



Alberta

MOUNTAIN PINE BEETLE

ACTION
PLAN





BACKGROUND

Alberta's forests enhance our lives in many ways, providing water, timber, wildlife habitat, beautiful scenery and recreation opportunities. The Government of Alberta, through Alberta Sustainable Resource Development (ASRD), manages forest resources for the benefit of all Albertans, current and future.

A growing, unprecedented infestation of mountain pine beetle (MPB) significantly threatens Alberta's pine forests and the things Albertans value about those forests. In response, ASRD has updated its *MPB Management Strategy* and begun to take specific actions to manage and mitigate the MPB's impact. This action plan outlines the steps ASRD is taking and intends to take, and will be updated as the status of the infestation evolves.

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Alberta Sustainable Resource Development

ACTIONS FOR MANAGING AND MITIGATING THE MPB INFESTATION



Alberta Sustainable Resource Development's current response to the MPB infestation has three broad objectives:

- **Timely detection** – to provide current knowledge about the status of the infestation and the risks it poses to the province's resources. This knowledge will support better management decisions and activities.
- **Effective and expedient response** – to produce an evolving set of cost-effective and timely activities that mitigate the risks associated with the MPB's adverse effects and protect the forests' benefits for current and future Albertans.
- **Useful communications and liaison** – to facilitate a well-informed, coordinated and accountable decision-making process and ensure stakeholders understand what is being done and can contribute to future decisions.

Short-Term Actions: the Beetle and Salvage Strategies

ASRD will undertake appropriate detection activities and population assessments throughout the province. Based on its findings and using the best science available, the department will develop maps showing three mountain pine beetle management zones: the Leading-edge Zone; the Holding Zone; and the Salvage Zone. These zones are defined in the *Mountain Pine Beetle Management Strategy*.

- Within the Leading-edge Zone, ASRD will conduct Level 1 treatment to prevent the beetle's spread along the eastern slopes of the Rocky Mountains and eastwards into the boreal forest. Level 2 treatment may supplement the Level 1 treatment, as determined by the ASRD Area Manager.
- Within the Holding Zone, areas with significantly more infested trees than the leading-edge zone, the objective is to reduce or hold the beetle population in check. Each tenure holder will plan and implement Level 2 treatment, subject to ASRD's approval. Level 1 treatment will supplement these activities where appropriate. ASRD is responsible for Level 1 treatment.
- Within the Salvage Zone, areas with a large number of infected trees or where treatments would be ineffective, the objective is to use timber harvesting to achieve other forest management goals, such as establishing growing forests, providing timber revenue to the province and protecting habitat or watersheds. Tenure hold-

ers will plan and implement salvage activities, subject to ASRD's approval.

Actions within the Leading-edge and Holding Zones make up the Beetle Strategy. Actions within the Salvage Zone make up the Salvage Strategy.

Long-Term Actions: the Pine Strategy

The provincial government intends to reduce the amount of timber susceptible to the MPB. It will identify the most susceptible stands and direct Forest Management Agreement (FMA) holders to amend their current management plans to reduce the amount of susceptible pine on their operating landbase by 75 per cent over the next 20 years. The Pine Strategy refers to actions taken to reach this goal.

Communications and Liaison Actions

ASRD has formed an internal Incident Command Team (ICT) to coordinate its short- and long-term actions, ensure that the best and most current information is available for strategic decisions and establish clear lines of accountability for those decisions. The ICT will release monthly status reports, through the *Beetle Bulletin*, which will describe recent and ongoing activities, plans and next steps in the management response.

The department will also develop a communications plan, to provide timely information on its mountain pine beetle

Level 1 treatment includes, but is not limited to, individual tree treatment such as grinding, peeling or burning and insecticide treatments.

Level 2 treatment refers to block or patch harvesting of infested areas.

Forest Management Agreements (FMAs) allow companies to establish, grow, harvest and remove timber from a particular area. The agreements allow FMA holders to take on certain responsibilities for the province, including forest management plans and reforestation.

Operating landbase refers to the forested landbase excluding areas where the FMA holder will not harvest timber, such as riparian areas, inoperable areas and protected areas. These areas do not contribute to the FMA holder's annual allowable cut.

response. This plan will be dynamic, changing as new information becomes available.

Although ASRD is the lead agency when managing MPB, consultation with all stakeholders and coordination of efforts among all land managers is critical. Interagency consultation and coordination activities include:

- **Spread Control Overview Team (SCOT)** – evaluation of MPB control efforts along the border region by key British Columbia and Alberta officials and industry representatives (a similar approach is proposed with Saskatchewan);
- **Joint Canadian Forest Service/ASRD efforts** – coordination of research activities to translate the newest research into management and treatment actions;
- **Interdepartmental activities** – close coordination between Alberta government departments to identify and address the socio-economic impact of the MPB infestation on communities;
- **the Alberta Mountain Pine Beetle Minister's Advisory Committee** – comprised of key opinion leaders selected by the Minister of Alberta Sustainable Resource Development to provide advice on strategies and approaches to minimize the threat posed by the mountain pine beetle;
- **Strategic Directions Council** – composed of Parks Canada, British Columbia Parks, British Columbia Ministry of Forest and Range, ASRD, Alberta industry, Alberta Tourism, Recreation Parks and Culture and Canadian Forest Service; and

- **Regional working groups** – local groups of forest managers and stakeholders coordinating operational MPB activities.



Partnership Approach

Alberta's lands consist of private lands, provincial Crown lands, federal Crown lands and municipalities, managed by a number of different parties. This mixture presents challenges in a situation such as this infestation. Each party has different management objectives and different ways of working towards those objectives. Alberta's response to the mountain pine beetle infestation requires close partnerships and coordination between all parties.

The provincial government's responsibilities include establishing beetle treatment policy and the overall coordination of activities within Alberta. The province has created partnerships with the forest industry, municipalities and the federal government to undertake treatments in Alberta. Further detail on these partnerships can be found in the document *Mountain Pine Beetle Infestation Management Responsibilities*. These relationships may evolve over time.

Part of ASRD's role in MPB infestation control is to lead and implement Level 1 treatment and facilitate and coordinate the efforts of all parties involved in the development and implementation of control plans. ASRD is responsible for detection and surveillance surveys and, through collaboration with stakeholders, strives to ensure effective programs.



Alberta Tourism, Parks, Recreation and Culture (TPRC) is responsible for the management of protected areas. TPRC has entered into a memorandum of understanding (MOU) with ASRD that identifies each department's roles and responsibilities, which are posted on ASRD's Forest Health website (<http://www.srd.alberta.ca/forests/health/default.aspx>).

The provincial government expects FMA holders to co-operate with ASRD in implementing strategies to manage the MPB infestation. FMA holders and other tenure holders will implement

Level 2 treatments deemed necessary by ASRD to control the MPB on provincial forest lands. The government will partner with the forest industry to develop plans.

As part of this partnership approach, the provincial government recognizes that it may need assistance from other stakeholders to meet its management responsibilities. Alberta simply does not have enough manpower and equipment to fulfill ASRD's obligations on all provincial lands. To that end, Alberta has created financial grants to support focused operational assistance from municipal governments, private land owners and industrial land managers. These grants reimburse the costs of certain MPB treatment activities at prevailing market prices. For more information on these grants, call the 310-BUGS (2847) hotline.

RESEARCH REQUIREMENTS:

There are many unanswered questions with respect to the impact of beetles on social and environmental values and long-term forest management. Alberta needs to capitalize on the experiences in neighboring British Columbia to ensure actions are well understood before implementation, whenever possible.

Alberta will collaborate with British Columbia to fill information gaps and learn from their experience to prevent duplication and wasted efforts on strategies already tried. The key research areas should include:

- Silvicultural barriers (recovery of stands without treatments, species conversion);
- Long term effects on biodiversity;
- Short and long term impacts to watersheds;
- Wildlife habitat;
- Impact of MPB infestation or salvage operations on other values (such as species at risk, etc);
- Community transition funding requirements for forest and community sustainability;
- Bio-products;
- Pulping of dry wood (constraints on moisture content of wood for kraft and chemo-thermal mechanical pulps, and newsprint);



- Production of other products (oriented strand board, pellets, bio-energy);
- Review of fire behavior after beetle attack and assessment of detection and suppression capabilities, to revise current models of fire behavior and fuel types;
- Length of time that dead stands can provide merchantable timber;
- Kiln drying and heat treatment certification requirements;
- the impact of continual or successive infestations on wood supply, wood quality and product spectrum;
- MPB genome research; and
- Development of new forest products and markets.

IMPLEMENTATION ISSUES

Forest Planning and Management

In Alberta, FMA holders must develop, and submit for government review and approval, forest-management plans that address social, economic and key environmental values—the so-called triple bottom line. Forest managers must consult stakeholders during plan development and throughout operations conducted under approved plans.

ASRD's response to the MPB infestation follows this approach. The department expects that the MPB infestation will quickly have a significant effect on the full range of forest values (including revenue derived from timber, tourism, wildlife habitat, recreation use, visual quality, carbon sequestration and biological diversity). ASRD is moving as rapidly as possible to integrate the short- and

long-term actions described above into existing forest-management plans, with appropriate protection of all the values Albertans derive from provincial forests. In sensitive sites, critical wildlife habitat, parks and protected areas, ASRD will attempt to minimize the impact of management tactics by using Level 1 treatment of infested trees, however in certain cases it may be necessary to move to a Level 2 response. ASRD will adopt site-specific species habitat considerations for grizzly bears, woodland caribou, trumpeter swans and limber and whitebark pine.

Forest management planning activities will follow a streamlined process, to ensure timely review and implementation. The government will continue to require consideration of key environmental impacts of harvest, but will also attempt to improve the efficiency of the review and approval process to ensure management activities are put in place quickly to maximize their benefit in the fight against the beetle. ASRD will notify tenure holders of this process as it evolves and will consult with them as it develops operational ground rules for MPB activities.



Timeliness of Actions

It is critical that all parties complete their tasks in a timely manner. ASRD must complete detection activities and produce zonal management maps as quickly as possible. Forest tenure holders and ASRD will use these maps to identify areas slated for beetle-related harvest and determine whether the harvest is for Level 2 treatment or salvage. The provincial government must declare obsolete any existing forest management plans not consistent with beetle-killed or proactive harvest planning. ASRD expects tenure holders to quickly determine their capacity to handle additional volumes and advise the Minister of the same, to allow development of alternative plans if required.

Most important is the timeliness of harvest. Where an operator obtains timber rights on beetle-endangered or -killed areas, that operator must harvest the timber within the timelines specified by the Minister. The government establishes these timelines to maximize the effectiveness of timber removal for the control of future beetle infestations and spread. The government will base the deadlines for annual harvests on beetle flight dates to reduce the risk of spread.

To meet the goals described above, it is likely that signifi-

cant volumes of timber will be available in the short term, perhaps beyond current processing capacity. ASRD will first ask the FMA holder, as the timber rights holder for the area, to harvest and handle the timber. The FMA holder will have 30 days to respond to the department's request, and if it is unable or unwilling to harvest all or part of the timber, the department may offer the surplus for sale or prioritize its burning to encourage natural reforestation. The government wants trees in infested areas where timber is not harvested to be managed rather than left to stand as dead timber. This management may address fire hazard, watershed or habitat concerns. Alberta does not favour the use of timber toward any one particular type of manufacturing facility. Alberta does not regulate which products are produced from the harvested timber.

Generally, infestations on the active landbase will be addressed using Level 2 treatments, except where special habitat considerations require the use of Level 1 treatments. Infestations on the passive landbase will primarily be addressed using Level 1 treatments, with Level 2 used under limited conditions. ASRD will establish the priority of areas to be treated and will direct operators and operations into those areas.

Annual Allowable Cuts

The Government of Alberta recognizes that implementing the Pine Strategy, in order to achieve the high-priority goal of reducing the amount of timber susceptible to the MPB, will require increases in the annual allowable cut (AAC) in many areas of the province. These increases will decrease longer-term harvest levels (fall down). Forest management plans for each area will identify the appropriate level of increase and fall down.

If an MPB outbreak results in the need to harvest more areas than scheduled in the forest management plan, ASRD will adjust the AAC to reflect current conditions.

For the purposes of AAC re-calculations, ASRD will temporarily remove from the productive landbase those areas not

Annual Allowable Cuts
– the volume of timber that an FMA holder may harvest in one year from a forest. In Alberta, the government calculates this volume under long-term sustainable forest management principles.

harvested for the Salvage Strategy. These areas will be included in future AAC calculations once a forest inventory or regeneration survey shows that a productive stand is growing or there is a commitment from tenure holders to reforest the areas.

Reforestation

Reforestation is required on all forest lands harvested under a commercial timber disposition. The *Timber Management Regulation* describes a disposition holder's reforestation obligations, and the *Alberta Regeneration Survey Manual* outlines requirements for activities. Consistent with these obligations and regulations, reforestation is required on all areas harvested under the Pine Strategy or Level 2 Beetle Strategy activities. The limited areas involved in Level 1 treatment makes follow-up reforestation unnecessary. The provincial government continually assesses seed supply to ensure it is adequate for the province's rehabilitation needs.

Rehabilitation Plans

Depending on the extent of the infestation, the government will develop rehabilitation plans to manage other forest and land values in areas not subject to reforestation requirements.

Stumpage

The government will assess timber dues on pine harvested from stands currently infested or endangered by mountain pine beetle at the "dead" or "damaged" rates described in the *Timber Management Regulation*, or applicable FMA rates.

The government will consider all beetle-damaged, -killed or -endangered timber volumes chargeable against the AAC. Tenure holders must report all beetle-damaged and -killed timber volumes in a management unit under a single scaling population, and report endangered timber under a different population. This will allow collection of more precise data on beetle salvage programs. Forest area offices will help tenure holders establish scaling populations.



Log Management and Transport Restrictions

To reduce the chance of inadvertent spread of the mountain pine beetle into healthy forests, ASRD has restricted log management and movement. These restrictions are based on MPB management zones and coincide with the beetle's natural life cycle. For more information on these restrictions, visit ASRD's website, http://www.srd.gov.ab.ca/forests/docs/MPB_Log_Management_Directive.pdf.

