



Protecting the Source of California's Water



2012-13 Annual Report



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Sierra Nevada Region

The Sierra Nevada Conservancy Region includes more than 25 million acres in all or part of 22 counties and is organized into six Subregions:

North Sierra: Modoc, Shasta, Lassen Counties

North Central Sierra: Tehama, Butte, Plumas, Sierra Counties

Central Sierra: Yuba, Nevada, Placer, El Dorado Counties

South Central Sierra: Amador, Calaveras, Tuolumne, Mariposa Counties

South Sierra: Madera, Fresno, Tulare, Kern Counties

East Sierra: Alpine, Mono, Inyo Counties

A Word from the Executive Officer

“Far and away the best prize that life has to offer is the chance to work hard at work worth doing.” President Theodore Roosevelt

Those words from one of our nation’s great conservationists sum up the work we do here at the Sierra Nevada Conservancy (SNC). As we closed the books on our 8th year of existence, lots of hard work has resulted in lots of positive outcomes throughout our [Region](#). And we’re confident this is work worth doing.

Thirty-eight million people call California home, and in one way or another each and every one of them have been touched by the Sierra Nevada. **More than 60%** of California’s developed water supply originates in the high elevations of the Sierra Nevada, and nearly half of the water that flows in to the Sacramento-San Joaquin Delta comes from the rivers of the Sierra Nevada. Recreational gems like Yosemite National Park, Lassen Volcanic National Park, Mono Lake, Mammoth Mountain ski resort, Sequoia and Kings Canyon National Park and millions of acres of national forests have 50 million visit days every year. Sierra forests and meadows filter and store water for millions of people and they store enough carbon to offset annual CO2 emissions

from 108 coal-fired power plants.

There are many organizations and individuals working hard to protect and restore the environmental, economic and social well-being of this Region. Sadly, the health of our forests, meadows, streams and communities are in decline, and California’s **primary source** of water is at risk.

Erosion, poor water quality and higher flood risks are expected consequences of these large damaging fires and the resulting **sedimentation impacts storage capacity** in our reservoirs, reducing the amount of water available for urban and agriculture users around the state.



Additionally, historic gold mining in California changed the landscape of the Sierra Nevada and the remnants of these mining activities are still with us today. The Sierra Nevada contains thousands of **abandoned mines** and the toxic substances associated with legacy mining, such as **mercury**, continue to be carried downstream to the Sacramento-San Joaquin Bay Delta and the San Francisco Bay. These substances impair water quality and impact public health.

Since its creation the Sierra Nevada Conservancy, along with a group of dedicated partners, has been working to preserve and improve Sierra benefits for all of California. Investing in activities and initiatives that improve forest health, protect water quality, and buffer the impacts of a changing climate have been the focus of SNC's efforts. The following summaries highlight some of the activities undertaken by the SNC during the 2012-13 fiscal year. Addressing these complex issues can be a daunting task, but we have roughly **38 million reasons** to face these challenges head-on.

We all stand to gain from a healthy Sierra Nevada, and we all stand to lose if the Sierra Nevada Region is allowed to fall victim to threats like catastrophic wildfire or mercury contamination. **Investing** in natural infrastructure, such as improving forest and watershed health, restoring meadows and streams in the upper watersheds, addressing water quality issues such as mercury contamination, and reducing the risk of large damaging fires is essential to ensuring that these shared benefits continue to exist in the future.

Jim Brankin

The Sierra Nevada Conservancy initiates, encourages, and supports efforts that improve the environmental, economic and social well-being of the Sierra Nevada Region, its communities and the citizens of California.



Most of California's Water Starts Here

Mercury may flow into bodies of water like lakes and streams. Bacteria in soils and sediments convert mercury to methylmercury. In this form, it is taken up by tiny aquatic plants and animals. Fish that eat these organisms build methylmercury in their bodies. As even-bigger fish eat smaller ones, the methylmercury is concentrated further up the food chain. This process is called "bioaccumulation".

(Source: US EPA website: <http://www.epa.gov/hg/exposure.htm#1>)

California's water system is large, complex, and **interconnected**. Sierra Nevada watersheds are the starting point of the natural infrastructure that collects, connects, filters, regulates, and transports most of the State's freshwater. While much of California's precipitation falls and is stored in the less populated, forested mountains of the Sierra Nevada, most of the state's water use occurs in the agricultural areas below the Delta and heavily populated urban areas along the coast. A perfect example of the interconnection of California's water system is to look at the legacy issues associated with historic gold mining.

Toxic substances, like mercury, **flow out of abandoned mines in the Sierra and into the Delta** and beyond with far reaching impacts on water quality, and public health. One particular concern is mercury and its impact on the food chain (see side bar).



This has resulted in warnings to the public to limit their consumption of fish from parts of the Sierra, the Delta, and elsewhere due to serious public health risks (Sacramento Bee article: <http://www.sacbee.com/2013/08/06/5628350/guidelines-show-which-california.html>). Addressing this link between abandoned mine lands in Sierra Nevada watersheds and urban water users became a focus for the SNC in FY 2012-13.

To address these issues, the SNC is targeting abandoned mine lands in its FY 2013-14 SNC Proposition 84 Grant Program. Additionally, the SNC enhanced work with The Sierra Fund, other State agencies, and other entities to explore opportunities to partner and fund efforts to address issues related to removal of mercury from the water system.



The Great Sierra River Cleanup

On September 15, 2012, the SNC again coordinated the [Great Sierra River Cleanup](#). This annual event, held in conjunction with Coastal Cleanup Day, brought 3,491 volunteers together to remove over 60,000 pounds of trash from waterways throughout the Sierra Nevada Region. The event connects local organizations' cleanup efforts to promote stewardship of California's water from the Sierra Nevada through the Delta out to the sea.

Healthy Forests Matter

Sierra Nevada forests are the **primary source of most of California's water**, are home to a uniquely rich assortment of plants and animals, and are a premier recreational destination for people around the world. Unfortunately, the health of Sierra forests are in decline, increasing the risk of **catastrophic wildfires** that can result in **serious statewide consequences** as illustrated by the Rim Fire. While periodic fire is part of a healthy ecosystem, the current condition of many of our forests makes beneficial fires less likely and large, intense, destructive fires more likely.

Sierra Nevada watersheds act as natural reservoirs and carbon sinks for California. Because these forests and watersheds are so critical to the State, we need thoughtful management, active collaboration, and continued investment to protect the values of the Region. Through the [Sustainable Forest and Community Initiative \(SNFCI\)](#), the SNC is engaged in activities that support the **restoration and preservation** of our forests to protect and enhance the quality and quantity of water flowing from them, **while ensuring the local community benefit from the efforts.**

SNC continued its SNFCI initiative in FY 2012-13, seeing resulting successful collaboration where a wide range of interests have come together and identified a common ground. The SNC continued to provide funding and staff support to a number of SNFCI efforts around the Region. Work occurring as a result of these efforts includes **forest restoration projects**, activities aimed at locating forest biomass energy facilities in communities (see sidebar), and crucial research and monitoring efforts. The Region has also seen three collaboratives awarded funding under the federal Collaborative Forest Landscape Restoration Program, resulting in a 10 year commitment of funding.

While progress is being made, there is an urgent need to increase the pace and scale of forest restoration work in the Sierra Nevada. Not only will this work reduce the risk of large damaging fires, protect California's water supply, and reduce greenhouse gas emissions, it provides an opportunity to create jobs in economically distressed rural communities.



Photo Credit USFS

Forest Biomass to Energy

During the past year, the SNC has been active in efforts to create markets and infrastructure for the use of forest biomass, including converting it to electricity. For a variety of reasons, there is currently excess biomass 'fuel' (mostly brush and small diameter trees) built up in the forest. One means to reduce large, catastrophic fire is forest restoration treatments involving removal of biomass. Utilization of biomass is important to provide financial support for forest health projects that reduce fire size and severity. Restoration and the utilization of biomass provide opportunities to contribute positively to local economies. The SNC has been identified in the [California 2012 Bioenergy Action Plan](#) as the lead on a number of actions related to the development of community-scale forest biomass energy facilities. The SNC is assisting numerous communities throughout the Sierra that have expressed interest in utilizing forest biomass for energy and other purposes.

Case Study: Fire's Impact on Water Storage

The Mokelumne River is the primary drinking water source for 1.4 million East Bay residents, but its forests are heavily overgrown and at risk of large-scale damaging wildfire.

After a century of wildfire suppression, many forests in the Sierra are overgrown and at high risk of large, damaging wildfires. Overgrown forests burn easily and fire can quickly pass into the canopy, making it more difficult to contain. The Rim Fire illustrates this in graphic terms.

The increasing number, and associated spiraling costs, of large-scale fires and the devastation they can cause inspired the SNC to partner with; The Nature Conservancy, U.S. Forest Service, local leaders and organizations and other stakeholders to launch an **avoided cost** analysis.

The Mokelumne River Watershed Project aims to quantify the **benefits of proactive forest restoration** by calculating the cost difference of investing in fuels reduction compared to post-fire impact costs. It uses models to forecast the effect wildfire might have on a watershed's forests and rivers, and the value that fire prevention measures bring to water users. Preliminary results demonstrate the danger of both fire and post-fire sediment in the watershed. For example, one model identifies a 2,000-acre hillside in the watershed that is at risk of burning with flames higher than 50 feet. After the fire, it is estimated that the hillside would **release 185,000 tons of sediment** into nearby waterways.

Proactive forest management will restore overgrown forests to their **original fire-resilient condition**,



Trucks such as the one above can hold 52,000 pounds of sediment. The sediment coming off the hillside in the previous example would fill over 7,100 trucks.



reestablishing forests that use less water and are made up of large, healthy trees that absorb more carbon dioxide (a greenhouse gas) from the atmosphere. These results highlight the potential damage from unmanaged forests. The final results of the study will provide a solid basis for discussions with additional stakeholders and downstream beneficiaries regarding investment opportunities that may reduce the costs associated with the existing state of our forests.

An ounce of prevention is worth a pound of cure.

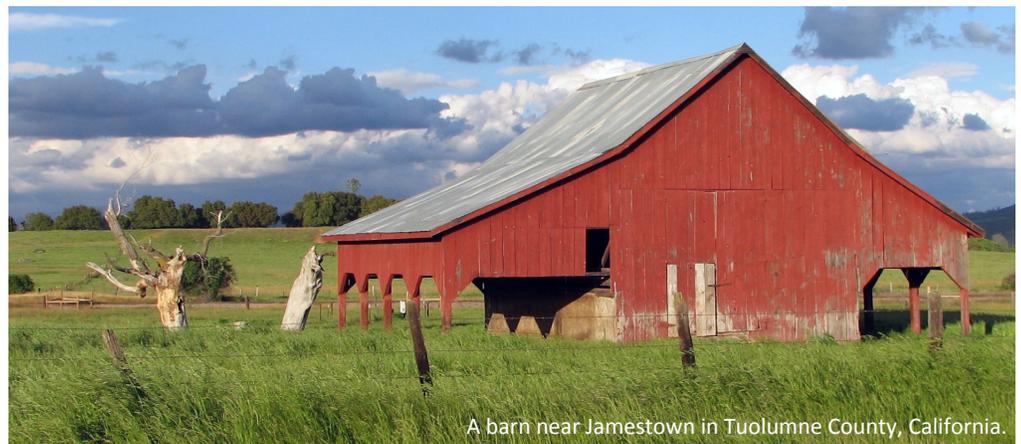
Grant Program

Providing funding for projects that address a variety of needs across **25 million acres** can be a daunting task, but the SNC has risen to the challenge. Since our inception, the SNC's Proposition 84 Grant Program has awarded over \$50 million in funds to a wide [variety of projects](#), many of which supported efforts that reduced the risk of large damaging wildfires, increased water reliability and quality for California, and created much needed jobs. Since our first grant round launched in 2007, SNC has awarded grants in five rounds, funding 294 projects across all 22 counties in the Region.

The grant round approved by the Governing Board at the June, 2013 Board meeting, focused both on projects dealing with the preservation or restoration of forest health, as well as on projects dealing with remediating toxins associated with the historic mining legacy in the Sierra Nevada. Both of these rounds will have a direct impact on **water quality** for California.

In March 2013, the SNC Governing Board authorized \$5.1 million in funding for projects focused on the preservation of ranches and agricultural land, bringing the total awarded dollars from Proposition 84 to over **\$52.1 million**.

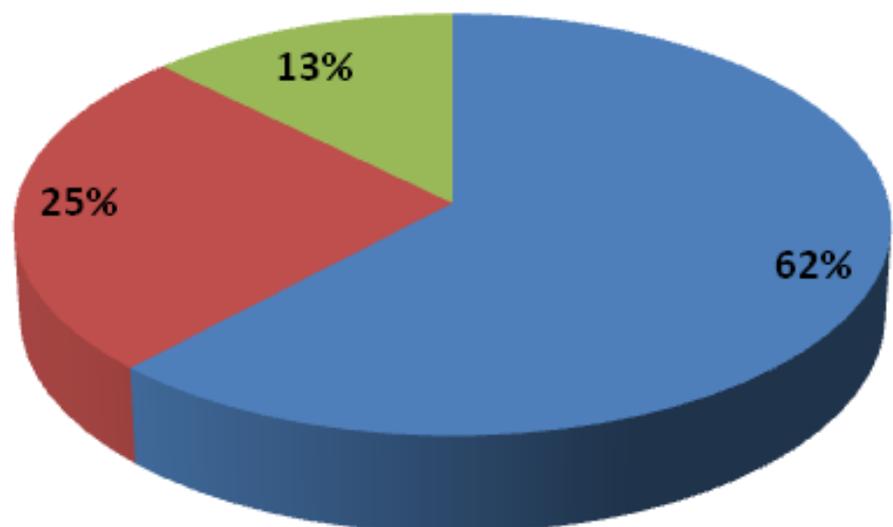
In addition to the new grant awards, grantees completed 36 projects in FY 2012-13, leaving 108 projects that SNC continues to actively manage.



A barn near Jamestown in Tuolumne County, California.

Ranches and Agricultural Land Grants Awarded FY 2012-13

- Restoration/Resource Protection \$3.17 million
- Conservation Easement Acquisition \$1.3 million
- Pre-Project Activities \$646,000



Budget and Fiscal Activity

Fiscal Year 2012-13 Budgeted and Actual Expenditures

STATE OPERATIONS:

Personal Services	Budgeted	Actual
Salaries and Wages	\$ 1,909,717	\$ 1,792,332
Staff Benefits	<u>\$ 607,364</u>	<u>\$ 716,680</u>
Personal Services, Totals	\$ 2,517,081	\$ 2,509,012
Operating Expenses & Equipment	Budgeted	Actual
General Expense	\$ 208,479	\$ 209,646
Travel - In State	\$ 52,274	\$ 58,658
Travel - Out of State	\$ 629	\$ 628
Training	\$ 19,800	\$ 8,964
Facilities	\$ 269,532	\$ 259,236
Utilities	\$ 14,480	\$ 17,015
Information Technology	\$ 155,403	\$ 154,265
Contracts - External	\$ 134,589	\$ 134,589
Contracts - Interagency Agreement	\$ 1,052,092	\$ 889,318
Other Items of Expense	\$ 22,124	\$ 21,076
Pro Rata (Control Agency Costs)	<u>\$ 161,517</u>	<u>\$ 161,517</u>
Operating Expenses & Equipment, Totals	<u>\$ 2,090,919</u>	<u>\$ 1,914,911</u>
State Operations, Totals	\$ 4,608,000	\$ 4,423,923

EXPENDITURES BY FUNDING SOURCE

State Operations	Budgeted	Actual
Environmental License Plate Fund	\$ 4,092,000	\$ 4,082,745
Proposition 84	<u>\$ 516,000</u>	<u>\$ 341,178</u>
State Operations, Totals	\$ 4,608,000	\$ 4,423,923
Local Assistance Grants	Budgeted	Actual
Proposition 84	\$ 15,448,000	\$ 13,107,005
Local Assistance Grants, Totals	\$ 15,448,000	\$ 13,107,005

TOTAL EXPENDITURES

Expenditures	Budgeted	Actual
State Operations, Totals	\$ 4,608,000	\$ 4,423,923
Local Assistance Grants, Totals	<u>\$ 15,448,000</u>	<u>\$ 13,107,005</u>
Expenditures, Totals	\$ 20,056,000	\$ 17,530,928

Governing Board

The SNC [Governing Board](#) is made up of 16 members; 13 voting and 3 non-voting advisors. Listed below are the members that represented the Board for 2012 through June 2013.

Governor's Appointees:

John Laird Secretary, California Natural Resources Agency
Todd Ferrara Designated Representative, Deputy Secretary for External Affairs, California Natural Resources Agency
Pedro Reyes Designated Representative, Chief Deputy Director, Policy

Public Members, Governor's Appointees:

Bob Kirkwood Public Member
B.J. Kirwan Public Member
Vacant Position Public Member

Legislative Appointees:

Bob Johnson Senate Rules Committee
John Brissenden Speaker of the Assembly

Local Government's Appointees:

Each of six Subregions is represented by a member of the Board of Supervisors from a county within the Subregion (as selected by the counties), and each representative serves a two-year term.

North Sierra Subregion

Pam Giacomini Supervisor, Shasta County
* Brian Dahle Supervisor, Lassen County

East Sierra Subregion

Byng Hunt Supervisor, Mono County
* Linda Arcularius Supervisor, Inyo County

North Central Sierra Subregion

Sherrie Thrall Supervisor, Plumas County
* Bill Nunes Supervisor, Sierra County

South Central Sierra Subregion

Kevin Cann Supervisor, Mariposa County
* Lee Stetson Supervisor, Mariposa County

Central Sierra Subregion

Ron Briggs Supervisor, El Dorado
* Ted Owens Supervisor, Nevada County

South Sierra Subregion

Tom Wheeler Supervisor, Madera County

Non-Voting Liaison Advisors:

U.S. Secretary of the Interior's Appointments

A. Este Stifel Bureau of Land Management
* Karen Goodrich-Taylor National Parks Service

U.S. Secretary of Agriculture's Appointment

Barnie Gyant U.S. Forest Service

* represents past seated Boardmembers





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