

Stockton Creek Preserve Vegetation Management

Application #811

SNC Healthy Forests Program

Submitted by Sierra Foothill Conservancy

SIERRA·FOOTHILL



· CONSERVANCY ·

Detailed Project Description Narrative

a. Project Description

The Stockton Creek Preserve surrounds and protects Stockton Creek Reservoir, which is the sole storage site for Mariposa's drinking water. The Sierra Nevada Conservancy funded the acquisition of the Stockton Creek Preserve (the Preserve) in 2010. This property, acquired by Sierra Foothill Conservancy (SFC) in partnership with Mariposa Public Utility District (MPUD), is now owned and managed by MPUD, with the goal of protecting the water quality and quantity in the watershed. MPUD's management of the Preserve is funded through the District's annual budget. The 410-acre Preserve is directly adjacent to the town of Mariposa, and provides recreational opportunities on trails around the reservoir for the community and visitors. Every month, an estimated 150 visitors hike, bike, and walk on the Preserve. MPUD added a more than mile addition to the trail system in March 2014.

Sierra Nevada Conservancy (SNC) contributed \$1,000,000 for the purchase of this Preserve in 2010 through their Proposition 84 grant program. Since the property was purchased in 2011, SFC and MPUD have leveraged more than \$400,000 in grant funding and in-kind services for fuels management, trail building, trail easement donation, public access, and engagement.

SFC and MPUD request \$139,000 from SNC to implement further management and study of this preserve. The Stockton Creek Preserve Management Project will work towards restoring the native plant community and reducing the possibility of catastrophic wildfire effects negatively impacting Mariposa's water supply. With the funds from SNC, SFC & MPUD will;

- Implement Phase II of fuel treatments
- Re-vegetate the treated area, focusing on ponderosa pines and blue oaks
- Study the effects of fuel management on the water supply and quality

MPUD and SFC targeted the Stockton Creek Preserve for conservation in order to provide for greater land management control of the watershed. The previous owner of the property implemented an herbicide treatment which resulted in the death of the majority of the live and blue oaks on the property. Then in 2004 a fire was started by an arson near the property,

this fire quickly grew, burning the dense chaparral and dead oak trees. The aftermath was a devastation of the native vegetation and precipitation of a more homogenous re-growth of chaparral. The following winter provided abundant rain which resulted in a runoff period producing more than double the amount of naturally occurring contaminants and sediment in the town water supply, which created a violation of the Federal Drinking Water Disinfection Byproduct Rule for an entire year. The goal of the Stockton Creek Preserve Vegetation Management Project is to prevent this from happening again.

Vegetation management on the Stockton Creek Preserve is critical, as its condition directly impacts the water quality and quantity available to Mariposa. MPUD has been able to implement fuels management on 150 acres of the 410 acre property through a \$110,000 Proposition 40 Grant from CAL FIRE. Further fuels management is critical on this property as a fire in the areas of the property containing dense vegetation, would devastate the water quality and the function of the watershed surrounding the reservoir. Phase II of the treatment will provide treatment to an additional 100 acres of the Preserve. Phase II will include shredding/mulching/ chipping brush, created and existing slash. Work shall be done in a manner that does not damage residual trees or vegetation not specified to be treated. The contractor will work on 0 to 45 percent slopes, while protecting soil conditions, riparian areas, and abiding by all federal and state regulations. Proper vegetation management will create a fire break, but also a mosaic of habitat types to increase biodiversity in the area.

Completing proper fuel management on the Preserve will also lower the fire risk to the town of Mariposa and the surrounding rural developments. The Preserve is adjacent to important infrastructure including Mariposa County High School and the MPUD water treatment facility. Fire through this area could devastate the local economy in addition to putting many houses and lives at risk. These 100 acres are also directly adjacent to the reservoir, and the work will comply with habitat and wildlife-friendly guidelines.

The grant will allow for re-vegetation of the Preserve in two areas. Area One will provide re-vegetation in the phase one mastication area, funded by Cal Fire and implemented last year, on the western portion of the preserve that was impacted by the 2004 fire. Area Two will provide re-vegetation in the area proposed for mastication as part of this Stockton Creek Preserve Vegetation Management Project.

SFC and MPUD will plant ponderosa pines and blue oaks in order to restore the arboreal vegetation that was destroyed in the 2004 fire, and to encourage habitat structure diversity. These trees are important species in the area, as they create habitat for wildlife, as well as competing with chaparral brush species that are more fire responsive and can be dangerous ladder fuels. Encouraging growth of these larger arboreal species will improve the health of the ecosystem, and reduce the need for future fuels management. It will also provide for greater biodiversity in both the flora and fauna communities, as well as structural diversity in the landscape. Approximately 65% of the plantings will be in the burned area (Area One), while 35% will be in the newly treated area (Area Two).

We will be working with the local Resource Conservation District to acquire ponderosa pines (*Pinus ponderosa*) and blue oak (*Quercus douglasii*) plants for this project. We will plant approximately 70% ponderosas, and 30% oak trees. The trees will be placed in clusters throughout the treated area and the burned area. In order to maintain the natural mosaic of the pine/chaparral habitat, the compositions of each cluster will be unique and dependent on the soil and topography of the area. The RCD will supply ponderosa seedlings that are appropriate for our elevation range and hydrology, and the plants will be available in the late fall.

SFC and MPUD will also work with the local FFA students and nursery to grow seedlings from collected acorns, maintaining the local genetics of the blue oaks. One school in the area, the Sierra Foothill Charter School, has experience with similar projects, and will be able to lend expertise to this project. Mariposa High School's FFA program has already contributed to the preserve by welding trail signs. By working with the students, we hope to encourage good stewardship and a better understanding of our complex ecosystems in the foothills. These seed plantings will occur in Year 1, so the plants will be ready for the ground by Dec, 2016. Plantings will be maintained for the extent of the grant period, and MPUD will manage them into the future.

SFC and MPUD both have experience with replanting and restoration projects, but we will work with local experts to ensure a high success rate of our plantings including members of Sierra Foothill Conservancy's Land Committee, RCD and NRCS staff and Board. Exact plant locations, spacing, and slopes will be determined once the fuel-reduction phase is complete. As the mastication area will shift depending on the topography of the property, the exact location

and spacing of plantings will be determined once the mastication is complete (See Project Map). We will work with NRCS, RCD, and local landscape restoration experts to implement a successful project. The plantings will be implemented by trained volunteers, led by the SFC Stewardship staff. Since we are planting seedlings, no post-planting watering will be necessary.

Our final component of this request is an effort to measure the effects of the fuels management work on water supply in order to build support for vegetation management in our community and statewide. SFC and MPUD will monitor the reservoir, as well as surrounding ground water percolation in the impacted area. Sediment run-off, soil moisture, reservoir turbidity, and other factors will be analyzed. We will record current conditions, and monitor changes for the three years in the grant round. This will give us an adequate pre- and post-treatment view of the impacts of the fuel reduction project. This study will be managed by SFC, using our knowledge of restoration within biotic and abiotic communities. We will consult with local water and ecology specialists, using their expertise to collect valid and pertinent data. The information collected will be compiled and analyzed in a report in Year Three, and will be used by MPUD to inform future management decisions.

The Stockton Creek Preserve is a high profile property in the Mariposa community, thus this project will be a great way to promote the public benefits of SNC, SFC, and MPUD's work. This project would also be a demonstration for proper fuels management that reduces fire risk, while maintaining important habitat and ecosystem functions. Land managers, both public and private, can learn from the management practices demonstrated on the Preserve. The project will act as a case study for the impact on the immediate watershed and reservoir. Given the severe drought that has increased fire risk and reduced water supply in our region, this project is time sensitive and will become more relevant as our climate regime shifts.

Sierra Foothill Conservancy and MPUD are also currently applying for funds through Department of Water Resources and the Clean Water State Revolving Fund to expand the Stockton Creek Preserve. This expansion will increase protection of the watershed, and give MPUD and SFC the ability to better manage the water resources that Mariposa depends on.

b. Workplan and Schedule Narrative

The Stockton Creek Management Project has three major components; fuels management, re-vegetation, and watershed impact study. Described below is the timeline for each part, as well as the deliverables involved.

Stockton Creek Preserve Fuel Reduction

Starting in the late fall and winter of 2015, SFC will contract with a forester to remove dangerous fuels from the Stockton Creek Preserve. Through the support from SNC, and direction from MPUD, we will be able to manage 100 acres of the Preserve, bringing the total land treated to 250 acres. This will be more than 60% of the entire preserve. This work will take approximately two weeks, and will take place in the winter to minimize impact on habitat, wildlife, and ecosystem functions. Mastication will be the main technique used to reduce the ladder fuels, though we will also incorporate trimming, hand removal, and other methods of fuel removal. The fuel reduction project will be completed before the six month project review.

Re-vegetation of Impacted Area

Sierra Foothill Conservancy will plant ponderosa and blue oaks in areas on the Preserve that have been previously impacted by fire. SFC will work with NRCS, the Mariposa RCD and restoration experts on our Land Committee to ensure planting success including training volunteers and siting of plantings. Implementation of the planting will occur in the fall or winter of 2016-2017, after the soil is saturated by the winter rains. Acorns from local blue oaks will be collected and grown by the FFA students in their greenhouse at Mariposa High School, which is adjacent to the Preserve. Acorn Collection will occur in Year 1, and the plants will be grown and maintained until planted. We will work with the Mariposa RCD to acquire appropriate ponderosa pine seedlings, grown from regional seeds, local seed zone 532, in the Fall of 2016.

We will plant in both Area One and Area Two concurrently. Approximately 65% of the plants will be planted in Area One, previously impacted by a fire and masticated in 2014, and about 35% of the seedlings will be planted in Area Two, to be masticated in 2015. This split is due to the denuded landscape in Area One as a result of the 2005 fire.

Fuel Reduction Impact Study

Alongside the fire fuel reduction and the re-vegetation projects, SFC and MPUD will complete a study to assess the impact of these actions on the water supply and water quality in the immediate watershed. The study will go on for three years, with the first observations acting as a baseline. The study will continue throughout the fuel reduction efforts, and the planting work. We hope to look at sites within the area of impact and in the area that will not be managed. This study will provide site-specific information on the benefits of forest management. It will also further the partnership between SFC, MPUD, SNC, and local researchers.

Ideally, we will monitor our sites every month to account for weather and precipitation changes. We hope to quantify several factors involved in the localized water cycle, include soil absorption, evaporation, and impacts to the reservoir. This part of the study will continue regularly for three years, ending in the fall of 2017. When the project is complete, SFC will report on the findings of our study and give a presentation to the community.

Figure 1: Project Timeline

DETAILED PROJECT DELIVERABLES	TIMELINE
Begin Water Supply Study for baseline info	Winter, 2014
Install Sign explaining project and funding	Dec 2014
Fuels Reduction Work	Dec, 2014-Feb, 2015
Collaborate with FFA to collect and grow acorns	Dec, 2014
Six month progress report	Spring, 2015
Continued planting monitoring & FFA collaboration, monthly water quality data collection, and preserve management	THROUGHOUT GRANT PERIOD
Six month progress report	Fall 2015
Six month progress report	Spring 2016
Acquire ponderosa seedlings from plants from RCD	Fall, 2016
Final design of plantings	Fall, 2016
Plant seedlings in determined areas	After rain, 2016
Six month progress report	Fall, 2016
Monitor Plantings	Spring 2017
Six month progress report	Spring 2017
Presentation & Report on Impact Study Results	Fall 2017
Final Grant Report	Fall 2017

c. Restrictions, Technical/Environmental Documents and Agreements Narrative

MPUD owns Stockton Creek Preserve outright and in full, so there will be no property restrictions. We will file CEQA documents for our fuel reduction work, with MPUD as the lead agency. We assume we will file a Mitigated Negative Declaration, which will be completed before Fall, 2014.

Please see letter of support by MPUD, who will be a very active partner in implementing this project.

d. Organizational Capacity Narrative

This grant will be administered by Sierra Foothill Conservancy, a 501(c)3 regional land trust. The Sierra Nevada Conservancy has our Articles of Incorporation, IRS letters, and bylaws on file. Sierra Foothill Conservancy, established in 1996, has protected more than 25,000 acres of land in the Central Sierra. We manage eight preserves, and 26 easements in four counties. Our management practices are guided by sound scientific methods, as well as adaptive conservation plans. We have managed several grants from Sierra Nevada Conservancy, including the grant for the Stockton Creek Preserve acquisition. As SFC manages more than 6,000 acres, we are well aware of best management practices to support wildlife, habitat, and ecosystem services, including water quality and quantity. Bridget Fithian, Conservation Director, and Gary Miltimore, Stewardship Manager, will be the leads on this project. SFC manages a \$700,000 annual budget, including multiple State, Federal, and private grants.

Mariposa Public Utility District has been managing the Stockton Creek Preserve since its acquisition in 2011. Mark Rowney, General Manager, has been working for MPUD for 30+ years, and is well acquainted with the processes and procedures surrounding land and water management. He coordinated the fuel reduction project on the Preserve in 2013, as well as a planting project in the early 2000s. He is aware of the logistics involved in implementing these tasks.

e. Cooperation and Community Support Narrative

The Stockton Creek Preserve garnered huge community support when it was acquired in 2011. There are very few publically accessible areas near the town of Mariposa and this Preserve and trails system received praise from the Mariposa Board of Supervisors, the *Mariposa Gazette*,

the Mariposa Tourism Bureau, and many individuals in the community. Open space protection and management is a key component in Mariposa's General Plan. The management of the Stockton Creek Preserve is also prioritized in the Yosemite-Mariposa Integrated Water Management Plan (Draft) as it is necessary for the protection of the water supply to town.

We have spoken with and will be working closely with the FFA program, the RCD, SFC's Land Committee, and other local experts to ensure the success of this project.

There are no known oppositions to this project, and we do not foresee any issues. Please see Attached Letters of Support and letters mailed directly to the Sierra Nevada Auburn Office.

Included letters:

- Mariposa County Public Utility District
- Mariposa County Board of Supervisors
- Sierra Business Council
- Yosemite Area Audubon Society
- Mariposa County Chamber of Commerce
- Central Sierra Partnership
- Ethos Youth Center

f. Long-Term Management and Sustainability Narrative

The Stockton Creek Preserve is managed primarily by MPUD, and funded through the District's source of supply budget. This guarantees annual funding to maintain the property and ensure best management practices. MPUD and SFC are also committed to funding future fuel reduction projects on the current preserve, and expanding the protected area to encompass more of the Stockton Creek Watershed.

Since the purchase of the property, SFC and MPUD have leveraged funds, volunteer time, staff time and other resources to further protect this property. We will continue to commit to the management of this property for recreational, wildlife, and the natural resources it contains.

Attached is the Stockton Creek Management Plan, updated in 2014.

Supplemental and Supporting Documents

a. Performance Measures

The Performance Measures for the Stockton Creek Vegetation Management will be:

Acres of Land Restored

Sierra Foothill Conservancy and MPUD will restore >100 acres using vegetation management techniques including mastication, hand removal of fire fuels and invasive, and re-vegetation.

Acre Feet per Annum of Water Supply Conserved or Enhanced

By managing the chaparral ecosystem, SFC and MPUD will conserve and enhance the water supply to the town of Mariposa. The acre feet conserved will be determined by the impact study included in this application.

Number of Jobs Created

The Vegetation Management Project on the Stockton Creek Preserve will create temporary jobs in Mariposa. The contract for fuels management will create jobs for the forestry industry, and the re-vegetation work will support the nursery and restoration field.

Number and Diversity of People Reached

The Stockton Creek Preserve is publically accessible, and more than 500 people will witness the vegetation work and signage on the property. In addition, SFC will publicize the SNC-supported project in our e-Newsletter (circulation ~1,300) and in local newspapers (circulation ~5,000).

b. Regulatory Requirements/Permits

We are currently filing for CEQA, and will be completed by Sept, 2014.

**SIERRA NEVADA CONSERVANCY
PROPOSITION 84 - DETAILED BUDGET FORM**

Project Name: Stockton Creek Preserve Vegetation Management

Applicant: Sierra Foothill Conservancy

SECTION ONE DIRECT COSTS	Year One	Year Two	Year Three	Total
Fuels Reduction (Contractor)	\$80,000.00			\$80,000.00
Fuels Reduction Project Management	\$3,500.00	\$500.00		\$4,000.00
Re-Vegetation Implementation (Plants and Time)	\$2,500.00	\$2,500.00	\$2,000.00	\$7,000.00
Re-Vegetation Staff Time & Management	\$1,500.00	\$1,250.00	\$750.00	\$3,500.00
Water Supply Impact Study	\$7,000.00	\$6,000.00	\$5,000.00	\$18,000.00
Water Supply Impact Study Materials	\$2,000.00			\$2,000.00
Water Supply Impact Study Management	\$2,000.00	\$1,500.00	\$1,000.00	\$4,500.00
Water Supply Impact Study Report Development			\$500.00	\$500.00

DIRECT COSTS SUBTOTAL:	\$98,500.00	\$11,750.00	\$9,250.00	\$119,500.00
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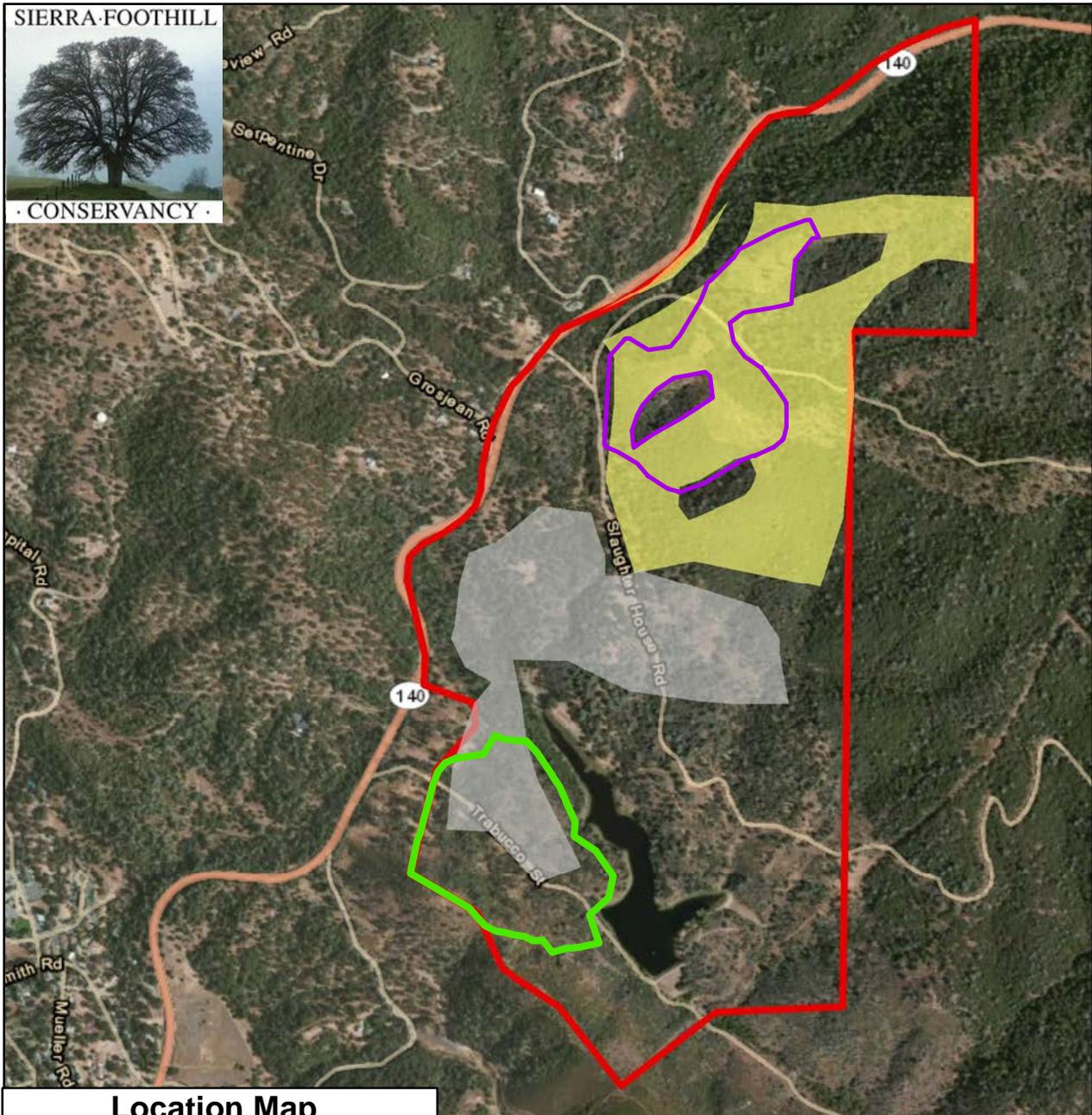
SECTION TWO INDIRECT COSTS	Year One	Year Two	Year Three	Total
Fuels Reduction Monitoring		\$1,000.00		\$1,000.00
ReVegetation Monitoring		\$750.00	\$750.00	\$1,500.00
Water Supply Impact Report Printing and Materials			\$500	\$500.00
Signage & Installation	\$500.00			\$500.00
INDIRECT COSTS SUBTOTAL:	\$500.00	\$1,750.00	\$1,250.00	\$3,500.00
PROJECT TOTAL:	\$99,000.00	\$13,500.00	\$10,500.00	\$123,000.00

SECTION THREE Administrative Costs (Costs may not to exceed 15% of total Project Cost) :				Total
Grant Administration	\$3,500.00	\$3,500.00	\$3,000.00	\$10,000.00
Overhead Costs	\$2,000.00	\$1,500.00	\$1,000.00	\$4,500.00
MPUD & SFC Collaboration	\$500.00	\$500.00	\$500.00	\$1,500.00
ADMINISTRATIVE TOTAL:	\$6,000.00	\$5,500.00	\$4,500.00	\$16,000.00
SNC TOTAL GRANT REQUEST:	\$105,000.00	\$19,000.00	\$15,000.00	\$139,000.00

SECTION FOUR OTHER PROJECT CONTRIBUTIONS	Year One	Year Two	Year Three	Total
State Water Revolving Fund (application is currently being developed)		\$1,200,000.00		\$1,200,000.00
Previous funds leveraged (including land management, grants from other agencies, volunteer time, outreach efforts, and staff time)	\$400,000.00			\$400,000.00
MPUD & SFC : Preserve Management during grant period (Trails, Access, etc)			\$10,000.00	\$10,000.00
MPUD & SFC Continued Fuels Management			\$100,000.00	\$100,000.00
Total Other Contributions:	\$400,000.00	\$1,200,000.00	\$110,000.00	\$1,710,000.00



Stockton Creek Vegetation Management Project Area



Location Map



Legend

0.5 Miles

-  Stockton Creek Preserve
-  CalFire Funded Fuels Reduction Area (Phase 1)
-  Proposed Fuels Reduction Area (Phase 2)
- Proposed Planting Sites**
-  Area 1 in Phase 1 Mastication/previous fire
-  Area 2 in Phase 2 Mastication

These proposed planting areas based on soils, slope (<45°), and where the mastication removed/ will remove large amounts of dense vegetation. In the areas where there are currently stands of large trees, we will thin the underbrush but no further planting will be required. These areas are subject to change