



NIAGARA PENINSULA CONSERVATION AUTHORITY  
FULL AUTHORITY

WELLAND

AGENDA

MARCH 23, 2011 – 7:00 P.M.

ROLL CALL

DECLARATION OF CONFLICT OF INTEREST

BUSINESS:

(1) MINUTES

(a) FULL AUTHORITY MEETING – February 16, 2011

Attached are the Minutes of the Full Authority Meeting held February 16, 2011.

(b) NIAGARA REGION TREE AND FOREST CONSERVATION BY-LAW ADVISORY COMMITTEE MEETING – January 20, 2011

Attached are the Minutes of the Niagara Region Tree and Forest Conservation By-law Advisory Committee Meeting held January 20, 2011.

(2) BUSINESS ARISING FROM MINUTES

(3) CHAIRMAN'S REMARKS

(4) CAO'S REPORT

(5) BALL'S FALLS HERITAGE ADVISORY COMMITTEE APPOINTMENT – REPORT NO. 12-11

Attached is Report No. 12-11 regarding this matter together with a copy of the Terms of Reference for the Advisory Committee.

(6) REQUEST FOR PARTICIPATION; BROCK UNIVERSITY CLIMATE CHANGE PROJECT – REPORT NO. 13-11

Attached is Report No. 13-11 regarding this matter.

(7) DRAFT BROCHURE – BUILDING NEAR NATURAL FEATURES - REPORT NO. 14-11

Attached is Report No. 14-11 together with a draft copy of the proposed brochure.

(8) NPCA STRATEGIC PLAN - CONSULTANT SELECTION – REPORT NO. 15-11

Attached is Report No. 15-11 together with summaries of each Consultants report.

(9) **PROPOSED 2011 OPERATING BUDGET – REPORT NO. 16-11**

Attached is Report No. 16-11 together with a copy of the proposed 2011 operating budget.

(10) **PROPOSED 2011 CAPITAL BUDGET – REPORT NO. 17-11**

Attached is Report No. 17-11 together with a copy of the proposed 2011 capital budget.

(11) **PFOS COMPOUNDS AT THE BINBROOK RESERVOIR – REPORT NO. 18-11**

Attached is Report No. 18-11 together with a memorandum from Joshua Diamond, Water Quality Specialist for the NPCA on this matter.

(12) **PROJECT/PROGRAM STATUS REPORT – REPORT NO. 19-11**

Attached is Report No. 19-11 outlining the status of Authority Projects/Programs to date.

(13) **OTHER BUSINESS**

(14) **IN-CAMERA**

- (a) Complaint and Violation Status Report - Report No. CR-05-11
- (b) Tree By-Law Status Report – Report No. CR-06-11

**ADJOURNMENT**



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

**DATE:** March 16, 2011

**SUBJECT:** Ball's Falls Heritage Advisory Committee Appointment – Report No. 12-11

The Ball's Falls Heritage Advisory Committee acts as an advisory body to the Niagara Peninsula Conservation Authority, to ensure that the purposes for which the museum exists are being fulfilled. The Committee is responsible for considering and recommending to the Authority action on policy and programming matters pertaining to the museum. Committee members will also serve as ambassadors to increase the profile of the site and encourage support for fundraising efforts for Ball's Falls.

The Committee membership will be comprised as follows: The Authority Chairman and Vice-Chairman are ex-officio members of the Committee. The Authority may also appoint a third Board member to the Committee. The Authority will appoint up to 6 citizen members to the Committee and will endeavour to seek out and recommend citizen members who reflect the diversity of the heritage community and who display skills, knowledge and or experience in areas pertinent to the museum operations.

The Authority has not appointed a third Board Member to the Committee for this term and accordingly staff are seeking direction from the Board in this regard. The attached terms of reference provides additional information regarding the committee, meetings and role of the Committee.

**RECOMMENDATION:**

That Report No. 12-11 regarding the Ball's Falls Heritage Advisory Committee Appointment be received for consideration.

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

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

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

**DATE: March 23, 2011**

**SUBJECT: Request for Participation; Brock University Climate Change Project – Report -13-11**

This report has been prepared as per the Board's direction from the February meeting. On February 16, 2011, a delegation from Brock University (BU) made a presentation to the NPCA Board on the Environment Canada funded initiative -"Adaptive Collaborative Risk Management and Climate Change in the Niagara Region". The university requested that the NPCA participate in the initiative. The goals and objectives of the Brock University study are attached as Appendix I.

In early 2010, Conservation Ontario (i.e. the umbrella group that represents common CA interests to the Province) published a position paper respecting the Provincial Expert Panels 2009 report entitled *Adapting to Climate Change in Ontario*. This response outlines what it believes CA's roles should be with respect to climate change. However, the NPCA has not developed any climate change policies specific to Niagara. Nonetheless, many NPCA programs have direct and positive impact on climate change, as they are founded on the underlying principal of wise use of land and water resources (i.e. tree planting, acquisition of significant natural lands, watershed restoration, rainfall/flood forecasting, etc.).

The initial phase of the BU project included substantial agency and public consultation. BU researchers found that the general public had identified the NPCA as a key stakeholder. Given the public expectation/awareness identified in BU consultation, NPCA staff subsequently attended three BU meetings.

Although staff believes the BU project is important, we have not formally confirmed NPCA's corporate support for or participation in the initiative. Given the complexity of the issue, staff felt it was important for the Board to have the opportunity to hear from the project leads directly. Upon hearing the delegates from BU at the February Board meeting, members raised specific concerns around the request for NPCA's participation with this initiative, which are discussed below:

i) The Deliverables of the Project.

The project deliverables are not clear because the BU initiative is a stakeholder engagement process, whose goals include sharing of information and exchanging input and data on *existing initiatives*. NPCA is only one of many other stakeholders being consulted. Through participation in the BU Climate Change Group, NPCA has the opportunity to build relationships with other stakeholders. Specific deliverables are not defined as each stakeholder already has its own work program, based on internal organizational priorities.

ii) Duplication of Effort with the Region of Niagara.

Niagara Region's 2008 Climate Change Action Plan is focused largely on greenhouse gas emissions and other energy use reduction targets. This is a significant issue and the Region of Niagara(RMON) is to be commended for being the lead agency in this area. While the BU initiative supports the Region's Action Plan (i.e. bring together stakeholders, identify actions that can help achieve greenhouse gas reduction), the BU

project is separate and distinct. In this regard, the RMON is already collaborating with the BU project.

iii) Resources Required.

Staff from the NPCA have been invited to participate in both the RMON and BU initiatives since the NPCA is considered a key stakeholder. In this regard, NPCA holds much of the key meteorological and water-related data which is important to climate change initiatives. No new resources are required for participation in the BU initiative. The only commitment required is limited to staff time to attend local meetings and sessions that are held typically twice a month. NPCA staff has not requested a dedicated budget to participate in the BU program. If a “special” project or changes to an existing program is at some point identified via this initiative as potentially requiring NPCA financial resources beyond our budget, as with any other program, a specific report would be prepared by staff for the Board’s consideration.

At this point, NPCA’s involvement with the BU project is expected to have the following results:

- i) increased awareness among other agencies and the public, with respect to positive actions the NPCA is already taking with respect to climate change;
- i) improve the NPCA’s ability to quantify the impact of our programs on climate change;
- ii) avoid duplication of effort and a corresponding waste of public funds by sharing NPCA information (e.g. hydrologic modeling, rainfall data, GIS information) with other agencies.

While NPCA is traditionally known as being a practical program “delivery” agency, it is important to note that the majority of our water management programs are funded in part and/or delivered in cooperation with other agencies and NGO’s. As such, building relationships with stakeholders is ultimately at the root of how we deliver many programs. NPCA staff consider formal participation the BU Climate Change project as a positive opportunity to do this.

In closing, while there is still not consensus in the scientific community with respect to the cause-magnitude drivers behind climate change, what is very obvious is that weather has become more extreme (i.e. rainfall intensity, snowfall, heat waves) in North America in the last 50 years. This has significant economic implications to the agricultural community, tourism, etc. For this reason alone, NPCA needs to be involved in this type of initiative.

For the reasons discussed above staff believe it is important that NPCA participate in the BU Climate Change Project and continue to support the Region’s Climate Change Action Plan.

**Attachments:**

Appendix I - excerpt from Brock University Climate Change Initiative TOR

**RECOMMENDATION:**

**That Report No. 13-11 regarding the Brock University Climate Change Program be received for information.**

**That NPCA formally participate in the Brock University Climate Change Project.**

Prepared by: John Kukalis; Director, Water Management, with input from Ilze Andzans  
Project Manager Niagara Water Strategy

Respectfully Submitted By: \_\_\_\_\_

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

Appendix I.

## **Brock University Climate Change Initiative.**

The project, based at Brock University and funded by Environment Canada, is aimed at ***creating a collaborative network of existing stakeholders in Niagara*** to collectively engage in planning for adaptation to climate change.

Recent adaptation research has shown the adaptive capacity of a community can be increased through social learning and collaboration. Social learning occurs as members of the community exchange ideas, concerns and develop collaborations.

Facilitating the social learning process is the theory of 'Social-Ecological System Analysis', where a social network of key stakeholders in the region work collectively to understand and identify concerns of the region, then together develop adaptive solutions. By working in this manner it is expected that complementary adaptive measures will be developed that will not create negative effects for other stakeholders.

The first stage of the process took 18 months and identified major stakeholders in the region and what collaborations are occurring with regard to climate change and other environmental concerns.

Presently stakeholders include provincial, regional and municipal government, NPCA, NGO's, businesses, education, health services, individuals, media and so on.

The second stage of the project is to bring the stakeholders together for a series of workshops to create a venue for social learning through interactions while also delivering the most recent climatic data in an easy to understand and manageable format.

The group is at a point to decide on the future role of the group at present this may include creating a 'Niagara Community Climate Action Plan' dealing with mitigation and adaptation to climate change.

The role of Brock University and Environment Canada is to facilitate in the creation and support of a self sustaining group focused on climate change adaptation in Niagara.



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

**DATE: March 23, 2011**

**SUBJECT: Draft Brochure - Building Near Natural Features – Report -14-11**

This report has been prepared to provide the Board with background related to the preparation of a draft brochure to assist landowners, smaller developers and builders, in understanding NPCA's roles and requirements, as they relate to development approvals in and around natural features.

The impetus to prepare the brochure stems from a pending Ontario Municipal Board(OMB) Hearing between the Town of Niagara-on-the-Lake, the Province of Ontario and the Regional Municipality of Niagara(RMON). By way of background, in August 2009 Niagara-on-the-Lake(NOTL) staff brought a Comprehensive Zoning Bylaw (CZBA) Report forward for Council's consideration. At that time, in response to objections from the Town's Agricultural Advisory Committee, the Council decided to modify the CZBA to exclude the requirements of the Region's environmental policies and the Provincial Greenbelt Plan. As a result, both RMON and the Ministry of Municipal Affairs and Housing appealed the Town of NOTL's CZBA to the OMB.

The concerns expressed by some in the agricultural community related to "potential" impacts on farms for buffer requirements for natural features and requirements for preparation of Environmental Impact Studies (EIS). With respect to EIS requirements, there appears to be misinterpretation by some, that an EIS would be required every time a landowner wanted to do very minor works or conduct routine agriculture practice. This is not the case. With regards to buffers, the Provincial Greenbelt Plan applies to the entire Town of NOTL and buffer requirements are not as flexible as they are outside of the Greenbelt Plan.

Given NPCA's role to provide technical review for natural environment matters (i.e. pursuant to the Niagara Planning Memorandum of Understanding), NPCA was asked to attend meetings between the Town of NOTL and the Region, in an effort to help reach a solution prior to the OMB Hearing. Currently, the OMB Hearing date is set for later this fall.

While the Region's Environmental Policies (OPA 187) offer limited flexibility for waiving EIS requirements on lands designated "Environmental Conservation", NPCA has attempted to be pragmatic as to when and to what level of complexity is required, when requesting a proponent prepare an EIS pursuant to OPA 187. NPCA frequently consults with both the RMON and MNR, in an effort to reduce the level of detail and/or time frame required to prepare an EIS. This is referred to as "scoping an EIS". For proponents that consult with NPCA before preparing an EIS, the scoping process ultimately saves proponents time and money. Unfortunately, this has apparently led to perceptions by some, that NPCA is arbitrary in EIS requirements pursuant to Region environmental policies.

Staff from NOTL confirmed at the onset of discussions that EIS requests have in fact, not been a problem for development or the agricultural community in the Town. To



illustrate the point, in 2009 the NPCA screened 48 Planning and Building Permit applications for EIS requirements in the Town of NOTL. Of these, an EIS was only required in 1 instance.

In an effort to help alleviate NOTL Council's concerns, the following course of action was agreed to:

i) Regional staff with consultation from NPCA, have drafted revisions to the Region's current EIS Guidelines for Regional Council's consideration later this year. The most significant changes being proposed include new requirements for preconsultation and better clarification regarding the ability of NPCA to request a "scoped EIS", based on NPCA staff's assessment of the proposed development site.

ii) Much of the concerns apparently stemmed from a few individuals and a poor understanding of what activities the RMON and/or NPCA is actually interested in. Accordingly, both Region and Town staff felt that NPCA could alleviate some of the misinformation by preparing a brochure that could be given out to clients at municipal counters. They felt that the brochure should among other things, summarize where an EIS may be required; where NPCA permits are required and the various administrative processes affecting natural environment matters.

It should be noted that the NOTL staff provided the flow charts contained in the brochure to help explain the process for determining the need for an EIS.

Attached is a copy of the first draft of the brochure. In this regard, it has been circulated to all municipal Planning Directors to solicit comments from municipal staff (including Building Departments) Therefore, although the content will likely undergo change before it is finalized, we are also forwarding it to the Board for information.

**Attachments:**

Draft Brochure: 'Building near Watercourses, Valleys, Wetlands and Shorelines

**RECOMMENDATION:**

**That Report No. 14-11 be received for information.**

Prepared by: John Kukalis; Director, Water Management with input from Suzanne McInnes, Coordinator, Watershed Planning

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

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

**DATE: March 16, 2010**

**SUBJECT: NPCA Strategic Plan – Consultant Selection Report No. 15-11**

Proposals were requested and received from 3 firms, KPMG, Performance Concepts and T.R. Endeavours. Included in the T.R. Endeavours proposal is an addendum that includes additional stakeholder consultation opportunities. Each of these firms specialize in undertaking operational reviews and preparing strategic plans. Attached for reference and discussion is a copy of the pertinent parts of each proposal. A full version copy of each proposal was forwarded to Board Members electronically.

The methodologies to complete Phase 1 of the work plan were similar and included:

Review of materials and start up meeting  
Interviews of internal (staff and members) and external stakeholders  
Public Consultation opportunities  
Plan Development and Review

Each firm demonstrated significant experience in undertaking the work and preparing a plan. Accordingly, the review of each proposal was based on a comparison of the opportunities for internal and external input, differences in methodology and depth of analysis as well as value for the fees requested.

A summary of each proposal is provided below:

## **KPMG**

### **Project Initiation**

- kick off meeting and documentation review
- Steering Committee Interviews (5) to confirm work plan

### **Environmental Scan**

- assess existing and emerging trends that would impact on the NPCA business

### **Stakeholder Consultation**

- 10 - 1 hour stakeholder interviews
- 4 - 2 hour evening community engagement sessions
- 1 - 90 minute focus group meeting with staff
- 1 - 90 minute focus group meeting with Board members

### **Program and Service Model Development**

- develop a high-level program and service model
- model validation
- service level and resource capacity definition

### **Steering Committee Working Session**

- 1 day workshop with staff and members to review and various components of the plan to identify common themes/strategic directions, inventory of opportunities and drivers and implementation options.

### **Plan Finalization, Public Review and Presentation**

- draft plan approved by the Board for public review
- 1 evening community engagement meeting for input opportunities
- final report presentation to the Board

**Project Schedule** - 16 weeks from initiation

**Project Fees** - \$49,950 plus HST plus 5% administrative and out-of-pocket expenses plus travel costs.

### **PERFORMANCE CONCEPTS (including addendum)**

#### **Future Focus (Internal)**

- kick off meeting
- 20 interviews with senior staff and members
- 1/2 day SWOT and Environmental Scan Analysis
- Inventory review of relative NPCA documents
- Optional survey tool

#### **Future Focus (External)**

- 6-8 structured interviews and 1/2 day group working session with selected municipal departments
- full day stakeholder/public input Charette
- 3-4 weekday evening public facilitated meetings/consultation sessions
- 2 - 1/2 day specific working sessions as follow up from public consultation

#### **Assembly of Information**

- 1 – ½ day Board and Senior Management working session
- 2 – ½ day NPCA staff working sessions to develop/refine/endorse plan outcomes
- 1 – ½ day Senior Management Team working sessions to integrate above work

#### **Strategic Plan Production**

- 2 – ½ day Board and Senior Management working session to review draft Strategic Plan issues
- undertake 3<sup>rd</sup> party risk management “stress test” to determine realistic plan deliverables/timelines and implementation capacity
- Production of Draft Plan
- ½ day open house for input from all internal and external stakeholders.

**Project Schedule** – 4 months from initiation

**Project Fees** - \$35,000 plus HST – upset limit includes all expenses and disbursements – the option to develop a online staff survey tool while desirable, is not considered to be necessary at this time and therefore not recommended.

### **T.R. ENDEAVOURS (Stage 1 only as Stage 2 included organizational review)**

#### **Start Up**

- review of relevant studies, plans and policies of the NPCA
- 2 - start up meetings with appropriate staff and members

#### **Focus Group Consultation**

- 2 workshops for senior staff and Board members
- 6 workshops for external stakeholders – two separate types being invitees from NPCA client

segments and for the general public

- develop, tabulate and analyze survey questionnaires (NPCA to distribute) – 400 surveys maximum
- report on results to Steering Committee

#### **Plan Development**

- PEST Scan and SWOT Analysis
- workshop to lead Steering Committee through mission, vision, values and goals objectives
- summarize all workshops and develop a draft strategic plan seeking feedback
- final plan presentation to Steering Committee/NPCA Board

**Project Schedule** – not indicated

**Project Fees (Stage 1)** - \$27,600 plus HST plus expenses (parking, mileage, copying, room and equipment rentals, printing, meeting refreshments and other incidentals – total estimate not provided)

#### **DISSUSSION AND RECOMMENDATION**

In reviewing the proposals, Senior NPCA staff believe that the Performance Concepts proposal outlined the necessary “in depth” research, external and internal consultation and analysis needed to complete the plan as per the NPCA’s expectations. Their proposal is considered to provide the best value for the NPCA and is recommended. From a cost perspective, a direct comparison to the other consultant fees is difficult to quantify as the Performance Concept cost of \$35,000 (plus HST) is an upset limit inclusive of all expenses while the lower cost of \$27,600 (plus HST) from T.R. Endeavours does not include expenses. Ultimately however, the final cost for the project would likely be similar.

#### **RECOMMENDATION**

**That Report No. 15-11 regarding the Strategic Plan Consultant Selection be received; and**

**That the firm of Performance Concepts be retained to undertake the Strategic Plan Phase 1 work in accordance with their proposal dated March 8, 2011 for an upset cost not to exceed \$35,000 plus HST and inclusive of all expenses.**

Respectfully Submitted By:

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



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

**DATE: March 16, 2010**

**SUBJECT: Proposed 2011 Operating Budget Report No. 16-11**

Attached for your review and consideration is the Proposed 2011 Operating Budget which includes 2010 Year End Expenditures, Preliminary 2011 Operating Budget and Revised 2011 Operating Budget.

Levy amount to member municipalities are identical to the preliminary budget approved in the September, 2010 Board meeting and received at the January, 2011 Board meeting. The municipal levy amounts for the operating budget have also been approved by Regional Niagara and the City of Hamilton.

The total revised operating budget has a net revenue and expenditure reduction of \$7,000; from \$8,049,923 to \$8,042,923, with the following explanations.

**Corporate Services**

An increase of \$10,000 in Corporate Management for the anticipated cost of the Strategic Plan (revised from \$25,000 to \$35,000), funded by reserves.

A reduction of \$30,000 in the Corporate Communications Budget to reflect actual Water Smart Funding availability for outreach programs and displays.

**Resource Inventory and Environmental Monitoring**

Increase of \$15,000 Miscellaneous Revenues from Water Smart Funding for additional programming and communication for the Children's Water Festival – Corresponding Increase in Niagara Children's Water Festival Expenditures.

- A program breakdown of the levy to be assessed to each member municipality is shown below:

**2011 Preliminary Operating Budget**

| <u>Operating Budget</u>         | <u>Total Expenditure</u> | <u>Total Levy</u>  | <u>Niagara</u>     | <u>Hamilton</u>  | <u>Haldimand</u> |
|---------------------------------|--------------------------|--------------------|--------------------|------------------|------------------|
| Corporate Services              | \$1,320,000              | \$1,020,000        | \$964,489          | \$40,232         | \$15,279         |
| Resource Inventory & Monitoring | \$527,283                | \$288,700          | \$272,988          | \$11,387         | \$4,325          |
| Flood Protection Services       | \$469,000                | \$249,050          | \$235,496          | \$9,823          | \$3,731          |
| Environmental Advisory Services | \$439,800                | \$255,800          | \$241,879          | \$10,090         | \$3,832          |
| Conservation Land Management    | \$2,786,790              | \$2,747,990        | \$2,731,015        | \$12,302         | \$4,672          |
| Conservation Land Programming   | \$2,311,650              | \$768,500          | \$633,850          | \$125,000        | \$9,650          |
| Vehicles and Equipment          | \$188,400                | \$97,400           | \$92,099           | \$3,842          | \$1,459          |
| <b>Total</b>                    | <b>\$8,042,923</b>       | <b>\$5,427,440</b> | <b>\$5,171,816</b> | <b>\$212,677</b> | <b>\$42,947</b>  |

A comparison with the 2010 operating budget is provided below:

**Levy Apportionment - 2011 Preliminary Operating Budget**

| <u>Municipality</u> | 2010<br>General<br>Levy | 2011<br>General<br>Levy | %<br>Change | 2010<br>Special<br>Levy | 2011<br>Special<br>Levy | %<br>Change | 2010<br>Total<br>Levy | 2011<br>Total<br>Levy | %<br>Change |
|---------------------|-------------------------|-------------------------|-------------|-------------------------|-------------------------|-------------|-----------------------|-----------------------|-------------|
| Haldimand           | \$24,666                | \$33,297                | 35.0        | \$9,590                 | \$9,650                 | 0.6         | \$34,256              | \$42,947              | 25.4        |
| Hamilton            | \$85,265                | \$87,677                | 2.8         | \$125,000               | \$125,000               | 0.0         | \$210,265             | \$212,677             | 1.1         |
| Niagara             | \$2,055,718             | \$2,101,876             | 2.2         | \$2,868,300             | \$3,069,940             | 7.0         | \$4,924,018           | \$5,171,816           | 5.0         |
| Total               | \$2,165,650             | \$2,222,850             | 2.6         | \$3,002,890             | \$3,204,590             | 6.7         | \$5,168,540           | \$5,427,440           | 5.0         |

The General Levy apportionments are based on CA Levy Regulation (O. Reg. 670/2000) for the Niagara Peninsula Conservation Authority modified in accordance with the 4 Year Levy Implementation Plan for the Years 2010-2013 (NPCA Report 63-09).

**RECOMMENDATION**

**That Report No. 16-11 regarding the Proposed 2011 Operating Budget be received; and**

**That the Proposed 2011 Operating Budget with a total expenditure of \$8,042,923 and a general levy of \$2,222,850 and special levies of \$3,069,940 to the Region of Niagara, \$125,000 to the City of Hamilton and \$9,650 to Haldimand County be approved; and**

**That the 2010 matching levy in the amount of \$175,650 and the total non-matching levy in the amount of \$2,047,200 for the 2011 Operating Budget be apportioned to the member municipalities on the basis of the CA Levy Regulation (O Reg. 670/2000) for the Niagara Peninsula Conservation Authority modified in accordance with the 4 Year Levy Implementation Plan for the Years 2010 – 2013 (NPCA Report No. 63-09); and**

**That the special levies for the 2011 Operating Budget be assessed in the amount of \$3,069,940 to the Region of Niagara, \$125,000 to the City of Hamilton and \$9,650 to Haldimand County.**

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



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

**DATE: March 15, 2011**

**SUBJECT: Proposed 2011 Capital Budget – Report No. 17-11**

Attached for your review and consideration is the Proposed 2011 Capital Budget which includes 2010 Year End Expenditures, Preliminary 2011 Capital Budget and Revised 2011 Capital Budget.

Levy amount to member municipalities are identical to the preliminary budget approved in the September, 2010 Board meeting and received at the January, 2011 Board meeting. The municipal levy amounts for the capital budget have also been approved by Regional Niagara and the City of Hamilton.

The budget also includes land acquisition funding as per previous years with total special levy amounts of \$500,000 for Niagara Region and \$100,000 for the City of Hamilton.

The allocation of unspent 2010 Capital Funding as outline in Report 07-11 (February Board Meeting) has been included in the Revised 2011 Capital Budget. There are also revisions relating to additional items with external funding sources.

A description of revisions are outlined below.

## **WATER MANAGEMENT PROGRAM**

### **Watershed Management and Health Monitoring**

Upper Welland River Watershed Plan – 2010 unspent carry forward of \$56,093

Lower Welland River Watershed Plan – 2010 unspent carry forward of \$40,000

Beaverdams and Shriners Creek Watershed Plan – 2010 unspent carry forward of \$40,369

### **Resource Inventory and Environmental Monitoring**

Welland River Watershed Restoration – use of OPG funding for projects and an additional \$33,000 of DFO compensation funds for additional projects.

Watershed GIS – additional funding from Habitat Analysis Canada (\$20,000)

Welland River Agricultural Stewardship - additional grant application for additional projects RAP related projects

12 Mile Creek PCB Trackdown – carry forward MOE funds to complete signs

Watershed General Restoration - WaterSmart funding grant of \$50,000 - Canopy for Kids Program

Watershed Well Decommissioning Project - \$9,800 carry forward from 2010

20 Mile Creek Restoration - \$19,500 from partnership program with NPC

Niagara-on-the-Lake Restoration – additional 20,000 reserve funding amount carry forward from 2010

Lyons Creek Sediment Remediation - \$18,000 Federal Grant carried forward from 2010

Natural Heritage Areas Inventory – 2010 unspent carry forward of \$28,267

### **Flood Protection Services**

Binbrook Dam - 2010 unspent carry over of \$70,438

### **LAND MANAGEMENT PROGRAM**

Ball's Falls CA - \$156,030 carry forward from 2010

Binbrook CA - \$22,528 carry forward from 2010

Chippawa Creek CA - \$26,064 carry forward from 2010

Beamer Memorial CA - \$20,000 carry forward from 2010

Jordan Harbour CA – additional \$86,286 PST rebate amount to this project

Morgan's Point CA – Defer to other years due to Capital Budget Limitations

Rockway CA - \$11,242 carry forward from 2010

Gainsborough CA - \$34,032 carry forward from 2010

St. John's CA - \$34,533 carry forward from 2010

Virgil CA - \$18,000 carry forward from 2010

Mud Lake CA - \$4,000 carry forward from 2010

Two Mile Creek CA - \$3,131 carry forward from 2010 plus an additional budget (see below).

Wainfleet Wetlands – Budget reduction to \$10,000, part of work deferred due to budget limitations.

Woodend – Budget reduction, work deferred pending outcome of DSBN capital initiatives.

Smith-Ness – Budget reduction deferred to other years due to budget limitations.

### **PROPOSED ADDITIONAL CAPITAL EXPENDITURES**

Included in the proposed final capital budget are the following recommendations to undertake additional works in 2011 to be funded through appropriate reserve funds.



**Upper Welland River Watershed Plan** – additional reserve funds of \$15,000 to facilitate public information sessions and report revisions as identified by Board members in a previous meeting.

**Watershed Flood Plain Mapping Update** – Additional proposed \$50,000 from reserves to a partnership with City of St. Catharines to undertake a Flood and Erosion Study.

**Twenty Valley Trail Development** – Proposed additional \$25,000 to undertake staircase reconstruction to address serious public safety issues.

**Stevensville CA** – Proposed additional \$10,000 from reserves to undertake additional trail work.

**Two Mile Creek CA** – Proposed additional \$11,869 reserve amount (Total \$15,000) for capital works related to public safety (paved trail in severe need of replacement).

**Summary**

- the total expenditure for the proposed 2011 Capital Budget is \$5,366,816
- a listing of the implications to the NPCA reserve funds is attached for information
- the general levy to be assessed to the member municipalities is \$614,100, a decrease of \$34,300 from 2010.
- a program breakdown of the levy to be assessed to each member municipality is as follows:

|                                 | Total<br><u>Expenditure</u> | <b><u>2011 Preliminary Capital Budget</u></b> |                    |                  |                  |
|---------------------------------|-----------------------------|---|--------------------|------------------|------------------|
|                                 |                             | <u>Total levy</u>                             | <u>Niagara</u>     | <u>Hamilton</u>  | <u>Haldimand</u> |
| Watershed Studies               | \$1,409,892                 | \$133,880                                     | \$88,850           | \$12,866         | \$32,165         |
| Resource Inventory & Monitoring | \$1,820,347                 | \$799,700                                     | \$728,820          | \$64,777         | \$6,103          |
| Flood Protection Services       | \$469,662                   | \$206,700                                     | \$195,451          | \$8,153          | \$3,096          |
| Conservation Land Development   | \$1,666,915                 | \$725,000                                     | \$500,000          | \$215,000        | \$10,000         |
| <b>Total</b>                    | <b>\$5,366,816</b>          | <b>\$1,865,280</b>                            | <b>\$1,513,121</b> | <b>\$300,796</b> | <b>\$51,363</b>  |

A comparison with the 2010 levy is as follows:

**Levy Apportionment - Preliminary 2011 Capital Budget**

| <u>Municipality</u> | <b>2010<br/>General<br/>Levy</b> | <b>2011<br/>General<br/>Levy</b> | <b>%<br/>Change</b> | <b>2010<br/>Special<br/>Levy</b> | <b>2011<br/>Special<br/>Levy</b> | <b>%<br/>Change</b> | <b>2010<br/>Total<br/>Levy</b> | <b>2011<br/>Total<br/>Levy</b> | <b>%<br/>Change</b> |
|---------------------|----------------------------------|----------------------------------|---------------------|----------------------------------|----------------------------------|---------------------|--------------------------------|--------------------------------|---------------------|
| <b>Haldimand</b>    | \$7,385                          | \$9,199                          | 25                  | \$68,750                         | \$42,165                         | -38.7               | \$76,135                       | \$51,363                       | -32.5               |
| <b>Hamilton</b>     | \$25,529                         | \$24,222                         | -5                  | \$271,400                        | \$276,574                        | 1.9                 | \$296,929                      | \$300,796                      | 1.3                 |
| <b>Niagara</b>      | \$615,486                        | \$580,679                        | -6                  | \$1,198,350                      | \$932,442                        | -22.2               | \$1,813,836                    | \$1,513,121                    | -16.6               |
| <b>Total</b>        | <b>\$648,400</b>                 | <b>\$614,100</b>                 | <b>-5</b>           | <b>\$1,538,500</b>               | <b>\$1,251,180</b>               | <b>-18.7</b>        | <b>\$2,186,900</b>             | <b>\$1,865,280</b>             | <b>-14.7</b>        |

The General Levy apportionments are based on CA Levy Regulation (O. Reg. 670/2000) for the Niagara Peninsula Conservation Authority modified in accordance with the 4 Year Levy Implementation Plan for the Years 2010-2013 (NPCA Report 63-09).

**RECOMMENDATION:**

**That Report No. 17-11 regarding the Proposed 2011 Capital Budget be received; and**

**That the Proposed 2011 Capital Budget with a total expenditure of \$5,366,816 and a general levy of \$614,100 and special levies of \$932,442 to the Region of Niagara, \$276,574 to the City of Hamilton and \$42,165 to Haldimand County be approved; and**

**That the 2011 general levy in the amount of \$614,100 be apportioned to the member municipalities on the basis of the CA Levy Regulation (O Reg. 670/2000) for the Niagara Peninsula Conservation Authority modified in accordance with the 4 Year Levy Implementation Plan for the Years 2010 – 2013 (NPCA Report No. 63-09); and**

**That special levies for the 2011 Capital Budget be assessed in the amount of \$932,442 to the Region of Niagara, \$276,574 to the City of Hamilton and \$42,165 to Haldimand County.**

Respectfully Submitted By:

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



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

**DATE: March 16, 2011**

**SUBJECT: PFOS Compounds at the Binbrook Reservoir – Report No. 18-11**

In 2009, Environment Canada collected plasma from snapping turtles as part of a study on organic toxins accumulation. The Binbrook Reservoir was sampled along with Cootes Paradise and the Lower Humber River. Binbrook was selected for use as a reference site or "control" population because the watershed was rural, and relatively un-impacted by industrial or municipal sewage discharge.

The plasma samples were tested for a wide variety of pollutants. During the analysis researchers discovered higher than expected amounts of perfluorooctanesulfonic acid (PFOS) a persistent organic pollutant (POP) in plasma from turtles in the Binbrook Reservoir. Some of the levels were 10 times higher than those of turtles sampled in Cootes Paradise and the Humber River. The attached memorandum, prepared by Joshua Diamond, Water Quality Specialist, provides additional detail on PFOS. In May of 2009 Stockholm Convention on Persistent Organic Pollutants added PFOS to a list of compounds that could pose a risk of causing adverse effects to human health and the environment".

The study findings were communicated to the Niagara Peninsula Conservation Authority, Environment Canada and the Ministry of the Environment (MOE) in early 2010. Since snapping turtles are not consumed by the public, researchers recommended additional studies on sport fish to determine if humans were at risk for exposure to PFOS. Fish were harvested from the reservoir in early 2010. In addition, samples of fish collected in 2009 were re-analyzed for PFOS. In late 2010, the MOE confirmed that some of the samples taken from the reservoir exceeded the fish consumption advisory levels.

Based on this new information, the MOE and the Ministry of Natural Resources (MNR) revised the sport fish consumption advisory for Binbrook Reservoir in December 2010. This information would not normally be circulated until the 2011-2012 Guideline to Eating Ontario Sport Fish is published in the late spring. Since the NPCA operates a popular ice fishing program at Binbrook, starting in January, Authority staff received permission from the MNR to produce an information sheet for distribution to park visitors.

Over the past two years, Authority Staff have been working with the Federal and Provincial Ministries to ensure access to the reservoir for sampling and monitoring. Although the Authority has an extensive water monitoring program above and below the Binbrook Reservoir, PFOS is not one of the parameters tested. The responsibility for monitoring, trackdown and abatement falls to the Ministry of the Environment.

The MOE is currently planning on conducting a sampling survey of sediment upstream and downstream of the Binbrook Reservoir. The ministry's goal through this survey is to potentially identify the source of the contamination and any remedial action that may need to be taken. Part of this study will also include additional fish samples and wildlife to be analyzed for PFOS contamination, which may result in other changes to the consumption guidelines if adverse results are found. The NPCA will be advised of the findings along with other agencies/landowners impacted by the contamination.

This report is provided for information purposes. Based on the most recent information, staff believe that appropriate steps have been taken to safeguard the health of our visitors. New consumption guidelines will allow anglers to make informed decisions about eating fish from the reservoir. Based on our research, the threat to swimmers or others that would come into contact with the water is very low. Staff will continue to cooperate with the MOE and Environment Canada and assist wherever possible in efforts to track down the source of the pollution. Staff will report back to the Full Authority as information becomes available.

**RECOMMENDATION:**

That Report No. 18-11 regarding PFOS Compounds at the Binbrook Reservoir be received.

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

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



## Memorandum

**DATE:** March 2<sup>nd</sup>, 2011

**FROM:** Joshua Diamond, Water Quality Specialist

**TO:** Tony D'Amario, CAO  
Niagara Peninsula Conservation Authority

**RE:** PFOS and Binbrook Reservoir

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This technical memo will provide information about perfluorooctanesulfonic acid (PFOS) and its occurrence in Binbrook Reservoir biota.

### Background

- Perfluorooctanesulfonic acid (PFOS) is a type of perfluorinated compound (PFCs) which is used in chemical applications such as fire-fighting foams, hydraulic fluids, carpet spot removers, mining, oil surfactants and other specialized chemical formulations.
- PFOS compounds are persistent in the environment, bioaccumulate in tissues/blood and are toxic.
- Unlike other persistent organic pollutants that persist in body fats, PFOS are found in the blood and liver of animals.
- It is not fully understood how PFOS bioaccumulates in fish but it likely through a combination of pathways such as ingestion of contaminated food and sediment and absorption from the water.
- Similarly, the accumulation of PFOS in humans is not fully understood but the major pathway is likely through the ingestion of contamination food.
- The effects of PFOS on human health are largely unknown but there is significant research on a variety of aquatic and terrestrial species highlighting the toxic effects of PFOS.
- The human body is slow to rid itself of PFOS.
- Minnesota Pollution Control Agency reports exposure to PFCs (including PFOS) through swimming is very low. These compounds are poorly absorbed through the skin and incidental ingestion of surface water while swimming would not likely expose someone to significant doses. Also, because PFCs are not easily evaporated from water into the air, breathing them in while swimming or bathing is not a health concern.

### Known Legislation

- Recently added (Feb 3<sup>rd</sup> 2011) to the *Virtual Elimination List* in the complied under the *Canadian Environmental Protection Act 1999*. The addition of PFOS to the *Virtual Elimination List* demonstrates Canada's commitment to virtually eliminated PFOS from entering the Canadian environment.
- PFOS has been added to the Annex B of the Stockholm Convention on Persistent Organic Pollutants in May 2009.

### Occurrence at Binbrook Reservoir

PFOS were found in the plasma of snapping turtles in 2009/2010 by Shane de Solla of Environment Canada as part of an organic toxins accumulation study. Based on these results Shane alerted the NPCA, Environment Canada and MOE Environmental Monitoring and Reporting Branch (EMRB). As of result, the Sport Fish Contaminant Monitoring Program (SFCMP) of EMRB collected new fish samples and re-analyzed older fish samples for PFOS concentrations. Concentrations of PFOS of some of these samples exceeded the fish consumption advisory levels. Based on these results the EMRB SFCMP and Ministry of Natural Resources together produced an updated sport fish consumption advisory for Binbrook Reservoir in the 2011-2012 *Guideline to Eating Ontario Sport Fish* guide.

### Notable changes to the fish consumptions advisory at Binbrook Reservoir

*For Sensitive Population (children under 15 and women of child-bearing age)*

- Complete restriction on Carp (all sizes) and Brown Bullhead (25cm size) consumption
- Reduction to 4 meals per month for Black Crappie (15cm size)

*For General Population*

- Complete restriction on Carp (45cm, 50cm, 55cm sizes)
- Reduction to 4 meals per month for Black Crappie (15cm and 20cm sizes)

### Additional Follow-up Information by MOE EMRB

- In Fall 2009 four sections of the Welland River downstream of Binbrook were sampled and analyzed for PFOS. If results are available they will be included in the 2011-2012 guide.
- Channel Catfish were collected in the Fall 2010 and currently being analyzed by for PFOS levels and will be included in the 2011-2012 guide.

If you have any questions or require additional information please do not hesitate to contact me.

Regards,

Joshua Diamond M.Sc.

Water Quality Specialist, Niagara Peninsula Conservation Authority

Phone: 1-905-788-3135, ext. 246 Email: [jdiamond@npca.ca](mailto:jdiamond@npca.ca)



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

**DATE: January 11, 2019**

**RE: PROJECT STATUS REPORT - REPORT NO. 19-11**

## **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. Staff also continue to monitor the water levels at our 13 gauge stations on a daily basis as part of the NPCA's routine flood forecasting/warning duties. The public is able to access this real-time information through the NPCA's website.

ii) The series of snowfalls and rain events in early March lead to the NPCA issuing three 'Flood Safety Bulletins'. The NPCA observed that, while high water levels were noted within the watercourses and localized nuisance flooding did occur in typical flood-prone areas, the flood waters remained below critical levels. No structural flood damage was observed or reported.

iii) Staff has been working on quantifying the accuracy of weather RADAR data in comparison to tipping bucket rain gauges to assess its application in Flood Forecasting. Rain events are being subdivided into weak vs. intense storms, fast-moving or slow-moving storms to determine which scenarios of NexRAD data can be relied upon for NPCA use.

iv) NPCA Snow Survey Project: The Niagara Peninsula observed a steady snowpack throughout the season with water content continuing to increase from January 15th to March 1st. For the 2009-2010 season, the highest snow depth values were recorded March 1st, while this year they were recorded at the beginning of February (similar to 2008-2009 season). In 2008-2009, there were only 3 snow survey dates (snow on ground), while in 2009-2011 there were 5 (suggesting a longer period of snow cover during the past 2 winter seasons). The average water content for 2010-2011 was 14.82%, and average depth was 18.79cm. In 2008-2009 the average snow depth was 15.66cm, and in 2009-2010 it was 6.87cm.

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

#### **i) Permits**

The NPCA has approved 15 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 12 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 5 municipal drain projects during the current calendar year.

## **3) Floodplain Mapping**

### **i) Wignall Drain – City of Port Colborne**

The NPCA is presently undertaking the necessary calculations, field work, and map analysis to accurately determine the extent of the 100 year flood elevations for the Wignall Drain located in the City of Port Colborne.

### **ii) Point Abino Drain – Town of Fort Erie**

The NPCA is presently undertaking the necessary calculations, field work, and map analysis to accurately determine the extent of the 100 year flood elevations for the Point Abino Drain located in the Town of Fort Erie.

### **iii) Singers Drain – City of Thorold**

The NPCA is presently reviewing the Singers Drain Floodplain Mapping Report by AMEC Engineering as submitted as part of the Port Robinson West Subwatershed Plan.

## **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 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.

i) Precipitation Station Update: Welland Waste Water Treatment Plant (WWTP) station installation is being finalized March 14, 2011; Crystal Beach WWTP station equipment is installed, programmed and ready, but is awaiting Bell phone line; Kalar Road station has a new phone line installed and is scheduled to be completed March 16.

ii) Gauge Stations Update: The proposed E.C. Brown station is currently in the planning stages. NPCA staff have met with the GRCA and TRCA staff for assistance on this project; Internal upgrades to the Big Forks Station will be completed once hydro and bell installations occur in the spring.



## **Watershed Planning Division**

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

Staff continue to respond to a steady stream of planning and building permit applications. A significant amount of work continues on the review of locally adopted Official Plans that are currently before the Region of Niagara for approval.

### **2) Watershed Plan Preparation**

#### **a) Lake Erie North Shore Watershed Plan**

The Lake Erie North Shore Watershed Plan is complete, was submitted to the Board in February and is pending approval.

#### **b) Central Welland River Watershed Plan**

This Central Welland River Watershed Plan is complete, was submitted to the Board in February and is pending approval.

#### **c) Beaverdams and Shriners Creek Watershed Plan**

Final updates to the Phase One Report are currently being made.

#### **d) Upper Welland River Watershed Plan**

The DRAFT Upper Welland River Watershed Plan is complete and has been distributed for staff commenting until April 1<sup>st</sup> and posted on the NPCA website for public commenting until April 15<sup>th</sup>.

#### **d) Lower Welland River Watershed Plan**

Research and writing of the Lower Welland River Characterization report is underway.

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

The Scenario Development Team has completed the first of the target setting meetings related to Hydrologic Function of the Natural Heritage System on March 3rd. The next meeting on April 7<sup>th</sup> will see the introduction of target setting information to complete the Hydrologic Function and Ecological Function at a Course Scale.

The Communications Committee has met to work on the communications strategy for the project. They are hoping to present their draft to the Steering Committee in the spring.

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

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

Source protection staff continue to work on developing the Source Protection Plan (SPP), with assistance from Niagara Region, and key SPC members.

The *Amended Proposed Assessment Report* was approved by the Source Protection Committee (SPC) March 8, 2011. The report will be posted on the internet for 30-day public commenting period starting March 18, 2011. An open house public meeting is scheduled for March 29, 2011. The SPC will review comments from the public consultation, make appropriate revisions, and then submit the report to the Source Protection Authority (SPA) for comments, before it is submitted to the Ministry of Environment.

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

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

Water Quality Monitoring staff are currently planning field work for the 2011 season. Surface water quality monitoring is tentatively scheduled for 72 stations (same as 2010) but this is dependent on funding.

#### Confirmed Funding

- 13 station through NPCA program
- 11 stations in partnership with the City of Hamilton in-kind funding
- 6 stations in partnership with Ontario Ministry of Environment through Provincial Water Quality Monitoring Network
- 22 stations in partnership with Water Smart Niagara

#### Pending Funding Approval

- 10 stations through Region of Niagara in-kind funding
- 10 stations through Great Lakes Sustainability Fund

Planning for biological monitoring is currently underway and will include the Hamilton Airport stations and other NPCA water quality monitoring stations.

The NPCA continues to collect groundwater level data at 15 monitoring wells as part of the Provincial Groundwater Monitoring Network (PGMN). Water quality sampling at PGMN stations is tentatively scheduled for spring but this is dependent on funding available through NPCA program. A second water quality sampling event in the fall is scheduled and is funded through MOE's PGMN program.

Water quality staff are beginning to analyse 2010 water quality data for the annual water quality report.

### **b) Special Projects**

Water quality staff are continuing to work on the Welland River Eutrophication Study. The NPCA hosted a final Technical Working Group Meeting on Feb 24<sup>th</sup> to discuss the results of the study and to determine delisting criteria for this project. NPCA staff produced a technical report for this meeting. Staff are working on the final report but awaiting comments from study partners. The deadline for the final report has been delayed to accommodate this commenting period.

NPCA staff are working on Glanbrook Landfill and Hamilton Airport Biological Assessments and these should be completed in early April.

NPCA Water Well Decommissioning Grant Program: Requests for application continue to be received for this program.

St. David's Well Decommissioning: NPCA staff continue to provide technical expertise and assistance to Niagara Region Public Works for abandoning the former St. David's municipal well field and reservoirs. The project is expected to continue through 2011.

Hydrogeology and water resources work in the last month included:

- 3 private servicing study reviews for Watershed Planning.
- Technical assistance for the MOE Climate Change monitoring program in Niagara.
- Technical assistance for Integrated Community Planning Water Policies project
- Niagara College and Brock University Intern Rural Water Use projects.
- 1 development application adjacent a provincially significant wetland; and
- Hydrology consultation for the Natural Heritage System project.

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

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

- Based on recent changes to the provincial schema and a reporting requirement from MOE, the data for the Assessment Report Database was repopulated and uploaded to the central infrastructure again this month.
- Due to the refinement of the IPZ-1 boundary for the Decew intake the managed land and livestock density analyses were recalculated.
- Several figures to the Assessment Report were updated

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

- The finalized evaluated wetlands from MNR for Haldimand County have been integrated into the Natural Areas Inventory and wetland mapping.
- The Authority's plan review and regulations screening mapping are being updated based on several significant technical studies and hazard inventory updates.
- Spatial analysis of the natural areas inventory continues and is providing new insight into the composition of our natural areas in a landscape context. Statistics as the current status to compare in context of potential ecological objectives of the NHS evaluation continue to be calculated for consideration by the Scenario Development Team. So far stats to inform target development for NHS Hydrologic Functions have been completed, and effort is now on NHS Course Scale Habitat Functions. Similar statistics are also being considered for comparison against the habitat delisting criteria of the Niagara River Remedial Action Plan.

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

- The SWOOP 2010 orthoimagery for Niagara and Hamilton have been received. Haldimand and other project deliverables (control) are still outstanding.
- The Large Scale Hydrology Mapping Maintenance pilot project on Twenty Mile Creek that the Authority is completing in partnership with the Water Resources Information Program from the Ministry of Natural Resources is in full production. The initial schema development and update of the mapping for the study is now complete, next phase is to integrate that with the terrain data to create a watershed model. Documenting the methodology continues as well and is the chief deliverable so that it can eventually be applied to rest of the watershed.

## **V. Watershed Restoration Division**

### **1) Project Implementation**

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 are being planned for 2011.

### **2) General Restoration**

- In total 35 woodland restoration / riparian projects will be 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. Over 100,000 trees and shrubs will be planted. Over 20,000

wildflowers and grass plugs will be planted and over 30 kilograms of native seed will be sowed into restoration project sites.

- Construction projects such as wetland restoration, aquatic in-stream works, erosion and bank stabilization projects are currently being planned. Over 25 wetland and riparian projects across the watershed will be completed this year with contributions from Ducks Unlimited, Great Lakes Sustainability Fund, Species at Risk Farm Stewardship Program, Niagara Community Foundation, Canadian Tire Financial, St. Catharine's Green Committee, and TD friends of the Environment.
- Best Management Practice (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 planned. Over 40 BMP projects will be implemented across the watershed with contributions from Great Lakes Sustainability Fund, Environmental Farm Plan and Species at Risk Farm Stewardship Program.
- Seven project interpretative signs will be produced and installed at key project sites across the watershed. These signs will provide education and awareness about the work of the NPCA relating to water quality and habitat biodiversity improvement.

### **3) Yellow Fish Road**

Program information has been sent out to schools and clubs within our area of jurisdiction. Requests to participate from teachers and parents have already started coming in for the 2011 season.

### **4) Canopies for Kids - ECO School Program**

The Niagara Peninsula Conservation Authority is pleased to introduce *Canopies for Kids*, a new program aimed at planting shade trees in school grounds. The goal of *Canopies for Kids* is to engage young students and volunteers 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.

The science-based program is adapted for grades 1 to 8 and meets the Life Systems Strand of the Ontario curriculum. The program will provide a deeper look at how trees improve biodiversity, water quality and air quality. Studies have shown that trees can reduce asthma rates related to poor air quality, contribute to increased physical activity, mood improvement and promote psychological well being. Students will learn about the benefits of trees and forests and how they help our ecological, economic and social environment.

The *Canopies for Kids* program is a progression of the highly successful Eco-School program which was executed across the watershed over the past 5 years. Schools selected to participate in *Canopies for Kids* will be engaged through interactive school assemblies / workshops provided by NPCA program staff. Staff will work with the school teams on planning and site design incorporating both large and small native to Niagara tree species. The Conservation Authority sent detailed program information to all schools in our jurisdiction. There is no cost to the participating schools and a maximum of 10 schools per year will be selected for participation. The program is expected to be executed over a multiyear time frame and is anticipated to begin in April 2011. To date over 25 applications have been submitted. The deadline for application is Friday March 25<sup>th</sup>.

### **5) Community Fisheries Involvement Programs**

The Angler Diary Program continues to collect data from anglers in the Welland River and Twelve Mile Creek watersheds. 2011 Angler Diaries for both watersheds have been sent out to anglers that have returned their 2010 diaries. Additional Angler Diaries are in the process of being printed and can be obtained by contact the NPCA.

## **6) Earth Day**

Staff will be hosting our 3rd annual Earth Day event on April 19<sup>th</sup> (Earth Day, the 22<sup>nd</sup> is Good Friday) at the E.C. Brown Wetland Restoration Project site. Several school groups will be on hand to assist in the planting of trees and shrubs as well as assisting with monitoring exercises for both flora and fauna. The event will also be open to public participation.

## **7) Landowner Stewardship Guide**

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 topic sections will focus on improving water quality and biodiversity. An application to the Niagara Community Foundation is being made in order to secure additional funding for this document. It is anticipated to be completed in mid 2011.

## **8) Niagara Envirothon**

The Canon Envirothon is a North American wide competition that gets high school students in an outdoor setting to learn about soils/landuse, aquatics, forestry and wildlife, as well as a current issue. Teams start at the local level and the winning team moves on to the Provincial level. From there the winning team goes on to compete on an international level at the Canon Envirothon. The NPCA helps to coordinate this locally, in partnership with Land Care Niagara and the Bert Miller Nature Club. A grant was received from Water Smart Niagara to support the program costs.

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

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

The Contaminated Sediments Technical Advisory Group (TAG) met in mid-February, and received presentations on the Sediment Transport Study and the PCB Decay Study Results. The Administrative Controls Protocol document has been signed by all except one (expected in April 2011) of the participating agencies. It will then be posted on the Ministry of the Environment's Environmental Bill of Rights (EBR) web site.

The NPCA will act as the lead coordinating agency in implementing the Protocol and next steps will involve establishing a Management Framework Agreement between the stakeholders and a public communication strategy.

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

The NPCA is the lead in the multi-agency technical working group for the Welland River Eutrophication Study that has been underway since 2008. The purpose of the project is to help develop delisting criteria for the BUI: *Eutrophication & Undesirable Algae*. The group met in late February and discussed the data collected over the past three years. The final report will include recommendations for nutrient targets and next steps.

A workshop is being planned in March to address the BUI: *Loss of Fish & Wildlife Habitat*. The purpose of the workshop is to develop a draft RAP habitat strategy.

The next RAP Coordinating Committee meeting is scheduled for mid-April 2011.

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

A Proposal Notice to extend the current Agreement through to June 24, 2012 has been posted on the Environmental Registry.

#### **4) International Liaison**

The International Association for Great Lakes Research (IAGLR) Conference will be held in Duluth, Minnesota, May 30 – June 3, 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".

#### **5) Update: Great Lakes Water Quality Agreement.**

The current GLWQA is the revised Agreement of 1978 as amended by Protocol in 1987. Negotiations between Canada and the U.S. for renewal of the Agreement may extend into 2012.

In the meantime, the International Joint Commission (IJC) released its 15<sup>th</sup> Biennial Report in March 2011. Also, the 2011 Great Lakes Biennial meeting will take place at Wayne State University on October 12-14, 2011.

### **LAND MANAGEMENT**

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

Staff has installed the travelling exhibit, "Child's Play", A Century of Toys. This exhibit from Haldimand Museums runs from February 10 – April 25. Andrea Wilson, Program Assistant met with Cheryl Clock from "The Standard", which resulted in a cover feature in the Today section, promoting the features of the exhibit in time for March Break. Cogeco has also filmed the exhibit.

Indoor and outdoor activities offered during Family Day on February 21 attracted about 200 visitors. A full schedule of activities are planned for families visiting during March Break.

Eco-Adventures March Break Day Camp is fully booked, with most registrants participating for the entire week. Volunteers are assisting with delivering this program.

Ball's Falls will host the Ontario Eastern Bluebird Society and the Glanbrook Conservation Committee, "Bluebird Nest Box Workshop" on March 19. "Fun for Wee Ones" takes place on March 22 and the "Natural Creams and Balms" workshop on March 27 still has a few openings available.

Forward planning for exhibits continues. Staff met recently with "Community Artists Niagara" to investigate programming options and the Niagara Needle Arts Guild to discuss the Exhibit planned for 2013. The Ontario Archaeological Society has also been approached with regard to future exhibits.

Site staff continue to provide copy to the Consultant for the Ball's Falls web page.

Site staff have prepared a variety of marketing materials for the 2011 season, including an overview of upcoming programs for spring. The 2011 Education Programs brochure has been prepared and circulated to school boards in our watershed.

Our Brock interns have completed their term. Both individuals were helpful in completing tasks required for program implementation.

Ball's Falls will be partnering with MNR and Rachel Hamilton, a Masters student from the University of Western Ontario to monitor and study migrating bats in Ontario.

Maintenance staff have completed the required training to proceed with stabilization work on the Barn. A number of custom made white pine braces, cabling and steel brackets will be installed. The barn will also be re-clad in white pine. Efforts are being made to maintain as much of a historical ambiance as possible. The project is progressing on schedule. Barn rentals have been booked from the end of April to October 31. Friday and Sunday rentals are also becoming popular as alternative days for weddings since almost all Saturdays are taken.

Our Guest Book during February recorded visitors from London, Toronto, Oakville, St. Catharines, England, Beamsville, Kirkland Lake, Niagara Falls, Dunnville, Simcoe, Wellandport, Rockway, Smithville and Caledon East.

Staff met with University of Western Ontario and the Ministry of Natural Resources regarding bat research at the Ball's Falls. This research includes several study areas across Ontario to assess a correlation of geographical landscape features with bat migration. The study explores migratory bat activity along linear landscapes (such as escarpment corridor forests).

### **Binbrook Conservation Area**

The Hard Water Crappie Derby (ice fishing derby) was up in numbers from 2010 with a total of 393 people fishing. This number is only 3 participants off our best year ever. Our corporate sponsor, Fishing World, supplied prizes from fish finder, dry suit, ice fishing toboggan and winter wear and a wide variety of rod reel combo's and assorted gear and clothing. Ice depth was between 14" and 18".

Samples of pike were taken as part of the Ministry of Environment perfluorooctanesulfonic acid (PFOS) study.

On the February 4-6 weekend, Binbrook hosted a winter scout camp with 35 campers participating. On February 26 a group of 16 Girl Guides made a day visit to the site with activities from ice fishing lessons, ice safety and ice identification by Fishing World co-owner Mike Jackson.

Members of the Hamilton Amateur Astronomers met with staff recently to express their appreciation for their use of the park by their club members. They brought forward a proposal to donate a new information kiosk to the park as a club project. Kiosk plans were provided by the club for staff review, consisting of three information boards under a small roofed canopy sitting on a concrete pad. Plans and location are being reviewed by staff, with the intent this project will go ahead this summer in partnership with the club.

Last year the Hamilton public health unit advised that new public health guidelines for water facilities were coming that would affect our splash pad operation. Construction is now underway at the splash pad to retrofit the holding tanks for the recirculation system, and add additional disinfection and filtration systems on site to meet compliance. Staff will be implementing new operational procedures as the pad comes back into service this spring.

### **Long Beach and Chippawa Creek Campgrounds**

The new Media Mix Interactive (MMI) online reservation system has been running without a hitch since March 1. This has enabled the NPCA to offer reservation services 6 weeks earlier than in past years. More importantly, it now allows campers to reserve 24/7 from the comfort of their home.

Overall, reservations have been light. Staff expected that it would take some time for the public to become aware of the service. News releases and a TV interview set for March 16 are ways we are taking the news about this service to the public.

Seasonal campers have received invoices for their 2011 campsites and have been paying their bill ahead of the Mar 31 deadline. Staff are pleased to report that numbers look very good so far for 2011!

Tree felling of over-mature hybrid poplars (a non-native species) is nearing completion at CCCA. This spring will bring to a close the ten-year process to eliminate these trees from our campgrounds. The process spanned ten years at CC due to the impact that removing such a large number of trees would have by enabling the release of young trees over time.

Final steps are underway to commission the CCCA sewage system for spring start-up. This includes hook-up of the electrical supply and spring landscaping. Work is on target for an April 30 start-up / testing of the system.

### **Jordan Stairs**

The wooden stairs down the escarpment behind the Jordan museum are nearing the end of their lifespan and need to be replaced. Staff will be looking at cost-effective designs for a new staircase that reduces the footprint on the escarpment and utilize a metal structure for longevity. A detailed topographic survey of the site will be undertaken to prepare the detailed design plans for future installation by staff.

### **St Johns Conservation Area – Memorial Benches**

In response to donor requests for memorial benches, St Johns CA has been chosen as a new location for memorial benches to replace the existing benches around the pond. Staff have provided the foundation with a bench location plan for donors to review. We are already assembling five new memorial benches for installation at the pond this spring.

### **Beamer Memorial Conservation Area**

Hawkwatch Season started March 1<sup>st</sup> with the Niagara Peninsula Hawkwatch Group monitoring the number of raptors that pass over the site from 8 a.m. to 4 p.m. each day.

Friday April 22 the group will hold its annual Open House to educate the public on this natural phenomenon. The event will include 'Hawk Talks', Hawk information, a live raptor demonstration and Nature Group displays.

### **Wainfleet Bog Conservation Area**

The Ontario Eastern Massasauga Recovery Team meeting will be held in Niagara this April. Authority Staff will be attending the meeting to report on management activities in the Wainfleet Bog. Delegates will be going on a field trip to the bog for a site tour.

### **Species at Risk**

Flowering Dogwood is an endangered plant in Ontario, protected under the Endangered Species Act, 2007 (ESA). It occurs within and/or near a number of NPCA properties. The MNR is developing a regulation to identify the protected habitat for eastern flowering dogwood and is looking for input on its content through the Environmental Registry. The areas being proposed for protection are those within a 20 metre radius of the tree and areas supporting the growth of the tree (i.e. forested area that supplies shade, soil or favourable moisture conditions). When



habitat is regulated it will allow activities that will not damage or destroy habitat. The NPCA has no concerns with the proposed regulation as it is consistent with the management activities in our Conservation Areas.

### **NPCA Hunting Program**

Staff has issued an additional 21 hunting permits in for the NPCA Conservation Areas in 2011. To date staff has received and issued 76 hunting permits/permission for 2011. Of these, permits are issued to 12 individuals residing outside of our administrative area.

### **Lathrop Property – Fonthill**

Staff assisted the Nature Conservancy with their mapping of the property, gathering additional trail information from the adjacent town lands. The NCC will be using this information to update their mapping and property information file.

### **Ontario Trails Council Conference – Stevensville Conservation Area**

The Ontario Trails Council and Sustainable Trails Ltd are hosting a trail conference and trail building workshop in Niagara Falls April 18-21. The NPCA is partnering to host the trail building portion of the workshop at Stevensville Conservation Area April 20-21<sup>st</sup>. Workshop participants will be learning trail building techniques while doing hands-on trail work around the pond at the new bridge. The conservation club is providing use of the club building to the participants and catering lunches both days. More information on the event is available online at [www.trailheadontario.com](http://www.trailheadontario.com)

## **COMMUNITY RELATIONS**

### **Annual Report**

Preparations are underway for the production of the Annual Report. Staff anticipates that this will be complete in April.

### **Eco School Presentations**

Plaques for the 2010 Eco School program participants have been produced and will be presented at the March 22<sup>nd</sup> District School Board of Niagara meeting and on March 29<sup>th</sup> at the Niagara Catholic District School Board meeting.

### **Earth Day Activities**

A number of requests to assist with Earth Day (April 22, 2011) activities have been received. The NPCA is providing information to as many organizations as possible to assist with their efforts to promote environmental stewardship.

### **Niagara Region Science and Engineering Fair**

The 48<sup>th</sup> Annual Science Fair will be held at Niagara College, Welland Campus on Saturday, March 26<sup>th</sup> and the Awards ceremony will take place on April 6, 2011 at centennial High School. The Conservation Authority has supported this important initiative for many years.

## **Annual Good Friday Hawkwatch Open House**

The annual Niagara Peninsula Hawkwatch open house at Beamer Memorial Conservation Area is being planned for Good Friday, April 22, 2011, which this year coincides with Earth Day. A number of activities to tie in these two major events are being planned.

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

Plans for the 2011 Water Festival are proceeding and staff are currently working on following up with potential sponsors. Plans for the Public Day scheduled for Sunday, September 11<sup>th</sup> are proceeding well. Invitations will again be extended to watershed municipalities inviting them to set up displays showcasing their environmental initiatives.

## **Source Protection Planning**

The 'Amended Proposed Assessment Report' was approved at the Source Protection Committee meeting held on March 8<sup>th</sup> and a public open house is being planned for Tuesday, March 29<sup>th</sup> at the Four Points Sheraton. There will be two sessions, one in the afternoon and one in the evening.

## **Chinese Delegation**

NPCA was pleased to host a delegation from Xinchang County, Zhejiang Province, China on March 7<sup>th</sup>. The delegation consisting of staff and executives from various sectors of the environment was interested in learning about the Conservation Authority's practices in watersheds planning and management. The meeting which included an exchange of ideas and experiences was of mutual interest.

## **Presentations**

The Director of Communications and the Executive Director of the Conservation Foundation will be making a presentation to the St. Catharines Probus Club regarding the work of the Conservation Authority on April 12<sup>th</sup>.

## **Glanbrook Conservation Committee Celebrates 20<sup>th</sup> Year**

The Glanbrook Conservation Committee is an active group that provides a great deal of assistance at Binbrook, helping with numerous activities including osprey monitoring, garbage pick-up, bluebird nest monitoring, monitor and remove purple loosestrife along the Lake Niapenco shoreline. In addition, they assist staff with numerous community outdoor events including the winter and spring crappie derby. No matter what the weather, this active group of dedicated volunteers is always ready and willing to lend a hand. The volunteers help the Authority to maintain the area and the restoration efforts are contributing to significant habitat and water quality improvement.

The Authority is pleased to acknowledge the many accomplishments of the Glanbrook Conservation Committee over the past 20 years. A number of people will be attending a celebration to mark this momentous occasion on March 26<sup>th</sup>.

## **Niagara Heritage Study**

Staff is attending the Scenario Development Team sessions. A draft outreach and communications plan is being developed in anticipation of rolling out the project to the public and other community stakeholders regarding the project.

## **Great Lakes St. Lawrence Cities Conference**

Mayors of the Great Lakes and St. Lawrence Cities Initiative will gather for three days June 15<sup>th</sup> – 17, 2011 to discuss efforts regarding protection and restoration of the Great Lakes and St. Lawrence River. The planning committee is meeting regularly to coordinate the conference which takes place in Niagara Falls June 15-17, 2011.

## **NIAGARA PENINSULA CONSERVATION FOUNDATION**

### **Elimination Draw, Dinner & Auction**

Board members are urged to attend and encouraged to help spread the word about the Foundation's 'fun'draising event taking place on Friday, April 1<sup>st</sup> at the Welland Lions Community Centre on River Road. For only \$65 a ticket, guests will be treated to a delicious five-course dinner, all drinks and the chance to win \$1,300 in cash prizes. Please notify staff if flyers or tickets are required.

### **Funding**

The Foundation has been successful in obtaining a grant in the amount of \$2,000 from the Niagara Community Foundation to support the development of a landowner stewardship guide for residents throughout the watershed.

The Foundation has partnered with Simply the Best Mobile Catering to provide services at the Hawkwatch event on April 22<sup>nd</sup> as well as the trout pond opening at St. Johns on April 23<sup>rd</sup>. A portion of the proceeds from sales at these events be donated to local conservation projects.

### **Golf Tournament**

The *2011 Bob Welch Memorial Classic* will be taking place on Tuesday, June 7<sup>th</sup> at the Whirlpool Golf Course. Registration and sponsorship packages have been prepared and sent to previous golfers and new prospects. It has been confirmed that our hole-in-one contest will be sponsored again this year and staff will continue to work on securing additional sponsors and donations for this tournament. Board members are asked to encourage participation and use their connections to solicit auction items for the event.

### **Conservation Education Bursaries**

Information and applications have been forwarded to schools and former recipients for this year's round of bursaries. These \$1,000 bursaries assist secondary and post-secondary students from the Fort Erie and surrounding area that are planning to pursue conservation-related studies. Deadline for applications this year is May 27<sup>th</sup>.

### **Sale of Rain Barrels**

The Foundation will host a truckload sale of rain barrels on April 30<sup>th</sup>, the 51<sup>st</sup> anniversary of the NPCA, in the NPCA parking lot from 9:00 am – 1:00 pm. Rain barrels will be sold for \$55 each and funds raised will support local conservation initiatives. Available in three colours, each is equipped with a mosquito and leaf debris filter basket, an overflow host, an outlet to join rain barrels together in a series and a spigot at the bottom which can be connected to a standard garden hose. These environmentally-friendly products were once used to import fruits and vegetables and have been refurbished and repurposed as rain barrels. There are no limits or residency requirements imposed on orders. Orders can be made securely online in advance at [www.RainBarrel.ca/Welland](http://www.RainBarrel.ca/Welland) or by calling the Foundation office.

**Recommendation:**

**Report No. 19-11 outlining the status of Authority projects be received for information.**

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

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