



I. Call to Order

Board Vice-Chair Tom Wheeler called the meeting to order at 9:00 a.m. He thanked those involved in setting up the meeting and the previous day's tour to Halstead Meadow and the Giant Forest.

II. Roll Call

Present: Tom Wheeler, Kevin Cann, Este Stifel, Bob Kirkwood, John Brissenden, Todd Ferrara, Byng Hunt, Pam Giacomini, Woody Smeck (alternate for Don Neubacher, National Parks Service), and Jerry Bird (alternate for Bernie Gyant, U.S. Forest Service)

Absent: BJ Kirwan, Ron Briggs, Sherrie Thrall, and Bob Johnston

III. Approval of June 6, 2013 Meeting Minutes (ACTION)

There were no changes to the meeting minutes.

ACTION: Boardmember Kirkwood moved and Boardmember Giacomini seconded a motion to approve the June 6, 2013 Meeting Minutes. The motion passed unanimously.

IV. Public Comments

Scott Spear, Sequoia Riverlands Trust, expressed his thanks to the Sierra Nevada Conservancy (SNC) for the grants his organization was awarded. He also thanked SNC for its good work.

V. Board Chair's Report

There was no report.

VI. Executive Officer's Report (INFORMATIONAL)

SNC Executive Officer Jim Branham commented on the Sierra Nevada fire season and, in particular, the Rim Fire near Yosemite. He introduced U.S. Forest Service Representative and Boardmember Bird for an update on the recent fires.

Bird said about 4,000,000-acres have burned nationally. There are seven large fires burning in California, and reported one fatality in the Clover Fire northwest of Redding. The 257,000-acre Rim Fire is still burning in the Stanislaus National Forest and Yosemite, but is mostly contained.

Burned Area Emergency Rehabilitation (BAER) teams are being deployed to 13 fire zones to protect communities from the anticipated erosion from ash and sediment left behind after the fires. The American Fire on the Tahoe National Forest near

Board Meeting Minutes
September 11 – 12, 2013
Page 2 of 10

Foresthill burned 27,000-acres. Bird said the U.S. Forest Service is trying to secure funding from the State's "Cap and Trade" auction revenues to achieve a dollar per-dollar match between federal and state dollars to double the fuels reduction/fire prevention work being done.

Bird said treatment on federal lands needs to increase from 200,000-acres a year to 500,000, pointing out that the Rim Fire would not have been nearly as large if it had been treated.

Branham said the SNC has efforts underway to quantify the impacts that forest treatments can have on wildfires.

The Board was shown a slide show put together by the Board Liaison Theresa Burgess featuring a number of news clippings, fire facts, and video footage taken from various sources.

Branham said he had discussions with the City of San Francisco Public Utilities Commission staff regarding their efforts to quantify impacts of the Rim Fire. Information such as this can be used to emphasize the relationship of Sierra watersheds and urban communities and the need to invest in this Region.

Boardmember Cann asked if, given the fires this season, is there any expectation that the Legislature will now look at investing more Cap and Trade auction revenue on forest issues.

Branham said the fires would definitely strengthen the case for investment in the forest sector.

Boardmember Ferrara said the Cap and Trade auctions will continue and the expenditure plan is the next step in the process.

Board Vice-Chair Wheeler said the awareness among the Bay Area cities is growing, especially as it affects their water supply.

Boardmember Kirkwood said the City of San Francisco had to spend some \$900,000 to purchase power on a temporary basis due to the Rim Fire, and Branham added that the overall cost to the City was estimated at \$30 million for power infrastructure replacement and repair alone.

Boardmember Brissenden asked when the next Cap and Trade auction would be. Branham said they would be held twice a year, and an estimated \$500 million is expected to be generated.

Board Meeting Minutes
September 11 – 12, 2013
Page 3 of 10

Wheeler commented that the fire suppression costs of the Rim Fire were estimated at \$104 million thus far, and noted that that dollar amount could produce many good forest treatments.

Brissenden noted that the other impacts from the fire are being felt by local businesses, which have suffered greatly from reduced tourism during the summer.

Branham acknowledged that there has been a multitude of negative impacts from the fires, and that SNC is in the process of gathering those points to help tell the story. He noted that included in the Board packet was an opinion piece printed in the San Jose Mercury News, co-authored by Assembly Member Brian Dahle, a former Boardmember, and Assembly Member Rich Gordon. Branham said that having bi-partisan legislative support from both urban and Sierra Nevada areas advocating for action would be very helpful.

Boardmember Stifel said that the damage to air quality needs to be included in the discussion as well.

On an administrative note, Branham noted that SNC's Public Information Officer Pete Dufour retiring in October. He thanked Dufour for his service to the SNC and the State.

a. Administrative Update

SNC Administrative Services Chief Theresa Parsley updated the Board on the following items:

- A two-year State labor contract is now in place for most employee unions.
- The SNC expects to fill a vacant position in Mariposa in early October.
- 25 general operational SNC policies are being reviewed to ensure relevance and possible updates.
- 5 new implementation procedures are being developed in the areas of grants admin, human resources and emergency response.
- The SNC has received feedback from the State Personnel Board regarding their compliance review audit of SNC's appointments and Equal Employment Opportunity program, saying they found no deficiencies. Next compliance review is in 2016.
- Auditors with the Department of Finance (DOF) have initiated another new grantee audit in addition to the Sierra Nevada Alliance audit mentioned in the staff report. DOF auditors met with SNC Staff in August regarding two Proposition 84 projects with the Alpine Watershed Group. A total of seven SNC grantees have now been audited. Preliminary comments indicate the auditor was very pleased with the SNC's record keeping and forms, and would recommend them to other State Departments.
- Greenhorn Creek Project Grant from last round was executed.
- Issues concerning Butte Creek project are still unresolved.

- Parsley reported that the Mariposa office move would be taking place soon.

Cann said he applauded the location of the new Mariposa office, which will provide the SNC more visibility in the community, as well as more interaction with the county, which will be co-located in the same building, and across the street from the county government center.

Branham said the Legislature is looking to scale back the proposed water bond, and that conversations with legislators and staff have positive regarding the need for investment in the Region. The bond still has a heavy commitment to the Bay Delta, but if a bond moves forward next year, the SNC will be positioned well for an appropriate share. Branham said it is also possible that the bond will be put off until 2016.

Boardmember Giacomini said there would be a large pushback from the northern part of the state if there were no assurances given on the protection of origin of water rights.

Branham said there is an understanding that as well as discussions about more water storage. He said that those who are doing the polling on the ballot measure indicate that any organized opposition to the water bond would hurt its chances of passing. He added that it is a very complex issue, especially with the Governor's Bay Delta Plan calling for tunnels in the Delta.

b. Policy and Outreach Update

Branham informed the Board that staff continues to engage policymakers and partners on the importance of including investment in the Sierra as part of the water bond. Giacomini commented on the importance of addressing area of origin rights as well. Branham responded that acknowledgement of that is increasing, but the projected effects of climate change may call for increased fresh water flows into the Delta. He said there will be opportunities for local Boardmembers to engage on these issues.

SNC Regional Policy and Program Manager Angela Avery said the team is working on a number of legislative outreach efforts, including two legislative tours that occurred over the summer and two additional tours in the near future. She said an effort to get Los Angeles area members out into the watershed has been postponed until spring.

Avery said the next big effort would be a legislative briefing, October 31, linking the impacts of the summer's fires to the SNC's study of the Mokelumne River Watershed, using that opportunity to create an understanding what investment is needed. She added there would be a display on the Governor's wall in the corridor outside the Governor's Office in the month of January.

Avery said that 13 legislators had signed on as honorary cosponsors of the 5th Annual Great Sierra River Cleanup, and invited Boardmembers to participate on September 21st.

Ongoing activities will include more legislative outreach, including opportunities for the SNC Board to engage.

Branham said the SNC is trying to engage statewide, national, and local, partners, with varying success. He said The Sierra Fund and the Sierra Business Council in particular have been supportive.

Boardmember Kirkwood said he appreciated the improvement to the new format and update of the Policy and Outreach Update, and congratulated Avery on her presentation.

c. 2013-14 Grant Program Update

Parsley noted there is a total of \$2.8 million remaining in Proposition 84 funding for grants. Currently four “Healthy Forest” projects have been invited to develop full proposals. All four are on federal lands. One is likely to be a categorical exemption under the California Environmental Quality Act (CEQA), and three others may qualify the SNC to act as the lead agency using completed National Environmental Policy Act (NEPA) documents as a basis to address CEQA requirements. If successful, these projects, with a combined request for \$866,000, would likely be before the Board in March.

There are two additional Healthy Forest projects and one Abandoned Mine project that the SNC anticipates will be invited to submit full proposals. These three projects total \$345,000, and could be before the Board at the December meeting. There are many more proposed projects competing for the remaining funds.

Parsley said the SNC will share all recommended projects with all Boardmembers, and will include more detail in the staff recommendations prior to the Board meetings.

d. National Parks Service (NPS) Presentation

Woody Smeck from the NPS talked about two important anniversaries coming up:

1. In 2014 the 50th anniversary of the Wilderness Act. He noted the Sierra Nevada has one of the largest concentrations of protected areas under the Act, adding there will be many opportunities to celebrate the values of the Act. A number of state and national planning efforts are underway.

2. In 2015 the 125th anniversary of the Act that established the Yosemite and Sequoia National Parks.

Smeck provided an overview on a number of key issues including budget challenges, the organization of the Yosemite/Sierra Executive Council, the Merced River Plan and ongoing challenges with bears in the parks.

VII. Deputy Attorney General's Report (INFORMATIONAL)

Deputy Attorney General Christine Sproul said she continues to work on a number of California Environmental Quality Act (CEQA) National Environmental Protection Act (NEPA) "crosswalk" issues, and that she expects to have some interesting presentations at the December and March Board meetings.

She added that efforts in the Legislature to amend CEQA to assist with ecological restoration in the forest have not been successful this session. However, she said a limited reform bill directed at infill and transit development and a bill by Senator Steinberg to assist in streamlining CEQA for the Sacramento Kings new arena may open the door for streamlining in the future.

VIII. 2012-13 Annual Report (ACTION)

The 2012-13 Annual Report was presented by Board Liaison Theresa Burgess who said the report will focus on making the Sierra-Delta connection, as well as providing updated budget and fiscal information. The report will be distributed to the Legislature and the Secretary of the California National Resources Agency, and will be sent electronically to Boardmembers, stakeholders and the public as well, with hard copies available at the December meeting. Burgess noted that the SNC would produce and publish the report in-house.

ACTION: Boardmember Kirkwood moved and Boardmember Brissenden seconded a motion to approve the completion and distribution of the 2012-13 Annual Report. The motion passed unanimously.

IX. Fire Threat Systems Indicators Report (ACTION)

Assistant Executive Officer Joan Keegan noted the Fire Threat Indicators Report is the fifth in a series of six such reports. The sixth report, on agricultural lands, will be presented to the Board in December.

Keegan said SNC consultant Mark Stanley produced the report. She recognized the assistance of consultant Steve Beckwitt and Mt. Lassen Area Representative Chris Dallas, crediting the team for creating such a high quality report. Keegan summarized key elements of the report.

Kirkwood said this is the most abstract of the SNC System Indicators reports published to date, and that he did not see any indicators on how SNC work is having an impact. Kirkwood also requested that the information be broken down by county to make it more useful/relevant to county boards of supervisors.

Keegan explained that the performance measures placed on SNC projects report out on some specifics, but that the System Indicators are more relevant at higher policy level. She said the hope is that this information can be used by the SNC and its partners over time to help explain conditions in the Sierra. Keegan agreed to provide fire information by county.

Boardmember Smeck said he appreciated the information in the report, and asked if it could be determined how many acres were burned as “managed” fire to reduce fuel and hazard, verses those burned as wildfires. He said that in the Sequoia/Kings Canyon National Park, two-thirds of the acreage burned was from managed fires.

Smeck also asked if it is possible to attach standards or benchmarks to the indicators to give a sense of understanding of the current conditions.

Wheeler said CalFire is documenting treatment areas and is using overlay maps to show how fuel reduction efforts have made an impact of fire.

Boardmember Stifel said it would also be good to know how many of the fires are “mega fires,” as an indication of how fires are behaving.

Wheeler said the report indicates to him that CalFire should not be charging homeowners the \$150 State Responsibility Area Fee because most of the fires are outside that area on federal lands. Wheeler also noted that SNC is a leader in compiling this information, and commented that he felt this is a great report.

ACTION: Boardmember Kirkwood moved and Boardmember Hunt seconded a motion to approve the Fire Threat System Indicators Report. The motion passed unanimously.

X. 2013-14 Budget/SNC Programs Discussion (INFORMATIONAL)

Keegan presented information on the status of the 2013-14 budget and its alignment of expenditures with statute and Board direction. The total SNC support budget, funded by the Environmental License Plate Fund is as follows:

Personal Services (salaries & wages):	\$2.9 million (61%)
Operating Expenses & Equipment:	\$1.8 million (39%)
Total Support:	\$4.7 million

Keegan said the SNC would also report annually, at each September Board meeting, on how it is allocating funds and resources across the following program areas:

- Policy Development (State and Federal) -- \$75,000

- Education and Advocacy -- \$60,000
- Region-Wide Projects -- \$212,000
- Grants -- \$235,000
- Collaborative Planning -- \$100,000
- Technical and Other Assistance -- \$90,000
- Research and Monitoring -- \$75,000

Kirkwood said it is very helpful to see the budget broken down in this fashion. He said it would be more illuminating and would help inform the Board's decisions if the personal costs associated with the various program areas could be estimated.

Stifel congratulated the SNC for its ratio of 60 percent labor to 40 percent operational costs, saying that ratio is very impressive. She asked if there was a way to mesh the Action Plan and the program budgets to show where the SNC prioritizes its funding. Keegan said a lot of that prioritization occurs not along program lines but on action plan lines, as part of the SNC Strategic Plan.

XI. Updates on Various SNC Activities (INFORMATIONAL)

a. Bioenergy Action Plan Implementation

Branham said a lot of activity is underway on this issue. He said while it is critical to utilize forest biomass, the infrastructure is not in place or is in disrepair. Placer County is set up the best for this, but there are still a lot of issues to be resolved, including power purchase agreements. He said the future of the proposed small plant at North Fork is uncertain. The SNC will continue to work with communities who have an interest in utilizing biomass utilization.

Branham said that due to the lack of bioenergy facilities in the Sierra, some fuel reduction and forest restoration projects are not going forward.

SB 1122 (Rubio Chapter 612 Stats. 2012) calls for the Public Utilities Commission (PUC) to develop a process for investor-owned utilities to include woody biomass as part of their renewable energy sources. He said the SNC has provided comments as part of this process, and is anxious to see what action the PUC will take at an upcoming meeting.

Branham said the SNC helped to convene a bioenergy meeting in Foresthill, while smoke from the nearby American Fire was still in the air. He said the community's desire for a facility was significant.

On a bright note, Branham said the biomass working group that Boardmember Bird has been working on with the SNC and other partner groups has just learned it has received a \$240,000 grant from the U.S. Department of Agriculture (USDA). These are funds can be put to work "on the ground."

- b. Sierra Nevada Geotourism MapGuide Project
SNC Mt. Lassen Area Manager Bob Kingman said the SNC, Sierra Business Council and the National Geographic continue to partner successfully on the project. The project's web site has been active since 2009, with over 1,600 destination pages that have all been nominated and submitted by local residents throughout the Region. He said the web site continues to grow in popularity with over 180 videos, and 179,000 page views during the month of July from 113 countries around the world.

Approximately 160,000 copies of the print map have been distributed, according to Kingman, who stated the map is a tool to drive people to the web site. Kingman added that advertising in Sunset, Via, and Sierra Heritage magazines have resulted in a 55 percent increase in "hits" on the web site.

According to the State Travel and Tourism Commission, California received more than 200 million visitors in 2011. Kingman said this equates to about \$7.35 billion coming to the Sierra Nevada, providing 85,000 jobs in the Sierra tied to tourism. He said the impacts forest fires is widely felt among the tourist industry in the Sierra, as well as the rest of the state.

Kingman said the next steps for the project include opportunities for tourists to upload their favorite videos and trips to the web site. He added that the ongoing marketing and business management aspects of the project would soon be changing. A memorandum of understanding is being developed which will give SBC the lead responsibility for day-to-day management of the project and that will be coming to the Board at their December meeting.

Conservation Easement Workshop

Branham asked the Board if it wanted to postpone the planned December workshop discussion regarding conservation easements, in light of the fact that there are no such projects in the near future. Vice-Chair Wheeler and Boardmember Kirkwood concurred with the recommendation to postpone the workshop.

XII. Boardmembers' Comments

Bird thanked SNC Sustainability Specialist Kim Carr and consultant Elissa Brown for their tremendous work in obtaining a \$240,000 grant for the Biomass Working Group. He said only five states received funding, and that through this grant California received 23 percent of the funding. He also thanked the National Park Service representative Smeck and Sequoia National Park Ranger Athena Demetry for the tour and the tremendous program history provided the previous day at Halstead Meadow and the Giant Forest.

XIII. Public Comments

There were no public comments.

XIV. Adjournment

The meeting was adjourned at 11:48 AM. The next meeting is in December in Amador County.

Background

At this mid-year point, all grants and general administration activities are proceeding smoothly. The Sierra Nevada Conservancy (SNC) will be going through a significant transition in coming months as Administrative Services Chief Theresa Parsley has announced she is retiring at the end of the calendar year. Parsley has been in this role with the SNC since May, 2010. In this time she has overseen the re-structuring of the organization including the move of grants administration into the Administrative Services Division, as well as the re-classification of SNC's primary program staff positions, the completion of SNC's first major examinations, the move of the Mt. Whitney team to a new facility in Mariposa, the development and update of SNC's contracting, safety and emergency preparation programs and the development of dozens of policies and procedures. Her experience, skill and "can do" attitude will be deeply missed. Recruitment for the new Administrative Services Chief is underway.

Current Status – Facilities

Mariposa staff has finally moved into their new home, located on 4988 11th Street in Mariposa, about a block from Highway 140 at 11th Street. This new facility allows SNC to provide community resources and a higher profile and better access to SNC programs and staff.

Current Status – Grants Administration

Grants Administration (GA) staff has participated in training and preparation activities to launch the new grant tracking and reporting program developed by the California Natural Resources Agency. When fully activated, the Agency Bond Consolidated Reporting System (ABCERS) will consolidate all bond-related data, projection and reporting functions into one central database. ABCERS will also replace the current Bond Accountability Database system for reporting and posting Proposition 84 funded project information to the public website.

Current Status – Budget

Budget and Grants Administration Staff are responding to various drills from the Department of Finance, as they put the Governor's 2014-15 budget together.

Current Status – Human Resources

As of October 1, 2013, the Mt. Whitney team welcomed SNC's newest state employee, Mandy Vance. Mandy is well-known to the SNC Governing Board, staff and stakeholders, having most recently worked as a consultant to the SNC. In addition to being a Mt. Whitney team member, Mandy is leading SNC activities on the Sierra Nevada Forest and Community Initiative and the Southern Sierra Fisher Conservation Strategy development effort.

Recommendation

This is an informational item only; no formal action is needed by the Board at this time, although Boardmembers are encouraged to share their thoughts and comments.

2013-14 SNC EXPENDITURES AND ENCUMBRANCES					
Through October 31, 2013					
State Operations					
<i>Personal Services</i>	<i>Budgeted</i>	<i>Expended</i>	<i>Balance</i>	<i>% Spent</i>	
SALARIES AND WAGES	2,097,591	633,011	1,464,580	30%	
STAFF BENEFITS	850,637	253,004	597,633	30%	
Personal Services, Totals	\$2,948,228	\$886,015	\$2,062,213	30%	
Operating Expenses & Equipment	<i>Budgeted</i>	<i>Expended</i>	<i>Balance</i>	<i>% Spent</i>	
GENERAL EXPENSE	221,196	62,750	158,446	28%	
TRAVEL - IS	58,000	0	58,000	0%	
TRAVEL - OS	1,737	0	1,737	0%	
TRAINING	30,000	1,660	28,340	6%	
FACILITIES	289,639	268,393	21,246	93%	
UTILITIES	15,380	4,017	11,363	26%	
CONTRACTS- INTERAGENCY AGREEMENT	793,535	331,077	462,459	42%	
CONTRACTS- EXTERNAL	149,250	137,996	11,254	92%	
INFORMATION TECHNOLOGY	61,691	4,854	56,837	8%	
EQUIPMENT	-	-	-	0%	
OTHER ITEMS OF EXPENSE	25,196	4,668	20,528	19%	
PRO RATA (control agency costs)	192,148	48,037	144,111	25%	
Operating Expenses & Equipment, Totals	\$1,837,772	\$863,450	\$974,322	47%	
Local Assistance					
<i>Appropriation</i>	<i>Budgeted</i>	<i>Expended</i>	<i>Balance</i>	<i>% Spent</i>	
2007 Orig Appropriation; Re-ap.11/12 (13/14 Yr 3 of 3)	17,000,000	16,860,586	139,414	99%	
2008 Orig Appropriation; Re-ap.11/12 (13/14 Yr 3 of 3)	17,000,000	16,622,271	377,729	98%	
2009 Orig Appropriation; Re-ap.12/13 (13/14 Yr 2 of 3)	15,448,000	13,107,005	2,340,995	85%	
	<i>Budgeted</i>	<i>Expended</i>	<i>Balance</i>	<i>% Spent</i>	
State Operations	4,786,000	1,749,465	3,036,535	37%	
Local Assistance *	49,448,000	46,589,863	2,858,137	94%	
SNC EXPENDITURES, TOTALS	\$54,234,000	\$48,339,328	\$5,894,672	89%	

Background

The Sierra Nevada Conservancy (SNC) Board has directed staff to conduct a variety of outreach and communication activities to ensure that the upper watersheds of the Sierra Nevada are appropriately considered in State funding discussions such as a new 2014 Water Bond or an updated Cap and Trade Auction Revenue spending plan. SNC staff continues to follow previous Board direction by taking steps to increase awareness of the Region and to communicate the value of the Region to the State's overall environmental and economic health and well-being.

Current Status

The Great Sierra River Cleanup took place on September 21st and was a successful event despite unusually rainy weather at many clean up locations. Outreach efforts resulted in 13 state legislators signing on to be co-chairs, nearly 3,900 volunteers turning out to collect more than 37 tons of trash and recyclables and clean more than 200 miles of shoreline, and event sponsors contributing \$13,000 in cash and more than \$7,000 in in-kind sponsorships. Media coverage included 11 news clips, including an article from the Fresno Bee (<http://www.fresnobee.com/2013/09/21/3510820/volunteers-pick-up-river-trash.html>).

On September 24th, the Senate Natural Resources Committee and the Senate Environmental Quality Committee held a joint informational hearing to discuss two proposed bills (SB42 and AB1331), and get public input on where the water bond discussion should go next. Several SNC partners including Trust for Public Land, The Nature Conservancy and Sierra Business Council commented publicly on the importance of source watersheds and the Sierra Nevada and a number of people mentioned the proven track record that state conservancies have for watershed protection and investment. A brief summary of the two water bills under consideration can be found on the [Senate Natural Resources and Water Committee web site](#). The SNC submitted a comment letter to the Committee members which emphasized the value of the Sierra Nevada Region to the State and supported direct allocation of investment in the Region through the SNC ([Attachment A](#)). Staff continues to work with a wide range of stakeholders to ensure that any water bond going forward contains appropriate investment in the State's primary watershed.

Staff worked with the United States Forest Service (USFS) and Cal Fire in developing a proposal for expenditure of Cap and Trade Auction Revenue in the forest sector. The SNC proposal recommends funds being expended for three activities: 1) development of forest biomass energy infrastructure; 2) a short-term transportation incentive to move biomass from piles to existing facilities; and 3) forest restoration treatments on USFS lands. The proposal is currently being considered by various entities within the administration.

On October 31, 2013, SNC and The Nature Conservancy co-hosted a Legislative Briefing designed to educate decision-makers about the long-term impacts events like the Rim Fire can have on California's water, habitat, carbon storage, air quality, and

communities. The event was designed to help legislative staff understand the actions and specific investments necessary to reduce the risks of fire and their impacts in the future. Staff developed a Rim Fire packet for the event ([Attachment B](#)).

Staff organized a meeting between SNC, Izzy Martin of The Sierra Fund and staff from the California State Assembly Committee on Natural Resources to begin discussing the details for a January, 2014 joint legislative oversight hearing on the topic of abandoned mine lands (AML). The goal of the hearing will be to educate members of the Senate and the Assembly about the legacy issues associated with AMLs and the need to invest in the upper watersheds to mitigate those issues and protect public health. During the meeting, Committee staff requested a tour of AML sites and the SNC is working with The Sierra Fund to fulfill this request.

The Governor's Office of Planning and Research is coordinating a series of five Water Conversations with water leaders and visionaries throughout the State. SNC staff attended the Sierra Nevada meeting in South Lake Tahoe and a verbal update will be provided at this Board meeting.

Since 2011, the SNC has been working with the Department of Water Resources (DWR) on the California Water Plan (CWP) Update 2013. The CWP, also known as Bulletin 160, is a statewide blueprint for water management. It provides information for decision-makers, water managers and other interested stakeholders for use in administering the State's considerable water-related resources. The SNC has been serving as the coordinator and lead author for the Mountain Counties Overlay (MCO) regional report, one of 12 region-specific reports that provide more detailed information on the major hydrologic regions of the state (The SNC Region is larger than the MCO area. It includes seven additional counties: Modoc, Shasta, Tehama, Mono, Inyo, Tulare, and Kern Counties). Our goal in this initiative has been to shape the MCO to help decision-makers more fully understand the complexities and value of the natural and cultural resources that come from the Sierra Nevada and to better justify the need for additional investment to protect and enhance those resources, which are critical to the Region and the rest of the state. On October 23rd, DWR released Volume 2 of the CWP for public comment. The public comment period for this volume will run through December 9th. The report is available online at:

http://www.waterplan.water.ca.gov/docs/cwpu2013/2013-prd/Vol2_Mountain-Counties-RR_PRD_Edited_Final_JW_wo.pdf.

Next Steps

Staff will continue to identify opportunities to get legislators and others out into the Region to educate them about the value and benefits that come from investment in the Sierra Nevada and to illustrate on-the-ground projects of value to the state.

Due to efforts by Assemblymember Brian Dahle, the Assembly Water, Parks and Wildlife committee is holding a water bond hearing in Redding on December 4, 2013.

Staff will provide a verbal update at this Board meeting and at the time of preparation of this report is working with partners to ensure that a coalition of Sierra Nevada partners is in attendance to provide comments on the need for and value of investment in the Region to ensure water reliability and supply for the state.

SNC will continue to schedule meetings with legislators in early 2014. Specifically, we are working to identify legislators from districts that are direct recipients of Sierra Nevada water. Additionally we will continue to work with partners to organize meetings with key water bond legislators.

The Regional Policy and Program team is developing an educational display to be hosted on the Governor's Annex Wall for the month of January, 2014. The display will identify upper watershed issues that pose threats to California's long-term water supply and reliability by highlighting the impacts of events such as the Rim Fire and identifying opportunities for upper watershed investments that minimize the associated risks and promote statewide water security.

Recommendation

This is an informational item only; no formal action is needed by the Board at this time, although Boardmembers are encouraged to share their thoughts and comments.

Agenda Item VII b

Attachment A



SIERRA NEVADA CONSERVANCY

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September 26, 2013

The Honorable Fran Pavley, Chair
Senate Committee on Natural Resources and Water
State Capitol, Room 4035
Sacramento, CA 95814

Dear Senator Pavley and Committee Members:

The Sierra Nevada Conservancy (SNC) would like to thank the committee for the opportunity to provide comments while you continue your discussions on a revised water bond. We understand that California's water system is complex and that the needs are far greater than can be satisfied with a single water bond. However, as a state agency doing work in California's principle watershed, we believe that it is imperative that source watersheds be included in any water bond designed to ensure water quality and supply for the State. We would like to specifically support the following recommendations, some of which were mentioned at the September 24 informational hearing:

- Investment in "source" watersheds: The Sierra Nevada Region provides more than 60% of California's developed water supply and nearly half of the fresh water that flows into the Delta. Failure to include investments that protect and restore the source of California's water would be a significant omission in a comprehensive package of solutions for California's water issues. To help ensure that the source watersheds continue to provide clean, fresh water to California's water system we would like to encourage you to maintain or strengthen language connecting source water and the downstream needs and users, as currently described in AB 1331.
- Funding for Conservancies: As mentioned in the September 24 informational hearing, Conservancies have a proven track record of getting funding out on the ground to directly meet the needs of the areas they represent. The SNC has successfully awarded more than \$50 million in Proposition 84 grants for the protection and restoration of rivers, lakes, and streams in the Sierra Nevada and has established strong partnerships with numerous agencies, non-profits, and tribes in

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September 26, 2013

Page 2 of 2

- the Region to complete a variety of projects focused on protecting the State's water supply. We would like to encourage you to adopt SB 42's total of \$500 million for state conservancies and we would encourage you to consider an allocation formula based on contribution to the state's water supply in addition to population and geography.
- Definition of "economically distressed areas:" The Sierra Nevada Region encompasses more than 25 million acres, or roughly one quarter of the State. Inclusion of "disadvantaged communities" in place of "economically distressed areas" will essentially eliminate funding opportunities for that quarter of the State. Using the definition for economically distressed areas takes financial hardship, unemployment rate and population density into consideration and would more appropriately address the needs of rural communities in the Sierra. We would like to encourage you to adopt AB 1331's definition of "economically distressed areas."
- Tribal organizations: We would like to encourage you to include tribal organizations as eligible entities to receive funds.

Thank you for your consideration of our comments and we look forward to continuing to be a part of the process.

Sincerely,



JIM BRANHAM
Executive Officer

cc: Senator Hill, Chair, Senate Environmental Quality Committee
Senator Wolk
Assemblymember Rendon

Agenda Item VII b

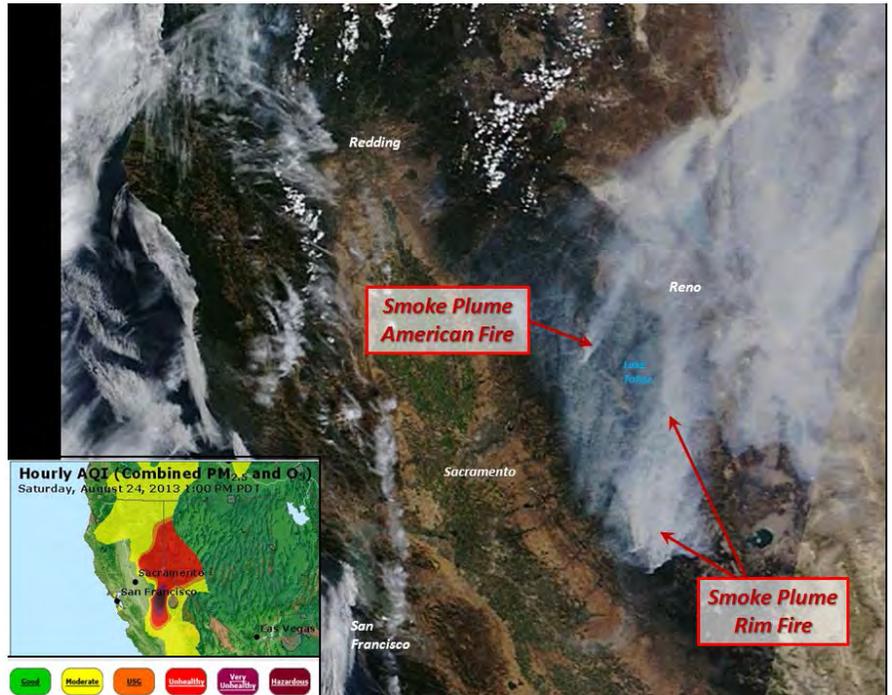
Attachment B

The Rim Fire: Why investing in forest health equals investing the health of California

What happens in the Sierra doesn't stay in the Sierra

On August 17, 2013 the Rim Fire began burning in the steep, rugged canyons of the Stanislaus National Forest, headed for Yosemite National Park. As devastating as the event was to the local landscape and communities, the impacts of the Rim Fire were widespread:

- On August 23rd, Governor Brown declared a **state of emergency for the City of San Francisco** due to the threat that the fire posed to water and power resources at Hetch Hetchy - the reservoir that serves 2.6 million people in the Bay Area.
- **Air quality warnings** were issued for Lake Tahoe, Carson City, and Reno, **more than 100 miles away**. Some hotels in South Lake Tahoe experienced as much as a 20% drop in business as a result of the smoke.



The smoke plume from the Rim Fire stretched across the Sierra and in to Nevada, creating unhealthy air as far away as Reno and Carson City.

Fire's impacts will be long-term

Decades of fire suppression, a changing climate, and a shortage of forest restoration efforts have led to the current unhealthy condition of many of our Sierra forests, resulting in an increase in the frequency of larger, more damaging fires. These fires, like the Rim Fire, take longer to heal and can result in long-term impacts on water quality and supply.

- The Rim Fire burned so hot in some areas -- **five times hotter than boiling water** -- that it changed soil chemistry and structure. These "high burn" areas are **more erosion-prone**.
- Nearly 100,000 acres, about **40% of the area**, burned at **high intensity**. Ecologists say that it could take **30 to 50 years** for the forest to reestablish itself in these areas.
- Denver Water is still spending **millions of dollars** to stem erosion **12 years after** the Hayman Fire burned across 215 square miles in the foothills south of Denver. The Rim Fire has consumed nearly 2 times that area at 402 square miles.

*Initial estimates indicate that the Rim Fire released **11,352,608 metric tons of greenhouse gas emissions**. Based on the U.S. EPA's web site, those emissions are roughly equivalent to:*

- Annual **greenhouse gas emissions** from **2.3 million cars**
- **Carbon dioxide emissions** from **1.2 billion gallons of gas** consumed
- **Carbon dioxide emissions** from the electricity use of **1.5 million homes** for 1 year
- Annual **carbon dioxide emissions** of **3.2 coal fired power plants**

The Rim Fire illustrates both the need to address existing forest conditions in the Sierra and the direct relationship between the Sierra Nevada and the rest of California. More than **60% of California's water** originates in the Sierra Nevada, and Sierra forests store enough carbon to offset the annual carbon dioxide emissions of 108 coal fired power plants. Investing in forest health and reducing the risk of large damaging fires, like the Rim Fire, is essential to ensuring that these Sierra benefits continue to exist in the future.



Photo Credit: USFS Mike McMillian

Rim Fire: Largest fire in recorded history of the Sierra Nevada

The Rim Fire doubled in size during the early stages. In less than 3 weeks it grew to be the largest wildfire in the Sierra Nevada and the 3rd largest in California history.

- To date the Rim Fire has burned, 257,314 acres, about 402 square miles or an area equal to eight times the size of San Francisco.
- Suppression cost to date: \$127.2 million
- Cost of emergency road, trail, and watershed stabilization efforts to date: \$8.5 million
- An estimated \$900,000 was spent to purchase alternative energy when 2 of San Francisco Public Utility Commission's (SFPUC) 3 hydroelectric powerhouses were taken offline as a result of the fire. The exact cost to repair the damage to these powerhouses is still unknown, but SFPUC estimates it to be in the millions.
- Habitat for many species, including listed or proposed for listing species such as the California spotted owl, great gray owl, and Pacific fisher was drastically altered.
- Losses to the ranching community, such as destroyed grazing land, killed livestock, and damaged infrastructure, are estimated to be in the millions.
- Tuolumne County budget projections show about \$275,000 less in estimated income from the tourism-driven occupancy tax on hotels, campgrounds, and other lodging.

Investing in forest health, clean energy

During the past five years, over 4.5 million acres of California forests have been impacted by wildfire. Many predict that the size and severity of these fires, like the Rim Fire, will continue to increase unless investment is made in proactive forest restoration treatments. This sustainable forest management includes removing excess biomass, or small diameter trees, branches, and diseased wood, that act as fuel for a fire. Biomass represents a huge untapped resource for the generation of heat and power and its removal can improve forest health and reduce the risk of catastrophic wildfire. In fact, burning biomass in a controlled facility to generate power, as opposed to an open fire, can reduce carbon dioxide emissions and create jobs for rural economies.

The Sierra Nevada Conservancy is a state agency that carries out a mission of protecting the environment and economy in a complementary fashion across 25 million acres, one-quarter of the state. To learn more, please visit the Sierra Nevada Conservancy Web site.

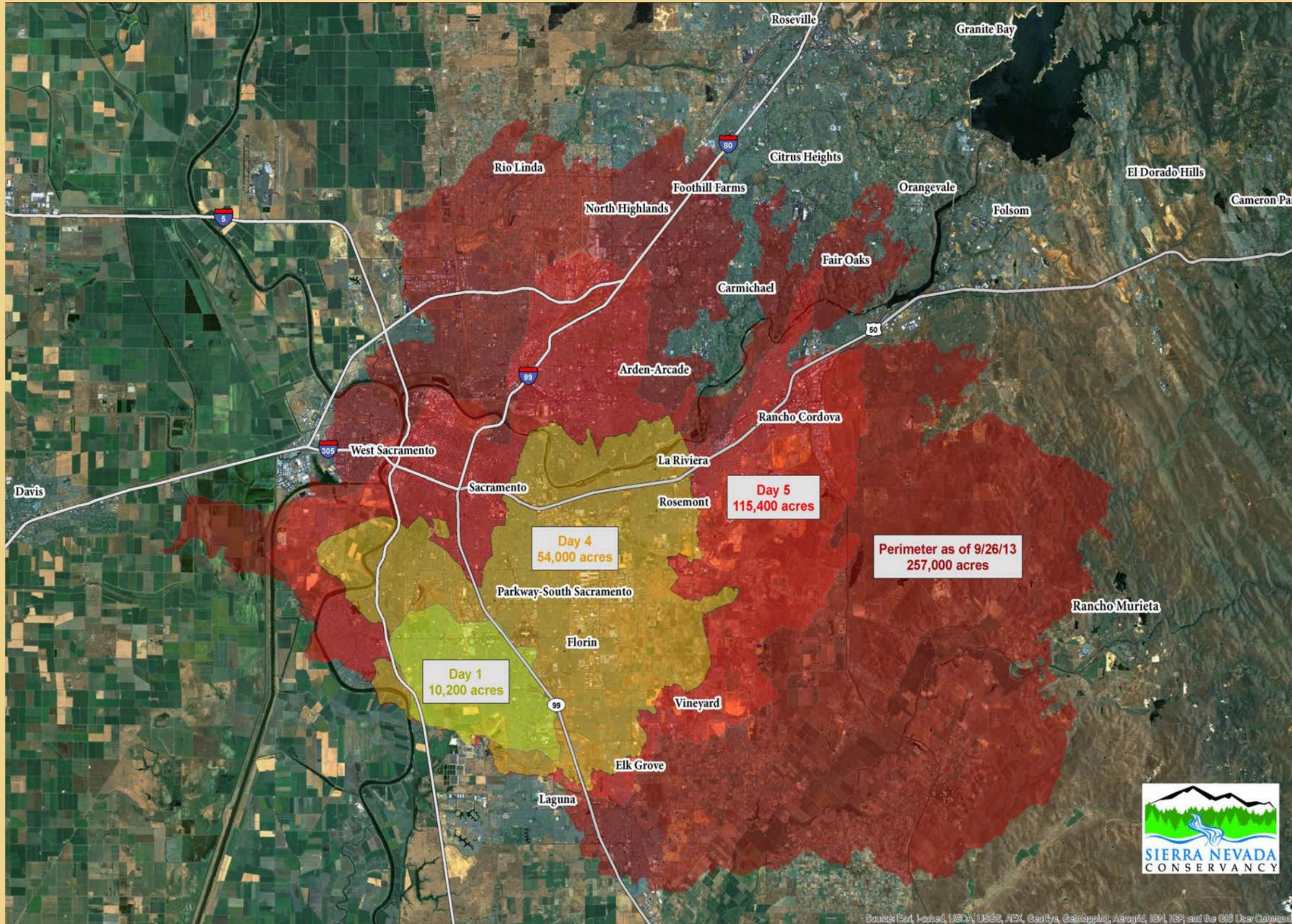


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S I E R R A N E V A D A . C A . G O V



RIM FIRE: Largest fire in recorded history of the Sierra Nevada



If the Rim Fire were to have burned in Sacramento...

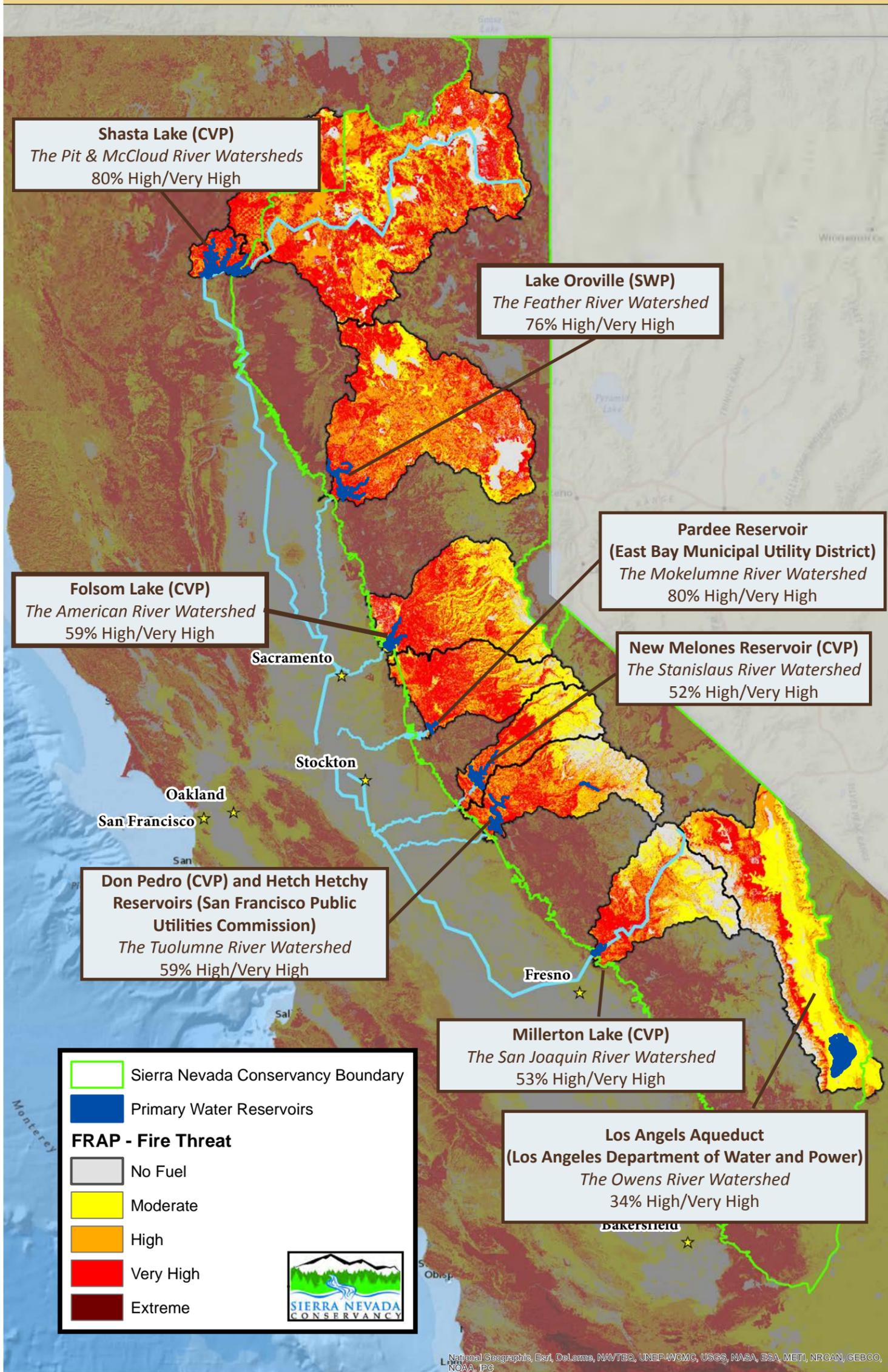
Due to a combination of forest conditions and weather, the Rim Fire jumped from just over 10,000 acres on the first day, to 36,000 acres by day three, and then more than 115,000 acres on day five. At this rate of spread, the fire would have consumed the Florin and South Sacramento in less than 4 days, and by day five Downtown, Elk Grove, Arden-Arcade, Rancho Cordova, and parts of West Sacramento would have been engulfed in flames.

The Rim fire illustrates the need to address existing forest conditions in the Sierra and many predict that the size and severity of fires in the Sierra Nevada will continue to increase unless investment is made to restore our forests to a more sustainable condition.



Source: Esri, Imagery: USDA, USGS, AEX, GeoEye, Geomapping, AeroGRID, IGN, IGP, and the GIS User Community

Fire Threat and California's Water System



The Sierra-Delta Connection

The Sierra Nevada Region is the source of up to half of the flows into the Sacramento-San Joaquin Delta, providing water critical to the long term ecological health and stability of California's water "hub."

California State Water Project (SWP)

The Sierra Nevada Region is the primary source of water for the California State Water Project (SWP) – the system that delivers water to two-thirds of California's population and stores and distributes water to 29 urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California. Approximately 25 million Californians receive water from the SWP and about 750,000-acres of farmland receive irrigation water from the SWP.

Federal Central Valley Project (CVP)

The Sierra Nevada Region is a major contributor to the federal Central Valley Project (CVP) – the system that delivers water to farms, homes, and businesses in California's Central Valley and major urban centers in the San Francisco Bay Area. Annually, the CVP provides irrigation water for about one-third of the agricultural land in California and drinking water for close to one million households. In addition to delivering water for consumption, the CVP produces electric power and provides flood protection, navigation, recreation, and water quality benefits.

More than 60% of CA's water originates in the forests of the Sierra Nevada

Each of the watersheds highlighted above are major contributors to the state's water system via the California State Water Project (SWP) and/or the Federal Central Valley Project (CVP). The call-out boxes highlight the percentage of acres in a particular watershed that have conditions placing them in the high or very high fire threat category. Fire Threat is the likelihood of a fire to start combined with the potential damage a fire might have on the landscape based on the history of fire occurring in a particular area and current conditions (terrain, vegetation type, weather, etc.). Investing in forest health and reducing fire threat in Sierra Nevada watersheds is essential to ensuring that California's water system remains healthy.

Background

The Sierra Nevada Conservancy's (SNC) Abandoned Mine Lands (AML) Initiative was officially instated through the adoption of the 2013-14 Action Plan and accompanying amendment to the Strategic Plan at the June 2013 Board meeting. Although AML issues were not a focus area prior to the June Board action, the SNC had been engaged in remediation efforts by awarding three grants for projects addressing legacy mercury impacts under the Proposition 84 Grant Program and participating in collaborative working groups.

The 2013-14 Action Plan identified three primary goals to focus on as the SNC further defines the potential actions under the AML Initiative: 1) funding projects that meet SNC criteria for AML remediation in the 2013-14 grant cycle; 2) identifying and carrying out appropriate roles for the SNC in the development of programs, policies, and efforts that will address AML issues in the Region; and 3) securing long-term funding and resources for the SNC and the Region to address AML issues. Six bulleted actions were provided as a means to obtain the goals.

Current Status

Many activities in accordance with the bulleted actions identified have been pursued to enhance the SNC's undertakings in support of the AML Initiative's goals over the last six months. As our activities have intensified and our conversations have expanded, it has become more apparent that finding remedies for the ongoing impacts necessarily includes raising awareness and educating the public and legislators. To this end, our activities have also included efforts that have that dual purpose in mind.

The 2013-14 Proposition 84 Grant Program includes AML, and legacy contamination issues in particular, as one of two focus areas. SNC Staff are working with our partners to develop AML project proposals. Two proposals have been invited to submit full applications for evaluation. The two proposals, Providence Mine Remediation Project located in Nevada City and Oro de Amador Remedial Action Workplan located in Jackson, directly address the abatement of arsenic contamination within the Deer Creek and Jackson Creek watersheds, respectively.

Two out of the three previously funded AML projects are still active. The Nevada Irrigation District's project, Environmental Review Assessing the Impacts of Removing Mercury Laden Sediment from Combie Reservoir, was awarded funding in October from the Department of Water Resources Integrated Regional Water Management (IRWM) program to complete the on-the-ground work, which underwent California Environmental Quality Act (CEQA) review with SNC dollars. Another SNC funded project, the Humbug Creek Watershed Assessment and Management Plan, has been completed and recommendations have been provided to California State Parks for the remediation of AML features impacting Malakoff State Park and tributaries to the Yuba River. State Parks is now in a position to choose a preferred alternative for remediation, after which, the data and research being developed under the Humbug Creek project

will be compiled in preparation for the completion of appropriate environmental documentation in compliance with CEQA.

SNC Staff is working with the Natural Resources Agency, other State agencies and partners to develop a due diligence process for identifying AML related problems on lands that may be acquired using State funds. We are working towards a uniform procedure for departments under the Natural Resources Agency with granting authority to use when evaluating project proposals that include the acquisition of land that may have been impacted by legacy mining.

A legislative tour was conducted on June 20, 2013 focusing largely on AML issues. Assembly members Brian Dahle and Rich Gordon hosted the tour, with support from the SNC and The Sierra Fund, which was attended by other legislators as well as other legislative staff. The tour was publicized and covered by local and regional news outlets. Currently, SNC Staff is working with The Sierra Fund and the Senate Natural Resources Committee to schedule a special legislative hearing in January where speakers will present the problems associated with AML and residual mercury contamination, State agency programs that deal with AML issues, and potential solutions, including the need for investment in the Sierra Nevada to address these issues at the source.

SNC Staff is also participating in the government agency AML working group, California Abandoned Mine Lands Agency Group (CAMLAG). CAMLAG is in the process of developing a new Charter which will define the purpose, practices, and roles and responsibilities of the group. This effort provides a real opportunity to facilitate a process to align and collaborate interdepartmental and Agency efforts to improve AML impact oversight, management, and solutions.

Next Steps

Staff will continue to explore, support and help develop AML project proposals eligible for funding under the SNC 2013-14 Proposition 84 Grant program and work with The Sierra Fund and other partners to continue to educate decision-makers on the impacts of AML and the need for investment in the Sierra. Staff will also continue to work with all partners to identify funding mechanisms for AML remediation work.

Recommendation

This is an informational item only; no formal action is needed by the Board at this time, although Board members are encouraged to share their thoughts and comments.

Background

The Sierra Nevada Conservancy (SNC) and the Sacramento San Joaquin Delta Conservancy (DC) have recently had discussions regarding the potential benefits of working collaboratively to build greater understanding of (1) the interconnections between the two regions and (2) the resulting need for integrated approaches to addressing water and climate issues from the Sierra to the Sea.

Current Status

The SNC and the DC are exploring the potential for a joint meeting of their Boards in March. Options under discussion include using the SNC's March, 2014 Board tour day to convene a joint workshop that would:

- Build understanding among Boardmembers, staff, and legislators regarding the issues facing the two regions and their linkages;
- Increase awareness of the need to invest in integrated approaches that account for the interconnections from the Sierra to the Sea; and
- Increase awareness of the rolls the Conservancies play in achieving conservation outcomes across our linked ecosystems.

Staff is also exploring the potential of presenting a resolution to both Boards for joint adoption, which would acknowledge the interconnections between the two regions and express mutual support for integrated approaches on some issues.

Next Steps

SNC staff will continue to work with DC staff to organize and finalize workshop details and will also continue to explore other opportunities for the two Conservancies to work together—and with other conservancies—to build understanding of issues from the Sierra to the Sea.

Recommendation

This is an informational item only; no formal action is needed by the Board at this time, although Boardmembers are encouraged to share their thoughts and comments. Staff further recommends that a two member committee of the Board be assigned to work with staff in developing the agenda for the joint activities.

Background

Many of the Sierra Nevada watersheds are with forests that are designated as high to very high risk of high-severity fire. Despite ongoing efforts to implement forest restoration treatments to reduce fuels, there needs to be a substantial increase in the number of acres of forest treatment occurring annually in order to significantly reduce fire threat and improve forest health. Lack of funding, complex processes and a shortage of biomass utilization infrastructure have resulted in an inability to treat the number of acres of forest per year necessary to restore forest health, impact the fire return interval and reduce the severity of fire.

To increase the pace and scale of restoration work, the Sierra Nevada Conservancy (SNC) has been working with a wide array of partners to address policy, process and funding issues. One key objective is to identify new investors that will also benefit from healthier watersheds. Some areas outside of California have been successful in establishing “Forest to Faucet” programs that create investment to improve forest health in watersheds that are critical to providing water to downstream users. Generally, these programs are established after a catastrophic fire occurs and the Region is faced with unanticipated post-fire costs. The SNC has joined in a partnership with multiple stakeholders to evaluate investment opportunities in the Mokelumne Watershed. This watershed was selected since its one of the few Sierra watersheds where the majority of the downstream water users can be easily identified. On an average year, about 40% of the river water is diverted by the East Bay Municipal Utility District for human use. Another reason is that this project builds off SNC’s work supporting the Amador Calaveras Consensus Group (ACCG), which has established a common understanding of both the watershed problems and the need for new investment to restore watershed health and local economic wellbeing.

There are three components to the work occurring in the Mokelumne Watershed and they share the following goals:

- 1) Reduce the risk of large damaging fire in the Mokelumne Watershed.
- 2) Restore the ecological function of the watershed.
- 3) Identify strategic investment for restoration of the Mokelumne Watershed.
- 4) Quantify the costs and benefits of increasing the number of acres treated by identifying costs avoided through watershed restoration efforts.
- 5) Identify specific areas in the watershed that are most important to restore for water quality and habitat.
- 6) Identify and evaluate other ecosystem services, that when restored, can improve the socioeconomic and environmental conditions of the area.

Below is a discussion of the three project components including the Environmental Benefits Program, Demand Analysis and Mokelumne Avoided Costs Analysis.

Environmental Benefits Program

The project includes partners from both the upper watershed and the valley portion of the watershed. This effort expands project involvement to include Sustainable Conservation, Environmental Defense Fund and diverse interests from both the valley and upper watershed. The Environmental Benefits Program is based on the premise that by measuring and tracking environmental outcomes from restoration and improved management practices, the program can substantially increase both the amount and effectiveness of watershed restoration activities. These metrics should help support work and investment throughout the watershed; however the initial measurement tool is being developed for the valley portion of the watershed. The riparian evaluation tool will be used to evaluate both project potential and progress. This tool will measure the improvements made to bird and salmon habitat, water temperature and quality, and downstream flood attenuation due to restoration work in the river riparian zone.

Demand Analysis/Water Forums

The Demand Analysis has brought together public and private sectors to develop and participate in a mutually beneficial partnership that rewards sustainable land management and watershed restoration in the Mokelumne River watershed and achieves tangible benefits to investors. The program has convened water forums with businesses that are large water users and/or for whom water quality is important to their end products. Some of these businesses include a large oil refinery, hotel chains, breweries, and beverage corporations. During these forums, land managers and conservation groups have discussed the linkage between the importance of restoring and protecting the natural resource base in the watershed, with a focus on water, and how this relates to ensuring long-term water source reliability and quality. In general, the business representatives were not aware of the impaired condition of the watershed and how this condition directly impacts water supply. Some have expressed interest in providing volunteer opportunities for their employees to help restore the watershed and further exploration into direct investment opportunities to protect the water source and to provide marketing opportunities for their businesses.

This program aims to demonstrate a more cost-effective and strategic way to achieve holistic stewardship of farms, ranches, and forests that produce services we all depend upon. Both public and private sector participants have expressed that this is the cost-effective and smarter alternative to investing in hard infrastructure or facing the huge costs of fire and other risks to these lands and waterways.

Avoided Cost Analysis

The focus of this report is the Avoided Cost Analysis since SNC has played the largest role in this project component by providing leadership, funding, and substantial staff time. The primary purpose of this project is to quantify the potential savings of investing in forest restoration and catastrophic fire prevention practices compared to the costs of suppression, restoration, destroyed infrastructure, clean up, and maintenance work following a catastrophic wildfire.

The upper Mokelumne watershed is managed by a number of land management entities including, but not limited to, the US Forest Service, Bureau of Land Management, industrial and non-industrial forest landowners, and water and power utilities. Like many forested watersheds, this watershed delivers a significant amount of benefits to downstream users, but its health and resilience have become degraded by decades of aggressive fire suppression and a lack of adequate forest treatment. Because of this, resource managers project that the chances of catastrophic fire in the watershed are high, and, in its current condition, when a fire does occur there will be significant adverse consequences to the watershed and the quality of services it provides.

The first phase of the project analyzes how upper watershed restoration treatments, primarily fuel hazard reduction and forest health management, benefits downstream beneficiaries and reduces operational costs of energy and water delivery agencies. The project also analyzes how these treatments can benefit socioeconomic and environmental conditions to watershed habitants and local resources. The backbone for these analyses is a rigorous computer modeling effort that linked numerous models together in a series, which were then run under both a current conditions scenario and a future treatment scenario. Bark beetle mortality modeling informed the development of the fire model, the outputs from which were used in three different sediment models. Three different sediment models were necessary to capture the distinct, but additive, post-fire erosion mechanisms: regular surface erosion (sheet and rill), gully formation, and debris slides.

Current Status

The project scope and work approach was developed by the SNC, U.S. Forest Service and The Nature Conservancy. Very early into the process the following key project partners were included: Bureau of Land Management, East Bay Municipal Utility District (EBMUD), Pacific Gas and Electric (PG&E), Department of Forestry and Fire Protection, Department of Water Resources, a local tribe, local conservation groups, and other local stakeholders. Both an Advisory Committee and Technical Committee have been formed with members from all participating organizations. The technical expertise and the complexity of this project required the hiring of four consultants: Fire Model Consultant, two Sediment Modelers, and Project Managing Consultant. This effort is being coordinated with the watershed-wide Environmental Benefits Program, as described above. The project cash budget for the first two years totals \$242,000 and includes \$137,000 from the Sierra Nevada Conservancy, \$100,000 from the Forest Service, and \$35,000 from The Nature Conservancy. It also includes an in-kind match of over \$1 million consisting primarily of the project management team and the Advisory and Technical Committee's time and technical resources.

To date, the modeling efforts are complete and the results indicate a significant fire and post-fire sedimentation risk. Under today's conditions, the models verify what is widely known: the water from this watershed is of high quality. However, the introduction of

large damaging fire can increase the sedimentation rates from burned hillsides by sometimes over 100 times, and flame lengths in certain areas are predicted to reach over 60 feet in height. A review of the treatment scenario modeled for the Analysis demonstrates that the treatments greatly reduce the impact of the fire on the landscape. The modeled treatment scenario included approximately 100,000 acres of treatments, which tests the effectiveness of treatments across the range of habitat and human use found within the fire-prone areas of the watershed. This inclusive treatment scenario was chosen to help the team determine where the greatest cost/benefit areas are located, so that future planning efforts can build upon and refine this work.

At the time this report was prepared, the Project Management Consultant team was performing a detailed review of the results and assigned cost and damage values to the model scenarios, which is the basis of the avoided cost calculations. Based upon the fire model results, the local fire history, and forecasted fire trends for the Sierra Nevada, the consultants have teased five (5) probable fire ignitions and burn perimeters out of the fire modeling data. Based on the perimeters, comparisons can be drawn on the extent and intensity of the fire under treated and untreated conditions. Based on those differences, damage to assets (e.g. power lines and parcels), suppression costs, and sediment erosion rates, among others, can be quantified and compared between treated and untreated. The Committees are actively reviewing each of the eight chapters developed for the final report, as well as ground-truthing the quantified values produced by the consultants.

Next Steps

The Project Management Consultant will work with the Advisory and Technical Committees to finalize and approve the Final Report, which will include an Executive Summary. Future actions will be based upon the findings in the Final Report and the identification of the organizations that would most benefit from the reduction of fire threat within the watershed. Outreach to organizations in the East Bay, as well as the development of the entire Environmental Benefits Program will continue. The avoided cost analysis report is scheduled to be completed in mid-December.

Recommendation

This is an informational item only; no formal action is needed by the Board at this time, although Boardmembers are encouraged to share their thoughts and comments.

Background

The Sierra Nevada Conservancy (SNC) has met quarterly throughout the Region since June 2006, meeting in all 22 counties. At the December 2012 meeting the Board approved the March meeting as a Sacramento meeting on an ongoing basis. With this change, three quarterly Board meetings are held in the Region, rotating between subregions.

Current Status

SNC Staff is working on the March Board meeting, which will include a policy day (Wednesday) in coordination with the Delta Conservancy. More information will be shared as details are finalized.

Next Steps

The following schedule is proposed for 2014:

- March 5 & 6, Sacramento
- June 4 & 5, North Subregion, Shasta County
- September 3 & 4, East Subregion, Mono County
- December 3 & 4, Central Subregion, Nevada County

Recommendation

Staff recommends that the Board approve the proposed schedule for 2014.

Background

In June 2013, the Sierra Nevada Conservancy (SNC) Governing Board (Board) approved Grant Guidelines for the 2013-14 Grant Round. This grant round will be SNC's final awards using funding from Proposition 84, The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. Staff released public notification of the SNC 2013-14 Grant Round on June 27, 2013. Since that time, staff continues working with potential applicants to determine the eligibility and readiness of their projects. At this point only one project requesting \$250,000 has made it through final scoring and is discussed in detail below. A number of other proposals are in process, and it is anticipated that a number of them will be ready for consideration at the March 2014 Board meeting. Estimated funding available for this grant round is approximately \$2.9 million¹.

As a reminder, this round has no final application due date. Applicants may contact SNC Staff at any time while funding remains and projects will be presented for Board approval dependent on project readiness, eligibility, and completion of required grant application elements. Staff expects that all funds will likely be awarded by the June 2014 Board meeting.

Current Status

Staff have completed review of SNC Project 783, and have found that it exceeds the threshold scoring level of 85, and recommends it for Board approval. The project is summarized below.

Raintree Forest Health Project – Score 92 of 100

Grantee Organization: El Dorado County Resource Conservation District

Funding Request to the SNC: \$250,000

Full Project Cost: \$1,392,288

Other Funders: USDA – Eldorado National Forest; El Dorado Union High School District; sale of biomass

Link to Full Project Description: [Project 783](#) (Note: This is a large PDF file and may take a significant amount of time to download. If you have difficulty seeing this information electronically, contact the SNC and we will make alternative arrangements for you to view the material.)

Project Summary: The Raintree Forest Health Project is located in the Central Sierra Subregion on the Eldorado National Forest in the Placerville Ranger District. The project area covers approximately 9,144-acres of National Forest Land (a portion of which will be covered by SNC funds). This project lies south of Highway 50 and the Mormon Emigrant Trail Road, including the general area between Capps Crossing and Leek Springs Lookout in El Dorado County, California.

¹ In addition, project 165 to the City of Chico, Bidwell Park for the Iron Canyon Fish Passage Project for \$1,000,000 is expected to close incomplete, without funding. Those funds will be released for other use. The staff proposal for expenditures of these funds will be discussed separately during this meeting.

The project will improve forest health and the restoration of watershed function in the Raintree area. It will decrease the threat of wild fire and reduce fuel loading while enhancing the existing old growth conifers, aspens and oaks. Hazardous fuels will be treated through a combination of grapple and machine piling, mastication of brush and small trees. Prescribed understory burning will enhance Strategically Placed Area Fuels Treatments (SPLATS) designed to slow the spread of wildfire. The commercial and pre-commercial understory thinning of mixed conifer stands and plantations will reduce tree density and fulfill the role the U.S. Forest Service has in providing a wood supply to local manufacturers. Revenue derived from commercial products will be used to perform essential and costly biomass removal and surface fuel treatments. In addition, the project will enhance recreational opportunities by providing a maintainable level of forest access, including the reconstruction and repair of system roads, while also closing unneeded roads and motorized trails. The reduction in the road network will improve long-term scenic sustainability while simultaneously enhancing wildlife habitat and riparian conservation areas. The project also includes the removal of hazard trees adjacent to system roads and dispersed camping areas. Finally, the project will enhance soil productivity within plantations by increasing soil cover.

The Raintree Restoration Project employed a robust community outreach and collaborative approach to building the proposed action, which is consistent with the SNC's Sierra Nevada Forest and Community Initiative (SNFCI). Collaboration resulted in the formulation of new ideas and capturing the issues, concerns and opportunities provided during the collaborative process. Collaborators included the Sierra Forest Legacy, El Dorado Fire Safe Council, California Forestry Association, Resource Conservation Districts, Trout Unlimited (El Dorado Chapter), El Dorado County Board of Supervisors and the Pacific Southwest Research Station. Project principles employ a Best Science approach to ecological restoration. The recommendations and guidance described in the recent General Technical Reports 220/237, "An Ecosystem Management Strategy for Sierran Mixed Conifer Forests" are being applied to this project.

Organizations in Support:

- Duane Nelson, Eldorado National Forest, U.S. Forest Service, USDA
- Steven Brink, California Forestry Association
- Stan Iverson, Oak Ridge High School
- Malcolm North, Pacific Southwest Research Station, U.S. Forest Service, USDA
- David C. Harcus, Sierra Pacific Industries
- Richard Krek, El Dorado County Fire Safe Council
- Diane Dealey Neill, California Forestry Challenge
- Craig Thomas, Sierra Forest Legacy

Recommendation

Staff recommends the Board adopt (a) the necessary California Environmental Quality Act findings; (b) authorize the Executive Officer to file a Notice of Determination for SNC Project 783, Raintree Forest Health Project; (c) authorize staff to enter into the necessary agreements for this project; and (d) direct staff to file the appropriate California Environmental Quality Act documentation with the State Clearinghouse.

**STATE OF CALIFORNIA
SIERRA NEVADA CONSERVANCY**

**Sierra Nevada Conservancy Grant Program
Safe Drinking Water, Water Quality and Supply, Flood Control,
River and Coastal Protection Bond Act of 2006 (Proposition 84)**

Applicant: El Dorado County Resource Conservation District
(EDC RCD)

Project Title: Raintree Forest Health Project

Subregion: Central

County: El Dorado

SNC Funding: \$ 250,000.00

Total Project Cost: \$1,382,288.00

Application Number: 783

Final Score: 92

PROJECT SCOPE

The 9,144-acre Raintree Forest Health Project is located on the Placerville Ranger District on the Eldorado National Forest (ENF) located south of Highway 50 in El Dorado County, California.

The Raintree Healthy Forest Project is a cooperative effort between the EDC RCD, ENF/U.S. Forest Service professionals and the community to implement restorative and preventative treatments and management actions to improve forest health and re-establish sustainable landscapes in the Raintree Project area in the Eldorado National Forest. The North Fork of the Cosumnes River and more than 15 tributary streams run through the middle of the project area.

Project goals specific to the SNC Forest Health program area include: (1) reduced tree density; (2) sustained old growth forest conditions; (3) enhanced wildlife habitat; (4) reduced wildfire risk; (5) improved long-term scenic sustainability; (6) increased recreational opportunities; (7) enhanced riparian conservation areas; and (8) utilization of revenue derived from commercial products to perform essential and costly biomass removal and surface fuel treatments.

The project activities include;

- commercial and pre-commercial understory thinning of mixed conifer stands and plantations;
- enhancing aspen and hardwood habitat;
- removing hazard trees adjacent to system roads and dispersed camping areas;

- reconstructing and repairing system roads to reduce erosion and sedimentation to the North Fork of the Cosumnes River and its tributaries;
- masticating brush and small trees to prepare for prescribed understory burning; and,
- placing large woody debris for increased aquatic habitat.

Project costs are leveraged by funding or in-kind contributions from the Eldorado National Forest, the El Dorado Union High School District for long term monitoring and biomass product value.

PROJECT SCHEDULE

DETAILED PROJECT DELIVERABLES	TIMELINE
Forest Treatments White Fir Treatment/Biomass Removal: Create gaps with legacy leave trees to decrease infection of <i>H. annosum</i> "S" type (root rot). Prescribed Understory Burning Hand Pile Burning Planting (trees, planting, grubbing) Deliverables: pre and post photo points, mapping	June 2014-February 2017
Forest Treatments Quaking Aspen, Montane Hardwood, and Blister Rust Treatment: enhance, maintain and expand existing quaking aspen aggregations and Montane hardwood ecosystems by removing competing conifers. Plant white pine blister rust resistant Sugar Pine and Jeffrey Pine. Deliverables: pre and post photo points, mapping	June 2014-February 2017
Road Decommissioning Decommission approximately 1.0 miles of system road by scarifying roadbed, removing culverts, re-contouring roadbed, and hiding with large woody debris. Deliverables: pre and post photo points, mapping	June 2014-February 2017
Rehabilitate Dispersed Recreation: Restore illegal camping sites and areas impacted by motor vehicle use by installing barrier rocks to limit access Deliverables: pre and post photo points, mapping	June 2014-February 2017
Large Woody Debris Place root wads and trees in stream channels to improve fish habitat. Deliverables: pre and post photo points, mapping	June 2014-February 2017
Noxious Weed Eradication Deliverables: pre and post photo points, mapping	June 2014-February 2017
Monitoring Watershed Education Summit (WES). Six High Schools participate each year to collect watershed data to evaluate	June 2014-February 2017

restoration objectives and overall watershed health. Deliverables: pre monitoring data and photo points, mapping, yearly data and photo points, summaries and written evaluations.	
Six Month Progress Reports	December 2014, June 2015, December 2015, June 2016, December 2016,
Final Report	February 2017
FINAL PAYMENT/FINAL PAYMENT REQUEST	March 1, 2017

PROJECT COSTS

PROJECT BUDGET CATEGORIES	TOTAL SNC FUNDING
Direct*	
Project Management: Staff	\$37,000.00
Forest Treatments- White Fir Treatment/Biomass Removal; Prescribed Understory Burning; Hand Pile BurningPlanting	\$85,500.00
Forest Treatments- Quaking Aspen, Montane Hardwood, and Blister Rust Treatment	\$13,000.00
Road Decommissioning	\$19,000.00
Rehabilitate Dispersed Recreation/Restoration	\$28,500.00
Large Woody Debris Habitat placement	\$18,000.00
Noxious Weed Eradication	\$9,000.00
Indirect**	
Monitoring	\$20,000.00
Project materials,supplies, equipment	\$16,000.00
Publications, printing, public relations/outreach	\$4,000.00
Administrative***	
Operating Costs	\$0
Total	\$250,000.00

* Direct: Direct costs are expenses necessary to acquire, construct, or to adapt property to a new or different use, or to improve property including land, buildings and equipment. The property/expense must have a useful life longer than one year.

** Indirect: Expenses involve ongoing operations, repair or maintenance costs, regardless of whether the repair or maintenance may last more than one year.

*** Administrative: Expenses associated with the administration of a project and may not exceed 15 percent of the total SNC grant request for direct and indirect costs.

PROJECT LETTERS - SUPPORT

- Support
 - Eldorado National Forest, Laurence Crabtree, Forest Supervisor
 - Eldorado National Forest, Duane Nelson, District Ranger
 - California Forestry Association, Steven Brink, Vice President-Public Resources
 - Oak Ridge High School, Stan Iverson
 - US Department of Agriculture, Malcom North, Research Ecologist
 - Sierra Pacific Industries, David Marcus
 - El Dorado County Fire Safe Council: Richard Krek, Chairperson
 - California Forestry Challenge, Diane Dealey Neill, El Dorado
 - Sierra Forest Legacy, Craig Thomas, El Dorado

PROJECT PERFORMANCE MEASURES

There are four Performance Measures common to all grants. In addition, grantees are required to include between one and three project-specific measures. Performance Measures listed here represent those proposed by applicants and may be modified through further discussion with SNC Staff.

- Number and Type of Jobs Created
- Number of New, Improved or Preserved Economic Activities
- Tons of Carbon Sequestered or S Emissions Avoided

NOTICE OF DETERMINATION

To: Office of Planning and Research
State Clearinghouse
P.O. Box 3044, 1400 Tenth Street, Room 212
Sacramento, CA 95812-3044

From: Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

Subject: **FILING OF NOTICE OF DETERMINATION IN COMPLIANCE WITH SECTION 21108 OR 21152 OF THE PUBLIC RESOURCES CODE**

Project Title: Raintree Forest Health Project (SNC 783)

State Clearinghouse No.: SCH# 2012012021

Project Location: The proposed project is located in the Placerville Ranger District on the Eldorado National Forest, south of Highway 50 and Mormon Emigrant Trail Road, bounded generally by Capps Crossing and Leek Springs Lookout, at North South Road and Meiss Road, approximately 13.5 miles southeast of Pollock Pines, El Dorado County, California. Township (T) 9 North (N), Range (R) 14 East (E), Sections 1, 2, 3, and 10-15; T9N R15E Sections 3-10, 16-21; T10N R14E Sections 35 and 36; and T10N R15E Sections 31 and 32. Latitude / Longitude: 38° 38' 47.9" / 120° 23' 2.96".

County: El Dorado County

Project Description: The El Dorado County Resource Conservation District is requesting \$250,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program for restorative and preventative treatments and management actions to improve forest health and re-establish sustainable landscape in the Raintree Project area in the Eldorado National Forest. This project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The project includes commercial and pre-commercial understory thinning of mixed conifer stands and plantations, enhancing aspen and hardwood habitat, removing hazard trees adjacent to system roads and dispersed camping areas, reconstructing and repairing system roads, grapple and machine piling, masticating brush and small trees, restoring watershed function, prescribed understory burning, and providing large woody debris for increased aquatic habitat. The project would improve forest health, reduce fuel loading and thus threat of wildfire, maintain and enhance old growth forest, and maintain and enhance recreation opportunities.

As Lead Agency a Responsible Agency under the California Environmental Quality Act (CEQA), the Sierra Nevada Conservancy has approved the above described project on December 5, 2013, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. A Negative Declaration Mitigated Negative Declaration Environmental Impact Report (EIR) accompanied by an Initial Study (CEQA Guidelines Section 15177) was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were were not made a condition of project approval.
4. A mitigation reporting or monitoring plan was was not adopted for this project.
5. A Statement of Overriding Considerations was was not adopted for this project.
6. Findings were were not made pursuant to the provisions of CEQA.

This is to certify that the Mitigated Negative Declaration, with attached Initial Study, Mitigation Monitoring and Reporting Plan, adopted findings, and record of project approval are available to the General Public at the following location:

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

Jim Branham

Executive Officer

(530) 823-4670
Phone #

TO BE COMPLETED BY OPR ONLY

Date Received For Filing and Posting at OPR:

**RESPONSIBLE AGENCY
ENVIRONMENTAL DETERMINATION**

PROJECT INFORMATION

1. Project Title:
Raintree Forest Health Project (SNC 783)
2. Responsible Agency Name and Address:
Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603
3. Contact Person and Phone Number:
Matthew Daley, Program Coordinator (530) 823-4698
4. Project Location:
The proposed project is located in the Placerville Ranger District on the Eldorado National Forest, south of Highway 50 and Mormon Emigrant Trail Road, bounded generally by Capps Crossing and Leek Springs Lookout, at North South Road and Meiss Road, approximately 13.5 miles southeast of Pollock Pines, El Dorado County, California. Township (T) 9 North (N), Range (R) 14 East (E), Sections 1, 2, 3, and 10-15; T9N R15E Sections 3-10, 16-21; T10N R14E Sections 35 and 36; and T10N R15E Sections 31 and 32. Latitude / Longitude: 38° 38' 47.9" / 120° 23' 2.96".
5. Project Sponsor's Name and Address:
El Dorado County Resource Conservation District
100 Forni Road, Suite A
Placerville, CA 95667
6. General Plan Designation:
Natural Resource (NR)
7. Zoning:
Agricultural
8. Description of Project:
The El Dorado County Resource Conservation District is requesting \$250,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program for restorative and preventative treatments and management actions to improve forest health and re-establish sustainable landscape in the Raintree Project area in the Eldorado National Forest. This project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth.

The project includes commercial and pre-commercial understory thinning of mixed conifer stands and plantations, enhancing aspen and hardwood habitat, removing hazard trees adjacent to system roads and dispersed camping areas, reconstructing and repairing system roads, grapple and machine piling, masticating brush and small trees, restoring watershed function and prescribed understory burning. The project

would improve forest health, reduce fuel loading and thus threat of wildfire, maintain and enhance old growth forest, and maintain and enhance recreation opportunities.

Biomass material (non-sawtimber material such as limbs, tops, and pieces less than six inches and 10 feet long) removed from the treatment units and accumulated at landings would be disposed of by pile burning, commercial and personal firewood use, or chipped and removed to co-generation plants. 140 acres are proposed to be treated.

Prescribed burning activities include pile burning and understory burning on 80 acres. The prescribed understory burn area would account for excluded areas such as roads, cultural resource sites, rocky outcrops, areas void of vegetation and other sensitive areas. The prescribed understory burning would occur in all natural stands, plantations, and in areas not treated by other methods. Activities would include construction of fire lines by hand or tractor, and hand cutting ladder fuels (trees less than 8.9 inches in diameter at breast height [dbh]) around large old growth conifers, oak trees, and aspen aggregations. Fire line construction would follow established guidelines as outlined in the best management practices (BMPs). The visible fire lines would be hidden by spreading woody debris where they intersect existing roads and trails to limit unauthorized vehicle use. All burning activities would comply with El Dorado County Air Pollution Control District requirements.

Removal of competing conifers from the understory and within 30 feet of the perimeter of existing oak or aspen trees would occur to create openings to stimulate natural regeneration. This would enhance 18 acres dominated by California black oak and canyon live oak and 18 acres of existing quaking aspen aggregations (best described and riparian aspen). In areas of newly created gaps, planting of white pine, blister rust resistant sugar pine, and Jeffrey pine would occur in clusters or groups with varying spacing between groups outside driplines of legacy trees.

System roads within the project area would be decommissioned, system roads that are not decommissioned may be reconstructed and repaired. Reconstruction and repair activities would involve the replacement of inadequate drainage crossings, elimination of ruts, ditch repair, installation of waterbars and dips with inadequate water runoff control, gate installation to control seasonal use or replacement of existing non-functional gates or barricades, and removal of brush and small trees encroaching on roads. In addition, approximately 565 barrier rocks would be installed to limit access in the vicinity of Meiss Road and adjacent to North Fork Cosumnes River. Existing parking areas adjacent to Meiss Road would be restored by installing rock barriers and reshaping native surface parking areas.

Large woody debris would be placed in stream channels lacking in debris to provide habitat for aquatic species, enhance geomorphic and biological characteristics of streams as well as associated riparian habitat. Trees will be felled into deficient stream channels to promote the natural progression of geomorphic and biological characteristics by impounding sediment, stabilizing stream banks, and facilitating the development of pool/riffle habitat.

Known noxious weed occurrences on 36 acres within the project area would be treated by hand pulling. Post-treatment monitoring of sensitive plants, noxious weed, and special habitat within the project area would be conducted following project

implementation to ensure that the design criteria are effective.

9. Surrounding Land Uses and Setting:

The Eldorado National Forest surrounds the proposed project area and is used for dispersed recreation (including off-highway vehicles) and logging operations. The North Fork Cosumnes River flows through the project area.

10. Other public agencies whose approval is required:

Placerville Ranger District, Eldorado National Forest, United States Forest Service*
California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement)

California Regional Water Quality Control Board
El Dorado County Air Pollution Control District (burn approval)
El Dorado Resources Conservation District**

*Approved the Environmental Assessment/Finding of No Significant Impact (NEPA)

**Approved the Mitigated Negative Declaration (CEQA)

PROJECT BACKGROUND

The proposed project area lies within the Placerville Ranger District on the Eldorado National Forest, in the Raintree Forest area. It is situated south of Highway 50 and Mormon Emigrant Trail Road, generally between Capps Crossing and Leek Spring Lookout. The total project area covers approximately 9,144 acres. Elevations range from 5,000 feet at the North Fork Cosumnes River on the west edge of the project area to 6,500 feet on Baltic Ridge at the north edge of the project area. The area is accessed from Highway 50 by Sly Park Road to Mormon Emigrant Trail Road, then to North-South Road and Meiss Road.

The principal forest cover types found in the project area are Sierra Nevada Mixed Conifer and Ponderosa/Jeffrey pine. The major species mixed in this forest cover type are white fir, Douglas fir, ponderosa pine, Jeffrey pine, sugar pine, lodgepole pine, incense cedar, quaking aspen, and oaks. The understory is dominated by dense, shade tolerant white fir and incense cedar samplings and small trees. The average age of the natural stands within the project area is generally around 130 years, if the dense understory (which is between 30 and 80 years of age) is not considered. Scattered across the project area are many trees that exceed 300 years of age.

Historically, at the lowest elevations or higher up on the drier south and west aspects and ridges within the proposed project, fires were generally frequent, ranging from fire return intervals of 5 to 15 years, with individual sites sometimes burning two years in succession. With this type of fire frequency, the fire intensity and severity were most likely low because of lack of time to accumulate very much fuel between fires. Fire suppression, starting in the early 1900s has changed these historic fire intervals, resulting in a change in species composition, structure and density.

Current vegetation conditions in the Raintree project area differ markedly from the historic condition and most of the current stands exceed the historical range of variability in terms of ecosystem structure and process. Multiple decades of fire exclusion, grazing by domestic livestock, and logging have altered fire intensity of wildfires from their historical range. The dense forest conditions within the project area make the area prone to the risk of a stand-replacing catastrophic wildfire.

Unhealthy conditions are indicated by increased densities of trees, higher levels of insect-related tree mortality, and an accumulation of ground and ladder fuels within stands in the project area. Dense, closed canopied forests tend to favor shade tolerant white fir and incense-cedar, and to exclude shade intolerant ponderosa pine, oak, and sugar pine. The shade tolerant species generally are more susceptible to mortality from fire and form dense understory thickets, which act as fuel ladders to the larger overstory trees. Thus the structure of the current forested landscape represents an unstable, unsustainable departure from the historic landscape for this area.

The El Dorado County Resource Conservation District acted as Lead Agency under CEQA in January 2012 and prepared an Initial Study and adopted a Mitigated Negative Declaration. The USDA Forest Service Placerville Ranger District for Eldorado National Forest acted as Lead Agency under NEPA in March 2011 and prepared an Environmental Assessment and adopted a Finding of No Significant Impact (FONSI) in December 2011.

The restorative and preventative treatments and management actions of the proposed project would improve forest health and re-establish sustainable landscape in the Raintree Project area in the Eldorado National Forest.

PREVIOUS ENVIRONMENTAL DOCUMENTATION

Raintree Forest Health Project Initial Study/Mitigated Negative Declaration

El Dorado County Resource Conservation District, *Raintree Forest Health Project Initial Study/Mitigated Negative Declaration*. SCH 2012012021. January 2012.

Raintree Forest Health Project Environmental Assessment/Finding of No Significant Impact

USDA Forest Service, Eldorado National Forest, Placerville Ranger District, *Decision Notice and Finding of No Significant Impact: Raintree Forest Health Project Environmental Assessment*. December 2011.

Basic Features of the Project

The goal of the proposed project is to modify the forest vegetation in order to: (1) reduce tree density; (2) sustain old forest conditions; (3) enhance wildlife habitat; (4) reduce wildfire risk; (5) improve long-term scenic sustainability; (6) increase recreational opportunities; (7) enhance riparian conservation areas; and (8) maximize revenue derived from commercial products to perform essential and costly biomass removal and surface fuel treatments.

The Raintree Forest Health Project Initial Study/Mitigated Negative Declaration (IS/MND) describes potential environmental impacts for the proposed project including: (1) improve the forest health across the Raintree project area; (2) reduce the fuel loading to reduce the threat of wild fire; (3) maintain and enhance the existing old growth conifers, aspen, and oak components; (4) maintain and enhance recreation opportunities; (5) treat hazardous fuels in a cost-effective manner to maximize treatment acres under a limited budget while fulfilling the role the Forest Service has in providing a wood supply for local manufacturers; (6) provide a maintainable level of forest access while closing unneeded roads and motorized trails to enhance wildlife habitat and reduce wildlife harassment; (7) enhance and maintain Strategically Placed Area Fuels Treatments (SPLATS) designed to slow the spread of wildfire; (8) enhance soil productivity within plantations by increasing soil cover; and (9) improve watershed

conditions and related ecosystem services by maintaining and restoring geomorphic and biological characteristics of special aquatic features.

Biomass material (non-sawtimber material such as limbs, tops, and pieces less than six inches and 10 feet long) removed from the treatment units and accumulated at landings would be disposed of by pile burning, commercial and personal firewood use, or chipped and removed to co-generation plants. 140 acres are proposed to be treated.

Prescribed burning activities include pile burning and understory burning on 80 acres. The prescribed understory burn area would account for excluded areas such as roads, cultural resource sites, rocky outcrops, areas void of vegetation and other sensitive areas. The prescribed understory burning would occur in all natural stands, plantation and areas not treated. Activities would include construction of fire lines by hand or tractor, and hand cutting ladder fuels (trees less than 8.9 inches in diameter at breast height [dbh]) around large old growth conifers, oak trees, and aspen aggregations. Fire line construction would follow established guidelines for waterbar construction as outlined in the best management practices (BMPs). The visible fire lines would be hidden by spreading woody debris where they intersect existing roads and trails to limit unauthorized vehicle use.

Removal of competing conifers from the understory and within 30 feet of the perimeter of existing oak or aspen trees would occur to create openings to stimulate natural regeneration. This would enhance 18 acres dominated by California black oak and canyon live oak and 18 acres of existing quaking aspen aggregations (best described and riparian aspen). In areas of newly created gaps, planting of white pine, blister rust resistant sugar pine, and Jeffrey pine would occur in clusters or groups with varying spacing between groups outside driplines of legacy trees.

Approximately one mile of system roads within the project area would be decommissioned. Reconstruction and repair would occur on another one mile of system roads. Reconstruction and repair activities would involve the replacement of inadequate drainage crossings, elimination of ruts, ditch repair, installation of waterbars and dips with inadequate water runoff control, gate installation to control seasonal use or replacement of existing non-functional gates or barricades, and removal of brush and small trees encroaching on roads. In addition, approximately 565 barrier rocks would be installed to limit access in the vicinity of Meiss Road and adjacent to North Fork Cosumnes River. Road and four existing parking areas adjacent to Meiss Road would be restored by installing rock barriers and reshaping native surface parking areas.

Large woody debris would be placed in stream channels lacking in debris to provide habitat for aquatic species, enhance geomorphic and biological characteristics of streams as well as associated riparian habitat. Trees will be felled into deficient stream channels to promote the natural progression of geomorphic and biological characteristics by impounding sediment, stabilizing stream banks, and facilitating the development of pool/riffle habitat.

Known noxious weed occurrences on 36 acres within the project area would be treated by hand pulling. Post-treatment monitoring of sensitive plants, noxious weed, and special habitat within the project area would be conducted following project implementation to ensure that the design criteria are effective.

Permits that are anticipated for the proposed project include the U.S. Army Corps of Engineers (Nationwide Permit 27, Aquatic Habitat Restoration, Establishment and Enhancement Area),

California Regional Water Quality Control Board Central Valley Region (Clean Water Act Section 401 Permit), California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement), and El Dorado County Air Pollution Control District (burn permits).

Impacts Identified Relevant to the Sierra Nevada Conservancy Grant Request

The action before the Sierra Nevada Conservancy is providing \$250,000 from the Sierra Nevada Conservancy’s Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program to fund restorative and preventative treatments and management actions to improve forest health and re-establish sustainable landscape in the Raintree Project area in the Eldorado National Forest. The Raintree Forest Health Project IS/MND identifies potential resource impacts related to aesthetics, biological resources, cultural resources, and geology and soils. Specifically, the proposed project may result in temporary habitat disruption; temporary disturbance of special-status species; temporary disturbance of forest aesthetics; disturbance of streams; the potential to inadvertently disturb unknown cultural resources or human remains during ground-disturbing activities; and the potential for loss of top soil and soil erosion during the enhancement activities. However, the project includes detailed design criteria, best management practices and specific mitigation measures to avoid or reduce impacts to less than significant levels, and based on the IS/MND, the project would not cause any significant adverse effects on the environment. The project proponent would implement measures identified in the IS/MND and MMP, to avoid or substantially reduce potential impacts to aesthetics, biological and cultural resources, and geology and soils.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:		
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact.”		
<input checked="" type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input checked="" type="checkbox"/> Geology / Soils
<input type="checkbox"/> Hazards / Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality	<input type="checkbox"/> Land Use / Planning
<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation / Traffic
<input type="checkbox"/> Utilities / Service Systems	<input type="checkbox"/> Mandatory Findings of Significance	

DETERMINATION (To be completed by the Responsible Agency)

On the basis of this evaluation:

The Sierra Nevada Conservancy (SNC) Board determined that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by, or agreed to by, the project proponent as reflected in the U.S. Forest Service Decision Notice and FONSI and in the project approval by the El Dorado County Resource Conservation District. An **INITIAL STUDY/MITIGATED NEGATIVE DECLARATION** prepared by the El Dorado County Resource Conservation District and considered by the SNC adequately analyzed the action for which the Sierra Nevada Conservancy will provide grant funding, mitigation measures have been incorporated into the project, and the SNC Board has adopted findings pursuant to CEQA Guidelines Sections 15096(h) and 15091. The El Dorado County Resource Conservation District, as the lead agency, also adopted mitigation requirements and a Mitigation Monitoring and Reporting Program that identifies the timing of mitigation measures and which parties will be responsible for implementing them; the SNC is not responsible for implementing any of these measures and is not proposing any additional mitigation measures.

Signature

Date

Jim Branham

Executive Officer

Printed Name

Title

Sierra Nevada Conservancy

Responsible Agency

**CALIFORNIA ENVIRONMENTAL QUALITY ACT
RESPONSIBLE AGENCY
STATEMENT OF FINDINGS**

Project Title: Raintree Forest Health Project (SNC 783)

State Clearinghouse Number: SCH# 2012012021

Project Location: The proposed project is located in the Placerville Ranger District on the Eldorado National Forest, south of Highway 50 and Mormon Emigrant Trail Road, bounded generally by Capps Crossing and Leek Springs Lookout, at North South Road and Meiss Road, approximately 13.5 miles southeast of Pollock Pines, El Dorado County, California. Township (T) 9 North (N), Range (R) 14 East (E), Sections 1, 2, 3, and 10-15; T9N R15E Sections 3-10, 16-21; T10N R14E Sections 35 and 36; and T10N R15E Sections 31 and 32. Latitude / Longitude: 38° 38' 47.9" / 120° 23' 2.96".

Description of Project: The El Dorado County Resource Conservation District is requesting \$250,000 in funding from the Sierra Nevada Conservancy's Proposition 84 Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Grant Program for restorative and preventative treatments and management actions to improve forest health and re-establish sustainable landscape in the Raintree Project area in the Eldorado National Forest. This project would reduce fuel loads and fire hazards, improve wildlife habitat and watershed conditions, and encourage forest growth. The project includes commercial and pre-commercial understory thinning of mixed conifer stands and plantations, enhancing aspen and hardwood habitat, removing hazard trees adjacent to system roads and dispersed camping areas, reconstructing and repairing system roads, grapple and machine piling, masticating brush and small trees, restoring watershed function and prescribed understory burning. The project would improve forest health, reduce fuel loading and thus threat of wildfire, maintain and enhance old growth forest, and maintain and enhance recreation opportunities.

Findings: Pursuant to Public Resources Code Section 21002.1(d) and CEQA Guidelines Section 15096(g) and (h), the Sierra Nevada Conservancy (SNC), as a Responsible Agency, has reviewed and considered the following documents prepared by the Lead Agency (CEQA):

El Dorado County Resource Conservation District, *Raintree Forest Health Project Initial Study/Mitigated Negative Declaration*. SCH 2012012021. January 2012.

In addition, as a Responsible Agency, SNC has reviewed and considered the following NEPA documents prepared by the USDA Forest Service, Eldorado National Forest, Placerville Ranger District (NEPA Lead Agency):

USDA Forest Service, Eldorado National Forest, Placerville Ranger District, *Decision Notice and Finding of No Significant Impact: Raintree Forest Health Project Environmental Assessment*. December 2011.

Using its independent judgment, the SNC makes the following finding:

The above listed document: a) adequately addresses the potential impacts of the project, and b) is adequate for use by the Sierra Nevada Conservancy (SNC) for assessing the potential impacts of funding the grant request now before the SNC for approval.

The Sierra Nevada Conservancy hereby makes the following findings regarding the significant effects of the proposed project, pursuant to Public Resources Code 21081 and Section 15091 of the State CEQA Guidelines.

1. AESTHETICS

The proposed project is expected to improve forest health, reduce the threat of wildfire, maintain and enhance old growth conifers, aspens, and oaks, and enhance the aquatic features within the North Fork Cosumnes River. However, to accomplish this outcome, the proposed project includes the removal of trees, pile burning, and prescribed understory burning. The prescribed understory burning includes the creation of a fire line. The visible fire lines would be hidden by spreading woody debris where they intersect existing roads and trails to limit impacts to aesthetics as well as limit unauthorized vehicle use. The understory burning would be noticeable for a couple of seasons and small pockets of burned trees could be noticeable for up to ten years. A burn plan would be prepared and burn permits sought from the El Dorado County Air Pollution Control District.

The visual environment would have the potential to be impacted by these activities, as trees and understory would be removed and fire lines and stumps would remain in the project area. Aesthetic impacts would be mainly noticeable for areas of higher use, such as Meiss Road and North-South Road. Part of the proposed project, however, is to cover the fire lines as well as meet the visual quality objectives.

After project completion, the proposed project would have a net benefit to aesthetics. Thinning around rock outcrops, hardwoods, aspen groves, and large conifers would enhance the overall scenic quality in the corridor by increasing the visual variety that would be revealed by the proposed project activities. The overall appearance of the project site would be more intact and the North Fork Cosumnes Wild and Scenic River would be enhanced.

Impacts are considered potentially significant. The IS/MND for the Raintree Forest Health Project covers aesthetic impacts for the proposed project and provides mitigation measures. Those mitigation measures that apply specifically to the proposed project are listed below.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid significant effects on the environment.

Facts in Support of the Finding: The Sierra Nevada Conservancy concurs with the lead agency that the following mitigation measures will reduce the project's environmental effects to a less-than-significant level.

Mitigation Measures:

- MM-1** Trees that are to be removed within the visible foreground (approximately 100 feet from roadway edge) of Meiss and North-South system roads will have a maximum stump height of six inches. Large landing biomass piles within the foreground of Meiss and North-South Roads will be burned or removed within two years of project completion.

2. BIOLOGICAL RESOURCES

The proposed project is expected to improve forest health, reduce the threat of wildfire, maintain and enhance old growth conifers, aspens, and oaks, and enhance the aquatic features within stream channels. The proposed project may cause direct impacts to streams, plants, and habitat; the proposed project may cause indirect impacts to habitat, wildlife, and plants. No federally or state listed threatened, endangered, candidate or other special-status plant and wildlife species would be adversely affected by the proposed project. Temporary impacts have the potential to occur during forest and stream maintenance and restoration activities; however, upon project completion, habitat would be enhanced.

Temporary disturbance of terrestrial species would occur. Changes in canopy cover and ground disturbance could affect habitat and foraging habitat for various species within the forest; however, design criteria and mitigation measures would restrict project activities or provide field confirmation of presence/absence prior to the start of project activities. Tree removal and ignition sites would occur outside a buffered area for stream channels, thus the potential for increased sedimentation to impact aquatic life would be temporary. Over the long-term, the enhanced forest and stream habitats would provide an enhanced habitat that benefits special-status wildlife and plant species.

Impacts are considered potentially significant. The IS/MND and EA/FONSI for the Raintree Forest Health Project cover biological resources impacts for the proposed project and provide mitigation measures. Those mitigation measures that apply specifically to the proposed project are listed below.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid significant effects on the environment.

Facts in Support of the Finding: The Sierra Nevada Conservancy concurs with the lead agency that the following mitigation measures will reduce the project's environmental effects to a less-than-significant level.

Mitigation Measures:

- MM-2** California spotted owl: Maintain a limited operating period (LOP), prohibiting vegetation treatments within approximately ¼ mile of the activity center during the breeding season (March 1 through August 31), unless surveys confirm that California spotted owls are not nesting. Prior to implementing activities within or adjacent to a California spotted owl protected activity center (PAC) and the location of the nest site or PAC is uncertain, conduct surveys to establish or confirm the location of the nest or PAC.
- MM-3** Northern goshawk: Maintain a limited operating period (LOP), prohibiting vegetation treatments within approximately ¼ mile of the nest site during the breeding season (February 15 through September 15) unless surveys confirm that northern goshawks are not nesting. If the nest stand within a protected activity center (PAC) is unknown, either apply the LOP to a ¼ mile area surrounding the PAC, or survey to determine the nest stand location.
- MM-4** Water holes in the vicinity of the project will be inspected annually by a fisheries biologist for existing aquatic species and aquatic dependent species before water

withdrawal for dust abatement. A Forest Service approved screen covered drafting box, or other device to create a low entry velocity (Riparian Conservation Objective [RCO] #4, SNFPA ROD).

- MM-5** Aquatic veined lichen (*Peltigera hydrothyria*), occurs within the proposed project area (streams NS-4 and NS-10). To maintain current stream shading overstory canopy within 100 feet of the occurrence will not be altered by project activities. Project botanist will be consulted prior to initiation of road maintenance within 100 feet of drainages with aquatic veined lichen. Should any new threatened or endangered species be located during the proposed project, available steps will be taken to evaluate and mitigate effects.

3. CULTURAL RESOURCES

There are historic and prehistoric sites within the project area. Eleven (11) of these sites have been evaluated for the National Register of Historic Places (National Register) and been determined eligible for inclusion in the National Register. The remaining 31 sites have not been evaluated. Seven (7) of the sites are in areas away from proposed project activity and would not be at risk. The proposed project could potentially impacts three (3) of the sites. Fifteen (15) sites have the potential to be effected by mechanical removal of tress as well as prescribed burn activities. Eleven (11) sites are resources at risk solely from activities associated with prescribed burning. Up to 14 sites are resources as risk from activities associated with road reconstruction.

The proposed project includes design guidelines to avoid known historic and prehistoric resources. In the event that a not-previously-known archaeological or historical resource is uncovered during construction activities, there would be a temporary halt to the activity until a determination is made by a qualified archaeologist. The IS/MND and EA/FONSI for the Raintree Forest Health Project cover cultural resources impacts for the proposed project and provides mitigation measures. Those mitigation measures that apply specifically to the proposed project are listed below.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid significant effects on the environment.

Facts in Support of the Finding: The Sierra Nevada Conservancy concurs with the lead agency that the following mitigation measures will reduce the project's environmental effects to a less-than-significant level.

Mitigation Measures:

- MM-6** Cultural resources sites within the project area boundary will be protected from ground disturbance associated with mechanical and hand treatments during all phases of implementation activities of this project. No mechanical equipment will be allowed to operate within the boundaries of an identified cultural site. Where it is necessary to remove trees from within site boundaries, the USFS District Archaeologist will be consulted to mitigate impacts. All thinning of trees adjacent to site boundaries will be directionally felled away from the site. The sites in units or near road maintenance/reconstruction will be identified with flagging and avoided during project activities. Sites that are flammable will be avoided during prescribed understory burning and fire line construction activities. Construction of fire lines will

occur outside of the cultural resource site boundaries. Gaps created will avoid cultural resource site locations. All machine and hand piles will be placed away from sites at a distance such that site features will not be affected by flames and heat. Hazard tree removal on or in the vicinity of cultural resource sites will be coordinated with the District Archaeologist and will follow the guidelines for hazard tree removal included in the *Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Officer Regarding the Identification, Evaluation and Treatment of Historic Properties Managed by the National Forest of the Sierra Nevada, California dated 1996 (SPA)*.

- MM-7** Should any previously unrecorded cultural resources be encountered during implementation of the proposed project, all work shall immediately cease in that area and the District Archaeologist will be notified immediately. Work may resume subsequent to approval by the District Archaeologist and implementation of additional protection measures as necessary. Should any cultural resources become damaged in unanticipated ways by activities proposed in this project, the steps described in the SPA for inadvertent effects would be followed.

4. GEOLOGY AND SOILS

Short term soil exposure would be expected as a direct result of mechanical and hand tree removal, skidding, machine piling, and fire line construction. Even though the natural stands currently have adequate to excessive litter cover, activities would result in displacement of litter cover. This displacement would be limited to skid trails, landings, machine pile areas, and limited areas within the tree harvest areas. Localized soil detachment and transport may occur during precipitation events immediately following harvest activities. In addition, understory prescribed burns would change the amount of exposed soil and could result in an increase in sedimentation and surface flow; however, this would be intercepted by road prism and concentrated to an outlet point determined by culverts, water bars or road outsloping.

The proposed project design includes best management practices that would be applied to the proposed project in order to reduce the amount of soil erosion or the loss of topsoil. The IS/MND and EA/FONSI for the Raintree Forest Health Project cover geology and soil impacts for the proposed project and provide a mitigation measure. The mitigation measure that applies specifically to the proposed project is listed below.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid significant effects on the environment.

Facts in Support of the Finding: The Sierra Nevada Conservancy concurs with the lead agency that the following mitigation measures will reduce the project's environmental effects to a less-than-significant level.

Mitigation Measures:

- MM-8** Best management practices (BMPs) will be applied to project activities. Specifically BMPs identified by the USDA Forest Service as BMPs: 1-3, 1-5, 1-6, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 1-17, 1-18, 1-20, 1-22, 1-25, 5-2, 5-3, 5-5, 5-6, 7-1, and 7-3.

The SNC Board has considered the environmental documentation prepared for the project, adopts the findings listed in this document, and approves the project. A Notice of Determination (NOD) indicating the results of these findings will be filed with the State Clearinghouse of the Governor's Office of Planning and Research pursuant to Section 15096(i) of the State CEQA Guidelines. The Executive Officer of the SNC is authorized to file the NOD.

Certification:

I hereby certify that the statements furnished above present the data and information used to support the findings made herein pursuant to California Code of Regulations, Title 14, Section 15091 or 15096(h), and the facts, statements, and information presented herein, are true and correct to the best of my knowledge and belief.

Signature _____

Date _____

Name Jim Branham

Title Executive Officer

MITIGATION MONITORING PROGRAM

1.1 MITIGATION AND MONITORING PROGRAM CONTENTS

This document is the Mitigation Monitoring Program (MMP) for the proposed Raintree Forest Health Project (SNC 783) (State Clearinghouse No. 2012012021), located in the Placerville Ranger District on the Eldorado National Forest, south of Highway 50 and Mormon Emigrant Trail Road, bounded generally by Capps Crossing and Leek Springs Lookout, at North South Road and Meiss Road, approximately 13.5 miles southeast of Pollock Pines, El Dorado County, California, within Township (T) 9 North (N), Range (R) 14 East (E), Sections 1, 2, 3, and 10-15; T9N R15E Sections 3-10, 16-21; T10N R14E Sections 35 and 36; and T10N R15E Sections 31 and 32. The MMP includes a brief discussion of the legal basis for and the purpose of the program, discussion, and direction regarding complaints about noncompliance, a key to understanding the monitoring matrix, and the monitoring matrix itself.

1.2 LEGAL BASIS OF AND PURPOSE FOR THE MITIGATION MONITORING PROGRAM

California Public Resources Code §21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The MMP contained herein is intended to satisfy the requirements of CEQA as they relate to the Initial Study/Mitigated Negative Declaration prepared for the Raintree Forest Health Project. It is intended to be used by El Dorado Resource Conservation District staff, participating agencies, the developer, project contractors, and mitigation monitoring personnel during implementation of the proposed project. The SNC is not responsible for implementing any of these measures and is not proposing any additional mitigation measures for this project.

Mitigation is defined by CEQA Guidelines §15370 as a measure that does any of the following:

- Avoids impacts altogether by not taking a certain action or parts of an action.
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifies impacts by repairing, rehabilitating, or restoring the impacted environment.
- Reduces or eliminates impacts over time by preservation and maintenance operations during the life of the project.
- Compensates for impacts by replacing or providing substitute resources or environments.

1.3 BRIEF PROJECT BACKGROUND

The proposed project area lies within the Placerville Ranger District on the Eldorado National Forest, in the Raintree Forest area. It is situated south of Highway 50 and Mormon Emigrant Trail Road, generally between Capps Crossing and Leek Spring Lookout. The total project area covers approximately 9,144 acres. Elevations range from 5,000 feet at the North Fork Cosumnes River on the west edge of the project area to 6,500 feet on Baltic Ridge at the north edge of the project area. The area is accessed from Highway 50 by Sly Park Road to Mormon Emigrant Trail Road, then to North-South Road and Meiss Road.

The principle forest cover types found in the project area are Sierra Nevada Mixed Conifer and Ponderosa/Jeffrey pine. The major species mixed in this forest cover type are white fir, Douglas fir, ponderosa pine, Jeffrey pine, sugar pine, lodgepole pine, incense cedar, quaking aspen, and oaks. The understory is dominated by dense, shade tolerant white fir and incense cedar samplings and small trees. The average age of the natural stands within the project area is generally around 130 years, if the dense understory (which is between 30 and 80 years of age) is not considered. Scattered across the project area are many trees that exceed 300 years of age.

Historically, at the lowest elevations or higher up on the drier south and west aspects and ridges within the proposed project, fires were generally frequent, ranging from fire return intervals of 5 to 15 years, with individual sites sometimes burning two years in succession. With this type of fire frequency, the fire intensity and severity were most likely low because of lack of time to accumulate very much fuel between fires. Fire suppression, starting in the early 1900s has changed these historic fire intervals, resulting in a change in species composition, structure and density.

Current vegetation conditions in the Raintree project area differ markedly from the historic condition and most of the current stands exceed the historical range of variability in terms of ecosystem structure and process. Multiple decades of fire exclusion, grazing by domestic livestock, and logging have altered fire intensity of wildfires from their historical range. The dense forest conditions within the project area make the area prone to the risk of a stand-replacing catastrophic wildfire.

Unhealthy conditions are indicated by increased densities of trees, higher levels of insect-related tree mortality, and an accumulation of ground and ladder fuels within stands in the project area. Dense, closed canopied forests tend to favor shade tolerant white fir and incense-cedar, and to exclude shade intolerant ponderosa pine, oak, and sugar pine. The shade tolerant species generally are more susceptible to mortality from fire and form dense understory thickets, which act as fuel ladders to the larger overstory trees. Thus the structure of the current forested landscape represents an unstable, unsustainable departure from the historic landscape for this area.

The El Dorado County Resource Conservation District acted as Lead Agency under CEQA in January 2012 and prepared an Initial Study and adopted a Mitigated Negative Declaration. The USDA Forest Service Placerville Ranger District for Eldorado National Forest acted as Lead Agency under NEPA in March 2011 and prepared an Environmental Assessment and adopted a Finding of No Significant

Impact (FONSI) in December 2011. As detailed in the Forest Service FONSI and Decision Notice the project includes detailed design criteria concerning cultural resources protection, vegetation and harvest practices, fuels management and prescribed burns in accordance with El Dorado County Air Pollution Control District (APCD) requirements, wildlife protection, best management practices to protect soil resources, and protection measures for aquatic features and riparian conservation areas.

The IS/MND identified potentially significant impacts and provided mitigation measures to reduce these impacts to less than significant levels. The mitigation measures identified in the IS/MND would apply to the proposed Raintree Forest Health Project and are identified in the Mitigation Monitoring Table on the following pages.

1.4 MITIGATION MONITORING TABLE

The Mitigation Monitoring Table identifies the mitigation measures proposed for the Raintree Forest Health Project. These mitigation measures are reproduced from the Initial Study/Mitigated Negative Declaration (IS/MND) for the Raintree Forest Health Project, and conditions of approval for the project. The table has the following columns:

Mitigation Measure/Summary: Lists the mitigation measures identified within the IS/MND for a specific impact, along with the number for each measure enumerated in the IS/MND.

Implementation Phase: Identifies at what point in time, review process, or phase the mitigation measures will be completed.

Monitoring Phase: Identifies at what point in time, review process, or phase the mitigation measures will be monitored.

Enforcing Agency / Responsible Party: References the El Dorado County Resource Conservation District or any other public agency with which coordination is required to satisfy the identified mitigation measure.

Verification of Compliance: Spaces to be initialed and dated by the individual designated to verify adherence to a specific mitigation measure.

1.5 NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the proposed project. The complaint shall be directed to the El Dorado County Resource Conservation District in written form, providing specific information on the asserted violation. The El Dorado County Resource Conservation District shall conduct an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the El Dorado County Resource Conservation District shall take appropriate action to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue.

TABLE 1-1: RAINTREE FOREST HEALTH PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure		Implementation Phase	Monitoring Phase	Enforcing Agency / Responsible Party	Verification of Compliance		
					Initials	Date	Remarks
AESTHETICS							
MM-1	Trees that are to be removed within the visible foreground (approximately 100 feet from roadway edge) of Meiss and North-South system roads will have a maximum stump height of six inches. Large landing biomass piles within the foreground of Meiss and North-South Roads will be burned or removed within two years of project completion.	During construction	During construction	El Dorado County Resource Conservation District, USDA Forest Service, and Project Manager			

TABLE 1-1: RAINTREE FOREST HEALTH PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure		Implementation Phase	Monitoring Phase	Enforcing Agency / Responsible Party	Verification of Compliance		
					Initials	Date	Remarks
BIOLOGICAL RESOURCES							
MM-2	California spotted owl: Maintain a limited operating period (LOP), prohibiting vegetation treatments within approximately ¼ mile of the activity center during the breeding season (March 1 through August 31), unless surveys confirm that California spotted owls are not nesting. Prior to implementing activities within or adjacent to a California spotted owl protected activity center (PAC) and the location of the nest site or PAC is uncertain, conduct surveys to establish or confirm the location of the nest or PAC.	Prior to project initiation / during construction	Pre- construction and construction	El Dorado County Resource Conservation District, California Department of Fish and Wildlife, USDA Forest Service, and Project Manager			
MM-3	Northern goshawk: Maintain a limited operating period (LOP), prohibiting vegetation treatments within approximately ¼ mile of the nest site during the breeding season (February 15 through September 15) unless surveys confirm that northern goshawks are not nesting. If the nest stand within a protected activity center (PAC) is unknown, either apply the LOP to a ¼ mile area surrounding the PAC, or survey to determine the nest stand location.	Prior to project initiation / during construction	Pre- construction and construction	El Dorado County Resource Conservation District, California Department of Fish and Wildlife, USDA Forest Service, and Project Manager			
MM-4	Water holes in the vicinity of the project will be inspected annually by a fisheries biologist for existing aquatic species and aquatic dependent species before water withdrawal for dust abatement. A Forest Service approved screen covered drafting box, or other device to create a low entry velocity (Riparian Conservation Objective [RCO] #4, SNFPA ROD).	Prior to project initiation / during construction	Pre- construction and construction	El Dorado County Resource Conservation District, California Department of Fish and Wildlife, USDA Forest Service, and Project Manager			
MM-5	Aquatic veined lichen (Peltigera hydrothyria), occurs within the proposed project area (streams NS-4 and NS-10). To maintain current stream shading overstory canopy within 100 feet of the occurrence will not be altered by project activities. Project botanist will be consulted prior to initiation of road maintenance within 100 feet of drainages with aquatic veined lichen. Should any new threatened or endangered species be located during the proposed project, available steps will be taken to evaluate and mitigate effects.	Prior to project initiation / during construction	Pre- construction and construction	El Dorado County Resource Conservation District, California Department of Fish and Wildlife, USDA Forest Service, and Project Manager			

TABLE 1-1: RAINTREE FOREST HEALTH PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure		Implementation Phase	Monitoring Phase	Enforcing Agency / Responsible Party	Verification of Compliance		
					Initials	Date	Remarks
CULTURAL RESOURCES							
MM-6	<p>Cultural resources sites within the project area boundary will be protected from ground disturbance associated with mechanical and hand treatments during all phases of implementation activities of this project. No mechanical equipment will be allowed to operate within the boundaries of an identified cultural site. Where it is necessary to remove trees from within site boundaries, the District Archaeologist will be consulted to mitigate impacts. All thinning of trees adjacent to site boundaries will be directionally felled away from the site. The sites in units or near road maintenance/reconstruction will be identified with flagging and avoided during project activities. Sites that are flammable will be avoided during prescribed understory burning and fire line construction activities. Construction of fire lines will occur outside of the cultural resource site boundaries. Gaps created will avoid cultural resource site locations. All machine and hand piles will be placed away from sites at a distance such that site features will not be affected by flames and heat. Hazard tree removal on or in the vicinity of cultural resource sites will be coordinated with the District Archaeologist and will follow the guidelines for hazard tree removal included in the Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Officer Regarding the Identification, Evaluation and Treatment of Historic Properties Managed by the National Forest of the Sierra Nevada, California dated 1996 (SPA).</p>	Prior to project initiation / during construction	Pre- construction and construction	<p>El Dorado County Resource Conservation District, Native American Heritage Commission, USDA Forest Service, and Project Manager</p>			
MM-7	<p>Should any previously unrecorded cultural resources be encountered during implementation of the proposed project, all work shall immediately cease in that area and the District Archaeologist will be notified immediately. Work may resume subsequent to approval by the District Archaeologist and implementation of additional protection measures as necessary. Should any cultural resources become damaged in unanticipated ways by activities proposed in this project, the steps described in the SPA for inadvertent effects would be followed.</p>	Prior to project initiation / during construction	Pre- construction and construction	<p>El Dorado County Resource Conservation District, Native American Heritage Commission, USDA Forest Service, and Project Manager</p>			

TABLE 1-1: RAINTREE FOREST HEALTH PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure		Implementation Phase	Monitoring Phase	Enforcing Agency / Responsible Party	Verification of Compliance		
					Initials	Date	Remarks
GEOLOGY AND SOILS							
MM-8	Best management practices (BMPs) will be applied to project activities. Specifically BMPs identified by the USDA Forest Service as BMPs: 1-3, 1-5, 1-6, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 1-17, 1-18, 1-20, 1-22, 1-25, 5-2, 5-3, 5-5, 5-6, 7-1, and 7-3.	During construction	During construction	El Dorado County Resource Conservation District, USDA Forest Service, and Project Manager			

Background

In June of this year, the Board approved Guidelines that established the criteria for the current grant cycle, with a focus on Healthy Forests and Abandoned Mine Lands. Since that time Sierra Nevada Conservancy (SNC) staff has been actively working with a variety of stakeholders to develop high benefit projects to be funded during the current cycle. There is one grant being recommended for authorization at this Board meeting and a number of others in the process for future Board meetings. The estimated amount available is \$2,858,137.

In August of this year, the Rim Fire began on the Stanislaus National Forest, burning into Yosemite National Park, as it became the largest fire in the recorded history of the Sierra Nevada, burning more than 257,000 acres. In addition to the magnitude of this fire, it burnt with an uncharacteristically high degree of intensity wreaking havoc in these watersheds. Preliminary estimates suggest that nearly 100,000 acres burned at high intensity, larger than most Sierra fires in their entirety. As the fire has moved from a suppression phase to a rehabilitation and restoration phase, staff has been engaged in a number of activities aimed at assisting in these efforts.

Current Status

In October, the SNC was informed by one of our grantees that their project is unable to go forward based on the inability to secure the additional funding needed to successfully complete the project. The grant, the Iron Canyon Fish Passage project in Butte County, was in the amount of \$1 million that is now available for the SNC to re-award.

Staff is recommending that in lieu of moving the funds into the existing grant program, these funds be expended supporting various efforts in restoring the area affected by the Rim Fire. By authorizing expenditure of \$1 million for this purpose the SNC will be able to contribute directly to needed activities and leverage other funding.

Next Steps

Should the Board approve this recommendation staff will immediately begin discussions with the United States Forest Service and a variety of stakeholders to determine how the SNC's contribution can make the greatest impact. This would include active coordination with the Yosemite Stanislaus Solutions (YSS) collaborative group that SNC has been a part of from its inception. The group had made significant progress building a consensus around forest management activities in their focus area when the Rim Fire occurred. Unfortunately, the entire area of focus for YSS was within the perimeter of the Rim Fire. As this group turns its attention to the issues currently facing this landscape, staff will work closely with the group to identify the best opportunities for SNC investment.

The staff recommendation includes providing additional authority for the Executive Officer (EO) to award grants where successful implementation would be hampered by waiting for Board action, primarily in allowing the EO authority to award grants in excess

of the current delegated authority of \$50,000. This authority may only be exercised in instances where the project is determined to be exempt from the California Environmental Quality Act (CEQA) or where it is deemed to not be a “project” under CEQA. In exercising this authority, staff is recommending that a committee of the Board consisting of the Chair and Vice Chair be consulted in the decision making process.

Recommendation

Staff recommends that the Board authorize expenditure of up to \$1 million of Proposition 84 funds, consistent the criteria identified in the “Rim Fire Restoration Grant Guidance” document included with staff report ([Attachment A](#)). Staff further recommends that a Board committee consisting of the Chair and Vice Chair be created to consult and advise the Executive Officer in exercising the authority granted in this action.

Rim Fire Grant Allocation Guidance

The Governing Board of the Sierra Nevada Conservancy (SNC) has authorized up to \$1 million to be granted for projects that contribute to the restoration of the area affected by the Rim Fire. Grants awarded under this authorization shall be guided by the following provisions:

1. Eligible entities shall be those identified in the statute that governs the SNC. (See Public Resources Code, section 33343.)
2. All projects must meet the requirements of Proposition 84, including showing that the purpose of “protection and restoration of rivers, lakes and streams, their watersheds and associated land, water and other natural resources” is met.
3. All projects must be consistent with the Sierra Nevada Conservancy Act, Public Resources Code section 33301 et seq., including addressing at least one of the objectives describe in Section 33320 of the Public Resources Code.
4. All projects must comply with the California Environmental Quality Act (CEQA), or be determined to be exempt from CEQA.
5. Projects awarded funds will meet the criteria of having high benefit, be well designed and have a high likelihood of successful implementation.
6. Up to 10 percent of the funds available may be used for activities necessary for successful implementation of on-the-ground projects (examples: CEQA analysis, biological surveys, etc.).
7. The Executive Officer (EO) is authorized to award grant funds for the projects where timely award is necessary for project success. For purposes of these funds only, the previous delegation limit of \$50,000 and the exclusion of “land improvement” projects (July 26, 2007) do not apply. The EO will consult with a committee of Governing Board members in the awarding of any grant. The EO will report to the full Governing Board on any actions taken between Governing Board meetings.
8. The EO is authorized to act on behalf of the SNC in determining whether projects are exempt from CEQA. The Governing Board reserves the authority to review, certify and adopt findings regarding negative declarations and Environmental Impact Reports.
9. SNC staff will coordinate with the United States Forest Service, the National Park Service, the Yosemite-Stanislaus Solutions Collaborative group, Tuolumne County and other stakeholders, as appropriate, in considering projects to recommend for grant funding.
10. Specific grant awards will be authorized at regularly scheduled Governing Board meetings, except as provided for in item # 7 above.

11. Staff will consider the maximization of local community benefits a priority in considering projects for grant funding.
12. A grant agreement including all legal requirements for receipt of grant funds will be required for all projects authorized by the SNC to receive grant funding.

Background

The Sierra Nevada Conservancy (SNC) 2006 Strategic Plan identified the need to develop System Indicators to measure progress in improving the environmental, economic, and social well-being of the Sierra Nevada Region. Since that time, staff has worked diligently to overcome data limitations and other obstacles in order to develop a set of six Indicator Reports that include Board approved Indicators as well as other information:

- Demographics and the Economy (September 2011)
- Land Conserved and Habitat (December 2011)
- Water and Air Quality and Climate September 2012)
- Forest Health and Carbon Storage (December 2012)
- Fire Threat (September 2013)
- Agricultural Lands and Ranches

Five of the reports have been presented to the Board at past meetings and the sixth, Agricultural Lands and Ranches is being presented here.

Current Status

This report examines the status of working landscapes in the Sierra as reported through three major indicators:

- The total area in agriculture (farms) and ranches in the Sierra and the size of individual operations;
- The overall number of farms and ranches and crop types; and,
- The economic productivity of working landscapes in the Region.

The report also looks at the conversion of working landscapes in the Region and the status of the Williamson Act in the counties in the Sierra. The Williamson Act is currently a key program for preserving working landscapes in California that is facing severe funding challenges.

In general, data on agriculture and ranches is available strictly by totals per county for the Region. In those cases, the indicators address those counties that are fully within the Region compared to those counties that are partially within Region. Vegetation mapping was also analyzed to identify the areas of potential agriculture and ranches within the Region. Unlike county level data, this mapping conforms exactly to the SNC's boundary.

Report Highlights**Area and Size of Agriculture and Ranches**

- Amador County had the greatest percent of private land in working landscapes for a county fully within the Region at 56 percent followed closely by Mariposa County at 48 percent. Madera, Fresno and Tulare Counties, which cross the Region into the San Joaquin Valley, all had upwards of 70 percent of their private land in working landscapes.

- Ranches were the dominant working landscape in the Sierra in 2007. Amador County had 50 percent of private land in ranches while Mariposa County had 47 percent, which were the highest percentages for counties fully within the Region. For counties that are partly within the Region, Inyo County had the greatest proportion of private land in ranches at 52.6 percent followed by Modoc County at 46.4 percent.
- Of the counties fully within the Region, Lassen County had the largest acreage of agriculture (farms) at 82,567 or seven percent of the total private land with the majority being in forage production. The acres of land in agriculture in the counties fully within the Region show a trend of largest to smallest from north to south, and after Lassen County the largest number of acres in agriculture is in Plumas County at 18,487. Forage was the most common crop type.

Number and Types of Working Landscapes

- Cattle and Calves Operations were the most common agricultural production for the counties fully within the Region and these operations were one of the leading agricultural commodities in all 22 counties fully or partly within the Region.

Economic Productivity

- Counties in the South Sierra Subregion led the State in agricultural and ranch production in 2011. The majority of the agricultural production in the counties in this Subregion occurred outside of the Region.
- The counties fully within the Region produced over \$317 million in gross agricultural production in 2011, and the counties partly within the Region produced close to \$21 billion.
- Of the counties fully within the Region, Lassen, Mono and Mariposa Counties had the leading agricultural commodities sales in 2011 at \$89,539,000, \$53,068,000, and \$30,975,000, respectively. Lassen and Mono Counties also had the highest irrigated water use of the counties fully within the Region.
- The counties fully within the Region accounted for about two percent of the total irrigated land in California while the counties partly within the Region accounted for 46 percent of the irrigated land in California. Irrigated water use correlated strongly with total gross agricultural value and net cash farm value in the Sierra. Use of irrigated water decreased from north to south in the Sierra.

Preservation and Threats to Agriculture and Ranches

- Placer and El Dorado Counties, which are both partly in the Region, saw the greatest percent change in conversion of working landscapes to other land uses between the 2000 and 2010 Census. Further, these counties had the least amount of private land in working landscapes, and the median farm size was the smallest compared to the other counties in the Region.

- In 2011, 994,201-acres (approximately 70 percent of the working landscapes) in the counties fully within the Region were in prime (agriculture) and non-prime (rangeland) Williamson Act contracts. In the counties partly within the Region, there were 5,972,286-acres (about 71 percent of the working landscapes) in prime and non-prime Williamson Act contracts.

Next Steps

The data in this report, along with the methodologies and frameworks that have been developed, will allow consistent analysis of agricultural land and ranches in the Sierra over time. Information relative to these indicators will be available on the SNC Web site and will be updated periodically as the underlying data is updated.

In addition to providing information relevant to the administration of SNC's programs throughout the Sierra Nevada Region, we hope that this information will also be useful to others located in or working in the Region, including other State agencies, as they develop and implement their own projects and programs.

Recommendation

Staff recommends the Board approve the Agricultural Lands and Ranches System Indicators Report after making any revisions resulting from its review.

System Indicators

Agricultural Lands and Ranches



Draft Report

December 2013

Lead Author:

Liz van Wagtendonk, Analyst, Sierra Nevada Conservancy

Contents

Introduction 4

Report Highlights 6

Area and Size of Working Landscapes 7

 Irrigated Land..... 11

 Median Farm Size..... 13

Number of Working Landscapes..... 15

 Types of Agricultural Production 15

Economic Productivity 17

 Total Agricultural Commodities Sold 17

 Leading Agricultural Sales 18

 Net Farm Income & Government Payments 18

 Number of Farm and Ranch Operators 19

 Contact Information..... 23

References 24

Appendix A - Area in Agriculture and Ranches, and Acres by Common Crop Types 27

Appendix B – Number of Farms and Ranches, Crop Type and Average Acreage per County 33

Appendix C - Leading Commodities by County and Statewide Rank and Operator Information 41

Appendix D - Programs that aid in the Preservation of Working Landscapes & Conversion of Agriculture and Rangeland as reported by the Department of Conservation 50

Introduction

Native Americans used horticulture techniques for thousands of years in the Sierra before European settlers arrived and established the working landscapes we are familiar with today (Sierra Business Council, 2007). Once European settlers arrived in the Sierra, a number of environmental and physical factors (e.g., slope, soils, water availability, weather patterns and vegetation) favored the development of ranches and smaller scale agricultural operations. For purposes of this report, agriculture is defined as all fruit, vegetable, nut, and grain crops grown for human consumption. Agriculture also includes irrigated field crops that produce hay and haylage. Agriculture also refers to all animal production operations exclusive of ranches. Ranches include all irrigated pasture lands and non-irrigated pasture lands (i.e., rangelands), which are used to grow cattle and calves, beef cows, milk cows, sheep and lambs.

Agriculture and ranches, collectively referred to as working landscapes in this report, are two of the most commonly observed land uses on private lands in the lower and mid elevations of the Sierra. These working landscapes are not simply a sector of our Sierra economy involved in employing Sierra residents, producing goods and contributing to the economy, they are the foundation of the rural aesthetic and cultural identity of large parts of the Sierra Nevada. In addition, these lands are critically important habitat for a large number of native species, particularly in the foothills of the Sierra.

This sixth report in the System Indicators series examines the status of agriculture and ranches on private lands throughout the Sierra Nevada Conservancy (SNC) Region using three major indicators:

- The total area in agriculture and ranches in the Sierra and the size of individual operations;
- The overall number of farms and ranches and crop types; and
- The economic productivity of working landscapes in the Region.

In general, data on agriculture and ranches is available strictly by totals per County for the Region. In those cases, the indicators address those counties that are fully within the Region compared to those counties that are partially within Region. The counties that are fully within the Region (or whose private lands are fully within the Region) include Alpine, Amador, Calaveras, Lassen, Mariposa, Mono, Nevada, Plumas, Sierra, and Tuolumne. The counties that are partly within the Region include Butte, El Dorado, Fresno, Inyo, Kern, Madera, Modoc, Placer, Shasta, Tehama, Tulare, and Yuba.

Vegetation mapping was also analyzed to identify the areas of potential agriculture and ranches within the Region. Unlike county level data, this mapping conforms exactly to the SNC's boundary.

In many instances, the report also provides information relative to the six subregions in the Sierra Nevada. The six Subregions are:

- North:** Modoc, Lassen, and Shasta Counties
- North Central:** Tehama, Butte, Plumas, and Sierra Counties
- Central:** Yuba, Nevada, Placer, El Dorado Counties
- South Central:** Amador, Calaveras, Tuolumne, and Mariposa Counties
- East:** Alpine, Mono, and Inyo Counties
- South:** Madera, Fresno, Tulare, and Kern Counties

Although some patterns do exist relative to working landscapes in the Sierra, each subregion or county has a unique composition of working landscapes and the local culture reflects the working landscape

heritage of the particular county. Modoc, Lassen and Plumas Counties have significant land in both agriculture and ranches, while Sierra County's working landscapes are largely composed of ranches only. The counties in the Central Subregion have experienced significant population increases in the last ten years. These counties had the smallest farms and experienced significant conversion of ranches to other land uses, particularly in Placer County. The counties that are partly within the Region on the western side of the Sierra in the north and south have strong agricultural economies that include both agriculture and ranches; these counties include Tehama, Butte, Yuba, Madera, Fresno, Tulare, and Kern Counties. The counties in the East Subregion produce forage and have livestock operations. However, few agricultural crops are grown in this subregion. In the South Central Subregion, ranches make up almost half of the private land and there tends to be smaller farms and fewer farms in agricultural production. The exception is Amador County; the leading agricultural product for this county in 2011 was wine grapes.

Report Highlights

- Amador County had the greatest percent of private land in working landscapes for a county fully within the Region at 56 percent followed closely by Mariposa County at 48 percent. Madera, Fresno, and Tulare Counties, which cross the Region into the San Joaquin Valley, all had upwards of 70 percent of their private land in working landscapes.
- Counties in the South Subregion led the State in agricultural and ranch production in 2011. The majority of the agricultural production in the counties in this subregion occurred outside of the Region.
- Ranches were the dominant working landscape in the Sierra in 2007. Amador County had 50 percent of private land in ranches while Mariposa County had 47 percent, which were the highest percentages for counties fully within the Region. For counties that are partly within the Region, Inyo County had the greatest proportion of private land in ranches at 52.6 percent followed by Modoc County at 46.4 percent.
- Of the counties fully within the Region, Lassen County had the largest acreage of agriculture (farms) at 82,567 or seven percent of the total private land. The acres of land in agriculture showed a trend of largest to smallest from north to south and after Lassen County, the largest number of acres in agriculture was in Plumas County at 18,487. Forage was the most common crop type.
- Cattle and Calf Operations were the most common type of working landscape for the counties fully within the Region and these operations were one of the leading types of working landscapes in all 22 counties fully or partly within the Region.
- The counties fully within the Region produced over \$317 million in gross agricultural production in 2011 and the counties partly within the Region produced close to \$21 billion.
- Of the counties fully within the Region, Lassen, Mono, and Mariposa Counties had the leading agricultural commodities sales in 2011 at \$89,539,000, \$53,068,000, and \$30,975,000, respectively. Lassen and Mono Counties also had the highest irrigated water use of the counties fully within the Region (Kenny, Barber, Hutson, Linsey, Lovelace, & Maupin, 2009).
- The counties fully within the Region accounted for about 2 percent of the total irrigated land in California while the counties partly within the Region accounted for 46 percent of the irrigated land in California. Irrigated water use correlated strongly with total gross agricultural value and net cash farm value in the Sierra. Use of irrigated water decreased from north to south in the Sierra.
- Placer and El Dorado Counties, which are both partly in the Region, saw the greatest percent change in conversion of working landscapes to other land uses between the 2000 and 2010 Census. Further, these counties had the least amount of private land in working landscapes and the median farm size was the smallest compared to the other counties in the Region.
- In 2011, 994,201 acres (approximately 70 percent of the working landscapes) in the counties fully within the Region were in prime (agriculture) and non-prime (rangeland) Williamson Act contracts. In the counties partly within the Region, there were 5,972,286 acres (about 71 percent of the working landscapes) in prime and non-prime Williamson Act contracts.

Area and Size of Working Landscapes

The area and size of working landscapes are examined here using two different sources of information. The first is the acreage of potential agriculture and ranches derived from vegetation mapping from CalVeg (United States Department of Agriculture (USDA), Forest Service, Pacific Southwest Region, 2010)¹. The CalVeg data provides an estimate of the total acreage of working landscapes in the Region since datasets for working landscapes specific to the SNC's boundary are not available. Lands identified as ranches should be considered only as potential ranch lands since the vegetation classes include grass and oak woodlands that may not be grazed. Agriculture (farms) is probably under-represented as the mapping likely does not include smaller croplands and animal production facilities.

The second source of information used to determine the area and size of working landscapes is the USDA's 2007 Census of Agriculture². The 2007 Census of Agriculture data is available by county. Therefore, the comparisons made in this report are between the counties fully within the Region versus the counties that are partly within the Region. Detailed information on the potential acres of agriculture and ranches, area in agriculture and ranches, and number of acres by common crop types found in the Sierra are available in Appendix A.

Based on the Census data, there were over 1.4 million acres in agriculture and ranches in the counties fully within the Region and over 8.4 million acres in the counties partly within the Region in 2007 (see Figure 1). Since the total number of acres of working landscapes in 2007 statewide was over 25.3 million,³ the 22 counties fully or partly in the Region accounted for 39 percent of the State's working landscapes. However, most of the acres of working landscapes within these 22 counties were outside the SNC boundary as indicated by the fact that only 4.7 million acres of potential working landscapes were identified using the vegetation mapping, which only includes the portion of each county within the Region⁴.

Of the counties fully or partly in the Region, Madera, Fresno, and Tulare Counties have the highest percent of private land in working landscapes, exceeding 70 percent in all three counties. In contrast, the percent of private lands in working landscapes was the least in the central Sierra in Nevada, Placer and El Dorado Counties. These counties have the largest populations and highest densities (185 people per square mile of private land) and have more residential, commercial and urban development. Between the 2000 and 2010, Placer County's population increased by 40 percent, El Dorado County's population grew by 15 percent and Nevada County's population went up by 8 percent.

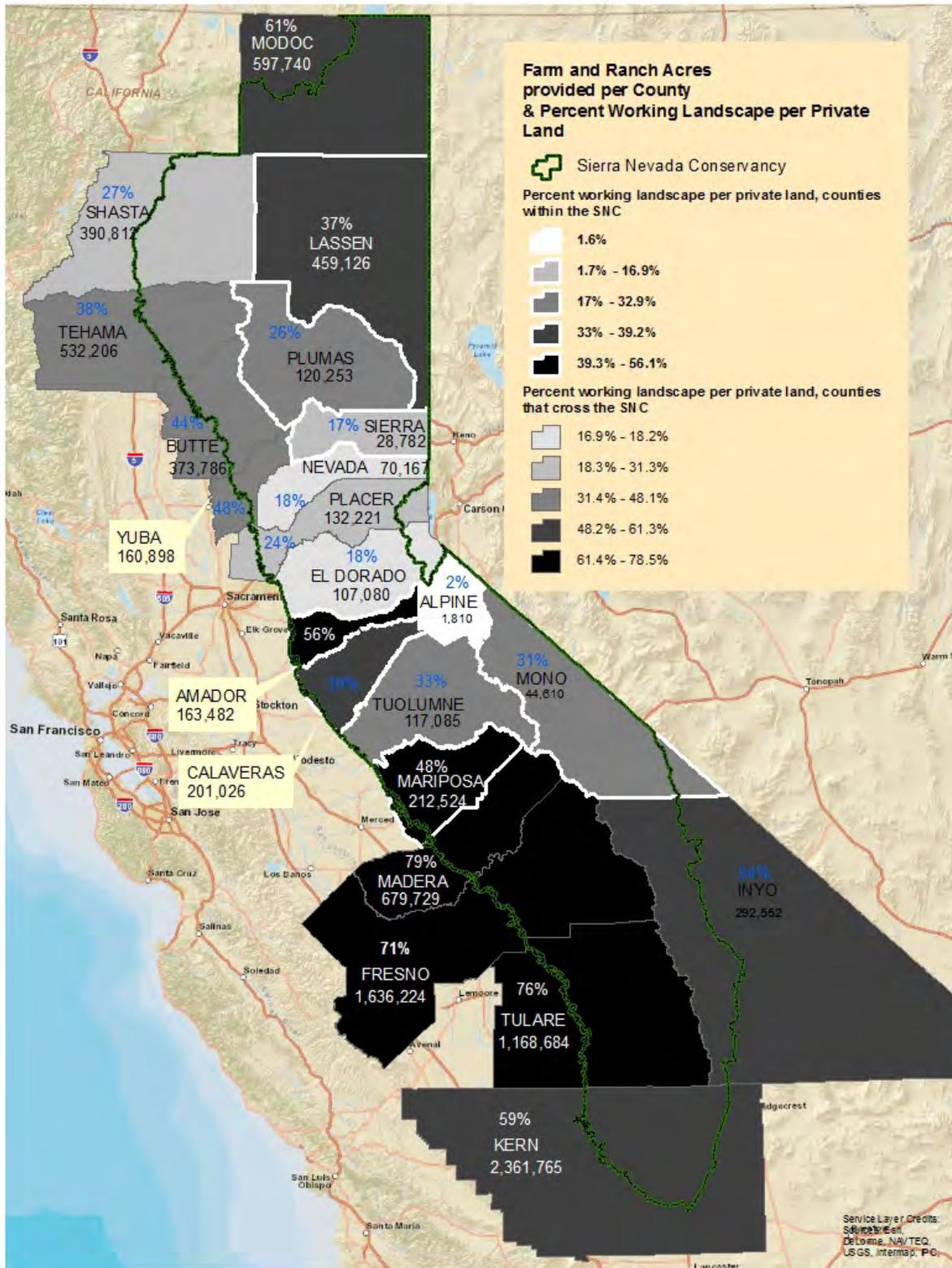
¹ Lands classified by CalVeg as grain and crop agriculture were identified as agriculture in this report. Ranches were identified as lands classified by CalVeg as annual grasses and forbs, perennial grasses and forbs, and oak woodlands, which is inclusive of native rangelands and irrigated pasture lands.

² The USDA requires all agriculture and ranch operators, regardless of the scale of operation, to complete an agricultural census every five years. Data are made available by State, County and Zip Code .

³ According to CDFA crop report figures, there were 25.4 million acres in agriculture and rangeland in 2012, indicating there were no changes in the number of acres in California since the 2007 Census.

⁴ Although only the South Central Subregion may be compared with the potential working landscapes acreages since these counties are fully within the Region, the two datasets appear to be fairly consistent. The potential or mapped acres of working landscapes in the South Central Subregion were 775,792 acres compared to the 694,117 acres reported by the respondents of the 2007 Census of Agriculture. These figures are fairly close when considering the majority of oak woodland occurring on private land is categorized as potential rangeland and that the total number of acres in working landscapes reported by respondents of the Census can vary significantly between years.

Figure 1. Acres of land in Agriculture and Ranches, 2007 Census of Agriculture



As shown in Figure 2, potential ranch land dominates in the Sierra. A total of 4,309,764 acres were identified as potential ranch lands in the Region, which is 46 percent of the private land in the Region⁵ (GreenInfo Network, 2013). There were approximately 16 million acres of ranch lands in California in 2007.

While the vegetation mapping only identified potential ranch land, the census data confirm that ranches were the dominant working landscape in the Sierra in 2007. Amador County had 51 percent of private land in ranches while Mariposa County had 47 percent, which were the highest percentages for counties fully within the Region. For counties that are partly within the Region, Inyo had the greatest proportion of private land in ranches at 53 percent followed by Modoc at 46 percent.

A total of 363,379 acres were identified as potential agriculture (farms) in the Region, which represents 4 percent of all private lands in the Region. Statewide there were over 8 million acres in agriculture in 2007. Figure 2 shows that areas of potential agriculture within the Sierra are concentrated in the North and North Central Subregions, which account for 88 percent of the total potential agriculture in the Region. Sixteen percent of the private land in these Subregions is potential agriculture. To corroborate these findings, we looked at the 15 counties where zoning data was available and found a high degree of agreement between the areas we identified as potential agriculture and those zoned for agriculture. Based on the available data, the zoning information demonstrates that areas identified as potential agriculture are generally zoned for this use. Although a small percentage of acres identified as potential agriculture were zoned for other land uses, none of the lands were zoned Residential.

From the Central Subregion south along the foothills of the western Sierra, there is less than one percent of private land in potential agriculture. This area has less suitable conditions for agriculture due to the topography, soil conditions and availability of water. The East Subregion has 4 percent or 9,549 acres in potential agriculture, which can be attributed to the Subregion's flatter valleys and access to water.

Looking at the census data, Lassen County had the leading number of acres in agriculture for the counties fully within the Region at 82,567 acres in 2007. The acres of land in agriculture showed a trend of largest to smallest from north to south. After Lassen County, the greatest number of acres in agriculture was in Plumas County at 18,487. Agriculture is more uncommon in the Sierra due to the more rugged terrain, rockier soil conditions, colder winter conditions and lack of access to irrigated water (Kenny, Barber, Hutson, Linsey, Lovelace, & Maupin, 2009) in comparison with the Sacramento and San Joaquin Valleys.

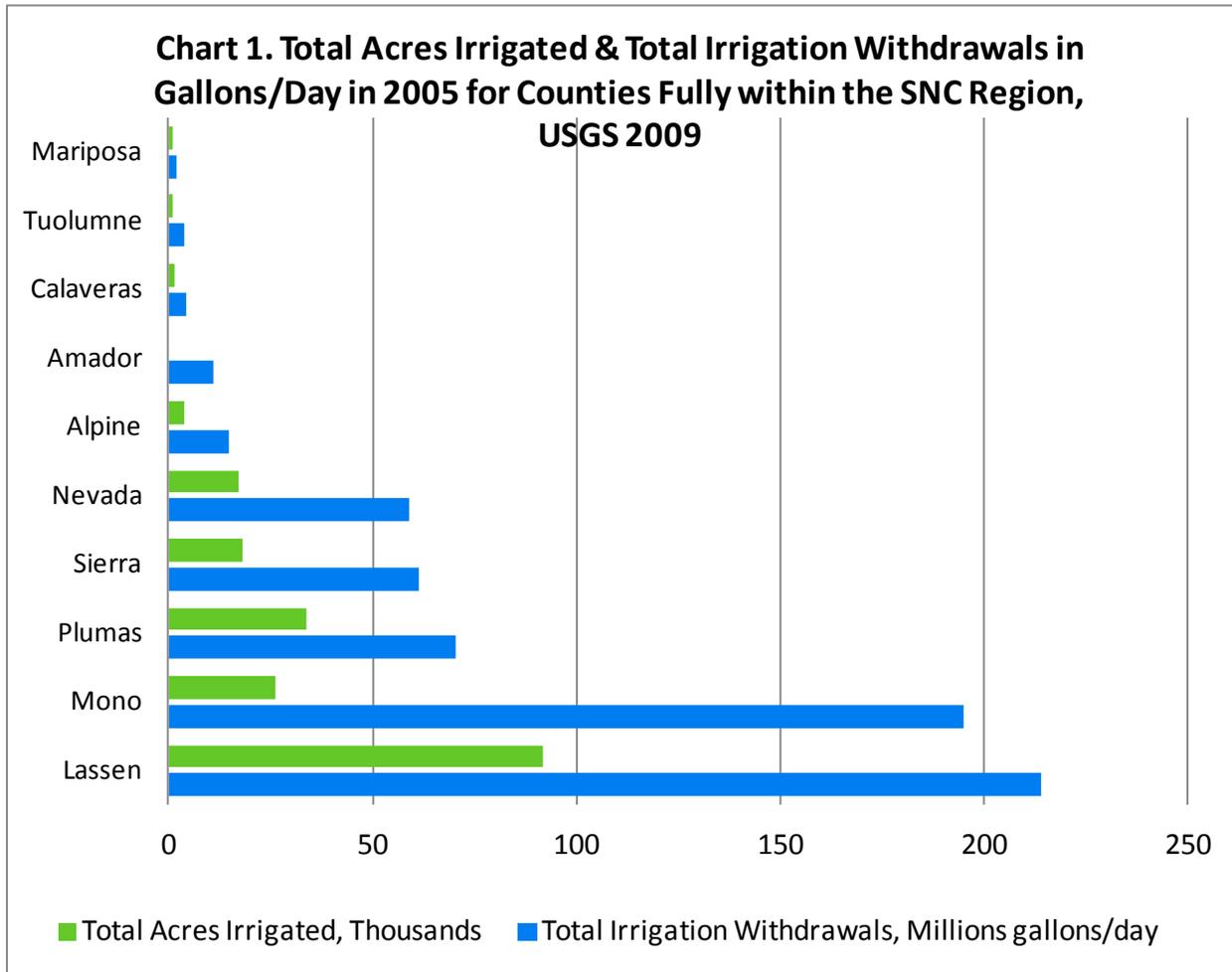
⁵ The California Protected Areas Database version 1.9 was used to calculate the total acres of private land in each County

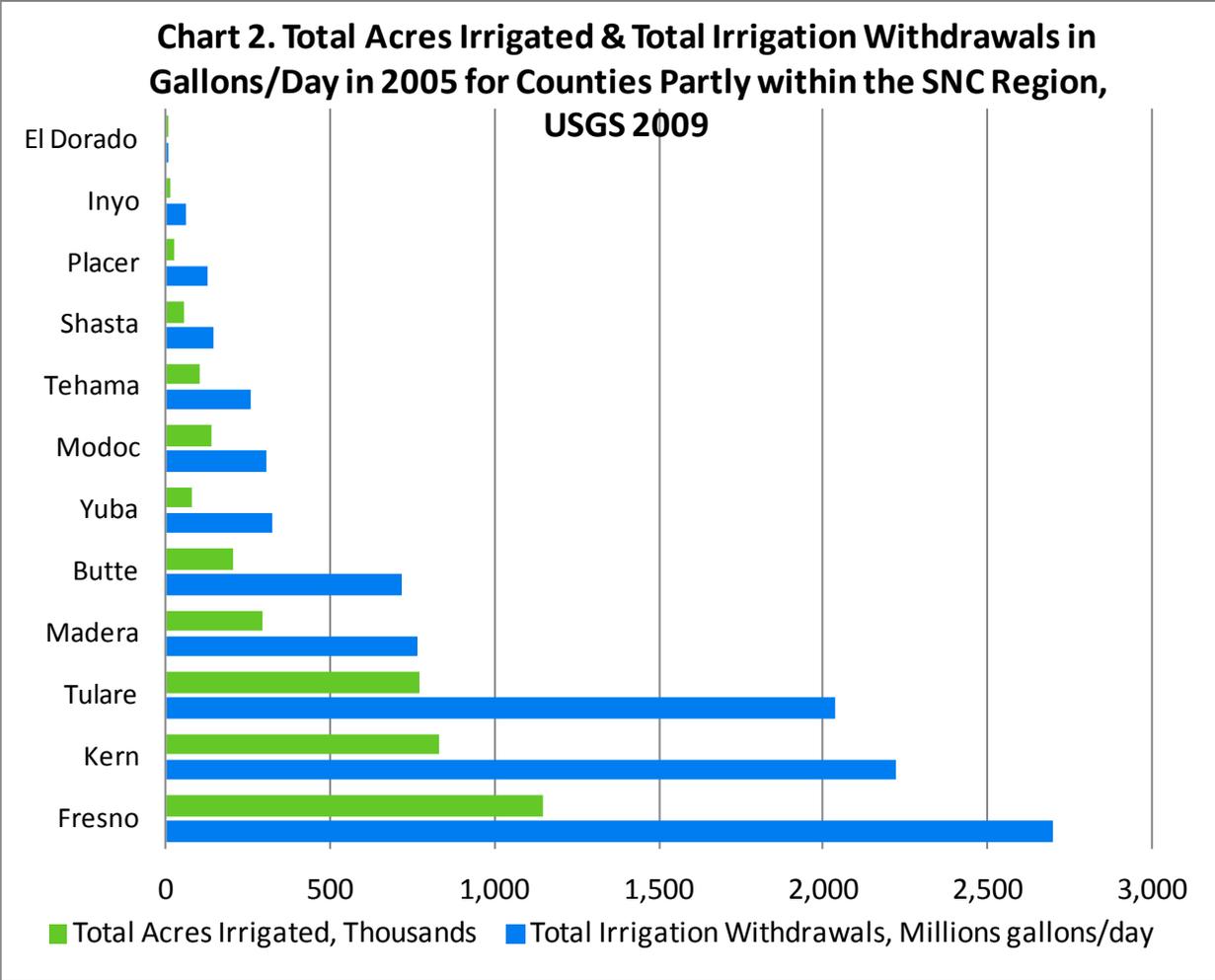
Figure 2. Location of potential agriculture and ranches in the SNC Region



Irrigated Land

Irrigation allows crops to be grown throughout semi-arid California including the Sierra Nevada. Access to irrigated water allows a greater diversity of crop types to be grown in the Region and it can significantly increase the overall economic productivity of farms. The number of irrigated acres and millions of gallons of water used for irrigation per day was collected for the counties within the Region (Kenny, Barber, Hutson, Linsey, Lovelace, & Maupin, 2009). Chart 1 shows the irrigated water use for the counties fully within the Region, and Chart 2 shows the counties that are partly within the Region.



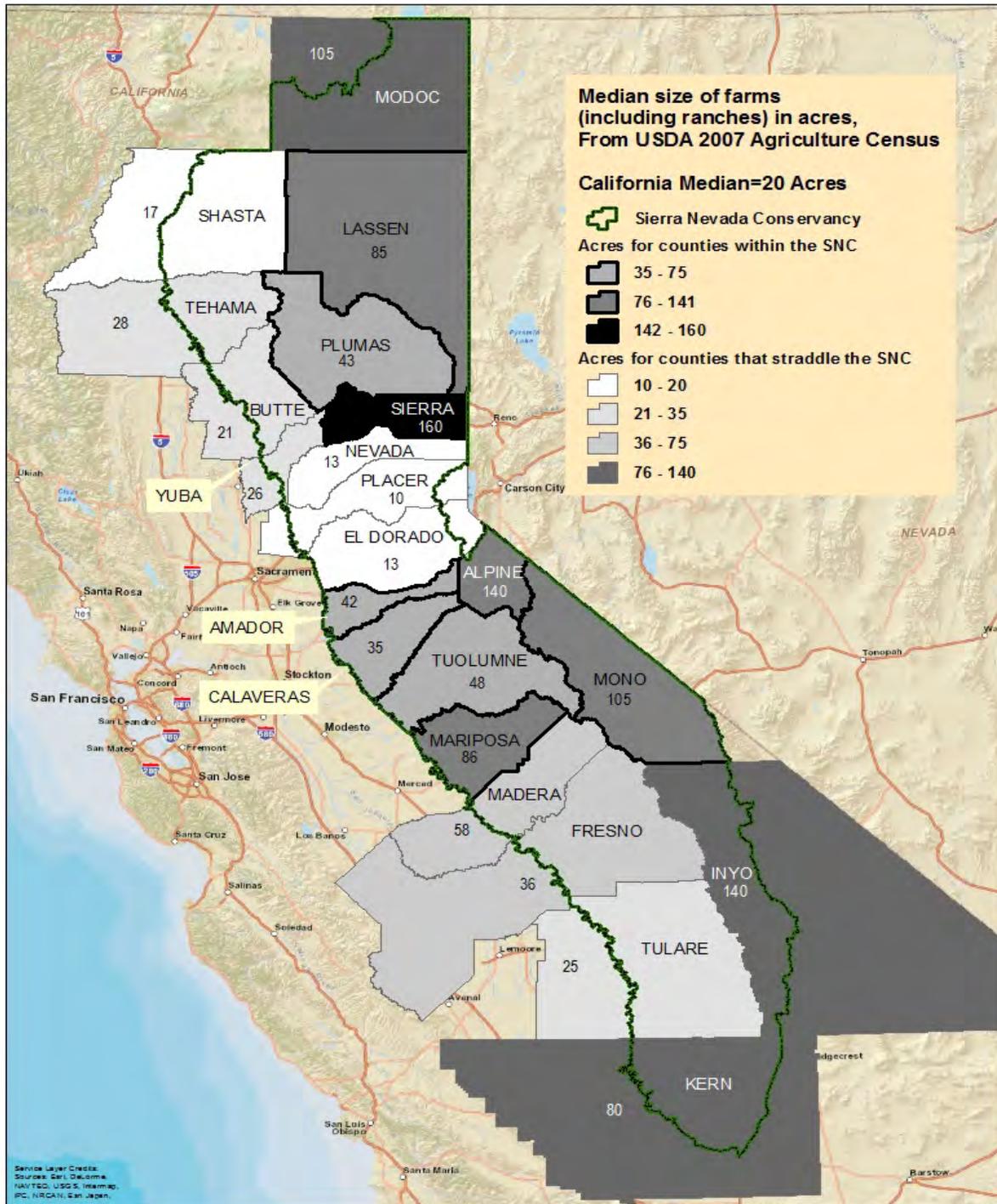


Although the counties fully within the Region contribute a significant amount of water supply to the State, only about 194,000 acres were irrigated in the counties fully within the Region in 2005, which is 2 percent of the total irrigated land in California. The counties partly within the Region irrigated almost 3.7 million acres, which was 46 percent of the 8 million acres of irrigated land in California.

Median Farm Size

As shown in Figure 3, the median farm and ranch size for counties fully within the Region varied from 35 to 160 acres and from 10 to 140 acres for counties partly within the Region. The median farm size in California in 2007⁶ was 20 acres while the average farm size was 313 acres.

Figure 3. Median size of farms and ranches in the Region, 2007 Census of Agriculture



⁶ The California Department of Food and Agriculture reported that the median farm size was 312 acres in 2011 indicating that average farm size has not changed since 2007.

Figure 3 shows that the counties north of Alpine that extend West into the Sacramento Valley all had a median farm and ranch size less than 29 acres in 2007, which was higher than the State median, yet significantly smaller than all of the counties in the Region to the south. Of particular note, Nevada, Placer and El Dorado Counties had the smallest median farm and ranch size at 13 acres or less. These counties also had the smallest percent of private land in working landscapes. Modoc County was the exception to the smaller median farm and ranch size with a 105 acre average. This is due to the fact that ranches made up a much higher percentage of private land (46.4 percent) than farms (15 percent).

In the South Central Subregion, ranches were the more widespread working landscape; therefore the overall median farm and ranch size would be expected to be greater. However, the median farm and ranch size ranged from 36 to 86 acres from north to south due to a large number of small farms growing a variety of crop types (Amador County Agricultural Commissioner, 2007; Calaveras County Agricultural Commissioner, 2007; Tuolumne County Agricultural Commissioner, 2007; Mariposa County Agricultural Commissioner, 2007)

The median farm and ranch size in the East Subregion was the largest of any subregion. The large median farm and ranch size in the Eastern Sierra is not unexpected, native pasture land and forage production make up the majority of total agricultural production in this subregion (California Department of Food and Agriculture, 2013).

Number of Working Landscapes

The number of working landscapes (farms and ranches) in the counties fully and partly within the Region was collected from the 2007 Census of Agriculture (United States Department of Agriculture, 2009). The counties fully within the Region had 3,304 working landscapes compared to 24,606 in the counties partly within the Region. California as a whole had 81,033 farms and ranches in 2007 and led the nation in terms of the number of different commodities produced in 2011 (California Department of Food and Agriculture, 2013). The smaller number of working landscapes in the counties fully within the Region is not unexpected since ranches make up the majority of working landscapes in the counties within the Region, and ranches are typically significantly larger in size than farms. Ranches tend to be greatest in size when livestock are grazed on native pasture land, which is common in the Sierra particularly further south in the western foothills where there is less access to irrigated water (Kenny, Barber, Hutson, Linsey, Lovelace, & Maupin, 2009).

Types of Agricultural Production

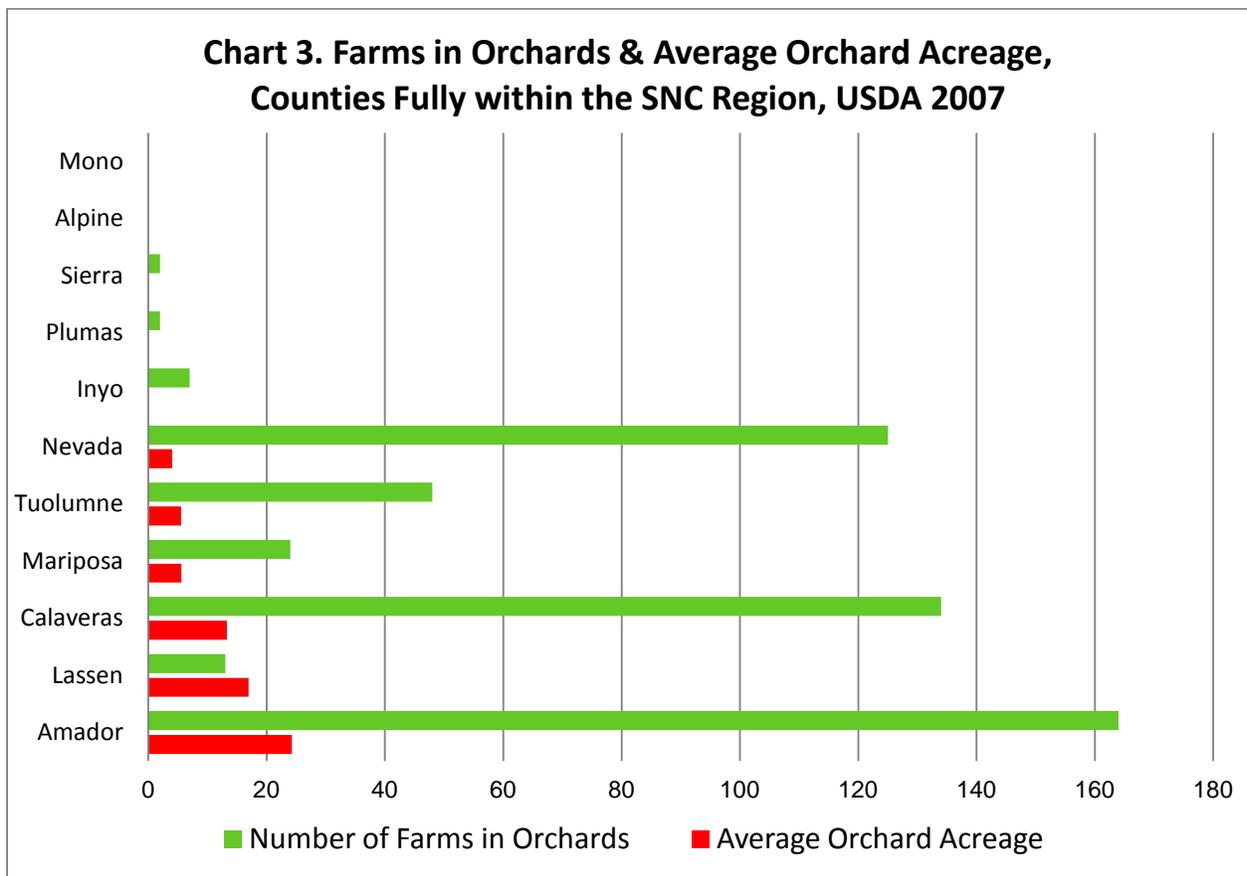
The Region supports a variety of different working landscapes, but the leading types of working landscapes are associated with livestock and forage production. The total number of working landscapes, number by common crop type and average acreage for the crops commonly grown in the Sierra in 2007 is found in Appendix B, which was collected from the 2007 Census of Agriculture. The 2007 and 2011 Crop Reports from the counties with available reports were examined to ascertain crop and animal production types in cases where the Census did not report these specifics⁷. Some key findings from the data include:

- Cattle and Calf Operations were one of the most common types of working landscapes in the Region. It was also one of the top ten grossing agricultural products in all 22 Counties in 2011. There were 1,407 Cattle and Calf Operations in the counties fully within the Region and 5,506 in the counties partly within the Region in 2007. Counties in the South Subregion dominated with 2,574 operations; many of these were located in the foothills of the southern Sierra where the vegetation mapping shows a predominance of potential ranch land. California as a whole had 16,638 Cattle and Calf operations.
- Ranches and field crops were more common than fruit, nut, and vegetable crop farms in the counties within the Region in 2007. The type of farms present in each county was closely associated to the availability of irrigated water. As shown in Chart 1, Mariposa County had the least amount of irrigated water available and also has the smallest acreage of crop types.
- Forage production is one of the more common agricultural practices in the counties fully within the Region, which complements the large number of ranches. Of the counties partly within the Region, Modoc and all the counties in the South Subregion had both the largest average acreage in forage as well as the largest number of farms producing forage.
- Significant regional differences exist in the average acreage and number of orchards (fruit tree and vineyard crops) in the Region. Counties in the South Subregion were the largest nut and

⁷ Modoc County has not produced a Crop Report since 2008 and does not have their past reports available. Therefore, the California Department of Food and Agriculture's (CDFA) California Agricultural Statistical Data was examined to acquire statistics on Modoc County as well as Statewide trends (California Department of Food and Agriculture, 2013).

grape producing regions of the country. This Subregion had 9,538 farms in orchards compared to 3,082 farms in orchards in the remaining counties in the Region. However, the majority of these orchards are found outside the Region in the San Joaquin Valley. As seen in Chart 3, looking at counties fully within the Region, orchards were most common in the South Central Subregion and their average acreage was small.

- The number of farms with harvested croplands (i.e. fruit, nut, vegetable and forage crops) in the counties fully within the Region in 2007 was 1,001, which is significantly different from the 15,875 farms with harvested cropland in the counties partly within the Region. Of the counties fully within the Region, Lassen County had by far the greatest number of harvested acres (46,908) and Mariposa County had the smallest number of harvested acres (286). The harvested cropland values were in alignment with the irrigated acres for the respective counties. Counties that had access to irrigated acres had more harvested cropland. Once again, counties in the South Subregion led the counties partly in the Region in the number of harvested acres. These counties made up 34 percent of the State's total harvested acres, which was over 7.6 million. Fresno County had 978,948 harvested acres, which made up 25 percent of the County's total land area.



Economic Productivity

Total Agricultural Commodities Sold

As shown in Table 1, the counties fully within the Region contributed over \$317 million to the State's total gross agricultural production (both farms and ranches) of \$43.5 billion in 2011, while the counties partly within the Region produced almost \$21 billion. Lassen, Mono and Mariposa Counties led the total gross value of agricultural products of the counties fully within the Region. Kern, Fresno, Madera and Tulare Counties, all of which extend west into the San Joaquin Valley outside of the Region, made up 95% of the total gross value of agricultural products from the counties partly within the Region.

Appendix C provides the leading commodities by county, the Cattle and Calf and Hay and Pasture Sales, Fruit, Nut and Vegetable Sales, and number of farm and ranch operators.

Table 1. Total Agricultural Production and Statewide County Rank		
	Statewide Rank	Total Agricultural Production
Counties Fully within the Region		
Lassen	39	\$89,539,000
Mono	44	\$53,068,000
Mariposa	48	\$30,975,000
Amador	49	\$28,511,000
Tuolumne	51	\$22,721,000
Plumas	52	\$20,019,000
Calaveras	53	\$19,637,000
Nevada	54	\$14,924,000
Alpine	57	\$5,311,000
Sierra	56	\$6,200,000
Counties Partly within the Region		
Fresno	1	\$6,884,582,000
Tulare	2	\$5,629,264,000
Kern	3	\$5,364,363,000
Madera	12	\$1,569,239,000
Butte	17	\$635,707,000
Tehama	29	\$245,672,000
Yuba	30	\$207,984,000
Modoc	37	\$107,009,000
Shasta	40	\$89,060,000
Placer	43	\$62,304,000
El Dorado	47	\$31,338,000
Inyo	50	\$26,271,000

Source: California Agricultural Statistics Review, 2011

While geography, topography and environmental conditions largely dictate the type of agricultural production that can occur within the Region, irrigation is one of the most important drivers of overall agricultural productivity. Lassen and Mono Counties were the top grossing agricultural counties fully within the Region in 2011, and they also had the highest irrigated water use⁸ in 2005 (Kenny, Barber, Hutson, Linsey, Lovelace, & Maupin, 2009). As shown in Table 1, all of the counties fully within the Region rank at the bottom of counties statewide in terms of total gross agricultural production. The number of irrigated acres in these counties in 2005 was small compared to the rest of the State (194,870 acres for counties fully within the Sierra compared to 9,050,310 acres Statewide) and decreased from north to south. Fresno, Kern, Tulare, and Madera Counties had the highest irrigated water use, respectively, and had the largest crop sales.

⁸ The 2005 irrigated water use data can be fairly compared to the economic production values of 2011 as significant shifts have not occurred in the last ten years regarding irrigated water use in the Sierra.

Leading Agricultural Sales

Key findings include:

- Cattle and Calves and Hay and Pasture operations were the leading agricultural sales in the counties fully within the Region. In these counties, the total sales of these two products was over \$223 million or 74 percent of the total gross agricultural production for counties fully within the Region in 2011. The exception was Amador County where the top grossing crop was wine grapes. Cattle and Calves or overall Livestock Products were one of the top ten grossing commodities for all 22 counties in the Region.
- The number one agricultural commodity for both Lassen and Mono Counties was Hay and Pasture (irrigated) sales, which placed these two counties in the top of all counties fully within the Region in terms of total gross agricultural production. Between 2010 and 2011, the value of Hay sales increased by 69 percent, which significantly benefited the total agricultural production for Lassen and Mono Counties.
- The contribution of fruit, nut and vegetable crops to the total gross value of all agricultural commodities was very low in the counties fully within the Region compared to the counties partly within the Region.
- In the South Subregion, Almond and Milk products were either the first and/or second leading sales in each county. The value of both Almond and Milk products has increased significantly in the last five years due to international demand and exports from California.

Net Farm Income & Government Payments

As shown in Table 2, the difference in total net farm and ranch income between the counties fully within the Region, (\$6,564,000), compared to the counties partly within the Region (\$2,953,987,000) is staggering. All of the counties in the South Central Subregion had negative net cash farm and ranch income based on the 2007 Census data and these counties received the lowest amount of government payments with the exception of Sierra County. They also had the lowest irrigated water use of all the counties within the Region. Lassen and Mono Counties had the largest net cash farm and ranch incomes among counties fully within the SNC Region. These counties also had the highest irrigated water use among these counties in 2005 and were thus able to produce more hay and pasture crops, which contributed to higher crop values and overall improved net cash performance in 2007.

Looking at the counties partly in the Region, Tulare, Kern, and Fresno Counties had the largest net cash farm and ranch income and received the largest government payments. They also had the highest irrigated water use. Placer, Shasta, and El Dorado Counties all had negative net cash farm income and they received the smallest amount of government payments of the counties partly within the Region; they also had the lowest irrigated water use of all the counties partly within the Region. Government payments may make a difference in whether or not the net cash farm income per farm is profitable, but use of irrigation also appears to be an important component of net cash farm income.

Table 2. Net Cash Farm and Ranch Income and Government Payments by County

	Net Cash Income	Average Net Cash Income	Average Government Payment	Total Government Payments
Counties fully within the SNC Region				
Alpine	Not reported	Not reported	Not reported	Not reported
Lassen	\$5,293,000	\$11,531	\$349	\$160,000
Mono	\$3,268,000	\$38,901	Not reported	Not reported
Sierra	\$145,000	\$2,899	\$940	\$47,000
Plumas	\$21,000	\$146	Not reported	Not reported
Mariposa	-\$1,005,000	-\$3,326	\$434	\$131,000
Tuolumne	-\$2,195,000	-\$5,997	\$101	\$37,000
Amador	-\$2,299,000	-\$4,800	\$190	\$91,000
Calaveras	-\$2,731,000	-\$4,328	\$78	\$49,000
Nevada	-\$7,061,000	-\$10,233	\$329	\$227,000
Totals	(\$6,564,000)	\$24,793	\$346	\$504,767
Counties partly within the SNC Region				
Tulare	\$871,303,000	\$166,279	\$3,881	\$20,335,000
Kern	\$869,363,000	\$410,658	\$12,917	\$27,346,000
Fresno	\$798,561,000	\$131,321	\$4,068	\$24,737,000
Madera	\$273,852,000	\$160,335	\$2,698	\$4,608,000
Butte	\$104,630,000	\$51,089	\$7,217	\$14,780,000
Tehama	\$25,791,000	\$14,721	\$608	\$1,065,000
Yuba	\$23,181,000	\$27,997	\$6,233	\$5,161,000
Modoc	\$14,408,000	\$32,161	\$1,842	\$825,000
Inyo	\$3,809,000	\$40,524	Not reported	Not reported
Placer	-\$3,585,000	-\$2,409	\$1,907	\$2,838,000
Shasta	-\$6,084,000	-\$4,130	\$171	\$252,000
El Dorado	-\$10,372,000	-\$8,180	\$118	\$149,000
Totals	\$2,964,857,000	\$1,020,366	\$3,787	\$1,989,376
Source: 2007 Census of Agriculture; USDA 2009				

Number of Farm and Ranch Operators

In 2007, there were 14,485 farm and ranch operators in all 22 counties fully and partly in the Region who stated that farming or ranching was their primary occupation, while 13,270 farm and ranch operations identified another occupation as their primary occupation. Sierra County led the counties fully within the Region with the most farm operators with their primary occupation as farming. The majority of farm operators in Alpine, Nevada, El Dorado, Mariposa, and Placer Counties had a different primary occupation other than farming. These Counties also had the lowest net farm income for agriculture and ranches as reported in Table 2.

Preserving Working Landscapes in the Sierra

Working landscapes are one of the most common land uses on private land in the Sierra, particularly in the foothills of the western Sierra and the valleys of the eastern Sierra. Farms and ranches contribute to the overall economic wellbeing and preserve the culture and aesthetic of the Region. They provide and protect habitats for a number of native species and impart valuable ecosystem services to the State.

Ranches are generally larger than farms and preserve a diversity of native landscapes. The ranches in the Sierra provide enormous ecosystem services beyond the calculated agricultural production reported. These working landscapes assist in preserving oak woodlands, store carbon, cycle nutrients, capture runoff, and provide habitat for many sensitive species. Ranches are of critical importance to the conservation of many habitats and the species dependent upon them in the foothills. Wetzler et al. 2012 found that 72 percent of the Williamson Act contracts in rangeland in California are critical for conservation, and the majority of these lands occur in the foothills that surround the San Joaquin and Sacramento Valleys. Farms produce food and also provide critically important habitats such as ephemeral wetlands and streams for a number of rare, threatened and endangered species.

While many programs assist in the preservation of working landscapes (see Appendix D: Programs that Aid in the Preservation of Working Landscapes), working landscapes face significant threats. The Farmland Mapping and Monitoring Program (FMMP) within the Department of Conservation monitors changes in agriculture and rangeland in counties in California where working landscapes make up a significant proportion of private lands. Chart 13 in Appendix D shows the conversion of farms and ranches to other land uses between 2002 and 2008 for the counties the FMMP monitors in the Region⁹. Kern and Fresno counties experienced the largest change in acreage converted to other land uses during this time. However, Placer and El Dorado Counties had the greatest percent change in conversion. Mariposa and Sierra Counties are the only counties fully within the Region that are monitored by the FMMP and these counties uniformly experienced very little land use conversion from working landscapes (primarily ranches) since 2002. In contrast, Fresno, Tulare, and Kern Counties had more conversion of farms to other land uses than ranches to other land uses.

The largest working landscape conservation program in the Sierra and the State is the Land Conservation Act of 1965 or the Williamson Act, which allows local governments in California to enter into contracts with private landowners who agree to keep land in agricultural and related open space uses in return for a reduced property tax assessment. The State provided local governments with an annual subvention for the lost property tax revenues until Fiscal Year 2008/2009 when revenue shortfalls resulted in the program being reduced to \$1,000 per year, statewide.

Since California reduced the subvention funding to local governments for the Williamson Act, the Williamson Act has been continued by participating counties through Assembly Bill 1265 (2011). This law allows local governments to continue Williamson Act contracts while being able to collect some of the foregone tax revenues¹⁰. This law went into effect in 2011 and thus far all the SNC counties that operated Williamson Act programs have continued accepting new contracts with the exception of

⁹ The first year the mapping program had a standardized system to consistently record change within and across the counties was in 2002; therefore, the 2002 to 2008 time period was used to evaluate the conversion of working landscapes to other land uses.

¹⁰ Counties may reduce contract periods by 10 percent and increase assessed value by 10 percent or the difference between Proposition 13 and the Williamson Act assessed land values.

Modoc and Plumas Counties¹¹. It is unclear if Sierra counties will be able to renew their existing contracts once the contract periods end. If the counties who operate Williamson Act programs are unable to maintain their programs, some research indicates that ranchers who have low household income and are wholly dependent upon their farm operation for their income will likely feel compelled to sell their ranches. Researchers (Wetzel, Lacher, Swezey, Moffitt, & Manning, 2012) surveyed ranch owners regarding how the loss of the Williamson Act would affect whether they could continue to own and operate their ranches. The researchers concluded that 71 percent of ranchers who completed the survey had annual profits less than or equal to their Williamson Act tax savings in 2009. If the Williamson Act program were eliminated in their county, 37 percent of the ranchers who responded to the survey would attempt to sell some or all of their land.

Table 3 shows the acreage of Williamson Act contracts in participating counties within the Region and provides the change in prime (lands in crop production) and non-prime (lands in native pasture/rangeland) contracts between 2006 and 2011. In 2011, there were 994,201 acres or approximately 70 percent of the working landscapes in counties fully within the Region in Williamson Act contracts. In the counties partially within the Region, there were 5,972,286 acres or about 71 percent of the working landscapes in Williamson Act contracts.

Table 3. Williamson Act Program in the SNC, 2011 Department of Conservation

County	Total Williamson Act Acreage 2011	Change in Prime Acres, 2006-2011	Percent Change in Prime Acres	Change in Non-Prime Acres, 2006-2011	Percent Change in Non-Prime, 2006-2011	Program
Modoc	127,629	17,764 acres may not be renewed		109,865 acres may not be renewed		New Contracts Not Accepted
Lassen	315,031	472	3%	428,978	4%	Active
Shasta	187,179	6,846	41%	3,222	2%	Active
Butte	220,175	4,276	4%	155	<1%	Active
Plumas	78,400	5,576 acres may not be renewed		72,824 acres may not be renewed		New Contracts Not Accepted
Sierra	34,818	-1	<1%	-1,725	-5%	Active
Tehama	789,341	2,191	4%			Active
El Dorado	34,021	168	8%	451,228	-2%	Active

¹¹ Inyo and Yuba Counties do not participate in the Williamson Act program.

Nevada	4,237	18	1%	403	11%	Active
Placer	41,822	716	5%	26,559	-9%	Active
Yuba	N/A	N/A	N/A	N/A	N/A	No program
Amador	92,777	266	5%	-2,369	<-1%	Active
Calaveras	144,018	-116	-20%	26,293	22%	Active
Mariposa	207,321	No acres reported	No change	-96,824	1%	Active
Tuolumne	121836 (2012 data)	2,221	2%; however 15,719 in non-renewal	736	1%	Active
Alpine	0	-	0%	-		Active-yet no existing contracts
Inyo	N/A	N/A	N/A	N/A	N/A	No Program
Mono	13,110	No change	No change	No non- prime acres enrolled		Active
Fresno	1,465,277	-14,505	-1%	-14,971	<-1%	Active
Kern	1,540,204	-6,673	-1%	-70,908	<-1%	Active
Madera	476,070	-3,902	-2%	-95,043	-1%	Active
Tulare	1,086,331	-655	<0%	367	<1%	Active

Several counties in the Sierra are currently discussing whether they can afford to continue to operate Williamson Act Programs. If additional counties are unable to continue accepting new contracts or renew existing contracts, the Sierra could experience conversion of its working landscapes to other land uses, particularly ranches as they are the dominant working landscape and occupy large areas of private land.

In addition to the loss of State subvention support, Senate Bill 618 authorizes property owners in Williamson Act contracts, under specific circumstances, to rescind their contract and simultaneously enter into a Solar-Use Easement. This contract would require that the solar photovoltaic facilities are used on the property for a term no less than 20 years. The program is not yet in operation, the Department of Conservation is reviewing comments received and will be implementing the program soon. It is unclear how agriculture and rangeland contracts in the Sierra would be affected by this program.

The preservation and restoration of working landscapes is largely dependent upon the economic health of individual property owners. Without programs such as the Williamson Act and other preservation and restoration initiatives, many landowners cannot afford to maintain and sustain their working landscapes in the Sierra.

Contact Information

For more detailed information on the individual indicators or explanation of their development, please contact:

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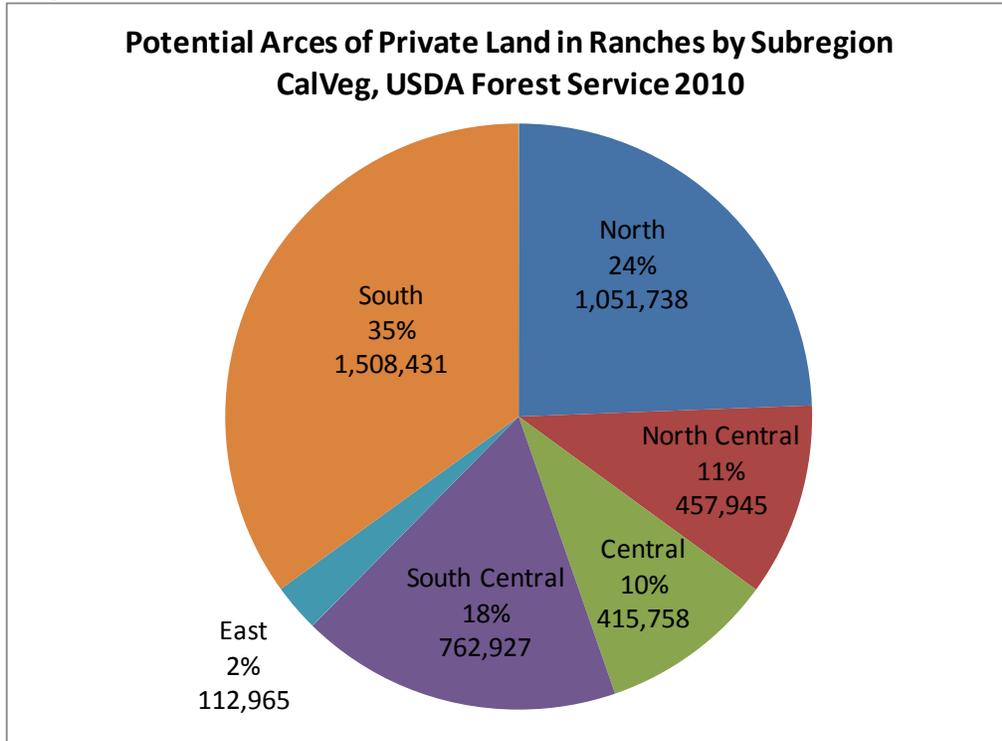
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Appendix A - Area in Agriculture and Ranches, and Acres by Common Crop Types

Graph 1



Graph 2

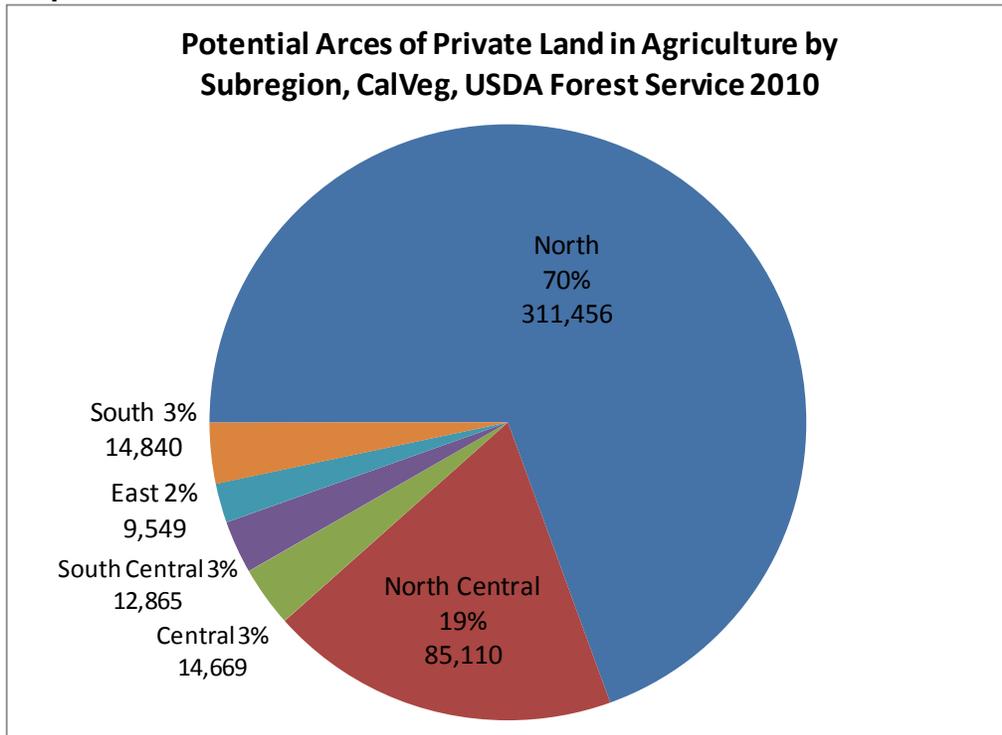


Table 4. Area in Agriculture & Ranches, 2007 Census of Agriculture

Counties	Subregion	Acres in Private Land	Acres of Agriculture & Ranches, Counties Fully in the Region	Acres of Agriculture & Ranches, Counties Partly in the Region	Acres in Agriculture, Counties Fully in the Region	Acres in Agriculture, Counties Partly in the Region	Acres in Ranches, Counties Fully in the Region	Acres in Ranches, Counties Partly in the Region
Modoc	North	974,713		597,740		145,784 (15.0%)		451,956 (46.4%)
Lassen	North	1,245,490	459,126		82,567 (6.6%)		376,559 (30.2%)	
Shasta	North	1,448,775		390,812		40,180 (2.8%)		350,632 (24.2%)
Tehama	North Central	1,390,771		532,206		94,214 (6.8%)		437,992 (31.5%)
Plumas	North Central	471,882	120,253		18,487 (3.9%)		101,766 (21.6%)	
Butte	North Central	852,059		373,786		222,713 (26.1%)		151,073 (17.7%)
Sierra	North Central	170,210	28,782		6,236 (3.7%)		22,546 (13.2%)	
Yuba	Central	334,818		160,898		71,009 (21.2%)		89,889 (26.8%)
Nevada	Central	400,428	70,167		7,301 (1.8%)		62,866 (15.7%)	
Placer	Central	556,460		132,221		50,334 (9.0%)		81,887 (14.7%)
El Dorado	Central	589,477		107,080		15,275 (2.6%)		91,805 (15.6%)
Amador	South Central	291,591	163,482		15,993 (5.3%)		147,489 (50.7%)	
Calaveras	South Central	511,218	201,026		12,097 (2.4%)		188,929 (37.0%)	

Tuolumne	South Central	356,303	117,085		5,622 (1.6%)		111,463 (31.3%)	
Mariposa	South Central	439,921	212,524		4,377 (1.0%)		208,147 (47.3%)	
Alpine	East	30,694	1,810		490 (1.6%)		1,320 (4.3%)	
Mono	East	142,695	44,610		10,479 (7.3%)		34,131 (23.9%)	
Inyo	East	540,938		292,552		8,261 (1.5%)		284,291 (52.6%)
Madera	South	865,928		679,729		290,683 (33.6%)		389,046 (44.9%)
Fresno	South	2,308,762		1,636,224		1,102,163 (47.7%)		534,061 (23.1%)
Tulare	South	1,548,526		1,168,684		638,789 (41.3%)		529,895 (34.2%)
Kern	South	4,023,790		2,361,765		942,827 (23.4%)		1,418,938 (35.3%)
Total Acres			1,418,865	8,433,697	163,649	3,622,232	1,255,216	4,811,465

Table 5. Acres of agricultural crops grown in counties of the SNC Region, 2007 Census of Agriculture

County	Acres in Orchards, Counties Fully in the Region	Acres in Orchards, Counties Partly in the Region	Acres of Barley for Grain, Counties Fully in the Region	Acres of Barley for Grain, Counties Partly in the Region	Acres of Forage for Hay and Haylage etc., Counties Fully in the Region	Acres of Forage for Hay and Haylage etc., Counties Partly in the Region
Amador	3,975				2,930	
Calaveras	1,782				786	
Tuolumne	264				321	
Lassen	220		838			
Mariposa	134					
Inyo		31				3,630
Fresno		471,825		6,516		96,152
Alpine					490	
Sierra					2,406	
Plumas					7,654	
Mono					8,041	
Modoc		52		2,724		86,967
Nevada	548				1,787	
Placer		1,525				7,654
Shasta		1,761				13,509
El Dorado		3,954				697
Yuba		24,082				2,824
Tehama		37,442		1,790		17,552
Butte		90,083				5,957
Madera		191,155		171		43,842
Tulare		274,351		292		155,283
Kern		407,208		2,376		118,340

Table 5 Continued. Acres of agricultural crops grown in counties of the SNC Region

County	Acres in Oats for Grain, Counties Fully in the Region	Acres in Oats for Grain, Counties Partly in the Region	Acres in Vegetables Harvested for Sale, Counties Fully in the Region	Acres in Vegetables Harvested for Sale, Counties Partly in the Region
Amador			6	
Calaveras			56	
Tuolumne			7	
Lassen	77		411	
Mariposa			2	
Inyo		0		
Fresno		2,411		195,401
Alpine	0			
Sierra				
Plumas			8	
Mono				
Modoc				4,152
Nevada			62	
Placer				121
Shasta				151
El Dorado				88
Yuba				86
Tehama		149		59
Butte				258
Madera		1,842		4,678
Tulare		823		2
Kern		420		83,755

Table 5 Continued. Acres of agricultural crops grown in counties of the SNC Region

County	Acres of Wheat for Grain, Counties Fully in the Region	Acres of Wheat for Grain, Counties Partly in the Region	Acres of Winter Wheat for Grain, Counties Fully in the Region	Acres of Winter Wheat for Grain, Counties Partly in the Region
Amador				
Calaveras				
Tuolumne				
Lassen	750		77	
Mariposa				
Inyo		0		0
Fresno		33,006		21,352
Alpine	0		0	
Sierra				
Plumas				
Mono				
Modoc		4,502		2,161
Nevada				
Placer				
Shasta				
El Dorado				
Yuba				
Tehama		852		
Butte		2,499		
Madera		4,292		3,219
Tulare		22,213		18,733
Kern		40,593		27,473

Appendix B – Number of Farms and Ranches, Crop Type and Average Acreage per County

Table 6. Farm Number per County, 2007 Census of Agriculture

County	Number of Farms and Ranches, Counties Fully in the Region	Number of Farms and Ranches, Counties Partly in the Region
Alpine	7	
Amador	479	
Butte		2048
Calaveras	631	
El Dorado		1268
Fresno		6081
Inyo	94	
Kern		2117
Lassen	459	
Madera		1708
Mariposa	302	
Modoc		448
Mono	84	
Nevada	690	
Placer		1488
Plumas	142	
Shasta		1473
Sierra	50	
Tehama		1752
Tulare		5240
Tuolumne	366	
Yuba		983

Table 7. Number of Farms by Most Common Crop Type in the Region, 2007 Census of Agriculture

Counties	Farms in Cropland, Counties Fully in the Region	Farms in Cropland, Counties Partly in the Region	Farms in Orchards, Counties Fully in the Region	Farms in Orchards, Counties Partly in the Region	Farms with Vegetables Harvested for Sale, Counties Fully in the Region
Nevada	314		125		41
Calaveras	298		134		22
Lassen	275		13		9
Amador	236		164		6
Tuolumne	121		48		11
Mariposa	80		24		4
Plumas	57		2		5
Mono	41		No Data		No Data
Sierra	29		2		
Alpine	4		No Data		No Data
Modoc		327		7	
Inyo		43		7	
Yuba		483		248	
Tehama		1116		651	
Madera		1288		1023	
Shasta		749		273	
Butte		1574		1113	
Placer		726		296	
El Dorado		794		494	
Kern		1449		836	
Fresno		964		4008	
Tulare		4469		3671	

Table 7 Continued. Number of Working Landscapes by Most Common Crop Type in the Region

Counties	Working Landscapes with Vegetables Harvested for Sale, Counties Partly in the Region	Working Landscapes with Cattle and Calves Sold, Counties Fully in the Region	Working Landscapes with Cattle and Calves Sold, Counties Partly in the Region	Working Landscapes with Forage, Land Used for Hay and Haylage etc., Counties Fully in the Region	Working Landscapes with Forage, Land Used for Hay and Haylage etc., Counties Partly in the Region
Calaveras		237		21	
Lassen		170		176	
Amador		149		15	
Tuolumne		142		10	
Mariposa		146		3	
Plumas		49		22	
Mono		35		24	
Sierra		30		19	
Alpine		6		34	
Modoc	19		198		231
Inyo	5		39		14
Yuba	25		183		31
Tehama	28		479		163
Madera	30		301		121
Shasta	39		502		191
Butte	52		229		105
Placer	65		360		54
El Dorado	70		117		14
Kern	138		358		319
Nevada	150		28		
Fresno	559		597		356
Tulare	4414		721		487

Table 8. Cattle & Calves Operations in the Region, 2007 Census of Agriculture

Counties	Cattle & Calf Operations Counties Fully in the Region	Cattle & Calf Operations, Counties Partly in the Region
Calaveras	283	
Nevada	244	
Lassen	218	
Tuolumne	195	
Amador	183	
Mariposa	168	
Plumas	65	
Mono	38	
Sierra	28	
Alpine	6	
Tulare		940
Fresno		796
Tehama		670
Shasta		651
Placer		509
Kern		477
Madera		361
Butte		347
Yuba		257
Modoc		232
El Dorado		215
Inyo		51
Total	1428	5506

Chart 4. Farms in Forage and Average Forage Acreage per Farm, Counties Fully within the SNC Region, 2007 Census of Agriculture

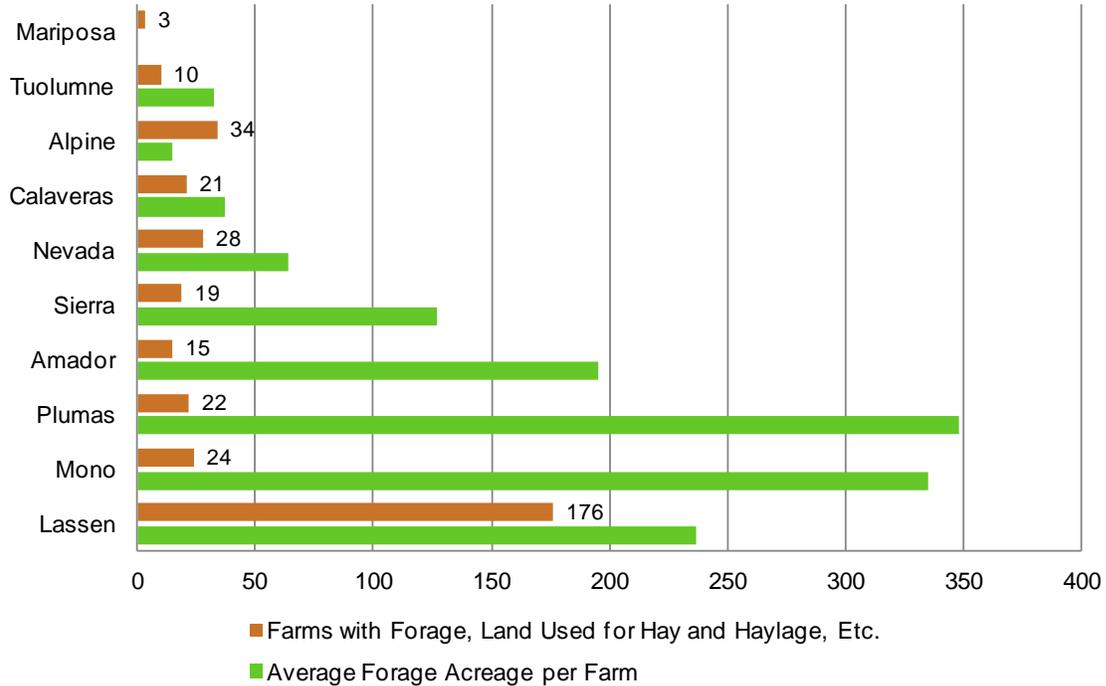


Chart 5. Farms in Forage and Average Forage Acreage per Farm, Counties Partly within the SNC Region, 2007 Census of Agriculture

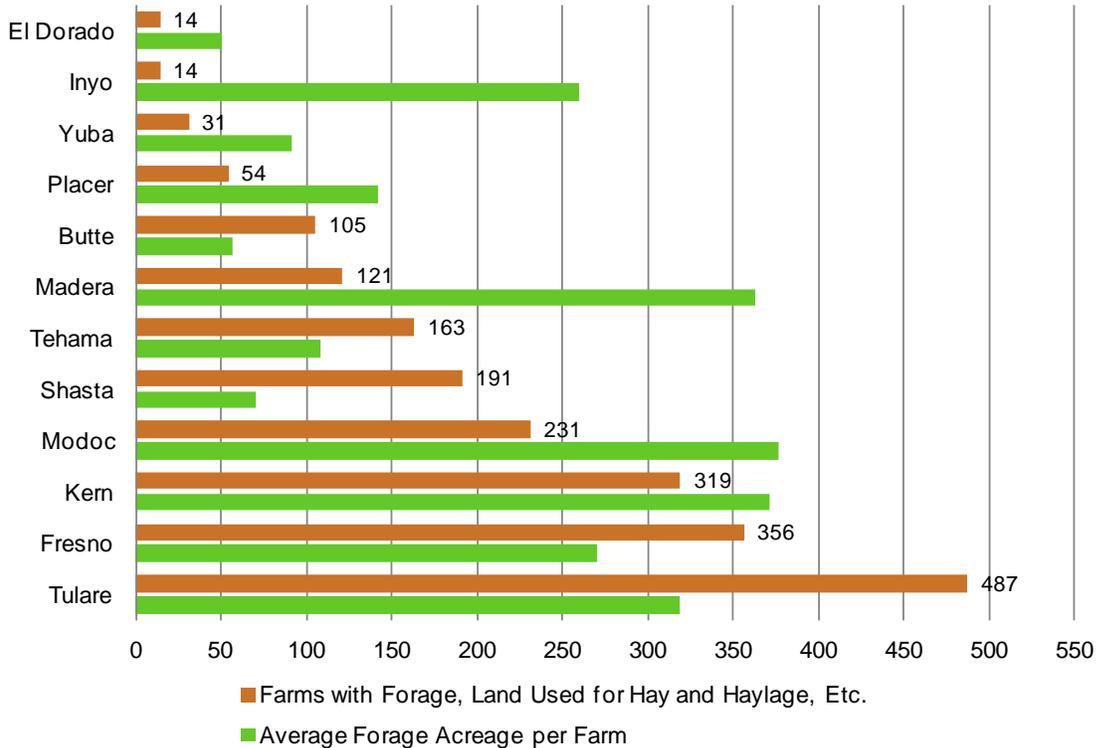


Chart 6. Farms in Orchards and Average Orchard Acreage for Counties Fully within the SNC excluding the South Subregion, 2007 Census of Agriculture

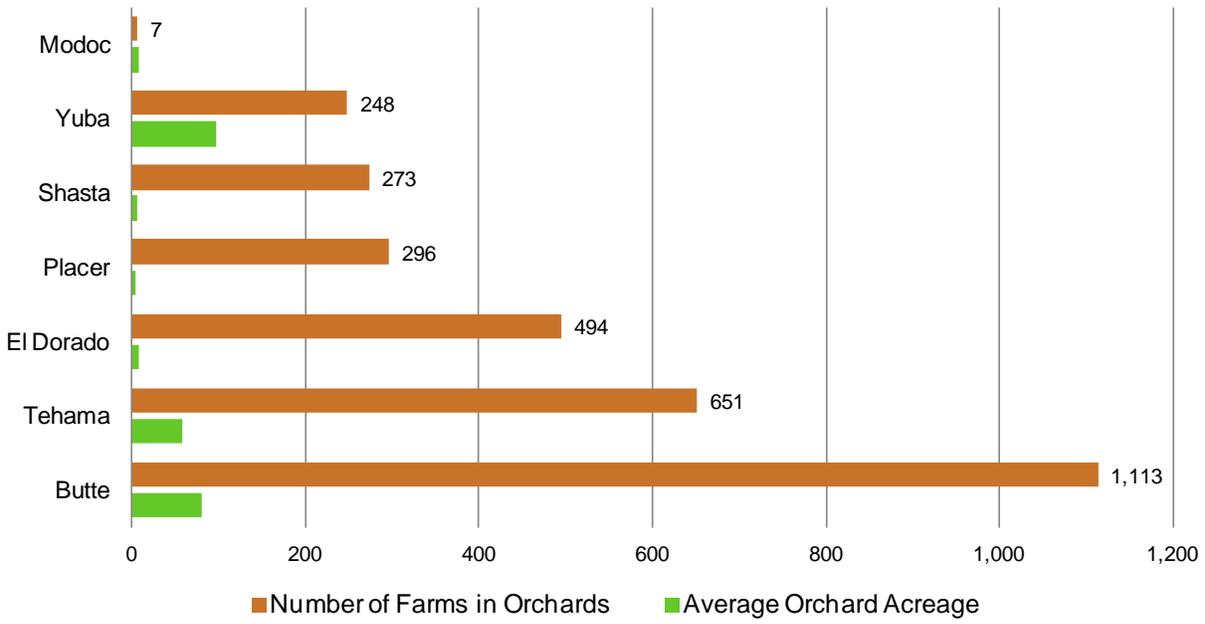


Chart 7. Farms in Orchards and Average Orchard Acreage for the South Subregion, 2007 Census of Agriculture

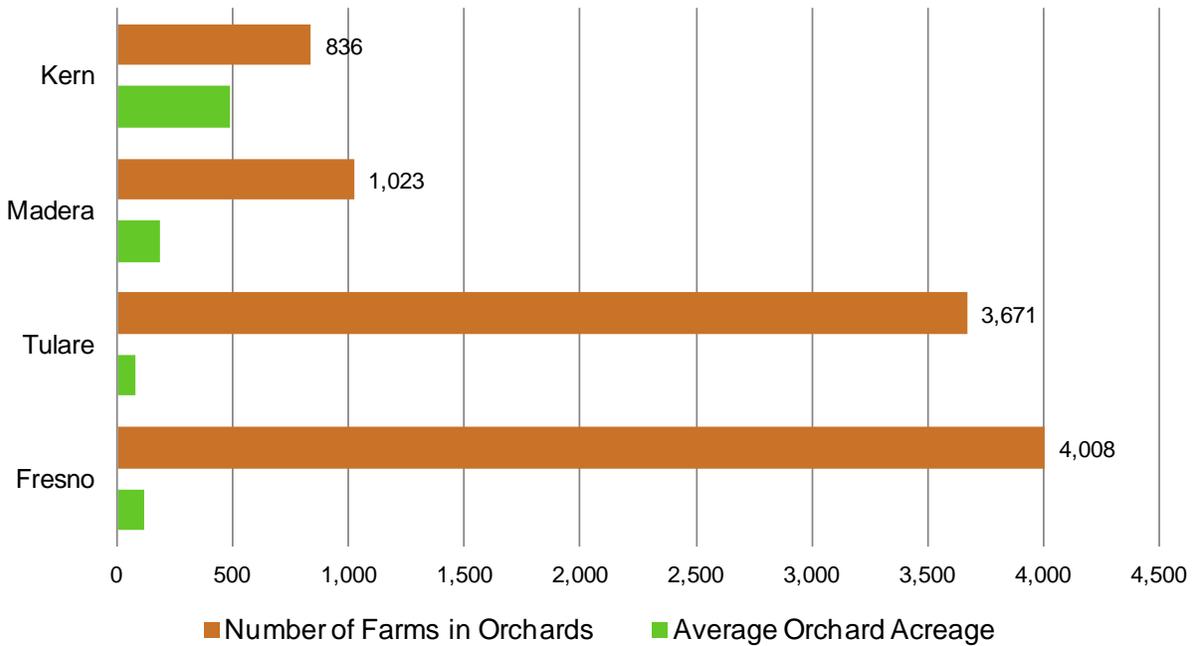


Chart 8. Farms with Vegetables and Average Acreage of Vegetable Crops, Counties Fully within the SNC, 2007 Census of Agriculture

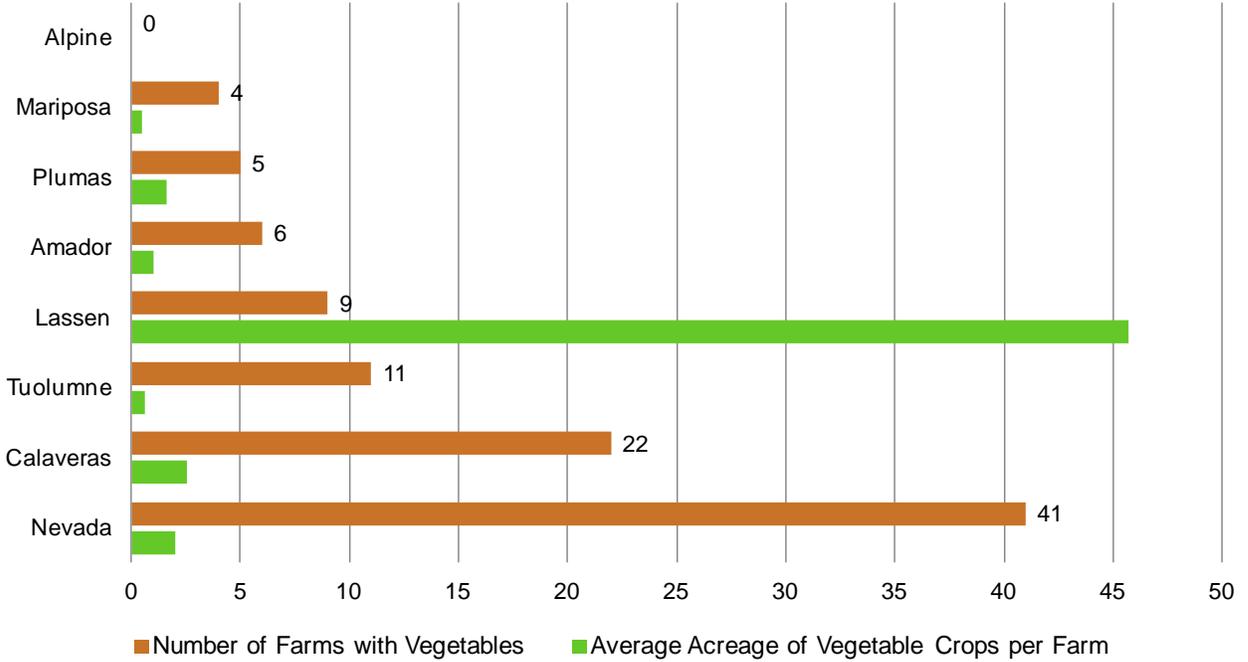


Chart 9. Farms with Vegetables and Average Acreage of Vegetable Farms, Counties Partly within the SNC, 2007 Census of Agriculture

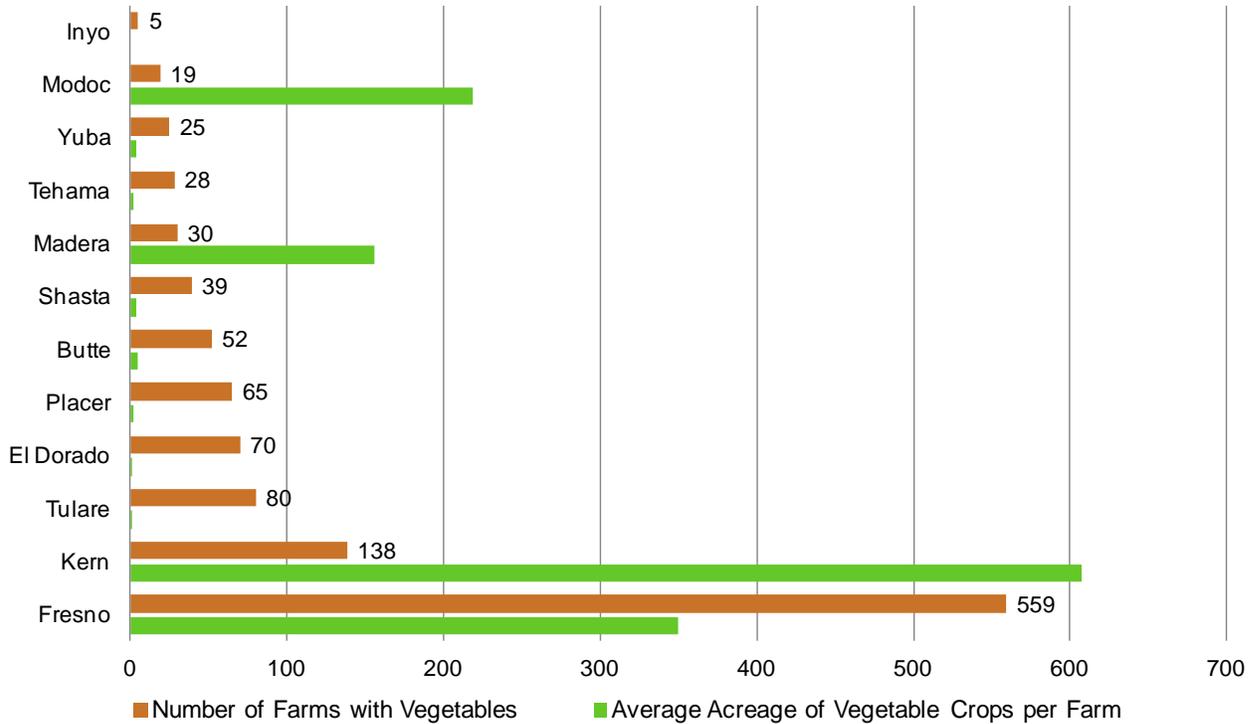


Chart 10. Farms in Harvested Cropland and Average Acreage of Harvested Cropland, Counties Fully within the SNC, 2007 Census of Agriculture

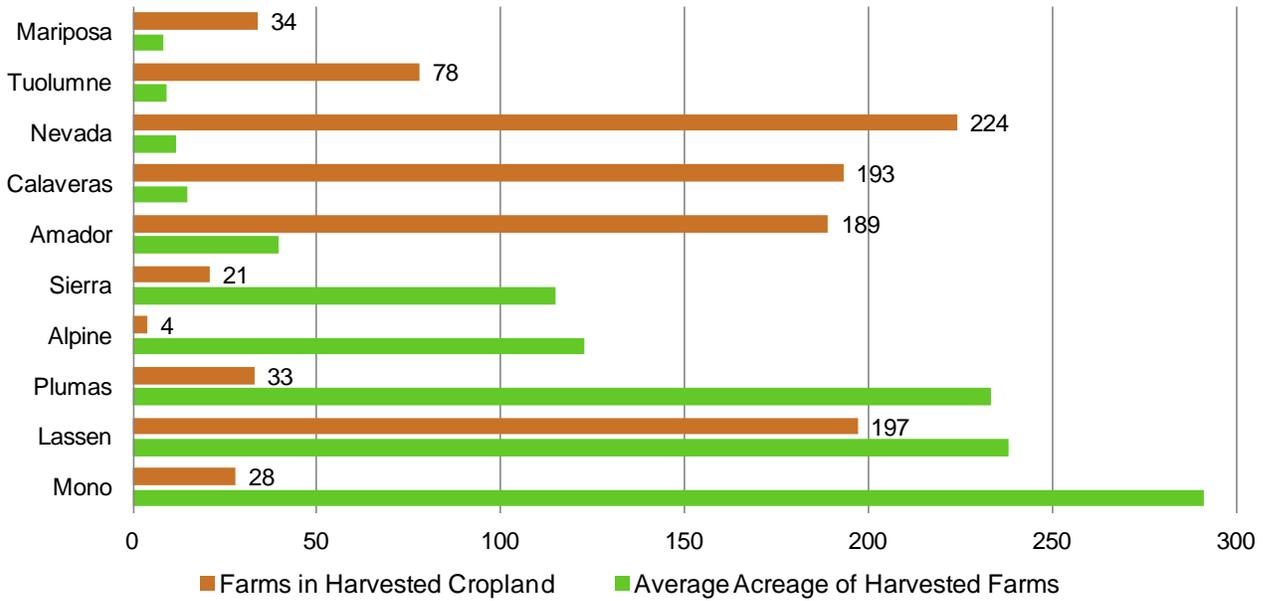
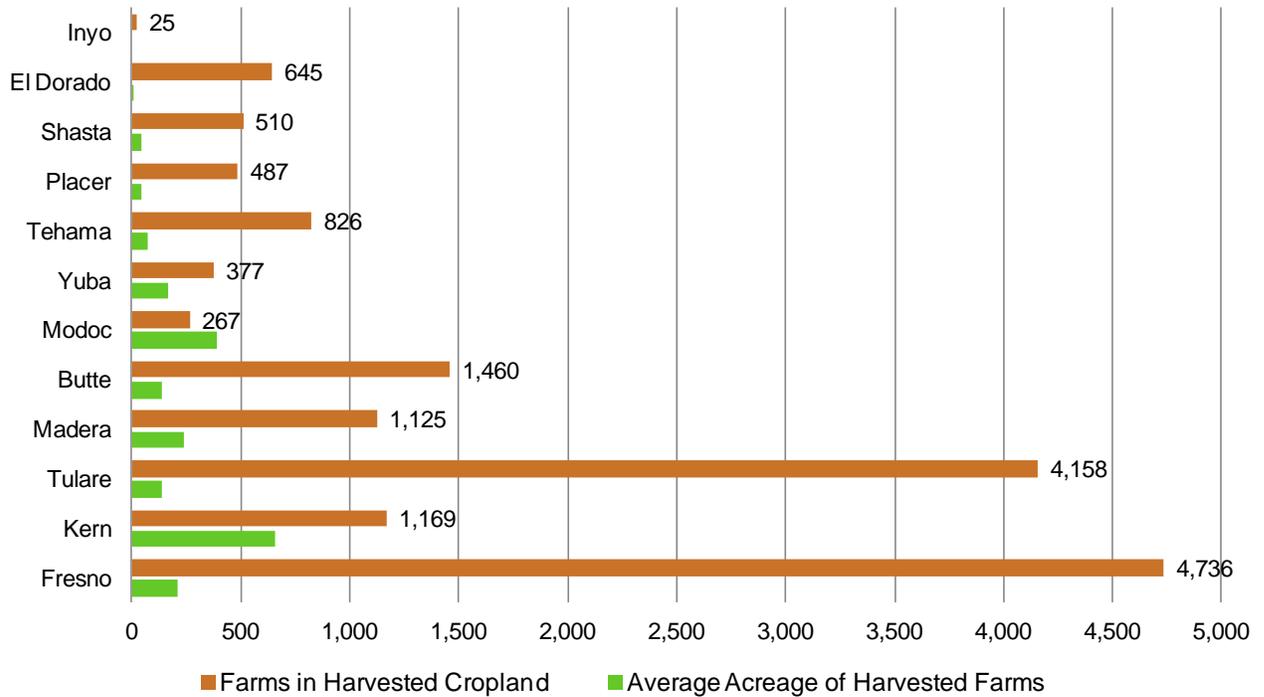


Chart 11. Farms in Harvested Cropland and Average Acreage of Harvested Cropland, Counties Partly within the SNC, 2007 Census of Agriculture



Appendix C - Leading Commodities by County and Statewide Rank and Operator Information

Table 9. Leading Commodities for Gross Value of Agricultural Production by SNC County, California Agricultural Statistics Review 2011, including Forest Products

<p>Alpine, East Subregion, (Fully in Region)</p> <ol style="list-style-type: none"> 1. Cattle & Calves, Unspecified-\$2,659,000 2. Pasture, Range-\$2,394,000 3. Pasture, Irrigated-\$188,000 4. Hay, Other, Unspecified-\$70,000 	<p>Amador, South Central Subregion, (Fully in Region)</p> <ol style="list-style-type: none"> 1. Grapes, Wine-\$11,676,000 2. Cattle, Calves Only-\$8,624,000 3. Pasture, Range-\$3,450,000 4. Vegetables, Unspecified-\$1,262,000 5. Hay, Grain-\$728,000 6. Livestock, Unspecified-\$587,000 7. Hay, Alfalfa-\$419,000 8. Field Crops, Unspecified-\$384,000 9. Goats & Kids, Unspecified-\$381,000 10. Walnuts, English-\$234,000
<p>Butte, North Central Subregion, (Partly in Region)</p> <ol style="list-style-type: none"> 1. Walnuts, English-\$218,680,000 2. Rice, Milling-\$141,515,000 3. Almonds, All-\$129,000,000 4. Plums, Dried-\$33,291,000 5. Nursery Products-\$21,728,000 6. Rice, Seed-\$15,340,000 7. Fruit & Nuts, Unspecified-\$11,169,000 8. Cattle & Calves, Unspecified-\$8,913,000 9. Peaches, Clingstone-\$7,975,000 10. Field Crops, Unspecified-\$7,076 	<p>Calaveras, South Central, (Fully in Region)</p> <ol style="list-style-type: none"> 1. Cattle & Calves, Unspecified-\$7,600,000 2. Pasture, Range-\$3,021,000 3. Grapes, Wine-\$2,916,000 4. Poultry, Unspecified-\$2,894,000 5. Walnuts, English-\$1,360,000 6. Nursery Products, Misc-\$300,000 7. Pasture, Irrigated-\$260,000 8. Vegetables, Unspecified-\$225,000 9. Fruits & Nuts-\$204,000 10. Sheep & Lambs, Unspecified-\$155,000
<p>El Dorado, Central Subregion, (Partly in Region)</p> <ol style="list-style-type: none"> 1. Apple, All-\$6,730,000 2. Grapes, Wine-\$5,137,000 3. Cattle & Calves, Unspecified-\$5,019,000 4. Pasture, Range-\$4,194,000 5. Christmas Trees, Cut Greens-\$2,049,000 6. Nursery Products, Misc-\$1,818,000 7. Livestock, Unspecified-\$1,342,000 8. Pears, Bartlett-\$1,113,000 9. Pears, Asian-\$743,000 10. Apiary Prod, Pollination Fees-\$712,000 	<p>Fresno, South Subregion, (Partly in Region)</p> <ol style="list-style-type: none"> 1. Almonds, All-\$772,616,000 2. Milk, Market, Fluid-\$503,540,000 3. Livestock, Unspecified-\$498,041,000 4. Grapes, Raisin-\$467,280,000 5. Tomatoes, Processing-\$365,750,000 6. Grapes, Wine-\$303,628,000 7. Garlic All-\$285,297,000 8. Cotton Lint, Pima-\$277,865,000 9. Tomatoes, Fresh Market-\$266,570,000 10. Grapes, Table-\$190,869,000
<p>Inyo, East Subregion, (Partly in Region)</p> <ol style="list-style-type: none"> 1. Hay, Alfalfa-\$4,797,000 2. Cattle, Steers-\$4,698,000 3. Cattle, Heifers-\$3,718,000 	<p>Kern, South Subregion (Partly in Region)</p> <ol style="list-style-type: none"> 1. Milk, Market, Fluid-\$739,298,000 2. Almonds, All-\$690,610,000 3. Grapes, Table-\$548,551,000

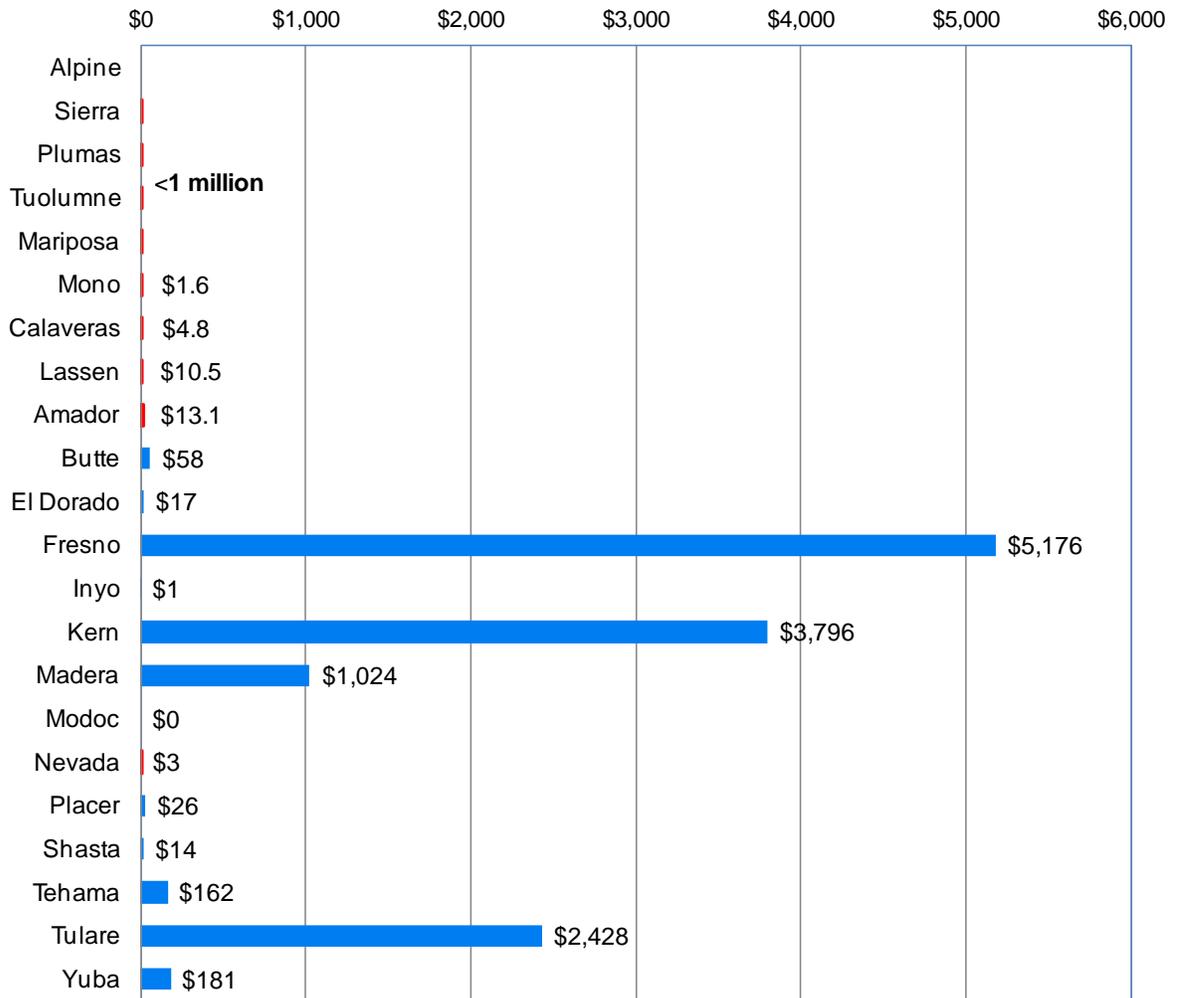
<ul style="list-style-type: none"> 4. Apiary Products, Honey-\$2,828,000 5. Cattle, Stockers, Feeders-\$2,342,000 6. Cattle, Cows-\$2,200,000 7. Hay, Other, Unspecified-\$1,535,000 8. Nursery, Turf-\$1,112,000 9. Pasture, Range-\$1,092,000 10. Sheep & Lambs, Unspecified-\$950,000 	<ul style="list-style-type: none"> 4. Vegetables, Unspecified-\$459,219,000 5. Pistachios-\$338,527,000 6. Cattle & Calves, Unspecified-\$338,540,000 7. Hay, Alfalfa-\$226,601,000 8. Oranges, Navel-\$241,979,000 9. Cherries, Sweet-\$221,121,000 10. Tangerines & Mandarins-\$198,437,000
<p>Lassen, North Subregion, (Fully in Region)</p> <ul style="list-style-type: none"> 1. Hay, Alfalfa-\$24,231,000 2. Hay, Other Unspecified-\$21,225,000 3. Vegetables, Unspecified-\$10,000,000 4. Cattle, Steers-\$7,298,000 5. Cattle, Milk Cows-\$5,272,000 6. Cattle, Heifers-\$5,151,000 7. Hay, Grain-\$3,335,000 8. Pasture, Irrigated-\$3,036,000 9. Cattle, Calves Only-\$2,900,000 10. Pasture, Range-\$1,837,000 	<p>Madera, South Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Almonds, All-\$382,817,000 2. Milk, Market, Fluid-\$325,946,000 3. Grapes, Wine-\$162,698,000 4. Pistachios-\$113,098,000 5. Grapes, Raisin-\$88,027,000 6. Grapes, Table-\$49,956,000 7. Cattle & Calves, Unspecified-\$45,424,000 8. Cattle, Dairy Heifers, RPLCMT-\$40,200,000 9. Fruit & Nuts, Unspecified-\$39,919,000 10. Hay, Alfalfa-\$36,421,000
<p>Mariposa, South Central Subregion, (Fully in Region)</p> <ul style="list-style-type: none"> 1. Cattle & Calves, Unspecified-\$18,776,000 2. Pasture, Range-\$5,800,000 3. Livestock Products, Misc-\$2,696,000 4. Poultry, Unspecified-\$1,729,000 5. Livestock, Unspecified-\$759,000 6. Fruit & Nuts, Unspecified-\$457,000 7. Sheep & Lambs-\$239,000 8. Field Crops, Unspecified-\$156,000 9. Apiary Products, Honey-\$113,000 10. Grapes, Wine-\$93,000 	<p>Modoc, North Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Hay, Alfalfa-\$36,464,000 2. Cattle & Calves, Unspecified-\$18,894,000 3. Potatoes, All-\$14,473,000 4. Wheat, All-\$6,091,000 5. Vegetables, Unspecified-\$5,836,000 6. Pasture, Irrigated-\$5,500,000 7. Hay, Grain-\$4,523,000 8. Pasture, Range-\$4,032,000 9. Hay, Wild-\$3,850,000 10. Onions-\$3,077,000
<p>Mono, East Subregion, (Fully in Region)</p> <ul style="list-style-type: none"> 1. Hay, Alfalfa-\$16,088,000 2. Cattle, Stockers, Feeders-\$9,579,000 3. Cattle, Steers-\$6,480,000 4. Cattle, Heifers-\$4,899,000 5. Hay, Other, Unspecified-\$4,500,000 6. Sheep & Lambs, Unspecified-\$3,990,000 7. Cattle, Cows-\$3,036,000 8. Pasture, Irrigated-\$1,925,000 9. Potatoes, All-\$803,000 10. Garlic, All-\$739,000 	<p>Nevada, Central Subregion (Fully in Region)</p> <ul style="list-style-type: none"> 1. Cattle, Heifers & Steers, Fed-\$5,006,000 2. Cattle, Milk Cows, Cull-\$3,927,000 3. Grapes, Wine-\$1,960,000 4. Pasture, Irrigated-\$1,500,000 5. Pasture, Range-\$1,425,000 6. Fruit & Nuts, Unspecified-\$830,000 7. Nursery Products, Misc.-\$392,000 8. Sheep & Lambs, Unspecified-\$306,000 9. Livestock Products, Misc.-\$107,000 10. Livestock, Unspecified-\$101,000
<p>Placer, Central Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Rice, Milling-\$17,909,000 2. Cattle & Calves, Unspecified-\$11,267,000 3. Nursery Products-\$8,668,000 4. Livestock, Unspecified-\$8,197,000 	<p>Plumas, North Central Subregion (Fully in Region)</p> <ul style="list-style-type: none"> 1. Cattle, Stock, Feeders-\$11,975,000 2. Pasture, Irrigated-\$2,310,000 3. Hay, Alfalfa-\$2,160,000 4. Hay, Wild-\$1,170,000

<ul style="list-style-type: none"> 5. Pasture, Irrigated-\$2,520,000 6. Walnuts, English-\$2,476,000 7. Pasture, Range-\$2,340,000 8. Livestock Product, Misc.-\$1,600,000 9. Tangerines& Mandarins-\$1,316,000 10. Vegetables, Unspecified-\$1,000,000 	<ul style="list-style-type: none"> 5. Pasture, Forage, Misc.-\$1,040,000 6. Cattle, Beef Cows, Cull-\$542,000 7. Hay, Grain-\$252,000 8. Fruits & Nuts, Unspecified-\$250,000 9. Pasture, Range-\$195,000 10. Livestock, Unspecified-\$125,000
<p>Shasta, North Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Hay, Other, Unspecified-\$18,101,000 2. Forest Products, Unspecified-\$12,732,000 3. Cattle, Stockers, Feeders-\$11,600,000 4. Nursery Products, Misc.-\$7,127,000 5. Rice, Wild-\$4,238,000 6. Pasture, Irrigated-\$4,125,000 7. Cattle, Beef Cow, Breeding-\$4,125,000 8. Cattle, Heifers & Steers, Fed-\$3,720,000 9. Pasture, Range-\$3,675,000 10. Walnuts, English-\$2,866,000 	<p>Sierra, North Central Subregion, (Fully in Region)</p> <ul style="list-style-type: none"> 1. Cattle, Stockers, Feeders-\$3,590,000 2. Pasture, Irrigated-\$756,000 3. Hay, Alfalfa-\$548,000 4. Hay, Wild-\$454,000 5. Pasture, Forage, Misc.-\$400,000 6. Hay, Grain-\$161,000 7. Cattle, Beef Cows, Cull-\$149,000 8. Pasture, Range-\$72,000 9. Fruits & Nuts, Unspecified-\$35,000 10. Livestock, Unspecified-\$35,000
<p>Tehama, North Central Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Walnuts, English-\$93,799,000 2. Plums, Dried-\$29,753,000 3. Almonds, All-\$23,100,000 4. Milk, Market, Fluid-\$14,423,000 5. Nursery Products, Misc.-\$11,103,000 6. Pasture, Range-\$11,088,000 7. Cattle, Stockers, Feeders-\$9,475,000 8. Fruits & Nuts, Unspecified-\$5,750,000 9. Cattle, Heifers & Steers, Fed-\$4,324,000 10. Cattle, Calves Only-\$4,053,000 	<p>Tulare, South Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Milk, Market, Fluid-\$2,047,865,000 2. Cattle & Calves, Unspecified-\$547,400,000 3. Oranges, Navel-\$484,916,000 4. Grapes, Table-\$439,228,000 5. Corn, Silage-\$206,700,000 6. Hay, Alfalfa-\$170,000,000 7. Pistachios-\$144,744,000 8. Walnuts, English-\$140,000,000 9. Tangerines & Mandarins-\$133,722,000 10. Almonds-\$123,390,000
<p>Tuolumne, South Central Subregion, (Fully in Region)</p> <ul style="list-style-type: none"> 1. Livestock, Unspecified-\$9,243,000 2. Cattle, Calves Only-\$6,710,000 3. Pasture, Range-\$3,930,000 4. Forest Products, Firewood-\$1,140,000 5. Cattle, Beef Cows, Cull-\$391,000 6. Fruits & Nuts, Unspecified-\$269,000 7. Nursery Products, Misc.-\$244,000 8. Sheep & Lambs, Unspecified-\$219,000 9. Pasture Irrigated-\$185,000 10. Vegetables, Unspecified-\$131,000 	<p>Yuba, Central Subregion, (Partly in Region)</p> <ul style="list-style-type: none"> 1. Rice, Milling-\$61,925,000 2. Walnuts, English-\$55,938,000 3. Plums, Dried-\$28,548,000 4. Peaches, Clingstone-\$14,759,000 5. Milk, Market, Fluid-\$14,722,000 6. Cattle & Calves, Unspecified-\$6,757,000 7. Kiwifruit-\$3,056,000 8. Pasture, Range-\$2,835,000 9. Almonds, All-\$2,744,000 10. Persimmons-\$1,958,000

Table 10. Cattle and Calves, and Hay and Pasture Crop Sales, California Agricultural Statistics Review, 2011

County	Cattle and Calves, 2011 Crop Report, Counties Fully in the Region	Cattle and Calves, 2011 Crop Report, Counties Partly in the Region	Hay and Pasture, 2011 Crop Reports, Counties Fully in the Region	Hay and Pasture, 2011 Crop Reports, Counties Partly in the Region
Mono	\$24,400,425		\$23,072,500	
Lassen	\$22,392,421		\$54,362,926	
Mariposa	\$18,776,000		\$6,016,000	
Plumas	\$14,780,117		\$9,591,000	
Amador	\$8,624,000		\$5,323,544	
Nevada	\$8,302,800		\$2,925,000	
Calaveras	\$7,600,000		\$3,597,000	
Tuolumne	\$7,101,000		\$4,204,000	
Sierra	\$4,914,192		\$3,200,363	
Alpine	\$2,658,800		\$2,651,196	
Tulare		\$547,400,000		\$410,651,000
Kern		\$383,540,000		\$294,547,000
Fresno		\$351,782,000		\$126,740,000
Madera		\$85,624,000		\$44,917,000
Tehama		\$22,645,400		\$9,979,000
Shasta		\$21,252,000		\$23,267,000
Modoc		\$18,894,000		\$36,464,000
Inyo		\$13,256,655		\$7,916,500
Placer		\$11,266,500		\$5,778,531
Butte		\$10,366,000		\$6,585,000
Yuba		\$6,757,000		\$5,090,000
El Dorado		\$5,018,900		\$4,392,438
Totals	\$119,549,755	\$1,477,802,455	\$114,943,529	\$976,327,469

**Chart 12. Value of Crops, not including Hay and Pasture,
Millions of Dollars, 2011 Crop Reports**



■ Crops not including hay and pasture, Counties Fully within the SNC Region
■ Crops not including hay and pasture, Counties Partly within the SNC Region

Table 11. Operators by Primary Occupation as Farming/Ranching or Other Occupation, 2007 Census of Agriculture

County	Total Operators	Percent Operators, Primary Occupation on Farming/Ranching	Operators, Primary Occupation on Farming/Ranching	Percent Operator With Primary Occupation Other than Farming/Ranching	Operator With Primary Occupation Other than Farming/Ranching
Alpine (Fully in Region)	7	29%	2	71%	5
Nevada (Fully in Region)	690	43%	295	57%	395
El Dorado (Partly in Region)	1,268	43%	543	57%	725
Mariposa (Fully in Region)	302	45%	135	55%	167
Placer (Partly in Region)	1,488	45%	670	55%	818
Mono (Fully in Region)	84	45%	38	55%	46
Calaveras (Fully in Region)	631	46%	288	54%	343
Shasta (Partly in Region)	1,473	47%	689	53%	784
Tuolumne (Fully in Region)	366	47%	173	53%	193
Amador (Fully in Region)	479	49%	236	51%	243

Plumas (Fully in Region)	142	49%	70	51%	72
Inyo (Partly in Region)	94	50%	47	50%	47
Tehama (Partly in Region)	1,752	50%	877	50%	875
Yuba (Partly in Region)	828	50%	417	50%	411
Butte (Partly in Region)	2,048	52%	1,057	48%	991
Lassen (Fully in Region)	459	53%	242	47%	217
Tulare (Partly in Region)	5,240	53%	2,786	47%	2,454
Madera (Partly in Region)	1,708	54%	929	46%	779
Fresno (Partly in Region)	6,081	57%	3,471	43%	2,610
Kern (Partly in Region)	2,117	57%	1,215	43%	902
Modoc (Partly in Region)	448	60%	269	40%	179
Sierra (Fully in Region)	50	72%	36	28%	14

Table 12. County Total Gross Agricultural Production Rank by County & Operators & Days Off Worked Operators, 2007 Census of Agriculture

County	Total Operators	Percent Operators, Days Worked Off Operation	Principal Operators, Days Worked Off Operation	Percent Operators, Days Worked Off Operation, 200 or More Days	Principal Operators, Days Worked Off Operation, 200 or More Days
Inyo (50)	94	69%	65	45%	42
Kern (3)	2,117	66%	1,390	43%	903
Plumas (52)	142	61%	87	42%	59
Yuba (30)	828	65%	536	41%	343
Lassen (39)	459	68%	311	41%	187
Tulare (2)	5,240	69%	3,600	41%	2,132
Tehama (29)	1,708	68%	1,160	40%	690
Nevada (54)	690	72%	500	39%	269
Mariposa (48)	302	69%	208	38%	115
Butte (17)	2,048	67%	1,373	38%	779
Calaveras (53)	631	72%	456	38%	240
Placer (43)	1,488	67%	994	37%	557
Shasta (40)	1,473	68%	999	37%	550
Tuolumne (51)	366	77%	280	37%	135
Amador (49)	448	74%	330	37%	165
Fresno (1)	6,081	66%	3,998	37%	2,232
Madera (12)	1,752	63%	1,096	36%	639
Sierra (56)	50	60%	30	34%	17
Modoc (37)	479	59%	281	33%	160
Alpine (57)	7	57%	4	29%	2
Mono (44)	84	63%	53	26%	22
El Dorado (47)	1,268	43%	543	25%	313

**Table 13. Number of Female Operators and Percent Female Operators by County, 2007
Census of Agriculture**

County	Total Operators	Female Operators With One or More Operators	Percent Female Operators
Nevada	690	571	83%
Tuolumne	366	287	78%
Plumas	142	92	65%
El Dorado	1,268	781	62%
Amador	448	255	57%
Sierra	50	27	54%
Mariposa	302	158	52%
Calaveras	631	319	51%
Lassen	459	199	43%
Modoc	479	185	39%
Yuba	828	303	37%
Placer	1,488	536	36%
Shasta	1,473	473	32%
Mono	84	23	27%
Alpine	7	1	14%
Butte	2,048	82	4%
Fresno	6,081	206	3%
Madera	1,752	55	3%
Kern	2,117	54	3%
Tehama	1,708	37	2%
Tulare	5,240	72	1%
Inyo	94	0	0%

Appendix D - Programs that aid in the Preservation of Working Landscapes & Conversion of Agriculture and Rangeland as reported by the Department of Conservation

Agencies and organizations operate other voluntary programs focused on preservation and restoration of working landscapes through the use of conservation easements and restoration projects. The Natural Resources Conservation Service (NRCS) operates multiple improvement and easement program nationwide. These programs include the Environmental Quality Incentives Program (EQUIP); the Wildlife Habitat Incentives Program (WHIP); the Cooperative Conservation Partnership Initiative (CCPI); the Conservation Stewardship Program (CSP); the Wetland Reserve Program (WRP); the Farm & Ranch Protection Program (FRPP); and the Grazing Reserve Program (GRP). The EQUIP, WHIP, CCPI, and CSP programs are aimed at improving forage, water quality and wildlife habitat, which can include fencing, range plantings, invasive plant removal, or transition to organic grazing practices. The WRP, CCPI and GRP are easement programs to protect working landscapes from development and may include restoration to improve wetland, farming and grazing functions. Local Resource Conservation Districts may operate similar programs in concert with the NRCS.

The United States Fish and Wildlife Service (USFWS) operates the Partners for Fish and Wildlife Program. Under this voluntary program, the USFWS, landowners, and other potential partners coordinate to implement restoration projects using 50 percent cost share. Projects have been implemented in the Sierra including wetland and upland restoration efforts on ranches in Tehama and Calaveras Counties. The USFWS is currently reviewing comments and is preparing to draft the final proposal for the California Foothills Legacy Program, which is a voluntary conservation easement program aimed at allowing families to permanently continue ranching operations and protect important wildlife values in the foothills bordering the San Joaquin Valley.

The Wildlife Conservation Board (WCB) runs the Ecosystem Restoration on Agricultural Lands (ERAL) and the Riparian Programs that are primarily focused on the restoration of streams and other wetlands as well as native grasslands. These programs require a 25-year maintenance agreement, and the WCB generally provides up to 75% of the project cost.

Not-for-profit conservation organizations work alongside many of the agency programs just described to both restore and protect farms and rangelands as well as wildlife habitat through conservation easements. Conservation easements allow the farmer or rancher to take a tax deduction based on the assessed value of the land protected from specific types of development through the easement.

In addition to the voluntary restoration and preservation efforts that agencies and organizations undertake to protect working landscapes in the Sierra, mitigation is often required to offset the impacts of a new development to farm and rangelands and the resources they provide. The California Department of Fish and Wildlife, the USFWS, and the Army Corps of Engineers may use mitigation easements as part of required mitigation and preserve and restore working landscapes in the Sierra. The Central Valley Project Conservation Program (CVPCP), the Central Valley Project Improvement Act (CVPIA), and the Habitat Restoration Program (HRP) were implemented to restore habitat impacted by the Central Valley Project. The CVPCP and HRP are managed cooperatively by the U. S. Bureau of Reclamation and the USFWS, and the California Department of Fish and Wildlife provides management direction. The CVPCP and HRP funded several rangeland conservation easements in the foothills that border the Central Valley.

Chart 13. Conversion of Agricultural & Rangeland Acres to Other Uses, FMMP 2002-2008

