



THE LAND ECONOMIST



**VALUATION CONSEQUENCES
AFTER NATURAL DISASTERS**



WHERE IT ALL BEGAN:

The Association of Ontario Land Economists ([AOLE](#)) was founded in 1963 and was officially incorporated in 1964. Its name reflects a long-standing position as the only body in Ontario open to all qualified professionals who work in the field of land economics. Since its incorporation, each full voting member has been known as an Ontario Professional Land Economist, with the right to use the letters PLE in their title.

QUALIFICATIONS FOR PLE DESIGNATION

In order to receive the PLE designation, candidates must qualify as a voting member of the AOLE.

TO QUALIFY YOU NEED:

- 1. To have held a position within the industry, in an occupation requiring competency in land economics.**
- 2. Academic study in a related discipline evidenced by a degree, diploma or certificate from a recognized educational institution.**
- 3. All students pursuing approved coursework can also qualify for Student or Graduate Membership.**

For complete qualification guidelines, please contact us at:

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FEATURES

PROFESSIONAL JOURNAL



ASSOCIATION
OF ONTARIO
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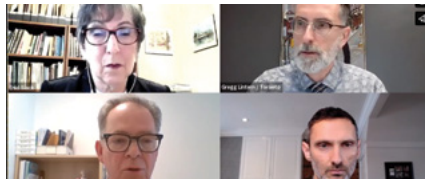
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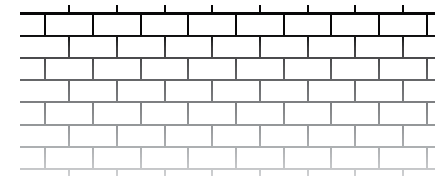
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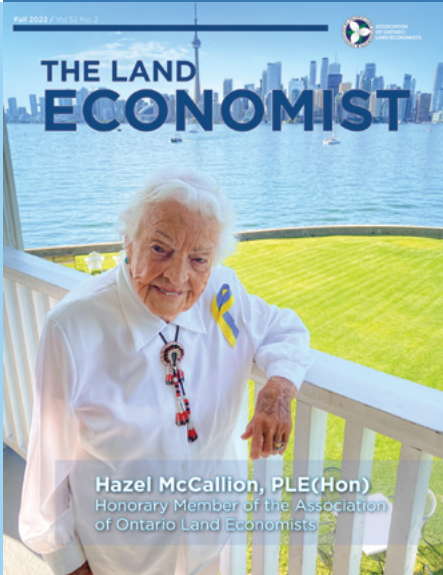


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A Tribute to Hazel McCallion in Memoriam

By Ed Sajecki

Hazel McCallion was a wonderful friend of the Ontario Land Economists. As Rt. Reverend Andrew Asbil, Bishop of the Toronto Anglican Diocese said at her funeral “Every once in a while, there are moments in our lives when we recognize how important someone has been to us, and this is such a moment”.

As Land Economists, we were fortunate to know Hazel, and for her to be our [keynote speaker](#) this past June at our 2022 Annual General Meeting.

With no notes, she captivated our members and guests as she spoke about COVID 19 and the long-standing problems in long-term care, hospitals, and healthcare - and the undetermined impacts of COVID on the population and the economy, including mental health. “The pandemic brought human separation, losses, school disruptions, viral and economic threats, and a lot of stress. I don’t know of any group of medical professionals that has been asked to assess the impacts on mental health across our society yet.”

She concluded by saying everyone in Canada needs to make sure that we all learn the lessons from COVID - and act on them. “We are not going back to normal. The previous systems didn’t work. We all need to take action now, so we will be ready for the next one. It will come.” She added “Young people need to be present too, to decide the sort of future they want to have in each municipality. Each and every one of us has the opportunity to shape the future.”

At our 50th Anniversary in 2013, we were privileged to have [Hazel](#) join us in our celebration, as keynote speaker. She started her speech by presenting our Association with a certificate of appreciation from the citizens and residents of Mississauga. “Members should be proud of the contribution they have made to shaping our province over the past 50 years”, she said. Drawing on her own experiences, she talked about various challenges and changing issues over the years. For example, in the 1960s, when she worked for Canadian Kellogg engineers and contractors, “I was paid to build the Lakeview coal-fired generating plant on the lakefront. I also had the privilege of pressing the button to destroy it (in 2006).”

Stepping down from the stage to be closer to the audience, and leaving her notes behind on the podium, she called on our members to work on difficult issues like transportation and infrastructure. “I’d like to have people here now with vision like those who decided to build two rail lines across the country when the population was only 10 million,” she said. “And I think it has to be you folks in this room.” She stressed that “We are all part of the problem. We’ve all got to be part of the solution, so in the future our children and grandchildren will be able to say: ‘They did something about it!’”

Next to her family, fishing and politics - women’s hockey was a passion of Hazel’s. Fran Rider, President and CEO, Ontario Women’s Hockey Association and Hazel’s best friend, spoke at Hazel’s funeral. “It was



Ed Sajecki with Hazel McCallion at AOLE's 2022 AGM at the Royal Canadian Yacht Club. Photo by Rowena Moyes

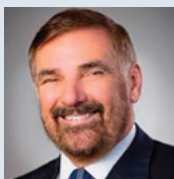
people that she cared about. That's what drove her. Every person was important to her". And "She had a true vision for a better world, and she certainly has made Mississauga, Canada and the world and Ontario better places today".

And "Hazel was a superstar in so many sectors of life. She lived each day to the fullest. She rose before 6 am. If you spoke to Hazel at the end of the day she would respond, she'd always respond 'I had a great day'- because she was with people and she was living a life she loved".

Fran went on to say "Everybody is gifted, no matter what we do in this world, with 24 hrs a day. And we have a choice to make in that day of how we live that day. And boy, did Hazel live those days to the fullest!"

As Reverend Asbil stated at the funeral, "There are very few of us in this room who have the sphere of influence to be able to summon leaders from across our land - Lieutenant Governor, Prime Ministers past and present, our Premier, our Mayor and leaders in our community, to speak into this moment. And very few of us have the sway to be able to summon thousands of people to come and to mark this moment and to acknowledge how important one particular soul has been to us. And Hazel McCallion is such a soul."

Hazel, we will miss you dearly. It's hard to forget someone who gave us so much to remember. 🍷



Ed Sajecki, Partner at Sajecki Planning and Senior Advisor at Strategy Corporation, was Mississauga's Commissioner of Planning & Building from 2003-2018 and worked closely with Hazel McCallion. Ed is a long-time member of the Board of Directors and a past president of AOLE.

AOLE Speaker Series: Impact of Bill 23 on Municipal Planning, Housing and Infrastructure

Speaking Notes for Lunch & Learn & Recorded Webinar Link

March 2, 2023, 12:00 noon to 1:30pm

Summary by Stefan Krzeczunowicz, PLE, AOLE President

Introduction from AOLE President – 3 mins

Thank you and welcome...Update on AOLE activities...good seeing new members at our Christmas Party especially those who joined us during COVID...welcome to member of OPPI...acknowledge passing of two distinguished Members Janina Milisiewicz and Hazel McCallion...

Today we are privileged to have a very distinguished panel of experts to speak to us about the impact of Bill 23, the *More Homes Built Faster Act*, on land use planning, housing, and municipal infrastructure planning.

- **Brian Bridgeman** has more than 30 years of professional planning experience in both the private and public sectors. He is currently the Commissioner of Planning and Economic Development for the Region of Durham, the fifth largest Census Division jurisdiction in Ontario by population and one of the fastest growing regions of the GTA.
- **Matti Siemiatycki** is Professor of Geography and Planning and Director of the Infrastructure Institute at the University of Toronto. He has lectured and published extensively on public-private partnerships, transit policy, and matters relating to urban infrastructure, and is a frequent media commentator on housing and city planning.
- **Gregg Lintern** is the City of Toronto's Chief Planner. He has worked in the City, in his words, "in the weeds on everything from figuring out where to put a door, to overseeing master plans for Regent Park, the West Don Lands and Lawrence Heights" for almost 40 years. He leads a department of almost 500 staff in one of the fastest growing urban centres in North America.

We are going to make two changes to our regular "lunch and learn" framework.

- First, so that we have enough time to hear the views of our panel members this event will be an hour and a half rather than an hour and we won't be taking questions from the audience. The session will however be recorded as usual and we'll e-mail everyone a link to it when it becomes available. (Editor's note: see link at bottom of this article)
- Second, given the complexity of the legislation and its impact on the full range of land economics matters, we are very pleased to welcome Dr. Enid Slack to moderate the discussion.

Enid is the Director of the Institute on Municipal Finance and Governance at the School of Cities at the University of Toronto. She worked on municipal finance and governance issues for 40 years and consults with governments and international agencies such as

the World Bank, IMF, UN Habitat, Asian Development Bank, the Inter-American Development Bank, and the International Growth Centre (at Oxford and LSE). Enid has written several books and articles on property taxes, intergovernmental transfers, and municipal infrastructure finance. Recent co-edited books include *Financing Infrastructure: Who Should Pay?* and *Is Your City Healthy? Measuring Urban Fiscal Health*. In 2012, she was awarded the Queen's Diamond Jubilee Medal for her work on cities.

Introduction to Topic by Moderator – 5 mins

Last October the Ontario Government announced a package of reforms under the title of *More Homes Built Faster*. Together with legislation from earlier in 2022, these are the most far-reaching planning reforms in Ontario since the advent of significant provincial policy involvement in growth management in the 1990s and, perhaps, since the creation of most regional governments in the early 1970s. They also include the most significant changes to how municipalities fund new infrastructure since the 1997 Development Charges Act. The legislature passed Bill 23, the *More Homes Built Faster Act*, on November 28, 2022.

Building 1.5 million more homes in Ontario over ten years is the main goal of the *More Homes Built Faster* initiative. It informs the housing growth targets for single- and lower-tier municipalities in Southern Ontario that are expected to have a population above 100,000 in 2031. The targets are not binding requirements in the fashion of the Growth Plan, which has the force of statute behind it in the Places to Grow Act. Rather, they form the basis of a new "Municipal Housing Pledge" by which municipalities are to demonstrate how the targets are to be achieved, including how supporting infrastructure is to be delivered.

The Government recently announced that funds would be made available to municipalities to offset some of the development charge revenue loss associated with the new legislation if the housing targets are met. As a result, there would be significant financial benefits if housing targets were achieved.

Another part of the *More Home Built Faster* initiative would remove specific lands from the Greenbelt provided they can be developed for housing in the near-term. A "land swap" is proposed, whereby an equivalent amount of land further from major housing markets would be added to the Greenbelt. The Government suggests further such land swaps are possible.

More Homes Built Faster combines numerous and overlapping regulatory and policy changes under dozens of statutes, regulations,

policies and procedures, all of which make for an enormously complex package. The complexity alone gives rise to much uncertainty as to the response of landowners, developers, financiers, municipalities, consumers and others. It is particularly difficult to assess how the changes will affect planning in the Greater Golden Horseshoe (GGH), which is subject to the Provincial Growth Plan.

The Government's overriding goal with these initiatives is to address housing affordability, particularly in the very expensive Greater Toronto Area and Hamilton (GTAH) market where affordability has rightly been described as a crisis. Generally, the More Homes Built Faster changes are intended to improve affordability by:

- reducing development costs;
- increasing housing supply through more land for development and higher intensity of land use; and
- a faster development approval process.

The complex changes are predicated on a foundational premise that Ontario needs 1.5 million homes over the next decade. As the Government states: "Ontario needs more housing, and we need it now."

In this session, we aim to explore the effect of the new legislation on municipalities, particularly in their role as planning authorities and providers of infrastructure. But we're also keen to test the Government's premise of whether this legislation will adequately address the pressing issue of housing affordability.

Brief Initial Comments From Each Panel Member

Ask panel members to give a short, 5 minute introduction to their perspective on Bill 23 and how it affects their work.

Brian Bridgeman - 5 mins

Matti Siemiatycki - 5 mins

Gregg Lintern - 5 mins

Q and A Facilitated by Moderator - 1 hour 5 mins

Topic 1 - Planning and Environmental Impact

- The Government has removed significant lands from the Greenbelt for housing. The largest of all Greenbelt removals is about 1,800 hectares of land in Durham Region.
 - Is the Region treating growth on this land as being over and above the growth planned through its municipal comprehensive review?
 - If so, does that create problems for servicing and managing growth in?
- Bill 23 effectively removes the Regions (and County of Simcoe) from the planning approval process and the Province will be appointing "facilitators" to manage the transition of authority.
 - Are there legitimate concerns about how much planning regulation there is in Ontario (duplication of effort between upper and lower tiers with approvals; length of time to process applications; OLT involvement)?
 - How long is the transition going to take?
 - What is the new role for the Regions (and Simcoe) in regional planning?
 - The Regions will still be responsible for large infrastructure. How can local municipalities properly approve plans when they don't control infrastructure planning?
 - Do local municipalities and the Ministry of Municipal Affairs and Housing have the operational capacity to take on the role of approval authorities?

- Do we really have a regional planning framework in Ontario anymore? Is the ultimate goal here to abolish regional government?
- Last year, the Province passed separate legislation to speed up the development process (Bill 109). Among the changes was a requirement for municipalities to refund planning application fees if a decision isn't made within prescribed timeframes. The start date for the refund process was recently delayed by the Province by six months.
 - Is this because municipalities are having difficulty meeting these timeframes?
 - Are the timeframes reasonable?
- The Government has proposed merging the Growth Plan for Greater Golden Horseshoe with the Provincial Policy Statement.
 - The Growth Plan is almost 17 years old—is it still fit for purpose?

Topic 2 - Impact on Housing

Many of the Bill 23 changes—increasing the land supply, reducing municipal fees and charges, streamlining planning approvals—were implemented to address housing affordability.

- Will the legislation reduce the price of housing? If so, how?
- What is the bigger problem with housing in Ontario—a lack of affordability overall, or a lack of "affordable housing" for low-income households.
- Is there a shortage of land for new housing in Ontario?
- The Government has set a target to build 1.5 million homes over the next decade. Do we need that many? Do we have the capacity to build homes at that rate?

Topic 3 - Paying For Infrastructure

Building more homes means accelerating municipal infrastructure and servicing projects. But Bill 23 significantly reduced the ability of municipalities to pay for services with development charges.

- If municipalities can't pay for infrastructure, how can more housing get built?
- Some of the proposed changes to development charges would exempt "affordable" and "attainable" housing from the charges. Recognizing that these changes have not yet been implemented, or fully explained, will these exempting or reducing development charges stimulate more affordable housing?

General

- How would you describe the current relationship between the Province and municipalities?

Closing Remarks from AOLE President - 2 mins

On behalf of the Association, I'd like to thank you all for sharing your insights and providing us with some very interesting material to digest. We really appreciate you taking the time to speak to us. Our custom is to present you with a small gift and make a donation to a charity of your choice—and we'll be in touch with you shortly about your preferences in these respects... 🎁

Watch Recorded Webinar



SIDEWAYS: The City Google Couldn't Buy Toronto: Random House Canada; 2022

Review by Jim Ward: February, 2023



Photos From: <https://www.sidewalklabs.com/toronto>

To say that this book is a comprehensive and detailed story of the attempt by Toronto, led by the three levels of the government-supported agency Waterfront Toronto, to bring new life to the waterfront area would be an understatement. It is, in fact, a gripping story of a battle between those who see the development of so-called 'Smart Cities' as a much desired future for humanity and those who see it as a modern version of George Orwell's 1984, perhaps 2084.



Photos From: <https://www.sidewalklabs.com/toronto>

The author, Josh O'Kane, a Globe and Mail reporter, has many years of experience reporting on the effects of Big Tech on the world and direct experience of the struggles over the citing of a Smart City on Toronto's waterfront. He is the ideal person to put such a story together. As I read the book I could not help but think that here is the making of six-part drama series with the power of a Shakespearian play. The book's title, *Sideways*, is a clever play on words, since the book is primarily about Sidewalk Labs (a Google entity) being the winning bid on a proposal to develop a Smart City on a part of Toronto's Waterfront lands. Eventually the bid fails, i.e. goes 'sideways'.

The book makes powerful arguments in five areas. These are; (1) the inherent dangers of surveillance capitalism; (2) the struggles between the public and the private sector; (3) the tensions within the lead agency, Waterfront Toronto, as it struggles for support from and some kind of working agreement with, the three levels of government (local, provincial and federal); (4) the potential colonialist perils of foreign encroachment (i.e. the United States) on Canadian soil, i.e. the Toronto Waterfront; (5) the overblown egos of powerful men, who characterise their dreams as being for the collective good.

Vincent Mosco, in his 2014 book *The Digital Sublime*, is often seen as the originator of the term 'surveillance capitalism' and, in 2019, Shoshana Zuboff, published what many now consider the most in-depth discussion of the concept in her book *The Age of Surveillance Capitalism*. On the first page of that 691 page magnum opus Zuboff defines surveillance capitalism in 144 words. In short, she defines it as: a new economic order that uses human experience as free raw material to be exploited; a parasitic economic logic; a new type of capitalism that vastly increases wealth and power in a few hands; a threat to human nature; an approach that presents huge challenges to market democracy; a new collective order based on total certainty; an overthrow of the people's sovereignty. In other words not good for the majority of people living in such a world. It is generally seen that the rise of so-called Big Tech, particularly Google and Facebook that have brought this about.

The whole process started when Waterfront Toronto began to look for innovative ways in which to develop that area to the south and east of the City of Toronto. It was particularly focused on developing what has come to be known as a 'Smart City' development on a 12.5 acre site, just to the south of Parliament Street, known as Quayside.

It's just a fraction of the approximately 400 hectares of Toronto's 'Port Lands'. Smart City developments usually include a high level of electronic data collection such as people's movements and daily lives by integrating information and communications technology. This information is then used, theoretically at least, to help cities function more effectively, by keeping pedestrians moving smoothly to their destinations and assisting in the appropriate design of buildings, etc. Sounds great? However critics of this approach to city design argue that such an approach infringes on peoples' privacy. An obvious case of this is the setting up of face recognition technology in public places. Critics of the rise of so-called surveillance capitalism believe that such approaches lead to a lack of personal privacy and, ultimately, their freedoms.

When, in 2017, Waterfront Toronto put out a proposal call for the development of Quayside, it was such Smart City approaches they were looking for. And generally the proposals received took this approach. Most obviously the proposal submitted by Sidewalk Labs. Sidewalk Labs was one of the many offshoots of Google/ Alphabet.



Photos From: <https://www.sidewalklabs.com/toronto>

The struggles between the public and private sectors are a key part of the discussions in the book. This closely relates to the fears inherent in the criticism of surveillance capitalism since, theoretically at least, the general populace in a democratic state has considerable say in the way governments shape their world, whereas the private sector is driven by profits alone.¹ Of course in autocracies, such as China, and possibly Russia, the public and private sectors are as one. Organizations such as Google and its many off shoots are seen by its critics as being driven by one purpose alone and that is the generation of profits. There is much in the book about the proposal for a Smart City to be sited on 12.5 acres of land comprising Quayside. By pure serendipity, an employee of Waterfront Toronto happened to have a person on the staff who had, at one time, been involved with the development of Hudson Yards on the west side of midtown Manhattan and, in that role, had been a colleague of Dan Doctoroff, a man who had once been a deputy mayor of New

York City and whose main claim to fame was to lead New York City's bid for the 2012 Summer Olympics. The bid failed and those games went to London. Nonetheless, Doctoroff was proud of his role. He was now the CEO of Sidewalk Labs, a Google offshoot that concentrated on the design and development of Smart Cities. Larry Page, who together with Sergey Brin, was the founder of Google, was keen on setting up a Smart City but he envisaged his key Smart City as being in California. Since his attempts to set up in his preferred location were not succeeding, he gave Doctoroff the go ahead to bid on the Toronto project. Just prior to this event Sidewalk Labs had carried out considerable research and brainstorming that came up with a design of what they were about. This work was brought together in their so-called Yellow Book, a large tome that envisaged a Smart City that would extend over 1,000 acres and house 100,000 people. Such a grand scheme was much influenced by the dreams of Larry Page.



O'Kane states that Sidewalk Labs not only wanted to build a city of the future it also wanted to run that city. One of the key participants in the early days of Sidewalk Labs was New York University professor Anthony Townsend, author of a book entitled *Smart Cities: Big Data, Civic Hackers and the Quest for a New Utopia*, published in 2013. Eventually, Townsend quit his association with Sidewalk Labs, primarily because he believed they obviously didn't see the dangers inherent in an entity completely run by the private sector. He felt that most of the Sidewalk Labs participants had not read his book where he outlines the dangers of such a blinkered approach that ignored the perils of discouraging public sector participation. Nonetheless, Sidewalk Labs won the contract, although there was an agreement that the content of the bid would be modified over a period of several months. Waterfront Toronto, wanted to see the Sidewalk Labs bid modified to ensure greater public sector involvement. A key concern was that an ongoing theme in both the original and ensuing modified Sidewalk Labs bids was that they constantly hinted at developing a Smart City that would occupy a much larger piece of the Waterfront land than the 12.5 acres comprising Quayside. Often this extended to well over 100 acres.

Created in 2001, Waterfront Toronto is an agency with financial support from the three levels of government: the City of Toronto, the Province of Ontario and the federal government of Canada. The agency's website states:

'With the backing of federal, provincial and municipal governments we overcome the barriers to revitalization so that Toronto can take its place among the world's top waterfronts. By listening to the public voice, we're delivering a distinct and vivid vision for a vibrant and sustainable waterfront.'

In 2015, John Campbell, the CEO of Waterfront Toronto resigned and the Board of Directors began looking for a new CEO. They were seeking someone who would bring "vision and innovation to the role." Josh O'Kane writes: "That word - innovation - would

¹ This criticism is very close to that raised by critics of so-called neo-liberalism. See for example Thom Hartmann's recent book: *The Hidden History of Neoliberalism*



Photos From: <https://www.sidewalklabs.com/toronto>

haunt them for years.” The board received 300 applications for the position. They chose Will Fleissig. And he took on the role of Waterfront Toronto CEO in December 2015. Fleissig, a Harvard graduate, had been involved in urban planning in several U.S. cities. He was seen as the man with the right kind of experience and with a forward-looking orientation. However, due to tensions over future perspectives for the role of Waterfront Toronto, particularly in terms of the Quayside project, the Board of Directors decided Fleissig had to go and he left the job in July, 2018. He was replaced by Michael Nobrega, a man who had been on the Waterfront Toronto board for just a few months, someone with a wealth of management experience, including being the CEO of OMERS (Ontario Municipal Employees Retirement System). Nobrega was someone that the board felt would be a stark contrast to Fleissig, i.e. the pragmatist versus the idealist. A key problem for Waterfront Toronto was always going to be that it was answerable to the three levels of government and, understandably, given the geographic nature of its role, it was primarily the municipal government that was most often directly involved. In fact, in the case of Fleissig’s resignation, John Tory, Toronto’s mayor, was a major instigator in encouraging the change. Although members of the board of directors were evenly divided among recruits from each of the three levels of government, it was only occasionally that the leadership in those governments was directly involved, with the exception of the City of Toronto. However at several points in the book, there is mention of a possible telephone discussion in 2017 between Justin Trudeau, Canada’s Prime Minister, and Erich Schmidt, then the Executive Chairman of Alphabet Inc., about the possibilities of Sidewalk Labs bringing a Smart City project to Toronto’s waterfront. O’Kane believes this discussion played an important part in encouraging Sidewalk Labs to bid on the Quayside project, and perhaps, that the Sidewalk Labs bid was the winning bid.

A key aspect of the concern shown by critics of the winning bid for the Quayside project was that it came from Sidewalk Labs, a U.S.- based company and one of the many Google/Alphabet spin-offs. Right from the beginning of his book, in the ‘Prologue’,

O’Kane describes the attempt by Google to develop a start up incubator in a ‘bohemian’ neighbourhood of Berlin. It took two years for the so-called “Fuck Off Google” demonstrations to convince Google to abandon the project. The fear of the protesters was that Google would make that part of Berlin, Kreuzberg, unaffordable as a place to live for the average Berliner. And, of course, it was largely a protest against the involvement of American Big Tech. The cancelling of the Sidewalk Labs contract to build out Quayside did not engender large street protests like those in Berlin, but many decision makers and members of the general public *did* vocalize their resistance to the project at public meetings and at the Waterfront Toronto headquarters at 20 Bay Street in downtown Toronto. O’Kane spends some time describing the interventions of these protesters, in meetings, and on the internet. He was present at many of these events.



Although the nature of the resistance was largely around the potential interference of Big Tech into people’s lives through so-called Smart City surveillance methods, there can be little doubt that its “Americanness” was also seen as a threat to Canadian sovereignty. This is most obvious in the strong opposition to the Sidewalk Labs proposal by the Canadian Jim Balsillie, the founding CEO of RIM (Research in Motion), a one-time leader of Big Tech, particularly through the Blackberry phone. Balsillie played a key role in having the Sidewalk Labs bid rejected and it was largely in terms of protecting home-grown technological initiatives from foreign, particularly American, competition.



Photos From: <https://www.sidewalklabs.com/toronto>

In the prologue to the book, entitled *After the Gold Rush*, O’Kane writes:

“The story of Sidewalk’s Toronto project is also a story of the failed ambitions of powerful men who deployed the language of collective progress as they tried to build their personal legacies and influence.” (p.xix)

Many of these so-called powerful men play an important role in O’Kane’s book, most obviously Larry Page, a founder of Google and Dan Doctoroff, the CEO of Sidewalk Labs. As mentioned previously, Larry Page’s ambition was to create a Smart City, run by Google, or one of its off-shoots, on a thousand acres and with a population of 100,000 people. He even visited Toronto one cold and snowy day and took a walking tour along the Waterfront. But the meagre 12.5 acres as the site for such a potentially ambitious project wouldn’t work and the continuous attempts to extend beyond that 12.5 acres brought the whole thing crashing down.

Dan Doctoroff, as CEO of Sidewalk Labs, was the ‘powerful man’ whose job it was to get the Sidewalk Labs’ Toronto project off the ground and to, hopefully, expand it beyond Quayside’s 12.5 acres. But, despite being an energetic go getter, who had known fame through his leadership in the development of Manhattan’s Hudson Yards project and his heading up New York’s failed bid for the 2012 Olympic Games, he was unable to pull this project off. According to O’Kane, Doctoroff sometimes lost patience in negotiations and thumped the desk and yelled out to show his frustration. But these tactics alienated many of his previous supporters.

There are many players in this drama, women and men, small and large organizations. And O’Kane discusses the part played by dozens of them. In fact this book could form the basis for a six-part, or so, TV series. The book is a detailed treasure trove of information that begs for a scriptwriter to create a drama about urban struggles in the 21st Century.

I would recommend this book to anyone interested in the power dynamics of urban planning in the 21st Century. 🐾



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.

VALUATION CONSEQUENCES AFTER NATURAL DISASTERS

By John T. Glen, MA AACI FRICS MIMA



Landscape view of wildfire near Highway 63 in south Fort McMurray (cropped).jpg by DarrenRD is licensed under CC BY-SA 4.0

BACKGROUND

My wife Pam and I were attending the **Caribbean Construction and Valuation Conference** held in Montego Bay, Jamaica on October 13-14, 2022. A speaker cancelled at the last minute and I was asked if I could make a presentation. The recent **\$800 million** in insured damage caused by Hurricane Fiona in Atlantic Canada inspired a suggestion that the topic **Valuation Consequences After Natural Disasters** would be appropriate in the Caribbean, given the dramatic effects of hurricanes in that part of the world. Indeed rising sea levels are a real concern in the region. My presentation was well received, and I will be giving the same topic in a Canadian context, at the [Appraisal Institute of Canada Conference](#) May 31 to June 3, 2023 in Vancouver.

British Columbia has been subject to **atmospheric rivers** and **heat domes** in the last two years resulting in **\$515 million** in flood damage as well as wildfire damage, including the blockage of both the CN and CP Rail lines in the Fraser Canyon and the destruction by fire of the Town of Lytton BC. In Ontario and Quebec last summer's windstorm known as a [derecho](#) resulted in **\$1 billion** dollars in insured damage.

These type of damages, have resulted in the Insurance Bureau of Canada urging for the creation of a [Climate Risk Index](#) down to the property level throughout Canada

Evidence that the effect of natural disasters has become a mainstream concern is the recent Toronto Star news article "[A Homebuyer's Newest Piece of Intel: Check the Climate Risk Score](#)" describes how the U.S. online real estate climate risk calculator [ClimateCheck](#) has partnered with the Montreal-based platform Local Logic, to provide climate risk scores, now available for the first time in Canada. They are already live on Royal LePage listings and coming soon to Sotheby's International Realty Canada, and REW.ca

A short time after the conference The Land Economist asked me to write an article on this topic and without further ado, here is my article.

NATURAL DISASTER

A **natural disaster** is any calamitous occurrence generated by the effects of natural, rather than human-driven, phenomena that produces great loss of human life or destruction of the natural environment, private property, or public infrastructure. A natural disaster may be caused by weather and climate events or by [earthquakes](#) [landslides](#), and other occurrences that originate at Earth's surface or within the planet itself.¹

There are two main types of natural disaster: Hydrometeorological

Weather- and climate-driven natural disasters include flooding caused by heavy rains associated with hurricanes and typhoons (tropical cyclones) and other intense storms; drought, famine, and wildfires brought on by heat waves and shifts in precipitation patterns; wind-generated devastation caused by tropical cyclones, [tornadoes](#), derechos, and other [windstorms](#); and damage and loss of life caused by blizzards and heavy snowfalls.



"2018 Flood Recovery / Rétablissement de l'inondation 2018" by GovNB / GouvNB is marked with Public Domain Mark 1.0

¹ Encyclopedia Britannica



Fort McMurray Wildfire



"Air attack on southern Oregon wildfire -- 2015" by BLM Oregon & Washington is licensed under CC BY 2.0



Wildfire Idaho 2013 "Idaho wildfire" by USEWIS Headquarters is licensed under CC BY 2.0

Geological

Earth-driven natural disasters include large volcanic eruptions (which produce lava flows, explosions, toxic gas clouds, ash falls, and pyroclastic flows that damage populated areas) and strong earthquakes (which result from the sudden fracturing of Earth's crust) powerful enough to damage or destroy built-up areas near their origin points.

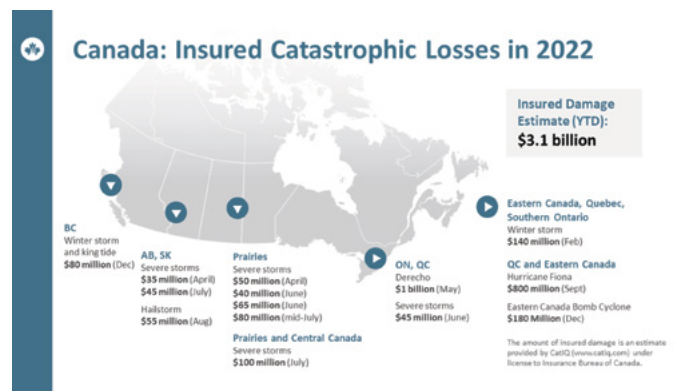


A Damaged Neighbourhood - Mexico city 2017 "A Damaged Neighbourhood (2)" by Carl Campbell is licensed under CC BY 2.0
Note: Earthquake damage in Colonia Hipódromo. A lot of work still needs to be done to clean up this neighbourhood after the 2017 earthquake in Mexico City. Many people here were killed when buildings collapsed.



"Hurricane Dorian aftermath in Halifax, Nova Scotia, Canada (48722056958)" by Coastal Elite from Halifax, Canada is licensed under CC BY-SA 2.0

INSURED DAMAGE MAP 2022



Insurance Bureau of Canada

NATURAL HAZARDS IN THE MAINSTREAM MEDIA

The Insurance Bureau of Canada says that severe weather caused **\$3.1 billion** of insured damages during 2022.²

Flooding, tornadoes and even a hurricane occurred throughout Canada last year, making 2022 the third worst year for insured losses in the nation's history, said the Insurance Bureau. The most expensive extreme weather event for Canada in 2022 was the Ontario and Quebec windstorm in May, which caused \$1 billion in insured damages. The other most expensive weather events last year included Hurricane Fiona, which caused \$800 million in damages, and the summer storms in western Canada that cost \$300 million.

² Insurance Bureau of Canada (2023), Weather Events Caused \$3.1 Billion Of Damages Across Canada in 2022, January 19, 2023

INSURED DAMAGE MAP 2021

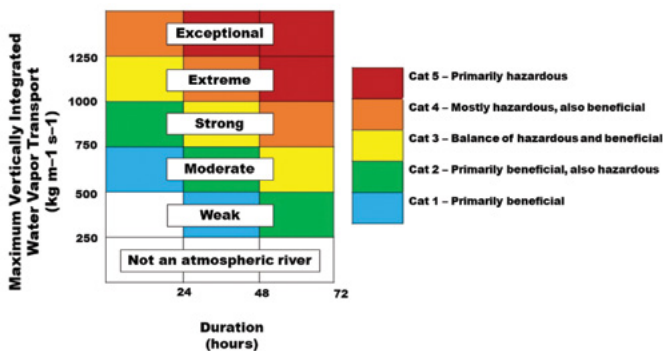


Insurance Bureau of Canada

WEATHER TERMINOLOGY

ATMOSPHERIC RIVER

- The term atmospheric river is used to indicate narrow, elongated corridors of concentrated moisture transport associated with extratropical cyclones. Atmospheric rivers are the largest transport mechanisms of freshwater on Earth. This moisture transport occurs under particular combinations of wind, temperature, and pressure conditions.
- Environment Canada is developing an atmospheric river ranking system to help the public prepare for everything from localized flooding to 'superstorms.'
- California researchers have already developed a rating system for atmospheric rivers, which shows the change in atmospheric moisture over time. That system ranges from AR CAT 1 (primarily beneficial) to AR CAT 5 (primarily destructive). The Canadian scale is looking to build on that, adding the consequences of everything from nuisance flooding to catastrophic flooding affecting half the province.



Source: Ralph, et al (2019), CW3E AR Scale, Bulletin of the American Meteorological Society

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 pot³. 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.⁴

In late June 2021, British Columbia (BC) experienced an unprecedented heat dome which resulted in record temperatures across many parts of the province over several days. Temperatures started to rise on June 24 and continued increasing to a peak on June 28-29. At the peak, temperatures reached over 40°C in many parts of the province. Overnight temperatures were also uncharacteristically high.

³ What is a heat dome? | Royal Meteorological Society (rmets.org)

⁴ Chief Coroner of BC (2022), A Review of Heat-Related Deaths in B.C. in Summer 2021, June 7, 2022

⁵ IBC (2022) Derecho Storm Ranks 6th Largest Insured Loss Event in Canadian History, June 15, 2022

DERECHO

A *derecho* is a widespread, long-lived, straight-line wind storm that is associated with a fast-moving group of severe thunderstorms known as a mesoscale convective system.

Derechos can cause hurricane-force winds, tornadoes, heavy rains, and flash floods. In many cases, convection-induced winds take on a bow echo (backward "C") form of squall line, often forming beneath an area of diverging upper tropospheric winds, and in a region of both rich low-level moisture and warm-air advection.

Derechos move rapidly in the direction of movement of their associated storms, similar to an outflow boundary (gust front), except that the wind remains sustained for a greater period of time (often increasing in strength after onset), and may exceed hurricane-force. A derecho-producing convective system may remain active for many hours and, occasionally, over multiple days

The May 21, 2022 derecho which affected Ontario and Quebec resulted in \$1 billion dollars in insured damage according to IBC. "The powerful storm, described as a derecho, was far-reaching and impacted a densely populated corridor across southern Ontario and into Quebec. Close to 30,000 homes in Ontario and Quebec were without power for more than a week after the storm. Although hail and torrential rain accompanied the storm, wind caused most of the property damage.

The derecho event ranks as the sixth largest in terms of insured losses in Canadian history and is a sobering reminder of the increasing risk climate change poses to communities across Canada. IBC continues to advocate for a National Adaptation Strategy that will result in tangible short-term measures that improve Canada's climate defense. Governments at all levels must act with urgency to prioritize investments that reduce the impact of these severe weather events on families and communities."⁵

"More can be done to prevent damage and injuries from severe wind events through low-cost and effective changes to national and provincial building codes. Canada must develop a comprehensive plan to close governance gaps and improve climate defence overall. This also includes investments in new infrastructure to lessen the impact of floods and fires on communities, better land-use planning and, increasingly, the creation of incentives to shift the development of homes and businesses away from areas of highest risk."

POLAR VORTEX

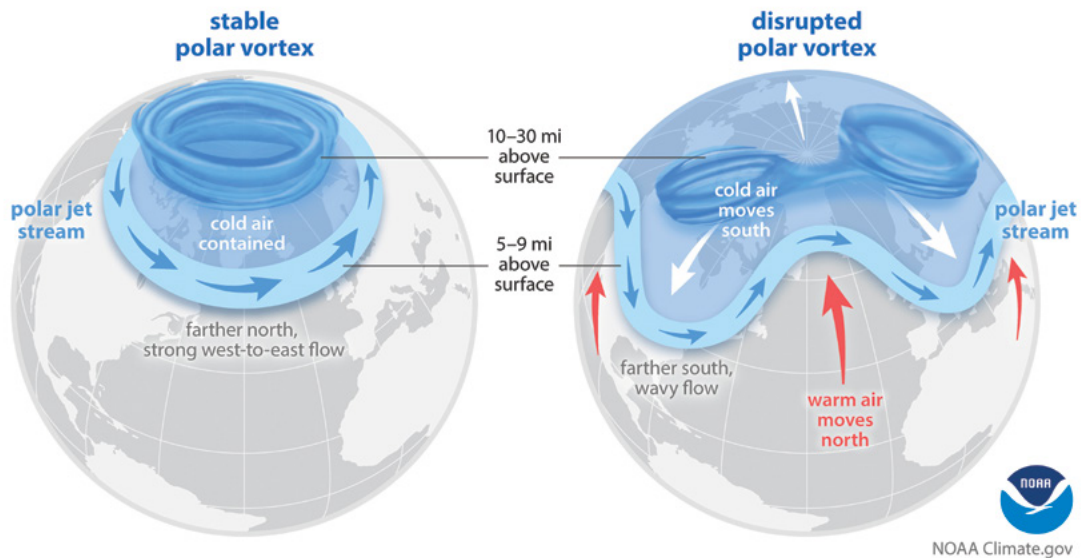
The polar vortex is a large area of low pressure and cold air surrounding both of the Earth's poles. It always exists near the poles, but weakens in summer and strengthens in winter. The term "vortex" refers to the counter-clockwise flow of air that helps keep the colder air near the Poles. Many times, during winter in the northern hemisphere, the polar vortex will expand, sending cold air southward with the jet stream (see graphic below. This occurs fairly regularly during wintertime and is often associated with large outbreaks of Arctic air in Canada and the United States.

Understanding the polar vortex

The Arctic polar vortex is a strong band of winds in the stratosphere, surrounding the North Pole 10–30 miles above the surface.

The polar vortex is far above and typically does not interact with the polar jet stream, the flow of winds in the troposphere 5–9 miles above the surface. But when the polar vortex is especially strong and stable, the jet stream stays farther north and has fewer “kinks.” This keeps cold air contained over the Arctic and the mid-latitudes warmer than usual.

Every other year or so, the Arctic polar vortex dramatically weakens. The vortex can be pushed off the pole or split into two. Sometimes the polar jet stream mirrors this stratospheric upheaval, becoming weaker or wavy. At the surface, cold air is pushed southward to the mid-latitudes, and warm air is drawn up into the Arctic.



CSIS Warns Climate Change Threatens Canadian Security, Prosperity⁶

“Canada’s spy service warns that climate change poses a profound, ongoing threat to national security and prosperity, including the possible loss of parts of British Columbia and the Atlantic Provinces to rising sea levels.” The CSIS brief “says the Arctic’s receding ice coverage will allow for routine navigation of the Northwest Passage and extraction of oil and mineral deposits in the region might become more economically viable. Great power competition for Arctic access, influence and control will likely intensify. There will be an escalating risk from significant Russian military activity and a growing China presence in this vital region.” As reported by Jim Bronskill, The Canadian Press on March 05, 2023.

You won’t want to miss reading this concerning but very interesting article. [Read the Article](#)

New Federal Rules Call for Financial Institutions to Bolster Climate Disclosure, Risk Management⁷

“Canada’s big banks and insurance companies should combine efforts to minimize climate-related risks in their overall business strategies, and they should tie top executives’ pay to meeting those objectives, the industry’s federal regulator says in a new set of climate-risk guidelines released on Tuesday”

“But in the new guidelines, the Office of the Superintendent of Financial Institutions, or OSFI, stops short of prescribing specific increases in capital buffers to deal with a range of physical and policy risks stemming from climate change including potential fallout from shifts in the economy related to meeting national commitments to decarbonization. Instead, OSFI says, financial institutions should incorporate potential consequences of climate change into their risk profiles and account for a range of possible climate-related outcomes when assessing whether the capital they hold in reserve is adequate. The regulator also ruled out a proposal by environmental activists to assign higher risk factors and capital requirements to fossil-fuel lending and investments.” As reported by Jeffrey Jones, in The Globe And Mail on March 7, 2023.

Don’t miss reading this very important article. [Read the Article](#)

⁶ Bronskill, Jim (2023) Canadian Press, March 5, 2023

⁷ Jones, Jeffery (2013), New Federal Rules Call for Financial Institutions to Bolster Climate Disclosure, Risk Management, Globe & Mail. March 7, 2022

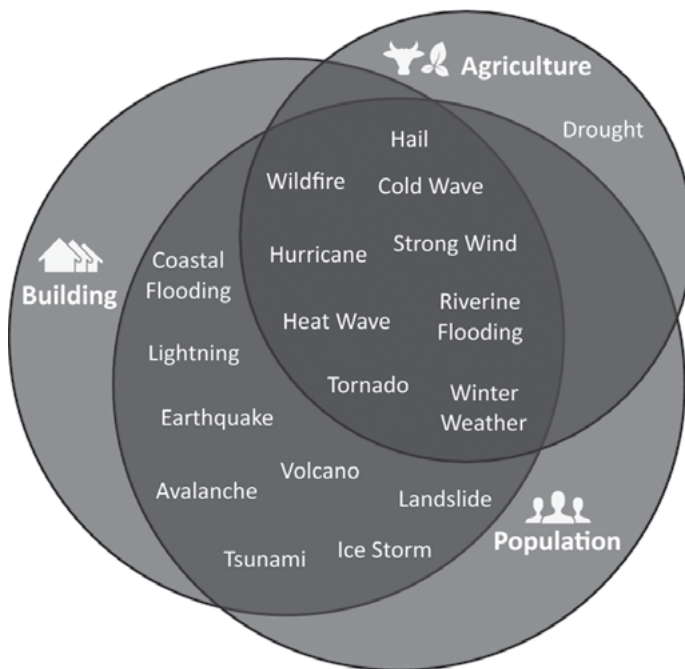
CLIMATE RISK INDEX FOR CANADA

In the fall of 2021, leaders from across the housing supply chain were invited to develop a framework to communicate natural hazards and climate risk to homeowners and tools to use across the **housing finance and insurance sectors**. The findings are published in the report, **Designing the Path to Climate Compatibility: Climate Risk Disclosure and Action in the Canadian Housing Context**.

- The report recommends the following immediate action items.
- Create a **Real Estate Climate Risk Index and Action Matrix** for communities, municipalities and homeowners.
- **Update flood maps and create maps for all hazards and climate risks.**
- Create a **Risk Action Matrix for lenders and insurers.**
- Create single-source disclosure data that is transparent, reliable and accessible.
- Create a **publicly accessible property-level database that stores information about individual property risk and mitigation.**
- Ensure local and regional governments are at the forefront of risk disclosure.

CLIMATE RISK INDEX USA

The Federal Emergency Management Authority (FEMA) has produced a climate risk index for the United States. The following diagram summarizes its key components:



A recent article in the *Appraisal Journal*, *Economic Perspectives: Environmental Risks and Investments*⁸, it is suggested that “Appraisers sensitive to the relative probability of a location’s natural disaster exposure can perhaps begin by referencing FEMA’s risk maps, which not only discuss the hazard risk itself but also measure a location’s capacity to rebound from severe events”.

⁸ Kelly, Hugh, F., PhD, CRE, (2022), *Economic Perspectives: Environmental Risks and Investments*, *Appraisal Journal*, Spring 2022, p 134-139.

⁹ See Public Safety Canada’s [Canadian Disaster Database](#)

¹⁰ [Thibaut Duprey, Colin Jones, Callie Symmers, Geneviève Vallée](#) (2021) *Household Financial Vulnerabilities and Physical Climate Risks*, Staff Analytical Note 2021-19 (English), August 2021

CANADA CLIMATE RISK INDEX

Canada’s Climate Risk system is based on the following meteorological and geological factors.

METEOROLOGICAL	GEOLOGICAL
• Tornado/Windstorm	• Tsunami
• Hail/Snow/Ice Storm	• Earthquake
• Flood/Storm Surge	• Land/Mudslide
• Avalanche	• Land Subsidence
• Forest Fire	• Volcanic Eruption
• Drought	• Iceberg/Glacier
• Extreme Temperatures	• Space Weather

Bank of Canada on Climate Risk

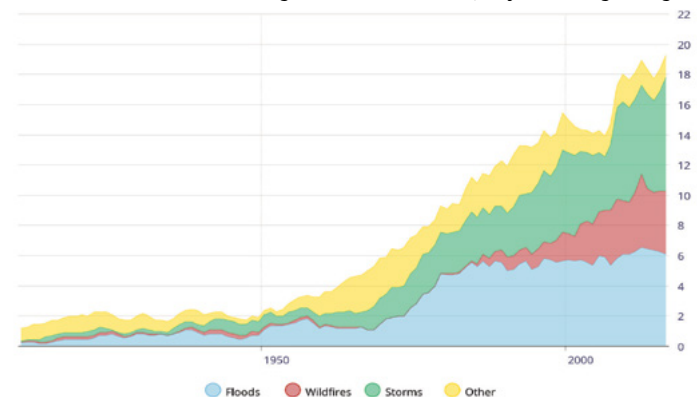
The Canadian Disaster Database compiled by Public Safety Canada tracks disasters that meet criteria outlined in the Emergency Management Framework for Canada. A disaster is defined as a hazard that affects a vulnerable community “in a way that exceeds or overwhelms that community’s ability to cope and may cause harm to the safety, health, welfare, property or environment of those people”.⁹ To be included in the database, a disaster event must meet at least one of the following criteria:

- 10 or more people killed
- 100 or more people injured, evacuated or left homeless
- an appeal for national or international assistance
- historical significance
- significant damage or interruption affecting the community’s ability to recover on its own.

Categories include avalanches, cold events, droughts, earthquakes, floods, heat events, hurricanes, landslides, storm surges, severe thunderstorms, tornadoes, tsunamis, wildfires, winter storms and unspecified storms.

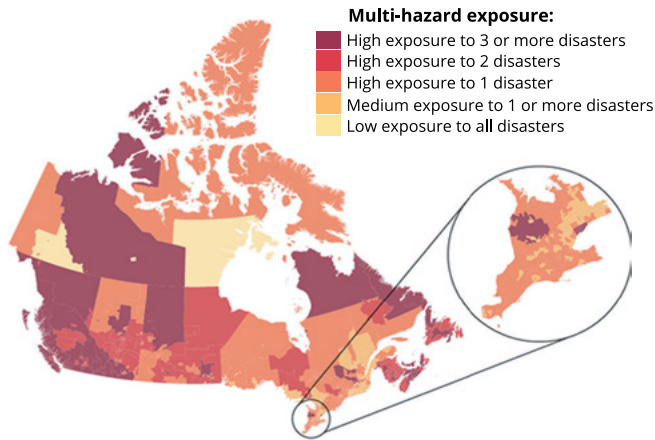
The Bank of Canada published a staff paper entitled [Household Financial Vulnerabilities and Physical Climate Risks](#)¹⁰, with the following illustrations:

Chart 1: The frequency of natural disaster events has increased over time
Number of natural disasters registered across Canada, 10-year moving average



Note: Some of the increase in the number of natural disasters over time likely reflects more systematic reporting and better measurement by authorities. Sources: Canadian Disaster Database and Bank of Canada calculations. Last observation: 2016

Chart 2: Exposure to different types of natural disasters varies by region across Canada
Multi-hazard exposure index, by forward sortation area



The multi-hazard exposure rating is similar to the rating being advocated by the Insurance Bureau of Canada in the report, [Designing the Path to Climate Compatibility: Climate Risk Disclosure and Action in the Canadian Housing Context](#).

This is a wake-up call for appraisers, that both the Canadian Financial and Insurance Industry are considering the risk associated with natural disasters, whatever their causes.

DO YOU KNOW YOUR HOME'S CLIMATE RISK SCORE? ¹¹

The U.S. online real estate climate risk calculator ClimateCheck has partnered with the Montreal-based platform Local Logic, to provide climate risk scores, now available for the first time in Canada. They are already live on Royal LePage listings and coming soon to Sotheby's International Realty Canada, and REW.ca

Those rankings are part of a new online real estate tool now being used in Canada that attaches climate risk scores to listings, helping owners and prospective buyers understand how the climate crisis will impact their own backyards.



WildFire Joshua Park "Post-wildfire scene" by Joshua Tree National Park is marked with [Public Domain Mark 1.0](#).

RELEVANCE FOR APPRAISERS

CUSPAP 2022 requires identification of detrimental conditions in appraisal reports.

CUSPAP 2022

3.20 DETRIMENTAL CONDITION:

An issue or condition that may cause a decrease in value including:

- General
- Transactional
- Distress and sociological
- Legal
- External
- Building and manufacturing
- Site and infrastructure
- Environmental and biomedical
- Conservation; and/or
- Natural and climate

FOCUS ON NATURAL AND CLIMATE CONDITIONS

Our focus is on **Detrimental Condition Type X: Natural and Climate Conditions** Natural disaster and weather issues - Flood, hurricane, typhoon, wildfire, seismic, volcano, tornado, global warming, tsunami, famine, drought, storms, etc.

A list of natural hazards includes the following:

Types of Natural Hazard	
Geological	Hydrometeorological
Earthquakes	Storms (Snow, Ice, Hail, Lightning)
Avalanches	Hurricanes
Landslides	Tornadoes
Tsunamis	Heat Wave, Cold Wave
	Floods, Droughts

Source: Agrawal, Nirupama (2018), *Natural Disasters and Risk Management in Canada*

REAL ESTATE DAMAGES ARTICLE

An article by Randell Bell, *Real Estate Damages: The Appraisal of Properties Impacted by Detrimental Conditions in Canadian Property Valuation*¹² elaborates on the concept of detrimental conditions:

Cost-Use-Risk Valuation Methodology

Along with the three stages of detrimental conditions, there are three sub-issues to consider within each stage. These are, **(1) cost, (2) use, and (3) risk.**

Cost effects primarily represent deductions for costs to repair or remediate a detrimental condition. These costs are usually estimated by someone other than the appraiser, and should include consideration of any increased operating costs due to property remediation. The valuation professionals should also be aware that the market might not recognize all estimated costs as having an effect on value.

¹¹ Warren, May (2023). *Do You Know Your Home's Climate Risk Score?* *Toronto Star*, February 6, 2023
¹² Bell, Randell, PhD, MAI, (2020), *Real Estate Damages: The Appraisal of Properties Impacted by Detrimental Conditions in Canadian Property Valuation* Volume 64 | Book 2 / Tome 2 | 2020

Use effects reflect impacts on the utility of the site as a result of the detrimental condition. If the detrimental condition or its remediation rendered a portion of the site unusable, or limited the future highest and best use of the property, then there could be a use impact. The key question is whether or not the normal use and enjoyment of the property were impaired. In considering this, it can be useful to analyze the bundle of rights, including but not limited to the right to sell, the right to lease, the right to occupy, the right to mortgage, and the right to bequest (give away). Some relevant use analyses include: loss of use, project delay, ground lease analysis, temporary construction easements, a study of income and yield capitalization rates, and so forth.

Detrimental Conditions and Time Stage Matrix for Natural and Climate Conditions:

		DETRIMENTAL CONDITIONS TIME STAGE		
		ASSESSMENT	REPAIR	ON-GOING
DETRIMENTAL CONDITION ISSUES	COSTS	Assess Damages & Responsibility Severe Moderate Minor	Repair Costs & Responsibility Demolition & Repair Contingencies	On-going costs Infrastructure damages Higher costs due to New Building Codes
	USES	All loss of utility while assessed Disruptions Safety Concerns Temporary housing	All loss of utility while repaired Income loss Expense increase Use restrictions	Ongoing disruptions Limitations on highest & best use Planning Limitations
	RISK	Uncertainty factor Discount if any If extent of damage is unknown	Insured or not EMO or other assistance Financial incentives if any to complete repairs	Market resistance Residual resistance if any due to situation

Risk effects, which are sometimes called by their nickname of 'stigma' often represent the most challenging part of the appraisal assignment. These effects are derived from the market's perception of increased risk and uncertainty. In other words, the question is whether or not the detrimental condition, even after any repairs, has incurred any market resistance due to the disclosure of the condition? The analysis of the effects of increased risk and uncertainty on property value must be based on market data, rather than unsupported opinion or judgment.

DAMAGE ASSESSMENT

The effect of a natural disaster on real estate is usually the responsibility of the Insurance Industry and Emergency Management Organizations (EMO). The typical process would be as follows:

Detrimental Condition Timeline

Detrimental conditions often involve a timeline, which is directly tied to the date of value.

There are three stages to the lifecycle of a detrimental condition. These are, (1) the assessment (before repair), (2) repair (during repair), and (3) ongoing (after repair).

While not every stage is necessarily relevant to every detrimental condition assignment, they should all be considered.

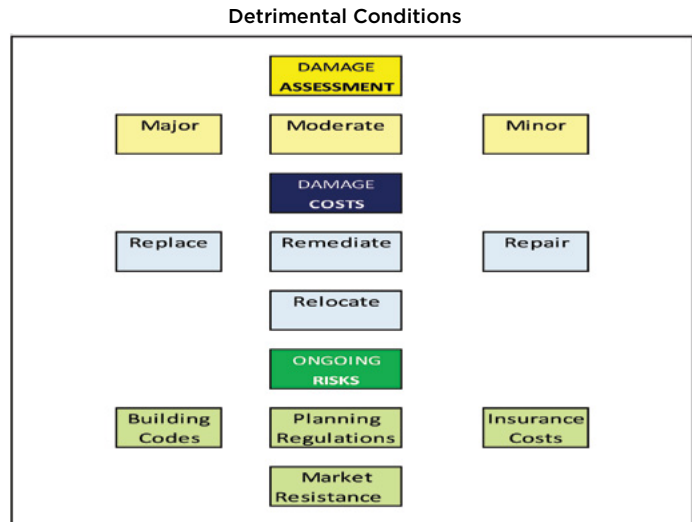
The assessment stage occurs when a property is being assessed, usually by engineers, contractors, or other qualified experts. Often during this stage, the extent of risks associated with a detrimental condition are still being characterized.

The repair stage occurs if repairs are required, and takes place after the assessment stage.

The ongoing stage involves post-repair issues and may reflect continuing or subsequent problems associated with a detrimental condition.

The key question is whether or not the **normal use and enjoyment** of the property were impaired.

The top table is our adaptation of **Bell's Detrimental Conditions and Time Stage Matrix for Natural and Climate Conditions:**



PUBLICATIONS ON NATURAL DISASTER VALUATION

The Appraisal Institute's "Guide Note 10: Development of an Opinion of Market Value in the Aftermath of a Disaster" addresses how real property markets in affected areas often exhibit instability, even chaos, and how analyzing data in such markets presents an array of challenges. The Guide Note, revised in 2018, also discusses how valuation professionals can develop credible opinions of market value in the aftermath of a disaster.

GUIDE NOTE

- The Guide Note explores how property utility might be impacted by damage or destruction;
- Properties might be more scarce because damaged or destroyed properties are removed from the overall supply;
- Desire for property might increase because displaced homes and businesses need replacement space;
- Effective purchasing power might be impacted by changes in lending policies and practices in the area in response to the disaster.

STANDARD PRACTICES

1. Developing an opinion of value in the aftermath of a disaster might require competency that surpasses or is different from that required prior to the disaster.
2. The characteristics of the applicable definition of market value must be carefully examined when appraising in a chaotic or unstable market.
3. Valuation in the aftermath of a disaster requires special attention to the fundamental appraisal principles of supply and demand, anticipation, change, substitution, contribution, externalities, and balance.
4. Transactions that occurred prior to the disaster will not reflect the same market conditions as those occurring after. Ideally, comparable data must be selected from the same market area and must be subject to the same market conditions as the subject property.
5. In appraisal assignments for which the date of value is a retrospective date prior to the disaster, the appraiser must rely on comparable sales that occurred prior to that retrospective value date.
6. In appraisal assignments for which the date of value is a retrospective date prior to the disaster, the appraiser must rely on the best available information concerning the nature of the subject property as of the date of value. Such an appraisal would be based on one or more extraordinary/special assumptions about the property condition and other characteristics that are as presumed to be true in the appraisal assignment.
7. Unless the appraiser possesses the requisite competency to make judgments about these matters, the appraiser must not take on assignments that require competency that is beyond that of a real property appraiser.

VALUATION CONSIDERATIONS

Appraisers will have many issues to consider when valuing in a natural disaster situation. They will include:

SUPPLY DEMAND IMBALANCE

SUPPLY AND DEMAND

Imbalance in supply and demand
Supply affected by damage
Demand may increase

After a natural disaster there will be an imbalance of supply and demand for real estate as a result of the diminishment of supply caused by the disaster. Those affected by the damage may increase demand on the undamaged properties.

EXPOSURE TIME

EXPOSURE TIME

Exposure time abnormal in crisis
Shortage of supply
Desire to relocate

The definition of market value assumes normal exposure time. The shortage of supply and/or the desire to relocate may affect exposure time after a natural disaster.

BUYER/SELLER MOTIVATION

BUYER AND SELLER MOTIVATION

Buyers

Undamaged property shortage
Damaged property discounts

Sellers

Shortage of Supply
Desire to relocate

Buyers may bid up the price of undamaged properties after a natural disaster and may also discount the price for damaged properties. Sellers may raise prices for undamaged properties after a natural disaster and may also discount the price by their desire to relocate.

APPRAISERS

APPRAISERS

Damage Inspection work
Repair cost estimation
Insurance Compensation
Lender assignments
EMO Assistance

After a natural disaster appraisers may be asked to assist in the inspection and determination of repair costs for exposed Lenders and Insurers. EMO may request assistance in the assessment of damages and potential Government Assistance.

APPRAISAL BASIS

APPRAISAL BASIS

Retrospective
Current
Prospective

Appraisers may be asked by exposed Lenders and Insurers to perform retrospective valuations in a market where the comparables may have been damaged. In a similar fashion current and prospective valuations may be difficult.

DAMAGE EFFECTS

DISASTER EFFECTS

Unable to inspect comparables
Damage effects
Repair Costs
Effect of new building codes/planning regulations

The damage from a natural disaster may make it unsafe to inspect comparables. The valuer may need to estimate damages and potential repair costs in a market where logistics and construction materials are difficult. Also the imposition of new building codes may complicate the valuation process.

INFRASTRUCTURE DAMAGES

INFRASTRUCTURE

Utilities
Communciations
Transportation

The effect of damage to infrastructure may influence the economic viability of various type of real estate.

OTHER ISSUES

OTHER ISSUES
Temporary Shelter
Emergency Facilities
Business Disruptions

Other issues may affect the valuation process such as the existence of temporary shelter, emergency facilities and business disruptions.

APPRAISAL METHODS

APPRAISAL METHODS
Sales Approach
Cost Approach
Income Approach

Appraiser will rely on the usual three approaches to value after a natural disaster. However various issues may complicate the normal valuation process.

SALES COMPARISON APPROACH

SALES COMPARABLES
Shortage of Sales Comparables
Sales Motivation
Effect of Damage
Difficulty in examining comparables

There may be a shortage of sales comparable after a natural disaster and motivation of buyers and sellers may change. The effects of damage may influence the market. It may be difficult to examine comparables.

COST APPROACH

COST APPROACH
Repair costs may be excessive
Shortage of materials/labour
Insurance Coverage effects
EMO Assistance

Repair costs after a disaster may be excessive because of a shortage of construction materials and labour. The effect of Insurance Coverage may influence the extent and types of repairs. The extent EMO assistance may also play a role.

INCOME APPROACH

INCOME APPROACH
Rental Effects
Vacancy Effects
Operating Costs
Capitalization Rates
Damage Repair Costs

There may be effects of all or any of the parameters associated with the Income Approach

- Rents
- Vacancy
- Operating Costs
- Capitalization Rates

Another factor to consider will be repair costs and the extent of insurance coverage and EMO assistance programs.

RISK ASSESSMENT

Risk from natural hazards is based on two broad concepts:

Risk Index = Likelihood x Impact

Hazard Likelihood

This reflects the expected frequency of the hazard. The more frequent the return in years the higher likelihood the hazards will occur.

Likelihood Ranking			
Return Period (years)		Likelihood	Rank
Low	High		
1	5	Very Likely	5
5	10	Likely	4
10	30	Slight Chance	3
30	100	Unlikely	2
>	100	Very Unlikely	1

Hazard Impact

Each type of hazard can vary in terms of its impact in terms of:

- Fatalities
- Injuries
- Critical Infrastructure
- Property Damage
- Environmental Impact
- Economic and Social Impact

The table to the right suggests an Impact measurement system:

HAZARD IMPACTS				
Category	Details	Assessment	Description	Rank
Fatality		0-4	Very Low	1
		4-10	Low	2
		10-50	High	3
		50+	Very High	4
Injury	Includes Homelass and Missing	0-4	Very Low	1
		4-50	Low	2
		50-2,000	High	3
		2000 +	Very High	4
Critical Infrastructure	Hospitals, Schools, Transportation and Utilites	Temporary Interruption	Very Low	1
		Closure of a few days	Low	2
		Loss of 50% Capability	High	3
		Permanent Loss	Very High	4
Property Damage	Public, Commercial, Residential	Minimal Damage	Very Low	1
		Localized Damage	Low	2
		Localized and Severe	High	3
		Widespread & Severe Damage	Very High	4
Environmental Impact	Green/Parks Toxic Releases	Minimal Damage	Very Low	1
		Localized Damage	Low	2
		Localized and Severe	High	3
		Widespread & Severe Damage	Very High	4
Economic and Social Impact	Industries, Businesses and Employers	Temporary Impact	Very Low	1
		Temporary & Widespread	Low	2
		Extended & Widespread	High	3
		Permanent Impact	Very High	4

Source: Agrawal, Niruama (2018) Natural Disasters and Risk Management In Canada p. 310

Risk Assessment System

To the right is a form of hazard risk assessment based on the concept of likelihood and impact.

Risk Assessment					
SN	HAZARD	(1)	(2)	(3)	RI %
		LIKELIHOOD	IMPACT	RISK INDEX	
				(1) x (2)	(3)/20 x 100
1	Winter Storm	5	3	15	75
2	Wildfire	4	1	4	20
3	Land Subsidence	4	2	8	40
4	Tornado	4	3	12	60
5	Epidemic	3	4	12	60
6	Extreme Heat	3	3	9	45
7	Landslide	2	2	4	20
8	Expansive Soil	2	2	4	20
9	Hurricane	2	4	8	40
10	Earthquake	1	3	3	15
11	Hail Storm/Wind Storm	3	1	3	15
12	Flash Flood	3	4	12	60

Maximum Value of RI = 20 (based on maximum rank of Likelihood = 5 and Impact = 4)
 Source: Agrawal, Niruama (2018) Natural Disasters and Risk Management In Canada p. 311

SPECIFIC NATURAL HAZARD IMPACTS

Avalanche Rating



Landslide Mountain "Landslide" by [crestedcrazy](#) is licensed under [CC BY 2.0](#).

North American Public Avalanche Danger Scale			
Avalanche danger is determined by the likelihood, size, and distribution of avalanches. Safe backcountry travel requires training and experience. You control your risk by choosing when, where, and how you travel.			
Danger Level	Travel Advice	Likelihood	Size and Distribution
5 - Extreme	Extraordinarily dangerous avalanche conditions. Avoid all avalanche terrain.	Natural and human-triggered avalanches certain.	Very large avalanches in many areas.
4 - High	Very dangerous avalanche conditions. Travel in avalanche terrain not recommended.	Natural avalanches likely; human-triggered avalanches very likely.	Large avalanches in many areas; or very large avalanches in specific areas.
3 - Considerable	Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding, and conservative decision-making essential.	Natural avalanches possible; human-triggered avalanches likely.	Small avalanches in many areas; or large avalanches in specific areas; or very large avalanches in isolated areas.
2 - Moderate	Heightened avalanche conditions on specific terrain features. Evaluate snow and terrain carefully; identify features of concern.	Natural avalanches unlikely; human-triggered avalanches possible.	Small avalanches in specific areas; or large avalanches in isolated areas.
1 - Low	Generally safe avalanche conditions. Watch for unstable snow on isolated terrain features.	Natural and human-triggered avalanches unlikely.	Small avalanches in isolated areas or extreme terrain.

Drought



Agriculture during the 2012 drought in Oxfordshire, UK" by [Global Water Forum](#) is licensed under [CC BY 2.0](#).

Drought Response Levels Summary

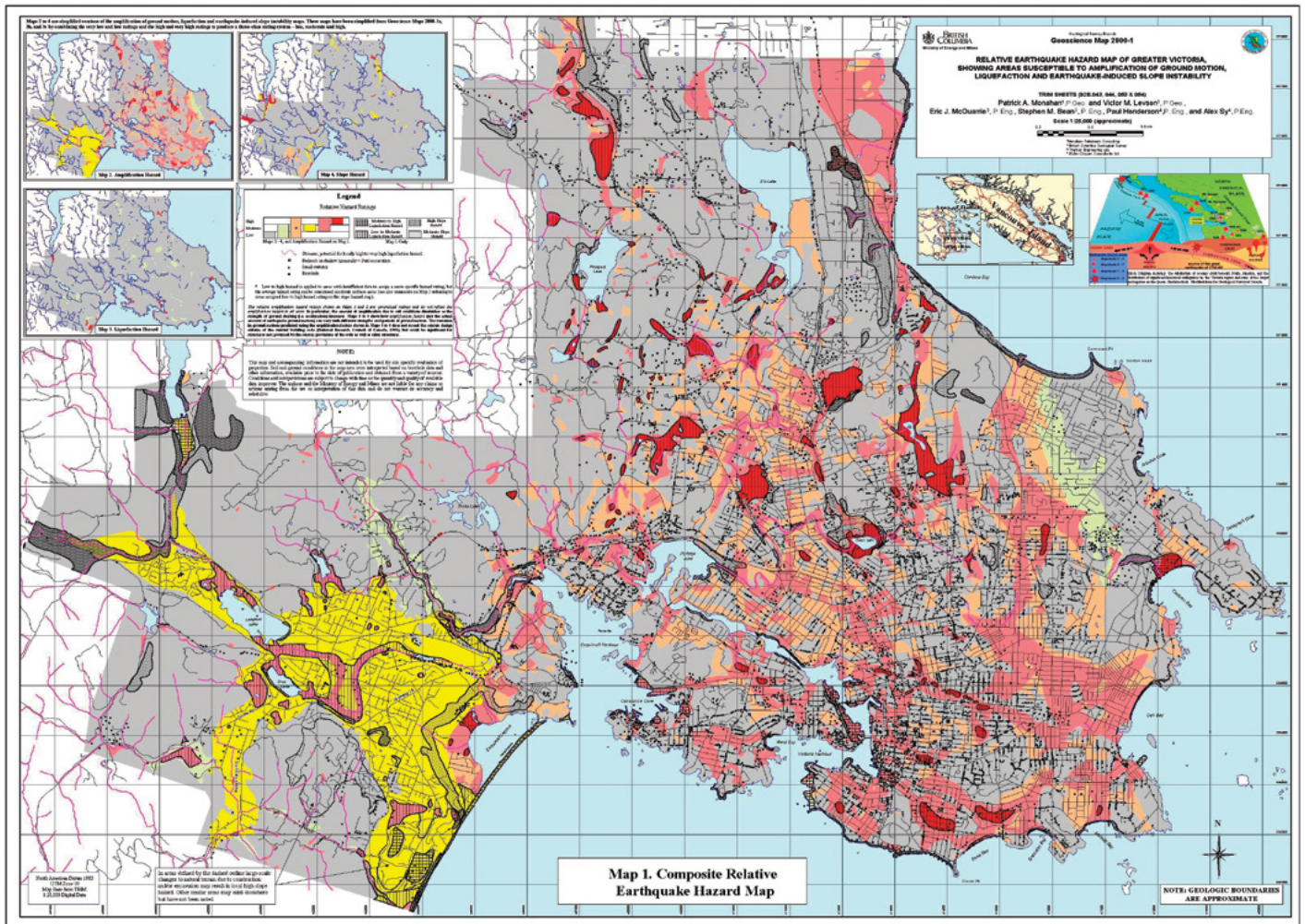
Level	Conditions	Significance	Objective	Target
1 (Green)	Normal Conditions	There is sufficient water to meet human and ecosystem needs	Preparedness	Ongoing reductions in community water use
2 (Yellow)	Dry Conditions	First indications of a potential water supply problem	Voluntary conservation	Minimum 10% reduction
3 (Orange)	Very Dry Conditions	Potentially serious ecosystem or socioeconomic impacts are possible	Voluntary conservation and restrictions	Minimum additional 20% reduction to a minimum total of 30%
4 (Red)	Extremely Dry Conditions	Water supply insufficient to meet socio-economic and ecosystem needs	Voluntary conservation, restrictions and regulatory response	Maximum reduction
Loss of Supply		Potential loss of a community's potable or fire fighting supply	Emergency response	Ensure health and safety

PHIVOLCS Earthquake Intensity Scale (PEIS)



Earthquake Bridge credit "Northridge, CA Earthquake, 1994" by U.S. Geological Survey is marked with CC0 1.0

INTENSITY SCALE	SHAKING	DESCRIPTION
1	Scarcely Perceptible	<ul style="list-style-type: none"> Water in containers move slowly Felt by some people
2	Slightly Felt	<ul style="list-style-type: none"> Felt by people at rest Water in containers move noticeably Hanging objects swing slightly
3	Weak	<ul style="list-style-type: none"> Felt by people indoors Hanging objects swing moderately Can cause dizziness or nausea in some people
4	Moderately Strong	<ul style="list-style-type: none"> Felt by people indoors and outdoors Hanging objects swing considerably Objects start to rattle and wood starts to creak Rumbling sounds can be heard
5	Strong	<ul style="list-style-type: none"> Some sleeping people are awakened Strong shaking and rocking felt indoors Small, light, and unstable objects may fall and break
6	Very Strong	<ul style="list-style-type: none"> Some people lose balance Heavy objects and furniture move Old or poorly-built structures may be damaged Possible rock falls and rolling boulders may occur in hillsides
7	Destructive	<ul style="list-style-type: none"> Heavy objects or furniture may topple or overturn Old or poorly-built structures suffer considerable damage Liquefaction, lateral spreading, and landslides are observed
8	Very Destructive	<ul style="list-style-type: none"> People find it hard to stand even outdoors Well-built buildings are considerably damaged Considerable liquefaction and lateral spreading cause damage to property Numerous landslides and rock falls occur in mountainous or hilly areas Fissures and fault ruptures may be observed
9	Devastating	<ul style="list-style-type: none"> People are forcibly thrown to the ground Most buildings are totally damaged Bridges and elevated concrete structures destroyed Widespread liquefaction and landslides River water splashes violently over dikes and banks
10	Completely Devastating	<ul style="list-style-type: none"> Man-made structures are destroyed Massive landslides and large scale liquefaction and subsidence Changes in river courses and destructive lake seiches Many trees are toppled, broken, and unrooted



Earthquake Hazard Map Victoria BC

Floods Risk Evaluation

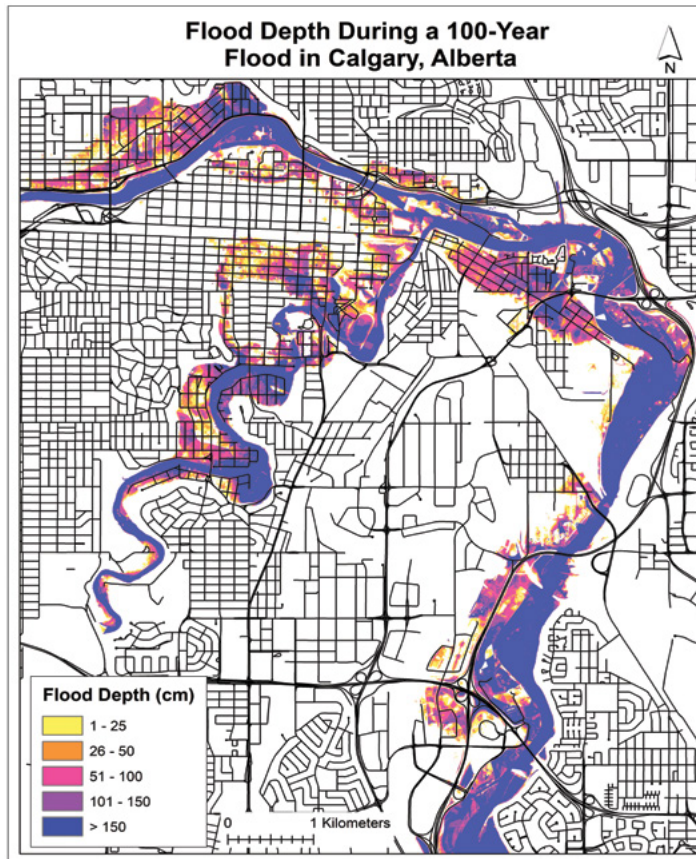
Source: Engineers & Geoscientists BC (2018)
**Professional Practice Guidelines Legislated
 Flood Assessments in a Changing Climate
 in BC**



Flooding in Cedar Rapids, IA by U.S. Geological Survey is marked with CC0 1.0.*

			RISK EVALUATION AND RESPONSE					
			VH	Very High	Risk is unacceptable short-term (before next flood season); Risk reduction required; long-term Risk reduction plan must be developed and implemented			
			H	High	Risk is unacceptable; medium-term Risk reduction plan must be developed and implemented in a reasonable (<5 years) time frame; planning should begin as soon as feasible			
			M	Moderate	Risk may be tolerable; more detailed review required; reduce Risk to low where reasonably practicable			
			L	Low	Risk is tolerable; continue to monitor if resources allow			
			VL	Very Low	Risk is broadly acceptable; no further review or Risk reduction required			
LIKELIHOOD DESCRIPTIONS Likelihood of Undesirable Outcome		PROBABILITY RANGE						
LIKELIHOOD DESCRIPTIONS								
Scenario can be expected on average every other year	Very Likely	0.5 – 0.2	M	H	H	VH	VH	VH
Scenario typically occurs on average every 10 years	Likely	0.2 – 0.07	L	M	H	H	VH	VH
Scenario typically occurs on average every 50 years	Moderate	0.07 – 0.02	L	L	M	H	H	VH
Scenario occurs on average every 100 years	Unlikely	0.02 – 0.007	VL	L	L	M	H	H
Scenario occurs on average every 200 years	Very Unlikely	0.007 – 0.004	VL	VL	L	L	M	H
Scenario occurs on average every 500 years	Extremely Unlikely	0.004 – 0.0013	VL	VL	VL	L	L	M
CONSEQUENCE DESCRIPTIONS	INDICES		1	2	3	4	5	6
	SAFETY (INJURY/LOSS OF LIFE)		Negligible Minor injuries of few individuals	Minor Major injury of 1 person	Moderate Major injury of several persons	Major Single fatality	Severe <10 fatalities	Catastrophic >10 fatalities
	ECONOMIC (MONETARY LOSSES)		Negligible; no business interruption; <\$1,000	Some asset loss; <\$10,000 damages	Serious asset loss; several days business interruption; <\$100,000	Major asset loss; several weeks business interruption; <\$1 million	Severe asset loss; several months business interruption; <\$10 million	Total loss of asset; 1 year or more business interruption; >\$10 million
	SOCIAL AND CULTURAL		Negligible impact	Slight impact; recoverable within days	Moderate impact; recoverable within weeks	Recoverable within months	Long-term (years) loss of social and cultural values	Complete loss of significant social and cultural values
	INTANGIBLES (PERSONAL SUFFERING)		Negligible impact	Slight impact; recoverable within days	Moderate impact; recoverable within weeks	Personal hardship; usually recoverable within months	Leaves significant personal hardship for years	Irreparable personal hardship
	ECOLOGICAL (FLORA AND FAUNA)		Negligible impact	Slight impact; recoverable within days	Moderate impact; recoverable within weeks	Recoverable within months	Severe species loss	Irreparable species loss

Figure E- 4: Example Risk matrix to determine the relative level of flood Risk for Proposed Development.



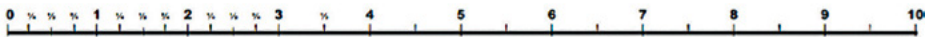
100 Year Flood Depth Calgary

Hail

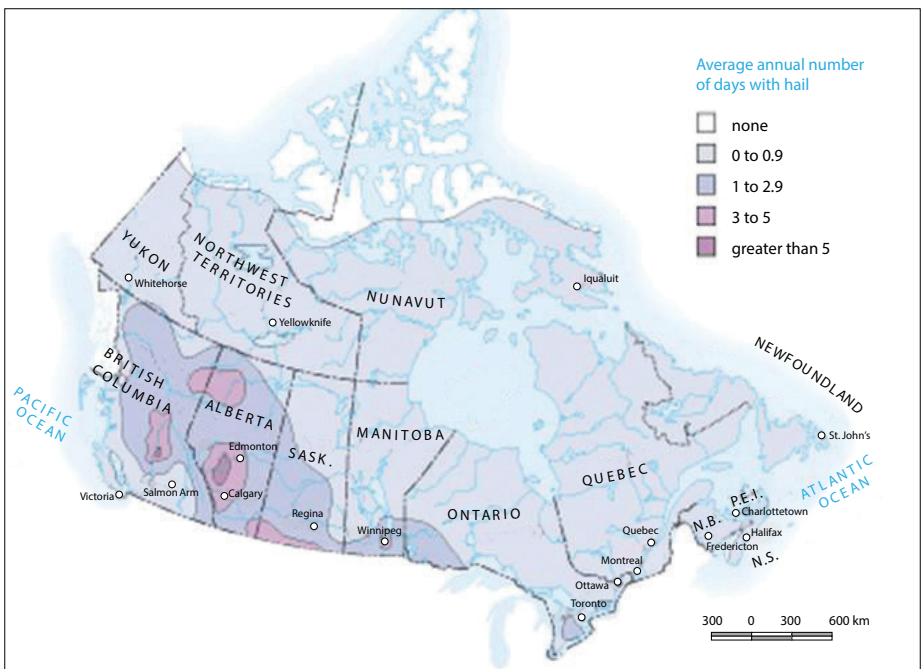
Hail Size Description Chart		
Hailstone size	Measurement	
	in.	cm.
bb	< 1/4	< 0.64
pea	1/4	0.64
dime	7/10	1.8
penny	3/4	1.9
nickel	7/8	2.2
quarter	1	2.5
half dollar	1 1/4	3.2
golf ball	1 3/4	4.4
billiard ball	2 1/8	5.4
tennis ball	2 1/2	6.4
baseball	2 3/4	7.0
softball	3.8	9.7
Compact disc / DVD	4 3/4	12.1

Note: Hail size refers to the diameter of the hailstone.

Hail Size. Source: National Atmospheric and Ocean Administration



Hail balls on ground credit "Hail after the storm" by relux, is licensed under CC BY-SA 2.0



Average Number of Days with Hail Canada

Heat Wave: The Humidex



Heat Wave birds credit "Heat wave 2012" by daBinsi is licensed under CC BY 2.0

Temperature (°C)	Relative humidity (%)																	
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	
21 °C	29	29	28	27	27	26	26	24	24	23	23	22						
22 °C	31	29	29	28	28	27	26	26	24	24	23	23						
23 °C	33	32	32	31	30	29	28	27	27	26	25	24	23					
24 °C	35	34	33	33	32	31	30	29	28	28	27	26	26	25				
25 °C	37	36	35	34	33	33	32	31	30	29	28	27	27	26				
26 °C	39	38	37	36	35	34	33	32	31	31	29	28	28	27				
27 °C	41	40	39	38	37	36	35	34	33	32	31	30	29	28	28			
28 °C	43	42	41	41	39	38	37	36	35	34	33	32	31	29	28			
29 °C	45	45	44	43	42	41	39	38	37	36	34	33	32	31	30			
30 °C	47	47	46	44	43	42	41	40	38	37	36	35	34	33	31	31		
31 °C	49	49	48	46	45	44	43	41	40	39	38	36	35	34	33	31		
32 °C	51	51	50	49	47	46	45	43	42	41	39	38	37	36	34	33		
33 °C	53	53	52	51	50	48	47	45	44	43	42	40	38	37	36	34		
34 °C	55	55	54	53	52	51	49	48	46	45	43	42	41	39	37	36		
35 °C	57	57	56	55	54	52	51	49	48	46	45	43	42	41	38	37		
36 °C	59	59	58	57	56	54	53	51	50	48	47	45	43	42	40	38		
37 °C	61	61	60	59	58	56	55	53	52	50	49	47	45	43	42	40		
38 °C	63	63	62	61	60	58	57	55	54	52	51	49	47	45	43	42	40	
39 °C	65	65	64	63	62	60	59	57	56	54	53	51	49	47	45	43	41	41
40 °C	67	67	66	65	64	62	61	59	58	56	55	53	51	49	47	44	43	43
41 °C	69	69	68	67	66	64	63	61	60	58	57	55	53	51	48	46	44	44
42 °C	71	71	70	69	68	66	65	63	62	60	59	57	55	53	50	48	46	46
43 °C	73	73	72	71	70	68	67	65	64	62	61	59	57	55	52	49	47	47

Hurricanes



Hurricane Irma Nasa Satellite *"NASA Sees Irma Strengthen to a Category 5 Hurricane"* by NASA Goddard Photo and Video is licensed under CC BY 2.0

Saffir-Simpson Hurricane Scale				
Category	Wind speed	Storm surge (height above normal)	Atmospheric pressure (millibars)	Damage
1	74–95 mph (119–153 kph)	4–5 ft (1.2–1.5 m)	>979	Minimal: No real damage to buildings. Damage to unanchored mobile homes. Some damage to poorly constructed signs. Some coastal flooding
Examples: Cindy and Ophelia (2005)				
2	96–110 mph (154–177 kph)	6–8 ft (1.8–2.4 m)	965–979	Moderate: Some damage to building roofs, doors, and windows. Considerable damage to mobile homes. Damage to piers from flooding. Small craft
Example: The Perfect Storm (1991), Hurricane Isabel (2003)				
3	111–130 mph (178–209 kph)	9–12 ft (3–4 m)	945–964	Extensive: Some structural damage to small residences and utility buildings. Large trees blown down. Mobile homes and poorly built signs
Examples: Dennis, Katrina, Rita, and Wilma (2005)				
4	131–155 mph (210–249 kph)	13–18 ft (4–5.5 m)	920–944	Extreme: More extensive failure on non-bearing, exterior walls with some complete roof structure failure on small residences. Major erosion of
Example: Galveston Hurricane of 1900				
5	>155 mph (249 kph)	>18 ft (5.5 m)	<920	Catastrophic: Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas on low ground within 5 to 10 mi (8 to 16 km) of the shoreline may be required.
Example: Andrew (1992), Ian (2022)				

Landslides



A 200-yard section damaged due to landslide
Credit: By OregonDOT CC BY 2.0

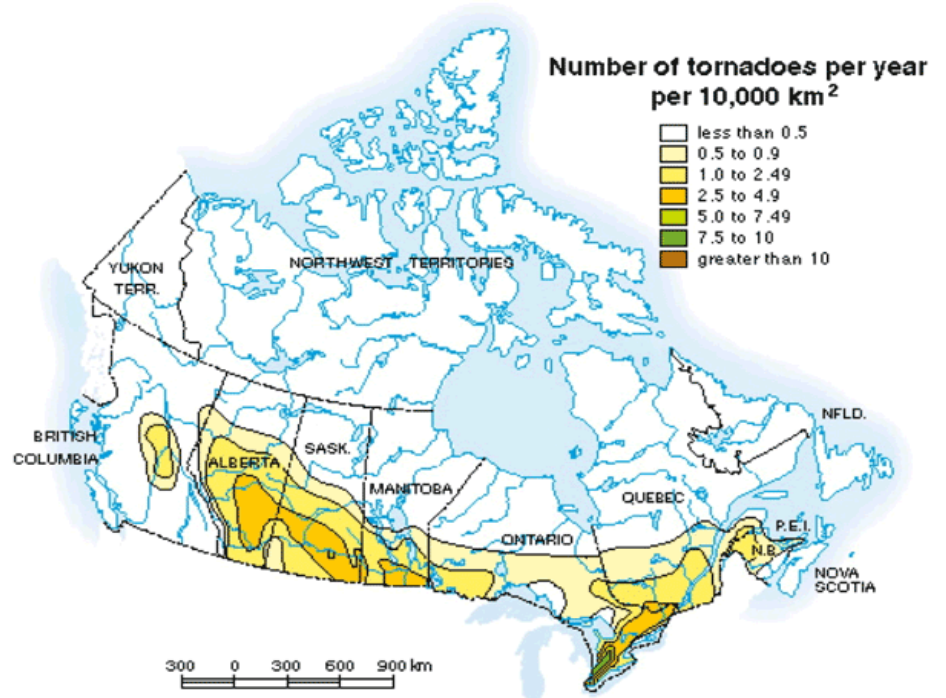
Main Type	Data layer	Update frequency 10 year....1 year... 1 day	RS	Scale			Hazard models		
			Remote Sensing useful?	National	Local	Site Specific	Heuristic	Statistical	Physically based models
Landslide Inventory	Landslide Inventory	↔	H	C	C	H	H	C	H
	Landslide Activity	↔	H	C	C	H	H	C	C
Environmental factors	Landslide Monitoring	↔	M	L	M	C	L	L	H
	Digital Elevation Model	↔	H	C	C	C	C	C	C
	Slope angle	↔	H	C	C	C	C	C	C
	Slope aspect & exposure	↔	H	H	M	L	H	H	M
	Distance from ridges	↔	H	H	M	L	H	H	M
	Flow accumulation	↔	H	M	H	H	M	H	H
	Lithology	↔	M	M	H	H	H	H	H
	Geological Structure	↔	M	L	M	H	M	M	H
	Distance to faults	↔	M	M	H	H	H	H	M
	Soil types	↔	M	M	H	C	H	H	C
	Soil depth	↔	L	L	H	C	L	L	C
	Slope hydrology	↔	L	L	H	C	L	L	C
	Geomorphology	↔	H	H	H	M	H	H	L
	Distance from eroding streams	↔	H	H	H	H	H	H	M
	Land use types & changes	↔	H	H	H	H	H	H	M
	Road cuts & drainage	↔	M	H	H	H	H	H	H
Coastal cliffs	↔	H	H	H	H	H	H	H	
Triggering factors	Daily Rainfall	↔	L	H	H	C	H	H	C
	Rainfall intensity/Duration	↔	L	M	H	C	L	M	H
	Earthquakes	↔	L	M	M	M	L	M	M
	Volcanic eruption	↔	M	M	M	M	L	M	M

Tornados



Tornado credit "Project Vortex-99: Occluded mesocyclone tornado (NOAA/unidentified fotoq)" by pingnews.com is marked with Public Domain. Mark 10

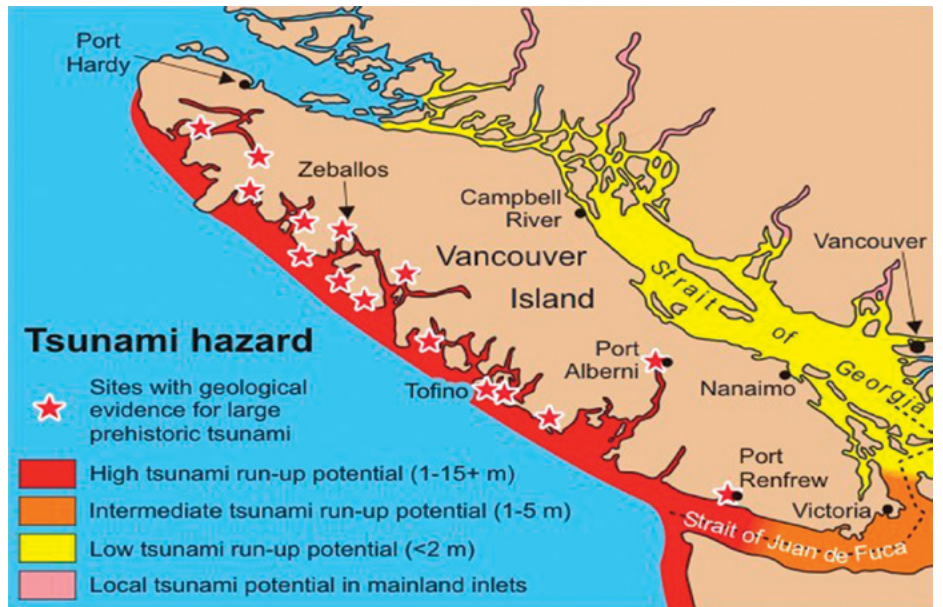
Enhanced Fujita Scale (Implemented February 2007)		
Rating	Winds	Expected Damage
EF0	65-85 mph	Minor damage. Shingles or parts of roof peeled off; damage to gutters/siding; branches broken off; shallow-rooted trees toppled.
EF1	86-110 mph	Moderate damage. More significant roof damage; windows broken; exterior doors damaged or lost; mobile homes badly damaged or overturned.
EF2	111-135 mph	Considerable damage. Roofs torn off well-constructed homes; homes shifted off their foundation; mobile homes completely destroyed; large trees snapped or uprooted; cars may be tossed.
EF3	136-165 mph	Severe damage. Entire stories of well-constructed homes destroyed; significant damage to large buildings; homes with weak foundations may be blown away; trees begin to lose bark.
EF4	166-200 mph	Extreme damage. Well-constructed homes leveled; cars thrown significant distances; top story exterior walls of masonry buildings likely collapse.
EF5	> 200 mph	Incredible damage. Well-constructed homes swept away; steel-reinforced concrete structures critically damaged; high-rise buildings sustain severe structural damage; trees usually completely debarked, stripped of branches, and snapped.



Map of the Annual Number of Tornadoes in Canada (Source: NRCan)

Tsunami

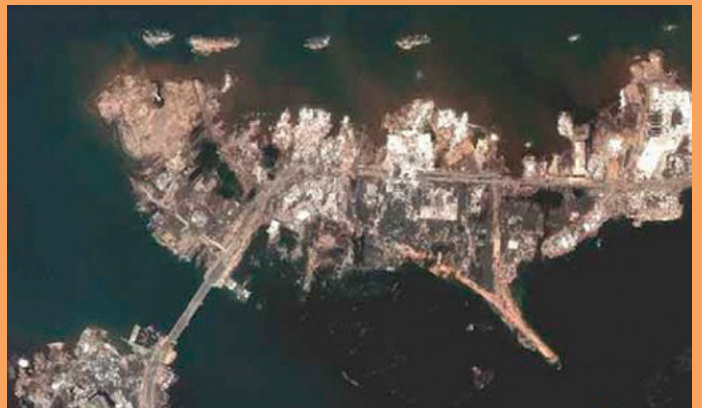
TSUNAMI CLASSIFICATION				
Tsunami N	Tsunami Height (m)	Unit	Damage and lives lost in certain land areas	
m	H		D	
-1	50	cm	None	
0	1	m	Very little damage	
1	2	m	Coastal and shipping damage	
2	4	6	Damage and lives lost in certain land areas	
3	10	20	Considerable damage to the costal areas	
4	30	m	Massive damage to the coastal Areas	



Tsunami Hazard Map



Before Tsunami Banda Aceh (Source DigitalGlobe)



After Tsunami Banda Aceh (Source DigitalGlobe)

Volcano

A **volcano** is a rupture in the crust of a [planetary-mass object](#), such as Earth, that allows hot [lava](#), [volcanic ash](#), and [gases](#) to escape from a [magma chamber](#) below the surface.

Volcanoes are most often found where tectonic plates are diverging or converging, and most are found underwater. For example, a mid-ocean ridge, such as the [Mid-Atlantic Ridge](#), has volcanoes caused by divergent tectonic plates whereas the Pacific Ring of Fire has volcanoes caused by convergent tectonic plates. Volcanoes can also form where there is stretching and thinning of the crust's plates, such as in the [East African Rift](#) and the [Wells Gray-Clearwater](#) volcanic field and [Rio Grande rift](#) in North America.

The volcanic explosivity index is as follows:

VOLCANIC SCALE							
VEI	Ejecta volume (bulk)	Classification	Description	Plume	Periodicity	Tropospheric injection	Stratospheric injection[2]
Examples							
0	< 10 ⁶ m ³	Hawaiian	Effusive	< 100 m	constant	negligible	none
1	> 10 ⁶ m ³	Hawaiian / Strombolian	Gentle	100 m – 1 km	daily	minor	none
2	> 10 ⁶ m ³	Strombolian / Vulcanian	Explosive	1–5 km	2 weeks	moderate	none
3	> 10 ⁶ m ³	Strombolian / Vulcanian / Peléan / Sub-Plinian	Severe	3–15 km	3 months	substantial	possible
4	> 0.1 km ³	Peléan / Plinian / Sub-Plinian	Catastrophic	> 10 km	18 months	substantial	definite
5	> 1 km ³	Peléan / Plinian	Cataclysmic	> 10 km	12 years	substantial	significant
6	> 10 km ³	Plinian / Ultra-Plinian	Colossal	> 20 km	50–100 years	substantial	substantial
7	> 100 km ³	Ultra-Plinian	Super-colossal	> 20 km	500–1,000 years	substantial	substantial
8	> 1,000 km ³	Ultra-Plinian	Mega-colossal	> 20 km	> 50,000 years	vast	vast

Source: Wikipedia

Wind Chill

Wind Chill	Risk
	Low Risk
	Moderate Risk
	High Risk
	Severe Risk
	Very High Risk
	Extremely High Risk

Wind Speed (km/h)	Estimating wind speed – what to look for	0	-5	-10	-15	-20	-25	-30	-35	-40
10	Wind felt on face – wind vane begins to move	-3	-9	-15	-21	-27	-33	-45	-51	-57
20	Small flags extended.	-5	-12	-18	-24	-30	-37	-49	-56	-62
30	Wind raises loose paper, large flags flap and small tree branches move	-6	-13	-20	-26	-33	-39	-53	-55	-65
40	Small trees begin to sway and large flags extend and flap strongly.	-7	-14	-21	-27	-34	-41	-54	-61	-68
50	Large branches of trees move, telephone wires whistle and it is hard to use an umbrella.	-8	-15	-22	-28	-35	-42	-56	-63	-69
60	Trees bend and walking against the wind is hard.	-9	-16	-23	-29	-36	-43	-57	-64	-71

DISASTER MANAGEMENT

The process dealing with natural disasters is outlined above. Can changes to building codes and improved natural hazard mapping provide a route to less damage. Certainly, the costs to taxpayers are evident from the expenditures by all levels of government after natural disasters occur.

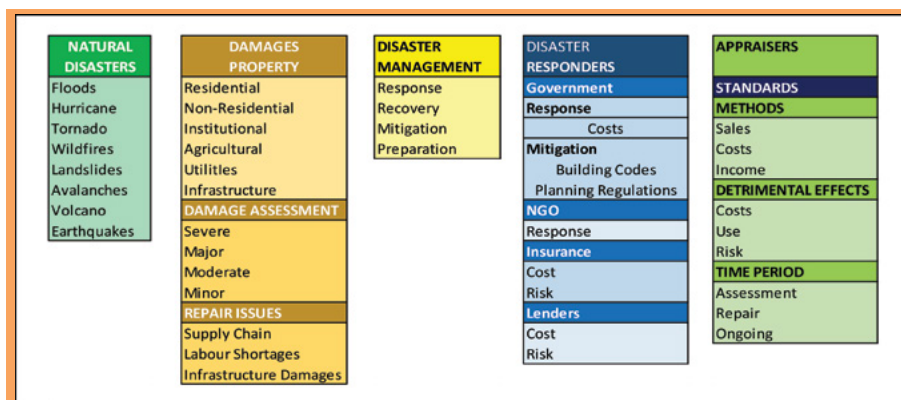
According to a 2019 report often cited by the federal government, Canada’s climate is warming two times faster than the global average — three times faster in the North.

The rapidly changing climate is acknowledged — in the words of one government report — to be increasing “the frequency, intensity, and duration of extreme events like heat waves, wildfires, and floods.” The trend is expected to continue for several decades, even if climate-warping emissions are reduced globally.

To better cope with the effects of climate change, Ottawa planned in 2022 to finalize its National Adaptation Strategy, an overarching set of plans and procedures to improve Canada’s climate resilience.

“As climate impacts continue to rise, the government recognizes that a more ambitious, strategic and collaborative approach is required to adapt and build resilience to the changing climate,” said a spokesperson for Environment and Climate Change Canada in an email.

The government started work on the plan in the spring of 2021 and is scheduled to release the final report in the fall of 2022.



CANADA DISASTER FINANCIAL ASSISTANCE ARRANGMENTS¹³

In the event of a large-scale natural disaster, the Government of Canada provides financial assistance to provincial and territorial governments through the Disaster Financial Assistance Arrangements (DFAA), administered by Public Safety Canada (PS).

Read about the roles and responsibilities of the various levels of government and about cost sharing between the Federal and Provincial or Territorial governments.

[Read Article](#)

Canada’s Disaster Aid System is Overwhelmed, Leaving Victims to Rebuild on their Own¹⁴

According to a March 17th article in the Globe and Mail “for more than 50 years, homeowners and businesses hit by fires, floods or storms have had a federal program to help governments decide who pays for the cleanup. Climate change is exposing its weaknesses and renewing talk of big changes to come.

Consider the extensive flooding that struck British Columbia a year ago this week, with estimated recovery costs of \$3.9-billion. Canadian taxpayers will pay nearly all of that amount (\$3.5-billion) through an obscure program called the Disaster Financial Assistance Arrangements (DFAAO).

Well before this, federal officials (and more than a few of their provincial counterparts) had already begun to question this aid’s affordability in an era of [climate change](#).

[Read the Article](#)

¹³ Public Works Canada

¹⁴ McClearn, Matthew (2022), *Canada’s Disaster Aid System is Overwhelmed, Leaving Victims to Rebuild on their Own*, *Globe and Mail*, November 17, 2022

Natural Disaster Risk Assessment¹⁵

According to a report from the Federal Government called Canada's Midterm Review of the Implementation of the Sendai Framework for Disaster Risk Reduction, "a key element in building a stronger, more resilient Canada is empowering citizens to educate themselves and to take action to mitigate risks to their property and personal safety. A national advertising campaign has been developed and aimed to educate and inform a broad swath of Canadians about the risks they could potentially face in their region.

The Government of Canada also recognizes the importance of comprehensive risk data to inform risk assessments, support open and inclusive dialogue, guide decision-making, and mitigate disaster risk to Canadians. Budget 2019 invested in probabilistic models to better understand the risks posed by earthquakes, wildland fires, and floods. Likewise, the Government of Canada, in concert with all provinces and territories, has been leading whole-of-society consultations to develop Canada's all-hazard National Risk Profile (NRP).

[Read More](#)

CONCLUSIONS

This article is intended to initiate consideration by valuation practitioners of the importance of considering the effect of natural hazards of all types in the property appraisal process. Valuers not only attempt to identify risk, but where possible quantify it. Our clients expect that natural hazards be identified if they present a significant risk to the value of a property. While it is reasonable to expect that appraisers cannot be experts in each type of hazard, CUPAP 2022 clearly requires that detrimental conditions be identified.

With respect to environmental contamination, many appraisers avoid the effect of that specific detrimental condition with an extraordinary assumption that a property is valued as if unimpaired. It is not apparent that such an assumption is valid for flood zones or areas subject to landslides or possible earthquake risk.

Of more recent interest on March 6, 2023, CSIS (Canada's Intelligence Agency) has identified Climate Change as a risk. Led by the [Energy Security & Climate Change Program](#), CSIS research focuses on strategies to address global climate change trends and manage its increasingly disruptive impacts. That's as mainstream as it can get. 🐾

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John Glen, MA AAI FRICS M.I.M.A.,

John is a well known international lecturer who has specialized in valuation and property tax consulting relative to retail, office, shopping centres, hospitality properties, multi-residential, recreation and industrial facilities. He has worked in the Public Sector for Municipal & Provincial governments to assist in the development of and implementation of mass appraisal procedures for Ontario, Alberta and New Brunswick.

¹⁵ Public Works Canada

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LEAVE IT TO BEAVER!

By Mike O'Dwyer

C*astor canadensis* – the rodent that *pelted* Canada into being is now changing our land for the better -- mostly

Yes, a few centuries ago, it was the beaver that did it. When Canada was an unnamed wilderness (by other than Indigenous People), the locations of beavers, and those that trapped them, dictated the paths of English and French explorers and traders across North America that ultimately defined our country.

*But there were unnatural consequences: During the 200 plus years of the Fur Trade, it has been estimated that 40 to 60 million beavers gave up their pelts for hats and their castor sacks for perfume – and *Castor canadensis* were nearly trapped to extinction.*



"Beaver Shot" by Paul Stevenson is licensed under CC BY 2.0

Still, beaver have proved to be dammed resilient and have built back to around 10 to 50 million throughout North America and Mexico.

And now, in the opinion of those who study these things, the beaver may again be redefining Canada – or at least parts of our country. And there are more beaver details to this story...

Beaver away in Canada

Chew on this for a moment: It was a European fashion craze that created Canada. And we have the mighty beaver to thank for that.

Fashions come and go but for about 400 years, from the 16th century to the mid 1900s, the beaver top hat held sway as the European fashion craze for men of *status*. So much so that by the 1600s, European beaver stocks had been virtually depleted.

Enter the Fur Trade -- an early and important industry in North America that played a major role in the development of Canada and the United States.

Indigenous People traded beaver pelts (and other furs) for tools, weapons and other goods to *coureurs de bois* and *voyageurs* who sent the pelts across the ocean to merry old England, *de trop* France and other fashion-first European countries where *hatters* – mad or otherwise – transformed them into top hats for the gentry and those who aspired to be seen as such.

In fact, beaver top hats were so valuable they were treated as family heirlooms and passed from father to son.

The Fur Trade was a main driver of the Canadian economy and expansion for 250 years. But by the 1900s, habitat destruction and unregulated trapping made beaver scarce and changing European-fashions (So long, beaver hat; hello silk toppers!) wrote *finis* to the Fur Trade.



Freshwater and Marine Image Bank

Beavers are a keystone species

It's somewhat hard to believe that a large, odiferous, orange-toothed rodent with a tail that looks like it was flattened by a Mac truck had (and is once again having) such an important ecological impact on our country. But, according to [Dr. Emily Fairfax](#), it shouldn't be because the beaver is not just any rodent, it's a *keystone species*.

What is a Keystone Species?

A *keystone species* can be an animal, plant or microorganism that enables other species to survive, occupying a key role in the ecosystem they are a part of. A term used alongside keystone is *ecosystem engineer*, which includes beavers.

Dr. Fairfax, Assistant Professor, California State University Channel Islands Environmental Science and Resource Management, says, "Beavers are considered a keystone species because the wetland environment they create and maintain is critical habitat for so many other species. Wetlands, broadly speaking, are hotspots of biodiversity. Unfortunately, the majority of wetlands in North America have been drained or degraded over the last couple centuries. Some parts of the American West have lost nearly 90 per cent of their wetlands, which is massively detrimental to the fish, frogs, birds, insects, mammals, etc. that depend on them. Beavers are able to rapidly transform simplified, degraded streams and rivers into thriving wetlands through their natural dams building and canal digging behaviors.

[Adam Burnett](#), the Executive Director of the Massachusetts-based non-profit Beaver Institute, adds that next to humans, beavers make a larger impact on ecosystems than any other species. "Their activity is holding up vast amounts of biodiversity."

Ecologically, the Canadian landscape was formed by beavers, says [Dr. Glynnis Hood](#), Vice Dean, Professor of Environmental Science, University of Alberta. "They have been on this continent since the last major ice age. Even the landscapes in which we live now have beavers' fingerprints all over them."



The beaver has a long history as both a commodity and a cultural icon. It has appeared in the heraldic bearings of Québec City and Montréal and even marked Canada's first postage stamp.

Source: Description; Canadian Mint

Photo: Benito Del Monte Medina

The beaver comeback – a win for the environment

[Jen Vanderhoof](#), Senior Ecologist, Water and Land Resources Division, King County, Washington: "Many people now think of them as invaders, as opposed to a native species slowly filling in all the spaces left empty 150 years ago. And their return has been so gradual that it is easy to forget they were historically an integral part of the landscape."

"By building dams on streams, beavers formed networks of wetlands, increased ecosystem complexity, and contributed to increased biodiversity."

[Ben Goldfarb](#), Spokane, Washington-based conservation journalist and author of *The Surprising, Secret Life of Beavers and Why They Matter*: "Beaver ponds and wetlands provide a wide range of ecological services. They store water in the face of drought, attenuate damaging floods, filter out pollution, sequester carbon, restore degraded streams, and even mitigate the spread of destructive wildfires.

Dr. Fairfax: "Beavers have a lot of positive influence in North American landscapes, pretty much all of which boil down to that beavers create physically, ecologically, and hydrologically complex wetland environments. They slow water down and enhance floodplain connections so that the water can be stored in the soil more readily. This is particularly useful during floods - spreading the water out and slowing it down can reduce downstream erosion and property damage from large storm events. Then during periods of drought, that stored soil water is still accessible to vegetation and keeps it green and healthy. Green vegetation and wet soil are hard to burn, so that stored water pays dividends again when wildfires ignite - the beaver complexes are incredibly fire resistant. Putting that all together, beavers create really stable, durable wetland habitat even in the face of climate change and increasingly intense and/or frequent disturbance."

Dr. Hood: “Beavers act as natural flood and drought mitigation tools which have been lost due to landscape change and beaver removal resulting from conflict with people over the past 100 years in Alberta. Even when beaver dams failed during the extreme 2013 Alberta floods, they still held back water as the storm progressed. Beavers are a nature-based solution to climate change, increasing watershed restoration and resiliency while providing additional ecosystem services such as habitat creation and aesthetic appeal.”

Conflict: Beavers versus humans - there’s no need for it

In a previous edition of the Journal, we explored the detrimental effects the proliferation of wild pigs has had on wide swaths of North America. As beavers continue their comeback, there are concerns in parts of Canada that *they* have become an invasive species, in conflict with human needs.

Adam Burnett provides context: “For the past three centuries humans have channelized rivers and streams, filled in wetlands for farming and development, and built our homes and cities in floodplains. These human constructions were implemented without much foresight to the complexity and space needed for nature. As a result, conflict arises between property owners and beavers due the spreading and soaking of water throughout a landscape - from crops being flooded to roads being washed out.

“These conflicts are easily and cheaply mediated through nearly fool-proof techniques of beaver management - from flow devices to tree wrapping. These options are much preferred to removing the beaver since, once a landscape is prepped, other beavers will likely return. It is more cost effective and beneficial for beavers to remain in place and naturally provide ecosystem services.”

Ben Goldfarb says that there are lots of techniques for creatively and non-lethally solving beaver conflicts. “One increasingly popular option for mitigating flooding is the “flow device,” a pipe and fence system that drops pond levels to a point that both beavers and humans can tolerate. A growing body of research shows that flow devices are highly effective, and can save municipalities money by avoiding annual trapping costs and road maintenance.

“Given the ecological importance of beavers, it’s vital that we learn to live with them rather than killing at the slightest sign of conflict.”

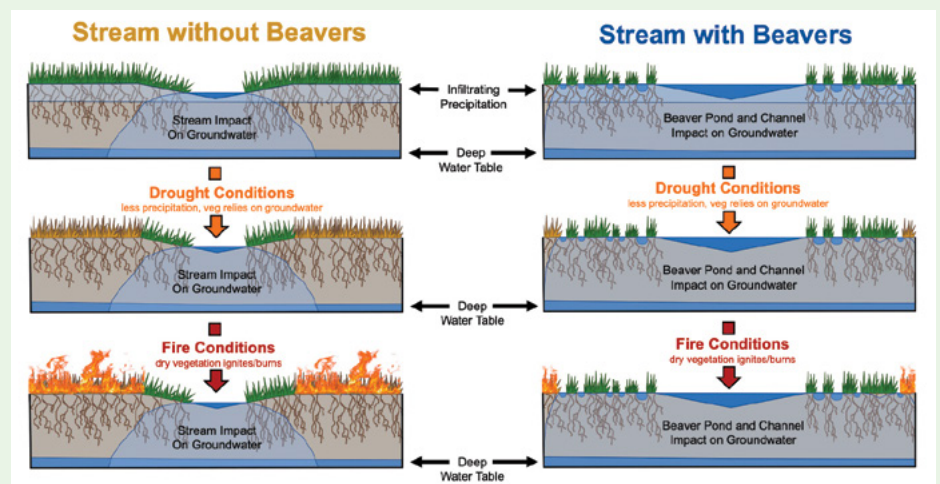
Dr. Hood offers this solution to land use planners: “One of the major problems in human/beaver conflicts is just the placement of our facilities. To avoid conflicts, try not to build a trail or a road right through a wetland system that is loaded with beavers and has wonderful habitat because you will have an ongoing problem with flooding.”

Beavers are a necessary part of adapting to climate change

Beavers, the animal that doubles as an ecosystem, are ecological and hydrological Swiss Army knives, capable, in the right circumstances, of tackling just about any landscape-scale problem you might confront. Trying to mitigate floods or improve water quality? There’s a beaver for that. Hoping to capture more water for agriculture in the face of climate change? Add a beaver. Concerned about sedimentation, salmon populations, wildfire? Take two families of beaver and check back in a year.

Ben Goldfarb, *The Surprising, Secret Life of Beavers and Why They Matter*

In Canada’s distant past, beaver were hunted to near annihilation. Today, thanks to conservation measures, reintroduction programs and their own resiliency, they have made a remarkable recovery - almost to the point they were at before the trapping tribulations of the Fur Trade. You really have to tip your (sustainably made) hat to them. And thank them for beavering away on our ecological behalf.



Conceptual model created by Dr. Emily Fairfax (2017). CC BY-NC-ND

Conceptual model of vegetation response to normal conditions (top), drought (middle), and fire (bottom) in creeks with (right) and without (left) beavers. (esajournals.onlinelibrary.wiley.com)

An Impossible Question Answered

There is no doubt that the Fur Trade had many historic and ecological effects on Canada and North America. But what if there had not been a Fur Trade? What if beaver populations had not been decimated?

This is the impossible question I put to the experts I interviewed for this story: *How would North America be different today if the beaver had not been trapped to near extinction during the Fur Trade era?*

And here are their very interesting (edited) answers.

Ben Goldfarb

There's no doubt this continent would be a much greener, bluer, lusher, wetter, wilder place, with millions of acres of additional wildlife habitat and far more stable streamflows. We may never restore our full historic beaver population, but I'm certain that North America can support tens of millions more beavers than it currently does — and in fact, our own future may depend on it.

Adam Burnett

The addendum to (the impossible question) might be...“not trapped near extinction and humans kept their development in floodplains to a minimum.” If this alternate reality were to have existed, many of the folks receiving the brunt of climactic devastation would experience the benefits of multi-generational wetlands, lessening the impact of megafires, droughts, and flooding.

Emily Fairfax

Hard to say for sure - there are other ecosystem engineers that were not trapped for fur but were similarly devastated during westward expansion for other reasons (e.g. buffalo, prairie dogs, salmon, wolves, etc.). So if beavers had dodged the Fur Trade there is still a good chance they would have been trapped because their dams and engineering make waterways harder to navigate by boat.

BUT, if they hadn't been trapped heavily for any reason and were still here in abundance today, we would probably have a lot more biodiversity across the continent, a lot more drought and fire resistant landscapes, and a lot more water flowing in our streams. There were 10x as many beavers here in the past as there are today. That's a lot of dams, canals, ponds, etc. that are missing from the landscape today, many we don't even realize are missing. The babbling little brooks that flow through the Great Smoky Mountains now? Those used to be beaver wetlands.

The dry, incised creekbeds of Utah, Arizona, and New Mexico? Many of those used to be beaver wetlands. The vast farmlands of the high plains and sub-boreal north? We can thank beaver wetlands for helping create such organic, nutrient rich soils.

Beaver Tales

Way back in primordial times, I did a stint as a contract writer for the (then) Ontario Ministry of Natural Resources. I wrote film documentaries and print articles on the human and natural history of Ontario with particular focus on the unique histories and features of provincial parks for use in interpretive programs and such.

One of the documentaries I worked on was a profile of a trapper who lived with his wife in a simple cabin in far Northern Ontario. The doc director, a cameraman and I bunked in with the couple for a week or so and got to know a wee bit about the loneliness and hardships of trapper life. Most notably the unspoken fact that the trapper and his wife were well into their 70s with significant health problems, separated by many miles of wilderness from the nearest medical help - yet they had no intention of abandoning the life they had known for so long and (also unspoken) would likely die in place. About that, I will only say: Everything eventually *does* come to pass.

The elderly trapper took whatever game he could find - fisher, muskrat, otter, marten, mink, rabbit, squirrel, lynx - and beaver.

Beaver are trapped in late fall, early spring and especially in the winter when fur quality is best and pelts bring more money.

We visited in mid winter and each day long before dawn, the elderly trapper would snowshoe out to check his trap lines. Some days were good, most were not but seven days a week, the trapper persevered. From him, I learned how to correctly skin a beaver and preserve the oil in its castor sac. I was also introduced to the dubious pleasure of beaver stew. Once was enough for a citified guy like me but to the couple, beaver was a dietary mainstay.

It was around that time I also heard a beaver tale from a guy who knew a guy who knew one of the cinematographers on Walt Disney's seminal nature documentary series *True-Life Adventures* of 14 films produced from 1948 to 1960.

The ground breaking series received many accolades and, although one of its guiding principles was presented on a title card that read *“These films are photographed in their natural settings and are completely authentic, unstaged, and unrehearsed”*, it was also denounced ([by the CBC for one](#)) for anthropomorphizing animals and for inaccuracies. ([See the lemming mass ‘suicide’ staging.](#))

And that brings me to the second film in the Disney series, the 1951 Academy Award-winning *In Beaver Valley* and the aforementioned cinematographer.

As the story goes: The Disney cameraman carefully crafted a blind of twigs and boughs to shield himself and his fairly large camera from the beavers. He had chosen a location near a stand of young trees that he knew were attractive beaver bait. Then he waited for the beaver to arrive. He waited days and days and still no chomping beavers. But finally, a big 'ol beaver wobbled ashore and began munching on a sapling. The cameraman swung his camera, got his focus and ... the camera jammed. By the time he cleared the jam, the beaver had finished its work and was pulling the sapling toward the water.

The frustrated cameraman blew his cover, jumped from behind the blind, grabbed the sapling out of the beaver's mouth, slammed it

into the ground and said, "Do it again, dammit!" And the beaver did and the cameraman got his shot.

I have tried to verify this story but haven't found any reference to it. It's a good story, though – so if it isn't true, it should be.

And BTW: All of the foregoing is a sort of shaggy beaver story with a Land Economist punch line ... or perhaps cautionary tale: No matter how you try to ameliorate it, what you do in your professional life will have an impact on the land and its inhabitants. Momentary, minuscule, monumental, millennial – who knows?

Compare it to the modern beaver which can measure up to 1.3 meters long including its tail, and weigh up to 32 kilograms – much smaller than the ice age giant beaver but still the largest rodent in North America and the second largest worldwide next to the capybara, native to South America.



An illustration of the Giant Beaver *Castoroides ohioensis* alongside the modern North American Beaver (*Castor canadensis*)

<https://www.theextinctions.com/blog-1/voices-of-palaeoart-corbin-rainbolt>

About Trapping

According to the Fur Institute of Canada:

- Trapping is still a significant economic generator to Canada's economy.
- When Indigenous People are included there are about 50,000 commercial trappers in Canada.
- In 2009-2010 (the last year Statistics Canada kept records) nearly 750,000 wildlife pelts were harvested with a value of almost \$15 million. This accounted for nearly 1/3 of Canada's fur pelt output.
- The most prevalent species trapped for fur is the muskrat followed by beaver.
- While fur trapping occurs in every province and territory, Quebec is the leading fur trapping province, followed by Ontario.

Once There Were Giants

During the ice age, giant beaver (*Castoroides ohioensis*) lived in North America. Growing up to 2.2 meters long, not including its tail, standing about 1 meter tall, and weighing about 200 kilograms, the extinct giant beaver was as large as today's black bear.



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.



Wild Pig Update

In the Fall 2022 issue of *The Land Economist* we had an article about Wild Pigs Invading Canada and now Canadian wild pigs are heading south and the US is not happy about it.

The Canadian Super Pigs Are Here

A new breed of massive, cold-weather-proof hog is venturing south.
Gizmodo, February 22, 2023 by Molly Taft.

Key Points

A new breed of wild hog is migrating to the US from Canada.

These super pigs – wild boar crossbred with domestic pigs – are huge and have adapted to withstand frigid Canadian winters.

The US has been struggling for years with a wild pig eruption and the new super pigs from Canada exacerbate the existing problem.



CC 2022-06-18 193-Pano* by SkiEngineer is licensed under CC BY-SA 4.0

Letter From America

A Salute to No. 3

By Joe Mathewson

I live in Chicago but I visit Toronto from time to time. On arriving here (at convenient Billy Bishop Airport) I never ceased to be amazed at the forest of giant construction cranes downtown—and everywhere, it seems. It’s no secret here that the [Rider Levett Bucknall Crane Index](#) shows Toronto as the perennial leader in North America—230 cranes in the third quarter of 2022, while Chicago had only 18. What a contrast! RLB’s third quarter report stated, “The industrial market continues to be a hub of activity as the GTA’s demand is centered on logistics and distribution, manufacturing, consumer goods and services, ad retail/ e-commerce businesses.” Of course, it’s also obvious that new downtown skyscrapers and boomtowns like Brampton and Vaughan are also creating thousands of new dwelling units.

One result of this vigorous expansion here is that Toronto is about to surpass Chicago—or perhaps already has—as the third largest city in North America. Canada Population showed 2.73 million in Toronto in 2022, while the most recent estimates for Chicago last year were 2.697 million by one count, 2.716 million by another, both slightly less than Toronto. In fact, as Toronto grows, Chicago is actually shrinking a bit, losing population to the Sun Belt and to neighboring Wisconsin and Indiana. It’s not as if the entire Chicago metropolitan area is atrophying, no, it’s not. That population, in a huge swath of 14 counties including slices of Wisconsin and Indiana, continues to grow—now a robust 8.9 million.

So, as a visitor, I ask, what’s going on here? What’s the difference between your city and mine, so similar in weather, gorgeous Great Lakes location, museums and

festivals galore, big-time sports and ethnic restaurants? Aye, there’s the rub, Ethnicns.

You Canadians shrewdly admitted 430,000 immigrants last year, mostly “economic,” meaning they have education and skills to contribute immediately not only to population growth but economic growth, and you’re boosting that already large influx to 500,000 in a couple of years. The top three job opportunities for immigrants are nurses, truck drivers and vocational institutions, opportunities that are much more likely to exist in urban areas, e.g., Toronto.

By contrast, in a nation with a population nearly 10 times Canada’s, ancient U.S. law limits immigrant visas to 675,000 annually— although, it must be noted, last year 2.7 million undocumented migrants flooded across the southwestern border

from Nicaragua, Venezuela, Cuba and other countries, many of them requesting asylum, a claim that currently takes years to adjudicate. A significant number of Spanish-speaking immigrants, legal and otherwise, but mostly unskilled, are making their way to Chicago, bringing the Latino share of the city’s population to about one third, roughly equal to the Black and white proportions. But U.S. policy doesn’t prioritize education and skills as Canadian policy does; high-skilled workers may get temporary work visas, while family members of U.S. residents get first preference for permanent residence.

Chicago has enjoyed a long run as no. 3. We didn’t want to be New York or LA anyway. Now, you’ve earned your advancement, Toronto. Good luck! But watch out for Houston. ➤



Joe Mathewson
[Professor, Medill School of Journalism](#), Media, Integrated Marketing Communications at Northwestern University

A note about me: I teach journalism at Northwestern University in Chicago. I was once a reporter for *The Wall Street Journal*, a corporate lawyer, a local elected official, and before all that a U.S. Navy officer. One of my most memorable Navy experiences was my first voyage to Europe, as a midshipman, when we put into Torquay and boarded a local bus for a look

around. The collector informed us that the fare was something that sounded like “tuppnc-hapny,” not our mother tongue at all. After he repeated it, equally unsuccessfully, a friendly, bilingual passenger translated it into “two and a half pence,” which we were quite relieved to pay. To set the record straight: many years later, back in the south of England as a tourist, I had the great pleasure of visiting the Britannia Royal Naval College at Dartmouth, where we were graciously shown around by a speaker of quite comprehensible English.

ANOTHER BRICK IN THE WALL

The Sequel

Editor's note: Title and art inspired by Pink Floyd's work of the same name.

By Mike O'Dwyer



Original cover. Black or red text reading 'Pink Floyd The Wall'

In the last issue of the *Journal*, your editorial team published a sampling of news stories, articles and commentaries on the entwined immigration and housing crises that was well received by our members.

So, well, in fact, we decided to do it again.

But when we took a close look at the admittedly eclectic selection of news stories, articles and research reports we had compiled, we had second thoughts.

Should we devote a large acreage of this *Journal* to the ever-swelling compilation?

- Yes -- every day had brought new material on both crises, resulting in a veritable blizzard of source materials to choose from.
- Yes -- if judged by sheer volume these crises continue to be the hot topics of 2023 as they were last year.
- No - because there was such a discouraging *sameness* to all this stuff.

The *same* arguments: Too few immigrants to satisfy Canada's employment and economic needs. Too many immigrants too quickly coming into Canada with no place to adequately house them. Too few housing options being built to address our country's already fraught and fractured real estate markets. Too many regulatory and administrative choke points to allow for the timely construction of the many types of housing required to meet a variety of pent-up demands. Too little investment in new developments - or at least in the right kind of developments in the right places at the right prices.

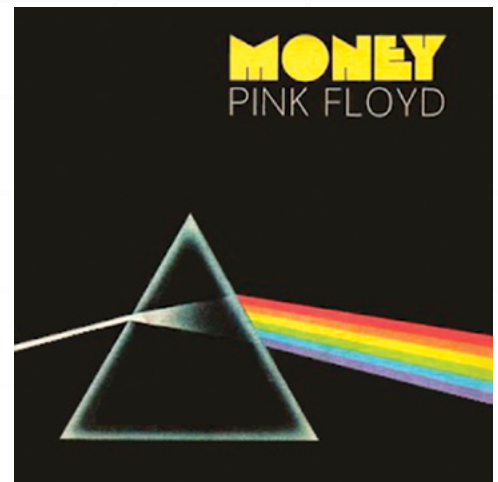
The *same* non-answers: Ill-conceived and poorly administrated housing 'jump-start' programs at all government levels that seem stuck in pre-construction (AKA bureaucratic) mud.

And the *nays* have it: Instead of taking up a lot of space with new stories, etc. filled with the same old concerns and non-starter answers, we thought it best to give the new stuff its own online home and direct you to it via this link.

[Read Full Article](#)

If you want to take the time to look through this new compilation, you'll find there is still much to be learned. But be aware: it will be a slog.

Editor's Note:
All it takes to solve this crisis is
"Money.....Kaching"
as per Pink Floyd's song.



French single picture sleeve.

Watch
"Money"
Song Video



AOLE Holiday Mixer

A great time was had by all at our AOLE Holiday Mixer which was held on Dec 19th at the CRAFT Beer Market, Toronto.



Clarence Poirier Jameson Chee-Hing, Nazreen Ali, Ian Ellingham



Vinkie Lau



Kari Norman & Rowena Moyes



Lis Blackburn, Bonnie Bowerman, Lorraine Cane



Alex Dobko



Michael Cane & Prakash Venkat



John Blackburn, Stefan Krzeczunowicz, Clarence Poirier, Jameson Chee-Hing



Ian Ellingham



Valdemar Nickel & Andy Manahan



Phillip Smith



David Fitzpatrick & Christina Kalt



Cameron MacDonald, Daria Savchenko, David Fitzpatrick, Vinkie Lau



Ed Sajecki, John Blackburn, Peter McCallion



Clarence Poirier & John Galluzzo



Nazreen Ali & Nick Kazakoff

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Janina Milisiewicz In Memorial

(May 4th, 1922 to Dec 12, 2022)

Canada's First Female Appraiser

First AOLE Woman President - 1976-1977

by Bonnie Bowerman, PLE

Background

Janina (also known as Jane) started work at 17 as a secretary to the Polish Naval Attaché in England during WWII. She and her husband (Jerzy died - 1978) came to Canada with their two young children (Jerzy- died 1990 and Krystyna) in 1950.

Fifteen years later in 1965 - she became the first woman in the country to receive AACI accreditation from the Appraisal Institute of Canada (AIC). In 1974, she was one of the first graduates from York University's Urban Studies BA program. In 1976 Janina became the first female president of the Association of Ontario Land Economists and was a lifelong member.

Upon her retirement in 1987, she became an active volunteer with the Canadian Opera Company Archives and the Textile Museum Library, among others. Janina was a member of The Friends of the Canadian Opera Company, the Polish Naval Association Canada and the Etobicoke Horticultural Society.

She was an environmentalist before her time. She loved: the arts; weaving on her own looms, gardening; and socializing with her many friends and family. She loved going out. And seldom did she ever refuse an opportunity to see friends or enjoy the outdoors.

She lived on her own - till her death on December 12, 2022, at the age of 100 - in a spacious light filled, downtown condo filled with antiques, her woven works of art, photos, books and flowers. She was bright and sharp right to the end. She passed away with her daughter Krystyna Angel and granddaughter Katrina Angel by her side.

Here she shares with us what the early years in the industry were like for a pioneering woman - this is reprinted from an interview she gave the journal back in June 2014. She was a true original who we will miss.

How did you get into real estate appraisal?

It was quite by accident. In 1958 I happened to walk into the North York Township office when they were looking for a secretary in their new Real Estate department, and I landed the job. Russ Foster was the AACI there then. I found working with him and coming to understand what he did fascinating.

So I started to take night courses in valuation. Russ took the time to show me how to research, do title searches and lay out arguments to support an estimate of value. The courses were held at the University of Toronto, once a week for two hours. There were wonderful lecturers from the Appraisal Institute. The late AOLE founder Gerry Young was one of them. And Hud Stewart was another — a lawyer who always provided crystal clear explanations. But he also started each class by saying "Good Evening Gentlemen" ... until I and the other two ladies present protested.

Was there anyone in that group that served as an inspiration?

The other two women!

How did the male students react to women in the class?

They were OK. Sometimes, as I am very short, they would just look over the top of my head without actually, seeing me. But they took notice when I wrote an essay that AIC published in its Appraisal Institute Magazine.



Graduating from York University in 1974

Was it difficult for a woman to become an AACI back then?

Oh yes. By 1962, I had met all the requirements. But Dennis Seward, then Chair of the Toronto AIC Chapter, denied my application on the grounds that “women should not be seen climbing fences”. Meanwhile, at the Township I was being paid a secretary’s wage for doing an appraiser’s work. To make matters worse, Seward became my new boss. So in 1962, I decided to quit.

Luckily one of the Township office’s frequent visitors was Cam Milani who owned a land development company. He invited me to take over managing his office. I enjoyed my time appeasing creditors, reducing surplus staff, and suggesting ideas for new developments — but I still wanted to pursue appraisal. I had to wait three years for the election of a more rational AIC Chairman. Clint McGee (Director of Real Estate at the Ontario Ministry of Transportation) presented me with my diploma in 1965.

With that finally in hand, I got hired by A.E. LePage in its brand new appraisal department, working with Dieter Maschke. He is the one who introduced me to the Association of Ontario Land Economists in 1972. He was one of the original members.

What were the brightest moments?

At A.E. LePage, I worked on everything from golf courses to old industrial buildings and visited many places in Ontario I would probably not have seen otherwise. I was making contacts among planners and others in the profession of land — many of whom became good friends. It was great fun. I also had to learn to drive (with great difficulty) when I was forty. Interestingly - enough, I found I had to climb very few fences!

What were the most difficult moments?

On occasion, clients at A.E. LePage would, upon hearing their appraiser was female, refuse to allow me on site — or they’d only talk to the junior who was male. Then there were the tirades from owners of expropriated property, times searching for rural properties with no identifying features, clients who gave us wrong directions ... the ongoing litany.

Where did you feel you made the most contribution?

In my own work, that was probably at the Ministry of Government Services. I was a review appraiser there from 1975 until I retired in 1987, and I felt I could really see and understand all the variables in the projects.

On broader issues, I was deeply involved in organizations in Toronto’s Polish community that had some real impact.

I served on the executive of the Toronto Chapter of the AIC, and was actively involved in the Community Planning Association of Canada and its offspring the ‘Stratford Conference on Civic Design’. And becoming AOLE’s first female President in 1976 was an honour that I hope also contributed to opening doors for other women.

What about retirement?

I continued teaching for a few years, and I do a lot of travelling — I was thrilled to finally get to the Met on a recent COC Opera tour. I also volunteer at the Textile Museum of Canada Library and the Canadian Opera Archive, have hundreds of books on my “to read list”, and still attend interesting Association events. And being able to linger over breakfast after a lifetime of having to rush off is truly delightful.

Messages of condolence may be left at www.ridleyfuneralhome.com. A scattering of her ashes will take place on her beloved Lake Ontario in 2023. 🌿



Association of
Ontario Land Economists

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As a marketing benefit designed to assist our members in promoting their companies, we are introducing periodic eblasts that will highlight various member's activities.

Should you want to take advantage of this promotion opportunity like Prakash Venkat, please send an email to admin@aole.org

INTRODUCING



Prakash Venkat

MBA, AACI, P. APP and PLE
Senior Director and Canadian
Practice Leader
**Kroll Real Estate Advisory
Group Toronto**

Malone Given Parsons

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.

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MUST WATCH: PMA|CIBC SUMMIT BREAKING DOWN CANADA'S SHIFTING PROPERTY REGULATIONS

What does the Prohibition on the *Purchase of Residential Property by Non-Canadians Act* mean for real estate? What is its impact on the new home industry and the future of Canadian homeownership? GUEST SPEAKERS - Dave Wilkes, President and CEO of BILD, Leor Margulies, Sr. Partner and Real Estate Group Leader at Robins Appleby LLP, Leona Savoie, Sr. VP Residential of Dorsay Development Corp. Moderated by Andrew Brethour, Executive Chairman, PMA Brethour Realty Group

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MUST WATCH: Altus Group State of the Market Video Recorded Webinar

What's in store for Canadian commercial and residential real estate in 2023? Will the headwinds subside to see activity recover in the second half of the year? Or, will we see continued apprehension in the market? Watch Altus Group experts, Peter Norman, Vice President and Chief Economist and Raymond Wong, Vice President Data Operations for a lively presentation and discussion that was recorded live on March 16th.

[Watch Recorded Webinar](#)

MUST WATCH: PMA|CIBC SUMMIT 2022 A Year In Review

After a challenging year, Ontario's real estate market has seen a rollercoaster of change as Canada's interest hikes impact the industry. A panel of experts examine the current conditions, follow the trends to predict the market trajectory, and share their insight on how to navigate murky waters. Guest speakers include Benjamin Tal, Managing Director and Deputy Chief Economist, CIBC World Markets Inc., Lianne McOuat, Vice President, Strategy McOuat Partnership and Andrew Brethour, Executive Chairman, PMA Brethour Realty Group.

[Watch Video](#)

CBRE Research: 2023 Canada Real Estate Market Outlook

A year of changes – positive, ultimately CBRE Report concludes that "Although expectations called for a return to stability in 2022, the pace of change did not let up and the year was anything but stable. Eight successive interest rate hikes by the Bank of Canada saw the pace of commercial real estate investment slow in the latter half of the year. 2023 will see higher costs of capital impact asset values, however there is likely more good than bad to come. A soft landing is expected where the economy

should see a technical recession while still being positive on the balance of the year. Capital market volumes are expected to rebound in the spring."

[Read Report](#)

Avison Young Fourth Quarter 2022 Greater Toronto area CRE Investment Review:

According to Avison Young "The Greater Toronto Area (GTA) commercial real estate investment amounted to \$ 22.3 Billion during 2022 (down just 5% from 2021's record -breaking volume)." They state that there was "a marked difference between the first-half and second-half dollar volumes. Strong momentum from 2021 carried through the first half of 2022, but repeated interest-rate hikes and the shifting economic landscape put a damper on activity later in the year."

[Read the full Report](#)

Altus Group: The 2023 Canadian Cost Guide

The Canadian construction and development industry hit major turbulence in 2022. The combination of widespread supply chain disruptions, sustained cost escalation, and rapidly rising interest rates strained the budgets of builders, developers, and governments alike.

Nevertheless, there is reason for cautious optimism. Underpinned by high immigration, increased immigration targets and a large backlog of projects underway, demand is likely to remain strong in the year ahead, even with a mild recession.

[Download The Cost Guide](#)

Quarter 4-2022 GTA High Rise Land Insights Report- Bullpen Research & Consulting & Batory Management

[Read Report](#)

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](#)

The state of data science in CRE investing

In an Altus Group report learn about the global CRE industry's current state and future plans for adopting advanced data analytics and data science in investment management.

[Download Report](#)

Interesting articles curated From blogTO:

Canada's housing crisis has people wanting to live at home forever

[Read Article](#)

Toronto's vacant home tax has arrived and here's what you need to know

[Read Article](#)

Breathtaking new Toronto waterfront district will be an architectural wonderland

[Read Article](#)

The 35 most stunning buildings in Toronto

In the March 5 2023 Issue of blogTO they curated a photo collection of what they consider the top contemporary buildings in Toronto. They state that the buildings in Toronto must be divided into two groups, those that were built before the New City Hall was constructed in 1965 and those that came after. They assert that "everything changed when Viljo Revell's spaceship-like civic hub put Toronto on the global architecture map and since then we've continued to add bold and beautiful structures to the urban fabric"

[View Photos](#)

What Yonge Street looked like in Toronto during the 1970s

This blogTO photo collection shows the vibrancy of downtown Yonge Street in the early 70's with well known but mostly long-gone restaurants, bars, theatres and retail stores before the Eaton Centre was constructed.

[View Photos](#)

Toronto's Skyline from 1957 to 2023

blogTO takes us on a historical photo tour that shows the growth of Toronto's skyline from a city without any modern buildings or many high-rises through to the construction of the first skyscraper, the blackTD bank tower in 1966 and then to various stages of growth that followed and finally to a city landscape filled with skyscrapers that rival New York's.

[View Photos](#)

What Will Toronto Look Like in The Future?

blogTO reports that “the years-long transformation of Toronto’s skyline has rendered this town practically unrecognizable from just a decade earlier, and the surge of new development promises to continue adding landmarks to the cityscape in the years to come.”

[Read Article](#)

Missing Middle Housing- 5 Missing Housing Mistakes

This article by Opticos, a team of urban designers, architects and strategists located in California talks about the mistakes cities and states are making in new zoning codes that do not have the right metrics to effectively regulate the missing middle housing. [Daniel Parolek](#), founding Principal of Opticos coined the term “Missing Middle Housing” and is a champion of the now-international Missing Middle Housing movement.

[Read Article](#)

Long-term office outlook appears positive, says insider

Nov 22, 2022 article in the Globe & Mail

[Read Article](#)

Billionaire Stephen Smith has a common name, but some uncanny talents

This Financial Post article tells us about Stephen Smith’s talent of making vast amounts of money while managing to generally stay out of the spotlight. He is described as a modest man. He has donated \$ 50 million dollars to Queen’s university and the school renamed their business school after him.

[Read Article](#)

Brookfield gathers US\$125B war chest as CEO sees recession

[Read Article](#)

Devron proposes 40-storey mixed-use tower in Weston

[Read Article](#)

First-ever 3D-printed multi-storey concrete build rises on Wolfe Island

[Read Article](#)

Toronto still tops N. American crane index

[Read Article](#)

A look back, and ahead, at Canada’s commercial real estate landscape

This article appearing in RENX on Dec

7/2022 gives a snapshot of what MSCI head of real estate economics Jim Costello and LaSalle Investment Management global strategist Jacques Gordon had to say during their talks at the Global Property conference on Nov. 29 about major trends in 2022 and the investment outlook for 2023.

[Read Article](#)

CPP names 2 senior execs; moves at Pure, Slate, OMERS.

[Read Article](#)

Canada Needs to Double Its Social Housing Stock: Report

Doubling Canada’s stock of social housing would be a “modest start” in addressing the national housing crisis, says a new report from Scotiabank according to an article written in Storeys on Jan 18, 2023

[Read Article](#)

New Pair of Mixed-Use Towers to Liven Up Toronto’s Port Lands

[Read Article](#)

RioCan plans colossal redevelopment. at GTA’s Colossus Centre

According to an article in RENX on April 11 2022, RioCan REIT has ambitious long-term plans to redevelop its 61.7-acre Colossus Centre shopping centre in Vaughan with up to 25 towers and buildings comprising over 10 million square feet of housing and retail.

[Read Article](#)

Canadian government commits \$235.5M toward two green building initiatives

According to an article in Sustainable BIZ Canada on Feb 10 2023, the Canadian government has announced two new green building programs totalling \$235.5 million to support deep retrofits for commercial, institutional and mid- or high-rise multi-unit residential buildings, and up to six neighbourhoods across the country.

[Read Article](#)

Wayne Tuck, Yardi report

Wayne Tuck, appears on RHBTv and shares details from the Yardi National Multifamily Report. He gives us insight behind the numbers and how the free data and information is not only impressive but vital to our industry.

[Watch Video](#)

Box Jacking -The underpass construction technology for minimizing the traffic impact:

Box jacking was used for the new QEW underpass for Mississauga light rail transit line.

[Read Article](#) [Watch Video](#)

A Toronto Laneway House Perfectly Fits a Family of Five

[Read Article](#)

Patience + experience: The key to success in commercial real estate investments in 2023

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Canada Square set for redevelopment

[Read Article](#)

Farmland prices have seen spectacular increases

[Read Article](#)

Commercial real estate has a ‘shock coming’ as return-to-office plans fall short, CEO says

[Read Article](#)

Proposal for 94-Storey Residential Tower at Yonge & Bloor

A high-profile development application has been submitted to the City of Toronto, detailing plans to transform the low-rise retail properties at 15 and 19 Bloor Street West into a new ‘supertall’ tower. Coming from the development team of Reserve Properties and Westdale Properties, and designed by the IBI Group. It would be immediately to the west of The One and have a height of 301.8 metres and would deliver 1,262 new dwelling units as reported by Urban Toronto.

[Read Article](#)

Toronto’s condo explosion is just getting started: A record 100 towers could go up every year – and these neighbourhoods will be most impacted.

Toronto Star article published on March 11th says that “New legislation and planned “transit-oriented communities” mean Toronto will see a surge in condo building for years to come. Some residents fear their neighbourhoods will be destroyed almost overnight.”

[Read Article](#)

10 Biggest Real Estate Companies in China

An article published on Insider Monkey on March 13 says that “The Chinese real estate sector is one that has been driving the country’s economic growth in recent years” The article gives us a look at the 10 biggest Real Estate companies in China.

[Read Article](#)

MUST WATCH: Türkiye -Syria earthquake ripped huge chasm in what was once an olive field near Antakya, Türkiye

[Watch Video](#)



The Legislative Beat

By Andy Manahan, PLE

Cutting red tape:

On February 27, Infrastructure minister Kinga Surma introduced the *Reducing Inefficiencies Act (Infrastructure Statute Law Amendments), 2023* that, if passed, would “modify the real estate authority of 14 entities which are under the oversight of eight ministries and provide the Minister of Infrastructure with the ability to oversee and manage this real estate.” Part of the impetus for these changes stems from a 2017 Auditor General’s report that identified opportunities for the Province to manage its real estate portfolio more efficiently by centralizing authority and decision-making.

The legislation would also allow the Minister of the Environment, Conservation and Parks to alter or waive the 30-day waiting period for Class EA projects such as municipal roads. The Minister would exercise these proposed powers on a project-specific basis.

Government pushes the boundaries:

In the previous issue, I commented on the academic debate precipitated by Frank Clayton and David Amborski on greenfield development where the authors argued for orderly outward expansion of urban boundaries such as in Hamilton.

Well, the rubber has hit the road. In November, the Province ordered the City of Hamilton to add 2,200 hectares of greenfield lands despite a 2021 decision by council to add density within its [borders](#). The Provincial edict included 77 modifications to the City’s urban official plan and 25 changes to the rural official plan.

As the municipality is unable to take legal action against the Province, a third-party group, Ecojustice (on behalf of Environmental Defence) has filed a notice of application for a judicial review saying that

no planning rationale has been provided for the boundary expansion. This legal action is supported by Indigenous organizations.

Municipal officials in Hamilton have said that provincial growth targets could be accommodated within the existing urban boundary. This position has been bolstered by a [report](#) by former head of planning for Waterloo Region, Kevin Eby, who says that there is room to build nearly double the provincially-set target of 47,000 units for Hamilton by 2031, without encroaching upon the Greenbelt or farmland newly included in the city’s urban [boundary](#).

Eby’s report on behalf of an umbrella group called The Alliance for a Liveable Ontario elicited an unusual response from Municipal Affairs and Housing Minister Steve Clark’s office, saying that it represented an “anti-housing and anti-growth ideology, rather than fact.”

A more thoughtful response would have recognized that the Hamilton LRT will spur development within the City’s boundaries and that it will improve intensification potential as has been touted for other transit projects in the GTA such as the Ontario Line and the Yonge North Subway Extension. It should be noted that this rationale was used by the Province to convince Ottawa to contribute matching funds of \$1.7 B in 2021.

Hamilton mayor (and former provincial NDP leader) Andrea Howarth said that the Province’s decision “has caused a lot of angst”, citing a 2021 survey of 20,000 Hamilton residents where more than 90 per cent of respondents were not in favour of urban boundary expansion.

Greenbelt:

Shortly after the Hamilton announcement, the Province announced that it would open Greenbelt lands for development. As part

of the goal to build 1.5 million housing units over 10 years, the Province has determined that it will accelerate the construction of 50,000 homes by removing land from 15 different areas of the Greenbelt. In exchange, land will be added elsewhere for permanent protection.

Although Premier Ford wields tremendous power with a majority government, and despite his many statements that the Greenbelt would not be built on, he appears to have misread that there is strong public support for maintaining the Greenbelt intact (whatever rationale there might be for incursions into these lands in the form of land swaps, or other mechanisms). In its 30-day consultation on changes to the Greenbelt, 29,200 submissions were made with the vast majority calling for continued protections and opposition to any removals or redesignations of lands under the Greenbelt Plan.

In one recent letter to the editor of *Newmarket Today*, the writer states that the Premier has miscalculated how much the people of Ontario love the [Greenbelt](#). But the controversy has now reached U.S. media as evidenced by this [article](#) in *The New York Times*.

An impediment to growth on these lands is that municipalities have not done any infrastructure planning for the Greenbelt lands identified by the Province. Durham Region’s CAO, Elaine Baxter-Trahair prepared a report to regional council expressing that the province should “focus on collaborating with all affected parties ... to redouble efforts on accelerating units already within the planning process ...” [33,000 draft approved homes and condos]. Further, she says: “Since the expectation was that the Greenbelt was to be protected in perpetuity, servicing solutions for these lands have simply not been developed.”

Similarly, Hamilton’s chief planner, Steve

Robichaud, commented in the Toronto Star that parcels removed from the Greenbelt by the Province “do not satisfy the criteria relating to the lands being serviceable and ready for development in the near term.”

The Province has made it clear that if housing production does not proceed by 2025, then the lands will be returned to the Greenbelt. The question then becomes ‘will the Province provide for extensions to permit developers to proceed with housing projects, or not?’

While it may seem that the Ford government has unfettered powers with respect to its control over municipalities and local land use planning, investigative bodies and the courts, as well as the court of public opinion, will act to rein in these powers.

A further complicating factor is that once a precedent has been set for thousands of hectares being removed from the Greenbelt, then there will be further pressures to open up more of the Greenbelt. The Narwhal [reports](#) that at least four other developers have made requests to build on protected land and that often these proposals are not made through the environmental registry where the public would be given a chance to comment.

York University professor Mark Winfield wonders whether Ontario’s housing plan has been built on evidentiary [sand](#). He concurs with Housing Affordability Task Force’s February 2022 report which stated that there is sufficient land available within existing urban areas but takes issue with its 10-year projections based on the number of dwellings required per 1,000 people. Instead, Winfield says that a better indicator is the number of people per household. Based on Ontario’s most recent five-year population growth, he estimates that 60,000 new housing units per year would be required, rather than the 150,000 figure used by the task force. Between 2016-2021, Ontario delivered 79,000 housing starts per year. Winfield does not supply analysis on housing size or tenure (e.g., more purpose built rental is required).

It should also be noted that in the past, building industry associations focused on expansion into the Whitebelt (the buffer land between the urbanized area and the Greenbelt) to meet future housing demand. For example, in a 2011 column, former Building Industry and Land Development (BILD) head Stephen Dupuis lamented the lack of low-rise building lots. His solution,

however, was to expand growth into the Whitebelt. He made no mention of incursion into the [Greenbelt](#).

Similarly, in 2018 BILD released a [report](#) by Malone Given Parsons which recommended that the Province should “provide greater certainty for future development by identifying the agricultural and rural lands in the inner-ring (Whitebelt) as future urban areas in the Growth Plan.”

Certainly, a good case can be made for a review of Greenbelt boundaries but it should be conducted with a rigorous evaluation process and not on political considerations. In fact, during the 2004 period when the Greenbelt bill was under review at Queen’s Park, the provincial Tories said that “the boundaries of the Greenbelt must be based on science and not arbitrary lines or political considerations” (see The Legislative Beat, Winter 2004, p. 8 of The Land Economist).

Housing Crisis:

The reaction to *More Homes Built Faster Act, 2022* (Bill 23) has been mixed. In its pre-budget submission, the Association of Municipalities of Ontario (AMO) recognized that there was a housing crisis but indicated the “provincial government’s current approach jeopardizes our collective ability to meet this shared goal.”

AMO’s brief submitted in February stated that “Legislative changes in the fall of 2022 fundamentally altered the policy framework for land use planning, environmental protection, growth and development, infrastructure financing, and municipal governance – all without any real collaboration with municipalities.”

AOLE sought to explore the topic further in a webinar held on March 2. For those who missed it, click [here](#) to view. A couple of themes that are worth highlighting: (1) the building industry doesn’t have the capacity to deliver the 1.5 million housing units by 2031, and (2) this is not just a supply problem, it is an affordability problem, as enunciated by Durham Regional Planning and Economic Development Commissioner Brian Bridgeman.

University of Toronto Professor of Geography and Urban Planning Matti Siemiatycki further elaborated that it is important to have ambitious goals but there needs to be more detail on how the goal of 1.5 million homes will be achieved in only 10 years. While the Province’s focus on market-oriented housing relies on the concept of

trickle down, the market is also focused on profit. Flooding the market with new housing runs counter to how most builders run their low-rise operations, for example, by releasing product in phases to maximize profits.

Development Charges:

The freezing of development charges (DC) under the *More Homes Built Faster Act* has also resulted in a lot of controversy. Municipalities have said that this will produce revenue shortfalls unless taxes increase or there is a reduction in local services.

A third of GTA municipalities surveyed by the CBC have indicated that property taxes will be raised to cope with the loss of DC revenues. The Association of Municipalities of Ontario stated that the new law could leave municipalities about \$5 billion short. Premier Ford targeted Mississauga Mayor Bonnie Crombie asking her to “stop whining” and to play in the sandbox. This type of criticism elicited more support for the mayor who many are now promoting as a worthy leadership candidate for the provincial Liberals.

Municipal Affairs and Housing Minister Steve Clark promised to have a third-party audit of the finances of select municipalities to determine what the repercussions might be. If there is a shortfall, he promised that the province would make those communities “whole.”

Critics of the DC regime also question why certain municipalities have large reserve funds. An Altus Group Economic Consulting study of 16 municipalities found that reserves totalled \$5 billion, with the City of Toronto accounting for \$2.6 billion of that [amount](#). Unfortunately, the value of those funds is negatively impacted in a high inflation environment, meaning that when capital investments are made the purchasing power declines. Altus also indicated that the municipal funding shortfall over the next nine years represents less than one per cent of annual municipal revenue in [Ontario](#).

There are of course compelling arguments on both sides: the industry is correct that high DCs and fees have hindered housing affordability; municipalities, on the other hand, have been acting within current DC statutes. These funds are necessary for many types of municipal infrastructure and are collected using a 10-year horizon.

According to coverage of the Rural Ontario

Municipal Association conference by the Globe and Mail, AMO president Colin Best received loud applause when he called on the Province to “fully offset” financial losses as a result of the new legislation. In relation to the curtailed role of conservation authorities, he said that fast-tracking housing while skimping on environmental legislation is a “false economy” - this also resulted in strong support from the municipal representatives.

Immediately following the passage of Bill 23, the Residential Construction Council of Ontario (RESCON) [praised](#) the legislation for taking bold action to build more housing and reduce costs, saying that removing development charges for affordable and non-profit housing will spur new residential construction.

While there is no doubt that DC reductions will result in project costs savings for non-profit housing projects such as those

built by Habitat for Humanity, it is useful to heed the statement by Brian Bridgeman at AOLE’s March 2nd webinar about market housing: ‘builders don’t pass on savings; they charge what the market will bear’.

In conclusion, if the Province wants municipalities to dramatically build more housing, local governments will expect provincial help to fund infrastructure, as was done during the housing boom of the 1970s. With the limitations of property taxes and user fees, there could be renewed calls for a New Deal for Cities where municipalities receive a share of sales or income taxes. It will be a tough but necessary conversation. ➤

March 12, 2023
Andy Manahan,
Manahan Consulting Services



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



Association of
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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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