Lost Fire Complex Rehabilitation Plan

The following consists of recommendations for soil and water rehabilitation of the Lost Fire Complex. Rehab team members consisted of Tammy Randall Parker, Wildlife Biologist; Jeff Hink, Hydrologist; and George Robertson, Soil Scientist.

The Lost Fire Complex consisted of two major fires, the Pocket Fire (approximately 90+ acres) and the Lost Fire (roughly 1900 acres). Both fires burned within the Oak Creek Watershed. Of the 90+ acres that burned within the Pocket Fire, approximately 30 acres burned within the upper 1/3 western slope of Oak Creek Canyon above Slide Rock State Park. TES map unit affected was 471. Typically, this map unit occurs on slopes ranging from 40 to 120%. Rock outcrop consists up to 50% of the map unit. Surface soil textures are extremely bouldery loamy fine sands and very stony fine sandy loams. Erosion hazard is severe. Vegetation type is pointleaf manzanita, turbinella oak and mountain mahogany. Landform is an escarpment.

The most intense fire occurred in three shutes near the top of the canyon. Major drainages within this burn area were not affected. Based on past experience with fire within this map unit (Encinoso Fire which burned recently) brush and grass will become established without any rehabilitation efforts.

However, within the Pocket Fire, there is approximately 3/4 of a mile of constructed handline roughly three feet wide that will require erosion control measures. The southern portion of this line occurs on the contour resulting minimal risk of on-site soil loss and not visible from highway 89A. The remaining line occurs on steep slopes perpendicular to the contour. It is recommended that waterbar locations be identified by Hydrologist Jeff Hink and be constructed to effectively to control soil erosion. After the fire is controlled, brush maybe placed on fire lines to assist in erosion control and to limit access and visibility. It is expected that live brush will again resprout within the firelines and become established within a short period of time.

The Lost Fire burned primarily on Lost and Secret Mountain within the Secret Mountain Wilderness area. TES map units primarily affected by this burn were 471, 550 and 567. Map unit 550 occurs on scarp slopes ranging from 15 to 40 percent. Vegetation type of this map unit is Ponderosa Pine/Gambel Oak. Surface soil textures are cobbly fine sandy loams. Erosion hazard is moderate. Map unit 567 occurs on elevated plains with slopes ranging from 0 to 15 percent. Surface soil textures are fine sandy loams and stony fine sandy loams. Vegetation type is Ponderosa Pine/Alligator Juniper/Gamble Oak. Erosion hazard is slight.

Approximately 350 acres, mostly TES map units 550 and 567, were severely burned in a mosiac pattern on top of Secret Mountain. The remaining acreage burned within this fire area was of light intensity. In addition, the fire burned within brush and rock outcrop areas on very steep slopes within the extreme uppermost portions of Secret Canyon, Long Canyon, Boynton Canyon and Hartwell Canyon. These canyons eventually drain into the lower reaches of Oak Creek,

roughly twelve to fifteen miles away. Affects on water quality are expected to be negligible. Roughly two miles of hand line were constructed on the northwest and north edge of the fire. It should be noted that on both the Pocket and Lost fires, all fire lines were constructed by hand. There was no fire line constructed by heavy equipment (i.e. bulldozers etc.).

As within the Pocket Fire, it is felt that many of the brushy areas that was burned on very steep slopes will quickly restablish to brush with no rehabilitation efforts. No rehabilitation measures are recommended for these areas. Based on field observations of previous wildfires that burned within TES map units 550 and 567 on Secret Mountain, early succession plants and native perennial grasses will rapidly become established without artificial seeding. In addition, it was also observed in areas of past burns that standing dead burned trees eventually fell to the soil surface which further reduced the risk of accelerated on-site soil loss. No accelerated soil erosion was observed. Based on these observations of past wildfires, it is felt that no artificial seeding or other rehabilitation measures are needed nor recommended to protect soil and water resources of the Lost Fire.

However, it is recommended that all hand lines occurring on slopes greater than 15 percent be waterbarred to minimize soil erosion. It is also felt that sufficient ponderosa pine overstory exists to provide sufficient litter cover on fire lines within one year. Concerns have also been expressed that existing fire lines will become new trails adversely affecting watershed, archaeology, and wildlife resources as well as wilderness values. It is recommended that berms from hand line construction be spread back onto fire lines and cup trenches from under slung lines be removed. In order to discourage use of fire lines as a trail system, the intersection of fire lines and existing trails should be completely disguised by pulling berm, spreading brush and rock etc.