IBC BAC | Insurance Bureau of Canada
Bureau d'assurance du Canada

Sewer Backflow Insurance Coverage:

A Shared Concern

Hamilton City Council
May 2, 2012

Presentation Plan

1. **The issue**
2. MRAT concept
3. Project status
4. Benefits for municipalities
5. Public policy implications

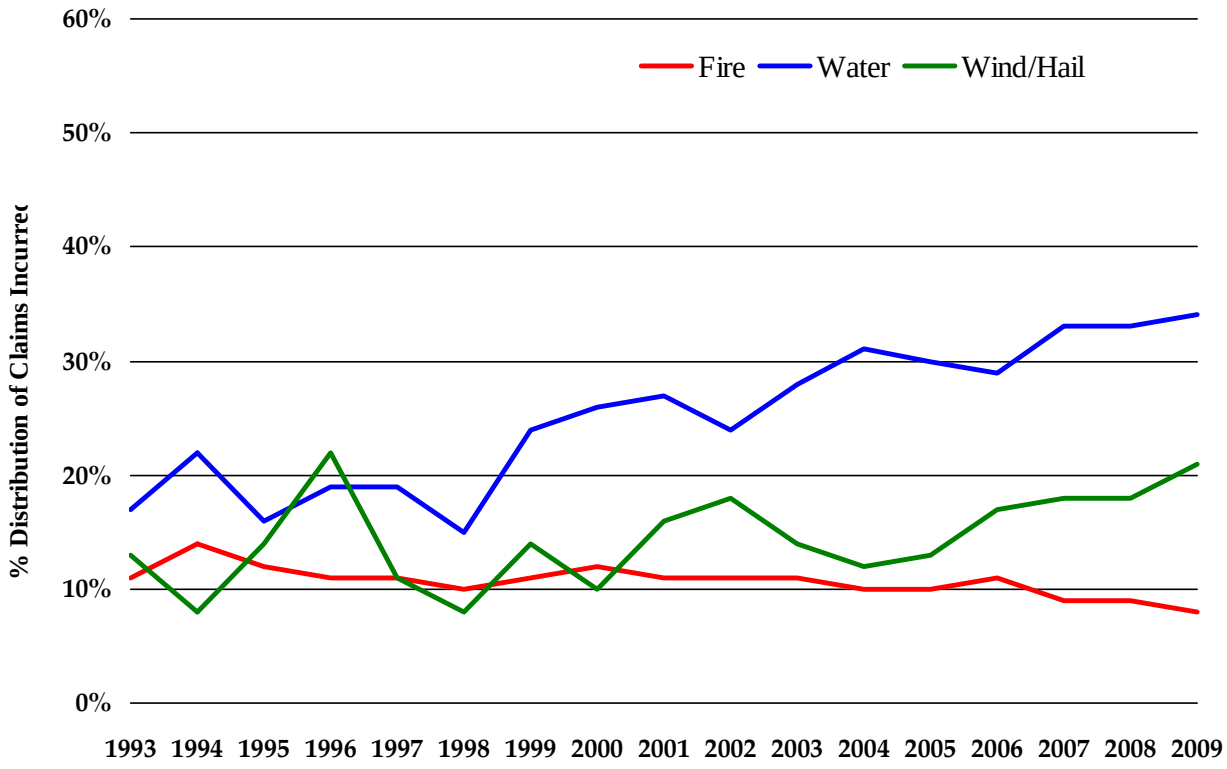
Size of Recent Events

	Shown in 2010 dollars
Saguenay floods (1996)	$1.5 billion*
Ice storm (1998)	**$1.8 billion**
B.C. wildfires (2003)	$225 million
Peterborough floods(2004)	$97 million
Toronto rains (2005)	$642 million
Hamilton-Ottawa rain (2009)	$200 million
Alberta wind (2009)	$355 million
Vaughan tornado (2009)	$87 million
Calgary hail/rain (2010)	$500 million
Slave Lake fire (2011)	**$700 million**
Goderich tornado (2011)	**$300 million**

*$271 million in insured losses

National Claims Trends

Homeowner insurance



Source: IBC, Homeowners exhibit

Why is this a problem?

- Availability and affordability of insurance
- Cannot simply remove coverage and increase premiums... not sustainable
- Insurers want to be part of the solution

Infrastructure

- Storm and sanitary sewers
  - Nationally at 76% of life expectancy
  - Convergence of factors; deferred maintenance, precipitation patterns changes
  - Climate no longer stable
  - Systems under designed for current climatic realities, huge challenge for municipalities to predict future needs
- FCM - $12 billion deficit in storm and sanitary infrastructure

Shared Concern….

- National issue; not just Hamilton
- We are in the business of selling insurance
- Difficult to price, historical losses no longer a solid indicator of future losses
- Hamilton has done lots of work to improve system; how do we translate work to coverage?

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How can we predict infrastructure risk?

- Prospective tool
- Need for a tool which will combine infrastructure, watershed, insurance claims and climatic data to predict risk of failure
- Also need to create a win/win/win between industry/consumers/municipalities

Municipal Risk Assessment Tool (MRAT)

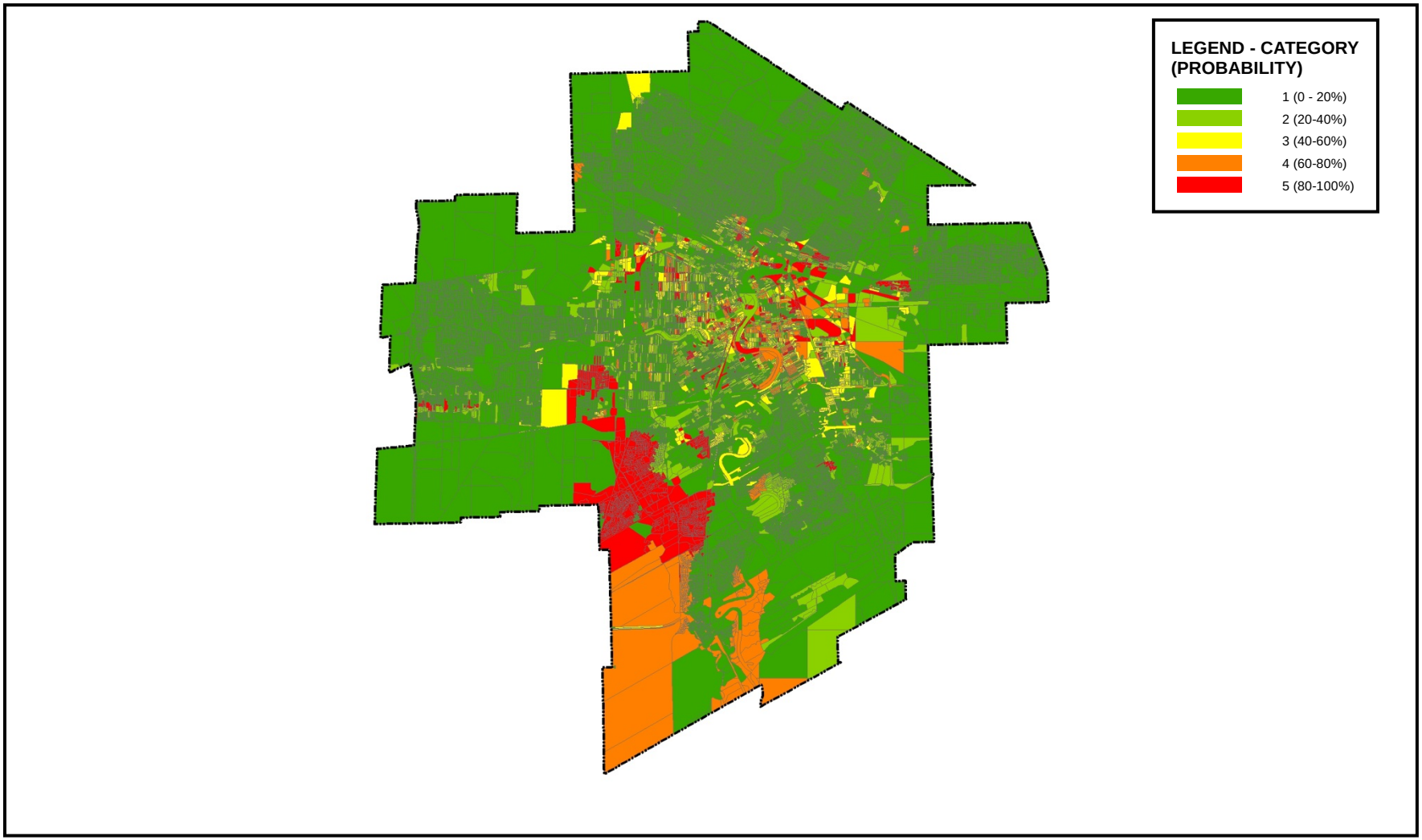
Risk = probability x vulnerability x exposure

- Climatic
- Operational
- Infrastructure variables
- Hydrology

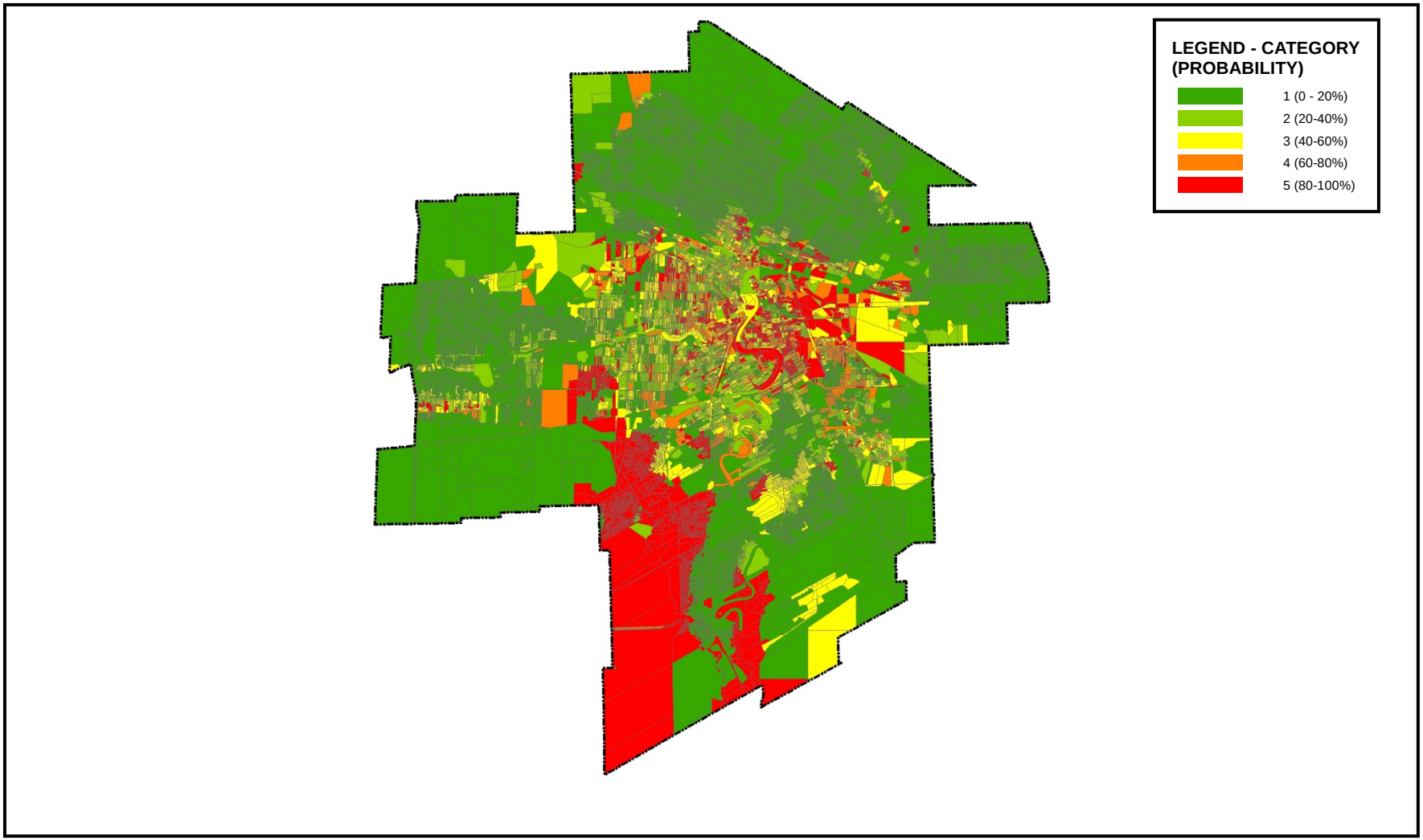
What is MRAT?

- Municipal Risk Assessment Tool
  - Top-Down approach
  - Tool to quantify failure risk of municipal storm/sanitary water infrastructure systems resulting in insurable losses for both **current** and **future** risk (2020-2050 time horizons)
  - Limitation—identify risk areas, not tell you how to fix it
- Based on a risk formula
  - Looks at 20 variables linked to a GIS visualization application, including vulnerability, exposure indicators and climatic return periods both updated and future climate scenario projections

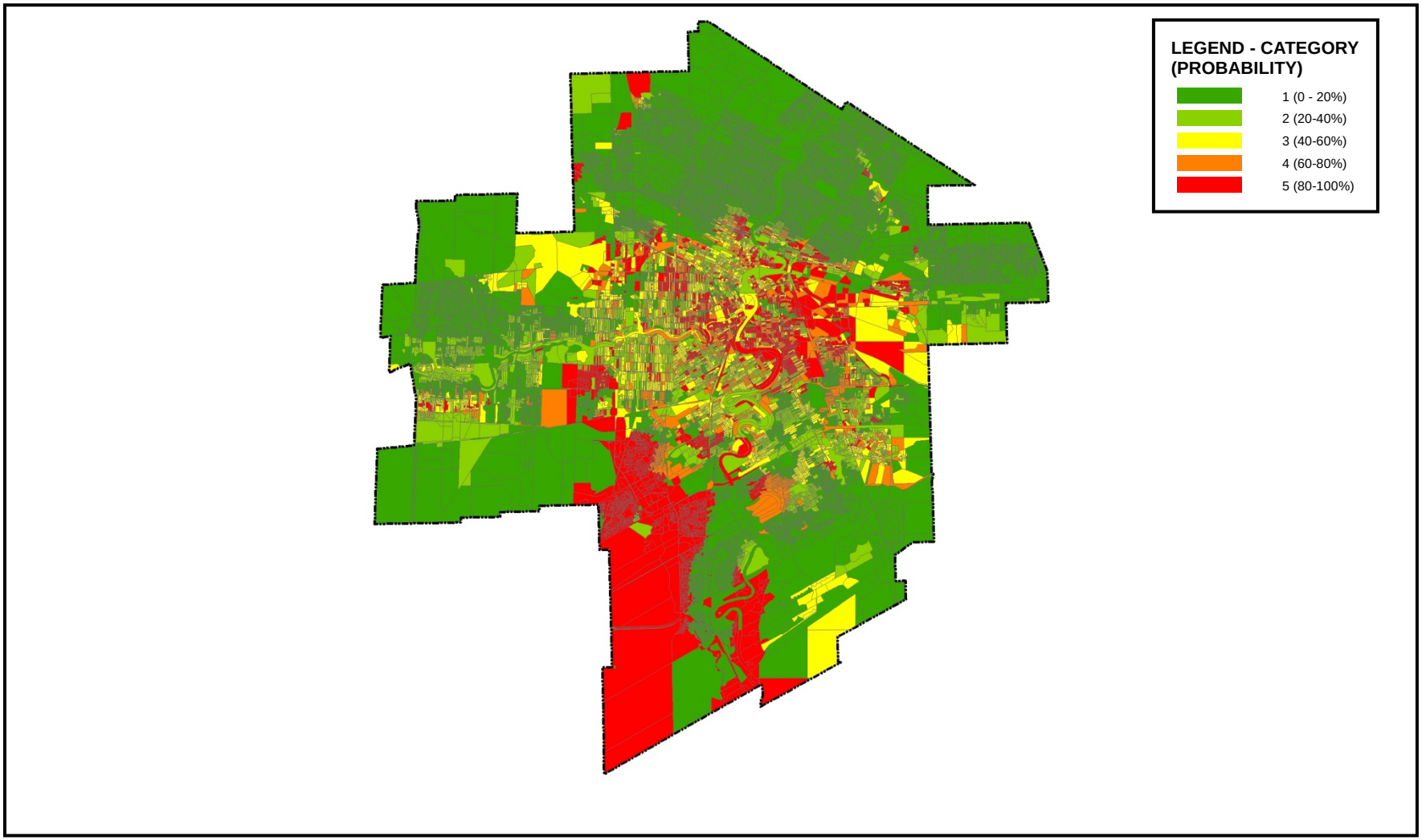
Municipality “A” Current risk



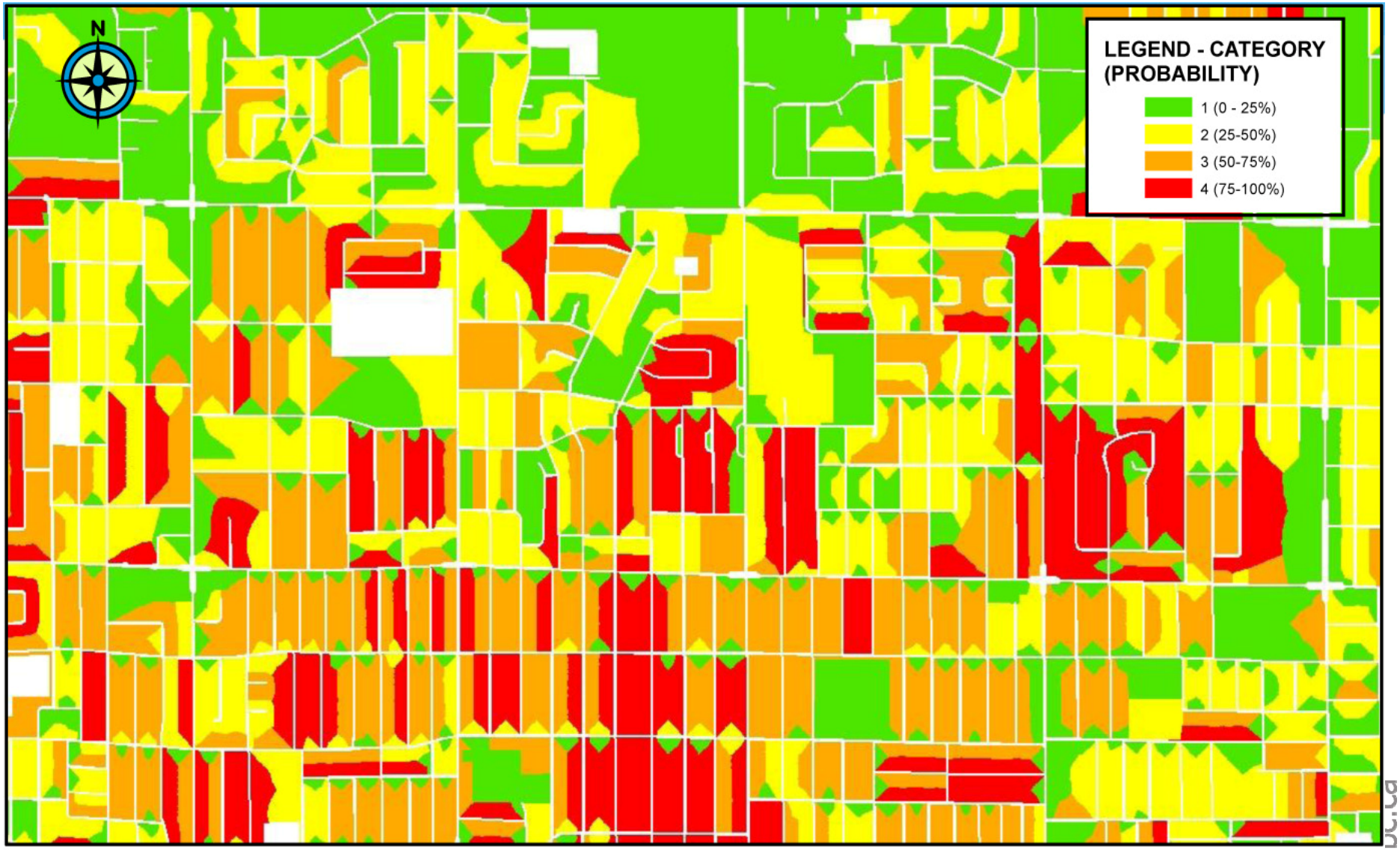
Municipality “A” Low rain scenario, 2020



Municipality “A” low rain scenario, 2050



Current Risk



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Initiated Project in 2009

- Proof of concept with Hamilton data
  - Hamilton shown its leadership, data quality outstanding, extremely knowledgeable and professional
  - Appreciated strong support, now need to meet with to highlight results, work in progress
- Ten participating municipalities for detailed proof of concept
  - Hamilton, London, Moncton, Bathurst, Winnipeg, Coquitlam, Fredericton, Halifax, St John's

Project was delayed…

- Due to lack of access of insurance industry data for calibration...
- Issue resolved as of three weeks ago
- Meanwhile continued work on climate scenarios, future IDF methodologies and recruiting municipalities
- Now engaged with five municipalities to continue proof of concept
- Deadline for first five municipalities is July, and next five municipalities is October
- Next steps—governance and conditions of use

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Benefits

- Municipalities, Insurers, Consumers
  - Availability of insurance
  - Additional decision-making tool
  - Updated rainfall climatic information
  - Information on impact of future climate
  - Help prioritize infrastructure investments
  - Build a case for infrastructure programs

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Public Policy Issues

- Need for additional funding
- IBC part of FCM Infrastructure Forum
  - MRAT's role to support infrastructure requests
- IBC ready to support municipal requests

Questions?

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