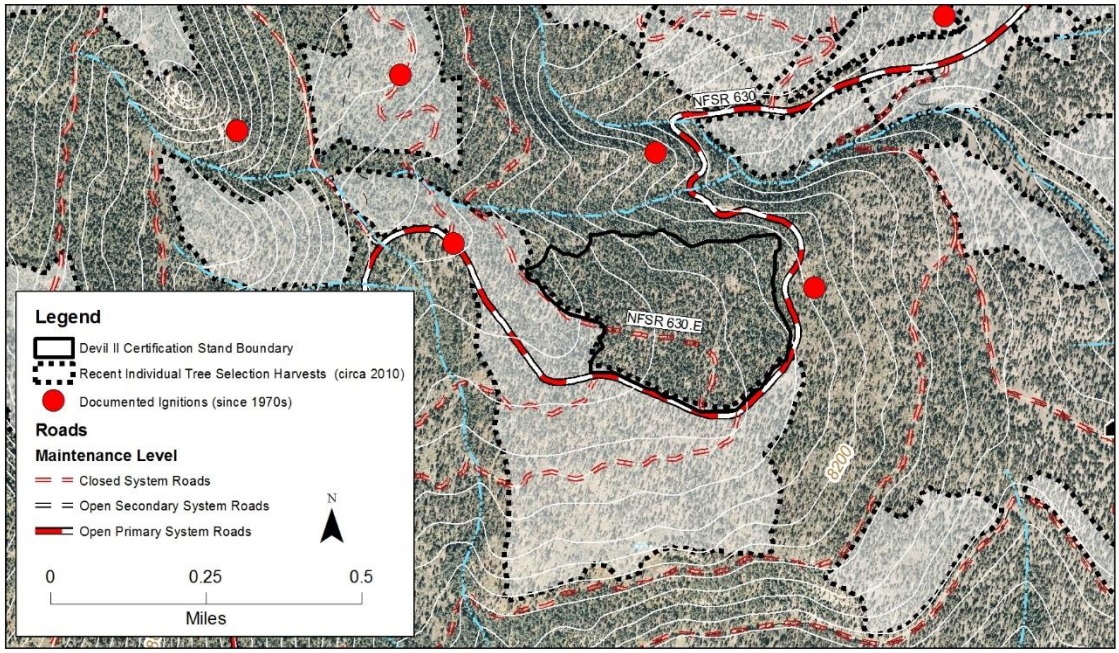
Devil II Timber Sale Timber Designation Guidelines

TREX Tree Marking Workshop

5/5/2018

Devil II Timber Sale Certification Stand Map



Workshop Goals:

- Develop an understanding of warm-dry mixed-conifer forest ecology and silviculture in the Southern Rocky Mountains.
- Understand the process of taking a timber sale/fuels contract from concept to marking and eventual contract and harvest.
- Implement (flag) marking guidelines associated with an individual tree selection harvest.
- Understand how to assess the quality and success of a tree marking effort in accomplishing silvicultural objectives.

Silviculture: the science and practice of managing* forest stands and landscapes for multiple objectives.
*Managing: forest establishment, growth, composition, aesthetics, flammability, product outputs, habitat function, health, quality, etc…

Marking Objectives (priorities):

1. Retain approximately 55 ft^3/acre conifer basal area.
2. Retain the highest quality, best condition residual trees possible to reduce the prevalence of forest health concerns within the stand.
3. Significantly reduce white fir density and stocking
4. Select leave and cut trees to meet species specific target distributions.

Anticipated Marking/Cruising Method:

- A leave-tree marking approach should result in the least amount of marking paint used, but there will only be slightly more cut trees than leave trees. The exact marking method is flexible and may be determined by the advanced cruiser.
- If a leave-tree marking approach is used a point sampling or point-count-measure cruise approach is anticipated following tree marking.

Stocking Guidelines:

Attempt to retain an average of approximately 55 ft^3 basal area/acre. Basal area may range from a low end of 20 ft^3/acre to 90 ft^3/acre. Limit opening sizes to less than ¼ acre in size. Retention of an average of 55 ft^3 basal area/acre basal area is a primary goal of harvest and critical to meeting harvest objectives (Guldin & Baker 1998). Focus on cutting of white fir, then Douglas-fir, then ponderosa pine to meet basal area target. Attempt to only retain suitable white fir when necessary to meet the required stocking target.

Poles and Advanced Regeneration:

Defer harvest of trees <4" DBH. Density of these trees will be assessed following commercial harvest in 2018.

Aspen

Cut all merchantable aspen >8" DBH. Do not cut cull or borderline cull aspen. These trees will remain on-site and become a source of snags and coarse woody debris.

White Fir:

Leave 20% (1 in 5) of the best 4-8" white fir. Cut 95% of white fir in excess of 8" DBH. Follow cut/leave tree selection guidelines. Retain any white fir in excess of 24" DBH as wildlife trees. A large white fir in the southeast corner of the unit with an osprey nest must be retained. See Special Situation below.

Douglas-fir:

Cut approximately 33% of Douglas-fir from 4-12" DBH. Retain DF >12" DBH. Follow cut/leave tree selection guidelines.

Ponderosa pine:

Cut up to 33% (1 in 3) ponderosa pine from 4-8" DBH and 20% (1 in 5) ponderosa pine from 8-12" DBH. Focus cutting of ponderosa pine where these trees are locally abundant. Avoid harvest where these trees are rare or scattered. Follow spatial and cut/leave tree selection guidelines.

All species:

Cut all trees >24" DBH unless containing cull or borderline cull.

<u>Spatial Guidelines:</u>

- In general, a random spatial pattern of leave trees is desired following harvest. Follow stocking and cut/leave guidelines to arrive at final spatial pattern.
- To the extent possible, keep treeless opening sizes to less than 1/4th acre, averaging 1/10th acre or less.
- If possible, do not retain leave trees where high densities of suppressed aspen sprouts are present.

<u>Cut/Leave Guidelines</u>

Cut	• Severely overtopped/suppressed with crown ratios less than 25% • Mistletoe infected DF or PP (DMR ≥3); • Major physical form defects; • Dead/damaged terminal leader as a result of spruce budworm defoliation; • Trees expected to die within 10 years or not respond to release; • Currently beetle infested as evidenced by extensive pitch tubes or frass; • Very poor vigor or chlorotic (pale green) foliage. • Recent root pulled trees indicating potential for windthrow.
Cut or Leave	• Minor mistletoe infestation (DMR 1-3) • Minor to moderate spruce budworm defoliation where terminal leader is still green. • Moderate or minor defects such as crooks or forks mostly in upper logs that reduce, but do not exclude sawlog yield. • Crown Ratios > 25% • Minor crown dieback.
Leave	• Vigorous, full crowns with ratios >30%. • Minimal signs of spruce budworm defoliation. • Very minor or no volume or form defects • No evidence of mistletoe

Marking Check:

Install a minimum of 11 quickplot marking check plots following tree marking to check basal area and species composition. Provide marking check information to silviculturist following marking for review.

Special Situations:

- An osprey nest is located in a dead topped white fir in the southeast corner of the stand. This nest is visually conspicuous to the casual observer. Confirm that this white fir tree is not included for harvest during marking.
- Retain all conifer snags present within the stand. There is a minimum target of 1 snag in excess of 15” DBH and 25 feet tall per acre and 3 snags >9” DBH and 25 feet tall per acre. If during marking sufficient densities of these trees are not seen, retain declining trees meeting these specifications that may die within the next 10 years to recruit for future snag requirements.

- Report the need for significant deviations from this marking guide immediately to the silviculturist if necessary.

A. Logging and Other Design Requirements

- The stand is currently roaded and several pre-existing skid trails and landings are present throughout. Road drainage is poor due to the low slope, but the road surface is in operable condition. Spot surface blading will likely be required prior to hauling operations.
- An approximately 10 acre area within the south central portion of the stand featured Forest Service force account white fir slashing around 2013-2014. Trees from this effort are often suspended above the 24" height standard. These trees may either be treated as slash or removed as biomass material during contract operations. If left on-site, these trees will contribute to San Juan NF LRMP Coarse Woody Debris guidelines (Table 7).
- Utilize existing openings as landings. Attempt to place landings behind visual screening from the main road corridor to minimize visual impacts of logging operations and landings to road traffic.
- Rip, seed and obstruct landings and skid trails following use. Utilize an available native seed mix featuring species present on-site. Consult Pagosa District botanist or range specialist if needed to determine seed mix.
- An osprey nest is located in a dead topped white fir in the southeast corner of the stand. This nest is visually conspicuous to the casual observer. Confirm that this white fir tree is retained following marking. Contract operation within 0.25 miles of this nest tree (i.e. this entire stand) are restricted from April 1–August 31.

"In the interior west, the Forest Service implements vastly more silviculture every year with the application and suppression of fire than with saws and harvesting equipment."