

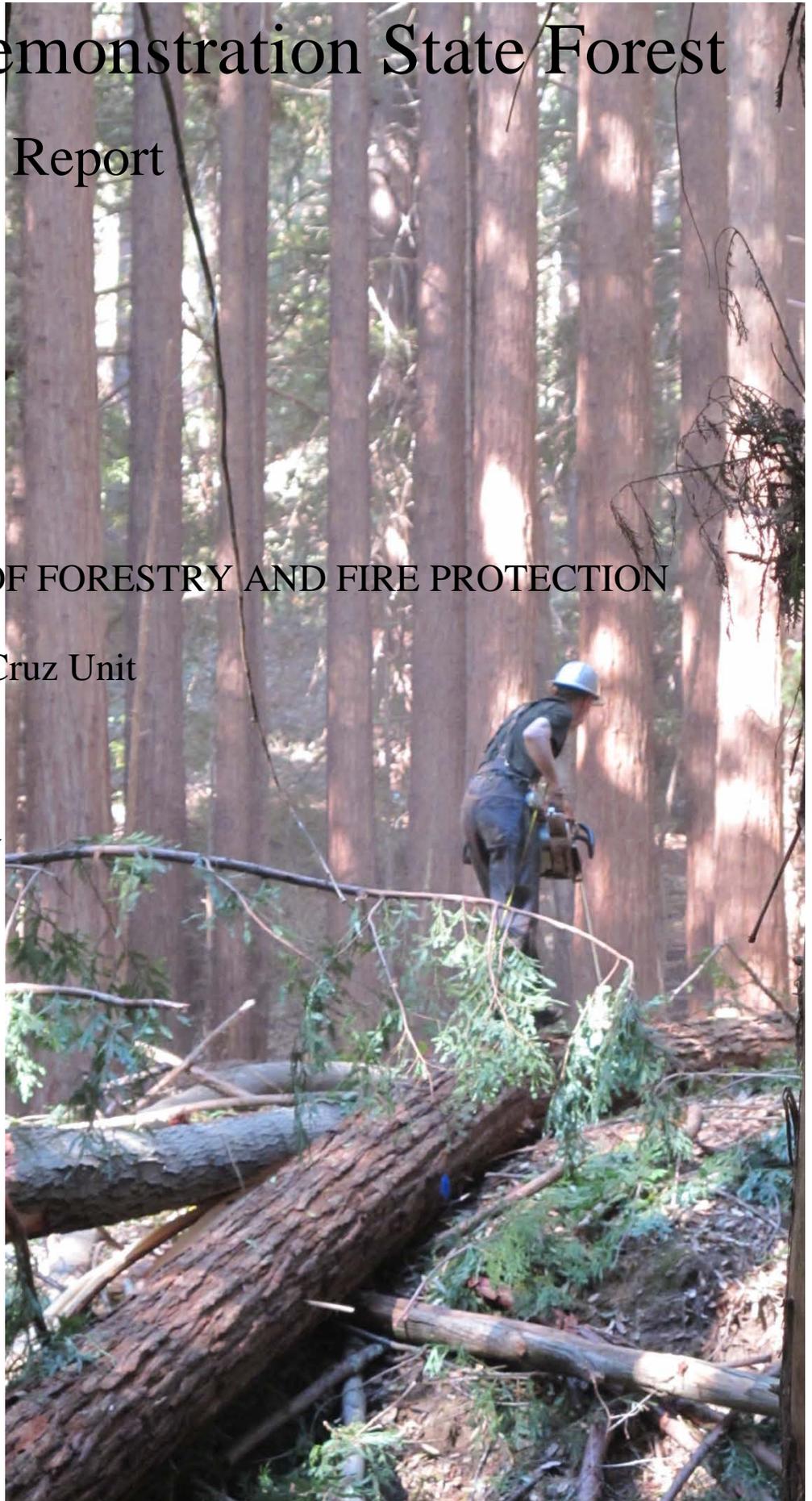
Soquel Demonstration State Forest

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.

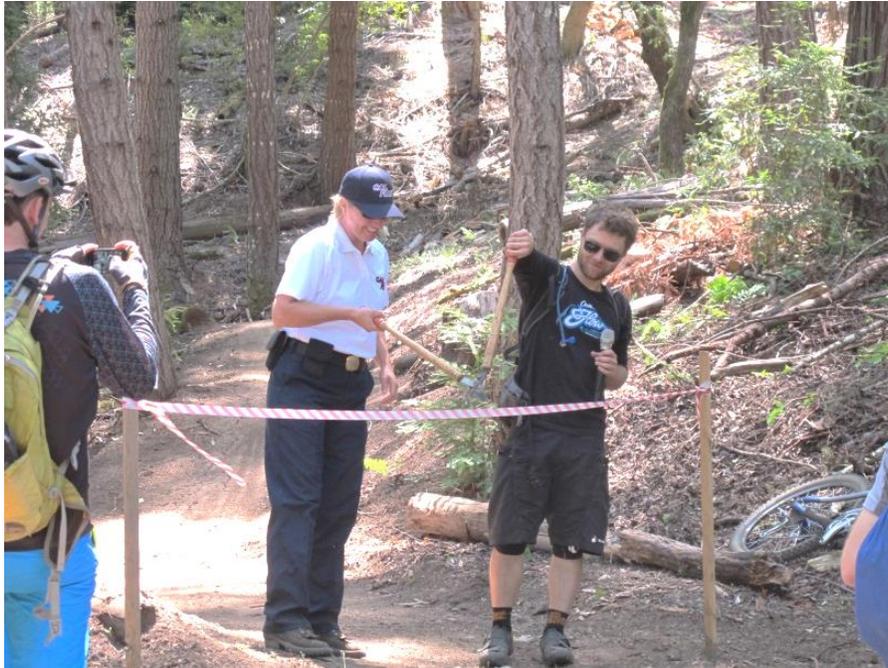
Bernheisel met with Orre and Whatford in late January to document needed recording for sites and cataloging of artifacts before Orre's promotion. Whatford committed to providing additional assistance from archaeology staff to complete the work.

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	Tens-cords	525	\$10,500.00
Seedlings	each	50	\$30.00
TOTALS			\$11,150.00

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 4/6/15

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
Nature Walks (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

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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.

Soquel Demonstration State Forest Transportation Map

