



Mountain Pine Beetle Ecology Program January 18, 2012

“Debugging Your Choices”





**Government
of Alberta** ■



Natural Resources
Canada

Ressources naturelles
Canada



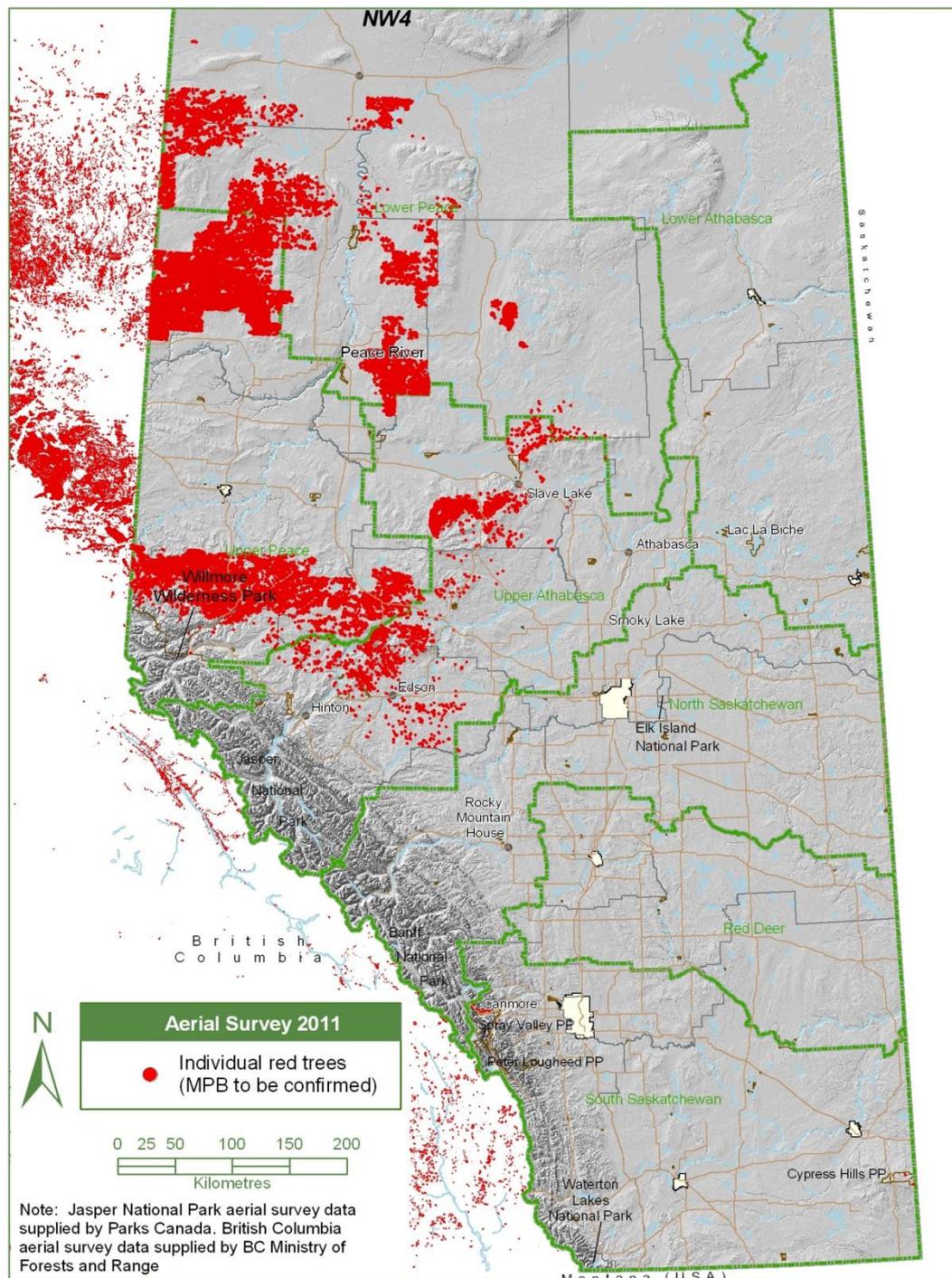
MPBEP Program

High lights of on- going projects

“Meeting the Challenge” areas

Where to next





Note: Jasper National Park aerial survey data supplied by Parks Canada. British Columbia aerial survey data supplied by BC Ministry of Forests and Range



**Spring
2011**

**Mountain
Pine Beetle**

**Population
Forecast Survey**

**Relative Status of the
Beetle Population**

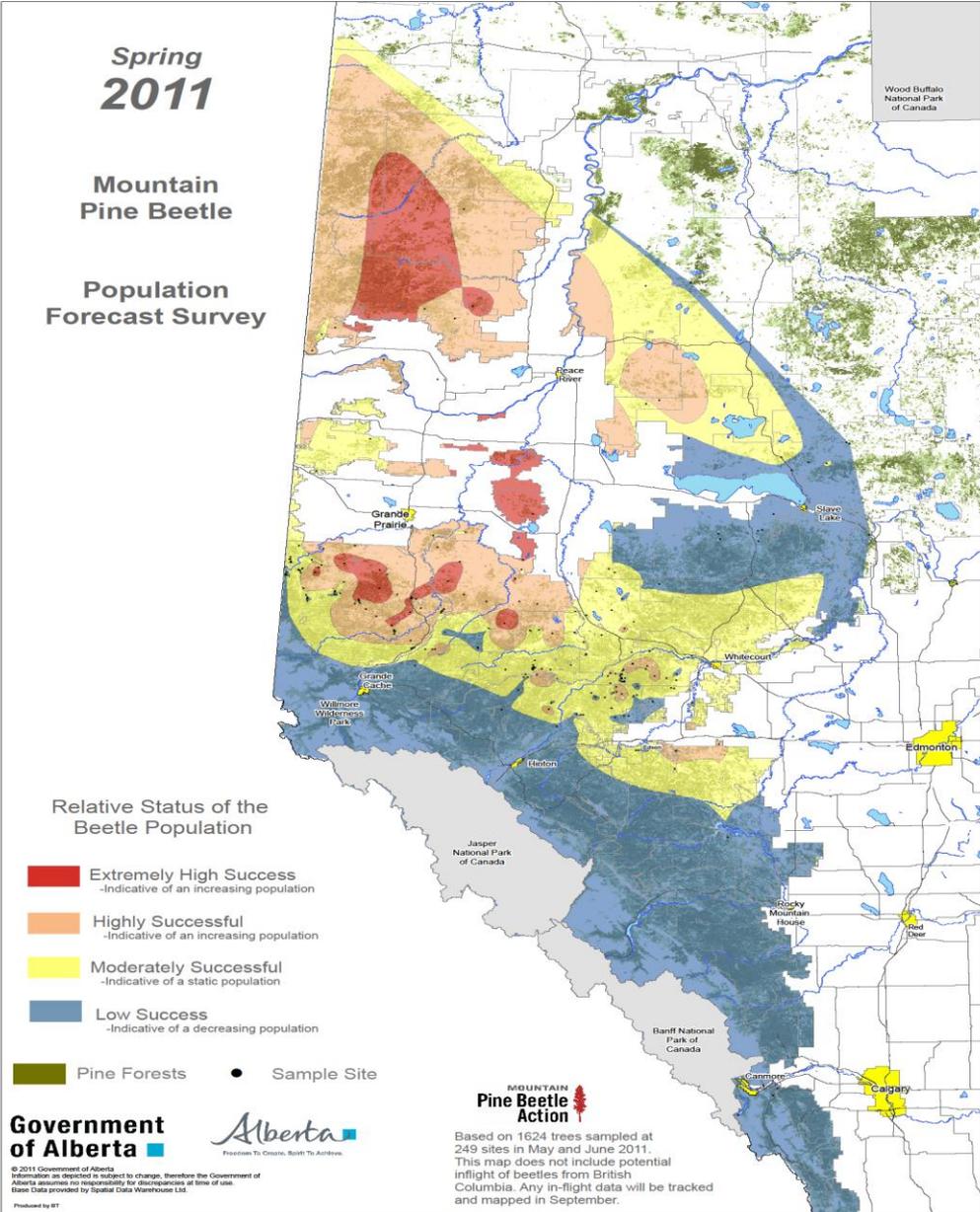
- Extremely High Success**
-Indicative of an increasing population
- Highly Successful**
-Indicative of an increasing population
- Moderately Successful**
-Indicative of a static population
- Low Success**
-Indicative of a decreasing population
- Pine Forests**
- Sample Site**

**Government
of Alberta**



Based on 1624 trees sampled at 249 sites in May and June 2011. This map does not include potential inflight of beetles from British Columbia. Any in-flight data will be tracked and mapped in September.

Produced by ST



MPBEP Current Projects

- 1. Effects of Mountain Pine Beetle attack on hydrology and post-attack vegetation and hydrologic recovery in lodgepole pine forests in Alberta**
- 2. Monitoring and Decision Support for Forest Management in a Mountain Pine Beetle Environment**
- 3. Does prescribed fire affect population dynamics of mountain pine beetle? Evaluating population success and fitness on fire-injured trees**



MPBEP Current Projects

4. Mountain Pine Beetle Phenology and Success in Whitebark Pine in Alberta

5. MPB population dynamics in new habitats and climates following range expansion: The potential for eastern and northern spread in Canada

6. Comparison of Understory Burning and Mechanical Site preparation to regenerate Lodgepole Pine Stands Killed by MPB



MPBEP Current Projects

7. Post mortality rate of wood degradation and tree fall in lodgepole pine trees killed by mountain pine beetle in the Foothills and Rocky Mountain regions of Alberta

8. The mountain pine beetle in novel pine forests: predicting impacts in a warming environment



MPBEP What works

Decision Support Tool

1. Involvement of Industry and government at the start
2. Use of existing sampling points and inclusion of new protocols
3. Preliminary development of tool
4. Beta test of tool with industry and government
5. Discussion of test comments and plan for enhancement of the tool



MPBEP What works

1. Relevant information

- Silvicultural treatments under standing dead pine
- Shelf life of standing dead pine after mpb
- Vegetation recovery under stand dead pine
- Hydrology recovery under standing dead pine



MPBEP Where to next

1. Fire Behavior changes
2. Influence of climate change
3. Impact on other insects and pathogens



Influence of climate change



2010 05 06 10 25

MPB Affected Fuels

Fire Behavior changes



Greer Creek June 19th 2010





A Partnership That Produces Results!

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