

Monitoring Treatments

To find out if treatments are achieving objectives, a variety of monitoring techniques are used to compare conditions before and after treatment. Examples of project objectives and monitoring strategies include:

Highway One Eucalyptus Thinning Project

1. Decrease standing area of eucalyptus
 - Measure how much of the ground is covered by the base of trees in a 25 x 4m plot
2. Reduce the dead and downed fuel load
 - Count how many times woody fuel of different sizes intersects a 50' transect
 - Measure how deep the duff is along a transect (*Duff is the decomposing vegetation below the freshly fallen leaf litter.)
3. Minimize resprouting of stumps
 - Count how many stumps are resprouting within a 25 x 4m plot
4. Increase native shrub cover
 - Count how many shrubs of each species are found in a 25 x 1m plot
5. Detect and record overall changes in site
 - Photographs are taken of the treatment area from several locations.

Alta Avenue Eucalyptus Removal and Restoration Project

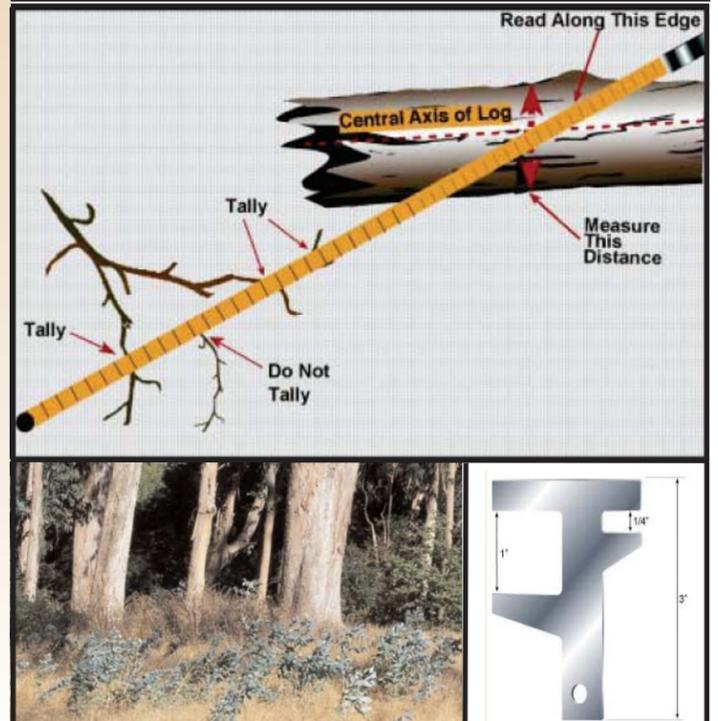
1. Identify and remove target invasive species
 - Undesirable weed species will be removed from the site when observed
2. Increase vegetation cover to 70% by 2006 and to 90% by 2008
 - Measure vegetation in a quadrat, using checkpoints for additional revegetation action if needed
3. Increase percentage of native vegetation
 - Count and compare how many plants are native in relationship to how many are non-native
4. Determine survival rate of replanted native species (coyotebrush, *Baccharis pilularis*)
 - Measure how many native plant seedlings survive over time
5. Determine if mulch from chipping is inhibits survival of native seedlings
 - Measure depth of duff and relate this to seedling survival to determine if effect is significant
6. Determine if wooden posts for bird perching increase seed dispersal by birds to site
 - Compare rate of revegetation in areas with and without bird perch posts

MONITORING TECHNIQUES

In a standard fuels transect, woody fuels on the ground are recorded by size on one side of a 50-foot tape.

LOWER LEFT: Photomonitoring is used to record changes at a site, such as these new root shoots which developed after a tree thinning project.

LOWER RIGHT: A special guage is used to classify fuels by their diameter. 0- 1/4 in. (1-hour) , 1/4-1 in. (10-hour), and 1-3 in. (100-hour) are standard fuels categories. "Hours" refers to drying out time, or "time lag", which indicates how long it will take fuel to become available for combustion. The larger the diameter, the more time it will take for fuel to ignite.



Comments or Questions?

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Let us know what you think about managing eucalyptus.

Eucalyptus Utilization

Wood products and energy from removed trees

ARE THERE PRACTICAL USES FOR EUCALYPTUS?

In the early 1900s, plans to develop eucalyptus as a lumber source proved unsuccessful because the wood cracks when dry.

In response to the oil embargo in the 1970s, a study for the U.S. Department of Energy looked at eucalyptus as a potential biomass fuel source which could be cultivated on "energy farms."

Today, land managers are seeking ways to recover costs from eucalyptus removal projects designed to reduce wildland fire hazards and preserve natural and cultural resources.

Chipped debris is hauled to co-generation plants and burned to create electricity. Boards have been cut to make wood flooring. Wood shavings are used as bedding in horse stalls. Eucalyptus trees have also been used for fences, furniture, and of course, the most traditional use of all, firewood.



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U.S. Department of the Interior
Fire and Fuels Management



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