



165 South Fortuna Boulevard, Fortuna, CA 95540
707-725-1897 • fax 707-725-0972
trc@timberlandresource.com

June 26, 2023

Attention: Cannabis Services Division
Humboldt County Planning and Building Department
3015 H Street
Eureka, CA 95501

Re: APN 108-023-008
PLN-11892-CUP



The attached Restocking Plan is being submitted in response to the County's June 16, 2023 general correspondence record titled "Restocking Details Discussion".

Sincerely,



Chris Carroll, RPF #2628
Timberland Resource Consultants



**RESTOCKING PLAN
FOR
APN 108-023-008
PLN-11892-CUP**

June 26, 2023

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Restocking Plan

Restocking Areas: See attached Restocking Map.

Site	Total Acreage / Square ft ²	# Trees at 18'x18' Spacing
Post-2016 Tree Removal Area	1.10 / 47,916	148

Site Preparation: Site preparation is commonly utilized to facilitate timber stand establishment. The primary objective of this practice is to create an area suitable for planting seedlings and establishing a new stand of trees. Site preparation activities remove or reduce competing vegetation, reduce or remove unwanted trees and logging debris, and prepare the soil to ultimately promote the growth and survival of desired tree species. There are many methods of site preparation that fall under either chemical or mechanical site preparation. Subsoiling/ripping is a mechanical site prep method for heavy soils on cutover timberlands or agricultural lands that have a compacted layer at or below the soil surface that limits root growth and development. Subsoiling/ripping increases aeration and water-holding capacity of compacted soils and breaks up root restricting hardpans and/or traffic pans.

Recommendation: Compacted surfaces such as the graded flat and roads will require ripping by heavy equipment such as a skid steer or mini-excavator. Non-compacted areas such as fill-slopes and adjacent grassland can be planted with a hand auger if necessary.

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 and tanoak. The area to be planted occurs within California Seed Zone 390 at approximately 1,800 feet in elevation.

Recommendation: The landowner shall plant Douglas-fir and/or tanoak (best suited for Seed Zone 390 at 1,800-foot elevation) at a uniform spacing no less than 18-feet by 18-feet, or 134 trees per acre.

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

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, take care not to let the roots dry out and avoid exposure to the sun or warmer temperatures.

Planting Instructions: When planting seedlings, the landowner or tree planter should abide by the following:

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. 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.

Restocking Plan (Cont.)

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 one of the following sources: <https://www.jonsteen.com/>, <https://www.samararestoration.com/>, <http://www.calforest.com/>, <https://sequoiatrees.com/>, <https://rngr.net/>, or contact Timberland Resource Consultants for assistance.

Monitoring Seedling Survival: Although a newly planted stand immediately fulfills stocking standards, the timber stand must continually contain an average density of at least 125 trees per acre (or 18.66-foot by 18.66-foot spacing) in order to meet the intent of the California Forest Practice Rules (CFPRs). A **Countable Tree** per 14CCR 895.1 must be in place at least two growing seasons among other requirements.

Recommendation: Monitor growth and success of planted trees one year after planting. An RPF should conduct a point count stocking sampling survey per 14CCR 1072. If less than 55% of the planted area meets the 125-point count minimum stocking level, repeat the planting process.

Certification: Within five years of planting, a report of stocking shall be submitted to the county by an RPF, which certifies that the area meets the minimum stocking standards of 14 CCR 912.7.

Sincerely,



Chris Carroll, RPF# 2628
Timberland Resource Consultants

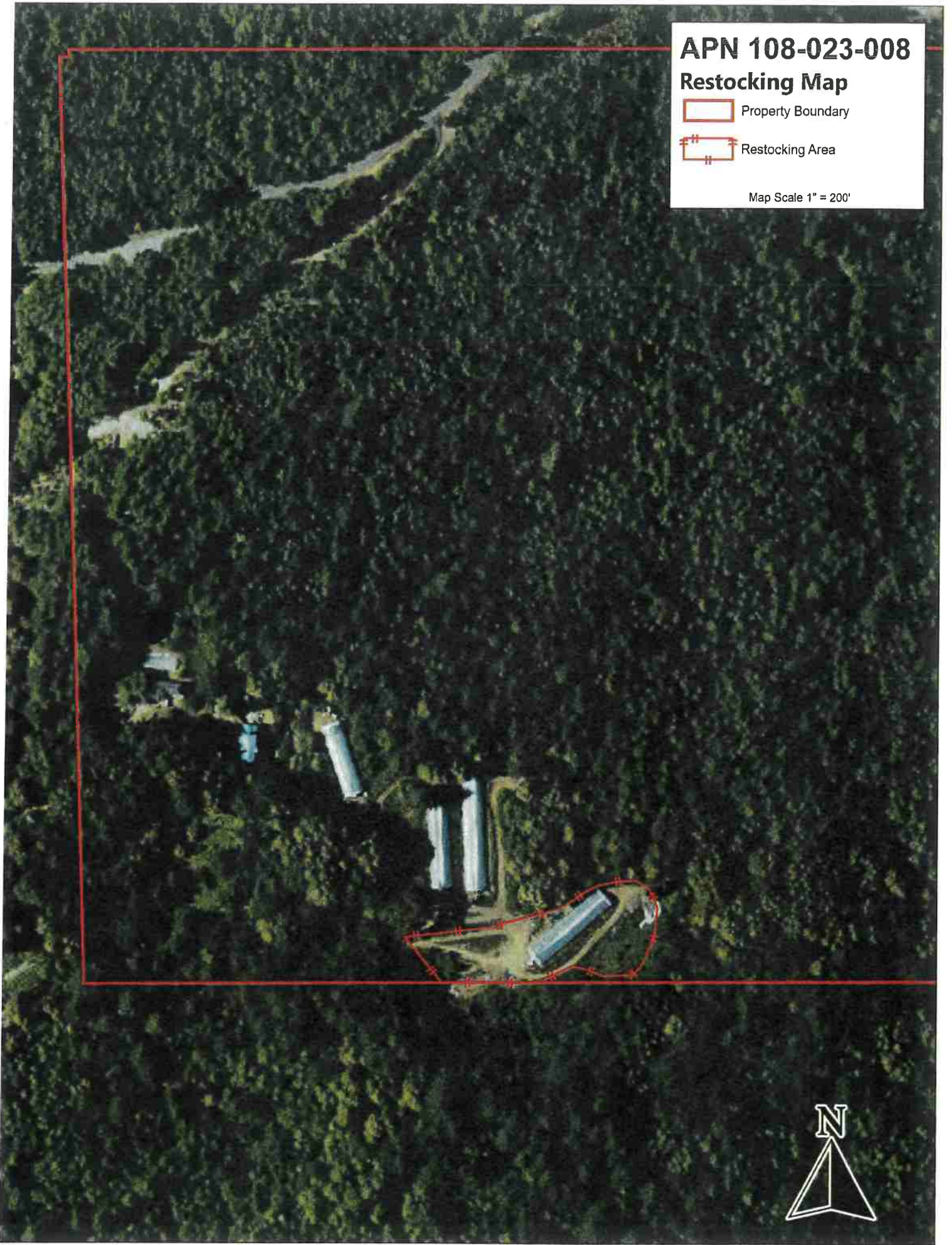
APN 108-023-008

Restocking Map

 Property Boundary

 Restocking Area

Map Scale 1" = 200'



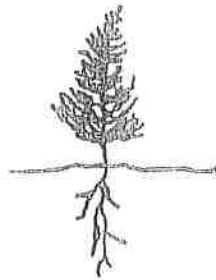


APN 108-023-008
Restocking Area



APPENDIX A

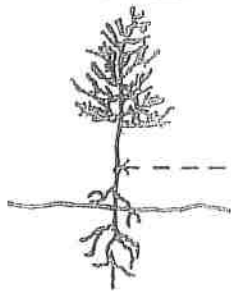
CORRECT METHOD OF SEEDLING PLANTING



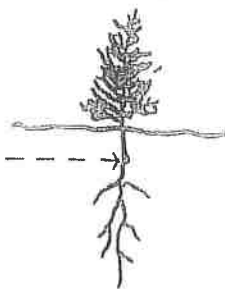
- Soil firmly packed around roots.
- No air pockets.
- Roots straight with no J or L bends.
- Root collar at or slightly below ground level.
- Root not pruned.

ERROR IN PLANTING

Too shallow



Too Deep



Root Collar

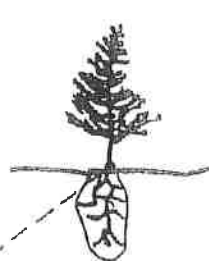
- Hole not deep enough.
- Root collar and upper roots exposed.
- Roots dry out.

- Hole is too deep.
- Root collar buried.

J or L Roots



Air Pockets



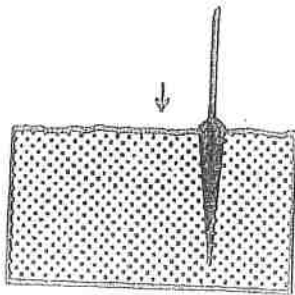
Root Collar

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

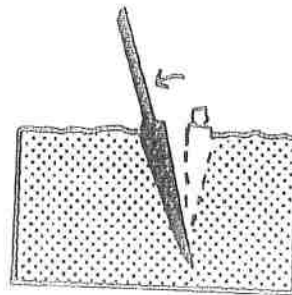
- Soil not firmly packed around roots.
- Air pocket forms.
- Roots dry out.

APPENDIX B
PLANTING WITH A FLAT BAR

1. Insert flat bar straight down.

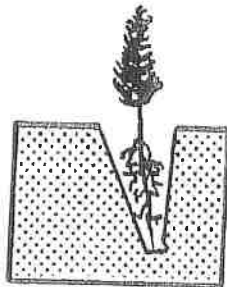


2. Pull flat bar backward to open hole.

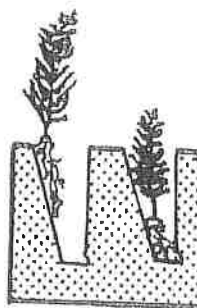


3. Remove flat bar and place seedling at correct depth with root collar at or slightly below ground level.

Correct

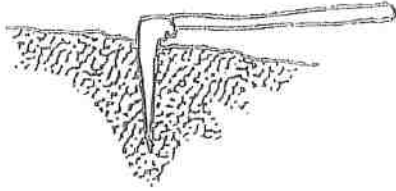


Incorrect

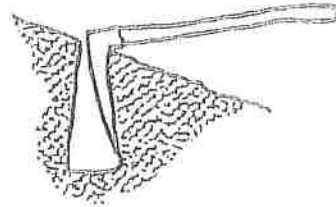


APPENDIX C
PLANTING WITH A HOE

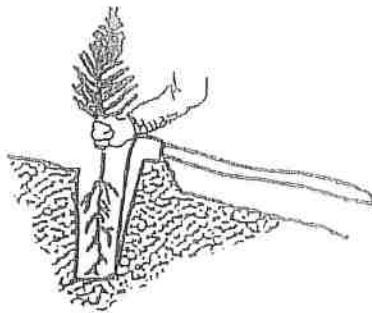
1. Swing hoe to get full penetration.



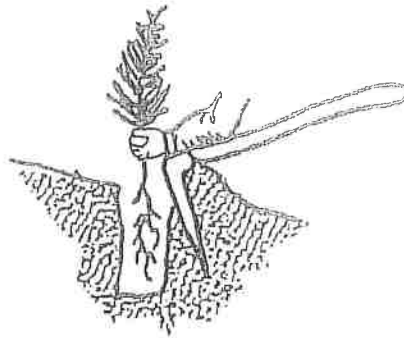
2. Lift handle and pull up to widen hole.



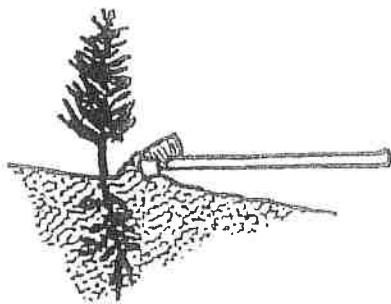
3. Place seedling while using hoe to hold back soil.



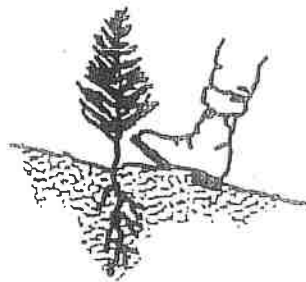
4. Use hoe to pack soil at bottom of hole.



5. Use hoe to pack soil at top hole.



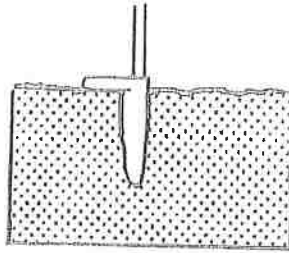
6. Firm soil around seedling with feet.



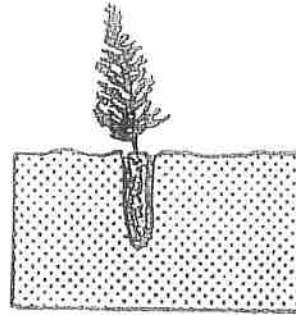
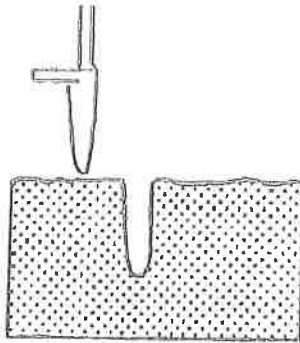
APPENDIX D

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.

