



Providing Professional Forestry Services

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**RESTOCKING PLAN
FOR
APN 524-114-011
December 13, 2021**

Restocking Plan

Restocking Area: Based on observations by the RPF the area for restocking is classified as Site III lands. As per 14 CCR 912.7(b)(1), Site III lands shall be classified as acceptably stocked if an area contains an average point count of 125 trees per acre. See attached Restocking Plan Map

Restocking Site Number	Site Class	Total Acreage	# Trees at 16' x 16' Spacing	Additional Notes
1	III	2.4	408	Stocking rate of 170 trees/acre – will account for potential mortality.
2	III	0.3	0	Overhead powerlines are present, should not plant trees in this area.

Site Preparation: Site preparation is utilized to facilitate timber stand establishment. The practice is used to make the restocking site suitable for planting seedlings and establishing a new stand of trees. Site preparation activities remove or reduce competing vegetation, reduce or remove undesirable trees and logging debris, and prepare the soil to ultimately promote the growth and survival of the desired tree species. There are multiple methods of site preparation including broadcast burning or pile burning, chemical (herbicide) application, and mechanical site preparation. Chemical and mechanical site preparation are most suited for smaller scale projects such as this.

Chemical preparation includes broadcast and direct herbicide application to reduce competing undesirable vegetation. Chemical preparation can be applied before planting if vegetation is present and post-planting if competing vegetation threatens desired tree species survival and thus the successful restocking of the site. Where conditions exist on cutover timberlands or agricultural lands that limit planting space or root growth and development, mechanical site preparation may be necessary. Tractor piling of slash and brush to make planting space in areas that otherwise have little exposed soil is one form of mechanical site preparation. Subsoiling/ripping or tilling is a mechanical site preparation method used for heavy or compacted soils to increase aeration and water-holding capacity and break up root restricting hardpans and/or traffic pans. This method may be appropriate for abandoned road grades, historic landing areas or other areas where soils have become otherwise unsuitable for seedling survival. Mechanical or chemical site preparation activities shall not occur within watercourse protection zones as defined by 14 CCR 916.5 unless specified as part of an approved streamside restoration plan.

Recommendations: Restocking Site 1: Employ mechanical ripping or tilling of the planting surface as necessary if soils are compacted and could potentially limit root growth or tree survival. Mechanical site preparation involving soil disturbance should occur during rainless periods of the year and should be conducted to minimize delivery of sediment to waters of the State. In the case that rain causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water, soil stabilization measures should be employed and may include straw wattles and/or drift fencing. Retain all existing conifer stocking, snags and residual hardwood trees with basal cavities, hollows, and other complex crown iterations valuable to wildlife during mechanical site preparation activities.

Restocking Site 2: Due to the existing overhead powerlines on this site, site preparation and restocking is not recommended as it will likely become a vegetation maintenance issue and potential fire hazard in the future.

Types of Seedlings: Harvested and/or understocked timberlands should be artificially regenerated with naturally occurring conifer species and cultivars well-adapted to the timber stand's specific climate, elevation, and other environmental conditions. Planting seedlings from appropriate seed zones and elevation ranges ensures better seedling success and, eventually, a more resilient timber stand. Specifically, timberland within the property is characterized by Douglas-fir. The areas to be planted occur within California Seed Zone 303 at approximately 660 feet in elevation.

Recommendation: The landowner shall plant Douglas-fir (best suited for Seed Zone 303 at 660-foot elevation) at a uniform spacing no less than 16-feet by 16-feet, or 170 trees per acre.

Conifer seedlings that come from nurseries are typically available in two forms: bareroot seedlings and containerized seedlings. Bareroot seedlings are stock where the roots are exposed at the time of planting. Bareroot seedlings are generally grown in nursery seedbeds and pulled from the soil in which they are grown to be planted in the field. Containerized seedlings are individually grown in a range of hard-walled vessels or in peat pots from seed. Containerized seedlings typically have a higher survival rate after planting due to their well-formed root system and are usually more expensive than bareroot seedlings.

Recommendation: Given the conditions of the site and the higher survival rate associated with containerized stock, use containerized seedlings if available.

Seedling Care: Seedling care and handling is extremely important to ensure post planting survival.

Recommendation: For long-term storage (more than 3 days), store seedlings at 33 to 36 degrees Fahrenheit. For short-term storage (several hours to less than 3 days), store below 42 degrees Fahrenheit. At the planting site, do not allow the roots dry out and store trees in the shade to avoid exposure to the sun or warmer temperatures.

Planting Instructions: When planting seedlings, the landowner or tree planter shall operate under the following guidelines:

1. Tree planting shall only occur in winter or early spring. Tree planting should not occur if the ground is frozen or during unusually warm periods.
2. Using a Hodad or Dibble, dig a hole at least one inch deeper and wider than the seedling roots. If planting from a container, dig the hole an inch deeper and wider than the container.
3. Place the seedling into the hole taking care not to bend the taproot, or main vertical root, and cover with soil.
4. Pack the soil down firmly around the seedling to remove any air pockets.
5. See Appendices A-D for illustrations for correct planting techniques.

Stock Purchase: Ideally, landowners should procure seedlings from sources growing local, site-specific stock. Appropriate stock is determined by stand type, seed zone, elevation, as well as other factors like soil type, site quality, and weather.

Recommendation: The RPF recommends acquiring conifer seedlings from either Jessica Huang at CALFIRE email: Jessica.Huang@fire.ca.gov or possibly inquire with Trent Johns at the Jonsteen Company in McKinleyville, CA at 916-799-7967. It is recommended that seedlings acquired be of the appropriate stock based on geographic area and site conditions.

Monitoring Seedling Survival: Although a newly planted stand initially fulfills the Forest Practice Rule's stocking standards, the planted stand must continually maintain a minimum average density of 125 trees per acre (or 18-foot by 18-foot spacing) to meet the intent of the California Forest Practice Rules (CFPRs). A Countable Tree per 14CCR 895.1 must be in place for at least two growing seasons and must be alive and healthy, among other requirements. Seedling survival can vary widely depending on several factors including weather, herbivory, genetics, etc. Monitoring growth and success of planted seedlings is key to ensure a minimum 125-point count stocking level is maintained or achieved 2-years after planting.

Recommendation: Monitor growth and success of planted trees one year after planting. Conduct a point count stocking sampling survey (protocol described in CFPRs 14CCR 1072). If less than 55% of the planted area meets the 125-point count minimum stocking level, repeat the planting process the following winter.

Certification: Within five years of planting, but no sooner than three years, a report of stocking shall be submitted to the county by an RPF that certifies that the area meets the minimum stocking standards of 14 CCR 912.7.

Sincerely,



Thomas Blair, Registered Professional Forester 2607

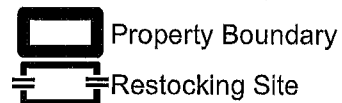
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APN 524-114-011 Restocking Plan Map

Sec 36, T6N, R5E, HB&M
Hennessy Park 7.5' USGS Quadrangle

1 inch = 125 feet



===== Seasonal Road

..... Class III Watercourse

●-●- Powerline

Property boundaries on this map are based on the Humboldt County Assessor's parcel maps GIS layer and may not be an accurate representation in relation to other mapped features.

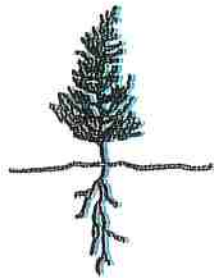
Restocking Site 1

36

Restocking Site 2

APPENDIX A

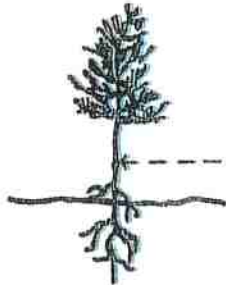
CORRECT METHOD OF SEEDLING PLANTING



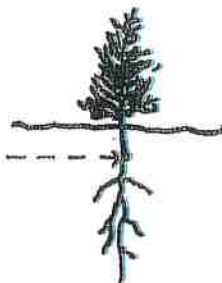
- Soil firmly packed around roots.
- No air pockets.
- Roots straight with no J or L bends.
- Root collar at or slightly below ground level.
- Root not pruned.

ERROR IN PLANTING

Too shallow



Too Deep



Root Collar

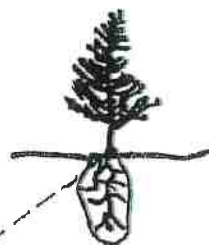
- Hole not deep enough.
- Root collar and upper roots exposed.
- Roots dry out.

- Hole is too deep.
- Root collar buried.

J or L Roots



Air Pockets



Root Collar

Hole is not deep enough — planting in rocky soil.
 Roots cannot effectively take up water.
 Tree not wind-firm.

- Soil not firmly packed around roots.
- Air pocket forms.
- Roots dry out.

APPENDIX B
PLANTING WITH A FLAT BAR

1. Insert flat bar straight down.



2. Pull flat bar backward to open hole.



3. Remove flat bar and place seedling at correct depth with root collar at or slightly below ground level.

Correct

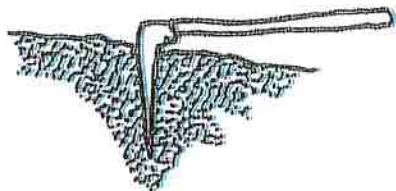


Incorrect

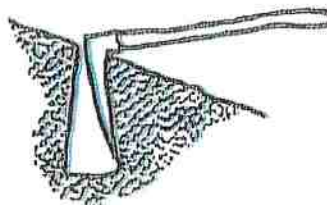


APPENDIX C
PLANTING WITH A HOE

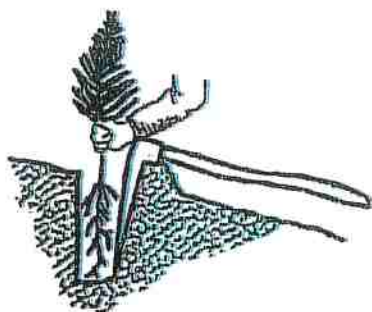
1. Swing hoe to get full penetration.



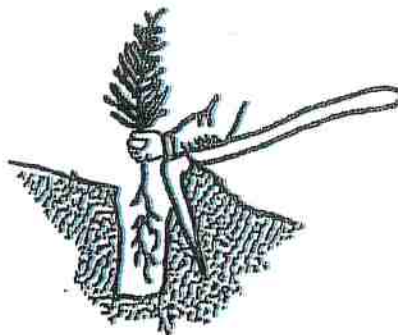
2. Lift handle and pull up to widen hole.



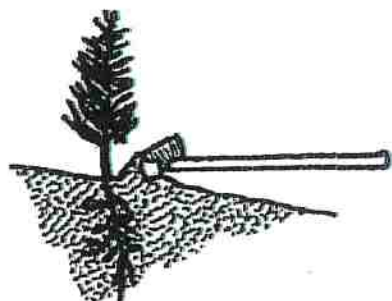
3. Place seedling while using hoe to hold back soil.



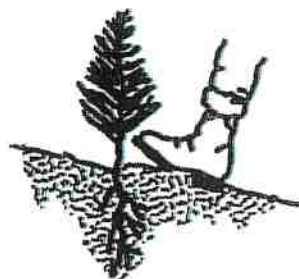
4. Use hoe to pack soil at bottom of hole.



5. Use hoe to pack soil at top hole.

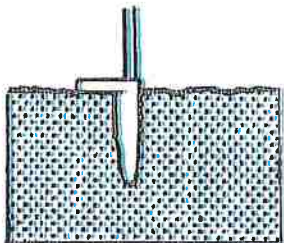


6. Firm soil around seedling with feet.

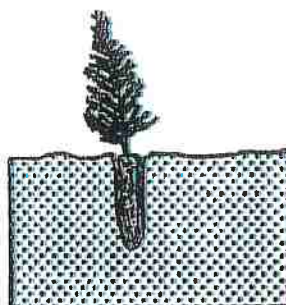
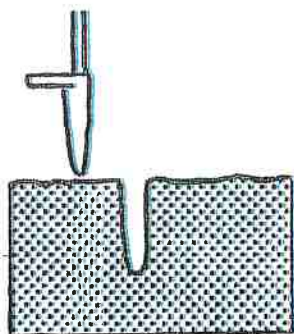


APPENDIX D
PUNTING WITH A PLUG BAR

1. Insert plug bar straight down until plug bar footrest is level with ground.



2. Remove plug bar and place seedling in hole.



3. Firm soil around seedling with heel of boot.

