

## Attachment 4 – Budget

A summary budget for the proposal is included as **Table 4-1 (DWR Table 8)** showing the summary budget for all of the projects included in this proposal. A detailed cost for each project is included in this attachment with a detailed cost breakdown of each task. Included for each project is the following:

- An explanation of how the costs included in the cost estimate were estimated
- Supporting documentation for the costs for each project
- DWR Table 7 showing the project categorized by the Categories required by DWR
- A Detailed Project Budget by Task showing breakdown of each task listed in the workplan and shown in the project schedule
- A Detailed Construction Cost Estimate for the construction costs based on actual costs from similar projects

The cost estimate for each project included in this application is believed to be reasonable because the budget for each project was based on actual costs from recent similar projects constructed either by the project proponent themselves, or other similar projects completed within the region, several of which were funded through similar grant programs with DWR.

A description of the work included in this task is not included in this Attachment, but please refer to the description of tasks that can be found in Attachment 3 – Workplan.

### Project A: FID - Southwest Groundwater Banking Project

The budget details in this attachment are organized into a format provided with the grant Proposal Solicitation Package. A detailed breakdown of all tasks and construction costs described in the Work Plan is included in **Table 4-2** (DWR Table 7 for Project A) at the end of this attachment. The associated costs are reasonable as they are based primarily from costs associated with similar banking projects in the region. All construction and surveying costs are based on local prevailing wage rates.

**Table 4-3**, Detailed Project Budget by Task for Project A includes list of anticipated costs by the tasks listed in the workplan and budget, including subtasks.

**Table 4-4**, Detailed Construction Cost Estimate for Project A that includes a detailed breakdown of construction costs, is based on likely bid items in accordance with similar construction projects is also included at the back of this attachment. Below is an explanation of the budget that is grouped by the categories listed in **Table 4-2** (DWR Table 7 for Project A) for each of the work tasks included in the budget.

### **Direct Project Administration Costs (Tasks 1, 2 and 3)**

The Kings River Conservation District is the lead agency for the Upper Kings Basin IRWM Authority. FID staff will assist KRCD with preparation of the required reporting information. FID and KRCD staff has administered several similar projects, and have found by experience that this is an accurate estimate of administrative expenses.

The budget includes time for FID's engineering consultant for direct project administration costs including such things as conference calls, meetings and meeting minutes, subconsultant management, coordination with stakeholders, and overall project coordination. Labor compliance and grant administration costs were based on those costs for similar recent projects. KRCD staff time is included in Task 3 Reporting.

### **Land Purchase / Easement (Task 4)**

The land acquisition is based on the option to purchase property that FID has obtained for the project property (**Attachment 3j**). The land acquisition cost equates to approximately \$15,000 per acre for both the additional property for canal widening and for the recharge basins.

### **Planning/Design/Engineering/Environmental Documentation (Tasks 5, 6, 7, and 8)**

The feasibility study has already been completed and the costs included were based on the costs incurred for the feasibility study (**Attachment 3b**). The fees for planning, design, engineering and environmental documentation are based on fees incurred for similarly sized banking projects in the region. The work will be performed by the same project consulting engineers, surveyors and planners that completed the work for the similar banking projects, including FID's recent Jameson Pond project that was partially funded by a grant from DWR. Summary information of similar costs is included in FID's Jameson Pond Project DWR Similar Project Costs Table (**Attachment 4a**).

### **Construction/Implementation (Tasks 9 and 10)**

Construction and implementation fees are based on conceptual engineer's estimates developed in the project's feasibility study and are included with **Table 4-3**. The quantities were estimated from a preliminary topographic survey and project layout as part of the project's feasibility study. The construction costs are detailed in **Project A Detailed Construction Cost Estimate** and include a breakdown of items, quantities and unit costs.

Unit costs were generally based on unit prices for similar, recent banking projects in the region from the last three years. Recent bid canvases showing similar costs are included as **Attachment 4b**. It is assumed that the current economic conditions would allow for the project's construction costs to be similar to these 2010 and 2011 prices without adjustments.

### **Environmental Compliance/Mitigation/Enhancement (Task 11)**

The budget includes \$5,000 for monitoring and minor reporting, if necessary. The preventative measures are intended to protect habitat for the local wildlife. This estimate is based on similar efforts and expenditures for similar banking projects in the region that had minor to no mitigation measures.

### **Construction Administration (Task 12)**

Construction administration costs are based actual fees incurred for similarly sized banking projects to observe construction and administer the construction contract. It is assumed that the project consulting engineers will perform the construction observation activities.

### **Other Costs**

The project is not anticipated to include costs other than those described above. On-going Monitoring and Reporting costs will be borne by the District utilizing existing staff.

### **Construction Implementation Contingency**

A construction implementation contingency of 20% is included as a conservative estimate of possible changes in construction cost because the plans are still preliminary, and because of the possible delay before start of construction.

### **Cost Share**

The District has included a 25% local cost share as part of the project costs. The feasibility study was completed in 2012 and early 2013 and the costs are included in Table 4-3 based on actual costs. The District will also pay for approximately one half (48%) of the construction costs for the project. The District will provide their matching funds through their existing Construction and Water Purchase Funds, so no financing plan is required for the project.

## **Project B: Laguna Irrigation District – Recharge Basin 11 Project**

The budget details in this attachment are organized into a format provided with the grant Proposal Solicitation Package. A detailed breakdown of all tasks and construction costs described in the Work Plan is included in **Table 4-5** (DWR Table 7 for Project B) at the end of this attachment. The associated costs are reasonable as they are based primarily from costs associated with similar banking projects in the region. All construction and surveying costs are based on local prevailing wage rates. **Table 4-6**, a Detailed Project Budget by Task for Project B, includes list of anticipated costs by the tasks listed in the workplan and budget, including subtasks.

**Table 4-7**, a Detailed Construction Cost Estimate for Project B that includes a detailed breakdown of construction costs, is based on likely bid items in accordance with similar construction projects is also included at the back of this attachment.

It is assumed that Laguna ID staff will perform the construction, except for the monitoring wells which will be installed by an experienced well driller. All surveying costs and well construction costs are based on local prevailing wage rates. Below is an explanation of the budget that is grouped by the categories listed in **Table 4-5** (DWR Table 7 for Project B) for each of the work tasks included in the budget.

### **Direct Project Administration Costs (Tasks 1, 2 and 3)**

The Kings River Conservation District is the lead agency for the Upper Kings Basin IRWM Authority. LID staff will assist KRCD with preparation of the required reporting information. KRCD staff has administered several similar projects, and have found by experience that this is an accurate estimate of administrative expenses.

The budget includes time for LID’s engineering consultant for direct project administration costs including such things as conference calls, meetings and meeting minutes, subconsultant management, coordination with stakeholders, and overall project coordination. Labor compliance and grant administration costs were based on those costs for similar recent projects. The budget also includes \$4,000 for a Labor Compliance Plan, which was based on a direct quote from a local provider of Labor Compliance Plans. KRCD staff time is included in

### **Task 3 Reporting.**

Overall, the administrative costs for the project are less than 5% of the total project cost.

### **Land Purchase / Easement (Task 12)**

The project property is privately owned and Laguna ID has secured an option (**Attachment 3j**) to purchase the property based on the appraised value. The land acquisition cost used is based on an appraisal performed in March 2013 (**Attachment 3i**). Laguna ID considers this appraisal to be reasonable based on current agricultural land prices and the sandy nature of the soils.

### **Planning/Design/Engineering/Environmental Documentation (Tasks 4, 5, 6, 7, & 8)**

The fees for planning, design, engineering and environmental documentation are based on fees incurred for similarly sized recharge projects in the region. The work will be performed by the same project consulting engineers, surveyors and planners that completed the work for the similar recharge projects. Summary information of similar costs is included in FID's Jameson Pond Project DWR Similar Project Costs Table (**Attachment 4a**).

### **Construction/Implementation (Tasks 9)**

Construction and implementation fees are based on conceptual engineer's estimates developed in the project's feasibility study and are included with the **Table 4-7** at the end of this section. The quantities were estimated from a preliminary topographic survey and project layout as part of the project's feasibility study. The construction costs are detailed in **Table 4-7**, a Detailed Construction Cost Estimate for Project B, which includes a breakdown of items, quantities and unit costs.

Unit costs were generally based on unit prices for similar, recent banking projects in the region from the last three years. Recent bid canvases showing similar costs are included as **Attachment 4b**. Construction costs have appeared to be fairly stable in the area during the last 5 years. It is assumed that the current economic conditions would allow for the project's construction costs to be similar to these 2010 and 2011 prices without adjustments.

### **Environmental Compliance/Mitigation/Enhancement (Task 10)**

Based on a review of potential environmental issues, no environmental mitigation, compliance or enhancement is expected to be necessary. However, \$5,000 is included in the budget to account for unforeseen or unexpected measures.

### **Construction Administration (Task 11)**

Construction administration costs are based on actual fees incurred for similarly sized recharge projects to observe construction and administer the construction contract. It is assumed that the project consulting engineers will perform the construction observation activities.

### **Other Costs**

The project is not anticipated to include costs other than those described above. On-going Monitoring and Reporting costs will be borne by the District utilizing existing staff.

### **Construction Implementation Contingency**

The construction cost estimate includes a 15% contingency. This contingency is considered appropriate for the feasibility-level design (30% plans) and accounts for uncertainty in dimensions, uncertainty in design, allowance for neglected items, and uncertainty in regulatory requirements. The cost contingency of 5% lower than Project A is related to the larger basin size and longer linear footage of canal improvements with Project A that may impact more crossings and private landowner encroachment modifications.

### **Cost Share**

Laguna ID plans to make part of their cost share through in-kind construction services. All of the facilities except the monitoring wells will be constructed by LID staff. LID staff have experience constructing similar facilities and will carefully track their hours, equipment usage and materials used.

Four local agencies have also pledged to contribute to the project if it is funded. These agencies include Riverdale Irrigation District (\$500), Burrel Ditch Company (\$500), Liberty Mill Race Company (\$1,000) and Reed Ditch Company (\$1,000). Their intent to financially support the project is documented in their Letters of Support (**Attachment 7d**). These funds would also be used as part of the cost share.

Laguna ID also reached a legal settlement with the nearby City of Lemoore regarding their well field. The settlement requires Lemoore to fund 50% of the cost for recharge projects in Laguna ID, up to a contribution of \$250,000. Therefore, Lemoore will be responsible for paying half of the cost share. **Attachment 4c** is the settlement agreement.

Laguna ID has sufficient finances to fund construction while waiting for DWR reimbursement. **Attachment 4d** is a copy of their most recent financial audit prepared for the period ending December 31, 2011. The audit shows that they have cash reserves of \$870,000 and total net assets of \$2.5 million (page 13 of **Attachment 4d**).

## **Project C: Bakman Water Supply Reliability and Conservation Project**

The budget details in this attachment are organized into a format provided with the grant Proposal Solicitation Package. A detailed breakdown of all tasks and construction costs described in the Work Plan is included in **Table 4-8** (DWR Table 7 for Project C) at the end of this attachment. The associated costs are reasonable as they are based primarily from costs associated with similar banking projects in the region. All construction and surveying costs are based on local prevailing wage rates. **Table 4-9**, a Detailed Project Budget by Task for Project C, includes list of anticipated costs by the tasks listed in the workplan and budget, including subtasks.

**Table 4-10**, a Detailed Construction Cost Estimate for Project C that includes a detailed breakdown of construction costs, is based on likely bid items in accordance with similar construction projects is also included at the back of this attachment. Below is an explanation of the budget that is grouped by the categories listed in **Table 4-8** (DWR Table 7 for Project C) for each of the work tasks included in the budget.

### **Direct Project Administration Costs**

The Kings River Conservation District is the lead agency for the Upper Kings Basin IRWM Authority. Bakman staff will assist KRCD with preparation of the required reporting information. KRCD staff has administered several similar projects, and have found by experience that this is an accurate estimate of administrative expenses.

The budget includes time for Bakman's engineering consultant for direct project administration costs including such things as conference calls, meetings and meeting minutes, subconsultant management, coordination with stakeholders, and overall project coordination. Labor compliance and grant administration costs were based on those costs for similar recent projects. KRCD staff time is included in Task 3 Reporting.

Overall, the administrative costs for the project are less than 5% of the total project cost.

### **Land Purchase/Easement**

No land acquisition is required as a part of this project.

### **Planning/Design/Engineering/Environmental Documentation**

The fees for planning, design, engineering and environmental documentation are based on estimated person-hours for tasks and subtasks including previous studies and coordination, final design, environmental process and documentation, and permitting processes. These

estimates were created based on the consulting engineer's experience with similar project applications.

### **Construction/Implementation**

Construction and implementation fees are based on an estimate of work from installations already performed by Bakman. Bakman has spent approximately \$233,600 on past installations of water meters throughout their service area; however, they are not claiming this as a fund matching cost.

The construction estimate for the meter portion of the project has been prepared based on these past installations, as shown in **Table 4-10** (Detailed Construction Cost Estimate – Project C). For a one-inch service retrofit installation, the cost is \$284 per meter, just over \$175 for remaining parts and \$450 per installation for labor costs. These costs are based on actual costs paid for similar meter installations within Bakman's service area and price quotations from vendors. These past costs are shown, through receipts, accounting statements and labor statements (See **Attachment 4e**). The costs associated with the Nitrate Analyzers, SCADA and AMR components are based on quotes received from Aqua Sierra Controls, Inc. and National Meter and Automation, Inc., respectively (see **Attachment 4f**). The quantities shown in the **Table 4-10** (Detailed Construction Cost Estimate – Project C) were determined from Bakman records of services remaining to be retrofitted. The costs and quantities associated with retrofitting existing service connections are based on Bakman's knowledge of the existing system.

The construction estimate for the treatment and blending portion of the project has been prepared based on industry data and Bakman's engineer's experience constructing these types of projects. Bakman has already received a quote for the GAC vessels, which is included as **Attachment 4g**.

### **Environmental Compliance/Mitigation/Enhancement**

No environmental compliance, mitigation, or enhancement measures are anticipated to be required as a part of this project.

### **Construction Administration**

Construction administration costs are based on person-hour requirements needed to observe construction and administer the construction contract. These person-hour requirements are based on the construction duration and experience from previous projects.

### **Other Costs**

Other costs include on-going monitoring and administration and on-going operation and maintenance. The monitoring and operation and maintenance listed under this task are not

included in the budget tables. Ongoing operation and monitoring will be included as part of the project contribution by the Bakman staff.

**Construction Implementation Contingency**

A 10% construction contingency is included to account for uncertainty in final design, unit prices and construction methods, and allowance for neglected items. The 10% contingency reflects the preliminary stages that portions of the treatment portion of the project, but considers the actual costs from meter installation that are expected to remain the same.

**Matching Funds**

Bakman is classified as a Disadvantaged Community and is requesting a Funding Match Waiver, please refer to Attachment 10. The project will meet the critical water supply and water quality need of a DAC as listed in Table 9 of the 2012 IRWM Guidelines. The project will treat and make usable water that currently is contaminated by DBCP and has nitrate levels that exceed the MCL, and will provide needed improvements to help to assure water supply reliability to the system.

## **Project D - San Joaquin Water Supply Reliability & Conservation Project**

The budget details in this attachment are organized into a format provided with the grant Proposal Solicitation Package. A detailed breakdown of all tasks and construction costs described in the Work Plan is included in **Table 4-11** (DWR Table 7 for Project D) at the end of this attachment. The associated costs are reasonable as they are based primarily from costs associated with similar banking projects in the region. All construction and surveying costs are based on local prevailing wage rates. **Table 4-12** is a Detailed Project Budget by Task for Project D includes list of anticipated costs by the tasks listed in the workplan and budget, including subtasks.

**Table 4-13**, a Detailed Construction Cost Estimate – Project D that includes a detailed breakdown of construction costs, is based on likely bid items in accordance with similar construction projects is also included at the back of this attachment. Below is an explanation of the budget that is grouped by the categories listed in **Table 4-11** (DWR Table 7 for Project D) for each of the work tasks included in the budget.

### **Direct Project Administration Costs**

The Kings River Conservation District is the lead agency for the Upper Kings Basin IRWM Authority. City staff will assist KRCD with preparation of the required reporting information. KRCD staff has administered several similar projects, and have found by experience that this is an accurate estimate of administrative expenses.

The budget includes time for City's engineer for direct project administration costs including such things as conference calls, meetings and meeting minutes, subconsultant management, coordination with stakeholders, and overall project coordination. Labor compliance and grant administration costs were based on those costs for similar recent projects. KRCD staff time is included in Task 3 Reporting.

Overall, the administrative costs for the project are less than 5% of the total project cost.

### **Land Purchase/Easement**

No land acquisition is required as a part of this project.

### **Planning/Design/Engineering/Environmental Documentation**

The fees for planning, design, engineering and environmental documentation are based on estimated person-hours for tasks and subtasks including previous studies and coordination, final design, environmental process and documentation, and permitting processes. These estimates were created based on the City's consulting engineer's experience with similar

project applications. The environmental documentation for the meter installation is already completed.

### **Construction/Implementation**

The construction estimate for the meter portion of the project has been prepared based on costs associated with other similar projects within the region, including the City of Fresno's recent meter installation project, and the costs received by Bakman for Project C of this application. The construction costs are shown in **Table 4-13** (Detailed Construction Cost Estimate – Project C). For a one-inch service retrofit installation, the cost is \$274 per meter, \$214 for remaining parts and \$400 per installation for labor costs. The City received a quote for meters that is included in **Attachment 4h**. The costs for those projects are well documented and supported under Project C above. The construction estimate for the well rehabilitation was based on a quotation for the construction work (**Attachment 4h**).

### **Environmental Compliance/Mitigation/Enhancement**

No environmental compliance, mitigation, or enhancement measures are anticipated to be required as a part of this project.

### **Construction Administration**

Construction administration costs are based on person-hour requirements needed to observe construction and administer the construction contract. These person-hour requirements are based on the construction duration and experience from previous projects.

### **Other Costs**

Other costs include on-going monitoring and administration and on-going operation and maintenance. The monitoring and operation and maintenance listed under this task are not included in the budget tables, but they are included in the economic analysis (see Attachment 7 for more details). Ongoing operation and monitoring will be included as part of the project contribution by the City staff.

### **Construction Implementation Contingency**

A 10% construction contingency is included to account for uncertainty in final design, unit prices and construction methods, and allowance for neglected items. The 10% contingency reflects the preliminary stages that portions of the treatment portion of the project, but considers the actual costs from meter installation that are expected to remain the same.

### **Matching Funds**

The City of San Joaquin is classified as a Disadvantaged Community and is requesting a Funding Match Waiver, please refer to Attachment 10. The project will meet the critical water supply and water quality need of a DAC as listed in Table 9 of the 2012 IRWM Guidelines. The project

will rehabilitate a well and augment a system that has inadequate water supply to maintain adequate fire protection flows and help protect the groundwater aquifer.

City staff is well versed in all aspects of grant administration and monitoring and has over the years developed other technical, legal or general consulting relationships that can be called upon as may be needed. One strong relationship is with Self-Help Enterprises (SHE). It also relies on its city engineer, Gouveia Engineering and his team who have administered many state and federally financed infrastructure projects.

If the City is approved for funding under the IRWMP process, Gouveia Engineering and SHE are prepared to provide technical assistance to the City so that the required progress reports, payments requests and other administrative requirements of DWR and the IRWMP program are met.

Additionally, the City is a small but solid, fiscally stable community which during this period of fiscal uncertainty has not imposed lay-offs or reduced service days. The City of San Joaquin has some financial reserves and is prepared to apply for a bridge loan from the Rural Community Assistance Corporation (RCAC) or utilize a Line of Credit from the local bank to meet cash flow requirements as may be necessary while payments from DWR are pending.

## **Project E: City of Kerman Residential Water Meter Project**

The budget details in this attachment are organized into a format provided with the grant Proposal Solicitation Package. A detailed breakdown of all tasks and construction costs described in the Work Plan is included in **Table 4-14** (DWR Table 7 for Project E) at the end of this attachment. The associated costs are reasonable as they are based primarily from costs associated with similar banking projects in the region. All construction and surveying costs are based on local prevailing wage rates. **Table 4-15**, a Detailed Project Budget by Task for Project E, includes list of anticipated costs by the tasks listed in the workplan and budget, including subtasks.

**Table 4-16**, a Detailed Construction Cost Estimate – Project E that includes a detailed breakdown of construction costs, is based on likely bid items in accordance with similar construction projects is also included at the back of this attachment. Below is an explanation of the budget that is grouped by the categories listed in Table 4-14 (DWR Table 7 for Project E) for each of the work tasks included in the budget.

### **Direct Project Administration Costs**

The Kings River Conservation District is the lead agency for the Upper Kings Basin IRWM Authority. City staff will assist KRCD with preparation of the required reporting information. KRCD staff has administered several similar projects, and have found by experience that this is an accurate estimate of administrative expenses.

The budget includes time for City’s engineer for direct project administration costs including such things as conference calls, meetings and meeting minutes, subconsultant management, coordination with stakeholders, and overall project coordination. Labor compliance and grant administration costs were based on those costs for similar recent projects. KRCD staff time is included in Task 3 Reporting.

Overall, the administrative costs for the project are less than 5% of the total project cost.

### **Land Purchase/Easement**

No land acquisition is required as a part of this project.

### **Planning/Design/Engineering/Environmental Documentation**

The fees for planning, design, engineering and environmental documentation are based on the City’s engineering efforts to install water meters in nearly 60% of the City. The environmental documentation for the meter installation is already completed.

### **Construction/Implementation**

The construction estimate for the meter portion of the project has been prepared based on costs associated with other similar projects within the region, including the City of Fresno's recent meter installation project, and the costs received by Bakman for Project C of this application. The construction costs are shown in **Detailed Construction Cost Estimate – Project C**. For a one-inch service retrofit installation, the cost is \$280 per meter, just over \$235 for remaining parts and \$512 per installation for labor costs. The costs for those projects are well documented and supported under Project C above.

### **Environmental Compliance/Mitigation/Enhancement**

No environmental compliance, mitigation, or enhancement measures are anticipated to be required as a part of this project.

### **Construction Administration**

Construction administration costs are based on person-hour requirements needed to observe construction and administer the construction contract. These person-hour requirements are based on the construction duration and experience from previous projects.

### **Other Costs**

Other costs include on-going monitoring and administration and on-going operation and maintenance. The monitoring and operation and maintenance listed under this task are not included in the budget tables, but they are included in the economic analysis (see Attachment 7 for more details). Ongoing operation and monitoring will be included as part of the project contribution by the City staff.

### **Construction Implementation Contingency**

A 10% construction contingency is included to account for uncertainty in final design, unit prices and construction methods, and allowance for neglected items. The 10% contingency considers the actual costs from prior meter installations by the City that are expected to have little change.

### **Matching Funds**

The City of Kerman has included a 25% local cost share for the project. The local cost share will be funded through the City's Water Fund. A copy of a portion of the capital budget showing the water meter line item is included as **Attachment 4i**. Also included in **Attachment 4i** is communication with the community about the meter program.

**Table 4-1 DWR Table 8 – Summary Budget**

**Proposal Title: Kings Basin Water Authority IRWM Implementation Grant**

		(a)	(b)	(c)	(d)	(e)
Individual Project Title		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost	% Funding Match (col. b/col. d)
<b>(a)</b>	Project A - FID Southwest Groundwater Banking Project	\$3,402,000.00	\$1,160,000.00	\$0.00	\$4,562,000.00	25%
<b>(b)</b>	Project B - Laguna Irrigation District Recharge Basin 11	\$906,000.00	\$302,000.00	\$0.00	\$1,208,000.00	25%
<b>(c)</b>	Project C - Bakman Water Company Water Supply Reliability and Conservation Project	\$2,907,000.00	\$0.00	\$0.00	\$2,907,000.00	0%
<b>(d)</b>	Project D - City of San Joaquin Water Supply Reliability and Conservation Project	\$794,066.00	\$0.00	\$0.00	\$794,066.00	0%
<b>(e)</b>	Project E - City of Kerman Residential Water Meter Project	\$724,934.00	\$241,645.00	\$0.00	\$966,579.00	25%
<b>(i)</b>	Proposal Total	\$8,734,000.00	\$1,703,645.00	\$0.00	\$10,437,645.00	
<b>(j)</b>	DAC Funding Match Waiver Total (Projects C and D)	\$3,701,066.00	\$0.00	\$0.00	\$3,701,066.00	0%
<b>(k)</b>	Grand Total	\$5,032,934.00	\$1,703,645.00	\$0.00	\$6,736,579.00	25%

**Table 4-2 DWR Table 7 – Project Budget**

**Proposal Title: Kings Basin Water Authority Implementation Grant**

**Project Title: Project A - Fresno Irrigation District - Southwest Groundwater Banking Project**

Project serves a need of a DAC?: "No"

Funding Match Waiver request?: "No"

		(a)	(b)	(c)	(d)
Category		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
<b>(a)</b>	Direct Project Administration Costs	\$ 111,130	\$ -	\$ -	\$ 111,130
<b>(b)</b>	Land Purchase/Easement	\$ 1,145,980	\$ -	\$ -	\$ 1,145,980
<b>(c)</b>	Planning/Design/Engineering/Environmental Documentation	\$ 245,190	\$ 29,190	\$ -	\$ 274,380
<b>(d)</b>	Construction/Implementation	\$ 1,209,190	\$ 1,130,810	\$ -	\$ 2,340,000
<b>(e)</b>	Environmental Compliance/Mitigation/Enhancement	\$ 5,000	\$ -	\$ -	\$ 5,000
<b>(f)</b>	Construction Administration	\$ 135,510	\$ -	\$ -	\$ 135,510
<b>(g)</b>	Other Costs		\$ -	\$ -	\$ -
<b>(h)</b>	Construction/Implementation Contingency	\$ 550,000	\$ -	\$ -	\$ 550,000
<b>(i)</b>	<b>Grand Total</b> <b>(Sum rows (a) through (h) for each column)</b>	\$ 3,402,000	\$ 1,160,000	\$ -	\$ 4,562,000

\*List sources of funding:

**1) Fresno Irrigation District construction and water purchase funds.**

**TABLE 4-3 DETAILED PROJECT BUDGET BY TASK**  
**Project A - FID SOUTHWEST GROUNDWATER BANKING PROJECT**

Task No.	Task Description	Project Manager (hrs)	Senior Professional (hrs)	Assistant Professional (hrs)	Technician (hrs)	Administration (hrs)	Labor Total	Land Acquisition	Authority Staff Time	Labor Compliance	Printing	Specialist	Construction	Non-State Share (Funding Match)	Requested Grant Funding	Total	% Funding Match
	Billing Rate	\$160	\$140	\$115	\$90	\$60											
<b>a</b>	<b>Direct Project Administration Costs</b>	<b>190</b>	<b>140</b>	<b>250</b>	<b>50</b>	<b>128</b>	<b>\$ 90,930</b>	<b>\$ -</b>	<b>\$ 14,000</b>	<b>\$ 6,000</b>	<b>\$ 200</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 111,130</b>	<b>\$ 111,130</b>	<b>0%</b>
1	Project Administration	120	60	80		40	\$ 39,200								\$ 39,200	\$ 39,200	0%
2	Labor Compliance Program (during construction)	10		10		8	\$ 3,230			\$ 6,000					\$ 9,230	\$ 9,230	0%
3	Reporting	60	80	160	50	80	\$ 48,500		\$ 14,000		\$ 200				\$ 62,700	\$ 62,700	0%
<b>b</b>	<b>Land Purchase/Easement</b>	<b>4</b>	<b>23</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>\$ 5,980</b>	<b>\$ 1,140,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,145,980</b>	<b>\$ 1,145,980</b>	<b>0%</b>
4	Land Purchase/Easement	4	23	8	8	8	\$ 5,980	\$ 1,140,000							\$ 1,145,980	\$ 1,145,980	0%
<b>c</b>	<b>Planning/Design/Engineering/Environmental Documentation</b>	<b>408</b>	<b>420</b>	<b>356</b>	<b>700</b>	<b>254</b>	<b>\$ 243,260</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 520</b>	<b>\$ 30,600</b>	<b>\$ -</b>	<b>\$ 29,190</b>	<b>\$ 245,190</b>	<b>\$ 274,380</b>	<b>11%</b>
5.1	Feasibility Study (already completed)	80	40	70	10	24	\$ 28,790				\$ 400			\$ 29,190	\$ -	\$ 29,190	100%
5.2	Establish Monitoring Committee	20	20	6		16	\$ 7,650								\$ 7,650	\$ 7,650	0%
6.1	Surveying	8		60	140	24	\$ 22,220								\$ 22,220	\$ 22,220	0%
6.2	Final Design	240	320	200	400	120	\$ 149,400					\$ 21,000			\$ 170,400	\$ 170,400	0%
7	Environmental Documentation	40		20	100	40	\$ 20,100					\$ 8,000			\$ 28,100	\$ 28,100	0%
8	Permitting	20	40		50	30	\$ 15,100				\$ 120	\$ 1,600			\$ 16,820	\$ 16,820	0%
<b>d</b>	<b>Construction/Implementation</b>												<b>\$2,320,000</b>	<b>\$ 1,130,810</b>	<b>\$ 1,209,190</b>	<b>\$ 2,340,000</b>	<b>48%</b>
9	Construction Contracting	4	40	8		14	\$ 8,000				2000			\$ 4,833	\$ 5,167	\$ 10,000	48%
10.1	Earthwork and Structures (See Table 4-4)										10000		\$2,260,000	\$ 1,096,979	\$ 1,173,021	\$ 2,270,000	48%
10.2	Monitoring Well Construction (See Table 4-4)												\$60,000	\$ 28,998	\$ 31,002	\$ 60,000	48%
<b>e</b>	<b>Environmental Compliance/ Mitigation/Enhancement</b>												<b>\$5,000</b>	<b>\$ -</b>	<b>\$ 5,000</b>	<b>\$ 5,000</b>	<b>0%</b>
11	Environmental Compliance/ Mitigation/Enhancement												\$ 5,000		\$ 5,000	\$ 5,000	0%
<b>f</b>	<b>Construction Administration</b>	<b>252</b>	<b>164</b>	<b>198</b>	<b>284</b>	<b>40</b>	<b>\$ 114,010</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 500</b>	<b>\$ 21,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 135,510</b>	<b>\$ 135,510</b>	<b>0%</b>
12.1	Construction Observation	240	140	180	220	40	\$ 100,900					\$ 20,000			\$ 120,900	\$ 120,900	0%
12.2	Record Drawings	4	24	8	40		\$ 8,520				\$ 500				\$ 9,020	\$ 9,020	0%
12.3	O&M Manuals and Monitoring Plan	8		10	24		\$ 4,590					\$ 1,000			\$ 5,590	\$ 5,590	0%
<b>g</b>	<b>Other</b>													<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
13.1	On-going Monitoring													\$ -	\$ -	\$ -	0%
13.2	On-going Operation and Maintenance													\$ -	\$ -	\$ -	0%
<b>h</b>	<b>Construction/Implementation Contingency</b>													<b>\$ -</b>	<b>\$ 550,000</b>	<b>\$ 550,000</b>	<b>0%</b>
14.1	Construction Contingency (20%)													\$ -	\$ 550,000	\$ 550,000	0%
	<b>TOTAL</b>													<b>\$ 1,160,000</b>	<b>\$ 3,402,000</b>	<b>\$ 4,562,000</b>	<b>25%</b>

**TABLE 4-4 DETAILED CONSTRUCTION COST**

**PROJECT A - FID SOUTHWEST GROUNDWATER BANKING PROJECT**

**60 ACRE BASIN AND CONVEYANCE PROJECT - UNLINED CANAL**

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount	Subtotals	
<b>FID System Improvements</b>							
1	Mobilization/demobilization, bonds & insurance, worker protection, miscellaneous facilities and operations (5%)	1	LS	\$70,000	\$70,000	\$70,000	
<i>Reach 'C' Improvements outside FID (Increase Lower Dry Creek Canal Capacity to 200 cfs w/o Lining)</i>						\$790,000	
2	Lower Dry Creek Channel Widening Earthwork (10,500 LF)	18,000	CY	\$10	\$180,000		
3	County Road Culvert Expansion	1	LS	\$250,000	\$250,000		
4	Private Road Crossing Culvert Expansion	1	EA	\$50,000	\$50,000		
5	Relocate (E) private turnouts/lift pumps	4	EA	\$20,000	\$80,000		
6	Replace (E) private check structure w/ turnouts	2	EA	\$40,000	\$80,000		
7	Construct New FID Boundary Check and Flow Measurement Site	1	EA	\$150,000	\$150,000		
<i>Reach 'D' Improvements outside FID (Increase Lower Dry Creek Canal Capacity to 100 cfs w/o Lining)</i>						\$440,000	
8	Lower Dry Creek Channel Widening Earthwork (6,200 LF)	13,000	CY	\$10	\$130,000		
9	Private Road Crossing Culvert Expansion	1	EA	\$50,000	\$50,000		
10	Relocate (E) private turnouts/lift pumps	2	EA	\$20,000	\$40,000		
11	Replace (E) private check structure	1	EA	\$20,000	\$20,000		
12	Culvert Expansion at Lower Dry Creek Spill	1	LS	\$200,000	\$200,000		
					<b>Subtotal =</b>	<b>\$1,300,000</b>	<b>\$1,300,000</b>
<b>60 Acre Groundwater Bank (Three 20 acre cells, with Interior Sedimentation/Conveyance Canal)</b>							
1	Mobilization/demobilization, bonds & insurance, worker protection, miscellaneous facilities and operations (5%)	1	LS	\$50,000	\$50,000		
2	Levee Earthwork (6' Tall, 15' Road, 3:1 outside/5:1 inside slopes)	80,000	CY	\$3	\$240,000		
3	Levee Keyway (3' Deep, 12' Wide)	20,000	CY	\$3	\$60,000		
4	Project Diversion Structure	1	EA	\$124,000	\$124,000		
5	Sedimentation Channel Overflow Weir Structure	1	EA	\$100,000	\$100,000		
6	Interbasin Structures/Turnouts	3	EA	\$70,000	\$210,000		
7	Staff Gauges (basin)	3	EA	\$2,000	\$6,000		
8	Monitoring Wells	3	EA	\$20,000	\$60,000		
9	Site Perimeter Wire Fencing	8,000	LF	\$10	\$80,000		
10	Crushed Rock for Drive Surfaces	3,000	TON	\$30	\$90,000		
					<b>Subtotal =</b>	<b>\$1,020,000</b>	<b>\$1,020,000</b>
				Contingency:	20%	\$460,000	\$460,000
<b>Project Capital Cost Subtotal</b>					<b>\$2,780,000</b>	<b>\$2,780,000</b>	
<b>Land Acquisition</b>							
	Reach C - Land Acquisition for Canal Fee Title	14.0	AC	\$10,000	\$140,000		
	Reach D - Land Acquisition for Canal Fee Title	10.0	AC	\$10,000	\$100,000		
	Basin Site Land Acquisition	60	AC	\$15,000	\$900,000		
					<b>Subtotal =</b>	<b>\$1,140,000</b>	

Notes: Unit prices from recent similar project bid canvass.

Assumes no canal lining.

**Table 4-5 DWR Table 7 – Project Budget**

Proposal Title: Kings Basin Water Authority Implementation Grant

Project Title: Project B - Laguna Irrigation District Recharge Basin 11

Project serves a need of a DAC?: No

Funding Match Waiver request?: No

		(a)	(b)	(c)	(d)
Category		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
<b>(a)</b>	Direct Project Administration Costs	\$26,280	\$0	\$0	\$26,280
<b>(b)</b>	Land Purchase/Easement	\$450,000	\$0	\$0	\$450,000
<b>(c)</b>	Planning/Design/Engineering/ Environmental Documentation	\$146,350	\$0	\$0	\$146,350
<b>(d)</b>	Construction/Implementation	\$171,070	\$302,000	\$0	\$473,070
<b>(e)</b>	Environmental Compliance/ Mitigation/Enhancement	\$5,000	\$0	\$0	\$5,000
<b>(f)</b>	Construction Administration	\$37,100	\$0	\$0	\$37,100
<b>(g)</b>	Other Costs	\$0	\$0	\$0	\$0
<b>(h)</b>	Construction/Implementation Contingency	\$70,200	\$0	\$0	\$70,200
<b>(i)</b>	<b>Grand Total</b> <b>(Sum rows (a) through (h) for each column)</b>	\$906,000	\$302,000	\$0	\$1,208,000

\*List sources of funding: Construction services by Laguna Irrigation District. Monetary contributions by City of Lemoore, Riverdale Irrigation District, Liberty Mill Race Co., Burrel Ditch Company and Reed Ditch Company.

**TABLE 4-6 DETAILED PROJECT BUDGET BY TASK  
PROJECT B - LAGUNA ID RECHARGE BASIN NO. 11**

STAFF HOURS Rate / Hour	Labor Costs								Administrative Costs					Total Hours	Total Cost
	Principal Engineer	Senior Engineer	Middle Level Engineer	Field Geologist	Drafter	GIS Specialist	2-Person Survey Crew	Clerical	Permit Fees	KRWV Fees / Labor Compliance Consultant	Construction / Land Acquisition	Contingencies (15%)	Mileage at \$0.365/mi.		
<b>(a) DIRECT PROJECT ADMINISTRATION COSTS</b>															
<b>Task 1 Project Administration</b>															<b>Total =</b>
Project Administration	8	30								8,000					<b>Task 1 Total =</b>
															<b>48</b>
															<b>\$13,700</b>
<b>Task 2 Labor Compliance Plan</b>															<b>Task 2 Total =</b>
										4,000					<b>0</b>
															<b>\$4,000</b>
<b>Task 3 Reporting</b>															<b>Task 3 Total =</b>
3.1 Quarterly Progress Reports		16													<b>16</b>
3.2 Final Report		24	24				4	4					100		<b>56</b>
															<b>\$8,580</b>
															<b>\$2,080</b>
															<b>\$6,500</b>
<b>(c) PLANNING/DESIGN/ENGINEERING/ENVIRONMENTAL DOCUMENTATION</b>															
<b>Task 4 Assessment and Evaluation</b>															<b>Task 4 Total =</b>
4.1 Project Surveying															<b>120</b>
4.2 Liberty Canal Hydraulic Analysis	2	40	8		8										<b>58</b>
4.3 Post Construction Geologic Evaluation		4	8				8	8							<b>28</b>
															<b>\$3,360</b>
<b>Task 5 Final Design</b>															<b>Task 5 Total =</b>
5.1 Feasibility Study	10	80	80		30	6	16	2					45		<b>224</b>
5.2 Geotechnical Investigation	2	4	4										50	10,000	<b>10</b>
5.3 Preliminary Plans - 60% Plans	16	30	58		44			8							<b>156</b>
5.4 Preliminary Plans - 90% Plans	8	28	30		26										<b>92</b>
5.5 Preliminary Specs - 90% Specs	2	8	30												<b>40</b>
5.6 Structural Design		24	4		8										<b>36</b>
5.7 Final Plans and Specs	4	49	22		26										<b>101</b>
															<b>\$85,345</b>
															<b>\$26,825</b>
															<b>\$11,310</b>
															<b>\$16,680</b>
															<b>\$10,220</b>
															<b>\$4,640</b>
															<b>\$4,200</b>
															<b>\$11,470</b>
<b>Task 6 Environmental Documentation</b>															<b>Task 6 Total =</b>
6.1 CEQA Initial Study	4	16	40			16		4					50		<b>80</b>
6.2 Cultural Resources Survey			2											5,000	<b>2</b>
6.3 Biological Survey			2											4,000	<b>2</b>
															<b>\$8,970</b>
															<b>\$5,260</b>
															<b>\$4,260</b>
<b>Task 7 Permitting</b>															<b>Task 7 Total =</b>
7.1 Storm Water Pollution Prevention Plan			16				8		2,100				50		<b>24</b>
7.2 Dust Control Plan							8		325				50		<b>24</b>
7.3 County Permit (Road Encroachments)	1	4	16						500						<b>21</b>
															<b>\$9,935</b>
															<b>\$4,390</b>
															<b>\$2,615</b>
															<b>\$2,930</b>
<b>(d) CONSTRUCTION/IMPLEMENTATION</b>															
<b>Task 8 Construction Contracting</b>															<b>Task 8 Total =</b>
Construction Contracting (Monitoring Wells Only)		8	30					8						50	<b>46</b>
															<b>\$4,870</b>
<b>Task 9 Construction</b>															<b>Task 9 Total =</b>
9.1 Mobilization/Demobilization										443,000					<b>0</b>
9.2 Canal Improvement (Upstream of Site)										75,000					<b>0</b>
9.3 Basin Earthwork										131,000					<b>0</b>
9.4 Liberty Canal Structures										128,400					<b>0</b>
9.5 Murphy Slough Drain										56,800					<b>0</b>
9.6 Monitoring Wells										34,000					<b>0</b>
															<b>\$468,200</b>
															<b>\$43,000</b>
															<b>\$75,000</b>
															<b>\$131,000</b>
															<b>\$128,400</b>
															<b>\$56,800</b>
															<b>\$34,000</b>
<b>(e) ENVIRONMENTAL COMPLIANCE/MITIGATION/ENHANCEMENT</b>															
<b>Task 10 Env. Compliance/Mitigation/Enhancement</b>															<b>Task 10 Total =</b>
										5,000					<b>\$5,000</b>
<b>(f) CONSTRUCTION ADMINISTRATION</b>															
<b>Task 11 Construction Administration</b>															<b>Task 11 Total =</b>
11.1 Construction Staking								32							<b>32</b>
11.2 Construction Oversight	8	24	104	96									100		<b>232</b>
11.3 Compaction Testing														3,000	<b>0</b>
11.4 Record Drawings		1	2		4		16						50		<b>23</b>
															<b>\$3,680</b>
<b>(b) LAND PURCHASE/EASEMENT</b>															
<b>Task 12 Land Acquisition</b>															<b>Task 12 Total =</b>
Land Acquisition										450,000					<b>0</b>
															<b>\$450,000</b>
															<b>\$450,000</b>
<b>(h) CONSTRUCTION/IMPLEMENTATION CONTINGENCY (15%)</b>															
															<b>Total =</b>
															<b>\$70,200</b>
<b>Total Hours:</b>	85	394	492	96	146	26	60								
<b>Total Cost:</b>	\$9,750	\$51,220	\$54,120	\$8,640	\$11,680	\$2,600	\$3,600		\$2,925	\$12,000	\$923,200	\$0	\$0	\$545	\$22,000

Total (rounded to 1000's) **\$1,208,000**

**TABLE 4-7 DETAILED CONSTRUCTION COST  
 ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST**

**LAGUNA IRRIGATION DISTRICT  
 RECHARGE BASIN NO. 11**

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
1	Mobilization/demobilization, bonds & insurance, worker protection, miscellaneous facilities and operations	Lump Sum	LS	\$43,000	\$43,000
	<u>Canal Improvements (Upstream of Site) <sup>(1)</sup></u>				
2	Structure Replacements in Liberty Canal	1	EA	\$20,000	\$20,000
3	Earthwork Improvements in Liberty Canal	8,000	LF	\$6	\$50,000
4	Vine Removal	1	EA	\$5,000	\$5,000
	<u>Basin Earthwork</u>				
5	Irrigation and Standpipe Removal	1	EA	\$5,000	\$5,000
6	Basin Earthwork <sup>(2)</sup>	30,000	CY	\$3.50	\$105,000
7	Levee Keyways/Overexcavation	4,100	LF	\$4	\$16,400
8	Basin Staff Gages	2	EA	\$800	\$1,600
9	Initial Disking & Ripping Basin Floor	1	EA	\$3,000	\$3,000
	<u>Liberty Canal Structures</u>				
10	Check Structure	1	EA	\$20,000	\$20,000
11	F&I 2 48" Dia Concrete Pipe Turnouts	320	LF	\$170	\$54,400
12	Concrete Inlet Turnout	1	EA	\$15,000	\$15,000
13	Concrete Outlet Turnout	1	EA	\$15,000	\$15,000
14	Open Flow Propeller Meters	2	EA	\$4,000	\$8,000
15	Canal Gates	2	EA	\$7,000	\$14,000
16	Outlet Rip Rap	1	EA	\$2,000	\$2,000
	<u>Murphy Slough Drain</u>				
17	Drain Inlet Structure	1	EA	\$8,000	\$8,000
18	48" Dia Concrete Pipe Drain	140	LF	\$170	\$23,800
19	72" Measurement Stand Pipe	1	EA	\$8,000	\$8,000
20	Canal Gate	1	EA	\$7,000	\$7,000
21	Open Flow Propeller Meter	1	EA	\$4,000	\$4,000
22	F&I Flap Valve	1	EA	\$4,000	\$4,000
23	Outlet Rip Rap	1	EA	\$2,000	\$2,000
	<u>Monitoring Wells</u>				
24	Monitoring Wells (4 x 100 FT)	400	LF	\$85	\$34,000
				Subtotal	\$468,200
	Contingency			15%	\$70,200
<b>PRELIMINARY CONSTRUCTION COST ESTIMATE:</b>					<b>\$538,400</b>

**NOTE(S):**

- 1) Canal improvements upstream of the project site were surveyed and determined by District
- 2) Earthwork is assumed to come from basin floor

**Table 4-8 DWR Table 7 - Project Budget**

Proposal Title: Integrated Regional Water Management Implementation Grant

Project Title: Project C - Bakman Water Company Water Meter Installation

Project serves a need of a DAC?: Yes

Funding Match Wavier request?: Yes

Budget Category		(a)	(b)	(c)	(d)	(e)
		Requested Grant Funding	Cost Share: Non-State Share* (Funding Match)	Cost Share: Other State Fund Source	Total Cost	% Funding Match
<b>(a)</b>	Direct Project Administration Costs	\$45,340	\$0	\$0	\$45,340	0%
<b>(b)</b>	Land Purchase/Easement	\$0	\$0	\$0	\$0	0%
<b>(c)</b>	Planning/Design/Engineering/ Environmental Documentation	\$127,630	\$0	\$0	\$127,630	0%
<b>(d)</b>	Construction/Implementation	\$2,452,970	\$0	\$0	\$2,452,970	0.0%
<b>(e)</b>	Environmental Compliance/ Mitigation/Enhancement	\$0	\$0	\$0	\$0	0%
<b>(f)</b>	Construction Administration	\$36,060	\$0	\$0	\$36,060	0%
<b>(g)</b>	Other Costs	\$0	\$0	\$0	\$0	0%
<b>(h)</b>	Construction/Implementation Contingency	\$245,000	\$0	\$0	\$245,000	0%
<b>(i)</b>	<b>Grand Total (Sum rows (a) through (h) for each column)</b>	<b>\$2,907,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,907,000</b>	<b>0.0%</b>

**\*List sources of funding: Bakman will use its General Budget to fund/cashflow the project.**

**Table 4-9 Detailed Project Budget by Task**

Project C - Bakman Water Company  
Water Supply Reliability and Conservation Project

Task No.	Task Description	Principal Engineer	Project Manager	Senior Professional	Field Staff	Associate Engineer	Assistant Professional	Technician	Admin	Labor Total	Other Direct Costs	Grand Total
	Billing rate	\$175	\$160	\$140	\$120	\$110	\$105	\$85	\$65			
<b>(a)</b>	<b>Direct Project Administration Costs</b>	-	24	28		52	32	36	40	\$23,340	\$22,000	\$45,340
1	Project Administration		8	20		40	-	16	20	\$11,140	\$5,000	\$16,140
2	Labor Compliance Program		8	-		-	-	-	-	\$1,280	\$10,000	\$11,280
3	Reporting		8	8		12	32	20	20	\$10,920	\$7,000	\$17,920
<b>(b)</b>	<b>Land Purchase/Easement</b>		-	-			-	-	-	\$0	\$0	\$0
	Land Acquisition		-	-			-	-	-	\$0	\$0	\$0
<b>(c)</b>	<b>Planning/Design/Engineering/Environmental Documentation</b>	4	56	292	7	269	24	60	76	\$93,530	\$34,100	\$127,630
4	Assessment and Evaluation		-	-		-	-	-	-			
	Treatment Component	4	11	74	3	64	-	-	12	\$21,000	\$5,550	\$26,550
	Metering Component		8	24		39	-	16	16	\$11,330	\$5,000	\$16,330
5	Final Design											
	Treatment Component	-	9	110	4	126	-	-	14	\$32,090	\$13,550	\$45,640
	Metering Component		8	24			24	24	14	\$10,110	\$0	\$10,110
6	Environmental Documentation		-	-		-	-	-	-	\$0	\$5,000	\$5,000
7	Permitting		20	60		40	-	20	20	\$19,000	\$5,000	\$24,000
<b>(d)</b>	<b>Construction/Implementation</b>	-	-	28	-	12	-	-	12	\$9,720	\$2,443,868	\$2,453,588
8	Construction Contracting											
	Metering Component		-	28	-	12	-	-	12	\$6,020	\$0	\$6,020
	Treatment Component			12		16	-	-	4	\$3,700	\$50	\$3,750
9	Project Construction (See Table 4-10)											
	Treatment Component										\$448,474	\$448,474
	Metering Component										\$1,995,344	\$1,995,344
<b>(e)</b>	<b>Environmental Compliance/ Mitigation/Enhancement</b>		-	-			-	-	-	\$0	\$0	\$0
10	Environmental Compliance/Mitigation/Enhancement		-	-			-	-	-	\$0	\$0	\$0
<b>(f)</b>	<b>Construction Administration</b>	-	-	96	48	74	-	60	38	\$34,910	\$1,150	\$36,060
11	Construction Observation and Preparation of Record Drawings									\$0	\$0	\$0
	Metering Component	0	-	40	36			60	20	\$16,320	\$0	\$16,320
	Treatment Component	-	-	56	12	74	-	-	18	\$18,590	\$1,150	\$19,740
<b>(g)</b>	<b>Other</b>		-	-			-	-	-	\$0	\$0	\$0
12.1	On-going Monitoring and Administration									\$0	\$0	\$0
12.2	On-going Operation and Maintenance									\$0	\$0	\$0
<b>(h)</b>	<b>Construction/Implementation Contingency</b>		-	-			-	-	-	\$0	\$0	\$244,382
	Construction Contingency (10%)		-	-			-	-	-	\$0	\$0	\$244,382
<b>Total hours</b>			92	498			144	160	178	\$161,500	\$2,501,118	\$2,907,000

**Table 4-10 Detailed Construction Cost Estimate**  
**Project C - Bakman Water Supply Reliability and Conservation Project**  
**ENGINEER'S PRELIMINARY OPINION**  
**OF PROBABLE CONSTRUCTION COST**

Construction Costs shown in Task (d)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
<b>1" Installation - Retrofit Completions</b>					
1	Badger Meter	434	EA	\$284	\$123,256
2	Labor and Installation	434	EA	\$60	\$26,040
3	AMR Registers & Transmitters (Parts)	350	EA	\$95	\$33,250
4	AMR Registers & Transmitters (Labor)	350	EA	\$60	\$21,000
<b>1" Water Meter Retrofit Installation</b>					
5	Badger Meter	1501	EA	\$284	\$425,909
6	Utility Box	1501	EA	\$32.73	\$49,128
7	Utility Box Lid	1501	EA	\$14.59	\$21,900
8	Fittings	1501	EA	\$128	\$192,368
9	Labor and Installation	1501	EA	\$450	\$675,450
<b>1-1/2", 2", 3" and 4" Water Meter Retrofit Installation</b>					
10	Badger Meter	164	EA	\$676	\$110,864
11	Utility Box	164	EA	\$59.90	\$9,824
12	Utility Box Lid	164	EA	\$57.07	\$9,359
13	Compound Meter	4	EA	\$3,348	\$13,392
14	Utility Box	4	EA	\$38.89	\$156
15	Utility Box Lid	4	EA	\$37.23	\$149
16	Fittings	168	EA	\$349	\$58,600
17	Labor and Installation	168	EA	\$450	\$75,600
				<b>SUBTOTAL</b>	<b>\$1,846,400</b>
<b>Well Treatment and Blending</b>					
18	Mobilization, Bonds and Insurance	1	LS	\$10,000	\$10,000
	<i>DBCP Treatment</i>				
18	Concrete Vessel Pad	1	LS	\$20,000	\$20,000
19	8' $\phi$ GAC Vessels and Installation	1	EA	\$115,000	\$115,000
20	Fill Vessels with GAC	1	EA	\$35,000	\$35,000
21	Site Piping, Meters and Vavles	1	LS	\$35,000	\$35,000
	<i>Nitrate Blending</i>				
22	Nitrate Analyzers - Dual Variable Input	3	EA	\$28,942	\$86,825
23	Site Piping, Meters and Vavles	1	LS	\$35,000	\$35,000
				<b>SUBTOTAL</b>	<b>\$336,800</b>
<b>AMR &amp; SCADA System</b>					
24	AMR System (see attached)	1	LS	\$74,100	\$74,100
25	Central Site (see attached)	1	LS	\$75,000	\$75,000
26	Well 8 and 8A (see attached)	1	LS	\$105,000	\$105,000
				<b>SUBTOTAL</b>	<b>\$254,000</b>
<b>Testing</b>					
27	Performance Testing (Hourly Cost)	100	EA	\$60	\$6,000
				<b>SUBTOTAL</b>	<b>\$6,000</b>

**PRELIMINARY COST ESTIMATE:**

**\$2,443,200**

**Table 4-11 DWR Table 7 – Project Budget**

Proposal Title: San Joaquin Water Conservation/Meter Project

Project Title: Project D - City of San Joaquin Water Supply Reliability and Conservation Project

Project serves a need of a DAC?: **Yes**

Funding Match Waiver request?: **Yes**

		(a)	(b)	(c)	(d)
Category		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
<b>1</b>	Direct Project Administration (including legal)	\$21,820	\$0	\$0	\$21,820
<b>2</b>	Land Purchase/Easement	\$0	\$0	\$0	\$0
<b>3</b>	Planning/Design/Engineering/Environmental Documentation	\$21,040	\$0	\$0	\$21,040
<b>4</b>	Construction/Implementation	\$655,966	\$0	\$0	\$655,966
<b>5</b>	Environmental Compliance	\$0	\$0	\$0	\$0
<b>6</b>	Construction Administration	\$30,240	\$0	\$0	\$30,240
<b>7</b>	Other	\$0	\$0	\$0	\$0
<b>8</b>	Construction/Implementation Contingency	\$65,000	\$0	\$0	\$65,000
	<b>Grand Total (Sum rows (1) through (15) for each column)</b>	<b>\$794,066</b>	<b>\$0</b>	<b>\$0</b>	<b>\$794,066</b>

*\*List sources of funding: City Water Fund. Bridge Loan from Rural Community Assistance Corporation or Line of Credit only if required at time of reward for cash flow requirements.*

**Table 4-12 Detailed Budget By Task**  
**Project D - City of San Joaquin Water Supply and Reliability Project**

Task No.	Task Description	Principal Engineer	Project Manager	Senior Professional	Field Representative	Associate Engineer	Assistant Professional	Technician	Administration	Labor Total	Other Direct Costs	Grand Total
	Billing rate	\$160	\$120	\$120	\$120	\$110	\$105	\$80	\$60			
<b>(a)</b>	<b>Direct Project Administration Costs</b>		<b>56</b>	<b>-</b>			<b>40</b>	<b>-</b>	<b>40</b>	<b>\$13,320</b>	<b>\$8,500</b>	<b>\$21,820</b>
1	Project Administration		40						20	\$6,000	\$500	\$6,500
2	Labor Compliance Program		8							\$960	\$4,000	\$4,960
3	Reporting		8				40		20	\$6,360	\$4,000	\$10,360
<b>(b)</b>	<b>Land Purchase/Easement</b>		<b>-</b>	<b>-</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
	Land Acquisition		-	-			-	-	-	\$0	\$0	\$0
<b>(c)</b>	<b>Planning/Design/Engineering/Environmental Documentation</b>	<b>-</b>	<b>20</b>	<b>92</b>	<b>-</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>40</b>	<b>\$20,040</b>	<b>\$1,000</b>	<b>\$21,040</b>
4	Assessment and Evaluation											
	Well Rehabilitation			60			16		20	\$10,080		\$10,080
	Metering									\$0		\$0
5	Final Design											
	Well Rehabilitation		8	24			24		14	\$7,200	\$0	\$7,200
	Metering		4						2	\$600		\$600
6	Environmental Documentation									\$0	\$500	\$500
7	Permitting		8	8					4	\$2,160	\$500	\$2,660
<b>(d)</b>	<b>Construction/Implementation (See Table 4-13)</b>		<b>-</b>	<b>24</b>	<b>-</b>	<b>32</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>\$6,880</b>	<b>\$649,086</b>	<b>\$655,966</b>
8	Construction Contracting											
	Well Rehabilitation			12		16			4	\$3,440	\$300	\$3,740
	Metering			12		16			4	\$3,440	\$300	\$3,740
9	Project Construction									\$0	\$648,486	\$648,486
<b>(e)</b>	<b>Environmental Compliance/ Mitigation/Enhancement</b>		<b>-</b>	<b>-</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
10	Environmental Compliance/Mitigation/Enhancement									\$0	\$0	\$0
<b>(f)</b>	<b>Construction Administration</b>	<b>-</b>	<b>80</b>	<b>-</b>	<b>120</b>	<b>-</b>	<b>-</b>	<b>60</b>	<b>24</b>	<b>\$30,240</b>	<b>\$0</b>	<b>\$30,240</b>
11	Construction Administration		80		120			60	24	\$30,240	\$0	\$30,240
<b>(g)</b>	<b>Other</b>		<b>-</b>	<b>-</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
12.1	On-going Monitoring and Administration									\$0	\$0	\$0
12.2	On-going Operation and Maintenance									\$0	\$0	\$0
<b>(h)</b>	<b>Construction/Implementation Contingency</b>		<b>-</b>	<b>-</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>\$0</b>	<b>\$65,000</b>	<b>\$65,000</b>
	Construction Contingency (10%)									\$0	\$65,000	\$65,000
<b>Total hours</b>		<b>0</b>	<b>156</b>	<b>116</b>	<b>120</b>	<b>32</b>	<b>80</b>	<b>60</b>	<b>112</b>	<b>\$70,480</b>	<b>\$658,586</b>	<b>\$794,066</b>

**Table 4-13 Detailed Construction Cost Estimate**  
**Project E - City of San Joaquin Water Supply Reliability and Conservation Project**  
**ENGINEER'S PRELIMINARY OPINION**  
**OF PROBABLE CONSTRUCTION COST**

Construction Costs shown in Task (d)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
<b>Water Meter Retrofit Installation</b>					
1	Neptune T-10 1" Meter	644	EA	\$274	\$176,263
2	Neptune R450 Meter MIU	644	EA	\$90.00	\$57,960
3	1" Meter Swivel Curb Stop	644	EA	\$40.00	\$25,760
4	Service Tubing	644	EA	\$6.00	\$3,864
5	Miscelaneous Parts/Fittings	644	EA	\$30	\$19,320
6	Box and Lid	644	EA	\$48	\$30,912
7	Labor and Installation	644	EA	\$400	\$257,600
				<b>SUBTOTAL</b>	<b>\$571,679</b>
<b>Well Rehabilitation</b>					
8	Mobilization, Bonds and Insurance	1	LS	\$25,000	\$25,000
	<i>(from detail on 2/14/13 Westside Pump Quote Attachment 4g, rounded to \$25,000)</i>				
				<b>SUBTOTAL</b>	<b>\$25,000</b>
<b>Fixed Base Meter Read System</b>					
9	Neptune R450 Data Collection with GPRS	1	LS	\$12,500	\$12,500
10	Neptune R450 Data Collector Antenna	1	LS	\$1,471	\$1,471
11	Neptune R450 Fixed Base Server Tower	1	LS	\$8,200	\$8,200
12	Neptune ARB N Sight Fixed Software	1	LS	\$12,000	\$12,000
13	Neptune ARB N Sight Fixed Implementation	1	LS	\$5,636	\$5,636
				<b>SUBTOTAL</b>	<b>\$39,807</b>
<b>Testing</b>					
14	Performance Testing	1	LS	\$12,000	\$12,000
				<b>SUBTOTAL</b>	<b>\$12,000</b>
<b>PRELIMINARY COST ESTIMATE:</b>					<b>\$648,486</b>
10% Construction Cost Contingency					<b>\$64,849</b>

**Table 4-14 DWR Table 7 - Project Budget**

Proposal Title: Kings Basin Water Authority Implementation Grant

Project Title: Project E - City of Kerman Residential Water Meter Project

Project serves a need of a DAC?: No

Funding Match Wavier request?: No

		(a)	(b)	(c)	(d)	(e)
Budget Category		Requested Grant Funding	Cost Share: Non-State Share* (Funding Match)	Cost Share: Other State Fund Source	Total Cost	% Funding Match
<b>(a)</b>	Direct Project Administration Costs	\$45,000	\$15,000	\$0	\$60,000	25%
<b>(b)</b>	Land Purchase/Easement	\$0	\$0	\$0	\$0	0%
<b>(c)</b>	Planning/Design/Engineering/ Environmental Documentation	\$26,250	\$8,750	\$0	\$35,000	25%
<b>(d)</b>	Construction/Implementation	\$548,078	\$182,693	\$0	\$730,770	25%
<b>(e)</b>	Environmental Compliance/ Mitigation/Enhancement	\$0	\$0	\$0	\$0	0%
<b>(f)</b>	Construction Administration	\$51,463	\$17,154	\$0	\$68,617	25%
<b>(g)</b>	Other Costs	\$0	\$0	\$0	\$0	0%
<b>(h)</b>	Construction/Implementation Contingency	\$54,144	\$18,048	\$0	\$72,192	25%
<b>(i)</b>	<b>Grand Total (Sum rows (a) through (h) for each column)</b>	<b>\$724,934</b>	<b>\$241,645</b>	<b>\$0</b>	<b>\$966,579</b>	<b>25%</b>

**\*List sources of funding:**

The funding source is the City of Kerman's Water Fund.

**Table 4-15 - Detailed Project Budget By Task**  
**Project E - City of Kerman Water Meter Installation Project**

Task No.	Task Description	Project Manager	Senior Professional	Assistant Professional	Technician	Administration	Labor Total	Other Direct Costs	Grand Total	Requested Grant Funding	Local Cost Share	Local Cost Share %
	Billing rate	\$105	\$100	\$75	\$65	\$55						
<b>(a)</b>	<b>Direct Project Administration Costs</b>	<b>78</b>	<b>60</b>	<b>60</b>	<b>120</b>	<b>120</b>	<b>\$33,090</b>	<b>\$26,910</b>	<b>\$60,000</b>	<b>\$45,000</b>	<b>\$15,000</b>	<b>25%</b>
1	Project Administration	40	20	10	80	100	\$17,650	\$11,000	\$28,650	\$21,488	\$7,163	25%
2	Labor Compliance Program	10	20	10			\$3,800	\$10,000	\$13,800	\$10,350	\$3,450	25%
3	Reporting	28	20	40	40	20	\$11,640	\$5,500	\$17,140	\$12,855	\$4,285	25%
<b>(b)</b>	<b>Land Purchase/Easement</b>						<b>\$0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
	Land Acquisition						\$0		\$0	\$0	\$0	
<b>(c)</b>	<b>Planning/Design/Engineering/Environmental Documentation</b>	<b>80</b>	<b>100</b>	<b>120</b>	<b>20</b>	<b>40</b>	<b>\$30,900</b>	<b>\$4,100</b>	<b>\$35,000</b>	<b>\$26,250</b>	<b>\$8,750</b>	<b>25%</b>
4	Assessment and Evaluation	20	25	65	20	30	\$12,425	\$2,000	\$14,425	\$10,819	\$3,606	25%
5	Final Design	40	40	30			\$10,450	\$1,000	\$11,450	\$8,588	\$2,863	25%
6	Environmental Documentation	10	25	20			\$5,050	\$1,000	\$6,050	\$4,538	\$1,513	25%
7	Permitting	10	10	5		10	\$2,975	\$100	\$3,075	\$2,306	\$769	25%
<b>(d)</b>	<b>Construction/Implementation (Refer to Attachment 4.2)</b>	<b>20</b>	<b>10</b>	<b>20</b>	<b>40</b>	<b>30</b>	<b>\$8,850</b>	<b>\$721,920</b>	<b>\$730,770</b>	<b>\$548,078</b>	<b>\$182,693</b>	<b>25%</b>
8	Construction Contracting	20	10	20	40	30	\$8,850		\$8,850	\$6,638	\$2,213	25%
9	Project Construction						\$0	\$721,920	\$721,920	\$541,440	\$180,480	25%
<b>(e)</b>	<b>Environmental Compliance/ Mitigation/Enhancement</b>						<b>\$0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
10	Environmental Compliance/Mitigation/Enhancement						\$0		\$0	\$0	\$0	
<b>(f)</b>	<b>Construction Administration</b>	<b>120</b>	<b>240</b>	<b>40</b>	<b>280</b>	<b>190</b>	<b>\$68,250</b>	<b>\$367</b>	<b>\$68,617</b>	<b>\$51,463</b>	<b>\$17,154</b>	<b>25%</b>
11	Construction Observation and Preparation of Record Drawings	120	240	40	280	190	\$68,250	\$367	\$68,617	\$51,463	\$17,154	25%
<b>(g)</b>	<b>Other</b>								<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
12.1	On-going Monitoring and Administration						\$0		\$0	\$0	\$0	
12.2	On-going Operation and Maintenance						\$0		\$0	\$0	\$0	
									\$0	\$0	\$0	
<b>(h)</b>	<b>Construction/Implementation Contingency</b>						<b>\$0</b>	<b>\$72,192</b>	<b>\$72,192</b>	<b>\$54,144</b>	<b>\$18,048</b>	<b>25%</b>
13	Construction Contingency (10%)							\$72,192	\$72,192	\$54,144	\$18,048	25%
<b>Total</b>		<b>298</b>	<b>410</b>	<b>240</b>	<b>460</b>	<b>380</b>	<b>\$141,090</b>	<b>\$753,297</b>	<b>\$966,579</b>	<b>\$724,934</b>	<b>\$241,645</b>	<b>25%</b>

## TABLE 4-16 - DETAILED CONSTRUCTION COST ESTIMATE

### Project E - City of Kerman Residential Water Meter Project

#### Construction Costs shown in Task (d)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Amount
<b>3/4" Water Meter Installation</b>					
1	Badger Model 35 Water Meter	693	EA	\$280	\$194,000
2	Utility Box	693	EA	\$30	\$20,800
3	Utility Box Lid	693	EA	\$33	\$22,900
4	Angle Meter Stop 3/4"X 1" No Lead	693	EA	\$70	\$48,500
5	Meter Tail	693	EA	\$15	\$10,400
6	Cut and Remove Asphalt	693	EA	\$39.50	\$27,400
7	Meter Gaskets (x2)	693	EA	\$0.23	\$200
8	3/4 " Copper Tubing Average 3 feet per Installation	2079	EA	\$6.18	\$12,800
9	Miscellaneous Plumbing Parts & Asphalt	693	LS	\$30	\$20,800
10	Labor and Installation	693	EA	\$512	\$354,800
				<b>SUBTOTAL</b>	<b>\$712,600</b>
<b>Testing</b>					
11	Performance Testing	1	LS	\$9,320	\$9,320
				<b>SUBTOTAL</b>	<b>\$9,320</b>
<b>PRELIMINARY COST ESTIMATE:</b>					<b>\$721,920</b>
10% Contingency					<b>\$72,192</b>