

**FULL AUTHORITY MEETING**  
**Wednesday September 21, 2016 9:30 am**  
**Stevensville Conservation Area; Club House**  
**2555 Ott Road; Fort Erie, ON**

## **A G E N D A**

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*9:30 am*

*Public Session*

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- ◆ **DECLARATION OF CONFLICT OF INTEREST**
- ◆ **ADOPTION OF AGENDA**
- ◆ **DELEGATIONS / PRESENTATIONS**
  - A. Member Recognition – Bea Kenny
  - B. Member Recognition – Domenic DiFruscio
  - C. Peter Domarchuk (Royal LePage) & Mark Jensen Re: 44 Riverview
- ◆ **BUSINESS**
  - (1) A. Full Authority Meeting-----Draft Minutes July 20, 2016
  - B. Draft Committee Minutes
    - ◆ *Cave Springs – August 9, 2016*
    - ◆ *Budget Committee – September 14, 2016*
    - Notice of Motion: That the Full Authority Board of Directors approve the Budget Steering Committee Meeting Minutes of September 14, 2016 and the recommendations within.***
  - (2) Business Arising from Minutes
  - (3) Correspondence
  - (4) Chairman's Remarks
  - (5) Chief Administrative Officer Comments

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### *Reports for Information*

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- (6) Project Status Reports:
  - 1. *Watershed Management*-----**Report No. 86-16**
  - 2. *Operations*-----**Report No. 87-16**
  - 3. *Corporate Services*-----**Report No. 88-16**

- (7) Tree & Forest Conservation By-law Status ----- **Report No. 89-16**
- (8) Financial Monthly Update – August 31, 2016----- **Report No. 90-16**
- (9) Bill 100 Supporting Ontario's Trail Act, 2016 ----- **Report No. 91-16**

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### *Reports for Consideration*

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- (10) Ducks Unlimited Partnership Agreement----- **Report No. 92-16**
- (11) Great Lakes Sustainability Fund Agreement ----- **Report No. 93-16**
- (12) Landowner Access Agreement (WQMP)----- **Report No. 94-16**
- (13) Treetop Trekking – Binbrook CA ----- **Report No. 95-16**
- (14) Development Review Approval Process----- **Report No. 96-16**
- (15) NPCA Policy Review – Consultation Program----- **Report No. 97-16**
- (16) Collaborative response to DFO Guidelines – Municipal Drains ----- **Report No. 98-16**
- (17) Other Business

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### *Closed Session*

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- (1) Events Cube ----- **Proposal**
- (2) Treetop Trekking (Appendix 2-Report 95-16) ----- **Proposal**

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### *Public Session*

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- ◆ Resolution(s) from closed session
  - ◆ **ADJOURNMENT**
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# REPORTS FOR INFORMATION

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- ❖ **REPORT NO. 86-16** – *Project Status - Watershed Management*
- ❖ **REPORT NO. 87-16** – *Project Status - Operations*
- ❖ **REPORT NO. 88-16** – *Project Status - Corporate Services*
- ❖ **REPORT NO. 89-16** – *Tree and Forest Conservation by-law*
- ❖ **REPORT NO. 90-16** – *Financial & Reserve; Month ending August 31<sup>st</sup>*
- ❖ **REPORT NO. 91-16** – *Bill 100, Supporting Ontario's Trails Act, 2016*

September 21, 2016 Full Authority Meeting

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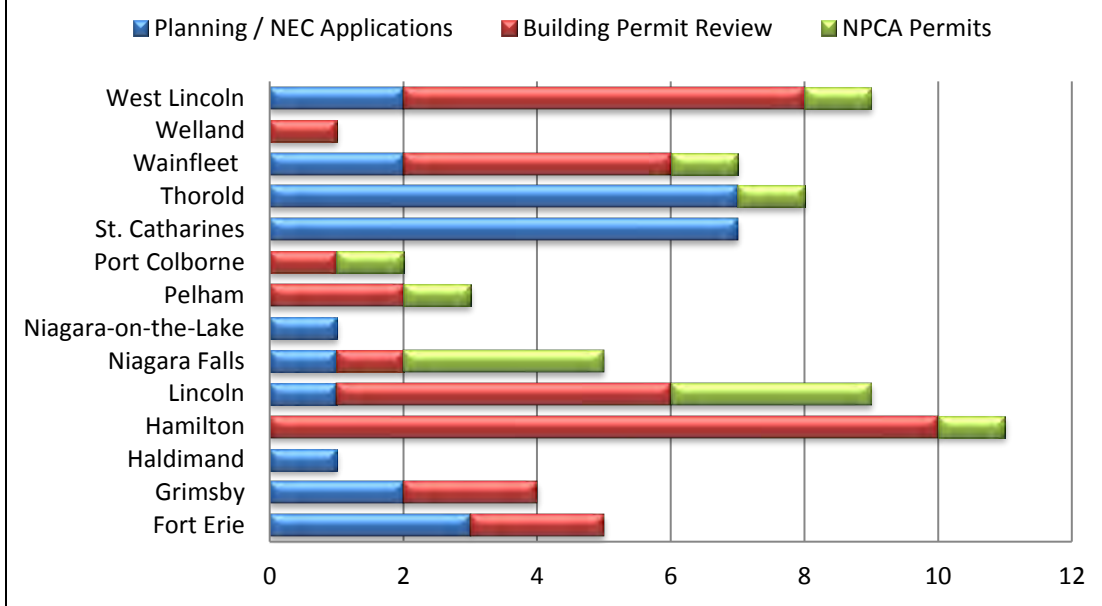
**Report To:** Board of Directors  
**Subject:** Watershed Management Status Report  
**Report No:** 86-16  
**Date:** September 21, 2016

**RECOMMENDATION:**  
That Watershed Management Status Report No. 86-16 be received for information.

**PURPOSE:**  
To update the Board on the Watershed Management Team's activities and achievements during July and August 2016.

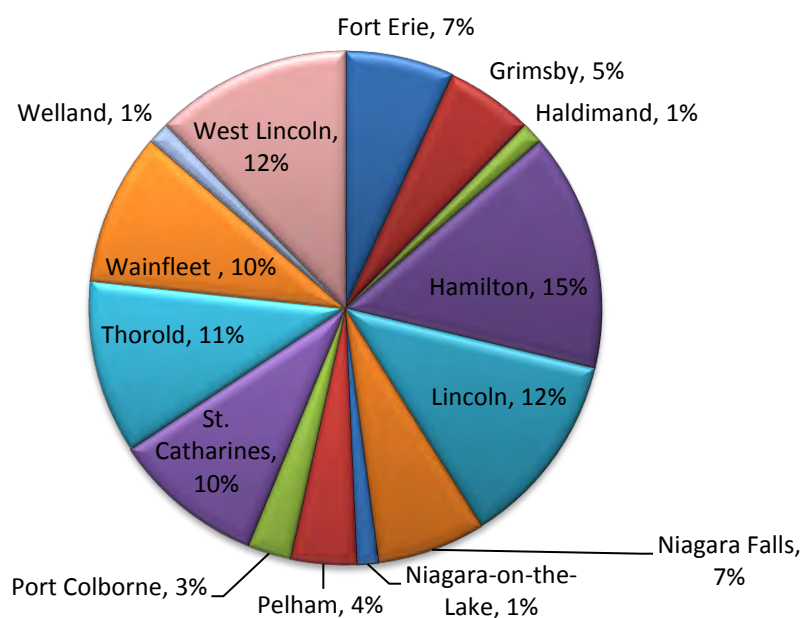
**BACKGROUND:**  
**A. Plan Review & Regulations**

**Figure 1: NPCA Watershed, No. of Applications  
by Type, July 2016**

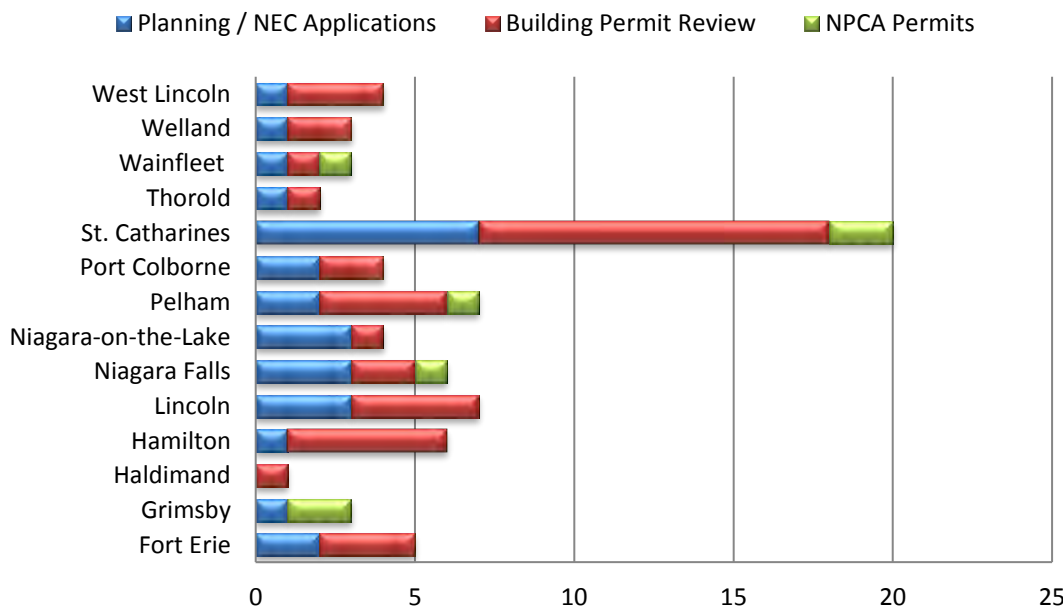


	Fort Erie	Grimsby	Haldimand	Hamilton	Lincoln	Niagara Falls	Niagara-on-the-Lake	Pelham	Port Colborne	St. Catharines	Thorold	Wainfleet	Welland	West Lincoln	Totals
Planning / NEC Applications	3	2	1	0	1	1	1	0	0	7	7	2	0	2	27
Building Permit Review	2	2	0	10	5	1	0	2	1	0	0	4	1	6	34
NPCA Permits	0	0	0	1	3	3	0	1	1	0	1	1	0	1	12
Totals	5	4	1	11	9	5	1	3	2	7	8	7	1	9	73

**Figure 2: Total No. of Applications (%), July 2016**

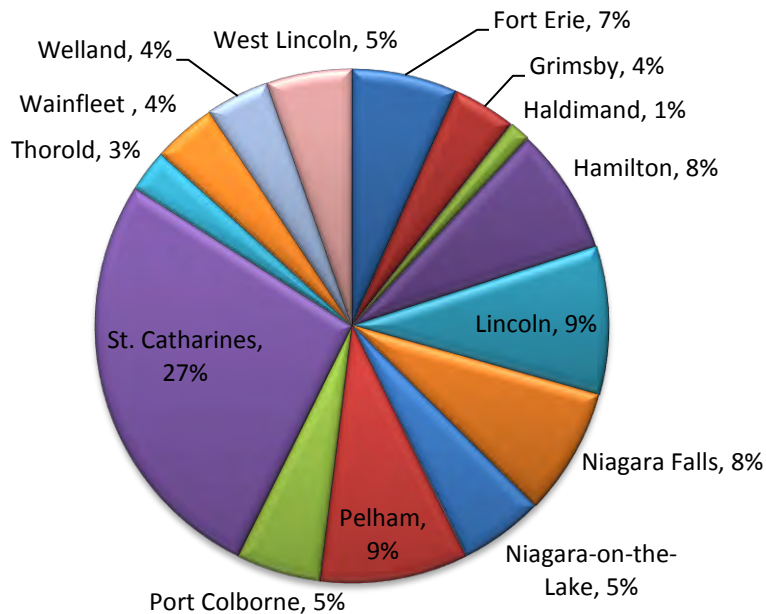


**Fig 3: NPCA Watershed, No. of Applications by Type, August 2016**



	Fort Erie	Grimsby	Haldimand	Hamilton	Lincoln	Niagara Falls	Niagara-on-the-Lake	Pelham	Port Colborne	St. Catharines	Thorold	Wainfleet	Welland	West Lincoln	Totals
Planning / NEC Applications	2	1	0	1	3	3	3	2	2	7	1	1	1	1	28
Building Permit Review	3	0	1	5	4	2	1	4	2	11	1	1	2	3	40
NPCA Permits	0	2	0	0	0	1	0	1	0	2	0	1	0	0	7
Totals	5	3	1	6	7	6	4	7	4	20	2	3	3	4	75

**Fig 4: Total No. of Applications (%), August 2016**



### 1) Municipal and Development Plan Input and Review

The Watershed Management Department is responsible for reviewing *Planning Act* applications and Building Permit applications where there is a feature regulated by the NPCA. Under the Memorandum of Understanding (MOU) with Niagara Region, the NPCA reviews *Planning Act* applications with respect to the Region's Natural Environment Policies (Chapter 7 of the Regional Official Plan).

During July, 2016, the Watershed Management Department reviewed 27 *Planning Act* applications (various type and complexity)/Niagara Escarpment Commission Development Permit applications, 34 Building Permit applications, and 12 property information requests. During August, 2016, the Watershed Management Department reviewed 28 *Planning Act* applications (various type and complexity)/Niagara Escarpment Commission Development Permit applications, 40 Building Permit applications, and 7 property information requests. Staff note that application volume has been increasing since June. Staff have been busy reviewing on-going/active applications as well as larger on-going municipal projects (Official Plan updates, Secondary Plans, etc.). Staff also responded to various inquiries from the public and local municipalities, as well as attended weekly consultation meetings with the local municipalities and conducted various site inspections

### 2) Construction Approvals (NPCA Permits)

During the months of July and August, 2016, NPCA Permits and Compliance issued a total of 19 construction permits as per Section 28 of the Conservation Authorities Act. These are works that have or are to occur within regulated features, buffers to regulated features or hazard lands.

No.	PERMIT #	MUNICIPALITY	ADDRESS	WORKS PROPOSED/PURPOSE	REGULATED FEATURE	TOTAL DAYS	COMMENTS
1	3811	Lincoln	4655 Bartlett Road	Greenhouse Addition	Wetland Buffer	12	7-16-108
2	3813	Wainfleet	13175 Lakeshore Road	Home addition	Lake Erie Shoreline	9	7-16-110
3	3814	West Lincoln	4638 Canborough Road	Inground Pool	Lands Adjacent Watercourse	9	7-16-112
4	3815	Niagara Falls	Lundy's Lane West of Garner Road	Enbridge New Gasline Installation	Lands Adjacent Watercourse	13	7-16-113
5	3816	Hamilton	Guyatt Road (500m East of Woodburn Road)	Culvert Replacement	Watercourse Alteration	7	7-16-114
6	3817	Lincoln	5545 Blezard Drive	Shorewall Maintenance	Lake Ontario Shoreline	5	7-16-115
7	3818	Thorold	103 Canby Street	Erosion Protection	Welland River	11	7-16-116
8	3762A	Niagara Falls	4603 Lyons Parkway	New Home Construction	PSW Buffer	15	7-16-54
9	3819	Port Colborne	1341 Firelane 1	Shorewall Maintenance	Lake Erie Shoreline	9	7-16-118
10	3335BR	Niagara Falls	Stamford Lots 4 and 5	Biofilter Treatment Addition	PSW Buffer	7	7-13-118
11	3820	Lincoln	3713 Greenlane Road	Addition, Garage and Pool	LSW Buffer	9	7-16-119
12	3821	Pelham	RR 20 btw Lookout St. and Effingham St.	Erosion Protection	Valley Slope	8	7-16-120
13	3822	Niagara Falls	4310 Lyons Creek Road	Dock in Lyons Creek	Watercourse Alteration	15	7-16-121
14	3823	Grimsby	275 Main Street West	New Home Construction	Slope Stability	15	7-16-122
15	3825	St. Catharines	24 Colton Avenue	New Home Construction	Lake Ontario Shoreline	12	7-16-125
16	3826	St. Catharines	6 Tanner Circle	Grading for Townhouse Development	Lands Adjacent Watercourse	7	7-16-126
17	3827	Wainfleet	12107 Augustine Road	Home Renovation with Foundation	Lake Erie Shoreline	12	7-16-127 (PLPER201600019)
18	3828	Pelham	177 Port Robinson Road	Channel Realignment for Subdivision	Watercourse Alteration	4	7-16-128
19	3778A	Grimsby	480 Winston Road	Retaining Wall & Pedestrian Bridge	Watercourse Alteration	6	7-16-71

### 3) Watershed Biology

In the months of July and August the Watershed Ecological Technicians have provided biology review for a variety of planning and regulations files. Twenty (20) site visits were conducted for planning files, 22 site visits for permit files, and 5 site visits for compliance



related issues, for a total of 47 site visits. Most of the site visits were followed with internal and external natural heritage comments.

Approximately 23 planning applications and 24 permit applications have been reviewed, with formal comments submitted to the Watershed Planning and Permit Departments

Drain maintenance requests under the DART Protocol were processed, and information requests were also completed during this time. Resources also assisted with the Cave Springs Management Plan project.

All Biology staff attended CityView End User Training in August.

Supervisor of Watershed Biology attended meetings and worked on several files including Thundering Waters (Niagara Falls), Grand Niagara (Niagara Falls), Warren Woods (Niagara Falls), Bridgeburgh Neighborhood (Fort Erie), the York/Glendale Hotel (NOTL), the Niagara-on-the-Lake Official Plan update and natural heritage designations, scoping an EIS for several Balfour Road lots owned by the Town of Pelham, completing scoping for several EIS's, assisting with the completion of CityView validation prior to implementation of the project, participating in Reporter Training for CityView, and participating in the Provincial Plans updates.

#### **4) Tree and Forest Conservation By-law – See Forest By-Law Summary Report**

#### **5) NPCA Policy Review**

Report 81-16 was presented at the July 2016 Board meeting. The Living Landscape Discussion Paper (i.e. Issues and Options paper is currently available on the project website (<http://www.livinglandscape.ca/participate>) for public review until September 30, 2016.

#### **6) Welland River Floodplain Mapping Study**

During the month of June, Round #2 Public Information Sessions were held across the watershed to explain the technical aspects of the floodplain modelling. A Consultation Report, summarizing the key themes that were heard at the four (4) information sessions, will be posted on the project website following Board approval.

The next Watershed Floodplain Committee meeting is scheduled for **October 12, 2016 @ 5:30 pm** at Balls Falls Conservation Centre.

### **B. Projects / Programs**

#### **1) Source Water Protection Plan**

- Staff participated in a workshop held by Ministry of Environment and Climate Change (MOECC) to discuss potential changes to the technical rules of the source protection program.



- Staff continued to answer enquiries on source water protection, and respond to requests from the MOECC.
- A Source Protection Committee (SPC) meeting was held September 15, 2016.

## **2) Water Quality Monitoring Program**

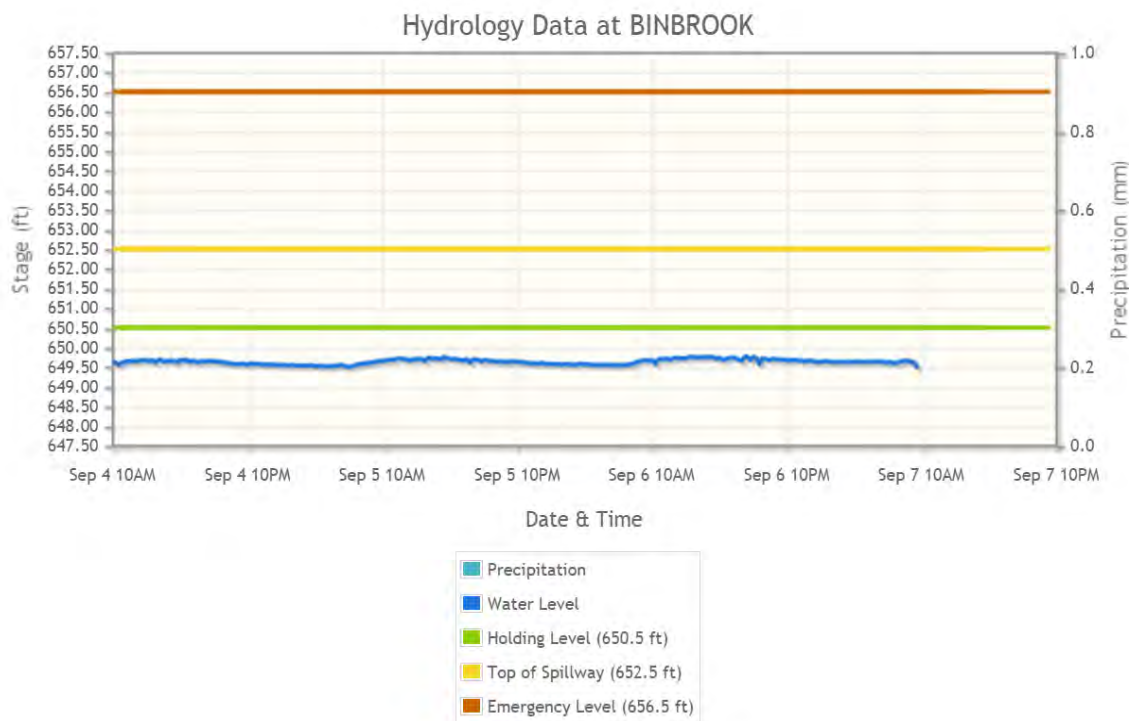
- Staff continued routine monitoring at all NPCA 75 water quality monitoring stations. This will be performed monthly until November. Samples will be analyzed for general chemistry, nutrients, metals and bacteria.
- Provincial Groundwater Monitoring Network (PGMN): Staff continue to visit monitoring wells for manual downloads and perform QA/QC checks on groundwater level data as part of their routine data maintenance protocol.
- At the Region of Niagara's request, NPCA staff undertook specialized sampling techniques to detect cyanobacteria and nutrients in the middle reservoir of the Decew Drinking Water Intake due to a summer blue-green algae bloom. The NPCA provided a row boat from Chippawa CA and staff to collect a number of samples at various depths using a Van Dorn sampler. Lab results indicated the bloom had dissipated. The Decew Water Treatment Plant supplies drinking water to St. Catharines and areas of Thorold, Lincoln, and Niagara-on-the-Lake. Region of Niagara staff greatly appreciated the service that NPCA staff provided.
- Staff completed Ontario Stream Assessments of five monitoring sites. The assessment included site identifications, site features and detailed stream morphology. This information will provide baseline data for a number of NPCA watersheds.
- Staff assisted the NPCA Ecologist with monitoring activities within Mud Lake and Wainfleet Wetlands Conservation Area.
- To date, the NPCA has completed 9 projects under the Well Water Decommissioning Program for 2016. At this time, 100% of the funding for this program has been allocated. The NPCA continue to receive applications for the program which are presently being placed on a waiting list to be undertaken in 2017.
- Staff continue to process data requests from other governmental agencies, consultants, and academic institutions.

## **3) Flood Control**

### **a) Flood Forecasting and Warning**

- Binbrook Reservoir – The water level in the Reservoir is presently sitting 1 foot (300mm) below the normal operational holding level. (Please see Water Level and Precipitation Graph below.) Due to the dry weather over the past two months, water discharge from the reservoir has been greatly reduced. Staff continue to monitor reservoir water levels on a daily basis and make adjustments as warranted.

## Water Level & Precipitation Data



**\*CAUTION:** All data is Provisional.

Any data secured from the NPCA database that are identified as provisional have not received Director's approval and are subject to revision. The data are released on the condition that the NPCA may not be held liable for any damages resulting from their authorized or

- Staff continue to monitor daily water levels at our 14 stream gauge stations, climatic data at our 15 climate stations, and undertake routine maintenance, calibration, and inspections at all 29 installations, as part of the NPCA's routine Flood Forecasting and Warning duties. The public may access this real-time water level and rainfall information through the NPCA's website.
- As part of this program's approved 2016 capital projects, NPCA staff proposed to install a new stream gauge station on 20 Mile Creek in the City of Hamilton in order to provide advanced flood warning for the community of Smithville in West Lincoln. NPCA staff have obtained formal approval from the City of Hamilton to locate this proposed 20 Mile Creek stream gauge station on the Woodburn Road right-of-way (mounted on a new wood hydro pole). The new wood hydro pole has been installed. The remaining equipment installation is expected to be completed over the next few weeks.

#### **b) Water Resource Engineering**

- Staff continue to provide daily support to the Planning and Regulations program with respect to the analysis of natural hazards and the review of storm water management engineering designs.
- The NPCA was successful in obtaining a \$25,000 grant from the Ministry of Natural Resource and Forestry's 'Water and Erosion Control Infrastructure' (WECl) program in order to undertake an overall updated Safety Review of the Binbrook Dam. The last comprehensive Safety Review of the Binbrook Dam was completed in 2003. Best management practices recommend that a Safety Review for a large dam like Binbrook be carried out every 10 – 15 years. Through a competitive selection process, the NPCA has retained WSP Canada Inc. to carry out the study at a total cost of \$65,145. WSP Canada is a large, reputable engineering firm who specialize in this area of practice. The Safety Review is scheduled to be completed by March 2017.

#### **4) Restoration**

##### **Project Implementation – Watershed Plans**

The Watershed Restoration Program is responsible for improving water quality, water quantity and biodiversity within the NPCA Watershed. The Restoration Program advances these areas through the implementation of comprehensive watershed plans.

Watershed Plans have been developed for many of NPCA's watersheds. Each watershed plan identifies water quality/quantity and ecological objectives for that watershed, and details voluntary actions and activities that community partners and agencies can undertake to achieve those objectives.

The restoration program administers a cost-sharing program, offering local landowners financial incentives to implement water quality and habitat improvement projects on their properties. In addition to providing financial assistance to landowners, restoration staff will conduct one-on-one site visits providing technical advice.

##### **Project Implementation – Voluntary Stewardship**

Staff are completing 2016 stewardship projects. All restoration projects include Best Management Practices (BMP's) principals. Typical BMP's are conservation farm practices, nutrient prevention and management projects, habitat naturalization, stream-bank stabilization, bioengineering, habitat diversification and rehabilitation such as wetland and riparian buffer restoration, etc.

##### **Ducks Unlimited Partnership**

Since 2002, DU and the NPCA have been working together with Niagara landowners to create wetland projects in Niagara. This collaboration has allowed for the sharing of both expertise and resources. The DU-NPCA partnership has successfully implemented over 70 wetland projects, creating over 125 ha of wetlands with a total project value of \$1.3 million dollars. Ducks Unlimited is providing \$26,000.00 towards seven NPCA partnership projects for the 2016 project year.

##### **Great Lakes Sustainability Fund (GLSF)**

Through the GLSF fund, Environment Canada provides technical and financial support for restoration projects in priority Remedial Action Plan areas. Emphasis is placed on meeting the goals under the *Canada-Ontario Agreement (COA) Respecting the Great Lakes*

*Ecosystem.* To date NPCA has accessed over \$3 million dollars from GLSF for water quality and habitat improvement projects as well as for water quality monitoring in the Welland River and Niagara River Area of Concern. The NPCA has received \$95,000 for the 2016/17 project year.

### **Haldimand County Water Quality Program**

Staff have three (3) project opportunities under this initiative in 2016.

### **Niagara River Remedial Action Plan (RAP)**

- *RAP Redesignation Reports* – Seven (7) Beneficial Use Impairment (BUI) assessment reports are remaining. Re-designation reports are required for each assessment to document the issues, describe the actions and present the results. These reports require extensive public and stakeholder engagement before the process for de-listing can commence.

<b>Beneficial Use Impairment</b>	<b>Status in Niagara River (2016)</b>
1. Restrictions on wildlife consumption* 2. Tainting of fish and wildlife flavour 3. Fish tumours or other deformities 4. Bird or animal deformities or reproduction problems 5. Restrictions on dredging activities 6. Degradation of aesthetics 7. Added costs to agriculture or industry 8. Restrictions on drinking water consumption or taste or odour problems	<b>Not Impaired</b>
9. Degradation of phytoplankton and zooplankton populations	<b>Requires Further Assessment</b>
10. Restrictions on fish consumption * 11. Degradation of fish and wildlife populations 12. Degradation of benthos 13. Eutrophication or undesirable algae 14. Loss of fish and wildlife habitat 15. Beach closings	<b>Impaired</b>

*Note - The BUI for "restrictions on wildlife and fish consumption" was considered as 2 separate components for assessment purposes.*

**BUI Status**



- *Communication Plan Development* – A RAP Communication Plan is being developed for public outreach and engagement activities which will be undertaken along with the re-designation of the remaining priority actions.
- *The Niagara River RAP Website* – The RAP website was launched on August 10<sup>th</sup>. [www.ourniagarariver.ca](http://www.ourniagarariver.ca)

## 5) Special Projects

- Staff provided comments on planning applications for Niagara Region and local municipalities under the Planning Memorandum of Understanding. Staff also provided comments on proposed updates to provincial plans and MOECC Permits to Take Water. Staff also participated in CityView software training.
- Staff assisted Operations with the Ball's Falls Sewage System and the Cave Springs Master Plan.
- Staff continued work on Bedrock Aquifer Study tasks, including 2016 projects with the Ontario Geological Survey, upgrades and repairs, data sharing with project partners, and 2016 capital purchases for long-term water level monitoring.
- Staff responded to information requests from consultants, government agencies and the public, and supported Source Water Protection implementation.
- Caitlin Smal, McMaster M.Sc. candidate, began her fall student term with Special Projects. Her thesis is on a study of Niagara groundwater quality.

## **FINANCIAL IMPLICATIONS:**

None

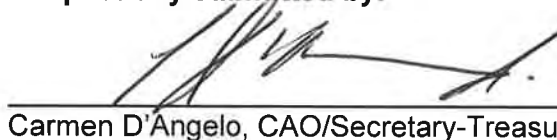
## **RELATED REPORTS AND APPENDICES:**

None

**Prepared by:**

  
Peter Graham, P.Eng. Director, Watershed Management

**Respectfully submitted by:**

  
Carmen D'Angelo, CAO/Secretary-Treasurer

*This report was prepared with consultative input from Suzanne McInnes, MCIP, RPP – Manager, Plan Review and Regulations, Brian Wright, P.Eng. – Manager, Watershed Projects, and NPCA staff.*

**Report To:** Board of Directors

**Subject:** Operations Status Report

**Report No:** 87-16

**Date:** September 21, 2016

**RECOMMENDATION:**

That the NPCA Board **RECEIVE** Report No. 87-16 for information.

**PURPOSE:**

To provide the Board a summary of Conservation Area activity and projects.

**DISCUSSION:**

***BALL'S FALLS CONSERVATION AREA***

**Capital:**

The report outlining the work needed to maintain our historical buildings is being finalized. The rebuilding of the church belfry is almost complete and will be re-installed prior to the Thanksgiving Festival. The foot bridge to the lower falls lookout will also be replaced.

	July	August
Adults admissions	891	804
Seniors/students admissions	273	313
Children admissions	81	92
Maximum - vehicles admissions	155	118
Membership renewals	5	1
Pavilion Rentals	3	0
Historical Tours given	10	8
Barn Wedding Receptions	18	13
Church Ceremonies	6	7
Centre for Conservation - wedding receptions	3	5
Centre for Conservation – non wedding rentals	1	5



### **Summer Camp**

This year we had a total of 162 campers, generating \$15,769.00. This is up from 2015 by \$5,326.00 and 54 campers.

<b>SUMMER CAMP 2016</b>		
<b>Week of Camp</b>	<b># of Campers</b>	<b>TOTAL REVENUE</b>
July 4-8	17	1,575.00
July 11-15	12	1,149.00
July 18-22	24	2,618.00
July 25-29	18	1,925.00
August 1-5	14	1,040.00
August 8-12	17	1,518.00
August 15-19	22	2,485.00
August 22-26	19	1,286.00
August 29-Sept 2	19	2,173.00
<b>TOTAL</b>	<b>162</b>	<b>\$15,769.00</b>

The weeks with the highest number of campers were the Outward Bound weeks. This has been a very popular theme week in previous years, and will be offered again.

### **Mini Adventure Camp**

There were four Mini Adventure Camps that came to our site in July and August. This is a field trip opportunity for other camps to come and do guided activities at our park. 27 campers attended the Mini Adventure Camps and generated \$635.00. We had one Mini Adventure camp cancel due to heat.

### **Education Programs**

A list of all Fall/Winter education programs has been sent to the communications department to be put online for teachers to book.

We have one school booked for our new Fall Harvest program in September.

### **Tours:**

We had one tour during the month of August organized by the Twenty Valley Tourism Association. **This tour brought 19 travel writers, bloggers, photographers, and people in the hospitality industry to Ball's Falls for a tour of the Centre for Conservation and the Grist Mill.**

Currently, two tours are booked for September.

### **Historical Buildings**

All buildings have been thoroughly cleaned throughout the summer. With the conclusion of the summer season the buildings and tours will be open by appointment only.

**YTD 2016 total programming revenue: \$26,871.21**

**Increase over 2015: \$7,620.53**

*Respectfully Submitted by Nathaniel Devos, Park Superintendent at Ball's Falls Conservation Area and Jill Walters-Klamer, Program Assistant*



## BINBROOK CONSERVATION AREA

### **Operations**

Our Summer Staff complement will be declining following the Labour Day Weekend.

The Waterfront Safety Audit has been completed and received by area staff. The immediate recommendations are being addressed currently including additional signage and lifesaving equipment for public use.

### **Revenue Statistics**

Membership Passes Sold to date - 344

Total Pavilions reserved - 122

Total Group Picnic areas reserved - 77

Occupancy Rates (Weekends and Holidays from May 1st through Labour Day weekend)

Pavilion #1 - 87% occupied

Pavilion #2 - 72% occupied

Pavilion #3 - 69% occupied

As of the end of August, gross revenue was approximately \$250,000, an increase of 7% over the previous year.

### **Special Events**

- Perseides Meteor Shower - 'Public Viewing Night' was scheduled for Friday August 12th by the Hamilton Amateur Astronomers but had to be cancelled due to bad weather
- CHCH News & Boarderpass Canada – CHCH News visited the park to film four segments that were aired Monday August 22<sup>nd</sup>. The focus was on Boarderpass Canada, our resident Cable Wakeboarding Facility, but there was also a lot of great publicity for Binbrook Conservation Area.

### **Capital Project Development**

- Splash Pad – The layout and colour scheme has been selected. Features have been ordered. The Splash Pad Mechanical building is being finalized for the permit application process through the City of Hamilton.
- Trail Upgrades – An Accessibility Trail Matting system order has been placed and we are awaiting shipment. **This system will allow wheelchairs and strollers to access the beach smoothly from the main parking lot.**

*This report was respectfully submitted by Mike Boyko, Park Superintendent*

## CHIPPAWA CREEK CONSERVATION AREA

### **Camping**

For the months of July and August there were 320 camping transactions made at the park, 469 additional vehicle passes sold, and 1485 day passes sold.

Deposits for 2017 seasonal camping are being taken from current seasonal campers to secure their campsite.

**The seasonal camping waitlist for 2017 is up to 29 people.**

### **Honey wagon service**

Trailer sewage pump out service has increased to an average of 16 trailers per week.

### **Park Maintenance**

Grass cutting and weed eating was minimal this summer because of the drought and heat. Staff concentrated their time on tree pruning, repairing picnic tables, and painting hydro and water posts.

*Respectfully Submitted by Rob Kuret, Park Superintendent, Chippawa Creek CA.*

## LONG BEACH CONSERVATION AREA

Even with the Wainfleet Fire Ban, occupancy and revenue numbers remained above average, except for firewood sales. Camping revenue is well above the 2016 target.

The park had two additional user groups stay on different weekends, Parry Sound Canoe Club, who was taking part in races in the Welland Recreational Canal on the August 18<sup>th</sup> weekend and Boy Scouts/ Cadet Club that stayed on the August 25<sup>th</sup> weekend.

Seasonal campers organized on their own, with some help from staff, an evening with a live band in pavilion 2 on Saturday August 6<sup>th</sup>. The evening was a great success and will likely be repeated and expanded upon in 2017.

Although grass cutting was minimal in July and August, grass cutting is becoming more of an issue in September. Other maintenance tasks took place, including painting, picnic table repair, and some general road maintenance.

The Labour Day weekend was busy and Seasonal Campers from 2016 are starting to hand in their Seasonal Campsite Deposits for 2017.

*Respectfully Submitted by Mike MacIntyre, Park Superintendent, Long Beach CA.*

## CENTRAL WORKSHOP – Gainsborough CA

With the warmer, drier weather, staff didn't have much grass cutting to do this year. This provided an opportunity to go from park to park to paint signs, gates, and some fences. Staff also painted the picnic pavilion at E.C. Brown.

July presented some challenges with the Wainfleet Bog Fire. There was also a smaller Wainfleet Bog Fire on August 14<sup>th</sup> which was detected early and dealt with quickly.

On July 6<sup>th</sup>, staff helped facilitate the Dedication of the Gord Harry Trail with a BBQ and small event. Various members of the Harry family attended as well as a number of Board Members and Senior Staff.

Seasonal Summer Staff have all left for the season. Grass cutting and more trail work will ramp up. Staff will start preparing Ball's Falls Conservation Area, by the 3<sup>rd</sup> week in September, for the Annual Thanksgiving Festival.

*Respectfully Submitted by Mich Germain, Superintendent, Central Workshop*

## ECOLOGICAL STATUS REPORT

### **Binbrook Conservation Area**

With the assistance of the Glanbrook Conservation Committee, two areas were planted with shore aquatic plants on Saturday August 27, 2016. This planting further enhanced the shore habitat and provides further erosion protection on 'Pickerel Island' and adjacent to the east, the Osprey Nesting Platform.

All native plants were used to provide cover, food for native animals, as well as, provide the highest success rate due to adaptation of local temperature and climate.

### **St. Johns Conservation Area**

On our annexed property, the reptile inventory continues through September, at the site. This resource information is being completed by the staff Ecologist with the assistance of a volunteer. When completed, it will provide baseline information for site management and site-use decisions. The 2016 results are to be completed in November.

### **Gord Harry Trail Conservation Area**

The final work of the Niagara Region Wind Farm (NRWF) has been completed on the trail section west of Etling Road in the Town of Wainfleet. **Staff Ecologist reviewed the site work and is compiling a report with the photos for comparison of 2015 to 2016.**

### **Rockway Conservation Area**

Request for proposals were sent, reviewed and an agency was selected for proposed archaeological work at the site related to the sites salt well/mine. This work is to determine any historical features and significant areas of the site, assess the features conditions and provide a

detail plan on necessary measures to conserve/preserve the site features, including the area's salt well/mine

The resulting study will build on the existing information NPCA staff has obtained from local museums and provincial contacts and sources, being:

- salt well/mine dates back to 1792 and was considered to contain some of the best quality and quantity of salt in the province at that time
- The well/mine is 15'x5'x11' timber structure with groundwater discharge
- Was the first salt well in Niagara part of Upper Canada
- Salt was extracted from the water
- In 1940s, 3 gallons of salt water fed into the well every 5 minutes

This awarded study will be completed in 2016 and will consists of:

- Historical research
- Archaeological Site assessment via a Test Pit and document archaeological resources
- Strategic Conservation Plan- examining resource condition and recommend stabilization measure in short term and long term of the existing structures found (including the site Salt Mine/Well)

This information will be used subsequently to complete restoration work at the site including conservation of any significant historic features, establish appropriate signage and educational messaging/programs.

### **Smith Ness Conservation Area**

Restoration of the meadow is underway at the site. Four areas have been prepared and tilled and will be seeded by late September. These areas will provide tall grass meadow areas (grasses, sedges and wildflowers), contributing a greater representation of this vegetative community on our Conservation Areas. This will assist in providing potential habitat (otherwise limited) for some rarer bird species (i.e. bobolinks or Eastern Meadowlark) as well as, habitat needs for other species such as a butterflies, a variety of birds, amphibians, insects, small mammals etc. As a result, unique/limited habitat will be provided, as well as, habitat that completes and supports a larger ecosystem cycle.

Further to this, the meadow is part of the greater site restoration with and extended forest with pits and mound and slough areas being implemented in 2015. The remaining site work proposed for 2017 includes a passive trail and a parking lot for site visitation.

### **Wainfleet Bog Conservation Area**

As part of the proactive fire management of the site, all lightning strikes being monitored daily for possible strikes in the area. Where positive lightning strikes are identified on the site (via weather information), NPCA staff follow up to check the site for possible fire occurrence at the strike vicinity. Lightning strikes assessment has now been modified where the OMNRF Haliburton Office provide the NPCA staff Ecologist with up to date information on their review of the bog area. This new approach is more efficient and timely with OMNR more accurate information pinpointing lightning occurrences.

### **Wainfleet Acquisition Conservation Area**

- i) As part of the site resource inventory being completed at the site, spring plants and reptiles are being assessed. To date the spring ephemeral plant inventory is complete, while the reptile survey continues through September. When completed this information will assist in providing baseline information for site management and site use decisions. The work is being completed by the staff Ecologist with the assistance of volunteers. The 2016 results to be completed in November.
- ii) Staff met with the adjacent development to co-ordinate restoration work for the required Fowler's Toad Habitat Enhancement Area on the two properties. An estimate of the site restoration costs for the required 10 years (2017-2027) was provided to the adjacent landowner for further discussion.

### **Wainfleet Conservation Area**

Annual monitoring was completed at the sites abandoned quarries to provide further baseline information and assess any changes in site conditions. Information on water depth, water quality and habitat/vegetation were obtained and assessed.

### **Other Conservation Area Ecological Activity**

#### **NPCA Hunting Program**

- a) General: Hunting Permits  
Staff has issued an additional 100 hunting permits for a total of 263 permits issued for the NPCA Conservation Areas for 2016, with 44 individual residing outside of our administrative area.
- b) The 2016 NPCA Waterfowl Hunting Blind Lottery has been completed. Upon announcement of the federal duck season in mid-July, the NPCA Waterfowl Hunting Program letters and applications were sent out to all waterfowl hunters in our current and previous year data base. All applications were due August 31, 2016, with the hunting blind lottery taking place September 1. All successful applicants have been notified by email/mail, and confirmation by phone as well for those inquiring individuals.

#### **Bat Monitoring**

Three bat routes were completed using stationary monitors and a mobile route monitor to assess species and bat diversity in Niagara. Each site required the route to be driven 2 times with 4 days of stationary monitors.

The three routes are part of the Ontario monitoring program, and included Niagara Falls, Pelham and Lincoln. As partners in the project, the data was collected with the assistance of the NPCA Ecological Summer Students and has been provided to the Ontario Ministry of Natural Resources and Forestry (OMNRF). The results will be available shortly as shared software programs are being used for analysis. This will provide data for our Conservation Areas and area development review needs.

### **Ecological Summer Students**

The Conservation Areas Ecological work was furthered with the assistance of two summer students. These students were employed for six weeks (July 18 through September 2) and assisted to complete:

- Vegetative shoreline buffer/habitat along the shores of Lake Niapenco, plant list and implementation
- Resource inventory reptile surveys at Lathrop and Lakewood Conservation Areas (CA) in varying weather but suitable conditions to determine site species
- Bat Routes for determine species diversity information for the Niagara Peninsula
- Morgans Point CA invasive species bedstraw removal
- Data Entry for the Wainfleet Bog Hydrological Data, Conservation Area Species, and Hunting Harvest Data
- Vegetative Survey at Wainfleet Wetland Quarry
- Flying Squirrel Habitat Survey at Ball's Falls Conservation Area

This greatly assisted in obtaining baseline information for further use in the conservation/restoration/protection of our Conservation Areas and ecosystems, and assist in achieving a sustainable between environmental conservation, economic growth and agricultural prosperity.

*Prepared by Kim Frohlich, Ecologist*

## **EVENTS STATUS REPORT**

### **Ball's Falls Thanksgiving Festival**

Thanksgiving Festival is now only a few short weeks away! Much work has been done to improve the event over last year.

To date there are 167 confirmed artisans, concessionaires, and farmer's participating at the event, which represents approximate revenue of \$84,000. Of the 167 vendors, 20 are new artisans at the event. We have also attracted 3 new food trucks to the event.

Much of the 'on-the-ground' work will be complete over the next month to prepare the site, and welcome more than 25,000 guests. The list of operational items requiring completion is extensive, and will require support from the staff at the central workshop. Examples of the support required include, erecting the large event tent, placing picnic tables throughout the site, installing a temporary crossing for parking entrance, ensuring all the signs are placed on their appropriate routes.

Notable new items to the festival include inflatables and face painting free of charge to our guests.

We have also secured a new ATM Vendor, Via Cash, and a new brewer; Bench Brewery. We have also eliminated the shuttle buses, as they are cumbersome and take a significant time to load and unload, and have replaced them with a larger quantity of large golf carts, including accessible carts. This change will hopefully help to alleviate wait times at the shuttle stations.

One significant change that our team is working to implement, is making this festival more “green”. We will be undertaking this endeavor by working closely with our concession vendors and directly with a group of volunteers who will sort all waste at the event before it is placed in its appropriate containers. We are endeavoring to divert 80% of our waste at this year’s event, by utilizing this new system.

Our communications team is preparing a marketing plan to entice guests to our event, and will include leveraging social media, print media, radio and interactive online advertisements.

Again this year, the NPCA will host an event “kick-off” dinner for all of our vendors, to welcome them to the event and provide a warm and welcoming atmosphere to our guests, this dinner will take place on Friday.

Event dates are Friday October 7<sup>th</sup> to Monday October 10<sup>th</sup>. The event is open from 10am to 5pm daily and admission is \$6 per person. Seniors are able to access the event for \$4 on Friday only. Weekend Passes are available for \$14.

### **Christmas Village**

The Christmas Village event has been greatly improved and will be held on December 3<sup>rd</sup> and 4<sup>th</sup> this year.

The event will feature characters from the movie Frozen including Elsa, Anna and Olaf. Santa will also be a big feature of the event, as well as horse drawn wagon rides, and roasting marshmallows over the campfire.

Work to secure an efficient method for providing photos with Santa is required. Event Décor has been sourced and secured, with plans in motion to secure food vendors, livestock rentals, and additional character rentals. Logistical considerations such as lighting, portable washrooms, and casual staffing will be secured throughout October.

The price point for this event will be \$30 for a family of 4, \$15 for an adult and \$8 for a child.

### **Niagara Children’s Water Festival**

The Water Festival Committee will be attending Children’s Water Education Council meeting in September to discuss trending programming ideas, development of new activity centres, event evaluations and funding opportunities. Plans to enhance the 5 areas of festival improvement have been identified, and will be implemented through the winter months. A new festival website needs to be investigated for the event as well, as identified as a priority by the festival committee.

A member of the festival committee has also been asked to speak at a Niagara Region Engineering Conference in November to discuss how building partnerships has led to the success of the Niagara Children’s Water Festival. The 2017 festival will take place on May 9<sup>th</sup> to 12<sup>th</sup> 2017, at Ball’s Falls Conservation Area. As always, this event will remain free to our young participants.



### **New Event-Spring 2017**

A partnership event between the Twenty Valley Tourism Association (TVTA) and the NPCA is beginning to take shape. The two organizations are planning to create a sustainable spring event which will showcase the local culinary, craft beverage and artisanal talents of Twenty Valley in a natural setting. This two-day event will be held at Ball's Falls Conservation.

The proposed event will look to bring awareness to the growing craft beverage producers in Twenty Valley and its surrounding area. The event will promote the area as an energetic growing region, working together to produce world class wines, impressive craft brewery & distillers while offering healthy sustainable culinary dishes.

The event team has proposed an admission \$25, which would include sample tickets for the day. Additional food and beverage samples would require additional tickets. The event would also offer an educational tour/walk for guests which, will help to promote our local surroundings and ensure active flow through the event space.

Based on past experience with events of this nature, the expected attendance would be estimated at 2,000 to 2,500.

### **Canada 150 Celebration at Binbrook-New Event**

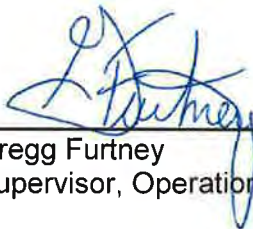
Early stages of planning for the Canada day 150 Celebration event at Binbrook have begun. To date an event committee has been formed, with initial meeting dates anticipated in the near future.

A draft estimate of costs has been sent to senior management.

Upcoming meetings will focus on the development of event themes, purpose, description, budget, communications plan and the event critical path.

*Respectfully Submitted by Brianne Wilson, Events Coordinator*


#### **Prepared by:**

  
\_\_\_\_\_  
Gregg Furtney  
Supervisor, Operations

#### **Reviewed by:**

  
\_\_\_\_\_  
Mark Brickell  
Acting Director of Operations

#### **Submitted by:**

  
\_\_\_\_\_  
Carmen D'Angelo  
Chief Administrative Officer/  
Secretary Treasurer

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**Report To:** Board of Directors

**Subject:** Corporate Services Project Status Report

**Report No:** 88-16

**Date:** September 21, 2016

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**RECOMMENDATION:**

That Corporate Services Project Status Report No. 88-16 be **RECEIVED** for information.

**PURPOSE:**

To provide the Board a summary of projects important to the Conservation Authority's business objectives.

**DISCUSSION:**

The project status report is to provide information pertaining to process improvements, initiatives in support of the strategic plan and supporting the organization to achieve its mission, vision and values.

**Information Management & Technology Services:**

- ❖ The CityView development tracking system went live on August 15<sup>th</sup>. End user training was conducted for two days at a computer lab at Niagara College. The implementation team received advanced configuration and reporter training in the office. Planning and permitting staff are meeting weekly to discuss any implementation issues as we get more familiar and used to the system, develop best practices, etc. Staff look forward to providing the Board with a live demonstration and a full report at the October members meeting.
- ❖ A new large format plotter and scanner was purchased and acquired through the capital budget to assist with the CityView implementation. The new hardware is significantly faster in terms of scan and prints.
- ❖ Both the internal and external GIS web tools were updated with the latest versions of the Geocortex web mapping software. It included several improvements such as more collapsible tool items, new measure and draw snapping tools, and improved accessibility capabilities.
- ❖ GIS staff have installed FME software as part of GIS software stack and have started the initial training sessions by addressing several GIS process automation requirements.
- ❖ Updates to regulation and screening layers have been performed to integrate recent wetland changes.
- ❖ Several custom maps were made to support CLTIP application and the RAP.

- ❖ GIS staff assisted with the Wainfleet Bog fire this summer with map and data management support.
- ❖ Several datasets related to conservation areas were improved, including the CA trail database and associated mapping for the website. Integration of scanned survey hyperlinks into our property acquisition database also occurred.
- ❖ Caches for several historic aerial and orthorectified imagery datasets are being prepared so they can be included in our mapping applications for decision support.

## **Communications and Foundation:**

### **Communications**

- ❖ NPCA Board Meetings - Live-Stream Results (The live stream was promoted on local Postmedia websites, NPCA website and social media channels)

Month	Peak Viewers	Average Viewers	Average View Duration
March	18	97	18:47
April	22	81	22:29
May	14	88	12:55
June	8	80	12:01
July	7	67	9:52
Monthly Combined Average	13.8	82.6	14:37

- ❖ The communications department has published and distributed the Q2 Quarterly Report to local politicians, stakeholders, community groups, media, and NPCA newsletter subscribers. A process has been established to send quarterly reports through email marketing software in order to track the effectiveness of our quarterly communications over time.
- ❖ Communications has supported several park-level events over the last couple months including the Party in the Park and Movie Night at Binbrook Conservation Area, the Doug Elliott Memorial Fishing Derby at Chippawa Creek, and Heritage Days at Ball's Falls Conservation Area. A promotional plan has been created for the Ball's Falls Thanksgiving Festival and is currently in the early stages of execution.
- ❖ Communications has been delegated the responsibilities of responding to Freedom of Information Requests early in 2016. Prior to July, the NPCA received only one Freedom of Information request. Since July 2, 2016, NPCA has supplied responses to ten information requests. There are five active requests for information currently being processed.

## Foundation

- ❖ The 2nd Annual Rt. Hon. John Turner Gala for Water & Environmental Leadership will be held on Thursday, Sept. 29 at the Queen's Landing Hotel in Niagara-on-the-Lake. With the logistical items looked after, keynote speaker confirmed and a near sold out event, it promises to be a great evening. The first recipient of the scholarship will be in attendance to accept her award. As well, Julie Angus, the first woman to row across the Atlantic Ocean, mainland to mainland, and National Geographic's Adventurer of the Year will be our keynote speaker. There will be winners in two categories, one in the individual category and one in the organization category.
- ❖ The Foundation held a fundraising barbeque in front of the Bass Pro Shop at the Niagara Outlet mall in Niagara-on-the-Lake, Friday, August 26. More than \$400 dollars was raised as well as increasing the profile of the Foundation and the great work that the NPCA does throughout its watershed.
- ❖ Three memorial benches were recently installed at St. John's Conservation Area.
- ❖ Work nears completion on the strategic planning for the Foundation. Interviews with key stakeholders throughout the watershed have taken place as well as with similar sized Conservation Authority Foundations throughout Ontario. Foundation Board recruitment, policy development and best practices moving forward for sustainable fund development are the three main areas covered under the plan.

## **Human Resources:**

### Recruitment

- ❖ Manager, Strategic Initiatives role was posted and closed
  - 159 applications received with 8 candidates being interviewed
  - The successful applicant was selected and began on August 15, 2016

### Training

- ❖ To date; 4 training applications submitted and approval received through the Canada Ontario-Job Grant program for total funding of \$23,033.00 towards training costs of \$32,600.

### Compensation

- ❖ On-line pay slips formatted for employees, currently being deployed for trial to SMT with estimated implementation for all permanent employees in October 2016.
- ❖ Final claims submitted for student wage subsidies for total funding of \$44,733.50 link between AccPac and Norming HRIS system set up and installed for testing; once testing is complete, employee information entered in the HR system will automatically be updated in AccPac allowing for more efficiencies

## **Community Outreach and Volunteer Report**

### **Community Liaison Advisory Committee (CLAC)**

- ❖ The Community Liaison Advisory Committee meeting took place on Thursday September 8<sup>th</sup> 2016. Agenda items were:
  - Consolidated Provincial Review – NPCA response
  - Living Landscape Discussion Paper
  - Shoreline Management
  - Draft Wetland Conservation Strategy
  - Cave Springs Management Plan

The meeting was held at Ball's Falls Centre for Conservation. Committee members submitted some of the agenda topics. Draft minutes from the September meeting will be in the agenda package of the October Board Meeting.

### **Volunteer Recruitment**


- ❖ Volunteer recruitment for the Ball's Falls educational programs and the summer camp was on-going through July and August. A number of junior camp leaders volunteered this year – many of which were camp kids from previous years.
- ❖ Staff has also been recruiting volunteers for the Ball's Falls Thanksgiving Festival, Christmas in the Country School Program, Christmas Village event and various other NPCA programs and activities. These programs rely heavily on volunteers to ensure their success. This year's Thanksgiving Festival will need over 200 volunteers, including heritage tours and demonstrations, vendor relief, customer surveys, parking, and recycling team.
- ❖ Volunteers have been assisting staff to collect ecological information at various conservation areas including assistance with salamander studies, bat surveys, and monitoring bluebird boxes. The bluebird box surveys were completed on September 1st and the information will be shared with the NPCA Ecologist.
- ❖ Volunteers assisted NPCA staff at William Nassau Park in Niagara-on-the-Lake to pull weeds and water the wildflower garden planted in partnership with the Town of Niagara-on-the-Lake in 2013. The garden is being judged as part of the 2016 Communities in Bloom program under the Environmental Action category.
- ❖ The NPCA has been helped by over 30 volunteers and recorded 602 volunteer hours in the months of July and August.

### **Community Outreach**

- ❖ The NPCA is partnering with the Eco Defenders volunteer group for the Ball's Falls Thanksgiving Festival. After filling two garbage bins of waste in 2015, staff enlisted the help of this group to reduce our waste for this year's Festival. The Eco Defenders bring a waste sorting booth and a group of volunteers to sort waste and put recyclables and organics in their proper place. The NPCA is also working with Niagara Falls Cadets and a Welland Scouting group to assist with this project.

- ❖ A sign dedication ceremony was held at the Gord Harry Trail Conservation Area on July 6th 2016. The ceremony was well-attended by over 20 members of the Harry family, including Harry's wife Angie and his two children. Chair Timms, Mayor Jeffs and Mrs. Harry all spoke at the ribbon cutting ceremony. A small BBQ was held afterwards.
- ❖ Staff did a presentation about Habitat Restoration to a small public group at Willowbank School on July 5th 2016. The presentation was well received by the attendees and staff received positive feedback about the work we do and the programs we offer.
- ❖ The "Heritage Days" at Ball's Falls Conservation Area took place on Sunday July 24th and Sunday August 14th. The final Heritage Day will be on Sunday September 11th. Volunteer blacksmiths and spinners/weavers were on site to give demonstrations in addition to the tours being offered in the historical buildings.
- ❖ Final comments and reviews are being submitted for the Cave Springs Management Plan. Staff having been working closely with other members of the Technical Steering Committee to get the Draft document prepared for the Board.
- ❖ The final two plantings for the Ontario Community Environment Fund Pollinator Garden project will be happening in September. One planting is planned for September 10th at Smith-Ness Conservation area. Volunteers from Brock University will be assisting with this project. Another planting will be at St. John's Valley Centre in partnership with the Niagara Catholic District School Board.

**Prepared by:**



**David Barrick**  
**Director of Corporate Services**

**Submitted by:**



**Carmen D'Angelo**  
**Chief Administrative Officer**  
**Secretary Treasurer**

*This report was prepared in consultation with: Geoff Verkade, Manager, Information Management and Technology Services; Michael Reles, Communications Specialist; Kevin Vallier, Communications & Foundation Manager; Misti Ferrusi, HR Generalist; and, Kerry Royer, Community Outreach Coordinator.*

**Report To: Board of Directors**

**Subject: NPCA Forestry and Tree and Forest Conservation By-law Status**

**Report No: 89-16**

**Date: September 21, 2016**

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**RECOMMENDATION:**

**THAT Report No. 89-16 regarding the status of NPCA Forestry activities and the Tree and Forest Conservation By-law be received for information.**

**PURPOSE:**

To provide an update on the status of Tree & Forest Conservation By-law and forestry activities being conducted by the NPCA Forester.

**BACKGROUND:**

By-law issues/main activities since July 7, 2016 include:

- Harvest operations approved under Good Forestry Practices (GFP) permits in woodlots located in West Lincoln and Fort Erie are in progress. Operations are being routinely monitored by the NPCA Forester to ensure conformance with permit conditions and operating conditions are suitable.
- Conducted final inspections in two woodlots located in Fort Erie and Niagara Falls harvested under a GFP permit. Operations were conducted during the favourable weather conditions in June and July. Soil disturbance was minimal throughout the woodland and was confined to main skid trails. Operations were well conducted in accordance with Good Forestry Practices as outlined in the permit.
- Approved five GFP permit applications for three woodlots in West Lincoln, one in Pelham and another in Fort Erie. Operations are planned for summer/fall/winter 2016.
- Conducted a site visit with a woodlot owner in Wainfleet interested in managing/harvesting their hardwood forest. Provided forestry advice on what steps could be taken and gave them instructions on how to obtain a Good Forestry Practices permit. Visited another woodlot in Welland where the owner was concerned about the health of their 40-year-old white pine plantation.
- Developing a reforestation/restoration plan for a property subject to Bylaw charge from March 2016. The matter is before court.



- Dealt with six tree cutting complaints in Niagara Falls (2), Grimsby, Pelham, Lincoln and St. Catharines. A complaint in Niagara Falls is still being investigated.
- Responded to complaints from property owners adjacent to CA properties in Niagara on the Lake. The complaints involve potential hazard tree damage from declining ash trees located on authority property. These trees pose a risk as individual ash trees decline from EAB infestation. Hazardous trees are being mapped, assessed and marked by the NPCA Forester and then assigned to operations staff to deal with.

**FINANCIAL IMPLICATIONS:**

None

**RELATED REPORTS AND APPENDICES:**

None

**Prepared by:**

Dan Drennan

Dan Drennan,  
R.P.F; Forester

**Reviewed by:**

Peter Graham

Peter Graham  
Director, Watershed Management

**Submitted by:**

Carmen D'Angelo

Carmen D'Angelo  
Chief Administrative Officer  
Secretary Treasurer

**Report To: Board of Directors**

**Subject: Financial and Reserve Report – Month Ending August 31, 2016**

**Report No: 90-16**

**Date: September 21, 2016**

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**RECOMMENDATION:**

That Report No. 90-16 be **RECEIVED** for information.

**DISCUSSION:**

To provide the Board a summary of operations & capital expenditures versus revenues and to provide a comparison of actual results to the budget as approved by the Board.

The report confirms the general financial oversight and compliance with Public Sector Accounting Board standards.

**FINANCIAL IMPLICATIONS:**

The lines of business are within budget allocations identified during the budget preparation and approval cycle.

**RELATED REPORTS AND APPENDICES:**

**Appendix 1 – Budget Status Report: month ending August 31, 2016 (consolidated)**

**Appendix 2 - Statement of Reserves for month ending August 31, 2016**

**Prepared by:**



**David Barrick  
Director of Corporate Services**

**Submitted by:**



**Carmen D'Angelo;  
CAO/Secretary Treasurer**

*This report was prepared in consultation with John Wallace, Manager of Finance.*

**NIAGARA PENINSULA CONSERVATION AUTHORITY**  
**CONSOLIDATED NON CAPITAL**  
**JANUARY 1, 2016 - AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>ANNUAL BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
MNR TRANSFER PAYMENTS	174,496.00	174,500.00	100.0%
PROVINCIAL GRANTS - MOE	110,295	95,000	116.1%
PROVINCIAL GRANTS - OTHER	335,103	235,000	142.6%
FEDERAL GRANTS	187,061	235,000	79.6%
MUNICIPAL LEVY - GENERAL	3,859,326	5,145,765	75.0%
LEVY - SPECIAL - NIAGARA	1,629,475	2,172,633	75.0%
LEVY - SPECIAL - HAMILTON	14,775	19,700	75.0%
ADMINISTRATION FEES	251,984	355,000	71.0%
USER FEES	1,311,487	1,379,495	95.1%
RESERVE FUNDS	-	135,000	0.0%
LAND OWNER CONTRIBUTION	12,393	-	100.0%
MISCELLANEOUS	108,985	331,474	32.9%
	<b><u>7,995,379</u></b>	<b><u>10,278,567</u></b>	<b><u>77.8%</u></b>

**EXPENDITURES**

CAO/BOARD & CORPORATE SERVICES	3,216,086	4,149,598	77.5%
WATERSHED	1,989,523	3,225,585	61.7%
OPERATIONS	1,873,718	2,903,384	64.5%
	<b><u>7,079,328</u></b>	<b><u>10,278,567</u></b>	<b><u>68.9%</u></b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY**  
**CAO/BOARD AND CORPORATE SERVICES**  
**JANUARY 1, 2016 -AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>ANNUAL BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
MNR TRANSFER PAYMENTS	75,796	75,800	100.0%
MUNICIPAL LEVY - GENERAL	1,744,249	2,325,665	75.0%
LEVY - SPECIAL - NIAGARA	1,172,350	1,563,133	75.0%
INTEREST INCOME	15,280	60,000	25.5%
MISCELLANEOUS	1,572	-	100.0%
RESERVE FUNDS		55,000	100.0%
CONSERVATION FOUNDATION	17,514	70,000	25.0%
	<b>3,026,761</b>	<b>4,149,598</b>	<b>72.9%</b>

**EXPENDITURES**

<b>CAO &amp; BOARD EXPENSES</b>	<b>233,743</b>	<b>325,073</b>	<b>71.9%</b>
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**CORPORATE SERVICES**

CORPORATE MANAGEMENT	1,579,704	1,828,842	86.4%
OFFICE SERVICES	583,241	767,094	76.0%
FINANCIAL SERVICES	222,586	273,937	81.3%
HUMAN RESOURCES	52,158	117,590	44.4%
INFORMATION TECHNOLOGY	323,880	511,324	63.3%
CORPORATE COMMUNICATIONS	220,774	325,738	67.8%
	<b>2,982,343</b>	<b>3,824,525</b>	<b>78.0%</b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY  
WATERSHED  
JANUARY 1, 2016 - AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>ANNUAL BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
MNR TRANSFER PAYMENTS	98,700	98,700	100.0%
PROVINCIAL GRANTS - MOE	110,295	95,000	116.1%
PROVINCIAL GRANTS - OTHER	335,103	235,000	142.6%
FEDERAL GRANTS	187,061	235,000	79.6%
MUNICIPAL LEVY - GENERAL	1,221,332	1,628,441	75.0%
LEVY - SPECIAL - NIAGARA	358,125	477,500	75.0%
LEVY - SPECIAL - HAMILTON	14,775	19,700	75.0%
ADMINISTRATION FEES	251,984	355,000	71.0%
RESERVE FUNDS	-	-	0.0%
LAND OWNER CONTRIBUTION	12,393	-	100.0%
MISCELLANEOUS	18,520	81,244	22.8%
	<b><u>2,608,287</u></b>	<b><u>3,225,585</u></b>	<b><u>80.9%</u></b>
<b><u>EXPENDITURES</u></b>			
WATERSHED MANAGEMENT	190,452	326,785	58.3%
PLAN REVIEW AND REGULATIONS	759,533	1,119,381	67.9%
WATERSHED PROJECTS	1,039,538	1,779,419	58.4%
	<b><u>1,989,523</u></b>	<b><u>3,225,585</u></b>	<b><u>61.7%</u></b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY**  
**OPERATIONS**  
**JANUARY 1, 2016 -AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>ANNUAL BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
MUNICIPAL LEVY - GENERAL	893,745	1,191,659	75.0%
LEVY - SPECIAL - NIAGARA	99,000	132,000	75.0%
USER FEES	1,311,487	1,379,495	95.1%
RESERVE FUNDS	-	80,000	0.0%
MISCELLANEOUS	56,099	120,230	46.7%
	<b><u>2,360,331</u></b>	<b><u>2,903,384</u></b>	<b><u>81.3%</u></b>
 <b><u>EXPENDITURES</u></b>			
OPERATIONS MANAGEMENT	285,968	457,673	62.5%
STRATEGIC INITIATIVES	298,054	599,348	49.7%
LAND PROGRAMMING	1,182,762	1,645,863	71.9%
VEHICLES AND EQUIPMENT	106,935	200,500	53.3%
	<b><u>1,873,718</u></b>	<b><u>2,903,384</u></b>	<b><u>64.5%</u></b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY**  
**CONSOLIDATED CAPITAL**  
**JANUARY 1, 2016 - AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>YTD BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
FEDERAL GRANTS	-	245,000	100.0%
MUNICIPAL LEVY - GENERAL	543,904	864,845	62.9%
LEVY - SPECIAL - NIAGARA	375,000	500,000	75.0%
LEVY - SPECIAL - HAMILTON	75,000	100,000	75.0%
RESERVE FUNDS	-	694,500	0.0%
MISCELLANEOUS	-	29,000	100.0%
	<b>993,904</b>	<b>2,433,345</b>	<b>40.8%</b>

**EXPENDITURES**

CORPORATE SERVICES	63,413	182,500	34.7%
WATERSHED	39,711	112,500	35.3%
LAND DEVELOPMENT	469,980	1,710,876	27.5%
NIAGARA DIFFERENTIAL (RESERVE)	-	427,469	0.0%
	<b>573,104</b>	<b>2,433,345</b>	<b>23.6%</b>



**NIAGARA PENINSULA CONSERVATION AUTHORITY  
CORPORATE SERVICES - CAPITAL  
JANUARY 1, 2016 - AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>YTD BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
MUNICIPAL LEVY - GENERAL	136,875	182,500	75.0%
	<b>136,875</b>	<b>182,500</b>	<b>75.0%</b>
<b><u>EXPENDITURES</u></b>			
CORPORATE SERVICES	25,345	70,000	36.2%
GIS	38,068	112,500	33.8%
	<b>63,413</b>	<b>182,500</b>	<b>34.7%</b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY  
WATERSHED CAPITAL  
JANUARY 1, 2016 - AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>YTD BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
RESERVE FUNDS	-	112,500	0.0%
	-	<b>112,500</b>	<b>0.0%</b>
<b><u>EXPENDITURES</u></b>			
BINBROOK DAM	-	10,000	0.0%
STREAM GUAGE & MONITORING NETWORK	39,711	92,500	42.9%
GENERAL OFFICE ENHANCEMENT/MISC.	-	10,000	0.0%
	<b>39,711</b>	<b>112,500</b>	<b>35.3%</b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY  
CONSERVATION LAND DEVELOPMENT - CAPITAL  
JANUARY 1, 2016 - AUGUST 31, 2016**

<b><u>REVENUES</u></b>	<b><u>YTD ACTUAL</u></b>	<b><u>YTD BUDGET</u></b>	<b><u>% OF BUDGET</u></b>
FEDERAL GRANTS	-	245,000	100.0%
MUNICIPAL LEVY - GENERAL	191,157	254,876	75.0%
LEVY - SPECIAL - NIAGARA	375,000	500,000	75.0%
LEVY - SPECIAL - HAMILTON	75,000	100,000	75.0%
RESERVE FUNDS	-	582,000	0.0%
MISCELLANEOUS	-	29,000	100.0%
	<b>641,157</b>	<b>1,710,876</b>	<b>37.5%</b>

**EXPENDITURES**

LAND ACQUISITION (RESERVE)	-	600,000	0.0%
BALL'S FALLS	69,259	65,000	106.6%
BINBROOK	106,717	645,499	16.5%
CHIPPAWA CREEK	112,825	130,000	86.8%
LONG BEACH	64,212	132,000	48.6%
ECOLOGICAL PROJECTS	-	29,000	100.0%
GAINSBOROUGH CENTRAL WORKSHOP	116,967	109,377	106.9%
	<b>469,980</b>	<b>1,710,876</b>	<b>27.5%</b>

**NIAGARA PENINSULA CONSERVATION AUTHORITY  
STATEMENT OF CONTINUITY OF RESERVES AND RESERVE FUND  
PROJECTION FOR THE YEAR ENDED DECEMBER 31, 2016**

	Balance 31-Dec 2015	Approved Budgeted Inflows	*Approved Budgeted Outflows	Projected 31-Dec 2016
	\$	\$	\$	\$
<b>Unexpended capital reserves</b>				
Capital Assets				
Vehicle	210,731	0	60,000	150,731
Equipment	59,582	0	20,000	39,582
Computers & office equipment	79,522	0	0	79,522
	<u>349,835</u>	<u>0</u>	<u>80,000</u>	<u>269,835</u>
Conservation area capital reserve				
Niagara Region	1,209,346	0	804,569	404,777
City of Hamilton	136,682	0	327,250	(190,568)
Haldimand County	11,594	0	0	11,594
Niagara Levy Differential	347,000	427,469	0	774,469
Land acquisition-Hamilton	800,000	100,000	0	900,000
Land acquisition-Niagara	298,174	500,000	0	798,174
	<u>2,802,796</u>	<u>1,027,469</u>	<u>1,131,819</u>	<u>2,698,446</u>
Water management capital projects				
Welland River restoration - Niagara	242,210	0	0	242,210
Welland River restoration - Hamilton	10,676	0	0	10,676
Water Management	46,167	0	51,200	(5,033)
Watershed Studies-Niagara	3,162	0	0	3,162
Watershed Studies-Hamilton	20,260	0	0	20,260
Watershed Studies-Haldimand	22,032	0	0	22,032
Flood Protection Services	483,978	0	10,000	473,978
Resource Inventory & Monitoring	52,443	0	51,300	1,143
	<u>880,928</u>	<u>0</u>	<u>112,500</u>	<u>768,428</u>
	<u>4,033,559</u>	<u>1,027,469</u>	<u>1,324,319</u>	<u>3,736,709</u>
<b>Operating reserves</b>				
Conservation Areas				
Niagara Region	90,274	0	0	90,274
City of Hamilton	191,372	0	0	191,372
Haldimand County	14,931	0	0	14,931
	<u>296,577</u>	<u>0</u>	<u>0</u>	<u>296,577</u>
Conservation Land Management				
Tree Bylaw	61,765	0	0	61,765
Agreement forest	20,606	0	0	20,606
Regulations & planning services	181,647	0	0	181,647
General operating contingency	45,808	0	40,000	5,808
	<u>606,403</u>	<u>0</u>	<u>40,000</u>	<u>566,403</u>
<b>Reserve Fund</b>				
Accumulated sick leave	16,103	0	15,000	1,103
	<u>16,103</u>	<u>0</u>	<u>15,000</u>	<u>1,103</u>
<b>Ontario Power Generation Funding</b>	<u>1,906,616</u>	<u>0</u>	<u>110,244</u>	<u>1,796,372</u>

\* Approved outflows include: \$394,801 from 2015 carryover capital projects

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**Report To: Board of Directors**

**Subject: Bill 100, Supporting Ontario's Trails Act, 2016**

**Report No: 91-16**

**Date: September 21, 2106**

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**RECOMMENDATION:**

That the NPCA Board **RECEIVE** Report No. 91-16 for information.

**PURPOSE:**

To provide the Board a summary background of Bill 100, Supporting Ontario's Trails Act, 2016.

**DISCUSSION:**

Bill 100, Supporting Ontario's Trails Act, 2016 has been a Bill written and endorsed by the Honourable Michael Coteau, Minister of Tourism, Culture and Sport. It achieved Royal Assent in 2016. Bill 100 is an Act to enact the Ontario Trails Act, 2016 and to amend various other Acts, specifically the Motorized Snow Vehicles Act, the Occupier's Liability Act, the Off-Road Vehicle Act, the Public Lands Act, and the Trespass to Property Act.

The purpose of the new Act is to:

- 1) Increase awareness about and encourage the use of trails
- 2) Enhance trails and the trail experience
- 3) Protect trails for today's generation and future generations
- 4) Recognize the contribution that trails make to quality of life in Ontario

The Honourable Minister of Tourism, Culture and Sport, along with his team, held public consultations with over 250 organizations in 2015 and 2016 to provide feedback.

The legislation is meant to connect and expand trails across the province, increasing the economic benefits for local communities. It is also to promote tourism and encourage use of the trails system by enabling the recognition of trails of distinction and proclaiming an annual Trails Week to coincide with International Trails Day in June.

Points of interest to the Niagara Peninsula Conservation Authority are that the Monday immediately before the first Saturday in June in each year will be proclaimed as "Trails Week". The Minister may recognize a trail as an Ontario Trail of Distinction. The Gord Harry Trail may

be one that the Board considers putting forth. The Minister may establish a trail classification system, which would be voluntary. The Minister may establish best practices to further the purposes of the Act, again which will be voluntary. Finally, the Minister shall maintain an Ontario Trails Strategy. The Strategy will set out strategic direction for the establishment, management, promotion, and use of trails in Ontario.

From a private landowner perspective, one of the biggest concerns to land owners was that the Act would force land owners to allow “easements” on their property to facilitate future trail systems. Section 12 outlines the rules regarding “Easements”. It is clear that any “easements” will be purely voluntary.

Conservation Authorities are specifically identified in Section 12, subsection (1) “f” as an eligible body in reference to “Easements”, however in Section 13 it says, “Section 12 does not apply to any land owned by the Crown or to lands administered under the Conservation Authorities Act, the Public Lands Act, or the Provincial Parks and Conservation Reserves act, 2006”.

Aside from a number of changes in the Public Lands Act, which does not affect the NPCA, there are a couple of amendments made by Bill 100 that affect the other Acts that will apply to the compliance/ enforcement and risk/ liability side of NPCA Operations.

Changes include:

#### **Motorized Snow Vehicles Act – Section 22 (2) An Addition**

Currently, section 22 of the MSV Act provides that every person who drives or rides on a motorized snow vehicle or is being towed by such a vehicle on any premises is deemed, for the purposes of subsection 4 (1) of the Occupier’s Liability Act, to have willingly assumed all risk where the person is not being provided with living accommodation by the occupier and no fee is paid for the entry or activity of the person, other than a benefit or payment received from a government or government agency or non-profit recreation club or association.

For greater certainty, the following do not constitute a fee for entry or activity of the person for the purposes of clause (1) (a):

- 1) A fee charged for a purpose incidental to the entry or activity, such as for parking.
- 2) The receipt by a non-profit recreation club or association of a benefit or payment from or under the authority of a government or government agency.

#### **Occupier’s Liability Act – Section 4 – An Addition**

Currently, subsection 4 (3) of the Occupier’s Liability Act specifies circumstances in which a person who enters on certain premises is deemed to have willingly assumed all risks and in which a modified duty of care applies. One of those circumstances is where a person enters certain premises for the purpose of a recreational activity and the person is not being provided with living accommodation by the occupier and no fee is paid for the entry or activity of the person, other than a benefit or payment received from a government or government agency or a non-profit recreation club or association.

**(3.1)** For greater certainty, the following do not constitute a fee for entry or activity of the person for the purposes of subclause **(3) (c) (i)**:

- 1) A fee charged for a purpose incidental to the entry or activity, such as for parking.
- 2) The receipt by a non-profit recreation club or association of a benefit or payment from or under the authority of a government or government agency.

### **Off-Road Vehicles Act – Section 20 – An Addition**

Currently, section 20 of the off-Road Vehicle Act provide that every person who enters premises on an off-road vehicle or while being towed by and off-road vehicle is deemed, for the purposes of subsection 4(1) of the Occupier's Liability Act, to have willingly assumed all risks where the person is not being provided with living accommodation by the occupier and no fee is paid for the entry or activity of the person, other than a benefit or payment received from a government or government agency or non-profit recreation club or association.

**(2)** For greater certainty, the following do not constitute a fee for entry or activity of the person for the purposes of subclause **(3) (c) (i)**:

- 1) A fee charged for a purpose incidental to the entry or activity, such as for parking.
- 2) The receipt by a non-profit recreation club or association of a benefit or payment from or under the authority of a government or government agency.

### **Trespass to Property Act – Amendment**

- 1) Section 2 of the Trespass to Property Act is amended by striking out “not more than \$2000” at the end of the portion after clause (b) and substituting “not more than \$10,000”.
- 2) Subsection 12 (1) of the Act is amended by striking out “but no judgment shall be for an amount in excess of \$1000” at the end. The amendment removes the \$1000 limit that could be imposed.

Bill 100 does provide some clarity to the direction the Province of Ontario is going with respect to trails. This is an opportunity for the NPCA, specifically for promoting our Conservation Areas and the trails within or connecting them.


As stated in the Act, there are number of things that the Province of Ontario still needs to establish in order for the Act to fully come into effect. This includes the Trails Strategy, the Ontario Trail of Distinction criteria, the Trail classification system, and Best Practices.

For future Operating and Capital Budgets, new trail signage will need to be created, purchased, and erected to suit the criteria, although voluntary, of the Ontario Trail Classification System and Ontario Trail Strategy.

Finally, although the additions and amendments to the Motorized Snow Vehicles Act, the Occupier's Liability Act, The Off-Road Vehicles Act, and the Trespass to Property Act are relatively minor, it is likely in the interest of the NPCA to change the wording on our signage to

"Parking Fee" from "Admission Fee" for Ball's Falls and Binbrook Conservation Areas as we do not currently provide "accommodations" at either park. This will relieve the NPCA of some liability, as outlined in the various Acts. We do however provide accommodations at Chippawa Creek Conservation Area and Long Beach Conservation Area. An NPCA Board of Directors approved Trail Policy, for inspection, construction, and compliance, will be developed for review and approval in 2017.

**Prepared by:**



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Gregg Furtney  
Supervisor, Operations


**Reviewed by:**



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Mark Brickell  
Acting Director of Operations

**Submitted by:**



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Carmen D'Angelo  
Chief Administrative Officer/  
Secretary Treasurer



# REPORTS FOR CONSIDERATION

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- ❖ **REPORT NO. 92-16** – *Ducks Unlimited Partnership 2016/17*
- ❖ **REPORT NO. 93-16** – *Great Lakes Sustainability Fund Agreement 2016/17*
- ❖ **REPORT NO. 94-16** – *Landowner Agreement Access – Well Monitoring*
- ❖ **REPORT NO. 95-16** – *Treetop Trekking at Binbrook CA*
- ❖ **REPORT NO. 96-16** – *Development Review Approvals Process*
- ❖ **REPORT NO. 97-16** – *NPCA Policy Review – Consultation Program*
- ❖ **REPORT NO. 98-16** – *Collaborative Response to DFO's "Guidance Document for...Municipal Drains"*

September 21, 2016 Full Authority Meeting

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**Report To: Board of Directors**

**Subject: Ducks Unlimited Canada Partnership 2016/17**

**Report No: 92-16**

**Date: September 21, 2016**

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**RECOMMENDATION:**

**That the NPCA continue to partner with Ducks Unlimited Canada (DUC) for the construction of wetlands of mutual interest through the approval of the 2016/17 Memorandum of Agreement (see Attachment #1).**

**PURPOSE:**

1. Present the DUC-NPCA Memorandum of Agreement for the implementation of wetland projects of mutual interest.
2. Request NPCA Board approval to enter into the agreement with DUC. DUC will pay \$26,000.00 upon execution of the agreement towards seven (7) wetland partnership projects.

**BACKGROUND:**

Ducks Unlimited Canada (DUC) is the recognized leading agency in wetland design and creation; NPCA initially consulted with DUC on a number of projects for their expertise in the creation of wetlands, and then started a partnership with them in 2002.

Since 2002, DUC and the NPCA have been working together with Niagara landowners to create wetland projects in Niagara. This collaboration has allowed for the sharing of both expertise and resources. The DUC-NPCA partnership has successfully implemented over 70 wetland projects, creating over 125 ha of wetlands with a total project value of \$1.3 million dollars. The respective organizations' goals and conservation programs are well aligned, and their strengths and expertise complement one another.

Under the current partnership structure, DUC will contribute \$26,000 towards seven (7) wetland projects to be completed during the term of this agreement (i.e. by March 31, 2017). These seven (7) wetland projects are located as follows: Niagara Falls (2), West Lincoln (2), Niagara-on-the-Lake (1), Port Colborne (1) and Haldimand County (1). The NPCA and the landowners will fund the remaining costs not covered by DUC, with NPCA funding up to a maximum of \$10,000 (as per NPCA program guidelines) for each wetland project.

### **FINANCIAL IMPLICATIONS:**

The following table provides funding details for 2016 DUC-NPCA projects.

<b>Project Description</b>	<b>Total Number of Projects</b>	<b>Cost to NPCA</b>	<b>Cost to DU</b>	<b>Cost to Landowner &amp; other partners</b>
Wetland Creation / Rehabilitation	7	\$ 25,000.00	\$26,000	Approx. \$21,000

The agreed upon funding contribution from the NPCA has been accounted for in the 2016 budget.

### **RELATED REPORTS AND APPENDICES:**

1. 2016/17 DUC-NPCA Memorandum of Agreement

#### **Prepared by:**

  
\_\_\_\_\_  
Brian Wright P.Eng.

Manager, Watershed Projects

#### **Reviewed by:**

  
\_\_\_\_\_  
Peter Graham P.Eng.

Director, Watershed Management

#### **Submitted by:**

  
\_\_\_\_\_  
Carmen D'Angelo

Chief Administrative Officer  
Secretary Treasurer

*This report was prepared with the consultative input from:  
Jocelyn Baker, Supervisor, Watershed Restoration*

**MEMORANDUM OF AGREEMENT  
DUCKS UNLIMITED CANADA (DUC)  
AND**

Agreement made in duplicate this 21<sup>st</sup> day of September, 2016.

**BETWEEN:** **Ducks Unlimited Canada (DUC)**  
740 Huronia Road  
Unit 1  
Barrie, Ontario, L4N 6C6  
hereinafter called the "Corporation"

- and -

**Niagara Peninsula Conservation Authority (NPCA)**  
250 Thorold Road, West  
Welland, Ontario, L3C 3W2  
hereinafter referred to as the “Partner”

WHEREAS the Corporation and the Partner share a mutual interest in wetland conservation to the benefit of waterfowl, other wildlife and the overall health of the watershed.

AND WHEREAS the Partner intends to implement wetland restoration projects on privately owned lands listed on Schedule 'A'. The Corporation will provide funding and technical assistance to assist the Partner for the implementation of each wetland restoration project conditional that each cooperating landowner signs a Ducks Unlimited Canada Conservation Agreement for the project.

NOW THEREFORE the Corporation and the Partner agree as follows:

## 1. INTERPRETATION

It is understood that the use of the term "Partner" is not intended and does not create a partnership at law between the parties.

## 2. TERM

This Agreement shall commence on the 21<sup>st</sup> day of September, 2016 and terminate on the 31<sup>st</sup> day of March 2017.

### 3. DESIGNATED REPRESENTATIVES

- i) The Partner agrees that the Corporation, for the purposes of this Agreement, may act through any individual designated by the Corporation.
- ii) For the purposes of this Agreement the designated representative for the Corporation is:

Jeff Krete  
Ducks Unlimited Canada  
(519) 621-2763 X 2297  
(705) 721-4444 (Barrie office)

for the Partner is: Jocelyn Baker  
Niagara Peninsula Conservation Authority  
(905)-788-3135

Both the Corporation and the Partner agree that they may designate a different representative by providing notice in writing.

#### 4. CORPORATION OBLIGATIONS

- i) The Corporation agrees to provide payment of **\$26,000.00** upon execution of this agreement and receipt of appropriate invoice(s) from the Partner detailing the expenses incurred, up to the maximum amount available according to the Schedule 'A', to the Partner in support of the implementation of the wetland restoration projects listed.
- ii) The Corporation agrees to provide to the Partner upon request, technical assistance for the purposes of wetland project design and regulatory compliance and approvals.

## 5. PARTNER OBLIGATIONS

- i) The Partner agrees to participate as the project proponent and lead agency for the project implementation including obtaining any and all required permits and approvals. This may include municipal bylaws, Conservation Authority approvals, permits to take water, fisheries or other federal approvals, consultation with First Nations, and Ministry of Natural Resources regulations and the Endangered Species Act assessments with registered mitigation plans whenever applicable.
- ii) The Partner agrees to recognize the support of the Corporation in any publicly available document, signage or presentation that specifically refers to this project.
- iii) The Corporation must obtain a signed DUC Conservation Agreement with the legal project landowners and the Partner will provide necessary information that is required, for each project.

- iv) The partner will secure quotations, hire contractors and equipment, provide construction supervision and all materials that may be required for the works.

6. JOINT OBLIGATIONS

- i) The parties agree to indemnify each other, keep indemnified and save each other harmless from and against all claims, demands, costs, actions, causes of action, expenses and legal fees, which may be taken or made against them arising from their existing and ongoing activities.
- ii) The Partner may request DUC to review the Project for compliance with the Ontario Endangered Species Act (ESA). If required, DUC will assist the Partner in developing an ESA mitigation plan. The Partner agrees to inform the landowner and register the project location with MNR.

7. ENTIRE AGREEMENT

The parties hereto agree that this Agreement embodies the entire Agreement between the parties and the Partner represents that in entering into this Agreement the Partner does not rely upon any previous oral or implied representation, inducement or understanding of any kind or nature.

8. TERMINATION of AGREEMENT

DUC shall have the right at any time, with or without cause, to cancel this agreement by giving the Partner thirty (30) days prior written notice to that effect. In the event of termination of this agreement by DUC, either with or without cause, DUC shall reimburse the Partner for all reimbursable costs incurred by the Partner to the date of cancellation, provided however, that the Partner shall not have the right to include as a cost of cancellation any profit or earnings that may have been realized by the Partner had the work not been terminated.

IN WITNESS WHEREOF the parties hereto have executed this Agreement

SIGNED, SEALED AND DELIVERED	)	
in the presence of	)	
	)	
	)	
	)	
_____	)	_____
Witness as to execution by	)	Owen Steele
Owen Steele	)	Head Conservation Programs - Ontario
Head Conservation Programs - Ontario	)	Ducks Unlimited Canada
Ducks Unlimited Canada	)	
	)	
	)	
_____	)	_____
Witness as to execution by	)	Authorized Signature
	)	
	)	
	)	_____
	)	Position

### **Schedule 'A' to MOA with Niagara Peninsula Conservation Authority**

This schedule lists the properties and DUC funding commitments for wetland projects to be implemented under this MOA. The owner's name, the legal address, the estimated area of wetland and uplands secured and the funding amounts available from DUC is listed for each project.

#### **Wetland Restoration Project #1**

Address: 13615 King Road

Property Description: Pt Lt 3 Con 5 Willoughby, Niagara Falls

Estimated area of wetland to be restored: 0.25 ha (0.62 ac)

**The DUC cash funding commitment to this project is: \$5,000**

#### **Wetland Restoration Project #2**

Address: 9552 Ort Road, Niagara Falls, ON, L2E 6S6

Property Description: Pt Lt 18 Con 3 Willoughby, Niagara Falls

Estimated area of wetland to be restored: 0.12 ha (0.30 ac)

**The DUC cash funding commitment to this project is: \$1,500**

#### **Wetland Restoration Project #3**

Address: 6941 Highway 3, Canfield, ON, N0A 1C0

Property Description: Pt Lt 15-17 Con 2 Canborough, Haldimand County

Estimated area of wetland to be restored: 0.41 ha (1.01 ac)

**The DUC cash funding commitment to this project is: \$4,500**

#### **Wetland Restoration Project #4**

Address: 2658 South Grimsby Road, West Lincoln, ON, L0R 2A0

Property Description: Pt Lt 14 Con 9 South Grimsby, West Lincoln

Estimated area of wetland to be restored: 0.15 ha (0.37 ac)

**The DUC cash funding commitment to this project is: \$3,500**

#### **Wetland Restoration Project #5**

Address: 9374 Twenty Road, Smithville, ON, L0R 3A0

Property Description: Pt Lt 18 Con 7 Caister, West Lincoln

Estimated area of wetland to be restored: 0.20 ha ( 0.49 ac)

**The DUC cash funding commitment to this project is: \$4,000**

#### **Wetland Restoration Project #6**

Address: 267 Line 8 Road, Niagara-on-the-Lake, ON, L0S 1J0

Property Description: Pt township Lt 144 and 145 Niagara Township, NOTL

Estimated area of wetland to be restored: 0.14 ha (0.35 ac)

**The DUC cash funding commitment to this project is: \$3,500**

#### **Wetland Restoration Project #7**

Address: 758 Wyldewood Road, Pt. Colborne, ON, L3K 5V3

Property Description: Pt Lt 9 Con 1 Humberstone, Pt. Colborne

Estimated area of wetland to be restored: 0.10 ha (0.25 ac)

**The DUC cash funding commitment to this project is: \$4,000**

**The total DUC funding contribution to these projects is \$26,000.00 and is conditional on receipt of 2 copies of signed DUC Conservation Agreement with the landowners and copies of construction invoices. The NPCA will invoice DUC for each project completed.**

**Additional projects may be added as an addendum to this MOA subject to the agreement of the Corporation and the Partner.**

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**Report To: Board of Directors**

**Subject: Environment Canada - Great Lakes Sustainability Fund Agreement 2016/17**

**Report No: 93-16**

**Date: September 21, 2016**

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**RECOMMENDATION:**

**That the NPCA enter into an agreement with Environment and Climate Change Canada (ECCC) to accept the Great Lakes Sustainability Fund (GLSF) grant of \$90,000 towards the implementation of environmental projects required to meet the goals and objectives identified in the Great Lakes Water Quality Agreement and the Canada-Ontario Agreement (COA).**

**PURPOSE:**

The purpose of this report is to:

- Present the GLSF funding agreement between Environment and Climate Change Canada and the NPCA (attached). The agreement is required to obtain the GLSF funding, which is a significant component of the NPCA stewardship program.
- Request NPCA Board approval to enter into the agreement with Environment and Climate Change Canada.

**BACKGROUND:**

The Great Lakes Sustainability Fund (GLSF) was initiated in 2000 as a component of the Great Lakes Basin 2020 Action Plan. The GLSF was established to advance Remedial Action Plans (RAP) that have been developed for each of Canada's remaining Areas of Concern (AOC) located within the Great Lakes Basin.

The Niagara River is an Area of Concern (AOC) and the NPCA acts as the local coordinating agency for the Niagara River Remedial Action Plan (RAP). Funding for the RAP coordination falls under a separate Client Services Consultant Agreement.

Through the GLSF fund, Environment Canada provides technical and financial support for restoration projects in priority areas of the RAP. Emphasis is placed on meeting the goals under the *Canada-Ontario Agreement Respecting the Great Lakes Ecosystem*. The NPCA Watershed Restoration Program is responsible for improving water quality, water quantity and habitat within the watershed. The restoration program advances these objectives through the implementation of a comprehensive cost-sharing program, offering local landowners financial incentives to implement water quality and biodiversity/ habitat improvement projects on their properties. The goals of the GLSF program align well with the goals and objectives of the NPCA's restoration and water quality program.



## **Application to the Fund**

To date NPCA has accessed over \$3 million dollars from GLSF for water quality and habitat improvement projects as well as for water quality monitoring in the Welland River and Niagara River AOC. These projects help satisfy the commitments identified in the Great Lakes Water Quality Agreement and the Canada-Ontario Agreement.

According to the agreement; *The GLSF contribution shall support, in whole or in part, the following key project activities:*

- *Continue to monitor the existing water quality stations in the Welland River watershed to track (temporal & spatial) nutrient concentrations and other water quality parameters.*
- *The Implementation of up to 8 Best Management Practices (BMP's) and Conservation Farm Practices projects within the Niagara River AOC. A **particular focus** will be on sub-watersheds identified as contributing very high phosphorus loads to the Welland River watershed through the 2011 Welland River Eutrophication Study.*

The above noted projects will be implemented with private landowners through the provision of cost-share incentives. These projects will include nutrient reduction, including livestock fencing, milk house wastewater containment, and naturalization projects such as buffer strips.

## **FINANCIAL IMPLICATIONS:**

The requested funding contribution from GLSF is included in the 2016/17 budget.

## **RELATED REPORTS AND APPENDICES:**

1. 2016/17 Partnership Agreement

### **Prepared by:**



Brian Wright, P.Eng.  
Manager, Watershed Projects

### **Reviewed by:**



Peter Graham P.Eng.  
Director, Watershed Management

### **Submitted by:**



Carmen D'Angelo  
Chief Administrative Officer  
Secretary Treasurer

*This report was prepared with the consultative input from:  
Jocelyn Baker, Supervisor, Watershed Restoration*



## CONTRIBUTION AGREEMENT

**BETWEEN HER MAJESTY THE QUEEN IN RIGHT OF CANADA**

as represented by the Minister of the Environment and Climate Change who is responsible for Environment and Climate Change Canada ("ECCC")

**AND Niagara Peninsula Conservation Authority**  
("Recipient")

Project Title: Water Quality and Habitat Improvement Program

Whereas ECCC is responsible for the Transfer Payment Program entitled "Sustainable Ecosystems", which provides the authority to enter into this Agreement under the program: Great Lakes Sustainability Funds (GLSF) ("ECCC Program");

Whereas the Recipient is eligible and has the capacity to carry out the Project;

Whereas the Recipient wishes to further disburse contribution funds received under this Agreement, and the Recipient is of the view that doing so would be beneficial to Final Recipients and would also assist the Recipient in its exercise of its mandate;

Whereas the Recipient is providing or has secured additional funds from other interested parties totalling \$206,000 and thereby is meeting the ECCC Program requirement to obtain funding from other sources;

Whereas the Recipient shall not generate profit as a direct result of the Project directly supported by this Agreement;

Whereas ECCC wishes to provide financial assistance to the Recipient to enable it to undertake the Project;

Whereas ECCC and the Recipient enter into this Agreement recognizing that the Recipient has begun the Project and incurred related costs, ECCC may, pursuant to the terms and conditions of this Agreement, reimburse the Recipient for Eligible Expenditures incurred as of Jul 07, 2016;

Whereas the financial payment to the Recipient shall not directly result in ECCC acquiring a good or service from the Recipient; and,

Whereas this Agreement is the instrument under which ECCC's contribution shall be made;

Now, therefore, this Agreement witnesses that in consideration of the mutual promises and agreements hereinafter set out, ECCC and the Recipient ("Parties") agree as follows:

### 1. **DEFINITIONS**

Unless the context otherwise requires:

"Agreement" - means this document along with the appendices and schedules in following list which together form an integral part of this Agreement, and together constitute the entire Agreement between the Parties, superseding all previous Agreements, documents, representations, negotiations, understandings and undertakings related to its subject matter. The Recipient acknowledges having read the Agreement and agrees with the contents.

- Appendix A – General Terms and Conditions,
- Appendix B – Project Cashflow and ECCC Funding,
- Appendix C – Payment Request Form,
- Appendix D – Reporting Templates,

“ECCC Contribution” means the contribution referred to in Section 5a.

“Eligible Expenditure” means an expenditure incurred by the Recipient between Jul 07, 2016 and the Agreement End Date, according to the terms and conditions of Section 6.

“Final Agreement” means an agreement entered into between the Recipient and a Final Recipient pursuant to Section 4b).

“Final Project” means project(s), activitie(s) or initiative(s) undertaken by a Final Recipient and funded by the Recipient pursuant to a Final Agreement. A Final Project shall support the purpose and expected results set out in Section 3 and shall consist of project(s), activitie(s) or initiative(s) that shall, in part or in whole, directly support the Project or parts of the Project.

“Final Recipient” means a legal entity to which the Recipient shall further distribute funds received under this Agreement in the manner provided in Section 4b).

“Fiscal Period” means the period or part of the period commencing April 1 and ending March 31 of any year during the Agreement.

“In Kind Contribution” means the cash-equivalent contribution in the form of a useful and valuable good, service or other support provided to the Project, for which no cash is exchanged but that is essential to the Project and that would have to be purchased on the open market, or through negotiation with the provider, if it were not provided.

“Project” means the project, activities or initiatives described in Section a) and b).

“Total Canadian Government Funding” means the total cash and in-kind funding available to the Recipient for the Project from federal, provincial, territorial and municipal governments.

“Total Contribution” means the total value of the cash and in-kind contributions from all sources secured for expenditures related to the Project, as set out in Section 5b).

## **2. DURATION**

This Agreement comes into effect on the date of last signature ("Effective Date") and ends on March 31, 2017 ("Agreement End Date") unless this Agreement is terminated earlier in accordance with the terms of the Agreement.

The Project shall be completed by the Agreement End Date.

## **3. PURPOSE & EXPECTED RESULTS**

The purpose of this Agreement is to establish the terms and conditions for the provision of ECCC's Contribution to the Recipient.

ECCC's Contribution shall enable the Recipient to reduce loadings of nutrients and sediment through the completion of various Best Management Practices projects, restoration of fish habitat to address the loss of fish and wildlife habitat and water quality monitoring to address the status of the Eutrophication Beneficial Use Impairment. To achieve the targets, a cost sharing incentive grant program is provided to landowners that are interested in improving water quality.

This Agreement supports the objectives of the following ECCC program activity: 1.3.4 Great Lakes, with the expected result(s) of:

- i. Implementation of environmental remediation, protection and conservation projects required to meet the goals and objectives identified in ecosystem-based management plans or to achieve ecosystem objectives.
- ii. Participation of individuals and organizations in activities contributing to the achievement of goals and objectives identified in ecosystem-based management plans or to achieve ecosystem objectives.

#### **4. ACTIVITIES, PROJECT OR INITIATIVE BEING FUNDED**

- a) In order to achieve the expected results, the Recipient shall undertake the Project. The ECCC Contribution shall support, in whole or in part, the following key Project activities:
  - i. Implement up to 8 Best Management Practices and Conservation Farm Practices projects including improved manure and milk house wastewater management, livestock restriction fencing, wetland restoration, riparian buffer establishment and stabilization/erosion control projects at high priority areas within the Niagara River Area of Concern. This will include the further dispersment of funds to rural landowners for implementation of Best Management Practices.
  - ii. Monitor existing water quality stations in the watershed to track (temporal & spatial) nutrient concentrations and other water quality parameters which will help to assess the beneficial use impairment 'Eutrophication or Undesireable Algae'.
- b) The Recipient shall further distribute to Final Recipients, by way of Final Agreements, no more than \$24,000 cash from the ECCC Contribution received under this Agreement. In so doing:
  - i. The Recipient shall adopt and use a clear, transparent and open decision-making process in soliciting, assessing and approving proposals related to Final Recipients in accordance with the principles and requirements set out in the Agreement.
  - ii. A Final Recipient shall not receive funds from the Recipient for purposes of supplying a good or service to the Recipient.
  - iii. Upon request by ECCC, the Recipient shall provide ECCC a copy of its operating plans, including annual performance expectations, with respect to the funds distributed to Final Recipients.
  - iv. The Recipient shall provide ECCC any review or audit reports carried out by, or on behalf of, the Recipient relating to the use of ECCC's Contribution.
  - v. Upon request by ECCC, the Recipient shall provide ECCC a right of access to all or some of the Final Agreements.
  - vi. The Recipient shall ensure that Final Agreements:

- a. include a statement of the purpose of the Final Agreement and clearly agreed expectations and roles between its parties. Final Agreements shall also set out the expenditures eligible for reimbursement by the Recipient to the Final Recipient. The nature of these expenditures shall be consistent with those set out in Section e).

Without restricting the generality of the foregoing, expenditures related to the acquisition of land or interest in land shall, at no point in time, be allowed under Final Agreements.

- b. grant to the Recipient a right to perform periodic audits of the Final Recipient's compliance with the terms and conditions of the Final Agreement, as well as a right for the Recipient to provide ECCC with copies of any audit report or any financial, progress or other report conducted pursuant to the Final Agreement.
- c. provide ECCC with a right of access to the Final Recipients' premises and documents for the purposes of monitoring the Recipient's compliance with this Agreement.
- d. provide for the Final Recipients' consent for the public disclosure by ECCC of any information provided by them to the Recipient in connection with their applications for funding of their respective Final Project, or relating to activities falling within the scope of this Agreement or any Final Agreement.

## **5. MAXIMUM AMOUNT OF CONTRIBUTION**

- a) ECCC agrees, subject to the terms and conditions of this Agreement, to contribute towards the Eligible Expenditures set out in this Agreement incurred by the Recipient to undertake the Project, up to a maximum amount of \$90,000 cash.
- b) The Total Contributions secured or provided by the Recipient for the Project is \$296,000.
- c) Of this total, the Total Canadian Government Funding (cash and in-kind) is \$200,500 which represents 68% of the Total Contributions (cash and in-kind).
- d) By the Effective Date the Recipient provided, and ECCC accepted, a project cashflow for the duration of the Project as set out in Appendix B. ECCC's cash contribution shall be based on the agreed upon cashflow requirements, and the maximum amounts to be available for each Fiscal Period are as follows:
  - for the Fiscal Period 2016-2017 in the amount of \$90,000

## **6. ELIGIBLE EXPENDITURES**

- a) The following shall be Eligible Expenditures, if directly incurred for the purposes of the Project and if the terms and conditions set out in this Agreement are met by the Recipient, at the satisfaction of ECCC:
  - Contractors
  - Material and supplies expenditures
  - Funds distributed to Final Recipients in accordance with Section 4b)
  - The eligible expenditures above include any GST/HST that is not reimbursable by the Canada Revenue Agency and any PST not reimbursable by the Provinces

No overhead shall be included in the eligible expenditures in this Section.

- b) Expenditures, other than those herein allowed, are ineligible unless specifically approved in writing by ECCC prior to the time the expenditures are incurred.

## **7. BASIS AND METHOD OF PAYMENT**

### **a) Basis of Payment**

Within the limits of Section 5 of the Agreement and Section 19 of Appendix A, and upon receipt and acceptance of any required reports and/or forms under this Agreement, and in accordance with ECCC's policies and the applicable laws relating to financial administration, as amended from time to time, ECCC agrees to pay the Recipient up to the maximum amount specified in Section 5a).

### **b) Method of Payment**

- i. The Recipient is eligible to receive payments for ECCC's Contribution stated in Section 5d) upon receipt and acceptance by ECCC of an accounting of the Eligible Expenditures directly incurred to-date by the Recipient for the purposes of undertaking the Project.
- ii. The Recipient shall submit to ECCC requests for reimbursement of Eligible Expenditures using the prescribed form provided in Appendix C.
- iii. Requests for reimbursement may be submitted to ECCC at any time during the Fiscal Period, but usually not more frequently than four times per Fiscal Period.

### **c) Final Payment**

During the final Fiscal Period ECCC shall withhold a minimum of \$9,000 of ECCC's Contribution allocated to the final Fiscal Period. ECCC shall issue the final payment to reimburse the unpaid balance of Eligible Expenditures upon receipt and acceptance by ECCC of the final report(s) required by Section 8. The Recipient shall submit the request for final payment with the final report(s) required by Section 8.

## **8. REPORTING**

### **a) Financial Reporting**

#### *Cash Flow Statement*

By the Effective Date of this Agreement, the Recipient has provided and both Parties have agreed to a cashflow statement for the entire period specified in Section 2, as detailed in Appendix B.

#### *Financial Forecasting*

By September 15 and December 15 the Recipient shall provide a financial forecast of the expenditures pertaining to the balance of the Fiscal Period.

#### *Final Reporting*

Following completion of the Project the Recipient shall, no later than 30 days after the Agreement End Date as referred to in Section 2, provide a final financial report including:

- a Project income and expenditure summary which shall identify all sources and use of the total Project funds over the duration of the entire Agreement;
- a statement detailing the use of ECCC's Contribution provided over the duration of the entire Agreement, including an explanation of any financial variances.

The accounting of total Project funding shall confirm that the Recipient continued to meet the eligibility requirements of the ECCC Program and identifies the need for any repayment, in part or in whole, of ECCC's financial contribution described in Section 5.

Per Section 7c), the Recipient shall submit the final request for payment when submitting the final report(s).

*Certification / Attestation*

All Financial Reports submitted by the Recipient shall be certified by a senior officer of the Recipient's organization (such as a CEO or CFO) attesting to the correctness and completeness of the financial information provided.

b) Project Activity Progress Reporting

*Project Description*

By the Effective Date of this Agreement, the Recipient has provided and both Parties have agreed upon a Project description for the entire period specified in Section 2.

*Ongoing Communication*

The Recipient shall make all reasonable efforts to respond to ad-hoc requests by ECCC for information on Project progress. The Recipient shall also advise ECCC immediately of any substantial events that could impact the Project timeline or cashflow requirements.

*Final Reporting*

Following completion of the Project the Recipient shall, no later than 30 days after the Agreement End Date as referred to in Section 2, provide a Project Performance Report with Project highlights, description of outcomes with respect to results set out in Section 3, quantitative and qualitative description of the accomplishments / success of the Project; challenges faced and solutions found, information on results (negative or positive) that were not anticipated, and lessons learned.

Per Section 7c), the Recipient shall submit the final request for payment when submitting the final report(s).

- c) The Recipient shall provide the reports required by Section 8 using the templates provided by ECCC in Appendix D, or an alternative format as pre-approved by ECCC.

**9. COMMUNICATIONS AND REQUESTS FOR PAYMENT**

- a) Any request for payment or notice or other formal communication between the Parties shall be:
- i. delivered personally; or
  - ii. scanned and sent by email; or
  - iii. mailed by registered mail, return receipt requested; or
  - iv. sent by facsimile transmission, proof of transmission required, and addressed as follows:

for ECCC:

Environment and Climate Change Canada  
Rose Iantorno, Grant and Contribution Administration Officer  
Great Lakes Areas of Concern  
4905 Dufferin Street  
Toronto, Ontario  
Canada, M3H 5T4

for the Recipient:

Niagara Peninsula Conservation Authority  
Steve Gillis , Restoration Project Lead  
250 Thorold Road West  
Welland, Ontario  
Canada, L3C 3W2

- b) If such notice or other formal communication is delivered in person, it shall be deemed to have been received on the date of delivery. If such notice is sent by registered mail, it shall be deemed to have been received by the Parties on the fifth business day following the day it is so mailed, or on the day it is received whichever is earlier. If the notice is sent by email or facsimile transmission, it shall be deemed to be received as of the date of the transmission, and for facsimile as evidenced by an automated confirmation of transmissions.

**10. SIGNATURES**

The Parties have executed this Agreement by the hands of their duly authorized officers as follows:

For Niagara Peninsula Conservation Authority

By: \_\_\_\_\_  
(print name)

Title: \_\_\_\_\_  
(print title)

Signature: \_\_\_\_\_

I represent and warrant that I am duly authorized to bind Niagara Peninsula Conservation Authority

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

HER MAJESTY THE QUEEN IN RIGHT OF CANADA, as represented by the Minister of the Environment and Climate Change who is responsible for Environment and Climate Change Canada

By: Jon Gee

Title: Manager, Great Lakes Areas of Concern

Signature: \_\_\_\_\_

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_



**APPENDIX A**  
**GENERAL TERMS AND CONDITIONS**

**1. APPROPRIATION**

Payment of the ECCC Contribution shall be made at ECCC's discretion, which shall not be unreasonably withheld, and shall be subject to an annual appropriation of funds by the Parliament of Canada for the Fiscal Period in which any payment is to be made.

ECCC may reduce or terminate the ECCC Contribution in response to a reduction or a denial of an appropriation by the Parliament of Canada in accordance with Section 11d) of Appendix A.

**2. ALLOCATION**

ECCC may, in accordance with Section 11d) of Appendix A, reduce or terminate the ECCC Contribution in response to the Government of Canada's annual budget, a parliamentary, governmental or departmental spending decision, or a restructuring or re-ordering of the federal mandate and responsibilities that impact on the ECCC Program under which this Agreement is made.

**3. PERSONS NOT TO BENEFIT AND LOBBYISTS**

The Recipient warrants that:

- a) no current or former public servant or public office holder to whom the Conflict of Interest Act, the Conflict of Interest and Post-Employment Code for Public Office Holders or the Values and Ethics Code for the Public Service applies shall derive direct benefit from this Agreement unless the provision or receipt of such benefit is in compliance with such legislation and codes;
- b) no member of the Senate or the House of Commons shall be admitted to any share or part of this Agreement, or to any benefit arising from it, that is not otherwise available to the general public;
- c) no bribe, gift, or other inducement has been paid, given, promised or offered to any person for, or with a view to, the obtaining of this Agreement by the Recipient;
- d) it has not employed any person to solicit or secure this Agreement upon any Agreement for commission, percentage, brokerage or contingent fee; and,
- e) it and any person lobbying on its behalf to obtain the contribution under this Agreement or any benefit hereto related and who is required to be registered pursuant to the Lobbying Act, is registered pursuant to that Act.

**4. LIABILITY**

The Recipient shall indemnify and save harmless Canada, ECCC, its officers, servants and agents from and against all liability, loss, damages, costs and expenses, including reasonable solicitor/client fees, administrative fees and disbursements, and from all claims, demands, actions, or any other proceeding whatsoever and by whomever made, for personal injury, death, environmental effect or property damage, arising directly or indirectly and whether by reason of anything done or omitted to be done, as a result of negligence or otherwise, from the performance or any default or delay in performance of the Recipient's obligations under this Agreement.

ECCC shall not be liable for any loan, capital lease or other long-term obligation in relation to the Project for which the contribution is provided.

**5. AUDIT**

ECCC may request, at its sole discretion and at its own expense, that an audit of the Recipient's financial statements, as they relate to this Project, be conducted at any point in time. The audit will be carried out by an independent accredited auditor and will be in accordance with the audit scope determined by ECCC, in consultation with the Recipient.

**6. REPAYMENT**

An amount paid by Canada as part of the ECCC Contribution or which is treated as such pursuant to the terms of this Agreement, and to which the Recipient is not entitled according to the terms of this Agreement shall be repayable to Canada and until repaid constitutes a debt due to Canada. ECCC shall deduct any such amount from subsequent payments of the ECCC Contribution or, if such amount is determined in or after the final Fiscal Period, the Recipient shall repay the amount within thirty (30) days of receiving written notification by ECCC. Interest shall be due and payable in accordance with the Interest and Administrative Charges Regulations SOR/96-188 made under the federal Financial Administration Act.

**7. RECORDS**

The Recipient agrees to keep proper accounts and records of the revenues and expenditures for the subject matter of the Agreement, including all invoices, receipts and vouchers relating thereto for a period of six years after the expiration or early termination of the Agreement.

**8. ACCESS TO RECORDS AND INFORMATION**

Subject to applicable access and privacy legislation and case law, the Recipient shall allow representatives of ECCC to have access to any records, information, databases, audit and evaluation reports and such information that may be in any way relative to the project, as ECCC may request during the life of the Agreement or within six years after its early termination or expiration.

**9. ACCESS TO PREMISES**

The Recipient agrees to give access to ECCC, by giving a five business day notice to the Recipient, to visit the premises or site where the Project is being carried out in order to review and assess the progress of the Project and compliance with the Agreement. The Recipient will provide such access only when the Recipient has control of the site or premises and authority to grant access.

**10. CONSENT TO DISCLOSURE**

The Recipient consents to the public disclosure by ECCC of any information provided under this Agreement, including without limitation information which relates to activities and objectives which are the subject of this Agreement, except where such information would not be disclosed pursuant to Section 20 of the Access to Information Act R.S.C. 1985, c. A-1. It is expressly agreed that ECCC may disclose, among other information, the following elements of information:

- Name of the Recipient;
- Maximum amount of the contribution;
- Purpose of the Agreement;
- Activities to be undertaken under the Agreement;
- Duration of the Agreement; and
- Analysis, audit and evaluation reports relating to the Project performed by either of the Parties.

**11. DEFAULT, REMEDIES, TERMINATION BY REASON OF DEFAULT AND REDUCTION OR TERMINATION AT ECCC'S DISCRETION**

a) Default

ECCC may declare a default under this Agreement if any of the following events occur:

- the Recipient becomes bankrupt, has a receiving order made against it, makes an assignment for the benefit of creditors, takes the benefit of a statute relating to bankrupt or insolvent debtors, ceases to actively carry on a business or is subject to an order made or resolution passed for the winding-up of the operations of the Recipient;
- the Recipient has submitted false or misleading information to ECCC or has made a false or misleading representation in respect of any matter related to this Agreement, except for an error in good faith, demonstration of which is incumbent on the Recipient, to ECCC's satisfaction;
- ECCC, at its discretion concludes, pursuant to a review of any of the financial reports submitted pursuant to Section 8, that a material discrepancy exists between the actual revenues and expenditures incurred by the Recipient to date and the forecast amounts set out in Appendix B or between the results attained by the Recipient to date and those that could reasonably be expected to have been attained at that point in time;
- the Recipient is no longer eligible under the eligibility requirements of the ECCC Program;
- the Recipient fails to complete the Project on the terms and conditions herein; and/or
- the Recipient fails to perform or comply with any term, condition, or other obligation contained in this Agreement for which it has responsibility.

b) Remedies

If ECCC declares that an event of default has occurred, ECCC may, in addition to any other remedy provided by law or pursuant to this Agreement, exercise one or more the following remedies:

- reduce the ECCC Contribution level;
- suspend the payment of any amount in respect of ECCC Contribution; or
- require the Recipient to repay all or part of the ECCC Contribution disbursed, with interest, calculated in accordance with the Interest and Administration Charges Regulations, SOR/96-188 from the date of demand for repayment.

The fact that ECCC refrains from exercising a remedy or any right herein shall not be considered to be a waiver of such remedy or right and, furthermore, partial or limited exercise of a remedy or right by ECCC shall not prevent ECCC in any way from later exercising any other remedy or right under this Agreement or other applicable law.

c) Termination by Reason of Default

- In the event of default, ECCC may immediately terminate this Agreement by means of a written notice of default and termination given to the Recipient. ECCC may also exercise any lawful remedy that ECCC deems appropriate.
- Notwithstanding the foregoing, ECCC reserves the right, where ECCC determines that the Recipient's default is capable of cure and that a delay for these purposes is appropriate, to send a written notice of default specifying a cure period of no less than thirty (30) days from the date of the Recipient's deemed receipt of the notice and requiring that the Recipient provide ECCC with proof of the cure within that delay. At the end of the cure period, ECCC may proceed to give the Recipient written notice of default and termination of this Agreement, and ECCC may also exercise any other lawful remedy that ECCC deems appropriate.

d) Reduction or Termination at ECCC's Discretion

- At any time before the completion of the Project, ECCC may, by giving notice in writing to the Recipient, reduce the ECCC Contribution or terminate this Agreement.

- In the case of a reduction to the ECCC Contribution, the reduction notice shall give the Recipient sixty (60) days written notice of that reduction in the ECCC Contribution. Subject to the maximum amount of the ECCC Contribution under Section 5 of this Agreement and any limits on Eligible Expenditures imposed within the reduction notice, ECCC shall reimburse the Recipient for any Eligible Expenditures incurred and claimed to the effective date of the reduction. The Parties understand that any such reduction may affect the full implementation of the Project which may require amending the Agreement in accordance with Section 24 of Appendix A.
- In the case of termination of this Agreement, the termination notice shall give the Recipient sixty (60) days written notice of the termination. Subject to the maximum amount of the ECCC Contribution under Section 5 of this Agreement and any limits on Eligible Expenditures imposed within the termination notice, ECCC shall reimburse the Recipient for any Eligible Expenditures incurred and claimed to the effective date of the notice of termination. The funding obligations of ECCC shall cease as of the effective date of termination.

## 12. NO PARTNERSHIP

The Parties acknowledge no principal-agent, employer-employee, partnership or joint venture is created by virtue of this Agreement and that the Recipient shall not represent itself as an agent, employee or partner of ECCC, including in any Agreement with a third party.

## 13. CONFLICT OF INTEREST

The Recipient confirms and warrants that it has, for the duration of this Agreement, no interest, pecuniary or otherwise, in any business matter that would put it in a real and/or apparent conflict of interest. The Recipient shall immediately notify ECCC, in writing, should any real and/or apparent conflict of interest exist or arise that could have a direct impact on ECCC's contribution to the Project.

## 14. PUBLIC ACKNOWLEDGEMENT AND OFFICIAL LANGUAGES

Due acknowledgement of ECCC's contribution for the Project shall be made in the Recipient's publications, public information releases, advertising, promotional announcements, activities, speeches, lectures, interviews, ceremonies and its web site.

ECCC shall provide the Recipient with the necessary templates and/or electronic files containing the logos and/or acknowledgement statements to be used.

The Recipient shall provide ECCC with final copies of any document or material utilizing the ECCC logo, Government of Canada logo and/or acknowledgement statements prior to printing or distribution, for ECCC approval of the use of said logos and/or acknowledgement statements.

Due acknowledgement consists of including the following in both appropriate official languages:

**This project was undertaken with the financial support of:**

**Ce projet a été réalisé avec l'appui financier de:**



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada

The ECCC logo can not be used without the statement.

If space does not permit, the following statement only is to be used:

This project was undertaken with the financial support of the Government of Canada through the federal Department of the Environment.

Ce projet a été réalisé avec l'appui financier du gouvernement du Canada agissant par l'entremise du ministère fédéral de l'Environnement.

ECCC shall provide the Recipient with the necessary templates and/or electronic files containing the logos and/or acknowledgement statements to be used.

Due acknowledgement consists of including the following in both appropriate official languages: The Government of Canada logo can not be used without the statement.

If space does not permit, the following statement only is to be used:

This project was undertaken with the financial support of the Government of Canada.

Ce projet a été réalisé avec l'appui financier du gouvernement du Canada.

## **15. CONFIDENTIALITY**

- a) "Confidential Information" means confidential, private or secret information in all material forms and however fixed, stored, expressed or embodied (and includes, without limitation, samples, prototypes, specimens and derivatives) that is disclosed by the Parties to each other during discussions, telephone calls, meetings, tests, demonstrations, correspondence, any other exchange, communication or otherwise under this Agreement and includes, without limitation:
- all scientific, technical, business, financial, legal, marketing or strategic information;
  - information that is non-public, protected, privileged or proprietary in nature, which may have actual or potential economic value, in part, from not being known; and
  - information that is related to activities pursuant to this Agreement, irrespective of whether or not such information is specifically marked confidential or identified as confidential at the time of disclosure.

The responsibility rests with the disclosing Party to clearly mark all Confidential Information as "confidential", "private", "secret", "protected", or equivalent wording.

- b) Confidential Information disclosed under this Agreement shall remain the exclusive property of the disclosing Party and the disclosure of the Confidential Information to the receiving Party shall in no way be deemed to be a grant of a license or a proprietary right.
- c) The receiving Party shall use the Confidential Information solely for the purposes for which it is disclosed, as indicated in writing by the disclosing Party at the time of disclosure, and for no other purposes.
- d) Unless the disclosing Party gives to the receiving Party its prior written consent to disclosure, the receiving Party shall keep confidential, hold in confidence, safeguard and not disclose the Confidential Information to third parties.

- e) The receiving Party shall use all reasonable efforts and take such action as may be appropriate to prevent the unauthorized use or disclosure of, and to preserve the confidentiality of, all Confidential Information, including, without limitation:
  - ensuring that the Confidential Information is disclosed only to those: who have a need to know for the purposes of this Agreement; who are subject to a contractual duty of confidentiality; and who are properly instructed to maintain the Confidential Information in confidence; and
  - safeguarding all Confidential Information against theft, damage or access by unauthorized persons by all reasonable means, including, without limitation, visitor control, controlled photocopier access, computer firewalls, secure computers, and physical security of facilities and computer networks.
- f) The receiving Party shall promptly notify the disclosing Party in writing if it has reason to believe that unauthorized use, possession, acquisition, dissemination or disclosure of any Confidential Information has occurred, and the receiving Party shall use its reasonable endeavours to cooperate with any appropriate action taken by the disclosing Party to protect such Confidential Information.
- g) Upon termination of this Agreement or upon either Party's request, all Confidential Information in any form, including without limitation, any hard or electronic copies, shall be promptly returned to the disclosing Party or destroyed without reviewing any copies or excerpts thereof. The receiving Party shall have no right to continue any use of or disclose the Confidential Information in any way, whatsoever.
- h) Nothing in this Agreement shall be interpreted so as to preclude ECCC from disclosing information that ECCC may be required or ordered to disclose pursuant to any applicable federal laws, including, without limitation, the Access to information Act, R.S. 1985, c. A-1, the Privacy Act, R.S. 1985, c. P-21 or judicial order.

## **16. PRIVACY AND PERSONAL INFORMATION**

The Parties shall conduct their activities in accordance with applicable legislation dealing with the protection of the privacy and personal information of individuals. For greater certainty, the Recipient shall ensure that its employees, agents and contractors are made fully aware of their obligations to protect personal information.

## **17. SUPPORTING DOCUMENTATION**

The Recipient shall provide ECCC, as and when requested, all supporting documentation ECCC deems appropriate to enable ECCC to review and accept any request for payment. In such case, ECCC shall advise the Recipient of the appropriate level of detail and of any specific supporting documentation required.

## **18. AMOUNTS OWING TO THE FEDERAL GOVERNMENT**

The Recipient attests to have declared any past-due amounts owing to the federal Crown under any legislation or any Agreement with the federal Crown before the signing of this Agreement and agrees to declare any amounts owing to the federal Crown under any legislation or any Agreement with the federal Crown that become past-due during the course of this Agreement.

The Recipient acknowledges that any amounts due to the Recipient pursuant to this Agreement may be set-off against any past-due amounts owing to the federal Crown.

## **19. ENVIRONMENTAL ASSESSMENT**

- a) The Parties agree that the Canadian Environmental Assessment Act, 2012 S.C. 2012, c. 19, s. 52 (CEAA 2012) does not apply to the Project.
- b) If, as a result of changes to the Project or otherwise, the Project becomes a “designated project” as defined in subsection 2(1) of the CEAA 2012, the Recipient agrees that no ECCC Contribution or additional ECCC Contribution will become or will be payable by ECCC to the Recipient for the Project unless and until:
  - i. the Canadian Environmental Assessment Agency makes a decision that no environmental assessment of the Project is required and posts that decision on the “Internet site” as defined in the CEAA 2012; or
  - ii. (A) the decision statement with respect to the Project issued by the Minister of the Environment to the Recipient indicates that the Project is not likely to cause significant adverse environmental effects or that the significant adverse environmental effects that it is likely to cause are justified in the circumstances, and  
  
(B) at the time that a claim is submitted for payment by the Recipient to ECCC, ECCC is of the opinion that the Recipient has complied or will comply with any conditions set out in the decision statement.
- c) If, as a result of changes to the Project or otherwise, the Project becomes a “project” as defined in section 66 of the CEAA 2012 and is therefore to be carried out on “federal lands” as defined in subsection 2(1) of the CEAA 2012 or outside Canada, the Recipient agrees that no ECCC Contribution or additional ECCC Contribution will become or will be payable by ECCC to the Recipient for the Project unless and until:
  - i. for a Project to be carried out on federal lands, ECCC determines that the Project is not likely to cause significant adverse environmental effects.
  - ii. for a Project to be carried out outside Canada:
    - (A) ECCC determines that the carrying out of the Project is not likely to cause significant adverse environmental effects, or
    - (B) ECCC determines that the carrying out of the Project is likely to cause significant adverse environmental effects and the Governor in Council decides that the significant adverse environmental effects that the project is likely to cause are justified in the circumstances; and,
  - iii. at the time that a claim is submitted for payment by the Recipient to ECCC, ECCC is satisfied that the Recipient has complied or will comply with any conditions set out by ECCC, for the purpose of this Agreement, with respect to the determination referred to in subparagraph ii.
- d) The Recipient will allow ECCC and its agents, employees, servants or contractors to access and enter at any time during reasonable hours upon any real property under the ownership or control of the Recipient for the purpose of ensuring that any conditions referred to in subparagraph c) iii. have been or will be complied with.
- e) Failure to comply with any of the conditions referred to in subparagraph c) iii), is a cause for default in respect of this Agreement in accordance with Section 11 of Appendix A.

## **20. SUSTAINABLE DEVELOPMENT**

The Recipient shall plan and implement the Project in a manner that promotes sustainable development and ensures the protection of the environment to the greatest extent possible.

## **21. INTELLECTUAL PROPERTY RIGHTS**

"Intellectual Property Rights" means any and all intellectual property rights recognized by law, including but not limited to intellectual property rights protected through legislation.

- a) Any Intellectual Property Rights created by the Recipient in association with the Project shall vest in and remain the property of the Recipient.
- b) The Recipient hereby grants to ECCC a non-exclusive, unconditional, irrevocable, perpetual, worldwide, royalty-free right to exercise all Intellectual Property Rights that vest in the Recipient under 21a), for any public purpose except commercial exploitation in competition with the Recipient. ECCC's license includes the right to use, produce, publish, translate, reproduce, adapt, modify, disclose, share, distribute, and broadcast the intellectual property.
- c) The Recipient shall further be responsible for providing to ECCC upon request, a written permanent waiver of moral rights (as this term is defined in the Copyright Act, R.S.C., c. C-42), from every author that contributes to the intellectual property which is subject to copyright protection.

## **22. DISCLAIMER**

The Recipient shall include the following disclaimer in any public information releases, advertising, promotional announcements, activities, speeches, lectures, interviews, ceremonies and web sites when the Recipient expresses a view or opinion specifically relating or referring to the Project.

"The views expressed herein are solely those of Niagara Peninsula Conservation Authority."

« Les opinions exprimées dans ce document sont celles de / de la / du / d' / des Niagara Peninsula Conservation Authority. »

## **23. SETTLEMENT OF DISPUTES**

The Parties agree that any matter in dispute under this Agreement shall first be referred to senior officers of the Parties. If the matter cannot be resolved, it shall be submitted to a mediator as agreed upon by both Parties. The Parties shall bear the expenditures directly related to the mediation process equally.

## **24. AMENDMENTS**

This Agreement may be amended by the mutual written consent of the Parties. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties, while this Agreement is in force.

## **25. SURVIVAL OF TERMS**

All representations and obligations contained in this Agreement on the part of each of the Parties expressly or by nature shall survive the early termination or the expiration of this Agreement until they are satisfied or until they expire by nature.

The following sections shall survive the termination of this Agreement:

- Agreement, Section 7 c) – Final Payment
- Agreement, Section 8 – Reporting



- Appendix A, Section 4 – Liability
- Appendix A, Section 5 – Audit
- Appendix A, Section 6 – Repayment
- Appendix A, Section 7 – Records
- Appendix A, Section 8 – Access To Records And Information
- Appendix A, Section 11 – Default, Remedies, Termination by Reason of Default, and Reduction or Termination at ECCC's Discretion
- Appendix A, Section 21 – Intellectual Property Rights
- Appendix A, Section 25 – Survival Of Terms

**26. WAIVER OF RIGHTS**

The waiver of any rights following any breach of any representation, warranty, covenant, obligation or Agreement shall not be deemed to be a waiver of any further breach. No waiver is effective unless in writing.

**27. LEGALITY**

The Recipient shall ensure that the Project be conducted in compliance with all applicable laws.

**APPENDIX B**  
**Project Cashflow and ECCC Funding**

**2016-2017**

**Project Cashflow**

<b>Project Funding</b>		<b>TOTAL</b>		
<b>Contributor</b>	<b>Contributor Type</b>	<b>Cash</b>	<b>In-Kind</b>	<b>All Funding</b>
Great Lakes Sustainability Fund	Environment and Climate Change Canada	90,000		90,000
Niagara Peninsula Conservation Authority	Provincial Government		80,000	80,000
Landowners	Other	60,000	20,000	80,000
Ducks Unlimited Canada	Other	5,000	5,000	10,000
Volunteers	Other		1,000	1,000
Trees Ontario	Other	2,500	2,000	4,500
Ontario Ministry of Natural Resources and Forestry	Provincial Government		2,500	2,500
Ontario Ministry of the Environment and Climate Change	Provincial Government		10,000	10,000
City of Hamilton	Municipal Government		15,000	15,000
Ontario Ministry of Agriculture, Food and Rural Affairs	Provincial Government		3,000	3,000
<b>Total Project Funding</b>		<b>157,500</b>	<b>138,500</b>	<b>296,000</b>

<b>Project Costs</b>		<b>TOTAL</b>		
<b>Cost Detail</b>	<b>Cost Category</b>	<b>Cash</b>	<b>In-Kind</b>	<b>All Funding</b>
Staff salaries	Salaries and Wages		70,000	70,000
Rental of office space	Overhead		5,000	5,000
Travel for projects	Travel		5,000	5,000
Supplies and materials for restoration projects	Material and supplies expenditures	27,500		27,500
Construction of restoration projects	Contractors	86,000	33,500	119,500
Lab analysis for water quality samples	Contractors	20,000	25,000	45,000
Landowner reimbursement for Best Management Projects	Further Disbursement of ECCC Funding to Final Recipients	24,000		24,000
<b>Total Project Funding</b>		<b>157,500</b>	<b>138,500</b>	<b>296,000</b>

<b>ECCC Funding</b>		<b>Apr, May, Jun</b>	<b>Jul, Aug, Sep</b>	<b>Oct, Nov, Dec</b>	<b>Jan, Feb, Mar</b>	<b>TOTAL</b>		
<b>Expenditure Detail</b>	<b>Expenditure Category</b>	<b>Cash</b>	<b>Cash</b>	<b>Cash</b>	<b>Cash</b>	<b>Cash</b>	<b>In-Kind</b>	<b>All Funding</b>
Supplies and Materials for restoration projects	Material and supplies expenditures		12,000	4,000		16,000		16,000
Construction of restoration projects	Contractors		10,000	10,000	10,000	30,000		30,000
Lab analysis for water quality samples	Contractors		5,000	10,000	5,000	20,000		20,000
Landowner reimbursement for Best Management Projects	Further Disbursement of ECCC Funding to Final Recipients		12,000		12,000	24,000		24,000
<b>Total Expenditures</b>		<b>0</b>	<b>39,000</b>	<b>24,000</b>	<b>27,000</b>	<b>90,000</b>	<b>0</b>	<b>90,000</b>

[Click here to generate stand-alone Payment Request Form](#)

Project Number:	GCXE17P160	Claim #:		Final Payment?	
Recipient Name:	Niagara Peninsula Conservation Authority				
Project Title:	Water Quality and Habitat Improvement Program				
Address:	250 Thorold Road West, Welland, Ontario, Canada, L3C 3W2				
Contact Name:		Contact Phone Number:			
Email Address:					
Fiscal Year:		Claim Period:		to	
Payment Method		Recipient's Reference/Invoice # (if applicable):			

Expenditure Type	Current Accounting	Previous Balance	Total for this Fiscal Year
TOTAL Eligible Project Costs	(a)		

	Amount
Advance limit for current fiscal year (from section 7 of your agreement)	(b)
Advance(s) already issued	(c)
Advance(s) previously accounted for (excluding amount from Section 2 above)	(d)
Advance(s) to be accounted for in Section 2 above	(e)=lesser of (a) and (c)-(d)
Advance that is unaccounted for	(f)=(c)-(d)-(e)
Current available advance limit	(g)=lesser of (b)-(f) and (h)-(i)
Advance requested (see note below)	Must be less than or equal to (g)

Note: You must clearly demonstrate the need for any advance. Provide an updated cashflow, if it has changed since the last time submitted to ECCC. You should also provide other supporting documents to demonstrate the need for an advance, clearly indicating a gap between the timing of the project costs and the funding received from all project funders.

<u>This Payment</u>	Requested
Reimbursement of Eligible Expenditures Requested	
Advance Payment Requested	
Payment to be Issued	

	Current Fiscal Year
Total ECCC Funding	(h)
Total of previous advance payments and reimbursements	(i)
Current payment (from Section 4 above)	
Total Payments	
Balance of ECCC Funding Available	

I hereby certify that the information provided in this form is accurate and that (1) any reimbursement requested or accounting for advance is for an eligible expenditure as defined by the Agreement and/or (2) any advance requested will be used in accordance with the Agreement.

\_\_\_\_\_  
 Name and Title (Print)

\_\_\_\_\_  
 Signature

Verified By		Certified Pursuant to s.34 of the FAA	
<div></div>		<div></div>	
Name	Date	Name (print)	Signature
Invoice Number:	GCXE17P160 -		Funds Commitment: GCXE17P160
	Line of Coding (Fund - F/A - GL - FC/CC - Order - WBSE)		Commitment Line #
Financial	4028 - PAN4 - 56719 - 221240 - - A-000416.001		Amount
Coding:			

## **APPENDIX D**

### **Reporting Templates**

Further to Section 8 - Reporting of the Agreement, ECCC has attached to this Agreement, or will provide under separate cover, the following templates which are to be used to meet the reporting requirements of this Agreement.

#### **Financial Reporting - Section 8a)**

<b>Reporting Requirement</b>	<b>Template or Documentation Required</b>
Financial Forecasting	ECCC will contact the Recipient directly to obtain the required information
Final Reporting	Final Reporting template (for both Financial and Activity results reporting)

In addition, Appendix C - *Request for Payment Form* is to be used for all requests for reimbursement of expenditures, as stated in Section 7, "Basis and Method of Payment" in the Agreement

#### **Project Activity Reporting - Section 8b)**

<b>Reporting Requirement</b>	<b>Template or Documentation Required</b>
Final Reporting	Final Reporting template (for both Financial and Activity results reporting)

- ECCC may revise these reporting templates and will provide the Recipient with updated templates in a timely basis.
- As stated in "Ongoing Communication" in Section 8b) of the Agreement, ECCC may request that the Recipient provide information on the financial and/or activity progress of the project, in addition to the reports required by this Agreement.

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**Report To: Board of Directors**

**Subject: Renew Landowner Agreement to Access Monitoring Well**

**Report No: 94-16**

**Date: September 21, 2016**

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**RECOMMENDATION:**

**That Report No. 94-16 and the attached landowner agreement for accessing monitoring well FS-2S be approved.**

**PURPOSE:**

The purpose of this report is to request NPCA Board approval for the attached landowner agreement that is required to continue using and maintaining monitoring well FS-2S. The well is currently used for the NPCA Groundwater Monitoring program.

This report aligns with NPCA's mandate to advocate and implement programs that "improve the quality of lands and water within its jurisdiction".

**BACKGROUND:**

The Niagara Peninsula Conservation Authority (NPCA) operates five (5) monitoring wells under the NPCA Groundwater Study. NPCA has participated in this program since 2005. While most of the monitoring wells are located on municipal or conservation authority lands, monitoring wells FS-2S and FH-2D are located on private property, and thus require a landowner agreement to access the property and the wells.

In 2016 the property containing these two wells was sold to a new owner, and consequently a new agreement is required with the new land owner. Staff have met and discussed the matter with the new landowner, and he has expressed a willingness to allow NPCA staff to continue entering the property to access well FS-2S as part of the NPCA program.

The NPCA no longer requires access to monitoring well FH-2D; consequently, NPCA staff recommended decommissioning of this well (at NPCA's expense as per the original land owner agreement). However, the new landowner wishes to take over ownership/responsibility of this well and use it for irrigation purposes.

The purpose of the attached draft landowner agreement is to:

1. Allow NPCA staff to access the property in order to collect samples, deploy groundwater monitoring equipment, and maintain monitoring well FS-2S.
2. Outline the responsibilities of the NPCA and the landowner with respect to monitoring well FS-2S, including responsibility for eventual decommissioning of the well, and

3. Transfer the ownership and responsibility for operation, maintenance and decommissioning, and any future liabilities associated with well FH-2D to the new landowner.

Note: The attached landowner agreement has been reviewed by a lawyer.

The landowner's name has been deleted from the attached agreement in order to maintain Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990 (MFFIPA) requirements.

### **FINANCIAL IMPLICATIONS**

NPCA will be responsible for maintaining and eventually decommissioning well FS-2S. This obligation is similar to that of the original landowner agreement. NPCA would no longer be responsible for maintaining or decommissioning well FH-2D.

### **RELATED REPORTS AND APPENDICES:**

1. Attachment 1: Draft Landowner Agreement

**Prepared by:**



**Brian Wright, P.Eng.**  
**Manager, Watershed Projects**

**Reviewed by:**



**Peter Graham, P.Eng.**  
**Director, Watershed Management**

**Submitted by:**



**Carmen D'Angelo**  
**Chief Administrative Officer / Secretary Treasurer**

## **MONITORING WELL AGREEMENT**

This agreement made in triplicate this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

BETWEEN: **MR.**

\_\_\_\_\_  
(Hereinafter referred to as the “Property Owner”)

-And-

**THE NIAGARA PENINSULA CONSERVATION  
AUTHORITY**

(Hereinafter referred to as the “Authority”)

WHEREAS the Property Owner is the registered owner of lands municipally described as \_\_\_\_\_ (Hereinafter referred to as the “Lands”)

WHEREAS the Authority wishes to undertake groundwater monitoring activities on the Lands;

AND WHEREAS the Property Owner and the Authority have agreed that the Authority may carry out the groundwater monitoring activities as more particularly described herein;

NOW THEREFORE the Property Owner and the Authority agree as follows:

### **DEFINITIONS**

1. In this Agreement, the following terms shall have the following meanings:

“**Infrastructure**” includes any groundwater monitoring, sampling or testing equipment that is installed for the collection or transmission of water and includes but is not limited to well caps, down well data loggers and associated cables, telemetry equipment, enclosure boxes and wire mesh cages;

“**Monitoring Wells**” means wells that have been installed on the Lands that are each a test hole as defined in Regulation 903 of R.R.O. 1990 (Wells) made under the *Ontario Water Resources Act*;

“**Termination Date**” means the last day that the Authority is permitted to attend the Land to carry out ground water monitoring activities pursuant to this Agreement;

## **GENERAL**

2. The Property Owner grants to the Authority, its agents, employees and invitees permission to enter upon the Lands to undertake works as outlined in this Agreement.
3. The Infrastructure associated with Monitoring Well FS-2S installed on the Lands by the Authority shall be and remain in the ownership of the Authority under the terms agreed upon by the Authority and the Property Owner, for the life of, and after termination of this Agreement.
4. The Property Owner hereby assumes full ownership of monitoring well FH-2D for private use and hereby discharges the Authority from all claims and demands for repairs, decommissioning, injuries (including death), loss, damages, and costs in any way related or connected with monitoring well FH-2D.
5. The Infrastructure associated with Monitoring Well FS-2S shall be permitted to remain on the Lands until such time as the said Infrastructure is fully decommissioned and removed by the Authority or its agent(s), or upon expiration or termination of the Agreement in accordance with the terms herein.
6. The Property Owner agrees not to remove, alter, or destroy, in any way, the Infrastructure associated with Monitoring Well FS-2S without prior consultation and approval of the Authority, notwithstanding the following sections of this Agreement. The Property Owner shall not knowingly permit any third party to remove, alter, or destroy in any way, the Infrastructure associated with Monitoring Well FS-2S without prior approval of the Authority.
7. If there is any noticeable visible damage, accidental or otherwise, to the Infrastructure, the Property Owner will immediately make reasonable attempts to notify the Authority by email. The Authority acknowledges and agrees that the Property Owner shall not be responsible for any damage to the Infrastructure unless caused by the negligence or willful misconduct of the Property Owner or any others which are allowed to lawfully access the Lands.

## **PROVISIONS FOR CANCELLATION**

8. The Parties agree:

That this Agreement may be cancelled unilaterally by either Party by providing 90 days written notice of the intention to cancel to the other Party or by mutual agreement with any agreed period of notice.

- a. Should either party cancel this agreement, the Property Owner shall allow the Authority to decommission monitoring well FS-2S and remove all associated Infrastructure. The Authority shall be permitted not less than \_\_\_ days following the Termination Date to complete the decommissioning and removal. In the event the Authority is unable to



complete the decommissioning and removal, due to circumstances beyond its control, this period shall be extended as may reasonably be required.

- b. This agreement becomes null and void should the Property Owner, by way of selling or other transference, cease to own the Lands. The Property Owner shall inform the Authority within a reasonable timeframe of the intent to transfer the Lands in order that the Authority may negotiate this agreement with the new Property Owner or decommission monitoring well FS-2S and remove all associated Infrastructure.

## **AUTHORITY OBLIGATIONS**

9. The Authority shall perform the following work as outlined with due diligence, care, and expertise.
10. The Authority shall perform any clean-up works necessary to ensure reasonable access to the Infrastructure associated with Monitoring Well FS-2S including general well site clean-up and removal of obstructions to well access and to the well site access road.
11. The Authority will make a reasonable attempt to notify the Property Owner before entering the Lands.
12. The Authority shall maintain the Infrastructure associated with Monitoring Well FS-2S in accordance with the *Ontario Water Resources Act* and *Ontario Regulation 903*.
13. The Authority shall periodically visit the FS-2S monitoring well site to, amongst other things, collect water level monitoring data and water quality samples, conduct site inspections, and undertake maintenance of the installed Infrastructure.
14. Upon request by the Property Owner, the Authority shall make available all water quantity and/or water quality data collected by the Authority.
15. The Authority reserves the right to use the information generated by this program for the management and protection of the Province's water resources and human health. All data shall be subject to disclosure as required under Provincial legislation.

## **INSURANCE AND INDEMNITY**

- i) During the entire term of this Agreement, the Authority agrees to obtain and keep in force a general public liability insurance policy in the maximum amount of five million dollars (\$5,000,000.00) of lawful money of Canada, that protects the Authority and the employees of the Authority from all claims, demands, actions, causes of action that may be taken or made against them or any of them for any loss, damage or injury, including death, of any nature or kind whatsoever that may arise

through any act or omission or both including negligent acts or omissions of the Authority or any employee or employees of the Authority.

- ii) The Authority agrees to protect, indemnify, keep indemnified and save harmless the Property Owner from and against all claims, demands, costs, actions, causes of action, expenses, legal fees whatsoever which may be taken or made against them or any of them incurred or become payable by them or any of them for any loss, damage or injury, including death, of any nature or kind whatsoever arising out of or in consequence of any act, neglect or omission of the Authority or any employee(s) or subcontractors of the Authority in connection with Monitoring Well FS-2S.
- iii) The Authority agrees to protect, indemnify, keep indemnified and save harmless its officers, servants and agents from and against all claims, demands, costs, actions, causes of action, expenses, legal fees whatsoever which may be taken or made against them or any of them incurred or become payable by them or any of them for any loss, damage or injury, including death, of any nature or kind whatsoever arising out of or in consequence of any act, neglect or omission of the Authority or any employee(s) or subcontractors of the Authority in connection with the performance of this Agreement.

#### **COMPLY WITH THE LAWS**

The Authority employees and representatives, if any, shall at all times comply with any and all applicable federal, provincial and municipal laws, ordinances, statutes, rules, regulations and orders, and all by-laws of all relevant local authorities.

IN WITNESS WHEREOF the parties hereto have executed this Agreement

SIGNED, SEALED, AND DELIVERED

\_\_\_\_\_  
Witness as to execution

Per: \_\_\_\_\_  
**MR. ....**

#### **THE NIAGARA PENINSULA CONSERVATION AUTHORITY**

\_\_\_\_\_  
Witness as to execution

Per: \_\_\_\_\_

\_\_\_\_\_  
Name and title

---end---

**Report To:** Board of Directors

**Subject:** Treetop Trekking at Binbrook Conservation Area

**Report No:** 95-16

**Date:** September 21, 2016

---

**RECOMMENDATION:**

1. That Report No. 95-16 be **RECEIVED** for information
2. That the NPCA Board of Directors **AUTHORIZE** staff to prepare a detailed lease agreement with Treetop Trekking allowing the company to operate at NPCA's Binbrook Conservation Area; and
3. That the proposed lease agreement between the NPCA and Treetop Trekking be brought forward to the NPCA Board of Directors for final approval.

**PURPOSE:**

To update NPCA Board members on progress related to the development of a revenue generating partnership with Treetop Trekking.

This report aligns with the 2014-2017 NPCA Strategic Plan under 'Effective Communication with Stakeholders & Public,' specifically, 'Identify potential new partners, funders and allies.'

**BACKGROUND:**

At the September, 2015 Board meeting, Report No. 96-15 (Appendix 1) outlined an opportunity to enter into a revenue generating partnership with Treetop Trekking, at Ball's Falls Conservation Area. Treetop Trekking is an industry leader in aerial zip line parks in Ontario and Quebec. Of its 5 existing aerial zip line parks in Ontario, 3 of them are located within Conservation Areas; Ganaraska Forest Center, Bruce Mills and Heart Lake. Given the company's experience with existing conservation principles and experience within other conservation areas, this proposal was being implemented as a 'single source' within the NPCA's Purchasing and Procurement Policy.

At the September, 2015 Board meeting the following resolution was passed:

**Resolution No. FA – 151 - 15**

Moved by: S. Beattie

Seconded by: T. Quirk

*That the NPCA Board **RECEIVE** Report No. 96-15 for information; and,  
That the NPCA Board **AUTHORIZE** staff to enter into lease agreement negotiations with Treetop Trekking so Ball's Falls Conservation Area may offer Zip line and Aerial Game Courses as well as a Treewalk Village for children.*

**MOTION CARRIED 12-1**

### **DISCUSSION:**

Through formal and informal discussions with the Niagara Escarpment Commission, it became clear that the idea of establishing an aerial game and zip lining park at Ball's Falls would be challenging, given the restrictive legislative parameters within the Niagara Escarpment Plan and the associated parameters within the Niagara Escarpment Parks and Open Space System (NEPOSS).

In June, 2016, NPCA received a legal opinion which documented the process, challenges and likely costs associated with amending or re-doing the master plan for Ball's Falls to comply with the current NEPOSS process.

At the July, 2016 Board meeting, staff informed Board members of the perceived challenges and asked for permission to explore the viability of establishing such an operation at the Binbrook Conservation Area. Board members provided preliminary support for this request. Thereafter, during the months of July and August, Treetop Trekking visited Binbrook Conservation Area several times to assess the suitability of the site for its operations.

With there being no August Board meeting, on August 14, 2016 the NPCA CAO e-mailed all Board members to advise them that discussions with Treetop Trekking were still underway, but were now focused on establishing this potential operation at Binbrook Conservation Area.

On August 22<sup>nd</sup>, Treetop Trekking confirmed its interest in Binbrook and submitted a proposal for establishing their operations at Binbrook. Informal negotiations were initiated to ensure that NPCA's contributions and interests were taken into account. Treetop Trekking submitted its final proposal on September 12, 2016 (In-Camera),

Treetop Trekking is aware that it is the NPCA Board that must give final approval to this initiative.

### **FINANCIAL IMPLICATIONS:**

To accommodate this lease agreement, the NPCA would need to facilitate some infrastructure as per the approved Binbrook Conservation Master Plan. These costs will be highlighted in the 2017 Capital Budget to be deliberated by the Budget Steering Committee and thereafter by the NPCA Board of Directors.

Treetop Trekking capital and operating investments into this operation includes over \$1.8 million within a 3-year phase-in plan.

NPCA revenues related to this operation are expected to reach over \$75,000 by Year 3, over \$100,000 by Year 4 and over \$150,000 from 5 years and beyond. In addition, NPCA anticipate greater entrance fees at Binbrook with the implementation of this project and the new splash pad.

### **RELATED REPORTS AND APPENDICES:**

1. Report No. 96-15
2. Confidential – Treetop Trekking Proposal Dated September 12, 2016 (in-Camera)

**Prepared by:**



**Mark Brickell**  
Acting Director, Operations

**Submitted by:**



**Carmen D'Angelo**  
Chief Administrative Officer

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**Report To:** Board of Directors

**Subject:** Treetop Trekking at Ball's Falls CA

**Report No:** 96-15

**Date:** September 16, 2015

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**RECOMMENDATION:**

1. That the NPCA Board **RECEIVE** Report No. 96-15 for information;
2. That the NPCA Board **AUTHORIZE** staff to enter into lease agreement negotiations with Treetop Trekking so Balls Falls Conservation Area may offer Zip line and Aerial Game Courses as well as a Treewalk Village for children.

**PURPOSE:**

For the Board to consider entering into lease agreement negotiations with Treetop Trekking at Ball's Falls Conservation Area.

This report aligns with the 2014-2017 NPCA Strategic Plan under 'Effective Communication with Stakeholders & Public,' specifically, 'Identify potential new partners, funders and allies.'

**BACKGROUND:**

In an effort to make the operating parks self-sustaining, NPCA Operations staff continually explore options to bring in additional revenue/visitors and expand service offerings. One way, is for the NPCA to operate additional services (e.g. WiFi service at Long Beach, Honey-wagon service at Chippawa Creek, kayak storage service at Binbrook) and another way is to seek out partnerships (e.g. St. Johns Expression of Interest process).

NPCA staff recognizes that Ball's Falls already has great facilities and access but is currently under-utilized. Therefore, NPCA staff contacted Treetop Trekking July 22, 2015 via email to seek out information on the possibility of creating a partnership that would offer additional eco-friendly, educational services at Ball's Falls while increasing the number of visitors and revenue.

**DISCUSSION:**

Why Treetop Trekking? As mentioned in their Company Overview (Appendix 1), *"Aerial game and zip lining parks have become one of the most popular outdoor adventure activities in the country and can be enjoyed by the whole family. Visitors can experience an exciting adventure*

*at the tops of the trees, while enjoying the forest like never before. Aerial and zip lining parks are one of the top emerging trends in adventure travel.”*

Treetop Trekking has built its reputation as the leader in aerial zip line parks in Ontario. They currently have 5 parks in Ontario and another 5 in Quebec. Of the 5 parks in Ontario, 3 of them are within Conservation Areas; Ganaraska Forest Center (Ganaraska Conservation Authority), Bruce Mills Conservation Area and Heart Lake Conservation Area (both within Toronto and Region Conservation Authority). To be clear, Treetop Trekking builds and operates the parks within the Conservation Areas. NPCA staff has contacted both Conservation Authorities and they were very pleased with their respective partnerships with Treetop Trekking.

To staffs knowledge, Treetop Trekking is the only company operating Zip Line parks within Conservation Areas. As such, they are familiar with Conservation Authority values, rules and recognize that working with Technical Standards & Safety Authority (TSSA), requires strict compliance with regulations, policies and procedures and extensive paperwork.

NPCA staff met with General Manager, Stephane Vachon, and two associates on August 5th, 2015 on site at Ball's Falls Conservation Area. They noted Treetop Trekking has been interested in finding a park in the Niagara Region for some time and were quite excited about Ball's Falls and its natural features; including the 2 water falls. They were also pleased with the proximity of the park to the QEW, Niagara Falls and Hamilton. Activities could include Zip Line Aerial Game Treks, Stand Alone Zip Line Rides, Adrenaline Jump, Night Treks, and Team Building. There is also a new attraction for kids called 'Treewalk Village.' Existing parks also cater to those with disabilities, individuals, small and large groups, Corporate Groups, School Groups, Camps and Scouts, Teams and Clubs, and Birthday Parties.

Treetop Trekking has made subsequent visits to start creating a custom site plan for Ball's Falls, knowing that the next step is seeking NPCA Board direction at its Sept. Board meeting. NPCA staff will be visiting Treetop Trekking's Heart Lake Conservation Area facility on Sept. 11<sup>th</sup> for additional due diligence.

Discussions with the NPCA have proven timely as Treetop Trekking had just finalized plans and financing for another project. When this opportunity presented itself in Niagara, the founders and owners of Treetop Trekking decided to put that project on hold to investigate a partnership with the NPCA. If Ball's Falls is viable, Treetop Trekking has stated they would move forward with it immediately instead of the other project; with the intent to start operating a new park for the 2016 season.

### **FINANCIAL IMPLICATIONS:**

Although no negotiations have taken place (pending Board direction), Treetop Trekking has been very open with providing information; including providing details of their other agreements. Based on other agreements and prior to any negotiations, NPCA staff can approximate that an additional \$75,000-\$125,000 in revenue annually for Balls Falls could be realized in this partnership. Further, they have suggested co-marketing opportunities to assist in getting better utilization at Ball's Falls facilities.

If the Board approves the staff recommendation, next steps would include finalizing the custom site plan with input from NPCA staff (including staff Ecologist to create awareness of flora and

fauna in the design) and coming back to the Board with a DRAFT lease agreement for consideration.

**RELATED REPORTS AND APPENDICES:**

1. Appendix 1: Treetop Trekking Company Overview July 2015

**Prepared by:**



**David Barrick;  
Director of Operations**

**Submitted by:**

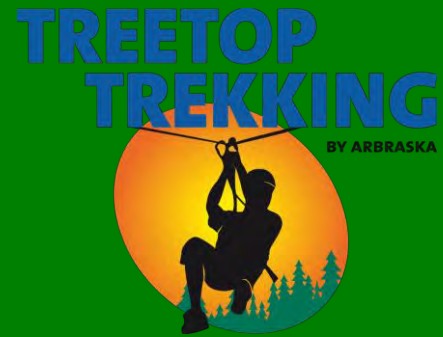


**Carmen D'Angelo  
Chief Administrative Officer /Secretary Treasurer**



# TREETOP TREKKING COMPANY OVERVIEW

## JULY 2015



PRINCIPAL CONTACT:  
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## INTRODUCTION TO TREETOP TREKKING

Aerial game and zip lining parks have become one of the most popular outdoor adventure activities in the country and can be enjoyed by the whole family. Visitors can experience an exciting adventure at the tops of the trees, while enjoying the forest like never before. Aerial and zip lining parks are one of the top emerging trends in adventure travel.



For over ten years Treetop Trekking and its sister company Arbraska have built its reputation as the leader in aerial zip line parks in Ontario and Quebec. The name Treetop Trekking is not only our brand; it has become the term associated with this type of activity in general. The Treetop Trekking name is associated with the premier visitor experience, with fun and challenging courses, friendly and energetic staff, and an outstanding safety record. Treetop Trekking's reputation grows continuously year after year and this is in large part due to the relationship we have with our customers. New parks benefit from this established brand name.

A Treetop Trekking aerial zip line park is made up of a series of elevated courses winding through the trees. Each course consists of platforms: wooden standing platforms around each tree, games: a variety of wooden challenges spanning the distance between each platform, and zip lines: cables which climbers connect to with a pulley to glide to another platform. A typical park will have anywhere from four to eight courses ranging in difficulty from Kids Courses to Expert Courses. Treetop Trekking aerial parks are an exciting adventure



to climb through, a marvel to see from the ground and a unique recreation option that compliments natural areas.



Treetop Trekking's sister company, Arbraska was founded in 2001 and with much success decided to move into the Ontario market in 2005 opening its first Ontario park at Horseshoe Resort under the name Treetop Trekking. Today Treetop Trekking/ Arbraska has ten parks between Ontario and Quebec. Our goal is to continue to expand and continue to be the leaders in aerial adventure parks, while maintaining our quality authentic experience and staying true to these core values.

### TREETOP TREKKING PARK OPTIONS

Treetop Trekking takes pride in the fact that no two sites are the same. We do not provide a "cookie cutter" product or service. We strive to create parks that are unique attractions that people are willing to travel extended distances to visit. As each park is developed, new improved systems are implemented and unique features are created. Below are a few examples of what we currently offer however there are many other potential options.

**BARRIE – BRAMPTON – GANARASKA - HUNTSVILLE – STOUFFVILLE**  
**LAFLÈCHE – MONT ST-GRÉGOIRE – RAWDON – RIGAUD - DUSCHESNAY**



### Zip line and Aerial Game Courses

Climb from tree to tree with the use of bridges, monkey cables, nets and of course zip lines. Travel across these “games” to reach each platform. Courses range in level from beginner to expert and start at age 5 and older. Climbers have the freedom to clip themselves through the course one game at a time.



### Stand Alone Feature

There are various “stand alone” features that Treetop Trekking can provide. A stand alone is simply a single or short course that is able to be offered on its own. These are ideal for participants that do not have the time for a full climb. Examples of this could be Treehuggin’ or a Giant Zip line.



### Giant Zip Lines



## Treewalk Village

Treewalk Village is the newest addition to the Treetop Trekking family. It can be explained through the eyes of a child as the Treehouse village of their Dreams.

Children travel at the tops of the trees across bridges, through nets and down slides. Treewalk village does not require any climbing gear such as harnesses and helmets because climbers are free to climb safely within the netted course.

Without the need for gear it allows for more climbers at a time. This type of park also decreases the amount of staff and start up cost not having to purchase gear. Climbers are able to choose their adventure through the maze of options at the tops of the trees. Parents are free to climb with their children or enjoy from the ground below. This type of course is very popular in Europe and an average size park has the potential to put through over 800 people a day. Treetop Trekking opened its first Treewalk Village in Stouffville.



## Via Ferrata

Travel across the rockface with the assistance of climbing gear fastened to the rocks. Via Ferrata can be offered in a variety of levels and heights.





## THE TREETOP TREKKING DIFFERENCE

### We Build AND Operate Successful Parks

Treetop Trekking offers the whole package. We are not a franchise company that builds parks and leaves them for someone else to operate. We are directly involved in every step of a park's life: from concept to design, build to opening, and for year after year of successful operation. We take pride in all aspects of our business because our customers have come to expect nothing but the best from Treetop Trekking.

### Unique Construction Style

Our two construction crews bring leading edge construction techniques, an efficient build sequence and years of experience to create works of art in the trees. Our parks are built with the absolute minimum impact on the surrounding environment, are a pleasure to climb and a marvel to see.

### Treetop Trekking Parks Stay Open

We have successfully operated in Ontario for nine years. While most of our competitors have closed or sold some of their parks, Treetop Trekking has never closed a park and will never abandon a park for quick cash. We stand by what we build and know what it takes to make each of our parks a success. Once our parks are built our management team ensures the venture is run efficiently, professionally and successfully. Treetop Trekking has the right model for success.

### Passionate Staff

Our staff love working for us and they come back year after year. They are just as motivated as our management to provide the greatest experience possible for our customers.



BARRIE – BRAMPTON – GANARASKA - HUNTSVILLE – STOUFFVILLE  
LAFLÈCHE – MONT ST-GRÉGOIRE – RAWDON – RIGAUD - DUSCHESNAY



### **Customer Driven**

Our customers and the experience they have with us is number one.

### **We Are An Ontario Company**

Treetop Trekking is proud to call Ontario home. We are based in Ontario, run by Ontarians, with all of our construction and management done in house.

### **Our Courses are in a League of their Own**

Our unique, unforgettable games leave our visitors' hearts pumping and send them home with stories to tell. We design each new course with a combination of our favourite games from our other parks, and wild new creations.

### **Ontario Knows the Treetop Trekking Brand**

With five existing parks in Ontario, the public knows the Treetop Trekking name, and they have come to trust us for the ultimate aerial park experience. They know our courses are exciting and dynamic, they know they are safe with us, and they know they will be treated like royalty by our staff.

### **Treetop Trekking Knows the Ontario Market**

With nine successful years in Ontario we have come to know the ever-changing Ontario market. We are actively pursuing growth in our school group market and the new Canadian Market. We know what the Ontario market wants, how to reach them and we deliver!







### **We Have an Excellent Relationship with TSSA and WSIB**

Having been on the Ontario scene for so long we know the ins and outs of all related standards, regulations and operational requirements. This allows us to open our parks on time and keep them running smoothly.

Working with Technical Standards & Safety Authority (T.S.S.A), requires strict compliance with regulations, policies and procedures and extensive paperwork. Treetop Trekking has been working with T.S.S.A. for over nine years in Ontario and have since developed a very strong working relationship. T.S.S.A. has completed various training sessions for their own staff at Treetop Trekking sites and have also used our Horseshoe Resort location to develop their regulations within Ontario. Treetop Trekking staff are trained on daily course and equipment inspections, and our licensed zip line mechanics complete the monthly T.S.S.A inspections. Opening and operating five parks in Ontario has given Treetop Trekking a clear edge on understanding, meeting or surpassing all T.S.S.A regulations.

### **We Are a Family**

Our staff will tell you that there is an undeniable family feel to Treetop Trekking. We have brothers and sisters across the province and an extended family all over Quebec. Like a strong family we work together, count on each other and have all the roles covered. We bring an in-house zip line mechanics, construction crews, and an arborist so that when a course concern arises there's no waiting or down time. Our family steps up and fixes any concerns, usually in the same day. Our guides, some of whom have been with us from the start travel to our new parks and take new staff under their wings, creating the next generation of amazing guides. Our management team is made up of vibrant people who have grown up in the company, gone off to school and have come back home with new skills to make our company better.

### **We Can Do the Numbers**

We've perfected our park designs and operating procedures to be able to deliver the same amazing experience to huge numbers of clients, we can accommodate in excess of 500 people a day in one park alone.





**We get real enjoyment from being involved in our communities. We try to give back with:**

- Fundraising Events - Make-A-Wish Canada, Right To Play, local food banks,
- Sponsorship
- Donations
- Volunteer Work
- Discounted rates for special needs support staff, schools, camps, etc.

### TREETOP TREKKING'S SOCIAL PERFORMANCE

Treetop Trekking has been the recipient of many awards in the past years. Not only is the Treetop adventure becoming more popular every year, but also the passion of our employees and the fun atmosphere of our parks have made us one of the top outdoor attractions in Ontario and Quebec.

Here is a list the awards Treetop Trekking and Arbraska have earned throughout the years.

2004 : Regional award for Quebec's Tourism Grand Prize

2005 : Regional award for Quebec's Tourism Grand Prize

2006 : Regional award for Quebec's Tourism Grand Prize

Acting for the future award

2007 : 2 Regional award for Quebec's Tourism Grand Prize

Barrie's best new company award



2008 : Regional award for Quebec's Tourism Grand Prize

Cultural diversity award

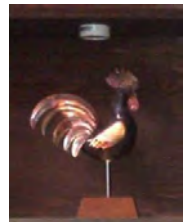
Recognition prize for leisure and entertainment

2009 : Regional award for Quebec's Tourism Grand Prize

2010 : National award for Quebec's Tourism Grand Prize

2012: Nominated for Tourism Barrie's Greening and Sustainability Award

2013: Attractions Ontario Tourism Champion of the Year Award – Jamie Hesser Regional Manager



We have also been awarded the opportunity to run a temporary project at the Harbourfront Center for the duration of the Pan Am and the Para Pan Am games in Toronto, a world stage event.



**BARRIE – BRAMPTON – GANARASKA - HUNTSVILLE – STOUFFVILLE  
LAFLÈCHE – MONT ST-GRÉGOIRE – RAWDON – RIGAUD - DUSCHESNAY**





For more information on Treetop Trekking please visit our website at  
[www.treetoptrekking.com](http://www.treetoptrekking.com)

**Principal Contact:**

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905-376-4840

**Report To:** Board of Directors

**Subject:** Development Review Approvals Process

**Report No:** 96-16

**Date:** September 21, 2016

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**RECOMMENDATION:**

That Report No. 96-16 be RECEIVED for information; and,  
That the Development Review flowchart identified in Appendix 1 of this report be APPROVED for implementation.

**PURPOSE:**

The purpose of this report is to provide the Board with information regarding business rules for the review of Development Applications under the Planning Act as specified in the NPCA Strategic Plan (2014-2017).

**BACKGROUND:**

The NPCA's Strategic Plan (2014-2017) Streamlined Efficient Delivery of Development Approvals Process, Phase 1 states: "Board to consider & adopt the development review and permit approval process business rules/flow charts and dispute resolution process, (including the recommended processing timelines). (Implementation: Q2 2014)". This report focuses on applications NPCA staff review under the Planning Act. The Board previously approved the business rules for NPCA Permits (Report 123-14) in December 2014 and Dispute Resolution (Report 106-14) in November 2014).

In 2007, the Ministry of Natural Resources (MNR) established a Conservation Authority Liaison Committee (CALC) that was comprised of the following members:

- Conservation Ontario (CO)
- Grand River Conservation Authority (GRCA)
- Lower Trent Conservation Authority (LTCA)
- Toronto Region Conservation Authority (TRCA)
- BILD (formerly Greater Toronto Homebuilders Association/Urban Development Institute)
- Hamilton-Halton Homebuilders Association
- Ontario Homebuilders Association
- Environmental Defence
- Sierra Club of Canada (Peel Region chapter)
- Association of Municipalities of Ontario (AMO)
- City of Toronto
- Regional Planning Commissioners of Ontario
- MNR and
- Ministry of Municipal Affairs and Housing (MMAH).

The purpose of this group was to clarify the roles of Conservation Authorities in the areas of municipal plan review, permitting related to development and the protection of the natural

environment. The development community wanted to have consistency amongst Conservation Authorities and rules in place regarding timelines for processing applications, preconsultation, appeals and complete applications.

The work of CALC resulted in a document called "Policies and Procedures for Conservation Authority Plan Review and Permitting Activity" (May, 2010)

[http://www.web2.mnr.gov.on.ca/mnr/water\\_erb/CALC\\_Chapter\\_Final\\_Apr23\\_Final.pdf](http://www.web2.mnr.gov.on.ca/mnr/water_erb/CALC_Chapter_Final_Apr23_Final.pdf)

This document provides clarity regarding the role of Conservation Authorities in land use planning and permitting activities, promotes greater consistency between Conservation Authorities in the delivery of these activities and provides improved transparency. The work of the group resulted in a new CA Plan Review and Permitting chapter that was incorporated into the "MNR Policies and Procedures for Conservation Authorities Manual".

NPCA's Strategic Plan was initiated in 2011 to recommend improvements to its areas of business including the working group focused on "Improving Development Process Performance". This working group prepared Planning Act approval process flow charts for a variety of application types that included estimated timelines for the review of Planning applications. Their work resulted in a specific recommendation that was included in the approved NPCA Strategic Plan (April 2014) as noted above.

## **DISCUSSION**

The flow charts prepared by the Strategic Plan working group have been used by the CityView Implementation team to establish the workflows for the various types of reviews under the Planning Act. The attached flow chart illustrates the typical processing timelines for the review of Planning Act applications at the NPCA (see Appendix 1). CityView is the development tracking system selected by the NPCA. On August 15, 2016 NPCA staff began using CityView to track development applications. There will be a transition period as staff become more familiar with using the system and generating reports on how well the timelines are being met. It is important to note that the Planning Act determines the timelines for the review of various types of Planning Act applications and the municipalities administer them.

## **FINANCIAL IMPLICATIONS:**

N/A

## **RELATED REPORTS AND APPENDICES:**

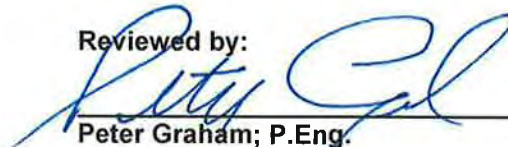
1. Report No.106-14, NPCA Dispute Resolution Process (referenced only)
2. Report No. 123-14, NPCA Permit Approval Process (referenced only)
3. Report No. 105-15, CityView Implementation Update (referenced only)
4. Appendix 1, Processing Timelines for the Review of Planning Act Applications

Prepared by:



Suzanne McInnes, MCIP, RPP  
Manager, Plan Review & Regulation

Reviewed by:



Peter Graham; P.Eng.  
Director, Watershed Management

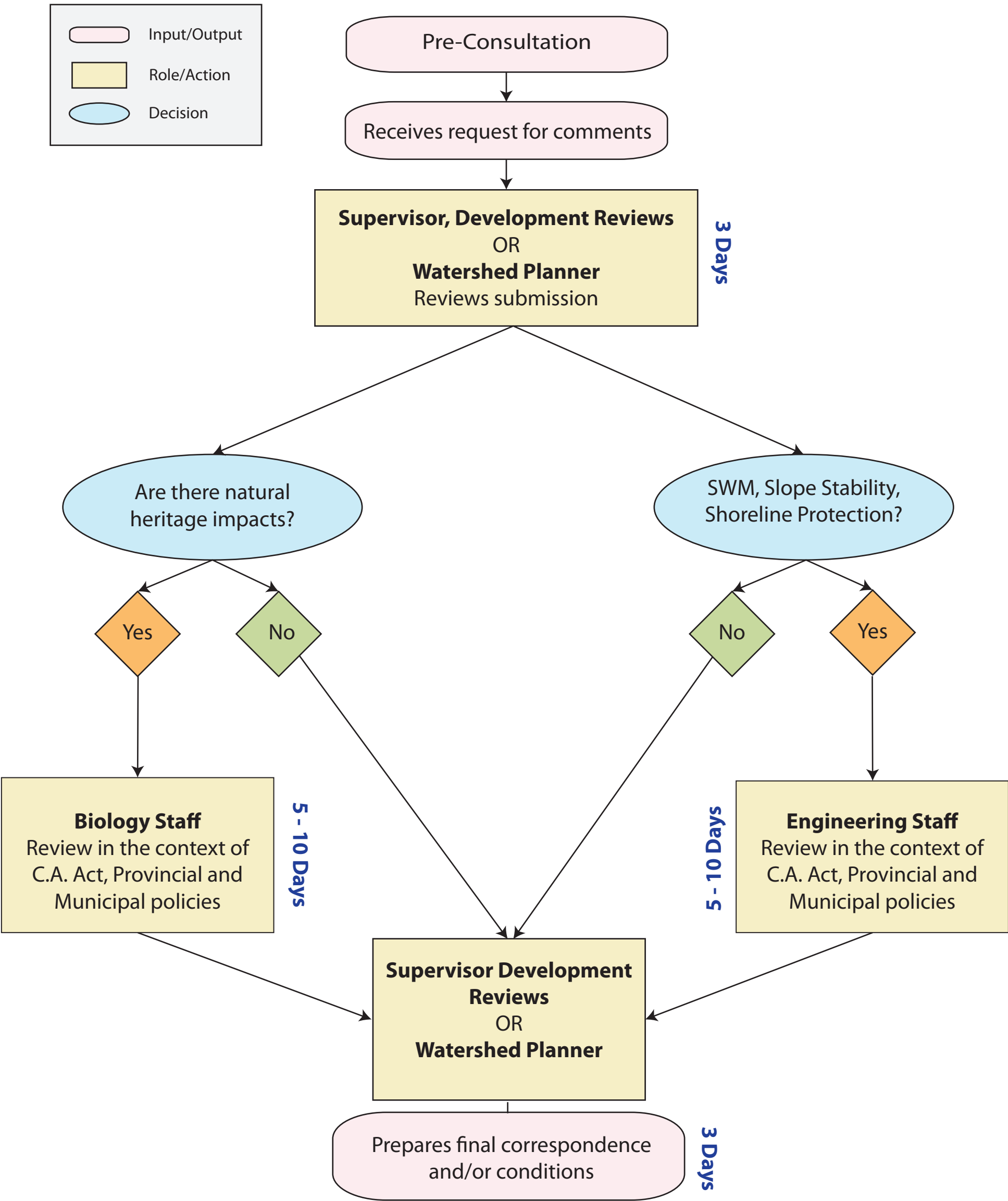
Submitted by:



Carmen D'Angelo;  
Chief Administrative Officer / Secretary Treasurer

PLANNING APPLICATION (Development Related Planning Act Application)\*

Note: Timelines shown are “desireable” and do not include wait times for proponent/consultants to resubmit revised design drawings/information.



\* Assumes formal pre-consultation meeting has occurred with local/regional municipality. Timelines for process will vary depending on specific municipalities internal approval process and type of proposal.

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**Report To:** Board of Directors

**Subject:** NPCA Policy Review – Consultation Program

**Report No:** 97-16

**Date:** September 21, 2016

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**RECOMMENDATION:**

1. That Report No. 97-16 be received for information, and
2. That the Board select one of the public consultation program options noted in this report for implementation in Fall 2016.

**PURPOSE:**

To apprise the Board of the proposed (budgeted) public consultation program for the *Living Landscape* Project and present an additional option for increased public consultation for the Boards consideration.

**BACKGROUND:**

As a reminder, *The Living Landscape* is the name given to this project, with its primary objective to review and complete a fundamental rewrite of NPCA's primary development guidance document titled *Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document*.

This policy review and update is also an important element of the NPCA Strategic Plan (2014-2017) to develop streamlined, efficient delivery of its development approvals process. As noted, the updated "NPCA policy document should clearly distinguish between broader planning guidance and regulatory/permit requirements".

The following provides a brief summary of activities for this initiative, highlighting the parties that have been informed and consulted with at various stages in the process.

***Summary of Activities***

*December 17, 2014*

Staff report updated the **Board** on the proposed workplan (including consultation) and associated process to update the NPCA's primary development guidance document titled "Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document". Formed an NPCA Staff Advisory Group and obtained initial feedback from staff on pertinent policy sections.

*April 16, 2015*

Staff report updated the **Board** and requested approval for the NPCA to send out a Request for Proposal and associated Terms of Reference. Three (3) consulting firms, who are known to have proven experience in completing this type of work, were invited to submit proposals. The RFP and ToR was also posted on the NPCA website for other interested parties to submit proposals.

*June 17, 2015*

Staff report updated the **Board** and requested approval to award Dillon Consulting Limited, in accordance with its Consultant Selection policies, with a services contract to assist the NPCA with the public consultation process and fundamental rewrite of its Policy Document.

*September 16, 2015*

Dillon Consulting made a presentation to the **Board** updating the Board on:

- Project Purpose
- Function of the Policy Document
- Key Factors
- Consultation and Engagement Tools, and
- Next Steps

*September 2015*

Project Team developed a comprehensive draft key stakeholder list, which includes members of the ***Watershed Floodplain Committee (WFC)***.

Project Branding – team decided on calling the project *The Living Landscape*

Project Website - established and is updated on a regular basis ([www.livinglandscape.ca](http://www.livinglandscape.ca))

*October-December 2015*

Between October and December of 2015, the NPCA had the opportunity to engage the **general public** in the first phase of the *Living Landscape* Policy Project. A series of seven (7) pop-up style consultation booths were set-up at various community events across the watershed with the objective of sharing information with the public and gathering initial feedback through a community visioning survey. This first phase of community consultation was developed in order to inform residents across the NPCA watershed and to gather information from the public to inform the NPCA's review of their land management policies. A detailed summary is provided on the project website: <http://www.livinglandscape.ca/news/>

*November 2015*

Formed a **Core Working Group (CWG)** comprised of representation from a cross-section of **Niagara Region municipalities, City of Hamilton, Haldimand County, MNRF, Niagara Escarpment Commission (NEC), and Niagara Region.**

*November 19, 2015*

Presented to **Community Liaison Advisory Committee (CLAC)** to introduce the project and obtain initial feedback and comments.

*December 9, 2015*

Director of Watershed Management provided an update to staff at an **All-Staff Meeting**.

*March 21, 2016*

CWG Meeting - Provided **CWG** with an overview of the project and process and obtained initial feedback on functional areas as well as input on:

- Overall Goals & Objectives
- Project Implementation
- Document Structure / Organization

*March 31, 2016*

Met with **Mississaugas of the New Credit First Nation** (MNCFN) to advise and gain insights on how best to consult with them on the policy review.

*April, May and June 2016*

Monthly **Watershed Status Reports** were included in staff's updates to the NPCA Board.

*June 2, 2016*

Staff Visioning Session held with **Staff Advisory Group** to develop draft Guiding Principles.

*June 20, 2016*

Provided the **CLAC** with an update on the project and initial feedback on draft Discussion Paper. **Project Team** meetings have been conducted throughout the duration of the project.

*July 20, 2016*

Staff report was provided to the **Board** that included a presentation by Dillon Consulting on the key aspects of the draft Discussion Paper (Attachment #1). The Discussion Paper has been posted on the project website ([www.livinglandscape.ca](http://www.livinglandscape.ca)); a weblink has been added to the NPCA website, email notifications have been forwarded to CWG, CLAC, Watershed Floodplain Committee, Municipalities, and other social media outlets. The expectation is that this further consultation with stakeholders, agencies and the public will identify further opportunities for improvement.

The purpose of the Discussion Paper "is to present the themes, issues and opportunities to be addressed in the *Living Landscape* Policy Project. The Paper is intended to provide direction for the broad range of policy changes and modifications to be considered for updating the NPCA's Policy Document.

The items discussed in this paper are not intended to be an exhaustive list of all issues and opportunities, rather, they are intended to form a starting point for understanding some of the aspects of the NPCA's policies which need to be revised or enhanced."



## **FALL 2016 CONSULTATION PROGRAM:**

As part of the original proposal submitted by Dillon Consulting, a consultation program was developed for this project. Key activities of the consultation program (see Attachment #2) include:

### ***Project Branding***

In an effort to foster engagement and communicate clearly to key stakeholders, the team identified and implemented a project identifier/brand (i.e. *The Living Landscape*) for this assignment.

### ***Project Website***

Recognizing that there may be interest in this project from a range of groups and individuals over a broad geography, the project team developed and will maintain a one-stop hub for current and accurate project information and online activities, linked through the NPCA website.

The webpage serves as an information sharing and feedback venue with access to project contact information, comment forms, links to social media outlets, a contact list sign-up, project status updates, notification of public meetings and general project details.

### ***Social Media***

In order to provide information updates out to the public on the progress of the project, social media will also be leveraged. NPCA communications staff will lead communications on Facebook and Twitter through its existing channels to guide users to the website at various key points in the project.

### ***NPCA Board Meetings***

As a key decision-maker the Board will be updated during key milestones of the project.

### ***Core Working Group***

The Core Working Group (CWG) is an Area Planners Forum that will be used as a sounding board to advise the project team on technical aspects of the project.

### ***Community Liaison Advisory Committee***

The Community Liaison Advisory Committee (CLAC) will be engaged throughout the project and will act as a sounding board for public materials and public consultation approaches. This group may be involved in reviewing materials and providing comments on the items that go out to the public.

### ***Roadshow #2***

Similar to Roadshow #1, a series of “pop-up” style engagement events will be held across NPCA’s jurisdiction. The purpose of these sessions is to get public feedback on the draft Policy Document (Note: Dillon Consulting is currently working on the first draft of the Discussion Paper).

At the conclusion of the Roadshow events, two (2) open house events will also be held.



The following provides a brief overview of the original community consultation and engagement activities and the related budgeted costs:

<b>NPCA Consultation</b>		
<b>Phase 3 Originally Proposed (Budgeted) Activities</b>		
<i>Activity</i>	<i>Purpose</i>	<i>Budget Cost</i>
Task 3.6: Core Working Group Meeting	To engage members of the area municipalities and obtain feedback on the draft Policy Document.	\$1,855.00
Task 3.7: Community Liaison Advisory Meeting	To engage a selection of stakeholders and obtain feedback on the draft Policy Document.	\$1,855.00
Task 3.8 & 3.16: NPCA Board Meetings	Present draft and final version of the Policy Document to NPCA Board.	\$6,775.00
Task 3.9: Project Website Updates	To provide opportunity on project website for members of the public to download a copy of the draft Policy Document. The website will allow users to submit written comments to the NPCA on the draft document.	\$667.00
Task 3.10: Public Events Roadshow	To consult and engage with members of the public on the draft Policy Document. Includes two (2) public open house events and two (2) informal "pop-up" style events. Locations to be determined.	\$16,932.00
<b>Sub-Total (Phase 3 Activities)</b>		<b>\$28,084.00</b>

- **Project Website Updates:** Draft Policy Document would be uploaded to the website for feedback. Several forms/questions will be used to obtain feedback and comments.
- **Public Events:** Two (2) pop-up style events will be scheduled to promote the open house events, raise awareness about the draft Policy Document and drive traffic to the website.
- **Open House Events:** Two (2) formal public open house events will be held. These events will be approximately two (2) hours in the evening, and include a short presentation, along with display panels and some facilitated workshop activities designed to obtain feedback on the draft Policy Document.
- A specific meeting will be held with the **Watershed Floodplain Committee** to gather feedback and comments on floodplain policies.

As an option for increased public consultation, two (2) additional public events could be held to facilitate additional discussions with interested parties and stakeholders.

The associated costs for these events are shown in the following table.

<b>NPCA Consultation</b>		
<b>Phase 3 Potential Additional Activities</b>		
<i>Activity</i>	<i>Purpose</i>	<i>Estimated Cost</i>
Task 3.10: Public Events Roadshow	Two additional public open house events (locations to be determined)	<b>\$8,545.00</b>

#### **FINANCIAL IMPLICATIONS:**

An additional \$8,545.00 if the Board chooses to approve the additional public consultation events noted above.

#### **RELATED REPORTS AND APPENDICES:**

1. Draft Discussion Paper
2. Consultation Program – NPCA Policy Review (August 2015)

**Prepared by:**

  
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NIAGARA PENINSULA  
**CONSERVATION**  
AUTHORITY



# THE LIVING LANDSCAPE

A Review of the Policies, Procedures and Guidelines for the Administration  
of Ontario Regulation 155/06 and Land Use Planning Policy Document

**DISCUSSION PAPER**

August 2016





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## 1.0 INTRODUCTION

### 1.1 Purpose of this Paper

The purpose of the following Discussion Paper is to present the themes, issues and opportunities to be addressed in the Living Landscape Policy Project. This Paper is intended to provide direction for the broad range of policy changes and modifications to be considered for updating the NPCA's Policy Document. The items discussed in this paper are not intended to be an exhaustive list of all issues and opportunities; rather, they are intended to form a starting point for understanding some of the aspects of the NPCA's policies which need be revised or enhanced. The expectation is that further consultation with stakeholders, agencies and the public will identify further opportunities for improvement.

The Paper is organized into four main sections. This first section provides an introduction, explaining the context and process for the Living Landscape. The second section describes the legislative framework for this assignment, outlining the legislation and provincial policies which are of relevance to the NPCA's Policy Document. The third section covers a range of policy themes, describing specific policies, gaps, issues and opportunities related to the resources which fall within the jurisdiction of the NPCA. The final section provides a summary of key policy issues and opportunities.

### 1.2 The Living Landscape

The Living Landscape Policy Project is an initiative to update and improve the Niagara Peninsula Conservation Authority's (NPCA) primary land use planning policy document – known as the "Policies Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document" (hereafter referred to as the Policy Document). The Policy Document is used by NPCA staff on a day-to-day basis to make decisions related to proposed development within the Niagara/Hamilton/Haldimand watershed area (hereafter referred to as the Niagara watershed) and contains policies on a variety of topics and themes which fall under the jurisdiction of the NPCA. The



INTRODUCTION

current Policy Document was approved by the NPCA Board back in 2007 under the authority of the *Conservation Authorities Act*, and has subsequently been amended several times to address minor modifications<sup>1</sup>. Since its inception, there have been a number of major policy changes at the Provincial level, as well as a number of new plans that have come into effect within the watershed area, including municipal Official Plans, zoning by-laws and the NPCA’s new Source Protection Plan for the Niagara Peninsula Source Protection Area (October 2014). The purpose of the Living Landscape Policy Project is to comprehensively update the NPCA’s Policy Document to address legislative gaps in the current Policy Document and to also implement a number of enhancements which will help to improve transparency and decision-making. In addition to the legislative drivers behind the Policy Document review, the NPCA’s Strategic Plan also identified a number of opportunities for improving the current Policy Document.

1.3 About the NPCA

1.3.1 Who is the NPCA?

The NPCA was formed in 1959 under the authority of the *Conservation Authorities Act*, and is responsible for undertaking a variety of responsibilities under the Act. As one of 36 conservation authorities across the Province, the NPCA’s mandate under Section 20 of the Act is to establish and undertake programs designed to further the conservation, restoration, development and management of natural resources across the watershed.

**NPCA MISSION**  
*To manage our watershed’s natural resources by balancing environmental, community, and economic needs.*

**VISION**  
*Balancing conservation and sustainable development for future generations by engaging landowners, stakeholders and communities through collaboration.*

**VALUES**  
*To the landowners, stakeholders and communities affected by our actions, we value:*

- 1. A sustainable balance between environmental conservation, economic growth and agricultural prosperity.*
- 2. Clear and respectful communication.*
- 3. Integrity, fairness and sensitivity to all impacted by our actions and decisions.*
- 4. Creativity and innovation in service delivery to clients.*
- 5. Transparency, accountability and quality in our services.*
- 6. Pragmatic solution oriented approaches to decision making.*
- 7. A respectful work environment and professional development.*

Excerpt from the NPCA Board’s 2014-2017 Strategic Plan

<sup>1</sup> The current version of the Policy Document was approved in 2007 and amended three times, in 2009, 2010 and 2011. Earlier versions of the document date back to 1993 and 2005.

### 1.3.2 What does the NPCA do?

The NPCA fulfills its mandate by implementing programs that:

- Improve the quality of lands and waters;
- Contribute to public safety from flooding and erosion;
- Provide for the acquisition of conservation and hazard lands; and,
- Enhance the quality of life in its watershed by using its lands for recreation, heritage preservation and conservation education.

The Niagara Peninsula Conservation Authority is a corporate body created through provincial legislation as well as registered charitable organizations with several different roles and functions, which can be broadly categorized as the following:

1. **Regulatory Authority:** Section 28 of the Conservation Authorities Act empowers conservation authorities to prohibit, restrict, regulate or give permission for certain activities in and adjacent to watercourses, including valleylands, wetlands, shorelines and other hazardous lands. In this capacity, the NPCA acts as an approval authority for development within its regulated areas.
2. **Representative of the Province of Ontario:** Conservation Authorities have delegated provincial interest for Section 3.1 of the Provincial Policy Statement (Natural Hazards) and act on behalf of the Province. In this capacity, the NPCA is responsible for providing comments on municipal policies (Official Plans) and zoning by-laws, as well as development applications submitted under the Planning Act.
3. **Resource Management Agency:** Sections 20 and 21 of the Conservation Authorities Act empower conservation authorities to develop programs that reflect local resource management needs within the watershed. These programs and/or policies are approved by the conservation authority board.
4. **Public Commenting Body:** Under the Planning Act, conservation authorities are considered a public commenting body and, as such, are to be notified of municipal policy plan changes and development applications. The NPCA provides comments within the context of their board-approved policies (Policy Document).
5. **Service Provider:** Conservation authorities may enter into agreements with other levels of government to undertake regulatory or approval responsibilities. The NPCA acts as a service

provider to a number of area municipalities within the watershed through Memoranda of Understanding signed with Niagara Region, the City of Hamilton, and Haldimand County respectively.

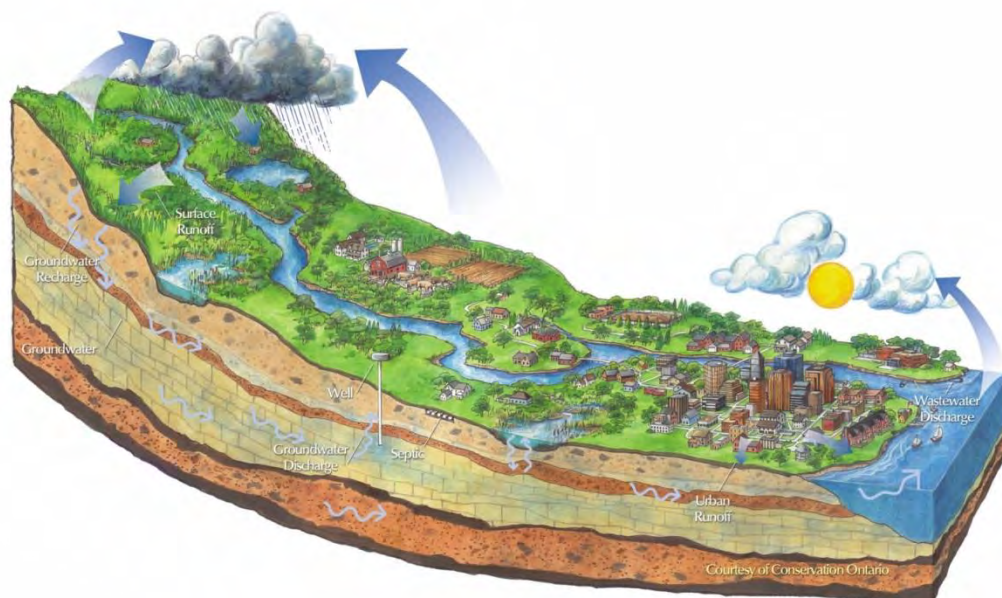
6. **Landowner:** Conservation authorities are also landowners, and can be involved in the planning and development process as either a proponent or as a landowner impacted by adjacent development.

Chapter 2 provides a more in-depth discussion of the NPCA's legislative authority for undertaking the above-noted roles and functions.

### 1.3.3 The Niagara Peninsula Watershed

A watershed is an area of land that catches rain and snow and drains or seeps into a marsh, stream, river, lake or groundwater. Watersheds include farms, cottages, forests, small towns, big cities, forests, rivers, lakes and a host of other physical elements. Some watersheds cross municipal, provincial and international borders. They come in all shapes and sizes and can vary from millions of acres, like the land that drains into the Great Lakes, to a few acres that drain into a pond (adapted from Conservation Ontario). **Figure 1.1** below provides a simple illustration showing how the different elements within a watershed function.

**Figure 1.1: Watershed Diagram**



The Niagara Peninsula watershed is bounded by Lake Ontario to the north, Lake Erie to the south, the Niagara River to east and Grand River and Hamilton watersheds to the west. The Niagara Peninsula watershed area covers an area of over 2,430 square kilometers and includes lands in the Region of Niagara, as well as portions within the City of Hamilton and the County of Haldimand. **Figure 1.2** shows the limits of the Niagara Peninsula watershed. The watershed area is incredibly diverse, and is home to a complex interconnected system of environmental, social and economic networks. There are over 460,000 people living in over 30 cities and small towns. The area includes a number of well-known unique features, including the Niagara Escarpment, the Wainfleet Bog and the Willoughby Marsh, as well as a variety of other significant landforms (such as the Fonthill Kame) and plant communities (alvars, prairies, Great Lakes shorelines, bogs and fens, etc.). The Niagara Peninsula watershed features a number of micro-climates, which has improved its biodiversity and also provides a rich environment for farmers. The area boasts one of the Province's most productive agricultural systems, including vineyards, tender fruit orchards, livestock and a variety of specialty crops (greenhouses for flowers, vegetables, sod farms and mushroom farms). From a land use perspective, approximately 64% of the watershed is estimated to be used for agricultural activities; 21% is estimated to be wooded or in a natural state; the remaining 15% is comprised of urban uses (Niagara Source Protection Assessment Report, 2013).

The dynamic nature of the various systems within the watershed means that there will be conflicts and issues to address. Historic growth and urbanization patterns across the watershed's dispersed settlement areas have placed pressure on the natural and agricultural systems. These pressures manifest themselves in a variety of ways, such as degraded water quality from urban and agricultural run-off, decreased infiltration and groundwater recharge resulting from increases in impermeable surfaces (i.e. more pavement), poorer air quality from increased emissions and degraded natural areas. At the same time, these natural and agricultural systems pose a challenge for communities and developers, as fragmentation of urban lands lengthens the development process and raises construction costs (which are ultimately passed onto consumers). Flood risks pose a major challenge as, on the one hand, concerns over climate change impacts suggest the need for more robust policies to protect private property and ensure human health and safety – and yet, on the other hand, strengthening flood policies may increase insurance and development costs. The Living Landscape initiative recognizes that the Niagara watershed encompasses a broad range of interconnected systems, including environmental, economic and social systems. These systems are not independent, and



changes in one realm can have impacts on other systems. With this in mind, the goal of the Living Landscape project is to prepare an updated set of policies which not only addresses legislative gaps, but also recognizes environmental, economic and social connections and provides a fair and balanced approach to watershed policy.



Wainfleet Bog. Photo Credit: NPCA



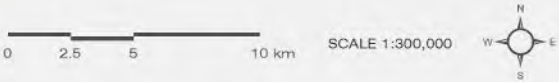


**NIAGARA PENINSULA  
CONSERVATION AUTHORITY**

**WATERSHED PLANNING AREAS  
AND SUBWATERSHEDS**

FIGURE 1.2

- FREEWAY / EXPRESSWAY / HIGHWAY
- WATERSHED PLANNING AREA BOUNDARY
- SUBWATERSHED BOUNDARY
- LOCAL MUNICIPAL BOUNDARY
- WATERBODY



MAP DRAWING INFORMATION:  
DATA PROVIDED BY NPCA, MNR AND ESRI

MAP CREATED BY: PFM  
MAP CHECKED BY: CF  
MAP PROJECTION: NAD 1983 UTM Zone 17N

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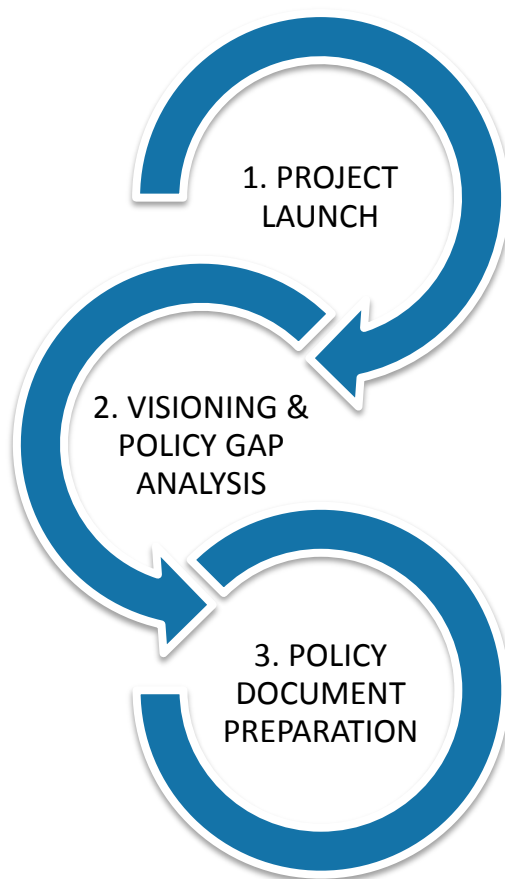
PROPOSAL  
STATUS: FINAL  
DATE: 8/15/2016



## 1.4 Living Landscape Process

The Living Landscape process is being undertaken in a three-phased process (**Figure 1.3**). This Discussion Paper represents the main deliverable resulting from Phase 2 of the overall process.

**Figure 1.3: Living Landscape Process**



### 1. PROJECT LAUNCH

- Consultation program & work plan finalization
- Data collection
- Website launch
- Project brand development
- Formal project launch (NPCA Board, CLAC & Area Planners sessions)

### 2. VISIONING & POLICY GAP ANALYSIS

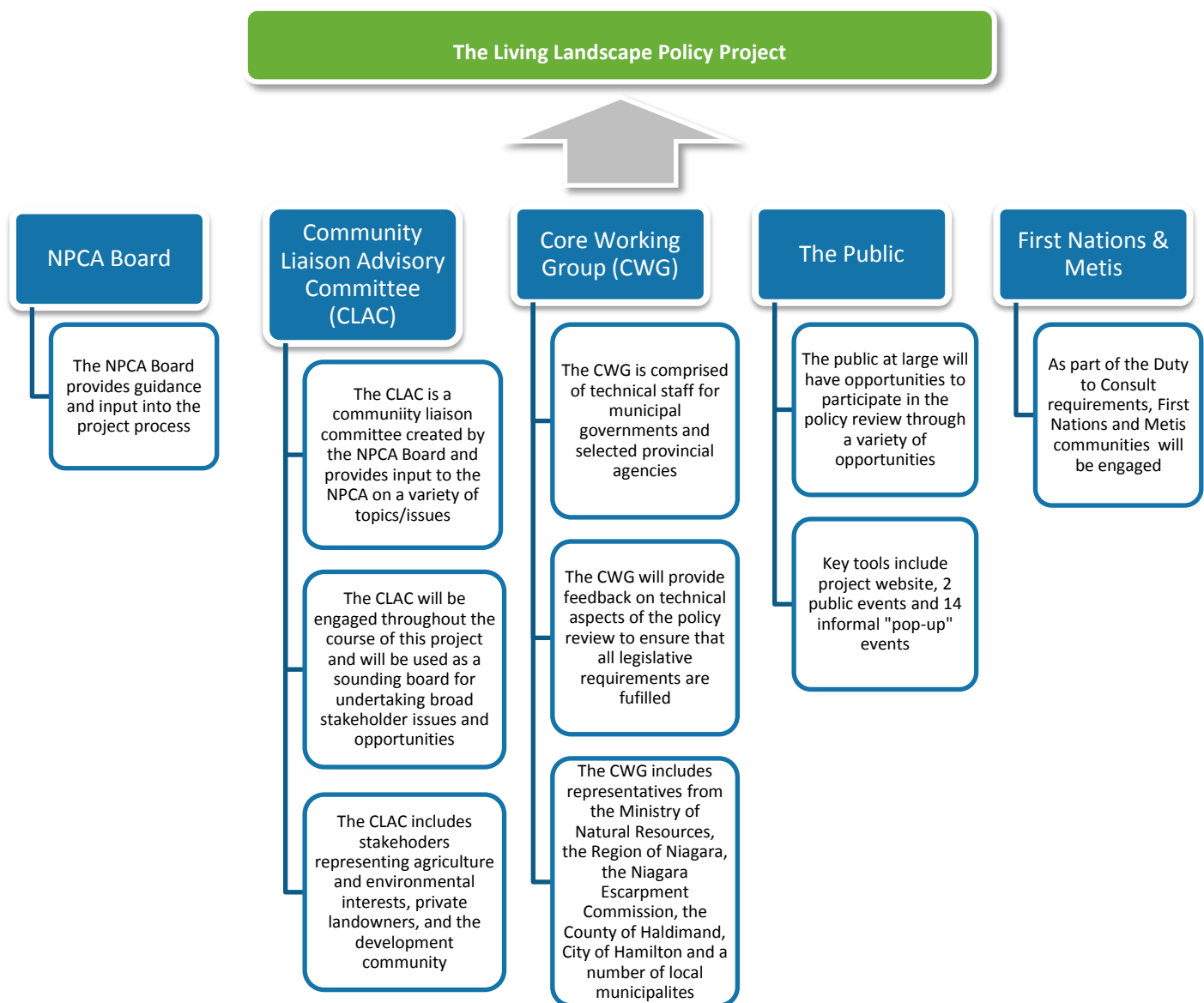
- Background review (plans, policies, etc.)
- Community Vision survey
- Public Roadshow Series #1
- Issues and gap policy analysis
- Staff workshop
- CWG Meeting
- CLAC#2 Meeting
- Draft & Final Discussion Paper

### 3. POLICY DOCUMENT PREPARATION

- Draft 1 of Policy Document
- Public Roadshow Series #2 & Open House
- Series of workshops with agencies and stakeholders
- Finalization of Policy Document
- Consultation Report
- NPCA Board Approval

The Living Landscape process includes a robust public and stakeholder engagement program. While a wide ranging consultation program was not mandated through any particular legislative requirement, as part of the Living Landscape process, the NPCA recognizes the importance of broad-based consultation and engagement. The overall consultation and engagement program for the Living Landscape project is illustrated below in **Figure 1.4**.

**Figure 1.4: Public Consultation and Engagement Program**





## 2.0 LEGISLATIVE CONTEXT

### 2.1 Integrated Watershed Management

The NPCA has adopted an ‘Integrated Watershed Management’ (IWM) approach to watershed planning. The IWM approach recognizes that water is a valuable resource which should be managed in a sustainable manner. Conservation Ontario defines Integrated Watershed Management as “the process of managing human activities and natural resources on a watershed basis, taking into account social, economic, and environmental issues, as well as community interests in order to manage water resources sustainably” (Conservation Ontario, 2012). For the NPCA, this means adopting the IWM lens when it acts as a land owner, resource management agency, regulator, delegated provincial responsibility, commenting body and a service provider. **Figure 2.1** provides a snapshot of the Integrated Watershed Management approach as adopted by the NPCA, and the various roles that the NPCA holds.

The NPCA derives its authority from several pieces of provincial legislation (see **Figure 2.2**). The following section builds upon the overview provided in Section 1.3.2, outlining the NPCA’s roles and responsibilities under the various pieces of Provincial legislation, policies and plans.

Figure 2.1: Integrated Watershed Management and Roles of the NPCA

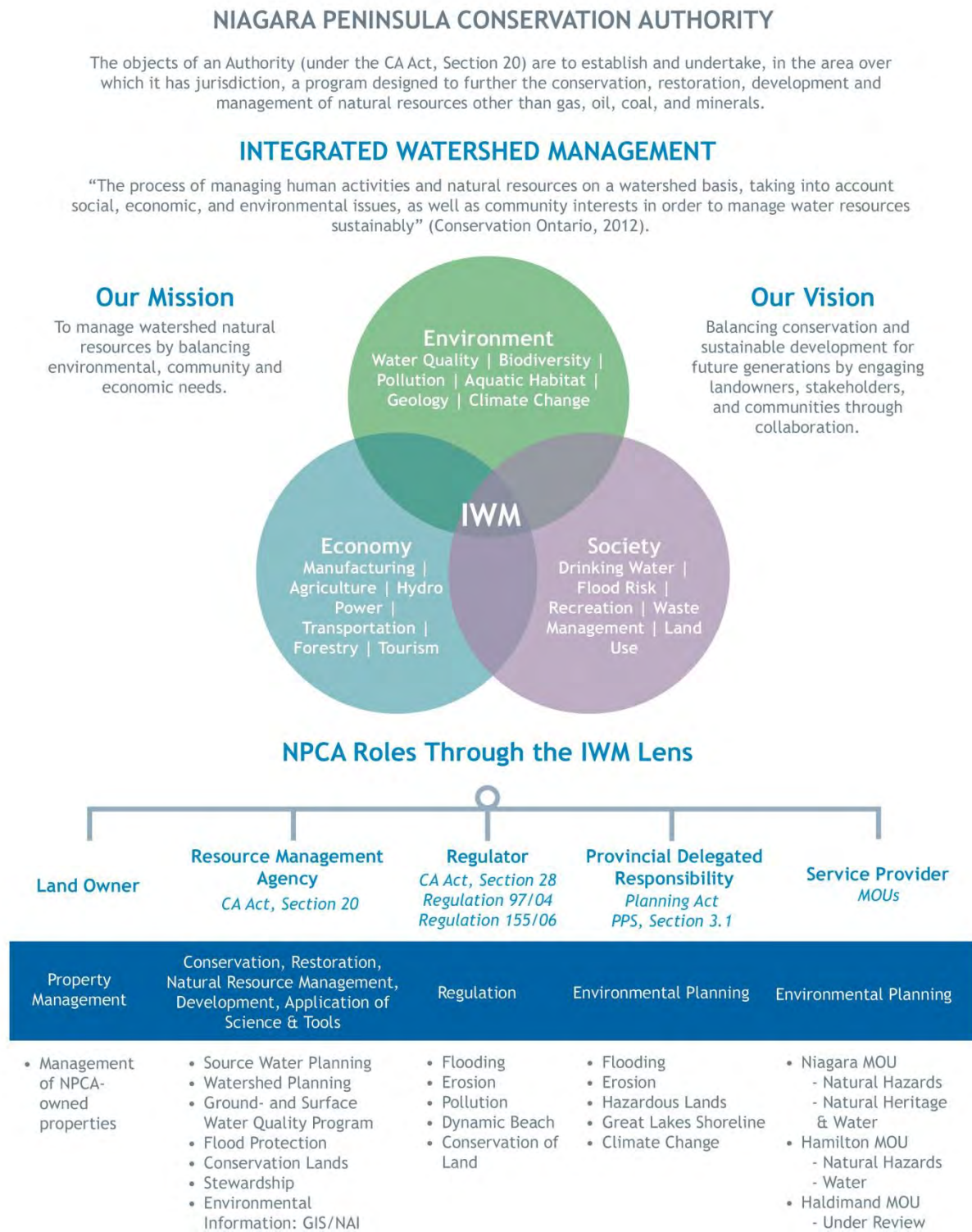
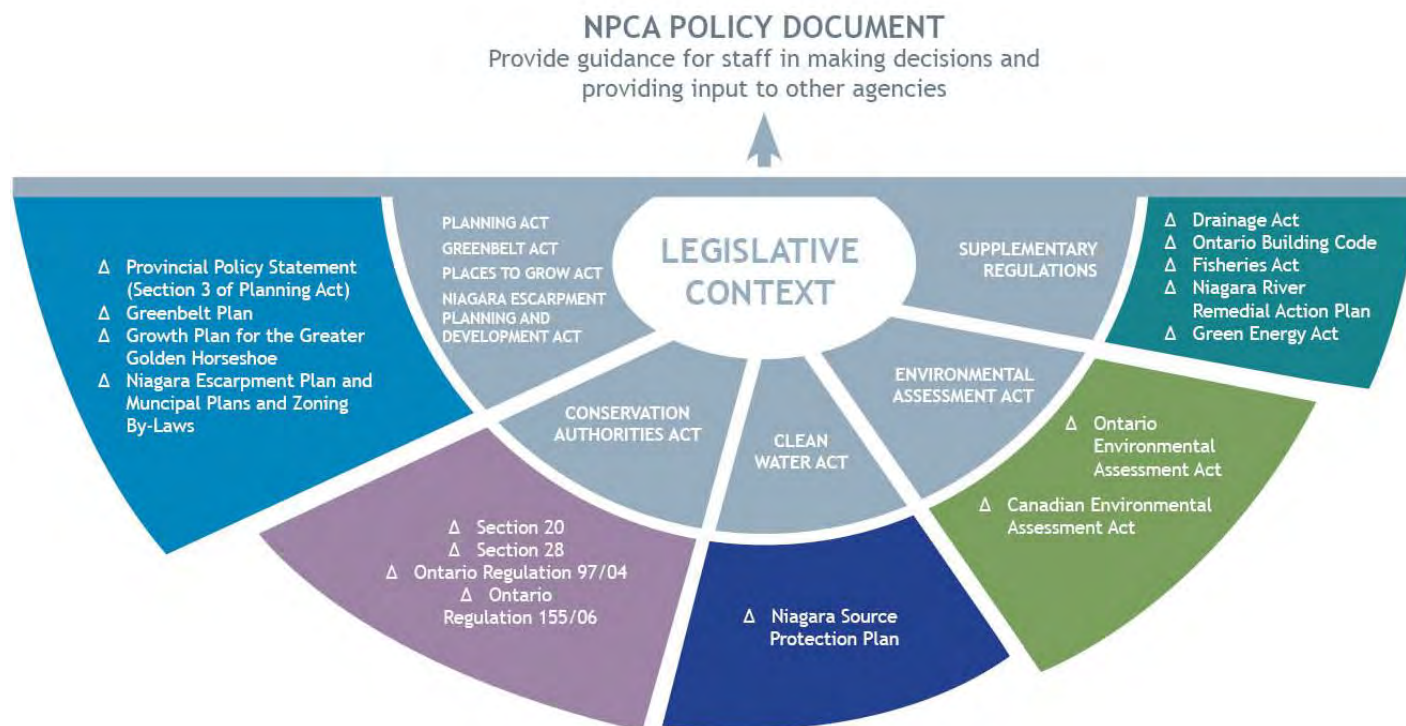


Figure 2.2: Legislative Context for the Policy Document



## 2.2 Conservation Authorities Act

The Conservation Authorities (CA) Act was passed in 1946 in order to provide direction on how to manage issues of erosion and flooding from a watershed perspective. The CA Act was revised on August 2, 2002, and it is now under provincial review by the Ministry of Natural Resources and Forestry. Section 20 of the Act states:

*The objects of an authority are to establish and undertake, in an area over which it has jurisdiction, a program designed to further conservation, restoration, development and management of natural resources other than gas, oil, coal and minerals.*

Section 21 of the Act empowers conservation authorities to undertake a variety of initiatives, including the power to “study and investigate the watershed and to determine a program whereby natural resources of the watershed may be conserved, restored, developed and managed” (21a). Sections 20 and 21a form the broad basis for the NPCA’s policy document. In addition, Section 28 of the Act

provides the basis for the NPCA's development permitting function, stating that conservation authorities may (subject to approval from the Minister) create regulations within its jurisdiction:

- a) Restricting and regulating the use of water in or from rivers, streams, inland lakes, ponds, wetlands and natural or artificially constructed depressions in rivers or streams;*
- b) Prohibiting, regulating or requiring the permission of the authority for straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;*
- c) Prohibiting, regulating or requiring the permission of the authority for development if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development;*
- d) Providing for the appointment of officers to enforce any regulation made under this section or section 29;*
- e) Providing for the appointment of persons to act as officers with all of the powers and duties of officers to enforce any regulation made under this section. 1998, c. 18, Sched. I, s. 12.*

It is also worth noting the Conservation Authorities Act provides the following definition of development, which is different than the definition of development under the Planning Act (accordingly, this definition is applied when the NPCA is acting under the authority of the CA Act and the Planning Act definition is used when the NPCA is acting under the authority of the Planning Act):

- a) The construction, reconstruction, erection or placing of a building or structure of any kind.*
- b) Any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure.*
- c) Site grading.*
- d) The temporary or permanent placing, dumping or removal of any material originating on the site or elsewhere.*

Finally, the Act also includes several explicit limitations on the power of conservation authorities. These limitations are provided under Section 28.10 and state that no regulation shall be made/applied which:

- Limits the use of water for domestic or livestock purposes;
- Interferes with any rights or powers conferred upon a municipality in respect of the use of water for municipal purposes;
- Interferes with any rights or powers of any board or commission that is performing its functions for or on behalf of the Government of Ontario; and,
- Interferes with any rights or powers under the Electricity Act or the Public Utilities Act.

Section 28.11 also limits the role of conservation authorities in regards to aggregate resource extraction, stating that “a requirement for permission of an authority in a regulation made under clause 28(1) (b) or (c) does not apply to an activity approved under the Aggregate Resources Act”.

## 2.3 The Planning Act

The purpose of the Planning Act is to promote sustainable economic development in a healthy natural environment through a policy-led system whose processes are fair, open, cooperative and efficient. The Planning Act is designed to recognize the decision-making authority and accountability of municipal councils in planning. The Planning Act provides the basis for land use planning in

*Part 1, Section 2A of the Planning Act identifies the following matters of provincial interest:*

- The protection of ecological systems, including natural areas, features and functions.*
- The protection of agricultural resources of the Province.*
- The conservation and management of natural resources and mineral resource base.*
- The conservation of features of significant architectural, cultural, historical, archaeological or scientific interest.*
- The supply, efficient use and conservation of energy and water.*
- The adequate provision and efficient use of communication, transportation, sewage and waster services and waste management systems.*
- The minimization of waste.*
- The orderly development of safe and healthy communities.*
- The adequate provision and distribution of educational, health, social, cultural and recreational facilities.*
- The adequate provision of a full range of housing, including affordable housing.*
- The adequate provision of employment opportunities*
- The protection of the financial and economic well-being of the Province and its municipalities.*
- The co-ordination of planning activities of public bodies.*
- The resolution of planning conflicts involving public and private interests.*
- The protection of public health and safety.*
- The appropriate location of growth and development.*
- The promotion of development that is designed to be sustainable, to support public transit and to be oriented to pedestrians*
- The promotion of built form that is well designed, encourages a sense of place and provides for public spaces that are high quality, safe, accessible attractive and vibrant.*



Ontario, identifying tools for managing how, where and when land use change occurs. Generally speaking, the Planning Act provides for a top-down system, where-by the Province sets the planning framework, identifies matters of provincial interest and delegates various responsibilities and permissions to municipalities. Of particular importance are a number of matters of provincial interest which reinforce the principles of the Conservation Authorities Act, such as the protection or enhancement of ecological systems, features and functions (Part 1, item 2a), the conservation and management of natural resources (item 2c), the protection of public health and safety (item 2o), the appropriate location of growth and development (item 2p) and the promotion of development that is designed to be sustainable (item q). Municipalities are responsible for preparing Official Plans and zoning by-laws and are also responsible for approving new development. Within this system, the Province's principle tool for ensuring that matters of provincial interests are implemented across the Province is the Provincial Policy Statement.

Specific responsibilities under the Planning Act have been delegated to conservation authorities. In 1995, the Province of Ontario delegated responsibility for floodplain management, hazardous slopes, Great Lakes shorelines, unstable soils and erosion – which are now covered in Section 3.1 of the Provincial Policy Statement. This means that the NPCA is responsible for representing the provincial interest on the above-noted matters:

- Conservation authorities review policy documents and development proposals which are processed under the Planning Act to ensure that the proposal is consistent with Section 3.1 of the PPS (see next section for more details on the PPS).
- Upon request from the Ministry of Municipal Affairs and Housing, conservation authorities provide comments to the Ministry on planning matters as part of the one-window review process.
- Where required, conservation authorities will initiate appeals under the Ontario Municipal Board.

## 2.4 The Provincial Policy Statement

The Provincial Policy Statement (PPS, 2014) is of particular relevance for conservation authorities, as the Planning Act states that all decisions and advice shall be consistent with PPS and provincial plans.

The Niagara Peninsula Conservation Authority also extends this consistency to comments provided under Service Agreements on development applications within its jurisdiction. Any comments provided by the NPCA need to be consistent with the PPS. The PPS includes a variety of policies related to Natural Heritage (Policy 2.1), Water (Policy 2.2) and Natural Hazards (Policy 3.1). The Niagara Peninsula Conservation Authority is responsible for providing comments on planning applications through the vehicle of a Memorandum of Understanding (MOU). The Niagara Peninsula Conservation Authority is bound by two different types of MOUs:

1. MOU between the Ministry of Natural Resources and Forestry, and Conservation Authorities in Ontario CAs (January 2001) regarding delegated Provincial Responsibility.
2. MOUs between the Niagara Peninsula Conservation Authority and the three main upper tier/single tier municipalities within our watershed, namely the City of Hamilton, Haldimand County, and Niagara Region. Each individual MOU is specific to the area and context it applies to. In general, these three MOUs identify the NPCA's role and function for implementing the above-noted sections of the PPS through the development review process.

Section 3 provides a more expansive discussion on some of the specific policies within the PPS which are of relevance to watershed planning.

## 2.5 Provincial Plans

### 2.5.1 Greenbelt Act and Greenbelt Plan

The Greenbelt Plan came into effect in 2005 and provides a policy framework for protecting the natural and agricultural systems in the Greater Golden Horseshoe by identifying where urbanization should not occur. The Greenbelt Plan was prepared under the authority of the Greenbelt Act (2005), which designates the Greenbelt Area that the Plan applies to, and lays out the key components and objectives for the Greenbelt area as described in the Plan. The Greenbelt Plan lays out a strategy and policies for protecting natural and agricultural resources and framework builds on the framework established in the PPS (and other provincial plans such as the Oak Ridges Moraine Plan and the Niagara Escarpment Plan). The Greenbelt Plan identifies policies for lands identified as Protected Countryside which includes lands identified as:



- Agricultural System
  - Speciality Crop;
  - Prime Agricultural Lands; and,
  - Rural Areas.
- Natural System
  - Key Natural Heritage Features (significant habitats of endangered species, threatened species and special concern species, fish habitat, wetlands, Life Science Areas of Natural and Scientific Interest, significant valleylands, significant woodlands, significant wildlife habitats, sand barrens, savannahs and tallgrass prairie and alvars); and,
  - Key Hydrologic Features (permanent and intermittent streams, lakes, seepage areas and springs and wetlands).

The Greenbelt Plan is of particular relevance as the northern portion of the NPCA's watershed falls within the limits of the Plan Area. The Plan is intended to be read and applied in conjunction with a range of other applicable plans, policies and legislation, including regulations under the Conservation Authorities Act. In instances where there is a conflict between a particular policy in the Greenbelt Plan and a policy in the NPCA's Policy Document, the Greenbelt Plan states that the more restrictive policy shall apply.

### 2.5.2 Places to Grow: The Growth Plan for the Greater Golden Horseshoe

Places to Grow: The Growth Plan for the Greater Golden Horseshoe (2005) works in parallel with the Greenbelt Plan (and other provincial plans). The Growth Plan was developed as a means to strategically direct and coordinate growth across the 118 municipalities which make up the mega-region known as the Greater Golden Horseshoe and was prepared under the authority of the Places to Grow Act (2005). The Growth Plan provides policies to support compact, transit-supportive and pedestrian friendly forms of intensification and greenfield development. Generally speaking, municipalities are primarily responsible for implementing the policies of the Growth Plan through Official Plans and zoning by laws. The Growth Plan is of relevance for the Living Landscape, as the NPCA needs to consider the policies of

the Growth Plan when issuing permits and/or commenting on development applications<sup>2</sup>. It is important to note that the Province is currently in the process of reviewing and updating the policies for both the Greenbelt and Growth Plans.

### 2.5.3 Niagara Escarpment Plan

The Niagara Escarpment Plan (2012) was created to protect and preserve the Niagara Escarpment, one of twelve UNESCO World Biosphere Reserves in Canada. The Plan was prepared under the authority of the Niagara Escarpment Planning and Development Act (1973) and includes policies for seven designations within the Escarpment: Natural, Protection, Rural, Recreation, Urban, Minor Urban and Mineral Resource Extraction. The Niagara Escarpment Commission is responsible for regulating development in the Plan Area, which skirts the northern portion of the NPCA's watershed. The NPCA is responsible for reviewing and providing comments on development proposals which fall within the Plan Area and the NPCA's regulations also apply within the Niagara Escarpment Plan Area<sup>3</sup>. The Province of Ontario is currently undertaking a review and update of the Niagara Escarpment Plan.

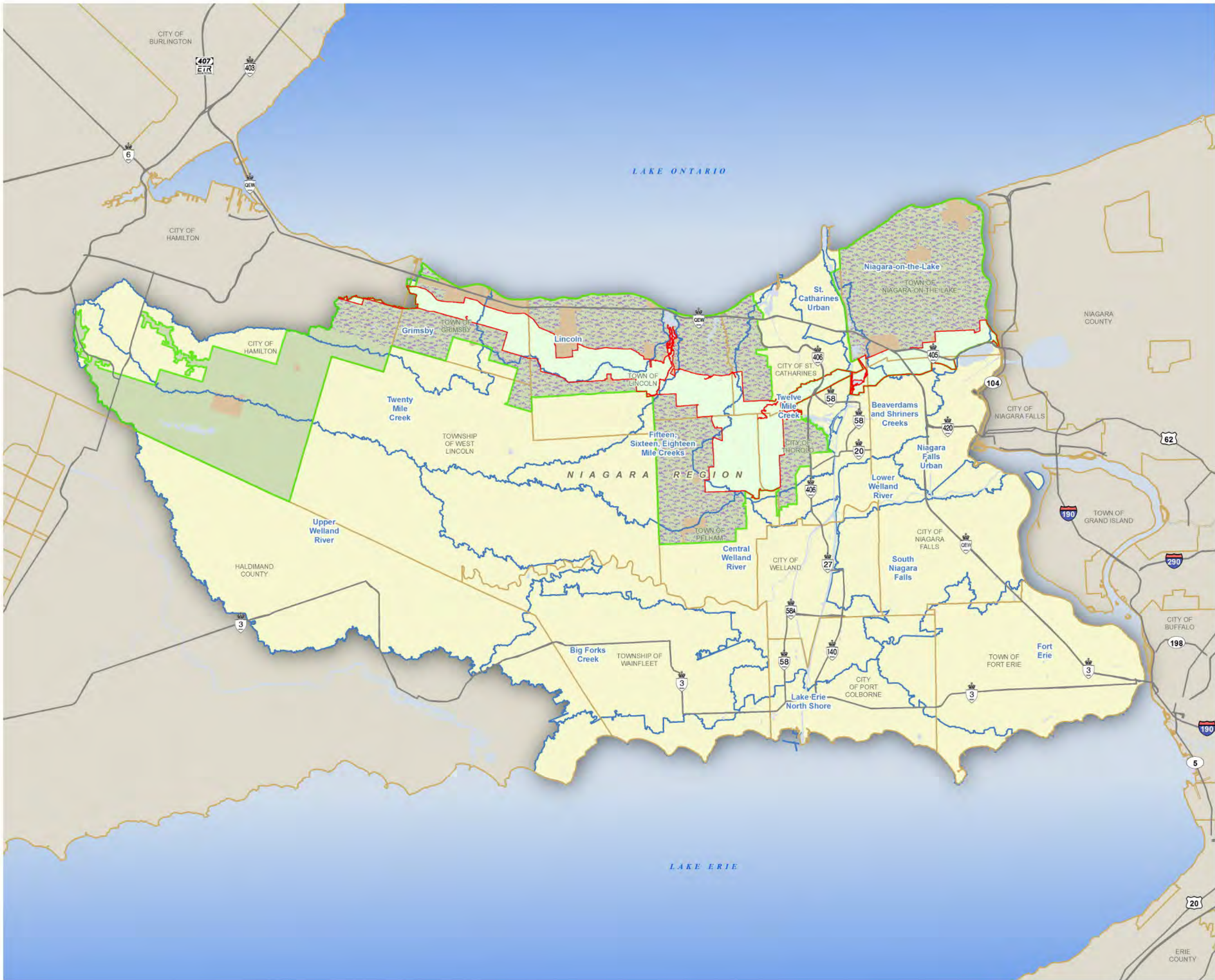
**Figure 2.3** highlights the areas within the NPCA jurisdiction that are designated under the Niagara Escarpment Plan and the Greenbelt Plan.

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<sup>2</sup> In instances where there is a potential conflict between a policy within the Growth Plan and other provincial plans/policies, Section 1.4 states that the Growth Plan shall prevail, except for policies related to the natural environment and public safety (in those matters, the policies of the PPS prevail). Notwithstanding the fact that the PPS and the Conservation Authorities Act direct development away from hazard lands and that Section 1.4 clearly outlines the policy hierarchy, there has been occasional confusion about how to manage conflicts between infill development and natural hazards.

<sup>3</sup> Note that the NEC does not maintain specific EIS guidelines and accordingly the NPCA relies on municipal EIS guidelines when reviewing NEC permits.



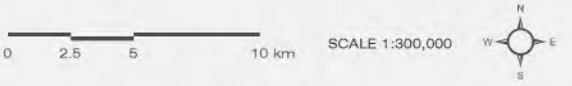


**NIAGARA PENINSULA  
CONSERVATION AUTHORITY**

**PROVINCIAL PLAN DESIGNATED AREAS  
WITHIN THE NPCA WATERSHED**

FIGURE 2.3

- NIAGARA ESCARPMENT PLAN BOUNDARY
- GREENBELT OUTER BOUNDARY
- NIAGARA ESCARPMENT PLAN
- PROTECTED COUNTRYSIDE
- TENDER FRUIT AND GRAPE LANDS
- HAMLETS
- TOWNS AND VILLAGES
- FREEWAY / EXPRESSWAY / HIGHWAY
- WATERSHED PLANNING AREA BOUNDARY
- LOCAL MUNICIPAL BOUNDARY



MAP DRAWING INFORMATION:  
DATA PROVIDED BY NPCA, CITY OF HAMILTON, NIAGARA REGION, MNR  
AND ESRI

MAP CREATED BY: PFM  
MAP CHECKED BY: CF  
MAP PROJECTION: NAD 1983 UTM Zone 17N

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PROPOSAL  
STATUS: FINAL  
DATE: 8/15/2016



## 2.6 Environmental Assessment Acts

### 2.6.1 Ontario Environmental Assessment Act

The purpose of the Environmental Assessment Act is “the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment” (2). The Act applies to provincial ministries and agencies, municipalities such as towns, cities, and counties, as well as public bodies such as conservation authorities for infrastructure projects such as (but not limited to):

- Public roads and highways;
- Transit projects;
- Waste management projects;
- Water and wastewater works;
- Resource management;
- Flood protection projects.

The NPCA is responsible for commenting on infrastructure projects within the watershed led by public or private sector proponents. The NPCA is also responsible for adhering to the Act when it acts as the proponent under the act (e.g. undertaking flood protection projects). When acting as a proponent for certain types of projects, the NPCA is subject to the Conservation Ontario’s Class Environmental Assessment for Remedial Flood and Erosion Control Projects.

### 2.6.2 Canadian Environmental Assessment Act

The Canadian Environmental Assessment Act (CEAA 2012) is generally similar to the Ontario Environmental Assessment Act, focusing on potentially adverse environmental effects within federal jurisdiction, including:

- Fish and fish habitat;
- Other aquatic species;
- Migratory birds;
- Federal lands;
- Effects that cross provincial or international boundaries;

- Effects that impact on Aboriginal peoples, such as their use of lands and resources for traditional purposes;
- Changes to the environment that are directly linked to or necessarily incidental to any federal decisions about a project.

Where Federal EAs are undertaken within the Niagara Peninsula watershed, the NPCA provides comments through the CEAA process.

## 2.7 Niagara River Remedial Action Plan

The Great Lakes Water Quality Agreement (1972) was signed by Canada and the U.S. to restore and maintain the integrity of the Great Lakes Basin ecosystem, which had come under significant pressure from a variety of sources (mainly the effects of extensive urbanization and industrialization). In 1987, an amendment to the Agreement allowed for the implementation of Remedial Action Plans (RAPs) to restore ecosystem health in 43 identified Areas of Concern (AOCs) located within the Great Lakes Basin. The Niagara River was designated as one of the 43 AOCs.

The purpose of the Niagara River RAP is to identify significant water quality concerns and take actions to resolve them, within the context of a three-step process:

- Stage 1 identifies and assesses use impairments;
- Stage 2 identifies proposed remedial actions and their method of implementation; and
- Stage 3 documents evidence that uses have been restored, and communicates these results through extensive public engagement.

Upon completion of the three-stage process, the Niagara River AOC will be considered remediated and will be “delisted” as an AOC. The Niagara River RAP is currently in the third and final stage of the RAP process, with a target delisting date of 2020. The NPCA acts as the Coordinator for the Niagara River Remedial Action Plan on behalf of the Province of Ontario and the Federal Government.

## 2.8 Other Relevant Legislation

In addition to the above, there are a number of additional acts and legislation that the NPCA needs to consider when making decisions related to development and site alteration. These include:

- The Building Code Act, which governs the structural, safety, and liability characteristics of developments. For development applications within its regulated areas, the Building Code recognizes the conservation authority regulations that are applicable by law. The Building Code Act requires NPCA permission to be provided prior to issuance of development approvals in accordance with any applicable regulations under the Conservation Authorities Act. The NPCA provides location approval and/or recommends technical investigations and site control measures in line with conservation best practices.
- The Drainage Act provides direction to municipalities for the maintenance and repair of municipal drainage works and, under certain circumstances, municipalities can be held liable where prescribed duties are not performed. Under the Conservation Authorities Act, conservation authorities are responsible for regulating works within watercourses and wetlands. The Ontario Ministry of Agriculture, Food and Rural Affairs maintains a DART (Drainage Act and Regulations Team) protocol which provides guidance to municipalities and conservation authorities on how to ensure the objectives of both acts are met. The DART protocol identifies the circumstances where a full permit is required under the Conservation Authorities Act and where a standard compliance requirement (SCRs) is recommended<sup>4</sup>.
- The Federal Fisheries Act provides provisions for the prevention of serious harm to fish as a result of human activity. In 2013, the Act was updated and, as a result of the update, Conservation Authorities no longer provide regulatory review for works under the federal Fisheries Act. Any previous agreements between DFO and conservation authorities are no longer in effect (additional commentary on the Fisheries Act is provided in Section 3.10 of this report).

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<sup>4</sup> Standard Compliance Requirements under the DART protocol are activities which can proceed without a full permit under the Conservation Authorities Act.



- The Federal Migratory Birds Act provides protection for over 450 species of migratory birds through a series of regulations.
- The Ontario Water Resources Act covers both groundwater and surface resources. The Act regulates sewage disposal and “sewage works” and includes regulations which prohibit the discharge of polluting materials that may negatively impact water quality. In addition to this, the Act also requires permits from the Ministry of Environment and Climate Change to take more than 50,000 liters of water per day from ground or surface water sources. The NPCA is notified of any applications to take water within the watershed and provides comments on permit requests.
- The Ontario Clean Water Act is concerned with the protection of drinking water through a multi-pronged approach to source water protection. The issue of drinking water protection within the NPCA watershed is addressed through the establishment of the Niagara Peninsula Source Protection Area (NPSPA), which was established in 2007 and covers the same geographic extent as the NPCA Watershed. The NPSPA implemented a Source Protection Plan in 2014 to provide a zone within which all municipal drinking water is derived from surface water resources, thereby protecting groundwater sources.
- The Federal Species at Risk Act (SARA), which prevents species from disappearing, promotes the recovery of species that have been extirpated, provides protection for species that are endangered or threatened as a result of human activity, and prevents species of special concern from becoming endangered or threatened. SARA is integrated into the NPCA’s review of development applications particularly where the modification of wetland boundaries is concerned.

It is also worth noting that a Natural Areas Inventory (NAI) was completed for the NPCA Watershed from 2006-2009. The NAI was developed using the Province’s “Ecological Land Classification” system protocol. The NAI project created 1:2,000 mapping of natural features in the watershed as well as species checklists, and a master plant list (including, a list of local rarity compiled by the Natural Heritage Information Centre of the Ministry of Natural Resources). This information can be used by staff, municipalities and other stakeholders to map natural features and areas in planning documents and used as background information to prepare Environmental Impacts Assessment reports for

development applications. The Policy Document will recognize the NAI mapping and how it is to be used by staff, stakeholders and the public.

## 3.0 WATERSHED POLICIES

The following section provides a review of the existing policies within the NPCA Policy Document and identifies key issues, opportunities and gaps which should be addressed in the update. The first section provides a brief discussion on the structure, organization and format of the Policy Document. The remaining sections cover a range of policy topics:

- Floodplains;
- Valleylands;
- Groundwater and Source Water Protection;
- Shoreline hazards;
- Wetlands;
- Natural heritage;
- Hazardous sites;
- Stormwater management;
- Fish habitat;
- Climate change; and,
- Fill placement and storage.

### 3.1 Policy Document Structure and Organization

#### 3.1.1 Context

As noted earlier, the Policy Document is used by NPCA Staff when making decisions (issuance of development permits under Ontario Regulation 155/06) or when commenting on a particular proposal or project. The stated purpose of the Policy Document is “to provide local NPCA watershed policies which will guide development and site alteration while protecting, preserving and enhancing the natural environment within the legislative mandate of the NPCA” (page 6).

### 3.1.2 Current Framework

The current Policy Document is organized into seven main sections. The first section is the introduction and lays out the legislative basis for watershed policy and also provides a few organizational notes for the reader (including the purpose of the document and a brief overview of the NPCA's ecosystems-approach to watershed planning). The second section documents the process and procedures for permits required under Section 28(1) of the Conservation Authorities Act. Section 3 provides the policies for decision-making associated with Ontario Regulation 155/06 and includes policies for watercourses, floodplains, valleylands, hazardous lands, wetlands and shorelines, with both general policies and specific policies. Section 4 generally covers the same policy themes; however, the policy guidance is directed towards the NPCA's role as a review agency under the Planning Act and other relevant pieces of legislation. The fifth section provides some additional reference materials to support decision making and policy interpretation for both Sections 3 and 4. Section 6 contains the definitions and Section 7 includes appendices which are intended to assist with some aspects of implementation (e.g. Hearing Guidelines under the Conservation Authorities Act and some additional background on the delegation of natural hazard review).



Policies, Procedures and Guidelines for the Administration  
of Ontario Regulation 155/06  
and  
Land Use Planning Policy Document

December 12, 2007 (Original NPCA Board Approval)  
December 9, 2009 (Housekeeping Amendments)  
September 15, 2010 (Housekeeping Amendments)  
October 19, 2011 (Housekeeping Amendments)



2010-09-15

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### 3.1.3 Guiding Principles

Guiding Principles will be used as a screening tool through which proposed changes to NPCA policies will be filtered, and will assist in determining the fairness or correctness (or vice versa) of proposed changes. The following principles were developed through a review of the legislative drivers, several other conservation authority policy documents, and a workshop with NPCA staff:

1. *Recognize that healthy communities require a sustainable balance between environmental, social and economic priorities, interests and uses.*
2. *Acknowledge that protecting natural systems over the long term is best achieved through a science-based approach that manages human activities and natural resources across the watershed.*
3. *Consider the impacts of climate change on the people, property and the environment.*
4. *Avoid the potential for negative impacts to people, property and the environment by directing development and site alterations away from natural features.*
5. *Work with landowners, stakeholders and municipal, provincial and federal partners to develop appropriate policies that meet the requirements of all relevant legislation.*
6. *Continuously pursue practical approaches to the management of water and natural resources based on the application of sound science, creativity, and innovation.*
7. *Learn from and inform watershed residents, member municipalities, partners and clients about the value of the watershed, its features and functions.*
8. *Minimize the potential for risk of harm to people and property resulting from flooding, erosion and slope instability.*

### 3.1.4 Key Issues, Opportunities and Policy Gaps

- The following summarizes some of the key issues, opportunities and gaps related to the Policy Document's current structure, organization and formatting: The discussion on legislation could be enhanced to better reflect the different roles played by the NPCA.
- There are opportunities to improve the structure and organization of the Policy Document, with a few alternatives which can be further explored. For instance, the NPCA could consider re-organizing Sections 2-5 to focus on policy themes (e.g. floodplains, valleylands, wetlands, etc.) to avoid confusion and redundancy within the policies. Each policy theme would need to recognize nuances between permits issued under Regulation 155/06 and Planning Act proposals. Alternatively, the document could be arranged around themes related to the various roles that the NPCA holds, for example Natural Hazards (Delegated Authority), Natural Heritage (MOUs), etc. There is also an opportunity to utilize language and/or formatting elements to distinguish between types of policies in the Document, such as policies derived from legislation,

policies that are based on guidelines or best practices, and policies that are intended to encourage desirable behaviour with respect to regulated areas.

- There are opportunities to introduce some additional visualizations, diagrams, photos and other color graphics to enhance the legibility of the Policy Document.
- The document does not include an implementation section – although aspects of implementation are woven throughout the Document. One suggestion would be to include an implementation section at the end of the Document, where procedures and processes are explained separately from policy interpretation. The implementation section could be subdivided to recognize the different protocols followed by the NPCA (permit approval, comments on plans, comments on EA, acquisition of land, etc.). This section might also expand upon the interaction between the NPCA's tools (stormwater management guidelines, watershed plans, etc.), municipal planning tools (Official Plans, Zoning by-law, site plans, Community Improvement Plans, Secondary Plans, etc.) and other tools/processes (such as EAs). The implementation section would also contain procedures for how the policy document would be updated on an ongoing basis.
- The Definitions section needs to be reviewed and updated to reflect changes in Provincial policy. This section could also benefit from a few explanatory notes to address some of the “quirks” and nuances within the Provincial planning framework. It is important to note there may be different definitions used for different plans/legislation, for example, the term “Development” has two different definitions (Planning Act vs. Conservation Authorities Act).
- The Province is currently conducting a review of several major plans and policies which are relevant to the Living Landscape, including the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan, the Niagara Escarpment Plan, and Conservation Authorities Act. The NPCA's Policy Document will need to be updated for consistency with these documents, however the timing for completing the various Provincial plan reviews is unknown. Where timelines permit, the Living Landscape project may be able to implement some of the new provincial plan directions and policies – alternatively, these changes may also be implemented through future amendments to the Policy Document.
- The Policy Document should be prepared as a web-friendly and accessible electronic document (i.e. minimum 12 point fonts, inclusion of document tags for accessibility.).



- The Hearing Guidelines which are attached as Appendix 1 to the Policy Document are out of date, as the NPCA Board adopted new hearing guidelines in 2015. The new Policy Document should include the recently adopted hearing guidelines which are now in force and effect.

## 3.2 Floodplains and Watercourses

### 3.2.1 Context

Generally speaking, floodplains are low lying lands which are adjacent to watercourses and/or in-land lakes and are subject to periodic flooding. To mitigate the potential risks to public health, safety and property, the Province of Ontario has enacted a number of regulations intended to limit the amount of development that occurs in floodplains<sup>5</sup>. The policy framework directs development away from areas of hazards (natural or man-made) where the risk associated with the development is shown to be unacceptable to the public health or safety, or will result in property damage, create a new hazard or aggravate an existing hazard.

*Flooding hazard: means the inundation, under the conditions specified below, of areas adjacent to a shoreline or a river or stream system and not ordinarily covered by water:*

- a) *Along the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes, the flooding hazard limit is based on the one hundred year flood level plus an allowance for wave uprush and other water-related hazards;*
- b) *Along river, stream and small inland lake systems, the flooding hazard limit is the greater of:*
  - i. *The flood resulting from the rainfall actually experienced during a major storm such as the Hurricane Hazel storm (1954) or the Timmins storm (1961), transposed over a specific watershed and combined with the local conditions, where evidence suggests that the storm event could have potentially occurred over watersheds in the general area;*
  - ii. *The one hundred year flood; or*
  - iii. *A flood which is greater than 1. or 2. which was actually experienced in a particular watershed or portion thereof as a result of ice jams and which has been approved as the standard for that specific area by the Minister of Natural Resources.*

*Except where the use of the one hundred year flood or the actually experienced event has been approved by the Minister of Natural Resources as the standard for a specific watershed (where the past history of flooding supports the lowering of the standard).*

<sup>5</sup> The PPS (Planning Act) and the Conservation Authorities Act (specifically Ontario Regulation 97/04 and Regulation 155/06 under the CA Act) are the main legislative tools which provide direction to municipalities and conservation authorities for regulating development in floodplains.

The primary objective for the identification of floodplains is the identification of potential risk to public health and safety, in addition to mitigating damage to property from the impacts of a significant storm event. One of the key tools for managing the risks associated with flooding is floodplain mapping based on significant storm events. The measure used by the NPCA for a significant storm event is the 100-Year Storm (some other Conservation Authorities use the 1954 Hurricane Hazel storm and others use the 1961 Timmins flood event). During a large storm event, the floodplains and valley lands fill up with water causing water levels to rise significantly within the floodplain. Accordingly, conservation authorities use floodplain mapping to manage the risks associated with development which may be subject to flooding.

In Ontario, there are two generally accepted approaches to floodplain policy, known as the one-zone and two-zone approaches. A floodway is the portion of the floodplain where development would cause significant risk to public health, safety or property damage (**Figure 3.1**). A one-zone concept is where the entire floodplain is the floodway, as illustrated in areas where the Hurricane Hazel Flood level is taken as the baseline for floodplain mapping. A two-zone policy provides a separation of the floodplain and the 'flood fringe', which is an area that allows development based on the type of storm that is considered as the baseline for floodplain mapping. For example, the flood fringe might be the land area between the Hurricane Hazel flood level and the 100-year storm flood level, where the 100-year storm flood level is closer to the shoreline<sup>6</sup>. Under the two-zone policy, development is still prohibited within the floodway where there is active conveyance, but within the flood fringe and outside of the floodway, conditional development is allowed with the correct type of flood protection measures.

Typically, where there is a two-zone policy approach in place, the onus is on local municipalities to demonstrate that the one-zone approach is too onerous and would have a negative impact on the community. The two-zone approach is usually applied in urban areas where demand for development can offset the costs associated with flood-proofing requirements. Also, municipalities play an important role in implementing floodplain policy, as they are responsible for incorporating floodplain mapping in local official plans and zoning by-laws.

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<sup>6</sup> Note that the Ministry of Natural Resource's technical guidelines for floodplains do not address a two zone system where floodplain is based on the 100-year flood event.

In addition to the one-zone/two-zone approach, the floodplain policy framework in Ontario also makes provision for historic built-up areas where development patterns pre-date the emergence of provincial flood risk management. A special policy area (SPA) is an area within an existing community where historically it existed within the floodplain. These are areas where both the MNRF and the MMAH have approved for the continued viability of existing uses and for some limited development. Development can continue and is allowed in these areas if it can be shown that significant hardships to the community would occur with strict adherence to the provincial policies and development was prohibited. The SPA does not allow for new or intensified development and site alteration if opportunities for development outside of the floodplain exist. There is one SPA in the NPCA Watershed, located in the Town of Fort Erie.

### 3.2.2 Policy Framework

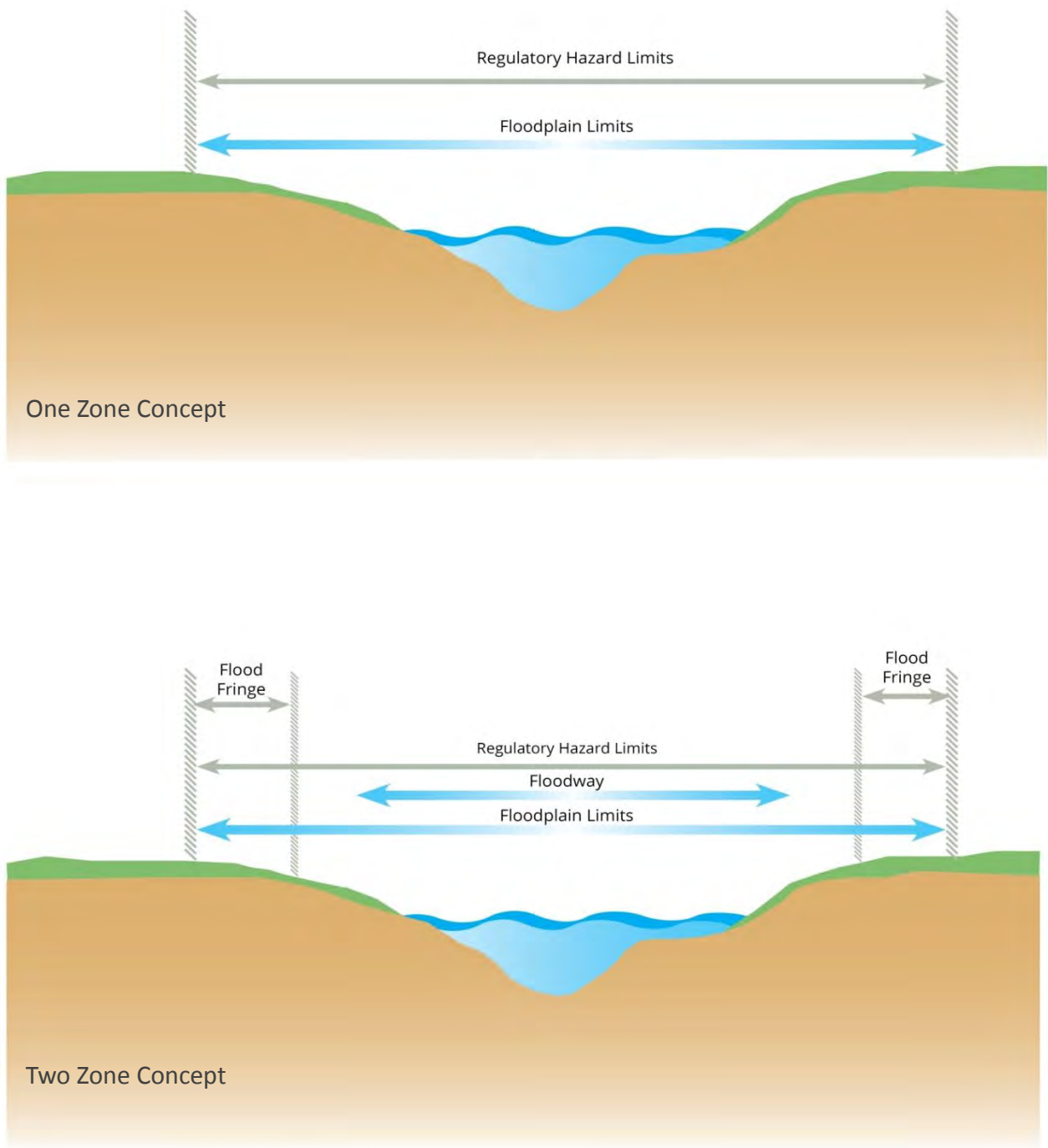
The NPCA's Policy Document aligns with Ontario Regulation 155/06, as Policy 3.1 states that development is prohibited within watercourses, regulatory floodplain, valleyland, hazardous land, wetlands and along the shoreline of the Great Lakes. However, some development may be permitted within a floodplain if it is demonstrated that *the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be impacted* by development.

The majority of the NPCA jurisdiction is categorized as a one zone area. There are no identified two zone areas within the NPCA jurisdiction. As mentioned previously, currently there is only one SPA within the NPCA's jurisdiction, located in the Town of Fort Erie in the Fort Erie Industrial Park. Generally, the NPCA uses the 100-year flood for identifying the limits of the floodplain (Policy 3.3); although in several locations in Niagara Falls, the Hurricane Hazel standard is used to define the floodplain limits (Beaverdams Creek, Shriner's Creek, Ten Mile Creek and Tributary W-6-5).

Section 3 includes both General and Specific Policies which apply to floodplains. The General Policies cover a range of items such as fencing, public safety, vegetation protection zones, design flows, as-built drawings, fish habitat setbacks, etc. (these General Policies are intended to apply to a variety of features within the NPCA's regulated areas). All works under the Specific Policies (Policies 3.15 – 3.26) must meet the requirements of the General Policies. Permits are required for all works under the Specific Policies. Specific policies include: Watercourses and floodplains, alterations to watercourses and floodplains, permitted uses within floodplains, existing floodplain development (including

replacement/relocation of buildings and structures and minor additions), balanced cut and fill (including policies, requirements, and hydraulic analysis requirements), floodplain spill areas, minor works within a floodplain where permits are not required (fill not exceeding 25 m<sup>3</sup> of material,

**Figure 3.1: Comparing the One-Zone and Two-Zone Approaches to Floodplain Policy**



landscaping, pipeline crossings), special policy areas, municipal drains, wetlands, valleylands, and shorelines. **Table 3.1** provides a summary of the NPCA's current floodplain policies.

**Table 3.1: NPCA Floodplain Policy**

Policy No.	Topic	Key Policy Directions
3.1	Watercourses, floodplains, valleylands, hazardous lands, wetlands and shorelines	<ul style="list-style-type: none"> <li>Except where permitted elsewhere in this Policy, this blanket policy prohibits development within floodplains (and other areas).</li> </ul>
3.3	One Zone Concept	<ul style="list-style-type: none"> <li>States that the NPCA shall implement a one zone concept, which is defined as:               <ul style="list-style-type: none"> <li>100-year Flood line, where the 100-year flood information is available;</li> <li>The Regional Flood where the 100-year flood is not available; and,</li> <li>Where information is not available, the landowner will be required to determine the 100-year level.</li> </ul> </li> <li>Policy notes three exceptions in Niagara Falls where the Regional Flood applies.</li> </ul>
3.15	Watercourses and Floodplains	<ul style="list-style-type: none"> <li>Floodplain mapping and modelling may be required to support an application.</li> </ul>
3.16	Alterations to watercourses and floodplains	<ul style="list-style-type: none"> <li>Provides conditions and criteria where alterations may be permitted.</li> </ul>
3.17	Permitted uses within the floodplain	<ul style="list-style-type: none"> <li>Notwithstanding the previously-noted policies, Section 3.17 lays out the criteria for allowing some limited activities within the floodplain (reconstruction or minor additions to existing structures, certain agricultural structures, in ground swimming pools, open space uses, parking lots, driveways, access roads, material and equipment storage, certain types of infrastructure, works under the Drainage Act and uses not likely to incur damages from floodwaters).</li> </ul>
3.18.1	Replacement/relocation	<ul style="list-style-type: none"> <li>Provides criteria allowing for the replacement of existing structures</li> </ul>

Policy No.	Topic	Key Policy Directions
	of buildings and structures	already located within the floodplain, provided the structure cannot be relocated outside the floodplain area.
3.18.2	Minor additions	<ul style="list-style-type: none"> <li>Provides additional direction for minor additions.</li> <li>Minor additions must be peripheral in nature (decks, patios, open porches) and are properly secured.</li> <li>The addition shall not exceed 20% of the original gross floor area or 300 square feet (whichever is lesser) and that the existing flood depths do not exceed 0.8 metres, velocity does not exceed 1.7 metres/second.</li> </ul>
3.19	Balanced cut and fill	<ul style="list-style-type: none"> <li>Outlines detailed policies for where and how cut and fill proposal may be approved.</li> <li>Requires the submission of a cut and fill plan which demonstrates how the various criteria have been met.</li> </ul>
3.20	Floodplain spill areas	<ul style="list-style-type: none"> <li>Identifies potential mitigation measures for spill areas.</li> </ul>
3.21	Minor works within a floodplain for which not permits are required	<ul style="list-style-type: none"> <li>Identifies minor works not subject to a permit, including certain types of agricultural activities, filling that does not exceed 25 cubic metres, landscaping and pipeline crossing.</li> </ul>
3.22	Special Policy Areas	<ul style="list-style-type: none"> <li>Includes a site specific policy for Fort Erie Industrial Park.</li> </ul>

### 3.2.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues and opportunities to be considered in the policy review with respect to floodplain policy:

- Policy 3.3 deals with the one-zone floodplain concept. There may be opportunities to examine the use of a two-zone concept in specific circumstances. For example, there may be opportunities to examine the applicability of the two-zone concept for the watercourses in Niagara Falls (where the floodplain is derived from Hurricane Hazel). With the consideration of development within the floodplain, consideration should also be given to special policy areas where development can occur; however, in the consideration of SPA's, it requires the approval of the province (MNRF, MMAH). This also requires the local municipal official plan and zoning regulations to be incorporated into the SPA's. However, it should be noted that it is not the



intent of the Policy Document review exercise to update flood plain mapping or conduct flood plain analysis. The Policy Document should include general policies which provide direction for the NPCA as to the overall policy framework and general implementation.

- Policy 3.11 deals with fencing, covering a range of possible circumstances. Specific fencing policies should be included in new sub-sections specific to each topic/themes (e.g. floodplains, wetlands, etc.)
- Policy 3.13 provides direction for certain works to be completed at certain times of the year. This section should reference the fact that there are certain timing requirements for works established by, for example, the MNRF or DFO. The updated policy does not need to include the specific time-frames, as they may change from time to time; however, they could reference the type of work and appropriate agency responsible.
- Policy 3.16 links both watercourse alterations with floodplain policy. For clarity reasons, there may be an opportunity to separate out these topics into different sub-sections.
- Policy 3.17 provides guidance for permitted uses in floodplains and generally provides a sufficient amount of direction for decision-making. However, there are several areas which could benefit from further clarification. Discussions with NPCA staff suggest that some policies within this section have been misinterpreted and some further refinement may be required.
- Policy 3.21 addresses the issue of fill application on floodplains. Additional guidance is needed to provide clarity on the use of regulated areas for the application of larger quantities of fill.
- Some watercourses within the watershed have been altered and there are opportunities for the updated Policy Document to encourage restoration and natural channel design.
- Most of the NPCA's floodplain mapping is based on the 100-year storm event, intended to provide a conservative estimate of the anticipated level of flooding for a major storm that would occur on average every 100 years. However, there have been a number of heavy precipitation events over the past decade that have either achieved or surpassed the 100-year storm level, thus providing an impetus for a review of the storm level utilized for floodplain mapping.
- Changes in climate and increased high-intensity short-duration storms as described above, have the potential to result in larger overland floods from rivers swollen by prolonged rainfall, sudden snowmelt or ice jams, damaging buildings and other structures within or adjacent to floodplains. Consideration should be given to the potential impacts of climate change and increased rainfall on floodplain limits and there is an opportunity for the Policy Document (or a

future study) to provide some guidance on how potential climate change impacts are to be handled (additional commentary on climate change is provided in section 3.11 of this report).

### 3.3 Valleylands

#### 3.3.1 Context

Valleylands are natural areas that occur “in a valley or other landform depression that has water flowing through or standing for some period of the year” (PPS, 2014). Valleylands are of particular importance for watershed planning for several reasons. Firstly, valleylands are dynamic places and are susceptible to slope failure and the loss of land which can result in extensive damage to property, roadways and buildings. Slope failure can be triggered by human modifications on or near the slope (construction activity) as well as atmospheric (heavy rainfall) and geologic (freeze-thaw soil action) processes or a combination of these three processes. Valleylands can also provide an important function for natural heritage systems, promoting biodiversity and connectivity. For these reasons, development controls in and adjacent to valleylands are regulated (e.g. adjacent lands where an EIS would be required are all lands within 15 metres of a valleyland feature).



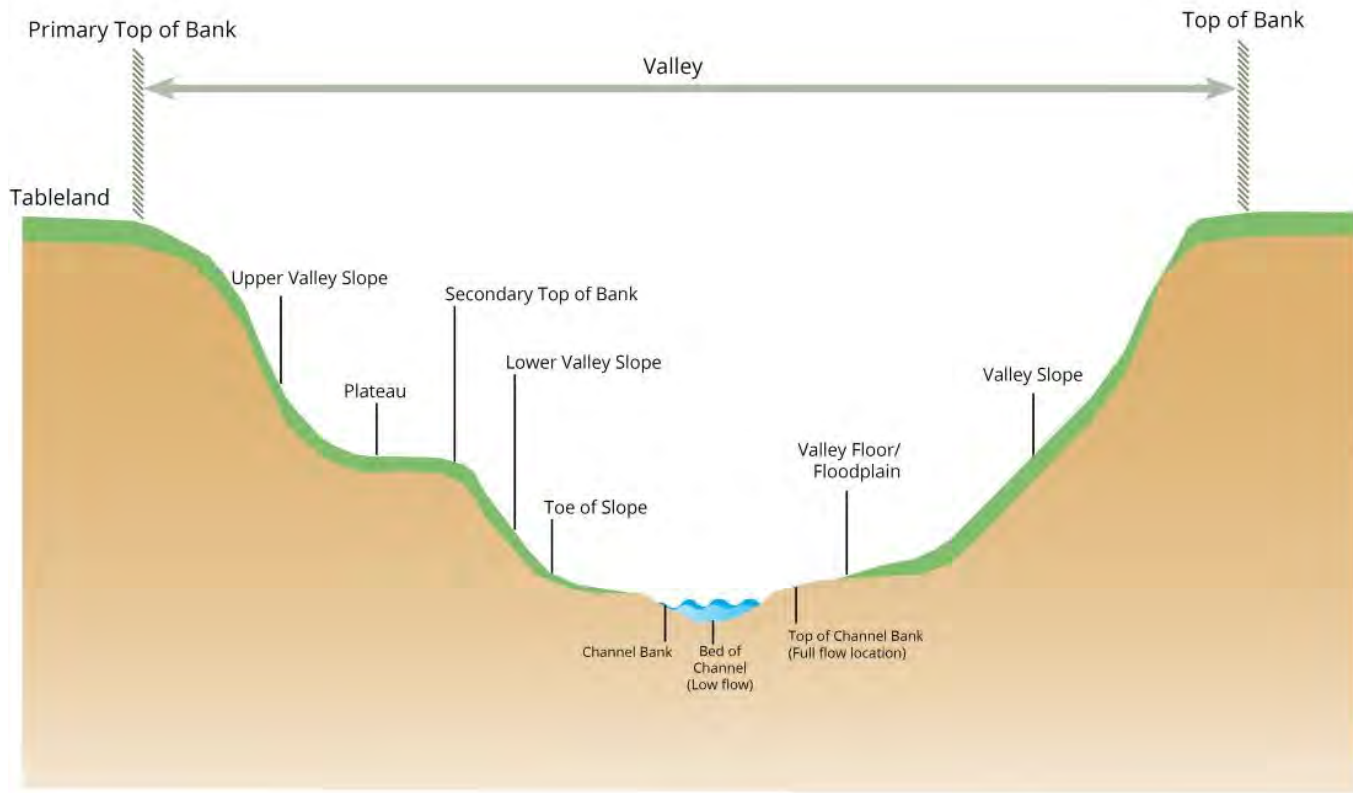
Twelve Mile Creek. Photo Credit: Julie Jocsak/ St. Catharines Standard/QMI Agency

### 3.3.2 Policy Framework

Both the PPS and Ontario Regulation 155/06 provide direction for planning in and around valleylands. Policy 2.1.5 of the PPS states that development and site alteration shall not be permitted in the natural heritage features listed in PPS policy 2.1.5, unless it has been demonstrated that there will be no negative impacts on the natural features or their functions; this policy prohibits development in significant valleylands (2.1.5c). Ontario Regulation 155/06 provides additional direction, as regulation 2B prohibits development in valleylands:

- i. Where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of bank, plus 15 metres, to a similar point on the opposite side;
- ii. Where the river or stream valley is apparent and has unstable slopes, the valley extends from the predicted long term stable slope projected from the existing stable slope or, if the toe of the slope is unstable, from the predicted location of the toe of the slope as a result of stream erosion over a projected 100-year period, plus 15 metres, to a similar point on the opposite side;
- iii. Where the river or stream valley is not apparent, the valley extends the greater of,
  - a. The distance from a point outside the edge of the maximum extent of the flood plain under the applicable flood event standard, to a similar point on the opposite side, and
  - b. The distance of a predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood standard, to a similar point on the opposite side.

The water features within a valleyland may be either permanent or intermittent. The limits of the valley land are defined by the primary top of bank on each side of the landform as illustrated below on **Figure 3.2.**

**Figure 3.2: The Physical Features of a Valleyland**

In addition to the PPS and Ontario Regulation 155/06, the Greenbelt Plan includes several policies for valleylands which merit consideration. Within the Greenbelt Plan Area, significant valleylands are considered to be a key natural heritage feature within the Greenbelt Natural Heritage System and development and site alteration is prohibited (Policy 3.2.4.1). Policy 3.2.5 provides direction to municipalities and conservation authorities encouraging connections between significant valleylands outside of the Greenbelt, stating that “in recognition of the function of the urban river valleys, municipalities and conservation authorities should:

1. *Continue with stewardship, remediation and appropriate park and trail initiatives which maintain and, to the extent possible, enhance the ecological features and functions found within these valley systems;*
2. *In considering land conversions or redevelopments in or abutting an urban river valley, strive for planning approaches that:*

- a) *Establish or increase the extent or width of vegetation protection zones in natural self-sustaining vegetation, especially in the most ecologically sensitive areas (i.e. near the stream and below the stable top of bank);*
  - b) *Increase or improve fish habitat in streams and in the adjacent riparian lands;*
  - c) *Include landscaping and habitat restoration that increase the ability of native plants and animals to use valley systems as both wildlife habitat and movement corridors; and*
  - d) *Seek to avoid, minimize and/or mitigate impacts associated with the quality and quantity of urban run-off into the valley systems; and*
3. *Integrate watershed planning and management approaches for lands both within and beyond the Greenbelt.*

The NPCA's current policy framework for valleylands is covered in several sections. Policy 3.1 and 3.2 prohibit development in valleylands and on lands within 15 metres from the stable top of bank, which is consistent with Ontario Regulation 155/06. Section 3.25 provides a more detailed policy framework for development in and adjacent to valleylands. Table 3.2 summarizes the current policy framework for valleylands.

**Table 3.2: NPCA Valleyland Policies**

Policy No.	Topic	Key Policy Directions
3.25.1 and 3.25.2	Defining the physical top of slope and stable top of slope	<ul style="list-style-type: none"> <li>Physical top of slope shall be defined in the field by NPCA staff and applicant, with drawings submitted to NPCA for review.</li> <li>Stable top of slope shall be established by a professional geotechnical engineer using NPCA guidelines in Section 5 of Policy Document.</li> </ul>
3.25.3.1	Development policies for stable slopes	<ul style="list-style-type: none"> <li>Minimum setback of 7.5 metres from the physical top of slope for all development.</li> <li>Lot creation is subject to a 7.5 metre setback from the physical top of slope.</li> </ul>
3.25.2	Development policies for unstable slopes	<ul style="list-style-type: none"> <li>Geotechnical investigation is required.</li> <li>A minimum setback from the stable top of slope is required for all</li> </ul>

Policy No.	Topic	Key Policy Directions
		<p>development.</p> <ul style="list-style-type: none"> <li>Lot creation is subject to a 7.5 metre setback from the physical top of slope.</li> <li>Geotechnical investigation may require greater setbacks.</li> </ul>
3.25.4	Existing development within and adjacent to valleylands	<ul style="list-style-type: none"> <li>Where development already exists within a valleyland or on adjacent lands, replacement of existing structures and buildings are permitted subject to a number of conditions.</li> </ul>
3.25.5	Construction practices for valleylands	<ul style="list-style-type: none"> <li>Overland flow is to be directed away from valley slopes.</li> <li>Fencing may be required 3 metres from the top of slope.</li> <li>Re-vegetation is required where vegetation has been disturbed as a result of construction.</li> </ul>
4.3	Application of valleyland policies through Planning Act processes	<ul style="list-style-type: none"> <li>Policies in section 3.25 form the basis of NPCA policy on valleylands.</li> <li>Through the planning application process, NPCA will encourage protection of valleyland and tablelands through the site plan process (through the dedication of land to the municipality).</li> <li>Development setbacks to range from 7.5 metres up to 30 metres where valleylands include a stream corridor to ensure protection of Type 1 Fish Habitat.</li> <li>Local municipalities are encouraged to zone all valleylands in local zoning by laws.</li> <li>Lands within setback areas should be zoned as open space, greenlands or hazard land in zoning by laws.</li> <li>Existing vegetation should be maintained in setback areas.</li> <li>Enhancement/establishment of vegetative buffers of native species may be required.</li> <li>Bioengineering may be used to stabilize erosion prone areas.</li> <li>Warning clauses may be required in the Agreements of Purchase and Sale and registered on the title of affected lots and/or blocks.</li> <li>NPCA may require the identification of a suitable building envelope within the lot for consents.</li> <li>Reductions in valleyland setbacks may be considered to accommodate smart-growth development in urban areas.</li> </ul>



Policy No.	Topic	Key Policy Directions
4.3	Slopes where bank height is less than 3 metres	<ul style="list-style-type: none"> <li>For valley slopes less than 3 metres, setbacks shall be determined based on the need to protect fish habitat and riparian vegetation.</li> <li>Setbacks to be the greater metric (floodplain limit, 15 metre vegetative buffer from channel bank where Type 2 or Type 3 Fish Habitat is present or 30 metre vegetative buffer for Type 1 fish habitat).</li> <li>Reductions in setbacks may be considered through an EIS.</li> </ul>

### 3.3.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps to be addressed for valleyland policy:

- There is a need to harmonize the policies in Section 3 and Section 4 – both in style and content. For example, the policies in Section 3 are short, clear and precise. By contrast, the policies contained in Section 4 are not numbered and include few headings, making the policies difficult to identify and read.
- The policies generally represent the requirements of Ontario Regulation 155/05 and the 2014 PPS; however, there is a need to more explicitly address and implement Policy 3.2.5 of the Greenbelt Plan (where it applies).
- There is an opportunity to articulate the overall objectives of valleyland policies. The current policies include a brief narrative to explain the context for the policies, which could be enhanced by stating the main objectives of the policies (i.e. protect public safety and property, protect and enhance natural areas, reduce risk of slope failure, reduce potential for impacts on fish habitat, etc.).
- There is an opportunity to modify the policy framework to differentiate between valleyland areas which need to be regulated solely for risk of slope failure, and valleylands which have a significant natural heritage function and require habitat protection measures. Accordingly, the policies should provide guidance for valleylands which have an ecological corridor function.
- The current policy framework treats all forms of development equally and some flexibility for development and site alteration for passive uses could be considered. There are opportunities to provide direction for certain forms of low-intensity development, such as municipal trails and

resource related uses. There are also opportunities to provide additional clarity on the types of development which are not permitted. The term passive uses should be a defined term in the Document.

- There are opportunities to provide more detailed policies to address intensification development in urban areas. Enhanced policies could speak to different forms of intensification (low density, medium density, high density, non-residential development, etc.) and offer different strategies depending on the intensity and form of development.
- A number of the policies in Section 4 are targeted to municipalities (e.g. consideration for how to treat valleylands in zoning by-laws). To improve the overall organization of the policies, the updated Policy Document could include a short implementation sub-section within the valleylands section. This implementation sub-section would provide valleyland policy direction for municipalities at the site plan/plan of subdivision/consent level, zoning by-law level and official plan level. This section could also provide direction for any study/investigation requirements (geotechnical investigations, cost of any peer reviews, etc.).
- Policy 4.3 states that, in some cases, restoration within the valleyland vegetative buffer area may be required. Some minor additions to this policy could be included to clarify the requirements for plantings which are native to the watershed and that restoration could also be required within the valleyland.
- The Policy Document could be updated to include additional guidance on how to define a setback from a watercourse where there is no apparent valley, effectively providing a clearer definition of the key terms used to define a valleyland (e.g. stable top of bank).
- The Policy Document uses the terms “setback” and “vegetative buffer” interchangeably. This is apparent in the valleyland section (but can also be found elsewhere) of the Policy Document and the revised policies should more clearly distinguish between these two terms. Setbacks which are required for public safety reasons due to the existence of a hazard are different than a vegetative buffer which is required to protect and maintain the ecological function of a natural feature. With this framework clearly established, the Policy Document could also provide

greater clarity about the distances required and types of development which may be permitted within buffers and setbacks<sup>7</sup>.

- The current Policy Document includes a valleyland figure/diagram which could be updated and modified to better represent the policy framework, including development setbacks, vegetative buffers, overland flow, etc.

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<sup>7</sup> Note that this observation applies to a number of topics throughout the Policy Document – including wetlands, shorelines, natural heritage features, etc.

### 3.4 Groundwater and Source Water Protection

#### 3.4.1 Context

Groundwater plays a vital role in both the wetland's ecological function, and provides an important source of potable water for people. It forms part of the hydrologic cycle (see **Figure 3.3**), which is the continued recycling of water between the oceans and lakes, precipitation, plants, surface water and aquifers. Groundwater is stored in aquifers, which consist of fractured bedrock or permeable overburden deposits such as sands and gravel. In the Niagara Peninsula watershed, groundwater from the aquifers is used for potable water primarily from individual private water wells. Where aquifers come to surface and intercept surface water features, they can provide baseflow to support these features and to moderate the surface water temperature.

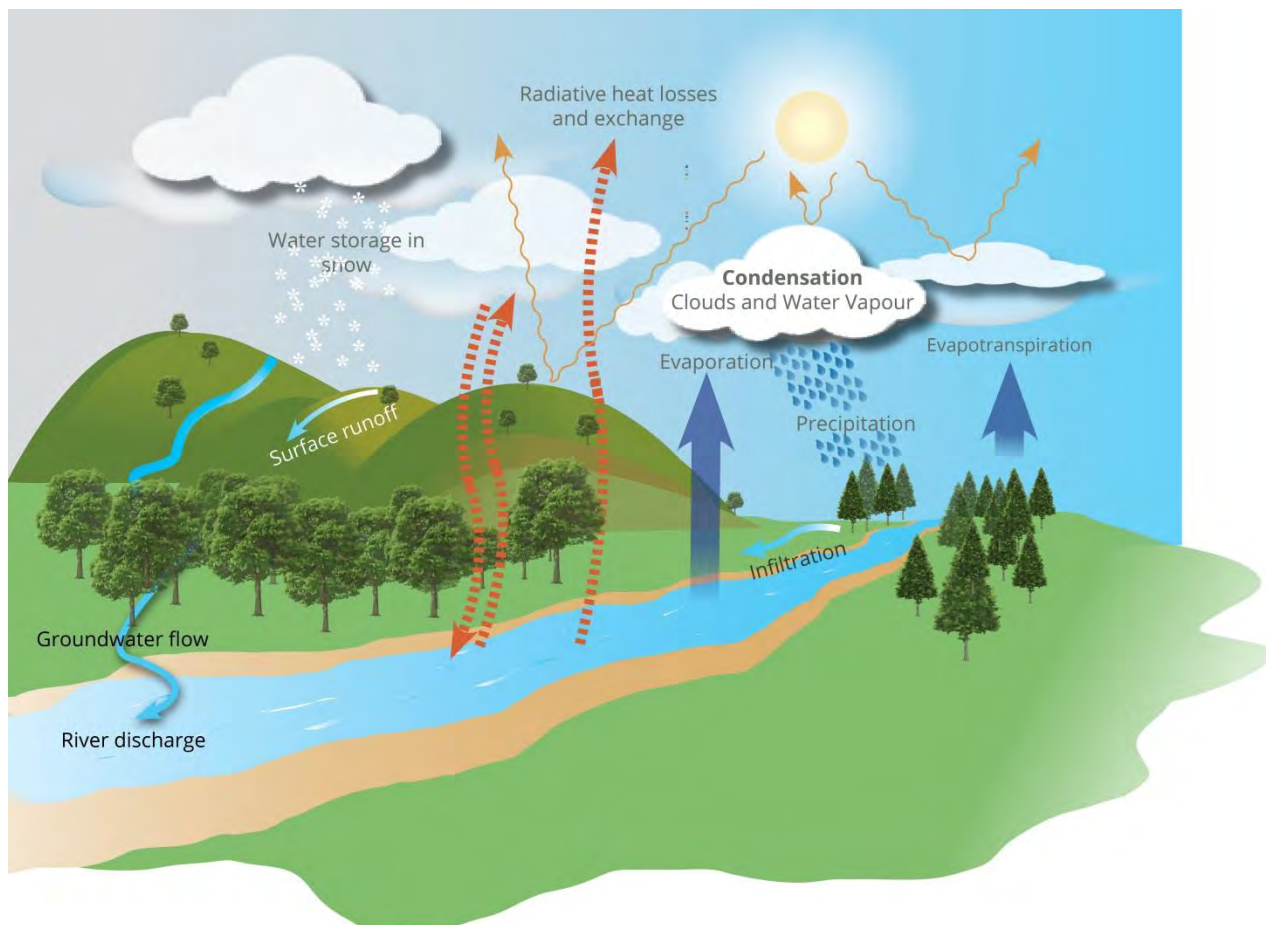


Figure 3.3: The Hydrologic Cycle

Groundwater is susceptible to contamination, especially in vulnerable areas where the aquifer is not overlain by lower permeable deposits such as clay and till that would restrict the vertical movement of contaminants. Chemicals released to the ground from spillage or leaks can dissolve within the groundwater and migrate far away from the original impact source. Detection and clean-up of groundwater impacts is difficult and expensive. For these reasons, the Province of Ontario provides a robust and multi-layered policy framework to protect vulnerable groundwater areas.

### 3.4.2 Current Policy Framework

The Clean Water Act (CWA, 2006) provides the basis for source water protection planning in Ontario. The purpose of the CWA is to protect Ontario's existing and future drinking water sources, as part of an overall commitment to safeguard human health and the environment. The CWA authorizes the creation of Source Protection Committees who are responsible for preparing Assessment Reports and Source Protection Plans. The CWA also allows for the creation of Source Protection Authorities (SPA) who are responsible for providing administrative, scientific and technical support to the Source Protection Committee (SPC). The Niagara Peninsula Conservation Authority is the Source Protection Authority in the watershed and is responsible for working with municipalities, stakeholders, other government agencies and the public to ensure that the policies of the Niagara Source Protection Plan are implemented.

Vulnerable areas were identified in the NPCA Assessment Report, and included significant groundwater recharge areas, high vulnerability areas and intake protection zones. The Source Protection Plan was completed in 2013 and included policies for four of the six surface water in-take protection zones (Welland; DeCew Falls; Port Colborne; City of Niagara Falls<sup>8</sup>). While the Assessment Report identified risks associated with groundwater, no formal policies were implemented through the Source Protection Plan. However, a few municipalities within the watershed, such as Hamilton and Welland have used the technical information in the Assessment Report and include specific policies and mapping in their

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<sup>8</sup> Note the Source Protection Plan did not include specific policies for the Grimsby and Rosehill water treatment plants as these facilities had lower vulnerability scores.

official plans for significant groundwater recharge areas and highly vulnerable aquifers. The purpose of these policies is intended to address the threats associated with groundwater, such as:

- Land development resulting in decreases of the infiltration capacity of shallow soils as a result of construction of an impervious surface, changes to land grading, loss of agricultural land cover etc. Decreases in infiltration result in high levels of runoff, limiting the amount of water that can enter the groundwater system which, in turn, may affect baseflow to surface water features.
- Land use activities resulting from contaminants being released into the environment that can potentially infiltrate into shallow aquifers. Common sources of area-wide contamination in the NPCA include nitrates from individual septic systems and agricultural activities, and salt impacts from de-icing activities. Individual sources of contamination include releases of chemicals associated with commercial and industrial properties.

In addition to the CWA, both the PPS and Greenbelt Plan provide planning direction for groundwater features. The PPS reinforces a number of the directions from the CWA and the Source Protection Plans. For example, Policy 2.2.2 states that “development and site alteration shall be restricted in or near sensitive surface water features and sensitive groundwater features such that these features and their related hydrologic functions will be protected, improved or restored”. The PPS also recognizes that groundwater features are part of a healthy and diverse natural heritage system and that sensitive features should be protected (by maintaining linkages, protecting and improving vulnerable and sensitive groundwater areas, Policy 2.2.1).

The Greenbelt Plan considers groundwater features to be a component of the Water Resources System within the Greenbelt Plan area and accordingly the policies which apply to entire Water Resources System would also apply to groundwater areas (see Policy 3.2.3).

The NPCA’s current Policy Document predates the completion of the Source Protection Plan and accordingly does not reference any the plans, policies and initiatives which apply to wellhead protection areas, intake protection zones and highly vulnerable aquifers. The current groundwater policies contained within the Policy Document are summarized in **Table 3.3**.



**Table 3.3: Groundwater Protection Policies**

Policy No.	Topic	Key Policy Directions
3.7	Conservation and Land Pollution	<ul style="list-style-type: none"> <li>Policy 3.7 relates to assessing the proposed development's potential to cause adverse environmental effects. In particular, the policy requires that any proposed development be evaluated to determine the potential effect to the conservation of land and/or pollution. Together, the broad terms "conservation of land and pollution" also encompasses the requirement to protect groundwater and surface water quality and quantity, as well as protection of the natural ecology.</li> </ul>
3.24, 4.4	Wetlands	<ul style="list-style-type: none"> <li>This policy requires that the hydrologic function of the wetland be maintained, and establishes minimum setbacks for development based on the wetlands size and significance.</li> <li>The setback provides both a buffer to the function of the natural feature as well as aids in maintaining the hydrologic regime of the wetland. Since some wetlands are supported by groundwater discharge, this policy places restrictions on development within adjacent areas that provide hydrologic support to the wetland via groundwater infiltration.</li> <li>Policy 4.4 states that, in addition to the hydrologic evaluation that may be required for development near a wetland as part of Permit application, an Environmental Impact Study (EIS) may be required to determine if the minimum setbacks are adequate.</li> <li>Policy 4.11 provides a general description of the objectives and content of an EIS, while Additional Reference 5.2 provides a summary of the scope of a hydrological evaluation.</li> <li>Overall, under the current policy, groundwater inputs into the wetland should be considered in EIS studies.</li> </ul>
4.5	Fish Habitat	<ul style="list-style-type: none"> <li>Policy states that the development or alteration of lands adjacent to a fish habitat shall not be allowed unless it can be demonstrated that there are no negative impacts on the natural features or their ecological function.</li> <li>Considering that sensitive fish habitats are often supported by groundwater discharge from adjacent areas, evaluation of the potential affects to groundwater infiltration from the development would be</li> </ul>

Policy No.	Topic	Key Policy Directions
		captured in this policy.
4.9	Sensitive Groundwater Features	<ul style="list-style-type: none"> <li>Policy states that development and site alteration shall be restricted in or near sensitive surface water and groundwater features such that these features are protected, improved or restored.</li> <li>The current policy references that the location of the sensitive groundwater features would be determined by NPCA staff based on available watershed/subwatershed studies and aquifer management plans.</li> </ul>

### 3.4.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps to be addressed for source water protection and groundwater:

- The NPCA's current policies do not explicitly mention the source water protection planning framework. The legislative context section should be updated to recognize the Source Protection Plan for Niagara and articulate the linkage between the Policy Document, the Source Protection Plan and the areas which the NPCA regulates. The legislative context should also recognize the mutually supporting framework for groundwater and source water protection through the Clean Water Act, the Provincial Policy Statement, the Greenbelt Plan, local official plans and other tools/processes.
- While there are several policies within the Document which address groundwater impacts associated with development proposals, it is suggested that the NPCA include a set of policies which promote the protection of the quality and quantity of groundwater in the watershed. Furthermore, a more explicit policy stating that development and site alteration in or near sensitive groundwater features should be restricted such that these features and their related hydrological functions will be protected.
- The NPCA should consider expanding the need for hydrological assessment reports by extending it to cover any developments which have the potential to affect groundwater quality or quantity (the current policy framework requires hydrological assessments for development in proximity to wetlands). The hydrological assessment report, which is to be prepared by a qualified Professional Geoscientist or Professional Engineer, is to demonstrate that development will not

significantly alter groundwater recharge/discharge in the area of the development, and that groundwater quality will not be impaired. The report should also identify mitigative measures to maintain pre-development infiltration rates, and improve or restore sensitive groundwater features and their hydrologic functions. A number of Conservation Authorities in the Province have implemented a requirement for hydrological or hydrogeological assessments (for example Halton Conservation) or components thereof to be integrated into environmental assessments or detailed design documents (for example as required by the TRCA) as part of development review applications. Such assessments typically apply to impacts on groundwater and sensitive features within the watershed in question, and include a desktop review of existing and potential future conditions as well as a field investigation to characterize site conditions, reporting on potential impacts, and provision of a plan to mitigate these impacts.

- The cumulative impacts of development is an area that is not sufficiently addressed within the Policy Document, and the NPCA may consider providing guidance on the evaluation of cumulative impacts on groundwater resources.

## 3.5 Shoreline Hazards

### 3.5.1 Context

The shorelines along Lake Ontario, Lake Erie, and the Niagara River can be very dynamic in nature. This is a result of the fact that shorelines are made up of an accumulation of detritus material such as sediment that is continually being transported and deposited by wave action, currents, and wind. The composition of the sediment varies from clay and silt to sand and gravel, to cobbles or even boulders. As a result, the composition of shorelines is very dynamic in nature where they are being shaped and reshaped. These changes can range from a period of a few hours to days or even years and decades in response to the changes in the waves, winds, water levels, currents as well as movement and accumulation of ice.

Morgan's Point. Photo Credit: NPCA



### 3.5.2 Current Policy Framework

The Conservation Authorities Act, through Ontario Regulations 97/04 and 155/06, grants the NPCA the authority to regulate development within shoreline hazard areas. The NPCA may grant permission for development in hazard areas “...if, in its opinion, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development”. The current NPCA shoreline policies are described in the Lake Erie and Lake Ontario Shoreline Management Plans, which were commissioned in 1992 and 1994, respectively. Updates to these Shoreline Management Plans were completed in 2010, and 2009, respectively. The policies and requirements in these Shoreline Management Plans are generally consistent with the Provincial Policies and the policies described in the MNRF Technical Guide for the Great Lakes – St. Lawrence River System and Large Inland Lakes.

Shoreline policies are in place to minimize risk to life, property damage, social disruption and adverse environmental impacts. In the watershed, hazardous lands adjacent to the shorelines of the Lake Ontario or Lake Erie are comprised of three types of hazard:

- Flooding;
- Erosion; and/or,
- Dynamic beach hazards.

The current policies also recognize that the Niagara River is a unique shoreline area which links the two Great Lakes and, accordingly, jurisdiction along the Niagara River is a shared responsibility between various levels of government. The NPCA is responsible for regulating development at the mouths of the Niagara River where it connects to Lake Ontario and Lake Erie.

The following subsections provide a brief overview of the policy context for erosion hazards, flooding hazards, dynamic beach hazards associated with the Lake Erie and Lake Ontario shorelines. A separate discussion on the Niagara River shoreline's policy framework is also provided.

### 3.5.2.1 Shoreline Erosion Hazard

Policy 3.26.1 in the NPCA's Policy Document describes the approach for managing development which may be subject to shoreline hazards. The erosion hazard is the portion of land that may be subject to erosion and is determined by the sum of the erosion allowance and the stable slope allowance. The erosion allowance is defined by consideration of the long-term recession of the unprotected shoreline. NPCA policies require a planning horizon of 100 years with respect to any shoreline development. The erosion allowance can be reduced if shore protection is constructed. The stable slope allowance is defined by consideration of the geotechnical conditions at a site and the appropriate factors of safety. The generic stable slope allowance is 3H:1V; however, a site specific geotechnical analysis may be completed to determine the stable slope allowance. Essentially, the identification of the erosion hazard limits along the Great Lakes is assessed on a site specific basis.

### 3.5.2.2 Shoreline Flood Hazard

Policy 3.26.2 describes the NPCA's shoreline flood hazard policies. Shoreline areas may experience a considerable range in flood levels, as a variety of factors can impact the potential for flooding such as

higher seasonal lake levels, storms, high winds, wave action, ice jamming and piling. The flood hazard is a result of the 100-year lake level and an allowance for wave uprush onto the shore. The 100-year flood level is the combined mean lake level plus storm surge with a return period of 100 years (i.e., on average there is 1% chance in any given year that the lake will reach that level). The generic allowance for wave uprush is 15 metres measured horizontally from the 100-year flood level; however, a site-specific analysis can be completed to determine the wave-uprush allowance.

Policy 3.26.2 includes 100-year lake levels for Lake Erie and Lake Ontario, which are listed below in Table 3.4.

Table 3.4: 100 Year Flood Levels for Lake Erie and Lake Ontario

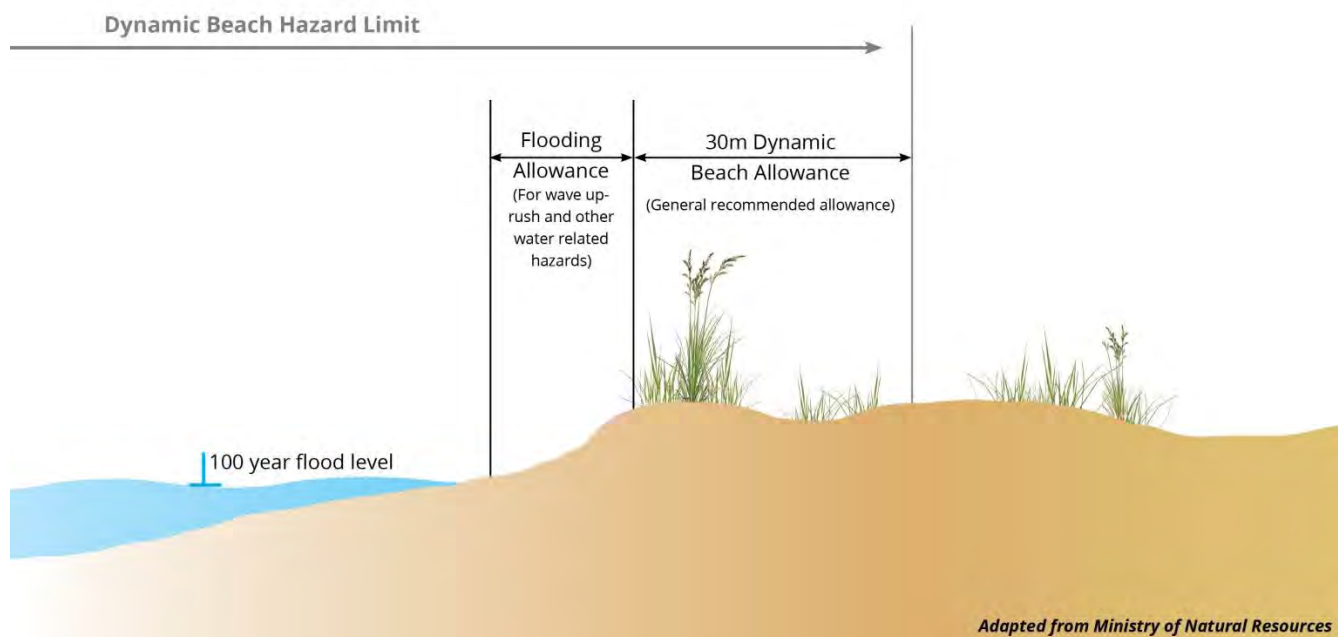
Location	100 Year Flood Level
Lake Erie – Mohawk Bay to Mohawk Point	• 176.65 metres
Lake Erie – Mohawk Point to Cassidy Point	• 176.77 metres
Lake Erie – Cassidy Point to Point Abino	• 176.89 metres
Lake Erie - Point Abino to Windmill Point	• 176.97 metres
Lake Erie - Windmill Point to Niagara River	• 177.11 metres
Lake Ontario - Fifty Point to Cherry Avenue (Grimsby)	• 76.01
Lake Ontario - Cherry Avenue to Mississauga Point (NOTL)	• 76.15

### 3.5.2.3 Dynamic Beach Hazard

The dynamic beach hazard is the area of unstable accumulations of sediment along the Great Lakes (see **Figure 3.4**). A dynamic beach is defined where the beach deposit is at least 30 cm in thickness, 10 metres in width, and 100 metres in length. These are identified by provincial standards and amended from time to time. The dynamic beach hazard limits consist of the flooding hazard limit plus a dynamic beach allowance. The generic allowance for a dynamic beach is a 30 m horizontal setback from the flood hazard limit; however, a site-specific analysis can be completed to determine both the flood hazard limit, and the dynamic beach hazard.



Figure 3.4: Dynamic Beach Hazard



### 3.5.2.4 Niagara River

Along the shoreline of the Niagara River, the regulatory floodplain is defined as the area impacted by the 1:100 year flood level. As with the shoreline hazards on the Great Lakes, the primary objective of the regulatory floodplain is to minimize risk to life, property damage and adverse environmental impacts. The Niagara River is recognized as a *“unique shoreline management interest relative to the potential impact on the Great Lakes resulting from New Development along the shoreline”*

The NPCA regulates only 350 m of the Niagara River, from the mouth of the Niagara River at Lake Ontario and an area at the head of the Niagara River within the 100-year flood elevation of 177.11, m IGLD’85 of Lake Erie. The Boundary of Waters Treaty of 1909 requires that the USA and Canada together approve projects that impact the levels and flows of water along their common boundary including the Niagara River.

The policy framework does not restrict the repair or maintenance of existing buildings and structures within the shoreline areas. For new buildings, or redevelopment or additions, development is not permitted within the flood allowance, the erosion allowance, the stable slope allowance or the dynamic beach allowance. The NPCA is responsible for reviewing development proposals and policy

documents to ensure they have considered Hazard Lands along the shoreline that are prone to flooding, erosion and areas with dynamic beaches.

### 3.5.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps to be addressed for shoreline hazards:

- The policy documents should clearly state that shoreline hazards on the Great Lakes shall be mitigated.
- The wording “stable shore allowance” in Section 3.26.4 should be revised to indicate a specific point or setback, rather than a buffer, which is what it seems to imply.
- There are discrepancies between the NPCA policy and the mapping provided in the shoreline management plans with respect to the 100-year flood levels for the Great Lakes. The tables with the 100-year flood levels should be revised to include a descriptive location reference and the flood proofing elevation should be added to Table 1 (Table 3.4 in this report).
- It would be beneficial to include a more detailed description of the Dynamic Beach Hazard itself, as well as identifying methods for the mitigation of the Dynamic Beach Hazard.
- The current policies are somewhat unclear on the management of shoreline hazards for existing situations. There is an opportunity to add or revise clauses to the policies which can allow owners of existing properties to improve their shore protection without replacing it. These additional and revised clauses should provide a level of openness, and should be permitted at the discretion of the NPCA based on the physical conditions of the individual site.
- The current policies are somewhat unclear on the shore protection requirements for adjacent and nearby properties. It may be to the Owner’s benefit to add shore protection to adjacent or nearby lots in order to protect their own property from future flanking erosion. There is an opportunity to revise the policies to accommodate this; however, this could be problematic to implement and enforce, especially with hostile neighbours.
- The current policies do not address an increase in the number of dwelling units as long as there is no expansion of the existing footprint. There is an opportunity to allow an increase in the number of dwelling units and habitable space as long as the overall footprint does not increase. A septic expansion may be required if the number of dwelling units is increased. Lastly, the

name of Section 3.26.4.3 should be revised to reference additions not increasing the existing footprint.

- New septic systems should not be allowed within the hazard limits. Replacement septic systems within hazardous lands may be permitted pending a review by the NPCA; however, this is not currently addressed in the policies. Lastly, the addition to existing septic systems as opposed to replacing the entire system should be addressed in the policies.
- The current policies are unclear whether or not new or upgraded shore protection is required if an existing dwelling within the hazard limit is being replaced. The policy is also unclear on the requirements for shore protection in cases where an existing dwelling is moved further landward. There is an opportunity to add a clause which would allow owners to replace a dwelling located within the hazard limits with a new dwelling over or landward of the footprint of the previous dwelling without the construction of shore protection. This should be permitted at the discretion of the NPCA based on the physical conditions of the individual site, any impacts on adjacent properties and should be reviewed by a qualified coastal engineer (which could also be defined in the Document).
- There is an opportunity to provide some additional guidance around shorelines and dynamic beach hazard areas which have an ecological function. While it is acknowledged that the policy framework requires shoreline hazards to be mitigated, the form of mitigation should be sensitive to the broader ecological function of the zone – for example a number of species depend on the changing dynamic beach processes and shoreline protection alternatives which allow for these beach processes to continue should be encouraged (where appropriate).
- There is an opportunity to provide greater clarity around the NPCA's regulatory role along the Niagara River. This section of the Policy Document could include some description of the NPCA's role, as well as other agency responsibilities, for example procedures on information sharing and updating municipalities with respect to development permit applications.

## 3.6 Wetlands

### 3.6.1 Context

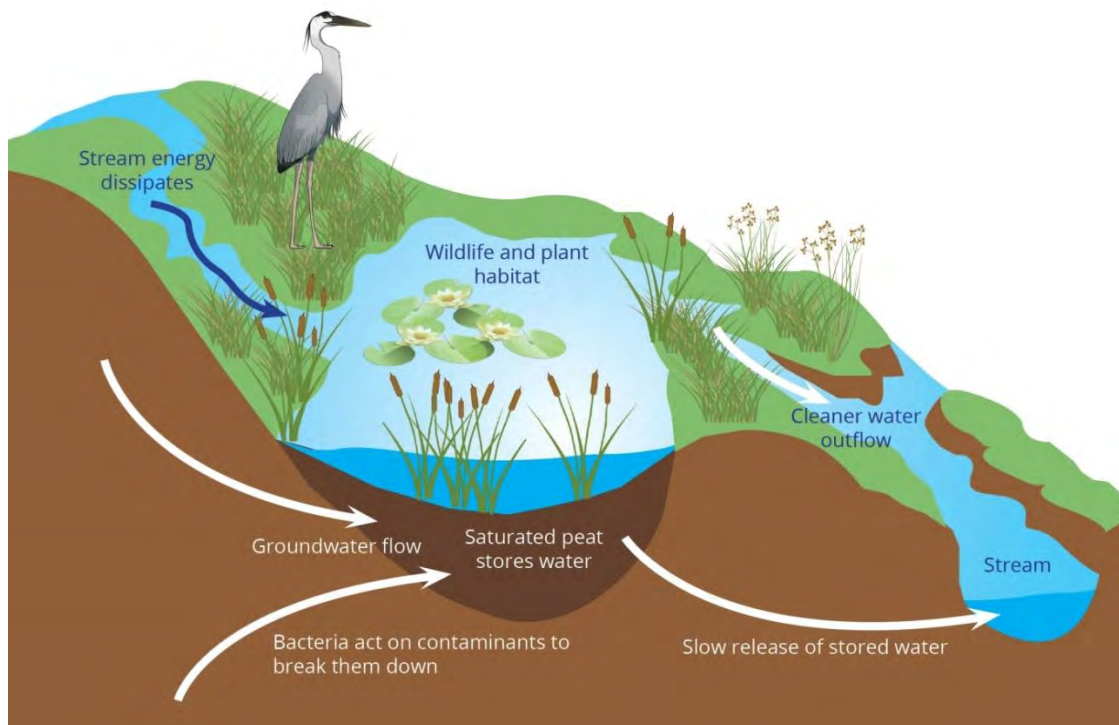
Wetlands are defined in the PPS as “lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens” (PPS, 2014). While the Conservation Authorities Act provides a similar definition for wetlands, it does, however, use slightly different wording<sup>9</sup>. Regardless of the language used to precisely define the term, wetlands are widely recognized as an important part of the ecosystem. They play a multi-dimension role in the hydrologic cycle acting as a source for flood attenuation, groundwater recharge and the improvement of water quality (see **Figure 3.5**). Wetlands are also an incredible source of biodiversity, offering a multitude of habitats for plants, birds, reptiles, amphibians, fish and other species. They also provide opportunities for recreation and have the potential to play a significant role in climate adaptation strategies. As an important component of a healthy natural environment, wetlands are protected through Provincial policy and accordingly, development in and adjacent to wetlands is subject to regulation (adjacent lands where an EIS shall be required includes all lands within 120 metres of a wetland that is greater than 2 ha in area).

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<sup>9</sup> Note that the Conservation Authorities Act provides a different definition for wetlands, stating that a wetland is land which:

- (a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
- (b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
- (c) has hydric soils, the formation of which has been caused by the presence of abundant water, and
- (d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water, but does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a wetland characteristic referred to in clause (c) or (d). (“terre marécageuse”) 1998, c. 18, Sched. I, s. 12.

Figure 3.5: Wetland Function



### 3.6.2 Current Policy Framework

The current Provincial policy framework for wetlands is administered through four main sources: the PPS, the Greenbelt Plan, the Ontario Wetland Evaluation System and Ontario Regulation 155/06. The PPS provides the broad policy framework, identifying where development should and should not occur with respect to wetlands and the Greenbelt Plan has specific policies which apply to wetlands which are more detailed than those within the PPS. The Ministry of Natural Resources and Forestry (MNRF) is responsible for administering protocols and procedures for identifying wetlands that have value at the provincial scale and is commonly known as the Ontario Wetland Evaluation System (OWES, MNRF 2013).

Section 2.1 of the PPS identifies minimum protection requirements for provincially significant wetlands, with the level of protection varying depending on geography. Policy 2.1.4 states that development and site alteration is not permitted in significant wetlands and significant coastal wetlands. Also, all wetlands within the Greenbelt Plan are protected as Key Natural Heritage Features within the

Greenbelt Natural Heritage System, and as Key Hydrologic Features within the NHS anywhere within the Protected Countryside designation.

Wetlands not identified to be significant are protected as part of the natural heritage system (sometimes referred to as local wetlands). Policy 2.1.2 states that “natural heritage systems (which includes wetlands) should be maintained, restored, or where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and groundwater features”. The Province has a recommended approach for identifying natural heritage systems, but municipal approaches (in conjunction with relevant agencies) that achieve or exceed the same objective may also be used. The Natural Heritage Reference Manual (MNRF 2010) provides provincial direction regarding the identification of natural heritage systems.

It is important to note that the policies within Section 2.1 of the PPS were updated in 2014 to include new protection specific to coastal wetlands. The revised language includes the following text (changes are noted in italics):

- Section 2.1.4 - *Development and site alteration* shall not be permitted in:
  - a) *significant wetlands* in Ecoregions 5E, 6E and 7E; and,
  - b) *significant coastal wetlands*”.
- Section 2.1.5(f) – (ADDED) Development and site alteration shall not be permitted in: *coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b),*” unless it has been demonstrated that there will be no negative impacts on the natural feature or their ecological functions.

In addition to the above-noted policy framework, Ontario 155/06 allows for conservation authorities to regulate development in and adjacent to wetlands. Through this regulation, the NPCA has the authority to prohibit or approve development.



Table 3.5 summarizes the NPCA's current wetland policies.

**Table 3.5: Wetland Policies**

Policy No.	Topic	Key Policy Directions
3.24.1a	Wetland Boundary	<ul style="list-style-type: none"> <li>Wetland limit to be established by applicant in conjunction with MNRF or NPCA staff, based on the most up-to-date version of the MNRF's Southern Ontario Wetland Evaluation Manual.</li> <li>Wetland boundary will be established where less than 50% of the plant community consists of upland species.</li> <li>Wetlands must be evaluated as a PSW or Locally Significant Wetland to be subject to the policies.</li> <li>Where wetland has not been evaluated, policy 3.24 provides criteria</li> </ul>
3.24.1b	Development	<ul style="list-style-type: none"> <li>Policy does not apply to instances where development has been approved pursuant to an application made under the Planning Act.</li> <li>Development and site alteration is not permitted within a PSW or Locally Significant Wetland or wetland greater than 2 hectares in size (restricted uses are permitted subject to an EIS).</li> <li>Replacement structures may be permitted subject to criteria.</li> <li>Additions, accessory structures, decks or swimming pools will generally not be permitted within any wetland.</li> <li>Ponds are generally not permitted within any wetland.</li> <li>Public infrastructure and private roads are permitted subject to development criteria.</li> </ul>
3.24.1c	Development within 30 metres	<ul style="list-style-type: none"> <li>Development within 30 metres of any wetland is not permitted, unless it can be demonstrated that there will be no negative impacts on natural features or their ecological functions.</li> <li>Where buildings and structures already exist within 30 metres of a wetland, replacement structure or additions are permitted subject to specific criteria.</li> </ul>
3.24.1d	Development between 30 metres and 120 metres	<ul style="list-style-type: none"> <li>Certain types of development between 30 metres and 120 metres is permitted without a permit, provided no significant fill or site alterations is proposed (such as swimming pools, single detached dwellings, minor additions, etc.).</li> </ul>

Policy No.	Topic	Key Policy Directions
		<ul style="list-style-type: none"> <li>If in the opinion of the NPCA that the proposed development or site alteration within 120 metres of a PSW or a wetland greater than 2 hectares may have an impact on the hydrological function, then the NPCA may require a development permit under Ontario Regulation 155/06.</li> </ul>
3.24.1e	Wetland compensation	<ul style="list-style-type: none"> <li>Policy provides direction for wetland compensation, where there is no other alternative location for the proposed development (excluding PSWs where no development is permitted).</li> <li>Compensation may require final approval by NPCA Board.</li> </ul>
3.24.1f	Wetland conservation	<ul style="list-style-type: none"> <li>Policy encourages local municipalities to promote conservation by identifying wetlands in Official Plans and zoning by-laws and develop conservation policies.</li> <li>Encourages municipalities to use plan of sub-division process to have wetlands dedicated to public agencies.</li> </ul>
3.24.1. g	Agriculture	<ul style="list-style-type: none"> <li>Policy states that none of the wetland policies are intended to limit the ability of existing agricultural uses to continue.</li> </ul>
3.24.2	Existing lots of record	<ul style="list-style-type: none"> <li>Policy provides guidance for development on existing lots of record.</li> </ul>

The NPCA's Policy Document does not make specific reference to coastal wetlands in a manner that is consistent with the revised PPS language. The protection of natural heritage systems, which is further explored in the Natural Heritage Section of this Discussion Paper, provides for additional protection of wetlands that are not deemed significant by the OWES, but may play an important role supporting natural process that are necessary to maintain biological diversity, natural functions, viable populations of indigenous species and ecosystems and support hydrologic functions. It is important that the Policy Document includes a statement regarding the protection of non-provincially significant wetlands which form part of the natural heritage system.

### 3.6.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps for wetlands:

- In general, the wetland section would benefit from the inclusion of different definitions for the different classifications of wetland (Provincially Significant vs. non-PSW, coastal, etc.). There is also a need to further articulate the NPCA's role in wetlands (responsible for regulating development) compared with that of the MNRF (responsible for confirming PSWs).
- It is recommended that the Policy Document make specific reference to the protection of coastal wetlands and differentiate between the protection afforded to significant coastal wetlands versus coastal wetlands not deemed significant, in a manner that is consistent with PPS 2014.
- It is further recommended that language be added to the Policy Document to establish a clear policy framework for non-Provincially significant wetlands, including situations where a non-Provincially significant wetland forms part of the natural heritage system.
- Some further refinement of the development policies may be required to address passive recreational uses in buffer areas, such as trails, tree-top canopy trails, etc. As noted earlier, a clear definition of passive uses will need to be included in the Policy Document.
- It is not clear what constitutes a locally significant wetland within the Policy Document. Previous versions of the OWES made a distinction between provincially significant and locally significant wetlands. This is no longer the case. It would be helpful to provide some language surrounding what constitutes a locally significant wetland and specific NPCA guidelines for undertaking this evaluation process. Alternatively, the Policy Document could also consider using a more simplified terminology for wetlands (PSWs and Non-PSWs).
- The current policies in 3.24 imply that, in some circumstances, a hydrologic assessment may be required for development which hydrologically impacts adjacent wetlands. Policy 3.24 (and Policy 5.2) should be modified to provide greater clarity around the circumstances where a water budget assessment could be required. The policy could also provide some general guidance on methodology.
- There should be guidance on the steps or requirements that follow should an EIS identify a possible wetland, outlining the criteria as to the type of documentation and mapping required, and steps to undertake an assessment of impacts and mitigation thereof.
- Note that the Province is currently in the process of reviewing its wetland policy framework. Any revisions/modifications to the Provincial framework would need to be incorporated into the NPCA's Policy Document.

## 3.7 Natural Heritage

### 3.7.1 Context

The PPS provides the framework for natural heritage systems planning in Ontario. Within the framework of the PPS, natural heritage refers broadly to a variety of ecologically important components that make up defined terms such as *natural heritage features and areas* as well as a *natural heritage system*.

Natural Heritage Features and Areas is defined as “features and areas, including significant wetlands, significant coastal wetlands, other coastal wetlands in Ecoregions 5E, 6E and 7E, fish habitat, significant woodlands and significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary’s River), habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area.”

The definition of a Natural Heritage System is more inclusive and refers to “a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial parks and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue.”

The PPS also includes protection for the diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, their maintenance, restoration, improvement, recognizing linkages between and among natural heritage features and areas, surface water features and groundwater features.

### 3.7.2 Current Policy Framework

The NPCA’s mandate for natural heritage systems planning can be understood in several ways. Firstly, a number of features within the NPCA’s regulated areas are part of the watershed’s natural heritage

system. Secondly, as an agency responsible for reviewing and commenting on environmental aspects of planning applications, the NPCA plays an important role in assessing potential impacts on the watershed's natural heritage system. The NPCA is responsible for providing technical review of Environmental Impact Studies (EIS) and works with area municipalities in this capacity. In cases where an EIS is required for lands adjacent to a component of the Natural Heritage System, and where the component lies within the Provincial Greenbelt Plan, adjacent lands mean all lands within 120 metres of the component.

The current Policy Document recognizes the above-noted function and includes a number of policies which are intended to provide guidance for natural heritage systems planning. The majority of natural heritage systems policies are included in section 4. **Table 3.6** summarizes the NPCA's current natural heritage system policies.

Table 3.6: Natural Heritage System Policies

Policy No.	Topic	Key Policy Directions
4.4	Wetlands	<ul style="list-style-type: none"> <li>See table 3.5 for details.</li> </ul>
4.6	Significant wildlife habitat	<ul style="list-style-type: none"> <li>Policy references the PPS and MNRF's Significant Wildlife Habitat Technical Guide (2000) and states that development and site alternation shall not be permitted in or adjacent to significant wildlife habitat areas.</li> <li>Relies on EIS as the key tool for evaluating impacts.</li> <li>Encourages local municipalities to include policies in Official Plans and zoning by-laws to identify habitat as part of greenlands/conservation zones.</li> </ul>
4.7	Significant Areas of Natural and Scientific Interest (ANSI)	<ul style="list-style-type: none"> <li>Policy references the PPS and the MNRF's Natural Heritage Reference Manual (1999) and states that development and site alternation shall not be permitted within or adjacent to ANSIs unless it can be demonstrated that no negative impacts on the natural features or functions.</li> <li>Considers adjacent lands to be 50 metres.</li> <li>Relies on EIS as the key tool for evaluating impacts.</li> <li>Encourages local municipalities to include policies in Official Plans and zoning by-laws to identify habitat as part of greenlands/conservation zones.</li> </ul>
4.8	Diversity and connectivity	<ul style="list-style-type: none"> <li>Policy references the PPS and states that the diversity and connectivity of natural features and their long term ecological function and biodiversity of natural heritage systems should be maintained, restored and where possible improved.</li> <li>States that linkages should be recognized between and among features in the watershed.</li> <li>The key tools for implementing this policy directive will be watershed and subwatershed studies, as well as the review of development applications.</li> </ul>
4.11	Environmental Impact Studies	<ul style="list-style-type: none"> <li>Policies provide the framework for EIS.</li> <li>Includes a brief description of the contents of an EIS.</li> <li>Includes Table 3 which explains when an EIS is required.</li> </ul>



The current Policy Document draws heavily on the direction provided through the PPS for natural heritage systems planning. It is important to note that some of the policies within the PPS have been revised which influence how natural heritage features are protected, including the following:

- Section 2.1.3 - (ADDED) “Natural heritage systems shall be identified in Ecoregions 6E & 7E, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.”
- Section 2.1.5 (b) – (REVISED) significant woodlands “south and east of the Canadian Shield” changed to “Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary’s River.”

### 3.7.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps for Natural Heritage:

- The organization of the Policy Document content should be reviewed and possibly ordered in a manner more consistent with other provincial guiding documents such as the PPS and Natural Heritage Reference Manual (MNRF 2010).
- There should be the addition of another section that discusses the natural heritage system and its relevance to the development, interference with wetlands and alterations to shorelines and watercourses.
- As part of the PPS update, some additions, deletions and reordering of policies occurred and the Policy Document needs to be revised to reflect these changes. Further, material used to identify and assess the significance of natural heritage features has been updated. As an example, the MNRF has updated supporting material for the Significant Wildlife Habitat Guide and its appendices, which provides guidance for the identification of significant wildlife habitat. Ecoregion Criteria Tables - Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E (MNRF 2015) is the appropriate material for defining wildlife habitat significance. Accordingly, the literature sources identified in the Policy Document which are to be used to identify and assess the significance of natural heritage features and system should be updated and made consistent with the current documents being used. There should also be the addition of a clearer statement that these guideline documents are updated from time to time and the most current version should be used. In addition, the MNRF’s Significant Wildlife Habitat Mitigation Support Tool (Version 2014) should be referenced as a resource for planners.

- Any update to the language of the significant wildlife habitat should include flexible language which will allow for changes to the criteria schedules and what constitutes significance.
- The EIS policies within the Policy Document should be updated to align with municipal EIS guidelines (if required, this section of the Policy Document may need to reference slightly different standards between the Region of Niagara, City of Hamilton and County of Haldimand).
- The Policy Document should acknowledge that various municipalities within NPCA jurisdiction may have recognized Natural Heritage Systems within their Official Plans, and work with municipalities in developing policies related to such features.
- Within the current NPCA Planning Document (Page 31), the concept of a Vegetation Protection Zone (VPZ) has been discussed. This discussion should be expanded to provide guidance on how VPZs may be implemented to provide protection for natural features from the impacts of construction and activities involved on the site following construction.

## 3.8 Hazardous Sites

### 3.8.1 Context

Hazardous sites are a type of natural hazard. Natural hazards are defined under the PPS as “property or lands that could be unsafe for development due to naturally occurring processes”. Hazardous sites are a specific type of natural hazard and refer to “property or lands that could be unsafe for development and site alteration due to naturally occurring hazards, including unstable soils, such as sensitive marine clays (lead clays) and organic soils and unstable bedrock, such as karst formations”(PPS). The Province’s Understanding Natural Hazards guideline provides additional context for these three types of hazardous sites:

- Unstable soils (sensitive marine clays, leda clay): clays deposited as sediment associated with the last glacial period, forming the bed of the Champlain sea. Disturbances to the sensitive clays can result in landslides or earthflows.
- Unstable soils (organic soils): organic and peat soils created by the decomposition of vegetative and organic materials can release humic acids into the ground water system and produce methane gas.

- Unstable bedrock (karst formations): unstable bedrock formations found in Ontario are typically karst formations which are susceptible to water infiltration over and through limestone/dolostone formations, eroding stability producing sinkholes and other depressions.

### 3.8.2 Policy Framework

Section 3.1 of the PPS provides the policy foundation for planning around hazardous sites. Policy 3.1.5 expressly prohibits the following uses from locating on hazardous sites, including:

- a) Institutional uses, including hospitals, long-term care homes, retirement homes, pre-schools, school nurseries, day cares and schools;
- b) Essential emergency services such as that provided by fire, police and ambulance stations and electrical substations; or
- c) Associated with the disposal, manufacture, treatment or storage of hazardous substances.

The PPS provides further guidance in 3.1.7 stating that some forms of development and site alteration may be permitted on hazardous sites and hazardous lands where the effects and risks to public safety are minor and can be mitigated with provincial standards.

The NPCA's Policy Document includes a short section addressing hazardous lands in Section 3.2 which references the PPS prohibitions for development on hazardous lands. In addition to this, Policy 4.10 addresses hazardous sites and acknowledges that the NPCA provides peer review to the City of Hamilton under a Memorandum of Understanding for hazardous geology. The NPCA utilizes the Ministry of Natural Resources and Forestry's Understanding Natural Hazards (2001) for direction when reviewing applications that are proposed on or near hazardous sites.

### 3.8.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps for hazardous lands and hazardous sites:

- Policy 3.2 could be further expanded to elaborate on the different types of natural hazards, explaining the difference between unstable soils (organic soils and marine clays) and unstable bedrock (karst formations).

- The NPCA's current policies reference the most up-to-date planning standards for hazardous sites (MNRF's Understanding Natural Hazards, 2001). The Policy Document does not speak extensively to hazardous sites and the role of the NPCP. Both the Federal government and the Province of Ontario maintain mapping of potentially hazardous sites. Local municipalities are responsible for incorporating mapping (where it is available) into Official Plans and providing policy direction for land use change. Due to the unique role that the NPCA plays with respect to the MOU with the City of Hamilton, it is recommended that the NPCA consider reviewing the readily available hazardous site mapping to determine the extent of known potential hazardous sites and the extent of any sites within the NPCA's jurisdiction (beyond the Karst formations associated with Niagara Escarpment).
- For any hazardous site, a technical study needs to be completed by a qualified professional to determine the extent of the hazardous site. This would be done in order to ensure that any development complies with provincial and municipal policies.

## 3.9 Stormwater Management

### 3.9.1 Context

Urbanization has the effect of impacting the quality and quantity of water that is discharged from a site or development. The increase in impervious areas increases the amount of surface runoff to a receiving water body such as a lake or river system. Untreated, this surface runoff can negatively impact downstream conditions if it is not controlled. The MOE 2003 stormwater management manual provides an outline for the management of the quality of stormwater runoff. It recommends various types of stormwater management features that provide methods for cleaning of stormwater prior to being discharged to receiving water.

Depending upon the type of stormwater management technique, the runoff can be cleaned to a level based on a removal efficiency of Total Suspended Solids (TSS). The TSS removal efficiency is based on the following removal levels:

- 80% Removal Efficiency – Enhanced Protection
- 70% Removal Efficiency – Normal Protection
- 60% Removal Efficiency – Basic Protection

Enhanced protection should be used when sensitive aquatic habitat will be impacted by end of pipe discharge. This normally includes receiving waters that have aquatic communities that require a low TSS environment. Normal protection is only considered when enhanced protection conditions do not exist. This includes areas with moderate natural sediment loads and fish spawning habitat that is less sensitive to TSS loadings. Basic protection is only acceptable when the receiving quality habitat is shown to be insensitive to stormwater impacts and has little to no potential for any rehabilitation.

Stormwater management techniques include the use of Low Impact Developments (LIDs) (formerly Best Management Practices (BMPs) to mitigate of stormwater runoff. A typical stormwater management facility is a stormwater management pond which allows for settling of TSS prior to discharge to the receiving water. In addition, the SWM pond can control the flow and volume of water runoff.

Under Regulation 155/06, any proposed SWM facility normally requires a permit as part of the approval to outlet to a watercourse. This impacts the quantity of water to a watercourse and, as a result, the proposed stormwater works need to consider mitigating the peak and total flows to the watercourse. This results in the need to provide storage within the SWM facility and release the flows at a controlled flow rate.

### 3.9.2 Current Policy Framework

The NPCA is responsible for providing comments to municipalities on the implications of development proposals from a surface water management perspective<sup>10</sup>. The current Policy Document does not include a comprehensive section on stormwater management; however, there are a number of policies included throughout the Document.

The current NPCA guidelines require any development to meet the standards as set out in the MOE 2003 SWM manual. Therefore, the requirement is that a SWM facility would be needed for any development to ensure the quality of discharge to a watercourse is not having a negative impact on the

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<sup>10</sup> Note that the NPCA reviews stormwater management primarily on behalf of Niagara Region through the MOU with Niagara (and select functions with the City of Hamilton), and accordingly the content of this section is largely directed at the role the NPCA plays in this process.

watercourse. These facilities require a permit under Ontario Regulation 155/06 as part of the approval to outlet to a watercourse.

From the NPCA Stormwater Management Guidelines (2010), The NPCA does not support the following SWM practices:

1. On-line SWM facilities for water quality;
2. Using natural wetlands as a SWM facility;
3. Locating SWM facilities in natural hazard areas, such as floodplains or erosion hazards, except outlets; and
4. Locating SWM facilities in Significant Natural Heritage Features.

For large scale stormwater planning, the planning and implementation of SWM systems are encouraged by the NPCA. This would be performed on a catchment basis, and completed through Subwatershed Plans, Master Drainage Plans or other strategies.

Based on the Adaptions to Climate Change for Niagara (2012), implementation of a number of stormwater management measures to mitigate impacts of climate change include:

- Stormwater Management Master Plans;
- Stormwater Infiltration Systems;
- Downspout Disconnection, Weeping Tile Disconnection and Rain Barrel Programs;
- Backflow prevention and Flood Alleviation Programs;
- Combined Sewer Separation and treatment for combined sewer overflows;
- Actions that facilitate the adaptation of natural Systems in Niagara to climate change; and
- Emergency Management Planning.

Up until recently, Niagara Region offered incentives through its WaterSmart program, which was intended to support the development of local watershed-based stormwater management master plans<sup>11</sup>.

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<sup>11</sup> Note that Regional Council discontinued the incentive programs for the Niagara WaterSmart program in 2016.



### 3.9.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps for hazardous sites:

- The NPCA Land Use Policy should be updated to include a detailed section on stormwater management, particularly as it relates to development. While Policy 5.5 briefly discusses stormwater management practices under Ontario Regulation 155/06 as part of approval of an outlet to a watercourse, the policies could be substantially enhanced to reflect the key aspects of the NPCA's Stormwater Management Guidelines.
- The 2010 NPCA Stormwater Management Guidelines provide a basis to reduce and, if possible, eliminate the undesirable impacts of stormwater, erosion and sediment on the built and natural environment, re-establish the benefits of precipitation, and protect and enhance water quality in the watershed. Some examples could include policy recommendations for official plans, the role of subwatershed studies (and requirements/expectations), examples of best management practices for intensification and greenfield development, policies to ensure municipal drains under the drainage act are designed, constructed and maintained in accordance with BMPs to avoid detrimental impacts on farmland, water resources, natural areas and wildlife habitat.
- The policies could also include water quality and quantity targets, recommendations for subwatershed studies and guidance for the location of storm water management facilities. The policies could include a brief sub-section on low impact development options which are sensitive to Niagara's context (e.g. clay soils).
- The stormwater management policies would also need to include a number of cross-references to other policies in the Policy Document, including links to wetlands, watercourses, valleylands, etc.
- The policy could also be framed around climate change trends and identify future studies, programs and targets intended to address climate change.

## 3.10 Fish Habitat

### 3.10.1 Context

Fish habitat refers to spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes

(Fisheries Protection Policy Statement, 2013). A key aspect of this definition is that a waterbody does not necessarily need to have fish residing in it, for the waterbody to be considered fish habitat.

### 3.10.2 Current Policy Framework

The protection of fish habitat in Canada is the responsibility of the Government of Canada through the Department of Fisheries and Oceans (DFO) and its partners. Fish Habitat is listed as a Key Natural Heritage Feature protected within the Greenbelt Plan Natural Heritage System. The main piece of legislation governing fish habitat is the federal *Fisheries Act*, which was last amended in 2012, with amendments coming into effect in November 2013. As described in the Fisheries Protection Policy Statement (2013), changes to the *Fisheries Act* include a prohibition against causing *serious harm to fish* that are part of or support a commercial, recreational or Aboriginal fishery (Section 35), provisions for flow and passage (Section 20 and 21) and a framework for regulatory decision making.

Serious harm to fish is defined by DFO as:

- The death of fish;
- A permanent alteration to fish habitat of a spatial scale, duration or intensity that limits or diminishes the ability of fish to use such habitats as spawning grounds, or as nursery, rearing or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of their life processes;
- The destruction of fish habitat of a spatial scale, duration or intensity that fish can no longer rely upon such habitats for use as spawning grounds, or as nursery, rearing or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of their life processes.

Prior to the latest *Fisheries Act* amendments, some Conservation Authorities, including NPCA, had agreements in place with DFO to assist in administering the review of projects under Section 35(1) of the *Fisheries Act*. Under the amended *Act*, these agreements are no longer in place, and the term “harmful alteration, disruption or destruction (HADD) of fish habitat” is no longer used.

Together, the above noted *Fisheries Act* changes reflect DFO’s strengthened ability to manage sustainability and productivity threats to Canada’s fisheries, while enabling a new approach and focus on commercial, recreational and Aboriginal fisheries.

The NPCA's Policy Document refers to the previous NPCA agreement with DFO in the administration of the *Fisheries Act*, and refers to the management of fish habitat under NPCA's jurisdiction. For example, in the introduction (Section 1) there is a section entitled "The Federal Fisheries Act," which describes the previous NPCA agreement with DFO, and uses language that is not aligned with the amended *Fisheries Act*. There are also references to fish habitat development setbacks, and reference to outdated terms with respect to fish habitat types (e.g., Type 1, Type 2, Type 3). The PPS also articulates policies that relate to fish habitat protection (Policy 2.1.6 and Policy 2.1.8).

### 3.10.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues, opportunities and policy gaps for fish habitat:

- The Policy Document currently refers to the previous NPCA agreement with DFO in the administration of the Fisheries Act, and refers to the management of fish habitat under NPCA's jurisdiction. Given the changes to the Act noted above, it is appropriate to remove references in the Policy Document to NPCA's role with respect to fish habitat and the Fisheries Act.
- It is further suggested that references to fish habitat types be removed, given that they do not align with DFO's definition of fish or fish habitat. Rather than set watercourse setbacks based on fish habitat types, Policy 4.3 should be based on ecological and hydrologic function which would be determined through an appropriate planning mechanism, such as a watershed/subwatershed study and further refined through secondary planning and Environmental Impact Studies.
- Since the DFO has changed its regulatory framework, it would be useful for the Policy Document to include a reference to the Fisheries and Oceans Canada (DFO) "Projects Near Water" website for guidance on activities that may impact fish and fish habitat.
- The outdated terminology utilized to identify watercourses in the current policy document (Type 2, Type 3) should be modified to reflect current classifications from the Ministry of Natural Resources and Forestry.
- It would be beneficial for the Policy Document to integrate context on the type and sources of mapping that will be used for fish habitat and wetland delineation in order to identify areas subject to NPCA policies and regulations.

## 3.11 Climate Change

### 3.11.1 Context

Climate change is defined by the Government of Canada (2013) as “changes in long-term weather patterns caused by natural phenomena and human activities that alter the chemical composition of the atmosphere through the build-up of greenhouse gases which trap heat and reflect it back to the earth’s surface”. The impacts on the ecosystems, agriculture, infrastructure, water supply, stormwater management, energy, transportation, tourism and recreation, human health and well-being, and ultimately the economy are front-centre in federal and provincial policies supporting climate change action and adaptation plans for many first and second tier municipalities.

In 2012, Brock University’s Environmental Sustainability Research Centre published a report outlining local climate change predictions and their impacts on the region’s social, economic and environmental resources. Niagara Region has already experienced changes in the climate including (Penney, 2012):

- 1.3°C increase in annual average temperature in the last 40 years;
- Trend towards more days with temperatures over 30°C and more heat waves of 3 or more consecutive hot days;
- Longer growing season, with May and September significantly warmer;
- Increase in average number of frost-free days with 10 more per year compared to 1970;
- Small increase in annual precipitation, with most of the increase coming in winter;
- More rain and less snow in winter;
- More summer droughts and dry spells;
- Increased numbers of freeze-thaw cycles; and
- And increase in heavy rain events.

It is projected that by 2050, average annual temperatures in Niagara Region will increase 3-4°C, freeze-free days will increase by 30 days, summer rainfall will decrease by 20%, an increase in freeze-thaw cycles and likely an increase in heavy rains, lighting strikes, high winds, hailstorms and tornados (Penney, 2012). Further, the Hamilton area is also expected to see warmer and wetter seasons, except in the winter, with prolonged periods of drought and intense precipitation events that lead to high flows and increased bank erosion (Conservation Hamilton, 2012).

Conservation authorities, as local natural resource management agencies, have an opportunity to contribute to Ontario's climate change strategy (Ontario Centre for Climate Impacts and Adaptation Resources, 2011). Climate change impacts can be addressed through adaptation and mitigation measures, with long-range planning policies and strategies to achieve overall resiliency.

Adaptation efforts minimize the level of damage, hazard and risks associated with climate change, while also recognizing new opportunities presented with our changing climate (Conservation Ontario, 2015), including: flood management programs, ecosystem enhancements, water quality and quantity, municipal plan review/input, local climate change monitoring and modelling, information management, green infrastructure/stormwater management, low water, carbon and water trading and offsets.

Mitigation efforts are focused on reducing greenhouse gas emissions and other causes that negatively and rapidly influence weather patterns and climatic conditions (Conservation Ontario, 2015). They include: green building technologies and retrofits (e.g., LEED), energy conservation, renewable energy, reforestation, carbon sequestration (e.g., wetlands), low impact development and sustainable

*Adaptation: Conservation Authority watershed management programs address the impacts of climate change as well as protect the ecosystem benefits we regularly rely on such as for drinking water, food, and support for manufacturing and other industries. Conservation Authorities monitor, track, and report on local conditions in Ontario's watersheds which can be used for climate change modelling and monitoring. Watershed programs build local natural resource resiliency by protecting and improving water quality, ensuring sustainable water supplies, restoring and protecting biodiversity, and addressing low water issues. Conservation Authorities also protect people and property from increased flooding and other natural hazards, as well as work with agencies, businesses and residents to implement a wide variety of green infrastructure and stormwater management strategies and practices.*

*Mitigation: Conservation Authorities contribute to greenhouse gas mitigation through their operations through increasing use of sustainable transportation within their fleet operations, identifying and applying energy conservation technologies and practices, and incorporating or implementing renewable energy systems (e.g. water power). Where possible, green building technologies, low impact development, and retrofits are also being implemented or promoted. Additional Conservation Authority program areas that mitigate greenhouse gases include reforestation, carbon sequestration (e.g. wetlands), low impact development, and the use of offsets (reforestation, habitat enhancement, carbon sequestration).*

*Conservation Authorities Addressing Climate Change Impacts (Conservation Ontario, 2015)*

transportation.

Adaptation and mitigation measures are used in the development of climate change strategies, land use planning and regulations, watershed plans, and education and outreach programs. Further, climate change resilience is defined by the International Institute for Sustainable Development as “ability of a system and its counterparts to anticipate, absorb or recover from the effects of a hazardous event in a timely and efficient manner” (2013).

### 3.11.2 Current Policy Framework

The current Provincial policy framework for climate change is embedded through the Provincial Policy Statement 2014 (PPS), provincial plans (e.g., Greenbelt Plan, Growth Plan for the Greater Horseshoe, etc.) and Planning Act tools. The PPS states in Section 1.8.1 that *“planning authorities shall support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation through land use and development patterns”* and in Section 3.1.3 that *“planning authorities shall consider the potential impacts of climate change that may increase the risk associated with natural hazards”*. The NPCA has regulatory authority to issue and approve development within its regulated limits; therefore, as the governing authority, it shall make decisions that support climate change adaptation duly caused by its stressors and rapid growth that challenge the natural ecosystem balance in achieving environmental integrity and economic growth.

### 3.11.3 Key Issues, Opportunities and Policy Gaps

The following summarizes some of the key issues identified in the Adapting to Climate Change: Challenges for Niagara report (Penney, 2012):

- Seven of Niagara’s watershed have a ‘high sensitivity’ rating, meaning that the watersheds are highly vulnerable to climate change, where vulnerability is a combination of sensitivity to climate change and the capacity of the system to adapt to climate change impacts;
- Predicted hotter and dryer summers are likely to require increased irrigation in vineyards and further impact groundwater quality and stress levels;
- Predicted additional decline in water quality;
- Impacts on Great Lakes shipping due to water level decline, passing through the Welland Canal;



- Intense rainfall or rain-on-snow events can overwhelm the capacity of soils, water courses and stormwater systems causing overland flooding;
- Impacts to electricity demand, supply and distribution – water level decrease has already impacted Niagara River flows with a decreased average of 7% between 1970 and 2000;
- Impacts to office buildings, infrastructure service buildings, bridges, culverts, tunnels, etc;
- Predicted increase in insect and disease outbreaks in trees and other vegetation, heat stress for trees and woodlands, decline in wetlands due to lower water levels, decline in water levels in lakes and rivers, threats to fish from higher water temperatures, unbalanced expansions and outbreaks of certain species and increased stress on urban ecosystems; and,
- Tourism and recreational activities may see impacts resulting from reduced boat access, change in desirable fish species, beach closures and extreme weather event damage.

The following summarizes opportunities and policy gaps addressing climate change adaptation and mitigation of potential impacts:

- Updating floodplain mapping and policies in response to increased high-intensity short duration storms, including the IDF curves, flood forecasting and detection/communication;
- Assess risks and vulnerabilities based on new floodplain mapping to protect people, built infrastructure and the natural environment; develop risk management framework;
- Develop watershed plans that address climate change and adaptive management, prioritizing 'high sensitivity' rating watersheds;
- Develop enhanced policies and programs to promote water conservation;
- Update policies on floodplains, valleylands, groundwater and source water protection, wetlands, shoreline hazards, natural heritage, hazardous sites, stormwater management and fish habitat to reflect adaptations for climate change;
- Consider developing a Climate Change Action Plan, as well as evaluation and monitoring programs;
- Develop policies on the use of Low Impact Development and encourage sustainable building and operation practices to conserve resources such as through the application of the LEED rating system on buildings and sites within the regulatory boundaries;
- Develop policies on the role of green infrastructure for mitigating and adapting to climate change – *e.g., afforestation and reforestation in response to tree loss due to severe storms,*

*disease, drought, insect infestations, etc.; establishing natural cover targets and monitoring plans;*

- Develop policies that protect and adapt the valleylands from climate change impacts - *e.g., erosion, development, heat-stress, etc;*
- Educate public on climate change and how they can help adapt and mitigate the impacts – *e.g., behavioural changes, home adaptations, growing own food, etc;*
- Integrate climate change into existing and new programs – *e.g., Canopies for Kids and Niagara Children’s Water Festival, as well as new programs that enhance green spaces, urban agriculture, LEED infrastructure, etc; and,*
- Identify critical partners and seek funding mechanisms to support climate change readiness – *e.g., federal and provincial government programs, Federation of Canadian Municipalities’ Green Municipal Fund, etc.*

## 3.12 Fill Placement and Storage

### 3.12.1 Context

In recent years the regulation of excess fill has emerged as a challenging issue for municipalities and, to a lesser extent, conservation authorities. As urban areas grow and new subways, roads, highways and buildings are constructed there has been increasing demand to store excavated fill associated with construction projects and land development. However, the storage of fill is not always a straight forward process and typically there can be issues around fill quality (potentially contaminated soils being dumped), the location and amount of fill, impacts on stormwater and drainage, visual impacts and traffic to name just a few.

### 3.12.2 Current Policy Framework

The placement of and storage of fill within the NPCA’s regulated areas is subject to a permit under the authority of Section 28 of the Conservation Authorities Act (as the placement of fill is considered to be a form of development under the Act). The current Policy Document does not include an explicit stand-alone section of fill permits or commercial fill operations, however the document does provide guidance in a number of sections for filling with respect to fencing (3.11), floodplains (3.17) balanced cut and fill (3.19) and minor works within the floodplain (3.21), stable/unstable slopes (3.25). Policy

3.21 is of relevance as it states that a permit is required for any filling within the floodplain greater than 25 cubic metres. Outside of regulated areas the placement of fill is subject to municipal site alteration by-laws prepared under the authority of the Municipal Act.

### 3.12.3 Key Issues, Opportunities and Policy Gaps

- There is an opportunity to review and refine the definition of fill to ensure that it aligns with municipal by-laws, or at a minimum there is no conflict between definitions.
- There is also an opportunity to provide guidance for filling within all regulated areas by including a short summary section which links all of the main policy directives on fill permits.
- There is also an opportunity to provide some general guidance for local municipalities when site alteration by-laws are being prepared (in areas which are of concern to the NPCA, such as stormwater management, water quality, etc.). Also, there may also be an opportunity to provide direction to applicants regarding the application of site alteration by-laws. For example, in some instances it is possible that a potential fill proposal may be subject to both a permit from the NPCA and also the requirements of a municipal site alteration by-law (for portions of the property which are outside of the regulated areas). The Policy Document could provide some explicit instruction to ensure that applicants are aware that both planning tools may apply.

## 4.0 SUMMARY OF KEY ISSUES & OPPORTUNITIES

Key policy issues and opportunities to be addressed in the NPCA's updated Policy Document are summarized below in **Table 4.1**. The items noted in this table are not intended to be an exhaustive list of all possible changes and modifications. Rather, these items are intended to act as a starting point for the update. The expectation is that additional consultation and engagement with interested stakeholders, agencies, landowners and the public will yield additional opportunities for improvement.

**Table 4.1: Summary of Key Issues and Opportunities**

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
Document structure and organization	<ul style="list-style-type: none"> <li>The introductory section should include a more clearly defined set of principles which recognize both local considerations, as well those articulated in the various Provincial plans and policies. A clearly articulated set of principles and objectives should help to better explain the rationale for the various policies contained within the Policy Document. Some preliminary principles to consider were developed through a review of the legislative drivers, several other conservation authority policy documents and a workshop with NPCA staff. These principles can also be used as a lens for updating the Policy Document and are as follows:               <ol style="list-style-type: none"> <li>1. Recognize that healthy communities require a sustainable balance between environmental, social and economic priorities, interests and uses.</li> <li>2. Acknowledge that protecting natural systems over the long term is best achieved through a science-based approach that manages human activities and natural resources across the watershed.</li> <li>3. Consider the impacts of climate change on the people, property and the environment.</li> <li>4. Avoid the potential for negative impacts to people, property and the environment by directing development and site alterations away from natural features.</li> <li>5. Work with landowners, stakeholders and municipal, provincial and federal partners to develop appropriate policies that meet the requirements of all relevant legislation.</li> <li>6. Continuously pursue practical approaches to the management of water and natural resources based on the application of sound science, creativity, and innovation.</li> </ol> </li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<ol style="list-style-type: none"> <li>7. Learn from and inform watershed residents, member municipalities, partners and clients about the value of the watershed, its features and functions.</li> <li>8. Minimize the potential for risk of harm to people and property resulting from flooding, erosion and slope instability.</li> </ol> <ul style="list-style-type: none"> <li>• The discussion on legislation could be enhanced to better reflect the different roles played by the NPCA.</li> <li>• There are opportunities to improve the structure and organization of the Policy Document, with a few alternatives which can be further explored. For instance, the NPCA could consider re-organizing Sections 2-5 to focus on policy themes (e.g. floodplains, valleylands, wetlands, etc.) to avoid confusion and redundancy within the policies. Each policy theme would need to recognize nuances between permits issued under Regulation 155/06 and Planning Act proposals. Alternatively, the document could be arranged around themes related to the various roles that the NPCA holds, for example Natural Hazards (Delegated Authority), Natural Heritage (MOUs), etc. There is also an opportunity to utilize language and/or formatting elements to distinguish between types of policies in the Document, such as policies derived from legislation, policies that are based on guidelines or best practices, and policies that are intended to encourage desirable behaviour with respect to regulated areas.</li> <li>• There are opportunities to introduce some additional visualizations, diagrams, photos and other color graphics to enhance the legibility of the Policy Document.</li> <li>• The document does not include an implementation section – although aspects of implementation are woven throughout the Document. One suggestion would be to include an implementation section at the end of the Document, where procedures and processes are explained separately from policy interpretation. The implementation section could be sub-divided to recognize the different protocols followed by the NPCA (permit approval, comments on plans, comments on EA, acquisition of land, etc.). This section might also expand upon the interaction between the NPCA's tools (stormwater management guidelines, watershed plans, etc.), municipal planning tools (Official Plans, Zoning by-law, site plans, Community Improvement Plans, Secondary Plans, etc.) and other tools/processes (such as EAs). The implementation section would also contain procedures for how the policy document would be updated on an ongoing basis.</li> <li>• The Definitions section needs to be reviewed and updated to reflect changes in Provincial policy. This section could also benefit from a few explanatory notes to address some of the “quirks” and nuances within the Provincial planning framework. It</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>is important to note there may be different definitions used for different plans/legislation, for example, the term “Development” has two different definitions (Planning Act vs. Conservation Authorities Act).</p> <ul style="list-style-type: none"> <li>• The Province is currently conducting a review of several major plans and policies which are relevant to the Living Landscape, including the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan, the Niagara Escarpment Plan, and Conservation Authorities Act. The NPCA’s Policy Document will need to be updated for consistency with these documents, however the timing for completing the various Provincial plan reviews is unknown. Where timelines permit, the Living Landscape project may be able to implement some of the new provincial plan directions and policies – alternatively, these changes may also be implemented through future amendments to the Policy Document.</li> <li>• The Policy Document should be prepared as a web-friendly and accessible electronic document (i.e. minimum 12 point fonts, inclusion of document tags for accessibility.).</li> <li>• The Hearing Guidelines which are attached as Appendix 1 to the Policy Document are out of date, as the NPCA Board adopted new hearing guidelines in 2015. The new Policy Document should include the recently adopted hearing guidelines which are now in force and effect.</li> </ul>
Floodplains	<ul style="list-style-type: none"> <li>• Policy 3.3 deals with the one-zone floodplain concept. There may be opportunities to examine the use of a two-zone concept in specific circumstances. For example, there may be opportunities to examine the applicability of the two-zone concept for the watercourses in Niagara Falls (where the floodplain is derived from Hurricane Hazel). With the consideration of development within the floodplain, consideration should also be given to special policy areas where development can occur; however, in the consideration of SPA’s, it requires the approval of the province (MNRF, MMAH). This also requires the local municipal official plan and zoning regulations to be incorporated into the SPA’s. However, it should be noted that it is not the intent of the Policy Document review exercise to update flood plain mapping or conduct flood plain analysis. The Policy Document should include general policies which provide direction for the NPCA as to the overall policy framework and general implementation.</li> <li>• Policy 3.11 deals with fencing, covering a range of possible circumstances. Specific fencing policies should be included in new sub-sections specific to each topic/themes (e.g. floodplains, wetlands, etc.).</li> <li>• Policy 3.13 provides direction for certain works to be completed at certain times of the</li> </ul>



THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>year. This section should reference the fact that there are certain timing requirements for works established by, for example, the MNRF or DFO. The updated policy does not need to include the specific time-frames, as they may change from time to time; however, they could reference the type of work and appropriate agency responsible.</p> <ul style="list-style-type: none"> <li>• Policy 3.16 links both watercourse alterations with floodplain policy. For clarity reasons, there may be an opportunity to separate out these topics into different sub-sections.</li> <li>• Policy 3.17 provides guidance for permitted uses in floodplains and generally provides a sufficient amount of direction for decision-making. However, there are several areas which could benefit from further clarification. Discussions with NPCA staff suggest that some policies within this section have been misinterpreted and some further refinement may be required.</li> <li>• Some watercourses within the watershed have been altered and there are opportunities for the updated Policy Document to encourage restoration and natural channel design.</li> <li>• Most of the NPCA's floodplain mapping is based on the 100-year storm event, intended to provide a conservative estimate of the anticipated level of flooding for a major storm that would occur on average every 100 years. However, there have been a number of heavy precipitation events over the past decade that have either achieved or surpassed the 100-year storm level, thus providing an impetus for a review of the storm level utilized for floodplain mapping.</li> <li>• Changes in climate and increased high-intensity short-duration storms, as described above, have the potential to result in larger overland floods from rivers swollen by prolonged rainfall, sudden snowmelt or ice jams, damaging buildings and other structures within or adjacent to floodplains. Consideration should be given to the potential impacts of climate change and increased rainfall on floodplain limits and there is an opportunity for the Policy Document (or a future study) to provide some guidance on how potential climate change impacts are to be (additional commentary on climate change is provided in section 3.11 of this report).</li> </ul>
Valleylands	<ul style="list-style-type: none"> <li>• There is a need to harmonize the policies in Section 3 and Section 4 – both in style and content. For example, the policies in Section 3 are short, clear and precise. By contrast, the policies contained in Section 4 are not numbered and include few headings, making the policies difficult to identify and read.</li> <li>• The policies generally represent the requirements of Ontario Regulation 155/05 and</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>the 2014 PPS; however, there is a need to more explicitly address and implement Policy 3.2.5 of the Greenbelt Plan (where it applies).</p> <ul style="list-style-type: none"> <li>• There is an opportunity to articulate the overall objectives of valleyland policies. The current policies include a brief narrative to explain the context for the policies, which could be enhanced by stating the main objectives of the policies (i.e. protect public safety and property, protect and enhance natural areas, reduce risk of slope failure, reduce potential for impacts on fish habitat, etc.).</li> <li>• There is an opportunity to modify the policy framework to differentiate between valleyland areas which need to be regulated solely for risk of slope failure and valleylands which have a significant natural heritage function and require habitat protection measures. Accordingly, the policies should provide guidance for valleylands which have an ecological corridor function.</li> <li>• The current policy framework treats all forms of development equally and some flexibility for development and site alteration for passive uses could be considered. There are opportunities to provide direction for certain forms of low-intensity development, such as municipal trails and resource related uses. There are also opportunities to provide additional clarity on the types of development which are not permitted. The term passive uses should be a defined term in the Document.</li> <li>• There are opportunities to provide more detailed policies to address intensification development in urban areas. Enhanced policies could speak to different forms of intensification (low density, medium density, high density, non-residential development, etc.) and offer different strategies depending on the intensity and form of development.</li> <li>• A number of the policies in Section 4 are targeted to municipalities (e.g. consideration for how to treat valleylands in zoning by-laws). To improve the overall organization of the policies, the updated Policy Document could include a short implementation sub-section within the valleylands section. This implementation sub-section would provide valleyland policy direction for municipalities at the site plan/plan of subdivision/consent level, zoning by-law level and official plan level. This section could also provide direction for any study/investigation requirements (geotechnical investigations, cost of any peer reviews, etc.).</li> <li>• Policy 4.3 states that, in some cases, restoration within the valleyland vegetative buffer area may be required. Some minor additions to this policy could be included to clarify the requirements for plantings which are native to the watershed and that restoration could also be required within the valleyland.</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<ul style="list-style-type: none"> <li>• The Policy Document could be updated to include additional guidance on how to define a setback from a watercourse where there is no apparent valley, effectively providing a clearer definition of the key terms used to define a valleyland (e.g. stable top of bank).</li> <li>• The Policy Document uses the terms “setback” and “vegetative buffer” interchangeably. This is apparent in the valleyland section (but can also be found elsewhere) of the Policy Document and the revised policies should more clearly distinguish between these two terms. Setbacks which are required for public safety reasons due to the existence of a hazard is different than a vegetative buffer which is required to protect and maintain the ecological function of a natural feature. With this framework clearly established, the Policy Document could also provide greater clarity about the distances required and types of development which may be permitted within buffers and setbacks<sup>12</sup>.</li> <li>• The current Policy Document includes a valleyland figure/diagram which could be updated and modified to better represent the policy framework, including development setbacks, vegetative buffers, overland flow, etc.</li> </ul>
<b>Groundwater and source water protection</b>	<ul style="list-style-type: none"> <li>• The NPCA’s current policies do not explicitly mention the source water protection planning framework. The legislative context section should be updated to recognize the Source Protection Plan for Niagara and articulate the linkage between the Policy Document, the Source Protection Plan and the areas which the NPCA regulates. The legislative context should also recognize the mutually supporting framework for groundwater and source water protection through the Clean Water Act, the Provincial Policy Statement, the Greenbelt Plan, local official plans and other tools/processes.</li> <li>• While there are several policies within the Document which address groundwater impacts associated with development proposals, it is suggested that the NPCA include a set of policies which promote the protection of the quality and quantity of groundwater in the watershed. Furthermore, a more explicit policy stating that development and site alteration in or near sensitive groundwater features should be restricted such that these features and their related hydrological functions will be</li> </ul>

<sup>12</sup> Note that this observation applies to a number of topics throughout the Policy Document – including wetlands, shorelines, natural heritage features, etc.

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>protected.</p> <ul style="list-style-type: none"> <li>The NPCA should consider expanding the need for hydrological assessment reports by extending it to cover any developments which have the potential to affect groundwater quality or quantity (the current policy framework requires hydrological assessments for development in proximity to wetlands). The hydrological assessment report, which is to be prepared by a qualified Professional Geoscientist or Professional Engineer, is to demonstrate that development will not significantly alter groundwater recharge/discharge in the area of the development, and that groundwater quality will not be impaired. The report should also identify mitigative measures to maintain pre-development infiltration rates, and improve or restore sensitive groundwater features and their hydrologic functions. A number of Conservation Authorities in the Province have implemented a requirement for hydrological or hydrogeological assessments (for example Halton Conservation) or components thereof to be integrated into environmental assessments or detailed design documents (for example as required by the TRCA) as part of development review applications. Such assessments typically apply to impacts on groundwater and sensitive features within the watershed in question, and include a desktop review of existing and potential future conditions as well as a field investigation to characterize site conditions, reporting on potential impacts, and provision of a plan to mitigate these impacts.</li> <li>The cumulative impacts of development is an area that is not sufficiently addressed within the Policy Document, and the NPCA may consider providing guidance on the evaluation of cumulative impacts on groundwater resources.</li> </ul>
<b>Shoreline hazards</b>	<ul style="list-style-type: none"> <li>The policy documents should clearly state that shoreline hazards on the Great Lakes shall be mitigated.</li> <li>The wording “stable shore allowance” in Section 3.26.4 should be revised to indicate a specific point or setback, rather than a buffer, which is what it seems to imply.</li> <li>There are discrepancies between the NPCA policy and the mapping provided in the shoreline management plans with respect to the 100-year flood levels for the Great Lakes. The tables with the 100-year flood levels should be revised to include a descriptive location reference and the flood proofing elevation should be added to Table 1 (Table 3.4 in this report).</li> <li>It would be beneficial to include a more detailed description of the Dynamic Beach Hazard itself, as well as identifying methods for the mitigation of the Dynamic Beach Hazard.</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<ul style="list-style-type: none"> <li>• The current policies are somewhat unclear on the management of shoreline hazards for existing situations. There is an opportunity to add or revise clauses to the policies which can allow owners of existing properties to improve their shore protection without replacing it. These additional and revised clauses should provide a level of openness, and should be permitted at the discretion of the NPCA based on the physical conditions of the individual site.</li> <li>• The current policies are somewhat unclear on the shore protection requirements for adjacent and nearby properties. It may be to the Owner's benefit to add shore protection to adjacent or nearby lots in order to protect their own property from future flanking erosion. There is an opportunity to revise the policies to accommodate this; however, this could be problematic to implement and enforce, especially with hostile neighbours.</li> <li>• The current policies do not address an increase in the number of dwelling units as long as there is no expansion of the existing footprint. There is an opportunity to allow an increase in the number of dwelling units and habitable space as long as the overall footprint does not increase. A septic expansion may be required if the number of dwelling units is increased. Lastly, the name of Section 3.26.4.3 should be revised to reference additions not increasing the existing footprint.</li> <li>• New septic systems should not be allowed within the hazard limits. Replacement septic systems within hazardous lands may be permitted pending a review by the NPCA; however, this is not currently addressed in the policies. Lastly, the addition to existing septic systems as opposed to replacing the entire system should be addressed in the policies.</li> <li>• The current policies are unclear whether or not new or upgraded shore protection is required if an existing dwelling within the hazard limit is being replaced. The policy is also unclear on the requirements for shore protection in cases where an existing dwelling is moved further landward. There is an opportunity to add a clause which would allow owners to replace a dwelling located within the hazard limits with a new dwelling over or landward of the footprint of the previous dwelling without the construction of shore protection. This should be permitted at the discretion of the NPCA based on the physical conditions of the individual site, any impacts on adjacent properties and should be reviewed by a qualified coastal engineer (which could also be defined in the Document).</li> <li>• There is an opportunity to provide some additional guidance around shorelines and dynamic beach hazard areas which have an ecological function. While it is</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>acknowledged that the policy framework requires shoreline hazards to be mitigated, the form of mitigation should be sensitive to the broader ecological function of the zone – for example a number of species depend on the changing dynamic beach processes and shoreline protection alternatives which allow for these beach processes to continue should be encouraged (where appropriate).</p> <ul style="list-style-type: none"> <li>• There is an opportunity to provide greater clarity around the NPCA's regulatory role along the Niagara River. This section of the Policy Document could include some description of the NPCA's role, as well as other agency responsibilities; for example, procedures on information sharing and updating municipalities with respect to development permit applications.</li> </ul>
<b>Wetlands</b>	<ul style="list-style-type: none"> <li>• In general, the wetland section would benefit from the inclusion of different definitions for the different classifications of wetland (Provincially Significant vs. non-PSW, coastal, etc.). There is also a need to further articulate the NPCA's role in wetlands (responsible for regulating development) compared with that of the MNRF (responsible for confirming PSWs).</li> <li>• It is recommended that the Policy Document make specific reference to the protection of coastal wetlands and differentiate between the protection afforded to significant coastal wetlands versus coastal wetlands not deemed significant, in a manner that is consistent with PPS 2014.</li> <li>• It is further recommended that language be added to the Policy Document to establish a clear policy framework for non-Provincially significant wetlands, including situations where a non-Provincially significant wetland forms part of the natural heritage system.</li> <li>• Some further refinement of the development policies may be required to address passive recreational uses in buffer areas, such as trails, tree-top canopy trails, etc. As noted earlier, a clear definition of passive uses will need to be included in the Policy Document.</li> <li>• It is not clear what constitutes a locally significant wetland within the Policy Document. Previous versions of the OWES made a distinction between provincially significant and locally significant wetlands. This is no longer the case. It would be helpful to provide some language surrounding what constitutes a locally significant wetland and specific NPCA guidelines for undertaking this evaluation process. Alternatively, the Policy Document could also consider using a more simplified terminology for wetlands (PSWs and Non-PSWs).</li> <li>• The current policies in 3.24 imply that, in some circumstances, a hydrologic</li> </ul>



THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>assessment may be required for development which hydrologically impacts adjacent wetlands. Policy 3.24 (and Policy 5.2) should be modified to provide greater clarity around the circumstances where a water budget assessment could be required. The policy could also provide some general guidance on methodology.</p> <ul style="list-style-type: none"> <li>• There should be guidance on the steps or requirements that follow should an EIS identify a possible wetland, outlining the criteria as to the type of documentation and mapping required, and steps to undertake an assessment of impacts and mitigation thereof.</li> <li>• Note that the Province is currently in the process of reviewing its wetland policy framework. Any revisions/modifications to the Provincial framework would need to be incorporated into the NPCA's Policy Document.</li> </ul>
<b>Natural heritage</b>	<ul style="list-style-type: none"> <li>• The organization of the Policy Document content should be reviewed and possibly ordered in a manner more consistent with other provincial guiding documents such as the PPS and Natural Heritage Reference Manual (MNRF 2010).</li> <li>• There should be the addition of another section that discusses the natural heritage system and its relevance to the development, interference with wetlands and alterations to shorelines and watercourses.</li> <li>• As part of the PPS update, some additions, deletions and reordering of policies occurred and the Policy Document needs to be revised to reflect these changes. Further, material used to identify and assess the significance of natural heritage features has been updated. As an example, the MNRF has updated supporting material for the Significant Wildlife Habitat Guide and its appendices, which provides guidance for the identification of significant wildlife habitat. Ecoregion Criteria Tables - Significant Wildlife Habitat Criteria Schedules For Ecoregion 7E (MNRF 2015) is the appropriate material for defining wildlife habitat significance. Accordingly, the literature sources identified in the Policy Document which are to be used to identify and assess the significance of natural heritage features and system should be updated and made consistent with the current documents being used. There should also be the addition of a clearer statement that these guideline documents are updated from time to time and the most current version should be used. In addition, the MNRF's Significant Wildlife Habitat Mitigation Support Tool (Version 2014) should be referenced as a resource for planners.</li> <li>• Any update to the language of the significant wildlife habitat should include flexible language which will allow for changes to the criteria schedules and what constitutes significance.</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<ul style="list-style-type: none"> <li>• The EIS policies within the Policy Document should be updated to align with municipal EIS guidelines (if required, this section of the Policy Document may need to reference slightly different standards between the Region of Niagara, City of Hamilton and County of Haldimand).</li> <li>• The Policy Document should acknowledge that various municipalities within NPCA jurisdiction may have recognized Natural Heritage Systems within their Official Plans, and work with municipalities in developing policies related to such features.</li> <li>• Within the current NPCA Planning Document (Page 31), the concept of a Vegetation Protection Zone (VPZ) has been discussed. This discussion should be expanded to provide guidance on how VPZs may be implemented to provide protection for natural features from the impacts of construction and activities involved on the site following construction.</li> </ul>
<b>Hazardous sites</b>	<ul style="list-style-type: none"> <li>• Policy 3.2 could be further expanded to elaborate on the different types of natural hazards, explaining the difference between unstable soils (organic soils and marine clays) and unstable bedrock (karst formations).</li> <li>• The NPCA's current policies reference the most up-to-date planning standards for hazardous sites (MNRF's Understanding Natural Hazards, 2001). The Policy Document does not speak extensively to hazardous sites and the role of the NPCP. Both the Federal government and the Province of Ontario maintain mapping of potentially hazardous sites. Local municipalities are responsible for incorporating mapping (where it is available) into Official Plans and providing policy direction for land use change. Due to the unique role that the NPCA plays with respect to the MOU with the City of Hamilton, it is recommended that the NPCA consider reviewing the readily available hazardous site mapping to determine the extent of known potential hazardous sites and the extent of any sites within the NPCA's jurisdiction (beyond the Karst formations associated with Niagara Escarpment).</li> <li>• For any hazardous site, a technical study needs to be completed by a qualified professional to determine the extent of the hazardous site. This would be done in order to ensure that any development complies with provincial and municipal policies.</li> </ul>
<b>Stormwater management</b>	<ul style="list-style-type: none"> <li>• The NPCA Land Use Policy should be updated to include a detailed section on stormwater management, particularly as it relates to development. While Policy 5.5 briefly discusses stormwater management practices under Ontario Regulation 155/06 as part of approval of an outlet to a watercourse, the policies could be substantially enhanced to reflect the key aspects of the NPCA's Stormwater Management Guidelines.</li> <li>• The 2010 NPCA Stormwater Management Guidelines provide a basis to reduce and, if</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>possible, eliminate the undesirable impacts of stormwater, erosion and sediment on the built and natural environment, re-establish the benefits of precipitation, and protect and enhance water quality in the watershed. Some examples could include policy recommendations for official plans, the role of subwatershed studies (and requirements/expectations), examples of best management practices for intensification and greenfield development, policies to ensure municipal drains under the drainage act are designed, constructed and maintained in accordance with BMPs to avoid detrimental impacts on farmland, water resources, natural areas and wildlife habitat.</p> <ul style="list-style-type: none"> <li>• The policies could also include water quality and quantity targets, recommendations for subwatershed studies and guidance for the location of storm water management facilities. The policies could include a brief sub-section on low impact development options which are sensitive to Niagara's context (e.g. clay soils).</li> <li>• The stormwater management policies would also need to include a number of cross-references to other policies in the Policy Document, including links to wetlands, watercourses, valleylands, etc.</li> <li>• The policy could also be framed around climate change trends and identify future studies, programs and targets intended to address climate change.</li> </ul>
Fish habitat	<ul style="list-style-type: none"> <li>• The Policy Document currently refers to the previous NPCA agreement with DFO in the administration of the <i>Fisheries Act</i>, and refers to the management of fish habitat under NPCA's jurisdiction. Given the changes to the <i>Act</i> noted above, it is appropriate to remove references in the Policy Document to NPCA's role with respect to fish habitat and the <i>Fisheries Act</i>.</li> <li>• It is further suggested that references to fish habitat types be removed, given that they do not align with DFO's definition of fish or fish habitat. Rather than set watercourse setbacks based on fish habitat types, Policy 4.3 should be based on ecological and hydrologic function which would be determined through an appropriate planning mechanism, such as a watershed/subwatershed study and further refined through secondary planning and Environmental Impact Studies.</li> <li>• Since the DFO has changed its regulatory framework, it would be useful for the Policy Document to include a reference to the Fisheries and Oceans Canada (DFO) "Projects Near Water" website for guidance on activities that may impact fish and fish habitat.</li> <li>• The outdated terminology utilized to identify watercourses in the current policy document (Type 2, Type 3) should be modified to reflect current classifications from</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>the Ministry of Natural Resources and Forestry.</p> <ul style="list-style-type: none"> <li>It would be beneficial for the Policy Document to integrate context on the type and sources of mapping that will be used for fish habitat and wetland delineation in order to identify areas subject to NPCA policies and regulations.</li> </ul>
Climate Change	<ul style="list-style-type: none"> <li>Seven of Niagara's watershed have a 'high sensitivity' rating, meaning that the watersheds are highly vulnerable to climate change, where vulnerability is a combination of sensitivity to climate change and the capacity of the system to adapt to climate change impacts;</li> <li>Predicted hotter and dryer summers are likely to require increased irrigation in vineyards and further impact groundwater quality and stress levels;</li> <li>Predicted additional decline in water quality;</li> <li>Impacts on Great Lakes shipping due to water level decline, passing through the Welland Canal;</li> <li>Intense rainfall or rain-on-snow events can overwhelm the capacity of soils, water courses and stormwater systems causing overland flooding;</li> <li>Impacts to electricity demand, supply and distribution – water level decrease has already impacted Niagara River flows with a decreased average of 7% between 1970 and 2000;</li> <li>Impacts to office buildings, infrastructure service buildings, bridges, culverts, tunnels, etc;</li> <li>Predicted increase in insect and disease outbreaks in trees and other vegetation, heat stress for trees and woodlands, decline in wetlands due to lower water levels, decline in water levels in lakes and rivers, threats to fish from higher water temperatures, unbalanced expansions and outbreaks of certain species and increased stress on urban ecosystems; and,</li> <li>Tourism and recreational activities may see impacts resulting from reduced boat access, change in desirable fish species, beach closures and extreme weather event damage.</li> <li>Updating floodplain mapping and policies in response to increased high-intensity short duration storms, including the IDF curves, flood forecasting and detection/communication;</li> <li>Assess risks and vulnerabilities based on new floodplain mapping to protect people, built infrastructure and the natural environment; develop risk management framework;</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<ul style="list-style-type: none"> <li>• Develop watershed plans that address climate change and adaptive management, prioritizing 'high sensitivity' rating watersheds;</li> <li>• Develop enhanced policies and programs to promote water conservation;</li> <li>• Update policies on floodplains, valleylands, groundwater and source water protection, wetlands, shoreline hazards, natural heritage, hazardous sites, stormwater management and fish habitat to reflect adaptations for climate change;</li> <li>• Consider developing a Climate Change Action Plan, as well as evaluation and monitoring programs;</li> <li>• Develop policies on the use of Low Impact Development and encourage sustainable building and operation practices to conserve resources such as through the application of the LEED rating system on buildings and sites within the regulatory boundaries;</li> <li>• Develop policies on the role of green infrastructure for mitigating and adapting to climate change – e.g., afforestation and reforestation in response to tree loss due to severe storms, disease, drought, insect infestations, etc.; establishing natural cover targets and monitoring plans;</li> <li>• Develop policies that protect and adapt the valleylands from climate change impacts - e.g., erosion, development, heat-stress, etc.;</li> <li>• Educate public on climate change and how they can help adapt and mitigate the impacts – e.g., behavioural changes, home adaptations, growing own food, etc.;</li> <li>• Integrate climate change into existing and new programs – e.g., Canopies for Kids and Niagara Children's Water Festival, as well as new programs that enhance green spaces, urban agriculture, LEED infrastructure, etc.; and,</li> <li>• Identify critical partners and seek funding mechanisms to support climate change readiness – e.g., federal and provincial government programs, Federation of Canadian Municipalities' Green Municipal Fund, etc.</li> </ul>
<b>Fill Placement and Storage</b>	<ul style="list-style-type: none"> <li>• There is an opportunity to review and refine the definition of fill to ensure that it aligns with municipal by-laws, or at a minimum there is no conflict between definitions.</li> <li>• There is also an opportunity to provide guidance for filling within all regulated areas by including a short summary section which links all of the main policy directives on fill permits.</li> <li>• There is also an opportunity to provide some general guidance for local municipalities when site alteration by-laws are being prepared (in areas which are of concern to the NPCA, such as stormwater management, water quality, etc.). Also, there may also be an opportunity to provide direction to applicants regarding the application of site</li> </ul>

THEME/TOPIC	KEY ISSUES & OPPORTUNITIES TO BE ADDRESSED
	<p>alternation by-laws. For example, in some instances it is possible that a potential fill proposal may be subject to both a permit from the NPCA and also the requirements of a municipal site alteration by-law (for portions of the property which are outside of the regulated areas). The Policy Document could provide some explicit instruction to ensure that applicants are aware that both planning tools may apply.</p>



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# CONSULTATION PROGRAM

NPCA Policy Review

August, 2015



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**Appendix A: Detailed Project Schedule**

# 1.0 INTRODUCTION

This consultation program describes the various consultation activities that will occur during the NPCA Policy Review Project.

## 1.1 What is the NPCA Policy Document?

The Niagara Peninsula Conservation Authority (NPCA) is updating its primary development guidance document – Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document (2011) (“Policy Document”). The Policy Document lays out the NPCA’s commitment to a watershed-based planning approach and is used by staff, agencies and the public as one of the main tools for decision-making within the NPCA’s jurisdiction.

The purpose of the NPCA Policy Document is to provide local NPCA watershed policies which will guide development and site alteration while protecting, preserving and enhancing the natural environment within the legislative mandate of the NPCA. The policies are based on the interrelationship between environmental, physical and social factors that impact land use planning and development within the watershed.

## 1.2 Purpose of the Project

The purpose of this project is to conduct a comprehensive policy review and develop a new Policy Document that the NPCA can use as a practical guide for evaluating development and site alteration while balancing its obligation to protect, preserve and enhance the natural environment within its legislative mandate.



## 2.0 CONSULTATION PROGRAM

### 2.1 Consultation Principles and Objectives

The objective of our consultation program is to provide local agencies, government officials, industry representatives and First Nation communities, and residents with an opportunity to participate in the review and development of the new NPCA Policies Document.

In pursuing this objective, the NPCA will be guided by the following principles:

- **Transparency** in documenting and reporting on the results of consultations through a dedicated NPCA project website.
- **Wide dissemination** of information and feedback channels through the NPCA's project website, various forums, and face-to-face discussions at other consultation sessions.
- **Broad participation** by reaching diverse stakeholders, including the general public, local and provincial government representatives, the First Nations, special interest groups, and private industry.
- **Accessibility** of information to stakeholders through a variety of channels and in easy-to-understand language.

### 2.2 Consultation Activities

Our proposed consultation activities are described below. **Appendix A** presents the detailed project schedule for the project which includes the consultation activities for each phase of the project.

- **Project Branding**  
*Purpose:* In an effort to brand the project, foster engagement and communicate clearly to key stakeholders, we propose that the team identify a project identifier/brand for this assignment. We will move away from the “**Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document (2011)**” label, so that others can more easily understand what the project entails. We understand that the formal title may still be required on the final Policy Document, but for the purposes of engagement we will endeavour to create a new brand for the NPCA's Policy Document.  
  
*Format/Method:* We propose taking the lead on identifying a few options and working with the NPCA to confirm the preferred brand for this assignment. Branding ideas will consider logos, colours, fonts and a new title for the document.  
  
*Lead Responsibility:* Dillon, with support and input from NPCA.



- **Project Website**

*Purpose:* In order to provide meaningful online engagement and make involvement in the project “fun” we plan to utilize a number of online engagement tools and activities to allow various levels of involvement in the project. Recognizing that there may be interest in this project from a range of groups and individuals over a broad geography, the project team will maintain a one-stop hub for current and accurate project information and online activities, linked through the NPCA website.

The webpage will serve as an information sharing and feedback venue with access to project contact information, comment forms, links to social media outlets, a contact list sign-up, project status updates, notification of public meetings and general project details. We have proposed to utilize Squarespace, a website platform that will allow the project to have a modern looking online central hub to host online materials, interactive engagement tools and links to social media outlets. The website will become the one-stop location for all up-to-date information on the project status, upcoming events and ways to get involved. We propose to host the community vision survey, in addition to considering options for photo contests, preference surveys and commenting forums on the project website to provide fun methods for engagement.

*Format/Method:* An outline of the proposed format and content will be provided by Dillon in a web-friendly format for NPCA review and sign-off before becoming live.

*Lead Responsibility:* Dillon, with support and input from NPCA.

- **Social Media:**

*Purpose:* To provide information updates out to the public on progress of project.

- *Format/Method:* We propose that the NPCA’s communications staff lead communications on Facebook and Twitter through their existing channels to guide users to the website at various key points in the project. We will provide links and basic notice information for when the NPCA’s accounts should be updated (related to the project).

*Lead Responsibility:* NPCA, with support from Dillon.

- **Contact List**

*Purpose:* In an effort to ensure those that are interested in the project and would like to contribute are kept informed, a comprehensive stakeholder contact list will be created and maintained. The team will utilize this initial contact list to provide project update information and invite stakeholders to the Public Roadshow events.

*Format/Method:* NPCA will prepare an initial list based on previous consultation activities. Dillon will review and maintain the master list and update it based on input received. We will use the master list to provide occasional email updates related to progress on the assignment.

- *Lead Responsibility:* NPCA initially, Dillon to maintain master list.

- **Project Launch**

*Purpose:* In order to notify the public, stakeholders and agencies of this project, we suggest that a formal project launch be initiated by the NPCA. We suggest the project launch includes the launch of the website with a public notification in a newspaper or newsletter format. We can support by providing content, but feel communication should be sent out by the NPCA to outline the process and opportunities for input for stakeholders and members of the public. This could provide an initial draw

to the project website and would also allow community members to indicate interest in being added to the contact list.

*Format/Method:* Dillon to prepare content for website and public notification. NPCA to confirm public notification logistics and secure advertisement.

*Lead Responsibility:* NPCA with support and input from Dillon.

- **NPCA Board Meetings**

*Purpose:* The NPCA Board is a key decision-maker and will need to be notified during key milestones of the project. Four meetings will occur over the course of the project. We have proposed four meetings with the NPCA Board:

- **Meeting 1: Orientation** - We will introduce the key members of our team and present our work plan and consultation program to the Board. We will provide a short session on the purpose, function and basis for the NPCA's Policy Document (how it's used, why it's important, etc.). We hope to receive feedback and direction on this proposed Consultation Program and also gain some preliminary insight into key issues, opportunities and the overall vision. We intend to prepare a short (~15 min) presentation introducing the project and outlining the key components of the Consultation Program, followed by discussion questions intended to provoke conversation.
- **Meeting 2: NPCA Board Workshop** - We will present our draft Discussion Paper to NPCA Board during the second meeting. We intend to prepare a short presentation (~15 min) summarizing the key findings of the Discussion Paper, followed by a few discussion questions intended to provoke discussion on the key gaps, strategic vision and potential areas for modification of the Policy Document.
- **Meeting 3: NPCA Board Working Meeting on Feedback** - We will present the draft Policy Document to the NPCA Board and will also provide our initial summary of feedback from the Core Working Group and the public. Based on any comments received from the CWG/CLAC and the Board, we will undertake any major edits to the Policy Document prior to public release.
- **Meeting 4: Present Final Policy** - A final meeting with NPCA Board members will be used to present the final draft Policy Document for approval.

*Format/Method:* NPCA to identify and schedule meetings. Dillon to prepare presentation materials, facilitate meeting and discussion.

*Lead Responsibility:* Dillon, with support and input from NPCA.

- **Core Working Group**

*Purpose:* The Core Working Group (CWG) is an Area Planners Forum intended to be used as a sounding board to advise the project team on technical aspects of the project. Three meetings will occur with the CWG:

- **CWG Meeting 1: Introduction to the Project** – We will present our work plan and consultation program to the Core Working Group. The purpose of this first meeting is to launch the project and get feedback on the proposed approach. We may also take this opportunity to explore some preliminary issues, opportunities and concerns. Materials presented to the NPCA Board will be refined if necessary and presented to the CWG.
- **CWG Meeting 2: Identify Issues and Opportunities** - We will hold a workshop to present, discuss and receive feedback on our draft Discussion Paper to the CWG. This

will include a review of key feedback received from the interviews and the public, and a discussion on the gaps, issues and potential areas for modification of the Policy Document. This session will be held as an interactive, workshop style event.

- **CWG Meeting 3: Final Review Session** - We will meet with the CWG to receive comments on the draft Policy Document. The format for this meeting will be a roundtable discussion, allowing members to provide high-level comments on the draft Policy Document.

*Format/Method:* NPCA to identify and schedule meetings. Dillon to prepare presentation materials, facilitate meeting and discussion.

*Lead Responsibility:* Dillon, with support and input from NPCA.

- **Community Liaison Advisory Committee**

*Purpose:* The Community Liaison Advisory Committee (CLAC) will be engaged twice throughout the project and will act as a sounding board for public materials and public consultation approaches. This group may be involved in reviewing materials and providing comments on the items that go out to the public. The CLAC will help inform the public engagement materials created during the project.

- **CLAC Meeting 1** – We will present our work plan and consultation program to the CLAC. The purpose of this first meeting is to launch the project, get feedback on the proposed approach and generate key themes for the public event roadshow #1. We plan to schedule the CWG #1 immediately following CWG #1, on the same day.
- **CLAC Meeting 2** – We will hold a workshop to present, discuss and receive feedback from the CLAC on our draft Discussion Paper. This will include a review of key feedback received from the interviews and the public, and a discussion on the gaps, issues and potential areas for modification for the Policy Document. This session will be held as an interactive, workshop style event held immediately following CWG #1, on the same day.

*Format/Method:* NPCA to identify and schedule meetings. Dillon to prepare presentation materials, facilitate meeting and discussion.

*Lead Responsibility:* Dillon, with support and input from NPCA.

- **Community Vision Survey**

*Purpose:* The purpose of the Community Vision Survey is to get feedback from the public about the importance of the following possible themes which tie into the NPCA's Policy Document:

- Sustainability
- Climate change
- Natural heritage systems and spaces
- Water resources
- Floodplains and natural hazards

*Format/Method:* The team will draft a series of questions and submit the questions to the NPCA for review. In addition to the Community Vision Survey, we will also prepare a series of more practical questions related to the NPCA's existing Policy Document. Both sets of questions will be used as the basis for the Stakeholder and Staff Interviews and the Public Event Roadshow #1. Survey will be hosted on the website.

*Lead Responsibility:* Dillon, with support and input from NPCA.

Note for discussion purposes: Following Public Review of Final Draft (3.13) have we allowed for public engagement/feedback to answer the question "Did we hear you correctly?"

- **Stakeholder and Staff Interviews**

*Purpose:* Stakeholder interviews provide an opportunity for short, one-on-one discussions and will allow us to get a better understanding of key issues and opportunities (with respect to both the Vision and some more functional aspects of the existing Policy Document). We intend to hold interviews over the course of one week, with representatives from the following:

- NPCA Staff (to discuss operational issues related to current policies);
- Representatives from the development community;
- Farmers and representatives from the agricultural sector; and,
- A selection of planners from municipalities within the NPCA's jurisdiction

*Format/Method:* We will work with the NPCA to confirm the list of stakeholder and staff interviews and to schedule the interviews.

*Lead Responsibility:* Dillon, with support and input from NPCA.

- **Public Event Roadshows**

*Purpose:* The roadshow events are designed to reach out to a broader audience at popular locales (i.e. farmers markets, festivals, sporting events) where our staff will be positioned to survey engage passively with members of the public. Using our tablets, our engagement team will canvas the public for feedback.

*Format/Method:*

**Roadshow #1:** over the course of several weeks in October, our staff will set up "pop-up" style booths at various venues across the NPCA's jurisdiction. Feedback will be collected on the policy Vision, issues and opportunities related to the NPCA's policies. Potential venues include:

- Festivals: 41<sup>st</sup> Annual Balls Falls Thanksgiving Festival (Friday October 9<sup>th</sup> through Monday October 12<sup>th</sup>), Downtown Harvest Festival (October 10<sup>th</sup> Port Colburne), Caledonia Fair (October 1-4<sup>th</sup>), Creepy Caledonia Halloween Festival (October 23-25), Niagara Falls International Marathon (October 23-25), Hernder's 21<sup>st</sup> Annual Craft Show (November 6-8<sup>th</sup>, in St. Catharines), River Arts Festival (November 1-15 in Dunville)

- Farmers markets: Niagara Falls Farmers Market (Saturday's year round), St. Catharines Farmers' Market (Thursday's and Saturday's year round), Welland Farmers Market (Saturdays year round), Welland Market Square (Thursdays until October), Grimsby Farmers Market (Thursdays until October) , Jordan Village Farmers Market (Wednesday's until October), Pelham Farmers Market (Thursdays until October), Port Colborne Farmers Market (Thursdays until October), Ridgeway Farmers Market (Saturdays until October), Hamilton Farmers Market (Tuesday, Thursday, Friday and Saturday year round).
- Major shopping areas: Canada One Factory Outlets, Outlet Collection at Niagara, Rymal Road Rio Can Shopping Centre in Hamilton,
- Public parks and plazas: Any of the conservation areas within the NPCA.

Roadshow #2: Similar to Roadshow event #1, we will conduct a series of "pop-up" style engagement events across NPCA's jurisdiction. The purpose of these sessions is to get public feedback on the draft Policy Document. At the conclusion of the Roadshow we will also hold two open house events.

*Lead Responsibility: Dillon, with support and input from NPCA (level of collaboration to be determined)*

- **Consultation Documentation**

*Purpose:* As part of ensuring transparency, the results of the consultation program should be documented throughout the process in order to support the NPCA Policy Review Legislative requirements. The document should include any and all formal feedback, including relevant materials garnered from letters, social media and the community conversation. We recommend NPCA staff prepare this documentation, but would be happy to discuss this further.

*Format/Method:* NPCA to prepare outline of document and point person for all consultation documentation. All feedback received will be sent to point person for inclusion in the document. Dillon to prepare responses to comments received from the two rounds of feedback on the draft and final Policy Document. This Consultation program should be part of the Consultation Documentation.

*Lead Responsibility:* NPCA with support from Dillon.

## 2.3 Summary of Consultation Activities

The following provides a brief summary of the consultation activities presented above for each phase of the assignment:

### PHASE 1: PROJECT LAUNCH: KEY CONSULTATION EVENTS & ACTIVITIES

- Prepare and confirm Consultation and Engagement Plan
- Confirm Project Branding
- Prepare Base Contact List
- NPCA Board Meeting #1: Orientation
- Core Working Group Meeting #1: Introduction to the Project
- Community Liaison Advisory Committee Meeting #1
- Project Website Preparation
- Project Website and Social Media Launch

**PHASE 2: VISIONING AND POLICY GAP ANALYSIS**

- Prepare and Conduct Community Vision Survey
- Stakeholder and Staff Interviews
- Update Contact List
- Public Event Roadshow #1
- Core Working Group Meeting #2: Identify Issues and Opportunities
- Community Liaison Advisory Committee Meeting #2
- NPCA Board Meeting #2: Board Workshop
- Project Website and Social Media Updates

**PHASE 3: POLICY DOCUMENT PREPARATION**

- Core Working Group Meeting #3: Final Review Session
- Community Liaison Advisory Committee Meeting #3
- NPCA Board Meeting #3: Working Meeting on Feedback
- Project Website and Social Media Updates
- Update Contact List
- Public Event Roadshow #2
- Prepare Consultation Documentation
- NPCA Board Meeting #4: Present Final Policy

## APPENDIX A: DETAILED PROJECT SCHEDULE



**Report To:** Board of Directors

**Subject:** Collaborative Response to DFO's "*Guidance Document for Maintaining and Repairing Municipal Drains*"

**Report No:** 98-16

**Date:** September 21, 2016

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**RECOMMENDATION:**

That Report No. 98-16 be received for information; and

That the NPCA Chair be authorized to sign the document (attached in Appendix 1) entitled "*Collaborative Response to DFO's Guidance Document for Maintaining and Repairing Municipal Drains*".

**PURPOSE:**

To work in partnership with other organizations in the initial response to the Department of Fisheries and Oceans draft guidelines on the maintenance and repairing of municipal drains.

**BACKGROUND:**

On August 18, 2016 Conservation Ontario distributed the DFO draft guideline document to conservation authorities seeking feedback. In addition, on August 30, 2016, conservation authorities were invited participate in a related webinar hosted by DFO.

During the webinar, DFO officials expressed a willingness for others to distribute the draft document to other stakeholders, and, possibly conducting some meeting to hear from stakeholders directly. The NPCA offered the DFO to host a workshop in the Niagara Region.

Further, the NPCA distributed the document to the Town of Niagara-on-the-Lake's Agriculture Committee and the Region of Niagara's Agriculture Policy and Action Committee (APAC).

In response, representatives from the Town of Niagara-on-the-Lake, Town of Lincoln, APAC Chair, local farmer Austin Kirkby, and the NPCA met on August 26, 2016 and September 6, 2016 to prepare a collaborative response. The meetings were supported by Dr. Kevin Ker, an agricultural researcher and expert, who was retained by the Town of Niagara-on-the-Lake.

Furthermore, the collaborative response was presented and supported by the Agriculture Policy and Action Committee on September 9, 2016.

**DISCUSSION**

The purpose of the DFO draft guidelines are to:

1. Outline the regulatory review process for the maintenance of drains in Ontario, with regards to the federal Fisheries Act and the Species at Risk Act (SARA).

2. Outline roles and responsibilities of other agencies with a regulatory interest in Municipal drain maintenance projects;
3. Provide user-friendly resources and tools for the drainage community when submitting maintenance activities for review by DFO.

Related to the maintenance and repair of municipal drains, a permit may be required from the NPCA as per Ontario Regulation 155/06. Prior to providing comments, the NPCA reached out to the local and regional agricultural community to seek input. The result is a collaborative response supported by the Town of Lincoln, Town of Niagara-on-the-Lake, Region of Niagara, Region of Niagara's APAC, and, with the approval of this report, the NPCA.

The primary message of the collaborative response is that guidelines, whether imbedded in legislation, policy and/or decision making, needs to be consistent with the 2014 Provincial Policy Statement. In Ontario, the 2014 Provincial Policy Statement (as created by Section 3 of the Planning Act) provides "...policy direction on matters of provincial interest related to land use planning and development." Furthermore, all planning matters "shall be consistent with" the Provincial Policy Statement.

In specific to Section 2.3 of the 2014 Provincial Policy Statement, prime agricultural areas shall be protected for long-term use for agriculture. The "prime agricultural areas" are identified as areas where prime agricultural lands predominate, and where specialty crop areas "...shall be given the highest priority for protection".

As per the Provincial Policy Statement, the definition of a "specialty crop area" is where "...an area has specialty crops that are predominantly grown such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil, usually resulting from:

- a. soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both;
- b. farmers skilled in the production of specialty crops; and
- c. a long-term investment of capital in areas such as crops, drainage, infrastructure and related facilities and services to produce, store, or process specialty crops."

The other message is that the guidelines should take into consideration the technical information (as provided by Dr. Kevin Ker) and the impacts to prime agricultural areas, especially specialty crop areas.


**FINANCIAL IMPLICATIONS:**

None

**RELATED REPORTS AND APPENDICES:**

Appendix 1 - Collaborative Response to "Guidance Document for Maintaining and Repairing Municipal Drains".

**Submitted by:**



**Carmen D'Angelo;  
Chief Administrative Officer / Secretary Treasurer**

Collaborative Response

To

“Guidance Document for Maintaining and Repairing Municipal Drains”

(Draft) – Version 3.0 Dated August 16, 2016



## Acknowledgements

This paper is the collaborative effort of

**The Town of Lincoln**

**The Town of Niagara-on-the-Lake**

**Region of Niagara**

**Niagara Peninsula Conservation Authority**

**Region of Niagara’s Agricultural Policy and Action Committee**

The **Agricultural Policy and Action Committee** consists of:

Regional Councillor Bill Hodgson (Lincoln), **Chair**

Regional Councillor Brian Baty (Pelham)

Lord Mayor Patrick Dart (Niagara-on-the-Lake)

Mayor Sandra Easton (Lincoln)

Mayor April Jeffs (Wainfleet)

Mayor Doug Joyner (West Lincoln)

Robert Bator (Niagara North Federation of Agriculture, Alternate)

Gracia Janes (Preservation of Agricultural Lands)

John Kikkert

Bill Schenck (Schenk Farms), **Vice-Chair**

Joe Schonberger (Niagara South Federation of Agriculture)

Len Troup (Ontario Tender Fruit Producer’s Marketing Board)

Arden Vaughn (Niagara North Federation of Agriculture)

Arlene White

Kai Wiens (Niagara North Federation of Agriculture)



## INTRODUCTION

This “response” paper is a collaborative effort of regional and local municipal representatives, agricultural and academic organizations, and the conservation authority, with the goal of providing input into the draft document entitled “Guidance Document for Maintaining and Repairing Municipal Drains” (Version 3.0 dated August 16, 2016).

In Ontario, the 2014 Provincial Policy Statement (as created by Section 3 of the *Planning Act*) provides “...policy direction on matters of provincial interest related to land use planning and development.” Furthermore, all planning matters “shall be consistent with” the Provincial Policy Statement.

In regards to agriculture and Section 2.3 of the 2014 Provincial Policy Statement, prime agricultural areas shall be protected for long-term use for agriculture. In addition, prime agricultural areas are identified as areas where prime agricultural lands predominate, and where specialty crop areas “...shall be given the highest priority for protection”.



As per the Provincial Policy Statement, the definition of a “specialty crop area” is where “...an area has specialty crops that are predominantly grown such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil, usually resulting from:

- a. soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both;
- b. farmers skilled in the production of specialty crops; and
- c. a long-term investment of capital in areas such as crops, drainage, infrastructure and related facilities and services to produce, store, or process specialty crops.”

In Niagara Region, the parameters related to the definition of a “specialty crop area” have been achieved. In addition to providing food for Canadian families, Niagara Region’s agricultural sector have the soils and climate conditions, the skilled farmers, and community members have invested in hundreds of millions of dollars in long-term capital.

It should be understood that Niagara’s “specialty crop area” consists primarily of perennial crops. However, these perennial crops surpass the typical lifespan of greater than 2-5 years. The highly skilled tender fruit and grape growers have invested in their crops, where one can find orchards greater than 100 years old. Thus, policy matters need to recognize that these specialty crops cannot be simply rotated as a best farming practice similar to the management of cash crops.

Overall, for policy matters at both the federal and provincial levels, specialty crop areas need to be recognized within the document for the highest level of protection. When assessing the draft document entitled “Guidance Document for Maintaining and Repairing Municipal Drains”, it is recommended that the guidelines make specific reference to specialty crop areas.

## SUGGESTED AMENDMENTS

The following amendments are suggested in response to a review of the draft documents entitled “Guidance Document for Maintaining and Repairing Municipal Drains”:

- The importance of municipal drains to the success of the agricultural sector should not be understated. Within the “Introduction” of the draft document, there is the reference that “...Fisheries and Oceans Canada (DFO) along with the agricultural community recognize that agriculture is a vital component of the economies of Ontario and Canada”.

It is suggested that the guideline include a policy statement that **municipal drains are an important feature to the success of agricultural operations**, and in specific, are a critical component to the long term productivity of specialty crops in Canada. The municipal drain infrastructure (connecting to farm tile drains) is what provides adequate drainage to ensure the soil does not become saturated, thereby leading to poor crop health.

To emphasize this issue, municipal drains are extremely important in regions with heavier or greater dense soil textures. During periodic times of high precipitation, without an effective tile and municipal drain system, soil saturation can occur leading to the harm of root systems and the general health of the plant.



- The draft guideline provides a statement that “...Drains and fish can coexist.” Thereafter in Section 2.3 of the guideline, there are appropriate references related to measures that avoid, mitigate or offset harm to fish habitat when maintaining and/or repairing municipal drains. In turn,

Appendix 5 further identifies avoidance and mitigation measures that are applicable to most drain maintenance activities.

Several of the mitigation measures are accepted by the agricultural community when managing municipal drains adjacent to specialty crops. For example, in order to protect fish habitat, the timing of conducting maintenance and non-emergency repairs can be scheduled to minimize potential impacts. Another example is the use of permanent sod in buffer areas and in other strategic locations within the specialty crop areas in order to protect drain integrity and function, and, reduce sedimentation from entering drains. However, some measures (such as the allowance of un-managed vegetation) can have significant detrimental effects on specialty crops.

Thus it is suggested, that when there is a conflict between the protection of a fish habitat and the need to maintain and/or repair a municipal drain, the guideline should include a statement that a permit from an approval authority should not be unnecessarily refused in prime agricultural areas.

- The draft guideline provides a useful Table entitled “Drain Maintenance Activities, Impacts to Fish and Fish Habitat and Measures to Avoid Mitigate or Offset Harm”. One of the measures specifically references to “...*leave vegetation and tree canopy on west and south banks*” and “...*limit bank work to one slope, leaving the west and south slope intact (shade producing side)*”. It is understood that these measures are referenced as they provide shade, keeping temperatures cool, and thereby protecting fish habitat.

It is also recognized that the statement “...the mitigation measures are not intended to be stringent requirements...” is referenced in Appendix 5 of the draft guideline. Thus, it is recommended that the noted statement in Appendix 5 be included in Table 1 of the draft document.

The “shade producing” measures should not be an absolute requirement or condition to permit maintenance and/or repairing of municipal drains in prime agricultural areas. There is evidence that unmanaged vegetation adjacent to specialty crops can cause significant damage. According to Dr. Kevin Ker (see attached technical brief), there are three parameters where specialty crops are impacted by unmanaged vegetation:

1. Impact on air flow
  - a. potential for cold air collection/damming resulting in perennial specialty crop injury; and
  - b. may result in increased potential pest activity and disease infection;
2. Impact as potential reservoir for insects, diseases, vertebrate pests and other items harmful to specialty perennial crops; and
3. Impact on specialty perennial crops through crop shading or competition with crops for nutrients, sunlight and moisture causing reduced specialty crop plant health and crop quality.

For perennial specialty crops, Dr. Ker recommends the following:

- Timing of drain clearing to minimize impact on specialty crop production in the crop ecosystem or by impacting activity of tile drains and water flows during periods of high precipitation/slow drying conditions and potential to create adverse soil saturation conditions;
- Drains are neither left as unmanaged vegetation nor allowed to become a pest reservoir or be an alternate host for viral, fungal, bacterial or other diseases and other pests (insects, vertebrates, weeds, etc). These drains should not create conditions to support biotic or abiotic threats to specialty crop plant health, productivity (quality and /quantity) nor create environments that put crops at undue risk for injury by low winter temperatures;





- Allow for seeding and establishment with plant species (to be determined in consultation with qualified crop specialists for the specialty crops being produced locally) that will not actively compete or impact negatively with the nearby specialty crops for sunlight moisture or nutrients not become invasive into the nearby specialty crop ecosystem; and
- Promote ditch and drain soil stability and bank stability to prevent erosion while not invading the ditch/drain base to restrict water and airflow throughout the year.

## OVERALL RECOMMENDATIONS

1. The draft guideline should be amended to include a policy statement that municipal drains are an important feature to the success of agricultural operations, and in specific, are a critical component to the long term productivity of specialty crops in Canada.
2. When there is a conflict between the protection of a fish habitat and the need to maintain and/or repair a municipal drain, the guideline should include a statement that a permit from an approval authority should not be unnecessarily refused in prime agricultural areas.
3. Given the scientific impacts on perennial specialty crops as highlighted by Dr. Ker in the attached appendix, “shade producing” measures should not be an absolute requirement or condition to permit maintenance and/or repairing of municipal drains in prime agricultural areas. This can be clarified by including the term “...mitigation measures are not to be intended to be stringent requirements...” within the body of the draft document (specifically highlighted within Table 1).

## APPENDIX (See Page 7)

Impact of Municipal Drains and Maintenance in Specialty Crop Areas  
By Dr. Kevin Ker  
Research Associate and Professional Affiliate  
Brock University  
Cool Climate and Oenology Institute

## SIGNATURES for the COLLABORATIVE RESPONSE

\_\_\_\_\_  
Lord Mayor Patrick Darte  
Town of Niagara-on-the-Lake

\_\_\_\_\_  
Mayor Sandra Easton  
Town of Lincoln

\_\_\_\_\_  
Regional Chair Alan Caslin  
Region of Niagara

\_\_\_\_\_  
Regional Councillor Bill Hodgson  
Chair, Agricultural Policy and Action Committee

\_\_\_\_\_  
Kevin W. Ker, PhD  
KCMS Applied Research and Consulting Inc.

\_\_\_\_\_  
Regional Councillor Bruce Timms  
Chair, Niagara Peninsula Conservation Authority

## APPENDIX

### Impact of Municipal Drains and Maintenance in Specialty Crop Areas

Background paper - September 07 2016

Prepared by

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#### 1. Introduction

Municipal Drains are a critical component to the long term productivity of specialty crops in Canada. Many agricultural soils require and landowners have installed sub surface tile drains which then empty into Municipal Drains for conveyance of excess water at periodic times of the year. Some crops (especially specialty perennial crops such as tree fruit and grapes) rely upon more extensive networks of subsurface tile drains in orchard/vineyard ecosystems in order to be sustainably grown and be viable. This use of intricate tile systems is extremely important in regions with heavier or more dense soil textures, during periodic times of high precipitation which would result in soil saturation and harm to the root systems and/or general plant health. A saturated soil fills all available air spaces in the soil with water and excludes oxygen which is required for root respiration and growth. If the soil remains saturated root injury or death occurs which leaves the plant prone to overall decline, reduced productivity, susceptibility to attack by detrimental organisms (rots, fungi, bacteria, etc) and if late in the season can leave it extremely susceptible to winter injury. It is very important to ensure that Municipal drains are properly maintained and not left unmanaged which could lead to improper water and air movement as well as create pest (Insects, disease, weeds etc) reservoirs and lead to competition for nutrients, sunlight and moisture that can negatively impact on long term soil, plant and ecosystem sustainability.

## 2. Drains for Specialty Crop Production

### 2.1 What are Specialty Crops?

Specialty crops lands are defined by the Ontario Provincial Policy statement of 2014 (OPPS 2014 - Ontario Ministry of Municipal Affairs and Housing 2014) as quoted:

“Specialty **crop area**: means areas designated using guidelines developed by the Province, as amended from time to time. In these areas, specialty crops are predominantly grown such as tender fruits (peaches, cherries, and plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil, usually resulting from:

- a) Soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both;
- b) Farmers skilled in the production of specialty crops; and
- c) A long-term investment of capital in areas such as crops, drainage, infrastructure and related facilities and services to produce, store, or process specialty crops. “

### 2.2 Why are drains important for these crops?

Successful agriculture and long term productivity of specialty crops as noted above relies upon good land stewardship practices and management of the ecosystem to provide sustainability. The maintenance of drain banks is critical to avoid air blockage, increased pest activity as well as to mitigate possible competition for sunlight, nutrients and moisture with adjacent specialty crops. The use of tile drainage systems and the transfer of excess water to municipal drain systems are critical to crops such as tender fruit and grapes. Traditional cash crops/field crops such as corn, soybeans, cereal grains, and other large acreage production units have tile systems where individual tiles may be 15 to 50 meters (55 to 165 feet) or more apart and are only necessary for draining low lying areas. Specialty crops such as grapes often have tile drains lines located 2.2 meters (8 feet) apart which are connected to header tiles that drain directly into municipal drains or road ditches. This type of drainage system is critical to the survival of perennial crops such as grape vines, tree fruit and other crops. (Willwerth, Ker and Inglis, 2014; Ker, 2007). The Ontario Ministry of Agriculture and Food has identified the use of tile drains as important for long term success of orchards and vineyards. “Ideal fruit soils have a useable depth for root growth of one metre or more. Many Ontario soils need to be tile drained before planting an orchard or vineyard to ensure proper aeration and depth of rooting. All fruit crops will benefit from systematic tiling if natural drainage is limited and root growth restricted. Peaches and cherries are

particularly sensitive to "wet feet." Tiles should be close enough to adequately remove excessive (gravitational) water. In poorly drained clay loam soils, it may be necessary to install a tile line under each row. In other soil types, every other row may be sufficient. Consult a drainage contractor for recommendations and costs” (Cline and Fitts, 1992).

### **2.3 Key items to consider with Drain Maintenance in areas with Specialty crops**

Routine examination and maintenance of Municipal Drains and the adjacent banks is vital to ensure that specialty crop ecosystems that rely upon them to move excess water to prevent soil saturation are kept in proper working condition to avoid any impedance of performance or support pests (insects, diseases, weeds , etc) or impact natural air flow or competition ( water, sunlight, nutrients) that would negatively impact annual specialty crop production and long term survival. The type of maintenance is **critical as to ensure there is no:**

- Impact on air flow (potential for cold air collection/damming resulting in perennial specialty crop injury
  - Grapes and tender fruit are particularly sensitive to low winter temperatures with multiple instances over the last decade where vines and trees and have been injured, reduced crop or killed due to low temperatures. It is critical to ensure that no vegetation or berms of land impede natural cold air drainage to lowest lying areas (i.e. ditches and municipal drains due to blockage by dense growing vegetation or by trees and scrub plants. An example of the potential severity of cold injury to a single specialty crop (grapes) has been highlighted in an economic impact study showing the Ontario grape industry could lose up to \$13.8 million in lost sales from a single severe cold weather event, as well as \$11.7 million in lost sales while damaged vines recover in subsequent years, and \$29.1 million in vine renewal and replacement costs ( Brock University, 2014)
- Impact on air flow that may result in increased potential pest activity and disease infection
  - Many pathogens are highly infective in areas with limited air flow, shading and high humidity development. Some examples of these are Grapevine Powdery Mildew, Grapevine Downy mildew, Powdery mildew of Peach/Nectarines, Botrytis sp. Rot, etc. Tree shade and dense growth (including those on berms) can exacerbate disease issues by slowing natural drying conditions which normally assist in reducing disease infection.

- Impact as potential reservoir for insects, diseases, vertebrate pests and other items harmful to specialty perennial crops
  - As with the point above, unmanaged vegetation can harbour pests or serves as reservoirs of pest populations on wild hosts or being pre infestation population zones where pest populations can rapidly multiply before entering adjacent vineyards and orchards. Examples of such pests are multiple leafhopper species ( Potato leafhopper, grape leafhopper, etc) feeding on grasses, Plant bugs ( Tarnished Plant bugs ) feeding numerous weed and flower species, Grape berry moth feeding on wild grape (Vitis sp) or associated plants – Virginia creeper ( Parthenocissus sp.). Other examples include Peach X disease which can infect peaches and chokecherry and there is no control for this disease. Plum Pox virus which has been identified in Ontario and resulted in the removal of thousands of acres of Peaches across Ontario as part of an attempt by the Canadian Food Inspection Agency to mitigate injury to the domestic tender fruit industry. Black knot is another serious pest of Prunus sp. (Cherries, plums, etc) that can move into orchards from unmanaged nearby plants. Additionally there are new pests that have recently appeared and are noted to move from unmanaged areas such as ditches and tree lines - the Multi Coloured Asian Lady Beetle – a serious threat to the grape and wine industry, The Brown Marmorated Stink Bug which has been extremely injurious to the tree fruit industry in the US and has now been detected in Ontario and the Spotted Wing Drosophila a threat to cane fruit , tree fruit and possibly grapes but is considered manageable with good sanitation ( reduced weed cover along perimeters and alternate food hosts/trees , elimination of exterior food sources and good crop protection practices
- Impact on specialty perennial crops through crop shading or competition with crops for nutrients, sunlight and moisture causing reduced specialty crop plant health and crop quality
  - There is definite impact on sunlight interception and air flow by berms and competitor plants such as trees, high growing shrubs and other plants on commercial crops such as grapes which have much lower stature in the landscape relative to nearby trees and shrubs. Keeping perimeter areas clear of these plants are essential as it is generally accepted that the influence at the base of a tree is equivalent to the height of the tree. This means a 10 meter high tree or plant would have influence on the surrounding area for a 10 meter diameter circle extending from its base. All plants within this diameter

especially specialty crops could be negatively impacted by reduced light exposure, access to nutrients and soil moisture and resulted in poor crop quality , quantity and leave these plants less healthy condition to survive the dormant winter period.

### **3. Effect of Drain maintenance on Specialty crops and measures to avoid, mitigate or offset harm**

Specific practices for drain maintenance should include but not be limited to:

- Timing of drain clearing to minimize impact on specialty crop production in the crop ecosystem or by impacting activity of tile drains and water flows during periods of high precipitation/slow drying conditions and potential to create adverse soil saturation conditions
- Promote ditch and drain soil stability and bank stability to prevent erosion while not promoting invasive plant growth into the ditch/drain base that may result in restriction of water and airflow throughout the year. This recognizes the benefits of permanent sod/low growth companion plant covers in buffers adjacent to the banks of municipal drains in specialty crop areas to protect drain integrity and function.
- Allow for seeding and establishment with plant species (to be determined in consultation with qualified crop specialists for the specialty crops being produced locally) that will not actively compete or impact negatively with the nearby specialty crops for sunlight moisture or nutrients not become invasive into the nearby specialty crop ecosystem
- Drains are neither left as unmanaged vegetation nor allowed to become a pest reservoir or be an alternate host for viral, fungal, bacterial or other diseases and other pests (insects, vertebrates, weeds, etc). These drains should not create conditions to support biotic or abiotic threats to specialty crop plant health, productivity ( quality and /quantity) nor create environments that put crops at undue risk for injury by low winter temperatures

#### **Conclusion:**

Specialty crops need to be recognized in all aspects of drainage and other policy statements federally, provincially and locally that impact upon agricultural production as they have unique production attributes and characteristics that do not fit into normal national or provincial land use classification categories. This paper highlights one aspect of policy – the impact of drainage and drain maintenance on specialty crop production and its inherent risks and benefits so that effective protection of specialty crop production can be maintained, promoted and enhanced.

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