

SELECTION CRITERIA-DESIGNATION BY PRESCRIPTION (DXP)

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.

The selection of retention and cut trees shall comply with Racetrack Special Provisions Section 41. The Purchaser shall leave all trees marking a property line (trees marked with red paint, blazed trees, and trees tagged with aluminum signs), posted unit boundary trees, trees marked with orange paint, all hardwood trees, non-hazardous snags, and the three largest pre-existing downed logs per acre that are greater than (>) twenty-one (21) inches in diameter at the large end within harvest units. Trees that are removed to facilitate logging do not count toward the leave tree requirements described below.

I. Test Mark

Prior to any harvesting operations the Authorized Officer will designate test mark areas. Any mechanical harvester operator and/or fallers designated to conduct falling operations will be required to mark (with paint or flagging) a one (1) acre test-mark area to demonstrate their ability to meet the Selection Criteria stated below. The test-mark area marking must be approved by the Authorized Officer prior to any falling in the contract area. Additional marking may be required based on the results of the sample mark. Upon acceptance of the sample mark by the Authorized Officer, the Purchaser may proceed with operations.

II. Selection Criteria

The selection criteria shown below shall be used by the Purchaser in determining which conifer trees greater than or equal to eight (≥ 8) inches DBH are designated for retention, and which are designated for harvest.

DBH is defined as the outside tree diameter measured at four and one-half (4.5) feet above ground level on the uphill side of the tree.

A. Retain the most dominant crown class trees from forty (40) to eighty (80) square feet of conifer basal area per acre (**40-80 ft² BA/AC**) to meet a sixty (60) square feet of conifer basal area per acre average (**60 ft² BA/AC**). This also equates to approximately forty (40) trees per acre or thirty-three (33) foot spacing between conifers ≥ 8 inches DBH.

B. Reserve Trees: These trees may be included in basal area determinations while selecting retention trees when their diameters at breast height (DBH) are greater than or equal to eight (≥ 8) inches DBH.

1. All conifers that are greater than or equal to twenty-two (≥ 22) inches in DBH shall be reserved regardless of spacing.
2. All western redcedar shall be reserved.
3. All trees marked with red or orange paint shall be reserved.

C. The trees species listed below, between eight (8) and twenty-two (22) inches DBH (8.0-21.9" DBH), will be thinned according to the desired basal area in section A above and using the following criteria:

1. Where available, retain trees that match closest to the following physical characteristics of vigorous trees:
 - a. Dominant and co-dominant conifer trees of the existing stand.
 - b. Trees that have a live crown ratio of forty (40) percent or greater. The live crown ratio is determined by dividing the height of the tree containing a live crown by the total height of the tree.
 - c. Trees that exhibit mostly dark green needles with very little yellowing of the needles.
 - d. Trees that are free from severe mistletoe, disease, wounds, insect, exuding sap, or poor form (dead or forked tops, sweep, or crook, etc.).
2. Species Preference: Where available, retain the following preferred tree species in the designated order of preference: WRC > WL > PP > DF > GF
 - 1) Western redcedar (WRC)
 - 2) Western larch (WL)
 - 3) Ponderosa pine (PP)
 - 4) Grand fir (GF)
 - 5) Douglas-fir (DF)
3. Favor western larch trees fourteen (14) inches DBH and greater with good form and healthy crowns.
4. Retain the following hardwood tree species and do not include in spacing requirements:
 - a. Quaking aspen
 - b. Paper birch and water birch
5. Except those snags that must be felled to permit safe working operations, an emphasis will be placed on retaining approximately four (4) standing dead trees (snags) per acre. Preference will be given to the largest snags present in a variety of decay classes.
6. Existing downed logs greater than (>) twenty-one (21) inches in diameter at the large end are reserved from harvesting or removal.

III. Compliance Inspection Criteria

1. Visual observation compliance will consist of subjective monitoring by the Authorized Officer for compliance with the selection criteria. Compliance will be considered satisfactory if ninety (90) percent of the observed cut or retained trees are determined by the Authorized Officer to meet the selection criteria.
2. The Authorized Officer shall inspect felling operations by random plot selections through felled areas. At each plot, the following will be inspected to determine if the approval level is being met:
 - a. Diameter and species of stumps measured at one (1) foot or less above ground on the uphill side.
 - b. DBH and species of residual trees.
 - c. Average square feet of basal area per acre of residual trees eight (8) inches DBH and larger.
 - d. Number of trees significantly damaged by the Purchaser's operation at each plot.

- e. The selection of residual trees and the work quality.
3. The purchaser's operations will be considered approved if:
 - a. Ninety (90) percent of the residual trees meet the selection criteria in Section II.
 - b. More than ninety-five (95) percent of the residual trees are not significantly damaged by operations under the contract. Significant damage is defined as any tree having greater than thirty (30) percent of the bark removed from the circumference of the tree, any tree with top diameter broken at three (3) inches in diameter or greater, or any tree being visually root-sprung.

Compliance inspection will consist of visual observation of on-going operations and collecting plot data after the trees have been felled as specified below:

If the Purchaser's operations fall below any one of these approval levels, a written warning will be immediately issued to the Purchaser.

IV. Definitions

Basal Area Per Acre - The total cross-sectional area of all stems in a stand measured at breast height expressed as square feet per acre (20 BAF is the standard used to determine the retention density in this sale).

Co-dominant - Trees with crowns forming the general level of the main canopy that receive full light from above but comparatively little from the sides.

Crown Class - The position of an individual tree in the forest canopy relative to its competing neighbors, determined by the amount of light the tree's crown can receive.

DBH - Diameter of a tree at breast height, measured at a point four and a half (4.5) feet above ground level on the uphill side of the tree.

Dominant - Trees with crowns extending above the general level of the main canopy that receive full light from above and partial light from the sides.

Form (tree form) - The general shape of the tree. For this contract, good form will be defined as trees with straight boles, full crowns, small branches that are perpendicular to the bole that have pyramidal crowns (not flat-topped).

Snag - A standing dead tree at least fourteen (14) inches in diameter and at least twenty (20) feet tall, from which the leaves and most of the branches have fallen