United States Department of Agriculture | Forest Service | Black Hills National Forest Supervisor's Office | 25041 North Hwy 16
Custer SD 57730-7239
Tel. 605/673-9200
TTY 605/673-9227
FAX 605/673-9350
www.fs.fed.us/r2/blackhills

File Code: 1950 **Date:** November 9, 2004
Route To:

Subject: Determination of an Insect Epidemic in the Bugtown Gulch Area

To: Michael D. Lloyd

The Bugtown Gulch area of the Hell Canyon Ranger District is currently experiencing an active and expanding mountain pine beetle infestation. Forest-wide, mountain pine beetle activity has increased dramatically over the last 5 years. Information presented in the Evaluation of MPB Activity on the Black Hills National Forest, December 2003, prepared by Kurt Allen, Entomologist at the Rapid City Service Center, specifically addressed the Bear Mountain area which includes Bugtown Gulch. Data presented in this report concludes that the Bear Mountain/Bugtown Gulch area is experiencing widespread beetle mortality and brood sampling suggests that mortality will continue to increase.

More recent data in this area was summarized in a memo to me dated November 4, 2004. Since 1999 there has been a 14 fold increase in beetle mortality in this area, from 3.4 trees per acre in 1999 to 48.5 trees per acre in 2004. In addition, the outbreak has spread significantly to the south. The beetle population is estimated to be increasing by a factor of 2-3 times.

Much of the Bugtown Gulch area contains stands which are in a condition that equate to a moderate to high risk for mountain pine beetle attack. Ponderosa pine stands in which 75% of the stand is in the 7-13 inch diameter range and the stand density is over 120 feet of basal area per acre are at the highest risk. Furthermore, stand conditions on the south and east periphery of this outbreak are also in moderate to high risk conditions. The short term effect of taking no action would be that this outbreak continues to grow and spread. In the long term, large contiguous areas infested and killed by mountain pine beetle would be expected.

Strategies for lowering the impacts of mountain pine beetle include silvicultural treatments to modify stand conditions such as thinning to reduce density. Other silvicultural treatment in the form of Sanitation harvest involves the removal of green trees that have live beetle brood in them. These trees are removed from the site to at least 1 mile from potential host trees, prior to beetle emergence. (USDA Forest Service, Forest Health Evaluation R2-04-02, December 2003.)

Given the information referenced above, I conclude that there currently is a mountain pine beetle epidemic in the Bear Mountain area, which includes the Bugtown Gulch project area. I believe the developing insect conditions could pose a significant threat to forest resources in the area, including soil and watershed health, wildlife habitat and forest products. Further, I am concerned that extensive insect-caused tree mortality in this area could increase the load of dead heavy fuels and pose a hazard of catastrophic fire to the community of Custer and surrounding

area. Therefore, I wholly support the Hell Canyon District's proposal to address this epidemic in the Bugtown Gulch area by utilizing authority provided in the Healthy Forest Restoration Act.

BRAD EXTON
Acting Forest Supervisor

cc: Kelly Honors, Patricia Hudson