



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

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TOM BURNS, PLANNING DIRECTOR

February 8, 2008

Planning Commission
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

Agenda Date: March 12, 2008
APN: 103-241-07
Application: 07-0461
Item #: 17
Time: After 9 AM

Subject: A public hearing to consider a proposal to rezone a single lot of record from the Special Use (SU) zone district to the Timber Production (TP) zone district.

Members of the Commission:

On August 27, 2007, the County Planning Department accepted this application for a rezoning to Timber Production (TP). This is a proposal to rezone a 23-acre parcel from the Special Use (SU) zone district to the Timber Production (TP) designation. The uses on the property consist of a single family dwelling & vacant rural acreage .

Background

This project qualifies for a rezoning under California Government Code Section 51113. This section allows a property owner to petition the County to rezone land to the TP zone. The requirements for this type of rezoning are listed in Government Code section 51113(c)1. The County may not place any additional requirements on this petition to rezone the property to TP. County Code Section 13.10.375(c) – "Zoning to the TP District" implements Government Code section 51113 and specifies the six criteria which must be met in order to rezone to TP.

1 c) On or before March 1, 1977, the board or council by ordinance shall adopt a list of criteria required to be met by parcels being considered for zoning as timberland production under this section.

The criteria shall not impose any requirements in addition to those listed in this subdivision and in subdivision (d). The following shall be included in the criteria:

- (1) A map shall be prepared showing the legal description or the assessor's parcel number of the property desired to be zoned.
- (2) A plan for forest management shall be prepared or approved as to content, for the property by a registered professional forester.

The plan shall provide for the eventual harvest of timber within a reasonable period of time, as determined by the preparer of the plan.

(3) (A) The parcel shall currently meet the timber stocking standards as set forth in Section 4561 of the Public Resources Code and the forest practice rules adopted by the State Board of Forestry and Fire Protection for the district in which the parcel is located, or the owner shall sign an agreement with the board or council to meet those stocking standards and forest practice rules by the fifth anniversary of the signing of the agreement. If the parcel is subsequently zoned as timberland production under subdivision (a), failure to meet the stocking standards and forest practice rules within this time period provides the board or council with a ground for rezoning of the parcel pursuant to Section 51121.

(B) Upon the fifth anniversary of the signing of an agreement, the board shall determine whether the parcel meets the timber stocking standards in effect on the date that the agreement was signed.

Notwithstanding the provisions of Article 4 (commencing with Section 51130), if the parcel fails to meet the timber stocking standards, the board or council shall immediately rezone the parcel and specify a new zone for the parcel, which is in conformance with the county general plan and whose primary use is other than timberland.

- (4) The parcel shall be timberland, as defined in subdivision (f) of Section 51104.
- (5) The parcel shall be in compliance with the compatible use ordinance adopted by the board or council pursuant to Section 51111.

(d) The criteria required by subdivision (c) may also include any or all of the following:

(1) The land area concerned shall be in the ownership of one person, as defined in Section 38106 of the Revenue and Taxation Code, and shall be comprised of single or contiguous parcels of a certain number of acres, not to exceed 80 acres.

(2) The land shall be a certain site quality class or higher under

Section 434 of the Revenue and Taxation Code, except that the parcel shall not be required to be of the two highest site quality classes.

In accordance with County Code Section 13.10.375(c), the project meets the following six criteria for rezoning to Timber Production:

1. A map has been submitted with the legal description or assessor's parcel number of the property to be rezoned.
2. A Timber Management Plan, undated, prepared by a registered professional forester has been submitted for the property (Exhibit E).
3. The parcel currently meets the timber stocking standards as set forth in Section 4561 of the Public Resources Code and the Forest Practice Rules for the district in which the parcel is located (see Exhibit E).
4. The parcel is timberland, as the entire parcel is capable of producing a minimum of 15 cubic feet of timber per acre annually and is almost entirely located within a mapped Timber Resource area.
5. The uses on the parcel are in compliance with the Timber Production Zone uses set forth in Section 13.10.372.
6. The land area to be rezoned is in the ownership of one person, as defined in Section 38106 of the Revenue and Taxation Code, and is comprised of at least five acres in area.

This project qualifies for a statutory exemption (Exhibit D) in accordance with the California Environmental Quality Act and the County Environmental Review Guidelines (Article 17, Section 1703).

Conclusion

All of the criteria have been met for rezoning this parcel to the Timber Production zoning designation. All required findings can be made to approve this application and the rezoning is consistent with the General Plan policies and land use designations.

Recommendation

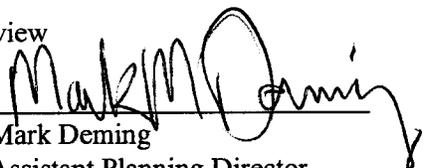
Staff recommends that your Commission adopt the attached Resolution (Exhibit A), sending a recommendation to the Board of Supervisors for approval of Application No. 07-0461 based on the attached findings (Exhibit B).

EXHIBITS

- A. Planning Commission Resolution, with Ordinance/ Findings
- B. APN Map
- C. Location, Current Zoning and General Plan Designation Maps
- D. Notice of Exemption from CEQA
- E. Timber Management Plan by Roy Webster, dated August 17, 2007.

Maria Porcila Perez
Project Planner
Development Review

Reviewed By:


Mark Deming
Assistant Planning Director

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 AMENDMENT TO THE ZONING ORDINANCE

WHEREAS, the Planning Commission has held a public hearing on Application No. 07-0461, involving property located on the south end of Allred Lane, approximately 3000 feet east of the intersection with Soquel San Jose Road, and the Planning Commission has considered the proposed rezoning, all testimony and evidence received at the public hearing, and the attached staff report.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission recommends that the Board of Supervisors adopt the attached ordinance amending the Zoning Ordinance by changing property from the Special Use (SU) zone district to the Timber Production zone district.

BE IT FURTHER RESOLVED, that the Planning Commission makes findings on the proposed rezoning as contained in the Report to the Planning Commission.

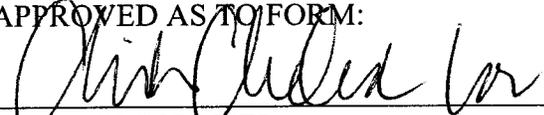
PASSED AND ADOPTED by the Planning Commission of the County of Santa Cruz, State of California, this _____ day of _____, 2007, by the following vote:

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

Chairperson

ATTEST: _____
MARK DEMING, Secretary

APPROVED AS TO FORM:



COUNTY COUNSEL

ORDINANCE NO. _____

**ORDINANCE AMENDING CHAPTER 13
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 Regulations to implement the policies of the County General Plan and Local Coastal Program Land Use Plan regarding the timber resource property located on the south end of Allred Lane, approximately 3000 feet east of the intersection with Soquel San Jose Road; finds that the zoning to be established herein is consistent with all elements of the Santa Cruz County General Plan and the Santa Cruz County Code, as modified by the *Big Creek* decision; and finds and certifies that the project is subject to a statutory exemption under the California Environmental Quality Act.

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 consistent with the objectives and land use designations of the adopted General 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 property meets the requirements of Government Code section 51113 or 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 district as follows:

<u>Assessor's Parcel Number</u>	<u>Existing Zone District</u>	<u>New Zone District</u>
103-241-07	Special Use (SU)	TP

SECTION IV

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

PASSED AND ADOPTED THIS _____ day of _____ 2007, 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

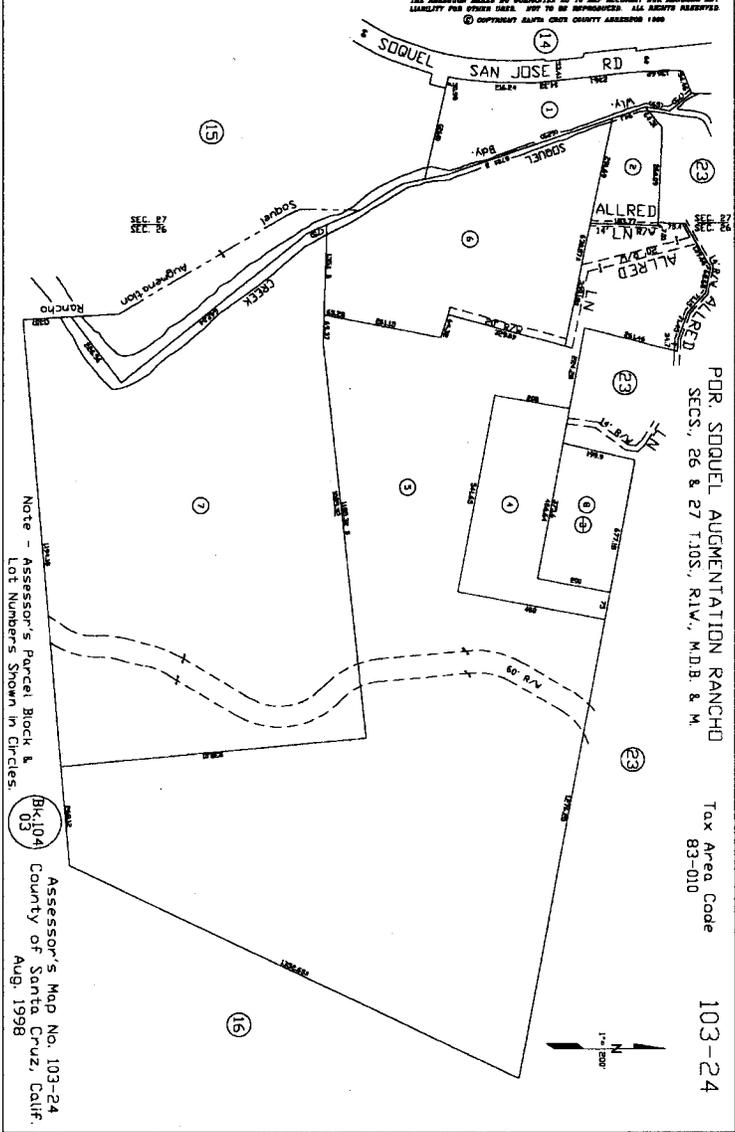
Exhibit: Rezoning Map

DISTRIBUTION: County Counsel
 Planning
 Assessor
 County

GIS

FOR TAX PURPOSES ONLY

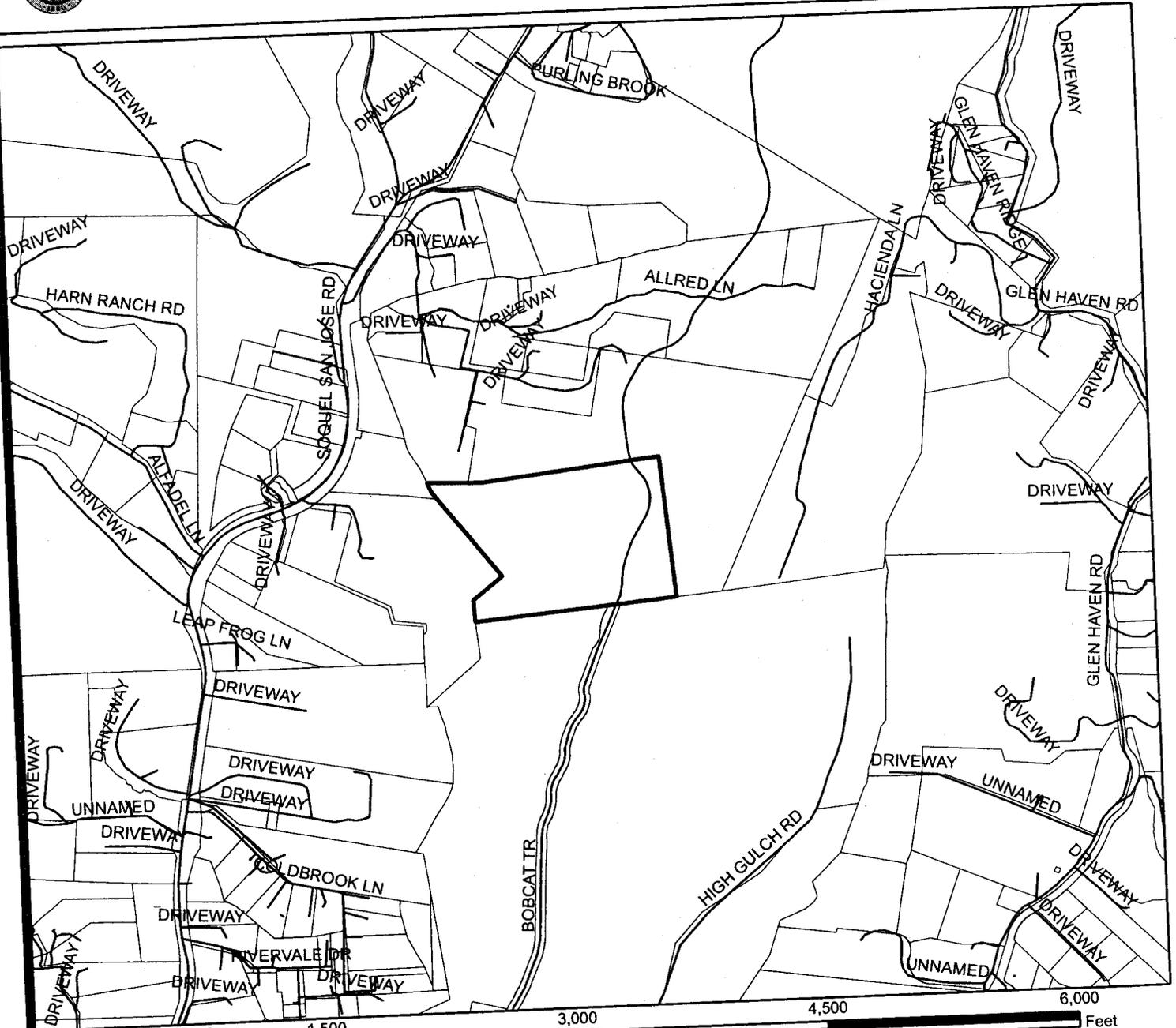
THIS ASSESSOR'S MAP IS GUARANTEED AS TO BOUNDARIES AND AREAS AND LIABILITY FOR OTHER DATA. YOU TO BE RESPONSIBLE. ALL RIGHTS RESERVED. © COPYRIGHT SANTA CRUZ COUNTY ASSESSOR 1998



POR SOQUEL AUGMENTATION RANCHO
 SECS. 26 & 27 T10S, R1W, MDB & M
 Tax Area Code 103-24
 83-010

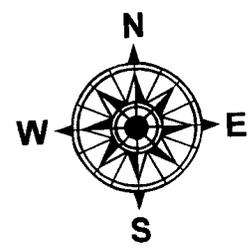
Note - Assessor's Parcel Block & Lot Numbers Shown in Circles.
 Bk-104
 03
 Assessor's Map No. 103-24
 County of Santa Cruz, Calif.
 Aug. 1998

Location Map



LEGEND

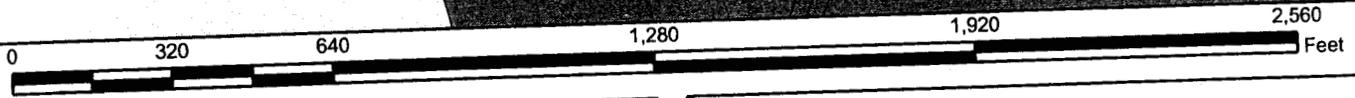
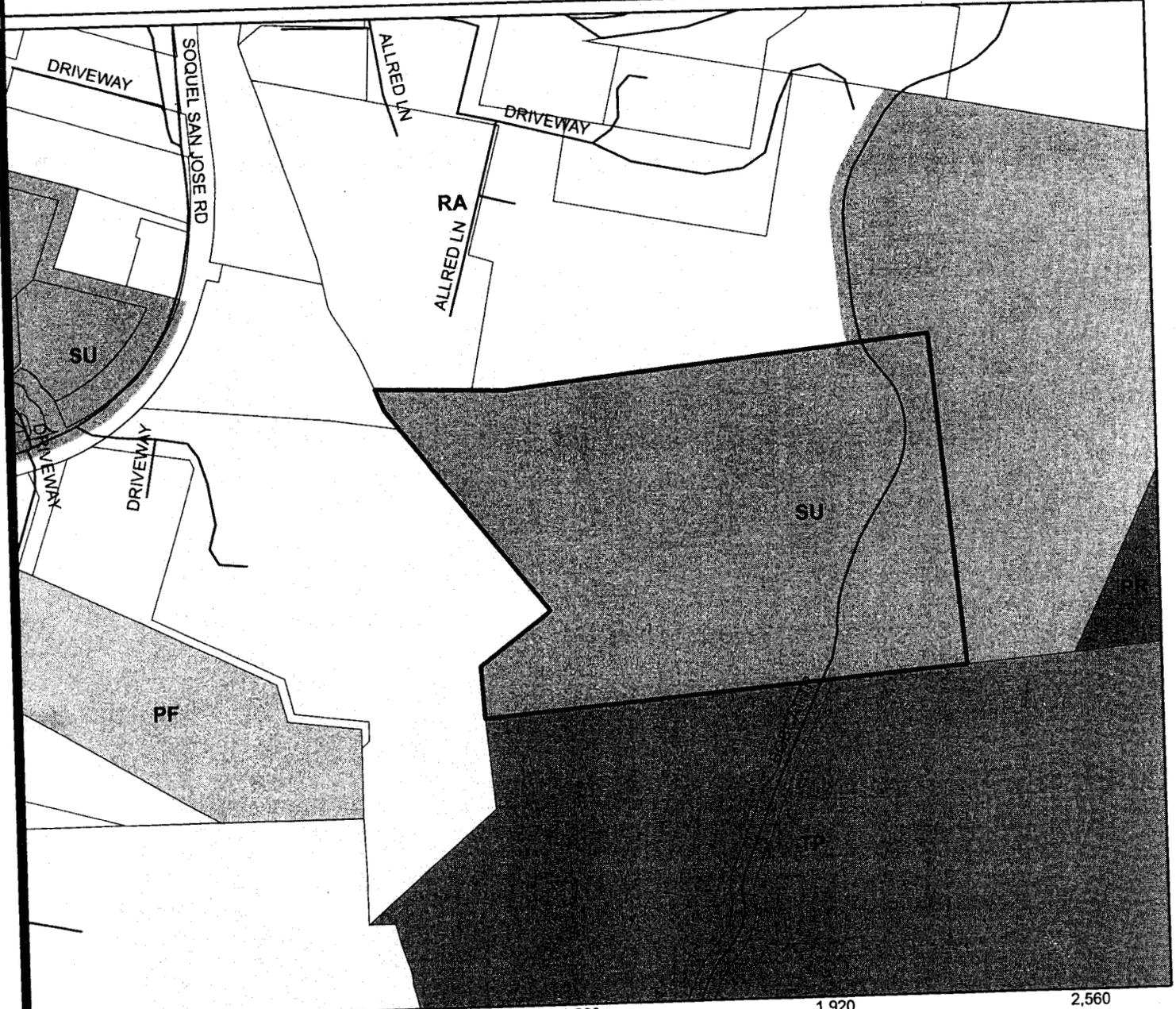
-  APN: 103-241-07
-  Assessors Parcels
-  Streets



Map created by
County of Santa Cruz
Planning Department
August 2007

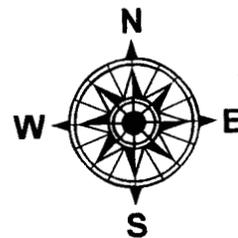
EXHIBIT C4

Zoning Map



LEGEND

-  APN: 103-241-07
-  Assessors Parcels
-  Streets
-  AGRICULTURE RESIDENTIAL
-  SPECIAL USE
-  TIMBER PRODUCTION
-  PARK
-  PUBLIC FACILITY

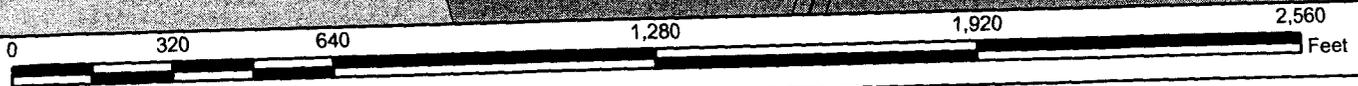
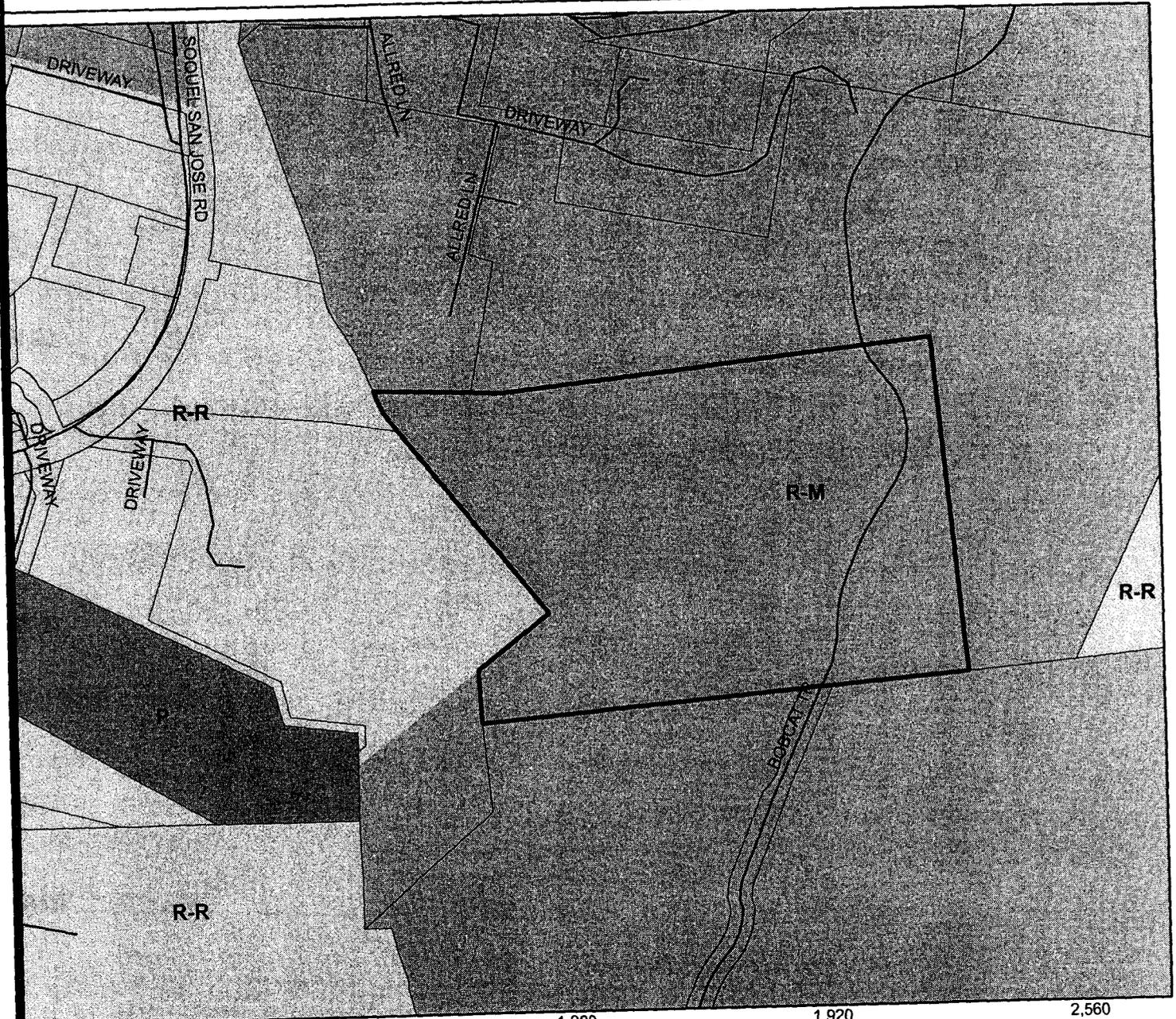


Map created by
County of Santa Cruz
Planning Department
August 2007

EXHIBIT C

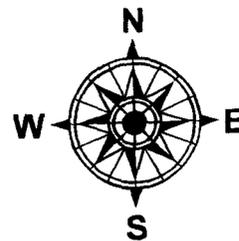


General Plan Designation Map



LEGEND

-  APN: 103-241-07
-  Assessors Parcels
-  Streets
-  Public Facilites
-  Residential-Mountain
-  Residential-Rural



Map created by
County of Santa Cruz
Planning Department
August 2007

EXHIBIT C 1

**CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION**

The Santa Cruz County Planning Department 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 07-0461

Assessor Parcel Number: 103-241-07

Project Location: Property located on the south end of Allred Lane, approximately 3000 feet east of the intersection with Soquel San Jose Road.

Project Description: Rezone a single parcel from the Special Use (SU) zone district to the Timber Production (TP) zone district.

Person or Agency Proposing Project: Roy Webster

Contact Phone Number: (831) 462-6237

- 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. **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285). [Section 1703]

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

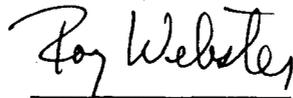
Maria Porcila Perez, Project Planner

Date: _____

LANDS OF HUBBACK
Santa Cruz County, California

FOREST AND LAND MANAGEMENT PLAN

Webster and Associates
Forestry Consultant



Roy Webster, RPF #1765

AUGUST 17, 2007

Table of Contents

General Description.....2

Land Use History.....2

Management Objectives.....3

Soils.....3

Watershed.....4

Cultural.....4

Wildlife.....4

Rare, Threatened, and Endangered Species.....4

Ancient Trees.....5

Recreation.....5

Timber5

Timber Inventory.....5

Erosion Hazard and Roads and Trails Management.....6

Fire protection.....6

Wildlife Management.....6

Snags and Downed Wood.....6

Harvest7

Timber Stand Improvement.....7

Tree Planting.....8

References.....8

Appendix (maps, tables, etc.).....9

Landowner

Peter Hubback
P.O. Box 818
Capitola, CA 95010

Property Location

3381 Allred Lane, Soquel, CA
Portion of Rancho Soquel Augmentation, Township 10S.R1W. MDM.

APN 103-241-07

General Description/Transportation system

The property contains a total of 23 acres and is located in the Soquel Creek watershed, off Old San Jose Road, approximately 3 miles north of Soquel. The western boundary of the parcel is Soquel Creek. The access to the property is by Allred Lane a private driveway departing east from Old San Jose Road just prior to its intersection with Laurel Road. The driveway is shared with Haven Nursery and several other residences. The owner's residence is located on the property. Elevations range from 100 feet along Soquel Creek at the western boundary of the property, to 500 feet on the eastern side.

The forest on the property consists primarily of second growth redwood trees with only a couple of Douglas fir trees observed during the cruise. Interspersed within the redwood stands are hardwoods: Coast Live Oak, Tanoak, Bay, and Madrone. Understory brush observed were Manzanita spp., Scotch Broom, Deerweed, Poison Oak, Blackberry, Scrub Oak, Thistle, and Hazelwood.

The owners home is located on the parcel as well as a caretakers residence, a workshop, a paddock and corral for horses and grassland for grazing, a vegetable garden and some fruit trees. The remainder of the parcel is timberland. Of the total 23 acres, 18 acres is timberland, the other 5 acres developed or unproductive brushland.

The property was previously harvested in 1997 (THP# 1-96-312 SCR) which is appended to this FMP. That plan was for a combined harvest of both the subject parcel and the adjacent Haven Nursery property. It was set up for either cable logging and/or tractor logging, but almost the entirety of the Hubback property was logged by tractor. At the time of the harvest the existing access included a bridge crossing of Soquel Creek which was not of sufficient strength to carry loaded log trucks. Therefore the logs were hauled under a temporary easement up the hill and across Kennolyn Camp and the Wood property to Glen Haven Road. Since that time the bridge has been rebuilt to accommodate heavier vehicles and future harvests will be able to use Allred Lane. This will reduce hauling costs as there will be no need to pay for a temporary easement across the Kennolyn Camp and Wood parcels. Existing roads, crossings and skid trails from the last harvest are in good condition and stable.

Land Use History

The Allred family owned the property around the turn of the century and ran a shingle mill in the area. When they completed logging the parcel they sold to the Sanford family. Mr. Hubback purchased the property in 1972 from the Sanford estate at which time there were some outbuildings and what I have called the caretakers residence in existence. In 1973 Mr. Hubback built a metal workshop and in 1980 the main residence.

The property appears to have been clear cut in the early 1900's as would be typical of most of the Soquel Creek watershed. A well stocked second growth redwood forest replaced the clear cut area. As noted

above a successful timber harvest was conducted in 1997. This harvest removed about 40% of the standing volume at the time.

Other than timber production and current land uses, no additional proposed uses are planned.

Management Objectives

The purpose of the owner's property management is to achieve an economic return from the timber and to maintain the growth and overall health of the forest for long term timber production, and for reduction of fire hazard. The owner seeks to rezone the property to **Timber Production** in order to facilitate this objective.

The owner's overall objective is to make management a self-sufficient enterprise from a cost standpoint, while preserving the outstanding natural values of the property. All future activities will recognize the sensitive nature of the watershed and biotic diversity on the property. Future management objectives will continue to develop the timber stand into an un-even aged character promoting growth and regeneration of timberland species while preserving the natural character of the property. Maintenance of existing improvements (roads, trails, clearings) will be given a high priority both to preserve their beneficial use and reduce impacts from their use. Preservation of biotic diversity on the property is an ongoing goal of management.

Resources

Soils

According to the Soil Survey of Santa Cruz County, the property is underlain by the following soils: the Ben Lomond Sandy Loam, 50 to 75% slopes, EHR (Erosion Hazard Rating) High; the Ben Lomond-Felton complex, 30 to 50% slopes, EHR Moderate; the Nisene-Aptos complex, 15 to 30% slopes, EHR Moderate; and the Nisene-Aptos complex, 50 to 75% slopes, EHR High.

The Ben Lomond sandy loam is deep and well drained. The soil formed in residuum derived from sandstone or granitic rock. Weathered sandstone is at a depth of 46 inches. Permeability is moderately rapid.

The Ben Lomond-Felton complex is about 35 percent Ben Lomond sandy loam and 35 percent Felton sandy loam. The Ben Lomond soil is deep and well drained. It formed in residuum derived from sandstone or granitic rock. Weathered sandstone is at a depth of 46 inches. Permeability is moderately rapid. The Felton soil is deep and well drained. It formed in residuum derived from sandstone, shale, schist, or siltstone. Weathered sandstone is at a depth of 63 inches. Permeability is moderately slow.

Nisene-Aptos complex soils are about 35% Aptos fine sandy loam and 30% Nisene loam. The Nisene soil is deep and well drained. It formed in residuum derived from sandstone or shale. Typically, weathered, fine-grained sandstone is at a depth of about 58 inches. Permeability is moderate. The Aptos soil is moderately deep and well drained. It formed in residuum derived from sandstone, siltstone, or shale. Weathered, fine-grained sandstone is typically at a depth of about 29 inches. Permeability of the Aptos soil is moderate.

These soils are well suited to timber production. Erosion hazard is high for most of the area, and is extreme on the steepest slopes. The slopes less than 30% have a moderate erosion hazard. The site is generally stable. Slopes range from 0 to 90%, with the majority of the area in the 30 to 60% slope class.

Watershed

This parcel is located within the lower half of the Soquel Creek Watershed, from the intersection of the West Branch of Soquel Creek with the East Branch of Soquel Creek, south to the Pacific Ocean. Included in the watershed are Moores Gulch and Grover Gulch, as well as numerous Class 2 watercourses.

There are five Class 3 watercourses on the property. These watercourses flow only in direct response to storms. They are generally dry from April through November of each year, often for most of the year. These class 3 watercourses drain directly into Soquel Creek.

Soquel Creek is listed as one of 13 streams in Santa Cruz and San Mateo Counties which have historically supported documented runs of Coho Salmon. Natural and man caused landslides, and residential and agricultural activities have combined to increase sediment loading and decrease the quality of fish habitat over the last half century.

There will be no harvesting of trees within the Class 1 Watercourse and Lake Protection Zone (WLPZ) of Soquel Creek. Thus, any future harvesting on the property will not impact the shade canopy hence water temperature of Soquel Creek.

Cultural

Both an archaeological field survey by a qualified surveyor and a records check at Sonoma State University Archaeology Department were made for the last Timber Harvest Plan. No cultural or archaeological resources were discovered on the parcel. Due to the diverse nature of historic and pre-historic sites it can be presumed that some discoveries of historic artifacts might be made in the future. If these are found during any future management activity they should be preserved and the proper records of their discovery should be filed with Sonoma State University.

Wildlife

Relatively high residential density and impact make this area less attractive as permanent habitat for many species however the presence of abundant water contributes to frequent use during some seasons of the year. Animals typical of the Santa Cruz Mountains frequent the area including deer, bobcat, squirrels, racoon, and feral pig. The area would fit with the classification of 4D in the wildlife habitat relationship classification system. This type has a high vegetative cover percentage and coniferous trees. Forest management directed at opening the canopy will improve forage and variety for small and large mammals as well as increase raptor use.

Large raptors may use the property for roosting and nesting with tall, dead topped conifers being particularly attractive. These will be preserved wherever feasible to promote this use.

The watercourses on the property do supply habitat for forage species available to the developing fishery in Soquel Creek. A major objective of the owners should be to preserve the quality of the water and stream bed characteristics.

Rare, Threatened and Endangered Species.

The area has been reviewed for the presence of rare or endangered species by examining the Natural Diversity Database maps and biotic resource maps as well as reviewing the County General Plan for species of special concern.

The Biotic Resources Map from the County of Santa Cruz shows a community of *Hystrix californica*, California Bottle-Brush Grass in the area. See the THP (attached) for a discussion of this species. *Hystrix*

californica was classified as rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low. No special mitigations were deemed necessary for this plant by any of the agencies reviewing the Timber Harvest Plan.

Coho Salmon and Steelhead Trout have been known to occur in Soquel Creek in the past. The property is within the range of the red-legged frog and some suitable habitat exists however no sightings have been made.

There is no known Marbled Murrelet use of the area and no on-site or nearby suitable habitat has been observed. The age and form class of the existing timber stand does not present suitable nesting habitat as described for this species.

Ancient Trees

During field work conducted for the timber inventory, no ancient trees (greater than 200 years old) were observed on the property.

Recreation and Aesthetics

No public recreation is allowed or provided for on this tract. Management activities will be designed to provide and maintain habitat diversity. Selective harvesting will be employed to preserve the aesthetics of the existing timber stand. These measures will enhance recreation for the landowners, tenants, and guests. Maintenance of the existing dirt road and trail system will be continued to allow for horseback riding and hiking.

Timber

The stand, in general, has two age classes, one age class of approximately 100 years old developed after the original clear cut logging near the turn of the century. A second age class was initiated by the selective harvest in 1997 a result of stump sprouts growing from the cut stumps. There are moderate amounts of downed, woody debris from natural falling of branches, and dead trees, buckskin logs from the original harvest (defective logs) and slash from the 1997 harvest. There are very few snags on the property.

Timber Inventory Results

The existing timber stand on the property is dominated by Coast Redwood, with only a few Douglas fir, larger amounts of tan oak, coast live oak and madrone. As is typical for the area, the distribution of conifers and hardwoods is predicated by a range of micro-site factors. This results in a stand, ranging from fast-growing, redwood dominated pockets, to more slower growing areas stocked primarily with hardwood and brush.

The property was first harvested over 100 years ago. This harvest was typical for the period, with evidence of clear cutting and burning remaining today. Stumps that survived the early harvest show the potential for growth of large diameter trees on most of the property. Post harvest management probably included livestock grazing until the area eventually revegetated with brush and trees. The resulting timber stand is even-aged, despite a large variation in diameter, and reflects a long period of suppressed growth. Some of the drier areas have regrown with a predominance of hardwoods. There is very little fire scarring in the existing stand.

In August, 2007, a timber cruise consisting of 11-1/5 acre plots were installed as part of the data gathering effort for this FMP. This constituted a 12% sample of the timbered area. Growth borings were also made to estimate growth so projections of harvest over time could be made. The specific plot measurements,

statistical analysis, and per acre and total trees, basal area and board feet volume are presented in the appendix. In summary, the stand contains 60 trees per acre 12 DBH (diameter at breast height) and larger, 230 square feet of basal area per acre, and 46,000 board feet per acre. For the total property, there are 1,079 trees 12 DBH and larger and 830,000 board feet of total standing board foot volume. It is estimated that the stand is growing 2% per year. Over time, as the stand is periodically thinned, slower growing trees are removed and competition reduced through improved tree spacing, the stand growth will increase to 2.5 to 3.0% per year. Measured heights of typical dominant and co-dominant trees varied from 120' to 160'.

Management Practices

Erosion Hazards and Road and Skid Trail Management

Soil erosion hazards on the property vary from moderate to very high based on slope as mentioned above in the soils description. The roads and skid trail system installed for the timber harvest and management have remained largely stable. The skid trails and landings on the property should continue to be monitored for adequacy of drainage and erosion control devices maintained every winter.

Fire Protection

The property is located in a fairly narrow canyon (Soquel Creek Watershed). No major accumulations of flashy fuels are evident. There is moderate herbaceous development in the understory. There are moderate amounts of dead and downed woody fuel.

The major threat to the property from a fire protection standpoint appears to be the possibility of fire spreading into the property from Old San Jose road or a residential escape to the wildland. There is also the possibility of ignitions due to trespass. The trespass issue can be handled by limiting access. The owner resides on the property and limits public trespass. Overhanging vegetation should be cleared periodically to make access for this equipment easier on the primary access road to the residences. A minimum 30' clearing should be maintained around any structures to provide protection from wildfires.

Special treatment areas maintained around structures in which slash will be lopped to 12" or chipped or removed will greatly reduce fire hazards. Strict adherence to Forest Practice Rules regarding slash lopping and fire hazard reduction should mitigate the fire risk of future harvesting activities to acceptable levels.

Wildlife

Management practices on the property should be directed at maintaining and enhancing wildlife diversity, while minimizing its impact on other uses. Existing roost trees will be preserved and nest trees will be protected when found. Reliance on natural predators will increase the presence of large mammals and raptors on the property in the short term. An uneven aged timber stand will likewise provide habitat for a wider range of species. Control of browsers and rodents may become necessary if they are found to impact stand regeneration, however this conflict is not anticipated.

Snags and Downed wood

There were a minimal number of snags observed during the timber inventory. Although often seen as a useless part of the landscape and a fire hazard, snags provide important habitat for numerous wild species. Future management schemes should seek to preserve several prominent snags per acre to promote diversity. As mentioned previously the Forest Practice rules require special attention to slash lopping and treatment to reduce fire hazard. Large trees which overhang the watercourse will be left to provide future recruitment of large woody debris within the stream.

Timber management

Harvest

The timber stand on this property has successfully regrown from the clearcut logging prior to the turn of the century. There has been one harvest that has begun the transition from even-aged to an uneven-aged forest as envisioned under the selection silvicultural system. An even-aged upper canopy is too dense to permit healthy growth of trees of all sizes. The increased light and growing space that is provided by removal of harvested trees will increase the growth of residual trees and initiate sprouting of a new generation of trees. Annual growth increases from 2 to 2.5 to 3.0%% are expected. Past harvests have relied completely upon tractor yarding, and as the the roads and trails are laid out and stable, it is anticipated that this will be the preferred harvest method for the property in the future.

Future selective harvesting to promote an uneven-aged pattern of stocking and growth is expected to occur on a roughly fifteen year cycle. These harvests will produce a variety of tree size classes throughout the stand. Based on analysis of the cruise data and growth borings, future harvests should focus on trees in all size classes in the 24" DBH and larger class. The goal is to maintain a component of trees in the larger size classes to perpetuity. The goal is also to achieve the optimal uneven-aged size class distribution which is the classic inverse-J curve of number of trees by size. Where beneficial, group selection will be used as a cutting practice to allow increased light into suppressed understory, or to create large enough openings to facilitate tree planting. Due to the complete overstory occupation, and limited light in the understory, there is minimal recruitment and light reaching the smaller trees. One of the objectives is to increase the number of saplings and pole size trees to be accomplished by opening the canopy in each cyclical selective harvest.

It is estimated that in the type of harvest prescribed in this FMP, harvest will equal growth over time. A sustained yield of timber products will be maintained to perpetuity. In this regard, it is estimated that the next two selective harvests will remove the timber that has accumulated over the previous 15 years at a 2% growth rate per year. Therefore, the next two harvests 15 years apart are estimated to remove 13,800 board feet per acre, or, a total volume of almost 250,000 board feet. Prior to the third and future cyclical harvest, growth borings should be made to confirm the growth rate occurring. If current projections are correct, over time the yield may increase to 20,700 board feet every 15 years, or, a total volume removal of 373,000 board feet every fifteen years.

Current Forest Practice Rules require a residual basal area after harvest on Site 3 lands of 75 square feet. Under this plan, basal area will never fall below 125 square feet of basal area.

Timber Stand Improvement

Intermediate treatments to foster the health and growth of the stand can include sprout thinning and selected hardwood removal. Multiple sprouts resulting from harvesting can be thinned to an average of 2 to 3 healthy sprouts per stump. This practice can be conducted immediately after harvest. This removal of competition will produce healthier and more vigorous young trees in the understory. During this thinning, dead and unhealthy small trees and sprouts will also be removed to reduce fire hazard and competition. This should be done to further improve spacing and promote the health of remaining trees. The objective will be to achieve a fully stocked stand with an average spacing of 10 to 14 feet between trees. All thinnings will be removed or lopped to within 20" of the ground.

Additional release can be achieved by hardwood removal where needed and practical. This is particularly important for this property due to current abundant hardwood growth on the property. This activity will produce marginal commercial value, however it could be combined with a timber harvest. Removal of the hardwoods would be beneficial to allow light into the understory and remove competition from regrowing conifers. Resulting hardwood stump sprouts will provide important deer browse.

Tree planting

Post harvest management can also include planting of conifer seedlings within one year. The redwood should be 2-0 stock (or 1-0 redwood inoculated with mycorrhizae). Seed sources should be selected to match the seed zone as closely as possible. Plantings should be limited to those areas that have been opened sufficiently to allow for a reasonable chance of establishment and growth. Coast redwood should be planted in only the most moist areas. Trees will be planted on an approximate 8' spacing (430 per acre). Browse protection may be necessary due to the large deer population and, although it will increase the cost of the practice, it is likely to increase the chances of seedling survival. This need should be evaluated prior to planting. A "clean and release" around established seedlings should be conducted by hand within the first three years after planting.

References

U.S.D.A. Soil Conservation Service, Soil Survey
Santa Cruz County, 1979.

California Natural Diversity Data Base (Maps and listings)

Arvola, T.F. 1978. California Forestry Handbook. State of California, Dept of Forestry. 232. pp.

Cooper, Clark, and Associates. Preliminary Map of Landslide Deposits in Santa Cruz County.

Santa Cruz County Biotic Resource Maps.

Appendix

MAPS

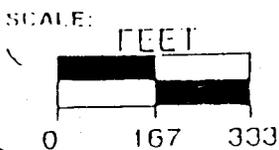
Plot Data

Stand Table

EXHIBIT B

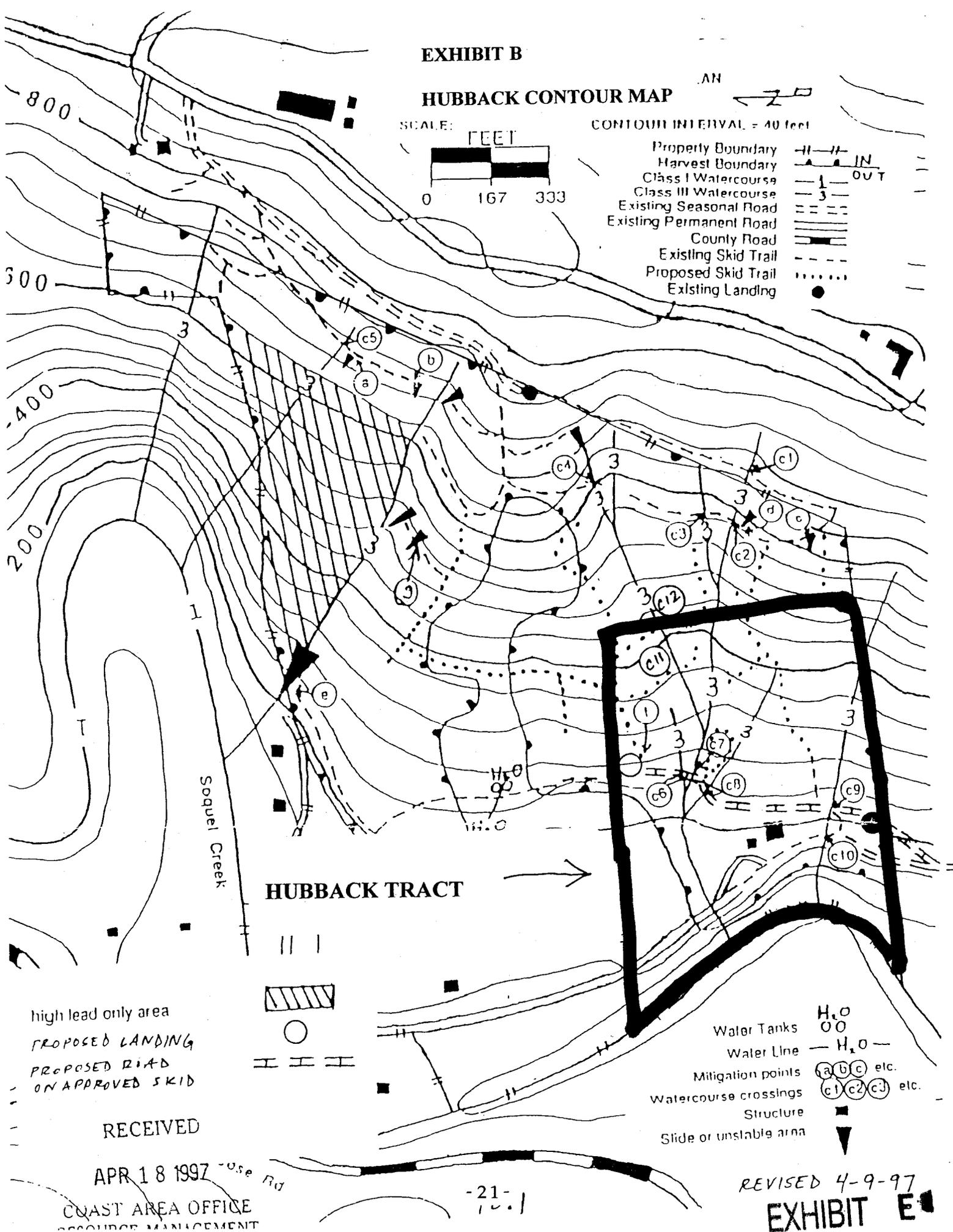
HUBBACK CONTOUR MAP

AN



CONTOUR INTERVAL = 40 feet

- Property Boundary
- Harvest Boundary
- Class I Watercourse
- Class III Watercourse
- Existing Seasonal Road
- Existing Permanent Road
- County Road
- Existing Skid Trail
- Proposed Skid Trail
- Existing Landing



HUBBACK TRACT

- high lead only area
- PROPOSED LANDING
- PROPOSED ROAD ON APPROVED SKID

- Water Tanks
- Water Line
- Mitigation points (a)(b)(c) etc.
- Watercourse crossings (c1)(c2)(c3) etc.
- Structure
- Slide or unstable area

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COAST AREA OFFICE
RESOURCE MANAGEMENT

REVISED 4-9-97

EXHIBIT E

EXHIBIT C HUBBACK CRUISE DATA

Product: LUMBER

Species: REDWOOD

8/17/2007

.2 Acre PLOT CRUISE

M & G Form Class Bd.Ft.-V" top

DBH	Per Acre			18 Acres	
	Trees	Basal Area	BOARD	Trees	BOARD FEET
12	1.8	1.4	58.70	33	1056.52
14	1.8	1.9	88.29	33	1589.17
16	5.5	7.6	601.60	98	10828.82
18	5.9	10.4	1130.64	106	20351.55
22	6.4	16.8	2386.27	115	42952.82
24	7.7	24.3	4044.59	139	72802.66
26	4.1	15.1	2626.79	74	47282.24
28	8.6	36.9	7330.92	155	131956.60
30	6.8	33.5	6875.56	123	123760.00
32	4.5	25.4	5809.03	82	104562.60
34	3.6	22.9	5429.50	65	97731.08
36	0.5	3.2	848.95	8	15281.01
38	0.5	3.6	963.89	8	17349.97
42	0.5	4.4	1220.29	8	21965.30
44	0.5	4.8	1361.76	8	24511.67
46	0.5	5.2	1512.07	8	27217.18
50	0.5	6.2	1839.20	8	33105.60
52	0.5	6.7	2016.03	8	36288.52
	60.2	230.3	46144.08	1079	830593.40

EXHIBIT C HUBBACK CRUISE DATA

HUBBACK

Plot Cruise Volume Summary

8/17/2007

Product	Per Acre			18 - Acres		Ave Tree			Cruise	
	Volume	Trees	BA	Volume	Trees	Volume	DBH	Plts	Size	%Cr
LUMBER	BOARD									
REDWOOD	46144.08	60.2	230.3	830594	1084	766.51	26.5	11	0.20	12.2
LUMBER	46144.08	60.2	230.3	830594	1084	766.51	26.5	11	0.20	12.2
STAND		60.2	230.3		1084		26.5	11	0.20	12.2

EXHIBIT C HUBBACK CRUISE DATA

HUBBACK **Plot Cruise Volume Statistics-95%** **8/17/2007**

Product	Plots	Size	Cruise%	Samp Err%	CoeffVar%	StdError
LUMBER						
REDWOOD	11	0.20	12.2	30.3	45.1	6278.53
LUMBER	11	0.20	12.2	30.3	45.1	6278.53

Stand Level Statistics are computed using Minor Form Class 77 (Cu. Ft.) volumes of all species

STAND	11	0.20	12.2	30.9	45.9	1221.54
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EXHIBIT C HUBBACK CRUISE DATA

8/17/2007

PlotNo	ProductName	SpeciesName	DBH	Height	NTrees
1	LUMBER	REDWOOD	30	6	2
1			16	2	1
1			28	6	2
1			18	3	2
1			24	5	1
1			34	7	1
1			32	7	1
1			36	8	1
2	LUMBER	REDWOOD	46	8	1
2			16	2	2
2			34	7	3
2			14	1	1
2			12	1	1
2			24	5	1
2			42	8	1
2			22	4	2
2			30	6	1
2			28	6	1
3	LUMBER	REDWOOD	22	4	2
3			30	6	1
3			16	2	3
3			28	6	1
3			32	7	1
3			52	8	1
3			18	3	1
4	LUMBER	REDWOOD	14	1	2
4			22	4	3
4			32	7	1
4			30	6	2
4			18	3	2
4			28	6	2
4			34	7	2
4			16	2	1
4			26	5	2
5	LUMBER	REDWOOD	50	8	1
5			38	8	1
6	LUMBER	REDWOOD	0	0	0
7	LUMBER	REDWOOD	32	7	1
7			24	5	1
7			16	2	1
7			18	3	1
7			28	6	2
7			26	5	1
8	LUMBER	REDWOOD	24	5	3
8			44	8	1
8			30	6	1

EXHIBIT C HUBBACK CRUISE DATA

8/17/2007

PlotNo	ProductName	SpeciesName	DBH	Height	NTrees
8			26	5	2
8			16	2	2
8			32	7	1
8			22	4	1
8			18	3	1
9	LUMBER	REDWOOD	28	6	4
9			32	6	1
9			22	4	1
9			24	5	5
9			30	6	2
9			26	5	1
10	LUMBER	REDWOOD	28	6	4
10			24	5	3
10			26	5	2
10			32	7	2
10			30	6	2
10			22	4	2
10			18	3	3
10			16	2	2
10			34	7	2
10			14	1	1
11	LUMBER	REDWOOD	28	6	3
11			22	4	3
11			24	5	3
11			26	5	1
11			12	1	3
11			30	6	4
11			32	7	2
11			18	3	3

EXHIBIT D HUBBACK THP (1997)

OCTOBER 17, 1996

Date of Director's Decision

OFFICIAL NOTICE OF THE DIRECTOR OF FORESTRY'S DETERMINATION OF CONFORMANCE OF TIMBER HARVESTING PLANS OR AMENDMENTS TO TIMBER HARVESTING PLANS WITH THE FOREST PRACTICE ACT AND BOARD OF FORESTRY REGULATIONS

The Director of Forestry found, on the date shown above, that the Timber Harvesting Plan, Non-Industrial Timber Management Plan (NTMP), or amendment (AM) listed below is in conformance with the Forest Practice Act, and Board of Forestry regulations pursuant thereto. This notice is posted in compliance with sections 1037.1 and 1037.8, Title 14, California Code of Regulations. Copies of these plans and related documents are available for inspection at: 6059 Hwy. 9, Felton, CA 95018, (408) 335-9148.

Plan No.: 1-96-312 SCR

Plan No.:

County: SANTA CRUZ

County:

Submitter: HAVEN INVESTMENT CORP/
PETER HUBBACK

Submitter:

Approx. Acres in Plan: 53

Approx. Acres in Plan:

Location: RANCHO SOQUEL
AUGMENTATION T10S R1W MDB&M
SOQUEL CREEK

Location:

Description: SELECTION

Description:

Plan No.:

Plan No.:

County:

County:

Submitter:

Submitter:

Approx. Acres in Plan:

Approx. Acres in Plan:

Location:

Location:

Description:

Description:

TO POSTING AGENCY: Please post this notice at the place where official notices concerning Environmental Quality Act compliance are usually posted. If there are questions concerning posting, please contact: Forest Practice Office, California Department of Forestry & Fire Protection, 135 Ridgway Av./P. O. Box 670, Santa Rosa, CA 95401/95402, (707) 576-2959. Posting Period is 30 days.

Rm10 (10/95)

FOR ADMIN. USE ONLY
Amendments-date & S or M

1. _____ 7. _____
2. _____ 8. _____
3. _____ 9. _____
4. _____ 10. _____
5. _____ 11. _____
6. _____ 12. _____

TIMBER HARVESTING PLAN
STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
RM-63 (9/94)
Received CDF
REGION 1

JUL 09 1996

FOR ADMIN. USE
THP No. 1-96-
Dates Rec'd JUL
Date Filed JUL
Date Approved 0
Date Expires 001
Extensions 1) 1

This Timber Harvesting Plan (THP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry Rules. Separate instructions for information on completing this form. NOTE: The form must be printed legibly in ink or typewritten. The THP is divided into six sections. If more space is necessary to answer a question, continue the answer at the end of the appropriate section of your THP. If writing an electronic version, insert space for your answer.

This THP conforms to 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 Board of Forestry Rules.

RESOURCE MANAGEMENT

SECTION I - GENERAL INFORMATION

1. TIMBER OWNER(S) OF RECORD: Name 1) Haven Investment Corporation (Haven) 2) Peter B. Hubback
Address 1) c/o Ross Paratore 12534 Wardell CL 2) P.O. Box 818
City 1) Saratoga 2) Capitola State CA Zip 1)95070 2)95010 Phone 1) (408) 475-2021
Signature 1) Ross T Paratore Date 7-2-96
Signature 2) Peter B Hubback Date 7/2/96

NOTE: The timber owner is responsible for payment of a yield tax. Timber Yield Tax information may be obtained at the Timber Tax Division, State Board of Equalization, P.O. Box 942879, Sacramento, California 94279-0001.

2. TIMBERLAND OWNER(S) OF RECORD: Name same as #1
Address _____
City _____ State _____ Zip _____ Phone _____
Signature Ross T Paratore Date 7-2-96
Signature Peter B Hubback Date 7/2/96

3. LICENSED TIMBER OPERATOR(S): Name unknown at this time; to be amended in Lic. No. _____
Address _____
City _____ State _____ Zip _____ Phone _____
Signature _____ Date _____

4. PLAN SUBMITTER(S): Name same as #1 State _____ Zip _____ Phone _____
Address _____
City _____ State _____ Zip _____ Phone _____
Signature _____ Date _____
If submitter is not 1, 2, or 3 above he/she must sign below and provide explanation of authority.

If LTO is not present on-site list person to contact on-site who is responsible for the conduct of the operation and represents the interests of the LTO Roy Webster & Associates
Address 132 Rancho Del Mar
City Aptos State CA Zip 95003 Phone (408) 688-8787

Yes No Will the timber operator be employed for the construction and maintenance of timber operations? If no, who is responsible? _____

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

The LTO will be responsible for erosion control maintenance.

6. a) Expected date of commencement of timber operations:
 date of conformance, or _____ (date)
- b) Expected date of completion of timber operations:
 3 years from date of conformance, or _____ (date)

7. The timber operation will occur within the:

COAST FOREST DISTRICT
 Southern Subdistrict of the Coast F.D.

The Tahoe Regional Planning Authority Jurisdiction
 A County with Special Regulations, identify:

Santa Cruz County

SOUTHERN FOREST DISTRICT
 High use subdistrict of the Southern F.D.

Special Treatment Area(s), identify:

NORTHERN FOREST DISTRICT

Other _____

8. Location of the timber operation by legal description:

Base and Meridian:	Section	Township	Range	Acreage	County	Assessor's Parcel Number*
<input checked="" type="checkbox"/> Mount Diablo <input type="checkbox"/> Humboldt <input type="checkbox"/> San Bernardino	<u>The parcel lies within the Rancho Soquel Augmentation</u>					
		10S	1W	53	Santa Cruz	_____
		_____	_____	_____	_____	_____
		_____	_____	_____	_____	_____
		_____	_____	_____	_____	_____
				TOTAL ACREAGE 53		

* Optional

9. Yes No Is a Timberland Conversion Permit in effect?
If yes, list permit number and date of expiration: _____
10. Yes No Is there an approved Sustained Yield Plan for this property? Number _____; Date app. _____
- Yes No Has a Sustained Yield Plan been submitted but not approved? Number _____; Date sub. _____
11. Yes 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. Yes No Is a Notice of Intent necessary for this THP?

See section III #12 for a discussion of notification procedures for this plan.

13. RPF preparing the THP: Name Ray Webster
Address 132 Rancho Del Mar
City Aptos State CA Zip 95003 Phone (408) 688-8787

- a) 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.
- 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) 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 operation. (Include both work completed and work remaining to be done):

I will be responsible for all aspects of this timber harvest, from preliminary field work and plan preparation through the completion of woods operations. This includes tree marking and any necessary plan amendments. David Pope will be my designee for this THP.

- d) Additional required work requiring an RPF which I do not have the authority or 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 for overriding considerations contained in Section III)
 will not have a significant adverse impact on the environment.

Registered Professional Forester: I certify that I, or my supervised 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 Ray Webster Date 7-2-96

EXHIBIT E

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 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, 953.11). If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

- | | | |
|---|--|---|
| <input type="checkbox"/> Clearcutting _____ ac. | <input type="checkbox"/> Shelterwood Prep. Step _____ ac. | <input type="checkbox"/> Seed Tree Seed Step _____ ac. |
| | <input type="checkbox"/> Shelterwood Seed Step _____ ac. | <input type="checkbox"/> Seed Tree Removal Step _____ ac. |
| | <input type="checkbox"/> Shelterwood Removal Step _____ ac. | |
| <input checked="" type="checkbox"/> Selection <u>53</u> ac. | <input type="checkbox"/> Group Selection _____ ac. | <input type="checkbox"/> Transition _____ ac. |
| <input type="checkbox"/> Commercial Thinning _____ ac. | <input type="checkbox"/> Sanitation Salvage _____ ac. | |
| <input type="checkbox"/> Special Treatment Area _____ ac. | <input type="checkbox"/> Rehabilitation of Understocked Area _____ ac. | |
| <input type="checkbox"/> Alternative _____ ac. | <input type="checkbox"/> Conversion _____ ac. | |

Total acreage 53 MSP Option Chosen (a) (b) (c)

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

Not applicable

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

Not applicable

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. Trees to be harvested will be marked with a stripe near breast height, and a basemark below the cut line.

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

d. Forest Products to be Harvested: Redwood and Douglas-fir sawlogs and fuelwood from damaged hardwoods.

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

f. Other instructions to LTO concerning felling operations.

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

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

PESTS

15. Yes 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).

HARVESTING PRACTICES

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

- | | | | | | |
|----|--|----|--|----|--------------------------------------|
| | GROUND BASED* | | CABLE | | SPECIAL |
| a) | <input checked="" type="checkbox"/> Tractor, including end/long lining | d) | <input type="checkbox"/> Cable, ground lead | g) | <input type="checkbox"/> Animal |
| b) | <input type="checkbox"/> Rubber tired skidder, Forwarder | e) | <input checked="" type="checkbox"/> Cable, high lead | h) | <input type="checkbox"/> Helicopter |
| c) | <input type="checkbox"/> Feller buncher | f) | <input type="checkbox"/> Cable, Skyline | i) | <input type="checkbox"/> Other _____ |

* All tractor operations restrictions apply to ground based equipment.

See Section 3 for a discussion of the feasibility analysis which lead to the choice of yarding system.

17. Erosion Hazard Rating: Indicate Erosion Hazard Ratings present on THP. (Must mark at least one rating)

Low Moderate High 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 EHRs 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.

Waterbars or rolling dips will be installed on all roads and skid trails as per 14 CCR 914.6. Waterbars will be installed at spacing for extreme EHR for the entire plan area. Areas of bare soil greater than 800 sq. ft., or other areas where CDF and the RPF agree that sediment may be transported to a watercourse in amounts which may be deleterious to the beneficial uses of the watercourse will be seeded with annual rye grass and straw mulched to a depth of at least 3 inches, with at least 90% coverage of bare ground, prior to the winter period.

In addition, the one existing seasonal road proposed for use on this harvest will be seeded with annual rye grass @ 50 lbs per acre the completion of operations or prior to the winter period, whichever comes first.

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

20. 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?

The plan does include an area designated for tractor / high lead cable option. See section 3 for a discussion of the justification for this option. The LTO shall keep ground based equipment confined to existing or proposed skid trails shown on the THP map within the area designated as tractor / high lead cable option.

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

- a) Yes No Unstable soils or slide areas?
- b) Yes No Slopes over 65%?
- c) Yes No Slopes over 50% with high or extreme EHR?
- d) Yes 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:

At mitigation points "a", "b", "c", "d", "e" and "q", tractors will operate on or near old slides or unstable areas. At mitigation point "f", a proposed skid trail is located on slopes of -55% for -75 feet. Explanations are given below for each mitigation point, as well as protection measures which will ensure compliance with 14 CCR 914. Justification for why application of the standard rule is not feasible or would not comply with 14 CCR 914 is given in THP Section 3.

Mitigation Point "a"

Existing skid trail crosses an area where an old debris flow has cause a small amount of the fill to fail. The trail appears stable. The trail will be used as is, and upon the completion of operations, the LTO shall place a large waterbar to the south and north of the debris flow. These waterbars will be flagged by the RPF. Between the large waterbars, the trail will be outsloped gently, and tractor packed with available slash.

Mitigation Point "b"

Existing skid trail crosses an old slide/cut bank failure which has eroded the outer one third of the trail. Since reconstruction of the crossing to the south would have been difficult, and trees near the watercourse south of point "b" can be reached from

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COAST AREA OFFICE
RESOURCE MANAGEMENT

45

Revised 8-20-96

- 33 -

EXHIBIT E

north side of the slide, it is not necessary to reconstruct the trail beyond the slide. ~~Waterbars~~ have been placed in the field to end the skid trail a safe distance north of the small slide. At the completion of operations, a large waterbar will be placed north of the slide, where flagged by the RPF. Furthermore, prior to final shutdown, the RPF will inspect the site to ensure that no perched fill is left near the slide.

Mitigation Point "c"

Existing skid trail crosses an area where the fill slope of the trail has failed for a length of approximately 15 feet along the trail. Prior to using this portion of trail for skidding, the trail will be pushed back away from the unstable area approximately five feet into the cut bank, in order to keep logs and equipment off of the unstable area. Slopes above the cut bank are approximately 30%. Soil removed from the cut bank during the widening of the trail in this section will be bladed away from the unstable area, and spread on the trail surface south of the unstable area. During operations, the trail will be gently insloped to prevent logs from rolling off onto the unstable area. Upon the completion of operations, the RPF will flag and the LTO will install a large waterbar south of the unstable area, and one to the north. The trail directly above the unstable area will be gently insloped, with water draining off the trail at the waterbar north of the unstable area.

Mitigation Point "d"

Existing skid trail crosses an old cut bank failure which has deposited approximately 2 feet of material across a section of the trail approximately 20 feet long. The failed material is in a stable place on the trail, so no special treatment is necessary. The trail will simply ramp over the old slide material, because blading it all away would possibly cause the cut bank to fall again.

Mitigation Point "e"

Existing skid trail crosses an old debris flow deposit. The trail is located on stable material deposited by the slide, so no treatment is necessary.

Mitigation Point "f"

Proposed skid trail will run straight up and down slopes of approximately 55% for 75 feet. Upon completion of operations, this portion of trail will be tractor packed with at least six inches of slash, and a large waterbar will be installed above the steep pitch.

Mitigation Point "g"

Existing skid trail crosses old stabilized slide. No unstable material will be crossed, so no special treatment is proposed.

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

- winter operating plan is as follows; or
 In lieu of a winter operating plan site specific measures to be followed are:

NOTE: All water breaks and rolling dips must be installed by October 15 or as prescribed above.

ROADS AND LANDINGS

24. Yes No Will any roads or landings be constructed or reconstructed. If yes, check items a through h:
- a. Yes No Will new roads be wider than single lane with turnouts?
 - b. Yes No Will any landings exceed one half acre in size?
 - c. Yes No Are logging roads or landings proposed in areas of unstable soils or known slide-prone areas?
 - d. Yes No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet?
 - e. Yes No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse?
 - f. Yes 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 of the boundary of a WLPZ?
 - g. Yes No Are exceptions proposed for flagging or otherwise identifying the location of roads to be constructed?
 - h. Yes No Will any roads, watercourse crossings, or associated landings be 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.

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

26. Yes No Are there any watercourse 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) [936.4 (c), 956.4 (c)] of the WLPZ rules for each watercourse.

A portion of the harvest area is near Soquel Creek, a Class I watercourse. There are also several class III watercourses within the plan area which drain westward into Soquel Creek. The following WLPZ widths will be adhered to:

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

Slope(%)	Class I	ft. msrs. (see list below)
0-30%		75 BDG
30-50%		100 BDG
>50%		150 ADG

A) The WLPZ will be clearly identified on the ground by the RPF who prepared the plan, or his designee, with paint, flagging or other suitable means prior to the preharvest inspection.

B) The WLPZ will be clearly identified on the ground by the RPF who prepared the plan, or his designee, with paint, flagging or other suitable means prior to the preharvest inspection.

D) To ensure retention of shade canopy, filter strip properties of the WLPZ, and the maintenance of a multi-storied stand for protection of values described in 14CCR 916.4(b), a base mark below the cut line of residual or harvest trees within the zone will be done in advance of the pre-harvest inspection by the RPF who prepared the plan, or his designee.

G) To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values in the Class I watercourse and lake protection zone, at least 50% of the overstory and 50% of the understory canopy covering the ground and adjacent waters, shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers. Species composition may be adjusted consistent with the above standard to meet on-site conditions when agreed to in the THP by the RPF and the director.

No WLPZ is necessary on any of the Class III watercourses within the harvest area to protect the beneficial user. No equipment will operate within any of the class III watercourses, except at prepared and mapped crossings. All crossings on this plan are temporary, and are discussed below:

In order to comply with the new Baseline Conservation Measures for the protection of coho salmon habitat, areas of bare mineral soil equal to or greater than 100 square feet within the Class I WLPZ will be mulched with straw or slash prior to the winter period.

Crossings c2, c4, c5, c6, c8, c9, and c10:

Temporary crossings of shallow channel class III watercourses. The channel will be crossed in its current condition. upon the completion of operations, or prior to the winter period, whichever comes first, the channel will be dipped out, and the trail seeded with annual rye grass @ 50 lbs. per acre and straw mulched or slashed for 25 feet either side of the channel.

Crossing c3: See sketch on following page.

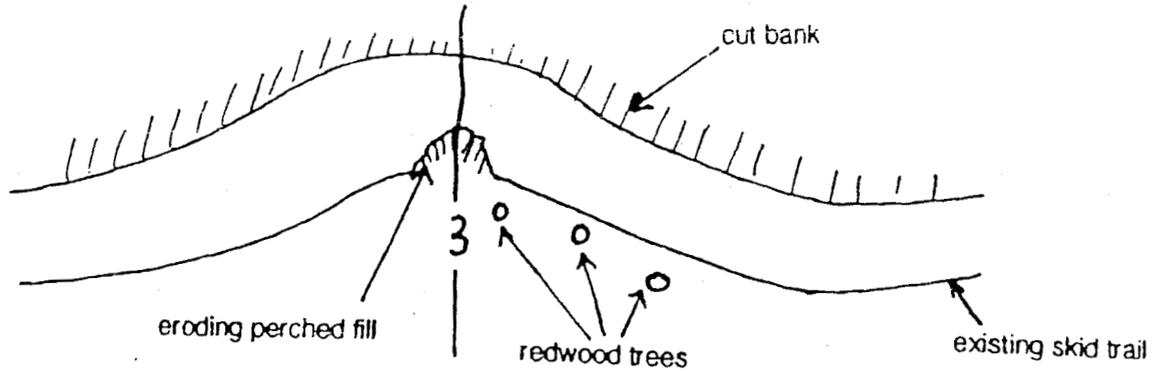
Existing skid trail crossing with falling perched fill on the downstream side. Crossing will be reconstructed by temporarily cribbing the fill on the downstream side of the crossing with either cull logs, hardwood logs, or straw bales. The cribbing can be braced against the redwood tree below the skid trail nearest the watercourse. Once the cribbing is in place, the trail can be widened to make a useable crossing.

Upon the completion of operations, or prior to the winter period, whichever comes first, first the fill and then the cribbing shall be pulled from the crossing. Fill will be bladed into the trail on the inside one third of the trail, nearest the cutbank. Furthermore, for 25 feet either side of the crossing, the outside of the trail has large amounts of perched fill in danger of falling down into the class III watercourse. For 25 feet either side of the crossing, some of this perched, approximately the outside one third of the trail, will be pulled back down to native material, approximately 3 to 4 feet. The material pulled from this area on the outside of the trail will be spread on the inside of the trail, nearest the cutbank. The trail will be gently outsloped. Then large waterbars will be place upslope of the area on either side of the crossing. Waterbar locations will be flagged by the RPF. Finally, the trail will be seeded with annual rye grass @ 50 lbs. per acre, and mulched with straw or slash to a depth of at least three inches.

Haven / Hubback THP
Crossing 3 Sketches

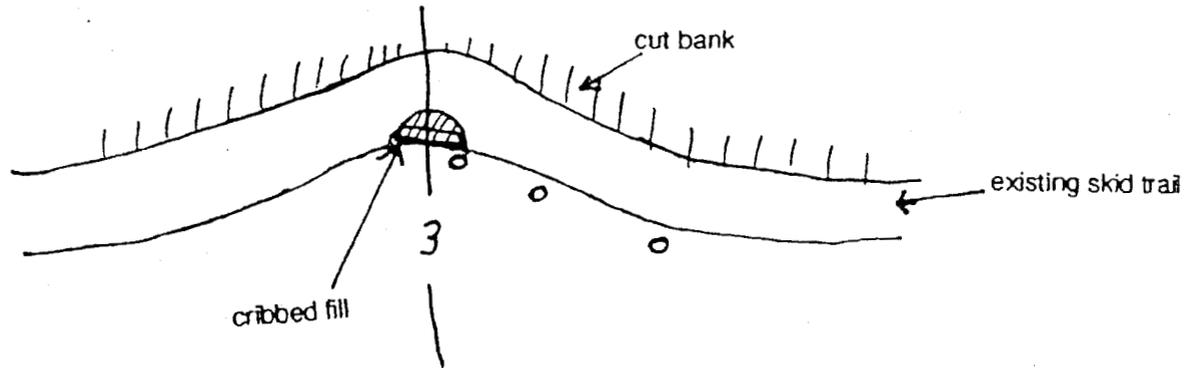
before operations

top view



during operations

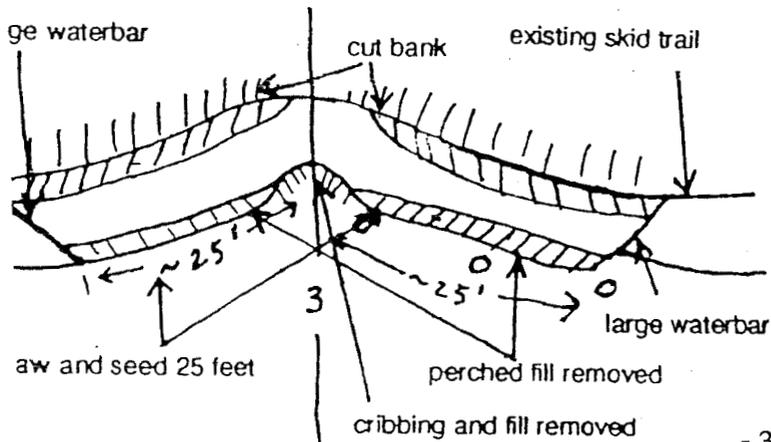
top view



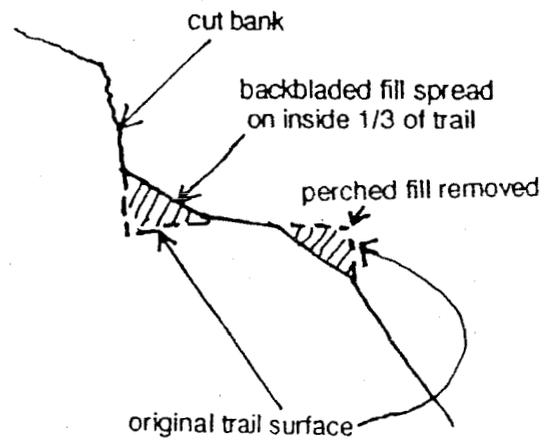
top view

after operations

backbladed spoils: spread on trail, trail outsloped



side view of trail surface



B.1

Crossing c1:

Crossing c1 is similar to crossing c3. fill will need to be cribbed prior to operations in the same way as at c3. After operations, however, the only treatment necessary will be to pull the temporary cribbing and fill, spread the fill on the trail either side of the crossing, and seed and mulch the trail for 25 feet in the same way as all other crossings.

Crossing c7:

Crossing c7 is a simple dip out crossing which will be treated the same as c2, c4, c5 etc. discussed above. However, below the crossing is a vertical drop in the watercourse of approximately 4 feet which is currently eroding its way back upstream towards the existing road surface. This situation can be easily remedied by placing several concrete bags or large rocks at the base of the small waterfall to prevent the further upstream migration of the small waterfall. The placement of the rocks or bags will be checked by the RPF prior to final shutdown or the beginning of the winter period, whichever comes first.

27. Are site specific practices proposed in-lieu of the following standard WLPZ practices?
- a. 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 No Retention of non-commercial vegetation bordering and covering meadows and wet areas?
 - c. Yes No Directional felling of trees within the WLPZ away from the watercourse or lake?
 - d. Yes No Increase or decrease of width(s) of the WLPZ(s)?
 - e. Yes No Protection of watercourses which conduct class IV waters?
 - f. Yes No Exclusion of heavy equipment from the WLPZ?
 - g. Yes No Retention of 50% of the overstory canopy in the WLPZ?
 - h. Yes No Retention of 50 % of the understory in the WLPZ?
 - i. Yes 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.

28. Yes No Were all landowners within 1000 feet downstream of the THP boundary notified by letter for information regarding domestic water supplies? If no, request exemption in Section III.
- 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 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 be implemented by the LTO.
29. Yes No Is any part of the THP area 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. 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.

There are numerous structure , the Hubback and Haven properties. Within 4 feet of all structures on the property wh are maintained for human habitation, slash will be lopped to within 12 inches of the ground not later than April 1 of the ye following its creation.

31. If piling and burning is to be used for hazard reduction, who will be responsible for compliance?
 LTO Timberland Owner Timber Owner - If more than one, specify extent of responsibility.

Not Applicable

BIOLOGICAL AND CULTURAL RESOURCES

32. Yes No Are any listed species, including their habitat, associated with the THP area? If yes, identify the species and the provisions to be taken for the protection of the species.

See #32 In Section 3 for a discussion of *Hystrix californica*, California Bottle Brush Grass, and Soquel Creek as a potential Coho Salmon Stream. There are no special mitigations for the LTO concerning either of these species.

33. Yes 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 No Are any Late Succession 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.
35. Yes No Are any other provisions for wildlife protection required by the rules? If yes, describe.
36. a. Yes No Has an archaeological survey been made of the THP area?
b. Yes No Has an archaeological records check been conducted for the THP area?
c. Yes 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 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.

The LTO will be advised of the location in the field of the powerlines, waterline and electrical line shown on the map so that he can take the necessary precautions to avoid damaging any of them. Trees will be marked so that they can be felled away from all water and power lines. The water and electrical line will be flagged in the field.

To promote safety for log trucks and other commuters on Glen Haven Road, "Caution: Log Trucks" signs will be posted near the intersection where the trucks enter onto Glen Haven Road from the driveway to Kennolyn Hi-Camp, and at reasonable intervals along Glen Haven Road, and near the intersection of Glen Haven and Cherryvale Roads.

DIRECTOR OF FORESTRY AND FIRE PROTECTION

This Timber Harvesting Plan conforms to the rules and regulations of the Board of Forestry and the Forest Practice Act

By:

(Signature)

(Printed Name)

(Date)

(Title)

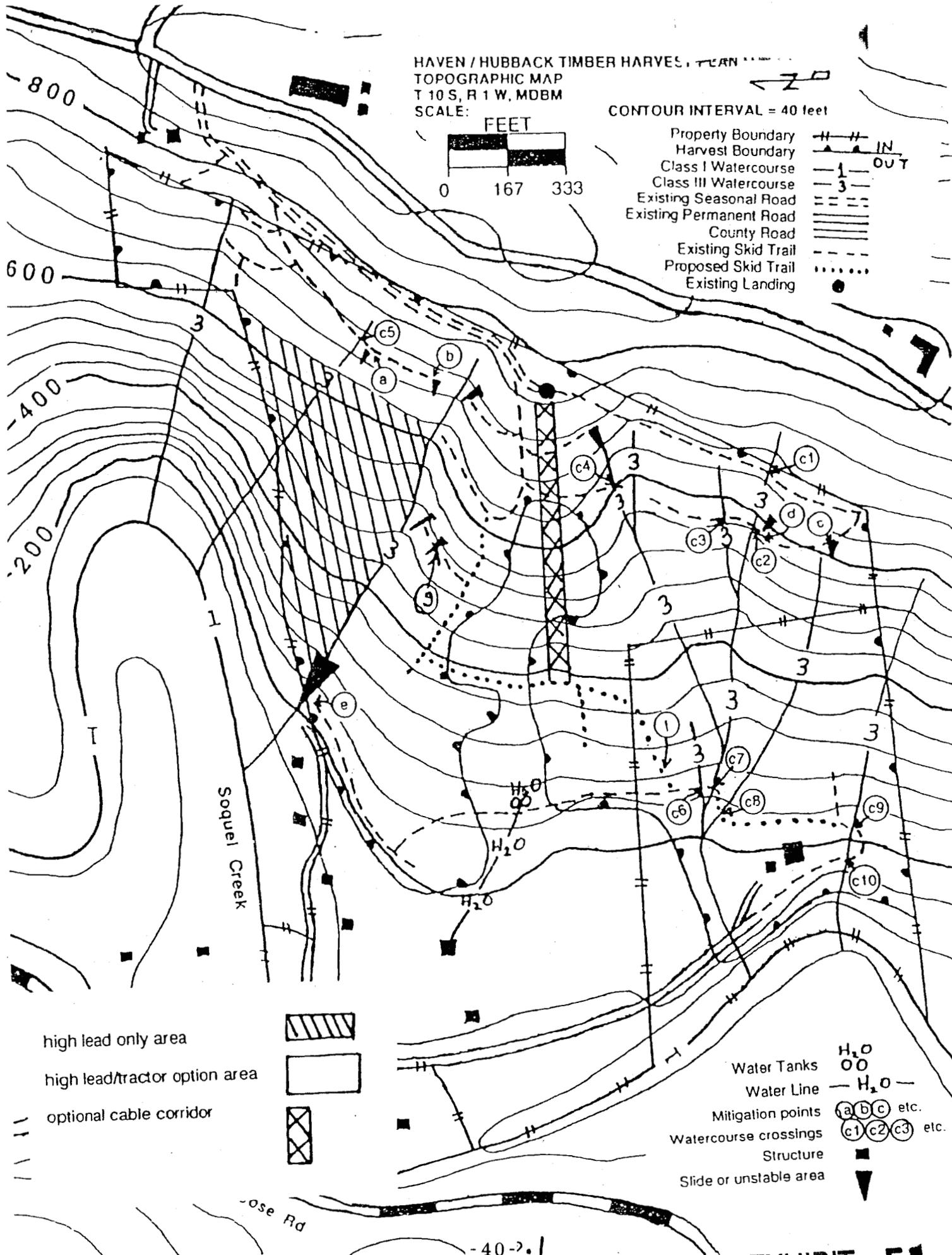
10

HAVEN / HUBBACK TIMBER HARVEST PLAN
 TOPOGRAPHIC MAP
 T 10 S, R 1 W, MDBM
 SCALE:



CONTOUR INTERVAL = 40 feet

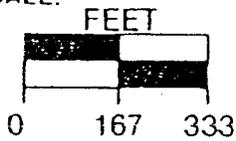
- Property Boundary
- Harvest Boundary
- Class I Watercourse
- Class III Watercourse
- Existing Seasonal Road
- Existing Permanent Road
- County Road
- Existing Skid Trail
- Proposed Skid Trail
- Existing Landing



- high lead only area
- high lead/tractor option area
- optional cable corridor

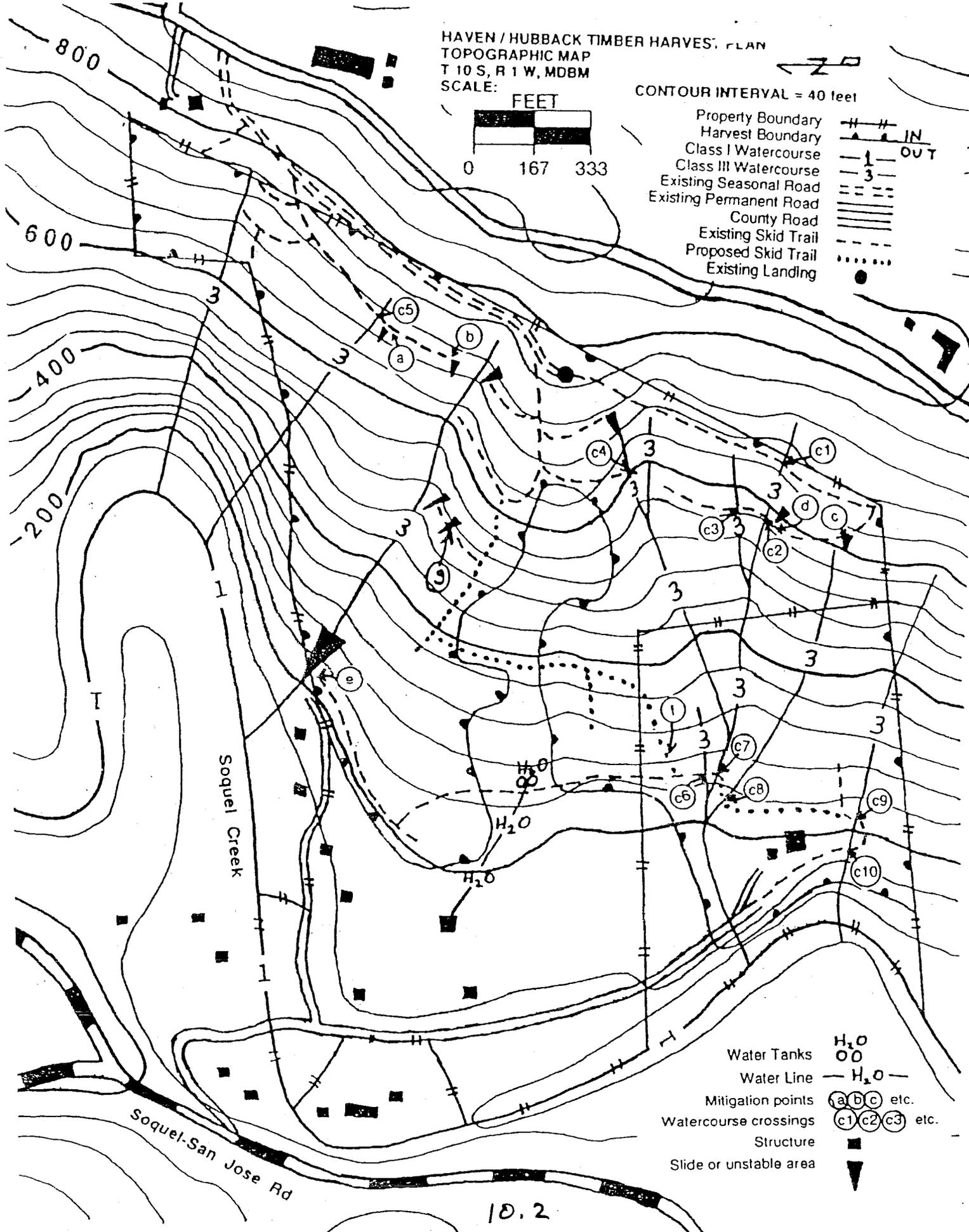
- Water Tanks
- Water Line
- Mitigation points
- Watercourse crossings
- Structure
- Slide or unstable area

HAVEN / HUBBACK TIMBER HARVEST PLAN
 TOPOGRAPHIC MAP
 T 10 S, R 1 W, MDBM
 SCALE:



CONTOUR INTERVAL = 40 feet

- Property Boundary
- Harvest Boundary
- Class I Watercourse
- Class III Watercourse
- Existing Seasonal Road
- Existing Permanent Road
- County Road
- Existing Skid Trail
- Proposed Skid Trail
- Existing Landing



- Water Tanks
- Water Line
- Mitigation points
- Watercourse crossings
- Structure
- Slide or unstable area

SECTION 3

HAVEN INVESTMENT CORP. / HUBBACK THP ADDENDUM

~~March 7,~~ 1996

July 4,

#12 Notice of Intent

This plan was originally submitted as THP #1-96-143 SCR in April of 1996. We went through the notification process, received one letter from a Mr. Phillip Haskett (See section VI), and no other responses from either the notice of intent or the domestic water inquiry. The plan was withdrawn on May 3 1996, in order to make some minor changes. At that point, I asked Charles Abshear of the Santa Rosa office of CDF if re-notification and re-publication is necessary for a re-submittal, and he responded that such duplication would not be necessary unless there were significant changes to the original plan, such as changes in harvest area or acreage, or yarding system. No such changes were made to this plan, therefore no re-notification was done.

#14 Silviculture

The selection method will be used for this harvest under 14 CCR 913.8 (a). At least 75 sq. ft. of basal area per acre will remain after timber operations are completed on this timberland, which is Site III. In order to prove that this Timber Harvest Plan conforms to 14 CCR 913.11, Maximum Sustained Production of High Quality Timber Products, the requirements of subsection (c) will be implemented. This subsection states that a THP has achieved Maximum Sustained Production (MSP) when, for unevenaged management, the THP complies with seed tree retention standards pursuant to 913.1 (c) (1) (A), the THP complies with the minimum stocking and basal area standards for the selected silvicultural methods as stated in the rules only with Group A species, and the THP protects soil, air, fish and wildlife, water resources, and other public trust resources.

The minimum stocking and basal area standards under 913.8 (a) will be met as discussed above with Group A species, in this instance, Douglas fir and coast redwood. These requirements call for more residual stocking and basal area than seed tree retention standards, therefore exceeding the basal area and number of trees required. The mitigations incorporated into this THP will serve to protect soil, air, fish and wildlife, water resources, and other public trust resources. Some of the mitigations include the use of existing skid trails and roads wherever feasible in order to minimize construction, which in turn reduces impacts to soils, water and wildlife, and maintains growing space for conifers.

No harvesting of late successional forest stands, as defined in 14 CCR 895.1, is proposed under this THP.

#16 Yarding System

The proposal for yarding systems involves areas designated for high lead cable yarding, and areas designated as cable tractor option.

10.3

Hubback THP - ction 3
~~7~~ March, 1996
4 JULY

Originally, we had hoped to use tractors to yard logs downhill on this job, hauling logs out across Soquel Creek to Old San Jose Road, or back up to Glen Haven Road across the property of Kennolyn Hi-Camp. Both of these options, however, became infeasible. The haul route across Soquel Creek would involve rebuilding the bridge across the creek, which will not currently support a log truck. Neither Haven Investment Corporation nor Peter Hubback were interested in reconstruction of that bridge, as it meets their needs in its current condition. The owners of the Kennolyn Camp property were not interested in allowing log trucks to haul thru their property. Therefore, the only feasible alternative was to skid the logs up to the ridgetop, then haul them out across a much smaller portion of the Kennolyn Camp property and the property of Richard and Pamela Wood. Letters which document permission from Kennolyn Hi-Camp and Richard and Pamela Wood are appended in Section VI of this THP.

In order to skid the logs up to the ridge, one of two possibilities will be employed. In the areas where existing skid trails are within a reasonable distance of the landing, and can be re-opened and used for this harvest with minimal disturbance, logs will be tractor yarded. In areas where no existing trails were found, or trails were found but could not feasibly be reconstructed due steep terrain, a high lead yarder system will be employed. For the remainder of the property, skid trails, either existing or proposed, will be used to skid logs to a central area near the northeast corner of the Hubback Property. From here, the LTO will have the option, since both yarder and tractor equipment will be on site, to either skid the logs up the hill approximately 800 feet to the landing, or else yard the logs up the hill along a single corridor with a high lead cable system. The determination of which system will be employed will be reached in consultation with the RPF, and shall consider environmental and economic costs and benefits.

It is our desire to leave a portion of the plan area designated as tractor/high lead option. There are several reasons we would like to leave the option in the plan, as well as some guidelines which will make it feasible to do so. There is not yet an LTO under contract for this job. Every operator has different equipment with different capabilities, and it is impossible for us to know at this time what equipment will be operating on this job. Leaving in the option for tractor or cable give us flexibility in choosing our operator, and gives him flexibility to log the option area in the way which has worked best for him in the past. It also gives flexibility in that the operator can have ground based equipment working off of the existing trails in the option area if the yarder is elsewhere. Heavy equipment will use only existing skid trails and the one proposed skid trail linking them together within the option area. There are no trails on slopes over 50% or on unstable areas, except for mitigation point "g" which, as discussed is not truly an unstable area, but a stabilized old slide. If the operator decides during the pre-op he does not need to use any of the trails designated on the map within the option area, the RPF will submit a revised map and delete any such trails. Further justification of the option scenario comes from the fact that the main proposed trail running down the ridge in the option area is necessary to joint the east and west existing roads on the property, to get equipment to the bottom of the property for tractor bunching and possible tailholds. So since that trail needs to be built to access the bottom of the property, it seems reasonable to allow the operator the option to skid logs on it.

Included in Section VI of this plan are diagrams of several topography profiles which were run from different possible yarder settings in order to get an idea of

~~7 March, 1996~~

4 JULY

the general slopes on the property. As shown in those drawings, none of the profiles showed any severe changes in slope which would make high lead cable logging infeasible. Deflection could not be calculated without knowing the size of the cable on the machine to be used, which is unknown at this point. Forest Practice Rules require waterbars on all cable roads which divert water away from natural drainageways, in the event that there are areas of insufficient deflection on this harvest. Furthermore, there are redwood trees along the entire length of the corridors which would allow for mid-span spars, if necessary. Profiles were not run for corridors near the Class 3 watercourse to the south of Profile #3, because the topography in this area is similar to the area traversed by Profile #3.

#21 a) Ground Based Equipment on Unstable Soils or Slide Areas

Explanation: At mitigation point "a", "b", "c", "d", "e", and "g" tractors will operate on or near old slides or unstable areas.

Justification: Justification for using all of these trail can be summarized by saying that this is an existing skid trail system which is in poor shape and in need of repair. Most of the crossings and unstable areas discussed in this THP will be greatly improved by the corrective work we have proposed, and we expect a net decrease in sediment leaving this property as a result of this harvest. Therefore, the use and improvement of these areas rather than construction of new trail through productive timber growing space on steep ground is clearly in compliance with 14 CCR 914.

Mitigation: Specific mitigations for each site are discussed in section II for the LTO on pages 5 and 6,

#21 c) Ground-based Equipment on Slopes >50% with High or Extreme EHR

Explanation: At mitigation point "f", a proposed skid trail will cross slopes that exceed 50% within an area of "High" EHR.

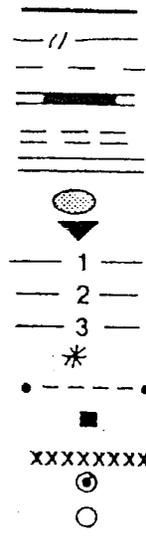
Justification: At mitigation point "f", the proposed trail is necessary to join the upper and lower roads on the property, as discussed under the feasibility analysis for the yarding system chosen. There was one unavoidable, short, steep ridge which must be climbed in order to link the remainder of gentle ground which this trail crosses. By implementing the mitigation described below, the trail will be protected equally to application of the standard rules on slopes less than 50%, and this trail is located in the only logical place in order to comply with the goals set forth in 14 CCR 914.

Mitigation: At mitigation point "f", the trail runs directly up a short ridge, where slopes are ~55% for approximately 75 feet. the entire length of trail with slopes greater than 50% will be heavily tractor packed with slash, to a depth of at least six inches, and a large waterbar will be installed upslope of the short steep pitch.

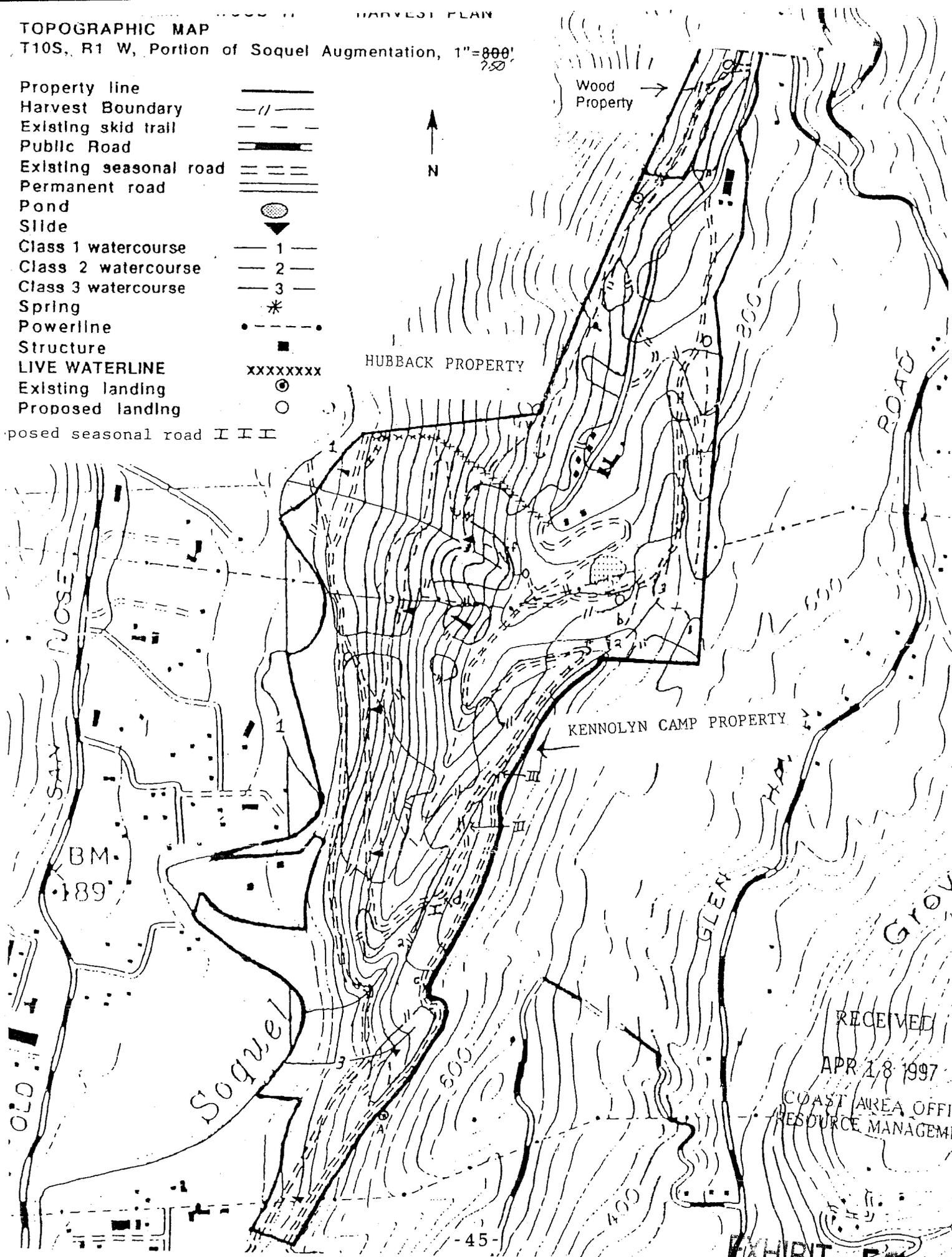
#28 Public Notice / Domestic Water Supply Inquiry

TOPOGRAPHIC MAP
 T10S, R1 W, Portion of Soquel Augmentation, 1"=800'
 250'

- Property line
- Harvest Boundary
- Existing skid trail
- Public Road
- Existing seasonal road
- Permanent road
- Pond
- Slide
- Class 1 watercourse
- Class 2 watercourse
- Class 3 watercourse
- Spring
- Powerline
- Structure
- LIVE WATERLINE
- Existing landing
- Proposed landing



Proposed seasonal road I I I



RECEIVED
 APR 18 1997
 COAST AREA OFFICE
 RESOURCE MANAGEMENT

~~9~~ March, 1996

4 July

There are 19 people who were sent a Notice of Intent to Harvest Timber / Domestic Water Supply Inquiry because they own property within 300 feet of the property boundary, or they own property adjacent to private haul route, or they own property within 1000 feet downstream of the harvest boundary which adjoins or includes a Class I, II or IV watercourse. The list of these property owners is found attached. In addition, the Soquel Creek Water District, the Soquel Union School District, and Jan Beautz, Board of Supervisors, were sent a Notice of Intent to Harvest Timber. As of March 6, 1996, no responses were received as a result of the Notice / Inquiry.

Landowners within 1000 feet downslope of the THP boundary were notified to request information of domestic water uptakes, if a Class 1, 2, or 4 watercourse is running through or adjoining their property boundary. No responses were received by Webster Associates which indicated a domestic water uptake in Soquel Creek or its tributaries within 1000 feet downslope from the harvest area. We did receive onbe letter from a Mr. Phillip Haskett, who had questions about the bridge over Soquel Creek, and effects of harvesting on flows in Soquel Creek. His letter and our

The Notice of Intent to Harvest Timber and the Domestic Water Inquiry were published in the Santa Cruz Sentinel on February 24, 1996. Ten days were allowed to pass from the date of publishing for members of the public to respond with information about domestic water supplies before the THP was submitted. No responses were received as of March 6, 1996.

#32 Rare and Endangered Species of Special Concern

The Natural Diversity Data Base by the Department of Fish and Game and the Biotic Resources Map by the County of Santa Cruz were checked at CDF in Felton for any information on rare, endangered, or threatened species within the harvest area.

Haven / Hubback THP--Section 3

~~7 March, 1996~~

4 July

The Natural Diversity Database indicated no listed plants or animals or their habitat within the harvest area. The Biotic Resources Map from the County of Santa Cruz shows a community of *Hystrix californica*, (*Elymus californica*) California Bottle-brush Grass, within the harvest area.

Hystrix californica, is currently listed as a "watch species" in the California Native Plant Species *Inventory of Rare and Endangered Vascular Plants of California* (February, 1994). The *Inventory* further classifies the grass, according to their Rarity-Endangerment-Distribution (R-E-D) code as 1-1-3. This code translates to the following classification: concerning rarity, CNPS classifies *Hystrix californica* as rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time; concerning endangerment, not endangered, and concerning distribution, endemic to California. A copy of a California Native Species Field Survey Form from 1986 in the upper Glen Haven Road area is attached at the end of Section III. Based on this classification, no special mitigations are deemed necessary for this grass species on this harvest.

Soquel Creek is listed as one of 13 streams in Santa Cruz and San Mateo Counties which have historically supported documented runs of coho salmon. In order to comply with the incidental take order from the Department of Fish and Game, special mitigations are required within the Class I WLPZ of any of these 13 streams or their Class I tributaries. These special mitigations are:

Within the Class I WLPZ

- A) Prior to the beginning of the winter period:
 - 1) roads within the harvest area will be covered with rock.
 - 2) skid trails will be tactor packed with slash or straw mulched.
 - 3) bared areas equal to or greater than 100 square feet will be covered with mulch or slash.
- B) All harvest trees will be marked prior to the preharvest inspection.
- C) Any other water quality protection measures deemed necessary by CDF will be implemented.

The only operations which may fall within the Class I WLPZ of Soquel Creek will be the selective harvesting of one or two redwood clumps between the Hubback residence and Soquel Creek, near the southwest corner of the harvest area. The Class I WLPZ has not yet been determined, and my estimate of the WLPZ boundary would put these clumps outside of the WLPZ, but in the event that they do fall within the WLPZ, they will be marked prior to PHI, felled directly away from the creek, and yarded by equipment which will remain outside of the WLPZ. No roads or skid trails will be located within the Class I WLPZ, thereby ensuring compliance with the DFG incidental take order.

PLAN ADDENDUM

7 March, 1996

4 JULY

Additional Information: General Description of Physical Conditions

General Soils and Topography Information

This proposed timber harvest is located within Santa Cruz County, on property belonging to two separate landowners, the Haven Investment Corporation, and Peter Hubback. The properties are situated approximately 3 miles north of the intersection of Highway 1 at the Porter Street / Bay Avenue exit, on the east side of Soquel Creek near the intersection of Soquel Creek and Moores Gulch.

The soils on the property consist of the Ben Lomond Sandy Loam, 50 to 75% slopes, EHR High, the Ben Lomond-Felton complex, 30 to 50% slopes, EHR Moderate, the Nisene-Aptos Complex, 15 to 30% slopes, EHR Moderate, and the Nisene-Aptos complex, 50 to 75% slopes, EHR High.

Slopes vary from 0 to over 90%, with most of the harvest area located on slopes from 20 to 40%. Elevation within the harvest area ranges from approximately 200 feet to approximately 800 feet. The majority of the harvest area is located in somewhat narrow bands near the numerous intermittent watercourses which flow westward into Soquel Creek. A small amount of redwood and Douglas-fir is found intermixed with hardwoods on the hardwood-dominated, dryer west facing broad ridges. The western border of the properties is Soquel Creek. Only a small portion of the area near the creek will be included in this harvest. This area is located near the southwest corner of the Hubback property. Other than this small area, where the harvest area will be approximately 200 feet from Soquel Creek, the harvest area will be 500 to 1000 feet from Soquel Creek, and separated from the creek by a large flat area which is currently being used as a nursery by the Haven Investment Corporation.

Vegetation and Stand Conditions

The vegetation on the Haven and Hubback properties consists primarily of second-growth redwood and Douglas-fir with mixed hardwoods and brush, with a very small component of scattered, badly fire-scarred residual redwood. Areas on the drier ridgetops are dominated by hardwoods (Coast live oak, tanoak, bay, madrone) and brush (*Manzanita spp.*, scotch broom, deerweed, poison oak, blackberry, scrub oak, thistle), with scattered Douglas-fir and hardwoods. The harvest area is confined to the areas containing adequate stocking of redwood and Douglas-fir.

Stand composition within the harvest area is roughly 70% conifer and 30% hardwood by canopy cover, within the harvest area. The conifer component consist of roughly 85% second-growth redwood, 14% second-growth Douglas-fir and less than 1% residual old-growth redwood.

The selection silviculture method will be used to remove approximately 50-55% of the commercial conifers over 18 inches. Some residual redwood will be marked for harvest in areas where healthy second-growth redwood will be released. Emphasis during marking will be on removing a sufficient volume of merchantable sawlogs to make the harvest economically feasible, while improving the overall stand condition, vigor and health.

PLAN ADDENDUM

7 March, 1996

4 JULY

Watershed and Stream Conditions

The plan area is located within the lower half of the Soquel Creek Watershed, from the intersection of the West Branch of Soquel Creek with the East Branch of Soquel Creek, south to the Pacific Ocean. Included in the watershed are Moores Gulch and Grover Gulch, as well as numerous Class II tributaries.

Dave Hope, Watershed Specialist for the County of Santa Cruz, has been consulted in the recent past concerning the condition of the Soquel Creek Watershed. He indicated that prior to the Loma Prieta earthquake, the West Branch of Soquel Creek, and Soquel Creek in general, were considered to be in generally good condition. Unfortunately, earthquake induced landslides directly into the creek channel along many parts of the West Branch of Soquel creek have combined with some residential and agricultural activities to dramatically increase sediment loading and decrease the quality of fish habitat. Hope indicated that some restoration activities, including installation of a fish ladder, combined with enforcement against known violations, may improve matters over time. In addition, environmental review and mitigation is being done under County permit authority for reconstruction of single family homes damaged or destroyed by the earthquake. According to Hope, no significant new development is under review at this time.

Soquel Creek has also been designated as a stream to be protected per the recent listing of the coho salmon as endangered south of San Francisco Bay. Although there have been no recent coho sightings within the Soquel Creek basin, the incidental take order from the Department of Fish and Game requires special mitigations within the Class I WLPZ of this stream. As discussed in section III of this THP, under Item #32, Rare and Endangered Species of Special Concern, those requirements have been met by this THP.

Shade canopy along the portion of Soquel Creek adjacent to the harvest area is between 40 and 50%, comprised mostly of riparian hardwoods. No equipment operations within the Class I WLPZ or harvesting of trees directly shading Soquel Creek are proposed as part of this THP, so shade canopy will be unchanged as a result of this proposed harvest.

The Class III tributaries which run through the harvest area and flow west into Soquel Creek are characterized by steep gradient, deeply incised channels common along the east bank of Soquel Creek, and are prone to debris flows following large intense storms, as evidenced by mud splatter on trees near the edges of these watercourses, and personal observation from landowners who were present during the heavy rains of 1982-83. The two northern-most class III's flow into Soquel Creek over a large landslide scarp just north of the harvest area, at the sharp 180 degree curve in Soquel Creek. The remainder of the class III's flow into a large terrace on the eastern bank of Soquel Creek, where the class III's flatten out and deposit a great deal of sediment before meandering into Soquel Creek, or infiltrating into ground water through the sandy soils which comprise the large flat terrace.

PLAN ADDENDUM

MAIL TO: NATURAL DIVERSITY DATA BASE, CALIFORNIA DEPARTMENT OF FISH AND GAME, 1416 NINTH ST., SACRAMENTO, CA 95814

Herb. 02-1987

PLEASE ENTER ALL INFORMATION AVAILABLE TO YOU. USE THE BACK FOR COMMENTS IF NECESSARY. PLEASE ATTACH OR DRAW A MAP ON BACK.

Document Code _____	Quad Code _____
Index Code _____	Occurrence # _____
Copy Sent To _____	

Scientific name (no codes) HISTRIY. CALIFORNICA (= Elymus californicus)

Reporter: Dean Wm. Taylor Phone: 408 1-425-8755

Address: BioSystems Analysis Inc., 303 Potrero, Suite 29-201, Santa Cruz, CA 95060

Date of Field Work: JUNE & JULY - 1986 County: SANTA CRUZ Collection? If yes, # NO Mus/Herb _____

Location: Upper end of Glen Haven road, Soquel

Quad Name: SOQUEL & LAUREL T _____ R _____ % of _____ 1/4 Sec _____

X 7 1/2' _____ 15' Elevation: _____ ft(m) T _____ R _____ % of _____ 1/4 Sec _____

Landowner/Manager VARIOUS PRIVATE

Species found? X Yes _____ No _____ If not, reason: _____

Is this a new location record? _____ Yes _____ No _____ Unknown _____

Total # of individuals: 10⁴ Is this a subsequent visit? _____ Yes _____ No Compared to your last visit: _____ more _____ same _____ fewer

Phenology (plants): _____ # vegetative _____ # flowering _____ # fruiting

Population Age Structure (animals): _____ # adults _____ # juveniles _____ # others

Site Function for Species (animals): _____ breeding _____ foraging _____ wintering _____ roosting _____ denning _____ other

Habitat Description: (plant communities, dominants, associates, other rare spp., substrate/soils, aspect/slope)

most Sequoia sempervirens forest phases - where well shaded or in cool ravines.

Current Land Use/Visible Disturbances/Possible Threats

Urbanization a threat. Logging has occurred recently (~5yr?)

Overall Site Quality: X Excellent _____ Good _____ Fair _____ Poor

Comments:

Should/Could this site be protected? How?

No.

Other comments:

DETERMINATION (Check one or more, fill in blanks)

42

_____ Keyed in a site reference _____

_____ Compared with specimen housed at _____

_____ Compared with photo/drawing in _____

_____ By another person (name) RE _____

PHOTOGRAPHS (Check one or more)

Subject _____ Type _____

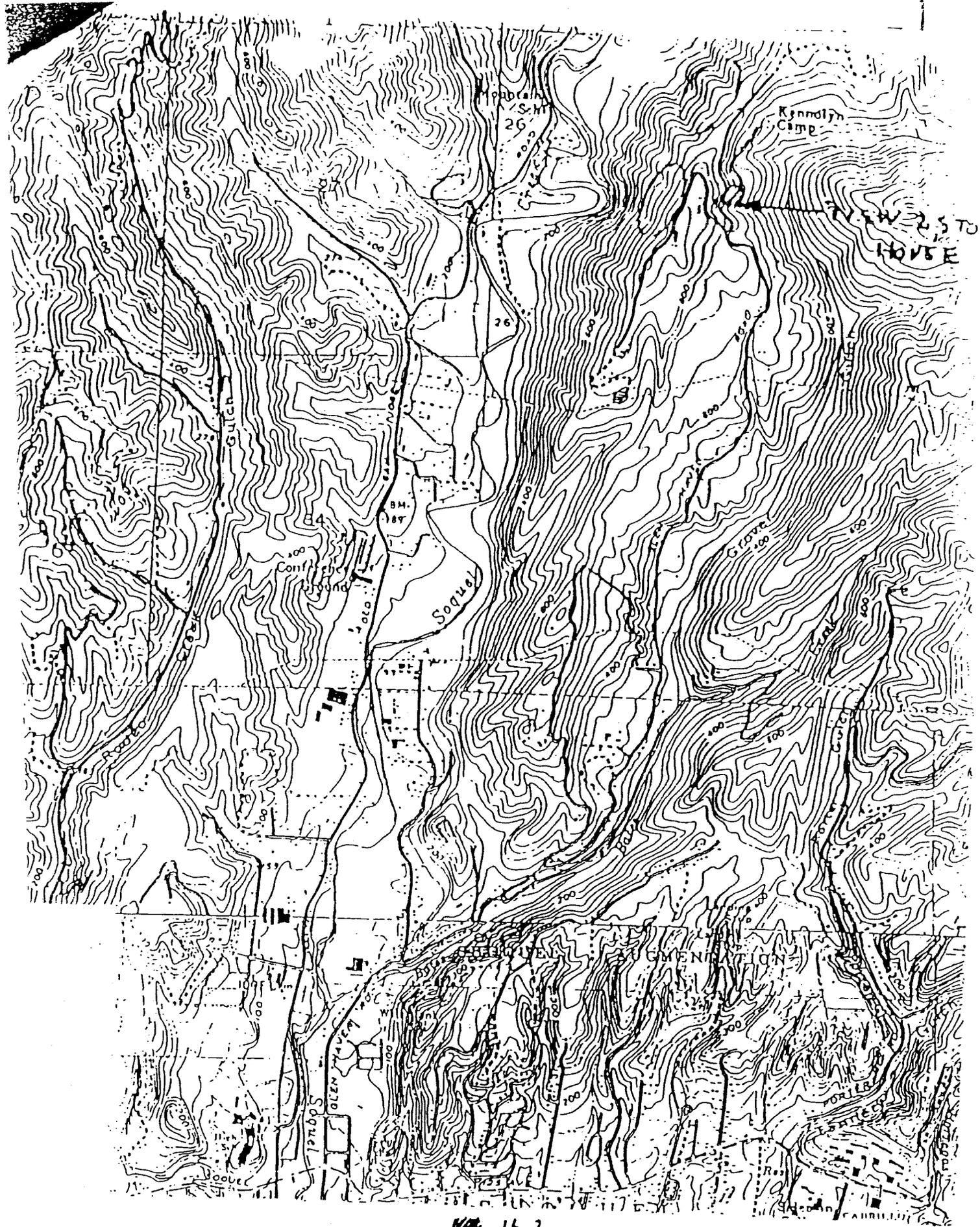
_____ Plant/Animal _____ Slide

_____ Habitat _____ Print

_____ Diagnostic Feature _____

-50-16.1

EXHIBIT E



DETERMINATION (Check one or more, fill in blanks)

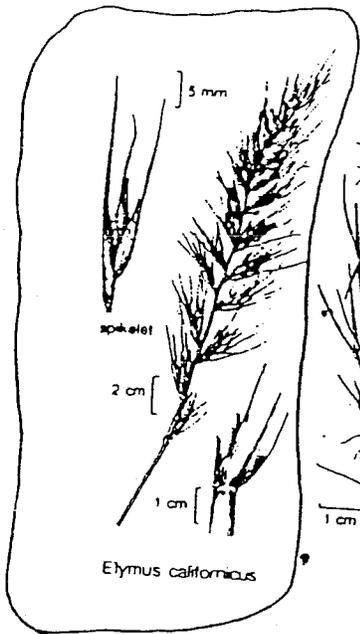
- Keyed in site reference _____
- Compared with specimen housed at _____
- Compared with photo/drawing in _____
- By another person (name) _____

16.2

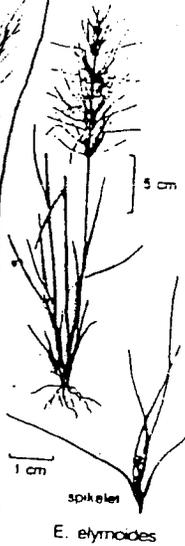
PHOTOGRAPHS (Check one or more)

- Subject _____
- Plant/Animal _____
- Habitat _____

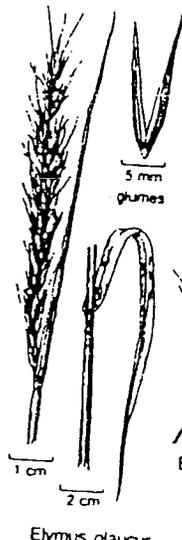
EXHIBIT E



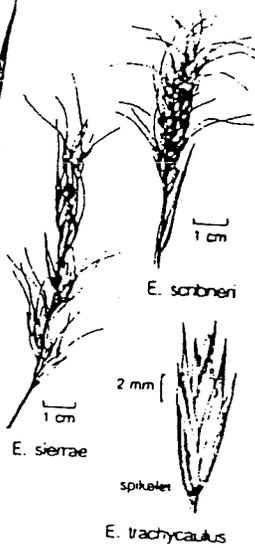
Elymus californicus



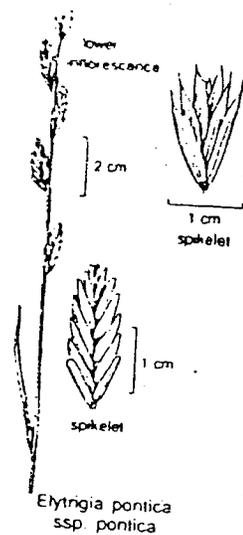
E. elymoides



Elymus glaucus



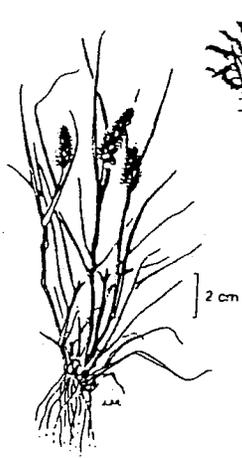
E. trachycaulus



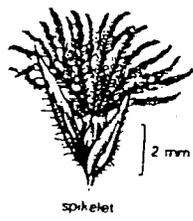
Elyngia pontica
ssp. *pontica*



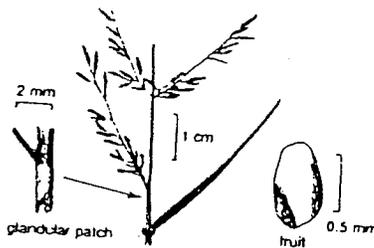
E. repens



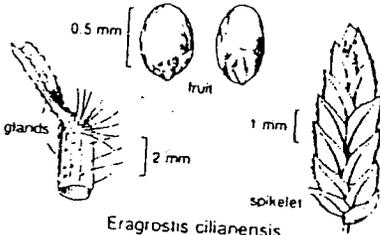
Eriopogon desvauxii



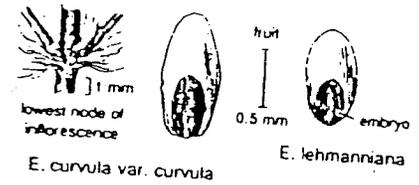
spikelet



Eragrostis barrelieri

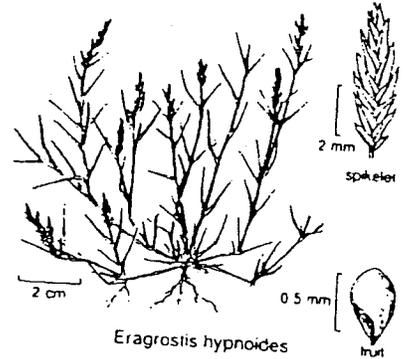


Eragrostis cilianensis

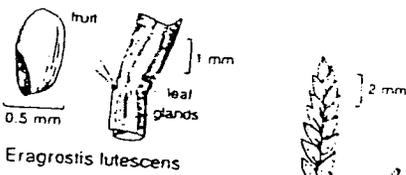


E. curvula var. *curvula*

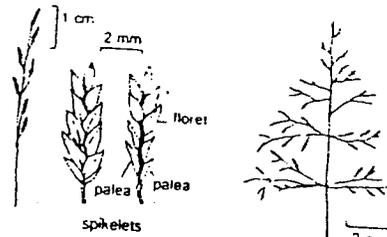
E. lehmanniana



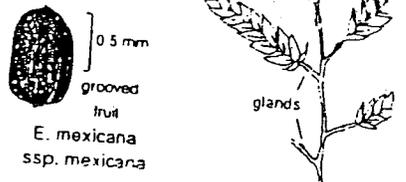
Eragrostis hypnoides



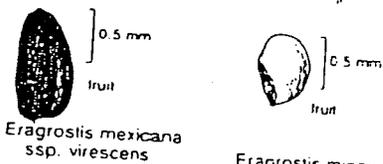
Eragrostis lutescens



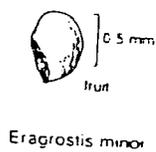
Eragrostis pectinacea
var. *pectinacea*



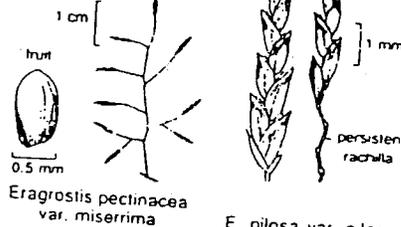
E. mexicana
ssp. *mexicana*



Eragrostis mexicana
ssp. *virescens*

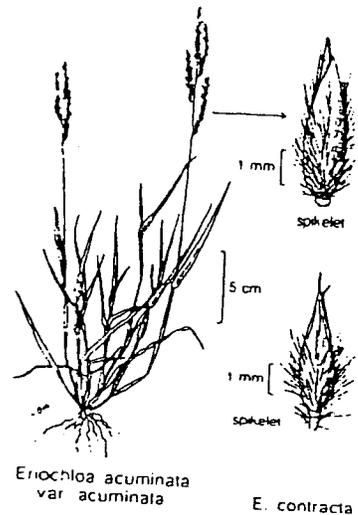


Eragrostis minor



Eragrostis pectinacea
var. *miserrima*

E. pilosa var. *pilosa*



Eriochloa acuminata
var. *acuminata*

E. contracta

SECTION IV

CUMULATIVE IMPACTS ASSESSMENT

For this cumulative impacts assessment, the following geographic assessment areas have been considered for each of the referenced sources. Justification for using these assessment areas follows the description of each area

1. Watershed - the Lower Soquel Creek Watershed, from the junction of the East and West branches of Soquel Creek south to the Pacific Ocean, and including Moores Gulch, Grover Gulch and Bates Creek. The watershed assessment area is approximately 6500 acres. The focus will be on drainages that flow through the plan area, because this is where the greatest impacts are expected to occur.

Justification: This proposed timber harvest includes several Class III tributaries to Soquel Creek, and, therefore, is in its watershed. Impacts associated with a timber harvest or other projects may affect this watercourse, therefore, this assessment area was chosen.

2. Soil Productivity--The boundaries of the Haven and Hubback properties and the one proposed haul route outside of the Haven and Hubback properties.

Justification: Heavy equipment will be operating only within the property boundaries and on the proposed haul route. Soil outside the property boundaries and the road will be left undisturbed, so no effects should result. Therefore, only the area within the Haven and Hubback property boundaries and the proposed haul route were considered.

3. Biological Resources--The focus will be on the plan area, but consideration will be given to the area within 1/2 mile surrounding the Haven and Hubback properties.

Justification: The further you move from the plan area, the less effect there will be on the terrestrial plants and animals. However, there could be some effects on downstream flora and fauna, and impacts associated with Soquel Creek, an anadromous fish stream.

4. Recreational Resources--The assessment area will be the harvest area plus 300 feet surrounding the harvest area.

Justification: According to the appendix for Technical Rule addendum #2, Cumulative Impact Assessment, the assessment area for recreational resources shall be the harvest area plus 300 feet surrounding the harvest area.

5. Visual Resources-- The assessment area will be an area within 3 miles of the harvest area from which the harvest will be visible. This includes portions of San Jose-Soquel Rd. west of the plan area, and two properties to the east of the harvest, below the trending ridge which will block the harvest from view from the east.

Justification: From areas further than 3 miles, the harvest will be difficult to discern, due to the selective nature of the harvest.

PLAN ADDENDUM
4 JULY 1996

...avenue mudback THP-- Section 4

~~7 March, 1996~~

4 JULY, 1996

6. Vehicular Traffic--Consider all roads which will be used by log trucks for this timber harvest.

Justification: The only roads effected by hauling operations are those to be used by log trucks by this timber harvest. These include Glen Haven Road, Main St. Soquel Dr. and Porter St. in Soquel and Highways 1 and 17.

Information sources for this assessment include:

- CDF THP files, 6059 Highway 9, Felton, CA 95018, 408-335-9148
- The Natural Diversity Database, Dept. of Fish and Game, P.O. Box 944209, Sacramento, CA 94244-2090, 916-324-3812
- Lists of Rare and Endangered Species in Santa Cruz County, County of Santa Cruz General Plan, 701 Ocean Street, Santa Cruz, CA 95060, 408-454-2000
- Santa Cruz County Biotic Resources Map, 701 Ocean Street, Santa Cruz, CA 95060, 408-454-2000
- Santa Cruz County assessment and survey maps, 701 Ocean Street, Santa Cruz, CA 95060, 408-454-2002
- Soil Survey for Santa Cruz County, USDA Soil Conservation Service, 635 S. Sanborn Road, Salinas, CA 93901, 408-424-7377.
- Jack Meyer, Northwest Information Center, Foundation Center, Building 300, Sonoma State University, Rohnert Park, CA 94928, 707-664-2494.
- Patrick Orozco, local tribal group, 110 Dick Phelps Road, Watsonville, CA 95076, 408-728-8471.
- Topographic Maps, by U.S. Geological Survey, Box 25286, Federal Center, Bldg. 810, Denver, CO, 80225, 303-236-7477.
- Dave Hope, County of Santa Cruz Planning Dept. 701 Ocean St. Santa Cruz, CA 95060 (408) 454-3096

PLAN ADDENDUM

4 JULY 1996

STATE OF CALIFORNIA
BOARD OF FORESTRY
CUMULATIVE IMPACT ASSESSMENT

1. Do the assessment area(s) of resources that may be affected by the proposed project contain any past, present, or reasonable, foreseeable, probable, future projects?

Yes.

Past, present, and reasonably, foreseeable, probable, future projects include timber harvesting, residential development, and agricultural production. The following is a list of past and present timber harvest plans within the watershed assessment area within the last ten years.

<u>THP#</u>	<u>Acres</u>	<u>Logging Method</u>	<u>Status</u>
5-85-39 SC	41	Tractor	Complete
1-87-20 SCR	20	Tractor	Complete
1-87-143 SCR	65	Tractor	Complete
1-87-174 SCR	80	Tractor	Complete
1-89-521 SCR	5	Tractor	Complete
1-90-735 SCR	53	Tractor	Complete
1-92-056 SCR	14	Tractor	Complete
1-92-237 SCR	70	Tractor	Complete
1-93-193 SCR	27	Tractor	Complete
1-94-347 SCR	90	Tractor	Active
1-94-201 SCR	16	Tractor	Approved
1-94-202 SCR	24	Tractor	Approved
1-94-342 SCR	132	Tractor	-66 acres complete -66 acres approved
1-95-033 SCR	100	Tractor	Inactive
1-96-031 SCR	9	Tractor	Approved

Approximately 746 acres have been harvested in the last ten years, out of the 6500 acre watershed of Soquel Creek. This amounts to approximately 11% of the total acreage within the watershed in a ten year period. Impacts from residential development and agricultural production, as mentioned in Section III, have also been occurring within the watershed, and will likely continue at the same rate as in the past.

THP #1-94-347 was harvested in the summer of 1995. This property contained many erosive areas caused by past blading of seasonal roads within the property, very few erosion control structures on roads and grazing in the headwaters of watercourses. All of these situations were contributing a substantial amount of sediment into Soquel Creek. Many mitigations were implemented on this plan and have reduced sediment yields originating from this property. These mitigations included hydroseeding 3 acres at the headwaters of a class II watercourse, rocking of WLPZ roads, installing a sediment catch basin, installing check dams in a class III watercourse, and use of over 75 bales of straw for protection of bare soil areas and waterbar outlets.

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COAST AREA OFFICE
RESOURCE MANAGEMENT

19

Revised 8-20-96

7 March, 1996

4 JULY

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

Yes.

Possible impacts in the watershed assessment area include residential development and agricultural production. Many homes are found near Soquel Creek along San Jose-Soquel Road. Agricultural production is in the form of orchards, vineyards and pastures found throughout the watershed. It is unknown exactly what impacts these uses have on the watershed, but there appears to be a significant amount of sediment entering Soquel Creek from pasture lands near the harvest area, and these impacts are expected to continue at the same rate as in the past. There are several acres of pastureland downstream from the harvest area, directly adjacent to Soquel Creek. Significant amounts of sediment enter Soquel Creek from these pastures during heavy rains. Also, there are two crossings of the creek used by horses in the same area which have no erosion control structures and contribute large amounts of sediment to the creek.

Additional significant impacts to the Soquel Creek watershed are not expected from this proposed Timber Harvest Plan because of the selective nature of the harvest, the large flat stream terrace separating most of the harvest area from Soquel Creek, and mitigations incorporated into the THP, and adherence to the Forest Practice Rules.

3. Will the project, as presented, in combination with past, present, and reasonably foreseeable, probable, future projects identified in items 1 and 2 above, have a reasonable potential to cause or add to significant cumulative impacts in any of the following resource subjects?

1. Watershed No, after mitigations.

Sediment Effects: Increased sediment in water carried downstream from timber harvest or other activities could have a detrimental effect on aquatic species or their habitat, including the endangered coho salmon. Increased sediment loads in the water would also reduce the visual quality of the water and affect fish populations. This THP, in conjunction with other THPs in the Soquel Creek watershed, could combine to produce unacceptable levels of sediment in Soquel Creek. Many recommendations and mitigations are incorporated into THPs during the review process to minimize impacts, such as slashing of skid trails to reduce and /or eliminate sediment movement into watercourses, improving the overall effect. Cable yarding is commonly used on the steeper slopes and drainages, reducing the impact to soil and water quality. The Haven/Hubback THP was designed to use cable yarding on steeper slopes where tractor operation would have required difficult skid trail construction, to utilize primarily existing roads and skid trails, and to keep equipment outside of the WLPZ, thereby retaining the buffer strip qualities of the vegetation and duff layer near watercourses. Thus, the majority of sediment from roads or skid trails will be deposited in the vegetation or trapped in flatter areas and not transported to watercourses. These measures, combined with the installation of drainage and erosion control structures which meet or exceed the minimum Forest Practice

PLAN ADDENDUM

~~7 March, 1996~~

4 JULY

requirements, will result in no significant additions to sediment levels in the watercourses as a result of this proposed harvest.

Water Temperature Effects: The combined timber harvests within the Soquel Creek watershed could result in reduced vegetation along Soquel Creek and its tributaries, allowing more direct sunlight to reach the watercourse, increasing water temperature, which could be detrimental to aquatic wildlife. There are several mitigating circumstances, however, which will prevent this from happening. As with the other THPs, this proposed THP will remove less than 50% of the overstory conifer canopy covering the ground and adjacent waters. Virtually all hardwoods and other vegetation shading the waters will be retained, very similar to preharvest conditions. Crown closure will return to preharvest levels within a few years, so any negligible increase in solar exposure will be short term. This harvest will remove no vegetation that is directly shading Soquel Creek. No significant cumulative impacts to water temperature are foreseen.

Organic Debris: Timber harvest activities may contribute organic debris to watercourses within the Soquel Creek watershed. This is primarily from trees that have been undermined from the flow of the streams, exposing the roots, and causing the trees to fall. California Forest Practice rules prohibit deposition of organic debris in amounts that would be deleterious to the beneficial uses of water. The rules also require that organic materials accidentally deposited (for example, a bucked log rolling downslope into a watercourse) be removed immediately. Compliance with the rules during timber harvest activities will ensure that there are no significant cumulative impacts from the addition of organic debris.

Chemical Contamination: Possible sources of chemical contamination would be from oils or fuels from logging equipment or other materials transported over public roads, spillage of dust abatement materials into watercourses, or contamination by pesticides or herbicides. Activities that could combine to cause significant cumulative impacts would be from timber management activities, transport of hazardous materials on public roads, and domestic or agricultural use of pesticides and/or herbicides. The landowner and the RPF have no control over activities outside of the property lines by other parties. However, we do have control over what goes on within the Haven and Hubback property boundaries. Equipment servicing within this THP will be done in such a way that petroleum products are contained and disposed of off site. There are no plans to use any materials other than water to control dust, so there is no possibility of contamination of this type. There are no plans to use herbicides or pesticides on the property in the foreseeable future, so there is no risk of contamination of this type. With these constraints on land management activities, this THP will not contribute any chemical contaminants that would result in significant adverse cumulative impacts to water quality.

Peak Flow: Due to the reduction of vegetative cover, and the opening of skid trails, there is expected to be a short term increase in peak flow from timber harvest areas. This, combined with similar activities on adjacent areas can be expected to have a cumulative effect of increasing peak flow for the short term within a given watershed. Careful attention to the installation and maintenance of erosion control structures (waterbars and rolling dips on roads and skid trails) along with the retention of as much understory and ground cover vegetation as

4 July

possible, will combine to spread and breakup water flows and allow more filtration, which will tend to reduce peak flow. Also, it should be noted that redwood clumps will be thinned, not removed. The redwood stumps will resprout, forming new trees which will transpire increasing amounts of water as they grow larger. It is expected, as has already been demonstrated, that crown closure will return within a few years, that understory vegetation will grow back to closure and open areas of disturbed soil, such as roads and skid trails, will soon be covered with leaves and needles. These natural effects will break up rainfall impacts, spread and hold surface water, and promote infiltration. With these mitigating measures and effects, it is not anticipated that this harvest will create a significant long-term increase in peak flow.

Overall Water Production Increase: As with the effect on peak flow, the reduction of total biomass and the ground disturbance from a timber harvest will result in an increase in water yield. This should be viewed as a positive benefit to downstream water users, as more water will be available. It should be kept in mind that potential adverse effects such as sedimentation, water temperature increase, and peak flow increase will be mitigated as discussed above, so high quality water at the optimum seasonal timing will be produced. It is also important to note that, in the absence of further vegetative management, those gains in water yield will be short term and will be lost as vegetation fills back in.

2. Soil Productivity No, after mitigations.

These mitigations include the use of primarily existing roads and skid trail, in order to retain growing space for conifers. Erosion control structures will be installed on roads, skid trails and cable roads, which will slow the overland flow of runoff across disturbed soil and ensure that there is no significant amount of surface soil loss.

Organic Matter Loss: No significant loss of organic matter is expected as a result of this harvest. Tractors will be confined, where feasible, to main skid trails, where organic matter will be removed from the soil surface by the skidding of logs. Other areas on gentle slopes used by tractors will be minimally disturbed by the skidding of logs, but no blade-down construction or reconstruction will occur in these areas. Litter and duff will return within one or two years to any areas significantly disturbed by this harvest, making any organic matter loss associated with this harvest short term and not environmentally significant. The use of a high lead cable system on a portion of the property will minimize soil disturbance in these areas, as at least one end of logs being yarded will be suspended off the ground.

Surface Soil Loss: No significant loss of surface soil is expected as a result of this harvest. By limiting tractors to main skid trails as much as possible, and allowing only blade-up operations where gentle slopes allow, direct exposure of surface soil to accelerated erosion will be minimized. Soil loss in the area designated for high lead cable yarding will be minimized by the suspension of one end of the logs off the ground. Furthermore, the installation of erosion control structures to skid trails and roads, in accordance with Forest Practice regulations, will minimize surface soil loss in areas of disturbed soils that might otherwise contribute to significant surface soil loss.

~~March~~, 1996

4 July

Soil Compaction: No significant adverse impacts associated with soil compaction are expected as a result of this harvest. The one landing to be used is an existing landing, and other possible yarding locations will be along the existing road at the top of the property. These areas, along with skid trails, will be the areas subjected to the greatest amount of soil compaction. The landing will be covered with straw mulch and seeded, however, which will minimize erosion due to decreased infiltration rates of compacted soils. The skid trails will be waterbarred, also preventing significant erosion from trails as a result of soil compaction.

Growing Space Loss: No significant adverse impact from loss of growing space is expected as a result of this harvest. As mentioned, the one landing and the majority of the skid trails are existing, and will result in no significant loss of growing space. Vegetation disturbed in the construction of new skid trails will return within one or two years after the harvest. The area disturbed by skid trail construction or reconstruction for this plan does not constitute a significant loss in conifer growing space.

3. Biological Resources No, after mitigations.

These mitigations include retaining large downed logs, some snags and other downed woody material in its place. No trees will be marked where nests are found.

Rare, threatened, or endangered species, or species of special concern: One plant species, *Hystrix californica*, classified as rare by the California Native Plant Society, is found within the harvest area, and is discussed in Section III under Item #32, Rare and Endangered species of Special Concern. No significant adverse impacts to this species are expected as a result of this proposed selective harvest.

Soquel Creek is listed in the Department of Fish and Game's 2080 Incidental Take Order as a stream which historically had coho salmon runs, and therefore must be protected as habitat for the now threatened coho. Compliance with the requirements of the incidental take order for this plan is described in Section III under Item #32, Rare and Endangered species of Special Concern.

Significant wildlife or fisheries resource concerns: No significant adverse impact to non-listed species within the assessment area is expected as a result of this harvest. Impacts to the two listed species associated with the harvest area and biological resource assessment area are discussed above. This will be a selective harvest, which will not significantly alter the stand characteristics and habitat for wildlife and plants. The redwood on site is growing in clumps, and the clumps will be thinned, not removed. Habitat found on the property prior to the harvest will be retained after harvesting operations are completed, thus any disturbance to wildlife will be temporary, and will not result in any loss of suitable habitat present prior to harvesting operations.

Effects on aquatic and near-water habitat conditions: No significant adverse impact to aquatic and near-water habitat conditions is expected as a result of this harvest. As discussed in Section III under Item #32, Rare and Endangered Species of Special Concern, the only operations proposed within any WLPZ will be the felling of a few trees near the Hubback residence. All other watercourses

March, 1996

4 JULY

within the harvest area are class III watercourses. Operations near these watercourses will be limited to felling of harvest trees, skidding on primarily existing skid trails, and longlining of timber from these existing trails or from the existing landing using a high lead cable yarding system. It is not expected that these operations will have a significant affect on aquatic or near-water habitat conditions. There will be some short-term decrease in the shade canopy along these class III watercourses, but shade canopy will close quickly, within two or three years as vegetation vigorously re-establishes in open areas.

Biological Habitat Conditions: No significant adverse impact to biological habitat conditions is expected as a result of this selective timber harvest.

Snags / den trees-- No harvesting of snags or den trees is proposed under this timber harvest plan, nor is any recruitment of snags or den trees proposed. It is not anticipated that any adverse impacts to wildlife using snags and/or den trees will result from this selective harvest.

Downed, large woody debris-- The amount of downed large woody debris will not be significantly reduced by this harvest. It is likely that the amount of large woody debris may increase as the result of cull logs left in the woods and hardwoods which are knocked down or felled in the process of falling harvest trees. This should be viewed as a benefit to wildlife species which require downed, large woody debris for habitat.

Multistory canopy-- Due to the selective nature of this proposed harvest, the post harvest canopy composure will retain similar multi-story canopy characteristics present in the area prior to the harvest.

Road density-- No new roads are proposed for this harvest, so road density will not be affected.

Hardwood cover-- Some hardwoods will be lost in skid trail construction and reconstruction, as well as hardwoods which may be damaged or felled during the falling of harvest trees. The amount of hardwood cover lost to these operations, however, will not significantly alter the overall habitat conditions of the property.

Late seral forest characteristics-- The Haven and Hubback properties contain scattered residual redwood. However, there is not a sufficient amount of large, decadent trees, downed logs or snags to constitute a late seral forest habitat. Furthermore, there is not a sufficient amount (20 acres, as defined in CCR 895.1) of such habitat to classify these properties as late seral habitat. Therefore, no adverse impacts will occur from the loss of late seral forests.

Late seral habitat continuity-- The Haven and Hubback properties are surrounded by second-growth redwood and Douglas-fir forest, and therefore this harvest will have no adverse impact on late seral habitat continuity.

4. Recreational Resources No reasonably potential significant effects.

This is private property and is not adjacent to any public lands.

PLAN ADDENDUM

~~7~~ March, 1996

4 July

5. Visual Resources No reasonably potential significant effects.

The harvest area is visible from one public road, Old San Jose-Soquel Road. The selective nature of the harvest will limit the adverse visual effects from any public road. This is evident from the harvest which occurred in 1995 on the property directly to the south of this proposed harvest, THP # 1-94-347 SCR. The public will most likely be viewing the plan area from a moving vehicle on a private road, or from a residence located near the harvest area. By complying with 14 CCR 917.4, Treatment of Logging Slash in the Southern Subdistrict, the visual impacts created by the logging slash will be reduced, as will the fire hazard. After the harvest is complete, there will be signs of logging, such as stumps and opened skid trails and roads, but these signs will only be visible to individuals near the harvest boundary. The visual signs of harvesting from Old San Jose-Soquel Road will be minimal.

6. Vehicular Traffic No, after mitigation.

The proposed haul route consists of roads recently used for log hauling. All roads are public roads, at least two lanes wide, and have been used by log trucks in the recent past. To promote safety for log trucks and other road users, "Caution Log Trucks" sign will be posted along Glen Haven Road.

	Yes, after mitigation	No, after mitigation	No reasonably, potential significant effects
1. Watershed		X	
2. Soil Productivity		X	
3. Biological		X	
4. Recreation			X
5. Visual			X
6. Traffic		X	

Note

(a) "Yes" means that potential significant adverse impacts are left after application of the Forest Practice Rules and mitigations or alternatives proposed by the plan submitter.

(b) "No, after mitigation" means that any potential for the proposed timber operation to cause significant adverse impacts has been substantially reduced or avoided by mitigation measures or alternatives proposed in the THP and application of the Forest Practice Rules.

(c) "No reasonably 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.

Section V
Confidential Archaeological Addendum

PLAN ADDENDUM
4 JULY 1996

NOTE

Information concerning archeological sites has been removed from this THP, 1-96-312 SCR, 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

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

Section VI
Additional Information

PLAN ADDENDUM
4 JULY 1996

EXHIBIT E

STATE OF CALIFORNIA
 BOARD OF FORESTRY
 ESTIMATED SURFACE SOIL
 EROSION HAZARD

HAVEN - HUBBACK TIMBER HARVEST PLAN
 A: Ben Lomond Sandy Loam 50 - 75% slopes
 B: Ben Lomond-Felton complex 30 - 50% slopes
 C: Nisene-Aptos Complex 15 - 30% slopes

SOIL FACTORS

1. SOIL TEXTURE	FINE	MEDIUM	COARSE	FACTOR RATING		
	LOW	MODERATE	HIGH	A	B	C
RATING	1-9	10-18	19-30	23	23	20

2. PERMEABILITY	SLOW	MODERATE	RAPID	FACTOR RATING		
	5-4	3-2	1	1	1	3
	RATING	15-9	8-4	3-1	3	3

3. DEPTH TO RESTRICTIVE LAYER OR BEDROCK	SHALLOW	MODERATE	DEEP	FACTOR RATING		
	1"-19"	20"-39"	40"-60"	3	3	3
	RATING	10-6	5-3	2-1	5	5

PLAN ADDENDUM
 4 JULY 1996

C. PERCENT SURFACE COARSE FRAGMENTS GREATER THAN 2 MM IN SIZE INCLUDING ROCKS OR STONES	LOW	MODERATE	HIGH	FACTOR RATING		
	10-39%	40-70%	71-100%	5	5	5
	RATING	10-6	5-3	2-1	5	5

II. SLOPE FACTOR	5-15%	16-30%	31-40%	41-50%	51-70%	71-80%	FACTOR RATING		
	1-3	4-6	7-10	11-15	16-25	26-35	20	10	5
	RATING	15-8	7-4	3-1	5	5	5	5	5

III. PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE	LOW	MODERATE	HIGH	FACTOR RATING		
	0-40%	41-80%	81-100%	5	5	5
	RATING	15-8	7-4	3-1	5	5

IV. TWO-YEAR, ONE HOUR RAINFALL INTENSITY (Hundredths Inch)	LOW	MODERATE	HIGH	EXTREME	FACTOR RATING		
	30-39	40-59	60-69	70-80	15	15	15
	RATING	1-3	4-7	8-11	12-15	72	62

EROSION HAZARD RATING

< 50	50-65	66-75	> 75	THE DETERMINATION IS		
LOW	MODERATE	HIGH	EXTREME	H	M	M

STATE OF CALIFORNIA
 BOARD OF FORESTRY
 ESTIMATED SURFACE SOIL
 EROSION HAZARD

HAVEN - HUBBACK TIMBER HARVEST PLAN
 A: Nisene-Aptos Complex 50 - 75% slopes

I. SOIL FACTORS

A. SOIL TEXTURE	FINE	MEDIUM	COARSE	FACTOR RATING		
1. DETACHABILITY	LOW	MODERATE	HIGH	A	B	C
RATING	1-9	10-18	19-30	20		
2. PERMEABILITY	SLOW	MODERATE	RAPID			
RATING	5-4	3-2	1	3		

B. DEPTH TO RESTRICTIVE LAYER OR BEDROCK

	SHALLOW	MODERATE	DEEP	FACTOR RATING		
	1"-19"	20"-39"	40"-60"			
RATING	15-9	8-4	3-1	3		

PLAN ADDENDUM
 4 JULY 1996

C. PERCENT SURFACE COARSE FRAGMENTS GREATER THAN 2 MM IN SIZE
 INCLUDING ROCKS OR STONES

	LOW	MODERATE	HIGH	FACTOR RATING		
	10-39%	40-70%	71-100%			
RATING	10-6	5-3	2-1	5		
SUBTOTAL				31		

II. SLOPE FACTOR

SLOPE	5-15%	16-30%	31-40%	41-50%	51-70%	71-80%	FACTOR RATING		
RATING	1-3	4-6	7-10	11-15	16-25	26-35	20		

III. PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE

	LOW	MODERATE	HIGH	FACTOR RATING		
	0-40%	41-80%	81-100%			
RATING	15-8	7-4	3-1	5		

IV. TWO-YEAR, ONE HOUR RAINFALL INTENSITY (Hundredths Inch)

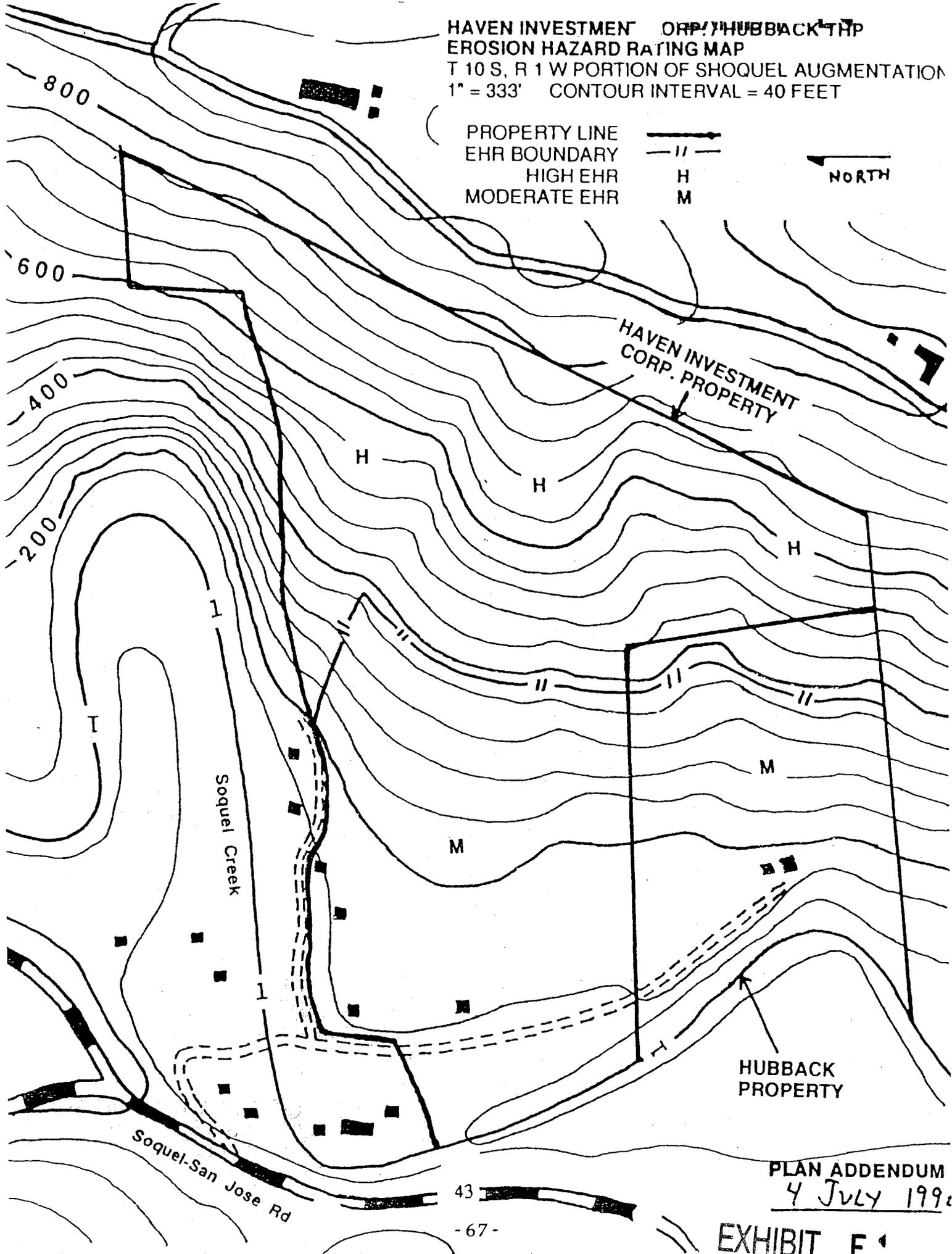
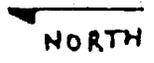
	LOW	MODERATE	HIGH	EXTREME	FACTOR RATING		
	30-39	40-59	60-69	70-80			
RATING	1-3	4-7	8-11	12-15	15		
TOTAL SUM OF FACTORS					71		

EROSION HAZARD RATING

	<50	50-65	66-75	>75	FACTOR RATING		
	LOW	MODERATE	HIGH	EXTREME			
THE DETERMINATION IS					H		

HAVEN INVESTMENT CORP. / HUBBACK TRP
 EROSION HAZARD RATING MAP
 T 10 S, R 1 W PORTION OF SHOQUEL AUGMENTATION
 1" = 333' CONTOUR INTERVAL = 40 FEET

PROPERTY LINE ———
 EHR BOUNDARY — // —
 HIGH EHR H
 MODERATE EHR M



PLAN ADDENDUM
 4 July 1992

EXHIBIT E 1

NOTICE OF INTENT TO HARVEST TIMBER/ DOMESTIC WATER INQUIRY

A Timber Harvesting Plan 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: March 8, 1996.

The earliest possible date the Department may approve the plan or amendment is: April 22, 1996.

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
138 Ridgeway Avenue (P.O. Box 670)
Santa Rosa, CA 95402
(707) 576-2275

California Department of Forestry
Santa Cruz/San Mateo Ranger Unit
6069 Highway 9 (P.O. Drawer F-2)
Felton, CA 95018
(408) 333-9148 (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. (To be completed by Department upon receipt. The cost to obtain a copy of the plan or amendment is: _____.)

PLAN INFORMATION

1. Timberland Owner(s) where timber operation is to occur: Haven Investment Corporation / Peter Hubback.
2. Registered Professional Forester who prepared the plan or amendment: Roy Webster, RPF #1785.
3. Name of individual(s) who submitted the plan or amendment: Haven Investment Corporation / Peter Hubback.
4. Location of the proposed timber operation (county, legal description, & approximate distance of the timber operation from the nearest community or well-known landmark: The plan area is within Santa Cruz County; Township 10 South, Range 1 West, a portion the Soquel Rancho Augmentation. The property is approximately three miles north of the intersection of Highway 1 at the Porter St / Bay Ave. Exit, and approximately 1/4 mile east of the intersection of Old San Jose Rd. and Laurel Glen Rd.
5. The name of and distance from the nearest perennial stream and major watercourse flowing through or downstream from the timber operation: The western border of the parcel is formed by Soquel Creek, approximately 4 miles upstream of the confluence of Soquel Creek and the Pacific Ocean.
6. Acres proposed to be harvested: Approximately 53 acres.
7. The proposed harvesting methods or treatments to be used: Selection

A map is attached to help in locating 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 contact the Registered Professional Forester who prepared the plan or amendment, please call: Roy Webster & Associates 132 Rancho Del Mar, Aptos, Ca 95003 (408) 688-8787

PLAN ADDENDUM
4 JULY 1996

Proof of Publication

(2015.5 C.C.P.)

NOTICE OF INTENT TO HARVEST TIMBER/
DOMESTIC WATER SUPPLY INQUIRY

STATE OF CALIFORNIA }
COUNTY OF SANTA CRUZ. } SS

**NOTICE OF INTENT TO HARVEST TIMBER/
DOMESTIC WATER SUPPLY INQUIRY**

A Timber Harvesting Plan 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 that 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 down slope 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 March 5, 1996.

The earliest possible date the Department may approve the plan or amendment is April 22, 1996.

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 & Fire Protection
1415 North Street
San Francisco, CA 94133
(415) 775-2776

For more information, contact the forester listed on the above Department's notice or purchase a copy of the plan or amendment. The cost to obtain a copy is \$25.00 plus for each page over 100 pages.

Name of individual(s) who submitted the plan or amendment: Haven Investment Corporation/Peter

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:

February 24, 1996

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

February 26, 1996

Dated at Santa Cruz, California

Signature

Kathleen Karaski

True and correct.

Dated at Santa Cruz, California..... Febr 0

Signature Kathleen Krasicki

PLAN ADDENDUM
4 July 1996





1901 Cleveland Ave. Suite 1
Santa Rosa, CA 95401
Phone: (707) 526-5820

132 Rancho Del Mar
Aptos, CA 95003
Phone: (408) 688-8787
FAX: (408) 688-3001

February 23, 1996

Mr. Ross Paratore
Haven Investment Corporation
12534 Wardell Ct.
Saratoga, CA 95070

Re: Timberland Owner's Responsibilities with respect to proposed Timber Harvest

Dear Ross,

As the Timberland Owner you have several legal responsibilities when a timber harvest is conducted on your property.

The California Code of Regulations (CCR), Title 14 (Natural Resources), Division 1.5 (Department of Forestry), Chapter 4 (Forest Practice), describes the responsibilities of the Plan Submitter, Registered Professional Forester (RPF), Licensed Timber Operator (LTO), and timberland owner.

The RPF is responsible to notify you of your legal requirements as a timberland owner. These include stocking, maintenance of roads, landings, and erosion control facilities.

The responsibilities which pertain to you for this operation will involve only the construction and maintenance of erosion control facilities.

The LTO will install erosion control facilities on roads, landings, and skid trails, and be responsible for their maintenance for the first winter after completion of the harvest. You will be responsible for maintenance thereafter for a period up to two additional years if required by the Department of Forestry.

It is suggested that you purchase a copy of the Forest Practice Rules from the Department of Forestry. Some of the more important sections of the CCR to review are:

- 1) 913.8(a) for stocking and marking requirements.
- 2) 895.1, 914.6, 923.3, 923.4, 923.6, 923.8, 1022.3, and 1050, for maintenance of roads, landings, and erosion control facilities.
- 3) 1035 for general responsibilities of all parties.

If you have any questions on Forest Practice Rules or responsibilities call me at (408) 688-8787 or the local CDF office in Felton at (408) 335-6740.

Sincerely,

David Pope
for Roy Webster, RPF #1765
Webster & Associates

47

PLAN ADDENDUM
4 JULY 1996



1901 Cleveland Ave. Suite 1
Santa Rosa, CA 95401
Phone: (707) 526-5820

132 Rancho Del Mar
Aptos, CA 95003
Phone: (408) 688-8787
FAX: (408) 688-3001

February 23, 1996

Mr. Peter B. Hubback
P.O. Box 818
Capitola, CA 95010

Re: Timberland Owner's Responsibilities with respect to proposed Timber Harvest

Dear Peter,

As the Timberland Owner you have several legal responsibilities when a timber harvest is conducted on your property.

The California Code of Regulations (CCR), Title 14 (Natural Resources), Division 1.5 (Department of Forestry), Chapter 4 (Forest Practice), describes the responsibilities of the Plan Submitter, Registered Professional Forester (RPF), Licensed Timber Operator (LTO), and timberland owner.

The RPF is responsible to notify you of your legal requirements as a timberland owner. These include stocking, maintenance of roads, landings, and erosion control facilities.

The responsibilities which pertain to you for this operation will involve only the construction and maintenance of erosion control facilities.

The LTO will install erosion control facilities on roads, landings, and skid trails, and be responsible for their maintenance for the first winter after completion of the harvest. You will be responsible for maintenance thereafter for a period up to two additional years if required by the Department of Forestry.

It is suggested that you purchase a copy of the Forest Practice Rules from the Department of Forestry. Some of the more important sections of the CCR to review are:

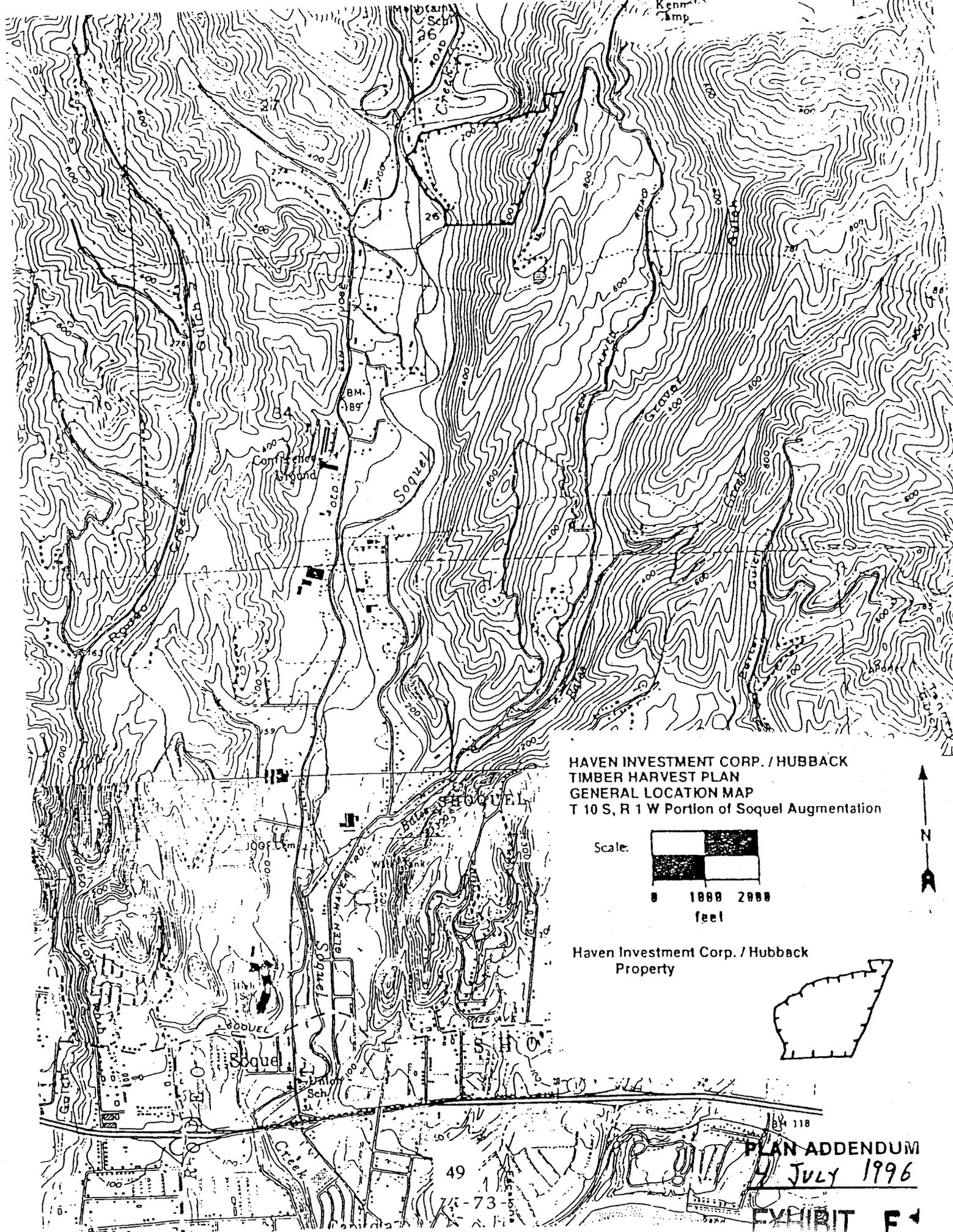
- 1) 913.8(a) for stocking and marking requirements.
- 2) 895.1, 914.6, 923.3, 923.4, 923.6, 923.8, 1022.3, and 1050, for maintenance of roads, landings, and erosion control facilities.
- 3) 1035 for general responsibilities of all parties.

If you have any questions on Forest Practice Rules or responsibilities call me at (408) 688-8787 or the local CDF office in Felton at (408) 335-6740.

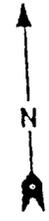
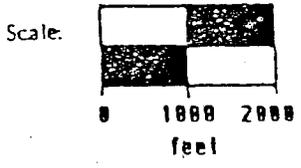
Sincerely,

David Pope
for Roy Webster, RPF #1765
Webster & Associates

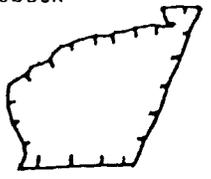
PLAN ADDENDUM
4 JULY 1996



HAVEN INVESTMENT CORP. / HUBBACK
 TIMBER HARVEST PLAN
 GENERAL LOCATION MAP
 T 10 S, R 1 W Portion of Soquel Augmentation

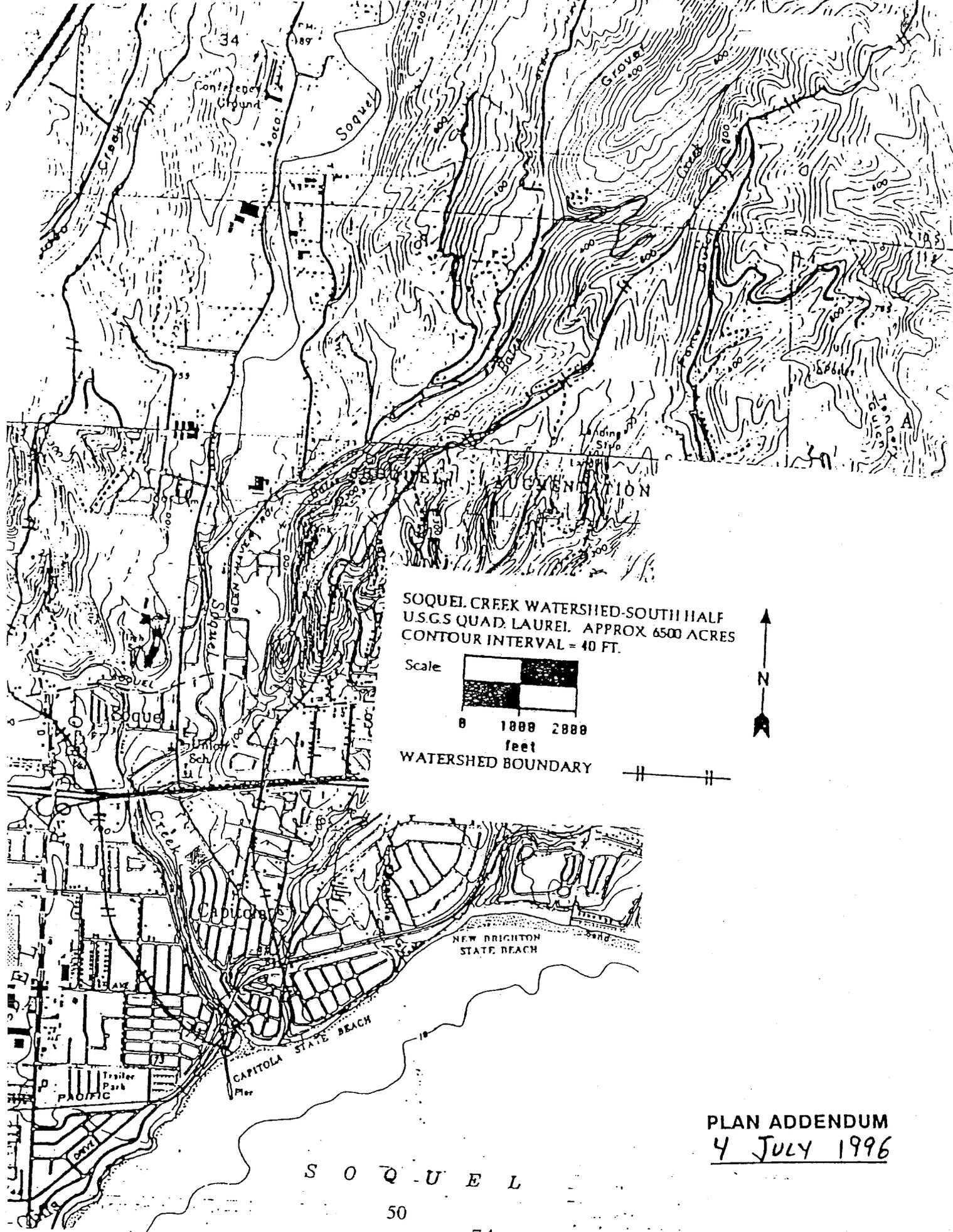


Haven Investment Corp. / Hubback
 Property

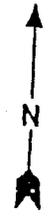
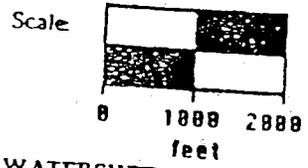


PLAN ADDENDUM
 JULY 1996
 EXHIBIT E

49
 74-73-5



SOQUEL CREEK WATERSHED-SOUTH HALF
 U.S.G.S QUAD. LAUREL. APPROX. 6500 ACRES
 CONTOUR INTERVAL = 40 FT.



WATERSHED BOUNDARY

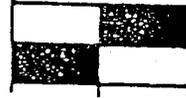
PLAN ADDENDUM
4 JULY 1996

S O Q U E L

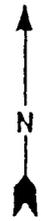
PLAN ADDENDUM
4 July 1996

SOQUEL CREEK WATERSHED-NORTH HALF
U.S.G.S QUAD. LAUREL APPROX 6500 ACRES
CONTOUR INTERVAL - 40 FT.

Scale:



0 1800 2800
feet



WATERSHED BOUNDARY



Haven Investment / Hubback
Property

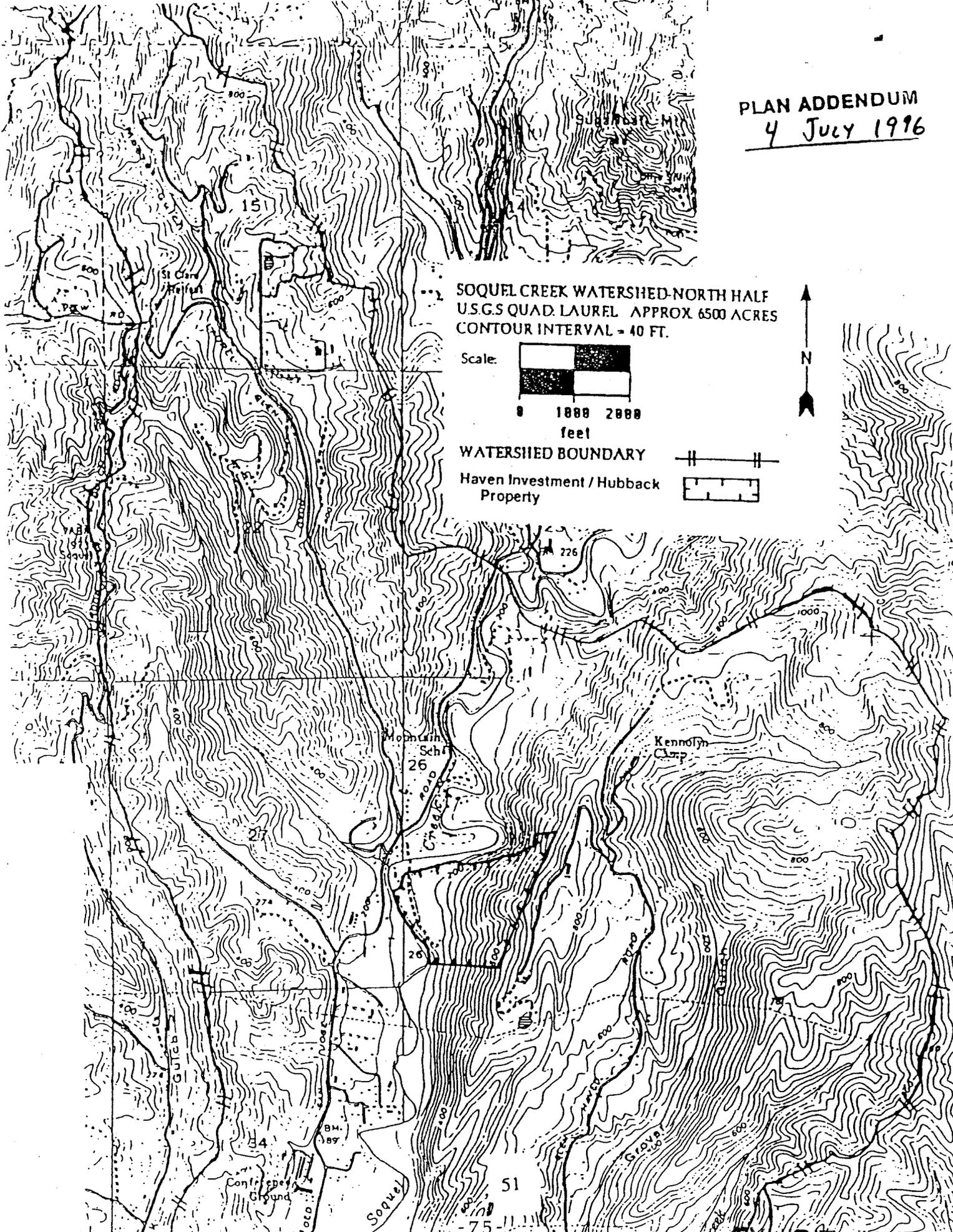
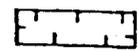


EXHIBIT E 1



1901 Cleveland Ave. Suite 1
Santa Rosa, CA 95401
Phone: (707) 526-5820

132 Rancho Del Mar
Aptos, CA 95003
Phone: (408) 688-8787
FAX: (408) 688-3001

February 19, 1996

Mr. & Mrs. Richard and Pamela Wood
9204 Glen Haven Rd.
Soquel, CA 95073

RE: Use of seasonal road on property of Kennolyn Hi-camp and property of Richard and Pamela Wood and skid trails on property of Richard and Pamela Wood by Haven Investment Corp. and Peter Hubback to haul timber harvested from their respective properties

Dear Richard and Pamela:

I am sending you this letter to document your permission for Haven Investment Corporation and Peter Hubback to use a portion of the seasonal haul road which passes through the property of Kennolyn Hi-camp and the property of Richard and Pamela Wood, and portion of several skid trails on your lands to haul logs off of their respective properties in accordance with a timber harvest plan which will soon be submitted to the California Department of Forestry for review. The seasonal road in question is that road which lies on the west side of the paved road running along the ridge top through the Hi-camp property, as we discussed in the field recently. A map is attached which shows the road and skid trails in question. The seasonal road and trails were used in 1995 as part of the timber harvest conducted on the Kennolyn Hi-camp property and the Wood property.

Erosion control maintenance on the entire length of road and any skid trails re-opened for the harvest on the Haven Investment Corp. & Hubback properties will be the responsibility of the Licensed Timber Operator for the Haven Investment Corp./Hubback Timber Harvest Plan, for the life of that plan.

By signing below, you will be granting permission to Haven Investment Corporation and Peter Hubback to use that portion of the above mentioned road and skid trails for the purpose of hauling logs as discussed above, with conditions for erosion control maintenance as outlined above.

Signed: Richard Wood Date: 2/23/96
Richard Wood

Pamela Wood Date: 2/23/96
Pamela Wood

Sincerely,

Roy Webster
Roy Webster, RPF #1765

PLAN ADDENDUM
4 JULY 1996



1901 Cleveland Ave. Suite 1
Santa Rosa, CA 95401
Phone: (707) 526-5820

132 Rancho Del Mar
Aptos, CA 95003
Phone: (408) 688-8787
FAX: (408) 688-3001

February 19, 1996

Kennolyn Hi-camp
c/o Mr. Max Caldwell
8400 Glen Haven Rd.
Soquel, CA 95073

RE: Use of seasonal road on property of Kennolyn Hi-camp and property of Richard and Pamela Wood by Haven Investment Corp. & Peter Hubback to haul timber harvested from their respective properties

Dear Max:

I am sending you this letter to document your permission for Haven Investment Corporation and Peter Hubback to use a portion of the seasonal haul road which passes through the property of Kennolyn Hi-camp and the property of Richard and Pamela Wood to haul logs off of their respective properties in accordance with a timber harvest plan which will soon be submitted to the California Department of Forestry for review. The seasonal road in question is that road which lies on the west side of the paved road running along the ridge top through the Hi-camp property, which we have recently discussed on the telephone. A map is attached which shows the road in question. The seasonal road was used in 1995 as part of the timber harvest conducted on the Kennolyn Hi-camp property and the Wood property.

Erosion control maintenance on the entire length of road re-opened for the harvest on the Haven Investment Corp. & Hubback properties will be the responsibility of the Licensed Timber Operator for the Haven Investment Corp./Hubback Timber Harvest Plan, for the life of that plan.

By signing below, you will be granting permission to Haven Investment Corporation and Peter Hubback to use that portion of the above mentioned road for the purpose of hauling logs as discussed above, with conditions for erosion control maintenance as outlined above.

Signed: Max Caldwell
Max Caldwell

Date: 2/25/96

Sincerely,

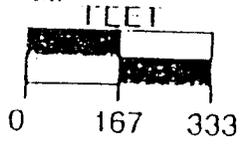
Roy Webster

Roy Webster, RPF #1765

PLAN ADDENDUM
4 JULY 1996

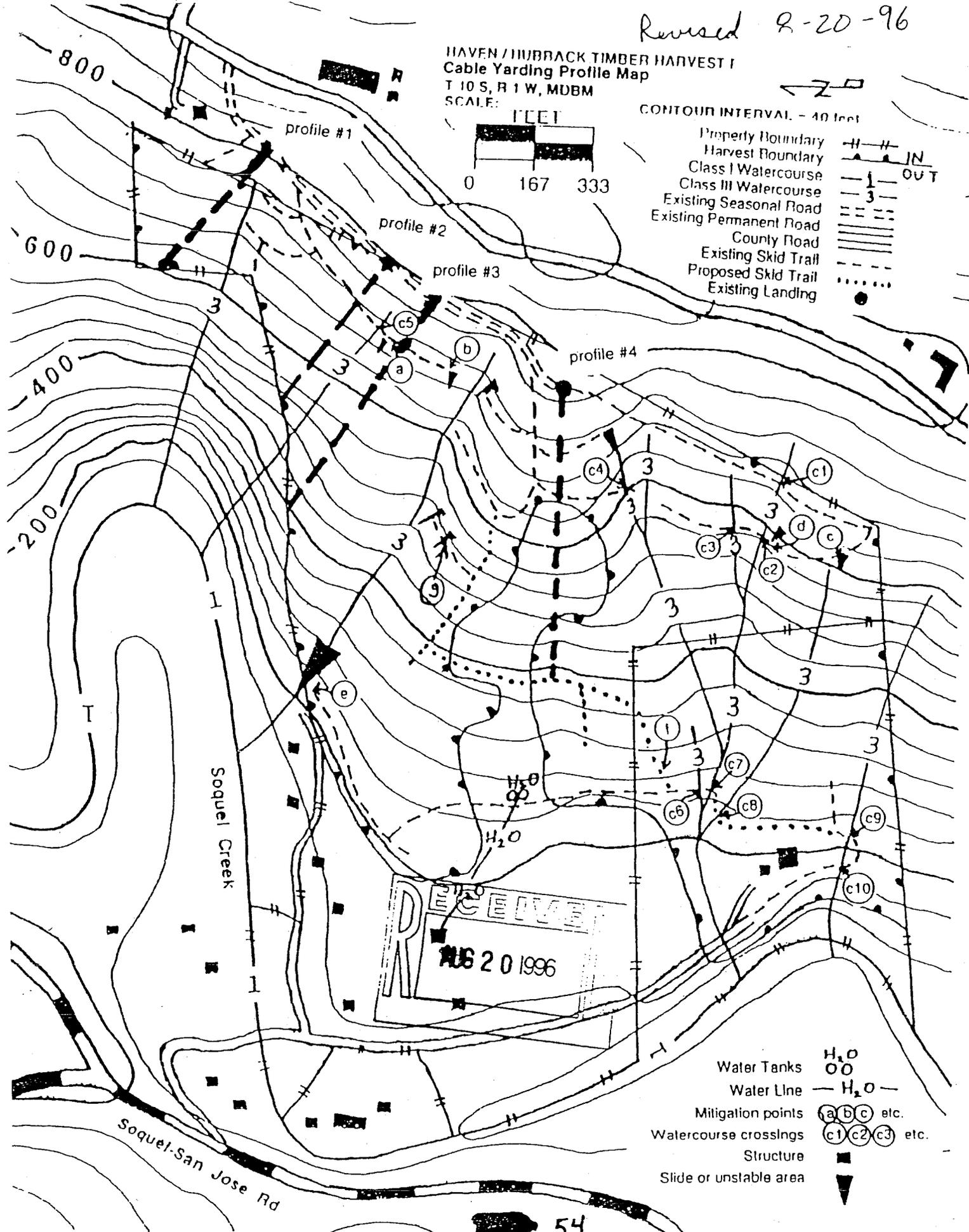
Revised 8-20-96

HAVEN/HUBBACK TIMBER HARVEST I
Cable Yarding Profile Map
T 10 S, R 1 W, MDBM
SCALE:



CONTOUR INTERVAL - 40 feet

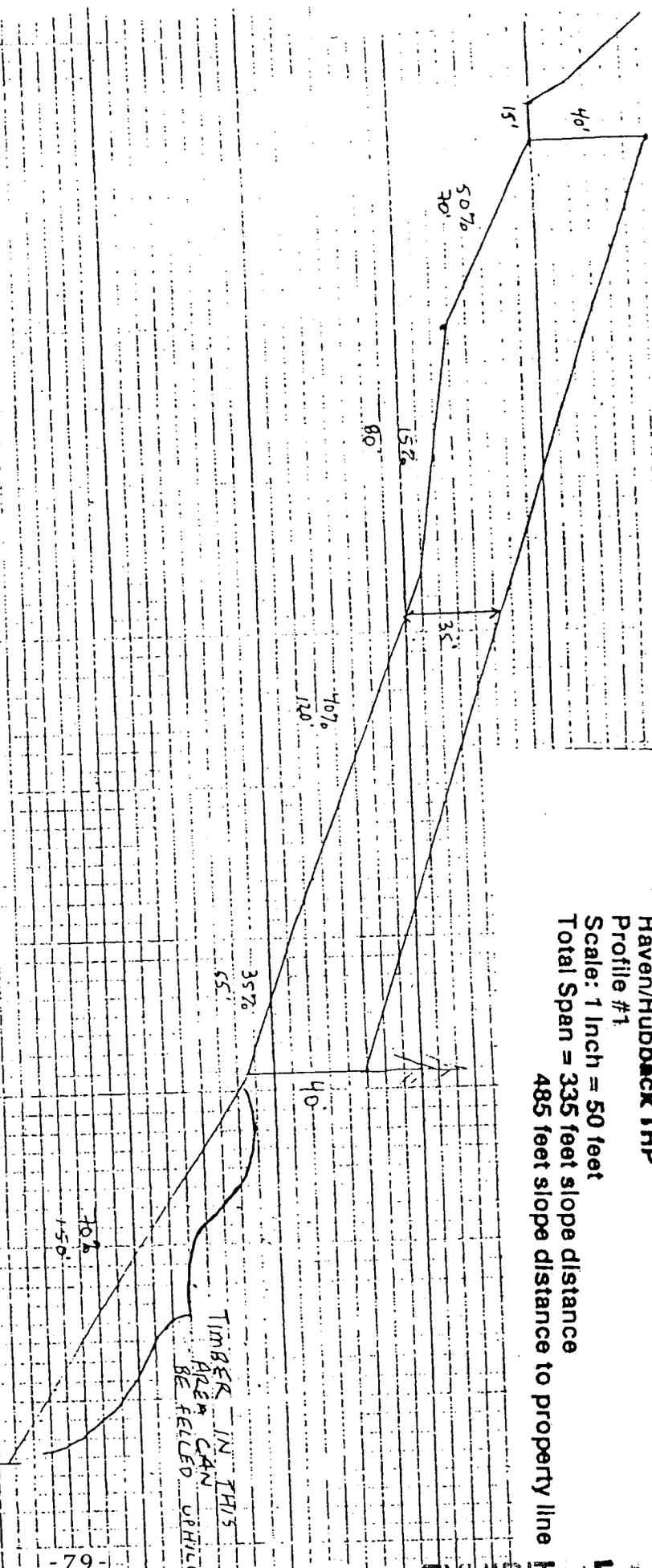
- Property Boundary
- Harvest Boundary
- Class I Watercourse
- Class III Watercourse
- Existing Seasonal Road
- Existing Permanent Road
- County Road
- Existing Skid Trail
- Proposed Skid Trail
- Existing Landing



RECEIVER
AUG 20 1996

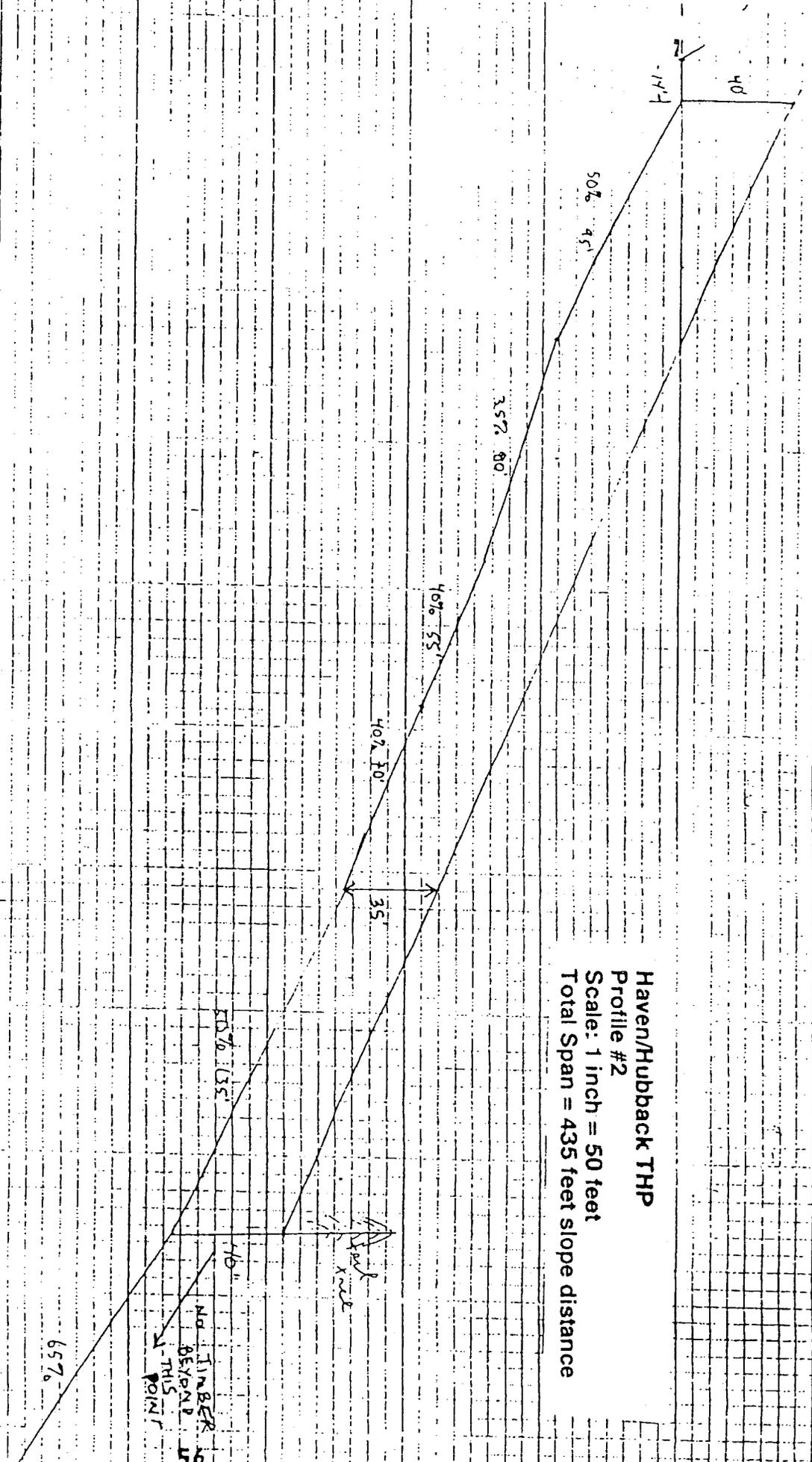
- Water Tanks
- Water Line
- Mitigation points
- Watercourse crossings
- Structure
- Slide or unstable area

Haven/Hubback THP
 Profile #1
 Scale: 1 Inch = 50 feet
 Total Span = 335 feet slope distance
 485 feet slope distance to property line



PLAN ADDENDUM
 4 JULY 1996

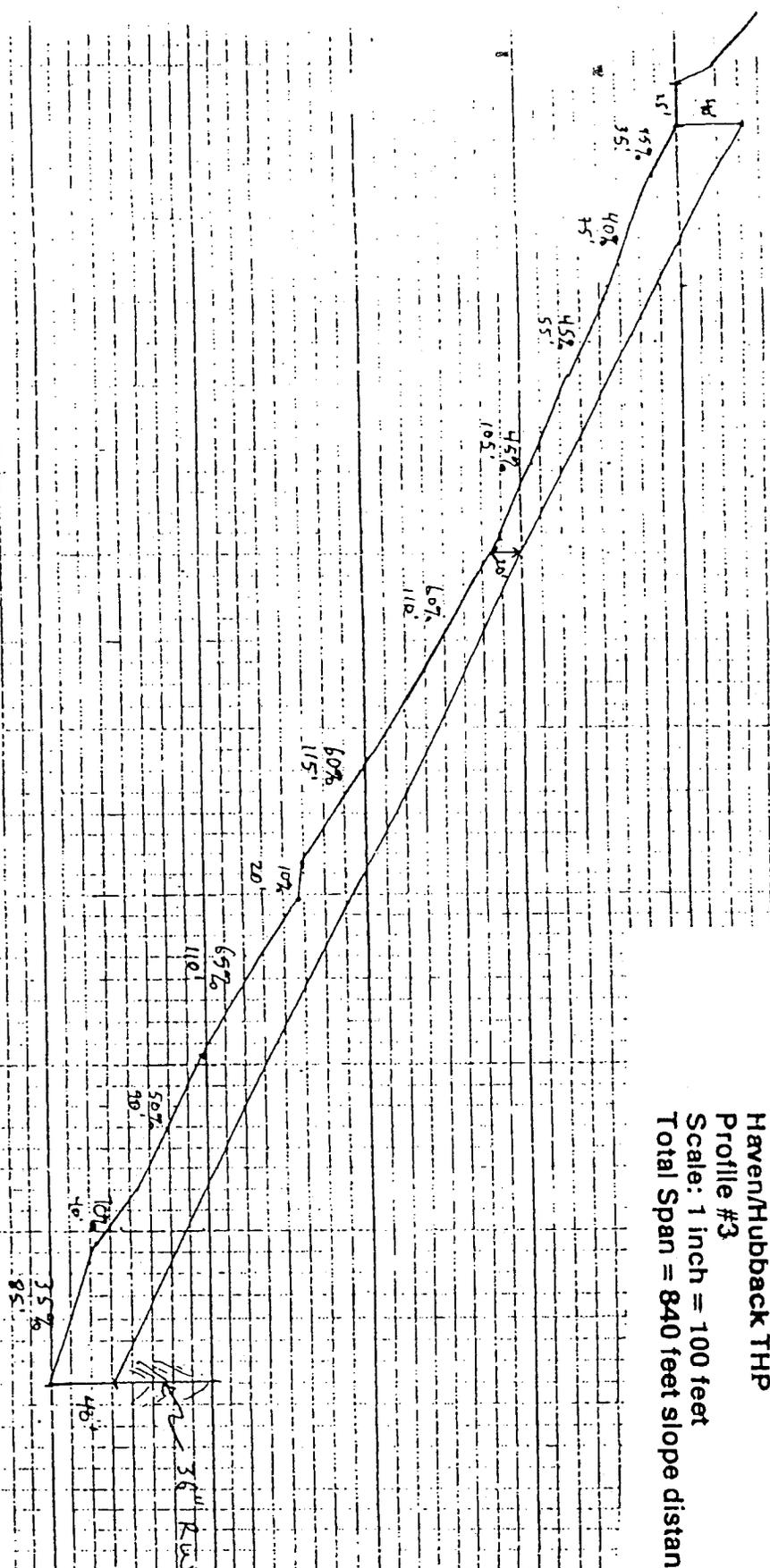
PLAN AL



Haven/Hubbuck THP
 Profile #2
 Scale: 1 inch = 50 feet
 Total Span = 435 feet slope distance

PLAN ADDENDUM
 4 JULY 1996

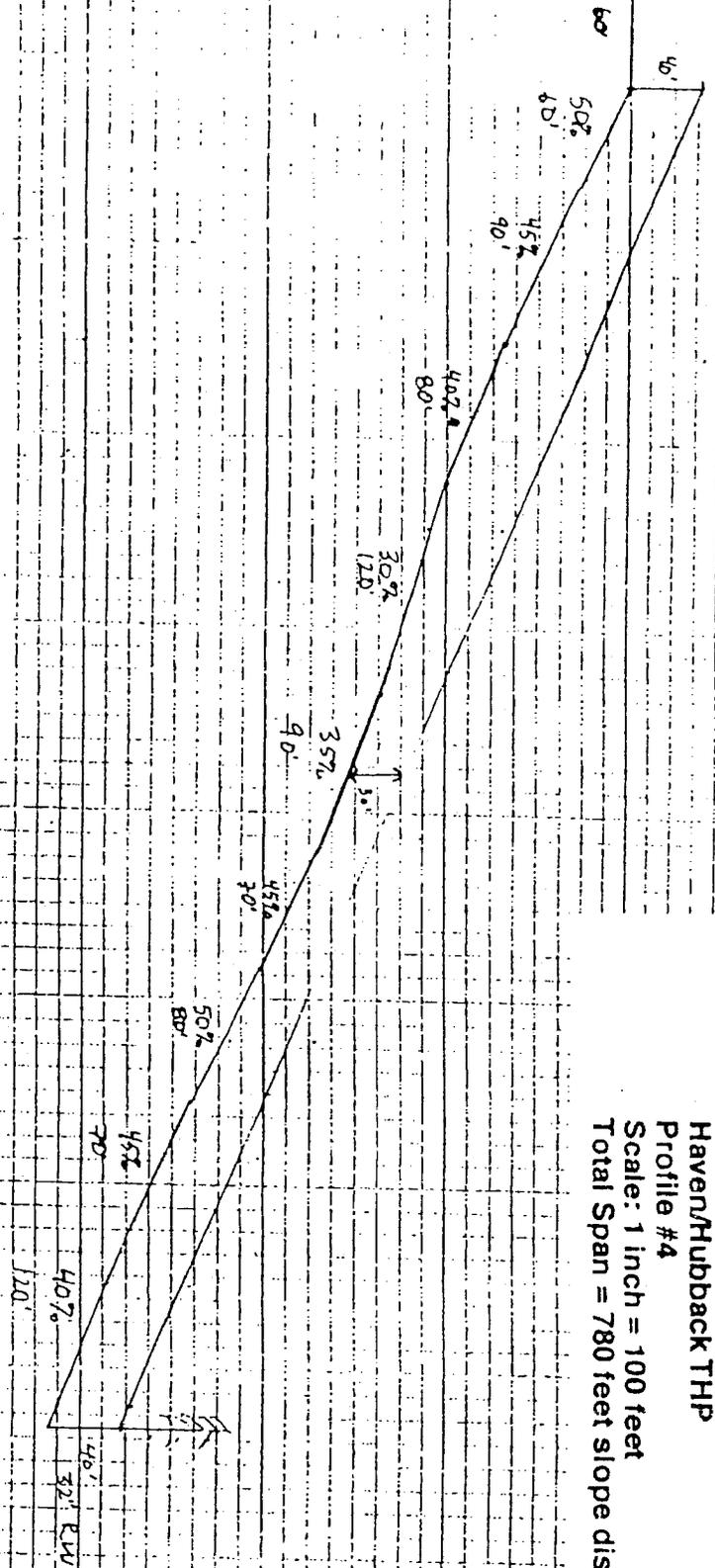
NO. TIMBER TO
 BE PAID IN
 THIS POINT



Haven/Hubback THP
 Profile #3
 Scale: 1 inch = 100 feet
 Total Span = 840 feet slope distance

PLAN ADDENDUM
 4 JULY 1996

Haven/Hubback THP
 Profile #4
 Scale: 1 inch = 100 feet
 Total Span = 780 feet slope distance



PLAN ADDENDUM
 4 JULY 1996

Webster & Associates
Professional Foresters

1901 Cleveland Ave. Suite 1
Santa Rosa, CA 95401
Phone: (707) 526-5820

132 Rancho Del Mar
Aptos, CA 95003
Phone: (408) 688-8787
FAX: (408) 688-3001

Received CDF
REGION 1

April 2, 1996

California Department of Forestry and Fire Protection
Attn: Resource Manager
135 Ridgeway Ave.
Santa Rosa, CA 95402-0670

APR 04 1996

RESOURCE MANAGEMENT

Re: THP Mailed to Santa Rosa Region Office on 4-1-96; Lands of Haven Investment Corporation
and Peter Hubback

Dear Resource Manager:

I would like to submit some additional information to the above referenced THP, to be included in the plan addendum. A small portion of the Hubback property, near the southwestern corner of the property, has recently been selectively harvested, with all of the timber from that small harvest milled on site and used for construction of an addition to Mr. Hubback's home. Harvesting occurred in a few redwood clumps between the southern boundary of the Hubback property and the class III watercourse to the south of Mr. Hubback's house. The area which was harvested is too small to delineate on the maps in the plan, but I would like to make clear our intention that no further harvesting will occur in any redwood clumps which have been recently harvested. At a visit to the site on April 2, 1996, the stumps from the recent harvest were observed, and are easily distinguished from older stumps in the area.

There are some logs from the previous harvesting still on the ground, and Mr. Hubback would like to retrieve these logs to be commercialized with logs from the proposed harvest. Our proposal is to review the previously harvested area during the pre-harvest inspection, and verify with the forest practice inspector, with flagging if deemed necessary, which clumps have been recently harvested and will not be re-entered. The logs remaining on the ground from the recent harvest, however, will be sent to mill with the logs from the proposed harvest.

If you have any questions regarding this proposal, please contact me at this office.

Thank you for your time.

Sincerely,

Roy Webster

Roy Webster, RPF #1765

PLAN ADDENDUM
4 JULY 1996

Webster, associates
Professional Foresters
1321 Paracha Drive
Aptos, Ca. 95003

Philip W. Hushett
646 Yorbalane
Cottonwood, AZ
86326

Mr Webster,

I received notice of intent to harvest approx 53 acres of land near my property at 3364 Allred lane, Saguely. I understand this is to be selective cuttings of and growth redwood on property owned by Haven Investment Corp/Peter Hubback.

My primary concern is the roads that will be used for the transportation of the logs out of the areas.

We have a bridge crossing Saguely Creek used by the nursery and several residents - including Peter Hubback - on that side of the river. This bridge has only limited capacity and I and family would have no way to get out if bridge goes down.

Also, is the river flow to be affected?

Please advise me of more details.

Thank you

Philip W. Hushett

PLAN ADDENDUM
4 JULY 1996



1901 Cleveland Ave. Suite 1
Santa Rosa, CA 95401
Phone: (707) 526-5820

132 Rancho Del Mar
Aptos, CA 95003
Phone: (408) 688-8787
FAX: (408) 688-3001

March 5, 1996

Mr. Phillip W. Haskett
640 Yorba Lane
Cottonwood, AZ 86326

Dear Mr. Haskett

I received your letter expressing your concerns over the selective harvest which we are proposing on the properties of the Haven Investment Corporation and Peter Hubback. Thank you for taking the time to write your concerns down and forward them to me. I hope you will agree, after reading the remainder of this letter, that those concerns have been addressed.

In response to your first concern, regarding the bridge over Soquel Creek, at the request of Rocky and Ross Paratore, owners of the nursery, and Peter Hubback, we will not be using the bridge at all for heavy equipment or logs. The logs will be transported up the hill above the nursery by tractor or with a cable yarding system, and hauled out to Glen Haven Road across the Kennolyn Camp Property. The only vehicles using the bridge would be small personal vehicles for timber fallers and other logging crew personnel, and a small service vehicle in the event that there is equipment problems anywhere accessible from the nursery.

As for your concern over how the harvest will affect flow levels on the river (I assume you are asking about Soquel Creek), this selective harvest will have very little noticeable affect on flow levels. The California Department of Forestry has conducted studies on the Jackson State Demonstration Forest near Fort Bragg in Mendocino County, CA, analyzing the affect of selective harvesting on water yields. They found that there is a very slight short term increase in water yield from forestland that has undergone a selective harvest at the levels we are proposing, but this increase is stabilized within two to three years as redwood sprouts and other vegetation re-establishes and begins to use more surface and sub-surface water.

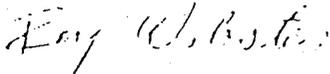
It is also important to note that the 53 acres we are proposing to harvest amounts to less than 1% of the total acreage within the watershed of the lower portion of Soquel Creek (this "watershed" includes all the acreage which drains into the lower Soquel Creek, from

the Junction of the East and West Branches of Soquel Creek, near Olive Springs Road, down to the Pacific Ocean). Water levels in Soquel Creek in the area near your property are also affected by all the acreage within the East Branch of Soquel Creek (~8600 acres) and West Branch of Soquel Creek (~7100 acres) Watersheds, which amounts to approximately 15,700 additional acres. What this means is that a "slight" increase in water yield on 53 acres within that large a watershed is nearly impossible to detect in terms of any affect on the main watercourse, Soquel Creek.

I hope this information helps to clarify how this proposed harvest will affect the areas you are most concerned with. If you have any other questions, please feel free to write or call our Aptos office, and I will do my best to provide you with any other information you might want.

Thank you for your time.

Sincerely,



Roy Webster, RPF # 1765

PLAN ADDENDUM
4 JULY 1996

Webster and Associates PROFESSIONAL FORESTERS

132 Rancho Del Mar · Aptos, California 95003 · Phone 408-688-8787 · Fax 408-688-3001



Roy Webster
RPF #1765

John Andersen
RPF #2503

Matt Bissell
Associate Forester

David Pope
Associate Forester

John Finlay
Associate Forester

Karen Palmer
Office Manager

July 4, 1996

Dear adjacent landowner:

You received a Notice of Intent to Harvest Timber / Domestic Water Inquiry from this office in late February of 1996, regarding a proposal to selectively harvest timber on the lands of Haven Investment Corporation and Peter Hubback. The harvest area is located upslope of the Garden Haven Nursery off of Allred Lane on the east side of Soquel Creek.

I am sending you this letter to notify you that the original submittal was withdrawn and a new plan is being submitted. Changes to the new plan are minor in scope. No changes to the harvest levels, methods or acreage are proposed. We are still interested if you have information regarding domestic water supplies near the proposed harvest within Soquel Creek. If you have any such information, or any questions please contact this office.

For your information, the important dates for you to know are approximately:

Plan will be submitted: **July 7, 1996**

Expected close of public comment period: **August 21, 1996**

Director's Date for determination of approval or disapproval:
September 4, 1996

Thank you for your time

Sincerely,

David Pope
for
Roy Webster, RPF #1765

State of California
Department of Forestry
RM-71(3/86)

MAY 2 1998

(ADMINISTRATIVE USE ONLY - Area _____
(THP/EMERGENCY No. _____
(Date Received _____
(_____

TIMBER OPERATIONS WORK COMPLETION AND/OR STOCKING REPORT

(As per Div. 4, Chap. 8, Section 4585 and 4587 PRC, and Sections 1070-1075 Title 14, CAC)

CERTIFICATION BY TIMBER OWNER OR AGENT

I certify that the declarations herein are true and correct to the best of my knowledge and belief. I am notifying the Department of Forestry of the status of compliance with the completion and stocking requirements of the Forest Practice

Act and forest practice rules for Timber Harvesting Plan/Emergency Notice number: 1-96-312 SCR

Check the appropriate boxes:

COMPLETION REPORT

- Final completion report. All work on the plan was completed on (date): April 15, 1998 and no further harvesting shall be conducted.
- Annual completion report. On (date) _____ all work on a part of the plan as shown on an attached map was completed. Additional harvesting is anticipated on the remaining area of the plan.

STOCKING REPORT -The area declared as complete in this report or previously approved completion report meets all the stocking requirements of the Forest Practice Act and rules. The stocking status after completion of timber operations was determined by:

- One of the sampling procedures adopted by the Board of Forestry.
- Physical examination of the area by the timber owner or his agent after completion of timber operations and a waiver of sampling is requested.

This is a stocking report for the: entire operating area; part of the operating area.

A map indicating the area completed and/or stocked must be submitted with this report. Additional information can be found on the back of this form.

Roy Webster _____ 5-26-98 _____ Roy Webster
 Signature Date Print Name

512 Capitola Suite 201 _____ Capitola, CA 95010
 Address City, State, Zip Code

(408) 462-6237 _____ #1765
 Telephone Number (Area Code) Registered Professional Forester Lic. No., if appropriate

DIRECTOR'S CERTIFICATION

- The Director has determined that all of the requirements of the Forest Practice Act and the forest practice rules have been completed except stocking for the area described in this report.
- The area described by this report has been found to meet all of the requirements of the Forest Practice Act and forest practice rules including stocking.
- The area described by this report has been found NOT to be in compliance with the Forest Practice Act and forest practice rules. See attached documents for further information.
- The Director has determined that the stocking requirements of the Forest Practice Act and forest practice rules HAVE NOT been met. See attached documents for further information.

DIRECTOR, DEPARTMENT OF FORESTRY

By Nancy Drinkard _____ NANCY DRINKARD
 Signature Print Name

Forester II _____ 1979 _____ 9/24/98
 Title RPF# Date

_____ CDF STOCK NO. 7540-130-0618

EXHIBIT E

EXHIBIT E

HUBBACK PROPERTY - APN 103-241-07

STOCKING ANALYSIS

Background: Government Code Section 51113(c)(3)(A) requires that parcels meet the timber stocking standards set forth in Section 4561 of the Public Resources Code and Section 913.8(a)(1) of the California Code of Regulations (CCR). The timber stocking standards pertaining to CCR Section 913.8(a) are met if the timberland contains an average, minimum post-harvest basal area of at least 75 square feet/acre for Site III land. The requirements of PRC 4561 are less stringent.

Analysis: Field review of the property suggests that the average dominant redwood trees on the property exhibit Site III characteristics. Site III characteristics are defined under CCR 1060 as lands capable of growing redwood trees of 135-154 feet in 100 years. The parcel has been selectively harvested in the past and has demonstrated the ability to sustain periodic harvests while maintaining the minimum basal area requirements cited above. Current stocking is 230 square feet of basal area per acre, well above the required standards.

WOOD FIBER ANALYSIS

Background: Government Code Section 51113(c)(4) requires that parcels zoned timber production must meet the definition of "Timberland" which is defined in Government Code Section 51104(f) as: "Privately owned land, or land acquired for state purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre".

Analysis: Field review of the property suggests that the parcel is capable of producing wood fiber in excess of 15 cubic feet/acre/year. Based on the timber cruise and growth borings, the timberland is producing 920 board feet per acre per year. There are 12 board feet in a cubic foot of wood. Therefore, a property must be capable of producing 180 board feet per acre per year. This parcel produces 5 times the minimum requirements set by law.

COMPATIBLE USE ANALYSIS

The primary land use on the parcel over the last several decades has been commercial timber production with one single family residence, a caretaker's residence, workshop, paddock, corral and grazing area for horses, and associated agricultural uses. These uses were able to co-exist with the timber harvest conducted in 1997. Timber Management is compatible with the current uses of the property.

