

THE LAND ECONOMIST

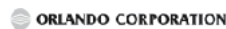
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Association of
Ontario Land Economists

THE COMPANY WE KEEP



The Association of Ontario Land Economists

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FEATURES

PROFESSIONAL MAGAZINE



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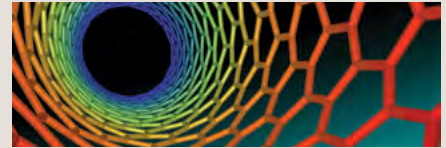
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COMING IN THE NEXT ISSUE

Our next issue will feature an interview with Mike Yorke, Past President of both the Carpenters District Council of Ontario and Toronto Carpenters Union Local 27. Mike recently retired and is now the owner of Mike Yorke Consulting. Mike will talk about the impending retirement of a large number of people in the construction trades and the concern about how to replace them. The interview will be featured in an article by writer Pat Brennan.

Front Cover Image: Aerial view of the Zibi, Ottawa project looking east at dawn.

Newfoundland 's Offshore "49-Storey" Drilling Rig Project

By Pat Brennan



Argentia - drill rig interior. Photo courtesy of Cenovus Energy.

ARGENTIA NL - In September, powerful tugboats will pull a 49-storey building from this Newfoundland port out to the North Atlantic and sink it.

It's a unique new way to drill for oil out on the Grand Banks.

[Cenovus Energy](#) of Calgary has hired three prominent construction firms to join forces and build an engineering marvel – a 145-metre-high offshore concrete and steel drill rig called a Concrete Gravity Structure (CGS). It is 122 metres wide and weighs 210,000 tons.

And when it sinks to the bottom of the ocean at a 120-metre depth, it'll still protrude 25 metres above the waves.



Argentia - rendering of CFS at work.

After it is standing firmly on the ocean floor another 25,000-ton structure will be lifted on top of the giant tower to house the drilling apparatus, plus living accommodations for 150 employees who will be extracting 115 million barrels of oil from the West White Rose oil patch.

To build the huge tower – the equivalent of a 49-storey building – the three construction companies – SNC Lavalin (now called [AtkinsRéalis](#)), [Dragados Canada](#) and [Pennecom Limited](#) from St. John's – first had

to dig a 25-metre deep graving dock (a dry dock) beside the ocean. In September the graving dock will be flooded by ocean water to float the CGS tower before it is towed to sea.



Argentia - graving dock. Photo courtesy of Cenovus Energy.

Dragados Canada, a construction company headquartered in Europe, is in a consortium building the \$12.5 billion Eglinton Crosstown LRT and in another consortium, building the \$6.1 billion Gordie Howe International Bridge across the Detroit River.

The \$3.2 billion CGS project employs up to 1,500 people. It was built using a continuous 69-day non-stop pouring of concrete, plus 8,100 tons of rebar was installed in the concrete by hand.



Argentia - drill rig. Photos courtesy of Cenovus Energy.

About an hour away from Argentia by boat (or 252 kilometres by road) on the other side of Placentia Bay in Marystown, [Kiewit Offshore Services](#) built the workers' accommodations, lifeboat stations and a helicopter landing pad. Those components have been shipped 6,000 kilometres by sea to Inglewood, Texas where another Kiewit plant will marry them to a platform housing the drilling apparatus.

That 25,000-ton platform will be towed out to the Grand Banks 350 kilometres off St. John's to be lifted atop the CGS tower.



Argentia - Aker tug.

In the meantime, a floating hotel to accommodate 400 drill-rig employees is being towed to the West White Rose oil patch from Norway as temporary accommodations for workers hired to connect the CGS to a cobweb of oil pipes on the ocean floor that collect oil from 40 different drill holes.

Those pipelines connect to [SeaRose](#), a 258-metre-long tanker floating near the CGS, which can hold 140,000 barrels of oil. Other tankers will offload oil from SeaRose and carry it to refineries on shore while the SeaRose remains on station.

When drilling starts, that temporary floating hotel owned and operated by the Norwegian company [Floatel](#), will sail away to some other offshore project needing accommodations. The floating hotel offers 400 single rooms each with a window and en suite bathrooms, a large gymnasium, a dining room to seat 200 people at a time, a movie theatre, a Wi-Fi lounge, medical facilities and a helicopter landing pad.

This project was started in 2005 by Husky Oil of Calgary, but was put on hold for several years because of Covid-19 and plunging oil prices. In 2013 Cenovus Energy purchased Husky's interest and owns 60 percent of the project. [Suncor](#) of Calgary owns 35 percent and [Nalcor](#), owned by the Newfoundland and Labrador provincial government, has a 5 percent interest.

CGS is expected to be pumping out its first off-shore oil by the summer of 2026. ➤



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The Gordie Howe International Bridge Rises

By Pat Brennan

The Gordie Howe International Bridge and Thunder Bay freighter - Photo by Pat Brennan.



Dr. Murray Howe & daughter, Dr. Meagan Stoinsky. Photo courtesy of Dr. Murray Howe.

It's a spectacular view from up near the top of the 750-foot-high [Gordie Howe International Bridge being](#) constructed over the Detroit River.

But it's a view you and I will never see.

There will be no public viewing platform on the bridge, expected to open to traffic in September, 2025.

However, Dr. Murray Howe, the youngest son of the famous hockey player, can tell you about that view. He and his daughter Meagan Stoinsky – also a doctor – were escorted high up on the bridge by ironworker Richard Hutchison, a friend of the Howe family.

Dr. Howe said from up high on one of the two towers supporting the bridge – one in Michigan and one in Ontario – you can see ships plying the Detroit River still two hours away from passing under the bridge.

“You get a phenomenal view of both Detroit and Windsor and environs from there,” said Dr. Howe “and the bridge looks so different from up there.”



“View from the perch near the top of the Bridge” Photo courtesy of Dr. Murray Howe.

Red Wing superstar Gordie Howe had two sons – Mark and Marty follow him into the NHL and Mark into the Hockey Hall of Fame.

His youngest son Murray played minor hockey with Hutchison, whom he calls “Hutch”. Hutch is an ironworker foreman on the American side of the bridge and operates a huge mobile crane, which is an old friend of Gordie Howe – at least its namesake is.

The 50-ton crane called “Mick” can lift 300 tons and is named after 77-year-old Mickey Redmond – a Howe teammate on the Red Wings and the first Red Wing to score 50 goals in a season.



Photo courtesy of Dr. Murray Howe.

Redmond is the radio colour commentator for Red Wing games and was named top radio hockey commentator this past season in the NHL.

The crane is owned by JJ Curran Company Ltd. of Detroit. President Jeff Curran and his father JJ before him have owned Red Wing season tickets for more than 50 years.

The company has two other heavy-lift cranes painted red and wearing Red Wing names – Stevey Yzerman and Gordie Howe.

Mick lifted a 100,000-pound girder into place on June 14 which connected both sides of the bridge that had been growing out from the Ontario and Michigan shore lines for more than two years.



Photo courtesy of Pat Brennan.

With a stretch of 2.5 kilometres (853 metres between the towers) it'll be the longest cable-stayed bridge in North America and the 10th longest in the world. The river is 46 metres below the road deck.

Canada is paying the construction costs currently estimated at \$6.4 billion but will collect all traffic tolls until construction costs are recovered.

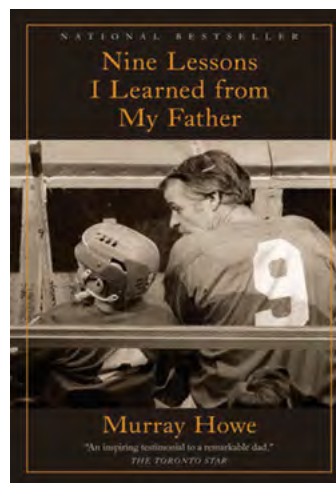
Although there'll be no viewing platform, the bridge will have a 12-foot-wide bicycle and pedestrian walkway along its upstream side. The 28,000-kilometre-long [Trans Canada Trail](#) will cross the bridge and hook into the [Iron Belle Trail](#) that ultimately connects to the [North Country Trail](#) that is 4,800-mile-long and runs through eight U.S. states that border on Canada. The North Country Trail is part of the [National Scenic Trail system](#) that comprises 11 scenic trails and has a total length of 28,650 kilometres.



Howe Family bridge Tour.



Gordie Howe painting in Saskatoon.



The Howe family – including grandchildren – had a tour of the construction site last year.

Gordie Howe wore number 9 on his back and made that number famous in hockey.

Dr. Howe has written a book called [“Nine things my father taught me.”](#)

Editor's Addition

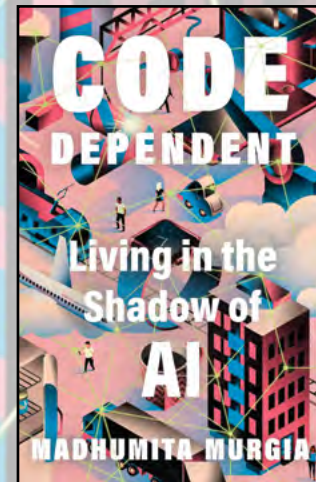
There is a great time lapse video showing the construction of the bridge from April 2022 to July 2024 [Watch.](#)



Code Dependent: Living in the Shadow of AI

by Madhumita Murgia; New York 2024;
Henry Holt and Co.

Book Review by Dr. Jim Ward



Although most of us have only been discussing the pros and cons of AI for the past year or two, particularly with the arrival of ChatGPT, Murgia has shown interest and concern about it for over ten years. And now, as AI editor for the *Financial Times*, she has brought together those interests and concerns. This book looks at the phenomenon from the perspective of those most directly involved in developing and using AI. And, primarily, the author examines the potential threats to human freedoms, on a world-wide scale and how it affects all of us. The main appeal of the book is that the language used is non-technical and the examples used are international in scope. The book tends to focus on particular issues relating to AI chapter by chapter. So I organized this review accordingly.

Essentially, the main argument of the book is that [Orwell's 1984](#) is just about upon us, it simply took forty years more than Orwell predicted. In the Introduction Murgia writes:

“By reflecting on the march of AI, we can start to address the imbalances in power and move towards redress.”

The book describes the AI experiences of groups in societies across the world in each of the 10 chapters. The title of each of those chapters reflects this.

In **Chapter 1, *Your Livelihood***, Murgia interviews people in Nairobi who are employed in the task of clicking pictures on computer screens in what is known as [data labelling](#) an essential aspect in the development of [algorithms](#). These people will spend hours each day clicking buttons so that tech companies can develop effective algorithms. The work of button clicking is depicted as monotonous and mind-dulling. As with most of the book, the observations are made in a number of locations around the world. In this chapter the workers being observed and interviewed are primarily in Nairobi, and Sofia.

In **Chapter 2, *Your Body***, Murgia discusses [deepfake](#) and how it has ruined so many lives by pasting faces onto sexualized bodies and then posting the results on pornographic sites. She quotes an employee from Sensity AI, a deep fake detection organization, who states that 95% of online deep fake videos are non-consensual pornography. She meets with a married woman in Sheffield, England, who has been a victim of this, her photos having been scraped from her Facebook page and attached to other bodies.

All are shown in pornographic videos. The victim here is a poet and novelist. Overall, a confident person. However, the deepfake experience has introduced a truly worrying aspect in her life.

In **Chapter 3, *Your Identity***, the topic of face recognition applications is discussed. Murgia provides data to demonstrate how frequently this approach leads to innocent people being detained and arrested. The chapter begins with the case of a young man, employed by the U.S. Department of Defense in Newport, Rhode Island. Essentially, he was pulled over for driving whilst black. The same young man, in later years worked in developing AI, in the days when so-called deep learning was making giant steps in terms of facial recognition. However, even with these improvements mistakes are still common and innocent people wrongly identified. This becomes a big problem in parts of the world where cameras are constantly surveilling people on city streets. Murgia claims that there are now around 900,000 such cameras on the streets of London. And in chapter 9, she writes of the omnipresence of such hardware in China's cities and towns.

In **Chapter 4, *Your Health***, the most positive chapter in the book, Murgia provides several examples of where AI approaches have been used to diagnose health issues and possible future threats to health, particularly in parts of the world where health personnel are in short supply. She does, however, express concern that the wealthiest people in such nations get the greatest benefits. Most of the evidence in this chapter comes through Murgia's interviews in India, although, U.S. and Mexican examples are also used.

In **Chapter 5, *Your Freedom***, the focus is on the use of predictive algorithms by authorities such as the police and the state. Such algorithms feed into notions that individuals of certain ages, genders, race, income, address, etc. are more likely to indulge in criminal activities, based on probability statistics. In these situations all manner of individuals are harassed by the authorities even though in many, if not most cases they have done no wrong, making it even more difficult to live a life free from harassment by the authorities. As an example of this, Murgia looks at the notion of the “Top 600” in Amsterdam, a group of individuals who, by dint of probability statistics, are seen to be those most likely to commit crimes. This leads to considerable harassment by the police of many individuals who never have and likely never will commit crimes. The author characterizes this situation as “Policy by Algorithm”. She also notes that, in the Amsterdam case, Moroccan-Dutch youth comprise the largest sub-group within the “Top 600”.

In **Chapter 6** *Your Safety Net*, is primarily based on interviews with those involved with AI in the town of Salta, a city of over 600,000 people in northwestern Argentina. Here Murgia finds that a large data set is being developed that is built on door-to-door interviews carried out primarily in the low-income areas of that city. An example of data collected here is that on mostly young girls. In terms of such indicators as educational levels, socio-economic status, and reproductive history. The purpose here, according to Murgia, is that the city is then able to make predictions regarding whether or not a particular girl is likely to get pregnant at a young age. She writes:

“Microsoft’s role in Salta’s teen pregnancy predictor, although seemingly minor, fits into its wider strategy to increase its political clout. Like the colonial mega-corporations of centuries gone by—the East India Company, say, or the Anglo Iranian Oil Company – technology companies today are beginning to function as monopolistic quasi states.”

In **Chapter 7** *Your Boss*, the focus is on the world of so-called [gig workers](#), e.g. Uber drivers and food deliverers. It is, argues Murgia, the AI system that is the boss in these kinds of employment. She interviews several people in different cities around the world who have attempted to make a living with UberEats. One became so disillusioned he set up a website named UberCheats that advises food deliverers how to avoid being cheated by the algorithms that determine their pay. For example, the algorithm-estimated time for doing a particular delivery does not take into account traffic jams, weather problems, etc. First-hand Uber experiences of drivers and food deliverers in Nairobi, London and Pittsburgh are discussed. She notes that Uber workers share their experiences across the world via internet exchanges. (There are struggles world-wide to make unionization of gig workers possible. In some cases, e.g. Canada, there has been some success.)

In **Chapter 8**, *Your Rights*, much of the chapter is based on the author’s interview with a human rights lawyer who has spent several years defending political prisoners in Guantanamo Bay. Her major concern is how the algorithms used in AI are primarily implemented by governments and the approach raises important human rights issues. As noted in Chapter 1, the content moderators, poorly paid people around the world, carry out the task of processing content every day and much of what they see is highly toxic. These workers are frequently asked by their employers, e.g. Meta and Google to sign non-disclosure agreements that forbid them from telling anyone, even family members, of what they see as they carry out their work. Such non-disclosure agreements are, apparently the norm.

She writes:

“From Myanmar, to Mumbai and Melbourne, tech platforms are making political, ethical and cultural decisions every day on behalf of their collective billions of users.”

In **Chapter 9**, *Your Future*, the discussion is based largely on the results of an interview the author carried out with Maya Wang, someone she considers to be an expert on “the digital dragnet of surveillance in mainland China, and the rights of citizens in the region.” Maya Wang has spent many years as a senior researcher in China and other parts of East Asia for the non-profit agency Human Rights Watch. She now lives in the United States. Murgia met with her in Washington D.C. Murgia quotes Wang as stating: “There’s never been any other empire or government in the whole of human history that has been able to exert such a wide-ranging and deep surveillance on people.” Facial recognition cameras are ubiquitous. As in previous parts of the book, Murgia again raises the spectre

of George Orwell’s 1984. And, drawing on the experience of the interview with Maya Wang, she writes:

“In the hands of despotic leaders, whether in China or elsewhere, algorithm-based control systems (are) the boot stamping on the face of humanity that George Orwell had written about.”

The way Maya Wang sees it, is that the ultimate aim of The Party is total social control. “If they succeed, it’s an unprecedented project of human history.”

In **Chapter 10**, *Your Society*, Murgia discusses how the recent development and now wide use of ChatGPT software has made it quite simple to call up text-based answers to spoken human queries. She worries about how this development will threaten the livelihood of so many people such as writers, actors and, possibly, lawyers.

Murgia ends the book with an *Epilogue* that discusses some attempts being made to counter the potential threat of AI to human freedoms. She is actually present at a meeting on this issue at the Vatican that is attended by the Pope and leading figures from the Islamic and Jewish faiths. She notes that there has also recently been a meeting on the topic at [Bletchley Park](#), in England, that was attended by state representatives from 24 nations plus leaders from major tech companies such as [Open AI](#), Google, [Google DeepMind](#) and Microsoft. A joint statement on the need for action, known as [The Bletchley Declaration](#), was developed by this group.

Thus, although the book is replete with warnings about the dangers of AI to humanity, Murgia ends on a hopeful note, as her final statement shows.

“My hope for AI isn’t that it creates a new upgraded species without the messiness of humanity, but that it helps us ordinary, flawed humans live our best and happiest lives.”

My overall takeaway from the book is that AI, if improperly used, poses an ongoing threat to human freedoms. However, if properly controlled it has considerable positive possibilities for future human development.

Editor’s Note

An excerpt of this book can be read on MacMillan Publishers’ website which also has links to other sites where the book can be purchased. [Read Excerpt](#) ➤



Dr. Jim Ward

Dr. Jim Ward holds a PhD in Social Geography from the University of Maryland. He has taught Urban Sociology in universities in the United States, Australia and Canada and has published two books on urban homelessness in the United States, Canada and Australia as well as a book on small town life in Australia and a book on the geography of Yellow Fever in Latin America. For 20 years he was a consultant on social issues that led to projects in Canada, the USA, Armenia and Russia.

Transforming a Retired Niagara Falls Power Station into a Luxury Hotel

By Pat Brennan



Rendering of the North Facade of the Toronto Power Generating Station by +VG Architects.



Cambridge Mill restaurant.



Elora Mill Hotel & Spa.

A minor earthquake has given Niagara Falls an opportunity for its first 5-Star luxury hotel.

The huge [Toronto Power Generating Station](#) nudging Niagara River just above Horseshoe Falls has been sitting idle and abandoned for 50 years since a minor earthquake shook the building in April, 1974. The slight movement of the ground bumped the drive shafts out of sync between the turbines down in the water turning the generators high above on the production floor.

Now [Pearle Hospitality](#) proposes converting the majestic power station into a luxury hotel with world-class entertainment and culinary features.

The Toronto Power Generating Station is considered the most impressive building in Niagara Falls and the finest example in Canada of Beaux-Arts style architecture. It opened in 1906 and was designed by renowned Toronto architect E.J. Lennox, who also designed Toronto's Old City Hall, plus Casa Loma and several other iconic Toronto buildings.

Leanne Ciancone and her brother Aaron run Pearle Hospitality, a chain of restaurants and resorts started by their grandmother Pearle in 1936. They've pumped millions into restoring historic stone buildings and converting them into renowned destination restaurants and resorts – such as the [Elora Mill Hotel & Spa](#) built on the Grand River in 1851 and the [Cambridge Mill restaurant](#), also on the Grand River, built in downtown Cambridge (Galt) in 1863.

Their [Ancaster Mill](#) is another limestone structure built in 1844 up on top of Hamilton Mountain.

Pearle started a chain of restaurants in 2010 called Earth To Table with two locations in Hamilton and one in Guelph. That chain is now called [Bardo](#).



Aerial View of the Toronto Power Generating Station.



Toronto Power Generating Station, in 2024 Photo by Pat Brennan.

[Earth To Table farm](#) hosts many weddings at its 97-acre farm in Flamborough Township near Clappison's Corners. Pearle recently opened the luxury [Pearle Hotel](#) on the Burlington waterfront adjacent to its popular Spencer's Restaurant. The hotel is renowned for its spa facilities.

Now they've committed to pump more than \$200 million into converting the Toronto Power Station into a 5-Star luxury hotel with world-class entertainment and culinary features.

It'll take three years of construction before the first dinner guest is seated in the summer of 2027.

[+VG Architects](#) of Toronto have been commissioned to convert the 500,000 square foot building from an industrial entity to a spectacular tourist destination.



Rendering of the hotel dining room. +VG Architects.



Toronto Power Generating Station on Aug 29, 2024. Photo By Benito Del Monte.



Rendering of North Facade. +VG Architects.



Rendering of the front of the Toronto Power Generating Station. +VG Architects.



Photos Left and Right: Toronto Power Generating Station on Aug 29 2024. Photos By Benito Del Monte.

And it won't cost you anything to explore the finished project. Pearl wants free-access public viewing platforms on the roof from where visitors can look down along Niagara's rapids to the brink of the Horseshoe Falls. The roof played a part in a 1918 rescue of two men working on a barge that broke loose from its tug boat, got lodged on some rocks perilously close to the Horseshoe Falls. A grappling gun on the roof of the power station shot out a rope that helped rescue the men. [View Rescue article](#).

The construction and operation of the finished hotel and restaurant is expected to create 9,500 jobs, accord to Niagara Parks CEO David Adames. He said the restoration of the power plant is a \$300 million boost to the GDP of Niagara Parks.

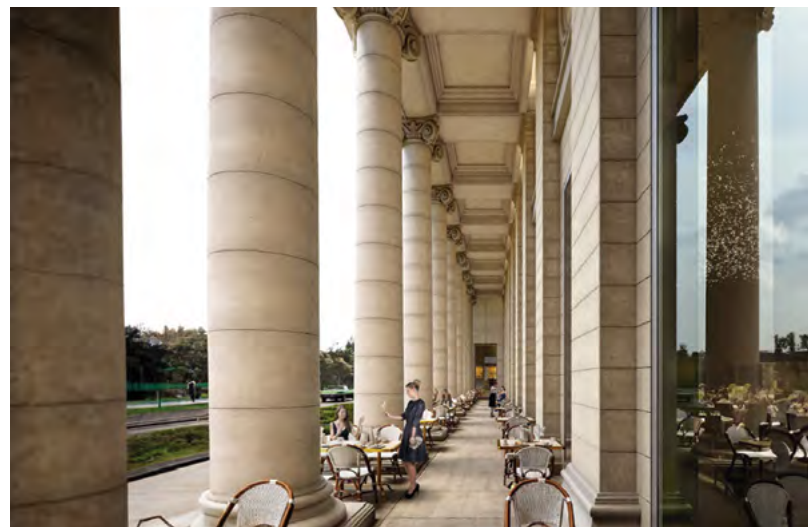
The first power plant on the Canadian side of the river is just across the street from the Toronto Power Station and it opened in 1905. An earthquake also put its turbines and generators out of sync and the plant closed in 2005. It is now a very popular [museum](#) that explains the creation of electricity by the fast-moving river water turning electrical generators. Entrance to the museum costs \$29 and \$34 with a tour guide. A 2,200-foot-long tunnel, 200 feet below the ground's surface, is where the water returned to the river after driving the generators. That tunnel recently opened for public tours and exits below the Horseshoe Falls.



The Stranded Scow plaque. Photo by Benito Del Monte.



Toronto Power Generating Station on Aug 29 2024. Photos By Benito Del Monte.



Rendering of Indoor/outdoor Front patio Cafe. +VG Architects.

[Volcano Discovery](#), which records earthquakes and volcanic eruptions all around the world estimates there have been 36 earthquakes in the region of Niagara Falls since the beginning of 2023. Only one was greater than 3 on the earthquake measuring scale.

In May 1956 an earthquake may have contributed to the collapse of the [Schoellkopf Power Station](#) on the American side of the Niagara River. Schoellkopf was the world's largest power station at the time and the collapse killed one employee at the plant. Its ruins are a tourist attraction today. 🐾



The University of New Brunswick Constructs New Building With Mass Timber

By Pat Brennan

Rendering of the interior of the UNB Commons.

FREDERICTON - They say graduates of the [University of New Brunswick](#) have thighs of steel.

Seeking good grades, students had to climb steep grades to get to class. The university occupies a high hill in Fredericton.

But soon they may be known for thighs of timber.

The school of engineering at UNB is the oldest in Canada with classes starting in 1853. The school's new Engineering Commons is a student resource centre being built with mass timber.

It is the first major construction project using mass timber in a province that is nearly 80 percent covered by timber.

Mass timber as a construction method is stronger than steel and concrete, but greatly reduces CO2 emissions.

The Engineering Commons is an addition to Head Hall, a principal piece of the engineering school at UNB.

The addition's three-story-high atrium will be named after prominent Toronto developer and builder [William Cooper](#), president of [Cooper Construction](#), a family firm started in 1905.

Cooper graduated from UNB's school of engineering in 1962 and recently pulled \$1.1 million out of his pocket to help finance the \$22.9 million addition. It's the latest in many of his donations to the school.

Dozens of engineers have graduated from UNB thanks to three Cooper-sponsored scholarships awarded annually for more than 20 years.



Engineering Commons under Construction.



Rendering of the exterior of the UNB Commons.

Cooper has chartered a private plane to take him and 16 family members, including grandchildren aged 14 and 16, down to Fredericton for the grand opening of the Engineering Commons on September 16th.

EllisDon, one of Canada's biggest construction companies, submitted a low bid to build the Engineering Commons because the firm wanted to create a presence in the Canadian Maritimes where it is not well known.

The 20,000-square-foot building was designed by Greg Murdock, President of **Murdock & Boyd Architects** of Fredericton.

"A big feature of the building is the mass timber," said Murdock. "People will gravitate to wood because it's warm, it feels good. It's part of our culture and salutes our forestry heritage."

The mass timber beams, girders and wall panels are coming from Quebec. A \$215 million factory is currently under construction near the Pictou First Nation reserve in Nova Scotia to build mass timber components for Atlantic Canada and to be shipped to the U.S. A large forested area on the Pictou Reserve will supply most of the raw timber to the plant.

The building's engineering features, such as mechanical ventilation, plumbing and electrical, are being exposed in the open atrium so engineering students can see how their studies apply to a building.

Construction involved installing more than 400 metres of "earth tubes" deep in the ground below the frost line to supply warm air and cool air to the Engineering



Truck with timber for the project.

Commons. The four-foot-diameter earth tubes circulates air that will absorb heat from the deep earth in the winter to help heat the building and cool air in the summer to help cool the building.

UNB's dean of the engineering school Dr. Josh Leon said the new structure will promote collaboration, innovation and learning among engineering students and other students plus make room for more student enrolment beyond the campuses' 12,000 current student population.

Cooper Construction has been building commercial, industrial and retail properties in Southern Ontario since 1905. Cooper built the stadium in Hamilton for the first-ever British Empire Games staged in August 1930. The stadium has since been dismantled. The games are now known as the Commonwealth Games.

One final note about the University of New Brunswick is about some of its well-known alumnae. Prominent Canadian travel writer Barbara Ramsay Orr of Burlington – former president of SATW (Society of American

Travel Writers) is not an engineer, but graduated from UNB in 1966 where she was crowned UNB's "miss engineering." One of her classmates was singer Ann Murray. ➤



Barbara Ramsay Orr.

A ROLLER COASTER RIDE INTO TOMORROW THE CRYSTAL BEACH STORY

By Mike O'Dwyer

The rattle and rumble of steel wheels on steel rails. Screams of fright and delight in the night. Honky Tonk music blaring from overstressed speakers. A cacophony of carny barkers yelling WIN WIN WIN a big prize for your girlfriend - just one thin dime to WIN big! Hot dog mustard and sugar waffle syrup smeared on happy little faces.

Welcome to Crystal Beach circa 1960. But that was then - this is now ...

Teenagers tossing a frisbee on one of the finest sand beaches anywhere. A young couple sipping coffee on the porch of their coastal home overlooking Lake Erie. And yes, happy little faces smeared with hot dog mustard and sugar waffle syrup.

Welcome to Crystal Beach today. Beautiful. Bustling. Building.

Difficult to believe that just a few years ago, the future of Crystal Beach was anything but crystal clear.

The Niagara Falls area is a magnet for tourists from around the world. Because of the magnificent waterfalls, of course. But just down the road from the Falls lies the town of Fort Erie - and its major attraction: Crystal Beach.



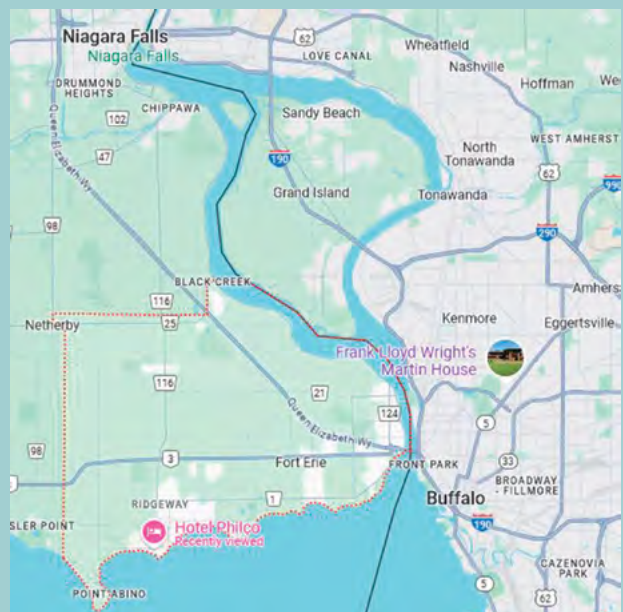
Fort Erie, Ontario Photo by Doug Kerr CC BY-SA 2.0.

FORT ERIE

The Town is situated on the shores of Lake Erie and the Niagara River, across the Canada-United States border from Buffalo, NY.

With a population of approximately 30,000, it is one of Niagara's fastest-growing communities, experiencing a surge in residential and commercial development in the past few years.

Fort Erie also includes the smaller communities of Bridgeburg, Ridgeway, Stevensville, Douglastown, Black Creek and Crystal Beach.



Fort Erie location. Source: Google Maps -Map data © 2024 Google Canada



The Peace Bridge, by Óðinn, CC BY-SA 3.0.

The Peace Bridge at Fort Erie is the second busiest border crossing between Canada and the US.

Historically, the original Fort Erie (built in 1764) played a significant role during the War of 1812 as a supply depot and shipping port for British troops, Loyalist Rangers and Six Nations Warriors. It was attacked twice by the Americans in 1812 and eventually destroyed by them in the winter of 1814. The Fort has been reconstructed and is now a much-visited designated National Historic Site.



Image by Ernest Metendorf, image released into the Public Domain by its author.

Between 1840 and 1860, Fort Erie was a major terminus for escaping slaves using the Underground Railroad to cross from the US into Canada.



Freedom Park Marker, photo by Jamie Abel, [hmdborg](https://www.hmdb.org)

October 2000: Freedom Park in Fort Erie was established at the Bertie Street Ferry landing – the longest operating ferry dock where thousands of freedom seeking fugitive slaves first set foot in Canada.



Fort Erie Racetrack "again, i bet on one of those last guys," by Jodie Wilson, CC BY 2.0

The 126-year-old Fort Erie Racetrack is considered to be one of the most picturesque infields in North America.

In the late 1800s, Crystal Beach became a mecca for vacationing families from Toronto to New York drawn to the small community by the beauty of its lakefront and the then-vibrant Crystal Beach Amusement Park.

But after the Park closed in 1989, Crystal Beach closed, too. With its biggest attraction gone, many local businesses shuttered, homes and cottages were left vacant, falling into disrepair, and Crystal Beach's once lively downtown descended into neglect and decay.

Derby Road was the epicenter of that neglect and decay. Crystal Beach's narrow central street once lead directly to the north gate of the Crystal Beach Amusement Park. Back then, the narrow street was lined with vendors selling [Loganberry](#) drinks, French fries and thousands upon thousands of hot dogs, thus earning it the nickname *Hot Dog Alley*.

But when the Park closed, Derry Road deteriorated into a sad row of decrepit, empty buildings – remnants of once bustling businesses strangled out of existence by the passing of the Park.

And then, along came Phil Smith who has worked his tail off for a couple of decades to bring Derby Road (and adjacent Queen's Circle) back to life – most notably via his funky and eclectic [Hotel Philco](#). But that's getting ahead of our story ...



Phil Smith

Phil was born and raised in the Fort Erie area. A high school co-op opportunity with a local real estate company led him to become a licenced realtor at 18 -- and the rundown, neglected, vacant cottages of Crystal Beach quickly became his unlikely focus.

"I was known as the *lawnmower guy*," says Phil. He would promise the owners of vacant, rundown cottages to cut their lawns if they would list with him. "I would list cottages for say, \$24,000 and sell them a couple of years later for \$20,000. It took a while but I knew Crystal Beach was an amazing and affordable place to live and eventually other people began to catch on."

By the mid 2000s, Phil was ready to branch out from his main business of selling cottages. "There was this abandoned restaurant building on Derby Road that I was thinking of buying. It would be a real stretch for me, financially, so I asked my mother what to do. She said buy it, and mom is always right, so I did."

In 2008 Phil opened his refurbished restaurant, [South Coast Cookhouse](#), and it immediately became a local favourite. It also spurred Phil to do more on Derby Road. "I would look out the window of my restaurant at all the abandoned and derelict buildings along Derby Road, I saw the potential for so much more so I began accumulating Derby Road properties as I could afford to do so. My goal was simple: Renovate and revitalize the village."

His biggest Derry Road investment - and leap of faith - was the purchase of the Ontario Hotel in 2017. "It was derelict and known locally as the *Heartbreak Hotel* because of its dismal reputation as a kind of last-stop place.



Derby Square is a happen' place featuring small shops, restaurants and cafes with live music and giant games on summer weekends and holidays.



Hotel Philco Today, once derelict Derby Road is dynamic Derby Square, featuring an array of apartments, commercial spaces, retail establishments and, of course, the Philco Hotel.

"The property cost \$1 million and banks weren't much interested in underwriting such a long-shot purchase, so I had to dig deep into my savings to acquire it. I admit to some sleepless nights - because of the cost and also because I did a lot of the renovations myself when I could steal time from my realty business."

Five years later, Phil opened his extensively renovated hotel to guests having rebranded the place *Hotel Philco*. To say it is eclectically different is an understatement.



The Bicycle Room.

The boutique hotel has retail spaces at street level with residential apartments above. Not unusual. What is unusual - or breathtaking, gobsmacking, euphoria-inducing ... take your pick -- are the hotel rooms.

Each room is outrageously themed: glam, beer, cabin, garden, bike, nautical, brewery, retro, Christmas, football, tropical, golf and the biggest: the Crystal Beach Room filled with amusement park memorabilia and overlooking the site of the old park.



Two views of the Crystal Beach Park Room

The funky and eclectic hotel is a hit, winning TripAdvisor reviews like this ...

Themed rooms are FUN! -- The Phil-co team knocked it out of the park! We stayed in the Nautical room. The loft and kitchenette are fun and useful. The decor is beyond.



Brewery Room, Glam Room, Football Room, Cabin Room, Christmas Room

And this ...
 Unique + memorable family experience -- This was our second time staying at Hotel Philco, and it was fantastic! The first time we stayed in the Crystal Beach room + this time we stayed in the Christmas room. Honestly, no detail went unnoticed; they went all out in terms of curating the rooms + creating unique, memorable experiences for their guests.

And many more five-star reviews on TripAdvisor and Google Hotels.

Phil says, "Some were skeptical of my plans for the hotel. But it's worked out well for us with solid bookings from the get-go. We have thirteen rooms now with four more on the way.

"Before *Hotel Philco*, people would come for the beach and say, 'This is a cool place.' But they had nowhere to stay for a day or two. Now they do - in a *very cool place*."

And while Phil was in the midst of his Hot Dog Alley makeover, Marz Homes came to town, in the vanguard of builders drawn to join the Crystal Beach resurgence by an ambitious Fort Erie revitalization plan.

Beginning in the late 1990s, Fort Erie Mayor Wayne Redkop, Town councillors and staff launched a multifaceted Crystal Beach rejuvenation program that improved property standards, upgraded infrastructure and completed a multi-million dollar waterfront/public space enhancement.

Over that time, the Town also aggressively pursued private investment in businesses and new housing. One of the first developers to come on board was Southwestern Ontario homebuilder, [Marz Homes](#).

The Hamilton-based company was first approached by Fort Erie planning representatives in 2007. "We took a close look and saw the potential to be tapped," says Marz Homes President, Dan Gabriele. "And by 2008 we had begun building there.

"Things started slowly for us. It definitely took a while to get traction. Our marketing campaign in Hamilton and the GTA kick-started sales as people became aware of all that Crystal Beach lifestyle had to offer.

"We themed our homes to fit with the unique character of the area - coastal designs that have been very well received."

Marz Homes currently has two active communities in Crystal Beach: The Shores and Beach Walk. "We expect to have more to offer in the future," says Dan.

Developers like Marz Homes, entrepreneurs like Phil Smith and a welcoming Fort Erie civic environment have reinvigorated Crystal Beach. Once known as a 'just for summer' destination and for years in decline after its signature amusement park closed, it has now evolved into a robust year-round community of diverse residential and commercial developments combining seamlessly with the historic allure of its natural attractions and panoply of cultural and recreational activities for seasonal visitors.

The Crystal Beach housing market is vibrant, offering a variety of year-round residential properties from lakefront condos to detached family homes designed for a 'coastal' lifestyle.



Fort Erie Mayor Wayne Redekop
Source: NiagaraRegion.ca

THE MAYOR SPEAKS ...

(Edited for clarity and length)

Wayne Redekop was born and raised in the Town of Fort Erie. He has been Mayor of the Town twice: from 1997-2006 and from 2014 to present. During his time as Mayor, he has led the town's heavy investment in infrastructure renewal, new parks and public transit, and the boom in residential construction. He has actively promoted the value of the Town's expansive waterfront, rich natural heritage and opportunities for growth and prosperity.

The resurgence of Crystal Beach has taken place under his watch.

Here is what Mayor Redekop had to say in a Q&A with The Land Economist ...

The Land Economist: What spurred Crystal Beach's resurgence?

Mayor Redekop: Crystal Beach has an interesting history, primarily in the past as a summer resort community. Efforts to rejuvenate the area began in the 1980's, suffered a set-back with the closure of the amusement park in the early 1990's, but then began to gain momentum in the late 1990s. The Town of Fort Erie worked with Crystal Beach residents to deal with outstanding issues relative to property standards, infrastructure deficiencies and lakefront opportunities. This resulted in over 150 derelict vehicles being removed from the area over a 2-year span, 1998-99, replacement of old water lines (which necessitated the reconstruction of some of the wastewater, sidewalk and road infrastructure) 1999-2001, completion of the Crystal Beach Waterfront Park, 2005, and the acquisition of the Rebstock property on Lake Erie, 2001, which is now the site of the Bay Beach Park, reconstructed and opened in 2019.

The Town also worked with local residents on a Neighbourhood Plan, 2005, which provided direction on how the area should be developed. Public investments by the municipality focusing on the Lake Erie waterfront, private investment in new housing and businesses.

The COVID pandemic resulted in many wishing to relocate out of the GTA and the casual lifestyle and relatively affordability of land and housing have all contributed to the resurgence of the area.

The Land Economist: What do you see for the future of Crystal Beach?

Mayor Redekop: Crystal Beach will continue to be the tourist hub of Fort Erie. The population will continue to grow as housing developments continue, new businesses continue to locate in the area, interesting and new events and programs are provided for tourists and residents alike and newcomers of all ages call Crystal Beach home.

This growth comes with significant challenges. Adequate road and wastewater infrastructure, school capacity and health care services are all critical aspects of accommodating growth. Some of these are within the Town of Fort Erie's scope, some are within the jurisdiction of the Niagara Region, school boards, Niagara Health and the provincial government. Hence constant and continuous dialogue with those partners on how to meet the emerging needs of Crystal Beach and Fort Erie as the population grows.

The Land Economist: What brought so much new development to the Crystal Beach area?

Mayor Redekop: First and foremost, I believe, was the affordability of the land and existing housing, as well as the open spaces within the urban boundary that had been identified for development. One local businessman, in particular, Phil Smith, has single-handedly restored a number of old buildings, including a restaurant and hotel. Numerous private investors purchased homes at relatively attractive prices, renovated and upgraded them and, thus, began a trend of rejuvenation of that area. Developers eventually picked up on this. Now that the word has spread about what Crystal Beach and Fort Erie have to offer, there are many development projects under construction or in the process of approval.

The Land Economist: Crystal Beach is a part of Fort Erie, of course. How does the revitalization of Crystal Beach affect Fort Erie and area?

Mayor Redekop: Prosperity in any part of a community translates into prosperity across the community. The influx of visitors provides opportunities for future visits to Crystal Beach and other parts of Fort Erie, raising of the Town's profile as word-of-mouth spreads and the media begins to tune in.

The new developments in Crystal Beach provide housing as workers and their families move here to meet the needs of the new manufacturers and businesses attracted to Fort Erie. The growing population leads to the expansion of existing businesses and the introduction of new businesses and that creates a greater property tax base that leads to new services and programs as well as a larger volunteer base, among other things.

THOSE WERE THE DAYS MY FRIENDS. WE THOUGHT THEY'D NEVER END*
UNTIL THEY DID
CRYSTAL BEACH AMUSEMENT PARK - 1888-1989



Crystal Beach Amusement Park Ontario Canada 1888-1989

Crystal Beach was not just a beach and a park, but a state of mind. When I was growing up in the 60s and 70's, Crystal Beach was a wonderful place to visit.

- An Ode to Crystal Beach Amusement Park by Gerry N., Parousia Buff, 2020

*Those were the days, my friend
We thought they'd never end
We'd sing and dance forever and a day
- Mary Hopkin*

For over 100 years, the Crystal Beach Amusement Park drew huge crowds - thousands arriving daily from New York State and beyond on the steam-powered ferries *Americana* and *Canadiana*.



The SS *Canadiana* and the SS *Americana* were the two most popular passenger excursion steamers operating between Buffalo, New York and Crystal Beach Park from 1910 to 1956.

The Park boasted about having the finest rides and games of any amusement park anywhere.



The Park's *Backety-Back* scenic wooden roller coaster circa 1910



The *Cyclone* opened in 1927 - crowds broke down fences to get to the *Cyclone* on opening day - and made its final run on September 2, 1946.



The *Cyclone* next to the Crystal Ballroom, circa 1930s

The Crystal Beach Dance Pavilion opened in 1891. It was replaced by The Crystal Ballroom, built in 1924 that featured the largest dance floor in North America. After a 1974 fire, the Ballroom was reduced in size and reopened in 1984.



For many heady years, the Crystal Ballroom swung and swayed to Big Bands playing to sold out crowds. When the music died and crowds no longer came, it was the final building at the Park to be demolished in the late 1980s.

Famous acts played the Ballroom including Frank Sinatra, Glenn Miller Orchestra, Jelly Roll Morton and Canadian acts Maynard Ferguson and Bert Niosi.

During its peak years in the 1940s and early 1950s, Crystal Beach drew about 20,000 visitors each day during the summer.



OFF THE RAILS: WHAT GOES AROUND COMES AROUND

UNTIL IT DOESN'T

*Don't it always seem to go that you don't know what you got
'til it's gone?
- Joni Mitchell*

The Park's decline started in the 1980s, losing business to Canada's Wonderland, Darien Lake, Fantasy Island and Marineland of Canada.

In 1989, the Park's rides were either demolished or sold to other amusement parks and the Crystal Beach Amusement Park shut its gates for good.

And speaking of gates: A gated community, the Crystal Beach Tennis and Yacht Club, now occupies the site.

The crowds that once thronged Crystal Beach Amusement Park have long faded away. The Park itself demolished under the weight of the more enthralling 'amusements' at places like Canada's Wonderland or Darien Lake.



The Comet opened in 1948. It was one of the greatest wooden coasters ever built.

Its unique food and drink offerings included sugar waffles, a Loganberry beverage and Halls Suckers.

BTW: [Crystal Beach Sugar Waffles](#), and Halls Suckers are available from the Crystal Beach Candy Co., manufacturer of *The Original Crystal Beach Sugar Waffle*, *Crystal Beach Suckers*, and *Loganberry Syrup* either online or at the company storey just minutes away from the site of the famous Park.



The legendary sugar waffles are still available from kiosks at various special events in Crystal Beach. Loganberry drinks are reported to be available at some retail locations in and around Buffalo.

And for a while, Crystal Beach felt the economic and cultural sting of abandonment.

But not anymore.

With strong civic support and the realization of mad dreams by 'Beach Believers' like Phil Smith, Crystal Beach is now *the* place to be for a great day of sun, sand and surf, For an activity-packed summer vacation or for a lifestyle segue into a laid-back *coastal* life. 🐾



Michael O'Dwyer has had careers as a writer and editor – newspapers, magazines, radio, television, websites, marketing/advertising – and as a senior communications practitioner/manager/partner in both government and industry. His film/TV productions have won numerous international awards and have been shown on all major Canadian networks and on television and in theatres around the world.



WILDFIRES

John T Glen MA, AACI, FRICS, MIMA, OLE

Cabin Creek Drive in Jasper Alberta, Source: [Parks Canada](#)

Introduction

My personal interest in wildfires began as a teen in Northwestern Ontario. Our proximity to the prairies of neighbouring Manitoba, meant that dry conditions could bring on the danger of forest fires. The evergreen trees that dominated the area were susceptible to fire whether caused by lightning or human carelessness. I volunteered to be a firefighter with the then Department of Land and Forests and learned quickly how hazardous wildfires could be. The firefighter is downwind of the fire and besides the danger of the fire itself, there is the smoke and heat to contend with. How puny our water hoses and shovels seemed when confronted with the oncoming fires which literally exploded through the dry evergreens that composed the forests of the area.

Objectives

This article tries to accomplish a number of objectives:

The **first objective** is to quantify the key parameters which make up for the **Fire Danger Index**. Included are the type of forest (or fuel). How dry is it? What have been the temperatures?

The **second objective** is to identify some newer weather terminology or conditions that describe the types of conditions that may be

exacerbating the situation. Whoever heard of heat domes, flash drought and fire tornados 10 years ago?

The **third objective** is to quantify the potential danger zones affected by wildfires known as the **wildland interfaces**. As development has spread, the borderlands between wildlands and urban areas have increased. Our infrastructure such as highways, railways and powerlines has been impacted, and various industries (mining and forestry, have been affected).

The **fourth objective** is to identify actions such as the **FireSmart** home and community to lessen wildfire damage. Many of these actions can be done without great cost to property owners.

The **fifth objective** is to identifying what **we have learned about wildfires and what institutional actions** would be recommended.

The **sixth objective** is to highlight some of the **insurance costs** which will impact premiums, some potential effects on **property value** that can be expected if things do not change. We also note some proactive actions by insurance companies to assist property owners on wildland zones.

1.0 WILDFIRE RATING SYSTEM

The Canadian Forest Fire Weather Index System (CCDRS)

The two main parts of the CFFDRS are the FWI and the FBP

- The [Canadian Forest Fire Weather Index \(FWI\) System](#), which depends solely on weather readings, provides a general measure of fire danger throughout forested and rural areas. The codes and indices of this system are calculated based on a single “standard” forest fuel type (mostly jack pine and lodgepole pine).
- Fire managers use the **FWI System** to anticipate the potential for daily fire ignition across the landscape, considering fires in two distinct categories:
- **Human-caused fire** – The likelihood of human-caused fire occurring in an area on a particular day can be predicted based on: 1) how receptive the small, thin forest fuels are to ignition and spread (largely determined by the moisture content of these surface fuels); and 2) how much human activity is happening in or near the forest (creating “ignition sources”). Clear patterns of this activity can appear, with fires emerging in clusters close to populated areas, roads and railways.
- **Lightning-caused fire** – Fire managers track the location of all the lightning strikes in their regions, in real time, every day of the fire season. They use this information, along with outputs from the FWI System, to tell them where pockets of lightning-caused fire can be expected to hold over (grow slowly beneath the surface or in dry rotten logs) and when lightning-caused fires might begin actively spreading.
- The [Canadian Forest Fire Behavior Prediction \(FBP\) System](#) helps forest managers assess how fast a specific fire could spread in a particular forest type, how much fuel it might consume and, ultimately, how intense that fire might be. The intensity of a fire is the factor a fire manager uses to determine what tactics and resources are needed to fight a fire.
- The FBP system relies on 14 primary data inputs in five general categories: **fuels, weather, topography, foliar moisture content, and type and duration of prediction**. This data, when combined, provides an indication of expected fire behaviour. For example, the moisture content of surface fuels, together with the observed wind speed, yields the Initial Spread Index—an indicator of how fast a fire is expected to spread—which in turn is used to calculate a fire’s rate of spread (e.g., in kilometres per hour).

The FBP System also uses the indices of the Forest **Fire Weather Index System** and converts them to stand-specific predictions of fire behaviour for all the major forest types across Canada.

Structure of the FWI System

Fine Fuel Moisture Code

- The Fine Fuel Moisture Code (FFMC) is a numeric rating of the moisture content of litter and other cured fine fuels. This code is an indicator of the relative ease of ignition and the flammability of fine fuel.

Duff Moisture Code

- The Duff Moisture Code (DMC) is a numeric rating of the average moisture content of loosely compacted organic layers of moderate depth. This code gives an indication of fuel consumption in moderate duff layers and medium-size woody material.

Drought Code

- The Drought Code (DC) is a numeric rating of the average moisture content of deep, compact organic layers. This code is a useful indicator of seasonal drought effects on forest fuels and the amount of smoldering in deep duff layers and large logs.

Initial Spread Index

- The Initial Spread Index (ISI) is a numeric rating of the expected rate of fire spread. It is based on wind speed and FFMC. Like the rest of the FWI system components, ISI does not take fuel type into account. Actual spread rates vary between fuel types at the same ISI.

Buildup Index

- The Buildup Index (BUI) is a numeric rating of the total amount of fuel available for combustion. It is based on the DMC and the DC. The BUI is generally less than twice the DMC value, and moisture in the DMC layer is expected to help prevent burning in material deeper down in the available fuel.

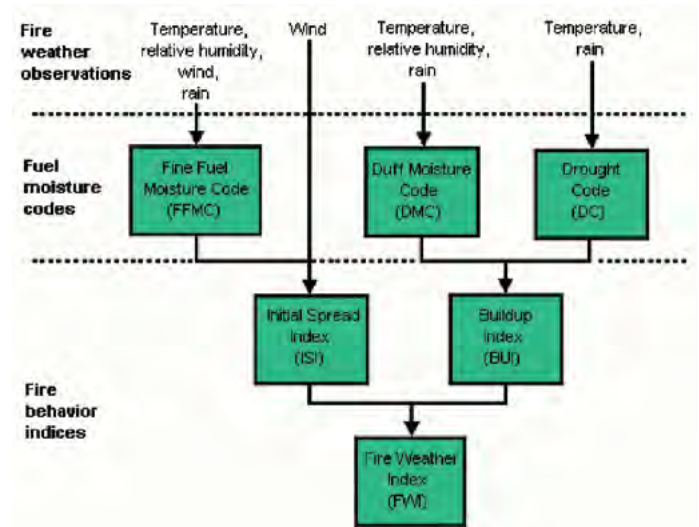
Fire Weather Index

- The Fire Weather Index (FWI) is a numeric rating of fire intensity. It is based on the ISI and the BUI, and is used as a general index of fire danger throughout the forested areas of Canada.

Daily Severity Rating

- The Daily Severity Rating (DSR), an additional component of the FWI system, is a numeric rating of the difficulty of controlling fires. It is based on the Fire Weather Index but it more accurately reflects the expected effort required for fire suppression.

Fire Weather Index System



Source: [Natural Resources Canada](#).

- The diagram above illustrates the components of the FWI System.
- Calculation of the components is based on consecutive daily observations of temperature, relative humidity, wind speed, and 24-hour precipitation.
- The six standard components provide numeric ratings of relative potential for wildland fire.

Fire Danger Legend ¹

Status	Description
Low	Fires likely to be self-extinguishing and new ignitions unlikely. Any existing fires limited to smoldering in deep, drier layers.
Moderate	Creeping or gentle surface fires. Fires easily contained by ground crews with pumps and hand tools.
High	Moderate to vigorous surface fire with intermittent crown involvement. Challenging for ground crews to handle; heavy equipment (bulldozers, tanker trucks, aircraft) often required to contain fire.
Very High	High-intensity fire with partial to full crown involvement. Head fire conditions beyond the ability of ground crews; air attack with retardant required to effectively attack fire's head.
Extreme	Fast-spreading, high-intensity crown fire. Very difficult to control. Suppression actions limited to flanks, with only indirect actions possible against the fire's head.
Nil	No calculations were performed for this region

2.0 WEATHER TERMINOLOGY

The following weather terminology is relevant to wildfires

- Heat Dome
- Flash Drought
- Fire Tornado

Heat Dome

- A heat dome occurs when an area of high pressure stays over the same area for days or even weeks, trapping very warm air underneath - rather like a lid on a pot.
- The definition of an extreme heat event varies based on many factors, including geographic location and weather conditions such as temperature, humidity, and cloud cover as well as the duration of the event.
- During this type of event, the temperature is much hotter than average for a particular time and place.
- What is a heat dome? | Royal Meteorological Society (rmets.org)
- Chief Coroner of BC (2022), A Review of Heat-Related Deaths in B.C. in Summer 2021, June 7, 2022

Flash Drought

- Flash drought is simply the rapid onset or intensification of drought. It is set in motion by lower-than-normal rates of precipitation, accompanied by abnormally high temperatures, winds, and radiation. Together, these changes in weather can rapidly alter the local climate.
- Higher temperature increases evapotranspiration—the process by which water is transferred from the land to the atmosphere by evaporation from the soil and by transpiration from plants—and further lowers soil moisture, which decreases rapidly as drought conditions continue.
- If not predicted and discovered early enough, changes in soil moisture that accompany flash drought can cause extensive damage to agriculture, economies, and ecosystem goods and services.

Fire Tornado

- The cumulonimbus flammagenitus cloud (CbFg), also known as the pyrocumulonimbus cloud, is a type of [cumulonimbus cloud](#) that forms above a source of heat, such as a [wildfire](#), nuclear explosion, or volcanic eruption, and may sometimes even extinguish the fire that formed it. It is the most extreme manifestation of a [flammagenitus cloud](#).
- According to the [American Meteorological Society's](#) Glossary of Meteorology, a flammagenitus is “a cumulus cloud formed by a rising thermal from a fire, or enhanced by buoyant plume emissions from an industrial combustion process.”

2021 British Columbia Firestorm, Canada ²

- Widespread cumulonimbus flammagenitus appeared over British Columbia and northwestern Alberta in connection with the 2021 [British Columbia wildfires](#), many of which were exacerbated by the historic [2021 Western North America heat wave](#).
- In just 15 hours, between 3pm June 30 and 6am July 1, 710,117 lightning strikes were recorded, of which 112,803 were cloud-to-ground strokes.
- This activity followed several days of unprecedented temperature highs in late June, including Canada's highest-ever recorded temperature of 49.6°C in [Lytton, British Columbia](#) (also known as [Camchin](#) or ʔq'əmcín). At least 19 wildfires ignited between June 27 and 29, but most remained under 5 hectares (12 acres); one fire, however, grew to at least 2 km² (0.77 sq mi) by June 29, prompting evacuations.
- On June 30, two large fires spread out of control, one near [Kamloops Lake](#) which grew to 200 km² (77 sq mi) by evening, and the other north of [Lillooet](#), which similarly grew to tens of square kilometres that day. At least two residents were unable to escape due to the speed of the firestorm's advance and perished when a utility pole was blown down on them by flames.

Jasper Wildfire 2024 ³

- “In the aftermath of the devastating [wildfire](#) that destroyed one-third of the town of Jasper, Alberta, Parks Canada says it has been working with wildfire researchers to understand how the disaster unfolded and what it may portend for communities battling future extreme fires.
- “It took less than three days from the time the Jasper wildfire started until it engulfed the town. As investigators come to grips with the shocking speed of events, one of the questions they face is what role pyrocumulonimbus clouds, or pyroCbs, played in accelerating the worst fire in the park's 117-year history.”
- “While the phenomenon has been recognized for years, pyroCbs have more recently become a focus for wildfire researchers because their occurrence in fire-prone regions appears to be growing – nowhere more than in Canada.”

While pyroCbs only form in a small fraction of Canadian wildfires, those fires tend to be the most destructive.



Jasper, Alberta. Source: [Parks Canada](#)

¹ Canadian Wildland Fire Information System | Fire Weather Maps (nrcan.gc.ca)

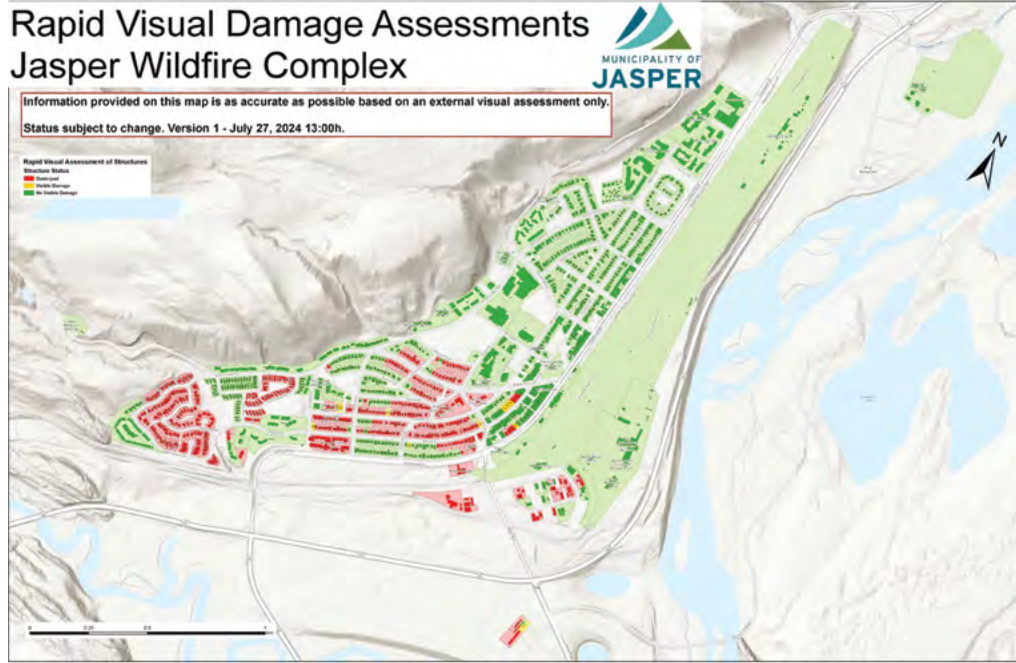
² Skrypnik, Jane (2023) *Fire-breathing Dragon of Clouds: These are Canada's Wildfire-Induced Super Storms*, *Globe and Mail* August 22, 2023

³ Semenuik, Ivan, (2024) *Was the Jasper Wildfire Fuelled by a Storm it Created? Investigators Race to Understand a Growing Threat*, *Globe and Mail* August 5, 2024



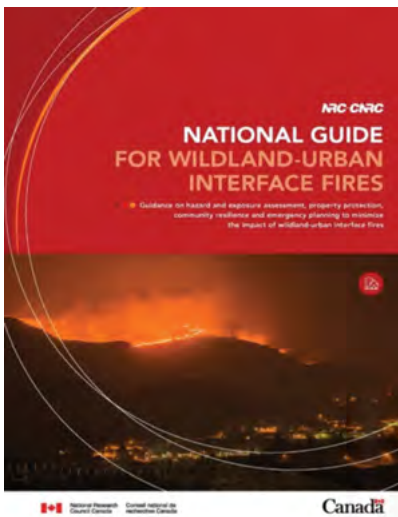
Jasper, Alberta. Source: Parks Canada

Visual Damage Jasper ⁴



Municipality of Jasper Handout.

3.0 WILDLAND INTERFACES



Wildfire Interface Codes/Guides

There are several standards for Wildfire Interfaces.

- **The 2021 International Wildland-Urban Interface Code (IWUIC)**
 - Establishes regulations to safeguard life and property from the intrusion of wildland fire and to prevent structure fires from spreading to wildland fuels.
 - Regulates defensible space, and provides ignition-resistant construction requirements to protect against fire exposure and resist ignition by burning embers.
 - Provides standards for emergency access, water supply and fire protection.
 - Provides requirements for automatic fire suppression and safe storage practices.

- In 2021 The Government of Canada published the **National Guide for Wildland-Urban Interface Fires**

These codes provide the definitions which are the basis for mapping the areas most likely to be affected by wildfires. Progress on mapping the wildfire interfaces will assist in mitigation efforts and allow prioritization of resources.

The abstract for the article **Mapping Canadian Wildland Fire Interface Areas⁵** follows:

- Destruction of human-built structures occurs in the 'wildland-urban interface' (WUI) - where homes or other burnable community structures meet with or are interspersed within wildland fuels. To mitigate WUI fires, basic information such as the location of interface areas is required, but such information is not available in Canada.
- In this study, we produced the first national map of WUI in Canada. We also extended the WUI concept to address potentially vulnerable industrial structures and infrastructure that are not traditionally part of the WUI, resulting in two additional maps: a 'wildland-industrial interface' map (i.e. the interface of wildland fuels and industrial structures, denoted here as WUI-Ind) and a 'wildland-infrastructure interface' map (i.e. the interface of wildland fuels and infrastructure such as roads and railways, WUI-Inf).
- All three interface types (WUI, WUI-Ind, WUI-Inf) were defined as areas of wildland fuels within a variable-width buffer (maximum distance: 2400 m) from potentially vulnerable structures or infrastructure. Canada has 32.3 million ha of WUI (3.8% of total national land area), 10.5 million ha of WUI-Ind (1.2%) and 109.8 million ha of WUI-Inf (13.0%). The maps produced here provide a baseline for future research and have a wide variety of practical applications.

⁴ <https://www.jasper-alberta.ca/p/release-of-map-of-damaged-structures>

⁵ Johnston, Lynn M. and Flannigan, Mike D., (2018), **Mapping Canadian Wildland Fire Interface Areas**, *International Journal of Wildland Fire* 2018, 27, 1-14

Wildfire Urban Interface

- When wildfires spread to and through the Wildland Urban Interface (WUI), an area where houses and other human developments meet or are mixed with wildland vegetation, the consequences can be extreme, resulting in significant losses and imposing substantial evacuations.

Wildfire Urban Interface Zones ⁶

Priority Zone 1

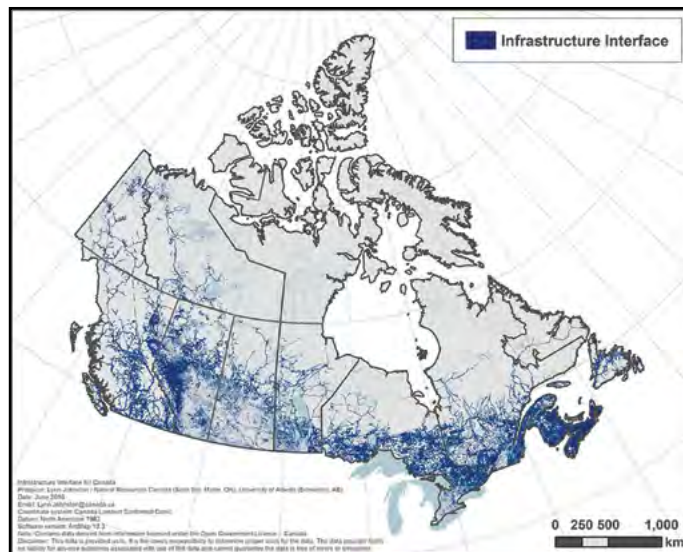
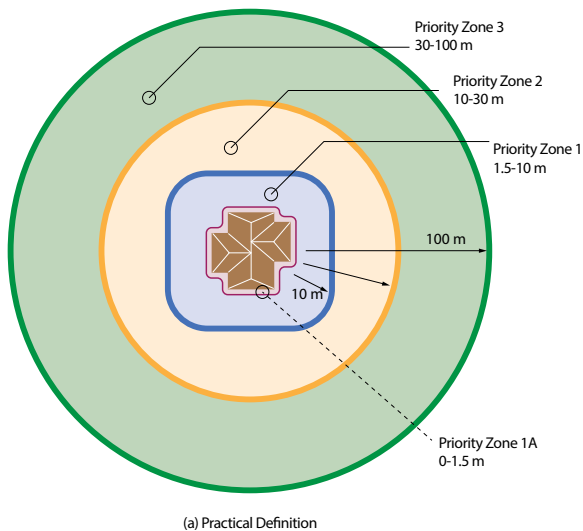
- 1.5 m -10 m extending outward in all directions from the furthest projection of the building.

Priority Zone 2

- 10 m - 30 m extending outward in all directions from the furthest projection of the building

Priority Zone 3

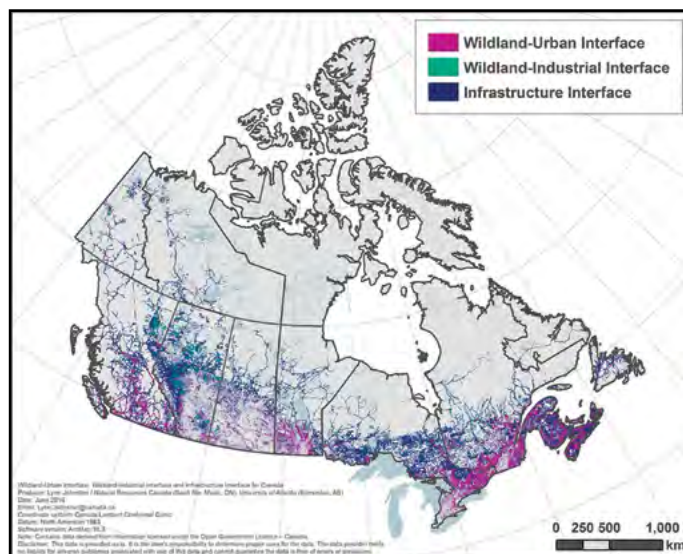
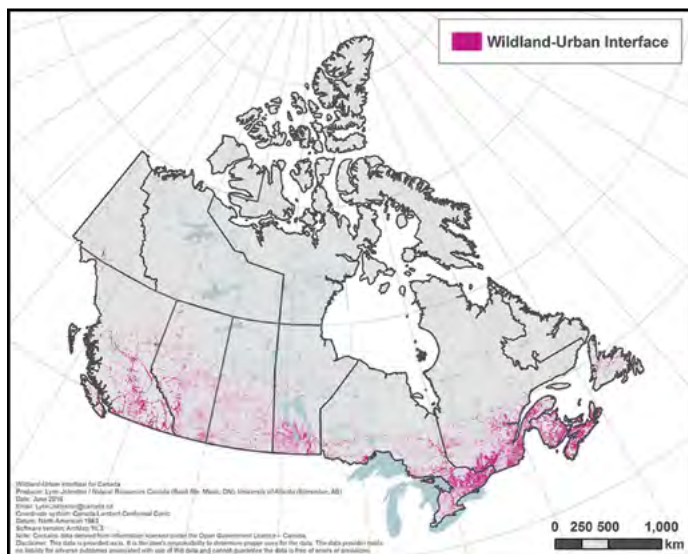
- 30 m - 100 m extending outward in all directions from the furthest projection of the building.



Other Wildland Interfaces

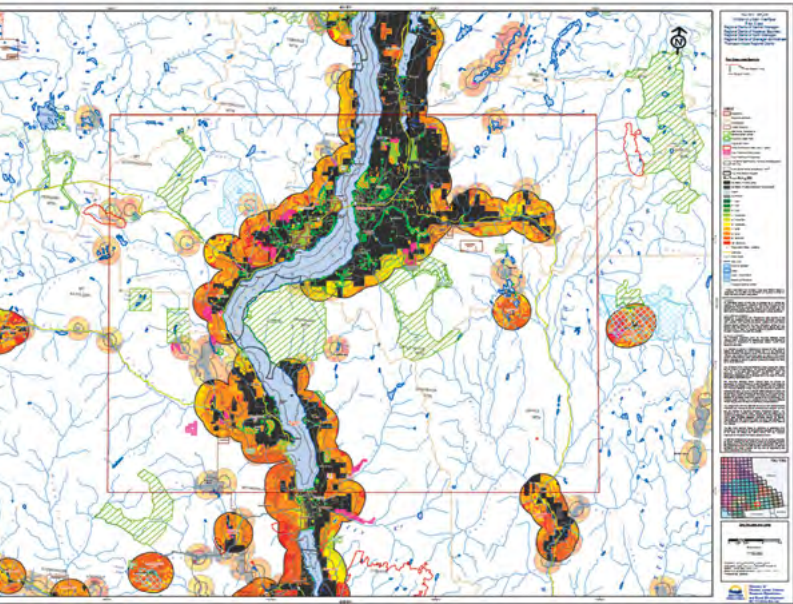
There are two other important wildland interfaces:

- Wildland Industrial Interface
- Wildland Infrastructure Interface



Source of Above Maps: Mapping Canadian Wildland Fire Interface Areas by Lynn M. Johnston, 2016.

6 National Research Council of Canada (2021) National Guide for Wildland-Urban Interface Fires



4.0 FIRESMART HOME ⁸

The key to the FireSmart home is the removal of combustibles

Non-Combustible Zone(0-1.5 METRES)

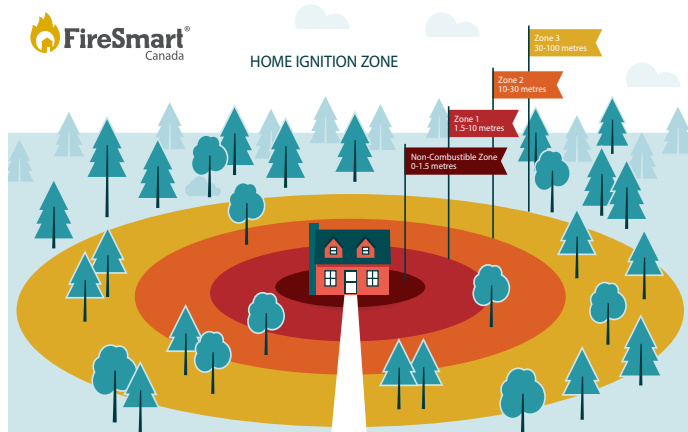
A minimum 1.5 metre noncombustible surface should extend around the entire home and any attachments, such as decks.

ZONE 1 (1.5-3.0 METRES) ZONE 2 (10 - 30 METRES)

Thin and prune evergreen trees to reduce hazard in this area. Regularly clean up accumulations of fallen branches, dry grass and needles from on the ground to eliminate potential surface fuels.

ZONE 3 (30 - 100 METRES)

Look for opportunities to create a fire break by creating space between trees and other potentially flammable vegetation. Thinning and pruning is effective here as well. These actions will help reduce the intensity of a wildfire.



This should be a fire-resistant zone, free of all materials that could easily ignite from a wildfire.

⁷ BC Ministry of Forests, Lands, Natural Resource Operations, and Rural Development BC Wildfire Service

⁸ FS_Home-Ignition-Zone-Poster.pdf (firesmartcanada.ca)

⁹ <https://www.abc.ca/news-insights/news/severe-weather-in-2023-caused-over-3-1-billion-in-insured-damage> Source: Insurance Bureau of Canada

¹⁰ Clare O'Hara (2024) *Insurers Facing Spike in Losses From Summer Rainstorms, Wildfires* Globe and Mail August 23, 2024

5.0 INSURANCE AND VALUE EFFECTS

INSURANCE PREMIUM

Saba, Rosa (2023) *Expect Premiums to Rise with Fire Risk*, Canadian Press, August 25, 2023

- “Canadian insurers are grappling with the higher risk of wildfires as this year’s fire season breaks records, and experts say rising premiums are just one way the industry is seeking to adapt to the changing landscape.”
- “The more losses, the more of these events, the higher the risk and the higher insurance premiums will trend,” said Craig Stewart, vice-president of climate change and federal issues at the Insurance Bureau of Canada.”

INSURED DAMAGES 2023 ⁹

Date	Event	Costs
February 3-5	Atlantic Canada cold snap	120 Million
April 5-6	Ontario and Quebec spring ice storm	330 Million
May 28-June 4	Tantallon, Nova Scotia, wildfire	165 Million
June 18-July 26	Prairies summer storms	300 Million
July 20-August 25	Ontario severe summer storms	340 Million
July 23	Nova Scotia flooding	170 Million
August 13-September 16	Bahchokg-Yellowknife and Hay River, NWT, wildfires	60 Million
August 15-September 25	Okanagan and Shuswap area wildfires	720 Million
August 24	August 24: Winnipeg hailstorm –\$140 million	140 Million
2023	Wildfire Total	954 Million

INSURANCE COSTS

Insurers Facing Spike in Losses From Summer Rainstorms, Wildfires ¹⁰

Canada’s largest property and casualty insurer is facing a spike in catastrophe losses that could cost it more than a billion dollars after a series of severe weather events this summer.

- “Toronto-based Intact Financial Corp. **IFC-T** announced this week that it estimates its total catastrophe losses so far in the third quarter, which ends Aug. 31, to be about \$1.1-billion.
- Intact had set an annual guidance for catastrophe losses at about \$900-million, according to quarterly financial reports.”
- “However, **four serious weather events** that have hit Canada in July and early August are being tied to higher than estimated losses at Intact, Definity Financial Corp. and other insurers.
- **Torrential rains in Southern Ontario – predominantly in the city of Toronto – cost the industry \$940-million in insured damages.**
- **\$1.2-billion for the hailstorms in Calgary and**
- **\$1-billion in insured losses for Hurricane Debby hitting Montreal.”**
- Updated estimates for the **Jasper wildfires** are now **\$880-million**

INSURANCE COMPANY MITIGATION EFFORTS

- TORONTO, May 7, 2024 /CNW/ - Intact Financial Corporation (TSX: **IFC**) is pleased to announce it has engaged with **Wildfire Defense Systems (WDS)** to launch a pilot project providing eligible customers in Alberta and British Columbia wildfire loss prevention and suppression services for their homes when threatened by active wildfires.

- **“Alberta and British Columbia personal property customers to benefit from enhanced wildfire loss prevention and suppression services and peace of mind.**
- **Pilot project** to help people and communities adapt to the impacts of climate change
- **Intact** has contracted with **WDS to deploy loss prevention and suppression services** to customers when their property is threatened by a **wildfire that is less than 5 kilometers away.”**

“Services may include but are not limited to:

- Removing materials from around the property that may fuel a fire, including firewood, propane tanks, furniture, and grass clippings.
- Covering exterior vents and closing exterior doors, windows, and garage doors to prevent embers from entering the home and igniting the interior.
- Setting up temporary sprinkler systems to increase humidity and lower temperatures.”

AISIX SOLUTIONS (FORMERLY MINERVA INTELLIGENCE)

AISIX WILDFIRE 2.0 CANADA

Key Features of Wildfire 2.0

- Risk Scoring
- Cumulative Probabilities
- Average Probabilities

AISIX Wildfire 2.0 provides probabilities of wildfire across Canada, offering a valuable tool for insurance professionals, real estate agents, and the public to assess their fire risk and understand how it is evolving due to climate change.

AISIX Wildfire Score for Canada

According To AISIX Solutions: “The Wildfire Score for Canada, powered by AISIX, is determined using AISIX’s specialized software developed with Burn-P3+. Burn P3+, also utilized by the Canadian wildfire service, predicts wildfire spread based on climate, topography, and vegetation variables. AISIX incorporates data and simulates multiple wildfire scenarios, integrating them to assess the likelihood of fire occurrence in specific locations or regions over 30-year period. “

AISIX Wildfire Risk Classification Score

According To AISIX Solutions: “To enhance the accuracy and transparency of the probabilities, we have implemented a classification system consisting of five distinct levels: 1 to 5. By assigning a higher number to a particular probability, we signify a greater likelihood of its occurrence. Conversely, assigning a lower number indicates a reduced likelihood or possibility of the event taking place. This categorization methodology ensures a clear understanding of the probabilities presented.”

Wildfire Risk Classification	
Wildfire risks are categorized according to 30 - years aggregate probability of occurrence, scored between 1 - 5, lowest to highest.	
% Probability, across 30 years	Score
> 26.0	5
5.8 - 26	4
0.6 - 5.8	3
0.3 - 0.6	2
<0.3	1

Please Note:

AISIX scores are probabilities, which means they are not certain. It’s important to be careful when understanding these scores. Remember that even if something is likely, it is not guaranteed. The opposite is also true. To understand more, please read AISIX disclaimers.

AISIX Wildfire Rating Methodology ¹¹



PROPERTY VALUATION ¹²

The Appraisal Institute of Canada has issued the following Guideline on Wildfires:

Appraisal Institute of Canada (2023) Wildfire Affected Properties Communique

If you are asked to complete an appraisal for wildfire-affected properties, the type of report will depend on the client and intended use including:

- Hypothetical “as if complete/repaired/remedied” value
- Cost to cure
- “As is” current value
- Retrospective value
- Property Condition Assessment



¹¹ <https://images.app.goo.gl/17FiaP2cDrkb9kb6>
¹² Appraisal Institute of Canada (2023) Wildfire Affected Properties Communique

6.0 FIGHTING WILDFIRES: WHAT HAVE WE LEARNED

6.1 WILDFIRE MITIGATION

- Wildland fires or wildfires can include unplanned fires (both natural and human-caused) and intentional burning and prescribed fires (as a part of fire management).
- How wildfires develop and spread depends on the complex interaction between ignition source(s), climate/weather, potential fuel(s), and geographic topography.
- At the wildland-urban interface, wildfires can lead to structural fires in the built environment.
- Wildfires contribute to the health and diversity of ecosystems and are an important part of the lifecycle of the natural environment.
- However, if they become too large to control it can create major health hazards and lead to disasters and death. In addition to health impacts wildfires can threaten industry, damage infrastructure and housing, and cause secondary impacts such as soil erosion, increased risk of landslides and flooding after fires.
- **Mitigation tools such as FireSmart can be very effective**

6.2 WILD FIREFIGHTERS

- Fighting Wildfires is Not a Part Time Job
- Require Better Wildfire Firefighter Training
- Better Wildfire Firefighter Renumeration
- Insurance for Wildfire Fighters and Volunteers
- Important Role of Volunteers ¹³
- A Canada Federal Emergency Management organization such as the US FEMA may be required.

6.3 WILDFIRE INTERFACE MAPPING

- Need for Detailed Wildfire Urban Interface Mapping
- AISIX (formerly MINERVA) has begun this process.

6.4 ROLES

- Role of Property Owners
- Important Role for Property Insurance Providers
 - Note the proactive role of some Insurance Companies
- Important Role for Lenders
 - Lenders have placed moratoriums on lending in areas impacted by wildfires and flooding.

Halifax Firefighters Ill-Prepared for Wildfire: Report ¹⁴

- Municipal firefighters in Halifax who battled a devastating wildfire over several weeks last spring in the city's wooded suburbs **didn't have adequate training, experience or equipment**, says a new report produced by Halifax Regional Fire & Emergency.
- Unlike in Europe, municipal firefighters in Canada don't have in-

depth [wildland](#) firefighting training; they are trained to respond to structure fires, and they also use different protective gear and equipment, he said.

- “We’re at the intersection of risk,” said Mr. McMullen, whose organization represents 3,200 municipal fire departments and 126,000 firefighters. “Our communities are growing beyond what our natural boundaries have been and we’re more so now getting utilized in what our wildland firefighters do all the time.”
- The number one risk in wildland firefighting is **downed and falling trees**, said Mr. McMullen. Calgary firefighter [Morgan Kitchen](#) died earlier this month after a tree fell on him as he worked on the fire in Jasper, which [destroyed 30 per cent](#) of the resort town.

Key Role of Property Owners and Volunteers ¹⁵

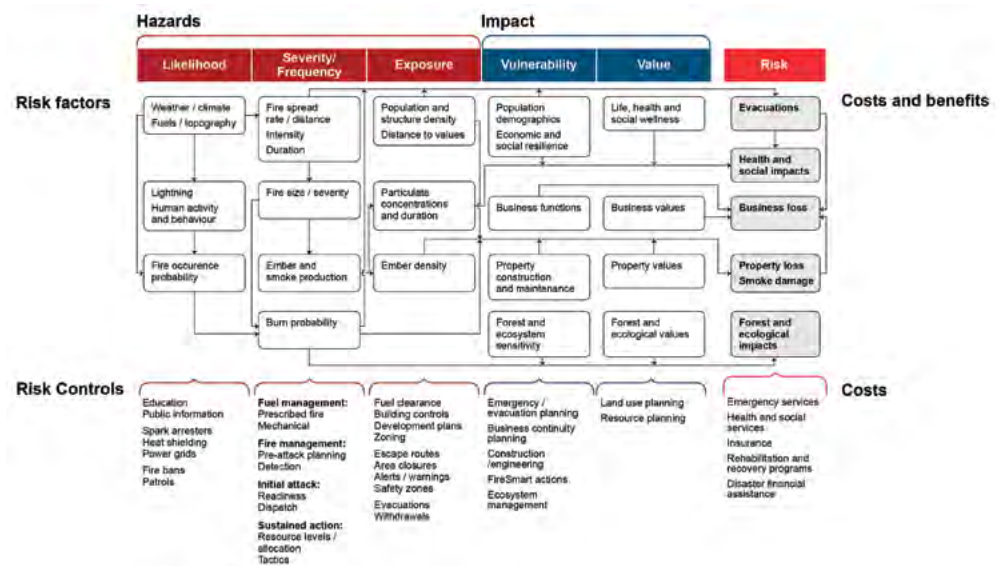
Rural residents and First Nations have a role to play in wildland firefighting. In Australia these individuals have been able to assist professional wildfire fighters because they are close to the fires themselves, may have equipment that can be utilized immediately and have a stake because their properties and homes are impacted. Training, communication capacity and the provision of insurance is a key to coordination.

6.5 WILDFIRE RISK MODELING ¹⁶

We require better prediction tools to predict who and what is at risk and where wildland firefighting resources are required

Understanding wildland fire risk – who and what is at risk?

- Wildland fire risk is measured by considering the likelihood a fire will occur at a given location, combined with the impact the fire would have if it occurred. Likelihood varies and depends on unique combinations of fuels, weather, topography, and human activity. Impacts can be both positive and negative; fire can have detrimental effects on some resources but have positive effects on others. The complexity and multiple factors required to arrive at an accurate portrait of fire risk are illustrated below.



¹³ MacDonald, Nancy and Woo, Andrea (2023). Why Some B.C. Residents Stayed to Fight Wildfires Amid Resource Shortage, Defying Evacuation Orders, *Globe and Mail*, August 25, 2023
¹⁴ Lindsay Jones (2024) Halifax's Firefighters Ill-prepared and Equipped for Wildfires: Report, *Globe and Mail* August 22, 2024
¹⁵ Woo, Andrea (2023) Australia's volunteer 'firies' offer lessons on taming wildfires in Canada, *Globe and Mail*, June 17, 2023
¹⁶ Government of Canada (2023) National Risk Profile: A National Emergency Preparedness and Awareness Tool First Public Report – May 2023

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MORE ON NORTHERN ACCESS: AIRSHIPS AND THE (POSSIBLE) RISE OF NANOTUBES

By Mike O'Dwyer

"High resolution carbon nanotube" by ghutchis is licensed under CC BY 2.0.

In recent issues of *The Land Economist*, we have explored Northern Ontario's Ring of Fire and how lack of access has stymied development of its precious resources for many years. We investigated potential solutions to the access/transportation conundrum to the Ring of Fire, specifically, and to Canada's North, more generally, including permanent road construction, ice roads, drones and airships.

We looked at each of these access/transportation options through the lens of which would be of most benefit to Indigenous communities and to fiscally and environmentally responsible resources development in the far north.

And we also looked at preserving and improving Canada's Arctic sovereignty: Is there a viable transportation/surveillance solution available for that, as well?

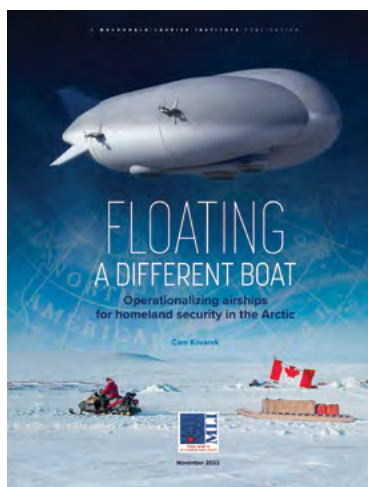
With insights provided by experts like [Professor Barry Prentice](#) (Asper School of Business, University of Manitoba), we focused on airships as an innovative and versatile solution to effective and efficient access/transportation to remote areas across northern Canada.

That led us to other airships believers like [Cam Kovarek](#) and through her, to Commander Norm Norman and others – and into some intriguing new possibilities for airship development featuring hydrogen and carbon nanotubes.

Here we go ...

GETTING A NET-ZERO LIFT

In the Spring 2024 issue of *The Land Economist*, we included in our article "Billions in Buried Treasure In Ontario's North" details of a published paper called "*Floating a Different Boat – Operationalizing airships for homeland security in the Arctic*" by [Cam Kovarek](#), a Lieutenant commander in the United States Navy. During my conversations with Cam about her case for various airship uses in the North, she introduced me to Canadian Armed Forces Commander Norm Normand, also a strong airships supporter.



Of course, I got in touch with Norm – and this is how that went ...

Commander Normand wrote his Master of Defence thesis at the Canadian Forces College on the use of airships for logistical sustainment of the arctic so he knows a bunch about airships and what keeps them in the air.

In a recent story on the use of cargo airships in northern Canada, I wrote:

Hydrogen is extracted from water and is much cheaper. It is also lighter than helium and more buoyant, meaning airships could lift heavier cargo loads.

Norm says that while that is true, hydrogen can also be made without water: "Hydrogen can be extracted from water but it also can be made from natural gas."

He's right, of course: Hydrogen can be derived from natural gas. In fact, natural gas is the most widely used technology for hydrogen production and is sometimes referred to as 'dirty' hydrogen because the extraction process produces enormous amounts of CO2.

But the natural gas option may soon be the best from an eco-environmental perspective when a plant in Edmonton comes onstream in 2025.

[Air Products](#), a leading supplier of essential industrial gasses is nearing completion of a net-zero hydrogen production and liquefaction facility in Edmonton that uses natural gas as its feedstock.

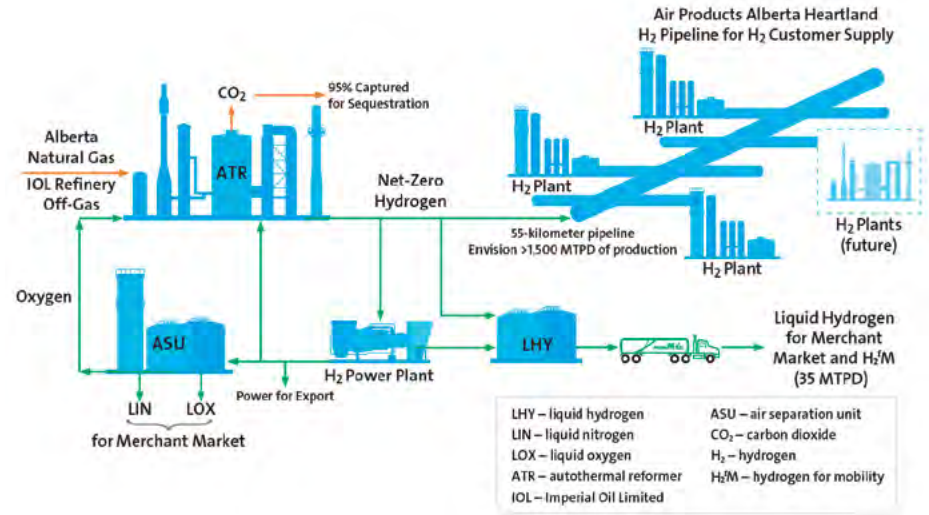
The net-zero facility incorporates advanced technology and an innovative design that will capture 95 per cent of carbon dioxide produced from the natural gas feedstock and store it underground with the remaining 5 per cent offset via hydrogen-fuelled electricity.

Hydrogen for powering fuel cells in vehicles, buildings and other infrastructure is said to be key to helping Canada achieve its goal of zero emissions by 2050.

"The hydrogen produced at the Air Products plant could also be used as both a lifting gas and propulsive fuel for airships," says Norm.

Transport Canada has not yet approved hydrogen for use in airships although Norm and other experts have argued that it is actually safer to use as a lifting gas than when it's transported as compressed gas in a tank on a truck or ship. But *when* hydrogen is approved for airships, Norm says airships lifted and fuelled by hydrogen derived from Air Products novel technology could be an important Northern Ontario transportation solution.

"As an airship travels a circuit making deliveries to northern communities it could also offload some of the hydrogen used to achieve lift as an energy source for those communities," he says.



This diagram found on Air Products website shows the process of hydrogen production and carbon dioxide capture.

Air Products new Edmonton facility will be the largest net-zero hydrogen complex in the world.

Today, most industrial-scale hydrogen is produced using Steam Methane Reforming (SMR) technology. If an SMR facility is equipped with carbon capture technology, about 55 per cent of carbon emissions are captured. The new Air Products facility uses advanced Auto-Thermal Reforming (ATR) that enables the capture of 95 per cent of carbon emissions for permanent sequestration underground.



Commander Norm Norman.

Commander Norm Norman, MBA, PCSC, CD is an active service Naval Logistician/ Ammunitions Officer.

In addition to his CAF duties, Norm is the founder and president of the consulting firm, FynnLink Group Inc., specializing in promoting the private sector development of airships.

HYDROGEN AND CARBON = A NEW ECONOMY FOR CANADA NORTH

Norm introduced me to fellow airship enthusiast, [David Prum](#), who strongly believes that innovative uses for hydrogen and carbon could deliver a new economy for Canada's North.

David's ideas are novel – and, at this point, impossible to achieve without fundamental changes to government regulations regarding the use of hydrogen as a lifting gas for airships and BIG dollar investments by unidentified investors. And even if those stars do align, it would realistically take many years to reach the goals David outlines here.

Still, what David postulates is more than worthy of debate, discussion and perhaps a commitment to investment by companies or individuals willing to roll the dice and maybe reshape the future of Northern Canada.



David Prum.

David Prum's background is as singular as his airship/carbon nanotubes vision. He dropped out of Harvard to crew on a charter sailing ship touring the Mediterranean and Caribbean for a couple of years, returning to Harvard to graduate with a degree in English literature and then attempting to break into show business as a theatre actor in New York and Boston.

Not too much success there, so he traded show biz for 30 years in Boston as a private investigator, specializing in criminal defense.

His airship attraction began when he met and was employed by [John Goelet](#), an investor in [experimental airship technology](#) (and an uber wealthy renaissance man - now deceased).

In 2015, David formed [LTA Aerostructures Canada](#) to build heavylift cargo airships with partners Greg Opas, [Ron Hochstetler](#) and Logan Kapitan. That company closed in 2016.

He recently formed AeroStrut LLC intended to bring his airships/nanotubes dreams to reality.

According to David Prum:

Three fundamental problems obstruct the development of the Canadian North: the high cost of transportation, the high cost of construction and the high cost of energy.

An integrated solution to these challenges can be realized in a relatively short period of time - 5 to 10 years - by creating a new energy and logistical system based on hydrogen.

We can accelerate the sustainable development of the Canadian north and make serious progress toward zero carbon energy worldwide, by focusing on hydrogen as an energy source and on carbon to replace conventional building materials.

The Canadian military can play an important role in developing several key technologies and Canadian national security will also be enhanced by creating a self-contained energy and transportation system based on hydrogen in the North.

Heavylift cargo airships have long been studied as a logistical solution in the North where there are no roads and few airfields. Cargo airships cannot succeed until they can be built more economically and lifted with hydrogen.

Helium is simply too expensive to be used as a lifting gas for a cargo airship industry. Plentiful affordable hydrogen will be part of making cargo airships practical.

Hydrogen can be used as a fuel as well as a lifting gas. In an effective cargo airship system, every ton of cargo will be delivered with an equivalent "lifting" ton of hydrogen to be used for energy at the delivery site.

This will solve the airship "ballasting problem" which has been an obstacle to cargo airship operations for over one hundred years. A system that delivers affordable hydrogen energy with every ton of cargo will revolutionize the economy of the North.

A necessary first step will be to overturn the obsolete prohibitions against hydrogen as a lifting gas. Hydrogen is safe and can be made safer. The Canadian defense establishment will

be instrumental in making this change because of its ability to experiment outside the confines of commercial regulations that now prohibit hydrogen as an airship lifting gas.

The Canadian North represents a perfect laboratory for the development of a hydrogen-based economy. The solutions I describe are economically feasible in the North today and can prove themselves first by supporting the economically struggling communities in the Canadian north.

The immediate goal of the plan outlined here will be to boost and support the economy and living standards of the Indigenous communities. The Indigenous communities and businesses will be at the center of every stage of this plan.

Ultimately, the great reward for developing a hydrogen-based energy system in Canada will come from gaining access to billions of dollars worth of mineral wealth, now stranded due to the lack of roads and conventional modes of transportation in the North. The long-term well-being of the Indigenous communities in Canada will depend on their obtaining their due share of the mineral wealth from tribal lands that is now inaccessible.

Access to Canadian mineral assets depends on optimizing the value of one of those assets - natural gas.

Canada has vast natural gas resources that can be readily "cracked" into hydrogen and carbon. Today that carbon is being treated as a waste product. It will ultimately become more valuable than the hydrogen itself.

Hydrogen is a rapidly growing part of the future energy mix along with solar, wind, hydro and geothermal energy.

HYDROGEN PRODUCTION METHODS

Hydrogen is typically referred to by colours that indicate its origin.

Colour	Production Source
Green	Either: Electrolyzers used to split water into hydrogen and oxygen Or: Hydrogen produced from low-emission sources such as biomass
Turquoise	Thermal splitting of methane - hydrogen is separated from natural gas and the waste carbon is processed into advanced materials such as nanotubes
Blue	Derived from natural gas through a process that separates hydrogen from carbon and then sequesters that carbon underground as carbon dioxide
Grey	Fossil hydrocarbons, mainly steam reforming of natural gas - currently the most widely used technology for hydrogen production
Brown/Black	Fossil hydrocarbons: brown (lignite) or black coal
Red/Pink/Purple	Nuclear power
Yellow	Sometimes understood to mean solar photovoltaics - used to carry out electrolysis instead of electrical energy
Gold/White	Hydrogen that occurs naturally deep within the Earth's crust - elemental hydrogen is scarce

Adapted from Wikipedia: [Hydrogen Production](#)

There is four times as much carbon than hydrogen in any volume of natural gas. Instead of treating that carbon as a waste byproduct to be sequestered at great expense, that carbon can be used for structure and shelter, creating greater value.

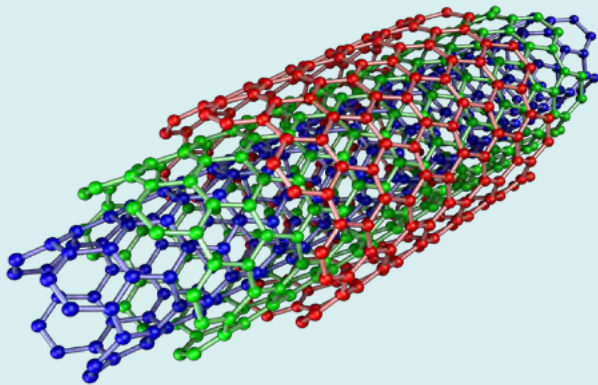
This development promises to address the global challenge of climate change by transforming the fossil fuel industry into a carbon and hydrogen industry. Eventually, this will happen simply because the carbon will prove to be more valuable than the energy content of the fossil fuels. This transition can be dramatically accelerated in the Canadian North.

Air Products, the largest producer of hydrogen in the world, is currently building a plant in Edmonton, Alberta to produce 4 tons of blue hydrogen per hour.

The current Air Products plan is to pump the waste carbon dioxide deep underground into stable geological formations. The cost of this sequestration process is considerable. Geological formations suitable for carbon dioxide sequestration are not plentiful. There are many locations where hydrogen can be generated that are not located close to the appropriate geology for sequestering carbon underground.

CARBON NANOTUBES AND NORTHERN DEVELOPMENT

An alternative plan for sequestering the waste carbon is to process the carbon by pyrolysis into ultra-strong ultra-light carbon nanotube materials. Carbon nanotubes are a stable solid fiber and can easily be stored above ground while a market for the material is developed.



"Multi-walled Carbon Nanotube" by Eric Wieser is licensed under CC BY-SA 3.0.

Eventually, carbon nanotube materials will be more valuable than the natural gas or the hydrogen, from which they are derived.

The additional capital cost of equipping a blue hydrogen plant with the equipment to produce carbon nanotube materials is reasonable, in the range of 5 per cent additional cost.

Carbon nanotubes are an amazingly versatile material, lighter and stronger than titanium. Carbon nanotubes can replace virtually every material we now use in the construction industry.

Carbon nanotube materials are too expensive today to be deployed at any scale. The best carbon nanotubes cost \$5,000 a kilo, at present. By comparison, conventional carbon fiber costs about \$40 a kilo.

The cost of carbon nanotubes depends on the scale of production. At the scale of the Air Products plant in Edmonton, the potential volume of waste carbon will make possible a reduction in the cost of carbon nanotubes down to \$1 a kilo or less.

FOR CONSTRUCTION ...

At a \$1 a kilo, carbon nanotubes materials will completely revolutionize the built environment - replacing wood, steel, concrete, masonry, and even glass.

This can happen first in the Canadian north where the demand for durable lightweight, super-insulated, easily transported housing is extremely urgent.

Prefabricated, lightweight, super-insulated structures made from carbon nanotubes can become an affordable solution for shelter of all sorts in the far north.

Globally, even if we solve the challenge to produce zero carbon energy for transportation, heating and cooling; we will not solve the challenge of climate change until we largely eliminate the carbon footprint of construction. This can happen in the Canadian north first and then grow globally.

The carbon footprint of conventional construction materials (now 30% of all carbon emissions) can be reduced nearly to zero. Housing manufacturers will ultimately make the most valuable large-scale use of carbon nanotube materials. A team lead by Professor Mark Goulthorpe of MIT is prototyping The Carbon House to automate the manufacture of housing and structures using carbon nanotubes materials.

FOR AIRSHIPS ...

For decades airships have been studied as a solution to cargo transportation in the north where the lack of roads and other means of cargo transportation are expensive and unreliable. Airship technology has been rapidly advancing and is now ready for deployment.



LockheedMartin P-79] by AMIRAAZAMI6, CC BY-SA 4.0 via Wikimedia Commons.

Professor Barry Prentice has calculated that airships capable of carrying cargo payloads of 30 tons or more can replace other inadequate forms of cargo transportation in the north.

At present the high cost of building airframes for cargo airships is obstructing their development.

The most expensive component of any airship is its airframe. Using nanotubes for airframe construction will dramatically reduce the cost and also the quality and resilience of airship airframes.

At the right price point, carbon nanotubes can also be used to weave ultra-strong ultra-light AeroStrut™ structures to make inexpensive super-resilient airframes for heavylift airships, dramatically reducing the overall cost of airships.

Unmanned robotic airships, piloted and operated remotely by air freight companies (many of them Indigenous) will deliver housing and cargo throughout the arctic at a fraction of the current cost of cargo delivery.

Airships can use hydrogen as a lifting gas as well as a fuel. They can also be used to deliver hydrogen as a fuel for local energy needs, replacing the awkward and expensive distribution of diesel fuels.

Using hydrogen as a lifting gas will solve the ballasting and load transfer problems that have held up the development of cargo airships.

When every ton of freight can be delivered with an equivalent amount of hydrogen to provide clean zero-carbon energy at the delivery site, we will solve both the problem of affordable cargo delivery and the problem of energy distribution.

Airships will initially prove themselves by delivering cargo to remote settlements in the far north but will soon be able to support remote mining operations in areas where roads are too expensive and fragile to be reliable.

When the mining industry adopts a hydrogen airship model of operations, they will be able to access the most valuable minerals wherever they are in the most environmentally sound way. Most of environmental disruption of mining operations is caused by roads which will no longer be needed.

IN SUPPORT OF A HYDROGEN SOLUTION

A major sticking point in the economical development of airships as effective Northern cargo haulers is the Canadian government's reluctance to change the regulations regarding the use of hydrogen as a lifting gas for airships. Here are some recent developments that may help change their bureaucratic minds ...

[UK-based Airlander Air Vehicles Ltd. is an early adopter of hydrogen using green technology.](#)

[World's First Hydrogen-Powered Superyacht Embodies Eco-Conscious Luxury](#)

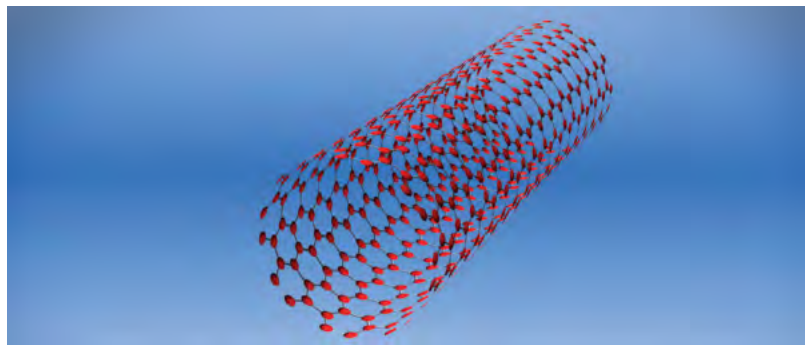
[Global Demand For Helium To Nearly Double By 2035](#)

[Toyota's portable hydrogen cartridges look like giant AA batteries and could spell the end of lengthy EV charging](#)

WHAT THE HECK ARE NANOTUBES?

Before diving into research for this story, I had no idea what nanotubes are. Maybe you're like me -- a nanotube newbie. Probably not - you're likely much more well-informed on esoteric stuff like this than I am. Either way, here's a nanotube primer for you (and me).

A **nanotube** is a nanoscale material with a tube-like structure and can be made from various materials including carbon, boron nitride and others.



'A Carbon Nanotube' by IBM Research is licensed under CC BY-ND 2.0

Carbon nanotubes (CNTs) are the most well-known type. They are composed of carbon atoms arranged in a cylindrical shape. Properties include high strength, electrical conductivity and thermal conductivity making them useful in a wide range of applications:

- **Electronics:** Used in transistors, sensors, and other electronic components due to their excellent electrical properties.
- **Materials Science:** Incorporated into composites to enhance strength and durability without adding much weight.
- **Medicine:** Explored for drug delivery systems and as components in medical devices due to their biocompatibility.
- **Energy:** Used in batteries and supercapacitors to improve energy storage and efficiency.

However, large-scale production of high-quality CNTs is still challenging and expensive. And there are concerns about the potential health impacts of CNTs, which require further research.

Adapted from https://en.wikipedia.org/wiki/Carbon_nanotube

Northern Transportation Symposium

Thompson, Manitoba
September 5-6, 2024

The two-day event brought a number of transportation sectors together to explore opportunities to service Northern Canada's remote communities. Among the fifteen speakers who examined the effects of climate change on Northern transportation, Indigenous economic reconciliation and technological innovation was Dr. Barry Prentice, familiar to our readers from previous articles on Northern access options, especially to the Ring of Fire. Dr. Prentice spoke of establishing a cold weather testing and research centre in Thompson to support airships hauling cargo to the Arctic, for mine exploration and ore hauling and for Canadian military airship surveillance in the far North.



Dr. Barry Prentice.

Other transportation options were discussed, including drones, EVs, intermodal models and ice roads as well as the effects of improved transportation on the development of Indigenous communities.

A video digest of Symposium speakers will be posted in November on www.thompsonchamber.ca.

LITHIUM UPDATE SIGNALS DOWNTICK?

As we reported in the Spring 2024 issue of The Land Economist, although lithium is not apparently abundant in the Ring of Fire, it is currently being mined in various Northern Ontario locations with more lithium mines and refining plants on the way.

In recent years, lithium has become a hot commodity, in high demand for EV batteries among many other uses. But that may be changing as outlined in these recent reports:

[Australia's lithium mining boom hit by sagging prices](#)

[Why global lithium prices are tumbling](#)

On the other hand:

[U.S. Races Towards Lithium Independence with Ambitious Mining Projects](#)

How all this will affect lithium mining and refining activity in Northern Ontario remains to be seen. 🔄



AOLE News!



New AOLE Recruiting Brochure

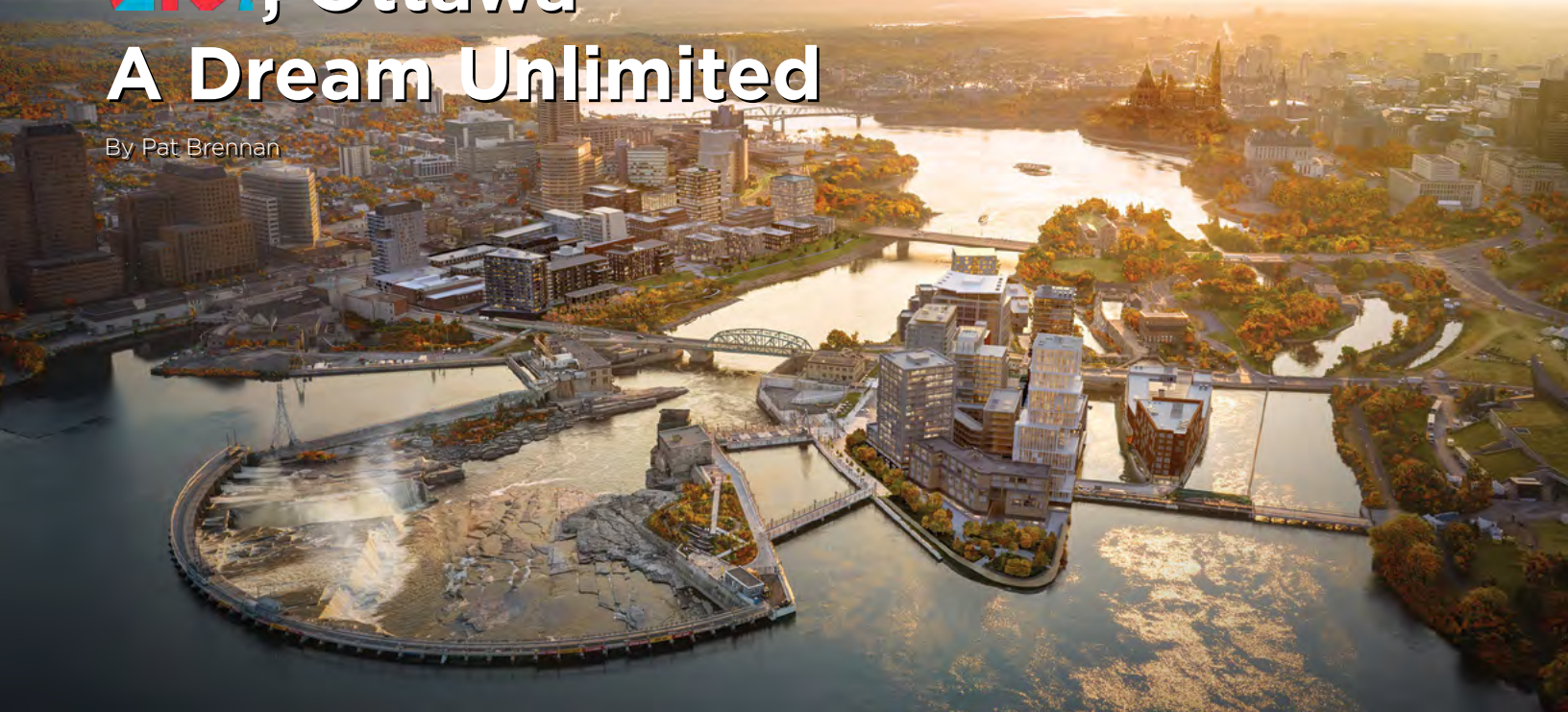
The Marketing Committee recently commissioned a new recruitment brochure to attract new members which has now been printed and will be distributed to target companies and organizations. We are proud to show it to you below.



zibi, Ottawa

A Dream Unlimited

By Pat Brennan



Aerial view of Zibi looking east at dawn.

The [Chaudière Falls](#) waterfall on the Ottawa River midway between the city of Ottawa and the city of Gatineau (Hull) has been flowing steadily for eons, but now you can actually see it happening.

For nearly two hundred years the falls was hidden behind lumber mills, pulp and paper mills, hydro power plants and high steel-mesh fences.

But most of those obstructions are now gone and everyone has been enjoying the new view.

The islands just downstream from the falls will be the home of new condo residences, offices, retail stores, restaurants, theatres and museums. It will be a vibrant new community to replace the old industrial neighbourhood.

And it'll be called Zibi - the Algonquin word for "river."



Chaudière Falls lookout. Photo by Pat Brennan.



Chaudière Falls. Photo by Pat Brennan.

The Toronto-based firm [Dream Unlimited](#) plans to grow [Zibi](#) into North America's most environmentally-conscious community with zero emissions of carbon greenhouse gases from its structures. It'll be Canada's first member of the One Planet Living campaign to create communities where happy and healthy residents can prosper, along with nature, wildlife and successful companies.

Zibi will be home to 6,000 people on 34 acres in the middle of the river as well as on its Ontario and Quebec shorelines.

[One Planet Living](#) strives to create communities guided by 10 principals, as established by the United Nations in 2015.



Illustration of all of the Zibi districts.

Health and happiness: Encouraging active, social, meaningful lives to promote good health and wellbeing.

Equity and local economy: Creating safe, equitable places to live and work which support local prosperity and international fair trade.

Culture and community: Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living.

Land and nature: Protecting and restoring land for the benefit of people and wildlife.

Sustainable water: Using water efficiently, protecting local water resources and reducing flooding and drought.

Local and sustainable food: Promoting sustainable, humane farming and healthy diets high in local, seasonal organic food and vegetable protein.

Materials and products: Using materials from sustainable sources and promoting products that help people reduce consumption.

Travel and transport: Reducing the need to travel, encouraging walking, cycling and low carbon transport.

Zero waste: Reducing consumption, reusing and recycling to achieve zero waste and zero pollution.

Zero carbon energy: Making buildings and manufacturing energy-efficient and supplying all energy with renewables.



*Top Image: Overlooking Oshki Wābowāyan Park towards Parliament.
Bottom Image: Balcony View overlooking Chaudière Falls.*

That's why Zibi is laced with bicycle paths and the paths pass among elevated garden boxes where the residents grow much of their own fruits, vegetables and flowers.



Zibi jogging and bike trail. Photos by Pat Brennan.

Many of the brick buildings from the river's industrial era are still standing, but are now restaurants, meeting lounges and offices.



Renderings of eateries and shops in the atrium.

They and the new buildings at Zibi are heated by toilet paper - or at least the process of making toilet paper.



Rendering of Restaurant Patio on Chaudière East.

Kruger Tissues - Canada's largest manufacturer of tissues and paper products - such as Scotties and Cashmere - has a pulp and paper mill just downstream from Zibi. It draws water out of the Ottawa River and heats it up to 42°C in the process of making its paper products. It then lets that hot water sit in a cooling pond until it is cool enough to dump back in the river.

Zibi engineers persuaded Kruger to install heat exchangers at its mill so its industrial effluent can transfer its heat to another water flow that heads a short distance up stream to Zibi's energy centre in the basement of a new 15-storey condo tower. That water fuels heat pumps that heat condo residences and hot-water heaters on the Quebec side.

Electricity is then used to heat the water before it gets sent over to the Ontario side via pipes under the Booth Street bridge that connects the two provinces to heat buildings on that shore.

Electricity costs are significantly lower in Quebec than in Ontario. In summer the cool waters of the fast flowing Ottawa River take over the piping system to cool residences with air conditioning.

Re-conditioning the industrial buildings left standing is part of Zibi's philosophy, recognizing and preserving the area's natural and cultural history.

There's a new monument at Zibi that marks the 100th anniversary this year of [Les Allumettieres](#). That's the name for the 100s of women who worked in the [E.B Eddy](#) mill in Gatineau and made matches. They went out on strike in 1924 demanding better wages and healthier working conditions. The women worked with phosphorus, an unhealthy chemical. It was the start of the women's labour movement in Canada.

Vancouver-based [Ledcor](#) - one of the largest construction firms in North America is the general contractor at Zibi.

Dream Unlimited is the developer at Zibi. The Toronto-based development firm, headed by [Michal J. Cooper](#), restored the 184-year-old Distillery District in 2005 in downtown Toronto, is developing the [Canary District](#), a 35-acre high-rise community beside the Don River that was launched as the athletes' village when Toronto hosted the Pan American Games in 2015. Dream Unlimited is also creating [Brightwater](#), a 72-acre waterfront community at Port Credit where an oil refinery once stood. 🐾

Annual General Meeting Highlights

The Association's Annual General Meeting was held June 17th, 2024 at the Royal Canadian Yacht Club, President Stefan Krzeczunowicz, presided. Stefan opened the meeting by saying "I also want to take a moment to recognize your Board of Directors. The Board is all volunteers, and I am privileged to serve with such a collegial and committed team." He then introduced each Board member and asked the audience to "please join me in thanking your Board." He added "I want also to thank Clarence Poirier, who stepped down from the Board earlier this year after several years' service. Clarence was a wonderful sounding board for us, particularly on marketing matters where he made many meaningful improvements to AOLE."

Treasurer's Report

Stefan then gave his Treasurer's Report and remarked that AOLE "continues to be in very good financial health. We ran a \$5,716 surplus for the 2022-2023 fiscal year, leaving us with a fund balance of \$25,524 as of March 31, 2023. Members should note that, after considerable debate, we increased our annual membership fees by 18% this year—the first fee increase of any kind in more than a decade in order to keep pace with rising costs. However, members can be assured that we continue to operate on a balanced budget and are committed to continuing to charge affordable membership dues, while delivering high quality speaker events and our magazine on a regular basis"

Stefan reported that AOLE now has 240 active members which represents a 10% increase in membership since last year.

Board Changes

Stefan concluded his remarks by saying "It's been my great pleasure to serve as President of AOLE for the past three years and I look forward to continuing to work with the Board as Treasurer

Christina Kalt was elected as incoming President. Phillip Smith was elected as Executive Vice President, Robyn Brown becomes Program Chair and Matthew Cory is now Internet Chair. Andréa Callà, a previous Past President remains on the Board as a Member at Large. Prakash Venkat joins the Board as a Member at Large.

Christina then addressed the meeting by introducing herself and thanking Stefan for all his contributions to AOLE in his 3 years of service as President.

Introduction of Lisa Raitt

Stefan introduced Keynote Speaker Lisa Raitt with these remarks "We have a very special guest speaker tonight. A native Nova Scotian, with degrees in science, chemistry, and law, she came to prominence in the early 2000s as the CEO of the Toronto Port Authority where she was instrumental in revitalizing the Marine Passenger Terminal and the Billy Bishop Airport.

From there she ran for political office, serving for more than a decade as the Conservative Member of Parliament for Halton and, subsequently, Milton. She rose to high political office in the Harper Government as Minister of Natural Resources, Minister of Labour, and Minister of Transport, and in opposition as the Shadow Minister of Finance, Deputy Leader of the Conservative Party, and Deputy Leader of the Opposition.

Since leaving politics in 2019 she has worked as Vice-Chair of Global Investment Banking at CIBC and has sat on a number of prominent boards and committees. Of note is her role as Co-Chair of the Canadian Coalition for a Better Future, an organization that works across business, labour and civil society to achieve a more inclusive, sustainable and prosperous Canada.

In 2023 she co-chaired the Task Force for Housing and Climate, whose Blueprint for More and Better Housing was released in March. The report includes 10 recommendations and 140 individual policy actions across all orders of government that address Canada's housing crisis while also focusing on how to provide Canadians with homes fit for a climate crisis. Its findings have a direct bearing on the work of all land economists.

This unique career belongs to The Honourable Lisa Raitt, whom we're very pleased to have speak to us this evening. Lisa you are most welcome to our Association. We're excited to hear your perspective on housing as well as any other topic you'd like to talk about. I also hope you'll also leave us some time for questions when you're done because I suspect there will be a few.

Ladies and gentlemen, please give a warm welcome to Lisa Raitt!"

Summary of Lisa Raitt's Remarks

Lisa Raitt according to those in attendance began her talk by walking up to the microphone with a copy of the Spring issue of The Land Economist magazine in her hand. Copies of the magazine were placed at every place setting as a gift for all those in attendance at the AGM. The cover of the issue had a photo of the Canadian Parliament's Centre Block Rotunda with a crew of women stonemasons posing inside. Inside the magazine the articles included stories about Parliament's restoration work, Ontario's untapped critical minerals and the Don River Mouth naturalization/ Port lands flood protection project. Ms Raitt held up the magazine and said it touched on her experience so much—as a Member of Parliament in Ottawa, and as counsel to the Toronto Port Authority.

She then segued into her work with the housing and climate task forces, and pointed out that these were bipartisan initiatives (she's co-chair of the latter with Anne McLellan, ex-Liberal MP for Edmonton). She said housing should be a priority for all levels of government across the country and is a priority for young voters.

She shared her concerns about the American election, saying that this would be "the most consequential election of any kind in Canadian history (i.e. including Canadian elections)". She was very pessimistic about the consequences for Canada of a Trump victory. She had great insights about the appeal of demagogic politicians, who seem to be very able to speak directly to people, and much better than "traditional" politicians. She talked about how we need to be aware of this phenomenon and to be able to contest demagogues on their own terms. 🐦



Hon. Lisa Raitt, PC
Vice-Chair Global Investment Banking at CIBC
Capital Markets

Leadership Team Profiles



Christina Kalt, President, MBA, OAA, PMP, PLE, MRAIC

Our President, Christina, is an experienced executive who has helped lead the planning, design and construction of more than \$8 billion of infrastructure projects across Canada. Based in Toronto, she is a registered architect in the Province of Ontario. She joined the Association of Ontario Land Economists in 2015 and as a Vice President for the past three years, worked alongside our Past President, Mr. Stefan Krzeczunowicz.

As Program Chair, Christina has been integral to the many events enjoyed by members over the past five years. In addition to her membership with the Association, she holds membership with the Project Management Institute and the Royal Architectural Institute of Canada. She also holds a Master of Business Administration (MBA) from the Rotman School of Management at the University of Toronto, as well as a Master of Architecture and an Honours Bachelor of Architectural Studies from the University of Waterloo.



Philip Smith, Executive Vice-President, FRICS, AACI, P. App, PLE

Philip recently re-joined Colliers International as Managing Director, Ontario in the Valuation and Advisory Services division based in the downtown Toronto office. Philip is a Fellow of the Royal Institution of Chartered Surveyors, an Accredited Appraiser and a Professional Land Economist. Philip has over 38 years experience in the commercial real estate market and has been involved in the leasing, management, sale, acquisition, financial analysis, strategic planning and valuation of a variety of assets in real estate markets across Canada, the U.S. and the Caribbean. He has completed numerous valuations and market studies for clients across Canada. In addition, he has also developed and coordinated real estate strategies for a wide variety of corporate, government and non-profit clients.

In his previous role at Altus Group, Philip was an Executive Vice President in the Research, Valuation and Advisory division where he was responsible for national operations and the public sector services team based in Toronto. Prior to this he had held

senior positions at Cushman & Wakefield, Colliers International and Richard Ellis (Canada) Inc.

Philip has previously served in several different volunteer capacities over many years at the Royal Institution of Chartered Surveyors including Chapter Chair for Ontario Region, Ontario Region board member, Development Series Committee Chair, National Board Member and Continuing Professional Development Coordinator. Philip also serves on the national Work Product Review committee for the Appraisal Institute of Canada. Philip is also a member of the International Right of Way Association, the Ontario Expropriation Association and the National Association of Industrial and Office Parks. He also holds an Ontario real estate broker's license and is a member of the Toronto Real Estate Board. He also previously volunteered part time at the Oakville Trafalgar Memorial Hospital. Philip is looking forward to making a meaningful contribution to the AOLE and its members in his role on the AOLE board and was already involved in coordinating the recent by-law review and update for ONCA compliance.

New Board Member



Prakash Venkat, Member at Large, AACI, PLE

Prakash leverages more than 20 years of real estate valuation experience in assisting clients on appraisals, appraisal review, and valuation policy and procedures. His focus areas include litigation support, M&A, financial reporting, tax planning, lease analysis and portfolio quality review.

Prakash has extensive experience valuing and advising clients on a wide range of asset classes, including retail, office, industrial, multifamily,

entertainment properties in addition to vacant and development lands. As a land economist, he has advised clients on diverse matters, including highest and best use analysis; pro forma development; impact of environmental, social and governance (ESG) on real estate valuations; benchmarking valuation policies and procedures; and automation of real estate portfolio valuation.

AOLE Board

2024-25

President

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Past President & Treasurer

Stefan Krzeczunowicz
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Colliers International
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Vice President & Journal Chair

CRU Communications
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Secretary & Nominations Chair

Bonnie Bowerman
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Registrar & Membership Chair

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Marketing Chair

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Legislative Chair

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Brad Wright

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AOLE's Annual General Meeting At the Royal Canadian Yacht Club on June 17 2024

Photos by Rowena Moyes



AOLE Board Directors, members and guests arrive at the Royal Canadian Yacht Club.



Michael Cane, Gary Muller, Stefan Krzeczunowicz, John McDermott.



Lis Blackburn, Michael Cane, Ian Ellingham.



Peter Thoma, Shawn Donahue, Philip Smith.



Peter McCallion, Ian Heerdegen, Jill Heerdegen.



Peter Norman, Andy Manahan, Michael de Lint.



Ed Sajecki, Stefan Krzczunowicz, Robyn Brown, Bonnie Bowerman, Michael Cane, Christina Kalt, Matthew Cory, Andrea Callà, John Blackburn, Andy Manahan, Philip Smith



Conrad Kim, Kevin Bialczak, Margot Hayward, Francisco Cordero, Matt Heather



John Blackburn, Rosanna Bullock, Jameson Chee-Hing



Stefan Krzczunowicz, John Blackburn



Bonnie Bowerman, John Glen



Thom Hunt, Mara Samardzic



Hon. Lisa Raitt, Stefan Krzczunowicz, Prakash Venkat, Ingrid Robinson, Conrad Kim, Robyn Brown



Leslie Navis, John Glen, Philip Smith, Changming Guo



Nick McDonald, Jameson Chee-Hing, Thom Hunt, Brian Bridgeman, Matthew Cory, Gary Muller, Larissa Klepatch



Lorie Cane, Michael Cane, Ian Ellingham, Ian Heerdegen, Jill Heerdegen, Rosanna Bullock, Lis Blackburn, John Blackburn.



seated: Josh MacLeod, Margot Hayward, Kevin Bialczak, Francisco Cordero, Nick Michael. Standing: John McDermott, Andy Manahan, Peter Norman.



Kari Norman, Christopher Balette, John Hughes, Russell Mathew, Mara Samardzic, Matt Heather, Jack Neal, Margie Carlson.



Cosimo Casale, Ian Brown, Ed Sajecki, Mary Ellen Bench, PeterThoma, Bohan Li, Shawn Donahue, Mimi Ward, Andréa Callà.



Hon. Lisa Raitt.



Hon. Lisa Raitt, keynote speech.



Christina Kalt, Hon. Lisa Raitt, Stefan Krzczunowicz.



NEWS BLASTS

Researched by **John Blackburn**, AIHM, PLE

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MUST WATCH: PMA | CIBC Summit: PMA | CIBC SUMMIT SERIES: FALL SUMMIT: REAL SOLUTIONS FOR REAL ESTATE

Webinar Recorded on September 26, 2024 Ontario needs more housing, and needs it now! Join some of the industry's most innovative voices as we address the ongoing housing crisis, discuss some of the key sticking points, and find real solutions for building a better future for our province!

GUEST SPEAKERS:

Leor Marguiles, Partner and Head of Development & Real Estate Lending Services, Robins Appleby LLP
Sid Kerrigan, Managing Partner EVOKE Residential
Don Given, Founding Partner Malone, Givens Parsons Ltd.
Tom Muench, Former Richmond Hill City Councilor, Founder, Up for Growth Ontario Senior Vice President, United Chargers
[Watch Video](#)

MUST WATCH: PMA | CIBC Summit: PMA | CIBC SUMMIT SERIES: PAUSE OR CORRECTION? ...

Webinar Recorded on June 6 2024 HOW LOWER RATES MAY AFFECT OUR HIGH-RISE MARKET. Canada's real estate industries were holding their breath as we awaited the Bank of Canada's verdict on June 5th, to see the official forecast for our economy and inflation heading into the summer. Joined by some of the industry's brightest minds, we will dive into the implications of this outcome with a high-level look at the high-rise market. Will we see a pause this season, or a major market correction?

GUEST SPEAKERS:

Julie Di Lorenzo, President and CEO, Mirabella Development Corporation
Jonathan Goldman, President of Stafford Homes
Samuel Frum, President of Metropia
Joseph Feldman, EVP & COO at Camrost Felcorp Inc.
[Watch Video](#)

Altus Group Webinar - The current sentiment on CRE business development

Webinar Recorded on July 11, 2024 Altus Group conducts quarterly surveys of US and Canadian industry professionals to keep a pulse on current market sentiment, conditions and issues impacting CRE. They recently shared the results of their Q2 2024 US and Canadian surveys and have invited their valuation experts from across North America to discuss and share their perspectives on the results.

In this webinar the panel will discuss:

- The current sentiment on CRE business development - where the industry is putting its current focus and forward-looking transaction plans
- Property type performance - are expectations improving?
- Capital availability and the divergence of sentiment in the US and Canada

[Watch Video](#) [Download Survey](#)

Diverso Energy Webinar: Decoding the Toronto Green Standard - A Deep Dive into Upcoming Changes

Recorded On Sept 25, 2024 Tim Weber, Co-Founder and CEO of Diverso Energy, joined David MacMillan, Manager of New Development & Renewable Energy at the City of Toronto's Environment & Climate Division. Together, they provided a deep dive into the changes and discussed the city's long-term sustainability vision.
[Watch Video](#)

Toronto Under Constructions Podcasts

A residential real estate podcast hosted by Bullpen Consulting's Ben Myers and co-hosted by Steve Cameron. This monthly podcast will dive into the nitty-gritty of Toronto Real Estate, with a specific focus on housing policy and economics
[Access Podcasts](#)

Colliers Mid-Year Pulse Check (Multifamily)

Colliers July 24th Newsletter takes the pulse of the Ontario market. It covers transaction volume, the impact of the capital gains hike, who's active, and where we're headed by December.
[Read Newsletter](#)

Centre For Urban Research And Land Development (CUR), May And June 2024 Newsletter

The Newsletter Topics include:

- Residents Fleeing the City of Toronto, Peel and York Regions to Find More Affordable Homes
- Toronto Tops in 2023 Population Growth in Canada and the United States
- GGH Population Growth: Population Surges in the City of Toronto, Peel and Waterloo Regions in 2023
- GDP Growth Rates in Guelph, Kitchener-Cambridge-Waterloo, and Barrie Exceeded the Toronto CMA 2009-2022
- Why do the "Experts" Treat Housing Types as Irrelevant?
- Toronto's Population Growth Higher than Major U.S. Cities Due to 'Surge of

Immigration': Report

- Toronto Now has the Fastest-growing Population Out of Any City in the US and Canada
- Toronto's Rental Construction was at its Highest Level Since the 1990s. Why is it Now Slumping?
- Ten Big Problems Define Toronto's Housing Crisis. Here's what Every Level of Government is Promising to do About it (and Whether it will Work)

[Read Newsletter](#)

Ontario Announces \$970M For Water Infrastructure Projects

[Read Article](#)

Feds Push For Transit-Oriented Development With \$30B Canada Public Transit Fund

[Read Article](#)

RE Insolvencies Set To Surpass Levels Of Global Financial Crisis

[Read Article](#)

Homebuilding Stocks That Will Benefit From Lower Interest Rates

[Read Article](#)

Homebuilders Say Expanding Public Lands Bank Is A Start

[Read Article](#)

Cost Factors Working Against Purpose-Built Rental Apt. Projects

[Read Article](#)

What Is The Trick To Making A Laneway House Work?

[Read Article](#)

New Home Buyers Need A Rebate Program That Delivers: BILD

[Read Article](#)

U.K. Finance Minister Reeves Pitches To Bay Street

[Read Article](#)

The High Cost Of Real Estate Commissions

[Read Article](#)

Falling U.S. Real Estate Commissions Could Impact Canada: Analyst

[Read Article](#)

TO Wants Family-Sized Condos But Current Builds Don't Work

[Read Article](#)

Real Estate's AI Revolution

[Read Article](#)

Office Sector Is Slow On Transactions: Dream Office REIT CEO

[Watch Video](#)

More Than 75 New Condo Projects On Hold In GTHA

[Read Article](#)

Why U.K. Is Finally Changing Its Ancient 'Leasehold' Laws

[Read Article](#)

Three Skyscrapers Planned To Rise On Vast TO Waterfront Site

[Read Article](#)

Quayside Phase 1 Gets Green Light From Toronto Council

[Read Article](#)

CPPIB To Spend \$300M+ On Lavish New Office At CIBC Square

[Read Article](#)

Rail Deck Park Plans Resubmitted, More Than 1,700 Additional Units Proposed

[Read Article](#)

Three Towers Up To 55 Storeys Proposed In North York

[Read Article](#)

Trio Of Project Settlements To Transform Danforth And Main

[Read Article](#)

Medallion Announces Six New GTA Rental Buildings

[Read Article](#)

Maple House Leads The Way At Toronto's Canary Landing

[Read Article](#)

TO Moves Forward On First Mass Timber Dev. On City Land

[Read Article](#)

New Boutique Hotel In Toronto Will Have Pipes Stretching 700 Feet Underground

[Read Article](#)

Sobeys Proposes Ambitious 7-Tower Development For Orleans In Ottawa

[Read Article](#)

Boost For Science: \$1.5B For Two New Ottawa Labs

[Read Article](#)

Firm Behind Two-Tower Barrhaven Proposal Says It's 'On Track'

[Read Article](#)

Broccoli Considers Return To Roots - Apartment Development

[Read Article](#)

The Rose Corp. Acquires 27-Acre Oakville Development Site

[Read Article](#)

McMaster Struggles To Fill New Downtown Student Building

[Read Article](#)

American Investment Firms Pour Billions Into Canadian RE

[Read Article](#)

UBS To Liquidate \$2.7B Office Fund, Includes Cdn. Properties

[Read Article](#)

2024 A Very Good Year, So Far, For Dream Unlimited: Cooper

[Read Article](#)

OMERS Has Largest War Chest In 20 Years, Eyes Deal Rebound

[Read Article](#)

Pershing Square Takes \$385M Stake In Brookfield Corp.

[Read Article](#)

Freed Golf Is Launched With \$200M Portfolio

[Read Article](#)

Altus Group To Sell Property Tax Service To Ryan, LLC For \$700M

[Read Article](#)

Colliers Completes Acquisition Of Englobe

[Read Article](#)

Choice Properties Real Estate Investment Trust Reports Results For The Six Months Ended June 30, 2024

[Read News Release](#)

The Success Of The Battery Sector 'Could Be Threatened'

In the RENX Aug 28 newsletter there is a synopsis of a La Presse article which states that "Canada lacks critical minerals to meet future demand from large battery plants, according to a government document highlighting major gaps in the supply chain. Tens of billions of dollars will need to be invested to open many more mines."

[Read Article](#) (note article is in French)

Umicore Halts Construction Of \$2.76B Battery Materials Plant

[Read Article](#)

Baz Group Adds 1,500 Units In Retirement And Residential Acquisitions

[Read Article](#)

Cannabis Retailer Tokyo Smoke To Close 29 Stores

[Read Article](#)

Cornerstone To Be Ont.'s Second- Largest Real Estate Board

[Read Article](#)

Hennick gets extension at Colliers;

Jay S. Hennick's term as global chairman and CEO of Colliers International Group (CIGI-T) has been extended until the beginning of 2029.

[Read Article](#)

Diverso Energy Announces new Vice President of Fulfillment

Diverso Energy announced in their July newsletter that Jason Henderson joined Diverso as their new Vice President of Fulfillment.

Woodbridge Appoints Veteran Executive Jay Forbes As CEO

[Read Article](#)

Vancouver's \$2.7 Billion Retrofitting Challenge: A Call To Reinvent Heating And Cooling

[Read Article](#)

'Pencil Buildings' And A Geothermal Future

Diverso Energy in their June newsletter references a newspaper article that highlights the increasing adoption of geothermal energy, driven by emerging green standards, and explores the advantages it brings to both tenants and developers alike. Geothermal equipment installed and managed by Diverso Energy will supply 100% of the heating and cooling requirements of two of the four condominiums in The Exchange District, currently under development by Camrost Felcorp in Mississauga,

[Read Article](#)

Watch Ontario's \$6.4B Border Bridge Materialize In Impressive Time-Lapse

[Read Article With Video included](#)

For more detailed information about the Gordie Howe International Bridge see *The Land Economist* article in this issue which also includes an interview with the Howe Family and photos on page 6.

Municipal World honours 2024 Women of Influence in Local Government

[Read Press Release](#)

Introducing The Winners Of The 2024 CHBA National Awards For Housing Excellence

[Read Article](#)

There's A New 3D Map Of Toronto's Notoriously Confusing PATH System

[Read Article](#)



John Blackburn, AIHM, PLE

President,

CRU Communications and Broadcast Productions Inc.

John has over 50 years' experience in marketing, sales and public relations, both in the E.U. and North America. Winner of numerous marketing and public relations awards, including BILD's Top Awards, two Grand SAMs, the very prestigious Riley Brethour Award, The Sales and Marketing Manager of the Year Award, the Canadian Home Builders' Association Award of Honour and the Queen Elizabeth II Diamond Jubilee medal, in recognition of contributions to Canada.



The Legislative Beat *Fall Update*

By Andy Manahan, PLE

Summer recess is over:

The legislature adjourned for the summer and is set to resume on Oct. 21. Despite this legislative recess there were a lot of announcements over the summer, with more clues that there could be a provincial election in spring 2025. One clue is that the Ford government is being friendlier to local governments by distributing incentive funds to municipalities for hitting housing targets ([see Vol. 54, No. 1](#)).

Housing-enabling water systems fund:

Over the summer months, the Premier, Ministers and MPPs held many media briefings [to announce investments of \\$970 million in 54 water infrastructure projects across 60 municipalities](#). Infrastructure Minister Kinga Surma has said that upgrading water and wastewater services will facilitate the construction of more than 511,000 new homes across Ontario.

[The City of Brampton, for example, received \\$29.7 million to improve stormwater management](#) in the downtown which will enable the construction of 12,900 new homes. [Cobourg will receive \\$25 million for water infrastructure which will translate to 2,250 homes](#) (this works out to \$2,302 and \$11,111 per home, respectively, so the value proposition on a per unit basis does vary widely depending on the type of infrastructure works).

Prior to the by-election that was held in the Bay of Quinte riding as a result of [Education Minister Todd Smith stepping down to take a management position with an energy firm](#), Ford and Surma broadcast that [Prince Edward County would benefit from an \\$18.2 million water infrastructure investment](#) that would support the construction of 3,895 new homes.

One assumes that the provincial outlays will result in either lower initial utility rates and/or lower development charges but there is no commentary on this aspect of the funding model.

An additional \$250 million has been added to the Fund. Applications for the second round of funding closes on Nov. 1, 2024.

New PPS:

In August, Municipal Affairs and Housing Minister Paul Calandra informed delegates at the Association of Municipalities of Ontario conference that a [new Provincial Policy Statement \(PPS\) had been approved](#) and that it was much shorter. Calandra said that the document “recognizes that municipalities understand local challenges and priorities when it comes to building homes, and that the types of homes that are needed to be built in your communities, it is you who know best what you should be building in your communities for your residents,”

While PLE members are familiar with the PPS, it is worth quoting from p. 5: “Land use planning decisions made by municipalities, planning boards, the Province, or a commission or agency of the government must be consistent with the Provincial Planning Statement. Where provincial plans are in effect, planning decisions must conform or not conflict with them ...”

As part of its goal to build 1.5 million homes by 2031, the Province also wants to streamline the processes for identifying new settlement areas – defined as both urban and rural areas within municipalities.

Opposition parties believe that expanding existing boundaries will serve only to exacerbate low-density sprawl development and result in the further loss of farmland.

The new PPS takes effect on October 20, 2024.

Places to Grow:

[The award-winning “A Plan to Grow: Growth Plan for the Greater Golden Horseshoe”](#) will also be relegated to the dust bin. While municipalities will still be required to set minimum targets for both affordable housing and “intensification and redevelopment within built-up areas”, the overall thrust of Places to Grow to direct growth to existing urban and designated settlement areas, will be diminished. Instead, the PPS prioritizes transit corridors and development of settlement areas. Municipalities are being asked to plan for 200 residents and jobs combined per hectare for areas serviced by a major subway, while that figure drops to 150 residents and jobs near a commuter or regional rail.

Former Neptis Foundation ED, Marcy Burchfield (and now a VP of Transit Planning at Metrolinx), had this to say on a LinkedIn post about growth planning in the Greater Golden Horseshoe:

“As a long-time observer of the Growth Plan for the GGH era, it feels like the pendulum has swung, but not too far, in the direction of Provincial interest waning in its role as de facto regional planner. However, the era spanned nearly a quarter of a century with launch of the Smart Growth Panels, and if the theorists of path dependency policy are correct, its core planning principles will continue. And indeed they do as TOC policies can be found in every municipal land use plan in southern Ontario.”

Her second takeaway of three that were listed in the post:

“Intensification as a preferred path for development is not easy to achieve. It is a much longer, much more complicated process than greenfield development. Not recognizing this early on but maintaining high levels of growth was always going to be problematic.”

One of the biggest changes is that municipalities will be required to set minimum targets for both affordable housing and “intensification and redevelopment within built-up areas.” This includes facilitating the redevelopment of underutilized commercial and institutional sites like shopping malls and plazas for housing.

Tunnel vision:

To alleviate traffic congestion, Premier Ford has pledged to build a 50+ km tunnel underneath Hwy. 401 from Mississauga/ Brampton to Scarborough for both vehicles and transit. Most pundits view this project as an unrealistic endeavour that would cost tens of billions of dollars. Curiously, Ford said that even though a [study would be done to determine costs and engineering feasibility](#), he insisted that “we’re getting the tunnel built.” Some [early estimates have](#)

[pegged the cost at \\$1 billion per km](#) for a four-lane tunnel, with double or triple that if transit were part of the project.

This article further states that Ford based the scope for the feasibility of the expressway on conversations with construction powerhouse Labourers’ International Union of North America (LiUNA) that has provided political support to both the Premier and the PC party since the 2018 general election. LiUNA had advised against building a second deck on top of the 401, warning that it would suffer from the same maintenance headache as the Gardiner Expressway, and thus proposed tunnelling instead.

Several [alternative proposals have been put forward such as having the Province subsidize](#) truckers to use the 407ETR (privately owned) and 407East (provincially owned), or [even buying back the ETR](#). According to this [article](#), there have been

no discussions with the 407ETR about any possible sale. Here is a humorous [take](#) on the tunnel proposal.

While engineering consulting firms will no doubt benefit from doing a feasibility study, it will certainly be a distraction from many other pressing issues that are bound to be debated during the upcoming provincial election.

October 9, 2024



Andy Manahan is President of Manahan Consulting Services and a member of AOLE’s Board of Directors



Association of Ontario Land Economists

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The Association of Ontario Land Economists (AOLE) is a membership based group of real estate professionals that offers the opportunity to connect with other professionals in related fields, share knowledge, learn and network with potential clients, partners, mentors and more. Currently the group proudly represents most of the significant developments in Southern Ontario and its members are active in many various roles across the vast real estate industries.

You can make a difference today by joining AOLE. Members have the benefit of broadening and enriching their professional development ensuring high-ethical work standards and making submissions to the government for improvements in both the law and public administration in relation to land economics. This year, our members will be involved in over \$50 billion dollars in Ontario real estate initiatives.

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Engineers

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