



COLORADO FOREST
RESTORATION INSTITUTE



Protocol for regeneration surveys in Unc Mesas treated units – Summer 2015

Need for monitoring

Treatments in the Unc Mesas project areas include a mechanical harvest and a prescribed burn. One of the intents of the prescribed burn is to stimulate aspen regeneration and provide bare mineral soil thought to help ponderosa regeneration.

In order to know if prescribed burning is affecting regeneration numbers, we need to monitor it. The existing monitoring plots are about 0.5 – 0.6 acres in size, but are few in number and widely dispersed. Further, regeneration data are collected only on a small portion of these plots. Seedling / sucker densities are usually highly variable within stands, and therefore the low density of plots will not provide estimates of regeneration across treatment units. To supplement the large plot data, we will measure tree seedling / sapling densities in small, circular plots on a grid that covers the whole treatment unit.

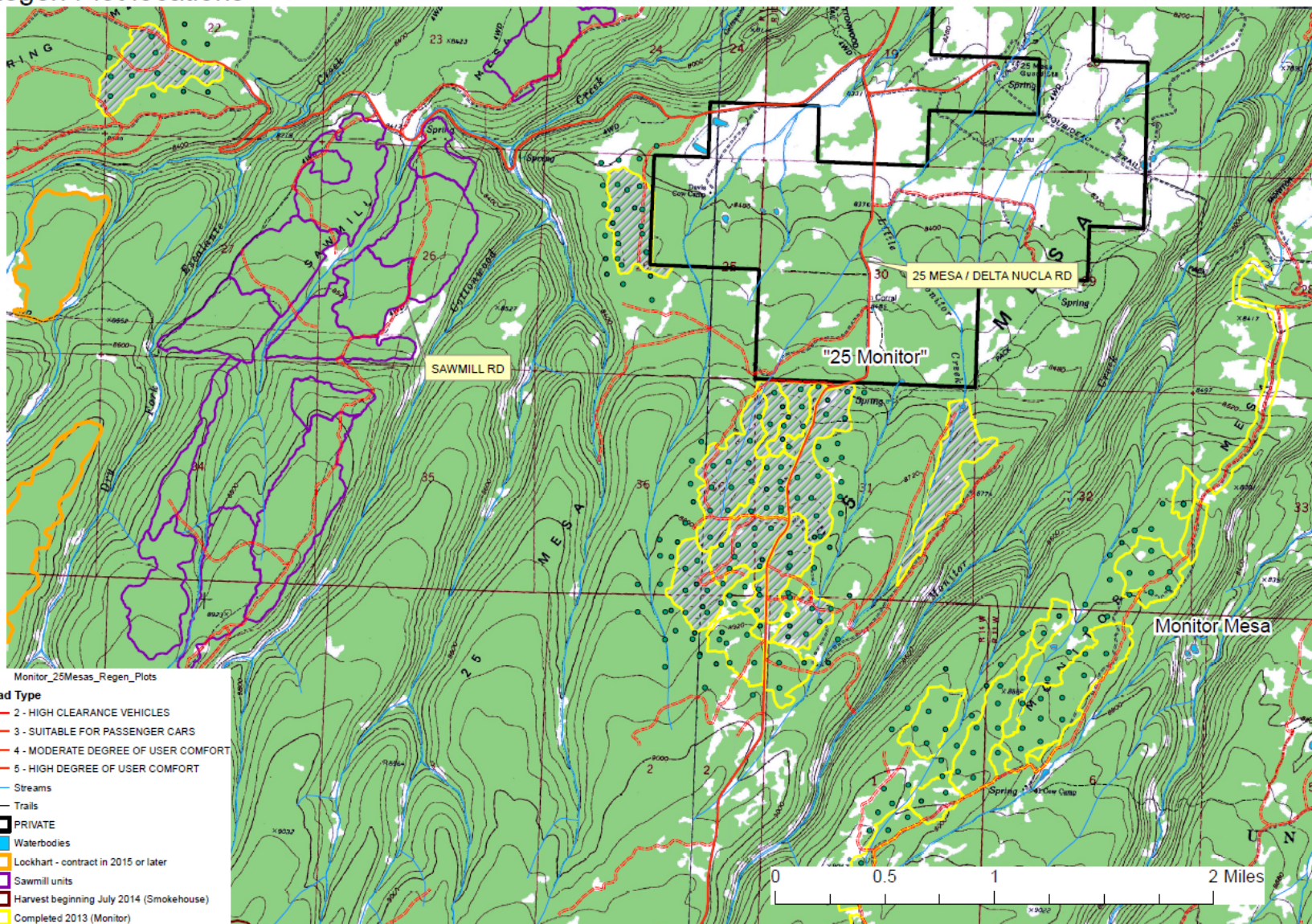
Plot locations

The plots will be placed at the locations of pre-treatment Common Stand Exam (CSE) plots. Although these plots were not permanently marked, their locations were recorded by GPS. Regeneration survey plots will be placed at the GPS location, which will be within ~10 m of the original on-the-ground location.

Stands to survey

Plots will be put in to Unc Mesas treatment units that have been treated for 3+ years (see map on next page). See pdf maps for more detailed plot locations and names.

Regen Plot locations



- Monitor_25Mesas_Regen_Plots
- Road Type**
- 2 - HIGH CLEARANCE VEHICLES
- 3 - SUITABLE FOR PASSENGER CARS
- 4 - MODERATE DEGREE OF USER COMFORT
- 5 - HIGH DEGREE OF USER COMFORT
- Streams
- Trails
- PRIVATE
- Waterbodies
- Lockhart - contract in 2015 or later
- Sawmill units
- Harvest beginning July 2014 (Smokehouse)
- Completed 2013 (Monitor)
- Burn in 2014

Methods

Navigate to GPS point. Once the GPS unit indicates you are ≤ 1 ft from GPS point, establish the point at that location.

Record plot number, slope, aspect, and any notes for the plot (such as if there is evidence of recent burning or not). Mark plot center with flush mounted rebar stake and tag on nearest tree. Record the tree tag number and location of rebar (distance, azimuth) from tree. Take picture of plot from N looking S, and from center straight up into the sky.

Count the number of tree seedlings/saplings (all trees < 5 inched dbh), by species (aspen [POTR], ponderosa pine [PIPO], Engelmann or blue spruce [PIXX] ; subalpine fir [ABLA]; Douglas-fir [PSME]), size class [1-5; see data sheet], and damage code [0 – 6, see data sheet] in a $1/100^{\text{th}}$ acre circular plot, with a radius of 11.8 ft. If tree has leader damage, record specific cause (such as browsing or spruce budworm) in notes if it can be identified.

