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ALASKA WILDLAND FIREFIGHTER SAFETY ALERT

Fuel Conditions in Spruce Beetle-Killed Forests

The recent spruce beetle epidemic on the Kenai Peninsula and in South- central Alaska has caused significant changes in the region's fire environment. Firefighters and fire researchers have not gained sufficient experience with wildland fires occurring in the resulting dead spruce/cured grass fuel complexes to accurately appraise potential fire behavior in these fuel types. Future incidents should be approached very cautiously by all firefighters regardless of their experience level.

The November 1993 **"Look Up, Look Down, Look Around"** Fireline Safety Reference (PMS 427/NFES 2243) lists "bug kill" as a fuel component indicator of potentially erratic fire behavior in the fire environment. When sizing up and suppressing a wildland fire in spruce beetle- killed forests the **LCES Checklist** must address the following factors:

- Spruce beetle-killed forests appear to be considerably more flammable than live spruce forests, and therefore more readily exhibit the characteristics associated with extreme, difficult-to-predict, fire behavior.
- The increase in grass fuels following a spruce beetle outbreak will predispose these dead and dying forests to rapidly spreading fires in the spring prior to "green-up". Spread rates and fire intensities could easily be many times greater in the beetle-killed areas when compared to healthy white spruce stands.
- Candling, torching, and crown fires are very common, even under seemingly mild burning conditions.
- Prolific spotting should be expected as well as the potential for "mass fire" or area ignition.
- Dead trees that have blown or fallen down will impede line construction and hinder escape to safety zones. The combination of dead grass and downed timber will severely limit fire shelter deployment opportunities.
- Expect falling snags along the fire perimeter soon after the fire's passage.

For additional information contact the Alaska Division of Forestry at 907-356-5850.

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