Wildland Fire Evacuations in Canada

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Wildland Fire Evacuation in Canada

1. Wildland Fire Evacuation Database

2. First Nations Wildfire Evacuation Partnership

3. Sandy Lake First Nation case study
Wildland Fire Evacuation Database

- Wildland fires are a frequent occurrence in Canada, impacting communities
- There is currently no single agency responsible for collecting these numbers across Canada (provincial or federal)
Wildland Fire Evacuation Database

Methods

- Existing database – Evacuations 1980 to 2007 compiled by Jen Beverley
- Searches for each year began with the keywords “forest fire*” “evacu*” and “Canada” – English news articles only
  - “Canadian News, Business and Current Affairs” database using ProQuest
  - Google
- Searches for specific events
- “Quick Look” sheets for easy viewing of evacuations for a given year.
Wildland Fire Evacuation Database

- Evacuation numbers (# of evacuees) sometimes not listed or referenced in terms of “a group” or “several” or “a neighbourhood”, etc.
- Used the same method as Beverly and Bothwell (2011) to define numbers for those with qualitative descriptions
  - group (20 people), some (9 people), several (3 people), dozens (36 people), a number of homes (20 people), camps (20 people), residential subdivision (90 people).
Wildland Fire Evacuation Database

Total: 448444
Wildland Fire Evacuation Database

Number of Wildfire Evacuees in Canada 2000-2017

[Bar chart showing the number of wildfire evacuees from 2000 to 2017, with a significant increase in 2016 and 2017.]
Wildland Fire Evacuation Database

Number of Wildfire Evacuation Events in Canada (1980-2015)
Wildland Fire Evacuation Database

Number of Wildfire Evacuation Events in Canada by Province
(1980-2015)

- AB
- BC
- MB
- NB
- NL
- NS
- NT
- ON
- PE
- QC
- SK
- YT

Number of Evacuation Events

Province
Wildland Fire Evacuation Database

- Size of Evacuations (1980-2013)
Limitations

- Use of media reports for earlier data
- Evacuations in Quebec – we had a research assistant go through all Quebec French media to make sure we weren’t missing any evacuation
- Estimates have to be used for evacuation numbers
  Who is responsible for compiling accurate evacuation numbers?
Acknowledgements

- Jen Beverley
- Mark Oldershaw, Sharon Romanowski, Scott Wilson, and Carolyn Gartrell
First Nations Wildfire Evacuation (FNWE) Partnership

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Wildfire Risk to Indigenous Communities

- First Nations, Metis and Inuit

- 80% are located in forested regions

- 1871 reserves that are located within the WUI.
  - 60% of all reserves in Canada

- Indigenous communities are dependent on forests for cultural, subsistence, and employment purposes
Number of Indigenous Evacuees in Canada 1980-2016

YEAR

NUMER OF
INDIGENOUS EVACUEES

0

5000

10000

15000

20000

25000

First Nations Wildfire Evacuation Partnership

- This partnership brings together researchers, First Nation communities in Ontario, Saskatchewan, and Alberta that were evacuated due to recent wildfires, and agencies responsible for conducting or providing support during these evacuations.

- The goal is to examine how Indigenous residents and communities have been affected by wildfire evacuations and identify ways to reduce negative impacts of wildfire evacuations on Indigenous people.
First Nations Wildfire Evacuation Partnership

- 14 agencies (provincial and federal)
- 7 First Nation communities
# First Nations Wildfire Evacuation Partnership

## Research team

| Dr. Tara McGee | • Mishkeegogamang Ojibway Nation (ON)  
• Whitefish Lake First Nation 459 (AB) |
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<td>Kyla Mottershead (MA)</td>
<td>• Dene Tha’ First Nation (AB)</td>
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| Henok Asfaw (PhD student) | • Sandy Lake First Nation (ON)  
• Deer Lake First Nation (ON) |

**Dr. Amy Christianson**  
Canadian Forest Service

Karen Pheasant-Neganigwane (from Wikwemikong First Nation)  
Deer Lake First Nation (ON)  
Onion Lake Cree Nation (SK)  
Stanley Mission (SK)
First Nation Wildfire Evacuation Partnership

- Research Dissemination
  - Multiple return visits to the community to discuss findings
  - Newsletters
  - Website [www.eas.ualberta.ca/awe](http://www.eas.ualberta.ca/awe)
  - Teleconferences
  - Interim and Final Workshops
  - Academic stuff 😊 (journals articles, conference presentations)
Wildfire Evacuation Experiences:  
*The case of Sandy Lake First Nation, Northern Ontario*

by

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CFS-CIF national e-lecture series
Innovative Solutions to Respond to the Challenges of a Changing Climate

November 1, 2017 Edmonton, Alberta
Contents of the presentation

• Background
• The study community – Sandy Lake First Nation
• Research objectives
• The 2011 Sandy Lake wildfire evacuation
• Factors affecting evacuation experiences and impacts
• Recommendations
Wildfire evacuation in Canada

Sandy Lake
First Nation
Ontario far north
Sandy Lake First Nation

- 17 square miles of Federal Reserve land - Treaty 5

- A fly-in community

In 2011 (during the community wide evac.), total population was about 2800.
Wildfire history near Sandy Lake First Nation
Research objectives

General objective

To investigate how residents of Sandy Lake First Nation were prepared for and affected by the 2011 wildfire evacuation.

Specific objectives

• Examined how issues related to pre-event evacuation preparedness influenced evacuation experiences.

• Explored how the nature of the evacuation operation by government influenced evacuation experiences and impacts.
Research methods

• Community-based qualitative case study

• Data collection instrument
  - In-depth interviews
  - Focus Group Discussions
    ❖ 56 interviews
    ❖ 2 Focus Group discussions

With deputy Chief Robert Kakegemic (left) and Councilor Fabian Crow (right) - August, 2015
The 2011 Sandy Lake wildfire evacuation

• Early in July 2011 => wildfires were burning forests surrounding Sandy Lake

• Wildfires were advancing by the west side towards the community airport

• July 18 – partial evacuation was declared (stage one-evacuees)

• July 20 – full evacuation
Leaving the community

- July 18-20, 2011 full evacuation
- Canadian Forces CC-130 Hercules aircraft
- EMO, MNRF, INAC
- It took about 21 Hercules flights
- Stage one evacuees were sent to Sioux Lookout and Thunder Bay
- Stage two evacuees were scattered to eleven towns throughout Ontario and into Manitoba.
Staying behind in Sandy Lake

- Approximately 21 members of the community stayed behind to maintain essential services and help protect the community.

- Took turns to drive around and patrol the community, assist the chief in providing updates.

- Some were assigned to look after the hydro and water treatment plant; and a few others served as cooks for MNR firefighters; and feeding dogs and other pets.

Background photo source: [http://www.simonteakettle.com/sandylake.htm](http://www.simonteakettle.com/sandylake.htm)

People who stayed behind photo source: [https://www.youtube.com/watch?v=f0ZT-Dam5Xg](https://www.youtube.com/watch?v=f0ZT-Dam5Xg)
Two broad themes were identified that negatively affected the evacuation experiences of residents.

I. Pre-event emergency preparedness at community level

II. The nature of evacuation operation by government vis-à-vis the characteristics of the evacuating community
I. Pre-event preparedness

Organization of the evacuation

Absence of evacuation plan

“We weren’t following anything, there was no set guideline at that time, and we weren’t following a book [Emergency Management Plan] saying here’s what you do in this case. Basically we just took charge right from the beginning, and it was common sense things that we did” (Participant 022).

“I don’t think anyone was prepared for that fire to happen like that. I know it was chaos, they were just grabbing people off the roads here saying well you got to go on this plane, you’re on this plane, you know it wasn’t set up properly. But then again you know, nobody wasn’t prepared for it. I don’t think even the people that were handling the family situation wasn’t prepared for it too” (participant 31).
The lack of emergency plan and pre-event preparedness resulted in:

1. Some medically vulnerable elders sent out without a care giver.
2. Some grandparent unable to evacuate with their child/children
3. Contributed to the problem of family separation
4. Assignment of community evacuation liaisons

Source: (http://www.ctvnews.ca/ont-sending-mobile-medical-unit-to-help-fire-evacuees-1.673527)
Another dominant theme => The evacuation ‘displaced and scattered’ the community members -

“One of the key things was that our people were scattered, they were displaced. It started with phase one evacuation mothers would go out their babies, and in the next phase of the evacuation, the father would go out with the older kids and I had one family where the mother was in Winnipeg and the father was in Moosonee, near Quebec, and one of their kid was in Ignace. They did not know where each other were […] so it created a lot of panic and fear that people were concerned about their families so families were split […]” (Participant 020)
The evacuation ‘displaced and scattered’…..cont’d

1. The challenges of communication and coordination

“When people were put on the plane, they didn’t know where they were going. For you, if you want to go somewhere, and you’re going on the plane, you know where you’re going, right? You know your destination. But these people, they were just put on the plane without knowing where they were going” (participant 044).

1. Effects on family separation

A lot of times people would get on the plane here and would not know where their final destination would be. And that’s not a good feeling [...] it was an awful experience, not only not knowing, but being split up [with family members]. That part wasn’t a pleasant experience” (participant 001)

2. Effects on community cohesion and social support

The evacuation breaks up families, it breaks up that ‘community-ness’, how you feel home [...] that’s difficult because if there’s family issues and children issues, and elder issues, women issues, [...] And if you’re up there the host community has to address those issues, and that’s not the way we would do it here” (participant 45).
Recommendations

- Community evacuation plan
- Resources and personnel for evacuation planning and preparedness.
- All parties involved in emergency response need to adhere to provincial standards in Ontario’s Mass Evacuation Plan: Far North and municipal level service level evacuation standards.
- Maintaining family and community unity; the importance of family care for frail Elders, medically vulnerable evacuees and small children.
For more information on the First Nations Wildfire Evacuation Partnership and for a short summary of this research as well as other researches completed in other FN, please visit our website

https://www.eas.ualberta.ca/awe/?page=home

Thank you !

Megewich !