SELECTION CRITERIA-DESIGNATION BY PRESCRIPTION
EXHIBIT E

The Selection Criteria shown below shall be used by the Purchaser in determining which trees are to be retained and which trees are to be cut and removed. Consider safety in determining whether a fire-killed or fire-injured snag should remain standing. The operator will have flexibility and responsibility to remove any snag or tree deemed unsafe for workers on site.

The Selection of retention shall comply with O'Toole Fire Salvage Special Provisions Sec 41. The Purchaser shall leave all boundary trees marked with any of the following: blazes, RED paint, and/or poster tags. Within harvest units, the Purchaser shall also leave live hardwoods, all pine species, ORANGE banded trees, and live green conifers with a low probability of mortality at the specified stocking standard defined in this Exhibit.

Before cutting and removing any trees necessary to facilitate logging in all Harvest Units shown on Exhibit A, the Purchaser shall identify the location of the skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan.

Harvest Objectives: Recover mortality and anticipated mortality from both fire and dwarf mistletoe related injury. Prepare a disease-free site for reforestation. Goals to accomplish include:

1. Salvage harvesting fire-injured trees, leaving only those with a 70% or greater probability of survival.
2. Salvage all dwarf mistletoe infected trees.
3. Commercial thin green patches of surviving timber to increase their health and vigor.

Prescription:

1. Remove merchantable conifers exhibiting signs of mistletoe infection
2. Remove fire-scorched conifers using the crown scorch guidelines in the table below
3. Remove live conifers in patches of overstocked green timber (defined as individual trees with a greater than 70% probability of surviving that together with other healthy green trees exceed 60-80 BA/AC at any given location)
    - Leave healthy green timber at a 60-80 BA/AC stocking
    - Remove the least healthy green trees that exceed 60-80 BA/AC stocking.
4. Trees considered **not suitable** for harvest:
    - Conifers with a greater than 70% probability of surviving
    - Pine species
    - Live hardwood trees > 7 inches DBH
    - 2 snags per acre to meet the requirement for cavity nesting birds at 40% of potential population levels. These trees are already banded with ORANGE paint.

COMPLIANCE INSPECTION:

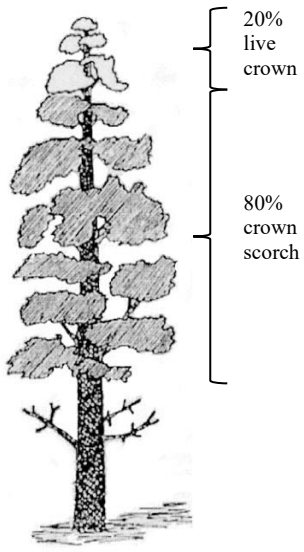
Non-compliance with the Prescription and/or Selection Criteria shall constitute a contract violation which may result in a suspension of operations as provided in Section 10 of the contract. Inspection will consist of a field review of the selection of leave trees in compliance with basal area retention of 60-80 BA/AC in patches of green timber and the crown scorch guidelines below.

Crown scorched trees predisposed to die:

Species	% Crown Scorch
Douglas-fir	> 25
Western Redcedar	≥ 30
Grand Fir	> 60
Western Larch	> 90

Percent crown scorch is a measure of the proportion of foliage that has been killed by the fire relative to the entire amount of foliage that was present before the burn (scorched foliage should be obvious to the naked eye as yellowish brown or red needles). Lower branches dead before the fire should not be included when determining crown scorch.

Percent Crown Scorch



To evaluate visual estimation of percent crown scorch:

- Position yourself to view the entire tree crown, preferably at right angles to the direction of fire spread.
- Reconstruct the pre-fire crown appearance by looking at the fine branch structure and needles.
- Estimate the percent of crown killed by the fire based on your estimation of the pre-fire crown area. These include areas with yellowish brown, brown, or red needles, as well as blackened fine branches.
- Assess the tree with consideration to all sides of the crown. One side may show higher crown scorch than the opposite side.
- Douglas-fir can be evaluated for presence of boring dust. Borderline trees with boring dust greater than 90% of the bole are mass-attacked by beetles, will die regardless of fire injury, and can be removed.
- Lower crowns that contain blackened fine branches contribute to crown scorch. Lower branches lacking fine twigs were likely dead before the fire and should **not** be included in crown scorch (as pictured). Unsymmetrical crown bases may be visually moved to even out the crown shape.

Optional aids in identifying burnt timber predisposed to die:

Bark Char Indicators of Trees Predisposed to Die. Evaluate bark char on four sides of tree near groundline and sum the quadrants that have dead cambium according to the table.

Species	Light	Moderate	Deep
Douglas-fir	Alive	Alive	Dead
Western Redcedar	Dead	Dead	Dead
Grand Fir	Dead if < 12" DBH; Alive if ≥ 12" DBH	Dead	Dead
Western Larch	Alive	Alive	Dead if < 12" DBH; Alive if ≥ 12" DBH

Bark char severity and descriptions.

Bark char severity	Bark Appearance
Light	Evidence of light scorching; can still identify species based on bark characteristics; bark is not completely blackened; edges of bark plates charred
Moderate	Bark is uniformly black except possibly some inner fissures; species bark characteristics still discernable
Deep	Bark has been burned into, but not necessarily to the wood; outer bark species characteristics are lost; bark looks smoothed because all ridges are gone

DEFINITIONS

Conifer: An evergreen tree that produces cones, needle-shaped leaves, and wood known commercially as "softwood". For purposes of this contract, pine species are excluded from conifers.

DBH: Diameter of the tree at breast height, measured at four point five feet (4.5') above the ground level from the uphill side of the tree.

Fire-Killed Tree: A standing or fallen conifer tree with 100% of the crown scorched showing brown needles or the crown is black with no needles.

Fire-Injured Tree: A conifer tree exhibiting crown scorch while still retaining green needles. Some fire-injured trees may die within the next 3 years.

Green Timber: Individual conifer trees with a greater than 70% probability of surviving that together with other healthy green trees do not exceed 60-80 BA/AC.

Overstocked Green Timber: Healthy green trees with a greater than 70% probability of surviving that at any given measurement location in the treatment unit exceed 60-80 BA/AC.

Percent crown scorch: A measure of the proportion of foliage that has been killed by the fire relative to the entire amount of foliage that was present before the burn (scorched foliage should be obvious to the naked eye as yellowish brown or red needles).