

# LEEDS GRENVILLE STEWARDSHIP COUNCIL

2014 Annual Report



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## Message from the Chair



I hope you enjoy this Annual Report: the second since February 2013, when the Leeds Grenville Stewardship Council charted a new course without support or funding from the Ontario government.

The Council is thriving due to the ability and determination of the hardworking/committed volunteers. LGSC continues to be comprised of 15 dedicated local residents who volunteered their time to work on over 25 environmental projects throughout the United Counties of Leeds and Grenville in 2014. The Council continues to focus on projects in four main theme areas: healthy aquatic ecosystems, sustainable forests, education and awareness, and species at risk. Additional information can be found on our website at [www.lgstewardship.ca](http://www.lgstewardship.ca).

Our stewardship work in the United Counties has been supported and encouraged by our many partners, in particular the Rideau Valley Conservation Authority (RVCA). We are grateful for all the support that the RVCA is providing. And we are very pleased that the United Counties of Leeds and Grenville are also supporting our work with annual financial seed funding. This has provided us an important foundation to support our volunteers and to leverage additional funding for stewardship projects.

We are thankful for all of the many partners who help us to deliver more than any of us could achieve on our own. We look forward to their continued friendship and cooperation.

Karen Brown  
Chair, Leeds Grenville Stewardship Council

# HEALTHY AQUATIC ECOSYSTEMS

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## Leeds Community Pasture – East Pasture



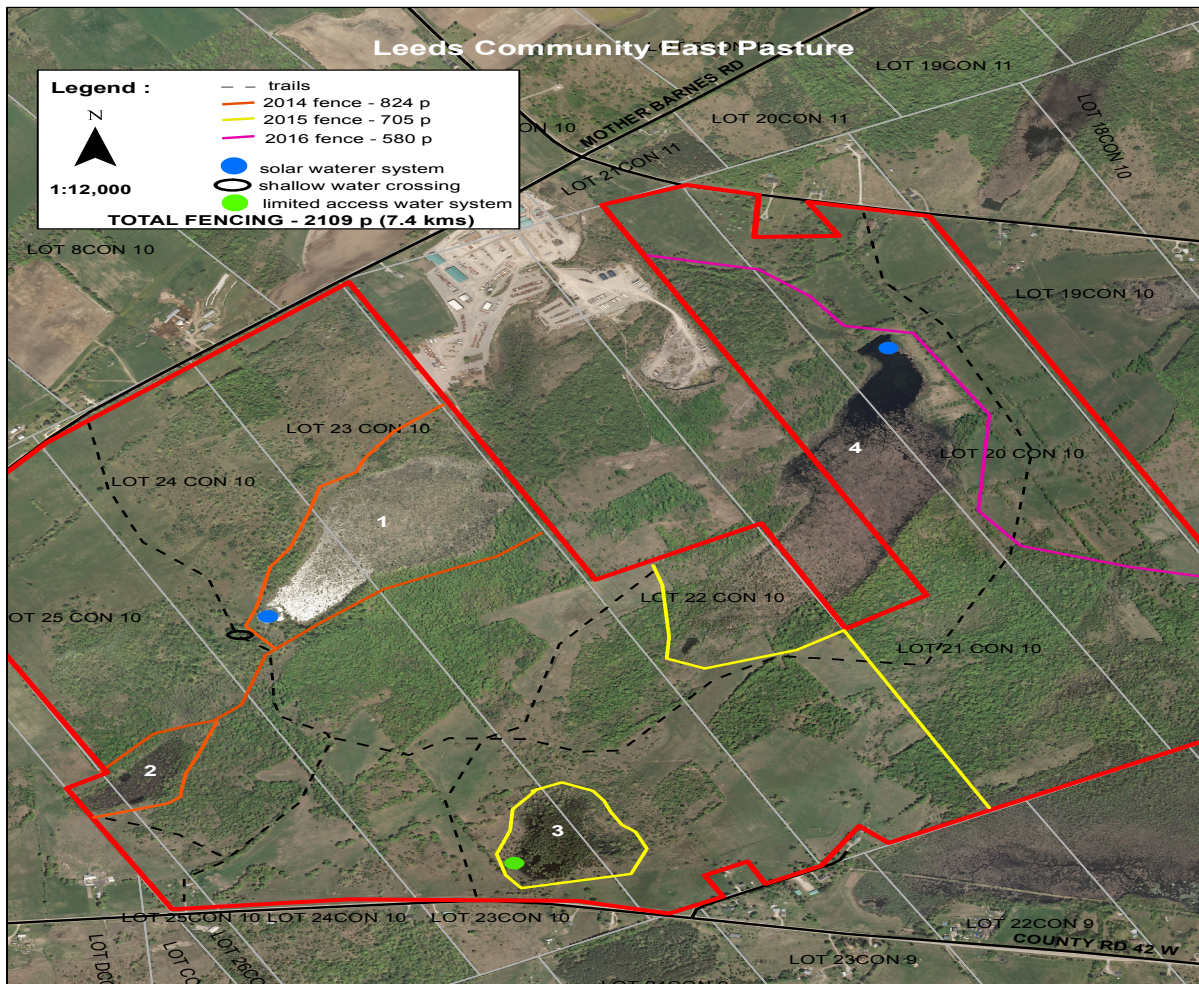
Leeds-Grenville Stewardship Council (LGSC) has been coordinating efforts by Leeds County farmers, farm organizations and the Leeds Community Pasture Association to exclude cattle from the upper reaches of the Gananoque River Watershed, which feeds the St Lawrence River, to improve water quality. The rationale has been to decrease nutrient loading into the headwaters to decrease phosphorus loadings and improve dissolved oxygen in the streams and lakes of the system: including Charleston, Upper Beverley and Lower Beverley. Over 1500 cattle have been excluded from the water to date, including along Soperton Creek in the West Pasture of the Leeds Community Pasture (See [www.lgstewardship.ca](http://www.lgstewardship.ca) for more information on the completed West Pasture project).

The Leeds Community Pasture Association (LCPA) owns and manages one of 11 Community pastures in Ontario, which is located near Soperton. Up to 25 local farmers graze their cattle at the Pasture in the summer. LGSC and the LCPA Board are working together to restore and protect the wetlands on the East Pasture.

The wetlands on the East Pasture are quite extensive covering some 111 hectares (276 acres) fed by natural springs. This water eventually flows into an arm of Soperton Creek which ultimately runs into Upper Beverly Lake (designated as a provincially significant wetland) at the top of the Gananoque watershed and then southwards through the Frontenac Arch Biosphere and ultimately into the St Lawrence River. The Biosphere Reserve is an area designated by UNESCO in 2002 because of its internationally renowned natural heritage.

The East Pasture includes grasslands, woodlands and wetlands. Trumpeter Swans, wood ducks, teal, ring neck ducks and mallards frequent the largest wetlands on the pasture and Upper Beverly Lake. Known species-at-risk in and around the Beverly Lakes include musk, northern map and snapping turtles, least bittern, black tern, bald eagles (active nest on Upper Beverly), gray rat snake and grass pickerel, all of which will benefit from water quality improvements.

While there is a Ducks Unlimited control structure existing on the property, which provides open water for waterfowl staging, the remaining wetlands (and springs) in the East Pasture are accessible by cattle. As a result they have been degraded resulting in increased nutrient and soil inputs both in the wetlands and the downstream DU pond and tributaries, which ultimately drain into Upper Beverly Lake.



Work started on the East Pasture fencing project in June 2014. The first year was successfully completed, according to plan and on budget with 2.8 km of continuous fencing installed as well as a solar waterer. (See the map above which outlines work to be completed each year).

Volunteers from Leeds Grenville Stewardship Council helped build fences, donated heavy equipment, and built and installed birdhouses. Student volunteers planted trees and help in fence building.

Partners included:

Environment Canada's EcoAction

Ontario Ministry of Natural Resources (Stewardship Rangers and funding from Land Stewardship and Habitat Restoration Fund)

Wildlife Habitat Canada

Athens District High School

Leeds Community Pasture Board

TD Friends of the Environment Foundation

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## Hutton Creek Wetland

The Hutton Creek Wetland is part of 5660 acre provincially significant wetland complex located in Elizabethtown-Kitley Twp. about 5 km south of the Village of Lombardy. The dam at Motts Mills is owned by the Rideau Valley Conservation Authority (RVCA), however the north end of the dam sits on property owned by Mr. Bill Griffith. The current dam was built in 1952 and is badly in need of repair or complete replacement. Due to natural succession, about 90% of the wetland created by the dam has filled in with emergent vegetation, mostly cattails (*Typha spp*). The wetland in its current condition provides fewer benefits to waterfowl and other wildlife, including species at risk, than it did through the 1950s through the 1970s.

The LGSC has partnered with the RVCA and Ducks Unlimited (DU) with the objective of reconstructing the dam and restoring the quality of this valuable wetland. Dwayne Struthers and Kerry Coleman are members of the Motts Mills Dam Technical Committee. The purpose of this committee is to provide technical advice regarding the replacement of the dam at Motts Mills and restoration of the Hutton Creek Wetland to the RVCA Board of Directors. The role of the LGSC has been to act as an interface and liaison between those landowners, who own a portion of the wetland, and the RVCA. The council members have also used their contacts to encourage Ducks Unlimited support and involvement in this project. Dwayne and Kerry have worked with local RVCA Board member, Lyle Pederson to get all the affected landowners (except one) to sign agreements to agree with the replacement of the dam and the retention of the wetland.

In 2014, RVCA applied for and received word they were successful in getting a \$90,000 grant from Wildlife Habitat Canada to assist with the dam replacement and Hutton Creek Wetland restoration. In 2014, RVCA also experienced a number of key staff changes. The General Manager (Dell Hallett) and the Manager of Engineering Services (Bruce Reid) both retired. The new management team at RVCA has placed a high priority on getting this important wetland project completed. They are optimistic the project will proceed in 2015.

The Technical Committee did not meet in 2014 and at this time it is unclear what role if any LGSC will have as this project moves forward.



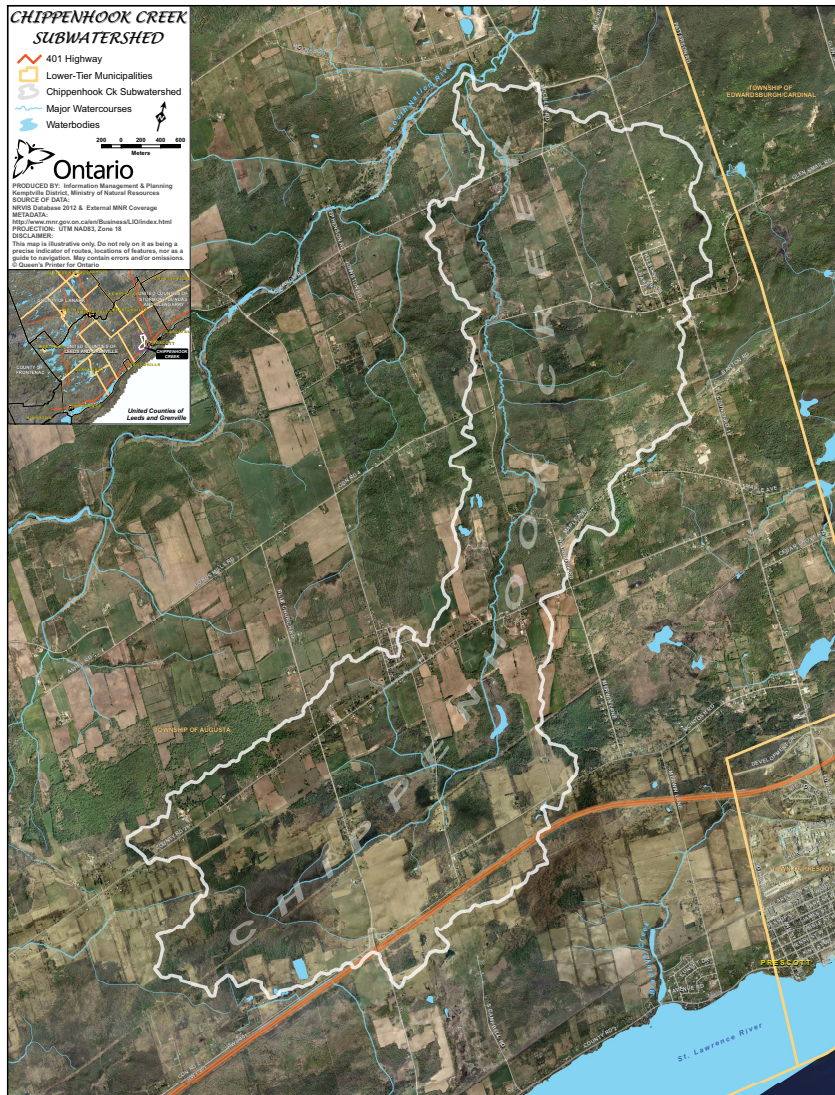
## Chippenhook Creek --- Monitoring Water Quality

For several years now, the LGSC has been conducting water sampling on several streams, but most specifically on the Chippenhook Creek, close to Prescott. This stream empties into the South Nation River. In the past, the Stewardship Council has installed water gauges at several locations, as well as conducted water sampling and testing. The water quality in our lakes and rivers depends on the smaller streams and creeks that feed into them. This is why even the smallest stream is important to the maintenance of good water quality.

The Benchmarks used to monitor water quality include:

1. Dissolved Oxygen Data - Within the possible range of 1-14 mg/L.
  - Low concentrations indicate poor water quality and unhealthy ecosystems
  - High concentrations indicate good water quality and healthy ecosystems.
2. Typical Alkalinity Ranges --- Typical surface water 20---200 mg/L
3. Nitrate --- Nitrate is measured in mg/L. Natural levels of nitrate are usually less than 1 mg/L. Concentrations over 10 mg/L will have an effect on the freshwater aquatic environment. 10 mg/L is also the maximum concentration allowed in human drinking water by the U.S. Public Health Service.
4. Phosphate --- Phosphorus in small quantities is essential for plant growth and metabolic reactions in animals and plants. It is the nutrient in shortest supply in most fresh waters, with even small amounts causing significant plant growth and having a large effect on the aquatic ecosystem. Phosphate---induced algal blooms may initially increase dissolved oxygen via photosynthesis, but after these blooms die bacteria aiding their decomposition consume more oxygen. This may cause a change in the types of plants that live in an ecosystem.
5. Sources of phosphate include animal wastes, sewage, detergent, fertilizer, disturbed land, and road salts used in the winter.
6. Phosphates do not pose a human or health risk except in very high concentrations. It is measured in mg/L. Larger streams may react to phosphate only at levels approaching 0.1 mg/L, while small streams may react to levels of  $PO_4^{3-}$  at levels of 0.01 mg/L or less.
7. In general, concentrations over 0.05 will likely have an impact while concentrations greater than 0.1 mg/L will certainly have impact on a river.





Preliminary evaluation of tests conducted in 2012 and 2013 indicated elevated levels of Phosphate. Continued and specific testing will provide sources of the elevated levels.

In 2014, Council members continued monthly water sampling and testing, both as a Council group and also in conjunction with a representative from the South Nation Conservation Authority.

In a further effort to increase data results, mechanical testers and monitors were placed in several locations.

Water results of course vary from location to location, but results would seem to indicate water quality is stable.

This summer, to get a real sense of the creek's health, we will organize benthic testing.

# SUSTAINABLE FORESTS

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## 50 Million Tree Program

With Donna's leadership, LGSC successfully had 37,300 seedlings planted on 10 sites (20 acres) from April 24 to May 16, 2014.

Another wet year gave food to 4' tall weeds, which took its toll on the seedlings but also allowed them to grow well. Most sites were small and wet; thus all of the sites were planted by hand planters.

For the spring of 2015, LGSC will have an even smaller number of 10000 seedlings on 4 sites to plant with the site preparation completed on most and spot spray where site preparation could not be applied.

Year 1, 2 & 5 survival assessments were completed in Nov 2014. A total 162,500 trees were planted on the 32 sites in these 3 years with average survival rates for each year being as follows: 2010-78.2%; 2013-86.6%; 2014- 90.2%. The sites are assessed in the 1<sup>st</sup> and 2<sup>nd</sup> year to evaluate whether a refill for dead seedlings is necessary i.e. the survival rate is 60% and lower. The 5<sup>th</sup> year is basically just a follow up to calculate the intervening 3 years and future of the plantation.

The assessments are done by counting 10 trees in 1 row and keeping track of the live vs. dead. Then skip 1 row and do the same for as many rows as necessary to get 10% of the planting assessed. With the drought in 2012 and the unusual amounts of rain in 2013-14, the vegetation competition has impaired the survival rate of the seedlings when compared to previous years.

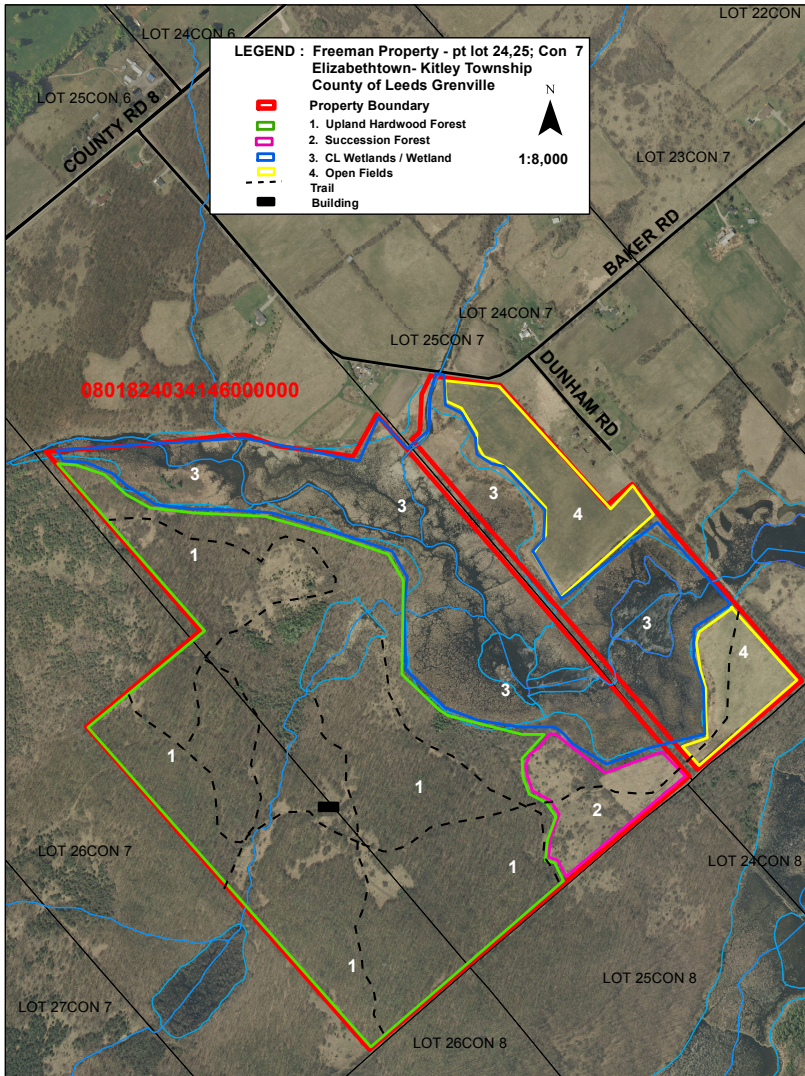


## Managed Forest Tax Incentive Program

Donna wrote plans for 14 properties in the winter of 2013/14 covering some 1540 acres. 6 plans are in the works for winter 2014/15 and more will be requested as winter progresses.

An example of one of the maps needed to complete a Managed Forest Approved Plan is included below.

### 6. Compartment Map for Freeman Property



## Butternut Recovery Program

LGSC partners with the Rideau Valley Conservation Authority in the delivery of the Butternut Recovery Program. Due to an abundance of seed in 2013, oodles of seedlings and seed were given across Eastern Ontario in spring of 2014. However, there was a severe shortage of Butternut seed in 2014, there will be no seedlings given to LGSC in spring of 2015.

Year 1, 2 & 5 survival assessments were completed in Nov 2014. Total trees 162, 500 trees on 32 sites.



Photos: L to R: Seedling, butternut seeds on a tree, seeds

## Kemptville Woodlot Conference 2014

The LGSC was a sponsor for the 27<sup>th</sup> annual Kemptville Woodlot Conference that was held on February 19, 2014, at the Kemptville Agriculture College. Sponsorship also included floor space for a display. The LGSC took advantage of this opportunity to present and discuss projects being undertaken by the LGSC, with special emphasis on the council's tree planting program. The conference was well attended. Several council members attended. Speakers included:

*Rob Keen*, CEO, Trees Ontario, - Rob provided an overview of the Trees Ontario planting initiatives.

*Dr. Richard Wilson*, (MNR) – Richard gave an update and his thoughts about the future of a number of the most problematic invasive species affecting our forests in Ontario. His presentation was followed by an informative video on Emerald Ash Borer.

*Bruno Pretto and Paula Vopni*, Mycosource Inc. – Bruno and Paula provided a detailed presentation on how to cultivate mushroom in a woodlot.

*Brian Lawrence*, Workplace Safety North – Brian's presentation highlighted the hazards of working in a woodlot. He had a number of sobering examples. He provided valuable safety advice and had resources materials available.

*Janine McLeod* – Janine's presentation on ephemeral ponds stressed the importance of this unique habitat and the role they play in adding to a woodlot's diversity, especially for

amphibians.

*Tom Richardson and Thomas Logan* – gave an overview of current wood product market trends and also their predictions for the coming year. This is very timely advice for those considering a commercial harvest in their woodlot.

*Michael Runtz* – Michael provided a very entertaining presentation about wildlife in woodlots. He provided many personal anecdotes and personal experiences. His photography is exceptional.

# EDUCATION AND AWARENESS

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LGSC has long been committed to education and awareness campaigns concerning important environmental themes. In 2014 this tradition has continued in a variety of ways and focused on a diversity of themes as well as audiences.

## Children's Water Festival

LGSC participated in the St Lawrence River Institute's May 2014 Water Festival held at the Drummond Building in Spencerville, Ontario. The two-day festival was very successful as almost 500 grades three and four students from eight local elementary schools attended the event. Secondary students from Athens District High School and Brockville Collegiate Institute acted as the station leaders interpreting each of the approximately thirty stations.

The theme of the stations included, among others, water conservation, wetlands, aquatic invaders, water chemistry erosion and the water cycle. In addition to St Lawrence River Institute other guest presenters were Ontario Power Generation, South Nation Conservation Authority, Edwardsburgh/Cardinal Fire Department and Edwardsburgh/Cardinal Public Library.

In addition to a financial donation, LGSC had six volunteers on hand during the two days.



## Woodworking for Wildlife

Leeds Grenville Stewardship Council volunteers actively support elementary school teachers through the Woodworking for Wildlife program. It is one of our most popular programs.



The program starts early in the winter as Garnet Baker, Dwayne Struthers and their many helpers convert their supply of Ottawa Valley white pine lumber into hundreds of pre-sawn and drilled bird box kits. Then they go to the classrooms. After listening to a short presentation, each child in the class gets the opportunity to construct and take home a blue bird box. Council members and the teacher are always near at hand to offer advice, but the children do the work.

## Earth Day Summit 2014



Leeds Grenville Stewardship Council is a proud supporter of the Earth Day Summit, which is hosted by the Environmental Education Network of the Frontenac Arch Biosphere in partnership with Leeds and Grenville Land Stewardship Council, Cataraqui Conservation Authority, Brockville Museum. In 2014 the Summit was held at Landon Bay April 24, 2014.

25 Schools from three Schools Boards participated in a one-day event. 4 Students are invited from local Grade 5 classes to come to Landon Bay with other school children to participate in this annual event called the Earth day Summit.

Outdoor Environmental activities include:

Biosphere Hike, Eco Clue Game, All Natural Department Store, Worm Composting, Kayak Relay, The Grey Rat, Museum in a Suit Case, Earth Art, Hug A Tree Survival Game.

“This is a popular one day event where Grade 5 Students come and learn about our local Environment and in turn are asked to be local ambassadors for their school to go back and talk to and teach other students about their experience and what they have learned at Landon Bay say’s Jack Henry Frontenac Arch Biosphere Education Chair”

Special thanks and recognition to the volunteers and partner’s who continue to make this event a huge success.



## Bring Your Parents to School Night - Rideau District High School

In 2014 LGSC had the opportunity to put on a workshop for the Bring Your Parents to School evening hosted at the Rideau District High School. As with the school presentations each of the 4 sessions began with a short presentation on the Stewardship work ongoing in the United Counties followed by instruction on how to assemble the bird boxes. The participants were very engaged and most if not all promised to install the 60+ assembled birdhouses the following day.



## **Envirothon 2014 - Leeds and Grenville**

In partnership with United Counties of Leeds and Grenville, the Leeds Grenville Stewardship Council and the Frontenac Arch Biosphere come together as partners each April to host this High School Environmental Competition.

Six local High Schools participated in this year's event where students learn first hand about the importance of Wetlands, Forests and Species at Risk.

This one-day is a very popular event held in Limerick Forest at the Limerick Forest Interpretative Center.

This year's overall winners were Rideau District High School.

Congratulations Rideau District!

Special Thanks to Geoff McVey and Rob Ross for their efforts in making this event a huge success.

## **LGSC Student Bursary**

The LGSC offers a \$500 Bursary yearly to graduating students in Leeds-Grenville who plan to further their education at the post-secondary level in the broad spectrum of Environmental studies (Forestry, Biology, Geography, etc.)

This year, all the applicants demonstrated academic achievement as well as participation in extra-curriculum activities and volunteerism in their local communities.

This year's worthy winner was Alexandra Mitchell of Gananoque Secondary School as chosen by the committee of Garnet, Amy, Ted and Laura.

## SPECIES AT RISK

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### Gray Ratsnake



The gray ratsnake is listed as threatened on the Ontario Species at Risk list. In 2005 with funding support from CFWIP, Garnet and Dwayne designed and built 12 wood framed, wire mesh nesting boxes to provide protection from egg predators. The structures have been deployed throughout Leeds County. They are filled annually with a variety of compost substrates designed to maintain a temperature around 30 degrees Celsius, which is necessary for egg incubation.

Since 2009 evidence of some 500 successful hatchings (egg shells) have been found in the nest boxes that are monitored annually. Previous years also helped provide additional information about the little known phenomenon of parasitism on gray ratsnake eggs from the larvae of the postulated carrion beetle. At one location where nesting boxes have been successful, evidence on some of the eggs showed that they had been destroyed by the beetle larvae which emerge and predate upon the incubating eggs. This site is known to be used communally by gravid ratsnakes and one belief is that these communally used sites can be more susceptible to this parasitoid.

Traditionally, the nest box sites were monitored by LGSC in the late fall but it was determined from previous years of monitoring that on several occasions we were finding eggs that were yet to hatch or juveniles were just emerging. It was determined that this could risk the successful emergence of juvenile snakes and the timing for nest box monitoring would be done in the spring in the future as not to disturb emerging snakes or alter incubating eggs.

## Gray Ratsnake Workshop



### Gray Ratsnake Recovery Workshop

Come learn how to help the Frontenac Axis population of Gray Ratsnake Recover and be part of the solution

**Saturday May 31st**

**9:00am to 12:30pm**

Queen's University Biological Station  
280 Queen's University Road  
RR #1, Elgin, Ontario K0G 1E0

**Organized By:**

Leeds Grenville Stewardship Council

**Supported By:**

QUBS , OMNR, FABR

**Featuring - Dr. Patrick Weatherhead**

Professor Emeritus, University of Illinois and member Gray Ratsnake Recovery team

- Learn how landowners can help the gray rat snake recover
- Overview of LGSC successful nesting box program
- Demonstration on how to build and fill your own nesting box

**Registration: \$10 workshop fee**

Register by May 26th by emailing [lgstewardship@gmail.com](mailto:lgstewardship@gmail.com)

**For more details go to [www.lgstewardship.ca](http://www.lgstewardship.ca)**



In partnership with Queen's University Biological Station (QUBS) and support from OMNR, a one day gray ratsnake workshop was offered to landowners in Eastern Ontario.

The objectives of the workshop were: to advise landowners how they help in the recovery of the gray ratsnake and engage landowners in the nesting box program. We were privileged to have Dr. Patrick Weatherhead Professor Emeritus, University of Illinois and Shaun Thompson of OMNR provide overviews of the taxonomy, ecology and conservation of ratsnakes and of the history and success of the nesting boxes.



15 interested landowners came to the workshop and after the overviews of the biology etc. folks were given a lesson in box construction and could see a box that was located on the QUBS property. While no one came forward to build or acquire a nesting box all went away with a lot of good information on how to help the gray ratsnake recover.



## Turtles

The United Counties of Leeds and Grenville is home to many endangered species of turtles, and in the past, basking rafts, nesting sites and fenced road shoulders have been installed by Council to protect turtles.



Cliff Rogers LGSC, Dave Robertson LGSC, Katie Keenan SNCA, Ted Royal LGSC, Lawrence Levere SNCA, at Stevenson Road

We have continued to care for the basking rafts in the creek and the fenced nesting areas on the road shoulders on the Skakum Road.

This year, maintenance was on going with our several projects. Also, a new site on the South Nation River at the Stevenson Road was scouted and developed by Councilors in association with South Nation Conservation Authority. The Council hopes to develop further nesting sites and improve Turtle Habitat. In the future, we hope to develop nesting sites at the west end of Skakum Road.

- 1) North side in a wooded area
- 2) At the Charlieville bridge.

# OUR COUNCIL

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## Council Members 2014



The strength of Leeds Grenville Stewardship Council is the group of volunteers who work tirelessly to make a difference on the ground. We have a diverse representation including rural and urban residents, landowners, farmers, retirees, and young people who live throughout the United Counties of Leeds and Grenville. What the group holds in common is a strong commitment to land stewardship.

In 2014 Karen Brown assumed responsibility of chair, Dave Robertson continued in his important role as the Treasurer and working with RVCA on all financial matters, and Rhonda Elliott took on the role of Secretary.

Garnet Baker	Toledo
Karen Brown (Chair)	Delta
Kerry Coleman	Oxford Mills
Rhonda Elliott (Sec)	Chantry
Jack Henry	Brockville
Donna O'Connor	Elgin
Amy Mackie	New Dublin
Laura Parrott	Prescott
Dave Robertson (Treasurer)	Johnstown
Cliff Rogers	Brockville
Ted Royal	Brockville
George Sheffield	Chantry
Lloyd Stone	Forfar
Dwayne Struthers	Toledo
Kristine Landry	Kemptville

The Council meets about once a month (weather permitting) at various locations throughout the United Counties.