A NEWSLETTER FROM THE CATARAQUI REGION CONSERVATION AUTHORITY

CAT TALES

FALL 2017 ISSUE

IN THIS ISSUE

- Learn more about the threats to one of our region's turtle species, see page 2
- Lots of fun, family events set for the fall, details on pages 6 & 7
- New barn swallow habitat project to help threatened species - see page 8
- Cataraqui Conservation Foundation's Forever Green Gala back for 2017, details on page 11
- How well do you know your groundwater? Info on page 12

Get Cat Tales delivered to your inbox. Sign-up at **crca.ca/online-services**.

CRCA Staff & Municipalities Busy with Flood Mitigation & Information Efforts

Grippen Creek

As we come to the end (fingers crossed!!) of a flood-prone spring and summer, the Cataraqui Region Conservation Authority (CRCA) believes this is a great time to let folks within our jurisdiction know just exactly what our role and responsibility is when it comes to flooding, mitigation and information.

Since the days of Hurricane Hazel in 1954, and the creation of the CRCA in 1964, protecting people and property from natural hazards and issuing timely flooding information have been two key aspects of the organization's mandate, as explained by CRCA Manager of Watershed Planning and Engineering, Rob McRae.

"One key area is prevention over time. Our job is to predict where flooding may occur when it comes, and to direct development activity to higher ground. By development activity I mean the construction of roads, houses, factories, hospitals, that sort of thing. And then when it's likely that a flood will happen, our role is to provide information. We look at conditions across the watershed, whether it's climate, or stream flow, soil moisture and other factors and provide that information and analysis out to the broader community," he explained.

"On the prevention side over time, our objective is to have floodplain mapping for the entire Cataraqui Region – all the watercourses and shorelines in our jurisdiction. This floodplain mapping, particularly along the region's river and stream systems, shows how wide the water would spread during a flood. Along the coast line of Lake Ontario and the St. Lawrence River, the mapping shows how far the waves would crash up on the shoreline during periods of high water levels, and that's really important because the waves can do a lot of damage."

CONTINUED ON PAGE 3

CREATURE FEATURE: NORTHERN MAP TURTLE

— *Graptemys geographica* —

Throughout the Cataraqui Region the CRCA, animal welfare groups and various government ministries work together to help promote awareness of turtles. In particular, great effort is put aside in having the public understand that during nesting season, turtles are more likely to be spotted on or near roadways – even major highways such as the 401 – as they head to prime nesting grounds.

Unfortunately, 2017 seems to be a rougher year than in the past with more reports of dead or dying turtles from a variety of species, being spotted on roadways. It goes without saying (but we're going to say it anyways) that turtles are a crucial part of the ecosystem, and we believe it's important to get to know some of the native species – a number of which are perilously close to becoming endangered or threatened.

In this edition of our Creature Feature, we present the Northern Map Turtle, a species that is considered by the Ontario Ministry of Natural Resources to be of 'special concern.' This means that, while it is neither endangered or threatened, due to a combination of factors including human encroachment on their habitat and climate change, the Northern Map Turtle may become endangered or threatened in the not-so-distant future.

The turtle got its name because of very unique markings on its face

and shell. The lines on the shell, in particular, are usually shades of yellow or orange, surrounded by dark borders. When viewed upon its olive brown or gray shell, these lines give the appearance of a map. Scientists say that the lines do fade a bit as the turtle ages.

Interestingly, females can grow to be at least twice as big as males, exceeding 25 centimetres in length, compared to the average male Northern Map Turtle, which rarely gets beyond 14 centimetres. As well, it appears that males and females of this species also have different palates, as females eat a lot more clams, snails and crayfish, as well as some varieties of fish, while males seem to prefer only insects and crayfish. The female has a very powerful jaw, which may explain why it prefers molluscs and clams because it is better able to crush their shells.

According to Wildlife Preservation Canada, the Northern Map Turtle prefers to live in lakes or large rivers that have slow moving water and a soft bottom. It can be seen as a sign of a healthy, clean lake to have an abundance of this turtle species as the primary source of food, especially for the females, are molluscs, which prefer to live in clean water. Although they normally live solitary lives, sometimes a group will choose to bask together at a site that has good access to food sources, or which is just a great place to get a turtle's version of a tan.

Folks living within the Cataraqui watershed have probably encountered Northern Map Turtles often as their primary geographic home in Canada is along the St. Lawrence River basin and most of the Great Lakes. The habitat extends into the central United States as far south as Oklahoma and Alabama.

It takes up to 10 years for females to reach maturity and be able to lay eggs. Northern Map Turtles breed in both the spring and fall, with their nesting period lasting between May and June, normally. For nesting sites, females preferring to lay their eggs in places that have loose soil and which are unshaded. As with other turtle species in the region, this is why they seem to like the loose sand and gravel along roadsides, even in fairly built-up areas.

Generally speaking, the females lay between 10 to 18 eggs, which hatch after somewhere between 50 and 70 days. Some eggs are laid in the late fall, meaning those hatchlings will likely over-winter in the nest, emerging in the spring, although this phenomena is not common, with most hatchlings emerging in August.

As stated earlier, there is enough degradation in their numbers to warrant special attention from various researchers and governmental bodies. Boating and other forms of shoreline recreational activities by humans – and their encroachment in general on turtle habitats, is one of the biggest risks to their long-term sustainability. The number of turtles injured or killed by being struck by cars or boat propellers is also impacting their overall numbers in a negative way.

They don't seem to be as adaptive to changes in their habitat in general, which means with the nature of the ecosystem changing due to the impacts of human-made climate change, they are being pushed out of their long-standing homes by more resilient species.

As well, as water in some areas becomes more polluted, their source of food – molluscs – die off, meaning the Northern Map Turtle has to go elsewhere or risk dying off as well.

Sources: Wikipedia, Ontario Nature, Ontario Ministry of Natural Resources & Forestry, Wildlife Preservation Canada

CATARAQUI REGION CONSERVATION AUTHORITY

CAT TALES

Cat Tales is published three times per year by the Cataraqui Region Conservation Authority.

EDITOR: Krista Fazackerley & Jim Barber LAYOUT AND PRINTING: Kingston Whig-Standard
CONTRIBUTORS: Jim Barber, Holly Evans, Krista Fazackerley, Katrina Furlanetto, Steve Knapton, Stana Luxford Oddie, Rob McRae, Carol Murphy, Andrew Schmidt

Member of Conservation ONTARIO Natural Champions

Send mail to: Editor c/o Cataraqui Region Conservation Authority P.O. Box 160 Glenburnie ON K0H 1S0
E-mail: kfazackerley@crca.ca Phone: (613) 546-4228 Toll-Free (613 area code): 1-877-956-CRCA (2722)

Flooding, mitigation & Information

Flooding in Bath

CONTINUED FROM PAGE 1

So, during incidences of extreme weather, such as the incredible amount of rain that fell on the Cataraqui Region this spring and summer, CRCA staff would be monitoring the water levels at numerous points throughout the region, analyzing the results and informing municipal officials, the media and the public as to the likelihood of flooding and the potential danger to people and property it might cause.

"The first thing we would do is to look at the climate information, whether that's weather forecasts from Environment Canada or from [the U.S.] National Oceanic and Atmospheric Administration, as well as our own climate monitoring network, including snow sampling sites and rain gauges, to get a sense of what's happening in terms of incoming water. We also have a stream gauge network that we operate across the region that tells us how much flow is happening in different locations. So, we take all this data and determine what it means; how high could the water go," McRae said.

"Once we've got that in place, our next job is to issue the appropriate flood messages through public bulletins which go to the media, municipalities and emergency responders. We also provide more detailed information specifically for the Community Emergency Management Co-ordinators (CEMC) so they are as prepared as possible. That's the core of our job – follow climate and weather information, monitor the flow and level of the water and provide relevant, timely and accurate information."

It is, in fact, the responsibility of each of the 11 member municipalities of the Cataraqui Region to make the best use of that information through their emergency response protocols. Municipal staff are the experts who co-ordinate and supply sandbags, provide bottled water (if necessary), assist local landowners experiencing flooding and close public roads if they've become damaged or impassible because of the flooding.

Most of the CRCA's responsibility is for inland lakes, rivers and streams. For the shorelines of Lake Ontario and the St. Lawrence River, McRae says the CRCA is simply a conduit of information with the bulk of the data collection and decision making coming from the Lake Ontario – St. Lawrence River Board.

"They provide us with the information that we distill down to key messages and share that with the local population along the coastline. We've also been doing some observations along the coastlines ourselves looking at the impact of the flooding. As a regulator, in terms of shoreline development, we can then think about the implications of rebuilding and what will happen to those areas impacted by flooding," said McRae.

CONTINUED ON PAGE 4

Road wash out in South Frontenac Township

Bedford Mills

Conservation Authority Roles & Responsibilities

Gananoque Waterfront

CONTINUED FROM PAGE 3

Reviewing development applications and enforcing provincial regulations related to development near watercourses and shorelines is another, practical, way that the CRCA is involved with mitigating and preventing harm to people and property occurring from natural hazards such as flooding and erosion.

"I lead a development review team, which is made up of qualified professionals that review applications for development on watercourses and water bodies, or near wetlands. We review Planning Act applications such as consents for severance, minor variance applications, rezoning applications and things of that nature. At the planning stage we look at multiple factors ranging from natural heritage, such as wetlands, woodlands, ecology and species at risk, as well, it is the responsibility of the CRCA, as with all Conservation Authorities in Ontario to enforce Provincial Regulations for natural hazard management," said CRCA Supervisor of Development Review Andrew Schmidt, who explained more about the development review process.

"Between plan review and regulation CRCA staff reviews between 600 and 700 applications a year and one of the big components is hazards, which means primarily flooding and erosion. At the planning stage, we provide comments back to the municipalities on whether we think a development might be subject to risk from flooding or erosion, which feeds into their decision-making process. We do this through service agreements with each municipality in the watershed which designates the CRCA to provide environmental advice on natural heritage and natural hazards relative to the application at hand."

One of the key aspects of Ontario Regulation 148/06 is to protect life and property from potential risk due to flooding and erosion, and one example is flood-proofing measures. "We ensure that a development is sufficiently raised so that it will not be subject to flood risk, even if it is on the flood plain. There are good examples right now where we have had people raise their structures through the application process and we can see the effects where they have not endured flooding because of those efforts," Schmidt added. "Generally speaking, it's a permissive regulation, similar to the Ontario Building Code. When someone submits a building permit application, a permit is generally issued if you use the right nail size, the right shingles, the right lumber to support your structure. It's similar with us; we usually approve applications although sometimes it might mean tweaking a few things to make sure you're within the guidelines. The main point is it's all about prevention. You don't want to be in a situation where you're reacting to a serious problem; we want to prevent it from occurring in the first place." The regulation is there to ensure that responsible development takes place that protects people, their property and the environment.

Another aspect to the regulation is enforcement. "If people don't follow the process and go ahead and do something without going through the proper application process under the regulation, it becomes an enforcement issue, and as we are Provincial Offences Officers staff can pursue legal means to achieve compliance. Having said that, the preferred approach is always to work with citizens and landowners through the application process." The application processes under the Conservation Authorities Act are not meant to create more red tape or to prevent development, but rather to protect property owners from potential hazards like flooding and erosion.

For more information on the CRCA's role in flood warnings, prevention and the planning and regulatory role we play as part of the development process, visit **www.crca.ca** or email to **info@crca.ca**.

Loughborough Lake Boat Ramp

What to Do After the Water Recedes – Advice from the CRCA Planning and Permitting Department

After a 2016 that saw a summer of serious drought conditions, the exact opposite took place throughout the spring and summer of 2017 as the Cataraqui Region encountered a nearly unprecedented and long-lasting flooding scenario due to a combination of rapid spring runoff and prolonged periods of rain.

Intense periods of precipitation during parts of June and July did not allow water levels on area lakes, rivers and streams – or Lake Ontario and the St. Lawrence River for that matter – to drop to seasonal norms, meaning the CRCA was still issuing flood watches and warnings for significant parts of the region well into August.

At some point, as was witnessed with the flooding that occurred in the spring of 2014 in the Gananoque River Watershed, waters eventually recede, and the assessment of property damage and clean-up can begin.

If you own property along a watercourse or lake, there may have been significant damage done to your shoreline and you want to fix it. Even though this is repair work, it is still important for property owners to understand that they need to have the proper permits from the CRCA to do the job. As with any new shoreline project, it's best to contact CRCA staff prior to beginning to determine the permitting requirements as well as if any other government agencies need to be involved, such as the Ministry of Natural Resources and Forestry or the federal Department of Fisheries and Oceans.

Depending on the scope and size of the project, property owners should also consult an excavating contractor, marine contractor and/or professional engineer that can provide technical advice as to the best way to proceed on a specific site. CRCA Planning and Permitting Staff can pass along a list of qualified professionals. In reviewing plans and issuing approvals, the CRCA staff work with landowners and contractors to identify workable solutions that are environmentally sound. In general terms, it is best to use natural materials such as native plants and rock as opposed to man-made materials such as concrete and steel.

CRCA staff has also been responding to several calls where individuals, primarily those who are new to owning waterfront or shoreline property, are asking to fill in the flood plain to be able to cut their grass in areas that are soggy because of the flooding. It needs to be emphasized that water levels vary from year to year. The predictions for our region suggest that droughts and floods may occur more often in the future. So, the best approach is to design shoreline areas and docks that can adapt to high and low water levels. Trees, shrubs and groundcovers work well along the shoreline, and floating docks move up and down with changing water levels.

To get the advice or permitting information you need before planning shoreline repair work, contact CRCA Development Officer Kristin Wozniak at **613-546-4228** ext. 288, or email **kwozniak@crca.ca**.

CONNECT WITH US FOR FLOOD INFORMATION.

The CRCA is responsible for monitoring and predicting flood flows and water levels within our jurisdiction (Napanee to Brockville) and disseminating flood messages to local municipalities, media, and the public. Connect with us on Facebook and twitter and bookmark our news page for the most recent flood messages and updates – **www.crca.ca/flood**

CHECK. TEST. DISINFECT.

Heavy rains and flooding can affect groundwater quality. If you own a private well, consider testing your water to ensure that it's save to drink. Contact your local public health unit for more details.

AFTER A FLOOD.

If you have had flood damage to your home, business or structure it is important to restore it to good order as soon as possible to protect your health and prevent further damage. The Government of Canada, at **www.getprepared.gc.ca**, has information on what to do before, during and after a flood. You can also find useful links on our website at **www.crca.ca/flood**.

6

WHAT'S HAP

TD Tree Days planting events happening in Brockville and Kingston.

LITTLE CATARAQUI CREEK CONSERVATION AREA

BUG SAFARI
Sunday, October 1 (2:00 p.m.)

Join in on the bug safari and see what friends live in the marsh and on land at Little Cataraqui Creek Conservation Area. You'll even get to use some of our cool bug catching equipment. All of our bug friends get put back gently in their homes. The program runs for approx. 1.5 hours.

FALL COLOURS WEEKEND
Sunday, October 8 and Monday October 9 (10:00 a.m. to 4:00 p.m.)

Enjoy the fall foliage at Little Cataraqui Creek Conservation Area. Bird watch or go for a hike and enjoy the beautiful fall colours - CRCA staff will be on hand to suggest routes and provide maps. Come into the Outdoor Centre and purchase a slice of pie and a mug of cider, or just sit and enjoy the colourful view from the West Hall.

SPIDERS OF ONTARIO
Sunday, October 22 (2:00 p.m.)

Join Tom Mason, retired Curator of Invertebrates for the Toronto Zoo, and learn about common spiders found in Ontario. Tom will also explain their role in our ecosystem and the importance of learning and understanding this understudied group of animals.

THE REAL BAT MAN
Sunday, October 29 (2:00 p.m.)
For ages 7 and up

Bat Expert Matt Saunders is back by popular demand. Matt will introduce you to the fascinating world of bats. Seating is limited, so be sure to come early! Matt's one hour presentation is suitable for ages seven and up. Bat house construction follows – kits will be available to purchase for $20 after the talk. You can stay and assemble your bat house with us (please bring a hammer) or take it home to build.

PENING 2017

CREATURES OF THE NIGHT HIKE
Saturday, November 4 (6:30 p.m.)
REGISTRATION REQUIRED

Enjoy the brisk fall air and learn about the creatures that come out at night at Little Cataraqui Creek Conservation Area. Cost is $2 per person plus the regular gate fee and registration is required. Be sure to register early – this popular hike fills up fast. Register online at **www.crca.ca/online-services**.

FAMILY FUN DAY – HIKING, ROCK PAINTING & S'MORES
Sunday, November 12 (2:00 p.m.)

Head out to Little Cataraqui Creek Conservation Area for an afternoon of family friendly activities. CRCA staff will be on hand to suggest hiking routes or take part in our eyes only scavenger hunt. After your hike, head into the West Hall for some colouring fun – Sourigraphic is offering rock painting! Children will have a chance to experience rock painting and discover their own talents. We will end the afternoon by the campfire making S'mores at 3:00 p.m.

DIY SUSTAINABLE HOLIDAY DECORATING
Sunday, November 26 (2:00 p.m.)

Bring the beauty of nature into your home this holiday season. Join Joli from Bella Fiore Farm and create a swag or centerpiece for your table or an outdoor arrangement for your entrance using sustainably sourced garden grown materials. Please bring your own bowl, urn, vase, platter, tray, or anything suitable to hold your greenery. Some greenery and decorative items will be provided but it is encouraged that you bring dried flowers, branches, pinecones, berries etc. to supplement your creation. Registration is required and enrollment is limited. Cost is $10 per person plus the regular gate fee. Register online at **www.crca.ca/online-services**.

LANTERN HIKE
Saturday, December 2 (6:30 p.m.)
REGISTRATION REQUIRED

Join us under that stars as we explore the trails of Little Cataraqui Creek Conservation Area. Afterwards warm up with a hot drink by the fireplace back at the Outdoor Centre. Cost is $2 per person plus the regular gate fee. Registration is required. Register online at **www.crca.ca/online-services**.

OUTDOOR CHRISTMAS PARTY FOR THE ANIMALS
Sunday, December 10 (2:00 p.m.)

Take a break from the bustle of this busy season with some time outdoors. Bring your family out and join us for an outdoor celebration. We will feed the birds, play some games and have a great old time. We will also leave a nature present for our animal friends.

MAC JOHNSON WILDLIFE AREA

Take Highway 29 north from Brockville to Tincap, turn east on Debruge Road and drive for 2 km to the main entrance. Enjoy 11 km of hiking and cross-country ski trails, nature centre, picnic facilities and a skating rink. For trail and rink conditions please check our website at **www.crca.ca** or call 613-345-1990.

TD TREE DAYS
Saturday, September 30 (9:00 a.m. to noon)

Help plant 150 trees at Mac Johnson Wildlife Area through the TD Tree Days Program. Join TD employees, CRCA staff and the Friends of Mac Johnson Wildlife Area at 9:00 a.m. at the Nature Centre (Debruge Road entrance) to help plant trees. Bring your shovel, gloves and proper footwear. For further information and to register visit **www.tdtreedays.com** and search for Mac Johnson Wildlife Area under the events tab.

FALL FESTIVAL
Saturday, October 14 (10:00 a.m. to 2:00 p.m.)

Admission is $5 per car. The Friends of Mac Johnson Wildlife Area are hosting their annual fall celebration with activities for the whole family. Enjoy the fall colours on a hike along our trails and compete in our eyes only scavenger hunt and at 11:00 am join a local wildlife expert for a guided hike to find recently sighted birds and critters. The CRCA will be providing kayaks and canoes free of charge so you can paddle and watch the waterfowl on the pond. Youth and kids can build a bird house or paint a rock monster. The Friends will host a BBQ at the Nature Centre, payable by donations, and accompanied by live music. After lunch, you can make popcorn and toast marshmallows at the newly renovated fire pit near the pond.

SAVE THE SALAMANDERS
Saturday, October 21 (2:00 p.m.)

Join award-winning salamander conservationist Matt Ellerbeck (aka the salamander man) for an insightful look at nature's tailed amphibians. Meet at the Mac Johnson Wildlife Area's Nature Centre for a presentation featuring live species both local and exotic.

LEMOINE POINT CONSERVATION AREA

Lemoine Point Conservation Area is located in the west end of Kingston on the shore of Collins Bay. There are entrances off Front Road and Coverdale Drive. Enjoy 11 km of hiking trails, picnic facilities, and many opportunities for wildlife viewing and nature appreciation.

TD TREE DAYS EVENT
Saturday, September 30 (9:00 to 11:00 a.m.)

Help plant 450 trees at Lemoine Point Conservation Area at the TD Tree Days Event. Join TD employees, CRCA staff and the Friends of Lemoine Point at 9:00 a.m. at the Front Road parking lot (south entrance). Bring your shovel, gloves and proper footwear. For further information and to register visit **www.tdtreedays.com** and search for Lemoine Point Conservation Area under the events tab.

#HikeCRCA Challenge

Dust off your hiking boots and take part in the #HikeCRCA Challenge. Hike the designated "Challenge Trail" at each of our Conservation Areas and on the Cataraqui Trail, take a photo with all of the challenge signs, post your photos on social media, then fill out the Challenge Entry Form for a chance to win some awesome prizes. The Challenge takes from Sept. 1 to Oct. 31. Visit **www.crca.ca/hikecrca** for challenge rules and a list of Conservation Areas and designated trails. Good luck! Thank you to our prize sponsors: Atmosphere and Trailhead Kingston.

FRIENDS OF LEMOINE POINT AGM
Wednesday, November 15 (7:30 p.m.)

Join the Friends of Lemoine Point at their Annual General Meeting at the Ongwanada Centre in Kingston on Wednesday November 15 at 7:30 p.m. The night will include their business meeting and a special presentation.

CATARAQUI TRAIL

FUNDRAISING DINNER AT THE OPINICON RESORT
Friday, October 13 at 5:30 p.m.

Join us for a fantastic meal, silent auction and a wonderful evening at the historic Opinicon Resort in support of one of Eastern Ontario's great outdoor gems. Tickets are $80 which includes a $30 charitable receipt. To purchase your tickets visit **www.crca.ca/tickets**.

CATARAQUI CONSERVATION FOUNDATION

FOREVER GREEN GALA – SENIOR OFFICERS' MESS, RMC
Saturday, October 28 at 6:00 p.m.
Tickets are $125 per person (tax receipt for a portion)

It's time for the Cataraqui Conservation Foundation's annual fundraising gala diner – Forever Green. Enjoy music at the reception, bid on some great items at the silent and live auctions and sit down to a lovely meal all in support of conservation education. Tickets are $125 and available by calling 613-546-4228 ext. 221. The Conservation Awards will also be presented.

CRCA and Partners Work to Improve Barn Swallow Habitat

In an effort to help encourage the growth and sustainability of the barn swallow population in the Kingston region, the Cataraqui Region Conservation Authority is working with a number of partner organizations to build a special structure to act as a home for the threatened species.

Barn swallows are in danger of their numbers continuing to decline due to a combination of factors, with climate change and human encroachment/ interaction being at the top of the list.

With that in mind, it was decided to use a portion of the Lemoine Point Conservation Area, near the Kingston Airport, to construct a special wooden structure that would have a number of purposes, not the least of which is to provide a safe, secure home for nesting pairs.

The name gives more than a hint as to one of its most significant behavioural quirks of this avian species, in that it prefers to use man-made structures – such as barns – in which to breed and nest. According to the Ontario government, the barn swallow is a medium-sized songbird that averages between 15 to 18 centimetres in length.

"Males have a glossy steel-blue back and upper wings, a rusty-red forehead and throat, a short bill and a broad blue breast band above its tawny underbelly. The male has long tail feathers which form a distinctive, deep fork and a line of white spots across the outer end of the upper tail. The female's tail feathers are shorter, the blue of her upper parts and breast band are less glossy, and her underside is paler."

Their comfort in living in and around humans has also perhaps been the species downfall. According to scientists, as farm operations close down, or are consolidated into bigger operations, older barns are torn down and replaced by facilities made out of metal that have far fewer access points or nesting sites inside. These modern barns have tighter seals around doors, and often no windows.

As well, barn swallows love to eat insects, which is one of the reasons they are appreciated by humans. But the increasing use of pesticides over the years on agricultural operations and on municipally-owned lands means their sources of food are declining. The Ministry of Natural Resources & Forestry has recorded a precipitous drop in the barn swallow population in Ontario since the mid-1980s, and believes these factors are to blame – although no definitive 'smoking gun' has been apportioned blame for their decline.

The structure at Lemoine Point will be similar to the one pictured above which was built by Bird Studies Canada.

The Cataraqui Region Conservation Authority has been developing ideas and programs aimed at enhancing or improving the biodiversity and ecological health of the Lemoine Point property. Working independently or with its many partners (City of Kingston, Friends of Lemoine Point, Kingston Field Naturalists, Ontario Ministry of Natural Resources and Forestry, TD Friends of the Environment, etc.) several programs have occurred or have been implemented in recent years.

With the success of the Bobolink and Meadowlark meadows, also at Lemoine Point C.A., the CRCA and Friends of Lemoine Point were considering opportunities for creating nesting structures for Barn Swallows. After consulting with some of the partners it became evident that a barn swallow habitat creation project was a shared interest. Through the support of the Friends, City of Kingston Airport, Kingston Field Naturalists, and private donations, the project was developed.

The goals of the program fit within the mandate of all these organizations in that it will help improve the biodiversity of Lemoine Point itself and provide a suitable and sustainable habitat for a threatened species of bird. It is also presents an excellent opportunity to help educate the public about threatened and endangered species within the Kingston area, and also provide research opportunities as to the best and most successful nesting methods. There is a chance to have up-close observation of this fascinating species, and perhaps provide possible banding opportunities.

As well, it demonstrates the importance of partnerships. The CRCA is always looking for ways to work with other organizations to help promote the causes of conservation, animal welfare, sustainability, biodiversity and public appreciation for the natural world around us.

Updates on the barn swallow project will be provided at regular intervals through various media as well as CRCA social media sites and at **www.crca.ca**.

New Monitoring Well Dug in Loyalist Township

The Cataraqui Region Conservation Authority recently added a new groundwater monitoring well to the provincial network. As part of its Watershed Monitoring Program, groundwater levels and quality conditions are tracked with the use of monitoring wells. The CRCA manages six monitoring wells throughout its jurisdiction that are part of the Provincial Groundwater Monitoring Network, a partnership program between the Ontario Ministry of the Environment and Climate Change, Conservation Authorities and Municipalities. A variety of information is collected at the monitoring wells including: groundwater level, groundwater temperature and groundwater quality. Some of the wells also have equipment that records rainfall and barometric pressure.

The new well replaces one that had to be decommissioned because of railway spur line construction. The monitoring well was dug on Clark Road in Loyalist Township within the Bayview Bog conservation property. CRCA Watershed Planning co-coordinator, Holly Evans, worked with Loyalist Township, The Ontario Ministry of the Environment and Climate Change (MOECC) and CRCA Lands Staff to determine the best location for the well, and to secure funding for the enterprise.

The new well was drilled on May 15 and although there was little water to show for the drilling efforts, a detailed borehole log was recorded by collecting the fillings brought to the surface in the drilling process. The driller returned on June 6 with a special cable tool designed to try and increase the water flow into the well, but this did not have the desired effect. Evans worked with an MOECC hydrogeologist to perform a low-volume pump test on July 6 and it was discovered that there is a very low recharge rate in the well. This is typical of the target aquifer (i.e. the Gull River Formation) and CRCA staff and MOECC are happy with the result.

Due to the very low recharge of the well it is not suitable for water quality testing, however, it is important for water level tracking. The water level will be recorded every hour using a data logger. In addition, barometric pressure will also be measured hourly to help correct the water level data. Future plans include the addition of a rain gauge to better understand the connection between water on the surface and water in the ground. Finally, the monitoring well will be outfitted with satellite data transmission capability to enable real-time data access, as is the case for several of the other monitoring wells.

For more information on the water quantity and quality information collected by the Cataraqui Region Conservation Authority, visit **www.crca.ca.**

CRCA School Programs Ready to Book for the 2017-2018 School Year

Calling all teachers! Get outside this school year and give your students the opportunity to learn in an outdoor "classroom" where they can connect with nature. The Cataraqui Region Conservation Authority offers Ontario Curriculum-enriched outdoor and environmental education programs for all ages at Little Cataraqui Creek Conservation Area in Kingston and Mac Johnson Wildlife Area in Brockville. We offer a variety of programs from Marsh Mysteries to Kinderscience and Wetland Conservation to Snowshoe Excursions. Make a day of it and combine you program with other great activities for a terrific day in the outdoors. We also welcome and encourage two classes or larger groups to participate at the same time to help save on bus costs.

Book your education program online and win! Teachers who use our online booking form between Sept. and Oct. 2017 will be entered into a draw for a special turtle-themed gift for their classroom. You can book for any time of the year; your program does not have to take place during September or October to be entered into the draw. For program information please visit **www.crca.ca/education** and to book your program online visit **www.crca.ca/edbooking**.

CRCA offers Nature Programs for Home and Early Learners.

Registration is now open of our popular Nature Programs. The CRCA offers our Home Learners program (ages 6 to 11) at Little Cataraqui Creek Conservation Area in Kingston and at Mac Johnson Wildlife Area in Brockville. The Home Learners program allows children to explore wild spaces, learn about nature and come away with new nature knowledge and a greater connection to the natural world. The Early Learners Program out of Little Cataraqui Creek Conservation Area in Kingston is for preschool children ages two to four years old. Throughout the program children will experience a connection to nature through songs, puppets, exploring, stories, games and hands-on activities. All of our programs foster a strong connection to nature by guiding children with their head, heart and hands. For further details and to register for these programs visit:

- Kingston Early and Home Learner Programs: **www.crca.ca/nature-programs**
- Brockville Home Learners: **www.crca.ca/mjwa-home-learners**

THANK YOU! Atmosphere, Axens, Trailhead Kingston & Smith Army Surplus.

CRCA staff and its students would like to say a huge thank you to Atmosphere, Axens, Trailhead Kingston, and Smith Army Surplus for their generous donations to our education programs. Atmosphere generously donated tripod stools for outdoor classroom options for all seasons; Axens helped us purchase much needed equipment to assist with our Nature Programs for home learners - this equipment will also benefit all programs for all ages of participants; and Trailhead Kingston and Smith Army Surplus donated supplies for our new Winter Survivors program. Thank you! Your donations are very much appreciated and go a long way to help the CRCA provide quality outdoor and environmental education programs for students in the community.

CRCA benefits from Lee Valley 150th initiative.

To celebrate Canada's 150th birthday Lee Valley partnered with local community groups across Canada to highlight the growing concern and loss of the habitat for birds, bees and butterflies. During May and June Lee Valley hosted no-cost building events where participants helped build bird, bee and butterfly houses. After the building events, the houses were then donated to different community groups and the CRCA is very happy to be the home for four butterfly houses, six bee houses and 12 bird houses. The butterfly houses were built by the Kingston Youth Naturalists of the Kingston Field Naturalists, the Bee houses were constructed by the Saint Mina Coptic Orthodox Church and the bird houses were completed by the 2nd Gananoque Scouts, Cubs and Lee Valley Kingston Staff. Thank you Lee Valley and participants for your generous donations and beautiful houses. Keep an eye out for the houses as we undertake upgrades to our gardens at the Little Cataraqui Creek Conservation Area Outdoor Centre.

- FOUNDATION NEWS -

On behalf of the Cataraqui Conservation Foundation we hope you will be able to join us as we once again come together for a lovely evening as the Forever Green Gala returns. It is our major fundraising event, and will be held in the Senior Officers' Mess at the Royal Military College on Saturday, Oct. 28, 2017.

One of the key aspects of the Foundation's mandate is to support programs to educate young people about nature and its conservation. You can't buy nature, you can only experience it. For this reason, we are focusing on offering 'experiences' to our Forever Green Gala guests. This will include both activities and items to support them.

In previous years, we have had generous support from the community. If you have been a supporter before, we thank you sincerely and hope that you will assist us again this year. If you would like to become a supporter for the first time, we hope that you will catch our vision and join us in helping young people experience the beauty of nature and the importance of conserving it. If you are able to be a sponsor, donate an item or service for our auction or would like to buy a ticket to attend please contact us.

Make your reservation early, as this is a very popular event. Even better, gather together a group of friends or family and have an entire table of fun. Make cheques payable to Cataraqui Conservation Foundation. Please help us make Forever Green 2017 the best gala ever. For further information, contact Carol Murphy at 613-539-8934 or leave a message at 613-546-4228 ext. 221.

The CCF would like to acknowledge the recent passing of former CRCA board member Anne Hutchinson. A passionate environmentalist, birder, and Kingston Field Naturalist, Anne became the first Secretary/Treasurer of the Cataraqui Region Conservation Authority and later a founding member of its foundation.

The board would also like to acknowledge the recent retirement of Jim Barnett, Adam Clow and John Kitney from our board. Jim served as a valued member and was a key figure in organizing our very successful annual Gala in 2015. Adam was a valued member of our board and served as secretary and brought valuable experience and expertise from the corporate perspective. John was our long-serving and dedicated treasurer. We extend our deepest thanks for their time and commitment to the board and the initiatives that the CCF supports.

We would like to welcome two new board members. Sharon Sommier-Mulligan brings a passion and long-time commitment to conservation to our board and we look forward to working with her. We also welcome Radha Malhotra who brings a unique perspective to our board through her engineering background and interest in environmental issues.

We are also recruiting new board members. If you have professional experience in accounting or bookkeeping, we are currently looking for a new Treasurer for our board and would be happy to chat with you about this exciting opportunity. Please contact us at the CRCA office or by email **www.cataraquiconservationfoundation.org.**

Forever Green Gala – Senior Officers' Mess, RMC

Saturday, October 28

Tickets are $125 per person (tax receipt for a portion)

It's time for the Cataraqui Conservation Foundation's annual fundraising gala diner – Forever Green. Enjoy music at the reception, bid on some great items at the silent and live auctions and sit down to a lovely meal all in support of conservation education.

Tickets are $125 and available by calling 613-546-4228 ext. 221. The Conservation Awards will also be presented.

Cataraqui Trail

The Cataraqui Region Conservation Authority owns the 104-kilometre long Cataraqui Trail, which runs from Strathcona in the west to Smiths Falls in the east. The trail is a multi-use, non-motorized trail (exception of snowmobiles with a valid OFSC permit) managed by a volunteer Board (Cataraqui Trail Management Board).The trail maintenance and development is supported by the municipalities in which is traverses (Stone Mills, South Frontenac, Rideau Lakes, and Smith Falls), Counties, multiple partners, interest groups, and local volunteers. This support, which includes in-kind services, financial assistance and technical advice, helps make the trail a great attraction for local residents and tourists.

The board looks to granting opportunities to assist in the funding of maintenance and development work on the trail. Work to improve the trail surface has been occurring in the Harrowsmith Section starting in 2016 and will last until 2018, thanks to funding from the Federal Economic Development Agency for Southern Ontario / Government of Canada (Canada 150 funding – Round 1) and partner support.

This fall, work will take place in the Township of Rideau Lakes thanks to grants from the Federal Economic Development Agency for Southern Ontario / Government of Canada, Ministry of Agriculture, Food and Rural Affairs (Rural Economic Development (RED) program, and support from Township of Rideau Lakes.

Groundwater vulnerability – how well do you know your groundwater?

Past research conducted within the Cataraqui Source Protection Area has found that the groundwater in 90 per cent of the area to be highly "sensitive" or vulnerable to contamination due to thin soils and fractures in parts of the bedrock.

There is only one aquifer, which is an underground layer of groundwater, in this area that can be used as a drinking water source. Sources of contamination such as fuels, manure, leaking septic systems, or local runoff can enter the soil naturally or through private wells - a direct path to groundwater. Certain harmful activities or lack of maintenance on your neighbour's property or municipally-owned land a number of kilometres away can have significant negative impacts on the quality of groundwater in your well. Preventative action is key, as cleaning up pollution in groundwater is expensive and often not even possible.

Understanding how water drains, the type of well and septic system you may have, potential activities on your property that may impact groundwater quality, and the associated maintenance required is important to prevent contamination of groundwater.

For rural landowners relying on private wells as a source for drinking water, there are multiple ways to reduce the possibility of contaminating groundwater on your own property. Properly maintaining wells and septic systems through annual inspections, multiple water quality tests, and observing changes to the environment (leaks, pooling, settling soils), can greatly impact how surface water drains on your property and enters the groundwater system.

In a response to the Groundwater Vulnerability Forum held in March 2017, CRCA staff have been working with other organizations and community volunteers to plan well and septic workshops throughout our jurisdiction. These workshops will provide an opportunity for those with wells and septic systems to come out and learn about how to properly maintain groundwater quality for safe drinking. There will be representatives from the CRCA, Ministry of Environment and Climate Change, Public Health Ontario, and other organizations, as well as an opportunity to learn just how vulnerable groundwater is on your property. The workshops are being planned for fall 2017 and winter 2018. Specific dates, times and locations will be posted on the cleanwatercataraqui.ca website and at www.crca.ca.

As part of the workshops, CRCA staff are developing a Groundwater Protection Plan for rural landowners to get a better sense of the risk to groundwater contamination on their property. The workshops will include time to fill out the workbook and asks questions about wells and septic systems on your property. The workbook will also be available online at cleanwatercataraqui.ca.

Public Health Ontario is also in the process of developing an outreach survey to determine the public's perception of groundwater, as well as creating a related risk assessment model on microbacterial concentrations in wells. The survey will be accessible for participants at the workshops mentioned above.

For those interested in attending the workshops, there will be an online registration portal available soon on the CRCA website, and advertised through various social media and public information channels. More details will be provided in the coming months.

For more information on any of the above initiatives, please contact Katrina Furlanetto, Source Protection Coordinator, at 613-546-4228 ext. 248 or **kfurlanetto@crca.ca**.

Cold Storage Facility Energy Efficiency Improvements

In 2016 the CRCA received a grant from the Community Foundation for Kingston Area to conduct improvements to the Cold Storage Facility at the Little Cataraqui Creek Conservation Area. The improvements were directed at reducing energy consumption and improving the functionality of the structure.

The cold storage facility is primarily used in the spring for the storage of tree seedlings for the Cataraqui Region Conservation Authority forestry programs and partners. It has also been used by Loving Spoonful, a not for profit organization who works to achieve a healthy food-secure community by facilitating fresh food access.

160,000 trees waiting to be planted, spring 2017.

There is still time to arrange for spring tree planting

Interested in planting trees on your property? There is still time to order trees for spring 2018. The CRCA offers a tree planting program to rural landowners in our watershed on a cost sharing basis. We deliver reforestation programs in partnership with Forests Ontario 50 Million Tree Program and the Ministry of Nature Resources and Forestry. You must have a minimum of 1 hectare of land to quality for the program.

Landowners can also order trees with us and do the planting themselves. There is a minimum order of 500 seedlings and individual species can be ordered in multiples of 50. Group orders are welcome. Get together with your neighbours and plant some trees. For further information on the CRCA's forestry program please visit **www.crca.ca** or contact **rknapton@crca.ca**.