

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

**TIMBER HARVESTING PLAN**  
STATE OF CALIFORNIA  
DEPARTMENT OF FORESTRY

FOR ADMIN. USE ONLY

- 1. SHU 7. Darley
- 2. FGI 8. \_\_\_\_\_
- 3. WQ5 9. \_\_\_\_\_
- 4. SHA-PW 10. \_\_\_\_\_
- 5. CGS 11. \_\_\_\_\_
- 6. RT 12. \_\_\_\_\_

AND FIRE PROTECTION  
RM-63 (02-03)

THP No.  
**2-10-049-SHA (4)**

Dates Rec'd 10/1/2010

THP Name: **North McMullen Mt.**

Date Filed **OCT 08 2010**

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

Date Approved **MAY 24 2011**

If this is a Modified THP, check box:

Date Expires **MAY 23 2014**

Extensions 1)  2)

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

SECTION I - GENERAL INFORMATION

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

1. TIMBER OWNER(S) OF RECORD: Name: **California Department of Forestry and Fire Protection**

Address **875 Cypress Avenue**

City **Redding** State **CA** Zip **96001** Phone **(530) 225-2505**

Signature Bruce W. Beck Date 9/30/10

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

2. TIMBERLAND OWNER(S) OF RECORD: Name: **California Department of Forestry and Fire Protection**

Address **875 Cypress Avenue**

City **Redding** State **CA** Zip **96001** Phone **(530) 225-2505**

Signature Bruce W. Beck Date 9/30/10

TIMBERLAND OWNER(S) OF RECORD: **Carl J. & Jo Ann Davis (Water drafting only)**

Address: **P.O. Box 142**

City Whitmore State CA Zip 96069 Phone none

Signature: See attached letter Section V Date: \_\_\_\_\_

**RECEIVED**  
**OCT 01 2010**  
**REDDING**  
**FOREST PRACTICE**

Section 1

North McMullen Mountain THP

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

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

4. PLAN SUBMITTER(S): Name: **California Department of Forestry and Fire Protection**

Address **875 Cypress Avenue**

City **Redding** State **CA** Zip **96001** Phone **(530) 225-2505**

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

Signature *Bruce Beck* Date *9/20/10*

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

Name **The Plan Submitter or designated RPF will notify CAL FIRE of responsible person prior to start of operations.**

Address

City State Zip Phone

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

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

~~The Licensed Timber Operator. Pursuant to 14 CCR 936.9(p), "The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR 923.8 shall be three years."~~ *See Revised Page 2.1*

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

date of THP conformance, or  (date)

b. Expected date of completion of timber operations:

3 years from date of THP conformance, or  (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.
- 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

**PART OF PLAN**

**Revised Item # 5**

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

**The Licensed Timber Operator. Pursuant to 14 CCR 936.9(p), "The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR 943.8 shall be three years."**

# PART OF PLAN

North McMullen Mountain THP

Section 1

8. Location of the timber operation by legal description: covered by USGS 7.5 minute Quad. **Jacks Backbone CA 1995**  
Base and Meridian:  Mount Diablo  Humboldt  San Bernardino

Section	Township	Range	Acreage	County	Assessor's Parcel Number (Optional)
1 - 3, 11, 12	32N	2E	870	Shasta	

870 TOTAL ACREAGE (Logging Area Only)

Planning Watershed: CALWATER Version, Identification Number, and Name

Version 2.2 Cal Water Planning Watersheds		
Name	Number	Acres w/in watershed
Huckleberry	5507.320102	450 acres
Beal	5507.310103	48 acres
Atkins Creek	5507.310101	372 acres

9.  Yes  No Has a Timberland Conversion been submitted? If yes, list expected approval date or permit number and expiration date if already approved.
10.  Yes  No Is there an approved Sustained Yield Plan for this property? Number Date app.  
 Yes  No Has a Sustained Yield Plan been submitted but not approved? Number Date sub.
11.  Yes  No Is there a THP or NTMP on file with CDF for any portion of the plan area for which a Report of Satisfactory Stocking has not been issued by CDF?  
 If yes, identify the THP or NTMP number(s):  
 Yes  No Is there a contiguous even aged unit with regeneration less than five years old or less than five feet tall? If yes, explain. Ref. Title 14 CCR 913.1 (933.1, 953.1) (a)(4).
12.  Yes  No Is a Notice of Intent necessary for this THP?  
 Yes  No If yes, was the Notice of Intent posted as required by 14 CCR 1032.7 (g)?
13. RPF preparing the THP: Name **Benjamin C. Rowe** RPF Number **2686**

Address **875 Cypress Avenue**

City **Redding** State **CA** Zip **96001** Phone **(530) 225-2508**

- a.  Yes  No I have notified the plan submitter(s), in writing, of their responsibilities pursuant to 14 CCR 1035 of the Forest Practice Rules.  
 Yes  No I have notified the timber owner and the timberland owner of their responsibilities for compliance with the Forest Practice Act and rules, specifically the stocking requirements of the rules and the maintenance of erosion control structures of the rules.

The timberland is owned by the California Department of Forestry and Fire Protection and managed by the LaTour Demonstration State Forest (LDSF). The California Department of Forestry and Fire Protection is also the Plan Submitter.

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

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

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

I am responsible for the preparation of the THP including layout, flagging of WLPZ's, designation of timber to be harvested or retained and any additional work deemed necessary for plan approval.

# PART OF PLAN

Section 1

North McMullen Mountain THP

Additionally it is my responsibility as the RPF of record to oversee and administer the timber operations described in the THP, explain to the LTO his responsibilities, ensure conformance with the requirements of the plan and the Forest Practice Act and Rules.

I will be present, or ensure that that my designee is present, on the logging area at a sufficient frequency to know the progress of operations and to advise the LTO and timberland owner, but not less than once during the life of the plan.

I am the RPF of record until the department is notified otherwise. I will immediately furnish written notification to the LTO, the plan submitter, and the Department of a decision to withdraw professional services from the plan.

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

NONE

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

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

will not have a significant adverse impact on the environment.

Registered Professional Forester: I certify that I, or my supervised designee, personally inspected the THP area, and this plan complies with the Forest Practice Act, the Forest Practice Rules and the Professional Foresters Law. If this is a Modified THP, I also, certify that: 1) the conditions or facts stated in 14 CCR 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

Byron C Rowe RPF# 2686

Date

9/30/10

SECTION II - PLAN OF TIMBER OPERATIONS

NOTE: If a provision of this THP is proposed that is different than the standard rule, the explanation and justification should normally be included in Section III unless it is 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 913 (933, 953) .11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

Clearcutting ac. Shelterwood Prep. Step ac. Seed Tree Seed Step ac.
Shelterwood Seed Step ac. Seed Tree Removal Step ac.
Shelterwood Removal Step ac.

Selection ac. Group Selection 753 ac. Transition ac.

Commercial Thinning ac. Road Right of Way ac. Sanitation Salvage ac.

Special Treatment Area ac. Rehab. of Understocked Area 27 ac. Fuelbreak 10 ac.

Alternative ac. Variable retention ac. Other 80 ac. no harvest/ Brush or plantation

Total acreage 870 ac.: Explain if total is different from that in 8. MSP option chosen: (a) [X] (b) [ ] (c) [ ]

THP 2-02-187 SHA South Cow THP

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).

Group Selection: Immediately upon completion of operations the area shall meet the stocking standards of CCR 933.2(a)(2)(A)(2), 75 square feet per acre of basal area shall be retained for Site III lands. The residual stand shall contain sufficient 18 inch DBH trees to meet at least the 15 sq/ft basal area, size, and phenotypic quality of tree requirement specified under the seed tree method as specified in CCR 933.1(c)(1)(A)(1.). Post harvest stocking will be met with group A species.

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

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

All harvest trees shall be marked in Orange paint with a horizontal stripe near breast height and a mark at the stump. A sample area will be marked prior to the preharvest inspection.

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

e. Forest products to be harvested:

Sawlogs, cull logs, chips, pulp logs, and fuel-wood, poles.

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

Section 2

North McMullen Mountain THP

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.

g. Other instructions to LTO concerning felling operations

Check all road location flagging, watercourse flagging, WLPZ boundary flagging, EEZ and ELZ flagging, and skid trail flagging prior to the commencement of any falling operations. Have the responsible RPF or supervised designee replace any flagging that is incomplete or unclear.

Trees designated for removal within the EEZ or ELZ shall be directionally felled towards the perimeter and away from the protection zone and endlined, so as to keep heavy equipment out of the protection zone. In the ELZ of Class III watercourses, trees may be felled bridging the watercourse and endlined from outside the ELZ. The purpose of this measure is to allow for trees that if not directionally felled across the ELZ would fall into the ELZ or damage the residual stand.

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

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

Site Preparation Addendum per 14 CCR 935.4 (a)-(h)

- a) Site preparation will occur within Rehabilitation Unit and may occur within the groups of the Group Selections silviculture.
  - b) Methods of site preparation may include manual slashing of sub-merchantable unharvested material, brushraking logging slash and brush into burn piles, contour ripping and chemical control of competing vegetation.
  - c) Mechanical equipment – excavator, bulldozer with rippers.
  - d) All site preparation activities are prohibited within the WLPZs of Class I and Class II watercourses, and within the ELZs designated for protection of Class III watercourses, springs and seeps.
  - e) No exceptions or alternatives to the standard rules are requested.
  - f) LTO shall be amended into the plan prior to the start of any mechanical site preparation.
  - g) All site preparation shall be conducted between May 1 and November 15
  - h) Pile construction and burning shall adhere to Item 31 within this THP.
  - i) The Rehabilitation Unit shall be planted with group A species within three years of completion of operations.
- j. If the rehabilitation method is chosen provide a regeneration plan as required by 14 CCR 913 (933, 953) .4 (b).

The Rehabilitation Unit shall be artificially regenerated. The unit shall be planted with Group A species within three years following completion of operations. An average of 300 seedlings per acre shall be planted. The seedlings shall be from the appropriate seed zone and elevation band.

15. a.  Yes  No Is this THP within an area that the Board of Forestry and Fire Protection has declared a Zone of Infestation or Infection, pursuant to PRC 4712 - 4718? If yes, identify feasible measures being taken to mitigate adverse infestation or infection impacts from the timber operation. See 14 CCR 917 (937, 957) .9 (a).
- b.  Yes  No If outside a declared zone, are there any insect, disease or pest problems of significance in the THP area? If yes, describe the proposed measures to improve the health, vigor, and productivity of the stand(s).

Located within the Rehabilitation unit and in smaller pockets throughout the THP, the Red Fir is heavily infected with dwarf mistletoe and *Cytospora spp* and the Western White pine is infected with blister rust. Both the Red Fir and the Western White Pine are experiencing a heavy die off.

To the extent possible the infected trees shall be marked for harvest to reduce the spread of infestation.

HARVESTING PRACTICES

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

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

\* All tractor operations restrictions apply to ground based equipment.

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

Low                       Moderate                       High                       Extreme  
If more than one rating is checked, areas must be delineated on map down to 20 acres in size (10 acres for high and Extreme EHRs in the Coast District).

18. Soil Stabilization: In addition to the standard waterbreak requirements describe soil stabilization measures or additional erosion control measures to be implemented and the location of their application. See requirements of 14 CCR 916.7 (936.7, 956.7), and 923.2 (943.2, 963.2) (m), and 923.5 (943.5, 963.5) (f).
1. Stabilization measures shall be selected that will prevent significant soil loss or sediment transport into Class I, Class II and Class III waters and may include, but need not be limited to, mulching, rip-rapping, grass seeding, or chemical stabilizers. Preference to which stabilization measure to be used, if the need occurs, shall be based upon on site conditions and the availability of treatment materials. If appropriate for the site, mulching will be the method of choice.
  2. Mulch shall consist of straw or other material that is less than 3 inches in diameter (i.e. logging slash or brush). Straw mulch shall cover > 90% of the exposed area at an applied depth of > 2 inches. If logging slash or brush is used for mulch it shall be compacted by equipment and cover 90% of the exposed area.
  3. Where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from timber operations, the ground shall be treated by measures including, but not limited to, seeding, mulching, or replanting, in order to retain and improve its natural ability to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes. Treatments shall meet the standards described in item 1 and 2 above.

4. Waterbreaks shall be constructed as soon as practical upon conclusion of use of skid trails, roads, and landings, which do not have permanent and adequate drainage facilities, or drainage structures.

The maximum distance between waterbreaks on all roads and skid trails within the THP area shall not exceed the following standards except where natural drainage will occur, i.e., low spots, draws, and depressions. In these areas, any berm on the downhill side of the road or skid trail shall be removed to allow drainage and a drainage facility shall not be constructed.

Road or Trail Gradient (%)	10 or Less	11-25	26-50
Low EHR	300 ft	200 ft.	150 ft.
Moderate EHR	200 ft.	150 ft.	100 ft.

Waterbreaks shall be cut diagonally a minimum of 6 inches into the firm roadbed or skid trail surface and shall have a continuous firm embankment of at least 6 inches in height immediately adjacent to the lower edge of the waterbreak cut.

Waterbreaks shall be located to allow water to be discharged into some form of vegetative cover, duff, slash, rocks, or less erodible material wherever practical, and shall be constructed to provide for unrestricted discharge at the lower end of the waterbreak so that water will be discharged and spread in such a manner that erosion and sediment transport shall be minimized. Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks on roads and skid trails cause surface runoff to be concentrated on down-slopes, roads, or skid trails, other erosion control methods, as described in 1 above, shall be installed as needed to comply with 14 CCR 934.

5. Soil stabilization of logging roads - Permanent drainage facilities (rolling dips or drivable waterbars) shall be constructed on appurtenant seasonal roads used for this operation. These drainage facilities shall be constructed prior to the completion of hauling on all road segments where practical. Where pre-haul drainage facilities are not feasible, the standard waterbreak construction and spacing specifications will be used.
6. All outside berms along roads created from grading or truck traffic during operations shall be pulled back onto the road surface prior to completion of use and final road grading. Where feasible, and to the extent that can reasonably be done with minor road dressing and grading, existing side-hill roads shall be outsloped.
7. The traveled surface of logging roads shall be treated to prevent waterborne transport of sediment and concentration of runoff that results from timber operations. Consequently, during timber operations, road running surfaces in the logging area shall be treated as necessary to prevent excessive loss of road surface materials by watering as per 943.4 (h).

Additional requirements

- A. Pursuant to 14 CCR 936.9(n), exposed areas, >100 square feet, approaches to watercourse crossings between the drainage facilities closest the watercourse, and road cuts and fills within the WLPZ, and within any EEZ or ELZ designated for watercourse or lake protection, shall be treated to stabilize soils, minimize soil erosion, and prevent the discharge of sediment into waters in amounts deleterious to the beneficial uses of water. Treatments shall meet the standards described in item 1 and 2 above.

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- B. Timing requirements for all erosion prevention activities within ASP watersheds.
  - 1. For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water.
  - 2. For areas disturbed from October 16 through April 30, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.
  - 3. All tractor roads shall have drainage facilities installed as soon as practical following yarding and any day with a National Weather Service forecast of chance of rain 30 percent or more, a flash flood warning, or a flash food watch as specified in CCR 14 936.9(m).
- C. The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR 936.9 (p) shall be three years.

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Section 2

North McMullen Mountain THP

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

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

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

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

If "a" is yes, provide site specific measures to minimize effect of operations on slope stability below. Provide explanation and justification in section III as required per 14 CCR 914 (934, 954) .2 (d). CDF requests the RPF consider flagging tractor road locations if "a." is yes.

If b., c., d. or e. is yes:

- 1) the location of tractor roads must be flagged on the ground prior to the PHI or start of operations if a PHI is not required, and
- 2) you must clearly explain the proposed exception and justify why the standard rule is not feasible or would not comply with 14 CCR 914 (934, 954).

The location of heavy equipment operation on unstable areas or any use beyond the limitations of the standard rules must be shown on the map. List specific instructions to the LTO below.

22.  Yes  No Are any alternative practices to the standard harvesting or erosion control rules proposed for this plan? If yes, provide all the information as required by 14 CCR 914 (934, 954) .9 in Section III. List specific instructions to the LTO below.

Section 2  
WINTER OPERATIONS

North McMullen Mountain THP

23. a.  Yes [ ] No Will timber operations occur during the winter period? If yes, complete "b, c, or d." State in space provided if exempt because yarding method will be cable, helicopter, or balloon.
- b. [ ] Yes  No Will mechanical site preparation be conducted during the winter period? If yes, complete "d".
- c. [ ] I choose the in-lieu option as allowed in 14 CCR 914 (934, 954) .7 (c). Specify below the procedures listed in subsections (1) and (2), and list the site specific measures for operations in the WLPZ and unstable areas as required by subsection (3), if there will be no winter operations in these areas, so state.
- d.  I choose to prepare a winter operating plan per 14 CCR 914 (934, 954) .7 (b).

The following winter operation plan is for all timber operations taking place between the dates of October 15 to May 1 in any year of operations. The harvesting activities that may occur during the operational period include but not limited to felling timber, yarding with ground-based equipment, decking logs and hauling logs. Road construction and abandonment shall not occur during the Winter Period.

WINTER OPERATING PLAN

1. The erosion hazard rating in the THP is low and moderate.
2. No mechanical site preparation is proposed during the Winter Period.
3. The yarding system is ground based.
4. The operational period for this plan is between October 15 to May 1. Operations will be allowed under the following conditions: 1) when dry, 2) rainless, 3) hard frozen conditions exist, 4) and when soils are not saturated. Use of heavy equipment or trucks on roads and landings shall be limited to a stable operating surface. Refer to "Definitions" below for the definitions of hard frozen conditions, stable operating surface and saturated soil conditions.
5. Erosion control facilities timing: All erosion controls and drainage facilities shall installed as soon as practical following yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood and prior to any weekend shut down periods.
6. Precipitation (Consideration in form of rain or snow): Precipitation in the THP area is primarily in the form of snow between October 31 and April 30. Spring rains usually fall onto a substantial snow pack and snow persists until middle to late May with snow drifts present until mid June. Drainage facilities shall be kept in effective condition throughout operations conducted during the winter period.
7. Ground conditions (soil moisture condition, frozen): Suitable ground conditions that will allow for timber operations are hard frozen conditions, soils with low antecedent soil wetness and the roads and landings must maintain a stable operating surface.
8. Silvicultural system-ground cover. Healthy regeneration, slash, needle cast and existing ground cover will ensure adequate ground cover to dissipate rainfall impact and runoff.
9. Operations within the WLPZ: Designated harvest trees within the WLPZ of Class II watercourses are to be felled toward the perimeter of the zone and end-lined out. All watercourse crossing facilities not constructed to permanent crossing standards shall be removed before November 15.

## 10. Equipment use limitations:

14 CCR 936.9 (l), (3), Logging roads, landings and tractor roads shall not be used when sediment from the logging road, landing or tractor road surface may be transported to a watercourse or a drainage facility 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.

14 CCR 936.9 (l), (4), Logging roads and landings shall not be used for log hauling when saturated soil conditions 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.

## 11. Known Unstable Areas. No known unstable areas are within the plan area.

**Definitions**

Low Antecedent Soil Wetness is defined as conditions not meeting the threshold of saturated soil conditions.

**14 CCR 895.1 (Definitions):**

Hard Frozen Conditions means those 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.

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.

Soils or road and landing surfaces that are hard frozen are excluded from this definition.

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.

Winter period means the period between November 15 and April 1, except as noted under special County Rules at Title 14 CCR 925.1, 926.18, 927.1, and 965.5.

## PART OF PLAN

24. Will any roads be constructed?  Yes  No, or reconstructed?  Yes  No. If yes, check items "a." through "g."  
Will any landings be constructed?  Yes  No, or reconstructed?  Yes  No. If yes, check items "h." through "k."
- a.  Yes  No Will new or reconstructed roads be wider than single lane with turnouts?
  - b.  Yes  No Are logging roads proposed in areas of unstable soils or known slide-prone areas?
  - c.  Yes  No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.
  - d.  Yes  No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27 a. will satisfy required documentation.
  - e.  Yes  No Will roads 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?
  - f.  Yes  No Will any roads or watercourse crossings be abandoned?
  - g.  Yes  No Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?
  - h.  Yes  No Will any landings exceed one half acre in size? If any landing exceeds one quarter acre in size or requires substantial excavation the location must be shown on the map.
  - i.  Yes  No Are any landings proposed in areas of unstable soils or known slide prone areas?
  - j.  Yes  No Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?
  - k.  Yes  No Will any landings be abandoned?
25. If any section in "item 24" above is answered yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance, and/or abandonment of roads or landings, as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

### Road abandonment

Pursuant to 14 CCR 943.8, road abandonment shall be conducted in a manner which provides for permanent maintenance-free drainage, minimizes concentration of runoff, soil erosion and slope instability, prevents unnecessary damage to soil resources, promotes regeneration, and protects the quality and beneficial uses of water.

Approximately 1000 feet of road of the White Fawn road shall be abandoned. This segment of road is has been identified within the LDSF 2008 Management Plan as a high priority for repair. This segment of road has heavily eroded ditches on either side of the road. There are two culvert cross drains and two Class III watercourse crossing (WC 1, WC 2) that will be removed with the abandonment of the road segment. The abandoned road segment shall be blocked so that standard production four wheel-drive highway vehicles cannot pass the point of closure at the time of abandonment. Additionally to provide dispersal of water flow and prevent erosion of the abandoned road surface, large water bars (24 inches plus) shall be install along the abandoned road segment.

The Old Peavine Road has been abandoned in the past, but a segment of the road is still accessible to vehicular traffic. The road shall be barricaded, preventing passage to standard four-wheeled drive vehicles, at the intersection of the Old Peavine Road and the White Fawn Road.

### Watercourse crossing abandonment

The following shall apply to the abandonment of crossings:

- 1) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel.
- 2) The excavated material and any resulting cut bank shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. Where needed, this material shall be stabilized by seeding, mulching, rock armoring, or other suitable treatment.

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

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

**NON ASP Watersheds**

Class II watercourses

The Class II watercourses have been flagged with blue and white striped flagging. Consistent with 14 CCR 936.5 all of the class II watercourses have at least the minimum widths as shown in the table below.

<b>Slope Class %</b>	<b>&lt; 30%</b>	<b>30% - 50%</b>
<b>WLPZ width in feet</b>	<b>50 ft.</b>	<b>75 ft.</b>

Pursuant to 14 CCR 936.5(e) "E", to ensure retention of shade canopy filter strip properties and the maintenance of wildlife values described in 14 CCR 936.4(b) a base mark shall be placed below the cut line of the harvest trees within the zone in advance of timber operations by an RPF or supervised designee. Additionally, pursuant to 14 CCR 936.5(e) "I" To protect water temperature, filter strip properties, upslope stability, and fish & wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers. As is with class I watercourses, all class II watercourses shall comply with 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 dbh and 50ft. tall within 50 ft.

Class III watercourses

Pursuant to 14 CCR 936.4(c)(1), Class III watercourses shall have a 25-foot ELZ on slopes less than 30% and a 50-foot ELZ on slopes greater that 30%.

Class III watercourse ELZs shall be flagged with blue and white striped flagging prior to start of operations. The ELZs shall be flagged by the RPF or supervised designee. Within the ELZ of Class III watercourses, equipment shall be allowed to operate on existing roads, prepared crossings and designated tractor road crossings. At least 50% of the understory vegetation present before timber operations shall be left living and well distributed within the ELZ to maintain soil stability. Note: "ELZ" means, "Equipment Limitation Zone" and shall be defined as follows: a) all heavy equipment is to be excluded from operating within the ELZ except on existing skid trails, skid trail crossings and existing haul roads, b) approved existing skid trails and existing skid trail crossings have been identified on the ground with yellow flagging. c) Approved skid trail crossings shall only be used when dry.

**ASP Watersheds**

In accordance to 936.9 (v) and consultation with the California Department of Fish and Game, the following are the protection measures for watercourses located within ASP Watersheds. Specifically, the following protections measures will be implemented on the Class I, Class II, and Class III watercourses located in the Lee March Gulch drainage. Justification and explanation is located within Section III of this THP.

Class I watercourse (Lee March Gulch)

The Watercourse Lake and Protection Zone (WLPZ) boundary has been delineated with blue and white striped flagging. The WLPZ is a 75 feet no cut zone.

Class II (L) watercourse

All the Class II watercourses with in the Lee March Gulch drainage are spring fed and they originate within 1000 feet of the Class I reach of Lee March Gulch. Class II (L) watercourses will be protected as Class II (S) watercourses. There are no Class II (S) watercourses within the THP.

The Class II watercourses have been flagged with blue and white striped flagging. Consistent with 14 CCR 936.5 all of the Class II watercourses have at least the minimum widths as shown in the table below.

<b>Slope Class %</b>	<b>&lt; 30%</b>	<b>30% - 50%</b>
<b>WLPZ width in feet</b>	<b>50 ft.</b>	<b>75 ft.</b>
<b>Core width in feet</b>	<b>10 ft.</b>	<b>10 ft.</b>

Within the Core, no harvest is proposed. Pursuant to 14 CCR 936.5(e) "E", to ensure retention of shade canopy filter strip properties and the maintenance of wildlife values described in 14 CCR 936.4(b) a base mark shall be placed below the cut line of the harvest trees within the zone in advance of timber operations by an RPF or supervised designee. Additionally, pursuant to 14 CCR 936.5(e) "I" To protect water temperature, filter strip properties, upslope stability, and fish & wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers. As is with class I watercourses, all class II watercourses shall comply with 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 dbh and 50ft. tall within 50 ft.

Class III watercourses

Class III watercourse ELZs shall be flagged with blue and white striped flagging prior to start of operations. The ELZs shall be flagged by the RPF or supervised designee. All Class III watercourses shall have a 25-foot ELZ on slopes less than 30% and a 50-foot ELZ on slopes greater that 30%.

Pursuant to 936.9 (h)(2-7): (2) Retain all pre-existing large wood on the ground within the ELZ that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse. (3) Retain all pre-existing down wood and debris in the channel zone. (4) Retain hardwoods, where feasible, within the ELZ. (5) Retain all snags (except as required for safety) within the ELZ. (6) Retain all countable trees needed to achieve resource conservation standards in 14 CCR § 912.7 [932.7, 952.7] within the ELZ. (7) Retain all trees in the ELZ and channel zone which show visible indicators of

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providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.

Within the ELZ of Class III watercourses, ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse. Equipment shall be allowed to operate on pre-flagged existing roads, prepared crossings and designated tractor road crossings. At least 50% of the understory vegetation present before timber operations shall be left living and well distributed within the ELZ to maintain soil stability

Note: "ELZ" means, "Equipment Limitation Zone" and shall be defined as follows: a) all heavy equipment is to be excluded from operating within the ELZ except on pre-flagged existing skid trails, pre-flagged, skid trail crossings and existing haul roads, b) approved existing skid trails and existing skid trail crossings have been identified on the ground with yellow flagging. c) Approved skid trail crossings shall only be used when dry.

- b.  Yes  No Are there any watercourse crossings that require mapping per 14 CCR 1034 (x) (7)?  
c.  Yes  No Will tractor road watercourse crossings involve the use of a culvert? If yes state minimum diameter and length for each culvert (may be shown on map).  
d.  Yes  No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If yes, attach the 1603 Addendum below or at the end of this Section II; provide the background information and analysis in Section III; list instructions for LTO below for the installation, protection measures, and mitigation measures; as per THP Form Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1603 Agreements and THP Documentation".

During the preparation of the THP, and the implementation of LaTour Demonstration State Forest's 2008 Management Plan (State Clearinghouse number 2008062009) all road segments and watercourse crossings have been evaluated and rated as to the risk to water quality. The evaluation included, but was not limited to, erosion potential, watercourse crossing types, frequency and placement of drainage structures, and the condition of all road watercourse crossings and drainage features. All watercourse crossings and drainage features that are not designated for removal are functioning properly.

## Non Classified Draw Protection

No draws, swales, or channels shall be used as skid trails. Skid trail crossings of these non-classified draws, swales, and channels shall be kept to a minimum. Existing crossings shall be used where feasible and shall be as close to a 90-degree angle as possible.

## Seeps and Springs

Seeps and springs and shall be protected with a minimum 25 feet ELZ and a minimum 50 feet where side slopes are greater than 30%. Equipment shall be limited to existing pre-flagged skid trails. These trails shall be flagged by the RPF or supervised designee prior to the start of operations. Equipment at no time will be allowed within the wet area of the seeps and springs. Additionally to protect water temperature, filter strip properties, upslope stability, and fish & wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers

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

- a.  Yes  No Prohibition of the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except as follows:
- (1) At prepared tractor road crossings.
  - (2) Crossings of Class III watercourses which are dry at time of timber operations.
  - (3) At existing road crossings.
  - (4) At new tractor and road crossings approved by Department of Fish and Game.
- b.  Yes  No Retention of non-commercial vegetation bordering and covering meadows and wet areas?
- c.  Yes  No Directional felling of trees within the WLPZ away from the watercourse or lake?
- d.  Yes  No Decrease of width(s) of the WLPZ(s)?
- e.  Yes  No Protection of watercourses which conduct class IV waters?
- f.  Yes  No Exclusion of heavy equipment from the WLPZ except as follows:
- (1) At prepared tractor road crossings.
  - (2) Crossings of Class III watercourses which are dry at time of timber operations.
  - (3) At existing road crossings.
  - (4) At new tractor and road crossings approved by Department of Fish and Game.
- g.  Yes  No Establishment of ELZ for Class III watercourses unless sideslopes are <30% and EHR is low?
- h.  Yes  No Retention of at least 50% of the overstory canopy in the WLPZ?
- i.  Yes  No Retention of at least 50% of the understory in the WLPZ?
- j.  Yes  No Are any additional in-lieu or any alternative practices proposed for watercourse or lake protection?

**NOTE: A yes answer to any of items "a." through "j." constitutes an in-lieu practice. If any item is answered yes, refer to 14 CCR 916 (936, 956).1 and address the following for each item checked yes:**

1. The RPF shall state the standard rule;
2. Explain and describe each proposed practice;
3. Explain how the proposed practice differs from the standard practice;
4. The specific location where it shall be applied, see map requirements of 14 CCR 1034 (x) (15) and (16);
5. Provide in THP Section III an explanation and justification as to how the protection provided is equal to the standard rule and provides for the protection of the beneficial uses of water, as per 14 CCR 916 (936, 956) .1 (a). Reference the in-lieu and location to the specific watercourse to which it will be applied.

### Landing and Associated Skid Trails within WLPZs and Class III ELZs

There are four landings (L1- 4) and associated skid trails proposed for use that are currently within or partially within a WLPZ (Refer to Roads and Landings Map). In these areas, skidders or tractors will be allowed to skid logs into the WLPZ to the landing and return on existing skid trails only. No new construction of skid trails or roads is proposed in WLPZs. Normal landing operations including limbing, bucking, sorting, and decking may occur on the landings.

The standard rule, 14 CCR 936.3(c) states, "The timber operator shall not use landings or skid trails in the WLPZ unless explained and justified in the THP by the RPF, and approved by the Director" and 14 CCR 936.4(d) states, "Heavy equipment shall not be used in timber falling, yarding, or site preparation within the WLPZ unless such use is explained and justified in the THP and approved by the Director". The proposed in-lieu practice differs from the standard rules in that it allows limited use of designated landings and skid trails within the WLPZ.

- Only existing, pre-flagged skid trails shall be used within the WLPZ. Approved skid trails shall be flagged with yellow flagging by the RPF.
- The outside edge of the landing shall be defined by the RPF or designee with white flagging prior to operations. No operations, including decking of logs and parking equipment, shall occur beyond the flagged limits. If necessary to prevent sediment delivery to a watercourse or other wet area, brow logs will be placed between the active portion of the landing or skid trail and the watercourse.
- Existing vegetation between the outside edge of the landings (brow logs) and the watercourses shall remain undisturbed.
- No material shall be side cast off the landing or skid trail surface towards the watercourse.
- Landings and skid trails shall be stabilized as specified in Item 18 above.

L1: is located adjacent to a Class I WLPZ in SW ¼ of Section 2, Township 32 North, Range 2 East. The access road to landing is rock and all landing operations can occur outside the WLPZ by migrating the landing to the west. There is approximately 75 feet of an existing skid trail located on the east side of Lee March Gulch. The logs will be skidded down to the graveled road and then across the existing culvert road crossing to L1.

L2: is located adjacent to and partially within a Class II WLPZ (White Fawn Gulch) along the section line between Sections 1 and 2, Township 32 North, Range 2 East. Operations will be conducted as described above with brow logs being placed at the flagged landing boundary near the WLPZ and blocking an old road that extends uphill and parallel to the WLPZ. The old road shall not be utilized during operations and shall be barricaded to all vehicular traffic upon completion of operations. Additionally there is a skid trail located partially within the WLPZ, on the east side of White Fawn Gulch. The skid trail will be utilized to skid logs down to the road. Once the logs are on the road they will be skidded across an existing culvert road crossing to L2.

L3: is located on the White Fawn Road in the SW ¼ of Section 2, Township 32 North, Range 2 East. A Class III watercourse bisects the eastern side of the landing. Following the previous harvest the watercourse reestablished itself across the landing. There are also two skid trails that cross the Class III watercourse prior to entering the landing. The portion of the landing on the east side of the Class III watercourse shall not be utilized for landing operations and the two skid trails shall be joined together outside the ELZ and only utilize one skid crossing. Upon completion of use of the landing the skid crossing shall be pulled and the watercourse reestablished across the landing and the road. Upon reestablishing the watercourse across the landing the road the LTO shall armor the watercourse crossing channel and a minimum of 10 feet of each approach with fractured rock 4-6 inches in size and a compacted depth of at least 6 inches. The reestablished watercourse channel shall be at least 8 feet in width across the road. All exposed soil within the ELZ shall be stabilized as specified in Item 18 of this THP.

L4: is located adjacent to and partially within a Class II WLPZ (Peavine Gulch) in the center of Sections 1, Township 32 North, Range 2 East. Operations will be conducted as described above. A section of the Old Peavine Road will be utilized as a skid trail. Upon completion of use the Old Peavine Road shall be barricaded as described in Item 25 of this THP.

L5: is located within the ELZ of a Class III watercourse in the SW ¼ of Section 1, Township 32 North, Range 2 East. There is also one designated skid trail and two skid trail crossings associated with the use of this landing. Operations will be conducted as described above, and the skid trail crossings shall be removed as described below.

#### Roads within WLPZ

Though not an in-lieu practice road segments exist that are adjacent to and fall within the WLPZ of a Class I and Class II watercourse. These segments are to be used for normal vehicular traffic, and log hauling. Equipment will also be allowed to travel on these roads and perform the necessary road maintenance. These road segments are located along Lee March Gulch and are delineated on the THP Map. These segments were surfaced with rock in 1999.

In preparing the THP these road segments were reviewed and assessed for any negative impacts to the beneficial uses of water. The THP is correcting identified issues related to the road system and no negative impacts are anticipated as a result of the proposed operations. These road segments are well established, several segments have rock surfaces and all are stable.

Tractor road skid crossings

Only Pre-Flagged, existing Class III skid trail watercourse crossing, which are dry during the time of operations shall be used. Upon completion of use the crossings shall be removed to the following standards:

- (1) Fills shall be excavated to form a channel that is as close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel.
- (2) The excavated material and any resulting cut bank shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. Where needed, this material shall be stabilized as described in Item 18 of this THP.

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28. a.  Yes  No Are there any landowners within 1000 feet downstream of the THP boundary whose ownership adjoins or includes a class I, II, or IV watercourse(s) which receives surface drainage from the proposed timber operations? If yes, the requirements of 14 CCR 1032.10 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  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  No Was any information received on domestic water supplies that required additional mitigation beyond that required by standard Watercourse and Lake Protection rules? If yes, list site specific measures to be implemented by the LTO.
29.  Yes  No Is any part of the THP area within a Sensitive Watershed as designated by the Board of Forestry 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.  Yes  No Are there roads or improvements which require slash treatment adjacent to them? If yes, specify the type of improvement, treatment distance, and treatment method.
- b.  Yes  No Are any alternatives to the rules for slash treatment along roads and within 200 feet of structures requested? If yes, RPF must explain and justify how alternative provides equal fire protection. Include a description of the alternative and where it will be utilized below.

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, chipping, burying or removal from the zone. All roads within the THP boundary and appurtenant roads within LDSF are public roads.

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

LTO is responsible for slash disposal. Any landing slash that is not spread back onto skid trails or removed as chips, shall be piled near the center of the landing. Piles shall not exceed 50 x 50 x 20 feet with a fire line completely around the pile that has a width at least 1.5 times the height of the pile to a maximum of 30 feet. Efforts shall be made to ensure that these piles are as compact and free of soil as practical. Material shall be piled at or near its final location to minimize the amount of movement necessary and subsequent soil deposition in the piles. Slash piles created prior to September 1 of each year shall be burned that fall when safe burning conditions occur. Slash piles created after September 1 of each year may be burned the following fall, prior to December 15, when safe burning conditions occur. See Section III, Item 31.

The local representative of the Director shall be notified in advance of the time and place of any burning of logging slash.

**BIOLOGICAL AND CULTURAL RESOURCES**

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

**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.**

All trees and snags with visible nesting sites of any threatened, endangered, or board sensitive species will be left standing as prescribed under 14 CCR 939.1 and 939.2(d). If during timber operations within the critical period, the timber operator discovers a snag or tree with a nesting threatened, endangered, or board sensitive species the operator shall protect the nest tree, screen trees, perch trees and replacement trees and shall cease operations within .25 miles, and notify the RPF, the Department of Fish and Game (DFG) and Cal Fire. The RPF shall consult with DFG and develop site specific mitigations and protection measures.

**LISTED:**

Northern Goshawk: a historic northern goshawk activity center is located in section 2, Township 32 N, Range 2 E, MDBM, within the THP Boundary. Harvest restrictions were put on the 20 acres surrounding the nest. The last known use of the activity center was 1999. Observations in 2000 and 2001 had the nest and surrounding absent of Northern Goshawk use. A LDSF wide Northern Goshawk survey conducted 2006, by LDSF staff un cooperation with the California Department of Fish and Game had no use in the territory or the surrounding area. The 2006 survey results had only one Northern Goshawk activity center located on LDSF. The one activity center is located approximately 1 .5 miles southeast of the THP, NE ¼, Section 13, T32N, R2E. The activity center was originally located in 2001 and has been active every year since. The activity center has fledged offspring in 2001, 2002, 2005-2006. There have been 4 different nest trees all within 300 yards of each other. The THP contains habitat for the Northern Goshawks and in the event that goshawks are discovered or suspected of inhabiting the THP area, efforts will be made to verify their presence. If any goshawks are observed nesting within the THP area the LTO shall cease all operations within .25 miles of the nest and contact the RPF, CAL FIRE inspector, and DFG. Specific nest protection measures will be developed in consultation with DFG. At a minimum, all goshawk nest sites will be protected according to 14 CCR 939.3.

Chinook salmon (*Oncorhynchus tshawytscha*) and Central Valley steelhead (*Oncorhynchus mykiss*): There are no known occurrences of anadromous salmonids within the THP area. No anadromous salmonids occur on LaTour nor are there historical records of observations. From dives performed in 2000 for the fish habitat assessment of the SWAG report, only rainbow trout were observed in Atkins Creek. The watercourses and fish habitat are protected by the WPLZ protections described in item 26 of this THP. See Section IV for additional discussion of anadromy.

**NON-LISTED:**

Pacific Fisher: 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

LDSF contains habitats for the Pacific Fishers and it was detected in a 1990 furbearer presence survey. No subsequent detections have occurred. The elevation of the plan is generally considered above the range of the pacific fisher, but contains habitat for the Pacific Fisher. The plan will maintain habitat post harvest. If Pacific Fishers are observed within the THP area the LTO shall cease all operations within .25 miles of the observation site and contact the LDSF staff, CAL FIRE inspector, and DFG. The Redding DFG Timberland Planning office shall be notified of the detection and observations

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of the pacific fisher, including any along the appurtenant roads. The notification shall include the time, date, and map location.

Additionally observations, detections, and take shall be reported to the Department of Fish and Game, Wildlife Branch, Attn: Fisher Observations, 1812 Ninth St., Sacramento, CA 95811, or by email submission to fisherdata@dfg.ca.gov. Information reported to the Department pursuant to this subdivision shall include as available: a contact name; the date and location (GPS coordinate preferred) of the observation, detection, or take; and details regarding the animal(s) observed (Title 14 CCR, Section 749.5(c)).

Pine Marten: The Pine Marten has been detected in the southeastern portions of the forest (Section 24), within the assessment area, during the forest carnivore surveys conducted by LDSF staff in 2005, 2006 and 2007. The THP will maintain habitat for the Pine Marten. LDSF staff is continuing a monitoring program to evaluate the presence and continued use of known mid-sized forest carnivores.

See Section IV for additional discussion of biological review.

33.  Yes  No Are there any snags which must be felled for fire protection or safety reasons? If yes, describe which snags are going to be felled and why.
- Snags greater than 20 feet tall and 16 inches DBH which are within 100 feet of permanent or seasonal roads or landings will be felled if they lean towards the road or landing and present a safety hazard, or if they are a potential hindrance to future access for initial attack of wildfire as per 14 CCR 939.1(a)(2). Additionally, any snag thought to contain sound volume may be harvested as allowed under 14 CCR 939.1(d).
34.  Yes  No Are any Late Succession Forest Stands proposed for harvest? If yes, describe the measures to be implemented by the LTO that avoid long-term significant adverse effects on fish, wildlife and listed species known to be primarily associated with late succession forests.
35.  Yes  No Are any other provisions for wildlife protection required by the rules? If yes, describe.
- All trees and snags with visible nesting sites of any non-listed raptor will be left standing as prescribed under 14 CCR 939.1 and 939.2(d). If during timber operations, the timber operator discovers a snag or tree with a nesting of any non-listed raptor the operator shall protect the nest tree, screen trees, perch trees and replacement trees, and cease operations within 500' of the nest, notify the RPF, DFG, Cal Fire. DFG shall have ten (10) days to respond and develop a consultation based on site specific conditions. If a consultation is not developed within the ten (10) days, all non-listed raptors shall have the nest tree, screen trees, perch trees, and replacement trees protected.
- Other trees within the THP area that have special value to wildlife will similarly be retained. These trees have been marked with a "W" at dbh. Additionally all snags that do not met the criteria in Item 33 above shall be retained for the benefit of wildlife
36. a.  Yes  No Has an archaeological survey been made of the THP area?
- b.  Yes  No Has a current archaeological records check been conducted for the THP area?
- c.  Yes  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 the THP, which is not available for general public review.
37.  Yes  No Has any inventory or growth and yield information designated "trade secret" been submitted in a separate confidential envelope in Section VI of this THP?

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

### Water drafting plan

Drafting locations are Beaver Creek crossing on South Cow Creek Road, Roaring Spring crossing on Bateman Road, Atkins Creek crossing a Butcher Gulch campground, and Old Cow Creek crossing at Old Cow Creek campground.

It is estimated that water usage will be approximately 40,000 gallons per day distributed among the drafting locations during active timber operations.

Water drafting shall not occur at any of these locations when:

- (A) bypass flows are less than 2 cubic feet per second, or
- (B) pool volume at the water drafting site would be reduced by 10%, or
- (C) diversion rate exceeds 350 gallons per minute, or
- (D) diversion rate exceeds 10% of the above surface flow.

The following are requirements when drafting:

- a. Openings in perforated plate or woven wire mesh screens shall not exceed 3/32 inches (2.38 millimeters).
- b. The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.
- c. Flow in the source stream shall be at least 1 cubic feet per second (cfs).
- d. Reduction in pool volume shall not exceed 10 percent.
- e. The screen surface shall have at least 2.33 square feet of openings and the diversion rate shall not exceed 350 gallons per minute (gpm) or 10 percent of the surface flow.
- f. If an alternative screen surface area or diversion rate is desired, the following formula can be used:  $\text{diversion rate (gpm)} \times 0.00676 = \text{square feet of screen surface area}$ . The diversion rate can be calculated by dividing the tank capacity by the fastest filling time (i.e., 3000 gallons / 15 minutes = 200 gpm).
- g. The drafting operator shall actively observe the drafting operation. Pumping shall cease and the screen cleaned if it becomes more than 10 percent obstructed with debris.
- h. All drafting locations shall include measures (such as drip pans or absorbent fiber pads) to prevent petroleum-based products originating from vehicles from reaching surface water, groundwater, and soil. These items shall be disposed of properly.

Check all WLPZ, EEZ and ELZ flagging, and skid trail flagging prior to the commencement of any falling operations. Have the responsible RPF or supervised designee replace any flagging that is incomplete or unclear.

Review any restrictions in yarding equipment access which may cause a need for directional falling toward the lead where the logs will be yarded. Trees designated for removal within the WLPZ of a watercourse shall be directionally felled away from the watercourse and longlined, so as to keep heavy equipment out of the protection zone. In the ELZ of Class III watercourses, trees may be felled bridging the watercourse and endlined from outside the ELZ. The purpose of this measure is to allow for trees that if not directionally felled across the ELZ would fall into the ELZ or damage the residual stand.

Use only designated skid trails and tractor road crossing within WLPZs. Designated skid trails and tractor road crossings are delineated with yellow flagging.

All trees marked with a "W", a "No" or a "L" shall be retained.

Review the Winter Operations Plan and the Site Preparation Addendum

Item 38 cont.

The LTO shall carefully review the Forest Practice Rules regarding Conduct of Operations on Roads and Landings, 14 CCR 943.6.

The LTO shall carefully review the Forest Practice Rules regarding Wildlife Protection Practices contained in 14 CCR 939.2 and 939.3.

All trees and snags with visible nesting sites of eagles, hawks, owls, waterfowl, or any rare or endangered species shall be left standing.

The THP boundary has been designated in red "Sale Boundary" flagging.

The Plan submitter shall notify the Department of the commencement of timber operations at the following address:

TEHAMA-GLENN UNIT  
Unit Forester  
CAL FIRE  
604 Antelope Boulevard  
Red Bluff, CA 96080  
530-528-5106

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: Michael J. Bacca  
(Signature)

MAY 24 2011  
(Date)

MICHAEL J. BACCA, RPF #2236  
(Printed Name)

**Forester III, Cascade,  
Sierra & Southern Regions  
Forest Practice Manager**

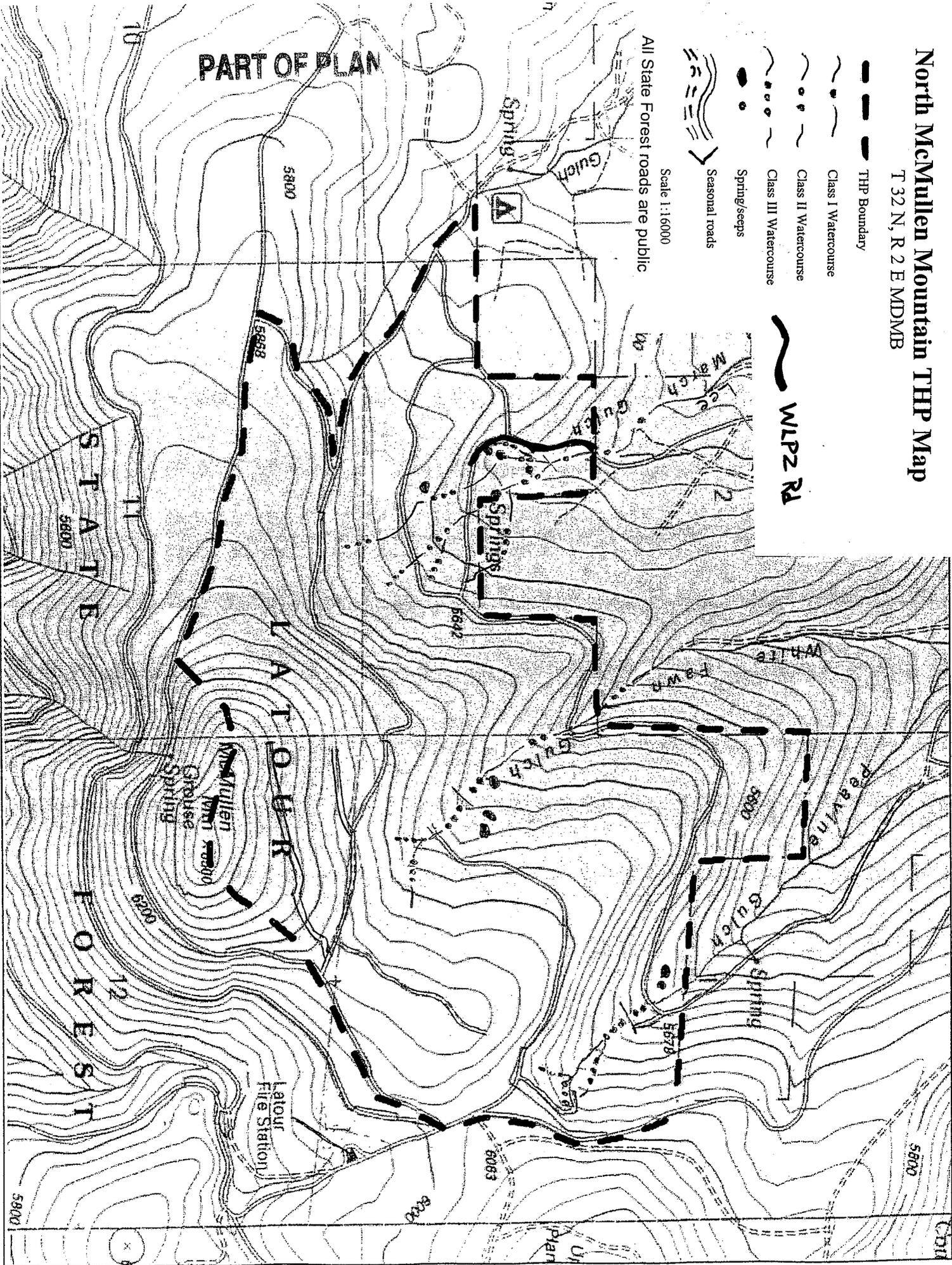
# North McMullen Mountain THP Map

T 32 N, R 2 E MDMB

-  THP Boundary
-  Class I Watercourse
-  Class II Watercourse
-  Class III Watercourse
-  Spring/seeps
-  Seasonal roads

Scale 1:16000  
All State Forest roads are public

WLPZ RA



APR 25 2011

# North McMullen Mountain THP Map

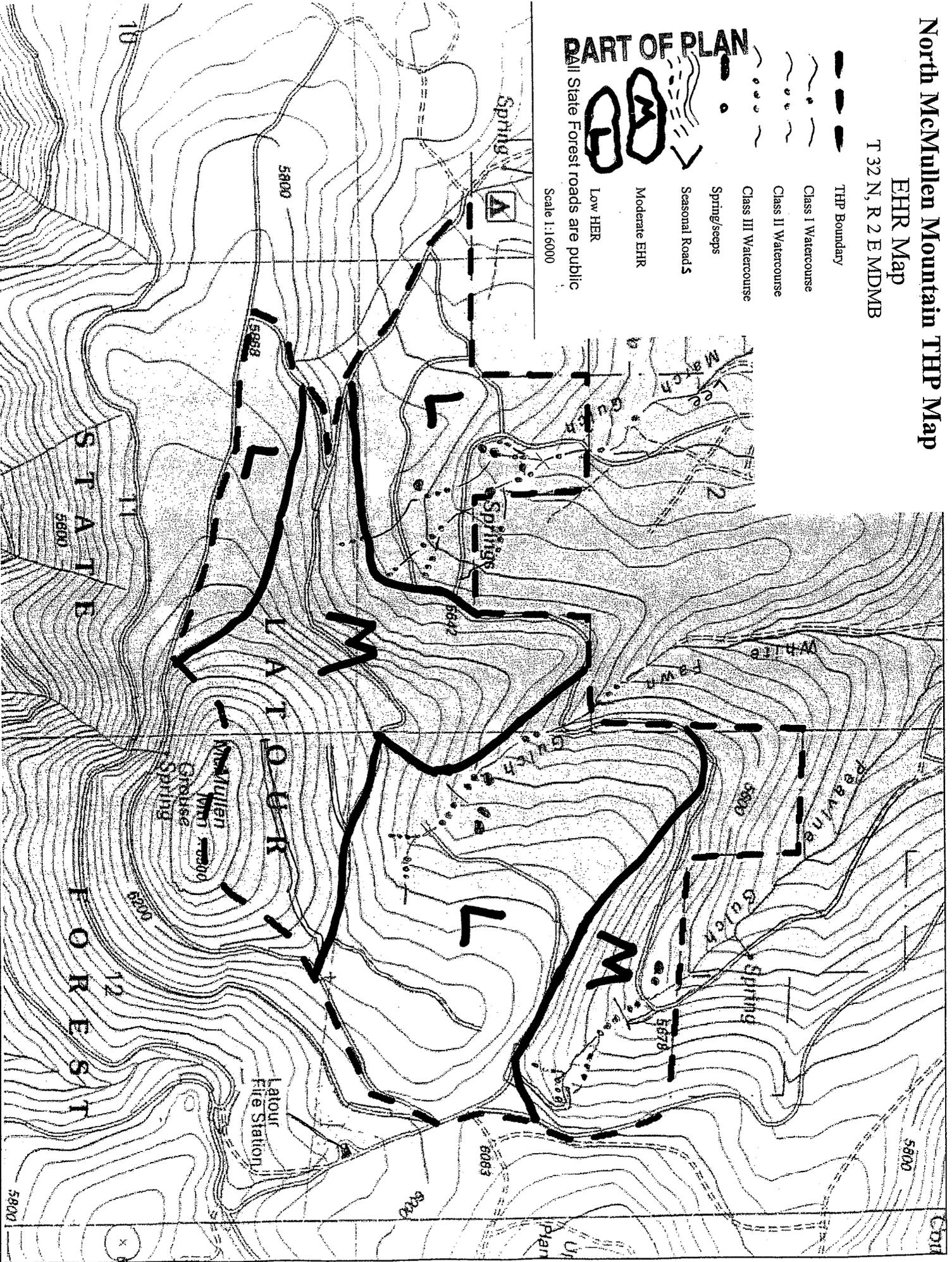
## EHR Map

T 32 N, R 2 E MDMB

**PART OF PLAN**

- THP Boundary
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse
- Spring/sceps
- Seasonal Roads
- Moderate EHR
- Low EHR

All State Forest roads are public  
Scale 1:16000

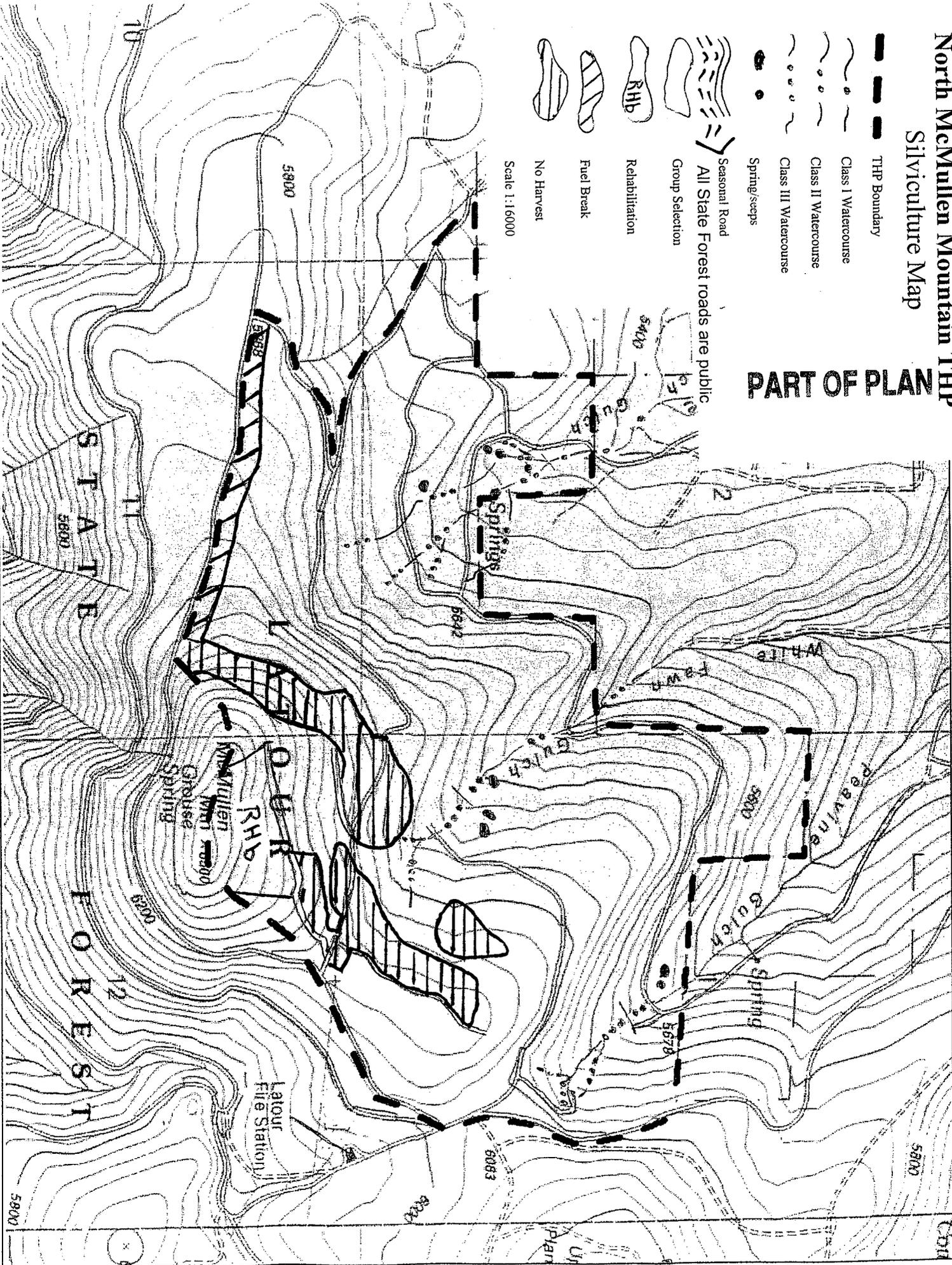


# North McMullen Mountain THP Silviculture Map

PART OF PLAN

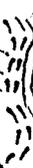
- THP Boundary
- Class I Watercourse
- Class II Watercourse
- Class III Watercourse
- Spring/seeps
- Seasonal Road
- All State Forest roads are public
- Group Selection
- RHP
- Rehabilitation
- Fuel Break
- No Harvest

Scale 1:16000

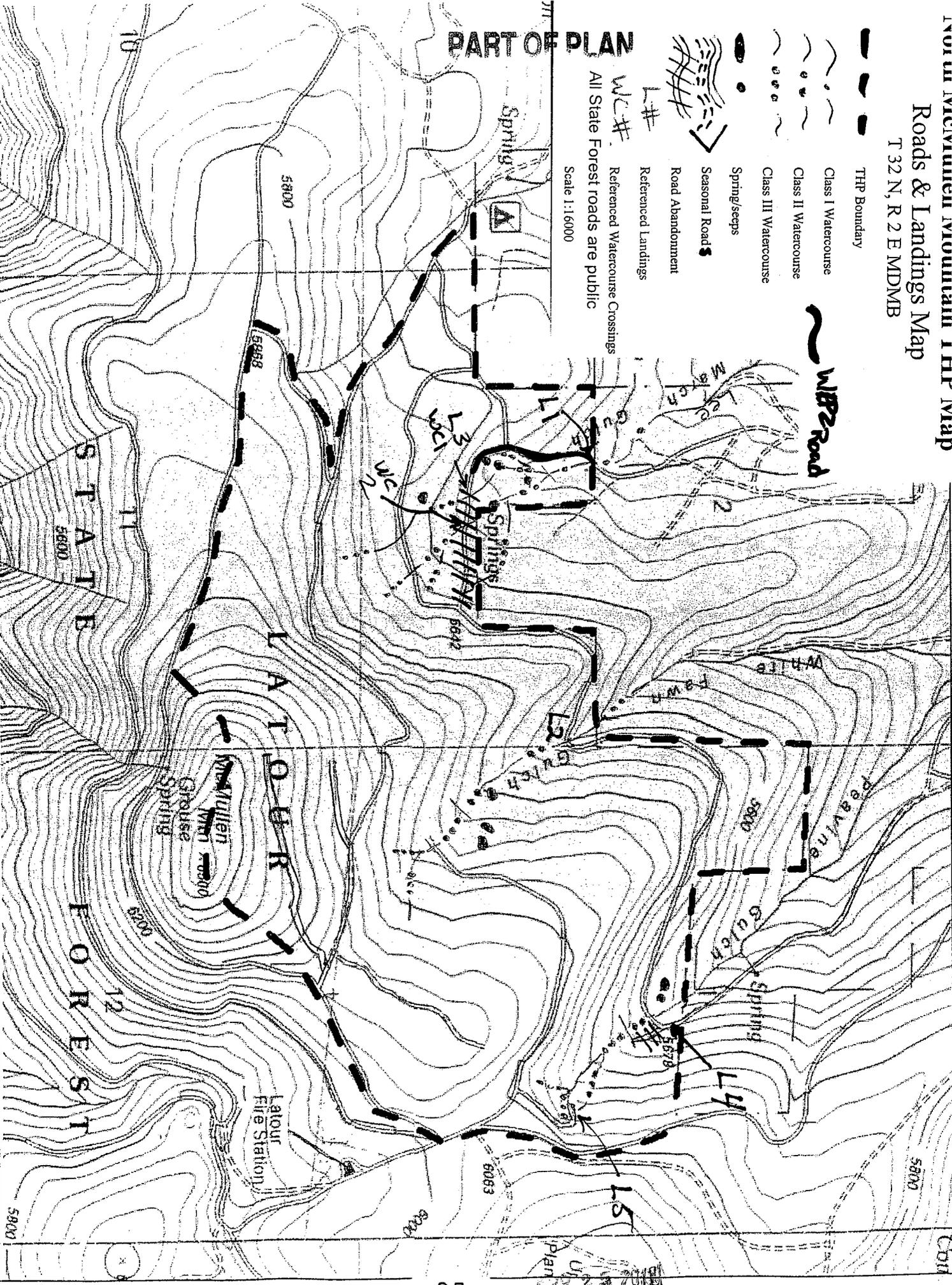


# Roads & Landings Map

T 32 N, R 2 E MDMB

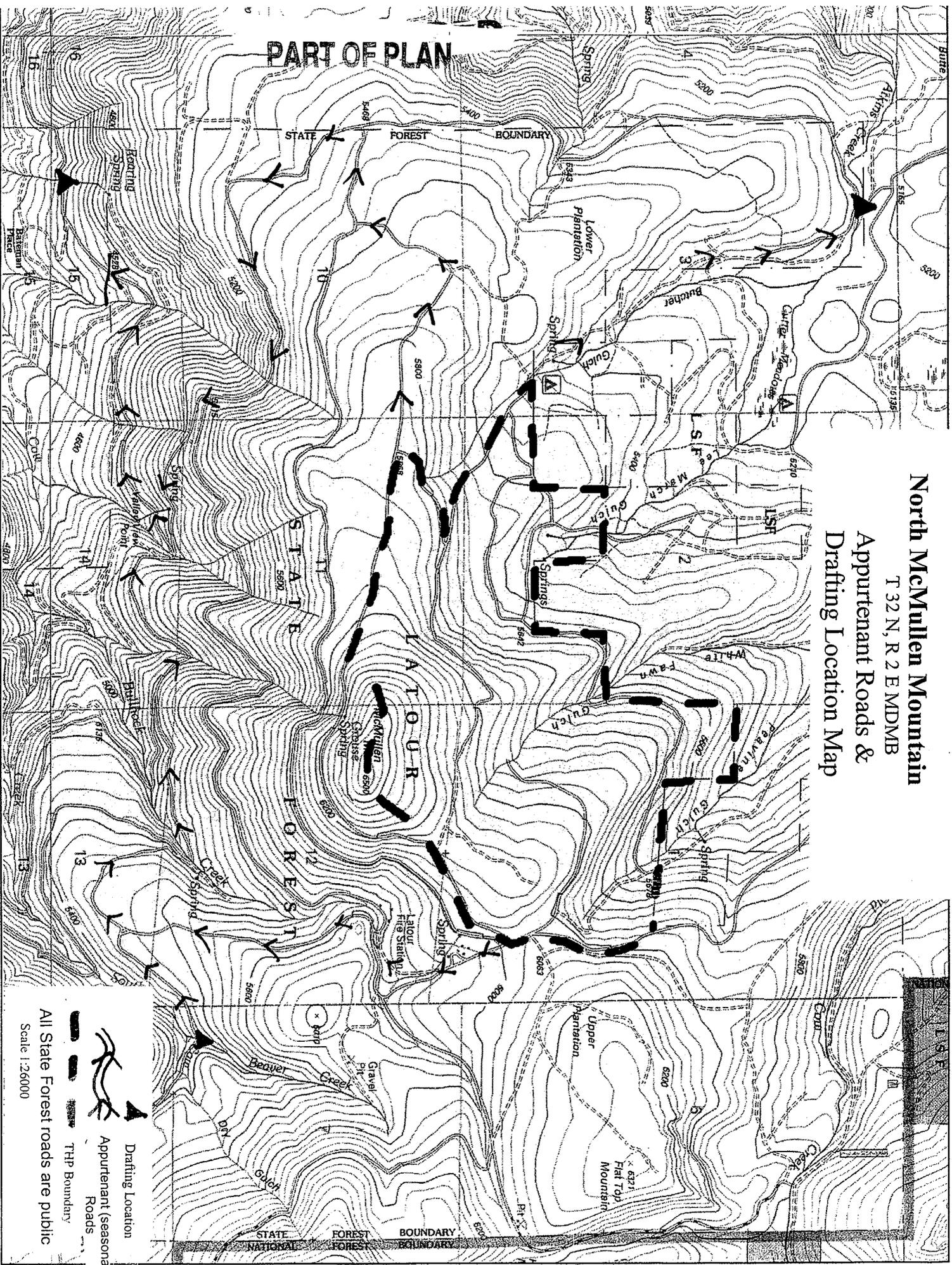
-  THP Boundary
  -  Class I Watercourse
  -  Class II Watercourse
  -  Class III Watercourse
  -  Spring/seeps
  -  Seasonal Road
  -  Road Abandonment
  -  Referenced Landings
  -  Referenced Watercourse Crossings
- All State Forest roads are public  
Scale 1:16000

## PART OF PLAN



# North McMullen Mountain

T 32 N, R 2 E MDMB  
 Appurtenant Roads &  
 Drafting Location Map



**Drafting Location**

**Appurtenant (seasonal) Roads**

**All State Forest roads are public**

**Scale 1:26000**

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**SECTION III**  
**Support Documentation**

## Feasibility of Alternatives

No significant adverse effects from the proposed operations under this THP are expected to occur. However, an analysis of THP alternatives follows.

### Purpose

The legislative authority for the State Forest System is contained in Public Resources Code (PRC) §4631-4658. CAL FIRE is responsible for the management of LDSF. As part of this oversight, the LDSF staff operates under a management plan, which provides general objectives and goals. The plan is required pursuant to Public Resources Code (PRC) §4645 and Article 8 of the California Board of Forestry and Fire Protection (Board) policy.

LDSF has a management plan (SCH # 2008062009), approved by the board, which provides direction and guidance for the managed uses of forest resources with an emphasis on forest demonstration, research, recreation, maintenance of wildlife habitat, and water quality protection. Timber harvesting is one of the mechanisms used to implement forest management goals and foster maintenance and enhancement of other non-timber resources. Guided by the statutes, the Board of Forestry and Fire Protection establishes policy, which governs LDSF and other state forests. Board policy states that the primary purpose of the state forest program is to conduct innovative demonstrations, experiments, and education in forest management.

### Objectives

- Demonstrate sound forest management.
- Reduce fuel loading thus reducing the risks of wildfires
- Avoid the waste of timber resources
- Enhance growth and vigor of timber resources
- Improvement of the forest road system
- Improve wildlife habitat, and watershed values promoted by the resulting healthy stands

The project as proposed meets is in conformance with the 2008 LDSF Management Plan (SCH # 2008062009), LDSF's Option A for Long Term Sustained Yield (LTSY), and the Board's policy. The project also meets the following objectives:

Achieve a balance between growth and harvest over time consistent with the harvesting methods within the rules of the Board.

Harvesting the trees that are infected with *Cytospora* sp. and white pine blister rust. Thus improving forest health and reducing tree mortality and fuel loading.

Maintain functional wildlife habitat in sufficient condition for continued use by the existing wildlife community within the planning watershed.

Maintain growing stock, genetic diversity, and soil productivity.

## **Alternatives Considered**

### NO PROJECT

Site would remain as is.

No economic benefits would be realized.

Stand vigor would decrease do to the *Cytospora sp.* and the white pine blister rust.

Mortality not harvested would be wasted.

Increased risk to stand replacing wildfires resulting from the stand conditions and increasing fuel loads.

Forest management and timber harvest demonstrations will not be carried out.

### PROJECT TIMING

The proposed project will be completed within the next 5 years.

Delaying the project to another decade was considered.

A delay of the proposed timber harvest would result in the waste of timber resources through stand mortality and allow for the continual risk of wildfire.

A delay in harvest and income timing would substantially reduce the present net worth of the proposed project.

LDSF is managed 15 to 18 year cutting cycle. Delaying the project will increase the acres to be treated in future years to maintain the stand treatment schedule.

### ALTERNATIVE SITE

This alternative is not necessary, as any significant negative effect from the proposed operations has been mitigated in the THP.

### ALTERNATIVE SILVICULTURE

Using more even-aged silviculture prescriptions is not suitable for this THP. LDSF has an Option A plan that defines the LTSY of the forest. The LTSY was determined by modeling timber growth for LDSF using specific silvicultural prescriptions. The LTSY was calculated primarily using un-evened aged silviculture. Even though even-aged silviculture is available to use, the minimal acres modeled are better suited for different locations on the forest, within stands of high disease and mortality, or marginal stocking.

**Upon review of the alternatives considered, the proposed project is the landowner's best alternative to meet the above stated objectives**

### General Project Description

Location: The THP is located in Shasta County on LDSF in sections 1, 2, 3, 11, and 12, T 32 N, R 2 E. The elevation of the THP ranges from 5,500 feet to 6,500 feet. The THP is approximately 13 air miles east of the community of Whitmore, California, 22 miles south of Burney and Seventeen miles northeast of Lassen Volcanic National Park.

### Soils and Topography

The soil series within the harvest boundary are Windy - McCarthy stony sandy loam and Cohasset stoney loam. Cohasset stoney loams comprise about 80% of the plan area. Windy - McCarthy soils are made up the remaining portions of the THP. Both these soils are volcanic in origin and are stony to very stoney throughout the soil profile. They are well-drained soils with moderate to rapid permeability. Both soil series have soil depths up to 60 inches and are considered moderately productive timberland soils.

Elevation in the harvest area ranges from 5,500 to 6,500 feet. The topography is varies from flat to moderately steep slopes. The average slope within the harvest units is approximately 20% but ranges from 0 to 55%.

The following are soil types that are found within the THP boundary:

<u>Soil Type</u>	<u>Slopes</u>	<u>Depth</u>	<u>Permeability</u>
Windy-McCarthy stoney sandy loam (WeD)	0-30%	40-60 inches	Mod-Rapid
Windy-McCarthy stoney sandy loam (WfE)	30-50%	40-60 inches	Mod-Rapid
Cohasset stoney loam (CmD)	0-30%	48-60 inches	Moderate

### Vegetation and Stand Conditions

The predominant vegetation types in the harvest area are True fir and Sierra mixed conifer. Previous management activites have resulted in the THP area having both even-aged and uneven-aged stands. Species composition of the true fir stands is predominately White fir and Red fir with a minor component of Lodgepole pine, Jeffrey pine, Sugar pine, and Western White pine. The stocking density in the majority of the true fir stands has resulted in little vegetation or regeneration in the understory, but where stocking is less dense the understory is dominated by chinquapin.

Sierra mixed conifer stands are uneven-aged with all size classes represented. Red fir and White fir comprise approximately 60 percent of the stand, Jeffery pine ranges from 10 to 25 percent of the stand and the Sugar pine and western white pine both comprise between 5 to 15 percent of the stand. Lodgepole pine and Incense cedar are also found within the mixed conifer stands. Regeneration exists naturally in the understory especially in areas where past harvest activities have created openings, and artificial regeneration exists in old group selection openings, areas that were Red Fir rehabilitation units and in converted brush fields. There is one 15 acre western white pine plantation and 2 white fir plantations that are part of a plantation density study.

The disease problems observed in the harvest area largely consist of dwarf mistletoe and cytospora or fir canker. Pockets of dead trees exist in the harvest area from fir canker infection. Infection of White Pine Blister Rust is affecting intolerant sugar pine and the western white pine and is throughout the THP. Endemic insect populations of Mountain Pine Beetle and Ips in the pine species and Scolytis in the fir were also observed.

Despite the disease problems, the selection area and fuel break area are well stocked with an average basal area of approximately 180 square feet and ranges for 100 to 280 square feet of basal area. The target average basal area post harvest is 140 square feet in the selection area, and 50 square feet in the Fuel break.

Watershed and Stream Conditions

LDSF is the headwaters source of two major streams, Old Cow Creek and South Cow Creek. A Tributary to the North Fork Battle Creek and South fork Bear Creek drain small portions of the south side of LDSF.

The THP is primarily located within the Huckleberry Watershed (Cal Water version 2.2 #5507.320102) and the Atkins Creek Watershed (Cal Water version 2.2 #5507.320101). There is also approximately 48 acres of the THP within the Beal watershed (Cal Water version 2.2 #5507.320103). The primary watercourses within these watersheds are Old Cow Creek, Atkins Creek and South Cow Creek respectively. Peavine Gulch and White Fawn Gulch are the two drainages within the THP that are tributary to Old Cow Creek, and Lee March Gulch is the only drainage on the THP which is tributary to Atkins creek. The THP has no watercourses located within the Beal Watershed. Peavine Gulch and White Fawn Gulch originate within and transition to Class II watercourses within the THP. Lee March Gulch originates from springs located on and adjacent to the THP. Until this year Lee March Gulch was considered and protected as a Class II watercourse. LDSF staff with cooperation from California Department of Fish and Game, electro-shocked Lee March Gulch on July 13<sup>th</sup> 2010. Fish were located approximately 2500 feet downstream from the THP and no fish were found on within the THP. Lee March Gulch annually goes dry just prior to leaving the THP area and is considered a seasonal Class I watercourse. The Class I portion of the watercourse within the THP does not have the habitat to hold fish during the summer months.

South Cow Creek and Old Cow Creek contains generally complex habitat with deep pools, riffles, and boulders forming step pools. The creeks appears to have good channel conditions in the lower portion of the planning watersheds and impacts from timber operations were not significant to those portions of South Cow Creek and Old Cow Creek. The upper reaches of Atkins Creek are primarily within meadow systems and contain a mix of habitat but primarily flat water and riffles reaches. Atkins creek is considered to be in fair and stable condition, but stability is a risk. Risks to Atkins Creek are associated with on going cattle grazing of Cutter Meadows and the surrounding area. Impacts related to timber management were not considered significant. Further evaluation of the watercourses occurred in the summer of 2000 from the *LaTour Demonstration State Forest Watershed Monitoring Project*, Stream Channel and Fish Habitat Assessment prepared by the Sacramento Watersheds Action Group (SWAG) under contract with the Department of Forestry and Fire Protection. In this report South Cow Creek, and Old Cow Creek and Atkins Creek were assessed within LDSF boundaries.

The SWAG report evaluated the Class I reaches of all three creeks and concluded nearly all of the watercourses are stable with some instability observed at the upper reaches in the meadows and the first 300 feet of Old Cow creek and the length of Atkins Creek where they exits LDSF. South Cow Creek and Old Cow Creek banks were stabilized primarily by large cobbles, boulders, and riparian vegetation. Atkins Creek's banks are predominately undercut and stabilized by shallow rooted vegetation.

Plan addendum # 14

Group Selection: pursuant to 14 CCR 933.2(a)(2)(B), group selection will occur on 763 acres of the plan area. The group selection method is designed to remove trees individually or in small groups sized from .25 to 2.5 acres. Three silvicultural considerations were observed within the existing stand (1) high stand density in the true fir stands (2) lack of regeneration, and (3) disease and mistletoe infection. The average basal area per acre in the group selection ranges from 100 to 325 square feet per acre. The stand was marked with the intention of opening it for release of vigorous conifers. Additionally, to assure the establishment of regeneration, "group clearings" (.25 - 2.5 acres) were marked. The "groups" are to be oriented such that the clearings are, where possible, constructed around or near large healthy "seed trees". No group clearings are within Watercourse and Lake Protection Zones (WLPZ's) or Equipment Limitation Zones (ELZ's).

Groups will not exceed 2.5 acres and will not exceed 20% of the area to be harvested under Group Selection.

The site classifications in the area to be harvested are Dunning Sites II and III. The post harvest stocking levels for group selection are, at least 80% of the stocked plots shall have a minimum of 75 square feet of basal area, and not more than 20% of the stocked plots will be used to meet the stocking standards utilizing the 300 point count. Group clearings are separated by logical logging areas.

Rehabilitation: Pursuant to 14 CCR 933.4 (b) Rehabilitation of Understocked Area Prescription will occur on 27 acres, for the purposes of restoring and enhancing the productivity of commercial timberlands which do not meet currently meet the stocking standards defined in 14 CCR 932.7.

The site classification within the rehabilitation unit is Dunning Site class III. The existing stand is declining in health and vigor. The overstory of Red fir and Western White Pine has a range in basal of 10 square feet to 100 square feet. Disease problems such as dwarf mistletoe, *cytospora spp*, and blister rust are infecting the vast majority of the overstory. The mistletoe and *cytospora spp*. have been transferred from the overstory to the understory which consists of pockets of advanced red fir regeneration. Portions of the unit do meet the basal area or point count totals to be considered stocked, but because of the disease problems the vast majority of the trees in both the overstory and understory do not meet the definition of a countable trees (defined in 14 CCR 895.1). Between the pockets of advanced regeneration the unit is dominated (greater than 80% cover) with manzanita and chinquapin brush.

The Rehabilitation Unit shall have site preparation, as per the Site Preparation Addendum, and will be artificially regenerated. The unit shall be planted with Group A species within three years following completion of operations. An average of 300 seedlings per acre shall be planted. The seedlings shall be from the appropriate seed zone and elevation band.

Fuel Break: CAL FIRE has a planned fuel break along the watershed boundaries within LDSF. The location of the planned fuel break is along the McMullen Road east to Table Mountain and along the Rim Road. A portion of this THP along the McMullen Road is within the planned fuel break and 10 acres will be treated with the fuel break prescription. The fuel break prescription is a width of 100 feet and approximately 4400 feet long. The fuel break will run adjacent to the McMullen Road, from the western edge of the THP to eastern edge of the brush field on the west side of McMullen Mountain.

As described in 14 CCR 933 (d), because fuel breaks are designated as defensible space areas, the wood production potential of these lands is compatible with the lowest site classifications and they shall be considered site IV timberland for stocking purposes. Upon completion of the THP the fuel break shall have a minimum stocking of 50 square feet of basal area as described in 14 CCR 932.7(b)(2). Sub-merchantable material shall be felled and chipped or piled to be burned when safe burning conditions exist. The Fuel Break is within the fire protection zone all logging slash shall be treated by lopping, piling and burning, chipping, or removal from the zone. This treatment shall be completed prior to April 1 following creation or within 30 days following climatic access.

**Vegetation control:** control of competing vegetation may be required to insure the survival of the regeneration within the Rehabilitation Unit and the groups within the Group Selection Silviculture. The primary competing vegetation with the regeneration is chinquapin, manzanita, and grasses. The competing vegetation may be controlled by manual, mechanical or chemical treatments.

**Mechanical treatments:** All equipment utilized for the control of competing vegetation shall adhere to the protection measures described within this THP including ELZs, Site Preparation Addendum, and the Winter Operations Plan.

**Chemical treatments:** Herbicide control of vegetation shall adhere to the Site Prep Addendum as to where and time of year application should occur. Treatments may be applied pre and/or post harvest. If preharvest application does not occur, then post harvest application may occur twice within five years following harvest. All herbicides used on this THP shall be registered for forestry applications and will likely be applied by a directed backpack spray by one of the following methods:

- Foliar backpack applications can be selective or non-selective, depending on the type of herbicide and the application method. The herbicide is sprayed by hand as a broadcast application across all vegetation or directly sprayed on target species. Even non-selective herbicides can be used for selective control through the use of low volume directed backpack applications or by timing the application so that the desired annual species have already produced seed.
- Basal stem treatments are another selective contact treatment. Basal stem treatments are usually made using backpack sprayers. Herbicide is mixed with an oil carrier to allow adequate bark penetration and is applied to the lower two feet of a woody plant. Basal stem applications have a longer application season and can provide good control through November. Dormant applications have less visual impact than other application methods since the target species never leafs out in the spring and there is no brownout.
- Cut-stump treatments are used to prevent woody species from resprouting. After trees and brush are cut with a chain saw or loppers, the stump is treated with herbicide.

The use, type and the timing of the herbicide shall be determined and recommended by a Licensed Pest Control Advisor (PCA) and the application shall adhere to the PCA's recommendation, the herbicide label instructions, and the Mitigated Negative Declaration, State Clearing House (SCH) # 2008062009 for LDSF Management Plan 2008.

The registration of herbicides in California is a CEQA equivalent process, and when applied according to the label instructions, PCA's recommendation, and with a licensed applicator, no significant adverse impacts to wildlife and water resources are likely to occur. Herbicides use is regulated by the Department of Pesticide Regulation (DPR) and enforced by the County Agricultural Commissioner.

#### Plan addendum #17 - Erosion Hazard Rating (EHR)

The Soil Survey of Shasta County California and field observations were used to determine the erosion hazard rating (EHR) for this THP area. The EHR areas were delineated according to soil type and ground observations with regard to slope, ground cover, and physical characteristics. The EHRs for the THP area are low and moderate. The EHR types are delineated on the EHR Map.

#### Plan addendum #26 - 936.9 (v) Site Specific Watercourse Protection Zone Widths

Site specific plans may be submitted when, in the judgment of the RPF, such measures or provisions offer a more effective or more feasible way of achieving the goals and objectives set forth in 14 CCR § 936.9, subsections (a) and (c), and would result in effects to the beneficial functions of the riparian zone equal to ... those expected to result from the application of the operational provisions required under 14 CCR § 936.9.

Pursuant to 936.9 (v)(2) ... "In the event of measures limited in applicability to specific sites, the submitter may instead of an evaluation, obtain written concurrence from DFG prior to plan submittal..." The WLPZ widths for

## PART OF PLAN

### Section 3

North McMullen Mountain THP

the protection of the watercourses within the Lee March Gulch drainage were developed in cooperation with DFG during a site preconsultation, conducted on July 13, 2010.

Lee March Gulch originates from springs on LDSF and flows approximately 1 mile north into Cutter Meadows where it joins Butcher Gulch and forms Atkins Creek. During the spring when snow is receding, Lee March Gulch shows evidence of modest flows with an average channel width of 4 feet and an average high water depth of 15 inches. After the snow is gone the flow becomes intermittent and surface flow does not even reach Cutter Meadows by mid July. During the July 13<sup>th</sup> preconsultation with DFG, the surface flow did not reach Cutter Meadows. By mid August the surface water is exclusively spring fed and does not leave the THP area.

Lee March Gulch is the only drainage within the THP that is within an ASP watershed (Atkins Creek) and is tributary to Atkins Creek. Several timber harvests have occurred within the Lee March Gulch drainage since the early 1960s. The historical harvests were for the development of LDSF road system and the timber was managed with un-evenaged prescriptions. During these previous harvests and on harvests outside of LDSF, Lee March Gulch was considered and protected as a non-fish bearing watercourse. The resulting stream side vegetation from these harvests is a multi-aged mixed conifer timberstand. The average canopy coverage exceeds 75%. Immediately around the springs, small meadows exist with dense patches of alder. The previous timber harvests within the watercourse protection zones were limited, as evidenced by very few stumps.

During the preconsultation with DFG, LDSF staff and DFG staff electro-shocked portions of Lee March Gulch. One 4 inch trout was located along the boundary of LDSF, where Lee March Gulch enters Cutter Meadows. There are no obvious fish barriers upstream from where the trout observed, so Lee March Gulch is now identified as a Class I watercourse from approximately 500 feet within the THP boundary north to the intersection with Atkins Creek.

The WLPZ widths and the protection measures for the watercourses within the Lee March Gulch drainage were developed in cooperation with DFG during a site preconsultation, conducted on July 13, 2010. During the site visit DFG and LDSF staff reviewed the in stream conditions of Lee March Gulch, available fish habitat, surrounding vegetation, and the previous watercourse protections measures for Lee march gulch. The WLPZ protections described within Section II, Item 26, ASP watersheds of the THP, are based upon DFG and LDSF observations, the proposed silviculture, and the previous management practices. The proposed protection measures shall provide effects to the beneficial functions of the riparian zone equal to those expected to result from the application of the operational provisions required under 14 CCR § 936.9. As Per 14 CCR 936.9(v)(2) DFG is in concurrence with the proposed protection measure for those watercourses within ASP watersheds. The DFG concurrence letter is located in Section 5, page 57.1.

As per 14 CCR 936.9(v)(4),

- (A) The WLPZ protection measures within the ASP watersheds were developed in consultation with DFG and are described in Section II, Item 26 of the THP. These protection measures were developed after DFG and LDSF staff electro-shocked a previously identified Class II watercourse, and assessed the instream and adjacent habitats.
- (B) As stated in the DFG concurrence letter "...the RPF's proposal for a site specific alternative provides equal protection to salmonids and their habitat as the provisions of 936.9.", thus no significant adverse impacts should occur to listed salmonids or the beneficial functions of the riparian zone.
- (C) As stated in (B) above and DFG consultation , no significant adverse impacts should occur to listed salmonids or the beneficial functions of the riparian zone.
- (D) The WLPZ protections are described within Section II, Item 26 of the THP and provide clear and enforceable for the timber operator.
- (E) As per 14 CCR 1035(d)(1), the plan submitter shall "retain an RPF who is available to provide

# PART OF PLAN

North McMullen Mountain THP

Section 3

professional advice to the LTO and timberland owner upon request throughout the active timber operations..."

- (F) The proposed protection measures for the Class I watercourses within ASP watersheds differ from the prescriptive rules described in 14 CCR 936.9 (f)(4), as the overall WLPZ width has been reduced from 100 feet to 75 feet. Additionally no harvest is proposed within the Class I WLPZ and 14 CCR 936.9(f) (4) allows for harvest outside the 30 feet "core zone".

The proposed protections measures for Class II watercourses within ASP watersheds differ from the prescriptive rules described in 14 CCR 936.9 (g), as the existing Class II watercourses within Lee March Gulch are by definition Class II Large watercourses and these watercourses are provided Class II standard protections.

## Plan addendum #27

Standard rule 14 CCR 936.3 (c) states that the timber operator shall not construct or reconstruct roads, construct or use tractor roads or landings in Class I, II, III, IV watercourses, in the WLPZ, marshes, wet meadows, and other wet areas unless when explained and justified in the THP by the RPF, and approved by the Director, except as follows:

- (1) At prepared tractor road crossings as described in 934.8 (b).
- (2) Crossings of Class III watercourses which are dry at the time of operations
- (3) At existing road crossings
- (4) At new tractor and road crossings approved as part of the Fish and Game Code process.

14 CCR 936.4(d) states, "Heavy equipment shall not be used in timber falling, yarding, or site preparation within the WLPZ unless such use is explained and justified in the THP and approved by the Director".

The proposed in-lieu practices, as described in Section II, item 27, of using existing skid trails, landings and roads within the WLPZ will provide equivalent, and possibly better, protection to the beneficial uses of water than would the standard rules. The proposed practice eliminates the need to relocate landings, skid trails, and road segments outside and adjacent to the WLPZ. Relocation and new construction is not feasible and would create an overall greater soil disturbance within the watershed. The existing skid trails, landings and roads are stable, and are not currently, and should not in the future; negatively impact the beneficial uses of water downstream. Measures to mitigate possible adverse effects from operations proposed under this plan are specified in Section II, Item 27.

## Plan addendum #28 (b) – Notification requirements

An exemption to the Notification requirements for information on domestic water supplies is requested for the newspaper notice. Sierra Pacific Industries and lands managed W.M. Beaty & Associate are the only landowners within 1000 feet downstream that receive surface drainage for areas proposed for harvest. Both SPI and W.M. Beaty & Associates received letters requesting any information regarding domestic water uses within 1000 feet from the proposed project boundary. Verbal correspondence with W.M. Beaty & Associates, Staff Forester, Ross Brazil the absence of domestic water supplies downstream of the THP area was conveyed. Verbal correspondence with Sierra Pacific Industries, Forester, Jan Caster the absence of domestic water supplies downstream of the THP area was conveyed.

Plan addendum #31 - Piling and burning for hazard reduction

The standard rules 14 CCR 937.2(a) and 937.5(b) state slash to be treated by piling and burning shall be treated no later than April 1 of the year following creation, or within 30 days following climatic access, or as justified in the plan. The piles and concentrations shall be burned at a safe time during the first wet fall or winter weather or other safe period following piling and according to laws and regulations.

An alternative to the standard rule is proposed to allow treatment of landing slash accumulations that result from the use of chipping and/or de-limbing equipment created after September 1 of each year. This material may be burned the following fall, prior to December 15, when safe burning exist. This alternative practice shall be applied over the entire THP area.

This practice differs from the standard practice in that piles will remain in place over the spring and summer and will be treated in the fall, rather than in the winter or early spring following their creation.

This alternative will provide equal or greater hazard reduction. Slash will be concentrated in the landings so that it is no longer a fuel component of the forested stands. There will be protective space around the piles as specified in Section II, Item 31. Also, there have been several incidents of burnt piles rekindling and even escaping following spring burning in this general region. Allowing fall burning of these piles will assure better consumption of the material and a cooling off period through the winter months.

All other provisions of 14 CCR 937.5 will be complied with. Piles will be constructed so that they are sufficiently free of soil for effective burning. These piles will be burned at a safe time during wet fall or winter weather according to other applicable laws and regulations. Piles that fail to burn sufficiently to remove the fire hazard shall be further treated to eliminate the hazard. All necessary precautions shall be taken to confine such burning to the piles.

Although some scorching of surrounding trees may occur, the extent of this damage will not result in conditions that do not meet the silvicultural and stocking requirements of this THP. No excessive buildup of bark beetle populations is expected to occur as a result of this proposed alternative.

Plan addendum #33 - Snag Falling / Hazard Reduction

Felling of snags for hazard reduction within 100 feet of all public roads, seasonal roads, and landings will not result in the loss of habitat elements associated with late seral stage timber stands. There are standing dead trees in later stages of decay throughout the THP. All snags with visible nesting sites of eagles, hawks, owls, waterfowl, or any rare or endangered species will be left standing as prescribed under 14 CCR 939.1 and 939.2(d). Special attention will be focused on retaining snags within WLPZs that may be recruited as large woody debris (LWD).

Plan addendum #34 – Late Successional Forest Stands

LDSF has had multiple entries (4-5) since it became a State Forest in the late 1940s. The THP has been harvested with un-even aged silviculture 4 times. Though the THP has scattered mature trees, there is no Late Seral Forests or characteristic on the THP area.

## DEMONSTRATIONS AND EXPERIMENTS

According to statute and Board policy, the purpose of the state forest program is to investigate and demonstrate the economic feasibility of artificial reforestation and the productive and economic possibilities of forest management practices which are designed to promote continuous forest production, with due regard to conservation of soil, watershed, scenic, wildlife, and recreational values. PRC 4645 authorizes the Department of Forestry and Fire Protection to manage State Forests and states, "The department, in accordance with plans approved by the board, may engage in the management, protection, and reforestation of state forests." The primary current use of state forests is to demonstrate economical silvicultural practices and timber harvesting procedures that protect environmental values.

State forests have been established to furnish land for needed investigation, demonstrations, and education in such things as the economic feasibility of artificial reforestation, good forest practices, maintenance of forest land in a productive condition, study of effects of improved cutting methods, proper management and harvesting methods, and economical forest management.

The following demonstrations are associated with this timber harvesting plan:

1. Continuous Forest Production and economical silvicultural practices.

Timber harvesting and forest production has occurred on LDSF since 1952. Approximately 150 million board feet of timber has been harvested from the Forest. Since the Forest's establishment, the estimated standing volume of timber has increased from 102 million board feet to 197 million board feet (based on TAI inventory conducted from 1994-2001). This harvest will continue to demonstrate forest production to achieve maximum sustained production of high quality forest products while giving consideration to other values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment.

2. Evaluation of yarding systems in selection silvicultural systems

An on going demonstration project is being conducted by LDSF Staff. Three yarding systems, (tractor, cable and helicopter) are being evaluated in harvesting forest stands utilizing selection silviculture. Costs, feasibility, and residual stand damage are evaluated to determine applicability for the small forest landowner.

3. Implementation and Demonstration of LDSF Road Management Plan

**SECTION IV**  
**CUMMULATIVE IMPACTS**

STATE OF CALIFORNIA  
BOARD OF FORESTRY  
CUMULATIVE IMPACTS ASSESSMENT

- (1) Do the assessment area(s) of resources that may be affected by the proposed project contain any past, present, or reasonably foreseeable probable future projects?  Yes  No  
If the answer is yes, identify the project(s) and the effected resource subject(s).
- (2) Are there any continuing, significant adverse impacts from past land use activities that may add to the impacts of the proposed project?  Yes  No  
If the answer is yes, identify the activities, describing their location, impacts, and the affected resource subject(s).
- (3) Will the proposed project, as presented, in combination with the past, present, or 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?

Impact Assessment	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			

a. Yes, means that potential significant adverse cumulative impact are left after application of the forest practice rules and mitigations or alternatives proposed by the plan submitter.

b. No after mitigation means that any potential for the proposed timber operation to cause or add to significant adverse cumulative impacts by itself or in combination with other projects has been reduced to insignificance or avoided by mitigation measures or alternatives proposed in the THP and application of the forest practice rules.

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

- (4) If column (a) is checked in (3) above, describe why the expected impacts cannot be feasibly mitigated or avoided and what mitigation measures or alternatives were considered to reach this determination. If column (b) is checked in (3) above describe what mitigation measures have been selected which will substantially reduce or avoid reasonably potential cumulative impacts except for those mitigation measures or alternatives mandated by the application of the rules of the Board of Forestry.
- (5) Provide a brief description of the assessment area used for each resource subject.
- (6) List and briefly describe the individuals, organizations, and records consulted in the assessment of cumulative impacts for each resource subject. Records of the information used in the assessment shall be provided to the Director upon request.

### Past and Future Activities

The assessment area for past and future activities consists of the Huckleberry (5507.320102), Atkins Creek (5507.310101) and Beal (5507.310103) Cal Water Planning Watersheds, version 2.2

For assessment purposes, the following is a table of past projects that have been approved within the Huckleberry Atkins Creek and Beal planning watersheds. The data was obtained from the CAL FIRE Cumulative Effects Database. Due to the limitations of the CDF database the acres listed below tend to be over estimates. If part of a THP is within the assessment area, then all of the acres of the THP are included in the database, unless noted otherwise.

Timber Harvest Plans in the Assessment Area

THP Number	yarding method	status	Acres by Prescription									Total			
			NT	FB	AP	R/W	CC	SWR	SEL	SS	CT		GSEL		
2-02-033	tractor/skidder	completed					31								31
2-02-225	tractor/skidder	completed			70	3	44							557	674
2-03-172	tractor/skidder	completed								458					458
2-04-177	tractor/skidder	active		40						1133		11			1184
2-05-111	tractor/skidder	active				2	213			10					225
2-05-149	tractor/skidder	active	39	14						95	200			1914	2262
2-06-129	tractor/skidder	active			344	2									346
2-06-138	tractor/skidder	active			167		239								406
2-01-037	tractor/skidder	completed				1				300	50	1025			1376
2-03-188	tractor/skidder	completed		57				485	2			237			781
2-03-050	tractor/skidder	completed								1185					1185
2-02-214	tractor/skidder	completed	13	112				494	54	3		410			1086
2-02-187	cable, tractor/skidder	completed													1632
2-01-161	tractor/skidder	completed										50	1288	611	661
2-08-071	tractor/skidder	active				2			7					341	350
2-09-064	tractor/skidder	review				6	266			12					284
2-09-063	tractor/skidder	review								1768	64				1832
2-09-059	tractor/skidder	review	15			1				320	101				437
2-03-143	tractor/skidder	completed	24					11	95	1898					2020
2-09-084	tractor/skidder	active						58*		143					200
2-08-078	tractor/skidder	active							24	1676					1700
2-09-110	tractor/skidder	active				3	209	37	17						266
**SCH # 2008062009		active	9,033 acre LDSF management Plan												
***Total Acreage			81	223	581	20	2050	563	9018	415	1733	4711		19,376	
***Percent of Assessment Area			<1%	<1%	2%	<1%	6%	2%	27%	1%	5%	14%		59%	

CC	Clear Cut	SEL	Selection
SWS	Shelterwood Seed	SS	Sanitation-Salvage
SWP	Shelterwood Prep	CT	Commercial Thinning
SWR	Shelterwood Removal	Trans	Transition Method
STS	Seed Tree Seed	Rehab	Rehabilitation of Understocked Area
STR	Seed Tree Removal	GSEL	Group Selection
R/W	Right of Way	NT	Non Timberland

\* 2-09-084 has 3 acres of meadow restoration and 55 acres of Variable Retention. These 58 acres are shown within the table as CC, because the amount of vegetation removed and ground disturbance is similar to a Clear Cut.

\*\* This is a CEQA compliant Mitigated Negative Declaration of LaTour Demonstration State Forest's Management Plan 2008.

\*\*\* Acres and percentages shown within these tables may be increased are over actual acres harvested within the assessment area. Due to the limitations of CAL FIREs' database, if portion of a THP is within the assessment area, then all the acres of the THP are included in the data base.

Based on the CAL FIRE Database Check 16,927 acres (69%) of the assessment area has been harvested or planned for harvest. Of the total area harvested, 3184 acres (18% of the assessment area) were treated with evenaged silviculture methods. The majority of the assessment area that was harvested was treated using unevenaged and intermediate silvicultural methods (13,743 acres). No long-term site impacts have resulted from the harvesting with in the assessment area.

#### Present projects

For the purpose of assessing present projects the entire THP area is being treated with selection and Variable Retention silviculture methods and there is three acres of meadow restoration. There are no other known California Environmental Quality Act projects currently proposed within the assessment area.

#### Future Projects

Future projects include the ongoing production and removal of high quality forest products through scheduled periodic harvesting on the commercial timberlands. LDSF will continue to manage the State's timberlands on periodic entries (18 year re-entry cycle) using predominantly un-evenaged silviculture. Within the next 5 years LDSF has 1 additional THP planned within the Beal watershed and one within the Huckleberry watershed. No increased impacts are expected to result from these ongoing forest management activities.

## **A. ASSESMENT AREAS**

### **Watershed Resources**

The watershed assessment area consists of the Huckleberry, Atkins Creek and Beal watersheds Cal Water Planning Watersheds version 2.2 and is shown on the attached Watershed Assessment Map. The THP boundary lies within the headwaters of these watersheds. The watersheds are third order watersheds and are tributary to Cow Creek. Cow Creek is tributary to the Sacramento River. This assessment area was chosen because the key cumulative impact issues, related to timber harvest, typically express themselves at the scale of planning watersheds or a subset of the planning watershed area.

Beal watershed (planning watershed 5507.310103) is the headwaters of South Cow Creek and drains a basin of 11,598 acres, of which 5,928 acres are contained within the boundaries of LDSF. Elevation ranges from 6,740 at LaTour Butte to 2,920 feet at the junction with Atkins Creek. Major tributaries include Beaver, Bullhock and Beal Creeks. South Cow is a third order stream before the junction with Atkins Creek (and fourth order below Atkins). There are approximately 9 miles of Class I watercourses along the main channel of South Cow Creek. Ownership in the lower elevations of the watershed is predominately private commercial timberlands

Huckleberry (planning watershed 5507.320102) includes the headwaters portion of Old Cow Creek and drains a basin of 12,836 acres, of which 1,452 acres are contained within the boundaries of LDSF. Elevation ranges from 7,064 (Huckleberry Mountain) to 4,520 feet about 1/4 mile below the junction with Hunt Creek. Old Cow Creek originates from Huckleberry Lake in the Lassen National Forest. Additional major tributaries include Huckleberry Creek, Peavine Gulch, and White Fawn Gulch. Old Cow Creek below Hunt Creek is a fourth order stream. There are about 7.5 miles of Class I watercourse along the main channel of Old Cow Creek.

Atkins Creek (planning watershed 5507.310101) is a major tributary of the headwaters portion of South Cow Creek. The drainage basin is 8,646 acres in size, of which 1,211 acres are contained within the boundaries of LDSF. Elevation ranges from 6,500 feet at McMullen Mountain to 2,920 feet where it enters South Cow Creek. Major tributaries include Lee March, Butcher, and Sunset Gulches. Atkins Creek is a third order stream and there are approximately 7 miles of Class I watercourse along the main channel.

The beneficial uses of water within the Watershed Assessment Area include; domestic water use, crop irrigation and stock use, power generation, contact and noncontact recreation, cold fresh water habitat and wildlife habitat. The beneficial uses was created from RPF's local knowledge and the Sacramento River Basin Plan, Chapter 2, Table II (Cow Creek).

### **Soil Productivity**

The assessment area will be the boundary of the THP. This will be adequate to cover impacts from timber operations.

### **Biological Resources**

The biological assessment area (BAA) coincides with the watershed assessment area. The BAA has high biodiversity based on the elevation range, and multiple types of vegetation and habitat. Rational for selection of the BAA is that the watershed assessment area serves as a distinct boundary for collecting and observing wildlife data. This area provides a large enough area adjacent to the THP to assess cumulative impacts to wildlife.

### **Recreational Resources**

The assessment area for recreational resources will be the harvest area plus 300 feet from the plan boundary. This area is appropriate due to the limited recreational use the area receives.

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## Visual Resources

The visual assessment area is the plan area that is readily visible to significant numbers of people within 3 miles of the THP. This was selected due to the distance of the harvest area from communities and well traveled roads.

## Vehicular Traffic Impacts

The assessment area includes the two main haul routes from the THP area.

- a) Cutter Road to the Tamarack Rd (Shasta County Rd.)
- b) Bateman Road from the harvest boundary to the end of the county road portion on the Bateman Road. The county road ends at the Atkins Creek watercourse crossing.

The extent of the assessment area was determined based on these routes are the most logical routes off the harvest area and the assessment area terminates at the first county road.

## B. Watershed Impact Assessment

LDSF is located at the head waters of 5 California Water Planning Watersheds and contains the headwaters of South Cow Creek (principle drainage within the Beal watershed) and part of the headwaters of Old Cow Creek and Atkins Creek (principle drainages within the Huckleberry and Atkins Creek watersheds). Precipitation on LDSF and the assessment area averages 46 inches a year with most of it as snow (74%) between November and March. Summer rainfall in the form of thunderstorms is unpredictable with the more severe storms producing localized, but intense runoff.

The harvest area lies within the Huckleberry, Atkins Creek and Beal watersheds. There are no watercourses on the THP within the Beal watershed. Lee March Gulch is one of two tributaries to Atkins Creek and the headwaters of Lee March Gulch is located within the THP boundary. The two main drainages within the THP are Peavine Gulch and White Fawn Gulch, both of which are tributary to Old Cow Creek.

Lee March Gulch, Peavine Gulch and White Fawn Gulch are all second order watercourses within the THP area. The main watercourses within the assessment area (Old Cow Creek, Atkins Creek, and South Cow Creek) are all third order watercourses until the exit the assessment area.

A detailed evaluation of the South Cow Creek and Old Cow Creek and Atkins Creek occurred in the summer of 2000 for the LaTour Demonstration State Forest Watershed Monitoring Project, Stream Channel and Fish Habitat Assessment prepared by the Sacramento Watersheds Action Group (SWAG), under contract with the Department of Forestry and Fire Protection. In this report South Cow Creek, Atkins Creek, and Old Cow Creek were assessed within the LDSF boundaries. The SWAG report assessed 16,579 feet of South Cow Creek, 2,842 feet of Atkins Creek and 7,380 feet of Old Cow Creek within the LDSF Boundaries. The creeks appears to have good channel conditions in the lower portion of the planning watershed and impacts from timber operations were not significant to those portions of the planning watersheds.

The SWAG report concluded South Cow Creek is in good condition and contains generally complex habitat with deep pools, riffles, and boulders forming step pools. SWAG reports 91% of S. Cow Creek was stable with some instability noted at the upper reaches within South Cow Creek Meadow. The stream banks were stabilized primarily by large cobbles, boulders, and riparian vegetation. By length habitat within South Cow Creek is approximately 44% riffle, 44% flat-water and 5% pools. Average pool depth is 1.8 feet and the average canopy cover is 70%.

The SWAG report concluded Old Cow Creek is in good condition and contains generally complex habitat with deep pools, riffles, and boulders forming step pools. The SWAG reports that 99% of Old Cow Creek was stable with the first 300 feet of Old Cow Creek within Old Cow Creek Meadow, being rated as stability at risk. The stream banks were stabilized primarily by large cobbles, boulders, and riparian vegetation. By length

## Section 4

habitat within Old Cow Creek is approximately 40% riffle, 40% flat-water and 20% pools. Mean pool depth of Old Cow Creek is 1.4 feet and the overall canopy cover of Old Cow Creek is 66 %.

The 4500-foot Class I segment of Bullhock Creek which is tributary to South Cow Creek was also rated as being stabile. The channel of Bullhock Creek is steep with the banks being stabilized with large boulders and diverse woody riparian vegetation. By length habitat is 36% riffles, 58% flatwater, and 6% pools. The average canopy cover of Bullhock Creek is 62% and the mean pool depth is 1.4 feet.

Salmonid spawning habitat may be considered to be degraded when fine sediment levels reach 20 % or greater. Within LDSF Old Cow Creek has the lowest percentage of surface fines, at 6.3 %; South Cow Creek has 15.1%; and Bullhock Creek has 9.8%.

Approximately 70% of the Atkins Creek watershed was burned in the 1978 Whitmore Fire. The fire and the reforestation of the timberlands has resulted in the vegetation type within the watershed is predominately a 30 year old coniferous plantation. The average canopy cover of Atkins Creek located on LDSF is 55 %, with 51% being from deciduous trees. Atkins Creek is primarily located within meadows with a low gradient. Atkins Creek's habitat by length has 22% riffles, 70% flatwater, 4% pools and 55% dry, with the mean pool depth being 1.4 feet. The dominant instream cover is undercut banks. Bank erosion is evident throughout the reaches assessed. Observed impacts to Atkins Creek are all related to cattle grazing. Impacts from timber management are not considered significant

The SWAG reports that instream Large Woody Debris (LWD) on LDSF is primarily concentrated in debris jams and not scattered throughout the stream reaches. This is to be expected in steep headwater streams, such as those found on LDSF. LWD will accumulate over time in debris dams until a flooding event provides enough energy to dislodge the debris jam and transport the material downstream. Additionally, on LDSF some LWD and some large trees were removed in 1983, by a fly fishing club, after consultation with the Department of Fish and Game.

Various portions of the plan area were initially harvested in the early 1960's. A second entry occurred in the 1980s -1990s, which covered most of the plan area. Past harvests used the selection silvicultural system. There are numerous existing skid trails and landings that exist within the harvest area from the previous harvests. The existing skid trail pattern and existing landings are the primary yarding design for this harvest. There will be minor changes to the existing skidding pattern and the location of a couple landings. The alterations in the skid pattern, landing location or landing size are to accommodate modern mechanized harvesting methods. Slopes of the harvest area within the THP are variable and range from flat to slopes upwards of 55%.

All operations within or adjacent to watercourses

#### Sediment Effects

Sediment-induced cumulative watershed effects (CWE) occur when earth materials transported by surface or mass wasting erosion enter a stream or stream system at separate locations and are then combined at a downstream location to produce a change in water quality or channel condition. Sediment effects result from many factors such as weather, geology, soil erosion potential, road location, silviculture, vegetation retention, and heavy equipment operations adjacent to watercourses. Sedimentation has occurred to tributaries of the South Cow Creek during the winter storms of 1997, when rain-on-snow events caused significant runoff resulting in culvert crossing failures and road fill washing into the drainage system.

The management of LDSF has a goal of reducing sedimentation to watercourses. The LDSF has developed and implemented a Road Management Plan (RMP) in compliance with the California Environmental Quality Act (CEQA) that will reduce erosion and sediment from the permanent road system. Implementation of the RMP involves systematic survey of the road system and all watercourse crossings. Watercourse crossings are evaluated as to their potential to fail or contribute sediment from improper installation.

Through the implementation of the RMP 46 sites have been identified as problem locations within the

assessment area. Since 1999, 39 of the 46 sites have been corrected. Corrective measures have included: over 20 miles of have been treated to improve drainage and reduce erosion. This treatment has included outsloping and installing rolling dips and road rocking; approximately 1.5 miles of road have been abandoned; and 15 watercourse crossings have been upgraded. All of these actions have or will reduce potential sediment inputs into assessment area.

There are four additional sites within the RMP that will be corrected through the implementation of this THP. Three of the sites are associated with inadequate drainage and lack of ditch maintenance. The fourth site is an improperly abandoned section of obsolete road.

1. A segment of the White Fawn Gulch road location between the two junctions with the Section Loop road has a heavily eroded inside ditch and poor road surface drainage. This segment of road has been identified to be abandoned in Item 25 of the THP.
2. Old Peavine road was improperly abandoned above the intersection with White Fawn Gulch road. This segment of road has been identified to be abandoned in Item 25 of the THP.
3. The segment of the White Fawn Gulch road east of the abandonment segment described in Item 25 of the THP and in number 1 above has very few drainage features and is inadequately drained. This site will be corrected through the routine maintenance of logging roads during operation, as is required by 14 CCR 943.4. The grading of the road and then installation of additional drainage features (waterbars, rolling dips and/or ditch relief culverts) will adequately drain this segment of road.
4. A quarter mile segment of the Section Loop road west of the abandoned segment of White Fawn Gulch road described in Item 25 of the THP and in number 1 above has eroding inside ditches, blocked inside ditches and is inadequately drained. This site will be corrected through the routine maintenance of logging roads during operation, as is required by 14 CCR 943.4. The grading of the road and then installation of additional drainage features (waterbars, rolling dips and/or ditch relief culverts) will adequately drain this segment of road.

Road Maintenance means activities used to maintain and repair roads involving minor manipulation of the road prism to produce a stable operating surface and to ensure road drainage facilities, structures, cutbanks and fillslopes are kept in a condition to protect the road, minimize erosion, and to prevent sediment discharge into a watercourse or lake. Examples of road maintenance include shaping and/or rocking a road surface; installation and maintenance of rolling and critical dips; restoring functional capacity of inboard ditches, cross drains, or culverts; and repairing water bars.

No cumulative sediment impacts are predicted with the implementation of the THP.

### Water Temperature/Thermal Loading Effects

Water temperature related CWEs are changes in water chemistry or biological properties caused by the combination of solar warmed water from two or more locations (in contrast to an individual effect that results from impacts along a single stream segment) where natural cover has been removed. Due to the elevation of the plan area the two major factors that would affect water temperature are water source and canopy cover. The contribution of water from the plan area within both watersheds, during the summer months, is spring-fed watercourses from streams with gradients that result in high flow velocities. Stream reaches with low flow velocities and full solar exposure that would result in an increase in water temperature are uncommon on the LDSF within these watersheds. Past harvests have maintained canopy cover over watercourses. The SWAG report found that the Class I watercourses on LDSF within the Watershed Assessment Area had an average of 69% canopy cover, measured with a solar pathfinder, within the LDSF boundaries. Ninety four (94) percent of this cover consisted of coniferous vegetation.

This THP will maintain streamside vegetation that will continue to shade watercourses from solar radiation and prevent water temperature increases.

### Organic Debris/LWD Effects

Large woody debris can have both positive and negative effects on a watercourse. Large woody debris is an important stabilizing agent in steep gradient channels. The sudden introduction of large, unstable volumes of bigger debris (such as logs, chunks, and larger limbs produced during a logging operation) can obstruct and divert stream flow against erodible banks, block fish migration, and may cause debris torrents during periods of high flow. Removing streamside vegetation can reduce the natural, annual inputs of litter to the stream (after decomposition of logging-related litter). This can cause both a drop in food supply, and resultant productivity, and a change in types of food available for organisms.

Based upon the California Department of Fish and Game's *California Salmonid Stream Habitat Restoration Manual – Third Edition*, the SWAG study found that on average there were 22 pieces of large woody debris per 100 feet of watercourse segment in the Class I watercourses on the LDSF. Watercourse protection provided in the plan will continue to provide both LWD for streamside habitat and prevent the sudden introduction of debris from harvesting practices.

### Chemical Contamination Effects

Sources of chemical contamination include run-off from roads treated with oil or other dust-retarding materials, direct application or run-off from pesticide treatments, contamination by equipment fuels and oils, and the introduction of nutrients released during slash burning.

The use of oil or dust retarding materials is not planned for this THP, but may occur. The types of dust palliatives that have been used on LDSF have been hygroscopic salts and resins, these materials are considered to be non-hazardous as per MSDS information provided to LDSF. These materials are non-flammable, non-combustible and are considered to be low or non-toxic to aquatic organisms. When these materials are utilized on LDSF, they will be applied under ideal weather conditions to allow for rapid curing. Potential hazards associated with the proper delivery and application of these products is very unlikely. By controlling the application process, using only licensed applicators and adhering to the MSDS, product labels and application recommendations, accidental spills can be minimized, eliminated and controlled if they occur. Additionally 90 % plus of dust abatement on LDSF is accomplished by use of water and water trucks.

Accidental contamination of equipment fuel or oil is unlikely. Fuel is stored in an area where it cannot contaminate a watercourse if a leak occurs. Additionally, equipment shall be serviced outside the protection zone of watercourses.

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Herbicides have been used on LDSF for demonstration, research and for the establishment, survival and improved growth of new forest stands. The use, type and the timing of the herbicide shall be determined and recommended by a PCA. The application shall be made by a Licensed applicator and adhere to the DPR regulations, a PCA's recommendation, the herbicide label instructions, and the Mitigated Negative Declaration, State Clearing House (SCH) # 2008062009 for LDSF Management Plan 2008.

The use of herbicides as a tool to control vegetation is determined by the vegetation present on site, by the vegetation targeted for control and the level of control needed to accomplish the goals of the project. These factors, as well as local weather patterns, soil types, topography, and the presence of threatened or endangered species are used to determine if herbicides will be used. The specific recommendation for the type of herbicide, application rate, timing, and application method will be determined by the site specific conditions and made by a Licensed Pest Control Advisor (PCA).

The three main brush species targeted for control on LDSF are chinquapin, manzanita, and snow brush. Other species that may be targeted in specific situations are gooseberry, currant, bitter cherry and various grasses. Application methods have been typically a directed backpack application to target species and two aerial applications following the 1978 Whitmore Burn.

Individual herbicide applications are based on label and MSDS restrictions, and written recommendations by PCA, that provide CEQA equivalency. The recommendations build upon the pesticide, surfactant and adjuvant Labels and Material Safety Data Sheets, which provide information potential for movement and toxicity. The PCA Recommendations consider site specific information such as vegetation present on site, targeted species, restrictions on chemical use, current and forecasted weather, soil types, topography, and the presence of threatened or endangered species. These recommendations will also evaluate proximity to schools, apiaries, neighbors, domestic water systems, presence of wetlands, watercourses, amphibians, and fish. If necessary these recommendations will include mitigations to reduce the impacts to apiaries, humans or biological resources. Mitigation examples include but are not limited to drift control measures, buffers, avoidance, weather restrictions, and timing. Additionally, LDSF is open range and grazing cattle are periodically present. Each pest control recommendation will consider the probability that cattle could graze treated vegetation (location and timing) and select herbicides with appropriate grazing restrictions.

Specific herbicide use depends on the nature of the vegetation and site conditions and may change based on availability from the manufacturer, registration status, feasible treatment alternatives and the recommendations of the PCA. Active ingredients in previous herbicides used on LDSF include Glyphosate, Triclopyr, Imazapyr, 2-4D, Hexazinone and picloram. The Carbon Sequestration research project on LDSF is currently utilizing Glyphosate, Triclopyr, and Imazapyr.

- Glyphosate is a non selective, post emergent herbicide. Glyphosate's mode of action is to inhibit an enzyme involved in the synthesis of the aromatic amino acids: tyrosine, tryptophan and phenylalanine. It is absorbed through foliage and translocated to growing points. Glyphosate is registered for forestry applications under various product labels. Selective control of undesirable vegetation is obtained through low volume directed backpack applications.
- Triclopyr and 2-4D are highly selective herbicides and a target broadleaf weeds and woody brush. They are considered hormone weedkillers and are within the largest group of herbicides used worldwide. These herbicides have complex mechanisms of action against weeds, resembling those of growth hormones. Once absorbed they are translocated within the plant and accumulate at the growing points of roots and shoots where they inhibit growth. Both chemicals are registered for forestry applications under various product labels. 2-4D has following restrictions; it has a ground water advisory, and can not be applied through an irrigation system. 2-4D applications must be permitted by the Shasta County Agriculture Commissioner.

# PART OF PLAN

Section 4

North McMullen Mountain THP

- Imazapyr is a non-selective broad-spectrum systemic herbicide, absorbed by the foliage & roots and causes disruption of protein synthesis. Imazapyr is registered for forestry applications. Selective control of undesirable vegetation is obtained through low volume directed backpack applications.
- Hexazinone is a non-selective broad spectrum herbicide which inhibits photosynthesis. It is registered for use in agriculture and forestry for selective weed control. It is a soil active herbicide and used to control grasses and broadleaf and woody plants. Selective control of undesirable vegetation is obtained through low volume directed backpack applications.
- Picloram is a systemic herbicide used for general woody plant control. It also controls a wide range of broad-leaved weeds. Selective control of undesirable vegetation is obtained through low volume directed backpack applications.

New products, formulations and application techniques may provide better control and improved environmental toxicology profiles than the chemicals previously utilized at LDSF. Additionally as part of LDSF's research and demonstration mission, small-scale herbicide trials or vegetation control studies are likely to occur. For this reason, in the future, there may be additions or deletions to the list of herbicides considered for use on LDSF.

Additional background on herbicide regulation and use is included as this is a topic of concern to some members of the public. The U.S. Environmental Protection Agency regulates pesticide use nationwide and has exclusive authority over pesticide labeling. Use of a pesticide is limited to the applications and restrictions on the label, and the label restrictions are legally enforceable. The California Department of Pesticide Regulation (DPR) regulates pesticides within the State of California and has legal authority to adopt restrictions on pesticide use going beyond the regulations of the U.S. Environmental Protection Agency (7 U.S.C.A. §136v). Under California law, pesticide products must be registered by DPR in order to be sold and used in California. Before a substance is registered as a pesticide for the first time, DPR conducts a thorough evaluation. After a pesticide is registered for use in this state, DPR has an ongoing obligation to review new information received about the pesticide that might show new problems beyond those identified in the registration process. DPR is the lead agency for regulating herbicide use under CEQA. Where the review of new information shows that a significant adverse impact has occurred, or is likely to occur, DPR is required to reevaluate the registration. The regulatory program of DPR and the county agricultural commissioners is thorough, detailed, and involved.

DPR's program for regulating pesticides was certified by the Secretary of the Resources Agency as a functional equivalent program under Public Resources Code (PRC) § 21080.5 in the same manner as the state's program of regulating timber harvesting was certified (14 CCR. § 15251(i)). Because the program is certified, DPR does not prepare environmental impact reports (EIRs) but prepares other documents in the place of EIRs (PRC § 21080.5(d)(3)). Because the registration evaluation process considers use of an herbicide in a broad area and in a variety of conditions, the documents are the functional equivalent of a program EIR for each pesticide. By the terms of its certification, the program is prevented from approving the registration as requested if there are feasible alternatives or mitigation measures available that could lessen any significant adverse effects on the environment (PRC § 21080.5(d)(2)(A)). By § 12825 of the Food and Agricultural Code, DPR may refuse to approve the registration of a new pesticide if its use would cause a significant adverse effect on the environment.

If DPR determines that further restrictions need to be placed on the use of a pesticide product to mitigate potential adverse effects, including human health effects and environmental effects, DPR classifies the pesticide as a restricted pesticide, and individual applications need a permit from the county agricultural commissioner. Site specific application and use of restricted pesticides is evaluated by the county agricultural commissioner during its review of applications for restricted materials permits. Not all pesticides are restricted, and only restricted pesticides require a permit from the county agricultural commissioner, except for a pesticide that DPR has not designated as restricted, the commissioner can require a permit for its use if the commissioner makes a finding that the pesticide will present an undue hazard when used under local conditions.

Because DPR is the CEQA lead agency, its determination the use will not have a significant effect on the environment is binding on all State agencies, including CAL FIRE (PRC § 21080.1, 14 CCR § 15050). Accordingly, if a DPR registered herbicide will be used in accordance with the directions and restrictions on the

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pesticide product label and any other restrictions established by DPR, CAL FIRE is required to find that the use will not have a significant effect on the environment unless there is new information showing significant or potentially significant effects not analyzed by DPR. The significant new information must show that the use would cause a new significant effect on the environment that had not been analyzed previously, that a previously analyzed effect would be much more severe, or that a new feasible alternative or mitigation measure, considerably different from ones analyzed previously, would lessen the significant effect but the project proponents declined to adopt it (14 CCR § 15088.5(a)). If CAL FIRE receives comments on proposed herbicide use, CAL FIRE will need to determine whether the information qualifies as significant new information. CAL FIRE will consult with DPR and the county agricultural commissioner about the submitted information both to obtain the evaluation by the agencies with their expertise and to alert them about the issues. DPR could respond to the information with a decision to reevaluate the registration of the herbicide or it could advise CAL FIRE that the information is repetitive of what was evaluated during the registration decision.

The Shasta County Agricultural Commissioner has responsibility for compliance and enforcement actions, registration of businesses that perform pest control in Shasta County, issuing Restricted Materials Permits and Operator ID numbers and other regulatory responsibilities. The THP and the state forest does not lie in the Shasta County Groundwater Protection Areas. The Central Valley Water Quality Control Board does not require notification for herbicide application that is applied in accordance to the product labels.

LDSF staff will review the PCA's recommendation, the recommended herbicide's, surfactant's, and adjuvant's intended use and the possible environmental effects of each. LDSF will work with the PCA to determine whether the proposed use would be consistent with the label, the registration limitations, the THP and LDSF's management plan. LDSF will also check for significant new information showing changes in circumstances or available information that would require new environmental analysis. Significant new information should be referred to DPR for that department's analysis as part of its ongoing evaluation program.

Details of herbicide, surfactant and adjuvant chemistry, including mode of action and break down products as well as manufactures formulations are evaluated in depth by EPA and DPR during both the registration process and periodic reviews. In addition to the label and MSDS the following can be reviewed for information relevant to the project; National Pesticide Information Center <http://npic.orst.edu/>.

The registration of herbicides in California is a CEQA equivalent process, and the herbicide's label is a comprehensive document about the herbicide, any associated hazards, active and inactive agents, and the proper use and handling of the herbicide. When herbicides are applied according to the label instructions, PCA's recommendation, and with a licensed applicator, no significant adverse impacts to wildlife and water resources are likely to occur.

No cumulative watershed effect, with regards to chemical contamination, is predicted for this THP.

### Peak Flow Effects

Peak flow increases may result from management activities that reduce vegetative water use or produce openings where snow can accumulate (such as clear-cutting and site preparation) or that change the timing of flows by producing more efficient runoff routing (such as insloped roads).

The assessment area has experienced high peak flows from rain-on-snow events. These events, such as occurred in 1997, are unpredictable. The proposed silvicultural prescriptions will maintain vegetation over the plan area that will enhance infiltration of precipitation and maintain peak flows. Groups within the selection area will be less than 2.5 acres and will be planted to establish vegetation in the opening. There are no new roads planned for this timber harvesting plan that would reroute and concentrate runoff. As stated above for sediments effects, the drainage of existing roads is being improved through implementation of LaTour's Road Management Plan. The potential for this plan to increase peak flows is insignificant.

This harvest will have no impact on water temperature, organic debris, chemical contamination, or peak flow cumulative watershed effects. Sediments effects from road use and harvesting activities may occur but will be insignificant. No new road construction is planned nor will large openings be created. Nearly all tractor roads needed for this harvest exist. All watercourses and springs within and adjacent to the harvest area will be protected. Post harvest streamside vegetation will continue to provide filter strip properties and shading. Water drafting is proposed at four locations. Drafting locations will be rocked to prevent the introduction of sediment into the watercourse during drafting operations. Additionally the vehicles will be inspected to ensure chemical contaminants are not introduced into the watercourses. The silvicultural systems being applied should have no effect on peak flow. The vigorous residual stand will continue to maintain infiltration capacities and hold soil in place.

### 303(d) Listing

South Cow Creek is 303(d) listed based on the pollutant of Fecal Coliform. The possible sources of fecal coliform include agriculture, grazing related sources and others. LDSF is not considered a highly desirable grazing area, due to steep slopes, dense timber cover and minimal meadow grazing potential. Additionally, weather conditions on LDSF also contribute to the loss of grazing potential (moderate to heavy snow loads in the winter and spring). Although LDSF has no grazing permits, it is located within open range and cattle do graze and travel through the property. This THP does not propose cattle grazing nor will timber harvesting increase or decrease fecal coliform potential.

### C. Soil Productivity Assessment

The soil series within the harvest boundary are Windy - McCarthy stony sandy loam and Cohasset stony loam. Cohasset stony loams comprise about 80% of the plan area. Windy - McCarthy soils are made up the remaining portions of the THP. Both these soils are volcanic in origin and are stony to very stony throughout the soil profile. They are well-drained soils with moderate to rapid permeability. Both soil series have soil depths up to 60 inches and are considered moderately productive timberland soils.

The primary factors influencing soil productivity to be assessed are:

1. Organic matter loss
2. Surface soil loss
3. Soil compaction
4. Growing space loss

#### Organic matter loss

The entire harvest area will be logged by tractor and disturbance of organic matter will occur. Throughout the harvest area there are many existing skid trails that will be utilized for this harvest. Few new skid trails will be constructed. When these skid trails are utilized organic matter will be displaced from them. To minimize disturbance, equipment will utilize designated skid trails and trees will be felled to these skid trails. Replacement of organic matter will occur through logging residue, tree tops and limbs that will be left behind after harvest and from natural needle fall. Any existing skid trails not pertinent to the harvest will not be utilized.

Existing down woody material throughout the harvest area will remain. Retaining unmerchantable material in the harvest area will recruit woody material. In addition to providing wildlife habitat, leaving woody material will add organic matter to the forest floor. Increases of organic matter to the forest floor will also occur from the planned lop and scatter slash treatment throughout the entire plan area.

#### Surface soil loss

Surface soil loss will occur by displacement of soil from skid trail construction and log skidding. There are many existing skid trails from past harvests and the need to construct new ones is minimal. Only one new landing is planned. The loss of surface soil from construction will be slight. Surface soil loss from erosion will be nominal due to the silvicultural systems being applied, lack of road construction, and installation of water breaks on skid trails and landings after completion of use.

#### Soil Compaction

Soil compaction will occur from the tractor skidding operation. Compaction will be greatest on main skid trails. To reduce compaction over the harvest area and eliminate random wandering by equipment operators, main skid trails will be kept to the minimum needed to carry out the harvest. Skid trails will be designated prior to timber operations and equipment will be required to use designated trails, which will reduce the impact from compaction to the harvest area. Harvest activities will occur when soil moisture is low. When soils are saturated timber operations will be suspended. Timber operations will not occur during the winter period.

#### Growing Space Loss

Growing space loss from skid trail construction will occur, however, it will be minimal. All roads, landings, and skid trails are considered permanent. New skid trails are constructed so that they can be utilized in future harvests. The use of existing skid trails will be required. There may be a need for the construction of a few new skid trails for this harvest. All roads needed for this harvest exist and no new roads are planned.

**D. Biological Assessment****PART OF PLAN****Scoping**

The Natural Diversity Data Base (NDDDB) was used as a scoping tool to check if any rare, threatened, endangered, or special concern species and/or their habitat are located on or surrounding the THP area. A nine quadrangle query was conducted, which included Jacks Backbone 7.5 minute quad, its surrounding eight quads. The following is a list of rare, threatened, endangered species, and/or their habitat that occurs within the THP area. There are no recorded occurrences of threatened or endangered species on LDSF.

**Anadromy**

There are no known occurrences of anadromous salmonids within the biological assessment area. The Beal and Atkins Creek planning watersheds are listed as a threatened and impaired for Chinook salmon and Central Valley Steelhead. No anadromous salmonids occur on LaTour nor are there historical records of observations in the Beal Creek Watershed.

In the development of the THP there were no pre-plan adverse affects identified within the plan area or the watershed and biological assessment areas. Additionally the implementation of this THP will have no significant cumulative watershed effects on the populations and habitat of anadromous salmonids. The Watershed assessment (section B) addresses sediment, thermal loading, large woody debris, and peak flow. Mitigation in the water drafting plan will prevent a take, if Steelhead are present in Atkins Creek. Harvesting activities along watercourses have been conservative in the past resulting in timber stands that provide good shade cover. With the implementation of the THP, and the protection afforded to the watercourses within the THP coupled with the requirements of the Forest Practice Act and Board of Forestry rules there should be no adverse cumulative impact to anadromous fish or other aquatic species or habitat.

Chinook salmon (*Oncorhynchus tshawytscha*): Information within the *Cow Creek Watershed Assessment*, prepared by SHN Consulting Engineers & Geologists Inc., indicates that fall run Chinook have occurred in the lower reaches of South Cow Creek below Wagoner Canyon approximately 10 miles west of the Forest. Historical data indicates salmon above Wagoner Canyon were scarce due to a natural barrier in the Canyon and a dam constructed across South Cow Creek by PG&E in 1908. The barrier was removed by blasting and a fish ladder was constructed at the dam in the 1970's by the Department of Fish and Game. However, local residents state there was no significant increase in the number of fish above the dam. The Cow Creek report suggests one of the key limiting factors is adequate stream flow to provide passage of adult fish. Water is diverted from South Cow Creek for irrigation and power use during critical passage periods.

Central Valley steelhead (*Oncorhynchus mykiss*): Steelhead were reported at the crossing of South Cow Creek by Ponderosa Way, approximately 9.5 miles west of the plan boundary. No physical barriers exist on South Cow Creek upstream of the Ponderosa Way crossing; as such Steelhead could potentially migrate upstream into the Beal and Atkins Creek planning watersheds. It is unlikely they occur within Atkins creek due to low flows during the summer and fall. The Cow Creek report suggests one of the key limiting factors is adequate stream flow to provide passage of adult fish. Water is diverted from South Cow Creek for irrigation and power use during critical passage periods.

From dives performed in 2000 for the fish habitat assessment of the SWAG report, only rainbow trout were observed in South Cow Creek, Old Cow Creek and Atkins Creek on the LDSF.

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Northern Goshawk: As discussed in Item #32 of the THP, the harvest area contains habitat for the Northern Goshawk. Protection measures are discussed in Section III of the plan. The silvicultural prescriptions proposed will have a very low impact on the Northern Goshawk's habitat requirements. The type of silviculture being conducted may even improve forage habitat conditions for the goshawk where dense fir stands are thinned and the tree and tree crown spacing is improved by the harvest.

Sierra Red Fox: The assessment area and the THP do contain the vegetation types considered habitat for the Sierra Red Fox. Observations of the red fox have occurred within the scoping area and primarily around Lassen Volcanic National Park. The closest observation to the THP is near Highway 44 and Sarch Meadow. LDSF staff has been conducting forest carnivore surveys the last three years and the Sierra Red Fox has not been detected. The project will maintain habitat for the Sierra Red Fox.

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California Wolverine: The California wolverine has been detected within the scoping area. The assessment area and the THP do contain the vegetation types that are considered habitat for the wolverine. LDSF staff has been conducting forest carnivore surveys the last three years and the wolverine has not been detected. The project will maintain habitat for the California Wolverine.

Pine Marten: The assessment area and the THP do contain habitat the Pine Marten. Pine Marten were detected on LDSF in a 1990 furbearer presence survey. The Pine Marten has been detected in the southeastern portions of the forest, within the assessment area, during the forest carnivore surveys being conducted by LDSF staff in 2005 and 2006 and 2007. The THP will maintain habitat for both the Pine Marten and the Pacific Fisher.

Pacific Fisher: LDSF contains habitats for the Pacific Fishers and it was detected in a 1990 furbearer presence survey. No subsequent detections have occurred. The elevation of the plan is generally considered above the range of the Pacific fisher, but contains habitat for the Pacific Fisher. The plan will maintain habitat post harvest. Protection measures are discussed in Section II of the plan.

Nodding vanilla grass, *Hierochloe odorata* (CNPS 2.3): The assessment area and the THP have the general habitat types associated with the known occurrences of vanilla grass. Vanilla grass is located within wet meadows and seeps above 5400 feet in elevation. The THP provides protection for all meadows and seeps.

Rayless mountain ragwort, *Packera indecora* (CNPS 2.2): Rayless mountain ragwort is located in meadows and seeps on mesic sites between 5200 and 6500 feet in elevation. The assessment area and the THP has the general habitat types associated with the known occurrences of Rayless mountain ragwort. The THP has potential habitat along the class II watercourses, meadows, springs and seeps. The THP provides protection for all meadows, seeps, and watercourses. The THP also restores potential habitat for Rayless mountain ragwort.

Scalloped moonwort, *Botrychium crenulatum* (CNPS 2.2): The assessment area and the THP have the general habitat types associated with the known occurrences of scalloped moonwort. Scalloped moonwort is located along moist meadows and near creeks of lower montane coniferous forests and freshwater marshes above 4500 feet in elevation. The THP provides protection for all meadows, seeps, and watercourses.

Long-stiped champion, *Silene occidentalis spp longistipitata* (CNPS 1B.2): CNPS identifies habitat as between 1000-2000 meters in Lower and Upper Montane coniferous forests and the NDDB add no further information. In the non published *Conservation Assessment and Strategy for Long-stiped Champion...*, a USFS Forest Service, Pacific southwest Region and Lassen National Forest document, the key habitat an biological parameters are: 1) occurs in openings of mid elevation mixed conifer forests as well as on ridgetops in black oak, 2) low canopy closure 3) survives in disturbed habitats and disturbance may be a important factor, 4) occurs in thin soils with clay and have various amounts of sand and rock. This document was provided to LaTour Demonstration State Forest from DFG. The THP does have the clay soils and is above the elevation range.

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The following table shows additional species scoped by the CNDDDB, (verified on September 22 2010). The THP area contains no habitat for these species.

Scientific Name	Common Name	Status	CNPS List	Comments
<i>Fritillaria eastwoodiae</i>	Butte County fritillary	None	3.2	THP is above elevation
<i>Cryptantha crinita</i>	silky cryptantha	None	1B.2	THP is above elevation
<i>Potentilla newberryi</i>	Newberry's cinquefoil	None	2.3	Marshes and swamps
<i>Potamogeton praelongus</i>	White-stemmed pondweed	None	2.3	Marshes and swamps
<i>Asplenium septentrionale</i>	Northern Spleenwort	none	2.3	Granite like outcrops
<i>Smelowskia ovalis</i> var <i>congesta</i>	Lassen Peak smelowskia	None	1B.2	Alpine bolder and rock field
<i>Silene suksdorfii</i>	Cascade alpine campion	None	2.3	Alpine bolder and rock field
<i>Astragalus pulsiferea</i> var <i>suksdorfii</i>	Suksdorf's milk-vetch	None	1B.2	Lower Montane Coniferous
<i>Collomia larsenii</i>	Talus collomia	None	2.2	Loose volcanic material
<i>Botrychium virginianum</i>	Rattlesnake fern	None	2.2	THP is above elevation
<i>Hulsea nana</i>	Little hulsea	None	2.3	Rocky or gravely volcanic Sub-Alpine forests
<i>Eriogonum pyrolifolium</i>	Pyrola-leaved buckwheat	None	2.3	Alpine bolder and rock field
<i>Juncus digitatus</i>	Finger ruch	None	1B.1	THP is above elevation
<i>Calochortus longebarbatus</i> var <i>longebarbatus</i>	Long haired star tulip	None	1B.2	Heavy clay soils
<i>Cryptantha crinita</i>	Silky cryptantha	None	1B.2	THP is above elevation
<i>Stachys palustris</i> ssp. <i>Pilosa</i>	Hairy marsh hedge-nettle	None	2.3	THP is above elevation
<i>Rana boylei</i>	Foothill yellow-legged	Special	N/A	THP is above elevation, outside range
<i>Pandion haliaetus</i>	Osprey	Special	N/A	No good fish producing body of water
<i>Haliaeetus leucocephalus</i>	Bald eagle	Endanger	N/A	No good body of water near
<i>Falco peregrinus anatum</i>	American peregrine falcon	Endanger	N/A	No habitat for nesting
<i>Oncorhynchus tshawytscha</i>	Spring run Chinook salmon	Threat	N/A	No occurrences in watershed.

There are numerous other wildlife species that exist on the THP and LDSF that are not listed as threatened, rare, or endangered. The South Cow Creek deer herd uses LDSF as summer range and fawning area. In the past, certain designated brush fields have been burned to improve forage habitat for the deer. There are other brush fields that may be burned in the future.

Habitat types

The forest inventory on LDSF indicates there are 7130 acres of merchantable sized timber stands and 677 acres of plantation (1978 Whitmore burn). The remainder of the Forest is brush, rocky areas, meadows, and open areas with scattered trees

Timber types and WHR habitat types for LDSF have been determined through aerial photo interpretation, vegetation inventory, and the use of a database program written by the Forest Staff which determines WHR types from forest inventory data. Plot data from the inventory represents a 2.5-acre area and the WHR type was determined for each plot. Within the plan area the tree size classes ranged from 3 to 5 and with a range of canopy closure from open to dense. The predominant WHR types were Sierra Mixed Conifer and White Fir 4D and 4M. Though the THP has scattered mature trees and WHR 5M, 5D types exist in the plan area, these stands are scattered and do not have the continuity to qualify as late succession forest stands per rule definition. LDSF has had multiple entries (4-5) since it became a State Forest in the late 1940s. The THP has been harvested with un-even aged silviculture 4 times. There are no Late Seral Forests or characteristic on the THP area. The desired forest structure on LDSF is described within *LDSF 2008 Management Plan*, "The overall goal is to maintain LDSF as a mid-seral forest type characteristic of the southern Cascades. Early and late seral stands will be represented but overall the Forest will maintain the characteristics of a mid-seral forest. This goal is not discretionary, but rather follows directly from the research and demonstration mandate for LDSF. Rather than a park or reserve, the legislated mandate for the Forest is that of a working forest property for demonstration and research purposes, serving a clientele of small to medium size land owners.

In order to remain relevant as a research forest, LDSF aims to create and maintain a wide range of forest types, ages, size classes, successional stages and structural characteristics. It is going to be very difficult to maintain pure stands of each of these characteristics on a Forest the size of LDSF. As a result, LDSF's approach will be to incorporate a continuum of types, age classes, successional stages and structures mixed within stands across the Forest as far as possible."

Snags and large down woody material are present on the THP and within the assessment area. Additional recruitment of snags and downed woody material will be accomplished through the retention of green cull trees and un-merchantable material in the forest stands.

Hardwoods

Hardwoods are not a large component of the stands on the LDSF, which is true for the THP area. The THP is located above 5400 feet in elevation, which is generally above the upper elevation limit at which oaks grow. Harvesting of oaks will not occur within the THP area.

Road density

Road densities, which can have a potential effect on wildlife, are moderate on LDSF and within the assessment area. The average density per section is 4 to 5 miles of seasonal and rocked seasonal roads on LDSF. Although accessible to the public, these roads receive little traffic most of the year. There is no new road construction proposed within the THP and there is .5 miles of roads being abandoned.

## **E. RECREATIONAL ASSESSMENT**

The recreational activities that normally occur in the recreational assessment area is deer hunting, camping, fishing, snowmobile riding, and site seeing. Mountain bike riders occasionally use the forest but are rare and infrequent. Additionally, the forest is used by the public for fuelwood cutting. The rock pit harvest unit is will occur along the main forest access road, Bateman Road. The road may be blocked to traffic for short periods of time during active timber operations. A sign will be posted on the Bateman road at the west entrance to the LDSF to warn the public of logging activities in the area and the Licensed Timber Operator will be advised to watch for recreationists and to allow thru traffic on Bateman Road.

The primary use within the recreational assessment area is deer hunting. Impact to hunting may occur during any year the THP is operated since, for safety reasons, no hunting will be permitted in the vicinity of timber operations

An agreement exists with the Lassen National Forest to allow the grooming of approximately 30 miles of Forest roads during the winter for snowmobile use. This recreational activity will not be adversely affected by timber operations.

## **F. VISUAL RESOURCE ASSESSMENT**

This timber harvest cannot be seen by significant numbers of people since the harvest area is not visible from any well-traveled roads or communities. The closest paved public road is the paved section of Bateman Road, 11 miles to the west of the LDSF boundary. Adjacent ownerships are accustomed to timber production, however, one home is approximately 1/4 mile west of LDSF boundary. The harvest area cannot be viewed from the home, however, logging traffic will likely travel by the home enroute to/from Redding. There will be no adverse effect on the visual resource. The prescribed silviculture will not adversely change the visual aspect of the assessment area. The greatest visual impact will be from within the stand after harvest.

## **G. VEHICULAR TRAFFIC IMPACTS**

Forest products from the harvest area will be hauled out over two potential routes. This will cause a slight increase in vehicular traffic.

### **a. Cutter Road and Tamarack Rd (Shasta Co. Road)**

This a seasonal road network with permanent culverts at watercourse crossings. The first 3miles of the tamarack road is chipped sealed or graveled and the remaining portions of the Tamarack road and the Cutter road are native soil surfaced roads that have a high coarse fragment content. These roads will not be used when soils are saturated. These roads will only be used during the non-winter months and a maintenance agreement and permit will be obtained prior to use for all privately owned roads. These roads will be graded as needed and watered during the operation (if used for log hauling).

### **b. Bateman Road.**

This haul route will result in traveling down the Bateman Road. The Bateman Road is a private road with public access and is graveled from Atkins Creek (end of the county road) to the harvest boundary. The one homeowner on the graveled portion of the road has posted 10 MPH signs near his home. The LTO will be advised to comply with the 10 MPH limit when passing by the home. The primary use of the road is from logging operations, recreation and access to the residence. Eleven miles of dirt and gravel roads will be used following this route. Bateman road will be graded as needed and watered during the operation (if used for log hauling).

Since the main use of these haul routes is logging traffic the impact to people who use them on a regular basis will be almost non-existent. The greatest impact from the increase in traffic will be on recreationists using these roads. Since weekend operations are not planned the impact will be minor.

**H. OTHER****Climate Change and Forestry Practice**

This THP complies with LDSF approved Management Plan, Mitigated Negative Declaration and Option A analysis. The following information is part of LDSF Mitigated Negative Declaration for LaTour Demonstration State Forest (SCH#2008062009) and the LDSF Management Plan:

In 2007 the State of California passed the Global Warming Solutions Act (AB 32), which set targets to reduce greenhouse gas emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. The California Air Resources Board was tasked with obtaining compliance with the cap through regulatory and market approaches. Planning is currently underway and definitive decisions by the Board have not yet been taken, however, it appears that forests will play a significant role in non-regulated strategies to meet targets. This is anticipated to occur both as offsets within a cap and trade system and through voluntary measures.

Recognized strategies to mitigate GHG emissions and enhance terrestrial sequestration include reforestation, forest management and fuels treatments to avoid catastrophic losses. LDSF will contribute to the targets of AB32 by increasing the resiliency of the Forest to catastrophic mortality by improving the general health of stands, pre-fire implementation of a shaded fuel break and maintenance of firefighting infrastructure such as roads, signage and water sources. The long-term carbon stocks of the Forest are anticipated to increase over time. For example, the Option A Plan indicates that the timber inventory on the Forest will increase from about 22.7 MBF per acre in 2005 to 34.4 MBF per acre in 2105.

Forest products produced from LDSF will sequester carbon during their life cycle. Biomass fuels produced on the Forest also provide an opportunity to replace fossil fuels with an alternative energy source that is close to carbon neutral.

This analysis evaluates whether climate change and greenhouse gas (GHG) issues related to management of LDSF have the potential to be a significant environmental effect, either on a project basis or cumulatively. Table 2 summarizes estimated net carbon dioxide sequestration levels under proposed management at LDSF over a 100-year planning interval<sup>1</sup>. The analysis shows substantial positive carbon sequestration benefits. Proposed management at LDSF will sequester a net CO<sub>2</sub> equivalent of 3,773,000 tons of carbon at the end of 100 years.

Table 2. Estimated carbon sequestration at LDSF over the next 100 years.

1	2	3	4	5	6	7
Current standing inventory	CO <sub>2</sub> stored in current standing timber <sup>2</sup>	Standing inventory at end of 100-year planning interval	CO <sub>2</sub> stored in standing timber at end of 100-year planning interval	Total harvest over 100-year planning interval	Total CO <sub>2</sub> sequestered in forest products at end of 100-year planning interval	Total net CO <sub>2</sub> sequestered at end of 100-year planning interval (4-2+6)
MBF*	M* tons	MBF	M tons	MBF	M tons	M tons
196,931	1,575	308,096	2,465	360,460	2,884	3,773

\* MBF is thousand board feet and M is thousand.

<sup>2</sup> A conversion factor of 8.0 was used to convert thousand board feet to tons of CO<sub>2</sub> including soil root biomass, duff, litter, canopy and non-bole tree parts (Smith et al, 2002, GTR NE-298).

<sup>1</sup> A 100-year look-ahead period is necessary in forested ecosystems, where trees can take more than 50 years to reach maturity. The 100-year planning interval allows a minimum period necessary to evaluate long-term steady-state behavior of forested ecosystem while not exceeding the range of applicability of mathematical simulation models.

Accounting for emissions from the Forest includes vehicles and buildings used by the Department that are associated with management. It also includes emissions from harvesting and manufacturing. We chose to do the downstream accounting. This will be the most conservative accounting approach because we are not including the negative substitution effect that occurs when alternative higher-GHG-impact building materials such as steel and concrete are used instead of wood products. Emissions from vehicles and buildings are estimated as follows:

Vehicles: 0.02 thousand (M) tons per year x 100-year planning horizon = 2 M tons

Building: 0.00003 M tons per year x 100-year planning horizon = 0.003 M tons

This is a total of 2.003 M tons for the 100-year planning horizon.

Harvesting emissions include in-woods emissions from equipment and vehicles and transportation to a mill. Mill emissions estimates from processing are included because long-term storage of wood products is included in the analysis. Mill emissions include sawing, drying, energy generation, and planing. Also, transport to final destination is included. The entire life cycle for green-dried lumber is included (Puettmann and Wilson 2005). This results in a total emission estimate of 0.13 metric tons CO<sub>2</sub> equivalent per thousand board feet (MBF).

Given the total harvest of 360,460 MBF over the 100-year planning horizon in table 1, this equates to 46,859 tons of CO<sub>2</sub> equivalent from harvesting emissions. Including vehicle and building emissions, the total GHG emissions estimate for LDSF is 46,861 tons of CO<sub>2</sub> equivalents.

These emissions including full life-cycle of wood, vehicle, and building emissions, represent 1.24 percent of the total carbon sequestered (column 7 in Table 2). The conclusion from the above analysis is that there is a substantial positive carbon sequestration benefit and a net negative emission of GHGs at LDSF under the guidance of the Project. Orders of magnitude more biomass is being conserved than is being harvested. In other words, the management plan proposes to harvest less biomass (and to emit less CO<sub>2</sub>) than growth.

Climate change science is still in its infancy. There are likely wide error bars around the above estimates, given the general level of the analysis and the relatively new estimation equations in the literature. The result that positive sequestration benefits exceed emissions by orders of magnitude however, lends validity to the general conclusion that sequestration will be much greater than emissions. Our conclusion is also supported by estimates from the Air Resources Board, which indicate that forest land use in California results in a net decrease in atmospheric carbon, not an increase ([http://www.arb.ca.gov/cc/inventory/data/tables/net\\_co2\\_flux\\_2007-11-19.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/net_co2_flux_2007-11-19.pdf)).

Since the net amount of carbon that would be sequestered under the Project is greatly higher than the amount of carbon that will be released by LDSF management activities, there are no potential significant adverse environmental impacts, single or cumulative. In fact, significant beneficial impacts of net carbon sequestration will occur.

## I. CONCLUSION

This harvest will not have any significant cumulative impacts to the resources.

## J. REFERENCE MATERIAL

### PERSONS

Eric Wertz, Forester  
Sierra Pacific Industries  
P.O. Box 496014  
Redding, CA 96049

Jan Castor  
Sierra Pacific Industries  
P.O. Box 496014  
Redding, CA 96049

Kelly Dreesmann, Division Chief  
CAL FIRE  
875 Cypress Ave  
Redding, CA 96001, (530) 225-2418

Pete Johnson, Forester  
W.M. Beatty and Associates  
P.O. Box 898  
Redding, CA 96099 Ph: (530) 243-2783

### LITERATURE AND MODELS

California Wildlife Habitat Relationship System Version 7.0

*Cow Creek Watershed Assessment*, prepared by SHN Consulting Engineers & Geologist, Inc.

*Conservation Assessment and Strategy for Long-stiped Campion ...*, prepared by Colin Dillingham and Allison Sanger, USFS Lassen National Forest, 2007.

*LaTour Demonstration State Forest Watershed Monitoring Project*, Stream Channel and Fish Habitat Assessment, Final Report, prepared by Sacramento Watershed Action Group.

*A Guide to Wildlife Habitats of California* California Wildlife - Volumes II & III

Pine Marten - Pacific Fisher Study Phase II Report 1992

Dept. of Fish and Game Natural Diversity Data Base

Soil Survey of Shasta County., U. S. Dept. of Agriculture

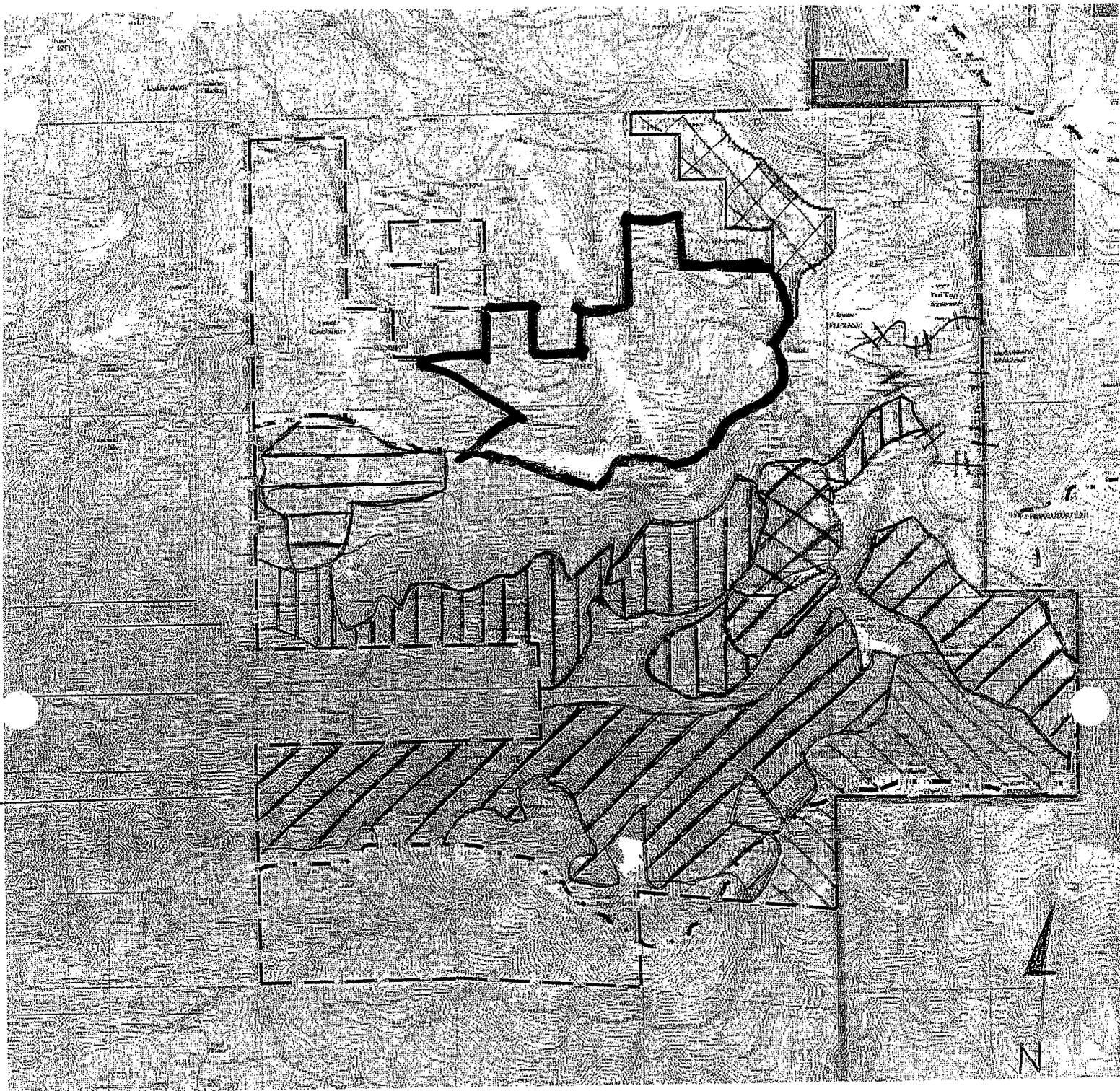
CDF Timber Harvest Plan Records

Aerial Photographs - Latour Demonstration State Forest

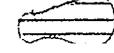
*LaTour Demonstration State Forest Option A*

*LaTour Demonstration State Forest Management Plan 2008*

Mitigated Negative Dec. (SCH# 2008062009), *LaTour Demonstration State Forest Management Plan 2008*

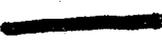


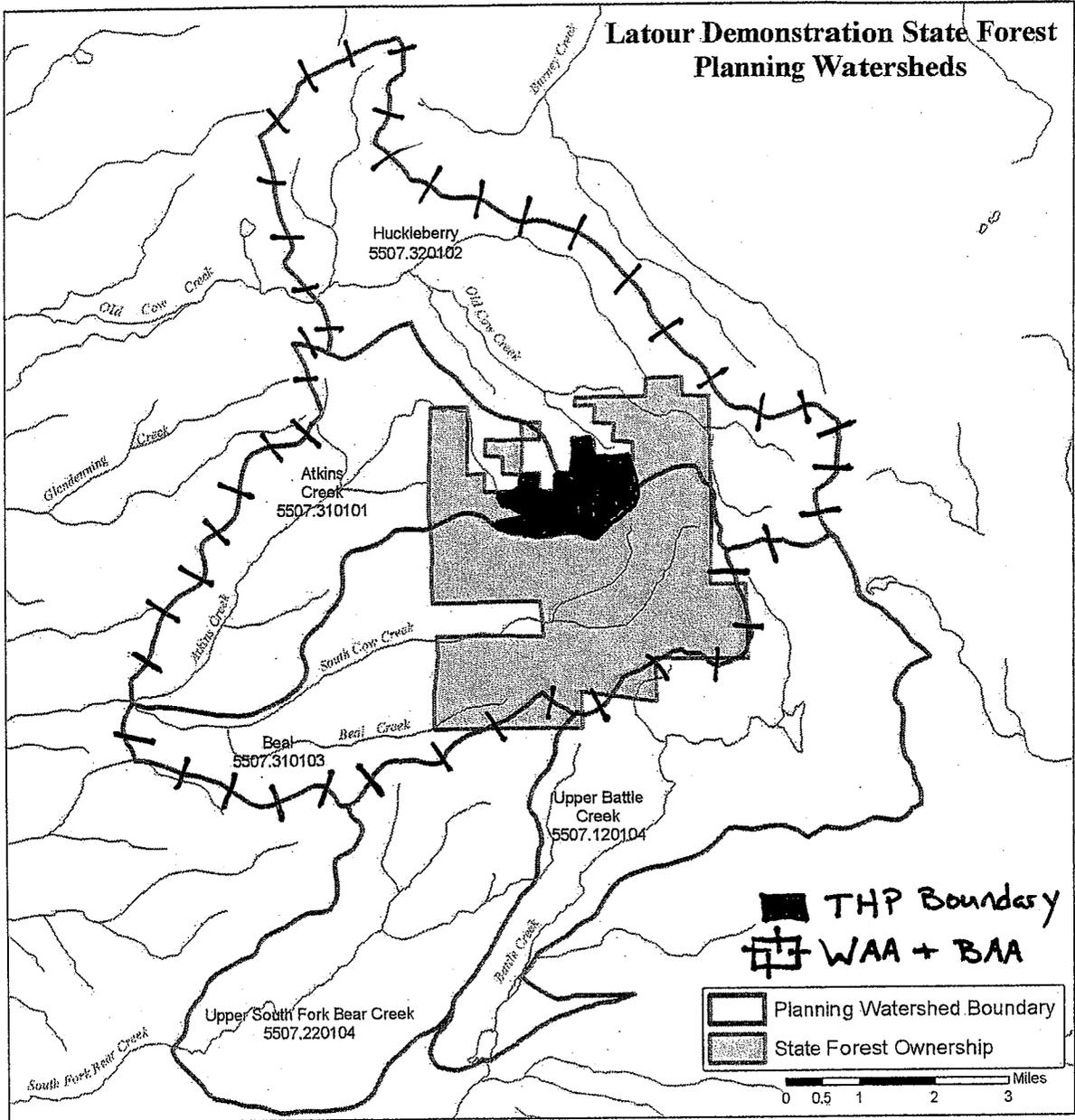
**AB 47 Cumulative Map**

- ++ TAP 09-084
- LDSF Boundary
- · - Watershed Assessment Area
-  THP 02-187
-  THP 01-161
-  THP 99-253

-  THP 09-059
-  THP 08-071

Scale: 1 mile

 THP Boundary



**PART OF PLAN****Rowe, Benjamin**

**From:** Stacy Stanish [SSTANISH@dfg.ca.gov]  
**Sent:** Thursday, September 30, 2010 10:03 AM  
**To:** Rowe, Benjamin  
**Subject:** Latour ASP Pre-Consultation

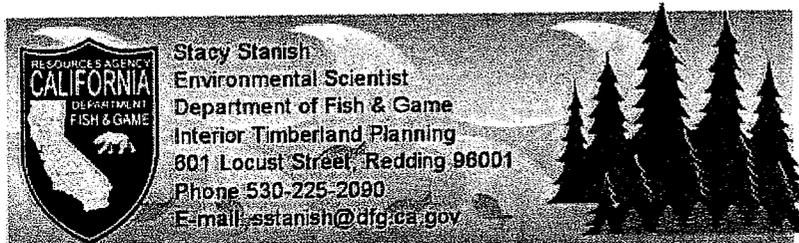
Ben,

This email serves to satisfy the requirement of Forest Practice Rule 936.9(v) which states in part that an RPF may propose site-specific measures in Anadromous Salmonid Protection (ASP) watersheds provided these measures would result in equal or more favorable than the operational provisions of 936.9 and with prior concurrence with DFG.

On July 13, 2010, DFG conducted a site visit of the proposed plan area with the intent to verify watercourse classification by electrofishing on Lee March Gulch which flows into Cutter Meadow. The watercourse receives the majority of water from spring flow. The stream had long low-gradient (<4%) riffles with shallow pools and runs. Stream width ranges from one to two feet with maximum depth at the pools at about four to six inches. Substrate ranges from gravel to small cobble. About 500 feet of stream was electrofished and one rainbow trout (~six inches) was found about 100 feet before the stream went subterranean before entering the meadow. The RPF agreed to map the watercourse as Class I up to the spring.

The plan area is located within a watershed identified by DFG as an ASP watershed due to the presence of Central Valley steelhead (*Oncorhynchus mykiss*) or restorable to the presence of steelhead within the watershed. As a result of the electrofishing, the RPF proposes changing the WLPZ width to 75 feet with a "no cut" zone. Class II watercourses will have a standard with salvage cut outside of the core. Given that the silviculture in the plan is Group Selection, the management within the zone, and the location of the plan within the watershed DFG believes that the RPF's proposal for a site specific alternative provides equal protection to salmonids and their habitat as the provisions of 936.9.

Please contact me if you have any questions.



<https://r1.dfg.ca.gov/Portal/itp>

10/25/2010

-57.1-

FEB 08 2011

I. SOIL FACTORS	PART OF PLAN			FACTOR RATING BY AREA		
	A. SOIL TEXTURE	Fine	Medium	Coarse	A	B
1. DETACHABILITY	Low	Moderate	High	23	20	23
Rating	1-9	10-18	19-30			
2. PERMEABILITY	Slow	Moderate	Rapid	1	2	1
Rating	5-4	3-2	1			

A – Windy/McCarthy > 30% slope  
B – Cohasset stoney Loam <30%  
C - Rehab

**B. DEPTH TO RESTRICTIVE LAYER OR BEDROCK**

Rating	Shallow	Moderate	Deep	2	2	3
	1"-19"	20"-39"	40"-60 (+)			
Rating	10-6	5-3	3-1			

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

Rating	Low	Moderate	High	5	5	5	FACTOR RATING BY AREA		
	(-)10-39%	40-70%	71-100%				A	B	C
Rating	10-6	5-3	2-1	5	5	5	31	29	32
<b>SUBTOTAL</b> →							31	29	32

**II. SLOPE FACTOR**

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

**III. PROTECTIVE VEGETATIVE COVER REMAINING AFTER DISTURBANCE**

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

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

Rating	Low	Moderate	High	Extreme	12	12	12
	(-) 30-39	40-59	60-69	70-80 (+)			
Rating	1-3	4-7	8-11	12-15			
<b>TOTAL SUM OF FACTORS</b> →					56	49	61

**EROSION HAZARD RATING**

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

FEB 08 2011



## DEPARTMENT OF FORESTRY AND FIRE PROTECTION

875 CYPRESS AVENUE  
REDDING, CA 96001-  
(530) 225-2508  
Website: [www.fire.ca.gov](http://www.fire.ca.gov)



September 22, 2010

Carl J. and Jo Ann Davis  
P.O. Box 142  
Whitmore, CA 96069

Dear Jack and Jo:

As part of LaTour's next timber harvesting plan that I am preparing, the licensed timber operator will once again, as many years in the past, be using Roaring Springs as a drafting location to maintain Bateman Road. The use of Roaring Springs is required for both dust abatement and maintaining the roads surface in a stable condition. The Forest Practice rules require you to be included as a timberland owner on LaTour Demonstration State Forests' "Rock Pit" timber harvesting plan. Your inclusion as a timberland owner assumes no responsibility for timber operations on your part and is for water drafting only at Roaring Springs along Bateman Road. Water drafting is considered timber operations per Public Resources Code 4527 and as such all timberland owners where water drafting will occur must be included in the plan.

Per Public Resources Code 4582, if the person filing the plan is not the owner of the timberland, the plan submitter shall notify the timberland owner by certified mail that the plan has been submitted and shall certify that mailing to the Department.

As the Registered Professional Forester preparing the plan I am required to inform you of your responsibilities as the timberland owner. The Department of Forestry and Fire Protection has a right-of-way agreement for the use of Bateman Road. This agreement requires the Department to maintain the road in good condition. As such, the Department will assume the erosion control maintenance for the use of the water drafting location used under the North McMullen Mt THP.

Carl J. and Jo Ann Davis  
 September 22, 2010  
 Page Two

All water drafting operations performed under this THP on your property will conform to the Forest Practice act and Board of Forestry rules. Note that the Department of Forestry and Fire Protection has adjudicated water rights to Roaring Springs under the Cow Creek Adjudication Decree No. 38577 of the Superior Court for Shasta County.

Thank you very much.

Sincerely,

*Ben Rowe*

BENJAMIN ROWE  
 Forester I, RPF #2686  
 Assistant Forest Manager  
 LaTour Demonstration State Forest

7005 0390 0002 5404 6476

U.S. Postal Service		<b>CERTIFIED MAIL RECEIPT</b>	
<i>(Domestic Mail Only - No Insurance Coverage Provided)</i>			
For delivery information visit our website at <a href="http://www.usps.com">www.usps.com</a>			
<b>OFFICIAL USE</b>			
Postage	\$ .44	Postmark Here	
Certified Fee	2.30		
Return Receipt Fee (Endorsement Required)	2.30		
Restricted Delivery Fee (Endorsement Required)			
Total Postage & Fees	\$ 5.54		
Sent to <i>Carl J. and Joanne Davis</i> Street, Apt. No., or PO Box No. <i>D.O. Box 142</i> City, State, ZIP+4 <i>Whitmore, CA 96069</i>			

<p><b>SENDER: COMPLETE THIS SECTION</b></p> <p>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.          Print your name and address on the reverse so that we can return the card to you.          Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:  <i>Carl J and JoAnn Davis</i>  <i>P.O. Box 142</i>  <i>Whitmore, CA</i>  <i>96069</i></p>	<p><b>COMPLETE THIS SECTION ON DELIVERY</b></p> <p>A. Signature <input type="checkbox"/> Agent  <input checked="" type="checkbox"/> <i>Jack Davis</i> <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <input type="checkbox"/> C. Date of Delivery  <i>Jack Davis</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No          If YES, enter delivery address below:</p> <p>3. Service Type <input type="checkbox"/> Express Mail  <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Registered <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>2. Article Number  <i>(Transfer from service label)</i>          7005 0390 0002 5404 6476</p>	

102595-02-M-1540

Domestic Return Receipt

PS Form 3811, February 2004

**DEPARTMENT OF FORESTRY AND FIRE PROTECTION**

875 CYPRESS AVE  
REDDING, CA 96001  
Website: [www.fire.ca.gov](http://www.fire.ca.gov)  
(530) 225-2506



September 7, 2010

Brooks Walker et. al  
C/O WM Beaty & Associates  
PO Box 990898  
Redding, CA 96099-0898

To Whom It May Concern:

LaTour Demonstration State Forest is in the process of preparing a Timber Harvesting Plan (THP). The location of the THP is in Shasta County, Township 32 North, Range 2 East, including portions of Sections 1, 2, 3, 11, and 12, Mount Diablo Base and Meridian.

The California Code of Regulations, Title 14 Section 1032.10 requires that the THP Submitter provide notice by letter to all other landowners within 1000 feet downstream of the THP boundary whose ownership adjoins or includes a Class I, II, or IV watercourse which receives surface drainage from the proposed timber operations.

This notice is to request information about surface domestic water use from Butcher Gulch, Lee Marsh Gulch, White Fawn Gulch, and Peavine Gulch within 1000 feet of the State Forest boundary. If you have any information about domestic water use in the area specified, please contact Ben Rowe within 10 days of receipt of this notice at the address or phone number listed above.

Thank you very much.

Sincerely,

Benjamin Rowe, RPF# 2686  
Assistant Forest Manager  
LaTour Demonstration State Forest  
875 Cypress Ave.  
Redding, CA 96001  
530-225-2508

**DEPARTMENT OF FORESTRY AND FIRE PROTECTION**

875 CYPRESS AVE  
REDDING, CA 96001  
Website: [www.fire.ca.gov](http://www.fire.ca.gov)  
(530) 225-2506



September 7, 2010

Sierra Pacific Industries  
Sierra Pacific Holding Co  
P.O. Box 496014  
Redding, CA 96049

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Thank you very much.

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Benjamin Rowe, RPF# 2686  
Assistant Forest Manager  
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530-225-2508