

## APPLEGATE DRY FOREST RESTORATION MARKING GUIDE

### OBJECTIVES:

Increase resistance/resilience of forest stands and landscape to wildfire, drought, insects, etc. (e.g., by reducing stand densities, ladder fuels, and increasing tree species diversity);

Restore more characteristic structure and composition (e.g., reducing stand densities and enhancing tree diversity, including hardwoods, and desirable understory species);

Accelerate development of structural complexity (e.g., development of larger tree structures and decadence);

Contribute to development of spatial heterogeneity in stand (e.g, fine-scale structural mosaic); and

Reduce risk of wildfire reaching Late Successional Emphasis Areas (LSEAs).

### ELEMENTS OF PRESCRIPTION FOR MATURE DOUGLAS-FIR DOMINATED STAND

General stand prescription (variable density thinning) has goals to:

Reduce overall stand density (basal area) to target level based on plant association;

Increase mean diameter of stand (compared to that before treatment);

Increase fire and drought-tolerant tree species component in stand (pines and incense-cedar); and

Sustain a hardwood component of stand, particularly larger cavity-bearing trees.

*Do NOT try to create uniformity/evenness in stand conditions in marking; DO try to encourage creation of spatial heterogeneity. Structural mosaics are characteristic of Dry Forest stands.*

*Retain clusters of trees where appropriate; do NOT feel imperative to thin clustered tree stems. Such clusters of 2, 3, 4, or more stems are characteristic structural features of all natural forest stands.*

**Retain and nurture significant existing features, such as:**

**Old trees (clear competing vegetation & fuels for 2X drip line);**

**Large hardwoods, especially those with cavities (release from overtopping);**

**Ponderosa and sugar pines and incense-cedars; and**

**Large snags, especially those with cavities, and large down wood.**

**SKIPS: Leave portion (15% +/-) of stand untreated to:**

**(1) Provide dense/shaded forest patches as habitat, hiding cover, and visual barriers; and**

**(2) Protect ecologically significant patches, such as seeps, rock outcrops, and hardwood groves.**

**GAPS: Create some larger (1/2 to 2 acre) open areas to the extent of about 15% +/- of stand (e.g., 1 acre opening every 6 or 7 acres) for establishing pine regeneration and other understory components. Complete removal of overstory is not encouraged; i.e., generally leave some scattered trees behind. Low density planting of pines would be proposed in such gaps.**

**Fuel treatments: *Treatment of activity fuels following completion of the logging is an essential element in such projects.***

## **ELEMENTS OF PRESCRIPTION FOR RESTORING PONDEROSA PINE-OAK SITES**

**Objective: Move aggressively to release ponderosa and sugar pines and larger, older hardwoods present on the site from competition and fuel accumulations.**

**RETAIN: All old and healthy pines and remove competing vegetation and fuels for 2X the drip line of the crowns. Older and cavity-active hardwoods. All older trees of other conifers, including Douglas-fir. Large and cavity-active snags. Large down logs.**

**REMOVE: Majority of Douglas fir, except for old trees and up to 6 trees/acre of large, healthy dominants.**

**SKIPS: Provide SKIPS (15% +/-) to provide visual barriers, hiding cover, protect seeps and intermittent channels, etc.**

**Low basal areas (e.g., 60 sq ft or less) are acceptable where the goal is to restore an open stand with pine and oak dominance.**

**Fuel treatments are expected to include periodic controlled burns.**