

Vol. 1: Oct.-Dec 2015

# QUARTERLY REPORT Q4 2015





Welcome to our Quarterly Report. Each year we will endeavour to produce a quarterly report for our funders, stakeholders and communities we are proud to serve. As laid out in our Strategic Plan, we are making a concerted effort to be more transparent and hope that these reports are helpful in your understanding of our work.



  
Carmen D'Angelo, BSc, MPA  
Chief Administrative Officer



  
Bruce Timms, P.Eng  
Chair, Board of Directors

# ABOUT US

The objects of an authority are to establish and undertake, in the area over which it has jurisdiction, a program designed to further the conservation, restoration, development and management of natural resources other than gas, oil, coal and minerals. R.S.O. 1990, c.C.27 s.20

The Niagara Peninsula Conservation Authority (NPCA) was established on April 30, 1959, under the Conservation Authorities Act, and serves approximately half a million people in the Niagara Peninsula Watershed, encompassing the entire Niagara Region and portions of the City of Hamilton and Haldimand County. The NPCA strives to manage the impact of human activities, urban growth and rural activities on its watershed.

The Niagara Peninsula is one of the most complex watersheds in the Province. It includes lands drained by the Niagara River, Twenty Mile Creek, the Welland River, the Welland Canal, Lake Erie and Lake Ontario. NPCA programs focus on the conservation and preservation of the unique environment, and initiatives that help keep people and their property safe from flooding and erosion while keeping our drinking water clean and safe.

The NPCA's ongoing commitment to land stewardship is reflected in the management of over 2,870 hectares of unique natural areas. These lands are held in public trust, allowing the people of Niagara, Hamilton, and Haldimand County to enjoy its distinctive natural heritage at 39 Conservation Areas, each offering diverse recreational and educational opportunities and a place for both children and adults to experience nature's beauty.

# RESEARCH & SCIENCE

Staff attended the **Niagara Green Infrastructure and Stormwater Management Workshop**, an opportunity to learn about the preparedness of the Niagara Region and its residents for the possibility of extreme weather events and how these can be mitigated through the development of green infrastructure and LID (Low Impact Development) projects.

**Water Quality Monitoring Program** Surface and groundwater monitoring is completed for the 2015 field season. Staff are identifying macroinvertebrate samples collected through the NPCA biological monitoring program.

**Provincial Groundwater Monitoring Network (PGMN)** Staff are currently downloading data from loggers, taking manual measurements and performing quality checks on groundwater level data as part of their routine data maintenance protocol.

To-date, the NPCA has received nine applications for the **Well Water Decommissioning Program** and all nine have been completed. All funding for this program was allocated for 2015.

At the request of the Glanbrook Conservation Club, staff deployed two YSI Loggers at **Lake Niapenco** to monitoring winter-time **dissolved oxygen** concentrations. Staff continue to process ongoing water quality data requests.

The NPCA Water Quality Monitoring team participated in several collaborative projects in 2015. These include:

1. Microbial DNA Trackdown with Environment Canada and McMaster University;
2. Climate Change Station with MOECC at Ball's Falls;
3. North Creek (West Lincoln) Nutrient Evaluation with MOECC;
4. Reference Creek Study with MOECC; and
5. Neonicotinoids monitoring for MOECC at Four Mile Creek (NOTL) and North Creek (West Lincoln).





# COMMUNITY

**Niagara College** and the Niagara Peninsula Conservation Authority have been successfully working together since 1997. Activities have included advisory committee participation, joint purchasing of equipment, collaborative research, teaching projects and co-operative employment opportunities. Based on a mutual commitment to community partnerships and education /community awareness, a formal agreement between the two parties was signed in 2001. The agreement formalized a strategic alliance between the two organizations and provides opportunities for the two groups to work together on mutually beneficial projects and programs.

**General Motors Partnership / Niagara College** NPCA staff and GM staff have been working with Niagara College students to naturalize portions of the non-utilized Glendale Avenue facility. This effort is part of General Motors Biodiversity Enhancement strategy. Niagara College students, as part of their living classroom experience assisted with the planting of trees, shrubs and wildflowers (pollinator gardens) as part of the naturalization effort and to count towards their College curriculum requirements. Students also assisted with the removal of invasive species including phragmites (common reed).

**Harrison Drain Natural Channel Design Project: Niagara-on-the-Lake** NPCA staff are working with an Ecosystem Restoration student group on the development of an invasive species management plan for the Harrison Drain Natural Channel Design project. The goal of the project was to work in partnership with the Town to test an alternative to routine maintenance dredging. This was done by incorporating a natural meander pattern in an otherwise straight and deep channel. This technique improves flow by slowing the water and helps to prevent the establishment of undesirable plant species and the trapping of sediment. The students are assisting with site monitoring and developing a plan to deal with flowering rush, an invasive species that has established at the site.

**E.C. Brown Wetland Restoration Project** NPCA staff are working with an Ecosystem Restoration student group on developing an invasive species management plan for the E.C. Brown wetland restoration site. Currently, the small wetland pool is overtaken by phragmites. The students are researching methods of eradicating this species from the wetland in a safe way that will not harm the ecology (damage the plants and animals that are beneficial).

# COMMUNITY (CONT)

Over 35 **volunteers** attended a tree planting day at Smith-Ness Conservation Area on Nov. 4. The volunteers planted 300 trees/shrubs on the property to naturalize a portion of the property that was once an agricultural field. Volunteers have also been assisting with the delivery of the Christmas in the Village school program running weekdays at Ball's Falls. Volunteers were of great help at the Christmas Village at Ball's Falls on Dec. 5. They took on many roles, including crafts, cookie decorating, photography assistant, event ambassador, historical tours, etc.

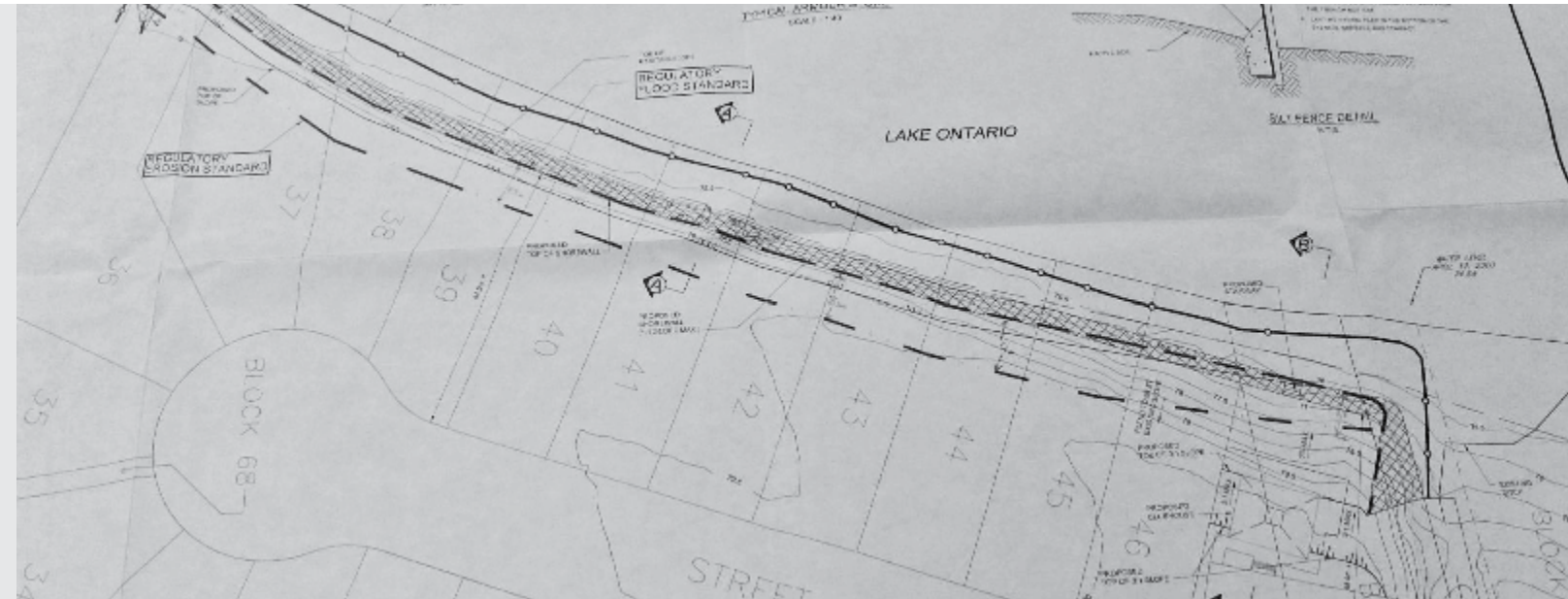
The final stakeholder meetings have been completed. The NPCA hosted an Open House/Information Session for the **Cave Springs Management Plan** on Tuesday, Nov. 24, 2015, at the Ball's Falls Centre for Conservation. Attendees were given a presentation about the Management Plan process and then were invited to view conceptual drawings of various aspects of the property, including: the Margaret Reed House; parking lots; staircase; walking trails; lookout points, etc. Attendees were asked to submit their comments online or by filling out the forms distributed that night. An interested crowd stayed well past 9 pm to engage in conversations with staff about the project and provide their feedback.

The 2015 **Conservation Achievement Awards** will be held at Ball's Falls Centre for Conservation on Feb. 24, 2016 at 7 pm. A call for public nominations is available on the NPCA website.

**Morningstar Mill** The Niagara Peninsula Conservation Authority's board voted to enter negotiations with the City of St. Catharines to manage operations of the mill for a two-year trial period. The NPCA would then decide if the mill is a good fit for its family of properties. The gorge and falls by Morningstar Mill are significant features in the watershed. The mill would add to the NPCA's village properties.

The NPCA renewed its on-going collaboration agreement with **Ducks Unlimited** in September for the implementation of five wetland projects of mutual interest. All five projects are in the implementation phase. Once constructed, they will result in an additional six acres of wetland habitat created and an additional 121 acres of naturalized area around the wetlands, including flowering trees, shrubs and wildflowers to support declining bee and butterfly populations.





# OUR ENVIRONMENT

The **Watershed Restoration Program** is responsible for improving water quality, quantity and biodiversity within the NPCA Watershed. The Restoration Program advances these areas through the implementation of watershed plans and cost-share incentive programs for landowners. These projects help address the chronic water quality degradation problems that are prominent in our watershed

**Project Implementation – Voluntary Stewardship** Staff are currently completing the 65 stewardship projects that were approved for implementation in 2015. This includes the finalization of construction projects including wetlands, stream-work and Best Management Practices.

Site restoration work at **Smith-Ness Conservation Area** for 2015 included the creation of sloughs and a forest extension to create a more naturalized and diverse edge. Wildlife habitat enhancements of the site continue in 2016.

Additional common milkweed was planted at **Morgan's Point Conservation Area** to assist the Monarch Butterfly and its' population recovery. These plants further augment the existing milkweed population, following last year's plant removal due to 'Yellows Phytoplasma' effects. Phytoplasma is a bacteria that can cause disease and death of the milkweed plant, and

negatively affect monarch caterpillars. This bacteria is spread by insects (i.e. leafhoppers). Seeds were also purchased and will be planted in the spring of 2016.

Site restoration work continues to improve wildlife habitat and increasing vegetative community representation across our **Conservation Areas** for increased environmental sustainability/health. Site excavation of sloughs was completed in October, mimicking the historic site landscape and providing feeding areas with higher concentrations of invertebrates, breeding areas for amphibians and wading areas for birds. Trees and shrubs were also planted in the southern portion of the field to create a more naturalized forest edge. Over 30 volunteers assisted including students from Stamford Collegiate School. In 2016, additional work on meadow plantings, trails and parking lot will be complete the site restoration and passive recreational site use for the public to increase their connection with nature and land stewardship.

**Water Treatment Facility Inspection** Routinely every four years, the City of Hamilton's Public Health Unit inspects Binbrook's Water Treatment Facility to ensure that Safe Water regulations are being met. The inspection was positive and successful.

# REGULATION

**Policy review** The NPCA is updating its policy document called, **"Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document (2011)"** ("Policy Document"). This Policy Document lays out the NPCA's commitment to a watershed-based planning approach and is used by staff and agencies as one of the primary tools for decision-making within the NPCA's jurisdiction.

The purpose of the review is to develop a new Policy Document that the NPCA can use as a practical guide for evaluating development and site alteration while balancing their obligation to protect, preserve and enhance the natural environment within its legislative mandate. The review process will occur in three phases and will result in an updated Policy Document for the NPCA.

In 2015, the NPCA hired MMM Group (MMM) to undertake new **floodplain mapping** exercise for the main branch of the Welland River from Binbrook Dam to the Niagara River. A comprehensive consultation and engagement process forms an integral part of this new project and consultation with the WFC is a critical part of this consultation process. The goal of this newly initiated mapping exercise is to engage the community and stakeholders in a process that produces accurate and technically supported flood line mapping.

**Fees Adjusted** The NPCA periodically evaluates and updates its development planning and permit fees to ensure consistency and fairness. These fees were last reviewed and adjusted in 2010.

Fees are adjusted based on:

1. Comparing the NPCA fee schedule to relevant municipal planning and building permit fees;
2. Comparing the NPCA fee schedule to other relevant Conservation Authorities; and
3. NPCA staff examining the existing fee schedule to determine if any files being reviewed by the NPCA with no associated cost.

Planning and Permit Fee changes are intended to:

1. Reduce pressure on municipal levies (tax payers) by working towards cost recovery for work performed.
2. Bring the NPCA fee schedule up to current dollars using relative rates of inflation (CPI).
3. Ensure a consistent and fair fee schedule.
4. Adjust existing fees to ensure alignment with both municipal fees and other CA's.
5. Add fees where no cost is currently attached to the work being performed.

The updated development planning and permit fee schedule took effect Jan. 1, 2016 and can be found at [npca.ca](http://npca.ca)

# SAFETY MONITORING

**Binbrook Reservoir** Due to the dry summer, the reservoir's water level is still presently sitting approximately 1.5 feet (450mm) below normal operational holding level. Discharge from the reservoir has been minimal. Staff continue to monitor reservoir water levels on a daily basis and make adjustments as warranted.

Staff continue to monitor daily the water levels at NPCA's **14 stream gauge stations**, climatic data at NPCA's 15 climate stations, and undertake routine maintenance, calibration, and inspections at all 29 installations, as part of the NPCA's routine Flood Forecasting and Warning duties. The public may access this real-time water level and rainfall information through the NPCA's website.

Lake Erie **Flood Outlook** bulletins were issued on Nov. 12 and Nov. 21 indicating that strong southwesterly winds were predicted to result in elevated lake levels and wave heights more than 3.0m. Localized flooding of low lying areas was experienced however as predicted; Lake Erie did not exceed critical flood levels.

On Nov. 28, the **E.C. Brown gauge station** sensor (which measures water level, flow, and flow direction) was removed to protect this sensitive piece of equipment from ice damage. It will be redeployed in May 2016.

# NIAGARA RIVER REMEDIAL ACTION PLAN

**Niagara River Fisheries** Both Canada and the United States have been assessing fish health in the Niagara River. A binational taskforce under the Great Lakes Fisheries Commission has been established to develop fish community goals and objectives for the entire Niagara River. Fisheries experts from both countries have been working in collaboration to better understand the current state of fish populations and species composition in the Niagara River. The public will be consulted to assist in determining the goals for the local fishery; this input will help with future remedial and restoration efforts if required.

**Niagara River Contaminated Sediment and Nuisance Algae** A review is needed on the Niagara River RAP Technical Assessments for the Degradation of Benthos (historically contaminated sediment) and the Eutrophication (nuisance algae) Beneficial Use Impairments (BUI). The conclusion of both these assessments recommends a re-designation of the BUI status from "impaired" to "unimpaired." To fulfill the re-designation process, stakeholder and public review of the evaluations are required. Public-friendly guidance documents of each technical assessment are required to assist with the facilitation of this process. A consultant has been selected to prepare these documents.

# THE NUMBERS

by the quarter

47

Planning Act Applications

31

Building Permit Applications

12

NEC Development Applications

420 Hunting Permits Issued

11 Site Visits by Watershed Ecological Technicians

7 Property Information Requests

published by the NPCA communications office



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