

Memo

To: Tulare Kern Funding Area Disadvantaged Community Involvement Program
From: GEI Consultants, Inc.
Subject: TKFA DACIP Project Completion Memo – Pond School Water Treatment Plant Improvements
Re: July 24, 2020

This project completion memo has been drafted by GEI Consultants, Inc. (GEI) for the Pond School Water Treatment Plant Improvements. Funding of \$20,000 was allocated through the Tulare Kern Funding Area Disadvantaged Community Involvement Program (TKFA DACIP) for the maintenance and installation of upgrades to their water treatment plant. This memo includes the following:

- Description of Project;
- Project Development Grant Amount;
- Stakeholder Summary;
- Project Deliverables;
- Challenges Encountered;
- Recommended Next Steps for the Project;
- Agency Review; and,
- Certification.

Description of Project

Pond School Water System serves drinking water to approximately 190 students and 25 staff members through one groundwater well. Due to high levels of arsenic exceeding the drinking water standard, a treatment plant was installed for the Pond School Water System. Since the treatment plant has been in operation, there has been a lack in maintenance and repairs on the equipment. It is important to conduct routine maintenance and to make necessary repairs to equipment in order to maintain compliance with the drinking water standards. Due to lack of maintenance and repairs on the drinking water treatment plant for arsenic reduction, there were treatment plant upsets where arsenic concentrations at the compliance point after the treatment plant were above the drinking water standard of 10 parts per billion (ppb). Pond School Water System received a proposal by McMor Water Service Company (McMor), who is their designated contract certified water system operator, that identified the necessary repairs and replacements needed for the treatment plant to consistently produce compliant drinking water.

Funding under the TKFA DACIP was used to implement the necessary equipment and maintenance repairs. To streamline the contracting process with Tulare County, GEI subcontracted to McMor for the Pond School water treatment plant maintenance and improvements. GEI has since coordinated grant and project management with McMor to successfully complete this project.

Project Development Grant Amount: \$20,000

A fund expenditure summary is provided in Table 1 below. The total cost reflects the grant funding spent to date. Funding expenditure summary is broken down by tasks that include project management by GEI and services provided by McMor Water Service Company.

Table 1. Funding Expenditure Summary

Task Name	Task Description	Total Cost
Project Management	GEI coordination with McMor Water Service Company and Grant Management	\$1,192
McMor Services	Water treatment plant improvements	\$18,000
Project Total		\$19,192.00

Stakeholder Summary

As previously stated, the benefits of this project serve the Pond School Water System, which is classified as a DAC. Completion of this project benefits approximately 190 students and 25 staff members that are serviced by the existing groundwater well.

Project Deliverables

Equipment were ordered and either replaced or provided as redundancy. Providing redundant equipment allows the treatment plant to remain in operation in the event of an equipment failure. Since the groundwater well is the sole supply for the school, shutting down the plant or allowing failures to occur, and producing non-compliant drinking water is not an option. Table 2 lists the parts that were ordered and their purpose. Pictures of the equipment ordered and installed are provided as an enclosure.

Table 2. Items Ordered for Pond School Water Treatment Plant

Quantity	Item	Purpose
3	Stenner Chemical Metering Pumps	Redundancy: Currently no backup systems in place
2	Grundfos Booster Pumps	Redundancy: Currently no backup systems in place
1	Field Iron and Arsenic Test Kit	Maintenance: Recurring expense to quickly test performance of treatment plant
1	HACH Pocket Colorimeter Test Unit	Maintenance: Current unit is old and unreliable
1	Sludge Removal of Backwash Tank	Maintenance: Sludge in tank hasn't been removed since treatment plant went into operation and tank is reaching capacity. Sludge is considered hazardous material due to arsenic
1	Re-pipe PVC SCH 80 at Influent and Effluent locations of Treatment Plant	Replace: Numerous leaks on pipe and restricted flow due to age
2	Signet Flow Meter	Replace: Both flow meters were non-operational
4	Electric Actuation Valves	Replace: Valves were broken and had to be manually controlled

Challenges Encountered

No challenges were encountered throughout the process of this project. Treatment plant improvements for Pond School were successfully completed with no problems or challenges.

Recommended Next Steps for the Project

Equipment installation and upgrades to the water treatment plant will allow for system redundancy and compliance. Recommended next steps for the project include identification of additional funding


sources to provide long-term operation and maintenance support for the water treatment plant and distribution system.

Agency Review:

There was no additional involvement required or needed for this project. Division of Drinking Water (DDW) had conducted a Sanitary Survey inspection of the water system on April 27, 2017 and provided a report of their findings in a DDW letter dated August 4, 2017. The report indicated equipment that had failed and resulted in finished water not meeting drinking water standards. Equipment ordered allows the arsenic treatment plant to operate in compliance with the water system's DDW permit.

Certification


The undersigned hereby certify that the project was completed with deliverables meeting the intent of the approved project development funding.



Jackie Takeda
Senior Water Quality Specialist
GEI Consultants, Inc.

July 24, 2020

Date



Alex Lopez / Kim Howard
Superintendent / School Secretary
Pond School Water System

7/24/2020

Date

Enclosure:

Pictures of water treatment plant improvements



Re-piped Influent and Effluent



New Hach CL2, Iron, and Arsenic Field Test Kits



New Backwash Flow Meter



New Influent Flow Meter



New Stenner Chemical Metering Pumps



New Actuation Valves



New Goulds Booster Pumps