

Attachment

3

*Implementation Grant Proposal  
BCSD Arsenic Management Feasibility Study and Well Design  
Work Plan*

Attachment 3 consists of the following items:

- ✓ **Work Plan.** Attachment 3 contains detailed information regarding the tasks that were and will be performed for the project in this proposal, as well as supporting documents such as regional and project maps, and existing data and studies.

This Work Plan contains a summary description of the project in the Antelope Valley (AV) Integrated Regional Water Management (IRWM) Implementation Grant Proposal and tasks necessary to complete the project. The Work Plan demonstrates that the project is ready for implementation and includes a brief discussion of the supporting studies, data, resources, and deliverables to ensure implementation of the project is based on sound scientific and technical principles. The Work Plan tasks are also consistent with the major tasks and sub-tasks identified in the Budget (Attachment 4) and Schedule (Attachment 5) of this proposal.

## Introduction

### Project Description

#### Overview

The Boron Community Services District (BCSD) Arsenic Management Feasibility Study and Well Design Project (Planning/Design Project)<sup>1</sup> consists of developing a hydrology study, preliminary engineering report, pilot well, and production well design to provide a recommended project to BCSD for arsenic management in their groundwater supply. The hydrogeology study will be completed to determine the best site, depth, and testing programs for a pilot test well. The pilot test well will be constructed to determine a recommended depth, screen interval, zone isolation and construction method for a new production well, assumed to be part of the eventual recommended construction project (Construction Project). Arsenic removal treatment may also be identified as part of the Construction Project. This Planning/Design Project will address a critical water quality need of a disadvantaged community (DAC), as explained in further detail in Attachment 10.

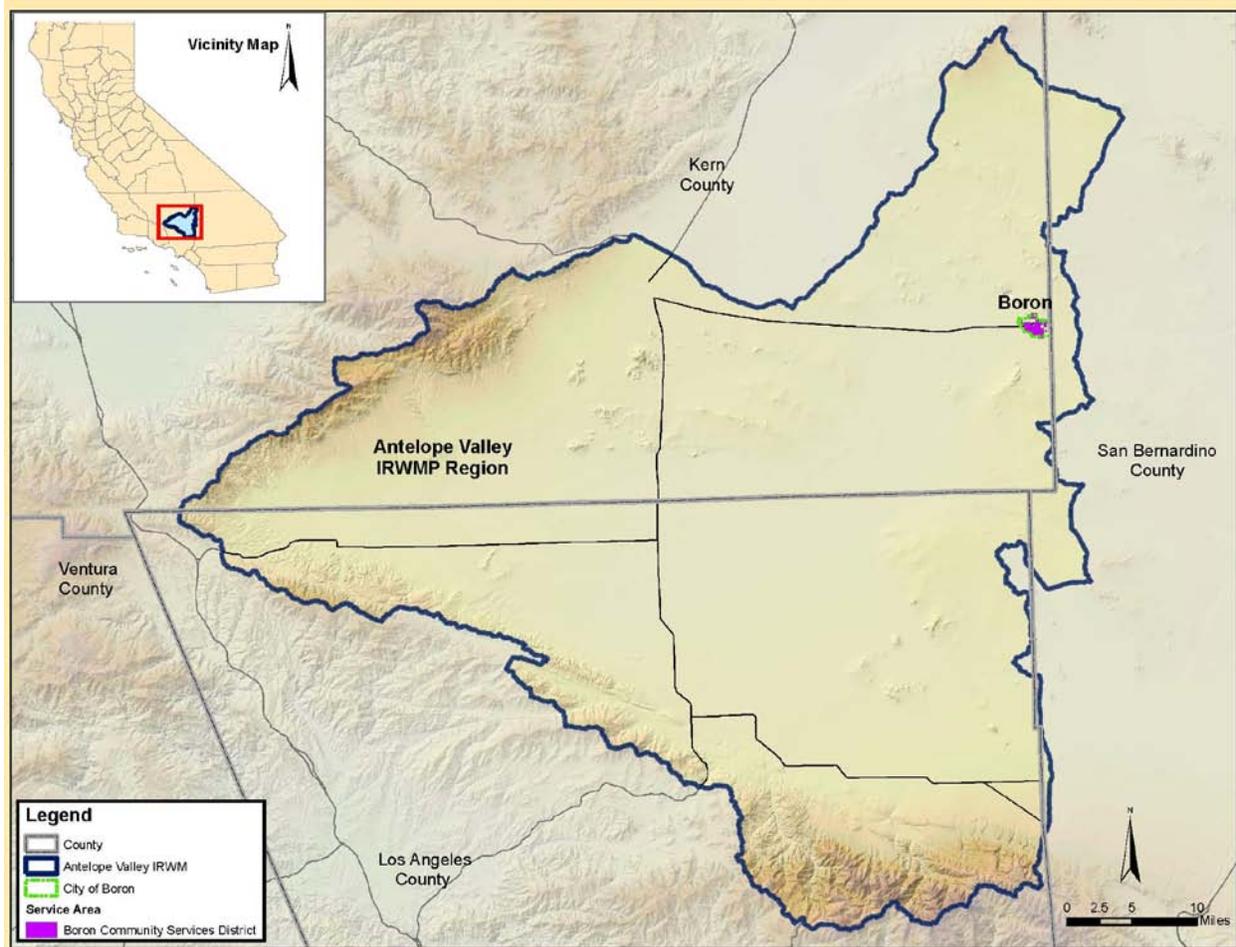
<sup>1</sup> For the purposes of this grant application, the term “Planning/Design Project” is used to refer to the planning/design phase, which is the phase seeking funding under Proposition 84, Round 2. The term “Construction Project” is used to refer to the construction phase, which will occur later and is not seeking funding under Round 2.

Background, Setting, and Problem Description

The Planning/Design Project is proposed by BCSD. BCSD was formed as a special district in 1953 under Division 3, Title 5 of the Government Code of California and serves the City of Boron, located within Kern County, and is responsible for maintaining and providing water, sewer, and streetlight provisions to 2,100 customers through 630 active service connections and two storage reservoirs. On an average annual basis, BCSD provides approximately 500 acre-feet per year (AFY) of water supply to customers.

A regional map is shown in Figure 3-1. All of the customers served by BCSD are considered to reside in a disadvantaged community (DAC) as set forth by the State of California, Department of Water Resources' (DWR's) 2010 American Community Survey (ACS) data and mean household income (MHI) criteria. The area's DAC status is discussed further in Attachment 10. BCSD's water system consists of two groundwater supply wells, two storage tanks, two booster pumps, and distribution lines (Figure 3-2). The two existing groundwater wells, Well #15 and Well #13, are nearly 50 years old. Well #15 is the primary groundwater production well and Well #13 is used as a standby only.

Figure 3-1: Regional Map of Project Location



In 2008, the California Department of Public Health (CDPH) lowered the primary maximum contaminant level (MCL) for arsenic from 50 to 10 parts per billion (ppb). Based on this new limit, on January 23, 2009, BCSD received a compliance order from the CDPH for a violation of the Safe Drinking Water Act. BCSD was required to develop and implement a plan to resolve the arsenic MCL exceedance.

Local water wells have recorded arsenic concentrations ranging from 67 ppb to 83 ppb (See Scope of Work Attachment). Since June 2008 BCSD began blending Well #15 water and Antelope Valley East-Kern Water Agency (AVEK) water (imported water) at a 52% AVEK and 48% well water blend. However, the blended water supply exceeds the arsenic MCL of 10 ppb due to restrictions on the availability of AVEK water. The most recent testing results of the blended water indicated arsenic concentrations of 39 ppb (See Scope of Work below).

BCSD cannot successfully come into compliance until a technical assessment is performed for potential project alternatives to meet the arsenic MCL. BCSD engaged the services of Provost & Pritchard Consulting Group to assist in developing a scope of work and associated budget for the Planning/Design Project, which includes a project alternatives analysis. BCSD is seeking Round 2 Proposition 84 Implementation Grant Funding to complete initial tasks intended to select and design the most cost-effective, long-term solution to help BCSD meet the primary MCL for arsenic.

Proposed Project:

This is a planning study/design only. It includes construction of a pilot well, but only for the purpose of testing various well parameters. These types of planning study and design projects are allowed under Proposition 84, Round 2 Implementation funding in cases where the project will benefit a DAC by addressing critical water supply and/or water quality issues. As stated in the IRWM Grant Program Guidelines on page 86 “Because DACs may not have a developed project to put forward, the types of eligible projects to address critical water supply or water quality needs of a DAC may include studies designed to help identify a preferred project.” This Planning/Design Project has the potential to address both.

The Planning/Design Project consists of the following elements:

- **Preliminary Engineering Report that provides analysis of four alternatives:**
  - Construct a new well in a location with lower arsenic concentrations
  - Construct an arsenic treatment system for the existing wells
  - Construct a new well with arsenic treatment
  - Construct a new well and utilize blending with AVEK water
- **Hydrogeology Study** – Determine the best site and depth of a new well and best probability of yielding low arsenic water
- **Design and Construction of Pilot Well** – Prepare plans, specifications and estimate for pilot test well. Construction well depth will be no more than 600 feet and will consist of a conduct zone sampling and water quality testing for up to 4 zones.
- **Design of Production Well** – Prepare technical specifications and estimate for production well, pump, well house, piping connection, gravity blending, booster pumps electrical, site improvements and appurtenances.
- **Environmental Documents**
  - California Environmental Quality Act (CEQA) – Prepare CEQA documents to ensure compliance with CEQA

- National Environmental Policy Act (NEPA) – Prepare NEPA documents to ensure compliance with NEPA, if required

**Project Partners**

BCSD is the sole implementing agency for the Planning/Design Project.

**Goals and Objectives**

The goals and objectives of the Planning/Design Project are identified in Table 3-1. The goals and objectives of the Construction Project (to be implemented later) are identified in Table 3-2.

**Table 3-1: Goals and Objectives for Planning/Design Project**  
 (Included in this grant request)

Goals	Objectives
Identify new well location(s)	<ul style="list-style-type: none"> <li>• Identify a potential new well site with a lower arsenic concentration</li> <li>• New well site (if lower arsenic groundwater is identified) can minimize treatment costs</li> </ul>
Select most cost-effective long-term solution for arsenic reduction/removal	<ul style="list-style-type: none"> <li>• Evaluate and determine the most cost effective alternative to comply with the arsenic MCL of 10 PPB</li> <li>• Evaluate alternatives to current and projected (20-year) water supply needs</li> </ul>
Construct pilot well	<ul style="list-style-type: none"> <li>• Determine the ideal depth and specifications of a new groundwater well for BCSD</li> </ul>
Design production well	<ul style="list-style-type: none"> <li>• Prepare design and technical specifications for the new production well that are ready for construction implementation</li> </ul>

**Table 3-2: Goals and Objectives for Construction Project**  
(Later phase - not included in this grant request)

Goals	Objectives
Provide the most reliable water supply to customers	<ul style="list-style-type: none"><li>• Continue to supply 500 AFY of potable water to all its 630 active service connections</li><li>• Replace aging infrastructure</li><li>• Maximize/optimize local water supplies</li></ul>
Meet drinking water regulatory requirements	<ul style="list-style-type: none"><li>• Meet the drinking water primary maximum contaminant level (MCL) for arsenic of 10 parts per billion (ppb)</li></ul>

### IRWM Plan Consistency

The Planning/Design Project has goals and objectives related to both water supply and water quality. These objectives are also incorporated in the AV IRWM Plan that was adopted by the Region in 2007. BCSD adopted the 2007 AV IRWM on January 17<sup>th</sup>, 2013 and is an active participant in the ongoing 2013 AV IRWMP update. The Planning/Design Project will aid in meeting the IRWM Region’s goals and objectives, first as a feasibility study and well design, and later potentially as a construction project. Table 3-3 highlights the 2007 AV IRWMP goals along with the respective objectives designed to achieve these goals.

**Table 3-3: AV IRWMP Goals and Objectives**

AV IRWMP Objectives	Primary AV IRWMP Goals Implemented by Objective		
	Goal 1: Municipal and industrial (M&I) purveyors reliably provide the quantity and the quality of water that will be demanded by a growing population	Goal 2: Satisfy agricultural users' demand for reliable irrigation water supplies at a reasonable cost	Goal 3: Protect and enhance current water resources (including groundwater) and the other environmental resources within the Antelope Valley Region
A Provide reliable water supply to meet the Antelope Valley Region's expected demand between now and 2035	•	•	
B Establish a contingency plan to meet water supply needs of the Antelope Valley Region during a plausible disruption of SWP water deliveries	•	•	
C Stabilize groundwater levels at current conditions		•	•
D Provide drinking water that meets customer expectations	•		
E Protect aquifer from contamination	•		•
F Protect natural streams and recharge areas from contamination	•		•
G Maximize beneficial use of recycled water	•		
H Reduce negative impacts of stormwater, urban runoff, and nuisance water			•
I Preserve open space and natural habitats that protect and enhance water resources and species in the Antelope Valley Region			•
J Maintain agricultural land use within the Antelope Valley Region		•	•
K Meet growing demand for recreational space			•
L Improve integrated land use planning to support water management	•		•

• IRWM Plan goal targeted by Plan objective

The Planning/Design Project (and Construction Project) will be consistent with three of the twelve AV IRWMP objectives. Table 3-2 below provides an overview of the AV IRWMP

objectives that are expected to be directly achieved through implementation of the Planning/Design Project.

**Table 3-2: Contribution to AV IRWMP Objectives**

Proposal Projects	Contribution to IRWM Plan Objectives											
	A	B	C	D	E	F	G	H	I	J	K	L
Arsenic Removal Treatment Plant Planning Project	•			•	•							

- achieved through implementation of the Project

This Planning/Design Project contributes to the AV IRWMP objectives in the following ways:

- **Objective A** – *Provide a reliable water supply to meet the Antelope Valley Region’s expected demand between now and 2035:* by ensuring BCSD can continue to provide reliable water supply to its 630 active service accounts.
- **Objective D** – *Provide drinking water that meets customer expectations:* by analyzing available arsenic treatment alternatives for BCSD, a public water system located within the Antelope Valley IRWM Region, and recommending the best option or combination of options to comply with the arsenic MCL requirement. Compliance with the arsenic MCL drinking water standard will reduce BCSD’s customers’ risk of experiencing skin damage, circulatory system problems, and cancer – all effects of long-term exposure to high arsenic concentrations.
- **Objective E** – *Protect aquifer from contamination:* should the Planning/Design Project result in a construction project that includes arsenic treatment, it will result in groundwater being extracted and arsenic being removed from the local water supply. To the extent that arsenic is removed and water is used for outdoor irrigation purposes, it represents return flow that will infiltrate back into the soil and to the aquifer with reduced amounts of arsenic. Over time, this constitutes a reduction in arsenic levels in the aquifer and results in protection from contamination.

### Purpose and Need

The Planning/Design Project is needed to help BCSD meet the State of California arsenic drinking water standard MCL of 10 ppb. The State of California has noted that some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems and may have an increased risk of cancer. The latest arsenic water quality test results by BCSD have shown arsenic concentrations of 39 ppb, approximately 29 ppb over the MCL. Therefore, the purpose of the Planning/Design Project is

to identify and design the best water supply/treatment alternative for BCSD to meet the State of California arsenic MCL standard.

Alternatives to be considered include various combinations of: (1) drilling a new water well to obtain low arsenic water; (2) constructing an arsenic removal water treatment plant; (3) blending with AVEK water. Consolidation with other existing wells to achieve arsenic compliance is not considered feasible at this time because all neighboring groundwater wells are known to contain arsenic exceeding the MCL. Although it is not considered likely that a new water well will produce water with arsenic less than the MCL, a new water well is proposed because both existing wells are nearly 50 years old and they produce water very high in arsenic, thus increasing treatment costs and the risk that the treatment process may sometimes produce water that exceeds the MCL. The goal will be to obtain water with low levels of arsenic so that the influent to an arsenic removal process is as low as possible. The age of the wells suggest that it is too risky to add treatment to the existing wells. If one or both of the existing wells fail within the next several years, a new well will need to be drilled. Water produced from a new well may or may not be compatible with an existing treatment system. BCSD is therefore proposing that a new well be drilled first before treatment pilot studies are completed and a new treatment process designed. A pilot well is proposed, with zone sampling, to identify and select zones that produce the lowest arsenic water concentrations. The production well will be designed and screened to produce low arsenic water. Following the planning phase, a production well will be drilled. Pilot plant testing will be completed and a new arsenic water treatment plant will be designed and constructed if recommended by the Planning/Design Project. The existing water reservoir is proposed to be used as a finished water clear well, with all water entering the reservoir before it is distributed to customers. This will require construction of a new feed line from the reservoir to the Cherry Hill area, which is connected to the main transmission line leading from the well field area to the reservoir.

### Project List

The proposal only consists of one project. Table 3-3 provides an abstract of the proposed Planning/Design Project, the current status of the Planning/Design Project, the implementing agency, and the site specific geographic location.

**Table 3-3: Project Specifics**

Project	Description	
<p><b>BCSD Arsenic Management Feasibility Study and Well Design</b></p>	<p><i>Abstract:</i></p>	<p>The Boron Community Services District (BCSD) Arsenic Management Feasibility Study and Well Design (Planning/Design Project) will consist of developing a feasibility study that recommends to BCSD the best project alternative to meet the primary maximum contaminant level (MCL) for arsenic. The project will complete a hydrogeology study to determine the best site, depth, and testing programs for a pilot test well. The pilot test well will be constructed; and data obtained for the test well will provide a final recommendation for production well depth, screen intervals, zone isolation and construction method. Also, if recommended, the type of arsenic removal treatment will be identified.</p>
	<p><i>Status:</i></p>	<p>Planning – Design Phase</p>
	<p><i>Implementing Agency:</i></p>	<p>Boron Community Services District (BCSD)</p>
	<p><i>Location:</i></p>	<p>The Planning/Design Project consists of a feasibility study that will be completed for BCSD and will serve the community of Boron, California. The test pilot well location and new production well location (if required) have yet to be determined. These locations will be determined as part of this Planning/Design Project.</p> <p>One potential location for a new well and/or arsenic treatment system is five miles west of the town of Boron, located to the north off of highway 58 on Gephart Road. This is the Well No. 15 site and is located on the west side of Gephart Road.</p>

**Integrated Elements of Project**

This Planning/Design Project will be integrated with other projects in the Antelope Valley IRWM Region that take steps to remove arsenic or lower arsenic concentrations. Higher arsenic groundwater has been identified in Los Angeles County Waterworks District 40 (LACWWD), Palmdale Water District, Quartz Hill Water District wells. Research conducted by LACWWD has shown that the problem exists primarily in the deep aquifer, but some water agencies will need to address arsenic water quality issues in the coming years.

### Completed Work

A scope of work and associated budget was developed by Provost and Pritchard in September 2011 for the Planning/Design Project. A copy of the scope of work and associated budget is included at the end of this attachment.

### Existing Data and Studies

Currently no studies have been prepared for the Planning/Design Project.

As part of this Planning/Design Project, a hydrogeology study will be prepared to identify the best site and depth to drill a pilot test well that is compatible with the BCSD water system. After completion of the pilot test well, a preliminary engineering report (PER) will be completed to identify the recommended Construction Project alternative for BCSD to meet the primary MCL for arsenic.

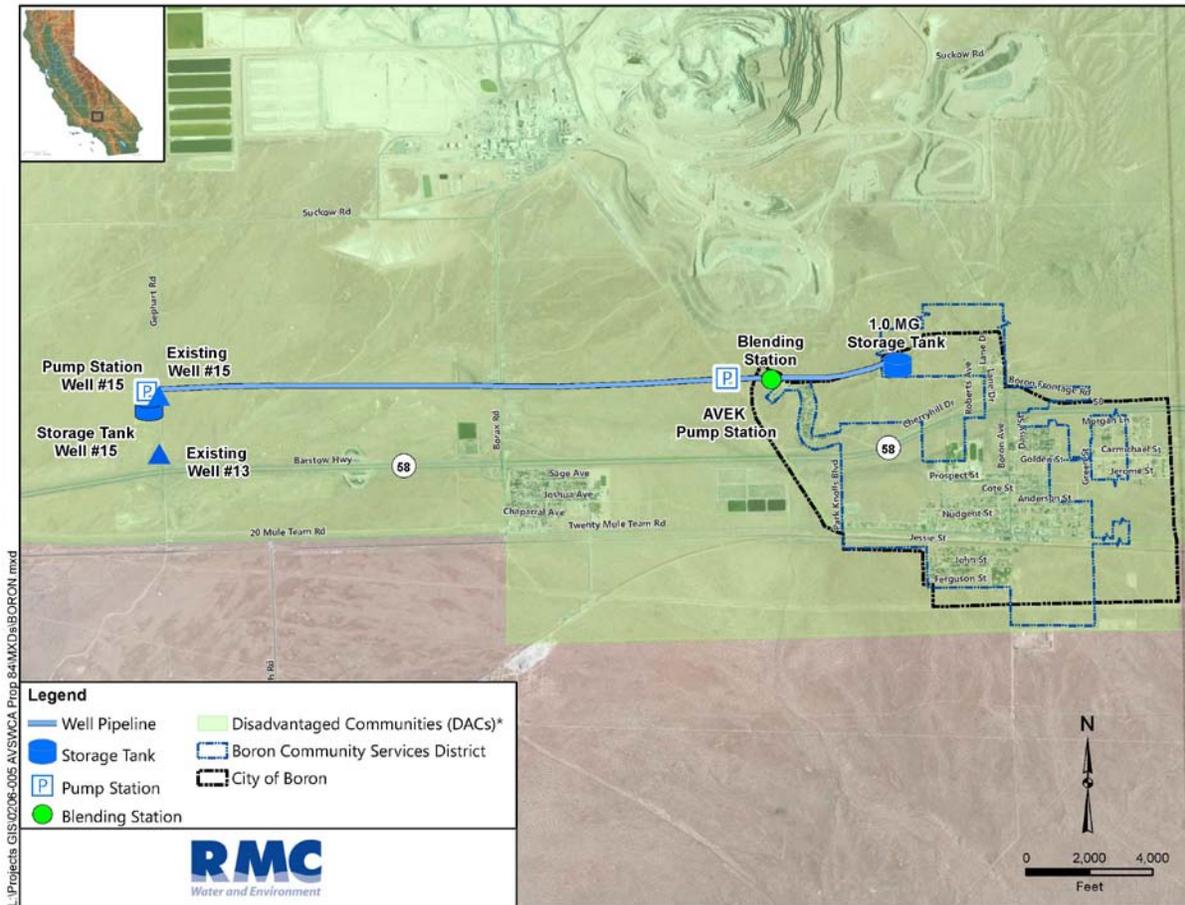
### Project Timing and Phasing

The Planning/Design Project is not part of a multi-phased project. The Planning/Design Project will commence with Project Administration tasks once the grant funding agreement between BCSD and DWR has been signed. Construction is scheduled to begin for the pilot well August 2014 and end by October 2014. See Attachment 5 -- Schedule for a detailed project schedule.

### Project Maps

The BCSD existing water system and service area boundary are shown in Figure 3-2. This map also shows the DAC area, as defined by US Census Block Group, which completely encompasses the BCSD service area.

**Figure 3-2: BCSD Service Area, Existing Facilities, and DAC Area**



## Proposed Work

The following sections discuss work items necessary for implementation of the Planning/Design Project. The work items are divided into each of the six primary budget categories and associated tasks shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

### (a) Direct Project Administration Costs

#### Task 1 - Project Administration

Work to be completed under this task will be performed by a BCSD project manager. The project administration tasks will consist of a development of project management plan, administration of grant and construction contracts, preparation of invoices, reports, and plans, coordination of design contract, a project kickoff meeting, and other administrative activities

required to manage the project. The project manager will also be responsible for managing all project related financing to ensure all grant contract requirements are met.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Administration	October 2013 – January 2015	Not yet begun		✓

**Task 2 - Labor Compliance Program**

BCSD will establish and provide a Labor Compliance Program throughout project implementation.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program	October 2013 to November 2014	Not yet begun		✓

**Task 3 - Reporting**

The BCSD project manager and supporting staff will prepare and submit quarterly progress reports and invoices to the granting agency (DWR). The progress reports will describe activities undertaken and accomplishments of each task when milestones are achieved and when any problems are encountered in the performance of the work. A final project report will be prepared per grant requirements and submitted to the granting agency within ninety calendar days of the project completion. Post-completion reports are not required by DWR for a Feasibility Study.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Invoices and Progress Reports	October 2013 – January 2015	Not yet begun		✓
Final Project Report	January 2015	Not yet begun		✓

**(b) Land Purchase/Easement**

The Planning/Design Project will need to secure a construction easement to drill the pilot test well. This task includes support for BCSD in securing land and right-of-way for conducting the pilot test well and production well site.

Land Purchase/Easement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Construction Easement	March 2014 – June 2014	Not yet begun		✓

**(c) Planning/Design/Engineering/Environmental Documentation**

**Task 4 - Assessment and Evaluation**

Assessment and evaluation activities that will be completed for the Planning/Design Project include:

- *Hydrogeology Study*: The study will be completed with the objective of determining the best site and depth of a new well that is compatible with the BCSD water system and has the best probability of producing an adequate yield of low arsenic water. The study will include 1) research of the hydrogeology area (including information from local well drillers), 2) review of well logs and water quality, 3) summary report with recommended site, depth, and testing programs for the pilot well.
- *Preliminary Engineering Report*: The report will analyze available alternatives and recommend the best option or combination of options to comply with the arsenic MCL. It is anticipated that the solution will be the combination of a new water well, to replace the gaining existing wells, and an arsenic removal water treatment plant. However, the PER will evaluate the following alternatives as stand alone or in combination:
  - Drill new water well at a new site to obtain low arsenic water
  - Construct arsenic water treatment plant to treat water from existing wells
  - Construct arsenic water treatment plant to treat water from new well
  - Utilize blending of AVEK water to meet arsenic MCL with new well producing lower arsenic water

The Report will include an evaluation of current and projected 20-year water supply needs. Cost estimates and an evaluation of the feasibility of each alternative will be included in the PER. A final recommendation and cost estimate for arsenic compliance will be provided. Preliminary water treatment alternative recommendations will be made and a location for a new well and water treatment plant identified. The remaining tasks assume that the Report will recommend a new water well with the anticipated need for arsenic treatment and that the project will proceed accordingly.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Prepare Hydrogeology Study	November 2013 – February 2014	Not yet begun		✓
Prepare Preliminary Engineering Report	October 2013 – December 2013	Not yet begun		✓

**Task 5 - Project Design**

This task will include preparing the plans and specifications for the design of the pilot test well recommended by the Hydrogeology Study. The Planning/Design Project will also prepare plans, technical specifications and an estimate for the production well. It is assumed that a new production well will be needed because of the age of the existing wells. The design plans for the production well will include: well, pump, well house, piping connection, gravity blending tank, booster pumps, electrical, site improvements and appurtenances; design for treatment systems is not included because it is unknown whether treatment will be included in the recommended project. As part of the production well design plans a topographic survey and property surveys will be completed for the design of the facility. The bidding and contract documents for the production well will be prepared alongside the production well design task.

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Pilot Test Well Design	June 2014	Not yet begun		✓
Production Well Design	June 2014	Not yet begun		✓

**Task 6 - Environmental Documentation**

CEQA/NEPA documentation for the production well and proposed arsenic treatment facilities will be obtained as part of the Planning/Design Project. CEQA documentation will consider various arsenic removal treatment technologies including coagulation-filtration and adsorption.

Biological and cultural surveys will be completed as part of this task. It is assumed a mitigated negative declaration will be obtained for the Planning/Design Project.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Biological and Cultural Surveys	September 2014 – January 2015	Not yet begun		✓
Mitigated Negative Declaration	September 2014 – January 2015	Not yet begun		✓

**Task 7 - Permitting**

There are no permit requirements for the Planning/Design Project; however, there are permits needed for the eventual Construction Project that BCSD hopes to implement once identified by the Engineering Report.

As part of the scope of this grant application, preliminary investigation into permitting requirements will be completed for the construction phase. These are likely to include:

- Kern County Env. Health Services (KCEHS) Dept. permit - for drilling pilot test well and new production well
- Building permit from the KCEHS - construction for the well or treatment plant
- California Department of Public Health (CDPH) Permit Amendment - for addition of a new well and any associated treatment (e.g., arsenic, chlorination, etc.)

Permitting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
KCEHS Department Permit	December 2013 – January 2014	Not yet begun		✓
KCEHS Building Permit	December 2013 – January 2014	Not yet begun		✓
CDPH Permit Amendment	December 2013 – January 2014	Not yet begun		✓

**(d) Construction/Implementation**

**Task 8 - Construction Contracting**

The construction contracting for the Planning/Design Project will be handled by BCSD staff. BCSD will advertise the bidding for the pilot test well and review all bidding submittals. A contract award is expected to be awarded by June 30, 2014.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Pilot Test Well – Advertisement & Bidding	June 2014	Not yet begun		✓
Contract Award	June 30, 2014	Not yet begun		✓

**Task 9 - Construction**

Although it is unlikely that a new groundwater well will produce water with arsenic less than the primary MCL, a new production well is proposed due to the advanced ages of Well #15 and Well #13. These groundwater wells are nearly 50 years old which suggests it would be too risky to add treatment to the existing wells. Therefore a pilot test well is proposed, with zone sampling, to identify if a new well and/or an arsenic removal treatment will be required.

*Subtask 9.1 Mobilization and Site Preparation:*

Mobilization and site preparation activities will consist of procurement and delivery of materials to the site for drilling of the pilot test well.

*Subtask 9.2 Project Construction:*

The pilot test well construction will consist of the following tasks:

- Drill pilot test well to depth recommended by the Hydrogeology Study (Maximum depth of 600 ft) to provide the final production well depth, screen intervals, zone isolation and construction method.
- Conduct zone sampling and water quality testing for up to 4 zones
- Prepare a geologic log and E-log

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Drill Pilot Test Well	August 2014	Not yet begun		✓
Conduct Zone Sampling and Water Quality Testing for 4 Zones	August 2014 – September 2014	Not yet begun		✓
Prepare Geologic Log and E-Log	September 2014 – October 2014	Not yet begun		✓

*Subtask 9.3 Performance Testing and Demobilization:*

An engineering inspection and hydrogeology and lab services will be completed during the pilot well testing. After the pilot well testing is complete, a final report will be completed by BCSD recommending the recommended production well depth, screen intervals, zone isolation, and construction method. This report will be submitted to the California Department of Public Health District Engineer and to the Department of Water Resource (DWR) for review.

Performance Testing and Demobilization Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Abandon Test Well	October 2014	Not yet begun		✓
Engineering Inspection, Hydrogeology, Lab Services	October 2014	Not yet begun		✓
Prepare Final Well Report for CDPH	October 2014 – November 2014	Not yet begun		✓

**(e) Environmental Compliance/Mitigation/Enhancement**

**Task 10: Environmental Compliance/Mitigation/Enhancement**

It is assumed the project will receive a mitigated negative declaration and no environmental compliance/mitigation/enhancement will be required.

**(f) Construction Administration**

**Task 11: Construction Administration**

BCSD staff will conduct the construction administration activities. Construction administration activities will consist of oversight during the pilot test well construction process.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Construction Administration		Not yet begun		✓

**(g) Other Costs**

There are no other costs anticipated for the Planning/Design Project.

**Discussion of Standards**

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods:

- Occupational safety and health administration
- American Society for Testing and Materials
- Uniform Building Code
- California Administrative Code Title 24, Energy Conservation Standards
- American National Standard Institute
- State Water Resources Control Board
- Construction Site Best Management Practices Manual
- American Water Works Association