# Staff Report to the Planning Commission

**Application Number: 221359**

**Applicant:** Seth Noble
**Owner:** Cheryl and Seth Noble
**APNs:** 064-201-14, 064-201-20
**Site Address:** 1704 Felton Quarry Road, Felton

**Agenda Date:** May 24, 2023
**Agenda Item #:** 8
**Time:** After 9:30 a.m.

**Project Description**: Proposal to rezone two parcels, APNs 064-201-20 and 064-201-14, totaling 43.37 acres, from the SU (Special Use) zone district to the TP (Timber Harvest) zone district.

**Location**: Properties are located just northwest of APN 064-201-83 (1704 Felton Quarry Road)

**Permits Required**: Zoning Map Amendment

**Supervisorial District**: 5th District (District Supervisor: Bruce McPherson)

**Staff Recommendation:**

- Adopt the attached resolution (Exhibit F), sending a recommendation to the Board of Supervisors to approve Application 221359, to adopt the ordinance rezoning the parcels from the Special Use (SU) zone district to the TP (Timber Production) zone district (Exhibit G), and to determine that the proposal exempt from further review under the Environmental Quality Act.

**Project Description & Setting**

The subject parcels are located approximately 1.2 miles west of the intersection of Highway 9 and San Lorenzo Boulevard in the San Lorenzo Valley Planning area, and approximately 0.6 miles east of the intersection of Pineridge Road and Empire Grade in Bonny Doon. Development in the vicinity of the parcels is varied; the site is accessed through a residential neighborhood to the east, and is bound by an active quarry to the south and vacant timber production zoned parcels to the north.

The larger of the two parcels, APN 064-201-20, is approximately 28-acres in size. The smaller parcel, APN 064-201-14, is approximately 15-acres in size. The parcels are contiguous and are similar in terms of topography and vegetation. Both parcels are notably steep, exceeding 50 percent slope over the majority of the project site. Both parcels have historically been used for timber production, with the last harvest occurring circa 1995 under Timber Harvest Permit Number 1-95-429. The parcels are bordered by TP zoned parcels to the north and west and are partially bordered by an active quarry with an M-3 (Mineral Extraction Industrial) zoning designation to the south. The east side of APN 064-201-20 is bordered by an undeveloped SU zoned parcel.

The proposed project would rezone both parcels from the SU (Special Use) zone district to the TP (Timber Production) zone district, for the purpose of facilitating timber harvesting on the parcels.

The applicant's representative, Dennis McCorkle (Registered Professional Forester #3120), submitted the requisite materials to support a TP rezone. Among the materials submitted is a letter (Exhibit F) prepared by Mr. McCorkle, which declares the property suitable for harvest and meets the minimum stocking standards described in Section 461 of Public Resources Code and referenced in subsection C(3) of SCCC 13.10.375 (Special standards and conditions for the Timber Production TP District).

**Zoning & General Plan Consistency**

Both parcels are presently zoned SU (Special Use) with R-M (Mountain Residential) General Plan designations. SU and TP are implementing zone districts for the R-M General Plan designation; therefore, the proposed project would result in parcels zoned consistent with their General Plan designations.

Timber harvesting is presently prohibited in the SU zone district but was allowed under a previous iteration of the County's Zoning regulations.

**Zoning Map Amendment**

Proposals to amend the County's Zoning Map require that the project conform with the regulations outlined in Santa Cruz County Code Section 13.10.215 (Zoning Plan Amendments), which mandates, at a minimum, three findings of approval. These findings, included on page 5 of this report (Exhibit B), ensure consistency with the General Plan and existing land uses in the vicinity. Staff are in support of the project, and the findings for a Zoning Plan Amendment can be made, in that the subject parcels have demonstrated a history of successful timber production, with a successful harvest within the last 30 years, and in that the parcels are presently deemed unbuildable. Permanent development on either parcel would be significantly constrained, if not precluded by, the challenges of developing on steep parcels, including the challenges presented in locating suitable sites for buildings, roads, and septic systems.

The proposal is not subject to consideration under the "Adjacency Rezoning" regulations described in Government Code Section 51113, which limits a jurisdiction's ability to place additional requirements or conditions on specific types of timber production rezoning applications.

**Conclusion**

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

**Staff Recommendation**

- Adopt the attached resolution (Exhibit F), sending a recommendation to the Board of Supervisors to approve Application 221359, to adopt the ordinance rezoning the parcels from the Special Use (SU) zone district to the TP (Timber Production) zone district (Exhibit G), and to determine that the proposal exempt from further review under the Environmental Quality Act.

**Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Division, and are hereby made a part of the administrative record for the proposed project**.

**The County Code and General Plan, as well as hearing agendas and additional information are available online at:** www.sccoplanning.com

Report Prepared By: _____
Evan Ditmars
Santa Cruz County Planning
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3227
E-mail: evan.ditmars@santacruzcounty.us

Report Reviewed By: _____
Jocelyn Drake
Principal Planner
Development Review
Santa Cruz County Planning

**Exhibits**

A. Categorical Exemption (CEQA determination)
B. Findings
C. Conditions
D. Foresters Report, Prepared by DKM Forestry, dated January 15, 2023
E. Assessor's, Location, Zoning and General Plan Maps
F. Planning Commission Resolution
G. Ordinance for Proposed Rezoning
H. Parcel information

# CALIFORNIA ENVIRONMENTAL QUALITY ACT
# NOTICE OF EXEMPTION

The Santa Cruz County Planning Division has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 221359
Assessor Parcel Number: 064-201-14, 064-201-20
Project Location: 1704 Felton Quarry Road, Felton

**Project Description: Proposal to rezone two parcels from SU to TP**

**Person or Agency Proposing Project: Seth Noble**

**Contact Phone Number: 831-431-3396**

**A.** _____ The proposed activity is not a project under CEQA Guidelines Section 15378.
**B.** _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).
**C.** _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.
**D.** __X__ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

**E.** ____ **Categorical Exemption**

Specify type: Article 18, Section 15264

**F. Reasons why the project is exempt:**

**Section 15264. Timberland Preserves:** Local agencies are exempt from the requirement to prepare an EIR or Negative Declaration on the adoption of timberland preserve zones under Government Code Section 51100 et seq. (Gov. Code, Sec. 51119).

The proposed project would change the zoning designation of two parcels from Special Use (SU) to Timber Production (TP) for the purpose of facilitating a timber harvest.

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date:_____
Evan Ditmars, Project Planner

**EXHIBIT A**

# Zoning Plan Amendment Findings

1. The proposed zone district will allow a density of development and types of uses which are compatible with the objectives, policies and programs, and land use designations of the adopted General Plan, and conforms with, and is adequate to carry out, the coastal resource protection provisions of the certified Land Use Plan.

This finding can be made in that the proposed TP Zoning designation is consistent with the R-M (Mountain Residential) General Plan designation. The application does not include a proposal for development. The subject parcels are bordered by TP zoned parcels to the north and west and are partially bordered by an active quarry with an M-3 (Mineral Extraction Industrial) zoning designation to the south. The east side of APN 064-201-20 is bordered by an undeveloped SU zoned parcel, and the nearest adjacent homes are approximately 940-feet from the eastern property line and 550 feet from the north property line. Future timber harvests, which would be evaluated and approved by CalFire via a Timber Harvest Plan, would not present a conflict with existing uses in the area.

2. The proposed zone district is compatible with the level of utilities and community services available to the land.

The proposal does not include development or uses which would require community services.

**One or more of the following findings must be made:**

(a) The character of development in the area where the land is located has changed or is changing to such a degree that the public interest will be better served by a different zone district;

The proposed rezoning allows the highest and best use of a property which is otherwise unbuildable. The sloped and forested land would limit, if not prevent, residential development and uses. As supported by the Forester's Letter (Exhibit D), the timber resources on the site are sufficient for harvest.

(b) The proposed rezoning is necessary to provide for a community-related use which was not anticipated when the zoning plan was adopted;

(c) The present zoning is the result of an error;

(d) The present zoning is inconsistent with designation on the General Plan;

(e) The proposed rezoning is in the best interests of the public health, safety or welfare;

The proposal to rezone the property would facilitate a commercial timber harvest. The resulting timber harvest would result in specialized forest management resulting in reduced fuel loads and increased fire safety. Under current conditions, the parcels are unbuildable and there is little incentive to implement sitewide management.

(f) A rezoning from nonresidential to residential use is appropriate in that the site has low commercial potential as reflected by existing vacancies, or outdated low value improvements, or low employment density, or low market demand for commercial use of the site; or

(g) The site will accommodate housing type(s) that are needed to house the local workforce in support of the local economy.

# Conditions of Approval

Exhibit D: Project letter and plans, prepared by DKM Forestry, dated 1-15-24

I. This permit authorizes the rezoning of APNs 064-201-14 and 064-201-20, from the SU (Special Use) zone district to the TP (Timber Production) zone district, as indicated on the approved Exhibit "D" for this permit. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

A. Sign, date, and return to Santa Cruz County Planning one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Provide evidence of combination of parcels into one Assessor's parcel number.

C. Complete and record a Declaration of Restriction to retain APNs 064-201-14 and 064-201-20 as one parcel. **You may not alter the wording of this declaration**. Follow the instructions to record and return the form to Santa Cruz County Planning.

II. Operational Conditions

A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

B. Upon the fifth anniversary of the signing of the agreement, the Board shall determine whether the parcel meets the timber stocking standards in effect on the date that the agreement was signed. If the parcel fails to meet the timber stocking standards, the Board shall immediately rezone the parcel and specify a new zone for the parcel, which is in conformance with the General Plan/Local Coastal Program Land Use Plan and whose primary use is other than timberland.

C. Prior to commencing any timber operations, the applicant shall obtain the necessary approvals from the California Department of Forestry.

III. Indemnification

The applicant/owner shall indemnify, defend with counsel approved by the COUNTY, and hold harmless the COUNTY, its officers, employees, and agents from and against any claim (including reasonable attorney's fees, expert fees, and all other costs and fees of litigation), against the COUNTY, its officers, employees, and agents arising out of or in connection to this development approval or any subsequent amendment of this development approval which is requested by the applicant/owner, regardless of the COUNTY's passive negligence, but excepting such loss or damage which is caused by the

sole active negligence or willful misconduct of the COUNTY. Should the COUNTY in its sole discretion find the applicant's/owner's legal counsel unacceptable, then the applicant/owner shall reimburse the COUNTY its costs of defense, including without limitation reasonable attorney's fees, expert fees, and all other costs and fees of litigation. The applicant/owner shall promptly pay any final judgment rendered against the COUNTY (and its officers, employees, and agents) covered by this indemnity obligation. It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this development approval.

A. The COUNTY shall promptly notify the applicant/owner of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. The COUNTY shall cooperate fully in such defense.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The applicant/owner shall not be required to pay or perform any settlement unless such applicant/owner has approved the settlement. When representing the COUNTY, the applicant/owner shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the COUNTY.

D. Successors Bound. The "applicant/owner" shall include the applicant and/or the owner and the successor'(s) in interest, transferee(s), and assign(s) of the applicant and/or the owner.

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Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

**Please note: This permit expires three years from the effective date listed below unless the conditions of approval are complied with and the use commences before the expiration date.**

Approval Date: _____

Effective Date: _____

Expiration Date: _____

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Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Planning Commission, may appeal the act or determination to the Board of Supervisors in accordance with chapter 18.10 of the Santa Cruz County Code.

**DKM Forestry**
**Registered Professional Forester 3120**

483 Spruce St.
Half Moon Bay, CA. 94019

(650) 703-1452

dennis@dkmforestry.com
dkmforestry.com

DKM Forestry

# Timber Management Plan

Lands of Noble-APN#'s 064-201-14 & 064-201-20

Prepared by Dennis McCorkle, Registered Professional Forester #3120
8-17-2022
Revised 1-15-2023



**Exhibit D**

**Introduction:** I have been hired to assist landowners Seth and Cheryl Noble in rezoning Santa Cruz County Assessor parcel numbers (APN) 064-201-14 & 064-201-20. The parcels are listed on the County's GIS site as 15.23 acres and 28.14 acres, respectively and are both currently zoned as SU. The two parcels are contiguous in size and total 43.37 acres. Seth and Cheryl Noble are the owners of both parcels. Additionally, both subject parcels are adjacent to existing zoned TP parcels including APN's: 064-201-78, 064-201-37, 064-201-79, and 064-201-80.

**General Property Description:** The property consists of a redwood/Douglas-fir forest mixed with hardwoods, principally tanoak, madrone, and live oak with minor amounts of maple and bay laurel. There are additionally Douglas-fir dominated areas with an understory of tan oak.

Soils in the harvest area are loams and sandy loams derived primarily from quartz diorite. The soils are considered productive timberland soils. The topography is generally steep, but the plan area also contains several large, moderately sloped bows near the ridgetops on either side of Shinglemill Creek, and a 2-3 acre flat at the terminus of the main Class II watercourse (Shinglemill Creek). All the larger, more recent slides have been previously located on previous harvest maps and appear to remain relatively stable. Elevation ranges from 1300 feet at the uppermost yarder pad to approximately 600 feet in the bottom of Shinglemill Creek at the eastern border of the property.

No fish or fish habitat occurs in or immediately adjacent to the property boundary. There are no in-stream water users within 1000' downstream of the property boundary. The property is within the Shinglemill Gulch watershed, which is a tributary to the San Lorenzo River. The Class II watercourses are deeply incised and have a high boulder and cobble component because of the surrounding quartz diorite parent material. In-stream sandy sediments occur at least partially because of minor inner gorge slide activity.

The area immediately south and west of the property is within the Gold Gulch Drainage and is owned in part by the Felton Quarry. Lands to the north are owned by the Erickson family and remain as uncut, second-growth redwood. All areas east of the project area are various subdivisions comprising the outskirts of Felton.

**Timber Harvest History:** The majority of the second growth forest is roughly 130 years old and appears to have two previous harvest entries following the turn-of-the-century clear-cut. The first harvest being in the 1950's focusing on Douglas-fir removal, and the second being in the 1990's which saw a selective redwood and Douglas-fir harvest.

The redwood stand is almost entirely second growth resulting from the turn-of-the-century clear-cuts. The Douglas-fir seems to have resulted from the competitive advantage following clear-cuts.



Exhibit D

**Management Objectives and Goal**s: Upon the successful rezoning of the property, the Nobles will continue to manage the forest for high-quality forest products, while enhancing aesthetic and wildlife values. Although state laws allow for a harvest every 10-years, it is advised that the cutting cycle be maintained nearer a 15-year interval to maximize the volume removed within each cycle and to minimize residual impacts. Future harvests shall focus on the following objectives:

- Prescribe and implement a forest improvement program to consistently improve stocking, maintain and increase tree vigor, and maximize growth.
- Maintain a healthy and vigorous forest of well-spaced trees growing at the highest rates feasible considering the other values of the forest.
- Restore and enhance the timber resource and understory species from past fire damages and reduce future fire hazards, creating a healthy and resilient forest.
- Maintain a high degree of aesthetic consideration during all aspects of forest management.
- Maintain and improve wildlife habitat where possible as part of continuing forest management.

**Recommended Logging System**

Appropriate logging systems shall incorporate a mix of tractor and cable yarding in order to reach all of the timber, and minimize impacts to the property.

**Present and Future Stand Conditions:** In early August 2022, I visited the property to conduct a logging feasibility analysis, establish timberland characteristics and inventory the current timber stocking levels. I inventoried 5 fixed area plots measuring height, diameter, and percent defect. A smaller subset of growth inventory was collected using an increment borer to determine the approximate growth capability of the timberland. The inventory was then processed to determine current stocking levels (volume per acre) and growth capability (accrued volume per acre per year) on the parcels. The results of this data are discussed below.

**Timber Stocking:** To rezone a property to the "Timber Production" zoning a property must meet the timber stocking standards set forth in Section 4561 of the Public Resources Code. Section 4561 states in part:

> "The average residual basal area, measured in stems one inch or larger in diameter…in areas which the registered professional forester has determined are Site II classification or lower, the minimum average residual basal area shall be 50 square feet per acre. Rock outcroppings and other areas not normally bearing timber shall not be considered as requiring stocking."

The current redwood stocking on the timbered portions of the parcels average 329 square feet per acre. The residual basal area following any future harvest is not expected to drop below 150 square feet per acre, which well exceeds the minimum stocking standards per PRC 4561.



**Exhibit D**

**Timberland:** To rezone a property to TP, the property must meet the definition of "timberland". California Government Code Section 51104 defines timberland as:

> "Privately owned land capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre."

The parcels proposed for rezoning are capable of growing an average annual volume of wood fiber of 136 cubic feet per acre and therefore meet and exceed the definition of timberland and the State's stocking standards.

**Compatible Use:** Current property use of the parcels include watershed, wildlife habitat and timberland. The property is open space land comprised of a mixed redwood/Douglas-fir forest with a mixed hardwood understory. The previous harvest occurred approximately 25 years ago and was selectively harvested under THP 1-95-429-SCR (attached). Existing harvest infrastructure, including landings, tractor skid trails, and haul roads are present throughout the property from the previous harvest. The existing infrastructure is suitable to facilitate future harvests. The current and future planned use of the property is expected to be compatible with growing and harvesting timber.

**Conclusion:** The property is well suited for future timber management. The property has been selectively managed for second growth timber in the past and the forest resources are healthy and vigorous resulting in productive-growth rates. The Nobles have indicated that they want to manage the timber resource and stand conditions warrant a harvest. Harvest operations are planned to commence upon the successful rezone to TP, and/or the approval of the appropriate CALFIRE Harvesting Permit.

Thank You,

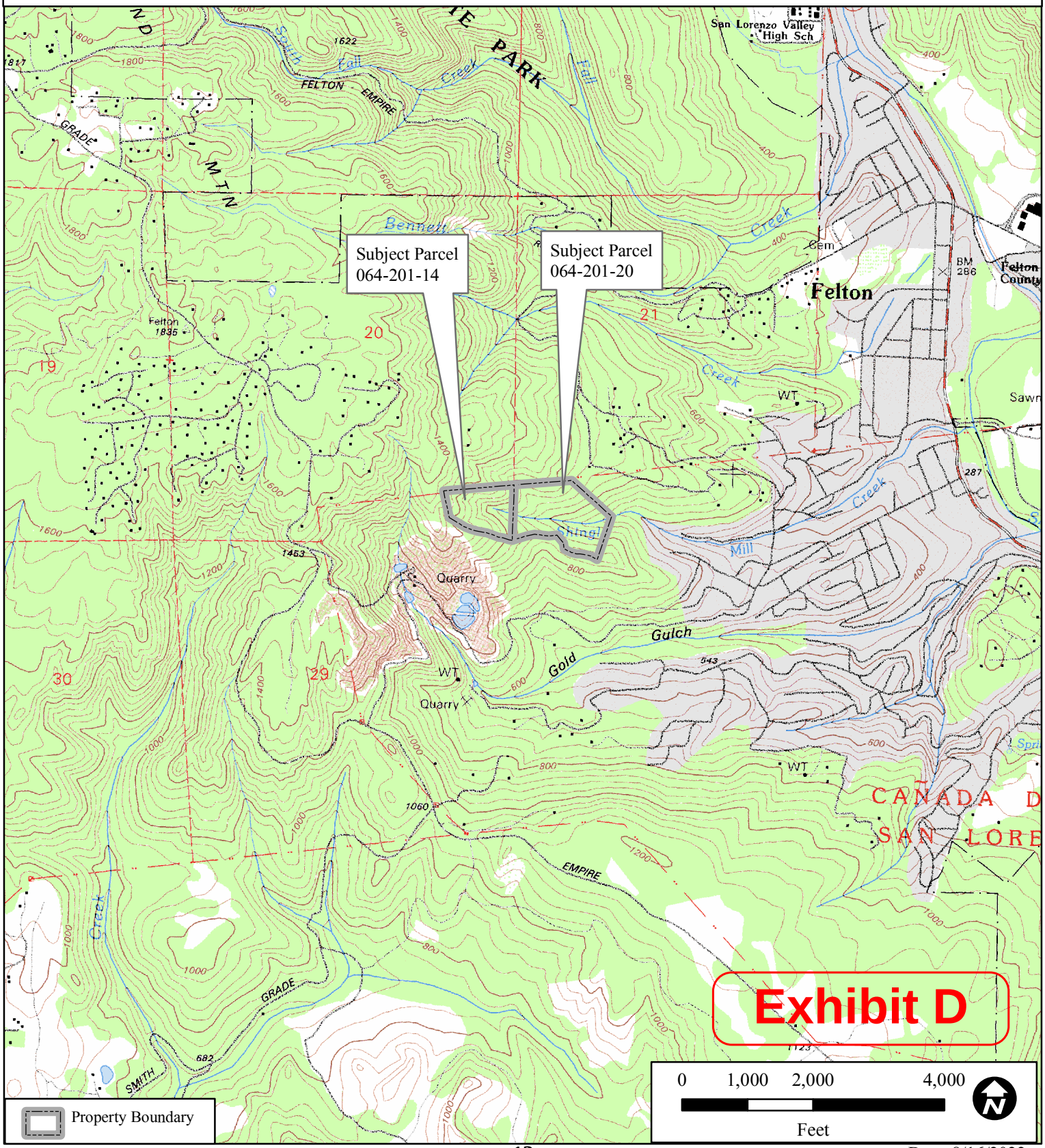
Dennis McCorkle
Registered Professional Forester # 3120



**Exhibit D**

# Location Noble Rezone

APN 064-201-14: LOCATED WITHIN PORTIONS OF Cañada del Rincon en el Rio San Lorenzo de Santa Cruz (projected as SEC 20), T 10S, R 2W
APN 064-201-20: LOCATED WITHIN PORTIONS OF Cañada del Rincon en el Rio San Lorenzo de Santa Cruz (projected as SEC 21) & 28, T 10S, R 2W
MDB&M. USGS FELTON QUAD. SANTA CRUZ COUNTY.






Date: 8/16/2022

# FOR TAX PURPOSES ONLY

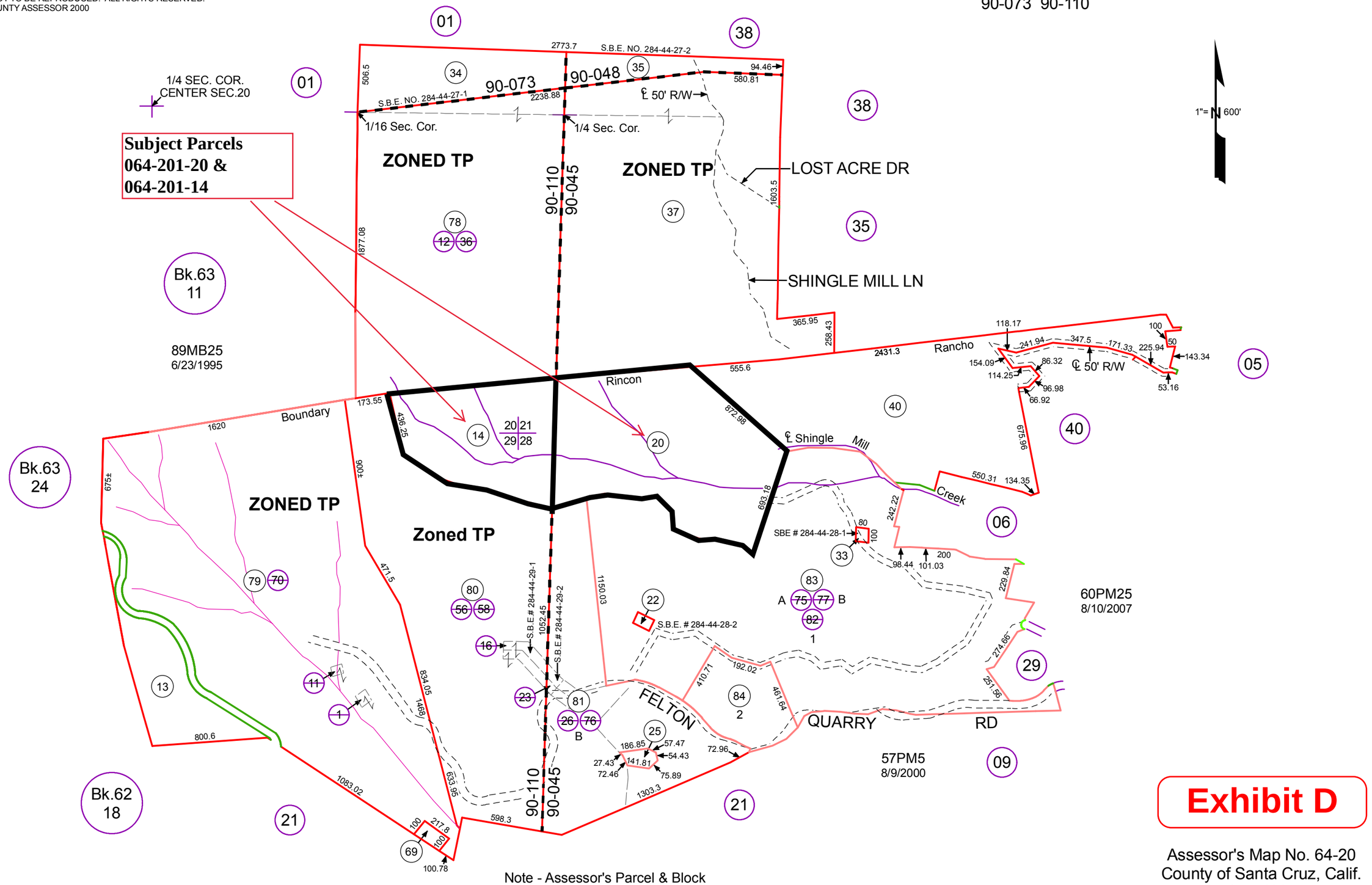


## POR. RINCON RANCHO

SECS. 20, 21, 28 & 29, T.10S., R.2.W., M.D.B. & M.

Tax Area Code
90-045 90-048
90-073 90-110

# 64-20




Note - Assessor's Parcel & Block Numbers Shown in Circles.

Electronically Redrawn 1/23/97 rw
Rev. 5/13/98 GG (CA Consolidation)
Rev. 9/21/00 CB (57PM5, 1-83 & 84)
Rev. 7/13/01 mvm (changed page refs.)
Rev. 5/23/05 mvm (Cor. linework, 1-25 per 4453/640)
Rev. 10/9/07 td (added pg. ref.)
Rev. 2/25/08 td (TCA)
Rev 1/8/09 CB (Cor to TCA)

| Amendments-date & S or M | | | |
|---|---|---|---|
| 1. _____ | 7. _____ | | THP No. 1-95-429 SCR |
| 2. _____ | 8. _____ | | Date Recd' SEP 0 8 1995 |
| 3. _____ | 9. _____ | STATE OF CALIFORNIA | Date Filed SEP 1 8 1995 |
| 4. _____ | 10. _____ | DEPARTMENT OF FORESTRY | Date Approved NOV 1 3 1995 |
| 5. _____ | 11. _____ | AND FIRE PROTECTION | Date Expires NOV 1 2 1998 |
| 6. _____ | 12. _____ | RM-63 (9/94) | Extensions 1) [ ] 2) [ ] |
| FOR ADMIN. USE ONLY | | | FOR ADMIN. USE ONLY |

## SECTION I - GENERAL INFORMATION

This THP conforms with my/our plan and upon approval , I/we agree to conduct harvesting in accordance therewith. Consent is hereby given to the Director of Forestry and Fire Protection, and his or her agents and employees, to enter the premises to inspect timber operations for compliance with the Forest Practice Act and Forest Practice Rules.

1. & 2. TIMBER OWNER(S) AND TIMBERLAND OWNER(S) OF RECORD:

Name Eel River Sawmills
Address 1053 Northwestern Ave.
City Fortuna, CA 95440 Phone: (707) 725-6911

Signature _____ Date 9/6/95

Name: Colin Young
Address 275 Davenport Landing
City Davenport, CA 95017 Phone: (408) 425-3806

Signature _____ Date 8-29-95

3. LICENSED TIMBER OPERATOR(S):

Name: **Unknown**. LTO will be named in a minor amendment prior to operations, but in time for the preoperational meeting.
License #
Address
City State: Zip Code: Phone:

Received CDF
REGION 1
SEP 0 8 1995
RESOURCE MANAGEMENT

4. PLAN SUBMITTER(S):

Name Eel River Sawmills
Address 1053 Northwestern Ave.
City Fortuna, CA 95017 Phone: (707) 725-6911

Signature _____ Date 9/6/95

5. If LTO is not present on-site, list person who is responsible for the conduct of the operation and represents the interests of the LTO.

**Unknown**. Responsible person will be named in a minor amendment, along with the LTO, prior to operations, but in time for the preoperational meeting.

[X] Yes [ ] No Will the timber operator be employed for the construction and maintenance of roads and landings during conduct of timber operations? If no, who is responsible?



Exhibit D

Who is responsible for erosion control maintenance after timber operations have ceased and until certification of the Work Completion Report? Eel River Sawmills.

6. (a) Expected date of commencement of timber operations:
[X] Date of conformance, or [ ] _____ (date)

(b) Expected date of completion of timber operations
[X] 3 years from date of conformance, or [ ] _____ (date)

7. The timber operations will occur within the:

[X] COAST FOREST DISTRICT
[X] Southern Subdistrict of the C.F.D.

[ ] SOUTHERN FOREST DISTRICT
[ ] High use subdistrict of the S.F.D.

[ ] NORTHERN FOREST DISTRICT

[ ] The Tahoe Regional Planning Authority Jurisdiction

[X] A county with Special Regulations, Identify: Santa Cruz
See Addendum Section II.
[ ] Special Treatment Area(s), Identify:

[ ] Other

8. Location of the timber operation by legal description:

Base and Meridian: [X] Mount Diablo, [ ] Humboldt, [ ] San Bernardino

| Sections | Township | Range | Acreage | County | Assessor's Parcel Number's |
|---|---|---|---|---|---|
| 20, 29 | 10S | 2W | 15 | Santa Cruz | 064-201-014 (Eel River) |
| 21,28 | 10S | 2W | 30 | Santa Cruz | 064-201-014 (Eel River) |
| 28 | 10S | 2W | 18 | Santa Cruz | 064-201-014 (Colin Young) |

9. [ ] Yes [X] No Is a Timberland Conversion Permit in effect? If yes, list permit number and date of expiration: _____

10. [ ] Yes [X] No Is there an approved Sustained Yield Plan for this property?
Number _____ Date approved _____

[ ] Yes [X] No Has a Sustained Yield Plan been submitted but not approved?
Number _____ Date approved _____

11. [ ] Yes [X] No Is there a THP or NTMP on file with CDF for any portion of the plan area for which a report of satisfactory stocking has not been issued by CDF?

If yes, identify the THP or NTMP number(s) _____

12. [X] Yes [ ] No Is a Notice of Intent necessary for this THP?

13. RPF preparing the THP:

Stephen R. Staub, RPF # 1911
775 Sunlit Lane
Santa Cruz, CA 95060
(408) 423-6461

(a) [X] Yes [ ] No I have notified the plan submitter(s), in writing, of their responsibilities pursuant to Title 14 CCR 1035 of the Forest Practice Rules.



Exhibit D

[X] Yes [ ] No I have notified the timber owner and the timberland owner of their responsibilities for compliance with the Forest Practice Act and rules, specifically the stocking requirements of the rules and the maintenance of erosion control structures of the rules.

(b) [X] Yes [ ] No I will provide the timber operator with a copy of the approved THP. If "no", who will provide the LTO a copy of the approved THP?

I, or my supervised designee, will meet with the LTO prior to commencement of operations to advise of sensitive conditions and provisions of the plan pursuant to Title 14 CCR 1035.2.

(c) I have the following authority and responsibilities for preparation and administration of the THP and timber operations. (Include both work completed and work to be done): THP preparation, Consultation with pertinent agency officials, and monitoring of operations.

(d) Additional required work requiring an RPF which I do not have the authority or the responsibility to perform: **None**.

(e) After considering the rules of the Board of Forestry and the mitigation measures, I have determined that the timber operation:

[ ] will have a significant adverse impact on the environment. (Statement of reasons fro overriding considerations contained within Section III)

[X] will <u>not</u> have a significant adverse impact on the environment.

Registered Professional Forester: I certify that I, or my designee, personally inspected the THP area, and the plan complies with the Forest Practice Act, the Forest Practice Rules and the Professional Foresters Law.

Signature _____ Date 8/31/95

**Exhibit D**

## SECTION II - PLAN OF TIMBER OPERATIONS

NOTE: If a provision of this THP is proposed that is different than the standard rule, the explanation and justification required must be included in Section III of the THP.

14. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913.11 (933.11, 953.111). If more than one method or treatment will be used, show boundaries on a map and list approximate acreages for each.

[ ] Clearcutting _____ac. [ ] Shltrwd. Prep. Step _____ ac. [ ] Seed Tree Seed Step _____ ac.
[ ] Shltrwd. Seed Step _____ ac. [ ] Seed Tree Rmvl. Step _____ac.
[ ] Shltrwd Rmvl. Step _____ ac.

[X] Selection 63 ac. [ ] Group Selection _____ ac. [ ] Transition _____ ac.
CCR 913.8(a), All THP area classified as Site III, Residual BA of 75 sq. ft.

[ ] Commercial Thinning _____ ac. [ ] Sanitation Salvage _____ ac.
[ ] Special Treatment Area _____ ac. [ ] Rehab. of Understocked Are _____ ac.
[ ] Alternative _____ ac. [ ] Conversion _____ ac.

Total Acreage 63 ac. MSP Chosen a [ ] b [ ] c [X]

a. If Group Selection or more than one method is applied, how will the LTO determine the boundaries of each group on the ground?

b. [ ] Yes [X] No Will even-age regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, units must be designated on a map and listed by size.

c. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked: All conifers will be marked with blue paint, both horizontally at breast height, and with a "stump spot" at ground level. Trees that have been " Xed out" shall be left. Some trees will have additional arrows on them, which generally indicate desired direction of felling.

[ ] Yes [X] No Is a waiver of marking by the RPF requirement requested. If yes, how will the LTO determine which trees will be harvested or retained.

d. Forest Products to be Harvested:

e. [ ] Yes [X] No Are group B species proposed for management?
[ ] Yes [X] No Are group B or non-indigenous A species to be used to meet stocking standards?
If either answer is yes, list the species and provide the LTO with necessary felling guidance.

f. Other instructions to LTO concerning felling operations. See Addendum.

g. [ ] Yes [X] No Will artificial regeneration be required to meet stocking standards?

h. [ ] Yes [X] No Will site preparation be used to meet stocking standards? If yes, provide the information required for site preparation addendum.

## PESTS

15. [ ] Yes [X] No Are there any adverse insect, disease, or pest problems of significance in the THP area? If yes, describe the proposed measures to improve the health, vigor and productivity of the stand(s).



Exhibit D

HARVESTING PRACTICES

16. Indicate the type of yarding system and equipment to be used:

| GROUND BASED* | CABLE | SPECIAL |
|---|---|---|
| a) [X] Tractor, including end/long lining | d) [ ] Cable, ground lead | g) [ ] Animal |
| b) [X] Rubber tired skidder, Forwarder | e) [ ] Cable, high lead | h) [ ] Helicopter |
| c) [ ] Feller buncher | f) [X] Cable, Skyline | i) [ ] Other ____ |

* All tractor operations restrictions apply to ground based equipment.

17. Erosion Hazard Rating: Indicates the Erosion Hazard Ratings present on the THP (must match EHR worksheets).

Low [ ] Moderate [ ] High [X] Extreme [ ]
If more than one rating is checked, areas must be delineated on map to 20 acres in size (10 acres for high and extreme EHR's in the Coast District).

18. Soil Stabilization:
In addition to the standard waterbreak requirements, describe soil stabilization measures or additional erosion control measures to be implemented and the location of their application. **No continuous exposure of more than 800 sq ft of bare soil is expected to occur within Class II WLPZs as a result of timber operations. Should such exposures occur, stabilization required per CCR 916.7 will consist of mulching with at least two inches of straw. See Addendum for additional measures.**

19. [ ] Yes [X] No Are tractor or skidder constructed layouts to be used? If yes, specify the location and extent of use.

20. [X] Yes [ ] No Will ground based equipment be used within the area(s) designated for cable yarding? If yes, specify the location and for what purpose the equipment will be used? **See Addendum and Yarding Methods Map.**

21. Within the THP area will ground based equipment be used on:

| | | | |
|---|---|---|---|
| a) | [X] Yes | [ ] No | Unstable soils or slide areas? |
| b) | [ ] Yes | [X] No | Slopes over 65%? |
| c) | [X] Yes | [ ] No | Slopes over 50% with high or extreme EHR? |
| d) | [ ] Yes | [X] No | Slopes over 50% which lead without flattening to a Class I or Class II watercourse or lake? |

List specific measures to minimize the effects of the use of ground based equipment for each "yes" checked. **See Addendum.**

22. [ ] Yes [X] No Are any alternative practices to the standard harvesting or erosion control rules proposed for this plan? If yes, list specific instructions to the LTO.

WINTER OPERATIONS

23. [X] Yes [ ] No Will timber operations and/or mechanical site preparation occur during the winter period. If yes, explain which activities will take place.

[ ] A winter operating plan is as follows; or
[X] In lieu of a winter operating plan site specific measures to be followed are: **See Addendum.**

ROADS AND LANDINGS

24. [X] Yes [ ] No Will any roads or landings be constructed or reconstructed? If yes, check items a through h:

a. [ ] Yes [X] No Will new roads be wider than single lane with turnouts?



Exhibit D

b. [ ] Yes [X] No Will any landings exceed one half acre in size?

c. [X] Yes [ ] No Are logging roads or landings proposed in areas of unstable soils or known slide-prone areas?

d. [ ] Yes [X] No Will new roads exceed a grade of 15% or have pitches of up to 20 % for distances greater than 500 feet?

e. [ ] Yes [X] No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse?

f. [ ] Yes [X] No Will roads or landings longer than 100 feet in length be located on slopes over 65%, or on slopes over 50%, which are within 100 feet the boundary of a WLPZ?

g. [ ] Yes [X] No Are exceptions proposed for flagging or otherwise identifying the location of roads to be constructed?

h. [ ] Yes [X] No Will any roads, watercourse crossings, or associated landings be a abandoned?

25. If any section in item 24 is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information concerning the construction, maintenance and/or abandonment of roads or landings. **See Addendum.**

WATERCOURSE AND LAKE PROTECTION ZONE (WLPZ) AND DOMESTIC WATER SUPPLY PROTECTION MEASURES

26. [X] Yes [ ] No Are there any watercourses or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, list the class, WLPZ width, and protective measures determined from Table I and/or 14 CCR 916.4 (c) of the WLPZ rules for each watercourse. **See Addendum.**

27. Are site specific practices proposed in-lieu of the following standard WLPZ practices?

a. [X] Yes [ ] No Prohibition of the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows and other wet areas except at prepared crossings.

b. [ ] Yes [X] No Retention of non-commercial vegetation bordering and covering meadows and wet areas?

c. [X] Yes [ ] No Directional felling of trees within the WLPZ away from the watercourse or lake?

d. [ ] Yes [X] No Increase or decrease of width(s) of the WLPZ(s)?

e. [ ] Yes [X] No Protection of watercourses which conduct class IV waters?

f. [ ] Yes [X] No Exclusion of heavy equipment from the WLPZ?

g. [ ] Yes [X] No Retention of 50% of the overstory canopy in the WLPZ?

h. [ ] Yes [X] No Retention of 50% of the understory in the WLPZ?

i. [ ] Yes [X] No Are any additional in-lieu or any alternative practices proposed for watercourse or lake protection?

If any of a. through i. are answered yes, describe and clearly locate the place(s) where the in-lieu or alternative will be used. Reference the in-lieu and location to the watercourse. Provide site specific instructions to the LTO as required. **See Addendum.**



Exhibit D

28. [X] Yes [ ] No Were all landowners within 1000 feet downstream of the THP notified by letter for information regarding domestic water supplies? If no, request exemption in Section III.

[X] Yes [ ] No Was a notice requesting information regarding domestic water supplies published in a newspaper of general circulation in the area? If no, request exemption in Section III.

[ ] Yes [X] No Was any information received on domestic water supplies that required additional mitigation beyond that required by standard Watercourse and Lake Protection rules? If yes, list site specific measures to implemented by the LTO.

29. [ ] Yes [X] No Is any part of the THP within a Sensitive Watershed as designated by the Board of Forestry. If yes, identify the watershed and list any special rules, operating procedures or mitigation that will be used to protect the resources identified at risk?

HAZARD REDUCTION

30. [X] Yes [] No Are there roads or improvements which require slash treatment adjacent to them? If yes, specify the type of improvement, treatment distance and treatment method.

31. If piling and burning is to be used for hazard reduction, who will be responsible for compliance? **Not used.**
[ ] LTO [ ] Timberland Owner [ ] Timber Owner - If more than one, specify extent of responsibility.

BIOLOGICAL RESOURCES

32. [ ] Yes [X] No Are any listed species, including there habitat, associated with the THP area? If yes, identify the species and the provisions to be taken for the protection of the species. **See Addendum.**

33. [ ] Yes [X] No Are there any snags which must be felled for fire protection or safety reasons? If yes, describe which snags are going to be felled and why.

34. [ ] Yes [X] No Are any Late Successional Forest Stands proposed for harvest? If yes, describe the measures to be implemented by the LTO that avoid long-term significant adverse effects on fish , wildlife and listed species known to be primarily associated with late succession forests. **See Addendum.**

35. [ ] Yes [X] No Are any other provisions for wildlife protection required by the rules? If yes, describe.

36. a. [X] Yes [ ] No Has an archaeological survey been made of the THP area?

b. [X] Yes [ ] No Has an archaeological records check been conducted for the THP area?

c. [ ] Yes [X] No Are there any archaeological or historical sites located in the THP area? If yes, protection measures are described in Section V of the THP.

37. [ ] Yes [X] No Has any inventory or growth and yield information designated "trade secret" been submitted in a separate confidential envelope with this THP.

38. Describe any special instructions or constraints which are not listed elsewhere in Section II. **See Addendum.**



**Exhibit D**

DIRECTOR OF FORESTRY AND FIRE PROTECTION

This Timber Harvest Plan conforms to the rules and regulations of the Board of Forestry and the Forest Practices Act:

By: _____ 11/13/95
(Signature) (Date)

Thomas P Osipowich Deputy Chief, Forest Practice
(Printed Name) (Title)



Exhibit D

**EEL RIVER/YOUNG THP Operational Instructions:**

7. **Special Rules of Santa Cruz County.**

926.1 - The RPF and his designee will work closely with the LTO as required by this section to assure compliance with all provisions of the THP and forest practice rules.
926.2 - A pre-operational meeting will be held with the operator prior to commercial operations.
926.6 - Public water purveyors have been notified and Bill O'Brien, a representative of Citizens Utility, has called asking to be notified of and participate in public hearings. Citzens Utility water lines have been flagged in the field.
926.9 - Hours of Work: The operation of chainsaws and other power-driven saw equipment shall be restricted to the hours between 7 AM and 9 PM, and shall be prohibited on Sundays and nationally designated legal holidays. The operation of all other power equipment, except licensed highway vehicles, within 300' of an occupied dwelling shall be restricted to the hours between 6 AM and 9 PM, and shall be prohibited on Sundays and nationally designated legal holidays. **An exception to standard work hours is requested:** Saturday operations, except log hauling, may occur from 9 AM to 5 PM in all parts of the Eel River property that are more than 300' from occupied dwellings. Chainsaw operations are contingent upon receiving no significant complaints from the public. **Justification:** The Eel River portion of this plan is well removed from all but one dwelling located on the Erickson property, and it is well over 300' away. Operations in the locations and hours proposed will not cause noise significantly different from residential maintenance activities and quarry operations routine in the area while allowing the operation to be completed up to two weeks earlier than it could if no weekend operations were permitted.
926.10 - "Caution Logging Truck" or comparable signs will be posted visible to both directions of traffic on San Lorenzo Ave, within 500 feet of the truck road junction with San Lorenzo Ave.
926.11 - Property boundaries are flagged in pink and sometimes include a strip of blue flagging. The pink and blue flagging represents a recent survey of the Eel River piece, and shall be left in place.
926.14 - Biotic Resources: See Addenda 32 and 34.
926.16 -All constructed roads, landings and skid trails will be flagged prior to the pre-harvest inspection.

14. (c) **Marking**. All conifers will be marked with blue paint, both horizontally at breast height, and with a "stump spot" at ground level. Trees that have been " Xed out" shall be left. Some trees will have additional arrows on them, which generally indicate desired direction of felling.

(f) **Felling Practices**. Faller shall make every effort to fall trees towards designated skid trails, while minimizing damage to residual trees. In areas where "cable only" operations are proposed, faller shall make every attempt to fall trees towards designated yarder corridors to ensure reachability, and minimize ground disturbance from side-pull. In areas designated as "long-line only", felling must be directed at flagged skid trails, as these trails are often the only accessible areas from which to yard logs.

Several large Douglas-fir trees and a few redwoods found within the WLPZ of Shinglemill Creek (mainly on the Young property, south of Shinglemill Creek) will require rigging to ensure that they remain on the slope after being felled. The RPF or his designee evaluate the potential need for rigging and indicate such need by painting "PULL" on the individual "pull trees". It is the faller's responsibility to alert the LTO when rigging is required, and the LTO's responsibility to provide the necessary men and equipment. Note: Specific instructions regarding the in-lieu practice for cross-felling within the WLPZ is discussed in #27 (c) below.

18. **Soil Stabilization. (Text Reference & Operations Map)**

The proposed skid trail **A** along the ridgeline will be waterbarred at 75' intervals. The trail will be packed with slash when slopes exceed 45%.

The proposed skid trail **B2** will be waterbarred at 100' intervals and tractor packed with slash when within 50' of the adjacent Class III. If slash is unavailable, the trail will be mulched with straw.

The existing skid trail **C** will be waterbarred at 75' intervals along its length and tractor packed with slash for the last 150' before crossing **X1**. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.





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The proposed skid trail D will be waterbarred at 75' intervals along its length and packed with slash for the last 150' before intersecting the tractor trail between X2 and X 3. If slash is unavailable, the trail will be mulched with straw.

The proposed skid trail E shall be packed with slash along its length (both above and below the intersecting truck road). If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed skid trail F shall be waterbarred at 75' intervals and packed with slash. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed skid trail G shall be waterbarred at 75' intervals and packed with slash. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed ridge trail H will be waterbarred at 75 intervals and packed with slash when slopes exceed 45%.

The proposed skid trail I shall be packed with slash when located in the swale bottom and otherwise waterbarred at standard intervals (see #26 below) . If slash is unavailable, the trail will be mulched with straw.

When operating near the slide at J , the operator shall keep the blade up at all times. Following operations, all skid trails will be waterbarred at standard intervals and packed with slash for the last 100' before entering onto the Existing Seasonal Road, near Landing 5.

The existing skid trail K shall only be used to skid logs up the hill to the midslope landing and not down towards the Citizens Utility water tank. All skid trails and roads will assume standard High EHR waterbar intervals (see #26 below).

Additional mulching or seeding may be required at the request of the RPF or his designee.

All of the aforementioned erosion control measures shall be installed immediately following completion of operations or as prescribed in-lieu of a winter operating plan (see #23 below)

20. **Tractor Bunch.** All areas north of the main Class II (Shinglemill Creek) are "tractor bunch", unless such areas have been listed as "cable only", "long-line only", or are within the WLPZ of Class II watercourses. Tractor bunching shall not be used in areas where skyline cable yarding is a less impacting alternative. Where skyline operations arte not feasible or would cause excessive disturbance, logs north of Shinglemill Creek will be skidded to locations favorable for skylined yarding (primarily designated as Tractor Bunch Landings) to the southern ridge. The attached Yarding Methods Map designates yarding methods as well as areas of equipment exclusion. Standard WLPZ and wet area exclusion remain in effect and shall be flagged prior to the pre-harvest inspection. All other rules and regulations regarding ground-based equipment operations shall be observed.

21. (a) **Ground based equipment on unstable soils** Incidental encroachment onto the ancient slide mass between skid trails I and J is necessary to avoid damaging residual trees, and eliminate the need for excessive construction on steep slopes above the slide. The area appears completely stabilized and shows no sign of recent activity. When operating in this area, the tractor or skidder blade shall remain up. Construction is unnecessary.

(c) 50% with High EHR

Portions of skid trail D exceed 50% slopes. There is little or no need for construction. The proposed trail will be waterbarred at 75' intervals along its length and packed with slash and/or mulched with straw for the last 150' before intersecting the tractor trail between X2 and X 3.

Portions of skid trail G exceed 50% slopes. These 50%+ pitches are relatively short (15'-20'), and occur in an area of fairly gentle terrain, where slopes average between 35 and 40%. There is little or no need for construction. The trail will be waterbarred at 75' intervals and packed with slash and/or straw along its length.

Portions of Y P 1 require construction on slopes over 50%. The pad is situated just off of the main ridgeline and is the uppermost of all the yarder pads. Construction will be of minimum size compatible with yarder placement



Exhibit D

(approximately18' X 20'). Berm logs, as diagramed in the geologic report, shall be placed below each of the yarder pads to prevent downslope migration of dirt. Fill shall be placed no steeper than a 1.5:1 slope to a maximum thickness of 3'. Cutslopes shall be no steeper than 0.5:1. Upon completion of operations, straw (4") shall be placed on all bare soils and fill slopes of the yarder pad.

The downslope portion of **YP3** requires construction on slopes over 50%. The pad is situated just off of the main ridgeline, above the westermost landing. Construction will be of minimum size compatible with yarder placement (approximately 18' X 20'). Berm logs, as diagramed in the geologic report, shall be placed below each of the yarder pads to prevent downslope migration of dirt. Fill shall be placed no steeper than a 1.5:1 slope to a maximum thickness of 3'. Cutslopes shall be no steeper than 0.5:1. Upon completion of operations, straw (4") shall be placed on all bare soils and fill slopes of the yarder pad.

23. Winter period operations in compliance with CCR 914.7(c) are proposed for the THP: 1) Operations of all types shall not extend beyond **November 15 or 4 inches** of cummulative rainfall, whichever comes first. 2) No road construction shall occur after October 15, and hand dug waterbars/or rolling dips shall be installed on all constructed skid trails and truck roads when operating beyond October 15. 3) Site specific WLPZ and unstable area protection per CCR 914.7(c)(3) is provided by eliminating equipment operations within the WLPZ (other than skyline cable yarding), not allowing tractor operations on the north of Shinglemill Creek after October 15, requiring all crossings (Class II and Class III) to be removed by October 15, allowing only one skid trail serving one landing to be open at any one time, and making log hauling operations entirely subject to CDF approval during extended fall conditions only (i.e., CDF inspectors may shut operations down at any time during the winter period when in their judgment soil conditions are sufficiently wet that problems might occur). Except for dry fall operations as described above, winter period operations shall be limited to felling outside the WLPZ, lopping and maintenance of erosion control measures. **NOTE:** All water breaks and rolling dips must be installed by October 15 or as prescribed above.

24. (c) **Roads in areas of unstable soils.** The only proposed seasonal road on the plan begins in an area which shows evidence of minor instability. The area has been identified and discussed above in #21 (a) above, and further in the attached geologic report. Provided that the recommendations within the geologic report are followed, it is unlikely that road construction will contribute to or result in additional instability.



26. **Watercourses.**

**CROSSINGS**

There are four crossings on this plan. Three of the crossings (**X1, X2,** and **X3**) occur within the same general area hereafter known as Text Reference **N.** The fourth crossing is located within the tractor bunch area and has been labelled **X4.** All of the crossings are existing and temporary in nature. As indicated on the attached schematic map labelled Text Reference Point **N,** crossings X1, X2, and X3 will only serve as unladen equipment access crossings. **No logs will be skidded across these crossings.** Crossing X4, however, is within the tractor bunch area and will have some tractor traffic. The crossings are proposed as follows:

**X1 Description**: Existing temporary crossing of a tiny Class II watercourse. There is no defined channel for this crossing. Water trickles over an old existing trail, and hasn't resulted in significant downcutting. The extended seasonal seep which supplies this watercourse flows some years, and remains dry in others. **Practice:** To preserve water quality and ensure the continued flow of water, operator shall first line the crossing with small logs or hay bales and then span the flow with beams or logs and cross atop said structures. If it appears that crossing is interrupting the flow of water or continually decreasing water quality, the beams or logs shall be removed immediately following crossing. If the flow appears unaffected, the crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.



**X2 Description**: Existing temporary crossing of a Class III watercourse. There is very little in the way of a defined channel. Periodic flow occurs during peak rainfall periods. **Practice:** Prior to crossing this small Class III, the crossing shall be lined with small logs or hay bales overlain with beams or logs. The crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.

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**X3 Description**: Existing temporary crossing of a Class II watercourse. There is a small channel (1.5' deep, 2.5' wide) which crosses the existing trail. Flow is minimal, and is expected to be nearly dry by late September. **Practice**: To preserve water quality and ensure the continued flow of water, operator shall first line the crossing with small logs or hay bales and then span the flow with beams or logs and cross atop said structures. If it appears that crossing is interrupting the flow of water or continually decreasing water quality, the beams or logs shall be removed immediately following crossing. If the flow appears unaffected, the crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.

**X4 Description**: Existing temporary crossing of a Class II watercourse. There is a small channel (1' wide, 1' deep) which crosses the existing trail. Flow is minimal, and is expected to be nearly dry by late September. **Practice**: To preserve water quality and ensure the continued flow of water, operator shall first line the crossing with small logs or hay bales and then span the flow with beams or logs and cross atop said structures. If it appears that crossing is interrupting the flow of water or continually decreasing water quality, the beams or logs shall be removed immediately following crossing. If the flow appears unaffected, the crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.



**WLPZ**



The minimum WLPZ widths vary with **Class II watercourses** relative to the average slope as follows:

| **<30% slope** | **30 - 50% slope** | **>50% slope** |
|---|---|---|
| **50 feet** | **75 feet** | **100 feet.** |

Protection measures:

**Class II Watercourses**

1) The Class II WLPZs will be flagged prior to the start of timber operations.
2) All trees to be cut within the WLPZ will be marked in advance with a horizontal stripe and a "stump spot" at ground level.
3) At least 50% of the total canopy shall be left in a well distributed, multi-storied stand composed of a diversity of species similar to that found prior to the start of operations. The residual overstory canopy will be composed of at least 25% of the existing overstory conifers.
4) No equipment will be operated within the WLPZ, except at approved crossings or tractor trails.

**Class III Watercourses**

1) Harvest trees within 25 feet of Class III watercourses will be marked by the RPF or his designee prior to commencement of operations in those areas in order to ensure retention of filter strip properties and maintain soil stability of the zone.
2) At least 50% of the understory vegetation present before timber operations shall be left living and well distributed adjoining Class III watercourses.
3) No equipment will be operated within Class III watercourses other than crossings listed on the Operations Map. Any soil deposited in a Class III watercourse shall be removed and debris removed or stabilized before the conclusion of timber operations or before October 15th, whichever comes first.

27. (a) **Tractor Roads in the WLPZ.** The existing skid trial which crosses at **X1, X2** and **X3** and then continues eastward, falls within the WLPZ of Shinglemill Creek (Class II) for a length of 150'. However, it should be noted that there are two existing trails, and that the proposed route avoids the section of trail which runs closer to Shinglemill Creek. This trail is not intended for skidding of logs, and is only an access route into the tractor bunch area. Operations within the WLPZ shall be limited to removal of debris or other material which impedes passage. Any disturbed soil within the WLPZ shall be stabilized, and grouser divots replaced and/or straw mulched immediately upon completion of operations and prior to the winter period.

Proposed skid trail **D** begins in the WLPZ's of both of the Class II watercourses at Text Reference **N.** Other than minor brush clearance, there will be little if any dirt movement necessary to access the ridge. The tractor will not be operated within the WLPZ for skidding logs. The proposed trail will be waterbarred at 75' intervals along its length and packed with slash and/or mulched with straw for the last 150' before entering the crossing at

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**X3**. Again, the need for construction is extremely low, and will probably only require the removal of several small tan oak trees.

(c) This plan proposes an in-lieu practice which would allow the felling of approximtely 15 trees in both directions across Shinglemill Creek (Class II). The area is mapped as Text Reference **L**. Cross-felled trees have been marked by the RPF or his designee, only where channel impacts are expected to be minimal. LTO shall not cross fall trees if channel impacts cannot be avoided. **No cross-felling shall be done without equipment on-site, and shall not occur during the winter period.**

30. **Hazard reduction**.

All woody debris greater than one inch but less than eight inches in diameter created by timber operations shall be removed when located within 100 feet of a permanently located structure maintained for human habitation.

All woody debris greater than one inch but less than eight inches in diameter created by timber operations shall be lopped to within 12" of the ground surface when located within 200 feet of a permanently located structure maintained for human habitation.

All other debris created by the proposed operations shall be lopped to within 30" of the ground surface.

38. **Special Instructions.**

1. Construction of Yarder Pads: Each Yarder Pad has been assigned a YP #. There will be approximately seven yarder pads located along the southern ridegeline of this plan (YP1-YP7), each having varying degrees of construction. In no case will construction exceed that necessary for placement of the yarder (18' X 20'). During active yarder operations, incoming logs will be removed as they are yarded, eliminating the need for a decking area. Construction of **YP1** and **YP3** will follow the guidelines discussed in 21 (c) above.

2. When operating in areas north of Shinglemill Creek, tractor bunching shall be restricted to areas where skyline cable yarding is impractical due to blind leads or other constraints such as topography. **Limit bunching activities as much as possible.**

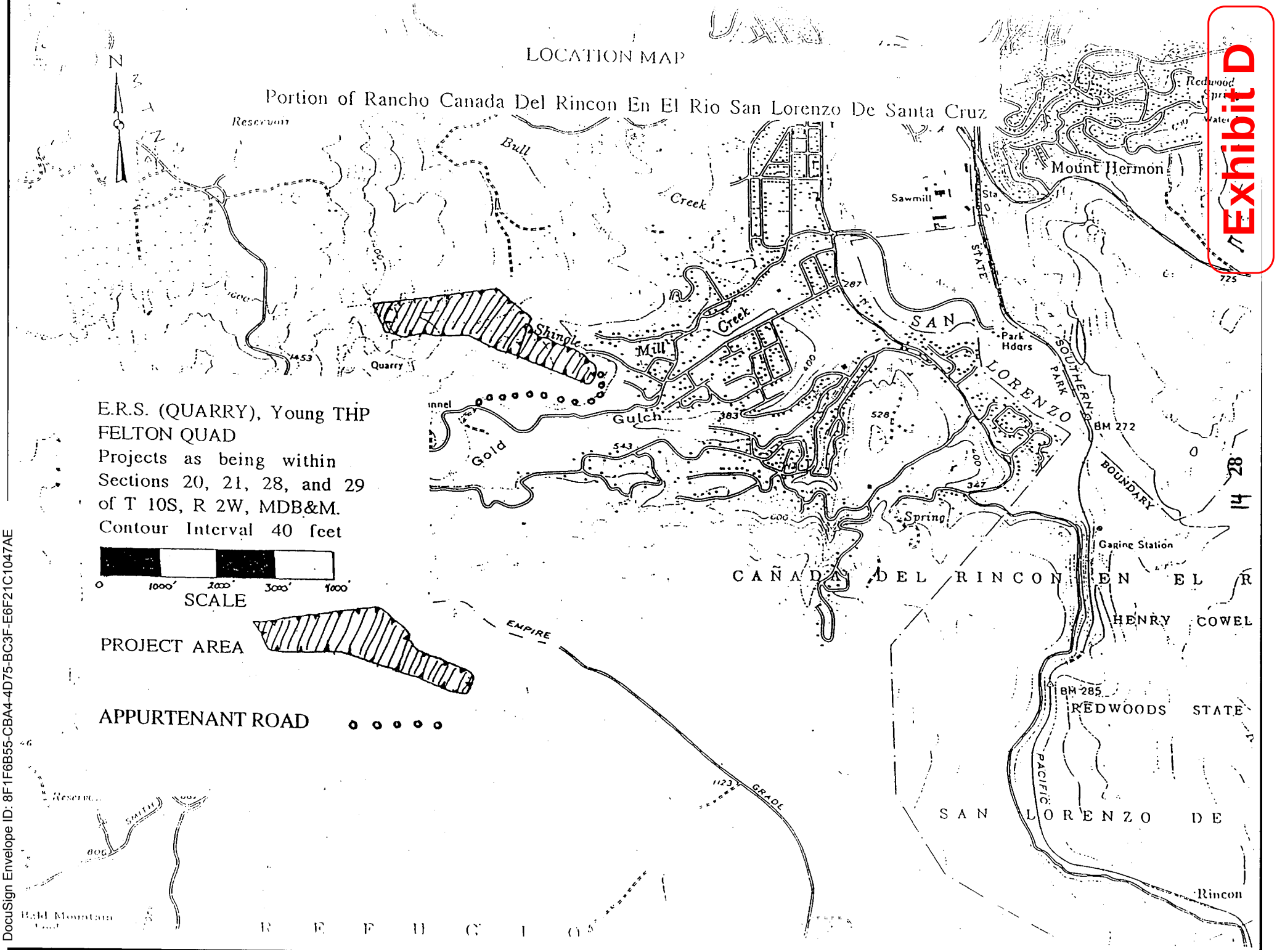
3. When operating near the water tank at the easternmost portion of the plan (Young property), use caution to ensure it remains undamaged. It is an active tank of Citizens Utility, and serves much of the neighborhood below it.

4. When operating along the ridgeline where the common property line is shared with the Quarry, ensure that equipment operations remain north of the recently surveyed line which approximates the centerline of the ridge.

5. The skid trail **D** will not be used as mainline skid. Its primary purpose is to access "bunch" areas that are inaccessible to the skyline cable. Tractors shalll not be operated within the WLPZ to skid logs along this trail.

6. **Prior to construction of YP1, YP3, and the proposed seasonal road**, the person responsible for constructing these features shall meet with Tim Best, Geologic Engineer, and go over construction specifications. Mr. Best will not necessarily be on-site during the actual construction of the road.

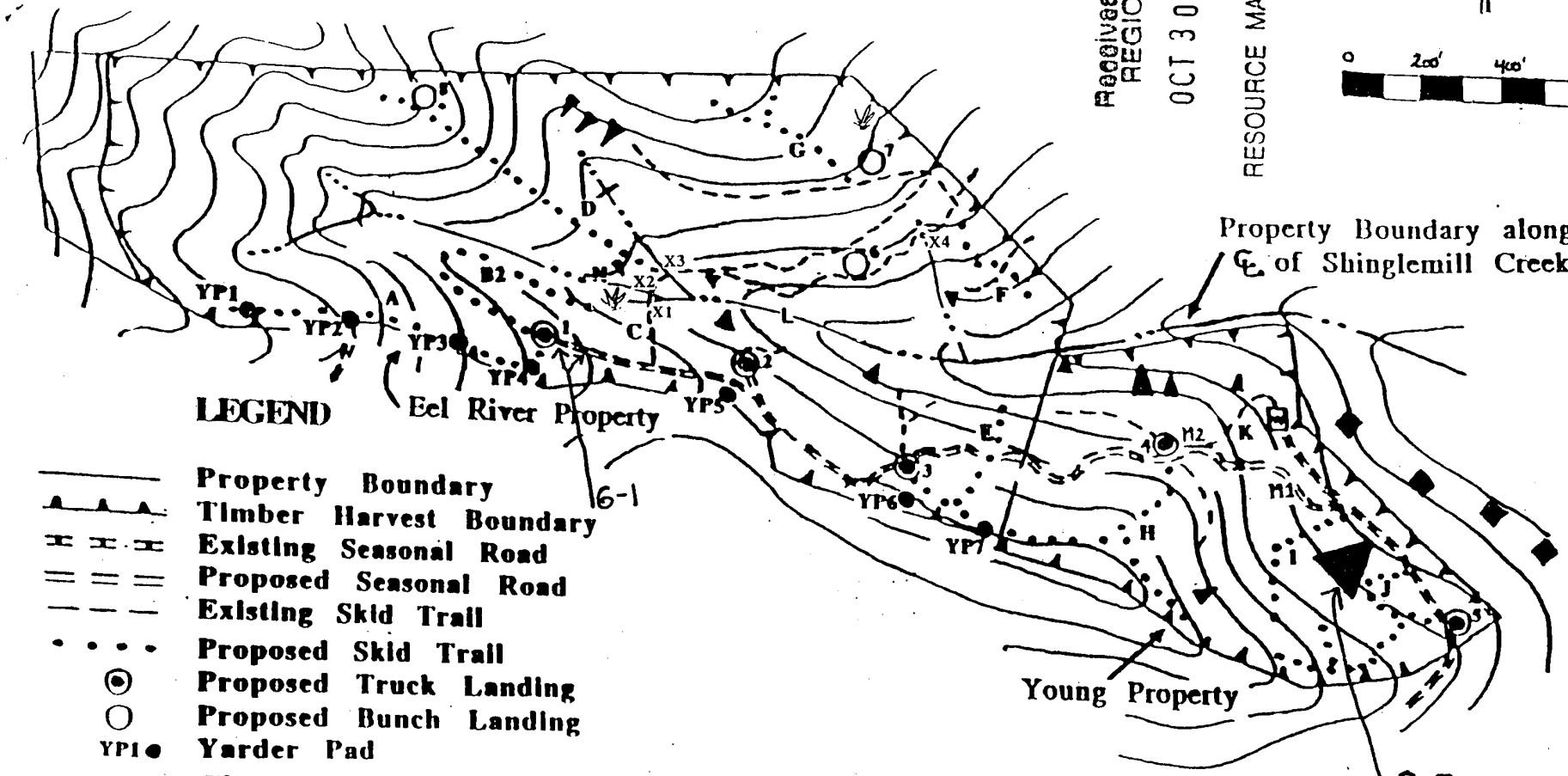
7. Text Reference **N**, and its associated schematic map is designed to clarify the extent of operations above crossings X1, X2 and X3. Equipment shall remain on the proposed skid trails in this area, effectively making all areas off of the proposed skid trail an equipment exclusion zone. Variances of the proposed alignment may be allowed only after receiving approval of the RPF or his designee. Exclusion areas will be flagged prior to commencement of operations.



EEL RIVER/YOUNG THP

TEXT REFERENCE & OPERATIONS MAP






LEGEND

- Property Boundary
- Timber Harvest Boundary
- Existing Seasonal Road
- Proposed Seasonal Road
- Existing Skid Trail
- Proposed Skid Trail
- Proposed Truck Landing
- Proposed Bunch Landing
- YP1 Yarder Pad
- Class II Watercourse
- Class III watercourse
- Wet Area
- Water Tank
- Slide
- A Text Reference
- X1 Watercourse Crossing
- HOMES

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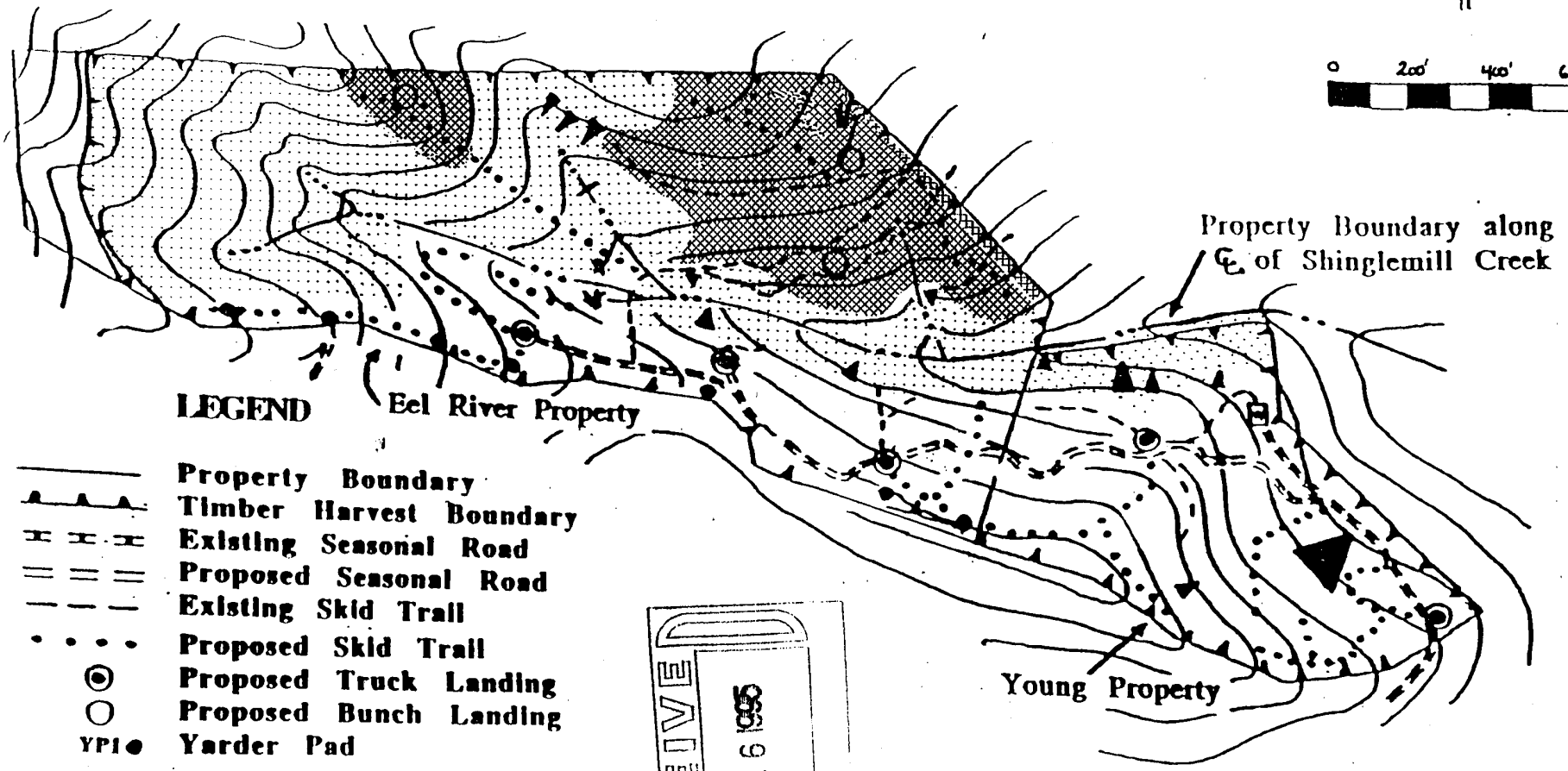
Exhibit D

EEL RIVER/YOUNG THP YARDING METHODS MAP




**LEGEND**

- Property Boundary
- Timber Harvest Boundary
- Existing Seasonal Road
- Proposed Seasonal Road
- Existing Skid Trail
- Proposed Skid Trail
- Proposed Truck Landing
- Proposed Bunch Landing
- YP1 Yarder Pad
- Class II Watercourse
- Class III watercourse
- Wet Area
- Water Tank
- Slide

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**LEGEND**

- Long-line/Cable only
- Tractor Bunch
- Tractor/Skidder

Received CDF REGION 1 OCT 30 1995 RESOURCE MANAGEMENT

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# SCHEMATIC FOR TEXT REFERENCE N

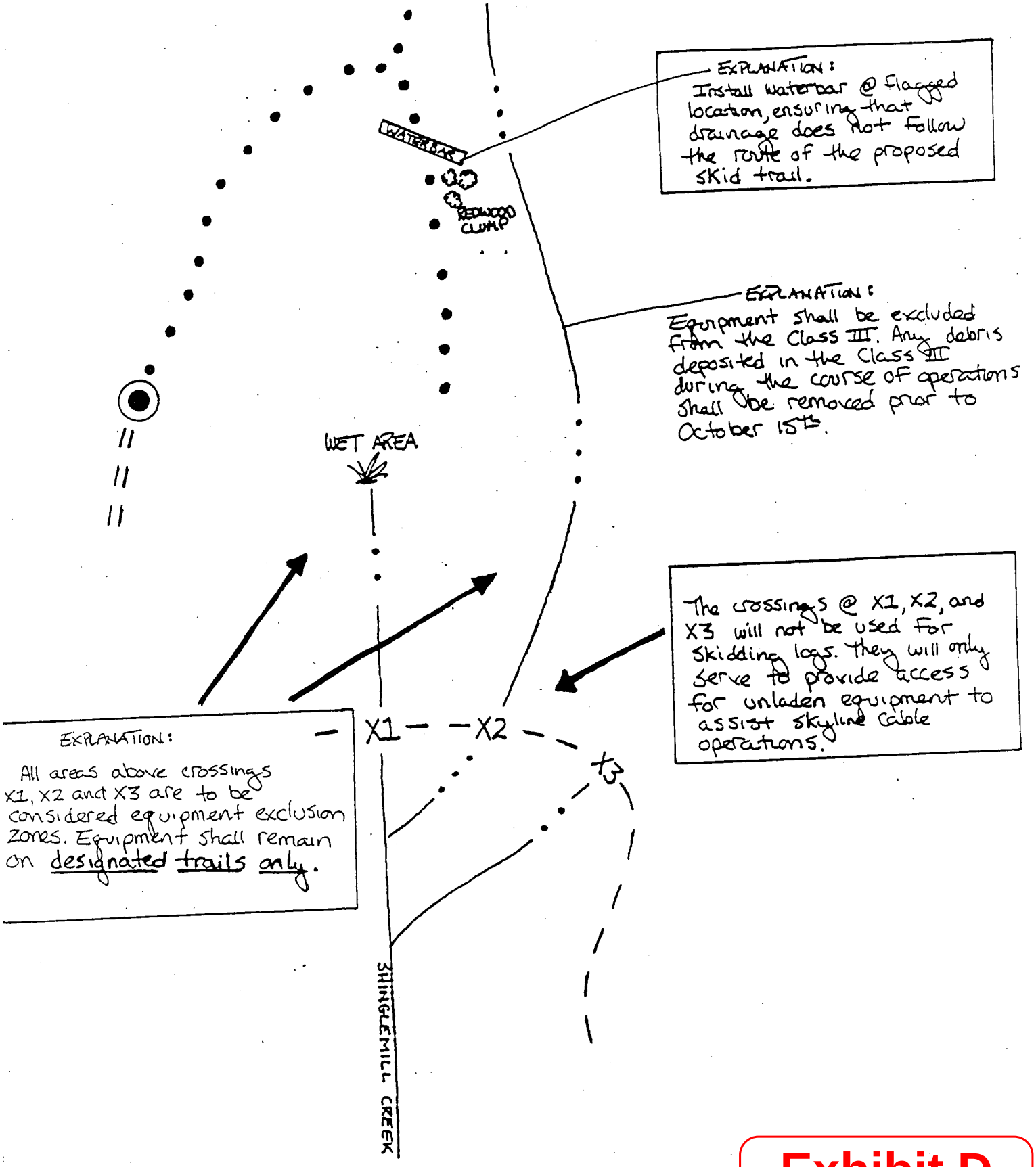


Exhibit D

## SECTION III - RPF ELABORATION

**General Description of the THP Project area and Watershed as per CCR 1034(jj)**

The THP area consists of approximately 40 acres of redwood dominated forest mixed with hardwoods, principally tanoak, madrone, and live oak with minor amounts of maple and bay laurel and approximately 23 acres of Douglas-fir dominated forest with an understory dominated by tan oak. The majority of the second growth forest is roughly 100 years old, but appears to have had an entry some time in the 1950's focused mainly on removal of Douglas-fir trees. The overall conifer component is weighted towards redwood although much of the area south of Shinglemill Creek is dominated by Douglas-fir. In general, hardwood percentage increases as you move up and away from Shinglemill Creek.

The redwood stand is almost entirely second growth sprouts resulting from turn of the century clearcutting. The Douglas-fir seems to have resulted from competitive advantage following clearcutting. This harvest is designed to promote a healthy, all-aged pattern of growth in the redwood stand by selecting dominant and co-dominant as well as deformed and diseased trees to encourage sprouting, generate spacing, and release smaller, understory conifers. The majority of the Douglas-fir being removed is inflicted with conk. The primary goal in the Douglas-fir dominated stands is to removed deformed and diseased trees and to release and thin some of the smaller, more healthy trees. At the same time, we will try and maintain a portion of the more sound large tree component and leave some large, unmerchantable trees for wildlife habitat.

Soils in the harvest area are loams and sandy loams derived primarily from quartz diorite. The soils are considered productive timberland soils. Erosion hazard is high. The topography is generally steep, but the plan area also contains several large, moderately sloped bowls near the ridgetops on either side of Shinglemill Creek, and a 2-3 acre flat at the terminus of the main Class II watercourse (Shinglemill Creek). Cooper-Clark and Associates (1975) mapped a large questionable landslide in the area which coincides with the large mapped slide located near the eastern edge of the Young property. This, and all of the larger, more recent slides have been located on all of the plan maps. Many of the slides along the inner gorge are unmapped beacause they will not be affected by equipment operations or are extremely minor features associated with downcutting of the stream channel. Elevation ranges from 1300 feet at the uppermost yarder pad to 600 feet in bottom of Shinglemill Creek at the eastern border of the property.

No fish or fish habitat occur in or immediately adjacent to the harvest area. There are no in-stream water users within 1000' downstream of the plan boundary, but there is a Citizens Utility holding tank located near the eastern boundary of the Young property. The harvest area is within the Shinglemill Gulch drainage, which is tributary to the San Lorenzo River. The Class II watercourses are deeply incised and have a high boulder and cobble component as a result of the surrounding quartz diorite parent material. In stream sandy sediments occur at least partially as a result of minor inner gorge landslide activity.

The area immediately south and west of the property is within the Gold Gulch drainage, and is owned in part by the Felton Quarry, the remainder being previously harvested portions of the Young property. Lands to the north of the property are owned entirely by the Erickson family and remain as uncut, second growth redwood. All areas east of the project area are various subdivisions comprising the outskirts of Felton.



**EEL RIVER/YOUNG THP ADDENDA:**

7. **Special Rules of Santa Cruz County.**

926.1 - The RPF and his designee will work closely with the LTO as required by this section to assure compliance with all provisions of the THP and forest practice rules.
926.2 - A pre-operational meeting will be held with the operator prior to commercial operations.
926.6 - Public water purveyors have been notified and Bill O'Brien, a representative of Citizens Utility, has called asking to be notified of and participate in public hearings.
926.9 - Hours of Work: **An exception to standard work hours is requested:** Saturday operations, except log hauling, may occur from 9 AM to 5 PM in all parts of the Eel River property that are more than 300' from occupied dwellings. Chainsaw operations are contingent upon receiving no significant complaints from the public. **Justification:** The Eel River portion of this plan is well removed from all but one dwelling located on the Erickson property, and even it is well over 300' away. Operations in the locations and hours proposed will not cause noise significantly different from residential maintenance activities and quarry operations routine in the area while allowing the operation to be completed up to two weeks earlier than it could if no weekend operations were permitted.



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926.10 - "Caution Logging Truck" or comparable signs will be posted visible to both directions of traffic on San Lorenzo Ave, within 500 feet of the appurtenant seasonal road junction with San Lorenzo Ave.
926.11 - Property boundaries are flagged in pink and sometimes include a strip of blue flagging. The pink and blue flagging represents a recent survey of the Eel River piece, and shall be left in place.
926.14 - Biotic Resources: See Addenda #32 and #34.
926.16 - All constructed roads, landings and skid trails will be flagged prior to commencement of operations.

14. (c) **Marking**. All conifers will be marked with blue paint, both horizontally at breast height, and with a "stump spot" at ground level. Trees that have been " Xed out" shall be left. Some trees will have additional arrows on them, which generally indicate desired direction of felling, and some may have the word "PULL" on them indicating the potential need for rigging.

(f) **Felling Practices**. Faller shall make every effort to fall trees towards designated skid trails, while minimizing damage to residual trees. In areas where "cable only" operations are proposed, faller shall make every attempt to fall trees towards designated yarder corridors to ensure reachability, and minimize ground disturbance from side-pull. In areas designated as "long-line only", felling must be directed at flagged skid trails, as these trails are often the only accessible areas from which to yard logs.

Several large Douglas-fir trees and a few redwoods found within the WLPZ of Shinglemill Creek (mainly on the Young property, south of Shinglemill Creek) will require rigging to ensure that they remain on the slope after being felled. The RPF or his designee shall evaluate the potential need for rigging and indicate such need by painting "PULL" on the individual "pull trees". It is the faller's responsibility to alert the LTO when rigging is required, and the LTO's responsibility to provide the necessary men and equipment. Note: In-lieu practice for cross-felling within the WLPZ is discussed in #27 (c) below.

18. **Soil Stabilization. (Text Reference & Operations Map)**



The following stabilization measures are more stringent and offer more protection than that which is provided for in the standard rules. Therefore, there is no additional explanantion necessary.

The proposed skid trail **A** along the ridgeline will be waterbarred at 75' intervals. The trail will be packed with slash when slopes exceed 45%.

The proposed skid trail **B2** will be waterbarred at 100' intervals and tractor packed with slash when within 50' of the adjacent Class III. If slash is unavailable, the trail will be mulched with straw.

The existing skid trail **C** will be waterbarred at 75' intervals along its length and tractor packed with slash for the last 150' before entering the crossing at **X1**. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and overlain with straw.

The proposed skid trail **D** will be waterbarred at 75' intervals along its length and packed with slash for the last 150' before intersecting the tractor trail between **X2** and **X3**. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed skid trail **E** shall be packed with slash along its length (both above and below the intersecting truck road). If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed skid trail **F** shall be waterbarred at 75' intervals and packed with slash. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed skid trail **G** shall be waterbarred at 75' intervals and packed with slash. If slash is unavailable, the trail will be seeded with Santa Cruz erosion control mix and mulched with straw.

The proposed ridge trail **H** will be waterbarred at 75 intervals and packed with slash when slopes exceed 45%.

The proposed skid trail **I** shall be packed with slash when located in the swale bottom and otherwise waterbarred at standard intervals (see #26 below) . If slash is unavailable, the trail will be mulched with straw.



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When operating near the slide at J, the operator shall keep the blade up at all times. Following operations, all skid trails will be waterbarred at standard intervals and packed with slash for the last 100' before entering onto the Existing Seasonal Road, near Landing 5.

The existing skid trail K shall only be used to skid logs up the hill to the midslope landing and not down towards the Citizens Utility water tank. All skid trails and roads will assume standard High EHR waterbar intervals (see #26 below).

Additional mulching or seeding may be required at the request of the RPF or his designee.

All of the aforementioned erosion control measures shall be installed immediately following completion of operations or as prescribed in-lieu of a winter operating plan (see #23 below)

20. **Tractor Bunch. Explanantion:** All areas north of the main Class II (Shinglemill Creek) are "tractor bunch", unless such areas have been designated as "cable only", "long-line only", or are within the WLPZ of Class II watercourses. Tractor bunching shall not be used in areas where skyline cable yarding is a less impacting alternative. Where skyline operations are not feasible or would cause excessive disturbance, logs north of Shinglemill Creek will be skidded to locations favorable for syline yarding (primarily designated as Tractor Bunch Landings) to the southern ridge. The attached Yarding Methods Map designates yarding methods as well as areas of equipment exclusion. Standard WLPZ and wet area protection measures remain in effect and shall be flagged prior to the pre-harvest inspection. All other rules and regulations regarding ground-based equipment shall also be observed. **Justification:** Tractor bunch operations are proposed because they often provide a lower impact alternative in areas where inadequate deflection and awkward sidepulls make skyline cable operations unappealing. And, in some areas, tractor bunching provides the only means of reaching several pockets of timber. Tractor access is available to most of these areas over existing roads and trails with minimal impact.

21. (a) **Ground based equipment on unstable soils. Explanantion:** There may be incidental encroachment onto the ancient slide mass between skid trails I and J. When operating in this area, the tractor or skidder blade shall remain up. Construction is unnecessary. **Justification:** The ancient slide mass is completely stabilized and shows no sign of recent activity. It was reviewed in the field by geologist Tim Best with similar findings. Tractor operations in this area are necessary to avoid damageing residual trees, and eliminate the need for excessive construction on steep slopes above the slide.

(c) 50% with High EHR.

**Explanantion:** Portions of skid trail D exceed 50% slopes. There is little or no need for construction. The proposed trail will be waterbarred at 75' intervals along its length and packed with slash and/or mulched with straw for the last 150' before intersecting the tractor trail between X2 and X3. **Justification:** Skid trail D provides the best access to a prime bunching area where skyline cable alone is ineffective due to poor deflection and blind leads. The trail is not intended for skidding logs. Adherence to the standard forest practice rules, and application of the soil stabilization measures outlined in #18 above will minimize the potential for adverse impacts. Again, the need for construction is extremely low, and will probably only require the removal of several small tan oak trees.

**Explanantion:** Portions of skid trail G exceed 50% slopes. These pitches are relatively short (15'-20'), and occur in an area of fairly gentle slopes, where slopes average between 35 and 40%. There is little or no need for construction. The trail will be waterbarred at 75' intervals and packed with slash and/or straw along its length. **Justification:** Skid trail G provides the best access to a ridgeline flat and a small sidedraw where skyline cable alone is ineffective due to poor deflection and blind leads. Adherence to the standard forest practice rules, and application of the soil stabilization measures outlined in #18 above will minimize the potential for adverse impacts. Again, the need for construction is extremely low, and will probably only require the removal of several small tan oak trees.

**Explanantion:** Part of YP1 requires construction on slopes over 50%. The pad is situated just off of the main ridgeline and is the uppermost of all the yarder pads. Construction will be of minimum size compatible with yarder placement (18' X 20'). Berm logs, as diagramed in the geologic report, shall be placed below each of the yarder pads to prevent downslope migration of dirt. Fill shall be placed no steeper than a 1.5:1 slope to a maximum thickness of 3'. Cutslopes shall be no steeper than 0.5:1. Straw (4") shall be placed on all bare soils



Exhibit D

and fill slopes of the yarder pad upon completion of operations. **Justification:** YP1 provides the deflection necessary to skyline cable yard the upper sections of the Eel River property. Skyling this area, rather than using ground-based equipment eliminates the need for construction on steep slopes and prevents unnecesasary disturbance of the Class III watercourses associated with the upper canyon. A request to extend part of the pad onto more moderate ground along the center of the ridge was denied by the adjacent landowner (see letter in Section VI), so the pad was placed on the most reasonable ground considering property line constriants, i.e. the ceterline of the ridge. Geologist Tim Best will be on-site to go over construction specifications prior to commencement of operations. Adherence to the standard forest practice rules, and application of the soil stabilization measures outlined above and in the geologic report will minimize the potential for adverse impacts.

**Explanantion:** The downslope portion of **YP3** requires construction on slopes over 50%. The pad is situated just off of the main ridgeline, above the westermost landing. Construction will be of minimum size compatible with yarder placement (18' X 20'). Berm logs, as diagramed in the geologic report, shall be placed below each of the yarder pads to prevent downslope migration of dirt. Fill shall be placed no steeper than a 1.5:1 slope to a maximum thickness of 3'. Cutslopes shall be no steeper than 0.5:1. Straw (4") shall be placed on all bare soils and fill slopes of the yarder pad upon completion of operations. **Justification:** **YP3** provides the corridor link for Landing 8 and the deflection necessary to skyline cable yard the midsection of the main upper canyon area. Skyling this area, rather than using groun-based equipment eliminates the need for construction on steep slopes below the pad, and prevents unnecesasary skid trial construction and Class III watercourse crossings to access the far hillside. A request to extend part of the pad onto more moderate ground along the center of the ridge was denied by the adjacent landowner (aee letter in Section VI), so the pad was placed on the most reasonable ground considering property line constriants, i.e. the ceterline of the ridge. Geologist Tim Best will be on-site to go over construction specifications prior to commencement of operations. Adherence to the standard forest practice rules, and application of the soil stabilization measures outlined above and in the geologic report will minimize the potential for adverse impacts.



23. Winter period operations in compliance with CCR 914.7(c) are proposed for the THP: 1) Operations of all types shall not extend beyond **November 15 or 4 inches** of cummulative rainfall, whichever comes first. 2) No road construction shall occur after October 15, and hand dug waterbars/or rolling dips shall be installed on all constructed skid trails and truck roads when operating beyond October 15. 3) Site specific WLPZ and unstable area protection per CCR 914.7(c)(3) is provided by eliminating equipment operations within the WLPZ (other than skyline cable yarding), not allowing tractor operations on the north of Shinglemill Creek after October 15, requiring all crossings (Class II and Class III) to be removed by October 15, allowing only one skid trail serving one landing to be open at any one time, and making log hauling operations entirely subject to CDF approval during extended fall conditions only (i.e., CDF inspectors may shut operations down at any time during the winter period when in their judgment soil conditions are sufficiently wet that problems might occur). Except for dry fall operations as described above, winter period operations shall be limited to felling outside the WLPZ, lopping and maintenance of erosion control measures. **NOTE**: All water breaks and rolling dips must be installed by October 15 or as prescribed above.

24. (c) **Roads in areas of unstable soils.**

**Explanation:** As indicated by the attached geologic report, the proposed seasonal road on the plan crosses several shallow debris flows as it begins its ascent from the existing seasonal road. As per the recommendations of the report, the road shall be keyed and benched into firm soil or bedrock when slopes exceed 50% and berm logs shall be employed to reduce the chances of loose fill migrating downslope. The site has been labelled as **M1** on both the geologic report and the plan Text Reference/Equipment Operations Map. **Justification:** The only viable road access to the Eel River property necessarily crosses this general area of instability. After evaluating several routes, it was the opinion of geologist Tim Best and of the RPF that the proposed location is geologically preferred, as there is not a reasonable potential for significant erosion problems with this section of road if the recommended construction specifications are followed.



26. **Watercourses.**

**CROSSINGS**

There are four crossings on this plan. Three of the crossings (**X1, X2,** and **X3**) occur within the same general area hereafter known as Text Reference **N.** The fourth crossing is located within the tractor bunch area and has been labelled **X4.** All of the crossings are existing and temporary in nature. As indicated on the attached schematic map labelled Text Reference Point **N**, crossings X1, X2, and X3 will only serve as unladen equipment



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access crossings. **No logs will be skidded across these crossings.** Crossing X4, however, is within the tractor bunch area and will have some tractor traffic. The crossings are proposed as follows:

**X1 Description:** Existing temporary crossing of a tiny Class II watercourse. There is no defined channel for this crossing. Water trickles over an old existing trail, and hasn't resulted in significant downcutting. The extended seasonal seep which supplies this watercourse flows some years, and remains dry in others. **Practice:** To preserve water quality and ensure the continued flow of water, operator shall first line the crossing with small logs or hay bales and then span the flow with beams or logs and cross atop said structures. If it appears that crossing is interrupting the flow of water or continually decreasing water quality, the beams or logs shall be removed immediately following crossing. If the flow appears unaffected, the crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.

**X2 Description:** Existing temporary crossing of a Class III watercourse. There is very little in the way of a defined channel. Periodic flow occurs during peak rainfall periods. **Practice:** Prior to crossing this small Class III, the crossing shall be lined with small logs or hay bales overlain with beams or logs. The crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.

**X3 Description:** Existing temporary crossing of a Class II watercourse. There is a small channel (1.5' deep, 2.5' wide) which crosses the existing trail. Flow is minimal, and is expected to be nearly dry by late September. **Practice:** To preserve water quality and ensure the continued flow of water, operator shall first line the crossing with small logs or hay bales and then span the flow with beams or logs and cross atop said structures. If it appears that crossing is interrupting the flow of water or continually decreasing water quality, the beams or logs shall be removed immediately following crossing. If the flow appears unaffected, the crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.

**X4 Description:** Existing temporary crossing of a Class II watercourse. There is a small channel (1' wide, 1' deep) which crosses the existing trail. Flow is minimal, and is expected to be nearly dry by late September. **Practice:** To preserve water quality and ensure the continued flow of water, operator shall first line the crossing with small logs or hay bales and then span the flow with beams or logs and cross atop said structures. If it appears that crossing is interrupting the flow of water or continually decreasing water quality, the beams or logs shall be removed immediately following crossing. If the flow appears unaffected, the crossing can be left in place for the return trip, but shall be removed no later than October 15th. Following removal, the watercourse shall be left free of dirt and debris, and all bare soil shall be stabilized with straw.



**WLPZ**

The minimum WLPZ width will vary with Class II watercourses relative to the average slope as follows: **<30% slope 50 feet** **30 - 50% slope 75 feet** **>50% slope 100 feet.**

Protection measures:

**Class II Watercourses**

1) The Class II WLPZs will be flagged prior to the start of timber operations.
2) All trees to be cut within the WLPZ will be marked in advance with a horizontal stripe and a "stump spot" at ground level.
3) At least 50% of the total canopy shall be left in a well distributed, multi-storied stand composed of a diversity of species similar to that found prior to the start of operations. The residual overstory canopy will be composed of at least 25% of the existing overstory conifers.
4) No equipment will be operated within the WLPZ, except at approved crossings or tractor trails.



**Class III Watercourses**

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1) Harvest trees within 25 feet of Class III watercourses will be marked by the RPF or his designee prior to commencement of operations in those areas in order to ensure retention of filter strip properties and maintain soil stability of the zone.
2) At least 50% of the understory vegetation present before timber operations shall be left living and well distributed adjoining Class III watercourses.
3) No equipment will be operated within Class III watercourses other than crossings listed on the Operations Map. Any soil deposited in a Class III watercourse shall be removed and debris removed or stabilized before the conclusion of timber operations or before October 15th, whichever comes first.



27. (a) **Tractor Roads in the WLPZ.**

The standard rule for use and construction of tractor trails within the WLPZ [CCR 916.3(c)] states that the timber operator shall not construct or use tractor roads in the WLPZ of a Class II watecourse. This plan proposes an in-lieu practice, CCR 916.1, which would allow an unladen tractor to cross X1, X2 and X3. The practice involves the use of tractor roads in the WLPZ of a Class II watercourse, which isn't allowed under the standard rule and requires an approved exception. **Explanation:** The skid trail which crosses at **X1, X2** and **X3** and then continues eastward, falls within the WLPZ of Shinglemill Creek (Class II) for a length of 150'. The trail provides access to the tractor bunch area north of Shinglemill Creek. No construction within the WLPZ is necessary to facilitate tractor passage. **Justification:** The existing skid trail provides the only reasonable access to the north side of the Eel River property. It should be noted that there are two existing trails, and that the proposed route avoids the section of trail which runs closer to Shinglemill Creek Construction is unnecessary in the opening stretch of trail, although some removal of debris or other material may be necessary to facilitate passage. Any disturbed soil within the WLPZ shall be stabilized, and grouser divots replaced and/or straw mulched. Once out of the WLPZ, surficial repairs can be made to assist in yarding logs.

The standard rule for use and construction of tractor trails within the WLPZ [CCR 916.3(c)] states that the timber operator shall not construct or use tractor roads in the WLPZ of a Class II watecourse. This plan proposes an in-lieu practice, CCR 916.1, which would allow an unladen tractor to walk up a ridge which begins in the WLPZ of a Class watercourse. The practice involves the construction of tractor roads in the WLPZ of a Class II watercourse, which isn't allowed under the standard rule and requires an approved exception. **Explanantion:** Skid trail **D** begins in the WLPZ's of both of the Class II watercourses at Text Reference **N.** Other than minor brush clearance, there will be little if any dirt movement necessary to access the ridge. The proposed trail will be waterbarred at 75' intervals along its length and packed with slash and/or mulched with straw for the last 150' before entering the crossing at **X3**. **Justification:** Skid trail **D** provides the best access to a prime bunching area where skyline cable alone is ineffective due to poor deflection and blind leads. The tractor will not be operated within the WLPZ to skid logs. Adherence to the standard forest practice rules, and application of the soil stabilization measures outlined in #18 above will minimize the potential for adverse impacts. Again, the need for construction is extremely low, and will probably only require the removal of several small tan oak trees.

(c) The standard rule for falling trees within the WLPZ [CCR 916.3(e)] states that trees shall be felled away from the watercourse to protect the residiual vegetation. This plan proposes an in-lieu practice, CCR 916.1, which would allow the felling of approximately 15 trees in both directions across Shinglemill Creek (Class II). The practice obviously involves falling trees across a Class II watercourse, which isn't allowed under the standard rule and requires an approved exception. **Explanation**: The RPF or his designee may mark up to 15 trees to be cross-felled. Cross-felling shall only be done in locations where site specific analysis indicates that channel impacts will be minimal and less than would occur from following the standard rule. The area is mapped as Text Reference **L.** **Justification:** The trees proposed for harvest as part of this in-lieu practice are generally heavily leaning trees which show potential instability. If left, many of the trees proposed for cross-felling would likely cause more damage from uprooting and uncontrolled falling, as evidenced by other downed trees in the vicinity. If the trees were simply felled uphill, and not cross-felled, the tendency would be for the trees to kick back and slide into the Class II, bringing with them, soil and debris. As proposed, we have the ability to control the fall and avoid dropping the trees into the stream channel. Nearly all of the bucked segments will be plucked out with skyline cable, minimizing drag and disturbance. Any segments that are unreachable by skyline will be long-lined from areas outside the WLPZ. **No cross-felling shall be done without equipment on-site, and shall not occur during the winter period.**



32. **Wildlife/Marbled Murrelet.**

Revised 23 (10/25/95)

There is no known marbled murrelet use of the area and no on-site suitable habitat. Past discussions with Ted Wooster and David Suddjian indicate that marbled murrelets are unlikely to occur in this area. All seven questions on the prefiling consultation checklist are negative. The current Natural Diversity Database files at the CDF Felton office were consulted for RTE species but none that would be found in redwood forest type were listed as occurring within the vicinity. The San Lorenzo River, which is located just over one mile downstream from the THP area, is listed as an anadramous fish stream. Standard watercourse protections, extra special measures proposed to protect domestic water supplies. and the yarding methods proposed in the plan are appropriate to protect downstream fish habitat. Neither Santa Cruz County Biotic Resources maps, the Natural Diversity Data Base maps and files, nor the RPF's inspection of the harvest area show nor have found any of the plant or animal species identified in the Santa Cruz County General Plan as per CCR 926.14. The nearest NDDB listing on the Felton Quad is the San Francisco popcornflower, *Plagiobothrys diffusus*, which occurs in heavy soiled meadow habitats rather than forests. The likelihood for its occurrence within the THP area is considered low and the potential for adverse impact even lower. All wildlife provisions adopted by the Board of Forestry effective 9/12/91 apply.

34. **Late Succession.**

The second growth conifer stands proposed for harvesting in this operation are not late successional stands as defined in CCR 895.1 with reference to the WHR classification system. The stands may be considered as WHR class 4M which is more than 20 acreas in extent. There is a decided lack of special habitat elements such as large decadent trees, snags and large downed logs that are characteristic of late successional forests. In addition, there are no known rare, endangered, threatened, special or listed wildlife species in this planning watershed known to be associated with second growth redwood stands. Harvesting in accordance with CCR 913.8(a) in second growth redwood stands in the Santa Cruz Mountains has not been shown to adversely affect the wildlife habitat or stand structure of those species associated with this forest type.



38. **Special Instructions.**

1. Construction of Yarder Pads: Each Yarder Pad has been assigned a YP #. There will be approximately seven yarder pads located along the southern ridegeline of this plan (YP1-YP7), each having varying degrees of construction. In no case will construction exceed that necessary for placement of the yarder (18' X 20'). During active yarder operations, incoming logs will be removed as they are yarded, eliminating the need for a decking area. Construction of YP1 and YP3 will follow the guidelines discussed in the geologic report, and in #21 (c) above.

2. When operating in areas north of Shinglemill Creek, tractor bunching shall be restricted to areas where skyline cable yarding is impractical due to blind leads or other constraints such as topography. **Limit bunching activities as much as possible.**

3. When operating near the water tank at the easternmost portion of the plan (Young property), use caution to ensure it remains undamaged. It is an active tank of Citizens Utility, and serves much of the neighborhood below it. Water lines have been mapped and flagged in the field.

4. When operating along the ridgeline where the common property line is shared with the Quarry, ensure that equipment operations remain north of the recently surveyed line which approximates the centerline of the ridge.

5. The skid trail D will not be used as mainline skid. Its primary purpose is to access "bunch" areas that are inaccessible to the skyline cable. Tractors shall not be operated within the WLPZ to skid logs along this trail.

6. **Prior to construction of YP1, YP3, and the proposed seasonal road**, the person responsible for constructing these features shall meet with Tim Best, Geologic Engineer, and go over construction specifications. Mr. Best will not have to necessarily be on-site during the actual construction of the road.

7. Text Reference N, and its associated schematic map is designed to clarify the extent of operations above crossings X1, X2 and X3. Equipment shall remain on the proposed skid trails in this area, effectively making all areas off of the proposed skid trail an equipment exclusion zone. Variances of the proposed alignment may be allowed only after receiving approval of the RPF or his designee. Exclusion areas will be flagged prior to commencement of operations.



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Exhibit D

## SECTION IV - CUMULATIVE IMPACTS ASSESSMENT

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## I. CUMULATIVE IMPACTS ASSESSMENT CHECKLIST

Each assessment area varies in relation to the resources being addressed. The area considered for cumulative impacts shall the same area used for Watershed Impacts, as it encompasses that which could reasonably be expected to be impacted by th proposed project.

A. Does the cumulative impacts assessment area of resources that may be affected by the proposed project contain any pa present or reasonably foreseeable probable future projects?

YES__X____ NO_____

If the answer is yes, identify the affected resource subjects and projects.

The operation of Granite Construction Company's Felton Quarry, and the occasional construction of homes, driveways and roads are ongoing activities in the assessment area. Such activities are generally regulated by the county. The county assesses the environmental impact during its review. Recreational activities occur on Henry Cowell State Park, UCSC upper campus area, and throughout various privately owner parcels in the assessment area. The local water district did not iden any projects in the vicinity which should be considered.

The following Timber Harvest Plans are also within the assessment area (also shown within Watershed Impacts Assessment

| THP # | Acres | Status | Yarding System |
|---|---|---|---|
| 1-88-373 SCR | 34 | Complete | Tractor/Cable |
| 1-90-034 SCR | 26 | Complete | Tractor/Cable |
| 1-91-323 SCR | 31 | Complete | Tractor/Cable |
| 1-94-160 SCR | 158 | Active | Tractor/Cable |
| 1-94-294 SCR | 8 | Complete | Tractor/Cable |

Total Acreage: 257

Timber harvesting is thoroughly regulated by the State, with special rules requested by the County, to ensure, among other things, that excessive siltation does not result from the harvest activities. None of the above operations had significant adverse impacts on water quality.

B. Are there any continuing, significant adverse impacts from past land use activities that may add to the impacts of the proposed project.

YES___X____ NO_____

If the answer is yes, identify the activities and affected resource subjects.

Whenever there is human activity, there is potential for adverse effects on the environment. The increasing human populatic affects all resources, either directly or indirectly. Accelerated erosion can occur from roads, home sites and agricultural land. Chemical pollutants can enter waterways from septic systems and roads. The increasing human population reduces the inventory of productive soils. It disrupts wildlife. It reduces wildland recreational opportunities and disrupts the visual resources. Almost all land use activities are controlled by either the County or the State with regulations designed to preve significant adverse impacts. The state forest practice rules and THP review process, particularly in the Santa Cruz Mounta minimize the impacts from timber harvesting.

C. Will the proposed project, as presented, in combination with past, present, and reasonably foreseeable probable future projects identified in items (A) and (B) above, have a reasonable potential to cause or add to significant cumulative impacts any of the following resource subjects?

| | yes after mitigation (a) | no after mitigation (b) | No reasonably potential significant effects (c) |
|---|---|---|---|
| 1. Watershed | _____ | __X___ | _____ |
| 2. Soil productivity | _____ | __X___ | _____ |



Exhibit D

| | | | |
|---|---|---|---|
| 3. Biological | _____ | __X___ | _____ |
| 4. Recreation | _____ | __X___ | _____ |
| 5. Visual | _____ | __X___ | _____ |
| 6. Traffic | _____ | __X___ | _____ |
| 7. Other | _____ | _____ | __X___ |

a.) Yes, means that potential significant impacts are left after application of the forest practice rules and mitigation or alternatives proposed by the plan submitter.

b.) No, after mitigation, means that any potential for the proposed harvest operation to cause significant adverse impacts h been substantially reduced or avoided by mitigation measures or alternatives proposed in the THP and/or application of the forest practice rules.

c.) No reasonable potential significant effects, means that the operations proposed under the THP do not have a reasonable potential to join with the impacts of any other project to cause cumulative impacts.

D. If column (a) is checked in (C) above, describe why the expected impacts cannot be feasibly mitigated or avoided and wh mitigation measures or alternatives were considered to reach this determination.

E. If column (b) is checked in (C) above, describe what mitigation measures have been selected which substantially reduce c avoid reasonably potential significant cumulative impacts except for those mitigation measures or alternatives mandated by application of the rules of the State Board of Forestry.

The proposed harvest is typical of harvests conducted in the Santa Cruz mountains. There are no unique environmental problems associated with the proposed operation. The state forest practice rules are designed to mitigate significant advers impacts from normal and routine harvest operations. Thus, the application of the forest practice rules will mitigate all potential significant adverse impacts on the proposed operation.

F. A brief description of the assessment area for each resource subject is contained in the analysis of each resource that follows.

G. The following individuals, organizations and records were consulted in the assessment of the cumulative impacts. SEE APPENDIX

## II. CUMULATIVE WATERSHED IMPACTS ASSESSMENT

### A. Watershed Impacts Assessment Area

Assessment area: The San Lorenzo River watershed from Shinglemill Creek to Rincon on the San Lorenzo River between Felton and Santa Cruz. The assessment area encompasses the project area and the San Lorenzo watershed downstream to Rincon. Rationale: This is the relevant portion of the San Lorenzo watershed and was chosen based upon past discussions with CDF Forest Practice Inspectors. It was deemed most appropriate to cover pertinent impacts and to meet the 3,000 ac watershed assessment area standard.

### B. Beneficial Uses

The beneficial uses of water are wildlife habitat, domestic water supplies and agricultural uses.

### C. Current Stream Channel Conditions

Are there any Class III or larger streams that are within or adjoin the project area that will receive runoff from an area disturbed by the project?

YES_X___ NO_____

If yes, briefly describe the channel conditions, their location and the affected beneficial use



Exhibit D

There are a number of small Class III watercourses which receive runoff from the project area. All of these Class III's are fine condition, with little evidence of instability or excessive erosion. The Plan Map indicates the location of these Class III In addition, there are three Class II watercourses which receive runoff from the project area. Two of these Class II's only for 200'-300' before entering Shinglemill Creek (the third Class II). Other than instability inherent to the steep sideslopes along portions of these Class II's, they all appear to be in good condition. The San Lorenzo River receives runoff from the project area. It is widely recognized that the river has been degraded by effluent from human development, excessive silt from human activities, natural sources and recent flooding. The degraded water quality affects all beneficial uses of water. The excessive silt, in addition to degrading water quality, is also damaging to the spawning gravels used by anadromous fish

Are there any current stream channel conditions outside the project area but within the watershed assessment area, that a contributing to a reduction in the beneficial uses of water?

YES_____ NO__X_____

If yes, briefly describe the channel conditions, their location and the affected beneficial uses.

Are there any known current stream channel conditions outside the assessment area that are contributing to a reduction in t beneficial uses of water?

YES_X___ NO_____

If yes, briefly describe the channel conditions, their location and the affected beneficial uses.

The stream conditions described above are prevalent throughout the San Lorenzo watershed.

D. Past and On-going Projects

Past projects within the assessment area include timber harvesting, mining, agricultural use and residential/recreational development.

Gold Gulch, approximately 1,200 acres, received/receives runoff from the Felton Quarry. Quarry activities are thoroughly regulated by the State and County, to, among other things, ensure that excessive siltation does not resul from the mining operation. Suzanne Smith of Santa Cruz County Planning indicated that the quarry was being monitc and excessive offsite impacts were not occurring.

CDF Felton office records indicate that the following THP's, all using the Selection Silvicultural Method, are within the Watershed Assessment Area.

| THP # | Acres | Status | Yarding System |
|---|---|---|---|
| 1-88-373 SCR | 34 | Complete | Tractor/Cable |
| 1-90-034 SCR | 26 | Complete | Tractor/Cable |
| 1-91-323 SCR | 31 | Complete | Tractor/Cable |
| 1-94-160 SCR | 158 | Active | Tractor/Cable |
| 1-94-294 SCR | 8 | Complete | Tractor/Cable |

Total Acreage: 257

Timber harvesting is thoroughly regulated by the State, with special rules requested by the County, to ensure, amor other things, that excessive siltation does not result from the harvest activities. None of the above operations had significant adverse impacts on water quality.

Roads and landings have been built for timber harvesting. Except during harvest operations, logging roads are typically used only during the dry season, and then only lightly, if at all. Most are abandon and allowed to become covered with leaf litter and vegetation between harvests. Erosion control facilities must be maintained following harvesting until the road surface becomes stabilized. The combination of abandonment and erosion control minimize: siltation from logging roads.

Roads and pads have been built for residential development on about 15% of the assessment area. Typically, most homesites are soon covered with vegetation, either naturally, or from lawn and landscape plantings. Because acce roads must be left useable all year, they inevitably must be rocked or paved. The combination of revegetation and r surfacing minimizes siltation from residential development. The residential and business development in the town o:



Exhibit D

Felton contributes little sediment to the watercourse. Streets are paved, and homesites are covered with lawns and other vegetation. Very little of what is left is erodible. While runoff from the town may contain harmful byproducts urban life, approximately 75-80% of the assessment area is in large open parcels.

There is very little agricultural activity within the assessment area, mostly home gardens. Overall, the amount of soil bared by such activities is insignificant.

Recreational activities within the assessment area occur primarily at Henry Cowell Redwoods State Park, approximately 50% of the assessment area watershed, and the UCSC North Campus undeveloped area. Henry Cowe so lightly developed that its overall contribution to sedimentation in the assessment area is insignificant.

Because the disturbance is infrequent, relatively small, and relatively short duration, the affects of selective timb harvesting are the smallest of any landscape altering human activity.

Based on knowledge of the watershed conditions on and off the project area, have any past projects within the assessment area resulted in any of the following impacts?

1. Increased sediment inputs that embedded gravels, filled pools, or caused channel aggregation within any portion of the stream system?
   YES__X__ NO_____ It is widely recognized that the San Lorenzo River contains runoff from barnyards, leach fields, homes, businesses, roads and city streets.

2. Increased channel down cutting or bank erosion as a result of increased flows, sediment transport, or other channel modifications?
   YES_____ NO___X____

3. Increased water temperatures resulting from canopy removal along stream channels?
   YES_____ NO___X____

4. Increased inputs of unstable organic debris to a stream or lake?
   YES_____ NO__X___

5. Removal of large organic debris leading to loss of pool habitat?
   YES_____ NO__X___

6. Chemical inputs to a stream or lake?
   YES__X__ NO_____ It is widely recognized that the San Lorenzo River contains runoff from barnyards, leach field homes, businesses, roads and city streets.

E. Potential On-site Affects

Based on current conditions and knowledge of the impacts of similar past projects, what is the potential for the project to cause the following affects? Use High, Medium or Low

LOW 1. Channel or bank erosion

LOW 2. Streamside or inner gorge mass wasting that could directly enter a stream channel.

LOW 3. Debris flows or torrents that could move directly into the stream system from sideslopes, swales, small channels, roads landings or skid trails.

LOW 4. Debris flows or torrents caused by debris jams.

LOW 5. Sideslope mass wasting that directs surface runoff into gullies, swales, or small channels connected to the stream system.

LOW 6. Sheet, rill, or gully erosion that could be discharged into the stream system from roads, landings, or skid trails (including all disturbed areas from the top of the cut to the bottom of the fill).

LOW 7. Sheet, rill or gully erosion from harvesting or site preparation that could enter the stream system.



Exhibit D

LOW 8. Openings created by the project along streams that could result in substantially increased stream temperatures.

LOW 9. Increased amounts of small organic debris in streams or lakes as a result of the project.

LOW 10. Movement or roadway chemicals, machinery fuels, pesticides, nutrients released by burning or other chemicals into streams or lakes as a result of the project.

LOW 11. Increased peak flows as a result of vegetation removal, snow accumulation in new openings or more efficie runoff routing created by the project.

LOW 12. Inputs of large organic debris in streams or lakes as a result of this project.

LOW 13. Extraction of large organic debris from streams or lakes as a result of this project.

LOW 14. Loss of future organic debris as a result of streamside timber harvesting.

If all of the Part E factors have been rated LOW, project impacts are non-existent or so slight that they cannot significantly contribute to downstream cumulative effects. In that case, go to Part H and check the line labeled "No (after mitigation)" or "No (no reasonable potential significant effects)" as appropriate.

F. Future Projects

Future projects within the assessment area include timber harvesting, future mining operations, and continuing residential development, although the Forest Lakes Development has reached effective "build-out". (Dave Montgomery, THP 1-94-160 SCR)

Based on knowledge of current watershed conditions, the effects of past projects and accounting for currently proposed mitigation measures, are the identified future projects likely to result in:

1. Increased sediment inputs that will fill pools, embed stream gravels or cause channel aggregation in some portion the stream system?
YES_____ NO_X__

2. Increased channel down cutting or bank erosion from increased flows, sediment transport or other stream modifications?
YES_____ NO_X__

3. Additional openings along stream channels that could result in unacceptable increases in water temperatures?
YES_____ NO__X____

4. New inputs of organic debris to streams or lakes?
YES_____ NO__X____

5. Extraction of large organic debris from streams or lakes?
YES_____ NO__X__

6. Chemical inputs to streams or lakes?
YES_____ NO__X____

If all of the factors in Part F above have been answered "NO", project impacts are non-existent or so slight that th cannot significantly contribute to downstream cumulative effects.

G. Interaction With Past and Future Projects

Any increase in erosion and sedimentation following harvesting would contribute to the cumulative effect. The rules of the Board of Forestry coupled with the local practice of covering exposed ground with slash and debris to the extent feasible, v hold erosion rates to no greater than natural background rates. This has been verified by studies in the Santa Cruz Mountain



Exhibit D

following selective harvesting as proposed here. If the proposed erosion rate is no greater than natural, it cannot be conside as contributing to a significant cumulative effect.

Considering the combined impacts of the beneficial uses of water described in Part A, current stream channel conditions fro Part C, effects of past projects listed in part D, and expected onsite effects of the proposed project from Part E, what is tl potential for developing adverse cumulative watershed effects in the assessment area described in Part B as a result of: (us High, Medium or Low)

LOW 1. The proposed project combined with the ongoing effects of past projects, but with the expected impacts of future projects.

LOW 2. The proposed project combined with the effect of past projects and the expected impacts of future project listed in Part F.

If the answer to both questions is LOW, go to part H and check the line labeled "No (after mitigation)" or "No (no reasonably potential significant effects)" as appropriate.

H. Impacts Evaluation

Will the proposed project, as presented, in combination with the impacts of past and future projects, as identified in Parts C through F and with the interactions rated in Part G above, have a reasonable potential to cause or add to significant cumulative impacts to watershed resources?

YES (after mitigation) _____
NO (after mitigation) _____
NO (no reasonable potential significant effects) __X___

If the answer above is "NO", and either or both of the questions in Part G are rated as "medium", describe the reasc for reaching this conclusion. This section also may be used to describe situations in which the proposed project, as described and mitigated, will result in positive effects on watershed conditions and existing cumulative watershed impacts.

## III. CUMULATIVE SOIL PRODUCTIVITY IMPACTS ASSESSMENT

Cumulative soil productivity impacts occur when combined impacts of a sequence of management activities produce significant reduction in soil productivity. Those impacts may occur as part of separate activities on the same proje as residual effects of past projects, and as the likely impacts of future projects.

Impact significance must also be considered relative to the soil productivity potential of the area in question. Losses that can be considered acceptable on highly productive lands may be unacceptable, or even exceed the productive potential, of lower site lands. For example, productivity reductions from loss of growing space associated with the development of roads and skid trails necessary for timber management on high site lands may be greater than the tc unit-area productivity of a poor site.

A. Soil Productivity Impacts Assessment Area

Assessment area: The THP harvest area as well as any pertinent harvest roads and trails. Rationale: Factors which potentially influence soil productivity must physically affect the harvest area.

B. Soil Productivity Resources Assessment

Site factors to be assessed for cumulative soil productivity impacts include organic matter loss, surface soil loss, compaction and growing space loss. The potential impact of successive management activities must be assessed for each of those factors individually and in combination, and the overall impact classed as significant when:

1. The area disturbed by proposed timber operations will exceed that required by the silvicultural and harvest syste approved for use under the proposed THP, including unnecessary duplication of existing skid trails, roads, landings, yarding disturbance and mechanical site preparation.



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Exhibit D

2. The amount of organic matter loss and soil displacement with use of the proposed silvicultural and harvesting systems will substantially exceed that of other feasible systems.

3. The amount of compaction and puddling with use of the proposed silvicultural and harvesting systems will substantially exceed that of other feasible systems under the soil moisture conditions expected at the time of the proposed operations.

4. The combined loss of soil productivity from loss of growing space, organic matter loss, soil displacement and soi compaction from proposed operations will substantially exceed that of other feasible combinations of silvicultural ar harvesting systems.

C. Impacts Evaluation

Will the proposed project, as presented, alone or in combination with impacts of past and future projects have a reasonable potential to cause or add to significant cumulative soil productivity impacts as a result of:

| | yes after mitigation | no after mitigation | No reasonable potential significant impacts |
|---|---|---|---|
| 1. Organic matter loss | _____ | _____ | ___X___ |
| 2. Surface soil loss | _____ | ___X___ | _____ |
| 3. Soil compaction | _____ | _____ | ___X___ |
| 4. Growing space loss | _____ | _____ | ___X___ |
| 5. Combination of above | _____ | _____ | ___X___ |

IV. CUMULATIVE BIOLOGICAL IMPACTS ASSESSMENT

A. Biological Impacts Assessment Area

Assessment area: The project area and the area within 1/2 mile of the project boundary. Rationale: The expanded area accounts for mobile species which may enter the project area or are likely to be within range of the biological influence of the project.

B. Biological Resource Inventory

1. Identify any of the following categories of species known or suspected to occur in the biological assessment area each: rare, threatened or endangered; species of special concern established by the BOF; sensitive species.

a. Anadromous fish

2. Identify any other wildlife or fisheries resource concerns known or suspected to occur within the biological assessment area.

a. Feral Pigs- represent a concern because of the negative impacts they create. Thus far, the pigs are only disrupting the grassy areas adjacent to the forested lands within the plan area. Elsewhere within the watershed, pigs are devastating forest soils and causing significant soil erosion and stream degradation.

b. None listed by Biotic Resources Map or the Natural Diversity Data Base at CDF, Felton as occurring withir said biological assessment area.

3. Describe the pre-project condition of the biological resources inventoried within the biological assessment area. Describe the anticipated post-project condition of those biological resources after completion of the proposed projec

a. While the redwood forest can provide suitable habitat for many endangered or sensitive species, none ha been located in the biological assessment area. It should be noted however, that the THP contains mitigation needed to prevent significant adverse impacts to such species should they be encountered.



Exhibit D

C. Habitat Condition

Describe the pre-project condition of the following habitat components within the biological assessment area, and ir the immediate vicinity outside the assessment area. Rate each: 0-none, 1-well below average, 2-below average, 3 average, 4-above average, 5-well above average. Consider "average" to be the typical forest in the Santa Cruz Mountains.

| Habitat components | Pre-project on-site | Pre-project off-site | Post project on-site |
|---|---|---|---|
| Snags | 3 | 4 | 3 |
| Nest trees | 3 | 3 | 3 |
| Down woody debris | 3 | 3 | 3 |
| Multistoried canopy | 4 | 2 | 4 |
| Road density | 3 | 2 | 3 |
| Hardwoods | 4 | 4 | 3 |
| Late seral stage | 3 | 4 | 3 |
| Continuity of the late seral stage | 3 | 4 | 3 |

D. Significant Special Habitat Elements

1. Are any of the following significant wildlife areas located within the terrestrial biological assessment area or in immediate vicinity outside the assessment area?

| | On-site | Off-site |
|---|---|---|
| Deer fawning areas | YES | YES |
| Deer migrating corridors | YES | YES |
| Deer winter range | YES | YES |
| Deer summer range | YES | YES |
| Wetlands | NO | YES |
| Riparian areas | YES | YES |

2. Will the project significantly affect the use of those areas by wildlife?

YES_____ NO__X___

EXPLAIN: Deer habitat will not be degraded. Forage is likely to improve in the years immediately following harvest. There may be some displacement of animals during harvest operations but this will not be permanent and will be insignificant within the first year following harvesting. Riparian areas will be adequately protected by applicable Forest Practice Rules and Regulations.

E. Other Projects

Identify and discuss the effects of the following projects within the biological assessment area that might interact v the effects of the proposed project:

1. Past and future projects in the biological assessment area under the control of the timber owner or timberland owner that did or could cause a significant impact on biological resources.

a. Selective timber harvesting- past/present/future- The original clear-cut logging at the turn of the centi had the most significant impact on the biological resources. Current laws prohibit and the rules are designed prevent significant adverse impacts to current biological resources. It is then anticipated that any future projects would have no significant impacts.

2. Past and future projects planned or expected within the biological assessment area not under control of the timbe owner or timberland owner that did or could cause a significant impact to biological resources.



Exhibit D

b. A number of the neighboring parcels are zoned TPZ and therefore subject to possible selective timber harvesting. These possible future projects, being subject to the same constraints as this one, will cause no significant impact to biological resources as evidenced by past modern-day harvesting on those parcels. Th is limited potential for new home construction as most parcels already have dwellings. Environmental impa from any such projects will be controlled through the County of Santa Cruz building permit process.

F. Interactions

Considering the interactions between biological resources within the assessment area (Parts A and B), the current habitat condition on-site and off-site (Parts C and D), the ongoing effects of past projects (Part D), and the effects of future projects (Part E), is the potential High, Medium or Low for developing significant cumulative effects to the terrestrial biological resources within the assessment area as a result of:

LOW- 1. The proposed project combined with the effects of past projects without the impacts of future projects?

LOW- 2. The proposed project combined with the effects of past projects and the expected impacts from future projects list in Part D?

If the answer to both questions is "LOW", go to Part G and mark it "NO".

G. Impacts Evaluation

Based on the information gathered by the RPF, the contents of the THP, the forest practice rules, information from the revi of other plans, the magnitude of impacts identified in Parts A through E, and the interactions rated in Part F, is the proposec project likely to produce significant adverse cumulative effects to the terrestrial biological resources within the terrestria biological resources assessment area?

YES_____ NO__X____

Will the proposed project, as presented, in combination with the impacts of past and future projects as identified in Parts A through E, and the interactions rated in Part F, and considering feasible alternatives and mitigation actions, have a reasonat potential to cause or add to significant cumulative impacts to terrestrial biological resources within the biological resources assessment area?

1. Yes (after mitigation)_____

2. No (after mitigation)_____

3. No (no reasonable potential significant effects)____X_____

## V. CUMULATIVE RECREATION IMPACTS ASSESSMENT

A. Recreational Impacts Assessment Area

Assessment area: That area which is within 300 feet of the THP boundary. Rationale: Recreational impacts are likely be confined to this range. There is no immediately adjoining area available for public recreation. The access road to the TH area is a private road. Consequently, there is no reasonable potential for adverse cumulative effects on recreational resources.

B. Recreational Resources Inventory

Identify the recreational activities involving significant numbers of people within the recreational assessment area. NONE.

Identify any recreational Special Treatment Areas as defined by the Board of Forestry rules within the recreational assessment area. NONE.

C. Change in Recreational Resources

Discuss whether the project will significantly alter the recreational opportunities within the recreational assessment area.



Exhibit D

No expected changes will occur in the recreational opportunities.

D. Other Projects

Identify and discuss other projects within the recreational assessment area that might interact with the effects of the proposed project.

1. Any past or future projects in the recreational assessment area that are under the control of the timber owner or timberland owner that will impact recreational opportunities identified in Part A.

There will be no changes in the recreational opportunities within the recreational assessment area.

2. Any known future projects in the recreational assessment area that are not under control of the timber owner or timberland owner that will impact recreational opportunities identified in Part A.

There will be no changes in the recreational opportunities within the recreational assessment area.

E. Impact Evaluation

Will the proposed project, as presented, in combination with the impacts of past and future projects identified in Part A through C, have a reasonable potential to cause or add to significant cumulative impacts to recreational resources?

1. YES (after mitigation)_____

2. NO (after mitigation)_____

3. NO (no reasonable potential significant effects)____X_____

## VI. CUMULATIVE VISUAL IMPACTS ASSESSMENT

A. Visual Impacts Assessment Area

**Assessment Area:** The logging area that is readily visible to significant numbers of people who are no further than 3 mil from the operation. **Rationale:** Visual impacts are minimal to those more than 3 miles away.

B. Visual Resources Inventory

1. Identify any Special Treatment Areas designated by the Board of Forestry rules for their visual value wi the visual assessment area. There are none

2. Describe how far the proposed project is from the nearest point that significant numbers of people can v the project.

The harvest area is almost entirely within an inner-gorge area, with little or no chance of being viewed fror publicly accessed road within 3 miles of the harvest area. A glimpse of the harvest area may be caught fro Empire Grade at the western entrance to the Felton Quarry, but the chance of noticing any change is extrem low. There is an intervening ridgeline which shields all but about 5 acres of the northernmost boundary of tl THP from Empire Grade. In addition, the distance between Empire Grade and said 5 acres is over one mile.

3. Identify the manner in which the public identified in Part A and B will view the proposed project.

If a person were to stop their car just south of the western Quarry entrance and peer through various breal in the tree line east of Empire Grade, approximately 5 acres of the proposed project area would be visible. would require a serious "before and after" analysis to detect any change in the viewshed.



Exhibit D

C. Changes in Visual Resources

Discuss the probability of the project changing the visual setting viewed by the public as a result of vegetation removal, creation of slash and debris or soil exposure.

The project will have little or no chance of actually changing the visual setting viewed by the public.

D. Other projects

Identify and discuss other projects in the visual assessment area that might interact with the effects of the proposed project.

1. Any past and future projects in the visual assessment area that are under the control of the timber owner or timberland owner that could interact to cause a significant change in any identified visual resource.

Additional selective harvest operations similar to past operations and the project proposed here. The construction of single family homes within the ownerships.

2. Known future projects in the visual assessment area that are not under the control of the timber owner or timberland owner that could interact to cause a significant change in any identified visual resource.

Selective harvest operations by neighboring parcels similar to that which is proposed here. Construction of additional residences in the area. Continued operations of the Felton Quarry.

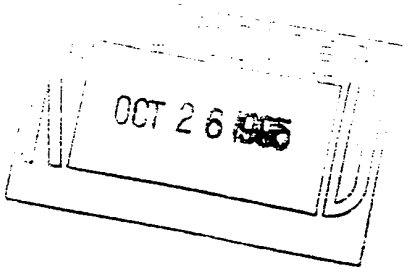
E. Impacts Evaluation

Will the proposed project, as presented, in combination with the impacts of past and future projects identified in Parts A through C have a reasonable potential to cause or add to significant cumulative impacts to visual resources?

1. YES (after mitigation)_____

2. NO (after mitigation)_____

3. NO (no reasonable potential significant effects)__X_____




RESOURCE MANAGEMENT

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REGION 1
OCT 30 1995

**VII. CUMULATIVE TRAFFIC IMPACTS ASSESSMENT**

A. Traffic Resource Assessment Area

**Assessment area**: All public roads over which logs will be trucked within a reasonable distance from the project area.
**Rationale**: This area includes roadways which could potentially be affected by the project.

B. Traffic Resource Inventory

1. Identify any public roads to be used for transporting logs.

San Lorenzo Avenue, Highway 9, Graham Hill Road (through Felton), Mount Herman Road, Highway 17.

2. Identify any public roads that have not been recently used for the transport of logs.

San Lorenzo Avenue

3. Identify any public roads to be used to transport logs that have existing traffic or maintenance problems.

San Lorenzo Avenue has consistent truck traffic from the Felton Quarry. There are several areas along this road (generally in the upper reaches) which have some maintenance problems. Traffic problems will be no greater than existing truck traffic, as the log trucks will be less frequent and will only last for period of about two or three months.

Revised 36 (10/25/95)



Exhibit D

C. Activity Levels

Discuss how the log trucks used on the project will change the amount of traffic on public roads, especially during heavy traffic conditions.

An average of 6-9 loads of logs will be hauled from the project each weekday There will be no log hauling on weekends and holidays. Traffic is never heavy over the route, except perhaps on Highway 17, first trips in the morning. Log trucks will n significantly increase this morning traffic and will be no more than a minor inconvenience to motorists, at most slowing onl the fastest of traffic.

D. Other Projects

Identify and discuss other projects in the traffic assessment area that might interact with the effects of the proposed proje

1. Other past or future projects on lands under the control of the timber owner or timberland owner that w add significantly to traffic on public roads during the period the roads are to be used for trucking logs from t project. NONE.

2. Any known future projects not under the control of the timber owner or timberland owner that will impac public road traffic during the period that the roads are to be used for trucking logs from the project. NONE.

E. Impact Evaluation

With care taken using public roads in the Santa Cruz Mountains., past operations have demonstrated that log trucks cause or a minor inconvenience, if any, to motorists using the proposed haul routes.

Will the proposed project, as presented, in combination with the impacts of past and future projects identified in Parts A through C have a reasonable potential to cause or add to significant cumulative impacts to traffic on public roads?

1. YES (after mitigation) _____

2. NO (after mitigation) _____X_____

3. NO (no reasonable potential significant effects) _____

## VIII. APPENDIX

Cumulative Impact Sources of Information

CDF Felton office (PO Drawer F-2 Felton, 95018, 335-9148)
* Natural Diversity Data Base
* Santa Cruz County Biotic Assessment Maps
* Geoff Holmes, Forest Practice Inspector
* Nancy Drinkard, Forest Practice Inspector
* CDF records of past timber harvesting

Santa Cruz County Planning Department (701 Ocean St. S.C. 95060)
* Dave Hope (454-3096)
* Suzanne Smith (454-3162)

Dan Peterson, S.C. County Environmental Health, 701 Ocean St. S.C., 95060 (454-2022)

Santa Cruz County Assessor Parcel Maps and Tax Rolls

Professional Foresters
* Dale Holderman, RPF # 69, 583 Mountain View Rd S.C. 95065, (426-6964)
* Stephen Staub, RPF # 1911, 775 Sunlit Ln, S.C., 95060, (423-6461)

Exhibit D

Guidelines to Assist in Determining a Significant Adverse Impact per 14 CCR 898, CDF, August 1988.

Larry Holmgren (Eel River Sawmills), Address and Phone on page 1 of THP

Gary Ifland, Ifland Engineers

California Forestry Handbook, T.F. Arvola, 1978.

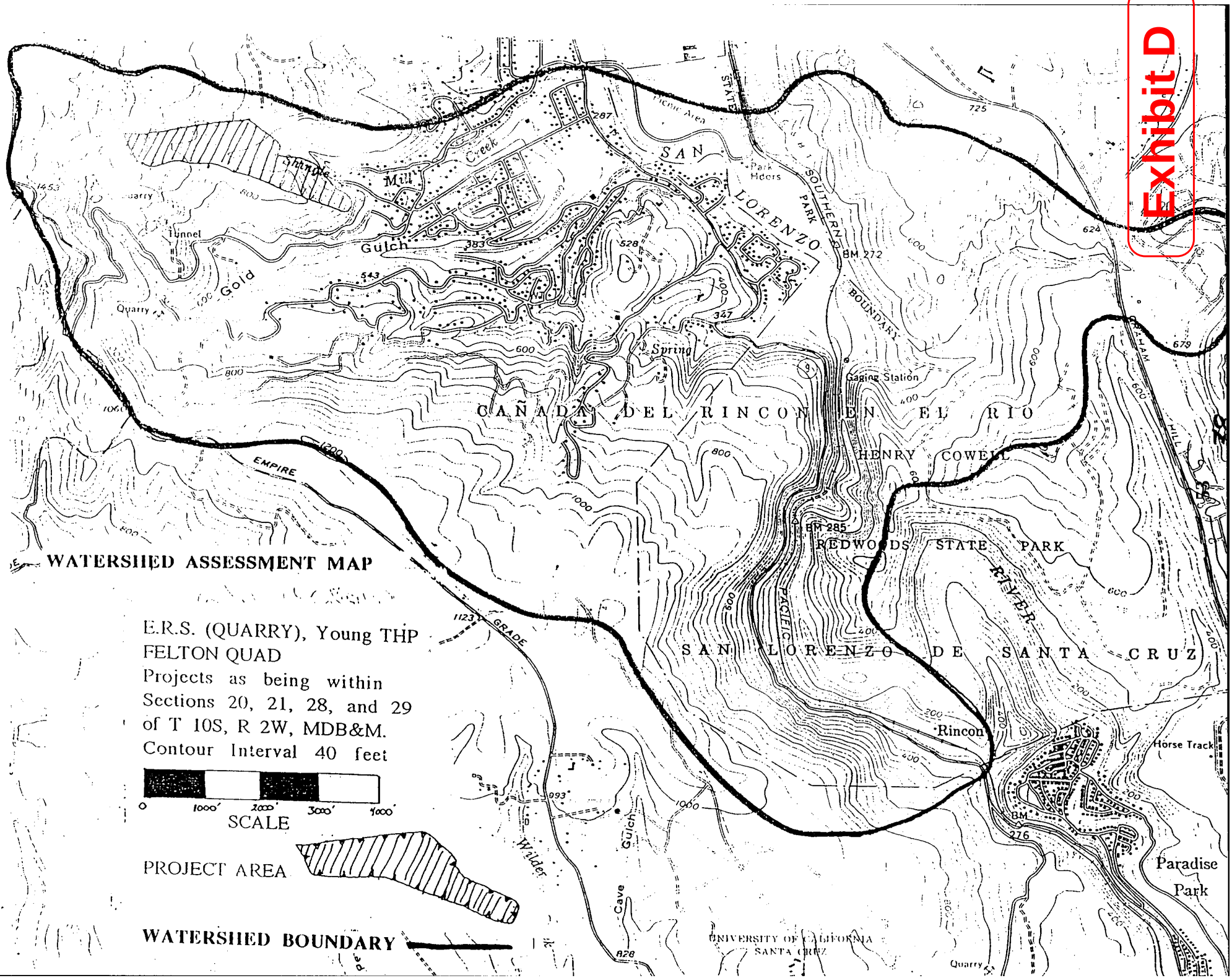
USGS Felton Quadrangle

Soil Survey of Santa Cruz County, SCS, USDA, 1980.

UCSC Long Range Development Plan 1988, May 1989 (revised Sept. 1992)



Exhibit D



## SECTION V -CONFIDENTIAL INFORMATION

Confidential archeological reconnaissance report attached.



Exhibit D

**NOTE**

Information concerning archeological sites has been removed from this THP, **1-95-429 SCR Pages 40 - 57 have been removed**, in accordance with the policy of The Office of Historic Preservation as adopted by the State Historical Resources Commission under the authority of Public Resources Code 5020.4.

Copies of the information have been sent to the following locations to facilitate review of the project:

1. CDF field unit - Felton
2. CDF Reviewing Archeologist, Mark Gary, Ukiah

The original copy of this material is maintained in a confidential file at CDF Region I Headquarters, 135 Ridgway Avenue, Santa Rosa, CA 95401.



Exhibit D

## SECTION VI -ATTACHMENTS

**EHR Worksheet**
**Assessor's Parcel Map**
**Proof of Publication**
**Geologic Report**
**Letter to Adjacent Landowner**



Exhibit D

ESTIMATED SURFACE SOIL EROSION HAZARD E.R.S. Quarry THP

| SOIL FACTORS<br>SOIL TEXTURE | FACTOR RATING BY AREA<br>A B C | FACTOR RATING BY AREA<br>A B C |
|---|---|---|
| DETACHABILITY<br>[Low: 1-9; Moderate: 10-18; High: 19-30] | 2 3 | |
| PERMEABILITY<br>[Slow: 5-4; Moderate: 3-2; Rapid: 1] | 1 | |
| DEPTH TO RESTRICTIVE LAYER OR BEDROCK<br>[Shallow: 15-9; Moderate: 8-4; Deep: 3-1] | 3 | |
| PERCENT SURFACE COARSE FRAGMENTS GREATER THAN 2 MM IN SIZE INCLUDING ROCKS OR STONES<br>[Low: 10-6; Moderate: 5-3; High: 2-1] | 7 | |
| SUBTOTAL | | 34 |
| SLOPE FACTOR<br>[31-40%=7-10; 41-50%=11-15; 51-70%=16-25; 71-80%=26-35] | | 1 6 |
| PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE<br>[Low 0-40%=15-8; Moderate 41-80%=7-4; High 81-100%=3-1] | | 4 |
| TWO-YEAR, ONE HOUR RAINFALL INTENSITY (Hundredths Inch)<br>[Moderate 40-59=4-7; High 60-69=8-11; Extreme 70-80=12-15] | | 1 5 |
| TOTAL SUM OF FACTORS | | 69 |
| EROSION HAZARD RATING | | H |

Exhibit D

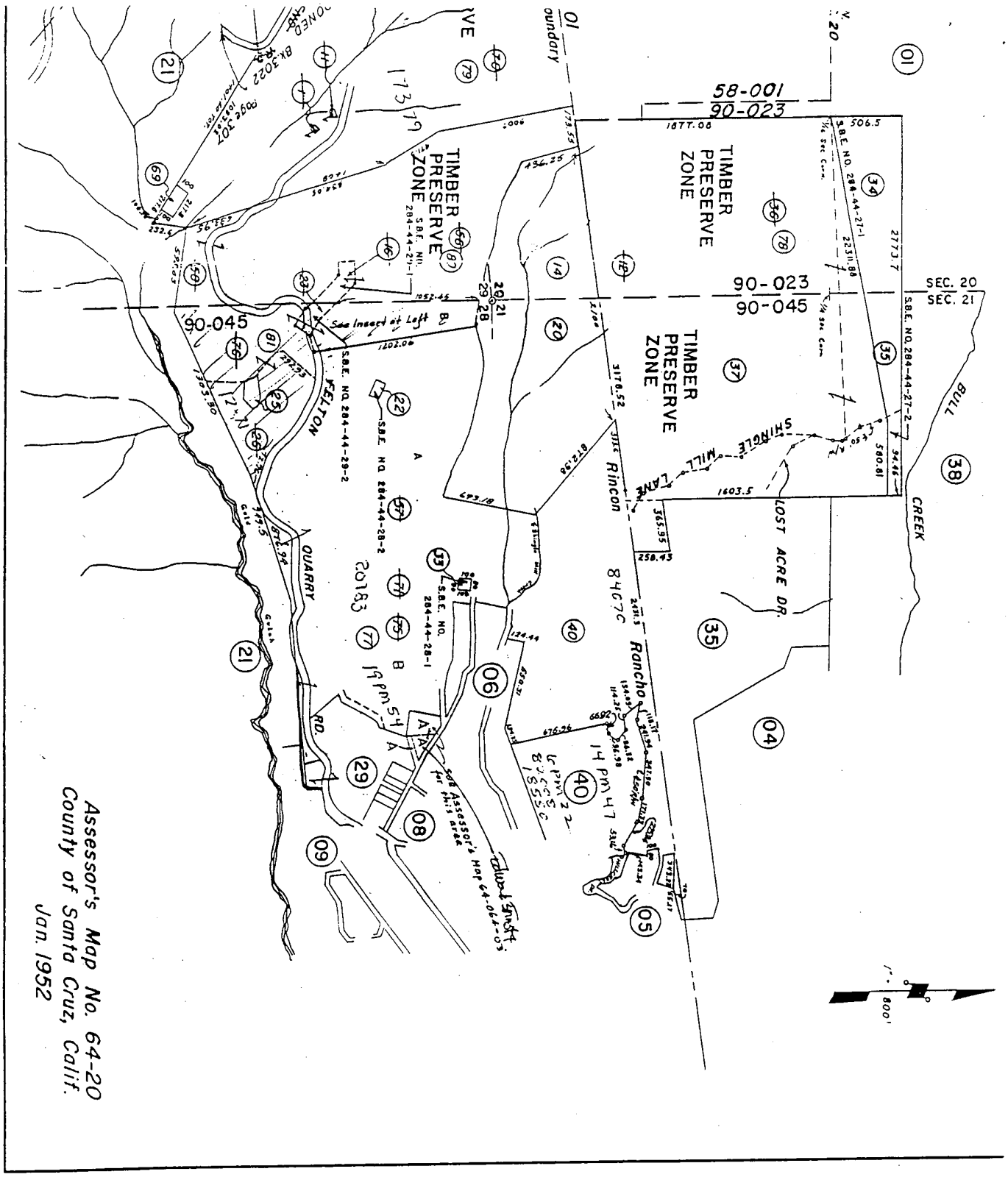





Exhibit D

# Proof of Publication

(2015.5 C.C.P.)

STATE OF CALIFORNIA }
COUNTY OF SANTA CRUZ } SS

NOTICE OF INTENT TO HARVEST TIMBER

NOTICE OF INTENT TO HARVEST TIMBER/
DOMESTIC WATER SUPPLY INQUIRY

A Timber Harvesting Plan (THP) or an amendment to an existing plan that may be of interest to you is being submitted to the California Department of Forestry & Fire Protection. The Department will be reviewing the proposed timber operation for compliance with various laws and rules. This review requires the addressing of any concerns you may have with what is being proposed. This Notice with map is being provided prior to submission of the THP so that the submitter may be advised of domestic water supplies taken from watercourses within 1,000 feet downslope of the proposed harvest. Please send such information to the forester listed at the bottom of the page within 10 days of the postmarked date on this Notice and Inquiry. The following briefly describes the proposed timber operation and where and how to get more information.

The review times given to the Department to review the proposed timber operation are variable in length, but limited. To ensure the Department receives your comments please read the following:

TIMELINE

The plan or amendment will be submitted to the Department on: 8/11/95

The earliest possible date the Department may approve the plan or amendment is: 9/25/95.

NOTE: THIS DATE IS PROBABLY NOT THE ACTUAL APPROVAL DATE AND CLOSE OF PUBLIC COMMENT. Normally, a much longer period of time is available for preparation of comments. Please check with Department, prior to the above listed date, to determine the actual date that the public comment period closes.

OBTAINING INFORMATION/PROVIDING INPUT

Questions about the proposed timber operation or laws and rules governing timber operations should be directed to:

CALIFORNIA DEPARTMENT OF FORESTRY

Forest Practice Program
135 Ridgeway Avenue
(P.O. Box 670)
Santa Rosa, CA 95402
(707) 576-2275

Santa Cruz/San Mateo
Ranger Unit
6059 Highway 9
(P.O. Drawer F-2)
Felton, CA 95018
(408) 335-5355, (415) 592-2726

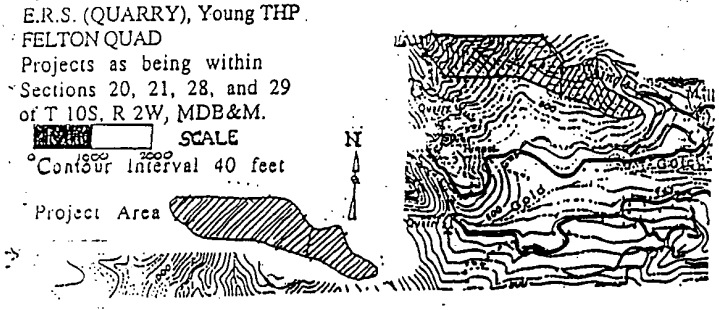
The public may review the plan or amendment at the above Department office or purchase a copy of the plan or amendment. The cost to obtain a copy is 12.5 cents for each page, $2.50 minimum per request.

PLAN INFORMATION

1. Timberland Owner where timber operation is to occur: Eel River Sawmills and Colin Young
2. Registered Professional Forester who prepared the plan or amendment: Stephen R. Staub, RPF#1911
3. Name of individual who submitted the plan or amendment: Eel River Sawmills
4. Location of the proposed timber operation (county, legal description, & approximate distance of the timber operation from the nearest community or well-known landmark): Santa Cruz County, Sections 20,21,28, and 29, T10S, R 2W, MDB&M. Located one mile SW of the town of Felton, CA.
5. The name of and distance from the nearest perennial stream and major watercourse flowing through or downstream from the timber operation: Shingiemill Creek (Class II on property) flows into the San Lorenzo River approximately one mile downstream.
6. Acres proposed to be harvested: 63
7. The regeneration methods and/or intermediate treatments to be used: Selection Silviculture.

A map is attached to help locate where the proposed timber operation is to occur. If you originally received this Notice of Intent to Harvest Timber by mail, you can expect the Department to mail you the Timber Harvest Plan or amendment number, the date of receipt of the plan by the Department, the filing date of the plan, and the date of any public hearing. You should check with the Department for the date of the Review Team meeting. If you would like to speak with the Registered Professional Forester who prepared the plan or amendment, please call: (408) 423-6461.

Portion of Canada Del Rincon En El Rio De San Lorenzo De Santa Cruz
E.R.S. (QUARRY), Young THP
FELTON QUAD
Projects as being within
Sections 20, 21, 28, and 29
of T 10S, R 2W, MDB&M.




July 28

(11649)

I, the undersigned say,

That I am over the age of eighteen and not interested in the above entitled matter; that I am now, and, at all time embraced in the publication herein mentioned, was, the principal clerk of the printer of the Santa Cruz County Sentinel, a daily newspaper printed, published and circulated in the said county and adjudged a newspaper of general circulation by the Superior Court of the County of Santa Cruz, State of California, under proceeding No. 25,794; that the advertisement, of which the annexed is a true printed copy, was published in the above named newspaper on the following dates, to-wit:

July 28, 1995

I Certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Santa Cruz, California July 28, 1995

Signature

Exhibit D

TIMOTHY C. BEST, CEG
CONSULTING ENGINEERING GEOLOGY AND HYDROLOGY

1803 Mission Street, Suite 403 Santa Cruz, CA 95060
(408) 425-5832 Phone/Fax • E-Mail 74001.17@Compuserve.com

August 9, 1995

Steve Staub
775 Sunlit Lane
Santa Cruz, CA 95060

Job: SST-ER-035

Subject: Focused engineering geology investigation of a proposed seasonal haul road and two yarder landings

Reference: Eel Rivers Sawmills-Young THP
APN 064-201-14, 20, and 82
Santa Cruz County, CA

## INTRODUCTION

This letter report presents the findings of our focused engineering geologic investigation of a proposed seasonal haul road and two proposed yarder landings located on the above referenced properties. The proposed THP is located about 2 miles southwest of the town of Felton within the upper Shingle Mill Creek watershed, a tributary to the San Lorenzo River. The proposed haul road extends from an existing dirt road in the north east corner of the harvest area 2400 feet, transecting 30 to 60 percent slopes to the watershed divide between Shingle Mill Creek to the north and Gold Gulch to the south (Figure 1). There are no Class III or larger watercourses along proposed road alignment.

The property is bounded to the north by Shingle Mill Creek and to the south by the drainage divide separating Shingle Mill Creek from Gold Gulch. Granite Construction Felton Quarry abuts the southwest portion of the harvest area of the property in Gold Gulch. The other adjacent properties are lightly developed with residential homes with some properties utilized for limited timber production.

Work performed during this investigation included: 1) Review of pertinent published and unpublished geologic and hydrologic reports associated with the proposed timber harvest, 2) Review of one set of aerial photographs, 3) Geomorphic



Exhibit D

field reconnaissance of the proposed haul road alignment, 4) Discussions with Steve Staub (RPF), and 5) Preparation of this report and accompanying graphics.

## SITE CONDITIONS and GEOLOGY

The subject property is located on moderate to steep slopes within the upper headwaters of Shingle Mill Creek. The slopes are typically smooth, slightly convex with natural slope gradients ranging between 30 and 60 percent. Inner gorge slopes exist immediately adjacent to Shingle Mill Creek with slope gradients locally exceeding 65 percent.

The hillside is drained by several small and narrow swales. These drainages are slightly incised into the hillside, typically have smooth, concave cross-sectional profile with a thin to thick duff layer found along the axis of the channel. We did not observe any evidence of active stream flow or fluvial erosion to suggest classifying these channels as Class III watercourses.

The western portion of the harvest area is underlain by unnamed granitic rocks (Figure 2). The upper portion of the granite is typically highly weathered with few outcrops of competent rock found near the ground surface. Weathered granite is typically a crystalline medium to coarse grained sand with little or no cohesion.

Mantling the granite in the eastern portion of the harvest area is the Eocene Age Lompico Sandstone (Figure 2). Where exposed along the road bed in the northeastern portion of the property the rock is comprised of competent thick bedded to massive medium to fine grained arkosic sandstone. Bedding was not observed on the property but regional mapping by Clark (1981) indicates a gentle 14 degree dip to the east

Overlying competent bedrock is weathered bedrock and colluvium. Thin colluvial deposits are found nearly everywhere across the hillside, however are thickest toward the axes of swales and drainages and toward the base of hillslopes. Locally, these deposits range in thickness of up to 2 feet. The colluvium that mantels both the Lompico Sandstone and unnamed granitic rocks have roughly the same engineering characteristics. These surficial soils consist predominantly of a well drained fine to medium grained near cohessionless sand with a minor trace of silt. The material well suited for road construction and most of the adjacent roads and skid trails are stable with minimal evidence of active erosion or fill instability.

Cooper-Clark and Associates (1975) mapped a large questionable deep-seated landslide in the eastern portion of the subject property (Figure 3). We could not confirm the existence of this slide but did observe a small bench like feature in the aerial photographs indenting the north facing hillside in the vicinity of the water tank. This bench may represent the unit surface of a large landslide, however additional work would be required to confirm this. Notwithstanding, in our opinion, the construction of the new temporary haul road should have almost no bearing on the large-scale stability of the hillslope.

Most of the land around the proposed timber harvest area was initially clearcut for redwood and fir around the turn of the century. Evidence of old growth stumps and a number of old skid trails and possible haul roads are scattered throughout the area.

An existing seasonal road contours around the hillside in the northeastern portion of the property providing access to two water tanks (Figure 1). A prominent skid tail used in past timber operations extends north of the water tanks climbing sharply up the hillside. Like many of the prominent skid trails in the area the trail, although steep, is in good shape with minimal evidence of erosion or fill instability.

The proposed new haul road, as flagged in the field, extends from the access road (100 feet prior to the water tanks) and transects moderate to steep slope for roughly 1500 feet before reaching the drainage divide between Shingle Mill Creek and Gold Gulch. The road will then extend an additional 1000 feet along or immediately adjacent to the moderately sloping ridge before terminating at a proposed landing.

Two areas of concern are located along the proposed road alignment. At M1 (located between 125 and 350) the alignment transects 45 to 55 percent slopes dipping in and out of several small swales (Figure 1). Several of these swales shows questionable and equivocal evidence for old to ancient debris flow activity. Not withstanding, we did not observe any evidence or recent landsliding or surface erosion in any of these swales and are of the opinion that the potential for significant erosion is low. Routing a stable road bed across this segment of the hillside is relatively straight forward provided the recommendations at the end of this report are adhered to.

At M2 (located between stations 675 and 750) the alignment transects steep 50 to 55 percent slopes for roughly 75 feet (Figure 1). The slopes along the alignment are smooth and straight and do not show evidence of past slope instability or surface erosion. Shingle Mill Creek is located approximately 200 feet downslope. Again, routing a stable road bed across this segment of the hillside is relatively straight forward provided that the recommendations in this report are strictly adhered to. If road construction follows these guidelines, we are of the opinion there is a low potential for road failure and significant surface erosion resulting from road drainage.

The remaining segments of road transect 25 to 45 percent slopes and standard road building techniques should prove adequate for the construction of the road.

At the terminus of the proposed road a new skid trail is proposed extending up the 35 to 45 percent ridge for an additional 800 feet. The skid will provide access to three yarder pads that will work the adjacent slopes to the north. Yarder Pads 1 and 3 (YP1 and YP3) are new pads to be graded into steep 55 to 70 percent slopes just off the nose of the ridge. The pads are to be roughly 20' by 18' in dimension with access to the pad via a narrow skid trail. Although the ground is steep, stable pads can be constructed at each of these two locations by keying the fill into competent soils and

retaining any loose fill behind one or two brow logs. The brow log(s) shall be anchored to the slope behind several large diameter fir trees and stumps located just below the pads. Fill will be compacted and the depth of fill kept to a minimum. Fill shall be less than 3 feet in thickness with minimal chance of fill instability. During construction some fill may dribble over the brow logs, however sediment is not anticipated to be delivered to any Class III or larger Watercourse. The nearest Class III channel is located in excess of 150 feet downslope at YP1 and 250 feet at YP3.

Yarder Pad 2 is located at the terminus of an existing road extending from the Felton Quarry.

## DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation, the proposed seasonal logging haul road and two yarder landings appear compatible with the site, provided the following recommendations are incorporated into the design and construction of the road. Both the road and landing can be constructed using a bulldozer.

### ROAD DESIGN AND LOCATION

1. The proposed haul road shall be constructed as near as possible along the flagged alignment as shown in Figure 1.

2. The project engineering geologist shall meet with the equipment operator prior to grading to verify the final location of the road alignment and to detail mitigative measures in areas of concern.

3. In general, the logging road width shall be maintained at a minimum width compatible with the largest type of equipment used in the harvesting operations. We anticipate a general road width of less than 12 feet.

### GENERAL GRADING RECOMMENDATIONS

4. Areas to receive fill that exceed 35 percent slope gradient shall be stripped of vegetation to a depth of 6 inches. Fill shall be placed in thin lifts not exceeding 18 inches in loose thickness and, at a minimum, track walked to achieve compaction. Where slopes are less than 35 percent fill can be side casted without stripping the vegetative layer.

5. Fillslope gradients shall not be constructed steeper than 1.5:1 gradient. Fills shall be keyed and benched into firm soil or bedrock in areas where existing gradients exceed 50 percent and the depth of fill exceeds 3 feet. Keyed fill will be required at Mitigative sites M1 and M2. Fills exceeding 5 feet in depth should be specifically reviewed by the engineering geologist.

6. The on-site soils appear suitable for use as engineered fill. Materials used for engineered fill shall be free of organic material, and contain no rocks or clods

Exhibit D

greater than 6 inches in diameter.

7. Cutslopes shall be inclined no steeper than 0.5:1 for heights up to 4 feet and 1:1 for heights up to 8 feet. Cuts greater than 8 feet should be reviewed by the engineering geologist. We do not anticipate any cuts over 6 feet in height along this road alignment. Cuts and fill should be balanced.

8. The road alignment should dip in and out of the shallow swales. Within the axis of the swale and for 20 feet on either side the road shall be a full bench construction. Excess spoil can be spread up or down road and incorporated into the fill prism of the road provided that the total depth of fill does not exceed 4 feet in thickness in those areas.

## DRAINAGE AND EROSION CONTROL

9. In order to preserve the roadbed and to control erosion, the road bed must be well drained. We recommend grading all of the road to give it an outsloped pitch. Outsloped roads are typically less expensive to construct and less difficult and expensive to maintain than insloped roads. Outsloped roads also disperse and drain runoff along the entire outside edge of the road. Refer to Appendix 1 for design criteria for outsloped roads.

10. Rolling dips and a smooth road surface are key to maintaining a well drained, outsloped road. The frequency of rolling dips and grade breaks, and the amount of "outsloping" needed to drain the road surface, depends on the grade of the road, as well as the road surfacing. Rolling dips require very little maintenance if they are constructed properly and at an adequate spacing. They should not collect enough runoff to develop significant erosion. Where possible rolling dips shall be constructed along the road alignment. Elsewhere, waterbars shall be graded into the roadbed prior to the winter season. Refer to Appendix 1 for general design criteria for rolling dips and waterbars.

11. Between October 15 and April 15, exposed soil shall be protected from erosion at all times. Such slopes shall be strawed. Straw shall be a minimum of 3" to 4" thick.

12. The owners shall be responsible for maintaining the erosion protection.

## SPECIFIC RECOMMENDATIONS

### M1

13. Fills along this 225 foot long reach of road shall be keyed and benched into firm soil or bedrock per general recommendations. Several brow logs shall also be placed at the base of the fill to limit the amount of material that may spill downslope during road construction.

### M2

14. Fills along this 75 foot long reach of road shall be keyed and benched into firm

soil or bedrock per the general recommendations. Several brow logs shall also be placed at the base of the fill to limit the amount of material that may spill downslope during road construction.

YP1 and YP3

15. The yarder pads should be constructed at a minimum size compatible with the largest type of equipment used in the harvest. We anticipate a yarder pad no larger than 20' by 18'. The proposed pads should be constructed as flagged in the field

16. One or two 18" to 24" green brow logs shall be placed below the yarder landing and pinned behind the large diameter firs located below the yarder pad. The brow logs in general should extend 10 feet on either side of the pad. The brow logs shall be placed to help contain any fill that ravels down the slope during road construction.

17. Areas to receive fill shall be stripped of vegetation and the fill keyed into competent soil or bedrock. Fill shall be placed at no steeper than a 1.5:1 slope to a maximum thickness of 3 feet. The pad should be outsloped. Cutslopes shall be no steeper than 0.5:1 slope.

29. Straw shall be applied prior to the winter season. Straw shall be a minimum of " to 4" thick.

GENERAL NOTES

23. If any unexpected variations in soil conditions, or if any unanticipated geologic conditions are encountered during construction, or if the proposed project will differ from that discussed or illustrated in this report, we require to be notified so supplemental recommendations can be given.

Exhibit D

## INVESTIGATIVE LIMITATIONS

1. This report presents the result of our focused engineering geologic investigation of a proposed logging haul road and two yarder landings. The purpose of this study was to conduct a limited field investigation to evaluate the feasibility of constructing a new logging road from water tank to the ridge crest following the existing flagged route and to evaluate the stability of the yarder landings as identified in the field. Our observations were limited to surface expressions and limited natural and artificial exposures of subsurface materials at and adjacent to the harvest area. For this reason, the conclusions should be considered limited in extent.

2. This written report comprises all of our professional opinions, conclusions and recommendations. This report supersedes any previous oral or written communications concerning our opinions, conclusions and recommendations.

3. The conclusion and recommendations noted in this report are based on probability and in no way imply the site will not possibly be subjected to ground failure or seismic shaking so intense that structures or roads will be severely damaged or destroyed.

4. This report is issued with the understanding that it is the duty and responsibility of the client, or his or hers representative or agent, to ensure that the recommendations contained herein are fully implemented.

5. The findings of this report are valid as of the present date. However, changes in the conditions of a property or landform can occur with the passage of time, whether they be due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control.

6. This investigation solely evaluates the geologic conditions for construction of the proposed new haul road. This report specifically does not provide an analysis of the property for residential development, including the use of the haul road as a driveway. If additional developments are proposed on the property, additional studies may be required.

I would like to thank you for this opportunity to assist you in your land use planning. If you have any questions or desire additional clarification, please don't hesitate to contact me.

Sincerely,

Timothy C. Best
Engineering Geologist # 1682

REGISTERED GEOLOGIST
TIMOTHY C. BEST
No. 1682
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA



Exhibit D

## REFERENCES CITED

1985: Frames WAC-85CA; black and white; 1:31,640 nominal scale; flown by WAC Corp., Eugene, Oregon; on file at the University of California Santa Cruz Map Library, photos 1985-D.

Cooper-Clark and Associates, 1974. Preliminary Map of Landslide Deposits in Santa Cruz County, California. Santa Cruz County Planning Department, County Building, 701 Ocean Street, Santa Cruz, California 95060.

Linseley, Krager Associates, 1983. Hydrometerological summary of the storm and flood of January 1982 in the San Lorenzo River Basin, Santa Cruz County, California, 32.p

Pacific Watershed Associates, W. E. Weaver and D.K. Hagans, 1994. Handbook for Forest and Ranch Roads: A guide for planning, designing, constructing, reconstructing, maintaining and closing wildland roads. For The Mendocino Resource Conservation District, 161p.

Rantz, S.E., 1971. Mean Annual Precipitation and Precipitation Depth-Duration-Frequency Data for the San Francisco Bay Region, California: U.S. Geological Survey Basic Data Contribution #32 - San Francisco Bay Region Environment and Resources Planning Department.

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# APPENDIX 1

# GENERAL RECOMMENDATIONS FOR ROAD CONSTRUCTION and MAINTENANCE

From Weaver and Hagans (1994)

## OUTSLOPED ROADS

It is generally recommended that most forest roads be constructed as single lane, outslope roads with minimal cut and fill. Outslope roads are typically less expensive to construct and less difficult to maintain than insloped roads. Outslope roads should be built without berms. The construction of berms may collect runoff and divert it down-road gullying the road bed and fill prism. Design criteria for outsloped roads is summarized in the below table.

**OUTSLOPING "PITCH' FOR ROADS UP TO 8% GRADE**
From; California Department of Forestry (1984)

| Road Grade | Outslope "pitch" for unsurfaced roads | Outsloped "pitch" for surfaced roads |
|---|---|---|
| 4%, or less | 3/8" per foot | 1/2" per foot |
| 5% | 1/2" per foot | 5/8" per foot |
| 6% | 5/8" per foot | 3/4" per foot |
| 7% | 3/4" per foot | 7/8" per foot |
| 8%, or more | 1" per foot | 1¼" per foot |

On most roads, especially those with grades in excess of 8%, outsloping is not always enough to get surface flow off the road quickly; therefore, in addition to outsloping, water bars (for seasonal or temporary roads) or rolling dips (permanent and seasonal roads) are necessary to divert runoff across the road surface.

Waterbars and rolling dips should be placed along the road close enough together that the road surface is not gullied. Waterbars are high maintenance drainage structures that are prone to failure if not properly built. Waterbars constructed on roads with even infrequent traffic (including mountain bikes) will quickly breakdown and/or breach the waterbar. Waterbars should be reserved for infrequently used skid trails.

In general, broad rolling dips are built at a 30 to 45 degree angle to the road, with a cross grade of at least 1% or greater than the grade of the road. Some rolling dips are built nearly perpendicular to the road. They are built with a long shallow approach on their up-road side and more abrupt rise or "lip" on the down-road side. They should be

built broad enough to permit uninterrupted vehicle travel.

Appropriate spacing of surface drainage structures depends on soil erodeability and runoff rates. Suggested design criteria for drainage spacing is listed in the following tables. Design dimensions for rolling dips are shown in the tables below .

Rolling dips and a smooth road surface are the key for maintaining a well drained, outsloped road. The frequency of rolling dips and grade breaks, and the amount of outsloping needed to drain the road surface depends on the grade of the road as well as the road surfacing.

**MAXIMUM DISTANCE BETWEEN WATER BREAKS ON ROADS AND TRAILS**
From: California Practice Rules

| Erosion Hazard Rating (for surface erosion) | ROAD OR TRAIL GRADIENT (%) | | | |
|---|---|---|---|---|
| | 10% or less | 11-25% | 26-50% | over 50% |
| Extremely High | 100' | 75' | 50' | 50' |
| High | 150' | 100' | 75' | 50' |
| Moderate | 200' | 150' | 100' | 75' |
| Low | 300' | 200' | 150' | 100' |

**ROLLING DIP DIMENSIONS**
From: USDA-SCS (1981)

| Road Grade (%) | Upslope approach (distance from up-road start of rolling dip to trough(ft) | Reverse grade (distance from trough to crest)(ft) | Depth below average road grade at discharge end of trough (ft) | Depth below average road grade at upslope end of trough (ft) |
|---|---|---|---|---|
| <6 | 55 | 15-20 | 0.9 | 0.3 |
| 8 | 65 | 15-20 | 1.0 | 0.2 |
| 10 | 75 | 15-20 | 1.1 | 0.1 |
| 12 | 85 | 20-25 | 1.2 | 0.1 |
| >12 | 100 | 20-25 | 1.3 | 0.1 |

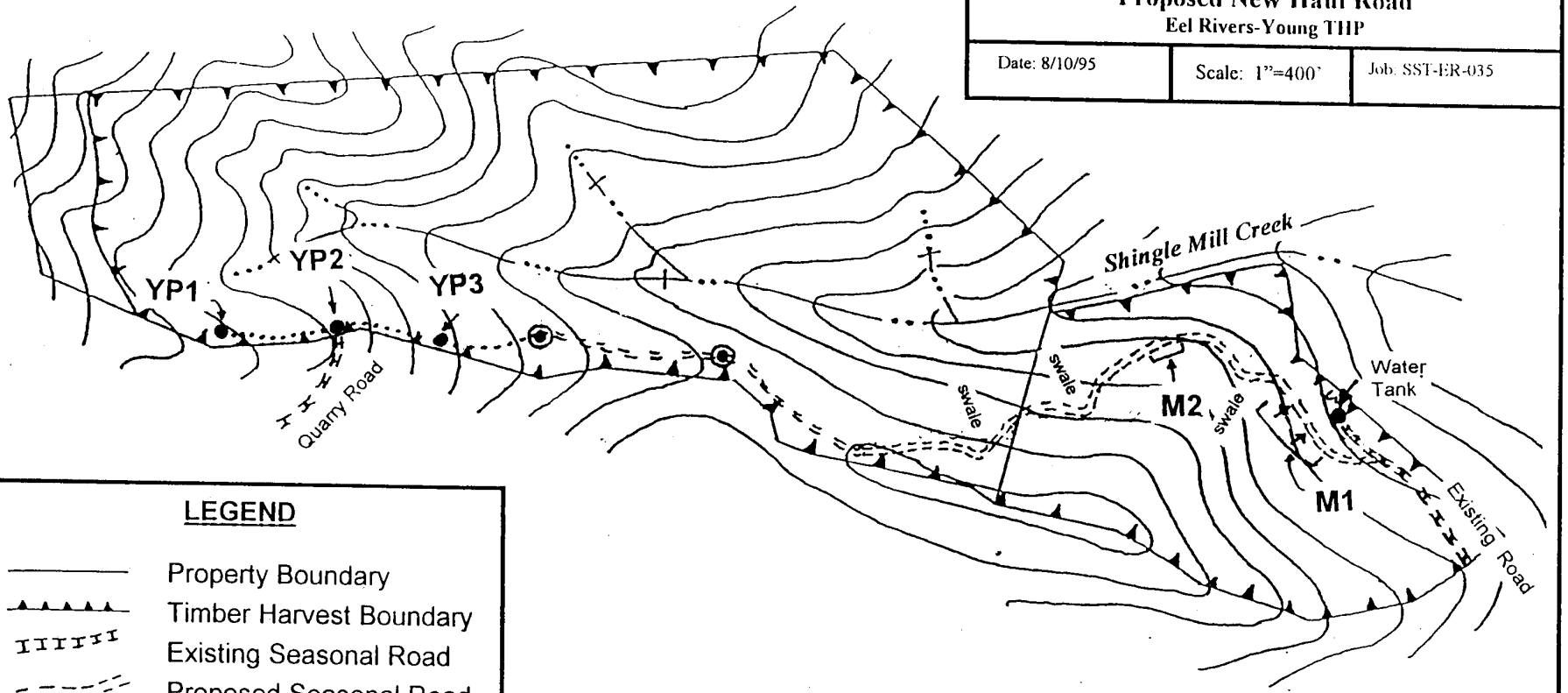
Exhibit D

FIGURE 1

TIMOTHY C. BEST, CEG
CONSULTING ENGINEERING GEOLOGY
1803 Mission Street, Suit 403: Santa Cruz, CA 95060
(408) 425-5832

# SITE MAP:
## Proposed New Haul Road
Eel Rivers-Young THP

| Date: 8/10/95 | Scale: 1"=400' | Job: SST-ER-035 |
|---|---|---|




**LEGEND**

- Property Boundary
- Timber Harvest Boundary
- Existing Seasonal Road
- Proposed Seasonal Road
- Existing Skid Trail
- Proposed Skid Trail
- Proposed Landing
- Yarder Pad
- Class II Watercourse
- Class III watercourse
- Debris Slide (questionable)

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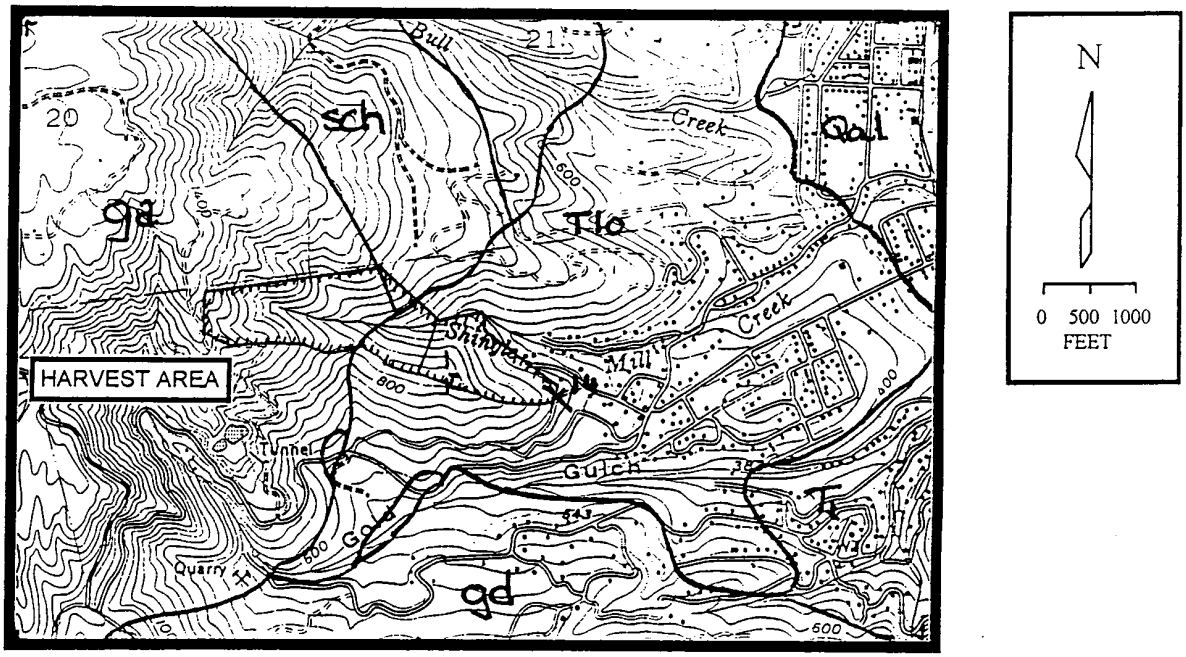
REGIONAL GEOLOGIC MAP FIGURE 2

EEL RIVERS-COLLINS THP




EARTH MATERIALS

Qal Alluvium:
Unconsolidated gravel sand and silt

Tlo Lompico Sandstone:
Thick bedded to massive fine-grained arkosic sandstone; locally friable.

ga Granite and Adamellite

sch Metasedimentary rocks

SYMBOLS

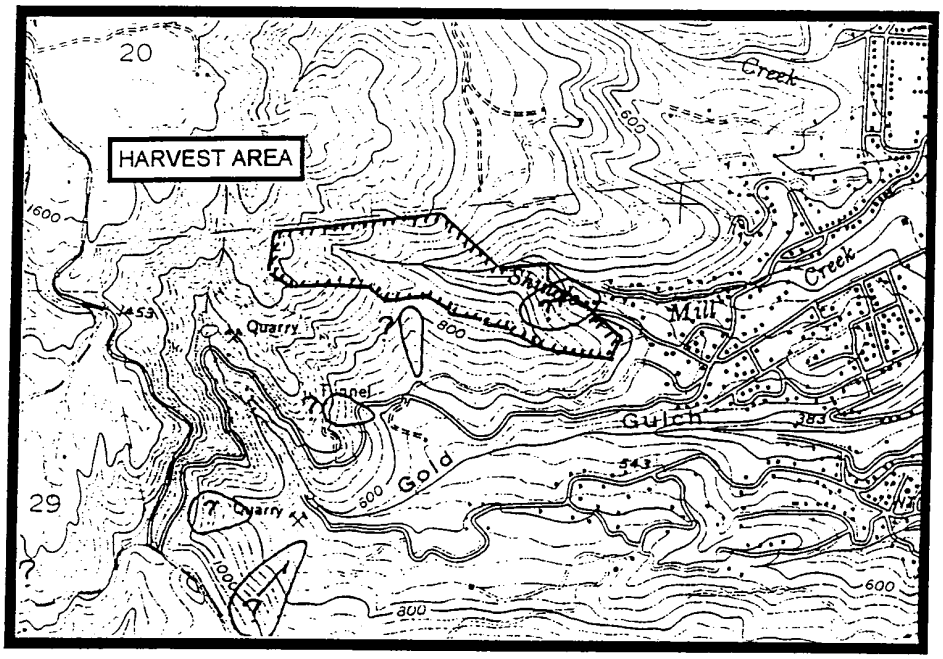
Geologic contact

36 Strike and dip of bedding

Exhibit D

## REGIONAL LANDSLIDE MAP
(From Cooper Clark and Associates)
EEL RIVERS-COLLINS THP

FIGURE 3




### LARGE LANDSLIDE DEPOSIT

More than 500 feet in maximum dimension. Arrows indicate general downslope direction of movement. D: definite landslide deposit; P: probable landslide deposit; ?: questionable landslide deposit; R: possible rapid rate of landslide movement (several hundred feet to 100 feet per second). Hachured line shows approximate position of inferred main scarp.

### SMALL LANDSLIDE DEPOSIT AND GULLY

50 to 500 feet in maximum dimension. Arrow indicates direction of downslope movement centered over location of deposit. Included are gullies which exhibit observable side bank slumping.

### SOIL CREEP

Areas od suspected soil creep, a gradual downslope movement of soil and loose rock material on a slope. Wiggly arrow indicates direction of soil creep and is centered over location of creeping area.



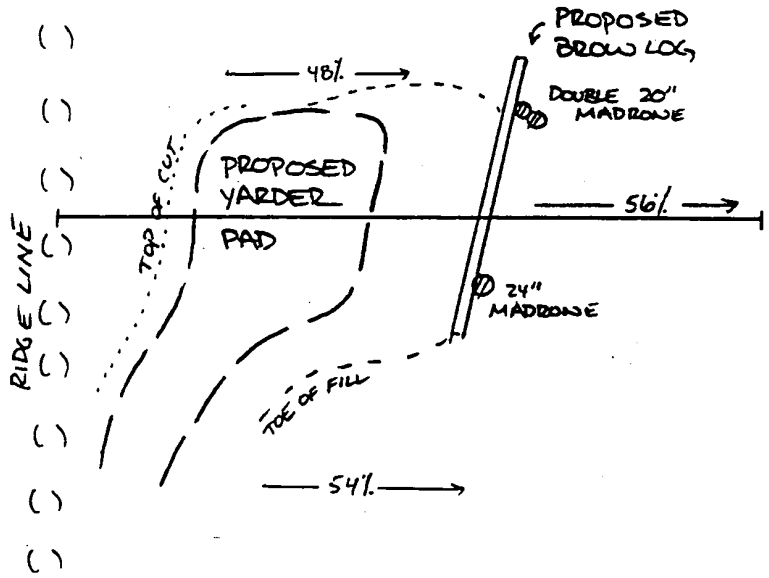
Exhibit D

EEL RIVER - YOUNGS THP

SITE MAP
YP-1

0 10 20
1"=20'





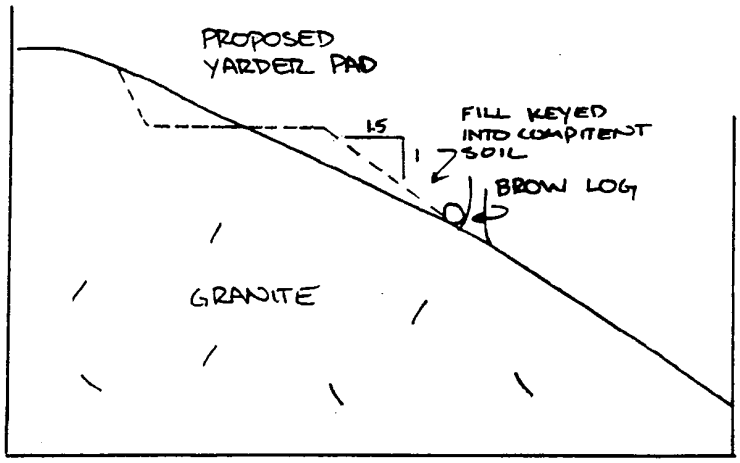
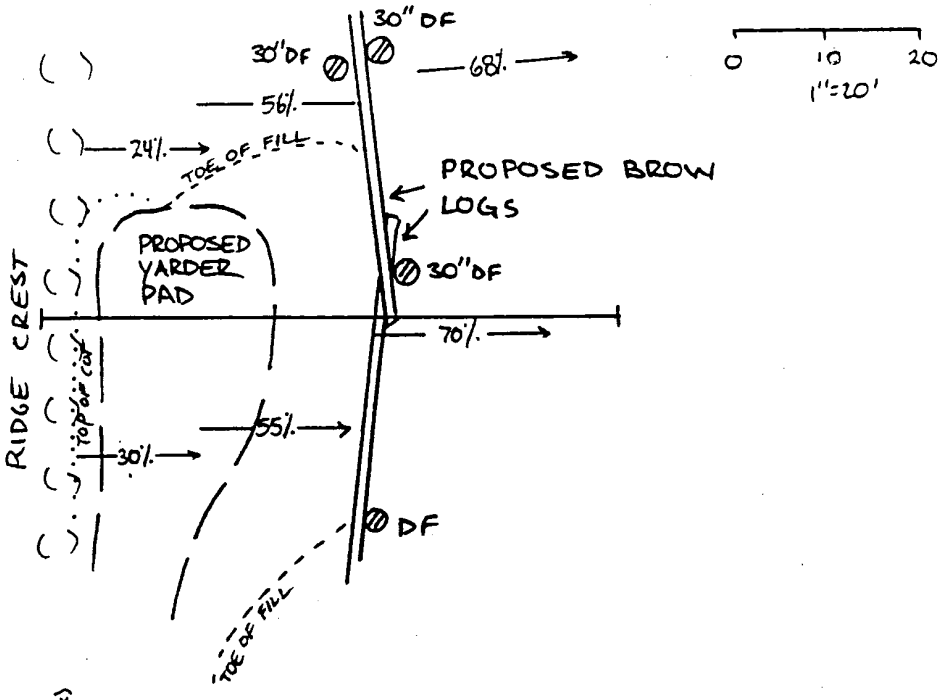




Exhibit D

# EEL RIVER-YOUNG THP

SITE MAP
YP-3



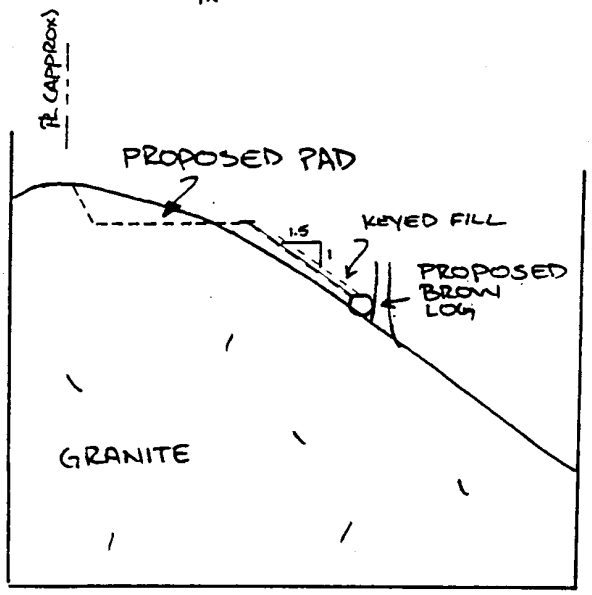








Exhibit D

Stephen R. Staub
Forester & Environmental Consultant

STAUB

March 14, 1995

Clarence Hansen, Edward Sinnott, et al.
c/o Gerry Hansen
2025 Volley Road
Meadow Vista, CA 95722

and

Mike Sinnott
952 Eaton Drive
Felton, CA 95018

Dear Quarry Landowners,

My name is Stephen Staub, and I represent Eel River Sawmills, who own parcels 064-021-014 and 064-201-020 immediately north of your Felton Quarry property. This letter recaps discussions we have had with Gerald Hansen and Mike Sinnott, who have been kind enough to listen to our proposals. Please consider the following as standing offers, likely to be of benefit to both ownerships.

As you know, we are preparing a Timber Harvest Plan (THP) for Eel River's adjoining parcels. The primary method of operation is skyline cable yarding. A skyline yarding "show" requires adequate deflection, which necessitates both a high tailhold and a high yarder location. The common ridgeline found along your northern property line and the southern property line of Eel River Sawmills has three ideal yarder locations that occur over a stretch of some 450 feet.

Current recorded surveys indicate that the property line approximates the centerline of the ridge as it rises to meet the easternmost portion of quarry operations (now abandoned and planted). Optimal yarder locations requiring little excavation would entail using portions of the ridge on your side of the current property line within that 450 foot stretch. Use would extend as much as 20 feet across the current line in a few spots, would generally involve 10 feet or less, and might not cross the line at all in other places. Total acreage involved would be roughly one acre or less.

Operations can feasibly take place without actually crossing the centerline of the ridge, but it would be less efficient and excessively destructive by requiring significant amounts of excavation. Your property would gain significantly improved fire suppression access from the proposed ridgeline trail, a very real benefit in view of the amount of foot traffic the ridgeline receives already, and as confirmed by the small half acre fire that occurred lower on the ridge last fall. No use of existing roads on your property is proposed since road access for the Eel River parcels is already established over other existing roads.

775 Sunlit Lane, Santa Cruz, California 95060 | Telephone 408·423·6461 | Registered Professional Forester License No. 1911



Exhibit D

Although there seemed to be widespread agreement that the proposed access is not unreasonable or undesirable, other considerations appear to have prevented a workable arrangement. Potential for increased liability due to timber operations was mentioned as a significant concern. We understand that concern, and believe that it can be alleviated under any of the following three scenarios that we have discussed, although a lot line adjustment may offer the surest means of protecting your property from any kind of liability involvement. The possible scenarios were as follows:

1. A land neutral lot line adjustment where the minimum amount of land necessary for yarding would be added to the Eel River parcel in exchange for adding an equal amount of land to your parcel further up the ridgeline. Permanent access along the ridgeline could be reserved for you as landowners and/or for your leasees. Eel River would bear all costs of such an exchange, which would completely relieve you of any direct or indirect involvement in harvesting operations.

2. A permanent easement for timber harvesting purposes, which would be specifically described and limited by area and in nature. Eel River would indemnify you as landowners from any and all future liability arising from its use. Insurance coverage naming you as additional insured would also be provided.

3. A temporary easement for purposes of the coming harvest, again specifically described and limited by area and in nature. As in the above cases, Eel River would bear all costs associated with establishing the agreement and provide indemnification and insurance protection. In both easement scenarios, you as landowners would receive letter confirmation of the use of the edge of your property for harvesting under the THP, but likely no signature would be required.

Recognizing that you have already heard these proposals, we respectfully request that you reconsider them, or terms for some other arrangement that would make this small area available for our use. As resource managers, it is frustrating to contemplate making large excavations in areas that, with your agreement, would need little more than slight brush clearance. Please contact us at any time if you wish to pursue these discussions. Any help would be greatly appreciated.

Thanks very much for your consideration.

Sincerely,

Stephen R. Staub

*Stephen R. Staub, Forester & Environmental Consultant*



Exhibit D

**STEPHEN R. STAUB** **REGISTERED PROFESSIONAL FORESTER**
(408) 423-6461 775 Sunlit Lane, Bonny Doon, CA 95060

October 20, 1995

Mr. T. Osipowich
Resource Manager
PO Box 670
Santa Rosa, CA 95402

Re: THP 1-95-429 SCR, Lands of EEL RIVER/YOUNG

I concur with the Review Team Recommendations for this THP.

Sincerely,

Stephen R. Staub
Registered Professional Forester
License Number 1911

PART OF PLAN

Received CDF
REGION 1
OCT 30 1995
RESOURCE MANAGEMENT



Exhibit D

REVIEW TEAM RECOMMENDATIONS

THP 1-95-429 SCR, LANDS OF EEL RIVER SAWMILLS/YOUNG

1. Original THP pages 9, 11, 12, 13, 15, 16, 18, 19, 21, 22, 23, 24, and 36 should be replaced with revised THP pages attached. These changes satisfy PHI recommendations 1, 2, 10, 11, 14, 12, 15, and 16.

2. Log truck drivers shall be reminded by the LTO to obey the truck speed limit on San Lorenzo Avenue and not use their jake brakes.

3. The RPF shall show the timber operator the location of the Santa Cruz manzanita prior to the commencement of operations. The timber operator shall keep the road width to a minimum in this area and avoid damage to the adjacent manzanita population.

4. The RPF shall check all flagging prior to the pre-operational meeting to assure the flagging is intact before timber operations commence.

5. Waterbreak outfalls along the existing haul road shall be mulched with straw.

6. The section of road at point "G-1" (revised THP map, page 15) shall be constructed as a full bench road. Sidecast shall be no thicker than 12" measured perpendicular to the hillside. A brow log shall be placed along the outer edge of the road to retain sidecast material.

7. At point "G-2" (revised THP map, page 15), there shall be no blading of the trench/slide surface. Any bare soil within the trench shall be mulched with slash or straw. The trench shall be properly drained to avoid ponding of water.

8. The following shall be adhered to when construction occurs on steep slopes or on areas of unstable soils:

   a. downhill construction shall occur whenever possible to limit sidecast;
   b. primary roadcuts shall be insloped and slightly uphill of the final road grade to permit the incorporation of the sidecast into the road surface;
   c. crib logs shall be utilized where possible to retain sidecast;
   d. sidecast shall be kept off of slopes greater than 50% unless a keyway bench is constructed (CCR 923.5).

9. The RPF (or his designee) or a certified engineering geologist shall be on-site during construction of the proposed road and construction of skid trails A, YP1 and YP3. The certified engineering geologist shall inspect the above construction features and certify to CDF, in writing, that his/her

recommendations, and the recommendations of CDMG, were implemented.

10. The mound of soil located at the end of the existing seasonal road at YP2 shall be removed upon completion of operations or before the winter period, whichever comes first.

11. Fill shall not be placed in lifts greater than 12" in loose thickness.

12. The licensed timber operator and his employees (including log truck drivers) shall not use Eaton Drive to access the plan area.

13. The RPF shall flag all property lines prior to the pre-operational meeting.

PART OF PLAN

064-201-82

'93 '64-201-77 < 82 / 89

93 · 157 Dodge

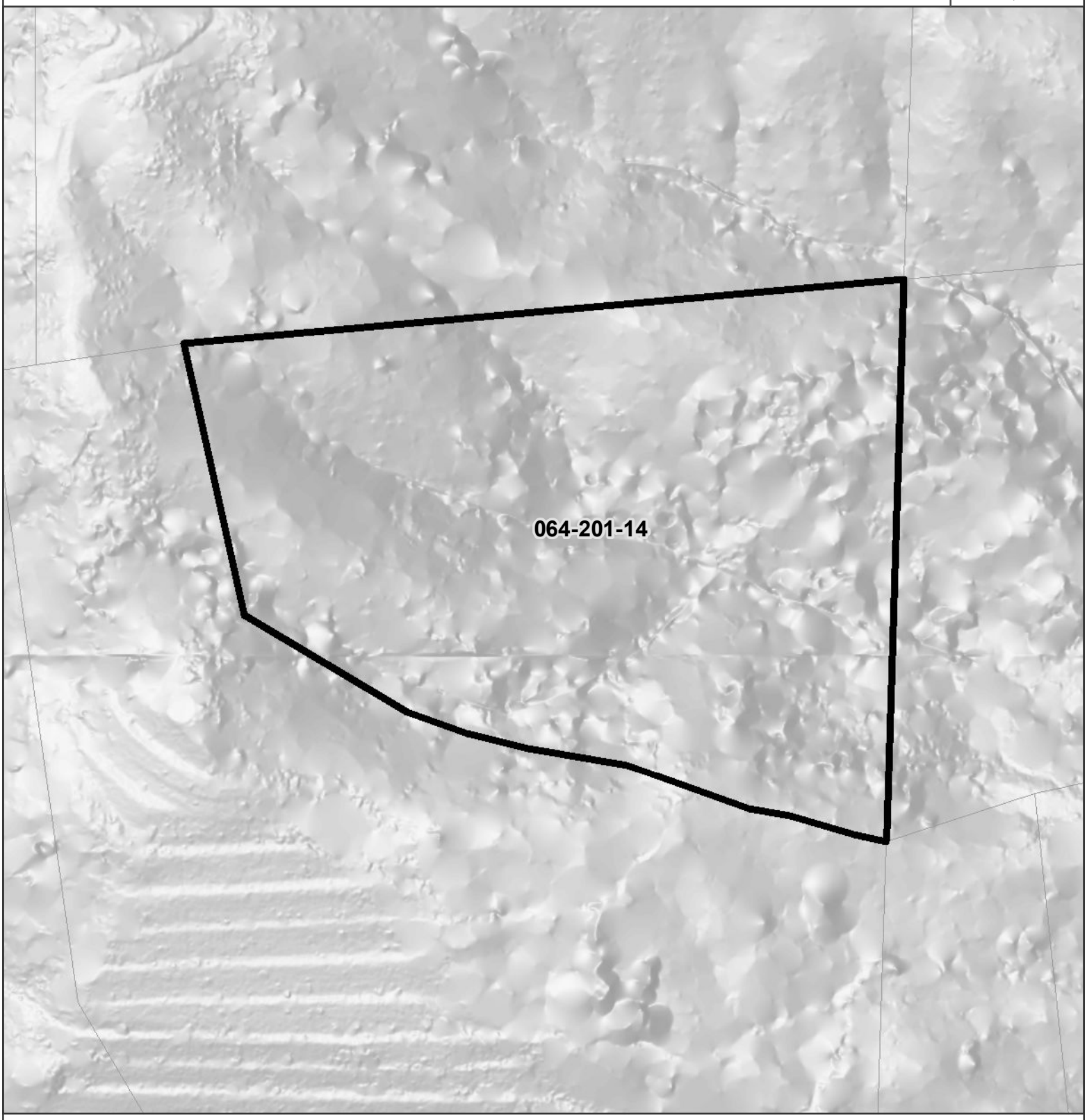
86 - maxwell

89 - Lehman Macmillan

88-373 34 acres

SANTA CRUZ COUNTY PLANNING DEPARTMENT

# Parcel Location Map


**Parcel: 06420114**

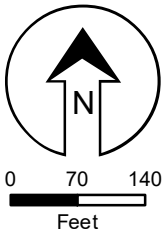
Study Parcel

Assessor Parcel Boundary

Map printed: 15 May. 2023

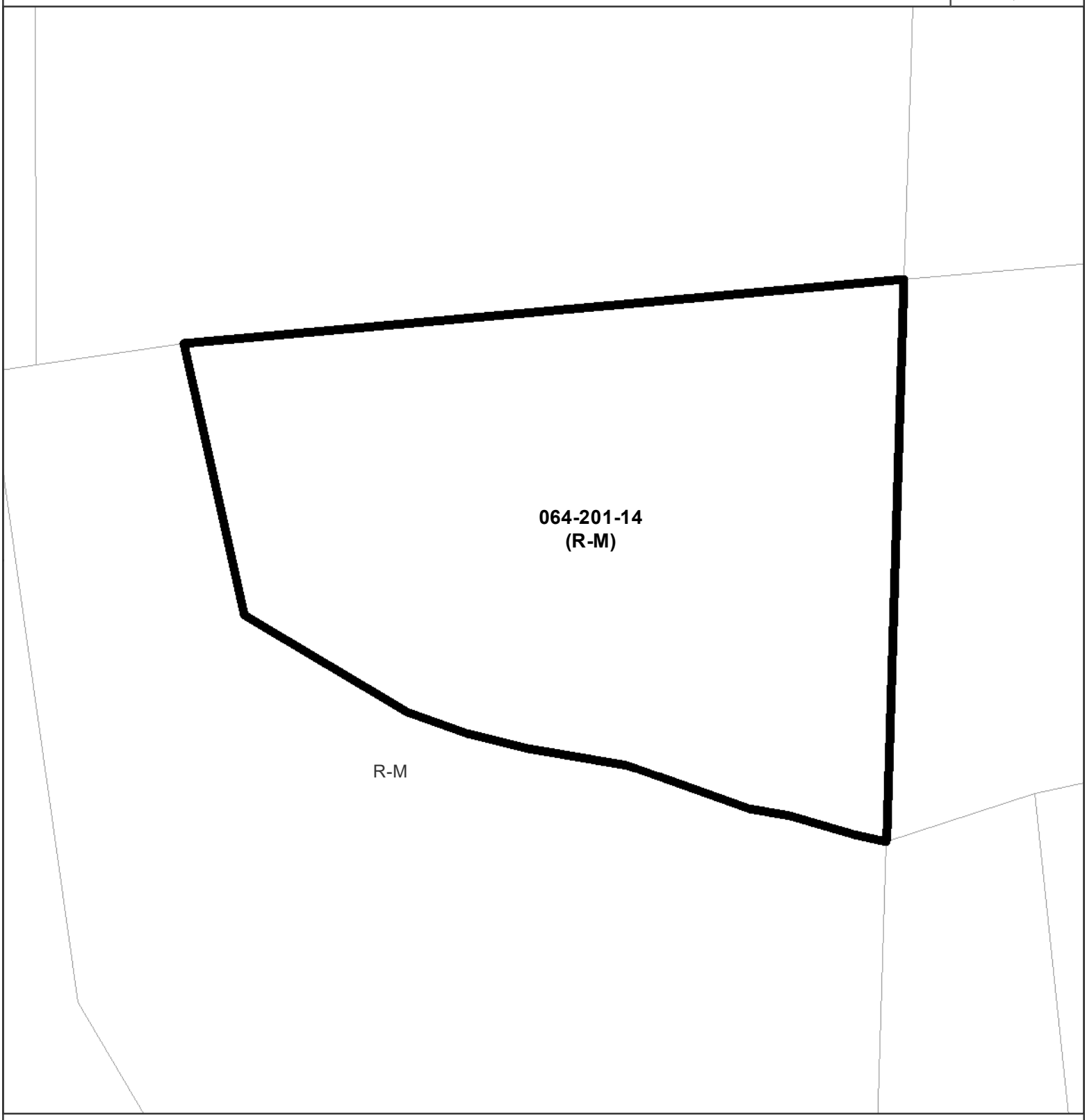


**Exhibit E**



SANTA CRUZ COUNTY PLANNING DEPARTMENT

# Parcel General Plan Map


R-M *Residential Mountain*

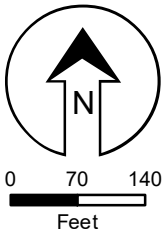
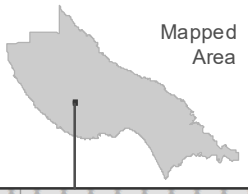



**Exhibit E**

SANTA CRUZ COUNTY PLANNING DEPARTMENT

# Parcel Zoning Map




PR

SU

064-201-14
(SU)

TP

M-3

M-3 *Mineral Extraction Industrial*
PR *Parks, Recreation, & Open Space*
SU *Special Use*
TP *Timber Production*

N

0 70 140
Feet

**Exhibit E**

SANTA CRUZ COUNTY PLANNING DEPARTMENT

# Parcel Location Map



**Parcel: 06420120**

Study Parcel

Assessor Parcel Boundary

Map printed: 15 May. 2023



**Exhibit E**

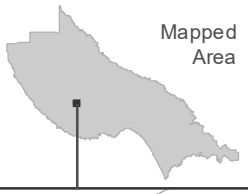
N

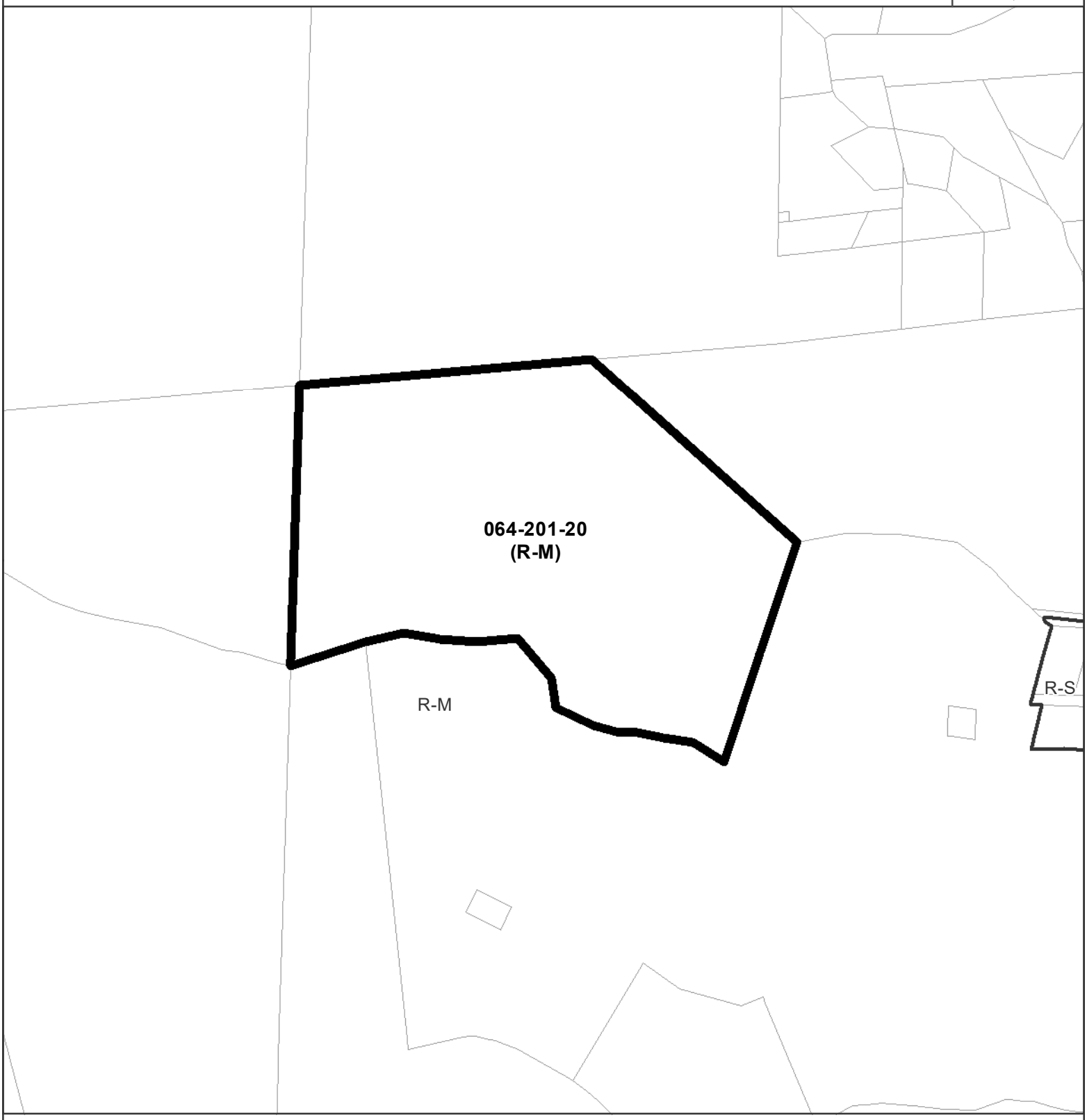
0 140 280

Feet

SANTA CRUZ COUNTY PLANNING DEPARTMENT

# Parcel General Plan Map




R-M *Residential Mountain*

R-S *Residential Suburban*

N

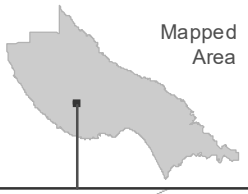
0 140 280

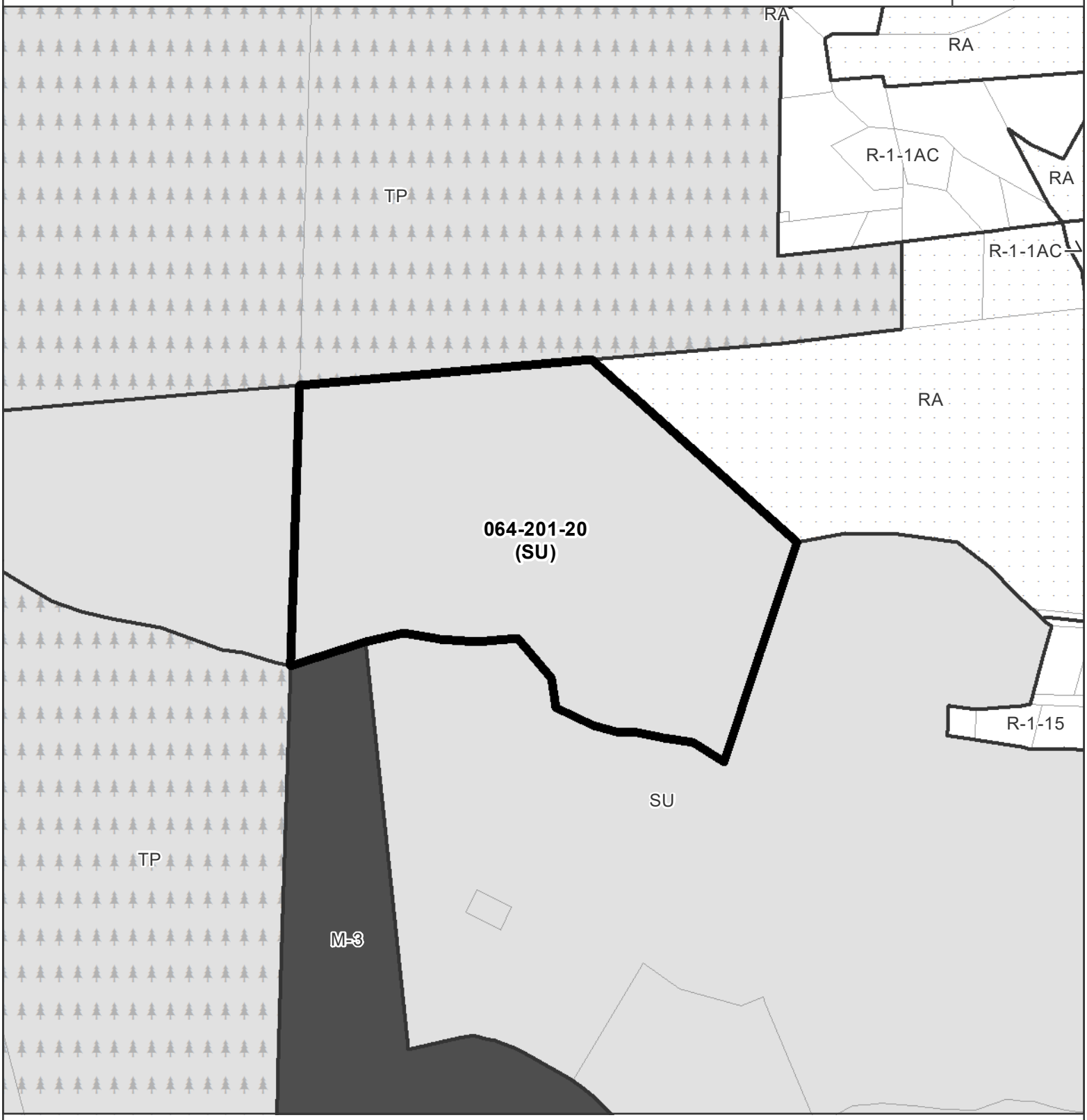
Feet

**Exhibit E**

SANTA CRUZ COUNTY PLANNING DEPARTMENT

# Parcel Zoning Map




RA *Residential Agricultural*
M-3 *Mineral Extraction Industrial*
R-1 *Single-Family Residential*
SU *Special Use*
TP *Timber Production*



**Exhibit E**

N

0 140 280
Feet

BEFORE THE PLANNING COMMISSION
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO._____

On the motion of Commissioner:
duly seconded by Commissioner:
the following Resolution is adopted:

PLANNING COMMISSION RESOLUTION
SENDING RECOMMENDATION TO THE BOARD OF SUPERVISORS
ON PROPOSED REZONING

---

WHEREAS, the Planning Commission has held a public hearing on Application No. 221359, an application to rezone two parcels, APNs 064-201-14 and 063-121-20, from the SU (Special Use) zone district to the TP (Timber Production) zone district. The subject parcels are located just north of 1704 Felton Quarry Road in the San Lorenzo Valley Planning Area.

WHEREAS, the Planning Commission has considered all testimony and evidence received at the public hearing and detailed in the attached staff report.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission recommends that the Board of Supervisors determine the proposal is exempt from further environmental review under the California Environmental Quality Act (CEQA) pursuant to Section 15264, Statutory Exemption for Timberland Preserves.

BE IT FURTHER RESOLVED, that the Planning Commission recommends that the Board of Supervisors adopt the attached Ordinance amending the County's Zoning Plan and Map pursuant to Santa Cruz County Code Section 13.10.215.

BE IT FURTHER RESOLVED, that the Planning Commission incorporates the findings on the proposed Zoning Map Amendment as contained in the Report to the Planning Commission and in Section II of the attached Ordinance.

PASSED AND ADOPTED by the Planning Commission of the County of Santa Cruz, State of California, this _____ day of _____, 2023, by the following vote:

AYES: COMMISSIONERS
NOES: COMMISSIONERS
ABSENT: COMMISSIONERS
ABSTAIN: COMMISSIONERS

_____
Rene Shepherd, Chairperson

ATTEST: _____
JOCELYN DRAKE, Secretary



Exhibit F

APPROVED AS TO FORM:

_____

COUNTY COUNSEL



Exhibit F

**ORDINANCE NO. _____**

**ORDINANCE AMENDING ZONING PLAN AND MAP PURSUANT TO CHAPTER 13.10 OF THE SANTA CRUZ COUNTY CODE CHANGING FROM ONE ZONE DISTRICT TO ANOTHER**

---

The Board of Supervisors of the County of Santa Cruz ordains as follows:

**SECTION I**

The Board of Supervisors finds that the public convenience, necessity and general welfare require the amendment of the County zoning plan and map pursuant to Santa Cruz County Code section 13.10.215, to maintain a stable, desirable, well-balanced pattern of development throughout the County. The Board of Supervisors desires to implement the policies of the County General Plan and Local Coastal Program Land Use Plan regarding two vacant parcels located approximately 1.2 miles west of the intersection of Highway 9 and San Lorenzo Boulevard in the San Lorenzo Valley Planning area, and approximately 0.6 miles east of the intersection of Pineridge Road and Empire Grade in Bonny Doon, and that the zoning to be established herein is consistent with all elements of the California Government Code, Santa Cruz County General Plan, and the Santa Cruz County Code.

**SECTION II**

The Board of Supervisors hereby adopts the Zoning Plan Amendment as described in Section III, and adopts the findings in support thereof without modification as set forth below:

1. The proposed zone district will allow a density of development and types of uses which are compatible with the objectives, policies and programs, and land use designations of the adopted General Plan, and conforms with, and is adequate to carry out, the coastal resource protection provisions of the certified Land Use Plan; and

2. The proposed zone district is appropriate for the level of utilities and community services available to the land; and

3. The character of development in the area where the land is located has changed or is changing to such a degree that the public interest will be better served by a different zone district; and

4. The proposed rezoning maintains and provides for priority uses consistent with Sections 2.22.1 and 2.22.2 of the certified Land Use Plan.

5. The property meets the requirements of Government Code section 51113.5 and County

Code Section 13.10.375(c).

**SECTION III**

Chapter 13.10 - Zoning Regulations of the Santa Cruz County Code is hereby amended by amending Section 13.10.210 - Zoning Plan to change the following properties from the existing zone district to the new zone districts as follows:

| Assessor's Parcel Numbers | Existing Zone District | New Zone District |
|---|---|---|
| 064-201-14 and 064-201-20 | SU (Special Use) | TP (Timber Production) |

**SECTION IV**

This ordinance shall take effect on the 31st day after the date of final passage.

PASSED AND ADOPTED THIS _____ day of _____ 2023, by the Board of Supervisors of the County of Santa Cruz by the following vote:

AYES: SUPERVISORS
NOES: SUPERVISORS
ABSENT: SUPERVISORS
ABSTAIN: SUPERVISORS

_____
Chairman of the Board of Supervisors

ATTEST: _____
Clerk of the Board

APPROVED AS TO FORM:

_____
Assistant County Counsel

Exhibit: Rezoning Map

DISTRIBUTION: County Counsel
Planning
Assessor
County GIS

# Parcel Information

## Services Information

| | |
|---|---|
| Urban/Rural Services Line: | __ Inside _X_ Outside |
| Water Supply: | N/A |
| Sewage Disposal: | N/A |
| Fire District: | County Fire District (CalFire) |
| Drainage District: | Flood Control Zone 8 |

## Parcel Information

| | |
|---|---|
| Parcel Size: | 15 and 28-acres |
| Existing Land Use - Parcel: | Vacant, undeveloped |
| Existing Land Use - Surrounding: | Timber production, Quarry, Undeveloped |
| Project Access: | Access from east side, via San Lorenzo Avenue |
| Planning Area: | San Lorenzo Valley |
| Land Use Designation: | R-M (Mountain Residential) |
| Zone District: | SU (Special Use) |
| Coastal Zone: | __ Inside _X_ Outside |
| Appealable to Calif. Coastal Comm. | __ Yes _X_ No |

## Environmental Information

| | |
|---|---|
| Geologic Hazards: | Not mapped/no physical evidence on site |
| Fire Hazard: | SRA-High |
| Slopes: | >50% over majority of site |
| Env. Sen. Habitat: | Not mapped/no physical evidence on site |
| Grading: | No grading proposed |
| Tree Removal: | Tree removal pending State approval |
| Scenic: | Not a mapped resource |
| Archeology: | Not mapped/no physical evidence on site |