CHARLESTON LAKE ASSOCIATION
PRESERVE AND ENHANCE
est. 1890

NEWSLETTER | WINTER 2021

We're dedicated to keeping Charleston Lake beautiful in every way!

www.charlestonlakeassociation.ca

President's Message

2020 has been a year like no other, one to remember or more aptly, not to remember. The world -wide Covid pandemic has affected us all in myriad ways almost beyond belief. Relief is on the horizon and lets hope that 2021 will bring brighter days ahead for all. In spite of all the events cancelled or postponed, one thing that did not change and that keeps us all safe on the lake is the maintenance, installation and removal of shoal markers. Once again, thanks to Robbie Gibson, George Bellisle, Cody Johnson and Lucas Dixie for their work.

Water quality is always a top priority and something that we sometimes take for granted. Unfortunately for the first time in over 20 years, in 2020 no water testing was conducted on Charleston Lake due to Covid restrictions. The Lake Partner Program, a government funded organization that analyzes our water samples, was shut down temporarily due to Covid. Reg Genge, from Ontario Lake Assessments, who conducts all our water quality work was set to retire, but thankfully has agreed to continue for one more year. According to Reg, Charleston Lake has been in good shape for many years and he does not expect any major changes to have occurred in 2020.

Many programs have been affected and may see change in 2021.

- Youth Summer Programs -tentatively planned for this summer.
- Golf Tournament - tentatively planned for August 14th
- Info Centre - expected to be open with restrictions.
- AGM - tentatively planned for July 31st. Location and time to be announced.
- Water testing to go ahead for 2021.

All of the above are dependent on Covid 19 restrictions imposed by the Health Authority. The hope is that by late spring or early summer more normal conditions will prevail and we all will be able to return to beautiful Charleston Lake. A decision on the roll out of the above programs to be made in April/May 2021.

Numerous complaints were received this past summer from lake residents concerned about boat size, speed and noise. It is important to remember that to keep Charleston Lake in its present great condition we have to respect this precious resource, treat it with care and make sure our actions on the lake do not detract from the enjoyment of other lake users and residents. Many of the complaints also echoed concerns for our loon population, due to the affect of boat wakes and speed. If we want to continue to hear the haunting call of the loon we need to give them their space. Our actions do make a difference.

We are including results from MNR & F of the Broad Scale Study conducted 2 years ago. This study gives us an idea of the numbers and different species of fish in Charleston Lake.

Please read the Thank You for Asking question included in this newsletter regarding the situation here at Charleston Lake and the proliferation in Eastern Ontario of Gypsy Moth Caterpillars.

As always we welcome your input and questions. Visit our website ***www.charlestonlakeassociation.ca*** for events and updates.

Wishing everyone a safe and healthy winter and hope to see you in the summer of 2021.

Bill Hallam

ONTARIO'S NEW CONSERVATION AUTHORITIES ACT

On December 8, 2020 Ontario Passed Bill 229, the Budget Measures Act including the controversial Schedule 6 which altered the Conservation Authorities Act, despite widespread opposition to the environmental changes by numerous conservation authorities, municipal councils, environmental organizations, as well as Conservation Ontario, Big City Mayors, Association of Municipalities of Ontario, Ontario Farmers Association and thousands of residents raising concerns and asking for Ontario to remove Schedule 6 from the budget bill.

The provincial government could have passed a budget bill about financial recovery from pandemic conditions without adversely impacting Ontario's highly successful watershed management model and undermining the importance of conservation authorities. Conservation authorities, including our local Cataraqui Region Conservation Authority formed in 1964, have protected life, property and watershed resources for up to 75 years and have worked productively and cooperatively with all levels of government.

The new law enables the Ontario Ministry of Municipal Affairs and Housing to unilaterally issue 'Minister's Zoning Orders' (MZOs) requiring a conservation authority to issue a permit for a development in sensitive areas such as a wetland, even if it goes against their mandate, the public interest, and the application of sound scientific principles for watershed management. The new law restricts the scope of appeals that conservation authorities can bring to the Local Planning Appeal Tribunal (LPAT) and makes a number of other changes that limits the role and important work of conservation authorities.

Now more than ever, where the expertise of conservation authorities is needed to assist municipalities and promote sustainable development and community growth with safeguards for protecting a healthy natural environment, their viability and function is being seriously threatened and needlessly gutted. Ontario's focus for a post-pandemic society should be on ensuring robust local planning and decision-making processes, enabling our science-based institutions, employing proper checks and balances, and supporting public participation in determining the future of our farmlands, forests, wetlands, and other valued areas and natural resources.

Roy Angelow - Municipal Contact

TREVELYAN FARM

Recently, the Ambrose family placed their 179 acre farm on Ballycanoe Road under a conservation easement with the Thousand Islands Watershed Land Trust (TIWLT). The farm, which includes 20 acres of Leeders Creek wetland and another 100 acres of mature and semi-mature mixed forest cover, reflects the rich biodiversity of TIWLT, in the Frontenac Biosphere Reserve. A key focus of the land trust is the Leeders Creek wetland complex, because it is so very important to protecting water quality, wildlife and in its capacity to offset both floods and drought. The owners recognize the importance of protecting these lands for the maintenance of quality water within the Leeders Creek watershed. Leeders is one of the main tributaries that flow into Charleston Lake and what is good for Leeders is good for the Lake. Of further interest to those associated with the Lake is that Trevelyan Farm does not use any chemicals on its crop fields and has not done so for over 45 years. No chemicals on the farm means no chemicals finding their way into the water system.

The conservation easement ensures that no further development (housing or commercial) will ever take place on the property regardless of land ownership: the easement is 4EVER. The owners are well aware of rural lands across the province rapidly changing in use and development, and realize the loss of our rich biodiversity. Through this conservation easement the Ambrose family goal of protecting the farm's rich biodiversity for future generations will be realized. The owners' grand daughters love visiting the farm and exploring the farm's rich biodiversity. The easement ensures that they and future generations will always have this opportunity. In addition to the farm woodlot currently absorbing many tonnes of carbon annually, 8,000 additional trees will be established this spring to contribute to the offsetting of society's carbon dioxide production – and in a special small way, to counter climate change.

For more about the Thousand Islands Watershed Land Trust programs, and how you at Charleston Lake can participate, see ***tiwlt.ca.***

Don Ross

THANK YOU FOR ASKING

This past summer my deck under a large oak tree was covered in small black balls each morning for several weeks. A friend told me this was caterpillar poop, possibly from gypsy moth caterpillars.

Is this something I should be concerned about and if so what can be done?

Answer

You and your friend are probably right, caterpillar poop or more correctly frass.

Last year there was a serious outbreak of Gypsy Moth Caterpillars in Southern Ontario including the Charleston Lake area. This is not the first outbreak here.

The Gypsy Moth was purposely brought from Europe to North America in 1869 in an attempt to start a North American silk worm industry. The experiment failed and the entrepreneur returned to France but unfortunately some of the insects escaped. Gypsy Moths first moved into Ontario near Kingston in 1985 and have been expanding their range ever since.

Large outbreaks can be serious and in some cases can completely defoliate trees, both deciduous and coniferous. Defoliated conifers, although not a favourite of the Gypsy Moth, have difficulty recovering.

What can you do?

1. Scraping and destroying egg masses before they hatch out. Egg masses, buff coloured and tear drop shaped, are found on tree trunks, branches and many other surfaces Soak in soapy water for 24 hours or burn in fireplace.
2. Tree banding with burlap, once the eggs have hatched. Goggle for details.

The above will not eradicate Gypsy Moths but according to the MNR&F can make the difference between complete defoliation and just an ugly nuisance.

Charleston Lake Environmental Association

2019 CHARLESTON LAKE BROADSCALE MONITORING (BSM) NETTING ASSESSMENT

For the past twelve years, the Ontario Ministry of Natural Resources and Forestry has been conducting provincial fisheries assessments as part of its Broadscale Monitoring (BsM) program. Charleston Lake is identified as a "trend" lake, to be assessed on a five year cycle as part of the BsM program, within Fisheries Management Zone 18. BsM provides a snapshot of the entire fish community within a given waterbody but it is primarily designed to survey either Lake Trout, Walleye or Brook Trout.

The following Lake Bulletin summarises the catch from the 3rd cycle of the BsM assessment conducted on Charleston Lake in 2018. Further detailed trends through time comparison analysis to the previous two cycles of BsM (2008 and 2014) will be presented in future editions of this newsletter.

Reminders of Fishing season dates 2021:

Lake Trout – May 22 – September 18

Bass – June 19- December 15

Joffre Cote - Management Biologist, Ontario Ministry of Natural Resources and Forestry – Kemptville District

BROAD-SCALE FISHERIES MONITORING BULLETIN

CHARLESTON LAKE - FMZ 18 - 2018-2022

Charleston Lake Facts

Location: LANSDOWNE
Surface area: 2642 hectares
Maximum depth: 91.5 metres
Average depth: 17.4 metres
Water clarity: 5.2 metres

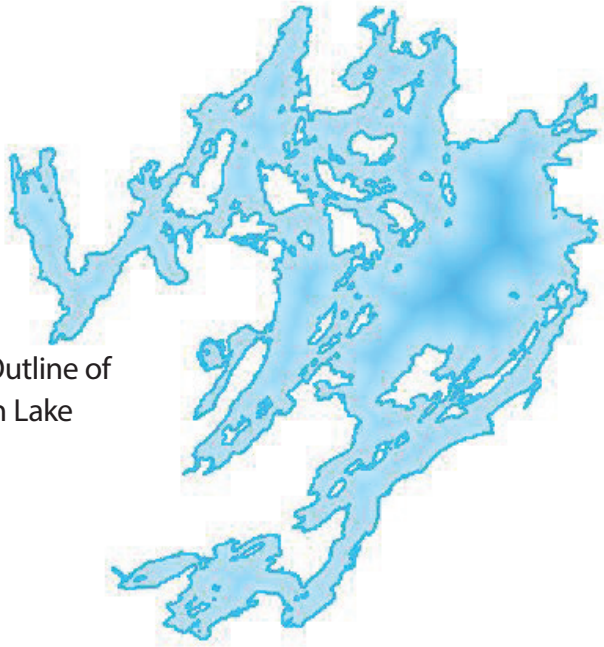


Figure 1. Outline of Charleston Lake

Monitoring Activities

Fish netting - yes
Fish contaminants - yes
Zooplankton - yes
Water chemistry - yes
Bathymetry - no
Water temperature/dissolved oxygen - yes
Aquatic invasive species - yes

Netting Summary

Netting period(s): September 10 to September 20 2019
Number of net sets: 43
Number of fish species caught: 19

Figure 2. Map of Ontario with FMZ 18 highlighted

Generated: October 27, 2020

About Broad-scale Fisheries Monitoring

The Broad-scale Fisheries Monitoring program collects information from representative lakes in fisheries management zones across the province to help biologists manage our fisheries effectively. This bulletin provides a snapshot of recent monitoring activities and netting results. The sampling approach allows us to measure and evaluate the health of Ontario's lakes and their fish communities, and track changes through time over broad areas of Ontario. To learn more about the sampling program visit **Methods for monitoring fish populations.**

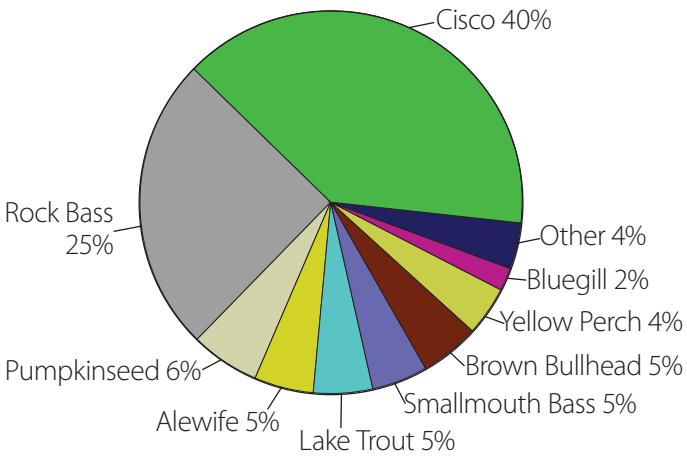
Fish netting results

Fish populations were surveyed using large and small mesh nets to provide information on fish species present and their characteristics, such as growth, age, and abundance.

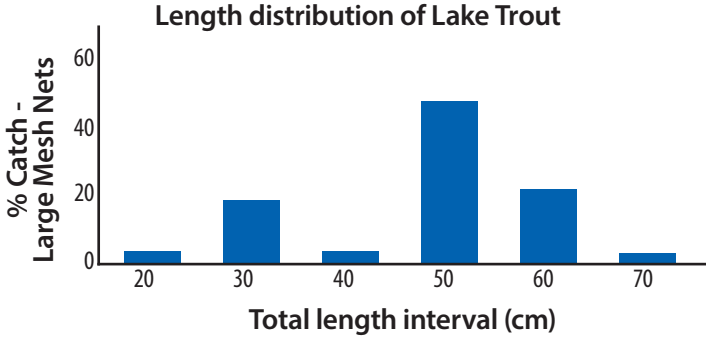
The catch data (depicted in the chart below) show that 15 species were surveyed in large mesh nets. Additional fish species observed in small mesh nets were Banded Killifish, Bluntnose Minnow, Golden Shiner, and Slimy Sculpin.

Fish Species	Total catch %	Maximum length (cm)	Minimum length (cm)	Average length (cm)
Cisco	40	42.0	15.1	26.2
Rock Bass	25	27.1	9.7	17.3
Pumpkinseed	6	24.0	9.3	17.8
Alewife	5	20.3	14.9	16.5
Lake Trout	5	79.7	28.9	53.5
Smallmouth Bass	5	44.0	14.3	27.9
Brown Bullhead	5	32.6	14.9	27.1
Yellow Perch	4	30.3	12.9	18.5
Bluegill	2	21.6	9.0	14.5
Yellow Bullhead	1	30.2	14.3	24.1
Northern Pike	1	77.1	37.8	59.6
Largemouth Bass	< 1	38.9	13.6	29.0
White Sucker	< 1	45.5	42.9	44.2
Bowfin	< 1	63.3	63.3	63.3
Black Crappie	< 1	18.1	18.1	18.1

Proportion of fish caught in large mesh nets

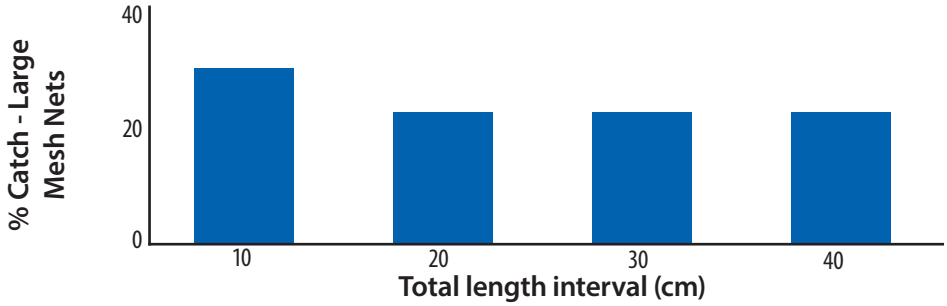


Length distribution of Lake Trout



Catch results are presented in 10-cm length intervals, labelled with the lower limit (e.g., the "20 cm" interval represents fish between 20 cm and 29 cm). The size of Lake Trout ranged from 28 to 79 cm.

Length distribution of Smallmouth Bass



Catch results are presented in 10-cm length intervals, labelled with the lower limit (e.g., the "20 cm" interval represents fish between 20 cm and 29 cm). The size of Smallmouth Bass ranged from 14 to 44 cm.

Water chemistry and temperature - Not available

Aquatic invasive species

Field crews searched for aquatic invasive species and zebra mussels were observed during monitoring. Zooplankton samples are being processed to determine if any new invasive species are present. Any species new to Ontario or an invasive species that is a new record for a waterbody is reported to the Invading Species Hotline ***(www.invadingspecies.com).***

Fish contaminants

Levels of contaminants in fish flesh (e.g., mercury, PCB's, mirex, organochlorine pesticides, and other organic chemicals) will be reported in: **The Guide to Eating Ontario Sport Fish.**

We are committed to providing **accessible customer service.** For alternate formats, communications supports, or more information, please contact the Ministry of Natural Resources and Forestry at 1-800-667-1940 (TTY phone number: 1-866-686-6072), send an email to ***mnr.nric.mnr@ontario.ca,*** or visit ***ontario.ca/fishing.***

FEWER SURVIVING CHICKS SPELL TROUBLE FOR LOONS


COMMON LOON

Icon in decline: *Acid rain, shoreline development and boating are all to blame.*

By Noah Cole

Ontario's common loons, a species symbolic of northern wilderness, are rearing fewer chicks to maturity, a new study reports. The research, based on Birds Canada's volunteer-supported Canadian Lakes Loon Survey data, suggests that this decline in reproductive success has been underway for four decades.

According to study co-author Kristin Bianchini, a postdoctoral researcher working with Acadia University and Birds Canada, loon populations are currently stable but fewer surviving loon chicks could mean fewer adult loons. And since loons are indicators of ecosystem health, their reproductive diffi culties suggest serious problems with Ontario lakes.

Researchers measure loon reproductive success by the annual number of six-weekold chicks pairs of loons have. By that point in their development, young loons are nearly two-thirds of adult size and are able to elude predators. Ontario loons successfully raised 0.8 six-week-old chicks per pair per year in the 1980s. Now, they raise fewer than 0.6 sixweek- old chicks. Other studies suggest that if this rate falls below 0.48, the number of loon adults may decline. "Our study shows that Ontario may be on its way to dipping below the 0.48 threshold," says Bianchini.

What is behind this decline? Acid rain caused by air pollution in the 1970s and 1980s deposited toxins such as aluminum and mercury in Canadian lakes. These toxins deplete fish stocks on which loon chicks rely for food. Accumulated mercury also affects loon behaviour, decreasing nest incubation, chick feeding activity and the young birds' resilience. Warmer conditions due to climate change may further raise mercury levels in the food chain, the study suggests.


COMMON LOON

Loons encounter other challenges in rearing their chicks, including shoreline development and boating activity. Cottagers and homeowners can help by letting shoreline native plants grow to provide shelter for loons and support habitat for species the birds eat. Additionally, minimizing the presence of boats and their wakes can lower the risk of damaging loon nests or separating adults from their progeny.

People can also advance research by participating in the Canadian Lakes Loon Survey. The upcoming third Ontario Breeding Bird Atlas, on which fieldwork will start in 2021, will reveal more details about loon and other bird population trends.

For both new and seasoned naturalists, the call of the loon is indelibly connected with Ontario's wilderness areas. "To me, hearing loons has always been associated with being in a secluded wild place," says Cecilia La Rose, a member of Ontario Nature's Youth Council. "The sound has made me happy for as long as I can remember." Ontario Nature hopes future generations of nature lovers will continue to enjoy those iconic sounds.

Many thanks to Ontario Nature and the author Noah Cole. The original can be viewed at view.publitas.com/on-nature/winter-2020/page/12-13.

DOUG HALE MEMORIAL GOLF TOURNAMENT

With the uncertainty around COVID-19 at this time, we are uncertain what social gathering restrictions will be in place for this summer, so we are unable to confirm that our annual tournament, currently scheduled for Saturday, August 14 will be held. We will revisit this decision during our first meeting in April.

This tournament, with the support of our golfers and sponsors, has been an important fund raiser for our Environmental Association, raising over $5,000 per year. We hope that we can count on your continued participation once we are able to hold this tournament again.

THE 2019-20 LOON NEWS

The raft in the picture is one that our Stewardship Team Garnet Baker, Gary Nielsen and myself built about 15 years ago. After several years, the logs and flotation became waterlogged so we decommissioned it. A couple of years ago I decided that I would tow it out to Muskrat Island for the turtles to bask on. Every fall I towed it back in and tied it to my dock until the next spring. I hurt my back in late August 2019 so we moved home early and I forgot to pull in the raft.

In May 2020 when I went down to rake the leaves I noticed a pair of loons inspecting the raft. It sure wasn't an ideal location as the platform was partially sinking and the only nesting material on it was from an abandoned muskrat house. Also the island is a very popular with the fishing folks and all the neighbours, kids and dogs enjoy swimming and jumping off the rock there. After circling the raft a couple of times, one of the loons hopped up and after a quick inspection settled down on the muskrat's sparse vegetation. A few hours later when the loon left and I checked the nest from our deck with my binoculars I could see at least one egg. A few days later there were two.

I knew then that we were going to have to limit our swimming activities with our dogs for a while because the raft was beside our swimming lane to the island. The incubation period for loon eggs is usually 26–30 days so I thought if I talked to the neighbors, we might be able to protect the nest until the eggs hatched.

It was quiet for the first week and most people gave the platform a wide berth but the traffic really increased during the next two weeks. The loon was constantly under stress as people were paddling too close or sometimes right up to the platform so she was off the nest a lot. Loons do leave the nest for a day sometimes when they are laying their eggs. As soon as they start to incubate the eggs one of them is usually present to protect and keep the eggs warm.

A week after the eggs should have hatched, I realized that the nest was probably going to be unsuccessful. I didn't want to interfere with wildlife as I knew they would eventually abandon the nest. The male finally quit coming to the nest but the female was an excellent parent and stayed on the nest for an additional three weeks. Unfortunately this was when we had that long stretch of hot weather and it was sad to see her panting while she was sitting in the hot sun all day. Several times during the day she would take a short break to cool off, catch a quick meal but then climb right back up on the raft. She would carefully turn the eggs over each time and then settle down on them. I kept hoping she would leave and I was tempted several times to go out and remove the eggs. I contacted the local authorities for advice but was told not to interfere and let nature take its course. She finally did abandon the nest and I removed the eggs.

It's quite common for loons to lay more than one egg and they don't always all hatch. When I opened the eggs there were no embryos. I don't know if the nest failed because the eggs were infertile or if they got too hot when she was stressed and off the nest repeatedly in the early weeks.

CLA/CLEA staff and volunteers will be erecting loon information signs at several locations around the lake this year on how boaters can protect our loons.

Our adult loon populations and chick numbers do fluctuate from year to year and we usually have 24-39 adults on the lake during the summer months. Since 2010 the annual chick populations have varied from 4-9 chicks and in 2019 a total of 6 chicks hatched.

When I did the final survey for 2020 all 3 chicks on the north end of the lake had survived and Bill and Janice Hallam confirmed 3 more on the south end. Our new rafts continue to successfully provide nesting habitat for most of our young chicks on the lake. Please give our nesting loons and young chicks a wide berth.

Dwayne Struthers**, **Fish and wildlife Director

CHARLESTON LAKE SUMMER CAMPS 2021

At this time, no decision has been made about Summer Camps for 2021. We are optimistic that we might be able to offer three weeks of camp in August 2021, if provincial regulations allow. We will make an announcement after our May Board meeting and will post it in our website and in the Summer newsletter. In the meantime, we would appreciate any feedback or questions you may have. You may contact mmansworth@truespeed.ca to indicate your interest or if you have questions.

Mary Mansworth – Youth Programs

TURTLE RESCUE AT CHARLESTON LAKE

In late July 2020, a large snapping turtle appeared on the beach at Peter and Judy Warren's cottage on Webster Bay. The turtle was injured, with a large gash in his shell which looked as though he might have been hit by a propeller. He was not in good condition and, over the course of a couple of days , he stopped going in the water at all. He was clearly deteriorating, much to the concern of all the people who lived close by and could see this beautiful creature suffering.

To the rescue came Dwayne Struthers, a CLA Board member and Webster Bay resident. Dwayne decided to drive the turtle that evening to Sandy Pines Wildlife Centre, an animal rescue centre in Napanee. They assessed his condition which by then seemed very serious and made a decision to start a course of antibiotics. The experts at Sandy Pines were not sure that this would be successful, but were hopeful.

Two weeks later, on August 12, Sandy Pines called Dwayne with the good news that the turtle could be returned to Charleston Lake – he had responded very well to the antibiotics. Dwayne and his wife, Nancy spent their wedding anniversary driving to Napanee to pick him up. A small group of neighbours gathered, socially distanced, to see his return to the lake on the Warren's beach. It was very moving to see this big turtle enter the water and, after a couple of minutes, swim away and disappear. While he had been away in Napanee, another large turtle was seen swimming around the Warren's dock on a number of occasions– perhaps this was his mate and they were reunited on his return.

Thanks to Dwayne and Sandy Pines, a valued long-time resident of the lake has lived to enjoy many more years!

Charleston Lake Association Directors

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billhallam@hotmail.com 613-659-2997
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Dwayne Struthers – *Fish and Wildlife*
Robbie Gibson – *Safety and Law Enforcement*
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Jay Kyle – *VP South/Natural Edge Program*
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Rocci Pagnello – *Fish and Wildlife/Ontario Youth Summit*

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Wayne Arthur – *Golf Tournament/Provincial Park Liaison*
Roy Angelow – *Municipal Contact*
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ANNUAL GENERAL MEETING 2021
SATURDAY, JULY 31st

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