



**fRI Research**  
Informing Land & Resource Management

# Mountain Pine Beetle Ecology Program

## Research Theme No. 4

### Social and Economic Implications of a Changing Landscape

#### Importance of Research Theme

When considering potential research needs related to the mountain pine beetle infestation, forest practitioners intuitively consider the biological and ecological aspects of the issue. The magnitude of the infestation is precedent setting and the scientific community has conceded that the mountain pine beetle will continue to impact Alberta's forests for the foreseeable future. Whereas it is fundamentally important to know as much as possible about the beetle in order to manage its progression through the forest, it has become increasingly apparent that research related to potential socio-economic outcomes following a forest health-based epidemic is critically important. Inevitably, significant social and economic changes occur at a broad range of scales during and following a mountain pine beetle epidemic and research that will help the province and local communities prepare for those changes is essential.

#### Implications if information needs are not addressed

Forest based communities, particularly those with wood products manufacturing facilities have typically evolved synergistically with the forest industry. Because the forest industry is a "sustainable" industry with relatively predictable sources of raw material, significant capital investments in equipment have been made and stable workforces have been established in many forest based communities. This has led concurrently to public investments in those communities in the form of schools, hospitals, roads and utilities. If public and private decision-makers have not adequately anticipated and prepared for the significant changes in the economy and social climate that occur during and following a mountain pine beetle infestation, the existing public and commercial infrastructure may be entirely inappropriate for ensuing demographic changes. Sustainability of communities in those situations will be seriously jeopardized.

## Economic, social and ecological benefits derived from addressing information needs

The most significant benefit of adequately addressing this theme is the maintenance of sustainable rural communities in the province. Vibrant rural communities are an integral component of Alberta's diverse economy and provide an attractive lifestyle for individuals and families that are dependent on one or more of the province's natural resource industries. Whereas the mountain pine beetle infestation will inevitably change some fundamental aspects of the forest industry, implementation of effective mitigation strategies based on well-founded research can help ensure sustainability of the industry and forest-dependent communities. Some community leaders are looking more positively at the impact of the beetle, thinking that its impact can be used to a community's, if not the province's advantage. Forward and creative thinking will be necessary to realize this possibility.

## Urgency of addressing information needs

Time is of the essence in order to realize the opportunities that can be addressed through appropriate application of research results. While some communities in Alberta have already experienced impacts from the mountain pine beetle infestation there is still time to provide essential information that may be derived from research under the program for implementation at both the provincial and local level.

## Critical Questions<sup>1</sup> February 14, 2017

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1	What are the characteristics of resilient communities that are able to ensure their social and economic stability in the midst of a landscape changing due to MPB, and what steps can be taken to enhance resilient capacity of communities? (*)
2	What are the changes in standing stem characteristics and fibre quality across ecosites following MPB attack and their collective impact on merchantability?
3	What are the long term impacts of MPB on Alberta's Forest Industry and the communities that depend on them? Can the impacts of MPB be used to Alberta's advantage?

<sup>1</sup> Critical Questions denoted by (\*) were addressed in a previous Call for Proposal, 2013.



