

The Lost Creek Fire: Vulnerability & Community Resiliency

Institute of Catastrophic
Loss Reduction
Toronto, ON
February 15, 2008



Research Team:

Judith Kulig University of Lethbridge

Bill Reimer Concordia University

Ivan Townshend University of Lethbridge

Dana Edge University of Calgary

Katja Neves-Graca Concordia University

Nancy Lightfoot Northern Ontario School of
Medicine

Advisory Team:

Michael Barnett Office of Congressman Patrick
Kennedy

John Claque Simon Fraser University

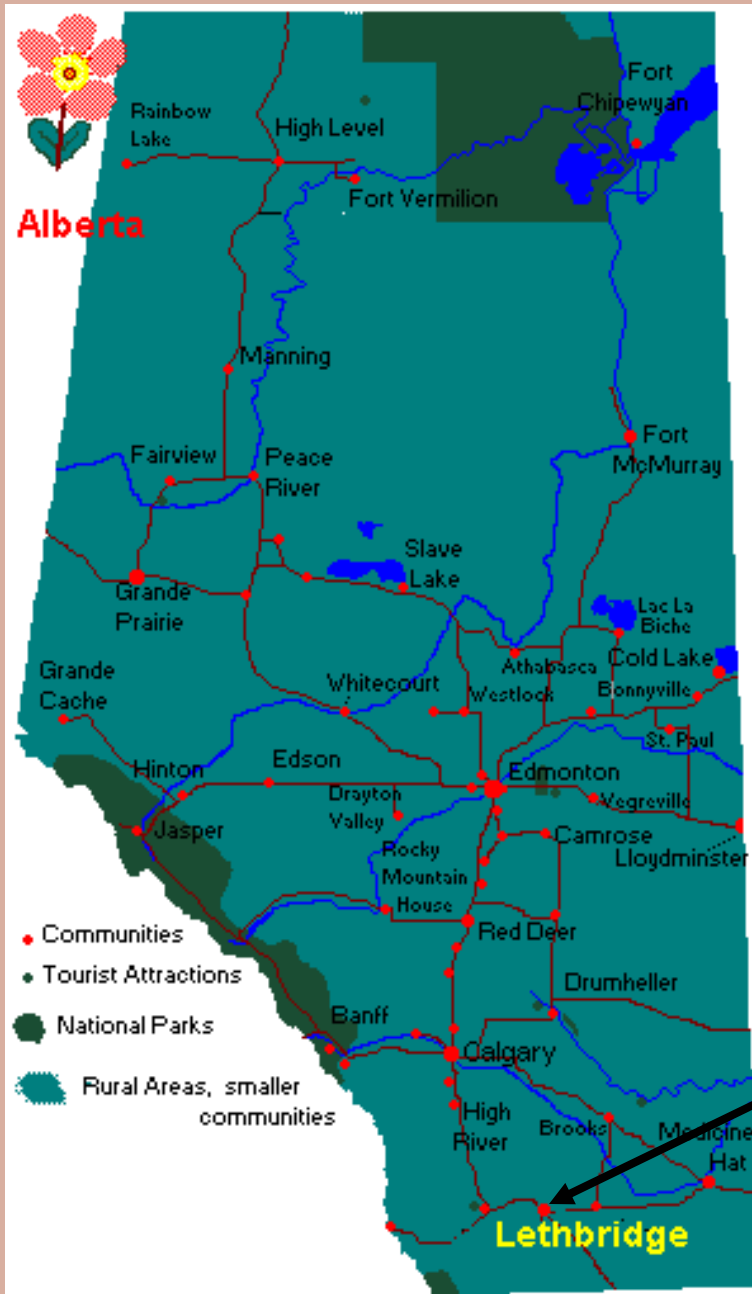
Andrew Coghlan Australian Red Cross

Murray McKay Alberta Health and Wellness

Ron St. John/Dave Hutton Public Health Agency of
Canada

Thanks to

- 🙌 The participants!
- 🙌 Pauline Desjardins, Community Liaison
- 🙌 The Municipality of the CNP Office
- 🙌 The funder—The Institute of Catastrophic Loss Reduction
- 🙌 Paige Emerson, 4th year nursing student, U of L and CIHR Health Professional Student Research Award Recipient



ALBERTA

Lethbridge



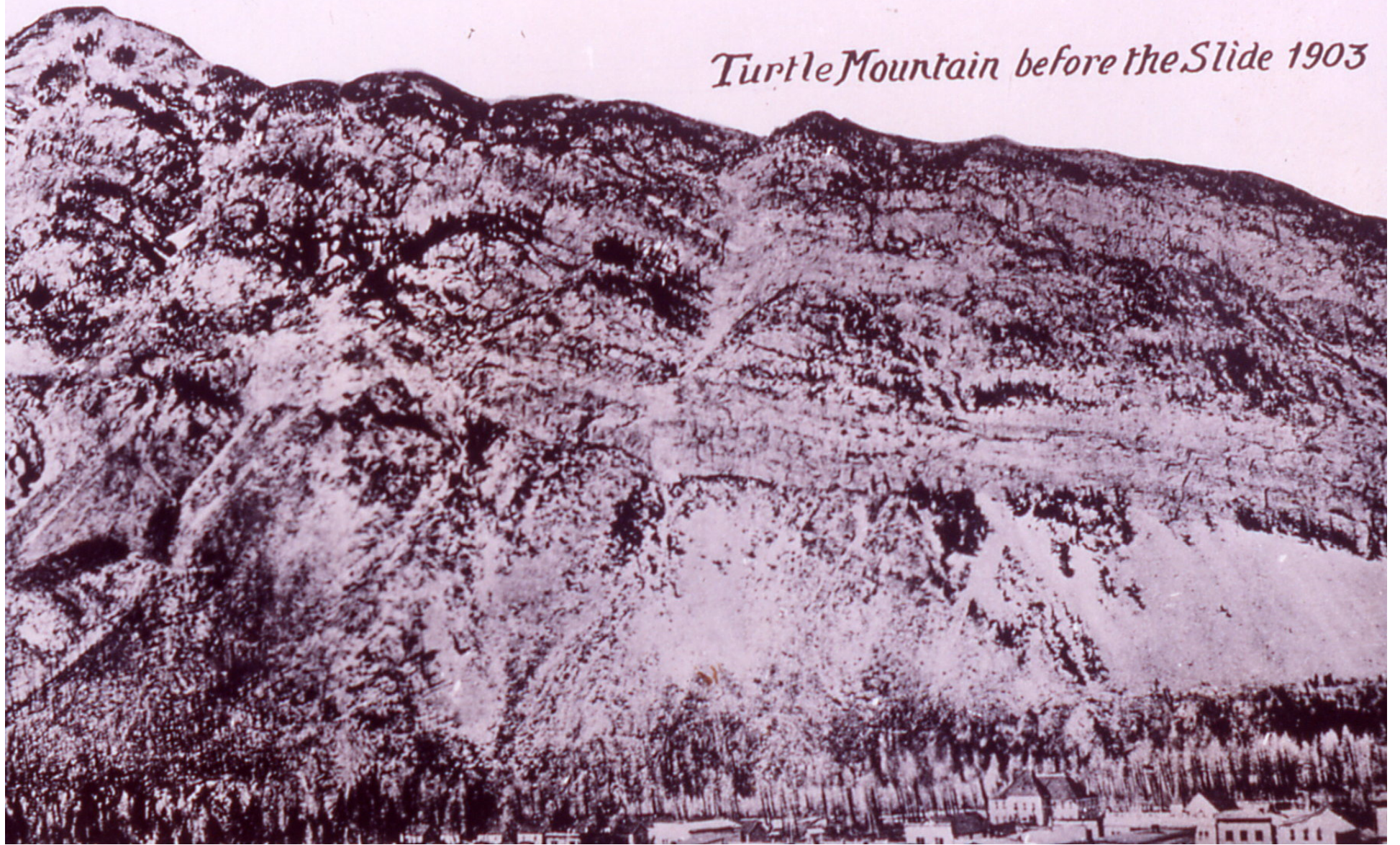


FRANK SLIDE

❖ APRIL 29-1903 ❖

DISASTER STRUCK HERE AT 4:10 A.M. APRIL 29th. 1903 WHEN A GIGANTIC WEDGE OF LIMESTONE 1300 FT. HIGH 4000 FT. WIDE AND 500 FEET THICK CRASHED DOWN FROM TURTLE MOUNTAIN AND DESTROYED THE TOWN OF FRANK. SEVENTY MILLION TONS OF ROCK SWEEP OVER TWO MILES OF VALLEY, TAKING 66 LIVES, BURYING NUMEROUS HOMES, THE ENTIRE MINE PLANT, RAILWAY SIDINGS AND 3200 ACRES OF FERTILE LAND TO A DEPTH OF 100 FEET IN APPROXIMATELY 100 SECONDS.

Turtle Mountain before the Slide 1903



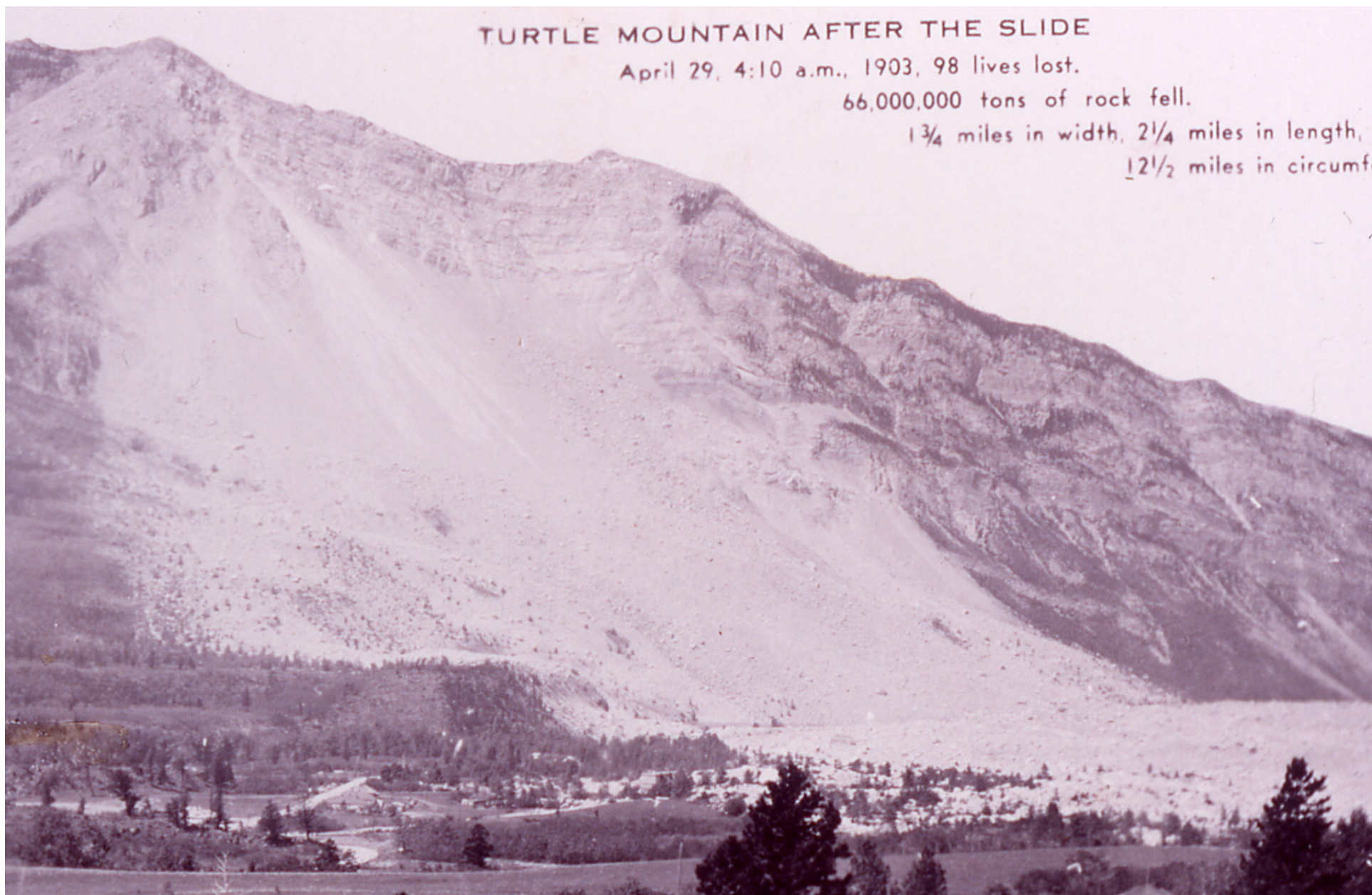
TURTLE MOUNTAIN AFTER THE SLIDE

April 29, 4:10 a.m., 1903, 98 lives lost.

66,000,000 tons of rock fell.

1 $\frac{3}{4}$ miles in width, 2 $\frac{1}{4}$ miles in length,

12 $\frac{1}{2}$ miles in circumf





Lost Creek Fire 2003



Lost Creek Fire 2003



Lost Creek Fire 2003



Wildfires

- Cost of health impacts of major wildfires can range from \$9-12 million due to increases in mortality risks (Rittmaster, Adamowicz, Amiro & Pelletier, 2006)
- In the past 10 years, 700,000 people and over 250 communities have been threatened by wildfires (Public Safety & Emergency Preparedness Canada, 2005)

What do we know about the summer of 2003?

- Thunder in the Valley® July 19, 2003
- Blairmore Fire Dept (and all local fire departments) heavily involved



Photo courtesy of Thunder in the Valley
<http://www.thunderinthevalley.ca/main.html>

High temperatures!



- July 19 29.7° C
- July 23 34.7° C
- July 28 28.9° C
- August 2 33.9° C
- August 7 28.9° C
- August 12 28.4° C
- August 17 28.7° C
- August 22 25.2° C

Lost Creek Fire Timeline

- July 23, 2003 Fire started
- July 26 State of Emergency (31 days)
- July 27 Adanac and East Hillcrest evacuated; all others in Hillcrest received 1 hr alerts
- August 2 All of Hillcrest evacuated
- August 3 South of the tracks in Blairmore evacuated
- August 6 return of Hillcrest residents
- August 8 return of Blairmore residents
- August 11 evacuated of same area of Blairmore
- August 17 return of Blairmore residents
- August 25 State of Emergency removed

Describing the Fire

- Moved at close to 89 feet/minute
- Over 800 SRD firefighters
- Helicopters & fire bombers
- Over 2000 residents evacuated
- ~100 residents in an evacuation Centre
- 21,000 hectares (51,800 acres) burned



http://earthobservatory.nasa.gov/Newsroom/NewImages/images.php3?img_id=15363

Costs of the Lost Creek Fire

- Municipal cost: \$2,394,180.91
- SRD cost: \$38 million (approximately)
- In comparison:
 - 2001 Chisholm Fire \$10 million
 - 2003 McLure Barriere Fire \$31.1 million
 - 2003 Kelowna Fire \$33.8 million

Other kinds of costs?

- Loss of tourism
- Change in the landscape
- Short-term economic losses for some businesses but booms for others
- A few businesses closed which may be at least partially due to the fire
- Media exposure around the world
- Real estate frenzy?? How much was due to the exposure from the fire?

The Participants

- Interviews were conducted with 30 participants (13 women and 17 men)
- The majority were married, living in the Pass and very involved in the community

What did we find out?

- The memories of the fire are very vivid.
- Poignant memories:
 - They remembered where they were the first time they saw the smoke
 - or heard about the state of emergency

“It became a story bigger than itself, and
when you talk about the Lost Creek Fire,
you talk about the fire fighters at the wall
of the flame,

Holding it back while everybody else left,
whether or not that’s true, that’s the
folklore,

That’s the story that’s come out of the
whole thing.”

Goals regarding controlling wildfires

- Municipality
 - No loss of life
 - No loss of structures
 - No lasting impact on taxpayers
- Residents:
 - No loss of life
 - No loss of homes
 - No loss of natural habitat/wildlife
- SRD:
 - Fire control with minimal losses to natural habitat & wildlife

Provincial Policy and Wildfires

- FireSmart program to prevent wildfire
- SRD is learning to address the “wildland-urban interface”
- Policies are needed to demonstrate and support the inter-connection between Municipal governments and SRD

- Formal, Organized Communication Processes are key!
 - Daily meetings were very helpful to keep all the groups connected
 - Process of communication between SRD and Municipality was developed
 - Residents appreciated the radio bulletins
 - Residents appreciated the SRD boards

Who is vulnerable?

- Those who are alone regardless of age
- Seniors with no local family members
- Individuals with more poor health (breathing difficulties; heart difficulties)
- Individuals who have physical, mental or developmental delays
- Individuals who have substance abuse issues or inadequate coping

Disaster plans

- The Municipality is legally required to have a disaster plan
- There is also a provincial disaster plan
- Most of the participants were not aware of the specifics of the plan
- Since the fire, there was no change among those interviewed about being prepared for the next disaster

Dealing with disasters

- Is a lot about TRUST between:
 - Residents
 - Residents and Municipality Office
 - SRD
 - Provincial Government

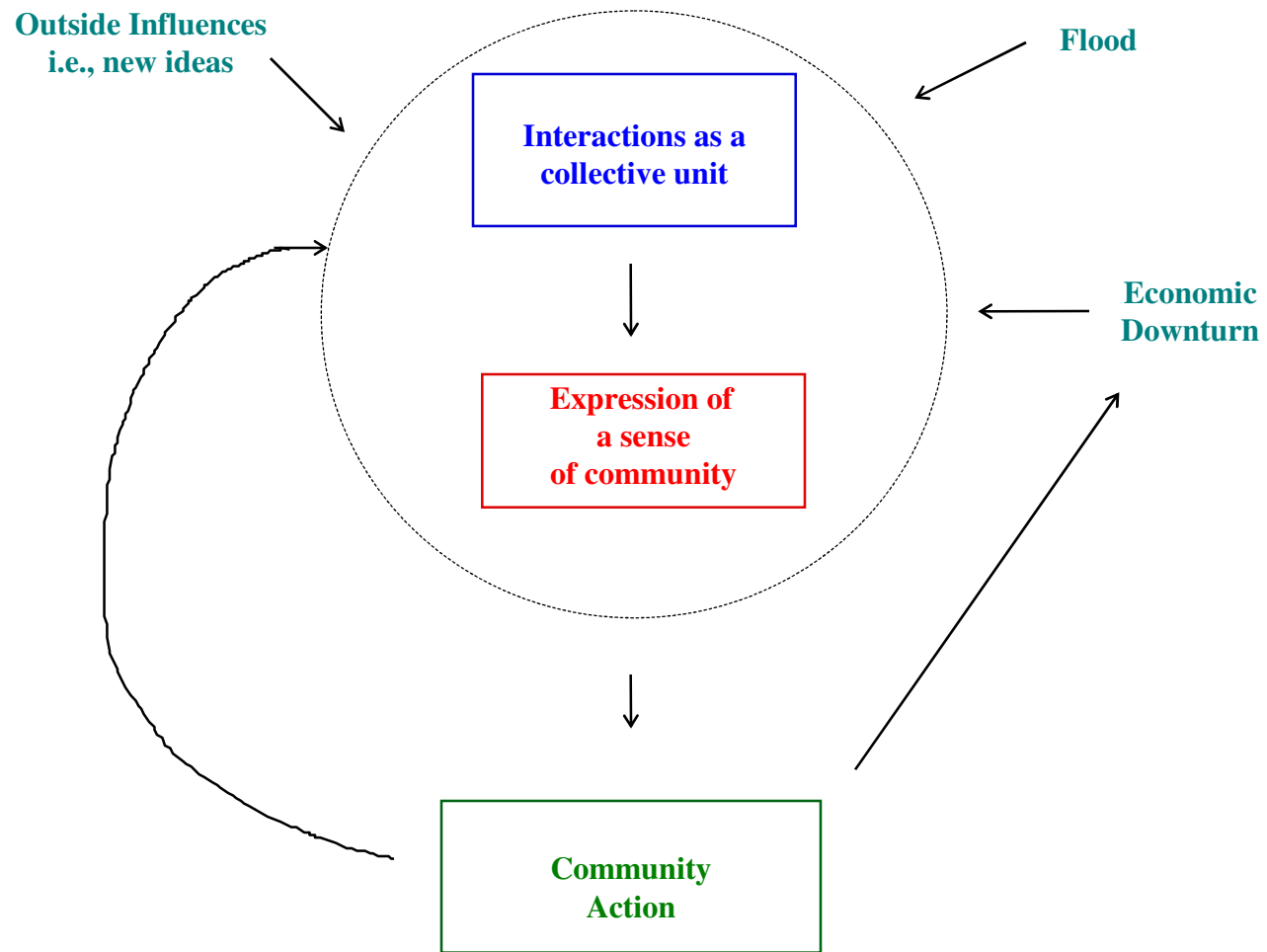
What is resiliency?

“It’s us! It’s the Pass!”

Resiliency is really about

- Allowing people to meet their capacities

Which means they need to be empowered or
feel empowered



INTERACTIONS AS A COLLECTIVE UNIT

- ❖ **Getting along: (i.e., differences were put aside)**
- ❖ **Sense of belonging: (i.e., residents felt very attached to the Pass and wanted to do something to help it survive the fire)**
- ❖ **Networks: (i.e., calls made to individuals such as teachers who volunteered)**

EXPRESSION OF A SENSE OF COMMUNITY

- ❖ **Community togetherness: (i.e., a belief that the Pass would survive)**
- ❖ **Community mentality/outlook (i.e., hopeful but also the fire itself was not a large enough disaster to challenge its resiliency)**

COMMUNITY ACTION

- ❖ **Copes with divisions (i.e., no lasting negative feelings regarding the fire)**
- ❖ **Deal with change in a positive way (i.e., acceptance is necessary and re-growth has begun)**
- ❖ **Problem-solving ability (i.e., development of drop-in meal service in Hillcrest and then Maple View Hall)**
- ❖ **Presence of visionary leadership (i.e., creation of a collaborative model for disaster planning)**

What are our conclusions?

- **Resiliency was enhanced in the Pass through the experience of the Lost Creek Fire**

Even though

- **Local knowledge was not initially perceived as being recognized or used to address the fire**
- **The Pass is a community that continues to address the challenges it faces**

What's Next?

- Dissemination Plans: Examples: Lessons Learned Booklet, presentations, publications

-

The next study...

- *Resiliency in Rural Settlements that have experienced Wildfires: Implications for Disaster Management and Mitigation* funded by Social Sciences & Humanities Research Council:

The 1999 Mallard Fire
La Ronge SK

The 2003 McLure Fire
Barriere BC

