

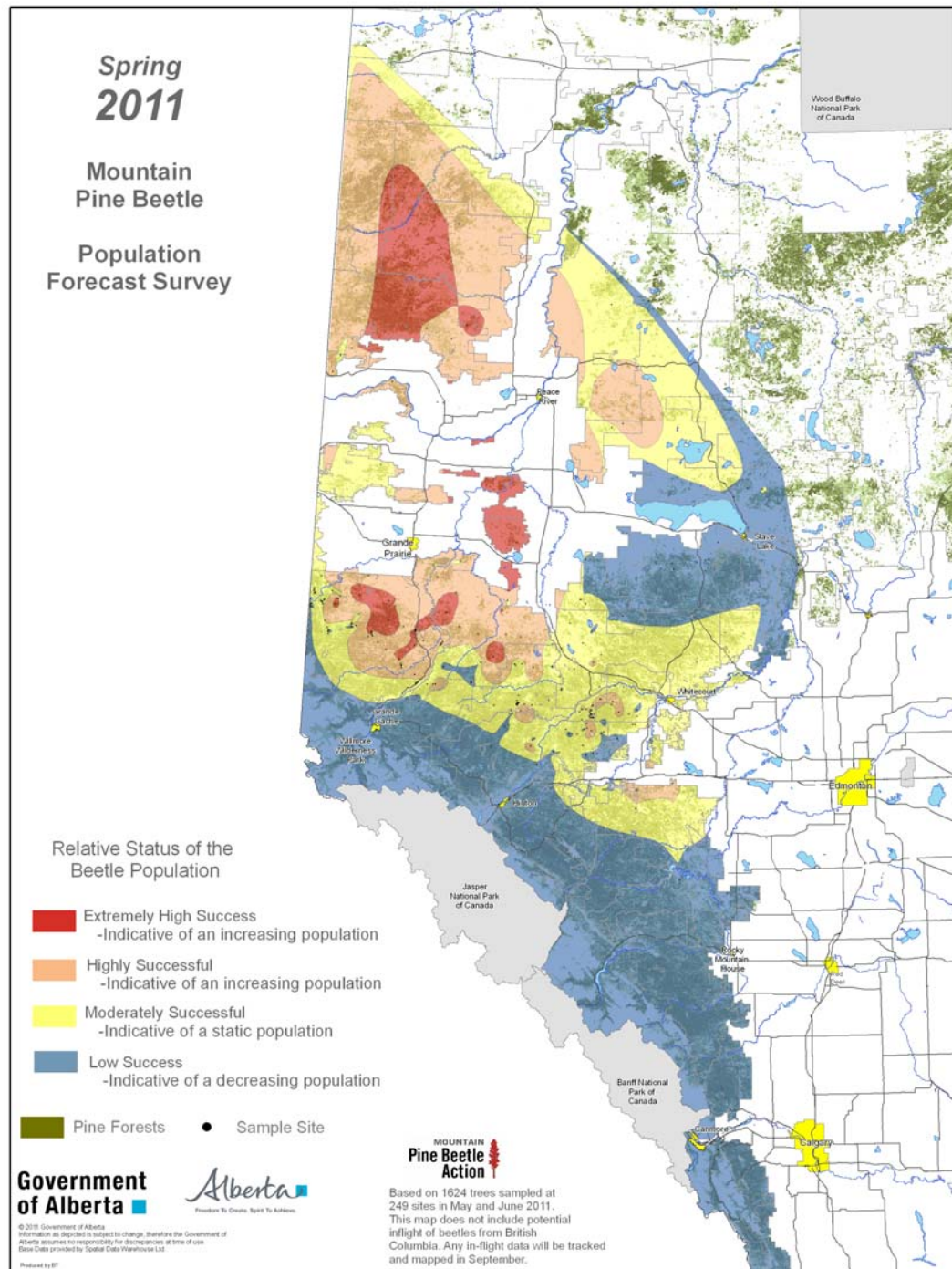
Mountain Pine Beetle Update

Foothills Research Institute
Mountain Pine Beetle Ecology Program
Workshop
April 25 and 26 2012

Dan Lux P.Bio
Manager of Forest Health
Alberta Sustainable Resource Development

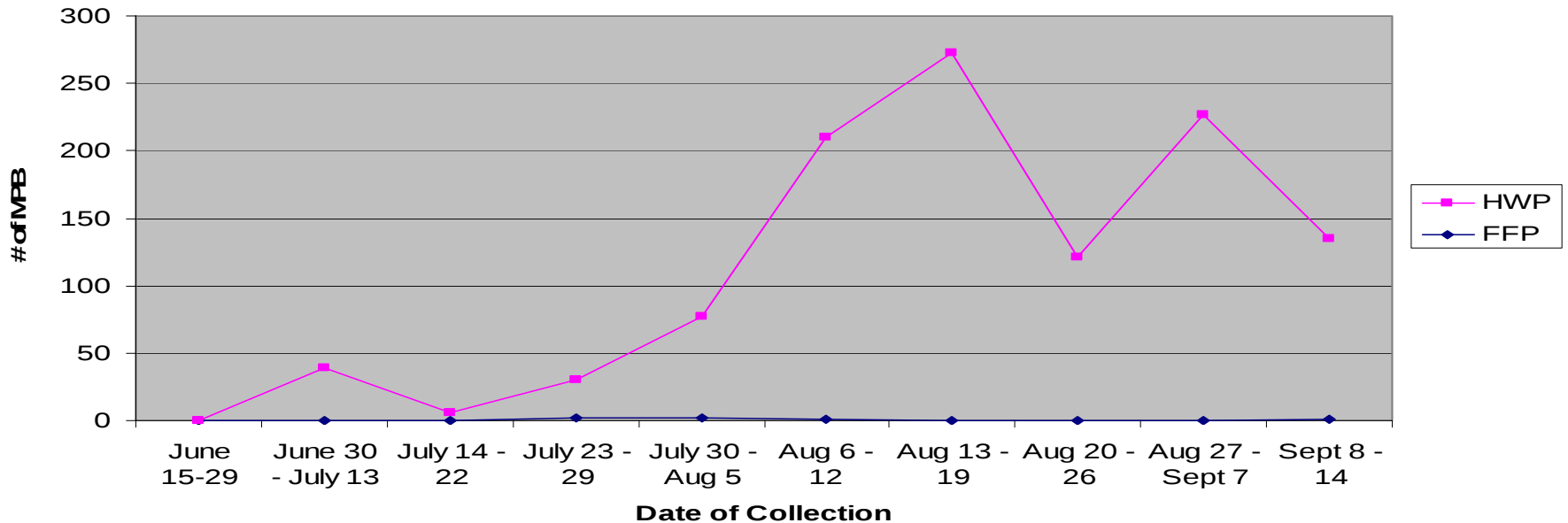
Last year at this
time....

Spring
Over-wintering
Success
2010



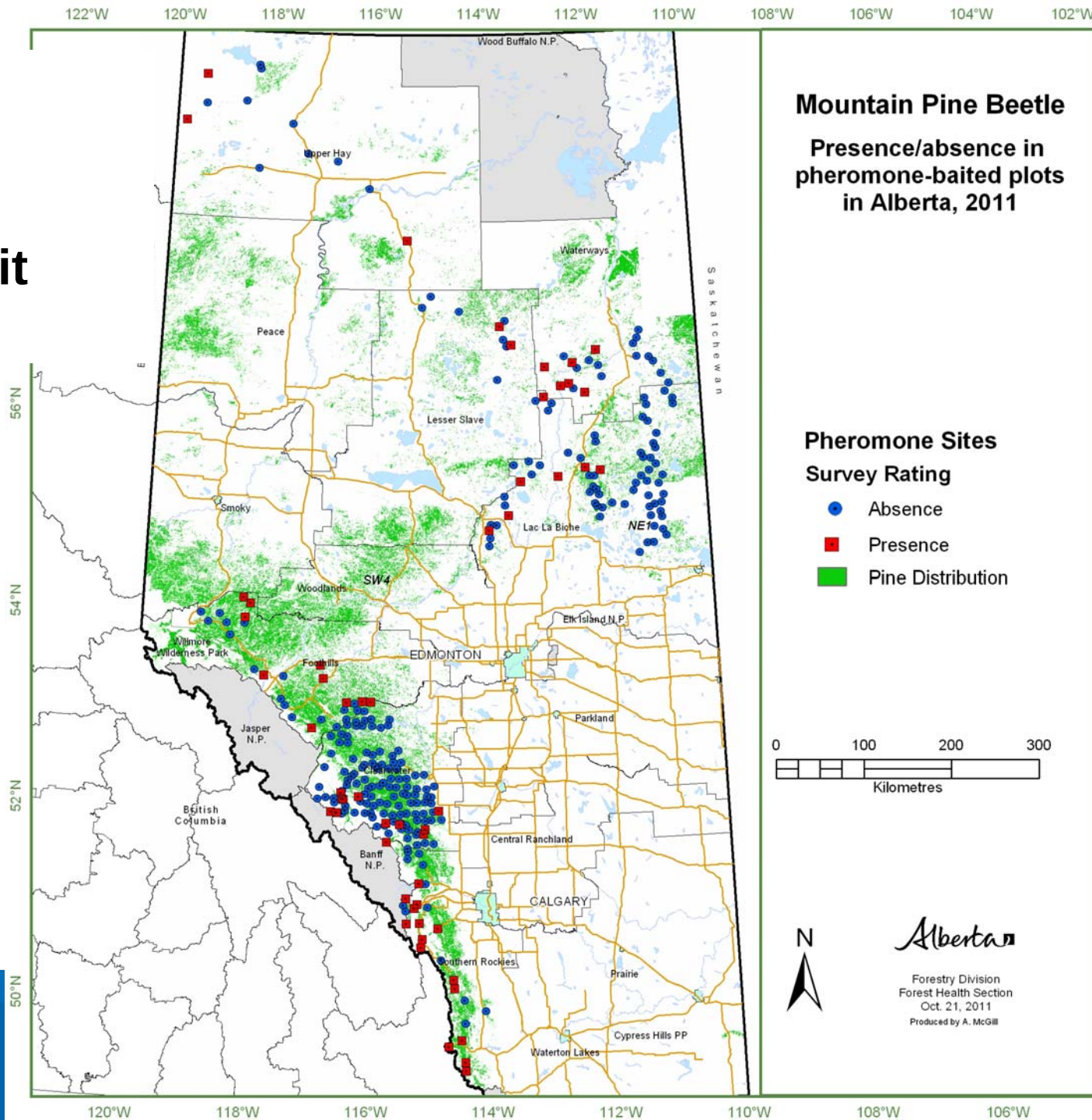
Beetle Flight

2011 Mill Trap Counts

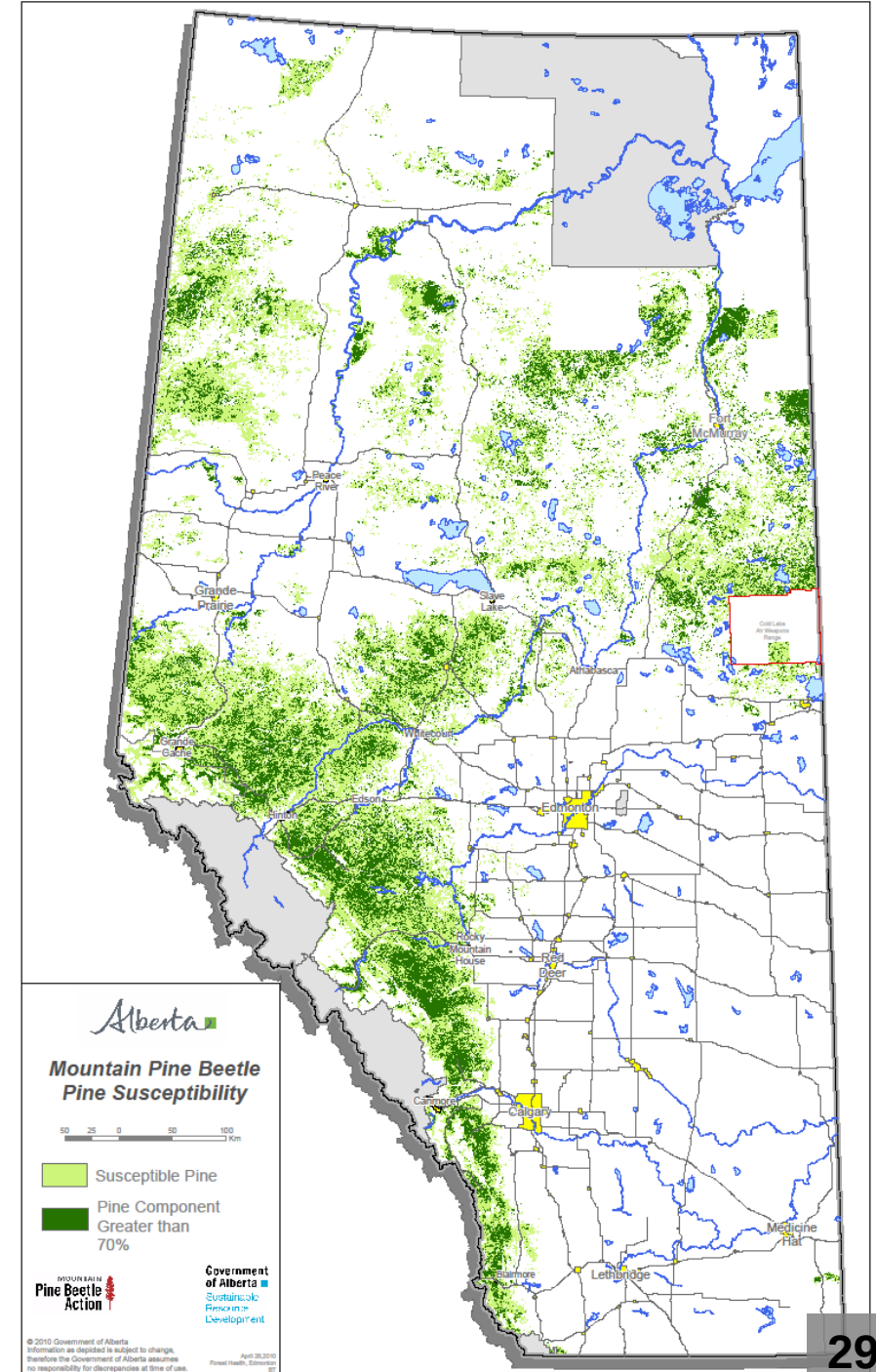


Long Range Detection

Pheromone Bait Network

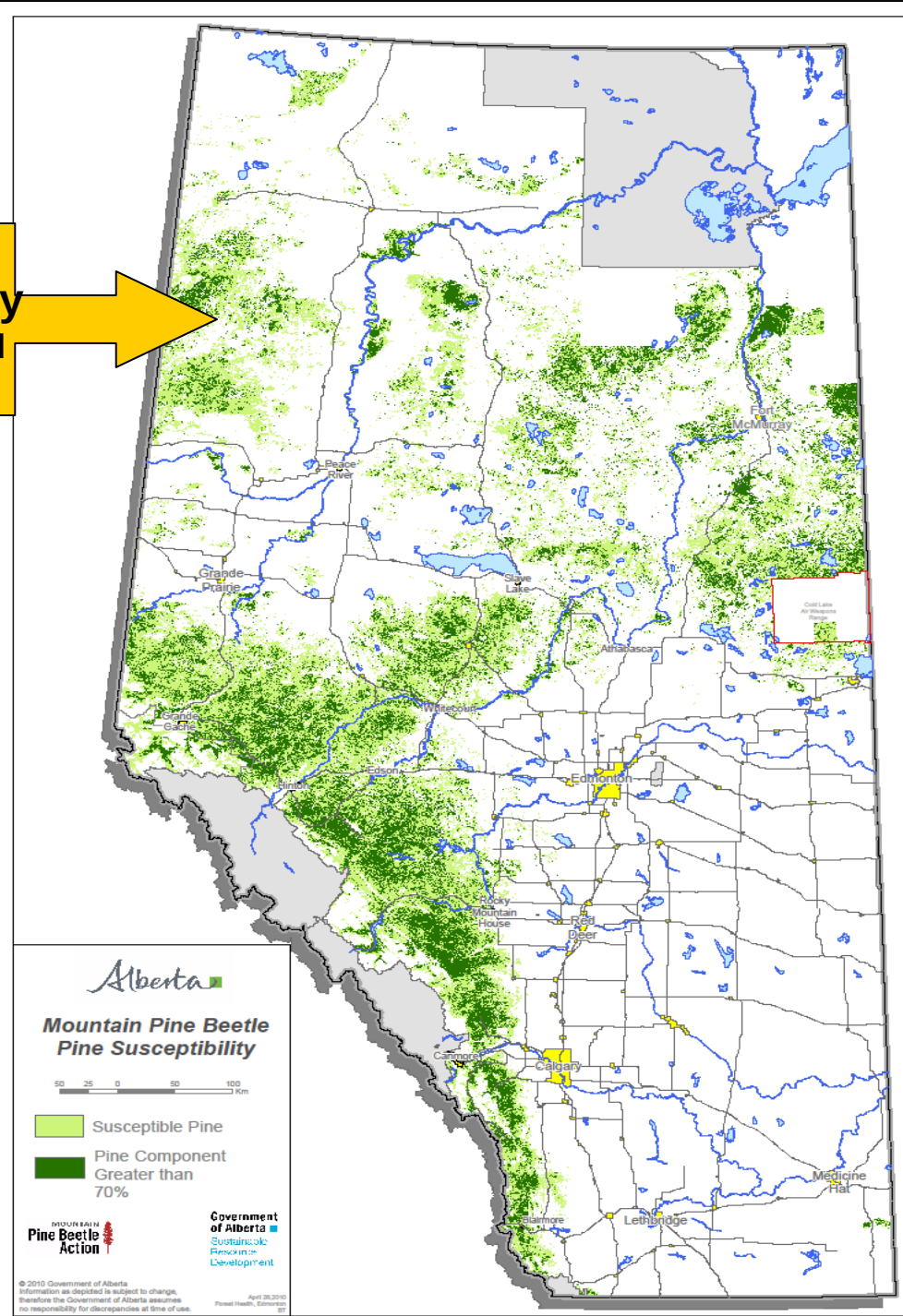


Generalized Aerial Survey Tactics



Generalized Aerial Survey Tactics

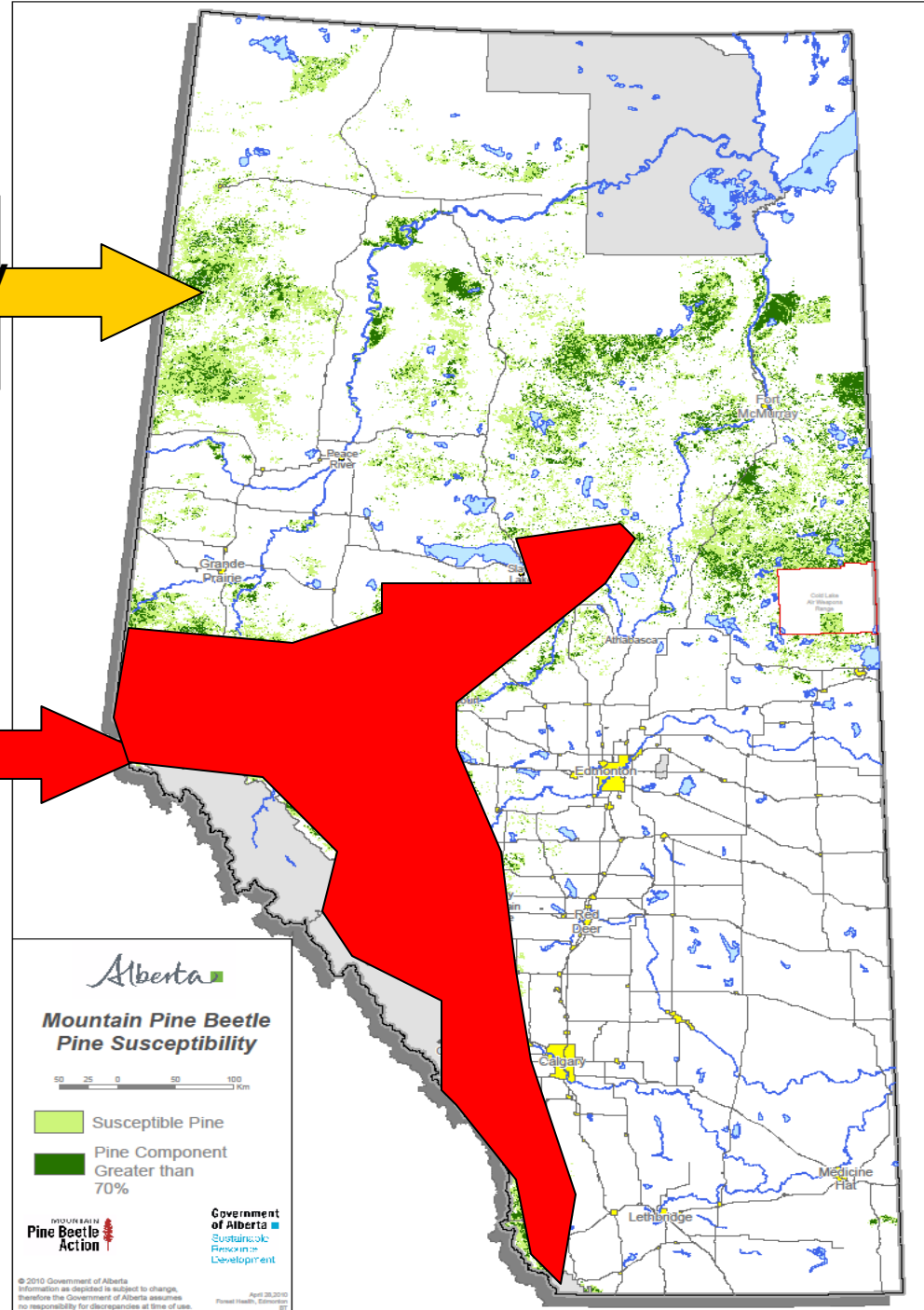
Aerial Photography
1.9 million red mapped



Generalized Aerial Survey Tactics

Aerial Photography
1.9 million red mapped

Heli GPS
Over 241,000 red mapped

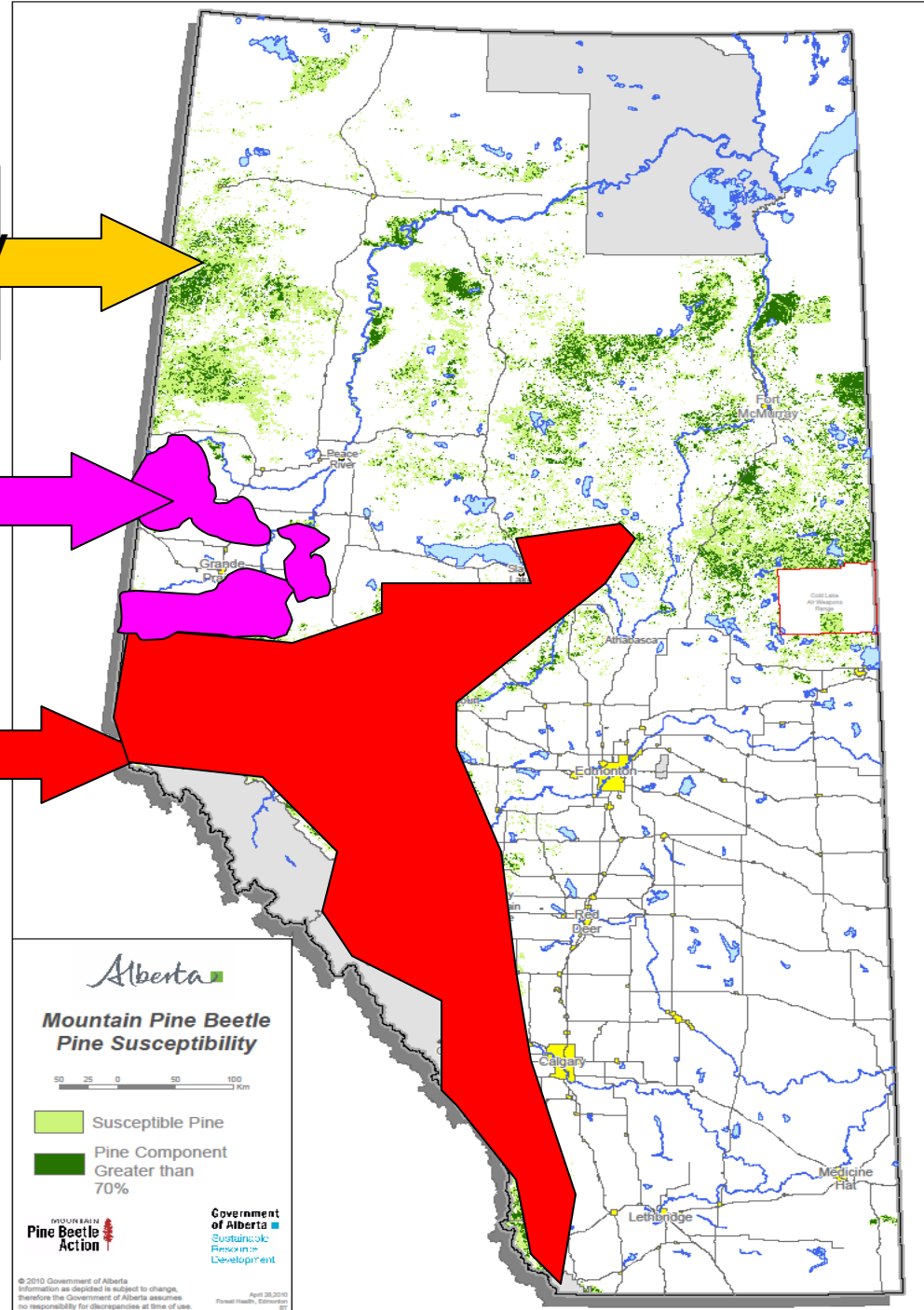


Generalized Aerial Survey Tactics

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**2010 Photography
And current G:R**

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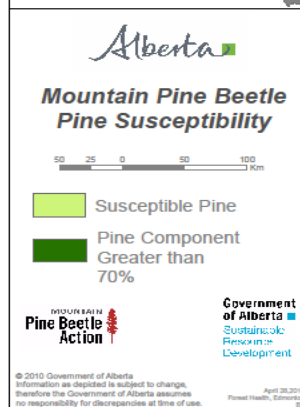
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**2010 Photography
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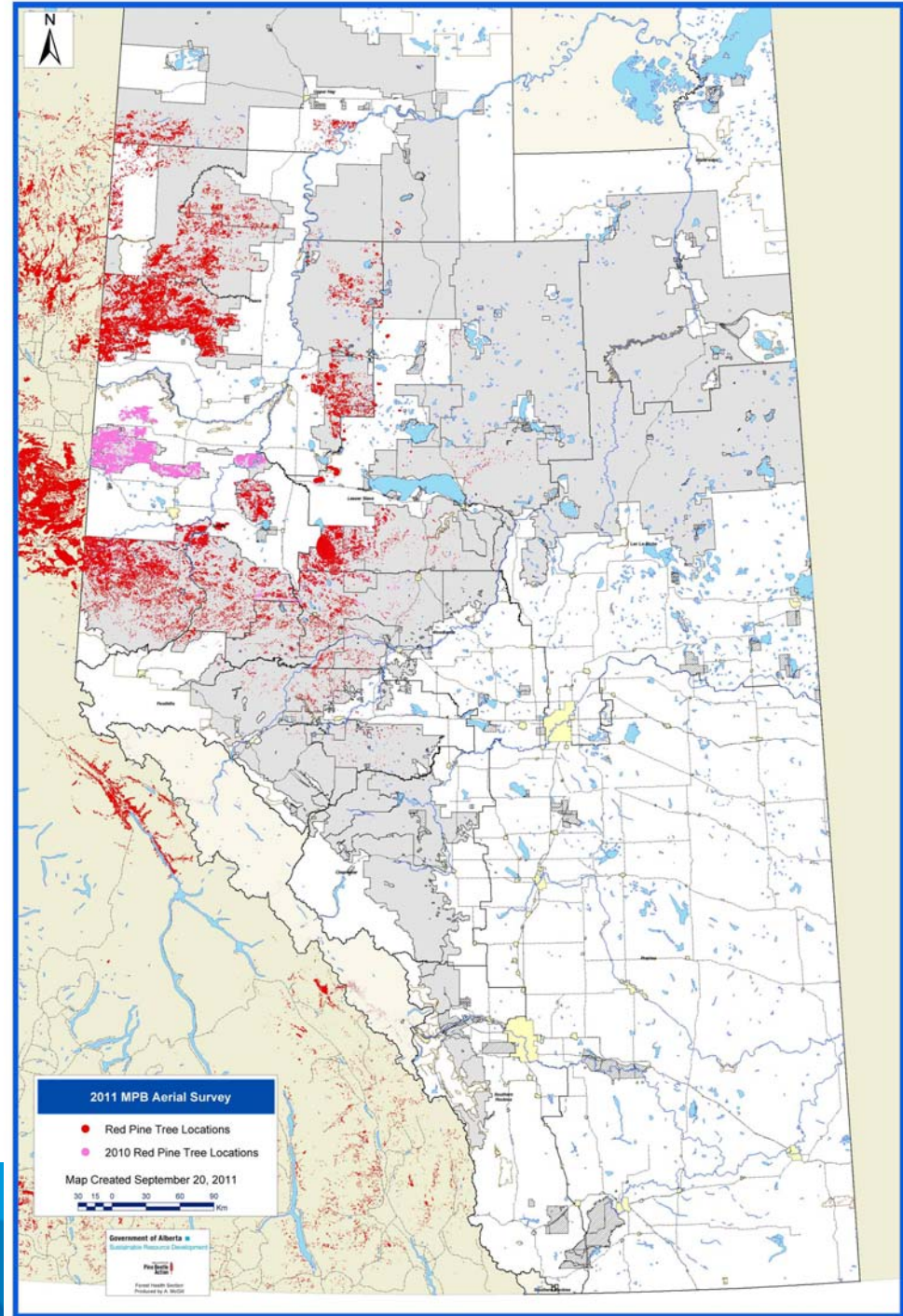
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**Fixed Wing
Sketch
Mapping**

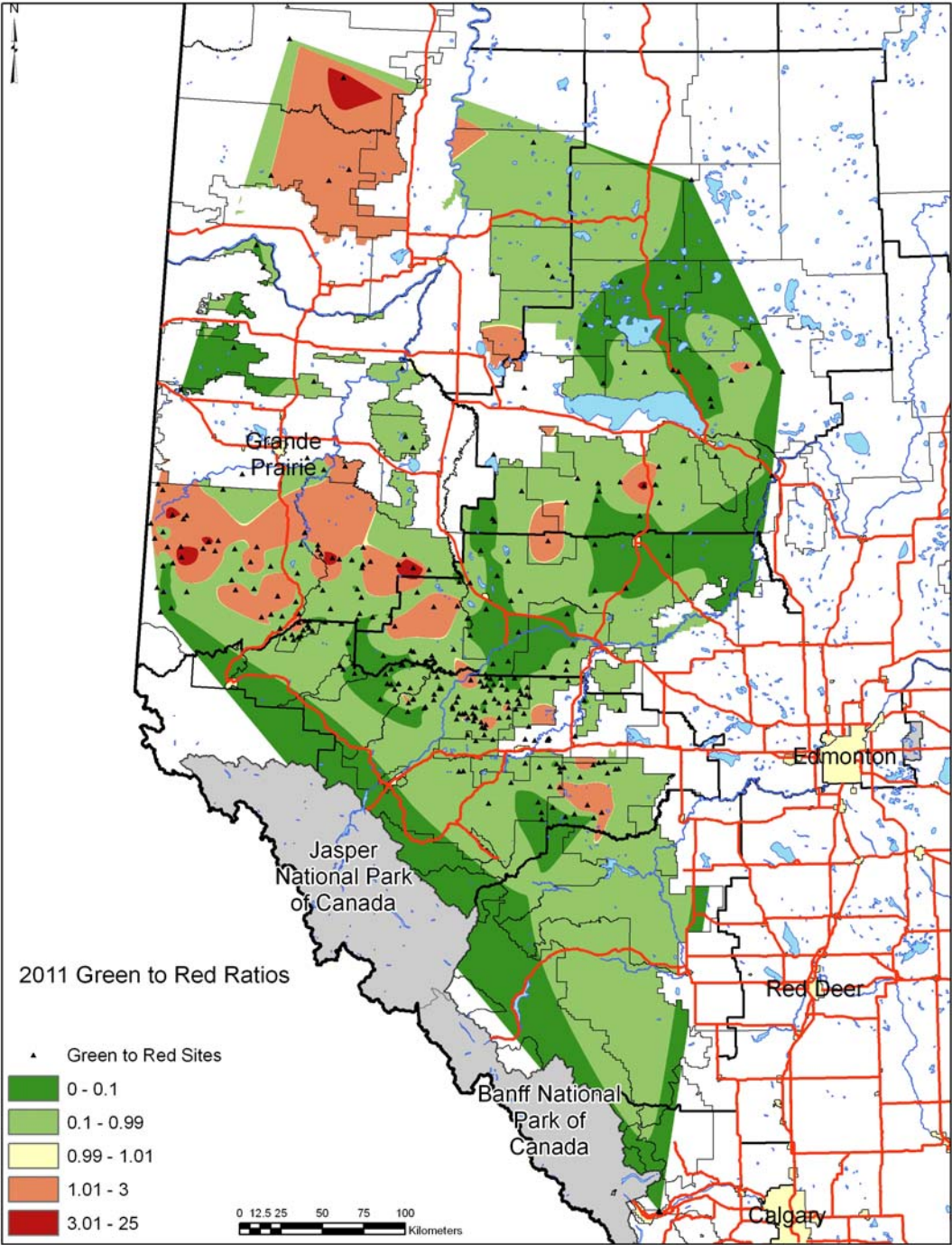


There are still hundreds of thousands of red trees in the West Central and Northwest part of the Province.

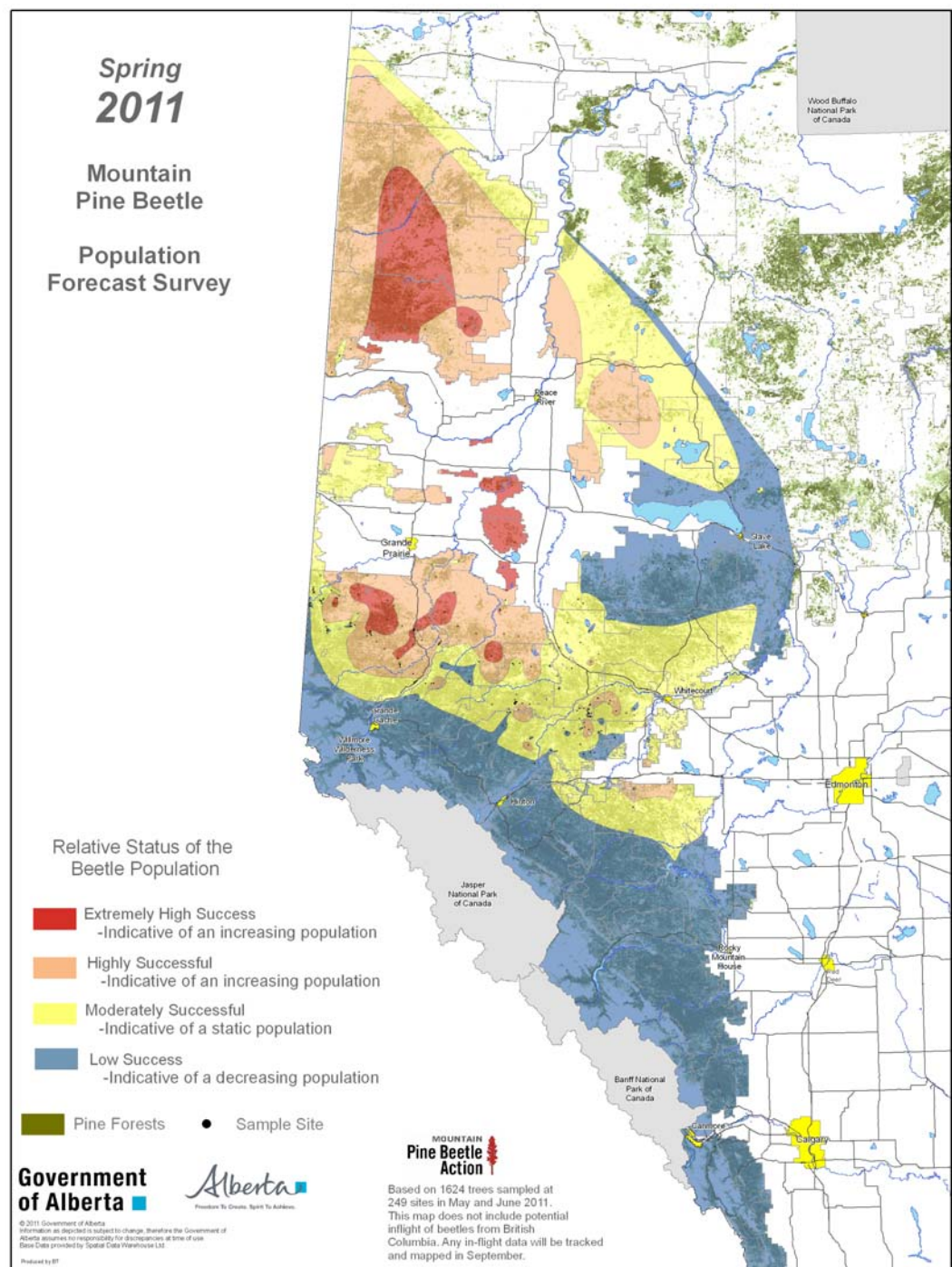
2,180,678 red trees mapped



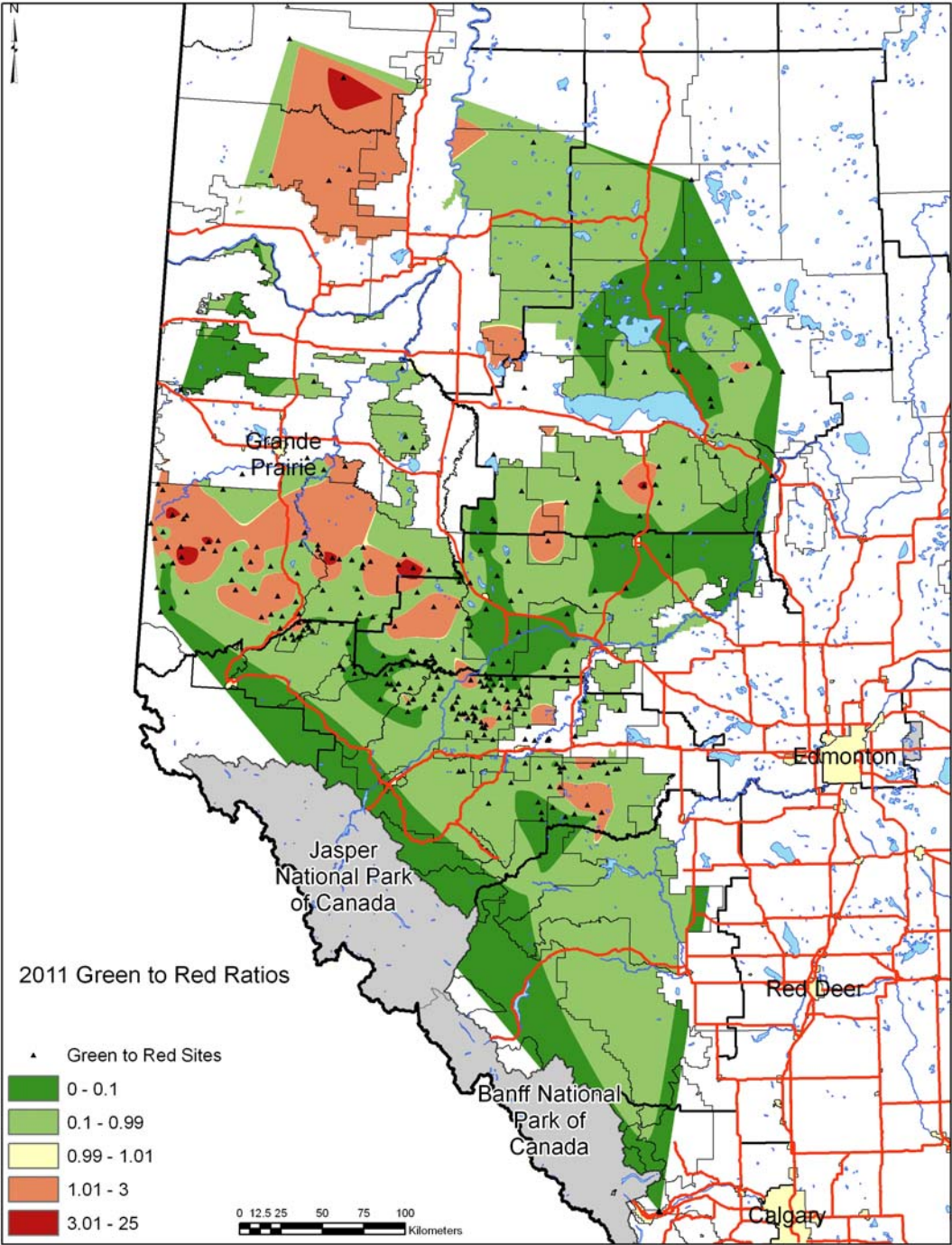
Green:red samples were collected.



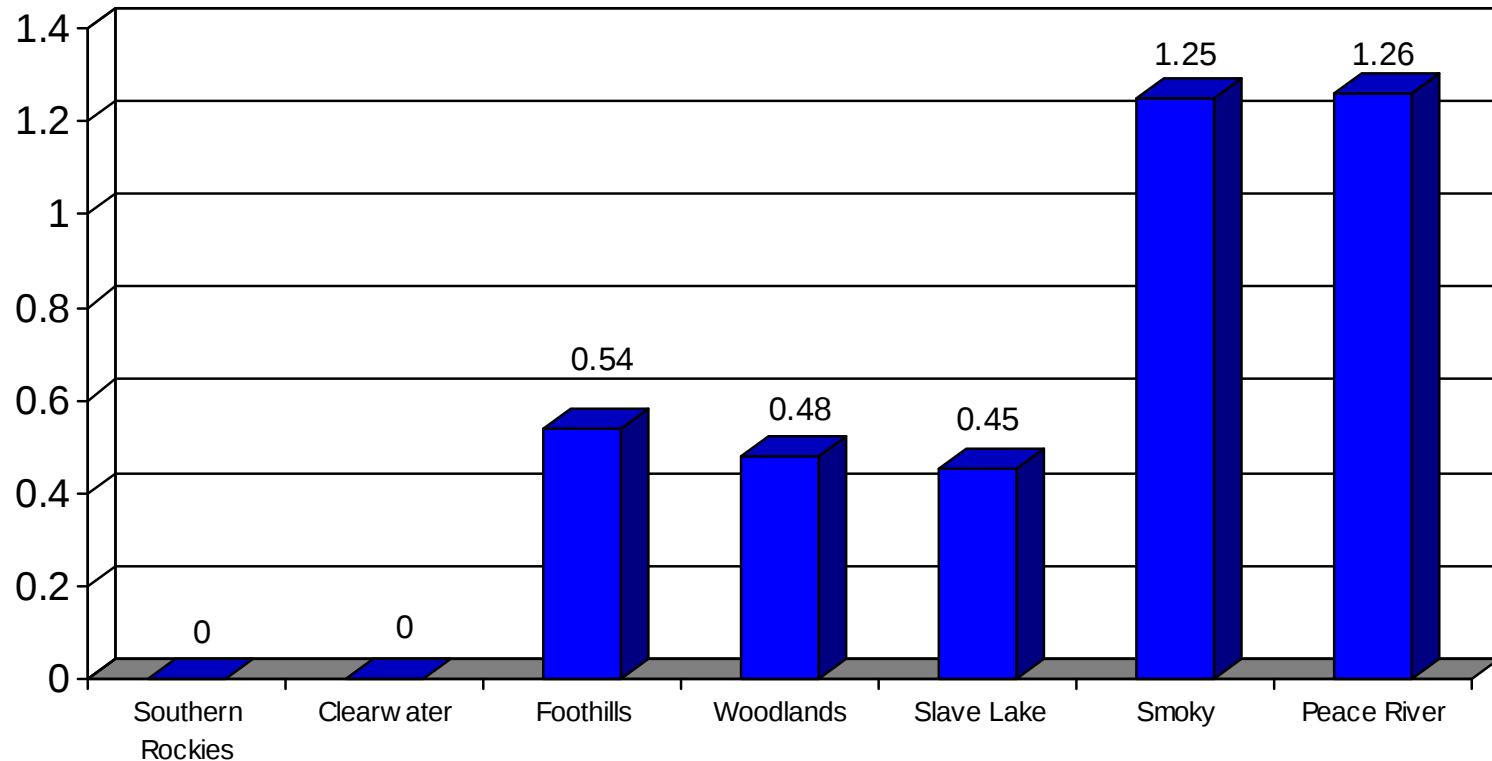
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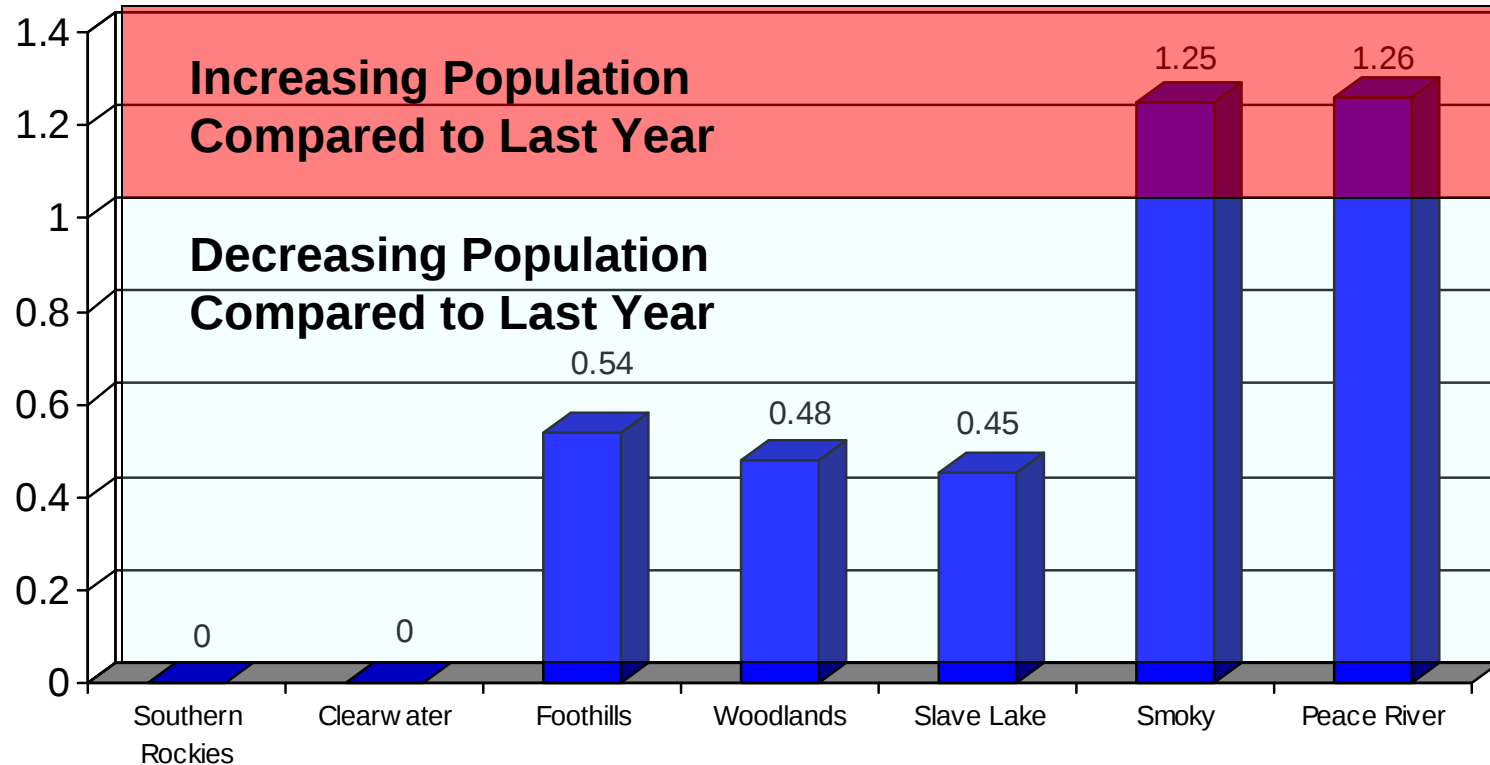
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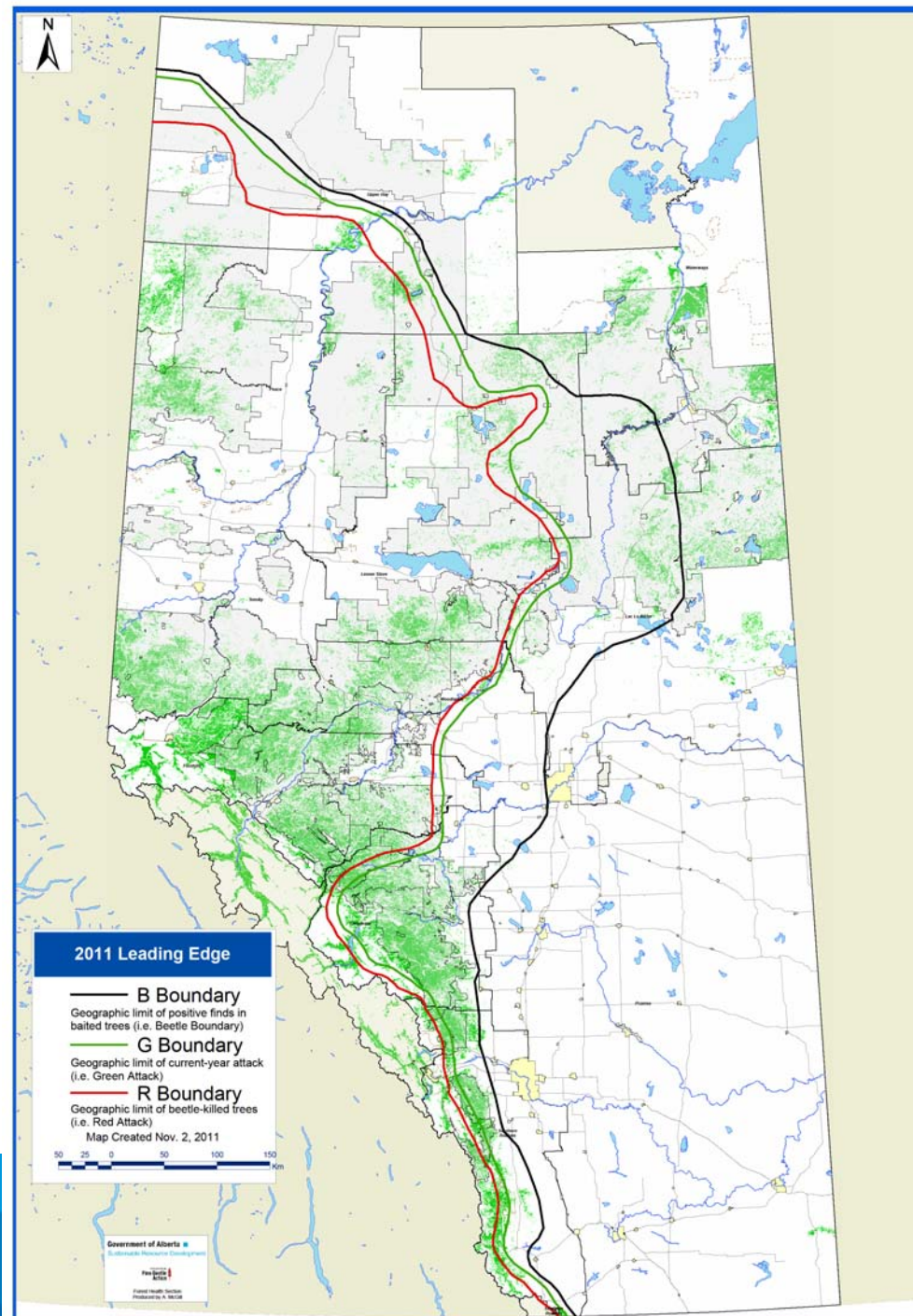
Summary of Green:Red Data



Summary of Green:Red Data



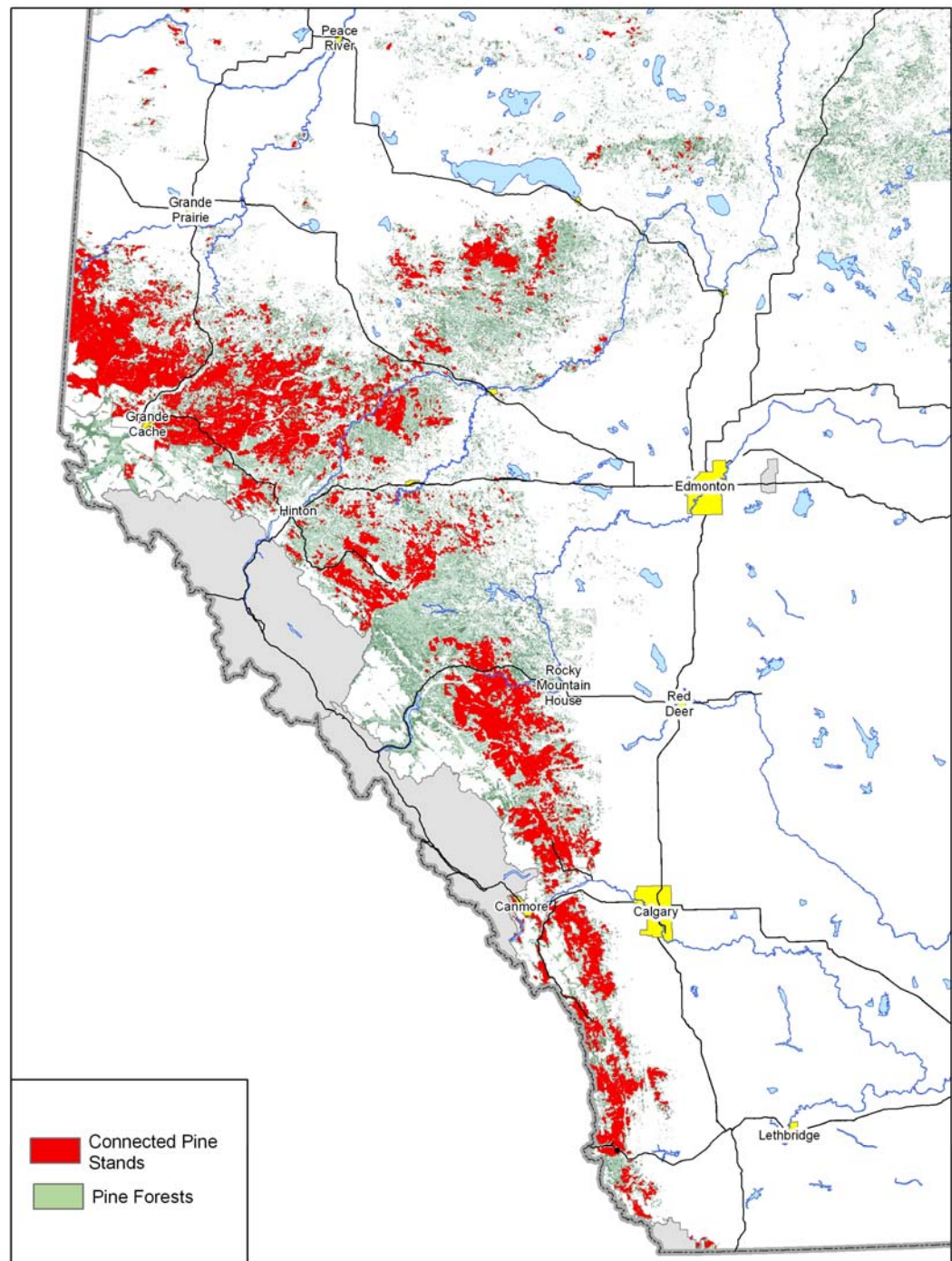
MPB Range 2011



Principals of Beetle Control

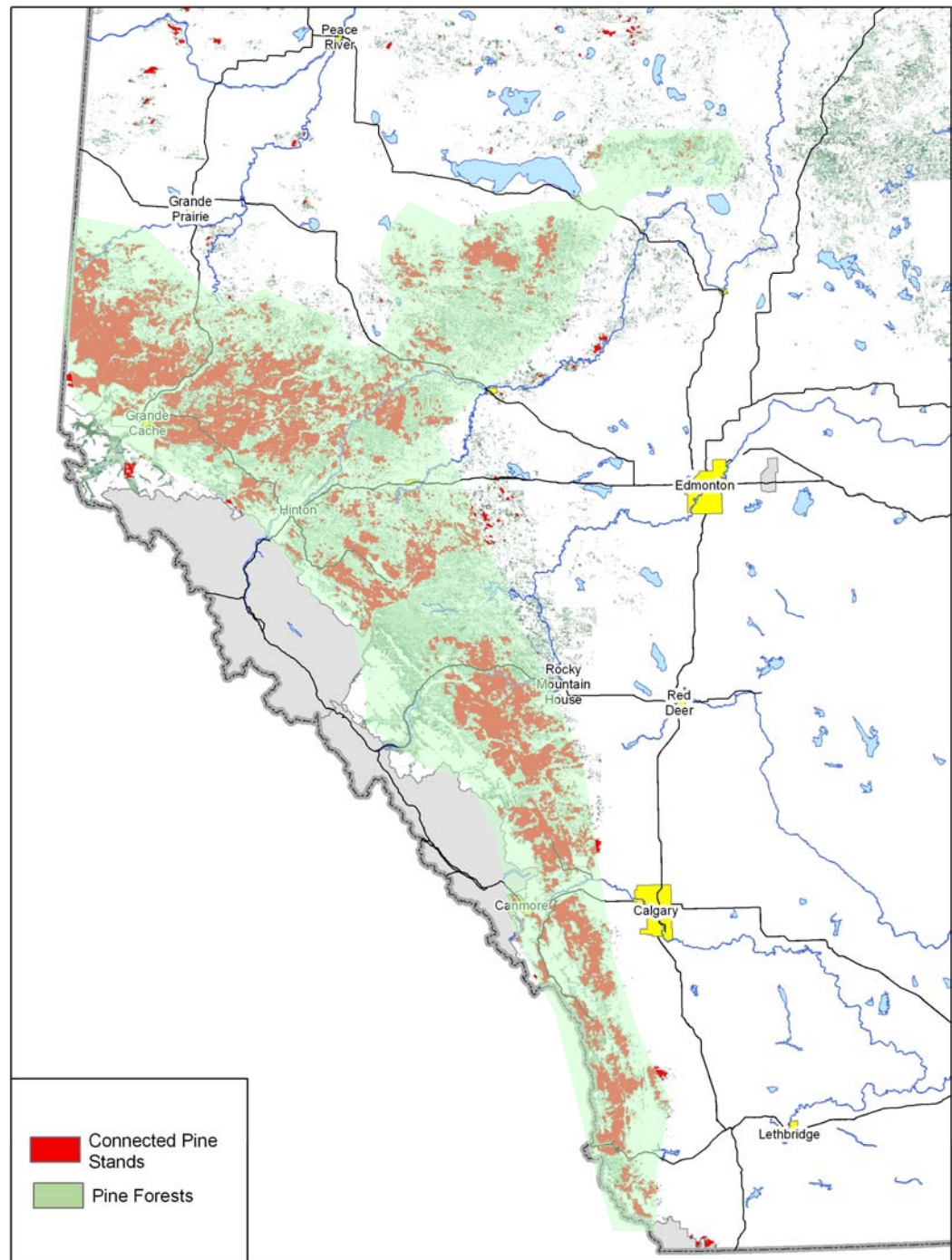
We put priority to the pine that is highly connected and threatens the watersheds along the eastern slopes or poses a risk of spreading further east into the Boreal.

Red indicates highly
connected MPB
susceptible Stands



Red indicates highly
connected MPB
susceptible Stands

Any build-up of beetle populations
in this area will threaten the Prime
Objectives



Principals of Beetle Control

We put priority to the pine that is highly connected and threatens the watersheds along the eastern slopes or poses a risk of spreading further east into the Boreal.

To control beetles

Over 80% of the high risk infested trees must be controlled.

We use a Decision Support System to assign risk based on:

The number of infested trees in the patch.

The susceptibility of the stand.

The connectivity of the stand (within 5 km radius).

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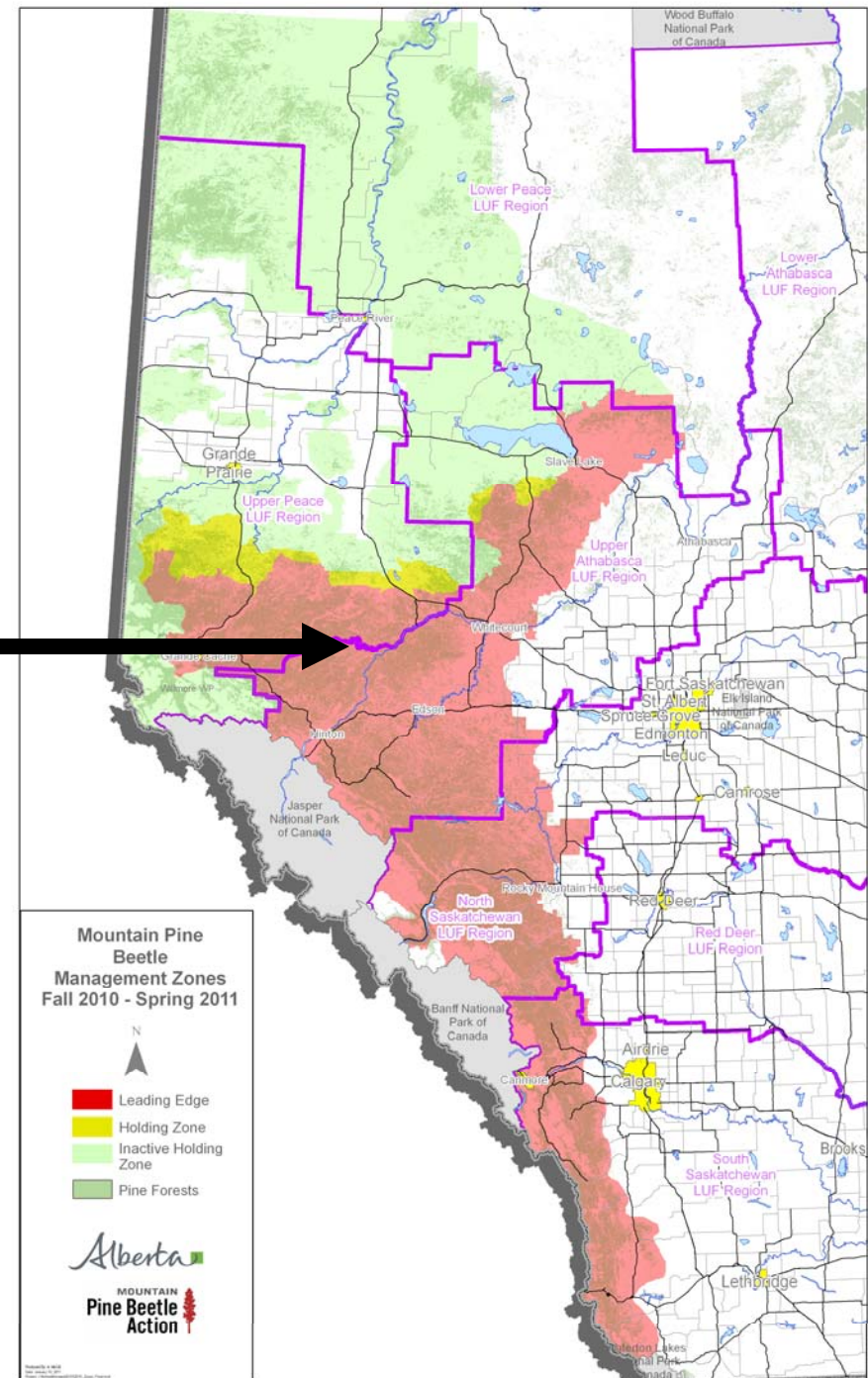
The susceptibility of the stand.

The connectivity of the stand (within 5 km radius).

With the help of Dr. Barry Cooke (NRCan) and Dr. Allan Carroll (UBC), we are reevaluating our DSS this year.

Leading Edge Zone

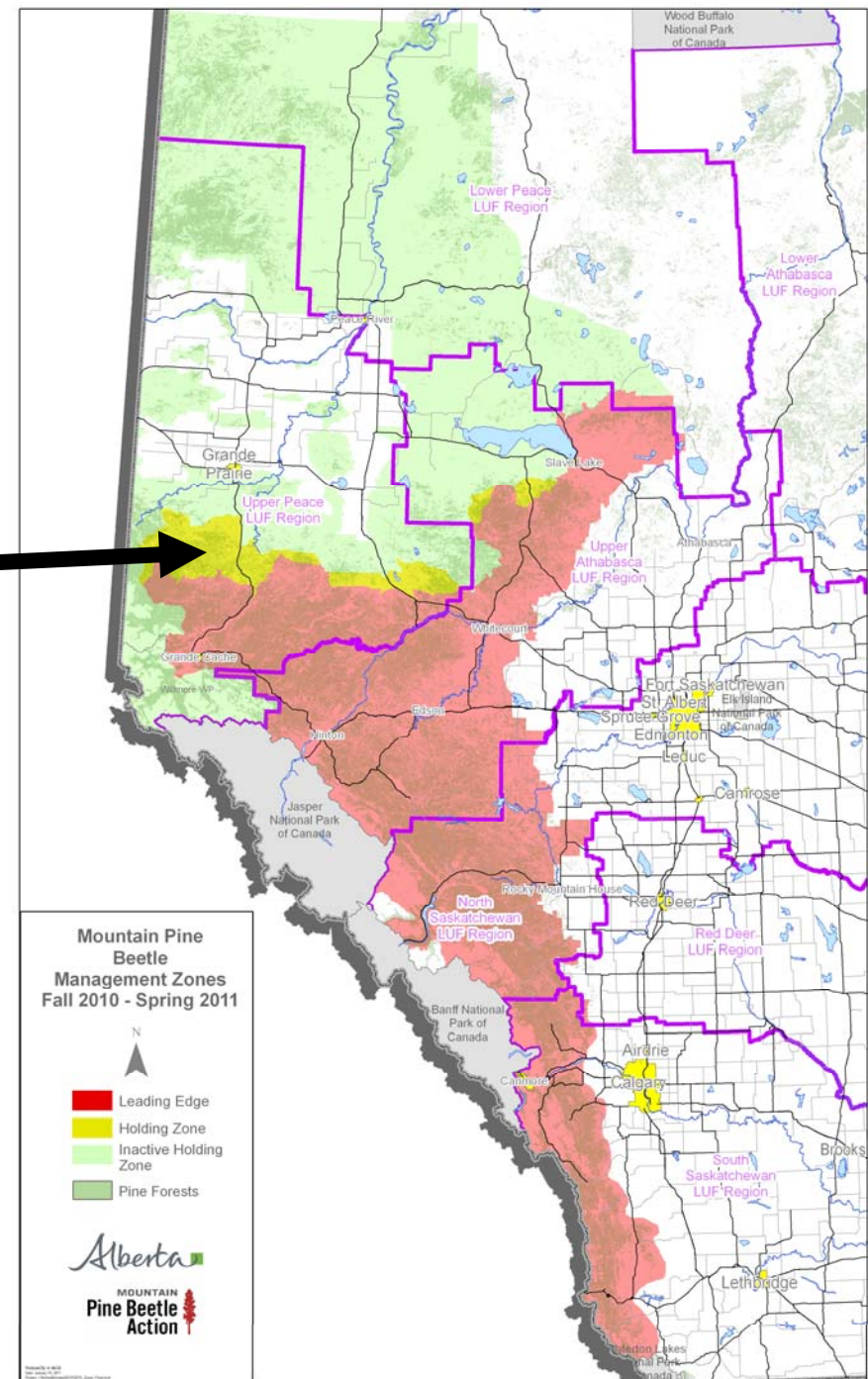
- Highest priority zone.
- It includes the highly connected pine areas, where beetle populations threaten to spread along the eastern slopes and eastward into the boreal forest.
- The objective is to treat 80% to 100% of any MPB site that poses a risk of spread.



Holding Zone

Has significantly more infested trees, with generally larger infested patches than in the Leading-edge Zone.

The objective for this zone is to ensure beetle populations remain static.



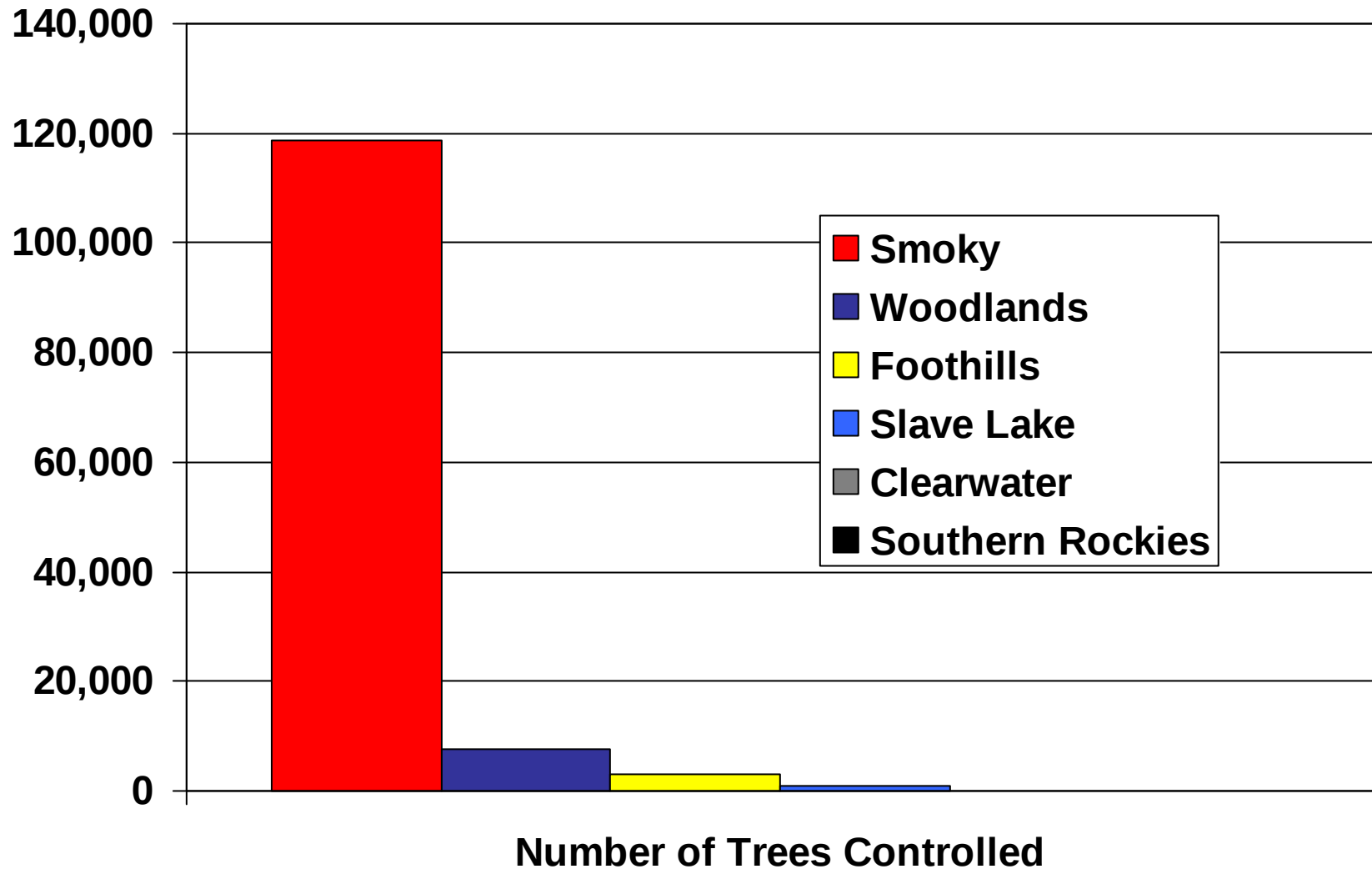
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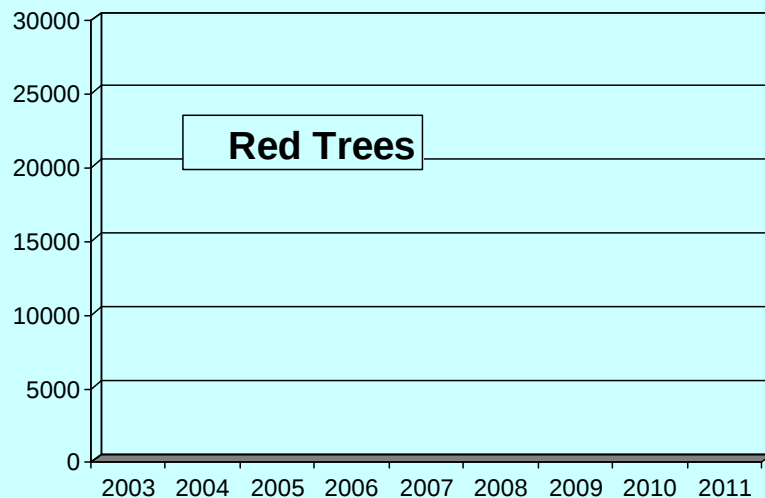
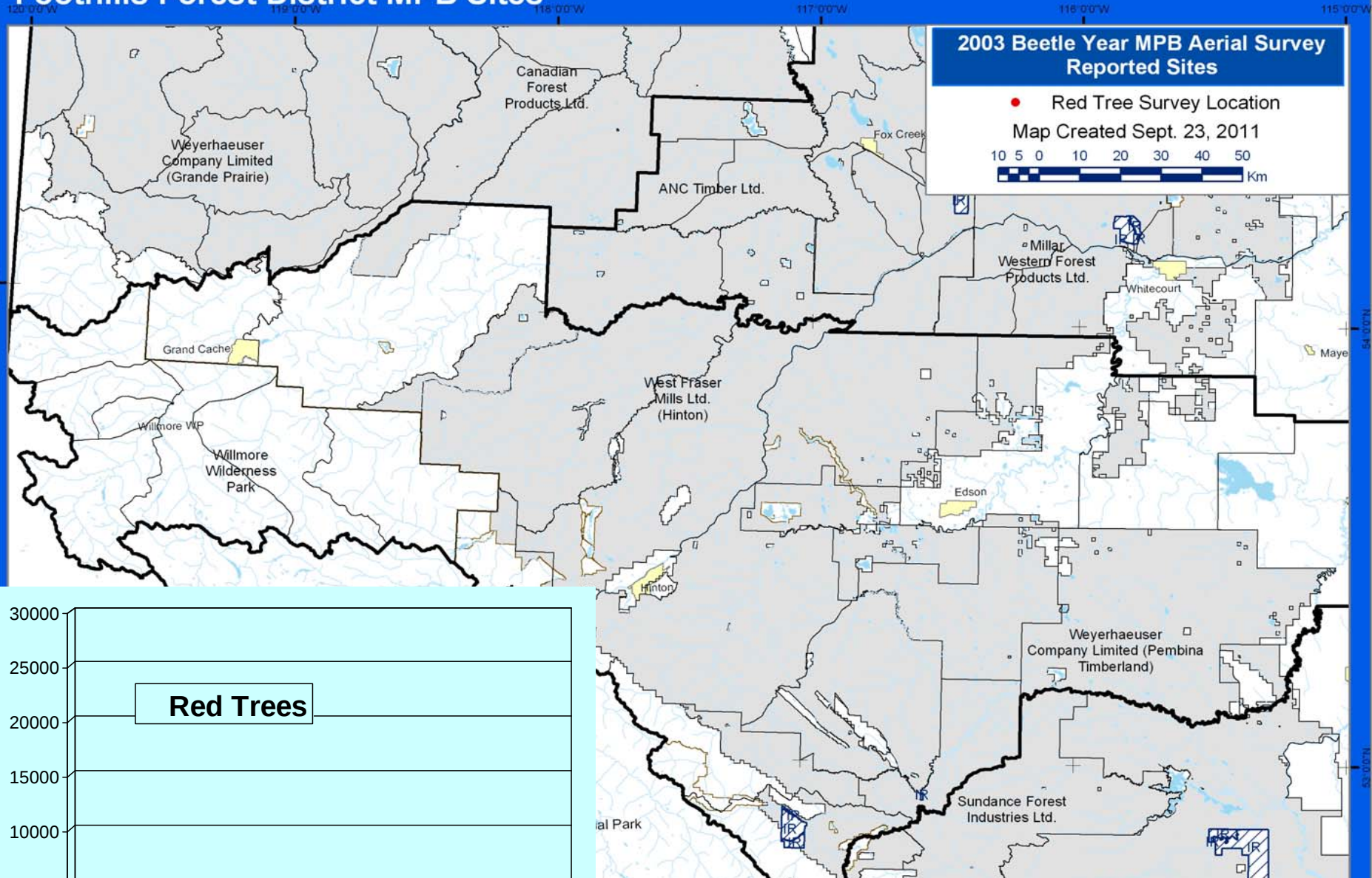
Summary for this year – Ground Survey Contracts

Forest Area	Sites Surveyed	Number of Infested Trees Surveyed	Number of Trees Controlled	Percent of high risk trees controlled
Smoky	6772	118,823	118,800	99.9%
Woodlands	1364	7766	7724	99.5%
Foothills	888	3045	3037	99.7%
Slave Lake	248	888	827	93.1%
Clearwater	16	28	10	35.7%
Southern Rockies	39	35	35	100%
Provincial TOTALS	9388	130,585	130,433	99.9%

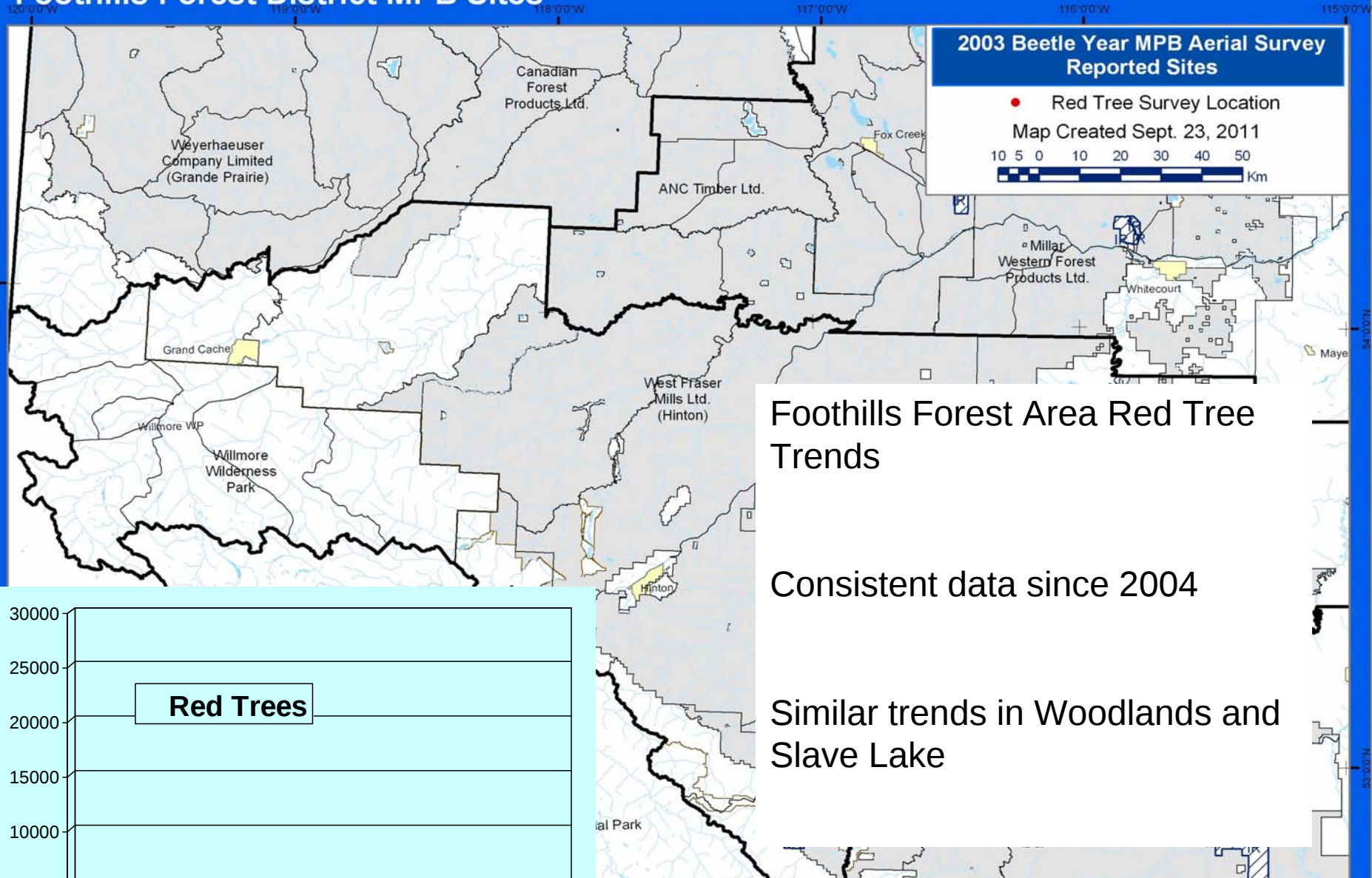
Where Control Happens in Alberta



Foothills Forest District MPB Sites



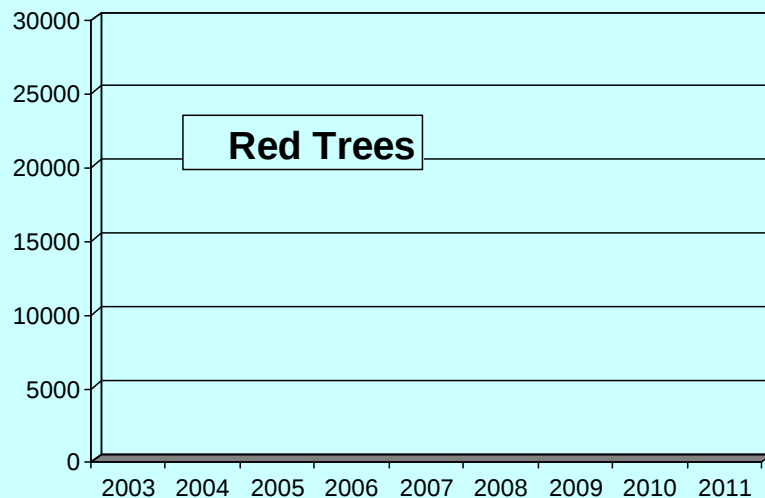
Foothills Forest District MPB Sites



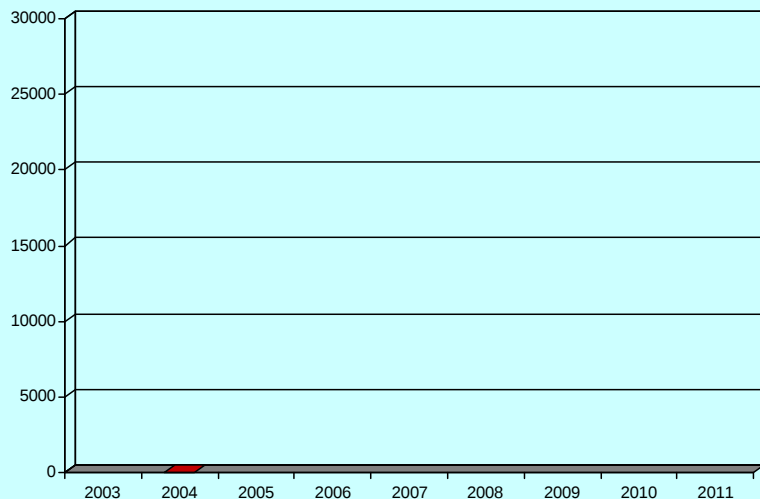
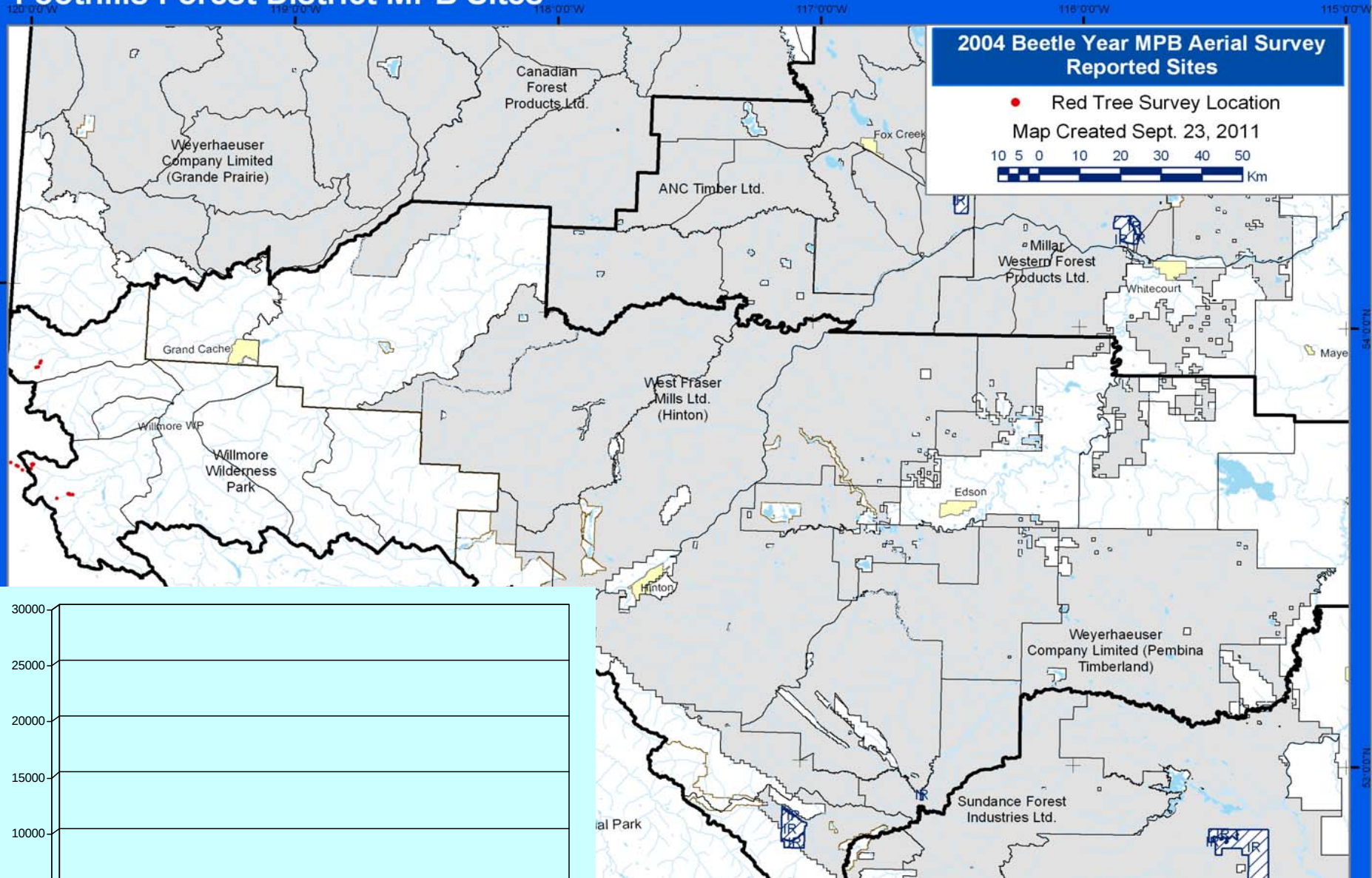
Foothills Forest Area Red Tree Trends

Consistent data since 2004

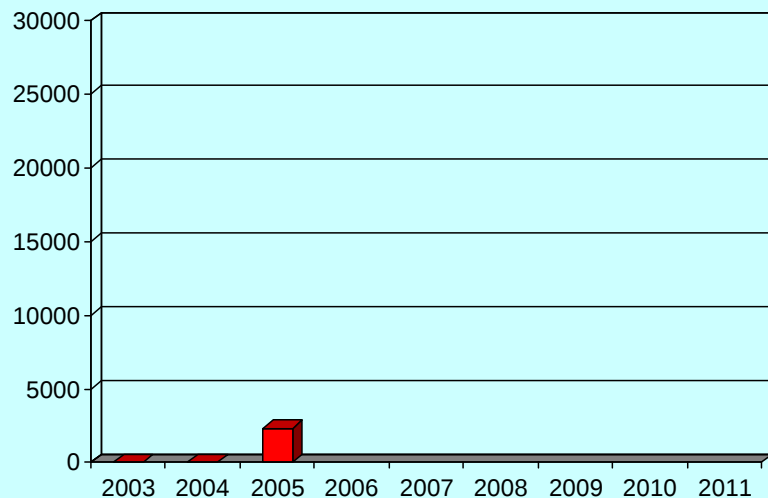
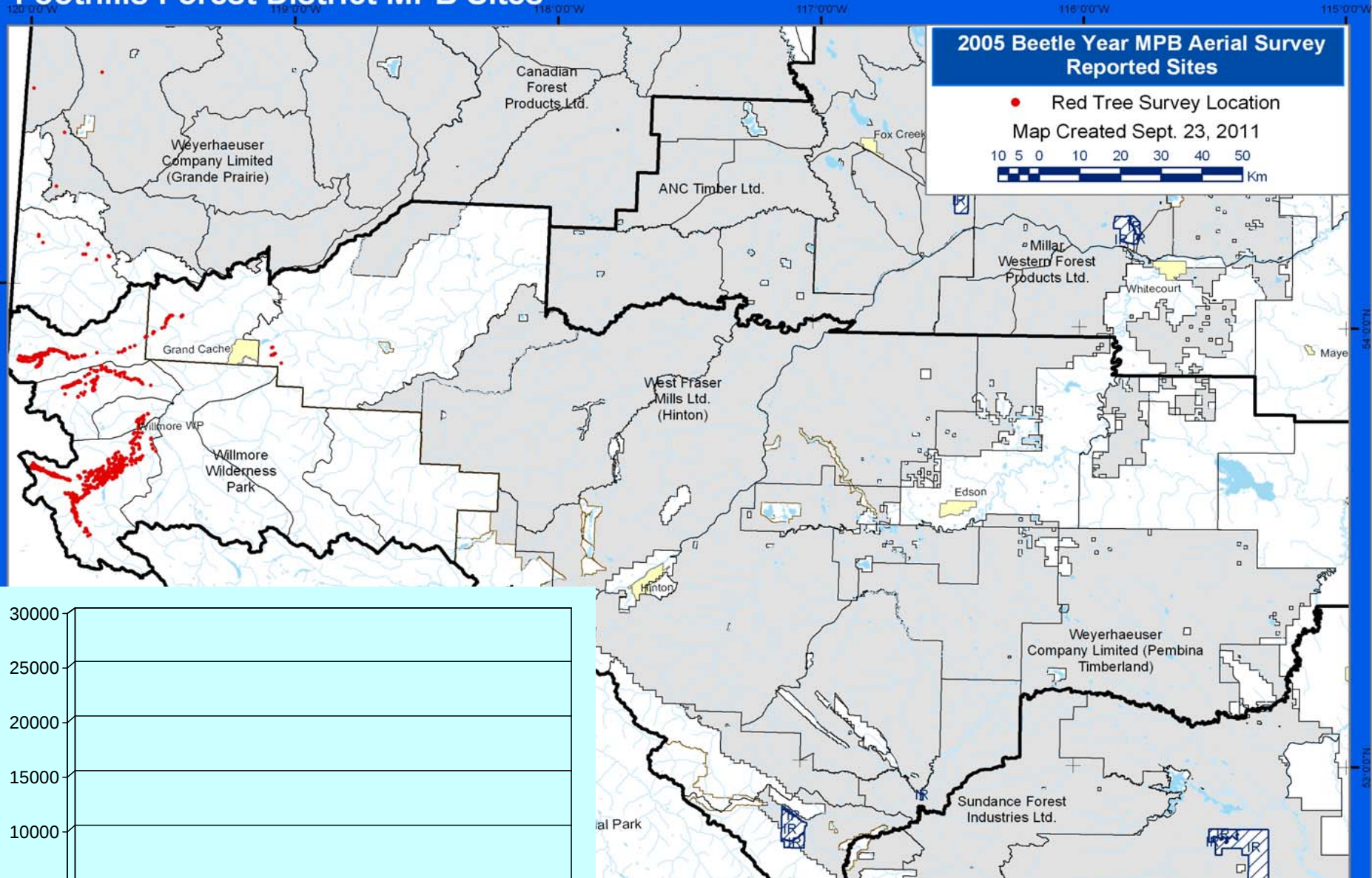
Similar trends in Woodlands and Slave Lake



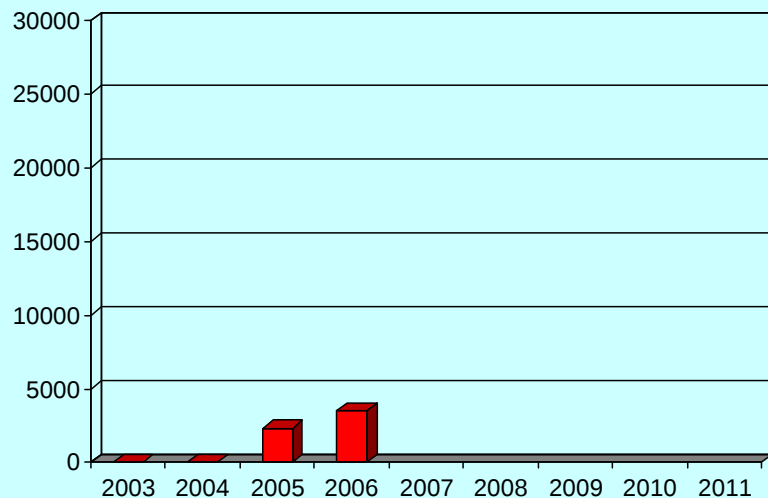
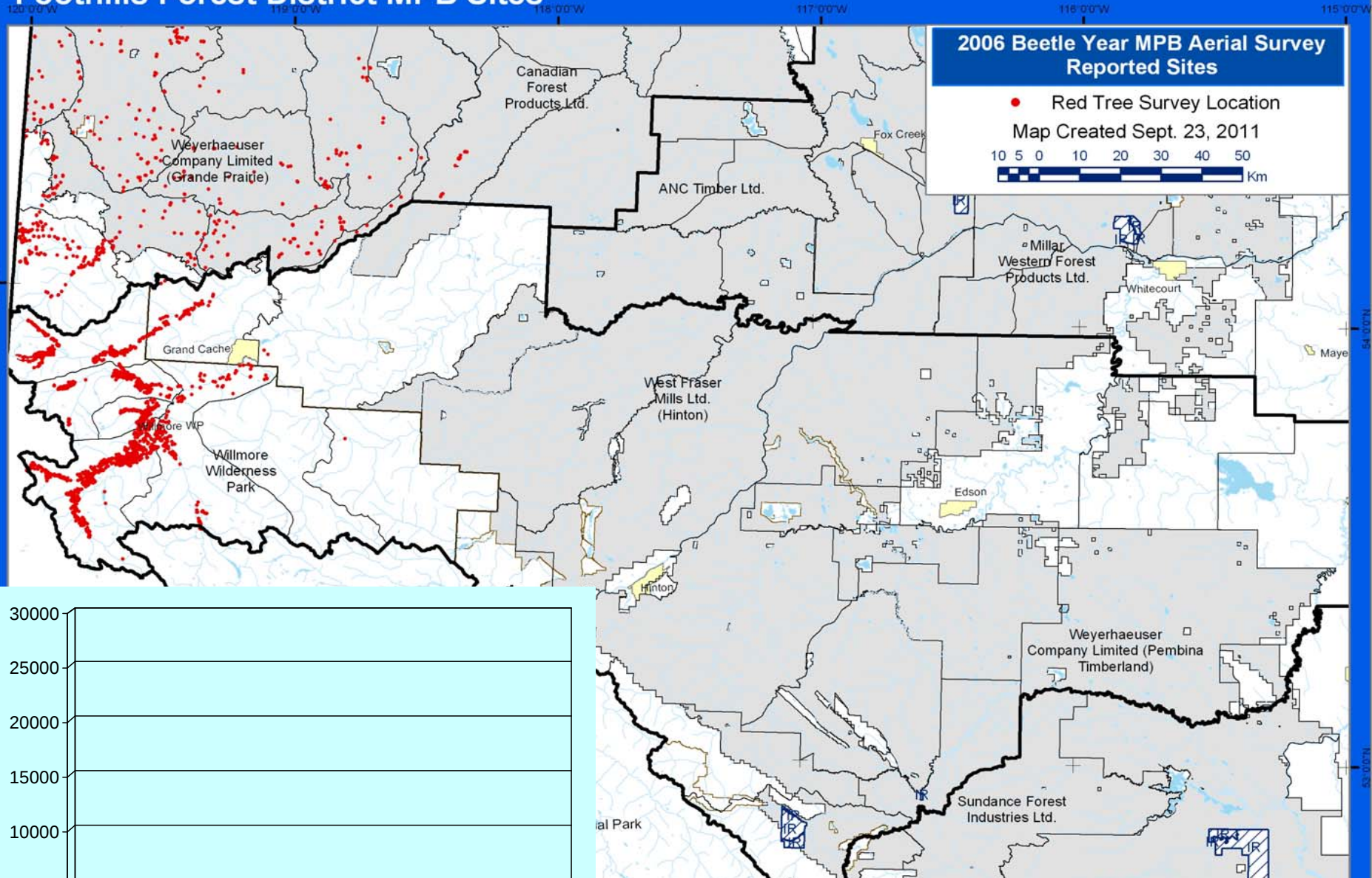
Foothills Forest District MPB Sites



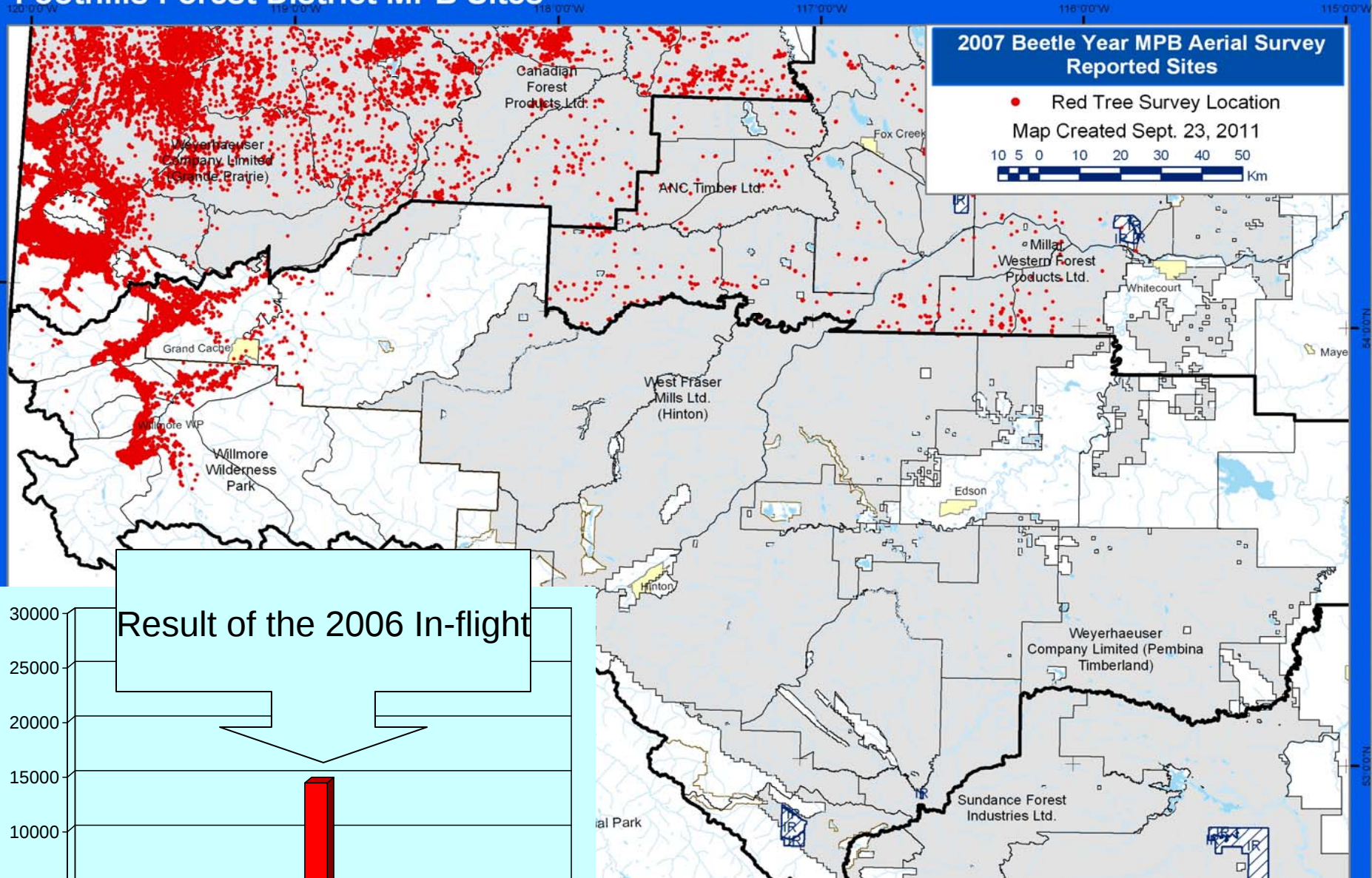
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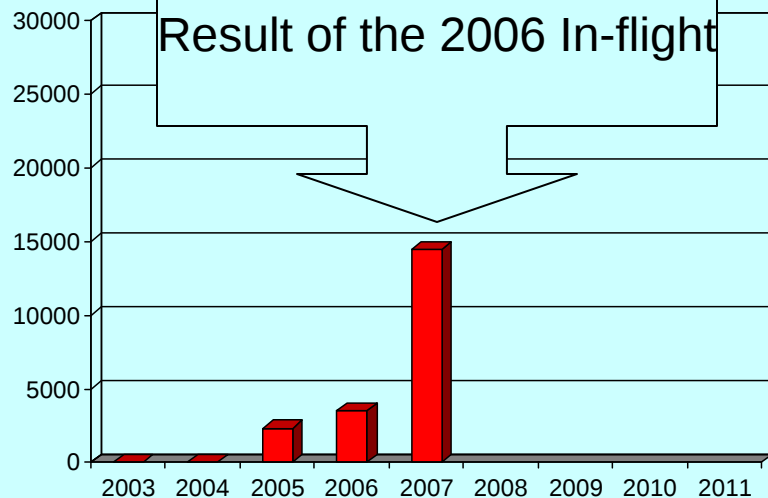
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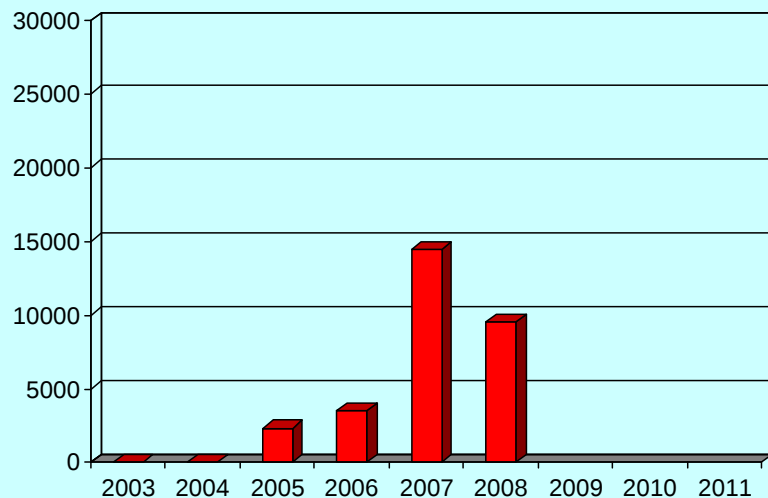
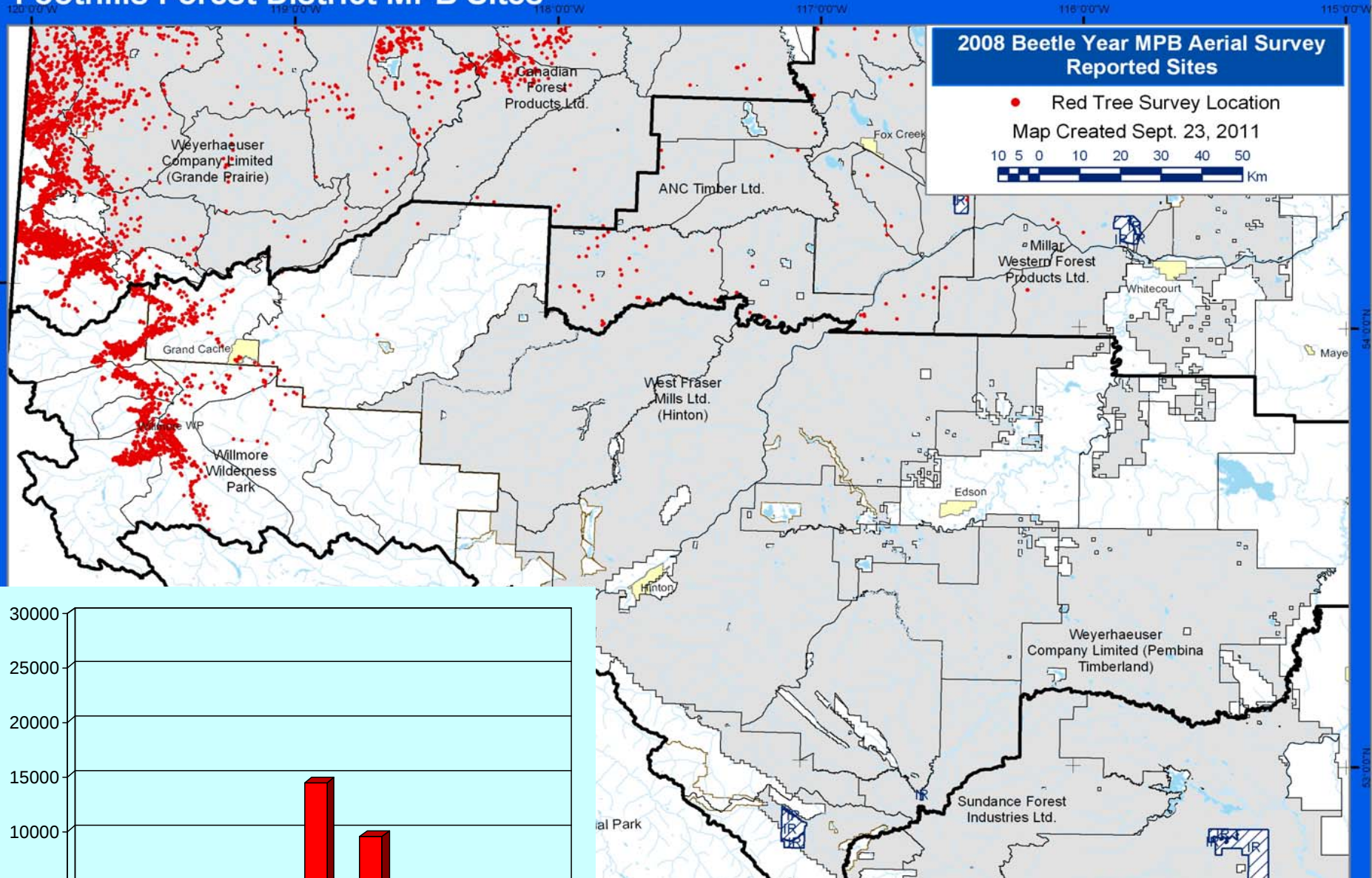
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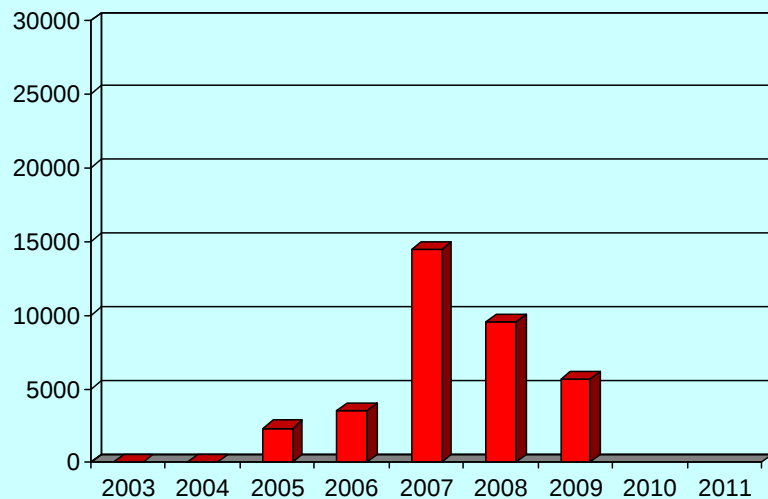
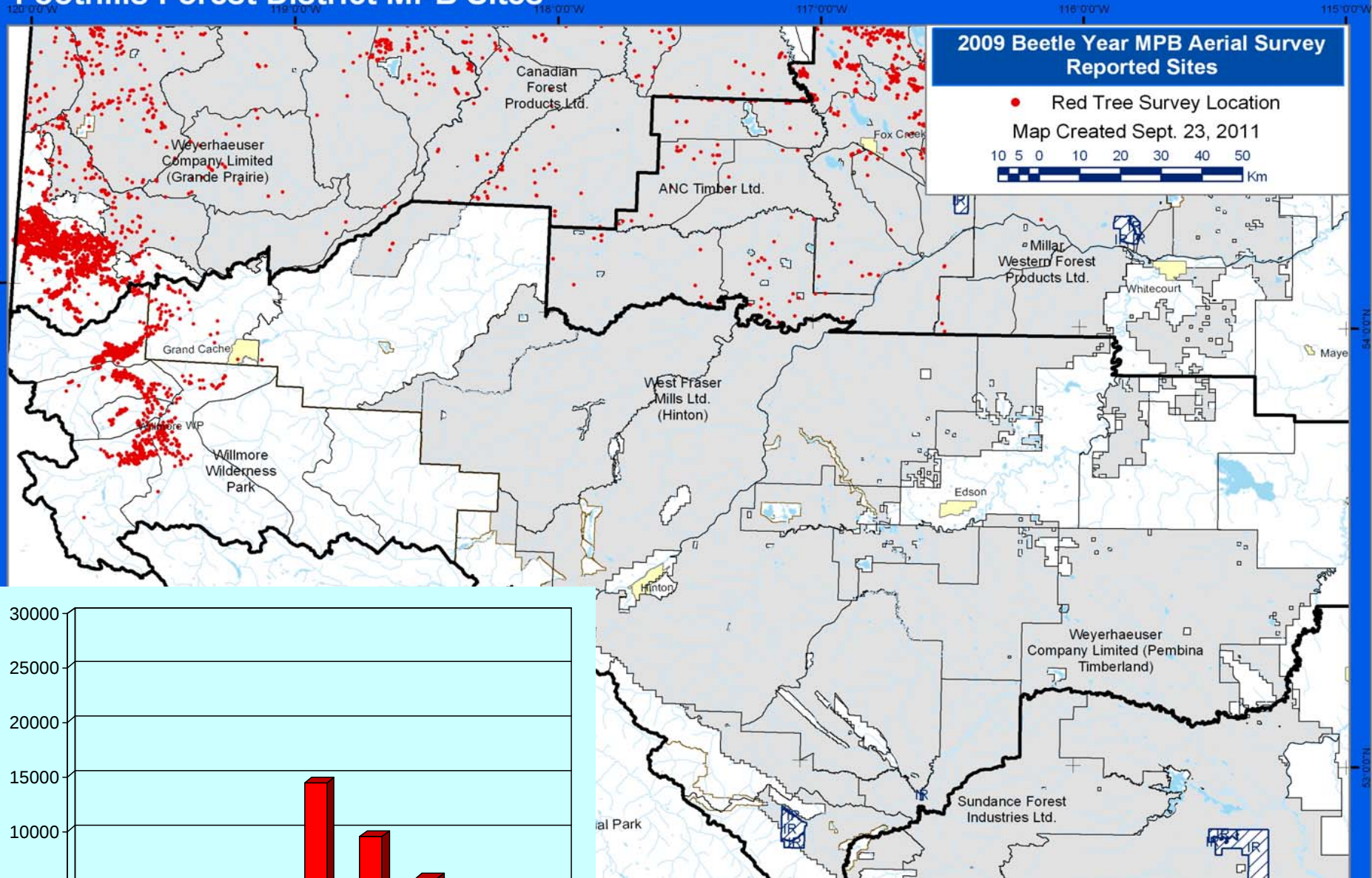
Result of the 2006 In-flight



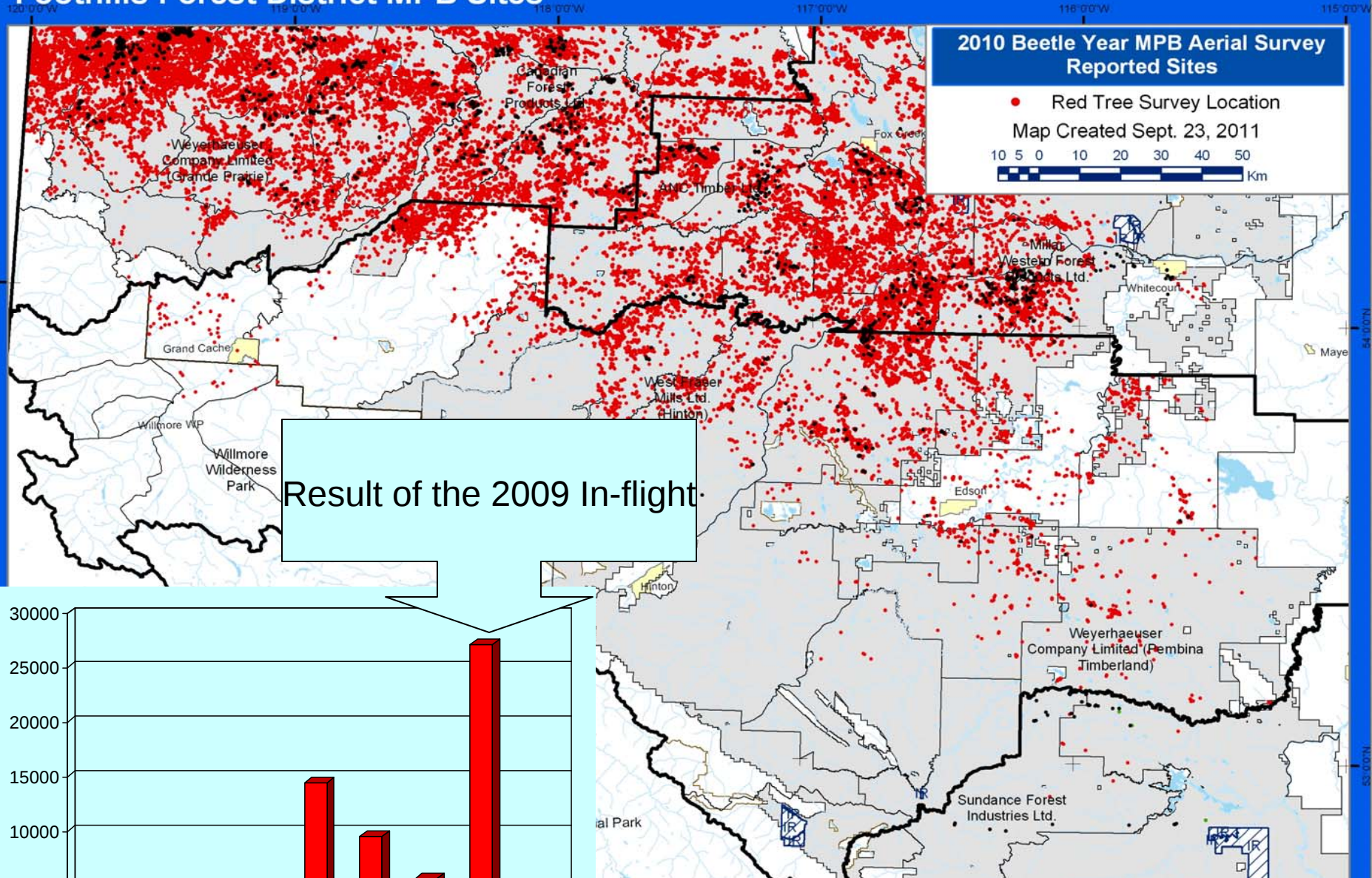
Foothills Forest District MPB Sites



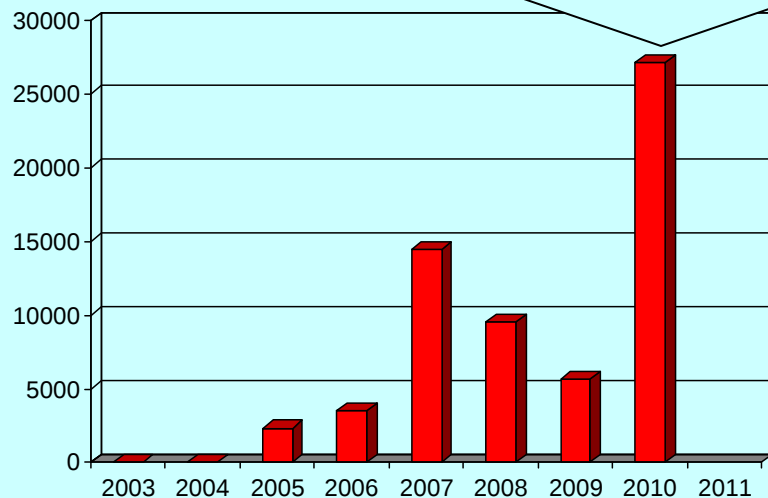
Foothills Forest District MPB Sites



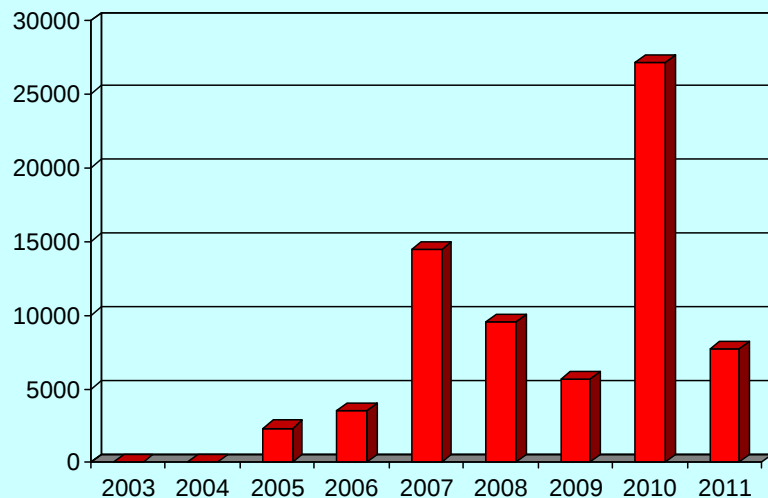
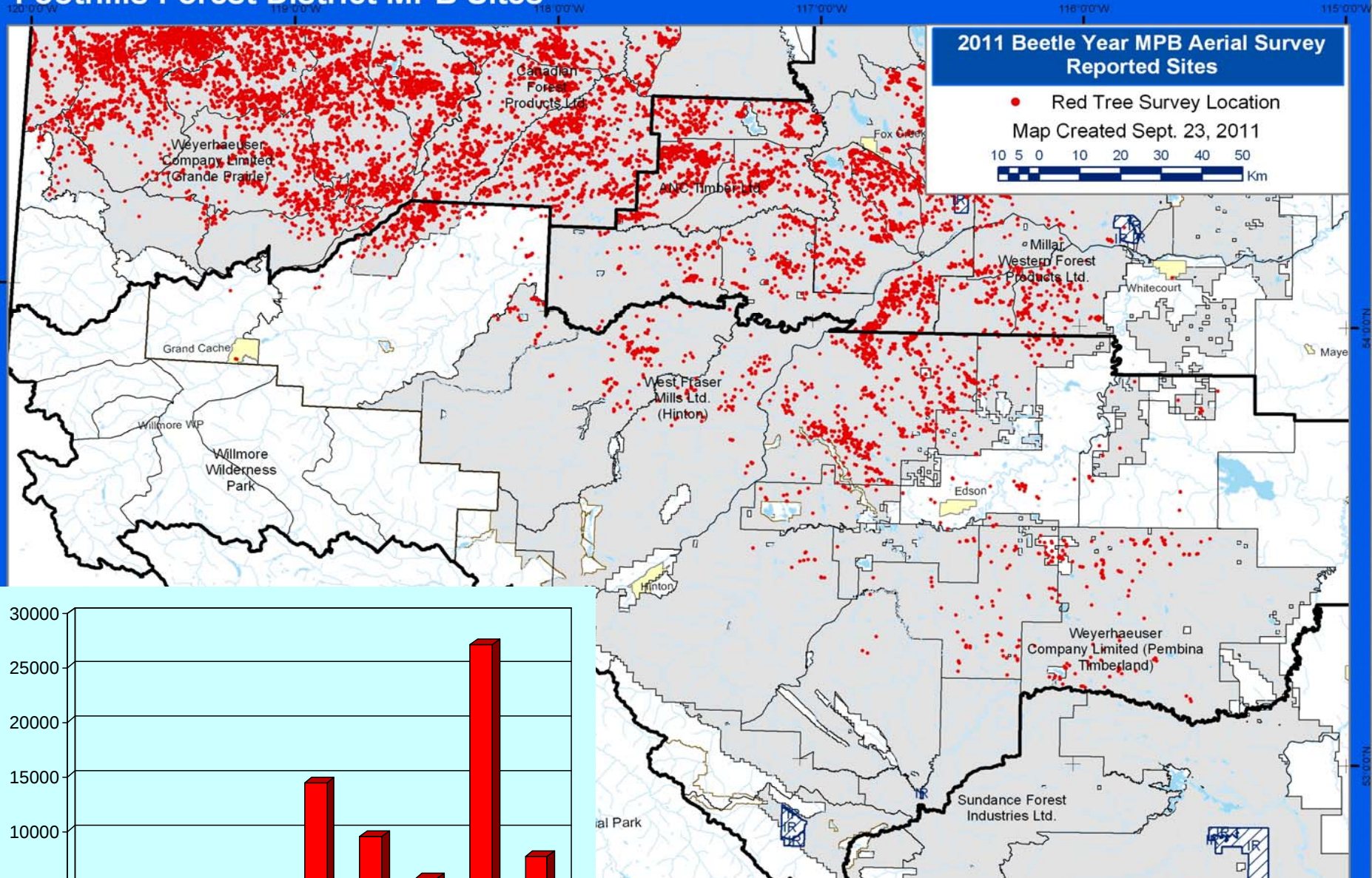
Foothills Forest District MPB Sites



Result of the 2009 In-flight



Foothills Forest District MPB Sites









Inter-governmental Projects

- National MPB Workshop Held in Edmonton Nov 2011
 - Forest Health Professionals and FM Execs from Across Canada
 - NRCan Researchers and Exec
- Dakota Society of American Foresters
 - Keynote speaker
- Interprovincial Agreements
 - Sask providing funding to AB
 - SK agreement is in place
 - NWT considering options, but we will align dispersal bait program

Recent Feedback

“It is very encouraging to see that a government agency can work with industry to layout and implement an effective MPB strategy. The Alberta MPB strategy is comprehensive enough to be effective and lucid enough to implement. The people of Alberta are very fortunate to have a timber industry and a government who are so dedicated to keeping Alberta’s and the rest of Canada’s forests healthy.” Nov 2011



Paul Pierson, CF
Dakotas Society of American Foresters, Chair-elect

“Just wanted to extend our thanks for the work and leadership Alberta is doing with regards to management of the MPB.”

Lyle Dinn
A/Manager Forest Operations
Government of Yukon – Nov 2011