

5. Narrative Description

a. Detailed Project Description

Project Summary

The proposal is a brush and ladder-fuels reduction project on 31+- acres, almost the entirety of Sugar Loaf Mountain adjacent to downtown Nevada City. The City of Nevada City purchased the iconic Sugar Loaf, which looms over the historic downtown, in a much-celebrated and long sought deal fostered by the City and local residents in January 2011, using Proposition 40 funding.

The site is a high priority for fuels reduction work because of its location. Within one mile of the site are the historic buildings of Nevada City whose entire downtown is listed on the National Register of Historic Places; the headquarters of Tahoe National Forest; and the Nevada County Government Center with its County Administration Center, County Jail, Main Library, Mental Health Facility, Facilities Maintenance Center, County Sheriff and Emergency Operations Center. Because Sugar Loaf towers over these facilities, an uncontrolled wildfire would rain fire brands on these buildings, with a high potential for part or total loss of County infrastructure and irreplaceable historic buildings.

The intent is to create defensible space through a “light on the land” fuels reduction project in a manner that protects native plant ecology as well as views of the site from historic Nevada City. The program will employ selective thinning strategies, largely by hand crews. Very few trees over 6 inches in diameter will be removed, consistent with the City’s Tree Cutting Ordinance and in order to preserve views. Rather, the emphasis will be on thinning the extensive Manzanita stands which will protect the mature trees on the site. Some revegetation work is expected to be needed, though not in vast areas, because native plants and trees are well represented on the site and will repopulate readily. The goal of revegetation will be erosion control as well as increasing plant diversity. The work will rely largely on experienced hired professional crews to ensure the timely completion of the project. However, volunteers will also be used and trained for follow up work which is included in the budget over the grant period to help ensure success of the project.

The proposal is offered by a partnership comprising Sierra Streams Institute (SSI), Friends of Sugar Loaf, and the City of Nevada City (owners of the project land). Sierra Streams Institute will be the fiduciary agent and provide financial oversight and technical assistance; Friends of Sugar Loaf will report to the City, provide

project management, direct the actual on site work of hired crews and volunteers, and manage the volunteer program.

Environmental Setting

The site is an open space jewel, just steps from an urban center. It is characterized by dense Manzanita, oak, and pine forest (Montane Hardwood-Conifer association). Thick Manzanita and hardwoods cover the south facing slope with suppressed conifers established in the understory. Large areas dominated by Manzanita shrub cover are also located on the interior of the south slope. The north slope is a well developed mixture of overstory conifers and hardwoods, with an understory of low shrubs including Himalayan blackberry. Invasive Scotch broom has taken hold of the edges of the summit area, clearing of the Scotch broom has already begun; the center of the summit is a cleared, flat area.

Healthy Forest/ Fire Safety benefits

The overall goal of the proposed vegetation management activities is to develop a healthy forest through the reduction of forest fuel loads, thereby reducing the risk of catastrophic fire, and subsequent erosion and sedimentation.

Maintaining a fire safe forest on Sugar Loaf will prevent potential water quality impacts to nearby Deer Creek by ensuring that post fire erosion and resulting sedimentation and nutrient additions to Deer Creek are avoided. The slopes of Sugar Loaf drain into two intermittent streams which flow into Deer Creek, a major tributary of the Yuba River.

Planting native vegetation that mimics the healthy forest conditions of the past before current fire suppression efforts altered the ecosystem, will ensure the increased diversity of plant and animal communities.

Consistency with the Goals of Proposition 84

Land and Water Benefits

Sugar Loaf mountain currently has a high fuel load. Reducing the fuel load will result in the following benefits:

- Protection of the biotic environment and the aesthetics of Sugar Loaf itself, the backdrop to historic downtown Nevada City and a City open space park.

-Reduction of fire hazard to downtown Nevada City, the County administrative center and library, and surrounding residences – all in close proximity.

-Reduction of the potential for post fire erosion and resulting sedimentation and water quality impacts to intermittent drainages and Deer Creek.

-Fostering of a sustainable healthy forest on the site.

Consistency with SNC Program Goals

The project addresses the following SNC program goals as follows:

Provides increased opportunities for tourism and recreation.

Recreation use. Sugar Loaf is a well used recreation area recently purchased by the City of Nevada City with grant funds. Its main destination is the summit with its 360 degrees views of Nevada City and surrounding forested area. Mountain bikers have also established paths on the lower slopes. Protection of the mountain's trees and shrubs from catastrophic fire will serve to preserve its recreational and aesthetic value.

View shed protection. Sugar Loaf forms the visual backdrop to Nevada City. A major fire event could destroy its visually striking forested areas as viewed from both downtown and on the site, which would take generations to regrow. Impacts to the cultural identity as well as the economy of Nevada City would be significant. Fuel reduction on the mountain will greatly reduce this potential.

Wildlife/Plant Habitat. The habitat value of Sugar Loaf is largely due to its connectivity to the vast forested area which surrounds Nevada City. The reduction of fire hazard on the site will assist in protection of these adjacent forested areas and the Deer Creek watershed. Thinning of densely overgrown thickets, in combination with targeted replanting from the native palette, will allow for the reemergence of a diverse plant community, as would have occurred naturally on the mountain before the present era of fire suppression began. The mountain is characterized as a classic Sierra montane habitat, with plant communities adapted to each slope according to its aspect, topography, water availability and soil quality. Restoring the full diversity will allow for the return of missing animal and plant species to the native habitat.

Water Resources. The site drains through intermittent drainages into Deer Creek, Rock Creek, and the South Yuba River. The project will reduce the potential for erosion that results from fire and resulting water quality impacts to the watersheds such as excessive fine sediment loading. Fine sediments in the Nevada City vicinity are marked by high concentrations of legacy heavy metals, with further potential for impacts to water resources.

Historic/cultural resources. As noted previously, the cultural value of the aesthetics of Sugar Loaf as the backdrop to Nevada City are critical. In addition, Sugar Loaf is an important historic site in itself, located just above the Gold Rush era Manzanita Diggings hydraulic mine site. Sugar Loaf figures prominently in many early sketches and photos of Nevada City. Generations of Nevada City residents have made the trip up Sugar Loaf for picnics and family events. Many a wedding has been celebrated atop Sugar Loaf and it is a traditional destination on New Years Day. Sugar Loaf is a key part of Nevada City's cultural identity and sense of place. The fuel reduction project will serve to protect the historic views of our favorite little mountain from fire as well as the potential for fire to spread to our historic town.

Reduces the risk of natural disaster such as wildfire. This subject has been discussed throughout the proposal. (See Project Summary.)

Protects and improves water quality. Please see discussion under previous "Healthy Forest/ Fire Safe Benefits" section.

Assists in the regional economy through operation of the SNC's program. As discussed previously, increased fire safety on Sugar Loaf will serve to protect both the historic views of Sugar Loaf itself as well as reduce fire hazard to historic downtown Nevada City and the surrounding forested area. The economy of Nevada City is heavily dependent on its aesthetics and historic structures which are irreplaceable.

Enhances public use and enjoyment of lands owned by the public. Sugar Loaf is owned by the City of Nevada City for use as a public open space park. The fuel reduction project will protect this asset. A catastrophic fire on the mountain would reduce its value as an open space park for many years.

b. Work Plan and Schedule

The work plan will accomplish the tasks described in the Project Description largely via use of one 8-10 person professional paid crew and a contractor with a masticator. The initial work is expected to be accomplished in approximately one to two months during the fall and early winter of 2012 when temperatures are cool, no nesting birds are present, and the rainy season has not begun. Hand work and erosion control work will continue through the winter and early spring. The on site work will be overseen by Friends of Sugar loaf volunteer Greg Archbald with the assistance as needed of Sierra Streams Institute staff and City staff.

Follow up work will be an important part of the work program. This will be conducted at two additional times over the 4 year period by the hired crew and incrementally throughout the 4 years by Friends of Sugar Loaf and Sierra Streams Institute volunteers. We will purchase hand tools including weed wrenches and erosion control materials to be used by volunteers in the longer term future as we maintain Sugar Loaf.

Outreach will be conducted throughout the 4 year period and will consist of contact with volunteers, press announcements before the beginning of the overall project, and before each volunteer day. A report to the City Council will be given annually during the 4 year period, including at the beginning and end of the project and at the two professional follow up interval work periods. Literature on the extent and importance of the work will be prepared to be placed near signage at Sugar Loaf for visitor education.

DETAILED PROJECT DELIVERABLES	TIMELINE
Start Date	July 31, 2012
Outreach – City Council update	August 30, 2012
Masticator and hired crew initial fuel reduction site work and clean up	September 1 – October 30, 2012
Outreach - Literature placement	October 1, 2013
Six month progress report and City Council update	January 30, 2012
Follow up site work and outreach by volunteers ongoing and crews as needed	October 30, 2012 to January 1, 2016
Hired crew special follow up sessions	Sept 1- Oct 30 2013 and 2015
City Council updates	January 30 2013, 2014, 2015
Six month progress reports to SNC	July 30 and January 30 annually 2013, 2014, 2015

Performance Measure report and City Council final report	February 1, 2016
Final billing and closeout of project to SNC	March 1, 2016

c. Restrictions, Technical/Environmental Documents and Agreements

Restrictions/Agreements.

None are present on the property. The City of Nevada City owns the property; a letter is included which allows SSI and Friends of Sugarloaf and our contractors access to the site.

Regulatory Requirements/Permits.

A ministerial City tree cutting permit is not expected to be necessary since no trees over 6" in diameter are expected to be cut. Other permits are not required because this is a ministerial project on City land with no stream alterations.

CEQA Compliance.

A Categorical Exemption has been granted and processed by the City of Nevada City and is included in the Appendix.

d. Organizational Capacity

Sierra Streams Institute is a non-profit watershed science organization, founded in 1995 as Friends of Deer Creek to monitor Deer Creek on behalf of Nevada City during the construction of a road bridge over the creek. Since our founding, we have collected 11 years of monthly water quality monitoring data and have implemented numerous projects that address the issues affecting the creek, successfully working within time and budget constraints. We have successfully completed several restoration efforts throughout the watershed, including revegetation work and gravel augmentation. Long term success of our restoration work has been proven by analysis of our macroinvertebrate dataset.

SSI staff includes a biologist, geologist, hydrologist and chemist, all with considerable expertise in project management. Among SSI's board members and volunteers are a microbiologist, hydrogeologist, former agency head at the State Water Quality Control Board, and the former manager of Nevada City's wastewater treatment plant.

Friends of Sugar Loaf will provide a substantial amount of the oversight of hired, experienced fuel reduction work crews as well as volunteers headed by volunteer Greg Archbald. Presently retired and living in Nevada City, California, Greg Archbald has been actively involved in land conservation and stewardship since the 1960's. His experience related to supervising vegetation management and habitat restoration projects on Sugar Loaf includes:

- Conservation Projects Director for the Golden Gate National Parks Conservancy. Managed projects in the Golden Gate National Recreation Area (GGNRA) involving habitat restoration, ranging from creation of an 11 acre sand dune ecosystem at Lobos Dunes to the improvement of Mountain Lake, a natural lake on the San Francisco Presidio in advanced stages of eutrophication.
- Co-founder of the Habitat Restoration Team - an all volunteer group working fifty Sundays a year in the GGNRA under National Park Service auspices to preserve and restore natural diversity. Led or participated in weekly volunteer workdays in diverse coastal habitats for a decade.
- Principal volunteer steward, Alto Bowl Open Space Preserve of the Marin County Open Space District. Major project to clear invasive species, including French broom and Himalaya berry. Personally volunteered hundreds of hours with the project, as well as organizing and leading many volunteer work days.
- Member, advisory council, Land Trust for Santa Barbara County. Drafted first vegetation management plan for the land trust's Arroyo Hondo Preserve on the Gaviota Coast and led volunteer habitat restoration workdays for three years.
- Co-founder and a founding director of the California Invasive Pest Plant Council (Cal-IPC), the state's leading organization on the identification and practical control of invasive species of public and private natural areas. Among other things, co-produced annual symposium bringing together experts in wildland weed management and habitat restoration.
- Principal organizer and supervisor of the Site Stewardship Program in the Golden Gate National Recreation Area. The program provides concentrated, staff and volunteer-based stewardship of several large sites in the park. The park's volunteer program is the leading National Park Service volunteer program nationwide, currently logging more than 500,000 volunteer hours annually, the majority of which is related to habitat restoration.

e. Cooperation and Community Support

Sierra Streams Institute has the support and assistance of the City of Nevada City (the landowner) and Friends of Sugar Loaf on this project. All three entities will be involved in the actual grant work. A letter from the City of Nevada City is enclosed.

Acquisition of Sugar Loaf as city open space was the result of a 6 year period of vision, community involvement, and City Council and staff action. Protection of Sugar Loaf has been included in the City's General Plan since 1985. This project will build on these successes.

f. Long-term Management and Sustainability

Sugar Loaf is under the ownership of the City of Nevada City which takes the stewardship of its land seriously. The City owns and manages over 270 acres of wildlands within City limits. Sierra Streams Institute has a long operating volunteer program which successfully completes vegetation management and restoration projects as well as stream monitoring annually. Together with the Friends of Sugarloaf, which has supported activities related to Sugar Loaf for 6 years, these two groups have a commitment to assist the City in fuel management and fostering biodiversity on Sugar Loaf for ten years after project completion and beyond.

g. Performance Measures

We will report on the following Performance Measures:

1. Number of people reached.

We will report on the number of volunteers involved, pieces of outreach literature distributed, and attendance at all update meetings with the City Council, as well as any press received.

2. Dollar value of resources leveraged for the Sierra Nevada.

We will report on the value of volunteer hours expended as well as the value of other in-kind contributions.

3. Number and type of jobs created.

We will report on how many jobs were created by the project including staff time, city time, and hired work crew time. (To be categorized as full-time or part-time and temporary or long-term.)

4. Number of new, improved, or preserved economic activities.

We will report on any new, improved, or preserved activities resulting from the project which may include expanded functions or programs at Sierra Steams Institute or the City of Nevada City, or Friends of Sugarloaf.

5. Number of special significance sites protected or preserved.

We will report on the extent to which this historic site is preserved.

6. Tons of carbon sequestered.

We will estimate tons of carbon sequestered by reducing fire potential as well as chipping material for mulch reuse.

7. Acres of land improved or restored.

8. Mass of pollutant reduced per year.

In reporting on this measure, we will attempt to determine how much sediment will be reduced leaving the site through our revegetation efforts by monitoring outflow at a number of locations on the site before and after project.