

CALENDAR ITEM

C34

MINUTE ITEM
This Calendar Item No. C34
was approved as Minute Item
No. 34 by the State Lands
Commission by a vote of 3
to 0 at its 7/6/95
meeting.

07/06/95

PRC 7835

W 25174

J. Ludlow

A 1

S 2

APPROVAL OF A GENERAL LEASE -
RIGHT-OF-WAY USE

APPLICANT:

Viola McBride
P.O. Box 1135
Ferndale, California 95536

AREA, TYPE LAND AND LOCATION:

A 0.149-acre parcel of submerged land located in the bed of
the Eel River at Eel Rock, Humboldt County.

LAND USE:

Placement of one seasonal flat-car bridge and bridge
approach.

EXHIBITS:

- A. Site Map
- B. Timber Harvest Plan

AB 884:

02/01/95

OTHER PERTINENT INFORMATION:

The lease term was established to expire simultaneously on
December 23, 1999, with the U.S. Army Corps of Engineers
Permit.

RECOMMENDED ACTION:

IT IS RECOMMENDED THAT THE COMMISSION:

CEQA FINDING:

FIND THAT AN ENVIRONMENTAL ANALYSIS DOCUMENT (CALIFORNIA
DEPARTMENT OF FORESTRY TIMBER HARVEST PLAN # 1-93-405 HUM)
WAS CERTIFIED FOR THIS PROJECT BY THE CALIFORNIA DEPARTMENT
OF FORESTRY UNDER ITS CERTIFIED PROGRAM (14 CAL. CODE REGS.

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CALENDAR ITEM NO. C34 (CONT'D)

15251 (a)) AND THAT THE COMMISSION HAS CONSIDERED THE INFORMATION THEREIN.

SIGNIFICANT LANDS

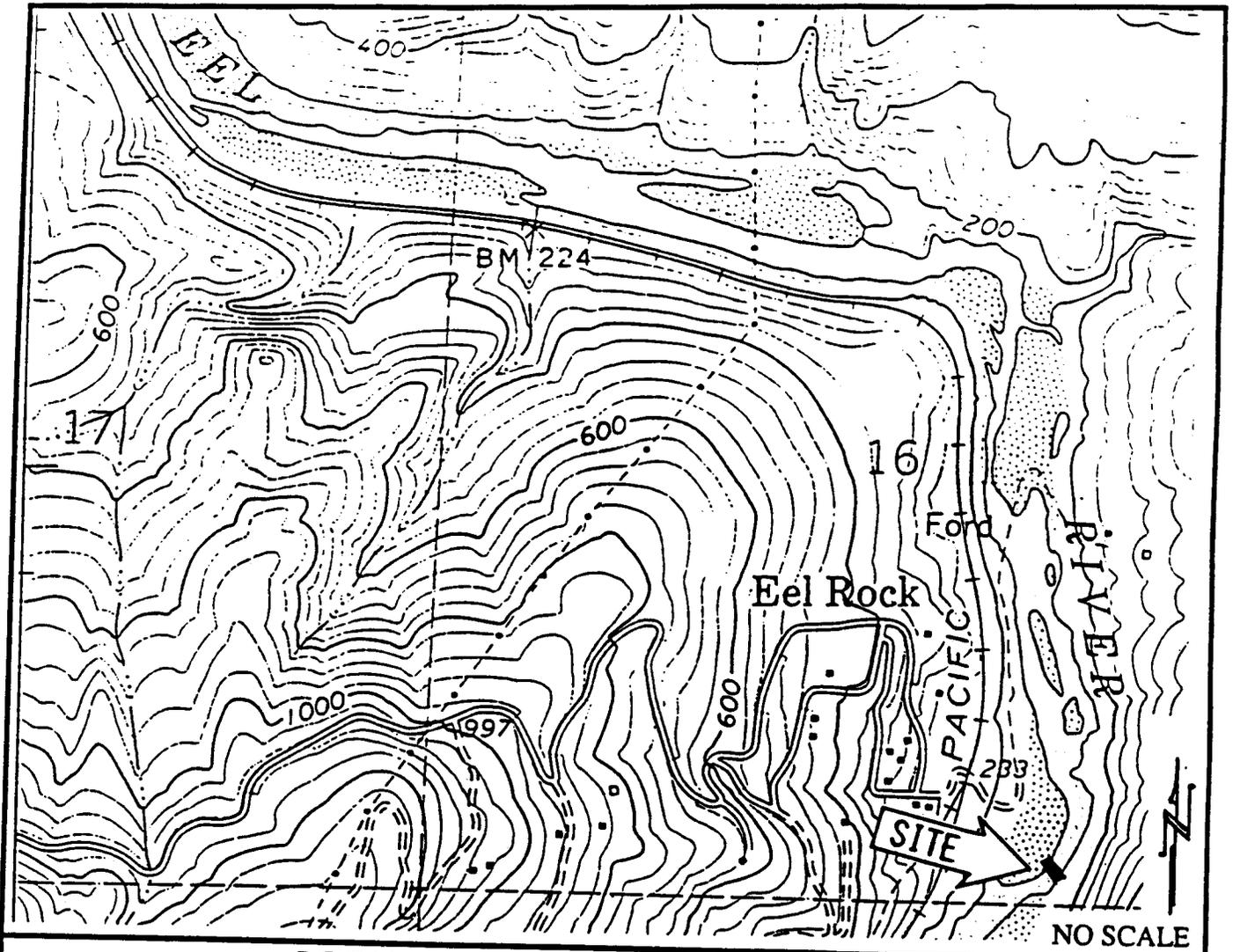
INVENTORY FINDING:

FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.

AUTHORIZATION:

AUTHORIZE THE ISSUANCE OF A FOUR-YEAR, SIX-MONTH AND 23-DAY GENERAL LEASE - RIGHT-OF-WAY USE, TO VIOLA MCBRIDE, BEGINNING JUNE 1, 1995; IN CONSIDERATION OF \$100 PER ANNUM; PROVISION OF PUBLIC LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF \$1,000,000; FOR THE PLACEMENT OF A SEASONAL FLATCAR BRIDGE AND BRIDGE APPROACH; ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

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LOCATION MAP

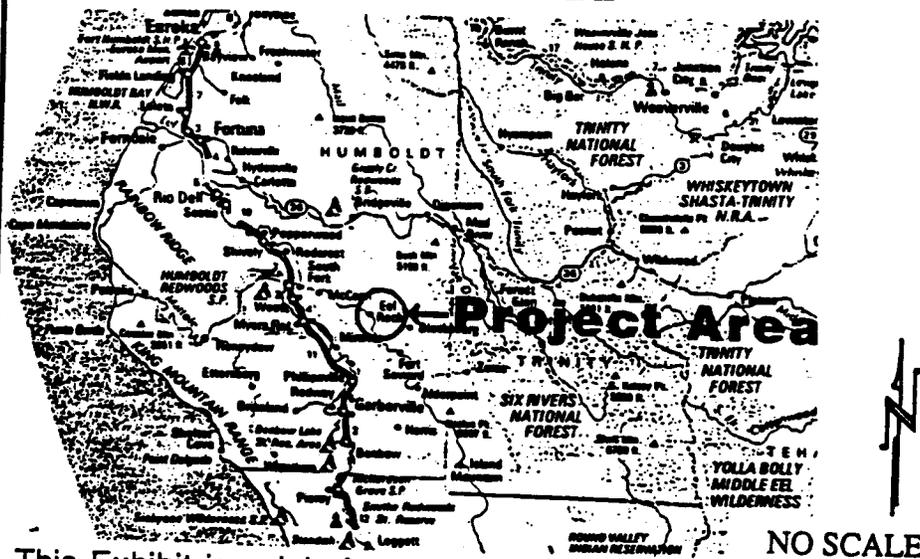


EXHIBIT "A"

W 25174

Summer Crossing R/W Lease

Eel River

HUMBOLDT COUNTY



This Exhibit is solely for purposes of generally defining the lease premises, and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

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CG 6795

DEPARTMENT OF FORESTRY AND FIRE PROTECTION

COAST REGION
135 RIDGWAY AVENUE
P.O. BOX 670
SANTA ROSA, CA 95402-0670
(707) 576-2275



IM

Date: NOVEMBER 2, 1993
THP: 1-93-405 HUM

CARL A. ANDERSON
P O BOX 1136
ARCATA CA 95521

NOTICE OF CONFORMANCE

Enclosed is a true copy of your Timber Harvesting Plan (THP) identified by the number shown above. The Director of Forestry and Fire Protection finds that the plan conforms with the Rules and Regulations of the Board of Forestry pursuant to the provisions of the Z'Berg-Nejedly Forest Practice Act of 1973. Conformance is indicated by the facsimile signature of his duly constituted representative being shown on the attached copy of the plan.

You may begin the timber operations proposed in the plan according to the conditions specified therein, and subject to the Forest Practice Act, Forest Practice Rules of the Forest District in which the operations will take place, related Board of Forestry regulations and other applicable laws, regulations and ordinances.

The Forest Practice Act requires the filing of the two reports listed below for each timber harvesting operation undertaken:

1. Timber Operations Work Completion Report: Within one month after completion of work described in a Timber Harvesting Plan, excluding work for stocking, a report shall be filed by the timber owner or his agent with Director that all work, except stocking, has been completed.
2. Report of Stocking:
 - a) Within six months after completion of timber operations covered by this THP, a Report of Stocking shall be filed by the timber owner or his agent with the Director.
 - b) Within five years after completion of timber operations covered by this THP, a Report of Stocking shall be filed by the timber owner or his agent with the Director.
 - c) Stocking obligations do not apply because:
 - A Timberland Conversion Permit is in effect.
 - The THP is for road right-of-way construction only.
 - The THP is for a one-time, minor conversion.

In future correspondence, please refer to the THP number in the upper right corner of the attached plan.

Sincerely,

LLOYD I. KEEFER
DEPUTY DIRECTOR, OPERATIONS

[Handwritten signature]
by Thomas P. Osipowich
Resource Manager, RPF #1767

Enclosures

cc: . V. McBride
Unit
File

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MINUTE PAGE	EXHIBIT 1009

TIMBER HARVESTING PLAN

(FOR ADMINISTRATIVE USE ONLY
(THP No. 1-93-405 HUM
(Date Recd SEP 16 1993
(Date Filed SEP 7 1993
(Date Apprvd NOV 2 1993

This Timber Harvesting Plan (THP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry rules. See separate instructions for information on completing this form. NOTE: The form must be printed legibly in ink or typewritten.

Shel. Seed Strip 247 ac.
Shel. Rem. Strip 73 ac.

1. TIMBER OWNER(S): Name Viola R. McBride
Address P.O. Box 1135

City Ferndale State CA Zip 95536 Phone (707)725-3088

2. TIMBERLAND OWNER(S): Name Viola R. McBride
Address P.O. Box 1135

City Ferndale State CA Zip 95536 Phone (707)725-3088

3. TIMBER OPERATOR(S): Name To be amended later.
Address _____ License # _____

City _____ State _____ Zip _____ Phone _____

4. PLAN SUBMITTER(S): Name Viola R. McBride
If the plan submitter is different from 1,2, or 3 explain authority to submit plan:

5. Person to contact on-site who is responsible for the conduct of the operation:

Name Carl A. Anderson

Address P.O. Box 1136

City Arcata State CA Zip 95521 Phone (707)822-3628

6. RPF preparing the THP: Name Carl A. Anderson

Address P.O. Box 1136 Registration Number #2457

City Arcata State CA Zip 95521 Phone (707)822-3628

1-ek Basin Creek
-1 River

CDF STOCK NO. 7540-130-0063

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RESOURCE MANAGEMENT

7. Expected commencement date of timber operations: Upon Director's approval & signature of the Plan.

8. Expected completion date of timber operations: 36 months following Director's approval & signature of the Plan. 11/1/96

9. Forest products to be harvested: Conifer & hardwood sawlogs, poles, pilings, merchantable cull logs and misc. forest products.

10. The timber operation is to be within: (check the appropriate boxes)

- 1. Coast Forest District
- 2. Northern Forest District
- 3. Southern Forest District

- 4. Southern Subdistrict of the Coast Forest District
- 5. High-Use Subdistrict of the Southern Forest District

11. Location of the timber operation by legal description:

Base and Meridian: Mount Diablo, Humboldt, San Bernardino

Section	Township	Range	Approximate Acreage	County	(Optional, Assessors Parcel No.)
<u>22</u>	<u>2-S</u>	<u>4-E</u>	<u>11</u>	<u>Humboldt</u>	
<u>23</u>	<u>2-S</u>	<u>4-E</u>	<u>37</u>	<u>"</u>	
<u>26</u>	<u>2-S</u>	<u>4-E</u>	<u>115</u>	<u>"</u>	
<u>27</u>	<u>2-S</u>	<u>4-E</u>	<u>157</u>	<u>"</u>	
TOTAL ACREAGE			<u>320</u>		

NOTE: Additional sheets may be necessary.

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RESOURCE MANAGEMENT

12. Yes No Is a timberland conversion permit in effect? If yes, list permit number and date of expiration: _____

13. Yes No Is there a THP 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 number: _____

14. Yes No Is any part of the plan within a special treatment area, Tahoe Regional Planning Agency jurisdiction, or a county which has special rules?
If yes, identify the special area: See Addendum to Item #14

SILVICULTURE

15. Check the method or treatments which are to be applied, and provide any other information required by the rules in an addendum:

- 1 Clearcutting
- 2 Shelterwood, preparatory step
- 3 Shelterwood, seed step
- 4 Shelterwood, removal step
- 5 Seed tree, seed tree step
- 6 Seed tree, seed tree removal step

7 Selection - designate basal area stocking standards to be met: _____

8 Commercial thinning - designate basal area stocking standards to be met: _____

9 Sanitation salvage - when will stocking be met: _____

10 Special treatment areas

11 Rehabilitation of understocked areas

12 Alternative prescription

13 Transition method

NOTE: Where the level of stocking is based upon timberland site, timberland sites must be shown on the map.

See Silviculture Addendum, Item #15

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16.a. Yes No Are any exceptions to the standard silvicultural methods or treatments permitted in the rules proposed for this plan? If yes, explain and justify the exception in an addendum.

b. Yes No Will artificial regeneration be required to restock the logged area?

17. Yes No Are broadleaf or optional species proposed for management? See item 18.

18. Yes No Are broadleaf or optional species to be used to meet stocking standards?

If the answer to items 17 or 18 is yes, list the species and provide the information required by the rules:

HARVESTING PRACTICES AND EROSION CONTROL

19. Indicate type of yarding systems to be used this plan:

- 1 Tractor, skidder, forwarder 2 Balloon, helicopter 3 Cable, ground-lead
4 Cable, high-lead 5 Cable, skyline 6 Animal

7 Other: _____

20. Yes No Will tractor constructed layouts be used?

21. Yes No Will tractors be used for directional tree pulling?

Check items 22 through 25 that apply to the use of tractors.

22. Yes No Operations on unstable soils or slide areas?
23. Yes No Operations on slopes over 65%?
24. Yes No Operations on slopes over 50% with high or extreme EHR?
25. Yes No Operations within cable yarding areas?

If any of items 22 through 25 are answered yes, explain and justify as required by the rules:

See Addendum to Item #22 and Item #23.

26. Indicate erosion hazard ratings present on this THP:

Low, Moderate, High, Extreme

27. Describe soil stabilization measures to be implemented or any additional erosion control measures proposed in this THP where required by the rules:

See Addendum to Item #27.

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RESOURCE MANAGEMENT

28. Yes No Are any alternative practices or exceptions to the standard harvesting or practices permitted in the rules proposed for this plan? If yes, explain:

29. Yes No Are timber operations proposed for the winter period? If yes, provide a winter addendum or specify compliance with 14 CAC 914.7(c), 934.7(c) or 954.7(c). No plan is needed for cable, helicopter, or balloon yarding.

ROADS AND LANDINGS

Recei
REQ

SEP 1

RESOURCE IDENT

30. Yes No Will any roads or landings be constructed or reconstructed?
If yes, check items 31 through 37 that apply:

31. Yes No Will new roads be wider than single lane with turnouts?

32. Yes No Will any landings exceed the maximum size specified in the rules?

33. Yes No Are logging roads or landings proposed in areas of unstable soils or known slides?

34. Yes No Will new roads exceed a grade of 15% or pitches of 20% for distance greater than:

35. Yes No Are roads to be constructed, other than crossings, within the watercourse and portion zone of a class I or II watercourse?

36. Yes No Will roads or landings longer than 100 feet in length be located on slopes over 6% on slopes over 50% which are within 100 feet of the boundary of a watercourse or lake prototype?

37. Yes No Are exemptions proposed for flagging or otherwise identifying the location of roads to be constructed?

38. If any of items 31 through 37 are answered yes, explain, justify, and give site-specific measures to avoid adverse impacts or, if there is any additional or special information concerning the construction and maintenance of roads or landings, if required by the rules. Provide necessary information in an addendum.

See Roads and Landings Addendum, Item

WATERCOURSE AND LAKES

39. Yes No Are there any watercourses or lakes which contain class I through IV waters on adjacent to the plan area? If yes, complete items 40 through 50.

40. Yes No Are any in-lieu practices and/or alternative practices proposed for watercourse lake protection? If yes, explain and justify:

Are any exceptions proposed for the following watercourse and lake protection zone practices? Check items 41 through 48 that apply.

41. Yes No Exclusion of the use of watercourses, marshes, wet meadows, and other wet areas, for landings, roads, or tractor roads?

42. Yes No Retention of non-commercial vegetation bordering and covering meadows and wet areas?

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43. Yes No Directional felling of trees within the zone away from the watercourse or lake?
44. Yes No Increase or decrease of width(s) of the zone(s)?
45. Yes No Protection of watercourses which conduct class IV waters?
46. Yes No Exclusion of heavy equipment from the zone?
47. Yes No Retention of 50% of the overstory canopy in the zone?
48. Yes No Retention of 50% of the understory in the zone?

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RESOURCE MANAGEMENT

If any of items 41 through 48 are answered yes, explain and justify if required by the rules and provide necessary information in an addendum.

49. Yes No Are residual trees or harvest trees going to be marked within the watercourse or lake protection zone? If no, explain:

Harvest trees will be marked within the WLPZ as described in the Addendum to Item #50.

50. In an addendum describe the protective measures and zone widths for the watercourse and lake protection zones that are in the plan area. See Addendum to Item #50.

WILDLIFE

51. Yes No Are any known rare or endangered species or species of special concern, including key habitat, associated with the THP area? If yes, in an addendum identify the species and the provisions to be taken for protection of the species.
52. Yes No Are there any snags which must be felled for fire protection or other reasons? If yes, describe which snags are going to be felled:

See Addendum to Item #52.

53. Yes No Are any other provisions for wildlife protection required by the rules? If yes, describe provisions:

For a complete discussion of Wildlife, see the Other Information Addendum, Item #61.

Biological Resources section.

CULTURAL RESOURCES

- 54.a. Yes No Has an archaeological survey been made of the areas to be harvested?
- b. Yes No Have the California Archaeological Inventory records been checked for any recorded archaeological or historical sites located in the area to be harvested?
55. Yes No Are there any archaeological or historical sites located in the area to be harvested? If yes, describe in an addendum how the sites are to be protected.

See Confidential Archeological and Historical Resources

Survey and Impact Assessment.
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HAZARD REDUCTION

56. What type of slash treatment will be used in the fire protection zone?

- 1[] Pile and burn, 2[] Lopping, 3[] Other: _____
- 4[X] Not applicable no fire protection zone present

57. [] Yes [] No If the clearcutting method is used, will broadcast burning be used for site preparation?

Not Applicable

58. If piling and burning is to be used for hazard reduction, who will be responsible for compliance?

- 1[] Timber owner, 2[X] Timber operator, 3[] Timberland owner

PUBLIC NOTICE

59. [] Yes [X] No Are there any ownerships within 300 feet of the plan boundary which are owned by persons other than the persons executing this plan? If yes, a list of the names and addresses of the adjacent property owners and a Notice of Intent to Harvest Timber must be included with the plan.

PESTS

60. [] Yes [X] No Are there any adverse insect, disease, or pest problems of significance in the plan area? If yes, describe the mitigation measures, if any, to improve the health and productivity of the stand in an addendum.

OTHER INFORMATION

61. Are there any other existing or planned land use activities including but not limited to other THPs in the area of the proposed THP which may combine with the effects of your timber harvesting operation to cause significant adverse cumulative environmental effects? [] Yes, [X] No If yes, please describe the other land use(s) and the likely effect as well as any mitigation which would reduce the negative effect in an addendum.

ATTACHMENTS

62. Check if the attachments listed are included with the plan:
- 1[X] Notice of Stream Bed Alteration to Department of Fish and Game (A copy of this notice is attached to the instructions for your use.)
 - 2[X] Estimated Surface Soil Erosion Hazard Calculations
 - 3[X] Notice of Intent to Harvest Timber and a list of names and addresses of adjacent property owners
 - 4[X] Maps
 - 5[X] Addendum for silviculture information
 - 6[] Written notice of plan to the timber operator, timberland owner, or timber owner that did not sign the THP.

REGISTERED PROFESSIONAL FORESTER

63. I have the following authority, responsibilities, and limitation for preparation or administration of the THP and timber operation:

Preparation of the THP and any future Amendments, if necessary. Also consultation with the plan submitter in the operation of the THP.

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64. I have notified the timber owner and the timberland owner, in writing, of their responsibilities for:
1. Yes [] No The stocking requirements of the rules
 2. Yes [] No The maintenance of erosion control structures requirements of the rules
 3. Yes [] No The marking requirements contained in the rules

65. Yes [] No I will provide the timber operator with a copy of the approved THP.

66. After considering the rules of the Board of Forestry and the mitigation measures I have proposed I have determined that the timber operation:

[] will have a significant adverse impact on the environment

will not have a significant adverse impact on the environment.

If the operation will have a significant adverse impact on the environment, in an addendum explain why any alternatives or additional mitigation measures that would reduce the impact are not feasible.

67. Registered Professional Forester: I certify that I, or my designee, personally inspected the plan area, and the plan complies with the Forest Practice Act and the Forest practice rules.

Signature: Carl Anderson Date 9/14/93

68. **CERTIFICATION**

The above conforms to my/our plan and, upon filing, I/we agree to conduct harvesting in accordance therewith. Consent is hereby given to the Director of Forestry, his agents and employees, to enter the premises to inspect timber operations for compliance with the Forest Practice Act and forest practice rules.

Timber Owner: Viola R. McBride

Signature: Viola R. McBride Date Sept 9, 1993

Printed Name: Viola R. McBride

Timberland Owner: Viola R. McBride

Signature: Viola R. McBride Date Sept 9, 1993

Printed Name: Viola R. McBride

Timber Operator: _____

Signature: _____ Date _____

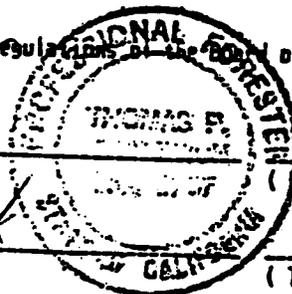
Printed Name: _____

DIRECTOR OF FORESTRY

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

By: Thomas P. Disipovich (Signature) Date: 11/2/93

Thomas P. Disipovich (Printed Name) (Title) **RESOURCE MANAGER**



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N THE OF INTENT TO HARVEST T. TR

1-93-405 HUM

A Timber Harvesting Plan or an amendment to an existing plan that may be of interest to you has been submitted to the California Department of Forestry and 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. 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 note following:

estimated

The earliest date the Department may approve the plan or amendment is: 9/30/93. This is 15 days from the date of receipt of the plan by the Department. The date of receipt for this proposal was: _____. The actual review required will determine the length of the review period beyond the noted minimum. Please check with the Department to determine the date of the decision.

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

California Department of Forestry
135 Ridgeway Avenue
P. O. Box 670
Santa Rosa, California 95402
(707) 576-2275

The public may review the plan or amendment at the above department office or purchase a copy of the plan or amendment for \$ 10.65. Information about the plan or amendment follows:

1. Timberland Owner where the timber operation is to occur:

Viola R. McBride

2. Registered Professional Forester who prepared the plan or amendment:

Carl A. Anderson

3. Name of individual who submitted the plan or amendment:

Viola R. McBride

4. Location of the proposed timber operation (county, legal description, & approximate distance of the timber operation from the nearest community or well-known landmark):

Humboldt County/in portions of Section 22, 23, 26 & 27, Township 2-South, Range, 4-East,

H.B.M./ approximately 2 miles Southeast of Eel Rock.

5. Name of and distance from the nearest perennial stream and major watercourse flowing through or downstream from the timber operation:

Mill Creek is ±1/2 mile to the North, Basin Creek is ±1/2 mile to the Southeast and the Eel River is ±1/2 mile to the South

6. Acres proposed to be harvested: 320

7. The regeneration methods and intermediate treatments to be used: Shelterwood-Seed Step and Shelterwood-Removal Step

A map is attached to help in locating where the proposed timber operation is to occur.

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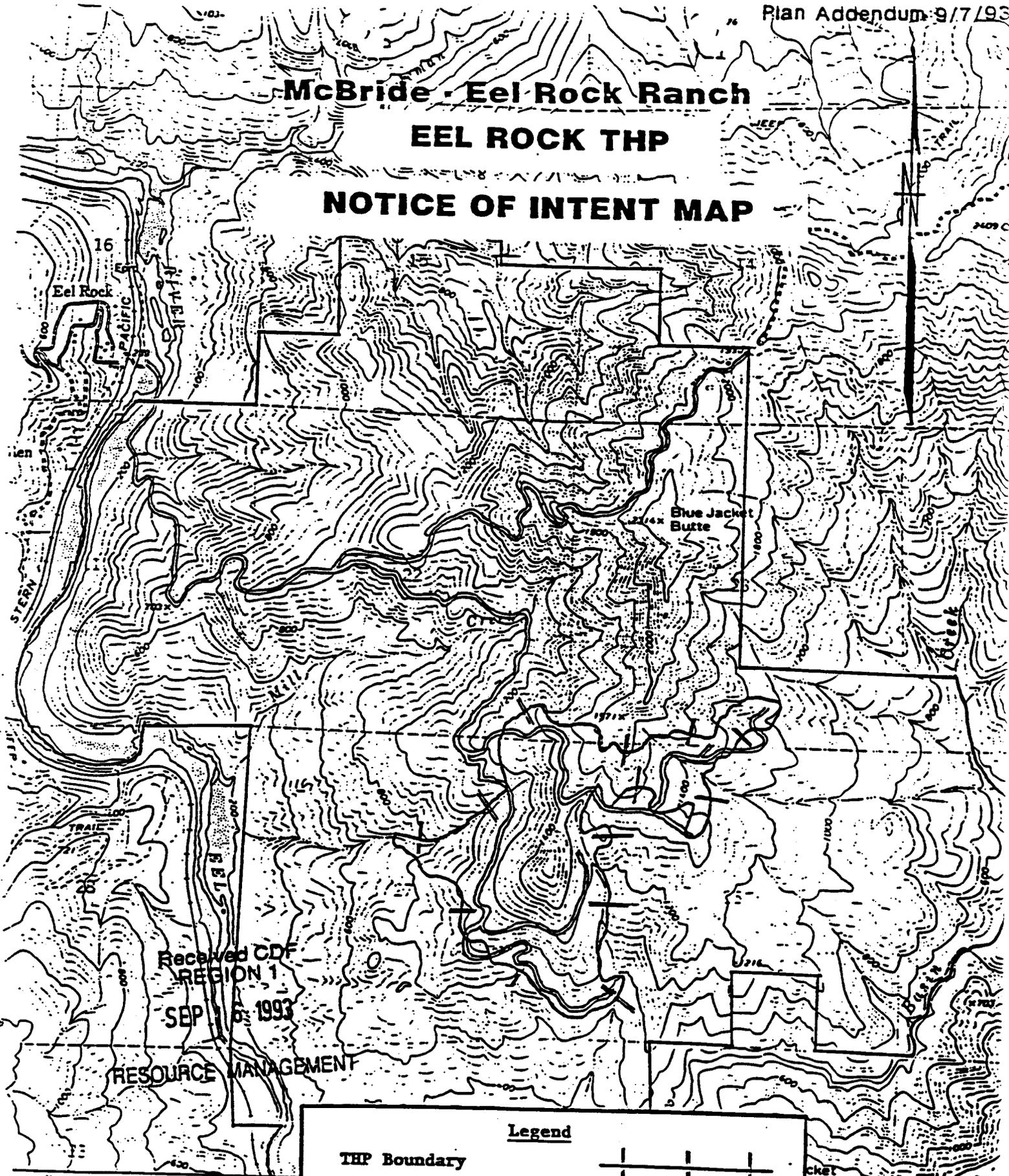
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McBride - Eel Rock Ranch

EEL ROCK THP

NOTICE OF INTENT MAP



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RESOURCE MANAGEMENT

Legend

THP Boundary

Existing Road

From USGS 7.5' "Blockburg"

HUMBOLDT COUNTY

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by the Geological Survey

Methods from aerial
photography 1969

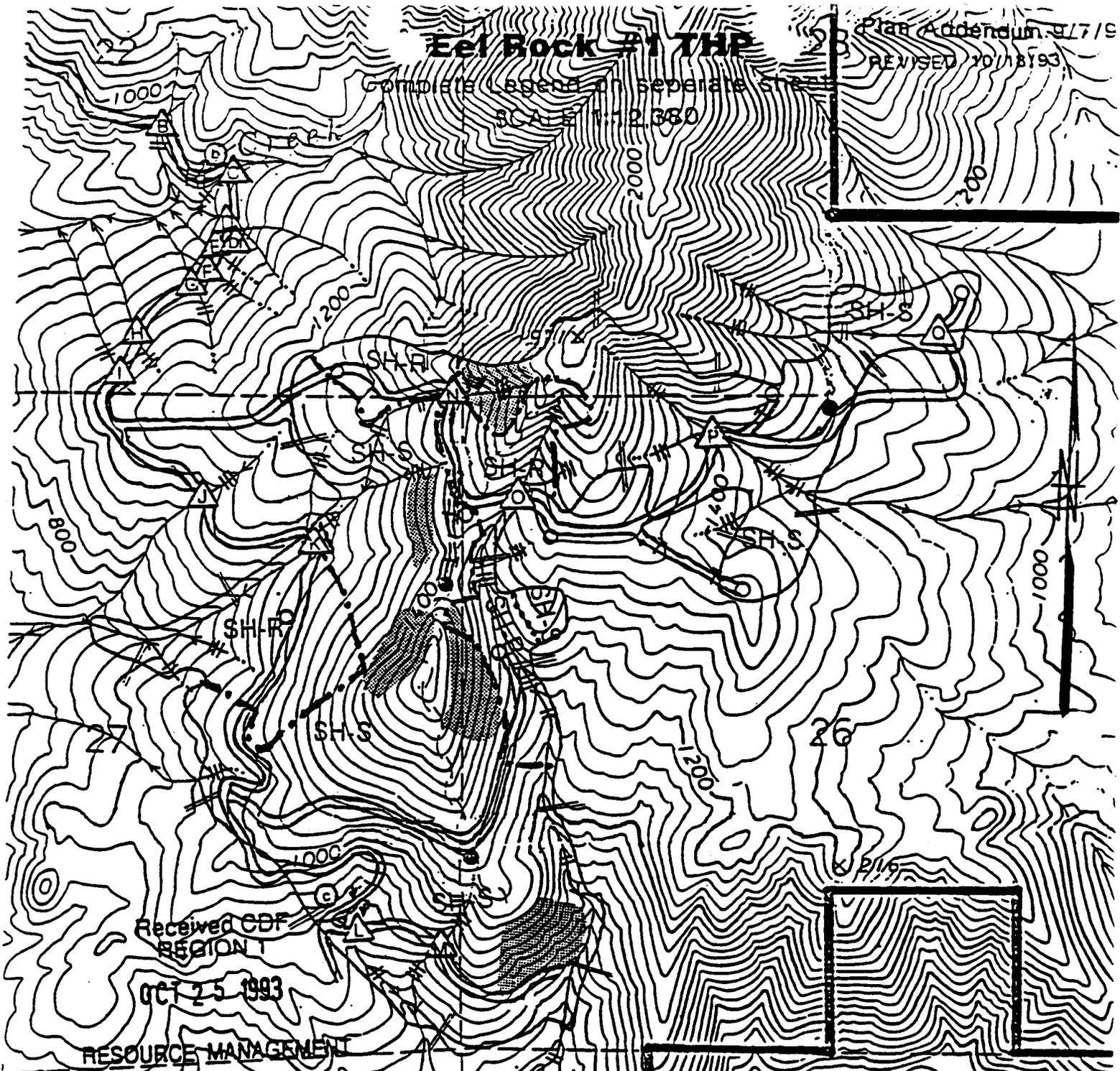
California coordinates

PORT SEWARD
SECTION 11 NW
T4E R24000
142
1018

Eel Rock #1 THP

Plan Addendum 9/7/93
REVISED 10/18/93

Complete Legend on separate sheet
SCALE 1:12,360



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REGION I
OCT 25 1993

RESOURCE MANAGEMENT

In Humboldt County in Portions of Sections 22, 23, 26 and 27,
Township 2-South, Range 4-East, H.B.M.

This map was reproduced (enlarged) from USGS 7.5' "Blocksburg"
 The entire plan area is a timber site class III.
 The entire plan area has a moderate erosion hazard rating.
 There are no public roads within the plan area.
 The entire plan area is tractor yarding.
 The Watercourse Crossing List is on a separate sheet.
 Watercourse Crossing "A" and THP Reference points "a" & "d" are on
 the Appurtenant Roads Map.

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MINUTE PART OF 1095 PLATS

From USGS 7.5 "Blocksburg" (Enlarged)

SCALE

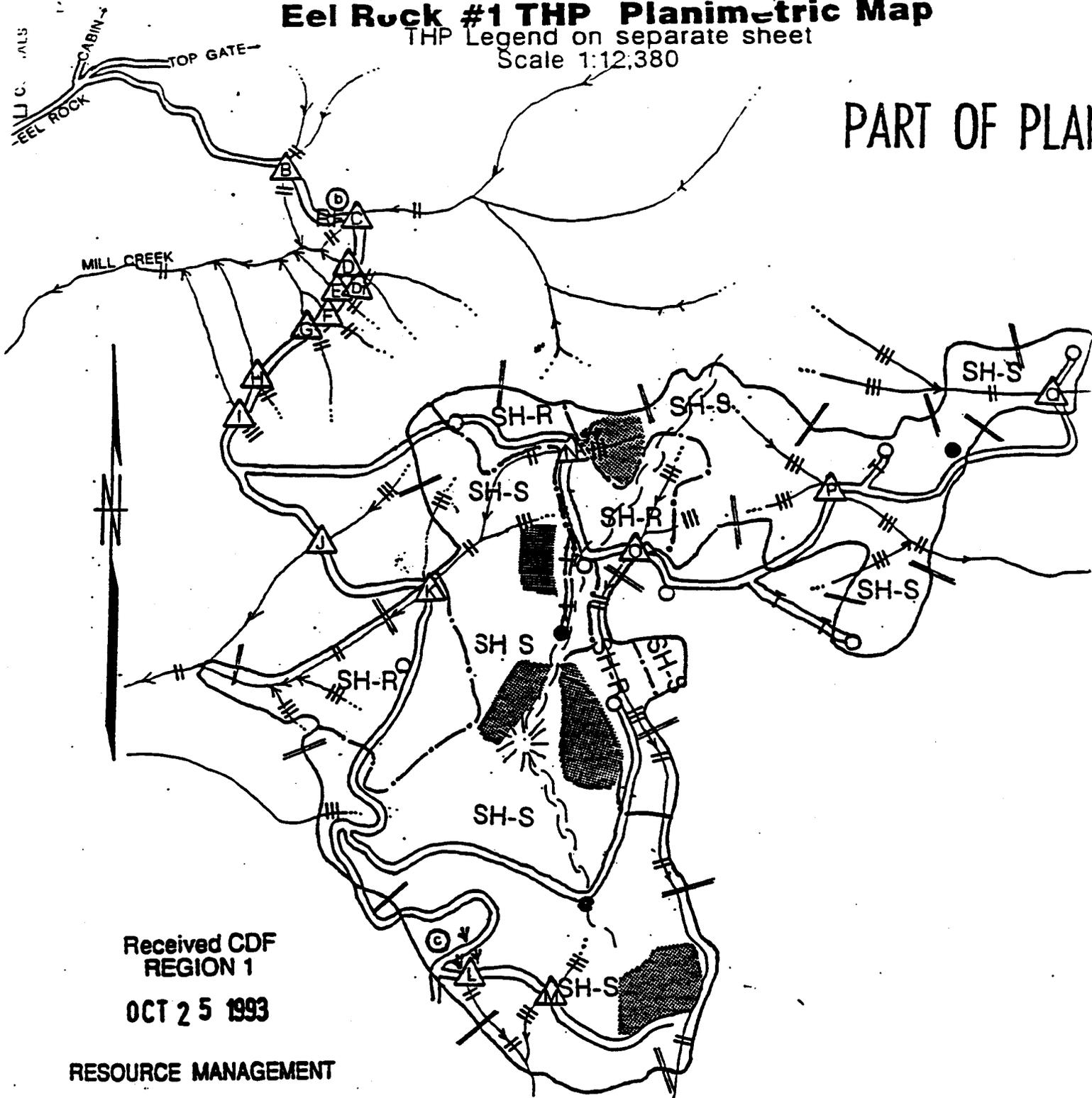
0 FEET

Eel Rock #1 THP Planimetric Map

THP Legend on separate sheet

Scale 1:12,380

PART OF PLAN



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OCT 25 1993

RESOURCE MANAGEMENT

The entire plan area is a timber site class III.
 The entire plan area has a moderate erosion hazard rating.
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 the Appurtenant Roads Map. CALENDAR PAGE 139
 In Humboldt County in Portions of Sections 22, 23, 26 and 27
 Township 2-South, Range 4-East. MEMO PAGE 1020

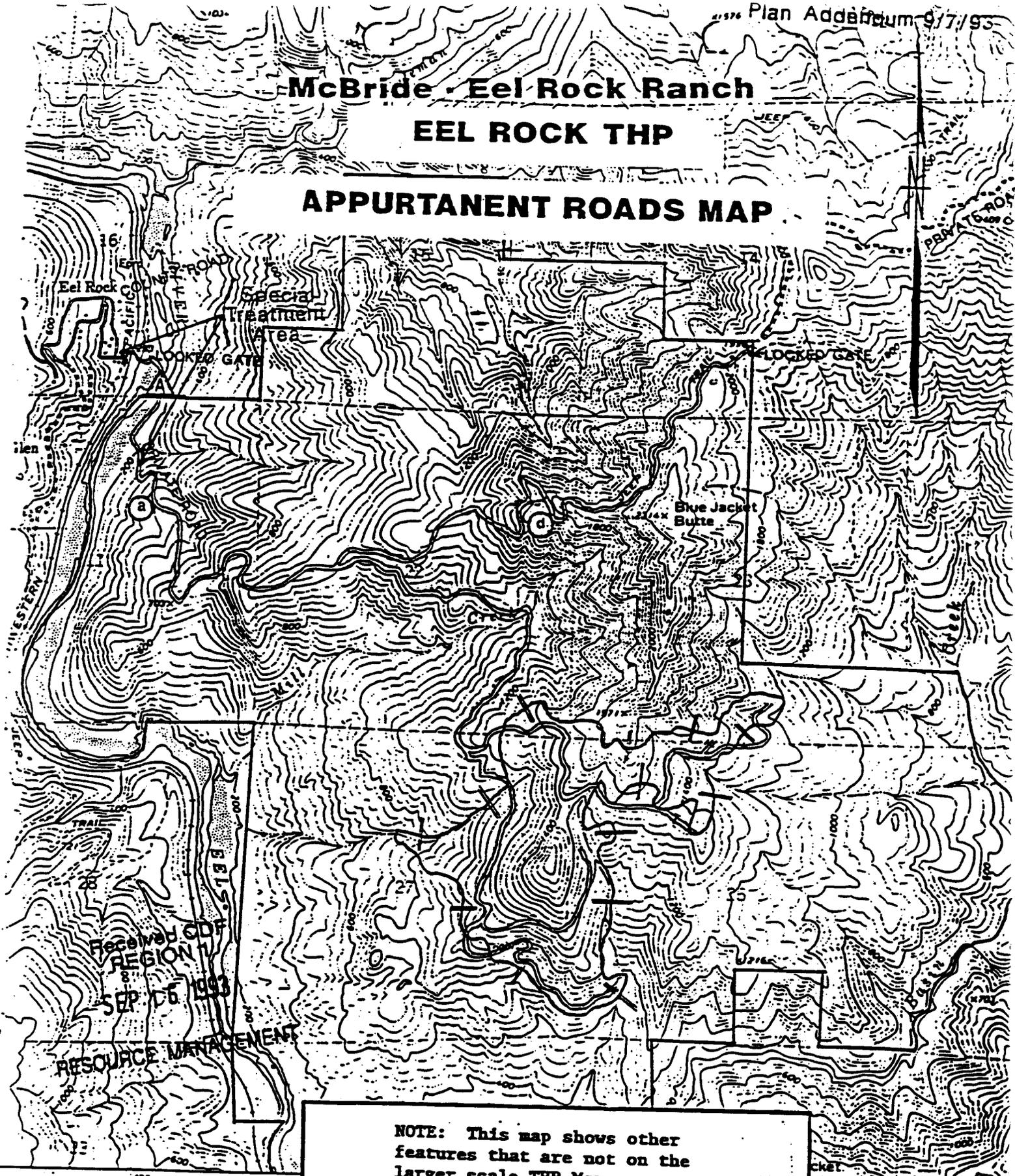
points "a" & "d" are on	
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EEL RIVER

McBride - Eel Rock Ranch

EEL ROCK THP

APPURTANENT ROADS MAP



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RESOURCE MANAGEMENT

NOTE: This map shows other features that are not on the larger scale THP Map.

Legend is the same for the

From USGS 7.5' "Blockburg" Scale
HUMBOLDT COUNTY

THP Map	1:24,000
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1964 II NW
 PORT SEWARD
 1000 5000

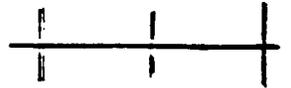
by the Geological Survey

Methods from aerial
 checked 1969

California coordinate

**Eel Rock #1 THP
Timber Harvesting Plan Map
In Humboldt County in Portions of Sections 22, 23, 26 and 27,
Township 2-South, Range 4-East, E.B.M.**

Legend

THP Boundary (Logging Area)..... 

Existing Roads

Permanent..... 
 Seasonal..... 
 Temporary..... 
 Existing Landings*..... 
 Road Failures..... 

Proposed Roads

Permanent..... N/A
 Seasonal..... N/A
 Temporary..... 
 Proposed Landings*..... 

Watercourse Classification (14 CCR 916.5)

Class I (one) Watercourse..... 
 Class II (two) Watercourse..... 
 Class III (three) Watercourse..... 
 Springs and Wet Areas..... 
 Watercourse Crossings..... 
 (Watercourse Crossing List and Temporary/Permanent Classification is on Separate Sheet
 THP Reference Point..... 

Regeneration Method Boundaries — . — . — . — . — .

Shelterwood-Seed Step..... SH-S
 Shelterwood-Removal Step..... SH-R
 Understocked areas prior to operations (20 ac. Min.)... N/A
 Slides and Unstable Areas.....  SSS
 Areas with slopes over 65%..... 
 Ridge Top Suitable For Fire Suppression Efforts-
 Will require felling of snags..... 
 Special Treatment Areas..... N/A

N/A means that this is not a feature of this THP.

* None within WLPZ or >1/4 acre or requiring substantial excavation.

Received GDF
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MINUTE SHEET 6 19931022

Watercourse Crossing List

Crossing	Watercourse Class	Size	Additional Instructions
A	I	Temp-Bridge	89 ft. flatcar bridge.
B	II	Perm-48" CMP	Install at grade with trash rack.
C	II	Temporary CMP	or permanent flatcar bridge, if available.
D	II	Perm-18" CMP	Install with downspout.
D1	III	Perm-18" CMP	
E	II	Perm-18" CMP	
F	II	Perm-18" CMP	
G	II	Perm-18" CMP	
H	II	Perm-18" CMP	
I	III	Temporary	
J	III	Perm-18" CMP	
K	II	Perm-30" CMP	Replace existing 12" CMP which is insufficient during high flows. West of crossing K, a class III crosses the road. If water is present at the time of operations, it will be diverted into the intake at crossing K, a distance of approximately 20 ft. The class III shall be dipped out upon completion.
L	II	Temporary	At this point, THP Reference Point "c", the road makes a switch-back turn thru a series of springs. There is one spring on the upper part of the turn that can be carried beyond the turn by an inside ditch. There are two springs on the lower part of the turn. The water from the second spring can be carried down to the third spring with an inside ditch at which point, it is proposed to install a temporary culvert to carry the water across the road. Upon completion, the road shall be dipped out at all three locations in the original channels.
M	III	Temporary	
N	II	Existing 12"	Functioning CMP exists. Intake should be cleaned and trash rack installed. Just up the road from "N" is a Temporary class III crossing.
O	III	Perm-24" CMP	
P	III	Perm-24" CMP	
Q	II	Perm-30" CMP	

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Standard Installation Techniques

All intakes and discharges on permanent culvert installations to be rock armored.

Trash racks to be installed on all permanent culvert installations.

Near culvert crossings, road drainage should be directed to the inside of the road, into the culvert intake, rather than over the downstream fill face.

Permanent watercourse crossings shall be constructed to prevent flow from being diverted down the road in the event the culvert is blocked by debris or its capacity is exceeded in a large runoff event. This can be accomplished by constructing rolling dips or large waterbars on either side of the crossing to prevent overflow from running down the road.

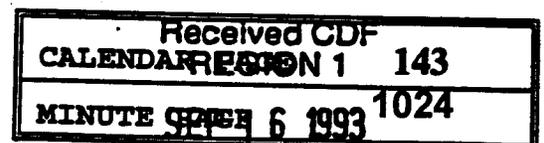
Temporary crossings shall require a culvert if water is present at the time of operations. CMP's, if used, shall be removed and the channels dipped out but made passable for standard production four-wheel drive vehicles for ranch and administrative purposes. Approaches shall be seeded and mulched.

In addition to following the required 1603/1606 process with the Department of Fish and Game, we are also in communication with the U.S. Army Corp of Engineers regarding the permit process for the temporary flatcar crossing of the Eel River at Eel Rock.

* Permanent Culverts have been sized to tolerate a 100 year flow (Talbot's Formula).

Item #14

The Eel River is a Wild and Scenic River as defined in PRC 5093.54 (d), and as such, is a Special Treatment Area (STA) within 200 feet of the watercourse transition line. While none of the harvest area is within or even close to the STA, the temporary crossing "A" at Eel Rock and the road approaches are within STA. The only operations proposed within the STA is the installation of the temporary bridge, maintenance of the existing approaches, and the hauling of logs to their mill destinations.



GENERAL DESCRIPTION OF PLAN SITE
14 CCR 1034 (ii)

The plan site straddles a southwest running ridge at approximately 600-2000' above sea level on the east side of the Eel River approximately 1.25 miles southeast of Eel Rock. The slopes are moderate to steep with many flat benches interspersed across the terrain. Approximately 2/3 of the vegetative cover in the general area is grass or oak (or a combination thereof) and the other 1/3 is currently supporting timber. The only conifer species observed in or around the plan area was Douglas-fir. Hardwoods include white oak, black oak, pepperwood, madrone, maple, live oak, tanoak and buckeye.

The predominant soil on the plan area is Hugo 812. Hugo is characterized by a grey/brown surface color and a light yellow brown subsurface color. The depth range is 30-60 inches. The surface texture is loam and the subsurface texture is a gravelly clay loam. The surface ph is moderately acid and the subsoil is strongly acid. The pale yellow subsoil is usually stony. It is the most common timber soil. Also on the plan area is Josephine 815. It has a brown surface color that is typically a loam and is slightly acid. The subsoil is a brownish/red color (sometimes pink) and has a depth range of 40"+. The subsoil texture is a clay and usually has little or no gravel and is strongly acid. The parent rock is usually soft from intense weathering. There are two other soil types that the existing seasonal road crosses from the end of the County road to the plan area. Through the oak stands, Tyson is the predominant soil type and Laughlin is predominant in the grass types. Tyson has a surface color that is a dark gray brown, loam texture and is slightly acid. The subsoil is a light yellow brown, stony clay loam and is strongly acid. It has a depth range of 18-48". Laughlin has a light brown color, slightly acid and a loam texture on the surface and subsoil. it has a depth range of 18-40 inches.

The stand is most accurately described as an even-age Douglas-fir forest approximately 80-100 years old. The stand is typical of a Douglas-fir type, apparently being the result of a fire event some 100+ years ago. There are a few fire survivors scattered throughout the plan site in some of the deeper draws where the fire did not get hot enough to cause complete mortality. It is a single story canopy that varies from 50-100% crown closure. DBH's range from 14-50 inches with approximately 90% of the stems falling in the 18-30 inch class. Heights vary from 90-135 feet with a few taller trees on the more favorable sites. The species distribution based on the percentage of basal area occupied by each species is estimated at 80% Douglas-fir, 20% white oak. Nominal amounts of tanoak, pepperwood and madrone are also present.

Watercourses on and around the plan area are smaller order 1 and 2 streams that originate in the plan area. Most of these watercourses are class III's, being rain dependent for flow. A few are perennial watercourses, and are class II's. The watercourses were surveyed in preparation of the Cumulative Impacts Assessment for watershed resources and a thorough description of that section of the THP.

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SILVICULTURAL ADDENDUM
ITEM #15

Justification of Silvicultural Methods

The forest management goal of the timberland owner is to produce and maintain a forest that is healthy and naturally diverse, with a mixture of tree species and understory plants similar in proportion to those previous to management activities, while providing for the following objectives to the maximum extent permitted under the rules and regulations of the Act and Board: Attempt to achieve a balance between growth and harvest over time; Attempt to maintain functional wildlife habitat in sufficient condition for continued use by the existing wildlife community (listed and non-listed if present) within the planning area; Retain or recruit late and diverse seral stage habitat components for wildlife concentrated in stream zones as required per 14 CCR 916.5 and provide for functional connectivity between habitats in the planning area as appropriate in consideration of known species and applicable defined habitat needs.

In this Timber Harvesting Plan, we are attempting to treat the southwest portion of the Timberland Owner's tract by identifying: 1) areas of residual timber that have successfully seeded in the next generation of conifers and are ready for overstory removal, and; 2) areas of mature second growth timber that are suitable for regeneration cuts.

In areas where previous entries were made, they were successful in regenerating the stand with young, vigorous conifer regeneration and are suitable candidates for overstory removal. In these areas, the Shelterwood-Removal Step has been proposed to treat the stand. This will allow removal of the remaining merchantable conifers while creating more growing space for the advanced regeneration present. Intrusion of grass into these areas has made additional regeneration very difficult without the benefit of soil disturbance. Additional seedling establishment is expected in the disturbed soil areas using trees from the adjacent stand as a seed source.

Fully stocked areas of mature young growth timber have also been identified for regeneration cuts using the Shelterwood-Seed Step. These are areas of moderately dense to dense mature Douglas-fir with little or no regeneration present in the understory. Sample borings in these stands has showed a significant slowing of growth in recent years indicating that the stand has reached its culmination of mean annual increment and that timing of the harvest at this point is prudent before decaying processes impair the production of high quality wood products any further. Less intense harvests, such as the shelterwood preparatory step, would be expected to fail due to the limited soil disturbance (seed bed preparation) and small percentage of crown opening in the overstory. Past experience on similar sites have shown light harvest entries have not been well suited to regeneration of the conifers, but have instead favored grass and brush introduction. Following the experience of previous harvests on this property we have proposed this silvicultural method as the best suited to the

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species, site conditions, management constraints for wildlife, and overall resource protection.

Explanation of Silvicultural Methods

There is approximately 73 acres proposed for Shelterwood-Removal and these areas shall have all merchantable timber removed. There is sufficient savable stocking present so that no artificial regeneration is required. Merchantable conifers down to 18" DBH that will make a 32' long by 8" diameter log will be harvested. Smaller "residual type" trees may be harvested if they show no signs of release or otherwise will not produce a future crop tree. These areas shall meet stocking standards set forth in 14 CCR 912.7 (b,1) upon completion of operations. While we did not observe any understocked areas during our inspection of the stands, there may be some isolated small areas that may not meet stocking standards set forth in 14 CCR 912.7 (b,1). Potential understocked areas, if any exist, will not exceed 10% of the area or 20 acres as per 14 CCR 913.1 (b,6) as judged by the RPF.

In the shelterwood-seed step areas, harvest trees shall be marked prior to timber operations by the RPF, or his designee, with a horizontal stripe painted above the cutline and spot marked below the cutline with paint. Approximately 247 acres will be under the shelterwood seed step perscription. The tree density description in the following paragraphs is the minimum allowed in the rules. In marking the units for harvest the RPF, or his designee, shall consider the condition of the individual tree, the condition of the stand, potential for windthrow, aspect, topography, soil conditions, micro-climate and wildlife use in determining the amount of canopy to be removed. Canopy closure after operations is expected to be -40 percent. Other areas may exceed 40% total canopy closure were understory hardwoods exist. Trees to be counted as seed trees (10 seed trees 18 inches dbh or greater per acre, 14 CCR 913.1 c) shall show superior phenotypic characteristics including dominant and co-dominant crowns, height, stem form and resistance to pathogens. Site preparation will not be required and it will in no way resemble a clearcut in extent or intensity.

Found throughout this stand are patches of white oak that may or may not contain sufficient merchantable Douglas-fir to apply this silvicultural method. These hardwood patches typically are densely stocked with young Douglas-fir regeneration. Due to the irregular shapes of the patches and the topographic characteristics of the plan, mapping these small patches would not be practical. In marking these areas for harvest, if the patch contains only 10 or less of the required 18 inch DBH or larger conifers per acre, the patch will simply not be operated. Nowhere on the plan area did the RPF observe any understocked area greater than or equal to 20 acres.

As per 14 CCR 913.1 (b,3), the number of seed trees shall equal or exceed that set forth under the seed tree regeneration method and shall provide adequate shelter for seedling establishment. The minimum residual tree density and spacing as set forth in 14 CCR 913.1 (c,1) is as follows:

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An average of at least 25 seed trees, 45.7 cm d.b.h. or greater per ha (10 seed trees 18 inches dbh or greater per acre) must remain on the logged area. In addition, no point within the logged area shall be more than 45.72 m (150 feet) horizontal distance from the nearest seed tree. Also, each seed tree 61 cm (24 inches) d.b.h. or greater shall be equivalent to two (2) seed trees which are less than 61 cm (24 inches) d.b.h., but at least 45.7 cm (18 inches) d.b.h. or greater.

Silviculture Evaluation

To aid the Department in the review of this TEP, we are volunteering the following Timber Stand Data for the areas to be harvested although none of the concerns addressed in the "New Guidance For Evaluating Timber Operations" are apparent in this TEP.

Timber Stand Data, Shelterwood-Seed Step Area

1. Estimate of current growth (board feet/acre/year or cubic feet/acre/year).

Current growth has slowed considerably in the last 10 years as evidenced by sample increment borings. Ten year diameter increments ranges from 0.8 to 1.4 inches. It is estimated that the stand is currently growing at approximately 1000 board feet/acre/year. The entire plan area is a timber site class III.

2. Estimate of the pre and post volume/acre or general d.b.h. class distribution.

Pre and post volume per acre is estimated at 7,500-30,000 board feet per acre (pre) and 5,000-10,000 board feet per acre (post). This will vary due to existing stand variability and variability in harvest intensity due to condition of the individual tree, the condition of the stand, potential for windthrow, aspect, topography, soil conditions and wildlife use.

3. Estimate of average pre and post basal area/acre.

Average pre and post basal area/acre is estimated at between 140-290 (pre) and 50-150 (post). This will vary also for the same reasons described in #2 above.

4. Estimate of pre and post harvest basal area composition of each species.

This is a almost pure stand of Douglas-fir with patches and fingers of hardwoods mixed throughout. Overall pre and post harvest basal area composition of each species will not differ and is estimated at 80% Douglas-fir and 20% white oak. Nominal amounts of madrone, pepperwood and other hardwoods are scattered throughout the plan area.

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5. *Prediction of the effect of harvest on growth.*

While some release is expected as a result of this harvest, it is not the object. The object is to open the stand significantly to effect natural regeneration. As explained in #1 above, growth has slowed considerably. By establishing a new stand of thrifty, vigorous young conifers the effect of the harvest on growth over time will be a net increase.

6. *Projected future entry.*

The next projected entry into this stand is dependent on the results attained in this entry, the priority of other stand treatments within the ownership, the financial needs of the Timberland Owner and the ever changing Forest Practice Rules. It is estimated that another entry could be made as early as 5-10 years but more realistically it would probably be made in 10-15 years.

7. *Estimated stand age class distribution.*

This is an even-aged stand of Douglas-fir approximately 80-100 years old. There are a few scattered older trees (Douglas-fir, 150-250 years old) that are fire survivors. These are found mostly in the deeper draws and in small isolated pockets. In isolated areas where they are found, these residuals number less than 5 per acre.

8. *Quality (including genetic) and level of residual stocking to produce a future stand.*

Trees to be counted as seed trees (10 seed trees 18 inches dbh or greater per acre) shall show superior phenotypic characteristics including dominant and co-dominant crowns, stem form, height, and resistance to pathogens.

*Timber Stand Data, Shelterwood-Removal Step Area*1. *Estimate of current growth (board feet/acre/year or cubic feet/acre/year).*

Sample borings of residuals in the shelterwood-removal step areas have showed unpredictable growth rates. Some trees have released and are putting on respectable diameter increments. These are trees with dominant and co-dominant crowns and little sign of defect. Other trees have not release and these are typified by poor quality crowns, broken tops and highly defective trees. It is estimated that these stands are currently growing at 100-500 board feet/acre/year.

2. *Estimate of the pre and post volume/acre or general d.b.h. class distribution.*

Pre and post volume per acre is estimated at 3,000-5,000 board feet per acre (pre) and 500-1,000 board feet per acre (post). Since most of the residual timber is to be removed and the

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advanced regeneration has not yet reached merchantable size, little volume will remain in these areas after operations.

3. Estimate of average pre and post basal area/acre.

Average pre and post basal area/acre is estimated at between 40-100 (pre) and 10-30 (post). These figures are low for the same reasons described in #2 above.

4. Estimate of pre and post harvest basal area composition of each species.

Pre and post harvest basal area composition of each species shall not appreciably vary and is estimated at 80% Douglas-fir and 20% white oak. Nominal amounts of madrone, pepperwood and other hardwoods are scattered throughout the plan area.

5. Prediction of the effect of harvest on growth.

Removal of the overstory should create more growing space for the existing regeneration. Also additional seeding of conifers is expected from adjacent stands in the newly disturbed soil. By establishing a new stand of thrifty, vigorous young conifers the effect of the harvest on growth over time will be a net increase.

6. Projected future entry.

As this is a final removal step and the existing regeneration is 15-20 years old, the next potential entry date would be in 25-35 years when a thinning might be appropriate.

7. Estimated stand age class distribution.

This is an even-aged stand of Douglas-fir, the residuals being mostly 80-100 years old, the regeneration being approximately 15-20 years old.

8. Quality (including genetic) and level of residual stocking to produce a future stand.

The advanced regeneration in the shelterwood-removal areas shows good genetic characteristics. There is little or no evidence of insect or disease problems in this portion of the tract and growth of the regeneration is best described as thrifty. The level of stocking will meet or exceed the stocking standards of 14 CCR 912.7 upon completion of operations.

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HARVESTING PRACTICES AND EROSION CONTROL ADDENDUMITEM #22

While no tractor operations are proposed in slide/unstable areas in any of the harvest area, tractors will be used in the seasonal road reconstruction at TEP Reference Point "a", "b" and "d", as explained and justified in the addendum to Item #38.

ITEM #23

The RPF proposes an exception to 14 CCR 914.2 (f,1), explained as follows: 1) Tractor operations shall be confined to initial construction of skid trails and yarding from said skid trails. No site preparation or layout construction is proposed, however tractors may also be used for tree pulling from the above mentioned skid trails; 2) Skid trails shall be flagged prior to preharvest inspection by the RPF, or his designee, and; 3) Tractor operations shall comply with all of the other provisions of 14 CCR 914.2.

The exception is justified as follows: 1) Areas of slopes over 65% are generally less than 10 acres in size and are broken up by benches; 2) The existing road system does not lend itself well to traditional cable yarding systems; 3) Construction of a new road system to allow access for cable yarding equipment would require extensive new construction on slopes over 65% requiring substantial excavation and end hauling, which would reduce the amount of growing space; 4) Tractor yarding lends itself better to partial cutting by allowing more flexibility in yarding positions, resulting in less damage to residual trees; 5) Tractor yarding allows the area to be stage felled, greatly reducing the amount of breakage of merchantable timber. Cable yarding requires all of the harvest trees felled before the cable rigging is put in place, and; 6) The silvicultural addendum describes what trees will be harvested considering the condition of the individual tree, the condition of the stand, potential for windthrow, aspect, topography, soil conditions, micro-climate and wildlife use in order to meet the goal of maximum sustained production of high quality timber products. Cable yarding would require the cutting of yarding corridors without regard any of these considerations.

Given the limited size of the areas with slopes over 65%, the natural benches found in the terrain, the moderate erosion hazard rating and the other justifications listed above, tractor operations on slopes over 65% as explained above will have substantially less impact on the environment than cable yarding and the required new road construction and associated felling practices.

ITEM #27914.6 Waterbreaks

Waterbreak spacing on truck roads and skid trails shall be as per 14 CCR 914.6 (c) based on erosion hazard rating and road or trail gradient.

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MAXIMUM DISTANCE BETWEEN WATERBREAKS

	Slope 10% or less	11-25%	26-50%	>50%
Extreme	100 ft.	75 ft.	50 ft.	50 ft.
High	150 ft.	100 ft.	75 ft.	50 ft.
Moderate	200 ft.	150 ft.	100 ft.	75 ft.
Low	300 ft.	200 ft.	150 ft.	100 ft.

916.7 Reduction of Soil Loss

Within the watercourse and lake protection zone adjacent to Class I and II waters, areas where mineral soil exceeding 800 continuous square feet in size, exposed by timber operations, shall be treated for reduction of soil loss. Treatment shall be done prior to October 15th except that such bare areas created after October 15th shall be treated within 10 days, or as agreed to by the director. Stabilization measures shall include seeding with State Mix* at a rate of 50 lbs. per acre and hay mulched at the rate of 2-4 inches covering at least 90% of the area so treated. The LTO shall consult with CDF concerning the use of mulch on those areas that exceed 800 square feet adjacent to the class II watercourses.

*45% Barley, 45% Annual Rye, and 10% Fescue

923.2 (m) Road Construction

Sidecast or fill material extending more than 20 feet (6.1 m) in slope distance from the outside edge of the roadbed which has access to a watercourse or lake which is protected by a WLPZ shall be seeded with State Mix at a rate of 50 lbs. per acre and hay mulched at the rate of 2-4 inches covering at least 90% of the area so treated.

923.5 (f) Landing Construction

The following specification shall be met upon completion of timber operations for the year or prior to October 15, whichever occurs first:

Overhanging or unstable concentrations of slash, woody debris and soil along the downslope edge or face of the landings shall be removed or stabilized when they are located on slopes over 65 percent or on slopes over 50 percent within 100 feet of a WLPZ.

Any obstructed ditches and culverts shall be cleaned.

Landings shall be sloped or ditched to prevent water from accumulating on the landings. Discharge points shall be located and designed to reduce erosion.

Sidecast or fill material extending more than 20 feet in slope distance from the outside edge of the landing and which has access to a watercourse or lake shall be seeded with State Mix at a rate of 50 lbs. per acre and hay mulched at the rate of 2-4 inches covering at least 90% of the area so treated.

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ROADS AND LANDINGS ADDENDUMItem #38

Except for one short segment of new road construction, all roads within and appurtenant to the plan area are existing. Mostly minor regrading and shaping of the road surface, along with proper reconstruction of watercourse crossings, is required to bring the roads up to seasonal truck road standards. A rolling grade will be used where possible with rolling dips at natural draws to better drain the road surface. Currently, roads are being used for ranch purposes and forest administrative use. There are three road failures, other than watercourse crossings, on the appurtenant roads leading to the plan area.

The first is at THP Reference Point "a", and is shown on the appurtenant roads map. This is an outer fill failure and can be fixed by making a slightly deeper cut into the bank. This appears to have been caused by allowing water to discharge onto some unstabilized fill, something that is not permitted under current forest practice rules. At the end of operations, waterbars will be installed directly above and below this point, to avoid discharging directly onto the fill.

At THP Reference Point "b", the upper bank has slumped down on the road, covering approximately 1/4 of the existing road surface. The road prism is intact and requires simple regrading and feathering away from the WLPZ to make it passable for truck traffic.

At THP Reference Point "d", a small debris chute has developed at the head of a Class III drainage. An upper bank slump near the head of the drainage was carried down slope by rain water concentrated on the road surface. The debris chute intercepts the road again after the road makes a switchback turn. The road prism is intact and needs only regrading and slight widening to make it usable. The problem can be avoided in the future by installing waterbars or rolling dips as per the Forest Practice Rules to minimize concentrated runoff situations and by diverting road runoff before it reaches the chute and just past the chute. A 12 inch berm shall be put in place along the head of the chute to prevent runoff from discharging onto the chute. It should be noted that this section of road is not planned for log hauling for this THP. Regrading and correction measures at "d" are an off-site mitigation to improve drainage problems and make for a lower maintenance road system.

All that is required at any of these points is one pass with a tractor to make it passable for truck traffic. What we are proposing is high standard correction mitigations that will allow use of these roads for ranch and administrative use long after the end of timber operations with minimal maintenance. The proposed rehabilitation of the roads at these points along with regrading and installation of proper drainage facilities as required by modern forest practice rules would in our opinion improve present conditions, allow for continued maintenance and ultimately add to the protection of the resources involved.

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Road Abandonment Plan

Upon completion of timber operations, temporary roads as designated on the THP Map and associated landings and watercourse crossings shall be abandoned in accordance with 14 CCR 923.8. The guidelines for abandonment are as follows:

- a. Blockage of roads so that standard production four wheel-drive highway vehicles cannot pass the point of closure at the time of abandonment shall be accomplished with an oversized waterbar or "tank trap" at the closure point.
- b. Stabilization of exposed soil on cuts, fills, or sidecast where deleterious quantities of eroded surface soils may be transported into a watercourse shall be accomplished as per the guidelines specified in the Harvesting Practices and Erosion Control Addendum. Such areas shall be seeded with State Mix at a rate of 50 lbs. per acre and hay mulched at the rate of 2-4 inches covering at least 90% of the area so treated or as per the CDF inspector's recommendation. The LTO shall consult with CDF concerning the use of mulch on those areas that exceed 800 square feet adjacent to the class II watercourses.
- c. Grading and shaping of road and landing surfaces to provide dispersal of water flow shall be accomplished by outsloping and using rolling grades where possible and as specified in the Roads and Landings Addendum.
- d. Pulling or shaping of fills or sidecast where necessary to prevent discharge of materials into watercourses due to failure of cuts, fills, or sidecast.
- e. All watercourse crossings associated with temporary roads shall be removed and associated fills removed upon completion of operations in accordance with 14 CCR 923.3 (d) as follows:
 1. Fills shall be excavated to form a channel which is as close as feasible to the natural watercourse grade and orientation and is wider than the natural channel.
 2. The excavated material and any resulting cut bank shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. Where needed, this material shall be stabilized by seeding, mulching, rock amoring, or other suitable treatment. The LTO shall consult with CDF concerning the use of mulch on those areas that exceed 800 square feet adjacent to the class II watercourses.

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WATERCOURSE AND LAKE PROTECTION ZONE WIDTHS
AND PROTECTION MEASURES
ITEM #50

14 CCR 916.5

Class I (one): None on the plan area.

Class II (two): Unnamed tributaries to Mill Creek, Basin Creek and the Eel River.

<u>Slope Class</u>	<u>Zone Width (ft.)</u>
0-30	50
30-50	75
>50	100 2/

2/ Subtract 25 feet in width for cable yarding operations.

As per 14 CCR 916.5, we are listing the following required protections for Class II watercourses.

"B"- WLPZ shall be clearly identified on the ground by the RPF who prepared the plan, or his designee, with paint and flagging prior to the start of timber operations.

"E"- To ensure retention of shade canopy filter strip properties and the maintenance of wildlife values described in 14 CCR 916.4 (b), a base mark shall be placed below the cutline of the harvest trees within the zone and shall be done in advance of timberfalling operations by the RPF who prepared the plan, or his designee.

"I"- To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% of the total canopy covering the ground 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.

Recruitment of large woody debris for instream habitat shall be provided by retaining at least two living conifers per acre at least 16 inches diameter breast high and 50 feet tall within 50 feet of all Class II watercourses, 14 CCR 916.3 (g), and within the WLPZ, at least 75 percent surface cover and undisturbed area shall be retained to act as a filter strip for raindrop energy dissipation, and for wildlife habitat, 14 CCR 916.4 (b,6). As an added mitigation, no harvesting of hardwoods shall be allowed within a class II WLPZ. The widths given above are minimum widths. These may be expanded to the break in slope in site specific cases by the RPF or his designee.

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Class III (three): Unnamed watercourses.

<u>Slope Class</u>	<u>Zone Width (ft.)</u>
0-50	25
50+	50

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An unmarked Equipment Limitation Zone (ELZ) shall be afforded to protect water quality, wildlife, and other resources listed in 916.4 (b). All heavy equipment shall be excluded from the ELZ's except at crossings and approaches for truck roads and skid trails and existing landings.

To further mitigate any potential negative impact to the resource, the following protection for Class III watercourses shall be applied. At least 50% of the understory vegetation present before timber operations shall be left living and well distributed within the ELZ to maintain soil stability within the zone and to act as a filter strip.

Soil deposited during timber operations in a Class III watercourse other than a temporary crossing shall be removed and debris deposited during timber operations shall be removed or stabilized before the conclusion of timber operations, or before October 15. 14 CCR 916.4 (c,3).

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Wet Areas and Springs

Wet areas and springs shall be afforded a 25 foot marked Equipment Exclusion Zone (EEZ) to protect water quality, wildlife, and other resources listed in 916.4 (b) and associated with wet areas and springs. Heavy equipment shall be excluded from EEZ's except on existing truck roads where it will be necessary for the transportation of the forest products. This exception is necessary because of the tendency for springs and seeps to occur along road cuts.

To further mitigate any potential negative impact to the resource, the following protection for Wet Areas and Springs shall be applied. At least 50% of the understory vegetation present before timber operations shall be left living and well distributed within the EEZ to maintain soil stability within the zone and to act as a filter strip.

SNAG RETENTION ADDENDUM
ITEM #52

All snags will be felled that are within 100 feet of the ridge top delineated on the THP map as suitable for fire suppression, within 100 feet of all seasonal roads and landings or where federal or state safety laws require the felling of snags for safety. All unmerchantable snags (dead trees) and large down woody debris shall be left distributed to the extent they occur prior to operations that does not conflict with safety and hazard reduction requirements. Unmerchantable for the purpose of this harvest is defined as trees producing all logs with less than 250 net volume.

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OTHER INFORMATION ADDENDUM
ITEM # 61

STATE OF CALIFORNIA BOARD OF FORESTRY

CUMULATIVE IMPACTS ASSESSMENT

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

Yes X No

If the answer is yes, identify the project(s) and affected resource subjects.

SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM

(2) Are there any continuing, significant adverse impacts from past land use activities that may add to the impacts of the proposed projects.

Yes No X

If the answer is yes, identify the activities and affected resource subject(s).

(3) Will the proposed project, as presented, in combination with past, present, and reasonably foreseeable 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.

	Yes after mitigation (a)	No after mitigation (b)	No reasonably potential significant effects (c)
1. Watershed		X	
2. Soil Productivity			X
3. Biological		X	
4. Recreation			X
5. Visual			X
6. Traffic			X
7. Other			X

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- a) Yes, means that potential significant adverse impacts are left after application of the Forest Practice Rules and mitigation or alternatives proposed by the plan submitter.
- b) No after mitigation means that any potential for the proposed 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 a cumulative impact.

(4) If column (a) is checked in (3) above, describe why the expected impacts cannot be feasibly mitigated or avoided and what mitigation measures or alternatives were considered to reach this determination impact. If column (b) is checked in (3) above describe what mitigation measures have been selected which will substantially reduce or avoid reasonably potential significant cumulative impacts except for those mitigation measures or alternatives mandated by application of the rules of the Board of Forestry.

SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM

(5) Provide a brief description of the assessment area used for each resource subject.

SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM

(6) List and briefly describe the individuals, organizations, and records consulted in the assessment of cumulative impacts for each resource subject. Records of the information used in the assessment shall be provided to the Director upon request.

SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM

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TIMBER HARVESTING PLAN ATTACHMENT
 CUMULATIVE IMPACTS ASSESSMENT ADDENDUM

Watershed Resources

The watershed assessment area for this THP is the entire Mill Creek and Basin Creek drainages which drain into the Eel River approximately 1.5 miles and 4 miles respectively upstream from Eel Rock. It totals approximately 5,700 acres with 1,231 acres in the Mill Creek drainage and 4,469 acres in the Basin Creek drainage. The watershed assessment area includes approximately 3.4 miles of the Eel River. The location of the assessment area was chosen because it includes the drainage basin where the plan is located and also includes areas where other watershed effects could combine with any potential watershed effects from the proposed project to form a cumulative impact. The assessment area includes both upper drainage steep gradient segments that are a good place to look for and evaluate singular impacts and lower portions of the watershed where individual effects can combine to form cumulative impacts. These are typically low gradient sections and areas where sediment accumulation is likely to occur.

PAST PRESENT AND FUTURE PROJECTS

Past Projects

Past activities in the assessment area include timber harvesting and livestock grazing. A summary of the past 10 years THPs follows.

PAST 10 YEAR THPs WITHIN WATERSHED ASSESSMENT AREA

THP NUMBER	PLAN SUBMITTER	ACRES*	YARDING METHOD	PRESCRIPTION	STATUS
85-292	Fearrien	60	Tractor	Shw-removal	Closed
89-562	Willis	91	Tractor	Shw-removal	Withdrawn
90-023	Fearrien	33	Tractor	Shw-removal	Closed
90-163	Fearrien	420**	Tractor	Shw-removal	Closed

* Acres are as planimetered off of Past THP Maps at CDF-Fortuna.
 ** The acreage listed in the plan was 375 acres but the area drawn on the Past THP Map at CDF-Fortuna is clearly larger.

Visual inspection on the ground as well as aerial photo interpretation of the past projects indicate that this area is suited for a combination of timber production and range management. Approximately 9 percent of the assessment area has been under an approved THP within the last 10 year period which is certainly not considered excessive. The most common silvicultural method used in the assessment area has been the shelterwood system which uses partial cutting techniques. Regeneration success has been normal using this technique in the past.

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Present Projects

To the best of our knowledge, using information currently available, there are no other THP's being operated within this assessment area nor are there any other THP's in the planning stages except for the proposed project.

Future Projects

This will be the first entry in this management block since 1981. Although there were several other areas noted that are in need of some form of stand treatment there are no specific areas under consideration at this time. It would be safe to say, however, that future stand improvements are expected to occur within the next five to ten years.

Beneficial Uses

The beneficial uses of water on-site and downstream within the assessment area are agricultural supplies (livestock watering), cold freshwater habitat, wildlife habitat, fish spawning and recreational. Livestock use is quite visible in this portion of the county. Typically, livestock will water from perennial streams and from developed water sources, both of which are present within the assessment area. The class II's in the plan area (there are no class I's) provide coldwater habitat that supports amphibians and invertebrates within the plan area and fish downstream in the class I streams in the assessment area and also provides water and shelter for other wildlife in the area. Fish spawning occurs in the Eel River and the lower stretches Basin Creek. Little recreational opportunities are available on this portion of the Eel River due to limited access. Some local residents of Eel Rock make use of the Eel River for fishing, picnicking and sun bathing.

In the reasonably foreseeable future, water demands are expected to remain constant for all uses.

Current Watercourse Conditions

Watercourses were visually inspected within the THP and the assessment area. No significant sources of major sediment input were noted during visual inspections nor were any significant recently active landslides observed either on the ground or through aerial photo interpretation. The most significant feature of the appurtenant road system is the number of failed watercourse crossings. Some sediment input is occurring at these failed crossings and the THP proposes replacement with high standard permanent and temporary crossings. No serious negative characteristics were observed including bank cutting, mast wasting, downcutting, scouring debris clearing or recent flooding. Canopy closure was typically in the form of a hardwood and conifer overstory, except of course, where watercourses flowed through open prairies. Many watercourses that flowed water year round were heavily vegetated with willow.

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Watershed Effects

Possible watershed effects from a timber operation include sediment deposit, increased water temperature, altering the availability of organic debris, chemical contamination and increased peak flows.

Sediment effects can be either short term (suspended sediment) or long term (bedload) effects. Increased suspended sediment (above historic backgrounds) caused by logging operations is usually the result of surface soil loss from roads and large areas of exposed mineral soil on the harvest area that has access to a watercourse.

An interesting characteristic of this site is that the conifer timber types are concentrated upslope on or near the ridgetops and the grasslands and hardwoods are on the lower slopes. Usually, the opposite is the case with the grass and oaks on the ridgetops and the timber in the creeks, putting operations closer to the major watercourses and increasing the risk of sediment input. While there are watercourses within the plan area, most are class III's with only a few class II's. The physical distance alone of the THP to any major watercourse shall lessen the risk of sediment input.

Soil types and characteristics are discussed in the attachments addendum and erosion hazard ratings for the plan area were determined to be moderate (see Estimated Surface Soil Erosion Hazard Worksheet in Attachments Addendum). The partial cutting of the plan area, with no mechanical site preparation proposed, shall reduce the risk of soil detachment by raindrop impact significantly by leaving a substantial amount of vegetative cover remaining after operations.

In light of the EHR, the silvicultural system proposed, the watercourse protection measures provided for in the Rules and the RPF's experience in the area, it is concluded that the greatest chance for sediment effects will come from runoff of roads, landings and skidtrails.

Presently, the existing road system is being used for ranch management purposes. The most significant impact noted in this road system is a number of failed watercourse crossings, or crossings that were never installed. This THP proposes to reconstruct these crossings to high standard permanent and temporary crossings. All new permanent watercourse crossings have been sized using Talbot's Formula and should be adequate when properly installed to withstand a 100 year flood.

This plan has been designed around the existing road system, requiring only -500 feet of new construction of temporary road. This is on a ridgetop location with no watercourses involved. Sediment effects shall be lessened significantly by adhering to the requirements of the Forest Practice Rules which include treatment of exposed mineral soil within WLPZ's as described in the addendum to Item #27 of the THP. Soil stabilization treatments, the restriction of tree felling across WLPZ's, installation of drainage structures and facilities and other features or actions to reduce surface erosion, gullyng, channel erosion and mass erosion will reduce the risk of sediment induced effects.

mass erosion will	
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Water temperature effects occur when enough canopy cover is removed to allow direct sunlight to reach the water. Dark colored stream bottom material, shallow water and slow running water can combine to increase this effect. Maintenance of multilevel canopies in WLPZ's shall provide adequate solar protection to the watercourses so that no increase in water temperature is expected to occur.

Organic debris effects can be either positive or negative, depending on the size of debris, type and the location introduced. Possible negative effects include a decrease in dissolved oxygen in the water, increase in acidity levels, diversion stream flow into erodible materials, cause fish barriers and create debris flows during high water events. No trees shall be felled or skidded across Class II watercourses and if accidentally deposited, shall be removed immediately and the banks stabilized. Any slash that may enter Class III watercourses shall be removed or stabilized as required in the rules. Introduction of organic debris is best left to natural processes and maintenance of WLPZ's including leaving at least two live 16" or larger conifers per acre within 50 feet of the watercourse shall provide for this.

Chemical contamination effects from logging operations are in the form of herbicide or pesticide application or run-off, fuel spills, dust retardates (not water) and excess nutrients released during slash burning. No herbicide or pesticide usage is prescribed, nor is the use of chemical dust retardates in this THP. The only slash burning will be for hazard reduction in piles around landings. These piles will be placed in such a position as required so as to not have direct access to a WLPZ. No Chemical contamination is expected from the result of this project.

Peak flow effects occur when management activities have occurred that reduce vegetative water use, create large openings where heavy snow loads can accumulate or design roads that concentrate run-off through insloping and poorly spaced drainage structures and facilities. At 600-1900 ft. above sea level, snow load accumulation should not be a problem. Roads on the plan area are outsloped in most places and drainages facilities will be installed as per the Forest Practice Rules. Partial cutting is prescribed on 100% of the plan area.

Extra mitigation measures that go beyond the Forest Practice Rules that are proposed in order to insure that no significant negative effects to watershed resources will occur include:

1. Partial Cutting on 100% of the plan area.
2. Only limited new road construction.
 - a. No new road construction within WLPZ's.
 - b. No new road construction on slopes over 65% or on slopes over 50% within 100 ft. fo a WLPZ boundary.
 - c. New road construction designated as temporary.
3. No hardwoods to be harvested within WLPZ's.

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4. No new watercourse crossings. All crossings are either existing or reconstruction of failed crossings.
5. Equipment Limitation Zones (ELZ's) on all Class III's.
6. Equipment Exclusion Zones (EEZ's) on springs and wet areas.
7. Reclamation of existing road at THP Reference Points "a", "b" and "c".
8. Sizing of all new permanent culverts to withstand 100 year storm event.

The project, as proposed, shall have little or no impact on the beneficial uses of water. While there may be some increase in turbidity and suspended sediment in the short term, it should be insignificant and lessened and mitigated by proper road maintenance and reconstruction of the failed watercourse crossings as prescribed in the plan. This should reduce the sediment input from the project area in the long-term. The watercourse protections, as outlined in Item #50 and the harvesting practices limitations, as outlined in Item #27 shall provide adequate protection for the beneficial uses of water addressed herein and minimize the chance of exportable watershed products including sediment, heat, increased peak streamflows, organic debris and nutrients from entering the watercourses. This plan poses no significant adverse impact to the beneficial uses of water listed herein or to any fishery or other aquatic inhabitants found in the Eel River system considering the mitigations as proposed for watercourse and resource protections.

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References

- "Water Quality Control Plan For The Northcoast Region" - including amendments up through September 26, 1991.
- "Wildland Watershed Management", by Donald R. Satterlund and Paul W. Adams, 2nd. Edition.
- "Geology of Northern California" - California Division of Mines and Geology, Bulletin 190.
- "Monitoring Guidelines To Evaluate Effects of Forestry Activities On Streams In The Pacific Northwest and Alaska" published by the United States Environmental Protection Agency.
- "Recent Publications Of The Pacific Northwest Research Station, Third Quarter 1992" published by the United States Department of Agriculture, Forest Service.
- "Long-term Experiments On Log Decomposition At The H.J. Andrews Experimental Forest" published by the United States Department of Agriculture, Forest Service.
- "The RAPID Technique: A New Method For Evaluating Downstream Effects of Forest Practices On Riparian Zones" published by the United States Department of Agriculture, Forest Service.
- "Research Publications of The H.J. Andrews Experimental Forest, Cascade Range, Oregon: 1988 Supplement" published by the United States Department of Agriculture, Forest Service.
- "Past THPs Maps" CDF&FP, Humboldt-Del Norte Ranger Unit, 118 So. Fortuna Blvd., Fortuna, CA 95540
- William E. Kleiner, Western Timber Services, Inc. P.O. Box 1136, Arcata, CA 95521. (707)822-3628.
- Eric Behn, U.S. Army Corp of Engineers, 211 Main st., S.F. CA 94105. (415)744-3318
- Lou Bugenig, Centerville Road, Ferndale CA 95536. (707)786-9646
- Viola R. McBride, P.O. Box 1135, Ferndale CA 95536. (707)725-3088
- William R. McBride, P.O. Box 608, Ferndale CA 95536. (707)786-9460
- Fred Nunnemaker, 438 10th St., Fortuna CA 95540. (707)725-2046
- 1974 Aerial Photographs - Black and White.
- 1983 Aerial Photographs - Color.
- 1991 Aerial Photographs - Color.

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Soil Productivity

Cumulative soil productivity impacts occur when the effects of two or more activities, from the same or different projects, combine to produce a significant decrease in soil biomass production potential. These impacts most often occur onsite within the project boundary, and the relative severity of productivity losses for a given level of impact generally increases as site quality declines. The assessment area for cumulative soil productivity impacts is limited to the area of the proposed THP as this is where impacts to soil productivity are most likely to occur. The geographic description of this assessment area is such that an individual assessment area map would serve no purpose and need not be provided.

Within the assessment area for soil productivity, there has been no projects in the past 10 years. Portions of the assessment area that are now prescribed for shelterwood removal were previously harvested approximately 15 to 20 years ago. No negative impacts on soil productivity from this harvest were noted during field inspections.

There are no significant negative impacts expected due to the loss of organic matter associated with harvesting operations in the assessment area. Typically after logging, organic matter in the form of limbs, tops and brush is left scattered around the plan area. No site preparation is prescribed for this THP. Large woody debris are also a major contributor to the amount of organic matter available, particularly those in late stages of decay. It is unlikely that the plan will have any negative effect on the amount of large woody debris available. Logs that are obviously culls and of no economic value will be left in a natural position in a well distributed manner. Underground litter will increase due to the harvest as stumps from harvested trees decay. This will be a gradual process with rates of decay dependent on species beginning with the abundant root hairs and continuing until all of the root system has decomposed.

No long-term surface soil loss is anticipated due to the operation of the THP. The main defense against soil erosion is the porosity of the surface soil. Porosity is maintained by the natural decay of dead organic matter being fed upon by soil organisms. If the organic material is removed and prevented from rebuilding, the porosity of the soil would gradually diminish. The forest stand treatments prescribed in this plan will insure the continued production of organic material necessary to maintain soil porosity. All soil series present on the plan area are classified as well-drained soils. The EHR was calculated to be moderate.

Soil compaction is likely to occur when the soil is saturated and subject to use by heavy equipment. No yarding or hauling is proposed during periods when the soil is saturated by rainfall. Considering the soil family, soil depth, soil structure, presence of coarse fragments in the soil, the logging history of the area, and the silviculture and yarding systems proposed, there is no significant risk of soil compaction associated with this THP.

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Operation of this THP would cause no significant negative impacts to the soil productivity on the project area due to a loss of growing space. Silviculture and yarding systems were planned around the existing road system. Very limited new road construction is proposed (less than 500 ft. total new road) and tractors will use existing skid trails where possible.

Partial cutting and natural regeneration of douglas-fir along with revegetation of shrubs, grasses and herbaceous plants, limited new road construction and use of use of tractors on designated skid trails on the steeper slopes will combine to lessen any potential impacts to soil productivity.

Future projects within the assessment area for soil productivity will be further timber harvesting and use as range land. Portions of the plan area designated as shelterwood-removal step will most probably not be operated until the stand is in need of a thinning, probably in about 20-30 years. In the areas designated for shelterwood-seed step, future entries will be dependent upon how soon we have regeneration success but, barring acts of nature and other unforeseen events, will probably be in about 5-15 years.

In studying the cumulative impacts on soil productivity resources in this assessment area for this proposed project in combination with past and future projects, and given due consideration to the silviculture prescribed, the selection of yarding systems and the areas ability to naturally re-vegetate, it is our opinion that no negative impacts will incur.

References

"California Forest Practices Rules" - Technical Rule Addendum Number One.

"California Forest Soils" University of Agricultural Sciences, University of California publication.

"Forest Soils" - Lutz and Chandler

"Forest-Soil Relationships in North America" - edited by Chester T. Youngberg.

"SAF Forestry Handbook", edited by Karl F. Wenger, 2nd. Edition.

"Forest Ecology" - Stephen H. Spurr and Burton V. Barnes, 3rd. Edition.

"Geology of Northern California" - California Division of Mines and Geology, Bulletin 190.

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Following are some listed species that could possibly occur within the assessment area and how the RPF looked for them.

Birds

Bald Eagle (*Haliaeetus leucocephalus*)

Management Status: State listed Endangered, Federally listed Endangered, California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): Coastal areas, and remainder of state from central California north (see list of reference publications for source of range maps). Breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity Counties (Zeiner, et al, 1990).

Habitat: Forages over large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. May also feed on water birds and or small mammals (voles). Perches high in snags, broken topped or stoutly limbed trees or rocks near water. Nests in large mature dominant or old growth trees with open branching. Nests usually in stands with less than 40% canopy, but with some shade afforded the nest. Often utilizes largest tree in the stand for stick platform nest located approximately 50-200 feet above ground, usually below tree crown. Species is not so important as height and size. Nearest nest tree location is usually near a permanent water source. In California, 87% of nest sites are within 1 mile of water (Zeiner, et al, 1990).

No bald eagles have been observed by the RPF or Staff during the course of working on this and adjacent property, nor have any been seen by wildlife biologists hired to do other wildlife surveys or by local ranchers. As bald eagles and their nests are usually quite visible it is highly unlikely that bald eagles are nesting in the area. That they may peripherally use the area is possible, since some elements of the habitat requirements exist. Operation of the THP should not alter the potential use of the area by bald eagles.

Golden Eagle (*Aquila chrysaetos*)

Management Status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Range: Entire state with some small exceptions, most notably in this case area along coast from south of Humboldt Bay north to the Oregon Border (Zeiner, et al, 1990).

Reported in THP area: No

Reported in Biological Assessment area: No

Habitat: needs open terrain for hunting, grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. Soars in search of prey 98-297 feet above ground, or in low quartering flights often 23-26 feet above ground. Occasionally hunts from a perch and flies directly to prey. Sometimes steals food from other predators. Hunting in pairs (Zeiner, et al, 1990).

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No golden eagles or nests have been detected on or near the subject THP by the RPF or Staff during preliminary field work for this THP and other forestry related work on adjacent properties. Specific habitat requirements for the golden eagle suggest that they could occur in the area. No golden eagles have been reported to the RPF by wildlife biologists hired to do wildlife surveys and by local ranchers. No golden eagles have been reported to the NDDB. Operation of the THP should not effect any potential use of the area by golden eagles and may improve it by increasing forage opportunities. It is unlikely that operation of the THP would adversely affect any potential habitat for golden eagles.

Northern Spotted Owl (*Strix occidentalis*)

Management Status: Federally listed threatened, California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): Northern California from Cascades west through Coast Ranges (Zeiner, et al, 1990).

Habitat: Habitat requirements vary by location but typically are found in medium to dense, multi-layered coniferous forests (Zeiner, et al, 1990). It has long been held that mature or old growth stands were required but consensus is now that habitat structure and not age is most important .

This THP is being submitted after consultation with the Department of Fish & Game in compliance with 14 CCR 919.9 (a). The Spotted Owl Plan Review Checklist/Worksheet is attached as a confidential part to this addendum.

Northern Goshawk (*Accipiter gentilis*)

Management Status: U.S. Forest Service Sensitive, Federal Category 2, California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): North Coast Ranges through Sierra Nevada, Klamath, Cascade and Warner Mts., and possibly in Mt. Pinos and San Jacinto, San Bernadino, and White Mts (Zeiner, et al, 1990).

Habitat: Prefers middle and higher elevations, and mature, dense conifer forests. Hunts in wooded areas and uses snags and dead-topped trees for observation and prey-plucking perches. The goshawk uses mature and old-growth stands of conifer and deciduous habitats as cover. They usually nest on north slopes, near water, in the densest parts of stands, but close to openings. In general, they like dense, mature conifer and deciduous forests with at least a 35% canopy closure, interspersed with meadows, other openings, and riparian areas (Zeiner, et al, 1990).

Northern goshawks were surveyed for in the plan area with negative results. Survey protocol was based on Survey Protocol For Northern Goshawk On National Forest Lands In The Pacific Southwest Region (Woodridge, 1992). Given the plan areas road density, a road

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survey was chosen as the most appropriate survey technique. Two surveys were conducted, once in June and once in August. Survey efforts were confined to the plan area as it is the only area within 1/2 mile that contains suitable habitat. We waited until our survey efforts were near completion for northern spotted owls to begin goshawk surveys to avoid harassment of any spotted owls that may have been present in the area. After we were certain that spotted owls were absent from the area we surveyed for goshawks.

In addition to our survey efforts, Esther Burkett (CDF&G, Wildlife Management Div.) was contacted by letter dated June 8, 1993 concerning known Goshawk Territories within 1/2 mile of the plan area. No response from CDF&G has been forthcoming.

Cooper's Hawk (*Accipiter cooperi*)

Management status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): Breeds throughout most wooded portions on the state, more uncommon in the northwest and southeast (Zeiner, et al, 1990).

Habitat: Usually nest in patchily distributed open stands of deciduous or mixed forests rather than in the interior of contiguous stands. Frequently found in dense stands of live oak, riparian deciduous or other forest habitats near water (Zeiner, et al, 1990).

No Cooper's hawks have been observed by the RPF or staff while doing THP field work and other forestry related activities on this property or by wildlife biologists hired to do wildlife surveys within the plan area or assessment area. Certain elements of their habitat requirements can be found on the plan area and within the assessment area. Habitat modification should have no significant negative effect on the Cooper's hawk (if it does exist within the assessment area) and certain elements may be improved including creating a more patchy woodland landscape with more edge for prey opportunities.

Sharp-shinned Hawk (*Accipiter striatus*)

Management status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): Wintering populations are fairly common, breeding distribution is not well documented (Zeiner, et al, 1990).

Habitat: Usually nests in dense pole and small tree stands (25-50 years) of conifers. Not usually found in early or late seral habitats. Climate of nesting habitat should be cool, moist and well shaded with little ground cover, near water (Zeiner, et al, 1990).

Sharp-shinned hawks have been observed by wildlife biologists within the assessment area (but not on the plan area) while doing other wildlife surveys. It is not expected that harvest of this THP will have any adverse impacts on the sharp-shinned hawk given the preference of younger pole-sized stands. It would seem that this

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species would benefit from this type of operation by creating more edge for prey opportunities while maintaining an even-age structure.

Marbled Murrelet (*Brachyramphus marmoratus*)

Management Status: California Endangered, Federal Threatened (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): Occurs from the Oregon border south to Point Sal, Santa Barbara Co (Zeiner, et al, 1990).

Habitat: In non-breeding season occurs in pelagic habitats. Habitat requirements for nesting sights for the murrelet are subject to opinion and current literature provides no definite guidelines. General requirements are for large, unbroken tracts of old growth forests with dense canopy closure and large limb structure. Inland nesting ranges vary from a few miles inland to 24-50 miles from the coast. Minimum habitat block size ranges from a low estimate of 25 acres to a high of 40 acres. Minimum canopy closures range from 40 percent or more to a less than 40 percent standard.

The proposed plan was discussed with Ken Moore of CDF&G regarding the potential use of the area by marbled murrelets. and the need for surveys. Considering distance from coast (24-25 air miles from nearest coastal point), vegetative types (ranch type grasslands/oaks with patches and ribbons of Douglas-fir 20-30" DBH with occasional residual 4-6' DBH, arid micro climate, elevation (1,000-1,500 ft. above sea level, lack of redwood/Douglas-fir timber types and no known historical use in that area, Mr. Moore concluded that no surveys would be necessary (Ken Moore, per. comm.).

Great Blue Heron (*Ardea herodias*) and Great Egret (*Casmerodius albus*)

Status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range: Most all California except several interior mountain areas and deserts (egrets) (Zeiner et al. 1990).

Habitat: Shallow estuaries and fresh and saline emergent wetlands, egrets also utilize slow moving streams, mudflats, salt ponds, and irrigated croplands and pastures. Great blue herons are less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills. 75% Of diet is fish, mostly species not sought by humans. Also eats small rodents, amphibians, snakes, lizards, insects, crustaceans, and occasionally small birds. Stands motionless or walks slowly when searching for prey in shallow water less than 12 inches, or sometimes in open fields. Perches and roosts in secluded tall trees or also in kelp beds off shore (Zeiner et al. 1990).

No great blue herons or great egrets (including nest trees and colonies) have been observed nor has evidence of their presence been observed by the RPF or Staff on or near the plan area during forestry related work on and adjacent to the

subject property.	
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Range maps indicate that the plan area is outside the range of the great egret. Herons have been observed along the Eel River and it is possible that they may venture up Basin Creek to forage although none have been observed. Watercourse protections addressed in the addendum to Item #50 shall be sufficient to protect watershed resources downstream and that the potential use of herons to forage in the Eel River and Basin Creek shall not be impaired. No negative impacts are expected to occur to great blue herons or great egrets as a result of timber operations.

Osprey (*Pandion haliaetus*)

Management status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range: Breeds in northern California from Cascade Ranges south to Lake Tahoe, and along coast south to Marin County (Zeiner et al. 1990).

Habitat: Breeding takes places along major rivers, lakes and estuaries such as Klamath River, Sacramento River, Shasta Lake, Eagle lake, Lake Almanor, Humboldt Bay and Noyo Harbor. Breeding population estimated in 1975 at 350-400 pairs in northern California, number apparently increasing in recent years. Associated strictly with large, fish-bearing waters. Preys mostly on fish, also takes a few mammals, birds, reptiles, amphibians, and invertebrates. Ospreys require open, and clear waters for foraging. Swoops from flight, hovers, or perches to catch fish near surface of water. Uses large trees, snags, and dead topped trees in open forest habitats for cover and nesting. Large platform nests at tops or near top of dead trees, snags, cliffs, or human made structures such as power line poles. Nests as high as 250 feet, or occasionally on ground. Needs tall, opened branched perch trees (pilot trees) for landing before approaching nest and for flight practice for young. Nests averaged 30-81 inch DBH and 135 feet. Nests may exist in colonies with only a portion of the nests being utilized within any one year (Zeiner et al. 1990).

In preparation of this THP and other forestry related work on this and adjoining properties, no ospreys have been observed on or near the plan area. As obvious as ospreys are (especially during the breeding season) is highly unlikely that there are any using the area at this time. The Eel River is a large, fish bearing water and the use of the area by ospreys is possible. The THP calls for leaving unmerchantable snags that would be suitable for nest and perch trees, should ospreys every use the area in the future. Operation of this harvest plan would not impair any current or future use of the area by osperys.

American Peregrine Falcon (*Falco peregrinus anatum*)

Management Status: Federal Endangered, California Endangered (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

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Range: Most of state except portion of southeast (Zeiner et al. 1990).

Habitat: Very uncommon, breeds mostly in woodland, forest and coastal habitats. 39 Known breeding pairs in California 1981, decline associated mostly with DDE contamination. Swoops from flight onto flying prey, chases in flight, rarely hunts from perches. Preys on number of birds up to duck size, occasionally taking mammals, insects, and fish. Requires protected cliffs, and ledges for cover. Breeds near wetlands, lakes and rivers, or other water on high cliffs, banks, dunes, mounds. Nest is a scrape on a depression or ledge in an open site. Will nest on human-made structures, and occasionally uses tree or snag cavities or old nests of other raptors (Zeiner et al. 1990).

No Peregrine falcons were observed on or near the plan area by the RPF or Staff or by wildlife biologists hired to do wildlife surveys within the plan area or assessment area. None of the required protected cliffs or ledges exist on the plan area. There are some small rock outcroppings on Blue Jacket Butte, North of the plan area, that may be marginal habitat. No peregrines have been observed flying around this rock area or any where else in the assessment area. Operations are -.5 miles away from these rock outcroppings. It is unlikely that operation of this plan will impact any current or future use of the area by peregrines.

Mountain Quail (*Oreortyx pictus*)

Management Status: Category 2 (NDDB Special Animals List, December 1992), also a harvest species (DF&G 1992 Hunting Regulations).

Reported in THP area: No

Reported in Biological Assessment area: No

Range: Most major montane habitats throughout California.

Habitat: Montane habitats, brushy vegetation interspersed with grass/forb areas; steep slopes and thickets for cover.

Mountain Quail have been observed by wildlife biologists within the assessment area while doing other wildlife surveys. It is not expected that harvest of this THP will have any adverse impacts on the Mountain Quail and they may actually benefit from operation of the plan. It has been observed by the RPF that mountain quail populations tend to escalate following timber harvesting operations. Whether this is associated with habitat alteration that improves nesting and escape areas or if it increases forage (seeds and insects) is not known. It would seem that this species would benefit from this type of operation by creating more ground cover and nesting structure.

Ruffed Grouse (*Bonasa umbellus*)

Management Status: California Species of Special Concern (NDDB Special Animals List, December 1992), harvest species (DF&G 1992 Hunting Regulations).

Reported in THP area: No

Reported in Biological Assessment area: No

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Range: Northwestern California from Del Norte County south to southern Humboldt County and eastward to northern Trinity County and southwestern Siskiyou County (Zeiner, et al, 1990).

Habitat: Valley foothill riparian and surrounding conifer forests at low to middle elevations. Requires a mosaic of habitats; riparian stands with young and old deciduous trees, brushy areas interspersed with herbaceous inclusions and conifer stands for cover (Zeiner, et al, 1990).

No ruffed grouse have been observed on or near the plan area by the RPF or Staff or by wildlife biologists hired to do wildlife surveys within the plan area or assessment area. Blue grouse are abundant on and around the plan area and operation of the THP is not expected to adversely effect the use of the area by blue grouse, in fact, they often do well in second-growth stands following logging (Zeiner, et al, 1990).

Purple Martin (*Progne subis*)

Management Status: California Species of Special Concern, Category 2 (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range: Central and Northern California in low-elevation habitats in summer. Rare in spring and fall, absent in winter.

Habitat: Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Also occurs in some coniferous habitats including Douglas-fir. Frequents old-growth, multi-layered, open forest and woodland with snags in breeding season. Forages over riparian areas, forest and woodland. Found in a variety of open habitats in migration (Zeiner, et al, 1990). Also found in towns, farms, open and semi-open country near water (Peterson, 1990). Loss of riparian habitat, removal of snags and competition for nest cavities from European starlings and house sparrows are said to be causes for the decline in population.

No purple martins have been observed by the RPF or staff while doing THP field work and other forestry related activities on this property or by wildlife biologists hired to do wildlife surveys within the plan area or assessment area. Certain elements of their habitat requirements can be found on the plan area and within the assessment area. Habitat modification should have no significant negative effect on purple martins (if they do migrate through the assessment area). Retention of riparian habitat and maintaining snag densities are incorporated into the plan.

Mammals

California Red Tree Vole (*Arborimus pomo* (=longicaudus))

Management Status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): From the Oregon border south to Sonoma County, mainly restricted to fog belt (Zeiner, et al, 1990).

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Habitat: Occurs in old-growth and other forests, mainly Douglas-fir, redwood and montane hardwood-conifer habitats. Dependent on Douglas-fir and/or grand fir for food and shelter. The needles of Douglas-fir and grand fir and the tender bark from terminal twigs are eaten and nests are constructed in the trees (Zeiner, et al., 1990).

The plan area is within the range of the red tree vole according to the California Wildlife Habitat Relationship range mapping system and the possibility of their presence was acknowledged since some of their habitat requirements are present. The red-tree vole is difficult to locate due to a number of factors including their size, nocturnal activity, lack of vocalizations and similarity of their nests with the nests of other forest animals. One technique is to look for partially eaten Douglas-fir or grand fir needles at the base of trees. Red tree voles eat all but the resin ducts and sometimes use these to line their nests, but may also discard them where they can be found on the forest floor.

No red tree voles or red tree vole nests were observed during other wildlife surveys and in THP preparation and none are known to exist on the plan area, however, given the habitat conditions present on the plan area and the range of the red-tree vole it is likely that they do exist on the plan area. Partial cutting and retention of a multi-storied canopy in the WLPZ's shall allay any short-term disruption to the potential use of the plan area by red-tree voles caused by harvesting operations. In addition, tree marking crews shall be instructed to look for and leave trees with nests for the benefit of all wildlife well distributed throughout the plan area and to look for resin duct piles at the bases of trees and leave them for the specific protection of red-tree voles.

Marten (*Martes americana*)

Management status : Forest Service Sensitive (Zeiner, et al., 1990), *M.a. humboldtenis* is listed as a California Species of Special Concern (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): North Coast regions, Sierra Nevada, Klamath and Cascades Mts (Zeiner, et al., 1990).

Habitat: Require a variety of different-aged stands, with access to old-growth conifers and snags which provide cavities for denning and nesting. Small clearings, meadows and riparian areas provide foraging habitats (Zeiner, et al., 1990).

No martens have been observed within the assessment area in preparation of this THP and other forest management work on this property by the RPF, staff or by wildlife biologists hired to do wildlife surveys for this THP, nor were there occurrences recorded in the NDDB. According to range maps the plan area is outside the range of the marten (Zeiner, et al., 1990). The plan area and surrounding stands provide habitat conducive to martens and the proposed timber operation should not impact their potential use of this area if their range should ever expand.

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Pacific Fisher (*Martes pennanti*)

Management Status: California Species of Special Concern, Category 2 (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range: Found in the Sierra Nevada, Cascades, Klamath Mts. and in a few areas in the North Coast Ranges (Zeiner, et al., 1990).

Habitat: Fishers require large areas of mature, dense stands of coniferous forests with snags and deciduous - riparian habitats greater than 50% canopy closure (Zeiner, et al., 1990).

The plan area is outside the range of the fisher according the WHR range mapping system (Zeiner, et al., 1990). No Pacific fishers were observed, nor was evidence of their presence observed during other wildlife surveys, inventory work on this property, preliminary field work of this THP and in other forestry related work in the immediate area. During field work, cavity trees, snags and down logs were thumped and visually inspected for evidence of fishers with negative results. The plan area is upslope and well out of any major riparian corridors.

Mountain Lion (*Felis concolor*)

Management status : *F.c. browni*, California Species of Special Concern, Federal Category 2 (NDDB Special Animals List, December 1992).

Reported in THP area: No

Reported in Biological Assessment area: No

Range (California): Widespread, uncommon permanent resident, ranging from sea level to alpine meadows. Found in most habitats except some desert habitats that don't support mule deer populations. Most agree that numbers appear to be increasing. *F.c. browni*, Yuma mountain lion is native to the Colorado River Valley (Zeiner, et al., 1990).

Habitat: Most abundant in riparian and early brushy stages of most habitats. Attracted to areas of irregular terrain, rocky outcrops, and edge habitat (Zeiner, et al., 1990).

Mountain lions have been observed near the plan area by wildlife biologists and local ranchers and sightings are increasingly more common in the area. None of their specific habitat requirements including feeding, cover, reproduction and water will be impeded by the proposed timber operations. Habitat conditions will not be significantly altered, however such alterations that will occur will favor the mountain lion by increasing brushy (early) stages of various habitats and tree/brush edges.

Amphibians

Olympic Salamander (*Rhyacotriton olympicus*)

Management status : California Species of Special Concern (NDDB Special Animals List, December 1992).

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Range (California): Occurs in coastal forests of northwestern California south to Mendocino Co., and is common in prime habitat (Zeiner, et al., 1988).

Habitat: Requires cold, well-shaded permanent streams and seepages in shady coastal forests. When found out of water it is usually within the splash zone or on moss-covered rock rubble with trickling water. It is found primarily in redwood, Douglas-fir, mixed-conifer, montane riparian and montane hardwood-conifer habitats (Zeiner, et al., 1988).

While year round watercourses do exist on the plan area that could support Olympic salamanders, none were observed in preparation of this plan. Searches were made in Class II (two) watercourses among pebbles and rock rubble where they would normally be found.

Del Norte Salamander (*Plethodon elongatus*)

Management Status: California Species of Special Concern, Federal Category 2 (NDDB Special Animals List, December 1992).

Range: The Del Norte Salamander is found in Del Norte, Humboldt, Siskiyou and western Trinity Counties at elevations from sea-level to 2500 ft. (Zeiner, et al., 1988).

Habitat: This species occurs in open-to-dense, sapling-to-mature stages of valley-foothill riparian, montane hardwood-conifer, Douglas-fir and redwood habitats, in stabilized talus, in rotten logs, or under surface objects in moist, but not wet, microhabitats (Zeiner, et al., 1988).

It is highly unlikely that Del Norte salamanders exist on the plan area as it is outside the known range of the Del Norte salamander according to the WHR range mapping system. During watercourse surveying and amphibian investigation work, no evidence was found to indicate the presence of Del Norte salamanders.

Tailed Frog (*Ascaphus truei*)

Management Status: California Species of Special Concern (NDDB Special Animals List, December 1992).

Range (California): The present range in California extends from Del Norte County in the north to as far south as possibly central Sonoma County and east to Shasta and Tehama Counties (Zeiner, et al., 1988).

Habitat: Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats, in perennial montane streams in steep-walled valleys with dense vegetation (Zeiner, et al., 1988).

Informal searches for the tailed frog, both adult and tadpole stages, were made in the class II watercourses, in densely vegetated areas with sufficient year-round flow and a rocky bottom. Although none were found certain elements of their habitat requirements were present and the assessment area does fall within their known range. Given the restrictions placed on the Class II WLPZ's, no negative impacts are likely to occur on the tailed frog if they do inhabit the assessment area.

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Northern Red-legged Frog (*Rana aurora*)

Management Status: California Species of Special Concern, Federal Category 1 (NDDB Special Animals List, December 1992).

Range: In California occurs west of the Sierra-Cascade crest and along the Coast Ranges the entire length of the State. Usually below 3936 feet but may occur up to 8000 feet (Zeiner, et al., 1988).

Habitat: Found in a variety of habitats, including humid forest, woodlands, grasslands and streamside, but most common in lowlands and foothills (Zeiner, et al., 1988).

Microhabitat: Associated with standing bodies of water such as ponds, lakes, marshy areas and occasionally quiet pools in streams. Breeding sites need to have little or no flow, last long enough for metamorphosis to occur, and have underwater or bankside vegetation for egg attachment (Zeiner, et al., 1988).

Red-legged Frogs were not detected during amphibian surveys. Appropriate breeding habitat is absent within the proposed harvest area, and harvest activities are not expected to have negative impacts upon potential *R. aurora* populations within the biological assessment area.

Foothill Yellow-legged Frog (*Rana boylei*)

Management Status: California Species of Special Concern, Federal Category 2 (NDDB Special Animals List, December 1992).

Range: Present in most of northern California west of the Cascade crest from sea level to around 7000 feet; occurring in the Coast Ranges from the Oregon border to Los Angeles County, east to the western flank of the Sierra Nevadas and south to Kern County (Zeiner, et al., 1988).

Habitat: Found in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer and riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral and wet meadows (Zeiner, et al., 1988).

Microhabitat: Confined to the immediate vicinity of permanent streams, most common along streams having rocky, gravelly or sandy bottoms, but may occur in those with muddy bottoms (Zeiner, et al., 1988).

Informal surveys were made for foothill yellow-legged frogs and they were not detected on any of the plan area but were found within the assessment area. Given that *R. boylei* is confined to the immediate vicinity of permanent streams and exhibits a home range of 33 feet or less in the longest dimension (Calif. Dept. of Fish and Game 1983) as well as the wide variety of habitat conditions that it is found in, Class II watercourse protections will provide a more than adequate buffer for preserving the necessary structural habitat and temperature requirements of this species if they do exist on the plan area.

Other listed species

Listed plant species considered in preparation of this plan include Humboldt milk vetch, Lassics sandwort, Lassics ceanothus, Lassics lupine, beaked Tracyina and Tracy's sandwort. **APPENDIX 1**

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