

ATTACHMENT 3

Work Plan

ATTACHMENT 3 CONTENTS

4.1	Project 1: Grant Administration	2
4.2	Project 2: BVWSD The Palms Groundwater Recharge and Recovery Project	3
4.3	Project 3: GHCSD Antelope Conjunctive Use Project – Steuber Phase	8
4.4	Project 4: Lake of the Woods Water Main Replacement & Meter Installation Project.....	12

4.1 Project 1: Grant Administration

IMPLEMENTING AGENCY: Buena Vista Water Storage District

PROJECT DESCRIPTION: The Kern Regional Water Management Group authorized Buena Vista Water Storage District (BVWSD) to act as the applicant and the grant manager for the Proposition 84, IRWM 2015 Grant. BVWSD will administer these funds and respond to DWR's reporting and compliance requirements associated with the grant administration. BVWSD will act in a coordination role: disseminating grant compliance information to the project managers responsible for implementing the projects contained in this agreement, obtaining and retaining evidence of compliance (e.g., CEQA documents, reports, monitoring compliance documents, labor requirements, etc), obtaining data for progress reports from individual project managers, assembling and submitting progress reports to the State, and coordinating all invoicing and payment of invoices.

Budget Category (a): Direct Project Administration

Task 1 - Agreement Administration

BVWSD will respond to DWR's reporting and compliance requirements associated with the grant administration and will coordinate with the project managers responsible for implementing the projects contained in this agreement.

Task 2 - Invoicing

BVWSD will be responsible for compiling invoices for submittal to DWR. This includes collecting invoice documentation from each of the project proponents and compiling the information into a DWR Invoice Packet.

Task 3 - Progress Reports and Project Completion Report(s)

BVWSD will be responsible for compiling progress reports for submittal to DWR. BVWSD will coordinate with project proponent staff to retain consultants as needed to prepare and submit progress reports and final project completion reports for each project, as well as the grant completion reports.

Reports will meet generally accepted professional standards for technical reporting and the requirements terms of the contract with DWR outlined in Exhibit G of the agreement. For example, progress reports will explain the status of the project and will include the following information: summary of the work completed during the reporting period; activities and milestones achieved; accomplishments; and any problems encountered in the performance of work. Project completion reports will include: documentation of actual work done, changes and amendments to each project, a final schedule showing actual progress versus planned progress, and copies of final documents and reports generated during the project.

Deliverables:

- Executed Grant Agreement
- Invoices and associated backup documentation
- Progress Reports
- Draft and Final Project Completion Report

4.2 Project 2: BVWSD The Palms Groundwater Recharge and Recovery Project

IMPLEMENTING AGENCY: Buena Vista Water Storage District

PROJECT DESCRIPTION: BVWSD's Palms Groundwater Recharge and Recovery Project (GRRP) consists of design, bidding, and constructing a 260 gross acre recharge basin to recharge/bank surplus surface water during 'wet' periods. The Project also proposes to re-equip three existing wells that currently have no pumps and motors, and construct 6,000 lineal feet of a 24" to 27" recovery pipeline to intertie the three existing wells to the State Water Project (SWP) California Aqueduct (CA) to increase drought year water supply reliability. The intertie to the CA will consist of connecting to an existing 72" pipeline that delivers water to the BVWSD West Canal from the BV-8 CA turnout. The Project will provide the following benefits:

1. Provide drought-relief water supply and improve BVWSD's overall water reliability during droughts. Surplus surface water that is recharged/banked during 'wet' periods will be recovered during 'dry' periods to supplement BVWSD water supplies. The recovery pipeline intertie to the CA increases BVWSD's overall water supply reliability by introducing additional operational exchange capacity on the CA.
2. Mitigate basin wide overdraft and promote efficient groundwater basin management by recharging/banking surplus surface water (that would otherwise be lost to beneficial use) in the groundwater aquifer. A portion of the recharged/banked groundwater will be left in storage as a future resource or to help mitigate basin overdraft, provide an alternative water supply to surface water during drought, and increase groundwater levels in the immediate and surrounding areas. The average annual stored groundwater volume will be 6,788 AF/year over the 50 year Project life; resulting in a total Banked Groundwater of 286,766 AF.
3. Implement a conjunctive use program in which surplus surface water is deliberately recharged and stored in the underlying groundwater aquifer during 'wet' periods for recovery by pumping for use in 'dry' periods when BVWSD surface water supplies are insufficient to meet crop demands.
4. Increase BVWSD operational flexibility by increasing the District's capacity for operational exchanges of surface water and recovered banked groundwater via the CA.
5. Improve groundwater quality by recharging high quality surface water in the Project basin reducing the concentration of salts, nitrate, and arsenic in the underlying groundwater. Furthermore, BVWSD's western boundary is formed by the Coastal Range that is derived from marine and lacustrine deposits that tend to have marginal to poor quality groundwater (high salinity). The Project will increase groundwater levels in the southern portion of BVWSD, reducing the head gradient separating the good quality groundwater located on the basin floor and the poorer groundwater to the west.

Budget Category (a): Direct Project Administration

Task 1 – Administration

Tasks include managing grant agreement including compliance with grant requirements, and preparation and submission of supporting grant documents and coordination with IRWM regional manager, BVWSD. Prepare invoices including relevant supporting documentation for submittal to DWR via BVWSD. This task also includes project management and administrative responsibilities associated with the project such as coordinating with partnering agencies, and managing consultants/contractors.

Deliverables: Environmental Information Form (EIF), Financial Statements, Invoices, Other Applicable Project Deliverables

Task Status: 0% - Work has not begun.

Task 2 - Labor Compliance Program

BVWSD is in the process of preparing a Labor Compliance Program that is compliant with applicable California Labor Code requirements as a requirement under the 2014 Drought Solicitation Implementation Grant. Approval of the Program by the Department of Industrial Relations (DIR) is expected by October

2015. Implementation of the Labor Compliance Program is included in Task 13 – Construction Administration.

Deliverables: Labor Compliance Program

Task Status: 70% - Labor Compliance Program has been prepared and is awaiting DIR approval

Task 3 – Grant Reporting

Prepare Project Quarterly Progress Reports detailing work completed during reporting period as required by the DWR Grant Agreement. Submit reports to BVWSD for review and inclusion in the overall Quarterly Progress Report to be submitted to DWR. Quarterly Progress Reports will provide updates on the Project Performance Monitoring Plan. Prepare draft Final Project Completion Report and submit to DWR via BVWSD for DWR Project Manager's comment and review no later than 90 days after project completion. Prepare Final Report addressing BVWSD/DWRs comments. The report shall be prepared and presented in accordance with the provision of the DWR Grant Agreement.

Deliverables: Quarterly Project Progress Reports, Draft and Final Project Completion Report

Task Status: 0% - Work has not begun.

Budget Category (b): Land Purchase/Easement

Task 4 – Landowner Easements

No easements or land need to be obtained for the Project.

Deliverables: N/A

Task Status: 100% - No work is required.

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

Task 5 – Assessment and Evaluation

BVWSD retained consultants to conduct a Project feasibility evaluation that was completed as part of the Project development and grant application process. Work consisted of a site hydrogeology review for groundwater recharge/banking and recovery well operations, preliminary well pump and motor design, preliminary design and layout of the recharge basins and recovery pipeline, and preparation of initial Project technical justification, workplan, cost estimate, and schedule.

Deliverables: Technical information and exhibits incorporated in grant proposal.

Task Status: 100% - Work complete.

Task 6 – Final Design

Subtask 6.1 – Survey and Utility Investigation: BVWSD will conduct topographic and boundary surveys within the Project area under the direction of a Licensed Land Surveyor. Existing utilities will be identified and incorporated into plan and profile design drawings.

Subtask 6.2 – Well Equipping Design: A registered engineer will finalize the design and requirements of the pump controls and electrical, and well discharge valving for equipping the Project wells. Initial design and requirements of the well pump and motor will be prepared, and will be finalized during construction after well pump tests to identify the final design parameters. Project wells will be videoed to identify current conditions, perforation intervals, and potential issues. Plans, specifications, and an estimate (PS&E) will be prepared for the well pump, motor, pump controls and electrical, and well discharge

valving. Quality Assurance/Quality Control (QA/QC) reviews will be conducted at each interval by a Principal level engineer. At completion of this subtask, the PS&E will be incorporated into contract documents for bid by Contractors.

Subtask 6.3 – Recharge Basin & Recovery Pipeline Design: A basis of design (BOD) memorandum will be prepared for the Project that documents the assumptions, design criteria, and proposed design layouts. The BOD will include a site review by a geotechnical consultant that is to include exploratory drilling to recommend earthwork requirements (e.g. over excavation to maximize recharge capacity) and basin levee construction requirements. After approval of the BOD, PS&E will be prepared for the recharge basin, recovery pipeline, connection to the existing 72" pipeline, and well interties. The PS&E will be prepared at 50%, 90%, and 100% design levels for review by BVWSD and DWR SWP staff. Quality Assurance/Quality Control reviews will be conducted at each interval by a Principal engineer. At completion of this subtask, the PS&E will be incorporated into contract documents for bid by Contractors.

Deliverables: BOD memorandum, Geotechnical consultant site review, Well video reports, 50%, 90%, and 100% PS&E, Contract documents

Task Status: 0% - Work has not begun.

Task 7 – Environmental Documentation

Subtask 7.1 – Well Equipping CEQA: Work consists of BVWSD filing a California Environmental Quality Act (CEQA) Notice of Exemption (NOE) under Categorical Exemption Section 15301 – Existing Facilities. The construction activities consist of re-equipping existing wells with new pumps, motors, pump controls, and electrical, and therefore is included under Categorical Exemption Section 15301.

Subtask 7.2 – Recharge Basin and Recovery Pipeline CEQA: Work consists of preparing required environmental compliance documents, including biological site surveys and cultural resources surveys, if needed. It is anticipated that the level of CEQA compliance documentation will be an Initial Study / Mitigated Negative Declaration (IS/MND). The IS/MND will build upon the District's previous Environmental Impact Report (EIR) for the BVWSD Water Management Program (State Clearinghouse No. 2009011008) prepared in 2009 for this Project. The EIR was prepared and adopted in accordance with CEQA law. Tribal notification will be performed according to Proposition 84 requirements; no tribal issues are expected. Upon completion of the public review process the District will address any comments received and will consider the adoption of the IS/MND document. If the District adopts the IS/MND, a Notice of Determination will be filed with the State Clearinghouse. NEPA is not required for the project.

Deliverables: Well Equipping NOE – Section 15301, Draft and Final IS/MND, Notice of Determination

Task Status: 20% - BVWSD has retained a consultant to prepare the IS/MND, and is currently in progress. It is estimated that the IS/MND will be adopted in January 2016.

Task 8 - Permitting

Subtask 8.1 – Existing PG&E Service Applications: While not a permit, BVWSD will need to file service request applications with PG&E during Project final design in order to obtain electrical service from existing electrical services for the Project wells.

Subtask 8.2. – Stormwater Pollution Prevention Plan (SWPPP): A SWPPP will be prepared in accordance with the State Water Resources Control Board (SWRCB) requirements and uploaded to their website.

Subtask 8.3 – Dust Control Plan (DCP)/Indirect Source Review (ISR): A DCP and ISR will be prepared in accordance with the San Joaquin Valley Air Pollution Control District (SJVAPCD) requirements.

Subtask 8.4 – DWR License Agreement: While not a permit, BVWSD will need to develop and enter into a license agreement with Kern County Water Agency (KCWA) and DWR to facilitate CA pump-ins from the recovery pipeline. The license agreement will detail the proposed CA pump-in operations, tracking the volume and quality of recovered water discharged into the CA, and any other management or facility conditions that BVWSD operations will need to comply with. The Project recovery wells will be designed to discharge to both BVWSD's Short Main Canal and the recovery pipeline. Thus, the Project recovery operations are not subject to the final DWR License Agreement and can occur prior to agency adoption. DWR SWP and KCWA staff will be included in all Project design reviews relating to the proposed pump-in operations to facilitate adoption of the License Agreement.

Deliverables: SWPPP, DCP/ISR, DWR License Agreement

Task Status: 0% - Work has not begun.

Task 9 - Project Performance Monitoring Plan

Develop and submit a Project Performance Monitoring Plan. The Project Performance Monitoring Plan will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points. Spreadsheets will be setup to monitor well extraction and groundwater recharge deliveries and specifically track project benefits.

Deliverables: Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 10 – Construction Contracting

The work will include two separate construction contracts for: 1) Well Equipping, and 2) Recharge Basin and Recovery Pipeline Projects. Work consists of activities necessary to secure a contractor and award the contract, including, but not limited to: develop bid documents, prepare advertisement and contract documents for construction contract bidding, conduct pre-bid meeting, prepare addendums prior to bid opening (if necessary), bid opening and evaluation, selection of the contractor, award of contract, and issuance of notice to proceed.

Deliverables: Bid documents, Proof of Advertisement, Bid addendums (if necessary), Bid evaluation, Award of contract, and Notice to proceed

Task Status: 0% - Work has not begun.

Task 11 – Construction

Subtask 11.1 – Well Equipping Construction: Work consists of construction activities related to installation and removal of development pump and motor, furnishing and installing new well pumps, motors, pump controls and electrical, and well discharges, fittings, and appurtenances. After well pump tests and data analyses, the well design engineer will finalize the well pump and motor designs and requirements. Wells will be equipped in accordance with DWR's Well Standards, as applicable, and Kern County requirements. After construction the wells will be sampled for water quality (as per DWR requirements and the License Agreement) and reviewed by DWR to facilitate CA pump-ins.

Subtask 11.2 – Recharge Basin and Recovery Pipeline Construction: Work consists of construction activities required to construct the recharge basin and furnish and install the recovery pipeline including, but not limited to: mobilization and site preparation, scarifying and recompaction, embankment earthwork, trenching and backfill, furnish and install turnout structure, and furnish and install pipeline, fittings, and appurtenances. The recovery pipeline will be installed in accordance with the American Society of Agricultural and Biological Engineers (ASABE) standards. Pipeline will be pressure tested in accordance with American Water Works Association (AWWA) C600.

Deliverables: Photographic documentation, Well water quality sampling results

Task Status: 0% - Work has not begun.

Task 12 – Environmental Compliance/Mitigation/Enhancement

Work consists of preparing field reviews and compliance documentation in accordance with the SWPPP, DCP, and any required environmental mitigation measures identified in the adopted CEQA documents.

Deliverables: Field review reports and compliance documentation

Task Status: 0% - Work has not begun.

Task 13 – Construction Administration

Work consists of construction contract administration, processing contractor payment requests, material submittal reviews, site staking by a licensed land surveyor, a pre-construction meeting, review of facility construction, soil compaction and material testing, responding to requests for information (RFIs), issuing change orders as needed, preparation of Project record drawings, and project closeout. This task also includes monitoring and documenting labor compliance in accordance with the California Labor Code, including review of contractor practices, conducting interviews, and preparing labor compliance reports.

Deliverables: Preconstruction and progress meeting minutes, Change orders, Periodic Labor Compliance Reports, Pay requests, Record drawings, Certificate of project completion

Task Status: 0% - Work has not begun.

4.3 Project 3: GHCS D Antelope Conjunctive Use Project – Steuber Phase

IMPLEMENTING AGENCY: Golden Hills Community Services District

PROJECT DESCRIPTION: The project includes construction of a new 500 gpm well and 4,500 lineal feet of pipeline to convey pumped groundwater to the Golden Hills Community Services District (GHCS D) distribution system. The project will provide the following benefits:

1. Provide an important water supply to help GHCS D meet peak demands, and ensure demands can be met if their largest capacity well is off-line.
2. Shift groundwater pumping to the east and away from a cone of depression forming in the District.
3. Provide much needed recovery capacity at the Antelope Dam Conjunctive Use Project, and make groundwater recharge in the area more practical and feasible.
4. Provide an emergency water supply to the neighboring City of Tehachapi, who can receive water from the well through an existing interconnection. Also provide excess pipeline capacity to meet anticipated future City demands.
5. Reduce the potential for reductions in revenue in GHCS D and the City of Tehachapi from a water supply interruption or shortage.

Budget Category (a) - Direct Project Administration

Task 1 - Administration: Tasks include meetings with DWR and project proponents, implementing the contracts and agreements, administration of the overall grant, administration of project, coordination and correspondence with project proponents, consultants and Regional IRWM manager, distributing relevant data to stakeholders, and preparation of quarterly invoices with relevant supporting documentation. This task also includes quarterly meetings with a Coordinating Committee to implement the project (comprised of the project beneficiaries: GHCS D, City of Tehachapi and Tehachapi-Cummings County Water District).

Deliverables: Meeting minutes, sub-grant agreement between proponents and applicant, financial statements, project invoices, various submittals required for grant agreement with DWR

Task Status: 0% - Work has not begun.

Task 2 - Labor Compliance Program: Work consists of developing a Labor Compliance Program in accordance with California Labor Code. The work will be performed by a labor compliance subconsultant. Implementation of the Labor Compliance Program is included under Task 13 – Construction Administration.

Deliverables: Submission of Labor Compliance Program

Task Status: 0% - Work has not begun.

Task 3 - Reporting: Tasks include preparation of Quarterly Progress Reports, Invoices, and Final Project Report in accordance with DWR requirements. Quarterly Reports will provide updates on the Project Performance Monitoring Plan. A draft of the Final Project Report will be provided to DWR for review no later than 90 days after project completion. The reports will be prepared in accordance with DWR guidelines (Exhibit G referenced in the IRWMP Grant Program Guidelines).

Deliverables: Quarterly Progress Reports, Draft Report and Final Report

Task Status: 0% - Work has not begun.

Budget Category (b) - Land Purchase / Easement

No land purchase will be required. GHCS D already owns land where the well will be drilled and a portion of the pipeline will be placed.

Task 4 - Easement Procurement: The project pipeline will travel partially through an easement held by the Tehachapi-Cummings County Water District (TCCWD). TCCWD has verbally agreed to provide joint use of the easement (TCCWD has provided joint use of different segments of the same easement to GHCS D in the past). In 2014, the TCCWD, GHCS D and the City of Tehachapi signed a Letter of Intent for the Formation of a Joint Agencies Agreement. The Joint Agencies Agreement is available in draft form. This task includes completing the

agreement, and acquiring signatures from participating parties, which would lead to approval for using the easement.

Deliverables: Final Signed Joint Agencies Agreement, All relevant documentation regarding approval for using existing easement

Task Status: 70% complete

Budget Category (c) - Planning / Design / Engineering / Environmental Documentation

Task 5 - Assessment and Evaluation: A conceptual evaluation of the project has been performed including site visits, an evaluation of local hydrogeologic conditions, pipeline hydraulic calculations and estimate of project costs. Some elements of assessment and evaluation are also documented in the CEQA Initial Study (see Task 7 – Environmental Documentation). A project work plan, schedule, budget, project justification and grant related documentation were prepared for the project and submitted as part of this grant application.

Deliverables: CEQA Initial Study and Grant Application documentation

Task Status: 100% complete.

Task 6 - Final Design:

Subtask 6.1 – Survey and Utility Investigation: Some properties boundaries have already been surveyed to assist with conceptual design. Further work will include topographic and boundary surveys along the pipeline alignment. Existing utilities will be identified and incorporated into plan and profile drawings.

Deliverables: Work incorporated into design drawings (see Subtask 6.4)

Task Status: 5% - Property boundary survey performed

Subtask 6.2 – Well Design: A final well design, specifications and bidding documents has been prepared and signed by a professional engineer.

Deliverables: Final design drawings, specifications and bidding documents.

Task Status: 100% Complete

Subtask 6.3 – Electrical Design & Southern California Edison (SCE) Coordination: An electrical engineer will design the electrical services for the well. The design will include a 2,000 foot extension of a powerline to the well site and electric controls. Electrical plans and specifications will be prepared for the project. Work includes coordination with Southern California Edison. GHCS D has already begun discussions with Southern California Edison on the location for a powerline connection, design requirements and permitting requirements.

Deliverables: Draft and final design drawings, specifications, bidding documents, SCE permit

Task Status: 10% - Coordination with SCE has begun.

Subtask 6.4 – Project Design: A basis of design (BOD) memorandum will be prepared for the project that documents the assumptions, design criteria, and proposed design layout. After approval of the BOD, plans, specifications, and an estimate (PS&E) will be prepared for the pipeline, road crossing, valving and appurtenances. The PS&E will be prepared at 50%, 90%, and 100% design levels for review by District staff. Where applicable, District standards, Kern County Standards, and/or AWWA Standards will be utilized in the project design. Quality Assurance/Quality Control (QA/QC) reviews will be conducted at each interval by a Principal level engineer. At completion of this subtask, the PS&E will be incorporated into contract documents for bid by Contractors. This task also includes developing an engineer's cost estimate.

Deliverables: BOD memorandum, 50%, 90%, and 100% PS&E, bidding and contract documents, engineer's cost estimate

Task Status: 0% - Work has not begun.

Task 7 - Environmental Documentation: A California Environmental Quality Act Initial Study was prepared in 2014 and adopted on April 18, 2014 (State Clearinghouse No. 2014031018). The Initial Study was prepared and adopted in accordance with State law. Tribal notification was performed according to CEQA requirements; no tribal comments were received. Comments were received from one local resident and a written response was

provided. A Notice of Determination of a Mitigated Negative Declaration was filed with the Kern County and the State of California on April 18, 2015. NEPA is not required for the project.

Deliverables: Adopted CEQA Initial Study and relevant notices

Task Status: 100% - CEQA Complete

Task 8 - Permitting:

Subtask 8.1 – SWPPP: A Stormwater Pollution Prevention Plan (SWPPP) will be prepared in accordance with the SWRCB requirements and uploaded to their website.

Deliverables: SWPPP

Task Status: 0% - Work has not begun.

Subtask 8.2 – DCP and ISR: A Dust Control Plan (DCP) and Indirect Source Review (ISR) will be prepared in accordance with the local Air Pollution Control Board requirements.

Deliverables: DCP, ISR

Task Status: 0% - Work has not begun.

Subtask 8.3 – Well Permit and Domestic Water Supply Permit Amendment: A well permit will be obtained from Kern County for the project. The well driller will be required to do this on behalf of GHCS D. A Domestic Water Supply Permit Amendment will be prepared and submitted to the SWRCB, Division of Drinking Water (DDW) to allow for the connection of a new water source to GHCS D's water system.

Deliverables: Kern County Well Permit and Domestic Water Supply Permit Amendment

Task Status: 0% - Work has not begun.

Subtask 8.4 – Encroachment Permit - Road Crossing: A permit will be acquired from the Kern County Road Department to place a pipeline under a County feeder road. Discussions have begun with the county on pipeline design requirements under the road and permitting requirements.

Deliverables: Encroachment Permit

Task Status: 10% - Preliminary investigation work has begun.

Task 9 – Project Performance Monitoring Plan: Prepare Project Performance and Monitoring Plan that includes monitoring goals, milestones, baseline conditions, monitoring protocols, monitoring parameters, frequency of monitoring, and locations of monitoring. Spreadsheets will be setup to monitor well extraction, water demands and groundwater deliveries and specifically track project benefits.

Deliverables: Project Performance Monitoring Plan

Task Status: 0% - Work has not begun.

Budget Category (d) - Construction / Implementation

Task 10 - Construction Contracting: Two contracts are anticipated for construction, one for the well drilling and equipping and the second for the pipeline construction. Tasks for each contract include: issue contract documents for a 45 day notice period for soliciting bids, conduct pre-bid meeting, issue addendums as necessary, hold bid opening, review bids, and award contract. The GHCS D Board will approve the recommend lowest responsible qualified bidder and award the contract including execution of the contract documents, bonds and insurance for contract document compliance.

Deliverables: Bid Notices, proof of advertisement, formal addendums, bid award notices, construction contracts, notice to proceed

Task Status: 0% - Work has not begun.

Task 11 - Construction:

Subtask 11.1: Mobilization and Site Preparation: A mandatory pre-construction meeting will be held for each construction contract to review the project design and contract requirements. Coordination will begin with the geotechnical firm, labor compliance officer, utility company representatives, and project construction reviewer. A

formal Notice to Proceed will be issued stipulating the construction start and end dates and liquidated damages based on the executed contract documents. Initial submittals will be reviewed and accepted. The pipeline alignment and appurtenances will be staked by a surveyor for construction. Contractors will locate existing utilities (USA), secure an equipment / material storage site on the GHCSO property, and mobilize equipment.

Deliverables: Contractor Notice of Intent to Begin Work

Task Status: 0% - Work has not begun.

Subtask 11.2: Well Construction: The well will be constructed in accordance with DWR's Well Standards, as applicable, and Kern County requirements under the well permit. The well pump and motor will be sized appropriately based on the well development and testing. The well house building will be constructed in accordance with the District's standard building and all equipment (chlorination, well head plumbing, valving) will be installed by the Contractor. Electrical work, controls, integration with the District's SCADA system will be performed by a specialty subcontractor. As required, the Contractor will implement the SWPPP and or DCP throughout the duration of construction activities or as specified.

Deliverables: Pay Requests from Contractors, photographic documentation

Task Status: 0% - Work has not begun.

Subtask 11.3: Pipeline Construction: Contractor will install 400 LF of new 8" diameter pipeline, 4,100 LF of 18" diameter pipeline, isolation valves, air release valves, and blowoff. The pipeline will be installed to avoid utility conflicts and have proper sewer and irrigation pipeline separation requirements. The Contractor will construct the facilities in accordance with the plans and specifications and referenced installation practices (AWWA and manufacturer recommendations). Traffic control measures will be placed and maintained by the Contractor throughout the duration of the contract. As required, the Contractor will implement the SWPPP and or DCP throughout the duration of construction activities or as specified.

Deliverables: Pay Requests from Contractors, photographic documentation

Task Status: 0% - Work has not begun.

Subtask 11.4: Performance Testing & Demobilization: Development of wells and selection of well pump will be in accordance with a Basis of Design memorandum. Pipeline will be pressure tested disinfected in accordance with AWWA standards. The well water will be tested in accordance with Chapter 14 of the *California Regulations Related to Drinking Water*, and the data sent to appropriate State agencies/databases.

Deliverables: Water quality test results

Task Status: 0% - Work has not begun.

Task 12 - Environmental Compliance/Mitigation/Enhancement: Prepare field reviews and compliance documentation in accordance with the SWPPP, DCP, well permits, and CEQA mitigation measures. No significant CEQA mitigation measures will be required unless a discovery (such as cultural resource) is found during construction.

Deliverables: Field review reports and compliance documentation

Category Status: 0% - Work has not begun.

Task 13 - Construction Administration: Work consists of contract administration, processing contractor requests for payment, material submittal reviews, holding a pre-construction meeting, documenting pre-construction conditions, maintaining a daily construction diary, review of facility construction, hydrogeologist review of well construction, notifying contractor if work is not acceptable, updating project schedule, soil compaction and materials testing, responding to requests for information (RFIs), issuing change orders as needed, preparation of project record drawings, and project closeout. A part time engineering construction observer will be on site during the project. This task also include monitoring and documenting labor compliance in accordance with the California Labor Code, which will involve reviews of contractor practices, conducting interviews, and preparing labor compliance reports.

Deliverables: Preconstruction meeting minutes, progress meeting minutes, change orders, pay requests, periodic labor compliance reports, record drawings, certificate of project completion

Category Status: 0% - Work has not begun.

4.4 Project 4: Lake of the Woods Water Main Replacement & Meter Installation Project

IMPLEMENTING AGENCY: Lake of the Woods Mutual Water Company

PROJECT DESCRIPTION: Through the implementation of the Water Main Replacement and New Meter Installation Project, Lake of the Woods Mutual Water Company (LOWMWC) will achieve water conservation resulting in reduced annual groundwater pumping. Installation of new water mains, valves and meters would assist the LOWMWC in achieving long-term water conservation by (1) substantially reducing losses from existing water mains and (2) allowing for the implementation of water rates based on actual customer water use that is measured by new meters, thereby incentivizing water conservation.

The project consists of designing, bidding, and constructing approximately 1.4 miles of new 6” diameter water mains and isolation valves, 406 individual metered house services, and fire hydrants located in areas where water mains are to be replaced. The water system in this area was constructed over 60 years ago and its deteriorated condition causes continual mainline leaks and occasional breaks. The Project will also include a water rate study to provide justification for the implementation of new water rates.

Budget Category (a): Direct Project Administration

Task 1 - Administration

Tasks include meetings with DWR and project proponents, implementing the contracts and agreements, administration of the overall grant, administration of project, coordination and correspondence with project proponents, consultants and Regional IRWM manager, distributing relevant data to stakeholders, and preparation of quarterly invoices with relevant supporting documentation. Under this Task LOWMWC will work with Self Help Enterprises or other organization to obtain a bridging loan to help cashflow construction costs.

Deliverables: Environmental Information Form (EIF), Financial Statements, Invoices, Other Applicable Project Deliverables

Task Status: 0% - Work as not begun.

Task 2 - Labor Compliance Program

CS & Associates previously developed a Labor Compliance Program in accordance with California Labor Code that was approved by the Department of Industrial Relations on 9/9/2014. Implementation of the Labor Compliance Program for this Project is included under Task 13 – Construction Administration.

Deliverables: Proof of labor compliance upon request

Task Status: 100% - Complete

Task 3 - Reporting

Tasks include preparation of Quarterly Progress Reports, Invoices, and Final Project Report in accordance with DWR requirements. Quarterly Reports will provide updates on the Project Performance Monitoring Plan. A draft of the Final Project Report will be provided to DWR for review no later than 90 days after project completion. The reports will be prepared in accordance with DWR guidelines (Exhibit G referenced in the IRWMP Grant Program Guidelines).

Deliverables: Quarterly Project Progress Reports, Draft and Final Project Completion Report

Task Status: 0% - Work as not begun.

Budget Category (b): Land Purchase/Easement

Task 4 – Land Acquisition

No easements or land need to be acquired as the replacement water mains will be located within existing public right-of-ways.

Deliverables: N/A

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

Task 5 – Assessment and Evaluation

Subtask 5.1 – Feasibility Study: Prepare initial project assessment including benefits analysis, project technical justification, work plan, budget, and schedule documentation for inclusion in this Kern IRWM Grant Application (complete).

Prepare conceptual design of project including pipeline sizing, fire flow analysis, fire hydrant location plan (to be reviewed and approved by the Kern County Fire Department), and review of water main placement and meter box locations in right-of-way. A WaterCAD hydraulic model of the LOWMWC's water system will be performed to determine pre- and post-Project conditions (determining fire flow improvements at fire hydrants). Prepare Basis of Design (BOD) memorandum with design assumptions, standards for construction, and work plan. Prepare initial project cost estimates and schedule.

Subtask 5.2 – Rate Study, Outreach, and Rate Implementation: Prepare rate study based on a proposed metered water system. AWWA M54 – *Developing Rates for Small Systems*, an industry standard manual, will be used in developing rates for a small water system that are equitable and fair. Similar nearby water systems will be reviewed to compare water use, budgeting needs, and revenue requirements. The Water Company will conduct public outreach meetings to discuss the project and upcoming rate changes. A hearing will be held regarding the implementation of the new rate structure. At the end of this process the new rate structure will be implemented and the billing system will be setup to invoice customers based on water use. In general, public support is anticipated as the Project will help reduce operating costs and could help facilitate and interconnection with Frazier Park PUD in the future.

Deliverables: BOD memorandum and exhibits, Rate Study, Outreach meeting materials, Public Hearing meeting minutes

Task Status: 25% - Initial Project Assessment under Subtask 5.1 is Complete

Task 6 – Final Design

Subtask 6.1 – Survey and Utility Investigation: Conduct a topographic and boundary survey of the project area. Pothole existing utilities as necessary to assist in locating proposed facilities to avoid conflicts with existing improvements. Survey potential water service line points of connection at houses (hose bibs) where the new house service is not proposed to be located on the same side of the house as the existing water service. A basemap will be created using data from the survey, information provided by LOWMWC, and existing utilities (identified in the field and through utility company records) will be incorporated. Additional survey points will be collected for the existing system facilities to improve the elevation accuracy of the WaterCAD model (prepared in Subtask 5.1).

Subtask 6.2 – Geotechnical Investigation: A licensed geotechnical firm will perform a geotechnical review of the soils in the project area to provide design recommendations for pipeline bedding and backfill and to assist with pavement design. Approximately 15 borings will be performed to generally identify the existing soils along the proposed water mains. Boring logs and testing will be required in identifying conditions for boring and jacking the proposed steel casing under Frazier Mountain Road.

Subtask 6.3 – Project Design: After comments for the BOD are addressed, the Plans, Specifications & Estimates (PS&E) will be prepared for the replacement water mains, associated facilities, and proposed meters. The PS&E will be prepared at 50%, 90%, and 100% design levels under the direction of a California licensed Civil Engineer for review by LOWMWC staff (the simplicity of the project does not warrant a lesser detailed submittal as the work in Subtask 5.1 is sufficient). The plan set will include plan and profile sheets for the installation of the replacement water mains and new metered house services as well as decommissioning plans for abandoning the existing water lines. With some of the water mains located in mountainous terrain, a traffic management plan will be prepared to accommodate residential traffic during construction. Where applicable, Water Company standards, Kern County Standards, and/or AWWA Standards will be utilized in the project design. QA/QC reviews will be conducted at each interval by a Principal engineer. Coordination with property owners will occur in the early stages of the design to determine preferred location of new service lines. Coordination with local utility companies and Kern County will occur throughout this subtask including providing final contract documents to

permitting agencies. At completion of this subtask, the signed and stamped PS&E will be incorporated into contract documents for bid by licensed, qualified Contractors. A courtesy plan set will be provided to the California Division of Drinking Water (under the SWRCB) for their review; however, no permit amendment is required for pipeline replacement.

Deliverables: 50% PS&E, 90% PS&E, 100% PS&E, Contract Documents

Task Status: 0% - Work as not begun.

Task 7 – Environmental Documentation

A Class 2 Categorical Exemption applies for the project since the project consists of the replacement of existing water supply facilities with substantially the same purpose and capacity. A Notice of Exemption will be prepared and filed with Kern County. Tribal notification is not required under CEQA as a Categorical Exemption is applicable to this project.

Deliverables: Notice of Exemption

Task Status: 0% - Work as not begun.

Task 8 - Permitting

Subtask 8.1 – SWPPP: Based on the size of the project, the preparation of a SWPPP is necessary and will be prepared in accordance with the SWRCB requirements and uploaded to their website.

Subtask 8.2 – DCP: A Dust Control Plan (DCP) will be prepared in accordance with the SJVAPCD requirements. This project is exempt from the preparation of an Indirect Source Review as the estimated construction equipment emissions will not exceed the local Air Board's emissions threshold.

Subtask 8.3 – Encroachment Permit: An encroachment permit application will be prepared with Kern County as the water mains are located within the County's right-of-ways. Final plans will be submitted to the County.

Deliverables: SWPPP, DCP, County Encroachment Permits

Task Status: 0% - Work as not begun.

Task 9 - Project Performance Monitoring Plan

Prepare Project Performance and Monitoring Plan that includes monitoring goals, milestones, baseline conditions, monitoring protocols, monitoring parameters, frequency of monitoring, and locations of monitoring. Tracking templates for unmetered water use/reported losses will be created and implemented by operations staff. A spreadsheet for tracking water meter data, estimated losses, and conservation through meter implementation will also be created for use by the Water Company's secretary.

Deliverables: Project Performance Monitoring Plan

Task Status: 0% - Work as not begun.

Budget Category (d): Construction/Implementation

Task 10 – Construction Contracting

The contract documents will be prepared for bidding and a public notice will be prepared requesting bids after a thirty (30) calendar day period. During the bidding period the following will be conducted: a pre-bid job walk, addressing contractor and vendor questions, preparing and issuing addenda, conducting bid opening at specified time and place, tabulating bids to determine accuracy, and review of other Contractor supplied documents required with the bid to confirm that the bidder is qualified. The LOWMWC Board will approve the recommend lowest responsible qualified bidder and award the contract. The contract will be executed after receipt of documentation, including bonds and insurance, from the contractor.

Deliverables: Advertisement for bids, Pre-bid contractor's meeting minutes, Written bid questions and answers, Bid tabulation, Addenda, Executed contract documents

Task Status: 0% - Work as not begun.

Task 11 - Construction

Subtask 11.1: Mobilization and Site Preparation: A mandatory pre-construction meeting will be held to review the project design and contract requirements. Coordination will begin with the geotechnical firm, labor compliance officer, utility company representatives, and project construction reviewer. A formal Notice to Proceed will be issued stipulating the construction start and end dates and liquidated damages based on the executed contract documents. As required, the contractor's construction schedule will be received and reviewed along with material submittals will be accepted and logged. As directed by the contractor, the water main alignments and appurtenances will be staked by a surveyor for construction. The contractor will locate existing utilities (USA), secure an equipment / material storage site, and mobilize equipment. Follow up contractor submittals will be processed.

Subtask 11.2: Water Main Construction: Construct approximately 1.4 miles of new 6" diameter water mains and isolation valves, and approximately 9 fire hydrants in the area. The contractor will construct the facilities in accordance with the plans and specifications. As needed, appropriate traffic control measures will be placed and maintained by the Contractor throughout the duration of the contract. As required, the Contractor will implement the SWPPP and or DCP throughout the duration of construction activities or as specified. Pipeline installation details shall be in accordance with County of Kern and AWWA standards. The Contractor shall make the disturbed construction area safe for pedestrian and vehicular traffic at the end of each work day, on observed holidays and each weekend.

Subtask 11.3: Water Meter Installation: The Contractor will install 406 individual metered house services. Approximately 84% of the water meters will be installed on the existing water service line. The remaining water meters will need to be installed on a new service line from the replacement water mains. Disruption of water services will be limited per the contract documents with the property owner/lessee/renter given advance notice by the Contractor. It is estimated that 2-3 water meters will be installed per workday and approximately 3 crews will work concurrently. The water meters and services will be installed in accordance with the recommended practices of AWWA M6 – *Water Meters-Selection, Installation, Testing and Maintenance* as specified in the contract documents.

Subtask 11.4: Performance Testing & Demobilization: The water mains will be pressure tested and disinfected in accordance with AWWA standards. After the new facilities pass these tests, the new system will go online and the old system will be abandoned per the plans and specifications. The Contractor shall remove all equipment and unused materials from his storage yard returning the site to pre-construction condition.

Deliverables: Training meeting notes, Photo documentation

Task Status: 0% - Work as not begun.

Task 12 – Environmental Compliance/Mitigation/Enhancement

Prepare field reviews and compliance documentation in accordance with the SWPPP and DCP.

Deliverables: Field review reports and compliance documentation

Task Status: 0% - Work as not begun.

Task 13 – Construction Administration

Work consists of: contract administration; conducting a pre-construction meeting with Contractor, utility company representatives, inspector, testing laboratory, labor compliance officer, construction surveyor, and County of Kern; processing material submittals and certificate of compliances; reviewing and processing Contractor requests for progress payments (to be submitted and processed on a pre-approved schedule); providing regular inspections for contract compliance, maintaining written inspection diary, and ordering material testing as the Contractor's work progresses; disseminating testing results to Contractor and permitting agencies; conducting field meetings between the Construction Manager (CM), Contractor, and inspector throughout all construction stages; monitoring construction progress with respect to the approved budget and schedule and directing the Contractor to take corrective actions necessary to return to contract compliance when not meeting schedule; responding to Contractor and vendor RFIs; issuing field directives and change orders as needed; where work requires,

coordination with County and personnel, preparing project record drawings, and project closeout including filing a Notice of Completion and requesting release of retention per the Contract documents. This task also include monitoring and documenting labor compliance in accordance with the California Labor Code, which will involve reviews of contractor practices, conducting interviews, and preparing labor compliance reports.

Deliverables: Pre-construction and field meeting minutes, Submittal documents with log, Change orders, Pay requests, Periodic labor compliance reports, Construction Observation Reports, Record Drawings, Certificate of project completion

Task Status: 0% - Work as not begun.