

	OKANAGAN SHUSWAP FOREST DISTRICT			SUBJECT: <u>District Manager Policy</u> – Mountain Pine Beetle Management Strategy and guidance for implementation.
	To: Okanagan Shuswap Forest District All Licensees Effective Date: August 10, 2005			
Forest Health # 001	MANUAL:	CHAPTER REF:	SECTION:	FILE: 195-30 D Policy - 18818-00

Purpose: to outline the local goals, objectives and expectations for Mountain Pine Beetle (MPB) management during the current epidemic and provide guidance for strategy preparation to achieve those objectives. Guidance within this document was designed for average conditions within the Okanagan Shuswap Forest District and may need to be varied for application to site-specific situations.

This guidance is intended to be consistent with and in furtherance of the BC Mountain Pine Beetle Action Plan for 2005 - 2010.

Management Goals:

- Take all reasonable actions to reduce bark beetle incidence to the level where all new infestations are being adequately actioned or otherwise addressed prior to the next flight following discovery.
- Reduce negative impacts of bark beetle infestations and salvage operations on biodiversity and other forest values.

Objectives:

1. Maintain and protect public health, safety and infrastructure.
2. Conserve the long-term forest values identified in land use plans.
3. Manage fuel hazard build-up to an acceptable level of risk from wildfire.
4. Recover the greatest value from beetle-infested timber before it deteriorates, burns or decays, while respecting other forest values.
5. Prevent or reduce damage to forests in areas that are susceptible but not yet experiencing epidemic infestations.
6. Mitigate the short and long term impacts of the MPB by employing strategies that reduce insect spread and maintain uninfested pine stands intact for as long as practicable or until collapse of the current epidemic.
7. Recognize the importance of a healthy and viable forest industry and the milling requirements for a component of mixed species.
8. Minimize the mid and long-term impacts on timber supply.

9. Recognize landscape and stand level biodiversity strategies and employ harvest methods that will maintain or enhance biodiversity values.
10. Retain hydrological function of watersheds to the extent practicable.
11. Mitigate the short and long term impacts associated with increased access development.
12. Provide for streamlined processing of salvage applications that is consistent with the urgency to take action as described in the goals, objectives and guidelines.

Guidance:

1. Follow the forest health objectives and strategies in the Okanagan - Shuswap LRMP. (The LRMP also provides applicable guidance on reforestation, access management and other related subjects).
2. Prepare retention plans for watersheds or geographic units that have significant amounts of infested or susceptible timber in order to address forest resource values that might otherwise be compromised by accelerated, salvage harvesting (see retention planning section).
3. Take harvesting action on infested stands that are operable and not part of a "retention area" at the earliest opportunity to minimize insect spread and the loss of provincial revenue and timber value.
4. Focus harvesting on the operable stands with the highest percentage of pine and the heaviest MPB infestations. Utilize a MPB risk assessment procedure to rate or prioritize harvest activities.
5. Although susceptible pine stands are a priority for harvest over other healthy timber types, the focus for harvest should be on infested stands first. Therefore, uninfested or "trace" infested pine stands should not be harvested until all operable, infested stands have been addressed by one of the following:
 - Application to harvest.
 - Incorporation as protected "retention" within a formal retention plan designed to address other values.
 - Incorporation into an approved delayed harvest schedule designed to address operational constraints and/or other values.
6. Prevent or reduce damage in susceptible timber types that are not yet experiencing an epidemic by employing early detection and focusing of salvage operations on the infested portions of stands. Aggressive, "leading edge" management should be employed to slow the spread and extend the harvest over as long a period as possible. Even within the boundaries of the main epidemic area, there will be isolated areas where the forest conditions and values at risk require this aggressive "leading edge" management approach.
7. Salvage in riparian reserve zones (RRZs), class A lakeshore management zones, wildlife tree patches (WTPs), wildlife habitat areas (WHAs) and old growth management areas (OGMAs) should be restricted to single-tree removal of live,

- bark beetle-infested trees that are not identified for protection in a retention plan. Furthermore, salvage should only occur where the bark beetle has been controlled in surrounding areas, there is a reasonable likelihood of stopping insect spread throughout the area or reserve, future access into the area will be controlled and the key riparian, wildlife and old-growth attributes will be maintained.
8. To reduce the susceptibility of future forests to forest health factors, consider mixed conifer species planting. Promote the establishment of deciduous/broadleaves over a portion of the area where appropriate.
 9. Licensees with more MPB within their operating area than they can address before the timber starts to lose value should identify areas that other licensees can address at the earliest possible opportunity. Identified areas should provide a good cross-section of logging chances and value that is comparable to the rest of the operating area and, wherever possible, make up a logical operating unit.
 10. During the current MPB outbreak, all licensees should be engaged to the fullest extent practicable in the harvest of bark-beetle infested stands, other forest health priorities and susceptible pine stands. Harvest of other stands should be limited to timber profile demands needed to sustain mill viability or meet government objectives (BCTS). Where there are insufficient forest health priorities and/or pine stands within a given operating area, licensees should work together to temporarily trade portions of operating areas.

RETENTION PLANNING

For the purpose of this document, retention planning means the practise of identifying the areas and types of timber that will not be salvage-logged even if they are attacked by mountain pine beetles. The objective of retention planning is to ensure that sufficient timber is maintained across the landbase to address other values that might otherwise be compromised by accelerated, salvage harvesting.

The amount of retention required depends on the amount, type and sensitivity of resource values within a given landbase unit and the risk posed by projected MPB infestation and salvage harvesting. Although retention is applied at two different levels, landscape and stand, they both need to be planned together. Adequate and well-distributed landscape-level retention within a given landbase unit enhances the ecological value of stand-level retention, and allows greater flexibility in allocating the amount and location of stand-level retention.

Unless otherwise specified, "retention" refers to the protection of merchantable timber. However, the non-timber harvesting land base (NTHLB) can be used as part of the retention allocation if it is suitable and adequately distributed.

Landscape-Level Retention

For the purposes of this document, landscape-level retention is the timber to be retained that can be mapped out in a retention plan prior to detailed cutblock design and harvesting. Some forms of landscape retention will likely be retained indefinitely; other retention may be temporary until the bark beetle epidemic has passed and harvested areas have become sufficiently "greened up" to address the values at risk.

Stand-Level Retention

For the purposes of this document, stand-level retention is the "within cutblock" timber to be protected during harvesting and retained on site for an entire rotation or longer. Stand-level retention includes wildlife tree patches and legacy trees that may or may not be linked to statutory reserves and restricted areas such as riparian reserve zones (RRZs) and wildlife habitat areas (WHAs). It also includes dispersed coarse woody debris, deciduous trees, understory timber and advanced regeneration.

GUIDANCE FOR RETENTION PLANNING

General

1. Identify the resource values at risk along with the specific objectives for bark beetle management and retention planning to address those values.
2. The amount and distribution of retention will need to vary according to the conditions and values in each geographic unit. Higher levels should be retained in community watersheds and other high-risk areas if it is likely to significantly mitigate the risks to forest values. If the only opportunity for retention is pine, and it is not likely to mitigate the risks to forest values, lower levels of retention may be rationalized.

In the absence of a retention plan endorsed by the district manager, proponents should retain the timber described below under "Landscape-Level and Stand-Level" and any additional timber needed to achieve a target of 20% or more (landscape and stand level combined), well distributed across the land base. For planning and assessment of distribution, watershed sub-basins or geographic units in the approximate size range of 1,000 to 2,000 ha or smaller should be used.

3. Wherever practicable, retained areas should be representative of the natural forest types.
4. The first priority for retention should be to maintain areas containing primarily live trees, mixed species stands (both mixed conifer and conifer-deciduous/broadleaf), and low risk stands to increase the likelihood of maintaining live trees in the retention patch in the long-term. Areas of particularly high mortality, with few live trees, will have a greater emphasis on maintaining a component of dead pine.
5. Fuel management objectives should be considered along with conservation objectives in order to provide opportunities for fuel breaks.
6. Retention plans should identify the following:
 - Areas that should not be harvested.

- Areas (if any) that are available for selective removal of pine only or infested trees only.
- Stands that will be logged if they become infested.

Landscape-Level

1. Designate the following as permanent or long-term retention:
 - The non-timber harvesting landbase (NTHLB) including inoperable sites and problem (non-merchantable) forest types.
 - Other restricted portions of the landbase including old growth management areas (OGMAs), wildlife habitat areas (WHAs), riparian management areas (RMAs), cultural heritage areas, lakeshore management zones and areas identified in land-use plans such as enhanced riparian reserves.
2. Designate the following as temporary retention until the MPB epidemic has passed and harvested areas are sufficiently greened up to address resource values at risk:
 - Immature forests that are unlikely to be attacked by the MPB.
 - Non-pine forest types.
 - Stands containing lower percentages of pine. Generally less than 30 % pine, but higher in high-risk watersheds.
 - Stands within the THLB that are economically inaccessible at the present time.
3. Riparian management areas and lakeshore management zones should be considered for the primary building blocks of landscape-level retention where practicable.

Stand-Level

1. The amount of stand-level retention, including coarse woody debris, merchantable and non-merchantable timber, should be increased as the size of clearcut openings and the distance to landscape-level retention areas increases. For implementation of this guideline, contiguous harvested areas that have not reached "green-up" should be considered as part of the opening.
2. Provide vertical structure, spatial heterogeneity of habitats and dispersed coarse woody debris over the long term (i.e. for the duration of the harvest rotation period).
3. Consider the use of alternative silvicultural systems in order to retain non-pine species.
4. Unharvested legacy trees and other retention should be grouped into clumps or patches wherever practicable.
5. Additional specific strategies that should be considered for stand-level retention and impact mitigation include the following:

- Protection of understory trees and advanced regeneration (preference to species that are ecologically adapted to the site).
- Protection of deciduous timber.
- Irregular cutblock boundaries.
- Enhanced coarse woody debris retention dispersed over the cutblock (will not be subject to waste charges if identified for retention in the cutting permit).