

# **Fresno Irrigation District 2012 LGA Grant**

## **5 Attachment 5 – Work Plan**

The following sections provide a detailed description of the work plan.

Refer to District Location Map and Site Map provided in attachment 4 as **Figures 1 and 5** respectively.

### **5.1 Scope of the Proposal**

The scope of the proposal is the installation of improved groundwater recharge measurement at groundwater recharge basins operated by the District. Refer to **Figure 5** in attachment 4 for a location of these basins within the District’s boundary.

### **5.2 Purpose, Goals and Objectives**

The purpose of this project is to estimate the infiltration rate and provide more accurate measurement of the volume of water recharged at District owned basins.

The long term goals to be achieved after completion of installation of the measurement equipment include:

1. Maintain daily, monthly and annual recharge volumes for each basin,
2. Utilize recharge volume information for basin expansion, maintenance or modification decisions.
3. Establishment of a baseline of operational data to allow for comparison from year to year of the performance and use of each basin.
4. Discuss and report findings, conclusions and recommendations to interested parties, the TAC, the District Board, agencies and the public through meetings, newsletters, website information and publicly available reports and project documents.

### **5.3 Work Items Performed Under Each Task**

#### **Task 1 - Design of Measurement Improvements**

##### **Subtask 1.1 - Prepare Environmental Documents**

Any construction under this task will include CEQA compliance work. The District will initiate CEQA by performing a preliminary review of the site and make a determination of

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environmental impacts. It is anticipated that a Categorical Exemption will be prepared (Class 6 'Information Collection' exemption, Section 15306, or a Class 3 'Small New Facilities' exemption, Section 15303, or a Class 1 'Modification of Existing Structures' exemption, Section 15301), as the project involves modification of existing District facilities. No building permits will be required, and NEPA compliance is not needed since the project does not include federal facilities.

### **Subtask 1.2 - Survey of Existing Facilities**

To facilitate design, a topographic survey of the basin facilities proposed for improvement will be conducted. The survey will likely be limited to hydraulic grade line information and top of structure information in both the conveyance canal that delivers water to the basin and the basin itself. Topographic information of the site near and along the delivery pipeline to the basin will also be conducted. The survey will be performed by a licensed land surveyor, familiar with similar projects. Some initial survey of facilities may be required in order to identify conceptual design alternatives.

### **Subtask 1.3 - Prepare Construction Drawings and Specifications**

A licensed engineer will prepare design drawings and specifications for the required improvements. The improvements will be designed in accordance with the Fresno Irrigation District standards, similar to other improvements constructed by the District. An example of similar design plans is included as **Figure 6** in Attachment 4 of the application. A cost estimate for a flowmeter under consideration can be found in Attachment 6 - Budget. It should be noted that the District is trying to standardize its flowmeters and is still evaluating various types of meters and may choose another based on site specific conditions, accuracy, reliability, maintenance, etc.

#### **Deliverables for Task 1:**

- Construction Drawings and Specifications

### **Task 2 - Measurement Improvement Construction**

#### **Subtask 2.1 - Construction of Improvements**

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The construction will be completed by District construction crews, experienced with similar construction. Since the District will be performing their own work, a third party will not be required to enforce the Department of Industrial Relations-certified Plan. The entire project will be under the supervision and direction of the District, with technical support from their consulting engineer as needed. District staff will provide the labor as a contribution to the project, but materials purchased (such as pipeline material, flowmeters, etc...) will be submitted for reimbursement as part of the grant program. A breakdown of anticipated labor and material costs for construction is included as **Figures 10 and 11** of Attachment 6. The labor costs are based on recent construction costs by District staff for similar work. A cost quotation for the flowmeter was received for this estimate and is included in Attachment 6 -Budget of the application.

### **Subtask 2.2 - Construction Inspection and Observation**

Construction review would be performed under the supervision of a licensed engineer. The District and the engineer will be responsible for insuring that the design intent is implemented during the construction phase and would inspect the site before, during, and after construction.

Day-to-day construction inspection services will be provided by District staff and qualified District staff will perform daily construction review. Review of material and equipment submittals, processing monthly payment requests, and negotiating and preparation of contract change orders would be performed by the District's consulting engineer.

### **Subtask 2.3 - Prepare Record Drawings**

Upon completion of the construction, record (as-built) drawings will be prepared to identify any changes to the overall design or installation of the measurement improvements. The drawings will be prepared based on input from the District staff and survey of the completed improvements, if required. The drawings will be signed by the licensed professional engineer responsible for design.

#### **Deliverables for Task 2:**

- Record Drawings

### **Task 3 - Reporting**

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### **Subtask 3.1 - Progress Reports**

The District will submit to DWR quarterly progress reports on the status of the project. These reports will include a description of progress to date and data developed or information gained, costs incurred, and problems encountered or potential benefits identified as a result of the planned project. Each report will be prepared in accordance with the required DWR format. Progress reports will also be presented to the District Board, as well as the TAC of the Fresno Area Regional GWMP.

### **Subtask 3.2 - Measurement Reading and Reporting at Basins**

Upon completion of the installation of improvements at each of the basins, groundwater recharge delivery records will be maintained by the District. Depending upon the water year, and completion of the construction projects, it is anticipated that delivery records for a portion of the irrigation season will be available prior to completion of the grant schedule. However, the District will continue to maintain these delivery records and include the data in the annual report of the Fresno Area Regional GWMP.

It is also anticipated that an extended infiltration rate testing will be conducted at each basin utilizing a staff gauge. As flow fluctuations and operations in the system will allow, an infiltration test will be performed by filling the basin, shutting off delivery to the basin, and recording daily water levels in the basin. This process will be continued for several weeks as available to better identify the long-term infiltration rate of each basin. The data will be analyzed and summarized based on the values observed. Observation of infiltration rate will provide a benchmark for evaluation year after year of basin performance, maximizing water recharge in the longer term. This is needed as certain basins can fill with silts, reducing infiltration rates.

### **Subtask 3.3 - Public Information and Awareness**

Short articles on the project will be prepared for the FID newsletter which is sent out twice a year during the fall and spring. During the life of the grant, it is anticipated that two articles will be prepared including one that introduces the grant program and project goals, and another identifying the improvements completed and project results. These newsletters will be mailed to District growers and be available on the FID website.

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The District also plans to educate other agencies on the project during regularly scheduled meetings of the TAC of the GWMP. Other agency updates will include the Friant Water Authority, Kings River Conservation District, Upper Kings River Basin IRWMP Group, and possibly others. This work is not included in the budget since it will only involve FID staff.

### **Subtask 3.4 - Draft Project Report**

The draft report is scheduled to be completed by March 17, 2014. It will consist of all pertinent data, criteria, maps, narratives, alternatives, recommendations, and conclusions identified in this work plan. The report will also include an Executive Summary, a comparison between the planned schedule in the Agreement and actual timeline of completed tasks and explain the differences, discussion of major problems that occurred in meeting the project goals and objectives as proposed (if any) and how they were resolved. This report will also include, at a minimum, all data collected pursuant to this grant, including the following:

- Location of improvements installed
- Summary of initial operation of measurement equipment

The draft report will be submitted to DWR and appropriate reviewing agencies. The agency review period is anticipated to be from March 17, 2014 to June 17, 2014.

### **Subtask 3.5 - Final Project Report**

FID will submit three hard copies and one electronic copy of the final report to DWR no later than July 14, 2014. The final report will address comments from DWR on the draft report.

#### **Deliverables for Task 3:**

- Quarterly Progress Reports
- Draft Project Report
- Final Project Report

## **5.4 Progress and Performance**

### **General Project Monitoring**

Project monitoring will be performed through the following:

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1. Updates on the project status at monthly District Board meetings
2. Quarterly progress reports submitted to DWR
3. Technical Advisory Committee meetings
4. Meetings with other water agencies to discuss project impacts to third-parties
5. The Draft Project Report will be available in the District office for public review and comments

These monitoring efforts will provide opportunities for the public, Technical Advisory Committee of the GWMP, Board of Directors, District staff, neighboring agencies, and DWR to comment on the project. Involvement of these parties will ensure that the work is proceeding in the appropriate direction and ultimately provides a product that is needed and understood. Lastly, the numerous QA/QC measures outlined in Attachment 8 Quality Assurance, will also help to ensure that the project is properly monitored and reviewed.

### **Management of Schedule and Budget**

The budget and schedule will be reviewed weekly to measure progress versus expenditures and the schedule. If expenditures are higher than anticipated, or progress is behind schedule, then the District manager and engineering consultant will meet within a week to resolve any problems. DWR will be notified as soon as possible if there are budgetary or scheduling concerns. The schedule, however, includes some contingency so schedule problems are considered unlikely.

### **Project Performance by Task**

Project performance will be measured as described below for each of the project tasks:

**Task 1** – Design of Measurement Improvements. Performance will be evaluated through design reviews during different stages in the design. These design reviews will be performed internally by the engineering consultant, District staff, TAC, and the Board of Directors. This will help to ensure that the designs are suitable and compatible with the local conditions, and meet the needs of the District. Construction will not proceed until the final design is acceptable.

**Task 2** – Measurement Improvement Construction. Oversight during construction will include periodic visits by the engineering consultant and daily visits by District staff. If necessary,

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design modifications will be made to suit site-specific characteristics. Design modifications will only be made after consultation with the District Manager, engineering consultant, and District construction staff.

**Task 3 - Project Reporting.** Data collected during initial months of operation will be tabulated and presented to District Board of Directors and the TAC. All information will be reviewed by technical specialists as well as FID staff and the TAC. Comments from reviewers will help ensure that the data is presented in an organized and appropriate format, and is usable by District staff and for inclusion in the GWMP Annual report. All the collected information will be compared to any existing delivery and infiltration rate data in the area for consistency.

Project reports will be reviewed by the engineering consultant, District staff, TAC and Board of Directors. This will help to ensure that the reports are well organized, contain relevant information, and contain an appropriate level of detail. Reports will be submitted to DWR quarterly and a final report will be completed upon completion of the project. These reports will be useful sources of information for the annual groundwater report.

### **5.5 Site Access**

All of the recommended improvement sites are owned by the District and all have either easements or right of way for access purposes. Therefore, permission will not need to be granted for site access. However, as a courtesy and if appropriate, the District will inform landowners as necessary.

### **5.6 Environmental Compliance and Permitting**

#### **Environmental Impacts**

No adverse environmental impacts from the project are anticipated. It is believed that the installation of metering and measurement equipment on the District's existing facilities classifies as a Class 1 Exemption under Section 15301 or Class 3 Exemption under Section 15303 of the CEQA Guidelines as 'modification of an existing facility.'

#### **CALFED Compliance**

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This project will in no way adversely impact the Bay-Delta system or threaten levee system integrity. The Mission Statement of the CALFED Bay-Delta program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta System. The proposed project achieves this by providing needed information for improved water measurement, leading to improved water management in an effort to reduce demands on other sources, including Bay-Delta water.

### **Permitting Requirements**

No permits are anticipated to be required, as the project will be performed by District staff on existing District facilities. Although it is not anticipated that any existing utilities will be located within the project area because District facilities are in current operation, the existing utilities will be identified as part of the design, but utilities within or along District facilities are under permit with the District to be located there. This agreement requires the utility company to modify or relocate facilities if required by the District.

### **CEQA Compliance**

The construction proposed will include CEQA compliance work. The District and its consultants will initiate CEQA by performing a preliminary review of the sites and make a determination of environmental impacts. The District will act as the lead agency and determine if an initial study, environmental impact report, or exemption is appropriate. All work is anticipated to be on District owned, existing facilities. This type of construction is often constructed under a CEQA Class 6 'Basic Data Collection' exemption (Section 15306), or a Class 3 'Small New Facilities' exemption (Section 15303) or Class 1 'Alteration of Existing Facilities'; and the District believes that the same exemptions will apply to this project. All other work performed on the project will be scientific and engineering studies and therefore will qualify as a Class 6 'Information Collection' exemption.

### **NEPA Compliance**

The project does not need to comply with NEPA since it will not involve federal funds or federal facilities.

### **Schedule**

A period of two months is scheduled for CEQA preparation. This time should be more than adequate for an exemption. No permits are anticipated, as District crews will make the improvements to District facilities.