COLEMAN
ENGINEERING

Proposal to Alleghany County Water District

FOR ENGINEERING, CONSTRUCTION CONTRACTOR PROCUREMENT & PROJECT OVERSIGHT FOR THE RAM SPRING IMPROVEMENT PROJECT

SEPTEMBER 8, 2022

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COLEMAN ENGINEERING

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COVER LETTER

September 8, 2022

Alleghany County Water District
PO Box 860
Alleghany, CA 95910

Re: Proposal for Engineering, Construction Contractor Procurement & Project Oversight for the Ram Spring Improvement Project

Dear Alleghany County Water District,

Coleman Engineering is pleased to submit this proposal for engineering, construction contractor procurement & project oversight services for the Ram Spring Improvement Project.

Prior to proposing on any project, the team at Coleman Engineering makes a thorough evaluation of the opportunity versus our staffing availability and technical ability to provide excellent services. We routinely pass on projects that aren't a good fit – for many possible reasons. When we do choose to propose, we do it for three specific reasons:

1) We WANT to do the work.
2) We are CERTAIN that we have the available staff to do an outstanding job.
3) We are CERTAIN that the Client will be well served by our team.

These three reasons absolutely apply in this case. We are confident that the Alleghany County Water District will be very well served by Coleman Engineering. And we are committed to doing all that is necessary to deliver project success to the water district and its customers.

As further indication of the perfect fit of the Coleman Engineering team, we have itemized each of the Selection Criteria noted in the Request for Proposals and provided a corresponding response. We trust that the table below will be a clear demonstration of our fit for the project as well as our zeal to work with the water district.

Selection Criteria	Coleman Engineering Response
1. Qualifications and specific experience of the firms team members.	Please see the Qualifications and Experience section of the proposal for summary information about our excellent team. In addition, more information is provided in the Resumes that are attached. Please also note how perfectly the team is prepared for success on the Ram Spring Improvement Project based on our many previous projects that are so similar. Finally, we feel that our team will be significantly enhanced by the inclusion of Kip Lybarger from Altec Engineering. Mr. Lybarger is the engineer of record for the 90% draft plans and has a good relationship with District staff. We trust that the continuity provided by Mr. Lybarger will be a significant benefit to the project.

Selection Criteria	Coleman Engineering Response
2. Project understanding and approach, including an understanding of ACWD approval and coordination processes.	We have provided two sections to the proposal that thoroughly address these questions. The Project Understanding section demonstrates that we understand the key technical issues as well as several ancillary issues related to the project. Most importantly, we understand that our role will be to represent the Alleghany County Water District in every possible way. Our Approach and Management Plan section of the proposal demonstrates a detailed approach with eight specific approach topics identified. The fact that we have developed these eight specific approaches for this project demonstrates our expertise with drinking water projects and especially projects funded by the State SRF program.
3. Experience with similar types of projects.	The Qualifications and Experience section speaks very well to how we have performed on similar projects. In addition, the Approach Section makes a clear case that the Coleman Engineering team is thoroughly experienced with similar projects and well prepared to provide excellent services to the Alleghany County Water District.
4. Satisfaction of previous clients.	We are confident that all the References we provided in the appropriate section will speak very highly of Coleman Engineering. Specifically, we suggest that callers ask about the team that served them as well as the high level of service that they received.
5. Schedule and capacity to provide qualified personnel.	Coleman Engineering is committed to providing excellent engineering services to the Alleghany County Water District. Our long history of providing engineering services on funded projects indicates that we have plenty of staffing capacity to outpace the State. Coleman Engineering will absolutely not be a reason that any schedule lags. On the contrary, we will keep the pressure on the State regulators and Division of Funding Assistance staff so that we are never on the critical path.
6. Preference shall be given to small businesses as defined in Gov code 14837.	We appreciate the preference given to our small business. Coleman Engineering is a Certified Small Business (Micro) by the State of California. Our Certification ID is 1240260.
7. Preference shall be given to local businesses defined as within a one or two hour travel distance from Alleghany.	We appreciate the preference given to our local business. We note that Google Maps defines the distance between our Roseville Office and Alleghany as less than 2 hours drive. Further, we regularly serve many clients that are 2 hours and farther. Several of our clients are in the Bay Area, Central Valley, and North Coast. The distance to Alleghany is well within our comfort zone for providing excellent engineering services.
8. Proposed fees must be fair and reasonable, but firm selection shall not be predicated on the lowest fees. The State Water Resources Control Board shall assist with the determination of “fair and reasonable” fees.	Our fees are very fair compared to the high level of services proposed. Please note that we have proposed to include substantial design services that were not formerly included in the 90% Draft design package. This is because we want to position the District in the best possible way by providing detailed mechanical, structural, architectural, electrical, instrumentation, and controls designs that are all needed for a complete bid package.

Information in the following table is provided in direct response to the RFP Submittal Requirements. Chad Coleman is authorized by Coleman Engineering, Inc. to negotiate a contract with ACWD.

Name	Chad R. Coleman, P.E.
Title	President Principal Engineer
Address	Coleman Engineering, Inc. 1223 Pleasant Grove Blvd., Suite 100 Roseville, CA 95678
Telephone Numbers	Office: (916) 791-1188 Cell: (916) 847-3476
E-mail Address	chad@coleman-eng.com
Location of Corporate Headquarters	Roseville, CA

The terms included in this proposal shall be valid for 120 days.

We look forward to partnering with Alleghany County Water District to deliver excellent engineering services and a significant improvement to the drinking water system. Please do not hesitate to contact me if you have any questions or need further information

Sincerely,

Chad R. Coleman, P.E.

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PROJECT UNDERSTANDING

PROJECT UNDERSTANDING

Our most important understanding is that the role of Coleman Engineering will be to fully represent the Alleghany County Water District so that the resulting water system improvements are designed and constructed with the following principles in mind:

- Minimize capital costs to ACWD by making sure that all project elements remain fully fundable.
- Minimize long-term operations and maintenance costs to ACWD by producing a quality design with a robust SCADA system that will allow for remote operations monitoring and assistance.

SUMMARY UNDERSTANDING

Coleman Engineering has come to an understanding of the project, including the history and future requirements, based on research and several conversations with multiple individuals. From the request for proposal, we understand that this project is a continuation of planning project # 4300012-008P funded by the State Water Resources Control Board (SWRCB). In May of 2017, as part of the planning project, driven pipes were installed at the Ram Spring to minimize surface water infiltration.

As a result of this drilling, and with subsequent water quality testing; on October 20, 2017, the SWRCB Division of Drinking water amended the Permit for the Ram Spring changing its classification from "ground water under the influence of surface water" to "ground water". This new classification eliminated the need for a treatment plant and lessens several regulatory requirements, saving both time and money over the long-term.

Further, we understand from the request for proposal that ACWD's objectives for this project are:

1) To reconfigure the district's facilities to accommodate the driven pipes installed in the planning phase of this project. This will facilitate continued water delivery to the residents of Alleghany in compliance with State and Federal drinking water standards.
2) To significantly extend the operational life of the Ram Springs collection area.
3) To reduce the annual O&M costs for ACWD
4) Replace parts of the water system's aged infrastructure.

In short, this project is like a great many others successfully completed by Coleman Engineering in that it is the finalization of design and construction of a project that is already 90% designed using Planning Funding from the State SRF program.

FINISH THE DESIGN

In the simplest form, we understand that our role is to use the 90% draft design that has been completed by Altec Engineering and complete that design so that it is ready to bid and construct. Coleman Engineering is fully prepared to provide final design services and engineering services during construction. We have also planned to provide much more than simply getting the draft design across a finish line. Our significant previous experience has informed the Project Approach detailed in the following proposal section so that we are providing much more service than simply finishing the design.

CLIENT TEAM

There are several organizations that make up the Client team. The most important is the Board of Directors of the Alleghany County Water District. We understand that there are currently four board members filling the five available board seats.

Bruce Coons is the Chief Water Operator and holds a D1 certification from the State of California. Edward Snyder is the Water Distribution Operations who also holds a D1 certification from the State of California. Together these two professionals operate the water distribution system. There is no treatment plant so no need for any treatment certifications by the operators.

Altec Engineering has provided engineering services for several years which has resulted in design of multiple facilities. Kip Lybarger is the Principal Engineer at Altec Engineering. He prepared the 90% draft design of the Ram Springs improvements.

Kip Lybarger gave us details about the involvement of Aqua Sierra Controls. We have had multiple conversations with Aqua Sierra about their previous proposals and intended services to ACWD. We understand that Aqua Sierra was set to provide several items of work as deferred submittal items called out in the 90% draft design. Following our conversations, Aqua Sierra provided three proposals that comprise the work that they are aware of. These proposals itemize various upgrades that were desired by ACWD but were not included in the Altec design. We have planned to include all the items in our

design so that ACWD has a complete design package for easier funding. This approach is detailed in the Project Approach section.

We anticipate working productively with Sierra County so that we have a thorough understanding of the permitting requirements. We anticipate that an encroachment permit and building permits will be required to complete the desired construction. Neither of these permits should be difficult but it will be important to understand and detail the requirements in the design package so that bidders will not be surprised and can include all the necessary costs of permitting.

SRF FUNDING PROCESS

Coleman Engineering has extensive experience designing and managing construction of projects that are funded by the State of California, State Revolving Loan Fund. This fund is actually funded by multiple state and federal sources so it is important to understand the funding allocated to each project so that requirements of the underlying funding agency can be addressed proactively.

Our experience with SRF funded projects is that the funding terms can be very good – including complete loan forgiveness so that the funding is all grants. The trade-off is that the process can be tedious and long. We still heartily encourage our clients to engage with the state for funding because the financial implications are so good for most clients. If client and water system user expectations are set realistically at the beginning of each project, we find that the process goes smoother.

Our understanding of the SRF funding process also leads us to recommend that the design be inclusive of everything that ACWD wants to include. We have found that its generally much easier to fund a single complete design package of plans and technical specifications rather than piecemeal funding requests with separate designs and vendor proposals. It's more difficult for an agency to justify desired project costs if they are not all included in a single design. Therefore, our understanding has led to a specific approach suggestion that is detailed in the next section which is that we be fully inclusive of all desired water system upgrades in this single design.

WATER STORAGE TANK DIFFICULTIES

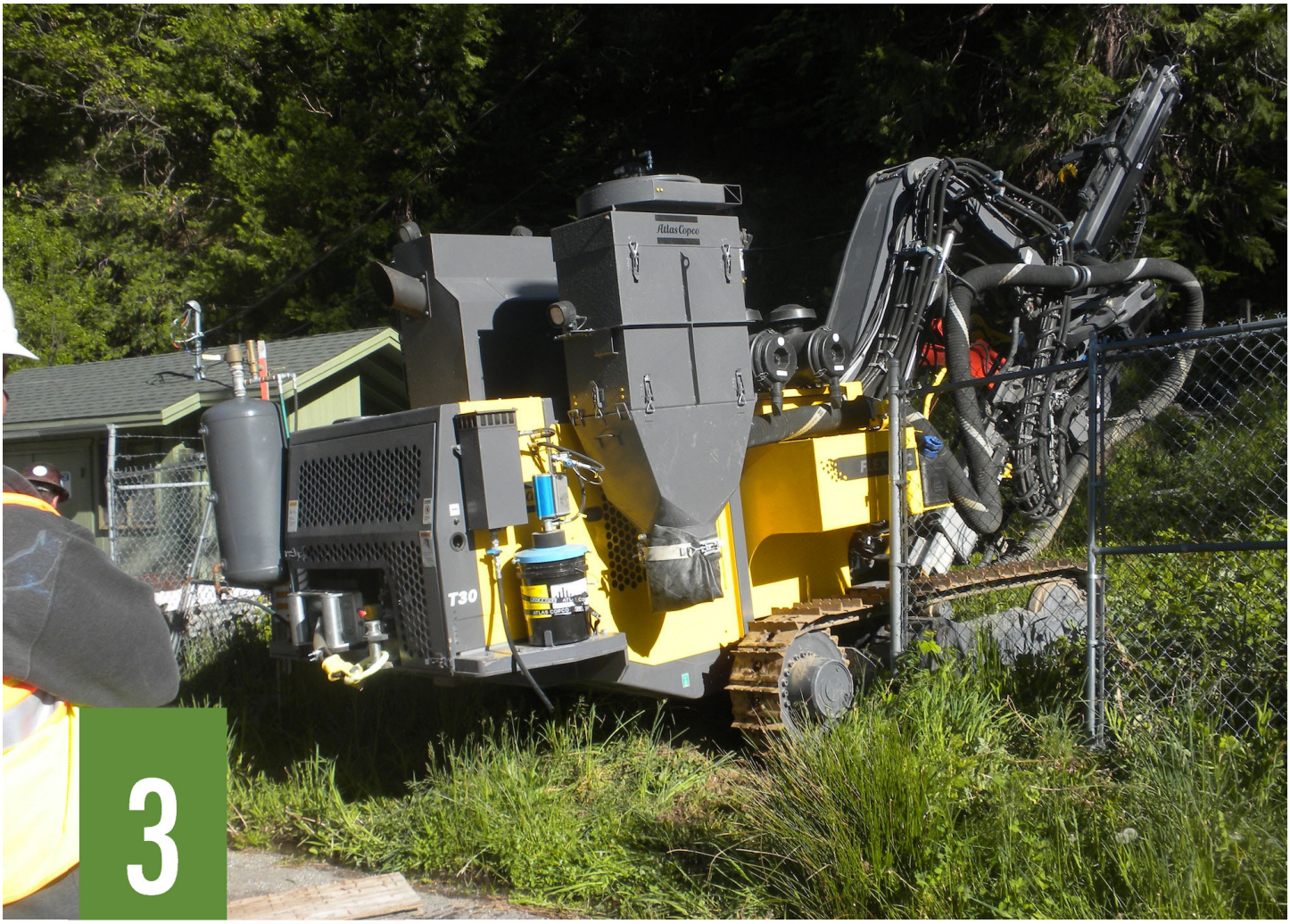
Coleman Engineering has gained an understanding of an unfortunate situation related to a water storage tank constructed in 2018. We understand that the 150,000-gallon bolted steel tank is experiencing failures in the tank floor. The tank is epoxy lined and coated and sitting on a fiberboard base with a concrete ring wall foundation. According to the description we were given, this installation appears to be somewhat typical.

The failures are manifesting as pinhole and larger holes that are allowing stored water to leak. Clearly, the integrity of the tank is breached, and the structure appears to be in jeopardy. We understand that repairs have been made to the floor to preserve the tank foundation and protect it from excessive erosion and settlement. This seems like a good temporary measure that should be followed up with additional permanent repairs and mitigations against future failures.

We are aware of the following entities involved in the tank issue:

- Altec Engineering – tank designer
- BRCO Constructors – tank general contractor
- CST – tank manufacturer
- Thompson Tank – specialty tank erector
- CSI – provided an 11-month tank inspection and now completing an evaluation with recommendations for repair

Our understanding of this issue is enhanced by the fact that Chad Coleman was involved in a similar project that included evaluation and recommendations for repairs for a failed tank earlier in his career. Coincidentally, two of the same team members were involved however the final analysis did not show that either of them was to blame for the issue. Mr. Coleman found that both CST (operating at that time as Columbian Steel Tank Company) and Thompson Tank were both helpful and thorough in their support to the client and to the diagnosis of the issue. The tank was ultimately repaired and put into service with expectations of a standard life expectancy.



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APPROACH AND MANAGEMENT PLAN

PROJECT APPROACH

We enjoy the opportunity to review and develop project approaches because it gives us the chance to demonstrate our high level of expertise and experience to our clients. The following text is a review of 8 project specific approaches that we have developed for the Ram Springs Improvements project that are each tailored to maximize success for the Alleghany County Water District.

1) **Make the project EASY for Alleghany County Water District.** Selecting Coleman Engineering will make things EASY for Alleghany County Water District. Making projects and outcomes easier is a mantra at Coleman Engineering. We tailor all our services and treat all our clients so that things get easier after engaging with Coleman Engineering. We train all our staff to go out of their way to serve each client in a way that makes their jobs easier.

   When Alleghany County Water District chooses Coleman Engineering it will be a choice to engage experts who are experienced with all the technical facets of the project as well as all the funding requirements of the project. There is nothing that we will be learning new on this project. We will simply be bringing our significant corporate resume of experience to bear for the sole benefit of the Water District.

   The result will be... EASY.

2) **Funded Capital Costs vs. Non-Funded O&M Costs.** All the services provided by Coleman Engineering will be tailored to maximize project quality and capital improvement dollars which are funded so that we minimize future operations and maintenance costs which will be ACWD responsibility in perpetuity.

   It is critical to remember that the State SRF program funds capital improvements but that fund and very few others will provide meaningful operations and maintenance funding assistance on an ongoing basis. That knowledge drives design decisions as we select approaches that are fundable now and that will minimize operations and maintenance costs later.

   An example of this approach by the way that we have approached SCADA and remote alarms in our Scope of Services. We have planned to add significantly to the SCADA and remote alarm functionality of the system because it will give the district a chance to economically engage with experts remotely and to allow local operators to make decisions without having to spend labor hours coming to the site to check and clear routine alarms. The added capital cost of the SCADA systems is fully fundable. And the saved operations and maintenance time is money saved by the Alleghany County Water District over the long term since the O&M time will be paid from district accounts and is not fundable.

3) **Include Altec Engineering on our team.** We began our project research by contacting Altec Engineering to discuss their work on the project and previously with the district. As a result of those early conversations, we invited Altec Engineering to team with us because we felt that together we could bring significant value to the project and the district. Consider the following list of benefits that we have planned to come from this teaming arrangement:

   - Maintain and respect relationships. We understand and appreciate that relationships are critical to successful project outcomes. We welcome the continuation of productive relationships that were formed between ACWD staff and Altec Engineering and expect that those relationships will be strengthened by the addition of Coleman Engineering.

   - Added continuity. We understand that the State has organized their funding into two phases largely because of the time it takes to develop the project from inception to completion. However, the risk to the district is that a new engineer with no connection to the project development may miss critical points and be plagued with inefficiency that could threaten a successful project outcome.

     Instead, we have planned to team with Altec Engineering to ensure continuity on the project. Coleman Engineering plans to capitalize on all the good work already accomplished by Altec and simply continue their work to its intended conclusion. We won't risk missing key project components or goals because we will pass all our design documents by Altec for review and several stages during the design.

   - Enhanced efficiency. By utilizing the previous project experience and working knowledge of District staff and preferences, we expect Altec Engineering to enhance the overall efficiency of our team. The

team won't be learning from scratch. We will be continuing the work of Altec in an organized and efficient manner. This team will function much more like a continuation of the 90% draft design than a true third party who has come in to "take over" someone else's design. The result will be a much more streamlined and efficient schedule.

4) **Full featured design.** Our Scope of Services includes all the design services that we anticipate being required. Our approach is to be fully inclusive so that all desired project elements are included in our design. This includes the following elements:
   - 100% design
   - Environmental consulting and permitting. We have included time to follow up with permitting agencies, prepare pre- and post-construction reports, and complete the pre-construction survey for nesting birds. We are aware that EnPlan has prepared most environmental documents and intends to complete permitting for the following: streambed alteration permit, Nationwide permit, and water quality certification. We are not fully informed on how the Timber Harvest Plan will be completed. Our approach to including budget for an environmental consultant is to give the District the resources it needs to make certain that the project is able to move forward productively during all permitting and other environmental coordination that may be required.
   - Mechanical design elements that are not yet fully detailed in the 90% draft design.
   - Electrical design elements that are not yet fully detailed in the 90% draft design.
   - Architectural and structural design elements that are not yet fully detailed in the 90% draft design.
   - Robust SCADA controls and alarms and integration services that are not yet fully detailed in the 90% draft design.

   Note that we have assumed that we will include all the work previously delegated to Aqua Sierra Controls. We have worked with Aqua Sierra to understand what was asked of them and they provided three proposals all dated in January 2020 (attached to this proposal as Appendix C). The Scope of Services included in this proposal includes all the elements that were previously proposed by Aqua Sierra Controls.

   By including everything in our single design package of plans and technical specifications we have planned for a much easier funding application process and for much higher likelihood of success during construction. We have brought everything under one roof so that there will be a general contractor with a single source of responsibility to the District for the performance of all project elements. What we wanted to avoid was a situation where there would be multiple source of responsibility to the District so that the District would have to manage warranty items from multiple parties.

   By including all known project elements in the final design, we anticipate three specific benefits to the District:
   1. More streamlined funding application process since everything is included in one justifiable package. There will be no need to document and justify desired project elements separately to the State.
   2. More efficient construction process with fewer change orders and less confusion. All of this leads to faster timelines and reduced costs during construction and during the perpetual operations and maintenance of the completed project.
   3. Single source of responsibility during and after construction. If anything goes wrong, the district will only need to contact the general contractor who will be responsible for the entire project. If project elements were left separate there could easily be a fight over which party would be responsible for which project elements. And it would be District staff left to make multiple calls and sort out the details.

5) **Complete the design to current industry standards.** There are several design elements that are not fully developed and completed to current industry standards. These may have been planned for further development by Altec Engineering during the final design stage. Coleman Engineering has planned for their completion so that the final design is fully developed and thoroughly detailed. Examples of design elements requiring final development include the following:
   - Inclusion of General Plan Notes and Typical Civil and Mechanical plan details. Coleman Engineering has developed these typical notes and details as a result of decades of professional experience to be protective of our clients. These simple notes and details on the plans will serve to clearly define the responsibilities and expectations of the contractor so that there is no confusion and no arguments.

- Update technical species to MasterFormat standards. The 90% draft specifications use an old format that was superseded in 2004. Coleman Engineering subscribes to a library of current technical specifications in the current format. By using the industry standard, we will be minimizing confusion and maximizing understanding between the contractor, engineer, funding agency, field inspector, and the district.
- Include Wild Land Urban Interface (WUI) requirements. Our architect has noted that according to mapping provided by the State of California Fire Marshalls office, the project is very likely to be inside the boundaries requiring compliance with Wild Land Urban Interface requirements. Generally, this means that building designs must include exterior materials that are either non-combustible or possibly heavy timber and windows that are dual glazed with the exterior pane tempered glass. We will confirm this requirement and consider how the designs may need to be completed to include WUI requirements. And, even if the building does not technically fall inside the WUI boundary, the fact that it sits in a forested area does suggest the benefit of protecting this critical drinking water infrastructure from wildfire.

6) **Robust SCADA and alarms.** Coleman Engineering has planned a design that includes robust SCADA and alarms. The reason for this is to assist the District to minimize their O&M costs in the near-term and to allow the District to get O&M help in the future if needed. There are two specific benefits to including remote monitoring capabilities:
   a. Reduced O&M costs in the near term. When the current District operator receives an alarm, he can easily review that alarm remotely and determine if it requires a site visit or if it can wait until normal business hours. Alarms that can wait are simply cleared or ignored with no further expense to the District. We have found that clients implementing robust remote monitoring capabilities typically experience significant cost savings relatively quickly.
   b. Allows for remote operations assistance if District operations staff are ill or on vacation or simply need a second set of expert eyes to help diagnose a problem. This can set the District up for future savings if an operations consultant is required or other remote operations arrangements become necessary.

   Further, construction of these improvements will use grant funding from the State which is included to reduce O&M costs which are not funded. This is a win-win for ACWD because it doesn't cost any more now and reduces costs in the future.

   Finally, by including the SCADA and alarm functions in the design, we will facilitate proposal and construction of the future system by several different sources. There is no need to limit the District to only getting proposals and support from Aqua Sierra Controls.

7) **Estimate construction costs liberally.** Coleman Engineering has found that during Construction Funding applications is the time to be very liberal with construction cost estimates. These estimates will be used to set budgets and apply for funding and so higher costs will reward ACWD with sufficient budgets during construction. Alternatively, if an engineer under values the likely costs of construction it can cause delays during construction and delays getting reimbursed by the State as budgets are adjusted. We will use our previous experience in this regard to estimate construction budgets as high as is reasonable knowing that the project will be fully funded by SRF grant money and that we will be setting ACWD up for a much more streamlined funding application and construction process later.

8) **Consider future addition of the tank into the design.** Our experience indicates that the more that funding applications can be consolidated to include all project elements, and the less those elements are piecemealed in an application, the easier the funding process goes. For that reason, we recommend future consideration of adding the tank repairs or replacement into the design prepared by Coleman Engineering.

   However, because of the potential for litigation and/or the involvement of insurance companies in the resolution of the current tank failures, this is not likely to be the best time to add the tank into the project. There are simply too many unknowns at this time. Hopefully sometime soon it will be possible to add the tank before the project design is completed so that a single design package can be submitted for funding.

MANAGEMENT PLAN

Our management plan is much more standard so that we can apply it uniformly across most of our projects. This consistency helps our staff to know exactly what is expected of them because it is the same as on all projects. Our Management Plan includes the following four key points:

1) **Assign a consistent team that ACWD can depend on.** Coleman Engineering will communicate clearly at the start of the project so that ACWD knows exactly who their project team is. We plan to maintain this project team throughout the project and will inform ACWD immediately of any unforeseen changes.

2) **Thorough Scope, Schedule, and Budget** included in this proposal which will serve as the basis for our work planning and execution. We invite reviewers to note the detail that is included in our Scope and in the accompanying Fee Spreadsheet. Please also note the consistency between the two documents. We routinely utilize these two documents together with the schedule to define the project expectations for our entire staff. We program the planned hours and due dates into our production schedule so that all staff commitments are known well in advance and so that they are coordinated with other due dates. The Coleman Engineering team meets every Monday morning to review weekly tasks, due dates, and client expectations. This process ensures that our clients get the best possible project outcomes – on time and on budget.

3) **Careful management of sub-consultant team members.** Our team includes several specialty sub-consultants who will be required to bring the design to a thorough conclusion. These team members include the following:
   - Frisch Engineering – electrical, instrumentation, and controls engineering
   - VE Solutions – structural engineering
   - Sigerson Architects – architectural design
   - Area West Environmental – environmental consulting and permitting

   All these subconsultants are very well known to us since we have worked with each on a great many similar projects. Our project experience with these trusted team members includes technically similar projects as well as managerially similar projects that were funded by SRF program money. This familiarity between all team members will serve ACWD very well since we will be able to serve ACWD in a fully functional and efficient way starting on the first day.

4) **Monthly meetings and review of progress and invoices and SRF submittals.** Coleman Engineering has planned to meet with ACWD staff monthly. The purpose of these monthly meeting will be to discuss project progress, including details of our invoices and required SRF submittals. Many of our clients ask for our help to submit reimbursement requests and other paperwork associated with the SRF funding. We are experienced and well known to the State staff and are very happy to provide this service. We find it goes best if we always keep a consistent line of communication open with our client. It is likely that we will decide together to invite State staff to some or all these meetings to further enhance productivity and streamline reimbursement requests.

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QUALIFICATIONS AND EXPERIENCE

SUMMARY OF QUALIFICATIONS AND EXPERIENCE

Coleman Engineering has a dedicated and experienced team ready to serve the Water District on this project. The table below highlights their relevant qualifications and also the years of experience they have.

We can confirm that to the extent within our control, the project team below will be available for the full term of the contract and if a personnel change becomes necessary, Coleman Engineering will seek prior approval form the District before making any such changes.

TEAM MEMBER	BIOGRAPHY	QUALIFICATIONS	YEARS OF EXPERIENCE
 Chad Coleman *Principal-in-Charge*	Chad has twenty-five years of experience in planning, designing, and managing construction and managing operations of water and wastewater infrastructure and facilities. He is experienced with the planning, design, rehabilitation, and construction management and operations of wastewater lift stations, wastewater collection systems, and wastewater treatment plants, as well as municipal wells, water treatment plants, water storage tanks, transmission and distribution piping, and pumping stations.	• Professional Civil Engineer: > CA #56490 > ID # 8964 > NV # 16990 > UT # 188915 • Water Treatment Plant Operator, Grade 3, CA #31314	25
 Jon Kaminsky, P.E. *Project Manager*	Jon is experienced planning, designing, and managing construction of water and wastewater infrastructure and facilities. He is an expert in the planning, design, and construction management of wells of all types including drinking water and agricultural water. In addition, Jon is experienced providing engineering services for all other parts of water and wastewater utility systems. He has worked at Coleman Engineering for 3 years.	• Professional Civil Engineer: > CA #82004 > ID #17460 > WA #55136	12
 Cody Tom, P.E. *Project Engineer*	Cody has experience with water modeling, treatment systems, system design and calculations, inspection and construction services and funded project administration. He has worked on many State funded projects including the construction inspection phases and is extremely experienced.	• Professional Civil Engineer: > CA #92966	6

KEY SUBCONSULTANT INFORMATION

Coleman Engineering contracts with subconsultants to provide the specialized engineering and other services required for each project. The following table gives details of the subconsultants we will work with on this project. We have regularly worked with these firms and know them to be experts in their field and trusted partners.

Altec Engineering. Michael Lybarger (Kip) is know to the Water District for his involvement in the previous stages of this project. Kip has agreed to be on the Coleman Engineering team which we believe will be a huge benefit to the overall project outcome.

Area West Environmental, Inc. (AWE) - CEQA/NEPA Environmental Compliance. AWE is a small, woman-owned California S Corporation headquartered in Orangevale, Sacramento County, California. AWE is also a disadvantaged business enterprise and we understand working in disadvantaged rural communities.
AWE was founded in 2000 as a natural resource specialty firm but has grown into a full-service environmental science, planning, and consulting firm. With over 22 years of experience providing California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance, biological and cultural resources support, environmental analysis, permitting, and monitoring consulting services.

Frisch Engineering—Electrical Engineering. Frisch Engineering was founded in 2001 and has been dedicated to the water, wastewater and power industries ever since. Based in Folsom, CA and with over 650 projects completed, the firm is a State of California registered micro business. Typical projects are pump stations, treatment plants, reservoirs, wells, wastewater lift stations, power plants, hydro-electric facilities, substations, and telemetry systems. Frisch Engineering is proficient in power distribution, protective relaying, hardware controls, PLCs, SCADA, programming, and instrumentation. Principal Tom Frisch will be the lead for this project.

VE Solutions, Inc. – Structural Engineering. Founded in 1997 and located in Carmichael, CA, VE Solutions, Inc. provides structural engineering design for steel, concrete, prestressed concrete, masonry and wood buildings and structures. The firm has particular experience in the rehabilitation of damaged structures. VE Solutions' Principal, Brad Friederichs, has worked on numerous water and wastewater infrastructure projects as structural designer for Coleman Engineering.

PROJECT EXPERIENCE

The following example projects demonstrate our suitability for the Ram Springs Improvement project. It is worth noting that all of the projects below were State-funded through the California State Water Resources Control Board. We understand what is required in the planning stages of these projects to secure further funding to steer the project through to completion and to adhere to stringent State guidelines and criteria.

We have provided contact names and phone numbers for each of the example projects so that reviewers can call to discuss the services provided by Coleman Engineering. We suggest specific discussions about our technical expertise and about the way that Coleman Engineering navigated the State Funding process and people for the benefit of our Clients and the success of each Project.

LOCKE INTERTIE PROJECT | LOCKE, CA

PROJECT OVERVIEW

Coleman Engineering was retained by the Locke Water Works Company to investigate alternatives that would bring the Locke Water System into compliance with drinking water standards. The town of Locke is a community, non-transient, small, rural water system. The State of California recognizes it as a disadvantaged community with a median household income of $24,999.

Arsenic contamination of the drinking water well was the key concern for this water system. The original water system board was opposed to consolidation which left treatment as the only feasible option. The project included early investigation of conventional coagulation filtration and adsorptive media treatments. A pilot study of 3 different types of adsorptive media was completed.

A change in board makeup caused a shift in preferences and after careful consideration of long term O&M and capital costs the decision was made to consolidate the Locke Water System with neighboring Sacramento County Water Agency (SCWA) in Walnut Grove. Coleman Engineering managed expectations and provided timely technical deliverables through this change in approach so that the Client received excellent service throughout the project. A 4,000-foot pipeline is nearing design completion and will be constructed to consolidate with SCWA at Walnut Grove using horizontal directional drilling under the Delta Cross channel.

REFERENCE:

Clarence Chu | General Manager, Locke Water Works
Telephone: (916) 552-9983 | E-mail: ckchu52@comast.net

Los Molinos CSD Arsenic Compliance and Consolidation Project | Water Supply Pipelines | Los Molinos, CA



PROJECT OVERVIEW

Coleman Engineering provided planning services (including a successful SRF-grant funding application); preliminary and final design; project management; and inspection and construction contract administration for a new drinking water well and for a consolidation pipeline for the Los Molinos Community Services District, Los Molinos, CA. The water supply pipeline portion of the project consisted of 1,800-feet of 10-inch dia. C900 PVC transmission main within and adjacent to the Caltrans right-of-way for State Highway 99, and two 4-inch dia. C900 PVC distribution pipes each approximately 450-feet long. The distribution pipes connect two mobile home parks io the Los Molinos CSD water supply network so that existing wells can be decommissioned. Three horizontal directional drilling (HDD) / jack-and-bore crossings – two of State Highway 99 and one of Los Molinos Creek – were included in the project.

Environmental restrictions prevented a bridged creek crossing from being permitted prior to determining that Jack and Bore installation was not feasible. The project was designed with the Jack and Bore but during construction that method proved to be not cost effective. A pause in construction was effectively managed by Coleman Engineering as the environmental clearances were obtained for the bridged creek crossing. Construction was re-started after the environmental was complete and the project was completed without delay and without incident. The project was a great success resulting in a new and compliant drinking water supply for the Los Molinos CSD and consolidation of two formerly independent public water systems that were out of compliance with drinking water regulations.

REFERENCE:

Jim Lowden | General Manager, Los Molinos Community Services District
Telephone: (530) 824-2914 | E-mail: jglowden54@gmail.com

SKY VIEW COUNTY WATER DISTRICT—WATER SYSTEM IMPROVEMENTS | TEHAMA COUNTY, CA




PROJECT OVERVIEW

Coleman Engineering was approached by the Sky View County Water District to provide assistance to the District with planning, preliminary engineering, final design, and assistance to obtain funding for design and construction of improvements to the drinking water system. The drinking water infrastructure, owned by the District, had served beyond its useful life and needed replacing to be able to supply clean and reliable drinking water to the community. There were also many residents within the District who were not served by any drinking water infrastructure and were forced to haul and store their own drinking water.

The most significant challenge on the project was the fact that the Water District was in the very early process of emerging from receivership and had very minimal Technical, Managerial, or Financial capacity. There were several delays, starts and stops, and hiccups as the District board learned the process of self-governance and reliable water system operations. Coleman Engineering provided significant guidance to the board of directors to enhance their TMF capabilities and to establish policies and practices that made the District eligible for funding with regard to their TMF status.

Coleman Engineering produced a Preliminary Engineering Report and prepared the funding applications for the District, to secured funding for the planning phase of the project. We were also able to obtain SRF Emergency Funding to which resulted in technical and environmental documentation that aided the District in securing emergency funding used for design and construction of emergency improvements to the water system.

REFERENCE:

Gretchen Minchew | Board Member, Sky View County Water District
Telephone: (469) 774-3010 | E-mail: Gretchen.minchew@gmail.com

Drinking Water System Consolidation |Castle City Mobile Home Park, Newcastle, CA

PROJECT OVERVIEW

Coleman Engineering was retained by Caritas Corporation to provide consulting services related to all compliance issues with the existing drinking water system. The mobile home park owns and operates a surface water treatment plant and drinking water distribution system that was constructed by the former owners of the park property. Coleman Engineering was engaged to assist the new owners in maintaining compliance with state and federal regulations. Services included preparation of a complete TMF report, application for new operating permit, and preparation of a compliance plan detailing the addition of turbidimeters on each of the pressure filters.

The Project eventually evolved to include design of new potable water pipeline, fire-flow pipeline, and consolidation connection to existing Placer County Water Agency potable water main to service 212 residential connections. Coleman was responsible for coordinating project funding from the Drinking Water State Revolving Loan Fund, FAAST application, and design of over 2,800-feet of pipe including existing utility conflicts, connections at existing pipelines, landscape removal and replacement costs, hydraulic calculations, project cost estimates, and plan drafting. Engineering services during construction followed with a very successful project completed in 2021. The project resulted in a water system consolidation so that drinking water reliability and fire fighting capacity were both significantly improved.

REFERENCE

Tracy Bejotte | Chief Operations Officer, Caritas Corporation, CA
Telephone: (949) 727-0568 | E-mail: tracy@caritascorp.com

Primary Influent Pump Station No. 2 | Sewerage Commission - Oroville Region, Oroville, CA

PROJECT OVERVIEW

The Sewerage Commission – Oroville Region (SC-OR) is a joint powers agency formed by the City of Oroville, Lake Oroville Public Utility District and the Thermalito Water and Sewer District. SC-OR operates a wastewater treatment plant and provides sewerage services for these three entities, serving a population of approximately 35,700. The design average dry weather flow capacity of the WWTP is 6.5 million gallons per day (mgd); though the WWTP can temporarily receive peak wet weather influent flows up to 26 mgd due to extensive I&I in the sewerage network.

Coleman Engineering is providing full construction management, resident engineer services and engineering services during construction for the new $7 million Primary Influent Pump Station No. 2 at the WWTP. New facilities include the new 17 mgd wet well structure, four submersible pumps and associated piping and valves; a bar screen structure; two large diversion boxes; a new electrical building to house electrical equipment; a new diesel engine generator; new flowmeter vaults; yard piping, new and modified electrical equipment; and site improvements.

REFERENCE

Glen Sturdevant | WWTP Plant Manager, SC-OR , Oroville, CA
Telephone: (530) 534-0353 | E-mail: gsturdevant@sc-or.org

EXAMPLES OF FUNDED PROJECTS

The table below is a list of examples of projects for which Coleman Engineering has successfully assisted or is currently assisting clients to secure Federal and State funding. Following the table are some more detailed examples of specific projects, including reference information for each project.

Client and Project Name	Funding Types and Totals	Phase and Status
Castle City MHP Water System Consolidation	> SRF Planning (Prop. 84) = $125,500 > SRF Construction (Prop. 1) = $1,642,923	Planning and design complete. Bidding assistance and construction complete as of Fall 2021.
Castle City MHP Wastewater System Consolidation	> SRF Planning = $500,000 (application in process)	Planning funding application is being prepared. Goal is to begin Planning in 2022.
City of Crescent City Water System Improvements	> SRF Planning (Prop. 1) = $120,000	Planning Complete.
City of Fort Bragg Water Supply Pipeline Replacement	> SRF Construction = $8,800,000	Design complete. Supported the City with their application for construction funds.
Forest Ranch Municipal Water Company Water System Upgrades	> Prop 1 SRF Planning Funding = $98,639 > Working with UEI	Original planning services complete. Now working through contracting for additional planning services.
Hamilton City Sanitary District Wastewater Treatment Plant and Pipeline Improvements	> RCAC = $150,000 > USDA = $1,088,000	Planning, Design and Construction completed in 2015. Currently providing contract wastewater system operations services.
Locke Water Works Consolidation Pipeline	> SRF Planning (Props. 1 and 84) = $360,000	Planning and Pilot Studies complete. Final Design currently underway. Construction anticipated 2022.

Client and Project Name	Funding Types and Totals	Phase and Status
Los Molinos CSD New Well and Consolidation	> SRF Planning (Prop. 84) = $120,000 > SRF Construction (Prop. 1) = $2,087,875	Planning and Design complete. Construction currently underway.
Madison CSD, Yolo County Water System Improvements	> CDBG Planning Funding = $50,000 > SRF and Private Construction funding = $5,000,000	Preliminary Engineering complete. Assisting the District to pursue funding from Private, State, and Federal sources.
Shaffer School Well Source Capacity Project	> SRF Planning (Prop. 1) = $381,000	Planning and Design completed March 2019.
Sky View Ranch Water District Water System Improvements	> Emergency SRF Planning = $57,507 > SRF Planning = $500,000	Emergency Funding secured and emergency planning complete. Planning Funding secured.
Spalding CSD Sewer Pond Ballast	> CDBG Design and Construction = $170,000	Design and Construction Completed in February 2018.
Tuolumne City Sanitary District Wastewater Treatment Plant Improvements	> RCAC = $1,230,000 > USDA = $4,985,000	Design and Construction Completed in 2013.
Valenzuela Water System Arsenic Treatment or Consolidation	> Prop 1 SRF Planning Funding = $154,740 > Working with RCAC	Planning underway. Treatment considered too expensive and operations intensive. Coordinating with the City of Hollister for consolidation.
Winship School Arsenic Treatment/ New Well #2	> SRF Planning (Prop. 84) = $250,250 > SRF Construction (Prop. 1) = $400,000	Planning, Design and Bid Assistance complete. Currently in construction.

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SCHEDULE OF WORK

SCHEDULE OF WORK

Our team has collaborated to prepare the Project Schedule shown below. There were several assumptions made that are very likely to be refined as the project commences and progresses. Experience on previous projects has shown that it is important to get started early and make steady progress while maintaining patience and realistic expectations about the nuances of working with the State SRF program.

Coleman Engineering has plenty of staff and availability to make great progress and to make certain that the project moves forward productively. We will welcome input on the schedule assumptions from the Alleghany County Water District. Adjustments are welcome and even expected as we negotiate an agreement, establish a firm start date, and begin working on the project. If acceleration of the schedule is desired, it is likely that Coleman Engineering can accommodate that request.

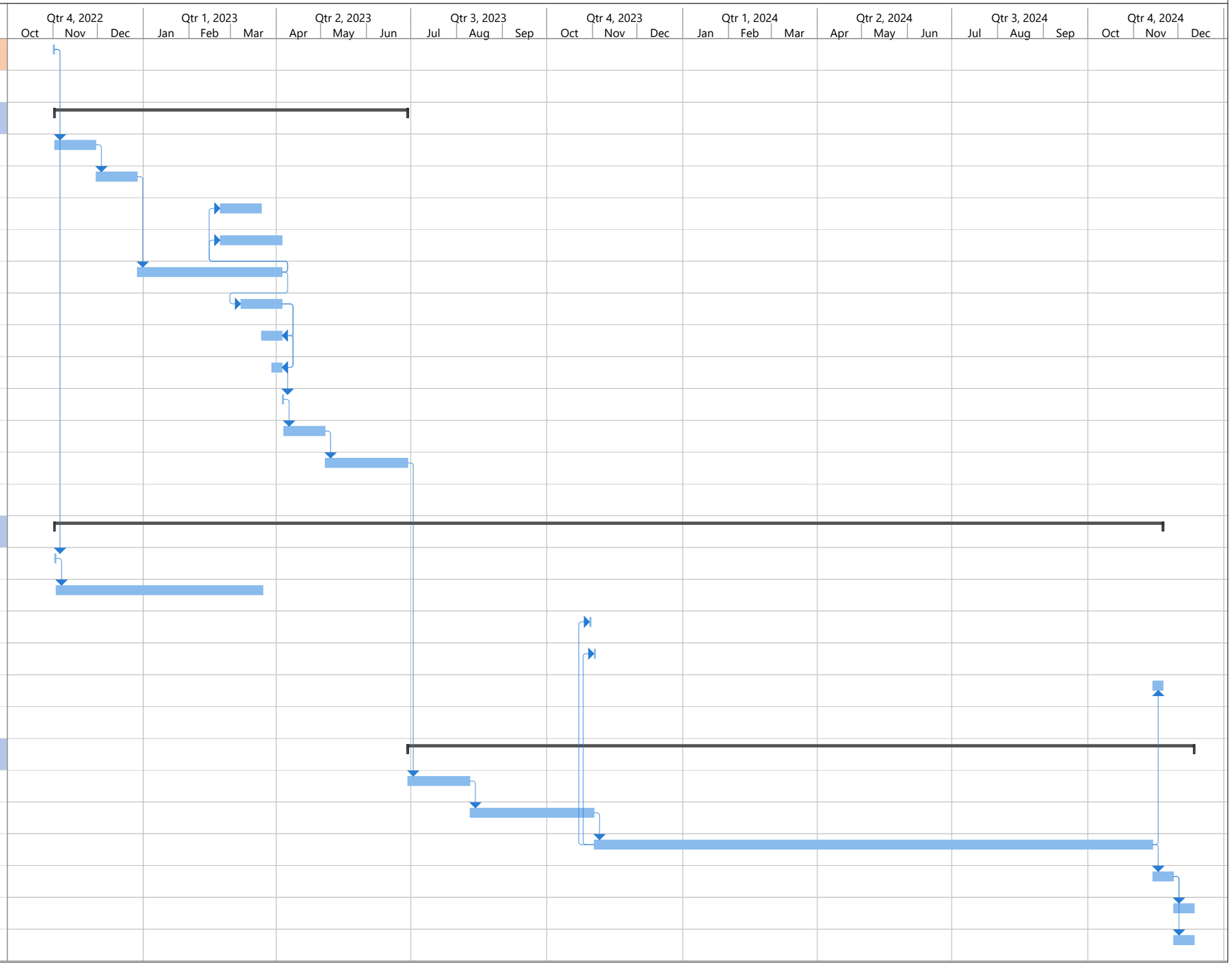
The following bulleted list is a summary of a few key schedule assumptions and observations.

- We have assumed a start date of November 1, 2022 as indicated in the RFP. We understand that this date is likely to change and will largely be determined by the timing of the state approval of our contract and the Construction Funding application.
- Upon execution of an agreement, the Coleman Engineering team will begin immediately. Design engineering is anticipated to consume the first two quarters of 2023, including one review and comment submittal to the District and the State.
- We anticipate that the environmental permitting, Timber Harvest Permit, and encroachment permits will be approved during the design engineering phase. All permits should be complete by the end of the second quarter of 2023.
- Bidding and approval of the recommended construction contract are anticipated to take a relatively long time due to the required state approvals and adjustments that are likely to be required to the construction budget. This is a normal process for state funded projects. We have shown the bidding and approval process to take approximately 4 months.
- The construction period is estimated at 270 days. The great majority of this time will be in procurement. Supply chains continue to be impacted which is causing long construction timelines. While its difficult to project the supply chain situation so far into the future, it is likely that the construction time will extend far beyond what may be considered reasonable to build a couple of small timber framed structures. This is due largely to the need to procure the long lead items including pumps, motors, motor controls, the generator, and the SCADA equipment.
- Coleman Engineering will be glad to work with the District to adjust the schedule as needed and as realistic when considering outside conditions. Coleman Engineering will commit the necessary staff to meet schedule desires of the District.

Alleghany County Water District

Ram Spring Improvement Project

ID	Task Name
1	**Assumed Project Start Date (to be updated as necessary)**
2	
3	**Design Engineering**
4	Information Review & Site Visit
5	Civil and Mechanical Engineering
6	Structural and Architectural Engineering
7	Electrical, Instrumentation, and Controls Engineering
8	Plans
9	Technical Specifications
10	Bidding and Contract Documents
11	Cost Opinion
12	100% Draft Plans and Specs
13	Client Review of 100% Draft submittal
14	100% Final Plans and Specs
15	
16	**Environmental Consulting**
17	Attend Project Kick-Off Meeting
18	Permit Coordination
19	Pre-Construction Nesting Bird Survey
20	Worker Environmental Awareness Training
21	Pre- and Post-Construction Reporting
22	
23	**Engineering Services During Bidding and Construction**
24	Engineering Services During Bidding
25	Contracting and State Approvals
26	Engineering Services During Construction
27	Final Observations and Punch List
28	Record Drawings
29	Maintenance Checklists, Ops Manuals, and Warranties



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REFERENCES

REFERENCES

We welcome the reviewers of this proposal to contact any of the references listed below.

PROJECT	REFERENCE	PROJECT OVERVIEW	TEAM MEMBER INVOLVEMENT
Los Molinos CSD Arsenic Compliance and Consolidation Project	Jim Lowden - General Manager, Los Molinos Community Services District Telephone: (530) 824-2914 E-mail: jglowden54@gmail.com	Water supply pipeline and consolidation	Chad Coleman—Project Manager Cody Tom—Project Engineer
Primary Influent Pump Station No. 2	Glen Sturdevant - WWTP Plant Manager, SC-OR , Oroville, CA Telephone: (530) 534-0353 E-mail: gsturdevant@sc-or.org	Construction management and resident engineer services	Chad Coleman—Project Manager Cody Tom—Resident Engineer
Skyview County Water District Water Supply Improvements	Gretchen Minchew - Board Member, Sky View County Water District Telephone: (469) 774-3010 E-mail: Gretchen.minchew@gmail.com		Chad Coleman—Project Manager
Valenzuela Water System	Carmelita Rios - Board Member, Valenzuela Water District E-mail: Carmelita.rios@gmail.coom	Water supply pipeline and consolidation	Jon Kaminsky—Project Manager

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COST PROPOSAL

COST PROPOSAL

The following cost proposal is a detailed view of every hour that every team member is planned to work on the project. Each task and sub-task correspond exactly with the accompanying Scope of Services that is included in the appendix to this proposal. A line-by-line comparison will demonstrate to the reader the detail that the Coleman Engineering team has invested in project planning.

It is critical to point out that our proposal is only a first step in the process of negotiating an agreement. If the District feels that they would like to take a different approach to the project, Coleman Engineering will be very happy to adjust our Scope of Services and Engineering Fee. We routinely work through an iterative process with new clients as the Coleman Engineering team learns the desires and preferences of the client. We are anxious to do the same with the Alleghany County Water District.

The Scope of Services and accompanying fee proposed in this section are much larger than anticipated during the Planning Services. The many reasons have been itemized elsewhere in this proposal and are summarized in the bulleted list below for clarity.

- The Coleman Engineering team has proposed to add significantly to the design. The purpose of the additions is to deliver more long-term benefits to the Alleghany County Water District. Proposed additions include:
  - The entire electrical, instrumentation and controls designs.
  - SCADA system designs.
  - Mechanical design for pump and associated pipe replacement.
  - Architectural designs to include Wildland Urban Interface requirements as established by the California Fire Marshall.
  - Advancing plans and specifications to current industry standards. This is especially notable with the proposed upgrade to standard MasterFormat specifications.
- Significant time allocated to management of the funding process. Our previous experience has demonstrated the need to budget sufficient time to assist our clients with the many coordination efforts that will be required to facilitate a smooth project. We have included support for the Construction Funding application, an updated cost estimate to set the Construction Funding budget, coordination with DFA on the design deliverables, and close-out support.
- We have included Pre- and Post-Construction Administration services by Altec Engineering in our fee. This is time already incurred that the District needs to pay Altec Engineering. We have included it in our fee to make that reimbursement much easier.
- Design time necessary to advance the design from its current form to a true 100% final condition. While the design served a good purpose to define the project and to deliver on previous expectations, we feel that the addition of details will add to the quality of the project. Added quality will result in lower bid prices and long-term benefits to the District.
- Environmental Consulting is a robust task derived largely from assumptions about the services that may be required. Since none of the permitting is finalized, there are no permit conditions itemized. Instead, our environmental consultant has drawn from their previous experience to assume what services may be required. Again, we have made conservative assumptions so that we are sure to have our team fully funded to provide support to the District.

- Engineering Services During Bidding are planned to be robust because of the nature of bidding SRF funded projects. As the District is aware, there are many requirements and expectations associated with the SRF program. Coleman Engineering has planned to be fully supportive of the District to help guide the bidding process to a successful conclusion – in full compliance with SRF program requirements.
- Engineering Services During Construction are also planned to be robust to be protective of the District and to ensure a quality project is constructed that will serve the District long into the future. We have found that it is the electrical and controls construction items that typically demand the most attention during construction. Accordingly, we have planned for our electrical engineer to include factory testing and on-site witness testing to make sure that systems are started up and integrated effectively.
- We have included time to prepare Record Drawings and to compile and prepare Maintenance Checklists, Operations Manuals, and Warranties for the various pieces of equipment that are added to the water system. This final service will serve District staff very well so that they are able to proactively maintain their equipment for lowest life cycle costs to the users.

To review the points made in other parts of this proposal, there are two main reasons why the approach proposed by Coleman Engineering is in the best interest of the Alleghany County Water District.

1) Engineering fees and capital costs are fundable by the State SRF program. Therefore, it is in the Districts best interest to maximize the design services and resulting construction of new and upgraded water infrastructure facilities. Put simply, the more that can be justified now, the better system the District will have at the conclusion of the project.
2) Operations and Maintenance costs are not fundable by the State or any other typical programs. Again, it is in the Districts best interest to have the best possible system designed and constructed now so that long-term costs to the users will be minimized in the future.

The final approval of our proposed approach will be the State SRF/DFA program managers. The Coleman Engineering team feels very confident that we can justify our approach and help the District to obtain the additional funding needed for this approach. It is possible that certain parts will not be justifiable despite our best efforts. If that is the case, Coleman Engineering will be happy to make modifications to our Scope of Services and associated Fee so that the resulting engineering services and construction project remain fully fundable.

There is no risk to the District in choosing to team with Coleman Engineering and adopt the approach of adding to the project description and budget for the purpose of enhancing the quality of the new infrastructure and reducing long-term operations and maintenance costs.

Alleghany County Water District
Ram Spring Improvement Project

Task Number	Task	Labor Hour Estimate						Labor Sub-Totals	Sub-Consultant Fee	Sub-Consultant	Expense Costs	Expense Description	Total Budget per Sub-Task	Task Sub-Totals	Total Budget Hours	Total Budget Days
		Principal-in-Charge	PM	Project Engineer	Staff Engineer	CAD Designer	Project Assistant									
	2022 BILLING RATES + 3% to escalate to 2023 =	$242	$210	$190	$168	$141	$103									
		Chad	Jon	Cody	ı, Andre, Tyler, I	Wes	Aimee									
1.0	**Project Management, Meetings, and Funding Administration**															
1.1	Project Management	20	40				40	$17,366					$17,366		100	12.5
1.2	On-Site Meetings (6)	12	36		36			$16,513	$8,327	Frisch and Altec	$656	Mileage	$25,496		84	10.5
1.3	Virtual Monthly Meetings (24)		24	12	12			$9,332					$9,332		48	6.0
1.4	Funding Administration							$0					$0		0	0.0
	Suport General and Technical Form questions	4	4		8		8	$3,976					$3,976		24	3.0
	Updated Construction Cost Estimate	2	4	8	24			$6,870					$6,870		38	4.8
	Coordinate with DFA on design deliverables	4	8		24		4	$7,091					$7,091		40	5.0
	Close-out support	4	16		16		4	$7,428					$7,428		40	5.0
1.5	Pre- and Post-Construction Administration							$0	$34,430	Altec Engineering			$34,430		0	0.0
														$111,989		
2.0	**Design Engineering**															
2.1	Information Review & Site Visit	2	12		16	4	2	$6,462			$109	Mileage	$6,572		36	4.5
2.2	Civil and Mechanical Engineering	4						$968					$968		4	0.5
	Demolition		2	4	8	4		$3,086					$3,086		18	2.3
	Site civil improvements			2	4	8		$2,179					$2,179		14	1.8
	Mechanical improvements		2	4	8	4		$3,086					$3,086		18	2.3
	Off-site civil improvements		4	8	12	8		$5,500					$5,500		32	4.0
2.3	Structural and Architectural Engineering		2	2	4			$1,471	$48,840	VE Solutions			$50,311		8	1.0
2.4	Electrical, Instrumentation, and Controls Engineering		2	4	4			$1,850	$33,803	Frisch Engineering			$35,653		10	1.3
2.5	Plans	5	11					$3,581	$3,410	Altec Engineering			$6,991		16	2.0
	G Sheets - 3			2	6	24		$4,678					$4,678		32	3.9
	C Sheets - 12			12	48	192		$37,426					$37,426		252	31.5
	M Sheets - 3			4	17	66		$12,865					$12,865		87	10.8
	A Sheets - 6			2	4	8		$2,179					$2,179		14	1.8
	S Sheets - 3				2	4		$900					$900		6	0.8
	E Sheets - 15			4	8	12		$3,795	$24,211	Frisch Engineering			$28,006		24	3.0
2.6	Technical Specifications	4	8	20	80		8	$20,695					$20,695		120	15.0
2.7	Bidding and Contract Documents	2	4	8	16		8	$6,351			$1,500	EJCDC docs	$7,851		38	4.8
2.8	Cost Opinion		2	4	8	2		$2,804					$2,804		16	2.0
2.9	Draft Submittals							$0					$0		0	0.0
	100% Draft Plans and Specs	2	2	2	4	4	2	$2,725					$2,725		16	2.0
	100% Final Plans and Specs	2	2	2	4	4	2	$2,725					$2,725		16	2.0
														$237,200		
3.0	**Environmental Consulting**															
3.1	Attend Project Kick-Off Meeting							$0	$2,208	Area West			$2,208		0	0.0
3.2	Permit Coordination		2	4	8			$2,521	$5,061	Area West			$7,582		14	1.8
3.3	Pre-Construction Nesting Bird Survey				2			$336	$2,879	Area West			$3,214		2	0.3
3.4	Worker Environmental Awareness Training				2			$336	$2,982	Area West			$3,318		2	0.3
3.5	Pre- and Post-Construction Reporting				2			$336	$5,666	Area West			$6,002		2	0.3
														$22,323		

Alleghany County Water District
Ram Spring Improvement Project

Task Number	Task	Labor Hour Estimate						Labor Sub-Totals	Sub-Consultant Fee	Sub-Consultant	Expense Costs	Expense Description	Total Budget per Sub-Task	Task Sub-Totals	Total Budget Hours	Total Budget Days
		Principal-in-Charge	PM	Project Engineer	Staff Engineer	CAD Designer	Project Assistant									
	2022 BILLING RATES + 3% to escalate to 2023 =	$242	$210	$190	$168	$141	$103									
		Chad	Jon	Cody	ı, Andre, Tyler, I	Wes	Aimee									
4.0	**Engineering Services During Bidding and Construction**															
4.1	PM during Bidding and Construction	20	40				40	$17,366	$3,080	Frisch Engineering			$20,446		100	12.5
4.2	Engineering Services During Bidding	8						$1,936	$1,650	Frisch Engineering			$3,586		8	1.0
	Manage bid doc repro and distribution			2	4	4	12	$2,851					$2,851		22	2.8
	Pre-bid meeting and site walk			8	8			$2,859			$109	Mileage	$2,969		16	2.0
	Respond to bidder questions		2	4	12	4	2	$3,963					$3,963		24	3.0
	Prepare Addenda (2)		8	8	16	16	4	$8,553					$8,553		52	6.5
	Attend bid opening			6	6			$2,144					$2,144		12	1.5
	Evaluate bids		4	6	4		2	$2,855					$2,855		16	2.0
	Prepare Conformed Bid Documents			2	2	12	4	$2,820					$2,820		20	2.5
4.3	Construction Review Meetings (12)		8	36	36			$14,548	$4,125	Frisch Engineering	$1,313	Mileage	$19,985		80	10.0
4.4	Submittal Reviews (50)	2	8	20	50	4	8	$15,738	$14,515	Frisch Engineering			$30,253		92	11.5
4.5	Response to Civil and Mechanical RFI's (12)	2	8	12	24	8	4	$10,010					$10,010		58	7.3
4.6	Electrical Engineering Services During Construction			4				$758	$27,253	Frisch Engineering			$28,011		4	0.5
4.7	Structural Engineering During Construction			4				$758	$12,210	VE Solutions			$12,968		4	0.5
4.8	Final Observations and Punch List	2	2	8	8		2	$3,970	$2,354	Frisch Engineering			$6,324		22	2.8
4.9	Record Drawings (18/42)			2	4	24	4	$4,849	$3,058	Frisch Engineering			$7,907		34	4.3
4.10	Maintenance Checklists, Ops Manuals, and Warranties		2	2	8		4	$2,554					$2,554		16	2.0
														$168,200		
BUDGET TOTALS																
Total Budget Hours		**101**	**269**	**232**	**569**	**416**	**164**								**1,750**	
Total Budget Days		**12.7**	**33.6**	**29.0**	**71.1**	**52.0**	**20.5**									**219**
Total Budget Dollars		**$24,545**	**$56,483**	**$43,898**	**$95,445**	**$58,702**	**$16,892**	**$295,965**	**$240,060**		**$3,688**		**$539,712**			

COLEMAN ENGINEERING

APPENDIX A

SCOPE OF SERVICES

Scope of Services

Client:	Alleghany County Water District
Project:	Ram Spring Improvement Project
Project Location:	Alleghany, CA
Summary of Services:	Funding Administration 100% Design Engineering Environmental Consulting Engineering Services During Bidding and Construction
Utility Systems:	Drinking Water

Project Background

The Alleghany County Water District (ACWD) is a groundwater system located in Sierra County. The system has 60 active connections and approximately 50 residents connected to the water system.

This project is a continuation of planning project # 4300012-008P funded by the State Water Resources Control Board (SWRCB). In May of 2017, as part of the planning project, driven pipes were installed at the Ram Spring to minimize surface water infiltration. As a result of this drilling, and with subsequent water quality testing; on October 20, 2017 the SWRCB Division of Drinking water amended the Permit for the Ram Spring changing its classification from "ground water under the influence of surface water" to "ground water". This new classification eliminated the need for a treatment plant and lessens several regulatory requirements, saving both time and money over the long-term.

ACWD's objectives for this project are:

1) To reconfigure the district's facilities to accommodate the driven pipes installed in the planning phase of this project. This will facilitate continued water delivery to the residents of Alleghany in compliance with State and Federal drinking water standards.
2) To significantly extend the operational life of the Ram Springs collection area.
3) To reduce the annual O&M costs for ACWD.
4) Replace parts of the water system's aged infrastructure.

Project Definition

The 90% plans prepared previously describe the following improvements that are included in the design. This Scope of Services assumes the following project improvements are included in the design. If additional project improvements are added during design, additional budget is likely to be required.

- Demolition
  - Remove existing chain link fence
  - Remove existing weed-barrier fabric inside the fenced area
  - Remove trees, saplings, and underbrush
  - Clear, scalp and grub as shown to prepare for site improvements
- Site Civil Improvements
  - Earthwork, excavation, and grading on site
  - Install four curtain drains and connect to the wetland area
  - Install valve boxes
  - Place weed-barrier fabric, crushed rock, and native soil on site
  - Install a new chain link site fence
  - Construct a concrete pad for the new roof cover over the collector tank
  - Construct new collector tank overflow, drain, and outlet piping
  - Construct concrete gutter with steel inlet grate at storage building driveway
  - Construct AC paved driveway to the new storage building
- Mechanical Improvements
  - Replace ball valves, PVC collector pipes and manifold pipes
  - Install PVC unions
  - Install six sampling stations and one low-head flow meter
  - Construct improvements in the pump house to include:
    - Two new vertical multistage pumps
    - discharge piping
    - chlorine addition
    - SCADA compatible flow meter
- Architectural Improvements
  - This location appears to be within a Cal Fire Hazard Zone. As such the structures will likely need to meet Wild Land Urban Interface (WUI) requirements. These include non-combustible materials such as stucco or fiber cement siding for the exterior or heavy timber. Also, glass needs to be tempered for the exterior panes.
  - Construct a new 12’ x 12’ roof cover over the collector tank
  - Construct a new 12’ x 16’ storage building with sample lab
  - Evaluate the existing building versus the WUI requirements (see below) and design upgrades to suit. It is assumed that the following may be required to meet WUI requirements:

        - New roofing to meet WUI requirements (metal, composition, or shingle)
        - Exterior wall finish material including roof overhangs to be clad in non-combustible material such as stucco or fiber cement paneling.
        - Doors to be replaced with hollow metal doors and jambs.
        - Existing windows, if any to be replaced with dual glazed units, including the exterior pane to be tempered glass.
        - All vents or screened openings to be converted to WUI compliant assemblies, including the vents noted on the 90% draft plans.
        - Address other openings that might allow sparks or embers to enter the structure.
        - Note that the building assemblies do not need to be one hour rated but rather able to resist sparks and embers igniting them in the event of a fire.
- Electrical Improvements
    - Coordinate with the electrical power utility for new service drop(s) to the new buildings. It is assumed that a new meter will not be required to serve the new buildings at the existing site.
    - Replace the propane generator
    - Power and lighting in the new storage building
    - Power and lighting in the new tank cover
    - Power, lighting, and controls to support improvements in the pump house to include: 2 pump VFD motors not to exceed 5 Hp each, 2 chlorine dosing pumps, and a SCADA compatible flow meter
    - New RTU control panel with integral radio system, Dataflow systems or similar
    - Instrumentation and controls to support new SCADA
        - Flowmeter, pressure transmitter, pH, Turbidity, Chlorine Analyzer
    - SCADA improvements and integration consistent with three proposals from Aqua Sierra Controls in January 2020
- Off-Site Civil Improvements
    - Replace meters at 52 residential service connections

Alleghany CSD is completing its application for Construction Funding to the State of California DDW. This Scope of Services will be attached to an Agreement for Engineering Services which will be the final attachment needed for the funding application.

Services and Data to be Provided to Coleman Engineering by Client

The Client has provided the files and information listed below. Coleman Engineering will use this information as much as possible for the engineering services described in this Scope. Coleman Engineering will also use information collected during site visits. As

additional information is required, Coleman Engineering will make reasonable assumptions for data that is not available.

- Request for Proposals: Ram Springs Improvement Project, dated 8/22/2022
- Plans: Ram Springs Water Source Improvements, Sheets 1-20, marked Preliminary, by Altec Engineering, dated March 20, 2020
- Draft Project Manual: Contract Documents and Technical Specifications for Ram Springs Site Improvements, pages 29-83, by Altec Engineering, dated March 2020

Scope of Services

TASK 1 – Project Management, Meetings, and Funding Administration

1.1 Project Management: Coleman Engineering will manage the project by coordinating with the Client, and sub-consultants, allocating the resources, and planning and organizing its efforts to maximize the goals of the Client.

1.2 On-Site Meetings: Coleman Engineering will participate in a maximum of six (6) meetings on-site with the Client as requested during the term of project. These meetings are anticipated to include Board meetings, annual share-holder meetings, and design review meetings. These meetings are in addition to those described in other tasks.

1.3 Virtual Meetings: Coleman Engineering will participate in a maximum of twenty-four (24) virtual meetings. These meetings are anticipated to consist of current project status, upcoming submittals, and discussions of design preferences with the Client. In addition, these virtual meetings are assumed to include interactions and coordination with the State DDW/DFA staff.

1.4 Funding Administration: It is understood that the only item required to complete the Clients' funding application is Attachment T3 to the Technical Package of the Construction Funding Application. This Scope of Services and the accompanying Agreement for Engineering Services will comprise Attachment T3.

Coleman Engineering has allocated 24 hours to provide support to the Client in the form of answering questions and providing supplemental information to State Water Resources Control Board Division of Financial

Assistance (DFA) on the General Information Form and the Technical Form that were prepared and submitted previously by the Client.

Coleman Engineering has assumed an update to the Engineer's Construction Cost Estimate will be prepared to submit with the Construction Funding application. This is because of the proposed addition of significant additional components to the project including: electrical, instrumentation, controls, SCADA, building upgrades to meet WUI requirements, mechanical pump and piping design, etc. All these items are additional to the estimate that was previously prepared by Altec Engineering. In addition, local economic conditions have resulted in significantly inflated construction bid pricing in the past 1-2 years. We anticipate that escalation of all cost estimates is likely to be prudent.

Coleman Engineering has allocated 40 hours to provide support to the Client in the form of answering questions and providing supplemental information to State Water Resources Control Board Division of Financial Assistance (DFA) on the deliverables associated with this Scope of Services such as: 100% final plans, 100% final technical specifications, and 100% final construction cost opinion.

Coleman Engineering has allocated 40 hours to provide support to the Client to close out the project funding with the State. This effort is anticipated to include such services as writing final reports, assisting with final project accounting, documenting final construction and useful occupancy of the new facilities, etc.

1.5 Pre- and Post-Construction Administration: Altec Engineering provided engineering services with the understanding that they would be reimbursed from the Construction Funding. The purpose of this task is to capture those services for reimbursement of Altec Engineering, as a sub-consultant to Coleman Engineering. Specific services provided by Altec Engineering that are allocated to this task include:

- Specifications preparation
- Design and Engineers estimate
- Environmental documents coordination
- T1 Engineering Report
- Related project expenses

TASK 2 – Design Engineering

2.1 Information Review and Site Visit: The Coleman Engineering team will visit the site to review existing conditions, gather information, and gain an understanding of current and anticipated future water system conditions

and operations. It is anticipated that the following information will be of interest during the site visit.

- Review the entire water system with staff to gain an understanding of infrastructure conditions and operational limitations
- Observe the Ram Springs site to understand how the 90% design applies in the field
- Observe and understand connecting piping, valves, pumps, and other appurtenances at the Ram Springs site
- Observe the distribution system to understand how the addition of 52 residential service meters may be accomplished and what additional design detail may be necessary
- Review water system operations standard operating procedures with staff
- Review water system demands and water usage with staff
- Obtain any As-Built Plans that are available

2.2 Civil and Mechanical Engineering: Coleman Engineering will prepare engineering research and calculations and coordinate with other disciplines as needed to complete 100% Civil and Mechanical design. This includes tasks under the following headings in the Project Description section above:

- Demolition
- Site Civil Improvements
- Mechanical Improvements
- Off-Site Civil Improvements

2.3 Structural and Architectural Engineering: The Coleman Engineering team will prepare engineering research and calculations and coordinate with other disciplines as needed to complete 100% Structural and Architectural design. This includes tasks under the Architectural Improvements heading in the Project Description section above.

2.4 Electrical, Instrumentation, and Controls Engineering: The Coleman Engineering team will prepare engineering research and calculations and coordinate with other disciplines as needed to complete 100% Electrical design. This includes tasks under the Electrical Improvements heading in the Project Description section above

2.5 Plans: It is anticipated that the plan set will include the following sheets. Plans sheets that are planned to be added to the 90% draft set are identified.

New for 100% Design	Sheet	Title
	G1	Title
✓	G2	General Notes
	G3	Project Notes, Legend, & Abbreviations
	C1	Overall Site Plan
	C2	Grading and Drainage Plan
	C3	System Improvements
	C4	Cross Sections
	C5	Collector Piping Detail
	C6	Piping Profiles
	C7	Collector Tank Pad and Section
	C8	Civil Details 1
	C9	Civil Details 2
	C10	Civil Details 3
	C11	Civil Details 4
	C12	Civil Details 5
✓	M1	Pump House Mechanical Plan
✓	M2	Pump House Mechanical Sections and Details 1
✓	M3	Pump House Mechanical Sections and Details 2
	A1	Collector Tank Roof Plan
	A2	Storage Building Floor Plan
	A3	Storage Building Foundation Plan
	A4	Storage Building Roof Plan
	A5	Storage Building Elevations
	A6	Architectural Details
✓	S1	Structural General Notes
✓	S2	Structural Details 1
✓	S3	Structural Details 2
✓	S3	Structural Details 3
✓	E1	Electrical Legend and Abbreviations
✓	E2	P&ID 1

New for 100% Design	Sheet	Title
✓	E3	P&ID 2
✓	E4	Pump House Electrical and Lighting Plan and Details
✓	E5	One-Line Diagram, Equipment Elevations and Load Calcs
✓	E6	Booster Pump Motor Control Elementary
	E7	Control Panel Block Diagram and Elevation
✓	E8	Pump House Electrical and Control Plan
✓	E9	Pump House Lighting and Receptacle Plan
✓	E10	Storage Building Electrical Lighting and Receptacle Plan
✓	E11	Tank Cover Electrical and Lighting Plan and Details
✓	E12	Overall Site Electrical Plan
✓	E13	Conduit and Wire Schedule
✓	E14	Electrical Details 1
✓	E15	Electrical Details 2

2.6 Technical Specifications: Technical specifications will be prepared as a text document separate from the plans. No other front-end type bidding or contracting document will be prepared. It is anticipated that the Specifications will include sections from the following Divisions from standard MasterFormat specification sections.

- Bid Schedule
- Division 1 – General Requirements
- Division 2 – Existing Conditions
- Division 3 – Concrete
- Division 26 – Electrical
- Division 31 – Earthwork
- Division 32 – Exterior Improvements
- Division 33 – Utilities
- Division 34 – Transportation
- Division 30 – Process Integration
- Division 41 – Material Process and Handling Equipment

- Division 43 – Process Gas and Liquid Handling, Purification and Storage Equipment
- Division 46 – Water and Wastewater Equipment

Technical specifications will be prepared assuming a public works bidding selection process to be conducted by the Client with assistance from Coleman Engineering.

2.7 Bidding and Contracting Documents: Coleman Engineering will prepare Division 0, Bidding and Contracting Documents using the current edition of EJCDC standard documents.

2.8 Cost Opinion: Design services will include the preparation of an opinion of probable construction cost suitable for setting budgets. A cost opinion will be prepared with the 100% final submittal.

2.9 Draft Submittals: Coleman Engineering has anticipated submitting design drawings at the following draft stages: 100% draft, 100% final. At the 100% draft submittal, the Client, DDW, and DFA may review and comment on the design. Coleman Engineering will respond to comments, make edits to the plan set, and submit the 100% final design drawings and specifications.

Task 2 Deliverables:

- *100% Draft Plans, Technical Specifications, and Biding and Contracting Documents (pdf files)*
- *100% Final Plans, Technical Specifications, Biding and Contracting Documents, and Cost Opinion (pdf files)*

TASK 3 – Environmental Consulting

Coleman Engineering will engage the services of Area West Environmental, Inc. (AWE) to provide environmental consulting and biological support services. The Client anticipates construction funding through the SWRCB's Drinking Water SRF. AWE understands that the SWRCB has paid for environmental permits and environmental permitting is approximately 98% complete. Based on the California Environmental Quality Act (CEQA) Notice of Exemption prepared for the project, AWE anticipates that the permits include a Regional Water Quality Control Board (RWQCB) Water Quality Certification (WQC), a California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA), and a U.S. Army Corps of Engineers (Corps) Nationwide Permit (NWP). Draft permits were not available during the preparation of this scope, so some assumptions on permit requirements are provided based on AWE's regulatory and permitting experience. AWE will provide the services described below to complete the permitting process and provide permit compliance throughout and following construction.

3.1 Attend Project Kick off Meeting: The AWE Project Manager will meet with ACWD and Team staff to review the scope of work, discuss the project design, and confirm the project approach. Prior to the meeting, AWE will review all existing documents related to the Project.

3.2 Permit Coordination: AWE will review the status of all permit applications for the Project. AWE will coordinate with ACWD, Team, and regulatory staff to receive all necessary approvals for the Project. This task assumes up to 40 hours of agency coordination and meetings with resource agency staff.

3.3 Pre-Construction Nesting Bird Survey: In accordance with the CEQA NOE and anticipated requirements in CDFW's LSAA, if project activities will begin between February 1st and August 31st, a CDFW-biologist will conduct a pre-construction nesting bird survey within 500-feet of project activities no more than 5 days prior to the start of project activities. The results of the nesting bird survey will be summarized in a brief technical memo and provided to CDFW. The timing and survey area may be adjusted based on the final LSAA. This task assumes a one-day survey will be sufficient for the pre-construction survey and includes time for CDFW's approval of the Project biologist.

3.4 Worker Environmental Awareness Training (WEAT): AWE anticipates that CDFW's LSAA will include a measure requiring that all construction personnel receive WEAT that includes a description of avoidance and minimization measures, a list of special-status species which could occur onsite and a description of their habitat, how to identify the species, and procedures should an individual be encountered. AWE will provide WEAT brochures and present the WEAT to all construction personnel during a one-day site visit on the first day of construction. Additional copies of the WEAT will be provided to the resident engineer to train any construction personnel who are added to the Project. A sign-in sheet will be used to documents all trained personnel.

3.5 Pre- and Post-Construction Reporting: Based on previous experience with resource agency permit requirements, AWE anticipates that the following pre- and post-construction reporting will be required. AWE will complete the following anticipated reporting:

CDFW: AWE will notify CDFW of the start of construction and will provide the results of the pre-construction nesting bird survey prior to construction (See Task 3.3). Following construction, AWE will prepare a brief post-construction report documenting compliance with all permit

requirements. The post-construction report will include pre- and post-construction photographs from six photo points, documentation of WEAT training, and the date of Project completion. The post-construction report will be submitted to CDFW within 30-days of Project completion.

RWQCB: AWE will notify the RWQCB of the start of construction. Following construction, AWE will prepare a Notice of Completion report. The Notice of Completion will include a statement that the Project was constructed according to plans, pre- and post-construction photographs from six photo points, project as-builts, and the date of Project completion. The Notice of Completion will be submitted to the RWQCB within 30-days of Project completion.

Corps: AWE will prepare a post-construction report for the Corps in compliance with the Nationwide Permit General Conditions. The post-construction report will include a statement that the Project was constructed according to plans and project as-builts. The post-construction report will be submitted to the Corps within 30-days of Project completion.

Task 3 Assumptions:

- *40 hours of resource agency coordination will be sufficient to complete receipt of all final permits. All meetings will be conducted virtually.*
- *A one-day site visit will be sufficient to complete the pre-construction nesting bird surveys.*
- *Access to the site would be granted at the time of the biological and cultural resources surveys; no return visits due to access limitations will be required.*
- *No protocol-level wildlife surveys will be conducted; these surveys often require multiple visits over longer time periods and within seasonal limits.*
- *No onsite biological monitor will be required by permit conditions.*
- *CDFW reporting requirements will include: construction start notification, pre-construction nesting bird survey results, and post-construction reporting. No additional reporting requirements will be required by permit conditions.*
- *RWQCB reporting requirements will include: construction start notification and Notice of Completion. No additional reporting requirements will be required by permit conditions.*
- *Corps reporting will include a post-construction report. The post-construction report will be submitted to CDFW within 30-days of Project completion.*

Task 3 Deliverables:

- *Draft and Final pre-construction nesting bird survey report*
- *Draft and Final Worker Environmental Awareness Training*
- *Twelve copies of the WEAT Brochures*
- *Draft and Final CDFW Post-construction Report*
- *Draft and Final RWQCB Notice of Completion*
- *Draft and Final Corps Post-Construction Report*

TASK 4 – Engineering Services During Bidding and Construction

4.1 Project Management During Bidding and Construction: Coleman Engineering will manage the bidding and construction phase of the project by coordinating with the Client, and sub-consultants, allocating the resources, and planning and organizing its efforts to meet the goals of the Client.

4.2 Engineering Services During Bidding: It is assumed that the Client will conduct a public bidding process consistent with State requirements by advertising for bids, distributing bidding documents to selected Contractors, and maintaining a Plan Holders List. Coleman Engineering will assist the Client by providing the following services during the bidding process:

- Managing reproduction and distribution of bid documents using a reproduction shop service.
- Participating in a pre-bid meeting and site walk to be held at the project site.
- Responding to bidders' inquiries via telephone. 24 labor hours have been budgeted for this sub-task.
- Prepare two Addenda to the bid documents.
- Attend and assist with the bid opening at the Clients office in Alleghany, CA.
- Assist the Client in evaluating bids and selecting a contractor. 16 labor hours have been budgeted for this sub-task.
- Prepare conformed bid documents for use in construction. Conformed documents will include design changes made by addenda during the bidding period and will be the plans that will be issued to the field for construction.

4.3 Construction Review Meetings: Coleman Engineering has budgeted to participate in twelve (12) meetings at the project site to occur as needed, and as requested by the Client during the construction phase.

Coleman Engineering will stay in contact with the Contractor and Client's project superintendent via regularly scheduled telephone calls during the critical phases of the construction project. For budgeting purposes, twelve (12) construction telephone meetings have been assumed.

In addition to formal construction review meetings, the Coleman Engineering team will stay in contact with the Clients staff using regular informal communications (telephone, e-mail, etc.). Coleman Engineering will keep the Client apprised of the status of the project at key points in its development.

4.4 Submittal Reviews: The design documents will require that information be submitted detailing materials, equipment, and some methods that are to be used in the construction of the new facilities. The Coleman Engineering team will review submittal information from the Contractor that is selected by the Client.

For budgeting purposes, it is assumed that the Coleman Engineering team will review and respond to a maximum of 50 submittals from the Contractor. For budgeting purposes, the maximum return and re-review rate on the submittals is assumed to be 25%. Submittal review timing will be as dictated in the technical specifications.

4.5 Response to Civil and Mechanical RFI's: It is anticipated that during construction, the Contractor will have questions about the intent of the design. Coleman Engineering has budgeted to respond to up to 12 Requests for Information related to the Civil and Mechanical design from the Contractor during construction.

4.6 Electrical Engineering During Construction: The Electrical Engineer on the Coleman Engineering team will provide the following services that are specific to the electrical design and construction activities:

- Submittal Reviews
- Responses to Electrical RFI's
- Factory testing
- Site witness testing
- Punch List Site Visit

4.7 Structural Engineering During Construction: The Structural Engineer and Architect on the Coleman Engineering team will provide the following services that are specific to the structural and architectural design and construction activities:

- Submittal Reviews

- Responses to Structural RFI's

4.8 Final Observations and Punch List: The Coleman Engineering team will make a final site visit to observe the complete operation of the well facility as demonstrated by the Contractor. During that visit, a Punch List will be prepared to itemize remaining Work to be accomplished by the Contractor. Upon completion of the Punch List items by the Contractor, Coleman Engineering will prepare and provide a Letter of Substantial Completion which the Contractor and Client will require to finalize funding documents with the State.

4.9 Record Drawings: Coleman Engineering professionals will use As-Built Drawing information provided by the contractor to prepare Record Drawings. Record Drawings will be submitted to the Client for archival as reference materials.

4.10 Assembly of Maintenance Checklists, Operations Manuals, and Warranties: Coleman Engineering will compile the following items for delivery to the Client.

- A list of maintenance procedures and recommended frequency of administration of those procedures
- System component's manufacturer's equipment brochures, operations manuals and product warranties, organized and indexed in electronic form

Maintenance and Operations and Warranty information is assumed to be delivered in electronic format but can be printed and delivered in hard copy format on a time and materials basis if required by the Client.

Task 4 Deliverables:

- *Conformed Plans and Specifications (pdf and AutoCAD files)*
- *Submittal Review Comments – maximum of 50*
- *Response to Requests for Information – maximum of 10*
- *Record Drawings (pdf and AutoCAD files)*
- *Maintenance Checklists, Operations Manuals, and Warranties (pdf files)*

Schedule

Coleman Engineering will provide services in an expeditious and professional manner. Coleman Engineering anticipates the following schedule. Dates can be added to the schedule table after the Authorization to Proceed date is known.

Milestone	Elapsed Times
Authorization to Proceed	n/a
Data Transfer and Kick-Off Site Visit	4 weeks
100% draft Plans and Specifications delivered to the Client	18 weeks
Client review of 100% draft submittal	4 weeks
100% Final design package delivered to the Client	8 weeks

Budgets

Coleman Engineering will provide the services outlined above on a Time and Materials basis according to the terms of payment outlined in the Agreement. Coleman Engineering reserves the right to transfer budgets between tasks while maintaining the total budget of the project.

The estimated budgets below include the cost of expenses directly related to the project including mileage, duplication, blueprinting, postage, delivery charges, plotting, outside reproductions, etc.

Coleman Engineering estimates the following budgets will be required to provide the services described above.

Task	Scope Item	Estimated Budget
1	Project Management, Meetings, and Funding Administration	$111,989
2	Design Engineering	$237,200
3	Environmental Consulting	$22,323
4	Engineering Services During Bidding and Construction	$168,200
	TOTAL ENGINEERING BUDGET =	$539,712

Tasks Not Included in this Scope of Services

This Scope of Services is intended to outline the services offered to the Client by Coleman Engineering. The list below is offered as a clarification of the services that are not included, not anticipated, or that will be completed by others.

1. Coleman Engineering CAD standards to be used.
2. The design will be prepared for a public selection of the Contractor by the Client using a public bidding process.
3. The only coordination for approvals that will be made are with the Client, DDW/DFA, and Sierra County. No other agencies will be consulted, coordinated with, or sought out for approvals.
4. Surveying or mapping. All topographic survey and legal descriptions are to be provided to Coleman Engineering by the Client.
5. Geotechnical Engineering to characterize site soils sufficient for structural designs will be required and is assumed to be provided by others and is not included in this Scope of Services.
6. Architectural renderings.
7. Utility coordination and design, including potholing is not anticipated to be required and is not included in this Scope of Services.
8. Dewatering plan is not included but will be specified to be required by the Contractor, if needed.
9. SWPPP preparation is not included but will be specified to be provided by the Contractor, if required.
10. Site security facilities including video monitoring is not included. The extent of site security is planned to be a perimeter fence with manual vehicle gate around new facilities.
11. Architecture and landscape architecture, including planting, irrigation, and other site aesthetic features are not included.
12. Obtaining any required construction permits.
13. Full time construction inspection (may be offered under a separate contract).
14. Legal review of bidding documents.
15. Obtaining NPDES permits for discharges from sites (may be offered under a separate contract).
16. Hazardous materials permits or approvals.

COLEMAN
ENGINEERING

APPENDIX B

PROJECT TEAM RESUMES

Chad R. Coleman, P.E.

Principal Engineer

Education

M.S., Civil Engineering
Brigham Young University

B.S., Civil Engineering
Brigham Young University

Registrations

Professional Engineer # 56490, CA

Professional Engineer # 8964, ID

Professional Engineer # 188915, UT

Professional Engineer # 16990, NV

Water Treatment Plant Operator, CA, Grade 3

Professional Affiliations

American Public Works Association

American Water Works Association

Water Environment Federation

Sacramento Area Water Works Association

Mountain Counties Water Resources Association

California Water Environment Association

Special Certifications

Completed Risk Assessment Methodology for Water Utilities (RAM-W™) Training Course sponsored by AWWA

Certified Grant Administrator, Idaho

Chad has over twenty-five years of experience planning, designing, and managing construction of water and wastewater infrastructure and facilities. He formed Coleman Engineering in 2010.

Chad distinguishes himself by providing outstanding client service that is punctuated with attention to excellent written and verbal communications.

Areas of Expertise:

- **Water**
  - municipal wells,
  - water treatment plants,
  - water storage tanks,
  - transmission and distribution piping
  - pumping stations
- **Wastewater**
  - wastewater collection system rehabilitation and design,
  - wastewater/stormwater lift stations,
  - wastewater lagoons
  - wastewater treatment plants
- **Stormwater**
  - stormwater pump stations
  - storm drain pipelines
  - MS4 permitting

Notable project experience:

- Crescent City Water Improvement Project, City of Crescent City, CA
- Los Molinos CSD Arsenic Compliance and Consolidation Project, Los Molinos, CA
- Skyview County Water District, CA

Jonathan W. Kaminsky, P.E.

Project Manager

Education

M.S., Civil and Environmental Engineering
University of California, Davis CA

B.S., Civil Engineering
University of California, Davis CA

Registrations

Professional Engineer # 82004, CA

Professional Engineer # 17460, ID

Professional Engineer # 55136, WA

Technical Expertise

Well design

Water system master planning

Pumping station design

Aquifer pump testing

Geophysical testing

Water seepage investigations

Distributions system hydraulic modeling, calibration, and field testing

Groundwater level contouring

Public water system permitting

Jon is experienced planning, designing, and managing construction of water and wastewater infrastructure and facilities. He is an expert in the planning, design, and construction management of wells of all types including drinking water and agricultural water. In addition, Jon is experienced providing engineering services for all other parts of water and wastewater utility systems.

Areas of Expertise:

- **Water**
  - > wells; municipal, domestic and agricultural
  - > water storage tanks
  - > transmission and distribution piping
  - > pumping stations
- **Wastewater**
  - > wastewater lagoons
  - > wastewater lift stations,
  - > wastewater collection systems and pipelines
- **Stormwater**
  - > stormwater pump stations
  - > storm drain pipelines

Notable project experience:

- Shaffer School Well Source Reliability, Litchfield, CA
- Valenzuela Water System, Hollister County, CA
- Tres Pinos CWD Consolidation Project, Tres Pinos, CA

Michael "Kip" Lybarger, PE, LS

POB 758
Alturas CA 96101
(530) 233-2453
altec@frontier.com

Summary of qualifications

Ca Civil Engineer 56736, Ca Land Surveyor 6816

Owner – Altec Engineering; 1998 to present
Alturas California

Scope of endeavor:
- Streets & Road design, Plans, Specifications & Bid Package preparation, Construction oversight
- Contracted Modoc County Surveyor (past)
- Construction surveying, Private property surveys
- Materials testing lab (ASTM & Caltrans test procedures)
- Percolation tests, septic design
- Public Water Supply design, PS&E, Oversight
- Public Sewage and Stormwater projects.

Professional memberships

California Land Surveyors Association
American Society Civil Engineers

Community activities

Modoc Parks and Recreation Department - Board Member
Federated Church Blue Lake Youth Camp - Volunteer

Cody Tom, P.E.

Project Engineer

Education

M.S., Civil and Environmental Engineering, University of California, Berkeley

B.S., Civil and Environmental Engineering, Brigham Young University

Registrations

Professional Engineer # 9296, CA

Technical Expertise

Resident Engineer

Construction Management

Tank Design

Funded Projects

Cody has six-years' experience with water modeling, treatment systems, field sampling, system design and calculations, inspection, construction services, and maintaining and designing water supply systems. Cody has the ability to make educated decisions and solve difficult problems and is a valuable member of the Coleman Engineering team.

Areas of Expertise:

- **Water**
  - > wells; municipal, domestic and agricultural
  - > water storage tanks
  - > transmission and distribution piping
  - > pumping stations
- **Wastewater**
  - > wastewater lagoons
  - > wastewater lift stations,
  - > wastewater collection systems and pipelines
- **Stormwater**
  - > stormwater pump stations
  - > storm drain pipelines

Notable project experience:

- Castle City Mobile Home Pipeline and Consolidation, Newcastle, CA
- Los Molinos CSD Arsenic Compliance and Consolidation Project, Los Molinos, CA
- Winship-Robbins Arsenic Treatment, Meridian, CA

AREA WEST ENVIRONMENTAL, INC.
EST 2000

Becky Rozumowicz-Kodsuntie

Principal

EDUCATION

B.S., Soil and Water Science, University of California Davis, California, 1994

AFFILIATIONS

Association of Environmental Professionals

Association of State Wetland Managers

California Native Plant Society

CASQA

The Wildlife Society

Calmentor

WTS International

KEY SKILLS

- *Resource agency familiarity*
- *Permitting expertise*
- *CPESC (#6472)*
- *QSP/QSD (#20991)*
- *USFWS and CDFW approved biological monitor*
- *USFWS 10(a)(1)(A) permit TE-48210A-2 (California tiger salamander, California red-legged frog, and vernal pool branchiopods)*
- *State Collecting Permit #10148*
- *State M.O.U. for California tiger salamander*
- *USFWS Bird Salvage Permit #MB67297A-0*

Becky Rozumowicz-Kodsuntie's experience spans **27 years** in permitting, compliance, assessment, and identification. She is the founder and president of Area West Environmental, Inc., established in 2000. Prior to starting her company, Becky volunteered for the Regional Water Quality Control Board (RWQCB), reviewing consultant submittals and entering hazardous waste site data. She regularly manages preparation of California Environmental Quality Act (CEQA) Initial Study/Mitigated Negative Declarations (IS/MND) and Environmental Impact Reports (EIR) for public works projects and has prepared numerous permit applications, reports, and assessments in compliance with CEQA, National Environmental Policy Act (NEPA), state and federal Endangered Species Acts (ESA), Clean Water Act (CWA), California Fish and Game Codes (CFGC), and California Department of Transportation (Caltrans). She is a Qualified Stormwater Pollution Prevention Plan (SWPPP) Practitioner and Developer (QSP/QSD). She has experience with the U.S. Army Corps of Engineers (Corps) and RWQCB CWA Sections 401 and 404, California Department of Fish and Wildlife (CDFW) CFGC Sections 1602 and 2081, and with U.S. Fish and Wildlife Service (USFWS).

Relevant Project Experience

Lake Don Pedro Community Services District (LDPCSD) – Raw Water Intake Project – Lake McClure, Mariposa County, California: Project Manager. Assisted with preparation of a wetland delineation for a Raw Water Intake project within Lake McClure. Managed preparation of Section 401 and 1602 permit applications, identified use of non-reporting Nationwide Permit 58 for authorization with the Corps, saving LDPCSD the preparation cost of another application.

City of Lincoln – East 5th Street Sewer and Water Replacement Project, Placer County, California: Project Manager. Prepared a focused IS checklist and a Notice of Exemption (NOE) for this water and sewer main replacement project. Worked with project engineers to develop a construction scenario and implement arborist-recommended measures to avoid adverse effects on a heritage oak tree.

Tuolumne Utilities District – Curtis Creek Slum Dam Algerine Ditch Diversion Leak Repair Project, Sonora, Tuolumne County, California: Principal. Prepared Section 404, 401, and 1602 permit applications for a repair project on a historical slum dam in Tuolumne County. Managed preparation of a California red-legged frog and foothill yellow-legged frog habitat assessment technical report and an aquatic resources delineation report. Identified mitigation options and developed a restoration plan, prepared a Biological Assessment (BA), and coordinated with regulatory agencies.

Stacy Whitbeck – Santa Cruz Harkins Slough, Santa Cruz County, California: Principal. Completed Section 404, 401, and 1602 permit applications to support structural improvements to the railroad line and bridges at Harkins Slough, La Selva Beach, Seascape, and Wilder State Park. Managed preconstruction clearance. Coordinated with Corps, USFWS, CDFW, San Francisco RWQCB, and State Historic Preservation Office to secure permits and approvals.

Cody Tom, P.E.

Project Engineer

Education

M.S., Civil and Environmental Engineering, University of California, Berkeley

B.S., Civil and Environmental Engineering, Brigham Young University

Registrations

Professional Engineer # 9296, CA

Technical Expertise

Resident Engineer

Construction Management

Tank Design

Funded Projects

Cody has six-years' experience with water modeling, treatment systems, field sampling, system design and calculations, inspection, construction services, and maintaining and designing water supply systems. Cody has the ability to make educated decisions and solve difficult problems and is a valuable member of the Coleman Engineering team.

Areas of Expertise:

- **Water**
  - > wells; municipal, domestic and agricultural
  - > water storage tanks
  - > transmission and distribution piping
  - > pumping stations
- **Wastewater**
  - > wastewater lagoons
  - > wastewater lift stations,
  - > wastewater collection systems and pipelines
- **Stormwater**
  - > stormwater pump stations
  - > storm drain pipelines

Notable project experience:

- Castle City Mobile Home Pipeline and Consolidation, Newcastle, CA
- Los Molinos CSD Arsenic Compliance and Consolidation Project, Los Molinos, CA
- Winship-Robbins Arsenic Treatment, Meridian, CA

BRAD FRIEDERICHS – VE SOLUTIONS

September 8, 2022

Name: Bradley Alan Friederichs

Profession: Consulting Structural Engineer

Registrations: California Structural Engineer, 1985, No. S2780
Oregon Structural Engineer, No. 14308PE
Washington Structural Engineer, No. 27932
Nevada Structural Engineer, No. 13470
Arizona Structural Engineer, No. 27796
Hawaii Professional Engineer, No. 10044
Texas Professional Engineer, No. 104078
California General Building Contractor- 753388

Education: B.S. Civil Engineering with honors, 1979, California State University, Sacramento

Design Experience: *Some of the 4000 projects that Brad has designed during his career.*

Water/Wastewater Structures

• Nevada City Wastewater Treatment Plant	$30 million
• Colusa Wastewater Treatment Plant	$12 million
• Foothill Raw Water Pump Station	$35 million
• Grass Valley Wastewater Treatment Plant	$8 million
• Lincoln Wastewater Treatment Plant	$80 million
• Fortuna Wastewater Treatment Plant	$20 million
• Lathrop Water Recycling Plant (#1 & #2)	$35 million
• Rio Vista Wastewater Treatment Plant	$20 million
• Reno Stead Solids Handling Pump Station	$3 million
• Reno Stead Wastewater Treatment Plant	$25 million
• Woodland WWTP Expansion	$15 million
• Valley Glen Pump Station, Dixon	$2.5 million
• Wheeler Ranch Pump Station, Yuba City	$2 million
• Callamont Tank, 500,000 gal	$5 million
• Copper Cove Pump Station	$300,000
• Comanche Pump Station	$400,000
• Fresno Airport Pump Station	$100,000
• Pena Adobe Pump Station, Petaluma	$1 million
• Allison Parkway Pump Station, Vacaville	$1 million
• SCWD Polo Grounds WTP	$1 million
• Galt Effluent Diversion Structure	$100,000
• Greenwood Water Treatment Greorgetown PUD	$5 million

APPENDIX C

AQUA SIERRA CONTROLS PROPOSALS:

1. Alleghany Booster Station Upgrade QJ06509
2. Alleghany Cameras QJ06000
3. Alleghany Instruments QJ06491-1

Aqua Sierra Controls, Inc.
California's Leading Instrumentation & Electrical Contractor for Over 40 Years

1650 Industrial Drive, Auburn, CA 95603
Cell (530) 305-3390 Office (530) 823-3241
jlane@aquasierra.com www.aquasierra.com
CA Contractors License A, C-10 474023
CA Small Business Certification #1162
DIR #1000003631

SCADA – AUTOMATION – RADIO TELEMETRY – MOTOR CONTROLS
DESIGN BUILD PUMP STATIONS – UL508 PANEL SHOP – FLOW STUDIES
PUMP CONTROLLERS – RADIO STUDIES – CHEMICAL FEED EQUIPMENT
SCADA MAINTENANCE – INSTRUMENT MAINTENANCE & CALIBRATIONS

Alleghany County Water District
PO Box 860
Alleghany, CA 95910

Attention: Mrs. Rae Bell Arbogast, General Manager

Phone: 530-287-3204

Subject: Water Treatment Plant Upgrade Proposal
Project: Water System

Proposal # QJ06509
January 10, 2020

Mrs. Arbogast,

Thank you for the opportunity to work with you on your instrument projects. I have included turnkey installation, setup, programming and calibrations of the instruments and programming to add the instruments to your SCADA system.

Equipment
(1) Kuntze Multi Free Chlorine / pH / Temperature Analyzer with Automatic Sensor Cleaning, 5mA Outputs, PID Control and Automatic Flow Sample
(2) ABB ACS355-03U-09A8-2 240V 3PH 9.8A 3HP VFD
(2) ABB ACS-CP-A VFD Keypad
(2) ABB FENA-01-KIT VFD Ethernet Adapter

(2) Grundfos CR5-7 Vertical Multistage Pump with 3HP, 3450 RPM, 230/480VAC 3PH TEFC Motor
(1) 240V 3PH to 120V Transformer 500KA With Enclosure
(1) NTRON 104TX 4 Port Network Switch
(1) CAT6 Surge Protector
(1) Lot installation materials

Scope of Work
1. Provide submittals
2. Update as-built drawings for booster pump control panel to accommodate VFDs
3. Demo existing CL2 analyzer, turbidity meter and chart recorder
4. Install, setup, program and calibrate new Cl2 analyzer
5. Demo existing starters, overloads, transformer and breakers in booster pump control panel
6. Install new VFDs and breakers in booster pump control panel
7. Install new transformer on wall next to booster pump control panel
8. Demo existing booster pumps
9. Install new booster pumps
10. Install new network switch and CAT6 surge protector
11. Network VFDs to existing SCADA server
12. Provide operation and maintenance manuals
13. Provide operator training
14. Provide programming to bring in new CL2 analyzer, flowmeter and VFDs to SCADA
15. Reconfigure PVC piping and install customer provided magnetic flowmeter

Proposal Total $30,512.19

Items included
1. Shipping and handling
2. Sales tax
3. Prevailing wage rates

Items not included
1. Items not in our scope of work
2. Specialty insurance beyond our standard two million dollars coverage
3. Confined space entry
4. Bonds, permits or fees
5. ISA-S20 instrument datasheets
6. Instruments other than what is specifically listed above
7. Custom report programming
8. Underground work, saw cutting
9. ISA process control loop diagrams
10. Short circuit analysis or arc flash study
11. NETA testing

12. Magmeter

Aqua Sierra Controls includes a one-year onsite warranty covering workmanship.

If you have any questions, please let me know.

Thank you,

Josh Lane
SCADA Manager

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DIR #1000003631

SCADA – AUTOMATION – RADIO TELEMETRY – MOTOR CONTROLS
DESIGN BUILD PUMP STATIONS – UL508 PANEL SHOP – FLOW STUDIES
PUMP CONTROLLERS – RADIO STUDIES – CHEMICAL FEED EQUIPMENT
SCADA MAINTENANCE – INSTRUMENT MAINTENANCE & CALIBRATIONS

Alleghany County Water District
PO Box 860
Alleghany, CA 95910

Attention: Mrs. Rae Bell Arbogast, General Manager

Phone: 530-287-3204

Subject: Water Treatment Plant Camera Proposal
Project: Water System Security

Proposal # QJ06000
January 17, 2020

Mrs. Arbogast,

Thank you for the opportunity to work with you on your IT projects. I have included turnkey installation and setup of a four camera and DVR system for the water plant / booster station.

Equipment
(1) Network 4K DVR with 2GB HDD
(4) Bullet Indoor/Outdoor Rated Zoom Capable Cameras
(1) Lot Installation Materials

Scope of Work
1. Turnkey Installation
2. Setup and Programming

Proposal Total $4,687.00

Items included
1. Shipping and handling
2. Sales tax
3. Prevailing wage rates

Items not included
1. Items not in our scope of work
2. Specialty insurance beyond our standard two million dollars coverage
3. Confined space entry
4. Bonds, permits or fees
5. ISA-S20 instrument datasheets
6. Instruments other than what is specifically listed above
7. Custom report programming
8. Underground work, saw cutting
9. ISA process control loop diagrams
10. Instrument calibrations for equipment not provided
11. Short circuit analysis or arc flash study
12. NETA testing

Aqua Sierra Controls includes a one-year onsite warranty covering workmanship.

If you have any questions, please let me know.

Thank you,

Josh Lane
SCADA Manager

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SCADA – AUTOMATION – RADIO TELEMETRY – MOTOR CONTROLS
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SCADA MAINTENANCE – INSTRUMENT MAINTENANCE & CALIBRATIONS

Alleghany County Water District
PO Box 860
Alleghany, CA 95910

Attention: Mrs. Rae Bell Arbogast, General Manager

Phone: 530-287-3204

Subject: Water Treatment Plant Instrument Proposal
Project: Water System

Proposal # QJ06491-1
January 16, 2020

Mrs. Arbogast,

Thank you for the opportunity to work with you on your instrument projects. I have included turnkey installation, setup, programming and calibrations of the instruments and programming to add the instruments to your SCADA system.

Equipment
(1) ABB Turbidity Meter Monitoring System, 115VAC, Analog Output, Flow Through Sensor System, Low Range <5NTU, 10M Sensor Cable
(1) ABB pH Meter and (1) ABB pH Probe with 30FT of Cable
(1) Lot installation materials

Scope of Work
1. Instrument Turnkey Installation
2. Instrument Setup and Programming
3. Instrument Calibrations and Certifications
4. Programming to add Instruments to SCADA
5. Electrical wiring to connect instruments to power
6. Electrical wiring to connect instrument outputs to RTU/SCADA
7. Update as-built drawings

Proposal Total $10,504.45

Items included
1. Shipping and handling
2. Sales tax
3. Prevailing wage rates

Items not included
1. Items not in our scope of work
2. Specialty insurance beyond our standard two million dollars coverage
3. Confined space entry
4. Bonds, permits or fees
5. ISA-S20 instrument datasheets
6. Instruments other than what is specifically listed above
7. Custom report programming
8. Underground work, saw cutting
9. ISA process control loop diagrams
10. Instrument calibrations for equipment not provided
11. Short circuit analysis or arc flash study
12. NETA testing

Aqua Sierra Controls includes a one-year onsite warranty covering workmanship.

If you have any questions, please let me know.

Thank you,

Josh Lane
SCADA Manager

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