DEPARTMENT OF FORESTRY AND FIRE PROTECTION
NORTHERN REGION HEADQUARTERS-REDDING
6105 Airport Road
Redding, CA 96002
(530) 224-2445
Website: www.fire.ca.gov

November 20, 2015

Timber Harvesting Plan
No. 2-15-049-NEV
BERRIMAN RANCH

EAST LOS ANGELES 56
7969 ENGINEER RD STE 108
SAN DIEGO, CA 92111

Dear Gentleperson(s):

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

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

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

1. Timber operations after completion of work described in a Timber Harvesting Plan, excluding work for stocking, a report shall be filed by the timber owner or his agent with the Director that all work, except stocking, has been completed.

2. Report of Stocking – As only Conversion of forestland to another use is proposed, no restocking is required unless the conversion of timberland to another use is not completed as proposed (PRC 4622).

The Timber Harvesting Plan will expire on November 19, 2015. Any request for an extension must be received ten (10) days prior to the expiration date shown above.

The effective period of this Timber Harvesting Plan is up to five years from the date the Director's representative signed the plan as being in conformance with the Forest Practice Act and Rules unless extended pursuant to **Public Resources Code 4590**.

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

Sincerely,

John Ramaley, RPF #2504
Forester III, Cascade, Sierra & Southern Regions
Forest Practice Manager

Attachment

cc:
UNIT – NEU
RPF – David Levy
TLO/TO – East Los Angeles 56, Asset Builders, Inc., Great Western Mortgage
INSPECTOR – Jack Harvey
Board of Equalization
County Planning- Nevada
FG 2
WQ 5A
FILE

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

1. NEU
2. FS-NC
3. FG2
4. WDSA
5. CP-NEV
6. CGS
7. RT
8. Harvey
9.
10.
11.
12.

TIMBER HARVESTING PLAN
STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
RM-63 (03-15)

THP Name: **Berriman Ranch THP**

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

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

FOR ADMIN. USE ONLY

THP No 2-15-049 NEV

Dates Rec'd ~~JUL 24 2015~~

Date Filed JUL 31 2015

Date Approved NOV 20 2015

Date Expires NOV 19 2020

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:

East Los Angeles 56
a C.L.P., Asset Property Management Inc.
Joseph F. Oliver President and General Partner
7969 Engineer Road, Suite 108
San Diego, CA. 92111
858.560.9363

Asset Builders Inc.
7969 Engineer Road, Suite 108
San Diego, CA. 92111
858.560.9363

Great Western Mortgage
Samuel J. Kahn President
225 W. Plaza St. #103
Solano Beach, CA. 92075
619.696.5066

Signature ***Notified By Certified Letter*** Date **June 30, 2015, July 15, 2015**

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. For Timber Tax information, please see our website at: www.boe.ca.gov/proptaxes/timbertax.htm.**

RECEIVED
JUL 24 2015
REDDING
FOREST PRACTICE

2. TIMBERLAND OWNER(S) OF RECORD: ***Same as Item #1 above.***

As the Timberland Owner listed above I acknowledge responsibility for the following:

(1) Achieve adequate stocking of the prescription area as described in the plan and 14 CCR 932.7.

(2) Pursuant to 14 CCR 934.6 and 14 CCR 1050: Waterbreaks and other erosion control structures must be maintained to remain functional in controlling the flow of runoff during the maintenance period (usually one year). The Director may recommend that this period be increased to three years. The LTO is responsible for proper construction, inspection, and maintenance of erosion control structures during the prescribed maintenance period until the Director approves a work completion report. The landowner is responsible for inspection and maintenance of these structures and any repairs if needed 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, providing that the assuming party acknowledges such responsibility in writing to the Director.

(3) Pursuant to 14 CCR 963.4: All roads including erosion control structures, crossings, etc. shall be maintained to provide adequate drainage of the road surface in a manner that will not degrade the beneficial uses of water for a period of at least one year. The Director may recommend that this period be increased to three years.

(4) Pursuant to 14 CCR 1035 (d)(2)(B), 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, not less than once during the life of the plan.

East Los Angeles 56
a C.L.P., Asset Property Management Inc.
Joseph F. Oliver President and General Partner
7969 Engineer Road, Suite 108
San Diego, CA. 92111
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619.696.5066

Signature ***Notified By Certified Letter*** Date **June 30, 2015, July 15, 2015**

3. LICENSED TIMBER OPERATOR(S):
(If unknown, so state. You must notify CDF of LTO prior to start of operations.)

Brian Forkner LTO# A-303
16720 Jacks Road
Nevada City, CA. 95959
530.265.3535

As the LTO listed above I acknowledge responsibility for the following:

(1) 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.
(2) 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.
(3) Keep a copy of the applicable approved plan and amendments available for reference at the site of active timber operations.
(4) Comply with all provisions of the Act, Board rules and regulations, the applicable approved plan and any approved amendments to the plan.
(5) Attend the on-site meeting to discuss archaeological site protection with the RPF or supervised designee familiar with on-site conditions.
(6) 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.
(7) Provide the RPF responsible for professional advice throughout the timber operations, the name, address and phone number of an on-site contact employee authorized by the LTO to receive RPF advice.
(8) Keep the RPF responsible for professional advice throughout the timber operations advised of the status of the operation activity.
(9) 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.
(10) 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.
(11) 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.

Signature: _____ Date 7/22/15

4. PLAN SUBMITTER(S):

East Los Angeles 56
a C.L.P., Asset Property Management Inc.
Joseph F. Oliver President and General Partner
7969 Engineer Road, Suite 108
San Diego, CA. 92111
858.560.9363

(Submitter must be from 1, 2, or 3 above. He/she must sign below. Ref. Title 14 CCR 1032.7(a)).

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 operation regarding:
(A) the plan,
(B) the Forest Practice Rules, and
(C) other associated regulations pertaining to timber operations.
(e) Within five (5) working days of change in RPF responsibilities for THP implementation or substitution of another RPF, file with the Director a notice which states the RPF's name and registration number, address, and subsequent responsibility 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 portion of the approved THP and any approved operational amendments to the LTO containing the information deemed by the RPF to be necessary for timber operations.
(g) 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 operation, 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) Shall notify, by telephone or by mail, the appropriate CDF Ranger Unit Headquarters, Forest Practice Inspector, or other designated personnel the start of timber operations. Notification shall be given each calendar year, within fifteen days prior to, and no later than the day of the start up of timber operations.

I have read and understand my responsibilities as Plan Submitter as described under 14 CCR 1035. I certify that I have fulfilled my legal obligation as stated in the forest practice rules, and agree to fulfill my responsibility as the plan submitter as it pertains to this plan.

[X] Yes [ ] No I have retained the services of an RPF to provide professional advice to the LTO and timberland owner upon request throughout active timber operations regarding: (1) the plan, (2) the forest practice rules, (3) and other associated regulations pertaining to timber operations.

[ ] Yes [X] No I have authorized the timberland owner (_____) to perform the services of a professional forester, understanding that the services will be provided personally on lands owned by the timberland owner.

Signature: _____ Date: 7-2-15

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.

Brian Forkner
16720 Jacks Road
Nevada City, CA. 95959
530.265.3535

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

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). Note, if the plan is located in an ASP watershed the prescribed maintenance period for logging roads and associated landings, including appurtenant roads, shall be three years.

Licensed Timber Operator

PART OF PLAN

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

[X] date of conformance, or [ ] _____ (date)

b. Expected date of completion of timber operations:

[X] 5 years from date of conformance, or [ ] _____ (date)

7. The timber operation will occur within the:

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

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

[X] NORTHERN FOREST DISTRICT

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

[ ] Coastal Zone, no Special Treatment Area
[ ] Special Treatment Area(s), type and identify:
_____

[ ] Other

8. Location Of The Timber Operation By Legal Description:

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

Section	Township	Range	Acreage	County	Assessor's Parcel Number*
2	**15N**	**8E**	**32**	**Nevada**	**22-140-03**
	TOTAL ACREAGE:		**32**	(Logging Area Only)	* Optional

Planning Watershed: CALWATER Version 2.2, Identification Number, and Name: **5516.320102 Nevada City**
U.S.G.S. Quadrangle Name: **Grass Valley 7.5' Quadrangle** Date: **1995**

Mark All That Apply:
[ ] ASP watershed; [ ] Upstream of ASP; [ ] Exempt from ASP watershed rules; [X] Non ASP watershed;
[X] 303d watershed

9. [X] Yes [ ] No Has a Timberland Conversion been submitted? If yes, list expected approval date or permit number and expiration date if already approved.

An Exemption from Timberland Conversion Permit for Subdivision has been submitted to Sacramento.

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

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

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

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

[ ] Yes [X] 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. [X] Yes [ ] No Is a Notice of Intent necessary for this THP?
[X] Yes [ ] No If yes, was the Notice of Intent posted as required by 14 CCR 1032.7 (g)?

13. RPF preparing the THP:

David Levy RPF# 1976
P.O. Box 1797
Nevada City, CA 95959
(530) 277-7144

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

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

b. [X] Yes [ ] No I will provide the timber operator with a copy of the portions of the approved THP as listed in 14 CCR 1035(e). If no, who will provide the LTO a copy of the approved THP?

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

c1. I have the following authority and responsibilities for preparation and administration of the THP and timber operation. (Include both work completed and work remaining to be done):

I have the authority and responsibility for the preparation of the THP including any required additional information or amendments until approval, during the life of the plan, and after plan approval; as well as the required marking of trees to be harvested, attendance at the PHI, response to review team questions. The Timber Operator shall be responsible for "Timber Operations", including all work incidental thereto. The Timberland Owner is responsible for the proper location of property corners and boundaries necessary for the conduct of these operations, and will contract for the services of a licensed surveyor or engineer if necessary to establish these boundaries. I agree to my responsibilities contained in 1035.1, specifically 1035.1(e)-(g) below.

(e) An RPF retained by the plan submitter to provide professional advice throughout the timber operations shall be present, or ensure that the RPF's supervised designee is present, on the logging area at a sufficient frequency to know the progress of operations and advise the LTO and timberland owner, but not less than once during the life of the plan.

(f) An RPF retained by the plan submitter to provide professional advice throughout the timber operations shall 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 if such mitigation measures are not strictly applied to minimize such impacts.

(g) The RPF shall without delay notify in writing the LTO, the plan submitter, and the Department of a decision to withdraw professional services from the plan.

c2. [X] Yes [ ] No I have been retained as the RPF, available to provide professional advice to the licensed timber operator and timberland owner upon request throughout active timber operation regarding: (1) the plan, (2) the forest practice rules, and (3) other associated regulations pertaining to timber operations.

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

None

e. After considering the rules of the Board of Forestry and Fire Protection and the mitigation measures incorporated in this THP, I (the Registered Professional Forester) have determined that the timber operation (**mark all that apply**):

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

[X] will not have a significant adverse impact on the environment.

[X] 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.

[ ] **If this is a Modified THP**, I also, certify that: 1) the conditions or facts stated in 1051 (a) (1) - (16) exist on the THP area at the time of submission, preparation, mitigation, and analysis of the THP and no identified potential significant effects remain undisclosed; and 2) I, or my supervised designee, will meet with the LTO at the THP site, before timber operations commence, to review and discuss the contents and implementation of the Modified THP.

Signature: _____ Date: 7/22/2015

SECTION II – PLAN OF TIMBER OPERATIONS PART OF PLAN

NOTE: If a provision of this THP is proposed that is different than the standard rule, the explanation and justification should normally be included in Section III unless its clearer and better understood as part of Section II.

14. 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 933.11. If more than one method or treatment will be used show boundaries on a map and list approximate acreage for each.

[ ] Clearcutting	0 Ac.	[ ] Shelterwood Prep. Step	0 Ac.	[ ] Seed Tree Seed Step	0 Ac.
		[ ] Shelterwood Seed Step	0 Ac.	[ ] Seed Tree Removal Step	0 Ac.
		[ ] Shelterwood Removal Step	0 Ac.		
[ ] Selection	0 Ac.	[ ] Group Selection	0 Ac.	[ ] Transition	0 Ac.
[ ] Commercial Thinning	0 Ac.	[ ] Road Right of Way	0 Ac.	[ ] Sanitation Salvage	0 Ac.
[ ] Special Treatment Area	0 Ac.	[ ]Rehab. Of Understocked	0 Ac.	[ ] Fuelbreak	0 Ac.
[ ] Alternative	0 Ac.	[X] Conversion	32 Ac.	[ ] Non-Timberland	0 Ac.

Total Acreage 32 Ac. (Explain if total is different from that listed) MSP Option Chosen (a) [ ] (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).

c. [ ] Yes [X] No Will evenaged 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 933.1(a)(2) in Section III of the THP. List below any instruction to the LTO necessary to meet (A) - (E) not found elsewhere in the THP. These units must be designated on a map and listed by size.

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

Both conifer and hardwood harvest trees have been identified on the official subdivision map. Areas have been flagged where trees will be retained after harvest for aesthetics. Individual trees will be reviewed on a case by case basis by the developer and timber faller during felling operations as to its removal or retention. Individual trees are not proposed to be marked prior to timber felling.

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

Areas identified on the official subdivision map where trees are to be retained occur within a flagged unit boundary. Trees within these locations are to remain; however individual hazard trees may be marked by the RPF to be removed.

e. Forest Products to be harvested: *sawlogs, fuelwood, chiplogs, pulplogs, hardwood firewood*

f. [X] Yes [ ] No Are group B species proposed for management?
[ ] Yes [X] No Are group B or non-indigenous A species to be used to meet stocking standards?
[ ] Yes [X] 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 are to be expected to maintain relative site occupancy of A species. Explain when a licensed Pest Control Advisor shall be involved in this process.

Hardwoods shall be removed within the conversion area as identified on the official subdivision map.

g. Other instructions to the LTO concerning felling operations.

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

j. If the rehabilitation method is chosen provide a regeneration plan as required by 14 CCR 933.4(b).

PESTS

15. a. [ ] Yes [X] 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 937 .9 (a).

b. [ ] Yes [X] 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).

HARVESTING PRACTICES ANE EROSION CONTROL

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

TACTOR, SKIDDER, FORWARDER (Ground Based)*	CABLE	ANIMAL, BALOON, HELICOPTER OTHER (Special)
a. [X] Tractor, including end/long lining	d. [ ] Cable, ground lead	g. [ ] Animal
b. [X] Rubber tired skidder, Forwarder	e. [ ] Cable, high lead	h. [ ] Helicopter
c. [ ] Feller Buncher	f. [ ] Cable, Skyline	i. [ ] Other _____
j. [ ] Shovel Yarding		

* All tractor operations restrictions apply to ground based equipment.

17. Erosion Hazard Rating: Indicate Erosion Hazard Ratings present on THP. (Must match EHR work sheets).
[ ] Low [X] Moderate [ ] High [ ] Extreme
If more than one rating is checked, areas must be delineated on map to 20 acres in size (10 acres for high and extreme EHRs in the Coast District).

18. Soil Stabilization: Describe, as required, soil stabilization measures or additional erosion control measures to be implemented (including the location of application).

ALL WATERSHEDS Logging Roads and Landings	**DESCRIPTION OF TREATEMENTS, PROTECTION MEASURES, and TIMING or not applicable.**
943.5(i) – Treatment to prevent significant discharge where features cannot be hydrologically disconnected.	N/A
943.5(l) & (m) – Treatments for sidecast or fill; cuts and fills associated with approaches to watercourse crossings; bare areas within WLPZ.	Those areas adjacent to the Class II watercourse where mineral soil exceeding 800 continuous square feet in size is exposed by timber operations shall be mulched with straw or slash as described below. When mulching is utilized for the Reduction of Soil Loss; 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. o Mulch shall be comprised of "clean" straw or rice stubble, if feasible or fine logging slash in amounts sufficient to initially provide at least a 2–4 inch depth with a minimum coverage of 90 percent. Mulching, when used, shall be used for stabilization of the disturbed areas for the first winter period following the timber operations. o If logging roads will be used from the period of October 15 to May 1, hauling shall not occur when saturated soil conditions exist on the road that may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters in receiving Class I, II, III, or IV waters or that violate Water Quality Requirements. See Item # 23c, Section II for the definition of saturated soil conditions as per 14 CCR 895.1.
943.5(n) – Where natural ability of ground cover in WLPZ is inadequate to protect.	N/A
943.5(o) – Exceptions to soil stabilization treatment timing.	N/A

Watercourse Crossings On Logging Roads	**DESCRIPTION OF TREATMENTS, PROTECTION MEASURES, AND TIMING, or not applicable.**
943.9(t)(1)-(3) – Bare soil on fills, sidecast, timing of treatment.	Mulching standards and timing as described above.

Non ASP and Exempt ASP Watersheds WLPZ & Protected ELZ & EEZ	DESCRIPTION OF TREATMENTS, PROTECTION MEASURES, AND TIMING or not applicable.
936.7 – Stabilization measures for WLPZ of CII.	N/A

Compliance with 14 CCR 934.6 Waterbreaks, as follows:

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.*
3. *Waterbreaks shall be constructed immediately upon the conclusion of the use of tractor roads, roads and landings which do not have permanent and adequate drainage facilities or structures.*
4. *Waterbreaks shall be installed at all natural watercourses on tractor roads and regardless of the maximum distances specified in this section, except where permanent drainage facilities are provided.*
5. *Waterbreaks shall be constructed and maintained in effective working condition to provide erosion protection for at least one year following the issuance of a completion report.*
6. *Waterbreaks shall be located to allow water to be discharged into some form of vegetative cover, slash, rocks or less erodible material and shall be constructed to provide for unrestricted discharge at the lowest end of the waterbreak so that water will be discharged and spread in such a manner that erosion will be minimized.*
7. *Waterbreaks shall be cut diagonally a minimum of six inches into the firm roadbed or skid trail and shall have a continuous firm embankment of at least six inches in height at the lower edge of the waterbreak cut.*
8. *A waterbreak shall be installed on the uphill side of all landing approaches accessed by skid trails and haul roads to divert water off the road and away from the landing.*

Distances between water breaks shall not exceed the following standards based on the Erosion Hazard Rating shown above.

MAXIMUM DISTANCE BETWEEN WATERBREAKS				
U. S. Equivalent Measure Road Or Trail Gradient				
EHR	<10%	11%-25%	26%-50%	>50%
Moderate	**200**	**150**	**100**	**75**

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

20. [ ] Yes [**X**] 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 934.3 (e).

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

a. [ ] Yes [**X**] No Unstable soils or slide areas? Only allowed if unavoidable.
b. [ ] Yes [**X**] No Slopes over 65%?
c. [ ] Yes [**X**] No Slopes over 50% with high or extreme EHR?
d. [ ] Yes [**X**] 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 [**X**] No Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake?

Note: If any of the above are answered "yes": any required site specific measures should be provided in Section II; and the required explanation and justification should be provided in Section III. See 954.2(d) and (f).for specific information. In addition, all exceptions must be located on a map. 1034(x)(15). If "b", "c", "d" or "e" is answered "yes": tractor road locations must be flagged on the ground prior to the PHI or start of operations if a PHI is not required.

22. [ ] Yes [**X**] No Are any alternative practices to the standard harvesting or erosion control rules proposed for this plan? If yes, provide all the information as required by 14 CCR 934 .9 in Section III. List specific instructions to the LTO below.

WINTER OPERATIONS

23. **NOTE:** "Winter period" means the period between November 15 and April 1, except as noted under special County Rules at 925.1, 926.18, 927.1, and 965.5. "Extended wet weather period" means the period from October 15 to May 1.
    (a) Tractor roads (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.
    (b) 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.
    (c) When the term "WPOP" (Winter Period Operating Plan) is used below, all the requirements pursuant to 934.7(b) must be addressed.

a. [**X**] Yes [ ] No Will timber operations occur during the winter period? If yes, address "b" – "n", as applicable.

b. [ ] Yes [**X**] No Will mechanical site preparation be conducted during the winter period? If yes, provide a WPOP

c. [**X**] I choose the in-lieu option as allowed in 934.7(c). Specify below the procedures listed 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.

Timber operations may occur during the winter period if extended dry periods are experienced.

1. *Tractor yarding or the use of tractors for constructing firebreaks or other tractor roads shall be done only during dry, rainless periods and shall not be conducted on saturated soil conditions that may produce significant sediment discharge.*

2. *Logging roads, landings, and watercourse crossings shall not be constructed during the winter operating period.*

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.

Hard Frozen conditions means:
Frozen soil conditions where loaded or unloaded vehicles can travel without sinking into the road surfaces to a depth of more than six inches over a distance of more than 25 feet.

3. *Once soils become saturated and remain saturated after November 15th, operations shall cease for the remainder of the winter period. However if a prolonged drying period occurs between storm events in which saturated soil conditions are not present then operations may resume upon consultation and approval by the RPF until such saturated soil conditions occur again.*

4. *Erosion control structures shall be installed on all constructed skid trails and tractor roads prior to the end of the day if the U.S. Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to weekend or other shutdown periods.*

5. *The timber operator shall cease any ongoing timber harvesting operations (except for falling or burning by hand crews) and complete erosion control activities prior to saturated soil conditions.*

6. *There are no unstable areas within the harvest plan.*

7. *As per 14 CCR 934.6:*

   (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.

(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.

(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. See Item # 23c, Section II for the definition of saturated soil conditions as per 14 CCR 895.1.

8. No operations shall occur within the Class II WLPZ during the winter operating period, except the use of crossing "A" for log truck hauling.

9. Road and landing construction shall not occur during the winter operating period.

d. [ ] I choose to prepare a WPOP. 934.7(b).

e. [ ] Yes [**X**] No Will tractor watercourse crossings be used during the winter period? If yes, provide operational instructions and stabilization measures in the winter period operating plan. If an exception is proposed an explanation and justification should be provided in Section III.

f. [ ] Yes [**X**] No Will roads or landings be constructed during the winter period? If yes, provide a complete winter period operating plan pursuant to 14 CCR 934.7 that specifically addresses such logging road or landing construction or reconstruction.

g. [ ] Yes [**X**] No Will roads or landings be used for log hauling and heavy equipment use during the winter period and not be restricted to roads with a stable operating surface, or surfaced with rock to a depth and quantity sufficient to maintain such a surface? If yes, the required explanation and justification should be provided in Section III.

h. [ ] Yes [**X**] No Will roads or landings be used for log hauling and heavy equipment use during the winter period on roads that are not hydrologically disconnected and exhibit saturated soil conditions? If yes, the required explanation and justification should be provided in Section III.

i. [ ] Yes [**X**] No Will temporary logging roads and landings be used during the winter period; or will logging roads to be abandoned or deactivated, be open (not be blocked) during the winter period? If yes, provide specific measures to be taken during operations in a WPOP. 923.6 [943.6, 963.6](f), 923.8 [943.8, 963.8] and (d).

j. [ ] Yes [**X**] No Will any logging road watercourse crossing proposed for removal not be removed and stabilized prior to the winter period? If yes, provide the specifics of the applicable CDFW 1600 agreement, or otherwise specify in the plan.

k. [ ] Yes [**X**] No Will any temporary logging road watercourse crossing not be removed and stabilized prior to the winter period? If yes, provide specific measures to be taken during operations in a WPOP.

ROADS AND LANDINGS

24. Will any roads be constructed? [**X**] Yes [ ] No, or reconstructed? [ ] Yes [**X**] No.
If yes, check items "a." – "e." & "g."

Will any landings be constructed? [**X**] Yes [ ] No, or reconstructed? [ ] Yes [**X**] No.
If yes, check items "h." -- "j."

PROVIDE: The classification and approximate length of each of the following logging road segment categories: constructed, reconstructed, and abandoned. 1034(o). **Constructed- 300 Feet**

a. [ ] Yes [**X**] No Will new or reconstructed roads be wider than single lane with turnouts? If yes, address pursuant to 923 [943, 963](c). 963.2(d)(1).

b. [ ] Yes [**X**] No Will any logging road cross an unstable area or connected headwall swale? If yes, address pursuant to 963.1(d). Also see 895.1 "Connected Headwall Swale"

c. [ ] Yes [X] No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? If yes, address pursuant to 923.2 [943.2, 963.2] (d)(2). See 923 [943, 963](c). Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet. 1034(x)(5)(A).

d1. [ ] Yes [X] No Will any logging roads or landings be constructed within: 150' of a Class I WLTL; 100 feet of a Class II WLTL on slopes > 30%; Class I, II, III, or IV watercourses or lakes; a WLPZ; or in marshes, wet meadows, and other wet areas except as described under 923.1 [943.1, 963.1](b)(1) – (3)? If yes, address the exception. 923 (943, 963](c).

d2. [ ] Yes [X] No Will any logging roads or landings be reconstructed within: a Class I, II, III, or IV watercourse or lake; a WLPZ; or in marshes, wet meadows and other wet areas except as described under 923.1 [943.1, 963.1] (c)(1) – (3)? If yes, address the exception. 923 (943, 963](c).

e. [ ] Yes [X] No Will any constructed or reconstructed road be located across more than 100 feet of lineal distance on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ that drain toward the zoned watercourse or lake? If yes, address pursuant to 923.2[943.2, 963.2] (a)(7) and 923.4 [943.4, 963.4](n).

f. [ ] Yes [X] No Will any roads or watercourse crossings be deactivated or abandoned? If yes, address pursuant to 923.8 [943.8, 963.8] et seq. Also see 923.9[943.9, 963.9](e) and (p).

g. [ ] Yes [X] No Is there any exception to flagging or otherwise identifying the location of any road to be constructed or reconstructed? If yes, address pursuant to 923.3 [943.3, 963.3](c).

h. [ ] Yes [X] No Will any landings exceed one half acre in size? If yes, address pursuant to 923 [943, 963](c). 923.2[943.2, 963.2](e)(2) If any landing exceeds one quarter acre in size or requires substantial excavation, the location must be shown on the map. 1034(x)(5)(D).

i. [ ] Yes [X] No Will any landing be located on an unstable area or connected headwall swale? If yes, address pursuant to 923.1[943.1, 963.1](d). Also see 895.1 "Connected Headwall Swale"

j. [ ] Yes [X].No Will any constructed or reconstructed landing be located on more than 100 feet of lineal distance on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ and drain toward the zoned watercourse or lake? If yes, address pursuant to 923.2[943.2, 963.2] (a)(7) and 923.4 [943.4, 963.4](n).

k. [ ] Yes [X] No Will any landing be deactivated or abandoned? If yes, address pursuant to 923.8[943.8, 963.8] et seq.

l. [ ] Yes [X] No **Significant Erosion Sites**: Are there any significant existing or potential erosion sites associated with logging roads, landings and watercourse crossings in the logging area? (923.1 [943.1, 963.1](e)(1)–(5). Also see 923.9 [943.9, 963.9](a)) If yes, for each significant existing or potential erosion site, provide the following (consider providing in a Map Point Table):

- Locate and map significant existing and potential erosion sites.
- In addition, for each site:
  - Describe current condition of the site.
  - Identify which sites can be feasibly treated, and which sites cannot.
  - Specify mitigations for those sites that can be feasibly treated.
  - Describe a logical order of treatment for those which have feasible treatments.

25. **NOTE:** If any "item is answered "yes" (or "no" for "Item 24m"): specific LTO **operational information**, in accordance with the respective rule requirement(s), should be provided **in Section II**. Any required **explanation and justification** should normally be included **in Section III**. Additional notes relative to the Road Rules effective 1/1/15:

Within the northern portion of the THP approximately 300 feet of road shall be constructed to access a new landing which will be located near the central area of the conversion; away from neighboring residence. Please refer to the THP Map for location. A dozer or front-end loader will be used to pioneer or improve the road prism of the existing skid trail and will push in the new landing. Terrain within the vicinity ranges from flat to 10% slopes. The road landing will travel and be located on nearly flat grade.

There are no signs of any instability or sediment transport within the road vicinity or road prism. There are no watercourses within the road vicinity. Once operations are completed the road will remain for underground utility and waterline installation and finally be surfaced as per city requirements.

As per: 14 CCR 943.4: Construction and Reconstruction of Logging Roads and Landings.

(e) Logging roads and landings shall not be constructed with overhanging banks.

(f) Any tree over 12 inches d.b.h. with more than 25 percent of the root surface exposed by logging road or landing construction shall be felled concurrently with the timber operations.

(h) Waste organic material, such as uprooted stumps, cull logs, accumulations of limbs and branches, and unmerchantable trees, shall not be buried in logging road or landing fills. Wood debris or cull logs and chunks may be placed and stabilized at the toe of fill to restrain excavated soil from moving downslope.

(i) Slash and other debris from road construction shall not be bunched against residual trees, which are required for silvicultural or wildlife purposes, nor shall it be placed in locations where it could be discharged into Class I or II watercourses or lakes.

(k) Logging roads or landings shall not be constructed under saturated soil conditions that may produce significant sediment discharge, except that construction may occur on isolated wet spots arising from localized ground water such as springs, provided measures are taken to prevent significant sediment discharge.

(q) Excess material transported from logging road or landing construction shall be deposited and stabilized in a manner and in areas that avoid potential adverse impacts to locations that could deliver significant sediment discharge.

As per: 14 CCR 943.5. Erosion Control for Logging Roads and Landings.

The following erosion control standards shall apply to logging roads and landings:

(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.

(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.

(e) Where logging roads or landings do not have permanent and adequate drainage, and where waterbreaks are to be used to control surface runoff, the waterbreaks shall be cut diagonally a minimum of six inches into the firm roadbed and shall have a continuous firm embankment of at least six inches in height immediately adjacent to the lower edge of the waterbreak cut. On logging roads that have firmly compacted surfaces, waterbreaks may be installed by hand methods and need not provide the additional six-inch embankment provided the waterbreak ditch is constructed so that it is at least six inches deep and six inches wide on the bottom and provided there is ample evidence based on slope, material, amount of rainfall, and period of use that the waterbreaks so constructed will be effective in diverting water flow from the logging road surface without the embankment.

(g) Where outsloping and rolling dips are used to control surface runoff, the dip in the logging road grade shall be sufficient to capture runoff from the logging road surface. The steepness of cross-slope gradient in conjunction with the logging road or landing gradient and the estimated soil erosion hazard rating shall be used to determine the rolling dip spacing in order to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

(h) Drainage facilities and structures shall discharge into vegetation, woody debris, or rock wherever possible. Where erosion-resistant material is not present, slash, rock, or other energy dissipating material shall be installed below the drainage facility or drainage structure outlet as necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge.

(j) There are no logging road and landing surfaces, road approaches, inside ditches and drainage structures that cannot be hydrologically disconnected. 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.

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

NOTE: if any "item is answered "yes" provide the required information pursuant to the associated rule. Specific LTO operational information should be provided in Section II. Explanation and justification should normally be included in Section III.

26 a. [**X**] 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 936.4(c) of the WLPZ rules by each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

b. [**X**] Yes [ ] No Are there any watercourse crossings that require mapping per 14 CCR 1034(x)(7)?

The following table describes watercourse crossings located within the THP area.

Crossing	Crossing Type	Truck/ Tractor	Watercourse Classification	Mitigation
A	Two 30 Inch CMPs	Truck	Class II	None Needed

c. [ ] Yes [**X**] No Will tractor road watercourse crossings involve the use of a culvert? If yes, state the minimum diameter for each culvert (may be shown on map).

d. [ ] Yes [**X**] No Is this THP Review Process to be used to meet Department of Fish and Wildlife CEQA review requirements? If yes, you should attach the required 1611 Addendum below, or at the end of Section II; and you should 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 1611 Agreements and THP Documentation".

e. [ ] Yes [**X**] No Are any exceptions provided under F & G code 1600 et seq., and made an enforceable part of plan? If yes, identify the exceptions. 923 [943,963](d).

f. [ ] Yes [**X**] No Will new drainage structures and facilities on watercourses that support fish or listed aquatic species be constructed? If yes, structures and facilities shall be fully described and allow unrestricted passage and natural movement of bedload. 914.8[934.8, 954.8](c) and 923.9 [943.9, 963.9](c).

g. [ ] Yes [**X**] No Are there any new permanent constructed, reconstructed, and temporary logging road watercourse crossings, including those to be abandoned or deactivated that require mapping per 1034 (x)(6)? If structure is a permanent culvert, specify the minimum diameter and the method(s) used to determine the culvert diameter. 923.9 [943.9, 963.9](e).

h. [ ] Yes [**X**] No Is there any exception to flagging or otherwise identifying the location of any constructed or reconstructed road watercourse crossing prior to the pre harvest inspection? If yes, provide an explanation and justification pursuant to 923.9 [943.9, 963.9](e)(1).

i. [ ] Yes [**X**] No Will methods other than critical dips be utilized in the construction or reconstruction of logging road watercourse crossings which utilize culverts? If yes, provide the methods that will be used to address diversion of overflow. 923.9 [943.9, 963.9](j).

j. [ ] Yes [**X**] No Are there any watercourse crossings that are existing or proposed for construction that are located on logging roads within the logging area? If yes, identify the crossing and provide the methods to mitigate or address the diversion of stream overflow at the crossing. 923.9 [943.9, 963.9](k).

k. [ ] Yes [X] No Will rock be used to stabilize crossing outlets? If yes, describe the range of required rock dimensions. 923.9 [943.9, 963.9](l).

l. [ ] Yes [X] No Is there a significant volume of sediment stored upstream from any crossing proposed to be reconstructed or removed? If yes, describe how the stored sediment shall be removed or stabilized, to the extent feasible, and in conformance with CDFW 1600 agreements, where applicable. 923.9 [943.9, 963.9](n).

m. [ ] Yes [X] No Are crossing fills over culverts large, or do logging road watercourse crossing drainage structures and erosion control features historically have a high failure rate? If yes, such drainage structures and erosion control features shall be oversized, designed for low maintenance, reinforced, or removed before the completion of timber operations; or as specified in the plan. 923.9 [943.9, 963.9](o).

n. [ ] Yes [X] No Will any logging road watercourse crossing be removed? If yes, describe the removal in the plan pursuant to the standards of 923.9 [943.9, 963.9](p)(1)–(4)

Class II watercourses and springs: *Protection B, E, I, and shall be given a WLPZ of 50 feet on slopes less than 30% and 75 feet on slopes 30%-50%.*

"B" WLPZ shall be clearly identified on the ground by an RPF, or supervised designee, with paint, flagging, or other suitable means, prior to the start of timber operations.

The standard width WLPZ has been identified by blue and white striped "Lake and Watercourse Protection Zone" flagging prior to the preharvest inspection.

"E" To ensure retention of shade canopy filter strip properties and the maintenance of wildlife values described in 14 CCR 956.4(b), a base mark shall be placed below the cutline of harvest trees within the zone and shall be done in advance of preharvest inspection by the RPF who prepared the plan, or his designee.

Trees to be harvested within the WLPZ have been marked with a white stripe at breast height and a white dot at the base of the tree below the cutline prior to the PHI.

"I" To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifer. Due to variability in Class II watercourses these percentages and species composition may be adjusted to meet on-site conditions when agreed to by the RPF and the Director in the THP.

No adjustment of percentage or species composition is requested.

As per 14 CCR 936.3 (g): Recruitment of large woody debris for instream habitat shall be provided by retaining at least two living conifers per acre at least 16 inches diameter breast high and 50 ft. tall within 50 ft. of the Class II watercourse.

As per 14 CCR 936.4(b)(6): Within the WLPZ, at least 75% surface cover and undisturbed area shall be retained to act as a filter strip for raindrop energy dissipation, and for wildlife habitat.

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 as described in 954.8(b).
        (2) Crossings of Class III watercourses that are dry at the time of timber operations.
        (3) At new and existing tractor and road crossings approved as part of the Fish and Game Code process (F&GC § 1600 et seq.).
    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 as described in 954.8(b).
(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 as part of the Fish and Game Code Process (F&GC 1600 et seq.)

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 or alternative practice. Refer to 956.1 for addressing the in lieu practices. For each item marked "yes", the operational information proposed under #2 below should be provided in Section II, including mapping requirements [1034(x)(15) and (16)]; and the following should normally be provided in Section III:

1. State the standard rule;
2. Explain and describe each proposed practice
3. Explain how the proposed practice differs from the standard practice;
4. Provide 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, as per 956.1(a).

28. a. [X] 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 1032.10 apply. Proof of notice by letter and newspaper should be included in THP Section V. If No, "28 b." need not be answered.

b. [ ] Yes [X] No Is an exemption requested of the notification requirements of 14 CCR 1032.10? If yes, an explanation and justification for the exemption must appear in THP Section III. Specify if requesting an exemption from the letter, the newspaper notice or both.

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

29. [ ] Yes [X] 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?

HAZARD REDUCTION

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

As per 14 CCR (937.2)

(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.

(b) Within 100 feet of the edge of the traveled surface of public roads, slash created and trees knocked down by timber operations shall be treated by lopping for fire hazard reduction, piling and burning or chipping.

(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 hazard reduction, removed, chipped or piled and burned; lopping may be required between 200-500 feet where unusual fire risk or hazard exist as determined by the Director or the RPF.

Lopping: Severing and spreading of slash so that no part of it remains more than 30 in. (76.2 cm) above the ground.

Note: *Because this THP is a Timberland Conversion for a subdivision; ultimately all slash and other vegetation will be either removed or chipped prior to final grading.*

b. [ ] Yes **[X]** 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.

31. [ ] Yes **[X]** No Will piling and burning be used for hazard reduction? See 14 CCR 937.1-.10 for specific requirements. Note: LTO is responsible for slash disposal. This responsibility cannot be transferred.

BIOLOGICAL AND CULTURAL RESOURCES

32. a. **[X]** 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 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.

If during any activity of the harvest plan any evidence of sensitive bird species is discovered the provisions of 14 CCR 939.2 b-d shall be followed.

(b) During timber operations, nest tree(s), designated perch trees(s), screening tree(s), and replacement trees(s), shall be left standing and unharmed except as otherwise provided in these following rules.

(c) Timber operations shall be planned and operated to commence at least 0.25 miles from an occupied nest tree unless explained and justified by the RPF in the THP.

(d) When an occupied nest site of a listed bird species is discovered during timber operations, the timber operator shall protect the nest tree, screening trees, perch trees, and replacement trees and shall apply the provisions of subsections (b) and (c) above and shall immediately notify the Department of Fish and Wildlife and Cal Fire. An amendment that shall be considered a minor amendment to the timber harvesting plan shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the Department of Fish and Wildlife and Cal Fire

There were no signs of any threatened or endangered raptors within the THP boundary. Either the RPF or his supervised designee traversed the entire property involved in the THP during field work including; timber marking and harvest unit layout. During field research and timber stand marking each tree was examined for nests, whitewash, feathers, and any information that would determine if raptors are within the THP area. Fieldwork was conducted during March 2015 through July 2015.

Future stand investigations will be conducted prior to the start of any operations which are to occur between the periods of February 15 through September 15 of any year. This will involve a traverse by either the RPF or his supervised designee to investigate any presence of nest structures, whitewash, feathers, or any other signs of raptor activity within the tree canopy. In addition, tree fallers will be educated on assessing the presence of any nesting raptors through the discovery of whitewash, feathers, or other residue typically present within an occupied nest If any observations of nesting raptors are witnessed operations will be held off until an appropriate consultation with CAL FIRE and CDFW is conducted.

When an unoccupied nest site is discovered during timber operations, the nest shall be treated as an "active nest", as defined by 14 CCR 895.1, until such time that it can be determined whether it is "active" or "abandoned". Active nest shall be protected as per 14 CCR 939.3(a), (b), & (c). An amendment to the timber harvest plan shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the Department of Fish and Wildlife.

The Great Grey Owl was given "Endangered" status under the California Endangered Species Act (CESA). This species was not observed within the THP boundary. The present stand does not possess the dense mature canopy component as preferred by this species for roosting. Open meadow areas are well under 20 acres in size. However the THP does contain a canopy open enough for suitable foraging habitat. If prior to or during timber operations a Great Grey Owl is observed, CAL FIRE and the pertinent CDFW Timberland Planning office shall be notified of the detection and operations will be held off completely until an appropriate consultation with CAL FIRE and CDFW is conducted. After consultation, any additional protection measures agreed upon will be amended into the plan.

The Pacific Fisher was given candidacy status for potential listing under the California Endangered Species Act (CESA). During the candidacy period, the Pacific Fisher shall be treated as a listed species. There are very few downed logs within the THP, and no trees were observed of sufficient diameter (14-54 inches dbh for natal and maternal dens) with cavities large enough for an adult female and kits. There are very few decadent or deformed trees, large downed logs, or snags within the project boundary. The surrounding area is heavily populated and likely does not provide suitable habitat for the Pacific Fisher. This species will occupy a broad range of habitat types within their known range; however prefer more remote locations. If during timber operations a fisher is observed, CAL FIRE and the pertinent CDFW Timberland Planning office shall be notified of the detection. The critical period for fishers is March 1 through July 31, where reproduction and caring for young occurs and when the highest potential for disturbance exists. During timber operations, if a fisher den or a female with young is observed, operations shall cease within 0.25 miles and CAL FIRE and CDFW will be immediately contacted. After consultation, any additional protection measures agreed upon will be amended into the plan.

As of June 26, 2013 the Townsend's big-eared bat was given candidacy status for potential listing under the California Endangered Species Act (CESA). During the candidacy period, the Townsend's big-eared bat will receive the same legal protections under CESA as a threatened or endangered species, including the general prohibition on "take" of such species. This species primarily roosts in caves, mines, abandoned dwellings, and large basal hollows of trees. There is no such suitable habitat within or adjacent to the THP. The barn and other outbuildings are currently used for storage and equipment parking and are entered on a regular basis. Trees within and adjacent to the THP are not of sufficient diameter to provide adequately sized basal hollows for this species. Nor were any trees observed with large crevices or basal hollows within the THP. If during timber operations a big-eared bat is observed, CAL FIRE and the pertinent CDFW Timberland Planning office shall be notified of the detection. During timber operations, if a big-eared bat or roost is observed, operations shall cease within 300 feet of the location site and CAL FIRE and CDFW will be immediately contacted. After consultation, any additional protection measures agreed upon will be amended into the plan.

The California Red Legged Frog has been federally listed as a "threatened" species and the California Fish and Wildlife Service has designated it as a "species of special concern". The THP lies within the frog's historic range. This species was not observed nor was there any suitable habitat available within the THP. The Class II watercourse is very shallow with little to no flow. Prior to each year of operations the RPF or his supervised designee shall investigate the watercourse within the THP for the presence of California Red Legged Frog. If prior to or during timber operations a California Red Legged Frog is observed, CAL FIRE and the pertinent CDFW Timberland Planning office shall be notified of the detection and operations will be held off within 300 feet of the high water line of the Class II watercourse until an appropriate consultation with CAL FIRE and CDFW is conducted. After consultation, any additional protection measures agreed upon will be amended into the plan. The standards for USFWS Take Avoidance will be amended into the THP.

As of June 30, 2014 the Sierra Nevada Yellow-legged Frog and the northern distinct population of the Mountain yellow-legged Frog have been listed as endangered under the Endangered Species act of 1973 by the U.S. Fish & Wildlife Service. The THP lies well outside the current and historic of the Sierra Nevada Yellow-legged Frog. The Class II watercourse is very shallow with little to no flow. Due to the THP location and lack of suitable habitat there shall be not impact upon this species.

The Sierra Nevada Red Fox was given threatened status under the California Endangered Species Act (CESA). This species was not observed within the THP boundary. The THP occurs outside the current range for this species. Timber fallers will be instructed to intently observe areas where denning is possible as well as the presence on any sign associated with this species. If this species is observed or signs of activity are noticed within the THP; operations shall stop immediately, CALFIRE and the CDFW shall be notified, and an evaluation of the THP area shall occur to assess any Sierra Nevada Red Fox inhabiting the project area. Operations will be held off until an appropriate consultation with CAL FIRE and CDFW is conducted. After consultation, any additional protection measures agreed upon will be amended into the plan.

As of June 4, 2014 the Gray Wolf has been listed as endangered under the California Endangered Species Act (CESA). This species requires large tracks of land with abundant prey, adequate denning sites, and prefers little human interaction. The THP occurs within an area where residential development is a common occurrence without large tracts of land as preferred by this species. If this species is observed or signs of activity are noticed within the THP; operations shall stop immediately, CALFIRE and the CDFW shall be notified, and an evaluation of the THP area shall occur to assess any Gray Wolf inhabiting the project area. Operations will be held off until an appropriate consultation with CAL FIRE and CDFW is conducted. After consultation, any additional protection measures agreed upon will be amended into the plan.

If any other listed species are detected in the THP area or in close proximity to the THP, operations within 0.25 miles of the activity center shall be stopped and CAL FIRE and the CDFW shall be contacted immediately to initiate a consultation. An amendment to the timber harvest plan shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the CDFW and CAL FIRE.

Through the scoping process it has been determined there is no suitable habitat for any listed plants. Should a special status plant species be discovered before or during the timber operations, a 25-foot no-operations buffer shall be flagged around the area and the CDFW, CAL FIRE, and the landowner or his agent shall be immediately notified. An amendment shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the CDFW. Equipment shall be excluded from this area and trees shall be directionally fell away from the site. There shall be no negative impacts to these species due to the proposed timber harvest.

Several plants and animals having endangered, threatened, or special concern status were identified within the assessment area; however according to the Natural Diversity Data Base there were no occurrences of any endangered, threatened, or species of special concern within the project boundary. Furthermore there was no suitable habitat identified within the project boundary for any of the plant species identified within the assessment area by the Natural Diversity Data Base or the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California.

b. [ ] Yes [**X**] No Are there any non-listed species which will be significantly impacted by the operations? If yes, identify the species and the provisions to be taken for the protection of the species.

NOTE: See THP Form Instructions or the CDF Mass Mailing, 07/02/1999, section on "CDF Guidelines for Species Surveys and Mitigations" to complete these questions.

If a non-listed occupied raptor nest or individual is detected in the THP area or in close proximity to the THP during the critical period (March 1st - August 15th), operations within 500 feet of the activity center will be stopped, and Cal Fire and CDFW shall be contacted to initiate a consultation; or the RPF or wildlife biologist, qualified to consult on the detected non-listed species, shall flag and maintain a seasonal 500 foot disturbance buffer until: 1) the young are capable of sustained flight and can take prey independently or 2) the nest has failed after June 1 as determined by a wildlife biologist familiar with raptor biology. This 500 foot seasonal disturbance buffer may be reduced by the RPF if an existing topographical feature (ridge, highway, river, etc.) provides a buffer from visual and auditory disturbance created by operations. The topographical buffer shall be fully described in the THP.

If an inhabited nest is observed within or adjacent to the THP boundary further mitigation shall include: Should operations outside the buffer cause the nesting raptor to vocalize, get up from a brooding position, or fly off the nest, operations will be moved back from the nest far enough to stop this agitated behavior by the raptor. The RPF will advise the CDFW prior to the end of the year in which the occupied nest was discovered of: a) the raptor species encountered, b) the size of any set back buffer employed, and c) the reproductive success or failure of the discovered nest.

An alternative protection measure shall be to contact a wildlife biologist, qualified to consult on the detected non-listed species, to provide mitigations that will protect the activity center. An amendment that shall be considered a minor amendment to the timber harvest plan shall be filed reflecting such additional protection.

During the scoping process for this THP a nine quad area has been used in evaluating biological resources. The California Natural Diversity Data Base (CNDDB) was queried on May 12, 2015 for the following U.S.G.S. 7.5' Quadrangles: Grass Valley, Rough And Ready, North Bloomfield, Chicago Park, Lake Combie, Wolf, French Corral, Colfax, and Nevada City.

The California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS) was also reviewed for the above Quadrangles. Information was gathered from the California Wildlife Habitat Relationship System (CWHR) for those species identified within the project and assessment boundaries. A discussion of habitat conditions present within both the project and assessment boundaries along with a description of the identified species and their associated habitat requirements have been included within Section III and Section IV of this THP.

An exemption from a Timberland Conversion Permit has been submitted to and approved by CAL FIRE, exemption number 15-01EX. Included with the Timberland Conversion Permit is the "Special-Status Plant Survey" prepared by Wetland Consultant Greg Matuzak. This document includes a discussion of species located and suitable habitat available within the project boundary. As stated there were no special-status plants or species of special concern located within the project vicinity.

PART OF PLAN

33. [X] 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.

All snags will be removed as a part of the timber conversion process. There will be no snags remaining after harvest.

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

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

36. a. [X] Yes [ ] No Has an archaeological survey been made of the THP area?
b. [X] Yes [ ] No Has an archaeological records check been conducted for the THP area?
c. [ ] Yes [X] No Are there any archaeological or historical sites located in the THP area? Specific site locations and protection measures are contained in the Confidential Archaeological Addendum in Section VI of THP, which is not available for general public review.

37. [ ] Yes [X] 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. Describe any special instructions or constraints that are not listed elsewhere in Section II.

As per 14 CCR 943.4(h) during timber operations, road running surfaces in the logging area shall be watered as necessary to prevent excessive loss of road surface materials. Water will be taken from the landowner/ caretaker's nearby residence where water trucks will be loaded from an irrigation line fed by a privately owned well. As a secondary drafting location a nearby hydrant will be used in association with the timberland conversion.

The Plan Submitter is responsible for notifying the Department of the commencement of timber operations. Notification shall be made to the following.

NEVADA-YUBA-PLACER UNIT
Forest Practice Coordinator
CAL FIRE
13760 Lincoln Way
Auburn, CA. 95603
(530) 889-0111 ext. 139
(530) 823-9201 FAX.

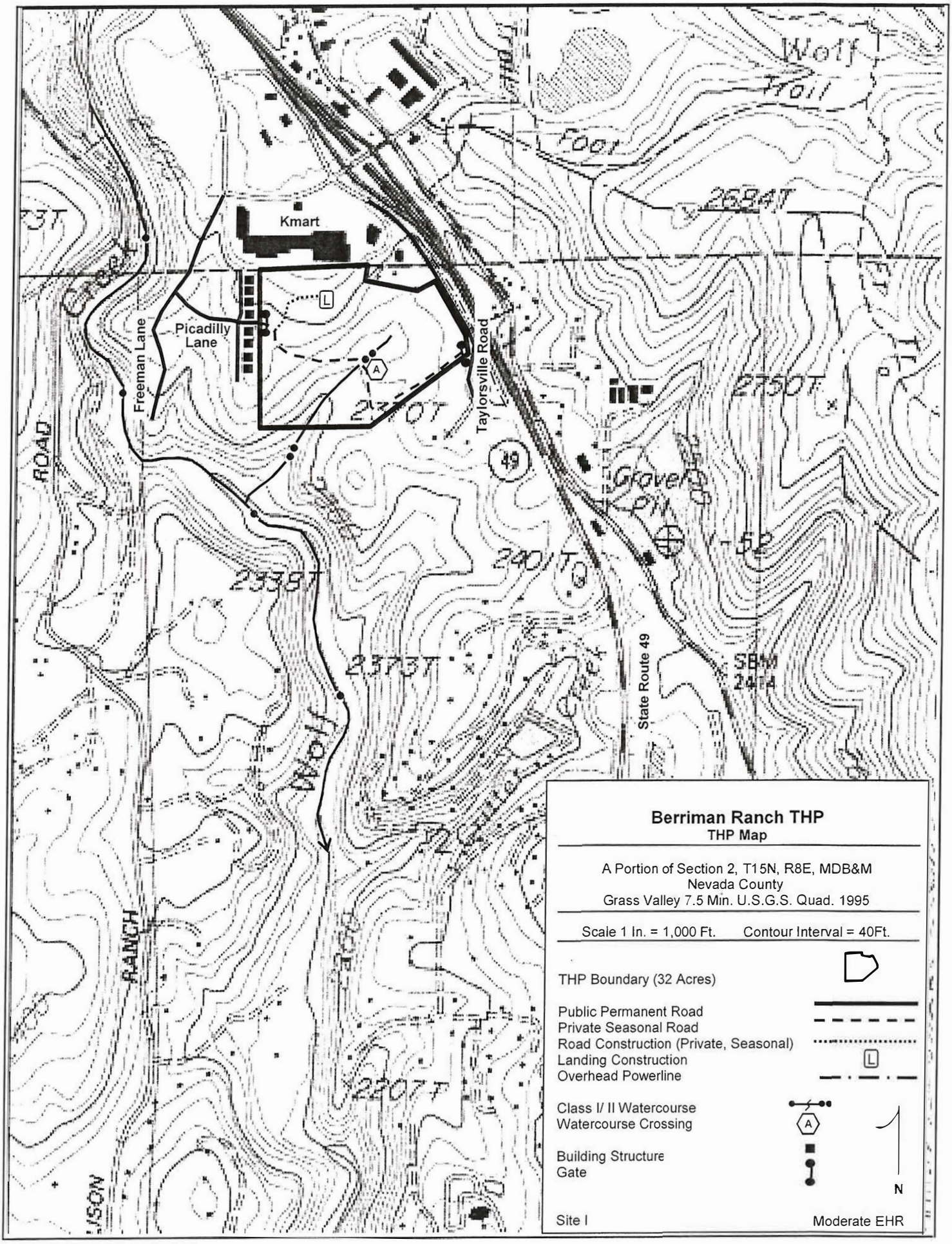
DIRECTOR OF FORESTRY AND FIRE PROTECTION

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

By: _____ 11/20/15
(Signature) (Date)

John Ramsley Forester III
(Printed Name) (Title)

PART OF PLAN



Berriman Ranch THP
THP Map

A Portion of Section 2, T15N, R8E, MDB&M
Nevada County
Grass Valley 7.5 Min. U.S.G.S. Quad. 1995

Scale 1 In. = 1,000 Ft. Contour Interval = 40Ft.

THP Boundary (32 Acres)

Public Permanent Road
Private Seasonal Road
Road Construction (Private, Seasonal)
Landing Construction
Overhead Powerline

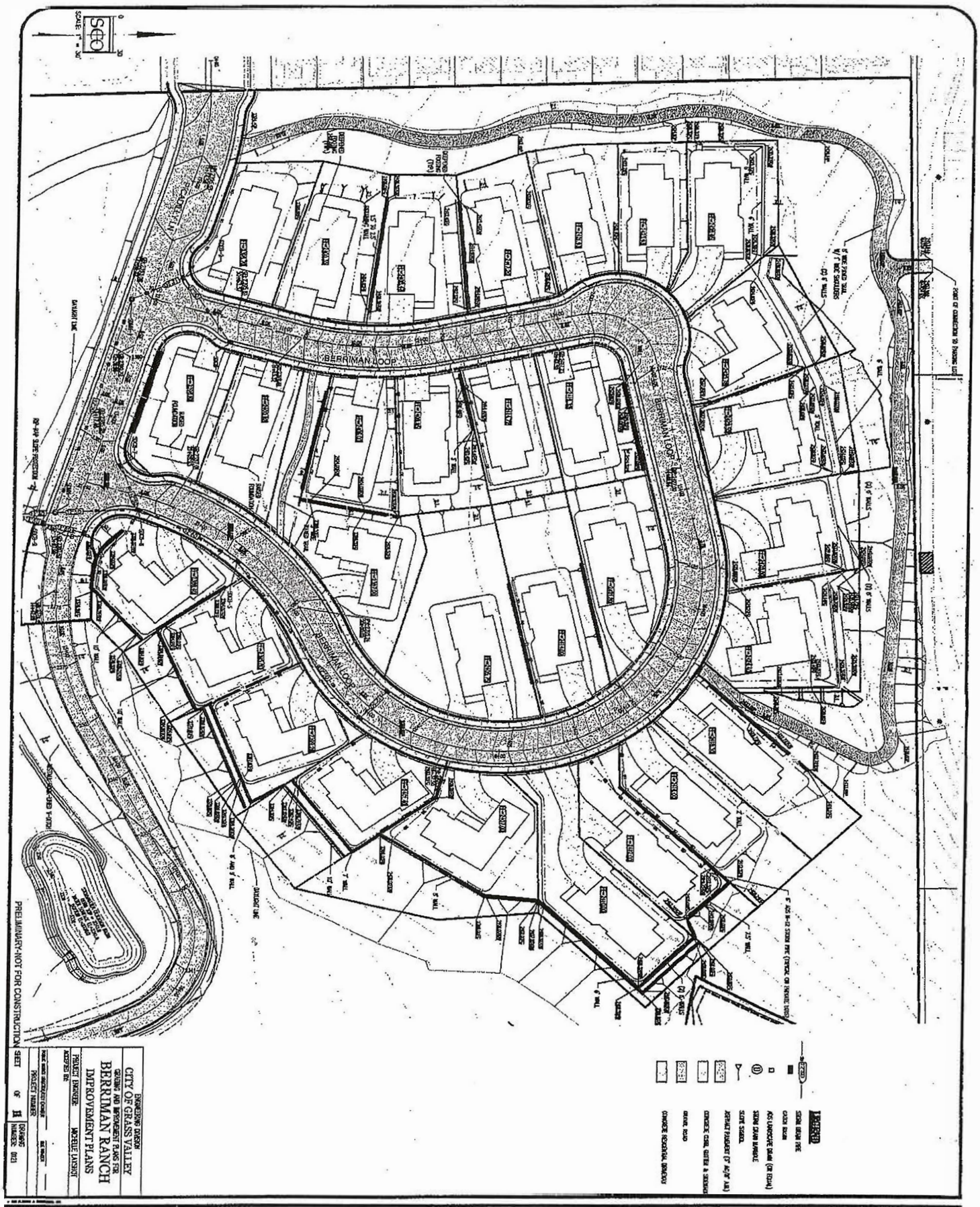
Class I/ II Watercourse
Watercourse Crossing

Building Structure
Gate

N

Site I Moderate EHR

PART OF PLAN


BERRIMAN LOOP
BERRIMAN LOOP
BERRIMAN LOOP
BERRIMAN LOOP
PRELIMINARY-NOT FOR CONSTRUCTION
SHEET 5 OF 11
CITY OF GRASS VALLEY
BERRIMAN RANCH
IMPROVEMENT PLANS
BERRIMAN RANCH
IMPROVEMENT PLANS
COMPREHENSIVE GRADING PLAN
GRASS VALLEY
CALIFORNIA
DESIGNED: MCL
DRAWN: JPD
PROJ. NO: 201445
DATE: MARCH, 2015

SECTION III
GENERAL DESCRIPTION OF PHYSICAL CONDITIONS OF PLAN SITE (1034jj)

Location: The Berriman Ranch THP consists of 32 acres to be developed into the Berriman Ranch Subdivision. The ownership is comprised of a total of 120 acres on two separate parcels. The subdivision is proposed on the northern portion of the northern parcel. The property was formerly known as the Berriman Dairy Farm but has not operated as such in many years and the property is now covered with a combination of forestland and abandoned pasture with invading brush as well as young conifers.

The THP is located immediately west of Highway 49 and has recently been annexed into the Grass Valley City Limits. It is accessed via McKnight Way to Taylorsville Road and through a locked gate on the east side of the property off Picadilly Lane.

The area surrounding the THP is a combination of smaller residential lots with tract housing to the west and one acre to six acre parcels in most directions mixed with some larger lots ranging between eight and twenty-five acres which are either residential or commercial. To the north of the project area lays Grass Valley Shopping Center, the Pine Creek Center, and other commercial buildings.

Topography & Soils: The THP area contains slopes ranging from 10%-25% and has elevations ranging from 2,260-2,440 feet with an average of 2,350 feet above sea level. Aspect is generally south, southwest. Soils within the project area consist of the following:

> ***MrC, Musick Sandy Loam - 5%-15% slopes, and MrE, Musick Sandy Loam – 15%-50% slopes;*** is a well drained soil underlain by weathered granodiorite. In a representative profile the surface layer is 25 inches of brown and reddish-brown sandy loam, light loam, and loam. The subsoil is about 73 inches of yellowish-red and red heavy clay loam and variegated reddish-yellow and yellow loam. Weathered granodiorite is at a depth of about 98 inches. This soil permeates moderately slow and has an effective rooting depth of 40 to 60 inches or more. Runoff is medium. These soils are primarily used for timber production, limited grazing. The erosion hazard for this soil is Moderate for the THP area.
>
> The harvest area is Site Class I (Dunning).

Vegetation & Stand Conditions: The THP area is located in a low elevation mixed conifer/ hardwood timber type. The project area contains a majority of ponderosa pine and sugar pine with fewer numbers of incense cedar and very few Douglas-fir. Merchantable conifers are approximately 60-110 years old. The understory consists primarily of ponderosa pine, sugar pine, and incense cedar seedlings, saplings, poles, and mature trees up to 18 inches in diameter. Brush and shrubs within the project area consist of live oak, manzanita, deer brush, poison oak, Himalaya berry vines, and mountain misery. There is a heavy concentration of duff and litter debris covering most of the forest floor.

There are no late successional forest stands present as defined in 895.1 of the forest practice rules.

Watershed & Stream Conditions:
The THP area drains via a Class II tributary to a Class I watercourse Wolf Creek. The watercourse originates within the project area and travels to the southwest.

The Class II watercourse within the THP area is approximately 3-5 feet wide and 1-2 feet deep. The watercourse originates within a meadow/ orchard area and travels towards the west off the property. The watercourse eventually enters into Wolf Creek. The channel consists of silt, gravel, cobble, and a few larger rocks. Sideslopes range from 5% near its origin to 15% at the point it leaves the property with an average gradient of 8%. Riparian vegetation includes alder and willow. There is one existing crossing using two 30-inch CMPs near the origin of the watercourse. The culverts looks to be in good condition and sufficient for properly draining the area above it. This watercourse has been given a standard Class II WLPZ with associated protection measures. The watercourse is in good condition and showing no signs of instability.

NEW ROAD CONSTRUCTION (Item #24)

A short portion of road (approximately 300 feet) will be constructed north of the existing seasonal road. This road follows a portion of existing skid trail and will be used to access a new landing. The road will follow the alignment of the proposed road traveling through the subdivision as depicted on the official subdivision map. The landing will be located within the center of the subdivision where the majority of the vegetation will be cleared for housing. Once loggings operations have completed the road shall remain open for underground utility work and eventually surfaced as described in the subdivision conditions of approval. There are no watercourses within the vicinity of the proposed road and landing. Slopes within the vicinity range 0-10 percent with the road grade traveling at approximately 7 percent. Road and landing construction shall not occur during the winter operating period.

DOMESTIC WATER NOTIFICATION (Item #28)

Request for information on domestic water supplies were sent out to the following landowners within 1000 feet downstream of the project area boundary (see attached example): There was no further information received regarding any domestic water uses associated this THP.

RPF Certification: Berriman Ranch THP
14 CCR 1032.10 Request for Information on Domestic Water Supplies

A list of the names and addresses of all other landowners within 1,000 feet downstream of the THP boundary whose ownership adjoins or includes a Class I, II, or IV watercourse(s) which receives drainage from the proposed timber operations.

Parcel # 22-140-49
Randall & Debra Blakemore
10538 Mote Ln.
Grass Valley, CA. 95949

Parcel # 22-160-02
Susanne & Daren Runion
13070 King Way
Grass Valley, CA. 95949

WILDLIFE (Item #32)

During the scoping process for this THP a nine quad area has been used to determine the occurrences of biological and botanical species within and adjacent to the THP boundary. For scoping purposes the California Natural Diversity Data Base (CNDDB) was queried on May 12, 2015 for the following U.S.G.S. 7.5' Quadrangles: Grass Valley, Rough And Ready, North Bloomfield, Chicago Park, Lake Combie, Wolf, French Corral, Colfax, and Nevada City. The California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS) was also reviewed for the above Quadrangles. Information was gathered from the California Wildlife Habitat Relationship System (CWHR) for those species identified within the project and assessment boundaries. Further discussion of habitat conditions present within both the project and assessment boundaries along with a description of the identified species and their associated habitat requirements have been included within Section IV of his THP.

Several plants and animals having endangered, threatened, or special concern status were identified within the assessment area; however according to the Natural Diversity Data Base there were no occurrences of any endangered, threatened, or species of special concern or any associated habitat within the project boundary.

Habitat within the project site is primarily mixed hardwood- conifer. This habitat is characterized by the following information derived from the California Wildlife Habitat Relationship System.

Vegetation

Structure-- Montane Hardwood-Conifer (MHC) habitat includes both conifers and hardwoods (Anderson et al. 1976), often as a closed forest. To be considered MHC, at least one-third of the trees must be conifer and at least one-third must be broad-leaved (Anderson et al. 1976). The habitat often occurs in a mosaic-like pattern with small pure stands of conifers interspersed with small stands of broad-leaved trees (Sawyer 1980). This diverse habitat consists of a broad spectrum of mixed, vigorously growing conifer and hardwood species. Typically, conifers to 65 m (200 ft) in height form the upper canopy and broad-leaved trees 10 to 30 m (30 to 100 ft) in height comprise the lower canopy (Proctor et al. 1980, Sawyer 1980). Most of the broad-leaved trees are sclerophyllous evergreen, but winter-deciduous species also occur (Cheatham and Haller 1975).

Relatively little understory occurs under the dense, bilayered canopy of MHC. However, considerable ground and shrub cover can occur in ecotones or following disturbance such as fire or logging. Steeper slopes are normally devoid of litter; however, gentle slopes often contain considerable accumulations of leaf and branch litter (Cheatham and Haller 1975).

Habitat-- Geographically and biologically, Montane Hardwood-Conifer is transitional between dense coniferous forests and montane hardwood, mixed chaparral, or open woodlands and savannahs. MHC merges with many other habitats at its upper and lower ecotones. These habitats include Valley-Foothill Hardwood (VFH), Valley-Foothill Hardwood-Conifer (VHC), Valley-Foothill Riparian (VRI), Closed-Cone Pine-Cypress (CPC), Montane Hardwood (MHW), Mixed Conifer (MCN), Douglas-fir (DFR), Redwood (RDW), Montane Riparian (MRI), Montane Chaparral (MCP), and Mixed Chaparral (MCH). The habitat is an area of vegetational and floristic diversity with large numbers of endemic species (Proctor et al. 1980).

Wildlife Considerations-- Montane Hardwood-Conifer provides habitat for a variety of wildlife species. Mature forests are valuable to cavity nesting birds. Moreover, mast crops are an important food source for many birds as well as mammals. Canopy cover and understory vegetation are variable which makes the habitat suitable for numerous species. In mesic areas, many amphibians are found in the detrital layer. Due to geographic variation in components of Montane Hardwood-Conifer, caution must be exercised when predicting wildlife species use.

The CWHR Habitat Stages of the THP area include 2M and 2D within the understory and 4P, 4M, and 5M, and 5D within the overstory. These stages are described within the following table.

Habitat Stage:

* **Information from CWHR System.**

Standards For Tree Sizes					Standards For Canopy Closure		
WHR	WHR Size Class	Conifer Crown Diameter	Hardwood Crown Diameter	Dbh	WHR	WHR Closer Class	Ground Cover (Canopy Closer)
1	Seedling Tree	n/a	n/a	<1"	S	Sparse Cover	10%- 24%
2	Sapling Tree	n/a	<15'	1"- 6"	P	Open Cover	25%- 39%
3	Pole Tree	<12'	15'- 30'	6"- 11"	M	Moderate Cover	40%- 59%
4	Small Tree	12'- 24'	30'- 45'	11"- 24"	D	Dense Cover	60%- 100%
5	Medium/ Large Tree	>24'	>45'	>24"			
6	Multi-Layered Tree	Size Class 5 Trees over a distinct layer of Class 4 or 3 trees, total tree canopy exceeds 60% closure.					

The following tables summarize the results of the scoping process.

Sensitive Plant Species:

* **Table information was gathered from the California Natural Diversity Data Base (CNDDB) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS).**

Species	Habitat	Status	Blooming Period	Habitat In Project	Plant Located
Calystegia stebbinsii, Stebbins's morning-glory	Open grasslands; often within serpentine or gabbroic soils.	Federal – Endangered California – Endangered CA. Rank – 1B.1	April – July	No	No
Chlorogalum grandiflorum, Red Hills soaproot	Open area on serpentine and gabbro substrate often on "historically disturbed sites.	CA. Rank – 1B.2	May – June	No	No
Fremontodendron decumbens, Pine Hill flannelbush	Gabbroic or serpentinite, rocky soils.	Federal – Endangered CA. Rank – 1B.2	April – July	No	No
Juncus digitatus, Finger rush	Vernal pools, xeric sites.	CA. Rank – 1B.1	May – June	No	No
Lewisia cantelovii Cantelow's lewisia	Mesic, granitic, sometimes serpentinite seeps.	CA. Rank – 1B.2	May – October	No	No
Lycopodiella inundata Inundated Bog-clubmoss	Bogs and fens, peat bogs, muddy depressions, pond margins.	CA. Rank – 2B.2	June – September	No	No
Mielichhoferia elongate Elongate copper-moss	Vernally mesic metamorphic rock.	CA. Rank – 2B.2	N/A	No	No
Poa sierra, Sierra blue grass	Shady moist slopes, often on mossy rocks.	CA. Rank – 1B.3	April -- June	No	No
Rhynchospora capitellata Brownish beaked-rush	Meadows and seeps, marshes and swamps.	CNPS – 2B.2	July – August	No	No
Sidalcea stipularis Scadden Flat checkerbloom	Montane freshwater marshes or swamps.	California – Endangered CNPS – 1B.1	July – August	No	No

Generally the THP area is predominantly covered with conifer species and occasional oaks. The factors used to determine if suitable habitat exists for the species listed were standard and specific habitat requirement descriptions paired with ocular investigations of those habitats relative to the species listed. Ocular investigations of associate species typically found with the listed species were also used to determine the habitat potential for the project area. The species listed are primarily found in specific rocky conditions, meadows, wet and boggy areas, etc.

Sensitive Terrestrial Vertebrates:

* **Table information was gathered from the California Natural Diversity Data Base (CNDDB) and the California Wildlife Habitat Relationship System (CWHR).**

Species	Current Status	Habitat Present Within THP	Habitat Present Within Assessment Area	Information Source
Accipiter gentilis Northern Goshawk	CDFW – Special Concern BOF – Sensitive	No	Yes	CNDDB
Accipiter striatus, Sharp-shinned Hawk	CDFW – Watch List	Yes	Yes	CNDDB, CWHR
Aquila chrysaetos, Golden Eagle	CDFW – Fully Protected CDFW – Watch List BOF – Sensitive	No	Yes	CNDDB, CWHR
Canus lupus, Gray Wolf	Federal –Endangered California – Endangered	Yes	Yes	CNDDB, CWHR
Corynorhinus townsendii, Townsend's Big-eared Bat	California- Threatened Candidate CDFW – Special Concern	No	Yes	CDFW
Desmocerus californicus dimorphus, Valley Elderberry Longhorn Beetle	Federal – Threatened	No	Yes	CWHR
Emys marmorata, Western Pond Turtle	CDFW – Special Concern	No	Yes	CDFW
Falco columbarius, Merlin	CDFW – Watch List	No	Yes	CDFW
Haliaeetus leucocephalus Bald Eagle	Federal – Delisted California – Endangered CDFW – Fully Protected BOF – Sensitive	No	Yes	CNDDB, CWHR
Laterallus jamaicensis coturniculus, California Black Rail	California—Threatened CDFW – Fully Protected	No	Yes	CNDDB, CWHR
Pekania pennant, West Coast Fisher	Federal – Proposed Threatened California – Threatened Candidate CDFW – Special Concern	No	Yes	CNDDB
Phrynosoma blainvillii, Coast Horned Lizard	CDFW – Special Concern	No	Yes	CNDDB
Rana boylii Foothill yellow-legged frog	CDFW – Special Concern	No	Yes	CNDDB
Rana draytonii California red-legged frog	Federal – Threatened CDFW – Special Concern	No	Yes	CNDDB
Strix nebulosa, Great Gray Owl	California – Endangered	Yes	Yes	CWHR
Strix occidentalis occidentalis, Spotted Owl	CDFW – Special Concern	Yes	Yes	CNDDB, CWHR
Taricha torosa, Coast Range Newt	CDFW – Special Concern	No	Yes	CNDDB, CWHR
Vulpes vulpes necator, Sierra Nevada Red Fox	California—Threatened	No	Yes	CNDDB

A more detailed discussion of habitat conditions for the species listed above having potential habitat within the assessment area have been provided below along with species that are known to, or have previously been documented adjacent to the THP boundary. A species description and habitat discussion for the species listed above not having potential habitat within the THP have been provided in Section IV of this THP.

There was one small nest structures observed within the THP area. Yet the combination of the structure, size, composition, location in the tree, and adjacent open habitat suggested the nest is probably not a raptor nest. None of the trees showed signs of refurbishment or recent use.

There were no signs of any threatened or endangered raptors within the THP boundary. Either the RPF or his supervised designee traversed the entire property involved in the THP during field work including; timber marking and harvest unit layout. During field research and timber stand marking each tree was examined for nests, whitewash, feathers, and any information that would determine if raptors are within the THP area. Fieldwork was conducted during March 2015 through July 2015.

When an unoccupied nest site is discovered during timber operations, the nest shall be treated as an "active nest", as defined by 14 CCR 895.1, until such time that it can be determined whether it is "active" or "abandoned". Active nest shall be protected as per 14 CCR 939.3(a), (b), & (c). An amendment that shall be considered a minor amendment to the timber harvest plan shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the Department of Fish and Wildlife.

If any other listed species are detected in the THP area or in close proximity to the THP, operations within 0.25 miles of the activity center shall be stopped and CALFIRE and the Department of Fish and Wildlife shall be contacted immediately to initiate a consultation. An amendment to the timber harvest plan shall be filed reflecting such additional protection as is agreed between the operator and the Director after consultation with the Department of Fish and Wildlife and CALFIRE.

If a non-listed occupied raptor nest or individual is detected in the THP area or in close proximity to the THP during the critical period (March 1st - August 15th), operations within 500 feet of the activity center will be stopped, and CALFIRE and the Department of Fish and Wildlife shall be contacted to initiate a consultation; or the RPF or wildlife biologist, qualified to consult on the detected non-listed species, shall flag and maintain a seasonal 500 foot disturbance buffer until:

1) the young are capable of sustained flight and can take prey independently or 2) the nest has failed after June 1 as determined by a wildlife biologist familiar with raptor biology. This 500 foot seasonal disturbance buffer may be reduced by the RPF if an existing topographical feature (ridge, highway, river, etc.) provides a buffer from visual and auditory disturbance created by operations. The topographical buffer shall be fully described in the THP.

If an inhabited nest is observed within or adjacent to the THP boundary further mitigation shall include: Should operations outside the buffer cause the nesting raptor to vocalize, get up from a brooding position, or fly off the nest, operations will be moved back from the nest far enough to stop this agitated behavior by the raptor. The RPF will advise the CDFW prior to the end of the year in which the occupied nest was discovered of: a) the raptor species encountered, b) the size of any set back buffer employed, and c) the reproductive success or failure of the discovered nest.

An alternative protection measure shall be to contact a wildlife biologist, qualified to consult on the detected non-listed species, to provide mitigations that will protect the activity center. An amendment that shall be considered a minor amendment to the timber harvest plan shall be filed reflecting such additional protection.

There is no old growth forest component associated with this THP area or within the surrounding area. There is however, evidence of deer, small birds and small mammals. I believe that most of these will not be impacted by the timber operations and the openings created will likely provide for better habitat.

ALTERNATIVES TO THE PROJECT

Purpose of the project: This project is proposed for the landowner to proceed with an approved plan for a subdivision and to make general improvements on their land including the ability to reduce fire danger. The project will also generate income for the landowners.

Need for the project: The project will serve to remove the majority of vegetation designated under the proposed construction permit. Both conifers and hardwoods, mature and immature trees will be removed for the development and construction of a multi- unit subdivision.

Comparison of Potential Alternatives:

Alternative A: This alternative is the Timber Harvest Plan as presented with both favorable and adverse effects discussed in the THP Cumulative Impacts Assessment. This alternative is the most beneficial in meeting the landowner's objectives to provide low income housing; beneficial tax revenues, and provide employment.

Alternative B: No Action — This alternative would provide for no timber harvesting and thus the inability for the landowner to proceed with the subdivision development. Short-term benefits would be no impact to the visual landscape but in the future the vigor of stand would decrease and mortality would increase within the stand. Further mortality would add to the already existing fire potential and would not provide for a healthy forest. Since the landowner wishes to improve fire safety conditions this alternative would not meet his objectives.

Alternative C: Alternative Uses — Currently the area surrounding the harvest boundary is primarily densely populated with multi and single-family residences. Alternative agricultural practices such as orchards are not economically feasible in a residential area. Cattle grazing is not a feasible practice due surrounding residential lots. These alternatives are not in line with the landowners objectives for the property.

Alternative D: Project Timing — The project has been approved by the City of Grass Valley and therefore pushing the harvest off would only cause the landowner exorbitant future costs. There may be less visual impact presently due to timber not being harvested; however impacts would remain the same in future harvests. This alternative does not meet the landowners' goals to convert their land to the proposed subdivision.

Alternative E: Alternative Sites — The landowners own a total of 120 acres of which the 32 proposed for this project are a part of. A primary objective for the landowners is to develop a portion of the property as well as to maintain area for recreation, timber management, and wildlife habitat. There are no other locations within the larger ownership which would be of greater benefit for this project to occur. As proposed the project meets the objectives of the landowners.

Alternative F: Public Acquisition — This alternative would allow for reduced management activities through acquisition of the land by the public or the sale of a conservation easement to a private organization. This type of transaction can occur by selling properties to public/ government agencies such as BLM for public access, USFS for unique habitat conditions or archeological sites. The subject property is a 120 acre ownership, which may be a viable trade; however there are no unique habitat conditions or unique archeological sites on the property. The landowner has invested money and effort into the subdivision development and does not wish to trade or sell the property.

Alternative G: Alternative Silviculture and Harvesting Methods — Taking into consideration the landowners objectives, the proposed Exemption from Timberland Conversion for a Subdivision is the only fit.

PART OF PLAN

SECTION IV

STATE OF CALIFORNIA BOARD OF FORESTRY
CUMULATIVE IMPACTS ASSESSMENT

Cumulative Impacts Assessment Checklist	Yes	No
(1) Do the assessment area(s) or resources that may be affected by the proposed project contain any past, present, or reasonably foreseeable, probable, future projects? If the answer is yes, identify the project(s) and affected resource subject(s).	X	
(2) Are there any continuing, significant adverse impacts from past land use activities that may add to the impacts or the proposed project? If the answer is yes, identify the activities and affected resource subject(s).		X

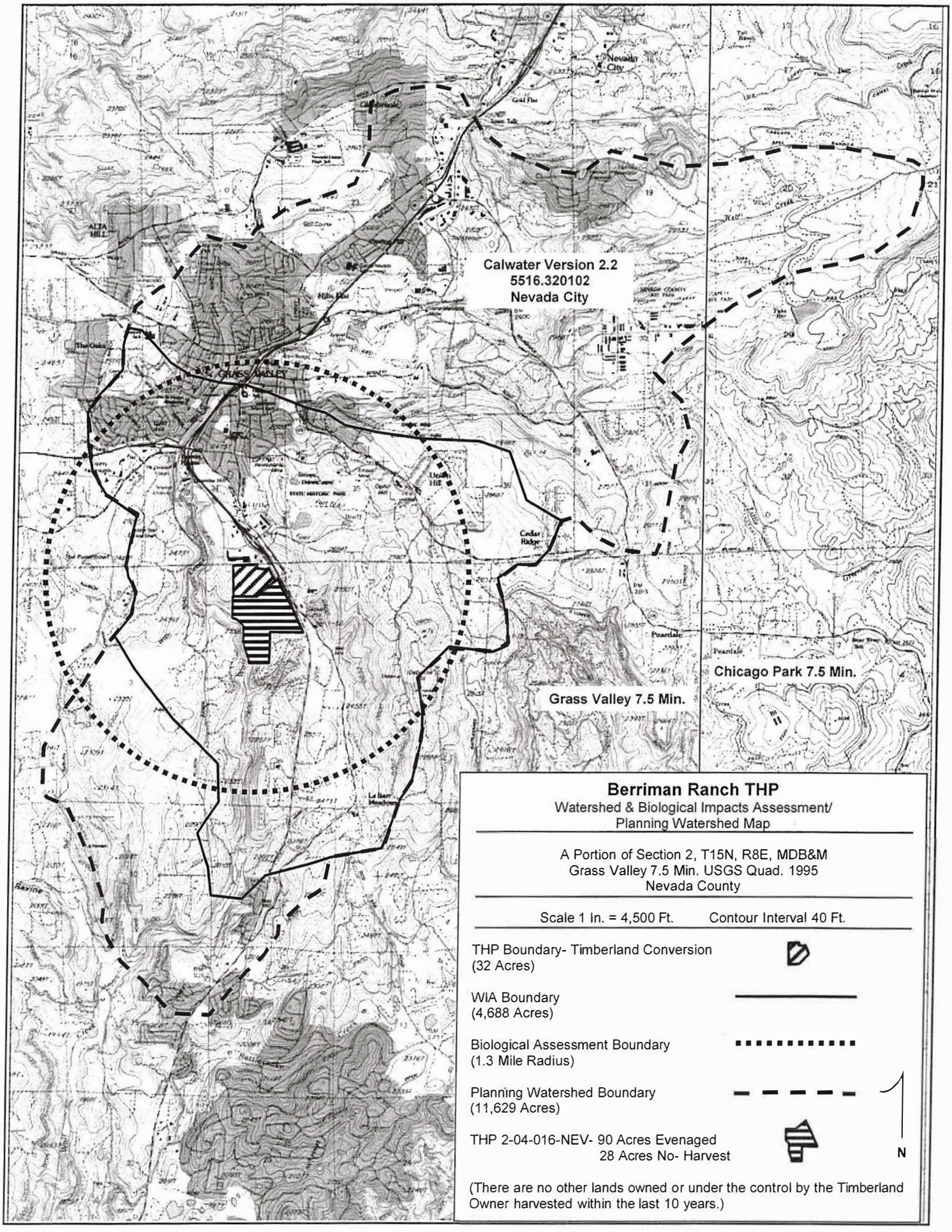
(3) Will the proposed project, as presented, in combination with past, present, and reasonably foreseeable, probable, future projects identified in items (1) and (2) above, have a reasonable potential to cause or add to significant cumulative impacts in any of the following resource subjects?

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

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 mitigations means that any potential for the proposed timber operation to cause significant adverse impacts has been substantially reduced or avoided by mitigation measures or alternatives proposed in the THP and application of the forest practice rules.

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



Berriman Ranch THP

Watershed & Biological Impacts Assessment/
Planning Watershed Map

A Portion of Section 2, T15N, R8E, MDB&M
Grass Valley 7.5 Min. USGS Quad. 1995
Nevada County

Scale 1 In. = 4,500 Ft. Contour Interval 40 Ft.

THP Boundary- Timberland Conversion
(32 Acres)

WIA Boundary
(4,688 Acres)

Biological Assessment Boundary
(1.3 Mile Radius)

Planning Watershed Boundary
(11,629 Acres)

THP 2-04-016-NEV- 90 Acres Evenaged
28 Acres No- Harvest

(There are no other lands owned or under the control by the Timberland Owner harvested within the last 10 years.)

Watershed: The watershed assessment area contains a total of 4,688 acres surrounding the Berriman Ranch THP area. The boundary was chosen based on natural topography and follows ridge lines around the assessment area. The assessment area includes a portion of Wolf Creek and the city of Grass Valley.

The assessment area was chosen due to the geography of the area. The boundary formed by ridgelines drains to Wolf Creek which eventually travels to Lake Wildwood and finally the South Yuba River. By using the ridgelines as proposed the assessment area provides a contained watershed where specific past, present, and future activities can be reviewed for potential impacts. It is the RPF's professional judgment that this area is of sufficient size to determine if the proposed THP combined with other projects within the assessment area will have a cumulative impact upon this particular watershed.

Soil Productivity: Only the area inside of the project boundaries. This is the only area that will be impacted.

Biological: During the scoping process for this THP a nine quad area has been used to determine the occurrences of biological and botanical species within and adjacent to the THP boundary. For scoping purposes the California Natural Diversity Data Base (CNDDB) was queried on May 12, 2015 for the following U.S.G.S. 7.5' Quadrangles: Grass Valley, Rough And Ready, North Bloomfield, Chicago Park, Lake Combie, Wolf, French Corral, Colfax, and Nevada City. The California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS) was also reviewed for the above Quadrangles.

The biological assessment area is a 1.3 mile radius around the project boundary. This area shall be of sufficient acreage in assessing biological impacts. The assessment area includes a wide diversity of terrain, watercourses, and forest stand types all of which provide habitat for different biological resources. Within this diversity exists habitat which is particular to that found within and adjacent to the THP. The assessment area is of sufficient size for determining what impacts may occur to the majority of the plant and animal life within the proximity of the THP. Certainly larger animals such as mountain lion and bear will have a much larger area of travel in which a portion will be within the assessment area.

Recreation: The area used in evaluating recreational impacts will be the THP area plus 300 feet.

Visual: The watershed assessment area will be used in evaluating visual impacts.

Traffic: Roads used in traffic impacts assessment will be Taylorsville Road, McKnight Way, and State Route 49.

Identification of Resource Sources

1) Archaeological Records search from California State University Sacramento.
2) Nevada County Assessors Records
3) Natural Diversity Data Base
4) California Native Plant Society Electronic Inventory
5) Tahoe National Forest Soil Survey
6) U.S.G.S. Quadrangles

CAL FIRE
Computer THP Listing
Redding Regional Office
6105 Airport Road
Redding, CA 96002

California Department of Fish and Wildlife
California Natural Diversity Database (CNDDB)
California Wildlife Habitat Relationship System (CWHR)
1807 13th Street, Suite #202
Sacramento, CA 95814
(916) 322-2493

Nevada-Yuba-Placer Ranger Unit
Ridge Road
Nevada City, CA 95959
(530) 265-2603

Tahoe National Forest
631 Coyote Street
Nevada City, CA. 95959

Past Activities

1. Within the THP Area.
There has been some impact to the property by previous timber harvesting and historic mining activities. It was previously harvested under THP 2-04-016-NEV using the Alternative silviculture prescription. The property was once an active dairy farm with cows and also an orchard. There still remains a farmhouse and barn on the property, however the barn is in poor condition and the orchard has been abandoned and invaded by brush and younger conifers. There has been no such activity for many years and none in the past 10 years.

2. Within the Assessment Area,

The majority of the assessment area is residential and small parcel landowners. There are also a number of shopping centers and other commercial buildings within this area. Across highway 49 from the project area lies a commercial rock distribution yard and an asphalt plant. There have been multiple new homes competed in the subdivision to the west and likely in other areas. Some new businesses have been added in the commercial areas.

Past Activities Possibly Within the Watershed and Biological Assessment Area:

THP #	Section	Township	Range	Acreage	Silviculture	Described Assessment Resource
2-06-008-NEV	3 34	16N 15N	8E 8E	226	Shelterwood Removal (45), Seed Tree Removal Step (76), Commercial Thinning (89), Rehabilitation (6)	Watershed/ Biological
2-13-105-NEV	26	16N	8E	773	Timberland Conversion (6)	Biological

Future Activities

Within the assessment area future activities may include the construction of a co-generation plant operating on wood fuels. The co-generation plant is in the planning stages and the actual location has not been determined. There are no other known future activities within the assessment area at this time. However, given past management practices, it is likely that timber harvesting and land development will continue on a regular basis within the assessment area along with increased rural development. It is my conclusion that there is a minimum likelihood of any of the THP activity combining with any past activities to create any cumulative impacts.

General Site Description

Watershed Impact Assessment

The CIAA is approximately 4,688 acres in size, of which this THP constitutes approximately 1%. The area includes meadow, timberland and hardwood/brush patches. The project area drains to the southwest via an unnamed Class II tributary to Wolf Creek. Channel bed features within Wolf Creek include silt, gravels, cobbles, larger rock, and bedrock. Riparian vegetation consists of alder, willow, and big-leaf maple.

Based on current conditions and knowledge of the impacts of similar past projects, proposed treatments and protective measures under this plan should provide adequate mitigation and are not expected to adversely affect the following:

- Sediment Effects: No major sediment deposits were observed within the watercourses of the assessment area. Transport capacity should remain constant within the watercourses. No sediment-induced cumulative watershed effects (CWE's) should combine with this THP to have a negative effect on this watershed.

- Water Temperature Effects: No water was observed within the THP area which would have it's chemistry or biological properties altered as a result of this THP. No biological thresholds could be readily identified. No water temperature induced CWE's should combine with this THP to have a negative effect on this watershed.

- Organic Debris Effects: No significant effects relating to organic debris are expected as a result of this operation.

- Chemical Contamination Effects: Roads will not be treated with oil or other dust-retarding materials. No pesticides are planned to be used in conjunction with this THP. No chemical contamination induced CWE's will combine with this THP to have a negative effect on this watershed.

- Peak Flow Effects: Due to preventative measures taken in erosion control structures this THP will have no affect on large sediment inputs or large openings, causing runoff routing within any watercourse nearby the THP. No peak flow induced CWE's should combine with this THP to have a negative effect on this watershed.

Current Watercourse Conditions: There is one Class II watercourse located within the THP boundary. The watercourse appears to be in good condition with no signs of bank instability or sediment movement. The following list of channel characteristics and factors have been used to describe current watercourse conditions and to assist in the evaluation of potential project impacts.

- Gravel Embedded – Silt, sand, gravels, cobbles, and larger rock within the watercourse channels vary depending on the amount of flow each watercourse has during the year. Within watercourses flowing year-round gravel and cobble are typically more common.

- Pools Filled – There are no signs of any pools which have been filled by sediment traveling down the watercourse.
- Aggrading – There are no signs of aggrading channels.
- Bank Cutting –There are no signs of bank cutting.
- Bank Mass Wasting – There are no signs of any mass wasting events.
- Downcutting – There are no signs of any downcutting.
- Scouring – There are no watercourses with scoured channel features.
- Organic Debris – There are no signs of large deposits of organic debris within any watercourse channels that would block or divert stream flow or cause a large release of debris flow.
- Stream-side Vegetation – Streamside vegetation appears to be a moderate to heavy concentration; healthy and is providing excellent bank stability. Species include willow, alder, and big-leaf maple
- Recent Floods – There have been no recent flood events that have caused any impacts upon the watercourses.

Beneficial Uses of Water: For Sources to Bear River System.

Existing beneficial uses of water:

- Municipal and Domestic Supply – All landowners within 1000 feet downstream of the proposed THP boundary whose ownership adjoins or includes a Class I, II, or IV watercourse(s) which receives drainage from the proposed timber operation were contacted. No further information was received on domestic water use. There shall be no CWEs combining with this THP to have a negative effect on Municipal and Domestic Supply.
- Irrigation – Protection measures associated with the WLPZ within the THP shall maintain minimal potential for sediment to increase within the project area. There shall be no CWEs combining with this THP to have a negative effect on irrigation.
- Stock Watering – Protection measures associated with the WLPZ within the THP shall maintain minimal potential for sediment to increase within the project area. Water shall not be diverted or blocked within the project area. There shall be no CWEs combining with this THP to have a negative effect on stock watering.
- Power – There are no weirs or impoundment areas proposed for this THP. Water shall not be diverted or blocked within the project area. There shall be no CWEs combining with this THP to have a negative effect on power.
- Contact – Protection measures associated with the WLPZ within the THP shall maintain minimal potential for sediment to increase within the project area. Roads are not proposed to be treated with chemical treatments within the THP. There shall be no CWEs combining with this THP to have a negative effect on contact.
- Canoeing and Rafting – Watercourses within the project area are un-navigable. There are no weirs or impoundment areas proposed for this THP. Water shall not be diverted or blocked within the project area. There shall be no CWEs combining with this THP to have a negative effect on canoeing and rafting.
- Other Non Contact – The proposed project shall not have any impact upon other non-contact uses.
- Warm Freshwater Habitat – Protection measures within the WLPZ shall maintain stream water temperatures both within the project area, as well as off site water temperatures fed by watercourses within the THP area. There shall be no CWEs combining with this THP to have a negative effect upon warm freshwater habitat.
- Cold Freshwater Habitat – Protection measures within the WLPZ shall maintain stream water temperatures both within the project area, as well as off site water temperatures fed by watercourses within the THP area. There shall be no CWEs combining with this THP to have a negative effect upon warm freshwater habitat.

- Wildlife Habitat – Watercourses shall maintain flows consistent with those prior to the start of operations for the proposed project. The proposed project shall have no impact on the ability for wildlife to drink and bathe within watercourses. There shall be no CWEs combining with this THP to have a negative effect upon wildlife habitat.

Potential beneficial uses of water:

- Warm Migration – Protection measures within the WLPZ shall maintain stream water temperatures both within the project area, as well as off site water temperatures fed by watercourses within the THP area. There shall be no CWEs combining with this THP to have a negative effect upon warm freshwater habitat.

- Cold Migration – Protection measures within the WLPZ shall maintain stream water temperatures both within the project area, as well as off site water temperatures fed by watercourses within the THP area. There shall be no CWEs combining with this THP to have a negative effect upon warm freshwater habitat.

- Warm Spawning Habitat – Protection measures within the WLPZ shall maintain stream water temperatures both within the project area, as well as off site water temperatures fed by watercourses within the THP area. There shall be no CWEs combining with this THP to have a negative effect upon warm freshwater habitat.

- Cold Spawning Habitat – Protection measures within the WLPZ shall maintain stream water temperatures both within the project area, as well as off site water temperatures fed by watercourses within the THP area. There shall be no CWEs combining with this THP to have a negative effect upon warm freshwater habitat.

As Per 14 CCR 936.9 Protection and Restoration in Watersheds with Threatened and Impaired values. According to the CAL FIRE Watershed mapper the Nevada City Hydrologic Unit is not a watershed with Listed Anadromous Salmonids.

As Per 14 CCR 898 the California 2010 303(d) list designates Wolf Creek has been identified as a 303d listed watershed. The primary stressor for this watershed is fecal matter derived from agriculture, urban runoff / storm sewer, and recreational and tourist activities. Much of the stream contamination that occurs is due to a sewer treatment plant upstream from the project area. Standard WLPZ widths given to watercourses within the THP will lessen the potential for increased runoff and sediment transport. Storm runoff and residential sewer mitigations for the subdivision have been approved by the City of Grass Valley. The THP will not combine with the existing listed stressor to cause increased adverse effect upon the water bodies beneficial uses.

Soil Productivity Assessment

The soil productivity assessment area is within the THP boundary. There will be some surface soil loss primarily on skid trails and landings. On the remainder of the plan area soil productivity values will be maintained by reusing existing roads, landings and skid trails whenever possible and by installing and maintaining erosion control structures according to current standards. There will be some soil compaction from heavy equipment during the subdivision construction, however areas where vegetation is to remain or replanted in association with the subdivision plan will remain less compacted.

Nutrient loss from bole removal will occur within the locations where permanent roads and structures are constructed. Areas where vegetation remains or replanted shall continue to maintain current or similar nutrient availability.

I conclude that there will be an impact on soil productivity from this timber harvesting operation; however minimized by blocks of vegetation remaining after harvest and newly planted vegetation associated with the subdivision plan.

Biological Impact Assessment

There were no signs of any threatened or endangered raptors within the THP boundary. There were no occurrences of any threatened, endangered, federally listed, or species of special concern within the THP boundary; however there were several occurrences of both plant and animal species with endangered, threatened, or special concern status within the assessment area. A species and habitat requirement discussion has been provided within this section for those species identified within the assessment area.

The implementation of this THP may have an impact on the following factors, however the proposed harvest acreage is very small which in turn will likely keep any impact minimal:

- Snags / den trees: While reviewing the timber stand a concise and consorted effort was made to identify any den trees within the THP. No such habitat was located within the boundary. Within the assessment area potential den trees and snags are still common. The THP shall have minimal impact on snag and den trees due to the low number located within the project boundary.

- Downed, large woody debris: Downed woody debris will be completely removed from the site prior to subdivision construction beginning. Within the assessment area downed woody debris has reduced within the last 5 to 10 years because of the proximity to city of Grass Valley and the potential for fire. The project will have little impact upon the amount of downed, large woody debris due to much of it being previously removed for fire protection.
- Multistory canopy: There will be no multistory canopy remaining after harvest operations. The assessment area includes wide diversity of multistory canopy. Due to the low harvest acreage, the project will have little impact on multistory canopy as a part of the larger assessment area.
- Road Density: The number of roads open on a permanent basis will likely increase within the THP boundary. During harvest operations roads access will be cleared for future construction. Within the assessment area road construction is very common, however there are many areas where no road construction will not occur in the foreseeable future. The THP will have little impact upon the increase of road density.
- Hardwood cover: Upon completion of operations there will be no hardwood component remaining within the THP boundary. However within the assessment area there will remain a diverse hardwood component throughout. The THP will have little impact upon hardwood cover as a part of the larger assessment area.
- Late seral (mature) forest characteristics: There are no functional Late Seral forest characteristics located on the subject property, however there are small to moderately sized locations with Late Seral forest characteristics within the assessment area. Past harvesting has decreased the amount of Late Seral forests within the area on private ownership. The THP shall have no impact upon Late seral forest characteristics.
- Late seral habitat continuity: There is no functional Late Seral forest continuity located on or near the project area. Past harvesting has decreased the continuity of Late Seral forest habitat on privately owned land within the area. Small to moderately sized areas of Late seral habitat continuity can be found within the assessment area. There is no such habitat within the proposed THP and there are no trees located within the project providing late seral characteristics which will be harvested. The THP shall have no impact upon Late seral habitat continuity.

Current Near Water Habitat Conditions

The Class II watercourse has a shallow gradient with very few areas for pooling. Flow occurs as spring fed flow which allows for shallow pools. The following habitat conditions are important in determining habitat quality within and near watercourses within the project area.

- Pools and Riffles – The watercourses has a low pool to riffle ratio with interspersed pools ranging from 3-6 inches deep. Flow characteristics are commonly fast moving water in narrower channels and slower moving water in wide, deeper channels. Flow is seasonal with a nearly dry channel during the summer months.
- Large Woody Debris – There is a light to moderate amount of large woody debris within the watercourse within the project. There are no areas where water is being diverted or any potential for large debris movements within the channel.
- Near Water Vegetation – Includes alder, willow, and big-leaf maple. Areas range from lightly scattered riparian vegetation to denser pockets located along the year-round flowing watercourse.

During the scoping process for this THP a nine quad area has been used in evaluating biological resources. The biological assessment boundary for this project is a 1.3 mile radius around the THP boundary. The California Natural Diversity Data Base (CNDDB) was queried on May 12, 2015 for the following U.S.G.S. 7.5' Quadrangles: Grass Valley, Rough And Ready, North Bloomfield, Chicago Park, Lake Combie, Wolf, French Corral, Colfax, and Nevada City. The California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS) was also reviewed for the above Quadrangles

The following is a species discussion and habitat description for those species determined to have habitat within the assessment area but not within the THP area.

Stebbins's morning-glory, *Calystegia stebbinsii*
CURRENT STATUS: California Native Plant Society 1B.1; Rare, threatened, or endangered in California and elsewhere. Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat). California Endangered, Federal Endangered.

LIFEFORM
Annual herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S1.1: Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province. Seriously endangered in California.

Global Ranking G1: Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
Bloom during April through July.

SPECIFIC HABITAT REQUIREMENTS
Found in open grasslands; often within serpentine or gabbroic soils with arctostaphylos in chaparral and cismontane woodland between 607- 3,575ft (185- 1,090m.).

Conclusion: This species was not observed within the THP boundary. There are no operations proposed within the open grassland around the buildings and pond except for the use of the existing roads. There are no serpentine or gabbroic soils within the project area. There are several occurrences of this species within the assessment area. Due to there not being any operations within suitable habitat for this species there shall be no negative impacts due to the proposed timber harvest.

Red Hills soaproot, *Chlorogalum grandiflorum*
CURRENT STATUS: California Native Plant Society 1B.2; Rare, threatened, or endangered in California and elsewhere. Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

LIFEFORM
Perennial bulbiferous herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S3: Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Global Ranking G3: Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
Bloom during May through June.

SPECIFIC HABITAT REQUIREMENTS
Found in open area on both serpentine and gabbro substrate often on "historically disturbed sites, in chaparral, cismontane woodland and lower montane coniferous forests between 803- 3,837ft (245- 1170m.).

Conclusion: This species was not observed within the THP boundary. There are no operations proposed within the open grassland around the buildings and pond except for the use of the existing roads. There are no serpentine or gabbroic soils within the project area. There are several occurrences of this species within the assessment area. Due to there not being any operations within suitable habitat for this species there shall be no negative impacts due to the proposed timber harvest.

Pine Hill flannelbush, *Fremontodendron decumbens*
CURRENT STATUS: Federal Endangered, California Rare, Rare Plant Rank 1B.2; Rare, threatened, or endangered in California and elsewhere. Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) California Rare, Federal Endangered.

LIFEFORM
Perennial evergreen shrub

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S1.2: Critically Imperiled, Threatened—Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Global Ranking G1: Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
Bloom during April through July.

SPECIFIC HABITAT REQUIREMENTS
Found in gabbroic or serpentinite, rocky soils in chaparral and cismontane woodland between 1,395- 2,490ft. (425-760m.).

THREATS
Development and alteration of fire regimes.

Conclusion: There are no gabbroic or serpentinite rocky soils within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Finger rush, *Juncus digitatus*
CURRENT STATUS: Rare Plant Rank 1B.1; Rare, threatened, or endangered in California and elsewhere. Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat).

LIFEFORM
Annual herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S1: Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Global Ranking G1: Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
Bloom during April through June.

SPECIFIC HABITAT REQUIREMENTS
Found in vernal pools, xeric sites in cismontane woodland openings and lower montane coniferous forest openings between 2,165- 2,590ft (660- 790m.).

THREATS
Ornamental rock mining, water diversion, development, and hydrological alterations.

Conclusion: There are no vernal pools or xeric sites within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Cantelow's lewisia, *Lewisia cantelovii*
CURRENT STATUS: California Native Plant Society 1B.2; Rare, threatened, or endangered in California and elsewhere. Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).

LIFEFORM
Perennial herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S3: Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Global Ranking G3: Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
Bloom between May through October.

SPECIFIC HABITAT REQUIREMENTS
Found in mesic, granitic, sometimes serpentinite seeps in broadleafed upland forests, chaparral, cismontane woodland, and lower montane coniferous forests between 1,082- 4,493ft. (330- 1,370m.).

Conclusion: There are no mesic, granitic soils or serpentine seeps within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Inundated bog-clubmoss, *Lycopodiella inundata*
CURRENT STATUS: Rare Plant Rank 2B.2; Rare, threatened, or endangered in California, but more common elsewhere. Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).

LIFEFORM
Perennial rhizomatous herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S1: Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Global Ranking G5: Secure, considering populations outside California
Bloom during June through September.

SPECIFIC HABITAT REQUIREMENTS
Found in bogs and fens, peat bogs, muddy depressions, marshes, swamps, and pond margins in mesic lower montane coniferous forests between 15- 3280ft. (5- 1000m.).

THREATS
Potentially by future mining.

Conclusion: There are no bogs or fens, peat bogs, muddy depressions, marshes, swamps, or pond margins within the THP area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Elongate copper-moss, *Mielichhoferia elongata*
CURRENT STATUS: Rare Plant Rank 2B.2; Rare, threatened, or endangered in California but more common elsewhere. Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).

LIFEFORM
Moss

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S2: Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

Global Ranking G4: Apparently secure, considering populations outside California. Uncommon but not rare; some cause for long-term concern due to declines or other factors.

SPECIFIC HABITAT REQUIREMENTS
Found in usually vernally mesic metamorphic rock outcrops in cismontane woodlands between 1,640- 4,265ft. (500-1300m.)

THREATS
Possibly road maintenance.

Conclusion: There is no vernally mesic metamorphic rock within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Sierra blue grass, *Poa sierrae*
CURRENT STATUS: California Native Plant Society 1B.3; Rare, threatened, or endangered in California and elsewhere. Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

LIFEFORM
Perennial rhizomatous herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S2S3: Imperiled to vulnerable— Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province. Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

Global Ranking G2G3: Imperiled to vulnerable – Imperiled- At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors. Vulnerable- At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
Bloom during April through June.

SPECIFIC HABITAT REQUIREMENTS
Found in shady moist slopes, often on mossy rocks, in canyons and forests in lower montane coniferous forests between 1,197- 4,920 ft. (365- 1,500m.).

Conclusion: There are no shady moist slopes or mossy rocks within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Brownish beaked-rush, *Rhynchospora capitellata*
CURRENT STATUS: Rare Plant Rank 2B.2; Rare, threatened, or endangered in California but more common elsewhere. Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

LIFEFORM
Perennial herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S1: Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Global Ranking G5: Secure, considering populations outside California.
Bloom during July through August.

SPECIFIC HABITAT REQUIREMENTS
Found in lower montane coniferous forests commonly within meadows and seeps, marshes and swamps between 145- 6,560ft (45- 2000m.).

THREATS
Possibly by grazing and development.

Conclusion: There are no meadows, seeps, marshes, or swamps within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Scadden Flat checkerbloom, *Sidalcea stipularis*
CURRENT STATUS: California Endangered, Rare Plant Rank 1B.1; Rare, threatened, or endangered in California and elsewhere. Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat).

LIFEFORM
Perennial rhizomatous herb

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
State Ranking S1.1: Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

Global Ranking G1: At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
Bloom during July through August.

SPECIFIC HABITAT REQUIREMENTS
Found in montane freshwater marshes and swamps between 2,295- 2,395ft. (700- 730m.).

THREATS
Altered hydrology, grazing, mowing, and non-native plants

Conclusion: There are no montane freshwater marshes or swamps within the project area. However there are several occurrences of this species within the assessment area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Northern goshawk, *Accipiter gentilis*
CURRENT STATUS: CDFW Species of Special Concern, BOF Sensitive Species.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
Northern goshawks breed in North Coast Ranges through Sierra Nevada, Klamath, Cascade, and Warner Mountains, and possibly in Mt. Pinos and San Jacinto, San Bernardino, and White Mountains. Remains yearlong in breeding areas as a scarce to uncommon resident. Prefers middle and higher elevations, and mature, dense conifer forests. Casual in winter along coast, throughout foothills, and in northern desert, where it may be found in pinyon-juniper and low elevation riparian habitats.

SPECIFIC HABITAT REQUIREMENTS
Feeding: Hunts in wooded areas. Uses snags and dead-topped trees for observation and prey-plucking perches. Feeds mostly on birds, from robin to grouse in size. Small mammals, of squirrel and rabbit size. Rarely eats carrion and insects. Prey caught in air, on ground, or in vegetation, using fast, searching flight, or rapid dashes from a perch.

Cover: Uses mature and old-growth stands of conifer and deciduous habitats.

Reproduction: Usually nests on north slopes, near water, in densest parts of stands, but close to openings (Jackman and Scott 1975). In eastern Oregon, nest usually located in fork of large, horizontal limb close to trunk, at bottom of live canopy 6-24 m (19-82 ft) above ground. Used large, live trees with mean dbh of 27.4 cm (11 in) (Reynolds *et. al.* 1982). Uses old nests, and maintains alternate sites.

Water: Usually is a water source within territory. Young have been reported bathing (Bond 1942, Brown and Amadon 1968).

Pattern: Dense, mature conifer and deciduous forest, interspersed with meadows, other openings, and riparian areas required. Nesting habitat includes north-facing slopes near water.

SPECIES LIFE HISTORY
Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/ Migration: Some movement downslope after breeding season, as far as valley foothill hardwood habitat in Sierra Nevada. Migration into lowlands occurs irregularly; probably related to availability of food rather than weather (Mallette and Gould 1978).

Home Range: Home range appears to be same as territory.

Territory: Extremely defensive of nest area. Vociferous; will strike intruders, including humans. Territory estimated to be 1.6 to 39 km^2 (0.6 to 15 mi^2) (Brown and Amadon 1968). Averaged 2.1 km^2 (0.8 mi^2) in Wyoming (Craighead and Craghead 1956). Distances of 2.9 to 5.6 km (1.8 to 3.5 mi) have been reported between nesting pairs.

Reproduction: Begins breeding in April in southern California, and by mid-June in the north. Female lays eggs in 3-day intervals for average clutch of 3 (range1-5). Female incubates 36-41 days while male provides food. After hatching, female feeds brood 8-10 days, then male helps feed them. Young may leave nest to perch at about 40 days, and often independent by 70 days.

Niche: Great horned owls, ravens, and crows may prey on young goshawks. May be limited competition for food with other accipiters.

Conclusion: This species was not observed within the THP area. The present stand does not possess the dense mature canopy component as preferred by this species for roosting. However the THP does contain a canopy open enough for suitable foraging habitat. As proposed the THP will provide a large opening within the overstory as well as openings within the understory from logging operations which may temporarily improve foraging for rodents, birds, reptiles, and other small prey. Within the assessment area both suitable roosting and foraging habitat are present. The THP will likely temporarily improve upon existing foraging habitat within the assessment area.

Sharp-shinned Hawk, *Accipiter striatus*
CURRENT STATUS: CDFW Watch List.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
Fairly common migrant and winter resident throughout California, except in areas with deep snow. Breeding distribution poorly documented. Very few breeding records for Cascades/Sierra Nevada. Probably breeds south in Coast Ranges to about 35° lat., and at scattered locations in the Transverse and Peninsular Ranges. May no longer breed in the southern Sierra Nevada. Uncommon winter migrant to Channel Islands. Uncommon permanent resident and breeder in mid-elevation habitats. Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter.

SPECIFIC HABITAT REQUIREMENTS
Feeding: Eats mostly small birds, usually no larger than jays; also takes small mammals, insects, reptiles, and amphibians. Perches, and darts out in sudden flight to surprise prey; also cruises rapidly in search flights. Often hunts as a harrier, in low, gliding flights. Often forages in openings at edges of woodlands, hedgerows, brushy pastures, and shorelines, especially where migrating birds are found.

Cover: Roosts in intermediate to high-canopy forest. Nests in dense, even-aged, single-layered forest canopy. Winters in woodlands.

Reproduction: Usually nests in dense, pole and small-tree stands of conifers, which are cool, moist, well shaded, with little ground-cover, near water. Nest is a platform or cup in dense foliage against trunk, or in main crotch of tree, usually 2-24 m (6-80 ft) above ground. Most inconspicuous nest of the accipiters (Call 1978).

Water: Nest usually located within 90 m (275 ft) of water. Captive individuals drink (Brown and Amadon 1968).
Pattern: Uses dense stands in close proximity to open areas.

SPECIES LIFE HISTORY
Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/ Migration: Some individuals migrate into California for winter. Others migrate to mountains for summer and downslope to foothills and valleys for winter.

Home Range: In Wyoming, Craighead and Craighead (1956) measured 2 breeding home ranges of 67 ha and 132 ha (166 and 326 ac). Reynolds (1979) reported crude home range of 2750 ha (6600 ac).

Territory: Appears to be same as home range. Distances averaged 4.1 km (2.5 mi) between nests. Very active nest defense.

Reproduction: Breeds April through August; peak late May to July. Clutch averages 4-5 eggs; range 3-8. Incubation 34-35 days, by both parents. Male brings food to female and semi-altricial young; fledging occurs at about 60 days. Among 11 pairs in Oregon, Reynolds (1975) reported 2.7 young/ pair, and a hatching success of 70%. Egg loss was greater than nestling loss. Nests may be reused in later years.

Niche: Fledging is timed to coincide with fledging of prey birds, providing a food supply for young, inexperienced hunters. An important predator of small birds. May compete with Cooper's hawk.

Comments: The least common breeding accipiter in California. Current breeding status in doubt; needs investigation.

Conclusion: species was not observed within the THP area. The present stand does not possess the dense mature canopy component as preferred by this species for roosting. However the THP does contain a canopy open enough for suitable foraging habitat. As proposed the THP will provide a large opening within the overstory as well as openings within the understory from logging operations which may temporarily improve foraging for rodents, birds, reptiles, and other small prey. Within the assessment area both suitable roosting and foraging habitat are present. The THP will likely temporarily improve upon existing foraging habitat within the assessment area.

Golden Eagle, *Aquila chrysaetos*
CURRENT STATUS: CDFW Fully Protected, CDFW Watch List, BOF Sensitive Species

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
Uncommon permanent resident and migrant throughout California, except center of Central Valley. Perhaps more common in southern California than in north. Ranges from sea level up to 3833 m (0-11,500 ft) (Grinnell and Miller 1944). Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Eats mostly lagomorphs and rodents; also takes other mammals, birds, reptiles, and some carrion. Diet most varied in nonbreeding season. Needs open terrain for hunting; grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. Soars 30-90 m (98-297 ft) above ground in search of prey, or makes low, quartering flights, often 7-8 m (23-26 ft) above ground. Occasionally searches from a perch and flies directly to prey (Carnie 1954). Sometimes pirates food from other predators. Hunting in pairs apparently common.

Cover: Secluded cliffs with overhanging ledges and large trees used for cover.

Reproduction: Nests on cliffs of all heights and in large trees in open areas. Alternative nest sites are maintained, and old nests are reused. Builds large platform nest, often 3 m (10 ft) across and 1 m (3 ft) high, of sticks, twigs, and greenery. Rugged, open habitats with canyons and escarpments used most frequently for nesting.

Water: No data found. Water needs probably met from prey.

Pattern: Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Mostly resident, but may move downslope for winter, or upslope after breeding season. Some migrate into California for winter.

Home Range: Home range probably same as territory. Size of home range related to prey density and availability, and openness of terrain.

Home Range: Home range probably same as territory. Size of home range related to prey density and availability, and openness of terrain.

Territory: Territory estimated to average 57 km2 (22 mi2) in Idaho (Beecham and Kocher 1975), 171-192 km² (66-74 mi²) in Montana (McGahan 1968), 23 km² (9 mi²) in Utah (Smith and Murphy 1973), 93 km² (36 mi²) in southern California (Dixon 1937), and 124 km² (48 mi²) in northern California (Smith and Murphy 1973).

Reproduction: Breeds from late January through August; peak in March through July. Clutch size 1-3, usually 2. Eggs laid early February to mid-May. Incubation 43-45 days (Beebe 1974), and nestling period usuallv 65-70 days.

Niche: Occasionally preys on domestic calves and lambs. May compete with ferruginous hawks for small mammals, and with California condors for carrion. May desert nest in early incubation if disturbed by humans (Thelander 1974).

Conclusion: There were no observations of this species within the THP area. The present stand structure of the THP is relatively open compared to areas within the assessment boundary; therefore current habitat conditions will remain similar or possibly improve for favorable hunting/ feeding. There is no presence of roosting habitat within the THP. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Gray Wolf, *Canis lupus*

CURRENT STATUS: Federal Endangered, California Endangered.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The available information suggests that wolves were distributed widely in California, particularly in the Klamath Mountains, Sierra Nevada, Modoc Plateau and Cascade Mountains. Most of the anecdotal observations are ambiguous as to whether the observer was reporting a wolf or a coyote and the physical specimens are very few in number. These facts are most consistent with a hypothesis that wolves were not abundant, even though they were widely distributed, in California. In recent years, dispersing wolves have established packs within Washington and Oregon. California is well within documented dispersal distances from extant wolves in Oregon, Washington, and Idaho.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Wolves primarily prey on medium and large mammals, especially ungulates. In western North America (including Alaska), gray wolves are known to prey on whitetailed deer (*Odocoileus virginianus*), mule deer (*O. hemionus*), moose (*Alces alces*), elk (*Cervus canadensis*), caribou (*Rangifer tarandus*), bison (*Bison bison*), muskox (*Ovibos moschatus*), bighorn sheep (*Ovis canadensis*), Dall sheep (*O. dalli*), mountain goat (*Oreamnos americanus*), beaver (*Castor canadensis*), and snowshoe hare (*Lepus americanus*). Other mammals, birds, and large invertebrates are also sometimes taken (Paquet and Carbyn 2003). In areas where wolves and livestock coexist, wolves kill livestock, including sheep, cattle, goats, horses, llamas, livestock guard dogs, and domestic pets.

Cover: Uses dense forest cover.

Reproduction: Birth usually takes place in a sheltered den, such as a hole, rock crevice, hollow log, or overturned stump.

Water: Their primary habitat requirements are the presence of adequate ungulate prey, and water.

Pattern: Wolves travel over large areas to hunt, and may cover as much as 30 miles in a day. They generally prefer the easiest available travel routes (Paquet and Carbyn 2003) and often use semi-regular routes, sometimes referred to as "runways", through their territory (Young and Goldman 1944).

SPECIES LIFE HISTORY

Activity Patterns: Active yearlong; hunts day and night.

Seasonal Movements/Migration: Wolves are habitat generalists and historically occupied diverse habitats in North America, including tundra, forests, grasslands, and deserts. Their primary habitat requirements are the presence of adequate ungulate prey, and water. As summarized by Paquet and Carbyn (2003), habitat use is strongly affected by the availability and abundance of prey, availability of den sites, ease of travel, snow conditions, availability of protected public lands, density of livestock, road density, human presence, and topography.

Home Range: Although some animals remain with their natal pack, yearling wolves frequently disperse and attempt to join other packs, establish new territories within occupied habitat, or form their own packs in unoccupied habitat (Mech and Boitani 2003). Although the average dispersing distance of NRM wolves is about 60 miles, some animals disperse very long distances. Individual wolves can disperse over 680 miles from their natal pack, with actual travel distances, documented through global positioning system technology, exceeding 6,000 miles (USFWS et al 2011a).

Territory: Packs live within territories that they defend from other wolves. Territory sizes range from approximately 20 to 215 square miles, depending on available prey and seasonal prey movements. Wolf territories in the NRM DPS tend to be larger, however, and typically vary from 200-400 square miles (USFWS 2003).

Reproduction: Typically, only the alpha male and female in each pack breed and produce pups (Mech and Boitani 2003; USFWS 2003). Females and males generally begin breeding as 2-year olds and packs typically produce one litter annually. The gestation period is 62-63 days. Most litters (1 to 11 pups) are born in early to mid-spring and average 5 pups. Pups are cared for by the entire pack, and on average four pups survive until winter (USFWS 2009a).

Comments: Except for red wolves (Canis lupus), all living North American wolves are considered to be Canis lupus - a total (as of 1997) of 32 recognized subspecies.

Conclusion: There were no observations of this species; nor is there suitable habitat available within the THP area. The project area is relatively high use with human recreational activity. There are no favorable cover conditions for this species. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Townsend's Big-eared Bat, *Corynorhinus townsendii*

CURRENT STATUS: California Threatened Candidate, CDFW Special Concern Species.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Townsend's big-eared bat is found throughout California, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats, and may be found at any season throughout its range. Once considered common, Townsend's big-eared bat now is considered uncommon in California. It is most abundant in mesic habitats.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Small moths are the principal food of this species. Beetles and a variety of soft-bodied insects also are taken. Captures their prey in flight using echolocation, or by gleaning from foliage. Flight is slow and maneuverable. Capable of hovering.

Cover: Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. May use separate sites for night, day, hibernation, or maternity roosts. Hibernation sites are cold, but not below freezing. Individuals may move within the hibernaculum to find suitable temperatures. Maternity roosts are warm. Roosting sites are the most important limiting resource. Known to roost in basal hollows in redwood trees ranging from 45.6 in. (Fellers & Pierson 2002) to 183 in. (Mazurek 2004) in diameter at breast height (dbh) and ranging from 8.45 cu. ft. (Fellers & Pierson 2002) to approximately 1,729 cu. ft. in volume (Mazurek 2004). Fellers and Pierson (2002) found COTO to day roost in 3 times as many redwood trees (n = 6; which ranged from 45.6 in. to 76.8 in. dbh with basal hollow entrances ranging from 2.6 sq. ft. to 82.6 sq. ft. in size) as Mazurek (2004, n = 2). Fellers and Pierson (2002) provided data from trees used as day roosts by COTO as follows: "Redwood trees (n = 6) with fire-created basal hollows ranged from 3.8 ft. to 6.4 ft. (45.6 in. to 76.8 in.) in diameter at breast height (dbh). The basal hollow entrances ranged from 1 – 5.9 ft. (12 in. to 70.8 in.) wide and 2.6 – 14 ft. (31.2 in. to 168 in.) high. These entrances ranged from 2.6 sq. ft. to 82.6 sq. ft. in area. Internally, the hollows ranged 1.3 – 8.4 ft. (15.6 in. to 100.8 in.) wide and 5 – 15 ft. (60 in. to 180 in.) high. The limiting factor for COTO presence in trees appears to be the physical characteristics of the hollow, and not the species of the tree itself. The above tree and basal hollow sizes should not be considered minimums for roosting.

Reproduction: Maternity roosts are found in caves, tunnels, mines, and buildings. Small clusters or groups (usually fewer than 100 individuals) of females and young form the maternity colony. Maternity roosts are in relatively warm sites.

Water: Drinks water. Relatively poor urine-concentrating ability in comparison to other southwestern bats.

Pattern: Prefers mesic habitats. Gleans from brush or trees or feeds along habitat edges.

SPECIES LIFE HISTORY

Activity Patterns: Nocturnal. Hibernates. Peak activity is late in the evening preceded by flights close to the roost. Bats at hibernacula from October to April.

Seasonal Movements/Migration: This relatively sedentary species makes short movements to hibernation sites. Of 1500 banded bats, the longest movement was 32.2 km (20 mi) (Pearson et al. 1952).

Home Range: Colonies usually are at least 16-19 km (10-12 mi) apart. A density of 1 bat/126 ha (1/310 ac) was reported on Santa Cruz Island (Pearson et al. 1952). The greatest traveled distance recorded for a banded individual is 64 kilometers (Kunz 1999). This species shows high site fidelity if undisturbed.

Territory: Not territorial. Males are solitary in spring and summer. Females form maternity colonies. Hibernates singly or in small clusters, usually several dozen or fewer.

Reproduction: Most mating occurs from November-February, but many females are inseminated before hibernation begins. Sperm is stored until ovulation occurs in spring. Gestation lasts 56-100 days, depending on temperature, size of the hibernating cluster, and time in hibernation. Births occur in May and June, peaking in late May. A single litter of 1 is produced annually. Young are weaned in 6 wk and fly in 2.5-3 wk after birth. Growth rate depends on temperature. The maternity group begins to break up in August. Females mate in their first autumn, males in their first or second autumn. About half of young females return to their birth site after their first hibernation. Subsequent return rates are 70-80%. Maximum recorded age is 16 yr.

Niche: Forages with many other species. Relatively specialized on moths, and slow, maneuverable flier. Gleans, and captures prey in the air by echolocation. Roosting sites may be shared with other species. Rabies is found in this species, but incidence is usually less than 1%.

Comments: This species is extremely sensitive to disturbance of roosting sites. A single visit may result in abandonment of the roost. All known nursery colonies in limestone caves in California apparently have been abandoned. Numbers reportedly have declined steeply in California. Especially sensitive to injury by wing banding (Humphrey and Kunz 1976). A California Species of Special Concern (Williams 1986).

Conclusion: There were no observations of this species within the THP area. There are no rock outcrops or crevices, tunnels, mines, caves within the project vicinity. The barn and other outbuildings are currently used for storage and equipment parking and are entered on a regular basis. Trees within and adjacent to the THP are not of sufficient diameter to provide adequately sized basal hollows for this species. Tree diameters were as large as 28 inches at dbh with no basal hollows observed greater than four inches in diameter. However suitable habitat exists within the assessment area. Along the Wolf Creek corridor there are trees of varying size with occasional basal hollows. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Valley Elderberry Longhorn Beetle, *Desmocerus californicus dimorphus*

CURRENT STATUS: Federally Threatened.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

At the time of listing in 1980, the beetle was known from less than 10 locations on the American River, Putah Creek and Merced River. Now it is known to occur from southern Shasta County to Fresno County. There are about 190 records, mostly based on exit holes.

DESCRIPTION
Longhorn beetles (family Cerambidae) are characterized by somewhat elongate, cylindrical bodies with long antennae, often more than 2/3 of the body length. Valley elderberry longhorn beetles (*Desmocerus californicus dimorphus*) are stout-bodied.

Males range in length from about 1/2 to nearly 1 inch (measured from the front of the head tothe end of the abdomen) with antennae about as long as their bodies. Females are slightly more robust than males, measuring about 3/4 to 1 inch, with somewhat shorter antennae. Adult males have red-orange elytra (wing covers) with four elongate spots. The red-orange fades to yellow on some museum specimens. Adult females have dark colored elytra.

There are four stages in the animal's life: egg, larva, pupa and adult. The species is nearly always found on or close to its host plant, elderberry (*Sambucus* species). Females lay their eggs on the bark. Larvae hatch and burrow into the stems. The larval stage may last 2 years, after which the larvae enter the pupal stage and transform into adults. Adults are active from March to June, feeding and mating.

It appears that in order to serve as habitat, the shrubs must have stems that are 1.0 inch or greater in diameter at ground level. Use of the plants by the animal is rarely apparent. Frequently, the only exterior evidence of the shrub's use by the beetle is an exit hole created by the larva just before the pupal stage. Field work along the Consumnes River and in the Folsom Lake area suggests that larval galleries can be found in elderberry stems with no evidence of exit holes. The larvae either succumb before constructing an exit hole or are not far enough along in the developmental process to construct an exit hole.

THREATS
Extensive destruction of California's Central Valley riparian forests has occurred during the last 150 years due to agricultural and urban development. According to some estimates, riparian forest in the Central Valley have declined by as much as 89 percent during that time period. The valley elderberry longhorn beetle, though wide-ranging, is in long-term decline due to human activities that have resulted in widespread alteration and fragmentation of riparian habitats, and to a lesser extent, upland habitats, which support the beetle. The primary threats to survival of the beetle include:

- Loss and alteration of habitat by agricultural conversion
- Inappropriate grazing
- Levee construction, stream and river channelization, removal of riparian vegetation and riprapping of shoreline
- Nonnative animals such as the Argentine ant, which may eat the early phases of the beetle
- Recreational, industrial and urban development.

Insecticide and herbicide use in agricultural areas and along road right-of-ways may be factors limiting the beetle's distribution. The age and quality of individual elderberry shrubs/trees and stands as a food plant for beetle may also be a factor in its limited distribution.

Conclusion: There were no elderberry plants located within the project boundary.

Western Pond Turtle, *Emys marmorata*
CURRENT STATUS: DFG Special Concern Species

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
The western pond turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Elevation range extends from near sea level to 1430 m (4690 ft) (Jennings and Hayes 1994). Associated with permanent or nearly permanent water in a wide variety of habitat types.

SPECIFIC HABITAT REQUIREMENTS
Feeding: This species is considered omnivorous. Aquatic plant material, including pond lilies, beetles and a variety of aquatic invertebrates as well as fishes, frogs, and even carrion have been reported among their food (Stebbins 1972, Nussbaum et al. 1983).

Cover: Pond turtles require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Turtles slip from basking sites to underwater retreats at the approach of humans or potential predators. Hibernation in colder areas is passed underwater in bottom mud.

Reproduction: Storer (1930) suggested that two distinct habitats may be used for oviposition. Along large slow-moving streams, eggs are deposited in nests constructed in sandy banks. Along foothill streams, females may climb hillsides, sometimes moving considerable distances to find a suitable nest site. Nussbaum et al. (1983) reports a nest in a clover field 100 m (325 ft) from water. Nests have been observed in many soil types from sandy to very hard. Soil must usually be at least 10 cm (4 in) deep for nesting. Nests must have a relatively high internal humidity for eggs to develop and hatch properly.

Water: Individuals normally associate with permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams. Hatchlings may be subject to rapid death by desiccation if exposed to hot, dry conditions.

Pattern: Associated with permanent or nearly permanent water in a wide variety of habitats.

SPECIES LIFE HISTORY

Activity Patterns: Most activity is diurnal but some crepuscular and nocturnal activity has been observed. Individuals are active all year where climates are warm but hibernate during cold periods elsewhere.

Seasonal Movements/Migration: During the spring or early summer, females move overland for up to 100 m (325 ft) to find suitable sites for egg-laying. Other long distance movements may be in response to drying of local bodies of water or other factors.

Home Range: The home range is normally quite restricted (Bury 1970, 1972) except for occasional long distance movements as described above.

Territory: The western pond turtle is not known to be territorial, but aggressive encounters including gesturing and physical combat (Bury and Wolfheim 1973) are common and may function to maintain spacing on basking sites and to settle disputes over preferred spots.

Reproduction: Three to 11 eggs (Ernst and Barbour 1972) are laid from March to August depending on local conditions. The incubation period for eggs maintained in the laboratory at 30° C (Feldman 1982) ranged from 73 to 80 days. Sexual maturity is thought to be attained in about eight years.

Niche: This is the only abundant native turtle in California. Hatchlings and juveniles are preyed upon by a variety of vertebrate predators including certain fishes, bullfrogs, garter snakes, wading birds, and some mammals. Competitive interactions with other species have not been reported.

Conclusion: This species was not observed within the THP area. Suitable water conditions are not present within the THP boundary. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Merlin, *Falco columbarius*

CURRENT STATUS: CDFW Watch List.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Uncommon winter migrant from September to May. Seldom found in heavily wooded areas, or open deserts. Frequents coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats. Occurs in most of the western half of the state below 1500 m (3900 ft). A rare winter migrant in the Mojave Desert; a few records from the Channel Islands. Numbers have declined markedly in California in recent decades.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds primarily on small birds; also small mammals and insects. Frequents shorelines in winter and catches shorebirds. Searches while flying at low level; attacks with a short dive, or dash from above. Captures prey on ground or in air, after direct pursuit. Young may rely upon insects while developing predatory skills.

Cover: Dense tree stands close to bodies of water are needed for cover. Uses a wide variety of habitats.

Reproduction: Does not breed in California. Breeds in Alaska and Canada. Typically modifies existing corvid or hawk nest consisting of an open platform of sticks in a tree, usually a conifer (Warkentin and James 1988, Sieg and Becker 1990). Occasionally nests in cavities, cliffs, in a deserted building, or on ground (Craighead and Craighead 1956, Brown and Amadon 1968).

Water: Usually nests close to water.

Pattern: Frequents open habitats at low elevation near water and tree stands. Favors coastlines, lakeshores, wetlands.

SPECIES LIFE HISTORY
Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/ Migration: Winters in California from September to May. Wanders in search of abundant prey. Some individuals migrate as far as South America in winter.

Home Range: During winter, mean home range size of adults was observed to be 196 ha in Saskatoon (Warkentin and Oliphant 1990).

Territory: Apparently do not defend feeding territories (Becker and Sieg 1987, Warkentin and Oliphant 1990, Sodhi and Oliphant 1992). Feeding home range tend to overlap. Intraspecifically aggressive while nesting.

Reproduction: Clutch of 4-5 eggs laid from late May into June. Incubates 28-32 days, and chicks fledge at about 24 days (Trimble 1972).

Niche: Because feeds mostly on birds, numbers probably have been reduced by pesticides. Potential avian predators are driven away as soon as they enter the territory; particularly intolerant of accipiters (Fox 1964, Bent 1938, Oliphant 1974).

Conclusion: There were no observations of this species within the THP area. However potential habitat exists within the assessment area. The present stand structure of the THP is relatively open compared to areas within the assessment boundary; therefore current habitat conditions will remain similar or possibly improve for favorable hunting/ feeding. There is no presence of roosting habitat within the THP. There shall be no impact upon this species from the proposed THP.

Bald Eagle, *Haliaeetus leucocephalus*
CURRENT STATUS: Federal Delisted, State Endangered, CDFW Fully Protected, BOF Sensitive Species.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
Permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. About half of the wintering population is in the Klamath Basin. More common at lower elevations; not found in the high Sierra Nevada. Fairly common as a local winter migrant at a few favored inland waters in southern California. Largest numbers occur at Big Bear Lake, Cachuma Lake, Lake Mathews, Nacimiento Reservoir, San Antonio Reservoir, and along the Colorado River.

SPECIFIC HABITAT REQUIREMENTS
Feeding: Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. Swoops from hunting perches, or soaring flight, to pluck fish from water. Will wade into shallow water to pursue fish. Pounces on, or chases, injured or ice-bound water birds. In flooded fields, occasionally pounces on displaced voles, or other small mammals. Groups may feed gregariously, especially on spawning fish. Scavenges dead fish, water birds, and mammals. Open, easily approached hunting perches and feeding areas used most frequently.

Cover: Perches high in large, stoutly limbed trees, on snags or broken-topped trees, or on rocks near water. Roosts communally in winter in dense, sheltered, remote conifer stands. In Klamath National Forest, winter roosts were 16-19 km (10-12 mi) from feeding areas (Spencer 1976b).

Reproduction: Nests in large, old-growth, or dominant live tree with open branchwork, especially ponderosa pine. Nests most frequently in stands with less than 40% canopy, but usually some foliage shading the nest (Call 1978). Often chooses largest tree in a stand on which to build stick platform nest. Nest located 16-61 m (50-200 ft) above ground, usually below tree crown. Species of tree apparently not so important as height and size. Nest usually located near a permanent water source.

Water: In California, 87% of nest sites were within 1.6 km (1 mi) of water.

Pattern: Requires large, old-growth trees or snags in remote, mixed stands near water.

SPECIES LIFE HISTORY
Activity Patterns: Yearlong, diurnal activity. Winter feeding usually occurs immediately after dawn and in late afternoon.

Seasonal Movements/ Migration: Individuals that breed in California may make only local winter movements in search of food. Winter migrants move from north to south.

Home Range: No data found.

Territory: Breeding territory in Alaska (n = 14), varied from 11-45 ha (28-112 ac), and averaged 23 ha (57 ac) (Hensel and Troyer 1964). Breeding territory defended from mating through fledging. Minimum distances between nests were 1 km (0.6 mi) in Alaska, and 17 km (10 mi) in Washington.

Reproduction: Breeds February through July; peak activity March to June. Clutch size usually 2; range 1-3. Incubation usually 34-36 days. Semialtricial young hatch asynchronously (Ehrlich et al. 1988). Monogamous, and breeds first at 4-5 yrs.

Niche: Highly vulnerable to DDE-induced eggshell thinning. Competes with, and steals prey from osprey. Territories have been abandoned after disturbance from logging, recreational development, and other human activities near nests (Thelander 1973). Usually does not begin nesting if human disturbance is evident.

Conclusion: There were no observations of this species within the THP area. The present stand structure of the THP is relatively open compared to areas within the assessment boundary; therefore current habitat conditions will remain similar or possibly improve for favorable hunting/ feeding. There is no presence of roosting habitat within the THP. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

California black rail, *Laterallus jamaicensis coturniculus*
CURRENT STATUS: California State Threatened, CDFW State Fully Protected

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
Rarely seen, scarce, yearlong resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay and a few other locations , the Salton Sea, and lower Colorado River area. Formerly a local resident in coastal wetlands from Santa Barbara Co. to San Diego Co.; still winters there rarely. Significant loss of saltwater and freshwater wetland habitat in recent decades probably has reduced population (Wilbur 1974a). The majority of breeders in the San Francisco Bay area located in San Pablo Bay (Evens et al. 1991). Loss of higher wetland around San Francisco Bay apparently has eliminated breeding in the south bay area (Manolis 1977).

SPECIFIC HABITAT REQUIREMENTS
Feeding: Carnivorous; gleans isopods, insects, and other arthropods from surface of mud and vegetation.

Cover: Occurs most commonly in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes in association with pickleweed. In freshwater, usually found in bulrushes, cattails, and saltgrass. Usually found in immediate vicinity of tidal sloughs (Manolis 1977). Typically occurs in the high wetland zones near upper limit of tidal flooding, not in low wetland areas with considerable annual and/or daily fluctuations in water levels. Along Colorado River, prefers dense bulrush stands, shallow water, and gently sloping shorelines (Repking and Ohmart 1977). During extreme high tides, may depend on upper wetland zone and adjoining upland or freshwater wetland vegetation for cover.

Reproduction: Nest concealed in dense vegetation, often pickleweed, near upper limits of tidal flooding (Stephens 1909). Builds a deep, loose cup, at ground level or elevated several inches.

Water: No additional information found.
Pattern: Dependent upon upper zones of saline emergent wetlands, especially with pickleweed, and brackish fresh emergent wetlands.

SPECIES LIFE HISTORY
Activity Patterns: No data found, but apparently circadian activity pattern. California Black Rails vocalize mainly at dusk and occasionally in daylight hours. Rarely heard at night (Flores and Eddleman 1991).

Seasonal Movements/ Migration: California population apparently resident. Occasionally found away from wetlands in late summer and autumn, suggesting some post-breeding movement (Wilbur 1974a, Ripley 1977). May winter in locations where it does not breed (Manolis 1978, Garrett and Dunn 1981).

Home Range: Little information available. Repking and Ohmart (1977) reported densities of 1.1 to 1.6/ha (0.4 to 0.6/ac) in spring, and 0.7/ha (0.3/ac) in winter, on the lower Colorado River. In Arizona, California black rails used home ranges averaging 0.4 +/-0.2 ha and rarely overlapped (Flores 1991).

Territory: Little information available; will respond to recorded calls, especially in breeding season.

Reproduction: Nests with eggs reported from 12 March to 4 June (Bent 1926, Wilbur 1974a). Single-brooded. Clutch size in California averaged 6 eggs; range = 3-8 (Dawson 1923, Wilbur 1974a). Reported to abandon nest if disturbed before completing clutch (Huey 1916, Heaton 1937).

Niche: Predators include herons and domestic cats. Occasionally found dead from collisions with powerlines, smokestacks, transmission towers, autos.

Conclusion: This species was not observed within the THP area. There are no wetlands or marshes as preferred by this species located within the project vicinity. However there is favorable habitat within the assessment area. Due to the lack of habitat within the project boundary the proposed THP shall have no impact upon this species.

Fisher, *Pekania pennanti*

CURRENT STATUS: Federal Proposed Threatened, California Threatened Candidate, CDFW Species of Special Concern.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Uncommon permanent resident of the Sierra Nevada, Cascades, and Klamath Mts.; also found in a few areas in the North Coast Ranges (Grinnell et al. 1937). Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure (Schempf and White 1977).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Fishers are largely carnivorous. Eat rabbits and hares, especially snowshoe hares, and rodents (mice, porcupines, squirrels, mountain beavers), shrews, birds, fruits and carrion. Prey on ground surface and in trees. Fishers are opportunistic; they search for small mammals, and pounce on, or chase prey. Also dig out prey. Grenfell (1979) reported that the most important food item in the stomachs of 8 fishers was false truffle, a subterranean fungus.
Cover: Fishers use cavities in large trees, snags, logs, rock areas, or shelters provided by slash or brush piles. Dense, mature stands of trees also provide cover especially in winter.

Reproduction: Fishers den in a variety of protected cavities, brush piles, logs, or under an upturned tree. Hollow logs, trees, and snags are especially important.

Water: May require drinking water.

Pattern: Suitable habitat for fishers consists of large areas of mature, dense forest stands with snags and greater than 50% canopy closure.

SPECIES LIFE HISTORY

Activity Patterns: Active yearlong. Mostly nocturnal and crepuscular, some diurnal activity.

Seasonal Movements/ Migration: Non-migratory.

Home Range: In Ontario, Canada, home ranges were estimated a 38 km^2 (10 mi^2) (deVos 1952). In Massachusetts, home ranges averaged 19.2 km^2 (7.4 mi^2), and varied from 6.6 to 39.6 km^2 (2.5 to 15.3 mi^2). Home ranges usually smaller in summer than in winter (Kelley 1977). The long axis of home range tends to parallel valleys. Home ranges of 3 adult males in Trinity Co. averaged 14 km^2 (5.4 mi^2) (Buck et al. 1979). The fishers in Trinity Co appeared to have regularly used travel routes within the home ranges (Buck et al. 1979).

Territory: Fishers appear to be territorial (Powell 1981b).

Reproduction: Females breed a few days after parturition; implantation of the embryo is delayed until the following winter. Post-implantation active growth lasts about 3 days (Powell 1981b. Young born February through May. Litter size averages 2.7, and ranges from 1-4, rarely 5. Young remain with female until late autumn. Males and females become sexually mature in the first or second yr (Powell 1982).

Niche: Few animals prey on fishers other than humans. Fishers are one of the few specialized predators on porcupines. Have been transplanted into Oregon, West Virginia, and other states for porcupine control (Hooven 1971, Powell 1981a, 1981b, 1982). Long-term studies suggest that fishers predominantly are terrestrial (Powell 1981b).

Conclusion: There is no suitable habitat available for this species within the THP boundary. Potential habitat is available within the Assessment boundary. There is a relatively low density of protected cavities; hollow logs, upturned trees, downed logs, brush piles, located within the project boundary. Because of the small acreage and being surrounded on all sides by residences with domestic animals, preferred habitat consisting of large areas of mature dense forest stands is not available. If however during timber operations a fisher is observed, CAL FIRE and the pertinent DFG Timberland Planning office shall be notified of the detection. The critical period for fishers is March 1 through July 31, where reproduction and caring for young occurs and when the highest potential for disturbance exists. During timber operations, if a fisher den or a female with young is observed, operations shall cease within 0.25 miles and CAL FIRE and DFG will be immediately contacted. After consultation, any additional protection measures agreed upon will be amended into the plan. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Coast Horned Lizard, *Phrynosoma blainvillii*
CURRENT STATUS: CDFW Species of Special Concern

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
The horned lizard is uncommon to common in suitable habitat. Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grass habitats. Ranges in the Central Valley from southern Tehama Co. south; in the Sierra foothills from Butte Co. to Tulare Co. below 1200 m (4000 ft); below 1800 m (6000 ft) in the mountains of southern California exclusive of desert regions; throughout the Coast Ranges south from Sonoma Co. There is an isolated population in Siskiyou Co.

SPECIFIC HABITAT REQUIREMENTS
Feeding: Horned lizards forage on the ground in open areas, usually between shrubs and often near ant nests. Pianka and Parker (1975) noted that this species, like other horned lizards, consumes many ants. Small beetles are taken in large numbers when especially abundant. Stebbins (1954) reported other insects as food items, including wasps, grasshoppers, flies, and caterpillars.

Cover: This species relies on camouflage for protection and often hesitates to move at the approach of a predator. Horned lizards often bask in the early morning on the ground or on elevated objects such as low boulders or rocks. Predators and extreme heat are avoided by horned lizards by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed into the soil under surface objects such as logs or rocks, in mammal burrows, or in crevices.

Reproduction: Little is known about habitat requirements for breeding and egg-laying. Males may use elevated "viewing platforms" such as cow dung (Tollestrup 1981) to locate females during the reproductive season. Eggs are apparently laid in nests constructed by females in loose soil.

Water: No information on water requirements. Does not require permanent water.

Pattern: Inhabits open country, especially sandy areas, washes, flood plains and wind-blown deposits in a wide variety of habitats. Found chiefly below 600 m (2000 ft) in the north and 900 m (3000 ft) in the south.

SPECIES LIFE HISTORY
Activity Patterns: Being a diurnal lizard, most activity occurs during the middle of the day in the spring and fall but is restricted to morning and late afternoon during mid-summer. Nocturnal activity may occur during particularly warm periods. Fall and winter are inactive periods in most areas.

Seasonal Movements/Migration: Pronounced seasonal movement or migration has not been reported. Habitat requirements, such as sites for courtship and display, egg-laying, and hibernation are apparently found within the normal area of activity.

Home Range: Little is known about home range. In Arizona, some individuals of a related horned lizard species, P. solare, established well-defined home ranges, while some wandered without establishing one. Males used a larger area than females; the mean maximum distance between capture points was 30 m (98 ft) for males and 15 m (49 ft) for females (Baharav 1975).

Territory: Horned lizards generally lack territorial defense (Lynn 1965, Stamps 1977), but combat between males (Whifford and Whifford 1973) and over female feeding territories (Nussbaum et al. 1983) has been reported.

Reproduction: The reproductive season for the horned lizard varies from year to year and geographically depending on local conditions. Pianka and Parker (1975) reported that egg-laying in southern California extends from late May through June with a mean clutch size of 13 eggs. Stebbins (1954) reported a range of 6 to 16 eggs. Hatching probably occurs after two months. The horned lizard is apparently unique among lizards in using a belly-to-belly position during copulation (Tollestrup 1981).

Niche: The spiny armor and aggressive behavior towards potential predators exhibited by horned lizards confer only partial immunity from predators. Leopard lizards, sidewinders, striped whipsnakes and other snakes, loggerhead shrikes, and hawks have all been reported as predators of horned lizards. After a review of the genus Phrynosoma, Pianka and Parker (1975) concluded that because of their rather specialized diets, most horned lizards probably experience little competition for food from other coexisting lizards.

Conclusion: This species prefers rocky outcrop terrain of which there is no such habitat within the project area. Due to the lack of habitat and the unlikelihood of the plant inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Foothill Yellow-legged Frog, *Rana boylii*
CURRENT STATUS: CDFG special concern.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
The foothill yellow-legged frog occurs in the Coast Ranges from the Oregon border south to the Transverse Mts. In Los Angeles Co., in most of norther California west of the Cascade crest, and along the western flank of the Sierra south to Kern Co. Livezey (1963) reported an isolated population in San Joaquin Co. On the floor of the Central Valley. Isolated populations are also known from the mountains of Los Angeles Co. Its elevation range extends from sea level to 1830 m. (1600 ft.) In the Sierra (Stebbins 1985). The foothill yellow-legged frog is found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.

SPECIFIC HABITAT REQUIREMENTS
Feeding: Adults eat both aquatic and terrestrial invertebrates. Adult insects appear to be favored, but snails, and pieces of molted skin have also been found in stomach samples (Fitch 1936). Tadpoles probably graze on algae and diatoms along rocky stream bottoms.

Cover: Adults often bask on exposed rock surfaces near streams. When disturbed, they dive into the water and take refuge under submerged rocks or sediments. During periods of inactivity, especially during cold weather, individuals seek cover under rocks in the stream or on shore within a few meters of water.

Reproduction: Egg clusters are attached to gravel or rocks in moving water near stream margins.

Water: Unlike most other ranid frogs in California, this species is rarely encountered (even on rainy nights) far from permanent water. Tadpoles require water for at least three or four months while completing their aquatic development.

Pattern: Foothill yellow-legged frogs are found in or near rocky streams in a variety of habitats.

SPECIES LIFE HISTORY
Activity Patterns: Terrestrial individuals are primarily diurnal. Frogs may be active all year in the warmest localities, but may become inactive or hibernate in colder areas.

Seasonal Movements/ Migration: Significant seasonal movements or migrations from breeding areas have not been reported. Nussbaum et al. (1983) found frogs underground and beneath surface objects more than 50 m (155 ft.) from water in April. These frogs probably spend most of their time in or near streams at all seasons.

Home Range: Normal home ranges are probably less than 10 m (33 ft.) in the longest dimension. Occasional long distance movements (up to 50 m) (165 ft.) may occur during periods with high water conditions.

Territory: Like most ranid frogs, males of this species probably defend areas around themselves during the breeding season (Martof 1953, Emlen 1968).

Reproduction: In California, breeding and egg laying usually await the end of spring flooding and may commence any time from mid-March to May, depending on local water conditions. The breeding season at any locality is usually about two weeks for most populations. Females deposit eggs in clusters of 200 to 300 (range 100 to 1000). They hatch in about five days. Tadpoles reach maximum sizes of 50 to 55 mm (2.2 in.) and transform in three to four months.

Niche: Garter snakes (Fitch 1941) feed heavily on tadpoles and adults. The foothill yellow-legged frog coexists with the Cascades frog and the red-legged frog at some localities, but different microhabitat preferences probably diminish competition. Moyle (1973) implicated the bullfrog in the observed reduction of foothill yellow-legged frog populations in the Sierra. Centrachid fishes readily eat Rana eggs (Werschkul and Christensen 1977), and, where introduced into foothill streams, may also contribute to the elimination of R. boylii.

Conclusion: There were no observations of this species; nor is there suitable habitat available within the THP area. Suitable water conditions are not present within the THP area. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

California Red-legged Frog, *Rana draytonii*
CURRENT STATUS: Federally Threatened, CDFG Special Concern

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
The red-legged frog inhabits quiet pools of streams, marshes, and occasionally ponds. Occurs west of the Sierra-Cascade crest and along the Coast Ranges the entire length of the state (Stebbins 1985), usually below 1200 m (3936 ft). Uncommon in Sierra-Cascade portion of range, uncommon to common elsewhere.

SPECIFIC HABITAT REQUIREMENTS
Feeding: Adults take aquatic and terrestrial insects and crustaceans and snails (Stebbins 1951), as well as worms, fish, tadpoles and smaller frogs (Dickerson 1906). Aquatic larvae are mostly herbivorous.

Cover: Highly aquatic. Prefers shorelines with extensive vegetation. Usually escapes to water 1 m (3 ft) deep or more, at the bottom of pools.

Reproduction: Eggs are deposited in permanent pools attached to emergent vegetation (Stebbins 1954).

Water: Requires permanent or nearly permanent pools for larval development, which takes 11 to 20 weeks (Storer 1925, Calef 1973). May require rains for dispersal. Individuals have been found considerable distances from breeding sites on rainy nights.

Pattern: Occurs in the vicinity of quiet, permanent pools of streams, marshes, and occasionally ponds.

SPECIES LIFE HISTORY
Activity Patterns: Active all year coastally, but with periods of inactivity (late summer to early winter) elsewhere.

Seasonal Movements/ Migration: A highly aquatic species with little movement away from streamside habitats. Individuals are occasionally found on roads at night during winter and spring rains. The nature of these movements is unknown.

Home Range: Unknown; possibly large for dispersing juveniles but probably smaller for adults.

Territory: Males probably defend a space for sexual display during the breeding season, as in other ranids (Martof 1953, Emlen 1968).

Reproduction: Breeds January to July (peak in February) in the south, and March to July in the north. Females lay 750 to 4000 eggs in clusters up to 10 in across, attached to vegetation 7 to 15 cm (2 to 6 in) below the surface (Stebbins 1954). Tadpoles require 11 to 20 weeks to reach metamorphosis (Stebbins 1951, Calef 1973).

Niche: Probably subject to predation by aquatic invertebrates and vertebrates such as fishes, other amphibians, snakes, and occasionally birds and mammals, during all life history stages.

General Comments: Sierra populations are highly restricted and consist of small numbers of individuals. Human activities that result in habitat destruction and/or the introduction of exotic competitors such as bullfrogs and green sunfish may have a negative effect on these few existing Sierra populations (Moyle 1973).

Conclusion: There were no observations of this species; nor is there suitable habitat available within the THP area. Suitable water conditions are not present within the THP area. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Great Gray Owl, *Strix nebulosa*
CURRENT STATUS: California Endangered, BOF Sensitive Species

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
A rarely seen resident at 1400 to 2300 m (4500-7500 ft) in the Sierra Nevada from the vicinity of Quincy, Plumas Co. south to the Yosemite region. Most recent records are from the Merced and Tuolumne River drainages of Yosemite National Park. Occasionally reported in northwestern California in winter, and in Warner Mts. in summer (McCaskie et al. 1988). Breeds in old-growth red fir, mixed conifer, or lodgepole pine habitats, always in the vicinity of wet meadows. Recent studies suggest a population decline; there may be fewer than 50 pairs remaining in California (Grinnell and Miller 1944, Winter 1980, 1982).

SPECIFIC HABITAT REQUIREMENTS
Feeding: Stoops on meadow-dwelling rodents, especially pocket gophers and voles, from low, exposed perches in or on edge of meadows. Eats a few birds, up to grouse size.

Cover: Uses trees in dense forest stands for roosting cover. Small trees and snags in, or on edge of, meadows used for hunting perches.

Reproduction: Nests in large, broken-topped snags, usually greater than 60 cm (24 in) dbh; builds no nest (Winter 1980). The 6 nests located in California have been within 262 m (861 ft) of a meadow (Winter 1980, 1982). Nest height ranged from 7.6 to 21.9 m (25-72 ft) above the ground. In other parts of range, often uses old hawk or eagle nests.
Water: No additional data found.

Pattern: Forages in wet meadows and nests and roosts in nearby dense coniferous forest. Both old-growth and second-growth forest used if suitable nest-sites are available (Winter 1982).

SPECIES LIFE HISTORY
Activity Patterns: Yearlong, circadian activity; considerable daytime activity.

Seasonal Movements/Migration: Most individuals apparently are resident, but there are few winter records. Some nonbreeders, postbreeders, and juveniles wander above breeding range to 2900 m (9000 ft) (Gaines 1977b). May be nomadic, following prey populations.

Home Range: Home range and territory probably same. In California, Winter (1982) estimated home range at 239-258 ha (591 -638 ac). In Wyoming, Craighead and Craighead (1956) reported that home range varied from 256-400 ha (632-988 ac).

Territory: Most of home range probably defended. In Quebec, Brenton and Pittaway (1971) reported a mean territory size of 45 ha (112 ac).

Reproduction: Peak of egg-laying probably March through May. Monogamous. One clutch per yr averages 3 eggs (range 1-5). Incubation about 30 days, by female. Male feeds female and semialtricial young at nest. Fledging age is 21-28 days, or more (Pulliainen and Loisa 1977).
Niche: Largest North American owl. California Endangered; apparently the rarest owl in California. Should be searched for in suitable habitat in northern California.

Conclusion: There were no observations of this species; nor is there suitable nesting/ roosting habitat available within the THP area. However potential foraging habitat does exist within the THP. The present stand structure of the THP is relatively open compared to areas within the assessment boundary; therefore current habitat conditions will remain similar or possibly improve for favorable hunting/ feeding. During timber operations, if a Great Grey Owl is observed, operations shall cease immediately and CAL FIRE and CDFW shall be immediately contacted. After consultation, any additional protection measures agreed upon will be amended into the plan.

Spotted Owl, *Strix occidentalis, occidentalis*
CURRENT STATUS: CDFW Species of Special Concern.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The spotted owl is an uncommon, permanent resident in suitable habitat. In northern California, resides in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 1200 m. (0-7600 ft). In southern California, nearly always associated with oak and oak-conifer habitats (Garrett and Dunn 1981). Breeding range extends west of the Cascade Range through the North Coast Ranges, the Sierra Nevada, and in more localized areas of the Transverse and Peninsular Ranges. May move downslope in winter along the eastern and western slopes of the Sierra Nevada, and in other areas.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds in forest habitats upon a variety of small mammals, including flying squirrels, woodrats, mice and voles, and a few rabbits. Also eats small birds, bats, and large arthropods. Usually searches from a perch and swoops or pounces on prey in vegetation or on the ground. May cache excess food.

Cover: Uses dense, multi-layered canopy cover for roost seclusion. Roost selection appears to be related closely to thermoregulatory needs; intolerant of high temperatures. Typically roosts in dense overhead canopy on north-facing slopes in summer and in oak habitats in winter. In northern regions of the state, daytime roosts averaged 165 m (549 ft) from water; in southern regions, daytime roosts averaged only 51 m (173 ft) from water (Barrows and Barrows 1978).

Reproduction: Usually nests in tree or snag cavities, or in broken tops of large trees. Less frequently nests in large mistletoe clumps, abandoned raptor or raven nests, in caves or crevices, on cliffs or on the ground (Call 1978). Mature, multi-layered forest stands are required for breeding (Remsen 1978). Nests are usually placed 9-55 m (30-180 ft) above the ground.

Water: Probably requires a permanent water source. May reduce heat stress by bathing (Barrows and Barrows 1978, Barrows 1981). Drinks freely in captivity.

Pattern: Spotted owls require blocks of 40-240 ha (100-600 ac) of mature forest with permanent water and suitable nesting trees and snags (Forsman 1976). In northern California, apparently prefers narrow, steep-sided canyons with north-facing slopes.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, nocturnal activity (Forsman 1976).

Seasonal Movements/ Migration: Not migratory, although some individuals may move downslope in winter.

Home Range: Forsman *et.al.* (1977) found home ranges in mature Doughlas-fir/ hemlock forests in Oregon of 120-240 ha (300-600 ac), with a mean of 180 ha (450 ac). Gould reported similar home range size in the Sierra Nevada. Individuals spaced 1.6 to 3.2 km (1-2 mi) apart in suitable habitat (Marshall 1942, Gould 1974).

Territory: Gould (1974) found that territory in conifer forests in the Sierra Nevada varied form 40-138 ha (100-340 ac), with a mean of 93 ha (230 ac). Very few observations of territorial behavior reported, in part because of wide spacing of pairs and inconspicuous behavior.

Reproduction: Breeds from early March through June, with peaks in April and May. One brood per year with clutches ranging 1-4, usually 2. Female incubates and broods, young male feeds female and young. May not be mature sexually until 3 years. Pairs may use same breeding site for 5-10 years, but may not breed every year (Forsman 1976).

Niche: Great horned owls and goshawks are potential predators of young (Forsman 1976). Requires mature forest stands with large trees and snags; very sensitive to habitat destruction and fragmentation (Gould 1974, forsman 1976). A California Species of Special Concern (Remsen 1978). Declared Federal Threatened in June 1990.the Sierra.

Conclusion: This species was not observed within the THP area. The present stand does not possess the dense mature canopy component as preferred by this species for roosting. However the THP does contain a canopy open enough for suitable foraging habitat. As proposed the THP will provide a large opening within the overstory as well as openings within the understory from logging operations which may temporarily improve foraging for rodents, birds, reptiles, and other small prey. Within the assessment area both suitable roosting and foraging habitat are present. The THP will likely temporarily improve upon existing foraging habitat within the assessment area.

Coast Range Newt/ California Newt, *Taricha torosa*

CURRENT STATUS: CDFW Species of Special Concern.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The California newt occurs commonly in the Coast Ranges from central Mendocino Co. south to northern San Diego Co. Populations are also known from the Peninsular Ranges of San Diego Co. south to the vicinity of Boulder Creek (Stebbins 1985). It is found the length of the Sierra, primarily in the foothills; an isolated population also occurs near the headwaters of Shasta Reservoir in Shasta Co. A few populations are also known from the floor of the Central Valley. Occurs primarily in valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub and mixed chaparral, but is also known from annual grassland and mixed conifer types. Elevation range extends from near sea level to about 1830 m (6000 ft) (Jennings and Hayes 1994).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Postmetamorphic juveniles and terrestrial adults take earthworms, snails, slugs, sowbugs, and insects (Stebbins 1972). Adults at breeding ponds have been shown to take the eggs of their own species (Kaplan and Sherman 1980), the eggs of other amphibians and trout, as well as adult and larval aquatic insects, small crustaceans, snails, and clams (Borell 1935). Aquatic larvae eat many small aquatic organisms, especially crustaceans.

Cover: Terrestrial individuals seek cover under surface objects such as rocks and logs, or in mammal burrows, rock fissures, or human-made structures such as wells. Aquatic larvae find cover beneath submerged rocks, logs, debris, and undercut banks.

Reproduction: Eggs are laid in small clusters on the submerged portion of emergent vegetation, on submerged vegetation, and on the underside of rocks off the bottom. Breeding and egg-laying occur in intermittent streams, rivers, permanent and semi-permanent ponds, lakes and large reservoirs. The eggs are normally laid in shallow water attached to submerged twigs or rocks.

Water: Rainfall is important in the maintenance of breeding ponds and streams in some localities. Newts will swim in rapids of larger streams (Stebbins 1985). Water loss during the terrestrial portion of the life cycle may be somewhat reduced by the development of a thickened and relatively unvascularized skin (Cohen 1952).
Pattern: Optimum habitats are in or near streams in valley-foothill hardwood and hardwood-conifer habitats.

SPECIES LIFE HISTORY

Activity Patterns: Terrestrial individuals are relatively inactive in subterranean refuges most of the year. Migrations to and from breeding areas usually occur at night during, or just following, rains. Some migration also takes place on cloudy days. Breeding adults and aquatic larvae are active both day and night.

Seasonal Movements/Migration: The first rains of fall usually initiate migration to breeding localities. Once at the breeding sites, adults become aquatic and may remain in or near these ponds and streams for several weeks. Adults migrate back to subterranean refuges in the spring, where they spend the summer aestivating. Migrations are delayed until as late as May at higher elevations of the Sierra. Larvae normally transform in the summer or fall of their first year. Twitty et al. (1967) reported that juveniles of the related species, T. rivularis, move very little during the first few months after metamorphosis. The inactive juveniles probably remain in moist areas under objects near breeding ponds or streams until they nest in spring or summer.

Home Range: Little or no movement occurs during dry periods (late spring to the first rains of fall). Migrations to and from breeding sites may occasionally exceed 1000 m (3300 ft), but few individuals move that far.

Territory: Not territorial.

Reproduction: Breeding and egg-laying may extend from fall through late spring depending on the locality. Females lay many small round clusters of eggs up to 3.5 cm (1.4 in) in diameter. The number of eggs laid by a female in a single season is unknown.

Niche: Adults consume the eggs of Ambystoma and Rana, but whether they compete with other amphibians for food or other resources is unknown. All newts of the genus Taricha possess a potent skin toxin called "tetrodotoxin" (Brodie et al. 1974). The eggs and the skin of both adults and aquatic larvae contain this toxin and are, therefore, protected from most predators. This may account for the diurnal behavior of newts compared to other California salamanders.

Conclusion: There were no observations of this species; nor is there suitable habitat available within the THP area. Water for breeding purposes is not present within the THP area. However suitable habitat exists within the assessment area. Due to the lack of habitat and the unlikelihood of this species inhabiting the project area there shall be no negative impacts to this species due to the proposed timber harvest.

Sierra Nevada Red Fox, *Vulpes vulpes necator*
CURRENT STATUS: California Threatened.

DISTRIBUTION, ABUNDANCE, AND SEASONALITY
Rare in Sierra Nevada, but widely distributed in lowlands in central and southern California. The native subspecies V. v. necator is found in the Cascades in Siskiyou Co., and from Lassen Co. south to Tulare Co. Introduced populations inhabit Sacramento and San Joaquin valleys and scattered coastal and inland locations from Sonoma Co. south to Monterey Co., and east to Stanislaus Co. as well as in Ventura, Los Angeles, and Orange cos. Sierra Nevada populations may be found in a variety of habitats, including alpine dwarf-shrub, wet meadow, subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral, montane riparian, mixed conifer, and ponderosa pine. Jeffrey pine, eastside pine, and montane hardwood-conifer also are used. Populations in central and southern California occur in annual and perennial grassland, coastal scrub, wet meadow, emergent wetland, and cropland habitats, and may use mixed chaparral and chamise-redshank chaparral (Grinnell et al. 1937, Ingles 1965, Ewer 1973, Ables 1975, Gray 1975, 1977, Schempf and White 1977, Gould 1980). Most sightings in Sierra Nevada are above 2200 m (7000 ft), ranging from 1200-3700 m (3900-11,900 ft) (Schempf and White 1977). Sightings in central and southern California are below 910 m (3000 ft) (Schempf and White 1977).

SPECIFIC HABITAT REQUIREMENTS
Feeding: Hunts small and medium-sized mammals, ground squirrels, gophers, mice, marmots, woodrats, pikas, and rabbits. Apparently an increasingly important predator of ground-nesting waterfowl, shorebirds, upland game birds, and eggs in lowland California and other areas. Other vertebrates, insects, carrion, fruits, and earthworms used occasionally; carrion important in winter, as are lagomorphs. Hunts in meadows, fell-fields, grasslands, wetlands, and other open habitats. Caches food (Scott 1955, Scott and Klimstra 1955, Sargent 1972, 1978, Ewer 1973, MacDonald 1980, Maccarone and Montevecchi 1981, Samuel and Nelson 1982, Yoneda 1982).

Cover: Uses dense vegetation and rocky areas for cover and den sites.

Reproduction: Den sites include rock outcrops, hollow logs and stumps, and burrows in deep, loose soil (Grinnell et al. 1937, Ables 1975). May move pups to new den several times.

Water: Captive red foxes did not require free water as pups or adults (Sargent 1978).

Pattern: In Sierra Nevada, prefers forests interspersed with meadows or alpine fell-fields. Open areas are used for hunting, forested habitats for cover and reproduction. Edges are utilized extensively (Seidensticker 1999). In lowlands, uses fence lines, hedgerows, woodlots, and other brushy, wooded areas for cover and reproduction, and hunts in cropland, wetland, urban habitats and other open areas (Grinnell et al. 1937. Ables 1975, Samuel and Nelson 1982).

SPECIES LIFE HISTORY
Activity Patterns: Active yearlong; hunts day and night (Grinnell et al. 1937, Ables 1975).

Seasonal Movements/Migration: None in many habitats. Sierra red foxes move downslope in winter into ponderosa pine and mixed conifer, upslope in summer to lodgepole pine, subalpine conifer, alpine dwarf-shrub, and red fir habitats (Grinnell et al. 1937, Schempf and White 1977).

Home Range: Summer home ranges in alpine and subalpine tundra of British Columbia averaged 1611 ha (3979 ac), varying from 277-3420 ha (684-8447 ac) (Jones and Theberge 1982). In Minnesota, Illinois, and Wisconsin, home ranges averaged 700 ha (1728 ac) and varied from 155-1554 ha (384-3840 ac) (Sargent 1972, Storm et al. 1976). Red foxes have been known to travel up to 395 km (245 mi). Home range size is influenced by food abundance and habitat.

Territory: The male defends the territory, which is shared by the mated pair and pups. Defense consists of display, scent-marking, chasing, and rare physical conflict (Preston 1975). The entire home range may be defended, or territoriality may break down in times of food abundance (Orr 1971, Zarnoch et al. 1977, Samuel and Nelson 1982, Seidensticker 1999).

Reproduction: Mating takes place in late winter (January-March. After a gestation period of 52 days, young are born in early spring (March-May). Litter sizes in many studies averaged about 5. Most litters are 4-6, though range is 1-12 (Grinnell et al. 1937, Samuel and Nelson 1982). There is 1 litter/yr. Lactation continues 56-70 days (Seidensticker 1999). Pups dependent on parents for 6 mo, and become sexually mature at 10 mo (Orr 1971, Zarnoch et al. 1977).

The results from the GHG Calculator spreadsheet is a tool intended for use in assessing the short-term and long-term greenhouse gas sequestration and emissions resulting from timber activities. The estimated quantity of carbon sequestration is determined from the estimated growth of trees onsite and from carbon stored in wood products and landfills. The calculation of carbon dioxide emission include harvested wood that does not end up in wood products or landfills, plus non-biological emissions associated with timber falling, yarding, loading, trucking, and milling.

As summarized in the GHG Calculator in Section V the results indicate there will be an estimated total site preparation emission (not proposed), non-biological emission and biological emission of 0.52 metric tonnes of CO^2 per acre associated with this timber harvest for a total emission of 16.64 metric tonnes. The table also states an estimated net emission of 36.49 metric tonnes of CO^2 for the one harvest. There will be a loss of total project carbon sequestration of 1,168 metric tonnes of CO^2. Carbon emitted from the project is expected to not be recouped since it will take 101 years to do so. Sequestration; while difficult to measure the amount will continue in wooded areas set aside for trails, green space, gardening, as well as occasional trees remaining on several lots throughout the project. This remaining vegetation will provide for the recoupment of carbon stocks along with additional vegetation to be planted for landscaping. As presented the proposed project in combination with the impacts of past and present projects may have an impact upon the increase of GHG emissions; however shall be somewhat offset by timber products and future growth of vegetation.

NEVADA COUNTY PUBLISHING COMPANY
Grass Valley, CA

AFFIDAVIT OF PUBLICATION

THE UNION

Customer Account: # 8089546
Reference: Berriman Ranch THP

Legal Account
David Levy Forestry
PO Box 1797
Nevada City, CA 95959
Attn: legal

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That the printed advertisement hereto annexed was published in the said UNION, for the full required period of **1** time(s) commencing on **1/24/2015**, and ending on **1/24/2015**, all days inclusive.

I certify, under penalty of perjury, the foregoing is true and correct.

Signed: _____

Legals Advertising Clerk

Date: 01/22/2015 State of California, Grass Valley

Proof and Statement of Publication
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Berriman Ranch THP
REQUEST FOR INFORMATION ON
DOMESTIC WATER SUPPLIES

David Levy Forestry will be submitting a Timber Harvest Plan (THP) to CAL FIRE, the Calif. Department of Forestry & Fire Protection. The THP is located in Sec. 2, T15N, R8E, MDB&M. This notice is to request information about any domestic water supplies from Class I, II, & IV watercourses that might receive drainage from the THP area within 1000 feet downstream. Watercourses that may be affected are: Unnamed tributary to Wolf Creek and Wolf Creek. Per Calif. State Law, the THP submitter hereby gives public notice and requests to be advised of any domestic water supplies from these watercourses. Please respond within ten (10) days of this publication to: David Levy Forestry, P.O. Box 1797, Nevada City, CA. 95959, (530) 277-7144

Publish: January 24, 2015 **Ad #10897198**

David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Ph. (530) 277-7144

January 20, 2015

Parcel # 22-140-49
Randall & Debra Blakemore
10538 Mote Ln.
Grass Valley, CA. 95949

SAMPLE

RE: Berriman Ranch THP

Dear Landowner,

David Levy Forestry Services, The "CAN DO" Company, is developing a Timber Harvest Plan (THP) for the property located in portions of **Sec. 2, T15N, R8E, MDBM.** I am requesting information on any surface domestic water supply or use located on or near your property. This includes any household water use derived from watercourses on or adjacent to your property, pursuant to Title 14, California Code of Regulations, Section 1032.10 of the Forest Practice Rules.

As a common courtesy, as well as required by state regulations, all users of surface water within 1,000 feet downstream of the proposed project must be notified of the intent to harvest timber. In addition, the location of all domestic water supplies must be shown on the THP map. This applies to household use, and includes the incidental watering of domestic stock for family sustenance or enjoyment and the irrigation of not more than one half acre of lawn, ornamental shrubbery, or gardens at any single establishment. This does not include wells outside the watercourse channel.

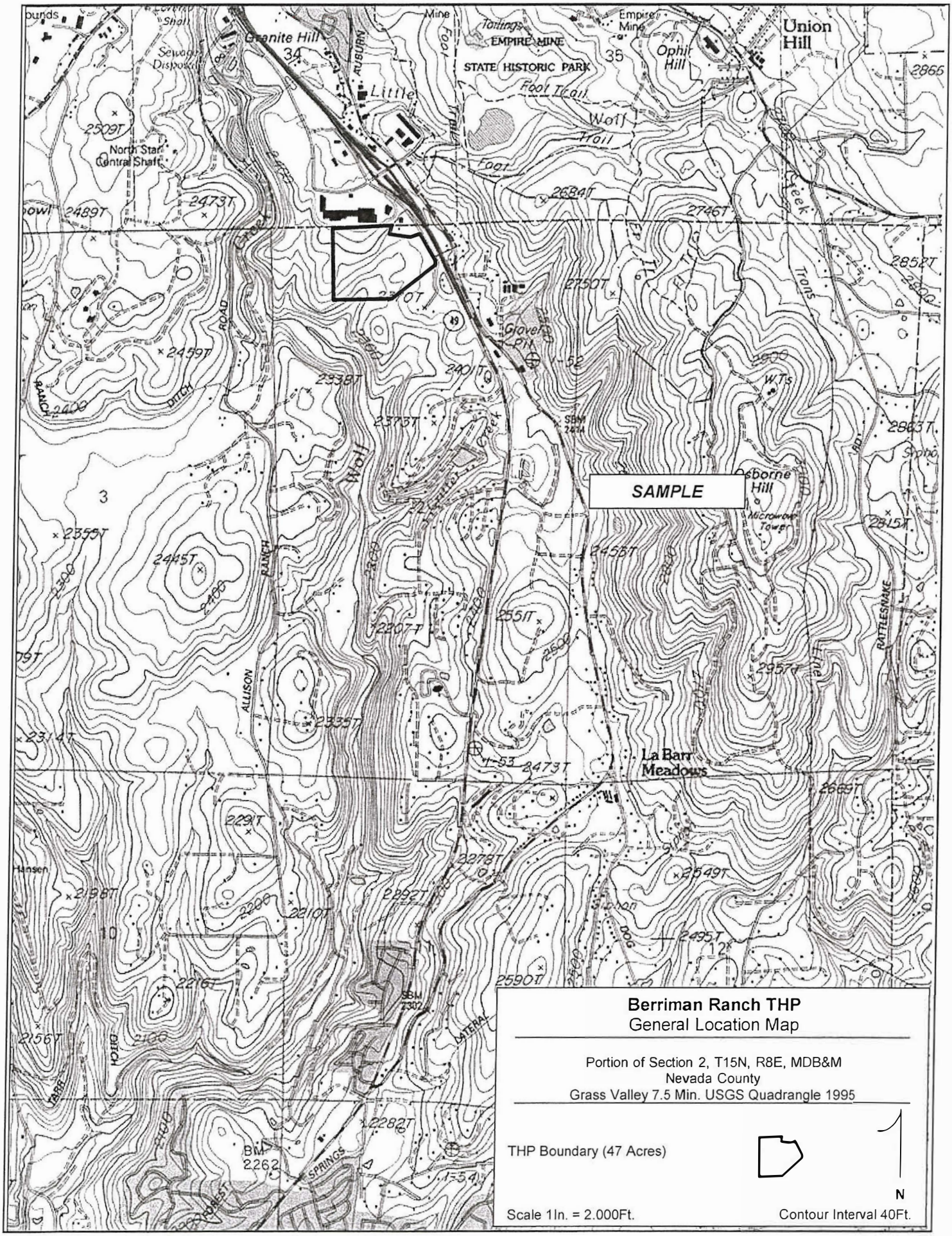
Your property has been identified as being within 1,000 feet downstream of the proposed project area. This letter is to request information as to your uses of any watercourses within 1,000 feet of the THP boundary. Watercourses that may be affected include **an unnamed tributary to Wolf Creek and Wolf Creek**. Even if you are not currently using the watercourse as a domestic water source, but have used it in the past as a backup, etc., please also supply this information. I have included a Project Location Map for your perusal.

I must have your information within ten (10) days of your receipt of this notification. Please make your response in writing to: **David Levy Forestry, The "CAN DO" Company, P.O. Box 1797, Nevada City, CA 95959. ATTN: Berriman Ranch THP.**

Again, your response must be in writing. Any response will be submitted with the THP to the California Department of Forestry for review. If any domestic supplies are noted, the THP shall contain mitigations necessary to protect the domestic water supply. Should you have any questions, please do not hesitate to call David Levy at (530) 277-7144.

Sincerely,

David Levy, RPF 1976
Enclosure: General Location Map



Berriman Ranch THP
General Location Map

Portion of Section 2, T15N, R8E, MDB&M
Nevada County
Grass Valley 7.5 Min. USGS Quadrangle 1995

THP Boundary (47 Acres)

N

Scale 1In. = 2.000Ft. Contour Interval 40Ft.

David Levy Forestry
The Can Do Company
David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Mobile (530) 277-7144

June 30, 2015

East Los Angeles 56
a C.L.P., Asset Property Management Inc.
Joseph F. Oliver President and General Partner
7969 Engineer Road, Suite 108
San Diego, CA. 92111

RE: Berriman Ranch THP

I would like to inform you that I have submitted Timber Harvest Plan for property in **Nevada** County.

Legal Description:	Township	Range	Section(s)	Base & Meridian
	15N	**8E**	**2**	**Mt. Diablo**

The plan will be reviewed by the California Department of Forestry for compliance before any operations can begin.

In accordance with the requirements of the California Forest Practice Rules, Title 14 California Code of Regulations, section 1035 and Item #13A on the Timber Harvest Plan I have prepared. As plan submitter, timber/ timberland owner, successor in interest or Licensed Timber Operator, these responsibilities are as follows:

1. Stocking
The Timber Harvest Plan coincides with a Timberland Conversion; therefore the stocking of trees after harvest to meet the State of California minimum requirements is not required.

2. Erosion Control
All logging roads and drainage structures shall be maintained after logging for a period of at least one year after the Timber Operations Work Completion Report is approved. The director may prescribe a maintenance period extending as much as three years.

3. Marking
Marking is required in the WLPZ and has been completed. A 10% sample mark has been completed. The remaining timber to be marked will be completed prior to operations.

If you have any questions, please contact our office at the telephone numbe.r abo.e.

Sincerely

David E. Levy
Registered Professional Forester # 1976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David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Mobile (530) 277-7144

June 30, 2015

Asset Builders Inc.
7969 Engineer Road, Suite 108
San Diego, CA. 92111

RE: Berriman Ranch THP

I would like to inform you that I have submitted Timber Harvest Plan for property in **Nevada** County.

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David E. Levy
Registered Professional Forester # 1976


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David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Mobile (530) 277-7144

July 15, 2015

Great Western Mortgage
Samuel J. Kahn President
225 W. Plaza St. #103
Solano Beach, CA. 92075
619.696.5066

RE: Berriman Ranch THP

I would like to inform you that I have submitted Timber Harvest Plan for property in **Nevada** County.

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	15N	**8E**	**2**	**Mt. Diablo**

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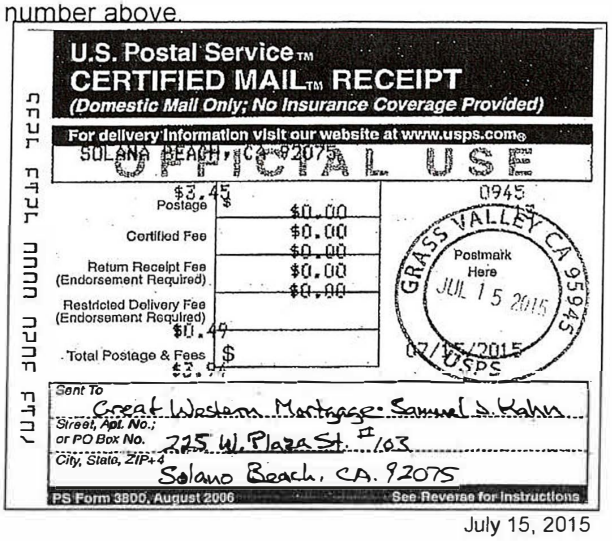
Sincerely

David E. Levy
Registered Professional Forester # 1976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Berriman Ranch
Special-Status Plant Survey

Prepared for:
SCO Planning, Engineering & Surveying
140 Litton Drive, Suite 240
Grass Valley, CA 95945

Prepared by:
Greg Matuzak, Wetland Consultant
163 Grove Street
Nevada City, CA 95959

June 2015

1.0 INTRODUCTION

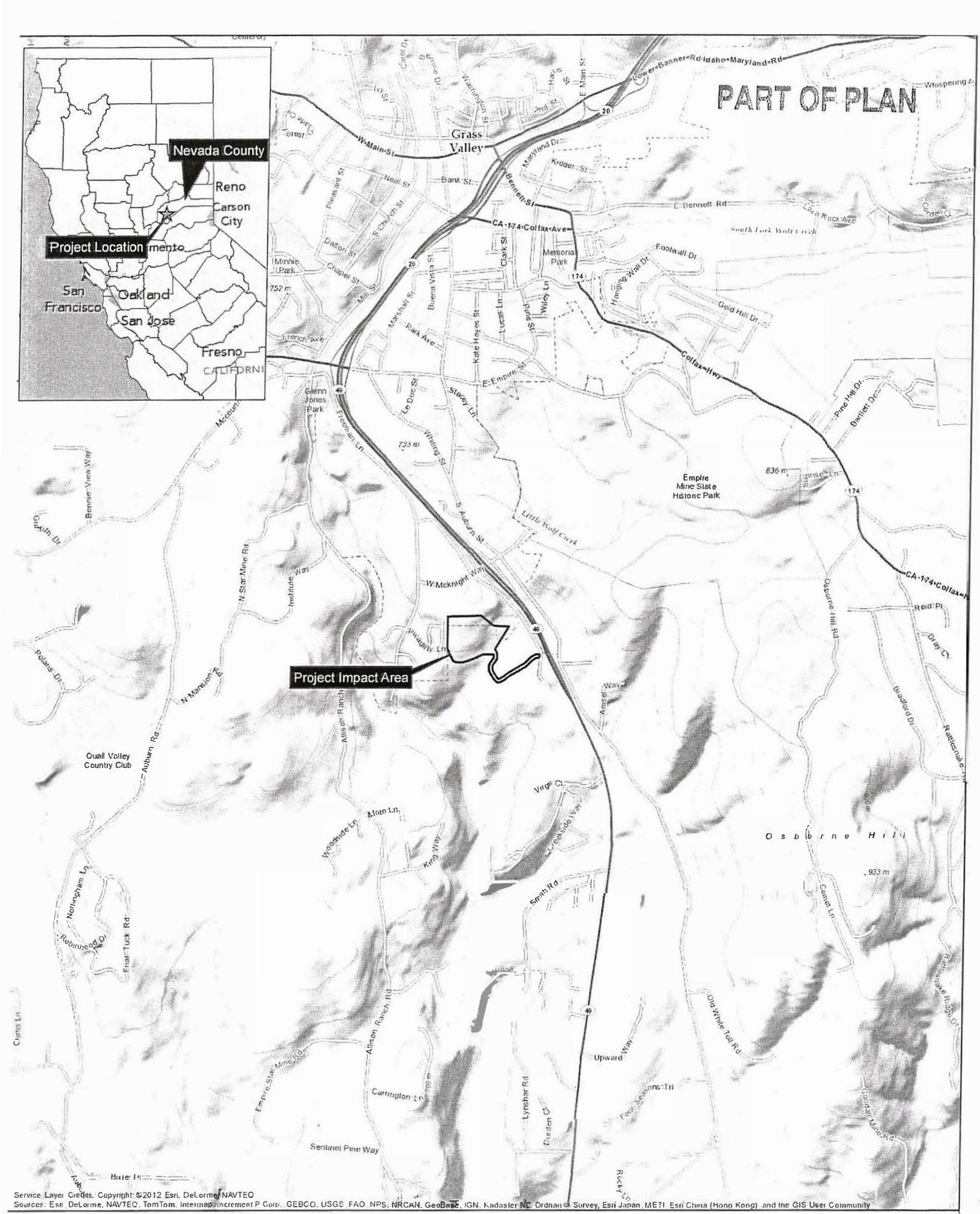
Greg Matuzak, a Biological Resources Consultant, conducted a special-status plant survey within the Berriman Ranch residential development and fire road project area located within the City of Grass Valley in Nevada County, California (Figure 1). The site is located within APN 22-140-03 and 22-160-03 and within Section 2, Township 15 North, Range 8 East within the USGS Grass Valley Quadrangle. The proposed project includes the development of residential units and the upgrade of an existing road to meet City of Grass Valley and local fire code standards. The proposed project includes the development of residential units connecting just east of Picadilly Lane, an existing street within the City of Grass Valley. Additionally, the proposed project plan includes the upgrade and development of an existing road that would connect Picadilly Lane with the newly developed residential units, and then with Taylorville Road.

The project is located in the City of Grass Valley, immediately south of Nevada City, in Nevada County. The project area is generally bound by two roads: Picadilly Lane to the west and Taylorville Road to the east. An existing residential development along Picadilly Lane just west of the proposed residential unit development borders the project area to the west. The project area encompasses approximately 22 total acres. The project area includes vacant private land and it is surrounded by a mix of residential and retail uses. The area surrounding the proposed project area consists of several existing commercial and residential land uses, and to a lesser degree public and quasi-public land uses.

The site is covered mostly by Ponderosa Pine, Annual Grassland, and Abandoned Orchard habitats. The site also includes small amounts of Foothill Hardwood, Foothill Riparian, and Freshwater Emergent Wetland habitats. Significant portions of the old orchards are associated with facultative mesic meadow plants and characterize wetlands associated with the project site drainages and drainage patterns. Site topography slopes gradually to the west towards Wolf Creek, where onsite drainages connect to. The site is approximately 2,200 feet above mean sea level; elevations increase in east, north, and south directions as the terrain drains to the west (Figure 2). The study area supports Annual Grassland, Orchard, Orchard/Wet Meadow/Seasonal Wetland, Montane Hardwood Woodland, Foothill Riparian habitat, and Fresh Emergent Wetland habitat types. The Foothill Riparian habitat and much of the associated wetlands within the site occur along the main tributary systems to Wolf Creek that cross the property from the east to the west. There is one main unnamed tributary to Wolf Creek that crosses the existing access and fire road, which contains a large culvert to allow water passage under the road.

The purpose of the special-status plant survey within the study area was to identify the presence of any plant species that have been identified as rare and contain a level of special-status where potential impacts to them would require consultation and coordination with local, state, and federal agencies as well as developing mitigation measures to avoid and minimize impacts to the special-status species, where feasible. Within the report plants are considered special-status if they are listed on the federal Endangered Species Act (ESA), listed by the State of California on the State ESA list, or have been ranked by the California Native Plant Society (CNPS) as a Rank 1, 2, 3, or 4 species.

A special-status plant species was conducted on May 30, 2015 and no special-status plant species were identified within the survey area. The results of this survey were identical to previous special-status plant surveys conducted within the site that also did not identify any special-status plant species (Biological Inventory and Habitat Management Plan, EcoSynthesis 2006 and Special-status Plant Survey Report, EcoSynthesis 2008).



0 0.5 Miles

1 inch = 2,000 feet

Figure 1
Project Vicinity

Berriman Ranch

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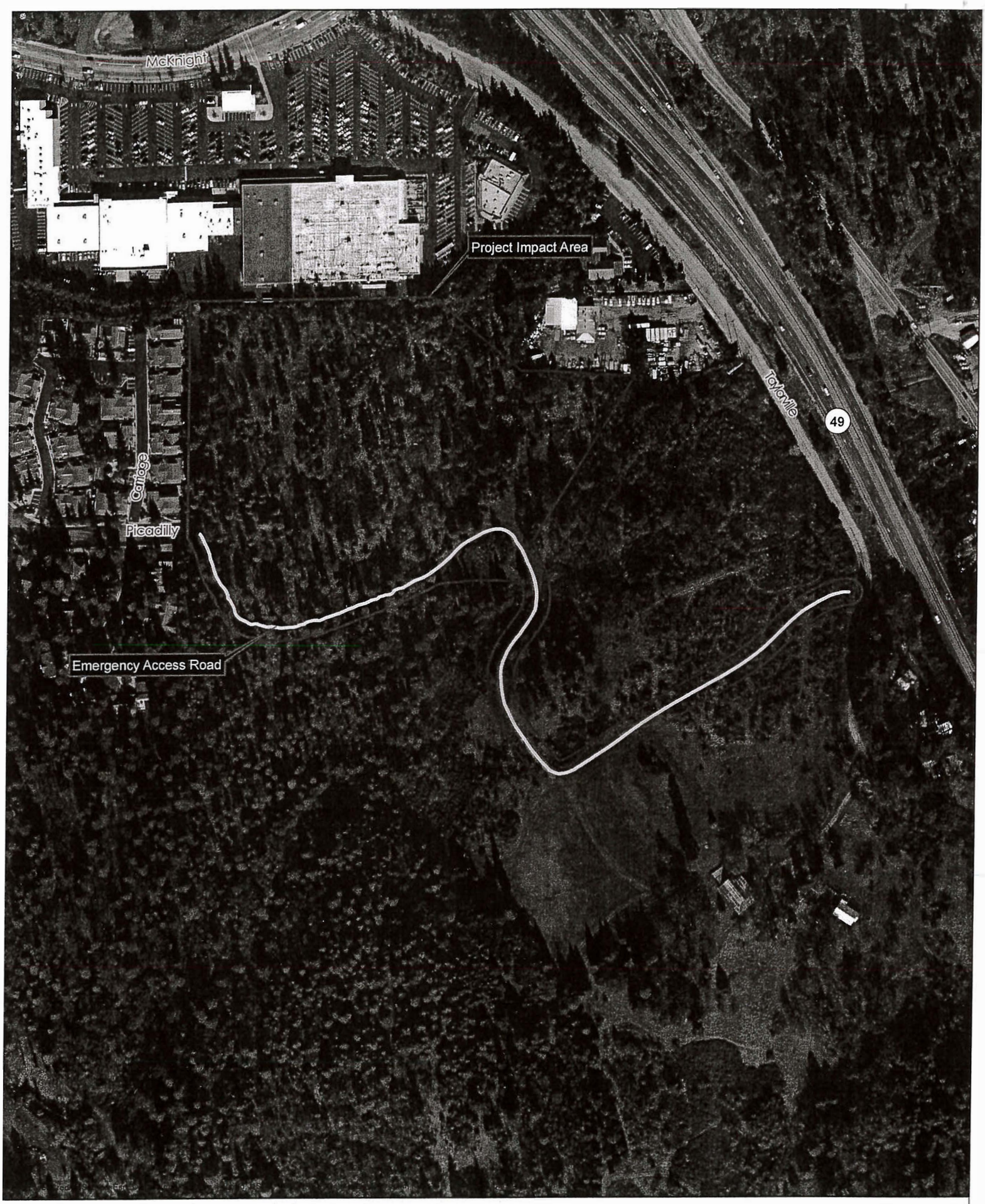

0 275 Feet

1 inch = 275 feet

NEVADA

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Figure 2
Project Location
Berriman Ranch

2.0 METHODS

The special-status plant survey include full coverage walking transects through the entire site on May 30, 2015. Prior to conducting the special-status plant survey, a 9 Quad Search was conducted within the California Department of Fish and Wildlife (CDFW) CA Natural Diversity Data Base (CNDDB) and within the CNPS On-line Inventory of Rare and Endangered Plants in California. The project survey area is located within the Grass Valley USGS Quad. The results of the 9 Quad Search and review of previous special-status plant surveys and biological assessments conducted within the site (EcoSynthesis 2006, 2008) identified 2 special-status plant species with a potential to occur within the project survey area. They include brownish beaked-rush (*Rhynchospora capitellata*), a CNPS Rank 2 species, and Scadden Flat Checkerbloom (*Sidalcea stipularis*), a federally endangered plant species and a CNPS Rank 1B species.

3.0 RESULTS

A total of 77 plant species were identified during the special-status plant survey (see Appendix A for plant list). The project area is composed primarily of Ponderosa Pine, Annual Grassland, and abandoned orchard habitats. However, the abandoned orchard habitats are associated generally with the riparian habitats adjacent to the unnamed tributary to Wolf Creek and are considered Foothill Riparian Wetlands. The Ponderosa Pine habitats also include incense cedar (*Calocedrus decurrens*) and California black oak (*Quercus kelloggii*). The Annual Grassland habitats contain bromes (*Bromus diandrus and B. hordeaceus*), wild oats (*Avena* sp.), orchard grass (*Dactylis glomerata*), tall fescue (*Festuca arundinacea*), among other native and non-native grasses. The abandoned orchard areas, which are primarily associated with Foothill Riparian Wetlands, include white alders (*Alnus rhombifolia*) and willows (*Salix laevigata* and *S. lasiolepis*) in addition to Himalayan blackberry (*Rubus armeniacus*), Baltic rush (*Juncus balticus*), and iris-leaved rush (*Juncus xiphioides*). See attached photo log in Appendix B for site conditions during the special-status plant survey.

Areas previously identified as seasonal wetlands and wetlands associated with the unnamed tributary to Wolf Creek contain a diverse palette of native herbaceous wetland species, such as clustered field sedge (*Carex praegracilis*), umbrella sedge (*Cyperus eragrostis*), Baltic rush (*Juncus balticus*), and iris-leaved rush (*Juncus xiphioides*). In addition, an obligate wetland species, cattail (*Typha* sp.) is also present in the topographic low areas adjacent to the unnamed tributary to Wolf Creek that crosses the project survey area.

No special-status plant species were identified within the project survey area. The brownish beaked-rush and Scadden Flat Checkerbloom were not identified within the project survey area, nor were any other special-status plant species. Therefore, no further surveys are required and consultation and coordination with the local, state, and federal agencies overseeing the protection of special-status species is not warranted. Furthermore, no additional avoidance, minimization, or mitigation measures are required for minimizing impacts to special-status species.

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Appendix A

Plant List

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Appendix A. Species observed within the project survey area on May 30, 2015

Scientific Name	Common Name
CRYPTOGAMS	**FERNS AND SPIKE-MOSSES**
Blechnaceae	
Woodwardia fimbriata	chain fern
Dennstaedtiaceae	**Bracken Family**
Pteridium aquilinum	bracken fern
Equisetaceae	**Horsetail Family**
Equisetum arvense	common horsetail
GYMNOSPERMS	**CONIFERS**
Cupressaceae	**Cypress Family**
Calocedrus decurrens	incense cedar
DICOTYLEDONS	**FLOWERING PLANTS**
Aceraceae	**Maple Family**
Acer macrophyllum	big-leaf maple
Anacardiaceae	**Cashew Family**
Toxicodendron diversilobum	poison oak
Apiaceae (Umbelliferae)	**Carrot Family**
Daucus carota	wild carrot
Torilis arvensis	hedge-parsley
Asteraceae (Compositae)	**Sunflower Family**
Artemisia douglasiana	mugwort
Aster eatonii	Eaton's aster
Calycadenia spicata	white tarweed
Carduus pycnocephala	Italian thistle
Centaurea solstitialis	yellow star-thistle
Cichorium intybus	chicory
Cirsium occidentale	western thistle

Cirsium vulgare	common thistle
Grindelia hirsutula	gum plant
Leucanthemum sp.	ox-eye daisy
Madia elegans ssp. *vernalis*	common madia
Madia gracilis	slender tarweed
Solidago canadensis	goldenrod
Sonchus sp.	sow thistle
Taraxacum officinale	common dandelion
Betulaceae	**Birch Family**
Alnus rhombifolia	white alder
Brassicaceae (Cruciferae)	**Mustard Family**
Brassica nigra	black mustard
Lepidium nitidum	pepper grass
Rorippa nasturtium-aquaticum	water cress
Caprifoliaceae	**Honeysuckle Family**
Lonicera hispidula	honeysuckle
Cornaceae	**Dogwood Family**
Cornus nuttallii	California dogwood
Ericaceae	**Heath Family**
Arctostaphylos viscida	whiteleaf manzanita
Fabaceae	**Legume Family**
Lathyrus latifolius	sweet pea
Lotus humistratus	lotus
Hypericaceae	**St. John's Wort Family**
Hypericum perforatum	Klamath weed
Juglandaceae	**Walnut Family**
Juglans californica	California black walnut

Lamiaceae	**Mint Family**
Prunella vulgaris var. *lanceolatus*	self-heal
Stachys ajugoides	hedge nettle
Plantaginaceae	**Plantain Family**
Plantago lanceolata	common plantain
Polemoniaceae	**Phlox Family**
Navarretia sp.	navarretia
Polygonaceae	**Buckwheat Family**
Rumex crispus	curly dock
Rosaceae	Rose Family
Malus spp.	pear and apple Several cultivars
Oemleria cerasiformis	oso berry
Prunus virginiana	choke cherry
Rosa californica	wild rose
Rubus armeniacus	Armenian blackberry
Rubus laciniatus	cut-leaved blackberry
Rubus leucodermis	blackcap raspberry
Salicaceae	**Willow Family**
Salix laevigata	red willow
Salix lasiolepis	arroyo willow
Scrophulariaceae	**Figwort Family**
Mimulus guttatus	seep-spring monkeyflower
Verbascum blattaria	moth mullein
Verbascum thapsus	woolly mullein
Cyperaceae	**Sedge Family**
Carex densa (dudleyi)	sedge
Carex feta	sedge
Carex praegracilis	clustered field sedge
Cyperus eragrostis	umbrella sedge
Iridaceae	**Iris Family**
Iris sp.	iris

Juncaceae	**Rush Family**
Juncus balticus	Baltic rush
Juncus bufonius	toad rush
Juncus effusus	soft rush
Juncus tenuis	rush
Juncus xiphioides	iris-leaved rush
Lemnaceae	**Duckweed Family**
Lemna sp.	duckweed
Liliaceae	**Lily Family**
Chlorogalum pomeridianum	soap plant
Poaceae	**Grass Family**
Avena sp.	wild oats
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft brome
Cynosurus echinata	dog-tail grass
Dactylis glomerata	orchard grass
Elymus glaucus	blue wild-rye
Festuca arundinacea	tall fescue
Holcus lanatus	velvet grass
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley
Lolium perenne perennial	rye grass
Muhlenbergia rigens	deer grass
Poa pratensis	Kentucky bluegrass
Taeniatherum caput-medusae	medusa-head grass

P.C.3.10

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Appendix B

Photo Log

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Photo Log: Berriman Ranch Project Survey Area (May 30, 2015)

Photo 1: Forested northwestern area of project survey area

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Photo 2: Access road within the western zone of the project area.

Photo 3: Access road through middle section of the project area.

Photo 4: Southern section of the project survey area.

Photo 5: Orchard area within the southern area of the project survey area.

Berriman Ranch THP: 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	4%	1.675	14.38	User must enter harvest cycles to 100 years and/or at least three entry cycles.	0	6	6	0	0	6	6
Incense Cedar	20%	1.675	13.42		25	0	0	0	0	0	0
Pines	75%	2.254	12.14		50	0	0	0	0	0	0
True firs	1%	2.254	11.18		75	0	0	0	0	0	0
Hardwoods		2.214	11.76		100	0	0	0	0	0	0
Conversion of Board Feet to Cubic Feet	0.185	Pounds per Metric Tonne	2.204		0	0	0	0	0	0	0
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.96			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	0.93			0	0	0	0	0	0	0
	Hardwoods	0.89			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.	
0	12	1	43	3	None	0
25	0	0	0	0	None	0
50	0	0	0	0	None	0
75	0	0	0	0	None	0
100	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		-43	-3.22	Sum of emissions (Metric Tonnes CO2e) per acre	0

Berriman Ranch THP: 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	(0.01)	20	1	-0.02	-0.11	1	-0.03	-0.17	0	0.00	0.00	-0.01	Step 13. Enter Estimated Load Average: MBF/Truck	4.5	-0.066612245	
25	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0	Breakout into multiple production sites and by harvest year
50	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0	
75	-	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	3	0	
100	-	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	-0.01				-0.11			-0.17			0.00	-0.01			-0.07	

Revised October 23, 2015

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Berriman Ranch THP: 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	100%	0%	20.57	0.00	-0.15	13.78	0.00	10.49	0.00
25	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	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				-0.15	Sum of CO2 equivalent in wood products		10.49	0.00

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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		101 Years
Live Trees (Conifers and Hardwoods)	46.47	0.00	
Wood Products		10.49	
Site Preparation Emissions		0.00	
Non-biological emissions associated with harvesting		-0.37	
Non-biological emissions associated with milling		-0.15	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		-36.49	

Project Summary		
Project Acres	Step 17- Insert the acres that are part of the harvest area.	32
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		(1,168)

ESTIMATED SURFACE SOIL EROSION HAZARD

STATE OF CALIFORNIA
BOARD OF FORESTRY
RM-87 (4/84)

I. SOIL FACTORS				FACTOR RATING BY AREA		
A. SOIL TEXTURE	Fine	Medium	Coarse	A	B	C
1. DETACHABILITY	Low	Moderate	High	**21**	**0**	**0**
Rating	1-9	10-18	19-30			
2. PERMEABILITY	Slow	Moderate	Rapid	**3**	**0**	**0**
Rating	5-4	3-2	1			

B. DEPTH TO RESTRICTIVE LAYER OR BEDROCK

	Shallow	Moderate	Deep			
	1"-19"	20"-39"	40"-60"(+)	**1**	**0**	**0**
Rating	15-9	8-4	3-1			

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

	Low	Moderate	High				FACTOR RATING BY AREA		
	(-) 10-39%	40-70%	71-100%	**10**	**0**	**0**			
Rating	10-6	5-3	2-1				A	B	C
						Subtotal	**35**	**0**	**0**

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	**5**	**0**	**0**

III. PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE

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

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

	Low	Moderate	High	Extreme			
	(-) 30-39	40-59	60-69	70-80 (+)	**12**	**0**	**0**
Rating	1-3	4-7	8-11	12-15			
				TOTAL SUM OF FACTORS	**56**	**0**	**0**

EROSION HAZARD RATING

	<50	50-65	66-75	>75			
	LOW (L)	MODERATE (M)	HIGH (H)	EXTREME (E)	**M**		
				THE DETERMINATION IS			

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DEPARTMENT OF FORESTRY AND FIRE PROTECTION
P.O. Box 944246
SACRAMENTO, CA 94244-2460
(916) 653-7772
Website: www.fire.ca.gov

July 29, 2015

Mr. Joseph F. Oliver, President
East Los Angeles 56 a C.L.P., Asset Property Management Inc.
7060 Engineer Road, Suite 108
San Diego, CA 92111

Mr. Oliver:

The California Department of Forestry and Fire Protection (CAL FIRE) has received your *Notice of Exemption from Timberland Conversion Permit for Subdivision* (Notice) for the following subdivision development project:

CAL FIRE Subdivision Exemption Number:	**15-01EX**	THP Number:	
Subdivision Name and/or Number:	**Berriman Ranch, 10PLN-06**		
Approving County or City:	**City of Grass Valley**	Parcel Number:	**22-140-03, & 22-160-03.**
Subdivision Location:	**West of Taylorsville Rd & East of the Gazebos and Carriage House Residential Projects, Grass Valley, CA**		
Legal Description:	**NE 1/4, NW ¼, Section 2, T15N, R8E, MDBM**		
Acreage to be converted:	**47 Ac.**	Conversion Completion Date	**August 1, 2018**

CAL FIRE finds that the subdivision, as described above, and supported by materials submitted with this Notice, is exempt from the requirement to obtain a Timberland Conversion Permit as authorized in *14 CCR §1104.2*. Prior to conducting any timber operations, as defined in *Public Resources Code (PRC) § 4527*, you must obtain CAL FIRE's approval of a Timber Harvest Plan. If you anticipate not meeting the Conversion Completion Date identified above, please notify this office, in writing, so that the delay is not interpreted as a default on this project. In the event this subdivision development is not completed or is abandoned, CAL FIRE may take corrective action pursuant to *PRC §§4605 – 4611* to restock those areas which have been harvested but do not meet the stocking requirements of the Forest Practice Rules *(CCR § 1104.2(e))*.

The completion date for this "Exemption from Conversion Permit for Subdivision" is August 1, 2018. If an Extension becomes necessary, an amendment can be submitted at that time.

Please do not hesitate to contact this office if you have any questions.

Sincerely,

William D Solinsky

William D. Solinsky
Forester III, Forest Practice

2-15-049NEV

ATTENTION

I. THE FOLLOWING ADDENDUM(S), AND INFORMATION IS REQUIRED BY LAW TO BE KEPT CONFIDENTIAL AND IS NOT FOR PUBLIC VIEWING:

ARCHEOLOGY:
(GOV. CODE 6254.10) & 14 CCR 929.1(a) (2))

PAGE 69 THROUGH PAGE 93

OPTION "A" TRADE SECRETS:
(GOV. CODE 6254.7(a))

PAGE_____ THROUGH PAGE _____

NTMP – TRADE SECRETS:
(GOV. CODE 6254.7(a))

PAGE_____ THROUGH PAGE _____

II. THE FOLLOWING NON-CONFIDENTIAL PAGES HAVE BEEN REMOVED FROM THIS THP/NTMP. THESE PAGES ARE AVAILABLE UPON REQUEST FROM THE DEPARTMENT OF FORESTRY & FIRE PROTECTION, 6105 AIRPORT RD., REDDING, CA 96002, OR CALL 530-224-2445.

OTHER(S)_____

PAGE_____ THROUGH PAGE _____

David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Ph. (530) 277-7144
Email: candodave@gmail.com

August 28, 2015

California Department of Forestry
Review Team Chairman
6105 Airport Road
Redding, CA. 96002

RE: #2-15-049-NEV Response to Review Team Questions (RTQ) and Pre-harvest Inspection Recommendations (PHI).

Included are:

- The response to Review Team Questions.
- The response to Pre-Harvest Inspection Recommendations.
- An authorization of the extension of the close of public comment.
- **Revised NOI & NOI Map, pages 5, 7, 14, 17-22, 29, 33-34, 57, 64-67, 69, & 72; as well as new pages 21.1 & 68.1. Please replace originals with these within the THP.**
- **Pages 63.1-63.16 have been sent via USPS and will be available prior to 2nd Review.**

Response to Review Team Questions (RTQ).

1. **Page 5, Item #8, Location of Timber Operations, Watershed:**
   This item has been revised to state the watershed is Non-ASP.

2. **Page 5, Item #9, Exemption from a Timberland Conversion Permit:**
   An exemption from a Timberland Conversion Permit has been submitted to and accepted by CAL FIRE.

3. **Page 7, Item #14(d), Tree Marking:**
   This item was discussed and agreed upon during the PHI. The THP is a conversion where no stocking will be met after harvest. Trees will be harvested or to remain will be done so during harvesting operations and construction layout. The building envelopes and associated yards will be harvested with 98% of the vegetation being removed. Occasional trees will remain for aesthetics only. Vegetation will remain around the border of the conversion area as a view shed for neighboring parcels. This area also is within the conversion; therefore will not need to meet stocking standards. Trees within this buffer will be retained with only removal of hazard, dead, dying, diseased, or vegetation that does not meet the city fire fuels reduction criteria.

4. **Page 7, Item #14(a), Silviculture, MSP:**
   This item has been revised to remove the "X" stating the THP will meet MSP.

5. **Page 7, Item #14(f), Hardwoods:**
   Occasional hardwood trees will be retained for aesthetics as identified on the official subdivision map. All hardwoods not identified on the official subdivision map to be retained shall be removed and cleared for construction layout.

6. **Page 12, Item #25, Road Construction, 14 CCR 943.5(i):**
   This item has been revised to include the following:

   There are no logging road and landing surfaces, road approaches, inside ditches and drainage structures that cannot be hydrologically disconnected.

   (Changes to this item occur on revised page 14)

7. **Page 14, Item #26(b), Watercourse Crossing Table, Mitigation:**
This item has been revised to change the word "Non" to "None".

PART OF PLAN

8. **Page 18, Item #32(a), Biological Resources, 3rd Paragraph, California Red-legged Frog:**
This item has been revised to state operations shall be held off within 300 feet of the high water line of the Class II watercourse until proper consultation.

9. **Page 19, Item #32(b), Biological Resources, Last Paragraph:**
This item has been revised to reflect an exemption from a Timberland Conversion Permit has been approved- Exemption Number 15-01EX

10. **Page 19, Item #32(b), Biological Resources, Last Paragraph:**
A copy of the "Special Status Plant Survey" has been provided in Section V.
(Changes for this item occur on new pages 63.1-63.16 which shall be provided prior to 2nd Review)

11. **Page 20, Item #33, Snags:**
This item has been revised to state:

There will be "no" snags remaining after harvest.

12. **Page 17, Item #32(a), Biological Resources, Great Grey Owl, Last Paragraph:**
This item has been revised to include measures for CAL FIRE and CDFW consultation if this species is observed within the THP boundary or vicinity.

13. **Page 33, Section IV, Soil Productivity:**
This item has been revised to reflect the potential impact of the conversion on soil productivity.

14. **Pages 33 & 34, Section IV, Biological Impact Assessment:**
This item has been revised to include a conclusion for how each assessed area will or will not be impacted by the proposed project.

15. **Page 18, Item #32(a), Biological Resources, COTO:**
Suitable habitat for this species was not observed within the THP boundary or vicinity. Take avoidance measures have been provided under this item if a COTO is observed within the THP or surrounding area.
(There are no changes for this item)

16. **Page 57, Section IV, Green House Gas Emissions:**
This item has been revised to reflect accurate total emissions associated with the THP. Also an accurate recoup period for the carbon emitted.

17. **Pages 64-67, Section V, Green House Gas Emission Worksheets:**
Clear copies of the worksheet have been provided. The original pre and post harvest inventories have been revised to more accurately describe the present and estimated stand conditions after harvest.

18. **NOI, NOI Map, Page, 5, Item #8, Page 7, Item #14(a), Page 21, THP Map, Page 22, Section III, Location, Page 29, WIA Map, Page 67, GHG Summary, Page 69, CAA Part 1, Page 72, Arch. Coverage Map:**
Originally city fire fuels work was possibly going to occur outside the conversion area; however this work will remain within the conversion area which is a total of 32 acres. The acreage was corrected on these items and a new NOI was posted on 8-21-15.

19. **Page 21, THP Map:**
The THP Map has been revised to depict the overhead powerlines on Taylorsville Road. There are no overhead powerlines within the THP boundary. No protection measures are proposed.

20. **Construction Storm Water Permit:**
It has been noted that this Conversion will need a Construction Storm Water Permit prior to grading, excavation, or grubbing activities that disturb more than one acre.

AUG 2 8 2015

21. Subdivision Map:
For clarity a copy of the Subdivision Map has been provided.
(Changes for this item occur on new page 21.1)

PART OF PLAN

Pre-Harvest Inspection Recommendations (PHI):

1. Timberland Conversion Approval:
The Timberland Conversion approval letter from CAL FIRE has been provided.
(Changes for this item occur on new page 68.1)

Additional Revisions:

1. Adjacent Landowner Notification:
The following corrected address shall be used for notifying the adjacent landowner on APN 22-150-32.

APN# 22-150-32
Estate of Hallie Richardson
Executor Esther Carnes
450 Gladycon Rd. #11
Colfax, CA. 95713

I authorize an extension of the close of public comment date to be ten working days after review of this response in the CDF office in Redding.

Thank you for your attention to this matter.

David Levy RPF #1976

AUG 2 8 2015

David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Ph. (530) 277-7144
Email: candodave@gmail.com

8/31/15

POP

August 28, 2015

CAL FIRE
6105 Airport Road
Redding, CA. 96002

RECEIVED
AUG 31 2015
REDDING
FOREST PRACTICE

RE: THP 2-15-049-NEV Berriman Ranch THP

Dear CAL FIRE Review Chair,

Please accept the accompanying "Special Status Plant Survey" to be included with the Berriman Ranch THP. The pages are numbered 63. 1-63. 16and shall be inserted within the original THP. These pages are provided as a condition of 2nd Review.

Thank you for your cooperation.

Sincerely,

David Levy Forestry Services RPF #1976

AUG 2 8 2015

David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Ph. (530) 277-7144
Email: candodave@gmail.com

September 21, 2015

California Department of Forestry
Review Team Chairman
6105 Airport Road
Redding, CA. 96002

RE: #2-15-049-NEV Response to Second Review Questions.

Included are:
The response to Second Review Questions.
An authorization of the extension of the close of public comment.
Revised pages 17, 25, 42-43, & 57. Please replace originals with these within the THP.

Response to Second Review Questions.

First Review Questions

#15. Page 43, Section IV, Species Discussion, Townsend's Big-eared Bat:
This item has been revised to include a statement as to the habitat characteristics used to determine as to suitable roosting habitat was present for this species.

#16. Page 57 GHG Discussion, Last Paragraph:
This item clearly states that the non-biological emission and biological emission is 0.43 metric tonnes of CO^2 per acre multiplied by 32 acres is a total emission of 13.76 metric tonnes associated with the THP. A statement as to how carbon stocs will be recouped has been provided.

Additional Responses

1. **Page 17, Item #32(a), Biological Resources:**
This item has been revised to read "Yes" there is habitat for rare, threatened or endangered species associated with the plan area.

2. **Page 25, Section III, Sensitive Terrestrial Vertebrates:**
This item has been revised to state "Yes" habitat for the grey wolf could be associated with the THP area.

3. **Page 42, Section IV, Species Discussion, Grey Wolf:**
This item has been revised to include to accurately state the correct Species Life History description.

I authorize an extension of the close of public comment date to be ten working days after review of this response in the CDF office in Redding.

Thank you for your attention to this matter.

David Levy RPF #1976

David Levy Forestry

The Can Do Company

David Levy RPF# 1976
P.O. Box 1797 Nevada City, CA. 95959
Ph. (530) 277-7144
Email: candodave@gmail.com

October 23, 2015

California Department of Forestry
Review Team Chairman
6105 Airport Road
Redding, CA. 96002

RE: #2-15-049-NEV Response to Additional Review Questions.

Included are:
The response to Additional Review Questions.
An authorization of the extension of the close of public comment.
Revised pages 15, 18, 27-28, 39-40, 43, 53, 56-57 & 64-67. Please replace originals with these within the THP.

Response to Additional Review Questions.

First Review Questions

#15. Page 43, Section IV, Species Discussion, Townsend's Big-eared Bat, Cover:
This item has been revised to include a discussion of habitat conditions used for scoping for this species.

#16 & #17. Pages 56 & 57 GHG Discussion:
This item has been revised to adjust the conifer and hardwood growth rate since nearly all trees will be removed within the conversion area. As a result carbon will not be sequestered within the project and carbon stocks will not be recouped.
(Please include revised pages 64-67)

Additional Responses

1. **Page 18, Item #32(a), Biological Resources, Second Paragraph, Page 43, Section IV, Species Discussion, COTO, Conclusion:**
   These items have been revised to include the following:

   The barn and other outbuildings are currently used for storage and equipment parking and are entered on a regular basis.

2. **Page 15, Item #26, Class II Protection Measures, 14 CCR 936.3(g):**
   This item has been revised to reference the Class II watercourse.

3. **Page 27, Section III, Alternative E:**
   This item has been revised to discuss the project occurring within another portion of the 120 acre ownership.

4. **Page 28, Section IV, CIA Checklist:**
   This item has been revised to state "No- After Mitigation" for Soil Productivity.

5. **Page 39, Section IV, Species Discussion, Northern Goshawk, Conclusion:**
   This item has been revised to better describe the potential habitat available for this species after harvest.

PART OF PLAN

6. **Page 40, Section IV, Species Discussion, Sharp-shinned Hawk, Conclusion:**
   This item has been revised to better describe the potential habitat available for this species after harvest.

7. **Page 53, Section IV, Species Discussion, CSO, Conclusion:**
   This item has been revised to better describe the potential habitat available for this species after harvest.

8. **Page 56, Section IV, Visual Impacts Assessment:**
   This item has been revised to elaborate on the visual assessment.

I authorize an extension of the close of public comment date to be ten working days after review of this response in the CDF office in Redding.

Thank you for your attention to this matter.

David Levy RPF #1976

NOV 0 5 2015