

OUR FOREST



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WINTER 2020

Data Driven Growth

Malcolm Cockwell leads change
at Haliburton Forest

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A Message from our CEO, Rob Keen

What does it take to grow our future forests? The job requires a host of things, such as awareness, public demand, political will, funding, and resources. Most importantly, it takes a long-term vision and a commitment to match.

This year, we have witnessed firsthand increased public recognition of the importance of nature-based solutions in combatting climate change, which has translated into record-breaking demand for private land tree planting. This increased interest in afforestation and restoration is extremely positive, as it is crucial to decreasing biodiversity loss and enhancing our forests' resiliency across the landscape in the face of a changing climate. However, to satisfy the tree planting demands of the public, we need a long-term commitment and guaranteed funding to support seed collectors, nurseries, and planting delivery agents in growing their capacity.

Climate change and its impacts are here to stay. As such, our approaches in addressing this largescale phenomenon should be just as long-term. And just as climate change impacts us all, so are we all responsible for playing our part in taking action to mitigate its effects.

Forests Ontario commends the federal government for pledging \$3.16 billion towards addressing climate change, enhancing forests, and creating good jobs as part of its Fall Economic Statement. Specifically, we applaud the strides being made towards planting two billion trees across Canada by 2030. By creating new forests and continuing to sustainably manage our existing forests, Canada can be a world leader in using nature-based solutions to fight climate change. By developing and working towards a lasting commitment, we can protect and build upon our progress towards healthy, robust ecosystems.

Recognition of the need for a long-term vision in support of the health of our forests, communities, and planet inspired the theme of our 2021 Annual Conference: *Growing our Future*.

This year's conference will look different as a result of the COVID-19 pandemic. However, just like our forests, we are adapting to the challenge. Our multi-day, virtual event will allow us to engage with speakers and participants from across the province, country, and world, as well as provide innovative opportunities for learning and networking. We have secured incredible speakers, such as Dirk Brinkman of Brinkman Reforestation Ltd. as our keynote and his son Baba Brinkman, Canadian rap artist and science communicator, to 'rap' things up. In between, we will discuss our working forests, the rise of innovative forest-based products, nature-based solutions to climate change, successes in ecosystem restoration, and more.

We hope you will join us February 3-5, 2021 as we explore how, together, we can grow our future. Until then, on behalf of Forests Ontario, I wish you and your loved ones a happy and healthy holiday.

All the best,



Rob Keen, RPF
CEO of Forests Ontario and Forest Recovery Canada



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OUR FOREST

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Over 500 farmers produce over
one million Christmas
trees each year.



#ItTakesAForest

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Forests Ontario Provides Distillery Historic District with Majestic Christmas Tree

BY MJ KETTLEBOROUGH



Scott Jackson of Forests Ontario speaks to CP24 as crew installs Balsam Fir at Distillery District. Photo by CNW.

At Forests Ontario, one of our favourite holiday traditions is sourcing a spectacular evergreen to be the centerpiece of the Distillery Historic District in Toronto. This is the tenth year that we've supplied what is known as 'The Big Tree,' the sight of which, for many, signals the start of the holiday season.

This year's tree is a majestic Balsam Fir from Schomberg, Ontario. Our friends at Shady Lane Expert Tree Care delicately delivered the giant to the Distillery on Nov. 2 and raised it to its full height of nearly 15 metres.

The tree was subsequently adorned with 60,800 LED lights, 500 over-sized ornaments, and 1,463 metres of lush gold garland. On Nov. 12, Elena Price (General Manager of the Distillery Historic District) and Rob Keen (CEO of Forests Ontario) attended the Tree Lighting Ceremony.

"Real trees truly are the environmentally sound choice," Keen said. "They have drastically lower carbon footprints than their plastic, most often imported, counterparts. Their purchase supports Ontario tree farmers and they are 100 per cent biodegradable." In other good news, Forests Ontario's Christmas trees at the Distillery sold out in two days. "Despite COVID-19, lots of people are on the hunt for a real Christmas tree," commented Elizabeth Celanowicz, Forests Ontario's Director of Operations.

Newest Heritage Tree: Black Walnut in Morrisburg

BY COLLEEN MAHAFFIE

Ontario's newest Heritage Tree is a 21.5-metre-tall Black Walnut in Morrisburg. Planted sometime after 1875, the tree sits on property that once belonged to Morrisburg's first doctor, Dr. Asaph Bradley Sherman.

Born in Barre, Vermont in 1814, Sherman moved to Ontario in 1848. Along with his medical practice, Sherman served the community in many capacities: as Chairman of the Board of Trustees for the Morrisburg Grammar School, Reeve of Williamsburg Township, and County Warden.

The Black Walnut continues to grow on the south side of the Victorian mansion built for Sherman, in what is now a historical district. The tree is healthy, with a well-balanced canopy and a 24-metre wide-spread.

Forests Ontario's Heritage Tree program collects and tells the stories of Ontario's unique trees, bringing awareness to the social, cultural, historical and ecological value of trees.

The Black Walnut tree, at age 150, has a spread of 24 metres. Photo courtesy landowner.



Seed Czar Retires... Again

Barb Boysen, long time leader of the Forest Gene Conservation Association

BY GARY NIELSEN



Since setting out with an Honours BScF from Lakehead University in 1982, Barb Boysen has logged over 38 years as a forester and entrepreneur. For the last two-and-a-half decades, she has served as charismatic leader of the Forest Gene Conservation Association (FGCA) in Ontario.

Boysen helped develop the initial concept of the FGCA in the early 1990s, just before getting caught in the first wave of government downsizing. From the mid 1990s to the early 2000s, she led the FGCA as a private consultant. When the Government of Ontario took the organization back on (largely due to Boysen's excellent work), Boysen applied for her own job for the third time. She led the FGCA as a public servant until it was once again orphaned in 2015, when she became her own boss once more: as General Manager of the FGCA.

Boysen leaves the FGCA in good hands as a financially stable, highly credible ENGO with a young, energetic staff, a diverse board and an ambitious work plan. Among her legacies, Boysen will have been personally responsible for the rescue of Butternut from the Endangered Species List, if the work she has begun is seen through to fruition.

Barb, we will allow you to go back to your gardens and hobbies because we know there will always be another seed crop to collect. We'll see you on the front lines again. Thank you.

Barb Boysen gathers pine cones at Taylor Lake White Pine seed orchard, August 2017.
Photo by Heather Zurbrigg.

Citizen Science in Action

New invasive insect, Zigzag Sawfly, sighted in Quebec

BY MADELEINE BRAY

The Elm Zigzag Sawfly has been spotted for the first time in North America. Native to Asia, these critters have been chewing through elm trees in Europe since 2003. The light green larvae mature after 2-3 weeks, though their full life span is roughly one month. These pests were first spotted by a citizen scientist through iNaturalist just south of Montreal. There have been at least 13 sightings, all centred around southern Quebec. Keep an eye out for distinctive zig-zag feeding patterns on your elm leaves. To slow or stop the spread of these invasives, plant mixed species among your elms and report any sightings to the Canadian Food Inspection Agency.

Photo of a Zigzag Sawfly by Andrea Quadrio.



Growing Our Future

The biggest forest sector conference in Ontario goes virtual

BY ALANNA EVANS

Each February, we look forward to seeing the new and familiar faces of members, landowners, forestry professionals, educators, students, and those passionate about our forests at Forests Ontario's Annual Conference in Alliston, Ontario. However, this year's event will look rather different as we adapt to new ways of coming together – while two metres apart. Though the COVID-19 pandemic prevents us from gathering in person, we can still stay connected. We invite you to join us on February 3-5, 2021, for a multi-day, virtual event packed with opportunities for meaningful discussions, networking, and learning.

This year's conference, under the theme *Growing Our Future*, will explore our successes and future ambitions in support of a healthy planet. From Canada's commitment to plant two billion trees in the fight against climate change, to our collective efforts to restore biodiversity, to our pursuit of alternatives to plastics, we are diligently moving towards a more sustainable future.

We're excited to have a diverse collection of sessions and speakers to inspire discussion around these themes. Since we can't gather in the same room, we've developed a virtual platform where everything conference-related is at your fingertips. Through this platform, registered

attendees can create their own user profile, including a photo of themselves and a brief bio. Attendees can also create a personalized event agenda to keep track of 'wish list' sessions to tune into, make note of speakers who piqued their interest, and interact with other attendees through chat functions.

We haven't forgotten the wide range of sponsors and exhibitors who join us each year. Each sponsor and exhibitor will have their own virtual booth and personalized profile to offer all the same great networking and learning opportunities as in the Conservation Dome of the Nottawasaga Inn. Attendees can access sponsor and exhibitor resources and schedule appointments with representatives. We're also planning a series of games with forest-themed prizes for the winners.

We look forward to creating a space for knowledge-sharing and innovative thinking. Through collaboration and diversity, we are committed to growing a stronger future for our forests, environment, and shared home. We hope to see you there, tuned in from across the province, country or world, for two and a half days of amazing speakers, sessions, and conversation around growing our future.



FORESTS ONTARIO'S ANNUAL CONFERENCE



Join us virtually
February 3-5, 2021!

Registration Type

General Admission	\$75 ☐	Student Rate	\$25 ☐
Members' Rate	\$50 ☐	2021 Membership Renewal	\$50 ☐

Attendee Information

Name: Address:
City: Province: Postal Code:
Email: Additional Attendee(s):
.....

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Please mail to: Forests Ontario, 144 Front Street West, Suite 700 Toronto, ON M5J 2L7

Breaking New Ground

It Takes a Forest's billboard network expands across Northern Ontario

BY SCOTT JACKSON

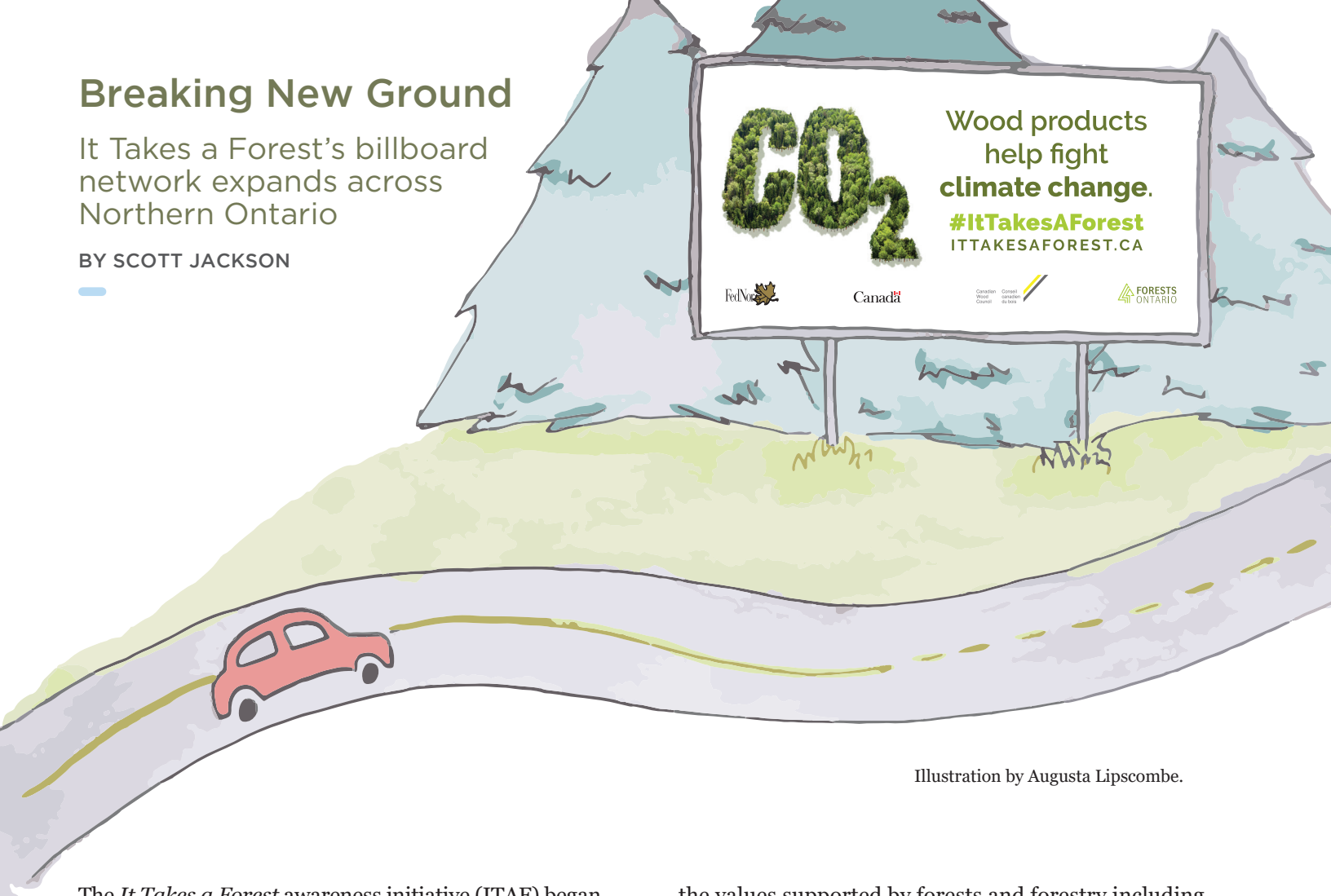


Illustration by Augusta Lipscombe.

The *It Takes a Forest* awareness initiative (ITAF) began in 2016 as a grassroots billboard campaign in the Ottawa Valley. Since then, ITAF has grown into a collaborative initiative with the goal of providing fact-based information about Ontario's forests and addressing common misconceptions about the province's forest sector, garnering support from more than 40 individuals and organizations.

Now, Forests Ontario is thrilled to announce that the number of ITAF billboards will more than double over the coming year. Thanks to a new initiative proudly supported by FedNor, the Government of Canada's economic development organization for Northern Ontario, and implemented in collaboration with the Canadian Wood Council and its Wood *WORKS!* program, 24 new billboards will appear across Northern Ontario. This will bring the total number of ITAF billboards to just under forty, province-wide.

"Ontario is recognized as a world leader in forest management," said Rob Keen, RPF and CEO of Forests Ontario. "Our approach to forestry ensures we provide for multiple forest values over the long-term. We believe all Ontarians should be very proud of how well our forests are managed. The *It Takes a Forest* initiative, and these billboards, help spread this important message."

The billboard network has provided a critical communication platform for ITAF's awareness efforts, providing the public with succinct – yet important – messages related to Ontario's position as a global leader in sustainable forest management. The billboards emphasise

the values supported by forests and forestry including stable employment, improved water quality, wildlife conservation, and the carbon benefits associated with wood products. The billboard rollout also builds on our existing wood partners network, amplifying the promotion of wood as our greenest and only renewable building material.

"We are very pleased to partner in this initiative and broaden the awareness of innovations in building with wood towards sustainable construction and green buildings throughout Ontario," said Marianne Berube, Executive Director with the Canadian Wood Council's Wood *WORKS!* program. "We hope communities use wood to promote sustainability into all aspects of our lives, including where we learn, work and play."

"Be sure," Keen added, "to look out for an ITAF billboard next time you are driving around our fair province."

The current and future It Takes a Forest billboard network would not be possible without the support of local sponsors including the Nawiinginiima Forest Management Corporation, the Federation of Northern Ontario Municipalities, Weyerhaeuser, the City of Temiskaming Shores, Westwind Forest Stewardship, Quality Hardwood, the Central Canada SFI Implementation Committee, Domtar Inc., EACOM Timber Corporation, Limberlost Forest and Wildlife Reserve, Haliburton Forest & Wild Life Reserve Ltd., Resolute Forest Products, Dryden Forest Management Company, and Sawmill Sid. Thank you to the individuals, organizations and municipalities who started things off including Jeff Muzzi, Dave Lemkay, the Renfrew Industrial Commission, the Town of Renfrew, McRae Lumber, Herb Shaw & Sons, Lavern Heideman & Sons, Ben Hokum & Son, Murray Brothers Lumber Company, Gulick Forest Products, Thomas J. Neuman Ltd., the County of Renfrew, the Township of Madawaska Valley, the Village of Eganville, and the Township of Killaloe, Hagarty and Richards.

“That One’s For You, Buddy”

Planting trees on the Highway of Heroes can be a deeply personal task

BY MIKE HURLEY

Our relationship with trees can be quite personal. When the Highway of Heroes Tree Campaign (HOH Tree Campaign) set a goal five years ago to plant 117,000 trees along Highway 401 between Trenton and Toronto as a living memorial to fallen Canadian soldiers, we had no idea just how personal the experience would become.

After we launched the campaign, almost instantly we became connected with so many that had also served themselves. While these individuals made it back to Canadian soil unlike their lost comrades, all too many returned with the invisible scars we now know as post-traumatic stress disorder.

Take, for example, Corporal Nick Kerr. Cpl. Kerr served in Afghanistan in 2006. Over the last four years, he has volunteered at more than 15 HOH Tree Campaign events.

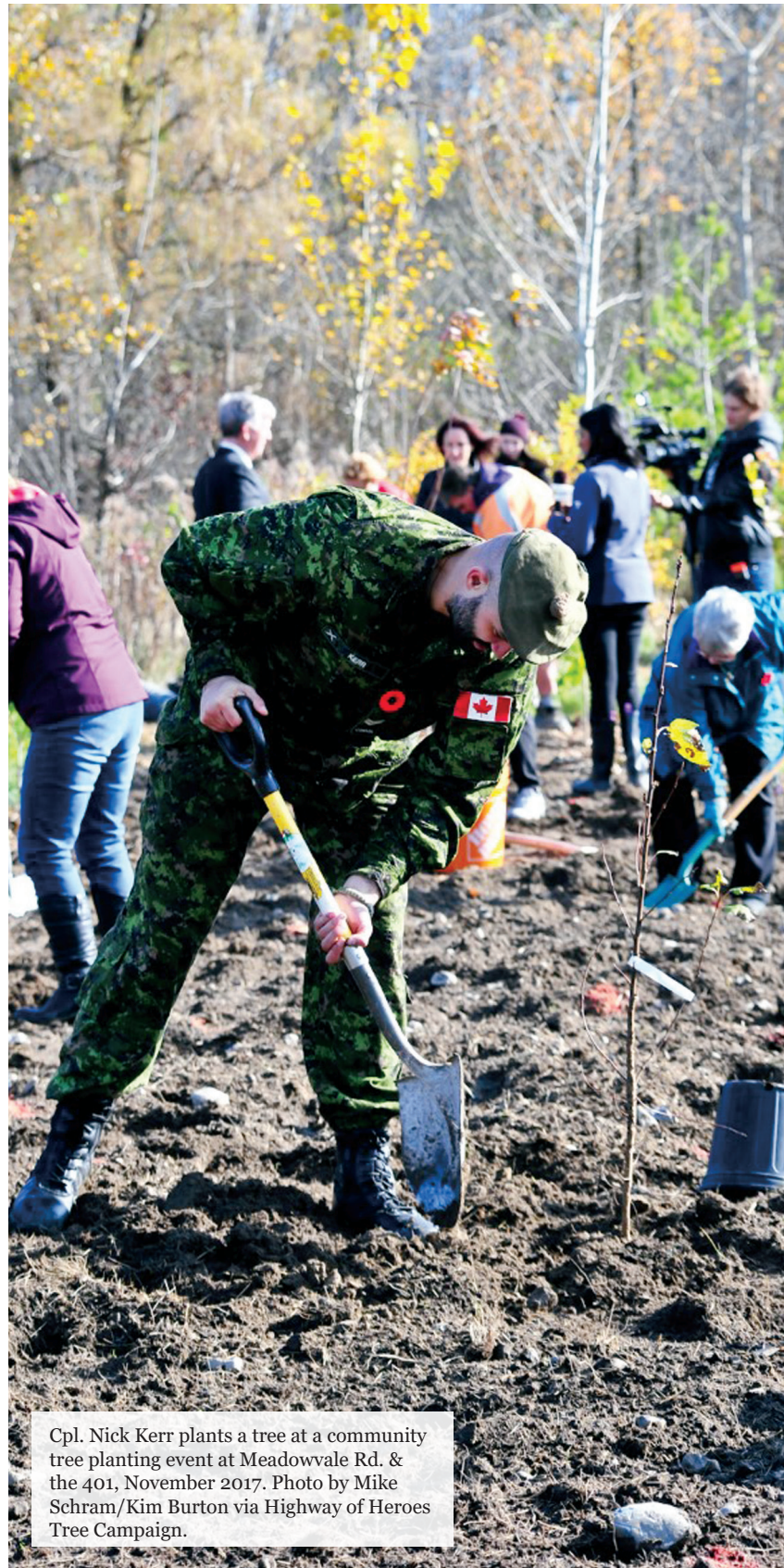
“Since my very first planting, I’ve found a sense of closure from the pain I had when I lost my friends,” said Cpl. Kerr. “I prefer an army of trees standing at attention over more stone cenotaphs. I was a pallbearer for eight friends I lost, and every time I plant a tree, I think: ‘That one’s for you, buddy.’”

Inspired by the likes of Cpl. Kerr and countless others, we learned early on that we had to expand our mission. We would not only plant trees for those that gave their lives in the line of duty, but also as a tribute to every Canadian that ever volunteered for service during times of conflict. In addition to the 117,000 trees we are planting directly on Highway 401, we are now planting over 1.8 million more in the communities along the entire 401 corridor.

This meant having to rapidly increase our annual planting rate. It meant we would have to aggressively pursue private landowners to give us access to more land to ultimately become home to these trees. It meant expanding to communities along the entire 401 corridor, not just those between Trenton and Toronto. That’s where Forests Ontario stepped up to the front lines. Our partnership with Forests Ontario has given us the upper hand in the battle to achieve our ambitious goals.

By the end of 2020, the HOH Tree Campaign will approach the halfway mark of our two million tree goal, the vast majority of which have been planted in the last year through our partnership with Forests Ontario. Teaming up with the 50 Million Tree Program, we can now plant hundreds of thousands of trees on privately owned land, providing an incredibly unique opportunity to Ontarians living in this corridor: to house part of this living tribute quite literally in their own backyard. Now, along with Cpl. Kerr, hundreds of landowners are building relationships with new trees – each one deeply personal.

Mike Hurley is Executive Director of the Highway of Heroes Tree Campaign.



Cpl. Nick Kerr plants a tree at a community tree planting event at Meadowvale Rd. & the 401, November 2017. Photo by Mike Schram/Kim Burton via Highway of Heroes Tree Campaign.

Tree Planting: A Delicate Balance

Demand to increase forest cover in Ontario is higher than ever

BY AUGUSTA LIPSCOMBE

Forests Ontario has facilitated the planting of more than 30 million trees in-province since the inception of the 50 Million Tree Program (50 MTP) in 2008, working with 5,000 landowners and 90 planting partners to create more than 17,000 hectares of new forest. We saw close to 2 million new trees take root in Ontario in 2020 alone, foresting a collective area nearly equivalent to the footprint of Presqu'île Provincial Park. These trees will clean the air we breathe and water we drink, provide important wildlife habitat, and sequester tonnes of carbon over their lifetime.

Clearly, Forests Ontario has proven that it will take more than funding cuts and a global pandemic to sidetrack our mission of healthy forests supporting healthy people. Our success is entirely due to our network of dedicated supporters and hardworking planting partners, including seed collectors, nurseries, and planting delivery agents.

This year presented unique obstacles, despite the organization's growing momentum. Due to COVID-19, just over three-quarters of the original 2.47 million trees to be planted in the spring took root. Impressively, less than 10 per cent of the planned amount was cancelled, leaving 330,000 deferred trees to be added onto next year's planting allocation.

We are seeing our committed planting partners working double-time to plant last year's sites and meet their targets for the coming year. We, alongside our field advisors and planting partners, are doing our part to work together and maintain the forward momentum we have built.

The fervent interest in the 50 MTP and planting trees in general is incredibly positive. We are thrilled by the growing attention being paid to nature-based solutions and the environment-human health interface, which manifests in record numbers of planting requests. However, this renewed interest also raises challenges: landowners have asked Forests Ontario for nearly 1 million more trees than our current 2021 funding can support.

We now seek contributions from climate-concerned sponsors and donors to help us ensure that we can meet the demand Ontarians are expressing for a greener province.

We have the trees to plant, the sites to plant them on, and the infrastructure to get them from point A to point B – all we need now is your support to help balance the equation for a greener tomorrow.

To donate, go to the Forests Ontario website or see donation form on the back page of this magazine.

Forests Ontario's Director of Operations, Elizabeth Celanowicz, views Swamp White Oak seedling stock at Somerville Seedlings, October, 2020. Photo by Fraser McLaughlin.





The Calculator is Mightier than the Feller-Buncher

Malcolm Cockwell leads growth at Haliburton Forest & Wild Life Reserve

BY COLLEEN MAHAFFIE

One of Ontario's own has recently joined the biggest hardwood players in Canada. In October, Haliburton Forest & Wild Life Reserve Ltd. – a 100,000 acre multi-use private land stewardship company at the southern tip of Algonquin Park – bought a hardwood sawmill and forestry division in Huntsville from Rayonier Advanced Materials. This newest acquisition doubles the company's forest management and hardwood lumber operations, putting it among the top three hardwood forest products enterprises in the country. Leading the charge to expand Haliburton Forest's operations is Managing Director Malcolm Cockwell.

It would be easy to mistake Cockwell for a scientist, at least until you get him talking about trees. Cockwell holds a Bachelor of Science in Forestry from the University of Toronto, where he is currently enrolled in ongoing PhD studies. Cockwell is also a Registered Professional Forester and the Vice President of Forests Ontario's Board of Directors.

A forester with a knack for data, he brings the tools of academia into the bush. Numbers inform every decision he makes, from the diversification of his company to his views on long term forest management. Cockwell represents the intersection of business, conservation, and statistics.

Although raised in Toronto, Cockwell spent much of his childhood exploring and working at Limberlost Forest & Wildlife Reserve. His parents, Bay Street titan Jack Cockwell and business executive Wendy Cecil, bought the 10,000 acre property in Huntsville in the 1980s. He was considering law school when he fell in love with the forest instead. The attractiveness of this green profession lay in its

“mix of business and conservation opportunities... there's relatively few professions that strike as good of a balance between the two. You're spending as much time talking about how to grow trees well as you are about how to cut them down efficiently,” he notes.

Cockwell's intrigue with data is evident in his PhD thesis, which sounds more like the work of an economist than a forester: “The growth and change in value of Sugar Maple trees in the Algonquin region.” At the heart of his research is the assertion that “trees have an average life expectancy, and decline over time.” Cockwell seeks to determine the sweet spot between a tree's age and its highest timber value. If it's too old, a tree tends to be more susceptible to disease, rot, and decay; too young, and the tree is less valuable for timber.

Rather than reinvent the wheel for his research, Cockwell and his academic supervisor looked for comparatively similar research, and found their answer in medicine. “At the end of the day,” Cockwell says, “a 50 cm DBH (diameter at breast height) Sugar Maple that has a Eutypella Canker is no different than a 50-year-old man who has a heart condition. The statistical approaches that are used for human populations and how their health changes over time can also be used for trees.”

While Cockwell would prefer to spend most of his time in the bush, he spends a fair bit of his days pouring over his own data sets of tree measurements, comparing them to those that have been collected in Ontario since the mid 20th century. He hopes to finish his PhD in short order, as he “hates having things half-finished,” but to do so would require an uninterrupted stretch of time.



Left: Malcolm Cockwell in Haliburton Forest. Photo by Peter Kuitenbrouwer. Middle & Right: Cockwell leads tour; Forwarder loads logs. Photos courtesy of Haliburton Forest. Far Right: Haliburton Forest in winter. Photo by Colleen Mahaffie.

Unfortunately for Cockwell, this doesn't sound like it will happen any time soon, given his other responsibilities. In 2016 Cockwell took over as managing director at Haliburton Forest. His team of about 100 work collaboratively to solve problems. "The information-driven culture at Haliburton Forest involves the whole management team. Arguably, some of my colleagues are more focused on accomplishing continuous improvement through ongoing studies and analysis than I am," says Cockwell.

Haliburton takes a unique approach to forest management, first implemented by Cockwell's predecessor, Peter Schleifenbaum: viewing the forest as an investment. While some forests are managed looking ahead 10 or 15 years, Cockwell notes that, "what Peter instilled in the company is an incredibly long term, enlightened view of forest management." Cockwell views the health of the forest as not only an investment in the environment, but as an investment in the company. "Fifty years is nothing in the context of these forests. If you're running the company, you're just a temporary custodian. It's not about this quarter's results." The Haliburton team uses all the data available to prescribe what will be best for this tree, this forest, and this land – for the next century.

Diversification defines Haliburton Forest. The company has two divisions: Tourism & Recreation and Forest Products. Collectively, they are composed of 20 distinct businesses, whose variety has served Haliburton well. So far as Managing Director, Cockwell has acquired a second and third sawmill, started offering private land stewardship services, and taken on management of Crown lands to help

supply the new sawmills. These ventures, in addition to Haliburton's large Tourism & Recreation division, have helped keep the firm afloat during tumultuous times.

Cockwell says they are "still trying to figure out how COVID-19 affected them," as things have changed rapidly over the last several months. Initially, with the Tourism & Recreation division shut down and a freeze on timber markets, production of infrastructure products like railway ties and pallet lumber kept the lights on. More recently, the company has had "one of our best years ever" for overnight camping as Torontonians look for an escape from the city. And with timber markets slow (Cockwell estimates they will return to normal by winter), they've been able to use an entire sawmill to process Eastern Hemlock logs, a traditionally low-value wood; these logs become Eco-Log Homes, another branch of the company. By investing in the multi-use facets of the forest, the business as a whole is insulated against a crisis in any one division.

In the last hour of every workday, the team crunches the data at each of the sawmills. General Manager of Forest Products, Bill Miller, and Business Manager, Ronnie Huang, coordinate a daily, data-intensive review of the profit and loss statement (produced at 5:45 p.m. sharp) for every single log the mill processed that day. "How did we do today? Tomorrow, let's try this and that," explains Cockwell, as he makes decisions in real time with the team. A daily data discussion means continuous improvement – and according to Cockwell, "that's just what we've done so far... but we're only just getting started."





Realizing the Benefits of Fire

The evolution of wildland fire and forest fuel management in Ontario

BY MATTHEW CORBETT, R.P.F.

Wildland fire is a natural phenomenon that has shaped the ecosystems of Ontario. However, there is a requirement to minimize its adverse impacts through wildland fire management to protect the people, property and other resources that inhabit the landscape. For almost all its history in Ontario, the focus of wildland fire management has been on control, meaning the prevention and suppression of unwanted fires. Over the past 20 years, wildland fire management has begun to shift in thinking from a fire-control paradigm to a more holistic approach of wildland fire risk reduction. As emergency management theory has matured, fire management agencies have adopted the framework for risk reduction that has shifted to the pillars of prevention, mitigation and response.

There is a growing recognition that total fire suppression/exclusion is neither feasible nor ecologically desirable and could directly increase wildland fire risk. As a result, the Ministry of Natural Resources and Forestry (MNRF) has adopted risk-based response approaches to wildland fire. These approaches allow more beneficial fire on the landscape (under low risk conditions) to support biodiversity and ecosystem health, reduce hazardous forest fuels and mitigate impacts and threats to cultural, ecological, economic, environmental and social values. In Ontario, this evolution in thinking led to the current Wildland Fire Management Strategy (MNRF 2014) that emphasizes prevention, mitigation, appropriate response to wildland fires and the beneficial use and application of fire as the pillars of wildland fire management. This strategy is designed to reduce the number of human-caused fires, mitigate the hazardous and negative impacts of wildland fire, protect public safety and meet ecological management objectives.

Wildland fires that are deemed an immediate threat to infrastructure and public safety are responded to as quickly as possible, whereas fires not posing imminent danger can be managed effectively to enable the beneficial ecological role of fire on the landscape. As such, there is a renewed need for fire and resource managers, communities, and individuals to identify landscape scale or site-specific values-at-risk, opportunities for beneficial fire and general management objectives. The Wildland Fire Management Strategy promotes a balanced approach to fire management that ranges from full suppression to managing wildland fires that renew and sustain the forest with a commitment to ensure public safety and reduce economic and social disturbance. This balanced approach when responding to fires is essential to the concept of 'appropriate' response upon which the Wildland Fire Strategy is based.

An appropriate response to a wildland fire is the set of actions over the life of the fire, intended to produce the best outcome given the competing desires to:

- a. Realize the benefits of fire
- b. Manage the adverse impacts of fire
- c. Manage the overall costs of wildland fire

Wildland fire is influenced by the interaction between fuels (forest vegetation), topography and weather. Forest fuels can be manipulated to reduce wildland fire risk and extreme fire behaviour by:

1. Reducing surface fuels and converting to more fire-resistant vegetation (i.e. hardwoods)
2. Reducing the vegetation between the forest floor and the crowns of trees
3. Thin forest vegetation to increase the space between tree crowns.
4. Retaining large trees that are resistant to fire

Forest fuel management in Ontario is not a new concept and is required to help reduce the likelihood of catastrophic wildland fires spreading into populated areas. In recent years, Ontario and many places in western North America have experienced wildland fires that caused evacuations and major social and economic disruptions due to fast spreading fires fueled by local forest fuels. There are opportunities in our forests to incorporate forest fuels management considerations into stand and forest level management planning. The actions listed above could have significant, and dual, benefits to forest management in Ontario by increasing available tree volume from a fuel management treatment that would interrupt a continuous fuel layer and reduce the likelihood of intense fires burning into undesirable areas, such as communities or critical wood supply areas.

Many of us live in the wildland-urban interface where forested areas meet urban populations, and we can see the volatility of our forest fuels. It is everyone's responsibility to mitigate wildland fire risks through forest fuel management. This mitigation will better align our efforts to be prepared to live in wildland fire-prone environments. Forest fuel mitigation efforts aligned through planning can enhance the ability to better inform landscape scale or site-specific values-at-risk, opportunities for beneficial fire and general management objectives on the landscape.

Resources are available to support these required efforts through Fire Smart Ontario at ontario.ca/firesmart.

Matthew Corbett is a Fire Science and Planning Specialist in Aviation, Forest Fire and Emergency Services at the Ontario Ministry of Natural Resources and Forestry. He lives in Dryden.

Left: Sakwite Hazard Reduction Prescribed Burn in a mixed conifer forest on Crown land in Fort Frances district, about 400 km northwest of Thunder Bay, 2017. Photo by Matthew Corbett, MNRF.

Ash Under Attack

How do I identify an EAB infestation, and what should I do?



Dear Silvie

Forests Ontario's experts, known collectively as "Silvie" (short for silviculture), answer your forestry question. Send questions to info@forestsontario.ca, or c/o Forests Ontario, 144 Front St. West, Toronto, Ont. M5J 2L7



Dear Silvie,

I am worried about the Emerald Ash Borer (EAB). How can I tell if EAB has infected my ash tree? What is the process for removing a dead ash tree on my property? And can I move firewood made from an ash that EAB had infected?

Worried in Woodstock

DEAR WORRIED IN WOODSTOCK,

Symptoms of an infestation by the EAB, an invasive beetle from China, in your ash may include tree top dieback, peeling bark, woodpecker feeding holes (they feed on the larva under the bark) and small D-shaped holes on the tree trunk. You may also see new branches growing out from the trunk, roots and branches of the trees - signs that the tree is stressed. Once these signs become clear, EAB has been there for some time and tree death is imminent. The beetle can kill a perfectly healthy tree within three years.

Municipalities are responsible for managing trees on public land, which includes parks, woodlots and street boulevards. If an ash tree on municipal property is deemed a risk through an assessment, they will remove the tree. It's your responsibility as a private landowner to remove dead or declining hazardous trees on your property. If you

Clockwise, from above: Emerald Ash Borer; photo by Christian Grenier via inaturalist.org. Gallery under bark is evidence of feeding by EAB larvae; adult beetle emerging from ash tree leaves "D" shaped exit hole. Photos by Hajnal Kovacs, Forestry Technician, Conservation Halton, Oct. 2020.



are unclear of your property boundary or the ownership of the tree, reach out to your local municipality, region or county. A permit may be required for tree removal in both urban and rural environments.

The Canadian Food Inspection Agency (CFIA) regulates invasive species (such as EAB) and movement of potentially infested material in Canada. The CFIA has delineated a 'Regulated Area' from which all species of firewood (not just ash) cannot be transported. These regulated areas slow the spread of the EAB, and other invasives, to new areas. People who move regulated materials outside of the regulated area without permission can face fines and/or prosecution. You can technically move firewood within the regulated area without permits. However, to stop the spread of EAB, the best practice is to not move firewood to a new location. A map of the "Emerald Ash Borer Regulated Areas of Canada," can be found on the CFIA website at inspection.gc.ca. The CFIA asks that you report to a CFIA office if any detections of EAB are located outside the regulated area.

**Yours,
Silvie**

It's Not About Taxes — It's About Healthy Forests

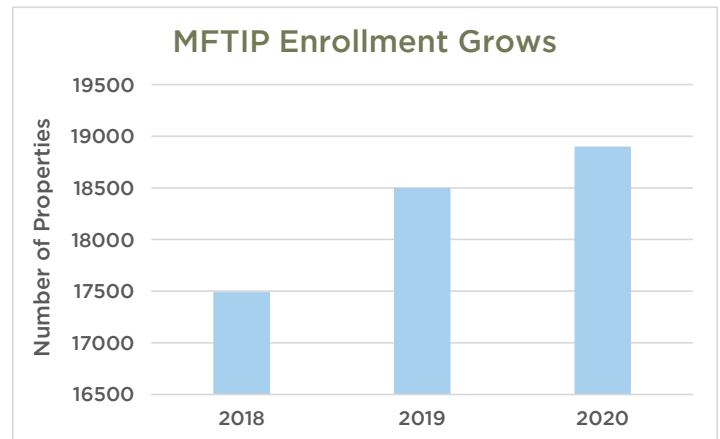
MFTIP connects landowners to professionals who can help guide forest stewardship

BY PETER KUITENBROUWER

Ontario's Managed Forest Tax Incentive Program (MFTIP) helps landowners pay less tax. When they enrol in the program, landowners can get a 75 per cent reduction on their property tax on eligible lands. But tax reduction was never the point of the MFTIP. Rather, the program's goal is to help landowners nurture their forests so that Ontarians can benefit from the clean air, clean water, wildlife and sustainable forest products that well-managed forests provide.

"The tax savings is the carrot," says Fraser Smith, an established, award-winning Managed Forest Plan Approver and Registered Professional Forester based in Peterborough. Smith previously worked as support staff for the MFTIP program administrator. "The whole point is to increase stewardship of forests on private land."

Key to the MFTIP is the relationship between the forest plan approver and landowner. "It's a knowledgeable professional giving you stewardship information and a nudge in the right direction," says Smith.



To enroll in the MFTIP, a landowner must have a managed forest plan, usually authored by a managed forest plan approver. The plan includes a full inventory, map of natural heritage features and resources for stewardship activities specific to the property.

The plan spells out the history of the property, the current state of the forest, ties it to the landowner's goals and lays out the path to achieve those goals with specific objectives and actions.

"Identifying and controlling invasive species is a huge one," Smith says. "A lot of people don't realize they have invasive species because they don't know what they look like."

The plan may then include guidance on how to detect invasives and address them. For example, a licenced professional could apply herbicides. The plan approver should be able to connect you to someone who can help.

Suppose the forest features a pine plantation in need of thinning. The plan approver can help the landowners find professionals to mark and oversee the thinning using good forest management practices.

Many properties in southern Ontario have abandoned farm fields. Smith often suggests landowners plant trees under Forests Ontario's 50 Million Tree Program. Planting trees increases the forested area and could lead to further tax reductions.

"The MFTIP gets a forester's foot in the door with a conversation on how to sustain forests," says Smith. "With roughly 20,000 properties in the MFTIP, the benefits of this unique program are clear and it is an example to jurisdictions across North America."

Fraser Smith, Managed Forest Plan Approver and Registered Professional Forester, in a Red Pine plantation on the eastern Oak Ridges Moraine, Sept. 2020. Video still by Tate Young.

A Career Dedicated to Growing Trees

Ferguson Tree Nursery CEO Ed Patchell puts the environment first

BY AUGUSTA LIPSCOMBE

Following the end of the Second World War in 1945, Ontario established the Ferguson Tree Nursery south of Ottawa partly to reclaim land in eastern Ontario damaged by farming and partly to employ the men returning from war.

Fast forward 75 years and the nursery is aiding in rehabilitation in the face of another war – to combat climate change.

Planting trees is more important now than ever says Ed Patchell, who joined the Kemptville-based tree nursery in 1986. At the time, eastern Ontario had 30-40 per cent forest cover. That number has since shrunk nearly in half. “For a healthy environment, for clean air, clean water, wildlife and everything else, we should be looking at least 30 per cent if not 40 per cent forest cover,” explains Patchell, who finds the reduction of forest cover disheartening. “You can see the impact on our climate, you can see the impact on our wildlife; everything is impacted.”

Patchell, CEO at Ferguson since 1998, says that he and his staff are working hard to address the need for forest.

Since coming under the ownership of the not-for-profit Ferguson Forest Centre Corporation in 2000, the nursery has aimed to generate funding to promote good forestry in Ontario and to support local conservation and recreation. Today, the nursery produces around 2.5 million trees annually and employs up to 65 local workers during its busiest seasons. About 600,000 of these trees go towards Forests Ontario’s 50 Million Tree Program (50 MTP). The central Ontario forestry sector uses 1.4 million seedlings as reforestation stock, and Ferguson sells the remainder for landscaping and conservation purposes or as gift trees for weddings and corporate events. At any one time, the nursery may have as many as eight million trees in the ground.

Ferguson recently expanded into seed collection, processing and storage; the nursery is increasing capacity to soon be able to collect and process seed for southern and central Ontario use. “That’s any kind of seed,” explains Patchell, “from wildflowers, to conifers, to hardwoods.” Well, not any seed – Ferguson provides only native or naturalized stock. “We don’t grow invasive species. We don’t want to do anything that will have a negative impact on the environment.” And then Patchell repeats his mantra, “It’s all about doing the right thing.”

This commitment to environmental integrity sets Ferguson apart from other nurseries, along with its wide range of products. The nursery sells bare root seedlings; containerized stock for reforestation, landscaping and

conservation purposes; seed; and perennials; it also provides poplar cuttings for phytoremediation at landfills. “There aren’t very many nurseries that do everything we do,” Ferguson says.

Patchell demonstrates his passion for forests at every turn. When Forests Ontario’s 50 MTP lost its provincial funding last year, he emerged as one of the loudest voices opposing the decision, telling national news outlets that he would have to destroy three million baby seedlings as a result of the provincial cutbacks. Patchell’s dire warning played a key role in attracting public attention and inspired the federal government to save the program.

“When I first started at this nursery in 1986, 30 million trees were being planted across southern Ontario each year. Now, we’re only planting two million,” Patchell says. “No matter where you go, you see more and more forested land being destroyed for either urbanization or agriculture. The environmental and societal values we get from tree planting and forests in general are huge. However, these benefits are being carried on the backs of a small number of landowners, who are supported by the 50 MTP.”

After a rich 42-year-long career in the tree nursery business, Patchell will retire by the end of the year. However, he’s confident that the future of the nursery is brighter than ever with a keen group of competent employees following in his footsteps. “If the two billion tree program gets going with the feds, Ferguson will be in good shape to help provide stock for it. If we can get people to see the value of having trees and shrubs and maintaining the environment, I think it’s got a great future.”

As for Patchell, it’s no surprise where he plans to spend his retirement: outdoors. “I’ve always been an avid skier; I am looking forward to getting out and enjoying my skiing. Going fishing, and going to the cottage. Just enjoying the countryside.” Patchell will remain involved in the nursery, offering his guidance from his position on the Board of Directors.

Reflecting on his career at Ferguson, Patchell fondly recalled his time spent working with his trees and getting his hands in the soil, “Just being outdoors and being hands-on – that’s what I really loved about it.” But his best experiences have been with the people he’s met along the way. “It’s going to be hard to lose those connections, but everybody’s got to move on eventually.”

Ed Patchell with Red Pine seedlings at Ferguson Tree Nursery, October 2020. Photo by Augusta Lipscombe.



Mapping Mass Timber

Where to find leading-edge wood buildings in Canada

BY AUGUSTA LIPSCOMBE

Forests are an intrinsic part of Canada's heritage. Trees sequester carbon as they grow, and wood products continue to store the carbon – often beyond the natural lifespan of a tree. This makes wood the only naturally-sourced and renewable building material. As trees are harvested, new ones take root, removing additional carbon from the air.

Through sustainable forest management and building with wood, the carbon benefit of Canadian forests is maximized. Wood construction is safe, strong, sustainable and sophisticated.

It Takes a Forest, in partnership with the Canadian Wood Council and Wood *WORKS!* program, developed a virtual map that highlights wood buildings across Canada. The virtual map aims to inspire and educate people about the possibilities and benefits of wood in construction. It showcases the innovative vision of architects, engineers and organizations who are championing the use of wood in construction applications.

Here are a few examples of the projects featured in the virtual map.

View wood projects featured in the virtual map on the It Takes a Forest website (ittakesaforest.ca). We welcome wood project submissions. Email alipscombe@forestsontario.ca for more information.



BC Passive
House Factory



Pemberton, BC; 2014



Hemsworth Architecture



Structurlam Mass Timber Corp.

The design of this factory reflects the quality of the prefabricated wood roof, wall and floor panel components it produces. By building with wood and wood byproducts, the CO₂ emissions of construction were reduced by approximately 971 tonnes of CO₂ when compared to a similar concrete building and 306 tonnes of CO₂ when compared to a similar steel building.

2



Meadows Community Recreation
Centre and Library



Edmonton, AB; 2014



Group2 Architecture & Interior Design AND
Perkins + Will Canada



Glulam Supplier – Western Archrib

This rec centre provides year-round opportunities for the rapidly expanding neighbourhoods. The total potential carbon benefit of this building is 9,819 metric tons, or the equivalent to taking 1,875 cars off the road for a year.

3



📍 Sudbury, ON; 2018

🏗️ LGA

When Laurentian University established the first new school of architecture in Canada in 40 years, they employed many modern design techniques – including the use of wood. The total potential carbon benefit of this building is 682 metric tons, or the amount of energy required to operate 72 homes for a year.

4



📍 Quebec City, QC; 2018

🏗️ Yvain Blouin Architecte

🏗️ Nordic Structures

As the tallest modern building with a 100% solid wood structure, this 13-storey, 92-unit building pushes the boundaries of wood. This building sequesters 2,295 metric tons of CO₂ and avoided the equivalent of 1,000 metric tons of CO₂ emissions by using wood, resulting in a total potential carbon benefit of 3,295 metric tons.



Facedrive is the right choice for a greener future



Get Your Bearings

Learn to find your way in the woods with a map and a compass

BY MADELEINE BRAY

The concept of getting lost in the woods can sound romantic – it's a chance to disconnect, get out and become one with nature. It sounds idyllic... until it actually happens. Then, it becomes a chore to try to find the sun through the canopy, or hunt for mossy trees to tell you which direction is south (even though this will only show you which direction is the sunniest).

This situation may be avoided with the use of apps on a phone or a trusty GPS, wonderful bits of technology that rapidly and efficiently meet our navigational needs. That is, if we have good cell service, enough satellite signals and a charged battery. Technology is a beautiful thing, but it has whittled our sense of spatial awareness down to what an app can spit out.

I have belonged to the Scouting movement for two thirds of my life. As a scout, I spent parts of my childhood in the woods with nothing but a map, a compass, a whistle and my wits. Our scouters would send us out with these tools to complete orienteering scavenger hunts - timed competitions where we had to travel between locations marked on our map.

Sometimes called 'cunning running,' orienteering is a sport that does not use marked trails. Instead, it relies solely on the map-reading and compass-wielding abilities of its participants. These wild goose chases offered a chance to fearlessly traipse through the brush and follow the sounds of everyone shouting and cheering as they reached different stops on the scavenger hunt. Our scout troop worked cooperatively and shared tips and tricks that strengthened our collective skill in using the tools we had.

Thanks to my adventures, I've never felt lost in the woods. With a map in one hand and a compass in the other, I am an intrepid explorer in an unfamiliar world, poking and prodding at whatever the forest decides to reveal.

This idea influenced the design of Forest Ontario's latest lesson plan, 'Set Your Course,' available on the Resources page of our website. Geared towards Grade 9 students, the activities within can be modified and used with any group of participants aged 10+. With a compass in hand, anyone can gain a new awareness of their surroundings and reduce their chances of getting lost.





Thank you to all our supporters for your help in ensuring environmental goals remain a priority throughout the COVID-19 pandemic.

Enhancing forest cover and enriching the public's knowledge of the social, economic, and ecological importance of our trees and forests across the province will strengthen Ontario. Your support will ensure Ontario has healthy forests and a healthy future.

Donate Today!

With your donation, you are making Ontario's forests greener.

Through your support of tree planting, education, and awareness initiatives, you make a vital contribution to greening our earth.

The time is now to improve our natural environment and leave a healthier world for future generations. We need it now more than ever.



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