



fRI *Research*
informing land and resource management



**NSERC
CRSNG**

fRI Grizzly Bear Program and the GrizzlyPAW project.

Annual General Meeting

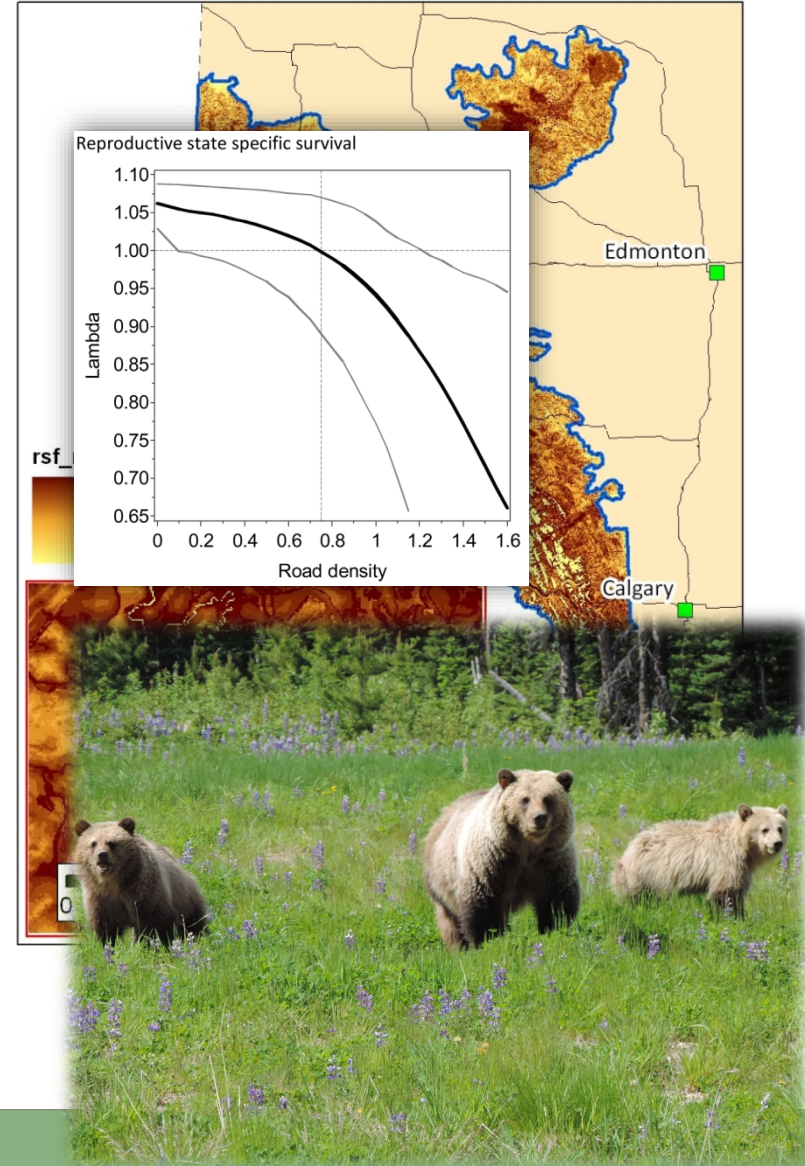
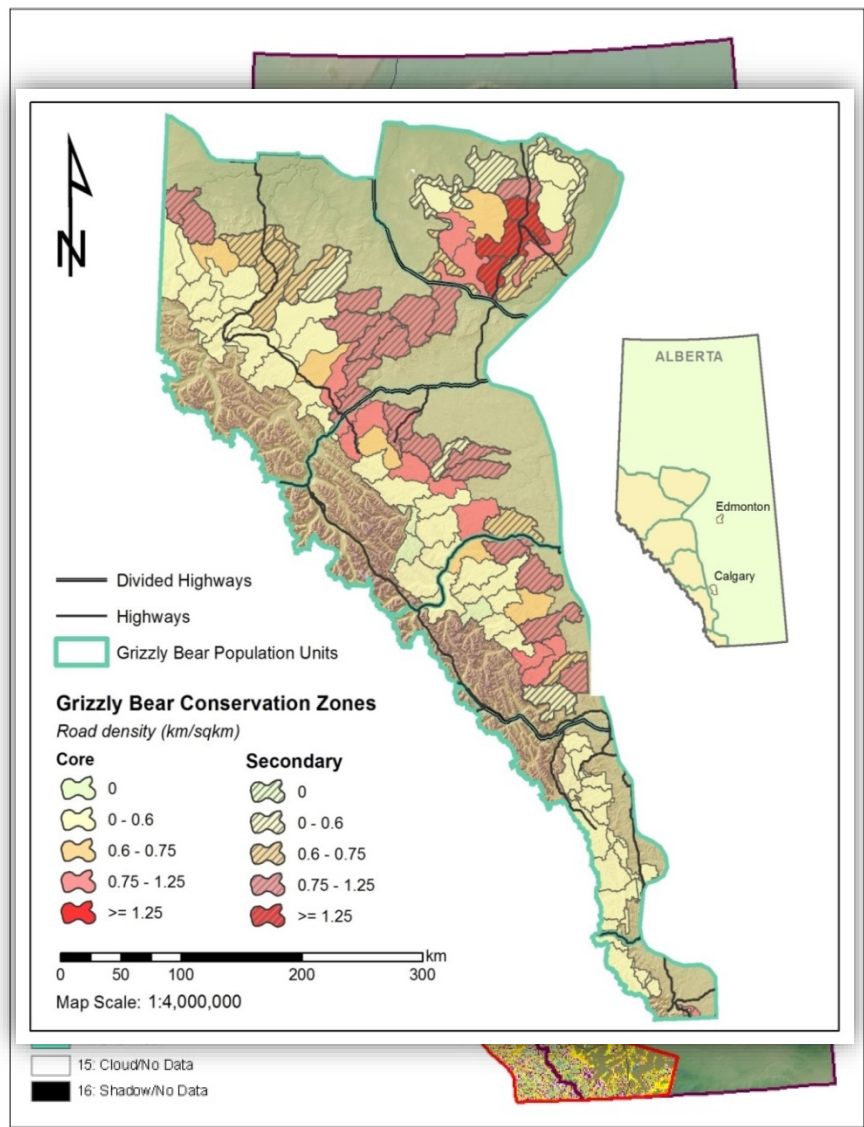
Gordon Stenhouse
Calgary, October 18, 2019



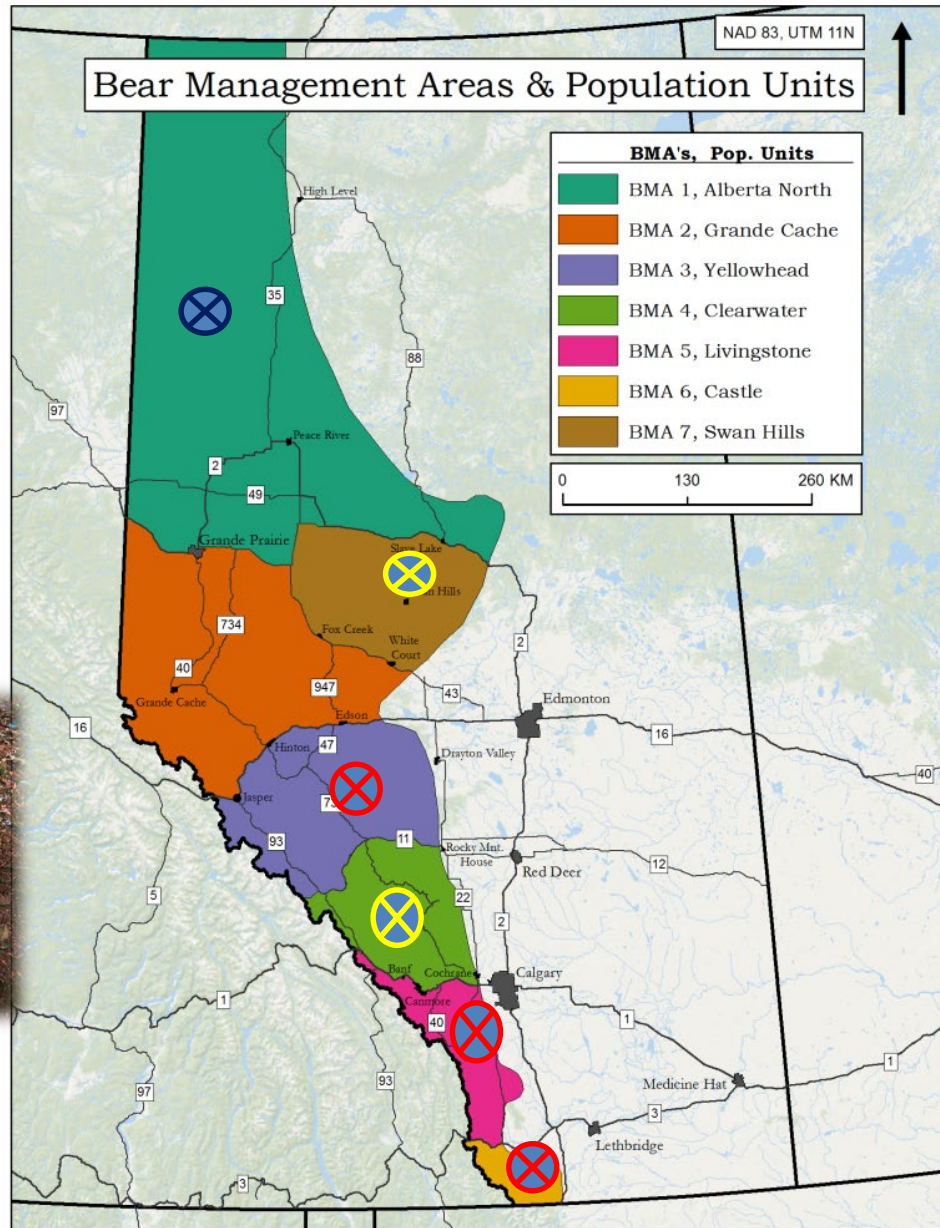
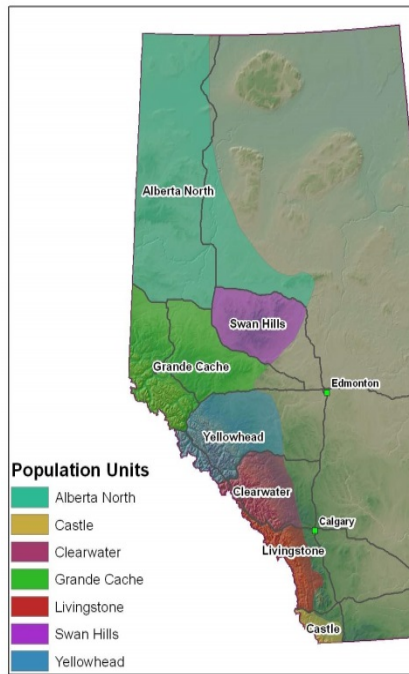
Some History



Long term datasets and achievements- mapping and models



Long term datasets and achievements – Pop Inventory



rizzly bear database –

EVENTS

Captures

Conflicts

Census

Mortalities

Opportunistic

Relocations

Tracking

Collar
Uploads

EVENTS

Bears

GPS Collar
Locations

External
Geodatabase

FIELD DATA

Reproductive

Body
Measurements

Tags &
Telemetry

Event
Locations

Biological
Samples

Photos

Health

Genetics

Why were grizzly bears listed as a threatened species in Alberta in 2010?

3 Key Reasons:

1. Lower than expected population numbers
2. Levels of human caused mortality
3. Concerns about habitat loss related to industrial activities in grizzly habitats



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Hunting licences allocated	73	0	0	0	0	0	0	0	0	0	0	0	0	0	73
Total grizzlies taken during legal hunt	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
Treaty (subsistence harvest)	1	0	0	2	3	2	1	0	2	1	2	1	1	2	18
Illegal kill	6	2	3	1	6	6	4	2	11	4	10	6	7	6	74
Mistaken for black bear	0	2	0	0	3	3	3	2	4	0	0	0	1	0	18
Self defence	1	5	4	6	0	1	2	5	3	3	3	5	0	1	39
Accidental (human-related e.g. road kills)	0	1	0	4	5	6	4	4	4	8	8	11	9	8	72
Research-related	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Destroyed - problem bears	3	1	2	6	0	1	1	1	2	3	4	6	4	3	37
Killed by predation	1	0	0	0	3	0	2	0	0	0	0	0	0	0	6
Unknown	0	2	0	1	1	2	1	1	5	0	1	0	0	3	17
Total known human-caused grizzly mortalities	23	12	9	19	17	19	15	14	26	19	27	29	22	20	271
Total mortalities	24	14	9	20	21	21	18	15	31	19	28	29	22	23	294

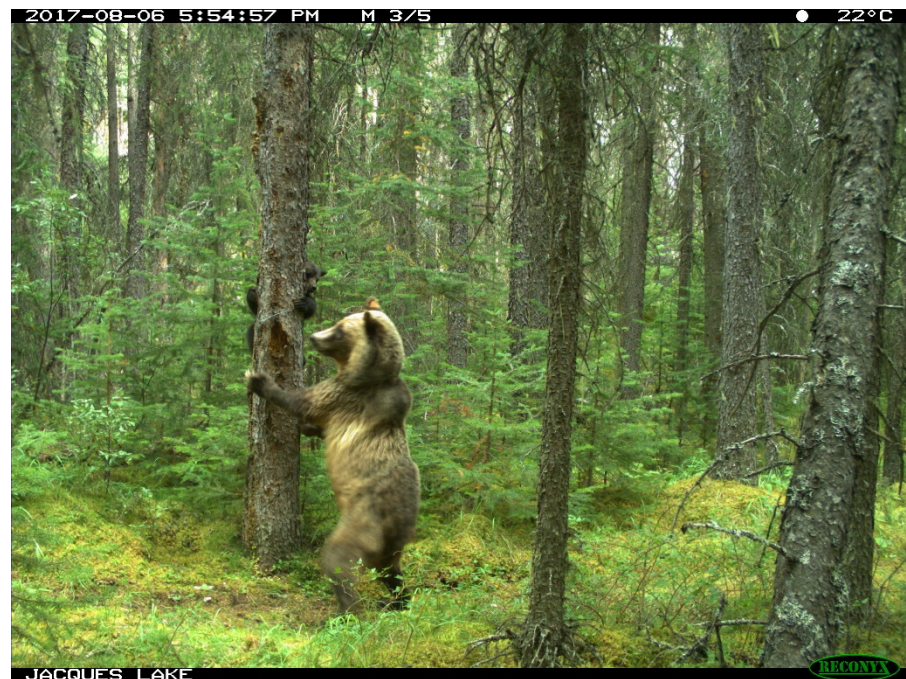
BMA 3 Population Estimates

2004: ***N=36*** (CI=27-45)

Ten years later.....

2014: ***N=74*** (CI=56-98)

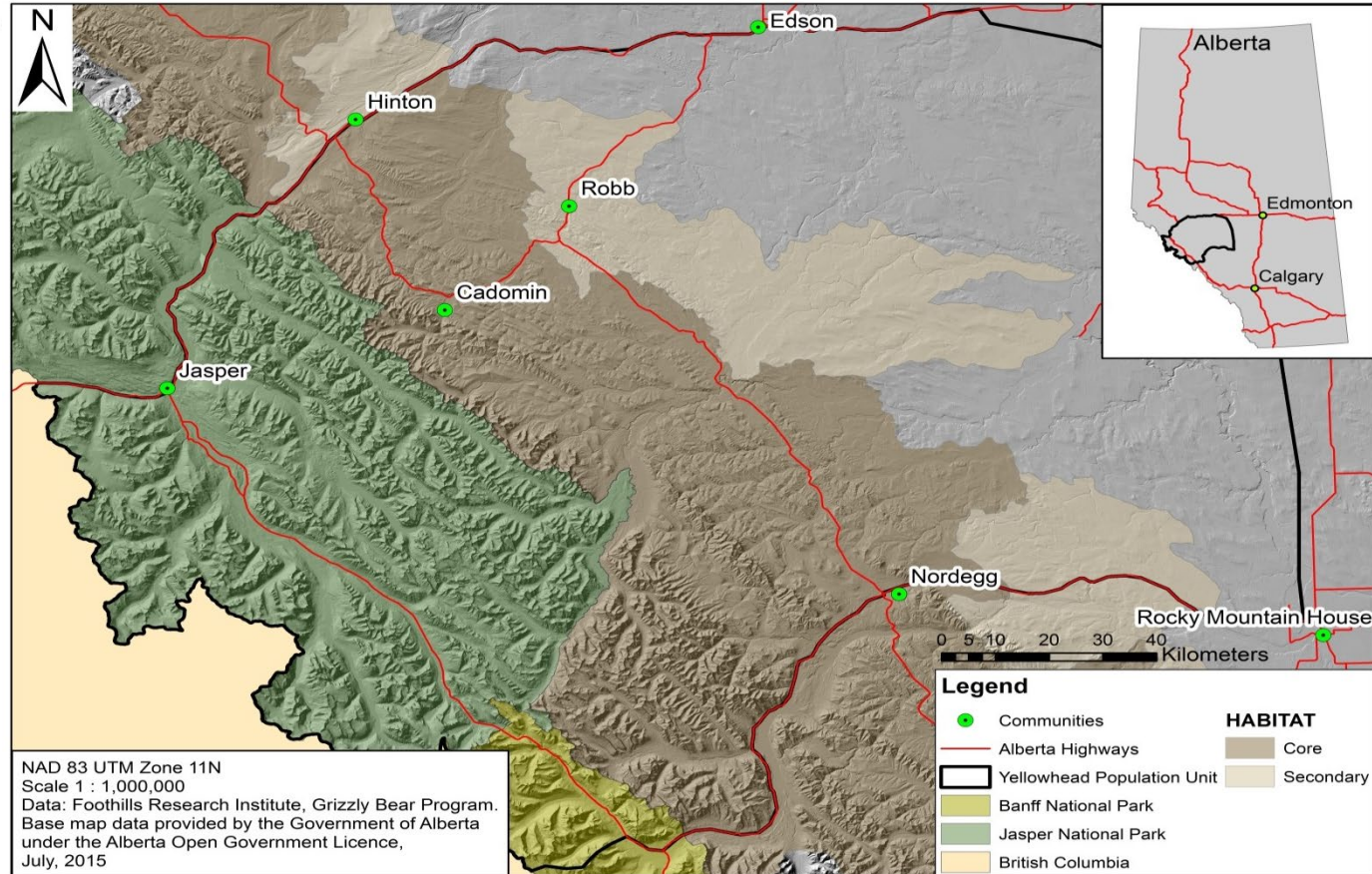
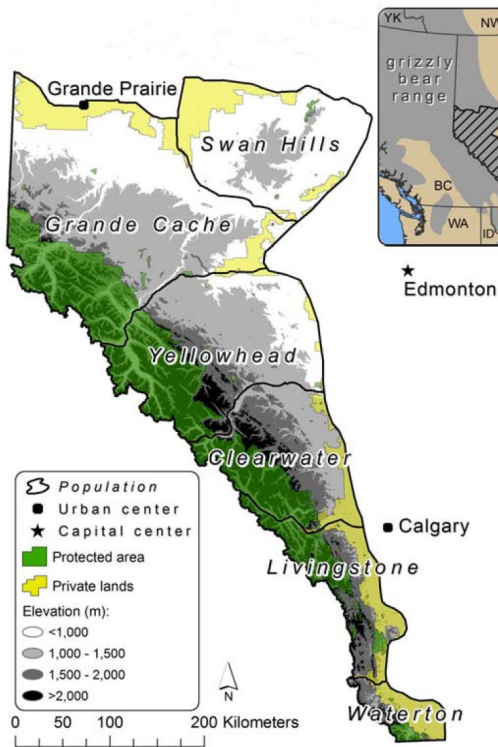
Population estimate doubled. Annual growth rate of 7%.





- We have traditionally thought that human use and activities cannot take place on the same landscape occupied by grizzly bears.
- We have data that suggests we need to rethink this assumption, if we can address human caused mortality issues.

Study Area – BMA 3 Why?





Objective of this NSERC/CRD project is to examine how long-term environmental change due to resource extraction and natural disturbances affect the health, population performance and conservation management of grizzly bears in Alberta.

To address this question, we divided our research into three themes:

1. environment,
2. population performance, and
3. wildlife health.



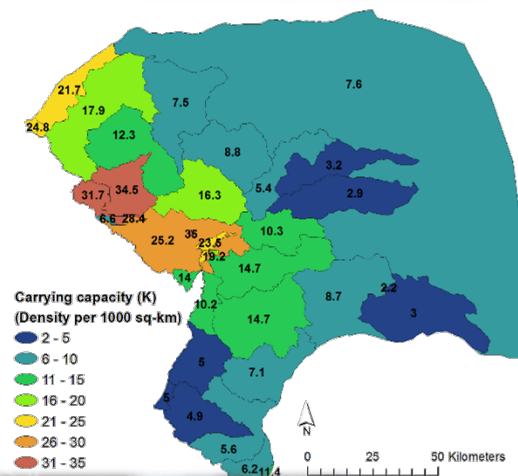
Environment:

- Roads
- Snow dynamics
- Biodiversity



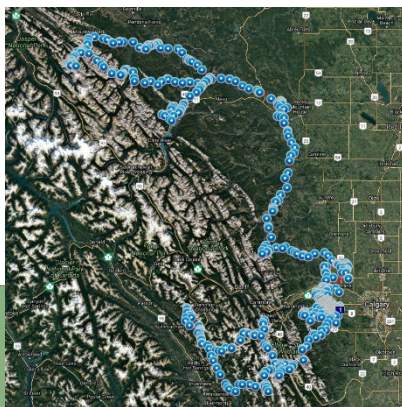
Population performance:

- Demographics
- Food and K



Health:

- Behaviour
- Physiology



fRI Role in NSERC/CRD



Bringing Key Players Together to achieve a Common Goal

- Industry partners
- Academic researchers and **exceptional** graduate students
- Engaging with government managers on progress and results of applied research for conservation and recovery
- Capture and collaring of research bears (data for research team use)
- Focus is on a research Team and strong Partnerships



Questions?

