

Mountain Pine Beetle Vulnerability

Determining the risk and management options for invasive mountain pine beetle in Northwest Territories pine forests.

CONTEXT

Mountain Pine Beetle (MPB) has historically been found in the pine forests of British Columbia (BC), and after a recent epidemic in BC the beetle crossed into Alberta (AB). In the fall of 2012, MPB was detected at sites along the Northwest Territories/AB border. A March 2013 survey found beetles had survived the winter in the NWT for the first time. The movement of MPB further north is being aided by warmer winter temperatures, the result of climate change.

Photo Credit: Aerial Forest Health Survey Flight Paths – FMD



MPB's spread blue stain fungus that, combined with larval feeding, can kill pine trees by blocking their conductive tissue. MPB attacks both pine species found in the NWT, jack pine and lodgepole pine. While the potential impact of MPB in the NWT is unknown, it has impacted the wood supply for forest harvesting, wildlife habitat and hydrology in BC. Healthy Forests and Landscapes are integral to maintaining safe and sustainable communities. No mountain pine beetle activity was found in the NWT in 2014, but monitoring is still important for making informed management decisions in case the beetles return.

OBJECTIVE

To determine the current status and risk of MPB to NWT forests, investigate management options to mitigate and minimize negative impacts, and to communicate current and predicted status of MPB to communities and affected stakeholders.

APPROACH

Current activities focus on aerial surveys of the most susceptible pine stands in southern NWT combined with the pheromone baiting program near NWT/AB border. This includes monitoring overwinter survival rates between April and June each year if any beetles are confirmed.

The Government of the Northwest Territories (GNWT) Forest Management Division (FMD) has been actively participating in the National Forest Pest Strategy meetings on slowing the spread of MPB across Canada to expand their understanding of the beetle and its activity in other regions.

EXPECTED RESULTS

This project will produce maps of pine forests in the NWT vulnerable to MPB and assist in sustainable forest management decision-making. A pest risk analysis has been completed, which includes a risk assessment and the determination of potential risk response options for a management strategy. It identifies future information needs and potential management strategies. One of them will be developing a five year MPB monitoring plan for the NWT.

Significance

Climatic conditions now allow Mountain Pine Beetle to survive in the NWT. Pine forests and values depending on them may be at risk.

Partners

- GNWT Environment and Natural Resources, Forest Management Branch
- Aboriginal and Northern Development Canada
- Natural Resources Canada
- University of British Columbia
- Alberta Environment and Sustainable Development
- JCH Forest Management

FOR MORE INFO

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