DEVELOPMENT, RESPONSIBILITY, &
THE CREATION OF FLOOD RISK IN
CALGARY

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PUBLISHED VERSIONS

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- The Conversation, November 30, 2021
  
• “A one-of-a-kind community on the edge of the Bow River that features a beautiful natural escape, thoroughly designed streetscapes and stunning views, all within city limits” (Brookfield Residential 2019).

• “Surrounded by 360 acres of environmental reserve” with “lots backing onto greenspace and Fish Creek Park” (Calbridge Homes 2019).

• Buying a home in Riverstone means “getting everything you want, without sacrifice” (Brookfield Residential 2019).

• Thanks to flood mitigation projects, “your family can safely enjoy all the advantages of living beside the beautiful Bow River year-round, without concerns” (Brookfield Residential 2019, statement about concerns later removed).
But Riverstone Ain’t Alone

We’re Turning the Villa Market Upside Down

We’ve taken the standard features of a basement and moved them upstairs where they belong, amidst high ceilings and expansive windows. Enjoy the convenience of truly stainless main floor living, with the added benefits of in-floor heating and an upstairs loft. Live in a luxury home designed and constructed by an Alberta development leader, and trust that we’ve considered every detail to bring you the best value on your home. The Calais features customizable lofts in 24 Arizona style bungalow villas. Located steps from the Bow River in the attractive community of Quarry Park.
AND CALGARY AIN’T ALONE EITHER

Housing development in Ste-Marthe-sur-le-Lac was mainly in flood zone

"Ste-Marthe-sur-le Lac was flooded not because there was a lot of rain, but because we build communities in flood plains."

RENE BRUIJMMER. MONTREAL GAZETTE  Updated: May 2, 2019

Maple Ridge council proceeds with riverfront subdivision

Third reading for 26 homes, most in Alouette flood plain.

PHIL MELNYCHUK / Apr. 24, 2019 11:30 a.m. / LOCAL NEWS / NEWS

Maple Ridge council gave initial approval Tuesday to building 26 homes near the South Alouette River over protests from the group that manages the waterway.

Council voted 4-3 to give third reading, to be followed by final adoption, to rezoning four properties at 12555, 12599, 12516 – 240th street and at 12511 – 241st St.

Total area of the properties is 20 acres, with most of that in the flood plain.

Fill, Build and Flood: Dangerous Development in Flood-Prone Areas

Building in areas vulnerable to flooding is a recipe for disaster, but communities can break the cycle.

By Laurie Mazur, Opinion Contributor  Oct. 8, 2019, at 12:04 p.m.
QUESTIONS I HAD....

• How do residents living in flood-prone areas attribute responsibility for the creation of risk and the protection of residents from flood risk?

• How do these residents view developers and the local municipal government; despite Albertans normally preferring a low-tax, low-regulation political climate, will flood-affected residents ask for more regulation of industry?

• Do residents favor or oppose requirements that real estate agents and/or developers disclose a home’s location in a flood-prone area to potential home-buyers, and/or to what extent do they prefer structural mitigation efforts?
A PRIORI ASSUMPTIONS

• Urban spaces aren’t static.

• Urban dwellers navigate – and live in– a continually changing landscape of hazards and risks.

• That hazardscape doesn’t evolve and take shape by happenstance. It’s intentional.

• Exposing certain urbanites to risk can be highly profitable for particular, well positioned parties.

• The more visible and knowable those risks are, the less profitable they become.
WHAT DO WE KNOW ALREADY?  (1)

• Urban Political Economy
  • “The City as a Growth Machine” (Logan & Molotch 1976)
  • “Growth Elite” encourages growth for growth's sake. Well positioned to take advantage.
  • Method: “incessant lobbying, manipulating, and cajoling.”

• Tierney (2014), The Social Roots of Risk:
  • “Pro-growth actors… prefer to operate in environments in which they are not constrained by land use plans, zoning and code requirements, and environmental regulations. They generally oppose regulations and requirements that would add to the cost of building and infrastructure construction and maintenance… and they seek to comply only minimally with existing mandates. Second, growth machine coalitions deemphasize the risks associated with places and spaces, focusing instead on the amenities provided by these locations” (pp. 127-128).
WHAT DO WE KNOW ALREADY? (2)

• Role of Developers
  • Pro-Growth actors “capture” local political officials and work to undercut existing environmental protections (Clement & Elliott 2012)
  • Developers “set the agenda” in Calgary (Grant 2009)
  • “Hegemonic Growth Regime” – most active group favours growth (developers, home builders, & real estate), and all others – including civil society groups – are pro-growth or neutral (Logan & Crowder 2002)

<table>
<thead>
<tr>
<th>Name</th>
<th>2017 Campaign disclosure</th>
<th>Developer contributions</th>
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<tr>
<td>Naheed Nenshi</td>
<td>$649,201</td>
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<td>Ward Sutherland</td>
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<td>Joe Magliocca</td>
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<td>Peter Demong</td>
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WHAT DO WE KNOW ALREADY? (3)

- Resident Views of Risky Development
  - Severely understudied area
  - Know much more about resident views tourism infrastructure (Long and Kayat 2011), transit (Noland et al. 2017), and sports facilities (Bob & Swart 2009; Scherer 2016)—not housing.
  - Why? Resident views often cast as uninformed or overly emotional (Rothstein 2003; Lupton 2013).
  - Residents support development, but hold negative appraisals of developers (Monkkonen & Manville 2019).
  - Feel excluded from conversations about development (Morris-Oswald & Sinclair 2005; Glenna 2010).
  - Homeowners understand property rights as absolute, resist limitations on use (Brody et al. 2011; Tarlock & Albrecht 2018).
  - Residents expect government to protect property values (Becher 2015).
WHAT DO WE KNOW ALREADY? (4)

• Hegemony of Structural Mitigation
  • Resident & official preference for building levees, berms, dikes, floodwalls, damns – not to mention property-level flood mitigation practices
  • Reflects “the idea that people can use technology to control nature to make themselves safe” (Mileti 1999).
  • Favoured by the growth lobby (Alexander 2000; Lara et al. 2017; Vari et al. 2003).
  • Can decrease aggregate flood damage, but other methods have proven more effective (Brody et al. 2007)
  • Key question: Should we try to keep water away from people+property, or people+property away from water? How much of each?
WHAT DO WE KNOW ALREADY? (5)

- Room for the River?
  - Borrowed from Northern/Western Europe (De Groot & De Groot 2009)
  - Being discussed and assessed in Alberta (Bogdan et al. 2020)
  - Focuses on combination of limiting development near rivers, buyouts of existing properties, structural mitigation where appropriate, preservation of greenspace as an amenity.
  - Better resident buy-in when framed as “gains” (i.e., amenities), not “loss” (i.e., fear of flooding) (Spence & Pidgeon 2010).
  - Resident preferences for environmental preservation directly related to proximity to water (Larson & Santelmann 2007).
RISK AND DISASTER IN ALBERTA

- 2013 Bow and Elbow Rivers overtopped banks, causing evacuation of 75,000 people and $6 billion in damages (Gandia 2013).
- Alberta accounts for 60% of Canada’s total disaster damage since 2010 (Edwardson 2018).
- Alberta is projected to warm at twice global rate— as much as 4 degrees Celsius by 2050 (Sanford & Freek 2014).
- City of Calgary spending some $318 million, 2013-2023, on flood mitigation (City of Calgary 2020).
- Ambitions plans to grow from 1.3 million to 1.7 million in 2033 and 2.4 million by 2017 (Calgary Metropolitan Region Board 2018).
- Prone to right-wing populism (Davidson 2019)
- Albertans favor “governments and political leaders capable of protecting an enviable quality of life by keeping taxes low” and eschew “activist government” (Sayers & Stewart 2019).
- Ardent defenders of sanctity of private property rights (Evans & Garvin 2009)
- Conservative communities often oppose most/all regulations, fearing overreach by “big government” (Hochschild 2016); see risk as inevitable tradeoff for economic growth (Lupton & Tulloch 2002).
DATA COLLECTION

• Sent emails to community associations in 26 flood-affected YYC neighbourhoods in summer 2015.

• C.A. leaders forwarded the email to members, discussed the interviews at meetings, or posted a sign about it, instructing interested participants to contact me.

• 45 interested individuals reached out by phone or email, and we were able to arrange a time and location to conduct the interview with 40 of them.

• 39 out of 40 had flooded homes; 20 men, 20 women.

• Interviews in Fall 2015
  • 60-180 minutes (average of 90)
  • Provided $50 gift card to RONA.

• Transcribed by a third-party transcriptionist, based in Calgary.
QUESTIONS ASKED RELATED TO RISK & DEVELOPMENT

• Do you think it should be mainly the responsibility of government or of individuals to protect our families and communities from flood risk? Why?

• When people's homes are damaged during an event like the 2013 flood, whose responsibility should it be to pay for the damages and rebuilding?
  • Prompts and Probes: Should government programs, like Alberta's Disaster Recovery Program (DRP), pay for all or some losses? Should it be the responsibility of the homeowner? Should Canada introduce a national flood insurance program, like the U.S. has—why or why not?

• What responsibilities do you feel city government and private developers have in regards to flood risk? In short, whose responsibility is it to ensure that Calgarians do not live in vulnerable places?
  • Prompts and Probes: Should the City of Calgary grant building permits in flood-fringe and flood-way areas? Should developers and real estate agents be required to tell potential buyers of the property's flood risk before they build or buy? Why?

• Thinking about your experience with the flood what steps do we need to take in order to prevent disasters like the 2013 flood?
  • Prompts and Probes: What do you feel the government should be doing to curb future risks?
ANALYSIS

• Names replaced with pseudonyms

• Data open-coded to identify key themes (Warren & Karner 2010)

• Data coded in Nvivo by both me and by a research assistant – descriptive and pattern coding (Miles and Huberman 1994; Maxwell 2005)

• Grounded theory approach – arguments built through exchange between data and existing theory (Burawoy 1991; Phillips 2014).
“I remember thinking about the community of Chaparral and down in that area where people are building right down in the valley and I thought, ooh, that looks like a really dumb place to buy a house even though I am sure they are gorgeous houses and everything.” – Mary Jean
DEVELOPERS – THE INVISIBLE HAND OF THE MARKET

• Don’t believe developers will act to protect safety unless required:
  • “Developers get away with a lot of shit that they shouldn’t be getting away with” – Irene

• Have responsibility, but shirk it:
  • “I think developers have a responsibility because they are the ones who are going to profit when those lots are sold, so they should take the responsibility to make it less likely to flood.” -- Mary-Jean

• “Cause the consumer won’t know [if a location is risky]… And the developer you know in some cases knows. Yeah. Private developers. Absolutely. They should have responsibility” -- Matthew
**DEVELOPERS – THE INVISIBLE HAND OF THE MARKET**

- Lack of care and concern:
  - “The developers can only do what they’re allowed to do. They can’t build where the city says they can’t. They can’t build where the province says they can’t. So it’s not the developers—they don’t give a shit… It has to be government who says it can’t be done” – Rachel

- Blameless – developers are capitalists and pursuing profit is what they do:
  - “You can’t blame the developers, they are just…in there to make bucks, right? And if the city says you can build there then bingo…They make a pile and they will” – Scott

- Not angry about this lack of concern, but resigned to it.
GOVERNMENT –
THE COURAGE TO STAND UP TO DEVELOPERS?

• Need for Regulation
  • “I think they have to have legislation in place to say at some point in time, “No, developer, you can’t put in a neighborhood there unless you do A, B and C” – Jackie
  • “I think it is a mistake [to buy a home by the river]. The river needs room and… the city should not allow it first off. It is the government’s fault. I believe…city government allowed that development to occur and the developers did it, so I am very, very unhappy about that.”

• Government as weak and ineffectual
  • Government actors need to “have the balls to say no, and most of them won’t…. It’s all about money” – Gary
  • “To hell with the developer and that is what the government has to do. To hell with the developer” -- Scott
GOVERNMENT – THE COURAGE TO STAND UP TO DEVELOPERS?

• View government as “in bed” with developers, influenced by money:
  • Residents want restrictions on development, so by ignoring the will of the people government is “negligent in their responsibility to the citizens” – Leila
  • Developers “can’t develop places where it’s just going to be torn down in 50 years or even 100 years. Think about it. And government, they should help. They should tell private developers maybe (laughing).” – Matthew

• Government has best information, moral responsibility to act:
  • “At least they’re aware…I mean if the information is there, I don’t think they should be developing there” – Nancy
  • “They should control that and say, ‘if you are going to allow a developer to develop a whole neighborhood on a flood plain or a swamp…..then yeah, they should pay for it’, I think, because it never should have been allowed” – Frank
THE NEED TO INFORM

• General agreement that home-buyers should be made aware of location in flood-prone area:
  • “Should have total disclosure. You know, if I was to sell my house, we would tell the people that, yeah, the city flooded in 2013… I think that it’s the responsibility of realtors to make sure that people buy and know what they’re getting into” – Peter
  • Realtors should “not just say that but explain what it means” – Angela
  • “I only knew I was in a flood plain, and then after the flood I was told I was in a flood fringe and I never, ever heard the word in my life…..I have lived here for 42 years and I have never heard of ‘flood fringe’ ever…..so maybe realtors should be more upfront that, “this is zoned ‘flood plain’ and this is zoned ‘flood fringe’” – Tasha

• Some objection:
  • “So, disclosure laws are pretty clear right now. You can’t sell a flooded property to somebody and not tell them. To tell them about future risk is kind of like: this house might burn down. That tree could fall on you. This could flood again. So, buyer beware, they should know that they’re buying on a flood fringe” – Bryan
  • Real estate industry has called these rules “idiotic” and believes they would “kill the market” (Goodell 2017)
TAKING PERSONAL RESPONSIBILITY

• Buyer Beware
  • “Well I think people can live wherever they want, but I think they have to carry that risk” – Caleb
  • Even discussion the issue “is really fraught with problems, because it harkens back to private property… It is really nobody’s responsibility” to protect people from flooding – Bryan

• Should be common sense
  • “People have to take some responsibility for themselves, you can’t just go in totally blind and say, ‘I know there is a river here but I am going to build anyways.’ You got to use some common sense” – Caleb
  • Should be “instinctual” (Rachel); “has to be in the back of your mind that it could happen” – William
HAVE WE ALREADY MADE OUR BED?

• “There is not a lot of land left in Calgary [where we might] say that is a vulnerable area and you should not live in it. So the dirty deed has been done” – Tasha

• “Regina? Built up on a river. Saskatoon? Built on a river. Edmonton? Built on a river. Vancouver? Built on the ocean. Tuktoyaktuk? Built on the ocean…Those are the natural trade routes that go back hundreds of years and that is why they are there” – Gary

• “It is not just Calgary, it is everywhere that people live in disaster areas….You can’t change that” – Allen

• Managed Retreat (Koslov 2016) is unrealistic
  • “Half the city’s built on a riverbank….So you’re not going to force all those people to pack up and move” -- Peter
  • “Calgary, downtown, headquarters of major national and international companies is in a flood plain of the river. I can’t imagine what cost it would be to the city, to the local economy, to the provincial economy, to the national economy if nobody was allowed to live in a flood plain, if no major businesses were allowed to operate in the flood plain…..I don’t think that you could do it, frankly” -- Edward
ENGINEER IT AWAY?

- **Put up walls:**
  - “I think it would be a very good idea if the money would be invested better on some kind of flood-proof wall” – Nicole
  - “We can keep building in floodplains, but “Make it higher. Make it safer. Whatever—put up the concrete walls or whatever you need to do to make it safe. If you really wanted to sell that for development—make it safe—or make the developers make it safe” – Emily

- **Houses on Stilts:**
  - “The government should have a lot to say about that, that’s why we get building permits that’s why we get development permits so there should be, I think, so if you’re gonna build a house here you gotta build it on stilts, it might not look like nice but I mean that the kind of thing we almost have to do” – Dave
  - “I think it makes more sense to put in really well-designed homes and go bigger than you even thought possible. Make it so you can’t even have a ground floor, or like just parking under your house . . . where the house is up on stilts and the car goes underneath” – Jocelyn
CONCLUSIONS

• Most participants did not believe developers would act to protect public safety, unless required
  • Not angry about this, but resigned to it

• Residents tended to take a couple preferred approaches:
  • Group 1: Regulate floodplain development and require disclosure of existing home location
  • Group 2: Buyer Beware, Take Personal Responsibility, Too-Little-Too-Late
  • G1+G2 Overlap: Enhanced structural protections

• Lack of agreement on best approach
  • Will limit collective voice
  • Even when residents are organized and there’s consensus, advocating to government can be challenging (Koslov 2016; 2019; Pilergam 2021)

• Helps us understand “hegemonic growth regimes” (Logan & Crowder 2002) and how growth consensus is created/maintained
CONCLUSIONS

• Risk is proliferating in North American cities, and new neighbourhoods are being planned and built in proximity to rivers

• The “Growth Machine” pushes for unabated development (Logan and Molotch 1987; Tierney 2014).

• Important to analyze the politics and motivations of property owners, during ‘normal’ times and in situations of risk

• Further complicated in conservative communities, which reject regulations and activist government, with property rights as sacrosanct
CONCLUSION

• Managing risk requires a shift in thinking:
  • “It used to be that we manage the river and let people go where they want to…. Now we are trying to manage the people and letting the river go where it wants to” – Mayor of Chelsea, Iowa (Steinberg 2000).
  • Resistance Adaptation – modifying human activities to adapt to a changing climate (Koslov 2016)
• First step in getting out of a hole is to stop digging

One who knows the Mississippi will promptly aver—not aloud, but to himself—that ten thousand River Commissions, with the mines of the world at their back, cannot tame that lawless stream, cannot curb it or confine it, cannot say to it, Go here, or Go there, and make it obey; cannot save a shore which it has sentenced; cannot bar its path with an obstruction which it will not tear down, dance over, and laugh at.

—Mark Twain—

GRATITUDE

• Research Assistants
  • Victoria Stamper, Isabelle Sinclair, Angela Laughton, Grace Ajele, Travis Milnes, Priya Kaila, Morah Mackinnon, Daran Gray-Scholz

• Participants, including 407 for earlier survey and 40 for interviews

• Funder
  • SSHRC, grant number 435-2014-1008