

# Soquel Demonstration State Forest

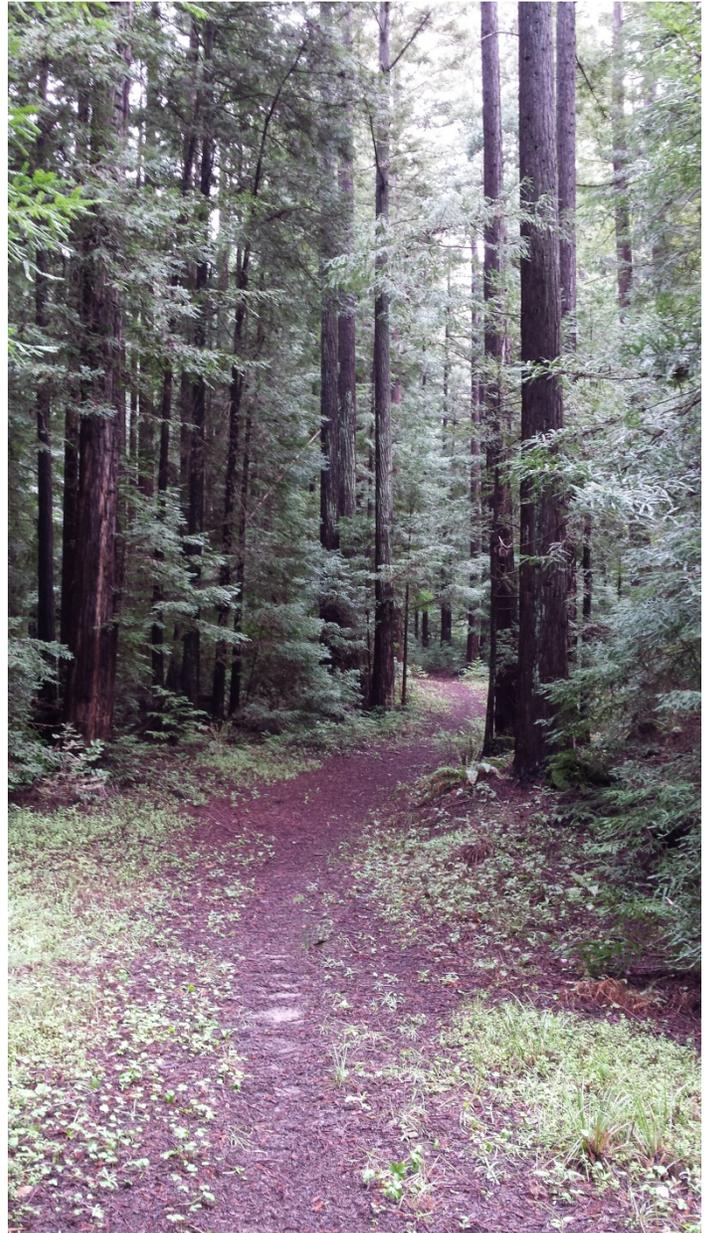
## 2015 Annual Report

Angela Bernheisel  
Forest Manager

State of California  
DEPARTMENT OF FORESTRY  
AND FIRE PROTECTION

San Mateo-Santa Cruz Unit (CZU)

Santa Cruz County



## SUMMARY

Highlighted projects completed at the Soquel Demonstration State Forest (SDSF) in 2015 included the Comstock Mill Timber Harvesting Plan (THP) with a total net volume of 2,134,060 board feet of redwood and Douglas-fir harvested, \$924,816.80 collected over two years, and 3,000 (zone 097) redwood seedlings planted. The shaded fuelbreak along the entire main road through the forest, Hihn's Mill Road, was completed as well as the wildly popular Flow Trail in cooperation with the Mountain Bikers of Santa Cruz (MBoSC).

## TABLE OF CONTENTS

Administration.....	3
Fire Prevention.....	5
Training.....	6
Timber Management.....	7
Research.....	8
Recreation.....	11
Education.....	13
Law Enforcement.....	15
Financial Summary.....	16
Annual Report of Timber Cut.....	17
Annual Statistical Data.....	18
SDSF Roads and Trails Map.....	20

## ADMINISTRATION

Angela Bernheisel remained Forest Manager along with Assistant Forest Manager Colin Noyes and half-time Office Technician Anna Cameron. Forestry Aide Meredith Jacobson completed her first season on March 6 and returned June 8 for a second season. New Forestry Aide Hannah Miller, another UC Berkeley graduate in forestry, started work on June 8 as well. Forest staff worked alternate schedules to provide for weekend coverage from April through October. The forest staff was assisted by Fire Captain Stuart Carlson, who worked on forest projects in January and February, leading crew work on the forest and keeping up with facilities maintenance. Retired Fire Captain, Bill Finch, signed up as a VIP to volunteer at SDSF on special projects. Bernheisel was out on medical leave for over two months at the end of 2015, and Noyes and the rest of the team at SDSF capably handled all the operations at the forest and supported Bernheisel in her recovery from a serious illness.

Unit Chief Scotty Jalbert and Deputy Chief of Operations Ian Larkin continued to lead the Unit Management Team, and Jalbert made an annual visit to the forest in June to tour project sites and to meet with staff. Bernheisel continued to support the Unit as Public Information Officer (PIO) including assisting with the new CZU website and working on the Wragg Fire as a PIO in late July. Noyes worked as a Suppression Repair Specialist on the Rocky and Jerusalem Fires in August in Lake County.

The possible designation of a Redwoods National Monument in the Unit included several public meetings and events. Bernheisel attended the February campaign kick-off held in Santa Cruz where Natural Resources Secretary John Laird spoke, and a meeting with the Rural Bonny Doon Association in July. Many issues with this new land designation would affect CAL FIRE and the local community, and many unanswered questions and concerns remained. The proponents did not provide an analysis of potential impacts, but despite this, broad support from a top down manner was solicited in Santa Cruz.

Bernheisel and Noyes worked with CAL FIRE Technical Services staff to coordinate information for plans for the construction of a new Soquel Forest Fire Station and Forest Office (to be called the Education Building). In July, Albert Lau worked with contractor GeoCon to drill holes for soil assessments. The condition of the onsite well was assessed by another contractor, and was determined to be unsound under the 50-year requirements for new state buildings, as it was of the age and type that made it unlikely to contain a sanitary seal. The Unit's Water and Sewage Treatment Plant Operator (WASPO), Rex Cherry, sampled water from the well that serves both the fire station and the forest office, and results showed that the water was above the drinking water standards for iron and manganese. The need to design space for a new well resulted in a layout change and required Lau to perform percolation tests twice for the two different locations for the proposed leach field. Noyes coordinated the biological assessment with a local botanist, and the well survey, that included video documentation. Christina Snow from Tech Services completed the California Environmental Quality Act (CEQA) process, and no public comments were received during the period ending November 16.

Since approval of the SDSF General Forest Management Plan in 2014, the Soquel Advisory Committee was kept apprised of activities through the seasonal newsletter, as no formal field trip was held in 2015. Copies of the Management Plan were printed through the Office of State Publishing and distributed to all the Advisory Committee members as well as individuals associated with the work at SDSF.

Bernheisel served on the interview panels for Forestry Aide and Fire Captain hiring, and continued to serve as a member of the Jasper Ridge Coordinating Committee for Stanford

University's Jasper Ridge Biological Preserve. Bernheisel and Noyes attended the State Forest Manager's meeting at UC Davis nursery in March with Demonstration State Forest Program Manager Dave Loveless. In December, as part of an effort to recruit new Forestry Aides for the State Forest Program, Noyes, Jacobson and Miller met with UC Berkeley students in the Forestry Club.

A Cal Trans bridge inspector inspected the Hihn's Bridge and did an initial assessment of the Highland Bridge in June. The Highland Bridge was added to the Cal Trans bridge inventory and will be scheduled for a full inspection in the future. SDSF staff coordinated road improvements on Aptos Creek Fire Road within the Forest of Nisene Marks State Parks to improve emergency access in the area. A CZU Heavy Fire Equipment Operator and the State Parks Equipment Operator with a box scraper improved drainage and the running surface from Buzzard Lagoon Road to Santa Rosalia Ridge. In November, forest staff completed additional road rocking and also implemented erosion control measures in preparation for the winter and forecast El Niño storms.

Geologists from the California Geologic Survey (CGS) worked on an assessment of all the roads and trails in the forest in the summer and fall. They spent several weeks recording and mapping all features and a report is expected in 2016.



**CGS Geologists Cheryl Hayhurst and Pete Roffers conducting assessment of all forest roads and trails.**

Noyes and Bernheisel also worked with CGS to examine potential sites for a well in the forest. A flow report of the existing USGS well, located near the east boundary of the forest was completed in November and indicated a rate of seven gallons per minute. The CEQA process will need to be completed in order to add a structure, pump, power source and water tank. This water source in the forest is crucial for fire protection, timber harvesting operations, and other emergency services.

Forest vehicles included: a 2008 Chevy 1500 (D1707 Bernheisel) that got an upgraded light bar, a 2001 Ford F150 (F1793 Noyes), a 2014 Yamaha Grizzly 450 ATV, a 1992 Built Rite utility trailer, and a second utility trailer transferred from Felton Resource Management. The 1998 Chevy 1500 (F1796 Forestry Aides) was retired from service in February and forest staff were without a third forestry vehicle for four months until a utility (U1734) was temporarily assigned to

the forest in June. A new vehicle is planned to be assigned to the forest in 2016. Problems with the fuel delivery system in the new Grizzly 450 ATV were managed by clearing out the carburetor and adding another fuel filter, but ongoing difficulties are anticipated since this model is known for fuel line and carburetor malfunctions.

The Unit IT Coordinator Sandra Chang continued to provide support for the forest office computers and assisted in securing a new contract for maintaining the ten-year old office copy machine which was considered old but in great condition. The main office computer was replaced at its five-year anniversary, and two more computers will be due for replacement in fiscal year 2016.

The continued drought conditions across the entire state created an extended fire season. The burn ban for the Unit was not lifted until November 9. The total precipitation recorded at the forest rain gauge for the 2015 calendar year was 19.13 inches, compared to an average of 39.49 inches during the last 18 years. The two months in 2015 with the most rainfall were February with 7.5 inches and December with 6.6 inches. No rainfall occurred from June through October, and portions of Soquel Creek went dry in mid-August.

## **FIRE PREVENTION**

Fire Crews from the Ben Lomond Conservation Camp (BLCC) worked with forest staff in 2015 on projects including: clearing fallen trees from roads and trails, piling firewood, installing mile markers along Hihn's Mill Road, closing an illegal mountain bike trail, cleaning up after an S-212 class, pulling invasive species, brushing along roads, and other fire defense improvements. Volunteer George Smith continued his commitment to the forest by working with the crews to pull French broom and jubata grass in the Longridge Road area in March.



**Ben Lomond Conservation Camp crew installing mile post makers along Hihn's Mill Road**

A new agreement with the California Conservation Corps (CCC), funded by state grants, provided crews to continue work on shaded fuel breaks. The CCC crews completed the rest of the Hihn's Mill Road shaded fuel break, continuing the work that Ben Lomond Crews accomplished in 2014. The CCC crews worked from late May through mid-summer and came self-equipped with a large chipper and chip truck. They ended the project when all the CCC crews were needed

on California wildfires in August. A solid relationship was established with the CCC, and SDSF will hopefully have the chance to apply for more crew time in fiscal year 2016. This collaboration allowed SDSF to make progress toward implementing a fire defense system for the forest and neighboring properties, which is a priority project in the CZU Unit Fire Plan.



**California Conservation Corps crew members working on the fuelbreak along Hihn's Mill Road.**

## **TRAINING**

After completing the Fire Fighter Academy in December 2014, Noyes graduated from Company Officer Academy on February 13. Noyes attended Fireline Suppression Repair training in Magalia, CEQA Training Workshop and CAL FIRE Certified Purchaser training. Noyes continued as a Board member of the California Licensed Foresters Association (CLFA) and attended monthly meetings, seasonal workshops, and conferences.

The S-212 chainsaw training was held in the forest during the last week of March to recertify B-level fallers. An area near the bay-laurel study site was used where several bay trees and tanoaks were felled. The material was utilized under the forest's 1038 exemption and served to reduce the bay trees contributing to the ongoing spread of Sudden Oak Death in the area. The opening created in this area will be planted with redwood seedlings during the 2016 planning season

Forest staff completed several training courses. Jacobson, Noyes and Miller passed ATV training at Hollister Hills, Miller completed the online defensive driver training, and Jacobson attended the S-212 refresher class held in the forest in late October. Bernheisel attended a Cal OES course, G-290 Enhanced Course in Crisis Communications, EEO training, and EMS Skills refresher. Cameron attended Employee Support training on stress management with Felton headquarters staff, and forest staff completed the Employee Code of Conduct training that was assigned by the Director.

Annual fire season readiness movement drills, organized by the CZU Training Battalion, were conducted May 26-30 for CAL FIRE and Santa Cruz County fire agencies. The engine companies utilized the lower helipad and surrounding areas to conduct drills for pumping, hose lays, hand line construction, and fire shelter deployment.

Monterey Bay Search Dogs conducted several search-dog training activities in the forest throughout the year. 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.



**Training during the movement drill at the lower helipad in SDSF**

## **TIMBER MANAGEMENT**

A two-year extension was obtained for the Rim THP to continue hardwood operations. In the spring, 3000 redwood seedlings were planted in the forest, mostly in the Rim and Comstock Mill THP areas, and some along the stream bank repair site. The seedlings were purchased from Green Diamond Nursery that grew the seedlings from local seed that was stored at the CAL FIRE seed bank in Davis. An additional 8,000 redwood seedlings were ordered for planting in 2016.

The second year of the Comstock Mill Timber Sale that was sold to Big Creek Lumber brought the total to 2,134.06 MBF net volume of redwood and Douglas-fir removed, and \$924,816.80 collected for the California Forest Resources Improvement Fund (FRIF) in 2014 and 2015. Bernheisel and Noyes completed raptor surveying in April, falling operations resumed April 9, and hauling began May 4. Several old-growth trees located within the THP area were evaluated, tagged with ID numbers, and recorded. Fuelwood operations by Licensed Timber Operator (LTO), Lonestar Timber, focused on thinning hardwoods to reduce sunlight competition around redwood groves within areas on the Comstock Mill Timber Sale. As part of the Comstock THP, an old road on neighboring property in the Amaya Creek Road area was graded and opened so it could be used for emergency access and egress through the Amaya Ridge Road neighborhood.

In December, Noyes submitted a new timber harvesting plan called the Meridian THP, located in the Sawpit Trail area, to west of the Rim THP. He consulted with the California Department of Fish and Wildlife (CDFW) concerning marbled murrelets, and CGS geologists Cheryl Hayhurst and John Oswald assisted by assessing crossings and roads in early November.

The State Forest LTO license and 1038(b) exemption were renewed for 2015-16. Nine firewood permits (Class 1 Timber Sales) were issued in 2015 for a total of \$800 in revenue to FRIF (sold for \$20 per cord). All firewood permits expired on October 15, 2015.



**Redwood sprouts in the Comstock Mill Timber Harvest area**

## **RESEARCH**

The Streambank/Road Repair project that was completed in August 2014 was monitored and reports were received, including an As-Built Report by CGS, a fish relocation report, and a re-vegetation report that were forwarded to cooperating agencies, including the CDFW, the US Army Corps of Engineers, and the National Oceanic and Atmospheric Administration (NOAA) Fisheries. The As-Built report was also posted on the SDSF website. Geologist Steve Reynolds who had worked on both the Large Woody Debris (LWD) and Streambank projects at SDSF retired at the end of 2014. Photo monitoring of the project was conducted by Jacobson, Noyes, and Carlson in the winter, and continued by Forestry Aides Jacobson and Miller in the summer and fall. CGS geologists Cheryl Hayhurst and John Oswald resurveyed the LWD sites in November and will prepare a monitoring report for 2015. Jacobson assisted NOAA biologists with habitat typing in Soquel Creek at the LWD and Streambank sites post-implementation. Jacobson and Noyes worked on re-vegetation of the sites by transplanting ferns and planting willow cuttings.

A neighboring private property owner next to the Olive Springs Quarry completed a similar project in the fall by installing six rootwads (sold by SDSF as leftovers from the LWD and Streambank projects) downstream of SDSF along Soquel Creek. A grant from the Wildlife Conservation Board paid for the project coordinated by the Resource Conservation District of Santa Cruz County.

In February, Bernheisel presented information at a workshop for the National Marine Fisheries Service and their cooperators regarding coho salmon recovery efforts made by CAL FIRE at SDSF. She included information about CAL FIRE Resource Management Programs to this group that was mostly comprised of fisheries biologists who were skeptical of timber management. In the fall, Noyes attended a field trip and board meeting of the Wood for Salmon Working Group in Santa Rosa where Cheryl Hayhurst presented information about the implementation of the Streambank Repair.

NOAA Fisheries staff and volunteers, assisted by Jacobson and Miller, conducted annual electro-fishing surveys in late October to sample steelhead at three stream sites. For the second time since electrofishing began in the forest, sampling at Longridge crossing was excluded due to

the fact that it was completely dry at the time. The 2015 Steelhead Population Report showed that numbers of fish were generally low. Researchers from the National Marine Fisheries Service also conducted snorkel surveys of fish in Soquel Creek for two days in July.



**NOAA Fisheries scientists conducting electrofishing during the annual steelhead survey**

Miller, Jacobson, and Bernheisel launched the HOBO temperature gauges (instream water temperature monitoring devices) at six in-stream locations plus one air temperature location in the forest in early June. The lower Fern Gulch creek location was excluded since the creek was dry at the time of launch. The loggers were retrieved in early November. The data were analyzed and an annual report of the results was prepared by Jacobson. The work in 2015 continued the ongoing stream temperature monitoring which began in 1997 and is documented in the SDSF 2015 In-stream Monitoring Report.

Dr. Marianne Elliott from Washington State University visited the Madrone study at the Ben Lomond Conservation Camp to check on the status of the seedlings. The Sudden Oak Death biocontrol study continued in the forest under her supervision.

Dr. Doug Schmidt of UC Berkeley returned to the forest to check sites of ongoing research of Sudden Oak Death in tan oaks in the forest. Bernheisel worked with Dr. Matteo Garbelotto, also from UC Berkeley, to complete an Interagency Agreement for building a smart phone-based educational app about the state forest and research sites. Jacobson and Miller created scripts for each stop along the virtual field tour. Jacobson and Miller also updated the forest-wide invasive species database for the forest that was started in 2007 with GIS information and included identification of priority sites for treatment.

Dr. Brook Kraeger, a local hydrologist, civil engineer and neighbor of the forest, continued collecting data from the rain and stream gauges located in a small watershed in the forest. The process was started for making data from the Campbell Scientific weather station, located at the lower helipad, accessible online and available for the public. A data-only cell network account, called a machine to machine, was added to the Unit cell phone account, and Cameron and Bernheisel worked with Western Weather on a plan for them to configure and install equipment.

This upgrade to the weather station will serve researchers, CAL FIRE and the general public with daily and hourly information.



**SDSF weather station at the lower helipad**

An ongoing herpetological study, led by retired CAL FIRE Captain Lawrence Erickson and sanctioned by the North American Field Herping Association (NAFHA), continued with a one survey in January during which a very emaciated California Newt was observed. This was noted to the California Department of Fish and Wildlife for their State Wildlife Action Plan as an example of drought effects on wildlife. Two new surveying sites were added to the study, and a spring survey was completed in May when Foothill Yellow-legged frogs were found in the Sulphur Spring area and in Soquel Creek. Erickson led a creek walk with volunteers including professional biologists from the CDFW along Soquel Creek over two days in the fall. They found fewer frogs and newts than expected in a normal year, and several long stretches of the creek were dry. Data collected from the 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 from 2014 covers a three-year period.



**Sharp-tail snake and Santa Cruz Black Salamander observed in January and October 2015 respectively**

Doctor Janet Foley from the UC Davis Department of Veterinary Medicine and Epidemiology continued her research of blood-borne disease in small mammals. A graduate student from Dr. Foley's lab, Benjamin Plourde, worked on his study of small mammal populations before and after timber harvesting in the Comstock Mill THP area. Plourde and two assistants surveyed woodrats in the THP area in April and May, and his work in the forest will continue until his thesis is completed.

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. A puma call station was set up on neighboring private timber land in February, and SDSF staff assisted with coordinating efforts to re-collar a female lion on neighboring property in the fall. Game cameras on SDSF remained part of a region-wide grid monitoring system, and SDSF continued to escort researchers and to provide storage of bait near the office for the project.

CAL FIRE Archaeologist Chuck Whatford completed the update of the SDSF Ownership-Wide Records Check and delivered copies of the site check to the forest office.

## RECREATION

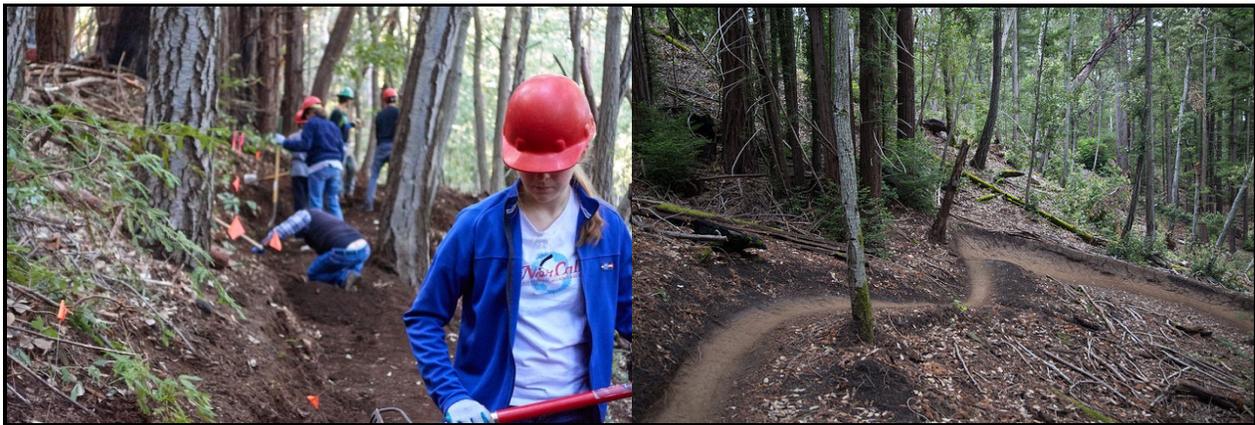
SDSF worked with a local non-profit cycling club, the Mountain Bikers of Santa Cruz (MBoSC), to complete the new Flow Trail. Along with MBoSC's employees, 350 volunteers put in 3,466 hours of time to complete the trail in 2015. MBoSC also organized volunteer trail work for maintenance of the other trails in the forest, and an additional 130 volunteers did 930 hours of work in 2015. Volunteers included local and visiting mountain bikers, local high school cycling teams, and employee-sponsored volunteers from bike and high tech companies from around the area. MBoSC employees Drew Perkins, Matt DeYoung and Patty Ciesla led and coordinated the work that began in 2014 when two of the six segments were completed, and then Perkins and DeYoung continued in 2015 until all segments were completed on April 18. American Conservation Experience (ACE) crews assisted through March, and increased the production rate of trail building significantly over 2014. Completion and opening of the entire 3.3-mile trail was celebrated at an official opening ceremony on May 9 that was attended by over 250 people and included an overview by Bernheisel of the CAL FIRE management goals and accomplishments in the forest and awards for the most-involved volunteers.



**Forest Manager Angela Bernheisel speaking at the Flow Trail Opening Celebration at the Badger Spring picnic area**

The Memorandum of Understanding between CAL FIRE and MBoSC was renewed for another year and updated to include film, photography and public information requirements. Weekend mountain bike visitor use increased dramatically with the opening of the Flow Trail, and, with that, came an increase in the number of medical aid requests throughout the spring and summer.

The Stewards of Soquel Forest, a non-profit group acting in support of SDSF's goals, met in January to consider how to incorporate more forestry education with recreation and to further research a western access to SDSF. Forest staff continued to check trail counters for gathering ongoing visitor data, and a report of annual usage was completed by Jacobson and Miller. New mileage signs for forest trails that include the Flow Trail were made at the Valley View Conservation Camp and installed in the winter.



Students from local high schools volunteering on Martin Luther King Jr Day, and a completed section of the Flow Trail

The application and process for obtaining a Special Use Permit was updated to go into effect in 2016. With a large increase in the number of requests, especially from mountain bike companies, tour guides, and bike instructors, a deadline to submit applications for each calendar year was set for March 1, fee schedules were increased, and a limit to the number of days of events was set, in order to simplify the process for forest staff and decrease the amount of time spent dealing with Special Use Permits. Seven Special Use Permits were issued in 2015, and \$2,435 in revenue was generated for FRIF. Permittees included: the Dirt Series Women's Mountain Biking Clinic, Lee Likes Bikes, Kat Sweet of Sweetlines, and the Ride Guides. Mountain bike and film companies obtained filming permits from the California Film Commission (CFC) for photography and video used for commercial purposes. Staff time requirements necessitated charging fees for one filming permit, and this approach to charging fees in coordination with the CFC permits will continue in 2016 as needed. The request by MBoSC for a 2015 Santa Cruz Super Enduro was denied based on staff time commitments and other forest priorities. A memorial mountain bike ride was organized over Labor Day weekend for Don Templeton, an avid cyclist and donor to the forest.

Despite the overall dry weather, a steady interest in mushroom gathering continued. Eighty-five permits were issued for the calendar year to 91 people (some permits were issued for couples and families). Several requests for commercial mushroom permits were denied. The Fungus Federation of Santa Cruz held forays in the forest during the winter and collected mushrooms for their annual Fungus Fair in January. Jacobson and Miller attended their October meeting to distribute mushroom gathering permits and to present forest updates.

The SDSF brochure was updated with a new map made by CAL FIRE GIS Specialist Shawn Headley, showing the new Flow Trail, and was posted, along with SDSF newsletters on the SDSF webpage: [http://calfire.ca.gov/resource\\_mgt/resource\\_mgt\\_stateforests\\_soquel.php](http://calfire.ca.gov/resource_mgt/resource_mgt_stateforests_soquel.php). A downloadable georeferenced map was added to the webpage to assist users with real time location data for smart phones and other devices utilizing an appropriate application. In September, an insert to the brochure was added to emphasize to mountain bikers the importance of being prepared for long hot bike rides in remote areas, to avoid injuries, and to follow forest rules. Jacobson and Miller continued to create winter and summer newsletters and distributed the new brochures to local bike shops. Forest staff provided outreach to remind visitors that night riding and cooking in the parking area are prohibited, and the public notice of closed areas and activities for the forest was updated to also include prohibition of the use of electric bicycles without permission of the Forest Manager (permission would be granted for ADA use).

## EDUCATION

For the first time, SDSF hosted the field trip portion of the Annual Santa Cruz Forestry Challenge, directed by Diane Dealey Neill, which takes place every November for local high school students. Noyes, Miller, and Jacobson assisted in facilitating the all-day field trip, coordinating volunteer presenters, and presenting information to over 100 students and staff. The topic of this year's event was forestry interpretation with an emphasis on SDSF. There were several stops, covering topics such as timber harvesting practices, ecology, history and geology of SDSF, trail maintenance and recreation, and fire protection and emergency response, that was presented by a CAL FIRE engine crew. Members of the Stewards of Soquel Forest were key volunteers and several local foresters also gave presentations. Miller and Jacobson gave additional support by preparing students at Redwood Christian Camp the day before the field portion and attending their presentations the day after. The students had many suggestions about how to design the educational app for smart phones. Jacobson and Miller also provided forestry presentations and field exercises to four agricultural and environmental science classes at Soquel High School.



**Diane Dealey Neill with CAL FIRE Engine crew and Assistant Forest Manager Colin Noyes (left), and Forestry Aide Hannah Miller (right) presenting to students at the 2015 Forestry Challenge at Soquel Demonstration State Forest**

Forest staff provided further public outreach throughout the year. Bernheisel worked in a group coordination effort by CAL FIRE foresters to host the Western Forestry Leadership

Coalition conference and field tour in the East Bay Hills in May. In July, Noyes and Bernheisel each spent a day at Swanton Pacific Ranch to serve as mentors for students in the Cal Poly State University four-week Sustainable Forestry and Environmental Practices course. Bernheisel collaborated with UC Berkeley Professor Matteo Garbelotto to develop plans for an educational program for forest visitors using an app for smart phones and devices. The bilingual program would give visitors recorded information about history, ecology, research projects, recreation uses and forest management practices at several stops along Hihn's Mill Road. An interagency agreement between CAL FIRE and the UC Regents will be established through CAL FIRE IT in Sacramento.

Jacobson and Miller continued the SDSF Newsletter with 2015 winter and summer editions that were distributed throughout the Unit and to friends of the forest, and they assisted in staffing the CAL FIRE booth at the Santa Cruz County Fair in mid-September.

An educational field trip for 40 students and five teachers from the urban Golden Valley High School district in Merced was held in June with forest staff providing guided stops to discuss research sites, such as the Large Woody Debris project, and sustainable timber management practices. The group participated as part of the Merced Union High School District Environmental Science Academy, and it was the first time this academy had visited a working forest.



Merced Environmental Science Academy, Angela Bernheisel, Hannah Miller and Meredith Jacobson (far right)

An outdoor skills class from West Valley Mission Community College Park Management Department visited the forest for three nights camping under a Special Use Permit in early May. Alex Leman with the Loma Prieta Fire and Rescue assisted with planning for the event. They appreciated the chance to learn and practice outdoor survival skills like shelter building, and basic search and rescue training. A class studying redwood ecology from Sierra Nevada College also camped under a permit in July and went on a field tour of the Comstock THP area, Large Woody Debris and Streambank Repair sites guided by Noyes, Miller, and one of our previous Forestry Aides, Julie Dufresne.

## **LAW ENFORCEMENT**

CAL FIRE engines and forest staff responded to a record-high 22 requests for medical aid by injured mountain bikers on the forest, including emergency calls, walk-ins to the Burrell Station and contact with patients in the forest by staff on patrol. An additional search and rescue dispatch for a lost mountain biker from out of town who had started a ride late in the day was responded to in April. Most mountain bike injuries occurred on the new Flow Trail or along Ridge Trail. One response required a shorthaul in the CAL FIRE helicopter 106, and at least five involved an air ambulance transport. The Loma Prieta Fire and Rescue volunteers also responded to most of these incidents. At least twelve patients declined ambulance transport against medical advice (AMA), but needed transport out of the forest to a personal vehicle.

Vandalism of the portable toilet and parking area as well as illegal dumping was discovered in the Highland parking area in the spring, and the Santa Cruz County Sheriff's office was able to successfully identify a suspect from evidence left at the scene. Restitution was granted to CAL FIRE for staff time and waste disposal charges. Partial payment was received for restitution from the court case in 2014 for firewood theft and the associated illegal trails that were constructed. In May, one motorcyclist was cited for trespassing on the forest roads and driving with a suspended license. In July, several bullet holes were discovered in the sign board, and damage to gates on neighboring property was found.

In June and again in October, two areas of illegal marijuana plants and toxic chemicals were removed by Santa Cruz County Sheriffs and CDFW on an adjacent property along Soquel Creek. Additional plants and trash that were likely associated with the first site were found and removed from the state property by forest staff. In the fall, the lock on the main gate was vandalized several times, and illegal trespass was discovered. Problems along Comstock Mill Road continued with a trailer found parked on forest property being used as an illegal dwelling.

## ANNUAL FINANCIAL SUMMARY

SOQUEL DEMONSTRATION STATE FOREST  
2015 CALENDAR YEAR

	Expenditures	Revenues
<b>SALES</b>		<b>\$ 201,468</b>
CLASS I		\$ 800
CLASS III		\$ 198,053
MAP		\$ -
Camping Fees		\$ -
Special Use Permits		\$ 2,435
Miscellaneous Revenue		\$ 180
<b>ROAD USE FEES</b>		
<b>ADMINISTRATION*</b>	<b>\$ 360,701</b>	
PERSONNEL	\$ 319,484	
BASE OPERATING	\$ 41,218	
<b>CAPITAL INVESTMENT**</b>	<b>\$ -</b>	
RECREATION		
ROADS		
FACILITIES (other than Recreation Infrastructure)		
REFORESTATION/TIMBER STAND IMPROVEMENT		
LAND		
<b>SURVEYING</b>	<b>\$ -</b>	
<b>RESEARCH &amp; DEMONSTRATION</b>		
<b>IN-LIEU PROPERTY TAX***</b>	<b>\$ 5,823</b>	
YIELD TAX (paid by timber purchaser)		
<b>TOTAL</b>	<b>\$ 366,525</b>	<b>\$ 201,468</b>
	<b>BALANCE TOTAL</b>	<b>\$ (165,057)</b>

\*Includes all personnel, material and service expenditures charged to SDSF budget for the 2015 calendar year minus capital investment expenses (contracts); Source: previous and current fiscal year HFD Budget Report (Q12) - 13 month.

\*\*Includes all capital investment expenditures charged to SDSF budget for the 2015 calendar year; Source: previous and current fiscal year HFD Budget Report (Q12) - 13 month.

\*\*\*Based on current fiscal year Property Tax Bill

ANNUAL REPORT OF TIMBER CUT

Soquel Demonstration State Forest

From January 1, 2015 to December 31, 2015

COMMERCIAL SALES

FOREST PRODUCTS CONVERTIBLE TO BOARD FEET

Product (give dimensions)	Conversion Factor	# of Pieces, Cords, Lineal Feet, Etc	MBF	Value
MBF			435.67	\$196,052.70
Cords				0
Christmas Trees				0
Posts (size)				0
Shingle Bolts				0
Poles (size)				0
Grape Stakes				0
Shakes				0
TOTALS			435.67	\$196,052.70

Miscellaneous Forest Products - Not Convertible to Board Feet

Kind	Unit	Quantity	Value
Firewood	cord	36	\$800.00
Hardwood	Tons-cords	100	\$2,000.00
Seedlings	each	0	\$0
TOTALS			\$2,800.00

No Forest Products were cut for Department use.

Approved by Angela Bernheisel Signature Angela Bernheisel  
 Title Forest Manager Date Submitted 4/25/16

RM-23

**STATISTICAL DATA**  
 SOQUEL DEMONSTRATION STATE FOREST  
 2015 CALENDAR YEAR

**ADMINISTRATION**

	<u># Processed</u>	<u># Pending</u>
Rights-of-Way	<u>0</u>	<u>0</u>
Leases	<u>0</u>	<u>0</u>
Trespass Cases	<u>1</u>	<u>0</u>

**PROTECTION**

<u>Fires:</u>	# of Fires: <u>0</u>	Fire Patrol Person-Days: <u>40</u>
	Acres Burned: <u>0</u>	# of Campfire Permits Issued: <u>0</u>

<u>Insects:</u>	# of Trees Treated: <u>0</u>	# of Acres Covered: <u>0</u>
	Control Methods Used: <u>0</u>	

<u>Disease:</u>	# of Contract Acres Treated: <u>0</u>	# of State Acres Treated: <u>0</u>
	# of Pest Detection Reports Submitted: <u>0</u>	

**Hazard Reduction:**

# of Snags Felled or Removed: <u>0</u>	Acres Treated: <u>22.3</u>
Roadsides Treated (miles): <u>1.8</u>	Salvage Volume (mbf): _____
Acres of Slash Abated or Cleanup: <u>22.3</u>	Fuel Treatment Acres: <u>22.3</u>

**TIMBER STAND MANAGEMENT**

<u># of Timber Sales:</u>	Class I: <u>9</u>	Class III: <u>1</u>
	<small>(eg. Salvage, Christmas tree &amp; Firewood Permits)</small>	

<u>Timber Stand Improvements:</u>	<u># of Trees Pruned</u>	<u>Acres:</u>	<u>Pruned</u>	<u>Thinned</u>	<u>Released</u>
	<u>0</u>		<u>0</u>	<u>0%</u>	<u>0</u>

Planting: <u>40</u> (acres)	# of Trees: <u>3,000</u>
Seeding: _____ (acres)	# of Spots: _____
Site Preparation: _____ (acres)	
Method(s) of Site Preparation: _____	
<small>(eg. Excavator, Brushrake, Masticator, Broadcast Burn, Lopping, Hardwood Felling, Hack-n-Squirt)</small>	

**INVENTORY**

	<u>Size of Plot</u>	<u># of Plots</u>
Inventory Plots Established:	<u>1/5 acre</u>	_____
Other Plots Established:	_____	_____
Plots Remeasured:	_____	_____
Acres Cruised:	_____	_____

**ENGINEERING**

Corners Recovered or Set:	<u>0</u>
Miles of Line Run:	<u>0</u>
Miles of Boundary Surveyed and/or Posted:	<u>35% to date</u>
Boundary Surveyed and Posted To-Date:	_____

**OUTREACH, EVENTS & TOURS**

# of Occasions: Outreach: 13 Events: 8 Tours: 4

**EXPERIMENTS & DEMONSTRATIONS**

# of Projects: Submitted: \_\_\_\_\_ Approved: 9 Completed: 4

Approved Projects Worked On: (List By Titles) Reports Submitted:

2015 Steelhead Trout Population Report and Instream Temperature Monitoring 2015	yes
Stream Flow Modeling Study, ongoing	
SDSF Herpetology Survey 12/2010-12/2015, ongoing	
Santa Cruz Mountain Puma Project, ongoing	
Sudden Oak Death Studies, ongoing	
Large Woody Debris Stream Habitat Restoration and Streambank Repair Projects	yes
Blood-borne Disease Study, ongoing	

**CAPITAL IMPROVEMENTS**

(eg. Miles & tenths)	<u>New Construction</u>	<u>Total System</u>	<u>Amount Maintained</u>
Main Timber Access Roads:	0	8.8	8.8
Spur Timber Access Roads:	0	5	5
Other Roads:	0		
Firebreaks:	3	7	2
Trails:	3.3	12.1	12.1
Powerlines:	0	0	0
Communication Sites:	0	0	0
Water Development:	0	0	0
Bridges:	0	2	2
Campgrounds:	0	1	1
Camping Units:	0	1	1
Picnic grounds:	0	4	4
Picnic Units:	0	9	9
Installed Toilets:	0	0	0

**RECREATION**

Primary Use <sup>1</sup> *	Day Use <sup>2</sup> (Visitor Days)	Overnight Use <sup>3</sup> (Campers)	Overnight Use <sup>3</sup> (Camper Days)
Camping:	N/A	0	0
Fishing:	N/A	0	0
Hunting:	N/A	0	0
Picnicking:	0	0	0
Sightseeing:	0	0	0
Hiking:	3500	0	0
Horseback Riding:	0	0	0
Nature Walks:	0	0	0
Mountain Biking:	26000	0	0
ATV:	0	0	0
Snow Sports:	0	0	0
Other (Christmas trees, etc.):	500	0	0
<b>TOTAL:</b>	<b>30000</b>	<b>0</b>	<b>0</b>

\* Enter N/A under "Day Use" if activity is not applicable to or not allowed on the DSF.

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

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

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

