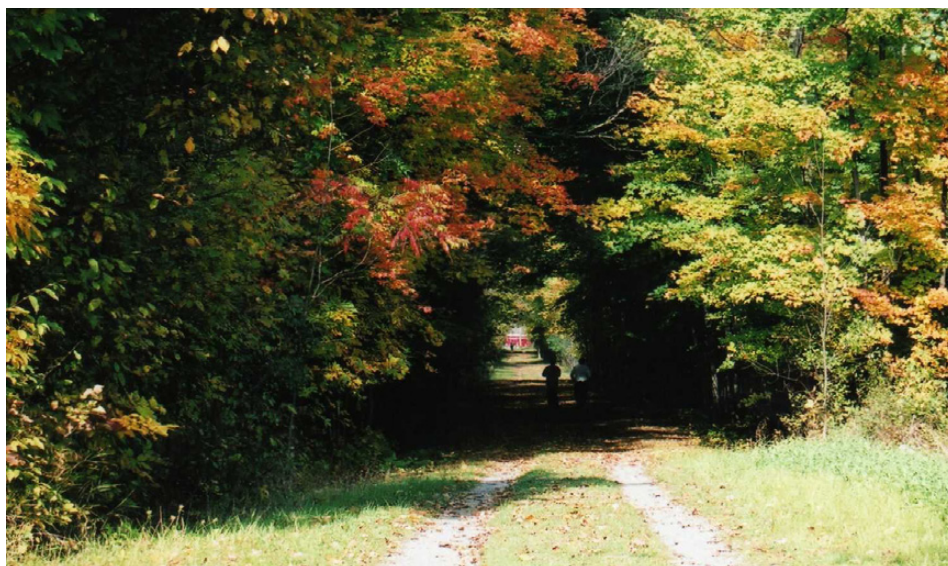




Ottawa-Carleton Wildlife Centre

SERVING THE COMMUNITY FOR OVER 25 YEARS

A GREEN PRESCRIPTION FOR WHAT AILS US



Saving natural areas must become much more of a priority for municipalities. There are multiple reasons for doing so. The economic benefits associated with 'green infrastructure' are well established and progressive cities are rapidly moving ahead in putting policies and plans in place to protect wetlands, woodlots, even small meadows and bits of remnant habitat in communities.

There has been a tendency to bulldoze every vestige of natural habitat to squeeze in as many homes and services as possible and then try to recreate something 'green' by building a small park with a few trees. Even here, more often than not, sports fields dominate the limited lands set aside for green space. Don't get me wrong, we need recreational space but we also need to retain accessible natural areas as well. It is of even greater importance as we experience an aging demographic where more people will be looking for passive recreational opportunities.

For Children's Sake

It has been more than a decade since Richard Louv, in his book *'Last Child in the Woods'*, coined the term "*nature-deficit disorder*". Preoccupied with electronic gadgets and games, children no longer go outdoors alone and what activities or sports they participate in are adult-directed and supervised.

A growing number of health officials, educators and authors have identified the high cost of this phenomena as one that is robbing our children of the sense of independence, adventure, risk-taking and creativity they need to develop and grow as individuals and we need for a productive and healthy society.

We All Need Nature

In spite of the ever-increasing number of electronic diversions and an affluent life style, we increasingly hear about society's unhappiness. Despite a standard of living that is well beyond what our

parents enjoyed, more people are feeling powerless, stressed and dissatisfied.

Maybe we are following the wrong dream.

In a world where the majority of the population live in urban areas, it has become critical to understand the importance of nature in our lives, as well as what happens if we're separated from it.

As for the health benefits, we know that trees reduce smog and pollution by filtering out harmful pollutants from the air we breathe; they provide shade and protect us from the sun while cooling off the environment during hot spells; they prevent flooding by absorbing rainfall and they create attractive and liveable communities. Wetlands, lakes and rivers serve as filters, keeping our drinking water clean as well as providing numerous recreational opportunities to relax and enjoy ourselves.

Studies show that our brain and body are hard-wired to need nature and that time in nature produces measurable benefits for our health and well-being. Having access and using green space promotes physical activity, reduces stress and increases social interaction. The presence of green space is associated with decreased death rates, obesity, cardiovascular disease and improved mental health.

For all of these reasons, doesn't it make sense for municipalities to place a higher value on preserving natural habitat? And, to provide the necessary leadership to bring developers and communities together to preserve more of it?

Community Outreach

Our Education and Outreach Programs have been busier than ever and the diversity of interest continues to motivate us. Here are some of the things we have been up to:

Working in the Community



The Centre is getting more and more requests to speak at different community association meetings. The most recent was the Rothwell Heights Property Owners' Association AGM. We gave a presentation entitled *'Enjoying Wildlife Neighbours – Finding a Balance between People and the Wildlife that Share Our Space.'*

The interest by the attendees in the subject was more than we could have hoped for. People not only had lots of questions about ways to coexist but also wanted to share their wildlife stories and observations. We thank them for their warm welcome and interest in coexisting.

OCWC in the News



Photo Credit: Adele Cardamone-Martel

This spring the Ottawa-Carleton Wildlife Centre had an opportunity to be a guest on CBC's 'Our Ottawa', a weekly magazine program highlighting local stories. Host Adrian Harewood had attended one of the Centre's presentations and felt it would be something viewers would be interested in and would find helpful.

It was a great chance to get out the message that during the spring birthing season wildlife will be more visible and that moms will be seeking out shelter to have their young. Places like sheds, BBQs, roofs and chimneys all make for good denning sites. It is temporary and it is critical not to take an action as it will likely result in creating orphans.

It was also good to emphasize that we are fortunate to have such a wide range of species living in and around our City. We received very positive feedback about the interview, one of the best compliments was to hear that *"it was a great delivery of the message of coexistence"*.

City of Ottawa's Wildlife Speakers Series

The City of Ottawa has continued its Wildlife Speakers Series, with the latest topic being *'Engaging Citizens in Science'*. As at previous sessions, there was an open-house environmental exposition with various local agencies and organizations having booths and displays. It was a great way for residents to learn more about Ottawa's wildlife and natural environment.



Our Centre had a booth showcasing its programs along with information about coexisting with backyard wildlife. In addition to being a great forum to engage the public, it was a good opportunity to connect with other organizations.

Celebrating Earth Day in River Ward



Photo Credit: : Office of City Councillor Riley Brockington

The Ottawa-Carleton Wildlife Centre was pleased to celebrate Earth Day this year by participating in an event hosted by Councillor Riley Brockington of Ottawa's River Ward. It was very encouraging to see a City Councillor take the initiative to recognize the importance of the environment.

The event included a guided nature walk, electronic recycle depot as well as a trade show with displays from environmental organizations and city services.

Editorial

An Engaged Public



As this issue shows, more and more people are taking an interest in how their communities are planned, particularly with regards to the preservation of natural

areas. Not surprising given the critical role that green space plays in our physical and mental health as well as the overall environmental and quality-of-life benefits it brings to neighbourhoods.

There are also the significant economic benefits as cash-strapped governments recognize the need to return to nature-provided services as opposed to laying more pipes and digging more storm-water ponds. Brigitte Desrochers, an instructor at Carleton University's Azrieli School of Architecture made a compelling case in this regard recently in an opinion piece in the Ottawa Citizen. It lays out the substantial benefits of using *'green infrastructure'*, challenging the City of Ottawa to provide the leadership and collaboration with other levels of government to get us there. I would add that there are plenty of community partners that can also contribute.

Donna DuBreuil
President, OCWC

The Centre had a booth with fun activities and information about local wildlife for people of all ages. The event was well attended, not only by many community residents, but also by all levels of government.

In addition to Councillor Brockington, the City of Ottawa was also represented by Councillors Mark Taylor and David Chernushenko.

MPP John Fraser attended as did the federal government's Environment and Climate Change Minister Catherine McKenna, who had just returned from the signing of the Paris Agreement on climate.

We were glad to be a part of an event that not only recognized the need for changes to improve the health of our planet, but that also celebrated the environment and gave hope for the future.

Animal Stories

To The Rescue

Even though we no longer do wildlife rehabilitation, the animals we have helped over the years are never far from our minds. In fact, having had the privilege of caring for these special animals has reinforced our commitment to giving people a better understanding of them.



By Kate MacNeil

In the many years while we were doing wildlife rehabilitation, I never personally found an animal in need. It may be because I was at the Centre day and night taking care of animals that other people found!

In the years since we stopped doing hands-on care, I seem to find myself in many of these situations. From helping turtles cross the road, to returning baby birds to the nest to rescuing orphaned baby skunks while on vacation, I seem to have obtained a real knack for finding animals in need. A few years back, I found myself in rescue mode once again with a baby porcupine. Of course it was during my vacation, perhaps it is an indication I should just stay at work.

It started when I saw a dead adult porcupine on the roadside; sadly it had been hit by a car. It was in a residential area with a speed limit of only 40 km/hr with a wooded area on one side. And while I realize it's hard to see animals, especially at night, I think too often it is speed and driver distraction that result in a tremendous threat to wildlife.

When I mentioned this to my father, he said he had seen an adult and a small baby porcupine in the same spot the day before. This was horrible news! I immediately got back in the car, box and gloves in hand and drove to the scene. I searched and called, praying I would find the baby. No luck. I felt awful, knowing the small orphan would have no chance of survival

at this young age without mom, and likely would suffer a slow death.

Over the next few days, I checked the area frequently, still, no luck. I even managed to find a pet carrier and a small net that I had ready in my car. By day four, I was feeling pretty pessimistic about the little porcupine's fate.

A friend had picked me up to go for lunch. As we were approaching the area I noticed cars on both sides were stopped. I was hoping this meant my little friend was back. I jumped out of the car and saw the baby had just crossed the road and was heading into the wooded area. In a panic I realized I had no carrier, it was in my car! So I grabbed an insulated grocery bag, and in a flash I ran towards the woods. As I got closer, I watched as the baby slipped under a wire fence. I knew this was likely my only chance. I don't know who was more surprised at my swift move over the fence, me or my friend? With a quick scoop I had the baby in the cooler bag. I was so relieved.

Now the fun began. I did a quick examination and the baby was thin and had some parasites but otherwise was ok. Although

Porky Facts:

- *It is estimated porcupines have more than 30,000 quills*
- *Young are born fully quilled, but quills are initially wet and soft*
- *Porcupines have a wide range of vocalizations, including grunts, sobs, barks and even screams*
- *Their diet is often lacking in sodium, thus making winter roads and their salts a deadly attractant*
- *Porcupines will also chew on items like paddles or even shoes that have had human sweat, again for the sodium*

weaned and no longer needing formula, it was still too small to be on its own and needed care, but where to find this? After several calls I did manage to find a place for this little guy to go, but they asked if we could do temporary care for a few days.

We managed to rig up a cage that would be suitable for a short stay. I considered this a working vacation. Actually, it was wonderful. There is something very special about directly helping an animal in need. It was also a rare opportunity for my daughter to see up-close what I used to do. She would sit very still and the baby porky would climb on her lap and munch almonds. They became fast friends.

We were lucky enough to get to visit porky before her release back into the wild. She had grown a lot, but she recognized my daughter and was happy for her special almond treat.

'Best Wildlife Management Practices'

Individuals Make the Difference. While cities across the country are developing more progressive practices to better live with wildlife, it's generally individual citizens that have prompted these changes. It was the initiative and determination of landowner Ross Owens that not only resolved problems on his property but pushed the City of Ottawa to adopt a more effective solution as well.

A Landowner's Approach to Solving Beaver Conflicts



By Ross J Owens

Those Dam Beavers

Cunning, calculating, destructive and sometimes difficult to live with, but beavers provide so much of our needs, protect our environment and protect us from some of the extremes of nature. Is it any wonder most don't understand them or can figure out how to deal with them?

We give them little thought until their environment encroaches on ours; in reality, most often the reverse is true.

As we discovered, it is possible to live harmoniously with these amazing creatures while still reaping the benefits of the relationship.

The Environment

Our property is southeast of Ottawa just east of the village of Vars. We have 31 acres that is about 20 acres bush and trails that are used primarily for horseback riding. Through the west end of the property runs a small stream flowing south with a creek bed about 10 to 12 feet wide in most parts and about 3 feet deep.

This is a perfect habitat for beavers and soon after we moved in 12 years ago so did our furry friends.

At first we were comfortable with the beavers. They began their dam building and turning the small stream into a beaver resort. Each year their environment grew until 10 years later they had created a 7 ½ acre lake with the two large dams 200 feet long and 40 feet long, 4 large lodges and a water depth of 4 ½ feet (7 ½ feet to the bottom of the creek bed).

The Dilemma

For many years we were happy to live with the beavers and share a portion of our land with them. Eventually much of our riding trails were flooded and no longer usable. Our neighbour had flooding in his back yard with water surrounding his surface well and his septic system was being threatened by the high water table. The beavers brought down large trees in his yard, one barely missing the house. His basement was also flooding during very short power outages. In addition, the beavers were now damming a culvert under a road to the south of us holding back about 5 feet of water and restricting drainage to not only our property but several others.

The beavers had created a health and safety issue as well as potential liability for us if we took no action.

The City of Ottawa was clearing the culvert several times a week only to have the dam rebuilt the following night. Much to our dismay, they also tried trapping the beavers to no avail. This only created a vacant beaver resort ready-made for a new colony to move in and further improve.

We and our neighbour had also breached the two dams on our property only to have our industrious inhabitants rebuild them in only a few hours. It was clear that another more creative approach was necessary.

The Objective

We did not want to deprive the beavers of their home but it was clear that we needed to create a situation that would work for all.

We enjoyed having the beavers on our property when their habitat was much



Lower beaver dam



Breaching dam before installing pond leveler

more constrained and wanted to preserve that.

We wanted to find a solution that would provide a sufficient habitat for the beavers that they could not expand while at the same time lowering the water table, alleviating the health and safety issues as well as making our land and trails useful again for the purpose they were intended.

We also needed a solution that was very low maintenance, cost effective and did not require heavy equipment to construct.

We and our neighbour agreed to tackle this problem together as we would both benefit from the resolution.

The Approach

We consulted with an Ottawa-Carleton Wildlife Centre contact, Mike Callahan of Beaver Solutions in Massachusetts. Mike was very accommodating and provided us with several options as well as guiding us through the design process.

In order to resolve this issue, we had to deal with two dams; an upper dam holding back about 4 1/2 feet of water, a lower dam holding back about 3 feet of water and a further downstream culvert under the road with a road surface height that was above the level of the upper dam.

Mike recommended the construction of pond levelers for each of the two dams. These devices consist of an 8 inch pipe that is placed through the dam at a level

where the water is to be controlled and the inlet to the pipe placed in a circular cage about 40 feet from the dam on the up-stream side. The principle of these devices is simply that no matter how much work the beavers do on the dam, the water is controlled by the level of the pipe placed through the dam. The inlet side being located about 40 feet from the dam, the beaver does not

relate this to the flow of water through the dam. The large cage at the pipe inlet along with cutting the shape of the pipe inlet on a taper does not allow the beaver to detect the water flow into the inlet of the pipe. The beavers eventually give up and as long as their habitat is suitable they will remain.

However, without resolving the road culvert problem, any work on the dams would be fruitless as when the beavers blocked the culvert they essentially created a dam that was higher than the other two dams and the water would back up over the level of the upper dam.

As the roadside ditch and the culvert are on City of Ottawa property, we required

the cooperation of the City to resolve this issue. To further complicate the situation, the culvert was the start of a Municipal Drains system that is controlled under the Province of Ontario Drainage Act and administered by the City of Ottawa. Several City departments would be involved.

Mike had recommended that we build a fence and pipe arrangement at the culvert to alleviate the issue. This involved building a fence at the entrance to the culvert fed by a pipe stretching 40 feet to a circular cage similar to that used for the pond levelers. The theory of operation is that the beavers would create a dam around the fence and the water would enter the culvert through the pipe that was placed 2 feet above the culvert bottom. The beavers would dam around the fence in an attempt to stop the water. This would create a 2 foot deep pool of water that covered the pipe in the cage and further damming could not raise the water level as the water would enter the culvert through the pipe. The 2 feet of water was required again so that the beavers could not sense the flow of water into the pipe inside the circular cage.

This would handle the normal flow of water and during a storm the water would rise and flow over the dam the beavers created at the culvert fence and into the unrestricted culvert. When the water



Road culvert solution

Continued on Page 6

Continued from Page 5

receded, it would again flow through the pipe.

The Obstacles

Beavers need about 3 feet of water to be able to thrive. We needed to control the level of the water at 2 ½ feet at the upper dam. Considering the depth of the creek bed (about 3 feet), that would give them 5 ½ feet of water; enough for winter survival and allow resolution of our problems. The water behind the lower dam would be controlled to 2 feet, again (with the creek bed) giving them sufficient environment in which to thrive.

In April 2013 we approached the City of Ottawa about this issue as their lack of capability to resolve the culvert situation was flooding our land and creating a health and safety issue. To our dismay, almost a year later and after many attempts and letters we were still unable to gain any cooperation from the City.

Two years later, in May 2015, we managed to gain the interest of a local roads foreman that agreed that a different approach was necessary. From that point forward with his assistance we managed to make significant inroads with the City and eventually gained approval in July 2015. We agreed that the construction cost was to be borne by us and they agreed to provide heavy equipment required to prepare the area as specified by Mike Calahan.

The Construction

In May 2014, we constructed the pond levelers to control the water levels on the two dams. We did the work in the spring to give the beavers time to adjust to their new environment before winter set in. This involved adjusting the entrances to their lodges to accommodate the lower water levels.

However, since the beavers could still create a 5 foot high dam at the road by just blocking the culvert, the water would backup over the original dam height. The City was still clearing the culvert several times a week at considerable expense but since the beavers would again block



Constructed pond levelers ready for installation.

the culvert the next night, the land never drained and the water did not have a chance to fully recede. Although their efforts helped some, it was far from an acceptable solution.

In August 2015, the City provided heavy equipment to clear and level the area in front of the culvert. Only a day was required to complete the construction and soon after the beavers did their construction required to make the system work.

The total cost was about \$600.

The Result

The pond levelers have been a great success and have controlled the level of the water to exactly where we wanted. They have been in place for more than 2 years and thus far have required no maintenance.

The beavers have adjusted to their new habitat and continue to provide cost-free environmental management for us and all who share it.

The fence and pipe arrangement at the culvert is doing exactly what we expected. The City has not had to clear the culvert for over a year and the fence and pipe has also required no maintenance and no further cost to us taxpayers. The entire area is now much safer as instead of almost 5 feet of water in the ditch that backed up for almost ½ km in each direction, there is only a small area with water 2 feet deep.

Our neighbour's property is now dry with no risk to his well or septic system. He also claims his sump pump runs much less frequently and no longer has a flooding issue.

Our potential liability to our neighbours has been mitigated. Our property is now much drier and we again enjoy the use of our riding trails.

A win-win for all.



Pond leveler still working after 2 years

THE BENEFIT OF BEAVERS

It is increasingly understood that wetlands serve a vital role in the health of our watersheds. In fact, if we are to have clean water to drink in the future, we will have to pay much greater attention to preserving and protecting our remaining wetlands.

There is no other species that is as critical to creating and maintaining wetlands as beavers. Considered a “keystone species”, there isn’t a single other species that will better benefit a watershed.

- Beaver dams create diverse habitats. By opening the tree canopy, sunlight is able to reach the water and triggers an explosion of biological activity. Grasses, sedges, bushes and saplings grow on the perimeter of the pond while aquatic plants thrive in the sun drenched, nutrient rich water. An entire food chain is created by a beaver pond, providing

food for fish and a host of birds and mammals.

- Beaver dams improve the flow and quality of water, holding back flood waters and preventing erosion while filtering and reducing sediments and toxins.
- Beaver dams can help to elevate and stabilize the water table by storing and gradually releasing precipitation and runoff, mitigating the disastrous effects of drought.

It explains why a growing number of progressive jurisdictions, recognizing the environmental and economic value of green infrastructure, are happily learning to live with beavers. They are installing flow devices to prevent flooding where



it’s a concern and wrapping trees they want protected while planting others like poplar, willow and cottonwood as ‘renewable’ beaver food.

And, as the story in this issue demonstrates, why individual landowners are doing all they can in order to keep beavers on the landscape and working on our behalf.

MIKE CALLAHAN, BEAVER SOLUTIONS LLC

www.beaversolutions.com

Mike has become a key resource for communities wanting to coexist with beavers. He arrived at this mission in a rather roundabout way. When his home state of Massachusetts held a referendum in 1996 restricting types of trapping, he and his wife, Ruth, were employed in the medical profession. But the trapping issue was pitting homeowners concerned about flooding against people concerned about beavers, challenging Mike and Ruth to find some middle ground.

They recruited 50 volunteers and installed 40 flow devices to prevent flooding, all the while doing research and learning from others in the field about non-lethal solutions.

In launching Beaver Solutions a few years later, Mike’s goal was to create a model business that could be replicated elsewhere. True to his word, he is always willing to give advice and join others in giving back to the community as he has done in Cornwall and London Ontario and, as reported in this issue, with Ross Owens here in Ottawa.

Mike has designed and installed over 1,300 successful flow devices, more than anyone else in North America. He has done this work on behalf of municipalities, state and local highway departments, public utilities, state and federal agencies, private businesses, conservation groups and private landowners.

Today, Beaver Solutions is internationally recognized as a world leader in

effective beaver management.

Mike has generously shared his beaver expertise in presentations, workshops and conferences across the US, Canada and

Europe. Beaver Solutions has also created a widely-acclaimed instructional DVD to help others solve their own beaver flooding issues with well-designed flow devices.

“It is so rewarding solving problems for people while increasing the many benefits of beaver created wetlands”, said Mike.



Wild and Wonderful

One of the principal philosophies we have at the OCWC is that all species should be valued, not only because everything in nature is connected and every species play a role in maintaining healthy ecosystems but also because each animal is unique and special. I think that is one of the things you realize when you get to work directly with individual animals.

We work hard to promote an understanding and appreciation of all species, especially those that we share our spaces with and may actually get an opportunity to watch in person, not only in a book or on a t.v screen.

Nature is a show that never disappoints, but to enjoy the show we must first stop and take the time to watch. Like this amusing event we recently saw:

Enterprising Chipmunk

This year around the Wildlife Centre we seem to have a few more chipmunks zooming around the property than usual. So perhaps they have to be extra creative in finding ways to store enough food in their underground burrow to make it through winter. Even if it means resorting to a bit of trickery.

I watched one chipmunk moving stealthily through the grass, while it watched very closely the movements of a big black squirrel.

I quickly realized the squirrel was busily burying nuts in the grass. After the nut was hidden just so, the squirrel would bound off into the woods to find another. This is when the chipmunk would make its move, going to the exact spot the squirrel had just left, retrieve the nut and race to his burrow to deposit it. He would



then return and once again hide in the grass watching where the squirrel would bury his next treasure. I watched this for several minutes and this chipmunk made a clean getaway every time.

Although I have talked to thousands of people who were having a wildlife problem, I felt this was the first time I encountered wildlife having a wildlife problem. I guess this is why squirrels need to be fastidious in storing food to ensure they compensate for loss.

We would like to put out a request to our readers to stop and watch the wild and wonderful wildlife around you. We would love if you would send your observations and photos to us at wildlifewatch1@gmail.com, so we can highlight them in future issues.

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