ADMINISTRATIVE RECORD FOR
TIMBER HARVESTING PLAN (THP)
1-15-014 DEL
GAUTREAUX THP

California Board of Forestry
and Fire Protection (Board)
Public Hearing regarding the
Appeal of THP Denial by the
Department Forestry and Fire Protection
April 6, 2016

MARK GAUTREAUX,
Plan Submitter, Timberland Owner,
and Timber Owner

BRIAN GRIESBACH,
Registered Professional Forester
(RPF) #2738

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California Department of Forestry and Fire Protection (CAL FIRE)

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Pre-Harvest Inspection (PHI)

First Day of PHI (3/17/15)

Final Day of PHI (9/8/15)

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
135 Ridgway Ave.
SANTA ROSA, CA 95401
(707) 576-2959
Website: www.fire.ca.gov

Date: February 26, 2015
Ref: **1-15-014 DEL**
By: TB

To: _X_ Registered Professional Forester
_X_ CAL FIRE - Field Unit-Fortuna
____ Other:

Attached is a copy of a proposed timber harvesting plan (THP), non-industrial timber management plan (NTMP), or an amendment (AM) to an approved THP or NTMP. This THP/NTMP/AM is being provided pursuant to Title 14 California Code of Regulations section 1037 et. seq. CAL FIRE invites and requests your participation in the review of this THP/NTMP/AM. Each THP/NTMP/AM is processed through an interdisciplinary review team and most are field inspected before the final interdisciplinary review team meeting. This process is in compliance with the California Environmental Quality Act (CEQA), but is substantially different in that no EIR is produced and the time frame is much shorter.

Each timber harvesting document is identified by a number, such as 1-14-606 MEN. The numbering system is defined as follows:

- 1 denotes CAL FIRE's Coast Area, which includes coastal counties from Santa Cruz County north to the Oregon border and a few
- counties interior to those.
- 15 denotes the year (2015)
- 606 denotes the 606th plan received in 2015
- DEL denotes the county: Colusa = COL, Del Norte = DEL, Humboldt = HUM, Lake = LAK, Marin = MAN, Mendocino = MEN, Napa = NAP, Santa Clara = SCL, Santa Cruz = SCR, San Mateo = SMO, Sonoma = SON, Trinity = TRI
- NTMP behind the year (i.e. 1-14NTMP-) identifies the document as a non-industrial timber management plan

During the review period THPs, NTMPs, AMs (on plans dated 2014 and after), and subsequent review team documents are, upon receipt, electronically transmitted to the Dept. of Fish and Wildlife, the appropriate Calif. Regional Water Quality Control Board, the Dept. of Conservation (Calif. Geological Survey), the Dept. of Parks and Recreation, the county planning agency, and the Calif. Coastal Commission (when in their jurisdiction). Transmission is via: ftp://thp.fire.ca.gov/THPLibrary/North_Coast_Region/ . Documents are filed in a folder specific to the plan; and in a "New Mail" folder as a short-term means of notification of mail recently received by CAL FIRE. Major amendments and associated review documents on plans received prior to 2009are physically mailed to the review team.

If the proposed THP/NTMP/AM is found acceptable for filing, the first multi-agency review team meeting will generally occur on a Thursday on or before March 8, 2015 at CAL FIRE's Coast Area Office, 135 Ridgway Avenue, Santa Rosa, CA 95401, (707) 576-2959.

Most THPs, NTMPs, and AMs have a preharvest inspection (PHI) and a first and second review:

Plans with county designators SCR, SMO or SCL are reviewed by our Felton office, 6059 Highway 9. Phone (831) 335-6740 for PHI and review team meeting dates.

County designators MAN, SON, NAP, LAK (southern 1/3) are reviewed out of our West College Ave. and our 135 Ridgway Ave., Santa Rosa offices. Phone (707) 576-2285 to confirm the PHI. Phone (707) 576-2959 for review team meeting dates which are generally held on Thursdays.

County designators MEN, LAK (northern 2/3) or TRI (southern ¼) are reviewed by our Willits office. Review team meetings are generally held Thursdays at 17501 N. Highway 101. Phone (707) 459-7440 to confirm PHI or review team meeting dates.

County designators HUM, DEL or TRI (northern ¾) are reviewed by our Fortuna office. Review team meetings are generally held on Thursdays at 138 Fortuna Blvd. Phone (707) 725-4413 to confirm PHI or review team meeting dates.

CAL FIRE invites you to participate in the review of this THP/NTMP/AM. An approved THP/NTMP/AM may impact a resource of concern to your agency. We value your input and look forward to your participation in the review process.

Sincerely,

LESLIE A. MARKHAM
Deputy Chief, Forest Practice
RPF #2529

Attachment

0001

NOTICE OF INTENT TO HARVEST TIMBER

A Timber Harvesting Plan (Plan) or Amendment has been submitted to the California Department of Forestry & Fire Protection (CAL FIRE). CAL FIRE will be reviewing the proposed timber operation for compliance with State law and rules of the Board of Forestry and Fire Protection. The following briefly describes the proposed timber operation and where and how to get more information. In accordance with the timeline stated under Public Resources Code Section 4582.7, you may submit written public comments on the Plan or Amendment for CAL FIRE to consider.

This notice applies to (select one below):

☒ New Timber Harvesting Plan ☐ Amendment to an Approved Timber Harvesting Plan

Applicant Information (Timberland Owner(s), Registered Professional Forester who prepared the plan and Plan Submitter should match those listed in the plan or amendment.)

1. The name(s) of the Timberland Owner(s) where timber operations are to occur: **Mark Gautreaux**

2. Registered Professional Forester who prepared the plan or amendment: **Brian Griesbach RPF#2738**

   Registered Professional Forester Phone (optional):

3. The name of the Plan or Amendment Submitter: **Mark Gautreaux**

Project Summary (County, legal description, acres proposed to be harvested and treatments to be used should match those listed in the plan or amendment.)

4. Location of the proposed timber operation (county, legal description, approximate direction & approximate distance of the timber operation from the nearest community or well-known landmark):
   Del Norte County; Township 18 North, Range 1 West, Section 21 HB&M; Approximately 2 air miles northwest of Smith River, CA

5. The name of, and distance from, the nearest perennial stream and major watercourse flowing through or downstream from the timber operation:
   Contains unnamed tributaries to Smith River, which is approximately 4,500 feet downstream.

6. Acres proposed to be harvested: **13.3**

7. The regeneration methods and intermediate treatments to be used:
   Clear Cut

8. ☒ Yes ☐ No Is there a known overhead power line, except lines from transformers to service panels, within the plan area?

Public Information: The review times allowed for CAL FIRE to review the proposed timber operation are variable in length, but limited. To ensure CAL FIRE receives your comments please read the following:

The estimated earliest possible date CAL FIRE may **APPROVE** the Plan or Amendment is: **March 13, 2015**
(This date is 15 calendar days from receipt of the Plan or Amendment by CAL FIRE, except in counties for which special rules have been adopted where the earliest date is 45 calendar days after receipt.)

NOTE: THE ESTIMATED EARLIEST APPROVAL DATE IS PROBABLY NOT THE ACTUAL APPROVAL DATE. Normally, a much longer period of time is available for public comment and preparation of CAL FIRE's responses to public comments. Please check with CAL FIRE, prior to the above listed date, to determine the actual date that the public comment period closes.

The public may review, or purchase a copy of, the Plan or Amendment at the CAL FIRE Review Team Office shown below. The cost to obtain a copy is 10 cents for each page, $2.50 minimum per request. The cost to obtain a copy of this plan or amendment is: $8.80
(to be completed by CAL FIRE upon receipt of plan).

Questions or concerns regarding this plan should be directed to the CAL FIRE Review Team Office shown below or emailed to **SantaRosaPublicComment@fire.ca.gov** for incorporation into an Official Response Document. Please include the plan number on all correspondence.

Forest Practice Program Manager
CAL FIRE
135 Ridgway Avenue
Santa Rosa, CA 95401
(707) 576-2959

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FEB 26 2015
COAST AREA OFFICE
RESOURCE MANAGEMENT

The plan may be viewed online at ftp://thp.fire.ca.gov/THPLibrary/North_Coast_Region

A map showing the approximate boundary of the THP area, a map legend, and a scale is attached to help in locating where the proposed timber operation is to occur.

For CAL FIRE Use Only

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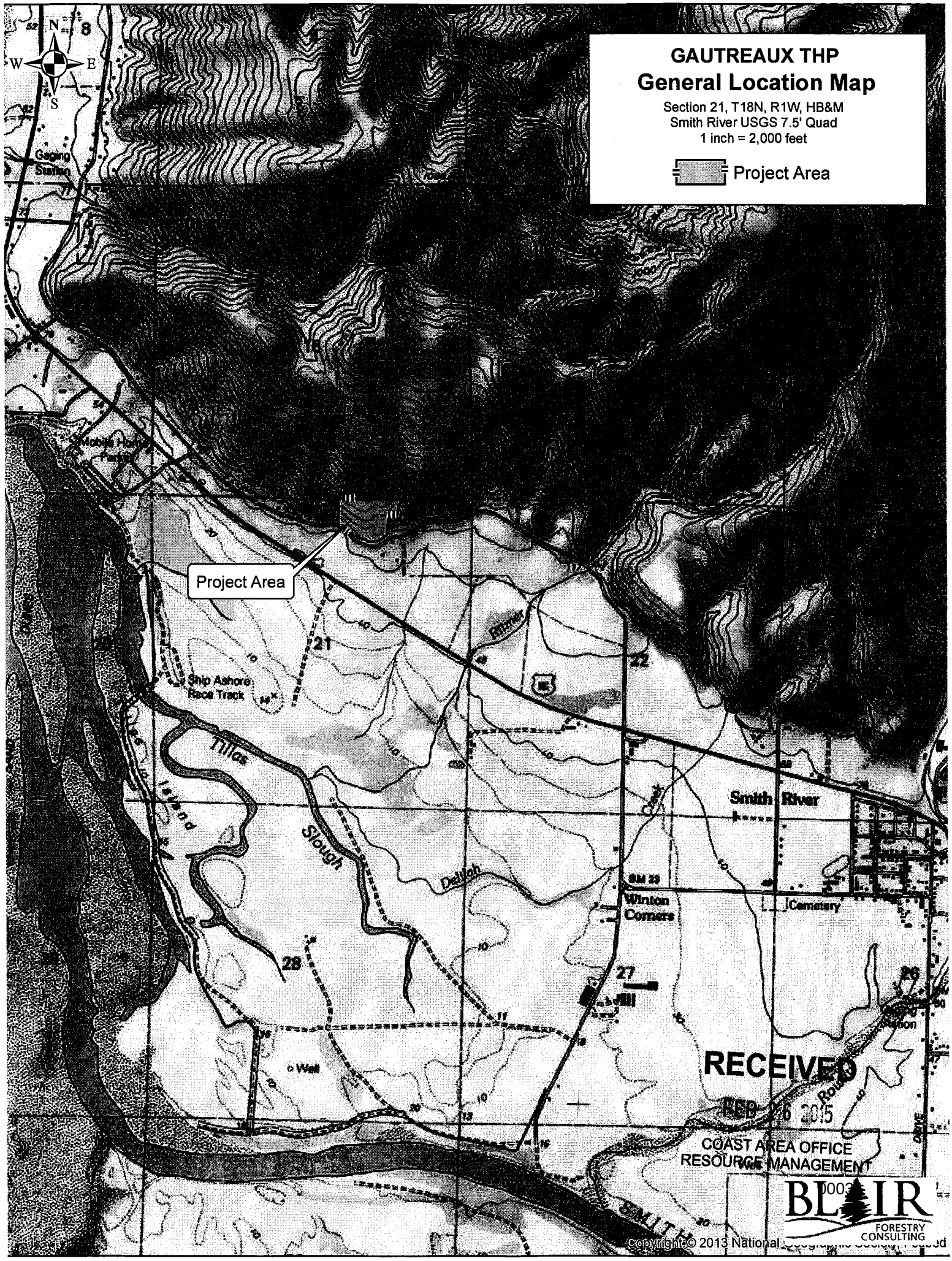
Timber Harvest Plan Number: 1-15-014 DEL

Date of Receipt:

12-08


GAUTREAUX THP
General Location Map
Section 21, T18N, R1W, HB&M
Smith River USGS 7.5' Quad
1 inch = 2,000 feet
Project Area
Project Area
Gaging Station
Ship Ashore Race Track
Tillas
Levee
Slough
Dellah
Smith River
Winton Corners
Cemetery
Well
21
22
27
28
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RESOURCE MANAGEMENT
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FORESTRY CONSULTING
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List of Adjacent Landowners to Gautreaux Timber Harvest Plan

APN102-010-24 Reservation Ranch PO Box 75 Smith River CA 95567	APN102-110-04, 102-110-05 Ernest & Linda J Silva Trust 11775 Oceanview Dr Smith River CA 95567
APN102-010-33 Robert Miller III 11885 Oceanview Dr Smith River CA 95567	
APN102-010-29 William and Viola Richards 301 North Indian Road Smith River CA 95567	
APN102-110-02 John Roberts 2004 Trust PO Box 336 Smith River CA 95567	

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COAST AREA OFFICE
RESOURCE MANAGEMENT

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

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

TIMBER HARVESTING PLAN

STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
RM-63 (02-03)

Gautreaux THP

(In the CDF FPS, this is "THP Description")

If this is a Modified THP, check box: [ ]

FOR ADMIN. USE ONLY

THP No. 1-15-014 DEL

Dates Rec'd FEB 2 6 2015

Date Filed

Date Approved

Date Expires

Extensions 1) [ ] 2) [ ]

This Timber Harvesting Plan (THP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry and Fire Protection rules. See separate instructions for information on completing this form. NOTE: The form must be printed legibly in ink or typewritten. The THP is divided into six sections. If more space is necessary to answer a question, continue the answer at the end of the appropriate section of your THP. If writing an electronic version, insert additional space for your answer. Please distinguish answers from questions by *font change*, bold or underline.

SECTION I - GENERAL INFORMATION

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

1. TIMBER OWNER(S) OF RECORD: Name Mark Gautreaux

Address 847 Chetco Point Road

City Brookings State OR Zip 97415 Phone (901) 230-4234

Signature _____ Date 6 Feb 15

Printed Name Mark Gautreaux

NOTE: The timber owner is responsible for payment of a yield tax. Timber Yield Tax information may be obtained at the Timber Tax Section, MIC: 60, State Board of Equalization, P.O. Box 942879, Sacramento, California 94279-0060; phone 1-800-400-7115; BOE Web Page at http:// www.boe.ca.gov.

2. TIMBERLAND OWNER(S) OF RECORD: Mark Gautreaux

Address 847 Chetco Point Road

City Brookings State OR Zip 97415 Phone (901)230-4234

Signature _____ Date 6 Feb 15

Printed Name Mark Gautreaux

3. LICENSED TIMBER OPERATOR(S): Name To be named at a future date (unknown) Lic. No. _____

(If unknown, so state. You must notify CDF of LTO prior to start of operations)

Address _____

City _____ State _____ Zip _____ Phone _____

Signatue _____ Date _____

Printed Name _____

4. PLAN SUBMITTER(S): Name Mark Gautreaux

Address 847 Chetco Point Road

City Brookings State OR Zip 97415 Phone (901)230-4234

Signature _____ Date 6 Feb 15

Printed Name Mark Gautreaux

RECEIVED

FEB 2 6 2015

COAST AREA OFFICE
RESOURCE MANAGEMENT

5. a. List person to contact on-site who is responsible for the conduct of the operation. If unknown, so state and name must be provided for inclusion in the THP prior to start of timber operations.

Name The LTO amended into item 3 above shall be responsible for the conduct of the operation.

Address _____

City _____ State _____ Zip _____ Phone _____

b. ☒ Yes ☐ No Will the timber operator be employed for the construction and maintenance of roads and landings during conduct of timber operations? If no, who is responsible?

c. Who is responsible for erosion control maintenance after timber operations have ceased and until certification of the Work Completion Report? If not the LTO, then a written agreement must be provided per 14 CCR 1050 (c).

The LTO amended into item 3 above shall be responsible for erosion control maintenance until the Work Completion Report is signed. The Timberland Owner shall be responsible for erosion control maintenance for the remainder of the maintenance period. 14CCR 923.7(j): In ASP watersheds, the erosion control maintenance period is one year for deactivated or abandoned roads and 3 years for logging roads and associated landings, including appurtenant roads.

6. a. Expected date of commencement of timber operations:

☒ date of THP conformance, or ☐ _____(date)

b. Expected date of completion of timber operations:

☐ 3 years from date of THP conformance, or ☒ five years from date of conformance

Completion date may be extended by amendment as per 14 CCR 1039.1.

7. The timber operation will occur within the: ☒ COAST FOREST DISTRICT

8. Location of the timber operation by legal description:
Base and Meridian: ☐ Mount Diablo; ☒ Humboldt; ☐ San Bernardino.

Section	Township	Range	Acreage	County	Assessor's Parcel Number (Optional)
21	18N	1W	13.3	Del Norte	102-010-34

TOTAL ACREAGE 13.3 (Logging Area Only)

U.S. Geological Survey (USGS) Quadrangle name(s) and date(s): Smith River 7.5' (1996)

Planning Watershed: CALWATER 2.2, Identification Number, and Name:
CALWATER version 2.2, #1103.110004 Dominie Creek

9. ☐ Yes ☒ No Has a Timberland Conversion been submitted and approved? If yes, list approval date, permit number, and expiration date.

10. ☐ Yes ☒ No Is there an approved Sustained Yield Plan for this property? Number _____Date app.

☐ Yes ☒ No Has a Sustained Yield Plan been submitted but not approved? Number _____Date sub.

11. ☐ Yes ☒ No Is there a THP or NTMP on file with CDF for any portion of the plan area for which a Report of Satisfactory Stocking has not been issued by CDF? If yes, identify the THP or NTMP number(s):

☐ Yes ☒ No Is there a contiguous even aged unit with regeneration less than five years old or less than five feet tall? If yes, explain. Ref. Title 14 CCR 913.1 (933.1, 953.1) (a)(4).

12. ☒ Yes ☐ No Is a Notice of Intent necessary for this THP?

☒ Yes ☐ No If yes, was the Notice of Intent posted as required by 14 CCR 1032.7 (g)?

13. RPF preparing the THP: Name Brian Griesbach RPF Number 2738

Address PO Box 2517

City McKinleyville State CA Zip 95519 Phone (707) 672-5814

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

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

See Section III Addendum Item 13 for copy of the Plan Submitter Responsibility and Timber/Timberland Owner notice.

b. ☒ Yes ☐ No I will provide the timber operator with a copy of the portions of the approved THP as listed in 14 CCR 1035 (f). If "no", who will provide the LTO a copy of the approved THP?

☒ Yes ☐ No I or my supervised designee will meet with the LTO prior to commencement of operations to advise of sensitive conditions and provisions of the plan pursuant to 14 CCR 1090.11.

c. I have the following authority and responsibilities for preparation and administration of the THP and timber operation. (Include both work completed and work remaining to be done):

The RPF is responsible for the layout and preparation of this THP through the approval process, including all flagging and marking of ground features and timber marking required prior to the PHI or as noted within the THP.

The plan preparing RPF has been retained to provide professional advice throughout the timber operations, as well as prepare THP amendments and deviations on behalf of the Plan Submitter. I will be available to provide advice and guidance regarding the conduct of timber operations pursuant to this THP. I or my supervised designee shall be present on the logging area at a sufficient frequency to know the progress of operations and to advise the LTO and timberland owner. I shall also inform the LTO during operations of any mitigation measures incorporated into the plan that are intended to address operations that have a high likelihood of resulting in immediate, significant and long term harm to the natural resources of the State.

d. Additional required work requiring an RPF, which I do not have the authority or responsibility to perform:

The RPF is not responsible for the determination of property line that defines the THP boundary or ownership of line trees.

e. After considering the rules of the Board of Forestry and Fire Protection and the mitigation measures incorporated in this THP, I have determined that the timber operation:

☐ will have a significant adverse impact on the environment. (Statement of reasons for overriding considerations contained in Section III)

☒ will not have a significant adverse impact on the environment.

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

Signature Brian Griesbach Date 2/10/15

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SECTION II - PLAN OF TIMBER OPERATIONS

14. SILVICULTURAL METHODS

a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913[933, 953].11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

☒ Clear cut 13.3 ac.

Total acreage 13.3 ac.: (Explain if total is different than in Item 8) MSP option chosen: (b) ☐ (c) ☒

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

See Item 26 for retention and stocking standards for watercourses.

c. ☐ Yes ☒ No Will evenage regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 14 CCR 913 (933, 953).1 (a) (2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) – (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All trees within the clear cut area are available for harvest unless marked with a blue painted "L" at breast height. Harvest trees within the WLPZ shall be marked with blue paint at approximately breast height, which is visible from at least two sides, including a stump mark below the cut-line.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If yes, how will LTO determine which trees will be harvested or retained? If more than one silvicultural method or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: Sawlogs, veneer logs, chip logs, split products and firewood. Chip logs and slash may be processed on site in the form of "clean chips" or "hog fuel".

f. ☐ Yes ☒ No Are group B species proposed for management?
☐ Yes ☒ No Are group B or non-indigenous A species to be used to meet stocking standards?
☐ Yes ☒ No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment is to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All conifer snags shall be retained, unless they are a safety hazard.

h. ☒ Yes ☐ No Will artificial regeneration be required to meet stocking standards?

Artificial regeneration will be required to meet stocking standards in those areas where the clearcut prescription is proposed. Depending on seedling availability, these areas will be planted 'as early as' the first winter following harvest operations. Only native conifers grown from locally collected seed or seed from the appropriate seed zones and elevations will be used. Seedlings will be planted to attain a minimum point count of 300 per acre. Conifer species to be planted shall be redwood, and or Douglas fir.

i. ☒ Yes ☐ No Will site preparation be used to meet stocking standards? If yes, provide the information required for a site preparation addendum, as per 14 CCR 915.4 (935.4, 955.4).

(a) Site preparation may be required in the clearcut areas to achieve a desirable level of stocking following harvest. Broad cast burning of slash may be used to prepare the site to allow for hand planting of conifer seedlings. If it is determined that the stocking requirements can be met without broadcast burning, no broadcast burning will take place. If burning is deemed necessary, burning operations will be conducted according to the provisions of a project type-burning permit issued by the California Department of Forestry and Fire Protection.

(b) At the completion of harvest operations, an assessment of the harvest area will be made to determine the extent of site preparation needed to meet stocking. If necessary, site preparation treatments may include one or more of the following methods:
- Broadcast burning or pile burning.
- Tractor piling of slash and brush in areas designated for tractor yarding.
- Yum yarding and/or chipping on site.
- Hand slashing of residual hardwoods and brush.

(c) Within the areas designated for ground based operations, excavators with a thumb attachment or track loaders (shovels) may be used to pile slash and brush for site preparation. Also, tractors may be used to construct fire lines within the areas allowing heavy equipment. Mechanical site preparation and/or tractor fire line construction will not occur from October 15 to June 1 or under saturated soils with the exception of shovel loaders which may be used to pile slash.

(d) Residual vegetation shall be protected from site preparation by piling slash an adequate distance away from stocking trees such that burning and/or scorching shall not occur. Residual trees, hardwood trees, LWD, vegetation and duff within the WLPZ's and hardwoods, LWD, vegetation and duff within the EEZ's shall be protected from site preparation burning by not lighting directly in the WLPZ's or EEZ's.

(e) No exceptions or alternatives to the standard rules are proposed for site preparation in this THP.

(f) Site preparation may occur within the THP area outside the EEZ/ELZ. Ignition within WLPZ's or EEZ's will not occur.

(g) The LTO shall be responsible for piling slash into piles and constructing fire lines within the clearcut areas. The person responsible for the burning portion of the site preparation activities is the Timber Owner listed in Item 1.

(h) Site preparation activities may occur from THP approval until the clearcut areas have been planted, and shall be the responsibility of the listed LTO. Slash shall be piled on landings concurrently with logging. The LTO shall construct a tractor fireline around each landing pile at the completion of use. Burning will be conducted during the fall, winter or spring following harvesting operation, and only after sufficient precipitation to raise the soil and fuel moisture to the point that large fuels are not completely consumed.

j. If the rehabilitation method is chosen, provide a regeneration plan as required by 14 CCR 913 (933, 953) .4(b).

15. PESTS

a. ☐ Yes ☒ No Is this THP within an area that the Board of Forestry and Fire Protection has declared a Zone of Infestation or Infection pursuant to PRC 4712 - 4718? If yes, identify feasible measures being taken to mitigate adverse infestation or infection impacts from the timber operation. See 14 CCR 917 (937, 957) .9 (a).

b. ☐ Yes ☒ No If outside a declared zone, are there any insect, disease or pest problems of significance in the THP area? If yes, describe the proposed measures to improve the health, vigor and productivity of the stand(s).

Should Del Norte County become a Zone of Infection for Sudden Oak Death (SOD), then the THP will be amended.

16. HARVESTING PRACTICES

Indicate type of yarding system and equipment to be used:

Ground-Based*		Cable		Special	
a.	☒ Tractor, including end- and long-lining	e.	☐ Cable, ground lead	h.	☐ Animal
b.	☒ Rubber-Tired Skidder, Forwarder	f.	☐ Cable, high lead	i.	☐ Helicopter
c.	☒ Feller Buncher	g.	☐ Cable, skyline	j.	☐ Other:
d.	☒ Shovel Logging				

* All tractor operations restrictions apply to ground based equipment.

17. EROSION HAZARD RATING:

Indicate Erosion Hazard Ratings present on THP. (Must match EHR worksheets)

☐ Low ☒ Moderate ☐ High ☐ Extreme

If more than one rating is checked, areas must be delineated on map to 20 acres in size (10 acres for high and extreme EHRs in the Coast District). See EHR worksheet within Section V.

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18. SOIL STABILIZATION:

In addition to the standard waterbreak requirements describe soil stabilization measures or additional erosion control measures to be implemented and the location of their application, as per requirements of 14 CCR 916.7 (936.7, 956.7).

14CCR 923.5(m) Soil stabilization, as required by **14 CCR 916.7, 923.5(l) and (q)(3), 923.8(b) and 923.9(l), (p)(2) and (t)(1-4)** will be accomplished by removal, replanting, seeding, mulching, armoring with rip-rap, removal, slash packing, or installing commercial erosion control devices. When seeding and/or mulching is the method chosen for stabilization, the minimum standards for seeding and mulching operations are 30 pounds per acre of seed and a minimum mulching depth of 2 inches, covering at least 90% of the exposed surface area. The 2 inch mulching depth shall be measured at the time of application.

14CCR 914.6 Waterbreaks The following standards are applicable to the construction of waterbreaks:

(a) except as otherwise provided for in the rules:

(1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations.

(2) Installation of drainage facilities and structures is required from October 15 to November 15 and from April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

(b) Waterbreaks shall be constructed concurrently with the construction of firebreaks and immediately upon conclusion of use of tractor roads, roads, layouts, and landings which do not have permanent and adequate drainage facilities, or drainage structures.

(c) Distances between waterbreaks shall not exceed the following standards:

14 CCR § 914.6(c) MAXIMUM DISTANCE BETWEEN WATERBREAKS (in feet)				
Erosion Hazard Rating (for surface Erosion) (See THP Section II, Item 17)	Road or Trail Gradient (%)			
	10%, or less	11 - 25%	26 - 50%	Over 50%
Extreme	100'	75'	50'	50'
High	150'	100'	75'	50'
Moderate	200'	150'	100'	75'
Low	300'	200'	150'	100'

14CCR 923.5(d) Waterbreaks and rolling dips installed across logging roads and landings shall be of sufficient size and number and be located to avoid collecting and discharging concentrated runoff onto fills, erodible soils, unstable areas, and connected headwall swales. Per **14CCR 923.5(f)** Distances between waterbreaks on logging roads shall not exceed the above standards (914.6(c) table), considering erosion hazard and road gradient.

14CCR 916.9(m) Tractor Road Drainage Facility Installation -All tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.

14CCR 916.9(n), 923.5(q)(3), 923.9(t)(4) Treatments to stabilize soils -Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent the discharge of sediment into watercourses or lakes in amounts deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements, shall be described in the plan as follows.

(1) Soil stabilization is required for the following areas:

(A) Areas exceeding 100 contiguous square feet where timber operations have exposed bare soil.

(B) Approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing.

(C) Disturbed road cut banks and fills, and

(D) Any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water.

(2) Soil stabilization treatment measures may include, but need not be limited to, mulching, rip-rapping, grass seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers.

(3) Where straw or slash mulch is used, the minimum straw coverage shall be 90 percent, and any treated area that has been reused or has less than 90 percent surface cover shall be treated again by the end of timber operations.

(4) Where slash mulch is packed into the ground surface through the use of a tractor or equivalent piece of heavy equipment the minimum slash coverage shall be 75 percent.

(5) For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water.

(6) For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.

(7) Where the natural ability of ground cover is inadequate to protect beneficial uses of water by minimizing soil erosion or by filtering sediment, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.

14CCR 923.2 (m) Road Construction Sidecast or fill material extending more than 20 ft. (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, planted, mulched, removed, or treated as specified in the THP, to adequately reduce soil erosion.

14CCR 923.5(i) Hydrologic disconnectivity shall be achieved through waterbarring and dipping. No other treatment is required.

14CCR 923.5 (n) Natural ground cover is adequate. No other treatment is necessary.

14CCR 923.5(l) Bare soil on logging road or landing cuts, fills, transported spoils, or sidecast that is created or exposed by timber operations shall be stabilized to the extent necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge. Sites to be stabilized include, but are not limited to:

(1) Sidecast or fill exceeding 20 feet in slope distance from the outside edge of a logging road or a landing that has access to a watercourse or lake.

(2) Cut and fills associated with approaches to logging road watercourse crossings of Class I or II waters or Class III waters where an ELZ, EEZ, or a WLPZ is required.

14CCR 923.5(o) Soil stabilization treatments shall be in place upon completion of operations for the year of use or prior to the extended wet weather period, whichever comes first. An exception is that bare areas created during the extended wet weather period shall be treated prior to the start of rain that generates overland flow, or within 10 days of the creation of the bare area(s), whichever is sooner.

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

20. ☐ Yes ☒ No Will ground based equipment be used within the area(s) designated for cable yarding? If yes, specify the location and for what purpose the equipment will be used? See 14 CCR 914.3 (934.3, 954.3) (e).

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

a. ☐ Yes ☒ No Unstable soils or slide areas? Only allowed if unavoidable.
b. ☐ Yes ☒ No Slopes over 65%?
c. ☐ Yes ☒ No Slopes over 50% with high or extreme EHR?
d. ☐ Yes ☒ No Slopes between 50% and 65% with moderate EHR where heavy equipment use will not be restricted to the limits described in 14 CCR 914 (934, 954) .2 (f) (2) (i) or (ii)?
e. ☐ Yes ☒ No Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake?

If " a." is yes, provide site specific measures to minimize effect of operations on slope stability and provide explanation and justification in Section III as required per 14 CCR 914 (934, 954) .2 (d). CDF requests the RPF consider flagging tractor road locations if " a." is yes. If "b., c., d., or e." is yes: 1) the location of tractor roads must be flagged on the ground prior to the PHI or start of operations if a PHI is not required, and 2) you must clearly explain the proposed exception and justify why the standard rule is not feasible or would not comply with 14 CCR 914 (934, 954). The location of heavy equipment operation on unstable areas or any use beyond the limitations of the standard rules must be shown on the map. List specific instructions to the LTO below.

22. ☐ Yes ☒ No Are any alternative practices to the standard harvesting or erosion control rules proposed for this plan? If yes, provide all of the information as required in 14 CCR 914.9 (934.9, 954.9) and 1090.5 (dd) in Section III. List specific instructions to the LTO below.

23. WINTER OPERATIONS

a. ☒ Yes ☐ No Will timber operations occur during the winter period? If yes, complete "b.", and then "c." or "d." State in space provided if exempt because yarding method will be cable, helicopter, or balloon.

b. ☐ Yes ☒ No Will mechanical site preparation be conducted during the winter period? If yes, complete "d."

c. ☐ I choose the in-lieu option as allowed in 14 CCR 914 (934, 954) .7 (c) and 1090.5 (bb). Specify below the procedures listed in subsections (1) and (2), and list the site specific measures for operations in the WLPZ and unstable areas as required by subsection (3), if there will be no winter operations in these areas, so state.

d. ☒ I choose to prepare a winter operating plan per 14 CCR 914 (934, 954)..7 (b) and 1090.5 (bb).

NOTE: "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 925.1, 926.18, 927.1, and 965.5... (a) except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

923.6(b) Logging roads and landings shall not be used during any time of the year when operations may result in significant sediment discharge to watercourse or lakes, except in emergencies to protect the road, to reduce erosion, to protect water quality, or in response to public safety needs.

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923.6(c) During the extended wet weather period, log hauling or other heavy equipment uses shall be limited to logging roads and landings that exhibit a stable operating surface in conformance with (b) above. Routine use of logging roads and landings shall not occur when equipment cannot operate under its own power.

916.9(k) Tractor roads shall not be used when operations may result in significant sediment discharge.

914.8(d) Tractor road watercourse crossing facilities shall be removed and stabilized prior to the beginning of the winter period to the standards of 14CCR 923.9 subsections (p)(1)-(4). Tractor watercourse crossings shall not be used during the winter period.

WINTER OPERATING PLAN

This Winter Operating Plan is for the Extended Wet Weather Period, occurring from October 15 to May 1, and the Winter Period, occurring from November 15 to April 1 for all timber operations.

1. Erosion Hazard Rating – Moderate.

2. Mechanical Site Preparation Methods – None.

3. Yarding Systems – yarding equipment which may be used on this plan are discussed in Section II Item 16 and shown on the attached plan maps. The following types of equipment may be used with their associated limitations:

    a. Cable yarding may occur during the winter period where haul roads are adequately surfaced for all weather conditions and have had appropriate drainage facilities installed. Cable operations will be subject to wet weather restrictions contained in paragraphs (7) & (10) below.
    b. No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.
    c. Tractor and skidder/forwarder operations may occur during the extended and winter period during only dry, rainless periods where soils are not saturated. Tractor operations will be subject to wet weather restrictions contained in paragraphs (5), (7) & (10) below.
    d. Loader "shovel" yarding may occur during the winter period where haul roads are adequately surfaced for all weather conditions and have had appropriate drainage facilities installed. Shovel operations will be subject to wet weather restrictions contained in paragraphs (7) & (10) below.
    e. Feller-Buncher and Shovel Logging Operations
        i. Where appurtenant haul roads are not surfaced for all weather conditions or do not have appropriate drainage facilities, or when the operation involves use of constructed skid trails for skidding and forwarding, the LTO will not carry out feller-buncher or shovel logging operations during the winter period
        ii. Feller-buncher and shovel logging operations will cease during storm events where logging operations, combined with significant rainfall, are likely to cause delivery of sediments in WLPZs (RMZs) or EEZs along Class I, II or III watercourses.
    f. Feller-buncher and Loader "shovel" yarding (no skid trail construction) - Winter period shovel y arding and feller buncher operations may occur on units that are adjacent to rocked roads. The equipment used in these operations is based on hydraulic excavators. These machines have wide track undercarriages with sufficient surface area to limit ground pressure to the point that there is little potential for soil compaction and disturbance. Other constraints inherent in the design and operation of this machinery are:

        i. They do not require constructed skid trails and they are not equipped with a blade.
        ii. They operate on top of slash and debris, not in prepared bare soil skid trails.
        iii. Their design limits operation to mild or moderate slopes.

    g. All winter period feller-buncher and shovel yarding operations shall be subject to the following constraints:
        i. Haul roads used to access such operations must be surfaced for all weather conditions, with appropriate drainage facilities installed.
        ii. Entrances and exits to the operating unit that are used by equipment for daily refueling shall be rocked or treated with slash to prevent rutting and to avoid generating sediment that might be transported to a ditch during rainfall. If a road drainage ditch must be crossed to access the operating area, a minimum 12 inch diameter culvert shall be installed, if necessary to protect the integrity of the ditch and ensure that any potential impact from the operation is disconnected from ditches and watercourses.
        iii. Operations will be limited to areas with slopes that average less than 35%.
        iv. Feller-buncher and shovel logging operations will cease during storm events where logging operations, combined with significant rainfall, are likely to cause delivery of sediments in WLPZs (RMZs) or EEZs along Class I, II or III watercourses. In addition, prior to operations resuming after a storm, a Barnum Timber Co. supervisor shall assess soil moisture conditions on the site and determine that it is appropriate to resume operations.
        v. Only wide track (low ground pressure) equipment will be used and this equipment will operate only on slash and duff (operating on bare soil is prohibited).

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4. Operating Period -

   a. Timber falling may be conducted during the winter period.
   b. Cable harvesting: No limitations specific to winter operations except road and landing use as per 923.6(b)&(c) .
   c. Ground based yarding: Ground based yarding may be conducted during the winter period when soils are not "saturated" as defined below.
   d. Feller-buncher and Loader "shovel" yarding may be conducted during the winter period as described under paragraph (3) above.

5. Erosion Control Facilities Timing – All Tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection or (2) any day with a National Weather Service forecast of a chance of rain of 30% or more, a flash flood warning, or a flash flood watch.

6. Rain, fog, and light snow are forms of precipitation in this area.

7. Ground conditions (soil moisture condition, frozen) – Heavy equipment use shall be done only during dry, rainless periods where soils are not saturated. Saturated soil conditions is defined below.

8. Silvicultural systems – ground cover – The silvicultural system is clear cut. It is the RPF's opinion that the harvest area will have 40% ground cover. Ground cover is defined as all vegetation below eye level (both live and dead), rocks, straw mulch, etc., that may help prevent erosion caused by overland flow and raindrop energy.

9. Operations within the WLPZ of the THP during the winter period will be limited to:

   a. The felling of trees. Trees shall be felled away from a watercourse as per 14 CCR 914.1(a).
   b. Long lining of logs.
   c. Cable yarding.
   d. Emergencies or road maintenance needed to protect water quality.

10. Equipment use limitations – No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.

11. Known unstable areas – No unstable areas were identified during preparation of this THP. If active slide areas are discovered during timber operations, the LTO shall immediately notify the RPF.

12. Logging Roads and landings - 14CCR 923.6(g) Logging roads and landings used for log hauling or other heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions.

    923.5(j) All logging roads and landings used for timber operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow.

    923.5(k) Where logging road or landing construction or reconstruction takes place during the extended wet weather period, drainage facilities and drainage structures shall be installed concurrent with construction or reconstruction operations.

    14CCR 923.4(l), No construction or reconstruction of logging roads or landings shall occur during the winter period.

Definitions of terms used (14 CCR 895.1):

Saturated Soil Conditions – means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Stable Operating Surface - means a road or landing surface that can support vehicular traffic and has a structurally sound road base appropriate for the type, intensity and timing of intended use.

No timber harvest activities during measurable rain events (defined as greater than ¼" in a 24-hour period).

NOTE: "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 926.18, 927.1, and 965.5... (a) except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year

of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

24. ROADS AND LANDINGS

Will any roads be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items a through g.
Will any landings be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items h through k:

a. ☐ Yes ☒ No Will new or reconstructed roads be wider than single lane with turnouts?
b. ☐ Yes ☒ No Are logging roads proposed in areas of unstable soils or known slide-prone areas?
c. ☐ Yes ☒ No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.
d. ☐ Yes ☒ No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27 a. will satisfy required documentation.
e. ☐ Yes ☒ No Will roads longer than 100 feet in length be located on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
f. ☐ Yes ☒ No Will any roads or watercourse crossings be abandoned?
g. ☐ Yes ☒ No Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?
h. ☐ Yes ☒ No Will any landings exceed one half acre in size? If any landing exceeds one quarter acre in size or requires substantial excavation the location must be shown on the map.
i. ☐ Yes ☒ No Are any landings proposed in areas of unstable soils or known slide prone areas?
j. ☐ Yes ☒ No Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
k. ☐ Yes ☒ No Will any landings be abandoned?

25. If any section in "item 24" above is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance, and/or abandonment of roads or landings, as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

Road Construction:

14CCR 1034(o) The RPF is proposing seasonal road construction for approximately 800' using an existing skid road. Although a prism is in existence this skid road is not suitable for the hauling of logs. Construction is proposed to improve the existing skid road by widening to allow for ingress and egress of log trucks. See THP Map for the location of road construction.

14CCR 916.9 (n) Bare mineral soil exceeding 100 contiguous square feet created from operations within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, shall be treated. Soil stabilization treatment measure within the WLPZ may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers. See Item 18 for more information regarding 916.9(n).

14CCR 923.1(g) The proposed road construction utilizes existing skid trail so log trucks may access portions of the plan. Landing construction associated with this road segment will allow for the landing and loading of logs in locations that prevent excessive skidding distances. No mitigation measures are needed to minimize potential adverse impacts to watersheds from the reconstructed road grade and associated landings.

14CCR 923.5

(a) All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.

(b) Drainage facilities and structures shall be installed along all logging roads and all landings that are used for timber operations in sufficient number to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

14CCR 923.6(h)(3) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance 923.6(b).

14CCR 923.7(c) During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of the road surface materials by methods including, but not limited to, rocking, watering, paving, or installing commercial erosion control devices to manufacturer's specifications.

14CCR 923.4(m) On slopes greater than 50 percent for greater than 100 lineal feet, fills greater than four feet in vertical height at the outside shoulder of the logging road or landing shall be:

(1) Constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift.
(2) Compacted in approximately one-foot lifts from the toe to the finished grade or retained by an engineered structure.

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14CCR 923.1(e) Significant existing or potential erosion sites do not exist within the plan area.

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

a. ☒ Yes ☐ No Are there any watercourse or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, list the class, WLPZ or ELZ width, and protective measures determined from Table I and/or 14 CCR 916 (936, 956) .4 (c) of the WLPZ rules for each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

b. ☒ Yes ☐ No Are there any watercourse crossings that require mapping per 14 CCR 1034(x)(7)?

14CCR 923.9(e) Watercourse crossings associated with this THP have been listed in the Work Order (with proposed culvert diameters) within Item 38 and are shown on the THP Map. These sites have been identified in the field (923.9(e)(1).

14CCR 923.9(l) Rock used to stabilize the outlets of crossings shall include a base of at least size 12" rock, and be adequately sized to resist mobilization.

c. ☒ Yes ☐ No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert (may be shown on map).

Crossing shall be installed to handle any surface flow by utilization of a flow through fill (clean rock or logs) with fabric or a temporary pipe that is of sufficient size (min. 6" x 15') to handle flow during operations.

d. ☒ Yes ☐ No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If yes, attach the 1603 Addendum below or at the end of this Section II; provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures; as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1603 Agreements and THP Documentation".

☒ Yes ☐ No Have or will the activities conducted under this THP that are subject to Fish and Game Code Section 1600 et seq. be included in a separate notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

☒ Yes ☐ No Will the submittal of this THP provide notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

LTO instructions are found in the Work Order for Road Repair report for watercourse crossings, found in THP Item 38. A DFG 1611 agreement process addendum and an analysis are included in the Plan Addendum to Item 26d in THP Section III.

Watercourse Protection Measures:

This THP is within the Coastal Anadromy Zone. On the ground identification of the WLPZ and marking of harvest trees within the WLPZ shall be completed prior to PHI.

14CCR 916(b)(1) & (2): Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

14CCR 916(d): This THP fully describes the type and location of measures needed to fully offset sediment loading, thermal loading and potential significant adverse watershed effects from the proposed operations. These measures are numerous and described in various locations within Section II of the THP. Examples of such measures include limited harvesting in WLPZ, soil stabilization measures in Section II, Item 18, repairing active erosion sites, etc. The LTO will be responsible for implementing each of these measures. The timber harvest unit has been configured in such a manner that impacts to sediment loading and thermal loading are avoided to the fullest extent feasible. The strategy of avoidance of potential risks to water resources will result in operations that are not likely to result in adverse impacts to water quality, including sediment loading or thermal loading.

14CCR 916.9 (e): Channel Zone

(1) There shall be no timber operations within the channel zone with the following exceptions:
   (a) Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.
   (b) Class III watercourses consistent with 14CCR 916.9 (h)(7): Retain all trees in the Class III ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control. Merchantable trees within the channel zone of Class III watercourses may be harvested with the following exceptions:
      - Within over-steepened headwall swales.
      - When located at the watercourse slope transition point and an obvious increase in downcutting of the watercourse channel is occurring below this point.
      - On unstable areas where the tree is stable and contributing to the stability of the channel.
      - Where soil has accumulated and is perched upslope of the channel tree.
      - When a tree is in the channel (or close proximity) and not just an individual root. In other words, give a weighted average to the tree's value in the channel based on proximity.

(2) In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the preharvest inspection.

14CCR 916.9 (u): Salvage logging shall not occur within a WLPZ.

Water Drafting: Water for dust abatement (if necessary) shall be from an offsite delivered source. Water drafting may occur onsite when water is collected in tanks from springs, which are not within the channel zone of natural watercourses. Since no drafting of water within a channel zone of a natural watercourse or lake is proposed, no description is required per 14CCR 923.7(l)(2).

Watercourse and Lake Protection Zone Widths.

	Class II-S*	Class III (ELZ)
Slope Class (%)	Width (feet)	Width (feet)
<30	50	30
30-50	75	50
>50	100	50

* Core and Inner Zones apply to Class II watercourses within this THP, see discussion in Item 26

Class II Watercourses

(1) The WLPZ shall be flagged and harvest trees shall be marked prior to the PHI.

(2) When there is a reasonable expectation that slash, debris, soil, or other material resulting from timber operations, falling, or associated activities, will be deposited in Class II waters below the watercourse transition line, those harvest activities shall be deferred until equipment is available for its removal.

(3) Accidental depositions of soil or other debris below the watercourse transition line shall be removed immediately after the deposition.

(4) Equipment operations within the WLPZ shall be limited to existing roads and designated skid trail crossings.

(5) Trees cut within the WLPZ shall be felled away from the watercourse.

(6) At least 75% surface cover and undisturbed area shall be retained within the WLPZ.

Class II Standard (II-S) Watercourses: The following protection measures apply:

(a) Core Zone: The width of the Core Zone shall be 15 feet measured from the watercourse transition line. No timber operations are permitted in this zone except for those listed in 14 CCR § 916.9, subsection (e)(1)(A)-(F), or those approved pursuant to 916.9, subsection (v).

(b) Inner Zone: The width of the Inner Zone shall be based on slope class and shall be measured from the landward edge of the Core Zone. The following Inner Zone widths shall apply:
   i. ≤30% slope - 35 ft. width
   ii. 30-50% slope - 60 ft. width
   iii. >50% slope - 85 ft. width

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(c) Within the Inner zone 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.

(d) Within 50 feet of the watercourse at least two living conifers per acre at least 16 inches DBH and 50 feet tall shall be retained.

Class III Watercourses: The protection measures for Class III waters shall prevent the degradation of downstream beneficial uses of water and shall be determined on a site-specific basis. The following protection measures apply:

(1) Establish a 30 foot wide ELZ on both sides of the watercourse for slopes less than 30% and an additional 20-foot ELZ where sideslopes are greater than 30%. The ELZ shall be measured from the watercourse transition line. Within the ELZ the following shall apply:

(a) No new construction of tractor roads permitted;
(b) No ground based equipment on slopes greater than 50%.
(c) Ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse or to the use of feller-bunchers or shovel yarding.
(d) Retain all pre-existing large wood on the ground that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.
(e) Retain all pre-existing down wood and debris in the channel zone.
(f) Retain hardwoods, where feasible.
(g) Retain all snags (except as required for safety).
(h) Retain all countable trees needed to achieve resource conservation standards in 14 CCR 912.7.
(i) Retain all trees that show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.
(j) Exceptions pursuant to 14 CCR 916.9, [936.9, 956.9], subsections (e)(1)(A)-(F) are permitted in any ELZ and channel zone.

(2) 916.4(c)(3): Soil deposited during timber operations in a Class III watercourse other than at 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. Temporary crossings shall be removed before the winter period.

14CCR 923.9:

(g) All culverts used for new and replacement logging road watercourse crossings shall be installed at or as close as practical and feasible to the natural watercourse grade. Culverts shall be installed in alignment with the watercourse channel to the extent feasible, and of the appropriate length to prevent fill erosion.

(h) Logging road watercourse crossings shall not discharge water onto erodible fill or other erodible material without the installation of energy dissipaters and other necessary protective structures.

(i) Fills for constructed and reconstructed logging road watercourse crossings shall be thoroughly compacted in approximately one-foot lifts during installation. The face of crossing fills shall be no greater than 65 percent (1.5:1, horizontal to vertical). Excavated material and cut banks resulting from construction or reconstruction which has access to a watercourse shall be sloped back from the channel to prevent slumping, to minimize soil erosion, and to prevent significant sediment discharge.

(j) Critical dips shall be incorporated into the construction or reconstruction of logging road watercourse crossings utilizing culverts, except where diversion of overflow is addressed by other methods stated in the plan.

(k) Watercourse crossings and associated fills and approaches shall be constructed and maintained to prevent diversion of stream overflow down the road, and to minimize fill erosion should the drainage structure become obstructed. Methods to mitigate or address diversion of stream overflow at logging road watercourse crossings shall be stated in the plan.

14CCR 923.9(p) All logging road watercourse crossings that are proposed by the plan submitter to be removed, including temporary crossings and those along abandoned or deactivated roads, shall be removed as described in the plan and shall apply the following standards:

(1) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel as observed upstream and downstream of the logging road watercourse crossing to be removed.

(2) The excavated material and any resulting cut bank shall be no greater than 65 percent (1.5:1, horizontal to vertical) from the outside edge of the constructed channel to prevent slumping, to minimize soil erosion and sediment transport, and to prevent significant sediment discharge. Exposed soil located between the watercourse crossing and the nearest adjacent drainage facility or hydrologic divide, whichever is closer, including cut banks and excavated material, shall be stabilized by seeding, mulching, rock armoring, replanting, or other suitable treatment to prevent soil erosion and significant sediment discharge.

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(3) Where it is not feasible to remove a logging road watercourse crossing or its associated fill to the above standards, the plan shall identify how soil erosion and significant sediment discharge will be prevented.
(4) All logging road watercourse crossings proposed for removal shall be removed upon completion of use, prior to the winter period or as specified in the applicable CDFW 1600 agreement, whichever is earlier, or as otherwise specified in the plan.

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

a. [ ] Yes [X] No Prohibition of the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except as follows:
(1) At prepared tractor road crossings.
(2) Crossings of Class III watercourses which are dry at time of timber operations.
(3) At existing road crossings.
(4) At new tractor and road crossings approved by Department of Fish and Game.

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

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

d. [ ] Yes [X] No Decrease of width(s) of the WLPZ(s)?

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

f. [ ] Yes [X] No Exclusion of heavy equipment from the WLPZ except as follows:
(1) At prepared tractor road crossings.
(2) Crossings of Class III watercourses which are dry at time of timber operations.
(3) At existing road crossings.
(4) At new tractor and road crossings approved by Department of Fish and Game.

g. [ ] Yes [X] No Establishment of ELZ for Class III watercourses unless sideslopes are <30% and EHR is low?

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

i. [ ] Yes [X] No Retention of at least 50% of the understory in the WLPZ?

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

NOTE: A yes answer to any of items "a" through "j" constitutes an in-lieu practice. If any item is answered yes, refer to 14 CCR 916 (936, 956).1 and address the following for each item checked yes:1) The RPF shall state the standard rule; 2) Explain and describe each proposed practice; 3)Explain how the proposed practice differs from the standard practice; 4)The specific location where it shall be applied, see map requirements of 14 CCR 1034(x) (15) and (16); 5)Provide in THP section III an explanation and justification as to how the protection provided is equal to the standard rule and provides for the protection of the beneficial uses of water per 14 CCR 916 (936, 956).1(a). Reference the in-lieu and location to the specific watercourse to which it will be applied.

28. DOMESTIC WATER SUPPLY

a. ☒ Yes ☐ No Are there any landowners within 1000 feet downstream of the THP boundary whose ownership adjoins or includes a class I, II, or IV watercourse(s) which receives surface drainage from the proposed timber operations? If yes, the requirements of 14 CCR 1032.10applies proof of notice by letter and newspaper must be enclosed in THP Section V. If No, Item 28 b. need not be answered.

b. ☐ Yes ☒ No Is an exemption requested of the notification requirements of 14 CCR 1032.10? If yes, explanation and justification for the exemption must be included. Specify if requesting an exemption from the letter, the newspaper notice, or both.

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

For more information please see the Addendum in Section III

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

30. HAZARD REDUCTION:

a. ☒ Yes ☐ No Are there roads or improvements which require slash treatment adjacent to them? If yes, specify the type of improvement, treatment distance, and treatment method.

b. ☐ Yes ☒ No Are any alternatives to the rules for slash treatment along roads and within 200 feet of structures requested? If yes, RPF must explain and justify how alternative provides equal fire protection. Include a description of the alternative and where it will be utilized below.

14CCR 917.2(a) Slash to be treated by piling and burning shall be treated as follows:
(1) Piles created prior to September 1 shall be treated not later than April 1 of the year following its creation, or within 30 days following climatic access after April 1 of the year following its creation.
(2) Piles created on or after September 1 shall be treated not later than April 1 of the second year following its creation, or within 30 days following climatic access after April 1 of the second year following its creation.

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14CCR 917.2(b) Within 100 feet of the edge of the traveled surface of public roads, and within 50 feet of the edge of the traveled surface of permanent private roads open for public use where permission to pass is not required, slash created and trees knocked down by road construction or timber operations shall be treated by lopping for fire hazard reduction, piling and burning ,chippping, burying, or removal from the zone.

14CCR 917.2(c) All woody debris created by timber operations greater than one inch but less than eight inches in diameter within 100 feet of permanently located structures maintained for human habitation shall be removed or piled and burned. All slash created between 100-200 feet of permanently located structures maintained for human habitation shall be lopped for fire reduction, removed, chipped, or piled and burned.

31. ☒ Yes ☐ No Will piling and burning be used for hazard reduction? See 14 CCR 917.1-.11, 937.1-.10, or 957.1-.10, for specific requirements. Note: LTO is responsible for slash disposal. This responsibility cannot be transferred.

See Item 30 above. Burning of piles and concentrations of slash shall be done as specified by 14CCR 917.5.

32. BIOLOGICAL RESOURCES

a. ☒ Yes ☐ No Are any plant or animal species, including their habitat, which are listed as rare, threatened or endangered under federal or state law, or a sensitive species by the Board, associated with the THP area? If yes, identify the species and the provisions to be taken for the protection of the species.

b. ☐ Yes ☒ No Are there any non-listed species which will be significantly impacted by the operation? If yes, identify the species and the provisions to be taken for the protection of the species.

Northern Spotted Owl

1. The THP area is within the range of the Northern Spotted Owl and contains habitat suitable for Northern Spotted Owls. There are no known NSO activity centers within 0.7 miles of the plan boundary.

2. In order to meet the requirements of 14 CCR 919.9 the plan will comply with 14 CCR 919.9(e) using Scenario 4 of the Northern Spotted Owl Take Avoidance Scenarios 2/1/2008.

The plan complies with the respective Scenario in the following ways:

The proposed project is in compliance with the USFWS Attachment A Take Avoidance Analysis - Coast 3/15/2011, except as noted below.

THP area contains suitable habitat for NSOs. No known NSO activity centers are within 0.7 miles of timber operations. NSO surveys shall be conducted and will be in conformance with the most current protocol.

For the year or years of operation on the THP area timber operations shall not commence until protocol surveys have been completed for the current, and/or immediately preceding, survey period; the results have been provided to CalFire; and the results have been incorporated into the THP.

A NSO report has been prepared by Galea Wildlife Consulting and is included in THP Section V. Surveys have been submitted as part of the THP and should be reviewed for consistency with 14 CCR 919.9(e) using Scenario 4 of the Northern Spotted Owl Take Avoidance Scenarios.

VI. Post-Harvest Habitat Retention and Typing

Within the 0.7 mile radius (985 acres) of each Activity Center please use the following:

1) Retain habitat to maximize attributes desirable for NSO.

2) Retain at least 500 acres of suitable (Nesting/Roosting/Foraging) NSO habitat, post-harvest, as follows:

   a) Retain 200 acres of Nesting/roosting Habitat within a 0.7 mile radius of the Activity Center consisting of:
      i) 100 acres of the 200 acres of Nesting/Roosting habitat retained should be contiguous, or contiguous as possible with the Activity Center.
      ii) An additional 100 acres of Nesting/Roosting with in the 0.7 mile radius:
         (1) If the second 100 acres of Nesting/Roosting habitat is also contiguous with the Activity Center , or within the same drainage, operations should retain a minimum of 66% of the pre-harvest basal area per acre of trees at least 11" DBH.
         (2) If the remaining 100 acres of Nesting/Roosting habitat is not contiguous with the Activity Center, retain at least Nesting/Roosting habitat.
   b) Retain at least 300 acres of Suitable NSO habitat, post-harvest, of at least Foraging quality.

3) Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an Activity Center during the life of the timber operations.

VII. Road Use

To avoid take of NSO from noise disturbance, road use within 0.25 mile (1,320 feet) of a NSO Activity Center during the breeding season is prohibited until **July 10**, unless:

1) Non-nesting, or nesting failure at the Activity Center has been determined by a Activity Center Search (2011 NSO Protocol) conducted on or after May 15th, or;

2) The Activity Center is within 165 feet of major highway that typically has continuous traffic year around (Hwy 1, 36, 101, 128, 299, etc.) and the appurtenant road is not within 165 feet of the Activity Center.

3) After **July 9th**, until the end of the breeding season road use within 0.25 mile is restricted to existing road use, maintenance and map point work.

VIII. Timber Harvest Operations

A 0.25 mile seasonal restriction on timber operations (except for road use after **June 1st**) applies to every known NSO Activity Center during the breeding season, unless it is determined via a site monitoring visit, "Activity Center Search" (2011 NSO Protocol), that NSO are not nesting, or nesting failure has occurred. If it cannot be determined whether NSO are nesting, or nesting failure cannot be determined, the 0.25 mile seasonal restriction stays in effect for timber operations until July 31st.

For all known Activity Centers, timber operations should adhere to the following recommendations:

1) Within the 100-acre Core Area polygon of an NSO Activity Center:

   a) Outside the breeding season, limited timber operations (i.e., road use and maintenance, map point work, tail-hold placement, use of existing skid roads, and loading) may be conducted, provided no trees >11 inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.

   b) During the NSO breeding season, timber operations (including use of roads before July 9th), are not allowed within the 100-acre Core Area polygon, except as allowed in subsections 4 and 5, below.

2) Timber Operations outside the 100-acre Core Area polygon, but within 0.25 mile of an NSO Activity Center:

   a) Outside the breeding season, timber operations may be conducted.
   b) During the breeding season, no timber operations should proceed unless protocol surveys do not detect nesting NSOs.

3) For all NSO ACs, prior to May 15th (until the required May 15 or later survey is completed):

   a) Timber operations (except helicopter yarding or staging) may be conducted only on those THP areas >0.25 mile from the Activity Center.
   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

4) For NSO Activity Centers where reproductive status has been determined to be non-nesting or failed nesting:

   a) Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre Core Area Polygon of the Activity Center Provided no trees> inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.
   Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within 1000 ft. of the Activity Center.

5) For NSO Activity Center, where reproductive status has been determined to be nesting:

   a) For Activity Centers where fledging status has not been determined, timber operations may be conducted only on those THP areas that are >.25 mile from the Activity Center until the end of the breeding season.

   Exception: The 0.25 mile disturbance buffer may be reduced where topography, such as ridgelines, will provide a similar noise disturbance protection.

   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

6) For NSO Activity Centers, where fledging status has been determined (either nest failure or fledglings have left the Core Area):

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a) Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within the 100-acre core polygon of the Activity Center.

b) Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre core polygon of the Activity Center, provided no trees >11 inches DBH are removed by the operations, and no logs are yarded through the Core Area.

7) For any NSO Activity Center, regardless of reproductive status:

a) If NSO move to a new location (>1000 feet from the historical Activity Center) and reproductive behavior is confirmed at the new site, request technical assistance to evaluate the status of the historical Activity Center.

Pacific Fisher

The THP is within the current range of the Pacific Fisher. Habitat exists within the BA and and potentially suitable habitat exists within the plan area. No observations of this species have been made within the biological assessment or plan area.

In any year the Pacific Fisher is a candidate or listed species pursuant to CESA, the following apply:

Den Tree Definition

- A potential den structure for the Coast Forest District is any hardwood with visible indicators of cavity formation (dead or alive) ≥ 18 inches DBH, a conifer snag ≥ 30 inches DBH, or a live green cull or green wildlife conifer ≥ 30 inches DBH. A live green cull is a conifer tree with less than 25% merchantable wood by volume. A green wildlife conifer is considered a potential den structure when it has mistletoe brooms, large rest branches, and visible signs of fungus or other indications of cavity formation or visible cavity openings.

During the Natal den period of March 1 to May 15

- Potential den trees will not be felled

During the Maternal den period of May 16 to July 31

- Potential den trees to be felled for safety reasons will not be cut until the day after all other trees intended to be felled within a ten acre area (a 375' radius) have been felled. If a fisher has kits in a den tree within the area, this will allow her additional time to remove her young from the area.

Fisher sighting

- If a fisher is sighted in a harvest unit during timber operations, all vegetation disrupting activities shall be suspended within 0.25 miles. If a den, resting area or other habitation of a Fisher is discovered, all operations (per PRC Section 4527) will additionally be suspended within a 1/4 mile of a natal den or within 375 foot radius buffer around the maternal den or other habitation. The Department of Fish and Wildlife (CDFW) and Department of Forestry and Fire Protection () will then be immediately notified.

DFW consultation

- Contact CDFW If site-specific avoidance measures are needed that differ from above. After consultation with CDFW, a minor amendment to the THP reflecting the protection agreed between the plan submitter and the Department of Fish and Wildlife shall be filed with Director of the Department of Forestry and Fire Protection; any additional site specific avoidance measures developed through consultation with CDFW will provide equal or greater protection to those stated here.

Rare Plant Mitigation Measures

A list of potentially occurring sensitive plant species has been prepared and is included in Section III. Rare plant surveys shall be conducted by a qualified botanist prior to operations, and the results shall be submitted to CALFIRE and DFW at least 10 days prior to operations to allow review of the adequacy of the survey methodology. Seasonally appropriate floristic surveys in sensitive plant habitat areas shall be in a manner consistent with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). The protocols can be accessed through CDFW's CNDDB web page (http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp) If any of the plants listed in the Species List in the Scoping report are detected prior to or during operations, a default mitigation measure of avoidance will be implemented by placing a 50 foot buffer around any occurrence until species-specific mitigation measures are developed. No timber harvesting, heavy equipment operations or road construction shall occur within 50 feet of any location supporting sensitive plants unless alternative mitigations measures, developed through consultation with DFW, are applied. The 50-foot buffer should begin at the outermost occurrence of the subject sensitive plant. Prior to any timber operations within the buffer zone, the RPF shall consult with DFW to develop species-specific mitigation measures to reduce impacts to less than significant.

General Animal Protection Measures:

If any animals listed in the Species List below are detected prior to or during operations, a default mitigation measure of avoidance will be implemented & no timber harvesting or heavy equipment operations shall occur within 500 feet of any location supporting sensitive animals unless alternative mitigation measures, developed through consultation with DFW, are applied.

Species List:

Peregrine falcon, bald eagle, northern spotted owl, southern torrent salamander, northern red-legged frog, foothill yellow-legged frog, tailed frog, Del Norte salamander, north western pond turtle, northern goshawk, golden eagle, osprey, sharp-shinned hawk, great blue heron, great egret, Vaux's swift, purple martin, Townsend's western big-eared bat, red tree vole, Pacific fisher, white-footed vole, Mcdonald's rock cress, Green yellow sedge, Nutall's saxifrage, Oregon coast paintbrush, Siskiyou paintbrush, Bluff wallflower, Giant fawn lily, minute pocket moss, Pacific gilia, Small groundcone, western lily, Woodnymph, ghost pipe, Wolf's evening-primrose, Seacoast ragwort, White-flowered rein orchid, Oregon polonium, Angels hair lichen, Tracy's romanzoffia, Great burnet, Siskiyou checkerbloom, Coast checkerbloom, Serpentine catchfly, Alpine marsh violet.

See Section III, Plan Addendum to Item 32 for additional information regarding biological resources.

33. SNAGS

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

Snags that constitute a safety hazard such as those which may lean over roads, landings or equipment and personal may be fallen. To provide protection and benefits for wildlife, all other snags shall be retained.

34. LATE SUCCESSION FOREST STANDS

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

35. NON-LISTED SPECIES WILDLIFE PROTECTION

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

36. ARCHAEOLOGY

a. ☒ Yes ☐ No Has an archaeological survey been made of the THP area?
b. ☒ Yes ☐ No Has an archaeological records check been conducted for the THP area?
c. ☐ Yes ☒ No Are there any archaeological or historical sites located in the THP area?

If a person discovers a potentially significant archaeological or historical site after this plan is accepted by the Director, the landowner shall conform to 14 CCR § 929.3 Post-Review Site Discovery.

(a) The person who made the discovery shall immediately notify the Director, LTO, RPF, or timberland owner of record.
(b) The person first notified in (a) shall immediately notify the remaining parties in (a).
(c) No timber operations shall occur within 100 feet of the identified boundaries of the new site until the plan submitter proposes, and the Director agrees to, protection measures pursuant to 14 CCR § 929.2.
(d) A minor deviation shall be filed to the plan.

37. GROWTH AND YIELD

☐ Yes ☒ No Has any inventory or growth and yield information designated "trade secret" been submitted in a separate confidential envelope in Section VI of this THP?

38. SPECIAL INSTRUCTIONS

Describe any special instructions or constraints that are not listed elsewhere in Section II:

1. **Notification of Commencement of Operations:** In accordance with 14 CCR § 1090.13, the Plan Submitter shall notify the current office technician at the Fortuna Resource Management Office (118 Fortuna Blvd., Fortuna, CA 95540) by either phone (707-726-1253) or e-mail each calendar year within fifteen days before and not later than the day of the start up of timber operations.

2. Conditions stated in Section V of the plan which pertain to NCRWQCB waste discharge requirements will not be enforced by the Department unless those same conditions are subject to the Forest Practice Act/Rules and included as enforceable provisions in Section II of the plan.

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Gautreaux Work Order for Road Repair

Site	C1			1600	X	ECP	
Road Class		**Stream Class**	**Existing Culvert Diameter (in.)**			**Proposed Culvert Diameter (in.)**	
Skid trail		II	none			24"	
Site Description	Existing class II temporary fill skid trail crossing						
Treatment	Install permanent culvert. Fill slopes exceeding 1½ :1 shall be rock armored. Road running surface shall be hydrologically disconnected. Road running surface within the WLPZ shall be rocked. Disturbed soil within the WLPZ shall be seeded and mulched or slash packed. Erosion control measures shall be in place prior to October 15th.						

Disturbed Area (sq.ft.)	**Final Site State (Perm/Temp)**	**Estimated Removed Fill Volume (cu. yards)**	**Estimated Added Fill Volume (cu. yards)**	**Fill Material Added**	**Disturbed Vegetation**
2000	Permanent	10	200	Native	huckleberry, fern brush, alder trees

Site	T1			1600	X	ECP	
Road Class		**Stream Class**	**Existing Culvert Diameter (in.)**			**Proposed Culvert Diameter (in.)**	
Skid trail		II	NA			NA	
Site Description	Existing skid trail crossing						
Treatment	Install temp crossing.						

Disturbed Area (sq.ft.)	**Final Site State (Perm/Temp)**	**Estimated Removed Fill Volume (cu. yards)**	**Estimated Added Fill Volume (cu. yards)**	**Fill Material Added**	**Disturbed Vegetation**
1500	Temp	2	2	Native, Rock	Grasses, brush

DIRECTOR OF FORESTRY AND FIRE PROTECTION

This Nonindustrial Timber Management Plan conforms to the rules and regulations of the Board of Forestry and Fire Protection and the Forest Practice Act:

By: _____ _____

(Signature) (Date)

_____ _____

(Printed Name) (Title)

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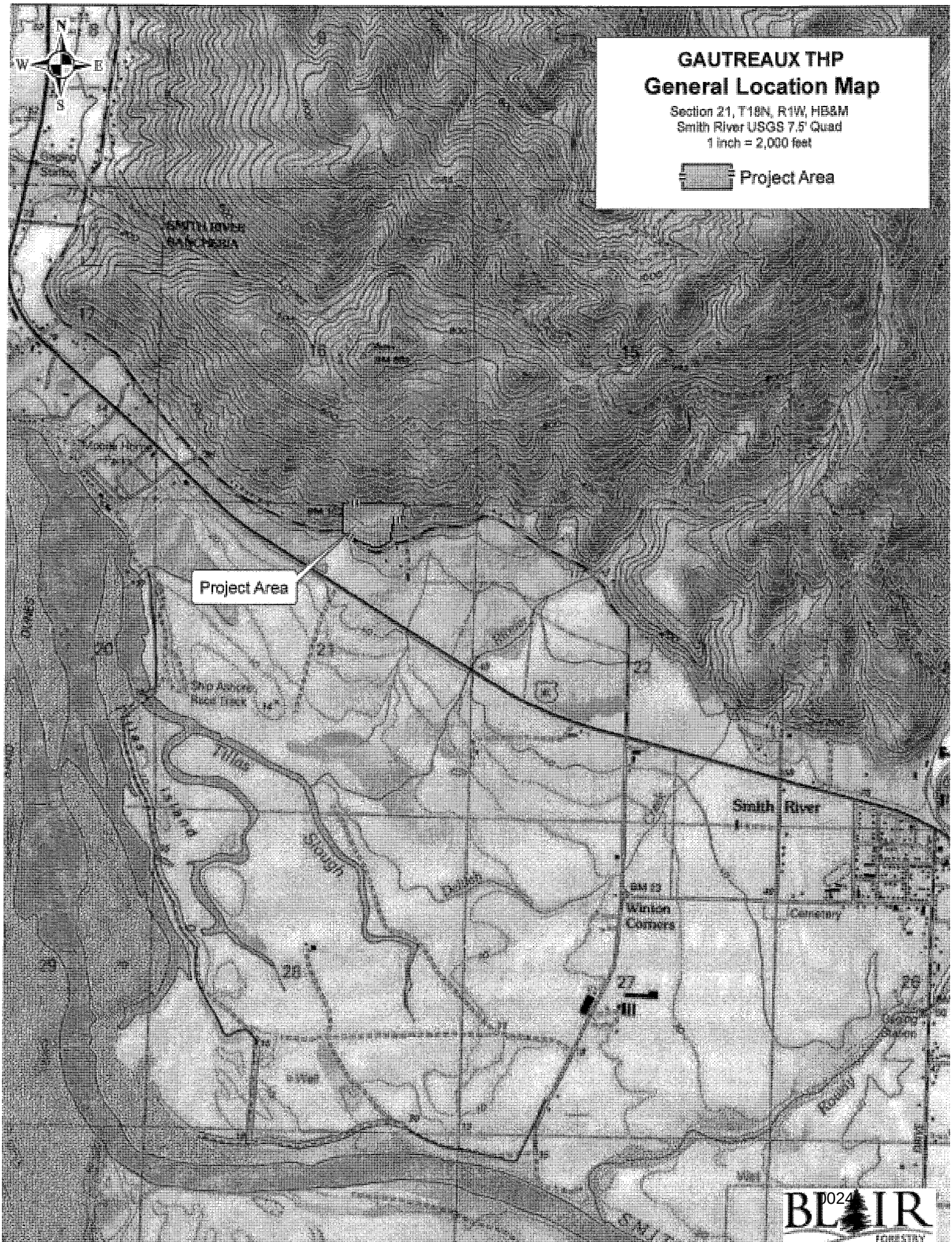
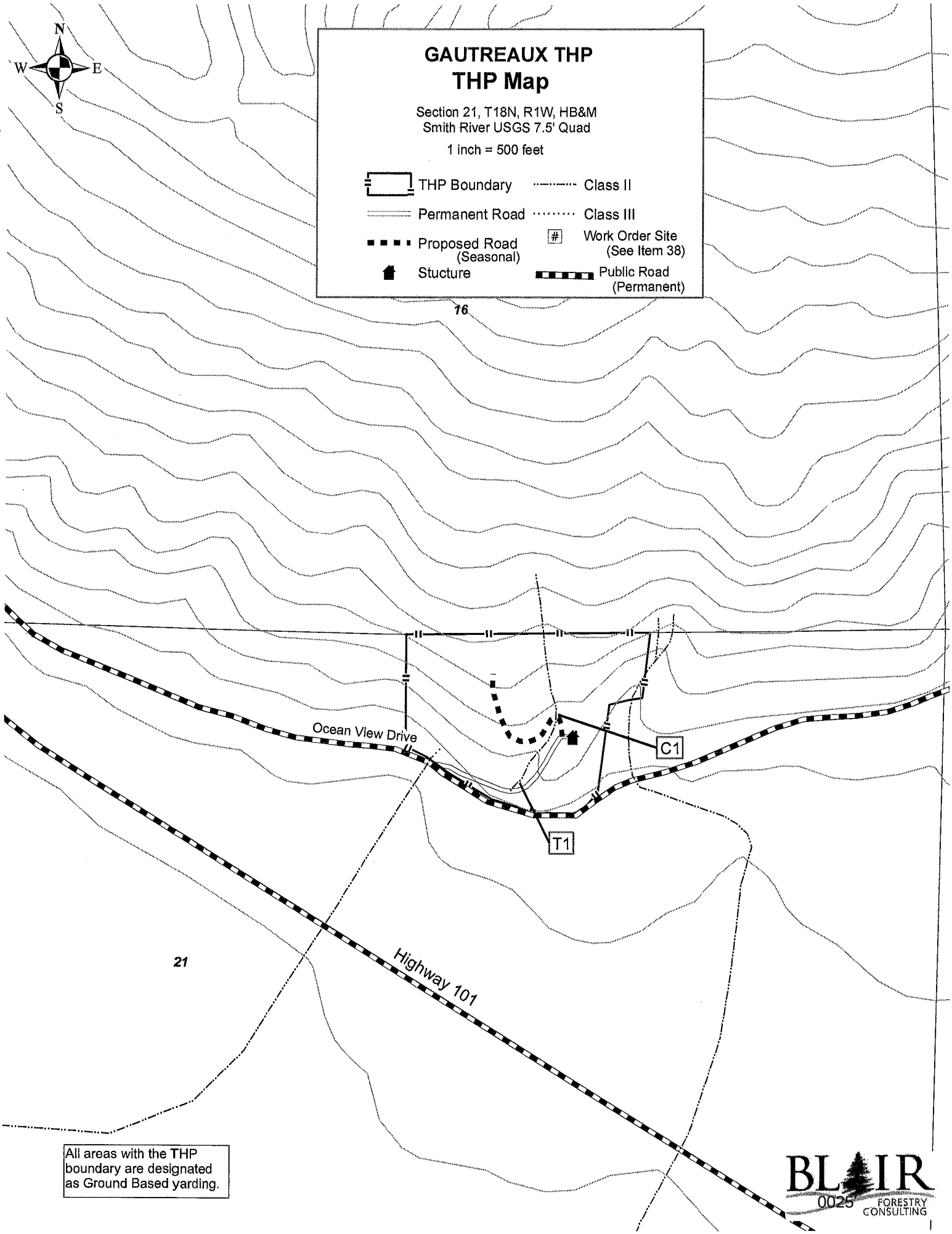

GAUTREAUX THP
General Location Map
Section 21, T18N, R1W, HB&M
Smith River USGS 7.5' Quad
1 inch = 2,000 feet
Project Area
Project Area
Smith River
Winton Corners
Cemetery
N
S
E
W


GAUTREAUX THP
THP Map
Section 21, T18N, R1W, HB&M
Smith River USGS 7.5' Quad
1 inch = 500 feet
THP Boundary
Class II
Permanent Road
Class III
Proposed Road (Seasonal)
Work Order Site (See Item 38)
Stucture
Public Road (Permanent)
N
W
E
S
16
Ocean View Drive
C1
T1
21
Highway 101
All areas with the THP boundary are designated as Ground Based yarding.
BLAIR
FORESTRY CONSULTING

SECTION III

ADDENDUMS

1) General Description of Physical Conditions at the THP Site (14CCR 1034 (gg))
   I. Project Location
   II. Vegetation and Stand Description
   III. Soils and Topography
   IV. Watershed and Stream Conditions
   V. Geology

2) Project Alternatives Analysis

3) Addendum To Item 13 – Plan Submitter, Timberland Owner, and Licensed Timber Operator Responsibilities

4) Addendum To Item 26-Watercourse Protection

5) Addendum To Item 28- Domestic Water Supplies

6) Plan Addendum To Item 32 – Biological Resources Information

GENERAL DESCRIPTION OF PHYSICAL CONDITIONS

SITE DESCRIPTION - 14CCR 1034 (gg)

I. Project Location:

The Timber Harvest Plan (THP) area consists of approximately 13.3 acres located approximately 2 air miles northwest of Smith River, CA, in Del Norte County. The legal description is a portion of Section 21, Township 18-North, Range 1-West, HB&M.

II. Vegetation and Stand Condition:

The stand is single tiered. The initial old growth harvest likely occurred in the early 1900's. Currently, the stand is well stocked with second growth Sitka Spruce that is approximately 80 years of age. A sparse component of other species is present including Western hemlock, Douglas-fir, red Alder, big leaf maple and tanoak. DBH ranges from 0" to 50" with an average of 30". Basal area ranges from 0 to 340 square feet per acre with an average of 200 square feet per acre. Understory vegetation consists of sword fern, salmonberry, elderberry, evergreen huckleberry, and various forbs and grasses.

II. Soils and Topography:

Slopes within the plan are located on the base of the coastal foothill. Elevation within the plan area is approximately 120-300 feet. Slopes within the plan area are 0%-60% (and in excess of 80% in watercourse zones), averaging 40% with a predominately south aspect. Soils within the plan area are "unclassified soils occurring on higher alluvial terraces". The site has a high timber growing potential with a timber site index of Site Class II. This soil is generally well-drained. The THP area has an erosion hazard rating (EHR) of medium (see worksheet in Section V).

III. Watershed and Stream Conditions:

The THP is located within the CALWATER (v2.2) Dominie Creek Planning Watershed (#1103.110004), which is approximately 3,919.7 acres. This project is 13.3 acres which comprises 0.33 % of the planning watershed. A large portion of the planning watershed is forested including, industrial and private holdings. Beneficial uses of Dominie Creek include domestic and agricultural water supply, groundwater recharge and freshwater habitat for wildlife species including rare and endangered. Watercourses in the project area drain to the Smith River.

A minor western portion of this watershed has been developed for rural residential and agriculture and the majority eastern portion is industrial timberland. The rural residential use primarily correlates to paved access provided by Ocean View Drive. Ocean View Drive is the boundary between watersheds running along the change in topography between coastal flatland and the forested foothills.

The watercourses within the Planning Watershed have a channel composition consisting of sand, gravel, cobble and boulder. Total vegetative cover of conifer and hardwood on these watercourses varies from 20-100%.

The majority of the Planning Watershed has been old growth harvested in the 1900s and is currently a mosaic of second and third growth timber stands. More recent harvesting in the watershed includes methods to successfully reduce associated timber harvest impacts. Sediment that is present in the THP is a result of natural events, past historical flooding, and previous logging. Ongoing impacts from past logging may occur in the form of sediment inputs (mostly from skid trails situated within or immediately adjacent to watercourses), loss of old growth habitat, and reduction from streamside canopies. Past logging contributed sediment due to changes in hillslope hydrology that caused new watercourses to cut the slope and changed flows of existing steams that caused bank and bed cutting. Past road construction did not consider the effects of sedimentation especially of a cumulative basis. Private and public roads still contain perched fills, poor surface drainage, and culverts of poor design and installation.

Currently watershed conditions appear fair as indicated by levels of shade canopy, streamside channel diversity, and populations of wildlife and fish. Mitigating factors in the watershed that protect it from impacts associated with population growth and industrialization can be attributed to greater restrictions on logging, a transition from industrial ownership to rural residential ownership, remoteness of location, rough terrain, and riparian zones that are being managed for late seral habitat.

V. Geology

The THP is underlain by Franciscan complex, Broken formation (KFjbf) Described as Cretaceous to Jurassic aged massive gray to tan-brown sandstone, interbedded sandstone and dark-gray mudstone, and minor amounts of conglomerate and schist; fragmented into bedded or massive blocks in a sheared shaley matrix; degree of metamorphism, if present, is less than that present in the mélange.

CGS mapping depicts the plan area as being underlain by disrupted ground (Davenport, C W, 1983). The plan area exhibits no indicators of instability. Trees and old growth stumps show no signs of lean or sweep, and slopes in the plan area are generally less average 50%. No landslides or unstable areas were observed within the plan area during field layout as defined by the California Forest Practice Rules.

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FEASIBILITY OF ALTERNATIVES FOR THIS PROJECT

As provided in the California Environmental Quality Act (CEQA), Title 14, CCR Sec 15126(d), the Alternatives Analysis must "describe a range of reasonable alternatives to the project, or to the location of the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

This discussion of alternatives requires a definition of the basic objectives of the project. Discussion is limited to feasible alternatives that would avoid or substantially lessen any of the significant effects. The range of these alternatives is limited by the rule of reason in 14 CCR 15126(d)(5)(c).... "Project alternatives whose implementation is remote and speculative" need not be given extensive consideration.

1. **Project description, purpose and need**

   The project is as described in the Timber Harvesting Plan. The purpose and need of the THP is to access, harvest, and regenerate forested land. Revenue created by this project will be used by the landowner and community to pay property tax and other costs associated with the necessity of living. This is to be done in accordance with the California Forest Practice Act, and other applicable rules and regulations. Potential impacts are mitigated to insignificance with methods prescribed in the rules, by site specific measures in the THP, and the recommendations of the multi-agency, inter-disciplinary review team process.

2. **No project alternative**

   This alternative would avoid potential environmental impacts that might occur because of the project. However, this alternative does not meet the purpose and need of the project. Furthermore, since the THP process mitigates significant effects and that increased long term sustained conifer yields on the THP area will result from the project, a "no project alternative" would not necessarily result in environmentally superior results.

   The no project alternative would eliminate an opportunity for local employment and reduce revenue to the state and county generated by yield taxes. The no project alternative will not decrease the need for forest products, and could possibly shift timber harvests to areas outside of the jurisdiction of the THP process. Such supplies may occur where significant effects are not required to be mitigated. Therefore, the no project alternative is rejected.

3. **Alternative land uses**

   This parcel is zoned for timber production (TPZ), and such lands are exclusively dedicated to the growing and harvesting timber for commercial purposes and compatible uses. There is a legal presumption that timber harvesting is expected to occur. The project as proposed is consistent with current TPZ zoning. This THP does not propose any conversion of this land to other uses. The timber harvesting plan preparer does not currently know of any other feasible land uses that would meet the project objectives and would avoid or substantially lessen any potential impacts. This project, as mitigated through the Forest Practice Act, and other rules and regulations, will protect and enhance the public concerns and public trust resources of the state through the THP process. Therefore, an alternative land use is rejected.

4. **Timing of the project**

   The timing of the project is prescribed to a degree by the Forest Practice Act, and other rules and regulations. These rules and regulations require specific minimum ages and age related features for certain types of harvests. In addition, the rules and regulations affect the timing of harvest areas adjacent to other areas that have been harvested under certain methods. Effectively managing timberland requires harvesting timber when it's most effective to do so. The decision to harvest was based on age, stocking levels, and growth rate. Harvest is also based on financial obligations and market values. Changing the timing of the project would not avoid or substantially lessen any potentially significant effects of the project, only defer those effects to another time. Therefore, this alternative is rejected.

5. **Alternative site**

   Similar to the timing alternative, the key question in the analysis of alternative sites is whether any of the potential impacts of the project would be avoided or substantially lessened by putting the project in another location. Since this project involves harvesting timber and leaving the area in a timbered use, commensurate with current zoning, it is substantially different from any project that would involve a permanent conversion to another use of the area. This

project is specific to a certain place and its conditions, and any potential impacts are mitigated or eliminated through the THP process. Relocating this project to an alternative site would not eliminate or reduce significant effects to the environment, but only affect the alternate site. Therefore, this alternative is rejected.

6. **Public Acquisition or Conservation Easement**

The plan submitter has participated in land sales to parties interested in using similar lands for uses other than what they are zoned for. Public acquisitions have focused on lands that contain a substantial amount of residual or "old growth" trees. The current forest type, of the proposed project, does not meet the criteria that such organizations, including any public agencies, are generally interested in for acquisition, at this time. If any offer has been made for purchase of any part of this project (for non timber use) it has not been disclosed to the plan preparer. It is unclear how public acquisition or conservation easements would avoid or substantially lessen any of the potential impacts effects of the project and still meet the purpose and need of the project. The highest and best use of the proposed project area is the THP. Therefore, this alternative is rejected.

Conclusion of Alternatives

Only Alternative 1 satisfies the wishes of the landowner and is compatible with the land-use zoning category in which the property falls. Silvicultural prescription have been specifically designed by timber type to maximize individual tree growth while improving the overall health and productivity of the forest while providing for the long-term sustained yield of high quality forest products.

Alternatives 2, 3, 4, 5 and 6 do not reflect the desires of the landowner and as a result of this analysis appear to have the potential to increase risk of an or directly increase potential adverse impacts. Therefore, these alternatives are rejected. For this reason, Alternative 1 is considered the preferred alternative.

PLAN ADDENDUM TO ITEM 13(a)

Plan Submitter Responsibilities (14CCR 1035)

1035 PLAN SUBMITTER RESPONSIBILITY
The plan submitter, or successor in interest, shall:
(a) Ensure that an RPF conducts any activities which require an RPF.

(b) Provide the RPF preparing the plan or amendments with complete and correct information regarding pertinent legal rights to, interests in, and responsibilities for land, timber, and access as these affect the planning and conduct of timber operations.

(c) Sign the THP certifying knowledge of the plan contents and the requirements of this section.

(d)(1)Retain an RPF who is available to provide professional advice to the LTO and timberland owner upon request throughout the active timber operations regarding:

i. the plan,
ii. the Forest Practice Rules, and
iii. other associated regulations pertaining to timber operations.

(d)(2) The plan submitter may waive the requirement to retain an RPF to provide professional advice to the LTO and timberland owner under the following conditions:

i. the plan submitter provides authorization to the timberland owner to provide advice to the LTO on a continuing basis throughout the active timber operations provided that the timberland owner is a natural person who personally performs the services of a professional forester and such services are personally performed on lands owned by the timberland owner;
ii. the timberland owner agrees to be present on the logging area at a sufficient frequency to know the progress of operations and advise the LTO, but not less than once during the life of the plan; and
iii. the plan submitter agrees to provide a copy of the portions of the approved THP and any approved operational amendments to the timberland owner containing the General Information, Plan of Operations, THP Map, Yarding System Map, Erosion Hazard Rating Map and any other information deemed by the timberland owner to be necessary for providing advice to the LTO regarding timber operations.
iv. All agreements and authorizations required under 14 CCR §1035(d)(2) shall be documented and provided in writing to the Director to be included in the plan.

(e) Within five working days of change in RPF responsibilities for THP/NTMP implementation or substitution of another RPF, file with the Director a notice which states the RPF's name and registration number, address, and subsequent responsibilities for any RPF required fieldwork, amendment preparation, or operation supervision. Corporations need not file notification because the RPF of record on each document is the responsible person.

(f) Provide a copy of the portions of the approved THP/NTMP and any approved operational amendments to the LTO containing the General Information, Plan of Operations, THP Map, Yarding System Map, Erosion Hazard Rating Map and any other information deemed by the RPF to be necessary for timber operations.

(g)The plan submitter shall notify the Director prior to commencement of site preparation operations. Receipt of a burning permit is sufficient notice.

(h) Disclose to the LTO, prior to the start of operations, through an on-the-ground meeting, the location and protection measures for any archaeological or historical sites requiring protection if the RPF has submitted written notification to the plan submitter that the plan submitter needs to provide the LTO with this information.

(i) The person who submitted the original plan or the successor in interest shall submit any and all subsequent consultations or letters of technical assistance to the Department as enforceable amendments to the plan prior to operations being conducted pursuant to that consultation or letter of technical assistance

TIMBERLAND OWNER'S RESPONSIBILITIES
The forest practice rules require that the Licensed Timber Operator listed on the THP/NTMP be responsible for the proper construction, inspection, and maintenance of erosion controls during the prescribed maintenance period until the work completion report is approved by CDF (see rules below). Thereafter, the rules require that the Timberland Owner (you) be responsible for inspection and any needed repair and maintenance of erosion controls within the THP area during the remainder of the prescribed maintenance period (3 years).

923.4 Road Maintenance

Logging roads, landings, and associated drainage structures used in a timber operation shall be maintained in a manner which minimizes concentration of runoff, soil erosion, and slope instability and which prevents degradation of the quality and beneficial uses of water during timber operations and throughout the prescribed maintenance period. In addition, those roads, which are used in connection with stocking activities, shall be maintained throughout their use even if this is beyond the prescribed maintenance period.

0030

1050 Erosion Control Maintenance

(a) Where necessary to minimize soil erosion or slope instability or to prevent degradation of the quality and beneficial uses of water, the department may require that erosion controls be maintained prior to the beginning of a winter period and prior to filing of a work completion report.
(b) The Director may deem completion report as described in PRC 4585 to have been filed upon the date of receipt if the department finds that all erosion controls have been constructed and maintained in compliance with the Forest Practice Rules upon the first inspection after receipt of the completion report. Otherwise, the Director shall accept a work completion report for filing only after the department finds that all erosion controls have been constructed in compliance with the Forest Practice Rules.
(c) The LTO is responsible for proper construction, inspection and maintenance of erosion control during the prescribed maintenance period until the work completion report as described in PRC 4585 is approved by the Director. The landowner is responsible for inspection and any needed repair and maintenance of erosion controls during the remainder of the prescribed maintenance period. Responsibility for erosion control maintenance may be assumed at an earlier date by the landowner or can be delegated to a third party, provided that the assuming party acknowledges such responsibility in writing to the Director.
(d) Upon approving a work completion report, the Director may prescribe a maintenance period which extends for as much as three years after filing the work completion report based on physical evidence (such as location of erosion controls in disturbed areas with high or extreme erosion hazard, on steep or unstable slopes, or within or adjacent to the standard width of a water course or lake protection zone) that erosion controls need to be maintained for the extended maintenance period in order to minimize soil erosion or slope instability or to prevent degradation of the quality and beneficial uses of water.
(e) After approving the work completion report, the Director may extend the prescribed maintenance period for as much as three years after filing of the work completion report if subsequent inspections by the department during the prescribed maintenance period show that erosion controls have failed or are likely to fail to minimize soil erosion or slope instability or to prevent degradation of the quality and beneficial uses of water. As authorized by yourself, you (timberland owner) shall be present on the logging area at a sufficient frequency to know the progress of operations and advise the LTO on a continuing basis throughout the active timber operation, but not less than once during the life of the plan.

TIMBER OWNER'S RESPONSIBILITIES
As listed Timber Owner, you are responsible for the filing of a stocking report as described below.
1071 Minimum Stocking Standards

Within five years after the completion of timber operations or as otherwise specified in the rules, a report of stocking on the entire area logged under the plan and shown on a revised map shall be filed with the Director by the timber owner or the agent thereof. If stocking is required to be met upon completion of timber operations, the stocking report shall be submitted within six months of the completion of operations. The minimum acceptable stocking standards on logged areas, which were acceptably stocked prior to harvest, are those specified in the Coast, Northern, and Southern Forest District rules. If not otherwise specified, the following minimum standards apply:
(a) On Site I timberlands as defined by the Board, the average residual basal area, measured in stems one inch or larger in diameter shall be at least 85 square feet per acre; or on Site II or lower shall be at least 50 sq. ft. per acre; or
(b) The area contains an average point count of 300 per acre on Site I, II, and III lands or 150 on Site IV and V lands as specified in PRC 4561. See 14 CCR 912.7, 932.7 and 952.7 for information for the point count values of various size trees and for determining how sprouts will be counted toward meeting stocking requirements.

1075 Report of Stocking

A Report of Stocking on a form acceptable to the Director, certifying that the area logged does not meet or meets minimum stocking standards, shall be submitted by the timber owner or the agent thereof to the Director within five years after completion of timber operations, or as otherwise specified in the rules. The report shall contain the following information:
(a) Name, address, and telephone number of timber owner(s) or agent thereof.
(b) The plan number.
(c) Name of person performing the stocking sampling.
(d) Map showing the sampling area, by sampling procedure, if more than one procedure is used; the plot locations indicating status as stocked or non-stocked.
(e) The acreage of each sampling area.
(f) The number of plot centers installed by sampling procedure.
(g) The number of stocked plots by sampling procedure.
(h) Certification by the timber owner or agent thereof.
(i) Either the plot reference data specified in 14 CCR 1072.2 or direction as to where the plot reference can be obtained.

PLAN ADDENDUM TO ITEM 13(b)

Licensed Timber Operator Responsibilities (14CCR 1035.3)

Each affected licensed Timber Operator shall:

(a) Sign the plan and major amendments to the plan, or sign and file with the Director a facsimile of such plan or amendments, agreeing to abide by the terms and specifications of the plan. This shall be accomplished prior to implementation of the following; which the affected LTO has responsibility for implementing:
    1) those operations listed under the plan and
    2) those operations listed under any amendments proposing substantial deviations from the plan.

(b) Inform the responsible RPF or plan submitter, whether in writing or orally, of any site conditions which in the LTO's opinion prevent implementation of the approved plan including amendments.

(c) Be responsible for the work of his or her employees and familiarize all employees with the intent and details of the operational and protection measures of the plan and amendments that apply to their work.

(d) Keep a copy of the applicable approved plan and amendments available for reference at the site of active timber operations. The LTO is not required to possess any confidential addenda to the plan such as the Confidential Archaeological Addendum, nor is the LTO required to keep a copy of such confidential plan addenda at the site of active timber operations.

(e) Comply with all provisions of the Act, Board rules and regulations, the applicable approved plan and any approved amendments to the plan.

(f) In the event that the LTO executing the plan was not available to attend the on-site meeting to discuss archaeological site protection with the RPF or supervised designee familiar with on-site conditions pursuant to Section 929.2 [949.2,969.2] (b), it shall be the responsibility of the LTO executing the plan to inquire with the plan submitter, timberland owner, or their authorized agent, RPF who wrote the plan, or the supervised designee familiar with on-site conditions, in order to determine if any mitigation measures or specific operating instructions are contained in the Confidential Archaeological Addendum or any other confidential addendum to the plan.

(g) Provide the RPF responsible for professional advice throughout the timber operations an on-site contact employee authorized by the LTO to receive RPF advice.

(h) Keep the RPF responsible for professional advice throughout the timber operations advised of the status of timber operation activity.
    (1) Within five days before, and not later than the day of the start-up of a timber operation, the LTO shall notify the RPF of the start of timber operations.
    (2) Within five days before, and not later than the day of the shutdown of a timber operation, the LTO shall notify the RPF of the shutdown of timber operations.
        (A) The notification of the shutdown of timber operations is not required if the period of the shutdown does not extend beyond a weekend, including a nationally designated legal holiday.

(i) Upon receipt of written notice of an RPF's decision to withdraw professional services from the plan, the LTO or on-site contact employee shall cease timber operations, except for emergencies and operations needed to protect water quality, until the LTO has received written notice from the plan submitter that another RPF has visited the plan site and accepts responsibility for providing advice regarding the plan as the RPF of record.

Plan Addendum to Item 26

WATERCOURSE AND LAKE PROTECTION

A field examination for watercourses which contain Class I, II, III, or IV waters was conducted as per 14 CCR 916.4 & 916.9 (f)(1)(E). The examination evaluated areas near, and areas with the potential to directly impact, watercourses for sensitive conditions including, but not limited to, existing and proposed roads, skid trails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, changeable channels, overflow channels, flood prone areas, and riparian zones where values set forth in 14 CCR 916.4 may be impaired. The examination considered these conditions, and those measures needed to maintain, and restore to the extent feasible, the functions set forth in 14 CCR 916.4, when proposing RMZ/EEZ widths and protection measures. The plan identifies such conditions, including where they may interact with proposed timber operations, that individually or cumulatively significantly and adversely affect the beneficial uses of water, and prescribed measures to protect and restore to the extent feasible, the beneficial uses of water (see the Cumulative Impact Assessment in Section IV).

This plan is located within the Coast Forest District of the Coastal Anadromy Zone. There are Class II and III watercourses within the project area. These watercourses flow to Smith River. The project is located within the Dominie Creek watershed. The Dominie Creek Planning Watershed is listed as a Coho watershed (DFG, April 2009).

All Class II watercourses within and adjacent to the plan area were evaluated, per 916.9(g), for the characteristics of a Class II-L watercourse. These characteristics include either: (1) a contributing drainage area of ≥100 acres in the Coast Forest District as measured from the confluence of the receiving Class I watercourse; or (2) an average active channel width of 5 feet or greater. The project area is beyond 1000' of the Class I confluence therefore Class II-L protection measures do not apply. The THP Map in Section II shows the location of all watercourses within the plan area.

See THP Section II, Item 26 for watercourse protection measures.

A combination of the rules, the plan, and mitigation measures provides protection for the following:

a. water temperature control
b. streambed and flow modification by large woody debris
c. filtration of organic and inorganic material
d. upslope stability
e. bank and channel stabilization
f. spawning and rearing habitat for salmonids
g. vegetation structure diversity for fish and riparian wildlife habitat, possibly including but not limited to:
    I. vertical diversity
    II. migration corridor
    III. nesting, roosting, and escape
    IV. food abundance
    V. microclimate modification
    VI. snags
    VII. surface cover

14CCR 916.9(d)(1) requires that "The plan shall fully describe: (A) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and (B) the person(s) responsible for the implementation of each measure, if other than the timber operator.

Measures are contained in Section II of the THP that will meet the intent for offsetting sediment loading, thermal loading, and potential significant adverse watershed effects. Other than the small amount of WLPZ harvesting, other measures are included in Item 18, Item 23, and Item 26 of Section II. All operational measures stated in Section II of the NTMP shall be implemented by the LTO. Maintenance of erosion control structures and facilities following the completion of operations shall be assumed by the timberland owner.

14CCR 916.9 (c) The recently updated Anadromous Salmonid Protection (ASP) rules are prescriptive in nature and have specific protection measures that were designed to accomplish the objectives of 14CCR 916.9(c). The plan does not include any deviations from the ASP rules and there are no special circumstances that would require additional protection measures to accomplish the stated objectives.

Plan Addendum to Item 26d

DFG 1600 permit process analysis; activity/facility description

Notification Information List Pursuant to
Fish and Game Code Section **1611**
Gautreaux THP
Version 20080819

1. Basic data:
   a. The name, address, and telephone number of the:

Applicant:	**Mark Gautreaux 315 Amanda Lane, Crescent City CA 95531**
Operator:	**To be amended**
Contact Person:	**Brian Griesbach , P.O. Box 2517, McKinleyville, CA 95519 (707) 672-5814**
Property Owner:	**Same as Applicant**

   b. The name of each lake and the name and watercourse classification of each stream the lake or streambed alteration activities will affect, including the nearest downstream watercourse or water body.

      Un-named Class II and III tributaries to Smith River.

   c. Road sites; township, range and section numbers; watercourse classification; present condition; proposed work of each lake and stream encroachment; and project description measures.

      T18N, R1W, Section 21, HBM. See THP Map and Work Order under Item 38, Section II for present condition; proposed work of each lake and stream encroachment; and project description measures (below).

   d. A single map or diagram clearly showing all of the following:
      i. All lake and stream encroachments, with a number or other appropriate identifying label.
      ii. All roads, with a number or other appropriate identifying label
      ii. All watercourse classifications (i.e., Class I, II, or III).
      iii. Access from a named public road.
      iv. A north arrow and scale.

      See THP Map and road work order at the end of THP Section II order for watercourse classifications associated with crossings.

   e. Description of the encroachment sites, existing and proposed culvert diameters, area to be disturbed, proposed conditions upon completion, estimated volumes to be removed and/or added to crossing, description of fill materials and disturbed vegetation.

      See THP Map and road work order at the end of THP Section II

   f. A description of the fish and wildlife and botanical resources the work could adversely affect, including riparian resources and special status species (i.e., species listed under the California Endangered Species Act ("CESA") and/or the federal Endangered Species Act ("ESA"), species fully protected under state law, and/or species of special concern). If the work could adversely affect any listed species, the applicant should indicate whether consultation under CESA or ESA has Commenced and if so, the current status of the consultation. Applicant should also provide the biological opinion, as applicable.

      See THP Item 32, Section IV: Cumulative Impacts Assessment. A botany survey will be conducted prior to operations.

   g. Indicate if the work takes place in, adjacent to, or near a river that has been designated as "wild and scenic" under state or federal law.

      No

2. Information about each lake and stream encroachment, including the following:
   a. Construction plans, including specific details, cross sections, and dimensions.

      See THP Map and road work order at the end of THP Section II

   b. If water will be present and diversion of flow around the work site is necessary, the volume of water to be diverted and the method of diversion.

      There is potential for water to be present at encroachment sites. If water is present at any site when work is proposed, water will be diverted around or through the site with pipes or portable pumps and returned back to the channel downstream of the work site. The flow shall be diverted only when the construction of the diversion is completed. Any temporary artificial obstruction shall be built from material which will cause little or no siltation (i.e. sandbags, straw bales, rock or plastic).

   c. If water drafting is proposed, provide drafting site information (i.e. estimated volume, drafting rate, timing, etc.). Indicate if the activity will be done pursuant to a water right application or permit.

      Water drafting shall occur from an offsite delivered source. Water drafting may occur onsite when water is collected in tanks from springs, which are not within the channel zone of natural watercourses.

   d. The materials (e.g., soil, sand, gravel, ¼- to ½-ton rip-rap, large wood, etc.) and volumes that will be used for and/or removed from the lake or stream encroachment, the dimensions of the area to be excavated and the dimensions of the area to be filled.

      See THP Map and road work order at the end of THP Section II

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e. Specify the type of equipment to be used.

A backhoe, tractor, excavator, dump truck, or grader may all be employed for crossing installation and removal.

f. Proposed work periods including the date or conditions requiring temporary crossing removal.

Work operations are proposed during the non-winter period (June 1 – October 14) of any year of operations when soils are not saturated.

g. The species composition and density of vegetation to be removed or disturbed as a result of lake or streambed alteration activities. Indicate if sensitive plant surveys have been completed within areas which will be affected by lake or stream encroachments. Include any plans to restore the affected riparian or hydrophytic vegetation.

See THP Map and road work order at the end of THP Section II. See THP Item 32. A botany survey will be conducted prior to operations.

h. Mode of impact to fish, wildlife and botanical resources (i.e., changes in sediment and/or flow delivery rates, dewatered or impounded watercourses, destabilized stream banks, erosion causing sediment deposition, changes to or elimination of riparian vegetation, reduced canopy affects on microclimate and/or water temperature, etc.)

There is potential for minor amounts of sediment to reach the watercourse during excavation and placement of temporary culverts, and during the first winter following operations. This potential will be minimized by operating during low flow periods and by the soil stabilization measures required by the THP. Due to the low flows that occur at the encroachment sites and significant distance to the nearest Class I watercourse downstream, the mode of impact to fish is virtually non-existent. Potential impacts to wildlife and botanical resources shall be protected by the measures detailed in the THP.

i. Measures included to protect fish, wildlife and botanical resources (i.e., avoidance measures, sediment control measures, construction time periods, methods to divert water around or away from the work site, special measures necessary to protect special-status species, a post-work action plan including measures to minimize soil erosion, revegetation, etc.).

See THP Items 18, 24, 26, 32 and 38 in Section II of the THP for details and special measures needed for protection of resources during encroachment work. Also see Project Description Measures (below).

j. Calculations or other data used to size culverts.

Culverts for temporary use only during the low flow period. Culverts are to be of sufficient diameter to handle flow. A minimum diameter of 6". Culverts will be removed prior to Oct 15th.

Culverts for permanent use have been sized for 100 year flow using Rational Method. Spread sheet attached at end of this section.

k. For bridge installations: indicate if the abutments or road approaches will encroach into the floodplain or channel; provide the calculations or data used to determine bridge height and flow capacity; describe the type of abutments and scour protections with dimensions; provide any engineering reports or plans; etc.

No bridge installations are planned.

l. Describe any debris torrent, landslide, or other unstable conditions at each encroachment.

N/A

PROJECT DESCRIPTION MEASURES

Permanent culvert crossing

- Culvert shall be placed at stream gradient, or have downspouts, or have energy dissipaters at outfall.
- If downspouts are used they shall be secured to the culvert outlet and shall be secure on fill slopes. If half round downspouts are used they shall be a size larger than the culvert.
- Culverts shall be long enough so that roadfill does not extend or slough past the culvert ends.
- Inlet of culverts and associate fill shall be protected with appropriate measures that extend at least as high as the top of the culvert.
- Outlet of culvert shall be riprapped if roadfill sloughing into channel can occur.
- Where debris loads could endanger the crossing a trash/debris catchment structure shall be constructed upstream of the culvert inlet.
- Bank and channel armoring may occur when appropriate to provide channel and bank stabilization.
- If operations require moving of equipment across a flowing stream, such operations shall be conducted without causing a prolonged visible increase in stream turbidity. For repeated crossings, the operator shall install a bridge, culvert, or rock-lined crossing.
- During construction in flowing water, which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, temporary diversion channel or other suitable means. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life below the dam. Equipment may be operated in the channel of flowing live streams only as necessary to construct the described construction.
- Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portion of any stream channel shall be restored to as near their original condition as possible. Restoration shall include the mulching of stripped or exposed dirt areas at crossing sites prior to the end of the work period.
- Structures and associated materials not designed to withstand high seasonal flow shall be removed to areas above the high water mark before such flows occur.
- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washing, oil or petroleum products, or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

Temporary crossings

- For crossings that require the placement of fill a "spittler" type crossing shall be considered if water is present at time of installation an adequate sized pipe shall be installed to handle the flow (min. 6 inch diameter pipe).
- Spittler crossings consist of logs laid in streambed with/without culvert. Use of culvert(s) dependent on site specific requirements. Culverts may be 6"-24" in diameter, dependent on stream flow.
    - Logs are covered with a layer of straw (minimum thickness 4"). Typar drain fabric material or plastic may be placed atop logs to aid in latter removal. Earth material is laid above straw and/or typar to a depth of 6"-12" to provide a running surface for vehicles or skid equipment. Drainrock may be used instead of earth material. If this is required or utilized, typar and straw are unnecessary, and the rock may be left onsite following completion.
- When fills are removed they shall be excavated to form a channel that is as close as feasible to natural watercourse grade and orientation, and that is wider than the natural channel.
- Excavated banks shall be laid back to a 2:1 (50%) or natural slope.
- Temporary crossings shall be removed by October 15.
    - Any temporary crossing left in after October 15 or installed after October 15 and before May 31, inclusive, shall be size to accommodate the estimated 100-year flow.
- Bank and channel armoring may occur when appropriate to provide channel and bank stabilization.
- If operations require moving of equipment across a flowing stream, such operations shall be conducted without causing a prolonged visible increase in stream turbidity. For repeated crossings, the operator shall install a bridge, culvert, or rock-lined crossing.
- During construction in flowing water, which can transport sediment downstream, the flow shall be diverted around the work area by pipe, pumping, temporary diversion channel or other suitable means. When any dam or artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain fish life below the dam. Equipment may be operated in the channel of flowing live streams only as necessary to construct the described construction.
- Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portion of any stream channel shall be restored to as near their original condition as possible. Restoration shall include the mulching of stripped or exposed dirt areas at crossing sites prior to the end of the work period.
- Structures and associated materials not designed to withstand high seasonal flow shall be removed to areas above the high water mark before such flows occur.
- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washing, oil or petroleum products, or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

Determination of 100-Year Flood Flow

Location: Gautreaux

(Enter data in fields with red-colored headings. Other data fields will be calculated automatically.)

Magnitude and Frequency Method for 100-year flood flow (A > 100 acres)

No.	Crossing	Area (acres) A	Basin maximum elevation (ft)*	Crossing elevation (ft)*	Area (mi^2) A	Avg. Annual Precipitation (in/yr) P	Elevation (ft/1000) H	100-yr flood flow Q_{100} (cfs) North Coast[1] (NC)	Sierra[2] (S)	North-east[3] (NE)	Central Coast[4] (CC)
1	*C1*	16	680	200	0.025	70	0.44	*23.0*	*99.5*	*14.2*	*35.7*
2											
3											
4											
5											

**To estimate discharges for bridges, use elevations along watercourse at 85 percent and 10 percent of water-course length from crossing to drainage divide, respectively, instead of using maximum and crossing elevations.*

See below for M&F equations

Rational Method for 100-year flood flow (A < 200 acres)

No.	Crossing	$T_c = 60((11.9 \times L^3)/H)^{0.385}$ Channel length (to top of basin) (mi) L	Elevation difference (ft) H	Concentration time (min) Tc	$Q_{100} = CIA$ Runoff coefficient C	100-year Return-Period Precipitation (in/hr) I*	Area (acres) A	100-yr flood flow (cfs) Q100
1	*C1*	0.37	480	*5*	0.35	1.5	16	*8.4*
2	*0*		0	*#DIV/0!*			0	*0.0*
3	*0*		0	*#DIV/0!*			0	*0.0*
4	*0*		0	*#DIV/0!*			0	*0.0*
5	*0*		0	*#DIV/0!*			0	*0.0*

**Use 100-yr precipitation of duration similar to Tc or for 10 min, whichever is larger; convert to in/hr for input as "I"*

Magnitude & Frequency Q_{100} equations

NC (1) $Q_{100} = 9.23\ (A)^{0.87}\ (P)^{0.97}$

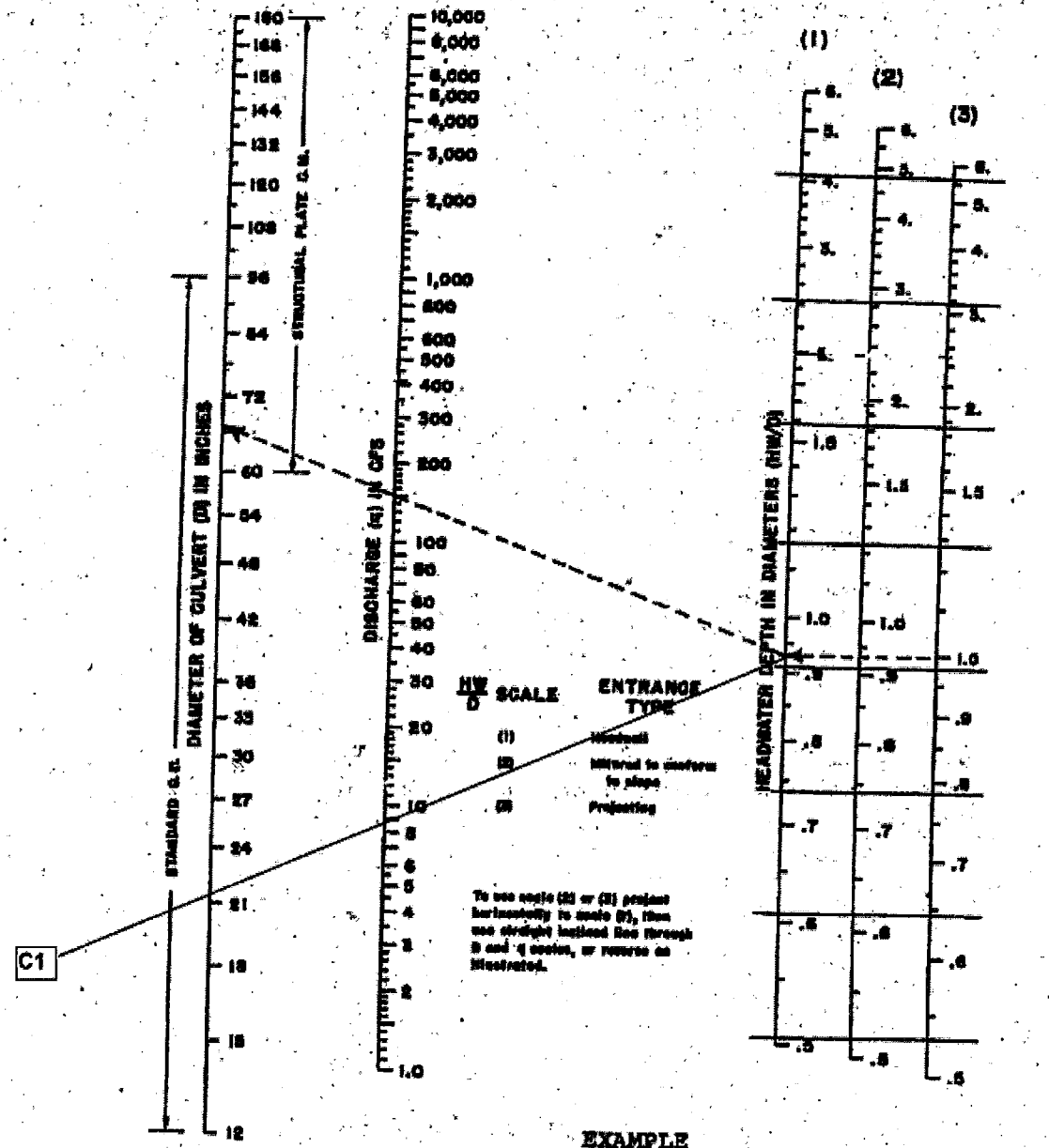
S (2) $Q_{100} = 15.7\ (A)^{0.77}\ (P)^{1.92}\ (H)^{-0.43}$

NE (3) $Q_{100} = 125\ (A)^{0.59}$

CC (4) $Q_{100} = 19.7\ (A)^{0.88}\ (P)^{0.84}\ (H)^{-0.33}$

Template prepared by:
Michael Wopat
6105 Airport Road
Redding, CA 96002

If questions, contact Mr.Wopat at 530-224-4748
or at michael.wopat@fire.ca.gov



EXAMPLE

HW/D = 1.0
Entrance type = (3)
Discharge = 150 cfs
Result:
Diameter of culvert = 66 inches

0038

PLAN ADDENDUM TO ITEM 28

SECTION III

Domestic Water Supply Notification

There are downstream landowners within 1000 feet of the THP whose ownership adjoins or includes a Class I, II, or IV watercourse which receives surface drainage from the proposed timber operations. An example of the proof of the request for information on Domestic Water Supplies by letter and newspaper has been included in THP Section V.

No responses were received from the Domestic Water Supply Inquiry or the Public Notice.

The following listed residents were mailed domestic water supply notification letters.

Downstream Landowners within 1000 feet of the project boundary

102-010--24
Reservation Ranch
PO Box 75
Smith River CA 95567

102-010-33
Robert Miller III
11885 Oceanview Dr.
Smith River CA 95567

102-110-02
John Roberts 2004 Trust
PO Box 336
Smith River CA 95567

102-110-04, 102-110-05
Ernest and Linda J Silva Trust
11775 Oceanview Dr
Smith River CA 95567

0039

Plan Addendum to Item 32

Plan Addendum, Item 32(a)

Key Habitats and Listed Species:

The scoping process for listed species included consulting the Department of Fish and Wildlife's RareFind Application (Version 5) of the California Natural Diversity Database (CNDDB) to view element occurrence records for plants, animals, and natural communities within a 5 mile radius surrounding the THP area. These records checks were performed on the Smith River 7.5' USGS quadrangle and the eight surrounding quadrangles. The Northern Spotted Owl Database was consulted to determine if any NSOs have been reported in the BAA. The CNDDB and NSO records checks were performed on February 18, 2015, using the most current versions available. "California's Wildlife, Volumes I through III, Zeiner et al" were reviewed.

The following descriptions are for sensitive species, and those which are listed as Protected, Endangered, or Threatened Species (PETS) within the Biological Assessment Area (BAA) and THP area, and/or in Del Norte County which may be affected by the proposed project. The BAA was chosen using major breaks in the landscape such as ridges and watercourses that appear to logically establish this project's area of influence. The BAA is the same as the Watershed Assessment Area (See Cumulative Impact Assessment Map in Section IV) for all species except for the Northern Spotted Owl, which was assessed over a 0.7 mile radius. If there is a possibility of the species occurring on the plan area, then the species is addressed, regardless of previous detection records for Del Norte County. The following analysis provides information on a particular species, including range, habitat and occurrence within the BAA and plan area.

I. BIRDS

Bald eagle (*Haliaeetus leucocephalus*) is listed as a California endangered species, a California Department of Fish and Wildlife fully protected species and a CalFire sensitive species. In California, bald eagles breed in the northern quarter of the state. The species winters throughout most of their breeding range, with a large portion (half in the late 1980's) of the state's population wintering in the Klamath Basin (Zeiner et al. 1990b). The species is a locally regular, uncommon winter visitor and locally rare breeder (Harris 1991). Specific winter habitat of this species is generally large trees with open crowns near large creeks, rivers, or lakes that have a fish supply. Declines in the populations of this species began in the 1950's due mainly to pesticide contamination, but also because of habitat loss or alteration, and disturbance. In California the breeding population was severely reduced in size by the early 1960's (Lehman 1983). Since then, most populations have increased, and winter populations appear stable (Johnsgard 1990, CDF&G 1990).

Sightings have been reported to the California Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle within the Rowdy Creek drainage approximately 3 miles west-southwest. No sightings have occurred within the BAA. Suitable foraging habitat is at least a half mile away. As bald eagles and their nests are usually quite visible it is highly unlikely that bald eagles are nesting in the area. The stand was visually inspected on the ground from below the canopy and from prominent viewing places where the overstory structure could be viewed obliquely and no large platform nests where observed. There are no large mature dominant or old growth trees suitable for nesting found within the plan area. This species does not occur within the project boundary.

Golden eagle (*Aquila chrysaetos*) is listed as a California Department of Fish and Wildlife species of special concern and a CalFire sensitive species. Golden eagles are a relatively common, permanent resident of low density, occupying rolling foothills, prairie and mountain areas. Numbers may increase in density in these habitats during the winter period as migrants arrive from northern habitats. Golden eagles are not generally associated with coastal forest stands.

Primary forage includes lagomorphs, rodents, other small mammals, birds, reptiles and carrion. Requires open terrain for hunting such as grasslands and early successional stages of forest and shrub habitats. In areas where this species is common they can be found foraging road corridors. Perches included large trees and cliffs with overhanging ledges. Nesting habitat is typically rugged open habitats with canyons and escarpments. The Golden Eagle builds large platform nest, often 3M (10ft) across and 1M (3ft) high, on cliffs of all heights and in large trees in open areas. Alternative nest sites are maintained and old nests reused.

No sightings have been reported to the California Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. Dominant trees that may be suitable for nesting and foraging are present however, foraging habitat is limited within the project area. Golden eagles and their nests are usually quite visible. Golden eagles build large platform nests, often 10 ft across and 3 ft high (Zeiner, et al, 1990, vol. II, pg. 142). The stand was visually inspected on the ground from below the canopy and from prominent viewing places where the overstory structure could be viewed obliquely and no large platform nests or golden eagles were observed. Habitat components will be retained along watercourses and prairie edges.

Northern goshawk (*Accipiter gentilis*) is listed as a California Department of Fish and Wildlife species of special concern and a CalFire species of concern. This species is scarce to uncommon in the north coast ranges, inhabiting mature, dense conifer forests in middle and higher elevations. Seasonal migration may increase densities along coastal foothills in timbered areas. These species are difficult to approach and detect and are thought not to be tolerant of human activities.

.0040

Northern Goshawks hunt in wooded areas interspersed with meadows and other openings, using snags and dead-topped trees for observation and prey-plucking perches. Feeds on birds, robin to grouse in size, plus small mammals such as squirrels and rabbits. Prefers mature and old growth stands of conifer and deciduous habitats. This species generally nests near water, on north slopes, in the densest parts of mature stands, but close to openings. They tend to nest in large, live trees, with stick nests usually located in fork of large, horizontal limb close to trunk, at bottom of live canopy 19-82 feet from ground. They will use old nests, and maintain alternative nest sites.

No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. Habitat exists within the project area. Stand searches for this species and their nests were conducted during the layout of this project no goshawks or nests were identified. Habitat components will be retained along watercourses and prairie edges.

Osprey (*Pandion haliaetus*) is listed as CalFire sensitive species. The range of this species in California is the northern portion of the state where their nest sites are associated with large fish-bearing bodies of water. In the north coast region this species is a common summer resident and breeder, but rare in winter (Harris 1991). Most of these birds undergo a seasonal migration, with most leaving by early October, with some birds remaining for the winter at major foraging areas. Spring migrants arrive at nesting areas by early March, with nesting underway by late May (Harris 1991).

Typical habitat consists of large elevated trees or artificial structures for nesting within a few kilometers of a fish source (Johnsgard 1990). Contamination of prey by organochloride pesticides was mainly responsible for population declines, and since the banning of these pesticides in the U.S. the reproductive success of most populations has increased (Harris 1982). Although ospreys are most often very tolerant of human activity and often nest adjacent to roads and other conspicuous locations, disturbance of nest sites during the nest season (April-early June) can cause nest abandonment.

Sightings have not been reported to the California Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. Suitable foraging habitat is at least a half mile away. Dominant trees suitable for nesting platforms have not been identified however it is possible they do exist. Osprey and their nests are highly visible and none were identified during the layout of this project. This species does not occur within the project area. Habitat components will be retained along watercourses and prairie edges.

Peregrine falcon (*Falco peregrinus anatum*) is listed as a fully protected species by the California Department of Fish and Wildlife and as a sensitive species by the CalFire. It should be noted that the recovery of this species occurred under protection measures provided by the standard Forest Practice Rules that required less mitigation to watercourses than required for this THP. This species is a relatively uncommon breeding resident and an uncommon migrant. Most nest sites known in managed areas are known, but additional sites are possible. The population is considered to be recovering slowly.

Peregrine falcons forage on a variety of birds up to large ducks in size, preferring water birds; occasionally hunting mammals, insects and fish. The species perches in trees and cliff areas, and manmade structures including large power line structures. Peregrines tend to breed near wetlands, lakes, riparian areas or other "open" water, mostly in wetlands within forests and coastal habitats. Often utilizes a scrape or ledge on cliffs or high rock outcroppings and occasionally man made platforms. The THP does not contain such a feature. These sites characteristically have a cavity or ledge in the tree down from the top of the tree or snag top. The cavity is thought to create a ledge for platform type nesting and the large tree extending above the canopy creates a "cliff" effect.

No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. The plan area is within the range of the species and certain habitat elements for the species exist, however, none of the required protected cliffs or ledges exist on the plan area. No peregrine falcon or their nests were identified during the preparation of this project.

Sharp-shinned hawk (*Accipiter striatus*) is listed as a watch list species by the California Department of Fish and Wildlife. In California, the range of this species is from the Oregon border south to central California during the breeding season, otherwise throughout the state from September to April. Harris (1991) calls the sharp-shinned hawk a common migrant and winter visitor, and an uncommon summer resident and breeder. Both the breeding and wintering habitats of this species have been characterized as woodlands of young or open forests with a variety of plant life forms (Johnsgard 1990). 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, vol. II, pg. 126). Populations of this species may have declined from 1950-1970 due to the use of organochloride pesticides, but have since improved (Johnsgard 1990). Remsen (1978) suggested that timber harvest may be a threat to nesting habitat of this species, but the work of other authors indicates that forest harvest resulting in younger stands benefit the species (Postovit and Postovit 1987, Reynolds et al. 1982).

Although the plan area is within the range of the species, preferred habitat for the species does not exist. No sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. No Sharp-shinned hawks have been observed by the RPF or staff 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 sharp-shinned hawk given the preference of younger pole-sized stands .

Northern spotted owl (*Strix occidentalis caurina*) is listed as a federally threatened species, state candidate for threatened status, and as a CalFire sensitive species. In California, the range of this species is considered the Klamath and Coast Range provinces in northwestern California (Thomas et al. 1990). In the north coast region Harris (1991) considers them as an uncommon resident and breeder. The specific habitat of this species in the Klamath Province includes a broad range of age and structure of forested habitats.

Different habitat types of this species are related to their nesting, roosting, and foraging habits. Minimum nesting requirements appear to be some sort of arboreal structure, and the presence of an adequate prey base, often including the dusky-footed woodrat (Neotoma fuscipes).

A search of the CNDDB/Spotted Owl Viewer shows no spotted owl Activity Centers within the 0.7 mile radius NSO Assessment Area. Surveys are being conducted during the 2015 field season to determine the status of NSOs occurring within or nearby the plan area. No timber operations shall occur until surveys have been provided for review and evaluated for consistency with the plan and protocols, and amended into the plan.

Great blue heron (*Ardea herodias*) is listed as a CalFire sensitive species. In California this species ranges throughout most of the state up to approximately 4,900' above sea level, with rookeries scattered throughout northern California (Zeiner et al. 1990b). Great blue herons inhabit a wide variety of freshwater and salt water habitats. Foraging areas include coastal bays, lagoons, tidal flats, mud flats, and rocks along rivers, creeks, ponds, and lakes (Yocom and Harris 1975) and also agricultural lands and along watercourses in mountainous areas. Their rookeries are often found in brush, on rocks and ledges, or on the ground, but they prefer groves of trees near feeding areas (Zeiner et al. 1990). Threats to this species include alteration of habitat through development.

Sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. No sightings have occurred within the BAA. Foraging habitat within the project area is lacking. Watercourses are relatively small brushy and not suitable for wading. Foraging habitat is near the project area in the form of watercourses in agricultural lands. Due to the proximity of foraging habitat the timber stands along the edge of the agricultural area could be considered suitable nesting habitat. However the presence of residences and the fact that a well traveled county road also exists along the edge of the agricultural land diminishes suitability of nesting. The species and their nests were not identified during layout of this project. Maintenance of watercourses and other mitigations proposed to protect water quality shall provide ample protections so that the species habitat shall not be reduced.

Great Egret (*Ardea alba*) is designated as a sensitive species by the CalFire. Regionally they are fairly common year round, inhabiting shallow estuaries and saline emergent wetlands, open fields, riparian and river habitats. The Great egret is restricted to lowland, flat areas. Great egrets forage mainly on fish, amphibians, snakes, snails, crustaceans, and small rodents. They feed on the ground only, moist flat areas, and take shelter and roosts communally in trees. This species usually nests in colonies in tops of secluded large snags or live trees near water source, at heights of 20-40 feet but as high as 100 feet. Nests are often sheltered from prevailing winds, built of sticks, and stems of marsh plants. Colonies can be intra specific with other herons and egrets. This species is relatively intolerant of human activities around nesting colonies. Nesting colonies are usually very obvious.

Sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle, with sightings occurring approximately 1 mile west of the project area. Foraging habitat within the project area is lacking. Watercourses are relatively small brushy and not suitable for wading. Foraging habitat is near the project area in the form of watercourses in agricultural lands. Due to the proximity of foraging habitat the timber stands along the edge of the agricultural area could be considered suitable nesting habitat. However the presence of residences and the fact that a well traveled county road also exists along the edge of the agricultural land diminishes suitability of nesting. The species and their nests were not identified during layout of this project. Maintenance of watercourses and other mitigations proposed to protect water quality shall provide ample protections so that the species habitat shall not be reduced.

Marbled murrelet (*Brachyramphus marmoratus*) is listed as an endangered species in the state of California and as a threatened species in California by the U.S. Fish and Wildlife Service. In California, the species ranges from the Oregon border south to Santa Cruz County. Harris (1991) lists the bird as a common resident and breeder in the north coast region. Specific nesting habitat of this species in this part of its range is large, sometimes decadent trees with large limbs for nesting platforms (Carter and Erickson 1988, and others). In California, they nest on large, horizontal, moss-covered limbs situated within virgin coastal conifer forest (Larson 1994). They lay a single egg per year in a mossy depression on a large horizontal limb. This bird is completely dependent on and adapted to breeding in coastal old-growth coniferous forests, does not breed in second growth forests (Carter and Erickson 1988). Throughout most of the year, this species is found in small groupings in near shore coastal waters where they feed on small baitfish. Cutting of nest trees, gillnetting, and catastrophic events such as oil spills and wildfire are potential threats to this species.

No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. Large dominant trees exist within the project area, up to 50" diameter at breast height, which are not old-growth. However large limb size and horizontal moss covered limbs required by the species does not exist within the project area. Suitable habitat for the species does not exist within the project area.

Willow flycatcher (*Empidonax traillii*) is listed as an endangered species by the State of California (1990). This species is a summer (breeding) resident to California. Its normal range is shown in references as occurring in the Central Valley and the wet meadow and montane riparian habitats, 2000-8000 feet above sea level in the Sierra Nevada and Cascade Range. Habitat is low (in height) willow thickets near languid streams, expansive standing water or wet seep areas. Thickets have no overhead canopy with typical habitat associated with wet meadows having willow thickets ½ acre or larger in size. Topography is generally flat (<5%).

No sightings have been reported to the California Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. Habitat is not present within the THP. Given that habitat for this species is absent from the THP and surrounding area and that the THP is not in the typical breeding range of this species, it is reasonable to conclude that this project will have no significant adverse impact on this species.

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Yellow warbler *(Dendroica petechia brewsteri)* is listed as a California Department of Fish and Wildlife species of special concern. The breeding range of this species in California is the length of the state, excluding southeastern deserts areas, and the higher mountains. In the north coast region this species is a locally common summer resident and breeder; common migrant; and casual in winter (Harris 1991). Breeding habitat for the yellow warbler consists of alder, cottonwood, and willow stands in riparian cover (Harris 1991). This species is a Neotropical migrant, and threats to its habitat are both the potential degradation of riparian areas in its breeding range, as well as alteration or removal of wintering habitat in Neotropical areas.

No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. Occasional sightings of this species occur in Del Norte County in areas of riparian and hardwood habitats and a rare use of the area within the BAA is presumed. Riparian habitat in the THP is considered marginal or not preferred habitat for this species due to the lack of "stands of riparian cover" such as willow, cottonwood and alder. No yellow warblers were observed during THP preparation. Given the protections provided within the WLPZ areas, it is reasonable to conclude that this THP will not create a significant adverse impact to this species

Vaux's swift *(Chaetura vauxi)* is listed as a California Department of Fish and Wildlife species of special concern. The range of this species in California is the length of the state in migration, and breeding in a narrow coastal belt from Del Norte County south to Santa Cruz County. On the north coast, the species is considered a common summer resident and breeder, casual in winter (Harris 1991). Specific habitat for this species includes hollow trees, snag-tops with cavities, and also chimneys for nests and roosts. The removal of old, decadent redwoods and Douglas-firs with hollow snag-tops can cause loss of nesting habitat for this species. Vaux's swift are more commonly associated with habitat used by murrelets.

Vaux's swifts are found in suitable habitat throughout Del Norte County and their specific habitat of large snags in this THP is considered absent at this time as none was observed. No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. Unless snags pose a hazard to worker safety or are required by the Director to be fell, they will be retained as described in Section II; Item 33. Snags will continue to recruit within and nearby the THP area from overstory conifer retention within the WLPZs along with additional live trees retained within the selection harvest area. Considering that snags will be retained within the THP area, it is reasonable to conclude that this THP will not create a significant adverse impact to this species.

II. MAMMALS

Pacific Fisher (*Martes pennanti*) is a candidate for listing as a California endangered species. The Fisher inhibits old growth forest that once ranged from British Columbia through northern California and the Sierra Nevada. Fishers use large areas of primarily coniferous forest with fairly dense canopies and large trees, snags and down logs. The Fisher dens in rotting logs, hollow trees, and rocky crevices of old growth forest. They are specialized animals that frequently travel along waterways and rest in or on live trees, snags. and down logs with cavities. These characteristics are usually only found in large, undistributed tracts of old forest. Douglas-fir is the most common species used for resting in northern California, whereas, the general oak species, white fir, and red firs are commonly used in the southern Sierra. The diameter of trees used by Fisher for resting and denning is consistently large. Rest sites are widely distributed throughout Fisher habitat. The average home range of Fishers vary between coastal and Sierra populations. In addition, home range for males is greater than females. In a Zielinski et. al (2004) study, home range size for the coastal population was estimated at 3,702 acres for females and 14,334 acres for males. The Sierra population home ranges were smaller with females at 1,286 acres and 7,408 acres for males. This study also found that there were no obvious differences between the sexes with respect to proportion of different size classes of trees within the home ranges. Average stand sizes of 11-24 inches in dbh with canopy closures 61-100% occupied the highest proportion of home ranges. For the coastal population Douglas-fir and true fir were the most prevalent species types. Sierra mixed conifer and ponderosa pine were the most prevalent species types for Sierra Nevada study areas. Resting structures were among the largest diameter trees available and resting site locations had high levels of canopy cover. Additionally, Sierra Nevada study area resting sites were more frequently noted within 100 meters of water and with a hardwood component (Zielinski et al. 2004, Purcell et al. 2009, Zhao et al. 2012). Structural elements used by the Fisher include; live tree cavities, broken tops, mistletoe platforms, large down logs, stumps and ground cavities. Other stand characteristics selected by fisher include high levels of canopy cover (>60%) and relative greater height and average diameter of the stand in relationship to the surrounding areas (Zhao et.al 2012).

The plan is within the current range of the Fisher (CDF 2009), however, habitat as listed above is sparse to non-existent within the plan area. No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. No Pacific fishers were observed by the RPF in preparation of this plan, nor were any sightings reported. It is unlikely that operation of this plan will impact any current or future use of the area by fishers given the limited operations and lack of suitable nesting habitat.

Humboldt Marten (*Martes americana humboldtenis*) is listed as a DFG California species of special concern. Found throughout North Coast regions, Sierra Nevada, Klamath and Cascades Mts (Zeiner, et al., 1990, vol. III, pgs. 300-301). Requires 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, vol. III, pg. 300).

No sightings have been reported to the Department of Fish and Game, Natural Diversity Data Base for the Smith River quadrangle. No martens have been observed within the plan area while doing field preparation of this THP. It is unlikely that operation of this plan will impact any current or future use of the area by martens given the limited operations and lack of suitable habitat.

California red tree vole (*Arborimus pomo (ssp. longicaudus)*) is listed as a DFG California species of special concern. The range of this species in California includes coastal forests in the humid fog belt (Jameson and Peters 1988) south to Sonoma County on the coast and to Mendocino County in the coastal mountains, and east to Trinity County (Maser 1966). They have been located at elevations of 150-3,100' above sea level (Maser 1966). The habitat of this species predominantly includes the existence of Douglas-fir trees, with grand fir, sitka spruce, and western hemlock also used (Meiselman 1987, Williams 1986). Some authors have suggested that this species is associated with old growth or fairly dense mature forest with large trees (Carey et al. 1991, Williams 1986).

However, habitat records reviewed by Maser (1966) suggested that this species also uses young second growth Douglas-fir trees 7"-15" DBH, and also habitats described as broken, isolated, and scattered by clearcuts, open grassland, bracken fern and cultivated fields; or 30-50 year old stands with a few interspersed older trees, but little evidence of dense forest. These last observations corroborate information gathered by foresters and biologists on this ownership since 1988, which indicates the use of various aged stands including Douglas-fir. Anecdotal observations indicate that even in stands with very large Douglas-fir trees the voles utilize even the smallest DBH Douglas-firs possibly because it is much easier to reach limbs with their food source. Williams (1986) concluded that clearcuts, fires, construction of roads or power lines and other activities creating openings, reduce and fragment habitat and therefore may be detrimental to red tree voles.

The plan area is within the range of the red-tree vole, however, the stand age, species distribution and stand structure is not considered typical red-tree vole habitat. No sightings have been reported to the Department of Fish and Game, Natural Diversity Data Base for the Smith River quadrangle. No red tree voles or red tree vole nests were observed during THP preparation and none are known to exist on the plan area.

White-footed vole (*Arborimus albipes*) is listed as a DFG California species of special concern, and a Category 2 candidate for federal listing. The range of this species in California is not well understood, but may run from the Columbia River south to Sonoma, County California. A more limited range has been suggested by Maser (etal 1981) that the species occupy a coastal strip of unknown width to as far south as Arcata, California. White-footed voles are a terrestrial species related to riparian alder/ small stream habitats, 20-100% crown closure, and riparian habitats. Redwood stands may not be optimum-habitat. The leaves of red alder make up a large portion of the diet of this species, which is dominated by green herbaceous plants (Maser etal 1981). This vole tends to nest on the ground, under logs, stumps, or rocks (WHR, 1979). Alteration or degradation of riparian habitats as has occurred in past logging practices, may have been detrimental to this species, but data to determine population status is lacking (Williams 1986).

Hardwood within the THP area is primarily absent, but includes minor amounts of red alder within the WLPZ areas. No sightings have been reported to the Department of Fish and Game, Natural Diversity Data Base for the Smith River quadrangle. Considering the absence of habitat within the influence of the THP area and the protection provided the WLPZs, it is reasonable to conclude that this project will have no effect on this species or individual animals.

Townsend's big-eared bat (*Corynorhinus townsendii*) is listed as a federal species of special concern and a DFW California candidate for listing. This species is found throughout California, in all but subalpine and alpine habitats, and may be found at any season throughout its range. Its distribution appears to be constrained primarily by two factors: availability of suitable roosting sites and degree of human disturbance at roosts. These bats are most common in mesic sites, but found in a variety of habitats including coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and deserts and high-elevation forests and meadows. Forested habitat for roosting and maturity includes caves or rock tunnels in moderately open stands within mature forest with large trees, hardwood snags, and riparian habitat. Requires caves, mines, tunnels, buildings, or other human-made structures (e.g., bridges or water tunnels) for roosting, and may use large trees with basal hollows. The size of the basal hollow required for habitat is not known, but the volume of the basal hollow must be large enough so that the bat has room to fly and can roost in a dark to semi dark situation. Researchers have looked at bat use of redwood basal hollows by selecting hollows with a ceiling height of >1.5meters and hollow depth of ≥0.4 meters. Hollow volume of about 2.5 cubic meters received at least some bat use in the summer. May use separate sites for night, day, hibernation, or maternity roosts. Roosting sites are the most important limiting resource. Males are solitary in spring and summer, females form maternity colonies. Hibernates singly or in small clusters, usually several dozen or fewer. This species is known to be a species that may require habitat free of human disturbance, and is extremely sensitive to disturbance of roosting sites. A single visit may result in abandonment of the roost, however, in some instances the species can become habituated to reoccurring and predictable human activity. If undisturbed, colonies will use the same roosts indefinitely.

Caves or tunnels were not found within the THP area nor was any indication that this species is present on site. No sightings have been reported to the Department of Fish and Game, Natural Diversity Data Base for the Smith River quadrangle. The THP area does not contain large trees with basal hollows. Mitigation for this species includes the retention and recruitment of snags throughout the THP area, canopy and down wood retention in the WLPZ. Given the lack of primary habitat and the limited operations proposed as part of this THP, it is reasonable to conclude that this project will have no significant effect on this species.

III. REPTILES AND AMPHIBIANS

Southern Torrent Salamander (*Rhyacotriton varigatus*) is listed as a DFG California species of special concern. Occurs in coastal forests of northwestern California south to Mendocino Co., and is common in prime habitat (Zeiner, et al., 1988. Vol. I, Pgs. 10-11). Requires cool (8-15oc), well-shaded permanent streams and seepage's in shady coastal forests. High gradient, talus lined, first and second order streams with perennial moisture at or below the bed surface is characteristic. Optimum habitat appears to be among small rocks and pebbles with interstitial spaces with trickling water. They are found primarily in redwood, Douglas-fir, mixed-conifer, montane riparian and montane hardwood-conifer habitats (Zeiner, et al., 1988. Vol. I, Pg. 10).

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The plan area is within the range of the southern torrent salamander, and suitable habitat for this species is present in portions of the Class II watercourses throughout the proposed harvest area. Sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle, however no sightings have been reported in the BAA. Given the Class II watercourse protection measures, no negative impacts are likely to occur on the southern torrent salamander.

Northwestern Pond Turtle (*Clemmys marmorata marmorata*) is a California species of special concern, and a Category 2 candidate for federal listing. In California, this species ranges from the Oregon border south to Kern County. The specific habitat of this species includes areas of permanent water such as ponds, lakes, rivers, marshes, sloughs, and drainage ditches. They require basking sites such as submerged logs, vegetation mats, rocks, and mud banks. Nests have been found in a variety of soil types from sandy to hard and must be at least four inches deep.

The plan area is within the range of the northwestern pond turtle, and potential habitat exists near the THP area. No northwestern pond turtles were detected during informal watercourse surveys. No sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle. Given the Class II watercourse protection measures, no negative impacts are likely to occur on the northwestern pond turtle if they do inhabit the plan area.

Tailed Frog (*Ascaphus truei*) is a DFG California species of special concern. In California, the range of this species is from sea level to approximately 6,500' above sea level, generally in areas which receive over 40" of rain annually in Siskiyou, Del Norte, Trinity, Shasta, Tehama, Humboldt, and possibly Sonoma counties (Bury 1968). The specific habitat of this species, for which they seem highly specialized, is swift, perennial streams with low temperatures (Nussbaum et al. 1983). Although habitat for tailed frogs has primarily been found in mature and old growth coniferous forests (Bury 1983, Bury and Corn 1988, Welsh 1990), they have also been found in young growth forests. This suggests the possibility that other factors of habitat suitability, such as water temperature, may be more important than forest age (Welsh 1990), and observations of this species in suitable habitat in young growth stands corroborates this. This species has also been found in suitable habitat in the Turwar Creek drainage (tributary of the Klamath River) following intense fires which removed essentially all stream side vegetation and woody instream cover.

The range of tailed frogs is a function of available stream habitat, in consideration of their preferred habitat as described in the preceding paragraph, and their apparent avoidance of marshes, wetlands, and slow sandy streams (Daugherty and Sheldon 1982). Reconnaissance surveys conducted during watercourse classification indicated that suitable habitat does exist within the THP area, associated with the larger Class II watercourses. Sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle, however no sightings have been reported in the BAA. Tailed frogs are presumed to exist in the larger watercourses having substrates of consolidated parent material within this BAA. The WLPZs protecting the watercourse within or adjacent to the THP area are designed to protect other species (steelhead, coho) that use similar habitat. All mitigations imposed to protect the steelhead and coho habitat will adequately protect this species. Considering the WLPZ protection provided to the watercourses and the THP in its entirety, it is reasonable to conclude that this THP will not create a significant adverse impact to this species

Northern Red-legged Frog (*Rana aurora*) is listed as a DFG California species of special concern, and is listed as Federally Threatened species outside of the north coast region. In the coast range, red-legged frogs occur at elevations below 3,900' above sea level (Zeiner et al. 1990a). Specific habitat for red-legged frogs includes ponds, slow-moving creeks, puddles, and drainage ditches in or near moist forests and riparian habitats (Nussbaum et al. 1983, Bury and Corn 1988b). Dense vegetation close to the water level appears essential for egg attachment and shade (Hayes and Jennings 1988, Nussbaum et al. 1983). Populations of this species have probably been in decline since the turn of the century due to commercial exploitation (Jennings and Hayes 1985). Since then, other threats to this species include alteration of habitat; perdition by fish, some birds and introduced bullfrogs (Hayes and Jennings 1988); and possibly herbicides; pesticides; and acid rain (Nussbaum et al. 1983).

Red-legged frogs have been found to be common in Del Norte County, generally in riparian habitat associated with the Class II watercourses. Sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle; however no sightings have been reported in the BAA. Although none were found during THP preparation, all watercourses having habitat that could be associated with this species received Class II WLPZ protection. Considering the protection provided to the habitat of this species and the THP in its entirety, it is reasonable to conclude that this THP will not create a significant adverse impact to this species.

Foothill Yellow-legged Frog (*Rana boylei*) is listed as a California species of special concern and a Category 2 candidate for federal listing. In the coast range this species occurs from the Oregon border south to Los Angeles County from sea level to approximately 6,000' above sea level. This species is able to utilize a variety of habitat types, including: valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow habitats (Zeiner et al. 1990a). In all habitats, the species is seldom found far from small, permanent streams with banks that can provide sunning sites (Nussbaum et al. 1983, and Zweifel 1968). Declines in the number of this species in the foothills of the Sierra Nevada and San Joaquin Valley are believed to be the result of habitat alteration and predation and competition by introduced bullfrogs.

Habitat for the Foothill Yellow-legged Frogs exists within or adjacent to the plan boundaries. 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, 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. Sightings have been reported to the Department of Fish and Wildlife, Natural Diversity Data Base for the Smith River quadrangle, however no sightings have been reported in the BAA.

IV. FISH

Coho (*Oncorhynchus kisutch*), **Steelhead** *(Oncorhynchus mykiss gairdneri)* **and Chinook salmon** (Oncorhynchus tshawytscha)

Coho has a Federal Threatened listed status. Steelhead has a Federal Threatened status. Chinook has a Federal Threatened status, is a California threatened species, and Forest Service Sensitive species within the local ESU. All are considered equal in this THP for protection and mitigations protecting these species, and their habitat, either on-site or downstream of the THP. The Dominie Creek Planning Watershed (CALWATER v 2.2, #1103.110004) is listed as a Coho Planning Watershed in DFG's Public Coho Watershed List (April 2, 2009).

Coho, Steelhead and Chinook spawn and rear juveniles within the Class I segments of the watershed. Spawning areas for these species are located at the heads of riffles or tails of pools where small to medium sized loose gravels are found. Pools and woody debris provides necessary cover to rearing juveniles and returning adult fish. Maintaining cool water temperatures (12-15 degrees C; 54- 59 degrees F) and pool habitat for escape cover is essential to the survival of this species.

Potential damage to stream habitat by harvest activities can occur through intense logging or clearcutting along watercourses without the use of protective buffer strips. Increased siltation leading to the embedding of gravel and filling of pool habitat can cause decreased reproductive success (Murphy et al. 1986). Protective buffer strips, or Watercourse and Lake Protection Zones (WLPZ's) are recommended to protect fish habitat (Murphy et al. 1986)).

This project proposes watercourse protection for creeks flowing through the project area. These species do not occur within the plan boundary as there are no Class I watercourses within or immediately adjacent to the plan area. The protection measures that have been incorporated into this THP are designed to mitigate significant adverse impacts to this species. Mitigation for this species will focus on reducing the potential for fines to reach watercourses, of all classification, and thereby avoid impacts to habitat and aid in the recovery past poor land practices and current sediment levels. The THP incorporates Aquatic Salmonid Protection Rules, which have been specifically put in place to provide additional protection to these species and their habitat. Additional discussion regarding cumulative impacts to these species and their habitat is found in Section IV.

V. PLANT SPECIES

The CNPS database was queried using a nine quad search on 1/13/15. The scoping list below shows the plants that resulted from the nine quad search that may occur within the project area. Prior to timber operations a seasonally appropriate survey will be conducted for plants that occur in habitat contained within the project area.

Species Name	Common Name	CNPS List	Blooming Period	Habitat in THP
Arabis mcdonaldiana	Mcdonald's rock cress	1B.1	May-July	Yes
Calamagrostis crassiglumis	Thurber's reed grass	2B.1	May-Aug	No
Carex praticola	northern meadow sedge	2B.2	May-July	No
Carex serpenticola	Serpentine sedge	2B.3	Mar-May	No
Carex viridula ssp. viridula	Green yellow sedge	2B.3	June-Nov	Yes
Cascadia nuttallii	Nutall's saxifrage	2B.1	June	Yes
Castilleja affinis ssp. litoralis	Oregon coast paintbrush	2B.2	June	Yes
Castilleja elata	Siskiyou paintbrush	2B.2	May-Aug	Yes
Empetrum nigrum	Black crowberry	2B.2	Apr Jun	No
Eriogonum pendulum	Waldo wild buckwheat	2B.2	Aug-Sept	No
Erysimum concinnum	Bluff wallflower	1B.2	Feb-July	Yes
Erythronium oregonum	Giant fawn lily	2B.2	March-July	Yes
Fissidens pauperculus	minute pocket moss	1B.2		Yes
Gilia capitata ssp. pacifica	Pacific gilia	1B.2	April-august	Yes
Hesperevax sparsiflora var. brevifolia	short-leaved evax	1B.2	March-June	No
Kopsiopsis hookeri	Small groundcone	2B.3	April-August	Yes
Lathyrus palustris	marsh pea	2B.2	March-August	No
Lilium occidentale	western lily	1B.1	June-July	Yes
Moneses uniflora	Woodnymph	2B.2	May-August	Yes
Monotropa uniflora	ghost pipe	2B.2	June-September	Yes
Oenothera wolfii	Wolf's evening-primrose	1B.1	May-October	Yes
Packera bolanderi var. bolanderi	Seacoast ragwort	2B.2	January-August	Yes
Pinguicula macroceras	Horned butterwort	2B.2	April-June	No
Piperia candida	White-flowered rein orchid	1B.2	March-September	Yes
Polemonium carneum	Oregon polonium	2B.2	April-September	Yes
Potamogeton foliosus ssp. fibrillosus	Fibrous pondweed	2B.3	unknown	No
Ramalina thrausta	Angels hair lichen	2B.1		Yes
Romanzoffia tracyi	Tracy's romanzoffia	2B.3	March-May	Yes
Sagittaria sanfordii	Sanford's arrowhead	1B.1	May-november	No
Sanguisorba officinalis	Great burnet	2B.2	June-October	Yes
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1B.2	May-Aug	Yes
Sidalcea oregana ssp. eximia	Coast checkerbloom	1B.2	June-August	Yes
Silene serpentinicola	Serpentine catchfly	1B.2	May-July	Yes
Streptanthus howellii	Howell's jewel flower	1B.2	June-August	No
Vaccinium scoparium	Little-leaved huckleberry	2B.2	June-August	No
Viola palustris	Alpine marsh violet	2B.2	March-August	Potential
Viola primulifolia ssp. occidentalis	western white bog violet	1B.2	April-September	No

SECTION IV

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 probable 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).
SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM.

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

	Yes - After Mitigation (a)	No After Mitigation (b)	No Reasonably Potential Significant Effects
1. Watershed			X
2. Soil Productivity			X
3. Biological			X
4. Recreation			X
5. Visual			X
6. Traffic			X
7. Other			X

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 or add to significant adverse cumulative impacts by itself or in combination with other projects has been reduced or avoided by mitigation measures or alternatives proposed in the THP and application of the Forest Practice Rules.

c) No reasonably potential significant cumulative 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, add to, or constitute significant adverse cumulative impacts.

SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM.

(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. 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.
SEE CUMULATIVE IMPACTS ASSESSMENT ADDENDUM.

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

Watershed Assessment Area - The plan area is located in the CALWATER (v2.2) Dominie Creek Planning Watershed (#1103.110004), which is approximately 3,919.7acres. The planning watershed is in the Smith River Hydrologic Unit and is located on the flat, coastal plain adjacent to the Pacific Ocean.

The Watershed Assessment Area (WAA) for this THP is shown on the Cumulative Effects Map. The assessment area for this project covers Lopez, Rittmer and Dominie Creeks. The WAA is of sufficient size to address the potential impacts caused by and added to the proposed timber harvest plan but not so large as to dilute the impacts resulting from the project. The WAA used in this analysis was arrived at for the following reasons:

- The assessment area was selected using major breaks in the landscape such as ridges and major watercourses which seem to define the project's sphere of influence.
- The assessment area contains anadromous Class I watercourses and is of sufficient size to be able to determine the possibility of cumulative impacts from timber harvesting operations.
- The area contains past, present, and future projects considered in the analyses for potential cumulative impacts to downstream beneficial uses of water.

Soil Productivity Area – Only the area within the plan boundary will be considered. This is the only area where a potential impact could occur from equipment operations.

Biological Resources Area – The geographic assessment area for biological resources is the same as the Watershed Assessment Area described above plus the area within 0.7 miles of the plan outside of the WAA.. This assessment area is large enough to include projects that may impact biological resources, but yet also small enough to that if cumulative adverse impacts do exist, or have potential to exist, they will be recognizable and not overlooked or minimized. The THPs chosen BAA should reasonably provide for an adequate assessment of aquatic, terrestrial and avian biological resources.

Recreational Assessment Area – The recreational assessment area is generally the area of the THP plus 300 feet. This is specified in the Board of Forestry, Technical Rule Addendum Number 2. The geographic description of this assessment area is such that an individual assessment area map would serve no purpose and need not be provided.

Visual Assessment Area - The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. At distances of greater than 3 miles from viewing points, activities are not easily discernible and will be less significant. Due to the silviculture, topography and geographic location of the plan area, it shall not be visible to significant numbers of the public.

Vehicular Traffic Assessment Area - The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. Ocean View Drive, Lopez Road and US Highway 101 will be the primary public roads used. The geographic description of this assessment area is such that an individual assessment area map would serve no purpose and need not be provided. All public roads to be used to transport wood products have been recently used for this purpose.

Climate Change Assessment Area - Only the area within the THP area will be considered. These are the only areas where equipment will be operated and carbon-sequestering materials harvested, thereby providing a potential impact of carbon emissions and potential impact to climate change.

(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

Watershed Assessment Area

Planning Watershed means the contiguous land base and associated watershed system that forms a fourth order or other watershed typically 10,000 acres or less in size. Planning watersheds are used in planning forest management and assessing impacts. The Director has prepared and distributed maps identifying planning watersheds plan submitters must use. The planning watershed concept was adopted by the Board of Forestry to help standardize watershed assessments. The rationale for selecting this Watershed Assessment Area (WAA) for the proposed plan is that this WAA includes the plan area and those areas into which the plan area drains, thereby allowing an assessment of potential impacts that could occur as a result of operations on the plan.

The Watershed Assessment Area (WAA) for the proposed THP is the CALWATER (v2.2) Dominie Creek Planning Watershed (#1103.110004), which is approximately 3,919.7 acres. Watercourses within the WAA include Dominie, Rittmer and Lopez Creeks. These watercourses drain to Tillas Slough and the Smith River. Major land uses within the watershed are agriculture land, rural residential, industrial and non-industrial timberland. It is reasonably expected that the currently forested properties under private ownership will continue to be managed for timber production. Please refer to the Cumulative Effects Map for the geographic area of the Watershed Assessment Area.

Lopez, Rittmer and Dominie Creek are low gradient second order streams which originate on the hillside on the eastern edge of the coastal plain and flow to Smith River. Streamside vegetation is high on all but the lower portions of these creeks which flow through actively grazed pastureland. Anadromous fish are known to spawn in portions of these watercourses.

Shade canopy is extremely variable along these creeks and dependent on the type of habitat which they flow through. For watercourses that flow through timber land the canopy is comprised of alder, with some redwood, allowing for approximately 70-90% shade canopy, but also large areas of dense brush due to ground saturation from lack of slope. Outside of timberland almost no canopy is present or very sparse amounts. Stream channel composition is mostly sand and mud in the smaller watercourses, with gravel and cobble being a larger component of the larger watercourses.

The watercourses within the assessment area have been negatively impacted during the original logging period from the 1900s to the 1950s. During this period logging practices included clear cutting riparian zones, installing undersized culverts, installing culverts incorrectly, installing log and fill crossings and not removing them following use, constructing roads directly adjacent to watercourses, yarding within watercourses, and little to no effort in optimizing conifer growth following harvest. Due to these forest management practices some un-natural sedimentation has reached the watercourses within the assessment area. Since that time logging practices have improved dramatically to the point where timber harvesting has no significant effect on watercourses within and outside of the watershed assessment area. These watercourses and riparian zones have been and are continuing to rebound from the effects of the above listed past logging practices. The rebounding is mainly attributed to the rapid growth of conifer and hardwood regeneration and vegetation that became established following the original logging period. Many of the sediment sources such as failed watercourse crossings and old roads within the riparian zones have re-vegetated and have since stabilized.

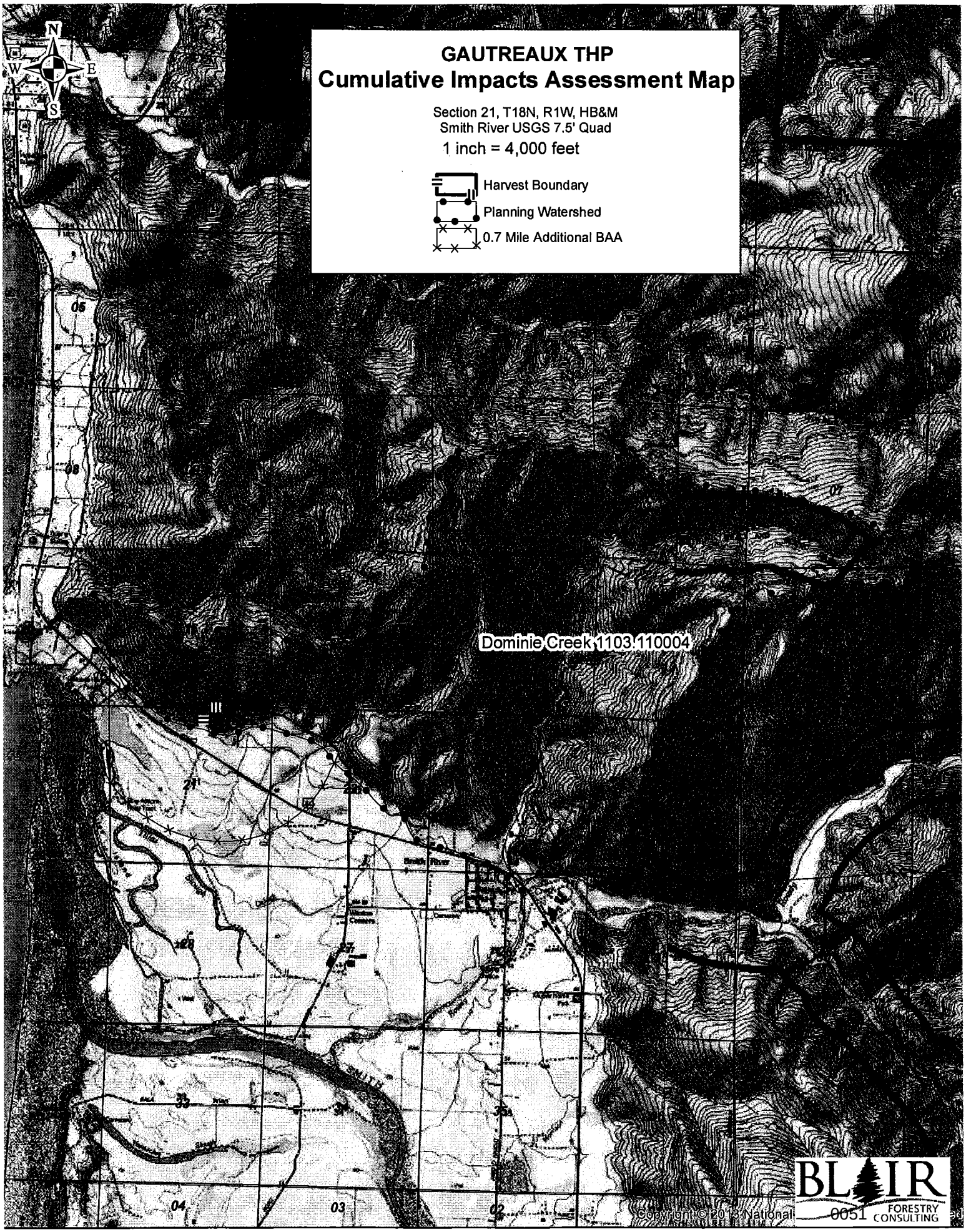
These watercourses have also been and continue to be impacted from conversion to housing. Until recently, insufficient creek buffers for clearing and building allowed for large amounts of sediment to enter these watercourses. Development still falls short of the protections provided to watercourses during timber harvest, but protections measures have improved.

No waterbodies in the WAA have been listed by the Environmental Protection Agency (EPA) as an "Impaired" waterbody pursuant to the federal Clean Water Act section 303(d). The Forest Practice Rules focus on the protection of watercourses through the installation and maintenance of erosion controls, retention of vegetation structure within riparian zones, and silvicultural restrictions resulting in the retention of vegetation across a landscape over time.

The "Water Quality Control Plan for the North Coast Region" (NCRWQCB 2011), states, in general, that "Beneficial uses of the waters of the state that may be protected against water quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation, recreation, aesthetic enjoyment, navigation; and preservation and enhancement of fish, wildlife and other aquatic resources or preserves." The following are potential beneficial uses: The Water Plan lists Dominie Creek under the Smith River hydrologic area and lists the following as existing beneficial uses:

- Municipal and Domestic Supply
- Agricultural Supply
- Industrial Service Supply
- Freshwater Replenishment
- Navigation
- Water Contact Recreation
- Non-water Contact Recreation
- Commercial and Sport Fishing
- Warm Freshwater Habitat
- Cold Freshwater Habitat
- Wildlife Habitat
- Rare, Threatened, or Endangered Species
- Migration of Aquatic Organisms
- Native American Culture

It is believed that the application of the rules of the Board of Forestry, along with the additional measures provided in this THP, will adequately protect the beneficial uses associated with the adjacent watercourses.


GAUTREAUX THP
Cumulative Impacts Assessment Map
Section 21, T18N, R1W, HB&M
Smith River USGS 7.5' Quad
1 inch = 4,000 feet
Harvest Boundary
Planning Watershed
0.7 Mile Additional BAA
Dominie Creek 1103.110004
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Past Projects

The following is a list of approved Timber Harvesting Plans (THPs) and Non-industrial Timber Management Plans (NTMPs) located within the WAA during the past ten (10) years (as provided by the FRAP Forest Practice Watershed Mapper):

Harvest Doc #	Silviculture	Yarding	Completion Status	Acres	PLSS
1-04-143-DEL	Clearcut	Cable System	Completed	0.6	T17N, R2E HBM T17N, R3E HBM
1-04-143-DEL	Clearcut	Cable/Helicopter option	Completed	30.1	T17N, R2E HBM T17N, R3E HBM
1-04-143-DEL	Clearcut	Tractor/Helicopter option	Completed	13.7	T17N, R2E HBM T17N, R3E HBM
1-04-143-DEL	No Harvest Area		Completed	18.7	T17N, R2E HBM T17N, R3E HBM
1-04-143-DEL	Selection	Cable/Helicopter option	Completed	8.0	T17N, R2E HBM T17N, R3E HBM
1-04-143-DEL	Selection	Tractor/Helicopter option	Completed	0.7	T17N, R2E HBM T17N, R3E HBM
1-04-182-DEL	Clearcut	Cable System	Completed	2.6	T18N, R1E HBM
1-04-182-DEL	Clearcut	Cable/Tractor option	Completed	15.6	T18N, R1E HBM
1-04-182-DEL	Clearcut	Tractor or Skidder	Completed	3.0	T18N, R1E HBM
1-04-182-DEL	Selection	Cable/Tractor option	Completed	12.0	T18N, R1E HBM
1-04-182-DEL	Selection	Tractor or Skidder	Completed	21.9	T18N, R1E HBM
1-04-223-DEL	Clearcut	Cable/Tractor option	Completed	9.1	T17N, R1E HBM
1-04-223-DEL	Clearcut	Tractor or Skidder	Completed	7.6	T17N, R1E HBM
1-04-223-DEL	No Harvest Area		Completed	0.2	T17N, R1E HBM
1-04-266-DEL	Clearcut	Cable/Helicopter option	Completed	17.5	T16N, R3E HBM
1-04-266-DEL	Clearcut	Tractor/Cable option	Completed	53.1	T16N, R3E HBM
1-04-266-DEL	No Harvest Area		Completed	4.1	T16N, R3E HBM
1-04-266-DEL	Selection		Completed	0.3	T16N, R3E HBM
1-04-266-DEL	Selection	Cable/Helicopter option	Completed	5.4	T16N, R3E HBM
1-04-266-DEL	Selection	Tractor/Helicopter option	Completed	10.3	T16N, R3E HBM
1-04-270-DEL	Clearcut	Tractor or Skidder	Completed	62.9	T17N, R2E HBM
1-04-270-DEL	Selection	Tractor or Skidder	Completed	1.6	T17N, R2E HBM
1-05-038-DEL	Clearcut	Tractor/Cable option	Completed	0.8	T17N, R2E HBM
1-05-133-DEL	Clearcut	Cable System	Completed	9.2	T17N, R3E HBM T17N, R4E HBM
1-05-133-DEL	Clearcut	Tractor or Skidder	Completed	42.1	T16N, R3E HBM
1-05-133-DEL	No Harvest Area	Tractor or Skidder	Completed	2.5	T16N, R3E HBM
1-05-133-DEL	Selection	Cable System	Completed	0.6	T20N, R3E HBM
1-05-133-DEL	Selection	Tractor or Skidder	Completed	21.6	T20N, R3E HBM
1-05-162-DEL	Clearcut	Tractor/Cable option	Completed	1.0	T19N, R2E HBM T19N, R3E HBM
1-05-162-DEL	No Harvest Area		Completed	0.1	T19N, R2E HBM T19N, R3E HBM
1-05-229-DEL	Clearcut	Cable System	Completed	0.0	T19N, R4E HBM
1-05-229-DEL	Clearcut	Tractor/Cable option	Completed	1.2	T19N, R4E HBM
1-06-076-DEL	Clearcut	Cable System	Completed	2.2	T19N, R4E HBM
1-06-076-DEL	Clearcut	Tractor or Skidder	Completed	5.4	T18N, R2E HBM
1-06-076-DEL	No Harvest Area		Completed	1.8	T18N, R2E HBM
1-07-037-DEL	Clearcut	Cable System	Completed	6.6	T19N, R2E HBM
1-07-037-DEL	Clearcut	Cable/Tractor option	Completed	2.3	T19N, R2E HBM
1-07-037-DEL	Clearcut	Tractor or Skidder	Completed	4.1	T19N, R2E HBM
1-07-037-DEL	No Harvest Area		Completed	1.2	T19N, R2E HBM
1-08-007-DEL	Clearcut	Tractor or Skidder	Completed	18.2	T19N, R1E HBM T19N, R3E HBM
1-08-007-DEL	No Harvest Area		Completed	11.6	T19N, R1E HBM T19N, R3E HBM
1-08-007-DEL	Selection	Tractor or Skidder	Completed	1.1	T17N, R1E HBM T17N, R3E HBM
1-08-031-DEL	Clearcut	Cable System	Unlogged	22.0	T19N, R3E HBM T19N, R4E HBM
1-08-031-DEL	Clearcut	Tractor or Skidder	Unlogged	3.2	T19N, R3E HBM T19N, R4E HBM
1-08-031-DEL	Clearcut	Tractor/Cable option	Unlogged	2.6	T19N, R3E HBM T19N, R4E HBM
1-08-031-DEL	Selection	Cable System	Unlogged	8.1	T19N, R3E HBM T19N, R4E HBM
1-08-077-DEL	Clearcut	Cable System	Completed	19.3	T19N, R1E HBM T19N, R3E HBM
1-08-077-DEL	Clearcut	Tractor or Skidder	Completed	8.2	T19N, R1E HBM T19N, R3E HBM
1-08-077-DEL	Clearcut	Tractor/Cable option	Completed	6.1	T19N, R1E HBM T19N, R3E HBM
1-08-077-DEL	No Harvest Area		Completed	2.0	T19N, R1E HBM T19N, R3E HBM

1-08-077-DEL	Selection	Cable System	Completed	4.2	T19N, R1E HBM T19N, R3E HBM
1-08-133-DEL	Clearcut	Cable System	Completed	6.4	T20N, R4E HBM
1-08-133-DEL	Clearcut	Tractor or Skidder	Completed	13.2	T20N, R4E HBM
1-08-133-DEL	Clearcut	Tractor/Cable option	Completed	44.2	T20N, R4E HBM
1-08-133-DEL	No Harvest Area		Completed	50.3	T20N, R4E HBM
1-08-171-DEL	Clearcut	Tractor or Skidder	Completed	4.3	T19N, R1E HBM
1-08-171-DEL	Clearcut	Tractor/Cable option	Completed	12.7	T19N, R1E HBM
1-08-171-DEL	No Harvest Area		Completed	3.6	T19N, R1E HBM
1-09-001-DEL	Group Selection	Tractor or Skidder	Completed	115.5	T19N, R1E HBM
1-12-050-DEL	Clearcut	Tractor or Skidder	Approved	19.3	T18N, R2E HBM
1-13-114-DEL	Clearcut	Tractor or Skidder	Approved	0.9	T19N, R4E HBM

Past and Future Activities

The area surrounding this portion of the Smith River was first settled in the 1850's. Cabins were first constructed along the Smith River. The first settlers into this area used it for farming. The lumber industry soon became the main industry in the area. Logging first began in the early 1890s in this area of Del Norte County along the slopes adjacent to the Smith River valley. Most of the original forest stands were harvested between the mid 1940's to mid 1960's. Natural regeneration and planted seedlings produced well stocked stands of second-growth conifer forests. A large portion of the assessment area was originally pasture land or has been converted since 1850, most during the early 1900's. From the late 1940s to the present a combination of even-age regeneration harvests, intermediate thinning and selection harvesting has occurred within the assessment area.

Past permitted projects within the Watershed Assessment Area (WAA) as defined by 14 CCR 895.1 in the last ten years has been, grazing, agriculture, home construction, conversions, recreation, road construction and timber harvesting. Refer to the previous table for a list of THPs and NTMPs within the WAA in the last 10 years.

Future activities within the assessment area are assumed to be continued agriculture, rural residential, and timber harvesting. The majority of the assessment area is zoned Rural Residential or Agriculture Exclusive, with which it is reasonable to expect agricultural uses will continue, as well as future conversions for residential use. While there are no other THPs currently being planned within the assessment area to the RPF's knowledge, it is reasonable to expect timber harvesting, forest stand improvements and related activities to continue. There are no present, or reasonably foreseeable probable future projects known to the RPF on land owned or controlled by the timberland owner.

APPENDIX - TECHNICAL RULE ADDENDUM NO. 2

A. Watershed Resources

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 occur when earth materials transported by surface or mass wasting erosion enter a stream or stream system at separate locations and are then combined at a downstream location to produce a change in water quality or channel condition. The eroded materials can originate from the same or different projects. In light of the EHR, the silvicultural system proposed, the watercourse protection measures provided and the RPF's experience in the area, it is concluded that the greatest chance for sediment effects come from runoff of roads, landings and skid trails. Sediment effects shall be lessened significantly by adhering to the requirements of the Forest Practice Rules. Soil stabilization treatments and the installation of drainage facilities will reduce the risk of sediment induced effects. The on-site watercourse protection measurers incorporated into this plan provide adequate protection from surface erosion to reduce the potential for sedimentation. Timber operations conducted pursuant to this THP should not have a significant sediment effect within the watershed resource assessment area.

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. Protection measures within the WLPZ's will strictly adhere to the Forest Practice Rules by utilizing the selection harvest method within watercourse protection zones, as discussed in Section II, Item 26. No further mitigation measures are considered necessary for this plan. Timber operations conducted pursuant to this THP should not have a significant water temperature effect within the watershed resource assessment area.

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 of stream flow into erodible materials, cause fish barriers and create debris flows during high water events. The protection measures provided in this THP in conjunction with the Forest Practice Rules will prevent significant amounts of organic debris from entering the watercourses associated with this plan. Large woody debris within the WLPZ will be left in place. The retention of overstory conifers and snags within the protection zones will provide for future recruitment of large organic debris in the watercourses. No further mitigation measures are considered necessary. Timber operations conducted pursuant to this THP should not have a significant organic debris effect within the watershed resource assessment area.

Chemical contamination effects from logging operations come from three principle sources: 1) accidental release of fuels and oils from heavy equipment, 2) spills from possible mishandling of herbicides if herbicide application is necessary to control competing vegetation or to prevent vegetation from encroaching into roadways, and 3) potential chemical contaminants from nutrients that may be released if slash burning is necessary.

No herbicide or pesticide application is planned as part of this plan. The use of dust retardants is not planned for this THP. Prescription burning may be used for site preparation, where necessary, to provide planting space to meet applicable stocking standards. Burning will only be done after sufficient precipitation to raise the soil and fuel moisture to the point that the large fuels are not completely consumed. The use of chemicals is likely used within the agricultural lands within the assessment area. The use of such material is regulated by State and County regulations. This harvest plan should not have any significant change from chemical contamination.

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. The project area is located at ~140 feet above sea level, therefore snow load accumulation is rare and should not be a problem. Roads within the plan area are located on flat topography for the most part and require a minimal of drainage facilities and structures.

Any peak flow effects will decrease as the site becomes vegetated. The effects are most likely to occur within the first 5 years after harvest. During that time a vegetative ground cover of conifers, natural shrubs and ferns, natural annual and perennial grasses, and other herbaceous plants will become established that will reduce these effects. No further mitigation measures are considered necessary. Timber operations conducted pursuant to this THP should not have a significant peak flow effect within the watershed resource assessment area.

Watercourse Conditions: Operations on the plan should not affect the condition of downstream waters. The watercourses within the WAA are typical of most lowland streams in that they have a channel composition, consisting mainly of mud, sand and fine gravel. Total vegetative cover on these watercourses varies from 0-90%, with coniferous and deciduous trees being the most abundant immediate streamside vegetation. The vast majority of the WAA has been harvested in the past and is currently a mosaic of second and third growth timber stands, cleared agricultural lands and rural residential areas.

In general, the aquatic and riparian habitat that exists in the WAA exhibits evidence of past degradation, but is continuously improving as current and future timber operations contain appropriate mitigation measures and rural residential land use is tailored to meet county standards and take environmental issues into consideration.

The following is a list of channel characteristics and factors that may be used to describe current watershed conditions and to assist in the evaluation of potential project impacts:

Gravel Embedded: The streams within the WAA have channels that are comprised mainly of silt, sand and small gravels due to the very low gradient bottomland nature of the topography. Some gravel embeddedness has occurred over time as a result of a combination of factors including low channel gradient, increased sedimentation due to soil disturbance and high natural sediment loads due to the geologic make-up of the area. No significant problems associated with gravel embeddedness were observed.

Pools Filled: Pool type structures within the WAA are created by large woody debris and undercutting of stream banks. Pooling around these structures does not appear to be overburdened by sedimentation.

Aggrading: Aggrading is characterized by channels filled, or filling with, sediment that raises the channel bottom elevation. Pools will be absent or greatly diminished and gravel may be embedded or covered by finer sediments. The streams within the WAA consist mainly of mud, sand and fine gravel. It appears that aggrading has reached equilibrium from past practices and current mitigations. The channels are well-established, and have not been diverted due to sediment deposition. It appears that a limited amount of sediment flushes down the watercourse each winter and does not appreciably build up in the channel. The streamside vegetation does not show evidence of being partially or completely buried in sediment.

Bank Cutting: Streamside vegetation, mainly red alder and redwood, appears to keep banks stable when water flow could be high enough to cause bank cutting. Very little bank cutting was observed in the WAA.

Bank Mass Wasting: Mass wasting results from landslides directly entering the stream system. Slide movement may be infrequent (single events) or frequent (continuing creep or periodic events). Significant mass wasting was not observed within the WAA probably because the topography is generally almost flat and slopes to watercourses are very short and gentle.

Downcutting: Downcutting is evident by incised stream channels with relatively clean, uncluttered beds cut below the level of streamside vegetation and with eroded, often undercut or vertical banks. No significant down cutting was observed in the WAA. The watercourses in the area are predominantly low gradient streams and are not prone to downcutting.

Scouring: No evidence of excessive scouring was observed within the watercourses of the WAA. A riparian zone of conifer and deciduous trees exists along the bank channels and the channels maintain a healthy component of large woody debris that shows signs of being in place for a long period of time. No evidence of debris flows or torrents was noted in the THP or the WAA.

Organic Debris: Large organic debris was noted within watercourses in the WAA, along with the potential for future recruitment. This large debris appears to have a positive effect on the stream channels by slowing stream flow during the winter months, creating pools, providing cover for fish, and minimizing sediment transport to lower reaches of the creeks.

Stream-Side Vegetation: Total vegetative cover on watercourses in the WAA varies from 0-90%, with coniferous and deciduous trees being the most abundant immediate streamside vegetation, or traveling through agriculture land with little to no vegetation, consisting mostly of riparian brush.

Recent Floods: Recent winter storms over the past several years do not appear to have significantly changed the conditions of watercourses within the WAA. This THP is not expected to produce conditions which would exacerbate the effects of floods.

It is the RPF's judgment that this THP, when combined with past, current and future harvesting projects, is not expected to cause or contribute to significant adverse cumulative effects in this CIAA relating to watercourse conditions, due to the lack of watercourses within or adjacent to the plan area, mitigations proposed in this plan and expected management practices of future entries.

B. 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 on-site within the project boundary, and the relative severity of productivity losses for a given level of impact generally increases as site quality declines. The primary factors influencing soil productivity that can be affected by timber operations include: (1) organic matter loss, (2) surface soil loss, (3) soil compaction, and (4) growing space loss. 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.

There are no significant negative impacts expected due to the **loss of organic matter** associated with harvesting operations in the assessment area. Large woody debris is 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. The soil series

present on this plan are well-drained soils. The EHR was calculated to be moderate for the entire plan area.

Soil compaction is likely to occur when the soil is saturated and subject to use by heavy equipment. The restrictions on operations during the wet weather conditions as specified in the Winter Period Plan will prohibit ground-based operations on these soils during periods of high soil moisture. 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.

Operation of this THP would cause minimal significant negative impacts to the soil productivity on the project area due to a **loss of growing space**. Existing roads shall be used to their fullest to best access the timber with the least impact to the resources including soil. Application of the Forest Practice rules, and reusing existing road, landing, and skidtrail locations shall combine to lessen any potential impacts to soil productivity.

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 the RPF's opinion that no negative impacts will incur.

C. Biological Resources

The Biological Assessment Area (BAA) is used to analyze and consider possible effects on any number of vegetative, aquatic, terrestrial and avian species, mainly in relation to forest seral stage distribution. This area was chosen using major breaks in the landscape such as ridges and watercourses that appear to logically establish this project's area of influence. The Biological Assessment Area (BAA) is the same as the Watershed Assessment Area (See Cumulative Effects Map).

Factors to consider in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or species of special concern (as described in the Forest Practice Rules) that may be directly or indirectly affected by project activities.

   The methodology used to identify the presence, if any, of listed species within the BAA is as follows:

   1. Scoping
      a) Search Natural Diversity Database (NDDB) for occurrence within the Assessment Area, including the quad that the plan is located on and adjoining quads.
      b) Evaluated the habitat requirements of species identified above that "could" occur.
      c) Assess the impact that the proposed project would have on species likely to occur within the assessment area and within the plan area.
   2. Surveys
      a) If the proposed project would have potential significant negative impacts on a listed species, a survey was conducted to determine presence or absence.
   3. Mitigations
      a) Where presence is determined and significant adverse effects are likely, mitigations to substantially lessen or avoid these impacts are developed.

A list of the rare, threatened or endangered species and other species of concern which may occur within the BAA, and which may be affected by timber operations is provided in the THP in Section III for Plan Addendum to Item 32. The list provides a description of the potential rare, threatened or endangered species, their preferred habitat, the potential presence of habitat within the BAA, and other pertinent information as necessary for each species of concern. Based upon database inquiries and known locations of sensitive species, the proposed project, as mitigated, is not expected to significantly impact any known sensitive species that occur within the BAA.

Because of the assortment of ownerships within the BAA, land management objectives and the consideration given to biological resources vary greatly. The ownerships range from lands owned by the public whereby changes in vegetation vary very little over time to industrial timber ownerships where modifications in vegetation are made more frequently, but only after taking steps to protect existing biological resources. In addition, there are small and large ownerships of agricultural lands as well as numerous small ownerships of residential properties. For the most part, the timberland within the BAA appear to be functional in terms of wildlife habitat because of the diversity of ages and the presence of certain elements such as hardwood, snags, and large woody debris.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and the biological assessment area (e.g. loss of oaks creating a forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas).

A search of the CNDDB/Spotted Owl Viewer returned no (0) known Northern Spotted Owl activity centers present within 0.7 miles of the proposed THP boundary. This project will not have a significant cumulative impact on the Northern Spotted Owls within the assessment area. The THP is designed to utilized un-evenaged management that will maintain at least foraging structure throughout the life of the THP. Seasonal restrictions have also been incorporated in to the THP that are designed to reduce impacts to the NSO during critical periods. No timber operations shall occur until such time as all surveys (which are conducted in conformance with the USFWS approved NSO survey protocols) for the current, or immediately preceding, survey period are complete; the results have been provided

to CAL FIRE; and the results of CAL FIRE's take avoidance determination have been incorporated into the plan.

A search of the CNDDB returned no (0) known occurrences of Pacific Fisher within the BAA. The plan area is within the current range of the fisher. Mitigation measures incorporated under Section II Item 32 shall prevent any significant adverse effects to this species.

3. The aquatic and near-water habitat conditions on the THP and immediate surrounding area.

The BAA contains Class I, II, III and IV watercourses. All class I and II watercourses within the BAA appear to provide suitable habitat for fish and non-fish aquatic species. These watercourses provide habitat for insects, algae, and other species used for food sources that eventually move down into downstream fish bearing watercourses. Since vegetation is present near these small streams, shelter for animals to move from one area to another is provided. Within the agricultural flats to the south of the plan area, many Class I watercourses have been straightened and channelized for agricultural purposes and may no longer be suitable for fish.

4. The biological habitat condition of the THP and immediate surrounding area.

Snags/den trees
Non-merchantable snags will be left well distributed to the extent they occurred prior to operations provided their retention does not conflict with appropriate safety and hazard reduction requirements for harvesting. This is a second growth stand and current snag density is low, which is normal. Snags on the plan area suitable for den or nest trees occur singularly and average approximately 1 per acre. Non-merchantable snags and trees with cavities and obvious nests will be left to the extent they occurred prior to operations, provided their retention does not conflict with appropriate safety and hazard reduction requirements for harvesting.

Downed, large woody debris
Large downed logs (particularly conifers) in the coastal environment in all stages of decomposition provide an important habitat for many wildlife species. Large woody debris (LWD) is present throughout the BAA and plan area in small amounts. Non-merchantable LWD such as standing snags and downed woody debris shall remain post-harvest. Generally, most LWD deteriorates rapidly due the maritime climate and resultant moisture. The proposed THP will not result in any significant reductions of large organic debris within the BAA.

Multi-story canopy
Coastal multistoried canopies have a marked influence on the diversity and density of wildlife species utilizing the area. A multi-storied canopy of two or more distinct layers is not a feature of the project area. The present landscape is characterized as an evenaged stand. Near-water multistoried canopies in riparian zones that include conifer and hardwood tree species provide an important element of structural diversity to the habitat requirements of wildlife.

Road density
The road density in the vicinity of the plan is moderate, due to the extensive residential areas. The roads that access the plan area are existing. Reconstruction is proposed to improve the existing prism through minor blading and widening to allow for ingress and egress of log trucks. These operations will not increase the road density in the vicinity of the plan.

Hardwood cover
Hardwoods are not a major a component in the THP area and occupy a small percentage of the land base in the BAA. No significant impacts to biological resources which are dependent upon hardwoods are expected as a result of this THP.

Late seral (successional) forest (LSF) characteristics
The THP area contains stands that are not late succession forest stands as defined by 14 CCR 895.1. They do not meet the stand structure or stem diameter to be considered late succession forest stands.

Late Seral Habitat Continuity
Since no LSF is proposed for harvest, no continuity of LSF habitat shall be altered.

Special Habitat Elements
There are no special habitat elements that would be threatened by the operation of this THP. The plan is surrounded by similar habitat types and operations on the plan will not result in the loss of any known key habitat elements. Large decadent snags and green culls trees will be retained where possible for nesting/denning within the plan area and multi-storied canopies along watercourses will be retained or recruited.

CONCLUSION – Biological Resources
It is the RPF's opinion that, based on the best information available, the proposed project will not likely produce significant adverse cumulative impacts to the biological resources within the assessment area after mitigation measures proposed in the plan and application of the Forest Practice Rules.

D. Recreation Resources

The recreational assessment area is generally the area of the THP plus 300 feet. This is specified in the Board of Forestry, Technical Rule Addendum No. 2. This area is private property, and primarily pastureland and forestland, and the primary activities that occur are grazing, agriculture and timber management. The proposed plan is on private property that is not open to the public for recreation. Road access is controlled and there are no developed recreational sites on or near the plan area.

E. Visual Resources Area

The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. At distances of greater than 3 miles from viewing points, activities are not easily discernible and will be less significant. Due to the aspect of the plan area, this project will be visible to nearby travelers along Highway 101. The project may also be visible to some residents of Smith River, which is approximately 2 miles away. A majority of the plan area will have sub-merchantable timber as well as some hardwood cover remaining which will lessen the visual impacts of the evenaged harvest. These remaining trees, as well as sprouts and planted seedlings will rapidly re-vegetate the hillside and quickly regain a forested appearance.

As timber harvesting is a common occurrence in the assessment area, the plan area is small in scale, and the harvested area will retain some small trees and hardwoods, and be reforested, no long-term significant impacts to visual resources are expected.

The plan area is within 200 feet of Ocean View Drive, a county road. 913.1(a)(6) was considered. The plan area is relatively remote, with little traffic occurring on the county road. In addition, timber harvesting within the watershed is common and clearly visible from the county roads. Also, as discussed above, the harvested area is expected to retain sub-merchantable timber and as well as some hardwood cover. No significant visual effect is anticipated with the harvesting of this plan.

F. Traffic Assessment

The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. Ocean View Drive, Lopez Road, and US Highway 101 will be the primary public roads used. All public roads to be used to transport wood products have been historically used for this purpose, with no known past or existing traffic, safety, or maintenance problems.

The proposed project will not have a reasonable potential to cause or add to significant cumulative negative impacts to vehicular traffic within the assessment area.

G. Climate Change Assessment

a. Climate Change in General.

The scientific literature on the phenomenon of global warming, and impact of greenhouse gas emissions on the State of California, as well as to the remainder of the Earth, is growing, conflicted, and politically charged. Consensus is growing on the occurrence of global warming, although there is considerable debate regarding the causes (Bast and Taylor, 2007; Ferguson, 2006). The Stern Review of the Economics of Climate Change (2006) was a comprehensive report commissioned by the British government, and provided projections of economic cost based on assumptions of impacts. Studies of past and present temperatures show a natural variability of Earth's climate. Past climates were as warm as (and even warmer than) what we currently experience, and such warm periods were typically, relatively short-lived respites from ice-age conditions that dominated the past half-million years (Ferguson, 2006).

Regardless of the aforementioned issue, the State of California has recognized climate change and global warming as a threat to health, safety, and the economy. Global warming could result in reductions in water supply due to changes in snow pack levels, adverse health impacts from increases in air pollution, adverse impacts on agriculture caused by changes in quantity and quality of water supplies and significant increases in diseases and pests, increased risk of catastrophic wildfires, and significant impacts to consumers and businesses due to increased costs of goods and services (AB 1493, 2002). In response, the State of California has enacted legislation and policies designed to reduce greenhouse gas emissions and to increase energy efficiency (AB 1493, 2002; AB 32, 2006; Gov. Schwarzenegger Executive Order S-3-05). The Executive Order established greenhouse gas emission targets using 1990 thresholds, and established the California Climate Action Team to coordinate the State's efforts to reduce and report on progress of those efforts and on impacts of global warming to the State.

Carbon dioxide (CO_2) is considered the greenhouse gas (GHG) that has the greatest effect on the dynamic of global warming due to the fact that it composes the vast majority of the releases by human activities. There are two basic ways carbon emissions are reduced. First is efficiency, where technology or conservation reduces carbon emissions through the use of less energy (electricity, fuel, heat, etc.) to accomplish an activity. Second is storage, which can be accomplished through geologic or terrestrial sequestration.

Forest activities can result in emissions through harvesting, wildfire, pest mortality and other natural and anthropogenic events. However, forestry is a net sink for carbon, the primary greenhouse gas. Plants absorb CO_2 from the air, and use the carbon as a building block of plant tissue through the process of photosynthesis. Worldwide forests store approximately 2,000 billion tons (Gt) +/- 500 of CO_2 (National Energy Technology Laboratory, 2000). An acre of mature redwood can store between 600-700 ton/ac of CO_2, which is the highest of any forest type on Earth. Though redwood forests can store the largest amounts of GHGs per acre of any forest type, the expanse of this forest type is not significant on a global level. The most recent draft Greenhouse Gas Inventory shows the forestry sector to be a net sink with emissions of 6.1 MMT CO_2 EQ. and emissions reductions of 21 MMT CO_2 EQ (Bemis, 2006).

The forest sector offers the ability to reduce emissions through a suite of possible activities: 1) substitute wood products for more energy-intensive products, 2) reduce demand for energy in growing timber, harvesting, and wood processing, 3) reduce biomass burning (wildfires), 4) afforest marginal croplands, 5) reduce conversion of forestland to nonforest use, 6) improve forest management, 7) reduce harvest, 8) increase agro-forestry, 8) plant trees in urban areas, 9) other combinations (Joyce and Nungesser, 2000). This proposed THP uses several of the activities which are considered to have the effect of reducing the overall forest emissions and improving the storage of GHGs. The harvest will add to the carbon stored in wood products, while at the same time increase the rate of carbon storage by maintaining a healthy, fast-growing forest. The proposed forest management may result in a reduced risk for wildfire, and will maintain maximum sustained productivity of quality forest products. By maintaining timber management there is a reduced risk of deforestation through conversion of the land to non-forest uses.

b. The Project:

The proposed project will result directly and indirectly in carbon sequestration and temporary, insignificant CO2 emissions. Carbon sequestration is achieved through a repeating cycle of planting and growing of trees that remove CO2 from the atmosphere and store carbon in tree fiber. When a tree is harvested, most of the carbon-filled tree fibers become lumber that is sequestered in buildings while a new rotation of trees is planted and grown. To the extent these wood building products replace the demand for new concrete or steel building components; they reduce substantial CO2 emissions that are associated with the manufacture of cement and steel. Some of the tree fibers such as branches and tops are left in the forest where they are sometimes burned to reduce fire hazard. However, the vast majority of this material is left to decay and will emit CO2 overtime; but, it also supplements the forest soils and forest duff layer where carbon is stored and serves as a substrate and nutrient for more tree growth. In addition, redwood is a dominant species on project area and redwood slash decays more slowly than slash from hardwood and whitewood species. Further, when CO2 is released by decaying slash, it is offset by rapid regeneration of tree stands (including sprouts from redwood and hardwood species) and other vegetation that sequesters carbon. This plan, alone or in combination with other harvest plans in the watershed, Del Norte County, or State of California is not expected to have an adverse impact on global warming. Carbon from trees harvested will be sequestered for decades or longer in the form of the wood products cut from the logs. Importantly, additional carbon will be sequestered in the future as newly planted, sprouting, and growing crop trees occupy and grow on the site.

A summary of the results of this analysis indicate that it will take 14 years until carbon stocks are recouped from this initial harvest and a total project sequestration over the defined harvesting period of 2,898 CO2 metric tonnes.

The assessment area for climate effects is the THP Area and the public transportation routes for the delivery of the logs to the manufacturing centers. Because the use and disposition of wood products is not under the control of the landowner after it is delivered to the primary manufacturing center, the direct GHG emissions of manufacturing activities are not estimated here. However, qualitative consideration of the carbon cycle in wood products is addressed as a cumulative effect.

In summary it is the RPF's opinion that after having performed the Cumulative Impacts Assessment, it has been determined that the proposed project as presented and mitigated, in combination with past, present, and reasonably foreseeable probable future projects will not cause, or add to significant cumulative impacts within the assessment area.

Summary			Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
	Beginning Stocks	Ending Stocks	
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis		14 Years
Live Trees (Conifers and Hardwoods)	203.90	203.90	
Wood Products		229.65	
Site Preparation Emissions		0.00	
Non-biological emissions associated with harvesting		-3.89	
Non-biological emissions associated with milling		-2.85	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		222.90	
Project Summary			
Project Acres	Step 17- Insert the acres that are part of the harvest area.	13	
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		2,898	

Project Carbon Accounting: Inventory, Growth, and Harvest

This worksheet addresses the sequestation and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods		Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)		Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	Step 0. Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	Step 1. Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.		Step 2. Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	Step 3. Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest.	Step 4. Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1.	Step 5. Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available.	Step 6. Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available.	Step 7. Enter estimated hardwood basal area harvested/treated per acre
Douglas-fir	100%	1.675	14.38		0	30	10	1500	0.2	30	0
Redwood	0%	1.675	13.42		60	30	10	1500	0.2	30	0
Pines	0%	2.254	12.14		120	30	10	1500	0.2	30	0
True firs	0%	2.254	11.18		0	0	10	1500	0.2	30	0
Hardwoods		2.214	11.78		0	0	0	0	0	0	0
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2,204	User must enter harvest cycles to 100 years and/or at least three entry cycles.	0	0	0	0	0	0	0
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.80			0	0	0	0	0	0	0
	Hardwoods	1.95			0	0	0	0	0	0	0
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	1.08			0	0	0	0	0	0	0
	Hardwoods	0.88			0	0	0	0	0	0	0

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	Step 8. Enter the value (in bold) for each harvest cycel that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	Computed: MBF * Conifer Multiplier from Step 0.	Computed: BA*Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0.	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Heavy- 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre) Medium - >25% <50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). Light - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). None - No site preparation is conducted.	
0	54	1	199	5	25%	0
60	54	1	199	5	25%	0
120	54	1	199	5	25%	0
0	0	1	0	5	25%	0
0	0	0	0	0	25%	0
0	0	0	0	0	25%	0
0	0	0	0	0	25%	0
0	0	0	0	0	25%	0
0	0	0	0	0	25%	0
	Difference between ending stocks and beginning stocks		0	0.00	Sum of emissions (Metric Tonnes CO2e) per acre	0

Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	Assumption: ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested	MBF (all species) Yarded Delivered to Landing	Assumption:(((35 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Dey			Assumption: (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((.16 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not.	Assumption: Round Trip Hours/Load average (from below, to compute the mbf/hour) /((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	Step 9. Enter the estimated volume delivered to the landing in a day.	Step 10. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Yarders and Loaders CO2 equivalent/mbf (metric tonnes)	Computed. Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	Step 11. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Tractor and skidder CO2 equivalent/mbf (metric tonnes)	Computed. Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	Step 12. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Helicopter CO2 equivalent/mbf (metric tonnes)	Computed. Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	Computed. Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	Steps 13 and 14 below		Computed. Estimated Metric Tonnes CO2e per harvested acre for each harvesting period.
0	(0.07)	30	1	-0.01	-0.34	1	-0.02	-0.53	0	0.00	0.00	-0.04	Step 13. Enter Estimated Load Average: MBF/Truck	4.5	-0.210938776
60	(0.07)	30	1	-0.01	-0.34	1	-0.02	-0.53	0	0.00	0.00	-0.04			-0.210938776
120	(0.07)	30	1	-0.01	-0.34	1	-0.02	-0.53	0	0.00	0.00	-0.04	Step 14, Enter Estimated Round Trip Haul in Hours	2	-0.210938776
0	(0.07)	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	-0.04			-0.210938776
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	-0.27				-1.02			-1.60			0.00	-0.17			-0.84

Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	**Assumption:** 20 fm/hour (mill energy use) /140mbf lumber processed/hour) *(.05 metric tonne/cm hour) * mbf processed	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Conifers	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Hardwoods	**Computed.** CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	**Computed.** CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Step 15.** Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	**Step 16.** Insert the percentage of hardwoods harvested or trailed that are subsequently delivered to sawmills	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Calculated.** The CO2s associated with processing the logs at the mill	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		**Estimate.** The weighted average carbon remaining in use at year 100 is 46.3%	**Estimate.** The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.57 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
0	95%	0%	141.11	0.00	-0.95	94.55	0.00	71.95	0.00
60	95%	0%	211.67	0.00	-1.43	141.82	0.00	107.92	0.00
120	95%	0%	211.67	0.00	-1.43	141.82	0.00	107.92	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-3.80	Sum of CO2 equivalent in wood products		287.80	0.00

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Maps Reviewed

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USGS 7.5' Topographic Maps – Smith River (1996)

Aerial Photo flights reviewed

- US Department of Agriculture (USDA) National Agriculture Imagery Program (NAIP) 2010 imagery datasets (1m resolution).

People Consulted

- Northwest Information Center, 150 Professional Center Dr. Suite E, Rohnert Park, CA 94928
- Local Tribal Groups and Individuals Listed by the Native American Heritage Commission.
- Frank Galea, Galea Wildlife Consulting

SECTION V

ATTACHMENTS

1) Erosion Hazard Rating Worksheet
2) Domestic Water Supply Inquiry Letter
3) Galea Wildlife Consulting Northern Spotted Owl Report for Gautreaux THP
4) Erosion Control Plan.

GAUTREAUX THP SOIL FACTORS

I. SOIL FACTORS:

				FACTOR RATING BY AREA		
A. SOIL TEXTURE	Fine	Medium	Course			
1. DETACHABILITY	Low	Moderate	High			
Rating	1-9	10-18	19-30	12		
2. PERMEABILITY	Slow	Moderate	Rapid			
Rating	5-4	3-2	1	3		

B. DEPTH TO RESTRICTIVE LAYER OR BEDROCK

	Shallow	Moderate	Deep			
	1"-19"	20"-39"	40"-60"(+)			
Rating	15-9	8-4	3-1	3		

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

	Low	Moderate	High			
	(-) 10-39%	40-70%	71-100%			
Rating	10-6	5-3	2-1	6		
			SUBTOTAL	**24**		

II. SLOPE FACTOR

Slope	5-15%	16-30%	31-40%	41-50%	51-70%	71-80%+			
Rating	1-3	4-6	7-10	11-15	16-25	26-35	11		

III. PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE

	Low	Moderate	High			
	0-40%	41-80%	81-100%			
Rating	15-8	7-4	3-1	7		

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

	Low	Moderate	High	Extreme			
	(-) 30-39	40-59	60-69	70-80 (+)			
Rating	1-3	4-7	8-11	12-15	13		
				SUBTOTAL	**31**		

EROSION HAZARD RATING				***TOTAL SUM OF FACTORS***	**55**		
	<50	50-65	66-75	>75			
	LOW (L)	MODERATE	HIGH (H)	EXTREME (E)			
			THE DETERMINATION IS		**M**		

7540-130-0435

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BLAIR
FORESTRY CONSULTING

Providing Professional Forestry Services PO Box 2517 McKinleyville, CA 95519 CELL 707.834.2990 EMAIL blairforestry@gmail.com

November 19th, 2014

Reservation Ranch
PO Box 75
Smith River CA 95567

Re: Request For Information on Domestic Water Supplies

Dear Landowner:

This letter is to notify downstream landowners that Blair Forestry Consulting is developing a Timber Harvest Plan (THP) located in Del Norte County in portions of Section 21, Township 18-North, Range 1-West, Humboldt Base and Meridian, and is approximately 2 miles Northwest of Smith River, CA. Watercourses that receive drainage from the THP are unnamed.

As required by current California Forest Practice Rules, we are informing all landowners within 1,000 feet downstream of the proposed plan boundary whose ownership adjoins or includes a Class I, II, or IV watercourse, which may receive surface drainage from the proposed timber operation. We request, within 10 working days of the post-marked date on this letter, any information that you may have concerning surface domestic water use from a watercourse within the plan area or within 1,000 ft. downstream of the plan area. To better protect off-site downstream domestic water supply intakes that may exist on your property, I need to be advised of any intake and its location. Please show the location of any intake on the map attached and include the map with your response. Your letter can be sent to:

Blair Forestry Consulting
PO Box 2517
McKinleyville, CA 95519

Thank you for your assistance.

Regards,

Brian Griesbach, Registered Professional Forester #2738
BLAIR FORESTRY CONSULTING

Attachments: Domestic Water Supply Inquiry Map

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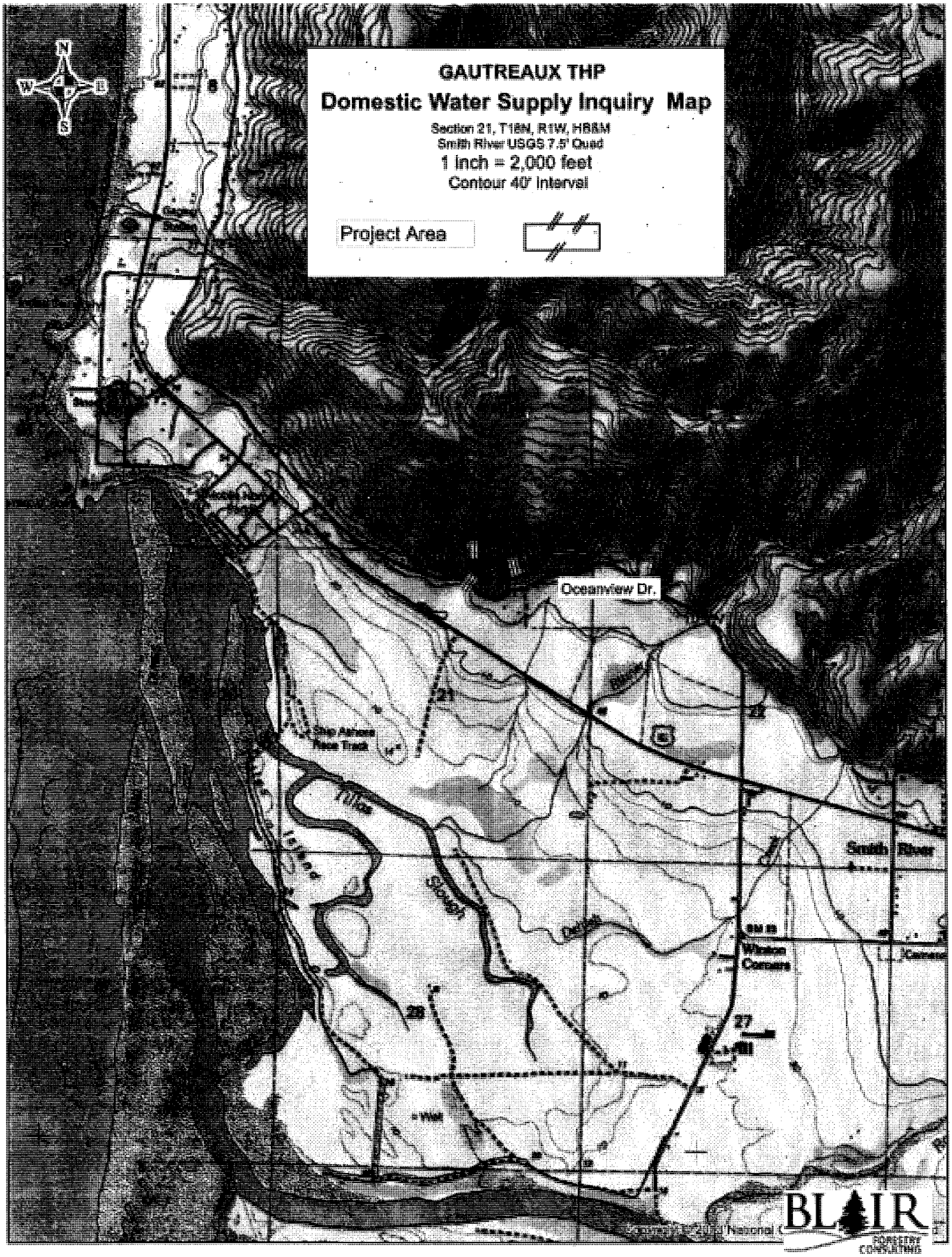

GAUTREAUX THP
Domestic Water Supply Inquiry Map
Section 21, T16N, R1W, HB&M
Smith River USGS 7.5' Quad
1 inch = 2,000 feet
Contour 40' Interval
Project Area
Oceanview Dr.
Smith River
Wilson Cemetery
BLAIR
FORESTRY CONSULTING

0070

Affidavit of Publication

STATE OF CALIFORNIA, COUNTY OF DEL NORTE

I, Patricia E Miller, a citizen of the United States and a resident of the county aforesaid; I am over the age of eighteen years, and not party to or interested in the above-entitled matter. I am the principal clerk of the printer of

The Triplicate

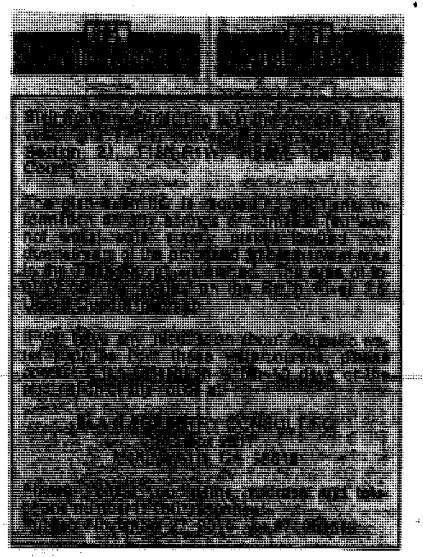
a daily newspaper of general circulation, printed and published in the City of Crescent City, County of Del Norte, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Del Norte, State of California, under the date of March 21, 1952, case number 7594; that the notice of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published and not in any supplement thereof on the following dates, to-wit:

Acct Name: BLAIR FORESTRY CONSULTING
Legal Description: Blair Forestry Consulting is in the process of developing a Timber Harvest Plan in a portion of Sect

11/27/2014

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

Dated at Crescent City, California, this 1 day of December, 2014. Patricia E Miller
Signature



AFFIDAVIT OF PUBLICATION

Filed _____

By _____

From the Office of

Attorney for _____

Classified

Monday, December 01, 2014

0071

GALEA WILDLIFE CONSULTING

200 Raccoon Court . Crescent City . California 95531
Tel: 707-464-3777
E-mail: frankgalea@charter.net . Web: www.galeawildlife.com

NORTHERN SPOTTED OWL SURVEY REPORT AND HABITAT ASSESSMENT, GAUTREAUX THP, OCEANVIEW DRIVE, DEL NORTE COUNTY

Submitted to: Blair Forestry
P.O. Box 2517
McKinleyville, Ca 95519

Prepared by: Frank Galea, Certified Wildlife Biologist
E-mail: frankgalea@charter.net

Galea Wildlife Consulting
200 Raccoon Court
Crescent City, CA 95531

Submitted: December, 2014

INTRODUCTION

The Applicant is proposing a 13.3 acre timber harvest plan (THP) on property located just north of Highway 101 near the town of Smith River (Figure 1). Galea Wildlife Consulting (GWC) Incorporated was contracted to provide northern spotted owl (NSO) surveys and potential impacts assessment for the THP regarding the NSO.

Project Area Description

The legal description of the property is Township 18 North, Range 1 West, in the north half of section 21. The area of assessment for this project is the entire property, plus all habitats within 1.3 miles of the project area.

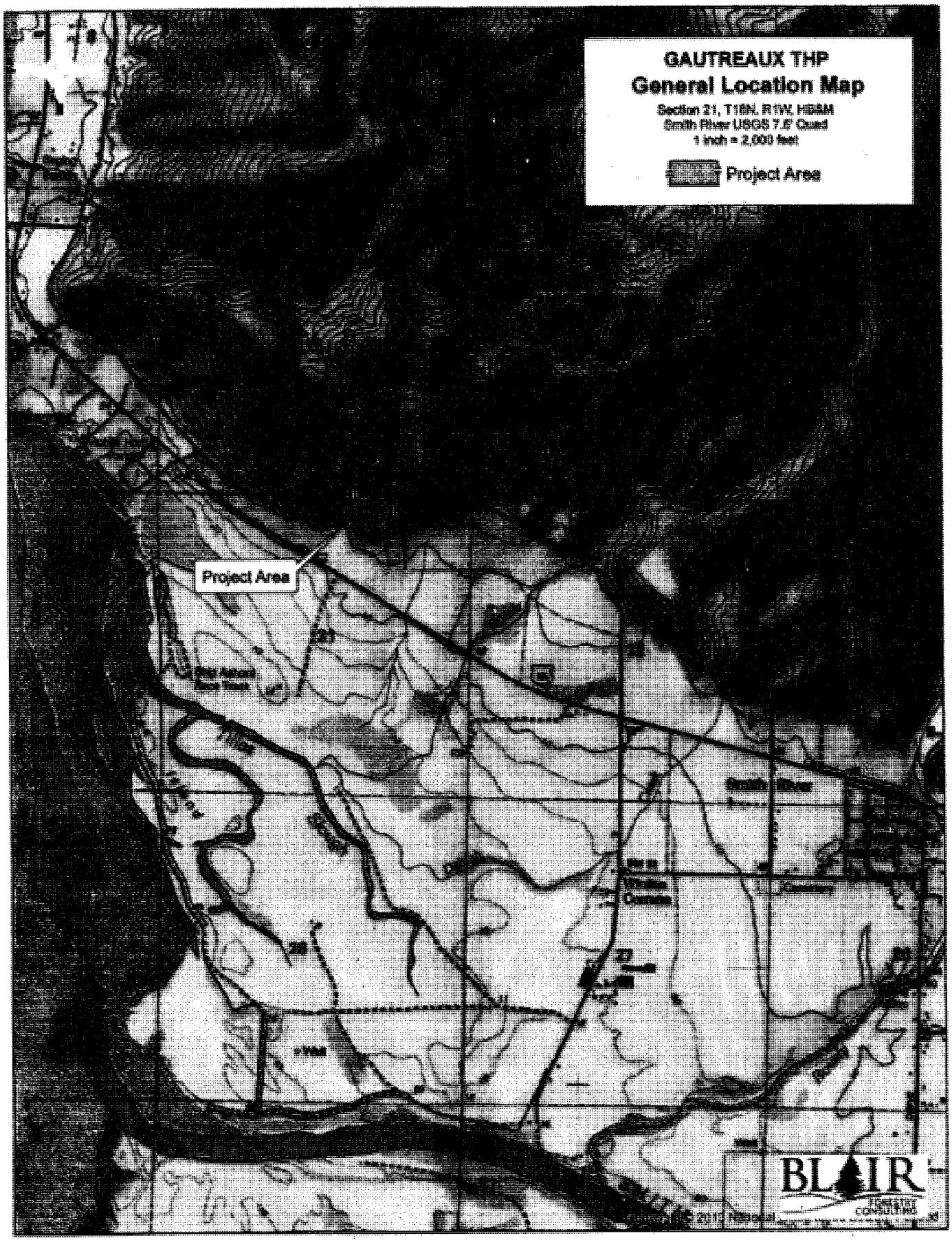
The THP is within a small property which includes a house and landscaping. Immediately north of the property is a large, open field used as pasture. Further north, northeast and northwest of the property are lands owned by Green Diamond Resources Company (GDRC), much of which has been harvested within the past ten years, leaving a mosaic of clear-cuts, early seral and mid-seral stands. West of the property are rural residences and timberlands owned by private entities. Between the THP property and Highway 101 is flat pasture.

Physical Environment

The climate of northern California is characterized as Mediterranean, with cool, wet winters and warm, dry summers with frequent fog. Along the coastline, proximity to the Pacific Ocean produces high levels of humidity and results in abundant fog and fog drip precipitation. The maritime influence diminishes with distance from the coast, resulting in lesser amounts of fog, drier summer conditions and more variable temperatures. Annual precipitation in the project watershed ranges from 60 - 150 inches occurring primarily as rain during the winter months. Snowfall is sporadic at higher elevations. Air temperatures measured in Crescent City, immediately south of the Project Area vary from 41°F to 67°F annually.

Geology and Soils

Bedrock in the project area is predominately of the Broken Formation of the Franciscan Assemblage. The rocks of this formation are late Jurassic to early Cretaceous in age, and are composed of tectonically fragmented inter-bedded graywacke, shale and conglomerate. The geologic unit that underlies the general area is primarily massive, coherent sandstone with only moderate shearing and fracturing. Soils produced from parent material are moderately deep to deep with good cohesion as a result of the high clay and iron contents. Wide valley bottoms along Rowdy Creek and the Smith River are filled with vegetated alluvial terrace deposits of fluvial origin dating from the Pleistocene and Holocene ages.


GAUTREAUX THP
General Location Map
Section 21, T18N, R1W, HB&M
Smith River USGS 7.5' Quad
1 inch = 2,000 feet
Project Area
Project Area
Smith River
BLAIR

0074

METHODS

Records Search

The California Department of Fish and Wildlife (CDFW) NSO database was queried for records of NSO territories in the assessment area. The search was conducted for the immediate area around the project out to 1.3 miles.

NSO Surveys

NSO were surveyed according to the U.S. Fish and Wildlife Service *"Protocol for Surveying for Spotted Owls in Proposed Management Activity Areas and Habitat Conservation Areas"* (USFWS, 1993, as revised, Evans et al. 2010). Per the new protocol, NSO surveys were conducted by broadcasting digital, pre-recorded NSO calls using a "Fanon"-brand megaphone at all stations. No surveys are conducted under adverse conditions.

Six NSO surveys were conducted in 2013 and six in 2014. Certified Wildlife Biologist Frank Galea of GWC conducted field surveys. Three survey stations were used to survey the proposed THP.

RESULTS

Records Search

NSO Surveys

No NSO were detected by GWC during 2013 or 2014 surveys at the THP. However, on May 11, 2014, GWC located a banded female NSO approximately one mile to the east, on GDRC property but located immediately north of another private property (T18N, R1W, Sec. 22). At that time GWC observed the female for over an hour just before dark, and the determination was made that she was non-nesting. This female was located again several times within the next few days by GDRC biologists, who read her band and determined that she was born in a nest just north of the Klamath River, 29 miles to the south. She was again determined to be non-nesting by GDRC, who monitored her for the remainder of the 2014 season.

As this area is monitored by GDRC and a female has not been heard in this vicinity before, this female is thought to be a new transient. Her location and status will need to be determined for 2015. For the purpose of this report, her position for 2014 will be used for habitat analysis. The site should not be classified as an activity center as the female is transient and will likely be located in another location in 2015. There are no other NSO sites within 1.3 miles of this THP.

Habitat Analysis for Female NSO Site

The THP consists of 13.3 acres of roosting habitat, as it is comprised of spruce trees located on the initial ridge facing the ocean. The stand is subject to the full brunt of storms off the ocean, and faces south, which is the primary wind direction from storms. Thus the stand qualifies as roost but not nest habitat, as far superior nesting habitat for NSO can be found in proximity inland (Figure 2).

Table1 provides a breakdown of pre and post-harvest acreages for female NSO located one mile east of the THP in 2014, within .7 and 1.3 mile radii.

Table 1. NSO Habitat Acreage Pre- & Post Harvest				
	Acreage Within .7 Miles of Site		Acreage Within 1.3 Miles of Site	
	Pre-Harvest	Post-Harvest	Pre-Harvest	Post-Harvest
Nest	76.5	76.5	61	61
Roost / Forage	395	395	156	143
Forage	-	-	422	422
Poor Forage	-	-	456	456
Total	371.5	371.5	1566	1553

As shown by Table 1, the THP is located outside of a .7 mile radius, therefore no habitat would be affected in proximity to this site. Within 1.3 miles, sufficient habitat exists post harvest (1,553 acres), and the THP is located at least a mile from the site, therefore this THP should have no impact on NSO.

Summary

The Gautreaux THP was surveyed six times in 2013 and again in 2014 with no detection of NSO. A transient female NSO has been detected one mile to the east in 2014. This female will be located again in 2015 and a new focus of habitat protection may be required.

Recommendations

1. This proposed THP should be reviewed with habitat protections around the current NSO female site located one mile to the east.
2. The transient female NSO should be located and her status assessed in 2015. Fortunately, she is banded and identification is possible.
3. Habitat retention for NSO should be reconsidered after her location and status is determined in 2015. No timber harvest should occur until this occurs. If the new NSO site is located within .7 miles of the THP a new evaluation and consultation with regulatory agencies is recommended.

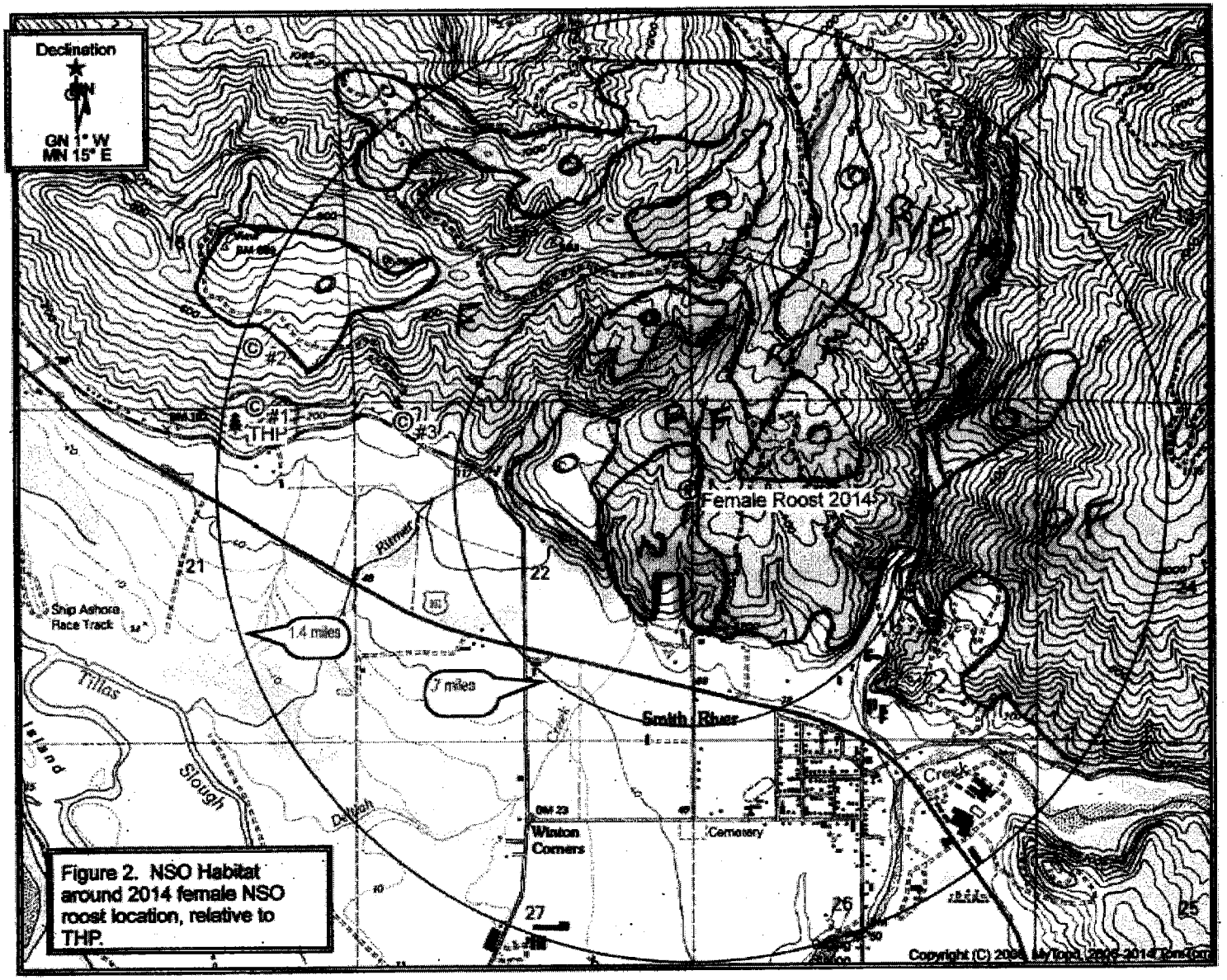
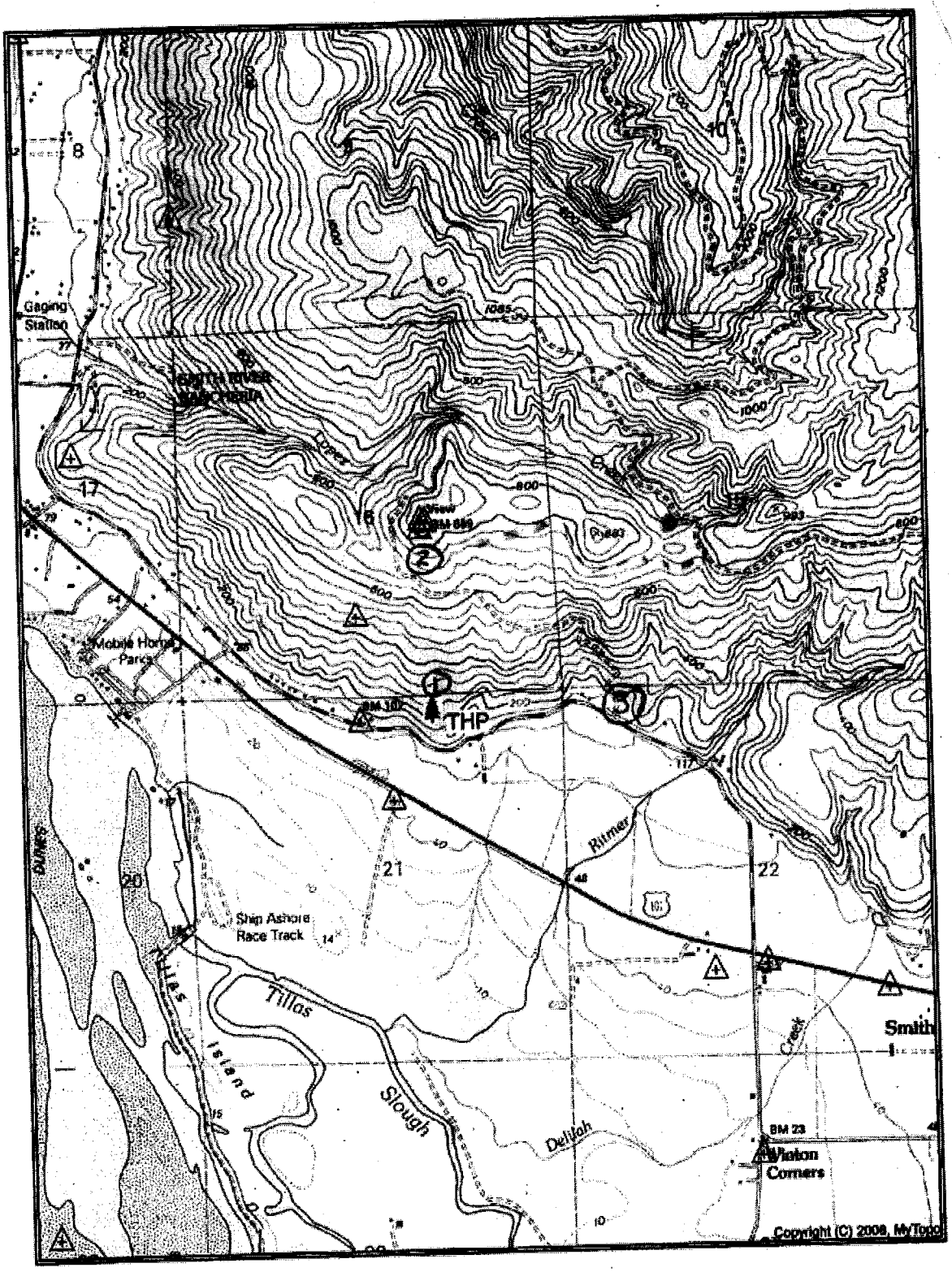


Figure 2. NSO Habitat around 2014 female NSO roost location, relative to THP.

STAFF QUALIFICATIONS

Habitat assessment and report writing for this project was conducted by Principal Biologist, Frank Galea. Frank is the primary Biological Consultant and owner of Galea Wildlife Consulting, established in 1989, and is certified as a Wildlife Biologist through the Wildlife Society. Frank's qualifications include a Master of Science Degree in Wildlife Management from Humboldt State University and a Bachelor of Science in Zoology from San Diego State University. Frank has been assessing habitat and conducting field surveys for Threatened and Endangered species for over 25 years. Frank has taken an accredited class on wetland delineation through the Wetland Training Institute, and has successfully completed a Watershed Assessment and Erosion Treatment course through the Salmonid Restoration Federation.



SCALE 1:24000

0 1 MILE

GALEA WILDLIFE CONSULTING
Owl Survey Form

Project: Oceanview, Smith River Client: Blair Forestry

Date(s): 4-12, 2013 Purpose: # 1 for 2013 NSO Detection ? YES (NO)
4-23+ 5-03 2+3

Surveyors(s): F. Galea

Weather: *(Circle one)* Precipitation: (None) *Trace Drizzle Light Heavy Snow*
Wind: 0-1 *(Beaufort Units)* Temperature:____ °F Cloud Cover: *Clear Partly Cloudy Overcast*
Survey Type: (Point) *Cruise Both* Moon Phase: *Full Half Quarter None*

Calling Point #	Time Start (24 hr)	Time End (24 hr)	Results *Spp., Sex, Direction from surveyor*
1	2010	2020	NR = No Response
2	2040	2050	NR
3	2117	2127	NR
1	2020	2030	NR
2	2049	2059	NR
3	2114	2124	NR
1	2113	2123	NR
2	2135	2145	NR
3	2158	2208	NR
1			
2			
3			
1			
2			
3			

4-12

4-23

5-03

4-23-13
Calm, clear, warm

GALEA WILDLIFE CONSULTING 200 RACCOON COURT
CRESCENT CITY CA (707) 464-3777

GALEA WILDLIFE CONSULTING
Owl Survey Form

Project: Oceanview THP Client: Blair

Date(s): 5-11, 6-24, 6-02, 2014 Purpose: # for 2014 1,2+3 NSO Detection? YES NO

Surveyors(s): F. Galea

Weather: *(Circle one)* Precipitation: *None Trace Drizzle Light Heavy Snow*
Wind:_____*(Beaufort Units)* Temperature:____ºF Cloud Cover: *Clear Partly Cloudy Overcast*
Survey Type: *Point Cruise Both* Moon Phase: *Full Half Quarter None*

	Calling Point #	Time Start (24 hr)	Time End (24 hr)	Results - Age, Sex, Direction from surveyor
5-11	2	2015	2025	NR= No Response 9 NSO located 1 mile due E, adj. THP.
	1	2050	2100	NR
	3	2109	2119	NR
5-24	2	2050	2100	NR
	1	2112	2122	NR
	3	2140	2150	NR
6-02	2	2100	2110	NR
	1	2125	2135	NR
	3	2151	2201	NR

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SPOTTED OWL LOCATION FORM -GALEA WILDLIFE CONSULTING

200 RACCOON COURT, CRESCENT CITY, CALIFORNIA 95531 (707)464-3777

Project: Westbrook Ranch THP Client: Blair Forestry, Wagner Ranch Landowner: Westbrook

Location: Smith River, CA Date: 5-11 - 2014 Surveyor(s): Frank Galea

NSO STATUS SUMMARY: Single Female **Territory Name &/or** _____
(Circle conclusions)

Territory Occupancy Status: No owls Pair Single Single &
(to date)

Reproductive Status: Unknown Nesting Reproductive Non-Reproductive Failed

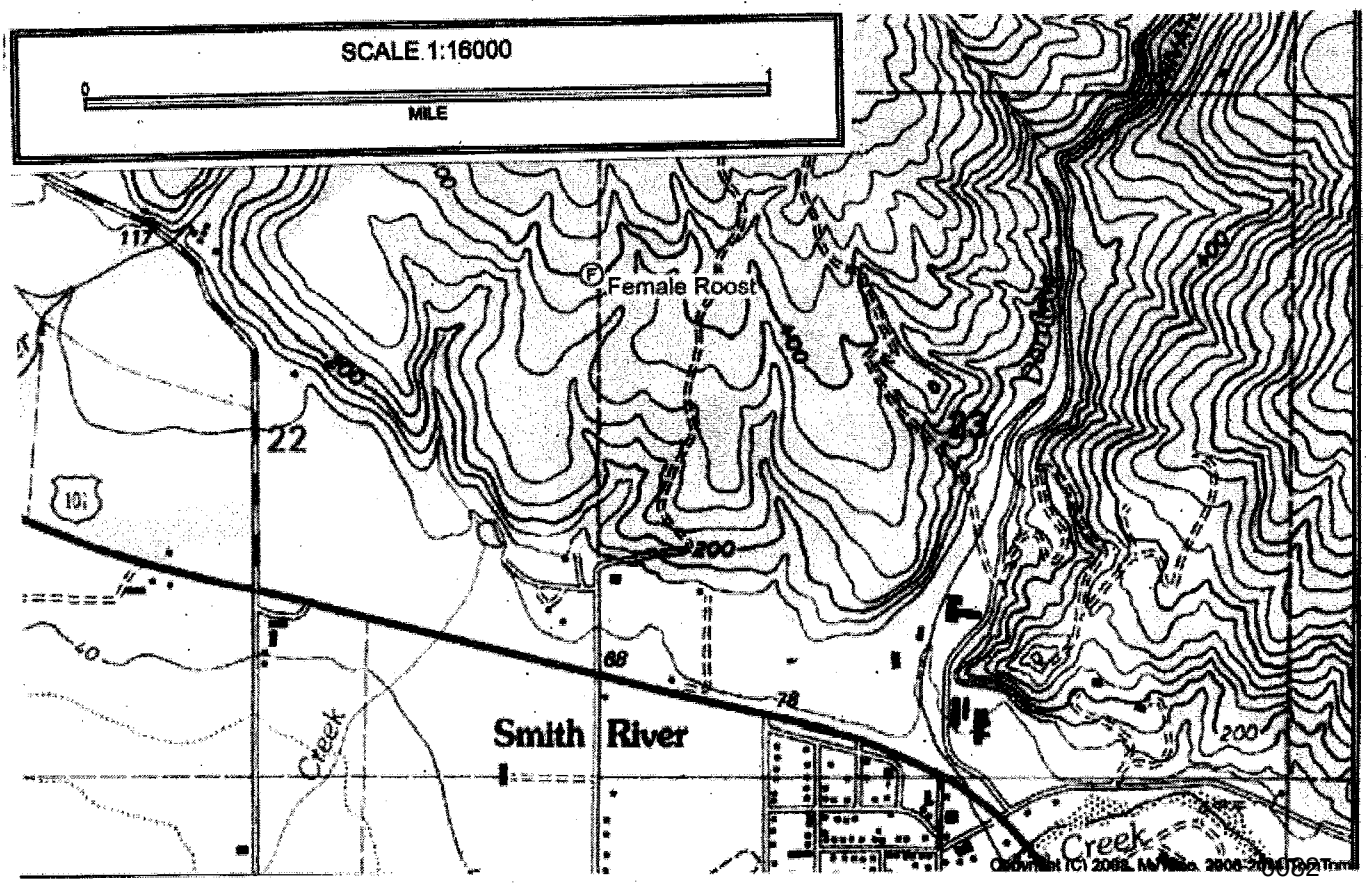
Nest Tree Location: T R S S (1/4) S(1/ 16) S(1 /64)

Weather: Precipitation: *None Trace Drizzle Light Heavy Snow* Wind: _____ (Beaufort Units)
Cloud Cover: *Clear Partly cloudy Overcast* **Moon:** *New Moon Quarter Full Moon*

SPOTTED OWL DETECTIONS AND LOCATIONS:

Owl No.	Age Class	Sex	Time Detected (24hr)	How Detected?	Legal Description						Mousing Results
					T	R	S	S 1/4	S 1/16	S 1/64	
01	Ad	F	1900	VO	18N	1W	22	NE	NE	SE	R
02											
03											

SEX: M, F or U=Unknown **AGE CLASS:** A=Adult S=Subadult J=Juvenile U =Unknown **HOW DETECTED:** V=Vocal O=Observed VO=Both
MOUSING OUTCOME: (Fate of mouse): U=Unknown E= Eaten C=Cached (or owl falls asleep with mouse in talon for 1 hr) R=Refused (in view for 30-60 min & owlwatching) N=Taken to nest Y=Taken to first young S=Taken to second young F=Given to female who ate it G=Given to female who cached it T=Taken to owl of opposite sex A= given to owl of opposite sex who gives it to young.



GALEA WILDLIFE CONSULTING
Owl Survey Form

Project: Oceanview THP Client: Blair

Date(s): 6-27, 7-06, 7-14 , 2014 Purpose: # 4,5+6 for 2014 NSO Detection ? *YES* (NO)

Surveyors(s): F. Galea

Weather: *(Circle one)* Precipitation: *None Trace Drizzle Light Heavy Snow*
Wind:_____*(Beaufort Units)* Temperature:____ NF Cloud Cover: *Clear Partly Cloudy Overcast*
Survey Type: *Point Cruise Both* Moon Phase: *Full Half Quarter None*

	Calling Point #	Time Start (24 hr)	Time End (24 hr)	Results *Spp., Sex, Direction from surveyor*
6-2	2	2040	2050	NR = No Response
	1	2110	2120	NR
	3	2129	2139	NR
7-06	2	2045	2055	NR
	1	2113	2123	NR
	3	2135	2145	NR
7-14	2	2055	2105	NR
	1	2115	2125	NR
	3	2141	2151	NR

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CRESCENT CITY CA (707) 464-3777

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GALEA WILDLIFE CONSULTING
Owl Survey Form

Project: Oceanview - Gautreaux THP Client: Blair

Date(s): 5-28, 6-05, 7-21 , 2013 Purpose: # 4, 5 & 6 for 2013 NSO Detection ? YES (NO)

Surveyors(s): F. Galea

Weather: *(Circle one)* Precipitation: (None) *Trace Drizzle Light Heavy Snow*
Wind: 0-1 *(Beaufort Units)* Temperature: ___ NF Cloud Cover: *Clear Partly Cloudy Overcast*
Survey Type: (Point) *Cruise Both* Moon Phase: *Full Half Quarter None*

	Calling Point #	Time Start (24 hr)	Time End (24 hr)	Results Spp., Sex, Direction from surveyor
5-28	2	2230	2240	NR = No Response
	1	2255	2305	NR
	3	2314	2324	NR
6-05	1	2105	2115	NR
	3	2130	2140	NR
	2	2151	2201	NR
7-21	2	2100	2110	NR
	1	2120	2130	NR
	3	2142	2152	NR

GALEA WILDLIFE CONSULTING 200 RACCOON COURT
CRESCENT CITY CA (707) 464-3777

0084

METHODS

Records Search

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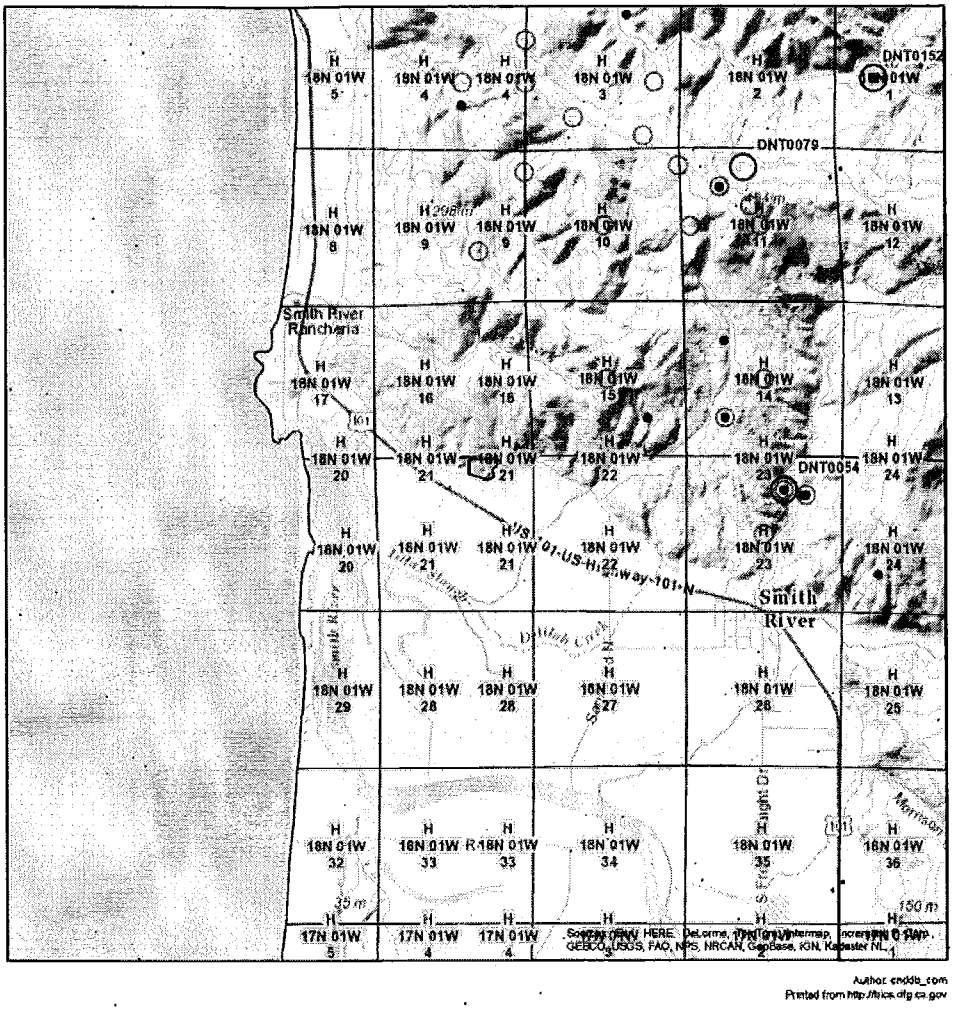
Gautreaux THP Project Area

- Positive Observation
- Negative Observation
- Activity Center
- Not Valid Activity Center
- Abandoned
- Approximate THP Location



1:72,224

0 0.5 1 2 mi

0 1 2 4 km

February 6, 2015

Author: cnddb_com
Printed from: http://rtics.dfg.ca.gov

0086

Data Version Date:
01/29/2015

Report Generation Date:
2/6/2015

Report #2 - Observations Reported

List of observations reported, by site.

Meridian, Township, Range, Section (MTRS) searched:

H_18N_01W Sections(15,16,17,20,21,22,27,28,29);

Masterowl: DNT0054 Subspecies: NORTHERN

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
AC	1990		2	UMUF	Y	N		41.941410	-124.143289	H 18N 01W 23	Contributor
NEG	2002		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2001-05-01	1920	0					41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	2000-06-15	2043	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2003-05-14	2221	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2007		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2001-04-04	1715	0					41.948183	-124.150754	H 18N 01W 14	Quarter-section centroid
NEG	2001-05-13	1900	0					41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	2004-06-29	2102	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2003-04-04	1828	0					41.951851	-124.155896	H 18N 01W 15	Section centroid
NEG	2004-05-30	2016	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2010		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2000-03-02	1910	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2000-03-20	1836	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2012		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2004-06-06	2040	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	1999		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2000		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2003		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	1998		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	1994		0					41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2003-07-01	2152	0					41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2000-08-28	2118	0					41.937271	-124.145853	H 18N 01W 23	Section centroid

NEG	2000-04-03	2159	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2002-06-05	2100	0	41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	2004-07-20	2238	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2001-05-07	2025	0	41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	2001-05-01	1600	0	41.940926	-124.140562	H 18N 01W 23	Activity center
NEG	2001		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2001-05-09	2154	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2011		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2003-03-20	1816	0	41.951851	-124.165696	H 18N 01W 15	Section centroid
NEG	2008		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	1993		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2004-05-27	2138	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2002-07-09	2052	0	41.951851	-124.165696	H 18N 01W 15	Section centroid
NEG	2001-03-08	1800	0	41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	2009		0	41.941410	-124.143289	H 18N 01W 23	Contributor
NEG	2000-07-08	2030	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2001-03-19	1100	0	41.940926	-124.140562	H 18N 01W 23	Activity center
NEG	2000-04-01	1958	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2003-03-28	1931	0	41.951851	-124.165696	H 18N 01W 15	Section centroid
NEG	2013		0	41.941410	-124.143289	H 18N 01W 23	Contributor
NEG	2000-03-14	1933	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	1995		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	1997		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2001-04-09	1010	0	41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	1996		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2000-05-18	2034	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2001-03-22	2117	0	41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2004		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	2002-04-24	1946	0	41.951851	-124.165696	H 18N 01W 15	Section centroid
NEG	2006		0	41.941410	-124.143288	H 18N 01W 23	Contributor
NEG	1992		0	41.941410	-124.143289	H 18N 01W 23	Contributor

NEG	2001-07-17	2135	0				41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2002-04-02	2033	0				41.951817	-124.145800	H 18N 01W 14	Section centroid
NEG	2003-04-19	1930	0				41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2001-03-08	2029	0				41.937271	-124.145853	H 18N 01W 23	Section centroid
NEG	2005		0				41.941410	-124.143288	H 18N 01W 23	Contributor
POS	2001-04-17	1658	1	AM	N		41.940926	-124.140562	H 18N 01W 23	Activity center
POS	1989		2	UMUF	Y	Y	41.940887	-124.140899	H 18N 01W 23	Quarter-section centroid
POS	1991		1	UM			41.941410	-124.143289	H 18N 01W 23	Contributor
POS	2001-03-16	1605	1	UM			41.948201	-124.160623	H 18N 01W 15	Quarter-section centroid
POS	2001-04-10	1830	1	AM			41.955432	-124.150848	H 18N 01W 14	Quarter-section centroid
POS	2001-04-17	1551	1	AM			41.940926	-124.140562	H 18N 01W 23	Activity center
POS	2001-03-15	1736	1	UM			41.948201	-124.160623	H 18N 01W 15	Quarter-section centroid
POS	2001-03-09	1747	1	UM			41.948183	-124.150754	H 18N 01W 14	Quarter-section centroid

Erosion Control Plan for the Gautreaux THP

Submitted to:

California Regional Water Quality Control Board -
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:

Brian Griesbach, RPF #2738
Blair Forestry Consulting

Sunday, February 01, 2015

Purpose

This Erosion Control Plan (ECP) has been prepared on behalf of the property owner, Mark Gautreaux, by agreement and in response to the California Water Code Section 13260(a), which requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the state, other than into a community sewer system, shall file with the appropriate regional board a report of waste discharge (ROWD) containing such information and data as may be required by the Regicnal Board. Order No. R1-2004-0030 specifically states that technical reports required under the General Waste Discharge Requirements include an Erosion Control Plan (ECP).

Scope of Report

The RWQCB's Guidance Document for Order No. R1-2004-0030 states that an Erosion Control Plan (ECP) shall contain the following:

1. An inventory of all controllable sediment discharge sources within the Project area, and,
2. A time schedule for implementation of prevention and minimization management measures from all controllable sediment discharge sources within the Project area. The implementation of prevention and minimization management measures must be completed during the period of coverage under General WDRs.

Controllable sediment discharge sources means sites or locations, both existing and those created by proposed timber harvest activities, within the Project area that meet all the following conditions:

1. is discharging or has the potential to discharge sediment to waters of the state in violation of applicable water quality requirements or other provisions of these General WDRs,
2. was caused or affected by human activity, and
3. may feasibly and reasonably respond to prevention and minimization management measures.

Methods

The methods used to develop this ECP include both field and office components. The office work included review of nearby approved THPs, the review of Geologic and Soil-Vegetation Maps for the area, and the review of aerial photography of the property for which the THP is located on.

The field component consisted of a survey for controllable sediment discharge sources (as defined above) located throughout the entire THP area. This included on-site physical inspections of the following: truck roads, skid roads, watercourse crossings, watercourse channels and banks, landings, unstable areas, and hill slopes adjacent to all watercourses that could potentially contribute sediment.

Controllable sediment discharge sources are defined as physical locations on the ground where existing erosion is occurring, or could potentially occur without proper mitigation. Erosion sites that do not threaten water quality, primarily because they do not have the potential to deliver eroded sediment to stream channels, were not individually identified.

No controllable sediment sources were identified in the THP area. No watercourses are within or immediately adjacent to the plan area.

Inventory and Treatment of Controllable Sediment Sources

None. If controllable erosion sources are identified in the future, the Erosion Control Plan will be amended to incorporate the new sites.

Implementation of Erosion Control Measures for Treatment of Controllable Sediment Sources

None.

Inspection Plan

Per General Waste Discharge Requirements Order No. R1-2004-0030 (GWDR), inspections shall be used to determine if any new controllable sediment discharge sources have developed within the Project area. The following inspection requirements shall begin once the startup of timber harvest activities begin within Project areas.

a. Project Areas where Timber Harvest Activities have not yet Commenced
No inspections are required.

b. Project Areas where Timber Harvest Activities have Commenced and No Winter Period Timber Harvest Activities have Occurred
At a minimum, conduct inspections each year and throughout the duration of the Project while Timber Harvest Activities occur and the Project is covered under General WDRs as follows:
1. By November 15 to assure Project areas are secure for the winter; and
2. Once following ten (10) inches of cumulative rainfall commencing on November 15 and prior to March 1, as worker safety and access allows; and
3. After April 1 and before June 15 to assess the effectiveness of management measures designed to address controllable sediment discharges and to determine if any new controllable sediment discharges sources have developed.

c. Project Areas With Winter Period Timber Harvest Activities
Project areas with timber harvest activities during the winter period shall, at a minimum, conduct inspections of such Project areas while Timber Harvest Activities occur and the Project is covered under General WDRs as follows:
1. Immediately following the cessation of winter period timber harvest activities to assure areas with winter timber harvest activities are secure for the winter;
2. Once following ten (10) inches of cumulative rainfall commencing on November 15 and prior to March 1, as worker safety and access allows; and
3. After April 1 and before June 15 to assess the effectiveness of management measures designed to address controllable sediment discharges and to determine if any new controllable sediment discharges sources have developed.

d. Inspection reports prepared pursuant to GWDR section III.G shall identify where management measures have been ineffective and when the Discharger will implement repairs or design changes to correct management measure failures.

e. If any new controllable sediment discharge sources are identified, such sites shall be addressed in accordance with the provisions of GWDR section III.B.3.

f. Equipment, materials, and workers shall be available for rapid response to failures and emergencies, and implement, as feasible, emergency management measures depending upon field conditions and worker safety for access.

0091

NOTE

"Information concerning archaeological sites has been removed from **THP 1-15-014 DEL** pursuant to California Government Code Section 6254.10 which exempts cultural resources site location information from the California Public Records Act and provides authority for widespread state policy (not just within the California Department of Forestry and Fire Protection) to keep archaeological site location information confidential. This exemption to the Public Records Act recognizes that providing site location information to the general public may put such sites at risk from artifact hunting, excavations and/or vandalism."

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

1. CAL FIRE field unit - Fortuna

2. Reviewing Archeologist, Santa Rosa (Region Office)

The original copy of this material is maintained in a confidential file at CAL FIRE's Northern Region Headquarters, 135 Ridgway Avenue, Santa Rosa, CA 95401.

Pages 88 – 104

DEPARTMENT OF FORESTRY AND FIRE PROTECTION

135 Ridgway Ave.
Santa Rosa, CA 95401
Website: www.fire.ca.gov
(707) 576-2959

Date: March 05, 2015
Ref: 1-15-014 DEL

Brian Griesbach
P O Box 2517
McKinleyville, CA 95519

Dear Mr. Griesbach:

Enclosed is a copy of a Notice of Filing for the Timber Harvesting Plan you have submitted. Review of this plan indicates a preharvest inspection (PHI) is necessary. The Review Team has asked that the following concerns or questions be addressed during the inspection. See Attachment A (if applicable).

A PHI must be conducted not before **March 06, 2015** but by **March 15, 2015**. (Ref. PRC 4604). Our **Fortuna** office will contact you concerning this inspection.

Upon completion of the PHI, a Review Team will evaluate the plan and make a recommendation to the Director's designated representative. In making its recommendations, the Review Team may ask the Registered Professional Forester that a concern be addressed or suggest the inclusion of mitigation measures to protect forest resources before a determination is made on the plan.

Operations may not start until the Director of Forestry and Fire Protection has found the plan in conformance, and a copy of this plan with a facsimile signature of the Director's duly constituted representative shown thereon has been forwarded to you.

It is preferred that you provide your responses to First Review Questions electronically to santarosareviewteam@fire.ca.gov. Follow up "hard copy" is not necessary. Also note that the Plan and most associated documents are now available on the internet at ftp://thp.fire.ca.gov.

Sincerely,

PETER LEUZINGER
Review Team Chair, Forest Practice
RPF #2904

/ntms
Cc: Unit, Plan Submitter, ftp://thp.fire.ca.gov, File

ATTACHMENT A
REVIEW TEAM QUESTIONS
THP#: 1-15- 014 DEL (Mark Gautreaux)
RPF: B. Griesbach
Filing Date: March 05, 2015
PHI Date: March 06, 2015 through March 15, 2015

- Contact CGS (Gerald Marshall) @ (707) 441-5742, gerald.marshall@conservation.ca.gov for a Mutually Agreeable PHI date.
- Notify RWB (Dean Prat) @ (707) 576-2801, dean.prat@waterboards.ca.gov of the PHI date.
- Contact CDFW (Monty Larson) @ (707) 441-2099, monty.larson@wildlife.ca.gov for a Mutually Agreeable PHI

ATTENTION RPF: All correspondence pertinent to this plan must be submitted directly to CAL FIRE Santa Rosa. This includes responses to 1st Review, PHI, 2nd Review, etc. Correspondence may be sent through the normal mail or emailed to santarosareviewteam@fire.ca.gov (not both). CAL FIRE Santa Rosa routes copies of all submitted documents to the Unit as a matter of procedure. You may provide a copy to the unit at your discretion.

RPF Questions to be addressed prior to PHI: (Make copies available at PHI to all participating agencies.)

1. Item 14b, page 4, directs the reviewer to Item 26 to see stocking standards for the watercourse selection standard. However the reviewer was unable to find stocking or retention standards, other than (6) on page 12. Please include 916.9(g)(2)(A)) and (B).

2. Please remove the references to road reconstruction, which are included in the winter operating plan. The THP as proposed does not include road reconstruction.

3. Please include a statement in the 1034(o) discussion that clarifies that no road reconstruction or abandonment is proposed under this THP.

4. Item 25, page 10, states "no mitigation measures are needed to minimize potential adverse impacts to watersheds from the reconstructed road grade". The THP as submitted does not propose any road reconstruction, please revise.

5. The final sentence on page 10 conflicts with statement "repairing active erosion sites", which is included in the last paragraph on page 11. Please revise.

6. The Work Order for Road Repair, page 19, classifies both roads as "Skid trail". Point C1 is a proposed permanent crossing on a seasonal road, please revise. Point T1, appears to propose a temporary crossing on a permanent road. Please provide clarify the road classifications for both crossings and the location of T1. Has crossing C1 (which will require 200 cubic yards of additional fill material) been evaluated to determine if it is a significant existing or potential erosion site?

7. Item 26(c), please revise to include the culvert length or alternatively the 914.8(e) requirement that "the culvert shall be of sufficient length to extend beyond the fill material."

8. Item 32, page 16. The NSO protection measures state that a 0.25 mile radius buffer would be afforded to new activity centers except for road use after June 1st. The attachment A protection measures specify road use after July 9th. Please clarify this deviation from the protocol. Also please clarify the exception to the 0.25 mile buffer would need to be approved by USF&WS or CALFIRE.

9. Regarding the NSO packet:

    1. Please clarify the habitat definitions used for the habitat assessment.
    2. Please clarify the habitat map provided for the female NSO. It is unclear what "o" and "pf" are intended to represent. Please show habitat as nest/roost, foraging, and unsuitable.

10. The proposed THP is referred to as an NTMP on pages 19 and 29. Please revise.

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ATTACHMENT A
REVIEW TEAM QUESTIONS
THP#: 1-15- 014 DEL (Mark Gautreaux)
RPF: B. Griesbach
Filing Date: March 05, 2015
PHI Date: March 06, 2015 through March 15, 2015

11. Please provide a contour interval and indicate an elevation on the THP map. Also please designate which roads are appurtenant. Labeling the Permanent and Proposed Seasonal roads as appurtenant will suffice.

12. Site C1 on the Work Order for Road Repair is described as a fill crossing on a class II stream. Please evaluate the potential for this point to be listed as a CSDS site. (RWB)

13. **Lake and Streambed Alteration Agreement:**

    On March 1, 2015, the Department of Fish and Wildlife (DFW) received your notification of lake or streambed alteration pursuant to Fish and Game Code 1611 within the THP. DFW has 30 calendar days date to determine if the notification is complete. DFW is required to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you within 60 calendar days from the date the notification is deemed complete. Unless you request otherwise, the notification will be deemed void if the THP is returned by CAL FIRE, or withdrawn by you. Agreement fees for proposed or approved harvesting plans are not required for notifications submitted on or after July 1, 2013.
    Additional information regarding the Lake and Streambed Alteration Program is available at http://www.dfg.ca.gov/habcon/1600/forms.html. More specific information about the 1611 process is available at https://r1.dfg.ca.gov/portal/HabitatConservationProgram/Timber/tabid/883/Default.aspx. (CDFW)

14. Does the RPF intend to submit a separate Fish and Game Code 1602 notification? Section II Item 26d indicates that the THP will serve as the 1611, and a 1611 notification is included in section III. However, item 26d also indicates a separate notification will be provided. Please clarify. (CDFW)

15. Item 2c of the 1611 notification in section III indicates that water may be drafted from springs onsite that are "not within the channel zone of natural watercourses." Please provide a map of the location(s) of the tank(s). (CDFW)

16. GIS analysis indicates that class I or restorable class I habitat may exist in the stream that runs along the eastern border of the THP. How was the absence of Class I habitat established? (CDFW)

17. THP section II item 14a identifies 13.3 acres of clearcutting and no other timber harvesting prescriptions. Yet section II item 14b indicates that the reader should "see item 26 for retention standards for watercourses." Item 26 then identifies the minimum FPR WLPZ measures suggesting that the WLPZ will be harvested in the THP. Why was selection timber harvesting not identified in item 14a along with the acreages of the proposed selection harvest? Why were the selection harvesting areas not identified on the THP maps in section II? (CDFW)

18. THP section IV, technical rule addendum 2, C. Biological Resources, 2 states "the THP is designed to utilized un-evenaged management that will maintain at least foraging structure throughout the life of the THP." Section II item 14a indicates that only clearcut timber harvesting will be used in this THP. Clearcut timber harvesting will not retain suitable foraging habitat for NSO. Please revise and reanalyze. (CDFW)

19. THP section IV, technical rule addendum 2 G, Climate Change Assessment item b states "In addition, redwood is a dominant species on project area and redwood slash decays more slowly than slash from hardwood and whitewood species." However, section III, site description item II, Vegetation and Stand Condition, states "the stand is well stocked with second growth Sitka spruce that is approximately 80 years of age. A sparse component of other species is present including Western hemlock, Douglas-fir, big leaf maple and tanoak." Redwood is not disclosed as a component of the stands proposed to be harvested in the THP.

    It appears that the CO2 emission calculations for this THP may have been copied from another THP where redwood was the dominant tree species in the stands proposed for harvesting. Please recalculate the CO2 emissions for this THP using

Sitka spruce as the dominant tree species. Please revise the Climate Change Assessment for this THP to reflect that the tree species to be harvested are Sitka Spruce.

Please also consider that much of the Sitka spruce harvested in northern California in the last few years has been shipped to China, where it is milled into lumber to be used as forms for concrete buildings. Whether this material is destroyed or reused is unclear but the underlying assumption that wood products from this THP will end up in buildings is not supported. Considering the primary use for Sitka Spruce is as forms for buildings it is more likely that the material is destroyed after a single use, likely within ten years following harvest. Given these reasonable assumptions it appears likely that it will take significantly more than 14 years to recover the carbon that would be released by this THP. (CDFW)

RPF Archaeology Questions to be addressed prior to the PHI: (For confidentiality purposes, please submit Archeological responses attached separately.)

- There are no Archaeological questions for the RPF.

Agency Questions to be addressed at PHI:

20. Please evaluate the proposed ground-based clearcut operations from a Public Safety Perspective in light of the mapped disrupted ground/earthflow complex in the immediate vicinity, public road at the base of the slope, residence within the Plan, and adjacent residence below the east portion of the Plan. Are additional mitigations needed? (CGS)

Reference:

Davenport, C. W., 1983, Geology and Geomorphic Features Related to Landsliding, **Smith River** 7.5' Quadrangle: California Division of Mines and Geology Open File Report OFR-83-19 S.F., scale 1:24,000. (CGS)

Agency Archaeology Questions to be addressed at PHI: (For confidentiality purposes, please submit Archeological responses attached separately.)

- There are no Archaeological questions for the Inspector.

7 ½' QUADRANGLE: Smith River, (1996)
PAST OVERLAPPING PLANS: None
CAL FIRE Representative: Daniel Sooy
CGS Representative: Jim Falls
ARCH Representative: Kathy Thorne
RWB Representative: Jonathan Meurer
CDFW Representative: Monty Larson

NCRWQCB Waste Discharge Requirement Comments

Timber Harvest Projects on private lands within the North Coast Region must be permitted under either Waste Discharge Requirements or a Waiver of Waste Discharge Requirements. The North Coast Regional Water Quality Control Board (RWB) has adopted General Waste Discharge Requirements (General WDRs) under Order No. R1-2004-0030 to provide coverage for THPs and Program THPs (PTHPs).

ATTACHMENT A
REVIEW TEAM QUESTIONS
THP#: 1-15- 014 DEL (Mark Gautreaux)
RPF: B. Griesbach
Filing Date: March 05, 2015
PHI Date: March 06, 2015 through March 15, 2015

The RWB also adopted a Waiver, Order No. R1-2014-0011 (supersedes Order No. R1-2009-0038), which can provide coverage for low impact THPs, Modified THPs (MTHPs), Emergencies, Exemptions, and timber harvest projects in compliance with the Garcia River TMDL.

Copies of the GWDR and Waiver, as well as other timber related information, can be found at the following web address: http://www.waterboards.ca.gov/northcoast/water_issues/programs/timber_operations/timber_waiver/

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
135 Ridgeway Ave.
SANTA ROSA, CA 95401
(707) 576-2959
Website: www.fire.ca.gov

FOREST PRACTICE
HARVEST PLAN DOCUMENTATION

ORIGINAL VERSION OF RESPONSIBLE AGENCY FIRST REVIEW TEAM QUESTIONS CGS, RWB, CDFW

The attached documents are copies of original questions submitted by the California Geological Survey (CGS), Regional Water Quality Control Boards (RWB), Department of Fish and Game (CDFW), and/or other Responsible Agency Review Team members as part of the First Review process. 14CCR 1037.5 and 14CCR 1090.19

In some cases, revisions to original questions are made by the submitting agency and/or the CAL FIRE Review Team Chair. Reasons for revisions include, but are not limited to, spelling and grammar, clarity, identification of potential significant impact, and/or identification of statutory authority.

The submitting agency representative is contacted regarding changes to his/her question(s) except for grammar and/or spelling. The timing of this contact depends upon review schedules, staffing availability of the submitter, etc. If contact occurs prior to filing a plan, the First Review Team Chair and the submitter, working under the authority of the Forest Practice Rules, revise the question. This may include deleting the question, or combining it with another question similarly asked. If contact is not possible prior to filing, the Review Team Chair notifies the representative, informing him/her of the change and clarifying that if unacceptable, their concerns can be raised during the review process.

Agency: CGS

Contact Info: 707-441-5742 or Gerald.Marshall@conservation.ca.gov

THP: 1-15-014 DEL

1st Review Date: March 5, 2015

PHI Notifications: Please contact Gerald Marshall @ 707-441-5742 to schedule a mutually agreeable PHI date.

Questions for RPF to address prior to PHI:

Agency Questions: Please evaluate the proposed ground-based clearcut operations from a Public Safety perspective in light of the mapped disrupted ground/earthflow complex in the immediate vicinity, public road at the base of the slope, residence within the Plan, and adjacent residence below the east portion of the Plan. Are additional mitigations needed?

Reference:

Davenport, C.W., 1983, Geology and Geomorphic Features Related to Landsliding, **Smith River** 7.5' Quadrangle: California Division of Mines and Geology Open File Report OFR-83-19 S.F., scale 1:24,000.

Reviewer: Jim Falls

>>

From:	Jonathan Meurer – North Coast Regional Water Quality Board
Contact Info:	jonathan.meurer@waterboards.ca.gov - 707-576-6707
To:	Santa Rosa Review Team
Subject:	First Review Questions/Notifications
Date:	March 3, 2015
THP:	**1-15-014DEL**

PHI Scheduling:
Please contact Dean Prat at (707) 576-2801 to NOTIFY US OF THE PHI date and time.

RPF Questions to be addressed prior to PHI:

1. Site C1 on the Work Order for Road Repair is described as a fill crossing on a class II stream. Please evaluate the potential for this point to be listed as a CSDS site.

Agency Questions to be addressed at PHI:

1. None

North Coast RWQCB Waste Discharge Information for RPF:
Timber Harvest Projects on private lands within the North Coast Region must be permitted under either Waste Discharge Requirements or a Waiver of Waste Discharge Requirements. The North Coast Regional Water Quality Control Board (RWB) has adopted General Waste Discharge Requirements (General WDRs) under Order No. R1-2004-0030 to provide coverage for THPs and Program THPs (PTHPs).

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Copies of the GWDR and Waiver, as well as other timber related information, can be found at the following web address:
http://www.waterboards.ca.gov/northcoast/water_issues/programs/timber_operations/timber_waiver/

Reviewer: WQ Representative: Jonathan Meurer, Engineering Geologist

DEPARTMENT OF FISH and WILDLIFE
Northern Region, Eureka Field Office
619 Second Street
Eureka, CA 95501

From:	Monty Larson
Contact Info:	**DFW, Northern Region, monty.larson@wildlife.ca.gov** (707) 441-2099
Subject:	First Review Questions/Comments
To:	CalFire First Review
Email:	santarosareviewteam@fire.ca.gov
Date:	**March 4, 2015**
Review Date:	**March 5, 2015**
THP:	1-15-014 DEL "Gautreaux"

PHI Notifications:

The CDFW requests a mutually agreeable PHI date to assess impacts to terrestrial and aquatic wildlife. Please contact Monty Larson (contact information above) to arrange a date.

Questions for the RPF

1. **Lake and Streambed Alteration Agreement:**

   On March 1, 2015, the Department of Fish and Wildlife (DFW) received your notification of lake or streambed alteration pursuant to Fish and Game Code 1611 within the THP. DFW has 30 calendar days date to determine if the notification is complete. DFW is required to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you within 60 calendar days from the date the notification is deemed complete. Unless you request otherwise, the notification will be deemed void if the THP is returned by CAL FIRE, or withdrawn by you. Agreement fees for proposed or approved harvesting plans are not required for notifications submitted on or after July 1, 2013.
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2. Does the RPF intend to submit a separate Fish and Game Code 1602 notification? Section II Item 26d indicates that the THP will serve as the 1611, and a 1611 notification is included in section III. However, item 26d also indicates a separate notification will be provided. Please clarify.

3. Item 2c of the 1611 notification in section III indicates that water may be drafted from springs onsite that are "not within the channel zone of natural watercourses." Please provide a map of the location(s) of the tank(s).

4. GIS analysis indicates that class I or restorable class I habitat may exist in the stream that runs along the eastern border of the THP. How was the absence of Class I habitat established?

5. THP section II item 14a identifies 13.3 acres of clearcutting and no other timber harvesting prescriptions. Yet section II item 14b indicates that the reader should "see item 26 for retention standards for watercourses." Item 26 then identifies the minimum FPR WLPZ measures suggesting that the WLPZ will be harvested in the THP. Why was selection timber harvesting not identified in item 14a along with the acreages of the proposed selection harvest? Why were the selection harvesting areas not identified on the THP maps in section II?

6. THP section IV, technical rule addendum 2, C. Biological Resources, 2 states "the THP is designed to utilized un-evenaged management that will maintain at least foraging structure throughout the life of the THP." Section II item 14a indicates that only clearcut timber harvesting will be used in this THP. Clearcut timber harvesting will not retain suitable foraging habitat for NSO. Please revise and reanalyze.

7. THP section IV, technical rule addendum 2 G, Climate Change Assessment item b states "In addition, redwood is a dominant species on project area and redwood slash decays more slowly than slash from hardwood and whitewood species." However, section III, site description item II, Vegetation and Stand Condition, states "the stand is well stocked with second growth Sitka spruce that is approximately 80 years of age. A sparse component of other species is present including Western hemlock, Douglas-fir, big leaf maple and tanoak." Redwood is not disclosed as a component of the stands proposed to be harvested in the THP.

   It appears that the CO2 emission calculations for this THP may have been copied from another THP where redwood was the dominant tree species in the stands proposed for harvesting. Please recalculate the CO2 emissions for this THP using Sitka spruce as the dominant tree species. Please revise the Climate Change Assessment for this THP to reflect that the tree species to be harvested are Sitka Spruce.

   Please also consider that much of the Sitka spruce harvested in northern California in the last few years has been shipped to China, where it is milled into lumber to be used as forms for concrete buildings. Whether this material is destroyed or reused is unclear but the underlying assumption that wood products from this THP will end up in buildings is not supported. Considering the primary use for Sitka Spruce is as forms for buildings it is more likely that the material is destroyed after a single use, likely within ten years following harvest. Given these reasonable assumptions it appears likely that it will take significantly more than 14 years to recover the carbon that would be released by this THP.

OFFICIAL NOTICE OF FILING
For Timber Harvest Plans (THPs), Non-Industrial Timber Management Plans (NTMPs), and Major Amendments to THPs and NTMPs
DATE: March 05, 2015

The THP, NTMP, or Major Amendment listed below has been filed with the Director of Forestry pursuant to State Laws and Regulations. [Ref. Z'berg-Nedjely Forest Practice Act, Division 4, Chapter 8, Public Resources Code and California Forest Practice Rules, Title 14, California Code of Regulations Chapters 4, 4.5 and 10.] Each document is subject to multi-agency review to ensure protection of environmental resources.

You are invited to submit comments and concerns for consideration in the review process. Submit written comments complete with the plan or amendment number clearly identified, and include your name and mailing address to the address listed immediately below*. Letters must be received in our office by the close of comment date shown. Please be aware that the date provided is the earliest possible closing date for public comments. This date generally changes throughout the review process, and opportunity to submit comments may still be available after the date shown. You may contact the Department for the most current deadline at: **North Coast Region Headquarters**, Attn: Forest Practice, 135 Ridgway Avenue, Santa Rosa, CA, 95401, (707) 576-2959, e-mail: santarosapubliccomment@fire.ca.gov

Plan number County Cost	Landowner and Submitter (SUB) if different	RPF	Nearest Drainage	Acres	Legal / Nearest Landmark	Description	Date Filed	Earliest Close of Comment
1-15-014 DEL Del Norte Cost $8.80	Mark Gautreaux	B. Griesbach	Smith River is 4,500 ft. downstream. 1103.110004	13	Section 21 T18N, R1W, HBM. 2 miles NW of Smith River.	Clearcut	03-05-15	03-20-15

The filed plan and associated review documents may be viewed at either the appropriate field office (see below), at the North Coast Region Headquarters (see above) **or through the internet at: ftp://thp.fire.ca.gov/THPlibrary/** . (Type in: ftp://thp.fire.ca.gov/THPlibrary/ on your internet browser (**do not** type in "http://www") and navigate to the documents you wish to view. All documents on the site are in PDF format and are readable via the free reader from Adobe Acrobat: that can be downloaded from: http://www.adobe.com/ . To purchase a photocopy by mail, send a check or money order in the amount shown payable to CAL FIRE, to the North Coast Region Headquarters; refer to the plan or amendment by number.

FIELD OFFICE: Humboldt Ranger Unit, (for Humboldt, Del Norte, West Trinity Counties)
118 S. Fortuna Blvd, Fortuna, CA 95540 (707) 725-4413

This notice is posted in compliance with Section 1037.1 of Title 14 of the California Code of Regulations.

TO POSTING AGENCY: Please post this Notice at the place where official notices concerning Environmental Quality Act compliance are usually posted. If there are questions, contact: Resource Management Office Department of Forestry and Fire Protection. Telephone: (707) 576-2959

cc: RPF, HUM, HUU, CC, TLO/SUBMITTER, FILE, POST, ftp://thp.fire.ca.gov/THPLibrary

Posting Period is 30 Days

BLAIR FORESTRY CONSULTING

UNIT, ftp/NEW

Providing Professional Forestry Services PO Box 2517 McKinleyville, CA 95519 **CELL** 707.834.2990 **EMAIL** blairforestry@gmail.com

Thursday, March 12, 2015
CalFire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, Ca 95401

RE: RPF's Responses to Review Team Questions for **1-15-014 HUM "GautreauxTHP"**

CalFire Review Team,

This letter includes the RPF's responses to review team questions for resubmitted THP 1-15-006 HUM. In all cases, an erratum has been included below each question that states on what revised or new page the response or form change can be found. Each revised or new page has been stamped REVISED March 12, 2015.

1. Item 14b, page 4, directs the reviewer to Item 26 to see stocking standards for the watercourse selection standard. However the reviewer was unable to find stocking or retention standards, other than (6) on page 12. Please include 916.9(g)(2)(A)) and (B).

   RPF Response: The WLPZ is a no cut.

2. Please remove the references to road reconstruction, which are included in the winter operating plan. The THP as proposed does not include road reconstruction.

   RPF Response: Revised page 9.

3. Please include a statement in the 1034(o) discussion that clarifies that no road reconstruction or abandonment is proposed under this THP.

   RPF Response: Disagree. Discussion is not necessary if the activity is not occurring

4. Item 25, page 10, states "no mitigation measures are needed to minimize potential adverse impacts to watersheds from the reconstructed road grade". The THP as submitted does not propose any road reconstruction, please revise.

   RPF Response: Revised page 10

5. The final sentence on page 10 conflicts with statement "repairing active erosion sites", which is included in the last paragraph on page 11. Please revise.

   RPF response: Revised page 11

6. The Work Order for Road Repair, page 19, classifies both roads as "Skid trail". Point C1 is a proposed permanent crossing on a seasonal road, please revise. Point T1, appears to propose a temporary crossing on a permanent road. Please provide clarify the road classifications for both crossings and the location of T1. Has crossing C1 (which will require 200 cubic yards of additional fill material) been evaluated to determine if it is a significant existing or potential erosion site?

   RPF Response: Revised page 19

7. Item 26(c), please revise to include the culvert length or alternatively the 914.8(e) requirement that "the culvert shall be of sufficient length to extend beyond the fill material."

   RPF response: Revised page 19

8. Item 32, page 16. The NSO protection measures state that a 0.25 mile radius buffer would be afforded to new activity centers except for road use after June 1st. The attachment A protection measures specify road use after July 9th. Please clarify this deviation from the protocol. Also please clarify the exception to the 0.25 mile buffer would need to be approved by USF&WS or CALFIRE.

9. Regarding the NSO packet:

    1. Please clarify the habitat definitions used for the habitat assessment.
    2. Please clarify the habitat map provided for the female NSO. It is unclear what "o" and "pf" are intended to represent. Please show habitat as nest/roost, foraging, and unsuitable.

    RPF Response; Revised page 73 and inserted page 87.1

10. The proposed THP is referred to as an NTMP on pages 19 and 29. Please revise.

11. Please provide a contour interval and indicate an elevation on the THP map. Also please designate which roads are appurtenant. Labeling the Permanent and Proposed Seasonal roads as appurtenant will suffice.

    RPF Response: Agreed. Revised map page 21. Disagree: .Roads within the unit boundary are appurtenant , as usual.

12. Site C1 on the Work Order for Road Repair is described as a fill crossing on a class II stream. Please evaluate the potential for this point to be listed as a CSDS site. (RWB)

    RPF Response: There is no erosion potential. This is an older crossing that has settled.

13. **Lake and Streambed Alteration Agreement:**

    On March 1, 2015, the Department of Fish and Wildlife (DFW) received your notification of lake or streambed alteration pursuant to Fish and Game Code 1611 within the THP. DFW has 30 calendar days date to determine if the notification is complete. DFW is required to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you within 60 calendar days from the date the notification is deemed complete. Unless you request otherwise, the notification will be deemed void if the THP is returned by CAL FIRE, or withdrawn by you. Agreement fees for proposed or approved harvesting plans are not required for notifications submitted on or after July 1, 2013.
    Additional information regarding the Lake and Streambed Alteration Program is available at http://www.dfg.ca.gov/habcon/1600/forms.html. More specific information about the 1611 process is available at https://r1.dfg.ca.gov/portal/HabitatConservationProgram/Timber/tabid/883/Default.aspx. (CDFW)

14. Does the RPF intend to submit a separate Fish and Game Code 1602 notification? Section II Item 26d indicates that the THP will serve as the 1611, and a 1611 notification is included in section III. However, item 26d also indicates a separate notification will be provided. Please clarify. (CDFW)

    RPF Response: Please specify the page and language leading to said " indication".

15. Item 2c of the 1611 notification in section III indicates that water may be drafted from springs onsite that are "not within the channel zone of natural watercourses." Please provide a map of the location(s) of the tank(s). (CDFW)

    RPF Response: Revised page 30

16. GIS analysis indicates that class I or restorable class I habitat may exist in the stream that runs along the eastern border of the THP. How was the absence of Class I habitat established? (CDFW)

    RPF Response: The watercourse size, on and off site. This can be field reviewed at PHI.

17. THP section II item 14a identifies 13.3 acres of clearcutting and no other timber harvesting prescriptions. Yet section II item 14b indicates that the reader should "see item 26 for retention standards for watercourses." Item 26 then identifies the minimum FPR WLPZ measures suggesting that the WLPZ will be harvested in the THP. Why was selection timber harvesting not identified in item 14a along with the acreages of the proposed selection harvest? Why were the selection harvesting areas not identified on the THP maps in section II? (CDFW)

    RPF Response: Revised page 4

18. THP section IV, technical rule addendum 2, C. Biological Resources, 2 states "the THP is designed to utilized un-evenaged management that will maintain at least foraging structure throughout the life of the THP." Section II

item 14a indicates that only clearcut timber harvesting will be used in this THP. Clearcut timber harvesting will not retain suitable foraging habitat for NSO. Please revise and reanalyze. (CDFW)

RPF Response: Revised page 52. The harvest area will remain foraging as it will remain part of the bigger foraging polygon.

19. THP section IV, technical rule addendum 2 G, Climate Change Assessment item b states "In addition, redwood is a dominant species on project area and redwood slash decays more slowly than slash from hardwood and whitewood species." However, section III, site description item II, Vegetation and Stand Condition, states "the stand is well stocked with second growth Sitka spruce that is approximately 80 years of age. A sparse component of other species is present including Western hemlock, Douglas-fir, big leaf maple and tanoak." Redwood is not disclosed as a component of the stands proposed to be harvested in the THP.

    It appears that the CO2 emission calculations for this THP may have been copied from another THP where redwood was the dominant tree species in the stands proposed for harvesting. Please recalculate the CO2 emissions for this THP using Sitka spruce as the dominant tree species. Please revise the Climate Change Assessment for this THP to reflect that the tree species to be harvested are Sitka Spruce.

    Please also consider that much of the Sitka spruce harvested in northern California in the last few years has been shipped to China, where it is milled into lumber to be used as forms for concrete buildings. Whether this material is destroyed or reused is unclear but the underlying assumption that wood products from this THP will end up in buildings is not supported. Considering the primary use for Sitka Spruce is as forms for buildings it is more likely that the material is destroyed after a single use, likely within ten years following harvest. Given these reasonable assumptions it appears likely that it will take significantly more than 14 years to recover the carbon that would be released by this THP. (CDFW)

    RPF response: The analysis provided is adequate.

This concludes the RPF's responses to the review team questions for THP 1-15-014 HUM Gautreaux. Attached are the revised pages as indicated in the errata for each question and summarized below.

If you need any clarification or I can answer any questions, please do not hesitate to call me.

Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach, Registered Professional Forester #2738
BLAIR FORESTRY CONSULTING

cc: CDF Santa Rosa

Attachments
Revised pages to be replaced: 4, 9, 10, 11, 30, 52 and 73

New pages to be inserted: 87.1

SECTION II - PLAN OF TIMBER OPERATIONS

14. SILVICULTURAL METHODS

a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913[933, 953].11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

☒ Clear cut 12 ac. ☒ No Cut WLPZ 1.3 ac

Total acreage 12 ac.: (Explain if total is different than in Item 8) MSP option chosen: (b) ☐ (c) ☒

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

WLPZ acres are no cut.

c. ☐ Yes ☒ No Will evenage regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 14 CCR 913 (933, 953).1 (a) (2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) – (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All trees within the clear cut area are available for harvest unless marked with a blue painted "L" at breast height. Harvest trees within the WLPZ shall be marked with blue paint at approximately breast height, which is visible from at least two sides, including a stump mark below the cut-line.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If yes, how will LTO determine which trees will be harvested or retained? If more than one silvicultural method or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: Sawlogs, veneer logs, chip logs, split products and firewood. Chip logs and slash may be processed on site in the form of "clean chips" or "hog fuel".

f. ☐ Yes ☒ No Are group B species proposed for management?
☐ Yes ☒ No Are group B or non-indigenous A species to be used to meet stocking standards?
☐ Yes ☒ No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment is to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All conifer snags shall be retained, unless they are a safety hazard.

h. ☒ Yes ☐ No Will artificial regeneration be required to meet stocking standards?

Artificial regeneration will be required to meet stocking standards in those areas where the clearcut prescription is proposed. Depending on seedling availability, these areas will be planted 'as early as' the first winter following harvest operations. Only native conifers grown from locally collected seed or seed from the appropriate seed zones and elevations will be used. Seedlings will be planted to attain a minimum point count of 300 per acre. Conifer species to be planted shall be redwood, and or Douglas fir.

i. ☒ Yes ☐ No Will site preparation be used to meet stocking standards? If yes, provide the information required for a site preparation addendum, as per 14 CCR 915.4 (935.4, 955.4).

(a) Site preparation may be required in the clearcut areas to achieve a desirable level of stocking following harvest. Broad cast burning of slash may be used to prepare the site to allow for hand planting of conifer seedlings. If it is determined that the stocking requirements can be met without broadcast burning, no broadcast burning will take place. If burning is deemed necessary, burning operations will be conducted according to the provisions of a project type-burning permit issued by the California Department of Forestry and Fire Protection.

4. Operating Period -

   a. Timber falling may be conducted during the winter period.
   b. Cable harvesting: No limitations specific to winter operations except road and landing use as per 923.6(b)&(c) .
   c. Ground based yarding: Ground based yarding may be conducted during the winter period when soils are not "saturated" as defined below.
   d. Feller-buncher and Loader "shovel" yarding may be conducted during the winter period as described under paragraph (3) above.

5. Erosion Control Facilities Timing – All Tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection or (2) any day with a National Weather Service forecast of a chance of rain of 30% or more, a flash flood warning, or a flash flood watch.

6. Rain, fog, and light snow are forms of precipitation in this area.

7. Ground conditions (soil moisture condition, frozen) – Heavy equipment use shall be done only during dry, rainless periods where soils are not saturated. Saturated soil conditions is defined below.

8. Silvicultural systems – ground cover – The silvicultural system is clear cut. It is the RPF's opinion that the harvest area will have 40% ground cover. Ground cover is defined as all vegetation below eye level (both live and dead), rocks, straw mulch, etc., that may help prevent erosion caused by overland flow and raindrop energy.

9. Operations within the WLPZ of the THP during the winter period will be limited to:

   a. The felling of trees. Trees shall be felled away from a watercourse as per 14 CCR 914.1(a).
   b. Long lining of logs.
   c. Cable yarding.
   d. Emergencies or road maintenance needed to protect water quality.

10. Equipment use limitations – No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.

11. Known unstable areas – No unstable areas were identified during preparation of this THP. If active slide areas are discovered during timber operations, the LTO shall immediately notify the RPF.

12. Logging Roads and landings - 14CCR 923.6(g) Logging roads and landings used for log hauling or other heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions.

    923.5(j) All logging roads and landings used for timber operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow.

    923.5(k) Where logging road or landing construction takes place during the extended wet weather period, drainage facilities and drainage structures shall be installed concurrent with construction operations.

    14CCR 923.4(l), No construction of logging roads or landings shall occur during the winter period.

Definitions of terms used (14 CCR 895.1):

Saturated Soil Conditions – means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Stable Operating Surface - means a road or landing surface that can support vehicular traffic and has a structurally sound road base appropriate for the type, intensity and timing of intended use.

No timber harvest activities during measurable rain events (defined as greater than ¼" in a 24-hour period).

NOTE: "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 925.1, 926.18, 927.1, and 965.5... (a) except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year

of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

24. ROADS AND LANDINGS

Will any roads be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items a through g.
Will any landings be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items h through k:

a. ☐ Yes ☒ No Will new or reconstructed roads be wider than single lane with turnouts?
b. ☐ Yes ☒ No Are logging roads proposed in areas of unstable soils or known slide-prone areas?
c. ☐ Yes ☒ No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.
d. ☐ Yes ☒ No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27 a. will satisfy required documentation.
e. ☐ Yes ☒ No Will roads longer than 100 feet in length be located on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
f. ☐ Yes ☒ No Will any roads or watercourse crossings be abandoned?
g. ☐ Yes ☒ No Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?
h. ☐ Yes ☒ No Will any landings exceed one half acre in size? If any landing exceeds one quarter acre in size or requires substantial excavation the location must be shown on the map.
i. ☐ Yes ☒ No Are any landings proposed in areas of unstable soils or known slide prone areas?
j. ☐ Yes ☒ No Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
k. ☐ Yes ☒ No Will any landings be abandoned?

25. If any section in "item 24" above is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance, and/or abandonment of roads or landings, as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

Road Construction:

14CCR 1034(o) The RPF is proposing seasonal road construction for approximately 800' using an existing skid road. Although a prism is in existence this skid road is not suitable for the hauling of logs. Construction is proposed to improve the existing skid road by widening to allow for ingress and egress of log trucks. See THP Map for the location of road construction.

14CCR 916.9 (n) Bare mineral soil exceeding 100 contiguous square feet created from operations within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, shall be treated. Soil stabilization treatment measure within the WLPZ may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers. See Item 18 for more information regarding 916.9(n).

14CCR 923.1(g) The proposed road construction utilizes existing skid trail so log trucks may access portions of the plan. Landing construction associated with this road segment will allow for the landing and loading of logs in locations that prevent excessive skidding distances. No mitigation measures are needed to minimize potential adverse impacts to watersheds from the constructed road grade and associated landings.

14CCR 923.5

(a) All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.

(b) Drainage facilities and structures shall be installed along all logging roads and all landings that are used for timber operations in sufficient number to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

14CCR 923.6(h)(3) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance 923.6(b).

14CCR 923.7(c) During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of the road surface materials by methods including, but not limited to, rocking, watering, paving, or installing commercial erosion control devices to manufacturer's specifications.

14CCR 923.4(m) On slopes greater than 50 percent for greater than 100 lineal feet, fills greater than four feet in vertical height at the outside shoulder of the logging road or landing shall be:

(1) Constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift.
(2) Compacted in approximately one-foot lifts from the toe to the finished grade or retained by an engineered structure.

14CCR 923.1(e) Significant existing or potential erosion sites do not exist within the plan area.

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

a. ☒ Yes ☐ No Are there any watercourse or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, list the class, WLPZ or ELZ width, and protective measures determined from Table I and/or 14 CCR 916 (936, 956) .4 (c) of the WLPZ rules for each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

b. ☒ Yes ☐ No Are there any watercourse crossings that require mapping per 14 CCR 1034(x)(7)?

14CCR 923.9(e) Watercourse crossings associated with this THP have been listed in the Work Order (with proposed culvert diameters) within Item 38 and are shown on the THP Map. These sites have been identified in the field (923.9(e)(1).

14CCR 923.9(l) Rock used to stabilize the outlets of crossings shall include a base of at least size 12" rock, and be adequately sized to resist mobilization.

c. ☒ Yes ☐ No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert (may be shown on map).

Crossing shall be installed to handle any surface flow by utilization of a flow through fill (clean rock or logs) with fabric or a temporary pipe that is of sufficient size (min. 6" x 15') to handle flow during operations.

d. ☒ Yes ☐ No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If yes, attach the 1603 Addendum below or at the end of this Section II; provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures; as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1603 Agreements and THP Documentation".

☒ Yes ☐ No Have or will the activities conducted under this THP that are subject to Fish and Game Code Section 1600 et seq. be included in a separate notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

☒ Yes ☐ No Will the submittal of this THP provide notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

LTO instructions are found in the Work Order for Road Repair report for watercourse crossings, found in THP Item 38. A DFG 1611 agreement process addendum and an analysis are included in the Plan Addendum to Item 26d in THP Section III.

Watercourse Protection Measures:

This THP is within the Coastal Anadromy Zone. On the ground identification of the WLPZ and marking of harvest trees within the WLPZ shall be completed prior to PHI.

14CCR 916(b)(1) & (2): Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

14CCR 916(d): This THP fully describes the type and location of measures needed to fully offset sediment loading, thermal loading and potential significant adverse watershed effects from the proposed operations. These measures are numerous and described in various locations within Section II of the THP. Examples of such measures include no harvesting in the WLPZ, limited size of project and soil stabilization measures in Section II. The LTO will be responsible for implementing each of these measures. The timber harvest unit has been configured in such a manner that impacts to sediment loading and thermal loading are avoided to the fullest extent feasible. The strategy of avoidance of potential risks to water resources will result in operations that are not likely to result in adverse impacts to water quality, including sediment loading or thermal loading.

Gautreaux Work Order for Road Repair

Site	C1			1600	X	ECP
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**			
Skid trail	II	none	24"			
Site Description	Existing temporary skid trail crossing to be upgraded to a permanent , seasonal road crossing.					
Treatment	Install permanent culvert. of sufficient length to extend beyond the fillslope. Fill slopes exceeding 1½ :1 shall be rock armored. Road running surface shall be hydrologically disconnected. Road running surface within the WLPZ shall be rocked. Disturbed soil within the WLPZ shall be seeded and mulched or slash packed. Erosion control measures shall be in place prior to October 15th.					

Disturbed Area (sq.ft.)	Final Site State (Perm/Temp)	Estimated Removed Fill Volume (cu. yards)	Estimated Added Fill Volume (cu. yards)	Fill Material Added	Disturbed Vegetation
2000	Permanent	10	200	Native	huckleberry, fern brush, alder trees

Site	T1			1600	X	ECP
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**			
Skid trail	II	NA	NA			
Site Description	Existing skid trail crossing					
Treatment	Install temp crossing.					

Disturbed Area (sq.ft.)	Final Site State (Perm/Temp)	Estimated Removed Fill Volume (cu. yards)	Estimated Added Fill Volume (cu. yards)	Fill Material Added	Disturbed Vegetation
1500	Temp	2	2	Native, Rock	Grasses, brush

DIRECTOR OF FORESTRY AND FIRE PROTECTION

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

By: _____ _____
(Signature) (Date)

_____ _____
(Printed Name) (Title)

0111

Plan Addendum to Item 26d

DFG 1600 permit process analysis; activity/facility description

Notification Information List Pursuant to
Fish and Game Code Section **1611**
Gautreaux THP
Version 20080819

1. Basic data:
   a. The name, address, and telephone number of the:

Applicant:	**Mark Gautreaux 315 Amanda Lane, Crescent City CA 95531**
Operator:	**To be amended**
Contact Person:	**Brian Griesbach , P.O. Box 2517, McKinleyville, CA 95519 (707) 672-5814**
Property Owner:	**Same as Applicant**

b. The name of each lake and the name and watercourse classification of each stream the lake or streambed alteration activities will affect, including the nearest downstream watercourse or water body.

Un-named Class II and III tributaries to Smith River.

c. Road sites; township, range and section numbers; watercourse classification; present condition; proposed work of each lake and stream encroachment; and project description measures.

T18N, R1W, Section 21, HBM. See THP Map and Work Order under Item 38, Section II for present condition; proposed work of each lake and stream encroachment; and project description measures (below).

d. A single map or diagram clearly showing all of the following:
   i. All lake and stream encroachments, with a number or other appropriate identifying label.
   ii. All roads, with a number or other appropriate identifying label
   ii. All watercourse classifications (i.e., Class I, II, or III).
   iii. Access from a named public road.
   iv. A north arrow and scale.

See THP Map and road work order at the end of THP Section II order for watercourse classifications associated with crossings.

e. Description of the encroachment sites, existing and proposed culvert diameters, area to be disturbed, proposed conditions upon completion, estimated volumes to be removed and/or added to crossing, description of fill materials and disturbed vegetation.

See THP Map and road work order at the end of THP Section II

f. A description of the fish and wildlife and botanical resources the work could adversely affect, including riparian resources and special status species (i.e., species listed under the California Endangered Species Act ("CESA") and/or the federal Endangered Species Act ("ESA"), species fully protected under state law, and/or species of special concern). If the work could adversely affect any listed species, the applicant should indicate whether consultation under CESA or ESA has Commenced and if so, the current status of the consultation. Applicant should also provide the biological opinion, as applicable.

See THP Item 32, Section IV: Cumulative Impacts Assessment. A botany survey will be conducted prior to operations.

g. Indicate if the work takes place in, adjacent to, or near a river that has been designated as "wild and scenic" under state or federal law.

No

2. Information about each lake and stream encroachment, including the following:
   a. Construction plans, including specific details, cross sections, and dimensions.

See THP Map and road work order at the end of THP Section II

b. If water will be present and diversion of flow around the work site is necessary, the volume of water to be diverted and the method of diversion.

There is potential for water to be present at encroachment sites. If water is present at any site when work is proposed, water will be diverted around or through the site with pipes or portable pumps and returned back to the channel downstream of the work site. The flow shall be diverted only when the construction of the diversion is completed. Any temporary artificial obstruction shall be built from material which will cause little or no siltation (i.e. sandbags, straw bales, rock or plastic).

c. If water drafting is proposed, provide drafting site information (i.e. estimated volume, drafting rate, timing, etc.). Indicate if the activity will be done pursuant to a water right application or permit.

Water drafting shall occur from an offsite delivered source.

d. The materials (e.g., soil, sand, gravel, ¼- to ½-ton rip-rap, large wood, etc.) and volumes that will be used for and/or removed from the lake or stream encroachment, the dimensions of the area to be excavated and the dimensions of the area to be filled.

See THP Map and road work order at the end of THP Section II

0112

present on this plan are well-drained soils. The EHR was calculated to be moderate for the entire plan area.

Soil compaction is likely to occur when the soil is saturated and subject to use by heavy equipment. The restrictions on operations during the wet weather conditions as specified in the Winter Period Plan will prohibit ground-based operations on these soils during periods of high soil moisture. 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.

Operation of this THP would cause minimal significant negative impacts to the soil productivity on the project area due to a **loss of growing space**. Existing roads shall be used to their fullest to best access the timber with the least impact to the resources including soil. Application of the Forest Practice rules, and reusing existing road, landing, and skidtrail locations shall combine to lessen any potential impacts to soil productivity.

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 the RPF's opinion that no negative impacts will incur.

C. Biological Resources

The Biological Assessment Area (BAA) is used to analyze and consider possible effects on any number of vegetative, aquatic, terrestrial and avian species, mainly in relation to forest seral stage distribution. This area was chosen using major breaks in the landscape such as ridges and watercourses that appear to logically establish this project's area of influence. The Biological Assessment Area (BAA) is the same as the Watershed Assessment Area (See Cumulative Effects Map).

Factors to consider in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or species of special concern (as described in the Forest Practice Rules) that may be directly or indirectly affected by project activities.

The methodology used to identify the presence, if any, of listed species within the BAA is as follows:

1. Scoping
   a) Search Natural Diversity Database (NDDB) for occurrence within the Assessment Area, including the quad that the plan is located on and adjoining quads.
   b) Evaluated the habitat requirements of species identified above that "could" occur.
   c) Assess the impact that the proposed project would have on species likely to occur within the assessment area and within the plan area.
2. Surveys
   a) If the proposed project would have potential significant negative impacts on a listed species, a survey was conducted to determine presence or absence.
3. Mitigations
   a) Where presence is determined and significant adverse effects are likely, mitigations to substantially lessen or avoid these impacts are developed.

A list of the rare, threatened or endangered species and other species of concern which may occur within the BAA, and which may be affected by timber operations is provided in the THP in Section III for Plan Addendum to Item 32. The list provides a description of the potential rare, threatened or endangered species, their preferred habitat, the potential presence of habitat within the BAA, and other pertinent information as necessary for each species of concern. Based upon database inquiries and known locations of sensitive species, the proposed project, as mitigated, is not expected to significantly impact any known sensitive species that occur within the BAA.

Because of the assortment of ownerships within the BAA, land management objectives and the consideration given to biological resources vary greatly. The ownerships range from lands owned by the public whereby changes in vegetation vary very little over time to industrial timber ownerships where modifications in vegetation are made more frequently, but only after taking steps to protect existing biological resources. In addition, there are small and large ownerships of agricultural lands as well as numerous small ownerships of residential properties. For the most part, the timberland within the BAA appear to be functional in terms of wildlife habitat because of the diversity of ages and the presence of certain elements such as hardwood, snags, and large woody debris.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and the biological assessment area (e.g. loss of oaks creating a forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas).

A search of the CNDDB/Spotted Owl Viewer returned no (0) known Northern Spotted Owl activity centers present within 0.7 miles of the proposed THP boundary. This project will not have a significant cumulative impact on the Northern Spotted Owls within the assessment area. The THP is designed to utilized management that will maintain at least foraging structure throughout the life of the THP. Seasonal restrictions have also been incorporated in to the THP that are designed to reduce impacts to the NSO during critical periods. No timber operations shall occur until such time as all surveys (which are conducted in conformance with the USFWS approved NSO survey protocols) for the current, or immediately preceding, survey period are complete; the results have been provided to CAL FIRE;

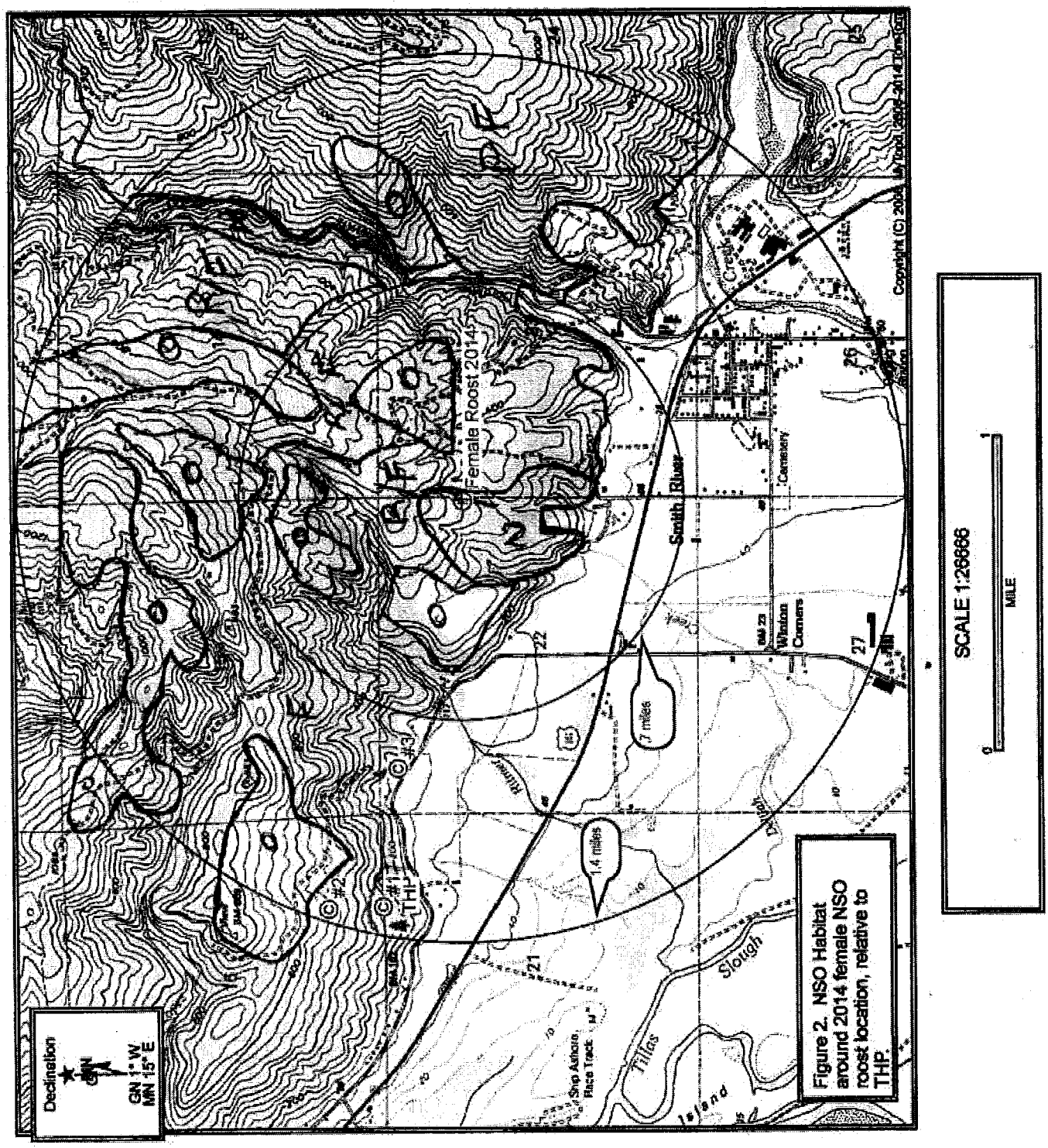

Figure 2. NSO Habitat around 2014 female NSO roost location, relative to THP.

Habitat Description

The canopy within the THP is typical of the coast area. The principal overstory and understory species include Sitka spruce, with minor amounts of Douglas-fir, and alder. Brush species primarily include salmon berry, huckleberry, Rhododendren, and ferns. Pre-harvest habitat types within and adjacent to the plan area consists of Foraging.

Northern spotted owl (NSO) habitat is defined per 14 CCR 895.1 and as modified by the USFWS Coastal NSO "Habitat Description". NSO Habitats are defined as:

Nesting/Roosting: Habitat with ≥60% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥100 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Foraging: Habitat with ≥40% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥75 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Habitat was identified by a variety of methods including:

Inventory data, Personal knowledge of foresters of habitat conditions in the assessment areas, cursory ground truthing by foresters, Aerial photo interpretation (especially to determine between NSO Non-habitat (i.e. clearcuts, heavily selected areas, etc) and potentially suitable Foraging and Nest/Roost habitats.

It should be noted that to maintain consistency in habitat typing for our habitat assessments, NSO habitats as shown were typed based on the definitions and not in consideration of edge effects. The majority of suitable NSO habitat acreage is not derived from narrow strips of WLPZ edge habitats or small "stands" (<6 acres) or Nest/Roost habitat, where edge effects are most likely to occur.

UNIT, FG, WQ, ER, LW, RPF

From: Rob Miller <rob.millerlily@gmail.com>
Sent: Thursday, March 12, 2015 1:24 PM
To: Santa Rosa Public Comment@CALFIRE
Subject: Fwd: Plan number1-15-014 DEL

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MAR 12 2015
COAST AREA OFFICE
RESOURCE MANAGEMENT

Sent from my iPad

Begin forwarded message:

From: Rob Miller <rob.millerlily@gmail.com>
Date: March 11, 2015 at 3:30:02 PM PDT
To: "SantaRosaPublcComment@fire.ca.gov" <SantaRosaPublcComment@fire.ca.gov>
Subject: Plan number1-15-014 DEL

A timber harvest plan is posted next to our property, 1-15-014 DEL, in del Norte county. It states it is planned to be clear cut. We have lived next to this property for 35 years and we want to make sure everyone realizes their is the largest roost of blue Herons in the area located on this property. I know this Blue heron roost is documented, please follow through and verify this. Clear cutting would destroy this nesting place. Please respond to this email. Thank you (forester Brian Griesbach RPF 2738, timber owner Mark Gautreaux)

Rob and kara miller
11885 oceanview dr
Smith river, ca. 95567
707 - 487 - 6681

Sent from my iPad

Santa Rosa Review Team@CALFIRE

From: Brian Griesbach <briantgriesbach@yahoo.com>
Sent: Sunday, June 21, 2015 9:58 PM
To: Larson, Monty@Wildlife
Cc: blairforestry@gmail.com; Brent, Heather@CALFIRE; frankgalea@charter.net; Santa Rosa Review Team@CALFIRE; Mark Gautreaux
Subject: Heron consultation for THP 1-15-014DEL "Gautreaux"
Attachments: THP 1-15-014 DEL_Consultation for Great Blue Heron.pdf

Dear Mr. Larson:

Attached for CDF&W review is the Heron consultation prepared by consulting biologist Frank Galea. Thank you for your attention to this matter.

Brian Griesbach RPF 2738
(707)672-5814
BLAIR FORESTRY CONSULTING

GALEA WILDLIFE CONSULTING

200 Raccoon Court ▫ Crescent City ▫ California 95531
Tel: 707-464-3777
E-mail: frankgalea@charter.net ▫ Web: www.galeawildlife.com

CONSULTATION FOR GREAT BLUE HERON (*Ardea herodias*) HERONRY SITE, GARTREAUX THP, SMITH RIVER, CA. MAY 2015. THP 1-15-014 DEL

Introduction

A group of great blue heron (*Ardea herodias*) nests, called a heronry, was located within a proposed THP near Smith River, California. The proposed THP consisted primarily of a large stand of spruce, located on the immediate edge between commercial timber lands and open agricultural fields. Oceanview Drive, a commonly used road which provides access to numerous homes in the area, is located along the south edge of the property and separates open fields from timbered stands.

The site was assessed by wildlife biologist Frank Galea in May of 2015. During the site visit trees were searched for nests using 8x10 binoculars. Ground cover vegetation was searched for white-wash, which provided evidence of the birds presence and helped determine nest site locations. Locations of nest trees were measured using a 300 foot tape with the southwest corner of the property as a starting control point.

The heronry was located along the south edge of the property (Figure 1). Six small to average sized spruce contained numerous nests, some older and abandoned and at least two which were occupied and active. During the visit one blue heron pair was observed nest building, bringing in large sticks and adding them to a relatively new nest. Blue heron egg shell fragments were located on the ground. Only two pairs were observed during the visit however there may have been as many as three pairs at the site. Most nests were built quite distal from the main trunk of the tree on relatively small branches.

The six trees comprising the heronry were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south). The grouping was located 205 feet east of the southwest property corner and 56 feet into the stand, measured from the edge of Oceanview Drive.

Between the heronry and Oceanview Drive is the driveway into the property, which contains a house 400 feet away. Thus, although the heronry is 56 feet from the main road, there is actually very little screening by vegetation between the heronry and the main road. Most of the nest trees are screened by only two or three relatively small spruce. On the distal side of Oceanview Drive there is a single row of mid-seral alder, which provide some, albeit limited, screening from the wind.

Considering the size of the stand, the herons have chosen a heronry site which is very close to the county road and has little screening from the south, which is the direction where almost all spring

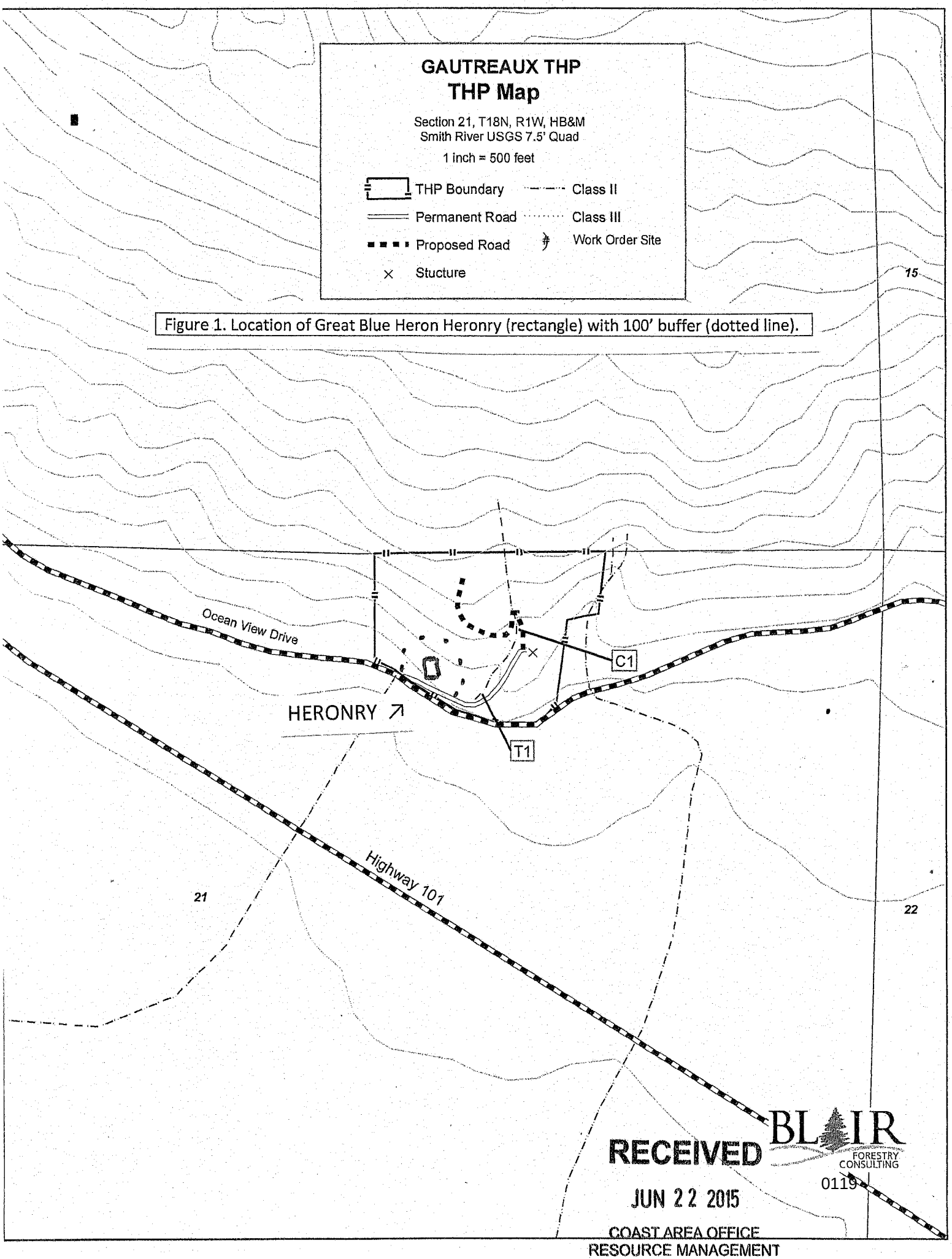

Figure 1. Location of Great Blue Heron Heronry (rectangle) with 100' buffer (dotted line).

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storms for the area originate. The nests have almost no screening from the sun, which suggests that shading is not an issue for this species in this area. The ability of the herons to access their nests, given their large wing span, or proximity to foraging habitat, may therefore be more important for them than protection from the elements.

PROPOSED HERONRY PROTECTION

The Applicant proposes to protect the heronry by establishing a "no-cut" buffer around the six trees (Figure 1). A buffer of 100 feet would be flagged around the entire grouping of six trees, and no trees would be cut within this boundary and no trees would be felled into it, in order to protect the nest trees and the screening trees which would also be retained. This would completely retain the existing screen of trees between the heronry and Oceanview Drive. All tree felling for the THP would take place no sooner than August of 2015, or after all heron young have left fledged. A pre-logging inspection by a wildlife biologist would take place if logging is to commence before September to insure that young have fledged.

As the herons have chosen a nesting location with only 50 feet of a buffer for screening from the elements or from traffic noise, a one hundred foot buffer around the heronry would suffice to maintain the site as a nest site. As inclement weather originates from the south, there would be no loss in weather-buffering screening. Retention of screen trees within 100 feet of the heronry would protect the site visually and from the elements.

UNIT, ftp/NEW

Flex your POWER

State of California
Department of Fish and Wildlife

Memorandum

Date: July 31, 2015

To: **Ms. Leslie Markham, Deputy Chief, Forest Practice**
California Northern Region 1 Headquarters
Department of Forestry and Fire Protection
135 Ridgway Avenue
Santa Rosa, CA 95401

From: for **Jon Hendrix**, Senior Environmental Scientist
Timber Harvest Program, Northern Region
California Department of Fish and Wildlife
32330 North Harbor Drive
Fort Bragg, California 95437

Subject: Great Blue Heron Consultation **15-R1-CTP-18-GBHE** for "Gautreaux" Timber Harvesting Plan **1-15-014DEL,** Del Norte County

The California Department of Fish and Wildlife (CDFW) has reviewed the subject Timber Harvesting Plan (THP) for potential impacts to nesting great blue herons (*Ardea herodias*) resulting from proposed THP operations. An active great blue heron rookery (a colony of breeding birds) exists within the boundaries of the 13.3 acre subject THP. This consultation is being conducted pursuant to Title 14, California Code of Regulations (14 CCR) Section 919.3that requires consultation with CDFW for species listed by the Board of Forestry and Fire Protection (Board) as sensitive. The great blue heron is listed by the Board as sensitive.

THP area

The THP is located approximately two miles northwest of the community of Smith River, 1.3 miles east of the Pacific Ocean and the mouth of the Smith River, and approximately 6 miles north of the Lake Earl Wildlife Area. It is located within Section 21, Township 18 North, Range 1 West (Humboldt Base and Meridian), Del Norte County, California. The THP covers 13.3 acres and proposes 12 acres of clearcut silviculture and 1.3 acres of no harvesting within the Watercourse and Lake Protection Zone (WLPZ). Ground-based yarding methods are proposed.

According to the THP, existing timber stands are approximately 80 years old. Stands are Sitka spruce dominated, with a small component of Douglas-fir, western hemlock and grand fir. Hardwood species found in the THP area include red alder, tan oak, and big leaf maple.

Life history

Great blue herons typically breed in colonies, in trees close to lakes or other wetlands. In California, adults generally return to the colony site after winter from December to March. Usually colonies include only great blue herons though sometimes they nest alongside other species of herons. The size of these colonies may be large, ranging between 5–500 nests per colony. Rookeries are usually relatively close, usually within 4 to 5 km (2.5 to 3.1 mi), to ideal feeding spots (Short and Cooper 1985). Great blue herons build a bulky stick nest. Nests are usually around 50 cm (20 in) across when first constructed, but can grow to more than 120 cm (47 in) in width and 90 cm (35 in) deep with repeated use and additional construction (Andrle 1988).

Courtship to egg laying can occur from early January to mid-March in California (Brandman 1976). In Marin and Humboldt Counties most fledglings left nests in June and July, but some left as late as September (Pratt 1970, Ives 1972). Herons in some colonies are apt to depart from colony sites with little provocation during early stages in the nesting cycle (Vos et al. 1985, Butler 1995, Vennesland 2010). Herons may be inhibited from displaying to each other by high winds and low temperatures (Palmer 1962).

Nests are often reused for many years; maintained throughout the nesting period with twigs gathered near the nest (Pratt 1970) primarily by the male (mostly when eggs are laid and hatched) and placed primarily by the female (Brandman 1976). Herons may build a new nest if an early attempt fails (Pratt 1970).

Pre-harvest inspection

Prior to the pre-harvest inspection (PHI), CDFW reviewed public comment for the proposed THP indicating the presence of a great blue heron rookery on the property. A previous THP (1-92-236 DEL) had revealed the presence of a heron rookery within the THP area; however, the proposed THP did not disclose the rookery or observations of great blue heron activity. This site was also not found in the California Natural Diversity Database (CNDDB).

THP Section III, page 38, great blue heron, states, "*Sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. No Sightings have occurred in the BAA.*" The THP also states, "*...due to the proximity of foraging habitat, the timber stands along the edge of the agricultural area could be considered suitable nesting habitat.*"

Early in the morning, on the day of the PHI (March 17, 2015), CDFW Environmental Scientist Monty Larson, observed the THP's timber stands from Highway 101, approximately one-quarter of a mile southsouthwest of the THP. From 0704 - 0845 hours, CDFW observed 12 great blue herons fly into, and 4 fly out of, the Sitka spruce trees in the southern portion of the THP. Birds within the stand were easily observed preening and sitting approximately mid-

canopy on branches of several trees visible from Highway 101.

During the PHI, the landowner showed the inspection team pictures of great blue herons roosting in trees on his property. The landowner stated he frequently observed herons flying onto and off of his property. The inspection team walked through the area where CDFW observed herons earlier in the day. The team observed white wash on vegetation and at least nine nest structures (Figure 1) present in at least four trees. Several of the nests were occupied by great blue herons, though the birds were not vocalizing while the inspection team was close to the nests.

After the PHI, on June 21st, CDFW received an assessment of the rookery conducted by the landowner's consulting wildlife biologist Frank Galea. In the report, Mr. Galea states "*Six small to average sized spruce contained numerous nests, some older and abandoned and at least two which were occupied and active. During the visit one blue heron pair was observed nest building...*" Mr. Galea also observed, "*The six trees comprising the heronry were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south). The grouping was located 205 feet east of the southest property corner and 56 feet in the stand, measured from the edge of Oceanview Drive.*"

July 14, 2015 field visit

On July 14, 2015, CDFW conducted a site specific heron consultation field review. CDFW Senior Enviromental Scientist Susan Sniado, was accompanied by CDFW Enviromental Scientists Simona Altman and Mr. Larson, Department of Forestry and Fire Protection (CalFire) Inspectors Heather Brent and Ray Wedel, landowner Mark Gautreaux, and Mr. Galea.

During the field visit, two juvenile herons were observed actively moving on the branches between nests. The juveniles were not observed flying; however, they were fully feathered and it is anticipated, based on their behavior and plummage, that fledging would occur within two weeks. Given the time of the year and the condition of the juveniles, other juveniles from this site may have already fledged.

CDFW observed nine nest structures within six Sitka spruce trees (approximately 20 to 30 inches in diameter). The nests are in the upper third of the trees and nest placement is variable. Some nests occur against the bole of the tree and others extend out on branches. Based on the condition of the nests and without surveys throughout the breeding season during the last two years, DFW assumes all nine nest structures have been active during that time. CDFW agrees with Mr. Galea's description that the six trees comprising the rookery were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south).

Resources at risk

The occurrence of this heron rookery represents an important biological resource within Del

Norte County including the Smith River estuary and the Lake Earl Wildlife Area. There are no other great blue heron rookeries identified in CNDDB within Del Norte County.

This active rookery could be impacted by the subject THP through habitat modification of the rookery stand or its surroundings, disturbance of nesting adults or chicks, or both. Habitat modification (harvest of trees or reducing the size or changing the configuration of the nest stand) could directly impact nesting birds by reducing the number and quality of nest tress. A great blue heron rookery on the Eel River in the vicinity of the town of Rio Dell was not reoccupied after clearcut timber harvest occurred within approximately 100 feet of the nest tree. Such harvest may have exposed the heron nests to strong afternoon winds and rendered the site unsuitable. (Jay Harris pers. comm. July 31, 2015)

Recommendations for avoiding adverse impacts

Habitat retention

In the great blue heron assessment submitted by consulting biologist Frank Galea to CDFW on June 21, 2015, Mr. Galea writes "*The Applicant proposes to protect the heronry by establishing a "no-cut" buffer around the six trees. A buffer of 100 feet would be flagged around the entire grouping of six trees, and no trees would be cut within this boundary and no trees would be felled into it, in order to protect the nest trees and the screening trees which would also be retained... As the herons have chosen a nest location with only 50 feet of a buffer for screening from the elements or from traffic noise, a one hundred foot buffer around the heronry would suffice to maintain the site as a nest site. As inclement weather originates from the south, there would be no loss in weather –buffering screening. Retention of screen trees within 100 feet of the heronry would protect the site visually and from the elements.*"

While the rookery is approximately 50 feet from Ocean View Drive near the southern boundary of the THP, the majority of the THP surrounds the rookery directly upslope to the north. The rookery trees and THP area are predominantly Sitka spruce. Tree rooting in spruce is generally shallow and trees remaining post-harvest are more susceptible to blowdown than other species. Timber harvesting adjacent to the rookery has the potential to affect nesting habitat through collateral blowdown or changes in microclimate due to wind or temperature effects. To preserve the existing rookery stand structure, and buffer the rookery from adverse changes in microclimate and wind, CDFW recommends, no harvesting within 200 feet of the rookery, and within 200-300 feet of the rookery, a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, shall be retained post-harvest. .

Seasonal restrictions

Courtship, nesting and fledging behavior of the great blue heron nominally occur during the period of February 1 to July 15 (Zeiner et al 1990), but based on our observations of the birds during the July 14 field visit, fledging could occur as late as August 1 or later. To avoid

adverse impacts on the great blue heron from noise generated disturbance, CDFW recommends seasonal restrictions on timber operations within a "seasonal buffer zone" adjacent to the rookery. The period when seasonal restrictions should be applied extends from February 1 to August 1 unless surveys confirm nesting has failed or young have fledged earlier. CDFW recommends a 0.25-mile disturbance buffer around the rookery during this critical period.

Protection Measures

The following protection measures are provided to reduce potential adverse effects to the active great blue heron rookery to a level of less than significant. Please ensure protection measures 1 through 3 are incorporated as enforceable conditions into the subject THP, Section II Item 32.

1. A year-round habitat retention buffer shall be established within 300 feet of the great blue heron rookery (Figure 2). The buffer shall be measured from the outer extent of the rookery as defined by the location of the nests. No harvesting shall occur within 200 feet of the rookery, and within 200-300 feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.

2. A 0.25 mile temporal disturbance buffer shall be established around the rookery during the critical period, February 1 to August 1. No timber operations shall be permitted within the disturbance buffer during the critical period, unless surveys confirm nesting has failed or the young have fledged earlier than August 1 and written concurrence is received from CDFW.

3. During the life of the THP the landowner shall agree to allow CDFW staff on the property to monitor the success of the protection measures and the status of the nest sites. Such access shall only occur with a minimum 48-hour notice.

If you have any questions regarding this consultation please call CDFW Staff Environmental Scientist Susan Sniado (707) 441-3970. Thank you for assisting CDFW in our mission to conserve California's fish and wildlife resources.

References

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ec: California Department of Forestry and Fire Protection
Leslie Markham/ Santa Rosa Review Team, William Forsberg, Heather Brent
santarosareviewteam@fire.ca.gov, huusecondreview@fire.ca.gov,
William.Forsberg@fire.ca.gov heather.brent@fire.ca.gov

Mark Gautreaux
mmgautreaux@earthlink.net

Blair Forestry Consulting
Brian Griesbach
briantgriesbach@yahoo.com

Galea Wildlife Consulting
Frank Galea
frankgalea@charter.net

California Department of Fish and Wildlife

R1 Timberland Conservation Program

Figure 1. Photo of the canopy of trees containing a great blue heron rookery within Timber Harvesting Plan 1-15-014 DEL (at least six nests are visible in this photo).

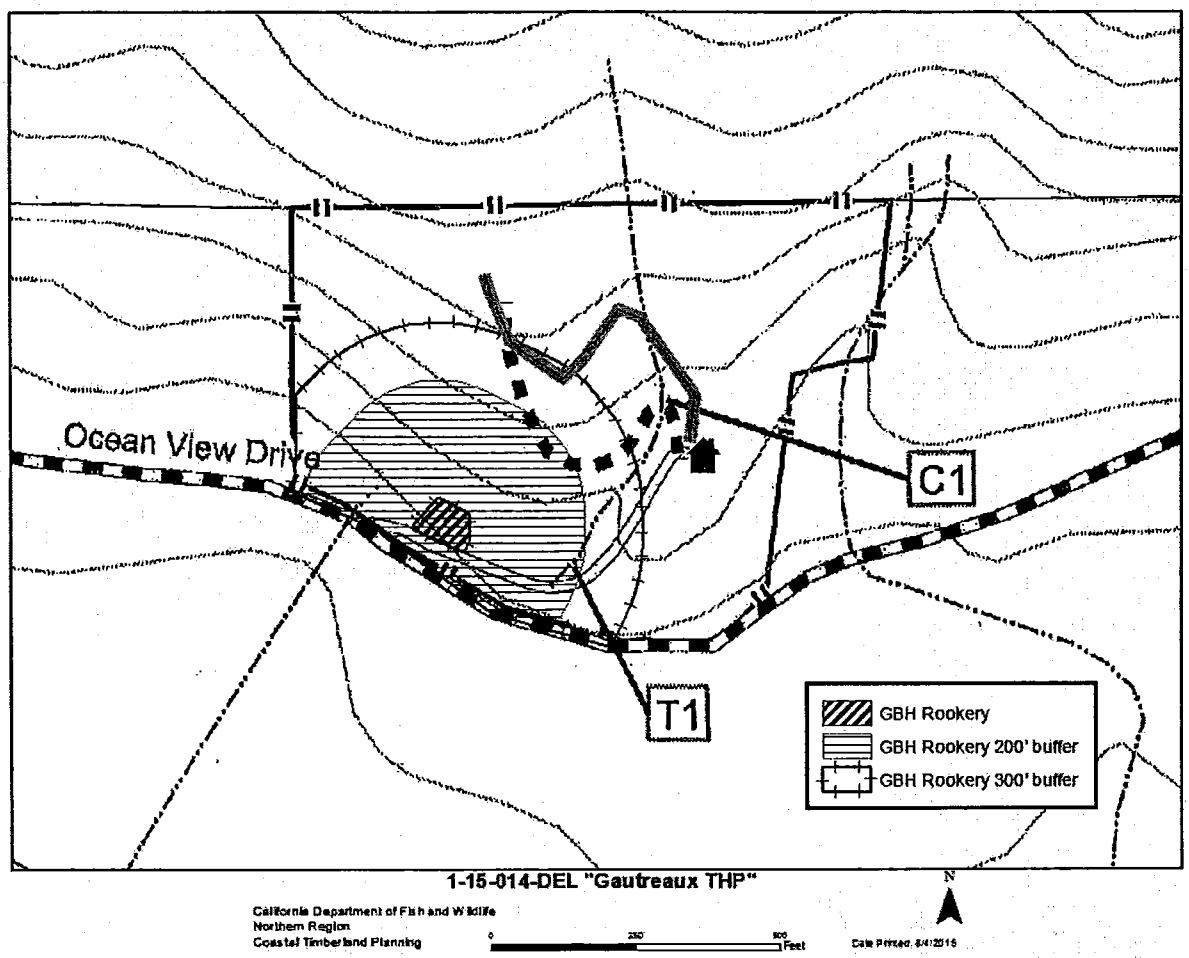


Figure 2. Approximate location of a great blue heron rookery discovered during the PHI for Timber Harvesting Plan 1-15-014 DEL and the approximate extent of a 200 foot and 300 foot habitat retention buffer. The habitat retention buffer shall include no harvesting within 200 feet of the rookery, and within 200-300 feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.

UNIT, ftp/NEW

BLAIR FORESTRY CONSULTING

Providing Professional Forestry Services PO Box 2517 McKinleyville, CA 95519 **CELL** 707.834.2990 **EMAIL** blairforestry@gmail.com

August 6, 2015
CalFire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, Ca 95401

RE: Addition to RPF's Response To Review Team Questions For THP **1-15-014 DEL "Gautreaux"**

CalFire Review Team,

This letter includes an addition to the RPF's Responses to Review Team Questions For THP 1-15-014DEL "Gautreaux". This additional response is at the request of CaFire Inspector, Heather Brent. An erratum has been included below each question that states on what revised page the change can be found. Each revised page has been stamped "Revised August 6, 2015".

RTQ 1 - revise pages that suggest WLPZ harvest to show no harvest.

RPF Response: Item 26(d) on pages 11, 12 and 13 are revised.

RTQ 8 - provide a response.

RPF Response: Page 16 is revised.

RTQ 9 - revise map to use standard habitat definitions as indicated in the RTQ and in your response to part one of this RTQ.

RPF Response: Page 73 is revised.

RTQ 10 - provide a response and a revised page 29.

RPF Response: Page 29 is revised.

RTQ 11 - provide the revised page 21.

RPF Response: Page 21 is revised.

RTQ 14 - the language leading to the indication that a separate notification will be provided is in your Section II Item 26d, as stated in the RTQ.

RPF Response: Page 11 is revised.

RTQ 17 - also provide a corrected Item 26.

RPF Response: Pages 4, 11, 12 & 13 are revised.

RTQ 18 - clearcut areas are not considered foraging habitat for the NSO. The habitat definition that you provided in response to RTQ 9 confirms that. Provide the requested revision.

RPF Response: The letter from Nancy J. Finley of USFW to Bill Snyder of CalFire regarding NSO take avoidance dated March 15, 2011 (page 5, paragraph 3) states habitat that is 600 feet wide cannot be typed as a separate polygon however the RPF agrees to the revision. Page 52 has been revised.

RTQ 19 - the analysis provided is not adequate, nor is it applicable to this site. Conduct and provide the requested climate change assessment.

RPF Response: Page 55 is revised.

This concludes the addition to RPF's responses to the review team questions for THP 1-15-014DEL "Gautreaux". Attached are the revised pages as indicated in the errata for each question and summarized below.

If you need any clarification please do not hesitate to call me.

Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach, Registered Professional Forester #2738
BLAIR FORESTRY CONSULTING

cc: Heather Brent-CalFire
Thomas Blair-Blair Forestry Consulting
Mark Gautreaux-Landowner

Attachments
Revised pages to be replaced: 4, 11, 12, 13, 16, 21, 29, 52 & 55

SECTION II - PLAN OF TIMBER OPERATIONS

14. SILVICULTURAL METHODS

a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913[933, 953].11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

☒ Clear cut 12 ac. ☒ No Cut WLPZ 1.3 ac

Total acreage 12 ac.: (Explain if total is different than in Item 8) MSP option chosen: (b) ☐ (c) ☒

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

WLPZ acres are no cut.

c. ☐ Yes ☒ No Will evenage regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 14 CCR 913 (933, 953).1 (a) (2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) – (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All trees within the clear cut area are available for harvest unless marked with a blue painted "L" at breast height. Harvest trees within the WLPZ shall be marked with blue paint at approximately breast height, which is visible from at least two sides, including a stump mark below the cut-line.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If yes, how will LTO determine which trees will be harvested or retained? If more than one silvicultural method or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: Sawlogs, veneer logs, chip logs, split products and firewood. Chip logs and slash may be processed on site in the form of "clean chips" or "hog fuel".

f. ☐ Yes ☒ No Are group B species proposed for management?
☐ Yes ☒ No Are group B or non-indigenous A species to be used to meet stocking standards?
☐ Yes ☒ No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment is to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All conifer snags shall be retained, unless they are a safety hazard.

h. ☒ Yes ☐ No Will artificial regeneration be required to meet stocking standards?

Artificial regeneration will be required to meet stocking standards in those areas where the clearcut prescription is proposed. Depending on seedling availability, these areas will be planted 'as early as' the first winter following harvest operations. Only native conifers grown from locally collected seed or seed from the appropriate seed zones and elevations will be used. Seedlings will be planted to attain a minimum point count of 300 per acre. Conifer species to be planted shall be redwood, and or Douglas fir.

i. ☒ Yes ☐ No Will site preparation be used to meet stocking standards? If yes, provide the information required for a site preparation addendum, as per 14 CCR 915.4 (935.4, 955.4).

(a) Site preparation may be required in the clearcut areas to achieve a desirable level of stocking following harvest. Broad cast burning of slash may be used to prepare the site to allow for hand planting of conifer seedlings. If it is determined that the stocking requirements can be met without broadcast burning, no broadcast burning will take place. If burning is deemed necessary, burning operations will be conducted according to the provisions of a project type-burning permit issued by the California Department of Forestry and Fire Protection.

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

a. ☒ Yes ☐ No Are there any watercourse or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, list the class, WLPZ or ELZ width, and protective measures determined from Table I and/or 14 CCR 916 (936, 956) .4 (c) of the WLPZ rules for each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

b. ☒ Yes ☐ No Are there any watercourse crossings that require mapping per 14 CCR 1034(x)(7)?

14CCR 923.9(e) Watercourse crossings associated with this THP have been listed in the Work Order (with proposed culvert diameters) within Item 38 and are shown on the THP Map. These sites have been identified in the field (923.9(e)(1).

14CCR 923.9(l) Rock used to stabilize the outlets of crossings shall include a base of at least size 12" rock, and be adequately sized to resist mobilization.

c. ☒ Yes ☐ No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert (may be shown on map).

Crossing shall be installed to handle any surface flow by utilization of a flow through fill (clean rock or logs) with fabric or a temporary pipe that is of sufficient size (min. 6" x 15') to handle flow during operations.

d. ☒ Yes ☐ No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If yes, attach the 1603 Addendum below or at the end of this Section II; provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures; as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1603 Agreements and THP Documentation".

☐ Yes ☒ No Have or will the activities conducted under this THP that are subject to Fish and Game Code Section 1600 et seq. be included in a separate notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

☒ Yes ☐ No Will the submittal of this THP provide notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

LTO instructions are found in the Work Order for Road Repair report for watercourse crossings, found in THP Item 38. A DFG 1611 agreement process addendum and an analysis are included in the Plan Addendum to Item 26d in THP Section III.

Watercourse Protection Measures:

This THP is within the Coastal Anadromy Zone. On the ground identification of the WLPZ shall be completed prior to PHI. No timber harvesting shall occur within the WLPZ.

14CCR 916(b)(1) & (2): Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

14CCR 916(d): This THP fully describes the type and location of measures needed to fully offset sediment loading, thermal loading and potential significant adverse watershed effects from the proposed operations. These measures are numerous and described in various locations within Section II of the THP. Examples of such measures include no harvesting in the WLPZ, limited size of project and soil stabilization measures in Section II, The LTO will be responsible for implementing each of these measures. The timber harvest unit has been configured in such a manner that impacts to sediment loading and thermal loading are avoided to the fullest extent feasible. The strategy of avoidance of potential risks to water resources will result in operations that are not likely to result in adverse impacts to water quality, including sediment loading or thermal loading.

14CCR 916.9 (e): Channel Zone

(1) There shall be no timber operations within the channel zone with the following exceptions:
   (a) Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.
   (b) Class III watercourses consistent with 14CCR 916.9 (h)(7): Retain all trees in the Class III ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control. Merchantable trees within the channel zone of Class III watercourses may be harvested with the following exceptions:
      - Within over-steepened headwall swales.
      - When located at the watercourse slope transition point and an obvious increase in downcutting of the watercourse channel is occurring below this point.
      - On unstable areas where the tree is stable and contributing to the stability of the channel.
      - Where soil has accumulated and is perched upslope of the channel tree.
      - When a tree is in the channel (or close proximity) and not just an individual root. In other words, give a weighted average to the tree's value in the channel based on proximity.

(2) In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the pre-harvest inspection.

14CCR 916.9 (u): Salvage logging shall not occur within a WLPZ.

Water Drafting: Water for dust abatement (if necessary) shall be from an offsite delivered source. Water drafting may occur onsite when water is collected in tanks from springs, which are not within the channel zone of natural watercourses. Since no drafting of water within a channel zone of a natural watercourse or lake is proposed, no description is required per 14CCR 923.7(l)(2).

Watercourse and Lake Protection Zone Widths.

	Class II-S*	Class III (ELZ)
Slope Class (%)	Width (feet)	Width (feet)
<30	50	30
30-50	75	50
>50	100	50

* Core and Inner Zones apply to Class II watercourses within this THP, see discussion in Item 26

Class II Watercourses

(1) The WLPZ shall be flagged prior to the PHI.

(2) When there is a reasonable expectation that slash, debris, soil, or other material resulting from timber operations, falling, or associated activities, will be deposited in Class II waters below the watercourse transition line, those harvest activities shall be deferred until equipment is available for its removal.

(3) Accidental depositions of soil or other debris below the watercourse transition line shall be removed immediately after the deposition.

(4) Equipment operations within the WLPZ shall be limited to existing roads and designated skid trail crossings.

(5) At least 75% surface cover and undisturbed area shall be retained within the WLPZ.

Class III Watercourses: The protection measures for Class III waters shall prevent the degradation of downstream beneficial uses of water and shall be determined on a site-specific basis. The following protection measures apply:

(1) Establish a 30 foot wide ELZ on both sides of the watercourse for slopes less than 30% and a 50-foot ELZ where side slopes are greater than 30%. The ELZ shall be measured from the watercourse transition line. Within the ELZ the following shall apply:

(a) No new construction of tractor roads permitted;
(b) No ground based equipment on slopes greater than 50%.
(c) Ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse or to the use of feller-bunchers or shovel yarding.
(d) Retain all pre-existing large wood on the ground that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.
(e) Retain all pre-existing down wood and debris in the channel zone.
(f) Retain hardwoods, where feasible.
(g) Retain all snags (except as required for safety).
(h) Retain all countable trees needed to achieve resource conservation standards in 14 CCR 912.7.
(i) Retain all trees that show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.
(j) Exceptions pursuant to 14 CCR 916.9, [936.9, 956.9], subsections (e)(1)(A)-(F) are permitted in any ELZ and channel zone.

(2) 916.4(c)(3): Soil deposited during timber operations in a Class III watercourse other than at 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. Temporary crossings shall be removed before the winter period.

14CCR 923.9:

(g) All culverts used for new and replacement logging road watercourse crossings shall be installed at or as close as practical and feasible to the natural watercourse grade. Culverts shall be installed in alignment with the watercourse channel to the extent feasible, and of the appropriate length to prevent fill erosion.

(h) Logging road watercourse crossings shall not discharge water onto erodible fill or other erodible material without the installation of energy dissipaters and other necessary protective structures.

(i) Fills for constructed and reconstructed logging road watercourse crossings shall be thoroughly compacted in approximately one-foot lifts during installation. The face of crossing fills shall be no greater than 65 percent (1.5:1, horizontal to vertical). Excavated material and cut banks resulting from construction or reconstruction which has access to a watercourse shall be sloped back from the channel to prevent slumping, to minimize soil erosion, and to prevent significant sediment discharge.

(j) Critical dips shall be incorporated into the construction or reconstruction of logging road watercourse crossings utilizing culverts, except where diversion of overflow is addressed by other methods stated in the plan.

(k) Watercourse crossings and associated fills and approaches shall be constructed and maintained to prevent diversion of stream overflow down the road, and to minimize fill erosion should the drainage structure become obstructed. Methods to mitigate or address diversion of stream overflow at logging road watercourse crossings shall be stated in the plan.

14CCR 923.9(p) All logging road watercourse crossings that are proposed by the plan submitter to be removed, including temporary crossings and those along abandoned or deactivated roads, shall be removed as described in the plan and shall apply the following standards:

(1) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel as observed upstream and downstream of the logging road watercourse crossing to be removed.

(2) The excavated material and any resulting cut bank shall be no greater than 65 percent (1.5:1, horizontal to vertical) from the outside edge of the constructed channel to prevent slumping, to minimize soil erosion and sediment transport, and to prevent significant sediment discharge. Exposed soil located between the watercourse crossing and the nearest adjacent drainage facility or hydrologic divide, whichever is closer, including cut banks and excavated material, shall be stabilized by seeding, mulching, rock armoring, replanting, or other suitable treatment to prevent soil erosion and significant sediment discharge.

3) Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an Activity Center during the life of the timber operations.

VII. Road Use

To avoid take of NSO from noise disturbance, road use within 0.25 mile (1,320 feet) of a NSO Activity Center during the breeding season is prohibited until **July 10**, unless:

1) Non-nesting, or nesting failure at the Activity Center has been determined by a Activity Center Search (2011 NSO Protocol) conducted on or after May 15th, or;

2) The Activity Center is within 165 feet of major highway that typically has continuous traffic year around (Hwy 1, 36, 101, 128, 299, etc.) and the appurtenant road is not within 165 feet of the Activity Center.

3) After **July 9th**, until the end of the breeding season road use within 0.25 mile is restricted to existing road use, maintenance and map point work.

VIII. Timber Harvest Operations

A 0.25 mile seasonal restriction on timber operations (except for road use after **July 9th**) applies to every known NSO Activity Center during the breeding season, unless it is determined via a site monitoring visit, "Activity Center Search" (2011 NSO Protocol), that NSO are not nesting, or nesting failure has occurred. If it cannot be determined whether NSO are nesting, or nesting failure cannot be determined, the 0.25 mile seasonal restriction stays in effect for timber operations until July 31st.

For all known Activity Centers, timber operations should adhere to the following recommendations:

1) Within the 100-acre Core Area polygon of an NSO Activity Center:

   a) Outside the breeding season, limited timber operations (i.e., road use and maintenance, map point work, tail-hold placement, use of existing skid roads, and loading) may be conducted, provided no trees >11 inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.

   b) During the NSO breeding season, timber operations (including use of roads before July 9th), are not allowed within the 100-acre Core Area polygon, except as allowed in subsections 4 and 5, below.

2) Timber Operations outside the 100-acre Core Area polygon, but within 0.25 mile of an NSO Activity Center:

   a) Outside the breeding season, timber operations may be conducted.
   b) During the breeding season, no timber operations should proceed unless protocol surveys do not detect nesting NSOs.

3) For all NSO ACs, prior to May 15th (until the required May 15 or later survey is completed):

   a) Timber operations (except helicopter yarding or staging) may be conducted only on those THP areas >0.25 mile from the Activity Center.
   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

4) For NSO Activity Centers where reproductive status has been determined to be non-nesting or failed nesting:

   a) Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre Core Area Polygon of the Activity Center Provided no trees> inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.
   Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within 1000 ft. of the Activity Center.

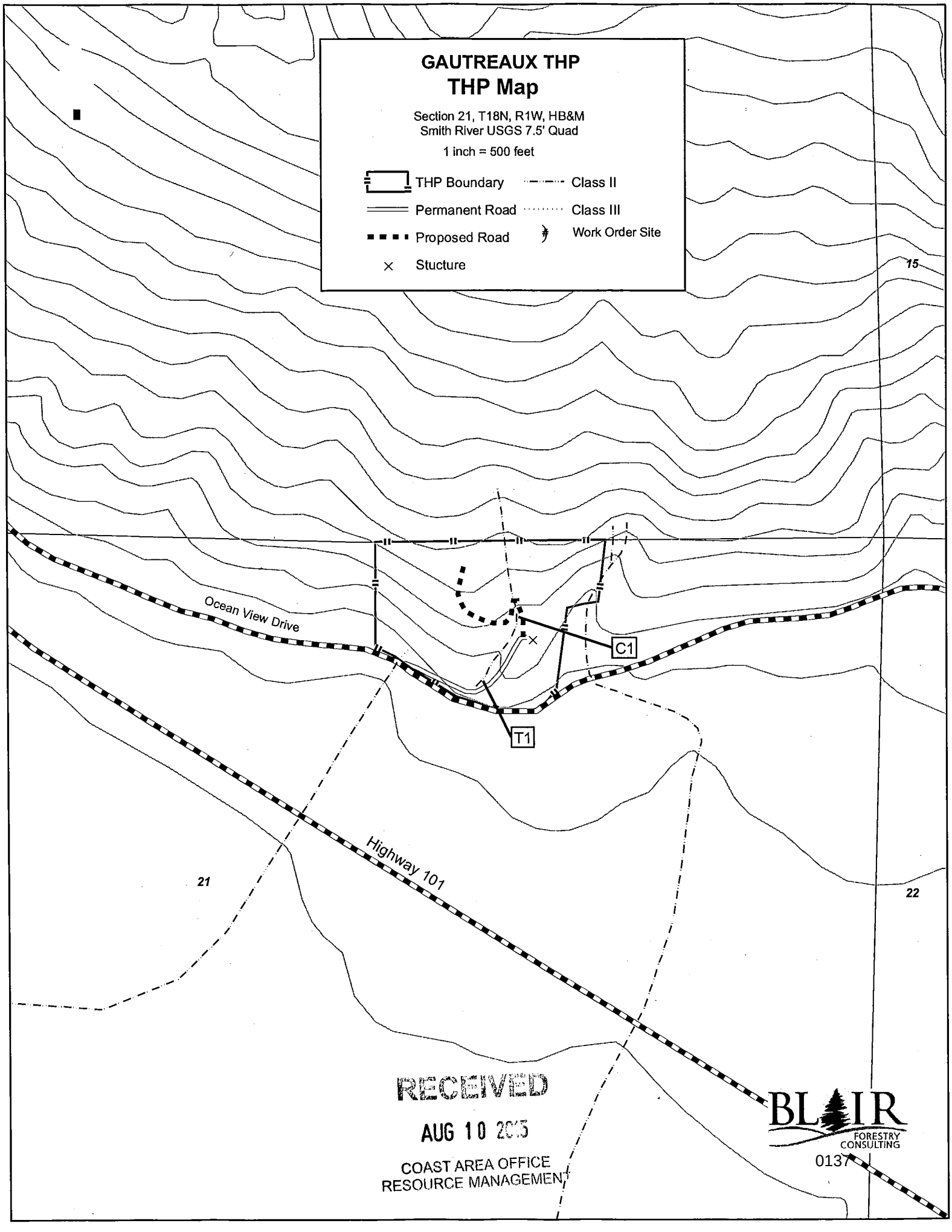
5) For NSO Activity Center, where reproductive status has been determined to be nesting:

   a) For Activity Centers where fledging status has not been determined, timber operations may be conducted only on those THP areas that are >.25 mile from the Activity Center until the end of the breeding season.

   Exception: The 0.25 mile disturbance buffer may be reduced where topography, such as ridgelines, will provide a similar noise disturbance protection.

   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

6) For NSO Activity Centers, where fledging status has been determined (either nest failure or fledglings have left the Core Area):



BLAIR
FORESTRY CONSULTING

Plan Addendum to Item 26

WATERCOURSE AND LAKE PROTECTION

A field examination for watercourses which contain Class I, II, III, or IV waters was conducted as per 14 CCR 916.4 & 916.9 (f)(1)(E). The examination evaluated areas near, and areas with the potential to directly impact watercourses for sensitive conditions including, but not limited to, existing and proposed roads, skid trails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, changeable channels, overflow channels, flood prone areas, and riparian zones where values set forth in 14 CCR 916.4 may be impaired. The examination considered these conditions, and those measures needed to maintain, and restore to the extent feasible, the functions set forth in 14 CCR 916.4, when proposing RMZ/EEZ widths and protection measures. The plan identifies such conditions, including where they may interact with proposed timber operations, that individually or cumulatively significantly and adversely affect the beneficial uses of water, and prescribed measures to protect and restore to the extent feasible, the beneficial uses of water (see the Cumulative Impact Assessment in Section IV).

This plan is located within the Coast Forest District of the Coastal Anadromy Zone. There are Class II and III watercourses within the project area. These watercourses flow to Smith River. The project is located within the Dominie Creek watershed. The Dominie Creek Planning Watershed is listed as a Coho watershed (DFG, April 2009).

All Class II watercourses within and adjacent to the plan area were evaluated, per 916.9(g), for the characteristics of a Class II-L watercourse. These characteristics include either: (1) a contributing drainage area of ≥100 acres in the Coast Forest District as measured from the confluence of the receiving Class I watercourse; or (2) an average active channel width of 5 feet or greater. The project area is beyond 1000' of the Class I confluence therefore Class II-L protection measures do not apply. The THP Map in Section II shows the location of all watercourses within the plan area.

See THP Section II, Item 26 for watercourse protection measures.

A combination of the rules, the plan, and mitigation measures provides protection for the following:

a. water temperature control
b. streambed and flow modification by large woody debris
c. filtration of organic and inorganic material
d. upslope stability
e. bank and channel stabilization
f. spawning and rearing habitat for salmonids
g. vegetation structure diversity for fish and riparian wildlife habitat, possibly including but not limited to:
    I. vertical diversity
    II. migration corridor
    III. nesting, roosting, and escape
    IV. food abundance
    V. microclimate modification
    VI. snags
    VII. surface cover

14CCR 916.9(d)(1) requires that "The plan shall fully describe: (A) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and (B) the person(s) responsible for the implementation of each measure, if other than the timber operator.

Measures are contained in Section II of the THP that will meet the intent for offsetting sediment loading, thermal loading, and potential significant adverse watershed effects. Other than the small amount of WLPZ harvesting, other measures are included in Item 18, Item 23, and Item 26 of Section II. All operational measures stated in Section II of the THP shall be implemented by the LTO. Maintenance of erosion control structures and facilities following the completion of operations shall be assumed by the timberland owner.

14CCR 916.9 (c) The recently updated Anadromous Salmonid Protection (ASP) rules are prescriptive in nature and have specific protection measures that were designed to accomplish the objectives of 14CCR 916.9(c). The plan does not include any deviations from the ASP rules and there are no special circumstances that would require additional protection measures to accomplish the stated objectives.

present on this plan are well-drained soils. The EHR was calculated to be moderate for the entire plan area.

Soil compaction is likely to occur when the soil is saturated and subject to use by heavy equipment. The restrictions on operations during the wet weather conditions as specified in the Winter Period Plan will prohibit ground-based operations on these soils during periods of high soil moisture. 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.

Operation of this THP would cause minimal significant negative impacts to the soil productivity on the project area due to a **loss of growing space**. Existing roads shall be used to their fullest to best access the timber with the least impact to the resources including soil. Application of the Forest Practice rules, and reusing existing road, landing, and skidtrail locations shall combine to lessen any potential impacts to soil productivity.

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 the RPF's opinion that no negative impacts will incur.

C. Biological Resources

The Biological Assessment Area (BAA) is used to analyze and consider possible effects on any number of vegetative, aquatic, terrestrial and avian species, mainly in relation to forest seral stage distribution. This area was chosen using major breaks in the landscape such as ridges and watercourses that appear to logically establish this project's area of influence. The Biological Assessment Area (BAA) is the same as the Watershed Assessment Area (See Cumulative Effects Map).

Factors to consider in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or species of special concern (as described in the Forest Practice Rules) that may be directly or indirectly affected by project activities.

   The methodology used to identify the presence, if any, of listed species within the BAA is as follows:

   1. Scoping
      a) Search Natural Diversity Database (NDDB) for occurrence within the Assessment Area, including the quad that the plan is located on and adjoining quads.
      b) Evaluated the habitat requirements of species identified above that "could" occur.
      c) Assess the impact that the proposed project would have on species likely to occur within the assessment area and within the plan area.
   2. Surveys
      a) If the proposed project would have potential significant negative impacts on a listed species, a survey was conducted to determine presence or absence.
   3. Mitigations
      a) Where presence is determined and significant adverse effects are likely, mitigations to substantially lessen or avoid these impacts are developed.

A list of the rare, threatened or endangered species and other species of concern which may occur within the BAA, and which may be affected by timber operations is provided in the THP in Section III for Plan Addendum to Item 32. The list provides a description of the potential rare, threatened or endangered species, their preferred habitat, the potential presence of habitat within the BAA, and other pertinent information as necessary for each species of concern. Based upon database inquiries and known locations of sensitive species, the proposed project, as mitigated, is not expected to significantly impact any known sensitive species that occur within the BAA.

Because of the assortment of ownerships within the BAA, land management objectives and the consideration given to biological resources vary greatly. The ownerships range from lands owned by the public whereby changes in vegetation vary very little over time to industrial timber ownerships where modifications in vegetation are made more frequently, but only after taking steps to protect existing biological resources. In addition, there are small and large ownerships of agricultural lands as well as numerous small ownerships of residential properties. For the most part, the timberland within the BAA appear to be functional in terms of wildlife habitat because of the diversity of ages and the presence of certain elements such as hardwood, snags, and large woody debris.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and the biological assessment area (e.g. loss of oaks creating a forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas).

A search of the CNDDB/Spotted Owl Viewer returned no (0) known Northern Spotted Owl activity centers present within 0.7 miles of the proposed THP boundary. This project will not have a significant cumulative impact on the Northern Spotted Owls within the assessment area. The small THP size coupled with the amount of no harvest WLPZ will leave forest structure that potentially NSO will still utilize for foraging. Seasonal restrictions have also been incorporated in to the THP that are designed to reduce impacts to the NSO during critical periods. No timber operations shall occur until such time as all surveys (which are conducted in conformance with the USFWS approved NSO survey protocols) for the current or immediately preceding, survey period are complete; the results have been provided

The forest sector offers the ability to reduce emissions through a suite of possible activities: 1) substitute wood products for more energy-intensive products, 2) reduce demand for energy in growing timber, harvesting, and wood processing, 3) reduce biomass burning (wildfires), 4) afforest marginal croplands, 5) reduce conversion of forestland to nonforest use, 6) improve forest management, 7) reduce harvest, 8) increase agro-forestry, 8) plant trees in urban areas, 9) other combinations (Joyce and Nungesser, 2000). This proposed THP uses several of the activities which are considered to have the effect of reducing the overall forest emissions and improving the storage of GHGs. The harvest will add to the carbon stored in wood products, while at the same time increase the rate of carbon storage by maintaining a healthy, fast-growing forest. The proposed forest management may result in a reduced risk for wildfire, and will maintain maximum sustained productivity of quality forest products. By maintaining timber management there is a reduced risk of deforestation through conversion of the land to non-forest uses.

b. The Project:

The proposed project will result directly and indirectly in carbon sequestration and temporary, insignificant CO2 emissions. Carbon sequestration is achieved through a repeating cycle of planting and growing of trees that remove CO2 from the atmosphere and store carbon in tree fiber. When a tree is harvested, most of the carbon-filled tree fibers become lumber that is sequestered in buildings while a new rotation of trees is planted and grown. To the extent these wood building products replace the demand for new concrete or steel building components; they reduce substantial CO2 emissions that are associated with the manufacture of cement and steel. Some of the tree fibers such as branches and tops are left in the forest where they are sometimes burned to reduce fire hazard. However, the vast majority of this material is left to decay and will emit CO2 overtime; but, it also supplements the forest soils and forest duff layer where carbon is stored and serves as a substrate and nutrient for more tree growth. When CO2 is released by decaying slash, it is offset by rapid regeneration of tree stands (including sprouts) and other vegetation that sequesters carbon. This plan, alone or in combination with other harvest plans in the watershed, Del Norte County, or State of California is not expected to have an adverse impact on global warming. Carbon from trees harvested will be sequestered for decades or longer in the form of the wood products cut from the logs. Importantly, additional carbon will be sequestered in the future as newly planted, sprouting, and growing crop trees occupy and grow on the site.

A summary of the results of this analysis indicate that it will take 14 years until carbon stocks are recouped from this initial harvest and a total project sequestration over the defined harvesting period of 2,898 CO2 metric tonnes.

The assessment area for climate effects is the THP Area and the public transportation routes for the delivery of the logs to the manufacturing centers. Because the use and disposition of wood products is not under the control of the landowner after it is delivered to the primary manufacturing center, the direct GHG emissions of manufacturing activities are not estimated here. However, qualitative consideration of the carbon cycle in wood products is addressed as a cumulative effect.

In summary it is the RPF's opinion that after having performed the Cumulative Impacts Assessment, it has been determined that the proposed project as presented and mitigated, in combination with past, present, and reasonably foreseeable probable future projects will not cause, or add to significant cumulative impacts within the assessment area.

Figure 2. NSO Habitat around 2014 female NSO roost location, relative to THP.

UNIT, ftp/NEW

From: Brent, Heather@CALFIRE
Sent: Friday, August 14, 2015 1:47 PM
To: Brian Griesbach; Santa Rosa Review Team@CALFIRE
Cc: Thomas Blair; Mark Gautreaux; HUU Second Review@CALFIRE; Oswald, John@DOC; Larson, Monty@Wildlife
Subject: RE: Addition To RPF's Response To 1st Review For THP 1-15-014DEL "Gautreaux"

Brian -

I have reviewed your revised responses. Responses to RTQs 1 through 18 are adequate.

Your response to RTQ 19 does not appear adequate. It appears that the only revision made in response to RTQ 19 is to remove the sentence on Page 55 stating that the stand is primarily redwood. Your calculations also appear to need revision. They appear to be using inappropriate assumptions. It is unrealistic to claim that carbon stocks will be recouped in 14 years. One obvious assumption to reconsider is the growth rate and the resulting volume at age 60. These do not appear realistic. Additionally, the introductory language on page 54 still includes a discussion of redwood forests, which is not applicable.

Please re-do your carbon calculation, and provide justification for assumptions that may be questionable. Also rewrite your introductory language to be applicable to the proposed project site.

The PHI remains open until an acceptable carbon calculation in response to RTQ 19 is received by CAL FIRE.

Heather Brent
707-677-0761

Every Californian should conserve water. Find out how at:
SaveOurWater.com · Drought.CA.gov

From: Brian Griesbach [briantgriesbach@yahoo.com]
Sent: Friday, August 07, 2015 20:32
To: Santa Rosa Review Team@CALFIRE
Cc: Brent, Heather@CALFIRE; Thomas Blair; Mark Gautreaux
Subject: Addition To RPF's Response To 1st Review For THP 1-15-014DEL "Gautreaux"

UNIT, ftp/NEW

Santa Rosa Review Team@CALFIRE

From:	Brian Griesbach <briantgriesbach@yahoo.com>
Sent:	Thursday, August 20, 2015 4:32 PM
To:	Brent, Heather@CALFIRE; Santa Rosa Review Team@CALFIRE; Thomas Blair; Mark Gautreaux
Subject:	Addition To RPF's Response To Review Team Questions For THP 1-15-014 DEL Gautreaux
Attachments:	2nd Addition To RPF's Response To Review Team Questions For THP 1-15-014DEL Gautreaux .pdf

Dear Ms Brent:

I have attached a response to your question regarding First Review Question 19. Thank you for your attention to this matter.

Brian Griesbach RPF 2738
(707)672-5814
BLAIR FORESTRY CONSULTING

BLAIR
FORESTRY CONSULTING

Providing Professional Forestry Services PO Box 2617 McKinleyville, CA 95519 CELL 707.834.2990 EMAIL blairforestry@gmail.com

August 20, 2015
CalFire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, Ca 95401

RE: Addition to RPF's Response To Review Team Questions For THP **1-15-014 DEL "Gautreaux"**

CalFire Review Team,

This letter includes an addition to the RPF's Responses to Review Team Questions For THP 1-15-014DEL "Gautreaux". This additional response is at the request of CalFire Inspector, Heather Brent. An erratum has been included below each question that states on what revised page the change can be found. Each revised page has been stamped "Revised August 20, 2015".

> RTQ 19 (Heather Brent) - Your response to RTQ 19 does not appear adequate. It appears that the only revision made in response to RTQ 19 is to remove the sentence on Page 55 stating that the stand is primarily redwood. Your calculations also appear to need revision. They appear to be using inappropriate assumptions. It is unrealistic to claim that carbon stocks will be recouped in 14 years. One obvious assumption to reconsider is the growth rate and the resulting volume at age 60. These do not appear realistic. Additionally, the introductory language on page 54 still includes a discussion of redwood forests, which is not applicable.
>
> Please re-do your carbon calculation, and provide justification for assumptions that may be questionable. Also rewrite your introductory language to be applicable to the proposed project site.
>
> **RPF Response: Pages 54 & 56-59 are revised.**

This concludes the addition to RPF's responses to the review team questions for THP 1-15-014DEL "Gautreaux". Attached are the revised pages as indicated in the errata for each question and summarized below.

If you need any clarification please do not hesitate to call me.

Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach, Registered Professional Forester #2738
BLAIR FORESTRY CONSULTING

cc: Heather Brent-CalFire
Thomas Blair-Blair Forestry Consulting
Mark Gautreaux-Landowner

Attachments
Revised pages to be replaced: 54 & 56-59

D. Recreation Resources

The recreational assessment area is generally the area of the THP plus 300 feet. This is specified in the Board of Forestry, Technical Rule Addendum No. 2. This area is private property, and primarily pastureland and forestland, and the primary activities that occur are grazing, agriculture and timber management. The proposed plan is on private property that is not open to the public for recreation. Road access is controlled and there are no developed recreational sites on or near the plan area.

E. Visual Resources Area

The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. At distances of greater than 3 miles from viewing points, activities are not easily discernible and will be less significant. Due to the aspect of the plan area, this project will be visible to nearby travelers along Highway 101. The project may also be visible to some residents of Smith River, which is approximately 2 miles away. A majority of the plan area will have sub-merchantable timber as well as some hardwood cover remaining which will lessen the visual impacts of the evenaged harvest. These remaining trees, as well as sprouts and planted seedlings will rapidly re-vegetate the hillside and quickly regain a forested appearance.

As timber harvesting is a common occurrence in the assessment area, the plan area is small in scale, and the harvested area will retain some small trees and hardwoods, and be reforested, no long-term significant impacts to visual resources are expected.

The plan area is within 200 feet of Ocean View Drive, a county road. 913.1(a)(6) was considered. The plan area is relatively remote, with little traffic occurring on the county road. In addition, timber harvesting within the watershed is common and clearly visible from the county roads. Also, as discussed above, the harvested area is expected to retain sub-merchantable timber and as well as some hardwood cover. No significant visual effect is anticipated with the harvesting of this plan.

F. Traffic Assessment

The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. Ocean View Drive, Lopez Road, and US Highway 101 will be the primary public roads used. All public roads to be used to transport wood products have been historically used for this purpose, with no known past or existing traffic, safety, or maintenance problems.

The proposed project will not have a reasonable potential to cause or add to significant cumulative negative impacts to vehicular traffic within the assessment area.

G. Climate Change Assessment

a. Climate Change in General.

The scientific literature on the phenomenon of global warming, and impact of greenhouse gas emissions on the State of California, as well as to the remainder of the Earth, is growing, conflicted, and politically charged. Consensus is growing on the occurrence of global warming, although there is considerable debate regarding the causes (Bast and Taylor, 2007; Ferguson, 2006). The Stern Review of the Economics of Climate Change (2006) was a comprehensive report commissioned by the British government, and provided projections of economic cost based on assumptions of impacts. Studies of past and present temperatures show a natural variability of Earth's climate. Past climates were as warm as (and even warmer than) what we currently experience, and such warm periods were typically, relatively short-lived respites from ice-age conditions that dominated the past half-million years (Ferguson, 2006).

Regardless of the aforementioned issue, the State of California has recognized climate change and global warming as a threat to health, safety, and the economy. Global warming could result in reductions in water supply due to changes in snow pack levels, adverse health impacts from increases in air pollution, adverse impacts on agriculture caused by changes in quantity and quality of water supplies and significant increases in diseases and pests, increased risk of catastrophic wildfires, and significant impacts to consumers and businesses due to increased costs of goods and services (AB 1493, 2002). In response, the State of California has enacted legislation and policies designed to reduce greenhouse gas emissions and to increase energy efficiency (AB 1493, 2002; AB 32, 2006; Gov. Schwarzenegger Executive Order S-3-05). The Executive Order established greenhouse gas emission targets using 1990 thresholds, and established the California Climate Action Team to coordinate the State's efforts to reduce and report on progress of those efforts and on impacts of global warming to the State.

Carbon dioxide (CO_2) is considered the greenhouse gas (GHG) that has the greatest effect on the dynamic of global warming due to the fact that it composes the vast majority of the releases by human activities. There are two basic ways carbon emissions are reduced. First is efficiency, where technology or conservation reduces carbon emissions through the use of less energy (electricity, fuel, heat, etc.) to accomplish an activity. Second is storage, which can be accomplished through geologic or terrestrial sequestration.

Forest activities can result in emissions through harvesting, wildfire, pest mortality and other natural and anthropogenic events. However, forestry is a net sink for carbon, the primary greenhouse gas. Plants absorb CO_2 from the air, and use the carbon as a building block of plant tissue through the process of photosynthesis. Worldwide forests store approximately 2,000 billion tons (Gt) +/- 500 of CO_2 (National Energy Technology Laboratory, 2000). The most recent draft Greenhouse Gas Inventory shows the forestry sector to be a net sink with emissions of 6.1 MMT CO_2 EQ. and emissions reductions of 21 MMT CO_2 EQ (Bemis, 2006).

Summary			Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
	Beginning Stocks	Ending Stocks	
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis		40 Years
Live Trees (Conifers and Hardwoods)	336.25	FALSE	
Wood Products		95.69	
Site Preparation Emissions		0.00	
Non-biological emissions associated with harvesting		-1.98	
Non-biological emissions associated with milling		-1.19	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		-243.74	
Project Summary			
Project Acres	Step 17- Insert the acres that are part of the harvest area.	13	
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		(3,169)	

Project Carbon Accounting: Inventory, Growth, and Harvest

This worksheet addresses the sequestration and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods	Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)	Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	Step 0. Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	Step 1. Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.	Step 2. Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	Step 3. Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest.	Step 4. Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1.	Step 5. Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available.	Step 6. Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available.	Step 7. Enter estimated hardwood basal area harvested/treated per acre
Douglas-fir	100%	1.675	14.38	60	50	10	800	4	50	0
Redwood	0%	1.675	13.42	0	0	0	0	0	0	0
Pines	0%	2.254	12.14	0	0	0	0	0	0	0
True firs	0%	2.254	11.18	0	0	0	0	0	0	0
Hardwoods		2.214	11.76	0	0	0	0	0	0	0
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2.204	User must enter harvest cycles to 100 years and/or at least three entry cycles.						
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.80		0	0	0	0	0	0	0
	Hardwoods	1.95		0	0	0	0	0	0	0
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	1.08		0	0	0	0	0	0	0
	Hardwoods	0.88		0	0	0	0	0	0	0

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	Step 8. Enter the value (in bold) for each harvest cycle that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	Computed: MBF * Conifer Multiplier from Step 0.	Computed: BA*Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0.	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Heavy - 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre) Medium - >25%<50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). Light - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). None - No site preparation is conducted.	
60	90	1	331	5	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
0	0	0	0	0	35%	0
	Difference between ending stocks and beginning stocks		-331	-5.37	Sum of emissions (Metric Tonnes CO2e) per acre	0

Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	Assumption: ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested	MBF (all species) Yarded Delivered to Landing	Assumption:(((35 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((.16 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not.	Assumption: Round Trip Hours/Load average (from below, to compute the mbf/hour) /((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	Step 9. Enter the estimated volume delivered to the landing in a day.	Step 10. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Yarders and Loaders CO2 equivalent/mbf (metric tonnes)	Computed. Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	Step 11. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Tractor and skidder CO2 equivalent/mbf (metric tonnes)	Computed. Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	Step 12. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Helicopter CO2 equivalent/mbf (metric tonnes)	Computed. Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	Computed. Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	Steps 13 and 14 below		Computed. Estimated Metric Tonnes CO2e per harvested acre for each harvesting period.
60	(0.11)	30	1	-0.01	-0.56	1	-0.02	-0.89	0	0.00	0.00	-0.07			-0.351564626
0	-	30	1	-0.01	0.00	1	-0.02	0.00	0	0.00	0.00	0.00	Step 13. Enter Estimated Load Average: MBF/Truck	4.5	0
0	-	30	1	-0.01	0.00	1	-0.02	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00	Step 14. Enter Estimated Round Trip Haul in Hours	2	0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	-0.11				-0.56			-0.89			0.00	-0.07			-0.35

Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	**Assumption.** 20 kw/hour (mill energy use) /(40mbf lumber processed/hour) *(.05 metric tonnes/kw hour) * mbf processed	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Conifers	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Hardwoods	**Computed.** CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	**Computed.** CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Step 15.** Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	**Step 16.** Insert the percentage of hardwoods harvested or treated that are subsequently delivered to sawmills	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Calculated.** **The CO2e associated with processing the logs at the mill**	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		**Estimate.** The weighted average carbon remaining in use at year 100 is 46.3%	**Estimate.** The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.67 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
60	95%	0%	187.67	0.00	-1.19	125.74	0.00	95.69	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-1.19	Sum of CO2 equivalent in wood products		95.69	0.00

RPF, PLANSUB, ftp/NEW

State of California
Department of Fish and Wildlife

Memorandum

Date: August 21, 2015

To: **Leslie Markham**, Forest Practice Manager
North Coast Region Office
Department of Forestry and Fire Protection
135 Ridgway Avenue
Santa Rosa, CA 95401

From: **Joe Croteau**, Timberland Conservation Program Manager
Northern Region
Department of Fish and Wildlife
601 Locust Street
Redding, CA 96001

Subject: Department of Fish and Wildlife Pre-Harvest Inspection (PHI) Report for Timber Harvesting Plan (THP) 1-15-014-DEL, "Gautreaux "

PROJECT OVERVIEW

Timberland Owner/Plan Submitter:	Mark Gautreaux (landowner); Blair Forestry Consulting
CALWATER Planning Watershed(s):	Dominie Creek
7.5-Minute Quadrangle(s):	Smith River
Sensitive Species and Habitat Specific Impact Evaluations:	• great blue heron (*Ardea herodias*) • coho salmon (*Oncorhynchus kisutch*) • steelhead trout (*O. mykiss irideus*) • coastal cutthroat trout (*O. clarki clarki*) • fisher (*martes pennanti*) • northern red-legged frog (*Rana aurora*) • tailed frog (*Ascaphus truei*) • southern torrent salamander (*Rhyacotriton variegatus*) • Sitka spruce (*Picea sitchensis)* • conservation of wildlife habitat elements

PHI Date and Attendees:	March 17, 2015 • Brian Griesbach, Registered Professional Forester (RPF), Blair Forestry Consulting • Mark Gautreaux, Landowner • Jeremy Turner, Licensed Timber Operator • John Oswald, California Geologic Survey (CGS) • Heather Brent, California Department of Forestry and Fire Protection (CAL FIRE) • Monty Larson, California Department of Fish and Wildlife (CDFW)

This report presents CDFW's evaluation of proposed timber operations (operations) on fish, plants, and wildlife, and their habitat. CDFW's evaluation is based on review of the THP document and participation in the PHI. CDFW used the THP, field inspection, and the California Natural Diversity Database (http://www.dfg.ca.gov/biogeodata/cnddb/) to identify and evaluate potential risks to biological resources.

DESCRIPTION AND SETTING

The THP is located approximately two miles northwest of the community of Smith River; within Section 21, Township 18 North, Range 1 West (Humboldt Base and Meridian), Del Norte County, California. The 13.3-acre THP includes 12 acres of Clearcut and 1.3 acres of no harvesting within the Watercourse and Lake Protection Zone (WLPZ). Ground-based yarding methods are proposed. The THP is located within the Dominie Creek planning watershed.

According to the THP, existing timber stands are approximately 80 years old. Stands are Sitka spruce dominated, with a small component of Douglas-fir, western hemlock and grand fir. Hardwood species found in the THP area include red alder, tan oak, and big leaf maple.

PREHARVEST INSPECTION OBSERVATIONS

Great Blue Heron Rookery

Prior to the PHI, CDFW reviewed public comments regarding the presence of a great blue heron rookery on the property. A previous THP (1-92-236 DEL) disclosed the presence of a heron rookery within the THP area, but this site was not found in the California Natural Diversity Database (CNDDB). The THP had not disclosed the rookery or observations of great blue heron activity.

THP Section III, page 38, Great Blue Heron, states, "*Sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle.* ***No Sightings have occurred in the BAA*** (**bold** emphasis added)." The THP also states, "*due to the proximity of foraging habitat the timber stands along the edge of the agricultural area could be considered suitable nesting habitat.*"

On the morning of 17 March 2015, CDFW observed the THP's timber stands from Highway 101, approximately one-quarter of a mile southsouthwest of the THP. From 0704 - 0845 hours, CDFW observed 12 great blue herons fly into, and 4 fly out of, the Sitka spruce trees in the southern portion of the THP. Birds within the stand were easily observed preening and sitting approximately mid-canopy on branches of several trees visible from Highway 101.

During the PHI, the landowner showed the inspection team pictures of great blue herons roosting in trees on his property. The landowner stated he frequently observed herons flying onto and off of his property; however, there is no mention of sightings within the THP. We recommended the RPF inquire with the landowner and other appropriate sources regarding local knowledge specific to the THP area and watershed. Since the landowner knew about the great blue herons in the area, the sightings and/or the rookery should have been disclosed in the THP and during the PHI.

The inspection team walked through the area where CDFW observed herons earlier in the day. The inspection team observed white wash on vegetation (see Figure 1) and at least nine nests (Figure 2) present in at least four trees. Several of the nests were occupied by great blue herons, though the birds were not vocalizing while the inspection team was close to the nests. The approximate extent of the trees, where nests were observed, and a 300-foot buffer around the nests are shown in Figure 3, below.

The California Board of Forestry and Fire Protection lists great blue heron as a sensitive species as defined by Title 14, California Code of Regulations Section (14 CCR) 895.1. Consultation with the CDFW is required pursuant to 14 CCR 919.3 for the protection of active nest sites of great blue heron when five or more nests are found in close proximity. CDFW recommends consultation be completed for the protection of the great blue heron rookery prior to second review (**Recommendation 1**).

Sitka Spruce Natural Community

Sitka Spruce is an endemic Pacific Northwest species with a native range from Alaska to Northern California. In California, it occupies a narrow coastal band and its southernmost contiguous range terminates in central Humboldt County. A disjunct population in central Mendocino County near Russian Gulch forms the southern terminus of its range.

CNDDB classifies vegetation for the primary purpose of assisting in determining significance and rarity of various vegetation types. Sitka spruce forest associations are recognized by the CNDDB as a natural community considered rare and of high priority for inventory. The CDFW List of California Vegetation Alliances (http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf) assigns Sitka spruce forests a rarity rank of G5S2. This designation means Sitka spruce forests are considered globally common, but *rare in California*.

Large, contiguous stands of mature Sitka spruce are uncommon in the region due to:

1. the species' limited range;
2. agricultural and residential development in the coastal zone have resulted in removal of these forests; and
3. silvicultural practices, which have converted stands to more economically valuable species such as redwood and Douglas-fir.

Genetic findings heighten the conservation value of Sitka spruce stands occuring near the edge of their range (Leppig and White 2006). Two comparitive genetic studies found rare alleles (genetic variation) only in peripheral and disjunct populations of Sitka spruce, such as those occurring near its southern terminus in California, and these alleles were not found in more central populations (Washington/ British Columbia) (Gapare et al., 2005). Peripheral populations of Sitka spruce are also shown to have strong genetic structure (an arranged demographic pattern of genetic variation) not found in more central Sitka spruce populations and unusual in conifers and other temperate tree species (Gapare and Aitken 2005).

The mature Sitka spruce forest stand present within the proposed THP is part of a contiguous stand that covers approximately 22 acres on two ownerships. This stand may also qualify as a late succesional forest stand as defined by 14 CCR 895. CDFW observed large Sitka spruce trees approaching 7 feet in diameter at breast height (dbh) (see Figures 4 and 5) scattered throughout the THP at a density of approximately two trees per acre. In addition, CDFW observed the forest stand which has characteristics of a California Wildlife Habitat Relationship (WHR) size class 6 (https://www.dfg.ca.gov/biogeodata/cwhr/). The overstory quadratic mean diameter appeared to exceed 24 in. dbh and the understory appeared as WHR size class 3, and more likely would meet size class 4. In addition, estimated throughout the THP area are snags (approx. one per 4 acres) and large down woody debris (approx. one per two acres).

Aerial imagery reveals little other stands with a similar dominance of large mature Sitka spruce between the Smith River and the Oregon border, making this stand unique in this region of Del Norte County. CDFW recommends the THP's stand of Sitka spruce should be disclosed and evaluated pursuant to 14 CCR 912.9, Technical Rule Addendum No. 2, item 1: a rare species that may be directly or indirectly affected by project activities. The cumulative impact analysis in THP Section IV should address potential cumulative impacts to Sitka spruce as a rare species in California. Mitigation should be developed as appropriate based on the findings of the cumulative impact analysis (**Recommendation 2**).

Wildlife Tree Characteristics

During the tailgate meeting at the end of the inspection, the RPF requested CDFW provide a list of characteristics to use to define trees with features important to wildlife. CDFW identifies the following characteristics of large trees (conifer >30 in. dbh) to be important to wildlife: reiterated trunk, large lateral limb, multiple tops, hollow, cavities,

decay, epicormic branching, broken top, snag top. CDFW recommends the THP Section II, item 14d be amended to include the list of tree characteristics important to wildlife. CDFW identifies the following characteristics of large trees (conifer >30 in. dbh) to be important to wildlife such as: reiterated trunk, large lateral limb, multiple tops, hollow, cavities, decay, epicormic branching, broken top, snag top (**Recommendation 3**).

Mapping Errors

The inspection team followed a segment of road proposed for hauling logs. The road is inaccurately mapped in the THP. The road is further uphill from the residence, crosses a stream upslope, and may be located greater than 300 feet from the great blue heron rookery (see Figure 6). Please accurately map the location of the proposed seasonal road on the maps in the THP's Section II (**Recommendation 4**).

Watercourse Classification

During first review, CDFW identified a stream in the harvest area which might be a Class I, fish habitat, watercourse and the inspection team investigated this stream. The steam was small (approx. 4 foot wide active channel), with a boulder step channel morphology and average gradient of approximately 8%. The stream contained one pool exceeding 1 foot in depth, at bankfull stage, for the 200 foot channel segment inspected. CDFW determined the stream segment was not suitable habitat for fish species present in the watershed.

RECOMMENDATIONS

As Trustee Agency for California's fish, wildlife, and native plant resources (Public Resources Code (PRC) section 21000, et seq.), a Responsible Agency pursuant to the California Environmental Quality Act , sections 15381 and 15386, and a review team agency under 14 CCR 1037.5(a), and PRC 4582.6(a), CDFW provides the following feasible and project-specific recommendations to avoid or reduce potentially significant direct, indirect, and cumulative impacts in accordance with the Forest Practice Rules 14 CCR 1037.5(f).

1. Pursuant to 14 CCR 919.3, revise the THP to include a completed consultation for great blue heron prior to second review.

2. Prior to second review, revise the THP to include disclosure of the unique stand of Sitka spruce in the THP and evaluate the stand, potential THP imapcts and appropriate mitigation pursuant to 14 CCR 912.9, Technical Rule Addendum No. 2, item 1: a rare species that may be directly or indirectly affected by project activities. The cumulative impact analysis in THP Section IV should address potential cumulative impacts to Sitka spruce as a rare species in California. Appropriate mitigation measures should be developed and disclosed based the analysis in cumulative impact analysis.

3. Prior to second review, revise the THP's Section II, Item 14d, to include the list of tree characteristics important to wildlife habitat. CDFW identifies the following characteristics of large trees (conifers >30 in. dbh) to be important to wildlife: reiterated trunk, large lateral limb, multiple tops, hollow, cavities, decay, epicormic branching, broken top, snag top:

    a. Reiterated trunk: vertically oriented stems with their own branches, architecturally indistinguishable from freestanding trees except for their location within the crown of the larger supporting tree;
    b. Large lateral limb: lateral limb greater than 6 in. in diameter;
    c. Multiple Tops: trees with two or more leaders near the top of the tree that provide opportunities for resting, denning, or nesting;
    d. Hollow: wood voids with (estimated) large interior dimension and a large ≥6-inch entrance opening suitable for use by a variety of small mammal and bird species;
    e. Cavities: wood voids with (estimated) small to medium interior dimensions and a relatively small (1.5 in. - 3 in.) to medium (3 in. - 6 in.) entrance openings suitable for use by a variety of small mammal and bird species;
    f. Decay: extensive decayed wood as evidence by large and/or extensive fungal fruiting bodies (conk), lichen, large broken limbs, cavity entrances and sloughing wood and/or bark;
    g. Epicormic branching: multiple branches emerging from a single location on a trunk; these may be dense clusters of very small branches (witches broom) or larger branches up to several inches in diameter;
    h. Broken Top: trees with a minimum diameter at the ordinal break of ≥ 12 in. diameter;
    i. Snag Top: trees with a dead top where with the lowest portion of the dead top is at least 12 in. in diameter.

4. Prior to second review, revise THP maps in Section II to show the correct location of the seasonal road which accesses the western portion of the THP.

Please direct questions or correspondence regarding this memorandum to Environmental Scientist Monty Larson at (707) 441-2099, monty.larson@wildlife.ca.gov. A color pdf version of this report can be provided upon request.

Attachments

ecs: See Page 7

ecs: California Department of Forestry and Fire Protection
Santa Rosa Review Team, William Forsberg, Heather Brent
santarosareviewteam@fire.ca.gov, huusecondreview@fire.ca.gov,
heather.brent@fire.ca.gov

Blair Forestry Consulting
Brian Griesbach
briantgriesbach@yahoo.com

California Geologic Survey
John Oswald
john.oswald@conservation.ca.gov

California Department of Fish and Wildlife
R1 Timberland Conservation Program
William Condon, william.condon@wildlife.ca.gov

LITERATURE CITED

Gapare, W.J., Aitken, S.N., 2005. Strong spatial genetic structure in peripheral but not core populations of Sitka spruce [*Picea sitchensis* (Bong.) Carr.]. Molecular Ecology p. 2659-2667.

Gapare, W.J., Aitken, S.N., Ritland, C.E., 2005. Genetic diversity of core and peripheral Sitka spruce [*Picea sitchensis* (Bong.) Carr.] populations: implications for conservation of widespread species. Biological Conservation vol. 123, issue 1, p. 113-123.

Leppig, G., White, J.W., 2006. Conservation of peripheral plant populations in California. Madrono vol. 53, issue 3, p. 264-274.

Figure 1. Photo of white-wash on vegetation near a great blue heron rookery discovered during the PHI for THP 1-15-014 DEL.

Figure 2. Photo of the canopy of trees containing a great blue heron rookery discovered during the PHI for THP 1-15-014 DEL (at least three nests are visible in this photo).

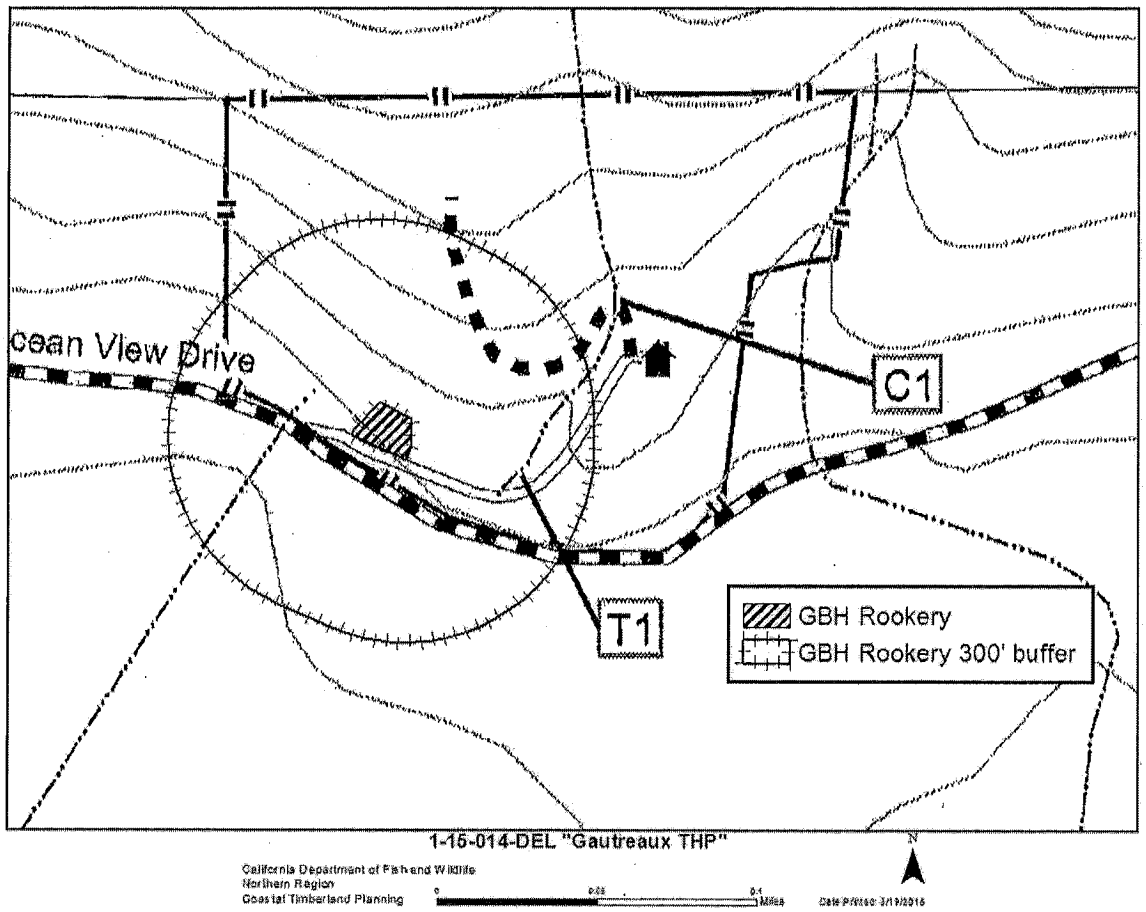


Figure 3. Approximate location of a great blue heron rookery discovered during the PHI for THP 1-15-014 DEL and the approximate extent of a 300 foot buffer.

Figure 4. Photo of approximately six foot diameter dbh Sitka spruce in THP 1-15-014 DEL.

Figure 5. Photo of approximately seven foot dbh Sitka spruce in Timber Harvesting Plan 1-15-014 DEL.

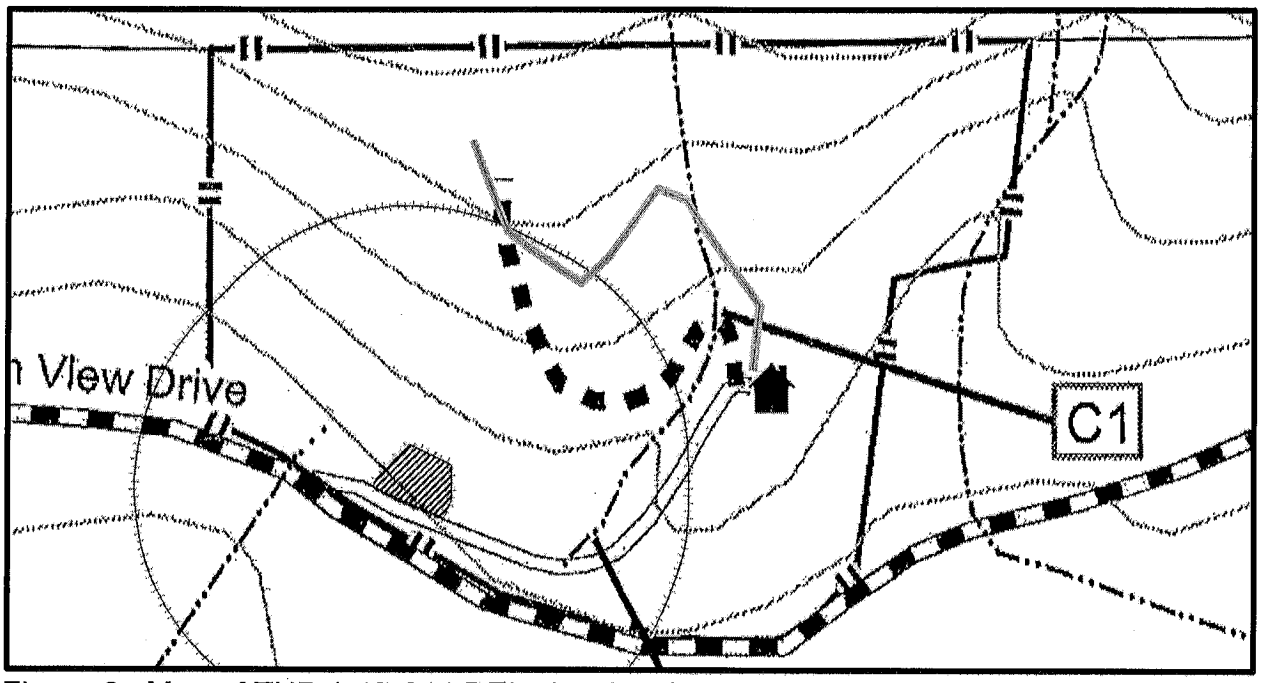


Figure 6. Map of THP 1-15-014 DEL showing the road alignment as drawn in the THP map (thick black dashed line) and an approximation of the actual road alignment based on GPS locations taken during the PHI (solid gray line).

DEPARTMENT OF CONSERVATION

CALIFORNIA GEOLOGICAL SURVEY

2120 Campton Road • Suite E • EUREKA, CALIFORNIA 95503

PHONE 707/441-5745 • **FAX** 707/441-5748 • **TDD** 916 / 324-2555 • **WEBSITE** conservation.ca.gov

TO: Duane Shintaku, Deputy Director for Resource Management
California Department of Forestry and Fire Protection
135 Ridgway Avenue
Santa Rosa, California 95401

UNIT, RPF, PLANSUB, ftp/NEW

FROM: John Oswald, Certified Engineering Geologist
Department of Conservation
California Geological Survey
2120 Campton Road, Suite E
Eureka, California 95503

DATE: March 23, 2015

SUBJECT: ENGINEERING GEOLOGIC REVIEW OF TIMBER HARVESTING PLAN
1-15-014-DEL ("Gatreaux")"

Pre-Harvest Inspection (PHI) date: 3/17/2015

Timber and Timberland Owner:
Mark Gatreaux

Area: 13 ac.

Logging Method: Ground basedl

Silviculture: Clear Cut 13 ac.

Slopes: Gentle ridgetop to moderate with steep (>65%) on streamside slopes.

EHR: Moderate

Participants-Affiliation:
Brian Griesbach –RPF Blair Consulting Forestry.
Mark Gatreaux – Landowner
Jeremy Turner - LTO
Heather Brent – RPF, CALFIRE Inspector
Monty Larson – Env. Sci., CDFW
John Oswald – CEG, CGS

County: Del Norte

USGS Quadrangle: Smith River 7.5 minute

Calwater v 2.2: 1103.110004 Dominie Creek

Legal Description: T18N R1W Sect. 21 HB&M.

Geologic Concerns

Geologic concerns for this Timber Harvesting Plan (THP) include clearcut timber harvesting adjacent to unstable areas immediately upslope of watercourse and use of ground based equipment on potentially unstable areas. There are public roads, private property, and residences located within and adjacent to the plan area.

References:

CALFIRE, 2014, California Forest Practice Rules 2014, Title 14 CCR, Chpt 4, 4.5, and 10 Department of Forestry and Fire Protection.

California Licensed Foresters Association (CLFA), 1999, Guide To Determining The Need for Input From A Licensed Geologist In THP Preparation.

CGS, 1999, North Coast Watersheds Mapping, DMG CD-ROM 99-002.

CGS (California Geological Survey), 2012 in print, Preliminary Geologic Map of Onshore Portions of the Crescent City and Orick 30'x60' Quadrangles, California, M. Delattre and A. Rosinski, compilers, Preliminary geologic Map Available Online at: http://www.conservation.ca.gov/cgs/rghm/rgm/preliminary_geologic_maps.htm.

Cruden, D.M. and Varnes, D.J., 1996, Landslide Types and Processes; in Landslides - Investigation and Mitigation, Special Report 247, Transportation Research Board, National Research Council, Turner, A.K. and Schuster, R.L., eds. National Academy Press, Washington, D.C., pp. 36-75.

Aerial Photographs

Google Earth imagery, 1996, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011 and 2012, accessed through Google Earth Pro.

Geologic Conditions:

The Timber Harvest Plan (THP) area is adjacent to the flood plain of Smith River. The plan is laid out on the lower slopes of an east-west trending ridgeline that defines the northern extent of the Smith River floodplain. Slopes are locally very steeply inclined adjacent to watercourses and broad, low gradient interfluve ridgelines separate tributary watersheds.

Regional geologic mapping by the California Geological Survey (CGS, 1999; CGS, 2012 *in print*) shows the Jurassic to Cretaceous-aged Broken Formation of the Eastern Belt Franciscan Complex underlies the THP area (see Figure 1, Regional Geologic and Geomorphic Map). The Broken Formation is described as massive gray to light brown, sandstone interbedded with dark gray mudstone and minor amounts of conglomerate.

CGS (1999) mapped disrupted ground underlying the proposed harvest unit. CGS (1999 and 2012) also map dormant rockslides adjacent and underlying portions of the proposed units. Some of these areas were reviewed during the PHI and are described below.

Agency Questions to be Addressed at PHI:

17. *Please evaluate the proposed ground-based clearcut operations from a public safety perspective in light of the mapped disrupted ground/earthflow complex in the immediate vicinity, public road at the base of the slope, residence within the plan, and adjacent residence below the east portion of the plan. Are additional mitigations needed? (CGS)*

Response: No evidence of wide spread slope instability was observed in the plan area. The slopes underlying the THP are generally broadly convex to concave in plan view and smooth. An unmapped unstable area was located during the PHI and is associated with a skid trail that crosses the southwestern extent of the proposed harvest unit (Figure 2, Site Map). This landslide does not pose

a threat to public safety or private property because of low gradient slopes and intervening topography between the existing failure and public safety concerns.

A residence is located within the eastern portions of the proposed plan area is separated from the logging area by low gradient slopes and intervening topography that slopes away from the residential structure (Figure 2). Private property and residential structures are also located to the west and east of the proposed plan area. The western side of the proposed plan area shares a property line with a private residence. A skid trail runs along the property line and shows little deformation except for a few cutslope slumps. Most of the topography along the western boundary appears to slope mostly downslope in the direction of the fence line and is low gradient. Along the eastern harvest boundary there is a small strip of timber that may be potentially harvested that is upslope of private property and structures. The slope is less than 40 feet in height and becomes flat at the base of the slope which is also approximately delineates the property line.

A County road defines the southern harvest boundary. The slopes leading to the road along the western half of the proposed harvest unit are generally low gradient or a short steep cutslope. The cutslope increases in height in the eastern portions of the plan area but the vegetation on the steep cutslope is mostly brush and contains a few undeformed conifer near the top of the slope.

During the PHI, the RPF inspector indicated the Forest Practice Rules require consideration of visual impact to adjacent, non-timber production zoned properties. The properties on the west, east, and south appear to be non-timber production zoned parcels. While there are no readily apparent risks to public safety and private property associated with the currently proposed harvest, the RPF may propose additional retention along the western and eastern harvest boundaries to reduce the visual impact of the proposed clearcut silviculture.

Additionally, while the PHI was being conducted, a group of nesting Heron were observed on the southern harvest boundary. The California Department of Fish and Wildlife representative indicated that the nesting area requires a 300 foot wide no harvest, no entry buffer around the nest sites. The actual impact to the proposed harvest along the southern boundary was not fully delineated during the PHI, but combined with the potential visual impact reduction noted above, it will severely limit the harvesting of timber along the southern harvest boundary and moderately impact harvesting along the western and eastern harvest boundaries.

General Observations:

During the PHI, cutslopes and natural exposures revealed light brown to gray fine to medium grained sandstone. The bedrock material was highly sheared with numerous through going fractures. The observed bedrock is consistent with mapping as the Broken Formation of the eastern Belt of the Franciscan Complex.

Mass wasting in the plan area appears to be dominated by debris slides on steep streamside slopes and shallow landslides associated with roads. (CGS 2012 and 1999). During the PHI, we observed several sites along the road and skid trails within the plan area that had cutslope and fillslope failures associated with initial grading and historical use of the particular road involved. The majority of the road failures are dormant-historic in activity status. Under the modern forest practice rules the likelihood of these types of failures is significantly reduced by road drainage requirements, limitations to grading operations, and equipment entry into watercourse buffers.

Site-Specific Observations:

CGS-1: CGS conducted a preconsultation of the proposed harvest unit prior to the PHI. During the preconsultation an unmapped unstable area was located in the western portions of the plan area (Figure 2). A skid trail crosses the toe of the unstable area and appears to either postdate the failure or was re-graded after the failure occurred. The failure has one slightly deformed conifer on the toe of the deposit and located immediately downslope of the skid trail crossing the deposit. The

remainder of the failure is covered with a few hardwoods and dense brush. The deposit rests on moderately inclined slopes about 100 feet upslope of the mapped Class III watercourse. During the PHI, CGS flagged the lateral extents of the unstable area on the skid trail that crossed the unstable area. We also showed the RPF the upslope and downslope extents of the unstable area. We provide recommendations for proposed operations on CGS-1 below.

Summary:

CGS participated on the PHI for the above referenced THP. The RPF appears to have been aware of the geologic framework of the region and appears to have reasonably used the unstable area definitions put forth in the Forest Practice Rules, and California Licensed Forester Association Guidelines (GDRCo., 2006; CALFIRE, 2014; CLFA, 1999). Potential problem sites have been mitigated by avoidance, use of appropriate set-backs, and silviculture modification. The RPF's mitigation measures appear to be reasonable based on our field reconnaissance conducted as a part of the PHI. We have one recommendations for the RPF below under Site Specific Recommendations, CGS-1.

General Recommendations: **NONE**

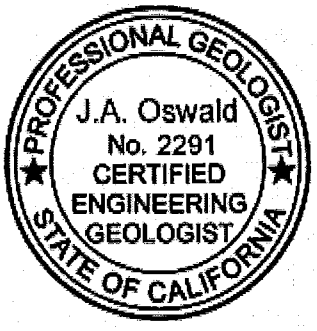
Site-Specific Recommendations:

CGS-1:

- The RPF shall add unstable area CGS-1 to the appropriate plan maps.
- The unstable area shall be enclosed in an equipment limitation zone and skid trail use restricted to the existing skid trail in the lower elevations of the unstable area.
- No grading on the skid trail within the extents of the unstable area shall occur.

Original signed by:

John A. Oswald, CEG 2291
Engineering Geologist

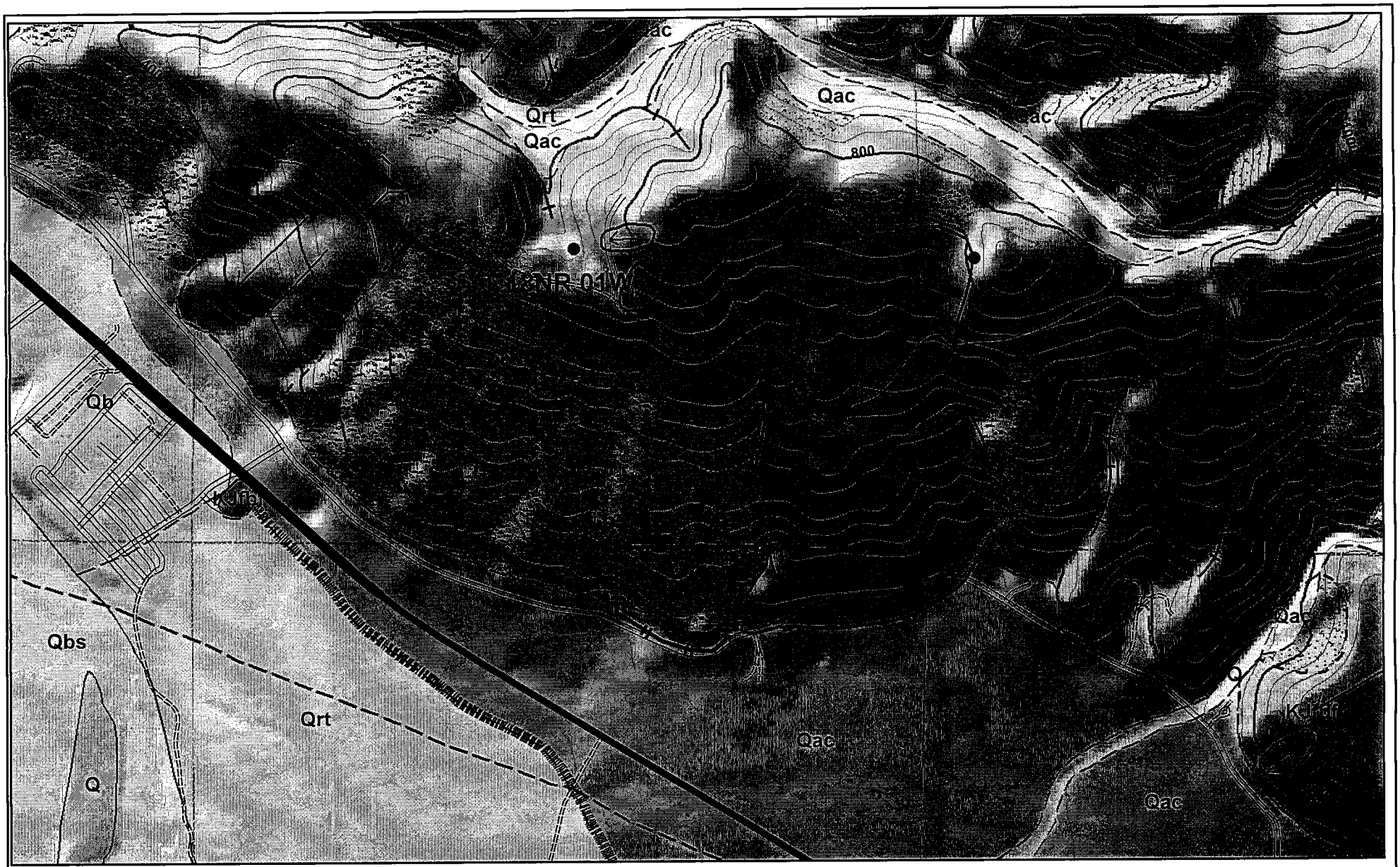


Concur:

Original signed by:

Gerald J. Marshall, CEG 1909
Senior Engineering Geologist

Attachments: Figure 1: Regional Geologic and Geomorphic Map
Figure 2: Site Map



- harvest boundary

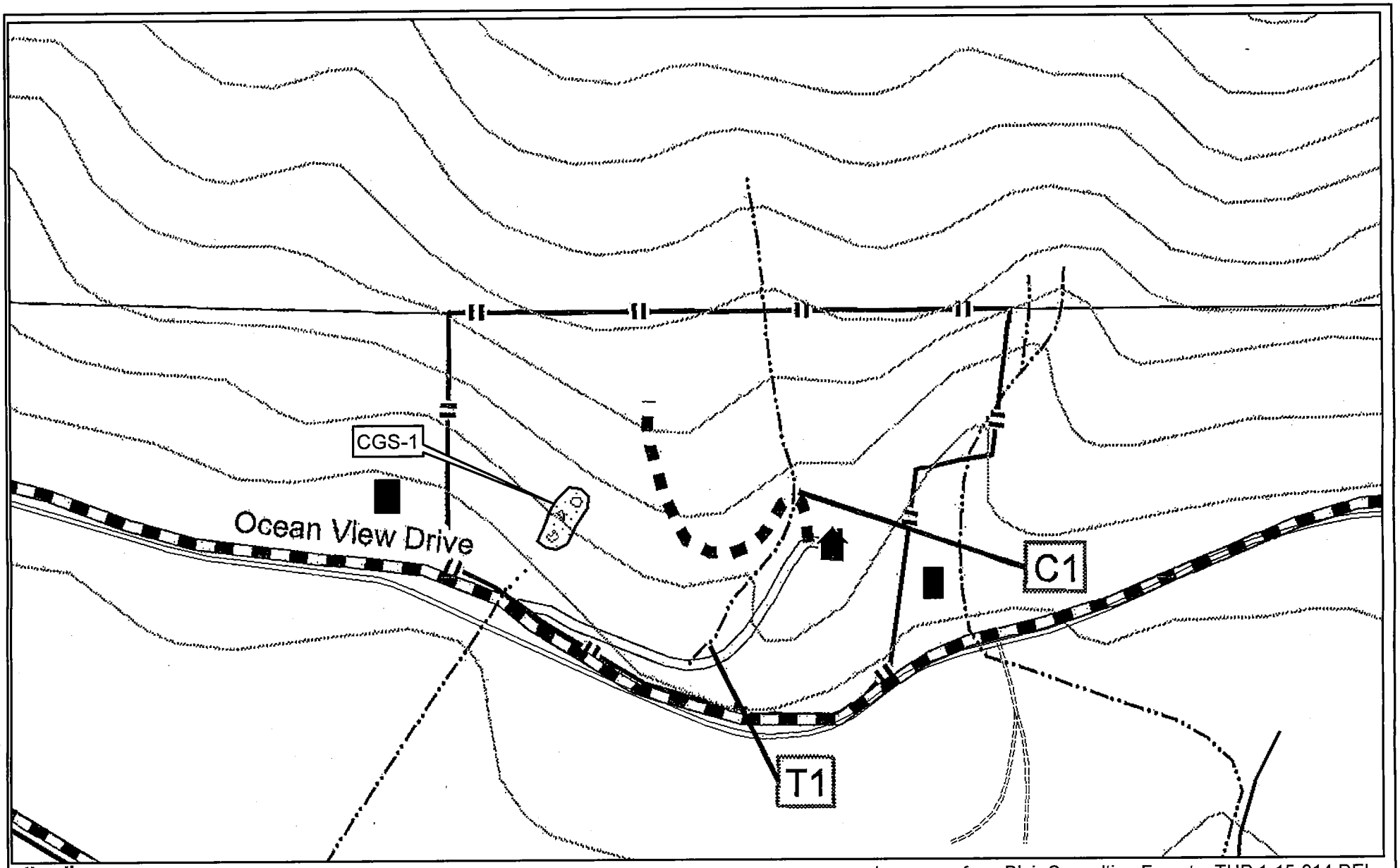
modified from CGS, CD 99-002

N

0 500 1,000 0167 2,000 Feet

contour interval 40 feet

Date: 03/18/15 Scale: 1:12,000 Approved by: jao	**Regional Geologic and Geomorphic Map** **To Accompany** **Engineering Geologic Review** **THP 1-15-014 DEL**	**Figure:** **1**



base map from Blair Consulting Forestry THP 1-15-014 DEL

- harvest boundary

- debris slide, dormant-historic

- residential/private structure

N

0 125 250 0168 500 Feet

contour interval 40 feet

Date: 03/20/15 Scale: 1:3,000 Approved by: jao	**Site Map** **To Accompany** **Engineering Geologic Review** **THP 1-15-014 DEL**	**Figure:** **2**

UNIT, fip/NEW

Santa Rosa Review Team@CALFIRE

From: Brian Griesbach <brian.griesbach@blairforestry.com>
Sent: Wednesday, September 09, 2015 4:02 PM
To: Santa Rosa Review Team@CALFIRE
Cc: Magoon, Mara@CALFIRE; Oswald, John@DOC; monty.larson@cdfw.ca.gov; Brent, Heather@CALFIRE; thomas.blair@blairforestry.com; mmgautreaux@earthlink.net
Subject: Revised First Review Response For THP 1-15-014DEL Gautreaux
Attachments: RPF RTQ Response (2) 1-15-014DEL.pdf

Document attached. Thank you.

BLAIR FORESTRY CONSULTING
Brian Griesbach
PO Box 2517
McKinleyville, CA 95519
Mobile: (707) 672-5814
Brian.Griesbach@BlairForestry.com

0169

SECTION II - PLAN OF TIMBER OPERATIONS

14. SILVICULTURAL METHODS

a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913[933, 953].11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

☒ Clear cut 12 ac. ☒ No Cut WLPZ 1.3 ac

Total acreage 12 ac.: (Explain if total is different than in Item 8) MSP option chosen: (b) ☐ (c) ☒

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

WLPZ acres are no cut.

c. ☐ Yes ☒ No Will evenage regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 14 CCR 913 (933, 953).1 (a) (2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) – (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All trees within the clear cut area are available for harvest unless marked with a blue painted "L" at breast height. Harvest trees within the WLPZ shall be marked with blue paint at approximately breast height, which is visible from at least two sides, including a stump mark below the cut-line.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If yes, how will LTO determine which trees will be harvested or retained? If more than one silvicultural method or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: Sawlogs, veneer logs, chip logs, split products and firewood. Chip logs and slash may be processed on site in the form of "clean chips" or "hog fuel".

f. ☐ Yes ☒ No Are group B species proposed for management?
☐ Yes ☒ No Are group B or non-indigenous A species to be used to meet stocking standards?
☐ Yes ☒ No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment is to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All conifer snags shall be retained, unless they are a safety hazard.

h. ☒ Yes ☐ No Will artificial regeneration be required to meet stocking standards?

Artificial regeneration will be required to meet stocking standards in those areas where the clearcut prescription is proposed. Depending on seedling availability, these areas will be planted 'as early as' the first winter following harvest operations. Only native conifers grown from locally collected seed or seed from the appropriate seed zones and elevations will be used. Seedlings will be planted to attain a minimum point count of 300 per acre. Conifer species to be planted shall be redwood, and or Douglas fir.

i. ☒ Yes ☐ No Will site preparation be used to meet stocking standards? If yes, provide the information required for a site preparation addendum, as per 14 CCR 915.4 (935.4, 955.4).

(a) Site preparation may be required in the clearcut areas to achieve a desirable level of stocking following harvest. Broad cast burning of slash may be used to prepare the site to allow for hand planting of conifer seedlings. If it is determined that the stocking requirements can be met without broadcast burning, no broadcast burning will take place. If burning is deemed necessary, burning operations will be conducted according to the provisions of a project type-burning permit issued by the California Department of Forestry and Fire Protection.

4. Operating Period -

   a. Timber falling may be conducted during the winter period.
   b. Cable harvesting: No limitations specific to winter operations except road and landing use as per 923.6(b)&(c) .
   c. Ground based yarding: Ground based yarding may be conducted during the winter period when soils are not "saturated" as defined below.
   d. Feller-buncher and Loader "shovel" yarding may be conducted during the winter period as described under paragraph (3) above.

5. Erosion Control Facilities Timing – All Tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection or (2) any day with a National Weather Service forecast of a chance of rain of 30% or more, a flash flood warning, or a flash flood watch.

6. Rain, fog, and light snow are forms of precipitation in this area.

7. Ground conditions (soil moisture condition, frozen) – Heavy equipment use shall be done only during dry, rainless periods where soils are not saturated. Saturated soil conditions is defined below.

8. Silvicultural systems – ground cover – The silvicultural system is clear cut. It is the RPF's opinion that the harvest area will have 40% ground cover. Ground cover is defined as all vegetation below eye level (both live and dead), rocks, straw mulch, etc., that may help prevent erosion caused by overland flow and raindrop energy.

9. Operations within the WLPZ of the THP during the winter period will be limited to:

   a. The felling of trees. Trees shall be felled away from a watercourse as per 14 CCR 914.1(a).
   b. Long lining of logs.
   c. Cable yarding.
   d. Emergencies or road maintenance needed to protect water quality.

10. Equipment use limitations – No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.

11. Known unstable areas – No unstable areas were identified during preparation of this THP. If active slide areas are discovered during timber operations, the LTO shall immediately notify the RPF.

12. Logging Roads and landings - 14CCR 923.6(g) Logging roads and landings used for log hauling or other heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions.

    923.5(j) All logging roads and landings used for timber operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow.

    923.5(k) Where logging road or landing construction takes place during the extended wet weather period, drainage facilities and drainage structures shall be installed concurrent with construction operations.

    14CCR 923.4(l), No construction of logging roads or landings shall occur during the winter period.

Definitions of terms used (14 CCR 895.1):

Saturated Soil Conditions – means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Stable Operating Surface - means a road or landing surface that can support vehicular traffic and has a structurally sound road base appropriate for the type, intensity and timing of intended use.

No timber harvest activities during measurable rain events (defined as greater than ¼" in a 24-hour period).

NOTE: "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 925.1, 926.18, 927.1, and 965.5... (a) except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year

of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

24. ROADS AND LANDINGS

Will any roads be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items a through g.
Will any landings be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items h through k:

a.	☐ Yes ☒ No	Will new or reconstructed roads be wider than single lane with turnouts?
b.	☐ Yes ☒ No	Are logging roads proposed in areas of unstable soils or known slide-prone areas?
c.	☐ Yes ☒ No	Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.
d.	☐ Yes ☒ No	Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27 a. will satisfy required documentation.
e.	☐ Yes ☒ No	Will roads longer than 100 feet in length be located on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
f.	☐ Yes ☒ No	Will any roads or watercourse crossings be abandoned?
g.	☐ Yes ☒ No	Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?
h.	☐ Yes ☒ No	Will any landings exceed one half acre in size? If any landing exceeds one quarter acre in size or requires substantial excavation the location must be shown on the map.
i.	☐ Yes ☒ No	Are any landings proposed in areas of unstable soils or known slide prone areas?
j.	☐ Yes ☒ No	Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
k.	☐ Yes ☒ No	Will any landings be abandoned?

25. If any section in "item 24" above is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance, and/or abandonment of roads or landings, as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

Road Construction:

14CCR 1034(o) The RPF is proposing seasonal road construction for approximately 800' using an existing skid road. Although a prism is in existence this skid road is not suitable for the hauling of logs. Construction is proposed to improve the existing skid road by widening to allow for ingress and egress of log trucks. See THP Map for the location of road construction.

14CCR 916.9 (n) Bare mineral soil exceeding 100 contiguous square feet created from operations within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, shall be treated. Soil stabilization treatment measure within the WLPZ may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers. See Item 18 for more information regarding 916.9(n).

14CCR 923.1(g) The proposed road construction utilizes existing skid trail so log trucks may access portions of the plan. Landing construction associated with this road segment will allow for the landing and loading of logs in locations that prevent excessive skidding distances. No mitigation measures are needed to minimize potential adverse impacts to watersheds from the constructed road grade and associated landings.

14CCR 923.5

(a) All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.

(b) Drainage facilities and structures shall be installed along all logging roads and all landings that are used for timber operations in sufficient number to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

14CCR 923.6(h)(3) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance 923.6(b).

14CCR 923.7(c) During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of the road surface materials by methods including, but not limited to, rocking, watering, paving, or installing commercial erosion control devices to manufacturer's specifications.

14CCR 923.4(m) On slopes greater than 50 percent for greater than 100 lineal feet, fills greater than four feet in vertical height at the outside shoulder of the logging road or landing shall be:

(1) Constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift.
(2) Compacted in approximately one-foot lifts from the toe to the finished grade or retained by an engineered structure.

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14CCR 923.1(e) Significant existing or potential erosion sites do not exist within the plan area.

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

a. ☒ Yes ☐ No Are there any watercourse or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, list the class, WLPZ or ELZ width, and protective measures determined from Table I and/or 14 CCR 916 (936, 956) .4 (c) of the WLPZ rules for each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

b. ☒ Yes ☐ No Are there any watercourse crossings that require mapping per 14 CCR 1034(x)(7)?

14CCR 923.9(e) Watercourse crossings associated with this THP have been listed in the Work Order (with proposed culvert diameters) within Item 38 and are shown on the THP Map. These sites have been identified in the field (923.9(e)(1).

14CCR 923.9(l) Rock used to stabilize the outlets of crossings shall include a base of at least size 12" rock, and be adequately sized to resist mobilization.

c. ☒ Yes ☐ No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert (may be shown on map).

Crossing shall be installed to handle any surface flow by utilization of a flow through fill (clean rock or logs) with fabric or a temporary pipe that is of sufficient size (min. 6" x 15') to handle flow during operations.

d. ☒ Yes ☐ No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If yes, attach the 1603 Addendum below or at the end of this Section II; provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures; as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1603 Agreements and THP Documentation".

☐ Yes ☒ No Have or will the activities conducted under this THP that are subject to Fish and Game Code Section 1600 et seq. be included in a separate notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

☒ Yes ☐ No Will the submittal of this THP provide notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

LTO instructions are found in the Work Order for Road Repair report for watercourse crossings, found in THP Item 38. A DFG 1611 agreement process addendum and an analysis are included in the Plan Addendum to Item 26d in THP Section III.

Watercourse Protection Measures:

This THP is within the Coastal Anadromy Zone. On the ground identification of the WLPZ shall be completed prior to PHI. No timber harvesting shall occur within the WLPZ.

14CCR 916(b)(1) & (2): Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

14CCR 916(d): This THP fully describes the type and location of measures needed to fully offset sediment loading, thermal loading and potential significant adverse watershed effects from the proposed operations. These measures are numerous and described in various locations within Section II of the THP. Examples of such measures include no harvesting in the WLPZ, limited size of project and soil stabilization measures in Section II. The LTO will be responsible for implementing each of these measures. The timber harvest unit has been configured in such a manner that impacts to sediment loading and thermal loading are avoided to the fullest extent feasible. The strategy of avoidance of potential risks to water resources will result in operations that are not likely to result in adverse impacts to water quality, including sediment loading or thermal loading.

14CCR 916.9 (e): Channel Zone

(1) There shall be no timber operations within the channel zone with the following exceptions:
   (a) Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.
   (b) Class III watercourses consistent with 14CCR 916.9 (h)(7): Retain all trees in the Class III ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control. Merchantable trees within the channel zone of Class III watercourses may be harvested with the following exceptions:
      - Within over-steepened headwall swales.
      - When located at the watercourse slope transition point and an obvious increase in downcutting of the watercourse channel is occurring below this point.
      - On unstable areas where the tree is stable and contributing to the stability of the channel.
      - Where soil has accumulated and is perched upslope of the channel tree.
      - When a tree is in the channel (or close proximity) and not just an individual root. In other words, give a weighted average to the tree's value in the channel based on proximity.

(2) In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the pre-harvest inspection.

14CCR 916.9 (u): Salvage logging shall not occur within a WLPZ.

Water Drafting: Water for dust abatement (if necessary) shall be from an offsite delivered source. Water drafting may occur onsite when water is collected in tanks from springs, which are not within the channel zone of natural watercourses. Since no drafting of water within a channel zone of a natural watercourse or lake is proposed, no description is required per 14CCR 923.7(l)(2).

Watercourse and Lake Protection Zone Widths.

	Class II-S*	Class III (ELZ)
Slope Class (%)	Width (feet)	Width (feet)
<30	50	30
30-50	75	50
>50	100	50

* Core and Inner Zones apply to Class II watercourses within this THP, see discussion in Item 26

Class II Watercourses

(1) The WLPZ shall be flagged prior to the PHI.

(2) When there is a reasonable expectation that slash, debris, soil, or other material resulting from timber operations, falling, or associated activities, will be deposited in Class II waters below the watercourse transition line, those harvest activities shall be deferred until equipment is available for its removal.

(3) Accidental depositions of soil or other debris below the watercourse transition line shall be removed immediately after the deposition.

(4) Equipment operations within the WLPZ shall be limited to existing roads and designated skid trail crossings.

(5) At least 75% surface cover and undisturbed area shall be retained within the WLPZ.

Class III Watercourses: The protection measures for Class III waters shall prevent the degradation of downstream beneficial uses of water and shall be determined on a site-specific basis. The following protection measures apply:

(1) Establish a 30 foot wide ELZ on both sides of the watercourse for slopes less than 30% and a 50-foot ELZ where side slopes are greater than 30%. The ELZ shall be measured from the watercourse transition line. Within the ELZ the following shall apply:

(a) No new construction of tractor roads permitted;
(b) No ground based equipment on slopes greater than 50%.
(c) Ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse or to the use of feller-bunchers or shovel yarding.
(d) Retain all pre-existing large wood on the ground that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.
(e) Retain all pre-existing down wood and debris in the channel zone.
(f) Retain hardwoods, where feasible.
(g) Retain all snags (except as required for safety).
(h) Retain all countable trees needed to achieve resource conservation standards in 14 CCR 912.7.
(i) Retain all trees that show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.
(j) Exceptions pursuant to 14 CCR 916.9, [936.9, 956.9], subsections (e)(1)(A)-(F) are permitted in any ELZ and channel zone.

(2) 916.4(c)(3): Soil deposited during timber operations in a Class III watercourse other than at 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. Temporary crossings shall be removed before the winter period.

14CCR 923.9:

(g) All culverts used for new and replacement logging road watercourse crossings shall be installed at or as close as practical and feasible to the natural watercourse grade. Culverts shall be installed in alignment with the watercourse channel to the extent feasible, and of the appropriate length to prevent fill erosion.

(h) Logging road watercourse crossings shall not discharge water onto erodible fill or other erodible material without the installation of energy dissipaters and other necessary protective structures.

(i) Fills for constructed and reconstructed logging road watercourse crossings shall be thoroughly compacted in approximately one-foot lifts during installation. The face of crossing fills shall be no greater than 65 percent (1.5:1, horizontal to vertical). Excavated material and cut banks resulting from construction or reconstruction which has access to a watercourse shall be sloped back from the channel to prevent slumping, to minimize soil erosion, and to prevent significant sediment discharge.

(j) Critical dips shall be incorporated into the construction or reconstruction of logging road watercourse crossings utilizing culverts, except where diversion of overflow is addressed by other methods stated in the plan.

(k) Watercourse crossings and associated fills and approaches shall be constructed and maintained to prevent diversion of stream overflow down the road, and to minimize fill erosion should the drainage structure become obstructed. Methods to mitigate or address diversion of stream overflow at logging road watercourse crossings shall be stated in the plan.

14CCR 923.9(p) All logging road watercourse crossings that are proposed by the plan submitter to be removed, including temporary crossings and those along abandoned or deactivated roads, shall be removed as described in the plan and shall apply the following standards:

(1) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel as observed upstream and downstream of the logging road watercourse crossing to be removed.

(2) The excavated material and any resulting cut bank shall be no greater than 65 percent (1.5:1, horizontal to vertical) from the outside edge of the constructed channel to prevent slumping, to minimize soil erosion and sediment transport, and to prevent significant sediment discharge. Exposed soil located between the watercourse crossing and the nearest adjacent drainage facility or hydrologic divide, whichever is closer, including cut banks and excavated material, shall be stabilized by seeding, mulching, rock armoring, replanting, or other suitable treatment to prevent soil erosion and significant sediment discharge.

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3) Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an Activity Center during the life of the timber operations.

VII. Road Use

To avoid take of NSO from noise disturbance, road use within 0.25 mile (1,320 feet) of a NSO Activity Center during the breeding season is prohibited until **July 10**, unless:

1) Non-nesting, or nesting failure at the Activity Center has been determined by a Activity Center Search (2011 NSO Protocol) conducted on or after May 15th, or;

2) The Activity Center is within 165 feet of major highway that typically has continuous traffic year around (Hwy 1, 36, 101, 128, 299, etc.) and the appurtenant road is not within 165 feet of the Activity Center.

3) After **July 9th**, until the end of the breeding season road use within 0.25 mile is restricted to existing road use, maintenance and map point work.

VIII. Timber Harvest Operations

A 0.25 mile seasonal restriction on timber operations (except for road use after **July 9th**) applies to every known NSO Activity Center during the breeding season, unless it is determined via a site monitoring visit, "Activity Center Search" (2011 NSO Protocol), that NSO are not nesting, or nesting failure has occurred. If it cannot be determined whether NSO are nesting, or nesting failure cannot be determined, the 0.25 mile seasonal restriction stays in effect for timber operations until July 31st.

For all known Activity Centers, timber operations should adhere to the following recommendations:

1) Within the 100-acre Core Area polygon of an NSO Activity Center:

   a) Outside the breeding season, limited timber operations (i.e., road use and maintenance, map point work, tail-hold placement, use of existing skid roads, and loading) may be conducted, provided no trees >11 inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.

   b) During the NSO breeding season, timber operations (including use of roads before July 9th), are not allowed within the 100-acre Core Area polygon, except as allowed in subsections 4 and 5, below.

2) Timber Operations outside the 100-acre Core Area polygon, but within 0.25 mile of an NSO Activity Center:

   a) Outside the breeding season, timber operations may be conducted.
   b) During the breeding season, no timber operations should proceed unless protocol surveys do not detect nesting NSOs.

3) For all NSO ACs, prior to May 15th (until the required May 15 or later survey is completed):

   a) Timber operations (except helicopter yarding or staging) may be conducted only on those THP areas >0.25 mile from the Activity Center.
   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

4) For NSO Activity Centers where reproductive status has been determined to be non-nesting or failed nesting:

   a) Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre Core Area Polygon of the Activity Center Provided no trees> inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.
   Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within 1000 ft. of the Activity Center.

5) For NSO Activity Center, where reproductive status has been determined to be nesting:

   a) For Activity Centers where fledging status has not been determined, timber operations may be conducted only on those THP areas that are >.25 mile from the Activity Center until the end of the breeding season.

   Exception: The 0.25 mile disturbance buffer may be reduced where topography, such as ridgelines, will provide a similar noise disturbance protection.

   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

6) For NSO Activity Centers, where fledging status has been determined (either nest failure or fledglings have left the Core Area):

Gautreaux Work Order for Road Repair

Site	C1			1600	X	ECP	
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Skid trail	II	none	24"				
Site Description	Existing temporary skid trail crossing to be upgraded to a permanent , seasonal road crossing.						
Treatment	Install permanent culvert. of sufficient length to extend beyond the fillslope. Fill slopes exceeding 1½ :1 shall be rock armored. Road running surface shall be hydrologically disconnected. Road running surface within the WLPZ shall be rocked. Disturbed soil within the WLPZ shall be seeded and mulched or slash packed. Erosion control measures shall be in place prior to October 15th.						

Disturbed Area (sq.ft.)	Final Site State (Perm/Temp)	Estimated Removed Fill Volume (cu. yards)	Estimated Added Fill Volume (cu. yards)	Fill Material Added	Disturbed Vegetation
2000	Permanent	10	200	Native	huckleberry, fern brush, alder trees

Site	T1			1600	X	ECP	
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Skid trail	II	NA	NA				
Site Description	Existing skid trail crossing						
Treatment	Install temp crossing.						

Disturbed Area (sq.ft.)	Final Site State (Perm/Temp)	Estimated Removed Fill Volume (cu. yards)	Estimated Added Fill Volume (cu. yards)	Fill Material Added	Disturbed Vegetation
1500	Temp	2	2	Native, Rock	Grasses, brush

DIRECTOR OF FORESTRY AND FIRE PROTECTION

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

By: _____ _____
(Signature) (Date)

_____ _____
(Printed Name) (Title)

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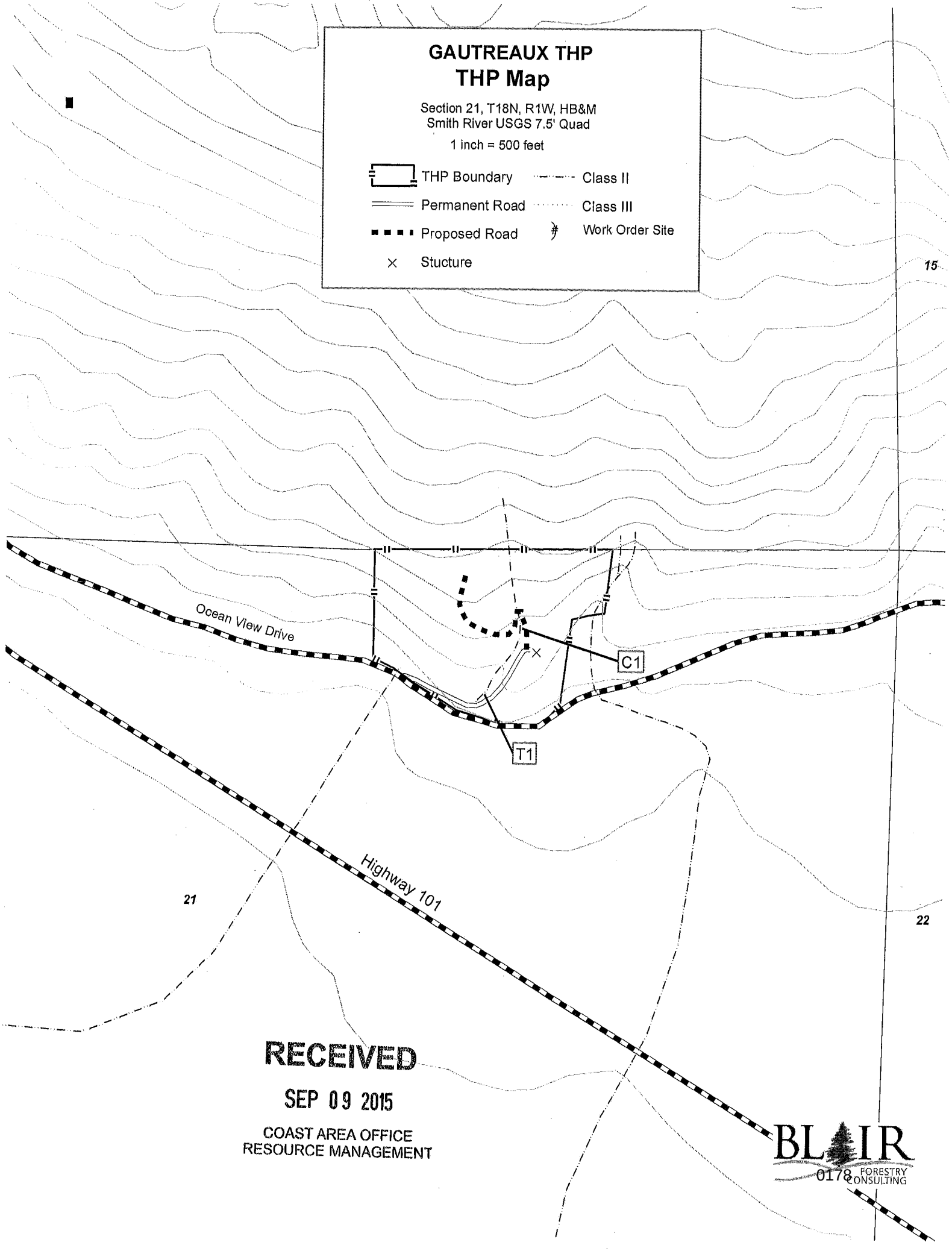

BLAIR FORESTRY & CONSULTING

Plan Addendum to Item 26

WATERCOURSE AND LAKE PROTECTION

A field examination for watercourses which contain Class I, II, III, or IV waters was conducted as per 14 CCR 916.4 & 916.9 (f)(1)(E). The examination evaluated areas near, and areas with the potential to directly impact watercourses for sensitive conditions including, but not limited to, existing and proposed roads, skid trails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, changeable channels, overflow channels, flood prone areas, and riparian zones where values set forth in 14 CCR 916.4 may be impaired. The examination considered these conditions, and those measures needed to maintain, and restore to the extent feasible, the functions set forth in 14 CCR 916.4, when proposing RMZ/EEZ widths and protection measures. The plan identifies such conditions, including where they may interact with proposed timber operations, that individually or cumulatively significantly and adversely affect the beneficial uses of water, and prescribed measures to protect and restore to the extent feasible, the beneficial uses of water (see the Cumulative Impact Assessment in Section IV).

This plan is located within the Coast Forest District of the Coastal Anadromy Zone. There are Class II and III watercourses within the project area. These watercourses flow to Smith River. The project is located within the Dominie Creek watershed. The Dominie Creek Planning Watershed is listed as a Coho watershed (DFG, April 2009).

All Class II watercourses within and adjacent to the plan area were evaluated, per 916.9(g), for the characteristics of a Class II-L watercourse. These characteristics include either: (1) a contributing drainage area of ≥100 acres in the Coast Forest District as measured from the confluence of the receiving Class I watercourse; or (2) an average active channel width of 5 feet or greater. The project area is beyond 1000' of the Class I confluence therefore Class II-L protection measures do not apply. The THP Map in Section II shows the location of all watercourses within the plan area.

See THP Section II, Item 26 for watercourse protection measures.

A combination of the rules, the plan, and mitigation measures provides protection for the following:

a. water temperature control
b. streambed and flow modification by large woody debris
c. filtration of organic and inorganic material
d. upslope stability
e. bank and channel stabilization
f. spawning and rearing habitat for salmonids
g. vegetation structure diversity for fish and riparian wildlife habitat, possibly including but not limited to:
    I. vertical diversity
    II. migration corridor
    III. nesting, roosting, and escape
    IV. food abundance
    V. microclimate modification
    VI. snags
    VII. surface cover

14CCR 916.9(d)(1) requires that "The plan shall fully describe: (A) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and (B) the person(s) responsible for the implementation of each measure, if other than the timber operator.

Measures are contained in Section II of the THP that will meet the intent for offsetting sediment loading, thermal loading, and potential significant adverse watershed effects. Other than the small amount of WLPZ harvesting, other measures are included in Item 18, Item 23, and Item 26 of Section II. All operational measures stated in Section II of the THP shall be implemented by the LTO. Maintenance of erosion control structures and facilities following the completion of operations shall be assumed by the timberland owner.

14CCR 916.9 (c) The recently updated Anadromous Salmonid Protection (ASP) rules are prescriptive in nature and have specific protection measures that were designed to accomplish the objectives of 14CCR 916.9(c). The plan does not include any deviations from the ASP rules and there are no special circumstances that would require additional protection measures to accomplish the stated objectives.

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Plan Addendum to Item 26d

DFG 1600 permit process analysis; activity/facility description

Notification Information List Pursuant to
Fish and Game Code Section **1611**
Gautreaux THP
Version 20080819

1. Basic data:
   a. The name, address, and telephone number of the:

Applicant:	**Mark Gautreaux 315 Amanda Lane, Crescent City CA 95531**
Operator:	**To be amended**
Contact Person:	**Brian Griesbach , P.O. Box 2517, McKinleyville, CA 95519 (707) 672-5814**
Property Owner:	**Same as Applicant**

b. The name of each lake and the name and watercourse classification of each stream the lake or streambed alteration activities will affect, including the nearest downstream watercourse or water body.

Un-named Class II and III tributaries to Smith River.

c. Road sites; township, range and section numbers; watercourse classification; present condition; proposed work of each lake and stream encroachment; and project description measures.

T18N, R1W, Section 21, HBM. See THP Map and Work Order under Item 38, Section II for present condition; proposed work of each lake and stream encroachment; and project description measures (below).

d. A single map or diagram clearly showing all of the following:
   i. All lake and stream encroachments, with a number or other appropriate identifying label.
   ii. All roads, with a number or other appropriate identifying label
   ii. All watercourse classifications (i.e., Class I, II, or III).
   iii. Access from a named public road.
   iv. A north arrow and scale.

See THP Map and road work order at the end of THP Section II order for watercourse classifications associated with crossings.

e. Description of the encroachment sites, existing and proposed culvert diameters, area to be disturbed, proposed conditions upon completion, estimated volumes to be removed and/or added to crossing, description of fill materials and disturbed vegetation.

See THP Map and road work order at the end of THP Section II

f. A description of the fish and wildlife and botanical resources the work could adversely affect, including riparian resources and special status species (i.e., species listed under the California Endangered Species Act ("CESA") and/or the federal Endangered Species Act ("ESA"), species fully protected under state law, and/or species of special concern). If the work could adversely affect any listed species, the applicant should indicate whether consultation under CESA or ESA has Commenced and if so, the current status of the consultation. Applicant should also provide the biological opinion, as applicable.

See THP Item 32, Section IV: Cumulative Impacts Assessment. A botany survey will be conducted prior to operations.

g. Indicate if the work takes place in, adjacent to, or near a river that has been designated as "wild and scenic" under state or federal law.

No

2. Information about each lake and stream encroachment, including the following:
   a. Construction plans, including specific details, cross sections, and dimensions.

See THP Map and road work order at the end of THP Section II

b. If water will be present and diversion of flow around the work site is necessary, the volume of water to be diverted and the method of diversion.

There is potential for water to be present at encroachment sites. If water is present at any site when work is proposed, water will be diverted around or through the site with pipes or portable pumps and returned back to the channel downstream of the work site. The flow shall be diverted only when the construction of the diversion is completed. Any temporary artificial obstruction shall be built from material which will cause little or no siltation (i.e. sandbags, straw bales, rock or plastic).

c. If water drafting is proposed, provide drafting site information (i.e. estimated volume, drafting rate, timing, etc.). Indicate if the activity will be done pursuant to a water right application or permit.

Water drafting shall occur from an offsite delivered source.

d. The materials (e.g., soil, sand, gravel, ¼- to ½-ton rip-rap, large wood, etc.) and volumes that will be used for and/or removed from the lake or stream encroachment, the dimensions of the area to be excavated and the dimensions of the area to be filled.

See THP Map and road work order at the end of THP Section II

present on this plan are well-drained soils. The EHR was calculated to be moderate for the entire plan area.

Soil compaction is likely to occur when the soil is saturated and subject to use by heavy equipment. The restrictions on operations during the wet weather conditions as specified in the Winter Period Plan will prohibit ground-based operations on these soils during periods of high soil moisture. 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.

Operation of this THP would cause minimal significant negative impacts to the soil productivity on the project area due to a **loss of growing space**. Existing roads shall be used to their fullest to best access the timber with the least impact to the resources including soil. Application of the Forest Practice rules, and reusing existing road, landing, and skidtrail locations shall combine to lessen any potential impacts to soil productivity.

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 the RPF's opinion that no negative impacts will incur.

C. Biological Resources

The Biological Assessment Area (BAA) is used to analyze and consider possible effects on any number of vegetative, aquatic, terrestrial and avian species, mainly in relation to forest seral stage distribution. This area was chosen using major breaks in the landscape such as ridges and watercourses that appear to logically establish this project's area of influence. The Biological Assessment Area (BAA) is the same as the Watershed Assessment Area (See Cumulative Effects Map).

Factors to consider in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or species of special concern (as described in the Forest Practice Rules) that may be directly or indirectly affected by project activities.

The methodology used to identify the presence, if any, of listed species within the BAA is as follows:

1. Scoping
   a) Search Natural Diversity Database (NDDB) for occurrence within the Assessment Area, including the quad that the plan is located on and adjoining quads.
   b) Evaluated the habitat requirements of species identified above that "could" occur.
   c) Assess the impact that the proposed project would have on species likely to occur within the assessment area and within the plan area.
2. Surveys
   a) If the proposed project would have potential significant negative impacts on a listed species, a survey was conducted to determine presence or absence.
3. Mitigations
   a) Where presence is determined and significant adverse effects are likely, mitigations to substantially lessen or avoid these impacts are developed.

A list of the rare, threatened or endangered species and other species of concern which may occur within the BAA, and which may be affected by timber operations is provided in the THP in Section III for Plan Addendum to Item 32. The list provides a description of the potential rare, threatened or endangered species, their preferred habitat, the potential presence of habitat within the BAA, and other pertinent information as necessary for each species of concern. Based upon database inquiries and known locations of sensitive species, the proposed project, as mitigated, is not expected to significantly impact any known sensitive species that occur within the BAA.

Because of the assortment of ownerships within the BAA, land management objectives and the consideration given to biological resources vary greatly. The ownerships range from lands owned by the public whereby changes in vegetation vary very little over time to industrial timber ownerships where modifications in vegetation are made more frequently, but only after taking steps to protect existing biological resources. In addition, there are small and large ownerships of agricultural lands as well as numerous small ownerships of residential properties. For the most part, the timberland within the BAA appear to be functional in terms of wildlife habitat because of the diversity of ages and the presence of certain elements such as hardwood, snags, and large woody debris.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and the biological assessment area (e.g. loss of oaks creating a forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas).

A search of the CNDDB/Spotted Owl Viewer returned no (0) known Northern Spotted Owl activity centers present within 0.7 miles of the proposed THP boundary. This project will not have a significant cumulative impact on the Northern Spotted Owls within the assessment area. The THP is designed to utilized management that will maintain at least foraging structure throughout the life of the THP. Seasonal restrictions have also been incorporated in to the THP that are designed to reduce impacts to the NSO during critical periods. No timber operations shall occur until such time as all surveys (which are conducted in conformance with the USFWS approved NSO survey protocols) for the current, or immediately preceding, survey period are complete; the results have been provided to CAL FIRE;

D. Recreation Resources

The recreational assessment area is generally the area of the THP plus 300 feet. This is specified in the Board of Forestry, Technical Rule Addendum No. 2. This area is private property, and primarily pastureland and forestland, and the primary activities that occur are grazing, agriculture and timber management. The proposed plan is on private property that is not open to the public for recreation. Road access is controlled and there are no developed recreational sites on or near the plan area.

E. Visual Resources Area

The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. At distances of greater than 3 miles from viewing points, activities are not easily discernible and will be less significant. Due to the aspect of the plan area, this project will be visible to nearby travelers along Highway 101. The project may also be visible to some residents of Smith River, which is approximately 2 miles away. A majority of the plan area will have sub-merchantable timber as well as some hardwood cover remaining which will lessen the visual impacts of the evenaged harvest. These remaining trees, as well as sprouts and planted seedlings will rapidly re-vegetate the hillside and quickly regain a forested appearance.

As timber harvesting is a common occurrence in the assessment area, the plan area is small in scale, and the harvested area will retain some small trees and hardwoods, and be reforested, no long-term significant impacts to visual resources are expected.

The plan area is within 200 feet of Ocean View Drive, a county road. 913.1(a)(6) was considered. The plan area is relatively remote, with little traffic occurring on the county road. In addition, timber harvesting within the watershed is common and clearly visible from the county roads. Also, as discussed above, the harvested area is expected to retain sub-merchantable timber and as well as some hardwood cover. No significant visual effect is anticipated with the harvesting of this plan.

F. Traffic Assessment

The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. Ocean View Drive, Lopez Road, and US Highway 101 will be the primary public roads used. All public roads to be used to transport wood products have been historically used for this purpose, with no known past or existing traffic, safety, or maintenance problems.

The proposed project will not have a reasonable potential to cause or add to significant cumulative negative impacts to vehicular traffic within the assessment area.

G. Climate Change Assessment

a. Climate Change in General.

The scientific literature on the phenomenon of global warming, and impact of greenhouse gas emissions on the State of California, as well as to the remainder of the Earth, is growing, conflicted, and politically charged. Consensus is growing on the occurrence of global warming, although there is considerable debate regarding the causes (Bast and Taylor, 2007; Ferguson, 2006). The Stern Review of the Economics of Climate Change (2006) was a comprehensive report commissioned by the British government, and provided projections of economic cost based on assumptions of impacts. Studies of past and present temperatures show a natural variability of Earth's climate. Past climates were as warm as (and even warmer than) what we currently experience, and such warm periods were typically, relatively short-lived respites from ice-age conditions that dominated the past half-million years (Ferguson, 2006).

Regardless of the aforementioned issue, the State of California has recognized climate change and global warming as a threat to health, safety, and the economy. Global warming could result in reductions in water supply due to changes in snow pack levels, adverse health impacts from increases in air pollution, adverse impacts on agriculture caused by changes in quantity and quality of water supplies and significant increases in diseases and pests, increased risk of catastrophic wildfires, and significant impacts to consumers and businesses due to increased costs of goods and services (AB 1493, 2002). In response, the State of California has enacted legislation and policies designed to reduce greenhouse gas emissions and to increase energy efficiency (AB 1493, 2002; AB 32, 2006; Gov. Schwarzenegger Executive Order S-3-05). The Executive Order established greenhouse gas emission targets using 1990 thresholds, and established the California Climate Action Team to coordinate the State's efforts to reduce and report on progress of those efforts and on impacts of global warming to the State.

Carbon dioxide (CO_2) is considered the greenhouse gas (GHG) that has the greatest effect on the dynamic of global warming due to the fact that it composes the vast majority of the releases by human activities. There are two basic ways carbon emissions are reduced. First is efficiency, where technology or conservation reduces carbon emissions through the use of less energy (electricity, fuel, heat, etc.) to accomplish an activity. Second is storage, which can be accomplished through geologic or terrestrial sequestration.

Forest activities can result in emissions through harvesting, wildfire, pest mortality and other natural and anthropogenic events. However, forestry is a net sink for carbon, the primary greenhouse gas. Plants absorb CO_2 from the air, and use the carbon as a building block of plant tissue through the process of photosynthesis. Worldwide forests store approximately 2,000 billion tons (Gt) +/- 500 of CO_2 (National Energy Technology Laboratory, 2000). The most recent draft Greenhouse Gas Inventory shows the forestry sector to be a net sink with emissions of 6.1 MMT CO_2 EQ. and emissions reductions of 21 MMT CO_2 EQ (Bemis, 2006).

Gautreaux THP - Evenaged Silviculture
Project Carbon Accounting: Inventory, Growth, and Harvest

This worksheet addresses the sequestation and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods	Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)	Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	Step 0. Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	Step 1. Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.	Step 2. Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	Step 3. Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest.	Step 4. Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1.	Step 5. Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available.	Step 6. Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available.	Step 7. Enter estimated hardwood basal area harvested/treated per acre
Douglas-fir	0%	1.675	14.38							
Redwood	0%	1.675	13.42							
Pines	0%	2.254	12.14							
True firs	100%	2.254	11.18							
Hardwoods		2.214	11.76							
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2,204							
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.89								
	Hardwoods	1.95								
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	0.84								
	Hardwoods	0.88								
				0	150	5	700	0.3	40	3
				60	52	20	700	0.3	45	15
				120	49	23	700	0.3	45	18
				180	46	23	700	0.3	0	0
				0	0	0	0	0	0	0
				0	0	0	0	0	0	0
				0	0	0	0	0	0	0
				0	0	0	0	0	0	0
				0	0	0	0	0	0	0
				0	0	0	0	0	0	0

User must enter harvest cycles to 100 years and/or at least three entry cycles.

Sitka Spruce is in the Pinacea family, therefore any forest type listed (besides redwood) most closey matches this conifer species

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	Step 8. Enter the value (in bold) for each harvest cycel that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	Computed: MBF * Conifer Multiplier from Step 0.	Computed: BA*Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0.	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Heavy- 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre) Medium - >25% <50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). Light - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). None - No site preparation is conducted.	
0	94	1	346	3	Medium	-1.2
60	98	3	360	11	Medium	-1.2
120	92	3	339	12	Medium	-1.2
180	87	3	318	12	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
	Difference between ending stocks and beginning stocks		-28	9.66	Sum of emissions (Metric Tonnes CO2e) per acre	-3.6

Gautreaux THP - Evenaged Silviculture
Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	Assumption: ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested.	MBF (all species) Yarded Delivered to Landing	Assumption:(((35 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((.16 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not.	Assumption: Round Trip Hours/Load average (from below, to compute the mbf/hour) /(((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	Step 9. Enter the estimated volume delivered to the landing in a day.	Step 10. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Yarders and Loaders CO2 equivalent/mbf (metric tonnes)	Computed. Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	Step 11. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Tractor and skidder CO2 equivalent/mbf (metric tonnes)	Computed. Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	Step 12. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Helicopter CO2 equivalent/mbf (metric tonnes)	Computed. Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	Computed. Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	Steps 13 and 14 below		Computed. Estimated Metric Tonnes CO2e per harvested acre for each harvesting period.
0	(0.09)	20	1	-0.02	-0.68	1	-0.03	-1.06	0	0.00	0.00	-0.06	Step 13. Enter Estimated Load Average: MBF/Truck	4.5	-0.843755102
60	(0.10)	20	1	-0.02	-0.76	1	-0.03	-1.20	0	0.00	0.00	-0.07			-0.94922449
120	(0.10)	20	1	-0.02	-0.76	1	-0.03	-1.20	0	0.00	0.00	-0.07			-0.94922449
180	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00	Step 14. Enter Estimated Round Trip Haul in Hours	6	0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	-0.29				-2.20			-3.46			0.00	-0.19			-2.74

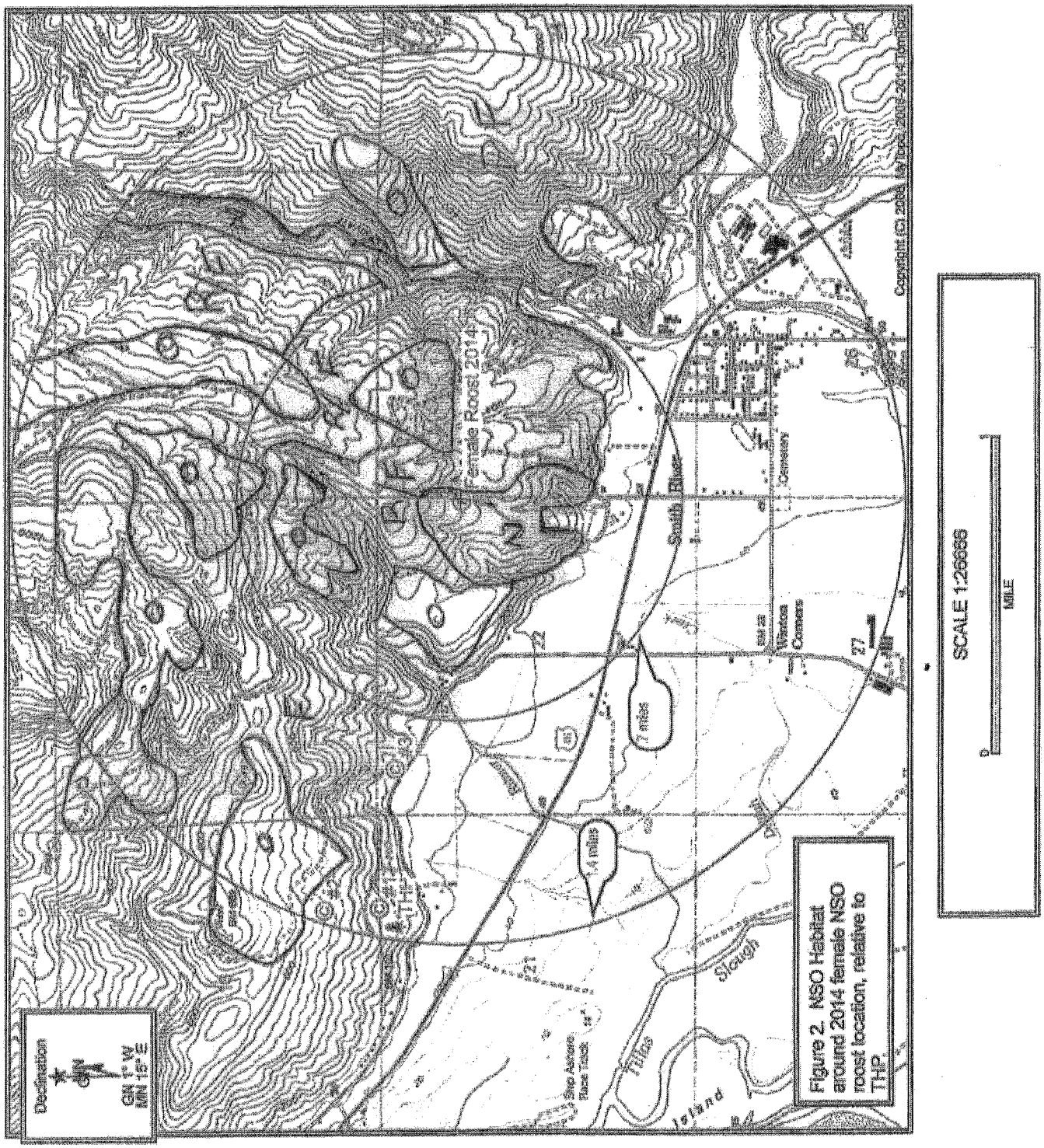
Gautreaux THP - Evenaged Silviculture

Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	**Assumption.** 20 kw/hour (mill energy use) /(40mbf lumber processed/hour) *(.05 metric tonnes/kw hour) * mbf processed	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Conifers	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Hardwoods	**Computed.** CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	**Computed.** CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Step 15.** Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	**Step 16.** Insert the percentage of hardwoods harvested or treated that are subsequently delivered to sawmills	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Calculated.** **The CO2e associated with processing the logs at the mill**	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		**Estimate.** The weighted average carbon remaining in use at year 100 is 46.3%	**Estimate.** The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.67 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
0	95%	0%	116.72	0.00	-0.95	78.21	0.00	59.51	0.00
60	95%	0%	131.32	0.00	-1.07	87.98	0.00	66.95	0.00
120	95%	0%	131.32	0.00	-1.07	87.98	0.00	66.95	0.00
180	95%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-3.09	Sum of CO2 equivalent in wood products		193.42	0.00

Gautreaux THP - Evenaged Silviculture Summary			Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
	Beginning Stocks	Ending Stocks	
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis		44 Years
Live Trees (Conifers and Hardwoods)	348.86	330.83	
Wood Products		193.42	
Site Preparation Emissions		-3.60	
Non-biological emissions associated with harvesting		-8.89	
Non-biological emissions associated with milling		-3.09	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		159.81	
Project Summary			
Project Acres	Step 17- Insert the acres that are part of the harvest area.	13	
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		2,078	



Habitat Description

The canopy within the THP is typical of the coast area. The principal overstory and understory species include Sitka spruce, with minor amounts of Douglas-fir, and alder. Brush species primarily include salmon berry, huckleberry, Rhododendren, and ferns. Pre-harvest habitat types within and adjacent to the plan area consists of Foraging.

Northern spotted owl (NSO) habitat is defined per 14 CCR 895.1 and as modified by the USFWS Coastal NSO "Habitat Description". NSO Habitats are defined as:

Nesting/Roosting: Habitat with ≥60% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥100 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Foraging: Habitat with ≥40% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥75 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Habitat was identified by a variety of methods including:

Inventory data, Personal knowledge of foresters of habitat conditions in the assessment areas, cursory ground truthing by foresters, Aerial photo interpretation (especially to determine between NSO Non-habitat (i.e. clearcuts, heavily selected areas, etc) and potentially suitable Foraging and Nest/Roost habitats.

It should be noted that to maintain consistency in habitat typing for our habitat assessments, NSO habitats as shown were typed based on the definitions and not in consideration of edge effects. The majority of suitable NSO habitat acreage is not derived from narrow strips of WLPZ edge habitats or small "stands" (<6 acres) or Nest/Roost habitat, where edge effects are most likely to occur.

Santa Rosa Review Team@CALFIRE

From: Brent, Heather@CALFIRE
Sent: Thursday, September 10, 2015 8:54 AM
To: Brian Griesbach; Santa Rosa Review Team@CALFIRE
Cc: Magoon, Mara@CALFIRE; Oswald, John@DOC; monty.larson@cdfw.ca.gov; thomas.blair@blairforestry.com; mmgautreaux@earthlink.net; HUU Second Review@CALFIRE
Subject: RE: Revised First Review Response For THP 1-15-014DEL Gautreaux

Brian -

Please include a cover sheet that states which pages are revised in response to which RTQ. This will allow the reviewers to confirm that the appropriate language has been included in response to each question.

Also, please include HUU Second Review (I've added them to the distribution list, so you can reply all) in your distribution.

Heather Brent
707-677-0761

Every Californian should conserve water. Find out how at:
SaveOurWater.com · Drought.CA.gov

From: Brian Griesbach [brian.griesbach@blairforestry.com]
Sent: Wednesday, September 09, 2015 16:02
To: Santa Rosa Review Team@CALFIRE
Cc: Magoon, Mara@CALFIRE; Oswald, John@DOC; monty.larson@cdfw.ca.gov; Brent, Heather@CALFIRE; thomas.blair@blairforestry.com; mmgautreaux@earthlink.net
Subject: Revised First Review Response For THP 1-15-014DEL Gautreaux

Document attached. Thank you.

BLAIR FORESTRY CONSULTING

Brian Griesbach
PO Box 2517
McKinleyville, CA 95519
Mobile: (707) 672-5814
Brian.Griesbach@BlairForestry.com

BLAIR FORESTRY CONSULTING

UNIT, ftp/NEW

Providing Professional Forestry Services PO Box 2517 McKinleyville, CA 95519
CELL 707.672.5814
EMAIL brian.griesbach@blairforestry.com

Wednesday, September 9, 2015
CalFire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, Ca 95401

RE: RPF's Responses to Review Team Questions for **1-15-014 HUM "GautreauxTHP"**

CalFire Review Team,

This letter includes the RPF's responses to review team questions THP 1-15-014DEL Gautreaux. At the Request of CALFire Inspector, Heather Brent, the First Review Response has been revised. In all cases, an erratum has been included below each question that states on what revised or new page the response or form change can be found. Each revised or new page has been stamped REVISED September 9, 2015.

1. Item 14b, page 4, directs the reviewer to Item 26 to see stocking standards for the watercourse selection standard. However the reviewer was unable to find stocking or retention standards, other than (6) on page 12. Please include 916.9(g)(2)(A)) and (B).

   RPF Response: Pages 11, 12 & 13 are revised.

2. Please remove the references to road reconstruction, which are included in the winter operating plan. The THP as proposed does not include road reconstruction.

   RPF Response: Revised page 9.

3. Please include a statement in the 1034(o) discussion that clarifies that no road reconstruction or abandonment is proposed under this THP.

   RPF Response: Disagree. Discussion is not necessary if the activity is not occurring

4. Item 25, page 10, states "no mitigation measures are needed to minimize potential adverse impacts to watersheds from the reconstructed road grade". The THP as submitted does not propose any road reconstruction, please revise.

   RPF Response: Revised page 10

5. The final sentence on page 10 conflicts with statement "repairing active erosion sites", which is included in the last paragraph on page 11. Please revise.

   RPF Response: Revised page 11

6. The Work Order for Road Repair, page 19, classifies both roads as "Skid trail". Point C1 is a proposed permanent crossing on a seasonal road, please revise. Point T1, appears to propose a temporary crossing on a permanent road. Please provide clarify the road classifications for both crossings and the location of T1. Has crossing C1 (which will require 200 cubic yards of additional fill material) been evaluated to determine if it is a significant existing or potential erosion site?

   RPF Response: Revised page 19

7. Item 26(c), please revise to include the culvert length or alternatively the 914.8(e) requirement that "the culvert shall be of sufficient length to extend beyond the fill material."

   RPF Response: Revised page 19

8. Item 32, page 16. The NSO protection measures state that a 0.25 mile radius buffer would be afforded to new activity centers except for road use after June 1st. The attachment A protection measures specify road use after

July 9th. Please clarify this deviation from the protocol. Also please clarify the exception to the 0.25 mile buffer would need to be approved by USF&WS or CALFIRE.

RPF Response: Page 16 is revised.

9. Regarding the NSO packet:

    1. Please clarify the habitat definitions used for the habitat assessment.
    2. Please clarify the habitat map provided for the female NSO. It is unclear what "o" and "pf" are intended to represent. Please show habitat as nest/roost, foraging, and unsuitable.

    RPF Response: Revised page 73 and inserted page 87.1

10. The proposed THP is referred to as an NTMP on pages 19 and 29. Please revise.

    RPF Response: Pages 19 and 29 are revised.

11. Please provide a contour interval and indicate an elevation on the THP map. Also please designate which roads are appurtenant. Labeling the Permanent and Proposed Seasonal roads as appurtenant will suffice.

    RPF Response: Agreed. Revised map page 21. Disagree: Roads within the unit boundary are appurtenant.

12. Site C1 on the Work Order for Road Repair is described as a fill crossing on a class II stream. Please evaluate the potential for this point to be listed as a CSDS site. (RWB)

    RPF Response: There is no erosion potential. This is an older crossing that has settled.

13. **Lake and Streambed Alteration Agreement:**

    On March 1, 2015, the Department of Fish and Wildlife (DFW) received your notification of lake or streambed alteration pursuant to Fish and Game Code 1611 within the THP. DFW has 30 calendar days date to determine if the notification is complete. DFW is required to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you within 60 calendar days from the date the notification is deemed complete. Unless you request otherwise, the notification will be deemed void if the THP is returned by CAL FIRE, or withdrawn by you. Agreement fees for proposed or approved harvesting plans are not required for notifications submitted on or after July 1, 2013.
    Additional information regarding the Lake and Streambed Alteration Program is available at http://www.dfg.ca.gov/habcon/1600/forms.html. More specific information about the 1611 process is available at https://r1.dfg.ca.gov/portal/HabitatConservationProgram/Timber/tabid/883/Default.aspx. (CDFW)

    RPF Response: Agreed

14. Does the RPF intend to submit a separate Fish and Game Code 1602 notification? Section II Item 26d indicates that the THP will serve as the 1611, and a 1611 notification is included in section III. However, item 26d also indicates a separate notification will be provided. Please clarify. (CDFW)

    RPF Response: Page 11 is revised.

15. Item 2c of the 1611 notification in section III indicates that water may be drafted from springs onsite that are "not within the channel zone of natural watercourses." Please provide a map of the location(s) of the tank(s). (CDFW)

    RPF Response: Revised page 30

16. GIS analysis indicates that class I or restorable class I habitat may exist in the stream that runs along the eastern border of the THP. How was the absence of Class I habitat established? (CDFW)

    RPF Response: The watercourse was reviewed at PHI.

17. THP section II item 14a identifies 13.3 acres of clearcutting and no other timber harvesting prescriptions. Yet section II item 14b indicates that the reader should "see item 26 for retention standards for watercourses." Item 26 then identifies the minimum FPR WLPZ measures suggesting that the WLPZ will be harvested in the THP. Why was selection timber harvesting not identified in item 14a along with the acreages of the proposed selection harvest? Why were the selection harvesting areas not identified on the THP maps in section II? (CDFW)

RPF Response: Pages 4, 11, 12, & 13 are revised.

18. THP section IV, technical rule addendum 2, C. Biological Resources, 2 states "the THP is designed to utilized un-even aged management that will maintain at least foraging structure throughout the life of the THP." Section II item 14a indicates that only clear cut timber harvesting will be used in this THP. Clear cut timber harvesting will not retain suitable foraging habitat for NSO. Please revise and reanalyze. (CDFW)

    RPF Response: Revised page 52.

19. THP section IV, technical rule addendum 2 G, Climate Change Assessment item b states "In addition, redwood is a dominant species on project area and redwood slash decays more slowly than slash from hardwood and whitewood species." However, section III, site description item II, Vegetation and Stand Condition, states "the stand is well stocked with second growth Sitka spruce that is approximately 80 years of age. A sparse component of other species is present including Western hemlock, Douglas-fir, big leaf maple and tanoak." Redwood is not disclosed as a component of the stands proposed to be harvested in the THP.

    It appears that the CO2 emission calculations for this THP may have been copied from another THP where redwood was the dominant tree species in the stands proposed for harvesting. Please recalculate the CO2 emissions for this THP using Sitka spruce as the dominant tree species. Please revise the Climate Change Assessment for this THP to reflect that the tree species to be harvested are Sitka Spruce.

    Please also consider that much of the Sitka spruce harvested in northern California in the last few years has been shipped to China, where it is milled into lumber to be used as forms for concrete buildings. Whether this material is destroyed or reused is unclear but the underlying assumption that wood products from this THP will end up in buildings is not supported. Considering the primary use for Sitka Spruce is as forms for buildings it is more likely that the material is destroyed after a single use, likely within ten years following harvest. Given these reasonable assumptions it appears likely that it will take significantly more than 14 years to recover the carbon that would be released by this THP. (CDFW)

    RPF Response: Pages 54-59 are revised.

This concludes the RPF's responses to the review team questions for THP 1-15-014 HUM Gautreaux. Attached are the revised pages as indicated in the errata for each question and summarized below.

Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach, Registered Professional Forester #2738
BLAIR FORESTRY CONSULTING

cc:
CalFire Fortuna
Monty Larson-CDFW
John Oswald-CGS
Heather Brent-CalFire
Mark Gautreaux-Landowner
Thomas Blair -Blair Forestry Consulting

Attachments
Revised pages to be replaced: 4, 9, 10, 11, 12, 13, 16, 19, 21, 29, 30, 52, 54-59, 73

New pages to be inserted: 87.1

SECTION II - PLAN OF TIMBER OPERATIONS

14. SILVICULTURAL METHODS

a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913[933, 953].11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

☒ Clear cut 12 ac. ☒ No Cut WLPZ 1.3 ac

Total acreage 12 ac.: (Explain if total is different than in Item 8) MSP option chosen: (b) ☐ (c) ☒

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

WLPZ acres are no cut.

c. ☐ Yes ☒ No Will evenage regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 14 CCR 913 (933, 953).1 (a) (2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) – (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All trees within the clear cut area are available for harvest unless marked with a blue painted "L" at breast height. Harvest trees within the WLPZ shall be marked with blue paint at approximately breast height, which is visible from at least two sides, including a stump mark below the cut-line.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If yes, how will LTO determine which trees will be harvested or retained? If more than one silvicultural method or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: Sawlogs, veneer logs, chip logs, split products and firewood. Chip logs and slash may be processed on site in the form of "clean chips" or "hog fuel".

f. ☐ Yes ☒ No Are group B species proposed for management?
☐ Yes ☒ No Are group B or non-indigenous A species to be used to meet stocking standards?
☐ Yes ☒ No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment is to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All conifer snags shall be retained, unless they are a safety hazard.

h. ☒ Yes ☐ No Will artificial regeneration be required to meet stocking standards?

Artificial regeneration will be required to meet stocking standards in those areas where the clearcut prescription is proposed. Depending on seedling availability, these areas will be planted 'as early as' the first winter following harvest operations. Only native conifers grown from locally collected seed or seed from the appropriate seed zones and elevations will be used. Seedlings will be planted to attain a minimum point count of 300 per acre. Conifer species to be planted shall be redwood, and or Douglas fir.

i. ☒ Yes ☐ No Will site preparation be used to meet stocking standards? If yes, provide the information required for a site preparation addendum, as per 14 CCR 915.4 (935.4, 955.4).

(a) Site preparation may be required in the clearcut areas to achieve a desirable level of stocking following harvest. Broad cast burning of slash may be used to prepare the site to allow for hand planting of conifer seedlings. If it is determined that the stocking requirements can be met without broadcast burning, no broadcast burning will take place. If burning is deemed necessary, burning operations will be conducted according to the provisions of a project type-burning permit issued by the California Department of Forestry and Fire Protection.

4. Operating Period -

   a. Timber falling may be conducted during the winter period.
   b. Cable harvesting: No limitations specific to winter operations except road and landing use as per 923.6(b)&(c) .
   c. Ground based yarding: Ground based yarding may be conducted during the winter period when soils are not "saturated" as defined below.
   d. Feller-buncher and Loader "shovel" yarding may be conducted during the winter period as described under paragraph (3) above.

5. Erosion Control Facilities Timing – All Tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection or (2) any day with a National Weather Service forecast of a chance of rain of 30% or more, a flash flood warning, or a flash flood watch.

6. Rain, fog, and light snow are forms of precipitation in this area.

7. Ground conditions (soil moisture condition, frozen) – Heavy equipment use shall be done only during dry, rainless periods where soils are not saturated. Saturated soil conditions is defined below.

8. Silvicultural systems – ground cover – The silvicultural system is clear cut. It is the RPF's opinion that the harvest area will have 40% ground cover. Ground cover is defined as all vegetation below eye level (both live and dead), rocks, straw mulch, etc., that may help prevent erosion caused by overland flow and raindrop energy.

9. Operations within the WLPZ of the THP during the winter period will be limited to:

   a. The felling of trees. Trees shall be felled away from a watercourse as per 14 CCR 914.1(a).
   b. Long lining of logs.
   c. Cable yarding.
   d. Emergencies or road maintenance needed to protect water quality.

10. Equipment use limitations – No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.

11. Known unstable areas – No unstable areas were identified during preparation of this THP. If active slide areas are discovered during timber operations, the LTO shall immediately notify the RPF.

12. Logging Roads and landings - 14CCR 923.6(g) Logging roads and landings used for log hauling or other heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions.

    923.5(j) All logging roads and landings used for timber operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow.

    923.5(k) Where logging road or landing construction takes place during the extended wet weather period, drainage facilities and drainage structures shall be installed concurrent with construction operations.

    14CCR 923.4(l), No construction of logging roads or landings shall occur during the winter period.

Definitions of terms used (14 CCR 895.1):

Saturated Soil Conditions – means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Stable Operating Surface - means a road or landing surface that can support vehicular traffic and has a structurally sound road base appropriate for the type, intensity and timing of intended use.

No timber harvest activities during measurable rain events (defined as greater than ¼" in a 24-hour period).

NOTE: "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 925.1, 926.18, 927.1, and 965.5... (a) except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year

of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

24. ROADS AND LANDINGS

Will any roads be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items a through g.
Will any landings be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items h through k:

a. ☐ Yes ☒ No Will new or reconstructed roads be wider than single lane with turnouts?
b. ☐ Yes ☒ No Are logging roads proposed in areas of unstable soils or known slide-prone areas?
c. ☐ Yes ☒ No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.
d. ☐ Yes ☒ No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27 a. will satisfy required documentation.
e. ☐ Yes ☒ No Will roads longer than 100 feet in length be located on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
f. ☐ Yes ☒ No Will any roads or watercourse crossings be abandoned?
g. ☐ Yes ☒ No Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?
h. ☐ Yes ☒ No Will any landings exceed one half acre in size? If any landing exceeds one quarter acre in size or requires substantial excavation the location must be shown on the map.
i. ☐ Yes ☒ No Are any landings proposed in areas of unstable soils or known slide prone areas?
j. ☐ Yes ☒ No Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
k. ☐ Yes ☒ No Will any landings be abandoned?

25. If any section in "item 24" above is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance, and/or abandonment of roads or landings, as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

Road Construction:

14CCR 1034(o) The RPF is proposing seasonal road construction for approximately 800' using an existing skid road. Although a prism is in existence this skid road is not suitable for the hauling of logs. Construction is proposed to improve the existing skid road by widening to allow for ingress and egress of log trucks. See THP Map for the location of road construction.

14CCR 916.9 (n) Bare mineral soil exceeding 100 contiguous square feet created from operations within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, shall be treated. Soil stabilization treatment measure within the WLPZ may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers. See Item 18 for more information regarding 916.9(n).

14CCR 923.1(g) The proposed road construction utilizes existing skid trail so log trucks may access portions of the plan. Landing construction associated with this road segment will allow for the landing and loading of logs in locations that prevent excessive skidding distances. No mitigation measures are needed to minimize potential adverse impacts to watersheds from the constructed road grade and associated landings.

14CCR 923.5

(a) All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.

(b) Drainage facilities and structures shall be installed along all logging roads and all landings that are used for timber operations in sufficient number to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

14CCR 923.6(h)(3) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance 923.6(b).

14CCR 923.7(c) During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of the road surface materials by methods including, but not limited to, rocking, watering, paving, or installing commercial erosion control devices to manufacturer's specifications.

14CCR 923.4(m) On slopes greater than 50 percent for greater than 100 lineal feet, fills greater than four feet in vertical height at the outside shoulder of the logging road or landing shall be:

(1) Constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift.
(2) Compacted in approximately one-foot lifts from the toe to the finished grade or retained by an engineered structure.

14CCR 923.1(e) Significant existing or potential erosion sites do not exist within the plan area.

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

a. ☒ Yes ☐ No Are there any watercourse or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, list the class, WLPZ or ELZ width, and protective measures determined from Table I and/or 14 CCR 916 (936, 956) .4 (c) of the WLPZ rules for each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

b. ☒ Yes ☐ No Are there any watercourse crossings that require mapping per 14 CCR 1034(x)(7)?

14CCR 923.9(e) Watercourse crossings associated with this THP have been listed in the Work Order (with proposed culvert diameters) within Item 38 and are shown on the THP Map. These sites have been identified in the field (923.9(e)(1).

14CCR 923.9(l) Rock used to stabilize the outlets of crossings shall include a base of at least size 12" rock, and be adequately sized to resist mobilization.

c. ☒ Yes ☐ No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert (may be shown on map).

Crossing shall be installed to handle any surface flow by utilization of a flow through fill (clean rock or logs) with fabric or a temporary pipe that is of sufficient size (min. 6" x 15') to handle flow during operations.

d. ☒ Yes ☐ No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If yes, attach the 1603 Addendum below or at the end of this Section II; provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures; as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1603 Agreements and THP Documentation".

☐ Yes ☒ No Have or will the activities conducted under this THP that are subject to Fish and Game Code Section 1600 et seq. be included in a separate notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

☒ Yes ☐ No Will the submittal of this THP provide notification to the Department of Fish and Game as per Fish and Game Code Section 1602?

LTO instructions are found in the Work Order for Road Repair report for watercourse crossings, found in THP Item 38. A DFG 1611 agreement process addendum and an analysis are included in the Plan Addendum to Item 26d in THP Section III.

Watercourse Protection Measures:

This THP is within the Coastal Anadromy Zone. On the ground identification of the WLPZ shall be completed prior to PHI. No timber harvesting shall occur within the WLPZ.

14CCR 916(b)(1) & (2): Protection of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not do either of the following during timber operations:

(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;

(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.

14CCR 916(d): This THP fully describes the type and location of measures needed to fully offset sediment loading, thermal loading and potential significant adverse watershed effects from the proposed operations. These measures are numerous and described in various locations within Section II of the THP. Examples of such measures include no harvesting in the WLPZ, limited size of project and soil stabilization measures in Section II, The LTO will be responsible for implementing each of these measures. The timber harvest unit has been configured in such a manner that impacts to sediment loading and thermal loading are avoided to the fullest extent feasible. The strategy of avoidance of potential risks to water resources will result in operations that are not likely to result in adverse impacts to water quality, including sediment loading or thermal loading.

14CCR 916.9 (e): Channel Zone

(1) There shall be no timber operations within the channel zone with the following exceptions:
   (a) Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.
   (b) Class III watercourses consistent with 14CCR 916.9 (h)(7): Retain all trees in the Class III ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control. Merchantable trees within the channel zone of Class III watercourses may be harvested with the following exceptions:
      - Within over-steepened headwall swales.
      - When located at the watercourse slope transition point and an obvious increase in downcutting of the watercourse channel is occurring below this point.
      - On unstable areas where the tree is stable and contributing to the stability of the channel.
      - Where soil has accumulated and is perched upslope of the channel tree.
      - When a tree is in the channel (or close proximity) and not just an individual root. In other words, give a weighted average to the tree's value in the channel based on proximity.

(2) In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the pre-harvest inspection.

14CCR 916.9 (u): Salvage logging shall not occur within a WLPZ.

Water Drafting: Water for dust abatement (if necessary) shall be from an offsite delivered source. Water drafting may occur onsite when water is collected in tanks from springs, which are not within the channel zone of natural watercourses. Since no drafting of water within a channel zone of a natural watercourse or lake is proposed, no description is required per 14CCR 923.7(l)(2).

Watercourse and Lake Protection Zone Widths.

Class I & II*	Class II-S*	Class III (ELZ)
Slope Class (%)	Width (feet)	Width (feet)
<30	50	30
30-50	75	50
>50	100	50

* Core and Inner Zones apply to Class II watercourses within this THP, see discussion in Item 26

Class II Watercourses

(1) The WLPZ shall be flagged prior to the PHI.

(2) When there is a reasonable expectation that slash, debris, soil, or other material resulting from timber operations, falling, or associated activities, will be deposited in Class II waters below the watercourse transition line, those harvest activities shall be deferred until equipment is available for its removal.

(3) Accidental depositions of soil or other debris below the watercourse transition line shall be removed immediately after the deposition.

(4) Equipment operations within the WLPZ shall be limited to existing roads and designated skid trail crossings.

(5) At least 75% surface cover and undisturbed area shall be retained within the WLPZ.

Class III Watercourses: The protection measures for Class III waters shall prevent the degradation of downstream beneficial uses of water and shall be determined on a site-specific basis. The following protection measures apply:

(1) Establish a 30 foot wide ELZ on both sides of the watercourse for slopes less than 30% and a 50-foot ELZ where side slopes are greater than 30%. The ELZ shall be measured from the watercourse transition line. Within the ELZ the following shall apply:

(a) No new construction of tractor roads permitted;
(b) No ground based equipment on slopes greater than 50%.
(c) Ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse or to the use of feller-bunchers or shovel yarding.
(d) Retain all pre-existing large wood on the ground that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.
(e) Retain all pre-existing down wood and debris in the channel zone.
(f) Retain hardwoods, where feasible.
(g) Retain all snags (except as required for safety).
(h) Retain all countable trees needed to achieve resource conservation standards in 14 CCR 912.7.
(i) Retain all trees that show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.
(j) Exceptions pursuant to 14 CCR 916.9, [936.9, 956.9], subsections (e)(1)(A)-(F) are permitted in any ELZ and channel zone.

(2) 916.4(c)(3): Soil deposited during timber operations in a Class III watercourse other than at 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. Temporary crossings shall be removed before the winter period.

14CCR 923.9:

(g) All culverts used for new and replacement logging road watercourse crossings shall be installed at or as close as practical and feasible to the natural watercourse grade. Culverts shall be installed in alignment with the watercourse channel to the extent feasible, and of the appropriate length to prevent fill erosion.

(h) Logging road watercourse crossings shall not discharge water onto erodible fill or other erodible material without the installation of energy dissipaters and other necessary protective structures.

(i) Fills for constructed and reconstructed logging road watercourse crossings shall be thoroughly compacted in approximately one-foot lifts during installation. The face of crossing fills shall be no greater than 65 percent (1.5:1, horizontal to vertical). Excavated material and cut banks resulting from construction or reconstruction which has access to a watercourse shall be sloped back from the channel to prevent slumping, to minimize soil erosion, and to prevent significant sediment discharge.

(j) Critical dips shall be incorporated into the construction or reconstruction of logging road watercourse crossings utilizing culverts, except where diversion of overflow is addressed by other methods stated in the plan.

(k) Watercourse crossings and associated fills and approaches shall be constructed and maintained to prevent diversion of stream overflow down the road, and to minimize fill erosion should the drainage structure become obstructed. Methods to mitigate or address diversion of stream overflow at logging road watercourse crossings shall be stated in the plan.

14CCR 923.9(p) All logging road watercourse crossings that are proposed by the plan submitter to be removed, including temporary crossings and those along abandoned or deactivated roads, shall be removed as described in the plan and shall apply the following standards:

(1) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel as observed upstream and downstream of the logging road watercourse crossing to be removed.

(2) The excavated material and any resulting cut bank shall be no greater than 65 percent (1.5:1, horizontal to vertical) from the outside edge of the constructed channel to prevent slumping, to minimize soil erosion and sediment transport, and to prevent significant sediment discharge. Exposed soil located between the watercourse crossing and the nearest adjacent drainage facility or hydrologic divide, whichever is closer, including cut banks and excavated material, shall be stabilized by seeding, mulching, rock armoring, replanting, or other suitable treatment to prevent soil erosion and significant sediment discharge.

3) Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an Activity Center during the life of the timber operations.

VII. Road Use

To avoid take of NSO from noise disturbance, road use within 0.25 mile (1,320 feet) of a NSO Activity Center during the breeding season is prohibited until **July 10**, unless:

1) Non-nesting, or nesting failure at the Activity Center has been determined by a Activity Center Search (2011 NSO Protocol) conducted on or after May 15th, or;

2) The Activity Center is within 165 feet of major highway that typically has continuous traffic year around (Hwy 1, 36, 101, 128, 299, etc.) and the appurtenant road is not within 165 feet of the Activity Center.

3) After **July 9th**, until the end of the breeding season road use within 0.25 mile is restricted to existing road use, maintenance and map point work.

VIII. Timber Harvest Operations

A 0.25 mile seasonal restriction on timber operations (except for road use after **July 9th**) applies to every known NSO Activity Center during the breeding season, unless it is determined via a site monitoring visit, "Activity Center Search" (2011 NSO Protocol), that NSO are not nesting, or nesting failure has occurred. If it cannot be determined whether NSO are nesting, or nesting failure cannot be determined, the 0.25 mile seasonal restriction stays in effect for timber operations until July 31st.

For all known Activity Centers, timber operations should adhere to the following recommendations:

1) Within the 100-acre Core Area polygon of an NSO Activity Center:

   a) Outside the breeding season, limited timber operations (i.e., road use and maintenance, map point work, tail-hold placement, use of existing skid roads, and loading) may be conducted, provided no trees >11 inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.

   b) During the NSO breeding season, timber operations (including use of roads before July 9th), are not allowed within the 100-acre Core Area polygon, except as allowed in subsections 4 and 5, below.

2) Timber Operations outside the 100-acre Core Area polygon, but within 0.25 mile of an NSO Activity Center:

   a) Outside the breeding season, timber operations may be conducted.
   b) During the breeding season, no timber operations should proceed unless protocol surveys do not detect nesting NSOs.

3) For all NSO ACs, prior to May 15th (until the required May 15 or later survey is completed):

   a) Timber operations (except helicopter yarding or staging) may be conducted only on those THP areas >0.25 mile from the Activity Center.
   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

4) For NSO Activity Centers where reproductive status has been determined to be non-nesting or failed nesting:

   a) Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre Core Area Polygon of the Activity Center Provided no trees> inches DBH are cut or removed by the operations, and no logs are yarded through the Core Area.
   Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within 1000 ft. of the Activity Center.

5) For NSO Activity Center, where reproductive status has been determined to be nesting:

   a) For Activity Centers where fledging status has not been determined, timber operations may be conducted only on those THP areas that are >.25 mile from the Activity Center until the end of the breeding season.

   Exception: The 0.25 mile disturbance buffer may be reduced where topography, such as ridgelines, will provide a similar noise disturbance protection.

   b) Helicopter yarding and staging may occur only on those THP areas >0.5 mile from the Activity Center.

6) For NSO Activity Centers, where fledging status has been determined (either nest failure or fledglings have left the Core Area):

Gautreaux Work Order for Road Repair

Site	C1			1600	X	ECP	
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Skid trail	II	none	24"				
Site Description	Existing temporary skid trail crossing to be upgraded to a permanent , seasonal road crossing.						
Treatment	Install permanent culvert. of sufficient length to extend beyond the fillslope. Fill slopes exceeding 1½ :1 shall be rock armored. Road running surface shall be hydrologically disconnected. Road running surface within the WLPZ shall be rocked. Disturbed soil within the WLPZ shall be seeded and mulched or slash packed. Erosion control measures shall be in place prior to October 15th.						

Disturbed Area (sq.ft.)	Final Site State (Perm/Temp)	Estimated Removed Fill Volume (cu. yards)	Estimated Added Fill Volume (cu. yards)	Fill Material Added	Disturbed Vegetation
2000	Permanent	10	200	Native	huckleberry, fern brush, alder trees

Site	T1			1600	X	ECP	
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Skid trail	II	NA	NA				
Site Description	Existing skid trail crossing						
Treatment	Install temp crossing.						

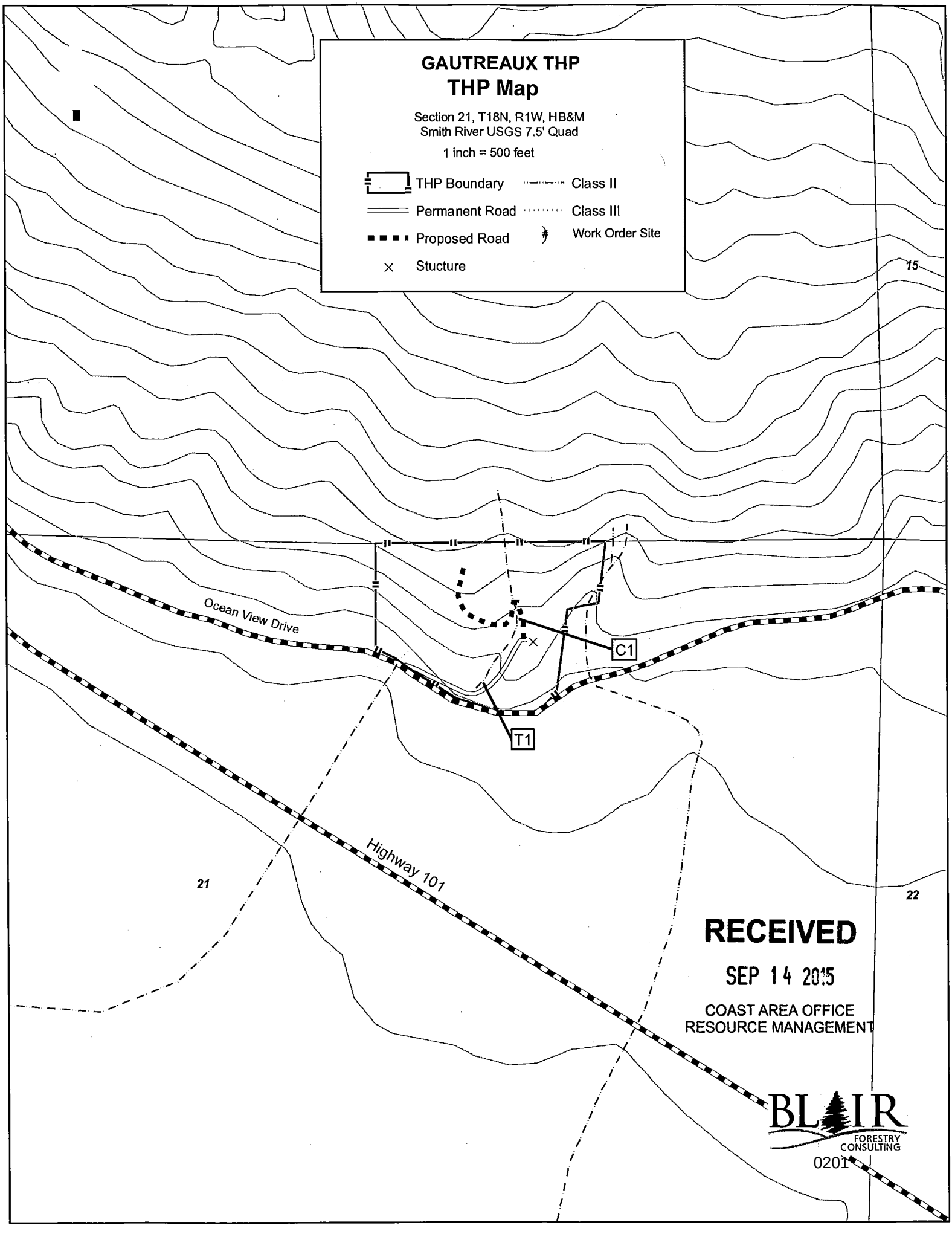
Disturbed Area (sq.ft.)	Final Site State (Perm/Temp)	Estimated Removed Fill Volume (cu. yards)	Estimated Added Fill Volume (cu. yards)	Fill Material Added	Disturbed Vegetation
1500	Temp	2	2	Native, Rock	Grasses, brush

DIRECTOR OF FORESTRY AND FIRE PROTECTION

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

By: _____ _____
(Signature) (Date)

_____ _____
(Printed Name) (Title)



BLAIR
FORESTRY
CONSULTING

Plan Addendum to Item 26

WATERCOURSE AND LAKE PROTECTION

A field examination for watercourses which contain Class I, II, III, or IV waters was conducted as per 14 CCR 916.4 & 916.9 (f)(1)(E). The examination evaluated areas near, and areas with the potential to directly impact watercourses for sensitive conditions including, but not limited to, existing and proposed roads, skid trails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, changeable channels, overflow channels, flood prone areas, and riparian zones where values set forth in 14 CCR 916.4 may be impaired. The examination considered these conditions, and those measures needed to maintain, and restore to the extent feasible, the functions set forth in 14 CCR 916.4, when proposing RMZ/EEZ widths and protection measures. The plan identifies such conditions, including where they may interact with proposed timber operations, that individually or cumulatively significantly and adversely affect the beneficial uses of water, and prescribed measures to protect and restore to the extent feasible, the beneficial uses of water (see the Cumulative Impact Assessment in Section IV).

This plan is located within the Coast Forest District of the Coastal Anadromy Zone. There are Class II and III watercourses within the project area. These watercourses flow to Smith River. The project is located within the Dominie Creek watershed. The Dominie Creek Planning Watershed is listed as a Coho watershed (DFG, April 2009).

All Class II watercourses within and adjacent to the plan area were evaluated, per 916.9(g), for the characteristics of a Class II-L watercourse. These characteristics include either: (1) a contributing drainage area of ≥100 acres in the Coast Forest District as measured from the confluence of the receiving Class I watercourse; or (2) an average active channel width of 5 feet or greater. The project area is beyond 1000' of the Class I confluence therefore Class II-L protection measures do not apply. The THP Map in Section II shows the location of all watercourses within the plan area.

See THP Section II, Item 26 for watercourse protection measures.

A combination of the rules, the plan, and mitigation measures provides protection for the following:

a. water temperature control
b. streambed and flow modification by large woody debris
c. filtration of organic and inorganic material
d. upslope stability
e. bank and channel stabilization
f. spawning and rearing habitat for salmonids
g. vegetation structure diversity for fish and riparian wildlife habitat, possibly including but not limited to:
    I. vertical diversity
    II. migration corridor
    III. nesting, roosting, and escape
    IV. food abundance
    V. microclimate modification
    VI. snags
    VII. surface cover

14CCR 916.9(d)(1) requires that "The plan shall fully describe: (A) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and (B) the person(s) responsible for the implementation of each measure, if other than the timber operator.

Measures are contained in Section II of the THP that will meet the intent for offsetting sediment loading, thermal loading, and potential significant adverse watershed effects. Other than the small amount of WLPZ harvesting, other measures are included in Item 18, Item 23, and Item 26 of Section II. All operational measures stated in Section II of the THP shall be implemented by the LTO. Maintenance of erosion control structures and facilities following the completion of operations shall be assumed by the timberland owner.

14CCR 916.9 (c) The recently updated Anadromous Salmonid Protection (ASP) rules are prescriptive in nature and have specific protection measures that were designed to accomplish the objectives of 14CCR 916.9(c). The plan does not include any deviations from the ASP rules and there are no special circumstances that would require additional protection measures to accomplish the stated objectives.

Plan Addendum to Item 26d

DFG 1600 permit process analysis; activity/facility description

Notification Information List Pursuant to
Fish and Game Code Section **1611**
Gautreaux THP
Version 20080819

1. Basic data:
   a. The name, address, and telephone number of the:

Applicant:	**Mark Gautreaux 315 Amanda Lane, Crescent City CA 95531**
Operator:	**To be amended**
Contact Person:	**Brian Griesbach , P.O. Box 2517, McKinleyville, CA 95519 (707) 672-5814**
Property Owner:	**Same as Applicant**

b. The name of each lake and the name and watercourse classification of each stream the lake or streambed alteration activities will affect, including the nearest downstream watercourse or water body.

Un-named Class II and III tributaries to Smith River.

c. Road sites; township, range and section numbers; watercourse classification; present condition; proposed work of each lake and stream encroachment; and project description measures.

T18N, R1W, Section 21, HBM. See THP Map and Work Order under Item 38, Section II for present condition; proposed work of each lake and stream encroachment; and project description measures (below).

d. A single map or diagram clearly showing all of the following:
   i. All lake and stream encroachments, with a number or other appropriate identifying label.
   ii. All roads, with a number or other appropriate identifying label
   ii. All watercourse classifications (i.e., Class I, II, or III).
   iii. Access from a named public road.
   iv. A north arrow and scale.

See THP Map and road work order at the end of THP Section II order for watercourse classifications associated with crossings.

e. Description of the encroachment sites, existing and proposed culvert diameters, area to be disturbed, proposed conditions upon completion, estimated volumes to be removed and/or added to crossing, description of fill materials and disturbed vegetation.

See THP Map and road work order at the end of THP Section II

f. A description of the fish and wildlife and botanical resources the work could adversely affect, including riparian resources and special status species (i.e., species listed under the California Endangered Species Act ("CESA") and/or the federal Endangered Species Act ("ESA"), species fully protected under state law, and/or species of special concern). If the work could adversely affect any listed species, the applicant should indicate whether consultation under CESA or ESA has Commenced and if so, the current status of the consultation. Applicant should also provide the biological opinion, as applicable.

See THP Item 32, Section IV: Cumulative Impacts Assessment. A botany survey will be conducted prior to operations.

g. Indicate if the work takes place in, adjacent to, or near a river that has been designated as "wild and scenic" under state or federal law.

No

2. Information about each lake and stream encroachment, including the following:
   a. Construction plans, including specific details, cross sections, and dimensions.

See THP Map and road work order at the end of THP Section II

b. If water will be present and diversion of flow around the work site is necessary, the volume of water to be diverted and the method of diversion.

There is potential for water to be present at encroachment sites. If water is present at any site when work is proposed, water will be diverted around or through the site with pipes or portable pumps and returned back to the channel downstream of the work site. The flow shall be diverted only when the construction of the diversion is completed. Any temporary artificial obstruction shall be built from material which will cause little or no siltation (i.e. sandbags, straw bales, rock or plastic).

c. If water drafting is proposed, provide drafting site information (i.e. estimated volume, drafting rate, timing, etc.). Indicate if the activity will be done pursuant to a water right application or permit.

Water drafting shall occur from an offsite delivered source.

d. The materials (e.g., soil, sand, gravel, ¼- to ½-ton rip-rap, large wood, etc.) and volumes that will be used for and/or removed from the lake or stream encroachment, the dimensions of the area to be excavated and the dimensions of the area to be filled.

See THP Map and road work order at the end of THP Section II

present on this plan are well-drained soils. The EHR was calculated to be moderate for the entire plan area.

Soil compaction is likely to occur when the soil is saturated and subject to use by heavy equipment. The restrictions on operations during the wet weather conditions as specified in the Winter Period Plan will prohibit ground-based operations on these soils during periods of high soil moisture. 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.

Operation of this THP would cause minimal significant negative impacts to the soil productivity on the project area due to a **loss of growing space**. Existing roads shall be used to their fullest to best access the timber with the least impact to the resources including soil. Application of the Forest Practice rules, and reusing existing road, landing, and skidtrail locations shall combine to lessen any potential impacts to soil productivity.

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 the RPF's opinion that no negative impacts will incur.

C. Biological Resources

The Biological Assessment Area (BAA) is used to analyze and consider possible effects on any number of vegetative, aquatic, terrestrial and avian species, mainly in relation to forest seral stage distribution. This area was chosen using major breaks in the landscape such as ridges and watercourses that appear to logically establish this project's area of influence. The Biological Assessment Area (BAA) is the same as the Watershed Assessment Area (See Cumulative Effects Map).

Factors to consider in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or species of special concern (as described in the Forest Practice Rules) that may be directly or indirectly affected by project activities.

   The methodology used to identify the presence, if any, of listed species within the BAA is as follows:

   1. Scoping
      a) Search Natural Diversity Database (NDDB) for occurrence within the Assessment Area, including the quad that the plan is located on and adjoining quads.
      b) Evaluated the habitat requirements of species identified above that "could" occur.
      c) Assess the impact that the proposed project would have on species likely to occur within the assessment area and within the plan area.
   2. Surveys
      a) If the proposed project would have potential significant negative impacts on a listed species, a survey was conducted to determine presence or absence.
   3. Mitigations
      a) Where presence is determined and significant adverse effects are likely, mitigations to substantially lessen or avoid these impacts are developed.

A list of the rare, threatened or endangered species and other species of concern which may occur within the BAA, and which may be affected by timber operations is provided in the THP in Section III for Plan Addendum to Item 32. The list provides a description of the potential rare, threatened or endangered species, their preferred habitat, the potential presence of habitat within the BAA, and other pertinent information as necessary for each species of concern. Based upon database inquiries and known locations of sensitive species, the proposed project, as mitigated, is not expected to significantly impact any known sensitive species that occur within the BAA.

Because of the assortment of ownerships within the BAA, land management objectives and the consideration given to biological resources vary greatly. The ownerships range from lands owned by the public whereby changes in vegetation vary very little over time to industrial timber ownerships where modifications in vegetation are made more frequently, but only after taking steps to protect existing biological resources. In addition, there are small and large ownerships of agricultural lands as well as numerous small ownerships of residential properties. For the most part, the timberland within the BAA appear to be functional in terms of wildlife habitat because of the diversity of ages and the presence of certain elements such as hardwood, snags, and large woody debris.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and the biological assessment area (e.g. loss of oaks creating a forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas).

A search of the CNDDB/Spotted Owl Viewer returned no (0) known Northern Spotted Owl activity centers present within 0.7 miles of the proposed THP boundary. This project will not have a significant cumulative impact on the Northern Spotted Owls within the assessment area. The THP is designed to utilized management that will maintain at least foraging structure throughout the life of the THP. Seasonal restrictions have also been incorporated in to the THP that are designed to reduce impacts to the NSO during critical periods. No timber operations shall occur until such time as all surveys (which are conducted in conformance with the USFWS approved NSO survey protocols) for the current, or immediately preceding survey period are complete; the results have been provided to CAL FIRE;

D. Recreation Resources

The recreational assessment area is generally the area of the THP plus 300 feet. This is specified in the Board of Forestry, Technical Rule Addendum No. 2. This area is private property, and primarily pastureland and forestland, and the primary activities that occur are grazing, agriculture and timber management. The proposed plan is on private property that is not open to the public for recreation. Road access is controlled and there are no developed recreational sites on or near the plan area.

E. Visual Resources Area

The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. At distances of greater than 3 miles from viewing points, activities are not easily discernible and will be less significant. Due to the aspect of the plan area, this project will be visible to nearby travelers along Highway 101. The project may also be visible to some residents of Smith River, which is approximately 2 miles away. A majority of the plan area will have sub-merchantable timber as well as some hardwood cover remaining which will lessen the visual impacts of the evenaged harvest. These remaining trees, as well as sprouts and planted seedlings will rapidly re-vegetate the hillside and quickly regain a forested appearance.

As timber harvesting is a common occurrence in the assessment area, the plan area is small in scale, and the harvested area will retain some small trees and hardwoods, and be reforested, no long-term significant impacts to visual resources are expected.

The plan area is within 200 feet of Ocean View Drive, a county road. 913.1(a)(6) was considered. The plan area is relatively remote, with little traffic occurring on the county road. In addition, timber harvesting within the watershed is common and clearly visible from the county roads. Also, as discussed above, the harvested area is expected to retain sub-merchantable timber and as well as some hardwood cover. No significant visual effect is anticipated with the harvesting of this plan.

F. Traffic Assessment

The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. Ocean View Drive, Lopez Road, and US Highway 101 will be the primary public roads used. All public roads to be used to transport wood products have been historically used for this purpose, with no known past or existing traffic, safety, or maintenance problems.

The proposed project will not have a reasonable potential to cause or add to significant cumulative negative impacts to vehicular traffic within the assessment area.

G. Climate Change Assessment

a. Climate Change in General.

The scientific literature on the phenomenon of global warming, and impact of greenhouse gas emissions on the State of California, as well as to the remainder of the Earth, is growing, conflicted, and politically charged. Consensus is growing on the occurrence of global warming, although there is considerable debate regarding the causes (Bast and Taylor, 2007; Ferguson, 2006). The Stern Review of the Economics of Climate Change (2006) was a comprehensive report commissioned by the British government, and provided projections of economic cost based on assumptions of impacts. Studies of past and present temperatures show a natural variability of Earth's climate. Past climates were as warm as (and even warmer than) what we currently experience, and such warm periods were typically, relatively short-lived respites from ice-age conditions that dominated the past half-million years (Ferguson, 2006).

Regardless of the aforementioned issue, the State of California has recognized climate change and global warming as a threat to health, safety, and the economy. Global warming could result in reductions in water supply due to changes in snow pack levels, adverse health impacts from increases in air pollution, adverse impacts on agriculture caused by changes in quantity and quality of water supplies and significant increases in diseases and pests, increased risk of catastrophic wildfires, and significant impacts to consumers and businesses due to increased costs of goods and services (AB 1493, 2002). In response, the State of California has enacted legislation and policies designed to reduce greenhouse gas emissions and to increase energy efficiency (AB 1493, 2002; AB 32, 2006; Gov. Schwarzenegger Executive Order S-3-05). The Executive Order established greenhouse gas emission targets using 1990 thresholds, and established the California Climate Action Team to coordinate the State's efforts to reduce and report on progress of those efforts and on impacts of global warming to the State.

Carbon dioxide (CO_2) is considered the greenhouse gas (GHG) that has the greatest effect on the dynamic of global warming due to the fact that it composes the vast majority of the releases by human activities. There are two basic ways carbon emissions are reduced. First is efficiency, where technology or conservation reduces carbon emissions through the use of less energy (electricity, fuel, heat, etc.) to accomplish an activity. Second is storage, which can be accomplished through geologic or terrestrial sequestration.

Forest activities can result in emissions through harvesting, wildfire, pest mortality and other natural and anthropogenic events. However, forestry is a net sink for carbon, the primary greenhouse gas. Plants absorb CO_2 from the air, and use the carbon as a building block of plant tissue through the process of photosynthesis. Worldwide forests store approximately 2,000 billion tons (Gt) +/- 500 of CO_2 (National Energy Technology Laboratory, 2000). The most recent draft Greenhouse Gas Inventory shows the forestry sector to be a net sink with emissions of 6.1 MMT CO_2 EQ. and emissions reductions of 21 MMT CO_2 EQ (Bemis, 2006).

Gautreaux THP - Evenaged Silviculture
Project Carbon Accounting: Inventory, Growth, and Harvest

This worksheet addresses the sequestation and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods	Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)	Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	Step 0. Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	Step 1. Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.	Step 2. Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	Step 3. Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest.	Step 4. Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1.	Step 5. Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available.	Step 6. Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available.	Step 7. Enter estimated hardwood basal area harvested/treated per acre
Douglas-fir	0%	1.675	14.38	0	50	5	700	0.3	40	3
Redwood	0%	1.675	13.42	60	52	20	700	0.3	45	15
Pines	0%	2.254	12.14	120	49	23	700	0.3	45	18
True firs	100%	2.254	11.18	180	46	23	700	0.3	0	0
Hardwoods		2.214	11.78	0	0	0	0	0	0	0
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2.204	0	0	0	0	0	0	0
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.89		0	0	0	0	0	0	0
	Hardwoods	1.95		0	0	0	0	0	0	0
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	0.84		0	0	0	0	0	0	0
	Hardwoods	0.88		0	0	0	0	0	0	0

User must enter harvest cycles to 100 years and/or at least three entry cycles.

Sitka Spruce is in the Pinacea family, therefore any forest type listed (besides redwood) most closey matches this conifer species

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	Step 8. Enter the value (in bold) for each harvest cycel that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	Computed: MBF * Conifer Multiplier from Step 0.	Computed: BA*Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0.	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Heavy- 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre) Medium - >25% <50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). Light - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). None - No site preparation is conducted.	
0	84	1	346	3	Medium	-1.2
60	98	3	360	11	Medium	-1.2
120	92	3	339	12	Medium	-1.2
180	87	3	318	12	None	0
0	0	0	0	0	none	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
	Difference between ending stocks and beginning stocks		-28	9.66	Sum of emissions (Metric Tonnes CO2e) per acre	-3.6

Gautreaux THP - Evenaged Silviculture
Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	Assumption: ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested	MBF (all species) Yarded Delivered to Landing	Assumption:(((35 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			Assumption: (((.16 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not.	Assumption: Round Trip Hours/Load average (from below, to compute the mbf/hour) /((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	Step 9. Enter the estimated volume delivered to the landing in a day.	Step 10. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Yarders and Loaders CO2 equivalent/mbf (metric tonnes)	Computed. Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	Step 11. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Tractor and skidder CO2 equivalent/mbf (metric tonnes)	Computed. Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	Step 12. Enter number of pieces of equipment in use per day for each harvest entry	Computed. Helicopter CO2 equivalent/mbf (metric tonnes)	Computed. Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	Computed. Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	Steps 13 and 14 below		Computed. Estimated Metric Tonnes CO2e per harvested acre for each harvesting period.
0	(0.09)	20	1	-0.02	-0.68	1	-0.03	-1.06	0	0.00	0.00	-0.06	Step 13. Enter Estimated Load Average: MBF/Truck	4.5	-0.843755102
60	(0.10)	20	1	-0.02	-0.76	1	-0.03	-1.20	0	0.00	0.00	-0.07			-0.94922449
120	(0.10)	20	1	-0.02	-0.76	1	-0.03	-1.20	0	0.00	0.00	-0.07			-0.94922449
180	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00	Step 14. Enter Estimated Round Trip Haul In Hours	6	0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	-0.29				-2.20			-3.46			0.00	-0.19			-2.74

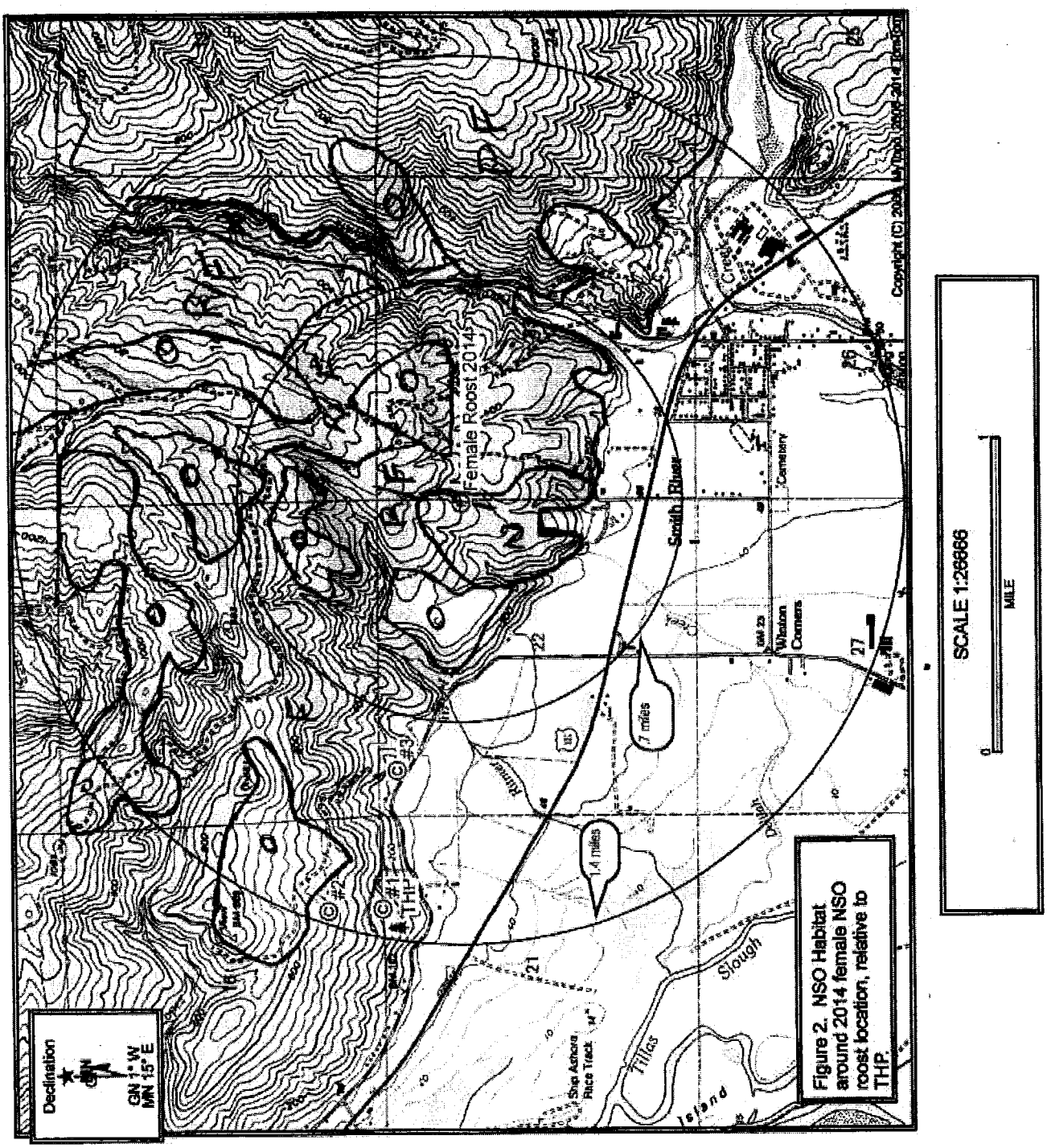
Gautreaux THP - Evenaged Silviculture

Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	**Assumption.** 20 kw/hour (mill energy use) /(40mbf lumber processed/hour) *(.05 metric tonnes/kw hour) * mbf processed	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Conifers	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Hardwoods	**Computed.** CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	**Computed.** CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Step 15.** Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	**Step 16.** Insert the percentage of hardwoods harvested or treated that are subsequently delivered to sawmills	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Calculated.** The CO2e associated with processing the logs at the mill	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		**Estimate.** The weighted average carbon remaining in use at year 100 is 46.3%	**Estimate.** The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.67 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
0	95%	0%	116.72	0.00	-0.95	78.21	0.00	59.51	0.00
60	95%	0%	131.32	0.00	-1.07	87.98	0.00	66.95	0.00
120	95%	0%	131.32	0.00	-1.07	87.98	0.00	66.95	0.00
180	95%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-3.09	Sum of CO2 equivalent in wood products		193.42	0.00

Gautreaux THP - Evenaged Silviculture Summary			Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
	Beginning Stocks	Ending Stocks	
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis		44 Years
Live Trees (Conifers and Hardwoods)	348.86	330.83	
Wood Products		193.42	
Site Preparation Emissions		-3.60	
Non-biological emissions associated with harvesting		-8.89	
Non-biological emissions associated with milling		-3.09	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		159.81	
Project Summary			
Project Acres	Step 17- Insert the acres that are part of the harvest area.	13	
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		2,078	



Habitat Description

The canopy within the THP is typical of the coast area. The principal overstory and understory species include Sitka spruce, with minor amounts of Douglas-fir, and alder. Brush species primarily include salmon berry, huckleberry, Rhododendren, and ferns. Pre-harvest habitat types within and adjacent to the plan area consists of Foraging.

Northern spotted owl (NSO) habitat is defined per 14 CCR 895.1 and as modified by the USFWS Coastal NSO "Habitat Description". NSO Habitats are defined as:

Nesting/Roosting: Habitat with ≥60% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥100 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Foraging: Habitat with ≥40% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥75 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Habitat was identified by a variety of methods including:

Inventory data, Personal knowledge of foresters of habitat conditions in the assessment areas, cursory ground truthing by foresters, Aerial photo interpretation (especially to determine between NSO Non-habitat (i.e. clearcuts, heavily selected areas, etc) and potentially suitable Foraging and Nest/Roost habitats.

It should be noted that to maintain consistency in habitat typing for our habitat assessments, NSO habitats as shown were typed based on the definitions and not in consideration of edge effects. The majority of suitable NSO habitat acreage is not derived from narrow strips of WLPZ edge habitats or small "stands" (<6 acres) or Nest/Roost habitat, where edge effects are most likely to occur.

UNIT, ftp/NEW, REF

Ms. Leslie Markham, Deputy Chief, Forest Practice
California Northern Region 1 Headquarters
Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, CA 95401

Dear Ms. Markham,

I have become aware of the possibility that individuals with the California Department of Fish and Wildlife (CDFW) may have grossly misrepresented California law in an attempt to pressure me into accepting extralegal protection of Great Blue Herons (GBH) located on my property as part of Timber Harvesting Plan (THP) 1-15-014 DEL.

The Registered Professional Forester (RPR) I employed to write this harvesting plan is licensed only to perform those services in which he is fully competent. As such, I have been compelled to seek the advice of two different consulting biologists (Frank Galea and Troy Leopardo). Assuming that the Initial Study presented by Troy Leopardo is correct, other than the actual nesting trees, I'm not legally required to give up any of my land for this rookery. It appears that CDFW has grossly overstated my legal obligations and has based their opinion on flawed analysis filled with anecdotal evidence and conjecture. I would find it even more troubling if their opinion and recommendations, based on flawed science and inconsistent with CA Law, were accepted by Cal-Fire.

Based on the recommendation of two certified wildlife biologist (at my own expense), I have agreed to provide this rookery with a 100-foot protection zone. In light of California Forest Practice Regulations (FRPs) and California law, I find CDFW's counter proposal completely confusing and unacceptable. My proposal is significantly larger than what is required by applicable California FRPs. In reading Consultation 15-R1-CTP-18-GBHE, you would think we were dealing with an endangered species. Mr. Galea and Mr. Leopardo both agree that a 1,320-foot seasonal restriction, a 200 foot no-cut zone, followed by another limited cut zone out to 300 feet, is grossly beyond what would be considered a reasonable set aside for a rookery within 50 feet of a County Road.

In addition, it appears 1st Review Team questions posed by CDFW with regards to my THP contain several unsubstantiated statements and speculations that are clearly outside their discretionary authority. Questions #8, 9 and 18 are irrelevant as there are no Northern Spotted Owls (NSOs) inside this plans assessment area. Furthermore, I think that question #17 indicates a predisposition by CDFW to micro-manage harvesting plan in a manner that is not ecologically meaningful at the landscape level. The most grievous question, however, is #19 and I can't help wondering if this type of speculation is customary in a Climate Change Assessment. The potential carbon dioxide content of the timber I am proposing for harvest is part of the earth's natural carbon cycle; any speculation on its intended use is not only prohibited law, it seems downright silly given that the root causes for Global Climate Shift is use of fossil fuels. If anything, this type of inappropriate and unreasonable THP review actually exacerbates the problem by adding to the THP review carbon footprint. Please keep in mind that we are talking about a parcel of land 13.25 acres of which approximately 2 acres around the house is already cleared and another 2+ acres are proposed to be left uncut to protect the GBHs and as part of a WLPZ.

The distinction between speculation and substantial evidence seems completely lost to me especially when viewed through the lens of the California Environmental Quality Act (CEQA). In proceeding along a line of questioning that assumes that potential impacts to these herons is

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RESOURCE MANAGEMENT

M216 8 Sep 15

significant, it appears that the CDFW is either unable or unwilling to following the requirements of CEQA. They provided no evidence of the significant impact outside of conjecture and anecdotal evidence. Drawing conclusions from a single data point and predicting micro climate changes based on such a small harvest seems to violate any and all accepted scientific practices.

As I believe these types of Underground Environmental Regulations imposed as mitigation measures under CEQA violate the California Administrative Procedure Act (APA), I respectfully request the Cal-Fire rejects the recommendations of CDFW and accept the proposal submitted by Frank Galea for GBH protection.

Respectfully,

Mark M Gautreaux
Land Owner

8 sep 2015

Mark Gautreaux
847 Chetco Point Ter.
Brookings, OR 97415-9087

UNIT, ftp/NEW

NOTE

"Information concerning archaeological sites has been removed from **THP #1-15-014 HUM** pursuant to California Government Code Section 6254.10 which exempts cultural resources site location information from the California Public Records Act and provides authority for widespread state policy (not just within the California Department of Forestry and Fire Protection) to keep archaeological site location information confidential. This exemption to the Public Records Act recognizes that providing site location information to the general public may put such sites at risk from artifact hunting, excavations and/or vandalism."

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

1. CAL FIRE field unit

2. Plan RPF

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

Cc (Arch Cover Sheet Only): File
Plan Submitter

PRE-HARVEST INSPECTION REPORT DATED 09-15-15 RECEIVED 09-15-15

State of California UNIT, ftp/NEW Natural Resources Agency

Memorandum

To: **Duane Shintaku, Deputy Director Resource Management** **Date: 9/15/2015**

Attention: **Leslie Markham, Deputy Chief, Forest Practice North coast Region 1 Headquarters** **Telephone:** 707-576-2959

Website: www.fire.ca.gov

From: **Department of Forestry and Fire Protection Humboldt-Del Norte Unit**

Subject: 5000 RESOURCE MANAGEMENT
5400 FOREST PRACTICE REGULATION AND TIMBER TAXATION
5410 FOREST PRACTICE ACT
Preharvest Inspection
THP # 1-15-014 HUM

Inspection No.:	1
Inspection Date:	3/17/15 & 9/8/15
Final Public Comment Date:	10/8/15
Inspection Hours:	46
Forest District:	Coast
Present:	Brian Griesbach, RPF Mark Gautreaux, timberland owner Jeremy Turner, LTO Rob Lovell, landowner employee Monty Larson, DFW John Oswald, CGS Heather Brent, CALFIRE

On 3/17/15, 2015 a preharvest inspection was made on the site of the proposed harvest area. The RPF agreed to an extension of the PHI date to accommodate a mutually agreeable date. Adequate responses to First Review Team Questions were received on 9/8/15, closing the PHI. An additional site visit was made on 7/14/15 with DFW for the great blue heron consultation. Prior to the onsite inspection, the THP document was carefully reviewed for compliance with the provisions of the Z'Berg-Negedly Forest Practices Act and the California Forest Practice Rules. First Review Team Questions (RTQ's) were reviewed and researched. Items needing clarification or potential errors, omissions, or inconsistencies were identified and noted for discussion with the forester in the field. The RPF responses to the RTQs were provided to the inspector in several emails with iterations of revisions. Some of the revisions were also sent to the Santa

Rosa Review Team. None appear to have been sent to Second Review in Fortuna. All of the revisions, in one set, need to be sent to Santa Rosa, Fortuna, the other attending agencies (CGS and DFW) and the CALFIRE inspector. **CALFIRE PHI Recommendation # 1:** *The RPF shall send the originals of the responses to the first review team questions and the PHI recommendations directly to the CDF Resource Management office in Santa Rosa. To assist in scheduling the Second Review team meeting, a copy of the responses shall be provided to the CDF Resource Management office in Fortuna. The RPF shall also send the final responses to First Review, in one set, to the CALFIRE inspector and the other attending agencies (CGS and DFW).*

1. TIMBERSTAND DESCRIPTION AND SILVICULTURE (THP ITEMS 14, 15, AND 37).

The RPF adequately describes the timberstand. It is second growth Sitka spruce, with a minor component of other species.

The proposed silviculture is clear cut, which is appropriate for the stand. A few large wolfy Sitka spruce, which may be residual from the original harvest, were observed. Due to the presence of large branches low on the bole, these trees will have little value at the mill. The LTO confirmed that he would not ship these logs. Such trees should be marked by the RPF for retention, provided they do not pose a safety hazard.

The plan area is adjacent to a public road on the south, and other ownerships not zoned TPZ on the west, north, and east. As such, 14CCR 913.1(a)(6) & (7) apply. When implementing this rule, the RPF shall ensure that a hazard to the neighboring properties is not created by the selected silviculture, keeping in mind the lack of wind firmness of spruce, the dominant species in the stand. **CALFIRE PHI Recommendation # 2:** *Prior to Second Review, the RPF shall provide a revised THP Item 14 and map identifying a 200 foot buffer in compliance with 14CCR 913.1(a)(6) & (7).*

The THP proposes to plant redwood and Douglas fir. Considering the ability of Sitka spruce to naturally regenerate, and the likelihood that redwood and Douglas fir will thrive on the site, this is acceptable.

Per the RPF response to RTQ 1, WLPZs are no cut. In the RPF's additional responses, THP Item 26 was corrected to remove references to WLPZ harvest. THP Item 14 still discusses a WLPZ harvest mark. **CALFIRE PHI Recommendation # 3:** *Prior to Second Review, the RPF shall provide a revised THP Item 14 with the reference to a WLPZ harvest mark removed.*

The total acreage shown in THP Item 14a does not equal the sum of the silvicultures shown and differs from THP Item 8. This needs to be corrected. **CALFIRE PHI Recommendation # 4:** *Prior to Second Review, the RPF shall provide a revised THP Item 14a with the acreage corrected.*

2. SLIDES AND/OR UNSTABLE AREAS.

CGS attended the PHI and identified an unstable area and proposed mitigation measures. Please see CGS report.

3. EROSION HAZARD RATING AND SOIL STABILIZATION (ITEMS 17 & 18).

The EHR is moderate and appears to be appropriately calculated.

4. YARDING AND HARVESTING PRACTICES (ITEMS 16, 19, 20, 21 & 22).

Ground-based yarding is proposed for the entire plan area. There are existing skid trails that should be sufficient for yarding the plan area. Most of the slopes are less than 50%. The yarding layout will be visible after operations, but it is possible to yard the plan area in compliance with the rules. An in-lieu skid trail was identified during the PHI, and will be addressed below in Item 8 of this report.

A tractor crossing, T1, is proposed, however, due to the location of a great blue heron rookery identified during the PHI, this crossing will not be necessary, and should be removed from the plan. **CALFIRE PHI Recommendation # 5:** *Prior to Second Review, the RPF shall provide a revised THP Item 26, 38, and THP map with crossing T1 removed.*

Should crossing T1 remain in the plan after the heron consultation, THP Item 26c will need to be revised to require a temporary pipe, and not flow through fill.

5. WINTER PERIOD OPERATIONS (ITEM 23).

A winter period operating plan has been included, stating that it is for the winter period and extended wet weather period. The winter operating plan discusses cable yarding, feller bunchers, and shovel yarding. It fails to address the extended wet weather period in parts 4, 9, and 12. It appears that this winter operating plan has been copied from a different THP, and was not made specific to this THP. A new winter operating plan, specific to this THP, needs to be written. The new winter operating plan also needs to address 14 CCR 916.9(l)(1), which is not currently addressed. **CALFIRE PHI Recommendation # 6:** *Prior to Second Review, the RPF shall provide a revised THP Item 23, with a new winter operating plan that is specific to this THP.*

6. ROADS AND LANDINGS (ITEMS 24 AND 25).

A short road and landing is proposed for yarding access. The proposed road is not accurately mapped. DFW is expected to recommend correction. CALFIRE concurs with this recommendation. THP Item 25 restates 14 CCR 923.4(m),

which provides construction requirements for roads build on slopes greater than 50% for more than 100 lineal feet. However, per the RPF, no road construction is proposed on slopes greater than 50%. Including this language is confusing, as it implies that roads may be built on slopes greater than 50%. **CALFIRE PHI Recommendation # 7:** *Prior to Second Review, the RPF shall provide a revised THP Item 25 with the paragraph of addressing 14 CCR 923.4(m) revised to state that no road construction is proposed on slopes greater than 50%.*

A permanent crossing, C1, is proposed on this road. THP Item 25 addresses 14 CCR 923.1(g) and states that no mitigation measures are needed. Considering the proposed installation of a crossing, mitigation measures to avoid impacts to the watercourse are likely necessary. THP Item 38 includes a work order for road repair, which includes mitigation measures in the "treatment" section. **CALFIRE PHI Recommendation # 8:** *Prior to Second Review, the RPF shall provide a revised THP Item 25, with the paragraph addressing 14 CCR 923.1(g) revised to include mitigation measures provided for the permanent crossing.*

The work order for road repair in THP Item 38 states that the estimated fill volume to be added at crossing C1 is 200 cubic yards. During the PHI this was determined to be an overstatement. A more realistic estimate should be provided. **CALFIRE PHI Recommendation # 9:** *Prior to Second Review, the RPF shall provide a revised THP Item 38 work order for road repair with a realistic estimate of the fill volume to be added at crossing C1.*

There is an existing crossing on the permanent road just below T1. The culvert is rusted through and needs to be replaced, per 14 CCR 923.7(e). **CALFIRE PHI Recommendation # 10:** *Prior to Second Review, the RPF shall provide a revised THP Item 25 and 38 to include replacement of the existing crossing on the permanent road just below T1.*

7. WATERCOURSE AND LAKE CLASSIFICATION AND PROTECTION MEASURES (ITEM 26).

The short Class III watercourse in the southwest corner of the plan area had surface water in it during the PHI and appears to be a Class II. The RPF had already provided Class II protection. The map needs to be corrected. **CALFIRE PHI Recommendation # 11:** *Prior to Second Review, the RPF shall provide a revised THP map showing the Class III watercourse as Class II.*

On THP Page 12, Item 26 addresses 14 CCR 916.9(e). In part (b) the plan states that "merchantable trees within the channel zone of class III watercourses may be harvested with the following exceptions…". This statement is not in compliance with the rule. The only situation in this THP where channel zone trees may be harvested is addressed in part (a). This section needs to be corrected. **CALFIRE PHI Recommendation # 12:** *Prior to Second Review, the*

RPF shall provide a revised THP Item 26 with the channel zone tree harvest section corrected.

In response to RTQ 15, the RPF removed the reference to collecting water from springs in tanks for drafting from the 1611 on THP page 30. This reference also needs to be removed from THP item 26. **CALFIRE PHI Recommendation # 13:** *Prior to Second Review, the RPF shall provide a revised THP Item 26 with the reference to collecting water in tanks from onsite springs removed.*

THP page 13, Item 26, under Class III watercourses, states that temporary crossings shall be removed before the winter period. There are no Class III temporary watercourse crossings. This reference should be removed. **CALFIRE PHI Recommendation # 14:** *Prior to Second Review, the RPF shall provide a revised THP Item 26 with the reference to temporary crossings removed from the Class III watercourse section.*

THP page 14, Item 26, states that "all logging road watercourse crossings proposed for removal shall be removed upon completion of use, prior to the winter period or as specified in the applicable CDFW 1600 agreement, whichever is earlier or as otherwise specified in the plan." The 1611 on THP page 30 states that temporary crossings will be removed by October 15. The THP needs to be consistent with the 1611. In addition, October 15 is more appropriate, as rain often occurs between October 15 and November 15. THP Item 26 should be revised. **CALFIRE PHI Recommendation # 15:** *Prior to Second Review, the RPF shall provide a revised THP Item 26 with the timing for temporary crossing removal changed to October 15.*

8. WATERCOURSE AND LAKE PROTECTIONS (IN-LIEU/ALTERNATIVE PRACTICES) (ITEM 27).

No in lieu practices are proposed in the THP, however during the PHI an existing skid trail going north on the east side of C1 will need to be reused and is within the WLPZ. It therefore needs to be addressed as an in-lieu. During the PHI, the RPF agreed to include the requirement for a waterbar where the skid trail enters the WLPZ and mulching the skid trail with seed and straw or slash as mitigations. **CALFIRE PHI Recommendation # 16:** *Prior to Second Review, the RPF shall provide a revised THP Item 27 that addresses the skid trail in the WLPZ on the east side of C1.*

9. DOWNSTREAM DOMESTIC WATER SOURCES (ITEM 28).

According to the THP, downstream landowners were notified, and no information was received regarding domestic water supplies.

10. SENSITIVE WATERSHEDS (ITEM 29).

The THP area is not within a sensitive watershed as designated by the Board of Forestry.

11. HAZARD REDUCTION (ITEMS 30 AND 31).

Hazard reduction is necessary for portions of the plan area. It appears to be adequately addressed.

12. WILDLIFE/BIOLOGICAL RESOURCES (ITEMS 32, 33, 34, AND 35).

With the revisions provided, the NSO appears to be adequately addressed.

Botanical surveys have not been conducted, according to the THP. Floristically appropriate botanical surveys must be provided prior to operations. This has been addressed in the THP.

A great blue heron rookery, which the RPF failed to either identify or disclose, is present in the THP area. The RPF and his consulting biologist both stated that they were unaware of the presence of herons in the plan area. The timberland owner, during the PHI, stated that he regularly saw herons in the area, and showed the PHI team pictures of herons he had taken at the property. Substantial quantities of white wash, indicative of heavy use by birds, was observed during the PHI in the area of the rookery. Several nests were easily visible from the ground in the area of white wash. The neighbors were aware of the rookery, and had informed CALFIRE and DFW. CGS had conducted a preconsultation site visit alone, and during the few minutes that he was at the road had been informed by neighbors of the presence of the heron rookery. This is a Board of Forestry sensitive species. It is required to be addressed by consultation with DFW prior to Second Review. CALFIRE attended an onsite inspection for this consultation conducted by DFW on 7/14/15. The RPF's consulting biologist proposed a 100 foot buffer for the rookery, however DFW has determined that a 300 foot buffer is necessary. The 300 foot buffer is in conformance with 14 CCR 919.3(b)(3) and appears appropriate.

13. CUMULATIVE IMPACTS ASSESSMENT.

With the revisions provided, the cumulative impacts assessment appears to sufficiently meet the expectations of the Department.

14. NOTICE OF INTENT.

A notice of intent was appropriately posted on Ocean View Drive.

15. PUBLIC ISSUES.

A public comment letter was received regarding the heron rookery. Both DFW and CALFIRE spoke with the commenter to obtain additional information. The rookery was observed during the PHI and consultation is underway.

16. OTHER.

The THP does not provide a flagging code for LTO and agency guidance. This should be included. **CALFIRE PHI Recommendation # 17:** *Prior to Second Review, the RPF shall provide a revised THP Item 38 that includes a flagging code.*

The area around the house on the property is mostly grass. Timber operations will not be conducted in this area. Therefore, it should be shown as out on the THP map. The acreages in THP Items 8 and 14 will need to be corrected. **CALFIRE PHI Recommendation # 18:** *Prior to Second Review, the RPF shall provide a revised THP map with the area around the house shown as "out" and acreages in Items 8 and 14 corrected as necessary.*

The Class II watercourse at T1 crosses the permanent road below through a culvert, travels down to Ocean View Drive, then travels west in an inside ditch to the watercourse shown as Class III on the THP map. The map should be revised to show this accurately. **CALFIRE PHI Recommendation # 19:** *Prior to Second Review, the RPF shall provide a revised THP map showing that the Class II watercourse at T1 crosses the permanent road below and goes down to Ocean View Drive.*

17. CULTURAL AND HISTORICAL RESOURCES (ITEM 36).

Please see attached confidential section.

ANSWERS TO REVIEW TEAM'S QUESTIONS

The RPF has provided acceptable responses to the RTQs.

The one agency question will be addressed by CGS.

RECOMMENDATIONS

1: The RPF shall send the originals of the responses to the first review team questions and the PHI recommendations directly to the CDF Resource Management office in Santa Rosa. To assist in scheduling the Second Review team meeting, a copy of the responses shall be provided to the CDF Resource Management office in Fortuna.

2: Prior to Second Review, the RPF shall provide a revised THP Item 14 and map identifying a 200 foot buffer in compliance with 14CCR 913.1(a)(6) & (7).

3: Prior to Second Review, the RPF shall provide a revised THP Item 14 with the reference to a WLPZ harvest mark removed.

4: Prior to Second Review, the RPF shall provide a revised THP Item 14a with the acreage corrected.

5: Prior to Second Review, the RPF shall provide a revised THP Item 26, 38, and THP map with crossing T1 removed.

6: Prior to Second Review, the RPF shall provide a revised THP Item 23, with a new winter operating plan that is specific to this THP.

7: Prior to Second Review, the RPF shall provide a revised THP Item 25 with the paragraph of addressing 14 CCR 923.4(m) revised to state that no road construction is proposed on slopes greater than 50%.

8: Prior to Second Review, the RPF shall provide a revised THP Item 25, with the paragraph addressing 14 CCR 923.1(g) revised to include mitigation measures provided for the permanent crossing.

9: Prior to Second Review, the RPF shall provide a revised THP Item 38 work order for road repair with a realistic estimate of the fill volume to be added at crossing C1.

10: Prior to Second Review, the RPF shall provide a revised THP Item 25 and 38 to include replacement of the existing crossing on the permanent road just below T1.

11: Prior to Second Review, the RPF shall provide a revised THP map showing the Class III watercourse as Class II.

12: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the channel zone tree harvest section corrected.

13: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the reference to collecting water in tanks from onsite springs removed.

14: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the reference to temporary crossings removed from the Class III watercourse section.

15: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the timing for temporary crossing removal changed to October 15.

16: Prior to Second Review, the RPF shall provide a revised THP Item 27 that addresses the skid trail in the WLPZ on the east side of C1.

17: Prior to Second Review, the RPF shall provide a revised THP Item 38 that includes a flagging code.

18: Prior to Second Review, the RPF shall provide a revised THP map with the area around the house shown as "out" and acreages in Items 8 and 14 corrected as necessary.

19: Prior to Second Review, the RPF shall provide a revised THP map showing that the Class II watercourse at T1 crosses the permanent road below and goes down to Ocean View Drive.

Hugh Scanlon
Unit Chief

original signature on file

by: Heather Brent RPF # 2656
Staff Forester

cc: File
Field
RPF
Water Quality
DFW
CGS

UNIT, EG, WQ, ER, [illegible], RPF

From: TROY LEOPARDO <leowild@prodigy.net>
Sent: Thursday, September 17, 2015 11:45 AM
To: Santa Rosa Public Comment@CALFIRE
Cc: Brent, Heather@CALFIRE; Thomas
Subject: 1-15-014 DEL
Attachments: Mark Gautreaux-CDFW091715.pdf

Dear Review Team,

Please accept my attached biological and legal analysis of protection measures recommended by California Department of Fish and Wildlife (CDFW) for great blue heron rookery located in association with proposed Timber Harvesting Plan (THP) 1-15-014 DEL. I would also like to address a discussion I had on the phone with Heather Brent regarding the language and intent of 14 CCR 919.3, the California Forest Practice Rules (FPRs) and your agencies Lead Agency status.

A private consulting biologist in Humboldt County, I have been involved with the Forest Practice Rules (FPR) since 1990. Compelled to unearth the legal basis for myopic and misguided mitigation measures proffered by agency biologists, it has become increasingly difficult to reconcile my understanding of State and Federal law with the manner that Cal-Fire approaches timber harvest review. Rather than guided by standards of practicality and reasonableness, Timber Harvest Plan (THP) Review Teams seems more interested in adopting the most ardent and difficult interpretation of law.

Underwritten by the landowner and prepared prior to the California Department of Forestry and Fire Protection (Cal-Fire) and CDFW Pre-Harvest Inspection Reports for this THP, my attached report pertains to Jon Hendrix's Great Blue Heron Consultation 15-R1-CTP-18-GBHE. Dated July 31, but inexplicably not submitted to the public record, CDFW's August 21 Pre-Harvest Report authored by Joe Croteau seems oblivious that such a consultation has even taken place.

In reference to the three hundred foot permanent protection buffer requested by the California Department of Fish and Wildlife, Ms. Brent's Pre-Harvest Report states: "The 300 foot buffer is in conformance with 14 CCR 919.3(b)(3)". However, much like Mr. Hendrix's heron consultation, she appears to have ignored key portions of applicable law.
Whereas 14 CCR 919.3(b)(3) state that the buffer zones for the Great Blue Heron and Great Egret shall consist of the area within a 300-foot radius of a rookery, §919.3(c)(3)
and §919.3(d)(3) make very clear that this buffer is intended for only for the critical period. It is obviously that statutory language in this section such as "All nest trees containing active nests shall be left standing and unharmed" and "timber operations within the buffer zone shall be staged with a gradual approach to the nest" implies that other trees inside the buffer are allowed to be harvested.

By insisting that a permanent 300-foot protection buffer around this rookery was indeed consistent with the FPRs, Ms. Brent is either unwilling or unable to interpret California law. More troubling, she appears to be abrogating Lead Agency responsibility for endorsing what is an exceedingly flawed CDFW report. Unwilling to discuss this report on its merits, instead she referring me to CDFW; however, as I see it, under PRC § 752 (b) any licensed Cal-Fire official that incorporates an outside opinion is accountable for the integrity of its content, in the same manner as a private Registered Professional Forester.

In this case, she appears complicit in an attempt to mislead my client into giving up his property rights. Although she denied it, in proclaiming that the plan proponent failed to identify or disclose this rookery there is a punitive sense to the extra legal heron protection measures endorsed by Ms. Brent. Reading Jon Hendrix's Great Blue Heron Consultation 15-R1-CTP-18-GBHE, date July 31 and CDFW's August 21 Pre-Harvest Report, they both appear to fault the plan proponents for not reporting this rookery to the California Natural Diversity Database (CNDDB). However, given that this rookery was first disclosed in a THP twenty-three years ago, and that the CNDDB is operated by CDFW who makes this it available to private customers for a subscription fee, one would think that the reporting of wildlife occurrences made available in the public record, such as THP review, would be the Departments responsibility.

In addition to unreasonable heron protection measures, this 13.6-acre THP also contains a number of unusual and extra legal recommendations. Without substantial evidence, or even a reasonable expectation of environmental significance, such recommendations, if coerced on the landowner, would amount to underground regulations. An explicit violation of State and Federal law that in my opinion not only exposes Cal-Fire to substantial threat of litigation, I also believe the failure to adhere to statutory limitation in this matter may be a licensing violation. However, given that recent case law, as articulated in Center for Biological Diversity v. Department of Fish and Wildlife[1] also gives landowners the right to take their case to the Office of Administrative Law (OAL), before Second Review of this plan, I respectfully request that the Director seek their advice in this matter. In addition, I ask that Ms. Brent and the team of CDFW biologist involved with my clients THP refrain from further comments pending an independent review of their qualifications and expertise in this matter.

Sincerely,

Troy Leopardo

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[1]Wood, J. 2015. Underground Environmental Regulations: Regulations Imposed As Mitigation Measures Under CEQA Violate the California Administrative Procedure Act. Program for Judicial Awareness Working Paper Series No. 13-514 August 10, 2015

Leopardo Wildlife
Associates
leowild@prodigy.net

August 27, 2015

Troy Leopardo
145 Liscom Hill Road
McKinleyville, CA 95519
(707) 502-9357

Ms. Leslie Markham, Deputy Chief, Forest Practice
California Northern Region 1 Headquarters
Department of Forestry and Fire Protection
135 Ridgway Avenue
Santa Rosa, CA 95401

RE: Protection Measures for Great Blue Heron Rookery associated with the "Gautreaux" Timber Harvesting Plan 1-15-014DEL, Del Norte County

Introduction

This biological and regulatory review of proposed protection measures for great blue heron (Ardea herodias) rookery located in proposed Timber Harvesting Plan (THP) 1-15-014DEL is conducted under the Z'berg-Nejedly Forest Practice Act 1973 (Public Resources Code Section 4551 et seq.). Thereto referred to as the California Forest Practice Rules (FPRs), timber operations conducted in accordance with the FPRs also qualify as a Mitigated Negative Declaration (MND) under the California Environmental Quality Act (CEQA). Comparing the landowner's proposal to implement a 100-foot no-cut buffer around great blue heron (GBH) nesting trees to recommendations issued by the California Department of Fish and Wildlife (CDFW), this environmental analysis is presented in lieu of an Initial Study (IS) Title 14, California Code of Regulations (14 CCR) Section 15063. Incorporating, or tiering of heron impact analysis previously provided for this and other THPs, this report contains a brief description of the project, its environmental and regulatory setting, as well as an analysis of significant environmental impacts and consideration of mitigation measures proposed to minimize significant effects.

Project Description

Located in northwestern Del Norte County, Section 21, Township 18 North, Range 1 West, HBM; a complete description of this THP can be found in the appropriate portions of the harvesting plan. Incorporating the entire 13.3-acre Gautreaux property, except for 1.3 acres set aside in Watercourse and Lake Protection Zones (WLPZs), this landowner was proposing to clear-cut this small parcel of land. Nevertheless, in addressing additional protection measures for GBH rookery discovered on the property late in the planning process, CDFW expressed concern that the proposed THP could impact the rookery "through habitat modification of the rookery stand or its surroundings, disturbance of nesting adults or chicks, or both". Rejecting the landowner's proposal to

establish a 100 feet "no-cut" buffer around nesting structures, in Great Blue Heron Consultation 15-R1-CTP-18-GBHE, the Department recommends protection measures that are significantly larger than required by applicable California law.

Environmental Setting

Common all year throughout most of California (Zeiner et al. 1990), increasing their population between 1970 and 1978 (Belluomini 1978), although knowledge of their locations is incomplete (Mallette 1972 and Belluomini 1978), herons are frequently encountered nesting in northwestern California (Harris 2006). Nesting as late as September (Pratt 1970 and Ives 1972), after breeding, they disperse from nesting colonies to outlying areas, but there is little regular migration (Gill and Mewaldt 1979). Although nests are often reused for many years and herons are socially monogamous within a single breeding season, most males choose new mates and different nests each year (Butler 1992). The FPRs specify that a tree or trees containing a group of five or more active great blue heron nests in close proximity qualify as a rookery. Located in a Sitka spruce dominated stand, this rookery appears to be approximately 0.10 acre in size. Situated 50 feet north of Ocean View Drive, a County Road on the southern edge of the property, it reportedly contains at least nine nests in at least six nesting trees. Although it could be expected that there may be more nesting structures than actual active nests, the number of estimated active nests appears consistent with twelve GBHs observed flying into and four flying out of the site by CDFW Environmental Scientist Monty Larson the morning of March 17, 2015.

Regulatory Setting

First instituted in 1973, California today has some of the strictest forest practice regulations in the world (Jacek et al 2009). The FPRs fall under the authority of CEQA, and as designated Lead Agency, regulating State Forestry is ultimately a California Department of Forest and Fire Protection (Cal-Fire) responsibility. Intended to assure the prudent and responsible production of high quality timber products [14 CCR §897(b)], while at the same time safeguarding the public's need for watershed protection, fisheries and wildlife, and recreational opportunities [14 CCR §4512 (c)], timber operations conducted in accordance with the FPRs also qualify as a MND. In other words, although harvest plans may result in localized environmental impacts, best management practices and habitat protection outlined in the FPRs are supposed to mitigate their significance on a landscape level. Required to consult with other responsible agencies, it is nonetheless the Lead Agencies responsibility to assure that environmental review procedures are conducted in accordance with policy requirements, as articulated in 14 CCR §21003. This analysis is conducted pursuant to 14 CCR §919.3 – Specific Requirements for Protection of Nest Sites. Considered by the Board of Forestry and Fire Protection (BOF) as a sensitive species according to 14 CCR §Section 898.2(d); tightly clustered herons nesting together are apt to depart abruptly from densely packed roost and nesting sites leading to mortality of young birds (Vos et al. 1985, Butler 1995, and Vennesland 2010).

Also included on CDFW's 2015 California Special Animals List, the FPRs provide explicit protection for GBH rookeries. In addition to the FPRs, potential significant impacts to this GBH rookery have been analyzed in accordance to standards of adequacy established in Public Resources Code (21000-21177), and in CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387).

Analysis of Significant Environmental Impacts

Timber harvesting may result in significantly adverse impacts to populations that exist in small numbers throughout all or a significant portion of their range [§15380(2)(A)], or are likely to become endangered within the foreseeable future throughout all or a significant portion of its range [§15380(2)(B)]. However, in accordance to California law, mitigation measures are not required for effects which are not found to be significant [CCR 14 §15126.4 (a)(3)]. In the event that a review team Chairperson concludes that the plan as filed would have a significant adverse effect on the environment, that member shall explain and justify this conclusion in writing as specifically as possible [CCR 14 §1037.5(b)]. In heron consultation for this THP, CDFW designates the rookery as a 'resource at risk' and this report goes on to state:

"This active rookery could be impacted by the subject THP through habitat modification of the rookery stand or its surroundings, disturbance of nesting adults or chicks, or both. Habitat modification (harvest of trees or reducing the size or changing the configuration of the nest stand) could directly impact nesting birds by reducing the number and quality of nest trees. A great blue heron rookery on the Eel River in the vicinity of the town of Rio Dell was not reoccupied after clearcut timber harvest occurred within approximately 100 feet of the nest tree. Such harvest may have exposed the heron nests to strong afternoon winds and rendered the site unsuitable. (Jay Harris pers. Comm. July 31, 2015)"

Although it does not directly regulate land use, CEQA makes environmental protection a mandatory part of the agency decision-making process by requiring state and local agencies to follow a protocol of analysis and public disclosure. As a Responsible Agency, when considering a Negative Declaration, CDFW must fully comply with CEQA when reaching its own conclusions. Required to distinguish potential significant effects from background impacts, the narrative should identify locally occurring plant or animal communities threatened by local elimination, in jeopardy of experiencing substantial habitat reduction, or dropping below self-sustaining levels as a result of proposed project [§15065(a)(1)]. As is reasonable, such argument should also contain an element of Forecasting (14 CCR §15144), as well as a degree of Specificity (14 CCR §15146) and Technical Detail (14 CCR §15147). Argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence [§21080(e)(2)].

A more comprehensive examination of the information submitted in the public record does not support the argument that proposed THP could reasonably result in significant environmental impacts to North coast GBH populations. Incomplete to the point that CDFW's GBH Consultation for THP 1-15-014 DEL cannot be considered CEQA

compliant, Senior Environmental Scientist Jon Hendrix's mention that there are no other great blue heron rookeries identified in the California Natural Diversity Data Base (CNDDB) within Del Norte County fails to acknowledge explicit CNDDB disclaimer that highly recommends review of available meta-data. Emphasizing the danger of basing evidentiary standards for rare or elusive species on anecdotal occurrence, McKelvey et al (2008) points to the Pacific Fisher as an example of how large errors of omission and commission can influence the allocation of limited funds and the efficacy of subsequent conservation efforts. Unfortunately, CDFW has a long history of misusing this database. As much as a lack of information does not in it self qualify as substantial evidence, CEQA also prohibits the use of historical records or anecdotal occurrences.

Not written in a manner useful or meaningful to the decision makers and the public, the possibility that the 100-foot buffer zone agreed to by the landowner could blow-down is conjecture, and as such, this highly speculative argument is out of place in a CEQA document. More troubling, having omitted any reference to the potential significance of alleged GBH impacts, other than a fleeting reference to 14 CR §919.3, this consultation makes no mention of specific heron protection measures as outlined in the FPRs. It is possible that language in 14 CCR §919.3(a) stating "buffer zones be designed to best protect the nest site and nesting birds from the effects of timber operations" has been misconstrued to mean 'by any means possible'. Nevertheless, in evaluating impacts of timber-harvesting operations to this rookery, CEQA also requires that existing baseline conditions be addressed. Located within 50 feet of a County Road, disturbance at this site is not novel, and as such, it is reasonable to expect that herons nesting at this site be accustomed to a certain amount of human activity.

Consideration of Mitigations to Minimize Significant Effects

The FPRs specify that buffer zones shall be established around all nest trees containing active nests. Such buffer zones are to be designed in consultation with the Department of Fish and Wildlife, to "best protect the nest site and nesting birds from the effects of timber operations", as approved by the Director and pursuant to 14 CCR §898. In consideration of the specific habitat requirements of the involved bird species, 14 CCR §919.3(b)(3) establishes a 300-foot radius buffer zone within a tree or trees containing a group of five or more active heron nests. However, 14 CCR §919.3(c)(3) makes it clear that year around restrictions apply only to those trees containing active nests. According to 14 CCR §919.3(d)(3), the critical period for GBH in this part of California is between March 15 and July 15, during which time timber operations within the buffer zone shall be staged with a gradual approach to the nest.

Implicit assumption of environmental significance aside, on the recommendation of a consulting Wildlife Biologist, Mr. Gautreaux has agreed to set aside more than the minimum required by the FPRs. Even if proposed operations would result in the eventual abandonment of this small rookery, the herons would simply relocate elsewhere. As such, it is important to consider that this landowner is also permanently setting aside 1.3 acres prime heron rookery habitat in the WLPZ. Amounting to approximately 10% of the ownership, this approximate ratio of harvest to habitat retention is consistent for

California North coast timber harvesting plans. Nevertheless, in recommending protection measures that are significantly larger than required by the FPRs, CDFW's proposal for a seasonal restriction of a quarter mile around a heron rookery is unreasonable for such a commonly occurring species. Asking that harvest operations be prohibited within 200 feet, and severely curtailed between 200 and 300 feet, CDFW is in effect increasing habitat retention for this rookery from 0.6 to 4.25 acres, or by more than 450%. Removing from forest production nearly 1/3 of the ownership, when asked about the lack of meaningful CDFW feasibility evaluation in 2009, Mr. Hendrix stated that the Department conducts "internal" feasibility assessments, but that the ultimate responsibility probably lay with Cal-Fire. However, it is reasonable to expect that responsibility for evaluating the feasibility of a mitigation or project alternative lay with the requesting agency. Consistent with a CDFW timber harvest review policy intent on adopting the most ardent and difficult interpretation of law, the notion that landowners must mitigate incidental damage or loss of individual non-ESA listed plant or animals is not the foregone conclusion this CDFW reviewer would have the Lead Agency believe it is. According to 14 CCR §15096, a Responsible Agency complies with CEQA by considering the Negative Declaration and by reaching its own conclusions on whether and how to approve the project involved. However, these comments shall be limited to those project activities that are within the agency's area of expertise.

The California Legislative Analysis's Office (LAO) in 2002 identified problems with the consistency, effectiveness, and accountability of the Department's CEQA review program (Giambattista 2002). Limited by a lack of formal process for prioritizing projects, this study also found that the absence of reliable data and lack of standardized protocol complicated program management and legislative oversight. Having failed to provide any substantial evidence showing that the potential loss of this rookery site could in fact be environmentally significant, it appears the Department has not presented State law in its entirety. Nevertheless, in accordance to the FPRs, as long as the actual nest trees are left standing and operations are contained to outside a 300-foot radius during the presence of birds, California law permit the types of impacts to GBH rookeries that this CDFW consultation purports to mitigate. As much as this landowner wishes to harvest the timber on his property in strict adherence to the FPRs, any agency effort to compel extralegal protection measures could be considered underground regulation. Mr. Charles Ciancio's petition to the Office of Administrative Law (OAL), in 2006, regarding an alleged violation of Government Code §11340.5 involving a quarter mile radius buffer zone around an osprey nest states:

> "Although CDF has adopted regulations specifying the size of the buffer zone, there does not appear to be any law which prevents a landowner from voluntarily agreeing to the larger buffer zone recommended by DFG. If acceptance of a 1,320 foot buffer zone by each property owner is truly voluntary and in each instance this results from a case-by-case analysis specific to each THP, then there would be no underground regulation. If, however, acceptance of the one quarter mile buffer zone is somehow coerced, the issue arises of whether this is being enforced by CDF or by DFG."

In conclusion, given a regulatory environment where harvesting plans are rejected for the smallest detail, the participation of agency individuals with a record of wrong or misleading opinions that are outside the discretionary powers of the law may be a serious violation of the California Administrative Procedure Act (Wood 2015). By an abundance of caution, or by some murkier motives, not only has this produced a regulatory mission creep that threatens the credibility of timber harvesting review process, it has also resulted in environmental protection measures that defy common sense.

Troy Leopardo

Private Consulting Biologist

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UNIT, fip/NEW

NOTE

"Information concerning archaeological sites has been removed from **THP 1-15-014 DEL** pursuant to California Government Code Section 6254.10 which exempts cultural resources site location information from the California Public Records Act and provides authority for widespread state policy (not just within the California Department of Forestry and Fire Protection) to keep archaeological site location information confidential. This exemption to the Public Records Act recognizes that providing site location information to the general public may put such sites at risk from artifact hunting, excavations and/or vandalism."

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

1. CAL FIRE field unit - Fortuna

2. Reviewing Archeologist, Santa Rosa (Region Office)

The original copy of this material is maintained in a confidential file at CAL FIRE's Northern Region Headquarters, 135 Ridgway Avenue, Santa Rosa, CA 95401.

UNIT, ftp/NEW

BLAIR FORESTRY CONSULTING

Providing Professional Forestry Services PO Box 2517 McKinleyville, CA 95519 **CELL** 707.672.5814 **EMAIL** brian.griesbach@blairforestry.com

October 9, 2015

Cal Fire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, Ca 95401

RE: RPF's Responses to PHI for **1-15-014 DEL "Gautreaux THP"**

Cal Fire Review Team,

This letter includes the RPF's responses to PHI for 1-15-014 DEL. The landowner has obtained a consulting biologist, Troy Leopardo, to address recommendations provided by CDFW (attached on pages 4-8). The RPF has also provided response to these recommendations (attached after Mr. Leopardo's response). An erratum has been included below each question that states on what revised or new page the response or form change can be found.

1: The RPF shall send the originals of the responses to the first review team questions and the PHI recommendations directly to the CDF Resource Management office in Santa Rosa. To assist in scheduling the Second Review team meeting, a copy of the responses shall be provided to the CDF Resource Management office in Fortuna.

RPF Response: Agreed

2: Prior to Second Review, the RPF shall provide a revised THP Item 14 and map identifying a 200 foot buffer in compliance with 14CCR 913.1(a)(6) & (7).

RPF Response: Disagree. The intent of The Rule is not to arbitrarily flag off 200 feet on all sides of the project. The intent of The Rule is to mitigate potential impacts to aesthetics and adjacent stand vigor.

The projects small size and no harvest areas will mitigate potential impacts. Of the 13.3 acres included in the project area there are 2.4 acres of "no cut" WLPZ, 1.3 acres of non-timber and .75 acre of no cut wildlife habitat (all adjacent to the public road). These areas will not be harvested and will break up the continuity of the harvesting.

Adjacent landowners have been given the opportunity to comment on this project. None of the adjacent landowners have stated they are concerned about visual impacts. The RPF called one of the neighboring landowners inquiring as of the matter and no statement was received which reasonably construes they are not concerned.

14CCR 913.1(a)(7) addresses a projects impact on adjacent stand vigor. Only one side of the stand has an adjacent stand. Again, given the projects small size and no cut areas significant impacts to adjacent stand vigor will not occur.

3: Prior to Second Review, the RPF shall provide a revised THP Item 14 with the reference to a WLPZ harvest mark removed.

RPF Response: Agreed. Page 4 is revised.

4: Prior to Second Review, the RPF shall provide a revised THP Item 14a with the acreage corrected.

RPF Response: Agreed. Page 4 is revised.

5: Prior to Second Review, the RPF shall provide a revised THP Item 26, 38, and THP map with crossing T1 removed.

RPF Response: Disagree. The protection zone for the rookery has not yet been determined. There is potential that the crossing will not be affected by the Heron protection zone. THP Item 26c already provides an option for a culvert. In the event T1 falls within 100' the RPF proposes use of the skid trail outside of the critical period.

6: Prior to Second Review, the RPF shall provide a revised THP Item 23, with a new winter operating plan that is specific to this THP.

RPF Response: Disagree and agree. The first sentence of the Winter Operating Plan states the period covered. It reasonably infers that the provisions provided apply to the extended period. 916.9(l)(1) has been included. Page 8 Item 3c is revised.

7: Prior to Second Review, the RPF shall provide a revised THP Item 25 with the paragraph of addressing 14 CCR 923.4(m) revised to state that no road construction is proposed on slopes greater than 50%.

RPF Response: Agreed. Revised page 10.

8: Prior to Second Review, the RPF shall provide a revised THP Item 25, with the paragraph addressing 14 CCR 923.1(g) revised to include mitigation measures provided for the permanent crossing.

RPF Response: Disagree. Measures are provided on page 32. Any additional measures necessary to protect natural resources will be provided by CDFW in a 1600 Agreement.

9: Prior to Second Review, the RPF shall provide a revised THP Item 38 work order for road repair with a realistic estimate of the fill volume to be added at crossing C1.

RPF Response: Agreed. Page 19 is revised.

10: Prior to Second Review, the RPF shall provide a revised THP Item 25 and 38 to include replacement of the existing crossing on the permanent road just below T1.

RPF Response: Agreed. Pages 10, 19, 21, 33, 34, and 87 are revised.

11: Prior to Second Review, the RPF shall provide a revised THP map showing the Class III watercourse as Class II.

RPF Response: Agreed. Page 21 is revised.

12: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the channel zone tree harvest section corrected.

RPF Response: Agreed. Page 12 is revised.

13: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the reference to collecting water in tanks from onsite springs removed.

RPF Response: Agreed. Page 12 is revised.

14: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the reference to temporary crossings removed from the Class III watercourse section.

RPF Response: Disagree. The rule is quoted in its entirety and portions of such are applicable. There is no need to "chop up" the rule language.

15: Prior to Second Review, the RPF shall provide a revised THP Item 26 with the timing for temporary crossing removal changed to October 15.

RPF Response: Agreed. Page 14 is revised.

16: Prior to Second Review, the RPF shall provide a revised THP Item 27 that addresses the skid trail in the WLPZ on the east side of C1.

RPF Response: Agreed: Page 14 is revised. New page 34.1 is included.

17: Prior to Second Review, the RPF shall provide a revised THP Item 38 that includes a flagging code.

RPF Response: Agreed: Page 19 is revised.

18: Prior to Second Review, the RPF shall provide a revised THP map with the area around the house shown as "out" and acreages in Items 8 and 14 corrected as necessary.

RPF Response: Disagree. Portions of the yard may be used for log landing and skidding. The map and Item 14 will be revised to show these areas as non-timbered. Pages 4 and 21 are revised.

19: Prior to Second Review, the RPF shall provide a revised THP map showing that the Class II watercourse at T1 crosses the permanent road below and goes down to Ocean View Drive.

RPF Response: Agreed. Revised page 21.

1. CGS-1:
-The RPF shall add CGS-1 to the appropriate plan maps
-The unstable area shall be enclosed in an equipment exclusion zone and skid trail use limited to the existing skid trail in the lower elevations of the unstable area.
-No grading within the extent of the unstable area shall occur.

RPF Response: Agreed: Pages 9, 19 and 21 are revised.

Leopardo Wildlife Associates
leowild@prodigy.net
707-502-9357
October 8, 2015

Ms. Leslie Markham, Deputy Chief, Forest Practice
California Northern Region 1 Headquarters
Department of Forestry and Fire Protection
135 Ridgway Avenue
Santa Rosa, CA 95401

RE: Response to Recommendations in California Department of Fish and Wildlife's Pre-Harvest Inspection Report for Timber Harvesting Plan 1-15-014DEL

1. Pursuant to 14 CCR 919.3, revise the THP to include a completed consultation for great blue heron prior to second review.

Please include my review of California Department of Fish and Wildlife (CDFW) Blue Heron Consultation 15-R1-CTP-18-GBHE submitted on behalf of the landowner as a public comment on September 17. Conducted under the Z'berg-Nejedly Forest Practice Act 1973 (Public Resources Code Section 4551 et seq.), thereto referred to as the California Forest Practice Rules (FPRs), as interpreted through California Environmental Quality Act (CEQA) Guidelines and presented in the format of an Initial Study (IS), this report concurs with the 100-foot no-cut buffer zone proposed by Consulting Biologist Frank Galea.

Although CDFW has already conducted a consultation for great blue heron rookery associated with this THP, their Pre-Harvest Inspection (PHI) Report submitted three weeks later makes no mention of it. Furthermore, contrary to CEQA principles of transparency and full disclosure, 15-R1-CTP-18-GBHE dated on July 31 was not made available to the public until September 23, after my public comment specifically asked for it. When questioned on September 22, as to why 15-R1-CTP-18-GBHE had not been made available for public review earlier, CDFW Biologist Monty Larson said he thought it was the RPF's responsibility. Also asked to explain why CDFW PHI Report signed by Timberland Conservation Program Manager Joe Croteau on August 21 does not acknowledge great blue heron consultation signed by Jon Hendrix dated three weeks earlier, Mr. Larson said that Mr. Croteau had completed his PHI Report prior to July 31. Presumably, it was postdated. Nevertheless, this PHI Report not only makes reference to 300-foot buffer, it also contains maps and photographs originally included with this consultation. Seeking an answer to these and other questions from Mr. Croteau, I was unable to reach him because the phone number provided by Mr. Larson had been disconnected.

Feasibility and Significance are fundamental statutory components of CEQA. Although CDFW's claims to have provided "feasible and project-specific recommendations to avoid or reduce potential significant direct, indirect, and cumulative impacts in accordance with the Forest Practice Rules 14 CCR 1037.5(f)", neither the PHI Report, nor the heron consultation prepared by the Department makes any further mention of these key principles. Instead, not only has CDFW presented their recommendations with an implicit assumption of significance, a clear violation of 14 CCR §21080(e)(2), the lack of meaningful consideration of the feasibility of their recommendations not only conflicts with the FPRs, it also violates CEQA and the California Administrative Policy Act (APA).

Although 14 CCR 919.3(b)(3) state that the buffer zones for the Great Blue Heron and Great Egret shall consist of the area within a 300-foot radius of a rookery, 14 CCR §919.3(c)(3) and 14 CCR §919.3(d)(3) make very clear that this buffer shall only apply to the critical period. Statutory language found in these sections such as "All nest trees containing active nests shall be left standing and unharmed" and "timber operations within the buffer zone shall be staged with a gradual approach to the nest" implies that other trees inside the buffer are allowed to be harvested. Nevertheless, in reference to the 300-foot permanent protection buffer requested by CDFW, Heather Brent (RPF #2656) states in Cal-Fire PHI Report: "The 300 foot buffer is in conformance with 14 CCR 919.3(b)(3)".

In accordance to 14 CCR §15096, a Responsible Agency complies with CEQA by considering the Negative Declaration and by reaching its own conclusions on whether and how to approve the project involved. Regrettably, much like Mr. Hendrix's heron consultation and Mr. Croteau's PHI Report, Ms. Brent appears to have ignored key portions of applicable law. As per 14 CCR §919.3(a), the boundaries and configuration of nest buffer zone shall be flagged by an RPF or supervised designee, in consultation with CDFW. However, this does not give CDFW the kind of carte blanch authority they seem to believe they have. Explicitly specifying that such consultation be conducted pursuant to 14 CCR §898, it is also clear that the responsibility of final approved rests with the Lead Agency.

In as much as I can tell from my numerous conversations with Cal-Fire representatives, they believe looking after the landowners' interests is solely the RPF's responsibility. However, it is the Lead Agency's responsibility to assure that environmental review procedures are conducted in accordance to policy requirements, as articulated in 14 CCR §21003. The law is also very clear in that these comments shall be limited to those project activities that are within the agency's area of expertise. However, not only does my attached IS cast doubt on the knowledge and experience of CDFW staff involved with this THP, in a public comment I also expresses the concern that CDFW's extra-legal heron rookery protection measures endorsed by Cal-Fire may be punitive.

The tone and tenor of Great Blue Heron Consultation, CDFW's PHI Report, and Cal-Fire's PHI Report seem to fault the plan's proponents for not reporting this rookery. Apparently blaming Mr. Galea for this mishap, Mr. Larson even went as far as informing

Brian Griesbach (RPF#2738) that CDFW would not accept any further work on the THP by this biologist. However, according to the FPRs, environmental analysis of past projects only needs to go back ten years. Disclosed in a THP twenty-three years ago, it is also important to keep in mind that the California Natural Diversity Database (CNDDB) is operated by CDFW, who make it available to private customers for a subscription fee. As the compilation and analysis of wildlife occurrences made available in the public record is clearly the Departments responsibility, the fault for this rookery not being reported on the CNDDB rests entirely with CDFW.

More troubling, insisting that a permanent 300-foot protection buffer around this rookery was indeed consistent with the FPRs, Ms. Brent is either unwilling or unable to interpret the FPRs. Having endorsed what is an exceedingly flawed CDFW analysis, Ms. Brent appears to be abrogating Lead Agency responsibility. Unwilling to discuss this report on its merits and instead referring me to CDFW; nevertheless, under PRC § 752 (b) any licensed Cal-Fire official that incorporates an outside opinion is accountable for the integrity of its content, in the same manner as a private RPF.

To conclude, in order to compel this landowner to adopt recommendations outlined by CDFW in 15-R1-CTP-18-GBHE, Cal-Fire must either ask the Department to specify how the proposed THP could reasonably lead to a significant impact to California great blue heron populations as defined by §15380(2)(A) or §15380(2)(B), or provide such analysis themselves. Not only should this narrative address the feasibility of implementing such rigorous protection measures on this small ownership, it must also show that such mitigation measures are reasonable when taking into account baseline conditions. Consequently, in the absence of such information this recommendation has been rejected.

2. **Prior to second review, revise the THP to include disclosure of the unique stand of Sitka spruce in the THP and evaluate the stand, potential THP impacts and appropriate mitigations pursuant to 14 CCR 912.9, Technical Rule Addendum No. 2, item 1: a rare species that may be directly or indirectly affected by project activities. The cumulative impacts to Sitka spruce as a rare species in California. Appropriate mitigations measures should be developed and disclosed based the analysis in cumulative impacts analysis.**

Whereas the CNDDB recognizes Sitka spruce forests as rare and of high priority for inventory, and CDFW's List of California Vegetation Alliances considers such forests rare, these types of second growth Sitka spruce stands are in fact common on the North Coast. Furthermore, although harvest plans may result in localized environmental impacts, timber operations conducted in accordance with the FPRs also qualify as a MND. Thus, best management practices and habitat protection outlined in the FPRs are intended to mitigate their significance on a landscape level. As such, barring the potential for a significant environmental impact, Mr. Gautreaux's private property rights eclipses the Trustee Agency's concern for this vegetation community. In order to compel this landowner to adopt CDFW's recommendations, Cal-Fire must ask the Department to provide, if not substantial evidence, at least a reasonable hypothesis for how a sig[illegible]

impact to Wildlife/Biological Resources associated with this Sitka spruce stand could occur, or provide such narrative themselves. Consequently, this recommendation has been rejected for the same reason as Recommendation #1.

3. **Prior to second review, revise the THP's Section II, Item 14d, to include the list of tree characteristics of large trees (conifers>30 in. dbh) to be important to wildlife: reiterated trunk, large lateral limb, multiple tops, hollow, cavities, decay, epicormic branching, broken top, snag top:**

    a. **Reiterated trunk: vertically oriented steam with their own branches, architecturally indistinguishable from freestanding trees except for their location within the crown of the larger supporting tree;**
    b. **Large lateral limb: lateral limb greater than 6 in. in diameter;**
    c. **Multiple Tops: trees with two or more leaders near the top of the tree than provide opportunities for resting, denning, or nesting;**
    d. **Hollow: wood voids with (estimated) large interior dimension and a large ≥6-inch entrance opening suitable for use by a variety of small mammal and bird species;**
    e. **Cavities: wood voids with (estimated) small to medium interior dimensions and a relatively small (1.5 in. – 3 in.) to medium (3 in. – 6 in.) entrance openings suitable for use by a variety of small mammal and bird species;**
    f. **Decay: extensive decayed wood as evidence by large and/or extensive fungal fruiting bodies (conk), lichen, large broken limbs, cavity entrances and sloughing wood and/or bark;**
    g. **Epicormic branching: multiple branches emerging from a single location on a trunk; these may be dense clusters of very small branches (witches broom) or larger branches up to several inches in diameter;**
    h. **Broken Top: trees with a minimum diameter at the ordinal break of ≥ 12 in. diameter;**
    i. **Snag Top: trees with a dead top where with the lowest portion of the dead top is at least 12 in. in diameter.**

In direct contradiction to Cal-Fire's PHI conclusion that cumulative impacts assessment provided by the RPF appears sufficient to meet their expectations, it is evident that CDFW does not share those expectations. In effect recommending that the landowner retain any and all conifers>30 in. dbh, with a reiterated trunk, large lateral limb, multiple tops, hollow, cavities, decay, epicormic branching, broken top, or snag top, the only justification CDFW offers for this recommendation is that such trees are important to wildlife. However, in failing to demonstrate the necessity of these recommendations in accordance to CEQA, not only does CDFW analysis for this THP neglect to address the significance of alleged impacts, having carefully avoided referring to recommended protection measures as "mitigations", it appears they are willfully trying to circumvent state law.

Unreasonable heron protection measures and extraordinary concern for Sitka spruce forests aside, the First and Second Review process for this 13.6-acre THP also contains a number of unusual and extra legal recommendations from CDFW. The optics of a convoluted greenhouse gas reduction policy whilst blind to the needless waist of energy spent on issues that don't need to be addressed and surveys that didn't need to be conducted stands out as particularly ill-advised. However, in a regulatory environment where projects are rejected for the smallest detail, the participation of agency individuals with a record of wrong or misleading opinions that are outside the discretionary powers of the law is a serious violation of CEQA. Consequently, as CDFW has specified neither which Wildlife/Biological Resource is at risk, or provided a reasonable hypothesis for a potential significant impact, this recommendation has been rejected.

Troy Leopardo

Private Consulting Biologist

RPF Response to CDFW Recommendations:

1. Pursuant to 14 CCR 919.3, revise the THP to include a completed consultation for great blue heron prior to second review.

   RPF Response: A consultation by biologist, Frank Galea is attached. The protection measures therein are appropriate. Pages 88.1-88.3 inserted. Page 15 is revised.

2. Prior to second review, revise the THP to include disclosure of the unique stand of Sitka spruce in the THP and evaluate the stand, potential THP impacts and appropriate mitigations pursuant to 14 CCR 912.9, Technical Rule Addendum No. 2, item 1: a rare species that may be directly or indirectly affected by project activities. The cumulative impacts to Sitka spruce as a rare species in California. Appropriate mitigations measures should be developed and disclosed based the analysis in cumulative impacts analysis.

   RPF Response: Disagree. The species is not on the State or Federal or CNPS Rare or Endangered Species List. Because a species is rare, absent or occurs in limited portions in one specific location does not make it "rare". Sitka Spruce occurs from California to Alaska is common in the Pacific Northwest and protected in numerous parks and public lands.

   The RPF counted 11 large trees on PHI. This constitutes less than 1 per acre rather than Mr. Larson's 2 per acre. The large trees are a minor stand component.

3. Prior to second review, revise the THP's Section II, Item 14d, to include the list of tree characteristics of large trees (conifers>30 in. dbh) to be important to wildlife: reiterated trunk, large lateral limb, multiple tops, hollow, cavities, decay, epicormic branching, broken top, snag top:

   a. Reiterated trunk: vertically oriented steam with their own branches, architecturally indistinguishable from freestanding trees except for their location within the crown of the larger supporting tree;
   b. Large lateral limb: lateral limb greater than 6 in. in diameter;
   c. Multiple Tops: trees with two or more leaders near the top of the tree than provide opportunities for resting, denning, or nesting;
   d. Hollow: wood voids with (estimated) large interior dimension and a large ≥6-inch entrance opening suitable for use by a variety of small mammal and bird species;
   e. Cavities: wood voids with (estimated) small to medium interior dimensions and a relatively small (1.5 in. – 3 in.) to medium (3 in. – 6 in.) entrance openings suitable for use by a variety of small mammal and bird species;
   f. Decay: extensive decayed wood as evidence by large and/or extensive fungal fruiting bodies (conk), lichen, large broken limbs, cavity entrances and sloughing wood and/or bark;
   g. Epicormic branching: multiple branches emerging from a single location on a trunk; these may be dense clusters of very small branches (witches broom) or larger branches up to several inches in diameter;
   h. Broken Top: trees with a minimum diameter at the ordinal break of ≥ 12 in. diameter;
   i. Snag Top: trees with a dead top where with the lowest portion of the dead top is at least 12 in. in diameter.

   RPF Response: See Mr. Leopardo's Response.

3. Prior to Second Review Revise the THP Maps to show the correct location of the seasonal road which accesses the western portion of the THP.

RPF Response: Agreed. Page 21 is revised.

This concludes the RPF's Response to PHI Recommendations. Please feel free to call with any questions or concerns. Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach - RPF #2738
BLAIR FORESTRY CONSULTING

cc: Second Review- Cal Fire Fortuna
John Oswald-CGS
Heather Brent –Cal Fire
Thomas Blair-Blair Forestry
Mark Gautreaux-Landowner
Monty Larson-CDFW

Attachments:

Revised pages to be replaced: 4, 8, 9, 10, 12, 14, 15, 19, 21, 33, 34, 87

New pages to be included: 34.1, 88.1-88.3

SECTION II - PLAN OF TIMBER OPERATIONS

14. SILVICULTURAL METHODS

a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913[933, 953].11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

☒ Clear cut	8.8 ac.	☒ No Cut WLPZ	2.4 ac
☒ Non timbered	1.3 acres	☒ No Cut Wildlife Habitat	.8 ac

Total acreage 13.3 ac.: (Explain if total is different than in Item 8) MSP option chosen: (b) ☐ (c) ☒

b. If Selection, Group Selection, Commercial Thinning, Sanitation Salvage or Alternative methods are selected the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 1034 (x) (12).

WLPZ acres are no cut.

c. ☐ Yes ☒ No Will even age regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) – (E) of 14 CCR 913 (933, 953).1 (a) (2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) – (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by or marked under the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

All trees within the clear cut area are available for harvest unless marked with a blue painted "L" at breast height.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If yes, how will LTO determine which trees will be harvested or retained? If more than one silvicultural method or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: Sawlogs, veneer logs, chip logs, split products and firewood. Chip logs and slash may be processed on site in the form of "clean chips" or "hog fuel".

f. ☐ Yes ☒ No Are group B species proposed for management?
☐ Yes ☒ No Are group B or non-indigenous A species to be used to meet stocking standards?
☐ Yes ☒ No Will group B species need to be reduced to maintain relative site occupancy of A species?

If any answer is yes, list the species, describe treatment, and provide the LTO with necessary felling and slash treatment guidance. Explain who is responsible and what additional follow-up measures of manual treatment or herbicide treatment is to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

g. Other instructions to LTO concerning felling operations.

All conifer snags shall be retained, unless they are a safety hazard.

h. ☒ Yes ☐ No Will artificial regeneration be required to meet stocking standards?

Artificial regeneration will be required to meet stocking standards in those areas where the clearcut prescription is proposed. Depending on seedling availability, these areas will be planted 'as early as' the first winter following harvest operations. Only native conifers grown from locally collected seed or seed from the appropriate seed zones and elevations will be used. Seedlings will be planted to attain a minimum point count of 300 per acre. Conifer species to be planted shall be redwood, and or Douglas fir.

i. ☒ Yes ☐ No Will site preparation be used to meet stocking standards? If yes, provide the information required for a site preparation addendum, as per 14 CCR 915.4 (935.4, 955.4).

(a) Site preparation may be required in the clearcut areas to achieve a desirable level of stocking following harvest. Broad cast burning of slash may be used to prepare the site to allow for hand planting of conifer seedlings. If it is determined that the stocking requirements can be met without broadcast burning, no broadcast burning will take place. If burning is deemed necessary, burning operations will be conducted according to the provisions of a project type-burning permit issued by the California Department of Forestry and Fire Protection.

923.6(c) During the extended wet weather period, log hauling or other heavy equipment uses shall be limited to logging roads and landings that exhibit a stable operating surface in conformance with (b) above. Routine use of logging roads and landings shall not occur when equipment cannot operate under its own power.

916.9(k) Tractor roads shall not be used when operations may result in significant sediment discharge.

914.8(d) Tractor road watercourse crossing facilities shall be removed and stabilized prior to the beginning of the winter period to the standards of 14CCR 923.9 subsections (p)(1)-(4). Tractor watercourse crossings shall not be used during the winter period.

WINTER OPERATING PLAN

This Winter Operating Plan is for the Extended Wet Weather Period, occurring from October 15 to May 1, and the Winter Period, occurring from November 15 to April 1 for all timber operations.

1. Erosion Hazard Rating – Moderate.

2. Mechanical Site Preparation Methods – None.

3. Yarding Systems – yarding equipment which may be used on this plan are discussed in Section II Item 16 and shown on the attached plan maps. The following types of equipment may be used with their associated limitations:

    a. Cable yarding may occur during the winter period where haul roads are adequately surfaced for all weather conditions and have had appropriate drainage facilities installed. Cable operations will be subject to wet weather restrictions contained in paragraphs (7) & (10) below.
    b. No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.
    c. Tractor and skidder/forwarder operations may occur during the extended and winter period during only dry, rainless periods where soils are not saturated. Tractor operations will be subject to wet weather restrictions contained in paragraphs (5), (7) & (10) below. Tractors are prohibited on slopes over 40% within 200' of a watercourse transition line.
    d. Loader "shovel" yarding may occur during the winter period where haul roads are adequately surfaced for all weather conditions and have had appropriate drainage facilities installed. Shovel operations will be subject to wet weather restrictions contained in paragraphs (7) & (10) below.
    e. Feller-Buncher and Shovel Logging Operations
        i. Where appurtenant haul roads are not surfaced for all weather conditions or do not have appropriate drainage facilities, or when the operation involves use of constructed skid trails for skidding and forwarding, the LTO will not carry out feller-buncher or shovel logging operations during the winter period
        ii. Feller-buncher and shovel logging operations will cease during storm events where logging operations, combined with significant rainfall, are likely to cause delivery of sediments in WLPZs (RMZs) or EEZs along Class I, II or III watercourses.
    f. Feller-buncher and Loader "shovel" yarding (no skid trail construction) - Winter period shovel yarding and feller buncher operations may occur on units that are adjacent to rocked roads. The equipment used in these operations is based on hydraulic excavators. These machines have wide track undercarriages with sufficient surface area to limit ground pressure to the point that there is little potential for soil compaction and disturbance. Other constraints inherent in the design and operation of this machinery are:

        i. They do not require constructed skid trails and they are not equipped with a blade.
        ii. They operate on top of slash and debris, not in prepared bare soil skid trails.
        iii. Their design limits operation to mild or moderate slopes.

    g. All winter period feller-buncher and shovel yarding operations shall be subject to the following constraints:
        i. Haul roads used to access such operations must be surfaced for all weather conditions, with appropriate drainage facilities installed.
        ii. Entrances and exits to the operating unit that are used by equipment for daily refueling shall be rocked or treated with slash to prevent rutting and to avoid generating sediment that might be transported to a ditch during rainfall. If a road drainage ditch must be crossed to access the operating area, a minimum 12 inch diameter culvert shall be installed, if necessary to protect the integrity of the ditch and ensure that any potential impact from the operation is disconnected from ditches and watercourses.
        iii. Operations will be limited to areas with slopes that average less than 35%.
        iv. Feller-buncher and shovel logging operations will cease during storm events where logging operations, combined with significant rainfall, are likely to cause delivery of sediments in WLPZs (RMZs) or EEZs along Class I, II or III watercourses. In addition, prior to operations resuming after a storm, a Barnum Timber Co. supervisor shall assess soil moisture conditions on the site and determine that it is appropriate to resume operations.
        v. Only wide track (low ground pressure) equipment will be used and this equipment will operate only on slash and duff (operating on bare soil is prohibited).

Operating Period -

h. Timber falling may be conducted during the winter period.
i. Cable harvesting: No limitations specific to winter operations except road and landing use as per 923.6(b)&(c) .
j. Ground based yarding: Ground based yarding may be conducted during the winter period when soils are not "saturated" as defined below.
k. Feller-buncher and Loader "shovel" yarding may be conducted during the winter period as described under paragraph (3) above.

4. Erosion Control Facilities Timing – All Tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection or (2) any day with a National Weather Service forecast of a chance of rain of 30% or more, a flash flood warning, or a flash flood watch.

5. Rain, fog, and light snow are forms of precipitation in this area.

6. Ground conditions (soil moisture condition, frozen) – Heavy equipment use shall be done only during dry, rainless periods where soils are not saturated. Saturated soil conditions is defined below.

7. Silvicultural systems – ground cover – The silvicultural system is clear cut. It is the RPF's opinion that the harvest area will have 40% ground cover. Ground cover is defined as all vegetation below eye level (both live and dead), rocks, straw mulch, etc., that may help prevent erosion caused by overland flow and raindrop energy.

8. Operations within the WLPZ of the THP during the winter period will be limited to:

   a. The felling of trees. Trees shall be felled away from a watercourse as per 14 CCR 914.1(a).
   b. Long lining of logs.
   c. Cable yarding.
   d. Emergencies or road maintenance needed to protect water quality.

9. Equipment use limitations – No heavy equipment operations, including hauling, roadwork or other non-emergency work shall take place under saturated soil conditions. Tractor yarding or the use of tractors in road construction shall be done only during dry, rainless periods where soils are not saturated.

10. Known unstable areas – Sufficient mitigation is provided for CGS-1. If another active slide area is discovered during timber operations, the LTO shall immediately notify the RPF.

11. Logging Roads and landings - 14CCR 923.6(g) Logging roads and landings used for log hauling or other heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions.

    923.5(j) All logging roads and landings used for timber operations shall have adequate drainage upon completion of use for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow.

    923.5(k) Where logging road or landing construction takes place during the extended wet weather period, drainage facilities and drainage structures shall be installed concurrent with construction operations.

    14CCR 923.4(l), No construction of logging roads or landings shall occur during the winter period.

Definitions of terms used (14 CCR 895.1):

Saturated Soil Conditions – means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Stable Operating Surface - means a road or landing surface that can support vehicular traffic and has a structurally sound road base appropriate for the type, intensity and timing of intended use.

No timber harvest activities during measurable rain events (defined as greater than ¼" in a 24-hour period).

NOTE: "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 925.1, 926.18, 927.1, and 965.5... (a) except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year

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of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

24. ROADS AND LANDINGS

Will any roads be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items a through g.
Will any landings be constructed? ☒ Yes ☐ No, or reconstructed? ☐ Yes ☒ No. If yes, check items h through k:

a.	☐ Yes ☒ No	Will new or reconstructed roads be wider than single lane with turnouts?
b.	☐ Yes ☒ No	Are logging roads proposed in areas of unstable soils or known slide-prone areas?
c.	☐ Yes ☒ No	Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.
d.	☐ Yes ☒ No	Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27 a. will satisfy required documentation.
e.	☐ Yes ☒ No	Will roads longer than 100 feet in length be located on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
f.	☐ Yes ☒ No	Will any roads or watercourse crossings be abandoned?
g.	☐ Yes ☒ No	Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?
h.	☐ Yes ☒ No	Will any landings exceed one half acre in size? If any landing exceeds one quarter acre in size or requires substantial excavation the location must be shown on the map.
i.	☐ Yes ☒ No	Are any landings proposed in areas of unstable soils or known slide prone areas?
j.	☐ Yes ☒ No	Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
k.	☐ Yes ☒ No	Will any landings be abandoned?

25. If any section in "item 24" above is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance, and/or abandonment of roads or landings, as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

Road Construction:

14CCR 1034(o) The RPF is proposing seasonal road construction for approximately 800' using an existing skid road. Although a prism is in existence this skid road is not suitable for the hauling of logs. Construction is proposed to improve the existing skid road by widening to allow for ingress and egress of log trucks. See THP Map for the location of road construction.

14CCR 916.9 (n) Bare mineral soil exceeding 100 contiguous square feet created from operations within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, shall be treated. Soil stabilization treatment measure within the WLPZ may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers. See Item 18 for more information regarding 916.9(n).

14CCR 923.1(g) The proposed road construction utilizes existing skid trail so log trucks may access portions of the plan. Landing construction associated with this road segment will allow for the landing and loading of logs in locations that prevent excessive skidding distances. No mitigation measures are needed to minimize potential adverse impacts to watersheds from the constructed road grade and associated landings.

14CCR 923.5

(a) All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.

(b) Drainage facilities and structures shall be installed along all logging roads and all landings that are used for timber operations in sufficient number to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

14CCR 923.6(h)(3) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit a stable operating surface in conformance 923.6(b).

14CCR 923.7(c) During timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of the road surface materials by methods including, but not limited to, rocking, watering, paving, or installing commercial erosion control devices to manufacturer's specifications.

14CCR 923.4(m) On slopes greater than 50 percent for greater than 100 lineal feet, fills greater than four feet in vertical height at the outside shoulder of the logging road or landing shall be:

(1) Constructed on a bench that is excavated at the proposed toe of the fill and is wide enough to compact the first lift.
(2) Compacted in approximately one-foot lifts from the toe to the finished grade or retained by an engineered structure.

14CCR 923.1(e) Significant existing or potential erosion sites do not exist within the plan area.

14CCR 916.9 (e): Channel Zone

(1) There shall be no timber operations within the channel zone with the following exceptions:
   (a) Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.
   (b) Class III watercourses consistent with 14CCR 916.9 (h)(7): Retain all trees in the Class III ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control. Merchantable trees within the channel zone of Class III watercourses may be harvested with the following exceptions:
      - Within over-steepened headwall swales.
      - When located at the watercourse slope transition point and an obvious increase in downcutting of the watercourse channel is occurring below this point.
      - On unstable areas where the tree is stable and contributing to the stability of the channel.
      - Where soil has accumulated and is perched upslope of the channel tree.
      - When a tree is in the channel (or close proximity) and not just an individual root. In other words, give a weighted average to the tree's value in the channel based on proximity.

(2) In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the pre-harvest inspection.

14CCR 916.9 (u): Salvage logging shall not occur within a WLPZ.

Water Drafting: Water for dust abatement (if necessary) shall be from an offsite delivered source. Water drafting may occur onsite when water is collected in tanks from springs, which are not within the channel zone of natural watercourses. Since no drafting of water within a channel zone of a natural watercourse or lake is proposed, no description is required per 14CCR 923.7(l)(2).

Watercourse and Lake Protection Zone Widths.

	Class II S*	Class III (ELZ)
Slope Class (%)	Width (feet)	Width (feet)
<30	50	30
30-50	75	50
>50	100	50

* Core and Inner Zones apply to Class II watercourses within this THP, see discussion in Item 26

Class II Watercourses

(1) The WLPZ shall be flagged prior to the PHI.

(2) When there is a reasonable expectation that slash, debris, soil, or other material resulting from timber operations, falling, or associated activities, will be deposited in Class II waters below the watercourse transition line, those harvest activities shall be deferred until equipment is available for its removal.

(3) Accidental depositions of soil or other debris below the watercourse transition line shall be removed immediately after the deposition.

(4) Equipment operations within the WLPZ shall be limited to existing roads and designated skid trail crossings.

(5) At least 75% surface cover and undisturbed area shall be retained within the WLPZ.

shall identify how soil erosion and significant sediment discharge will be prevented.
(4) All logging road watercourse crossings proposed for removal shall be removed prior to Oct 15th.

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

a. [x] Yes [X] No Prohibition of the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except as follows:
(1) At prepared tractor road crossings.
(2) Crossings of Class III watercourses which are dry at time of timber operations.
(3) At existing road crossings.
(4) At new tractor and road crossings approved by Department of Fish and Game.

The RPF proposes the use of an existing skid trail in a class II WLPZ. Thelocation is on the THP map. An addendum is included in Section III.

b. [ ] Yes [X] No Retention of non-commercial vegetation bordering and covering meadows and wet areas?
c. [ ] Yes [X] No Directional felling of trees within the WLPZ away from the watercourse or lake?
d. [ ] Yes [X] No Decrease of width(s) of the WLPZ(s)?
e. [ ] Yes [X] No Protection of watercourses which conduct class IV waters?
f. [ ] Yes [X] No Exclusion of heavy equipment from the WLPZ except as follows:
(1) At prepared tractor road crossings.
(2) Crossings of Class III watercourses which are dry at time of timber operations.
(3) At existing road crossings.
(4) At new tractor and road crossings approved by Department of Fish and Game.
g. [ ] Yes [X] No Establishment of ELZ for Class III watercourses unless sideslopes are <30% and EHR is low?
h. [ ] Yes [X] No Retention of at least 50% of the overstory canopy in the WLPZ?
i. [ ] Yes [X] No Retention of at least 50% of the understory in the WLPZ?
j. [ ] Yes [X] No Are any additional in-lieu or any alternative practices proposed for watercourse or lake protection?

NOTE: A yes answer to any of items "a" through "j" constitutes an in-lieu practice. If any item is answered yes, refer to 14 CCR 916 (936, 956).1 and address the following for each item checked yes:1) The RPF shall state the standard rule; 2) Explain and describe each proposed practice; 3)Explain how the proposed practice differs from the standard practice; 4)The specific location where it shall be applied, see map requirements of 14 CCR 1034(x) (15) and (16); 5)Provide in THP section III an explanation and justification as to how the protection provided is equal to the standard rule and provides for the protection of the beneficial uses of water per 14 CCR 916 (936, 956).1(a). Reference the in-lieu and location to the specific watercourse to which it will be applied.

28. DOMESTIC WATER SUPPLY

a. ☒ Yes ☐ No Are there any landowners within 1000 feet downstream of the THP boundary whose ownership adjoins or includes a class I, II, or IV watercourse(s) which receives surface drainage from the proposed timber operations? If yes, the requirements of 14 CCR 1032.10applies proof of notice by letter and newspaper must be enclosed in THP Section V. If No, Item 28 b. need not be answered.
b. ☐ Yes ☒ No Is an exemption requested of the notification requirements of 14 CCR 1032.10? If yes, explanation and justification for the exemption must be included. Specify if requesting an exemption from the letter, the newspaper notice, or both.
c. ☐ Yes ☒ No Was any information received on domestic water supplies that required additional mitigation beyond that required by standard Watercourse and Lake Protection rules? If Yes, list site specific measures to be implemented by the LTO.

For more information please see the Addendum in Section III

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

30. HAZARD REDUCTION:

a. ☒ Yes ☐ No Are there roads or improvements which require slash treatment adjacent to them? If yes, specify the type of improvement, treatment distance, and treatment method.
b. ☐ Yes ☒ No Are any alternatives to the rules for slash treatment along roads and within 200 feet of structures requested? If yes, RPF must explain and justify how alternative provides equal fire protection. Include a description of the alternative and where it will be utilized below.

14CCR 917.2(a) Slash to be treated by piling and burning shall be treated as follows:
(1) Piles created prior to September 1 shall be treated not later than April 1 of the year following its creation, or within 30 days following climatic access after April 1 of the year following its creation.
(2) Piles created on or after September 1 shall be treated not later than April 1 of the second year following its creation, or within 30 days following climatic access after April 1 of the second year following its creation.

14CCR 917.2(b) Within 100 feet of the edge of the traveled surface of public roads, and within 50 feet of the edge of the traveled surface of permanent private roads open for public use where permission to pass is not required, slash created and trees knocked down by road construction or timber operations shall be treated by lopping for fire hazard reduction, piling and burning ,chippping, burying, or removal from the zone.

14CCR 917.2(c) All woody debris created by timber operations greater than one inch but less than eight inches in diameter within 100 feet of permanently located structures maintained for human habitation shall be removed or piled and burned. All slash created between 100-200 feet of permanently located structures maintained for human habitation shall be lopped for fire reduction, removed, chipped, or piled and burned.

31. ☒ Yes ☐ No Will piling and burning be used for hazard reduction? See 14 CCR 917.1-.11, 937.1-.10, or 957.1-.10, for specific requirements. Note: LTO is responsible for slash disposal. This responsibility cannot be transferred.

See Item 30 above. Burning of piles and concentrations of slash shall be done as specified by 14CCR 917.5.

32. BIOLOGICAL RESOURCES

a. ☒ Yes ☐ No Are any plant or animal species, including their habitat, which are listed as rare, threatened or endangered under federal or state law, or a sensitive species by the Board, associated with the THP area? If yes, identify the species and the provisions to be taken for the protection of the species.

b. ☐ Yes ☒ No Are there any non-listed species which will be significantly impacted by the operation? If yes, identify the species and the provisions to be taken for the protection of the species

Great Blue Heron:

Great Blue Herons nest within the project boundary. The protection measures outlined in biologist Frank Galea's report in Section V THP page s 88.1-88.3 shall be applied as below:

The Applicant proposes to protect the heronry by establishing a "no-cut" buffer around the six trees (Figure 1). A buffer of 100 feet would be flagged around the entire grouping of six trees, and no trees would be cut within this boundary and no trees would be felled into it, in order to protect the nest trees and the screening trees which would also be retained. This would completely retain the existing screen of trees between the heronry and Oceanview Drive. All tree felling for the THP would take place no sooner than August of 2015, or after all heron young have left fledged. A pre-logging inspection by a wildlife biologist would take place if logging is to commence before September to insure that young have fledged.

Northern Spotted Owl

1. The THP area is within the range of the Northern Spotted Owl and contains habitat suitable for Northern Spotted Owls. There are no known NSO activity centers within 0.7 miles of the plan boundary.

2. In order to meet the requirements of 14 CCR 919.9 the plan will comply with 14 CCR 919.9(e) using Scenario 4 of the Northern Spotted Owl Take Avoidance Scenarios 2/1/2008.

The plan complies with the respective Scenario in the following ways:

The proposed project is in compliance with the USFWS Attachment A Take Avoidance Analysis - Coast 3/15/2011, except as noted below.

THP area contains suitable habitat for NSOs. No known NSO activity centers are within 0.7 miles of timber operations. NSO surveys shall be conducted and will be in conformance with the most current protocol.

For the year or years of operation on the THP area timber operations shall not commence until protocol surveys have been completed for the current, and/or immediately preceding, survey period; the results have been provided to CalFire; and the results have been incorporated into the THP.
A NSO report has been prepared by Galea Wildlife Consulting and is included in THP Section V. Surveys have been submitted as part of the THP and should be reviewed for consistency with 14 CCR 919.9(e) using Scenario 4 of the Northern Spotted Owl Take Avoidance Scenarios.

VI. Post-Harvest Habitat Retention and Typing

Within the 0.7 mile radius (985 acres) of each Activity Center please use the following:

1) Retain habitat to maximize attributes desirable for NSO.

2) Retain at least 500 acres of suitable (Nesting/Roosting/Foraging) NSO habitat, post-harvest, as follows:

   a) Retain 200 acres of Nesting/roosting Habitat within a 0.7 mile radius of the Activity Center consisting of:
      i) 100 acres of the 200 acres of Nesting/Roosting habitat retained should be contiguous, or contiguous as possible with the Activity Center.
      ii) An additional 100 acres of Nesting/Roosting with in the 0.7 mile radius:
         (1) If the second 100 acres of Nesting/Roosting habitat is also contiguous with the Activity Center , or within the same drainage, operations should retain a minimum of 66% of the pre-harvest basal area per acre of trees at least 11" DBH.
         (2) If the remaining 100 acres of Nesting/Roosting habitat is not contiguous with the Activity Center, retain at least Nesting/Roosting habitat.
   b) Retain at least 300 acres of Suitable NSO habitat, post-harvest, of at least Foraging quality.

Flagging Key:

Pink and black "Timber Harvest Boundary"	Timber Harvest Boundary
Blue white and black "Watercourse and Lake Protection Zone"	WLPZ
Orange "Truck Road"	Truck Road
Yellow and black "Skid Trail"	Designated skid trail
Orange, white and black "Special Treatment Area"	Hazard reduction zone
White and blue "Geology" with red	Geology Area
Orange, white and black "Special Treatment Area" with Pink "No Cut""	100' Heron no cut buffer
Orange, white and black "Special Treatment Area"with white and green polka dot	300' Heron seasonal buffer

4. Within the unstable area mapped as CGS-1 on the THP Map heavy equipment shall only use the existing skid trail in the lower portion of the unstable area. No grading shall occur.

Gautreaux Work Order for Road Repair

Site	C1			1600	X	ECP	
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Skid trail	II	none	24"				
Site Description	Existing temporary skid trail crossing to be upgraded to a permanent, seasonal road crossing.						
Treatment	Install permanent culvert. of sufficient length to extend beyond the fill slope. Fill slopes exceeding 1½:1 shall be rock armored. Road running surface shall be hydrologically disconnected. Road running surface within the WLPZ shall be rocked. Disturbed soil within the WLPZ shall be seeded and mulched or slash packed. Erosion control measures shall be in place prior to October 15th.						
Disturbed Area (sq.ft.)	**Final Site State (Perm/Temp)**	**Estimated Removed Fill Volume (cu. yards)**	**Estimated Added Fill Volume (cu. yards)**	**Fill Material Added**	**Disturbed Vegetation**		
2000	Permanent	10	111	Native	huckleberry, fern brush, alder trees		

Site	T1			1600	X	ECP	
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Skid trail	II	NA	NA				
Site Description	Existing skid trail crossing						
Treatment	Install temp crossing.						
Disturbed Area (sq.ft.)	**Final Site State (Perm/Temp)**	**Estimated Removed Fill Volume (cu. yards)**	**Estimated Added Fill Volume (cu. yards)**	**Fill Material Added**	**Disturbed Vegetation**		
1500	Temp	2	2	Native, Rock	Grasses, brush		

Site	C2			1600	X	ECP	x
Road Class	**Stream Class**	**Existing Culvert Diameter (in.)**	**Proposed Culvert Diameter (in.)**				
Permanent	II	12"	18"				
Site Description	Existing culvert crossing on a class II watercourse. Culvert is rusted.						
Treatment	Install permanent culvert.of sufficient length to extend beyond the fillslope. Fill slopes exceeding 1½:1 shall be rock armored. Road running surface shall be hydrologically disconnected. Road running surface within the WLPZ shall be rocked. Disturbed soil within the WLPZ shall be seeded and mulched or slash packed. Erosion control measures shall be in place prior to October 15th.						
Disturbed Area (sq.ft.)	**Final Site State (Perm/Temp)**	**Estimated Removed Fill Volume (cu. yards)**	**Estimated Added Fill Volume (cu. yards)**	**Fill Material Added**	**Disturbed Vegetation**		
2000	Permanent	10	10	Native	grass		

DIRECTOR OF FORESTRY AND FIRE PROTECTION

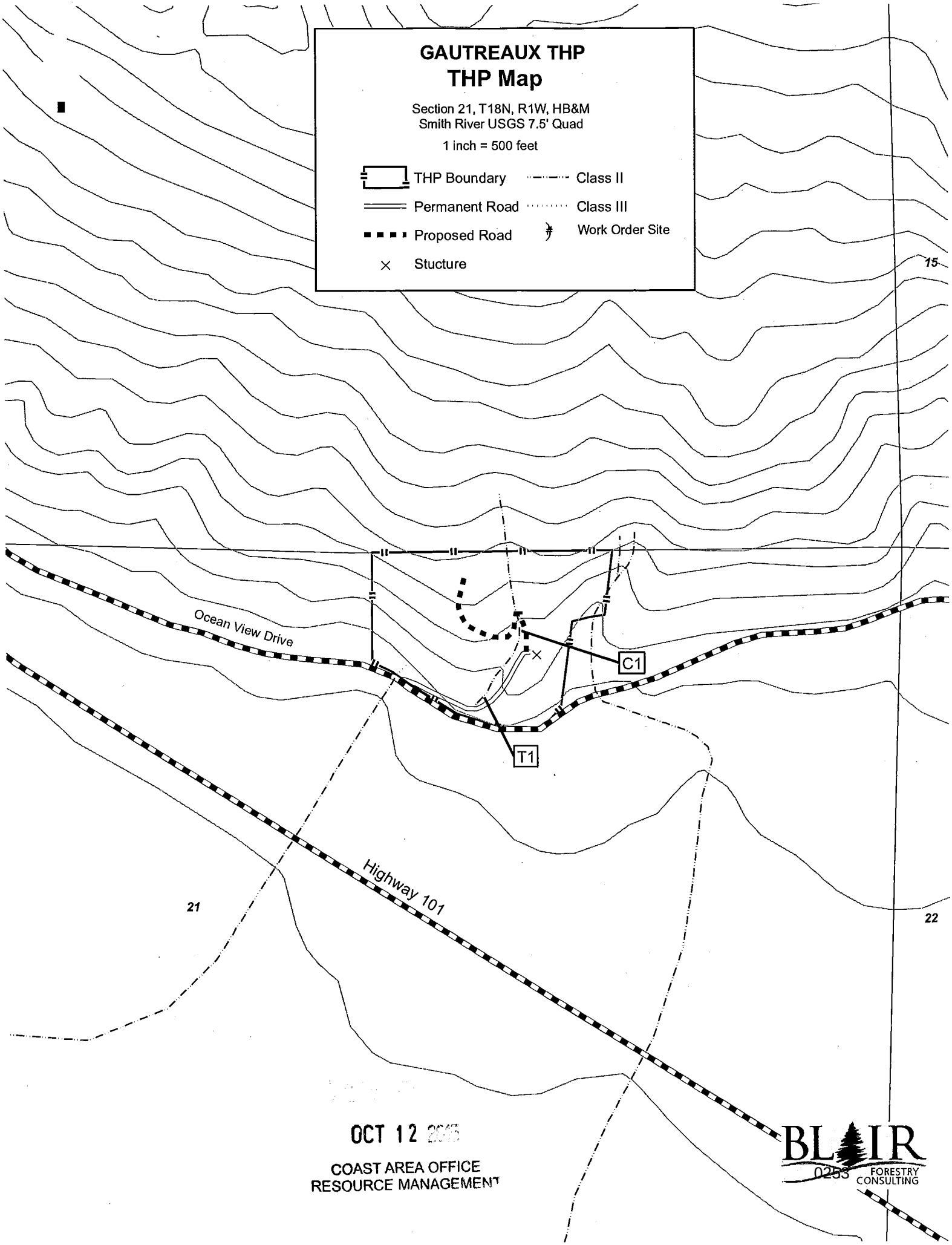
This Timber Harvest Plan conforms to the rules and regulations of the Board of Forestry and Fire Protection and the Forest Practice Act:

By: _____ _____
(Signature) (Date)

OCT 12 [illegible]

COAST AREA OFFICE
RESOURCE MANAGEMENT

_____ _____
(Printed Name) (Title) 0252



OCT 12 2015

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Location: Gautreaux

(Enter data in fields with red-colored headings. Other data fields will be calculated automatically.)

Magnitude and Frequency Method for 100-year flood flow (A > 100 acres)

No.	Crossing	Area (acres) A	Basin maximum elevation (ft)*	Crossing elevation (ft)*	Area (mi^2) A	Avg. Annual Precipitation (in/yr) P	Elevation (ft/1000) H	100-yr flood: North Coast[1] (NC)	100-yr flood: Sierra[2] (S)
1	*C1*	16	680	200	0.025	70	0.44	***23.0***	***99.5***
2	*C2*	2.5	889	120	0.004	70	0.5045	***4.6***	
3									
4									
5									

**To estimate discharges for bridges, use elevations along watercourse at 85 percent and 10 percent of water-course length from crossing to drainage divide, respectively, instead of using maximum and crossing elevations.*

See below

Rational Method for 100-year flood flow (A < 200 acres)

		$T_c = 60((11.9 \times L^3)/H)^{0.385}$			$Q_{100} = CIA$				
No.	Crossing	Channel length (to top of basin) (mi) L	Elevation difference (ft) H	Concentration time (min) Tc	Runoff coefficient C	100-year Return-Period Precipitation (in/hr) I*	Area (acres) A	100-yr flood flow (cfs) Q100	***Magnitude equation***
1	*C1*	0.37	480	*5*	0.35	1.5	16	***8.4***	**NC** (1)
2	*C2*	0.24	769	*2*	0.35	1.5	2.5	***1.3***	**S** (2)
3	***0***		0	*#DIV/0!*			0	***0.0***	**NE** (3)
4	***0***		0	*#DIV/0!*			0	***0.0***	**CC** (4)
5	***0***		0	*#DIV/0!*			0	***0.0***	

**Use 100-yr precipitation of duration similar to Tc or for 10 min, whichever is larger; convert to in/hr for input as "I"*

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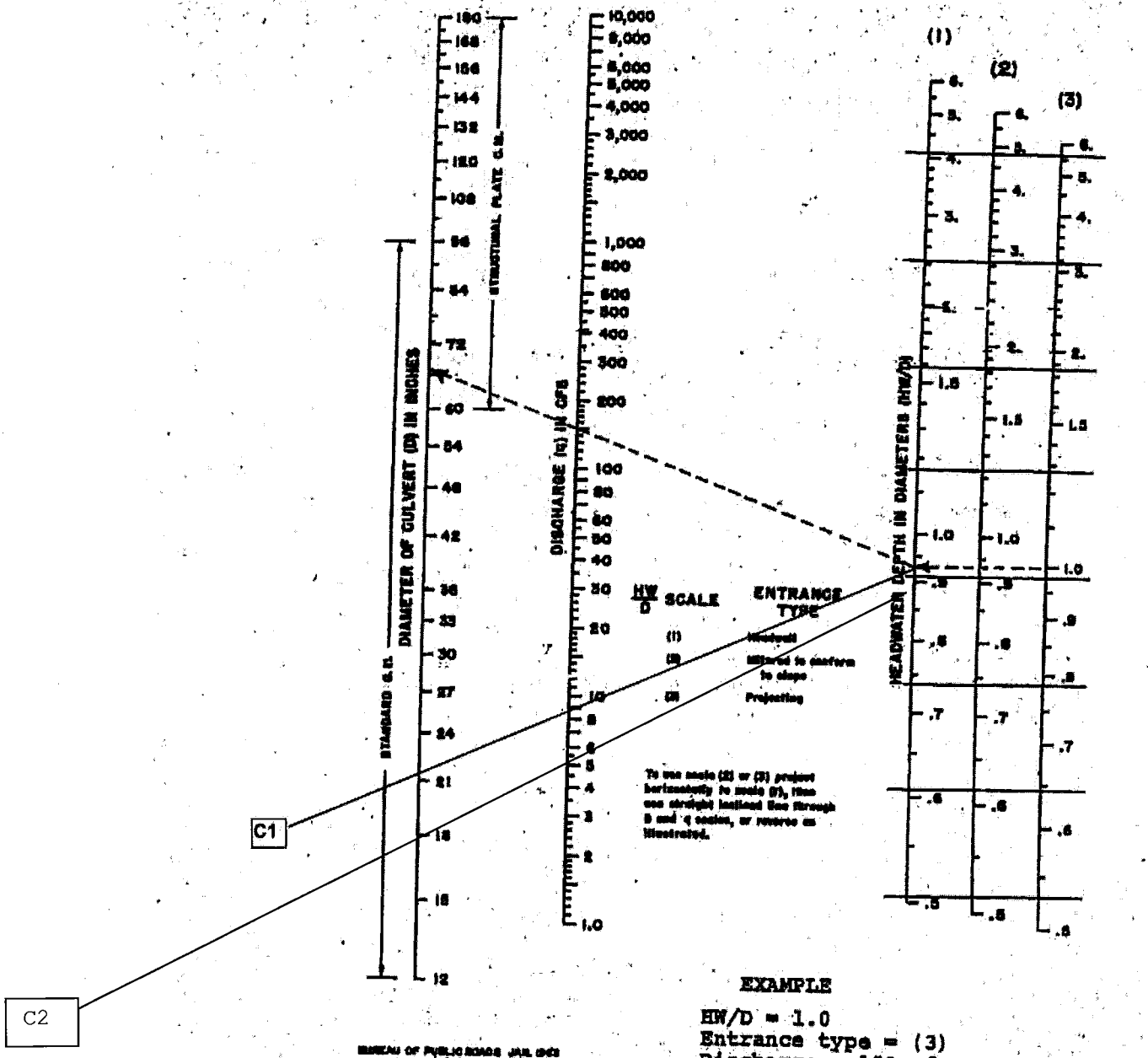

Plan Addendum to Item 27a
Equipment Operations In The WLPZ

916.4(d) Watercourse and Lake and Lake Protection " heavy equipment shall not be used in timber falling, yarding or site preparation within the WLPZ unless such is explained and justified in the THP and approved by the Director.

The RPF proposes the use of heavy equipment in the WLPZ. This use is on an existing skid trail and is for the purpose of skidding logs.

This differs from the standard rule as heavy equipment is not allowed in the WLPZ

The location is within a class II watercourse WLPZ. The length of the segment of existing skid trail within the WLPZ is approximately 200'. The location is shown on the THP Map.

This will provide protection of the resources by not having to construct new skid trail immediately outside the WLPZ. If new skid trail is constructed significant cutting of the slope will occur. The slope cutting will cause soil disturbance greater than that which would be created by using the existing skid trail. Therefore using the existing skid trail will create less sedimentation.

Methods

The methods used to develop this ECP include both field and office components. The office work included review of nearby approved THPs, the review of Geologic and Soil-Vegetation Maps for the area, and the review of aerial photography of the property for which the THP is located on.

The field component consisted of a survey for controllable sediment discharge sources (as defined above) located throughout the entire THP area. This included on-site physical inspections of the following: truck roads, skid roads, watercourse crossings, watercourse channels and banks, landings, unstable areas, and hill slopes adjacent to all watercourses that could potentially contribute sediment.

Controllable sediment discharge sources are defined as physical locations on the ground where existing erosion is occurring, or could potentially occur without proper mitigation. Erosion sites that do not threaten water quality, primarily because they do not have the potential to deliver eroded sediment to stream channels, were not individually identified.

No controllable sediment sources were identified in the THP area. No watercourses are within or immediately adjacent to the plan area.

Inventory and Treatment of Controllable Sediment Sources

A potential sediment source exists on the existing permanent road. This site is identified as C2 on the [illegible] Map and is described in the Road Work Order on page 19.

Implementation of Erosion Control Measures for Treatment of Controllable Sediment Sources

This potential sediment source will be repaired concurrent with THP operations as described in the Road Work Order.

Inspection Plan

Per General Waste Discharge Requirements Order No. R1-2004-0030 (GWDR), inspections shall be used to determine if any new controllable sediment discharge sources have developed within the Project area. The following inspection requirements shall begin once the startup of timber harvest activities begin within Project areas.

a. Project Areas where Timber Harvest Activities have not yet Commenced
No inspections are required.

b. Project Areas where Timber Harvest Activities have Commenced and No Winter Period Timber Harvest Activities have Occurred
At a minimum, conduct inspections each year and throughout the duration of the Project while Timber Harvest Activities occur and the Project is covered under General WDRs as follows:
1. By November 15 to assure Project areas are secure for the winter; and
2. Once following ten (10) inches of cumulative rainfall commencing on November 15 and prior to March 1, as worker safety and access allows; and
3. After April 1 and before June 15 to assess the effectiveness of management measures designed to address controllable sediment discharges and to determine if any new controllable sediment discharges sources have developed.

c. Project Areas With Winter Period Timber Harvest Activities
Project areas with timber harvest activities during the winter period shall, at a minimum, conduct inspections of such Project areas while Timber Harvest Activities occur and the Project is covered under General WDRs as follows:
1. Immediately following the cessation of winter period timber harvest activities to assure areas with winter timber harvest activities are secure for the winter;
2. Once following ten (10) inches of cumulative rainfall commencing on November 15 and prior to March 1, as worker safety and access allows; and
3. After April 1 and before June 15 to assess the effectiveness of management measures designed to address controllable sediment discharges and to determine if any new controllable sediment discharges sources have developed.

d. Inspection reports prepared pursuant to GWDR section III.G shall identify where management measures have been ineffective and when the Discharger will implement repairs or design changes to correct management measure failures.

e. If any new controllable sediment discharge sources are identified, such sites shall be addressed in accordance with the provisions of GWDR section III.B.3.

f. Equipment, materials, and workers shall be available for rapid response to failures and emergencies, and implement, as feasible, emergency management measures depending upon field conditions and worker safety for access.

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GALEA WILDLIFE CONSULTING

200 Raccoon Court ▫ Crescent City ▫ California 95531
Tel: 707-464-3777
E-mail: frankgalea@charter.net ▫ Web: www.galeawildlife.com

CONSULTATION FOR GREAT BLUE HERON (*Ardea herodias*) HERONRY SITE, GARTREAUX THP, SMITH RIVER, CA. MAY 2015. THP 1-15-014 DEL

Introduction

A group of great blue heron (*Ardea herodias*) nests, called a heronry, was located within a proposed THP near Smith River, California. The proposed THP consisted primarily of a large stand of spruce, located on the immediate edge between commercial timber lands and open agricultural fields. Oceanview Drive, a commonly used road which provides access to numerous homes in the area, is located along the south edge of the property and separates open fields from timbered stands.

The site was assessed by wildlife biologist Frank Galea in May of 2015. During the site visit trees were searched for nests using 8x10 binoculars. Ground cover vegetation was searched for white-wash, which provided evidence of the birds presence and helped determine nest site locations. Locations of nest trees were measured using a 300 foot tape with the southwest corner of the property as a starting control point.

The heronry was located along the south edge of the property (Figure 1). Six small to average sized spruce contained numerous nests, some older and abandoned and at least two which were occupied and active. During the visit one blue heron pair was observed nest building, bringing in large sticks and adding them to a relatively new nest. Blue heron egg shell fragments were located on the ground. Only two pairs were observed during the visit however there may have been as many as three pairs at the site. Most nests were built quite distal from the main trunk of the tree on relatively small branches.

The six trees comprising the heronry were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south). The grouping was located 205 feet east of the southwest property corner and 56 feet into the stand, measured from the edge of Oceanview Drive.

Between the heronry and Oceanview Drive is the driveway into the property, which contains a house 400 feet away. Thus, although the heronry is 56 feet from the main road, there is actually very little screening by vegetation between the heronry and the main road. Most of the nest trees are screened by only two or three relatively small spruce. On the distal side of Oceanview Drive there is a single row of mid-seral alder, which provide some, albeit limited, screening from the wind.

Considering the size of the stand, the herons have chosen a heronry site which is very close to the county road and has little screening from the south, which is the direction where almost all spring

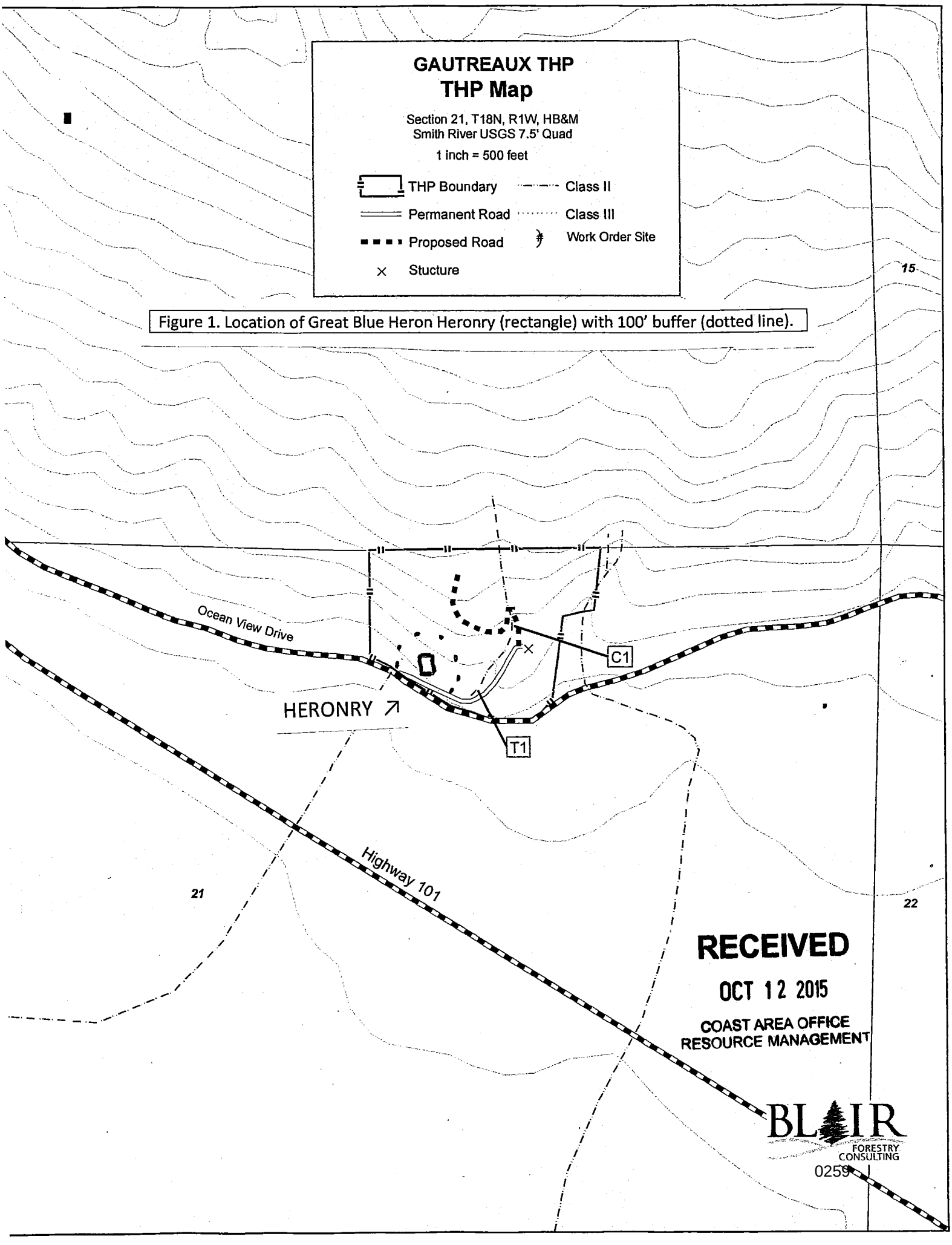

Figure 1. Location of Great Blue Heron Heronry (rectangle) with 100' buffer (dotted line).

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storms for the area originate. The nests have almost no screening from the sun, which suggests that shading is not an issue for this species in this area. The ability of the herons to access their nests, given their large wing span, or proximity to foraging habitat, may therefore be more important for them than protection from the elements.

PROPOSED HERONRY PROTECTION

The Applicant proposes to protect the heronry by establishing a "no-cut" buffer around the six trees (Figure 1). A buffer of 100 feet would be flagged around the entire grouping of six trees, and no trees would be cut within this boundary and no trees would be felled into it, in order to protect the nest trees and the screening trees which would also be retained. This would completely retain the existing screen of trees between the heronry and Oceanview Drive. All tree felling for the THP would take place no sooner than August of 2015, or after all heron young have left fledged. A pre-logging inspection by a wildlife biologist would take place if logging is to commence before September to insure that young have fledged.

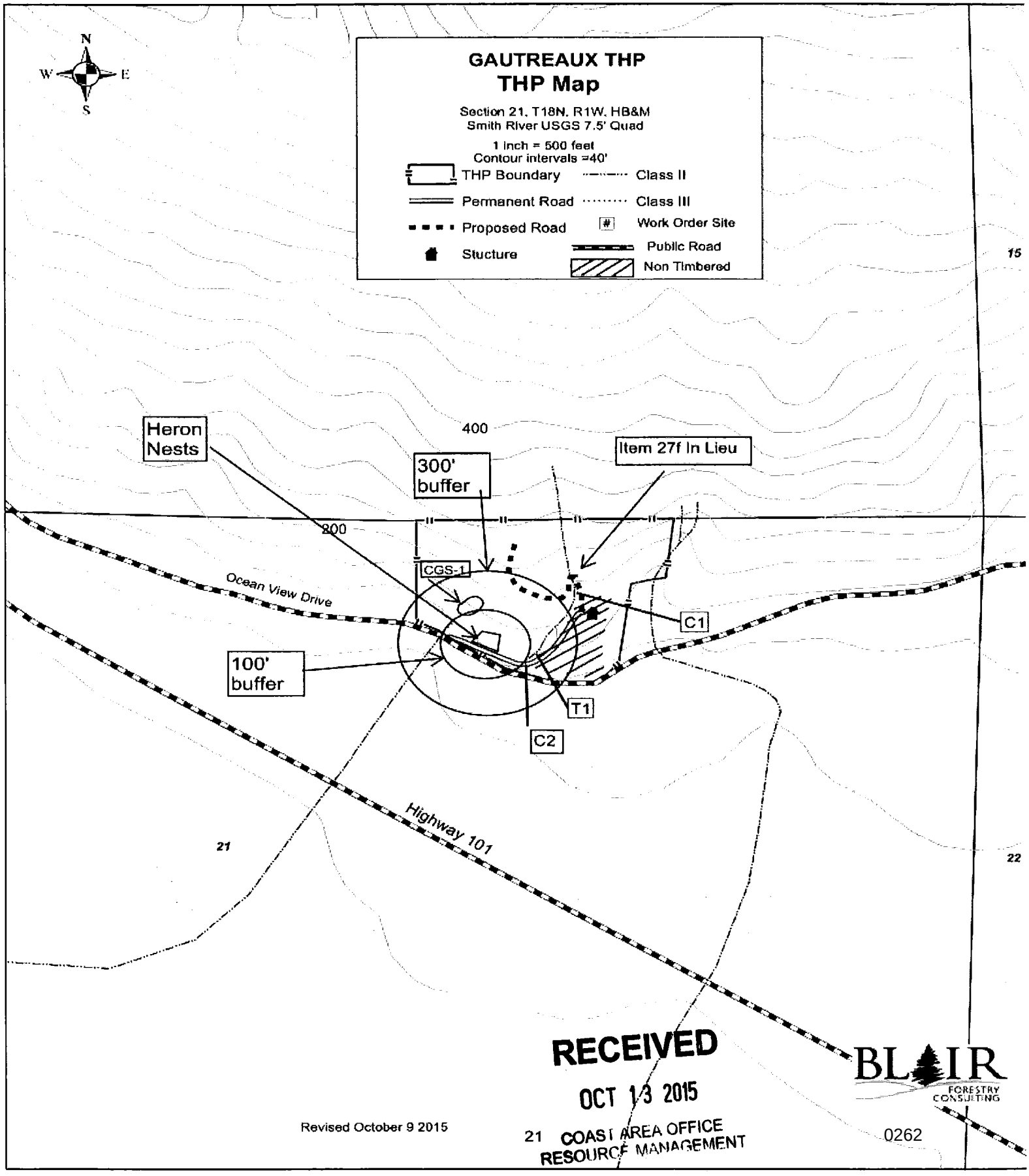
As the herons have chosen a nesting location with only 50 feet of a buffer for screening from the elements or from traffic noise, a one hundred foot buffer around the heronry would suffice to maintain the site as a nest site. As inclement weather originates from the south, there would be no loss in weather-buffering screening. Retention of screen trees within 100 feet of the heronry would protect the site visually and from the elements.

UNIT, ftp/NEW

From: Oswald, John@DOC
Sent: Tuesday, October 13, 2015 8:37 AM
To: Forsberg, William@CALFIRE
Cc: HUU Second Review@CALFIRE; Santa Rosa Review Team@CALFIRE; Brian Griesbach
Subject: 2nd rev 1-15-014DEL
Attachments: 1-15-014DEL_pg21_THP_revMap.pdf

CGS has reviewed the map submission from Blair Forestry Consulting labeled (attached): revised October 9 2015 submitted as page 21 of THP 1-15-014DEL and are satisfied the RPF has incorporated our recommendations into the plan.

John A. Oswald, PG, CEG
Engineering Geologist
California Geological Survey
2120 Campton Road, Suite E
Eureka CA 95501
707 441 5745
707 407 5102 cell



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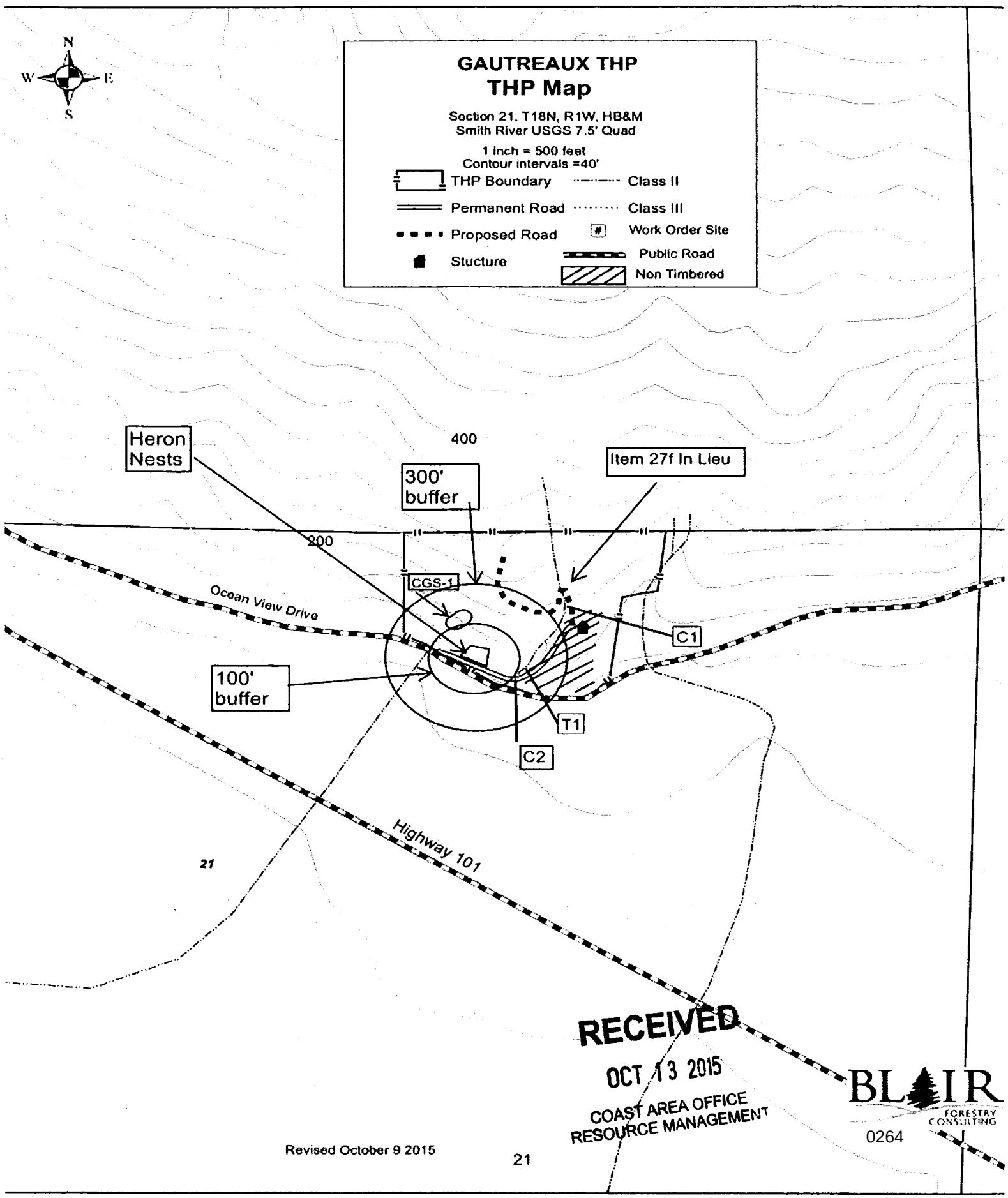
Revised October 9 2015

From: Brian Griesbach <brian.griesbach@blairforestry.com>
Sent: Monday, October 12, 2015 5:57 PM
To: HUU Second Review@CALFIRE; Santa Rosa Review Team@CALFIRE; Oswald, John@DOC; Larson, Monty@Wildlife; Brent, Heather@CALFIRE; blairforestry@gmail.com; mmgautreaux@earthlink.net
Subject: RPF's Response To PHI Recommendations For THP 1-15-014DEL "Gautreaux"
Attachments: Page 21 THP Map.docx

PDF exchange is on occasion corrupting map symbols when emailed. The THP Map, page 21, may have been affected. If you are having this problem I have pasted the map to word perfect document. Thank you for your attention to this matter.

BLAIR FORESTRY CONSULTING
Brian Griesbach
PO Box 2517
McKinleyville, CA 95519
Mobile: (707) 672-5814
Brian.Griesbach@BlairForestry.com



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UNIT, ftp/NEW

BLAIR FORESTRY CONSULTING

Providing Professional Forestry Services

PO Box 2517
McKinleyville, CA 95519

CELL 707.672.5814
EMAIL brian.griesbach@blairforestry.com

October 19, 2015

Cal Fire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, Ca 95401

RE: Revisions for **1-15-014 DEL "Gautreaux THP"**

Cal Fire Review Team,

This letter includes revisions for 1-15-014 DEL. These revisions are at the request of William Forsburg, The Review Team Chair for the Humboldt Del Norte Unit and CDFW Environmental Scientists Sue Sniado and Monty Larson. An erratum has been included below each question that states on what revised or new page the response or form change can be found.

Attached are revised pages 23, 56-59, 73 and 87.1 and new page 53.1

Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach - RPF #2738
BLAIR FORESTRY CONSULTING

cc: Second Review- Cal Fire Fortuna
John Oswald-CGS
Heather Brent –Cal Fire
Thomas Blair-Blair Forestry
Mark Gautreaux-Landowner
Monty Larson-CDFW

GENERAL DESCRIPTION OF PHYSICAL CONDITIONS

SITE DESCRIPTION - 14CCR 1034 (gg)

I. Project Location:

The Timber Harvest Plan (THP) area consists of approximately 13.3 acres located approximately 2 air miles northwest of Smith River, CA, in Del Norte County. The legal description is a portion of Section 21, Township 18-North, Range 1-West, HB&M.

II. Vegetation and Stand Condition:

The initial old growth harvest likely occurred in the early 1900's. Currently, the stand is well stocked with second growth Sitka spruce that is approximately 80 years of age. The stand is generally single tiered however large, heavily limbed Sitka spruce reaching up to approximately seven feet in diameter are sparsely scattered throughout the area averaging approximately one per acre. These spruce pioneered the prairie and were the seed source for the current stand. A sparse component of other species is present including Western hemlock, Douglas-fir, red Alder, big leaf maple and tanoak. DBH ranges from 0" to 50" with an average of 30". Basal area ranges from 0 to 340 square feet per acre with an average of 200 square feet per acre. Understory vegetation consists of sword fern, salmonberry, elderberry, evergreen huckleberry, and various forbs and grasses.

II. Soils and Topography:

Slopes within the plan are located on the base of the coastal foothill. Elevation within the plan area is approximately 120-300 feet. Slopes within the plan area are 0%-60% (and in excess of 80% in watercourse zones), averaging 40% with a predominately south aspect. Soils within the plan area are "unclassified soils occurring on higher alluvial terraces". The site has a high timber growing potential with a timber site index of Site Class II. This soil is generally well-drained. The THP area has an erosion hazard rating (EHR) of medium (see worksheet in Section V).

III. Watershed and Stream Conditions:

The THP is located within the CALWATER (v2.2) Dominie Creek Planning Watershed (#1103.110004), which is approximately 3,919.7 acres. This project is 13.3 acres which comprises 0.33 % of the planning watershed. A large portion of the planning watershed is forested including, industrial and private holdings. Beneficial uses of Dominie Creek include domestic and agricultural water supply, groundwater recharge and freshwater habitat for wildlife species including rare and endangered. Watercourses in the project area drain to the Smith River.

A minor western portion of this watershed has been developed for rural residential and agriculture and the majority eastern portion is industrial timberland. The rural residential use primarily correlates to paved access provided by Ocean View Drive. Ocean View Drive is the boundary between watersheds running along the change in topography between coastal flatland and the forested foothills.

The watercourses within the Planning Watershed have a channel composition consisting of sand, gravel, cobble and boulder. Total vegetative cover of conifer and hardwood on these watercourses varies from 20-100%.

The majority of the Planning Watershed has been old growth harvested in the 1900s and is currently a mosaic of second and third growth timber stands. More recent harvesting in the watershed includes methods to successfully reduce associated timber harvest impacts. Sediment that is present in the THP is a result of natural events, past historical flooding, and previous logging. Ongoing impacts from past logging may occur in the form of sediment inputs (mostly from skid trails situated within or immediately adjacent to watercourses), loss of old growth habitat, and reduction from streamside canopies. Past logging contributed sediment due to changes in hillslope hydrology that caused new watercourses to cut the slope and changed flows of existing steams that caused bank and bed cutting. Past road construction did not consider the effects of sedimentation especially of a cumulative basis. Private and public roads still contain perched fills, poor surface drainage, and culverts of poor design and installation.

Currently watershed conditions appear fair as indicated by levels of shade canopy, streamside channel diversity, and populations of wildlife and fish. Mitigating factors in the watershed that protect it from impacts associated with population growth and industrialization can be attributed to greater restrictions on logging, a transition from industrial ownership to rural residential ownership, remoteness of location, rough terrain, and riparian zones that are being managed for late seral habitat.

Special Habitat Elements
Large, heavily limbed, Sitka Spruce reaching approximately seven feet in diameter occur approximately one per acre (approximately 11 total on 13 acres). Although the RPF considers them a minor stand component due to their sparsity these trees do have potential for roosting, nesting, den and snag recruitment. California Department of Fish And Wildlife List of Vegetation Alliances list Sitka Spruce a rarity of GS52, globally common but rare in California. CDFW is further concerned that populations that occur on the edge of a larger population may be genetically diverse from the main population. Department of Fish And Wildlife identifies the following characteristics of large trees (conifers>30 in. dbh) to be important to wildlife: reiterated trunk, large lateral limb, multiple tops, hollow cavities, decay, epicormic branching, broken top, snag top:

a. Reiterated trunk: vertically oriented stems with their own branches, architecturally indistinguishable from freestanding trees except for their location within the crown of the larger supporting tree;
b. Large lateral limb: lateral limb greater than 6 in. in diameter;
c. Multiple Tops: trees with two or more leaders near the top of the tree that provide opportunities for resting, denning, or nesting;
d. Hollow: wood voids with (estimated) large interior dimension and a large ≥6-inch entrance opening suitable for use by a variety of small mammal and bird species;
e. Cavities: wood voids with (estimated) small to medium interior dimensions and a relatively small (1.5 in. - 3 in.) to medium (3 in. - 6 in.) entrance openings suitable for use by a variety of small mammal and bird species;
f. Decay: extensive decayed wood as evidence by large and/or extensive fungal fruiting bodies (conk), lichen, large broken limbs, cavity entrances and sloughing wood and/or bark;
g. Epicormic branching: multiple branches emerging from a single location on a trunk; these may be dense clusters of very small branches (witches broom) or larger branches up to several inches in diameter;
h. Broken Top: trees with a minimum diameter at the ordinal break of ≥ 12 in. diameter;
i. Snag Top: trees with a dead top where with the lowest portion of the dead top is at least 12 in. in diameter.

This habitat component occurs regularly on the California North Coast. Large, limb laden Sitka Spruce can be seen regularly as it fringes lagoons and shorelines, generally protected within park boundaries. Significant portions of the stand within the project area will be retained in no harvest WLPZ and wildlife no harvest areas. The large trees high number of limbs decreases the value at the mill and increases the cost of processing in the woods. This creates a significant likelihood that they will not be harvested. Only a small number of these trees, if any, will be removed on this project. In proportion to the number of these trees that exist on the North Coast the proportion of trees being removed is extremely small. This project will not have a significant impact on the habitat component within the planning watershed.

CONCLUSION – Biological Resources
It is the RPF's opinion that, based on the best information available, the proposed project will not likely produce significant adverse cumulative impacts to the biological resources within the assessment area after mitigation measures proposed in the plan and application of the Forest Practice Rules.

Gautreaux THP - Evenaged Silviculture
Project Carbon Accounting: Inventory, Growth, and Harvest

This worksheet addresses the sequestation and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods	Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)	Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	Step 0. Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	Step 1. Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.	Step 2. Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	Step 3. Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest.	Step 4. Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1.	Step 5. Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available.	Step 6. Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available.	Step 7. Enter estimated hardwood basal area harvested/treated per acre
Douglas-fir	0%	1.675	14.38	0	50	5	700	0.3	40	3
Redwood	0%	1.675	13.42	60	52	20	700	0.3	45	15
Pines	0%	2.254	12.14	120	49	23	700	0.3	45	15
True firs	100%	2.254	11.18	180	46	23	700	0.3	0	0
Hardwoods		2.214	11.76	0	0	0	0	0	0	0
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2.204	0	0	0	0	0	0	0
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.89		0	0	0	0	0	0	0
	Hardwoods	1.95		0	0	0	0	0	0	0
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	0.84		0	0	0	0	0	0	0
	Hardwoods	0.88		0	0	0	0	0	0	0

User must enter harvest cycles to 100 years and/or at least three entry cycles.

Sitka Spruce is in the Pinacea family, therefore any forest type listed (besides redwood) most closey matches this conifer species

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	Step 8. Enter the value (in bold) for each harvest cycel that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	Computed: MBF * Conifer Multiplier from Step 0.	Computed: BA*Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0.	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Heavy- 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre) Medium - >25% <50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). Light - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). None - No site preparation is conducted.	
0	94	1	346	3	Medium	-1.2
60	98	3	360	11	Medium	-1.2
120	92	3	339	12	Medium	-1.2
180	87	3	318	12	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
	Difference between ending stocks and beginning stocks		-28	9.68	Sum of emissions (Metric Tonnes CO2e) per acre	-3.6

Gautreaux THP - Evenaged Silviculture
Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Assumption:** ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested	MBF (all species) Yarded Delivered to Landing	**Assumption:**(((35 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((.16 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not.	**Assumption:** Round Trip Hours/Load average (from below, to compute the mbf/hour) /((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	**Step 9.** Enter the estimated volume delivered to the landing in a day.	**Step 10.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Yarders and Loaders CO2 equivalent/mbf (metric tonnes)	**Computed.** Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	**Step 11.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Tractor and skidder CO2 equivalent/mbf (metric tonnes)	**Computed.** Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	**Step 12.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Helicopter CO2 equivalent/mbf (metric tonnes)	**Computed.** Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	**Computed.** Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	Steps 13 and 14 below		**Computed.** Estimated Metric Tonnes CO2e per harvested acre for each harvesting period.
0	(0.09)	20	1	-0.02	-0.68	1	-0.03	-1.06	0	0.00	0.00	-0.06	**Step 13.** Enter Estimated Load Average: MBF/Truck	4.5	-0.843755102
60	(0.10)	20	1	-0.02	-0.76	1	-0.03	-1.20	0	0.00	0.00	-0.07			-0.94922449
120	(0.10)	20	1	-0.02	-0.76	1	-0.03	-1.20	0	0.00	0.00	-0.07			-0.94922449
180	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00	**Step 14.** Enter Estimated Round Trip Haul in Hours	6	0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	-0.29				-2.20			-3.46			0.00	-0.19			-2.74

Gautreaux THP - Evenaged Silviculture

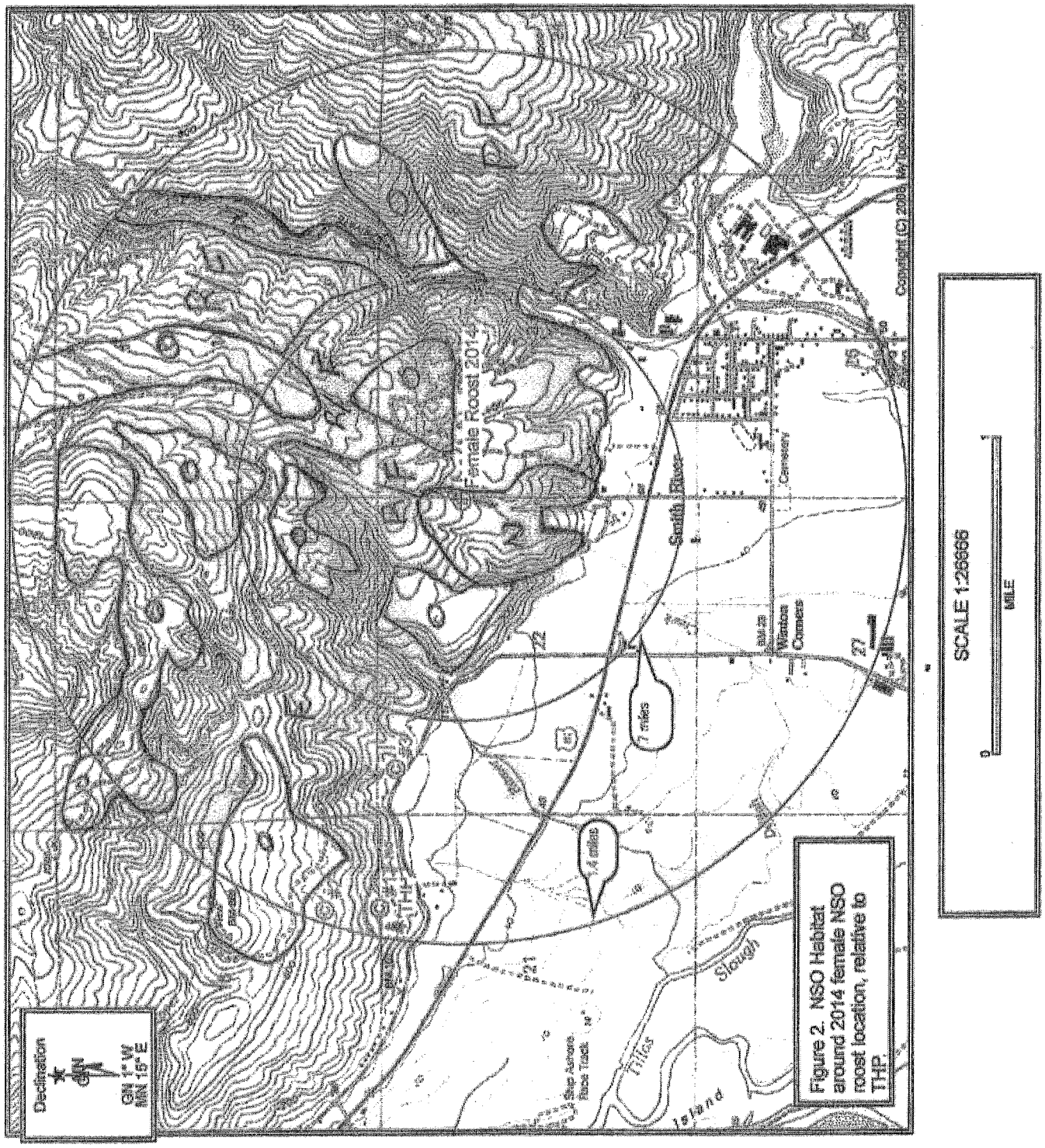
Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	**Assumption.** 20 kw/hour (mill energy use) /(40mbf lumber processed/hour) *(.05 metric tonnes/kw hour) * mbf processed	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Conifers	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Hardwoods	**Computed.** CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	**Computed.** CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Step 15.** Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	**Step 16.** Insert the percentage of hardwoods harvested or treated that are subsequently delivered to sawmills	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Calculated.** The CO2e associated with processing the logs at the mill	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		**Estimate.** The weighted average carbon remaining in use at year 100 is 46.3%	**Estimate.** The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.67 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
0	95%	0%	116.72	0.00	-0.95	78.21	0.00	59.51	0.00
60	95%	0%	131.32	0.00	-1.07	87.98	0.00	66.95	0.00
120	95%	0%	131.32	0.00	-1.07	87.98	0.00	66.95	0.00
180	95%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-3.09	Sum of CO2 equivalent in wood products		193.42	0.00

Gautreaux THP - Evenaged Silviculture Summary		
	Beginning Stocks	Ending Stocks
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis	
Live Trees (Conifers and Hardwoods)	348.86	330.83
Wood Products		193.42
Site Preparation Emissions		-3.60
Non-biological emissions associated with harvesting		-8.89
Non-biological emissions associated with milling		-3.09
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		159.81
Project Summary		
Project Acres	Step 17- Insert the acres that are part of the harvest area.	13
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		2,078

Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
44 Years



Habitat Description

The canopy within the THP is typical of the coast area. The principal overstory and understory species include Sitka spruce, with minor amounts of Douglas-fir, and alder. Brush species primarily include salmon berry, huckleberry, Rhododendren, and ferns. Pre-harvest habitat types within and adjacent to the plan area consists of Foraging.

Northern spotted owl (NSO) habitat is defined per 14 CCR 895.1 and as modified by the USFWS Coastal NSO "Habitat Description". NSO Habitats are defined as:

Nesting/Roosting: Habitat with ≥60% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥100 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Foraging: Habitat with ≥40% canopy cover of trees that are ≥11 inches DBH and have a basal area of ≥75 feet^2/acre of trees ≥11 inches DBH. Trees may be conifer or hardwood.

Habitat was identified by a variety of methods including:

Inventory data, Personal knowledge of foresters of habitat conditions in the assessment areas, cursory ground truthing by foresters, Aerial photo interpretation (especially to determine between NSO Non-habitat (i.e. clearcuts, heavily selected areas, etc) and potentially suitable Foraging and Nest/Roost habitats.

It should be noted that to maintain consistency in habitat typing for our habitat assessments, NSO habitats as shown were typed based on the definitions and not in consideration of edge effects. The majority of suitable NSO habitat acreage is not derived from narrow strips of WLPZ edge habitats or small "stands" (<6 acres) or Nest/Roost habitat, where edge effects are most likely to occur.

STATE OF CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION
TIMBER HARVESTING PLAN (THP) OR AMENDMENT NUMBER: 1-15-014 DEL

AFTER REVIEW OF THE FILE TO DATE, THE REVIEW TEAM CHAIR RECOMMENDS THAT:

1. ___ The Plan or Amendment be found in conformance with the rules of the Board of Forestry and Fire Protection (BOF).

2. ___ The Plan or Amendment be found not in conformance with the rules of the BOF. The reasons for denial are attached.

3. _X_ The Plan or Amendment be found in conformance with the rules of the BOF if the recommendations of the Chairperson, or intent of them, are addressed by the plan submitter and incorporated into the Plan before the close of the Comment Period. A report of the recommendations is attached.

SUMMARY OF SECOND REVIEW TEAM

Filing Date	PHI Date(s)	Second Review Team Meeting Date	Tentative Close Of Comment Date*	Non-Concurrence Must Be Submitted By**
3/5/15	9/8/15	10/22/15	11/2/15	10/27/15

*The Close of Public Comment will occur on the date listed above [at least 30 calendar days after PHI, ten calendar days of which shall occur after the Second Review Team Meeting] or the day the RPF Responses to the Second Review Team Recommendations are received, whichever is later, ref. 14 CCR §1037.4.
**Non-concurrences must be submitted within five calendar days of the review team meeting, ref. 14CCR 1037.5(e).

REVIEW TEAM MEMBERS:	CDF	CGS	DFW	RWB	OTHER (DPR or County)	RPF
Present (last name)	Forsberg		LARSON & SNIADO			GRIESBACH
Contribution since 1st Rev.	Yes	Yes	Yes			Yes
PHI Report/ RPF Response Dates	9/15/15	3/23/15	PHI-8/21/15 Consultation Ltr. 7/31/15			RTQs = 8/6/15 & 9/9/15 PHI's = 10/9/15

1. If applicable, the second Archaeological Notice pursuant to 14CCR 929.1(b) was sent: NA
2. Are NSO surveys included? Yes. If so, do they meet the intent of the FWS protocols? Yes.

3. (FOR APPLICABLE COUNTIES ONLY):
   ( ) Yes ( ) No Was a Public Hearing Held? Date of Hearing, if held: _____.
   ( ) Yes ( ) No Is a Public Hearing Report attached?

4. ( ) Yes (X) No Written comments have been filed by a member of the Review Team on an alternative practice.
   Agency that filed comment: NA

5. The following Agency has indicated that they will be submitting a non-concurrence: NA

6. The potential cumulative effects of this plan or amendment have been considered during the review and:
   ( ) No reasonably potential significant effects are likely to occur.
   (X) Potential significant effects have been mitigated through the review process.
   ( ) Significant effects are likely to occur but cannot be mitigated, as described on the attachment.

The Director's representative will make a determination on this Plan or Amendment within 15 working days of the Close of Comment Period unless extended through a mutual agreement with the plan submitter, ref. 14CCR 1037.4.

DATE: 10/22/15

Signature of Review Team Chair: William Forsberg
Review Team Chair: William Forsberg, RPF # 2755

Approval is recommended with the following mitigation measures:

1. Special Habitat Elements have been listed on revised page 53. 1. Please revise the discussion on page 53 to indicate there are Special Habitat Elements in the THP area.

2. Please revise the plan per the three recommendations provided on page 5 of DFW consultation letter dated July 31, 2015. As per the consultation recommendations, please revise the acreage totals in Item 14 (a) and update the THP map (page 21) to show the 0-200' No Harvest area and the 200-300 Selection area where 60% of the canopy is retained post-harvest and half of dominate and co-dominate trees are retained post-harvest. Also revise Item 14(b) to indicate the retention standards in the 200-300" outer band of the Great Blue Heron buffer zone. Please update Item 14 (d) to specify how trees in the 200-300' buffer zone area will be marked and whether harvested or retained. Please provide in Item 32 and Item 38 the seasonal restrictions for Great Blue Heron identified on pages 4 and 5 of the consultation letter.

3. Item 2 (c) on page 30 states "Water Drafting shall occur from an offsite delivered source". On revised page 12, it states that water drafting may occur from springs. Please clarify.

RPF NOTE: WHEN RESPONDING TO THE SECOND REVIEW TEAM RECOMMENDATIONS, PLEASE TITLE YOUR LETTER WITH: **"RESPONSES TO SECOND REVIEW TEAM RECOMMENDATIONS".**
Responses may either be emailed to: SantaRosaReviewTeam@fire.ca.gov or sent hard copy to our Santa Rosa office. PLEASE DO NOT send by both methods.

The THP and various documents related to the plan are now available through the internet at: ftp://thp.fire.ca.gov/THPlibrary

****

I agree to the above mitigation measures.

RPF Signature: _____

Date: _____

_____
RPF's name (Printed)

UNIT, ftp/NEW

BLAIR FORESTRY CONSULTING

Providing Professional Forestry Services PO Box 2517 McKinleyville, CA 95519 CELL 707.672.5814 EMAIL brian.griesbach@blairforestry.com

December 14, 2015

Cal Fire Review Team
California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, CA 95401
SantaRosaReviewTeam@fire.ca.gov

RE: RPF Response to Second Review Recommendations for **1-15-014 DEL "Gautreaux THP"**

Cal Fire Review Team,

This letter provides the RPF's Response to 2nd Review Recommendations for said THP. An erratum has been included below each question that states on what revised or new page the response or form change can be found.

1. Special Habitat Elements have been listed on page 53.1. Please revise the discussion on page 53 to indicate there are Special Habitat Elements in the THP area.

   RPF Response: Page 53 is revised.

2. Please revise the plan per the three recommendations provided on page 5 of DFW consultation letter dated July 31, 2015. As per the consultation recommendations, please revise the acreage totals in Item 14(a) and update the THP map (page 21) to show the 0-200' No Harvest area and the 200-300 Selection area where 60% of the canopy is retained post-harvest and half of dominate and co-dominate trees are retained post-harvest. Also revise Item 14(d) to indicate the retention standards in the 200'-300' outer band of the Great Blue Heron buffer zone area will be marked and whether harvested or retained. Please provide in Item 32 and Item 38 the seasonal restrictions for Great Blue Heron on pages 4 and 5 of the consultation letter.

   RPF Response: Response has been provided by the landowner's consulting biologist, Troy Leopardo.

   With regards to Review Team Chair recommendation #2, Mr. Gautreaux has instructed me to reject additional mitigation for this heron rookery as recommended by CDFW. It is the landowners position that additional 100-foot no-cut protection zone afforded this rookery at the recommendation of private consulting biologist Frank Galea provides sufficient protection for this rookery. Furthermore, not only has CAL FIRE failed to present substantial evidence indicating a potential adverse significant impact, having based their decision on an implicit assumption of significance contrary to 14 CCR §21080(e)(2), the landowner is concerned that this attempt to coerce him into accepting extralegal heron protection measures could seriously affect the future timber management of his property. A such, should CAL FIRE insist on making CDFW recommendations contingent on approving this plan, Mr. Gautreaux has announced his intention to appeal the denial in accordance to the Forest Practice Act PRC §4593.7.(c)

3. Item 2(c) on page 30 states "Water drafting shall occur from an offsite delivered source". On revised page 12, it states that water drafting may occur from springs. Please clarify.

   RPF Response: Water will be delivered from an off-site source. Page 12 attached.

Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach - RPF #2738
BLAIR FORESTRY CONSULTING

ERRATA:
Revised pages: 53, 12

cc: Second Review- Cal Fire Fortuna
Monty Larson-CDFW
Mark Gautreaux-Timberland Owner
Thomas Blair-Blair Forestry Consulting
Heather Brent-CalFire Trinidad

14CCR 916.9 (e): Channel Zone

(1) There shall be no timber operations within the channel zone with the following exceptions:
   (a) Actions necessary for the construction, reconstruction, removal, or abandonment of approved watercourse crossings.

14CCR 916.9 (u): Salvage logging shall not occur within a WLPZ.

Water Drafting: Water for dust abatement (if necessary) shall be from an offsite delivered source.

Watercourse and Lake Protection Zone Widths.

	Class II-S	Class III (EEZ)
Slope Class (%)	Width (feet)	Width (feet)
<30	50	30
30-50	75	50
>50	100	50

* Core and Inner Zones apply to Class II watercourses within this THP, see discussion in Item 26

Class II Watercourses

(1) The WLPZ shall be flagged prior to the PHI.

(2) When there is a reasonable expectation that slash, debris, soil, or other material resulting from timber operations, falling, or associated activities, will be deposited in Class II waters below the watercourse transition line, those harvest activities shall be deferred until equipment is available for its removal.

(3) Accidental depositions of soil or other debris below the watercourse transition line shall be removed immediately after the deposition.

(4) Equipment operations within the WLPZ shall be limited to existing roads and designated skid trail crossings.

(5) At least 75% surface cover and undisturbed area shall be retained within the WLPZ.

3. The aquatic and near-water habitat conditions on the THP and immediate surrounding area.

The BAA contains Class I, II, III and IV watercourses. All class I and II watercourses within the BAA appear to provide suitable habitat for fish and non-fish aquatic species. These watercourses provide habitat for insects, algae, and other species used for food sources that eventually move down into downstream fish bearing watercourses. Since vegetation is present near these small streams, shelter for animals to move from one area to another is provided. Within the agricultural flats to the south of the plan area, many Class I watercourses have been straightened and channelized for agricultural purposes and may no longer be suitable for fish.

4. The biological habitat condition of the THP and immediate surrounding area.

Snags/den trees
Non-merchantable snags will be left well distributed to the extent they occurred prior to operations provided their retention does not conflict with appropriate safety and hazard reduction requirements for harvesting. This is a second growth stand and current snag density is low, which is normal. Snags on the plan area suitable for den or nest trees occur singularly and average approximately 1 per acre. Non-merchantable snags and trees with cavities and obvious nests will be left to the extent they occurred prior to operations, provided their retention does not conflict with appropriate safety and hazard reduction requirements for harvesting.

Downed, large woody debris
Large downed logs (particularly conifers) in the coastal environment in all stages of decomposition provide an important habitat for many wildlife species. Large woody debris (LWD) is present throughout the BAA and plan area in small amounts. Non-merchantable LWD such as standing snags and downed woody debris shall remain post-harvest. Generally, most LWD deteriorates rapidly due the maritime climate and resultant moisture. The proposed THP will not result in any significant reductions of large organic debris within the BAA.

Multi-story canopy
Coastal multistoried canopies have a marked influence on the diversity and density of wildlife species utilizing the area. A multi-storied canopy of two or more distinct layers is not a feature of the project area. The present landscape is characterized as an evenaged stand. Near-water multistoried canopies in riparian zones that include conifer and hardwood tree species provide an important element of structural diversity to the habitat requirements of wildlife.

Road density
The road density in the vicinity of the plan is moderate, due to the extensive residential areas. The roads that access the plan area are existing. Reconstruction is proposed to improve the existing prism through minor blading and widening to allow for ingress and egress of log trucks. These operations will not increase the road density in the vicinity of the plan.

Hardwood cover
Hardwoods are not a major a component in the THP area and occupy a small percentage of the land base in the BAA. No significant impacts to biological resources which are dependent upon hardwoods are expected as a result of this THP.

Late seral (successional) forest (LSF) characteristics
The THP area contains stands that are not late succession forest stands as defined by 14 CCR 895.1. They do not meet the stand structure or stem diameter to be considered late succession forest stands.

Late Seral Habitat Continuity
Since no LSF is proposed for harvest, no continuity of LSF habitat shall be altered.

Special Habitat Elements
Large Sitka Spruce occur within the project area. Please see page 53.1 for discussion.

UNIT, ftp/NEW

BLAIR FORESTRY CONSULTING

Providing Professional Forestry Services

PO Box 2517
McKinleyville, CA 95519

CELL 707.672.5814
EMAIL brian.griesbach@blairforestry.com

Wednesday, January 13, 2016

California Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, CA 95401
ATTN: CALFIRE THP REVIEW TEAM

RE: RPF'S RESPONSES TO CDFW 2ND REVIEW RECOMMENDATION FOR GREAT BLUE HERON DATED TUESDAY JANUARY, 12 2016

Cal Fire Review Team,

This letter includes the RPF's response to 2nd Review for 1-15-014DEL "Gautreaux". Specifically, the RPF will address CalFire recommendation with CDFW concurrence regarding the Great Blue Heron received via email dated Tuesday January 12, 2016. The landowner has obtained a consulting biologist, Troy Leopardo, to address recommendations provided by CDFW (attached).

Recommendations:

1. A year-round habitat retention buffer shall be established within 300 feet of the great blue heron rookery (Figure 2). The buffer shall be measured from the outer extent of the rookery as defined by the location of the nests. No harvesting shall occur within **100** feet of the rookery, and within **100-300** feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.

2. A 0.25 mile temporal disturbance buffer shall be established around the rookery during the critical period, February 1 to August 1. No timber operations shall be permitted within the disturbance buffer during the critical period, unless surveys confirm nesting has failed or the young have fledged earlier than August 1 and written concurrence is received from CDFW.

3. During the life of the THP the landowner shall agree to allow CDFW staff on the property to monitor the success of the protection measures and the status of the nest sites. Such access shall only occur with a minimum 48-hour notice.

Mr. Leopardo's Response:

With regards to Review Team Chair recommendation #2, Mr. Gautreaux has instructed me to reject additional mitigation for this heron rookery as recommended by CDFW. It is the landowners position that additional 100-foot no-cut protection zone afforded this rookery at the recommendation of private consulting biologist Frank Galea provides sufficient protection for this rookery. Furthermore, not only has CAL FIRE failed to present substantial evidence indicating a potential adverse significant impact, having based their decision on an implicit assumption of significance contrary to 14 CCR §21080(e)(2), the landowner is concerned that this attempt to coerce him into accepting extralegal heron protection measures could seriously affect the future timber management of his property. A such, should CAL FIRE insist on making CDFW recommendations contingent on approving this plan, Mr. Gautreaux has announced his intention to appeal the denial in accordance to the Forest Practice Act PRC §4593.7.(c)

This concludes the RPF's Response to 2nd Review Recommendations. Please feel free to call with any questions or concerns. Thank you for your attention to this matter.

Sincerely,

Brian Griesbach

Brian Griesbach - RPF #2738
BLAIR FORESTRY CONSULTING

cc: Second Review- Cal Fire Fortuna
Thomas Blair-Blair Forestry
Mark Gautreaux-Landowner
Sue Sniado-CDFW
Monte Larson-CDFW

UNIT, ftp/NEW

From: Schwab, Dominik@CALFIRE
Sent: Wednesday, January 13, 2016 8:48 AM
To: Santa Rosa Review Team@CALFIRE
Subject: FW: 1-15-014 DEL Great Blue Heron Protection Measures

---

From: Thomas Blair [mailto:blairforestry@gmail.com]
Sent: Tuesday, January 12, 2016 9:02 PM
To: Schwab, Dominik@CALFIRE
Cc: 'Brian Griesbach'; 'TROY LEOPARDO'; 'Mark Gautreaux'
Subject: RE: 1-15-014 DEL Great Blue Heron Protection Measures

Dominik,

The landowner does not want to agree with CDFW's revised mitigation measures.

Thomas

BLAIR FORESTRY CONSULTING
Thomas Blair, RPF 2607
P.O. Box 2517
McKinleyville, Ca 95519
Mobile: 707.834.2990
blairforestry@gmail.com

From: Schwab, Dominik@CALFIRE [mailto:Dominik.Schwab@fire.ca.gov]
Sent: Tuesday, January 12, 2016 1:49 PM
To: blairforestry@gmail.com
Cc: brian.griesbach@blairforestry.com
Subject: FW: 1-15-014 DEL Great Blue Heron Protection Measures

Hello Thomas,
Please let me know if the landowner is agreeable to these revised recommendations. Obviously, Brian is the plan preparing RPF who signed the THP, and he is ultimately responsible for its contents.
Dominik

From: Sniado, Susan@Wildlife
Sent: Tuesday, January 12, 2016 11:06 AM
To: Schwab, Dominik@CALFIRE
Cc: Hendrix, Jon@Wildlife; Forsberg, William@CALFIRE
Subject: RE: 1-15-014 DEL Great Blue Heron Protection Measures

Hi Dominik

The Department of Fish and Wildlife has reviewed the proposed Great Blue Heron protection measures outlined below and concludes that if the mitigation measures are included in the subject THP, the THP will provide adequate mitigation measures to protect Great Blue Herons and their nesting habitat.

If you have any question regarding this concurrence, please call me at the phone number below.

Thank you.

Susan Sniado
Senior Environmental Scientist (Specialist)
Coastal Timberland Plannning
California Department of Fish and Wildlife
619 Second Street
Eureka, CA 95501
707-441-3970
Susan.sniado@wildlife.ca.gov

From: Schwab, Dominik@CALFIRE
Sent: Tuesday, January 12, 2016 10:55 AM
To: Sniado, Susan@Wildlife
Subject: 1-15-014 DEL Great Blue Heron Protection Measures

Hello Sue,
Thanks for talking with me on the phone this morning. We talked about potentially revising the Great Blue Heron protection measures in 1-15-014 DEL so that there would be a 100-foot "no-cut" buffer around the Great Blue Heron nests. From 100-300 feet around the nests, harvesting would be allowed as long as the post-harvest stand retained at least 60% canopy and at least half of the pre-harvest dominants and codominants. It was my understanding that these revised protections measures would ensure that the Great Blue Heron nest sites would best protect the nest sites and nesting birds from the proposed timber operations. Please review the revised protection measures below, and please let me know if DFW finds these protection measures to be appropriate. If DFW is agreeable to these protection measures, I will propose them to the RPF.

1. A year-round habitat retention buffer shall be established within 300 feet of the great blue heron rookery (Figure 2). The buffer shall be measured from the outer extent of the rookery as defined by the location of the nests. No harvesting shall occur within **100** feet of the rookery, and within **100-300** feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.

2. A 0.25 mile temporal disturbance buffer shall be established around the rookery during the critical period, February 1 to August 1. No timber operations shall be permitted within the disturbance buffer during the critical period, unless surveys confirm nesting has failed or the young have fledged earlier than August 1 and written concurrence is received from CDFW.

3. During the life of the THP the landowner shall agree to allow CDFW staff on the property to monitor the success of the protection measures and the status of the nest sites. Such access shall only occur with a minimum 48-hour notice.

Thanks,

Dominik Schwab
Forester II, RPF #2823
CAL FIRE
135 Ridgway Ave.
Santa Rosa, CA 95401
(707) 576-2941

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SaveOurWater.com · Drought.CA.gov

UNIT, ftp/NEW

From: Schwab, Dominik@CALFIRE
Sent: Wednesday, January 20, 2016 11:10 AM
To: Santa Rosa Review Team@CALFIRE
Subject: Additional info: 1-15-014 DEL
Attachments: Pages from 1-99-356 HUM-2.pdf

Please print this out, and put it in the plan record.
Thanks,
Dominik

From: Robbins, James (HUU)@CALFIRE
Sent: Monday, January 11, 2016 2:44 PM
To: Schwab, Dominik@CALFIRE
Subject: THP 1-99-356 HUM

This is the plan. I read it in the THP archive. The consultation called for a 500 foot buffer. There is evidence in the CAL FIRE biologist's consultation that another nearby rookery was disrupted by timber operations. This is why a 500' buffer was recommended. See attached

James M. Robbins
Forester III, RPF #2627
CAL FIRE
California Department of Forestry and Fire Protection
Humboldt-Del Norte Unit
118 Fortuna Blvd.
Fortuna, CA 95540
Phone (707) 726-1251
James.Robbins@fire.ca.gov

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AMENDMENT NO. 3 (MINOR)

PALCO THE PACIFIC LUMBER COMPANY P.O. Box 37, Scotia, CA 95565 (707) 764-2222

August 4, 2000

Mr. David Driscoll, Chief - Region I
California Department of Forestry
and Fire Protection
Resource Management Office
135 Ridgway Avenue
Santa Rosa, CA 95401

This amendment conforms to the rules and the regulations of the Board of Forestry and the Forest Practice Act.
Reviewed by MM date routed 8-14-00
cc: Unit (2) DFG WQ CF PR BoE Sub RPF

RE: THP # 1-99-356 HUM (WEST RIO DELL)

Dear Mr. Driscoll,

I would like to amend the above mentioned plan to include the attached Great Blue Heron Consultation done by John E. Harris (CDF, Senior Wildlife Biologist) and memorandum from Kenneth C. Moore (CDF&G, Environmental Specialist IV) concurring with consultation. Recommendations 1 through 4 on page 3 of consultation shall be incorporated as enforceable conditions in the subject THP, Section II Item 32.

Please consider the above Great Blue Heron Consultation as a minor amendment. This change in the conduct of timber operations can reasonably be expected not to cause any significantly adverse impacts to the wildlife resource that may be at risk.

I respectfully request that you accept the above change as a minor amendment and if you have any questions or concerns, please feel free to contact me at any time.

Sincerely,

Edward M. Crans

Edward M. Crans (RPF # 1805)
Compliance RPF
The Pacific Lumber Company

Attachment: 1) July 24, 2000 CDF Great Blue Heron Consultation
2) August 3, 2000 CDF&G Consultation Concurrence

RECEIVED
hard copy to fax recd
AUG 09 2000 8/4/00
COAST AREA OFFICE
RESOURCE MANAGEMENT

DEPARTMENT OF FORESTRY & FIRE PROTECTION

MEMORANDUM

July 24, 2000

TO: Armand Gonzales
California Department of Fish & Game
Northern California – North Coast Region
619 2nd Street
Eureka, CA 95501

FROM: Department of Forestry & Fire Protection
John E. Harris, Senior Wildlife Biologist
Humboldt-Del Norte Ranger Unit

SUBJECT: Great Blue Heron Consultation – Pacific Lumber 1-99-356 Hum THP

INTRODUCTION

The following memorandum documents the know history and characteristics of a great blue heron (*Ardea herodias*) rookery located in Township 2 North, Range 1 West, Section 36, SE ¼ of the SW ¼, USGS 7.5' Fortuna CA quadrangle (Figure 1). This memorandum also provides recommendations for mitigating potential adverse effects associated with the THP 1-99-356 Hum to the referenced heron rookery. These recommendations are being submitted to the DFG pursuant to 14 CCR 898 and 14 CCR 9193(a), which stipulates that the Department will consult with the DFG regarding the nest protection measures for sensitive species.

Dan Dill, Associate Wildlife Biologist Scotia Pacific Company (ScoPac), initiated this consultation. Mr. Dill contacted the DFG regarding the desire to conduct the consultation. Due to workload issues the DFG informed Mr. Dill that they would not be able to respond to his request for 3 – 4 weeks and suggested that he contact CDF biological staff to provide an evaluation of the situation.

An inspection of the nest site occurred on June 30, 2000 from 1345 – 1600 hours. Present during the field visit were Dan Dill, Jim Robbins (CDF inspector) and John Harris.

SITE HISTORY

The rookery occurs on ScoPac property that was recently purchased from Eel River Sawmills. The property is not covered by ScoPac's HCP. A query of the Natural Diversity Database (Version 2.1.1, 01/05/00) and DFG local records was made (Curtis Miller, Scientific Aid, DFG Eureka, pers comm. 06/29/00). Neither the NDDB nor local DFG records indicate a rookery at the current location; however, a rookery (DFG #1-12-31) is reported from Township 1 North, Range 1 West, Section 1, NW ¼ of the NE ¼, USGS 7.5' Fortuna CA quadrangle.

This "historic" rookery was originally detected in an active THP (1-95-037 Hum) in May 1995 on lands owned by the Simpson Timber Company (Hibbard & Condon 1997). The historic rookery, hereafter referred to as the Simpson rookery, contained at least 3 active nests in a 43" dbh Sitka spruce (*Picea sitchensis*), which occurred in a stand dominated by 70-year-old redwoods (*Sequoia sempervirens*).

Mitigation measures incorporated into THP 1-5-037 Hum for the Simpson rookery included: 1) seasonal restrictions, 2) limitations on personnel within the seasonal restriction zone, 3) sequencing timber operations outside of the area of seasonal restrictions, 4) monitoring heron behavior, 5) marking and retaining the nest tree and selected trees, and 6) managing timber hauling (Hibbard & Condon 1997). The mitigation measures were considered successful for the 1995 and 1996 breeding seasons (Hibbard & Condon 1997). Monitoring at the site did not continue after the 1996-breeding season.

The Simpson rookery was visited during the inspection. The nest tree and retention stand was still present; however, there was no indication that it had been used recently by herons. The nest tree no longer contained any evidence of nest platforms nor was any evident in the other retention trees.

It is believed that this rookery may have been abandoned due to exposure to high coastal winds blowing up the Eel River. The retention stand is only approximately 0.5 acres and consists of 57 screen trees and snags >12" dbh. The stand is surrounded by clearcut, which coupled with its small size increases its exposure to winds. This was evident during the inspection where gusts of approximately 20 mph. were experienced resulting in substantial canopy movement.

SITE DESCRIPTION

The active great blue heron rookery is located approximately 300 feet north of Blue Slide Road along a private drive and approximately 350 feet from the Eel River (Figures 1 & 2). The turnoff for the private road is just beyond the Rio Dell City limit. The rookery is at UTM coordinates Zone 10; 404,286m. E; 4,484,446m. N. The rookery was detected on June 26, 2000 by ScoPac compliance forester Ed Crans.

Five active nests were detected during the inspection containing at least 3 juvenile herons. Two of the juvenile herons were fully feathered and actively moving about the trees making accurate counts difficult. It is anticipated that these birds will be fledging soon. The third juvenile was still covered in down. The feather remains of one juvenile was observed under one of the nests. Additional juveniles may have been present; however, an intensive effort to document the exact number was not attempted due to concerns over disturbance. Furthermore, given the time of the year other juveniles may have already fledged.

The rookery is within a second growth redwood stand corresponding to a CWHR RDW 5M with redwood, big-leaf maple (*Acer macrophyllum*), and Oregon ash (*Fraxinus latifolia*) being the dominate tree species. The canopy of the stand is fairly open; however, there is a significant understory of redwood that is approximately 15 years old. Areas of un-maintained pasture and ephemeral wetlands occur adjacent to the nest stand. The nests are observable from both the private road and Blue Slide Road.

All of the observed nest structures were in redwoods. Heights of the nest trees averaged approximately 140 to 160-feet. Due to concern of causing stress to juvenile herons, dbh were only taken on three of the nest trees. They are 41, 34, and 27 inches dbh. The nests are in the upper third of the trees. Nest placement is variable with nests occurring against the bowl of the tree as well as out on extended branches.

It is assumed that this rookery was established after the Simpson rookery was abandoned. This, however, is only an assumption based on the proximity of the two sites and the fact that the Simpson rookery appears to have been abandoned.

THP 1-99-356 Hum

THP 1-99-356 Hum consists of two units totaling 29 acres and is located within in Township 2 North, Range 1 West, Section 36, USGS 7.5' Fortuna CA quadrangle, Humboldt Base and Meridian. The land and timber owner is the Scotia Pacific Company. Silviculture for the THP is clearcut. Harvesting practices for the THP are tractor (Unit 1) and tractor, cable option (Unit 2).

The rookery is located within Unit 1, which bisects Blue Slide Road (Figure 3). Much of the timber south of Blue Slide Road has been felled; however it has not been yarded. No timber has been felled north of Blue Slide Road. Because of the patchy nature of the habitat within the rookery and concerns over

increasing the susceptibility of the site to winds a 500-foot habitat retention buffer is recommended. This size of a habitat retention area is supported by the local, although anecdotal, observations of the Simpson rookery. In addition to the 500-foot habitat retention buffer a ¼ mile temporal disturbance buffer is recommended (see exception below for Unit 2) for the critical period. Because of the presence of at least one pre-fledging juvenile great blue heron, it is recommended that the critical period for this THP be extended to August 1.

Unit 2 is approximately 1000 feet from the rookery at its nearest point. This unit is however, located on the backside of a ridge and is not visible from the rookery. Timber operations, including hauling along Blue Slide Road are currently occurring within Unit 2. Because Unit 2 is topographically screened from the rookery temporal restrictions are not deemed necessary for this unit. Given that Blue Slide Road is a county road which receives moderate traffic volumes and the small size of Unit 2 (fewer loads) restrictions on hauling from this unit are also not deemed necessary.

RECOMMENDATIONS

The following recommendations are proposed to reduce potential adverse effects to the active great blue heron rookery to a level of less than significant. In order for this consultation to be considered valid it must be accompanied by a letter of concurrence by the DFG prior to submittal of the amendment documenting this resource and consultation. Furthermore, any additional measures stipulated by the DFG must be incorporated into the THP. These measures shall be incorporated into Item #32, Section 2 of the THP via an amendment.

1. A 500-foot habitat retention buffer shall be established around the great blue heron rookery (Figure 3). The buffer shall be measured from the outer extent of the rookery as defined by the location of the nests. To the south the buffer shall extend to Blue Slide Road, a distance of approximately 300 feet. No timber operations shall be permitted within this 500-foot habitat retention buffer. Prior to operations the project proponent shall contact the DFG and CDF (Fortuna biologist) to evaluate the definition of the rookery boundaries. The DFG and CDF shall have 10 business days to perform this evaluation.
2. A ¼ mile temporal disturbance buffer shall be established around the rookery during the critical period which, for the purposes of this THP, shall be defined as extending from February 15 through August 1 (Figure 3). During this time no timber operations shall be permitted within the ¼ mile disturbance buffer. An exception to this restriction is that operations, including hauling, may continue within Unit 2.
3. The following language shall be incorporated into Item #32, Section 2 of the THP by the RPF. *The person who submitted the original plan, or the successor in interest shall submit any and all subsequent consultations or letters of technical assistance to the Department as enforceable amendments to the plan prior to operations being conducted pursuant to that consultation or letter of technical assistance.*
4. During the life of the THP the landowner shall agree to allow DFG and/or CDF biological staff on the property to monitor the success of the mitigations and the status of the nest site. Such access shall only occur with a minimum 48-hour notice. Furthermore, during the life of the THP the project proponent shall provide annual reports to the DFG (cc Armand Gonzales & Karen Kovacs) and CDF (cc Fortuna biologist) documenting the status of the rookery.

Dave Ebert
Ranger Unit Chief

by:

John E. Harris
Senior Wildlife Biologist
Humboldt-Del Norte Ranger Unit

cc Dan Dill (Scotia Pacific Co.)
Karen Kovacs (DFG-Eureka)
Bill Condon (DFG-Eureka)
Jim Robbins (CDF-Fortuna)

LITERATURE CITED

Hibbard, Catherine J. and W.M. Condon. 1997. Evaluating mitigations during and after timber harvest around a great blue heron rookery. Unpubl. Abstract. 1997 Annual Conference The Wildlife Society Western Section Abstracts, Feb. 5-8, 1997, San Diego CA.

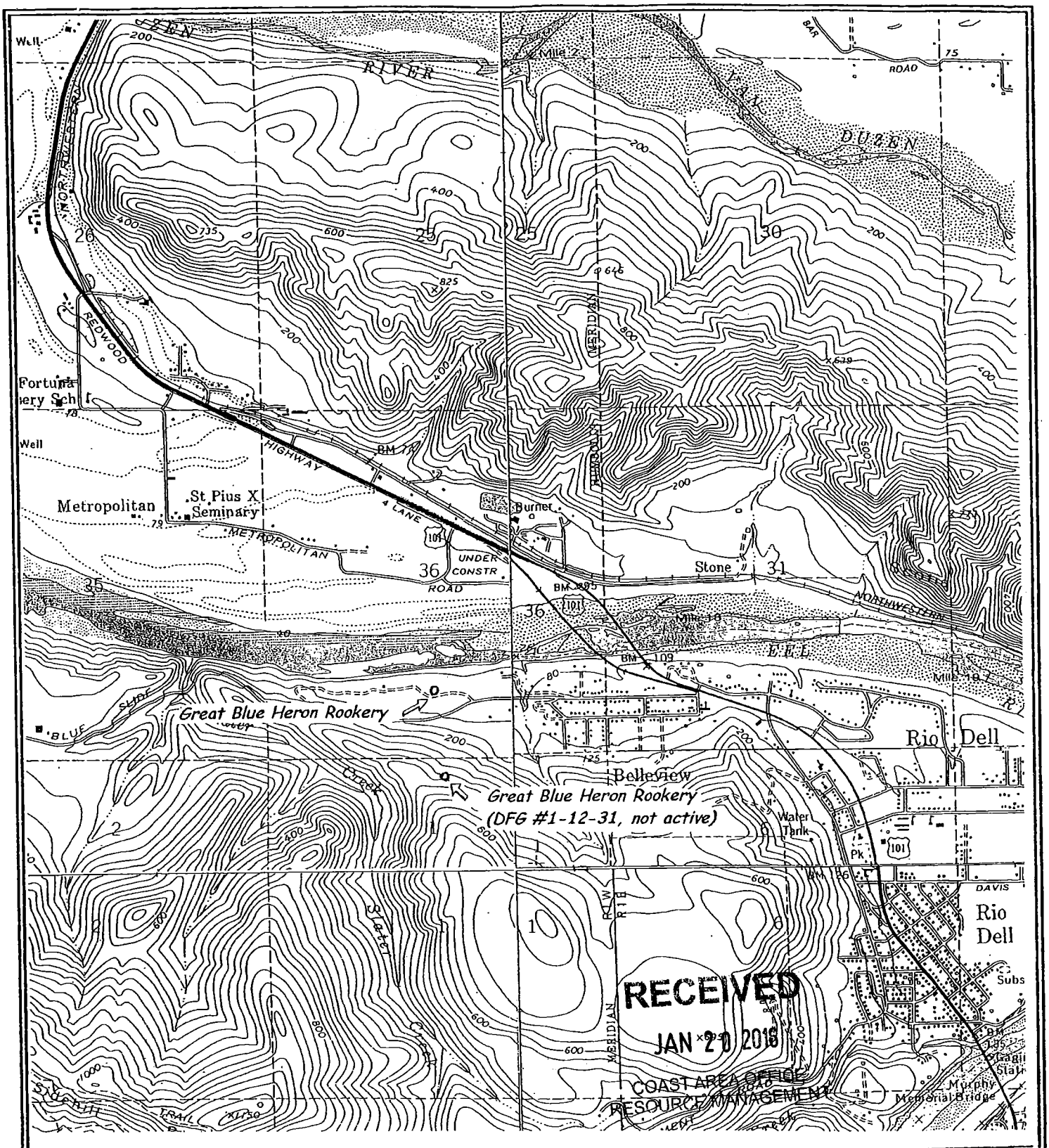

Figure 1. General Vicinity Map - Great Blue Heron Rookery. T2N, R1W, Section 36, SE ¼ of the SW ¼, USGS 7.5' Fortuna CA Quadrangle

Scale 1:24000

Figure 2. Active and Historic Great Blue Heron Rookeries. 1996 WAC-96CA 30-236 Aerial Photograph. T2N., R1W., Sec.36, USGSS 7.5' Fortuna CA Quadrangle.

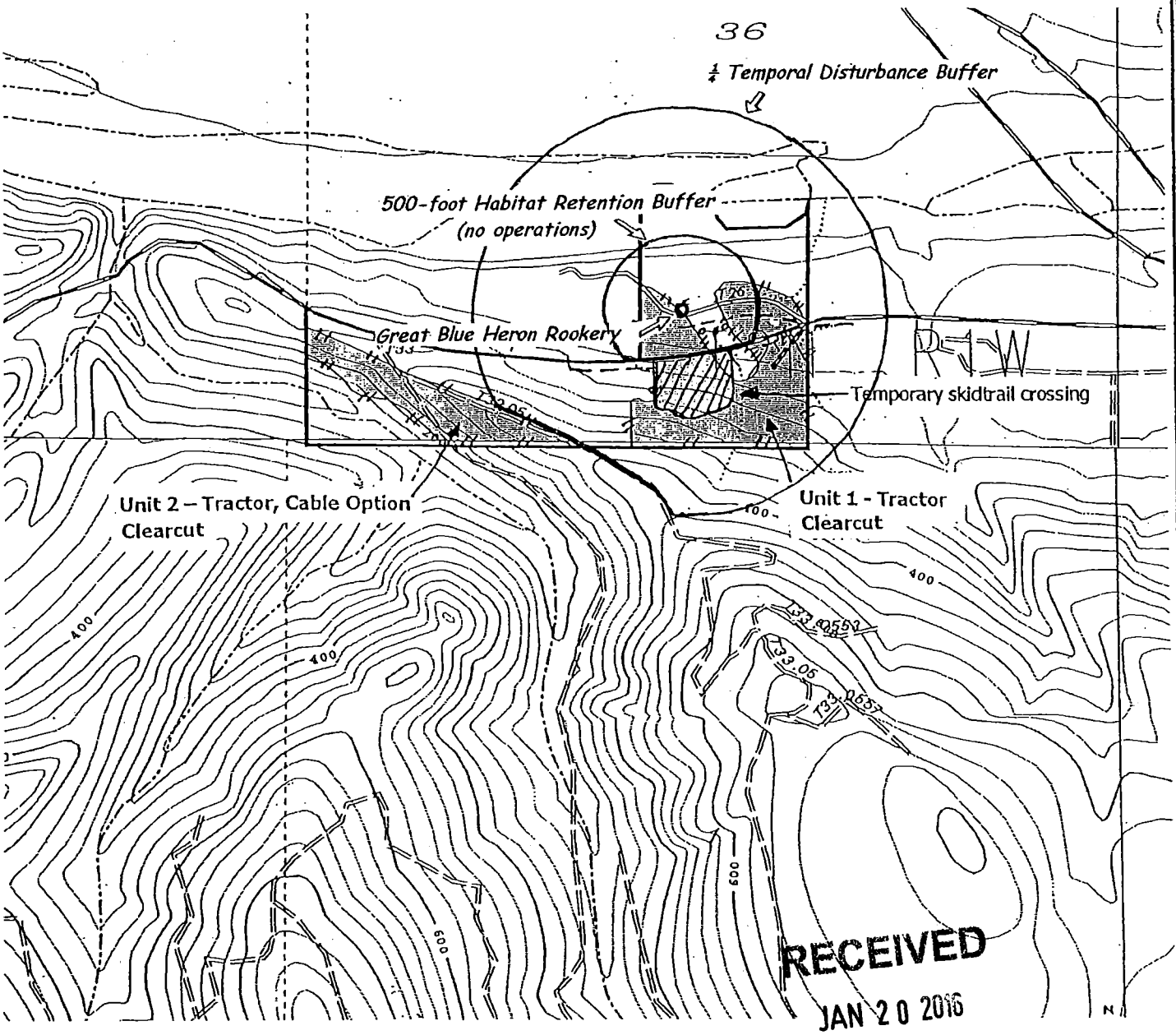

Figure 3. THP 1-99-356 Hum Great Blue Heron Mitigation Map. T2N, R1W, Section 36, USGS 7.5' Fortuna CA Quadrangle

Scale 1:1000

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AUG 09 2000
COAST AREA OFFICE
RESOURCE MANAGEMENT

N

State of California **The Resources Agency**

cc: Compliance
Chimici
Dill

Memorandum

To: Mr. David Driscoll
Chief, Forest Practice
Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, California 95401

Date: August 3, 2000

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 7

To JOHN	From
Co. SHEED	Co.
Dept.	Phone #
Fax #	Fax #

Attn: Mr. Rodger Thompson, Deputy Chief

From: **Northern California-North Coast Regio**
Department of Fish and Game
619 Second Street, Eureka CA 95501

Subject: Timber Harvesting Plan (THP) **1-99-356HUM,** Great Blue Heron (*Ardea herodias*) Consultation

The Department of Fish and Game (DFG) has reviewed the consultation prepared by the Department of Forestry and Fire Protection Senior Biologist John E. Harris, dated July 24, 2000, to address potential impacts of the subject THP to the Board of Forestry sensitive species great blue heron rookery found in association with the subject THP. A copy of the consultation memorandum is attached.

The DFG concurs with the recommendations made in the consultation to reduce potential impacts to the rookery to a level of less than significant. Please ensure recommendations 1 through 4 are incorporated as enforceable conditions into the subject THP, Section II Item 32.

If you have questions regarding this matter, please contact Environmental Specialist III Scott Osborn at (707) 445-7805.

Kenneth C. Moore
Environmental Specialist IV
Coastal Timberland Planning Supervisor

Attachment: July 24, 2000 CDF Great Blue Heron Consultation

cc: See attachment

RECEIVED
JAN 20
COAST AREA OFFICE
RESOURCE MANAGEMENT

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AUG 0 9 2000
COAST AREA OFFICE 0294
RESOURCE MANAGEMENT

cc: Mr. John Sneed
Scotia Pacific Company LLC
P.O. Box 712
Scotia, California 95565

Ms. Amedee Brickey
US Fish and Wildlife Service
1655 Heindon Road
Arcata, California 95521

Mr. John Marshall
Department of Forestry and Fire Protection
118 Fortuna Blvd.
Fortuna, California 95540

Mr. Ron Pape
Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, CA 95401

Mr. Mark Stopher; Department of Fish and Game, Redding

Ms. Tina Bartlett, Mr. William Condon, Dr. Scott Osborn; Department of Fish and Game, Eureka

UNIT, ftp/NEW

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June

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2015

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Thursday, June 4, 2015

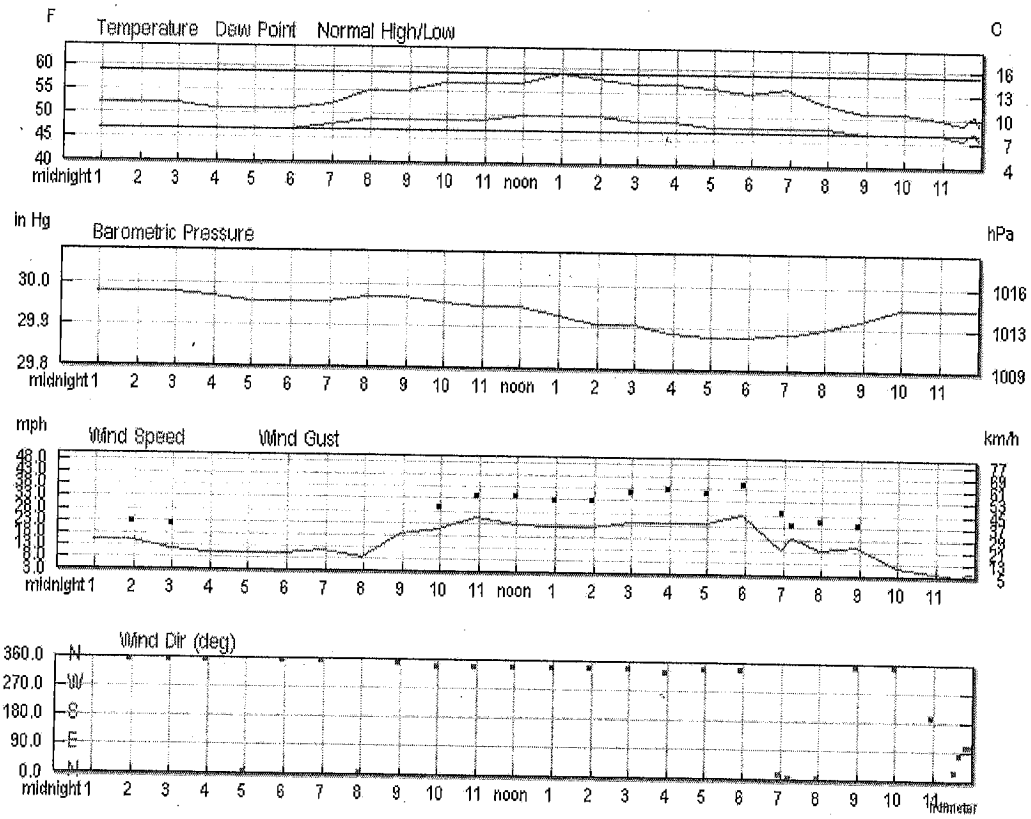
Daily | Weekly | Monthly | Custom

	Actual	Average	Record

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KCEC

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Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

June

4

Submit

Astronomy

	Rise	Set
Jun. 04, 2015		
Actual Time	5:43 AM PDT	8:47 PM PDT

Jun. 04, 2015	Rise	Set
Civil Twilight	5:09 AM PDT	9:21 PM PDT
Nautical Twilight	4:26 AM PDT	10:04 PM PDT
Astronomical Twilight	3:36 AM PDT	10:55 PM PDT
Moon	10:38 PM PDT (6/4)	7:50 AM PDT (6/4)
Length of Visible Light	16h 11m	
Length of Day	15h 04m	

Waning Gibbous, 95% of the Moon is Illuminated

Jun 4	Jun 9	Jun 16	Jun 24	Jul 1
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:56 AM	53.1 °F	48.0 °F	83%	29.98 in	10.0 mi	North	15.0 mph	20.7 mph	N/A		Scattered Clouds
1:56 AM	53.1 °F	48.0 °F	83%	29.98 in	10.0 mi	North	15.0 mph	23.0 mph	N/A		Clear
2:56 AM	53.1 °F	48.0 °F	83%	29.98 in	10.0 mi	North	11.5 mph	21.9 mph	N/A		Clear
3:56 AM	52.0 °F	48.0 °F	86%	29.97 in	10.0 mi	North	10.4 mph	-	N/A		Clear
4:56 AM	52.0 °F	48.0 °F	86%	29.96 in	10.0 mi	North	10.4 mph	20.7 mph	N/A		Clear
5:56 AM	52.0 °F	48.0 °F	86%	29.96 in	10.0 mi	North	10.4 mph	-	N/A		Clear
6:56 AM	53.1 °F	48.9 °F	86%	29.96 in	10.0 mi	North	11.5 mph	-	N/A		Clear
7:56 AM	55.9 °F	50.0 °F	80%	29.97 in	9.0 mi	North	9.2 mph	-	N/A		Clear
8:56 AM	55.9 °F	50.0 °F	80%	29.97 in	9.0 mi	North	18.4 mph	27.6 mph	N/A		Clear
9:56 AM	57.9 °F	50.0 °F	75%	29.96 in	10.0 mi	NNW	20.7 mph	29.9 mph	N/A		Clear
10:56 AM	57.9 °F	50.0 °F	75%	29.95 in	10.0 mi	NNW	25.3 mph	34.5 mph	N/A		Clear

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
11:56 AM	57.9 °F	51.1 °F	78%	29.95 in	9.0 mi	NNW	23.0 mph	34.5 mph	N/A		Clear
12:56 PM	60.1 °F	51.1 °F	72%	29.93 in	9.0 mi	NNW	21.9 mph	33.4 mph	N/A		Clear
1:56 PM	59.0 °F	51.1 °F	75%	29.91 in	8.0 mi	NNW	21.9 mph	33.4 mph	N/A		Clear
2:56 PM	57.9 °F	50.0 °F	75%	29.91 in	8.0 mi	NNW	24.2 mph	36.8 mph	N/A		Clear
3:56 PM	57.9 °F	50.0 °F	75%	29.89 in	7.0 mi	NNW	24.2 mph	38.0 mph	N/A		Clear
4:56 PM	57.0 °F	48.9 °F	74%	29.88 in	7.0 mi	NNW	24.2 mph	36.8 mph	N/A		Clear
5:56 PM	55.9 °F	48.9 °F	77%	29.88 in	7.0 mi	NNW	27.6 mph	40.3 mph	N/A		Clear
6:56 PM	57.0 °F	48.9 °F	74%	29.89 in	7.0 mi	NNE	13.8 mph	28.8 mph	N/A		Clear
7:11 PM	55.9 °F	48.9 °F	77%	29.89 in	7.0 mi	North	18.4 mph	24.2 mph	N/A		Scattered Clouds
7:56 PM	54.0 °F	48.9 °F	83%	29.90 in	6.0 mi	North	13.8 mph	25.3 mph	N/A		Haze
8:56 PM	52.0 °F	48.0 °F	86%	29.92 in	6.0 mi	North	15.0 mph	24.2 mph	N/A		Clear
9:56 PM	52.0 °F	48.0 °F	86%	29.95 in	6.0 mi	North	6.9 mph	-	N/A		Clear
10:56 PM	51.1 °F	48.0 °F	89%	29.95 in	7.0 mi	SSW	4.6 mph	-	N/A		Clear
11:32 PM	50.0 °F	46.9 °F	89%	29.95 in	5.0 mi	NNE	3.5 mph	-	N/A		Scattered Clouds
11:41 PM	51.1 °F	48.0 °F	89%	29.95 in	6.0 mi	East	3.5 mph	-	N/A		Mostly Cloudy
11:52 PM	51.8 °F	48.2 °F	88%	29.95 in	6.0 mi	ESE	4.6 mph	-	N/A		Scattered Clouds
11:56 PM	50.0 °F	46.9 °F	89%	29.95 in	7.0 mi	ESE	4.6 mph	-	N/A		Scattered Clouds

Crescent City, CA

McNamara

1:10 PM PST on January 15, 2016 (GMT -0800)

Weather History for KCEC - June, 2015

June

11

2015

View
Thursday, June 11, 2015

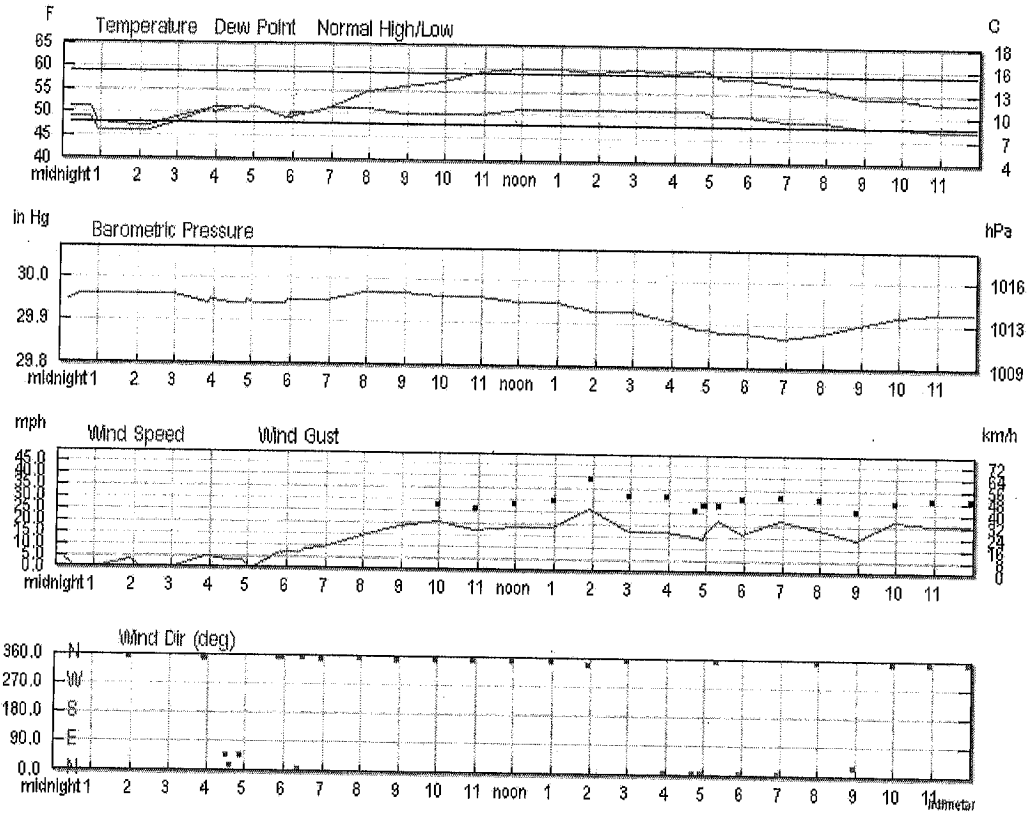
Daily | Weekly | Monthly | Custom

	Actual	Average	Record

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KCEC

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

June

11

Submit

Astronomy

Jun. 11, 2015	Rise	Set
Actual Time	5:41 AM PDT	8:51 PM PDT

Jun. 11, 2015	Rise	Set
Civil Twilight	5:07 AM PDT	9:25 PM PDT
Nautical Twilight	4:23 AM PDT	10:09 PM PDT
Astronomical Twilight	3:31 AM PDT	11:02 PM PDT
Moon	2:32 AM PDT (6/11)	3:40 PM PDT (6/11)
Length of Visible Light	16h 18m	
Length of Day	15h 09m	

Waning Crescent, 26% of the Moon is Illuminated

Jun 11	Jun 16	Jun 24	Jul 1	Jul 8
Waning Crescent	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	52.0 °F	50.0 °F	93%	29.95 in	7.0 mi	SSW	3.5 mph	-	N/A		Overcast
12:33 AM	52.0 °F	50.0 °F	93%	29.96 in	7.0 mi	Calm	Calm	-	N/A		Overcast
12:44 AM	52.0 °F	50.0 °F	93%	29.96 in	7.0 mi	Calm	Calm	-	N/A		Overcast
12:56 AM	48.9 °F	46.9 °F	93%	29.96 in	6.0 mi	Calm	Calm	-	N/A		Overcast
1:56 AM	48.0 °F	46.9 °F	96%	29.96 in	6.0 mi	North	3.5 mph	-	N/A		Overcast
2:14 AM	48.0 °F	46.9 °F	96%	29.96 in	5.0 mi	Calm	Calm	-	N/A		Overcast
2:56 AM	50.0 °F	48.9 °F	96%	29.96 in	5.0 mi	Calm	Calm	-	N/A		Overcast
3:52 AM	51.8 °F	51.8 °F	100%	29.94 in	2.5 mi	North	4.6 mph	-	N/A		Overcast
3:56 AM	52.0 °F	51.1 °F	97%	29.95 in	2.5 mi	North	4.6 mph	-	N/A		Overcast
4:29 AM	52.0 °F	52.0 °F	100%	29.94 in	3.0 mi	NE	3.5 mph	-	N/A		Overcast
4:36 AM	52.0 °F	52.0 °F	100%	29.94 in	2.5 mi	NNE	3.5 mph	-	N/A		Overcast

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
4:51 AM	51.8 °F	51.8 °F	100%	29.94 in	1.2 mi	NE	3.5 mph	-	N/A		Overcast
4:52 AM	52.0 °F	52.0 °F	100%	29.95 in	1.2 mi	NE	3.5 mph	-	N/A		Overcast
5:04 AM	52.0 °F	52.0 °F	100%	29.94 in	0.5 mi	Calm	Calm	-	N/A	Fog	Fog
5:50 AM	50.0 °F	50.0 °F	100%	29.94 in	1.5 mi	North	6.9 mph	-	N/A		Mostly Cloudy
5:53 AM	50.0 °F	50.0 °F	100%	29.94 in	3.0 mi	North	5.8 mph	-	N/A		Mostly Cloudy
5:56 AM	51.1 °F	50.0 °F	96%	29.95 in	4.0 mi	North	6.9 mph	-	N/A		Scattered Clouds
6:20 AM	51.1 °F	51.1 °F	100%	29.95 in	2.5 mi	North	6.9 mph	-	N/A		Partly Cloudy
6:27 AM	51.1 °F	51.1 °F	100%	29.95 in	3.0 mi	North	8.1 mph	-	N/A		Partly Cloudy
6:56 AM	52.0 °F	52.0 °F	100%	29.95 in	4.0 mi	North	9.2 mph	-	N/A		Clear
7:56 AM	55.9 °F	52.0 °F	87%	29.97 in	7.0 mi	North	13.8 mph	-	N/A		Clear
8:56 AM	57.0 °F	51.1 °F	81%	29.97 in	7.0 mi	North	18.4 mph	24.2 mph	N/A		Clear
9:56 AM	57.9 °F	51.1 °F	78%	29.96 in	7.0 mi	North	20.7 mph	27.6 mph	N/A		Clear
10:56 AM	60.1 °F	51.1 °F	72%	29.96 in	7.0 mi	North	17.3 mph	26.5 mph	N/A		Clear
11:56 AM	61.0 °F	52.0 °F	72%	29.95 in	7.0 mi	North	18.4 mph	28.8 mph	N/A		Clear
12:56 PM	61.0 °F	52.0 °F	72%	29.95 in	7.0 mi	North	18.4 mph	29.9 mph	N/A		Clear
1:56 PM	60.1 °F	52.0 °F	75%	29.93 in	7.0 mi	NNW	26.5 mph	39.1 mph	N/A		Clear
2:56 PM	61.0 °F	52.0 °F	72%	29.93 in	7.0 mi	North	17.3 mph	32.2 mph	N/A		Clear
3:56 PM	60.1 °F	52.0 °F	75%	29.91 in	7.0 mi	North	17.3 mph	32.2 mph	N/A		Clear
4:40 PM	61.0 °F	52.0 °F	72%	29.89 in	7.0 mi	North	15.0 mph	26.5 mph	N/A		Partly Cloudy
4:54 PM	60.8 °F	51.8 °F	72%	29.89 in	6.0 mi	North	13.8 mph	28.8 mph	N/A		Haze
4:56 PM	60.1 °F	51.1 °F	72%	29.89 in	6.0 mi	North	16.1 mph	28.8 mph	N/A		Haze

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
5:18 PM	59.0 °F	51.1 °F	75%	29.88 in	6.0 mi	North	21.9 mph	28.8 mph	N/A		Haze
5:56 PM	59.0 °F	51.1 °F	75%	29.88 in	6.0 mi	North	16.1 mph	31.1 mph	N/A		Haze
6:56 PM	57.9 °F	50.0 °F	75%	29.87 in	6.0 mi	North	21.9 mph	32.2 mph	N/A		Haze
7:56 PM	57.0 °F	50.0 °F	77%	29.88 in	6.0 mi	North	18.4 mph	31.1 mph	N/A		Haze
8:56 PM	55.0 °F	48.9 °F	80%	29.90 in	6.0 mi	NNE	13.8 mph	26.5 mph	N/A		Haze
9:56 PM	55.0 °F	48.9 °F	80%	29.92 in	8.0 mi	North	21.9 mph	29.9 mph	N/A		Clear
10:56 PM	54.0 °F	48.0 °F	80%	29.93 in	8.0 mi	North	20.7 mph	31.1 mph	N/A		Clear
11:56 PM	54.0 °F	48.0 °F	80%	29.93 in	8.0 mi	North	20.7 mph	31.1 mph	N/A		Clear

Crescent City, CA

McNamara

12:59 PM PST on January 15, 2016 (GMT -0800)

Weather History for KCEC - October, 2015

October

3

2015

View

Saturday, October 3, 2015

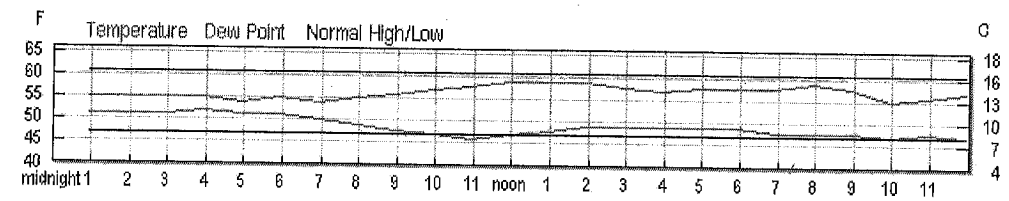
Daily | Weekly | Monthly | Custom

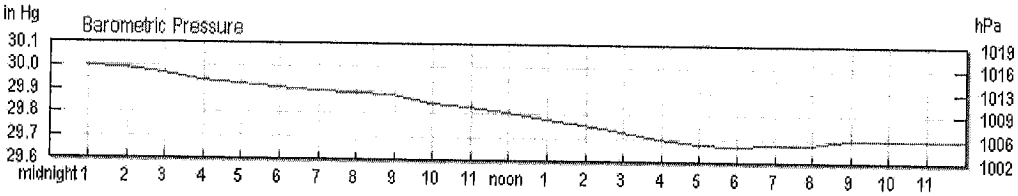
	Actual	Average	Record

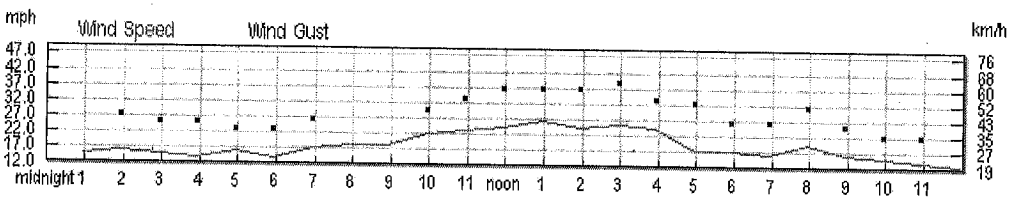
T = Trace of Precipitation, MM = Missing Value

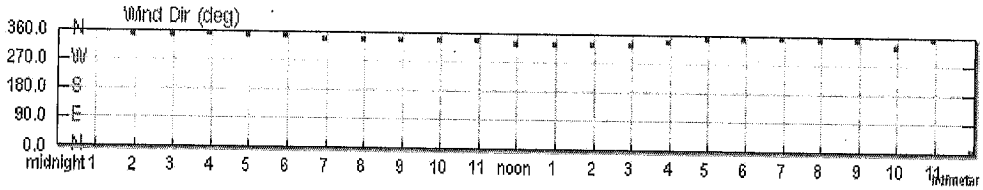
Source: NWS Daily Summary

Daily Weather History Graph









Search for Another Location

Airport or City:

KCEC

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

3

Submit

Astronomy

Oct. 03, 2015	Rise	Set
Actual Time	7:15 AM PDT	6:55 PM PDT

Oct. 03, 2015	Rise	Set
Civil Twilight	6:48 AM PDT	7:23 PM PDT
Nautical Twilight	6:15 AM PDT	7:55 PM PDT
Astronomical Twilight	5:43 AM PDT	8:27 PM PDT
Moon	11:32 PM PDT (10/3)	1:26 PM PDT (10/3)
Length of Visible Light	12h 35m	
Length of Day	11h 39m	

Waning Gibbous, 61% of the Moon is Illuminated

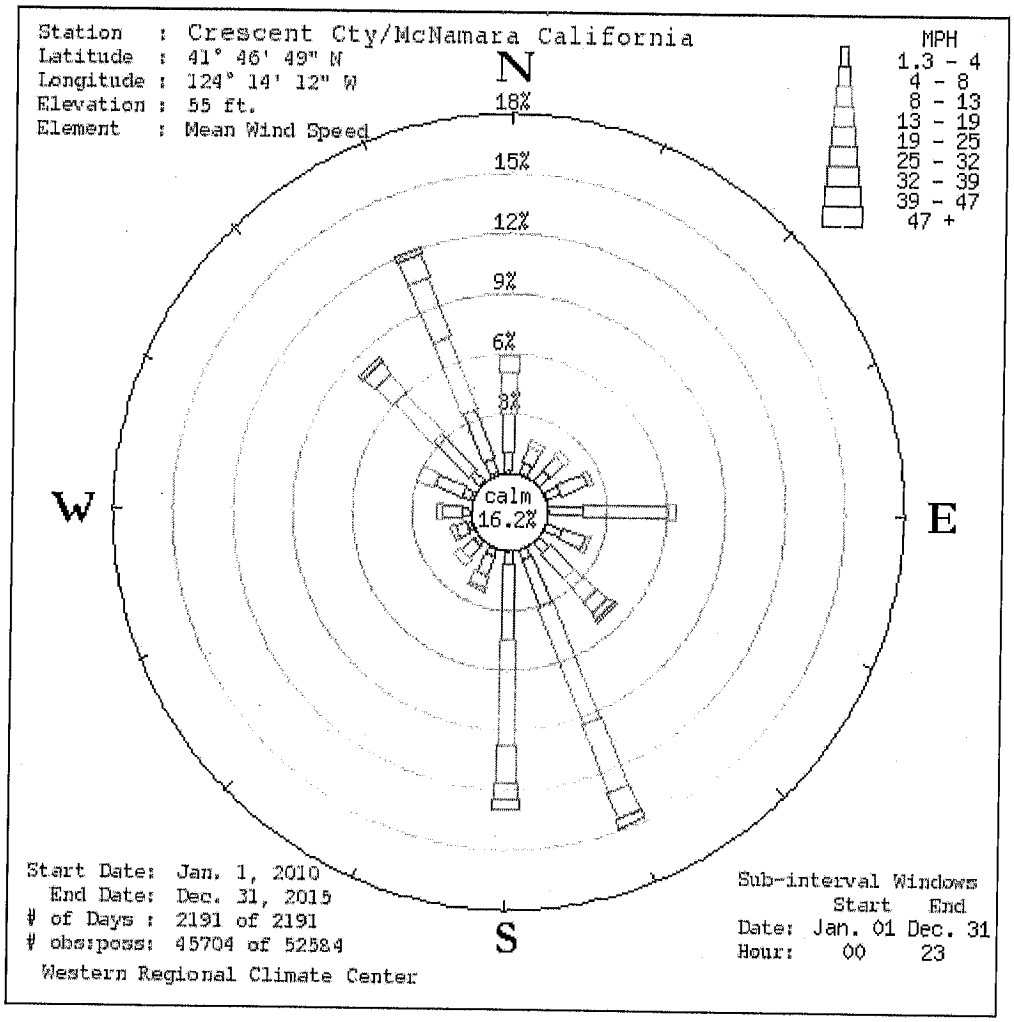
Oct 3	Oct 4	Oct 12	Oct 20	Oct 27
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:56 AM	55.0 °F	51.1 °F	86%	30.00 in	8.0 mi	North	15.0 mph	26.5 mph	N/A		Clear
1:56 AM	55.0 °F	51.1 °F	86%	29.99 in	8.0 mi	North	16.1 mph	27.6 mph	N/A		Clear
2:56 AM	55.0 °F	51.1 °F	86%	29.97 in	8.0 mi	North	15.0 mph	25.3 mph	N/A		Clear
3:56 AM	55.0 °F	52.0 °F	89%	29.94 in	8.0 mi	North	13.8 mph	25.3 mph	N/A		Clear
4:56 AM	54.0 °F	51.1 °F	90%	29.93 in	8.0 mi	North	16.1 mph	23.0 mph	N/A		Clear
5:56 AM	55.0 °F	51.1 °F	86%	29.91 in	9.0 mi	North	13.8 mph	23.0 mph	N/A		Clear
6:56 AM	54.0 °F	50.0 °F	86%	29.90 in	10.0 mi	NNW	17.3 mph	26.5 mph	N/A		Clear
7:56 AM	55.0 °F	48.9 °F	80%	29.89 in	10.0 mi	NNW	18.4 mph	-	N/A		Clear
8:56 AM	55.9 °F	48.0 °F	75%	29.88 in	10.0 mi	NNW	18.4 mph	29.9 mph	N/A		Clear
9:56 AM	57.0 °F	46.9 °F	69%	29.85 in	10.0 mi	NNW	21.9 mph	29.9 mph	N/A		Clear
10:56 AM	57.9 °F	46.0 °F	65%	29.83 in	10.0 mi	NNW	23.0 mph	33.4 mph	N/A		Clear

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
11:56 AM	59.0 °F	46.9 °F	64%	29.81 in	10.0 mi	NNW	24.2 mph	36.8 mph	N/A		Clear
12:56 PM	59.0 °F	48.0 °F	67%	29.78 in	9.0 mi	NNW	26.5 mph	36.8 mph	N/A		Clear
1:56 PM	59.0 °F	48.9 °F	69%	29.76 in	9.0 mi	NNW	24.2 mph	36.8 mph	N/A		Clear
2:56 PM	57.9 °F	48.9 °F	72%	29.73 in	8.0 mi	NNW	25.3 mph	39.1 mph	N/A		Clear
3:56 PM	57.0 °F	48.9 °F	74%	29.70 in	7.0 mi	NNW	24.2 mph	33.4 mph	N/A		Clear
4:56 PM	57.9 °F	48.9 °F	72%	29.68 in	8.0 mi	North	17.3 mph	32.2 mph	N/A		Clear
5:56 PM	57.9 °F	48.9 °F	72%	29.67 in	8.0 mi	North	17.3 mph	26.5 mph	N/A		Clear
6:56 PM	57.9 °F	48.0 °F	70%	29.68 in	9.0 mi	North	16.1 mph	26.5 mph	N/A		Clear
7:56 PM	59.0 °F	48.0 °F	67%	29.68 in	10.0 mi	North	19.6 mph	31.1 mph	N/A		Clear
8:56 PM	57.9 °F	48.0 °F	70%	29.70 in	10.0 mi	North	16.1 mph	25.3 mph	N/A		Clear
9:56 PM	55.0 °F	46.9 °F	74%	29.70 in	8.0 mi	NNW	15.0 mph	21.9 mph	N/A		Clear
10:56 PM	55.9 °F	48.0 °F	75%	29.70 in	9.0 mi	North	13.8 mph	21.9 mph	N/A		Clear
11:56 PM	57.0 °F	46.9 °F	69%	29.70 in	10.0 mi	North	12.7 mph	-	N/A		Clear

Crescent Cty/McNamara California



Crescent Cty/McNamara California - Wind Frequency Table (percentage)

Latitude : 41° 46' 49" N
Longitude : 124° 14' 12" W
Elevation : 55 ft.
Element : Mean Wind Speed

Start Date : Jan. 1, 2010
End Date : Dec. 31, 2015
# of Days : 2191 of 2191
obs : poss : 45704 of 52584

Sub Interval Windows
Start End
Date Jan. 01 Dec. 31
Hour 00 23

(Greater than or equal to initial interval value and Less than ending interval value.)

Range (mph)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
1.3 - 4	0.9	0.5	0.6	0.7	1.7	0.9	0.7	0.6	0.7	0.4	0.2	0.2	0.3	0.4	0.6	0.7	10.1
4 - 8	1.9	0.8	1.0	1.5	4.4	1.2	1.7	2.5	3.8	1.0	0.8	0.6	1.0	1.6	2.5	2.6	29.0

8 - 13	2.1	0.3	0.3	0.3	0.4	0.2	1.5	6.3	5.3	0.6	0.4	0.3	0.4	0.9	2.8	3.9	25.9
13 - 19	0.8	0.0	0.0	0.0	0.0	0.0	0.7	3.7	1.9	0.2	0.1	0.1	0.1	0.1	1.2	3.2	11.9
19 - 25	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.3	0.9	0.1	0.0	0.0	0.0	0.0	0.8	1.3	4.8
25 - 32	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.3	1.7
32 - 39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
39 - 47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47 -	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total(%)	5.8	1.7	2.0	2.5	6.5	2.3	5.2	14.9	13.0	2.3	1.6	1.2	1.8	3.0	8.2	11.9	83.7
Calm (<1.3)																	16.2
Ave Speed	8.4	5.6	5.5	5.4	5.1	5.1	10.1	12.4	10.8	7.9	7.2	7.1	6.5	6.8	10.7	11.9	8.0

Crescent Cty/McNamara California - Hourly Wind Statistics Table

Latitude : 41° 46' 49" N
Longitude : 124° 14' 12" W
Elevation : 55 ft.
Element : Mean Wind Speed

Start Date : Jan. 1, 2010
End Date : Dec. 31, 2015
# of Days : 2191 of 2191
obs : poss : 45704 of 52584

Sub Interval Windows

	Start	End
Date	Jan. 01	Dec. 31
Hour	00	23

Time - Time of Day (L.S.T.)
Speed - Average (Scalar) Speed in MPH
U-Vel - East-West Velocity, Positive to East
V-Vel - North-South Velocity, Positive to North
Res Spd - Vector Average (resultant) Speed in MPH
Res Dir - Vector Average (resultant) Direction
Dir Con - Directional Constancy (Res Spd/Speed)
Num Spd - Number of Wind Speed Observations
Num Dir - Number of Wind Direction Observations

Time	Speed	U-Vel	V-Vel	Res Spd	Res Dir	Dir Con	Num Spd	Num Dir
0	6.6	-1.7	2.2	2.8	142	0.423	1935	1890
1	6.2	-1.8	2.0	2.7	138	0.429	1931	1886
2	6.0	-1.8	1.7	2.5	134	0.413	1926	1882
3	5.7	-1.8	1.5	2.3	130	0.403	1932	1887
4	5.6	-1.7	1.4	2.2	130	0.387	1931	1888
5	5.6	-1.8	1.4	2.3	128	0.403	1925	1884
6	5.7	-1.8	1.4	2.3	128	0.401	1928	1874
7	6.0	-1.7	1.4	2.2	129	0.368	1922	1875
8	6.6	-1.3	1.6	2.0	140	0.308	1929	1873

9	7.6	-0.5	1.6	1.7	162	0.224	1925	1857
10	8.7	0.3	1.9	1.9	189	0.219	1923	1847
11	9.6	1.3	2.0	2.3	213	0.244	1919	1838
12	10.5	2.1	1.7	2.7	232	0.260	1929	1857
13	11.1	2.6	1.1	2.8	247	0.254	1928	1869
14	11.3	2.7	0.5	2.8	260	0.247	1929	1879
15	11.2	2.7	0.1	2.7	269	0.244	1930	1868
16	10.7	2.4	-0.3	2.5	278	0.230	1866	1803
17	10.0	1.9	-0.4	1.9	282	0.192	1932	1874
18	9.2	1.2	-0.3	1.2	282	0.130	1934	1879
19	8.5	0.3	0.2	0.4	231	0.046	1930	1876
20	8.0	-0.4	0.8	0.9	154	0.116	1929	1882
21	7.6	-1.0	1.6	1.9	147	0.247	1931	1887
22	7.4	-1.4	2.0	2.4	146	0.328	1932	1890
23	6.9	-1.6	2.3	2.8	144	0.401	1934	1893
ALL	8.0	-0.1	1.2	1.2	175	0.153	46230	44938

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Prevailing wind direction is based on the hourly data from 1992-2002 and is defined as the direction with the highest percent of frequency. Many of these locations have very close secondary maximum which can lead to noticeable differences month to month.

Click on a State: Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

All directions are where the wind blows FROM.

ALASKA

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
AMBLER AIRPORT, AK. (PAFM)	NNE	NNE	NNE	NNE	NNE	W	NNE	NNE	NNE	NNE	NNE	NNE	NNE
ANAKTUVUK PASS AP, AK (PAKP)	NE	S	NNE	NE	NE	NE	NE	NE	NE	NE	S	NE	NE
ANCHORAGE INT'L AP, AK (PANC)	N	N	N	S	S	S	S	S	S	N	N	N	N
ANIAK, AK. (PANI)	N	ESE	N	ESE	W	SE	SE	SE	ESE	ESE	ESE	N	ESE
ANNETTE AP, AK (PANT). WIND	ESE	ESE	ESE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE
ANVIK AP, AK (PANV). WIND R	NE	NE	NNE	NNE	W	W	W	W	W	NNE	NE	NE	NE
ARCTIC VILLAGE AP, AK (PARC)	NE	E	ENE	E	E	NE	WSW	WSW	NE	E	E	E	E
BARROW, AK. (PABR)	ENE	E	E	E	E	E	E	E	E	E	E	ENE	E
BARTER ISLAND, AK. (PABA)	W	E	W	E	E	E	E	E	E	E	E	W	E
BETHEL AIRPORT, AK. (PABE)	NNE	NE	NNE	N	S	S	S	S	S	N	NNE	NNE	NNE
BETTLES AP, AK. (PABT)	N	NNW	N	N	N	SW	S	S	N	N	N	N	N
BIRCHWOOD, AK. (PABV)	S	S	SSW	W	W	W	W	W	SSW	SSW	S	S	SSW
BUCKLAND AP, AK. (PABL)	WNW	E	E	W	WNW	WNW	SE	W	SE	SE	SE	E	SE
CANTWELL AP, AK (PATW). WIN	Incomplete Data												
CAPE LISBURNE AP, AK (PALU).	E	E	E	E	E	E	SSW	SSW	E	ENE	E	E	E
CAPE NEWENHAM, AK (PAEH). W	ESE	ESE	ESE	N	S	S	S	S	N	N	ESE	N	N
CAPE ROMANZOF, AK. (PACZ)	NE	NNE	NE	NNE	S	NNE	SSW	N	N	NNE	NE	N	NNE
CHIGNIK AP, AK (PAJC). WIND	W	W	W	W	W	W	W	W	W	W	W	W	W
COLD BAY, AK. (PACD)	SE	SE	SE	SE	SE	SE	SE	W	W	N	SE	N	SE
CORDOVA, AK. (PACV)	E	E	E	E	E	E	ENE	ENE	E	E	E	E	E
DEADHORSE AP, AK (PASC). WI	WSW	ENE	ENE	E	E	E	ENE	E	E	E	E	WSW	E
DEERING AIRPORT, AK. (PADE)	W	E	W	W	W	W	W	SSW	SW	SW	E	W	W
DELTA JCT/FT GREELEY, (PABI)	ESE	ESE	E	S	W	W	W	W	E	E	ESE	ESE	ESE
DILLINGHAM AIRPORT, AK. (PADL	N	N	N	N	N	S	S	S	N	N	N	N	N
EAGLE AP, AK (PAEG). WIND R	ESE	ESE	SE	SE	NE	N	W	ESE	SE	ESE	ESE	ESE	ESE
EGEGIK AP, AK (PAII). WIND	N	ESE	ESE	ESE	W	ESE	SE	W	W	N	N	N	ESE
EIELSON AFB-FAIRBANKS, AK-PAEI	S	S	NNW	W	W	W	W	W	S	S	S	S	S
ELMENDORF AFB-ANCH, AK-PAED	NE	N	N	N	W	W	W	W	N	N	NNE	NE	N
EMMONAK, AK (PAEM). WIND RO	ENE	ENE	ENE	N	N	N	S	S	N	N	ESE	N	N
EUREKA-SKELTON AP, AK (PAZK)	NE	NE	NE	W	W	WSW	WSW	W	W	NE	NE	NE	W
FAIRBANKS AP, AK. (PAFA)	NNE	NE	NNE	N	N	W	W	N	N	N	N	NE	N
FAIRBANKS-WAINWRIGHT AP, (PAFB	E	E	ENE	ENE	W	W	WSW	E	E	ENE	E	E	E
GALENA AIRPORT, AK. (PAGA)	N	E	N	N	N	WSW	SW	SW	E	N	E	E	N
GAMBELL, AK. (PAGM)	NNE	NNE	NNE	NNE	NNE	NNE	SSW	SSW	N	N	N	NE	NNE
GOLOVIN AP, AK. (PAGL)	NW	E	NW	NW	NW	S	S	S	NNW	N	N	NW	NW
GULKANA AIRPORT, AK. (PAGK)	N	N	N	S	S	S	S	S	S	N	N	N	S
GUSTAVUS AP, AK. (PAGS)	SE	SE	SE	SE	SE	SW	SW	SE	SE	SE	SE	SE	SE
HAINES AIRPORT, AK. (PAHN)	WNW	WNW	WNW	E	E	E	E	E	E	E	WNW	WNW	WNW
HEALY RIVER AP, AK (PAHV).	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE
HOMER AP, AK. (PAHO)	NE	NE	ENE	WSW	WSW	WSW	WSW	WSW	NE	NE	NE	NE	NE
HOONAH SEAPLANE, AK (PAOH)	Incomplete Data												
HOOPER BAY AP, AK. (PAHP)	E	E	E	N	N	N	N	W	N	E	E	E	E
HUSLIA AP, AK (PAHS). WIND	E	E	E	ENE	ENE	WNW	W	W	ENE	ENE	E	E	E
HYDABURG SEAPLANE, AK (PAHY)	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE
ILIAMNA AP, AK (PAIL). WIND	N	E	E	E	E	E	E	E	E	N	N	N	E
JUNEAU INT'L AP, AK (PAJN).	E	E	E	ESE	ESE	E	E	E	E	E	E	E	E
KAKE AIRPORT, AK. (PAFE)	ESE	ESE	ESE	ESE	ESE	W	ESE	ESE	ESE	ESE	E	ESE	ESE
KALTAG AP, AK (PAKV). WIND	NE	NE	NE	NE	SW	SW	SW	SW	SW	NE	NE	NE	NE
KENAI AP, AK (PAEN). WIND R	NNE	NNE	NNE	N	SSW	SSW	SSW	S	NNE	NNE	NNE	NNE	NNE
KETCHIKAN AP, AK (PAKT). WI	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SE	SE
KING SALMON AP, AK (PAKN).	N	E	E	E	S	S	S	S	N	N	N	N	N
KIVALINA AP, AK (PAVL). WIN	NNE	NNE	NNE	N	N	W	W	N	N	NNE	NNE	NNE	NNE
KLAWOCK AP, AK (PAKW). WIND	NE	NE	NE	S	SW	SW	SW	SW	SSW	S	NE	NE	SW
KODIAK AP, AK (PADQ). WIND	NW	NW	NW	NW	NW	E	E	NW	WNW	NW	NW	NW	NW
KOTZEBUE AP, AK (PAOT). WIN	E	E	E	E	W	W	W	W	E	E	E	E	E
KOYUK AP, AK (PAKK). WIND R	N	N	N	N	N	SSW	SSW	SW	N	N	N	N	N

LAKE HOOD SEAPLANE BASE, ANC	N	N	N	S	S	S	S	S	S	N	N	N	N
MCGRATH AP, AK (PAMC). WIND	W	WNW	N	N	W	W	S	S	W	N	N	N	N
MCKINLEY PARK AP, AK (PAIN).	N	S	N	S	N	N	S	N	N	N	N	N	N
MEKORYUK AP, AK (PAMY). WIN	NE	ESE	ESE	W	NNW	WNW	W	W	NNW	N	SE	N	N
MERRILL FIELD, ANCHORAGE, PAMR	NNE	N	N	N	W	WNW	WNW	WNW	N	N	NNE	NNE	N
METLAKATLA SEAPLANE BASE, AK	E	E	E	E	SSE	WSW	S	S	S	SSE	E	E	SSE
MIDDLETON ISLAND AP, AK (PAMD	ESE	ESE	E	E	E	W	E	W	E	E	E	E	E
MINCHUMINA AP, AK (PAMH). W	ENE	ENE	ENE	E	WSW	WSW	WSW	WSW	WSW	ENE	ENE	ENE	ENE
NABESNA-DEVILS MTN LODGE (PABN	Incomplete Data												
NENANA AP, AK (PANN). WIND	E	E	ENE	E	E	W	SW	E	E	ENE	ENE	ENE	E
NOATAK AP, AK (PAWN). WIND	N	NNE	NNE	NNE	N	S	S	N	N	N	N	NNE	N
NOME AP, AK (PAOM). WIND RO	E	E	E	E	E	WSW	WSW	WSW	N	N	E	N	E
NORTHWAY AP, AK (PAOR). WIN	WNW	E	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW
NUIQSUT AP, AK (PAQT). WIND	W	ENE	ENE	ENE	E	E	ENE	W	ENE	E	ENE	NE	ENE
PALMER MUNICIPAL AP, AK. (PAAQ	N	N	N	SE	SE	SE	SE	N	N	N	N	N	N
PETERSBURG AP, AK (PAPG). W	WSW	ESE	WSW	E	E	ENE	ENE	E	E	ESE	WSW	WSW	E
POINT HOPE AP, AK (PAPO). W	N	N	N	N	N	N	S	N	N	E	NNE	N	N
PORTAGE AP, AK (PATO). WIND	WNW	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	WNW	ESE
RED DOG AP, AK (PARD). WIND	Incomplete Data												
SAND POINT AP, AK (PASD). W	N	SSE	N	N	N	S	S	S	N	N	NNW	N	N
SAVOONGA AP, AK (PASA). WIN	E	E	E	E	E	E	W	W	N	N	E	NE	E
SELAWIK AP, AK (PASK). WIND	ENE	ENE	ENE	W	W	W	W	W	ENE	ENE	ENE	ENE	ENE
SELDOVIA AP, AK (PASO). WIN	N	N	N	S	S	S	S	S	S	S	S	S	S
SEWARD AP, AK (PAWD). WIND	N	N	N	N	S	S	S	N	N	N	N	N	N
SHISHMAREF AP, AK (PASH). W	N	N	E	E	NNW	W	N	N	N	E	E	E	N
SITKA AP, AK (PASI). WIND R	ESE	ESE	ESE	ESE	ESE	SW	SW	ESE	E	ESE	ESE	E	ESE
SKAGWAY AIRPORT, AK. (PAGY)	NE	NE	NNE	SSW	SSW	SSW	SSW	SSW	SSW	SSW	NNE	NE	SSW
SLANA, AK (PADT). WIND ROSE	Incomplete Data												
SLEETMUTE AP, AK (PASL). WI	NW	NW	NW	ESE	W	SE	ESE	ESE	ESE	WNW	WNW	NW	NW
SOLDOTNA AP, AK (PASX). WIN	E	E	E	E	W	W	W	W	E	E	E	E	E
ST. GEORGE ISLAND, AK. (PAPB)	NNE	E	E	NNE	E	NE	W	S	W	NNW	NNW	E	NE
ST. MARY'S AP, AK (PASM). W	E	E	E	E	N	S	S	S	E	E	E	E	E
ST. PAUL ISLAND, AK. (PASN)	N	N	E	N	N	N	W	SSW	WSW	N	N	N	N
TALKEETNA AP, AK (PATK). WI	NNE	N	NNE	N	N	S	S	S	N	N	N	N	N
TANANA AP, AK (PATA). WIND	E	E	E	E	ESE	WSW	W	W	E	E	E	E	E
TIN CITY AP, AK (PATC). WIN	N	N	NNE	NNE	NNE	NNE	SSW	NNE	NNE	NNE	NNE	NNE	NNE
TOGIAK AP, AK (PATG). WIND	N	N	N	N	N	SSW	S	S	N	N	N	N	N
UNALAKLEET AP, AK (PAUN). W	E	E	E	E	E	NNW	W	E	E	E	E	E	E
UNALASKA AP, AK (PADU). WIN	SE	SE	SE	N	SE	E	E	E	SSW	NNW	NNW	SE	SE
UTOPIA CREEK, AK (PAIM)	ENE	ENE	ENE	E	E	NW	NW	W	ENE	ENE	ENE	ENE	ENE
VALDEZ AP, AK (PAVD). WIND	E	E	E	W	W	W	E	E	E	E	E	E	E
VALDEZ WSO, AK (PAVW). WIND	ENE	ENE	ENE	ENE	WSW	WSW	WSW	WSW	WSW	ENE	ENE	ENE	ENE
WAINWRIGHT AP, AK (PAWI). W	E	E	E	E	E	E	W	E	E	E	E	E	E
WASILLA AP, AK (PAWS). WIN	ENE	ENE	ENE	E	E	S	ENE	ENE	ENE	ENE	ENE	ENE	ENE
WHITTIER AP, AK (PAWR). WIN	ENE	S	S	S	S	S	S	S	ENE	SSW	S	SSW	S
WRANGELL AP, AK (PAWG). WIN	E	ESE	E	SE	SE	W	W	SE	ESE	ESE	E	E	E
YAKUTAT AP, AK (PAYA). WIND	E	E	E	E	SE	E	E	E	E	E	E	E	E

ARIZONA

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
CASA GRANDE AP, AZ (KCGZ).	N	W	W	W	W	W	W	E	E	ENE	N	N	W
DOUGLAS AIRPORT, AZ (KDUG).	E	N	N	W	WSW	W	S	E	E	E	E	N	N
FLAGSTAFF AP, AZ (KFLG). WI	SW	SW	SW	SW	SW	SSW	SW	SSW	SW	SW	ENE	ENE	SW
FORT HUACHUCA-SIERRA VISTA A	W	W	W	W	W	W	W	W	W	W	W	W	W
GILA BEND AP, AZ (KGBN). WI	N	W	W	W	W	W	W	W	W	W	N	N	W
GLENDALE-LUKE AFB, AZ (KLUF)	N	N	N	SW	SW	SW	SW	SW	N	N	N	N	N
GRAND CANYON AP, AZ (KGCN).	NE	NE	SSW	SSW	SSW	SSW	SSW	SSW	SSW	NE	NE	NE	SSW
KINGMAN AIRPORT, AZ (KIGM).	E	N	SW	SW	SW	SW	SW	SW	S	N	N	E	SW
NOGALES AIRPORT, AZ (KOLS).	SSE	S	E	E	E	E	SE	SE	ENE	S	E	SE	S
PAGE AIRPORT, AZ (KPGA). WI	W	W	W	W	W	W	W	S	N	W	W	W	W
PHOENIX SKY HARBOR AP, AZ (K	E	E	E	E	W	W	W	E	E	E	E	E	E
PHOENIX-DEER VALLEY AP, AZ (	E	E	SW	SW	SW	SW	SW	SW	E	E	NE	NE	SW
PRESCOTT AIRPORT, AZ (KPRC).	S	S	S	S	S	S	S	S	S	S	S	S	S
SAFFORD AIRPORT, AZ (KSAD).	E	E	WNW	WNW	WNW	WNW	W	E	E	E	E	E	E
SCOTTSDALE AP, AZ (KSDL). W	N	SW	SW	SW	WSW	WSW	SW	WSW	S	S	WSW	N	SW
ST. JOHNS AP, AZ (KSJN). WI	S	S	WSW	WSW	WSW	WSW	S	S	S	S	S	S	S

TUCSON INT'L AP, AZ (KTUS).	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE
TUCSON-DAVIS MONTHAN AP, AZ	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE
WINDOW ROCK AP, AZ (KRQE).	WSW	SW	SW	SW	SW	WSW	S	S	S	S	SW	SSW	SW
WINSLOW AIRPORT, AZ (KINW).	ESE	SW	SW	SW	SW	SW	SW	ESE	SW	ESE	SE	SE	SW
YUMA MCAS, AZ (KNYL). WIND	N	N	W	W	W	S	SSE	SSE	S	N	N	N	S

CALIFORNIA

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALAMEDA NAS, CA (KNGZ). WIN	NNW	W	W	W	W	W	W	W	W	W	W	SE	W
ALTURAS AP, CA (KAAT). WIND	S	S	W	W	W	W	W	W	W	W	S	S	W
ARCATA AP, CA (KACV). WIND	E	E	E	E	NW	NW	NW	NW	NW	E	E	E	E
AVALON-CATALINA AP, CA (KAVX	W	W	W	W	WSW	WSW	WSW	WSW	WSW	W	W	W	W
BAKERSFIELD AP, CA (KBFL).	E	E	N	NW	NW	NW	WNW	WNW	WNW	NW	E	E	NW
BEALE AFB, CA (KBAB). WIND	SSE	SSE	S	SSE	S	S	S	S	S	NNW	NNW	SSE	S
BISHOP AP, CA (KBIH). WIND	N	N	N	N	N	N	SSE	SSE	N	N	N	N	N
BLUE CANYON, CA (KBLU). WIN	ENE	S	ENE	ENE	SSW	SSW	SSW	SSW	ENE	ENE	ENE	ENE	ENE
BLYTHE AP, CA (KBLH). WIND	N	N	S	S	S	S	S	S	S	N	N	N	S
BURBANK AIRPORT, CA (KBUR).	ESE	S	S	S	S	S	S	S	S	S	S	S	S
CAMARILLO AP, CA (KCMA). WI	ENE	ENE	ENE	WSW	SW	SW	WSW	WSW	WSW	WSW	ENE	ENE	WSW
CAMP PENDLETON MCAS, CA (KNF	N	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	N	N	SSW
CAMPO AIRPORT, CA (KCZZ). W	NE	NE	SW	SW	SW	SW	NE	NE	NE	NE	NE	NE	NE
CARLSBAD AP, CA (KCRQ). WIN	W	W	W	W	WSW	WSW	WSW	WSW	W	W	W	E	W
CHINA LAKE-ARMITAGE FIELD, C	SW	SSW	SSW	SW	S	SSW	S	S	SSW	SSW	SW	SW	SSW
CHINO AP, CA (KCNO). WIND R	W	W	W	W	W	W	W	W	W	W	W	W	W
CONCORD-BUCHANON FIELD, CA (	S	S	S	W	S	S	S	SSW	W	S	S	S	S
CRESCENT CITY AP, CA (KCEC).	SSE	S	S	S	N	NNW	S	S	S	N	SSE	SSE	S
DAGGETT-BARSTOW AP, CA (KDAG	W	W	W	W	W	W	W	W	W	W	W	W	W
EDWARDS AFB, CA (KEDW). WIN	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	W	SW	SW
EL CENTRO NAF, CA (KNJK). W	W	W	W	W	W	W	W	SE	W	W	W	W	W
EL TORO MCAS, CA (KNZJ). WI	E	E	E	W	W	W	W	W	W	W	E	E	W
FRESNO AIR TERMINAL, CA (KFA	ESE	E	NW	NW	NW	NW	NW	NW	NW	NW	NW	E	NW
FULLERTON AP, CA (KFUL). WI	E	E	S	S	S	S	S	S	S	S	E	E	S
HANFORD MUNI AP, CA (KHJO).	E	ESE	NW	NW	NW	NW	NW	NW	NW	NW	NW	ESE	NW
HAWTHORNE AP, CA (KHHR). WI	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	WSW
HAYWARD AIRPORT, CA (KHWD).	W	W	W	W	W	W	W	W	W	W	W	ENE	W
IMPERIAL AIRPORT, CA (KIPL).	W	W	W	W	W	W	W	ESE	W	W	W	W	W
IMPERIAL BEACH NOLF, CA (KNR	E	WNW	W	W	W	W	W	W	WNW	W	WNW	E	W
LANCASTER AIRPORT, CA (KWJF)	W	W	W	W	W	SW	SW	SW	SW	W	W	W	W
LEMOORE NAS, CA (KNLC). WIN	SE	NNW	NNW	NNW	NNW	NNW	NNW	NW	NNW	N	NNW	NNW	NNW
LIVERMORE AP, CA (KLVK). WI	ENE	W	W	W	W	W	W	W	W	W	ENE	ENE	W
LOMPOC AP, CA (KLPC). WIND	E	E	W	W	W	W	W	W	W	W	E	E	W
LONG BEACH AP, CA (KLGB). W	WNW	W	S	W	S	S	S	WNW	WNW	WNW	WNW	WNW	WNW
LOS ANGELES INT'L AP, CA (KL	E	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	E	WSW
LOS ANGELES-DOWNTOWN, CA (KC	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	WSW
MADERA MUNI AP, CA (KMAE).	ESE	E	NW	NW	WNW	WNW	WNW	WNW	WNW	WNW	E	E	WNW
MARYSVILLE AIRPORT, CA (KMYV	SSE	SSE	SSE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE
MCCLELLAN AFB, CA (KMCC). W	SSE	SSE	SSE	SSE	SSE	S	SSE	SSE	SSE	SE	SSE	SSE	SSE
MERCED MUNI AP, CA (KMCE).	SE	SE	NNW	NNW	NW	NW	NW	NW	NW	NW	NW	ESE	NW
MIRAMAR NAS, CA (KNKX). WIN	E	E	E	WNW	W	WNW	WNW	NW	NW	E	E	E	E
MODESTO AIRPORT, CA (KMOD).	SE	SE	NW	NW	NW	NW	NNW	NNW	NW	NW	NW	SE	NW
MOFFETT FIELD NAS, CA (KNUQ)	SE	SE	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	SE	NNW
MONTEREY AIRPORT, CA (KMRY).	ESE	ESE	W	WNW	W	W	W	W	W	W	ESE	ESE	W
MOUNT SHASTA CITY, CA (KMHS)	SE	SE	SE	NW	N	N	N	NE	NE	N	NE	SE	N
NAPA COUNTY AP, CA (KAPC).	E	E	W	W	W	SSW	SSW	SSW	SSW	SSW	E	E	SSW
OAKLAND INT'L AP, CA (KOAK).	SE	W	W	W	W	W	W	W	W	W	W	SE	W
OCEANSIDE MUNI AP, CA (KOKB)	W	NE	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	NNE	WSW
ONTARIO INT'L AP, CA (KONT).	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W
OROVILLE MUNI AP, CA (KOVE).	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	E	E	SSE	SSE	SSE
OXNARD AIRPORT, CA (KOXR).	W	W	W	W	W	W	W	W	W	W	W	NE	W
PALM SPRINGS AP, CA (KPSP).	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
PALMDALE AP, CA (KPMD). WIN	W	W	SW	W	SW	SW	SW	SW	SW	SW	W	W	SW
PALO ALTO AP, CA (KPAO). WI	N	N	N	NNW	N	N	N	N	N	NNW	N	N	N
PASO ROBLES AP, CA (KPRB).	E	E	NW	NW	NW	NW	SSW	WNW	NW	NW	E	E	NW
POINT MUGU NAS, CA (KNTD).	NE	W	W	W	W	W	W	W	W	W	NE	NE	W
POINT PIEDRAS BLANCAS, CA (K	N	N	NNW	NNW	N	N	N	NW	NNW	N	N	N	N
PORTERVILLE MUNI AP, CA (KPT	E	E	ESE	NW	NW	NW	NW	S	S	E	E	E	NW

RAMONA AIRPORT, CA (KRNM).	W	W	W	W	W	W	W	W	W	W	WNW	E	W
RED BLUFF AP, CA (KRBL). WI	NNW	SSE	N	NNW	SSE	N	S	S	NNW	NNW	NNW	NNW	NNW
REDDING AIRPORT, CA (KRDD).	N	N	N	N	N	N	S	S	N	N	N	N	N
RIVERSIDE MUNI AP, CA (KRAL)	WNW	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	N	WNW
RIVERSIDE-MARCH AFB, CA (KRI	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	WNW
SACRAMENTO EXECUTIVE AP, CA	SE	SSE	S	SSW	S	S	S	S	S	S	SSE	SSE	S
SACRAMENTO INT'L AP, CA (KSM	SSE	SSE	S	S	S	S	S	S	S	S	NW	SSE	S
SACRAMENTO-MATHER AP, CA (KM	SE	SE	SE	S	S	S	S	S	S	SE	SE	SE	S
SALINAS MUNI AP, CA (KSNS).	SE	SE	W	W	W	W	WNW	WNW	WNW	WNW	SE	SE	W
SAN CARLOS AP, CA (KSQL). W	N	W	W	W	W	W	W	W	N	N	N	N	W
SAN DIEGO-BROWN FIELD, CA (K	W	W	W	W	W	W	W	W	W	W	W	SE	W
SAN DIEGO-GILLESPIE FIELD, C	W	W	W	W	W	W	W	W	W	W	W	W	W
SAN DIEGO-LINDBERGH FIELD, C	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW
SAN DIEGO-MONTGOMERY FIELD,	W	W	W	W	WSW	WSW	WSW	WSW	WNW	W	W	W	W
SAN DIEGO-NORTH ISLAND NAS,	NW	W	W	W	W	W	W	NW	NW	NW	NW	NW	W
SAN FRANCISCO INT'L AP, CA (	W	W	W	W	W	W	W	W	W	W	W	W	W
SAN JOSE INT'L AP, CA (KSJC)	SSE	SSE	NNW	NNW	NNW	NNW	NW	NNW	NW	NW	NW	SE	NNW
SAN JOSE-REID HILLVIEW AP, C	SE	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
SAN LUIS OBISPO AP, CA (KSBP	NW	NW	NW	NW	WNW	WNW	WNW	WNW	WNW	WNW	NW	NW	WNW
SAN NICHOLAS ISLAND NOLF, CA	WNW	WNW	WNW	WNW	WNW	NW	WNW	NW	WNW	WNW	NW	NW	WNW
SANDBURG, CA (KSDB). WIND R	NE	S	NW	NW	NW	NW	NW	NW	NW	NW	NE	NE	NW
SANTA ANA-JOHN WAYNE AP, CA	S	S	S	S	S	SSW	SSW	SSW	SW	SW	SW	S	SSW
SANTA BARBARA AP, CA (KSBA).	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW
SANTA MARIA AP, CA (KSMX).	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW
SANTA MONICA AIRPORT, CA (KS	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	N	SW
SANTA ROSA AIRPORT, CA (KSTS	S	SE	S	S	S	S	S	S	S	S	S	SE	S
SISKIYOU COUNTY AP-MONTAGUE,	S	S	N	N	N	N	N	N	N	N	S	S	N
SOUTH LAKE TAHOE AP, CA (KTV	S	S	S	S	S	SSW	S	S	S	S	S	S	S
STOCKTON AIRPORT, CA (KSCK).	SE	SE	W	W	W	W	W	W	W	W	W	SE	W
THERMAL AIRPORT, CA (KTRM).	N	N	NNW	NNW	NW	NW	NW	NW	NNW	NNW	NW	NW	NW
TORRANCE AIRPORT, CA (KTOA).	W	W	W	W	W	W	WNW	WNW	W	W	W	W	W
TRAVIS AFB-FAIRFIELD, CA (KS	N	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	N	N	WSW
TRUCKEE AIRPORT, CA (KTRK).	S	S	S	SSW	SW	SSW	SW	SSW	SSW	N	S	S	S
TUSTIN MCAS, CA (KNTK). WIN	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW
TWENTYNINE PALMS EAF, CA (KN	W	W	WNW	WNW	WNW	NW	W	W	W	W	WNW	NW	WNW
UKIAH AIRPORT, CA (KUKI). W	S	SSE	WNW	WNW	N	N	N	N	N	W	SSE	SSE	N
VACAVILLE AIRPORT, CA (KVCB)	NNW	S	SSW	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW	NNW	SSW
VAN NUYS AP, CA (KVNY). WIN	N	N	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	N	N	ESE
VISALIA AIRPORT, CA (KVIS).	SE	SE	NW	NW	NW	NW	NW	WNW	NW	NW	ESE	ESE	NW
WATSONVILLE MUNI AP, CA (KWV	N	NNW	W	W	W	SW	W	SW	WSW	W	NNW	NNW	W

COLORADO

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
AKRON AP, CO (KAKO). WIND R	W	W	N	N	N	S	S	S	S	S	W	W	W
ALAMOSA AP, CO (KALS). WIND	S	S	S	S	S	S	S	S	S	S	S	S	S
ASPEN-PITKIN COUNTY AP, CO (	S	S	S	S	S	SSW	SSW	SSW	S	SSW	S	S	S
BOULDER-JEFFERSON CTY AP, CO	W	W	W	N	N	N	N	NNW	N	N	W	W	W
BUCKLEY AFB, CO (KBFK). WIN	S	S	S	S	S	S	S	S	S	S	S	S	S
BURLINGTON AP, CO (KITR). W	W	S	N	N	S	S	S	S	S	S	W	N	S
COLORADO SPRINGS AP, CO (KCO	N	N	N	N	N	N	N	N	N	N	N	N	N
CORTEZ AP, CO (KCEZ). WIND	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
CRAIG AP, CO (KCAG). WIND R	W	W	W	W	W	W	E	E	W	W	W	W	W
DENVER AIRPORT, CO (KDEN).	S	S	S	N	S	S	S	S	S	S	S	S	S
DENVER-CENTENNIAL AP, CO (KA	S	S	S	N	S	S	S	S	S	S	S	S	S
DURANGO AIRPORT, CO (KDRO).	N	N	N	WSW	W	N	N	N	N	N	N	N	N
EAGLE AIRPORT, CO (KEGE). W	E	E	E	W	W	WSW	E	E	E	E	E	E	E
FORT CARSON-BUTTS AFB, CO (K	N	N	N	N	N	N	N	N	N	N	N	N	N
FORT COLLINS-LOVELAND AP, CO	N	N	N	N	N	N	N	N	N	N	N	N	N
GRAND JUNCTION AP, CO (KGJT)	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	ESE
GREELEY AIRPORT, CO (KGXY).	N	N	N	N	E	E	E	E	E	N	N	N	N
GUNNISON AIRPORT, CO (KGUC).	N	N	N	W	N	N	N	N	N	N	N	N	N
HAYDEN AIRPORT, CO (KHDN).	ESE	ESE	ESE	W	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ESE
LA JUNTA AIRPORT, CO (KLHX).	W	W	W	W	E	E	E	E	W	W	W	W	W
LAMAR AIRPORT, CO (KLAA). W	W	W	E	N	S	S	S	S	S	E	W	W	W
LA VETA PASS, CO (KVTP). WI	WSW	WSW	WSW	WSW	SW	SW	N	S	WSW	SW	WSW	WSW	WSW
LEADVILLE AIRPORT, CO (KLXV)	N	N	N	N	N	W	N	N	N	N	N	N	N

LIMON MUNI AP, CO (KLIC). W	N	N	N	N	N	S	S	S	N	N	N	N	N
MEEKER AIRPORT, CO (KEEO).	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	NE	NE	NE	NE
MONTROSE AP, CO (KMTJ). WIN	SE	SSE	SE	SE	SE	SE	SE	SE	SE	SE	SSE	SSE	SE
MONARCH PASS, CO (KMYP). WI	WSW	WSW	WSW	WSW	WSW	WSW	NE	WSW	WSW	WSW	WSW	WSW	WSW
MONUMENT PASS, CO (KMNH). WI	SSW	S	S	S	S	S	S	S	S	S	S	SW	S
PUEBLO AIRPORT, CO (KPUB).	W	W	E	E	E	E	E	E	E	E	W	W	E
RED CLIFF PASS, CO (KCCU).	W	WNW	W	W	WSW	S	S	W	W	W	W	W	W
RIFLE AIRPORT, CO (KRIL). W	S	S	W	W	W	W	W	W	W	W	S	S	W
SPRINGFIELD AP, CO (KSPD).	W	S	S	S	S	S	S	S	S	S	S	W	S
TRINIDAD AP, CO (KTAD). WIN	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	WSW
WOLF CREEK PASS, CO (KCPW).	W	W	SSW	SSW	SSW	SSW	NE	SW	SW	SSW	SSW	SW	SSW

HAWAII

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BRADSHAW AAF, HI (PHSF). WI	W	W	W	W	W	W	W	W	W	W	W	SE	W
HILO INT'L AP, HI (PHTO). W	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
HONOLULU INT'L AP, HI (PHNL)	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
KAHULUI AP, HI (PHOG). WIND	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
KAILUA-KONA INT'L AP, HI (PH	E	E	W	W	W	SSW	SSW	WSW	WSW	SW	S	ESE	WSW
KANEOHE MCAS, HI (PHNG). WI	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	ENE
KAPOLEI-KALEALOA AP, HI (PHJ	NE	NE	NE	ENE	NE	ENE	ENE	ENE	NE	ENE	NE	ENE	ENE
LAHAINA-KAPALUA AP, HI (PHJH	NE	NE	NE	ENE	ENE	ENE	NE	ENE	ENE	ENE	NE	NE	NE
LANAI CITY AP, HI (PHNY). W	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
LIHUE AP, HI (PHLI). WIND R	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	ENE	ENE
MOLOKAI AP-KAUNAKAKAI, HI (P	ENE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
WAHIAWA-WHEELER AAF, HI (PHH	E	E	E	E	E	E	ENE	E	ENE	E	ENE	E	E

IDAHO

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BOISE AP, ID (KBOI). WIND R	SE	SE	SE	NW	NW	NW	NW	NW	SE	SE	SE	ESE	SE
BURLEY AP, ID (KBYI). WIND	W	W	W	W	W	W	W	W	W	W	W	W	W
CALDWELL AIRPORT, ID (KEUL).	SSE	SSE	SSE	WNW	WNW	WNW	WNW	WNW	WNW	WNW	SSE	SE	WNW
CHALLIS AIRPORT, ID (KLLJ).	S	S	N	N	W	W	W	W	W	N	S	S	WNW
CHALLIS AP, ID (KU15). WIND	S	S	N	N	N	N	N	W	N	N	N	S	N
COEUR D'ALENE AP, ID (KCOE).	NNE	NNE	S	S	S	S	S	S	S	S	NNE	NNE	NNE
ELK CITY, ID (KP69). WIND R	N	NNE	NNE	NNE	NNE	NNE	NNE	N	N	NNE	NNE	N	NNE
HAILEY-SUN VALLEY AP, ID (KS	NNW	NNW	N	N	S	S	S	S	S	N	N	N	N
IDAHO FALLS AP, ID (KIDA).	N	N	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	N	N	SSW
JEROME AIRPORT, ID (KJER).	NE	NE	W	W	W	W	W	W	E	W	ENE	NE	W
LEWISTON AIRPORT, ID (KLWS).	S	E	E	E	WNW	E	E	WNW	E	E	E	S	E
MCCALL AIRPORT, ID (KMYL).	S	S	S	N	N	NW	S	SSW	S	S	S	S	S
MOUNTAIN HOME AFB, ID (KMUO)	ESE	ESE	ESE	NW	NW	NW	NW	NW	NW	NW	ESE	ESE	ESE
MULLAN PASS VOR, ID (KMLP).	S	S	S	SW	NW	NW	NW	NW	SW	S	S	S	S
POCATELLO AP, ID (KPIH). WI	SW	S	SW	SW	WSW	WSW	W	W	W	SW	SW	SW	SW
REXBURG AP, ID (KRXE). WIND	SSW	S	S	S	S	S	S	S	S	S	S	S	S
SALMON AIRPORT, ID (KSMN).	N	N	N	N	N	N	N	N	N	N	N	N	N
STANLEY RNGR STN, ID (KSNT).	SSE	SSE	SSE	N	S	S	S	S	S	S	S	SSE	S
TWIN FALLS AP, ID (KTWF). W	SSW	W	W	W	W	W	SSW	SSW	SSW	SSW	SSW	S	SSW

MONTANA

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BAKER MUNI AP, MT (KBHK). W	W	W	SE	SE	W	W	SE	SE	ESE	W	W	W	W
BILLINGS AP, MT (KBIL). WIN	SW	SW	SW	SW	N	N	N	SW	SW	SW	SW	SW	SW
BOZEMAN-BELGRADE AP, MT (KBZ	S	SSE	SSE	W	SE	W	SSE	SSE	SE	SE	SSE	SSE	SSE
BUTTE AP, MT (KBTM). WIND R	S	S	S	N	N	N	N	S	S	S	S	S	S
CUT BANK AP, MT (KCTB). WIN	WSW	WSW	WSW	W	W	W	W	W	W	WSW	WSW	WSW	WSW

DILLON AP, MT (KDLN). WIND	S	S	S	S	S	S	S	S	S	S	S	S	S
GLASGOW AIRPORT, MT (KGGW).	ESE	ESE	E	E	E	E	E	E	E	ESE	E	ESE	E
GLENDIVE AIRPORT, MT (KGDV).	S	S	S	NW	NW	W	NW	S	NW	S	S	S	S
GREAT FALLS AP, MT (KGTF).	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
GREAT FALLS-MALSTROM AFB, MT	SW	SW	SW	SW	SW	W	W	W	SW	SW	SW	SW	SW
HAVRE AIRPORT, MT (KHVR). W	SW	SW	SW	E	E	E	E	E	SW	SW	SW	SW	SW
HELENA AIRPORT, MT (KHLN).	W	W	W	W	W	W	W	W	W	W	W	W	W
JORDAN AIRPORT, MT (KJDN).	W	W	W	W	W	W	W	W	W	W	W	W	W
KALISPELL AP, MT (KFCA). WI	S	S	SSE	SSE	SSE	SSE	SSE	S	S	S	S	S	S
LEWISTOWN AIRPORT, MT (KLWT)	SW	W	W	WNW	E	ESE	ESE	ESE	ESE	W	SW	SW	W
LIVINGSTON AP, MT (KLVM). W	WSW	WSW	W	W	W	W	W	W	W	W	WSW	WSW	W
MILES CITY AP, MT (KMLS). W	S	S	NW	NW	NW	NW	NW	SSE	NW	S	S	S	NW
MISSOULA AIRPORT, MT (KMSO).	ESE	ESE	N	NW	N	NW	N	N	N	W	ESE	ESE	NW
SIDNEY MUNI AP, MT (KSDY).	SSW	S	S	N	S	S	S	S	S	S	SSW	SSW	S
WOLF POINT AP, MT (KOLF). W	W	W	ENE	E	W	W	E	E	E	W	W	W	W

NEVADA

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
CALIENTE AP, NV (KP38). WIN	NNE	S	S	S	S	S	S	S	S	S	NNE	NNE	S
DESERT ROCK-MERCURY, NV (KDR	NNE	NNE	NNE	NNE	SW	SW	SW	SSW	SSW	NNE	NNE	NNE	SSW
ELKO AIRPORT, NV (KEKO). WI	E	E	W	W	W	W	W	W	W	W	E	E	W
ELY AIRPORT, NV (KELY). WIN	S	S	S	S	S	S	S	S	S	S	S	S	S
EUREKA AIRPORT, NV (KP68).	SSE	SSE	S	S	S	S	S	S	S	S	S	S	S
FALLON NAS, NV (KNFL). WIND	S	S	S	N	W	N	W	WNW	N	N	S	S	S
LAS VEGAS AIRPORT, NV (KLAS)	W	W	W	SW	SW	S	S	S	S	W	W	W	S
LAS VEGAS-NELLIS AFB, NV (KL	NE	NE	S	S	S	S	S	S	S	NNE	NNE	NE	S
LOVELOCK AIRPORT, NV (KLOL).	NNE	NNE	NNE	N	W	W	S	S	NE	NNE	E	NE	NNE
NORTH LAS VEGAS AP, NV (KVGT	NW	NW	NNW	SSW	S	S	S	S	NW	NW	NNW	NW	NW
RENO-TAHOE AP, NV (KRNO). W	S	S	W	W	W	W	W	W	W	S	S	S	W
TONOPAH AIRPORT, NV (KTPH).	N	N	N	N	N	N	S	N	N	N	N	N	N
WINNEMUCCA AP, NV (KWMC). W	S	S	S	W	W	W	W	W	W	S	S	S	S

NEW MEXICO

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ALAMOGORDO-HOLLOMAN AFB, NM	S	S	S	S	S	S	S	S	S	S	SSE	N	S
ALBUQUERQUE-DOUBLE EAGLE II	NNW	NW	W	W	W	S	S	S	NNW	S	NNW	NNW	W
ALBUQUERQUE INT'L AP, NM (KA	N	N	N	W	W	E	E	E	E	N	N	N	N
ARTESIA AP, NM (KATS). WIND	WSW	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	N	SSE
CARLSBAD AP, NM (KCNM). WIN	W	W	W	W	W	SSE	S	SSE	S	S	W	W	S
CLAYTON MUNI AP, NM (KCAO).	W	N	N	N	S	S	S	S	S	S	W	WSW	S
CLINES CORNERS, NM (KCQC).	WNW	WNW	W	W	W	W	W	W	W	W	WNW	WNW	W
CLOVIS MUNI AP, NM (KCVN).	W	W	W	W	S	S	S	S	S	S	W	W	S
CLOVIS-CANNON AFB, NM (KCVS)	W	W	W	W	S	S	S	S	S	W	W	W	W
DEMING AP, NM (KDMN). WIND	W	W	W	W	W	W	E	E	E	W	W	W	W
FARMINGTON AP, NM (KFMN). W	E	E	W	W	W	E	E	E	E	E	E	E	E
GALLUP AIRPORT, NM (KGUP).	WSW	WSW	WSW	WSW	WSW	WSW	WSW	S	WSW	WSW	WSW	SW	WSW
GRANTS AIRPORT, NM (KGNT).	NW	NW	NW	W	W	W	SE	SE	NW	NW	NW	NW	NW
HOBBS AIRPORT, NM (KHOB). W	WSW	S	S	S	S	S	S	S	S	S	S	S	S
LAS CRUCES AP, NM (KLRU). W	W	W	W	W	W	W	SE	W	SE	W	W	W	W
LAS VEGAS AP, NM (KLVS). WI	S	S	S	S	S	S	S	SSW	S	S	S	S	S
LOS ALAMOS AP, NM (KLAM). W	S	S	S	S	S	S	S	S	S	S	S	S	S
RATON MUNI AP, NM (KRTN). W	ENE	NE	N	W	S	S	N	N	N	S	ENE	NE	N
ROSWELL AIRPORT, NM (KROW).	N	SSE	SSE	S	S	SSE	SSE	SSE	SSE	SSE	N	N	SSE
RUIDOSO AIRPORT, NM (KSRR).	W	W	W	SSW	SSW	SSW	ESE	ESE	ESE	W	W	W	W
SANTA FE AIRPORT, NM (KSAF).	N	N	N	N	WSW	N	N	N	N	N	N	N	N
SILVER CITY AP, NM (KSVC).	W	W	W	W	W	W	WNW	NNW	W	NNW	NNW	NNW	W
TAOS MUNI AIRPORT, NM (KSKX)	N	N	N	W	W	W	N	N	N	N	N	N	N
TRUTH OR CONSEQUENCES AP, NM	NW	S	S	S	S	S	S	WNW	S	S	NW	N	S

OREGON

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ASTORIA AIRPORT, OR (KAST).	E	E	E	S	W	W	NW	NW	NW	E	E	E	E
AURORA AIRPORT, OR (KUAO).	S	S	S	S	S	S	N	N	N	S	S	S	S
BAKER CITY AP, OR (KBKE). W	ESE	ESE	ESE	N	N	NNW	NNW	NNW	NNW	N	ESE	ESE	NNW
BURNS MUNI AP, OR (KBNO). W	E	E	WNW	NW	NW	WNW	WNW	WNW	WNW	WNW	E	E	WNW
CORVALLIS AP, OR (KCVO). WI	S	S	S	S	WNW	NW	NW	NW	WNW	S	S	S	S
EUGENE AIRPORT, OR (KEUG).	S	S	S	S	N	N	N	N	N	S	S	S	N
HERMISTON MUNI AP, OR (KHRI)	WSW	S	WSW	WSW	WSW	WSW	WSW	WSW	SW	WSW	S	WSW	WSW
KLAMATH FALLS AP, OR (KLMT).	SSE	SSE	W	W	W	W	W	W	NNW	W	SSE	SSE	W
LA GRANDE AP, OR (KLGD). WI	S	S	S	NW	NW	NW	NW	NW	NW	S	S	S	S
LAKEVIEW AIRPORT, OR (KLKV).	S	S	S	N	N	N	N	N	N	N	S	S	N
MCMINNVILLE MUNI AP, OR (KMM	N	N	S	SW	SW	SW	SW	SW	N	N	N	N	N
MEACHAM AIRPORT, OR (KMEH).	SSE	S	W	W	W	W	W	N	W	W	S	S	W
MEDFORD AIRPORT, OR (KMFR).	N	N	N	N	WNW	WNW	WNW	WNW	WNW	N	N	N	N
NEWPORT MUNI AP, OR (KONP).	E	E	S	S	NNW	NNW	NNW	NNW	N	S	S	E	S
NORTH BEND MUNI AP, OR (KOTH	SSE	SSE	SSE	SSE	N	N	N	N	N	N	SSE	SSE	N
ONTARIO MUNI AP, OR (KONO).	W	W	W	W	W	NW	W	W	W	W	W	W	W
PENDLETON AP, OR (KPDT). WI	S	S	W	W	W	W	W	W	SE	SE	S	S	W
PORTLAND INT'L AP, OR (KPDX)	ESE	ESE	ESE	S	NNW	NNW	NNW	NNW	NW	NW	ESE	ESE	ESE
PORTLAND-HILLSBORO AP, OR (K	S	S	S	S	NW	NW	NW	NW	NW	S	S	S	S
PORTLAND-TROUTDALE AP, OR (K	E	E	E	E	W	W	W	W	W	E	E	E	E
REDMOND AIRPORT, OR (KRDM).	S	S	S	WNW	NW	NW	NNW	NNW	S	S	S	S	S
ROME, OR (KREO). WIND ROSE.	S	S	SSE	S	N	WSW	N	S	SSE	SSE	S	S	S
ROSEBURG AIRPORT, OR (KRBG).	S	S	N	N	N	N	N	N	N	N	S	SSE	N
SALEM AIRPORT, OR (KSLE). W	S	S	S	S	S	N	N	N	N	S	S	S	S
SEXTON SUMMIT, OR (KSXT). W	S	S	S	S	NNW	NNW	NNW	NNW	NNW	S	S	S	S
THE DALLES AP, OR (KDLS). W	E	NW	NW	WNW	NW	NW	NW	NW	NW	WNW	E	E	NW

UTAH

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BRYCE CANYON AP, UT (KBCE).	W	W	W	W	W	W	W	W	W	W	W	W	W
CANYONLANDS AP-MOAB, UT (KCN	NW	W	W	W	W	SW	SE	E	W	W	W	NW	W
CEDAR CITY AP, UT (KCDC).	SSW	SW	SSW	SSW	SSW	SSW	SW	SSW	SSW	SW	N	SSW	SSW
LOGAN AIRPORT, UT (KLGU). W	N	N	N	N	N	N	N	S	N	N	N	N	N
MILFORD AIRPORT, UT (KMLF).	S	SSW	S	SSW	S	SSW	SSW	S	S	S	S	S	S
OGDEN AIRPORT, UT (KOGD). W	SSE	S	SSE	S	S	S	S	S	S	S	S	S	S
OGDEN-HILL AFB, UT (KHIF).	E	E	E	E	E	E	E	E	E	E	E	E	E
PRICE-CARBON COUNTY AP, UT (	N	N	N	N	N	N	N	N	N	N	N	N	N
PROVO MUNI AP, YT (KPVU). W	NW	NW	NW	NW	NW	NW	SE	SE	SE	SE	SSE	SSE	NW
SALT LAKE CITY AP, UT (KSLC)	S	S	SSE	SSE	SSE	S	SSE	SSE	SSE	SE	SE	S	SSE
ST. GEORGE MUNI AP, UT (KSGU	E	ENE	ENE	W	W	W	W	ENE	ENE	ENE	E	E	ENE
VERNAL AIRPORT, UT (KVEL).	W	W	WNW	W	W	W	W	W	W	W	WNW	W	W
WENDOVER AP, UT (KENV). WIN	NW	NW	E	NW	E	E	E	E	E	E	E	E	E

WASHINGTON

PREVAILING WIND DIRECTION

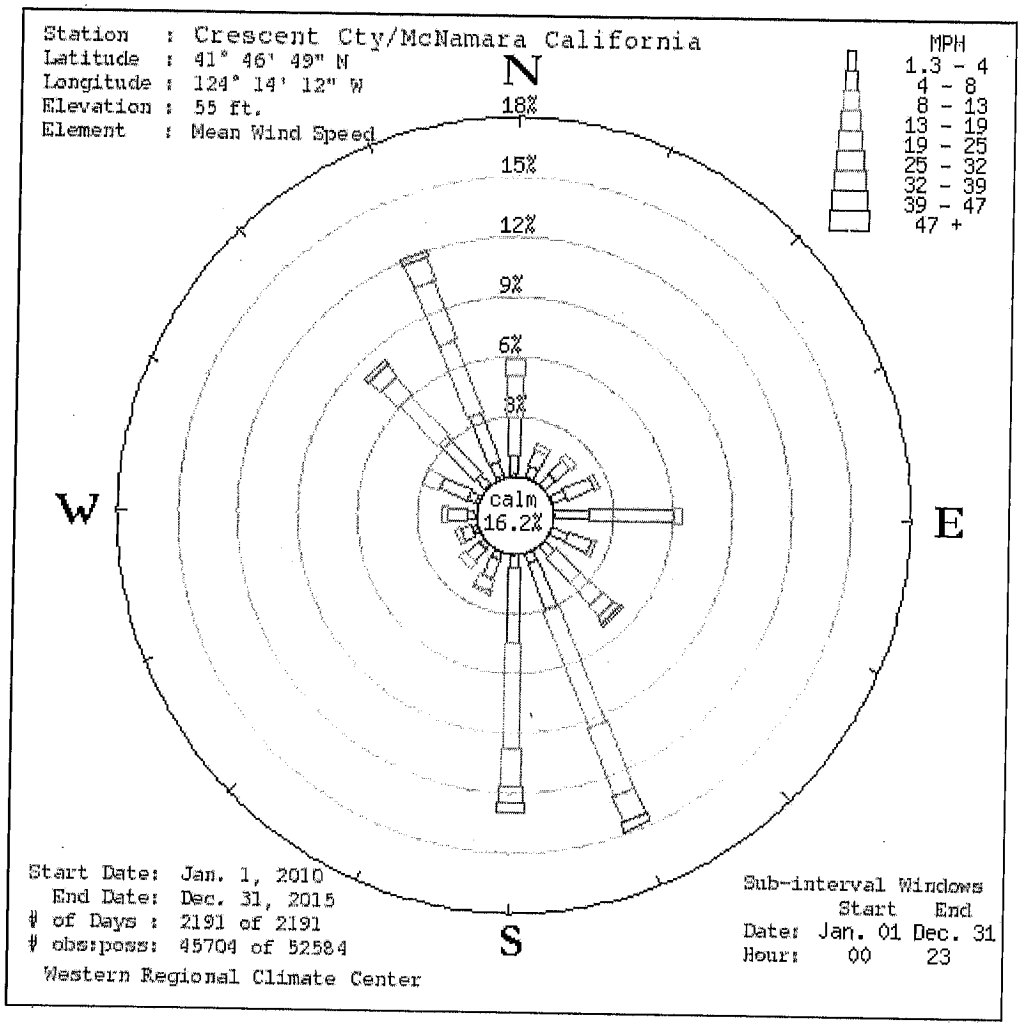
STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
ARLINGTON AP, WA (KAWO). WI	SSE	SSE	S	S	NW	NW	NW	NW	NW	SSE	SSE	SSE	SSE
BELLINGHAM AP, WA (KBLI). W	S	S	S	S	S	S	S	S	S	S	S	NNE	S
BREMERTON MUNI AP, WA (KPWT)	SSW	SSW	SSW	SSW	SSW	SSW	SSW	NE	NE	SSW	SSW	SSW	SSW
DEER PARK AP, WA (KDEW). WI	N	NNE	S	S	S	S	S	S	SSE	N	N	N	S
ELLENSBURG AP, WA (KELN). W	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	E	E	NW
EPHRATA AIRPORT, WA (KEPH).	N	N	N	N	S	S	S	S	N	N	N	N	N
EVERETT-PAINE FIELD, WA (KPA	S	S	S	S	N	N	N	N	N	S	S	S	N
FORT LEWIS AAF, WA (KGRF).	S	S	S	S	S	S	S	S	S	S	S	S	S
FRIDAY HARBOR AP, WA (KFHR).	SE	SE	SE	WSW	SW	SW	SW	SE	SE	SE	SE	SE	SE
HANFORD, WA (KHMS). WIND RO	NW	NW	NW	W	NW	NW	NW	NW	W	W	NW	NW	NW
HOQUIAM AIRPORT, WA (KHQM).	E	E	E	W	W	W	W	W	W	E	E	E	E

KELSO-LONGVIEW AP, WA (KKLS)	SSE	S	S	S	N	WNW	N	N	N	SSE	SSE	SSE	SSE
MOSES LAKE AP, WA (KMWH). W	N	N	N	N	S	SSW	S	N	N	N	N	N	N
OLYMPIA AP, WA (KOLM). WIND	S	S	S	S	S	S	SSW	S	S	S	S	S	S
OMAK AIRPORT, WA (KOMK). WI	S	S	N	N	N	N	N	N	N	N	S	S	N
PASCO-TRI CITIES AP, WA (KPS	NW	NW	SW	SW	SW	SW	SW	SSW	NNW	SW	SW	NW	SW
PORT ANGELES AP, WA (KCLM).	WSW	SW	W	W	W	W	W	W	W	W	SW	SW	W
PULLMAN-MOSCOW AP, WA (KPUW)	E	E	E	SW	WSW	WSW	WSW	WSW	WSW	E	E	E	E
QUILLAYUTE AP, WA (KUIL). W	ENE	ENE	S	S	W	W	W	S	S	ENE	ENE	ENE	S
RENTON MUNI AP, WA (KRNT).	S	S	S	S	S	S	NNW	S	NNW	S	S	S	S
SCAPPOOSE AIRPORT, WA (KSPB)	S	S	S	N	N	N	N	N	N	W	SSE	S	N
SEATTLE-BOEING FIELD, WA (KB	S	S	S	S	S	S	NW	NW	NW	SSE	SSE	SSE	S
SEATTLE-TACOMA AP, WA (KSEA)	S	S	S	S	SSW	SSW	SW	N	N	S	S	S	S
SHELTON AIRPORT, WA (KSHN).	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	WSW
SKYKOMISH AP, WA (S88). WIN	SSE	SSE	NW	S	NW	NW	NW	NW	NW	S	SSE	S	NW
SPOKANE-FAIRCHILD AFB, WA (K	SSW	NE	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW
SPOKANE-FELTS FIELD, WA (KSF	SW	SSW	SW	SSW	SSW	SSW	NNE	NNE	NNE	NNE	SSW	SW	SW
SPOKANE-GEIGER FIELD, WA (KG	NE	NE	S	S	SSW	S	S	SW	S	S	NE	NE	S
STAMPEDE PASS, WA (KSMP). W	E	E	E	WSW	WSW	WSW	WSW	WSW	SW	WSW	E	E	WSW
TACOMA NARROWS AP, WA (KTIW)	S	S	S	S	S	S	N	S	N	S	S	S	S
TACOMA-MCCHORD AFB, WA (KTCM	S	S	S	S	S	S	S	S	S	S	S	S	S
TOLEDO AIRPORT, WA (KTDO).	S	S	S	S	NW	NW	NW	NW	NW	S	S	S	S
VANCOUVER AIRPORT, WA (KVUO)	ESE	ESE	ESE	NW	NW	NW	NW	NW	NW	ESE	ESE	ESE	ESE
WALLA WALLA AP, WA (KALW).	S	S	S	S	S	S	S	S	S	S	S	S	S
WENATCHEE AP, WA (KEAT). WI	W	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW
WHIDBEY ISLAND NAS-OAK HARBO	SE	ESE	SE	W	W	W	WSW	W	W	ESE	SE	E	W
YAKIMA AIRPORT, WA (KYKM).	W	W	W	W	W	W	W	W	W	W	W	W	W

WYOMING

PREVAILING WIND DIRECTION

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BIG PINEY AP, WY (KBPI). WI	ENE	ENE	NW	NW	NW	NW	W	W	NW	NW	NW	NW	NW
BUFFALO AP, WY (KBYG). WIND	NNW	NNW	NNW	NNW	N	NNW	N	NNW	NNW	NNW	WSW	NNW	NNW
CASPER AIRPORT, WY (KCPR).	SW	SW	SW	WSW	WSW	WSW	WSW	SW	WSW	SW	SW	SW	SW
CHEYENNE AP, WY (KCYS). WIN	W	W	W	W	W	W	W	W	W	W	W	W	W
CODY AP, WY (KCOD). WIND RO	W	WSW	N	N	N	N	N	N	N	N	W	WSW	N
DOUGLAS AP, WY (KDGW). WIND	NW	W	W	SE	SE	W	SE	SE	ESE	SE	W	W	W
EVANSTON AP, WY (KEVW). WIN	SW	SW	WSW	WSW	WSW	WSW	SW	SW	SW	WSW	SW	SW	SW
GILLETTE AP, WY (KGCC). WIN	SW	SW	S	S	S	S	S	S	S	S	SW	SW	S
GREYBULL AP, WY (KGEY). WIN	NW	NW	NW	NW	NW	NNW	WNW	ESE	NNW	ESE	ESE	ESE	NW
JACKSON HOLE AP, WY (KJAC).	NNE	NNE	NNE	NNE	N	SW	N	NNE	NNE	NNE	SSW	NNE	NNE
LANDER AIRPORT, WY (KLND).	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW
LARAMIE AIRPORT, WY (KLAR).	SW	SW	SW	W	SSE	SE	SE	SSE	S	SW	SW	SW	SW
RAWLINS MUNI AP, WY (KRWL).	SW	SW	SW	WSW	WSW	WSW	SW	SW	SW	WSW	SW	SW	SW
RIVERTON AIRPORT, WY (KRIW).	W	W	W	W	W	W	NW	NW	NW	NW	W	W	W
ROCK SPRINGS AP, WY (KRKS).	W	W	W	W	W	W	W	W	W	W	W	W	W
SHERIDAN AIRPORT, WY (KSHR).	NW	NW	NW	NW	NW	NW	WNW	WNW	NW	NW	NW	WNW	NW
TORRINGTON MUNI AP, WY (KTOR	W	W	W	NNW	ESE	E	SE	SE	ESE	WNW	W	WNW	W
WORLAND MUNI AP, WY (KWRL).	S	S	N	N	N	N	N	N	N	S	S	S	N
YELLOWSTONE LAKE, WY (KP60).	SW	SW	SW	SW	SW	SW	SW	W	W	W	W	SW	SW



UNIT, ftp/NEW

From: Schwab, Dominik@CALFIRE
Sent: Wednesday, January 20, 2016 11:05 AM
To: Santa Rosa Review Team@CALFIRE
Subject: FW: 1-15-014 DEL: Great Blue Heron Protection Measures

From: Sniado, Susan@Wildlife
Sent: Tuesday, January 19, 2016 4:14 PM
To: Schwab, Dominik@CALFIRE
Cc: Hendrix, Jon@Wildlife; Larson, Monty@Wildlife
Subject: RE: 1-15-014 DEL: Great Blue Heron Protection Measures

Dominik

First, I would like to point out that the historic and active Great Blue Heron (GBHE) rookery (collection of nests) was not disclosed in the THP by the RPF at the time of submittal. Title 14, California Code of Regulations Section (14 CCR) 919.2 General protection of Nest sites (a) states:

"A preharvest inspection will normally be required when it is known or suspected that the ***minimum buffer zone*** *surrounding an active nest of a Sensitive Species is in or extends onto an area proposed for timber operations..."*

The RPF did not disclose the GBHE rookery within the THP. THP Section III under GBHE states: *No Sightings have occurred in the BAA.* CDFW attended the PHI and birds were easily seen and heard in nests within the THP. During the PHI, the landowner related that he was aware of the location of the birds and the nest sites prior to plan submittal and shared pictures. It is concerning to CDFW that the RPF did not disclose the nest sites in the THP and that CDFW discovered the nests only during the PHI.
The nest site was observed to be an active rookery with multiple nests including juveniles of the year not yet fully fledged.

Nest site protection measures

14 CCR 919.3 (a) states:

"Buffer zones shall be established around all nest trees containing active nests. ***The buffer zones shall be designed to best protect the nest site and nesting birds from the effects of timber operations.*** *In consultation with the Department of Fish and Game, and as approved by the Director, an RPF or supervised designee shall flag the location of the boundaries and the configuration of the buffer zone. Consultation with the Department of Fish and Game shall be required pursuant to 14 CCR 898.* ***Consideration shall be given to the specific habitat requirements of the bird species involved when configuration and boundaries of the buffer zone are established. [bolded highlights added]***

Pursuant to 14 CCR 919.3 (a), CDFW provided a written consultation to CALFIRE (letter from Jon Hendrix to Leslie Markham July 31, 2015) based on CDFW's inspection of the THP and nest

sites. CDFW's consultation included a site specific configuration of the nest site buffer zone as provided for under 14 CCR 919.3 (a) to protect the GBHE nests.

The THP proposes clearcut silviculture. The rookery trees and surrounding THP are predominantly Sitka Spruce. Tree rooting in spruce is generally shallow and trees remaining post-harvest are more susceptible to blowdown than other species. Tree harvesting adjacent to the rookery has the potential to affect nesting habitat through collateral blowdown or changes in microclimate due to wind or temperature effects.

On June 21, 2015 private consulting biologist Frank Galea, hired by the landowner, submitted a report to CALFIRE providing his assessment of the nest location and recommending a 100-foot no harvest buffer around the nest site and a restriction on timber operations within the entire THP until after the breeding season or young had fledged. Additionally, Mr. Galea states that "*...as the herons have chosen a nest location with only 50 feet of a buffer for screening from the elements or from traffic noise, a one hundred foot buffer around the heronry would suffice to maintain the site as a nest site. As inclement weather originates from the south, there would be no loss in weather –buffering screening. Retention of screen trees within 100 feet of the heronry would protect the site visually and from the elements.*"

The July 2015 CDFW consultation documents this heron rookery as an important biological resource within Del Norte County including the Smith River estuary and Lake Earl Wildlife Area. There are no other identified GBHE rookeries within Del Norte County.
CDFW's consultation explained that while the rookery is approximately 50 feet from a low use road to the south, the majority of the THP surrounds the rookery directly upslope to the north. Prevailing winds in the summer are out of the northwest and the active rookery could be significantly impacted by modification of the rookery stand allowing either changes in micro climate (including wind), or reducing the number and quality of nest trees through blowdown events. In a phone conversation with State Parks Wildlife Biologist Jay Harris on July 31, 2015, he explained that a GBHE rookery on the Eel River was abandoned after clearcut timber harvest occurred within 100 feet of the nest trees. He believes strong afternoon winds blew out the nests and rendered the site unsuitable for nesting.

Clearcutting to within 100 feet of the GBHE rookery may subject the site to significant adverse environmental effects. Chen et al. (1995) found timber harvest increased solar radiation for a distance of 60 m (197 ft) into forest edges adjacent to clearcuts in old-growth Douglas-fir forests of the Pacific Northwest. They also found that air and soil temperatures are increased for distances of greater than 150 m (492 ft) and approximately 40 m (131 ft), respectively, from clearcut edges; wind speed and humidity are increased and decreased, respectively, over distances of 180 m (590 ft) from the edges of clearcuts.

CDFW recently proposed to the landowner a modification to CDFW's original consultation. The new proposal reduced the buffer zone from a 200 foot no-harvest buffer with an additional 100 feet of selection harvest to a 100 foot no-harvest buffer with an additional 200 feet of selection harvest. CDFW recommends this buffer zone to avoid significant adverse impacts from clearcut harvesting to the GBHE rookery.

References

Chen, J., J.F. Franklin, and T.A. Spies. 1995. Growing-season microclimatic gradients from clearcut edges into old-growth Douglas-fir forests. Ecological Applications 5(1):74-86.

Please call me if you have any questions

Susan Sniado
Senior Environmental Scientist (Specialist)
Coastal Timberland Plannning
California Department of Fish and Wildlife
619 Second Street
Eureka, CA 95501
707-441-3970
Susan.sniado@wildlife.ca.gov

From: Schwab, Dominik@CALFIRE
Sent: Monday, January 11, 2016 10:23 AM
To: Sniado, Susan@Wildlife
Subject: 1-15-014 DEL: Great Blue Heron Protection Measures

Hello Sue,
1-15-014 DEL is up for approval, with a Director's Determination Date of January 21, 2016. The RPF did not agree to the protection measures that were recommended at Second Review. Please see attached. Could you please describe to me why a 100 foot no cut buffer is not sufficient to protect the Great Blue Heron rookery on this THP? These are the protection measures currently in the THP (at present there are no pages 88.1 – 88.3 in the THP):

32. BIOLOGICAL RESOURCES

a. ☒ Yes ☐ No Are any plant or animal species, including their habitat, which state law, or a sensitive species by the Board, associat provisions to be taken for the protection of the species.

b. ☐ Yes ☒ No Are there any non-listed species which will be significant the provisions to be taken for the protection of the specie

Great Blue Heron:

Great Blue Herons nest within the project boundary. The protection measur THP page s 88.1-88.3 shall be applied as below:

The Applicant proposes to protect the heronry by establishing a "no-cut" buffer (Figure 1). A buffer of 100 feet would be flagged around the entire grouping of s would be cut within this boundary and no trees would be felled into it, in order to and the screening trees which would also be retained. This would completely reta of trees between the heronry and Oceanview Drive. All tree felling for the THP sooner than August of 2015, or after all heron young have left fledged. A pre-log wildlife biologist would take place if logging is to commence before September have fledged.

Also, the map on THP page 21 has been revised to show the Heron nests, 100 foot buffer, and 300 foot buffer. Please let me know if you have any questions.
Thanks,

Dominik Schwab
Forester II, RPF #2823
CAL FIRE
135 Ridgway Ave.
Santa Rosa, CA 95401
(707) 576-2941

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UNIT, ftp/NEW

From: Schwab, Dominik@CALFIRE
Sent: Wednesday, January 20, 2016 11:06 AM
To: Santa Rosa Review Team@CALFIRE
Subject: FW: Heron Reccomendations for 1-15-014DEL Gautreauex

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From: Brian Griesbach [mailto:briantgriesbach@yahoo.com]
Sent: Monday, January 18, 2016 12:36 PM
To: Sniado, Susan@Wildlife; Schwab, Dominik@CALFIRE
Subject: Heron Reccomendations for 1-15-014DEL Gautreauex

Sue and Dominik:

Thank you for your efforts to reach a compromise on this issue. Your recommendation would allow us to resolve the issue and move on while ensuring the resources to be protected. However, as stated in the Response To 2nd Review, the landowner's decision was to reject the recommendation. Given the majority of the state's forest is in public ownership etc. I do in part agree with him and Mr. Leopardo regarding private property and government infringement. However I recognize, respect and value your willingness to compromise. Thanks again for your time and efforts. Have a nice day.

Brian Griesbach RPF 2738
(707)672-5814

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
P.O. Box 944246
SACRAMENTO, CA 94244-2460
(916) 653-7772
Website: www.fire.ca.gov

Date: January 21, 2016
RE: THP # 1-15-014 DEL

Mr. Mark Gautreaux
847 Chetco Point Road
Brookings, OR 97415

Dear Mr. Gautreaux:

As plan submitter signatory to the above timber harvesting plan (THP), I am writing to notify you of the disapproval of this plan. The basis for the disapproval is provided below.

Factual Background

THP 1-15-014 DEL (the THP) is located in Del Norte County in the Coast Forest District. The legal description of the THP's location is Section 21, Township 18 North, Range 1 West, Humboldt Base & Meridian, and is located in the Smith River 7.5' USGS Quadrangle. The THP is 13.3 acres in size, and as of the Director's Determination Date of January 21, 2016, proposed 8.8 acres of clearcutting, contained 1.3 acres of non-timberland, and 3.2 acres of no-harvest area.

On February 26, 2015, THP # 1-15-014 DEL was submitted to CAL FIRE. Upon submission, the THP did not disclose the presence of Great Blue Herons (*Ardea Herodias*) or of a Great Blue Heron rookery in the Biological Assessment Area (BAA). Regarding Great Blue Herons, THP Section III, page 38 stated:

> *Sightings have been reported to the Department of Fish and Wildlife Natural Diversity Data Base for the Smith River quadrangle. No sightings have occurred within the BAA [Biological Assessment Area]. Foraging habitat within the project area is lacking. Watercourses are relatively small brushy and not suitable for wading. Foraging habitat is near the project area in the form of watercourses in agricultural lands. Due to the proximity of foraging habitat the timber stands along the edge of the agricultural area could be considered suitable nesting habitat. However the presence of residences and the fact that a well traveled county road also exists along the edge of the agricultural land diminishes suitability of nesting. The species and their nests were not identified during layout of this project. Maintenance of watercourses and other mitigations proposed to protect water quality shall provide ample protections so that the species habitat shall not be reduced.*

The Review Team was not aware that a Great Blue Heron rookery was present in the THP area, and the THP was accepted for filing on March 5, 2015.

On March 12, 2015, CAL FIRE received a public comment letter from Rob and Kara Miller, who live next to the property where THP 1-15-014 DEL is proposed. The public comment letter stated:

> *A timber harvest plan is posted next to our property, 1-15-014 DEL, in del Norte county. It states it is planned to be clear cut. We have lived next to this property for 35 years and we want to make sure everyone realizes their is the largest roost of blue Herons in the area located on this property. I know this Blue heron roost is documented, please follow through and verify this. Clear cutting would destroy this nesting place. Please respond to this email. Thank you (forester Brian Griesbach RPF 2738, timber owner Mark Gautreaux)*

On March 17, 2015, the pre-harvest inspection (PHI) was conducted for this THP. The California Department of Fish & Wildlife (CDFW) PHI Report states:

> *On the morning of 17 March 2015, CDFW observed the THP's timber stands from Highway 101, approximately one-quarter of a mile southsouthwest of the THP. From 0704 - 0845 hours, CDFW observed 12 great blue herons fly into, and 4 fly out of, the Sitka spruce trees in the southern portion of the THP. Birds within the stand were easily observed preening and sitting approximately mid-canopy on branches of several trees visible from Highway 101.*
>
> *During the PHI, the landowner showed the inspection team pictures of great blue herons roosting in trees on his property. The landowner stated he frequently observed herons flying onto and off of his property; however, there is no mention of sightings within the THP. We recommended the RPF inquire with the landowner and other appropriate sources regarding local knowledge specific to the THP area and watershed. Since the landowner knew about the great blue herons in the area, the sightings and/or the rookery should have been disclosed in the THP and during the PHI.*
>
> *The inspection team walked through the area where CDFW observed herons earlier in the day. The inspection team observed white wash on vegetation (see Figure 1) and at least nine nests (Figure 2) present in at least four trees. Several of the nests were occupied by great blue herons, though the birds were not vocalizing while the inspection team was close to the nests. The approximate extent of the trees, where nests were observed, and a 300-foot buffer around the nests are shown in Figure 3, below.*

Pursuant to 14 CCR 919.3, CDFW recommended that a consultation regarding the Great Blue Heron rookery be completed prior to Second Review.

On June 21, 2015, the RPF submitted a Great Blue Heron consultation prepared by private wildlife biologist Frank Galea. Mr. Galea proposed the following protection measures for the Great Blue Heron rookery:

The Applicant proposes to protect the heronry by establishing a "no-cut" buffer around the six trees (Figure 1). A buffer of 100 feet would be flagged around the entire grouping of six trees, and no trees would be cut within this boundary and no trees would be felled into it, in order to protect the nest trees and the screening trees which would also be retained. This would completely retain the existing screen of trees between the heronry and Oceanview Drive. All tree felling for the THP would take place no sooner than August of 2015, or after all heron young have left fledged. A pre-logging inspection by a wildlife biologist would take place if logging is to commence before September to insure that young have fledged.

As the herons have chosen a nesting location with only 50 feet of a buffer for screening from the elements or from traffic noise, a one hundred foot buffer around the heronry would suffice to maintain the site as a nest site. As inclement weather originates from the south, there would be no loss in weather-buffering screening. Retention of screen trees within 100 feet of the heronry would protect the site visually and from the elements.

The letter did not include any support for its determinations that "inclement weather originates from the south," as do "almost all spring storms for the area." In an effort to verify these statements, CAL FIRE reviewed publicly available data for the weather station located at McNamara Field, roughly 12 air miles from the THP area (station KCEC). That data confirms that the prevailing winds at the weather station generally originate from the south and south-southeast, but it also shows that the prevailing winds during the months of May, June, and October originate from the north, north-northwest, and north, respectively. Two of these months are within the critical period for the Great Blue Heron. In the two weeks prior to Mr. Galea's letter, there were wind events with gusts approaching 40 mph.

On July 14, 2015, CDFW conducted a field visit to evaluate the proposed protection measures for the Great Blue Heron rookery, with CAL FIRE staff in attendance. CDFW consultation letter **15-R1-CTP-18-GBHE** states:

During the field visit, two juvenile herons were observed actively moving on the branches between nests. The juveniles were not observed flying; however, they were fully feathered and it is anticipated, based on their behavior and plummage, that fledging would occur within two weeks. Given the time of the year and the condition of the juveniles, other juveniles from this site may have already fledged.

CDFW observed nine nest structures within six Sitka spruce trees (approximately 20 to 30 inches in diameter). The nests are in the upper third of the trees and nest placement is variable. Some nests occur against the bole of the tree and others extend out on branches. Based on the condition of the nests and without surveys throughout the breeding season during the last two years, DFW assumes all nine nest structures have been active during that time. CDFW agrees with Mr. Galea's description that the six trees

comprising the rookery were within a grouping 58 feet wide (east to west) and 76 feet deep (north to south).

Resources at risk

The occurrence of this heron rookery represents an important biological resource within Del Norte County including the Smith River estuary and the Lake Earl Wildlife Area. There are no other great blue heron rookeries identified in CNDDB within Del Norte County.

This active rookery could be impacted by the subject THP through habitat modification of the rookery stand or its surroundings, disturbance of nesting adults or chicks, or both. Habitat modification (harvest of trees or reducing the size or changing the configuration of the nest stand) could directly impact nesting birds by reducing the number and quality of nest trees. A great blue heron rookery on the Eel River in the vicinity of the town of Rio Dell was not reoccupied after clearcut timber harvest occurred within approximately 100 feet of the nest tree. Such harvest may have exposed the heron nests to strong afternoon winds and rendered the site unsuitable. (Jay Harris pers. comm. July 31, 2015)

John "Jay" Harris was a former CAL FIRE biologist who conducted an inspection as part of a Great Blue Heron consultation for THP # 1-99-356 HUM. Mr. Harris verified that an historic rookery located near THP # 1-99-356 HUM (on THP # 1-95-037 HUM) was abandoned and the nest structures missing following a previous clear-cut harvest. Mr. Harris determined that the retention stand on THP # 1-95-037 HUM, which measured roughly .5 acres (of similar size as urged by your biologist) and consisting of 57 trees was abandoned due to exposure to "high coastal winds blowing up the Eel River." The inspection report noted that during the inspection "gusts of up to 20 mph were experienced resulting in substantial canopy movement." Mr. Harris recommended a 500 foot buffer where no timber operations were allowed, and with concurrence from CDFW, these protection measures were incorporated into THP # 1-99-356 HUM as minor amendment #3.

In developing their recommendation for protection of the Great Blue Heron rookery, CDFW made the following observations in CDFW Consultation Letter **15-R1-CTP-18-GBHE**:

While the rookery is approximately 50 feet from Ocean View Drive near the southern boundary of the THP, the majority of the THP surrounds the rookery directly upslope to the north. The rookery trees and THP area are predominantly Sitka spruce. Tree rooting in spruce is generally shallow and trees remaining post-harvest are more susceptible to blowdown than other species. Timber harvesting adjacent to the rookery has the potential to affect nesting habitat through collateral blowdown or changes in microclimate due to wind or temperature effects. To preserve the existing rookery stand structure, and buffer the rookery from adverse changes in microclimate and wind, CDFW recommends, no harvesting within 200 feet of the rookery, and within 200-300 feet of the rookery, a minimum average of 60 percent canopy

closure, including at least half of the dominant and codominant trees, shall be retained postharvest.

The CAL FIRE PHI Report (received September 15, 2015) supported this recommendation, stating:

A great blue heron rookery, which the RPF failed to either identify or disclose, is present in the THP area. The RPF and his consulting biologist both stated that they were unaware of the presence of herons in the plan area. The timberland owner, during the PHI, stated that he regularly saw herons in the area, and showed the PHI team pictures of herons he had taken at the property. Substantial quantities of white wash, indicative of heavy use by birds, was observed during the PHI in the area of the rookery. Several nests were easily visible from the ground in the area of white wash. The neighbors were aware of the rookery, and had informed CALFIRE and DFW. CGS had conducted a preconsultation site visit alone, and during the few minutes that he was at the road had been informed by neighbors of the presence of the heron rookery. This is a Board of Forestry sensitive species. It is required to be addressed by consultation with DFW prior to Second Review. CALFIRE attended an onsite inspection for this consultation conducted by DFW on 7/14/15. The RPF's consulting biologist proposed a 100 foot buffer for the rookery, however DFW has determined that a 300 foot buffer is necessary. The 300 foot buffer is in conformance with 14 CCR 919.3(b)(3) and appears appropriate.

On September 17, 2015, Troy Leopardo, a private wildlife biologist hired by you, submitted a public comment letter. The letter generally questioned the legal basis for CDFW's recommended mitigation and scarcely addressed the scientific basis. In regards to the Great Blue Heron rookery protection measures proposed by wildlife biologist Frank Galea, Mr. Leopardo conceded that "tightly clustered herons nesting together are apt to depart abruptly from densely packed roost and nesting sites leading to mortality of young birds." Mr. Leopardo's principal concern seems to be based in his misunderstanding of the Forest Practice Rules:

14 CCR §919.3(c)(3) makes it clear that year around restrictions apply only to those trees containing active nests... Mr. Gautreaux has agreed to set aside more than the minimum required by the [Forest Practice Rules] Even if proposed operations would result in the eventual abandonment of this small rookery, the herons would simply relocate elsewhere. As such, it is important to consider that this landowner is also permanently setting aside 1.3 acres prime heron rookery habitat in the WLPZ.

The RPF's responses to the PHI recommendations were received on October 12, 2015. In response to CDFW PHI Recommendation #1, the RPF did not revise the THP to include the recommendations from CDFW Consultation Letter **15-R1-CTP-18-GBHE**, but chose to incorporate the protection measures proposed by private wildlife biologist Frank Galea.

Second Review for this THP was held on October 22, 2015. CAL FIRE Review Team Chair William Forsberg made the following recommendation (Recommendation #2) regarding the protection measures for the Great Blue Heron rookery:

> *Please revise the plan per the three recommendations provided on page 5 of DFW consultation letter dated July 31, 2015. As per the consultation recommendations, please revise the acreage totals in Item 14 (a) and update the THP map (page 21) to show the 0-200' No Harvest area and the 200-300 Selection area where 60% of the canopy is retained post-harvest and half of dominate and co-dominate trees are retained post-harvest. Also revise Item 14(b) to indicate the retention standards in the 200-300' outer band of the Great Blue Heron buffer zone. Please update Item 14 (d) to specify how trees in the 200-300' buffer zone area will be marked and whether harvested or retained. Please provide in Item 32 and Item 38 the seasonal restrictions for Great Blue Heron identified on pages 4 and 5 of the consultation letter".*

On December 29, 2015, the RPF submitted a response to Recommendation #2, stating:

> *With regards to Review Team Chair recommendation #2, Mr. Gautreaux has instructed me to reject additional mitigation for this heron rookery as recommended by CDFW. It is the landowners position that additional 100-foot no-cut protection zone afforded this rookery at the recommendation of private consulting biologist Frank Galea provides sufficient protection for this rookery. Furthermore, not only has CAL FIRE failed to present substantial evidence indicating a potential adverse significant impact, having based their decision on an implicit assumption of significance contrary to 14 CCR §21080(e)(2), the landowner is concerned that this attempt to coerce him into accepting extralegal heron protection measures could seriously affect the future timber management of his property. A such, should CAL FIRE insist on making CDFW recommendations contingent on approving this plan, Mr. Gautreaux has announced his intention to appeal the denial in accordance to the Forest Practice Act PRC §4593.7.(c).*

The receipt of the RPF's response to Second Review closed the public comment period, and set the Director's Determination Date for January 21, 2016.

On January 11, 2016, I discussed the Great Blue Heron protection measures with RPF Brian Griesbach. I informed RPF Griesbach of three options:

1) Bringing the THP into conformance by agreeing to the Great Blue Heron protection measures recommended in CDFW Consultation Letter **15-R1-CTP-18-GBHE**. Since the Great Blue Heron rookery was not disclosed upon submission of the THP, this would be considered Significant New Information per 14 CCR 895.1, and the THP would need to be recirculated [ref. 14 CCR 1037.3(f)]. I informed the RPF that under this scenario, an additional Second Review would not be necessary, and that the THP would only be recirculated for the Great Blue Heron protection measures. Once the public comment

period closed due to recirculation, CAL FIRE would complete the plan review process and issue a determination.

2) Withdrawing the THP and submitting a new THP with appropriate protection measures and proper disclosure of the Great Blue Heron rookery.

3) CAL FIRE making a determination that the THP is not in conformance with the Forest Practice Rules, specifically 14 CCR §§ 898.1(c)(1), 898.2(d), and 919.3(a), and deny approval of the THP [ref. 14 CCR 1037.6, PRC 4582.7(b)].

RPF Griesbach indicated that he understood these options, and discussed the possibility of proposing revised protection measures consisting of a 100-foot no-harvesting buffer around the Great Blue Heron Rookery, with retention of ½ the dominants and codominants and 60% canopy retention from 100 feet – 300 feet from the rookery.

After informing CDFW Senior Environmental Scientist Susan Sniado of a revised potential compromise recommendation on January 12, 2016, I proposed the following revised protection measures to CDFW:

1) A year-round habitat retention buffer shall be established within 300 feet of the great blue heron rookery (Figure 2). The buffer shall be measured from the outer extent of the rookery as defined by the location of the nests. No harvesting shall occur within **100** feet of the rookery, and within **100-300** feet, harvesting can occur as long as a minimum average of 60 percent canopy closure, including at least half of the dominant and codominant trees, is retained.

2) A 0.25 mile temporal disturbance buffer shall be established around the rookery during the critical period, February 1 to August 1 [which would be longer than the period prescribed in 14 CCR 919.3(d)(3) due to the observed presence of late-fledging chicks at the rookery]. No timber operations shall be permitted within the disturbance buffer during the critical period, unless surveys confirm nesting has failed or the young have fledged earlier than August 1 and written concurrence is received from CDFW.

3) During the life of the THP the landowner shall agree to allow CDFW staff on the property to monitor the success of the protection measures and the status of the nest sites. Such access shall only occur with a minimum 48-hour notice.

On January 12, 2016, CDFW Senior Environmental Scientist Susan Sniado concurred with the revised recommendation, stating:

> *The Department of Fish and Wildlife has reviewed the proposed Great Blue Heron protection measures outlined [above] and concludes that if the mitigation measures are included in the subject THP, the THP will provide adequate mitigation measures to protect Great Blue Herons and their nesting habitat.*

These revised protection measures were then proposed to the RPF to bring the THP into conformance. On behalf of the landowner, Thomas Blair replied on January 12, 2016, stating:

The landowner does not want to agree with CDFW's revised mitigation measures.

This response was confirmed in a letter by RPF Brian Griesbach received on January 13, 2016.

Legal Background

The Forest Practice Rules include the Great blue heron among Sensitive Species and, by extension, Listed Species, per 14 CCR 895.1. Protection measures specific to the Great blue heron are found at 14 CCR 919.3:

> *The following requirements shall apply to nest sites containing active nests and not to nest sites containing only abandoned nests.*
> *(a) Buffer zones shall be established around all nest trees containing active nests. The buffer zones shall be designed to best protect the nest site and nesting birds from the effects of timber operations. In consultation with the Department of Fish and Game, and as approved by the Director, an RPF or supervised designee shall flag the location of the boundaries of the buffer zone, and the configuration of the buffer zone. Consultation with the Department of Fish and Game shall be required pursuant to 14 CCR 898. Consideration shall be given to the specific habitat requirements of the bird species involved when configuration and boundaries of the buffer zone are established.*
> *(b) The size of the buffer zone for each species shall be as follows:*
> *(3) For the Great Blue Heron and Great Egret, the buffer zone shall consist of the area within a 300-foot radius of a tree or trees containing a group of five or more active nests in close proximity as determined by the Department of Fish and Game.*
> *(c) The following year around restrictions shall apply within the buffer zone.*
> *(3) For the Great Blue Heron and Great Egret, all nest trees containing active nests shall be left standing and unharmed.*
> *(d) Critical periods are established for each species and requirements shall apply during these critical periods as follows:*
> *(3) For the Great Blue Heron and Great Egret, the critical period is February 15 until July 1 for coastal counties south of and including Marin County. For all other areas, the period is from March 15 through July 15. During this critical period, timber operations within the buffer zone shall be staged with a gradual approach to the nest.*

The Director shall review plans to determine if they are in conformance with the provisions of rules adopted by the Board and with the Forest Practice Act [ref. 14 CCR 898.1; PRC § 4582.75]. When in doubt as to the feasible alternative which best carries out the intent of the Forest Practice Act, the Director shall seek the advice of other state agencies charged with protecting the public interest in forest-related resources [ref. 14 CCR 898.1(b)]. In reviewing plans, the Director shall disapprove all plans that meet the special conditions for disapproval set by the Board in 14 CCR 898.2 [ref. 14 CCR 898.1(c)]. The Director shall

disapprove a plan as not conforming to the rules of the Board if implementation of the plan as proposed would cause significant, long-term damage to listed species [ref. 14 CCR 898.2]. "Significant" means harm or damage which is substantial and threatens the use of forest-related benefits (including wildlife resources), and "Long-term" means harm or damage that is of such a nature and of lasting duration which cannot be corrected within 3 timber harvest seasons following commencement of timber operations under a proposed plan [ref. 14 CCR 901]. When the Director determines that a plan is not in conformance with the rules of the Board, the plan shall be returned to the person submitting the plan with a statement including the reasons for returning the plan [ref. 14 CCR 1054(a); PRC § 4582.7].

Reasons the Plan is Not in Conformance

THP # 1-15-014 DEL is not in conformance with the California Forest Practice Rules and is being returned for the following reasons [ref. 14 CCR 898.1(e)]:

1) CAL FIRE has determined that the Great Blue Heron rookery within the THP area contains a group of five or more nests that meet the 14 CCR 895.1 definition of Active Nest, and that the provisions of 14 CCR 919.3 therefore apply. A buffer zone must be established in consultation with CDFW [ref. 14 CCR 919.3(a)]. The buffer zone shall be designed to best protect the nest site and nesting birds from the effects of timber operations, and consideration shall be given to the specific habitat requirements of the bird species involved when configuration and boundaries of the buffer zone are established [ref. 14 CCR 919.3(a)]. When in doubt as to the feasible alternative which best carries out the intent of the Act, the Director shall seek the advice of other state agencies charged with protecting the public interest in forest-related resources [ref. 14 CCR 898.1(b)].

   CAL FIRE relies on CDFW's advice in determining whether wildlife protection measures comply with the Rules. CAL FIRE determined that the protection measures for the Great Blue Heron rookery recommended in CDFW Consultation Letter **15-R1-CTP-18-GBHE** better protected the nest site on this particular THP, and that the protection measures described by your biologist are not adequately protective of the nest site. In an effort to compromise, and with the concurrence of CDFW, CAL FIRE proposed an alternative that would have allowed more timber operations within the buffer zone while still providing adequate protection for the Great Blue Heron rookery. CAL FIRE finds that the protective measures proposed by you would not be in conformance with the Act and Rules. In addition, CAL FIRE agrees with CDFW's determination that the rookery represents a significant biological resource in Del Norte County, and further finds that the timber operations as proposed in the THP would cause significant, long-term damage to the Great blue heron, a listed species, necessitating disapproval of the THP [ref. 14 CCR 898.2(d)]. In order to bring the THP into conformance with the Act and Rules, the THP must be revised either to incorporate, at a minimum, (i) the revised protection measures proposed by CAL FIRE and concurred in by CDFW or (ii) additional measures beyond those proposed by your biologist or such additional analysis to demonstrate that those proposed measures best protect the nest site and will avoid significant, long-term damage to the Great blue heron.

2) Additional revisions needed to bring the plan into conformance:

a) Per CAL FIRE PHI Recommendation #5, remove watercourse crossing T1 from the THP if necessary to protect the Great Blue Heron rookery.

b) Per Second Review Recommendation #2 and the revised CDFW recommendation, revise THP Section II, Item 14(d) to specify how trees in the 100'-300' buffer zone area will be marked and whether harvested or retained.

c) Revise THP Section III, page 38, to include an accurate description of the status of Great Blue Herons in the BAA and in the THP area.

d) Per CAL FIRE PHI Recommendation #7, revise THP Section II, page 10, Item #25 to state that no road construction is proposed on slopes greater than 50%.

e) The buffers on the operations map extend beyond Mr. Gautreaux's property south of Ocean View Drive. Revise the THP Section II Operations Map, page 21, to be consistent with proposed CDFW protection measures and the map contained in CDFW consultation letter **15-R1-CTP-18-GBHE.**

f) THP Section II, Item #27(a) is checked "Yes" and "No".

g) THP Section III, page 33, is missing information in the tables, possibly due to a photocopying error when the page was revised.

h) Text from the top of page 53 regarding CAL FIRE Northern Spotted Owl take avoidance determinations has been removed during page revisions dated 12/29/15.

i) The years to recoup carbon, and the total carbon sequestration stated on page 55 are not consistent with the results from the THP Greenhouse Gas Emissions on page 59.

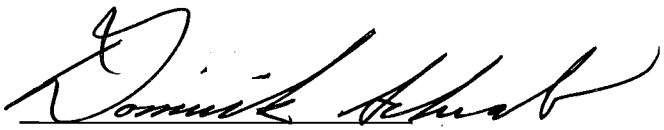
Without the incorporation of the information and/or analysis outlined above, the plan is not in conformance with the Act and Rules and is being denied for approval under 14 CCR 898.1 and PRC 4582.7(b).

Timber operations proposed under THP # 1-15-014 DEL are not approved and shall not commence.

You have the right to a public hearing before the Board of Forestry and Fire Protection, provided you request such a hearing within ten (10) days from receipt of THP # 1-15-014 DEL as set forth in 14 CCR 1054.1. The appeal should be directed to:

Matt Dias, Acting Executive Officer
California State Board of Forestry and Fire Protection
1416 Ninth Street, P.O. Box 944246
Sacramento, CA 94244-2460

Sincerely,



Dominik Schwab
Forester II, Forest Practice
RPF #2823

Cc: Brian Griesbach, RPF
Unit
File
ftp://thp.fire.ca.gov/THPLibrary/North_Coast_Region/