Fort McMurray: The most expensive wildland fire event in world insurance history
ICLR established in 1997 by Canada’s insurers

Mission: Reduce the risk of loss of life and property damage from severe weather and earthquakes

Developing evidence & tools, promoting best practices, communication

- Urban flood, extreme wind, wildland fire, earthquake
10 largest insured loss events - Canada

$ Billions (adjusted)

Fort McMurray (2016)
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Low estimate ($3.58 Billion)
High estimate ($4.67 billion)
“...no one really appreciated or considered the massive concentration of values in such a remote location exposed to the peril of wildfire.”

Peter Hearn, President & CEO, Guy Carpenter (Oct. 2016)
Top 10 wildland fire events, insurance loss (world)

1991 Oakland Hills, CA
- 25 deaths
- 3,000 structures destroyed
- ($1.7 B USD in 1991, 2015 USD: $2.7 B)

Data sources: Aon Benfield; CatIQ; IBC; ISO PCS, PCS Canada
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- 2011 Bastrop, CA
- 1993 Topanga, CA
- 2011 Slave Lake
- 2015 Valley Fire, CA
- 2009 Black Saturday, AUS
- 2003 Old Fire, CA
- 2003 Cedar Fire, CA
- 2007 Witch Fire, CA
- 2016 Fort McMurray (low estimate)
- 1991 Oakland Hills CA
- 2016 Fort McMurray (high estimate)

Image: NASA Ames Research Centre DART
Top 40 cat events, worldwide (insured loss 1970-2015)

Data sources: Swiss Re; PCS
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Data sources: Swiss Re; PCS

- Hurricane Katrina (2005)
- Tohoku earthquake, tsunami (2011)
- Hurricane Sandy (2012)
Top 40 cat events, worldwide (insured loss 1970-2015)

Fort McMurray is the only wildland fire event that could be added to this list

Fort McMurray (2016)
Tohoku earthquake, tsunami (2011)
Hurricane Katrina (2005)
Hurricane Sandy (2012)

Data sources: Swiss Re; PCS
Slave Lake 2011 pop: 6,792

Total insured losses: $784 million
Fort McMurray population: 61,374

39th most expensive event in the recorded history of the world insurance industry
Fort McMurray *alone* exceeds insured losses from 2013 A. AB flood, 2013 GTA flood, 2013 Ice Storm

Also in 2016: Over a dozen storms and extreme rainfall events, Hurricane Matthew remnants

Data sources: CatIQ, 2016; PCS, 2016; IBC, 2016
Additional notes

- Kelowna, Slave Lake: Considered major but ‘one off’
- Fort McMurray disaster is globally significant
- Most of the losses caused by damage to homes and home contents – significant opportunities to reduce risk
Reducing wildland fire risk—ICLR
Recent ICLR activities – wildland fire

- Research reports
- Public education materials (w/ FireSmart, A. Westhaver)
- Construction code recommendations (w/ FireSmart and NFPA)
- **Insurers Rebuild Stronger Homes**
Insurers Rebuild Stronger Homes

- Build Back Better
- Total losses provide opportunity to invest in risk reduction
- Affordable measures with significant impact, focus on structure
- ICLR research, labs, demonstration projects, international literature and experts
- May 2016 1st Ed.—advice will change based on new findings
Opportunities post-Fort McMurray fire

- Integrate rebuild stronger measures into rebuilds
  - Basement flooding
  - Wind
  - Hail
  - Wildland fire
- Priority, enhanced
Wildland fire

- **Priority**
  - Fire resistant roofing materials
  - Fire resistant siding
  - Openings (doors and windows) that do not enhance risk

- **Enhanced**
  - Roof gutters, downspouts
  - Vents and soffits
  - Closing in of openings (under decks, eaves, etc.)
  - Window screens
  - Non-combustible exterior projections
  - No attic ventilation facing combustible materials
  - Spark arrestors
Cost estimates (RMWB)

- Basement flooding: $200-300
- Wind: $200-$350
- Hail: Major cost is additional ice and water shield
- Wildland fire: Negligible (largely building practice)
Conclusions

- Fort McMurray was a globally significant loss event
- Increased interest in wildland fire risk reduction
- Opportunity to significantly reduce risk through rebuilding process