

NIAGARA PENINSULA CONSERVATION AUTHORITY  
FULL AUTHORITY

WELLAND

AGENDA

SEPTEMBER 21, 2011 – 7:00 P.M.

ROLL CALL

DECLARATION OF CONFLICT OF INTEREST

BUSINESS:

(1) MINUTES FULL AUTHORITY MEETING – August 17, 2011

Attached are the Minutes of the Full Authority Meeting held August 17, 2011.

(2) BUSINESS ARISING FROM MINUTES

(3) CHAIRMAN'S REMARKS

(4) CAO'S REMARKS

(5) HEARING – APPLICATION BY WILLIAM WAKULICH – REPORT NO. 45-11

A hearing will be held with respect to an application under the NPCA'S Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourse Regulation (Ontario Regulation 155/06). Documents for this matter are separate.

(6) CORRESPONDENCE

- a) Correspondence from Conservation Ontario
- b) Letter from Klara Young-Chin & Gerry Beneteau

(7) BUDGET STATUS REPORT - REPORT NO. 46-11

Attached is Report No. 46-11 updating the budget to date, together with details and summary copies of the current and capital budgets.

(8) WORKPLACE HEALTH AND SAFETY POLICIES AND PROCEDURES – REPORT NO. 47-11

Attached is Report No. 47-11 regarding this policy, together with a copy of the Policy Statement.

(9) HOUSEKEEPING AMENDMENTS - REGULATION OF DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND WATERCOURSES REGULATION (Ontario Regulation 155/06, as amended) – REPORT NO. 48-11

Attached is Report No. 48-11 together with a copy of O.Reg. 155/06 showing the proposed changes to the document.

(10) **OSWEGO CREEK FLOODPLAIN MAPPING – AWARD OF WORK – REPORT NO. 49-11**

Attached is Report No. 49-11 regarding this project.

(11) **PROJECT/PROGRAM STATUS REPORT – REPORT NO. 50-11**

Attached is Report No. 50-11 outlining the status of Authority Projects/Programs to date.

(12) **OTHER BUSINESS**

(13) **IN-CAMERA**

- (a) Complaint and Violation Status Report - Report No. CR-16-11
- (b) Tree By-Law Status Report – Report No. CR-17-11
- (c) Report on August 17<sup>th</sup> in-camera matter

**ADJOURNMENT**



**To: Chairman and Members of the Authority**

**Date: September 21, 2011**

**Re: Application by William Wakulich under the NPCA's Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 155/06, as amended); 9 Pine Street, City of St. Catharines, Region of Niagara; valley slope of Twelve Mile Creek/Martindale Pond – Report No. 45-11**

The purpose of this report is to consider an application from William Wakulich to erect solar panels on the valley slope of Twelve Mile Creek/Martindale Pond.

The existing valley in the subject area is very defined and rises to a vertical height of approximately 9.0 metres above the ambient water level in Martindale Pond. The bank slope at the property is relatively steep, with an incline of approximately 67 % (1.5 H:1.0 V). For context, in lieu of detailed subsurface soil analysis, a slope of no more than 33% (3.0H:1.0V) is considered as being stable over the conditions it may be subject to in the long term. Maps showing the location of the property are appended as Attachment No 1.

NPCA's involvement with this matter began in late May 2011 when the NPCA was advised that construction was occurring on the valley at the subject property. Staff attended the property at which time the Proponent indicated that it was his understanding that he did not require NPCA approval. At that time, the Proponent was advised that conducting the works without a permit was a violation of Ontario Regulation 155/06 and that he should refrain from further works. After making a number of enquiries in relation to the work, staff met on site again with the Proponent in early July 2011. At that time, staff confirmed again that the works were subject to NPCA's Regulation, that a permit from NPCA was required, but that unfortunately as the works were contrary to NPCA policy, a permit could not be issued by staff. As such, the Proponent was advised that the most straightforward way to resolve the matter would be to remove the works and restore the bank. Staff met on site at the request of the Proponent again in mid August 2011. At that time staff had a long discussion with the Proponent in an effort to further elaborate as to why the works were problematic to NPCA. Staff confirmed that regardless of the works being commenced without approval and despite staff's opinion that they should be removed, the Proponent did have the right to make application to the Board. Subsequently, the proponent submitted a permit application on August 18, 2011.

The Applicant is seeking approval to erect two (2) solar panels "arrays" on the bank of Martindale Pond/Twelve Mile Creek.

Each array will consist of 20 individual solar panels. Each array will extend approximately 9.1m (30') across and parallel to the slope and 6.7m (22') deep or perpendicular to the slope. Based on discussion with the applicant, each array will weigh approximately 450 kg (1000 lbs) and is to be supported on sub frames or "racks" made of approx. 50mm (2") square tube aluminium. The racks will in turn be secured to a base frame consisting of approx. 100 mm (4") wide steel "u" channel. The base frame is to be secured/welded and supported on 3 approximately 2.0 m (6') diameter footings that consist of vertically placed sections of corrugated steel culvert/pipe filled with a combination of gravel and concrete. The Applicant advises that the vertical corrugated culvert

footings extend just below natural grade on the downward side. Some wire conduit has also been installed below grad to convey current from the panels.

The lower solar panel array has been substantially completed and is shown in photographs included under Attachment No. 2.

Natural valleys with slopes exceeding 33% (3.0 H:1.0 V) in gradient are inherently subject to both shallower “wedge slides” and deeper subsurface “rotational slip” failures. As such, valley slopes are considered to be “Hazard Lands” as per Provincial Policy Statements and the associated Technical Guidelines. Accordingly, Section 3.25 of NPCA’s “Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Document” (PPGD) prohibits new structures from being located within natural valleys that are higher than 3 metres. This section also requires that no new structures be located within 7.5 metres of the stable top of bank. The underlying premise of NPCA policies being protection of life and property over the long term.

Slope failures often result in significant damage to buildings, roadways and other property, as well as personal injury or fatality. In examining slope failures, it is often found that the onset and/or extent of failure is often exacerbated by human modification on or near the slope, as even modest modifications can significantly increase the risk of slope movement. Slope failures can be triggered by atmospheric processes (heavy rainfall), geologic processes (earth tremors, freeze-thaw soil action), random unanticipated sources (i.e. water service leak nearby/reduces soil shear strength), human modification (i.e. removal of vegetation) or a combination of the above. Furthermore, they can also occur suddenly with little or no prior warning.

Virtually anything can be built if enough financial, engineering and construction resources are put into it. However, as has well been demonstrated, the best perceived engineering solutions are often compromised by changes in the natural environment that cannot be foreseen (i.e. extreme rainfall, changing groundwater table, etc.), the results being costly damages and/or injury/loss of life. All building is a risk management exercise and the approach adopted by the Board for new development is to avoid placing it in, or near inherently hazardous lands, such as the subject valley lands. For a more pragmatic perspective, at this location the engineering solutions that are more likely to remain stable over the longer term would entail things such as deeply driven piles or caissons which are prohibitively expensive for anything but large scale civil engineering projects.

Finally, the other issue that NPCA policy considers albeit to a lesser extent at this location is habitat. Valleys including the area in question, if left unaltered, have the potential to serve as important habitat for both vegetation and wildlife. New development in a valley not only destroys natural habitat but fragments the habitat “corridor”.

In order for the proposed works to be in conformance with NPCA policy, they would have to be relocated off of the valley slope. There are no other alternatives afforded by NPCA Policy.

A copy of section 3.25 NPCA Policies, Procedures and Guidelines for Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document, dated December 12, 2007 is appended as Attachment No. 3. The specific section of Ontario Regulation 155/06, as amended, that the proposal is subject to is Section 2(1) and the corresponding definition of “hazardous lands” is found in Section 25 of the Conservation Authorities Act, R.S.O. 1990, Chapter C. 27. A copy of the relevant excerpts are appended as Attachment No. 4 & 5 respectively.

Pursuant to the Conservation Authorities Act, only the Full Authority can deny an application for issuance of a permit.

**Attachments :**

- 1) Property Location Map and Location of Work Map
- 2) Photos of Work Site – 1 to 8
- 3) Excerpt; section 3.25 of NPCA Policies, Procedures and Guidelines for Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document, dated December 12, 2007
- 4) Excerpt; Section 2(1)(b)&(c) of Ontario Regulation 155/06, as amended
- 5) Excerpt; Section 28(25) of Conservation Authorities Act, R.S.O. 1990, Chapter C. 27.
- 6) Permit Application submission

**RECOMMENDATION**

THAT: Application No. Reg. 07.11.69 for permission to construct a structure to support solar panels on the valley slope of Twelve Mile Creek/Martindale Pond be denied for the following reasons:

- the construction of the works imposes an artificial load on the valley slope which can undermine the stability of the slope both currently and in the long term.
- the placement of structures on a valley slope results in an unnecessary risk to property and safety
- that that construction of a structure on a regulated valley slope is contrary to section 3 of NPCA Policies, Procedures and Guidelines for Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document, dated December 12, 2007

Prepared by: John Kukalis, C.E.T.; Director, Water Management

Respectfully Submitted by:

\_\_\_\_\_  
Tony D'Amario, P.Eng.; CAO/Secretary-Treasurer

# **ATTACHMENT NO. 1**

Wakulich Location Map



© Niagara Region, NPCA, U.O. MPO and Teraco

0 0.19 0.4 Kilometers

This map is for advisory purposes only. Information contained herein is not intended to constitute advice. It is a substitute for professional review or advice. NPCA does not warrant the accuracy of the information contained on this map. Any responsibility or obligations remain with the user. (189 53 907) A PLAN OF SERVICE



Legend

- NPCA ADMINISTRATIVE BOUNDARY
- Corporate Watershed Divide N
- R/W Streets
- Regional
- Municipal
- Neighbourhood
- Neighbourhood & Core
- Ham and Hold Streets (30K - 2)
- Ham and Hold Streets
- R/W Assessment Parcels
- Ham and Hold Assessment Parcels
- Ham and Hold Assessment Parcels and Concession Fabric
- MEMBER MUNICIPALITY LAR
- Member Municipal Boundary L
- 2K Hydrology
- 2K Hydrology
- Contours - 1m Region 2002
- AIRPORTS
- Otho2006 NE1
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 NE2
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 NW1
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 NW2
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 SE1
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 SE2
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 SW1
- Red Band 1
- Green Band 2
- Blue Band 3
- Otho2006 SW2
- Red Band 1
- Green Band 2
- Blue Band 3

Notes  
Enter a brief map description  
1: 7,663  
SR2011

### Wakulich Application Map



This map is for illustrative purposes only. Information contained hereon is not intended to constitute advice, is not a substitute for professional review or a site survey, and is subject to change without notice. The NIPCA makes no responsibility for, nor guarantees, the accuracy of the information contained on this map. Any interpretations or conclusions drawn from this map are the sole responsibility of the user. THIS IS NOT A PLAN OF SURVEY.

AREA OF PROPOSED WORKS



**Legend**

- NIPCA ADMINISTRATIVE BOUNDARY
- Corporate Watershed Divide N
- Road Edges 2002
- RMN Streets Labels
- Ham and Hold Streets (50K - 2)
- Ham and Hold Streets
- RMN Assessment Parcels
- Ham and Hold Assessment Parcels
- MEMBER MUNICIPALITY LAB
- Member Municipal Boundary L
- 2K Hydrology
- Contours - 1m Region 2002
- AIRPORTS

Ohio2006 NE1  
 Pac.Bank\_1  
 Green.Bank\_3  
 Blue.Bank\_3  
 Ohio2006 NE2  
 Pac.Bank\_1  
 Green.Bank\_2  
 Blue.Bank\_3  
 Ohio2006 NW1  
 Pac.Bank\_1  
 Green.Bank\_2  
 Blue.Bank\_3  
 Ohio2006 NW2  
 Pac.Bank\_1  
 Green.Bank\_2  
 Blue.Bank\_3  
 Ohio2006 SE1  
 Pac.Bank\_1  
 Green.Bank\_3  
 Blue.Bank\_3  
 Ohio2006 SE2  
 Pac.Bank\_1  
 Green.Bank\_2  
 Blue.Bank\_3  
 Ohio2006 SW1  
 Pac.Bank\_1  
 Green.Bank\_2  
 Blue.Bank\_3  
 Ohio2006 SW2  
 Pac.Bank\_1  
 Green.Bank\_2  
 Blue.Bank\_3

Scale: 1:511  
 Date: 9/8/2011

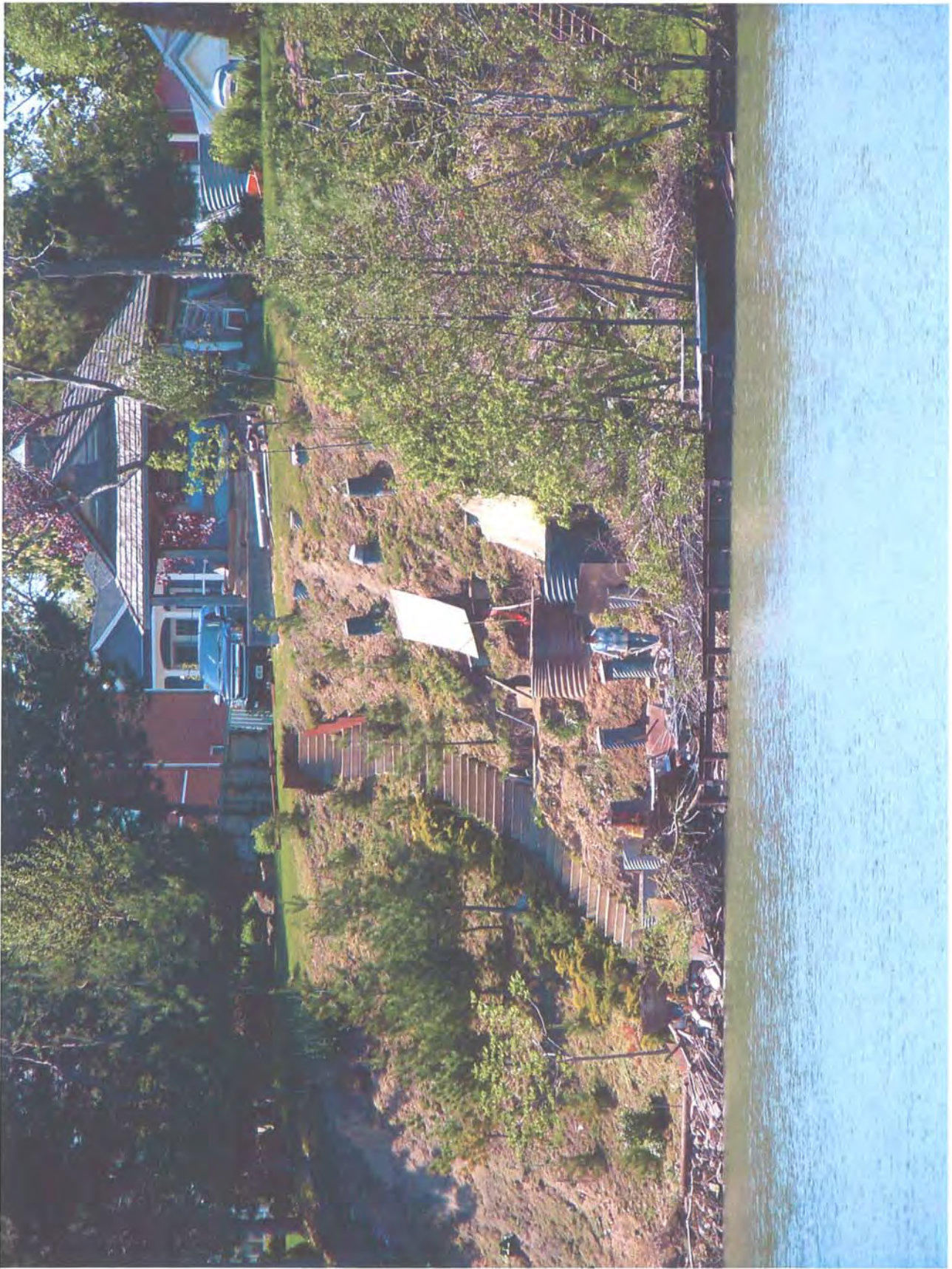
Notes:  
 Enter a full map description



## ATTACHMENT NO. 2











# **ATTACHMENT NO. 3**

## **Section 3**

# **Policies for the Administration of Ontario Regulation 155/06**

### 3.25 Valleylands

Slope failures can cause devastating damage to buildings, roadways and property. In many cases damage is exacerbated by human modification on or near the slope. Almost any modification increases the risk of slope movement. Slope failures can be triggered by atmospheric processes (heavy rainfall), geologic processes (earth tremors, freeze-thaw soil action), human modification or a combination of the above.

The NPCA defines a valley as a natural landform depression that contains a watercourse, has water flowing through, or contains standing water. Water features may be either permanent or intermittent. The boundaries of a valley are defined by the primary top of bank on each side of the landform depression as illustrated in Figure 3. NPCA staff will locate and approve the top of bank through field inspection.

The valleyland resources within the NPCA jurisdiction can be categorized by - steep 'V' shaped valleys and broad 'U' shaped stream corridors. Generally, the steep valley systems are found north of the Niagara Escarpment in the western portions of Niagara-on-the-Lake and St. Catharines, as well as the eastern portion of the Town of Lincoln. The Niagara Escarpment is considered to be included within the jurisdiction of the NPCA, and will be afforded the protection of the NPCA's Valleyland policies. The broader stream corridors are found south of the Escarpment, in Fort Erie, Port Colborne and Wainfleet and Haldimand County.

Certain valleys in Niagara have, in recent years, exhibited Slope failure problems. These problems have been aggravated by historical Development situated in very close proximity to, or on, the top of valley Slopes. This situation, in combination with varied soil characteristics, groundwater hydraulics/movement and historical Fill placement (for example), has created damaging and dangerous situations. The Twenty Mile Creek Valley in Lincoln and the Twelve Mile Creek Valley in St. Catharines are two such areas. The lack of detailed valleyland policies implemented some 20 to 30 years ago, has created situations where homes and businesses are now experiencing great risk of major damages due to Slope instability problems. Solving these types of problems through 'structural' means can be cost prohibitive and may also impact Fish Habitat. As a result, a comprehensive 'non-structural' approach to deal effectively with Development in these situations is of great importance.

**As such, no new Development (with the exception of Structures required for Erosion control purposes) will be permitted within natural valleys where the bank height is equal to, or greater than 3 metres (10 feet). In addition, Development proposed on Adjacent Lands to these Slopes will be subject to the policies of this Section.**

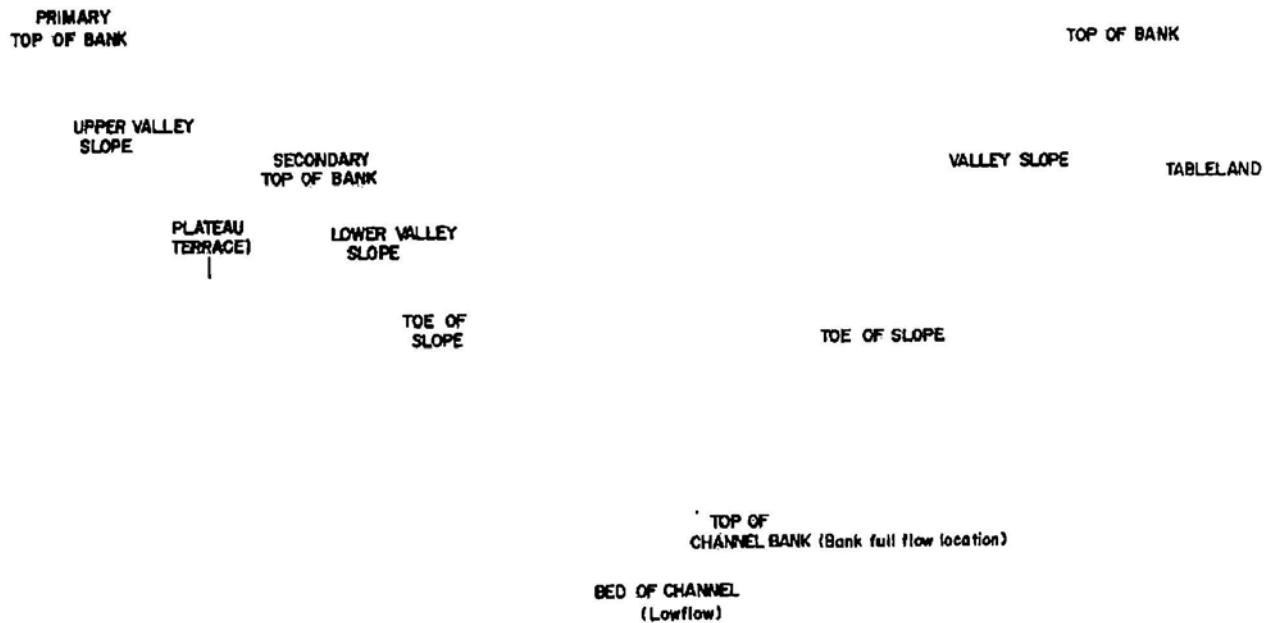
The policies that restrict development on the tablelands adjacent to the top of bank are in place in part to protect the valley slope vegetation and its root system from excavation and loading damage/destruction. The root system of the vegetation at the top of bank and along the valley walls helps to bind the soil particles and maintain bank stability. This in turn protects the landowner's property from the potential loss of tableland as a result of bank erosion. Development located at the top of bank can affect drainage patterns, which can result in an increase in soil erosion along the valley slopes. In addition, these policies provide for access to the bank for heavy machinery for construction (should erosion protection works be required in the future), maintenance and emergency access. The buffer/setback may also provide additional protection against unforeseen or unpredicted external conditions, which could have an



adverse effect on the natural conditions or processes acting on or within an erosion prone area. One example of such an unpredicted external condition would be climate change.

Ideally the regulated tablelands adjacent to the top of bank should be left in a natural state (i.e., not manicured lawn) in order to allow for the natural succession of vegetation from the valleylands onto the tableland to provide a buffer to the valleyland vegetation and root system. The tableland adjacent to a valley, if left in a natural state, provides additional habitat, movement corridors and food sources for species that utilize the valleylands and provides some additional stormwater filtration prior to it entering the valley feature/watercourse. No removal of vegetation shall be permitted below the top of slope.

This policy is not intended to prevent the addition or extensions, including new structures, to existing primary agricultural operations which are not likely to incur significant damages, impact the valley system or cause pollution.



**Figure 3: The Physical features of A Typical Valley**

The following policies shall apply to all valleylands where slope is greater than or equal to 3 metres in height:

### 3.25.1 Physical Top of Slope

Where the Physical Top of Slope is required to be established, site inspections with the applicant and Authority staff are to be undertaken. The NPCA Approved Physical Top of Slope shall be marked in the field. The applicant will then submit drawings indicating the surveyed location of the NPCA Approved Physical Top of Slope for NPCA review and approval.

### 3.25.2 Stable Top of Slope

The Physical Top of Slope and the Stable Top of Slope may be coincident. However, in some cases, due to specific on-site conditions (such as slope inclination, proximity of the watercourse to the toe of slope, soil conditions, erosion, etc.) the Stable Top of Slope may not be located at the Physical Top of Slope, but rather may be located landward from the Physical Top of Slope.

The Stable Top of Slope is to be established by a professional geotechnical engineer utilizing the guidelines and manuals outlined in Section 5, to the satisfaction of NPCA staff. Where no geotechnical assessment has been undertaken, the Stable Top of Slope is based on a line projected upwards from the base of the slope at a 3:1 (horizontal to vertical) angle. In addition to the requirements outlined in Section 5, the geotechnical assessment must take into consideration, and make recommendations pertaining to: construction equipment/access; limit of work area; vegetation protection; sediment and erosion controls; drainage; etc.

### 3.25.3 Slope Stability

#### 3.25.3.1 Stable Slopes

Where the stability of the slope has been previously confirmed (i.e. the Physical Top of Slope is at the same location as the Stable Top of Slope), or where a natural valley slope which through field inspection of surficial conditions **does not** reveal evidence of:

- : outward tilting of trees,
- : toe Erosion at the base of the Slope,
- : slumping, gullyng or other visibly evident Erosion process,
- : the addition of Fill material,
- : containing an easily eroding soil type (ie. the Short Hills area of Pelham contains soil types which are highly erodible and easily susceptible to gully Erosion), and
- : where the angle of the Slope is gentler than 3(H):1(V),

the following policies apply:

A minimum setback of 7.5 metres (25 feet) from the NPCA Approved Physical Top of Slope (surveyed by the applicant in accordance with Policy 3.25.1) will be required, to ensure perpetual stability of the slope and for the purposes of Conservation of Land, for all Development including swimming pools, subsurface sewage disposal system and the placement of Fill. The valley shall be maintained in a natural state and there shall be no disturbance of grades or vegetation below the Physical Top of Slope or within the 7.5m setback.

For newly created lots through plan of subdivision or NPCA approved consent applications which are being developed in greenfield or brownfield situations, the rear lot lines or side lot lines (as the case may be) shall be set back 7.5m from the NPCA Approved Physical Top of Slope. The NPCA will consult with the local municipality in "infilling" situations to discuss site specific constraints to this policy.

### **3.25.3.2 Unstable Slopes**

Where the instability of the slope has been previously confirmed (i.e. the Physical Top of Slope is not at the same location as the Stable Top of Slope), or where a natural valley Slope which through field inspection of surficial conditions reveals evidence of:

- : outward tilting of trees,
- : toe Erosion at the base of the Slope,
- : slumping, gullyng or other visibly evident Erosion process,
- : the addition of Fill material,
- : containing an easily eroding soil type (ie. the Short Hills area of Pelham contains soil types which are highly erodible and easily susceptible to gully Erosion), or
- : where the angle of the Slope is steeper than 3(H):1(V),

the following policies shall apply:

A Geotechnical Investigation, undertaken by a qualified geotechnical engineer, shall be required by Authority staff in all cases of Development, where the Slope characteristics identified above are found. A minimum setback of 7.5 metres (25 feet) from the NPCA Approved Stable Top of Slope (as indicated by the commissioned Geotechnical Investigation) will be required for stability purposes and the Conservation of Land, for all Development including swimming pools, Subsurface sewage disposal systems, and the placement of Fill.

For newly created lots (i.e. severance and plans of subdivision), the rear lot lines or side lot lines (as the case may be) shall be set back 7.5m from the NPCA Approved Stable Top of Slope. The valley shall be maintained in a natural state and there shall be no disturbance of grades or vegetation below the Physical Top of Slope.

The Geotechnical Investigation may determine that setbacks greater than 7.5 metres are required to address the site specific Slope characteristics.

At the discretion of the Conservation Authority, applicants may be required to update geotechnical reports, should the recommendations of these reports not be implemented within one year of the original analysis that has been approved by the appropriate agencies.

### **3.25.4 Existing Development Within and Adjacent to Valleylands**

- 1) Where buildings and structures already exist within 15 metres of the Stable Top of Slope and a 7.5 metre publicly owned access is not provided adjacent to the Stable Top of Slope the following policies will apply:

# **ATTACHMENT NO. 4**

**Conservation Authorities Act  
Loi sur les offices de protection de la nature**

**ONTARIO REGULATION 155/06**

**NIAGARA PENINSULA CONSERVATION AUTHORITY: REGULATION OF DEVELOPMENT,  
INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND  
WATERCOURSES**

**Consolidation Period:** From May 4, 2006 to the e-Laws currency date.

No amendments.

*This Regulation is made in English only.*

**Definition**

1. In this Regulation,

“Authority” means the Niagara Peninsula Conservation Authority. O. Reg. 155/06, s. 1.

**Development prohibited**

2. (1) Subject to section 3, no person shall undertake development, or permit another person to undertake development in or on the areas within the jurisdiction of the Authority that are,

(a) adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beaches, including the area from the furthest offshore extent of the Authority’s boundary to the furthest landward extent of the aggregate of the following distances:

(i) the 100 year flood level, plus the appropriate allowance for wave uprush shown in the column headed “100 Year Flood Limit” found in Table 3 of the document entitled “Lake Ontario Shoreline Management Plan”, January 1994, which is available at or through the Authority at its head office located at 250 Thorold Road West, Welland, Ontario, L3C 3W2,

(ii) the 100 year flood level, plus the appropriate allowance for wave uprush shown in the column headed “100 Year Flood Limit” found in Section 3.2 of the document entitled “Lake Erie Shoreline Management Plan”, June 1992, which is available at or through the Authority at its head office located at 250 Thorold Road West, Welland, Ontario, L3C 3W2,

(iii) the predicted long term stable slope projected from the existing stable toe of the slope or from the predicted location of the toe of the slope as that location may have shifted as a result of shoreline erosion over a 100-year period,

(iv) where a dynamic beach is associated with the waterfront lands, the appropriate allowance inland to accommodate dynamic beach movement shown in Section 4.4 of the document entitled “Lake Ontario Shoreline Management Plan”, January 1994, which is available at or through the Authority at the address given in subclause (i), and

(v) where a dynamic beach is associated with the waterfront lands, the appropriate allowance inland to accommodate dynamic beach movement shown in Section 3.8.2 iii) of the document entitled “Lake Erie Shoreline Management Plan”, June 1992, which is available at or through the Authority at the address given in subclause (ii);

(b) river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined in accordance with the following rules:

(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;

(c) hazardous lands;

(d) wetlands; or

(e) other areas where development could interfere with the hydrologic function of a wetland, including areas up to 120 metres of all provincially significant wetlands and wetlands greater than 2 hectares in size, and areas within 30 metres of wetlands less than 2 hectares in size, but not including those where development has been approved pursuant to an application made under the *Planning Act* or other public planning or regulatory process. O. Reg. 155/06, s. 2 (1).

(2) The areas described in subsection (1) are the areas referred to in section 12 except that, in case of a conflict, the description of the areas provided in subsection (1) prevails over the descriptions referred to in that section. O. Reg. 155/06, s. 2 (2).

#### **Permission to develop**

3. (1) The Authority may grant permission for development in or on the areas described in subsection 2 (1) if, in its opinion, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development. O. Reg. 155/06, s. 3 (1).

(2) The permission of the Authority shall be given in writing, with or without conditions. O. Reg. 155/06, s. 3 (2).

#### **Application for permission**

4. A signed application for permission to undertake development shall be filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing the type and location of the development.
2. The proposed use of the buildings and structures following completion of the development.
3. The start and completion dates of the development.
4. The elevations of existing buildings, if any, and grades and the proposed elevations of buildings and grades after development.
5. Drainage details before and after development.
6. A complete description of the type of fill proposed to be placed or dumped. O. Reg. 155/06, s. 4.

#### **Alterations prohibited**

5. Subject to section 6, no person shall straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or change or interfere in any way with a wetland. O. Reg. 155/06, s. 5.

#### **Permission to alter**

6. (1) The Authority may grant a person permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or to change or interfere with a wetland. O. Reg. 155/06, s. 6 (1).

(2) The permission of the Authority shall be given in writing, with or without conditions. O. Reg. 155/06, s. 6 (2).

#### **Application for permission**

7. A signed application for permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or change or interfere with a wetland shall be filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing plan view and cross-section details of the proposed alteration.
2. A description of the methods to be used in carrying out the alteration.
3. The start and completion dates of the alteration.
4. A statement of the purpose of the alteration. O. Reg. 155/06, s. 7.

#### **Cancellation of permission**

8. (1) The Authority may cancel a permission if it is of the opinion that the conditions of the permission have not been met. O. Reg. 155/06, s. 8 (1).

(2) Before cancelling a permission, the Authority shall give a notice of intent to cancel to the holder of the permission indicating that the permission will be cancelled unless the holder shows cause at a hearing why the permission should not be cancelled. O. Reg. 155/06, s. 8 (2).

**ATTACHMENT NO. 5**

## Conservation Authorities Act

R.S.O. 1990, CHAPTER C.27

**Consolidation Period:** From June 6, 2011 to the e-Laws currency date.

Last amendment: 2011, c. 9, Sched. 27, s. 22.

### Skip Table of Contents

#### CONTENTS

<u>1.</u>	Definitions
<u>2.</u>	Meeting to establish authority for watershed
<u>3.</u>	Establishment, jurisdiction and initial financing
<u>4.</u>	Regional municipality to act in place of local municipalities
<u>5.</u>	Toronto and Region Conservation Authority
<u>6.</u>	Hamilton Region Conservation Authority
<u>7.</u>	Grand River Conservation Authority
<u>8.</u>	Grouping of municipalities
<u>9.</u>	Establishment of authority for two or more watersheds
<u>10.</u>	Enlargement of authority's area
<u>11.</u>	Amalgamation of authorities
<u>13.</u>	Participating municipalities following annexation, etc.
<u>13.1</u>	Dissolution of authority
<u>14.</u>	Members of authority
<u>15.</u>	Meetings of authority
<u>16.</u>	Decision-making at meetings
<u>17.</u>	Chair, vice-chair
<u>18.</u>	Employees and advisory boards
<u>19.</u>	Executive committee
<u>20.</u>	Objects
<u>21.</u>	Powers of authorities
<u>22.</u>	Agreement re road
<u>23.</u>	Minister's powers
<u>24.</u>	Projects of authority
<u>25.</u>	Apportionment of benefit
<u>26.</u>	Determination of capital expenditure
<u>27.</u>	Maintenance and administration costs
<u>28.</u>	Regulations by authority re area under its jurisdiction
<u>29.</u>	Regulations by authority re lands owned by it
<u>30.</u>	Regulations by authority: mandatory regulations
<u>30.1</u>	Restriction on entry
<u>31.</u>	Expropriation
<u>32.</u>	Restrictions on projects
<u>33.</u>	Assessment of lands of authority
<u>34.</u>	Cemetery lands
<u>35.</u>	Right to use water power
<u>36.</u>	Assent of electors not necessary
<u>37.</u>	Payment to and spending by authority
<u>38.</u>	Annual audit
<u>39.</u>	Grants
<u>40.</u>	Regulations

#### Definitions



(18) If a person does not comply with an order made under subsection (17), the authority having jurisdiction may, in the case of a development, have it removed and, in the case of a watercourse or wetland, have it rehabilitated. 1998, c. 18, Sched. I, s. 12.

**Liability for certain costs**

(19) The person convicted is liable for the cost of a removal or rehabilitation under subsection (18) and the amount is recoverable by the authority by action in a court of competent jurisdiction. 1998, c. 18, Sched. I, s. 12.

**Powers of entry**

(20) An authority or an officer appointed under a regulation made under clause (1) (d) or (e) may enter private property, other than a dwelling or building, without the consent of the owner or occupier and without a warrant, if,

- (a) the entry is for the purpose of considering a request related to the property for permission that is required by a regulation made under clause (1) (b) or (c); or
- (b) the entry is for the purpose of enforcing a regulation made under clause (1) (a), (b) or (c) and the authority or officer has reasonable grounds to believe that a contravention of the regulation is causing or is likely to cause significant environmental damage and that the entry is required to prevent or reduce the damage. 1998, c. 18, Sched. I, s. 12.

**Time of entry**

(21) Subject to subsection (22), the power to enter property under subsection (20) may be exercised at any reasonable time. 1998, c. 18, Sched. I, s. 12.

**Notice of entry**

(22) The power to enter property under subsection (20) shall not be exercised unless,

- (a) the authority or officer has given reasonable notice of the entry to the owner of the property and, if the occupier of the property is not the owner, to the occupier of the property; or
- (b) the authority or officer has reasonable grounds to believe that significant environmental damage is likely to be caused during the time that would be required to give notice under clause (a). 1998, c. 18, Sched. I, s. 12.

**No use of force**

(23) Subsection (20) does not authorize the use of force. 1998, c. 18, Sched. I, s. 12.

**Offence: obstruction**

(24) Any person who prevents or obstructs an authority or officer from entering property under subsection (20) is guilty of an offence and on conviction is liable to a fine of not more than \$10,000. 1998, c. 18, Sched. I, s. 12.

**Definitions**

(25) In this section,

“development” means,

- (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, or
- (d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere; (“aménagement”)

“hazardous land” means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock; (“terrain dangereux”)

“pollution” means any deleterious physical substance or other contaminant that has the potential to be generated by development in an area to which a regulation made under clause (1) (c) applies; (“pollution”)

“watercourse” means an identifiable depression in the ground in which a flow of water regularly or continuously occurs; (“cours d’eau”)

“wetland” means land that,

**ATTACHMENT NO. 6**



NIAGARA PENINSULA  
**CONSERVATION**  
AUTHORITY

250 Thorold Road West, 3rd Floor, Welland, Ontario L3C 1W2  
Telephone 905/789-3135 Facsimile 905/789-0271

Revised July, 2007  
**APPLICATION FOR DEVELOPMENT, INTERFERENCE  
WITH WETLANDS, AND ALTERATIONS TO  
SHORELINES AND WATERCOURSES**  
(Ontario Regulation 155/06)

OFFICE USE ONLY

Date Received: \_\_\_\_\_

File No.: \_\_\_\_\_

NOTE: PLEASE READ "INFORMATION SHEET" AND FEE SCHEDULE BEFORE COMPLETING THIS APPLICATION FORM. THIS APPLICATION IS NOT COMPLETE UNTIL ALL REQUIRED DETAILS AND FEES ARE SUBMITTED.

LANDOWNER'S NAME WILLIAM WAKULICH  
Address 9 PINE ST. Postal Code L2N 4T2  
Telephone No. (Business) \_\_\_\_\_ (Residence) 905-934-0479 (Fax) \_\_\_\_\_  
Email CNDNWILLIE@HOTMAIL.COM

NOTE: If applicant is not the Owner of the subject property, then a copy of an Offer to Purchase, or a written statement of intent to purchase (verified by the Owner), must be submitted with this application.

AGENT'S NAME \_\_\_\_\_  
Address \_\_\_\_\_ Postal Code \_\_\_\_\_  
Telephone No.: (Business) \_\_\_\_\_ (Residence) \_\_\_\_\_ (Fax) \_\_\_\_\_  
Email \_\_\_\_\_

AUG 18 '11 PM 1:35

LOCATION OF WORK: Lot(s) 73 Block(s) \_\_\_\_\_ Concession(s) \_\_\_\_\_ Reg. Plan 699  
Municipality REGIONAL MUNICIPALITY OF NIAGARA Former Township \_\_\_\_\_  
Municipal Street Address 9 PINE ST.

APPLICATION IS HEREBY MADE TO CARRY OUT ONE OR MORE OF THE FOLLOWING WORKS:

- |                                                                                                                                                   |                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Fill (including cut and fill proposals)                                                                                  | <input type="checkbox"/> Buildings, Additions or Reconstructions                                                |
| <input type="checkbox"/> New or Replacement Watercourse Crossings on Public Roads (e.g. bridges, culverts, low flow crossings, utility crossings) | <input type="checkbox"/> Accessory Structures (inground pools, decks and docks)                                 |
| <input type="checkbox"/> New or Replacement Dams (Where Permitted)                                                                                | <input type="checkbox"/> Erosion Protection Works (including bio-engineering), Channelizations & Dredging Works |
| <input type="checkbox"/> Private Watercourse Crossings for Primary Access (e.g. driveway, footbridge, golf cart crossing)                         | <input type="checkbox"/> Diversion of Water (Where Permitted)                                                   |
| <input type="checkbox"/> Shoreline Protection Works                                                                                               | <input type="checkbox"/> Selective Pond, Watercourse & Shoreline Works (e.g. woody debris removal)              |
| <input type="checkbox"/> Secondary Crossings (farm crossing)                                                                                      | <input type="checkbox"/> New Pond Construction (connected to a watercourse)                                     |
| <input type="checkbox"/> Stormwater Outfall                                                                                                       |                                                                                                                 |

Purpose of Proposed Works: INSTALL SOLAR PANELS/RACKS RE-ONTARIO MICROFIT PROGRAM

PROPOSED COMMENCEMENT DATE OF WORK PRESENT PENDING BOARD APPROVAL

PROPOSED COMPLETION DATE OF WORK FALL OF 2011

I understand that the information contained in this application form is accurate to the best of my knowledge and that staff of the Niagara Peninsula Conservation Authority will undertake a detailed inspection of the subject property as part of the application review process.

Signature of Landowner

WILLIAM WAKULICH

Print Name

Signature of Applicant or Agent (if different from Owner)

Print Name

DATED AT

AUG 18 / 2011

THIS

AUG

DAY OF

18<sup>th</sup>

20

11



**TO:                   The Chairman and Members of the Authority**

**DATE:               September 15, 2011**

**SUBJECT:           Budget Status Report - Report No. 46-11**

Attached is the budget status report for the period ending August 31, 2011.

Expenditures and revenues in the operating budget are generally in line with the approved budget for 2011. A year end projection report will be prepared for the October Board meeting.

For the capital budget, overall expenditures in the Land Management project budgets will increase now that the Conservation Areas are closing.

As previously noted, staff closely monitor expected revenues from non levy sources such as through Provincial, Federal programs and self generated revenues and make appropriate adjustments for any significant variances.

**RECOMMENDATION:**

That the Budget Status Report for the period ending August 31, 2011 be received.

Respectfully Submitted By: \_\_\_\_\_  
Tony D'Amario, P. Eng. CAO/ Secretary-Treasurer



**TO: The Chairman and Members of the Authority**

**DATE: September 14, 2011**

**SUBJECT: Workplace Health and Safety Policies and Procedures – Report No. 47-11**

The health and safety of our employees has been a priority for the Conservation Authority and we endeavour to meet all the legislative requirements placed on us as an employer.

### **Corporate Health and Safety Policy Statement**

Under Section 25(2)(j) of the Occupational Health and Safety Act, the NPCA is required to conduct an annual review of the Corporate Health and Safety Policy Statement. The intent of the policy statement is to reflect the employer's commitment, support and attitude to the health and safety program for the protection of its workers. The current NPCA Policy Statement was adopted in June of 2010.

In order to resolve this issue, the Policy Statement must be reviewed and adopted. Attached for Board consideration is the proposed 2011 Health and Safety Policy Statement. Since the wording of the 2011 Statement meets the requirements of the Act, no change is recommended.

### **RECOMMENDATION:**

That the Report No. 47-11 regarding the Health and Safety Program be received; and

That the Health and Safety Policy Statement for the Conservation Authority dated September 22, 2011 be adopted.

**Prepared by: Darcy B. Baker - Director, Land Management**

Respectfully Submitted By: \_\_\_\_\_  
Tony D'Amario, CAO/ Secretary-Treasurer



## **HEALTH AND SAFETY POLICY STATEMENT**

The Niagara Peninsula Conservation Authority is vitally interested in and committed to the health and safety of its employees and the prevention of injury and illness to its employees through the provision and maintenance of healthy and safe workplaces. The Conservation Authority will make every effort to meet its responsibilities for the health and safety of all employees by adhering to the relevant health and safety standards and legislative requirements.

It is a primary duty of all supervisory staff to ensure that all persons under their direction are made aware of and comply with all applicable health and safety policies and procedures. The supervisory staff are responsible for ensuring that all aspects of the workplace including machinery and equipment are safe and any risks, hazards and safety violations brought to their attention are investigated and corrected promptly.

The Conservation Authority will take all reasonable steps to acquaint its employees with their rights and duties in the workplace and the applicable regulations and procedures for protecting their health and safety.

All employees shall protect their own health and safety by complying with prevailing regulations and standards and with safe practices and procedures established by the Conservation Authority. Employees must report any health hazards and unsafe conditions or practices to supervisory staff for corrective action. Where appropriate, the Conservation Authority will support training programs to assist in maintaining safe conditions and work practices and will support employee participation in health and safety activities including health and safety committees.

It is in the best interest of all parties to consider health and safety in every activity and the commitment to health and safety shall be an integral part of the Conservation Authority's activities.

Date: September 22, 2011

---

Bart Maves  
Chairman

---

Tony D'Amario  
C.A.O./Secretary-Treasurer

## ONTARIO REGULATION 155/06

made under the

### CONSERVATION AUTHORITIES ACT

Made: April 24, 2006

Approved: May 4, 2006

Filed: May 4, 2006

Published on e-Laws: May 8, 2006

Printed in *The Ontario Gazette*: May 20, 2006

### NIAGARA PENINSULA CONSERVATION AUTHORITY: REGULATION OF DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND WATERCOURSES

#### Definition

1. In this Regulation,

“Authority” means the Niagara Peninsula Conservation Authority.

#### Development prohibited

2. (1) Subject to section 3, no person shall undertake development, or permit another person to undertake development in or on the areas within the jurisdiction of the Authority that are,

(a) adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beaches, including the area from the furthest offshore extent of the Authority’s boundary to the furthest landward extent of the aggregate of the following distances:

(i) the 100 year flood level, plus ~~the appropriate~~ an allowance of 15 m for wave uprush **and other water related hazards** ~~shown in the column headed “100 Year Flood Limit” found in Table 3 of the document entitled “Lake Ontario Shoreline Management Plan Update”, January 1994, which is available at or through the Authority’s at its head office located at 250 Thorold Road West, Welland, Ontario, L3C 3W2,~~

(ii) the 100 year flood level, plus ~~the appropriate~~ an allowance of 15 m for wave uprush **and other water related hazards** ~~shown in the column headed “100 Year Flood Limit” found in Section 3.2 of the document entitled “Lake Erie Shoreline Management Plan Update”, June 1992, which is available at or through the Authority’s at its head office located at 250 Thorold Road West, Welland, Ontario, L3C 3W2,~~

(iii) the predicted long term stable slope projected from the existing stable toe of the slope or from the predicted location of the toe of the slope as that location may have shifted as a result of shoreline erosion over a 100-year period,

(iv) where a dynamic beach is associated with the waterfront lands, the appropriate allowance inland to accommodate dynamic beach movement shown in ~~Section 4.4 of~~ the document entitled “Lake Ontario Shoreline Management Plan Update”, ~~January 1994,~~ which is available at ~~or through~~ the Authority’s head office ~~at the address given in subclause (i), and~~

(v) where a dynamic beach is associated with the waterfront lands, the appropriate allowance inland to accommodate dynamic beach movement shown in ~~Section 3.8.2 iii) of~~ the document entitled “Lake Erie Shoreline Management Plan Update”, ~~June 1992,~~ which is available at ~~or through~~ the Authority’s head office ~~at the address given in subclause (ii);~~

(b) river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined in accordance with the following rules:

(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 **determined under subsection(4)**, 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 **determined under subsection(4)**, to a similar point on the opposite side;
- (c) hazardous lands;
- (d) wetlands; or
- (e) other areas where development could interfere with the hydrologic function of a wetland, including areas up to 120 metres of all provincially significant wetlands and wetlands greater than 2 hectares in size, and areas within 30 metres of wetlands less than 2 hectares in size. ~~but not including those where development has been approved pursuant to an application made under the *Planning Act* or other public planning or regulatory process.~~
- (2) **(formerly section 12) The** All areas described in subsection (1) that are within the jurisdiction of the Authority, including the allowances associated with the areas, are delineated as the “Regulation Limit” shown on a series of maps filed at the head office of the Authority under the map title “Ontario Regulation 97/04: Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses”.
- (3) If there is a conflict between the description of areas in subsection (1) and the areas as shown on the series of maps referred to in subsection (2), the description in subsection (1) shall prevail .
- (4) **(formerly section 11) The** applicable flood event standards used to determine the maximum susceptibility to flooding of lands or areas with the watersheds in the areas of the jurisdiction of the Authority are the Hurricane Hazel Flood Event Standard, the 100 Year Flood Event Standard and the 100 year flood level plus wave uprush, described in Schedule 1. The 100 Year Flood Event Standard applies to all watersheds within the area of jurisdiction of the Authority except for,
  - (a) the watersheds associated with Shriner’s Creek, Ten Mile Creek and Beaverdams Creek (including Tributary W-6-5) in the City of Niagara Falls where the Hurricane Hazel Flood Event Standard applies; and
  - (b) Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System, as described in Schedule 1, where the 100 Year Flood Event Standard, plus wave uprush, applies.

**Permission to develop**

3. (1) The Authority may grant permission for development in or on the areas described in subsection 2 (1) if, in its opinion, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development.

(2) The permission of the Authority shall be given in writing, with or without conditions.

(3) ~~The Authority may designate the Authority’s executive committee or one or more of its employees as a Regulation Approval Officer and that executive committee or employee or employees may exercise the powers and duties of the Authority under subsection (1) and (2) with respect to the granting of permissions for development in or on the areas described in subsection 2(1).~~

**Application for permission**

4. ~~An application for permission to undertake a development in or on an area described in subsection 2(1) shall be signed by the owner of the land on which the development is proposed or his or her agent and A signed application for permission to undertake development shall be~~ filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing the type and location of the development.



2. The proposed use of the buildings and structures following completion of the development.
3. The start and completion dates of the development.
4. The elevations of existing buildings, if any, and grades and the proposed elevations of buildings and grades after development.
5. Drainage details before and after development.
6. A complete description of the type of fill proposed to be placed or dumped.

**7. Such other technical studies or plans requested by the Authority.**

**Alterations prohibited**

**5.** Subject to section 6, no person shall straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or change or interfere in any way with a wetland.

**Permission to alter**

**6.** (1) The Authority may grant a person permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse in or **on the area described in Section 2** or to change or interfere with a wetland **in or on the area described in Section 2**.

(2) The permission of the Authority shall be given in writing, with or without conditions.

(3) **The Authority may designate the Authority's executive committee or one or more of its employees as a Regulation Approval Officer and that the executive committee or employee or employees may exercise the powers and duties of the Authority under subsection (1) and (2) with respect to the granting of permissions for alterations in or on the areas described in subsection 6(1).**

**Application for permission**

**7.** **An application for permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or change or interfere with a wetland shall be signed by the owner of the land on which the affected river, creek, stream or watercourse or wetland is situated, or his or her agent, and** ~~A signed application for permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or change or interfere with a wetland shall be filed with the Authority and shall contain the following information:~~

1. Four copies of a plan of the area showing plan view and cross-section details of the proposed alteration.
2. A description of the methods to be used in carrying out the alteration.
3. The start and completion dates of the alteration.
4. A statement of the purpose of the alteration.

**5. Such other technical studies or plans requested by the Authority.**

**Cancellation of permission**

**8.** (1) The Authority may cancel a permission if it is of the opinion that the conditions of the permission have not been met.

(2) Before cancelling a permission, the Authority shall give a notice of intent to cancel to the holder of the permission indicating that the permission will be cancelled unless the holder shows cause at a hearing why the permission should not be cancelled.

(3) Following the giving of the notice, the Authority shall give the holder at least five days notice of the date of the hearing.

**Validity of permissions and extensions**

**9.** (1) ~~A permission of the Authority is valid for a maximum period of 24 months after it is issued, unless it is specified to expire at an earlier date.~~ **The maximum period, including any extensions, for which a permission granted under section 3 or 6 may be valid is,**

(a) **24 months, in the case of a permission granted for projects other than projects described in clause (b);**

(b) **60 months, in the case of permissions granted for,**

(i) **projects that, in the opinion of the authority, cannot reasonably be completed within 24 months from the day the permission is granted, or**

(ii) projects that require permits or approvals from other regulatory bodies that, in the opinion of the authority, cannot reasonably be obtained within 24 months from the day the permission is granted.

(2) ~~A permission shall not be extended.~~ A permission may be granted for an initial period that is less than the maximum period specified in subsection (1) where, in the opinion of the authority, the project can be completed in less than 24 months.

(3) A permission granted for less than the maximum period of validity may be extended to the maximum period if,

(a) the person who was granted the permission submits a written application for the extension to the Authority at least 60 days before the expiry of the permission;

(b) the application sets out the reason why the extension is required and demonstrates that circumstances beyond the control of the person granted the permission prevented completion of the project within the initial period.

#### Appointment of officers

10. The Authority may appoint officers to enforce this Regulation.

#### Flood event standards

~~11. (1) The applicable flood event standards used to determine the maximum susceptibility to flooding of lands or areas within the watersheds in the area of jurisdiction of the Authority are the Hurricane Hazel Flood Event Standard, the 100 Year Flood Event Standard and the 100 year flood level plus wave uprush, described in Schedule 1. O. Reg. 155/06, s. 11 (1).~~

~~(2) The 100 Year Flood Event Standard applies to all watersheds within the area of jurisdiction of the Authority except for,~~

~~(a) the watersheds associated with Shriner's Creek, Ten Mile Creek and Beaverdams Creek (including Tributary W-6-5) in the City of Niagara Falls where the Hurricane Hazel Flood Event Standard applies; and~~

~~(b) Lake Ontario and Lake Erie in the Great Lakes St. Lawrence River System, as described in the Schedule, where the 100 Year Flood Event Standard, plus wave uprush, applies. O. Reg. 155/06, s. 11 (2).~~

#### Areas included in the Regulation Limit

~~12. Hazardous lands, wetlands, shorelines and areas susceptible to flooding, and associated allowances, within the watersheds in the area of jurisdiction of the Authority are delineated by the Regulation Limit shown on maps 1 to 125 dated February 2006 and filed at the head office of the Authority at 250 Thorold Road West, Welland, Ontario under the map title "Ontario Regulation 97/04: Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses". O. Reg. 155/06, s. 12.~~

13. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 155/06, s. 13.

### SCHEDULE 1

1. The Hurricane Hazel Storm Event Standard means a storm that produces over a 48-hour period,

(a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 1; or

(b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 1 shall be modified by the percentage amount shown in Column 2 of Table 2 opposite the size of the drainage area set out opposite thereto in Column 1 of Table 2.

TABLE 1

73 millimetres of rain in the first 36 hours
6 millimetres of rain in the 37th hour
4 millimetres of rain in the 38th hour
6 millimetres of rain in the 39th hour
13 millimetres of rain in the 40th hour
17 millimetres of rain in the 41st hour
13 millimetres of rain in the 42nd hour
23 millimetres of rain in the 43rd hour
13 millimetres of rain in the 44th hour
13 millimetres of rain in the 45th hour
53 millimetres of rain in the 46th hour
38 millimetres of rain in the 47th hour
13 millimetres of rain in the 48th hour

TABLE 2

Column 1	Column 2
Drainage Area (square kilometres)	Percentage
26 to 45 both inclusive	99.2
46 to 65 both inclusive	98.2
66 to 90 both inclusive	97.1
91 to 115 both inclusive	96.3
116 to 140 both inclusive	95.4
141 to 165 both inclusive	94.8
166 to 195 both inclusive	94.2
196 to 220 both inclusive	93.5
221 to 245 both inclusive	92.7
246 to 270 both inclusive	92.0
271 to 450 both inclusive	89.4
451 to 575 both inclusive	86.7
576 to 700 both inclusive	84.0
701 to 850 both inclusive	82.4
851 to 1000 both inclusive	80.8
1001 to 1200 both inclusive	79.3
1201 to 1500 both inclusive	76.6
1501 to 1700 both inclusive	74.4
1701 to 2000 both inclusive	73.3
2001 to 2200 both inclusive	71.7
2201 to 2500 both inclusive	70.2
2501 to 2700 both inclusive	69.0
2701 to 4500 both inclusive	64.4
4501 to 6000 both inclusive	61.4
6001 to 7000 both inclusive	58.9
7001 to 8000 both inclusive	57.4

2. The 100 Year Flood Event Standard means rainfall or snowmelt, or a combination of rainfall and snowmelt, producing at any location in a river, creek, stream or watercourse a peak flow that has a probability of occurrence of one per cent during any given year.

3. The 100 year flood level means the peak instantaneous still water level plus an allowance for wave uprush and other water-related hazards for Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System that has a probability of occurrence of one per cent during any given year.

Made by:

NIAGARA PENINSULA CONSERVATION AUTHORITY:

BART MAUVES  
*Chairman*

TONY D'AMARIO  
*Chief Administrative Officer/Secretary-Treasurer*

Date made: September 22, 2011

I certify that I have approved this Regulation.

DAVID JAMES RAMSAY  
*Minister of Natural Resources*

Date approved: May 4, 2006.

[Back to top](#)



NIAGARA PENINSULA  
**CONSERVATION**  
AUTHORITY

**TO: The Chairman and Members of the Authority**

**DATE: September 9, 2011**

**SUBJECT: Oswego Creek Floodplain Mapping - Award of Work - Report No. 49-11**

Oswego Creek is located within the Upper Welland River Watershed within the Region of Niagara and County of Haldimand. Oswego Creek (see attached map) is a large subwatershed and includes 183 square kilometres study area, 35 km of watercourse and 7 crossings based on road network (either bridges or culverts).

In August of 2011, in accordance with our Consultant Selection Policy, requests for proposals were issued to three(3) firms known to be able to complete modeling works of this complexity. A copy of the Request for Proposal is appended. The proposal received ranged in cost from \$49,675 to \$50,270. All proposals received were reviewed by appropriate staff and the low bid proposal which was submitted by Aquafor Beech Limited, was found to address the needs of the project. With respect to financing, \$100,000 was allocated in the 2011 budget for floodplain mapping services. The project will begin in October following the completion of the Upper Welland River Floodplain mapping project and is expected to be completed in March 2012.

Attachments:

1. Terms of Reference for Project
2. Study Area Map

**RECOMMENDATION:**

- i) That Report No. 49-11 regarding the Oswego Creek Floodplain Mapping Project be, received for information.**
- ii) That the Board support execution of the Consulting Services Agreement with Aquafor Beech Limited with an upset limit of \$ 49,675.**

Prepared by: Suzanne McInnes, MCIP, RPP, Watershed Planning Coordinator

Respectfully Submitted By: \_\_\_\_\_  
Tony D'Amario, P. Eng.  
Chief Administrative Officer/Secretary-Treasurer

# **Oswego Creek Watershed Plan Floodplain Mapping Update Terms of Reference (August 2011)**

## **Scope of the Study**

As part of the Watershed Planning Program the Niagara Peninsula Conservation Authority would like to update and create new floodplain mapping for the Oswego Creek Watershed. This study will undertake the necessary hydrologic and hydraulic analysis in order to generate 100 year return period floodlines for the main branch of the Oswego Creek and the tributaries shown on the attached map. All components of this analysis shall be consistent with the Ministry of Natural Resources and the Flood Damage Reduction Program requirements. The study includes:

- 183 square kilometres study area;
- 35 km of watercourse (shown in red on attached map);
- 7 crossings based on road network (either bridges or culverts)

The new floodplain mapping report shall identify roadways which are susceptible to flooding (ie. overtopping) due to capacity limitations of the associated culvert/bridge structures and the identification of flood-susceptible buildings. The report shall also include recommendations to mitigate the identified flood hazards which may include: floodproofing, culvert/bridge replacement, or channel capacity improvements. The estimated costs to mitigate the flood-susceptibility of identified roads and buildings shall also be included.

One public meeting to present the results of the study is also required.

## **Deliverables**

### **Report**

The successful consultant shall submit eight (8) hard copies and a digital .pdf copy of the entire final floodplain mapping report complete with all associated maps, diagrams, calculations, and culvert/bridge crossing inventory. All files (both paper and digital) of the associated hydrologic and hydraulic computer models shall be provided to the NPCA.

### **Mapping**

This study will deliver 1:2,000 mapping (both paper and digital) in the formats approved by the NPCA. A Digital Terrain Model (DTM) and digital orthoimagery are available from the NPCA for use in this study as the topographic base.

All spatial data produced during the study will be captured at 1:2000 scales or larger and be delivered to the NPCA in ESRI shapefile format (no CAD drawings accepted). Metadata using the Region of Niagara Metadata Standard will be generated along with supplemental data dictionaries for each shapefile to be delivered. Maps composed for the study should be provided in suitable resolution .pdfs for reproduction purposes.

## **Timing**

The project is targeted to be completed within 6 months of project initiation.

## **Meetings**

The schedule shall include meetings of the consultant team and the NPCA at the following stages:

- 1) Project initiation;
- 2) At the 60% completion stage in order provide an update on project status and to discuss any issues with respect to the hydrologic and hydraulic modeling calibration and validation;
- 3) After the NPCA has reviewed the draft floodplain report and mapping in order to discuss comments;
- 4) At the completion of the project in order to summarize relevant issues, identify significant damage centres, and discuss the study's conclusions and recommendations.

## **Available Resources**

For this study, the following resources are available to the study team:

- 1) A Digital Terrain Model (DTM) of the study area;
- 2) Digital orthoimagery of the study area;
- 3) Digital information with respect to soils, land use, and land cover of the study area;
- 4) One long-term Oswego Creek surface water gauge stations located within the study area;
- 5) Long term meteorological data from climate stations in and around the study area;
- 6) Historic computer models and reports for: the Welland River and Oswego Creek (1988)

## **Model Specifications**

- 1) HEC-HMS shall be utilized for the hydrologic component of the study, HEC-RAS shall be utilized for the hydraulic component of the study.
- 2) Hydrology shall be generated utilizing Event (design storm) methodology.
- 3) All stream crossings shall be surveyed relative to the elevation of the centre-line of road elevation (as per the NPCA's Digital Elevation Model).

## **Available Digital Resource Specifications**

### **Niagara 2002 Ortho-based DTM Details:**

Compiled by First Base Solutions, a Division of J.D. Barnes Limited in 2002.

RFP stated the DTM was to be developed generally "for pre-engineering survey and design, the production of municipal planimetric mapping and detailed topographic mapping at a minimum scale of 1:2000 with a contour interval of no less than one metre (1.0 m)."

#### Mass Points

Average Spacing (X-plane): 10m

Average Spacing (Y-plane): 10m

Horizontal Control: 0.5m if not better

Vertical Control: 0.5m if not better

#### 3D Breaklines

Select linear point density supplementing the mass points to support the production of municipal planimetric mapping and detailed topographic mapping at a minimum scale of 1:2000 with a contour interval of no less than 1m.

Horizontal Control: 0.5m if not better

Vertical Control: 0.5m if not better

Vertical Datum Details: Canadian Geodetic Vertical Datum of 1928 (CGVD28)

Horizontal Datum is NAD 1983 UTM Zone 17T

### **Niagara Aerial Photography Details:**

Two orthoimagery datasets will be made available for the study

1. Black and White 2006 orthoimagery.

Photography Scale: 1:10,000

Captured using the Vexcel Ultracam Digital Mapping Camera with a ground pixel resolution of 10cm.

Horizontal Datum is NAD 1983 UTM Zone 17T

Compiled by First Base Solutions, a Division of J.D. Barnes Limited 2006.

2. Colour 2002 orthoimagery

Photography Scale: 1:10,000

Film scanned in at 20 microns so resulting digital pixel resolution is 20cm.

Horizontal Datum is NAD 1983 UTM Zone 17T

Compiled by First Base Solutions, a Division of J.D. Barnes Limited 2002.

### **Niagara Region Metadata Standard:**

([http://metadata.yourniagara.ca/metadata/GeoSmart\\_Niagara\\_Metadata\\_Standard\\_May2006.pdf](http://metadata.yourniagara.ca/metadata/GeoSmart_Niagara_Metadata_Standard_May2006.pdf)),

## **Deliverable Data Product Specifications**



## 1, Digital Spatial Data Products

- Regulatory Flood Line segmented by and populated with map sheet number
- Cross Section Inventory populated with regulatory stage and map sheet number
- Bridge/Culvert Hydraulic Control Structure Inventory populated with model parameters
- Hydraulic Model Stream Reaches populated with model parameters
- Hydraulic Model Flowpaths populated with model parameters
- Hydraulic Model Banks populated with model parameters
- Hydrology Model Subbasins populated with model parameters
- Hydrology Model Streams/Reaches populated with model parameters
- Mapping product tile/sheet index

## 2. Digital Hydrology and Hydraulic Model Files

- All model input files including meteorological data
- All physical model files
- All model output files

## 3. Digital Mapping Products

- 24x36 600 dpi PDFs of final hardcopy mapping products
- 11x17 600 dpi PDFs of final hardcopy mapping products



**TO: Chairman and Members of the Authority**

**DATE: September 20, 2011**

**RE: PROJECT/PROGRAM STATUS REPORT - REPORT NO. 50-11**

## **WATER MANAGEMENT**

### **I. Watershed Regulation Division**

#### **1) Monitoring**

i) Staff continue to monitor the water levels at the Binbrook reservoir on a regular basis and adjust the valve settings as required based on forecast weather. Due to the prolonged dry conditions, maintaining standard operating level at the reservoir has been challenging. The reservoir water level is presently approximately 12 inches (300mm) below standard operating level.

Staff also continue to monitor the water levels and undertake routine maintenance at our 13 gauge stations, as part of the NPCA's routine flood forecasting/warning duties.

The public is able to access this real-time level and rainfall information through the NPCA's website.

#### **2) NPCA 'Regulation of Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses'**

##### **i) Permits**

To date, the NPCA has approved 67 permit applications for the 2011 calendar year pursuant to the NPCA's 'Regulation of Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses' regulation (Ontario Regulation 155/06).

##### **ii) Violations**

Please refer to the associated Report under "in camera" section of agenda.

##### **iii) NPCA-DFO Partnership Agreement**

The NPCA is under agreement with the Department of Fisheries and Oceans (DFO) to review works in or near water to determine whether the work is likely to result in the harmful alteration, disruption or destruction of fish habitat (HADD). As part of the NPCA-DFO Partnership Agreement, NPCA staff work as a liaison between DFO Assessors and proponents to recommend appropriate fish habitat compensation projects. During the current calendar year NPCA staff has reviewed 42 applications under this agreement.

##### **iv) Municipal Drain Maintenance Review**

The NPCA continues to represent Conservation Authorities located in Central Ontario on the DART Committee with representatives of the Ontario Federation of Agriculture, Drainage Superintendents Association of Ontario, Ontario Society of Professional Engineers (Land

Drainage Committee), Association of Municipalities of Ontario – Rural Caucus, OMAFRA, MNR and Conservation Ontario. The purpose of the DART is to develop a consistent approach and technical direction with regard to municipal drainage project review under Conservation Authority Regulations. NPCA staff has reviewed 9 municipal drain projects during the current calendar year.

### 3) Floodplain Mapping

- i) Lower Welland & Thompson Creek – City of Niagara Falls  
The NPCA is continuing to work with our consultant AMEC Engineering to undertake the work necessary to generate the 100 year regulatory floodplain mapping for the Lower Welland River and Thompson Creek.
- ii) Shriner's & Beaverdams Creeks – Cities of Niagara Falls & Thorold  
The NPCA is currently undertaking the necessary field work, computer modeling, and calculations in order to generate the regulatory floodplain mapping for the Shriner's Creek and Beaverdams Creek systems.

### 4) Gauge Station Expansion

In 2010, the NPCA received funding from the Niagara Water Strategy to undertake gauge station network improvements/expansion to both rainfall and water quality monitoring. By the end of 2011;

- nine (9) rainfall stations will be integrated into NPCA system (6 RMON & 3 new);
- three(3) permanent water quality monitoring units will be installed;
- an abandoned gauge station on Big Forks Creek (Wainfleet) will be recommissioned;
- a new "state of the art" flow and water quality station will be built on the Welland River adjacent to E.C. Brown.

- 1) **Rain Stations:** All six Regional co-operative climate stations are constructed, running and reporting at this time. The stations include: Crystal Beach, Lincoln Town Hall, Port Dalhousie, Chippawa-Niagara Falls, Seaway-Port Colborne and Welland WWTP. Permission from City of Hamilton has been granted and Locates for both Haldimand (Ruigrok) and Hamilton (Glancaster Road South) installation sites have been completed. Hydro design for the Hamilton site is outstanding from Hydro 1 (to be finalized in October). All instrumentation has been installed at the Haldimand (Ruigrok) station, commissioning is anticipated to be completed mid-October).
- 2) **Water Quality Stations:** (Caistors in West Lincoln and Balls Falls in Lincoln): The Caistors water quality sensor station has been installed and is operational. Construction of the Balls Falls station is anticipated to be completed by mid-October.
- 3) **Big Forks Creek (Wainfleet):** The Big Forks climate and stream gauge station has been installed and is operational.
- 4) **E.C. Brown Cons. Area (Pelham):** The Region has granted permission to install instrumentation on O'Reilly's Bridge. The conduit and the sensor mount are anticipated to be installed on the bridge by November. Hydro 1 is presently completing the design to bring power to the site and is expected to be completed by November as well.

## **II. Watershed Planning Division**

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

i) Staff continue to respond to a steady stream of planning and building permit applications. To the end of August 163 Planning Act related Applications ranging from complex Zoning Bylaw Amendments to simple Variances have been processed. Review work on local Official Plans for the RMON also continues. In addition, 291, formal Building Permits Reviews and Property Enquiry letters have been issued. August was particularly busy with 54 Building Permit reviews as opposed to our average of around 25.

ii) Work on the Planning Brochure for municipalities continues. After reviewing the 2<sup>nd</sup> draft of the brochure, a number of comments were received from area municipalities that the originally contemplated brochure, although comprehensive, was too broad and complex for more routine building proposals. Therefore, it has been decided to prepare a second more limited brochure that will be given out at municipal counters. This brochure will then reference a link to the original/expanded brochure which will instead be placed on our website.

### **2) Natural Areas Inventory/Heritage System**

The Steering Committee was updated by staff on the progress of the Scenario Development Team. They reviewed the outline for the final report. They also received a draft of the Communications Plan and first communications piece for their review.

The Scenario Development Team are reconvening over the fall to compare and contrast the learning scenarios that have been developed using the constraints and targets and assessed through the use of the MARXAN model. They will be reviewing several scenarios in an attempt to come to consensus on a preferred scenario.

The Outreach and Education Committee is completing a revised communications strategy for the project with the comments of the Steering Committee. The Plan will be finalized with the Steering Committee later this fall.

## **III. Source Water Protection Division**

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

Source protection staff continue to work on developing the Source Protection Plan (SPP), and Explanatory Document.

The next task will be to pre-consult with the municipalities and provincial agencies that are affected by the policies. A number of early engagement meetings have already been held with staff from Niagara Region and the Cities of Thorold, Port Colborne and Niagara Falls to discuss the policy approaches the Source Protection Committee has chosen.

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

### **a) Routine Water Quality Work**

Water quality (WQ) staff are currently sampling for the 2011 field season. NPCA staff are also completing the laboratory portion of the biological monitoring that was completed at WQ stations this spring.

### **b) Special Projects**

- Water quality staff have been assisting the Ministry of the Environment and Conservation Ontario with the Niagara 20 Mile Creek Integrated Climate Change. Additional site visits were needed to confirm conditions of the wells.
- NPCA Water Well Decommissioning Grant Program: Requests for applications continue to be received for this program.

Hydrogeology and water resources work in the last two months included:

- 5 private servicing study reviews/consultation.
- 1 development monitoring program review;
- 1 Permit To Take Water review;
- Technical assistance for City of Hamilton Airport Employment Growth District, Port Robinson West Subwatershed Study, Niagara Region Water Policies, Town of Grimsby Official Plan, Watershed Planning and the Niagara Water Strategy; and Information requests for data water well records.

## **IV. Geographic Information Systems (GIS) Division**

### **1) Source Water Protection Support Activities**

- Staff has been making maps for the draft source protection planning policy. A web mapping application was developed to highlight water well decommissioning programs that exist across the province, including the NPCA's.

### **2) Watershed Planning Support Activities**

- Analytic support for the Natural Heritage System project over the past month has been extensive and focused on data compilation for model preparation. Data input preparation is complete and calibration is underway leading up to the running of the actual scenarios. Over 7500 individual ecological objective target values were derived for the evaluation and comparison of the various scenarios.
- An update to the Niagara Natural Environment Information Screening Layer and Approximate Regulations Lands layers base on the updated floodplain mapping for Singers Drain.
- Staff updated and added a regulations violations dataset on the internal web mapping tool as a flag for staff, it does not include personal information or case details.

### **3) Corporate GIS and Information Management Support Activities**

- The Large Scale Hydrology Mapping Maintenance pilot project has also been a priority with the report writing continuing when time affords.
- The Restoration Database was updated with several 2010 projects that were recently submitted for entry.

## **V. Watershed Restoration Division**

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 a comprehensive cost-sharing program that offers local landowners financial incentives to implement water quality and habitat improvement projects on their properties, thereby, rewarding the private landowner who conserves the public interest. In total, over 100 restoration projects will be completed in 2011.

### **1) Project Implementation**

- Staff have completed the woodland reforestation and riparian planting projects. In total 35 woodland restoration / riparian projects were implemented across the watershed through partnerships with private landowners, Land Care Niagara (funding provided through Trees Ontario Foundation and 50 Million Tree Program), Ontario Power Generation (bio-diversity and carbon sequestering funding) and the Niagara Restoration Council. Well over 100,000 trees and shrubs were planted. Over 10,000 native wildflowers and grass plugs were planted and over 10 kilograms of native seed was planted into restoration sites.
- Construction projects such as wetland restoration, aquatic in-stream works, erosion and bank stabilization projects are currently in implementation. Over 15 wetland projects across the watershed are scheduled for completion this season.
- BMP projects such as nutrient management projects, livestock fencing, cover crops and erosion control projects such as rock chutes and check point dams are currently being implemented. In total over 40 BMP projects are being implemented across the watershed.
- Staff are researching opportunities to work with landowners who live adjacent to the Welland River between the Old Welland Canal Siphon and HWY 24. The goal is to locate riparian wetland restoration opportunities in this location as it is the most affected by water level and flow reversal issues. These projects will advance our commitments under our OPG agreement.

### **2) Source Water Protection Stewardship**

- Staff are working with several producers in the Decew Source Water Protection Area on early Action projects such as farm runoff and buffer projects.
- A runoff diversion project was completed in February at the Summers farm on Beaverdams Road. The landowner undertook an earth works project to redirect agricultural surface runoff from the farm operation away from the Decew Water Works Canal (IPZ -1). The runoff is now directed via a swale and berm through a vegetative filter of extensive cattail and wetland type growth to a slue drain outleting to Lake Gibson which is an IPZ-2. As a result, the agricultural activities on these lands are now reduced from a significant threat level to a moderate threat level.

### **3) Outreach & Education**

#### **Canopies for Kids**

The *Canopies for Kids Program*, is a new NPCA program aimed at planting shade trees in school grounds to engage young students and volunteers in environmental learning. The goal is to learn through hands-on involvement, the benefits that trees provide, not only for a healthy environment, but also to recognize the important contribution trees make to our health.

Trees were planted at ten schools in May, each received 10 large sized (60 mm calibre) shade trees native to Niagara including Silver Maple, Tulip, Freemans' Maple, Red Maple, and Sugar Maple. In addition, each school received up to 30 smaller trees (10 gallon pots) for students to hand plant. The entire student body participated in the planting day and have been left with the task of watering the trees and caring for them (staff have contracted out the watering over the summer).

To date, all large trees are thriving. There has been some vandalism to the smaller trees which was anticipated. Site monitoring and maintenance by both staff and students will be on-going.

The application process for 2012 will begin in late fall, early winter.

### **Yellow Fish Road**

Requests to participate from volunteers continues, although with less frequency in the summer months. Information will be circulated to schools and community groups in early September to encourage fall participation.

### **Community Fisheries Involvement Programs**

- The Angler Diary Program continues to collect data from anglers in the Welland River and Twelve Mile Creek watersheds.
- Staff are working with MNR to identify common areas of interest for fall fisheries assessments. Staff will also be assisting MNR staff with their electrofishing sampling (to determine diversity and populations) and to obtain data for the Guide to Eating Ontario Sport Fish.

### **Landowner Stewardship Guides**

- Building on the success of the One Mile Creek Landowner Stewardship Guide, staff are working to modify this guide to a watershed wide "How to" guide for landowners. Main topics sections will focus on improving water quality and biodiversity. It is anticipated to be completed in September. A grant for \$2,000.00 was secured from the Niagara Community Foundation for the production of this document.
- The NPCA was a partner on the production of a Stewardship Guide for American Water-Willow, which is a Species at Risk in Niagara. This important riparian plant, stabilizes banks, prevents erosion and promotes improved water quality and clarity. In addition, it is important to the life cycles of many local aquatic species, and as a flowering plant it is important to pollinators. As with many riparian plants, the water-willow is vulnerable to shoreline clearing to accommodate agriculture and development. This guide promotes how humans and this species can happily coexist.

## **VI. Remedial Action Plan (RAP)**

### **1) Lyons Creek East**

The Conservation Authority will host the first meeting of the participating agency representatives in the Lyons Creek East Administrative Controls Protocol for Monitored Natural Recovery on October 20, 2011. The agenda will include discussion on implementing the administrative controls and communications products. Golder's *"Guidance document for selecting and*

*implementing Monitored Natural Recovery at Contaminated Sediment Sites*” (July 2011) and Environment Canada’s *“Lyons Creek East Contaminated Sediment Baseline Monitoring”* (August 2011) are now available.

## **2) RAP Monitoring & Assessment**

The RAP’s BUI assessment report for the *Loss of Fish & Wildlife Habitat* in the Area of Concern (AOC) is under development. A response is anticipated from MNR with regards to their strategy for habitat issues, as well as to confirm their choice of approach to address a delisting criterion for BUI: *Degradation of Fish and Wildlife Populations*.

The draft report from the Welland River Eutrophication Study is under review by the Technical Working Group (TWG) and the RAP Coordinating Committee. A final meeting of the TWG will be held in fall to sign off on the report. The next steps in addressing the impaired BUI: *Eutrophication and Undesirable Algae* will involve engaging with local partners and stakeholders to develop an implementation strategy around the preferred option(s) for dealing with nutrient issues in the Welland River watershed.

## **3) RAP Stage 3**

The RAP Coordinating Committee is scheduled to meet in mid-October. The agenda will include a review of the RAP work plan and status of all actions.

The draft 2011 RAP Update is under review by the Coordinating Committee.

## **4) Update: Canada-Ontario Agreement Respecting the Great Lakes Ecosystem (COA)**

The 2007 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) has been extended until June 24, 2012.

## **5) International Liaison**

The next meeting of the U.S. RAC is set for late September in Buffalo.

The RAP Coordinator will attend the 2011 International Joint Commission Great Lakes Biennial meeting at Wayne State University on October 12-14, 2011.

The State of the Lakes Ecosystem Conference (SOLEC) 2011 will be held on October 26 & 27 in Erie Pennsylvania. The theme is: “Linking Land to the Lakes”.

The Lyons Creek East Administrative Controls Protocol for Monitored Natural Recovery of contaminated sediments has been nominated as a SOLEC success story.

## **6) Update: Great Lakes Water Quality Agreement**

The Governments of Canada and the United States (the Parties) are proceeding with the negotiations to amend the Great Lakes Water Quality Agreement (GLWQA). Binational Public Forums were held in Toronto and Chicago in September, as well as a Public Webinar via the Internet.



## **LAND MANAGEMENT**

### **Ball's Falls Conservation Area**

The Ball's Falls website is now up and running. Visitors to the area can now access important information at [www.ballsfalls.ca](http://www.ballsfalls.ca). The site is also building interest in social media with Twitter, Facebook and YouTube links. Staff will be using these tools to improve visitor services and expand programming at the site.

*Seeds in Disguise*, a travelling exhibit from the Royal Ontario Museum and Art Installation by Montreal area Artist Deborah Carruthers, opened at the Centre for Conservation at Ball's Falls Conservation Area on September 10, 2011. The artist, Deborah Carruthers was on hand to give a public talk about her work. This exhibit is generously supported by Stokes Seeds.

The *Niagara Tondo* is a series of pieces created specifically for this exhibition. In this series Carruthers explores the overlap between art and science. Working with the language of genetics and molecular biology, she transformed the genetic data of various plants into color and form using seed: demonstrating that which is harmonious in nature leads to harmony in color. "I have always loved the diversity found in nature. When I found out that the Stokes Seed company was supporting this exhibition, I wanted to use seed to create some new works. They graciously sent me a variety of seed to use for this project. I selected various plants, such as the wine grape, and translated a segment of its genetic code." This exhibit brings art, science and engagement to the diverse subject of seeds.

Staff are preparing for the next exhibit "Winter Sports" (November 17 – December 23). The first exhibit in 2012 is "Pathways to Peace", an exhibit on significant War of 1812 sites in Niagara. This will our second exhibit on the War of 1812. Staff are working with the Town of Lincoln and local 1812 Bicentennial groups to ensure that exhibits and events are widely promoted. Other exhibits are scheduled throughout the 3-year bicentennial event.

The outdoor pond at the Centre has been undergoing restoration to repair the liner and pump system for the waterfalls. This repair work has been undertaken by staff at minimal disruption to the facility operations, with the restoration work being completed before frost and winterization of the pumps.

The remainder of the Ball's Falls summer camps were well attended. Now that school is back in session, staff are focusing on promotion of the education programs. A new education program brochure has been produced and is being circulated to schools, libraries and community organizations.

The Grist Mill is receiving new cedar siding. The south installation is complete. The east side is scheduled to be completed by the end of September. Work on the west side will begin after the Thanksgiving Festival and should be completed before the end of November.

Mr. Robert Winninger, the new Site Administrator for Ball's Falls, started on September 6<sup>th</sup>. This position is a replacement following the retirement of the previous Administrator Christine Hayward.

Plans are well underway for the 37<sup>th</sup> Annual Thanksgiving Festival, October 7 – 10<sup>th</sup>, 2011. This year is shaping up to be one of the largest shows, with more than 125 vendors, historical displays and exhibitors.

## **Binbrook Conservation Area**

Day use activity in August was not as busy in previous years. Staff believe this may be the result of severe weather conditions and problems operating the children's splash pad. On the other side, boat rental and retail showed significant improvements over the same period in 2010.

Binbrook played the role of an airplane crash site for filming of another "Mayday" episode. These film productions bring revenue and recognition to the parks and can usually be scheduled during off-peak times to ensure that other visitors are not impacted.

The TD-Canada Trust Trail Project continues to move forward. Staff will be coordinating a work day for the bank employees this fall to complete the project.

## **Binbrook PFOS Contamination (Update)**

The article in the Hamilton Spectator generated very little feedback at the Conservation Area. Staff recorded two phone calls related to the August 16<sup>th</sup> story. Staff toured the Conservation Area with Hamilton Councillor Brenda Johnson to discuss the matter in detail. This provided an opportunity for staff to show the testing and the safeguards in place to ensure public safety.

Airport manager TradePort hired a consultant to study the extent of the pollution and develop a plan for remediation. A preliminary plan was submitted to the Ministry of the Environment for review and consideration. Once the Ministry has completed their review the report will be brought to the Hamilton City Council for consideration.

At this point, the airport has installed measures to prevent further surface water from leaving the site and potentially carrying PFOS into the Welland River and the Binbrook Reservoir. This is widely seen as an effective, albeit temporary measure to prevent further contamination of the system. NPCA staff will continue to liaise with the City of Hamilton and update Board members as the information becomes available. If there are matters that require specific consideration or approvals, a formal report will be prepared for the agenda package.

## **Long Beach and Chippawa Creek Conservation Areas**

The Labour Day long weekend was very popular at both campgrounds. As in previous years, the NPCA enforces an alcohol ban at campgrounds during the first and last official long weekends of the summer. This policy helps ensure an enjoyable experience for all of our campers.

Chippawa Creek will play host to a number of cross-country track & field meets as well as group camping events. These activities have grown significantly over the past few years and provide a good source of revenue in the shoulder season.

Many summer staff have now returned to school and the parks have moved into fall operations. The campgrounds are still operating the extended season until the Thanksgiving Weekend. After closing, our staff will be focusing on capital improvements and winterizing.

## **Jordan Harbour**

The pavilion project is on hold pending further investigation of the site conditions at the dock. Spring flooding at the site aggravated underlying soil conditions resulting in some new site damages observed at the first construction meeting. Staff are working with the contractor to determine the appropriate footing design for the pavilion and associated construction required for the boat ramp retaining wall. Changes to the contract will be reviewed by staff before proceeding further with this project.

## **Twenty Valley Trail Staircase**

Field staff have been monitoring the condition of the staircase on the slope of the Twenty Valley behind the Jordan museum, conducting spot repairs as necessary to keep the stairs open to the public. The stairs have reached the end of their lifespan and need to be replaced. Staff are recommending due to safety conditions these stairs should be closed to the public come this winter season. The site conditions have been surveyed and staff have completed a new stair and trail design plan suitable for pre-tender evaluation. This design plan has been presented by staff to the property owner, Ontario Heritage Trust (OHT), for consideration. OHT is reviewing the plan and the conditions on the property and will provide input to staff on the direction they wish to take with this project. Due to the size and expense of this potential project, OHT is considering all of their options, including a "do-nothing approach" and removal of the entire staircase and valley access to the public at this location. We await their decision and further discussion on this part of the Twenty Valley tourist area.

## **Comfort Maple**

Staff received an arbourist report recommending the tree be fenced off to the public to both protect the tree and the public. Staff have prepared a design plan for fencing and a new viewing area outside the fence for the public with the intent of completing the work before winter.

Staff are also undertaking a project to maintain the heritage of the Comfort Maple tree. This fall, seeds from the tree will be propagated. The resulting saplings will be planted in the vicinity of the Comfort Maple and in other Conservation Areas to maintain the genetic makeup of the parent tree.

## **Beamer Memorial Conservation Area**

The non-native, invasive Buckthorn tree is being removed from the area north of the bird monitoring tower. An outside contractor has been working to remove the material (cutting and mulching) and staff are monitoring and applying herbicide to the freshly cut stumps to prevent regrowth. All disturbed areas will be re-planted with native vegetation. The project will be completed by the end of 2011, with follow up for the next 5 years to prevent regrowth and seedlings.

## **Mud Lake Conservation Area**

Annual benthic (organisms living on or in lake bottoms) monitoring was completed by staff in late June. Monitoring is completed to assess the diversity and abundance of benthic and show change overtime in relation to the water management. These organisms provides a valuable food source for waterfowl, and other species.

In early September, staff observed lower than expected water levels at Mud Lake. This was traced to a structural failure in the control culvert at the outlet of the lake. Staff fixed the structure and water levels are being restored.

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

Turtle basking structures were made and installed at the St. Johns pond in late August. Existing turtle basking areas were limited at the St. Johns pond, forcing basking turtles to use pond banks. This resulted in a high level of disturbance by park visitors walking by. As a result two basking structures were installed, as basking is the most effective way for turtles to absorb heat and this process is necessary for a number of its functions, including: riding of algae, increasing body temperature for food digestion and promoting healthy shell growth. Both structures were placed in areas of southern sun exposure and are not accessible to visitors.

### **Woodend Conservation Area**

Conservation Authority, staff have completed the first stage of a vegetative survey (summer phase) at Woodend. Summer vegetation has been inventoried. Sugar maple forests with minimal forest structure, some unique plant species and potential critical overwintering animal habitats identified.

This information will be used to update the management plan for Woodend, and provide input to the design of the DSBN Outdoor Education Facility.

### **NPCA Hunting Program**

The waterfowl hunting season begins in September. Conservation Authority staff have issued 252 hunting permits for 2011. Of this total, hunting permits are issued to 41 individuals residing outside of our administrative watershed area.

The NPCA operates two controlled waterfowl hunting programs at Mud Lake and Binbrook Conservation Areas. During the first two weeks of the hunt, blinds are awarded based on a lottery system. This ensures that everyone has an opportunity to hunt early in the season. Beginning October 8th, blinds become available on a first come – first served basis.

### **Gypsy Moth Surveys**

Staff completed the annual gypsy moth surveys for 2011 on at Chippawa Creek, Ruigrok Tract, St.Johns, Smith-Ness, St. Johns, Hedley Forest and Willoughby Marsh Conservation Areas. These surveys are completed annually to monitor the population of the gypsy moths and assess if any measures of control are necessary. Both a winter and summer survey are completed at each site. During these surveys the number of egg masses (winter) and the level of defoliation (summer) are assessed and compared with previous years to determine the population levels and effects, and if management techniques are required. Spring 2011, egg masses were low, with wet warmer weather suggesting low-stable populations with natural fungus supporting declining populations. Summer 2011 surveys indicate no defoliation and low gypsy moth populations.

## **COMMUNITY RELATIONS**

### **Niagara Children's Water Festival**

The 9<sup>th</sup> annual Niagara Children's Water Festival will take place at Ball's Falls the week of September 20 – 23, 2011. The school program is booked solid with several new schools participating, representing all of our watershed municipalities. A Family day will take place on Sunday, September 18<sup>th</sup> from 12:00 noon to 4:00. A number of great activities are planned for this day. Staff will also visit a couple of other festivals to explore the possibility of sharing activities.

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

The 37<sup>th</sup> annual festival will be held October 7 – 10<sup>th</sup>, 2011. This event is recognized as a Niagara Classic tradition. Members are encouraged to attend.

### **Source Water Protection**

Bruce Davidson from the Walkerton Citizens Group will be participating in the public day of the Children's Water Festival. He was very well received last year, and gave a great overview of his work in Walkerton.

### **Conservation Achievement Awards**

In 1991 the Conservation Authority established the Conservation Achievement Awards to recognize the efforts of individuals, businesses and organizations who voluntarily contribute to the conservation, restoration, development and management of natural resources. These awards allow the board and staff an opportunity to recognize the efforts of watershed residents whose contributions to conservation efforts are evident through their direct actions. Nominations for awards are invited from the public and internally through the board and staff.

It has been the Authority's practice to give an award to every person who has been nominated as this program was not intended to stress the amount of the contribution, but rather to serve as a means of thanking those people who voluntarily practice environmental stewardship. Recipients are invited to an awards reception which is scheduled to take place at the Centre for Conservation on Wednesday, November 23<sup>rd</sup> beginning at 7:00 pm.

### **Niagara Natural Heritage System Project**

Meetings have resumed following a summer break. Staff is working on several communications pieces which will be rolled out once some of the modeling has been completed. The project is scheduled to wrap up at the end of October.

### **Living in Niagara Report**

Staff will be providing feedback on the draft '*Living in Niagara Report 2011*' – a project of the Niagara Research and Planning Council.

The first report was released in 2008. This report is a community based perspective on the current state of affairs in 11 different areas of life in Niagara. There are clear descriptions of what are Niagara's asset based strengths along with the very real challenges that affect and impact living in Niagara. This document will provide the community with the information required to focus on and make informed decisions on what issues can be acted on in a targeted manner to impact individual lives in Niagara. The goals and objectives of the Living in Niagara Report 2008 are the result of multi-sector discussions and community input. The report, by its content, will enable the development of an integrated community based planning approach to: determine key issues and priorities in Niagara; reflect the values of Niagara citizens; provide research and

statistics on key issues; validate social service/voluntary sectors (with statistics); create and maintain a community report card; measure the well-being of Niagara.

The NPCA's role involves providing input into the environmental projects that we have undertaken and their role in contributing to a sustainable community. The goal is to release the 2011 report in November.

### **Watershed Report Card**

Since their inception from 1940s -1960s, Conservation Authorities have been collecting and analyzing environmental data and then using this information to guide the development of local natural resource programs and plans.

Public demand for information about the state of our watersheds and a need to demonstrate accountability led Conservation Authorities to conduct a pilot project to establish guidelines to develop watershed report cards. The report card is an important tool which provides information about local watershed conditions to a wider audience including local residents, agencies, and government partners; thus enabling smarter decision-making leading to enhanced local protection and remediation actions.

Many Conservation Authorities have prepared watershed report cards since 2003. In 2009, a review of the watershed report cards by Conservation Ontario revealed significant inconsistencies in the way that Conservation Authorities were collecting, analyzing and reporting local technical data, thus preventing a broader application of this important information. It was determined that a more standardized set of indicators and evaluation needed to be established and *employed* by all Conservation Authorities in order to ensure improved consistency and use of information.

Conservation Authority experience in developing Watershed Report Cards to Municipalities and other watershed partners has proven a successful means of communicating vast amounts of technical information in an understandable format. The proposed standardized format will be particularly beneficial to jurisdictions that cross two or more watershed boundaries because it allows for a true comparison of local environmental conditions. NPCA staff is participating as a member of the implementation committee to finalize the guide and report templates with the goal of completing our reports by the end of 2012 and releasing them simultaneously in the early part of 2013.

### **A.D. Latornell Conservation Symposium**

The A.D. Latornell Conservation Symposium is one of Ontario's *premier* annual environmental events. It provides a forum for practitioners, policy makers, nongovernment organizations, academics and businesses to network and discuss the challenges and opportunities in Ontario's conservation field. The **theme** of the 18th annual A.D. Latornell Conservation Symposium – *Water: The Future of the Source* looks at the current state of our water resources in Ontario and attempts to forecast the quality and quantity of our water resources (subject to various stressors) that will be available in the upcoming years.

How do we ensure we have enough clean, sustainable water sources for all our uses – for technologies, a resilient environment and for all of us individually? Delegates at this year's A.D. Latornell Conservation Symposium will discuss Ontario's water issues in the context of climate change, future demands, relationship of natural and built infrastructure and how it all relates to human health and water management. Registration is now open for any members interested in attending.

## **NIAGARA PENINSULA CONSERVATION FOUNDATION**

### **Conservation Education Bursaries**

The Foundation Chairman and staff discussed applications received this year to determine their eligibility for a bursary. Supporting students from Fort Erie and surrounding area that are pursuing a post-secondary education in a field related to conservation and resource management, this year there were three successful applicants that will receive \$1,000 each. Since 1992, 119 bursaries totalling \$118,600 have been awarded as a result of the conservation education bursary program.

### **Rock 'N Ribs**

Harbour Estates Winery hosted this event on September 10<sup>th</sup>, featuring a rib dinner and private concert with renowned Canadian rock musicians April Wine. The Foundation presented a silent auction table at this event and almost \$1,000 was raised in support of the Jordan Harbour Conservation Area redevelopment project.

### **Thanksgiving Festival**

The Niagara Peninsula Conservation Foundation will be holding its annual raffle at this year's Thanksgiving Festival from October 7<sup>th</sup> through 10<sup>th</sup>. Prizes are being finalized and currently include more than \$2,200 in merchandise donated by various Thanksgiving Festival artisans that will be incorporated into gift baskets as in previous years. Board members are asked to support these efforts by volunteering their time to help staff the raffle area. Shifts each day are from 10:00 am – 1:30 pm and 1:30 pm – 5 pm. Please confirm any commitments with staff as soon as possible.

### **Recommendation:**

**Report No. 50-11 outlining the status of Authority projects/programs be received for information.**

Respectfully Submitted by: \_\_\_\_\_

Tony D'Amario, P.Eng.  
Chief Administrative Officer/Secretary-Treasurer