

The Mental Health Impacts of Flooding and Associated Costs: A Case Study



Prepared by:
Dana Decent, Manager
Intact Centre on Climate
Adaptation
University of Waterloo
ddecent@uwaterloo.ca
www.intactcentre.ca

Nov 5th, 2018

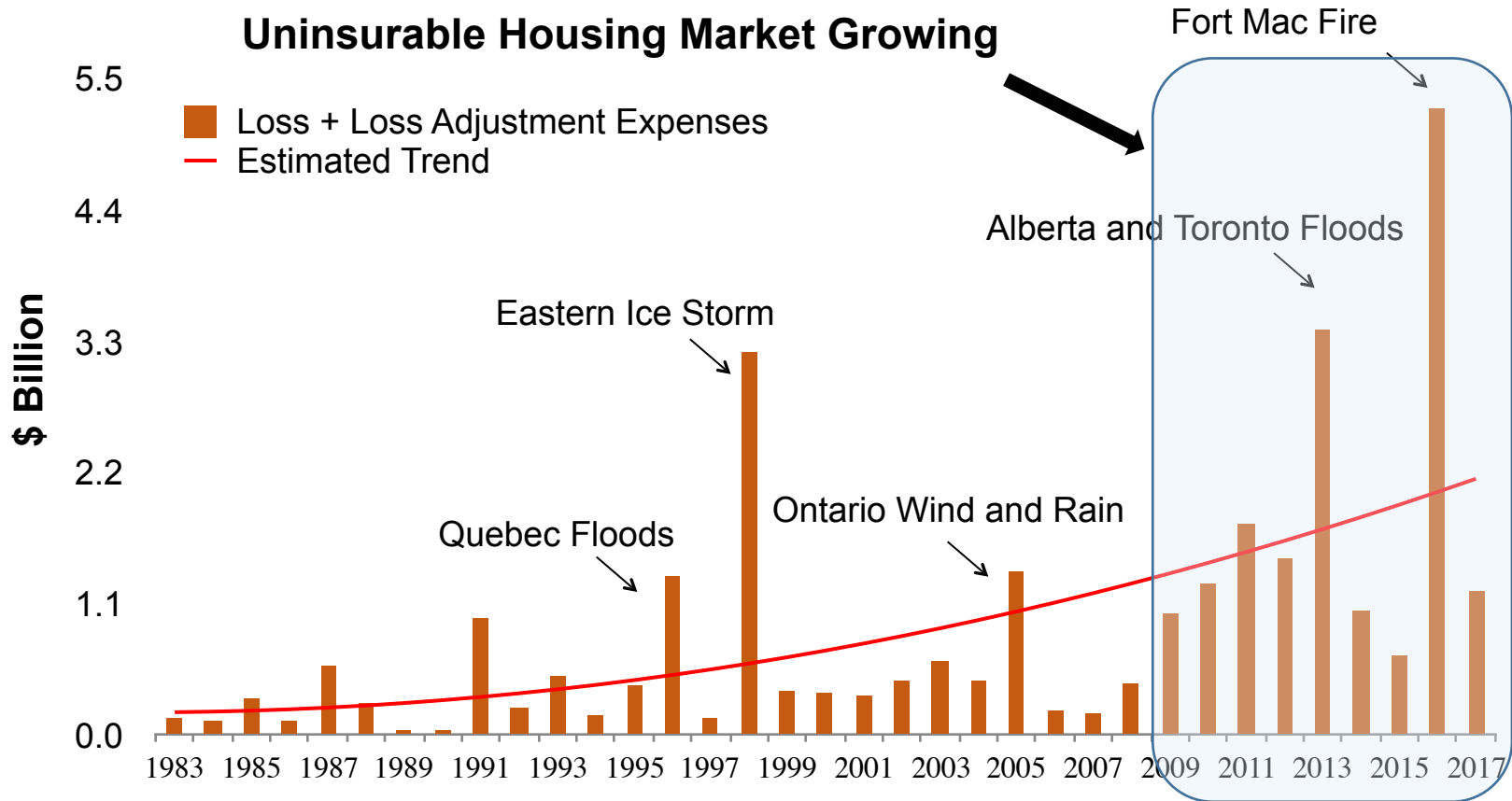
Agenda

1. Rising Costs of Extreme Weather/
Flooding
2. Case Study: the Mental Health Impacts
of Flooding



Costs of Extreme Weather: Catastrophic Insurable Losses

INTACT CENTRE
ON CLIMATE ADAPTATION



Loss + Loss Adjustment Expenses

\$2017 - total natural-catastrophe losses normalized by inflation and per-capita wealth accumulation

Courtesy: Insurance Bureau of Canada

Note: Cost to government and homeowners 3-4X that of private insurers.

Quantitative Costs

1) Leave from work

- For Saguenay-Lac-St-Jean (QB) residents following 1996 floods:
 - 12% had to take sick leave or were absent from work
 - 6% took an early retirement
- (Malthais et al., 2000)

2) Higher Health Claims

- For High River women residents following 2013 Alberta floods:
 - 164% increase in anti-anxiety medication
 - 232% increase in sleeping aids
- (Sahni et al. 2016)



3) Supply Chain interruptions

- Hospitals in the United States experienced a **shortage of medical supplies** because of interrupted manufacturing from Hurricane Maria on Puerto Rico.

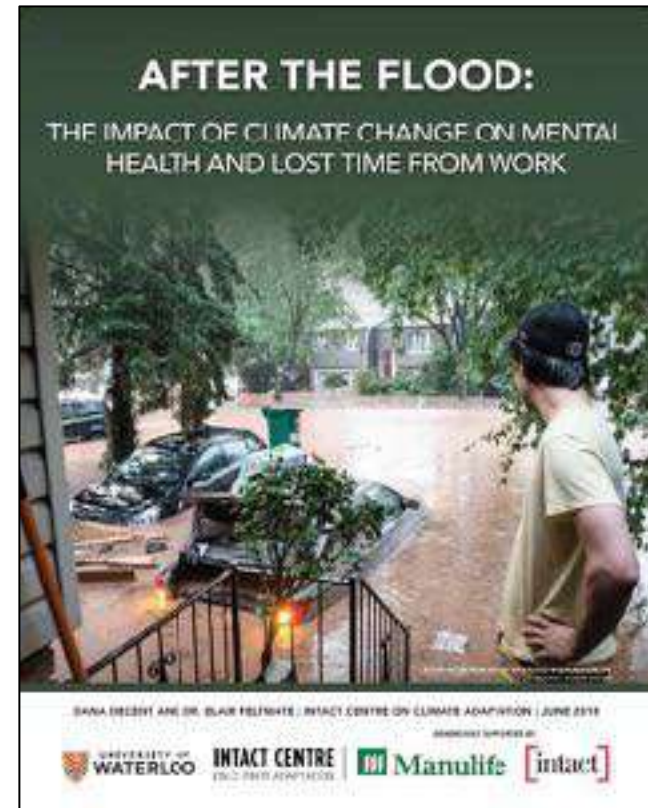
Intact Centre Study: Health Impacts and Costs of Flooding

INTACT CENTRE
ON CLIMATE ADAPTATION

Purpose: Assessing mental and physical health impacts in flooded vs. non-flooded homes and associated costs.

Project: 100 interviews with people who live in flood-affected neighbourhoods in Burlington, ON.

Result: Days off work due to flooding and significant mental health impacts three years after a flood.



Quotes from People Whose Homes Flooded in the Last 3 Years

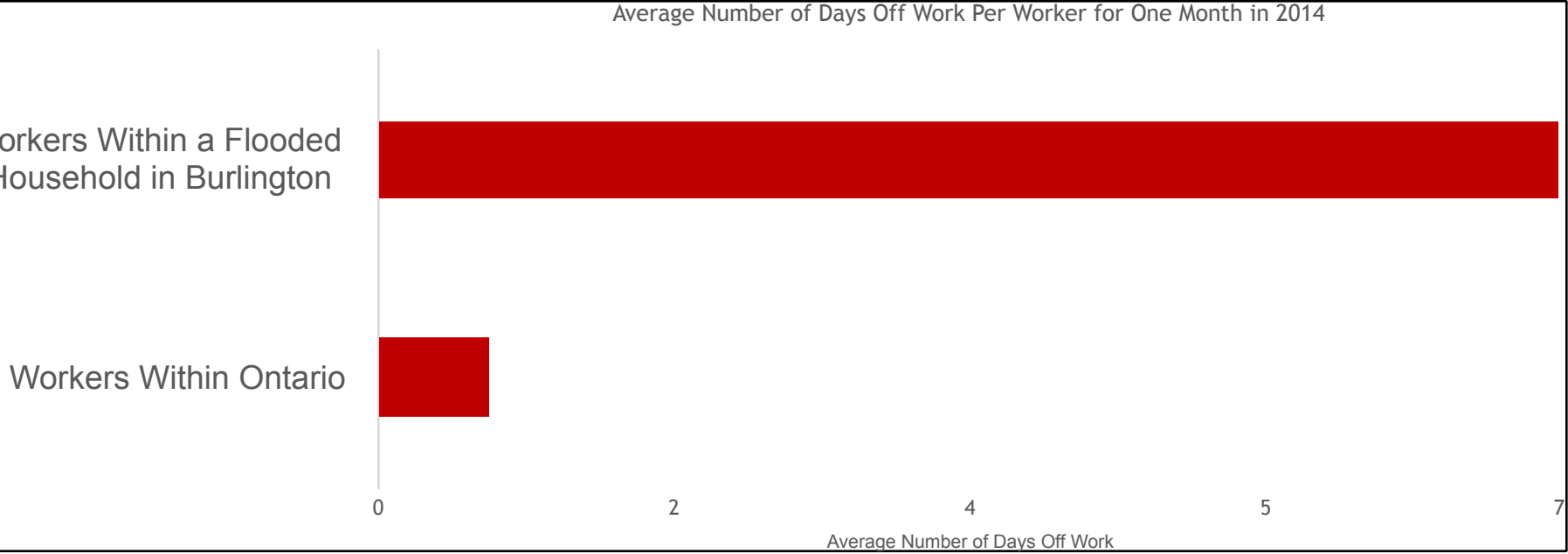
INTACT CENTRE
ON CLIMATE ADAPTATION

- *“No health issues – just my sanity”*
- *“I have PTSD from it [the flooding]”*
- *“I think of something I want and it’s gone”*
- *“We mentally suffered more than anything else”*
- *“My business no doubt suffered”*
- *“We lost so much that was important to us”*
- ***“I just hope nobody else goes through it, that’s for sure”***



Days off Work due to Flooding

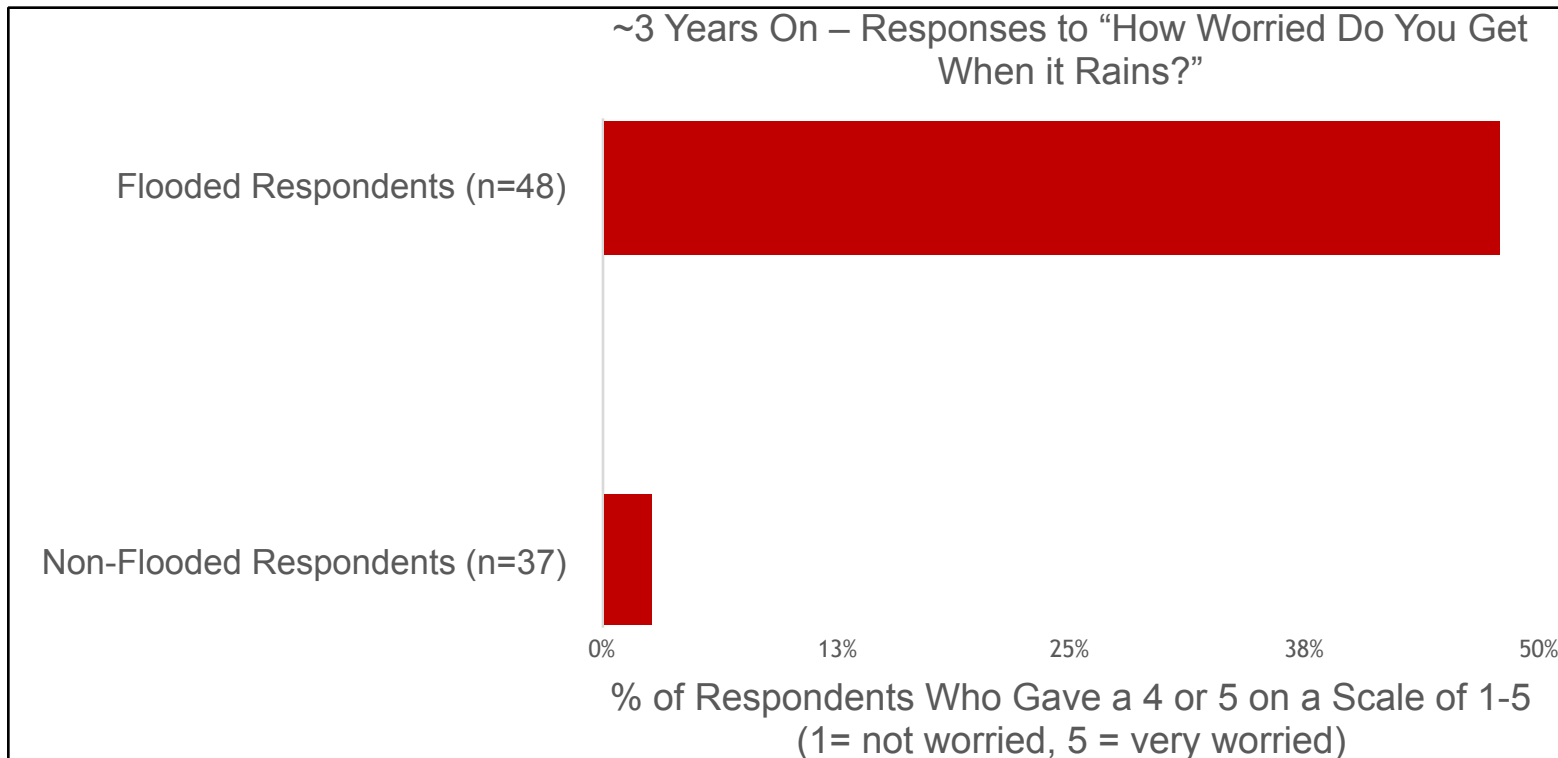
Over half (56%) of flooded households that had at least one working member took time off work. **7 days off work** was the average per flooded household (10x the Ontario average).



Source: Statistics Canada (2017) <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=2790029&&pattern=&stByVal=1&p1=1&p2=37&tabMode=dataTable&csid=>

Assessment of Mental and Physical Health Impacts of Basement Flooding

INTACT CENTRE
ON CLIMATE ADAPTATION



“It’s something you never want to experience again in your life”