

Draft Demonstration State Forests Annual Report

2014 Calendar Year



State of California

Department of Forestry and Fire Protection

July 23, 2015



Cover Photo: Taken by Sean Headley (State Forests GIS Specialist) at the State Forests Managers meeting held at Boggs Mountain Demonstration State Forest on February 14, 2014. From left, name (and position then and now): Dave Loveless (Manager – LaTour, currently State Forests Program Manager), Gerri Finn (Manager – Boggs Mountain, retired), Helge Eng (State Forests Program Manager, currently Assistant Deputy Director Resource Management), Jeff Leddy (State Forests Biometrician), Lynn Webb (Jackson R&D Forester II), Jim Kral (Manager – Mountain Home), Bruce Beck (Shasta-Trinity Unit Forester III, retired), Pam Linstedt (Manager – Jackson), Craig Pedersen (Jackson Recreation Program/Administration Forester II, currently Mendocino Unit Forester III), Angela Bernheisel (Manager – Soquel). Also in attendance at the meeting was Eric Hoffmann (Lake-Napa Unit Chief, currently Assistant Region Chief Northern Region).

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Demonstration State Forests Program Summary

Introduction

This document is a compilation of the CAL FIRE Demonstration State Forests Annual Reports for calendar year 2014. It provides a summary of activities, facts and statistics for each Forest. This section is a synopsis of the Demonstration State Forests program as a whole. Included in this section is a proposed schedule for State Forest Management Plan Updates (Table 5). Also included in this section is a summary of the Demonstration State Forests expense, income and harvest volumes for the previous five fiscal years (Table 6 and Figure 1). Following this summary are the annual reports for each of the individual Demonstration State Forests.

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. Locations of the State Forests and the Research Area are illustrated in Figure 2. The aggregate acreage of these lands total approximately 70,000 acres. Table 1 lists the acreage comprising each 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. Las Posadas has limited public access and recreation opportunities due to deed restrictions.

The State Forests are State-owned public working forests with three primary legislatively mandated land uses: timber production, research and demonstration, 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 operating expenses, as the State Forests 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 of maintaining 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 conducted seven timber sales and harvested 18.6 million board feet of timber during 2014 (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 of revenues generated annually from the State Forests, operation of the State Forest System typically requires no additional financial assistance from the Department (CAL FIRE) or the State of California.

Last calendar year, 2014, the State Forests generated \$5.195 million in revenue, primarily from timber sales, while we spent \$5.112 million on salaries, operating expenses and State pro-rata Assessments. Surplus State Forest revenues remain in the FRIF fund, as mandated, and are carried forward into the next fiscal year. Table 2 below provides a breakdown of revenue and expense categories by Forest.

Research and Demonstration

The following are highlights of some of the research and demonstration projects that occurred on the State Forests in 2014. Details are provided in the accompanying individual State Forest Annual Reports. Some of the more notable highlights include:

The Jackson State Forest Research Plan progressed from a conceptual draft through expert review and input resulting in public review of the plan. The JDSF Research Committee completed an initial draft plan. An expert panel provided significant improvements to the plan's Focus areas as well as highlighting administrative issues. A public draft was prepared and presented at the December JAG meeting. The JAG supported the Plan with additional input regarding outreach. The draft plan was brought before and approved by the Board in January, 2015.

The Casper Creek watershed study advanced with the selection of Salli Dymond to fill a hydrologist post-doctorate position. The primary function of this position is to develop the third phase of the Caspar Creek watershed project. In addition, PSW-Redwood Sciences Lab hired Brian Storms as a permanent Hydrologic Technician for the Caspar Watershed study. Filling these positions exemplifies the long-term commitment by both the Forest Service and CALFIRE to the ongoing research that has been conducted in this watershed now for over 50 years.

Dr. Kevin O'Hara, et al, completed the North Fork Casper Pre-commercial Thinning study on Jackson State Forest. The results will be published in Forest Science. The 12-year results show some expected trends, but the extent of sprouting was noted.

Work on Dr. O'Hara's Seasonal Growth Study continued on Jackson State Forest with staff taking measurements every two weeks at sample plots across the Forest.

The Jackson State Forest South Fork Caspar - Lindquist Precommercial Thinning data set from the Green Diamond remeasurement was evaluated by State Forest staff, with the results presented by Lynn Webb in a poster presentation at the 2014 SAF – IUFRO Conference in Salt Lake City.

Jackson State Forest developed new documentation protocols to document the feasibility, need, costs and results of an increasing number of operational demonstrations undertaken on the forest.

Preparation of a Timber Harvest Plan began on LaTour State Forest based on a proposal submitted to the VTAC Committee in 2013 to incorporate either site-specific measures or nonstandard operational provisions for the protection and restoration of watersheds with listed anadromous salmonids. The goal is to use this provision contained in the Forest Practice Rules as a pilot project for the VTAC committee who is seeking additional projects that can demonstrate how the Section V pathway can promote more immediate (short-term) responses to active riparian management practices.

In May, 2014 six HOBO stream temperature and light monitors and six ambient air monitors were placed along South Cow Creek on LaTour State Forest, for a second season, to collect temperature, turbidity and ambient temperature data for the proposed VTAC project.

Pacific Southwest Research Station continued a LaTour State Forest white fir growth and spacing study on two brush units that were cleared in 2008 and planted in 2009. Both units were replanted in May of 2014 to fill in voids due to mortality.

A biocontrol study of bay laurel trees on Soquel State Forest continued in areas with Sudden Oak Death (SOD) (*Phytophthora ramorum*) led by Dr. Marianne Elliott from Washington State University and researchers from the Canadian Forest Service. Data indicates that the herbicide treatment appears the most effective at suppressing new sprouts after the first year.

Soquel State Forest staff met with Dr. Doug Schmidt and Matteo Garbelotto of UC Berkeley to review their ongoing research of SOD in the forest. The idea for a smart phone-based educational app about the state forest and research sites was hatched. The herpetological study on Soquel State Forest, led by CAL FIRE Captain Lawrence Erickson and sanctioned by the North American Field Herping Association (NAFHA), continued with one survey in May with 17 volunteers, including representatives from CDFW and the National Parks Service, as well as one herpetologist from Colorado and one volunteer from Illinois.

Doctor Janet Foley from the UC Davis Department of Veterinary Medicine and Epidemiology continued her research of blood-borne disease in small mammals on Soquel State Forest. Forest staff coordinated with graduate student Benjamin Plourde on a new study to assess small mammal populations before and after timber harvesting.

Dr. Chris Wilmers and Paul Houghtaling of UC Santa Cruz continued the Santa Cruz Mountain Puma Project to monitor the distribution and behavior of local mountain lions using GPS telemetry collars. In September, their staff installed game cameras on Soquel State Forest as part of a region-wide grid system to monitor pumas.

Recreation

All the State Forests experience high levels of recreation activity, although 2014 showed a downward trend from previous years. 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 76,000 total for all the State Forests. As has been the trend in previous years, Mountain Home received the most visitors in 2014, followed by Soquel and Boggs.

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 in 2011 and Jackson State Forest implemented camping fees in 2012. 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. Based on camper feedback and a reduction in campground management issues the program appears to have been a success. 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. Recreation visitor days are summarized for each Forest in Table 4 below.

Dr. Bill Hendricks, Cal Poly San Luis Obispo professor, presented his results of the 2013 recreation user survey to the Jackson State Forest Recreation Task Force and public in March and a Jackson State Forest Recreation Task Force meeting was in June to present a first draft of the new Recreation Plan.

New techniques were used to upgrade and make the Jackson State Forest Casper Creek Trail structures safer and longer-lasting. Over one hundred infrastructure improvements have been implemented on the trail system.

Mountain Home State Forest finished the construction of four new equestrian campsites in June, 2014, complete with corrals, picnic tables, bear proof food lockers, fire pits, new pit toilets and parking for trucks and horse trailers.

Soquel State Forest completed two segments of the Flow Trail in cooperation with Mountain Bikers of Santa Cruz (MBoSC), and hosted the Santa Cruz Super Enduro mountain biking race for the third year.

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 in-lieu payments for 2014 totaled \$95,691. Table 1 lists the equivalent in-lieu property tax payments to Counties by Forest.

Advisory Groups

Two meetings with the Jackson Demonstration State Forest Advisory Group (JAG) were held in 2014, one in April and another in mid-December. The April meeting focused on planned 2015 timber harvest planning and implemented 2014 timber sales. The December meeting centered on review of the 2014 JDSF Research Plan.

The Soquel State Forest Advisory Committee met on October 7, 2014 for a field tour of the forest to view the latest projects. Four Committee members attended, along with three CAL FIRE staff, six members of the public, and California Geological Survey (CGS) Geologist Cheryl Hayhurst. The subcommittee for a Steve Staub Memorial decided on a location in the forest for a memorial bench and view point, along Hihn's Mill Road, and planned for an interpretive sign to be included at the site.

Other

For the third consecutive year LaTour State Forest had the honor of provided the State Capitol Christmas Tree. The tree was selected by Department of General Services personnel during a tour of the forest in August, 2014. The tree, a 53 foot tall white fir, was then harvested on November 4th and transported to Sacramento by CALFIRE. The 83rd Annual Capitol Christmas Tree Lighting Ceremony took place on December 2nd, in which the 10,000 ultra-low wattage LED lights and the 900 hand-crafted ornaments made by children and adults with developmental disabilities were illuminated.

A total of 41,000 seedlings, grown under contract with Cal Forest Nursery in Etna, were planted on LaTour State Forest in the spring of 2014 on approximately 143 acres in various harvest and rehabilitation units across the Forest.

Retired Annuitant Dave Dulitz completed a 100% inventory of the Old-Growth Giant Sequoias (OGGS) on Mountain Home State Forest. The inventory began in 2001 and

was worked on periodically until finished in 2014. The inventory found that there are 4,750 OGGS still growing on the Forest.

Mountain Home State Forest had film crews on the forest more than once in 2014. From documentaries to commercials, film crews continue to seek out the forest for its majestic settings and unique features.

The Sequoia Forestry Challenge was hosted by Mountain Home State Forest, for the third time, in October, 2014. This four day event was a competition for high school students to learn some technical forestry skills and engage in current forestry issues.

Natural Resources Secretary John Laird, CAL FIRE Director Ken Pimlott, and Deputy Director Clare Frank attended a tour of San Mateo-Santa Cruz Unit (CZU) led by Unit Chief Jalbert on February 21. The tour included a stop at the Soquel State Forest Office, where Forest Manager Angela Bernheisel described some of the current forest projects.

The updated 2014 Soquel State Forest General Forest Management Plan (GFMP) was approved by the Soquel Demonstration State Forest Advisory Committee and by the Board of Forestry and Fire Protection upon completion of CEQA and the public review process.

Table 1. Forest Acreages and In-Lieu Property Taxes Paid in Calendar Year 2014

Forest	Acres	Equivalent Payment to Property Taxes
Jackson	48,652	\$76,325
LaTour	9,033	\$8,016
Mountain Home	4,807	\$4,456
Boggs Mountain	3,493	\$0
Soquel	2,681	\$5,792
Las Posadas	796	\$1,002
Ellen Pickett	100	\$100
Mount Zion	164	\$0
Total	69,726	\$95,691

Table 2. Costs and Revenues in Calendar Year 2014

Forest	Revenues			Costs		
	Large Timber Sales	Small Timber Sales and Miscellaneous Forest Products	Total Revenues	Personnel	Operating Expenses	Total Costs
Jackson	\$3,683,422	\$35,098	\$3,718,520	\$2,181,890	\$223,024	\$2,404,914
LaTour	\$656,492	\$3,998	\$660,490	\$237,888	\$121,268	\$359,156
Mountain Home	\$0	\$68,003	\$68,003	\$422,775	\$63,036	\$485,811
Boggs Mountain	\$0	\$11,158	\$11,158	\$191,432	\$44,435	\$235,866
Soquel	\$726,764	\$9,615	\$736,379	\$300,601	\$62,656	\$363,257
State Forests Program**	\$0	\$0	\$0	\$447,667	\$196,798	\$644,465
Assessments						\$618,540
Total	\$5,066,679	\$127,872	\$5,194,550	\$3,782,252	\$711,216	\$5,112,008

* Operating Expenses include: Materials, Services and Capital Investments

** State Forests Program Operating Expense includes all State Forests Property Taxes

Table 3. Timber Sales Harvested Volume in Calendar Year 2014

Timber Sales	Harvest Volume (MBF)	Revenue (\$)
Road 80	1,694	\$708,321
Water Gulch	3,042	\$256,990
Orchard	2,719	\$524,203
Casper Creek	1,370	\$329,476
Frolic #2	2,678	\$1,214,889
Park Gulch	2,239	\$649,543
Railroad Gulch	0	\$0
Jackson Total	13,743	\$3,683,422
LaTour	3,186	\$656,492
Mountain Home	0	\$0
Boggs Mountain	0	\$0
Soquel	1,693	\$726,764
Total	18,622	\$5,066,679

Table 4. Recreation Visitor Days in Calendar Year 2014

Forest	Visitor Days
Jackson	4,075
LaTour	3,872
Mountain Home	25,017
Boggs Mountain	19,998
Soquel	23,020
Total	75,982

Table 5. State Forests Management Plan Update Schedule

Demonstration State Forest*	Mgt. Plan Update (Year)	Mgt. Plan Status
LaTour	2013	Completed/Approved
Soquel	2014	Completed/Approved
Boggs Mountain	2015	In Progress
Jackson	2016	
Mountain Home	2017	
LaTour	2018	
Soquel	2019	

Table 6.

Demonstration State Forests Revenue, Expense and Harvest Volume						
Five-Year Trend						
Year	PY+ OE Expense	Encumbrances	\$ Expense	\$ Revenue	\$ Carryover	Volume (MBF)**
FY10/11	3,758,071.13	108,557.97	3,937,745.10	3,782,622.92	0.00	19,771.83
FY 11/12	4,752,270.13	67,371.74	4,900,695.87	6,059,303.71	0.00	24,584.86
FY 12/13	5,066,883.89	141,676.33	5,633,922.22	6,783,738.75	1,158,607.84	30,173.58
FY 13/14	4,666,169.20	265,936.73	5,550,645.93	3,666,234.51	2,308,424.37	16,473.28
FY 14/15*	4,871,591.65	205,428.05	5,805,338.70	6,329,843.92	424,012.95	18,621.32
FY 15/16*	0.00	0	878,918.00	0	524,505.22	
Statewide						
Year	Pro-RATA Cost					
FY10/11	71,116					
FY 11/12	81,054					
FY 12/13	425,362					
FY 13/14	618,540					
FY 14/15	728,319					
FY 15/16	878,918					
* FY 14/15 as of 7/13/2015						
** Harvest Volumes by calendar year, based on annual reports						

The Statewide Pro-Rata cost represents General Fund recoveries of statewide general administrative costs (i.e., indirect costs incurred by central service agencies) from special funds (Government Code [GC] sections 11010, and 11270 through 11277). The Pro-Rata process apportions the costs of providing central administrative services to all state departments that benefit from the services. This apportioned amount is further allocated to each state department's funding sources based on the percentage of total expenditures in each fund.

Figure 1.

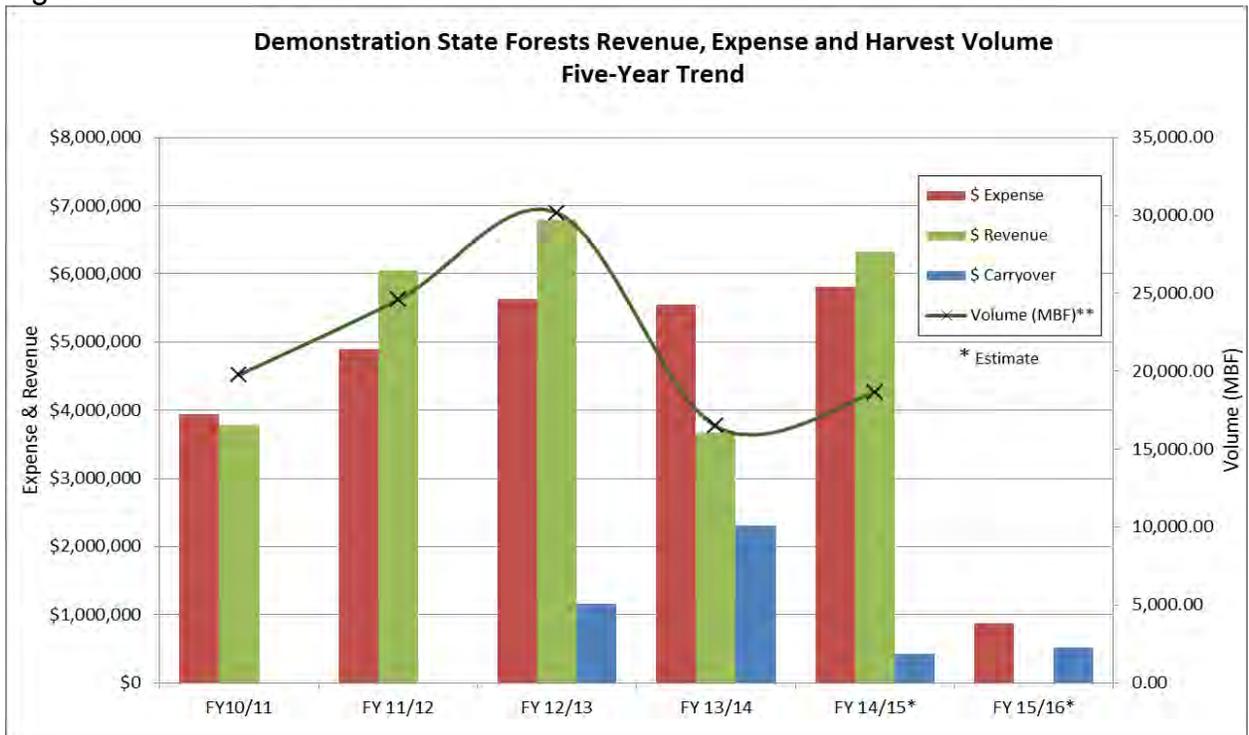


Figure 2. Demonstration State Forests in California.



ANNUAL REPORT

JACKSON DEMONSTRATION STATE FOREST

Mendocino County, California

2014 Calendar Year



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

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

Administration

State Forest Staff

Manager:

Pam Linstedt (Forester III)

Protection:

Vacant (Fire Captain Specialist, Jul-Dec)
Craig Dudley (Fire Captain Specialist, Jan-July)

Silviculture/Timber:

Dave Derby (Forester II)
Jason Serna (Forester I)
Erik Wahl (Forester I)
Fred Postler (Forestry Asst. II)
Julie Rhoads (Forester I)
Brandon Rodgers (Forester I)

Geographic Information Systems:

Shawn Headley (Research Program Spec. II)

Heavy Fire Equipment Operation, Road Maintenance:

Doug King (HFEO)
Kris Rorabaugh (HFEO)

Research, Demonstration and Education:

Lynn Webb (Forester II)
Brian Barrett (Forester I)
Kirk O'Dwyer (Forester I)
Christopher Henderson (Forestry Asst. II-TAU, Dec.)

Retired Annuitants:

Ron Collins
Bob Sallee
John Griffen

Administration, Recreation, Roads and Law Enforcement:

Craig Pedersen (Forester II, Jan-July)
Robert Horvat (Forester I)

Seasonal Forestry Aides:

Peter Smith
Nochella Ozard
Robert Aguero
Christopher Henderson
Jerold Sharp
Kate Ferland
Erik Snow
Tori Norville

Biologist:

Tina Fabula (Staff Env. Scientist)

Clerical:

Joy Korstjens (Office Tech)
Debbie Lotten (Account Clerk, ½-time)

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, property survey, engineering and fire protection and prevention.

Jackson Demonstration State Forest Advisory Group (JAG)

The primary focus for the JAG's activity centered on review of ongoing forest management plan implementation. George Hollister is the residing Chair of the group with John Andersen filling the position of Vice Chairperson.

Two meetings were held, one in April and another in mid-December. The April meeting included and focused on planned 2015 timber harvest planning and implemented 2014 timber sales. The December meeting centered on review of the 2014 JDSF Research Plan.

Four THPs were evaluated and the entire JAG determined by consensus that all were being developed in accordance with the Management Plan.

JAG membership (December, 2014):

George Hollister (Chair)	Doug Albin	
John Andersen (Vice Chair)	Amy Wynn	Mahesh Rao
	Mike Anderson	Darcie Mahoney

The frequency of JAG meetings will continue to be determined by necessity, but likely not more frequently than quarterly. JAG meetings were attended by 1-2 CAL FIRE Sacramento staff members, 1-3 JDSF staff members, and the MEU Unit Chief. Preparation of meeting materials was accomplished primarily by JDSF staff with Sacramento Headquarters support.

Timber Management and Minor Forests Products

Class III Timber Sales (Large Sales)

13.7 million board-feet were harvested during calendar year 2014 with a value of \$3.7 million dollars. The major timber sale activity this year occurred throughout the forest within second-growth timber stands in the South Fork Noyo River watershed (Road 80 and Frolic #2), the Caspar Creek watershed (Orchard and Caspar Creek), Mouth of Big River watershed (Railroad Gulch), and the Chamberlain Creek watershed (Water Gulch and Park Gulch). Selection was the primary silvicultural system used. Single tree selection was the dominant prescription. Group selection was prescribed to a lesser extent. The volume of timber sold remained consistent with the provisions of the Management Plan (see statistics). Camp run timber prices averaged \$268 per thousand board feet (stumpage price).

LOGGING SEASON 2014 <i>(through 12/31/14)</i> <i>Not fiscal year</i>		
Timber Sale	Volume (Mbf)	Revenue (\$)
Road 80 (2 nd year)	1,694.24	708,321
Water Gulch (2 nd year)	3,042.44	256,990
Orchard	2,718.93	524,203
Caspar Creek*	1,370.38	329,476
Frolic #2*	2,678.14	1,214,889
Park Gulch*	2,239.19	649,543
Railroad Gulch*	0	0
TOTAL	13,743.32	3,683,422
*In progress		

Approximately 4.13 miles of new seasonal and 0.9 miles of temporary road were constructed and 2.6 miles roads were abandoned as part of the 2014 operations. New ridge-top roads were constructed to provide for cable yarding operations. Approximately 35 miles of road were maintained by private licensed timber operators during the dry season.

Planning and reconnaissance work began for 2015 timber sales; it is expected that sale activity will be continued within the Caspar Creek, Mouth of Big River, South Fork Noyo, and Chamberlain Creek watersheds. Sale activity is expected to commence in the Brandon Gulch watershed. In the South Fork Noyo, timber operations will include completion of the Frolic #2

timber sale and initiation on the Peterson Gulch timber sale. The Park Gulch timber sale will be completed in the Chamberlain Creek (tributary to NF Big River) watershed. The Caspar Creek watershed will include the completion of the Caspar Creek timber sale and the initiation of the Fairbanks timber sale. In the Mouth of Big River watershed the Railroad Gulch timber sale will continue and the Thompson Gulch timber sale will commence. Operations on the Cribwall #2 timber sale will be initiated in the Brandon Gulch watershed.

Class I Sales (Minor Sales)

Minor sales involving firewood, mushrooms, and other minor forest products occurred. During the year, 654 permits were issued to local individuals.

Two timber sale areas were opened to the personal use firewood program this year. A greater supply of downed material enabled the sale of firewood permits for a total of 4 weeks. The firewood areas were closed because of significant rain in mid-September. Frequent inspections reveal good compliance with the regulations and no cutting of live trees.

*The cost of commercial mushroom permits was reduced from \$100 to \$20 in November of 2014 and free personal mushroom permits were no longer offered after that date. This has eliminated enforcement issues with permit holders that collect more than was allowed with a personal permit.

Class I Sales Statistics

Permit Type	# Permits		Volume Sold		Revenue	
	2013	2014	2013	2014	2013	2014
Personal use firewood (2 cord)	116	155	232	310	\$2,240	\$3,080
Commercial firewood (10 cord)	NA	NA				
Personal use mushrooms	208	92			0	0
Commercial mushroom*	56	404			\$5,400	\$10,040
Fern	2	0			\$80	0
Shrubbery	1	1			\$25	\$25
Roots/Stumps (tons)	25	2	22.1	1	\$680	\$30.00
Poles	1	0	1 pole	0	\$33	0
Total					\$8,425	\$13,175

Research and Demonstration Program

Highlights this year included the completion of the JDSF Research Plan and preparation of two publications associated with long-term precommercial thinning projects. In addition, work on several new and ongoing THP demonstrations continued. Invasive weed management documentation was greatly improved.

Research Plan

This year the research plan progressed from a conceptual draft through expert review and input resulting in public review of the plan. The JDSF Research Committee completed an initial draft plan. The Research Committee was comprised of State Forest Program Manager- Helge Eng, Northern Region Resource Manager- Kelly Dreesmann, Mendocino Unit Chief – Chris Rowney, and Forest Manager- Pam Linstedt. For development of the plan, the committee was augmented by Chris Keithley- Fire and Resource Assessment Program Chief, Pete Cafferata-Watershed Protection Program Manager, and Lynn Webb-JDSF Research and Demonstration Program Manager. The initial draft was reviewed by past Board members Doug Piirto, Robert Heald, Gary Nakamura. The next step included securing an expert panel of research scientists who could address the focus areas as well as other issues. Via an interagency agreement with UC Extension, Dr. Richard Standiford of UCB assembled an expert panel of research scientists. On August 20, an orientation meeting was held at JDSF (office and field). The panel included Drs: Tim Bean, HSU; Lee McDonald, CSU; Kevin O'Hara, UCB; and Martin Riche, PSW. The group visited relevant forest sites: Caspar Watershed, pre-commercial thin study; Berry Gulch invasive weed demonstration and the two long-term Whiskey Springs studies. The expert panel provided significant improvements to the plan's Focus areas as well as highlighting administrative issues. With continuous feedback from the expert panel, a public draft was prepared and presented at the December JAG meeting. The JAG supported the Plan with additional input regarding outreach. The draft plan will be brought before the Board in early 2015 for approval.

Research

Caspar Watershed Study

The remainder of the 13-14 hydrologic year was dry resulting in an Aug.-Apr. total of 25.5" that was 56% of the mean annual rainfall. This is in addition to the lower than normal totals for prior years: HY13: 33.9" (74% of mean) and HY12: 37.47" (82% of mean). November and December rains did offer promise of a wetter hydrologic year in 2015.

PSW-Redwood Sciences Lab hired Brian Storms as a permanent Hydrologic Technician for the Caspar Watershed study, located in Fort Bragg. Filling this long vacant permanent position will improve continuity of the program and reduce the reoccurring training workload for science staff. In addition, a hydrologist post-doctorate position has been selected from a pool of excellent candidates. Salli Dymond is expected to report early in 2015. The primary function of this position will be to develop the third phase of the Caspar Creek watershed project.

The annual Caspar Creek Watershed meeting with CAL FIRE and USFS- Pacific Southwest Research Station, Redwood Sciences Lab was held on May 22; Webb, Linstedt, Barrett, Cafferata and Dennis Hall from CAL FIRE attended. Logistics of recruiting the Post-Doctoral candidate to help focus the third experiment was an important topic. With the fraction of normal rainfall and few storm events, some short-term studies were not able to collect the data they had hoped. The South Fork Caspar Creek mean daily stream flows display an apparent trend toward drier Fall seasons than previous decades.

Caspar Watershed hydrologist Sue Hilton completed her career with PSW this year. Her work on stream wood has been key to understanding the Caspar Creek story, and her good work was recognized during the annual meeting.



Important maintenance work was completed on the North Fork Caspar fish ladder had thanks to cooperation from CAL FIRE Region Technical Services and PSW on October 7. A new seal was installed on one of the adjustable 22 ft. long weirs. Future maintenance costs will be minimized due to ability to repair this in-house.

Work continues on the backlog of trail maintenance in the Caspar Watershed. New techniques are being used to make the structures safer and longer-lasting. Redwood lumber from the Parlin mill is used. Documenting the infrastructure in GIS has made us aware that there are over one hundred infrastructure improvements in the trail system. The photo shows improvements designed by Kirk O'Dwyer that should insure the durability and safety of bridges. This includes cement footings, moisture barrier between treads and supports and use of roofing material on tread to prevent slipping.

Externally Initiated Research Studies

Continuing projects

- Fish Population Comparison in Caspar Creek, South Fork Noyo River, and Pudding Creek. Sean Gallagher, California Department of Fish and Wildlife.
- Ecosystem Scale Nitrogen Balances, Isotopic Analysis of disturbance effects. JDSF is a redwood region replicate. Dr. Ben Houlton as well as Meagan Mnich and Erin Lennon graduate students, U.C. Davis.
- Hermit Warbler Breeding Season Study. Brett Furnas, CA Department of Fish and Wildlife.
- 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.
- Annual SF Caspar fish count the second week of October with participation from multiple agencies and others. The streamflow was lower than Brad Valentine had observed before with some riffles dry. Steelhead was found throughout the sampled reaches but no Coho.
- The Bedload Study in North Fork Caspar was monitored by Sara Yarnell of UC Davis and others. They seek to validate a bedload movement model but the absence of a large storm event has slowed the study.
- A tentative new graduate project will be implemented to study the microbiome of *Ensatina* spp. salamanders was reviewed and accepted.
- JDSF's importance as a site to study mushrooms has been highlighted this month.

JDSF is a specimen collection site for educational events. On November 22, the Four University mushroom collection field trip and a class from Mendocino College held events on the Forest. Though the individual permitting process has changed for mushroom collection, (see recreation below) no fee has been required for Special Use permits related to science education.

Priority Projects with Significant Research & Demonstration Staff Support

Multi Cohort Silviculture

This study had important installation and measurements in 2014. The final adjustments in density for the Camp 6 replicate were completed utilizing professional fellers and logging crew. The remaining Multi Cohort replicates were planted by HSU students (North Waldo) and local reforestation crew (Camp Six). HSU Graduate Student Kurt Schneider worked on the redwood sprouts and seedling portion of Dr. Berrill's study. He measured the redwood sprouts and seedlings and used hemispherical photography to characterize the replicates as well.

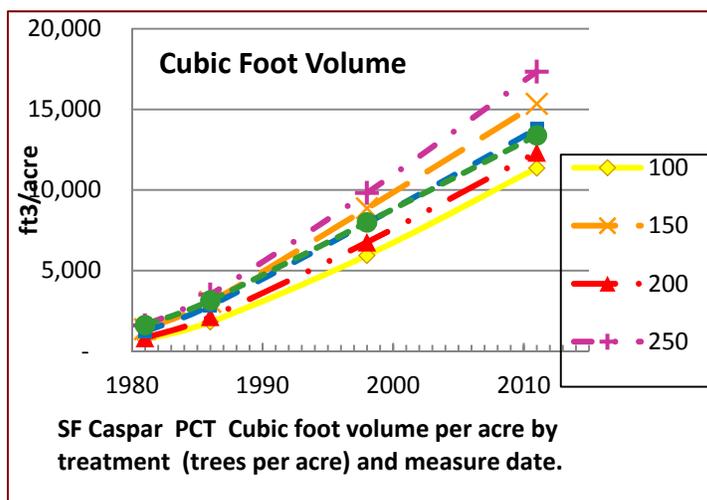
Seasonal Growth Study

Work on Dr. O'Hara's study continued with JDSF staff taking measurements every two weeks at the three sample plots across the Forest. This was the first substantive use of Manual Band Dendrometers on redwoods, so the study has piqued interest by the manufacturer. Agricultural Electronics Corporation Representative Bill Gensler visited the Forest on September 25. Brian Barrett who has been responsible for installation and maintenance of the bands provided a site visit to one of the study sites. Forestry Aide Christopher Henderson plotted the first year's measurements.

North Fork Caspar Precommercial Thinning

JDSF received Dr. Kevin O'Hara, *et al.*'s report. In addition, the results will be published in Forest Science. The 12-year results show some expected trends, but the extent of sprouting was noted.

The South Fork Caspar- Lindquist Precommercial Thinning data set from Green Diamond remeasurement was evaluated by Lynn Webb with the assistance of Jeff Leddy. The results were presented at a poster for the 2014 SAF – IUFRO Conference in Salt Lake City. This natural regenerated stand had variability that seemed to be tied to the clumpy redwood sprout distribution and initial stand composition. Between the two studies, both early (year 10) and late (year 19) PCT of redwood has been documented.



Caspar Cutting Trials

The Caspar Cutting Trials were reviewed prior to the preparation of the Fairbanks THP in part of the study area. Contacts included James Lindquist, Dr.s Doug Piirto, Kevin O'Hara, Pascal Berrill and former JDSF staff: Tilley, Jameson, Yee and Griffin. The demonstration value of the study remains high. The research value is limited at this point, particularly in the group selection area. A redesign of sampling methods would be a minimum requirement. For the Fairbanks 2015 THP, the group selection treatment area will be harvested using that technique. All plot trees that will be harvested were measured and trees with the original 1960's era tags were measured as well. The single tree selection blocks will not be harvested nor will the control of unmanaged second growth. This will conserve the study's value.

Demonstrations

As the number of operational demonstrations has grown, the need for documenting the feasibility, need, costs and results has been recognized. Newly developed documentation protocol will improve outcomes.

West Berry Gulch THP Gorse Management

JDSF staff conducted the initial post-operations survey for gorse seedlings in the Berry Gulch THP. As expected, the stored seedbed did produce some seedlings. Gorse has not been found beyond the existing Berry Gulch sites, indicating the specific measures incorporated in the THP to prevent spread seem to have been successful. Seedlings were treated, but in the Fall additional seedlings were found. Annual monitoring and treatment will continue focusing on identifying stand conditions that produce the most seedlings and adjusting the survey dates.

Road 80 THP Gorse Management

The THP was completed, legacy plants were mapped and surveys are planned for 2015.

Orchard THP Eucalyptus Management

The THP was completed and the material to cover the stumps was purchased. Installation will be conducted in 2015.

Invasive Weed

Forestry Aides conducted annual star thistle survey and hand pulling. Star thistle has been eradicated from four sites. Thanks to cooperation with Parlin Fork Camp staff the star thistle infestation in the leach field has declined in numbers. Monitoring is necessary for at least one more year more.

The spread of invasive weeds on recently constructed roads and THP areas was systematically monitored. The Forestry Aides tallied and removed weeds where feasible. As expected, gorse seedlings were found at the prior infestation sites. Forestry Aides removed over 4,500 plants and surveyed over 24 miles of road. Eight miles were identified as areas with higher concentrations due to power line right-of-ways or older infestations. The results will be evaluated on a forest-wide scale to prioritize future treatments. Christopher Henderson has organized, compiled and used GIS to document this project.

Water Gulch THP Reforestation

Redwood Resources began a reforestation contract associated with the Water Gulch THP after lengthy CAL FIRE contract delays. They also planted trees within the Camp 6 THP replicate for the Multi-Cohort study.

Park Gulch Continuous Cover- Conifer Regeneration Demonstration Area

This area was inventoried and harvested. Treatments are planned for 2015. At the completion of the entire project, a demonstration site will be available for furthering our understanding of conifer hardwood dynamics on the east side of JDSF.

Multiage Silviculture at Walton Gulch THP

Relatively intensive inventory was conducted for stand stratification in association with a demonstration using the Stocking Assessment Model (MASAM) developed by Berrill and O'Hara. The intent of the demonstration is to use MASAM to assist in identifying and then creating appropriate growing space for overstory, mid-canopy and regeneration.

Whiskey Springs Lindquist Thinning Study Demonstration- Education

Permanent plot monuments were updated. The update including color coding plot corners to assist visitors in observing the effects of two different density treatments. Maps were upgraded as well.

Forest Learning Center

The unusual January cold froze the water pipes linked to the FLC for an extended period. Use of the Forest Learning Center increased during the summer season.

Outreach and Education

Tours and Presentations

In the early spring Dr. Christa Dagley, HSU, brought approximately 20 natural resource students to plant trees at the North Waldo Multi-Cohort study replicates. The students learned about reforestation and density management. Barrett and Webb received the ultimate compliment: some students expressed interest in becoming foresters after the day in the woods.

On October 3, the Forest hosted 12 international scientists on a pre-tour event associated with the International Union Forestry Research Organizations - Society of American Foresters Conference. The scientists toured several sites including: Whiskey Springs density management demonstration, the uneven-aged multi-cohort study, ongoing work with our USFS partners in the Caspar Watershed and active logging operations in the Caspar THP. Liz Keppeler, PSW, and Lynn Webb led the tour.



The annual Redwood Region Logging Conference included participation by JDSF including preparation of new material, conducting tours and staffing the booth at Ukiah.

In the spring Fabula and Webb hosted a half-day rare plant field trip on the Forest for the College of the Redwoods, Fort Bragg, rare plant botanical class taught by Dr. Teresa Sholars.

On October 11, Dr. Susan Marshall, HSU, brought her soil taxonomy class to visit the Pygmy Forest. They visited the important soil pits that were dug by Hans-Jenny in 1971. As part of the Forest's demonstration mission, the exposed soil profile within the pits is periodically maintained for this educational opportunity. The Pygmy Forest is linked to the unusual acidic leached soils. Local professor Theresa Sholars who worked with Hans-Jenny attended and provided further insight regarding the soils and dependent botanical community.

Webb presented a poster at the SAF/CIF/IUFRO Conference that documented 30-year results from the Lindquist South Fork Caspar Precommercial thinning study. Linstedt and Barrett attended as well, benefiting from the quality presentations on emerging forest science and management.

Barrett and O'Dwyer staffed an educational booth at Paul Bunyan Days in Fort Bragg.

O'Dwyer conducted an impromptu tour for Russian Boy Scouts in July, and Julie Rhoades provided one for German Foresters.

Fort Bragg Fire Prevention Days included a campfire safety program staffed by Barrett and Headley in June.

Educational signs for a "Wood in Streams" project were made and sign locations have been selected. These signs are part of an integrated grant effort that was completed adding wood to stream reaches in the South Fork Noyo River. JDSF worked with Trout Unlimited and California Conservation Corps to develop the signs.

Road Rules Workshop - (Sept. 10, 11) ½-day field tour on JDSF. This year, the Board significantly revised the Forest Practice Rules relating to roads. In preparing for 2015 implementation, JDSF provided training opportunities for two of the field days associated with the statewide training effort.

The Board of Forestry and Fire Protection and the State Water Resources Control Board held a joint meeting in Fort Bragg and JDSF sponsored their field tour on September 24. The tour focused on Water/Lake Protection measures and associated timber management.

Recreation

Campgrounds were open as usual from May through September. This year a Forestry Aide was assigned specifically to the recreation program, which in part, resulted in an increased number of contacts with Forest visitors, particularly those camping. Additionally, an increase in general patrol and maintenance activities resulted.

Camping

Dunlap and Horse Camp in the east end and most of the sites in the Camp One area (west end) opened on May 15. Big River, Wagon, Teacher's, Red Tail, and South Bend campgrounds remained closed while work on the vault toilet replacement continued. Wagon and Red Tail opened for Memorial weekend. The other sites opened as the improvement work was completed. Campers ranged from individuals to families and small groups. Seven groups of campers reserved Tilley campground this year. Visitor use in campgrounds increased as compared to 2013, although the numbers weren't quite as high as 2012. However, vandalism and theft at the Iron Rangers was an ongoing issue this year, so the true visitor count is undoubtedly higher. There was an increase in illegal camping and transients occupying the Forest, possibly due to the closure of a shelter in Ukiah. The combined effort of additional staffing (Forestry Aide) and our prevention staff reduced the occurrence of problems in the Camp One area. Campground use declined towards the end of the summer season. Detailed camper numbers are included below.

Mushroom Collecting

Mushroom permit sales in the first half of the year were slow due to limited mushroom abundance associated with low rainfall levels, but increased dramatically in the wet fall and winter months resulting in issuance of 496 permits. A new approach to mushroom permits was implemented and detailed in a press release for the second half of the year. The new policy did not change the

requirement for all individuals collecting mushrooms on JDSF to have a permit, with permits issued for a 12-month period from July 1 – June 30 annually from the JDSF Fort Bragg office. The revised permit process, established to enhance resource protection measures, includes a single annual fee of \$20.00 for an individual permit, which entitles the permittee to gather mushrooms on JDSF for either commercial or personal use with no daily collection limit. Special Use permits for educational institutions may be arranged by contacting staff. This new approach will be evaluated at the end of the first year of implementation.

The Mycological Society of San Francisco and Fungus Federation of Santa Cruz held their annual events; additionally, educational events were held by UC Berkeley and Mendocino College faculty and students for a total of 10 Special Use permits. The most complex part of implementation was addressing the needs of the mycological societies. Previously they used special permits for one or two day events. Given their interest in both culinary and educational, participants continue to collect after the event. All participants were required to purchase individual permits. Staff issued the permits and sold maps on site for two events. The most consistent comment has been the desire to obtain permits online. Staff will explore alternate methods to issue permits that can address the needs of visitors who cannot visit the office during business hours.

Recreation Task Force, Survey and Plan

Dr. Bill Hendricks, Cal Poly San Luis Obispo professor, presented his results of the 2013 recreation user survey to the JDSF Recreation Task Force and public in March. The five task force members, two JAG members, and seven members of the public attended. The presentation was well received. Prior to Recreation Program Manager Craig Pederson's departure, he held a Recreation Task Force meeting in June to present a first draft of the new Recreation Plan. The plan identifies five recreation opportunity categories: 1) road use, 2) facilities, 3) trails, 4) dispersed use, and 5) organized events. For each category, objectives and management strategies are identified. The plan does not include site specific projects but rather provides decision criteria and guidance for evaluating and implementing appropriate projects. The Recreation Task Force met on July 31 and discussed the existing sanctioned, non-sanctioned, and potential trail networks. Specific items included: signage, inventory, known concerns, appropriate use, etc. An additional Recreation Task Force member (bicycling enthusiast) was selected.

Recreation Events

- Norcal Adventures held bicycle events June 28-29 and August 30-31.
- The Mendocino 100 mountain bicycle event took place July 5. It was a successful event; however, the sponsor had to be contacted to remind him to remove all flagging from the course.
- Mendocino Bike Sprite held an event August 8-11.
- The North American Trail Ride Conference held an event August 15-17 at Horse Camp; there were approximately 50 participants.
- Mendocino MTB Madness, a three-day mountain bike event, occurred August 22-24 with less than 100 participants using the same route as was used for the 2013 event. The event included both guided rides and a relay event.
- The Annual Caspar Classic mountain bicycle event took place August 31. This year a segment of the course was modified because of ongoing logging in the Orchard THP. In December, the Through Tree Trail which is a popular bicycle route on the western edge of JDSF was reopened following additional work by staff and Chamberlain crews. The remainder of the Orchard THP remains closed.

Recreational Statistics

Campsites were generally occupied for fewer than the allowed 14 days per visit, with the exception of one eviction. Other forms of recreational use (i.e. equestrian, mountain biking, hiking, etc.) appeared to be within historic levels.

Individual Campsites	2012	2013	2014
Permits issued	860	609	761
Number of campers	2,558	1,719	2,294
Camper days	4,520	3,263	4,075

The total revenue generated from camping permits (base fees plus extra vehicle fees) was \$20,462.60. 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 iron rangers were vandalized numerous times and one or more individuals had developed a technique to remove envelopes. By increasing collection frequency and by the staff visiting new campers at the end of the day, more registrations were collected. In general nearly all comments regarding the fees were positive, and many positive comments were received regarding the new toilets. The change to more family oriented campers observed in the 2012 and 2013 seasons continued into 2014. The entire camping season went without a camp host in either Dunlap or Camp One due to a lack of qualified applicants. Limited amenities at the host site(s) appear to be the major contributing factor to attracting good candidates.

Law Enforcement

Illegal activity on the Forest continues to include: garbage dumping, abandoned vehicles, gate vandalism, camping, wood theft, trail construction, and off-highway vehicle and four-wheel drive vehicle damage.

Illegal Motorized Vehicle Activity

The lower Hare Creek drainage is being accessed from some of the residential areas bordering the Forest. Several neighbors have made reports of rude behavior and excessive speed. Some of the illegal access points in the Hare Creek area have been blocked utilizing heavy equipment.

Firewood

The West Chamberlain firewood area remained open through September 29 although sale of wood permits ceased earlier in the season due to decreasing wood availability. Firewood cutters were generally found in compliance with the rules during periodic checks of the firewood area. A Forestry Aide was dedicated to the recreation program, and the increased presence in the campgrounds and firewood areas appears to have increased compliance. Illegal wood cutting continued in areas of the Forest during the winter months.

An individual cited for illegal firewood cutting and vehicle access behind a locked gate on a road closed for the winter plead guilty in exchange for a fine and 12-months' probation that included: stay away from JDSF, obey all laws, and community service. The court released the chainsaw to his father as he claimed it was his. JDSF will not issue firewood permits to the suspect or the father since they live at the same address.

Camping – Theft and Vandalism

The theft of camping fees from the Iron Rangers required extensive work by Prevention staff and periodic repairs of the ranger. Prevention BC Farias observed the thief in the act of stealing envelopes from an Iron Ranger but the thief escaped on foot into the darkness. However, Farias was able to arrest his accomplice who was waiting in a vehicle nearby. The accomplice failed to appear for his court date and has a warrant for his arrest.

Illegal Dumping

Garbage continued to be a problem. Parlin inmates and JDSF staff conducted cleanup along some of the roads on the west side. Some of the dumping is well beyond household garbage as 30 tires were found at one site.

Mushroom Permit

Education and enforcement of mushroom permits continued through the fall and winter and compliance seemed to increase through time. The change from a two permit system, personal (free) vs. commercial (\$100), for mushroom gathering to a single permit allowing commercial use at a reduced fee (\$20) is working well for enforcement. Compliance is high for those persons contacted by patrol staff.

Wildlife and Botanical Resources

Fabula, Webb and Horvat conducted the annual half-day training for the Parlin and Chamberlain Creek Conservation Camp Fire Captains to inform them of required rare plant and animal protections across JDSF. The training also covered the JDSF preferred road brushing specifications.

The JDSF wildlife, rare plant, and spotted owl GIS layers were updated.

A new avian survey contract (northern spotted owl and marbled murrelet) was submitted to Business Services Office. Work continued on wildlife surveys associated with timber sales and THP planning.

Northern Spotted Owl

2014 Northern spotted owl survey planning was finalized with the current contractor. Fabula attended CDFW's annual NSO meeting in Fort Bragg. Three timber sales (Orchard, Road 80, and Water Gulch) were cleared after early spot-check calling found no owls in the harvesting areas. Despite a large number of spotted owl calling throughout the Forest, only one NSO Activity Center has been located this year. Two pairs of barred owls have been heard during calling. Northern Spotted Owl surveys were completed for four timber sales (Frolic #2, Caspar Creek, Railroad Gulch and Park Gulch).

Northern spotted owls were unresponsive or absent at many of the historic activity centers. The 2014 northern spotted owl detections were contributed to the CDFW Spotted Owl database.

Barred Owl

JDSF barred owl data were compiled and contributed to a regional database that was included in a "Northern Spotted Owl vs. Barred Owl," presentation at the Western Section of the Wildlife Society meeting in January 2015.

Marbled Murrelet Potential Habitat

The JDSF Wildlife Biologist attended the required annual marbled murrelet refresher training. Fabula completed additional potential murrelet habitat assessments in association with future THP planning, and met with CDFW regarding survey locations associated with potential murrelet habitat. Two new potential marbled murrelet habitat areas were identified in the Chamberlain TW THP adding to the five areas surveyed. Murrelet surveys were conducted between April and the end of July. No murrelets have been detected at the seven areas currently being surveyed in the Forest.

Townsend's Big Eared Bat

With the recent candidacy for listing of Townsend's big-eared bat, *Fabula* and the THP preparers researched published scientific work on life history and habitat requirements. With research in hand, habitat was assessed and potential protective measures were discussed. No potential habitat was identified in the 2014 THPs.

Botanical Survey

Botanical surveys were completed at five THP areas. One area of running pine was relocated on Walton Gulch THP and two areas of Oregon goldthreads were relocated on Peterson Gulch THP. Additional botanical field work at Frolic #2 THP and Fairbanks THP was completed with the overseeing RPF, due to the fact that new areas or unreported areas of special status plants were found in these THPs. All of the 2014 rare plant and animal sightings at JDSF were reviewed, compiled and contributed to the CDFW's California Natural Diversity Database.

A new botanical services contractor (Wildflower Solutions) was hired, and botanical surveys for five THPs are planned to begin in May, 2015.

The seasonal Forestry Aides were given a rare plant identification field trip to learn how to identify several of the rare plant species found on the Forest. The Aides later assisted with a count of the Humboldt milkvetch plants along Forest Road 330. Humboldt milkvetch is a state endangered plant species.

Stream Temperature Monitoring

Approximately 32 stream temperature recorders were placed in major streams across much of JDSF by *Fabula* and Forestry Aides. Recorders were programmed to take water temperatures every hour from June through November.

Expenditures

Botanical services contract expenditures for the calendar year were \$10,300, and NSO and Murrelet services contract expenditures were \$23,500.

Grant Projects

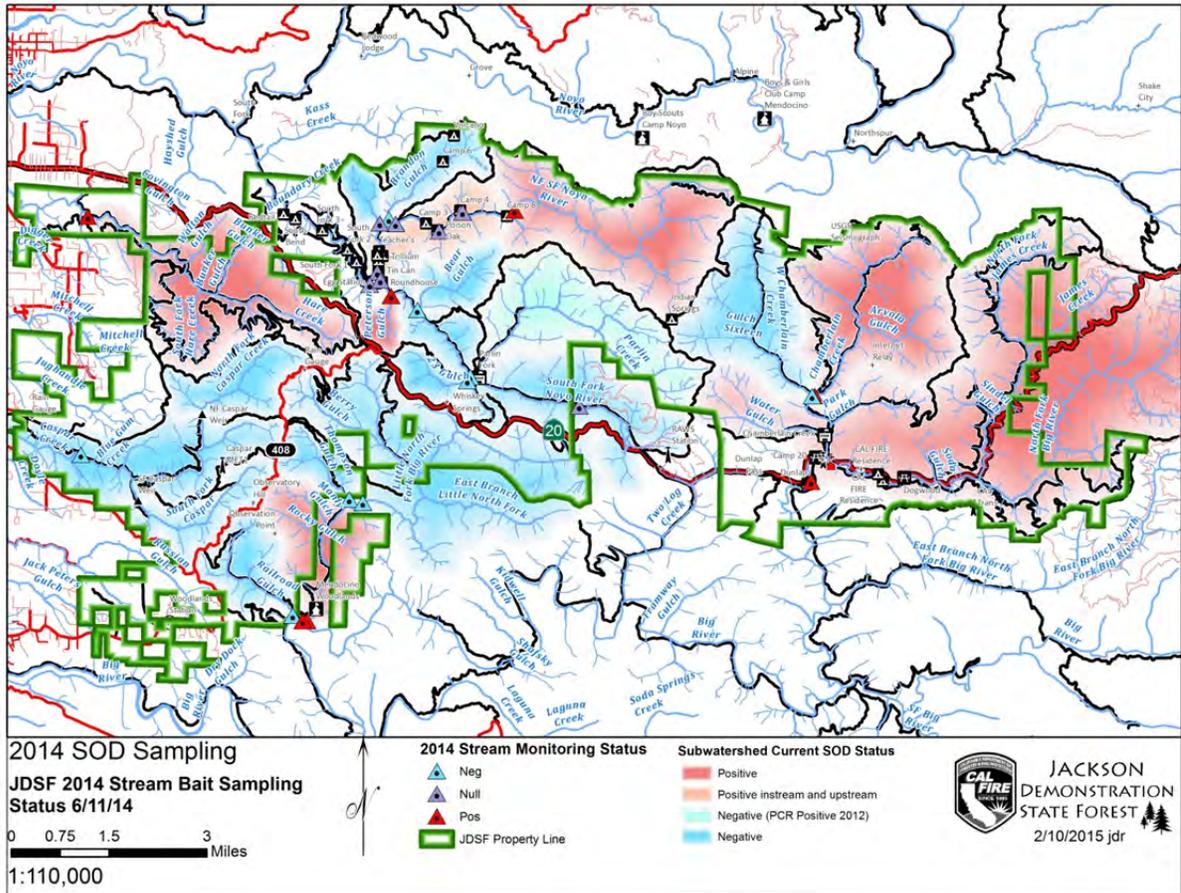
Two Fisheries Restoration Grant Projects were completed: removal of two dam remnants on Parlin Creek for improved fish passage, and installation of a steel arch over Walton Gulch to improve fish passage and repair the roadway.

Forest Health

Surveys for *Phytophthora ramorum*, the pathogen that causes Sudden Oak Death (SOD), continue on JDSF. Because tanoak is mortally impacted by SOD and comprises a large component of stands throughout JDSF, this disease may have dramatic impacts to the ecology of the Forest and region as it spreads. JDSF is monitoring the progression and effects of this pathogen, as well as looking for opportunities to conduct related research or management activities.

Spring stream sampling conducted by Heather Mehl, SOD researcher with U.C. Davis's Rizzo Lab, continued for the seventh year. Modifications to sampling locations were made to narrow down the positive stream results from previous years and to monitor additional watersheds on JDSF. In-stream sampling sites in Hare Creek, Chamberlain Creek, and the North Fork of Big

River were positive for the first time this year. Diseased vegetation in these watersheds has not been identified.



The USFS's Forest Health Protection Aerial Detection Survey inventories tree mortality and other forest damage including suspected SOD. Julie Rhoads participated in survey detection flights over Mendocino County and JDSF in July. Follow-up ground surveys did not reveal infected vegetation.

Symptomatic vegetation surrounding the known SOD infestation in the North Fork Noyo River was resampled to determine extent of the pathogen and also assess rate of spread. While the results were negative for *P. ramorum*, *P. nemorosa* was again detected. This area will continue to be surveyed and assessed for potential ecological impacts, hazard trees, etc. and to determine when and where timber operations will need to implement Best Management Practices for spread reduction. The Trestle Trail, which bisects the infested area, was closed again this winter to minimize spread by foot traffic.

After completion of several additional ground surveys, no new areas on JDSF have been determined to be infected with *P. ramorum*.

Real Property

Approximately 4.5 miles of property boundary line were surveyed by CAL FIRE State surveyors. 66 monuments were recovered, 15 additional set and one restored. The 15 monuments set established a boundary line adjustment on the west end of the Forest (Windlinx). The boundary

line adjustment resulted from a court Settlement Agreement. The State swapped land along the boundary to allow ingress to a private holding, and in return received compensatory adjacent acreage from the same private parcel.

An altogether different legal case is still pending whereby the current landowner (White) has sued and appealed for a permanent easement. The case is currently under appeal.

Roads

A Forest-wide road inventory is now 99% complete, and will be utilized to prioritize road upgrade, maintenance and decommissioning projects.

JDSF's two Heavy Equipment Operators (HFEO) maintained 34.5 miles of road, upgraded 4 stream crossings, reopened 1.5 miles of road associated with one large slide, blocked illegal access in 20 locations, and installed 5 concrete tanks for replacement vault toilets in the campgrounds.



JDSF Road 450 Class II Crossing Culvert Replacement

Parlin Fork Camp spent 186 days brushing, clearing and picking up trash along JDSF roads. Chamberlain Creek Camp provided crews as well for campground maintenance and road clearing projects.

Conservation crews, predominantly Chamberlain and Parlin Fork Camps were responsible for completing the following work on JDSF:

- Maintained 27.6 miles of road for fire prevention/suppression, administrative and recreational access
- Maintained 22.4 miles of recreational trails
- Constructed five new outhouses
- Maintained all campsites and campgrounds
- Removed large trash dumpsites
- Assisted in demonstration/research project set-up
- Mitigated numerous hazard trees

Annual Financial Summary

(note: not fiscal year)

<u>Revenues</u>		<u>Expenses</u>	
Class III Timber Sales	\$3,683,422	Personnel	\$2,181,890
Class I Sales	\$13,175	Operating	\$223,024
Camping Fees	20,462.60		
Special Use Permits	\$1,460		
Total Revenue	\$3,718,520	Total Expenses	\$2,404,914

Taxes

Yield taxes (from Class III sales only):	\$ 124,827.47
Estimated yield taxes returned to Mendocino County (80%):	\$ 99,861.98
<i>In-Lieu</i> property taxes paid to Mendocino County:	\$ 76,325.28
 Estimated total taxes to Mendocino County:	 \$ 176,187.26

69th ANNUAL REPORT
LATOUR DEMONSTRATION STATE FOREST

Shasta County
California

2014 CALENDAR YEAR



Shannon Johnson
Assistant Forest Manager

State of California
DEPARTMENT OF FORESTRY AND FIRE PROTECTION
NORTHERN REGION

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ADMINISTRATION

2014 State Forest Staff

Forest Manager: Vacant (Dave Loveless promoted 10/15/14)
Assistant Forest Manager: Shannon Johnson
Research and Demonstration Forester: Jed Washburn
Forestry Assistant II: Vacant (Shannon Johnson promoted 6/1/14)
Forestry Aides: Carter Krewson, Jeff Silva, Rhianna Dutra and Ian McBride

The field season began in early May and continued through November with unrestricted access to virtually the entire Forest through November. Precipitation and snow accumulation for the year totaled 40", with an accumulation of approximately two feet of snow at the headquarters measured in December. Much of the Forest was accessible all winter. The Forest along with much of the North State received a small accumulation of snowfall in November, with a larger front bringing significant rain and snow the first three weeks of December. This was the third year that the State Capitol Christmas Tree was harvested from LaTour Demonstration State Forest. The tree was harvest on November 3 with the official lighting ceremony at the State Capitol on December 2. Four Forestry Aides were hired for a cumulative total of 11.75 months to perform inventory, timber sale preparation and other duties on the Forest last field season.

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 during the summer months and during the fall hunting season. The 2013/14 winter snow accumulation was poor which constrained snowmobile use for a second year. The Redding Sno-riders, a local snowmobile club, are responsible for grooming the Ashpan Flat Snowmobile Park trails of which LaTour Demonstration State Forest (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 did not groom any of the LDSF road system. See "Recreation" listed under "Statistical Data" in this report for estimates of recreational use on LDSF in 2014.

TIMBER MANAGEMENT

Class III Sales

The Beal Ridge Timber Sale was sold in January 2014 and was logged in June – September, 2014. Sierra Pacific Lumber Company (SPI) was the successful bidder and the Licensed Timber Operator (LTO) was Headrick Logging from Anderson, California. The timber sale harvested 3,185 thousand board feet (MBF) of timber and generated \$656,492.43 in revenue. The timber sale was part of the Cabled Cow Timber Harvest Plan (THP).

The Cabled Cow timber sale was sold in December, 2014 and will be operated in 2015. The sale area consists of 3.92 mmbf to be harvested on 245 acres using the group selection and shelterwood removal silvicultural prescription. One bid was received for the sale, from Trinity River Lumber Company, at \$832,090. The bid exceeded our timber sale appraisal by \$84,908. The LTO is unassigned at this time.

Class I Sales

Class I timber sale activity included the sale of one-hundred and twenty six (126) Christmas trees under sixty-five (72) permits with total revenue of \$1,260.00. Carlton Christmas Trees Inc. purchased three large Christmas trees for \$2,062.50. Firewood sales were down this year, a total of twenty seven (27) firewood permits (limit three cords/permit) were sold for an additional \$675 in revenue. Two additional Christmas tree permits were provided as donations. One for 20 trees was provided to the local community of Whitmore as part of their annual Volunteer Fire Department fund raiser and a second was to the California Veteran's Home Redding.

Timber Harvest Plans

Preparation continued in 2014 on the Cave Rock timber harvest plan (THP) in the Cave Rock area near the South Cow Creek Campground to be submitted for review in 2015. Once approved, this plan will be effective for five years, however, it is planned to be operated as two timber sales in 2016 and 2017. Silviculture methods will include group selection and evenaged management. Harvest methods will consist of ground-based yarding and cable systems. The Cave Rock THP will also include site-specific measures or nonstandard operational provisions as described under 14 CCR 936.9 (v) (6) and (10) of the anadromous salmonid protection rules, proposing operations within the WLPZ of a Class I watercourse for fire hazard reduction. This project, referred to as VTAC, is further discussed under "Research and Demonstrations".

The Mountain Cow THP was approved in November 2014 in the Cow Creek area near the Old Cow Creek Campground. This THP is 706 acres and silviculture methods will be variable retention (dispersed and aggregate), shelterwood removal step and group selection. Harvest methods will consist of ground based yarding and cable 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 2014 was the measurement of Timber Atlas Inventory (TAI) plots. The TAI plots were modified this year to reduce the number of plots and start collecting defect data. A total of 211 plots were established and measured in 2014 on LDSF, covering approximately 1,055 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. With the new TAI specifications there will be 1,800 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

Concentrated tree mortality continues to occur on the Forest, due to blister rust in the western white pine and *Cytospora* fungus in the red fir, in specific areas both on LDSF and on adjacent Lassen National Forest to the east and south of the LDSF. Areas affected by these diseases will continue to be monitored for mortality and spread in 2015, with salvage operations proposed when deemed necessary and economical. In addition, Sugar Pine hand crews have treated some heavily infected areas by thinning stands and pile and burning dead material to reduce the fuel buildup. Infected areas within reasonable proximity to THP's that are being prepared are also being incorporated into the plans for silvicultural treatment or rehabilitation prescriptions. These management techniques should reduce the economic impacts from mortality, and may slow the spread and severity of the diseases, however, it will not eliminate them.

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 strategic fuelbreaks along roads (157 acres), and biomass operations near Table Mountain (104 acres) on LDSF. Supplemental funding, provided in this case by the Grant, was necessary in order to make this project viable by subsidizing the haul cost of the chip material to the nearest market in Redding. When completed, the project will reduce the fuel loading and fire hazard, improve residual tree growth and treat stands infected with *Cytospora*. Bids for the work were solicited and a contract was awarded to Rick Rice Logging in November of 2013. Work commenced in May of 2014, but due to high fire activity in the Shasta-Trinity Unit work did not stay at a steady rate until mid-September. Due to winter weather, operations were put on hold November 15. A total of 64 acres were completed, 24.5% of the total acreage, and work is planned to commence after the winter period and snow melts. The contract has been extended until September 30, 2015.

To reduce the risk of fire and to improve access, Sugar Pine Conservation Camp Crews continued to remove encroaching brush and improve existing fuelbreaks on arterial roads in 2014. Crews piled

and both crews and staff subsequently burned the material in the fall. In total, Sugar Pine Camp spent 21 crew days on LDSF in 2014.

EXPERIMENTS AND DEMONSTRATIONS

In 2013 LDSF staff prepared a proposal to incorporate either site-specific measures or nonstandard operational provisions for the protection and restoration of watersheds with listed anadromous salmonids into current and future Timber Harvesting Plans, as per 14 CCR 936.9(V), referred to as Section V, of the Forest Practice Rules (FPR's). The goal is to use at least one of these site-specific proposals as a pilot project for the VTAC committee which is seeking additional projects that can demonstrate how the Section V pathway can promote more immediate (short-term) responses to active riparian management practices. Measures or provisions described and allowed under Section V provide for the potential and opportunity to conduct forest management activities within the watercourse and lake protection zone (WLPZ) intended to modify the existing dense stand structures. The proposed activities include unevenage regeneration silvicultural methods, such as individual tree and group selection prescriptions designed to thin trees and to create a series of small openings within the canopy with the goal of reducing the fuel hazard. In order to evaluate the effects, if any, of the proposed projects on the watershed, LDSF has established water monitoring devices on South Cow Creek to measure stream temperature, turbidity, and ambient temperature. A weather station was also installed on the Forest in 2013 to monitor storm events in order to correlate weather activity with runoff and stream conditions. Our ongoing roads management and monitoring plan, intended to identify, correct and track potential road and watercourse crossing sediment sources, will also play an important role in the watershed monitoring process for this project. These projects will be incorporated into the Cave Rock THP in 2015.

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. This unit was replanted in May of 2014 to fill in voids due to mortality. A spray contract is currently in review to be scheduled for 2015.

The small mammal traps purchased for the small mammal project are currently on loan to JDSF for a similar project. Staff is continuing efforts to identify an agency or academic collaborator interested in pursuing the small mammal project.

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



The weather station installed by Western Weather Group in July of 2013 has been periodically downloaded and data stored for review for any research and demonstration projects. The station is linked to the phone repeater on LaTour Butte and data can be downloaded via phone.

In May, 2014 six HOBO stream temperature and light monitors and six ambient air monitors were placed along South Cow Creek, for a second season, to collect temperature, turbidity and ambient temperature data for the proposed VTAC project. The monitors were removed in November and will be replaced in 2015 prior to the end of the winter operating period (April 1st).

ROAD IMPROVEMENT

In January thru March of 2014 several roads on LDSF received damage due to lack of snow, rain events, and continued access to the forest. Damage included rutting of roads from vehicles, rilling of roads, and numerous fallen trees. Repairs were started in May 2014 by SHU HFEO's. A belly dump and loader were rented from I-5 Rentals for a week to expedite the repairs needed to Sandow and Rim Roads. Work included rocking roads and grading. Work was also started on McMullen Mt. Road by the grouse springs water tanks.

As part of the LDSF Roads Management Plan, Road Survey and Crossing/Culvert forms were developed to collect pertinent baseline data. This data was collected on all road segments, crossings and culverts in 2009. In 2014, forestry aides checked culverts and cleared any debris from opening.

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 Beal Ridge Timber Sale approximately 10 miles of forests roads were graded and maintained.

TIMBER STAND IMPROVEMENT

A total of 41,000 seedlings were grown under contract with Cal Forest Nursery in Etna for LDSF in 2013. These trees were planted under an approved contract in the spring of 2014 on approximately 143 acres in various units across the Forest. In addition, a contract prepared and submitted in December 2014 is in review for an additional 24,000 seedlings to be planted in the McMullen Mt. THP area and Sandow brush treatment areas in the fall of 2015.

Previous rehabilitation, planting and/or herbicide treatment Units are described below.

Site preparation of the 50 acre variable retention prescription area, harvested as part of the 2011 Rim Buck TS, was completed and all piles burned in 2012. Seedlings were planted under an approved contract in May of 2014.

The Lower Plantation project, located within the 1978 Whitmore Fire, had approximately 38 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 2012. Seedlings were planted in May of 2014. Herbicide treatment in 2015 is planned pending contract approval.

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 is scheduled for planting in fall of 2015 and, depending upon contract success, may be treated with herbicides prior to planting.

The 36 acres of group selection openings created under the Rock Pit Timber Sale in 2010 were planted in May of 2014. The group openings will be monitored for follow-up herbicide treatment.

A nine acre mastication unit located off Butcher Gulch Road was inter-planted in May of 2014. The unit was part of a Pacific Southwest Research Station white fir growth and spacing study on a brush unit that was masticated in 2008 and planted in 2009. The unit was originally planted with white fir seedlings in six one-acre plots assigned spacing regimes of 10'X10', 14'X14' and 20'X20'.

Bids were solicited for the clearing/rehabilitation of an additional 40 acres of the Lower Plantation along the Sandow Road in 2012. However, due to the 2012 fire season, in which local contractors were engaged, no bids were received. The project was successfully contracted in 2013 and work was completed utilizing a brush rake and excavator in September. This unit was planned for burning in December, but due to dirty piles burning was unsuccessful. Planting is planned for fall of 2015 and the unit will be evaluated for additional treatment (burning, herbicide, or pulling of piles by dozers) prior to planting.

TOURS AND PRESENTATIONS

A meeting was conducted in September with Stacy Stanish evaluate the proposed VTAC projects along South Cow Creek. This project will be a part of the Cave Rock THP. Participants included Jed Washburn, Shannon Johnson and Conner Pompa.

Staff also conducted a tour with prospective bidders (Sierra Pacific Industries) for the proposed 2015 Cabled Cow Timber Sale. A bid was received and the contract awarded to Trinity River Lumber Company.

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

OTHER ACTIVITIES

LDSF, CAL FIRE Shasta-Trinity Unit and Shasta College are still working together in developing a Memorandum of Understanding to allow Shasta College to conduct Natural Resource courses on LDSF and to use LDSF facilities.

LDSF staff continues to be fully engaged in the ongoing potential acquisition of approximately 12,000 acres 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.

ANNUAL FINANCIAL SUMMARY

LATOUR DEMONSTRATION STATE FOREST 2014 CALENDAR YEAR

1.	Capital investment in land, timber, buildings, and roads*		\$ 90,946.18
2.	Gross revenues		\$ 660,509.93
3.	Operating expenses (OE)	Labor* *	\$ 237,887.71
		Materials & Services***	\$ 30,321.68
		Property Tax****	\$ 8,015.72
Total OE			\$ 267,225.11

* Includes all contract expenditures (i.e. Tree planting, Fuelbreak/Biomass contract)

** Source: ½ of June 2013 YTD HFD Budget Report by Index (Q12) + December 2014 YTD HFD Budget Report by Index (Q12)

***Includes all material and service expenditures charged to LDSF budget accounts for the 2014 calendar year minus capital investment expenses (contracts); Source: ½ of June 2014 YTD HFD Budget Report by Index (Q12) + December 2014 YTD HFD Budget Report by Index (Q12)

****Based on 7/1/2014 - 6/30/2015 Property Tax Bill

ANNUAL REPORT OF TIMBER CUT

LATOUR DEMONSTRATION STATE FOREST 2014 CALENDAR YEAR

COMMERCIAL SALES

Forest Products Convertible to Board Feet

Product (give dimensions)	Conversion Factor	# of Pieces, Cords, Lineal Feet, Etc.	MBF	Value
MBF			3,185.83	\$656,492.43
Cords	0.5	81	40.5	\$675.00
Posts (size)_____				
Shingle Bolts				
Poles (size)_____				
Grape Stakes				
Shakes				
TOTALS			3,226.33	\$657,167.43

Miscellaneous Forest Products - Not Convertible to Board Feet

Kind	Unit	Quantity	Value
Christmas trees	\$10 ea	126	\$1,260.00
Large Christmas Trees	\$12.50 Ft.	165	\$2,062.50
TOTALS			\$3,322.50

Approved by _____ Signature _____

Title _____ Title _____

Date _____ Date Submitted _____

FOREST PRODUCTS CUT FOR DEPARTMENT USE

LATOUR DEMONSTRATION STATE FOREST 2014 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 2014 CALENDAR YEAR

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): **12**

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: 110 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: 102 Class III: 1

Timber Stand Improvements

Trees Pruned: 36 Acres: 0

Thinning (acres): 17

Release (acres):

Planting Number of Trees: 41,000 Acres: 143

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:

EXPERIMENTS & DEMONSTRATIONS

Projects:	<u>Submitted</u>	<u>Approved</u>	<u>Completed</u>
	1	1	0

Approved Projects Worked on (list by titles):

TAI Plots
Reconyx wildlife survey
Weather Station
HOBO Stream Monitoring Devices

Project Status:

Ongoing
Observations Archived, Project Ongoing
Project 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):	1,055	211

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: 0
(Staff is currently working with CAL FIRE Chief of Surveys regarding survey needs on LDSF)

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	10
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	12
Picnic Grounds	0	0	0
Picnic Units	0	0	0
Installed Toilets	0	5	5

Buildings Constructed (describe each): none

RECREATION

Primary Use ¹	Day Use ² (Visitor Days)	Overnight Use ³	
		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	10		
Nature Walks	50	30	60
ATV	200	20	80
Winter Sports	50		
Other (Christmas trees)	72		
TOTAL	2222	690	1650

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

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

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

SIXTY-NINTH ANNUAL REPORT
MOUNTAIN HOME DEMONSTRATION STATE FOREST

Tulare County
California

2014 CALENDAR YEAR



James J. Kral
Forest Manager

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

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Administration

2013 STATE FOREST STAFF

Forest Manager: James J. Kral
Forestry Assistant II: Alan Frame
Forestry Aides: Nicholas Shew, California State University Chico
Henry Francois, Bakersfield College



2014 Forest Staff: Nicholas Shew, Henry Francois, Alan Frame, Jim Kral

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 two Forestry Aides to assist the permanent staff during the 2014 field season. Forestry Aides Nicholas Shew and Henry Francois were hired on in February. With only 2 seasonal aides being hired, they were able to stay with Cal Fire for an extended season. Nicholas Shew is a new graduate from CSU Chico with a BS in Recreation Administration Parks Management and Natural Resources. Henry Francois is finishing up his AS in Forestry through Bakersfield College.

On May 1st Henry started his season and the entire forest was opened to the public, due to an unusually light snow pack over the winter. For the first month of the camping season Alan Frame, Jim Kral and Henry Francois were the only staff working on the forest.

Upon his arrival, Henry was trained by the Forestry Assistant II in trash collecting, recreational maintenance and repair duties. Henry participated in the Tulare Unit FF rehire academy May 5 - 9. In addition, Henry Francois and Nick Shew were trained as Class A sawyers. This practice takes place each year, as safe and effective use and maintenance of chainsaws is vital to forest operations.

The extended work period for the seasonal aides allowed them to assist with closing the forest and winterizing the infrastructure. Once substantial snowfall arrived, Henry moved into the winter office and Nick moved to Springville for the remainder of the work season. Henry left the forest on January 29th after applying for the 2015 season. Nick left the forest on February 27th and along with reapplying as a forestry aide for the 2015 season has also applied for the Forestry Assistant II Exam.



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

Snow depth and water content averages for Mountain Home Demonstration State Forest (MHDSF) at the Enterprise Mill snow course in March, were 1.53 inches of average depth, with a water content of .69 The April averages were 5.1 inches of snow depth, with a water content of 1.0 inches. There was no snow on the snow course for the May survey.

With the very light 2013-2014 snow year, the forest staff was able to once again open early for the camping season.

In 2014, the first significant fall snow event occurred in the first week of November with up to 6 inches of snow at the summer headquarters. The snow remained for about a week before it melted off. On the third week of November, the forest received another 2 inches of snow on the summit. In early December an additional 12 inches of snow fell on some areas of the forest.



Balch Park Pack Station with Snow

Once again winter closure in 2014 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. The gates were closed on November 18.



Forestry Aide Francois and Forest Manager Kral working on the new Pack Station porch

One of the primary objectives for the summer was to upgrade the exterior of the pack station. New concrete siding was installed over the existing redwood and given a couple of coats of paint. This was necessary as the old siding was degraded due to woodpecker holes and unsightly because of attempts to cover the holes with numerous snuff can lids, soda cans, and old shoe soles. In addition to the siding, the existing decks were replaced and upgraded. A new covered porch was included on the front side deck of the pack station. The material used in the construction of both decks was incense-cedar harvested from the Brownie Meadow area. Forest Manager Jim Kral, Forestry Assistant II Alan Frame and Forestry Aides Nick Shew and Henry Francois all worked together to build the new cedar log porch. Activities included logging, milling, debarking, general framing and construction to complete the new decks and covered porch.

Another task for the summer was to install new signs at all five of the existing general campgrounds and the Pack Station. The objective is to have a standard, clear and easy to read signage for the public at every campground and recreation site to better demarcate that these campgrounds are not “Balch Park”. During sign installation the snow came and brought an end to access on the forest. Forestry Assistant II Frame along with Forestry Aides Shew and Francois were able to install four of the six signs complete with cedar log frames. Signs at Hidden Falls and Moses Gulch are planned to be installed in the spring.



Forestry Aides Francois and Shew replacing the original sign at Hedrick Pond Campground.



This new sign was installed so it can be seen by both directions of traffic

This year proved to be onerous again with water delivery. System leaks sprung up in different areas of the forest. The first leak was found to be on a broken valve located on the line between Shake Camp and the Pack Station. Forestry Aides Shew and Francois were able to locate this leak and repair it. Next, a water line constriction caused by tree roots occurred in the Hidden Falls Campground. The constriction had a direct effect on the tank at Moses Gulch causing it to go completely dry. After much searching by Forestry Assistant II Frame and Forestry Aides Shew and Francois, the cause was determined to be in a portion of the old ABS roll out line at the Hidden Falls Campground which, in turn feeds the Moses Gulch Campground. Mountain Home Conservation Camp (MHCC) crews assisted in digging up the line and the constricted portion of the line was bypassed with new PVC Schedule 40 pipe and the old line was abandoned in place. Forestry Aides Shew and Francois found and repaired several more leaks throughout the forest during the 2014 camping season.

Problems were encountered with the Shake Camp horizontal well once again this season. The Shake Camp water delivery system failed the routine sample at the beginning of August for total coliform. Therefore, we were required to pull four samples from the system for re-testing. Two of the four repeat samples failed again. After the second failure in a 48 hour period, we were required to disinfect and drain the system. Forest Manager Kral contacted the local drinking water specialists from the regional water quality control board to discuss the inability to drain the system because of the stock at the Pack Station. Signage was placed in the Shake Camp

Campground and public corrals to notify the public that the water was for “non-potable” use only.

The source that supplies our headquarters facilities and barracks was reduced to a trickle and failed to keep up with demand. Additional conservation methods were put in place to make it through the season. The drinking water spring at the “Old Mountain Home Day Use Area” ran dry in the middle of July. Long time users could not remember the spring ever running completely dry for such an extended period.

Frame instructed Francois and Shew in the fine art of felling, limbing, bucking, skidding, loading, hand-jacking and hauling timber. Because of his knowledge in sawmill operations; Frame also instructed Kral, Francois and Shew in the milling process utilizing the recently repaired MHDSF Woodmizer mill. Most of the lumber that state forest staff produced was utilized in the Pack Station project. Plans for milling additional lumber for future forest projects are in the works to better utilize forest products generated from various MHDSF projects.



Forestry Aides Shew and Francois milling lumber on the Woodmizer

Public Outreach & Education

More than once this season MHDSF had film crews on the forest. From documentaries to commercials, film crews continue to seek out the forest for its majestic settings and unique features. Kral would schedule the events and “show me” trips with the production crew or scouts, process the special use permits, escort

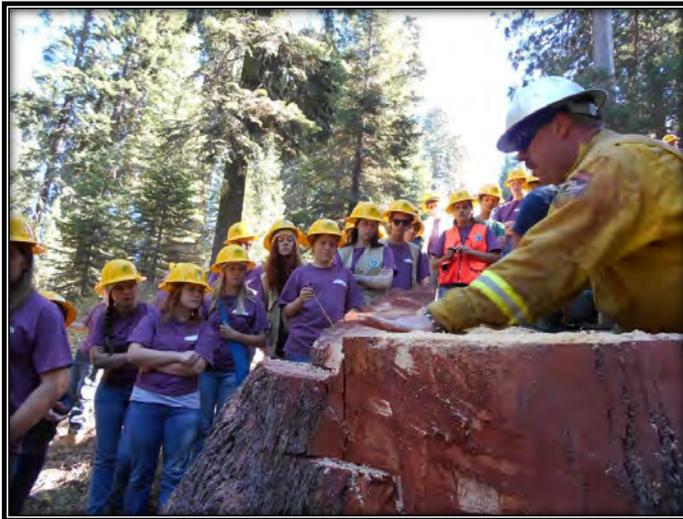
the film crews and monitor the filming to ensure compliance with the permit and state forest rules and regulations.

As stated last year, the MHDSF electronic newsletter (*Giganteum*) was sent to all users that provided an email address while registering to camp. The intent was to produce and email four copies on a seasonal basis to keep our users informed on forest happenings. However, producing the newsletter proves to be a challenge in the wake of all of the unexpected issues that require more immediate attention. With the forest operating with a small staff, there is often little time to prepare a quality newsletter. Therefore, *Giganteum* has only been produced when time allows which is generally twice a year. The optimistic goal remains to produce four newsletters a year. This year Kral charged the Forestry Aides with preparing a rough draft of the newsletter for the following reasons. Their involvement in producing *Giganteum* would make them more aware of what is going on around them; the importance of documenting their endeavors with notes and photos; and being cognizant of how our management projects can be perceived by the public. The newsletter generally provides information on closed areas, camping tips, times and locations of events, management practices, forest history, and some discussion of the Forest Rules. It also acts to inform our users of special events such as the manager led “walk in the woods” in areas that have recently been treated. These events prove to build public trust in our management practices by offering the users an opportunity to ask questions and discuss what’s going on in “their forest”.

In October, MHDSF hosted the 2014 Sequoia Forestry Challenge. This four day event was a competition for high school students to learn some technical forestry skills and engage in current forestry issues. Local forestry and resource professionals spent time with the students familiarizing them with common tree species, forestry tools, and the use of identification keys and volume tables. Working in 3-5 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.

This year was the third Sequoia Forestry Challenge event at MHDSF. Last year eight schools competed in this Challenge. This year’s event was slightly smaller than last year with six schools attending. Participants came from as far away as Los Angeles and Placerville. The students were housed and fed at the Clemmie Gill School of Science and Conservation (SCICON) which is located 12 miles away.

Fire Captain Don Abbott from Mountain Home Conservation Camp pictured falling a dead 40 inch Sugar Pine for the participants of the Sequoia Forestry Challenge. This has been a highlight for the group the past 2 years.



Once the tree was on the ground, Fire Captain Abbott explained the necessary steps for safely and effectively falling the big timber. Students asked him multiple questions about falling the tree. Students got a close up look at the difficulties of sizing up the obstacles that are often involved in getting good quality logs to the landing.



2014 Sequoia Forestry Challenge Participants

Prior to the start of the challenge the forest staff prepared plots for the students with the idea that the topic would be on prescribed fire. Fuel loads were to be measured as their field exercise using “Brown’s Transect”. However, the event coordinator changed the topic immediately prior to the event. The field trips took place at MHDSF on October 9th and 10th, the problem solving portion of the event was given on October 10th. The focus topic that the students had to base their presentations on was to develop a reasonable strategy for securing natural giant sequoia regeneration based on a number of factors including budget constraints and operational feasibility.

The public outreach program that was initiated in 2010 has become routine during the summer. The original intent of the engine program was to one, familiarize our seasonal firefighters and engineers with the forest and, to make a connection with the public that Cal Fire is both a resource management and fire protection agency. It also increases public awareness about proper campfire use and the dangers of being irresponsible with fire in the woods. Engine crews make contact with numerous groups every weekend throughout the camping season. When children in the campground see the fire engine roll through they are eager for a chance to use the fire hose, and check out the apparatus and fire tools up close. They also enjoy the free stickers and temporary tattoos.



Engine 4173 with campers at Frazier Mill Campground

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, signage and cabinet work, milling, thinning and fuel

reduction work, campground maintenance and construction, hazard tree abatement, snow removal, infrastructure repairs and installation, trail work, chipping, pile and broadcast burning.

We thank the Tulare Unit for the prevention and fire patrols, particularly during peak season and critical fire conditions. We would like to acknowledge Fire Captain Tim Rogers for his exceptional dedication to his prevention tasks while on the state forest this year. Tim assisted in multiple law enforcement issues, medical aids, and public outreach. His commitment to the state forest exceeded expectations each and every weekend throughout the summer camping season. We would like to acknowledge Division Chief Phil Brown for his contributions to the state forest. Chief Brown's determination in directing burn operations and crew projects at MHDSF has been greatly appreciated. His enthusiasm to see projects through should be an example to all. Chief Brown's passion for MHDSF has come from his many years of work and play here. He retired in December of 2014; however, we anticipate his presence on the forest in the years to come. With that being said, we look forward to the future and working with new Division Chief Stan Machado on projects at Mountain Home.

We would further like to thank Program Manager Helge Eng for his support and wish him well in his new position. We welcome our new Program Manager Dave Loveless and trust that he will secure additional funding and staff for us way down here in the Southern Sierras. State Forest Biometrician Jeff Leddy also deserves a nod for scheduling and compiling all of the Forestry Aide interviews and results. The efforts of these individuals from afar are greatly appreciated.

Last, but certainly not least, we thank Unit Chief Paul Marquez for his support and willingness to let us "roll the way we roll" within the bounds of the State Forest.



Mountain Home Conservation Camp Staff: Pictured from back left: DC Stan Machado Cpt. Don Abbott, Cpt. Jack Thompson, Cpt. Chris Fox. and Cpt. Julio Quiroz Front left: Cpt. Ryan Wallace, OT. Lydia Venegas, Cpt. Sam Johnson **Not Pictured:** Cpt. Frank Villani, Cpt. Justin Tashiro, HFEM. Rick Evans, CPO. Dave McCarty. Cpt. Steve Ballew, and Cpt. Tyler Attebury

Recreation

Given the poor snowpack and general lack of hazards and storms in March and April, the forest was once again opened to the public on May 1st. We were saddened to hear that our friend and camp host David Kuster lost his battle with cancer on Father's Day. Many of our Frasier Mill campers miss Dave and his unique sense of humor. A couple of weeks after Dave's passing, his wife Diane Goins returned to Frasier Mill Campground to continue her good work informing the public of forest rules and notifying forest staff of issues. We were happy to see her return considering the loss of her husband Dave.

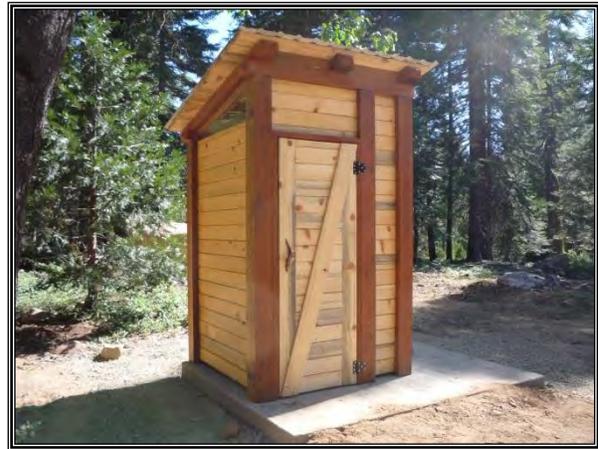
Mountain Home welcomed back Peter Parry as the host of Hedrick Pond Campground. Peter and Diane are long time Mountain Home campers that have gained an appreciation for what it takes to administer and operate a public campground facility. In 2013, two new campsites were constructed specifically for the campground hosts. They were placed near the entrance of their respective campgrounds so the hosts could keep an eye on the iron rangers and our patrons. This has proved to be beneficial to the hosts, forest staff and campers. Being in plain view allows the public to find them easily should they have questions about site registration or fun things to do while visiting MHDSF. It also allows camp hosts to be in a better position to observe potential problems and provide assistance to campers. Having hosts at two of the most popular campgrounds helped tremendously with campground registration, public safety and keeping campsites tidy. Peter left a little early this season for some personal issues that he had to see to. However, we expect his return in 2015 to host the Shake Camp Campground. We are trying to find a new host to replace Peter at Hedrick Pond and continue to solicit potential campground hosts with the goal of having a host for each campground.

Holiday weekends always prove to be challenging for forest staff and Cal Fire law enforcement officers. As usual, usage during the week tapered off to approximately 15% of what is regularly observed on weekends. This year saw many campers staying only one night at a time. This pattern was different from past summers when campers would generally spend a whole weekend. Many of this year's campers were staying only Friday or Saturday night and then leaving. Holiday weekends tended to be busier than regular weekends as was expected. By noon on the Saturday of Labor Day weekend we found all of the campgrounds full and had to turn people away. This was the first time that we "sold out" since we started charging for camping in August 2011. However, this was only a one day phenomenon with many sites being vacated on Sunday afternoon. This was pretty strange being that the holiday fell on a Monday.

Signage and personal communication with campers about the camping fee continues to yield positive results. Though there are still some occurrences of folks sneaking out without paying their fee, it happens infrequently and seems to lessen each year. For one reason or another, some campers still fail to include their campsite number on their registration form. This makes patrol difficult when we are trying to determine whether the occupants of a particular site are in fact, registered. Each campsite number is painted on the top of the bear-proof food lockers and each site is further designated with a numbered, redwood sign. We can only assume that

these campers don't see the sign and that they place items on top of the food lockers when they first arrive. Therefore, the Forestry Aides were asked to stencil all of the doors on the bear boxes with site numbers and a reminder that registration is required prior to camping. Forestry Aides Shew and Francois accomplished this task over the course of a few weeks and campers seemed to respond to the reminders.

Camping fees remained at \$15.00 per site, which includes a single vehicle, or vehicle with a trailer. If another vehicle joins the site they are charged an additional \$5.00. Maximum site occupancy is restricted to two vehicles with some site specific exceptions. Diligent patrolling has proved effective in educating the public about the fee and the registration process. The staff has noticed a continual decline in loose trash throughout the forest and in the campgrounds since the fee has been implemented. There is also considerably less vandalism to campground structures and natural resources.



Newly installed Pack Station sign and new Shake Camp equestrian site toilet.

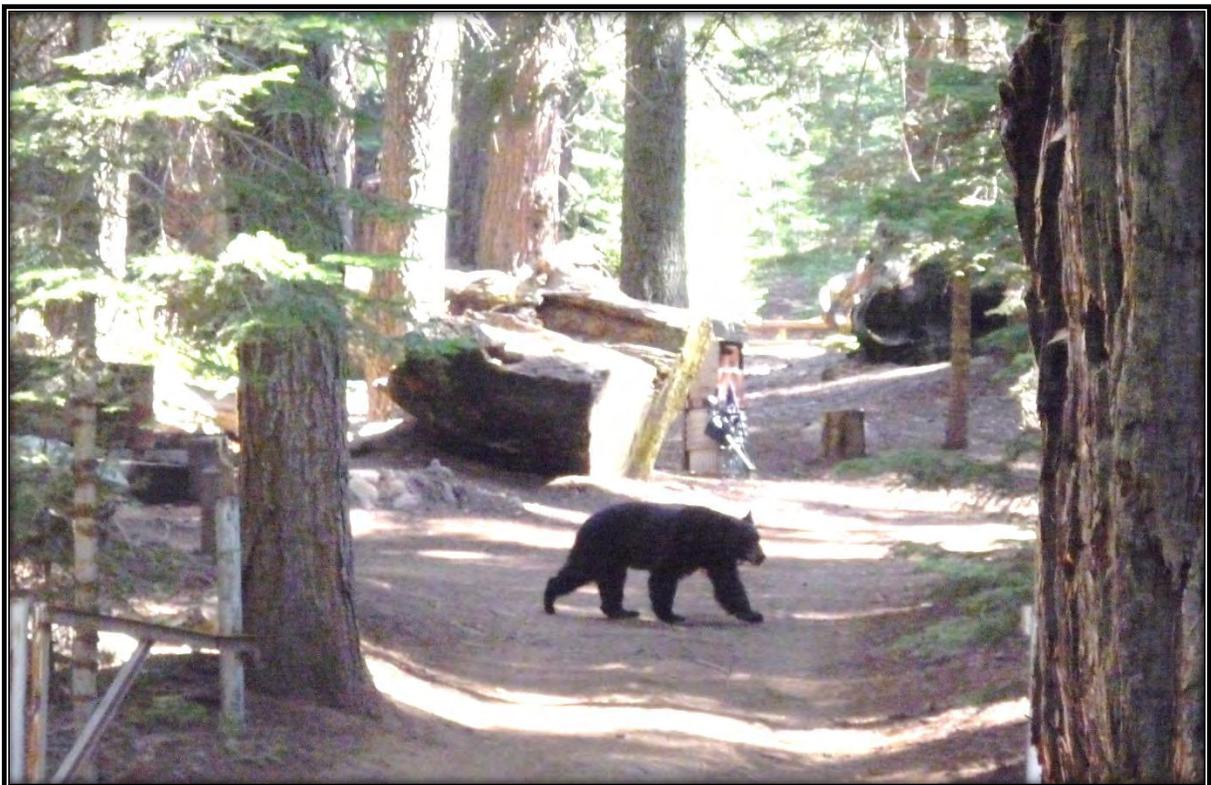
Unit law enforcement (LE) patrolled the forest on most Saturdays, while engines from the Tulare Unit patrolled on most Sundays. Kral and Frame continued weekend patrols to educate the public of the forest rules and ensure compliance. Not only does this allow for positive contact and educational opportunities for the public, it allows the different engine crews within the Unit to become familiar with the infrastructure and road system of MHDSF.

As usual, the hotter it gets on the valley floor the more we see camping activity. The combination of increased user accountability and five summers of weekend patrols, unruly and undesirable behavior has almost become a thing of the past. It is estimated that better than 95% of the campers visiting MHDSF comply with the both the registration fee and the forest rules.



Lower Balch Park Pond pictured on the left in August 2014. Pictured on the right in February 2015. Note the high water mark on the large boulder in the background on the left.

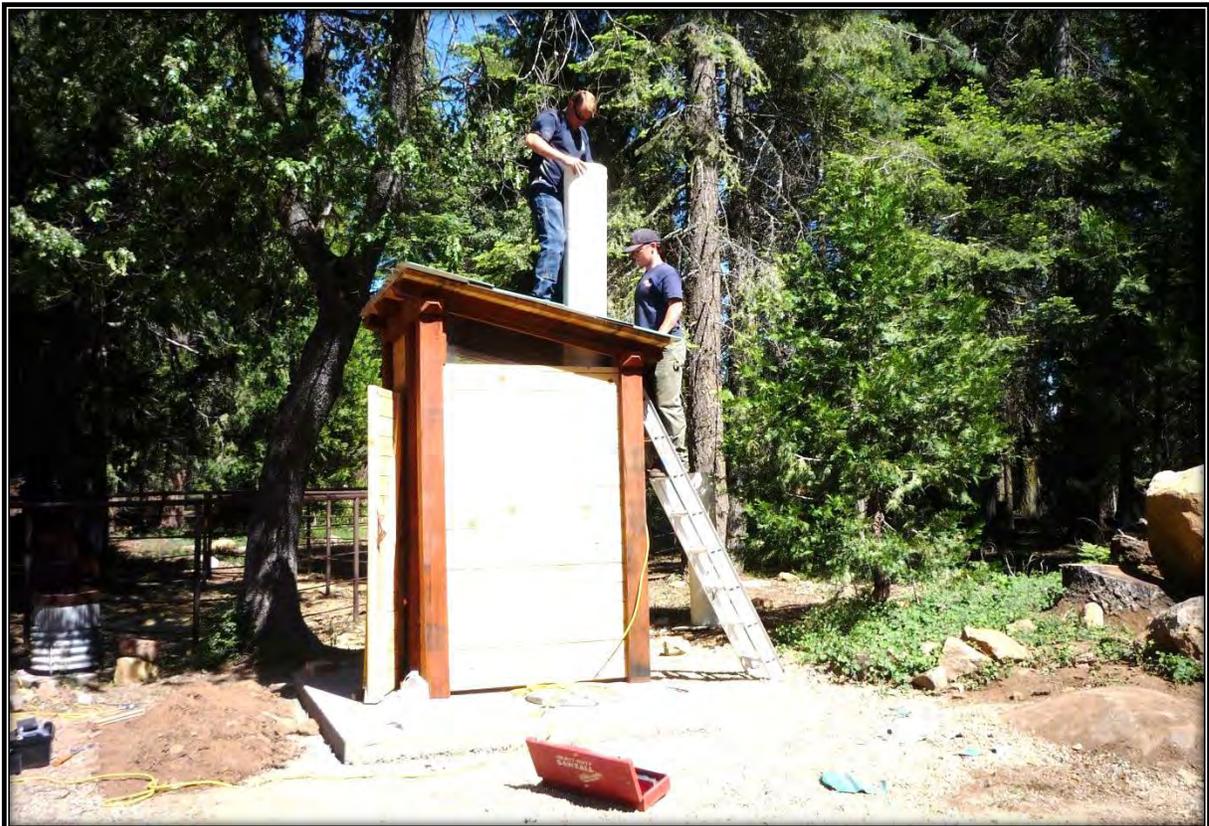
Fishing remained a popular activity on the forest at Hedrick Pond and at Balch County Park. The CA Department of Fish and Wildlife continued to stock Hedrick Pond and both of the Balch Park ponds throughout the summer, but due to low pond levels this summer the fishing was unusually slow. Water was three feet below the lower ponds spillway with no water flowing into it from the upper pond. The last delivery of catchable fish for the season was in mid-September. High water temperatures were a big concern to the Fish and Wildlife employees in charge of stocking. This led to a reduction in the amount of fish released into the pond and the days that the ponds were stocked. Hedrick Pond is supplied by a different stream than Balch Park. Though the in-flow was slow, it was enough to maintain the old mill pond at its highest level.



Yogi searching for pick-a-nick baskets in A Loop at Frazier Mill Campground.

Bears were a popular topic among campers this year. Hedrick pond had regular visits from bears including one bear that would swim and fish in the pond. Campers enjoyed watching until the bear learned that stringers of fish were easier to come by and provided a higher caloric gain for calories spent. Bears were also a common sight at Frazier Mill Campground and occasionally at Shake Camp. While many campers enjoyed seeing the bears, some learned the hard way why we provide bear lockers. Some campers who left food out had it stolen and their campsite torn apart by bears. This usually resulted in campers cutting their trip short and leaving sooner than they had planned. Many deer hunters reported seeing no bucks, but plenty of bears. This just seemed to reinforce the strength of the current population of bears on the forest.

The construction of four new equestrian campsites was completed in June. The new sites are located in the Shake Camp area with two sites being constructed at each set of public corrals. Each campsite is equipped with a picnic table, bear proof food locker, fire pit, and parking for trucks and horse trailers. New pit toilets were also built at each set of corrals. Equestrian users found these sites to be a great addition to the forest. Equestrian users now have the convenience of camping within eyesight of their horses while remaining in compliance with the state forest rules. We expect use to increase year after year as more equestrian users learn about these new upgrades on the forest.



Forestry Aides Francois and Shew installing a vent pipe on one of the new pit toilets

These new sites are for equestrian users only and are available on a first come-first served basis. The rates for these sites are the same as general camping at \$15 a night. It is our hope that the new sites will attract more users to the forest. State Forest Rules only allow camping in developed campsites and horses are prohibited within the existing campgrounds. Therefore, people with horses were unable to

camp in sight of their stock and many users were apprehensive about leaving their horses unattended to legally camp elsewhere on the forest. The end result was potential campers leaving the forest after going on a ride the same day they arrived. Should demand dictate additional sites, there is sufficient room to build them to meet the demand. So far though, the four sites appear to be meeting the demand and equestrian campers have expressed their appreciation and approval.

August saw a new group of campers to the forest with Elements Gathering reserving Methuselah Campground for six days. The group attracts all sorts of people looking to learn primitive survival skills; including fire making, pottery, medicinal plant gathering, yoga, and rope making. They generated a good amount of camping revenue for us. In addition, many of their campers would pick up trash wherever they went on the forest which was a hit with the forest staff. We look forward to them visiting in the upcoming years.

Archery season proved to be slower than usual, with only one small buck being taken. The slow season had fewer hunters than usual trying their luck on the weekends. General season reflected the same with fewer hunters on the forest than in previous years. General season was not much more productive than archery season with two deer and five bear being taken.

The return of Game Warden, Stephanie McNulty, was beneficial this year for both MHDSF staff and the forest user. Stephanie helped enforce the forest rules in addition to Fish and Wildlife Codes. Many of the local hunters took advantage of Stephanie's presence with questions regarding hunting and fishing. Additionally, hunters were able to get their deer or bear validated on the forest, saving them a trip to town or to Fresno respectively.

With a few exceptions, most of the hunters thought a Fish and Wildlife warden in the area was a good idea. McNulty did issue one citation on opening day of rifle season for hunting without a license. During the general season, a decoy was placed on the forest during the night. The morning of the decoy detail, a hunter was cited for shooting before daylight in a prohibited shooting area on MHDSF.

General deer season opened on September 27th and created a small resurgence of camping activity. This trend continued until the season closed on October 26. Shake Camp, Hidden Falls and Moses Gulch were closed to the public on November 4th with the entire forest being closed to the public on November 12th. Mountain Home was open to public use for 196 days in 2014 and produced a total of \$ 50,297.61 from camping fees.

Timber Management

Water deficits for the last three years have resulted in the manifestation of dead and dying commercial tree species on the forest. The white fir component is being hit hard by fir engraver beetle especially following last year's Tussock moth outbreak. Both the sugar pine and ponderosa pine are being attacked by *Dendroctonus sp.* Early summer estimates of 1 MMBF of timber have been surpassed with more trees dying during the fall and early winter months. Current estimates of 2.5 to 3 MMBF seem to be more accurate. Van's Logging returned to MHDSF to begin salvage operations to mitigate hazards from trees that have died in campgrounds and within

falling distance to many of the roads. Logging began in the first half of November and continued until snow halted operations in December. They will return in spring when weather and ground conditions allow.

Work on the Tub Flat THP has been put on hold because of poor market conditions and the anticipated high volume of salvage on the State Forest in 2015 and beyond.

The forest staff fell many of the smaller dead, dying and diseased cedar and ponderosa pine which were processed into short logs and hauled to MHCC for milling. Felling these trees gave Frame a prime opportunity to train both Forestry Aides and certify them as A sawyers. It also provided a nice log deck at the camp for the forest staff to mill into lumber for future forest projects.



Struggling to load the largest quarter log of old growth giant sequoia for transport to MHCC.

Mountain Home Camp received 16.0 MBF of old growth giant sequoia from MHDSF this year. Two large logs with a diameter of 10' and length of 16'6" were quartered and skidded to the California landing in 2013. December storms prevented transport of the logs to camp in 2013. Therefore, the quartered redwood was left in the landing until summer of 2014. The ongoing demand to fill the Department's needs for redwood products from MHCC in 2013 resulted in the camp's supply of redwood to be depleted. The immediate need for redwood to meet these needs in 2014 prompted the camp to make retrieving these logs a priority. Eight redwood quarters averaging 2.0 MBF each were loaded and trucked to MHCC. Each quarter was a single truck load equating to eight loads. Two of the quarters were too large to fit in the truck. This obstacle required additional saw work on the quarters to get them loaded. With "one log loads" becoming a rarity from private and public timberlands in California, the ¼ log load from MHDSF is still relatively common.

Since 2014 proved to be a busy fire season for MHCC Captains and crews, the staff of MHDSF pitched in by loading and trucking many of the pine and fir logs to MHCC.

Protection

Mountain Home Conservation Camp crews; as well as, cover crews spent much time on the forest this summer continuing the fuel reduction projects along the primary and secondary roads. Treatment included cutting and piling live brush and small trees and dead and downed material. Primary roads are being treated for 100' on each side with secondary roads being treated for 50' on each side. A chipper was utilized as the treatment method in remote areas where pile burning could have been more problematic.



Pile burning along Summit Road in the Pack Station area.

Beginning in November, MHCC crews and forest staff began burning piles once the activity was authorized. Crews burned through the end of the calendar year with some short interruptions due to inclement weather. Many of the piles will need to be reconstructed because they were only partially consumed.

Numerous broadcast burn areas were included in the State Forest fire plan but once the activity was authorized it was obvious that the burn “window” had already closed. An attempt was made to strip fire a small unit in the McAnlis Road area that had been treated in preparation of a control burn. Most of the larger fuels were lopped and piled in the open areas of the unit where tree scorching and crown damage would not occur. This, in turn, provided a more consistent fuel bed within the prescription area to provide a more predictable outcome in regard to fire behavior. Knowing that we were out of prescription when the burn was finally authorized, we optimistically attempted the burn anyway. However, conditions proved to be too wet to carry the ground fire so only the jackpot piles were burned. We are still planning

to burn this unit among many others if we ever get the opportunity to do so when the units are in prescription and our burn objectives can be met.

Experiments and Demonstrations



Tussock moth traps collected in the fall of 2013

The Tussock moth populations were down considerably on the forest this year with a total of four moths being found in ten traps. The sampling takes place on two transects that consist of five pheromone traps on each. The transects are located in the Hidden Falls and Rock Crusher Road areas. A total of 159 moths were caught in 2013. Of those, 87 percent of them were caught on the Hidden Falls transect.

Retired Annuitant Dave Dulitz completed the Old-Growth Giant Sequoia (OGGS) Inventory for Mountain Home Demonstration State Forest. Giant sequoias on MHDSF have been inventoried using various inventories since the early 1900's. However, it was felt that the accuracy of these inventories was not adequate, considering the importance of this species in the management of MHDSF. It was decided that the best way to inventory this species was to accomplish a 100% cruise. This cruise started in 2001 and worked on periodically until finished in 2014.

The data collected during the OGGS inventory included tree heights, diameters, circumference of fire-scars and GPS coordinates. It was determined that the long held belief that MHDSF contained 5,000 old-growth sequoias was dispelled as a result of the inventory. Within the bounds of MHDSF are 4,750 OGGS with 132 trees in the Silver Creek Grove and the remainder in the Mountain Home Grove.

Annual Financial Summary

Capital Invested	To Date 2013	2014	To Date 2014
Timber	\$511,627	-\$506	\$511,121
Land	\$497,125	\$0	\$497,125
Buildings, Property, Equipment & Roads	\$467,105	\$5,114	\$472,219
TOTAL	\$1,475,857	\$4,608	\$1,480,465

Gross Revenue	\$9,724,591	\$68,003	\$9,792,594
Operating Expenses	\$11,465,499	\$485,811	\$11,951,310

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

Mountain Home Demonstration State Forest from January 1, 2014 to December 31, 2014.

COMMERCIAL SALES

Forest Products Convertible to Board Feet

Product (give dimensions)	Conversion Factor	# of Pieces, Cords, Lineal Feet, Etc.	MBF	Value
MBF			270.12	\$13,056.10
Cords	0.5	40.0	20.0	\$200.00
Posts (size)_____				
Posts (size)_____				
Shingle Bolts				
Poles (size)_____				
Grape Stakes				
Shakes				
TOTALS			290.12	\$13,256.10

Miscellaneous Forest Products - Not Convertible to Board Feet

Kind	Unit	Quantity	Value
Cones	BU	25	\$75.00
Sawdust	YDS		\$0.00
Round	EA		\$0.00
Christmas Trees	LF		\$0.00
Branches	PU		\$0.00
Seedlings	Lot		
TOTALS			\$75.00

Approved by _____

Signature _____

Title _____

Title _____

Date _____

Date Submitted _____

Forest Products Cut for Department Use

Product	# of Pieces, Cords, Lineal Feet, Etc.	MBF	Value
white fir sawlogs		.56	\$16.80
sugar pine sawlogs		5.0	\$150.00
giant sequoia sawlogs		16.00	\$4,000.00
incense cedar sawlogs		0.0	\$0.00
Ponderosa pine sawlogs		0.0	\$0.00
YG giant sequoia sawlogs		0.0	\$0.00
TOTALS		21.56	\$4166.80

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

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: 1 Acres Burned: 25 ft² Man-days Fire Patrol: 2
 State Forest Campfire Permits Issued (number): 1,534

Insects: Number of Trees Treated: 200 Number of Acres Covered: 150
 Control Methods Used: Sanitation Salvage

Disease: Number of Acres Treated (Contract): 0 Disease Involved
 (State): 0

Number of Pest Detection Reports Submitted: 0
 Hazard Reduction: 0
 Snags Felled or Removed: 5 Acres: 2
 Roadsides Treated (miles): 5
 Slash Abated or Cleanup (acres treated): 0
 Blowdown Salvaged (board feet): 22.92 MBF

TIMBER STAND MANAGEMENT

Number of Timber Sales Class I: 25 Class III: 0
 Timber Stand Improvements
 Trees Pruned: 0 Acres: 0
 Thinning (acres): 0
 Release (acres): 0
 Planting Number of Trees: Acres:
 Seeding Number of Spots: 0 Acres: 0
 Site Preparation for: 19
 Natural Seedfall (acres): 19 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	none	

Timber Cruised (acres):

ENGINEERING

Corners Recovered or Set: 0
 Miles of Line Run:
 Miles of Boundary Surveyed and/or posted:
 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	6	99	99
Picnic Grounds	0	2	2
Picnic Units	0	4	4

Buildings Constructed (describe each): Two bathrooms were constructed for the new equestrian campsites. The bathrooms measure 5' X 5' X 8'. A covered porch was constructed on the Pack Station.

RECREATION

Primary Use ²	Day Use ³ (Visitor Days)	Overnight Use ¹	
		Campers (6941)	Camper Days (12525)
Camping		1,607	2,971
Fishing	2,800	2,013	3,623
Hunting	272	416	750
Picnicking	1,800		
Sightseeing (driving)	1,800		
Hiking	600	69	124
Horseback Riding	240	60	60
Nature Walks	1,200	694	1,249
Swimming	3,780	2,082	3,748
Winter sports (prohibited)			
Other (specify)			
TOTAL	12,492	6,941	12,525

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

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

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

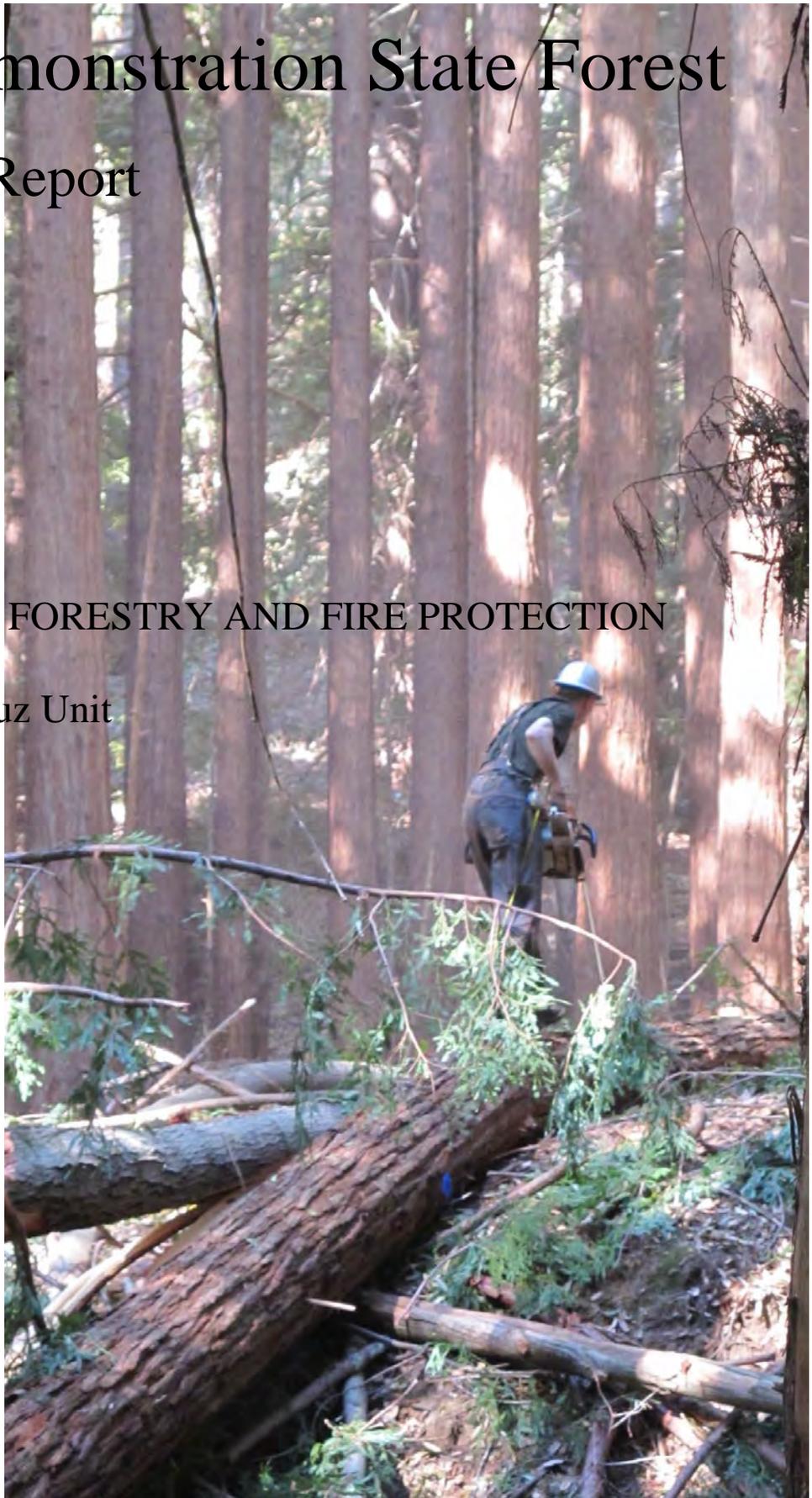
Soquel Demonstration State Forest

2014 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

There were several significant projects completed in the Forest in 2014. The Streambank and Road Repair Project was completed to protect and stabilize the road and to create improved stream habitat. Field trips for groups from several agencies and organizations were offered to review the stream work. The updated General Forest Management Plan (GFMP) was approved by the Soquel Demonstration State Forest Advisory Committee and by the Board of Forestry and Fire Protection upon completion of CEQA and the public review process. Operations for the Comstock Mill Timber Harvesting Plan (THP) occurred and will be completed in 2015. The first phase of a shaded fuelbreak along Hihn’s Mill Road was finished. Designs were reworked for the new Soquel Forest Fire Station and forest office, planned to begin construction in 2016. Recreation highlights included completion of two segments of the Flow Trail in cooperation with Mountain Bikers of Santa Cruz (MBoSC), and a third year for the Santa Cruz Super Enduro mountain biking race.

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ADMINISTRATION

Angela Bernheisel remained Forest Manager along with half-time Office Technician Anna Cameron. In January Ed Orre, Assistant Forest Manager since December 2000, promoted to Forester II to work in the Santa Clara Unit, Vegetation Management Program. Local forester, Colin Noyes was hired as the Assistant Forest Manager and the newest Forester I to the Unit on May 7. Forestry Aide Julie Dufresne completed her fourth season at the forest on January 14, passed the Registered Professional Forester exam in April, and returned for a fifth season May 12. She left service August 15 for a permanent forester position with a private timber company. Forestry Aide Trevor Seck completed a nine-month term on February 7. New Forestry Aide Meredith Jacobson, a UC Berkeley forestry graduate, began work June 9. The forest staff was assisted by Fire Captain Sean Adams from February through April while the Forestry Aides were laid off and hiring for Assistant Forest Manager was in process. Adams helped with forest projects which included leading crew work on the Hihn's Mill Road shaded fuelbreak. Fire Captain Stuart Carlson also assisted with forest projects for nine days in December, working on needed repairs, erosion control and facilities maintenance.

Unit Chief Scotty Jalbert and Deputy Chief of Operations Ian Larkin led the Unit Management Team, and Bernheisel served as Recorder for the Unit Management Team and Operations Team meetings. Bernheisel also continued duties as Public Information Officer for the Unit including membership in the Santa Cruz PIO Council and coverage during significant events. Bernheisel and forest staff met with Unit Chief Jalbert in June to review projects and tour the new Flow Trail using mountain bikes provided for the day by Epicenter Cycling.

The Soquel Forest Advisory Committee approved the updated General Forest Management Plan (GFMP) at their meeting on January 14 and voted to forward the plan to the Board of Forestry and Fire Protection (Board) for CEQA review. Bernheisel and Region Forester Jill Butler worked on the Initial Study and Negative Declaration. Noyes, Butler, and State Forest Program Manager Helge Eng attended the Board Management Committee Meeting on August 26 when the GFMP and Initial Study were reviewed and forwarded to the full Board. The Board voted unanimously to accept the plan and put it out for public comment. The entire CEQA process, including public comment period, was completed in October. One comment letter was received from the California Department of Fish and Wildlife (CDFW) to emphasize protection for potential habitat for the Santa Cruz Kangaroo rat, marbled murrelets and grasslands, and consideration for these in future project analysis. Bernheisel provided details in response to CDFW and attended the Board meeting on November 5, when they gave final approval of the GFMP. Several research papers, surveys and monitoring reports were forwarded to CAL FIRE Communications to be added to the publications database on the Soquel Demonstration State Forest (SDSF) website, as requested by the Board.

The Advisory Committee met on October 7 for a field tour of the forest to view the latest projects. Four Committee members attended, along with three CAL FIRE staff, six members of the public, and California Geological Survey (CGS) Geologist Cheryl Hayhurst. The subcommittee for a Steve Staub Memorial decided on a location in the forest for a memorial bench and view point, along Hihn's Mill Road, and planned for an interpretive sign to be included at the site.

The Advisory Committee Members in 2014 were:
Vice Chair Steve Butler - Resource Conservation District of Santa Cruz County (RCD)
Chairperson Patty Ciesla - Stewards of Soquel Forest
Matt Dias - Board of Forestry and Fire Protection
Geoff Holmes- Registered Professional Forester
Tim Hyland and Chris Spohrer - California Department of Parks and Recreation
Matt Johnston - Santa Cruz County Planning Department
Conrad Jones - California Department of Fish and Wildlife (CDFW)
Patricia Marland - Neighbor Representative
Larry Serpa – The Nature Conservancy

Minutes and committee meetings agendas, along with the GFMP and newsletter were posted on the SDSF webpage: http://calfire.ca.gov/resource_mgt/resource_mgt_stateforests_soquel.php.



Bernheisel providing information to the SDSF Advisory Committee on a public field tour

Helge Eng promoted to Deputy Director of Resource Protection and Improvement on January 1, but continued to cover his duties as State Forest Program Manager until Dave Loveless became the new Demonstration State Forest Program Manager on October 15. Loveless had been Forest Manager at LaTour Demonstration State Forest since 2010. Bernheisel attended the State Forest Manager’s meeting at Boggs Mountain Demonstration State Forest in mid-February, and served on the interview panel for Forestry Aide hiring early in the year.

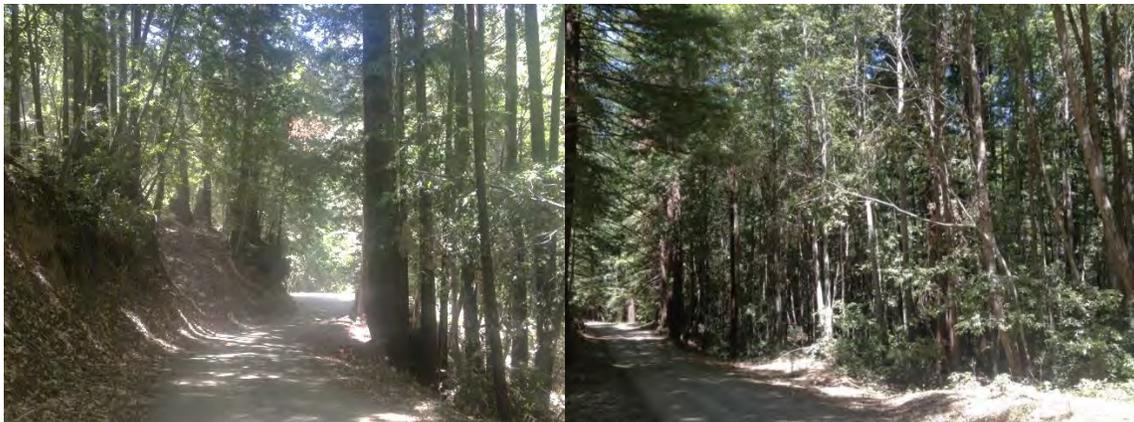
Natural Resources Secretary John Laird, CAL FIRE Director Ken Pimlott, and Deputy Director Clare Frank attended a tour of San Mateo-Santa Cruz Unit (CZU) led by Unit Chief Jalbert on February 21. One of the stops was the SDSF Office and Soquel Forest Fire Station

facilities slated for replacement in 2016. Bernheisel had an opportunity to describe some of the current forest projects, but unfortunately there was not enough time for visiting the forest.

Bernheisel continued to serve as a member of the Jasper Ridge Coordinating Committee for Stanford University's Jasper Ridge Biological Preserve.

Fire Crews from the Ben Lomond Conservation Camp (BLCC) worked with forest staff for 32 days in 2014 on projects including: weed abatement, fence maintenance, mowing, clean up at the forest office and fire station grounds, brushing roads, and installing forest signs. Volunteer George Smith worked with the crews to pull French broom and jubata grass in the Longridge Road area in March. Ben Lomond Camp personnel completed a project to router and paint 24 mile markers on redwood 4x4's to be installed along Hihn's Mill Road in 2015.

Ben Lomond Conservation Camp Crews continued work on the shaded fuelbreak project, started in 2013 as part of CAL FIRE's Vegetation Management Program. Crews worked for 15 days in 2014 on this grant-funded project along the main access road through the forest, Hihn's Mill Road, which is 6 miles long. A total of 13.7 acres and 1.3 miles of road were completed in 2014 with Dufresne and Jacobson supervising crews and managing the prescription for the project implementation. Pile burning, that had been planned for 2013 but was postponed due to dry weather and the reinstatement of a burn ban, was completed in February 2014 after some rain. The fuelbreak now spans 2.5 miles of Hihn's Mill Road, from the eastern property boundary to just past its intersection with Tractor Trail.



Hihn's Mill Road Shaded Fuelbreak BEFORE



Hihn's Mill Road Shaded Fuelbreak AFTER

In April, Bernheisel met with State Parks representatives, CAL FIRE VMP staff and a private forester representing a neighboring landowner to review a project to improve emergency access and to implement an additional shaded fuelbreak along the common boundary with the forest. The first phase of a shaded fuel break was implemented along Aptos Creek Fire Road during the summer by Ben Lomond Crews and State Parks sponsors.

Plans continued to be coordinated with CAL FIRE engineers from Technical Services in Sacramento for the demolition of the vacant house on the Noren property. Surveys were completed for hazardous materials and environmental hazards, funded through Technical Services on an existing DGS contract. In November, a private contractor removed the old trailer that was located on another Noren parcel just south of the Noren house. All materials were transported to the landfill for recycling or disposal, the site was cleaned, and a new gate was installed for better security.

CAL FIRE Surveyors from Technical Services in Sacramento, Jeff Gawronski and Garrett Jackson, posted signs on a portion of the newly surveyed property boundary with the assistance of Noyes and Jacobson.

Forest vehicles included: a 2008 Chevy 1500 (D1707 Bernheisel), a 2001 Ford F150 (F1793 Noyes), a 1998 Chevy 1500 (F1796 Forestry Aides), a new 2014 Yamaha ATV which replaced the previous 1992 Suzuki LT250 ATV, a 1992 Built Rite utility trailer, and a second utility trailer transferred from Felton Resource Management.

The street address for the public entrance to the forest at 29400 Highland Way was corrected in website search engines to help visitors more easily locate the entrance. The County of Santa Cruz Public Works repaired landslide areas on Highland Way, and this main access road for the public to the forest was closed during weekdays from October through December.

The continued drought conditions across the entire state brought an extended fire season. The burn ban for the Unit was not lifted until November 17 and the Soquel Forest Fire Station was open until November 24, both unusually late dates. The total precipitation recorded at the Longridge rain gauge for the 2014 calendar year was 34.91 inches. The two months in 2014 with the most rainfall at Longridge were February with 9.8 inches and December with 13.2 inches.

TRAINING

Bernheisel, Dufresne, Noyes and Jacobson completed the annual sponsor training required for working with Ben Lomond Conservation Camp Crews on projects. Bernheisel and Seck attended a CPR/AED refresher course at Felton headquarters on January 31. Seck completed S-212 training February 7. Bernheisel attended a one-day CEQA training presented by Chris Browder on April 10 at the Ben Lomond Training Center. Jacobson and Noyes completed the online defensive driver training. Jacobson completed First Aid/CPR/AED training with the Red Cross in Santa Cruz on August 1.

Noyes completed FEMA ICS training online in May, and obtained his Class B Driver's license in August. He completed pre-Academy training in September and graduated from Fire Fighter Academy on December 19. Bernheisel attended the ceremony along with other Battalion Chiefs from CZU.

Annual fire season readiness movement drills, organized by CAL FIRE Battalion Chief Jed Wilson, were conducted May 27-31 on the forest for Santa Cruz County Fire Agencies. A Statewide Medical/Health Exercise was held on November 20. Bernheisel and Jacobson gave a tour of timber harvesting operations, including tree felling, to 16 CAL FIRE Apparatus Engineers as part of their resource management JAC training in October.



JAC Training in Soquel Forest

Bernheisel and Jacobson attended a Road Rules Training Workshop for foresters and agency professionals in September led by CAL FIRE Hydrologist Pete Cafferata with a field portion held at the Hinckley Basin Fire Road and Redwood Empire managed lands. Hinckley Creek is a tributary to the East Branch of Soquel Creek downstream of SDSF. Hinckley Basin Road along Hinckley Creek is a significant sediment source due to several low water crossings, road problems and all season traffic into private residences and the State Park along this riparian road. The landowner has made upgrades in the past which are not maintained by the road users and the landowner does not have legal authority to close or abandon the road. It is also an important road providing emergency access to a large portion of the State Park downslope of SDSF. Bernheisel attended the California Licensed Foresters Roads Workshop in Chester also in September.

On December 8, Jacobson, Carlson and past Forest Manager Thomas Sutfin attended a workshop offered by NOAA/NMFS fisheries for participating in the Central Coast monitoring effort of anadromous species. They learned how to identify spawning sites and the protocol for the monitoring effort. The goal is to eventually add a segment of the East Branch of Soquel Creek located within SDSF as one of the monitoring sites for the central coast.

Monterey Bay Search Dogs conducted several search-dog training activities in the forest throughout the year, including a testing day for search and rescue on September 14. They are affiliated with the Santa Cruz Sheriff's Department Search and Rescue Team and the California Task Force 3 Urban Search and Rescue team.

TIMBER MANAGEMENT

Fuelwood operations in the Rim THP area were conducted in the summer with Licensed Timber Operators (LTOs) Lonestar Timber and Mead Fuelwood, and the THP was amended to extend operations for two days until October 17. Over 500 cords of fuelwood were removed from the Rim timber sale area. CGS Geologist Steve Reynolds assisted Bernheisel with a road realignment amendment proposal in the Rim THP area.



Fuelwood harvesting in the Rim THP area

In mid-March 2,500 redwood seedlings were planted in the Rim timber sale area, and 5,350 seedlings were planted in the Fern Gulch timber sale area. Additionally, 350 trees were planted in the four Large Woody Debris project sites in 2014. The 8,200 seedlings were purchased from Green Diamond Nursery who grew the seedlings from local seed that was stored at the CAL FIRE seed bank in Davis.



Planted seedling in Rim fuelwood harvest area

The bid opening for the Comstock Mill THP in the Amaya area on the western side of the forest was March 12. The sale was awarded to Big Creek Lumber Company at \$450 per MBF for redwood and \$30 per MBF for Douglas-fir (DF). (The minimum bid for redwood was \$397 per MBF and for DF it was \$2 per MBF.) The THP focused on the area outside the previous Amaya THP from 1998. The contract process was completed on May 21. Operations started with tree falling on June 17 and truck hauling on July 7. Noyes completed a minor amendment to the THP for a Class III crossing design change after consultation with CDFW, CGS and CAL FIRE. Unfortunately, two members of the logging crew suffered significant injuries in August and were unable to continue working on the project. A total of 1,693 MBF net volume was removed and \$726,764.10 collected for the California Forest Resources Improvement Fund (FRIF). Equipment operations concluded on October 15. The THP included roadwork along Comstock Mill and Amaya Creek Roads, to install culverts and drainage, and to shape and rock the roads. Further operations will continue in 2015 for an anticipated 400 MBF additional volume.



Timber harvesting operations for the Comstock Mill THP

Raptor surveying was completed in March with the assistance of consulting RPF Matt Greene. Greene also assisted with red-legged frog mitigation surveys around Amaya Pond in May, prior to the start of timber operations in that area.

In February LTO Lee Locatelli repaired the new gate at Highland Way which appeared to be damaged by a vehicle.

The property-wide archaeology records search update was performed by State Archaeologist Chuck Whatford in May. The State Forest LTO license and 1038(b) exemption were renewed for 2014.

Eighteen firewood permits (Class 1 Timber Sales) were issued in 2014 for a total of \$1570 in revenue to FRIF. Some permits were for firewood that was gathered, transported and stacked near Soquel Station and were sold for \$40 per cord. Other permits cost \$20 per cord. All firewood permits terminated on October 15, 2014.



SYYS Yarder used for the Comstock Mill THP

RESEARCH

The Streambank Repair Project began July 14 with contractor Monte West of Algerine West Construction. CGS geologist Steve Reynolds directed the project which required dewatering and fish relocation under the direction of biologist Don Alley. Two other biologists, Jim Robbins and Brian Mori, provided daily biological monitoring during implementation.



Noyes, Jacobson, Biologist Don Alley and Dufresne relocating fish for the Streambank Repair Project

The Streambank Repair project finished August 28, with nine large redwood rootwads and nine logs installed to form a revetment to stabilize the bank and support the road. The wood in the stream will also provide for improved stream habitat by creating overhanging wood and

vegetation, slow water refuge areas and a decrease in potential sediment inputs. A new Interagency Agreement between CGS and CAL FIRE was completed in July for geologic services for the State Forests. This new agreement was necessary in order for Reynolds to continue to oversee the project as he did for the 2012 Large Woody Debris (LWD) sites and to continue work on LWD monitoring. Cheryl Hayhurst of CGS also monitored both the LWD and Streambank project sites. Changes observed at these sites following the rain and subsequent rise of Soquel Creek in December included formation of new pools, gravel sorting, increased sinuosity and accumulation of additional woody debris.

Forest staff assisted with biological monitoring and provided consistent photo monitoring for the project. Staff also assisted NOAA biologists with habitat typing in Soquel Creek at the LWD and Streambank sites post-implementation, and re-vegetation of the sites which included transplanting ferns and planting willow cuttings.



CGS geologists Steve Reynolds and Cheryl Hayhurst measure a redwood rootwad and log prior to installation into the stream bank

The innovative project attracted attention and interest from various agencies and organizations. Bernheisel and Melissa Farinha of CDFW coordinated a field trip attended by nine CDFW THP-review personnel and fish biologists, one fish biologist from Trout Unlimited and SDSF staff to the Streambank/Road Repair and LWD sites. Reynolds led the field trip and provided background and monitoring information to the group. There were many excellent discussions and ideas shared about fish habitat improvement methods and projects. In November, Reynolds provided a separate tour for three fisheries biologists from CDFW to review the LWD and Streambank Repair sites.



Streambank and Road Repair site- before



Streambank and Road Repair site- after

In August, the breakfast meeting of the California Licensed Foresters Association was held at the Streambank/Road Repair site and was attended by eight foresters and SDSF staff. Steve Reynolds of CGS provided details and answered questions. Another similar field trip for 20 members of the public, organized by the Coastal Watershed Council, was held in March.

The biocontrol study of bay laurel trees continued in areas with Sudden Oak Death (SOD) (*Phytophthora ramorum*) led by Dr. Marianne Elliott from Washington State University and researchers from the Canadian Forest Service. Dufresne and Noyes assisted the researchers with a follow-up survey by taking measurements for the one-year after treatment to compare treatment effects. It appeared that the herbicide treatment was the most effective at suppressing new sprouts after the first year. It is expected that the bio-control method will take a longer time to exhibit effectiveness.

Bernheisel met with Dr. Doug Schmidt and Matteo Garbelotto of UC Berkeley to review their ongoing research of SOD in the forest. The idea for a smart phone-based educational app about the state forest and research sites was hatched.

NOAA Fisheries staff and volunteers, assisted by Jacobson, conducted annual electro-fishing surveys for two days in early October to sample steelhead at 3 stream sites. For the first time since electrofishing began in the Forest, sampling at Longridge crossing was excluded due to the fact that it had been dry for over a month during the summer. Steelhead population counts were generally lower than in past years. All data is documented in the 2014 Steelhead Population Report.

Steelhead measured during annual electrofishing survey and NOAA Fisheries scientist Sue Sogard of the Southwest Fisheries Science Center

Dufresne and Noyes launched the HOBO temperature gauges (instream water temperature monitoring devices) at five in-stream locations plus one air temperature location in the forest on May 28. The two standard locations in Fern Gulch creek were excluded as the creek was dry at the time of launch. The loggers were retrieved on October 21 and 22 with the exception of one logger which was never found. The data were analyzed and an annual report of the results was prepared by Jacobson. This year's work continues the ongoing stream temperature monitoring which began in 1997 and is documented in the 2014 In-stream Monitoring Report.

Dr. Brook Kraeger, a local hydrologist, civil engineer and neighbor of the forest, continued collecting data from a pair of rain and stream gauges located in a small watershed in the forest. Upgrades were made to the solar panel and sensor at the stream gauge. The state forest Campbell Scientific weather station was evaluated for the possibility of upgrading to access the data on the internet.

The herpetological study, led by CAL FIRE Captain Lawrence Erickson and sanctioned by the North American Field Herping Association (NAFHA), continued with a one survey in May with 17 volunteers, including representatives from CDFW and the National Parks Service, as well as one herpetologist from Colorado and one volunteer from Illinois. They found one red-legged frog in the Amaya Pond area and another in Amaya Creek. California Natural Diversity Database records were completed and submitted by Erickson. Since the areas where the frogs were observed were adjacent to the Comstock Mill Timber Harvest Plan, CDFW was informed and consulted. Protocol and requirements in the THP were confirmed with CDFW to be adequate for protection of the frogs. Erickson checked on the cover boards in late September that were found to be dry and absent of herps. Data collected from these surveys are being stored in NAFHA's Herpetological Education and Research Project database. Whenever a Species of Special Concern is found during a survey, CDFW is notified and the species is registered in their database. The permit for 2014 covers a three year period.



Red-legged frog observed during herpetology survey

Doctor Janet Foley from the UC Davis Department of Veterinary Medicine and Epidemiology continued her research of blood-borne disease in small mammals. Bernheisel coordinated with graduate student Benjamin Plourde on a new study to assess small mammal populations before and after timber harvesting in the Comstock Mill THP area. Foley and Plourde spent eight days in May trapping small mammals for assessment and establishing plots for the wood rat population study.

Dr. Chris Wilmers and Paul Houghtaling of UC Santa Cruz continued the Santa Cruz Mountain Puma Project to monitor the distribution and behavior of local mountain lions using GPS telemetry collars. In September, their staff installed game cameras on SDSF as part of a region-wide grid system to monitor pumas. SDSF continued to provide storage of bait near the office for the project.

Bernheisel met with Orre and Whatford in late January to document needed recording for sites and cataloging of artifacts before Orre's promotion. Whatford committed to providing additional assistance from archaeology staff to complete the work.

The annual visual cone crop survey was completed in July by Dufresne and Jacobson for the CAL FIRE Seed Bank at the LA Moran Reforestation Center. It was decided that cones would not be collected this year at the forest.

RECREATION

SDSF continued to plan for a new recreation trail and entered into a unique partnership with a local non-profit club, the Mountain Bikers of Santa Cruz (MBoSC) to build the trail. The trail is located near Tractor Trail and will be over 3 miles long. The CEQA Negative Declaration was completed with no public comments on January 16, and construction began on January 29. MBoSC employees Drew Perkins, Matt DeYoung and Patty Ciesla led and coordinated the work along with trained volunteers. Bernheisel attended the kick-off trail work event to meet volunteers and to ensure that safety, security and environmental protection measures were followed for the project. Two of the six segments of the new Flow Trail were completed in 2014. Reynolds visited the forest twice in the spring to evaluate the trail in order to provide recommendations to SDSF on design, safety, effective drainage, and erosion control.

Bernheisel produced a Public Information Plan to help guide MBoSC marketing managers and volunteers about appropriate and professional messaging for the Flow Trail project. An Addendum to the MOU between CAL FIRE and MBoSC was made in October to provide further detail to the requirements of the Trail Plan.



Forest Manager Angela Bernheisel and MBoSC Trailbuilder Drew Perkins opening the Flow Trail in June



Construction of a bridge crossing on the Flow Trail

With the guidance of MBoSC-trained trail leaders, a yearly total of 409 volunteers, working 2,463 total hours, helped to build segments 3 and 5 which were opened on June 1 at an

official opening ceremony. Trail work days were held March 15 and 16, April 8 and 19, and May 3.

On June 12, Perkins guided trail work volunteers from Google to complete maintenance on Corral Trail. Prior to starting up any new construction on the flow trail in 2015, all trails received maintenance. A trail maintenance day on December 6 was attended by 33 volunteers included a morning orientation by Bernheisel and information about ongoing unauthorized activities in the forest involving trail building, stunt building and night riding. Bernheisel requested cooperation and support from the mountain bikers to help curtail these activities and improve compliance with CAL FIRE rules and regulations. Jacobson and 25 volunteers worked on December 20 on Ridge and Corral Trail to maintain and improve erosion control features. Forest staff reviewed the proposed alignment and detailed construction specification for the Flow Trail segments 1 and 2 that will begin construction in 2015.

In December, Bernheisel provided a letter to mountain biking contacts who conduct events and/or hold special use permits at the forest. The letter asked for assistance, similar to the talk given at the trail work day on December 6. This letter spurred a lot of discussion and response including an article in the Santa Cruz Sentinel.

The trail counters that were installed in 2012 on all major trails in the forest were updated and two new magnetic-detecting trail counters were installed on main trails. These underground counters replaced the two stolen in 2013 and record only mountain bike traffic. One counter was damaged and lost in the Comstock Mill Timber Harvest. The trail counters provide data that is analyzed using special software and is compiled in a report for the year.

In August, a group of mountain bikers held a memorial bike ride and picnic for a friend who died in 2014. A \$10,000 donation was made to the MBoSC Flow Trail fund in his honor and a wooden sign honoring his name was placed in the forest.

In May, a close relative of Jim Owen made a special trip from out of state to visit his memorial bench located near the upper helipad. Owen was an avid mountain biker who was involved with the local mountain bike community and trail building at SDSF.

Due to increased requests for special use permits, an application was developed and a process was established for evaluating recreation and event requests based on available staff and the benefit to both the forest and visitors. The usual rate charged for special use activities was \$20 per participant. Nine Special Use Permits were issued and \$8,045 in revenue was generated for FRIF. Fox Racing Shox conducted several days of product testing throughout the year, the Dirt Series Women's Mountain Biking Clinic had three educational days in the spring, and NorCal Mountain Adventures held bike training in April and September. A wilderness survival group led a skills weekend for teens in the forest in July where they slept in hand-built leaf shelters, and West Valley Mission Community College held an outdoor skills class in September for their Park Management Department.

The Santa Cruz Super Enduro mountain bike race returned to the forest for a third year on October 11 and was sponsored by MBoSC. There were 215 participants, 56 volunteers, and several spectators. A planned day of trail work the day after the event was postponed due to drought conditions and dry trails. Total fees collected for the Special Use Permit were \$4300. Course marshals responded to one rider with an injured shoulder who was treated by ambulance staff but declined transport.

In October, Jacobson and Cameron attended a Fungus Federation of Santa Cruz meeting to update members on SDSF activities and to issue mushroom gathering permits. A total of 80 personal-use mushroom gathering permits were issued for the calendar year to 91 people (some permits were issued for couples and families). Requests for permits increased after rains began in October.

EDUCATION

Bernheisel and Noyes served as RPF mentors to the Cal Poly Summer Field Program students at Swanton Pacific Ranch. Students were assigned to develop and write a THP in groups for a plot of ground in the Scott Creek Watershed with concerns such as the presence of coho salmon in the adjacent watercourse, marbled murrelets, red-legged frogs, San Francisco garter snake and abundant steep, unstable ground. Students had mock Pre-Harvest Inspections with review team agency representatives.

Jacobson developed a SDSF Newsletter for public education which was distributed throughout the Unit and to friends of the forest. She also helped staff the CAL FIRE booth at the Santa Cruz County Fair in September.

Jacobson and Bernheisel provided forestry presentations and field exercises to four agricultural and environmental science classes at Soquel High School, and volunteered at the Forestry Challenge in November by assisting with presentation guidance, forestry skills training, and judging. A few Soquel High students competed at the event held at Redwood Christian Park where a total of 91 high schools participated. The competition included a field trip to Big Basin Water Company where CAL FIRE VMP staff gave an overview of fire prevention efforts in the area.



2014 Forestry Challenge at Redwood Christian Park



Forestry Aide Meredith Jacobson at Soquel High School classroom

LAW ENFORCEMENT

CAL FIRE engines and forest staff responded to nine requests for medical aid by injured mountain bikers on the forest, and two search and rescue incidents. Most injuries occurred on Braille Trail or Ridge Trail. One response required a shorthaul, and at least three required an air ambulance (helicopter). The Loma Prieta Fire and Rescue also responded to most of these incidents. Several hours were spent by CAL FIRE resources to assist with fire season patrol during the busy summer time. The movement drill training in May provided good preparation for these calls. Additionally there were at least six known mountain biker injuries on Braille and Tractor trails without requests for emergency services that were reported to forest staff by trail work volunteers or other forest users.

CAL FIRE Prevention Officers patrolled the Forest during the summer weekends. An illegal trail across SDSF and three neighboring properties was discovered to be re-opened and receiving regular use after coordinated efforts to eradicate the trail in 2012. Bernheisel reached out to local bicycle companies and advocacy groups in an attempt to discourage illegal mountain biking activities, such as night riding and illegal trail construction and usage.

Other incidents included repeated vandalism of the portable toilet in the Highland parking area by reckless driving and gun shots, and illegal trespass in the parking area. Ongoing evidence of motorcycle trespass was observed on the forest roads. Two small wildland fires occurred in the neighborhood of the SDSF Office in May.

The neighbor who was prosecuted for firewood theft was evicted from his rental house adjacent to the forest. His court case was settled and restitution was finalized. CAL FIRE will be reimbursed for costs associated with installing erosion control on the trails that were built to remove firewood. In September, an abandoned truck was towed from Comstock Mill Road with assistance from the California Highway Patrol. In December, a man was found to be camping in a tent on one of the Noren parcels off Soquel-San Jose Road and was requested to leave.

2014 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	\$300,601.05*
		Material	\$62,655.82
		<u>Property Tax</u>	<u>\$5,792.10</u>
		Total	\$ 369,048.97**

Revenue Summary

3.	Gross revenues	(Class I Timber Sales)	\$1,570.00
		(Special Use Permits)	\$8,045.00
		<u>(Class III Timber Sales)</u>	<u>\$726,764.10</u>
		Total	\$736,379.10

Net Operating Costs

Total	\$369,048.97
	- <u>\$736,379.10</u>
	- \$367,330.13

* Other CAL FIRE personnel who contributed work to SDSF in 2014 included: 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), Jill Butler (Region HQ Forester), Chuck Whatford (State Archaeologist), Surveyors Jeff Gawronski and Garrett Jackson (Technical Services), and Stuart Carlson (CZU Fire Captain). California Geological Survey Certified Engineering Geologists Stephen Reynolds and Cheryl Hayhurst also spent several weeks on the forest overseeing the implementation and monitoring of the Streambank/ Road Repair Project and the Large Woody Debris Project.

** Additional funding not included in the total was provided by CAL FIRE Sacramento for biological consulting for the Streambank/Road Repair Project for \$12,739.83, and the contract with Algerine West for \$216,640.

ANNUAL REPORT OF TIMBER CUT

Soquel Demonstration State Forest

From January 1, 2014 to December 31, 2014

COMMERCIAL SALES

FOREST PRODUCTS CONVERTIBLE TO BOARD FEET

Product (give dimensions)	Conversion Factor	# of Pieces, Cords, Lineal Feet, Etc	MBF	Value
MBF		1693.17		\$726,764.10
Cords				0
Christmas Trees				0
Posts (size)				0
Shingle Bolts				0
Poles (size)				0
Grape Stakes				0
Shakes				0
TOTALS		1693.17		\$726,764.10

Miscellaneous Forest Products - Not Convertible to Board Feet

Kind	Unit	Quantity	Value
Firewood	cord	23.5	\$620.00
Hardwood	Tons-cords	525	\$920.00
Seedlings	each	50	\$30.00
TOTALS			\$1570.00

These Forest Products were cut for Department Use: 3 cords for CAL FIRE Fire Stations.

Approved by Angela Bernheisel Signature *Angela Bernheisel*
 Title Forest Manager Date Submitted 6/15/15

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

**SOQUEL STATE FOREST
Calendar Year 2014**

ADMINISTRATION

	<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

		<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: 0 Acres: 0
Roadsides Treated (miles): 2.3
Slash Abated or Cleanup (acres treated): 18.5
Salvaged (board feet): 0

TIMBER STAND MANAGEMENT

Number of Timber Sales Class I: 18 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: 8200	Acres: 32
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 or topics):

2014 Steelhead Trout Population Report

Instream Temperature Monitoring 2014

SDSF Herpetology Survey 12/2010-12/2014- Ongoing

Santa Cruz Mountain Puma Project- Ongoing

Sudden Oak Death Studies (various)- Ongoing

Stream Flow Modeling Study - Ongoing

Blood-borne Disease Study - Ongoing

Large Woody Debris Stream Habitat Restoration Project – Reports submitted

Steambank Repair- Report 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: 4 monuments set, no additional found

Miles of Line Run: ½ mile

Boundary Surveyed and/or posted: ½ mile reposted

Boundary Surveyed and Posted to Date: 35%

CAPITAL IMPROVEMENTS

	New Construction	Total System (miles & tenths)	Amount Maintained
Main Timber Access Roads	0	8.8	8.8
Secondary (Spur) Timber Access Roads	0	5.0	5.0
Fire Protection Roads- (included above)	0	0	0
Firebreaks	0	3	3
Christmas Tree Roads/(included above)	0	0	0
Trails	1	8.6	8.6
Powerlines	0	0	0
Telephone Lines	0	0	0
Bridges	0	2	2
Water Development	0	0	0
Campgrounds	0	1	1
Camping Units	0	1	1
Picnic Grounds	0	4	4
Picnic Units- tables	0	9	9
Toilets	0	0	0
Storage Containers	0	2	2

Buildings Constructed (describe each): none

RECREATION

Primary Use	Day Use	Overnight Use	
	(Visitor Days)	Campers	Camper Days
	ESTIMATED		
Camping ¹	0	0	0
Fishing ²	0	0	0
Hunting ³	0	0	0
Picnicking (see hiking)	0	0	0
Sightseeing (driving)	0	0	0
Hiking	3,000	0	0
Horseback Riding	20	0	0
NatureWalks (see hiking)	0	0	0
Swimming	0	0	0
Wintersports ⁴	0	0	0
Other (specify):	-	-	-
Mushroom Collecting	400	0	0
Mountain Biking	20,000	0	0
Estimated TOTAL	23,020	0	0

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 Wildlife 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.

**ANNUAL REPORT
BOGGS MOUNTAIN DEMONSTRATION STATE FOREST
Lake County, California
2014 Calendar Year**

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



**Ken Pimlott, Director
Keith Larkin, Region Chief
Scott Upton, Unit Chief
Nick Kent, State Forest Manager**



**BOGGS MOUNTAIN
DEMONSTRATION
STATE FOREST**



Administration

State Forest Staff

Manager:

Nick Kent (Forester II)

Seasonal Forestry Aide:

Jeremiah Steuterman – June 2014 through March 2015

Joe Mathews – May through June, 2015

The Assistant Manager position is vacant due to budget constraints.

Demonstration and Experiment Program

Ongoing Studies

The 1980's Mortality and Growth Study was remeasured in the fall of 2012, and a M&G summary has been prepared by staff. Data was checked in 2014 by Jeremiah Steuterman.

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.

Operational Projects

Ditch clearing (pulling), road edge clearing and grading occurred on several of the high use forest roads in the fall of 2014. Many of the roads that have not had recent shaping performed had moderate erosion in the form of road surface erosion and rilling from the heavy precipitation event (10 inches storm) of December, 2014. Road 530 where it passes through the neighboring property gullied to a depth of several feet and requires erosion control work prior to the upcoming winter.

Improvements to facilities included:

- Gravel has been applied in areas where potholes were the worst along approximately 1 mile of Road 500, the main access road into the forest. Gravel staged along the 500 road was used

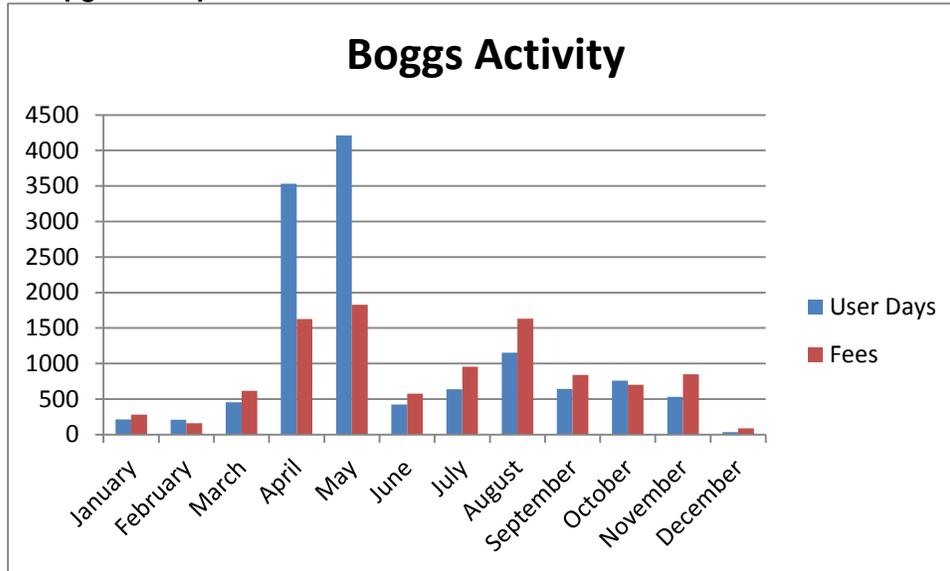
Recreational Use January 1 to December 31, 2014

Recreational Statistics – Campground and Special Use Permits

	#NIGHT	#People	# Days	USER DAYS
January	23	55	48	213
February	13	49	31	207
March	57	151	100	453
April	82	1201	147	3531
May	83	1491	150	4212
June	53	152	101	422
July	97	211	165	639
August	149	444	260	1151
September	75	236	122	645
October	58	341	105	759
November	68	226	111	531
December	8	15	14	35

TOTALS	766	4,572	1,354	12,798
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Campground/Special Use Permits



Special Use Permits Only

Number of campers 2,030
 Camper User days 5,960

Campsite Permits

Total Camping User Days – 6,838

Special Use Events:

A total of 19 Special Use Permits (SUPs) were issued in 2014. The total number of participants in the events was 2,030. Most of the events included camping for a total of 5,960 camper days. The events are listed by event type.

- 2 SUP issued for mountain bike races – one had 1,000 participants and the other had 60 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 number of days each event takes place on varies. The total number of visitors to the forests for mountain biking events was calculated to be 2,000 for a total of 6,000 visitor days.
- 2 SUP – high school running events - 120 participants and 290 visitor days.
- 1 SUP for high school mountain biking club to practice on Sundays.
- 3 SUP for Boy Scouts of America for a total of 150 participants and 450 visitor days.
- 1 Horse group - 20 participants and 60 visitor days
- 5 NRA Shooting Instruction Days – 250 participants total for one day events.
- 1 annual Orienteering event was held with 200 participants and 400 visitor days
- 1 WWII enactment- 30 participants and 90 visitor days.
- 1 Running event with 50 participants and 100 visitor days.
- 1 Jeep event – one day event with 25 participants

Total SUP revenue 2014 - \$1,700.00
Total Camping revenue 2014 - \$8,018.00
2014 Recreation Revenue - \$9,718.00

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. The total visitor days for 2014, including camping, day use and special use events is estimated to be **19,998**.

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. Approximately 10,000 bd.ft. was harvested from Boggs and Las Posadas.

The Ridge Camp THP field work was completed in 2014. The logging plan is a group selection harvest using ground based equipment. 850,000 board feet will be harvested from the Caluepowee Management Unit. The THP will be completed and submitted in the fall of 2015.

Class I Timber Sales (minor sales)

Minor timber sales involving firewood, and other minor forest products occurred. During the year, 62 permits were issued to local individuals for personal use. 4 Commercial Firewood Permits were sold for a total of 21 cords.

Class I Sales Statistics

<u>Permit type</u>	<u># Permits</u>	<u>Volume sold</u>	<u>Revenue</u>
Personal use firewood (3 cords)	62	186 cords	
Commercial firewood	4	21 cords	
Totals	66	207 cords	\$1,440.00

Prescribed Fire

Several prescribed burns occurred of approximately 130 acres.

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. The campground and the popular target shooting area are where most of our visitor contact was focused. Unit prevention staff helped patrol the mountain biking events.

Summary of illegal activities on Boggs:

- illegal camping
- illegal tree cutting
- illegal dumping, littering
- off road use
- shooting trees
- illegal, abandoned campfires
- underage drinking and parties
- illegal trail building

Annual Financial Summary

<u>Revenues</u>		<u>Expenses</u>	
Class III Timber Sales	\$ 0.00	Personnel	\$191,432
Camping and SUP fees -	\$9,718.00	Operating	<u>\$44,435</u>
Class I Sales	<u>\$1,140.00</u>		
Total Revenue	\$11,158.00	Total Expenses	\$235,866