

## PROJECT 1: Gold Village Drought Resiliency Project

**IMPLEMENTING AGENCY:** County of Yuba, as fiscal/management agent for the Gold Village Community Services District

### PROJECT DESCRIPTION:

The isolated 84-household rural foothill community of Gold Village (a Disadvantaged Community/DAC) is currently 100% groundwater dependent. The water supply is at risk as the community relies on one primary (81% of supply) and two backup wells within the same fractured bedrock aquifer. Five other wells that once served the community have been abandoned due to contamination, lack of capacity, or both (prior to 2010). From April-June 2014, depth to groundwater dropped precipitously in the primary-source well due to drought and overdrafting. This prompted an emergency declaration in July 2014, still in effect, that prohibits all outdoor use of potable water. Further, in July 2013, the community's water tank was emptied as a result of demand exceeding storage capacity. Cumulative daily use of 36,000 gpd on average, with even greater peak summer usage, exceeds daily well production of 31,200 gpd.

The project comprises three components: *A. Installation of a storage tank, B. Implementation of residential rebate programs (landscaping and appliances/fixtures), and C. Investigation of possible new water sources.*

**Component A - Water Storage Tank:** It is proposed to design and install a 250,000-gallon water storage tank, to supplement the existing 255,000-gallon storage tank. This would provide an adequate and reliable water supply to meet minimum daily storage requirements to meet peak demand. The tank would also provide water in circumstances of: 1) unexpected/emergency situations of infrastructure failure or fire, and 2) maintenance-related system outages. **Component B - Rebate Programs:** Water conservation to reduce ongoing water demand would be promoted via indoor and outdoor rebate programs: 1) Initiation of a rebate program to incentivize residents to replace low-efficiency indoor appliances and fixtures with high-efficiency indoor appliances and fixtures to increase water-use efficiency, and 2) initiation of a rebate program to incentivize residents to replace traditional turf landscaping with water-efficient plants, xeriscape, or synthetic turf in order to encourage water conservation. These two programs are projected to save 11.7 acre-feet of water (29.3%) annually.

**Component C - Investigation of New Water Sources:** To address the long-term security and availability of water, the project includes evaluation of: 1) potential new groundwater sources that access a different aquifer than that exercised by the existing wells, via drilling of exploratory wells; and 2) evaluation of the possibility of developing tie-ins to existing surface water purveyors' infrastructure to access currently unavailable surface water supplies.

***In the following work plan each component (A-C) is fully addressed and always presented in the same order. For those budget categories or tasks that are not relevant to a specific component, a brief sentence at the beginning of the section clearly indicates that the project component does not require work for that category and/or task.***

**Project Applicant vs. Project Manager:** Note that the Yuba County Water Agency (YCWA) is the formal applicant for this project. Yuba County will act as fiscal agent and project manager for the project. Yuba County will also contract Program Management services for the project. As a result, YCWA will serve as the applicant and sign the Agreement and the County will provide all Program and Project Management, reporting and invoicing services to YCWA.

### Budget Category (a): Direct Project Administration

#### **Task 1: Project Management**

As Gold Village Community Service District (CSD) does not have the resources to administer this grant, Yuba County will serve as the fiscal agent and overall project manager for this project, with assistance from subcontractors as required. This task includes administrative responsibilities associated with the project such as coordinating and managing consultants/contractors and providing DWR with a completed Environmental Information Form. The task also includes providing a completed set of financial statements for the Gold Village CSD. Please note that, per DWR staff, the Overall Program Administration tasks are included in this Project Work Plan. The County will manage (via subcontract) the overall program, including compliance with overall grant requirements and preparation and submission of supporting grant documents, such as progress invoicing, as well as grant agreement amendments (if required). The cost of Program Management is prorated across all three project components and further divided between Task 1 and Task 3.

##### Deliverables:

- |   |   |
|---|---|
| <input type="checkbox"/> Environmental Information Form   | <input type="checkbox"/> Quarterly Invoices   |
| <input type="checkbox"/> CSD Financial Statements   | <input type="checkbox"/> Management of contractors/consultants, as illustrated by monthly internal progress reports from each consultant or contractor, as well as meeting notes documenting personal communications (if any) |
| <input type="checkbox"/> Program management – invoicing and budget management, agreement and administration of amendments (if required) |   |

#### **Task 2: Labor Compliance Program**

Neither *Component B - Implementation of residential appliance/fixture and landscaping rebates*, nor *Component C - Investigation of new water sources* will result in any construction and hence would not require a labor compliance program.

##### **Task 2.1: Component A -Water Storage Tank**

Take all measures necessary to ensure compliance with applicable California Labor Code requirements, including preparation and implementation of a labor compliance program including any payments to the Department of Industrial Relations under Labor Code Section 1771.3. As the CSD does not have the capacity and the County does not have the resources, this task will be contracted out with the specific requirements of this role being determined during the bid process (see Task 10.1).

##### Deliverable:

- Proof of labor compliance, upon request

### Task 3: Reporting

Prepare progress reports detailing work completed during reporting period for all three project components. The County will submit reports to YCWA for review prior to submittal to DWR. Prepare draft Final Project Completion Reports and submit to DWR via YCWA for DWR Project Manager's comment and review no later than 90 days after project completion. Prepare Final Report addressing YCWA's/DWR's comments. The report shall be prepared and presented in accordance with the provision of Exhibit G of the final contract.

#### Deliverables:

- Quarterly Progress Reports
- Draft and Final Project Completion Report

### **Budget Category (b): Land Purchase/Easement**

Neither *Component B - Implementation of residential appliance/fixture and landscaping rebates*, nor *Component C - Investigation of new water sources* will require an easement.

### Task 4: Land/Easement Acquisition

#### Task 4.1: Component C - Investigation of new water sources (Groundwater Availability)

For *Component C - Investigation of new water sources (drilling of exploratory wells)* temporary "right-of-entry" agreements will be required. Appropriate forms for a right-of-entry will be filed with the County surveyor, following approval by the adjacent property owner. Right-of-entry will expire after exploratory wells have been completed (right-of-entry has a 90-day window). **0% Complete**

#### Deliverable:

- Copy of right-of-entry forms

### **Budget Category (c): Planning/Design/Engineering/Environmental Documentation**

**All three project components have tasks within this budget category: i.e., *Component A - Installation of a Storage Tank*, *Component B - Implementation of residential appliance/fixture and landscaping rebates*, and *Component C - Investigation of new water sources*.**

### Task 5: Feasibility Studies

Neither *Component A - Installation of a Storage Tank*, nor *Component B - Implementation of residential appliance/fixture and landscaping rebate* will require a feasibility study.

### Task 5.1: Component C - Investigation of new water sources

#### Task 5.1.1: Groundwater Availability

The project intends to drill a total of 6 test (also referred to as 'exploratory') wells. A groundwater assessment will be completed prior to any test/exploratory wells being drilled. Task 5.1.1 work effort focuses on identifying the sites/zones where exploratory wells should be drilled and developing a phasing and prioritizing plan to direct the actual drilling activities once the fieldwork begins.

The work effort will include: evaluation, by a registered engineer, of lands within and adjacent to the western portion of the CSD (west of Vineyard Creek) which may offer likely drilling sites. Following initial evaluation, a simple drilling site/zone map will be prepared to provide initial guidance to the well drilling company. Well drilling companies with extensive experience in the region may very well have direct input into the final sites chosen for drilling. Thus, after the initial map is drawn and the well drilling contractor selected and under contract (as described in Task 10.2 – Contract Services), a refined well drilling site/zone map will be developed that will guide efforts in the field, as described in Task 12.3, inclusive. For the purposes of this application, the tasks associated with drilling the test/exploratory wells are described in Task 12.3 under Construction/Implementation Activities. **0% Complete**

#### Deliverables:

- Preliminary report evaluating the westerly CSD lands, with drilling sites or zones established and mapped
- Meeting notes from consultations with selected drilling company to refine the drilling sites/zones report and map
- Refined drilling sites/zones report and map and well phasing determination

#### Task 5.1.2: Surface Water Availability

The feasibility of having local surface water purveyors serve the GVCSD will be addressed in two phases: Phase 1 - identifying surface water purveyors within a reasonable distance of the CSD (<3 miles) who would have the capacity to provide water. This phase would include contacting those purveyors directly, initiating discussions as to the feasibility of such connections. Initially, the Nevada Irrigation District (with service in nearby Smartsville, one mile east of the development) seems the most likely entity to consult with; however, there may be other jurisdictions which may be potential candidates. The outcome of this phase would be a memo summarizing the Phase 1 outreach to possible water purveyors, indicating the results of that outreach and whether further discussions are worth pursuing. If additional discussions are warranted, then Phase 2 of the work effort will result in two possible outcomes: 1) additional discussions resulting in an agreement to provide surface water via an MOU (or a Willingness to Serve Letter), or 2) discussions which determine that provision of such water is ultimately not feasible. If provision of water is deemed feasible, then the outcome would be a preliminary engineering design (30% design stage) of the proposed infrastructure (see Task 8.3, below). This level of design enables the entities to determine if the next stages of the project are feasible. **0% Complete**

#### Deliverables:

- Notes summarizing discussions with area water purveyors
- Preliminary assessment of opportunities and barriers to developing infrastructure connections (memorandum)

- MOU to provide surface water or Willingness to Serve Letter, if applicable

### Task 6: CEQA Documentation

Neither *Component B - Implementation of residential appliance/fixture and landscaping rebates*, nor *Component C - Investigation of new water sources* will result in any construction and thus are not considered a project under CEQA Section 15378. **0% Complete**

#### Task 6.1: Component A - Installation of a storage tank

Preliminary determination by County staff is that a Categorical Exemption will be filed for the project because improvement to an existing system that does not add capacity or enable future growth and is already within the developed zone of the subdivision does not require further review. **0% Complete**

Deliverable:

- Categorical Exemption

#### Task 7: Permitting

*Component B - Implementation of residential appliance/fixture and landscaping rebates* will not result in any construction of sufficient magnitude to require a permit.

#### Task 7.1: Component A - Installation of a storage tank

The permits required for this project will include grading and building. County engineering staff will coordinate with County planning staff to prepare necessary permits. **0% Complete**

Deliverable:

- Grading and building permits

#### Task 7.2: Component C - Investigation of new water sources (Groundwater availability)

The drilling of the exploratory wells will require drilling permits. County engineering staff will coordinate with County Department of Environmental Health staff to prepare necessary permits. **0% Complete**

Deliverable:

- Drilling permits

#### Task 8: Design

##### Task 8.1: Component A - Installation of a storage tank

Complete preliminary design, including the following supporting work: geotechnical investigation (soils investigation), topographic survey, and basis of design report (BOD). The BOD will provide the overall project concept for use in development of final design, plans, and specifications including: preliminary earthwork calculations, preliminary design details for tank foundation, and preliminary design details for 100% (Final) design, plans, and specifications. Complete 100% design documents. Additionally, the design of the SCADA system to support the ongoing operations as well as Monitoring Plan (Task 9.1, below) will be developed during this task. **0% Complete**

Deliverables:

- Geotechnical Report
- Topographic Survey
- BOD Report
- Updated Project Cost Estimate
- 100% Design Documents

##### Task 8.2: Component B - Implementation of residential appliance/fixture and landscaping rebates

The two rebate programs themselves result in no physical activities that would require area-wide design, therefore the “design” aspect of this component is associated with developing the policies, procedures, and materials (e.g., application forms) necessary to support the rebate programs. The County has created draft forms/materials to support rebate administration. **40% complete**

Deliverable:

- Documentation of policies and procedures, and resulting materials (e.g., application forms)

##### Task 8.3: Component C - Investigation of new water sources (Surface water availability)

If the Phase 2 effort (see 5.1.2, above) results in the determination that provision of water to Gold Village by a surface water purveyor is feasible, then a preliminary engineering design of the proposed infrastructure will be prepared. The focus of this effort will be to develop the design to a sufficient level of detail to enable the CSD to pursue funding to construct the proposed project. **0% Complete**

Deliverable:

- Creation of 30% complete engineering materials for the proposed infrastructure to accomplish connection between Gold Village and the water purveyor’s facilities.

#### Task 9: Project Performance Monitoring Plan

All three project components have tasks within this task: i.e., *Component A - Installation of a storage tank*, *Component B - Implementation of residential appliance/fixture and landscaping rebates*, and *Component C - Investigation of new water sources*

##### Task 9.1: Component A - Installation of a storage tank

The CSD will conduct an annual performance assessment from 2017 through 2058 for the new 250,000-gallon storage tank. In 2017, it will review how many gallons of water were supplied from the tank for the months of June, July, and August to demonstrate that the target benefit of 2,469 gpd (0.7AFY -- half year of total benefits) was met. From 2018 to 2058 it will be verifying that a target benefit of 4,938 gpd (1.4 AFY) was available to meet peak summer demand, using the same methodology as described above. It is not possible to measure

incremental progress towards meeting the identified benefits, as the benefits do not accrue until the tank is installed and operational. **0% Complete**

Deliverable:

- Annual reporting of total water supplied by the tank compared to the targeted use of 4,938 gpd (1.4 AFY).

**Task 9.2: Component B - Implementation of residential appliance/fixture and landscaping rebates**

Monitoring of the rebate programs will be accomplished each year from 2018 through 2028, by comparing total metered usage against a target reduction of 11.7 AFY – from 39.9 AFY to 28.2 AFY per year. Incremental progress towards meeting the benefits will be measured in six month increments following installation of the initial fixtures/landscapes. **0% Complete**

Deliverable:

- Annual reports documenting metered water use against the target reduction of 11.7 AFY.

**Task 9.3: Component C - Investigation of new water sources**

**Task 9.3.1 Groundwater Availability:** The performance monitoring will focus on documenting that the test wells were completed, that the testing results from those wells were recorded and evaluated, and an indication of well sites suitable for further development (if applicable). Progress towards meeting the benefits will be measured based on the results of the exploratory wells and associated reporting. **0% Complete**

Deliverable:

- Well logs and Memorandum summarizing outcomes of exploratory well drilling project

**Task 9.3.2 Surface Water Availability:** The performance of this project will be based on two reports. The first report will be a summary documenting the Phase 1 outreach to possible water purveyors, the results of that outreach and indication as to whether further discussions are worth pursuing. If additional discussions are warranted, then a second report will be completed summarizing and documenting Phase 2 of the work. Phase 2 will result in one of two possible outcomes: 1) additional discussions which result in an agreement to provide surface water, or 2) discussions which determine that provision of such water is not feasible. If provision of water is deemed feasible, then the outcome would be a preliminary engineering design of the proposed infrastructure. If discussions do not go further, then a summary of the discussions would be prepared. Progress towards meeting the benefits will be measured based first on the results of Phase 1 outreach and then on the basis of Phase 2 outreach, with initiation of the 30% design phase as the final indication of benefit. **0% Complete**

Deliverable:

- Report documenting Phase 1 outcomes, Phase 2 outcomes documented either as a report (if developing additional water supplies proves to be infeasible) or preliminary engineering drawings if such a connection is deemed feasible (with a follow-up memorandum documenting the feasibility of the project and clear indication and preliminary cost estimate of next steps).

**Budget Category (d): Construction/Implementation**

All three project components have tasks within this **budget category:** i.e., *Component A - Installation of a storage tank, Component B - Implementation of residential appliance/fixture and landscaping rebates, and Component C - Investigation of new water sources.*

**Task 10: Contract Services**

Two project components have activities within this task: *Component A - Installation of a storage tank, and Component C - Investigation of new water sources* will require additional contracts. *Component B - Implementation of residential appliance/fixture and landscaping rebates* will be administered by the County and will not require any contractors to fully implement. **0% Complete**

**Task 10.1: Component A - Installation of a storage tank**

Activities necessary to secure a contractor and award the contract would include: develop bid documents (including a full description of the proposed infrastructure identified in the design phase (Task 8.1, above), prepare advertisement and contract documents for construction contract bidding, conduct pre-bid meeting, bid opening and evaluation, selection of the contractor, award of contract, and issuance of notice to proceed. **0% Complete**

Deliverables:

- Bid documents
- Award of Contract
- Proof of Advertisement
- Notice to Proceed

**Task 10.2: Component C - Investigation of new water sources (Groundwater availability)**

This task will involve identifying and contracting with an engineer and a well drilling company. Activities necessary to secure a contractor and award the contract would include: develop bid documents (including a full description of the proposed infrastructure identified in the design phase (Task 8.1, above), prepare advertisement and contract documents for construction contract bidding, conduct pre-bid meeting, bid opening and evaluation, selection of the contractor, award of contract, and issuance of notice to proceed. **0% Complete**

Deliverables:

- Request for Proposals and/or Bid Documents
- Award of Contract
- Proof of Advertisement and/or List of Consultants Contacted
- Notice to Proceed

**Task 11: Construction Administration**

Neither *Component B - Implementation of residential appliance/fixture and landscaping rebates, nor Component C - Investigation of new water sources* will result in any construction activities that would require expenditures within this task.

**Task 11.1: Component A - Installation of a storage tank**

This task includes managing contractor submittal review, answering requests for information, and issuing work directives. A Contract Manager (a County employee) will be onsite during project construction. This task includes: documenting of pre-construction conditions, daily construction diary, preparing change orders, addressing questions of contractors on site, reviewing/updating project schedule, reviewing contractor log submittals and pay requests, forecasting cash flow, notifying contractor if work is not acceptable. The Labor Compliance Monitor will also be onsite during construction, per the developed work plan. **0% Complete**

Deliverables:

- Photographic Documentation
- Engineers Certification
- Notice of Completion

**Task 12: Construction/Implementation Activities**

All three project components have tasks within this task: i.e., *Component A - Installation of a storage tank*, *Component B - Implementation of residential appliance/fixture and landscaping rebates*, and *Component C - Investigation of new water sources*.

**Task 12.1: Component A - Installation of a storage tank (Construction)**

**Task 12.1.1 Mobilization and Demobilization:** Following contract execution (Task 10.1, above), the contractor will coordinate with CSD/County staff to ensure that all permits (Task 7.1, above) are in proper order, at which point the Contractor will initiate site mobilization. Activities will include: identification of onsite materials storage, constructing temporary security fencing, staging equipment to the site, etc. Upon completion, all storage areas will be cleaned and remaining trash and materials removed, fencing and equipment will be removed, and the Contractor will conduct a project close-out walk of the site with CSD/County staff to ensure that post-project demobilization meets the standards agreed to prior to commencement of the project. **0% Complete**

**Task 12.1.2: Site preparation** will include grading, vegetation removal (if required), installation of power sources as required, installation of temporary fencing, and development of staging areas. **0% Complete**

**Task 12.1.3: Install, construct, excavate:** The tank will be erected and ancillary pipes, meters, pumps, and other necessary infrastructure installed. The activities will include grading and leveling, trenching and other excavations, construction of any necessary foundations, flat work and paving, and construction of the tank and appurtenant structures. **0% Complete**

Deliverables:

- Pre-construction, construction period, and post-construction photographs
- Record drawings

**Task 12.2: Component B - Implementation of residential appliance/fixture and landscaping rebates**

The implementation phase of the rebate program will focus on: publicizing the availability of the rebates, providing interested residents with the necessary application materials (developed as part of the Design Task 8.2, above), reviewing and ranking the applications that are submitted, determining which residents will receive the rebates, notifying residents of the award, completing the necessary paperwork to formalize the award, issuing checks for the rebates, gathering the necessary documents provided for the rebate payment request and filing them in a database, establishing the water use monitoring program to support the Task 9.2 Performance Monitoring Plan, and establishing a formal protocol for tracking the data within the necessary County/CSD systems. **0% Complete**

Deliverables:

- Certifications of installed appliance/fixtures and/or landscaping
- Copy of the initial method by which reduced water use resulting for installation will be tracked (electronic file, screen shot, or other method, depending on final design of the Project Performance Plan).

**Task 12.3: Component C - Investigation of new water sources (Groundwater availability)**

For installation of the test/exploratory wells the construction effort will be managed by the contracted engineer in collaboration with the selected well drilling company. A total of six wells will be installed and capped following testing of water quality and flow rates. The costs of managing this effort are included in the estimate of total project cost. **0% Complete**

Deliverable:

- Documentation supporting the installation of six wells, accompanied by logs, water quality tests, flow rates, and aquifer characteristics (as observed).

### Budget Category (a): Direct Project Administration

Task 1: Project Management

Task 2: Labor Compliance Program

Task 2.1: Component A -Water Storage Tank

Task 3: Reporting

### Budget Category (b): Land Purchase/Easement

Task 4: Land/Easement Acquisition

Task 4.1: Component C - Investigation of new water sources (Groundwater)

### Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 5: Feasibility Studies

Task 5.1: Component C - Investigation of new water sources

Task 5.1.1: Groundwater Availability

Task 5.1.2: Surface Water Availability

Task 6: CEQA Documentation

Task 6.1: Component A - Installation of a storage tank

Task 7: Permitting

Task 7.1: Component A - Installation of a storage tank

Task 7.2: Component C - Investigation of new water sources (Groundwater)

Task 8: Design

Task 8.1: Component A - Installation of a storage tank

Task 8.2: Component B - Implementation of residential appliance/fixture and landscaping rebates

Task 8.3: Component C - Investigation of new water sources (Surface water)

Task 9: Project Performance Monitoring Plan

Task 9.1: Component A - Installation of a storage tank

Task 9.2: Component B - Implementation of residential appliance/fixture and landscaping rebates

Task 9.3: Component C - Investigation of new water sources

Task 9.3.1 Groundwater Availability:

Task 9.3.2 Surface Water Availability:

### Budget Category (d): Construction/Implementation

Task 10: Contract Services

Task 10.1: Component A - Installation of a storage tank

Task 10.2: Component C - Investigation of new water sources (Groundwater)

Task 11: Construction Administration

Task 11.1: Component A - Installation of a storage tank

Task 12: Construction/Implementation Activities

Task 12.1: Component A - Installation of a storage tank

Task 12.1.1 Mobilization and Demobilization:

Task 12.1.2: Site preparation

Task 12.1.3: Install, construct, excavate:

Task 12.2: Component B - Implementation of residential appliance/fixture and landscaping rebates

Task 12.3: Component C - Investigation of new water sources (Groundwater)