Appendix H

Post-Fire Grazing Interim Guidelines
MALHEUR NATIONAL FOREST
December 2, 2003

The Authorized Officer, Forest Supervisor and or District Ranger (this authority can not be delegated), has the responsibility of determining when to resume grazing on areas burned during wildfire or prescribed fire. These guidelines establish the minimum timeframes that an area will be rested from grazing following fire. Other resource concerns may require resting the burned area from grazing for longer periods to allow the area to recover sufficiently.

When making that decision to resume grazing after fire, some factors that should be considered are (list not all inclusive):

- Amount of acres burned (suitable for grazing and non-suitable).
- Amount and spatial arrangement of moderate and high intensity burned areas in relation to the whole burn and surrounding non-burned area.
- History of past grazing use.
- Vegetation community type and its condition prior to the burn. The vegetation community and its condition will influence the amount of time necessary for it to recover from the affects of fire.
- How much effective ground cover is available and are needed to resume grazing.
- Aquatic resource values.
- Condition of range improvements, have they been damaged and, if so, have they been reconstructed.

Resumption of grazing following prescribed fire or wildfire is dependent upon the length of time it takes the vegetation to recover sufficiently to withstand grazing (Sanders 2000). Some vegetation types, such as elk sedge (Carex geyeri)/pine grass (Calmagrostis rubescens); require little or no recovery time after a light burn. Because elk sedge sprouts from underground rhizomes, it has a high degree of resistance to fire, often increasing after a fire; however, severe fire may cause a decrease in elk sedge cover. Burning can improve elk sedge production. Pine grass has rhizomes buried in the top inches of mineral soil, allowing plant survival when the duff is not completely consumed. Low to moderate severity fires are best for pine grass enhancement in Douglas-fir/pine grass associations of the Blue Mountains (information obtained from the Fire Effects Information System).

Other vegetation types, such as bunch grasses, require long recovery periods even after a light burn (prescribed or wildfire) (Brown and Smith 2000, p. 151-152). Carbohydrates manufactured by the plants provide the energy for metabolism and growth (Trlica 1977: in Brown and Smith 2000 p. 28). The underground plant parts that remain after fire usually provide carbohydrates until sufficient growth occurs to allow photosynthesis. Grazing and browsing can delay recovery if the demand on the plant reserves is excessive. Heavy post fire grazing is most likely to cause harm during the first year post fire (Trlica 1977: in Brown and Smith 2000 p. 28). After a light burn by either prescribed fire or wildfire, plant recovery is usually rapid with ground cover returning to pre-burn status in one or two growing seasons (Johnson 1998), but seed production

usually doesn't resume until the second growing season. Because seed production might not occur the first season after a prescribed fire or light intensity wildfire, grazing generally would not resume until after the first year seed was produced, probably the second growing season. Recovery after moderate to severe burning can take three or more years (Johnson, pers. comm. February 2003; Johnson 1998). Therefore, grazing generally would not resume until ground cover had recovered and was near or at its pre-fire condition.

In areas where elk sedge and pine grass are the dominant ground cover and 10% or less of the burned area is occupied by native bunchgrasses, grazing may occur in the same year as a light-intensity (intensity as described in Johnson 1998 or as mapped by the Burned Area Emergency Recovery [BAER] Team) fire if:

- Burning occurs before vegetative green-up, then grazing may occur in the area of the burn without any timing restriction; or
- The burn occurs after vegetative green-up, grazing may occur after range has been determined to be ready and the percent ground cover of elk sedge and pine grass is the same as prior to the burn, or grazing may occur in the fall (Sept./Oct.) without a range-readiness determination.

For a light (or low) intensity fire in areas where bunchgrass occupies more than 10% of the burned area, grazing may occur the second growing season after the burn, but only after seed has set. If the bunchgrass areas can be adequately protected from grazing, such as by electric fencing, then grazing may resume in the remainder of the burned area during the first growing season post burn.

For moderate to high intensity (intensity as described in Johnson 1998 or as mapped by the BAER Team) fire in all areas suitable for grazing, as defined by the Forest Plan, grazing may resume after the vegetation has recovered to the percent ground cover that existed prior to the fire as described for the appropriate plant association type in Plant Association of the Blue and Ochoco Mountains (Johnson and Clausnitzer 1992). A team consisting of at least two resource specialists, such as a range conservationist, botanist, ecologist, silviculturist, or hydrologist, will conduct the monitoring to determine if the percent ground cover has been reestablished. The method and results will be documented and submitted to the authorized official who will decide when to resume grazing. If monitoring is not done, grazing may resume after three full grazing seasons after the fire occurred, because research indicates that vegetation usually recovers within this timeframe (C. G. Johnson, pers. Comm., February 2003). However, grazing would not resume prior to two growing seasons after the fire, even if monitoring verified that the percent ground cover was the same as the pre-fire condition, to allow for plants to set seed.

Brown, J. K. and J. K. Smith, Eds. 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech Rep. RMRS-GTR-42-vol. 2. Ogden, UT: S. S. Dept. of Agric., Forest Service, Rocky Mountain Research Station. 257 p.

Johnson, C. G., Jr. 1998. Vegetation response after wildfires in national forests of Northeastern Oregon. R6-NR-ECOL-TP-06-98. US. Dept. Agric., Forest Service, Pac. Northwest Region.

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Sanders, K. D. 2000. How long should rangelands be rested fro livestock grazing following fire: a viewpoint. Unpubl. Rep. Rangeland Ecology and Management, University of Idaho.