

Soquel Demonstration State Forest

2012 Annual Report



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

Santa Cruz County



SUMMARY

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

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

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ADMINISTRATION

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

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

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

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



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

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

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

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

The Advisory Committee Members in 2012 were:

Donna Bradford - Santa Cruz County Planning Department

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

Vice Chairperson Patty Ciesla - Stewards of Soquel Forest

Eric Huff - Board of Forestry and Fire Protection

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

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

Patricia Marland - Neighbor Representative

Larry Serpa – The Nature Conservancy

Chairperson Steve Staub - Registered Professional Forester

Thomas Sutfin - Ex-Officio Member

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

TRAINING

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

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

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

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

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



Movement drill in mid-May

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

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

TIMBER MANAGEMENT

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

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

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

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



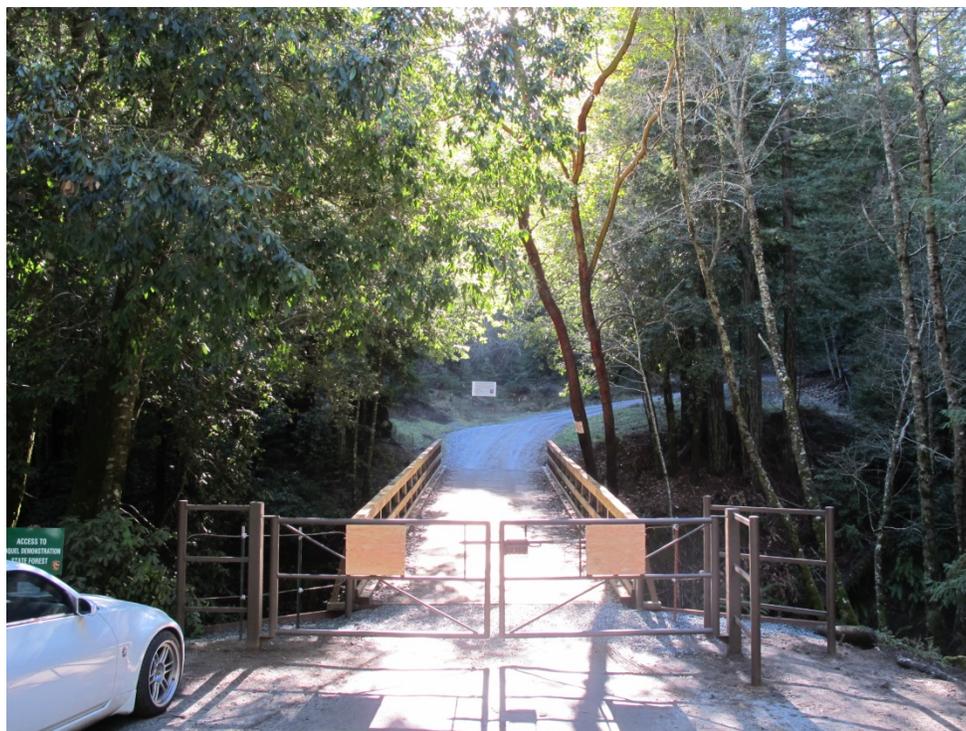
Cable yarding in the Fern Gulch Timber Sale

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

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

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

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



Redecking and new gate on the bridge at Highland Way.

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

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

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

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



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

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

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

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

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

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

RESEARCH

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



Rootwad transport as part of Large Woody Debris Project

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



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

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

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

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

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



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

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

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

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

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

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



Forest Sharptailed Snake, Contia Longicaudae Photo by J. Maughn

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



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

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



Mountain puma with radio collar in the Forest.

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

RECREATION

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

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

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

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

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

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

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



Super Enduro riders in the Forest

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

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

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

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

EDUCATION

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



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

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

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

LAW ENFORCEMENT

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

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

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

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

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

2012 CALENDAR YEAR FINANCIAL SUMMARY FOR
SOQUEL DEMONSTRATION STATE FOREST

Expense Summary

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

Revenue Summary

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

Net Operating Costs

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

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

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

ANNUAL REPORT OF TIMBER CUT

Soquel Demonstration State Forest

From January 1, 2012 to December 31, 2012

COMMERCIAL SALES

FOREST PRODUCTS CONVERTIBLE TO BOARD FEET

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

Miscellaneous Forest Products - Not Convertible to Board Feet

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

No Forest Products were cut for Department Use.

Approved by Angela Bernheisel Signature _____

Title Forest Manager Date Submitted _____

PERMANENT PLOTS

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

ENGINEERING

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

CAPITAL IMPROVEMENTS

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

Buildings Constructed (describe each): none

RECREATION

Primary Use	Day Use	Overnight Use	
	(Visitor Days)	Campers	Camper Days
	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	2,700	0	0
Horseback Riding	0	0	0
Nature Walks (see hiking)	0	0	0
Swimming	0	0	0
Wintersports ⁴	0	0	0
Other (specify):	-	-	-
Mushroom Collecting	300	0	0
Mountain Biking	17,000	0	0
Estimated TOTAL	20,000	0	0

RM-39

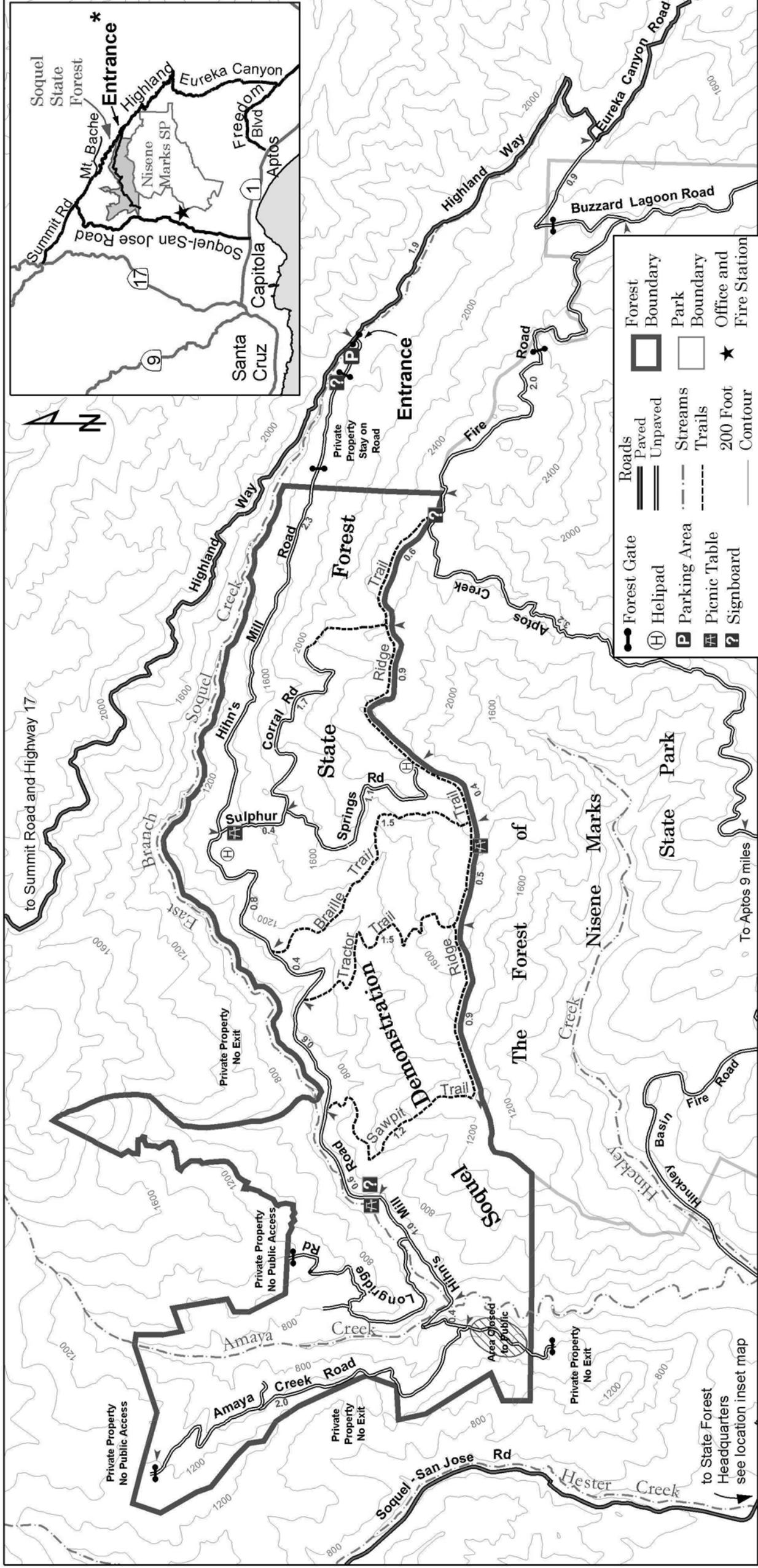
1 No campgrounds exist on SDSF. Camping is only allowed by special use agreement.

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

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

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

Soquel Demonstration State Forest



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

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

0 0.25 0.5 1 Mile
0 0.25 0.5 1 Kilometer