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Mountain Pine Beetle Quick Reference

Flight Season							15th	To	15th			
Pitch Tubes (fresh)												
Blue Stain												
Tree Fading												
Preventive Spraying												
Control (Solar, start)				Plastic	Plastic							
Control (Mechanical)												
No Greenwood Cutting												
Removal to Safe Site												
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

Flight Season: July 15 through September 15; the time of year when beetles are emerging and seeking live green trees to attack. Beetle emergence is at its peak in mid-August. During this time, beetle pairs (male and female) will attempt to bore into the bark through one hole, form an egg gallery, and lay approximately 75 eggs. *Note: The flight can begin earlier in warmer years.*

Pitch Tubes: Accumulations of sap; a trees' natural defense against beetle attacks. Large white to pinkish tubes may indicate an unsuccessful attack. Beetles are often found drowned in these large accumulations. Smaller reddish to brown pitch tubes indicate a successful attack. Pitch tubes are fresh when they have a crystallized honey texture and there are no exit holes (1/8 inch symmetrical pitch-free holes) present on the tree. Pitch tubes may persist on the trunk for a few years after the attack, but are hard and crusty.

Blue Stain: A fungus beetles introduce into attacked trees, not usually detected until mid to late February on newly infested trees from the previous flight season. This fungus will eventually kill the tree by disrupting the vascular system and causing the needles to fade from a lack of nutrients and water.

Tree Fading: Turning of newly attacked trees from a darker green to yellowish green and eventually brown. Fading trees are a result of the previous flight seasons' beetle attacks and blue stain fungus. Fading is apparent approximately 8 to 10 months after a successful attack.

Preventive Spraying: A formulation of *carbaryl*; *Sevin*, or *permethrin*; *Astro*, can be used to prevent beetle attacks on individual trees. Spray is applied to living green trees in spring or early summer (before June 1) to deter attacking beetles and is effective through one flight season. *Always carefully read and follow label precautions before applying insecticide for mountain pine beetle prevention and control.*

Control (Solar): Solar Treatment refers to the cutting and exposing of infested tree parts to the sun. Areas with full sunlight are best. Begin solar treatment as soon as the attack is confirmed. The goal is to dry out the live layer under the bark. Bucking up and splitting logs dramatically speeds up the process. Bucked up sections should be rolled periodically to expose all sides to the sun.

Wood cut after April 1st must be covered with plastic and monitored. Check the plastic periodically for any holes and repair immediately. The goal is to raise the temperature to a lethal level through a greenhouse effect. Plastic or no plastic, place logs only one layer high. Removal to a safe site is more effective than solar treatments and should be done whenever possible.

Control (Mechanical): Mechanical treatment of infested trees (i.e. cutting, bucking and splitting, chipping, peeling, or burning) can be done year round. Care should be taken when cutting during June through September to minimize beetle attraction to the area by freshly cut wood (hatched area on table). Removing large wood to a safe site (see Removal to a Safe Site) and chipping or removing slash from the site will reduce this risk. *Note: Do not stack freshly cut wood against living trees, beetles are often attracted to these piles and may attack and kill the standing live trees.*

No Greenwood Cutting: The cutting of live trees is not recommended during the period of June through September. Cutting during this time may attract beetles to the area, especially if the slash and/or wood are to remain on site.

Removal to a Safe Site: If solar treatment has not begun by April 1st, sufficient time is not available to kill off the beetles in the wood before the flight begins unless the wood is covered with 6 mil clear plastic.(see above “Control Solar”) Plastic is difficult to work with and not very efficient when covering many logs.

In this instance, wood cut on or after April 1st must be hauled to a safe site. Safe sites are at least 1 mile in all directions from any MPB susceptible host tree, i.e. ponderosa, lodgepole, pinon, or limber pines.

Note: *For detailed information please refer to, “[Fact Sheet 5.528, Mountain Pine Beetle](#),” “[Preventive Spraying for Mountain Pine Beetle](#),” and “[Solar Treatment of Mountain Pine Beetle Infested Trees](#).” These publications are available from the Colorado State Forest Service.*