




United States Department of the Interior

OFFICE OF THE ASSISTANT SECRETARY
POLICY, MANAGEMENT AND BUDGET
Washington, D.C. 20240

APR - 2 2003

Memorandum

To: Bureau Directors

From: Assistant Secretary – Policy, Management and Budget 

Subject: Forest Health Guidance – Reducing the Risks of Insects and Disease Mortality

Continued drought in the Interior West, coupled with high hazardous fuel loads and insect and disease outbreaks, have created forest and woodland health problems requiring prompt actions. The President's Healthy Forests Initiative and recent Congressional Hearings have drawn national attention to this forest and woodland health issue. Follow-up questions to the March 13th Senate Energy and Natural Resources National Fire Plan hearings prompted a data call on insect and disease outbreaks over 300 acres on Department of the Interior managed lands. The list was extensive and broad in scope, indicating forest and woodland health is in decline and the risk of increased severe fire activity is increasing.

Timely, active management is needed to remove diseased and infested trees. Bureau Directors should consider preventative measures to reduce the risk of creating or exacerbating insect or disease outbreaks. Several data sources are available to provide technical knowledge about pathogen life cycles and opportunities to suppress or prevent further problems. The attached ***Guidelines for Reducing the Impacts of Bark Beetles and Other Forest Insects and Diseases***, prepared by the Bureau of Land Management's Forest and Woodland Management Group, lists a number of these sources of information. The ***Guidelines*** also provide sound advice on actions which field managers can take for prevention, suppression or restoration of insect and disease epidemics.

Insect and disease surveys and biological assessments can be conducted by the Forest Service at the request of Federal and state agencies, local governments, and Tribes. Funding is also available for treatment through the Forest Pest Management program in coordination with the Forest Service. For further information on this program, please contact Rick Tholen, DOI Forest Pest Management Committee leader, at (208) 373-4049, or for information on biomass utilization or forest health contact John Stewart, Office of Wildland Fire Coordination, at (202) 606-0504.

Attachment

Guidelines for Reducing the Impacts of Bark Beetles and Other Forest Insects and Diseases

Department of the Interior
Guidelines for Reducing the Impacts of
Bark Beetles and Other Forest Insects and Diseases
March 31, 2003

The following general principles and practices should be incorporated into all forest and woodland management activities, including hazardous fuels reduction, to ensure that appropriate steps are taken to reduce the impacts of bark beetles, and other forest insects and diseases. Most of these guidelines are referenced from the USDA Forest service Forest health protections web site, <http://www.fs.fed.us/foresthealth/> . It is also suggested that managers consult with local insect and disease experts and universities when planning vegetative treatments.

1) Limit attracting bark beetles to areas where forest and woodland vegetation is being manipulated.

- Minimal damage to residual trees is necessary to prevent bark beetles from being attracted to pheromones produced by trees when they are injured or damaged. During management activities, plan activities to prevent damage or injury to trees that will remain after the treatment is completed. If possible, remove damaged trees before they attract bark beetles, particularly around high resource value areas such as campgrounds, structures and critical habitats.
- Some types of bark beetles infest green slash in the spring. Avoid creating treatment residue during the late winter and early spring months (January through June) where possible. Consult your local entomologist if unsure of the bark beetle's life cycle.
- Treat residue materials left following vegetation manipulation, either by removing it from the forest, burning on site or in offsite piles, or chipping on site. Piles may also be covered with black plastic where sunlight causes temperatures to exceed 180 degrees Fahrenheit, which kills bark beetle larvae. Residue treatment should occur prior to the next beetle flight (see specific bark beetle life histories at www.na.fs.fed.us/spfo/pubs/fth_pub_pages/fidl.htm).
- Wind-thrown, snow or wind damage trees should be inventoried and treated before the next spring beetle flight to avoid the spread of insects into adjacent areas.

2) Create stand conditions that improve tree vigor so they have a better opportunity to repel bark beetles when they do attack.

- Thin stands to a density or basal area that provides an optimal amount of moisture, sunlight, and nutrients to the trees, while still meeting other management objectives. Recommended stand densities for specific forest types (tree species, size class, habitat type) can be obtained from most foresters, forest entomologists, or in forest health publications (See literature at www.fs.fed.us/foresthealth/publications.html)

Guidelines for Reducing the Impacts of Bark Beetles and Other Forest Insects and Diseases

- When thinning forest stands, remove trees that show signs of having been successfully attacked by bark beetles (See literature to identify bark beetle attacks).
- When thinning stands, leave trees that appear to be healthy and vigorous by observing their crown, foliage, and bole characteristics.
- Birds and insects are natural predators to bark beetles. Leave an adequate number of large or medium sized standing dead trees (snags) and down logs that provide habitat to these predators. A limited number of large dead trees or down logs typically do not contribute greatly to the wildfire risk. Avoid compacting soils when treating forest stands. Compacted soils do not release moisture and nutrients as readily as non-compacted soils; compaction negatively affects tree vigor and makes trees more prone to successful bark beetle attack.
- Avoid compacting soils when treating forest stands. Compacted soils do not release moisture and nutrients as readily as non-compacted soils; compaction negatively affects tree vigor and makes trees more prone to successful bark beetle attack.
- In some tree species, such as lodgepole pine, bark beetles are attracted to trees of a certain diameter (cambium thickness), and are an inevitable part of the renewal cycle for these forests. Management strategies should focus on creating a mosaic of age classes that will reduce the extent of damage by any particular bark beetle attack and also reduce the potential for large catastrophic fires, rather than strictly reducing tree spacing.

3) Be aware of forest diseases and parasites in your area and leave trees that reduce the likelihood of disease or parasite spread. As with forest insects, forest diseases and parasites require strategic long-term management prescriptions to successfully manage and treat problem areas.

- Mistletoe infested forest stands have been shown to provide a much greater risk of crown fire than those that are mistletoe free. It also alters tree growth and vigor and in some markets may affect the value. When thinning, select against trees exhibiting mistletoe infections.
- Blister rust is an exotic disease that infects most 5-needle pines, such as western white pine, whitebark pine and limber pine. As with mistletoe, select against trees exhibiting blister rust cankers during thinning.
- Annosus root disease affects most western conifer species, and predisposes them to bark beetle attack, or can kill the tree outright. It is spread through spores that typically enter a stand by landing on tree stumps and moving through interconnected root systems. When thinning trees in areas where annosus root rot is present, it is very important that freshly cut stumps 8 inches in diameter and larger are treated with a borate solution to prevent infection. (Refer to www.fs.fed.us/r6/nr/fid/fidls/annosus.pdf for additional information)

4) Monitor bark beetle and other forest insects and disease activities to determine where risks are greatest and tree mortality will likely jeopardize land management objectives.

The Department of the Interior (DOI) has a Pest Control Agreement with the Department of Agriculture to provide funding and services to manage forest pests.

Guidelines for Reducing the Impacts of Bark Beetles and Other Forest Insects and Diseases

Under this Agreement the Forest Service is responsible, among other things, for:

- Providing and financing overall leadership and coordination for insect and disease control on all forest lands when the activities are financed with Federal funds;
- Providing and financing technical assistance for control projects on DOI managed lands;
- Performing and financing detection surveys and entomological or pathological evaluations of insect and disease outbreaks on DOI managed lands;
- Cooperating with DOI agencies in suppressing insect and disease outbreaks on DOI managed lands, and;
- Training key DOI employees in techniques for prevention, detection, and suppression of destructive forest insects and diseases.

DOI bureaus are responsible, among other things, for:

- Facilitating detection surveys and evaluations on DOI managed lands;
- Deciding for or against control action on DOI managed lands;
- Performing and financing supplemental field surveillance;
- Conducting and financing suppression projects on DOI managed lands, and;
- Cooperating with other agencies in insect and disease control programs and projects on other ownerships that involve DOI managed lands.

Mr. Rick Tholen coordinates BLM's Forest Health Program and chairs the DOI committee responsible for coordinating activities under the DOI and Department of Agriculture pest control agreement. Questions or concerns relative to forest insect or disease outbreaks, including bark beetles, and the interdepartmental agreement should be addressed to Mr. Tholen via email at rtholen@blm.gov or by telephone at (208) 373-4049.