

# **Draft Demonstration State Forests Annual Report**

**2012 Calendar Year**



**State of California**

**Department of Forestry and Fire Protection**

**May 25, 2013**

## **Demonstration State Forests Program**

This document provides a summary of activities, facts and statistics pertaining to the CAL FIRE Demonstration State Forests for calendar year 2012. This section is a summary of the Demonstration State Forests program as a whole. It is followed by annual reports for each individual Demonstration State Forest.

The California Department of Forestry and Fire Protection (CAL FIRE) manages eight Demonstration State Forests and one State Research Area on behalf of the public (hereinafter referred to as "State Forests"). The locations of the State Forests are shown in Figure 1. The total acreage of these lands total approximately 70,000 acres. Table 1 shows a breakdown of acreages by Forest. Five of the forests, Jackson, LaTour, Mountain Home, Soquel and Boggs Mountain, are actively managed for research and demonstration, sustainable forestry, recreation and resource protection. The remaining three Forests, Las Posadas, Ellen Pickett and Mount Zion, are primarily used for monitoring, basic research and recreation.

The State Forests are State-owned public working forests with three primary legislatively mandated land uses: timber production, research and recreation. State Forests are mandated to undertake research, demonstration, and education on sustainable forestry practices using active forest management, including periodic timber harvests. They are required to address public trust values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment. Under Board of Forestry and Fire Protection policy guidance the State Forests conduct a balanced program of research and demonstration directed to the needs of the general public, small forest landowners, timber operators and the timber industry. State Forests fill a unique niche to advance research, demonstration, and education on sustainable forestry and best management practices.

### **Timber Production and Finances**

Timber harvest operations on the State Forests have several objectives. They can be implemented for revenue generation to cover expenses of operating the State Forests. The State Forests are self-funded; they receive no funding from the State General Fund. Timber sales can also be conducted in order to accomplish the objectives of specific applied research or demonstration projects. Timber harvesting occurs as a means to maintain the range of structure and age classes representative of working forests, in order to stay relevant to the clients of our research. Finally, we harvest trees in order to achieve long term management goals and maintain forest health.

The State Forests grow approximately 65 million board feet of timber volume each year. We harvested 30.1 million board feet of timber during 2012 (see table 3 for details). Revenues from these harvests fund the operations of the State Forests (Public Resources Code Section 4799.13 requires that revenue generated on the State Forests

must be spent on the State Forests). As a result, the State Forests are usually a source of income for the State of California.

2012 was no exception. We brought in \$8.1 million of revenue, primarily from timber sales, while we spent \$5.5 million on salaries and operating expenses. Given that the tentative economic recovery in the housing market and the general economic upswing have not yet translated into a meaningful sustained increase in timber prices, this year's surplus will come in handy as a reserve for next year. Table two below shows a breakdown of revenue and cost categories by Forest.

### **Research and Demonstration**

Numerous research and demonstration projects occurred on the State Forests in 2012. Details are provided in each Forest's annual report. Agency external studies continued to focus on carbon or related topics. Some of the highlights include:

The 50<sup>th</sup> year of the Caspar Creek watershed study at Jackson State Forest. A practitioner workshop focused on watershed research results was delayed due to unanticipated workload for PSW scientists. The new date for the workshop is June 28, 2013.

Work was initiated on Jackson State Forest by University of California Davis scientists to study disturbance effects on ecosystem Nitrogen balances. Humboldt State University was the source of two new projects at Jackson State Forest in 2012. CA Department of Fish and Wildlife (DFW) installed two monitoring studies on JDSF: one regarding fisher distribution and the second concerns stream habitat changes resulting from a culvert replacement/barrier removal project.

At Soquel State Forest, after several years of consultation with numerous experts, the Large Woody Debris and Habitat Complexity Project finally began along a 0.7 mile stretch of the East Branch of Soquel Creek. The purpose of the project was to contribute to the survival and recovery of Federally and State listed Endangered Central California Coast Evolutionarily Significant Unit Coho Salmon (*Oncorhynchus kisutch*) and Federally listed Threatened Central California Coast Distinct Population Segment Steelhead (*Oncorhynchus mykiss*) in the watershed, by increasing habitat complexity and pool frequency.

Dr. Alexandra Ponette-Gonzalez from the University of North Texas, Department of Geography began a study in Soquel State Forest to monitor the transfer of nutrients and pollutants in precipitation or as particles or gases from the atmosphere to the land surface. Collectors were set up at various elevations, aspects, topographic exposures and vegetation types to observe these influences on atmospheric deposition.

Soquel State Forest staff worked with researchers from Washington State University on the Pacific madrone study at the Ben Lomond Conservation Camp. This study is species-wide and examines the various agents and situations that occur in the different

ecoregions where the Pacific madrone occurs. The Ben Lomond Camp site represents the furthest south study location that expands from California to Oregon and Washington, representing four ecoregions.

A new study with Dr. Marianne Elliott from Washington State University and researchers from the Canadian Forest Service will focus on biocontrols for inhibiting sprouting of bay laurel stumps. In June, samples of diseased tissue were taken from bay trees, research plots were located and trees were tagged. Plans are for at least 300 trees to be treated in 2013 to evaluate the effectiveness of different treatments over time. The areas where the treatments will occur have very heavy stocking with bay laurel trees due to the high mortality of tanoak and madrone within the stands. As bay laurel trees spread Sudden Oak Death through the forest they are not killed by the pathogen. Finding a treatment to reduce the occupancy of bay laurel in stands such as these will increase species diversity and overall forest health.

On May 25th Humboldt State University scientists began conducting research on Giant Sequoia structure and function at Mountain Home State Forest, as part of The Redwoods and Climate Change Initiative. The study will investigate effects on sequoia species attributed to climate change. This research will determine current growing conditions of *Sequoia sempervirens* and *Sequoiadendron giganteum* throughout California, how these species have responded to shifting environmental conditions in the past, and how they will likely respond to future changes.

Det Vogler from the USDA Forest Service conducted his last sampling at Mountain Home State Forest of *Ribes* spp. leaves to determine infection by white pine blister rust. According to Det, this is the last year that the Forest Service will be collecting samples as the program will no longer be funded.

## **Recreation**

All the State Forests experience high levels of recreation activity during 2012. A high quality recreation and camping experience combined with low cost and easy access continues to be an attraction. Total visitor days (one person visiting for one day) reached approximately 100,000 total for all the State Forests. Mountain Home received the most visitors in 2012, followed by Soquel.

There was a marked change in the type of campers and their use of the campgrounds compared to previous years. The change is attributed to the implementation of camping fees. Mountain Home and Boggs Mountain implemented camping fees starting last year. Jackson State Forest implemented camping fees for the first time this year. The fee was introduced not for financial reasons, but to achieve law and order, accountability, reduce vandalism and increase the quality of the camping experience. The program seems to work very well. We have seen a marked decrease in homeless populations and problems with illegal activity, accompanied by an increase in family visits and increased satisfaction with the camping experience. Detailed camping information is included in table four below.

## **Property Taxes**

The California Constitution exempts State lands from paying property taxes. Section 4654 of the Public Resources Code however, requires State Forests to make payments to Counties equivalent to the property taxes that would be paid on similar privately held forest land. Equivalent payments for 2012 totaled \$111,546. Table one shows the equivalent payments to Counties, by Forest.

## **Advisory Groups**

The Soquel State Forest Advisory Group continued working with staff on the management plan update for the Forest, reviewing timber sales, and reviewing research projects. Chairperson Steve Staub, Advisory Committee member since the first meeting in September 1991, passed away in mid-November. An original member of the Advisory Group since the establishment of Soquel State Forest, Steve Staub was an invaluable member of the Advisory Group and friend of the Forest. Over his career Steve consulted on many aspects of SDSF management. For many years we relied on Steve for intelligent and insightful contributions to the management of Soquel State Forest. He was a good friend and will be greatly missed. The Jackson Advisory Group continued their work in 2012, focusing largely on implementation of the group's 2011 recommendations. Review of timber sales, creation of a research governance structure and development of a research plan for Jackson State Forest were major tasks.

## **Other**

Probably the greatest claim to fame for the State Forests in 2012 was that the Capitol Christmas Tree, which decorated the State's Capitol, came from LaTour State Forest. In a joint operation between CAL FIRE and the Department of General Services, a picture perfect 60 feet tall white fir tree was harvested from the Forest on November 7 and transported to Sacramento. The tree was decorated with hundreds of hand-crafted ornaments made by children and adults with developmental disabilities, and illuminated by approximately 10,000 ultra-low wattage LED lights. The tree was the centerpiece of tree lighting festivities on December 5. As the 59<sup>th</sup> Army Band provided musical entertainment, ten-year-old Christian Anderson from Costa Mesa, with a little help from Governor Brown, flipped the switch and turned on the lights, kicking off the holiday season.

All of Jackson State Forest was included in the final federal critical habitat designation for the northern spotted owl (rule published in the federal register on 12/4/2012).

On August 4th Mountain Home State Forest hosted the Northern California Chapter of the Society of American Foresters summer meeting. The meeting focused on management strategies in the Southern Sierra and giant sequoia under various ownerships.

In October, Mountain Home State Forest hosted the 2012 Sequoia Forestry Challenge. This four day event was a competition for high school students in technical forestry and current forestry issues. Teams of students competed in field testing, and gave a presentation to determine the top scoring team. Forestry professionals spent time with the students familiarizing them with common tree species, forestry tools, and the use of identification keys. With this first event under our belt, a larger turnout of competitors is expected for the 2013 event.

Table 1. Forest acreages and equivalent payments to property taxes in calendar year 2012.

Forest	Acres	Equivalent Payment to Property Taxes Paid In 2012
Jackson	48,652	\$92,144
LaTour	9,033	\$8,016
Mountain Home	4,807	\$4,807
Soquel	2,681	\$5,419
Boggs Mountain	3,493	\$0
Las Posadas	796	\$1,057
Ellen Pickett	100	\$104
Mount Zion	164	\$0
Total	69,726	\$111,546

Table 2. Costs and revenues in calendar year 2012.

Forest	Revenues			Costs		
	Large Timber Sales	Small Timber Sales and Miscellaneous Forest Products	Total Revenues	Personnel	Operating Expenses	Total Costs
Jackson	\$6,410,097	\$17,999	\$6,428,096	\$2,179,881	\$388,278	\$2,568,159
Mountain Home	\$148,466	\$573	\$149,039	\$344,948	\$60,000	\$404,948
Boggs Mountain		\$8,748	\$8,748	\$212,691	\$40,000	\$252,691
Soquel	\$876,737	\$2,630	\$879,367	\$368,803	\$65,263	\$434,066
LaTour	\$590,044	\$1,780	\$591,824	\$356,018	\$35,375	\$391,393
State Forests Program				\$483,946	137000	\$945,946
Assessments						\$462,000
Total	\$8,025,345	\$31,730	\$8,057,075	\$3,946,287	\$725,916	\$5,459,203

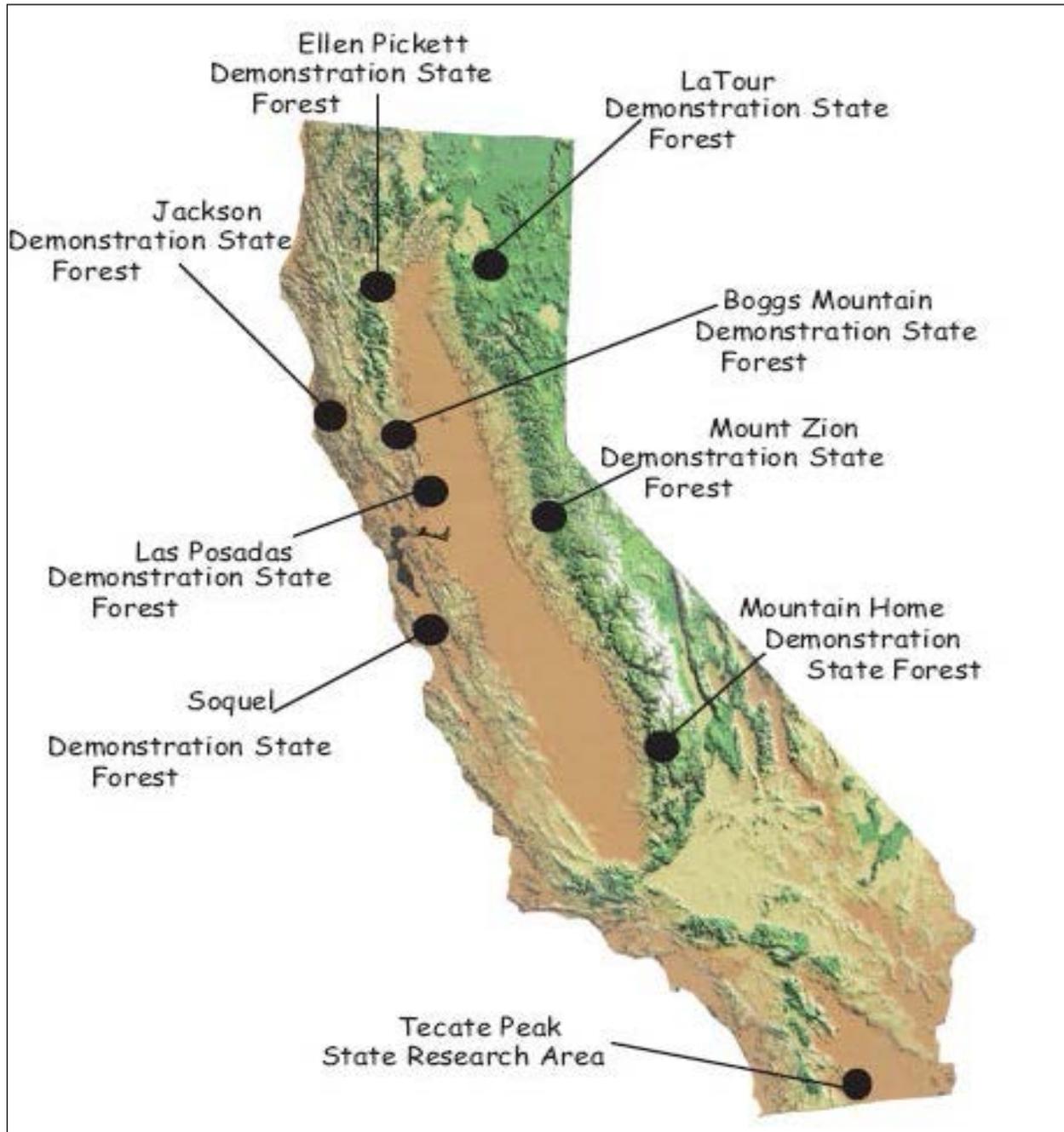
Table 3. Timber sales harvested volume in calendar year 2012.

<b>Timber Sale</b>	<b>Harvest Volume, MBF</b>
Jackson	22,068
LaTour	3,534
Mountain Home	2,692
Boggs Mountain	0
Soquel	2,562
Total	30,856

Table 4. Recreation visitor days in calendar year 2012.

<b>Forest</b>	<b>Visitor Days</b>
Jackson	4,520
Mountain Home	40,861
Boggs Mountain	9,001
Soquel	20,000
LaTour	7,375
Total	81,757

Figure 1. State Forests in California.



**67th ANNUAL REPORT**  
**LATOUR DEMONSTRATION STATE FOREST**

Shasta County  
California

**2012 CALENDAR YEAR**



David J. Loveless  
Forest Manager

State of California  
DEPARTMENT OF FORESTRY AND FIRE PROTECTION  
NORTHERN REGION

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# ADMINISTRATION

## 2012 State Forest Staff

Forest Manager: Dave Loveless  
Assistant Forest Manager: Ben Rowe  
Forestry Assistant II: Shannon Johnson

Precipitation totals and snow accumulation was below average for winter 2011/12. Approximately 50 percent of the Forest was accessible into January and early February. In contrast, the Forest along with much of the North State received record precipitation in late October, November and December. The October storms produced over two feet of snow at the Forest Headquarters. The heavy snow accumulation required the Unit HFEOs to plow the Bateman Road to facilitate the removal of the State Capitol Christmas Tree on November 7. The field season began in early May and continued until the fall storms in the end of October. As in 2011, the October snows then melted sufficiently to again allow access onto much of the forest into mid-December.

# RECREATION

Observations of visitor use for camping and other activities appeared similar to past years. As is typical on Latour, all campgrounds were heavily utilized on holiday weekends and during the fall hunting season. The 2011/12 winter snow accumulation was modest which constrained snowmobile use. The Redding Sno-riders, a local snowmobile club, are responsible for grooming the Ashpan Flat Snowmobile Park trails of which LDSF roads are included. In a normal snowfall year, approximately 30 miles of LDSF roads are regularly groomed, as many as 10 times. Last winter, due to snow conditions, the club was only able to groom approximately 8-10 miles of the LaTour Demonstration State Forest (LDSF) road system, and the roads were only groomed twice. See "Recreation" listed under "Statistical Data" in this report for estimates of recreational use on LDSF in 2012.



## **TIMBER MANAGEMENT**

### **Class III Sales**

The McMullen Mountain West Timber Sale was sold in December 2011 and was logged in July – October, 2012. Trinity River Lumber Company (TRLCo) was the successful bidder and the Licensed Timber Operator (LTO) was Dave Richardson from Montague, California. The timber sale harvested 3,478 thousand board feet (MBF) of timber and generated \$590,044 in revenue. The timber sale was part of the McMullen Mountain Timber Harvest Plan (THP).

The Peavine Creek Timber Sale, the second sale under the McMullen Mountain THP, was sold in December of 2012 and will be operated in 2013. The sale area consists of 3.2 mmbf to be harvested on 420 acres using individual-tree selection, group selection, and rehabilitation silvicultural prescriptions. Two bids were received for the sale, from Sierra Pacific Industries (SPI) and Trinity River Lumber Company (TRLCo). SPI was the high bidder at \$573,146. The LTO is unassigned at this time.

### **Class I Sales**

Class I timber sale activity included the sale of eighty-eight (88) Christmas trees under forty-five (45) permits with total revenue of \$880.00. In addition, thirty-six (36) firewood permits (limit three cords/permit) were sold for an additional \$900 in revenue. One additional Christmas tree permit for 20 trees was provided as a donation to the local community of Whitmore as part of their annual Volunteer Fire Department fund raiser.

### **Timber Harvest Plans**

A new timber harvest plan (THP), named Cabled Cow, was prepared and submitted for review in 2012. This THP encompasses 670 acres on Latour and is located in the Beal Ridge/South Cow Creek area. It is planned to be operated as two timber sales in 2014 and 2015. Silviculture methods include group selection and seed tree removal step. Harvest methods will include both ground-based and cable yarding systems.

## **TIMBER INVENTORY**

The remeasurement of the Continuous Forest Inventory (CFI) plots occurs every 5 years. The CFI plots were last measured in 2010 and are scheduled for re-measurement in 2015. The primary focus and function of the four LDSF Forestry Aids in 2012 was the measurement Timber Atlas Inventory (TAI) plots. A total of 704 plots were established and measured in 2012 on LDSF, covering approximately 1,750 acres. These non-permanent plots are established and data collected approximately every ten years on a revolving basis, with approximately 900 acres targeted for remeasurement annually. In total, there are 3,600 TAI plots located across LDSF. This data, in conjunction with data collected on the CFI plots, is used to track the timber inventory and other resource parameters over time to ensure that management goals established for the Forest are being met. In addition, this information, both current and historic records, is available to interested parties for academic and other research purposes.

## **FOREST PROTECTION**

Mortality on the Forest was relatively light this year, however, there is still ongoing concern regarding blister rust in the western white pine and the large amount of red fir infected with *Cytospora* fungus on LDSF and on adjacent Lassen National Forest to the east and south of the LDSF. Those areas on the Forest affected by these diseases will continue to be monitored for mortality and spread in 2013, with salvage operations proposed when deemed necessary and economical. This management technique should reduce the economic impacts from mortality, and may slow the spread and severity, however, it will not eliminate the disease.

To reduce the risk of fire and to improve access, Sugar Pine Conservation Camp Crews removed encroaching brush and improved existing fuelbreaks on over three miles of road. Crews piled and subsequently burned the material last fall. In total, Sugar Pine Camp spent 50 crew days on LDSF in 2012.

## **EXPERIMENTS AND DEMONSTRATIONS**

Pacific Southwest Research Station is continuing with a white fir growth and spacing study on two brush units that were cleared in 2008 and planted in 2009. One unit was masticated and the other unit was brush raked, pile burned and ripped. The mastication unit (approximately 11 acres) was planted with white fir seedlings and six (6) one acre plots were established with spacing of 10'X10', 14'X14' and 20'X20'. The brush rake unit (approximately 10 acres) was piled and burned in the fall of 2008 after which the piles were spread and the unit was ripped. This unit was also planted with white fir in the fall of 2009 applying the same spacing regimes as the mastication unit. Subsequently, both Units were treated with herbicides in the fall of 2010 to control chinquapin brush competition. Observations after the 2011 growing season indicated that additional herbicide treatments will be required on both Units in order to control competing vegetation. Additional inter-planting will also be required to fill in voids due to mortality. Both tasks are scheduled for the fall of 2013.

The joint three year small mammal study project with the DFG titled "Evaluation of Group Selection Silvicultural Systems on Species Population Diversity and Habitat Use by Small Terrestrial Birds and Mammals" has been put on hold indefinitely due to DFG budget and staffing changes. The inter-agency agreement calls for the DFG to provide the expertise, data analysis, and personnel and CAL FIRE to provide the facilities, equipment and some funding necessary to conduct the research. The small mammal traps purchased for the project are currently on loan to JDSF for a similar project.

In 2012, the California Department of Fish & Wildlife, formerly DFG, and LDSF staff conducted follow-up research on the Hermit Warbler that was initiated in 2010. The project consisted of establishing five call stations on LDSF where male specimens were attracted and captured to gather data. The research is being conducted on LDSF, JDSF, MHDSF and Boggs.

LDSF continues to use eight Reconyx® digital cameras strategically located on the Forest to detect and document wildlife species and activity throughout the year.



Pacific Fisher on LDSF (4/17/2012)

## **ROAD IMPROVEMENT**

The rock crushing contract that was awarded in December, 2011 for work to be done in 2012 was not completed and the contract has been extended until August 31, 2013. The contract calls for the excavation, crushing and stockpiling of 5,000 yards of rock, sorted in three sizes, from an existing quarry developed in 2009 on LDSF. This rock will provide on-site material at a much lower cost than alternative procurement and delivery costs, and will be used for future road and watercourse crossing contract work.

Between November 17 and November 23 several large storm fronts hit LDSF and all of Northern California. These warm tropical storms caused a rain on snow event at the higher elevations on the forest. Several roads on LDSF received storm related damage, including plugged ditches and culverts, rilling and numerous fallen trees across the roads. Emergency repairs were completed in early December, but these road systems will need to be further evaluated in the spring and additional repairs may be required.

Timber Sale road maintenance and road system improvement projects are all part of an ongoing road management strategy designed to improve the road system by reducing the potential for erosional processes to transport sediment and to reduce overall future road and watercourse crossing maintenance requirements on the Forest. During the North McMullen Mountain Timber Sale approximately 10 miles of forests roads were graded and maintained.

## **TIMBER STAND IMPROVEMENT**

Site preparation of the 55 acre variable retention prescription area, harvested as part of the 2011 Rim Buck TS, was completed and all piles burned in early December. Seedlings are on order and the unit is scheduled for planting during fall 2013.

No additional brush conversion work took place in 2012. The Lower Plantation project, located within the 1978 Whitmore Fire, had approximately 80 acres of brush dominated plantation cleared and piled with a brush-rake in 2010. The majority of the piles were burned in the fall of 2011 with the remaining piles burned in early December, 2012. Seedlings are on order and the unit is scheduled for planting in the fall of 2013. Bids were solicited for the clearing of an additional 35 acres of the Lower Plantation along the Sandow Road. Due to the 2012 fire season, in which local contractors were engaged, no bids were received. The contract will be solicited for bids again in 2013. Both the variable retention unit and the Lower Plantation project will be assessed the spring 2013 to evaluate the need for hand treatment of herbicides.

The Upper Plantation project, consisting of 21 acres of brush located on Table Mountain, was treated by crushing followed by a broadcast burn conducted by Unit personnel in the fall of 2010. This area will be treated with herbicides in 2013 and, depending upon treatment success, planted in either the fall of 2013 or 2014. The ten acres of brush treated under the Rock Pit TS in 2010 will also receive a follow-up herbicide treatment in 2013 prior to planting. Due to the prolific nature of brush species found on the Forest and the failed reforestation attempts in the past, these areas will be planted in the future after the brush is sufficiently eradicated to successfully re-establish plantations, recognizing that follow-up is critical to plantation success and that additional future treatments may be necessary.

In 2012 LDSF received a grant from the Sierra Nevada Conservancy (SNC) for a proposed fuelbreak/biomass project. The grant was made available through the Proposition 84 Healthy Forests Grant Program administered by the SNC and funded by the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. The projects consist of the establishment of fuelbreaks along roads (199 acres), and biomass operations near Table Mountain (104 acres) on LDSF. LDSF staff continues to work on the preparation of the projects and bids for the work will be solicited in 2013.

## **TOURS AND PRESENTATIONS**

Staff conducted tours with prospective bidders for the 2013 Peavine Creek Timber Sale. Additionally LDSF staff provided forest management and logging activity tours to the Northern Region Chief, Northern Region Deputy Chief and Shasta-Trinity Unit Chief, Shingletown members of the Sierra Club and the California Conservation Corp of Redding.

Forest Staff also participates annually in local Arbor Day functions including school presentations, poster contests, recognition awards, and seedling acquisition and distribution for various functions. The Forest Manager is a member of the Board of Directors for the Cow Creek Watershed Management Group (CCWVG) and provides the Board and group members with periodic updates on activities taking place on LDSF.

## OTHER ACTIVITIES

Four Forestry Aides were hired for the 2012 field season. One Forestry Aide was employed from May through September. The other three Aides started the beginning of June and worked until they returned to college in mid-August. Their primary duties included data collection on the TAI plots and timber sale preparation (marking and flagging). Forestry Aide time totaled 12.5 man-months on LDSF in 2012.

LDSF, CAL FIRE Shasta-Trinity Unit and Shasta College are working together in developing a Memorandum of Understanding to allow Shasta College to conduct Natural Resource courses on LDSF and to use LDSF facilities. In addition, LDSF staff continues to be fully engaged in the ongoing potential acquisition of PG&E properties in Shasta County. Work involves preliminary evaluation of the properties, interactions with potential conservation easement holders, negotiations and preparation of Conservation Easements, and draft resource inventory procedures.

Other projects undertaken by LDSF staff in 2012 included Headquarters facility maintenance. Staff also repaired window shutters and replaced freeze damaged and leaking valves, fittings, and pipes on the main water supply line to the HQ and within the HQ. Sugar Pine Camp crews fell hazard trees and pre-commercially thinned true fir thickets located around the barracks. In addition, hundreds of piles created from brush clearing and timber sale activities were burned last fall by both staff and Camp Crews.

# ANNUAL FINANCIAL SUMMARY

## LATOUR DEMONSTRATION STATE FOREST 2012 CALENDAR YEAR

1.	Capital investment in land, timber, buildings, and roads*		\$ 8,000.00
2.	Gross revenues		\$ 591,824.35
3.	Operating expenses (OE)	Labor**	\$ 356,018.19
		Materials & Services***	\$ 27,359.47
		Property Tax****	\$ 8,015.72
<b>Total OE</b>			<b>\$ 391,393.38</b>

\* Includes all contract expenditures

\*\* Source: 1/2 of June 2012 YTD HFD Budget Report by Index (Q12) + December 2012 YTD HFD Budget Report by Index (Q12)

\*\*\*Includes all material and service expenditures charged to LDSF budget accounts for the 2011 calendar year minus capital investment expenses (contracts); Source: 1/2 of June 2012 YTD HFD Budget Report by Index (Q12) + December 2012 YTD HFD Budget Report by Index (Q12)

\*\*\*\*Based on 6/30/2012-7/1/2013 Property Tax Bill

# ANNUAL REPORT OF TIMBER CUT

## LATOUR DEMONSTRATION STATE FOREST 2012 CALENDAR YEAR

### COMMERCIAL SALES

#### Forest Products Convertible to Board Feet

Product (give dimensions)	Conversion Factor	# of Pieces, Cords, Lineal Feet, Etc.	MBF	Value
MBF			3,479.83	\$590,044.35
Cords	0.5	108	54	\$900.00
Posts (size)_____				
Shingle Bolts				
Poles (size)_____				
Grape Stakes				
Shakes				
TOTALS			3,533.83	\$590,944.35

#### Miscellaneous Forest Products - Not Convertible to Board Feet

Kind	Unit	Quantity	Value
Christmas trees	ea	88	\$880.00
Boughs	lbs		
TOTALS			\$800.00

Approved by \_\_\_\_\_ Signature \_\_\_\_\_

Title \_\_\_\_\_ Title \_\_\_\_\_

Date \_\_\_\_\_ Date Submitted \_\_\_\_\_

# FOREST PRODUCTS CUT FOR DEPARTMENT USE

## LATOUR DEMONSTRATION STATE FOREST 2012 CALENDAR YEAR

Product	# of Pieces, Cords, Lineal Feet, Etc.	MBF	Value
TOTALS		0	\$0.0

List those commercial timber sales that were not closed but were extended into the new year:

N/A

# STATISTICAL DATA

## LATOUR DEMONSTRATION STATE FOREST 2012 CALENDAR YEAR

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### ADMINISTRATION

	<u>Processed</u>	(number)	<u>Pending</u>
Rights-of-Way	0		0
Leases	0		0
Trespass Cases	0		0

### PROTECTION

Fires: Number of Fires: 0      Acres Burned: 0      Man-days Fire Patrol: 0  
State Forest Campfire Permits Issued (number): 15

Insects: Number of Trees Treated: 0      Number of Acres Covered: 0  
Control Methods Used: none

		<u>Disease Involved</u>
<u>Disease:</u> Number of Acres Treated (Contract):	0	none
(State):	0	none

Number of Pest Detection Reports Submitted: 0

Hazard Reduction:

Snags Felled or Removed: 15      Acres: 0  
Roadsides treated (miles): 4  
Slash Abated or Cleanup (acres treated): 0  
Salvaged (board feet): 0

### TIMBER STAND MANAGEMENT

Number of Timber Sales	Class I: 88	Class III: 1
Timber Stand Improvements		
Trees Pruned: 0	Acres: 1	
Thinning (acres): 0		
Release (acres):		
Planting	Number of Trees: 0	Acres: 0
Seeding	Number of Spots: 0	Acres: 0
Site Preparation for		
Natural Seedfall (acres):	Planting (acres): 55	Seeding (acres):
State Method of Site Preparation:	Excavator	

### EXPERIMENTS & DEMONSTRATIONS

Projects:	<u>Submitted</u>	<u>Approved</u>	<u>Completed</u>
	4	4	N/A

Approved Projects Worked on (list by titles):

TAI Plots  
Reconyx wildlife survey  
Weather Station  
DFW Hermit Warbler Study

Reports Submitted (list by titles):

Ongoing  
Ongoing  
Ongoing  
Ongoing

### PERMANENT PLOTS

	<u>Size</u>	<u>Number</u>
Inventory Plots Established	none	0
Other Plots Established	none	0
Plots Remeasured	none	0
Timber Cruised (acres):	1,760	704

## ENGINEERING

Corners Recovered or Set: 0  
Miles of Line Run: 0  
Miles of Boundary Surveyed and/or posted: 0  
Boundary Surveyed and Posted to Date: 85%

## CAPITAL IMPROVEMENTS

	<u>New Construction</u>	<u>Total System</u>	<u>Amount Maintained</u>
		(miles & tenths)	(miles & tenths)
Main Timber Access Roads	0	49.1	9
Spur Timber Access Roads	0	13.25	1
Fire Protection Roads	0	15.1	0
Firebreaks	0	10.9	2
Christmas Tree Roads/Truck Trails	0	4.55	0
Trails	0	0	0
Powerlines	0	0	0
Telephone relay sites	0	2	2
Water Development	0	1.25	0
		(number)	
Bridges	0	3	2
Campgrounds	0	4	4
Camping Units	0	12	0
Picnic Grounds	0	0	0
Picnic Units	0	0	0
Installed Toilets	0	5	5

Buildings Constructed (describe each): none

## RECREATION

Primary Use <sup>1</sup>	Day Use <sup>2</sup> (Visitor Days)	Overnight Use <sup>3</sup>	
		Campers	Camper Days
Camping	150	300	640
Fishing	100	80	150
Hunting	800	200	600
Picnicking	90		
Sightseeing (driving)	400		
Hiking	300	60	120
Horseback Riding	20	5	15
Nature Walks	80	40	80
ATV	200	20	80
Winter Sports	3500		
Other (Christmas trees)	110		
<b>TOTAL</b>	<b>5690</b>	<b>705</b>	<b>1685</b>

<sup>1</sup>Assign primary use to avoid duplication when forest user participates in more than one activity.

<sup>2</sup>Include everyone except those who stay overnight. A person visiting or using an area on 3 different days counts as 3 visitor days.

<sup>3</sup>A person remaining in an area occupying overnight facilities for 3 nights counts as 3 camper days.

**ANNUAL REPORT**

**BOGGS MOUNTAIN DEMONSTRATION STATE FOREST**

**Lake County, California**

**2012 Calendar Year**



**State of California  
Department of Forestry and Fire Protection**

**Ken Pimlott, Director  
Bill Holmes, Region Chief  
Eric Hoffmann, Unit Chief  
Gerri Finn, State Forest Manager**

## Administration

### State Forest Staff

**Manager:**

Gerri Finn

(Forester II)

**Seasonal Forestry Aide:**

Jamie Wise

May thru November, 2012

The Forest Manager position has been filled since May of 2010. The Assistant Manager position is vacant due to budget constraints.

## Demonstration and Experiment Program

### Ongoing Studies

Two Annosus Root Disease Studies were reviewed by Cal Fire pathologists Jack Marshal and Tom Smith. They determined that the 1970's Annosus Observation Plot (a research plot needing annual/springtime data collection) will be terminated. The 1960's Report on Root Disease Survey (Annosus and Armillaria) will be revived and periodically remeasured by Cal Fire pathologists.

The 1980's Mortality and Growth Study was remeasured in the fall of 2012.

Remeasurement of ongoing research required by forest staff is now up to date.

DFG (now CA Fish and Wildlife) has a yearly ongoing study of Hermit Warbler populations.

### New Studies and Demonstrations

The Climate Change Weather Stations Project began in 2011 for both Las Posadas and Boggs Mountain Demonstration State Forests. The project was completed in 2012. Both weather stations have been installed and the data logger calibrated. Data is being collected from both stations periodically. The data is kept at the State Forest and a copy is sent to Sacramento.

### Inventory

No inventory projects were required in 2012 other than the Mortality and Growth research plots.

### Operational Projects

The main forest access road (Road 500) received significant damage caused by the severe weather in November 2012. Calfire crews have manually unplugged culverts. Calfire HFEO's were not available due to staffing issues and the roads still need grading.

## Recreation

### Improvements to recreation facilities included:

- Construction of a vault toilet was completed at the Horse Camp by The Backcountry Horsemen Association.
- An Eagle Scout project (the installation of two benches) along the trails was completed.
- Friends of Boggs Mountain printed a new version of the State Forest map for visitors of the forest. A donation is requested to help with the cost of printing. They also donated nine metal campfire rings which have a value of \$2600.00. The rings were installed by volunteers.
- A vault toilet was installed at Crawler Camp. It was built by The Users of Boggs, a volunteer organization.

### Special Use Events:

A total of 19 Special Use Permits (SUP) were issued in 2012. The total number of participants in the events was 1905. Most of the events included camping for a total of 6140 camper days. The events are listed by event type.

- 4 SUP issued for mountain bike races – two had 650 participants one had 200 participants and a small group of 25 was issued a permit for their biking tour for a total of 1525 participants. The events attract more people than the participants and it's estimated that there were at least twice as many visitors to the forest than the number of participants. The total number of visitors to the forests for mountain biking events was calculated to be 3050 for a total of 6100 visitor days.
- 2 SUP - running marathon - 120 participants, one day event.
- 2 SUP for Boy Scouts of America – 1 for the Lake County Camporee and 1 other Scouting events for a total of 125 participants and 250 visitor days. Please note that the use of the group camp for camping by scout troops is up from previous years.
- Horse groups - 5 small events with 105 participants and 210 visitor days
- NRA Shooting Instruction – 50 participants total for one day events on seven different occasions. 1 Airsoft tactical event with 55 participants and 200 visitor days.
- 1 annual Orienteering event was held with 200 participants and 900 visitor days.
- 1 wedding with 300 attendees for an afternoon
- 1 Jeeping event with 50 participants
- 1 Mushroom hike with 70 participants

### Recreational Statistics

#### Camping

Number of campers 1094  
Camper days 2861

#### Camping with Special Use Permit

Number of campers 2280  
Camper days 6140

Total number of campers **3374**  
Total number of camper days **9001**

## Recreation - continued

Fee Collecting per AB5321 was established July 1<sup>st</sup>, 2011. Since July 2011, most campers have registered when visiting BMDSF. Considering the required registration, camping numbers are more accurate and more closely reflect the actual usage of Boggs instead of the estimated usage presented in previous annual reports.

### 2012 Camping Fees Collected

January - \$80.00	July - \$904.00
February - \$195.00	August - \$637.00
March - \$225.00	September - \$1163.00
April - \$351.00	October - \$514.00
May - \$646.00	November - \$125.00
June - \$740.00	December - \$160.00

Total fees collected - **\$5740.00**

2012 Special Use Fees Collected was **\$975.00**. The mountain bike race sponsors donated a vault toilet pumping service to the forest in lieu of a fee. The value of their donation is approximately \$1000.00

### Day Use

The number of visitors is hard to determine because we don't register day users, so these are rough but conservative estimates. Because many visitors come on multiple days, the best way to count them is by counting visitor days. There was an average of 20 day use visitors per day for a total of 7200 visitor days.

Total visitor days for 2012, including camping, day use and special use events is estimated to be **18,121**.

## Timber Management and Minor Forests Products

### **Class III Timber Sales (large sales)**

No logging occurred on BMDSF or Las Posadas that generated revenue for the forest. Konocti Conservation Camp removed dead trees from both forests. The camp then milled the dead trees into lumber for project work. Like last year, approximately 20,000 bd.ft. was harvested.

### **Class I Timber Sales (minor sales)**

Minor timber sales involving firewood, and other minor forest products occurred. During the year, 46 permits were issued to local individuals. Wood generated during the precommercial thinning project was the main source of firewood for the personal use firewood permits.

## Timber Management and Minor Forests Products - continued

3 Commercial Firewood Permits were sold for a total of 17 cords.

### Class I Sales Statistics

Permit type	# Permits	Volume sold	Revenue
Personal use firewood (3 cord)	46	138 cords	\$920
Commercial firewood	3	17 cords	\$113
Totals	49		<b>\$1033</b>

### Pre-commercial Thinning

Nine precommercial thinning units were thinned by fire crews. The thinning units were from 1992 logging where the silvicultural method "Group Selection" was applied. The units ranged from 1 to 2 acres.

### Prescribed Fire

Approximately thirty acres were treated using controlled burning. In addition, more than 100 piles (most generated from the pre commercial thinning) were burned in the fall of 2012.

### Wildlife and Botanical Resources

Northern spotted owl surveys were conducted on both Boggs Mountain and Las Posadas State Forests. No NSO (or Barred Owls) were detected in the surveys.

### Law Enforcement – Illegal Activities

Most of the patrolling of the State Forest was conducted by forest staff. Some patrolling, (focusing on large Special Use Events), was conducted by unit prevention staff. The campground and the popular target shooting area are where most of our visitor contact was focused.

An old "backpack meth lab" was found in a pine plantation during a thinning project. No hazardous materials were found.

Summary of illegal activities on Boggs:

- illegal camping
- illegal dumping
- vehicle abandonment
- off road use
- shooting trees
- abandoned campfires
- vehicle accidents
- illegal tree cutting
- 1 hazardous material incident
- Illegal forest road use (neighbor)

**Annual Financial Summary**

**Revenues**

Class III Timber Sales        \$0  
Camping and SUP fees    -\$6715  
Class I Sales                \$1,033  
  
Total Revenue                \$7748.00

**Expenses**

*Personnel* \$212,691  
  
*Operating* \$40,000

# Soquel Demonstration State Forest

## 2012 Annual Report



Angela Bernheisel  
Forest Manager

State of California  
DEPARTMENT OF FORESTRY AND FIRE PROTECTION  
Northern Region  
San Mateo-Santa Cruz Unit

Santa Cruz County



## SUMMARY

Several significant improvement projects were completed in 2012, along with two Timber Harvesting Plans, Rim and Fern Gulch. These two timber harvests represent a tremendous step forward in implementing the sustained production of timber across the forest and the demonstration of harvesting operations to the public. The Fern Gulch timber harvest took a long time to bring to implementation and the Soquel Demonstration State Forest (SDSF) staff was fortunate to work with a very skilled and experienced timber operator and crew who took great care ensuring that the project was done well. They also went above and beyond their responsibilities to work with SDSF staff in creating interesting and educational field trips for the public during the active harvest operation. These tours were a major highlight of the events occurring in 2012.

Other highlights in 2012 included the completion of the first phase of an ambitious project for enhancing large woody debris (LWD) for fish habitat improvement, new forest research with researchers coming to set up their projects from as far away as Canada and Texas, the creation of experiences and partnerships with cutting edge mountain biking organizations and events like the Mountain Bikers of Santa Cruz Super Enduro and their sponsorship of a new trail. SDSF continues to be a valuable asset to the local CAL FIRE Unit and cooperating agencies for wildland firefighting training and education.

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## ADMINISTRATION

Angela Bernheisel remained Forest Manager along with Assistant Forest Manager, Ed Orre; half-time Office Technician, Anna Cameron; and returning Forestry Aides, Julie Dufresne and Elizabeth Lucas. Dufresne and Lucas worked until January 10<sup>th</sup> and then were rehired April 17<sup>th</sup> through the rest of the year. The Vegetation Management Program (VMP) Coordinator position (Bernheisel's previous position) for the Unit was filled in late February 2012 by Forester I Andrew Hubbs. Bernheisel continued to support the VMP program through a transition period by attending meetings to review plans to implement federal grants and to coordinate with local Fire Safe Councils.

Both Bernheisel and Orre worked a standard Monday through Friday schedule while Dufresne and Lucas worked an adjusted schedule to include one weekend day each. Dufresne and Lucas, as experienced Forestry Aides with several seasons working on the Forest, did an excellent job of providing information to Forest users, monitoring public use, promoting a CAL FIRE presence and to assisting with emergency response throughout the summer on weekends.

Unit Chief John Ferreira retired in December, and Scott Jalbert became the new Unit Chief in February 2013. The Unit Management Team under Chief Jalbert's leadership began meeting regularly and Bernheisel is an active and engaged member of the team.

Several volunteers provided valuable service to the Forest throughout the year. A neighborhood resident, Kenny Jatho, volunteered during the summer to learn about Resource Management. Another neighbor to the Forest, George Smith, continued his campaign to rid the Forest roads and trails of invasive French broom and also assisted with Ben Lomond Crew supervision of projects.



**SDSF Staff (left to right): Assistant Manager Ed Orre, Forestry Aide Julie Dufresne, Office Technician Anna Cameron, Forestry Aide Elizabeth Lucas and Forest Manager Angela Bernheisel in front of SYYS on the Fern Gulch timber harvest.**

During the fire season of 2012 Orre was assigned to six incidents where he served as a field observer or suppression repair specialist. Orre also responded to vegetation fires in the Unit as a C Faller.

Since August 29, 2011 when the Soquel Forest Advisory Committee was reconvened, members worked chapter by chapter to submit comments on the General Forest Management Plan (GFMP) to CAL FIRE staff for revision. They held one meeting and one field trip in 2012. At the April 2<sup>nd</sup> meeting, they reviewed the updated draft to the GFMP through Chapter 7 which included comments from the Committee and members of the public. Eight of the nine members were in attendance, as well as CAL FIRE staff from the Forest and Region Headquarters. It was agreed to postpone a meeting that had been scheduled for June 18<sup>th</sup> in order to allow more time for Committee members to comment on the rest of the GFMP and for SDSF staff to complete the two timber harvesting plans on the Forest. Region HQ Forester Jill Butler assisted with incorporating comments from the Committee into the Plan.

On September 14<sup>th</sup>, the Committee attended a field trip to review the Fern Gulch Timber Harvest and Large Wood Placement project in Soquel Creek. Six of the nine members attended and they saw new road construction, unique log yarding equipment, horse logging demonstrations, timber falling, erosion control practices and habitat improvement sites.

The Advisory Committee Members in 2012 were:

Donna Bradford - Santa Cruz County Planning Department

Steve Butler - Resource Conservation District of Santa Cruz County (RCD)

Vice Chairperson Patty Ciesla - Stewards of Soquel Forest

Eric Huff - Board of Forestry and Fire Protection

Tim Hyland and Chris Spohrer - California Department of Parks and Recreation

Terris Kasteen - California Department of Fish and Wildlife (DFW)

Patricia Marland - Neighbor Representative

Larry Serpa – The Nature Conservancy

Chairperson Steve Staub - Registered Professional Forester

Thomas Sutfin - Ex-Officio Member

Changes to the Committee membership occurred in 2012. Jennifer Slaughter replaced Donna Bradford who retired from Santa Cruz County. Chairperson Steve Staub, Advisory Committee member since the first meeting in September 1991, passed away in mid-November after his battle with mesothelioma.

Steve Staub was a valuable and admired member of the Advisory Committee and friend of the Forest. Over his career Steve consulted on many aspects of SDSF management. Steve could always be depended upon for intelligent and insightful viewpoints and contributions to the staff he consulted with and the Advisory Committee he chaired. A memorial was held at Big Creek's beautiful oak flat picnic area on April 18, 2013 to celebrate his life with hundreds of friends and family in attendance.

Another area of SDSF administration is the continued need for repairs and improvements to the office and the Soquel Forest Fire Station site. The office phone system was upgraded for the first time since 1990 and the Omega Phone IV system (circa 1985) was retired. ECC Chief Mike Borelli worked with CAL FIRE Telecom Analyst Mo Matthews in Sacramento to arrange for FYI Communications to install the added features of caller ID, conference calling, and voicemail. Office furniture was repaired and rearranged to create a more suitable work environment. Unit IT Coordinator, Sandra Chang repaired computers, replaced an outdated computer, fixed network problems and updated all office computers with Office 2010 software. In

May, fiscal year-end purchasing was extended for State Forests by Deputy Director Russ Henly. Forestry supplies for SDSF were purchased and paid for by Sacramento FRIF funds.

On office and station grounds, Orre repaired the fuel pump, and a contractor repaired the diesel generator and established a maintenance schedule. Forest vehicles including the 20 year old ATV and ATV trailer were serviced. CAL FIRE ECC personnel maintained handheld HT radios and radios in Forest vehicles. The electric power pole providing service to the office and fire station was replaced by PG&E due to heavy damage from woodpeckers.

A street address was established for the public entrance to the Forest; 29400 Highland Way. This was to prevent confusion for Forest visitors who frequently arrive at the office on Soquel-San Jose Road looking for the entrance, and to assist with better resource dispatching in emergencies. The address change was reflected in web browser searches and in the new 2013 phone book listings.

Lucas inventoried Forest signs and coordinated with Valley View Conservation Camp to create and print new directional signs and to replace old ones. Dufresne and Lucas installed 37 signs and refurbished existing signs throughout the Forest to improve visitor orientation.

The Sulphur Springs Improvement Project was completed in the fall. The project included road improvements and rerouting to provide better access to the upper helipad as well as additional uses for a water tank, storage area and outdoor education setting at the lower helipad. Additionally, upgrades were completed on Hihn's Mill Road and Sulphur Springs Road to improve drainage and rock was added along a major portions.



*Road improvements at water tank and storage container near lower helipad.*

Existing forest gates were repaired and maintained. Some locking mechanisms were reconfigured and improved by a professional welder. A new gate was installed at the public entrance adjacent to Highland Way as part of the Fern Gulch THP contract. The previous simple cable gate had been vandalized regularly to gain unauthorized access to the Forest. An additional gate was installed on Comstock Mill Road at the Forest boundary.

Fire Crews from the Ben Lomond Conservation Camp worked with SDSF staff for a total of 11 days to burn piles of slash, remove French broom, clear roads, assist with slash treatment at the Large Woody Debris site, prep water tanks for plumbing installation, install posts for a new

gate, repaint gates, reroute Ridge Trail and remove illegal trails and stunts. In preparation for winter, forest staff cleaned and prepared culverts, waterbars and trash racks.

Several new maps of the Forest were created by CAL FIRE GIS Specialist Shawn Headley. Several of these maps were incorporated into the GFMP update, and were used for the upcoming Comstock Mill THP.

CAL FIRE Surveyors from Technical Services in Sacramento, Dan Gregory and Jeff Gawronski, spent several weeks surveying the western and northern boundaries of SDSF. They met with neighboring landowners who helped them with historical information. The identification of the property boundary was important in planning for the new Comstock Mill THP on the western part of the Forest. The surveyors also helped to determine the boundary of the Forest near the confluence of Fern Gulch and Soquel Creek for the Large Woody Debris project.

Bernheisel attended several key meetings throughout the year. She coordinated with the agencies that govern the neighboring properties to the Forest, the Mid-Peninsula Regional Open Space District (MROSD) and the Forest of Nisene Marks State Park. Two meetings were held in May with Rangers Tom Lausten and Michael Newbern from the MROSD, and Peace Officer Bill Wolcott and biologist Chris Spohrer from State Parks. These meetings were to become more familiar with access and to discuss relevant policies, emergency contacts, law enforcement, radio communications and security issues.

Bernheisel, along with previous Forest Manager Thom Sutfin, attended a talk at a local high school by U.S. Representative, Sam Farr, who authored the enabling legislation creating SDSF when he was a California Assemblyman. Following the talk they spoke with the briefly about SDSF and his continued interest in programs and future plans at SDSF.

Bernheisel attended the State Forest Managers meeting and participated on a panel for the Unit's Battalion Chief hiring assessments February. She attended Unit Chief Ferreira's presentation to the Santa Cruz County Board of Supervisors, presentation of the firefighter of the year awards and the Unit Operations Team meeting in May. Bernheisel regularly attended the Jasper Ridge Coordinating Committee meetings as a member of the Committee for Stanford University's Jasper Ridge Biological Preserve. She also attended the Society of American Foresters Summer Field Meeting at Mountain Home State Forest. Bernheisel was assigned PIO duties for the Santa Clara Unit Rob Van Wormer passing and memorial service from October 28<sup>th</sup> to November 3<sup>rd</sup>.

The total precipitation recorded at the rain gauge in the Forest for the 2012 calendar year was 52.85 inches. This was higher than the annual rainfall average for the last 15 years of 41.47 inches. The two months in 2012 with the most rainfall were March with 13.5 inches and December with 14.6 inches.

## **TRAINING**

Bernheisel, Orre, Dufresne, Lucas and Forest volunteer, George Smith, completed the annual sponsor training at the Ben Lomond Conservation Camp. This training is required by CAL FIRE and the California Department of Corrections and Rehabilitation for all personnel who work as sponsors with fire crews on projects.

Orre attended a CPR and EEO refresher class. Bernheisel completed the Hazardous Materials refresher training. In February, Bernheisel completed the Certified Purchasers training in Magalia. Cameron attended an informational session concerning the Employee Support Services

program at Felton Headquarters. SDSF staff completed Information Security Awareness training required by the California Natural Resources Agency. Orre successfully completed C Faller Recertification in mid-May. SDSF Staff completed the online Defensive Driver course through DGS. Bernheisel attended duty chief training in Redding on May 30<sup>th</sup>.

Prior to the start of timber harvesting for the season, training was held with biologists from the Resource Conservation District of Santa Cruz County for listed species in the timber harvest areas. Six contractors and five CAL FIRE staff attended.

On three days in mid-May, movement drills organized by CAL FIRE Training Captain Jed Wilson and Battalion Chief Jake Hess were held on the Forest. The movement drill includes wildland firefighting resources from all the local Santa Cruz County fire departments and districts.



**Movement drill in mid-May**

Monterey Bay Search Dogs (MBSD) conducted several search-dog training activities in the Forest. MBSD is affiliated with the Santa Cruz Sheriff's Department Search and Rescue Team and the California Task Force 3 Urban Search and Rescue team. A tour of the Forest was held with another organization, the Monterey County Search & Rescue Dogs, who work with the Monterey County Sheriff's office. They returned to the Forest to train their dogs in air-scent, ground trailing, cadavers and water tracking with the goal of getting their dogs certified.

Bernheisel attended the National Marine Fisheries Service presentation of the 2012 California Central Coast Coho Recovery Plan in Scotts Valley in September, Forest Practice Law Enforcement in Fort Bragg during the week of October 15<sup>th</sup> and Supervision 4 at the CAL FIRE Academy in December. Dufresne and Lucas attended a Registered Professional Forester exam preparation seminar in November.

## **TIMBER MANAGEMENT**

Hauling for the Rim Timber Harvesting Plan (1-09-107-SCR) began for the second year on July 6<sup>th</sup>. A new archaeological site was discovered in the timber sale area and the THP was amended and site records were recorded. Conifer harvesting operations were completed in mid-July and very little hardwood was removed in conjunction with the conifer harvesting. In August

a separate hardwood operator was brought in to focus on the concentrations of down hardwood and thinning of the hardwood stands. A total of 172 tons of firewood were removed in the Rim THP in 2012. The purchaser for the Rim timber sale, Sierra Pacific Industries (SPI), delivered a 5,000 gallon water tank to the lower helipad as part of the contract agreement. Totals for 2011 and 2012 were 1,567,030 board feet of redwood and 27,720 board feet of Douglas-fir which brought in \$594,458.77 in revenue. With the additional 172 tons of hardwoods (firewood) removed, the final total revenue for the Rim THP was \$595,318.77. The contract for the Rim THP ended October 14<sup>th</sup>.

Local RPF and wildlife biologist, Matt Greene, conducted raptor surveys for both the Fern Gulch and Rim THP areas with assistance from Forestry Aides Dufresne and Lucas. No nest sites or nesting activity was identified.

After the Fern Gulch Timber Sale received no bids in 2011, the plan was restructured. In January 2012, the THP was amended to change Fern Gulch Road to a temporary road. On March 27<sup>th</sup>, at the bid opening, the timber sale was awarded to the highest bidder, Big Creek Lumber, at \$346.00 per MBF for redwood. A lower bid from Redwood Empire Sawmills was returned. The contract was signed on April 27<sup>th</sup> and timber operations began on May 1<sup>st</sup> after two pre-operational meetings with representatives of Big Creek Lumber and the Licensed Timber Operator (LTO) Lone Star Timber Harvesting. Orre and Bernheisel headed an informational meeting with neighbors of the Forest on the THP process, rules and area closure procedures. Lucas and Dufresne also attended and posted signs at Forest entrances to advise the public of the timber harvest area closures.



**Cable yarding in the Fern Gulch Timber Sale**

Michael Huyette, CGS Geologist, monitored the progress of road construction and timber operations for Fern Gulch. Later during the summer Michael Huyette retired and CGS Geologist Don Braun resumed geologist inspections consistent with requirements in the THP.

Don Clark, CAL FIRE engineer, made two trips in April to assess the leaning old-growth hazard tree in the Fern Gulch timber sale area and determine the best way to mitigate the hazard. One of the trips included arborist, James P. Allen. A final mitigation for monitoring the lean and any movement of the tree was implemented. A cable system to secure the tree was not used.

From June 18<sup>th</sup> through October 15<sup>th</sup>, a temporary bridge over Soquel Creek along Longridge Road was installed as part of the THP for the main haul route. The first log truck for the Fern Gulch Timber Sale began hauling on June 19<sup>th</sup>. Forester I Andy Hubbs, the new CAL FIRE Unit VMP Coordinator, and Forester I Scott Bullock inspected the Fern Gulch THP in June and September. Operations throughout the summer ran smoothly with no major breakdowns causing time lost on production and no major injuries. Forest staff conducted water quality monitoring inspections in the Rim and Fern Gulch THP areas throughout the wet season.

On June 13<sup>th</sup>, the Highland Bridge was re-decked by the Fern Gulch LTO and crew. The re-decking increased the running surface to 11 ½ feet, and included new railings. This project allowed log trucks and emergency response vehicles to cross the bridge with greater ease, and decreased the safety concerns for Forest visitors using the bridge.



**Redecking and new gate on the bridge at Highland Way.**

In August, CAL FIRE Foresters Tim Meyers and Andy Whitlock performed check scales for SDSF timber sales at Chinese Camp, Sonora and Big Creek Lumber. No significant discrepancies were noted and they felt that they were adequately accommodated at all the mill sites in order to perform the check scaling.

There was a log truck accident on the Fern Gulch THP on July 24<sup>th</sup>. The log truck rolled onto its side off the road when the driver did not take a turn wide enough and drove onto the soft

shoulder. There were no injuries or environmental damage, although the log truck was completely totaled. An accident report was completed by a CHP Officer and CAL FIRE Officer.

In July, August and September, several public tours were given to demonstrate the techniques used on the Fern Gulch Timber Harvesting Plan. Over 80 members of the public attended the tours of the Fern Gulch area. In addition, other tours of the harvest area were attended by a third-grade Mountain School elementary class of 19 students and 5 adults, a group of erosion control specialists (organized and planned by Rich Casale of the USDA Natural Resources Conservation Service), newly-elected County Supervisor Zach Friend, Advisory Committee members, several CAL FIRE staff, and two groups of students from the Swanton Pacific Ranch Sustainable Forestry and Environmental Practices Summer Program. Tour participants saw horse logging, the unique SYYS yarder in operation, timber falling, erosion control practices, new road construction and habitat improvement sites. Overall feedback from the tours was very positive. A front page article was written in the local newspaper, the Santa Cruz Sentinel, on Sunday, September 16<sup>th</sup> regarding the tours and timber harvest. Another article about the field trips was prepared by CAL FIRE Forester Jill Butler and published in the Forestland Steward Newsletter.



*Ed Orre providing information to a Fern Gulch timber tour group.*

Orre and CAL FIRE Region Archaeologist Chuck Whatford examined several unrecorded historic sites, evaluated new information related to historical timber harvesting, and examined additional areas associated with the LWD project. On June 19<sup>th</sup>, a new archaeological site was examined in the Fern Gulch Timber Sale area by Whatford and Orre, and protection measures and modifications to operations were implemented.

A total of 2,191,280 board feet of redwood and 38,050 board feet of Douglas-fir was removed, bringing in \$758,220.93. By the end of 2012, 282 tons of hardwood (as firewood) was removed from the Fern Gulch area, bringing an additional \$1410 in revenue, for a final total sale value of \$759,630.93.

Nine firewood permits (Class 1 Timber Sales) were issued in 2012 for a total of 18 cords and \$360 in revenue. In 2012, the price per cord was \$20, with a one cord minimum. All firewood permits terminated on October 15<sup>th</sup> for 2012.

A total of 10,000 redwood seedling were ordered from Green Diamond Resource Company Nursery for planting in the two timber harvest areas in 2013 or early 2014.

Preparation for the new Comstock Mill THP began on the western side of the Forest near Amaya Creek Road led by CAL FIRE Forester Scott Bullock. The THP focuses on the area outside the previous Amaya THP from 1998. CGS Geologist, Don Braun, completed a pre-consultation for the new timber harvest plan area.

## RESEARCH

After several years of consultation with numerous experts, the Large Woody Debris (LWD) and Habitat Complexity Project began along a 0.7 mile stretch of the East Branch of Soquel Creek. The purpose of the project was to contribute to the survival and recovery of Federally and State listed Endangered Central California Coast Evolutionarily Significant Unit Coho Salmon (*Oncorhynchus kisutch*) and Federally listed Threatened Central California Coast Distinct Population Segment Steelhead (*Oncorhynchus mykiss*) in the watershed, by increasing habitat complexity and pool frequency. CAL FIRE Hydrologist, Pete Cafferata, was instrumental in providing continuity through the planning process with many iterations of proposals, permits and personnel changes.



*Rootwad transport as part of Large Woody Debris Project*

When the entire LWD project area with 5 sites went to bid through the state contracting process only one bid was received. State contracting rules did not allow for the process to move forward with only one bid. The RCD was able to contract with the one bidder to install one portion of the project (Site #1) with grant funding and that site was implemented in September 2012. CGS, Certified Engineering Geologist, Steve Reynolds prepared designs, worked with the contractor in the day to day operation of implementation and followed up with detailed monitoring reports of the stream geomorphology through time. The remaining project areas will be advertised for a contract bid in 2013. Rootwads and logs that were taken from the Fern Gulch harvest area have been staged for use in the remainder of the LWD project areas.



*One of three rootwads installed at Large Woody Debris Project Site 1*

NOAA Fisheries staff and volunteers conducted annual electro-fishing surveys on in the third week of September to sample steelhead at five stream sites. The Ashbury site was also sampled in June. Electro-fishing surveys began in 1993 in partnership with the California Department of Fish and Game. The 2012 survey data was analyzed and an annual report of the results was prepared.

On May 23<sup>rd</sup>, Dufresne and Lucas launched HOBO temperature gauges (instream water temperature monitoring devices) at six in-stream locations plus one air temperature location on the Forest. The loggers were retrieved in October. One monitoring device was found to be defective and its data from the Southwest Boundary site was irretrievable. The data was analyzed and an annual report of the results was prepared, an effort which continues the ongoing stream temperature monitoring which began in 1997.

Dr. Alexandra Ponette-Gonzalez from the University of North Texas, Department of Geography began a study in the Forest to monitor the transfer of nutrients and pollutants in precipitation or as particles or gases from the atmosphere to the land surface. Collectors were set up at various elevations, aspects, topographic exposures and vegetation types to observe these

influences on atmospheric deposition. SDSF staff contributed to this research by setting up plots and changing out collectors.



*Forestry Aide Elizabeth Lucas and Forest Manager Angela Bernheisel assist in changing out collectors for atmospheric deposition study*

Dr. Brook Kraeger, a local hydrologist, civil engineer and SDSF neighbor, continued collecting data from a pair of rain and stream gauges located in a small watershed in the Forest. The purpose is to model the effects of forest management on runoff. The Rim timber sale logged in 2011 represents the first disturbance in this watershed since the study began in 1995.

Dr. Doug Schmidt of UC Berkeley made several visits to his research plots for studies on Sudden Oak Death (*Phytophthora ramorum*). One study involves treating tanoak to resist infection from Sudden Oak Death while the other investigates *P. ramorum* spore production from bay trees in an overstory canopy.

Forest staff worked with researchers from Washington State University on the Pacific madrone study at the Ben Lomond Conservation Camp. This site was roto-tilled and fenced, and seedlings were planted in a three-acre plantation in February. This study is species-wide and examines the various agents and situations that occur in the different ecoregions where the Pacific madrone occurs. The Ben Lomond Camp site represents the furthest south study location that expands from California to Oregon and Washington, representing four ecoregions. In December, Bernheisel, Dufresne and Cameron assessed seedlings and found a very high mortality rate at the Ben Lomond Camp site.

A new study with Dr. Marianne Elliott from Washington State University and researchers from the Canadian Forest Service will focus on biocontrols for inhibiting sprouting of bay laurel stumps. In June, samples of diseased tissue were taken from bay trees, research plots were located and trees were tagged. Plans are for at least 300 trees to be treated in 2013 to evaluate the effectiveness of different treatments over time. The areas where the treatments will occur have very heavy stocking with bay laurel trees due to the high mortality of tanoak and madrone within the stands. As bay laurel trees spread Sudden Oak Death through the forest they are not killed by the pathogen. Finding a treatment to reduce the occupancy of bay laurel in stands such as these will increase species diversity and overall forest health.

A herpetological study, led by CAL FIRE Captain Lawrence Erickson and sanctioned by the North American Field Herping Association (NAFHA), continued with surveys in April, July and November. At least 10 volunteers participated each day. Sign markers were added to the research sites to warn forest visitors not to disturb the study sites containing cover boards. Data collected from these surveys is being stored in NAFHA's Herpetological Education and Research Project database.



*Forest Sharptailed Snake, Contia Longicaudae Photo by J. Maughn*

Dr. Janet Foley of UC Davis continued her study of blood-borne disease reservoirs in ticks and small mammals and expanded her research to include herps. A graduate student in herpetology also assisted. New telemetry collars were placed on wood rats to determine how diseases travel. Preliminary results indicated that 6% of small mammals tested positive for Lyme disease (*Borrelia burgdorferi*) and 18% tested positive for Anaplasmosis (*Anaplasma phagocytophilum*).



*A woodrat being handled for collaring in Dr. Janet Foley's research study on blood-borne disease.*

Dr. Chris Wilmers and Paul Houghtaling of UC Santa Cruz continued the Santa Cruz Mountain Puma Project which monitors the distribution and behavior of local mountain lions using GPS telemetry collars. Bait stations and game cameras were employed to locate un-collared lions in the area and to relocate collared lions for evaluation. In May, Orre and Dufresne assisted with attempts to capture a collared male with hounds. On June 25<sup>th</sup>, a lion was re-collared near Sulphur Springs. The lion was not at a bait-station; it had hunted a fawn and was registered in the area via radio collar. A male lion was captured in October to replace a broken collar. SDSF provided storage of bait near the office for the Puma Project.



**Mountain puma with radio collar in the Forest.**

The annual visual cone crop survey was completed for the CAL FIRE Seed Bank at the LA Moran Reforestation Center. Bernheisel attended the Sempervirens Fund experiment project tour where they are demonstrating practices to accelerate old growth forest structure at their Waterman Gap ownership.

## **RECREATION**

Mountain bikers continue to be the most numerous visitors to the Forest. The highest use continues to be weekends with nice weather. At least 60 vehicles use the parking area and parking along Highland Way on any given Saturday or Sunday. New trail counters were installed on all major trails in the Forest in order to more accurately estimate recreation user numbers.

New slide damage occurred on Highland Way just before Christmas blocking the roadway and limiting public access to the Forest entrance. The slide was cleared in early January.

The Stewards of Soquel Forest, a non-profit organization supporting SDSF educational and recreational goals, conducted six trail work days in 2012 with the help of several volunteers. On February 26<sup>th</sup>, Orre participated in a trail work day with the Stewards and 19 volunteers. They worked in two groups on Ridge Trail and Sawpit Trail. The Mountain Bikers of Santa Cruz (MBOSC) led two trail work days, one on March 10<sup>th</sup> with Bernheisel, Orre and 15 volunteers on Braille Trail, and another on March 18<sup>th</sup> with Orre and eight volunteers on Sawpit Trail.

Additional trail work days were completed with the Stewards on March 31<sup>st</sup> on Ridge Trail, on April 7<sup>th</sup>, and on April 29<sup>th</sup> on Corral Trail. The website [www.trailworkers.com](http://www.trailworkers.com) helped with volunteer sign-ups, notifications and work day reports. The schedule of trail work days was also posted on signboards in the Forest.

Bernheisel and Orre met with Stewards President Patty Ciesla and volunteer Drew Perkins to discuss trails in the Forest, and made plans to design a new trail near Tractor Trail.

Tractor Trail remained closed to public use through 2012 due to timber operations. The trail was reopened in January 2013. Forestry Aides Dufresne and Lucas performed reconnaissance surveys for any illegal bike trails in the Forest. The majority of illegal trails and stunts continue to be in the Corral Trail area. These illegal trails and stunts are always eventually eradicated.

SDSF issued three Special Use Permits for activities on SDSF and revenue to FRIF for the permits totaled \$2000. On April 14<sup>th</sup>, the first-ever legally sanctioned mountain biking race, the Mountain Bikers of Santa Cruz (MBOSC) Super Enduro, was held on the Forest in conjunction with Bike Fest 2012 in Aptos Village. The Super Enduro had 50 competitors and included segments on the Forest of Nisene Marks State Park. The event was a success with the help of numerous volunteers, the Amateur Radio Emergency Service, the Loma Prieta Fire and Rescue Volunteers, as well as CAL FIRE prevention officers and Forest staff. Few spectators attended the event, but Bell Helmets, the event sponsor, produced a video. Other Special Use Permit holders were Fox Racing Shox for product testing and the Dirt Series Women's Mountain Biking Clinic. National Mountain Biking Patrol leader, Daryl Breuninger, regularly volunteers to work with Special Permit Use holders to provide his expertise about the trails and environment at SDSF. The rate SDSF charges for issuing a Special Use Permit for these type of events allowing for shuttle vehicle access is \$20 per person.



*Super Enduro riders in the Forest*

Bernheisel attended the Boggs Mountain Classic, part of the National Interscholastic Cycling Association race series for high school teams at Boggs Mountain Demonstration State Forest on April 15<sup>th</sup>. This is a long standing event that has been occurring at BMDSF. Bernheisel met with Forest Manager Gerri Finn to discuss how they handle races in order to improve coordination of events. On May 14<sup>th</sup>, stage 2 of the 2012 Amgen Tour de California bike race passed by the Forest office and the road to the office was closed for several hours. Specialized

Bicycle Components Company continued to provide a portable toilet (with servicing) to SDSF visitors as a donation. This portable toilet is located at the Highland Way parking area.

In October, Dufresne and Lucas attended a Fungus Federation of Santa Cruz meeting to update members on SDSF activities and to issue mushroom gathering permits. A total of 71 personal-use mushroom gathering permits were issued for the year to 86 people (some permits were issued for couples and families). Requests for permits increased after the annual Fungus Fair event in early January 2013.

In November, Forest staff met with two staff members from DFW to tour the Forest and to look at potential hunting opportunities and explore the potential for trial hunting program.

## EDUCATION

Forest staff and a Ben Lomond Fire Crew assisted staff from the Oakland Museum Natural Science Renovation Project to harvest bark from redwood trees to use in their redwood forest exhibit. LTO, Ken Pelphrey, assisted by falling a tree near a road that was easily accessible within the Rim THP. The bark was later dried, preserved and reassembled in the museum to represent two trees in a redwood forest. The whole operation was a big success in this hands on coordinated effort from the LTO, the Ben Lomond Crew, several of the Oakland Museum staff and SDSF staff.



*Member of Ben Lomond Crew 5, Oakland Museum and SDSF peel bark off redwood tree for museum exhibit.*

Dufresne and Lucas presented basic Forestry concepts and field training on how to measure trees to students at Soquel High School over three days in October. Several of these students participated in the Forestry Challenge the following month. The Forestry Challenge is a competitive event for high school students in technical forestry and current forestry issues. Bernheisel, Lucas and Dufresne participated as instructors, proctors and judges for the 2012 competition in Boulder Creek.

Orre met with a teacher from Monterey to arrange for educational trips to the Forest for special needs students.

## **LAW ENFORCEMENT**

Unit Prevention Officers increased patrols of the Forest on weekends and evenings. Some progress was made in deterring weekend parties and camping after a large party was shut down by CAL FIRE Officers with the assistance of a State Parks Rangers and Santa Cruz County Sheriffs. Vandalism of gates on the Forest and the adjoining Nisene Marks State Park was ongoing in 2012. Unit Prevention Officers assisted SDSF staff with three trespass incidents in 2012: two on the Forest and one at the Noren parcel. One case involved 2 vehicles that caused extensive road damage and the offenders were cited.

In the spring, the container used for housing the SDSF ATV and other equipment and tools on the Forest was burglarized. Several items were stolen, but luckily not the ATV. A CAL FIRE Prevention Officer responded, along with a Sherriff's Deputy, to investigate and file a report.

CAL FIRE engines responded to eight requests for medical aid by injured mountain bikers on the Forest. Most of the accidents occurred on Braille Trail. The Loma Prieta Volunteers also responded to several of these incidents. The Loma Prieta volunteers assisted a Forest visitor who reported a dead car battery parked near the parking area on Highland Way. One stray dog was found in SDSF during the summer and was turned in to the animal shelter. One lost dog was successfully reunited with its owner with the help of Forest volunteer George Smith.

Other incidents included theft of the timber fallers' chainsaws, a vehicle accident on March 27<sup>th</sup> on Soquel-San Jose Road on State property (Noren parcel), and trespassing and vandalism at an uninhabitable house on State property near the Forest. Illegal dumping occurred on the Forest along Comstock Mill Road. A new gate was installed at the boundary on Comstock Mill Road to deter this illegal dumping. Illegal firewood cutting occurred intermittently although no suspects were identified.

On September 6<sup>th</sup>, a big rig accident occurred along Soquel-San Jose Road and the vehicle crashed into Hester Creek on the CAL FIRE-owned Noren parcel that was acquired in 2006. Approximately 50 gallons of diesel spilled onto the stream bank and leaked onto the stream. The hazardous material cleanup and assessment of the site was led by DFW coordinating with Santa Cruz County Environmental Health. CAL FIRE legal counsel from Sacramento assisted with coordinating a Right to Entry permit through DGS and the trucking company.

2012 CALENDAR YEAR FINANCIAL SUMMARY FOR  
SOQUEL DEMONSTRATION STATE FOREST

Expense Summary

1.	Capital investment in land, timber, buildings, and roads		\$0
2.	Operating expenses	Labor	\$368,803.30*
		Material	\$59,729.95**
		<u>Property Tax</u>	<u>\$5,532.90</u>
		Total	\$ 434,066.15

Revenue Summary

3.	Gross revenues	(Class I Timber Sales)	\$360.00
		(Special Use Permits)	\$2,000.00
		<u>(Class III Timber Sales)</u>	<u>\$879,007.35</u>
		Total	\$881,367.35

Net Operating Costs

	Total	\$434,066.15
		<u>-\$881,367.35</u>
		- \$477,301.20

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\* Personnel costs shown are for SDSF budgeted personnel plus one month of surveying work done by CAL FIRE Surveyors Jeff Gawronski and Dan Gregory, Technical Services, totaling \$7,150.83. Other CAL FIRE personnel who have contributed work to SDSF in 2012 include Rich Sampson (CZU Unit Forester), John Martinez (CZU PreFire Planner), Scott Bullock (CZU Forester), Jake Dellamonica (CZU Prevention Battalion Chief), Jim Galassi (CZU Prevention Captain), Pete Cafferata (State Hydrologist) and Jill Butler (Region HQ Forester). California Geological Survey Certified Engineering Geologists Stephen Reynolds and Cheryl Hayhurst also spent several days on the forest overseeing the Large Woody Debris project Site #1 implementation and monitoring. Don Braun, CGS, also provided technical assistance in developing the Comstock Mill THP.

\*\* Additional funding for forest supplies and improvements was provided by Sacramento FRIF funds totaling \$27,906.14 not included in the total above.

ANNUAL REPORT OF TIMBER CUT

Soquel Demonstration State Forest

From January 1, 2012 to December 31, 2012

COMMERCIAL SALES

FOREST PRODUCTS CONVERTIBLE TO BOARD FEET

Product (give dimensions)	Conversion Factor	# of Pieces, Cords, Lineal Feet, Etc	MBF	Value
MBF			2562.29	\$876,737.35
Cords				
Christmas Trees				
Posts (size)				
Shingle Bolts				
Poles (size)				
Grape Stakes				
Shakes				
TOTALS			2562.29	\$876,737.35

Miscellaneous Forest Products - Not Convertible to Board Feet

Kind	Unit	Quantity	Value
Firewood	cord	18	\$360.00
Hardwood	tons	454	\$2270.00
TOTALS			\$2630.00

No Forest Products were cut for Department Use.

Approved by Angela Bernheisel Signature \_\_\_\_\_

Title Forest Manager Date Submitted \_\_\_\_\_

**ANNUAL STATE FOREST REPORT  
STATISTICAL DATA** (attach to annual Narrative Report)

**SOQUEL STATE FOREST  
Calendar Year 2012**

<u>ADMINISTRATION</u>	<u>Processed</u>	(number)	<u>Pending</u>
Rights-of-Way	0		0
Leases	0		0
Trespass Cases	1		0

**PROTECTION**

Fires: Number of Fires: **0** Acres Burned: **0** Person-days Fire Patrol: 40  
State Forest Campfire Permits Issued (number): **0**

Insects: Number of Trees Treated: 0 Number of Acres Covered: 0  
Control Methods Used: none

Disease: Number of Acres Treated (Contract): 0 Disease Involved none  
(State): 0 none

Number of Pest Detection Reports Submitted: 0

Hazard Reduction:

Snags Felled or Removed: 0 Acres: 0  
Roadsides Treated (miles): 1  
Slash Abated or Cleanup (acres treated): 1  
Salvaged (board feet): 0

**TIMBER STAND MANAGEMENT**

Number of Timber Sales Class I: 9 Class III: 2

Timber Stand Improvements

Trees Pruned: Number of Trees: 0 Acres: 0

Thinning (acres): Acres: 0

Release (acres): Acres: 0

Planting Number of Trees: Acres: 0

Seeding Number of Spots: 0 Acres: 0

Site Preparation for

Natural Seedfall (acres): 0 Planting (acres): 0 Seeding (acres): 0

State Method of Site Preparation: none

**EXPERIMENTS & DEMONSTRATIONS**

Approved Studies Worked on (list by titles):

2012 Steelhead Trout Population Report- Report pending

Instream Temperature Monitoring 2012- Report submitted

SDSF Herpetology Survey 12/2010-12/2012- Ongoing

Santa Cruz Mountain Puma Project- Ongoing

Sudden Oak Death Studies (various)- Ongoing

Stream Flow Modeling Study - Ongoing

Blood-borne Disease Study - Ongoing

Atmospheric Deposition Research 2012 – Report pending

Large Woody Debris Stream Habitat Restoration Project Site #1 – Reports Submitted

**PERMANENT PLOTS**

	<u>Size</u>	<u>Number</u>
Inventory Plots Established	1/5 acre	0
Other Plots Established	none	0
Plots Remeasured	none	0
Timber Cruised (acres):		

**ENGINEERING**

Corners Recovered or Set: 64 monuments recovered, additional 7 found; 4 monuments set.  
Miles of Line Run: 3.6  
Miles of Boundary Surveyed and/or posted: 3.6 plus ½ mile flagged  
Boundary Surveyed and Posted to Date: 3.4 miles posted with boundary signs  
Western boundary of Forest completed, northern boundary parallel to Comstock Mill Road completed and posted.

**CAPITAL IMPROVEMENTS**

	<u>New Construction</u>	<u>Total System</u> <u>(miles &amp; tenths)</u>	<u>Amount</u> <u>Maintained</u>
Main Timber Access Roads	0.7	8.8	8.8
Secondary (Spur) Timber Access Roads	0	5.0	5.0
Fire Protection Roads- (included above)	0	0	0
Firebreaks	0	1.0	1.0
Christmas Tree Roads/(included above)	0	0	0
Trails	0	8.6	8.6
Powerlines	0	0	0
Telephone Lines	0	0	0
Bridges	0	1 (Hihn)	1
Water Development	0	1 ( East well)	0
Campgrounds	0	1	1
Camping Units	0	1	1
Picnic Grounds	0	4	4
Picnic Units- tables	0	9	9
Toilets	0	1	1
Storage Containers	0	2	2

Buildings Constructed (describe each): none

**RECREATION**

Primary Use	Day Use	Overnight Use	
	(Visitor Days)	Campers	Camper Days
	<b>ESTIMATED</b>		
Camping <sup>1</sup>	0	0	0
Fishing <sup>2</sup>	0	0	0
Hunting <sup>3</sup>	0	0	0
Picnicking (see hiking)	0	0	0
Sightseeing (driving)	0	0	0
Hiking	2,700	0	0
Horseback Riding	0	0	0
Nature Walks (see hiking)	0	0	0
Swimming	0	0	0
Wintersports <sup>4</sup>	0	0	0
Other (specify):	-	-	-
Mushroom Collecting	300	0	0
Mountain Biking	17,000	0	0
Estimated TOTAL	20,000	0	0

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RM-39

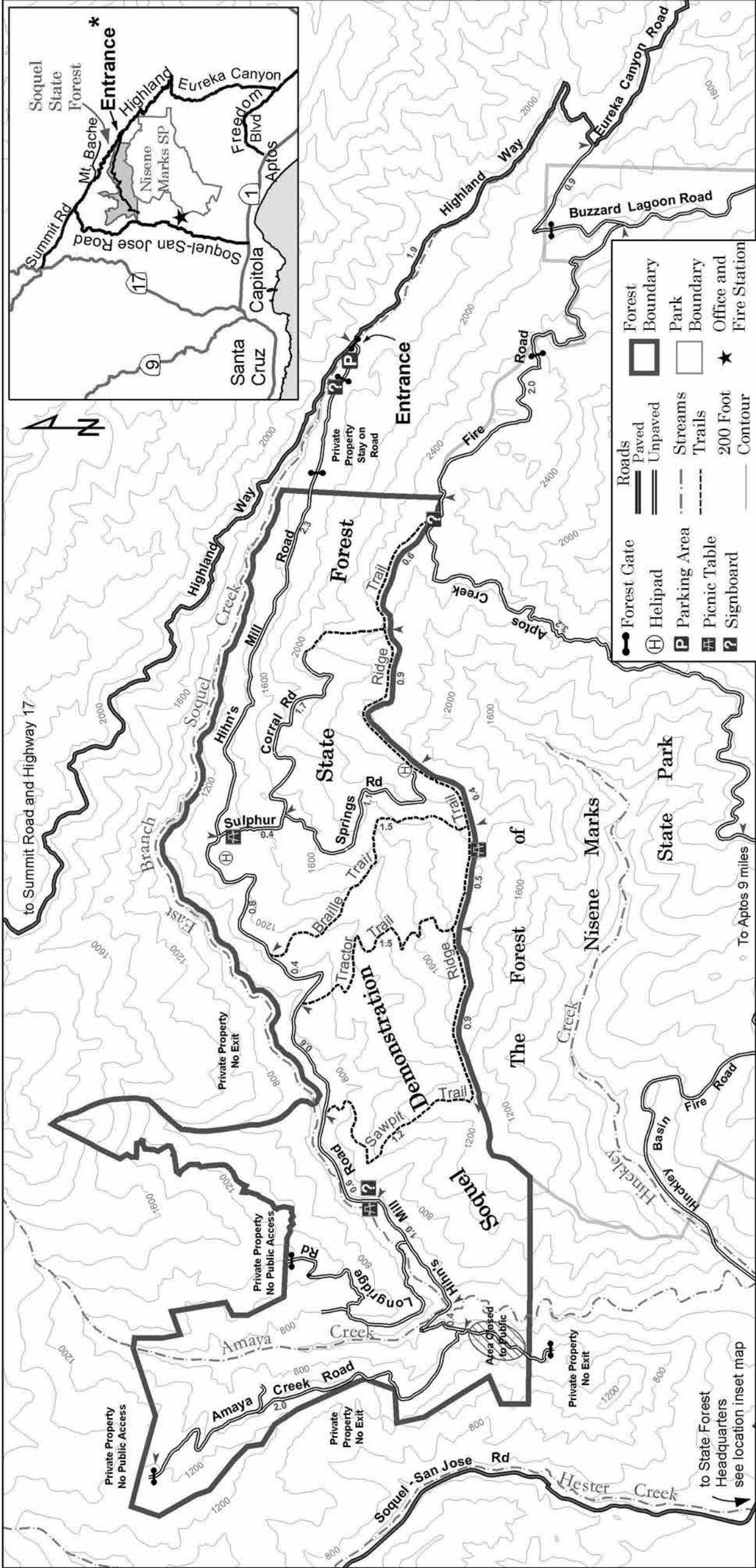
1 No campgrounds exist on SDSF. Camping is only allowed by special use agreement.

2 No fishing is allowed on SDSF by California Department of Fish and Game regulations.

3 Hunting and/or firearm use is only allowed on SDSF by special use agreement.

4 SDSF is not located in an area that normally receives snowfall.

# Soquel Demonstration State Forest



	Forest Gate		Roads Paved		Forest Boundary
	Helpad		Roads Unpaved		Park Boundary
	Parking Area		Streams		Office and Fire Station
	Picnic Table		Trails		200 Foot Contour Interval
	Signboard		Private Property No Exit		

Scale 1:32,000 at 8 1/2 x 14  
 Revised August 2003

0 0.25 0.5 1 Mile  
 0 0.25 0.5 1 Kilometer

\* The Forest entrance is located on Highland Way 6 miles east of Soquel-San Jose Road (Old San Jose Road) and 10 miles east of Highway 17. SDSF Office: (831) 475 - 8643

SIXTY-SEVENTH ANNUAL REPORT  
MOUNTAIN HOME DEMONSTRATION STATE FOREST

Tulare County  
California

2012 CALENDAR YEAR



James J. Kral  
Forest Manager

State of California  
DEPARTMENT OF FORESTRY AND FIRE PROTECTION  
CALIFORNIA SOUTHERN REGION

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## Administration

### 2012 STATE FOREST STAFF

Forest Manager: James J. Kral  
Forestry Assistant II: Alan Frame  
Forestry Aides: Benjamin Anderson, Cal Poly, San Lois Obispo  
Mitchell Goulette, Cal Poly, San Lois Obispo  
Ricky Shurtz, Humboldt State University  
Brian Harwood, Humboldt State University



2012 Forest Staff: Jim Kral, Alan Frame, Mitchell Goulette, Ricky Shurtz, Benjamin Anderson, Brian Harwood

The Forest Manager and Forestry Assistant II continue to be the only permanent staff assigned to the State Forest. Sacramento Headquarters provided FRIF funds to hire four Forestry Aides to assist the permanent staff during the 2012 field season. Forestry Aide Kyle Hampton was hired by Sacramento to assist Jeff Leddy during the 2012 season. On May 7<sup>th</sup> Kyle began cruising Continuous Forest Inventory (CFI) plots for Mountain Home Demonstration State Forest (MHDSF) under the supervision of Jeff Leddy. A second Forestry Aide from Sacramento, Jillian Kreth, was scheduled to join Kyle in mid June and assist him with the inventory work. In addition to Jillian, The Forestry Aides from MHDSF were committed to assist in the CFI cruise, once they arrived, and as time allowed. Two new seasonal aides were hired by MHDSF on May 14<sup>th</sup>, Ricky Shurtz and Brian Harwood, both were students from Humboldt State University.

Brian Rueger, Registered Professional Forester (RPF) employed by the Tule River Indian Reservation, requested MHDSF to allow his Forestry Technician, Vance

Peyron to assist in the CFI cruise and other projects in timber sale preparation. Brian's motive was to gain Vance experience in forestry work. Brian's request was granted, and MHDSF greatly benefited from Vance's contribution. Vance began on June 5<sup>th</sup>, working Wednesdays and Thursdays through early August. Vance worked under a liability waiver for MHDSF and was funded through the Tule River Tribe. Vance is currently enrolled at Humboldt State University pursuing a degree in forestry.

On June 18<sup>th</sup> two more seasonal aides were hired by MHDSF, Benjamin Anderson and Mitchell Goulette, both from Cal Poly San Louis Obispo. Jillian Kreth, the second seasonal hired by Sacramento, also arrived on June 18<sup>th</sup>.

Due to the CFI cruise, three additional people needed to be housed on the forest. The State Forest barracks was designed to house four seasonal workers with the option to double in one of the four bed rooms, allowing a total of five. There are two bathrooms, and the furniture from Prison Industries consisted of two chairs and one couch dating back to the 1980s'. Plywood scraps had been inserted under the cushions to take the place of broken support straps. Sacramento found the funds to allow the purchase of three new recliners and a new couch for the barracks. In addition, a new refrigerator, cook stove, and couch were purchased for "Jack's House", where Jeff Leddy and Kyle Hampton were housed for most of the summer. Due to unforeseen circumstances, after three weeks of work on the CFI cruise Jillian Kreth returned to work in Sacramento, allowing Mitchell Goulette and Benjamin Anderson to have their own rooms.

Balch Park (Tulare County), Frasier Mill, and Hedrick Pond campgrounds were opened to the public on May 17<sup>th</sup>. The opening of Shake Camp, Hidden Falls, and Moses Gulch was delayed due to broken water lines and road repairs. On May 25<sup>th</sup> the entire forest was open to the public with all campgrounds available for camping.

Upon their arrival, the new Forestry Aides were trained by the Forestry Assistant II in trash collecting and recreational maintenance duties. Five of the Forestry Aides were also trained and carded as (A) Sawyers. This practice takes place each year, as safe and effective use and maintenance of chainsaws is vital to forest operations.

Of the four Forestry Aides from 2012, only one committed to return to work at Mountain Home Demonstration State Forest for the 2013 season. The other Three chose to seek work elsewhere to gain a variety of work experiences and additional exposure in the labor force. Ricky Shurtz will receive his Bachelors Degree in May 2013 and has committed to return to MHDSF for a second season. Prior to working at MHDSF, Ricky worked several years for Jim Kral at Progressive Forestry, where he gained valuable knowledge in timber sale preparation. As a returning Forestry Aide Ricky's experience in forest operations, and his familiarity of the forest is beneficial in training new aides both on the forest and in the barracks.



**Forestry Aide saw training; falling, limbing, bucking, piling, and decking.**

Due to decisions at the Unit level, the Aides were not permitted to participate in the Tulare Unit Firefighter Rehire Academy, leaving the permanent staff without immediate assistance in the event of a fire. This year, all Forestry Aides were enrolled in defensive driving classes and certified to operate State vehicles. Ricky Shurtz returned to Humboldt State University on August 17<sup>th</sup>. Mitchell Goulette and Benjamin Anderson returned to Cal Poly in mid-September. Brian Harwood accepted a job with the California Conservation Corp and left on September 14<sup>th</sup>. The permanent staff stayed busy with campground demands, annual winterizing of facilities, timber sale preparation, logging administration and closing the forest for the winter.

Snow pack for the 2012 season started out well below average in March with a snow depth of 18.3 inches and a water content of 14.4. The April depth measurement was also well below normal with a snow depth of 20.6 inches and water content of 8.6 inches.

Historic snow depth averages for MHDSF at the Enterprise Mill snow course were, March 1<sup>st</sup> - 39.1 inches, April 1<sup>st</sup> - 37.1 inches, and May 1<sup>st</sup> - 15.2 inches. The average water content was, March 1<sup>st</sup> - 14.4 inches, April 1<sup>st</sup> - 15.2 inches, and May 1<sup>st</sup> - 7.2 inches.

Throughout the 2012 snow season the forest was subject to sporadic and sometimes significant snowfall. However, rain and warm weather followed these snow storms and melted the snow soon after it accumulated.

April storms brought another 2 feet of snow to Mountain Home, insuring there would be measurable snow on the Old Enterprise snow course for the May snow survey. Typical spring like conditions left 3.6 inches of snow depth and 1.6 inches of water content for the May 1<sup>st</sup> snow survey.



**Hedrick Pond on April 18<sup>th</sup> 2012**

Once again winter closure in 2012 at MHDSF was done by two permanent gates and Tulare County DOT utilizing temporary barricades and signage. The permanent gates on both Bear Creek and Balch Park Roads have securely prohibited travel to the State Forest during the winter snow season. However, due to access issues from private land owners neighboring MHDSF, the Balch Park Road gate was relocated. On November 1<sup>st</sup> 2012 the Balch Park Road gate was moved from the original installation location up the road to the Brownie Meadow area. This gate relocation insured neighboring land owner's access to their property without the need to enter into the gated area. The relocated gate stood through the 2012 winter season in the new location with only one incident. Someone broke a key off in the large master lock. However, a local locksmith was able to remove the obstruction for a minimal fee.

Infrastructure repair and debris cleanup from winter storms was relatively light in the spring due to the lack of winter storms producing heavy accumulations of snow.



**The relocated gate near Brownie meadow**

In the early spring of 2012 David Dulitz agreed to continue working on the Old Growth Giant Sequoia (OGGS) inventory for MHDSF as a retired annuitant. Dulitz began this project in May of 2001 shortly after his retirement from Manager of Mountain Home Demonstration State Forest. The purpose of the inventory is to identify how many old growth Giant Sequoia trees exist on MHDSF. Each trees location, diameter, height, description of fire scars, and other characteristics will be recorded. Each tree is also tagged with an identification number. Due to numerous issues that program encountered while attempting to hire Dulitz as a retired annuitant, the inventory work did not begin in the 2012 season. Sacramento HQ is revising the paperwork in an attempt to have Dulitz begin the OGGS inventory in the spring of 2013.

Once again work began on installing new kitchen counters in the “House that Jack Built” a.k.a. “Jack’s House.” The new countertops that sport a brand new sink, match the new kitchen cabinets made from blue stained pine. The cabinets were built and installed by Mountain Home Conservation Camp in 2011. In addition to the new wood work, Jacks cabin houses a new propane refrigerator, cook stove, and a sofa sleeper. Work on the cabin will continue in 2013 with plans of installing young growth sequoia paneling in parts of the kitchen, bedrooms and bathroom. Due to the housing demands that come with visitors conducting inventory work, research, public speaking, etc., Jacks House has played an essential role in the infrastructure of the forest. This season the cabin housed Linda Pollack, Southern Region Archaeology Program Manager, Ken Delfino, Consulting forester, retired CDF, and two members

of the CFI crew. We are also planning to offer the house to Department personnel for a modest rental fee.



**The new cabinets, counter, and stove at Jack's house.**



On August 4<sup>th</sup> Mountain Home Demonstration State Forest hosted the Northern California Chapter of the Society of American Foresters summer meeting. The meeting focused on management strategies in the Southern Sierra and giant sequoia under various ownerships; as well as, the critical local forest industry. With a myriad of speakers scheduled, the day began at Happy Camp. Jeff Gletne, Forester for Sierra Forest Products, began discussion on private timberland management of southern Sierra mixed conifer with a giant sequoia cohort. Immediately following, Ken Delfino, Consulting Forester, retired CDF, continued the discussion with fire protection planning on private lands bordering public lands.



**Ken Delfino is speaking at Happy Camp, local mill owner John Wagy is at far right.**

From Happy Camp the group continued to Frasier Mill. A short hike to a second growth giant sequoia stand that had been thinned in the late 80s', became the next topic of discussion. Dr. Doug Piirto, Professor Cal Poly San Luis Obispo, and Josh Soderland, Forester ACRT, discussed the 20 year thinning study results, and evaluation of effects on giant sequoia. Dr. Rob York, University of California, continued with a discussion on the response of large, old giant sequoia to active management.



**Dr. Doug Piirto (background on stump), Professor Cal Poly San Luis Obispo**



**Dr. Rob York, University of California**

From Frasier Mill the group traveled to Sunset Point for lunch and more discussion. Sunset Point is a well-known interpretive archaeological site and day use area. It was a major base camp used by the local Indians for over 5000 years. Linda Pollack, Archaeology Program Manager, Cal Fire, spoke about cultural resource management in the southern Sierra and the research that Cal Fire did at the site.

Larry Duysen, Sierra Forest Products, discussed the need for a sustainable forest industry in the southern Sierra.

Jim Whitfield, Ecosystem Manager, Sequoia National Forest, spoke about management on the Sequoia National Forest and Giant Sequoia National Monument.



**Linda Pollack, speaking at Sunset Point.**

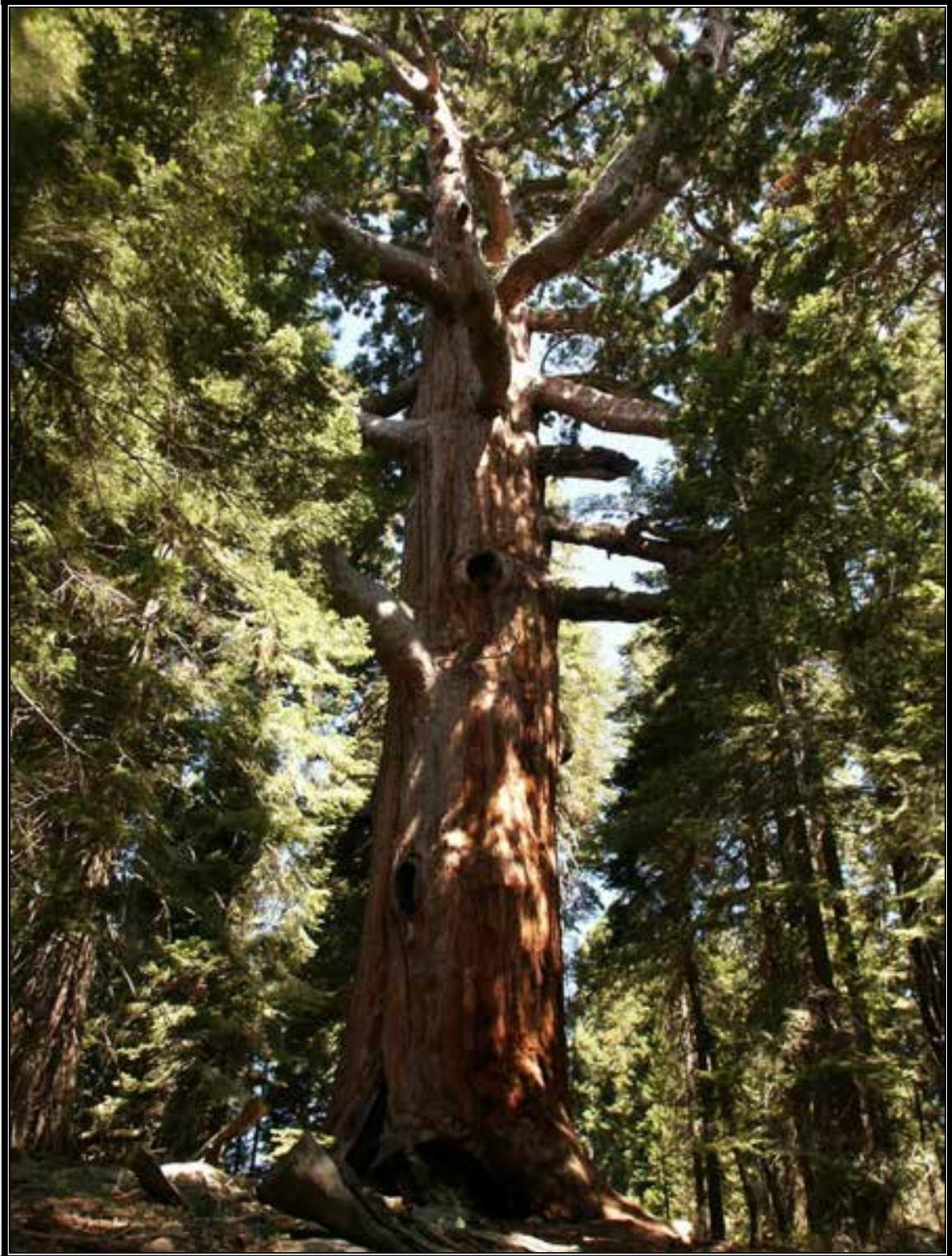
From Sunset Point, the group moved to the Vantage Point landing off of Summit Road. This location in the At Last timber sale area is where Jim Kral, Mountain Home Demonstration State Forest Manager, discussed the current management plan, and the silvicultural practices that are being implemented to favor giant sequoia reforestation and protection.



Jim Kral, MHDSF Manager speaking at Vantage Point landing.



From Vantage Point the group moved to a ridge east of Dogwood Meadow where the Bonsai Tree stands. Visitors stand in awe at the site of this unique old growth giant sequoia. There was no better location to hear closing comments for management of southern Sierra forests and giant sequoia under various ownerships. As the group adjourned they exited the forest through lower Dogwood Meadow, this allowed them to drive through the south portion of the At Last timber sale area as they traveled back to Springville.



**The Bonsai Tree**

In October, MHDSF hosted the 2012 Sequoia Forestry Challenge. This four day event was a competition for high school students in technical forestry and current forestry issues. Teams of students competed in field testing, and gave a presentation to determine the top scoring team. Forestry professionals spent time with the students familiarizing them with common tree species, forestry tools, and the use of identification keys. Working in 2-5 person teams, the students completed a comprehensive field test. The scores from various testing stations were combined to become 60% of the team's final score. The students are then taken on a fieldtrip where they are presented with a real life current issue to solve. They are given time to ask questions and collect data. Guided by two consultation sessions with a Registered Professional Forester, students use all available information to put together a 15 minute presentation, which is worth 40% of the final score.



**A student from the Mariposa High School team is demonstrating the use of an increment borer**

This was the first California Forestry Challenge in our area. A mix of first time and returning schools competed in this event at this new location. The students were housed at the Clemmie Gill School of Science and Conservation (SCICON), and meals were catered for a modest price.

The fieldtrip took place at MHDSF on October 11<sup>th</sup>, where the problem solving portion of the event was given. The students were given the task of Managing Giant Sequoia in the Southern Sierra. During the data collection portion of the day the students were granted permission from LTO Guy Van Gaasbeek to watch his timber faller Fred Malahy, fall a 40" DBH white fir. The students were also taken to an area where LTO Terry Johnson was operating a KOBELCO 235 high RPM rotary head masticator.



**Timber faller Fed Malahy is answering questions from the students.**



**Students being briefed on the current harvest in the Dynamite Springs timber sale area.**

The students created some amazing power point presentations with their recipes for regeneration of giant sequoia at MHDSF. Monache High School team 3 was first place, Palmdale High School was second place, Mariposa High School was third Place, and Monache High School team 2 was fourth place. With this first event under our belt, a larger turnout of competitors is expected for the 2013 event.

In mid-August Teri Griffis from the L.A. Moran Reforestation Center in Davis, contacted Jim Kral requesting sugar pine cone samples. Kral and Frame collected and shipped cone samples from numerous locations on the forest. After the reforestation center tested the cone it was determined that the Shake Camp and Galena Road areas had the best cones for seed collection. In early September Jim Kral met with tree climber Robert Beauchamp. Kral directed Beauchamp to good seed trees in the sample locations where he collected 50 bushels of sugar pine cones from two separate seed lots and delivered the cones to the L.A. Moran facility.

Tulare Unit HFEO's were able to do some much needed road grading to numerous secondary roads and two camp ground roads in Frasier Mill Campground. The rolling dips, inside ditches, and one curve were restored on the Moses Gulch Road. The Upper Moses Road and Copper Mine Road were graded for the first time since the mid 90's, when the last timber sales took place in those areas. The E and D Loop Roads at Frasier Mill Campground were also graded and dipped. Other roads graded this season were the Dogwood Meadow, Rock Crusher, Lace Meadow, Camp Lena, and the Bogus Meadow Roads.

Heavy Fire Equipment Operators continued road grading on the Bogus Meadow and Camp Lena roads until their work was stopped by a late December snow storm.



**HFEO Shane Braziel is preparing to lower the inside of this corner to allow drainage.**

**Acknowledgements:** The State Forest Staff thanks the entire Mountain Home Conservation Camp Staff for all of their assistance in camp and at the forest this year. This includes help with vehicle maintenance and repair, sign and cabinet work, milling, thinning and fuel reduction work, campground maintenance, hazard tree abatement, snow removal, infrastructure repairs and installation, trail work, chipping and pile burning. We would like to acknowledge Captain Wesley Grim (now retired) for maintaining the entire MHDSF trail system. We thank Captain Matt Guerrero for the fabrication work he has performed for MHDSF.

We thank the Tulare Unit for the prevention and fire patrols, particularly during peak season and critical fire conditions. We also thank the Tulare Unit HFEO's for their role in road and parking area maintenance. We would like to acknowledge Division Chief Phil Brown for directing burn operations on Mountain Home Demonstration State Forest. Chief Brown's commitment and determination to burn, has helped MHDSF to once again utilize fire as a valuable management tool.



Mountain Home Conservation Camp Staff: Pictured from left front: HFEM. Rick Evans, Cpt. Atilano Martinez, DC. Phil Brown, Cpt. Steve Ballew, OT. Lydia Venegas, Cpt. Jack Thompson, Cpt. Jeff Paul, Cpt. Don Abbott, Cpt. Matthew Guerrero. Back row from left: Cpt. Chris Fox, Cpt. Frank Villani, Cpt. Julio Quiroz, Dave McCarty. **Not Pictured:** Cpt. Tim Rogers.

## Recreation

Given the amount of snowpack and the general lack of hazards and storms in March, it was anticipated that the forest would open to the public by May 1<sup>st</sup>. However, April storms brought another 2 feet of snow to Mountain Home. In early May, the forest staff repaired broken water lines, and several sink holes in the road system. Camp hosts Dave and Diane Kuster returned to Frasier Mill

campground to continue their good work informing the public of forest rules, and notifying forest staff of issues. The entire forest was open to the public with all campgrounds available for camping on May 25<sup>th</sup>.

Once the entire forest was opened, most of the campgrounds had available campsites on weekends in July. Usage during the week tapered off to approximately 15% of what was observed on weekends.

Improved signage and personal communication with campers about the camping fee is an ongoing process which has been overwhelmingly positive. Of course, there were a few people that opposed the camping fee. However, when the alternatives to a fee are explained and they are reminded how peaceful it is due to user accountability, they are usually converted to happy paying campers.

Camping fees were set at \$15.00 per site which includes a single vehicle. If campers have an additional vehicle or a trailer, they are charged an additional \$5.00. Diligent patrol has proved effective in educating the public about the fee and the registration process. It has also increased the occurrence of payment being made. Public comments regarding the fees were, for the most, positive and understanding. A noticeable reduction in campers came with the implementation of fees however. Throughout the summer it became obvious the reduction in campers was due more to the required accountability of registering to camp rather than the payment of the fee itself. A camping trend change has come with the camping fee and the family camping experience has returned to Mountain Home.



**Happy campers**

Unit law enforcement (LE) patrolled the forest on Saturdays, while engines from Bear Creek Station patrolled on Sundays. Kral and Frame continued weekend

patrols to educate the public of the forest rules throughout the summer camping season. Though Bear Creek Station provided most of the Cal Fire engines for Sunday patrols, engines from other stations within the Tulare Unit would rotate through to assist with the patrols. Not only does this allow for positive contact and educational opportunities for the public, it allows the different engine crews within the Unit to become familiar with the infrastructure and road system of MHDSF.

In 2010 Kral and Frame began a public outreach program by directing engines to specific groups to provide photo opportunities and initiate group discussion among the campers and their children regarding the importance of safe and responsible camping. This public outreach program has become routine during weekend engine patrols. Engine crews make contact with numerous groups in most of the campgrounds every weekend throughout the camping season.



**Engine 4184 with campers at Frasier Mill Campground**

Historically, Mondays have been labor intensive in regard to trash collections. This is due to large accumulations of trash that cannot be accommodated with the many trash receptacles located in the campgrounds. Once the trash cans are full, campers leave bagged trash next to the garbage cans which then gets scattered by wildlife before the aides arrive to work on Mondays. Therefore, the decision was made to change the entire staff's days off to Tuesday and Wednesday allowing for maximum coverage through the busiest part of the week. The new summer time scheduling has been successful in mitigating trash scatters, allowing for more interaction with campers, creating better Cal Fire exposure and in resolving conflicts.

With hotter temperatures observed on the valley floor, camping activity increased during the summer. With the camper registration and five summers of weekend patrols by forest staff, TUU engines and law enforcement had a significant impact on camper behavior. The general trend has been toward more family camping, peace and quite, less vandalism, slower drivers and almost no gang related activity.

Tussock fir moth caterpillars created some pain and frustration throughout the forest this summer. Several campers complained of strange rashes, and one camper had to go to the hospital to be treated. The caterpillars fell from trees and crawled everywhere for about two months. The most common complaints were, trying to cook, and trying to sleep. Needless to say, screened canopies became the fad of this summer.

During a weekend patrol, Kral and Frame noticed a child playing with what appeared to be a snake. They approached the child, and to their surprise, it was the largest Rubber Boa the staff had seen on the forest. The Rubber Boa is a small native Boa with a blunt tail, and sometimes called two headed snake. The Rubber Boa is the only snake on the forest that doesn't bite, and is docile when taken in hand. Kral and Frame talked to the child about the dangers of handling snakes, and the need to return the snake to the location it was found.



**Child in Frasier Mill with a large Rubber Boa.**

Fishing remained a popular activity on the forest at Hedrick Pond and at Balch County Park. The Department of Fish and Game continued to stock Hedrick Pond and both of the Balch Park ponds throughout the summer. The last delivery of catchable fish for the season was in mid-September.



**Alan Frame is assisting the Department of Fish and Game in stocking trout at Hedrick Pond**

There was one illegal campfire found at the end of the Tub Flat Road during the 2012 season. Patrols were intensified throughout the summer in this area, and no additional illegal campfires were found. With the exception of just a handful of warnings for minor violations, an improvement in user awareness and compliance was observed. It is anticipated that things will continue to improve with the collection of fees and user registration.

On August 6<sup>th</sup>, Mountain Home Conservation Camp assisted Tulare County in a medical aid at Hidden Falls around midnight. While sitting on a stump and enjoying a few beers at the Hidden Falls campground, the victim fell from the stump, went down a bluff, bounced off a number of rocks, received a compound fracture of the left arm, numerous abrasions to his legs and concluded his 30 foot fall in approximately 1 foot of water at the edge of the Tule River. The victim was rescued, treated, and then taken by ambulance to the hospital.

Only one other injury was reported in 2012. While hiking along the river at Hidden Falls a female around fifty years of age tripped and sprained her wrist. She was given an ice pack and advised to see a doctor.

In mid June a 41 year old Hispanic female, became lost after wondering away from her campsite in Frasier Mill D – Loop. Frame, Unit Forester Dave Shy, and four Forestry Aides, assisted Tulare County S. O. in a search for the lost female. After an hour of searching a local resident from Happy Camp returned her to Frasier Mill

Campground. The resident found the lost female walking down the road near Happy Camp. She told the resident she was trying to get to Frasier Mill Campground. The resident drove her back to Frasier Mill Campground and turned her over to Tulare County S. O.

With the start of school, a decline in campers was realized. However, with the opening of archery season, there was a small gain in the number of campers. Labor Day weekend resulted in numbers that were near normal for the summer weekend season. Since opening for the 2012 season, Mountain Home DSF had collected \$31,371.25 in camping fees as of September 3.

Archery season proved to be successful for some hunters, though the general season hunters were not as successful. Several small bucks were taken throughout the general season.

General deer season opened on September 22 and created a small resurgence of camping activity. This trend continued until the season closed on October 21<sup>st</sup> bringing with it a drastic reduction in camping activity. With the annual display of fall colors throughout the forest, sightseers and photographers were visiting as day-users until winter snow forced the closure of Bear Creek and Balch Park Roads in mid November. In the 2012 camping season, Mountain Home Demonstration State Forest collected a total of \$36,005.25 in camping fees.

## **Timber Management**

The Dynamite Springs THP was filed on December 30, 2011 and a preharvest inspection was conducted on January 6, 2012. The Dynamite Springs THP (4-011-021/TUL-1) was approved on April 16, 2012. The plan contains 353 acres for an estimated volume of 3.7 MMBF.

Kral finished preparing the Dynamite Springs Timber Sale Agreement, appraisal, bid notification packet and other associated documents on April 25. Bid notices were mailed to perspective bidders on April 26<sup>th</sup>. A pre-bid tour was held on May 18, and four potential bidders showed up for the tour. An optional tour was scheduled for May 25, however, no additional bidders showed up. Bid openings took place on June 8, and a single bid was received for the Dynamite Springs Timber Sale. Sierra Forest Products was awarded the contract for \$197,210.00 for an estimated volume of 3.7 MMBF of mixed conifer timber. All applicable documentation was mailed to Sacramento on June 11<sup>th</sup>.

The State Forest staff continued to work on timber management activities. Timber operations commenced on THP 4-09-010/TUL-1 "At Last" on May 22nd. There was an estimated half million board feet left to cut. Between 120 and 150 MBF were being delivered each week which is commendable given the amount of recreation traffic on the haul route.

Comments received from the public in regard to the harvest activity have been mostly positive. Jackpot piling with tractors was done concurrent to yarding operations. Harvest operations on the At Last Timber Sale were completed at the

end of June. The LTO remained on the project performing jackpot piling and roadside hazard abatement.

The At Last timber sale yielded another 730.07 MBF and generated \$40,346.09 in 2012. This brings the final total for the sale to 2,985.39 MBF and \$168,303.09

A completion report for the At Last THP area was submitted to Region HQ following road grading and pile burning activities, and a final was granted.

Guy Van Gaasbeek conducted some salvage operations on the forest after completing operations on the At Last THP. Approximately 200 MBF of softwood was removed.

Marking and cruising continues in a sporadic nature on the Tub Flat THP area.

The Dynamite Springs Timber Sale contract was approved on August 24, 2012, only 3.5 months following submittal and 2.5 months before snow. The LTO that was scheduled to harvest the Dynamite Springs Timber Sale backed out of his agreement with the successful purchaser. It is assumed that he was not willing to haul all of his iron to MHDSF for what may be a short operational period given snow generally comes to the forest in early November.

The successful bidder found two LTO's to log the Dynamite Springs THP area. Kiper and Kiper began working in the area surrounding the Methuselah Group Campground while Van's Logging was working the area east of the State Forest Summer Headquarters. Falling operations commenced on October 18.

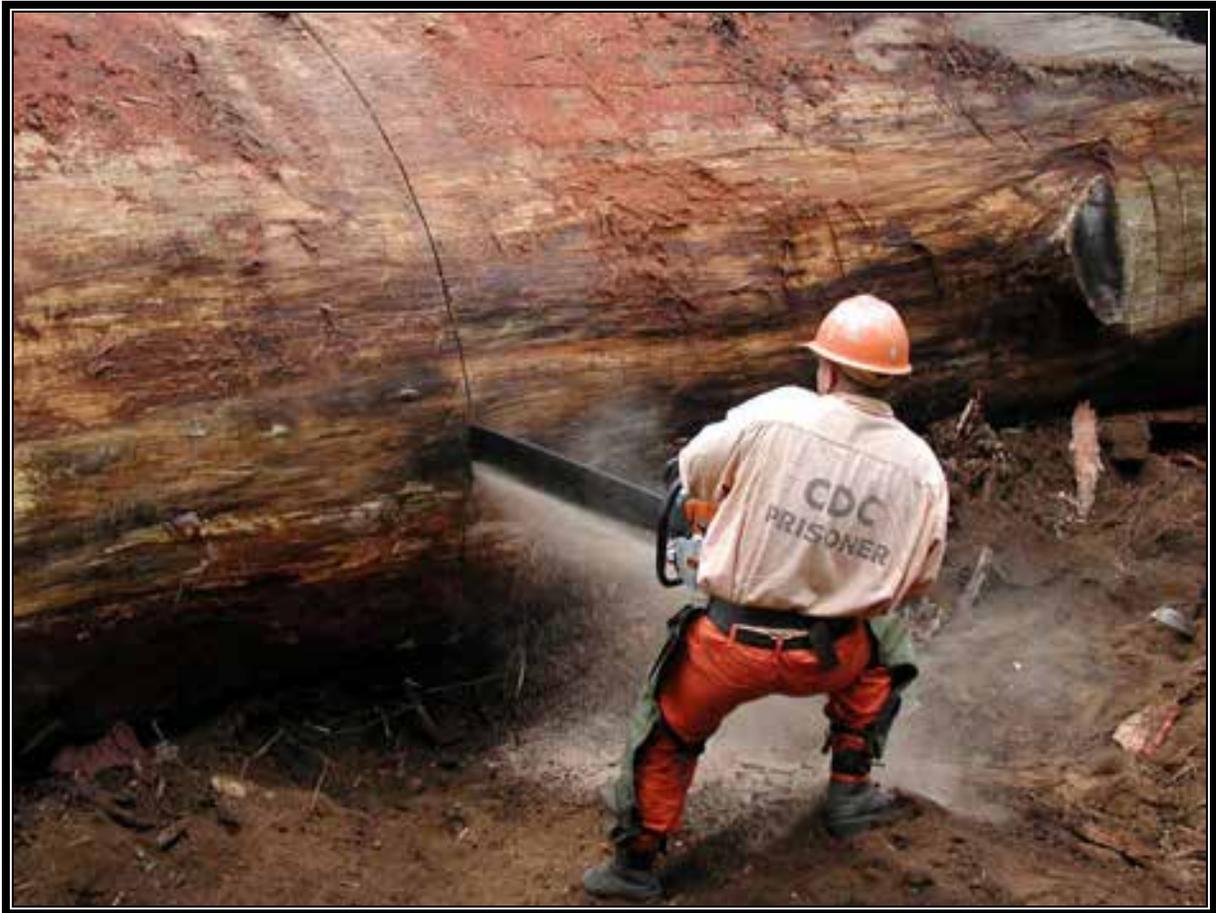


**This is an active landing on the north portion of the Dynamite Springs timber sale area.**

Both LTO's that were logging on the Dynamite Springs THP area winterized the sale area and departed from the forest on Friday, December 14. Operations will

recommence after the spring thaw in 2013. The Dynamite Springs timber sale yielded 1,667.90 MMBF and generated \$98,137.10 in 2012.

Mountain Home Conservation Camp (MHCC) LTO Don Abbott and crew bucked two 16 foot logs from the upper portion of the old-growth giant sequoia windthrow that they began cutting on in 2010. Due to weather conditions Captain Abbott was not able to move the logs to MHCC in the 2012 season. The two logs will be moved to MHCC when 2013 spring thaw conditions allow.



**MHCC crew bucking redwood logs**

## **Protection**

The forest prepared a VMP to address broadcast burning on a number of units in MHDSF that are generally too steep for mechanized equipment. Kral worked with unit Forester David Shy to prepare the documents and design the project. Potential burn units were identified and maps were prepared for the VMP burn last fall. Kral met with Tom Sandelin to discuss documentation preparation for the VMP for fall burning. To conduct burning operations at the State Forest last fall Region CEQA staff required that the plan consist of the environmental checklist, maps, consultation with DFG, APCD and Cal Fire archaeology, and NDDB runs. The plan contained 129 acres of broadcast burning and was reviewed in Fresno.

Firing operations commenced on the Mountain Home VMP on October 30th. MHDSF permanent staff assisted by Battalion Chief Phil Brown, Unit Forester Dave Shy, three engines and two crews from Mountain Home Conservation Camp

assisted with the burn. The first unit was completed on Friday, November 2 with patrol of the burn unit extending through the weekend. Approximately 30 acres of heavy forest fuel was treated. The fire needed to burn with a moderate to high intensity in order to introduce sufficient heat into the canopy of the giant sequoia to open the serotinous cone. New seed was observed on the control lines immediately following the burn.



**MHCC crew supporting a control line**

An attempt to burn the second unit was interrupted when a high wind advisory was issued during the firing stage. All fire was extinguished and all fire perimeters were lined. An early winter storm brought snow to the area and ended broadcast burning for the year.



**Battalion Chief Phil Brown directing firing operations**

Pile burning became the objective for the remainder of 2012. All burning of existing piles scattered throughout the forest was completed on December 20<sup>th</sup>. Mountain Home Conservation Camp crews continued working on the Proposition 40 roadside fuel hazard abatement project along the Balch Park Road on the southwest portion of the forest. Forest staff is grateful for the assistance we received from the Tulare Unit and the MHCC crews. It is estimated that roughly 2,200 piles were burned by forest staff and Mountain Home Conservation Camp crews.



**The day after fire was introduced in this area**

Fuel reduction work commenced on the thirty acre parcel that contains the winter headquarters buildings. Mountain Home Conservation Camp crews began cutting, piling and burning ladder fuels to create a defensible fuel profile and demonstrate proper management of rural residential parcels in the front country. The work is being done when sponsored projects are not available.

An LTO was scheduled to commence mastication operations at MHDSF on July 1<sup>st</sup> via Prop 40 funding. Prior to commencement of mastication operations, Kral and Frame identified and flagged  $\frac{3}{4}$  of a mile of unsurveyed line along the southern boundary of Section 34 on the western portion of MHDSF. Waterlines, Class II watercourses and archaeological sites were also flagged for protection. Mastication operations commenced on July 26<sup>th</sup> in Section 34 to address fuel loading and overstocked conditions on this particular portion of the State Forest. Section 34 is located adjacent to both federal land and numerous private parcels making for a good demonstration area. A broadcast burn is also anticipated for this area in four to five years depending on the amount of forest litter that accumulates to carry fire.



**The KOBELCO 235 high RPM rotary head masticator working in Section 34**



**The KOBELCO 235 high RPM rotary head masticator working on the River Road**

Mastication operations in Section 34 were completed at the end of September with approximately 100 acres treated. Additional mastication began in early November adjacent to River Road to create a defensible fuel profile. The masticator operator experienced a number of minor mechanical breakdowns that slowed the progress given the remote location of the forest and its proximity to parts.

Approximately 3 miles of work equating to 18 acres was completed before the onset of winter. The Tulare County Resource Conservation District has been awarded a \$350,000 grant from the Sierra Nevada Conservancy to conduct additional mechanical fuel treatments at MHDSF.

The weather at MHDSF this year began on January 20<sup>th</sup> with four days of intermittent rain, often heavy at times. The forest was blanketed with snow on February 13<sup>th</sup> and there was approximately 10 inches of new snow at the summer HQ. During the rest of February and March the forest was subject to sporadic and sometimes significant snowfall. However, warm weather had been following these storms and melting snow soon after it accumulated. In April, storms brought another 2 feet of snow to Mountain Home. In May, the forest was experiencing typical spring like conditions with forecasted thunderstorms for Memorial Day weekend. June and July brought typical summer conditions with daytime temperatures in the 70's. August and September were hot and dry with occasional thunderstorm activity. October continued unseasonably warm and dry with significant cooling forecast for November. Snow and freezing temperatures finally arrived at the forest in November.

## Experiments and Demonstrations

Kral received a proposal to conduct research from a research team that has been funded by Save the Redwoods League. The study will cross the State in the natural range of both coast redwood and giant sequoia. The study will investigate effects on sequoia species attributed to climate change.

On May 25<sup>th</sup> Robert Van Pelt began conducting research on Giant Sequoia structure and function at Mountain Home Demonstration State Forest. As part of ongoing research – **The Redwoods and Climate Change Initiative** – funded by the Save the Redwoods League, 16 one – hectare permanent plots are being installed at 13 sites throughout the geographic range of both California redwood species. As of December 2011, 14 of the 16 plots had been installed. This research will determine current growing conditions of *Sequoia sempervirens* and *Sequoiadendron giganteum* throughout California, how these species have responded to shifting environmental conditions in the past, and how they will likely respond to future changes. Quantification of vegetation is occurring at spatial scales ranging from leaf to landscape using a multi-level, hierarchical design to insure adequate sampling at each scale.

A permanent plot was established in a relatively untouched portion of the MHDSF. Each plot is 1 hectare in size, with plot dimensions of 10:1 (316 X 31.6 m). After installation, the only evidence of the plot was a collection of tagged trees. Both tags and nails are stainless steel - built to survive future prescribed burns. They are also camouflage colored, making them very difficult to see without effort. In addition, tags

are placed on the side of the stem least visible to any hikers or other off-trail visitors. In addition to the plot mapping and installation, four trees were climbed within the plot for detailed analysis. The team quantifies the structure and age of a tree by making a complete, non-destructive inventory of the main trunk and all of the trees appendages. In giant trees this involves the use of arborist-style rope techniques, measuring tapes, compasses, and survey lasers. After several trees in a plot are crown mapped, a selected sample of appendages-stratified by height and diameter-are collected for dissection in the laboratory. Surface areas, volumes, and masses of all tree components are then measured directly on the samples, and equations are developed to predict these quantities for all appendages remaining on the trees (i.e., > 99% of the total). Summing these values yields accurate metrics of all above ground tree components, and these structural measurements combined with dendrochronology allow them to determine tree ages. In order to quantify the tree's age and growth history, increment core samples (5mm diameter) were collected from the main trunk and largest appendages of the mapped trees. Combining data from increment cores with measured diameters along the height gradient allows them to reconstruct growth histories of standing trees.

The report will be published monographs which will combine the analysis from the plot at Mountain Home with the other plots, and the tree plot level. An establishment report was to be prepared after the main plot installation was complete.

Copies of all original data files are to be stored with Jim Kral at MHDSF. Tree cores were taken to the dendrochronology lab at Humboldt State University, where they will be preserved after analysis. No other destructive samples are kept once the data has been collected.

Cameron Williams began foliar sampling of sequoia on August 20<sup>th</sup>, and completed sample collection on September 10<sup>th</sup>. We anticipate receiving his findings after he completes the laboratory analysis.

Det Vogler (USFS) conducted his last sampling of *Ribes spp.* leaves to determine infection by white pine blister rust. According to Det, this is the last year that the USFS will be collecting samples as the program will no longer be funded.

Tussock fir moth caterpillar activity was very high this year. Defoliation was recognized throughout the forest with variations of intensity. The Shake Camp area appeared to have the highest caterpillar activity. There were two Tussock fir moth trap transects. One transect was located northeast of Hidden Falls, and the other was located west of the Rock Crusher landing. The Tussock fir moth traps were collected in October and revealed a high level of Tussock fir moths. Tussock fir moth caterpillars were found throughout the forest, particularly in the Wishon Fork drainage and in the Frasier Mill area.



**White Fir in Shake Camp defoliated by Tussock fir moth caterpillars**



## Annual Financial Summary

Capital Invested	To Date 2011	2012	To Date 2012
Timber	\$523,043	-\$4,082	\$518,961
Land	\$497,125	0	\$497,125
Buildings, Property, Equipment & Roads	\$431,846	\$11,153	\$442,999
<b>TOTAL</b>	<b>\$1,452,014</b>	<b>\$7,071</b>	<b>\$1,459,085</b>

Gross Revenue	\$9,185,266	\$185,543	\$9,370,809
Operating Expenses	\$10,721,204	\$344,948	\$11,066,152

**CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION**  
**Annual Report of Timber Cut**

Mountain Home Demonstration State Forest from January 1, 2012 to December 31, 2012

**COMMERCIAL SALES**

Forest Products Convertible to Board Feet

<b>Product</b> (give dimensions)	<b>Conversion Factor</b>	<b># of Pieces, Cords, Lineal Feet, Etc.</b>	<b>MBF</b>	<b>Value</b>
MBF			2,642.70	\$148,465.90
Cords	0.5	98.0	49.0	\$490.00
Posts (size)_____				
Posts (size)_____				
Shingle Bolts				
Poles (size)_____				
Grape Stakes				
Shakes				
<b>TOTALS</b>			2,691.70	\$148,955.09

Miscellaneous Forest Products - Not Convertible to Board Feet

<b>Kind</b>	<b>Unit</b>	<b>Quantity</b>	<b>Value</b>
Cones	BU	25	\$75.00
Sawdust	YDS		\$0.00
Round	EA		\$0.00
Christmas Trees	LF	16	\$8.00
Branches	PU		\$0.00
<b>TOTALS</b>			\$83.00

Approved by \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date Submitted \_\_\_\_\_

Forest Products Cut for Department Use

<b>Product</b>	<b># of Pieces, Cords, Lineal Feet, Etc.</b>	<b>MBF</b>	<b>Value</b>
white fir sawlogs		0.0	\$0.00
sugar pine sawlogs		0.0	\$0.00
giant sequoia sawlogs		0.0	\$0.00
incense cedar sawlogs		0.0	\$0.00
Ponderosa pine sawlogs		0.0	\$0.00
YG giant sequoia sawlogs		0.0	\$0.00
<b>TOTALS</b>		0.0	\$0.00

List those commercial timber sales that were not closed but were extended into the new year:

THP 4-09-10 / TUL – 1 – “At Last” (Contract # 8CA01330)

**ADMINISTRATION**

	<u>Processed</u>	<u>Pending</u>
	(number)	
Rights-of-Way	0	0
Leases	0	0
Trespass Cases	0	0

**PROTECTION**

Fires: Number of Fires: 0 Acres Burned: 0 Man-days Fire Patrol: 0  
 State Forest Campfire Permits Issued (number): N/A

Insects: Number of Trees Treated: 30 Number of Acres Covered: 120  
 Control Methods Used: Sanitation Salvage

		<u>Disease Involved</u>
<u>Disease:</u>	Number of Acres Treated (Contract):	0
	(State):	0

Number of Pest Detection Reports Submitted: 0

Hazard Reduction: 0

Snags Felled or Removed: 5 Acres: 10

Roadsides Treated (miles): 2

Slash Abated or Cleanup (acres treated): 60

Blowdown Salvaged (board feet): 12,000

**TIMBER STAND MANAGEMENT**

Number of Timber Sales Class I: 51 Class III: 2

Timber Stand Improvements

Trees Pruned: 250 Acres: 15

Thinning (acres): 0

Release (acres): 0

Planting Number of Trees: 0 Acres: 0

Seeding Number of Spots: 0 Acres: 0

Site Preparation for: 20

Natural Seedfall (acres): 20 Planting (acres): 0 Seeding (acres): 0

**EXPERIMENTS & DEMONSTRATIONS**

	<u>Submitted</u>	<u>Approved</u>	<u>Completed</u>
Projects	0	0	0

Approved Projects Worked on (list by titles): **Giant sequoia structure and function.  
 Foliar sampling of sequoia.**

Reports Submitted (list by titles):

**PERMANENT PLOTS**

	<u>Size</u>	<u>Number</u>
Inventory Plots Established	none	0
Other Plots Established	none	0
Plots Re-measured	Variable	124

Timber Cruised (acres): 200

**ENGINEERING**

Corners Recovered or Set: 0

Miles of Line Run:

Miles of Boundary Surveyed and/or posted: 3/4

Boundary Surveyed and Posted to Date: 69%

**CAPITAL IMPROVEMENTS**

	<u>New Construction</u>	<u>Total System</u> (miles & tenths)	<u>Amount Maintained</u>
Main Seasonal Roads	0	9.96	9.96
Spur Seasonal Roads	0	19.79	19.79
Temporary Roads	0	1.75	1.75
Fire Protection Roads	0	1	1
Firebreaks	0	2	2
Christmas Tree Roads/Truck Trails	0	0	0
Trails	0	18.88	18.88
Powerlines	0	0	0
		(number)	
Bridges	0	2	2
Water Development	0	5	5
Campgrounds	0	6	6
Camping Units	0	93	93
Picnic Grounds	0	2	2
Picnic Units	0	4	4

Buildings Constructed (describe each):

RECREATION	Primary Use <sup>2</sup>	Overnight Use <sup>1</sup>	
		Day Use <sup>3</sup> (Visitor Days)	Campers (Estimated) Camper Days
Camping			5,325 9,800
Fishing	3,000	1,331	2,662
Hunting	1,000	500	1,000
Picnicking	1,800		
Sightseeing (driving)	9,600		
Hiking	800	532	1,064
Horseback Riding	40	60	90
Nature Walks	1,200	1,065	2,130
Swimming	2,720	2,000	4,000
Winter sports (prohibited)			
Other (specify)			
<b>TOTAL</b>	<b>20,160</b>	<b>10,813</b>	<b>20,701</b>

<sup>1</sup>A person remaining in an area occupying overnight facilities for 3 nights counts as 3 camper days.

<sup>2</sup>Assign primary use to avoid duplication when forest user participates in more than one activity.

<sup>3</sup>Include everyone except those who stay overnight. A person visiting or using an area on 3 different days counts as 3 visitor days.

**ANNUAL REPORT**

**JACKSON DEMONSTRATION STATE FOREST**

**Mendocino County, California**

**2012 Calendar Year**



**State of California  
Department of Forestry and Fire Protection**

**Ken Pimlott, Director  
Bill Holmes, Region Chief  
Christopher Rowney, Mendocino Unit Chief  
Pam Linstedt, State Forest Manager**

## Administration

### State Forest Staff

**Manager:**

Pam Linstedt (Forester III, since April)

**Protection:**

Ryan Finn (Fire Captain Spec.)

**Silviculture/Timber:**

Dave Derby (Forester II, since August)

Jason Serna (Forester I)

Erik Wahl " "

David Ahmadi " "

Vacant " "

Fred Postler (Forestry Asst. II)

Julie Rhoads (Forester I, since November)

**Geographic Information Systems:**

Shawn Headley (Research Program Spec. II)

**Heavy Fire Equipment Operation, Road Maintenance:**

Jess Derickson (HFEO)

Terry Pittman (HFEO, retired in December)

**Research, Demonstration and Education:**

Lynn Webb (Forester II)

Brian Barrett (Forester I)

Brandon Rodgers (Forestry Asst. II)

**Retired Annuitants:**

Ron Collins

Bob Sallee

John Griffen

Marc Jameson

**Administration, Recreation, Roads and Law Enforcement:**

Craig Pedersen (Forester II)

Robert Horvat (Forester I)

**Seasonal Forestry Aides:**

James Airey

Noah Coonen

Charles Dibble

Peter Smith

Austin Roughton

Ariel Thomson

Debbie Leung

Jim Buckley

**Biologist:**

Tina Fabula (Staff Env. Scientist)

**Clerical:**

Sonya Schmidt (Office Asst. II, April)

Debbie Lotten (Account Clerk)

In addition to the above personnel working at JDSF, we also continually draw upon the expertise of other technical specialists elsewhere in the Department, for subject matter expertise such as archaeology, hydrology, statistics, measurements, experimental design, geology and fire protection and prevention.

### Jackson Demonstration State Forest Advisory Group (JAG)

Following completion of the JAG's 2011 report with recommendations for forest management at JDSF, the JAG has been changing direction focusing more on local recreation and ongoing forest management issues. The JAG recommended that JDSF explore the costs and benefits of third-party forest certification.

Two meetings were held, one in April which was a two-day field meeting focusing on implementation of forest management activities including recently completed timber harvest plans

(14 Gulch, Pleiades III and South Whiskey), as well as 2013 harvest plans under preparation for sale (Upper Hare Creek, Road 80, and Orchard). The field tour also included recreation (Camp One Loop Trail), law enforcement (*i.e.* illegal activities including trash dumping, burning, off-road vehicle use) and research stops (Cutting Trials, Multi-cohort study). JAG feedback was largely positive regarding management proposals. No changes were requested by the JAG to the proposed timber harvest plans.

The second meeting held in November, welcomed three new members by including an overview of forest management activities and scheduling of future topics. As of December 31, 2012, the current JAG members are:

Doug Albin	George Hollister	Ross Liberty
John Anderson	Peter Braudrick	Amy Wynn
Kathy Bailey	Mike Anderson	Darcie Mahoney
Kelly Harris	Don Phillips	Mahesh Rao
Mike Liquori		

Also discussed during the November meeting were revisions to the group's charter that removed the initial work recently completed by the JAG and shifted primary responsibilities for the JAG from Sacramento Headquarters to JDSF. The frequency of future JAG meetings will be determined by necessity, but likely not more frequently than quarterly. JAG meetings were attended by two CAL FIRE Sacramento staff members, 1-3 JDSF staff members, and frequently by the MEU Unit Chief and Board of Forestry and Fire Protection Executive Officer. Preparation of meeting materials was accomplished by Sacramento Headquarters and JDSF staff.

## Timber Management and Minor Forests Products

### Class III Timber Sales (Large Sales)

22.7 million board feet was harvested during calendar year 2012 with a value of \$6.4 million dollars. The major timber sale activity this year occurred throughout the forest within second-growth timber stands in the South Fork Noyo watershed (Riley Ridge, Waldo, Scissors #2 and Upper Parlin IG) and the North Fork Big River Watershed (West Berry Gulch). The primary silvicultural system involved was single tree selection implemented towards several meeting several goals, including Older Forest Structure in the Riley Ridge sale. The volume of timber sold remained consistent with the provisions of the Management Plan (see statistics). Camp run timber prices averaged \$292 per thousand board feet (stumpage price).

<b>LOGGING SEASON 2012 (through 11/15/12)</b> <i>Not fiscal year</i>		
<b>Timber Sale</b>	<b>MBF</b>	<b>Revenue, \$</b>
Upper Parlin IG	2,391.65	706,668
Dunlap South	219.97	46,672
Waldo	6,703.78	2,436,816
Riley Ridge	5,121.62	1,372,527
Scissors #2	3,383.73	754,710
West Berry Gulch	4,247.53	1,092,704
<b>TOTAL</b>	<b>22,713.74.45</b>	<b>6,410,097</b>

Approximately 2.5 miles of new seasonal and 950 feet of temporary road was constructed and 0.8 miles of road were abandoned as part of the 2012 operations. New roads were constructed to provide for cable yarding operations.

For year 2013, it is expected that sale activity will be continued within the South Fork Noyo and North Fork Big River watersheds. In the South Fork Noyo, timber operations will include completion of the Scissors #2 sale and initiation of the Road 80 timber sale. The West Berry Gulch sale will be completed in the NF Big River drainage and sales will be initiated in the Chamberlain Creek (tributary to NF Big River) drainage in both West Chamberlain and Water Gulch. The Upper Hare Creek sale will begin in the Hare Creek drainage.

### **Class I Sales (Minor Sales)**

Minor sales involving firewood, mushrooms, and other minor forest products occurred. During the year, 732 permits were issued to local individuals. Three timber sale areas were opened to the personal use firewood program this year resulting in increased public use (approximately double from 2011).

### **Class I Sales Statistics**

<b>Permit type</b>	<b># Permits</b>	<b>Volume sold</b>	<b>Revenue</b>
Personal use firewood (2 or 4 cord)	354	902 cords	\$8,520
Commercial firewood (10 cord)	Not sold this year		
Personal use mushrooms	268		no charge
Commercial mushroom	91		\$9,100
Fern	1		\$80
Shrubbery	1		\$25
Roots/Stumps	<u>17</u>	9.3 tons	<u>\$507</u>
Totals	732		\$17,999

## **Research and Demonstration Program**

### **Overview**

This year marked some significant progress in the Research and Demonstration program. The best and most relevant legacy long-term silviculture studies are in the process of being re-measured and the data analyzed. Several existing studies determined to be no longer viable have transitioned to demonstration and education sites. JDSF's long-term data sets are being used in innovative ways. Dr. Kevin O'Hara of University of California, Berkeley and JDSF successfully competed for a Save the Redwoods League Grant related to climate change, which will utilize 50-year old seasonal growth data comparing it with current seasonal growth patterns.

Research planning for JDSF continues to be discussed by both the Board of Forestry and Fire Protection and its Research & Science Committee this year. The Board's July 14, 2011 "Findings on the Recommendations of the Jackson Demonstration State Forest Advisory Group" describe the following items still to be resolved:

1. A strategic research plan for JDSF.
2. Rather than the silvicultural constraints suggested by the JAG for each of the landscape allocations, the Board will instead rely upon the Board's research governance structure, Department of Forestry and Fire Protection staff, and subject matter experts to develop the silvicultural prescriptions appropriate to each of the allocations.

3. The Board will develop a research governance structure for JDSF with the assistance of the Board's Research and Science Committee, subject matter experts, Department of Forestry and Fire Protection staff, and the public. The Board's research governance structure will determine the range of stand structures necessary to fulfill the goal of creating a "world class" research and demonstration forest at JDSF. Once the Board's research governance structure has made this determination, it will then determine what, if any, modifications to the adopted landscape allocations are required.

## **Research**

### **Caspar Watershed Study**

Recognition of the Caspar Watershed Experiment's 50<sup>th</sup> hydrologic year focused efforts on outreach. Specific presentations and outreach were conducted to recognize the research partnership between CAL FIRE- JDSF and the U. S Forest Service Pacific Southwest Research & Experiment Station, Redwood Sciences Lab (USFS-PSW). Posters and presentations included:

- Redwood Region Logging Conference, Ukiah, March 14-17
- Jere Melo Foundation, Take Back Our Forest, (as part of several JDSF posters) Fort Bragg, March 30
- Salmonid Restoration Foundation Conference, Davis, April 6
- Presentation to the Sacramento – Tahoe Chapter of Society of American Foresters
- Salmon Restoration Association's "World Largest Salmon BBQ" Fort Bragg, July 7
- Paul Bunyan Days, Fort Bragg, September 2
- Caspar Fest, Celebration of Community and Sustainability, September 7- 8.
- Presentation to CAL FIRE Sacramento Headquarters staff
- Presentation to Humboldt State University Geology Club.

A practitioner workshop focused on watershed research results was delayed due to unanticipated workload for PSW scientists. The new date for the workshop is June 28, 2013. CAL FIRE and USFS-PSW are now working with the Northern California Society of America Foresters to coordinate this workshop. Dr. Richard Harris who is working with a grant from Forest Service, State and Private Forestry has provided expertise and experience that will make the project successful. Pete Cafferata and Dr. Leslie Reid have drafted a CAL FIRE Forestry Report that will summarize the recent results and provide applications for managers. The new date will allow the Caspar Watershed AmeriCorps to be involved with this event.

Road decommissioning was monitored for its second storm season by PSW staff. This was the initial step of the third-phase study implementation. Additionally, the road decommissioning project was reviewed by Pete Cafferata, CAL FIRE Sacramento, and Danny Hagans, Pacific Watershed Associates, as well as local staff incorporating practitioner feedback. PSW has not replaced retired science staff which is slowing "third-phase" planning progress.

USFS-PSW is monitoring fish movement through the fish ladders on the NF and SF of Caspar Creek. November and December precipitation patterns provided multiple storm events ( $\geq 2.0'$  stage at the North and South Fork Caspar Creek weirs) which resulted in better opportunities for salmonids to move upstream than in prior years.

### **Externally Initiated Research Studies**

This year Humboldt State University was the source of two new graduate student projects. In addition, work by University of California Davis involving several graduate students was initiated. Agency external studies continued to focus on carbon or related topics. CA Department of Fish and Wildlife (DFW) installed two monitoring studies on JDSF: one regarding fisher distribution and the second concerns stream habitat changes resulting from a culvert replacement/barrier removal project.

This year's example of JDSF's ability to be responsive to unanticipated research opportunities is illustrated by work with the Houlton Lab at University of California, Davis. Dr. Benjamin Houlton received a five-year grant to study "Isotopic Constraints on Ecosystem – Scale N Balances. The lab will examine disturbance utilizing the cutting history within the Caspar Creek watershed. The researchers are interested in a range of stand ages to sample trends in disturbance effects. This facet of their study will contribute to statewide modeling of the N balance. As an ecosystem study, sampling soil and stream water is integral. The minimum size of sample site is a small basin or section of a sub-watershed. JDSF does not have recent even-age harvest areas and the two years required to prepare a THP precludes cuts specifically designed for the study. Fortunately, two existing Caspar sub-watersheds can provide study sites, though the time sequence is limited. Dr. Houlton's students are benefiting from advice and support by Liz Keppeler of USFS-PSW.

The following is a list of externally originated studies (initiated by agencies, academia or elsewhere) that were active this year:

- Hermit Warbler Breeding Season Study. Brett Furnas, Department of Fish and Wildlife.
- Evaluating the Importance of Redwood Forests as Wintering and Mating Habitat for a Continental Migrant: the Silver-Haired Bat. Theodore J. Weller, USDA Forest Service.
- Root Biomass variation modeling in coast redwood ecosystem. Ben Caldwell, University of California Berkeley. The sampling was extended to younger stands, PCT plots in NF Caspar. This below ground sampling can be complemented by the above ground measurements of the plots in 2012.
- Carbon Density relationships relative to inner tree competition within redwood ecosystems. Drew Jones, University of California Berkeley
- Ecosystem Scale N Balances, Isotopic Analysis of disturbance effects. JDSF is redwood region replicate. Dr. Ben Houlton as well as Megan Mnich and Erin Lennon graduate students, University of California Davis
- Distribution of fisher (*Martens pennanti*) in Mendocino and Humboldt Co. Scott Koller Department of Fish and Wildlife.
- Biogeochemistry of Soils: carbon/water/ rock interaction. Marjorie Schulz U.S.G.S.
- Vegetation Associations of the Pygmy Cypress. Rhiannon Korhummel, graduate student, Humboldt State University.
- Estimating Biomass Integrating Lidar with NAIP Images. Hai Vuong, graduate student, Humboldt State University.
- Small Mammal Populations in Old Growth, Greg Guisti, University of California Extension
- The FACE Wood Decomposition Experiment- Role in Forest Carbon Cycle located at experimental forests throughout the United States. Carl Trettin and Julie Arnold, USDA FS. Installed photo points and maintained the experiments measuring devices.
- Trillium Creek Culvert replacement for fish passage. John Hendrix. Department of Fish and Wildlife
- Green Diamond Resource Company completed remeasurement of the long term pre-commercial thinning study developed by Jim Lindquist in the South Fork of Caspar Creek.

#### **Priority Projects with Significant Research & Demonstration Staff Support**

- Multi Age Continuous Cover Silviculture – Dr. Pascal Berrill's multi-disciplinary study "Managing coast redwood forests for continuous cover and rainstorm impact abatement" moves to the next phases the Whiskey Springs' plot installation was completed by Drs.

Berrill, Christa Dagley, Kevin O'Hara, as well as JDSF staff, HSU and UC Berkeley students. The final density in several plots in Whiskey Springs was adjusted with the assistance of Parlin Fork crews and logs were delivered to the mill there. Final density adjustments were marked at Camp 6. Waldo plot replicates were harvested.

- Precommercial Thinning Study at NF Caspar - 10 year remeasurement conducted by Forestry Aides supervised by Brandon Rodgers with support from Dr. Kevin O'Hara.
- Camp Three Late Seral Development Study- post harvest permanent plot measurement by Forestry Aides supervised by Julie Rhoads.
- Railroad Gulch Research-next phase. The researchers who had been involved in the study provided feedback on the proposed project and associated future management. The value of both the long term data set and resulting demonstration value of the stand structure merit continuation of the study.

## Demonstration

**Demonstration** Projects have increased significantly as more active management is occurring on the forest. The following are ongoing projects addressing current management issues:

- Stream temperature monitors were deployed as part of the annual program. The JDSF data set has utility for both long term studies and addressing specific timber harvest plans.
- Water Gulch 2013 THP- Role of hardwood competition in establishment and growth of conifers. Sequencing and initial treatments were planned.
- Berry Flat Gorse Management- alternative approaches in selection silviculture. Harvest will be completed in the gorse area in 2013.
- Caspar Orchard Eucalyptus, demonstrating appropriate goals and management in the context of community concerns. The initial goal was to control eucalyptus in a fraction of the infestation so that native forest species could become reestablished. The only method deemed feasible was a combination of cutting and herbicide use. Outreach regarding the proposal identified significant opposition to use of herbicides in the nearby community of Caspar. The herbicide treatment was abandoned in the interest of maintaining good relationships with our neighbors. A new goal to prevent the further expansion of the infestation as a result of timber operations was adopted. This can be achieved without the use of herbicides in the near term. The size of the THP was reduced to meet the new goal. Restoration of the eucalyptus infested area was deferred.
- Invasive weed management focused on star thistle, English ivy, and gorse.

## Inventory

The 2010 Continuous Forest Inventory (CFI) plot remeasurements have been processed by John Griffin, retired annuitant, and Jeff Leddy, Sacramento Staff Biometrician. We now have a 55-year continuous sequence of 5-year remeasurements on permanent plots across JDSF, an invaluable resource for research and monitoring applications.

## List of 2012 Tours & Presentations (Outreach and Education)

Caspar Watershed was the main focus of outreach to kick off the recognition of the 50<sup>th</sup> year of the study. The outreach efforts are listed under the Caspar heading.

July 8<sup>th</sup> Pam Linstedt and Lynn Webb conducted a field tour, and then made a presentation at the Caspar Community Center on August 26 in regards to the initial eucalyptus management demonstration associated with the Orchard THP.

The Forest hosted a field tour by the Department of Fish and Wildlife Habitat Conservation Program staff. They viewed steelhead at the mainstem Caspar Creek study site as well as

research sites in the South Fork Caspar Watershed. Liz Keppeler, PSW, provided an overview of Caspar studies.

JDSF staff provided logistical support and information for the Board of Forestry Road Rules Field Trip. The group was able to observe a range of relevant road issues at JDSF and lands of the Conservation Fund. Road drainage and disconnection from a watercourse were the primary focus. Rainfall amounts during the 2-day tour approached 3" which provided a particularly successful tour.

April 14, Lynn Webb provided a tour of the forest to the University of California Berkeley Silviculture Class with Dr. Kevin O'Hara.

In October, Lynn Webb presented a unit on Forestry and Silviculture the College of the Redwoods Environmental Science class. Tanya Smart, instructor, and about 20 students toured the forest with Lynn and Julie Rhoads.

Paul Bunyan Days again featured Mike Stephens (JDSF contract avian biologist) who played the title role. Brian Barrett accompanied by Mike/Paul made school presentations regarding forestry and wildlife in conjunction with the annual celebration. Brian also spoke about JDSF at the annual Labor Day Logging Show.

Dr. Susan Marshall brought the HSU Soil Origin and Classification class to look at the sodosols at JDSF in the pygmy forest area. JDSF staff showed them the location of the long established soil pits and discussed the distinctive vegetation and soils with the interested students.

The annual University mycology field trip included Stanford this year as well as University of California, Berkeley, Davis and San Francisco State students and faculty. International participation came via a Finnish researcher and her family. The number of species observed was about average (~ 200), with *Suillus* and *Gomphidius* being particularly abundant. JDSF staff was able to discuss management and research with undergraduate and graduate students. The trip was well attended (~ 50 people) despite the weather being more pleasant for fungi than people.

The informal redwood cooperative reviewed several harvest areas for potential genetic material and conducted follow-up visits. The participation in the cooperative now includes both large and smaller ownerships.

## **Recreation**

There was a marked change in the type of campers and their use of the campgrounds compared to previous years. The change is attributed to the implementation of camping fees this year, for the first time in JDSF history. The fee was introduced not for financial reasons, but to achieve law and order, accountability, reduce vandalism and increase the quality of the camping experience. The program seems to work very well. We have seen a marked decrease in homeless populations and problems with illegal activity, accompanied by an increase in family visits and increased satisfaction with the camping experience. Detailed camping information is included below.

Improvements to recreation facilities included: replacing or repairing picnic tables, railings and walkways, signage, and rebuilding outhouses within the campgrounds, improving signage on trails, rocking of campground roads, trail maintenance, and resurfacing of access roads.

The revised JDSF brochure prepared by Staff was printed and available to the public beginning in late July. The first order of 2,000 copies was nearly depleted by the beginning of December so an additional 2,000 copies were ordered.

The JDSF Recreation Task Force met in March, June, and October of 2012. Two the Task Force members have resigned, however there are seven active members remaining. New Task Force members will not be sought until the existing member terms near their term limit.

The annual Caspar Classic mountain bike ride was held in September. This event had 39 participants. This annual ride is sponsored by the Mendocino Coast Cyclists and continues to be well organized.

A first time two-day mountain bike event was held August 25 and 26. The event headquarters was the Woodlands State Park and included a race on trails in JDSF surrounding the Woodlands. There were rides on various JDSF trails guided by local riders on both days. The event was attended by 70 riders. The promoter deemed the event a success even though he had hoped there would be as many as 300 participants.

One equestrian event was held in August. Approximately 50 participants rode in the event. Participants came from throughout California and other states. A second equestrian event was held in September. Approximately 80 participants rode in this endurance event.

Six equestrian groups and 8 groups of campers reserved group camps this year. One California Conservation Crew group stayed in a group camp while working on a project on the forest.

### **Recreational Statistics**

Campsites were occupied by fewer numbers of individuals and for far fewer than the allowed 14 days per visit. Only one campsite was occupied for the maximum 14 consecutive days. Other forms of recreational use (i.e. equestrian, mountain biking, hiking, etc.) appeared to be within historic levels.

<u>Individual Campsites</u>	
Permits issued	860
Number of campers	2,558
Camper days	4,520

The total revenue generated from camping permits (base fees plus extra vehicle fees) for 2012 was \$21,555.00. The fees were collected using a self-registration envelope and iron rangers placed at the camp host sites in Camp One and Dunlap and at the Big River campground. The Camp One iron ranger was vandalized twice but it appeared the vandal(s) were unable to get the envelopes. Very few campers tried to avoid the fees. Nearly all comments regarding the fees were positive, particularly those from people who had camped in the past. Many positive comments were received regarding the change in camper clientele to a more family oriented and law-abiding group. Law Enforcement was only called out twice, with each call alcohol related.

The fees and maximum occupancy for the Tilley group site are being revised for next year. The fees will increase to more closely align with the cost/person equivalent of the individual sites. The procedures for the horse campgrounds are also being reviewed for possible revision.

The number of individual campsite permits increased from 580 in 2011 to 860 in 2012. The number of individual campers in 2012 increased to 2,558 from 1,031 in 2011 and 1,594 in 2010. However, the total number of camper days was approximately thirteen percent lower than for 2011. The 2012 camping season saw fewer numbers of individuals per site, generally one or two, and staying for fewer days per visit than previous years (average of 1.7 days in 2012 vs. 5 days in 2010). The primary cause for reduction in the number of camper days is a shift from large transient groups, six to 10 campers per site, staying for the maximum 14 days to individuals or families staying for one to three days. A new host for the Camp One area campgrounds left in

early September, after someone broke into a storage shed in the camp host site and stole an axe. The host was not comfortable leaving his belongings while making rounds or going to town.

## Wildlife and Botanical Resources

### Northern Spotted Owl Status

Thirteen of the 21 designated northern spotted owl (NSO) activity centers on JDSF were monitored in 2012. One new activity center (pair, non-nesting) was located along Parlin Creek, making a total of three NSO Activity Centers along 4 miles of Parlin Creek.

Only one NSO (MEN 292) nested successfully, with 1 fledgling. The rest of the owl activity centers were non-nesting pairs (5 pairs), or single males (2 sites), separate male and female (2 sites), or pairs with unknown nesting status (2 sites).

Owls were not found at only one of the designated activity centers.

### Barred Owls

This year, the single barred owl heard near Camp One/Petersen Gulch in 2010 was determined to be a reproducing pair of barred owls with young. There are at least three pairs of barred owls now known to occur on JDSF.

### Other

All of JDSF was included in the final federal critical habitat designation for the northern spotted owl (rule published in the federal register on 12/4/2012).

### Botany

Botanical consultants WRA Inc. completed botanical surveys for three timber harvesting plans. Rare plants were found on two of the plans. Additional field work by the JDSF biologist, JDSF Forestry Aides and RPFs added to the new findings of one rare plant, Oregon goldthread (*Coptis laciniata*), within the Road 80 THP. Staff also found a running pine club moss (*Lycopodium clavatum*) occurrence in one of the 1990's Caspar clear cuts. Oregon goldthread continues to be found at more locations in the SF Noyo watershed near the stream.

Most of the known JDSF locations of the state endangered Humboldt milk-vetch (*Astragalus agnicidus*) were surveyed during July and the information was provided to the Department of Fish and Wildlife. The Road 305 roadside occurrence that had been previously hand weeded by conservation crew labor to remove jubata grass and then opened up for timber harvesting access had the largest increase in the number of plants. Other areas continue to decline in numbers of milk vetch plants as brush and young trees take hold. Oregon State University concluded their research and seed collection at the largest occurrence of milk vetch on the forest along Road 330. Following the completion of their survey, conservation crews cut brush along the roads to keep the area open to allow for road maintenance and improve vehicle passage. This work also benefits the opportunity for milk vetch persistence.

## Law Enforcement

The Fire Captain Specialist position assigned to JDSF was filled with the graduation of Ryan Finn from the Peace Officer Specialized Training Academy. Patrol of the Forest was accomplished utilizing the Mendocino Unit Prevention Captains, and a JDSF Peace Officer. The captains split the week and split their time between JDSF and other Unit duties. Finn was committed to the Field Training Program for much of the summer. This provided minimal patrol during the summer

months. Patrol was focused on the campgrounds. Fire activity increased from the previous year further reducing the availability of the captains to patrol the forest.

Unit law enforcement (LE) staff made hundreds of contacts and conducted numerous investigations within the Forest including: Felony warrant – one case, theft (including state property) – three, illegal wood cutting – eight, illegal camping - one, illegal dumping - ten, and vandalism of state property – nine including four pulled gates and two Iron Ranger attempted break-ins, vehicle abandonment - two, off-highway use - two. Many did not result in case development for various reasons, primarily lack of suspects.

Two abandoned vehicles were removed from the Forest through the Mendocino County Abandoned Vehicle Abatement program. One of the abandoned vehicles was burned as a result of arson. Fortunately this was early in the year, prior to the County program expiring. Mendocino voters unanimously approved continuance of the program in November.

Garbage dumping continues to be a major problem within the Forest. The State Forest continues to pay significant dump fees to haul away illegally dumped trash. The 10 cases noted above are only a fraction of the illegal dumps cleaned up last year. An estimated 150 hours of JDSF staff time and several days of Conservation Crew time were expended to pick up and haul the trash. Department of Fish and Wildlife wardens tracked down two separate individuals responsible for dumping on the Forest.

Vandalism is a continuing challenge. Vandalism often results in damage to recreation facilities, including bulletin boards, picnic tables, and outhouses. Vandalism to locks and gates is a reoccurring weekly event, usually with resultant destruction to un-rocked roads. Five gates were pulled out or damaged this year with one pulled out twice. Unauthorized snag and live tree cutting throughout the Forest continues to be a concern. One case of illegal wood cutting involved an approximate 7-foot diameter, at the butt, old growth down log. This case has not yet been to court. Illegal shooters are targeting gates, signs, and standing trees. Efforts to mitigate vandalism by mitigating as quickly as feasible (*i.e. cleaning up trash dumps, vehicle abatement, gate repairs and replacing gate locks*) has only had moderate success. The most positive aspect in timely response to the vandalism is that legal forest users are appreciative of our efforts.

### Annual Financial Summary (note: not fiscal year)

<b>Revenues</b>		<b>Expenses</b>	
Class III Timber Sales	\$6,410,097	Personnel	\$2,179,881
Class I Sales	\$ 17,999	Operating	\$388,278
<b>Total Revenue</b>	<b>\$6,428,096</b>	<b>Total Expenses</b>	<b>\$2,568,159</b>

#### **Taxes**

Yield taxes (from Class III sales only):	\$ <i>not available at</i>
Estimated yield taxes returned to Mendocino County:	<i>time printed</i>
<i>In-Lieu</i> property taxes paid to Mendocino County:	\$ 92,192.80
Estimated total taxes to Mendocino County:	\$ _____