

# WORKING TOGETHER FOR A HEALTHY FOREST

The City of Aspen, Pitkin County Open Space and Trails, Aspen Fire Protection District, Aspen Skiing Company, Aspen Center for Environmental Studies, and the Colorado State Forest Service are working together to reduce the impacts of the Douglas-fir bark beetle within forests visible from the City of Aspen, particularly on Aspen Mountain.

Forested areas dominated by Douglas-fir trees around the City of Aspen area will be treated beginning in May 2022 with MCH pheromone pouches of repellent that will be attached to trees. The pouches repel bark beetles by mimicking communications, signaling to incoming beetles that trees within the treatment area have already been attacked. The beetles, sensing the trees are already infested, move on rather than attacking the treated trees. Studies have shown that MCH packet have a 90% efficacy rate.

Treatments are planned for several years, as drought conditions continue, until beetle populations are reduced and tree defenses have rebounded.

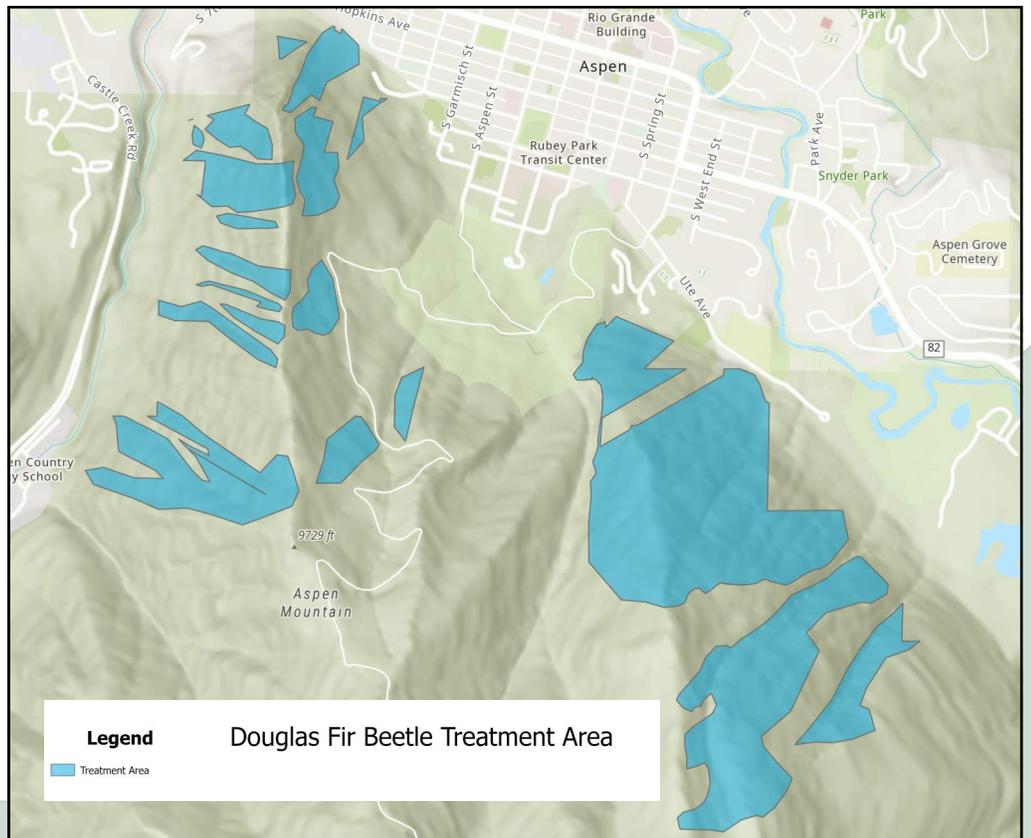


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<https://www.cityofaspen.com/1388/Douglas-fir-Beetle-Mitigation>



Side view of a repellent pouch



## How this native bark beetle kills Douglas-fir trees

Dense forests and below-average precipitation have enabled Douglas-fir bark beetles to rapidly build populations and attack otherwise healthy Douglas-fir trees. Bark beetles overcome tree defenses by launching mass attacks on drought stressed trees.



1. The beetles attack and kill trees by chewing through the bark and laying eggs in a thin layer of the tree's carbohydrates. They create a fine sawdust as they chew through the bark, ultimately laying eggs under the bark.



2. It takes one year for adult beetles to develop. They emerge from the infested tree, and seek mature, large trees, if available, to attack, repeating the cycle. By attacking *en masse*, they overcome the tree's natural defenses. Groups of 5-10 trees are typically killed when weakened by prolonged drought. Populations of beetles can rapidly develop and spread during such periods.



3. Trees infested with the Douglas-fir beetle turn from a healthy, deep green hue to a red or rust color before needles fall from the tree.

Woodpeckers reduce a small proportion of beetles. Signs of their work can be seen in piles of bark flakes at the base of infested trees.