

CALAVERAS COUNTY WATER DISTRICT

Request for Proposals for Sheep Ranch Water Supply Reliability Study and Facilities Master Plan

Submission Deadline: - September 2, 2021



Calaveras County Water District
120 Toma Court
San Andreas, CA 95249
(209) 754-3543
www.ccw.d.org

BACKGROUND

The Calaveras County Water District (“District”) was organized in 1946 as a public agency for the purposes of developing and administering water resources and wastewater services in Calaveras County (“County”). CCWD is an independent Special District and is not associated with the County’s government. The District boundaries encompass approximately 1,000 square miles of land ranging from the San Joaquin Valley to the Sierra Nevada Mountains. The District’s headquarters are located in San Andreas, the County seat, which is approximately 135 miles east of San Francisco and 65 miles southeast of Sacramento. With elevations starting at 200 feet, the western portion of the County has been undergoing a shift from cattle ranching to residential development. The eastern portions range to over 6,000 feet and host agriculture, mining, timber, and tourism.

The District operates six different public water systems serving communities throughout the County with a total of over 13,000 water service connections. This request for proposals concerns the Sheep Ranch Service Area (“Sheep Ranch”), the District’s smallest water system with only 50 connections and serving a population of less than 100 persons. The Sheep Ranch water service area was formed by CCWD on March 2, 1960 to provide water supply to this small community located to the west of the State Highway 4 Corridor.

The small, historic town of Sheep Ranch is a remote, rural community in an unincorporated area of central Calaveras County between Mountain Ranch and Avery. It was a historic gold mining town and opened its first post office in 1877. The gold mine was discovered in 1868 and was active for over 70 years until closing in 1942. The mine provided employment that made possible a thriving community of several thousand people. As late as World War I, the community included over 20 saloons, two hotels, two churches and numerous stores. The community historically received water from the San Antone Ditch System via a diversion on San Antonio Creek that served the gold mining company. The community’s water supply issues began as early as 1950, soon after the mining operations ceased as the ditch system was costly to maintain.

The same ditch system historically served Fricot City Ranch (now referred to as the “Fricot City Diversion Ditch”), originally leased to the California Youth Authority in the 1940s. That property was eventually developed into a boys school by the State which operated from 1980 to 1989. In 1999 the school was acquired by the Rite of Passage Athletic Training Centers & Schools, Inc. (“Rite of Passage”) which claims a pre-1914 water right to San Antonio Creek for use in the Fricot City Diversion Ditch. Up to the late-1960’s San Antonio Creek remained an unregulated stream with a history of low or negligible summer flows in the months of July through October and there were no storage facilities to carry through prolonged dry or drought periods. During that period, the District planned with the State of California Youth Authority to develop a dam and reservoir at “Neds Gulch” with a capacity of 180 acre feet, as well as, a larger “Scotts Reservoir” along San Antonio Creek. However, the project was deemed too expensive and never constructed by CCWD.

In the late 1960s, American Forest Properties, as part of a land development venture, constructed White Pines dam and lake at the confluence of San Antonio and Big Trees Creeks upstream of the Fricot City Diversion Ditch, to the east of Arnold near Blagen and Dunbar Roads in the community of White Pines. White Pines Lake (“White Pines”) is now located on the site of the former Blagen sawmill and adjacent mill pond that was used for lumber operations starting in 1938. The White Pines site has a long history of water use and development, dating back to the original Dunbar Ranch in 1885, for lumber and other operations to support the local communities. White Pines is located about 6 miles upstream of Sheep Ranch and has an estimated capacity of 262 acre feet, although silt accumulation has since reduced capacity to approximately 160 acre feet. CCWD relies on its pre-1914 water right claim to Big Trees Creek (originating with Dunbar Ranch), to supply Sheep Ranch consumptive uses and for non-consumptive recreational storage in White Pines. Big Trees Creek has generally been able to support these uses, although available water varies greatly with the volume, nature, and timing of annual precipitation in the Upper Calaveras River Watershed.

In addition to the above described raw water infrastructure, the existing Sheep Ranch water system consists of a small raw water pump station, one 4-ft dia. x 5-ft tall pressure filter (with 40-inches of granular media) package treatment plant with a 30-gpm capacity, sodium hypochlorite disinfection and 100,000-gallon steel water storage tank. The water treatment plant and storage tank are located on Armstrong Road about ½ mile east of Main Street. No significant improvements have been made to the Sheep Ranch water system since 1997, and it is in relatively poor condition and in need of replacement and modernization. The existing steel water storage tank is severely corroded on the interior and needs to be replaced and/or repaired. Furthermore, the storage tank and water distribution system piping do not have capacity to meet ISO fire flow standards typically requiring a least 1,000-gpm fire flow for 4 hours. The existing packaged plant is more than 25 years old and near end of its useful lifecycle. The source water is diverted from San Antonio Creek often has higher turbidity than the pressure filter is capable of treating and during these times the packaged treatment system must be shut down and rely upon minimal storage reserve in the one storage tank. During times of drought, the system is unable to remove organics that cause taste and odor issues. In the past, the District has had to haul water from outside of the system by truck, which leads to the possibility of water supply shortages.

Although the Big Trees Creek pre-1914 water right is generally sufficient to provide water supplies to Sheep Ranch, and for White Pines non-consumptive recreational uses, the system poses operational challenges to CCWD given varying hydrology, White Pines operations, and shared use of the Fricot City Diversion Ditch with Rite of Passage. The Sheep Ranch raw water intake, treatment, and distribution infrastructure are generally understood to need repair or replacement.

CCWD's largest water system is the nearby Ebbetts Pass Service Area, which serves CCWD customers from just above the town of Murphys up to Camp Connell. The Ebbetts Pass system is served by CCWD's 4 MGD Hunters Treatment Plant, which draws water from the North Fork Stanislaus River. Given the proximity of Sheep Ranch to CCWD's larger Ebbetts Pass Service Area, CCWD must consider options to consolidate the systems to improve overall cost-effectiveness and water supply reliability. Sheep Ranch is a designated "economically disadvantaged community" ("DAC") based on state-wide Median Household Income metrics, which could provide DAC-related grant funding support for future CCWD projects. More work is needed to assess Sheep Ranch supply conditions, project opportunities, and other considerations for the service area.

SCOPE AND OBJECTIVES

The District is seeking professional consulting services to prepare a water supply reliability study and water master plan for the Sheep Ranch water system with the following objectives:

1. **Demand Assessment:** Evaluate current and potential future demand for water in the Sheep Ranch area. This should include residential demand in Sheep Ranch and surrounding areas (e.g. "Mineral Mountain" and others), as well as the agricultural demand and the need for fire suppression infrastructure. An improved water supply could serve a greater number of new customers, depending upon the water source, method of delivery and conveyance/alignment.
2. **Water Supply Infrastructure:** An integral part of this effort is to make a comparison of the capital costs for the available water supply alternatives and provide recommendations from a financial perspective and reliability standpoint.
 - a. **Existing Infrastructure:** Evaluate the cost of maintaining the current water supply infrastructure, including White Pines Lake and the raw water infrastructure up to the treatment plant (the diversion, pump station, and associated raw water delivery pipelines). Assess the condition of the infrastructure and provide cost estimates and timelines for infrastructure improvements. Also include an assessment of the O&M costs associated with the current raw water infrastructure.

- b. Intertie Alternative: Evaluate the feasibility of a new water supply intertie by conveying either raw or treated water to Sheep Ranch from the nearby Ebbetts Pass Water System. The closest point of the existing treated water distribution system is the Timber Trails campground on Sheep Ranch Road. A raw water diversion would likely have to come from the pressurized raw water intake to the Hunters Treatment Plant. The results of the Demand Assessment, discussed above, should inform the appropriate size and scale of the project that will be most beneficial and cost effective. Also, as part of this analysis the consultant is to evaluate if the pipeline is best to convey raw or treated water on the basis of water quality and factors such as pipeline sizing, operating velocity, water age, and formation of disinfection byproducts for a chlorinated line.

The analysis should evaluate and prepare maps of possible alignments for a new water supply pipeline including preliminary profiles and hydraulic calculations. One of the most likely alignments is to follow Avery-Sheep Ranch Road and connect to the Ebbetts Pass System near Timber Trails just outside of Avery and which is in the vicinity of the Hunters Water Treatment Plant near Arnold. However, the District would be open to investigating other alignment options. The consultant and CCWD staff should investigate and vet the most likely and preferred alignments in the field. For determining the best alignments, a constraints analysis should be undertaken to identify possible environmental constraints, property ownership and easement issues, required permits, and other constraints. Any ancillary impacts to the Ebbetts Pass Water System (water treatment plant, pump stations or pipelines) should be reviewed to identify the magnitude of any deficiencies in those systems and necessary improvements, if any.

- c. Groundwater Alternative: Lastly, the potential availability of localized groundwater should be further evaluated as another possible water supply. This is a fractured bedrock environment, however, reliable wells exist in the area. The District previously investigated this option in 1993 by drilling and constructing a well on Armstrong Road (east of town). A 6" bore hole was drilled to a depth of 243' and recorded a static water level of 137'. Upon testing, the well was able to pump 18.37-gpm for 23 hours with drawdown to 230', then flow dropped off to 10-gpm. A water sample taken at 190' had a sulfide odor and contained 0.73 mg/L iron (Fe) and 0.30-mg/L manganese. A local well driller, Briski Well Drilling, reported two other wells near Sheep Ranch had capacities of 12 to 15-gpm with similar water quality issues.
3. **Water Treatment and Distribution**: Complete a condition assessment and capacity analysis of existing Sheep Ranch water treatment and distribution facilities. Provide an assessment of needed infrastructure improvements and estimated capital costs to rehabilitate or replace those aging facilities. The analysis should evaluate infrastructure treated water facilities (water treatment plant, storage tanks, pumping and treated water distribution), and fire suppression. The existing water treatment plant, steel storage tank, and distribution system have exceeded a reasonable life cycle and are due for rehabilitation or complete replacement. The final report should provide cost estimates, project descriptions, potential environmental concerns, and design layouts and maps to illustrate the recommended capital improvements.

DELIVERABLES

The proposal should address the work items described above, as well as other relevant issues identified by the proposers. The District reserves the right to add, amend and/or substitute any tasks as necessary.

1. Draft Study

a. The following is a preliminary, preliminary list of topics to be covered in the study:

- Introduction
- Relevant Background Information and Data
- Description and Assessment of Existing and Future Water Demands
- Description and Assessment of Existing and Alternative Water Supplies (e.g. watersheds and surface waters)
- Overview of other potential water supply alternatives (e.g. groundwater)
- Summary and Comparison of Available Water Supplies, Challenges and Ancillary Benefits (fire protection, agriculture, meet future demands)
- Basis of Sizing and Scaling of Capital Improvements, Population and Customers to be Served, Facility Capacities, Water Demands, Fire Flows, Water Quality, Water Age, Operating Parameters, and Other Considerations
- Condition of Existing Raw Water Facilities, Deficiencies and Recommended Capital Improvements to the existing White Pines Water System (including maps, conceptual plans, preliminary layouts, alignments and profiles for facility improvements)
- Condition of Existing Treated Water Facilities, Deficiencies and Recommended Capital Improvements to Sheep Ranch Water System (treatment plant, storage, and distribution system).
- Recommended Capital Improvements to Develop Alternative Water Supply via Ebbetts Pass – North Fork Stanislaus River Watershed intertie (including maps, conceptual plans, preliminary layouts, alternative alignments and profiles).
- Potential Impacts to the Ebbetts Pass System and Additional Capital Improvements to Mitigate Those Deficiencies (diversion, storage, conveyance, treatment plant, pump stations, etc.)
- Constraints Analysis for Alternative Intertie Routes between Sheep Ranch and the Ebbetts Pass System – Environmental, Property Ownership, Permits, Etc.
- Comparison of Alternatives, Capital Improvements, Estimated Costs and Avoided Costs
- Summary of Findings and Recommendations
- Attachments: maps, drawings, layouts, alignments, profiles, etc.

b. Electronic copy in word format for staff review

c. Respond to staff comments and address them for development of Final Study

2. Final Study

a. 10 hard copies submitted to the District

b. Electronic Word copy

c. Electronic PDF copy

3. Project Management and Meetings

a. Project Kick-Off Meeting

b. Field Meetings and Site Visits

c. Review Meetings, Progress Meetings, Online Meetings

d. At least One formal PowerPoint presentation to the District Board of Directors

CONTENT OF PROPOSALS

For any questions, inquiries and matters of coordination regarding this RFP please submit these by e-mail to Kate Jesus at katej@ccwd.org or by phone (209) 754-3181.

1. Proposals are to be made on letter size sheets (fold outs are acceptable for charts, etc.) and type size must be large enough to be easily legible (≥ 10 point). Please limit proposal to twenty pages or less excluding resumes. Deliver one (1) complete electronic copy and (3) complete hard copies of the proposal to:

Calaveras County Water District
120 Toma Court
San Andreas, CA 95249
RFP – Sheep Ranch Water Supply Study and Facilities Master Plan
Attn: Kate Jesus

2. The proposals are to include at least the following items:
 - a. Cover Letter.
 - b. Introduction, Project Understanding and Approach to Work
 - c. Statement of Qualifications, Experience and Project Team
 - d. Work Plan and Tasks
 - e. Schedule
 - f. Fee Estimate include breakdown of costs by hours, hourly rates, and by task, subconsultants (if any), and reimbursables.

SELECTION PROCESS

The evaluation of all proposals will be by a selection committee comprised of managers and staff from the Calaveras County Water District. Each proposal will be reviewed and collectively ranked by the committee according to the responsiveness to the proposal including the general presentation of the proposal, project understanding and approach to work, team qualifications and experience, work plan and schedule, and level of effort and overall value. For the firm that ranks highest, staff desires to negotiate a final contract price, details of scope of services, contract terms and conditions. Should staff not be able to negotiate the price and other conditions to its satisfaction, it may choose to negotiate with another qualified proposing firm(s).

DISTRICT NOTICES

1. Submit any questions, inquiries and matters of coordination regarding this RFP by e-mail to Kate Jesus at katej@ccwd.org / Phone: (209) 754-3181.
2. All consultant firms responding to this RFP should note the following:
 - a. All work performed for the District, including all documents and electronic files associated with the project(s), will become the exclusive property of the District, with the exception of any software that is proprietary or issued by license agreement.
 - b. The District reserves the right to: 1) reject all proposals, 2) request clarification of any submitted information, 3) not enter into any agreement, 4) cancel this process at any time, 5) amend this process at any time, 6) issue similar RFPs or RFQs in the future, and/or 7) request additional information during the selection process.
 - c. The selected consultant is to perform and complete the project(s) in its/their entirety.
 - d. Any and all costs arising from preparation of this RFP and participation in the selection process incurred by any consultant firm shall be borne by the firm without reimbursements by the District.

- e. Consultant is required to enter into the District's standard Professional Services Agreement (PSA) a copy of which can be furnish upon request prior to submitting your proposal.

TIMING AND SCHEDULE

All responses to this RFP must be submitted to the District's contact person identified herein on or before the specified dates/deadlines below.

The schedule for proposals, selection and project kick-off is as follows:

Submission deadline	September 2, 2021 (by 5:00 PM)
Interviews (if needed)	September 6 – 9, 2021
Recommended selection	September 13 – 15, 2021
Award of contract	September 22, Board of Directors meeting
Sign / Execute Contract	September 23 – October 1, 2021
Project Kick-Off Meeting	October 4, 2021 (week of)