

**FIRST AMENDMENT TO
AGREEMENT**

THIS FIRST AMENDMENT TO AGREEMENT (Amendment) made and entered into effect the _____ day of October 2019, between the CITY OF FRESNO, a California municipal corporation (City), and CAROLLO ENGINEERS, INC., a Delaware corporation (Consultant).

RECITALS

WHEREAS, the City and the Consultant entered into an agreement on May 21, 2019, (Agreement) to provide professional consulting services for the preparation of workplans for the evaluation of the existing groundwater monitoring well network and arsenic and manganese assessment at the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF) (Project); and

WHEREAS, the City Wastewater Management Division operates the RWRF in accordance with Waste Discharge Requirements (WDR) Order R5-2018-0080 adopted by the Central Valley Regional Water Quality Control Board (Board) on December 13, 2018; and

WHEREAS, the City and the Consultant met with the Board on June 30, 2019 to discuss the requirements of the WDR as they relate to the Consultant's scope of work for this Project, and as a result of the meeting, the Board requires evaluation of domestic wells located within the vicinity of the RWRF, including testing for nitrogen-based components; and

WHEREAS, the City and the Consultant desire to expand the scope of work including, but not limited to, evaluation of domestic wells located within the vicinity of the RWRF, including testing for nitrogen-based components; and

WHEREAS, due to the need for additional services, the City and the Consultant desire to increase the compensation by \$49,287 to complete the original and amended scope of work; and

WHEREAS, with entry into this Amendment, the Consultant agrees it has no claim, demand, or dispute against the City.

AGREEMENT

NOW, THEREFORE, the parties agree that the aforesaid Agreement be amended as follows:

1. The recitals to this Amendment are incorporated and made a part of this Amendment.
2. The Consultant shall provide additional services as described in Exhibit A1, attached hereto and incorporated herein by reference.

3. The Consultant's sole compensation for satisfactory performance of all services required or rendered pursuant to this Amendment shall be a total fee of \$49,287. Such fee includes all expenses incurred by Consultant in performance of such services. Statements may be rendered monthly and shall be payable in the normal course of City business. Such statements shall be for an amount no greater than that attributable to the Task upon which Consultant is then engaged as provided in Attachment A1.

4. Exhibit A of the Agreement is amended to add the additional professional scope of services in **Exhibit A1**, attached hereto and incorporated herein by reference.

5. Except as otherwise provided herein, the Agreement entered into by the City and the Consultant on May 21, 2019, remains in full force and effect.

[Signatures follow on the next page.]

IN WITNESS WHEREOF, the Parties have executed this Amendment at Fresno, California, the day and year first above written.

CITY OF FRESNO,
A municipal corporation

CAROLLO ENGINEERS, INC.,
A Delaware corporation

By: _____
Michael Carbajal, Director
Department of Public Utilities

By: Penny Carlo
Name: Penny Carlo

APPROVED AS TO FORM:
DOUGLAS T. SLOAN
City Attorney

Title: Assoc. Vice President
(If corporation or LLC., Board Chair, Pres.
or Vice Pres.)

By: Brandon M. Collet 10/9/19
Senior Deputy City Attorney Date

By: _____
Name: Michael W. Barnes

ATTEST:
YVONNE SPENCE, CRM MMC
City Clerk

Title: Secretary
(If corporation or LLC., CFO., Treasurer,
Secretary or Assistant Secretary)

By: _____
Deputy Date

Addresses:
CITY:
City of Fresno
Attention: Anita Luera
Supervising Engineering Technician
2101 G Street, Building A
Fresno, CA 93706
Phone: (559) 621-1625
FAX: (559) 498-4126

CONSULTANT:
Carollo Engineers, Inc.
Attention: Penny Carlo, P.E.
Associate Vice President
710 West Pinedale Avenue
Fresno, CA 93711
Phone: (559) 436-6616
FAX: (559) 436-1191

Attachment: Exhibit A1

EXHIBIT A1

AMENDMENT NO. 1 TO SCOPE OF SERVICES
Consultant Service Agreement between the City of Fresno (City) and Carollo
Engineers, Inc., (Consultant)
WORKPLANS FOR THE GROUNDWATER MONITORING NETWORK AND ARSENIC
& MANGANESE GROUNDWATER ASSESSMENT

Under the original Agreement, Carollo Engineers, Inc. (Carollo), in association with Luhdorff & Scalmanini, Consulting Engineers (LSCE), are authorized to provide professional engineering services to prepare Workplans for the Groundwater Monitoring Network and Arsenic (AS) and Manganese (Mn) Groundwater Assessment. Carollo/LSCE will deliver the following services to Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) under the terms of Professional Engineering Services for the Fresno/Clovis Regional Wastewater Reclamation Facility *Workplans for the Groundwater Monitoring Network and Arsenic & Manganese Groundwater Assessment*.

The initial scope of work includes services for Carollo/LSCE to complete two workplans that are required by the Waste Discharge Requirements (WDR) for the RWRF. The first workplan (As/Mn Workplan) will establish the activities and tasks to be conducted to evaluate the impact of As and Mn beneath and downgradient of the RWRF. The second workplan will establish the activities and tasks to be conducted to evaluate the current groundwater monitoring network and its adequacy to characterize the influence on groundwater quality (including arsenic and manganese concentrations) in the vicinity of the RWRF.

This Amendment covers new work needed to support the development of the As/Mn Workplan, described as Task 4.3 in the initial scope of work. Task 4.3 (Domestic Well Survey) covers work needed to conduct an initial identification of domestic wells in the vicinity of the RWRF potentially affected by the RWRF's discharge. The domestic well survey is a high priority in the WDR. In Provision J.1.a.i.(2), the WDR states the As/Mn workplan shall evaluate *"the potential impacts the elevated concentrations may have on downgradient beneficial uses. This shall include conducting a survey of domestic wells within an appropriate radius of the Facility. The results of the well survey shall be included in the Workplan along with a proposed strategy and schedule for sampling wells that could be impacted by the discharge."*

The scope for Task 4.3 was based on the interpretation of the WDR that the domestic well survey would not include sampling the wells identified in the workplan. Rather, sampling of wells would occur in 2020, during the Phase 2 implementation of the project, and in accordance with the strategy and schedule to be established in the workplan.

During a meeting with the Regional Water Quality Control Board (RWQCB) on June 30, 2019, the City was directed to speed up the domestic well survey and include the results of at least one round of sampling of domestic wells in the workplan. The City was also informed that the groundwater analyses should include the entire nitrogen suite, in

addition to As and Mn, and other analytes. Nitrogen concentrations (and other analytes) help in understanding of groundwater conditions that affect solubility of As and Mn.

Based on the direction of the RWQCB to conduct one round of sampling that includes analyzing the water for the entire nitrogen suite, the City has decided to design the sampling program so that the results from the project can also be applied to the City's upcoming Initial Assessment for Nitrates. The Initial Assessment will be conducted by the City after it receives the Notice to Comply (NTC) with the Central Valley Nitrate Control Program from the RWQCB. The NTC is expected in 2020, once the Basin Plan Amendment (BPA) for the Tulare Lake Basin becomes effective.

PURPOSE

The purpose of the Amendment No. 1 is to expand the scope of services initially established in Task 4.3, to include a sampling program for one round of sampling of domestic and agricultural wells in the vicinity of the RWRF. The water quality results will be evaluated and used to inform the As/Mn Workplan, and also to support the City's upcoming Initial Assessment for Nitrates, anticipated to begin around the year 2020-2021. The work will be covered in a new task (Task 6 – Domestic/Agricultural Well Sampling Program).

CONSULTANT'S SERVICES

Task 6.0 Assist the City in conducting a sampling program of domestic and agricultural wells in the vicinity of the RWRF. Evaluate the water quality data and present the results in the As/Mn Workplan, as they relate to and inform the understanding of the As/Mn concentrations as estimated to be associated with the RWRF discharge. Record and summarize the results so that they will also be suitable and ready for use in the Initial Assessment for Nitrates.

6.1 Identification of Potential Wells

The 25 square mile study area surrounding the RWRF, used in the 2003 domestic/agricultural sampling program, will be used as the starting point for this project. Carollo will be responsible for obtaining well records and performing outreach to the well owners.

- a. Obtain well logs: The City has obtained a list of APNs, owner names, location, some well construction reports (WCRs), etc., for domestic and agricultural wells in the area, from the County of Fresno Department of Public Health. The City has also received an unredacted file of WCRs from DWR for wells constructed in the vicinity of the RWRF; these WCRs do not have precise locations.
- b. First priority wells: Wells sampled during the 2003 program plus others identified within one mile of the RWRF.
- c. Second priority wells: As a parallel activity, the City will conduct a mass mailing to all other domestic/agricultural well owners in the study area, where APN, ownership and addresses are available, to request permission to sample the well water. This sampling will be conducted during Phase 2 of the As/Mn Study.

The Carollo/LSCE Team will review the well information and WCRs, and try to match up the appropriate WCR for wells to be sampled during Phase 1. If no WCR is identified, domestic wells in close proximity to the RWRF (approximately one mile from the perimeter of the RWRF or lands receiving effluent) will still be sampled, but these wells will be sampled for fewer analytes with the focus on As, Mn, and nitrate. Summarize and tabulate construction details from the drillers' logs for each of the wells that will be sampled. Categorize wells according to depth (as possible associated with four zones delineated beneath the RWRF) and suitability for use in the As/Mn project and/or the Initial Assessment for Nitrates.

6.2 Expand Sampling Plan

- a. Update the sampling Standard Operating Procedures (SOPs) developed during the 2003 domestic/agricultural sampling program to ensure the procedures sufficiently address WDR requirements.
- b. Develop list of analytes. Analytes will include As, Mn, and Nitrogen species, at a minimum. Other analytes will be included to help understand site-specific conditions and help identify probable sources and relative contributions from the sources. The utility of using isotopes and other less typical analytes will be considered for purposes of trying to determine whether non RWRF sources are contributing to the presence of As, Mn and nitrate.
- c. Prepare Sampling Plan. The Sampling Plan will include the SOPs, map of wells identified for the project, the list of analytes, list of sampling/analysis parameters (laboratory methods, minimum detection limits, sample containers, holding times, preservation method), field quality control methods, etc.
- d. Deliverables: Draft and Final Sampling Plan (pdf)

6.3 Evaluate Results

Sampling activities developed in Task 6.2 will be conducted by the City. The City will prepare documentation of sampling (chain of custody, field logs, etc.) and tabulate analytical results in Excel. Carollo/LSCE will evaluate and summarize water quality results. Results from First Priority wells will be compared to the 2003/2004 results.

Water quality data and well attributions will be entered into the geodatabase. Results will be mapped in conjunction with the RWRF data. This will likely include more than 100 maps that will show constituent concentrations pertaining to each of the four zones.

6.4 Enhance As/Mn Workplan with Sampling Program Findings

The findings from this sampling program will be presented in the As/Mn workplan. The findings will include discussing how the data relate to and inform the understanding needed to identify the possible point of compliance (POC). This aspect of the work will directly address the expectations of the RWQCB. The results will also help inform the modeling approach for Phase 2, and potential sequencing and scheduling of Phase 2 tasks, including additional private well sampling (second priority wells) in response to the City's outreach efforts. The findings will be incorporated into the deliverable for Task

6.5 Project Management and Communications

Carollo's project manager will direct and coordinate the efforts of the project team members in order to ensure delivery of project elements.

- a. Meetings - Assume 3 conference calls with the City to coordinate the sampling effort and identification of potential wells.
- b. RWQCB – Assume one conference call with the RWQCB to present sampling plan and obtain feedback.

TIME OF PERFORMANCE

Carollo/LSCE will work closely with the City to initiate the sampling program as quickly as possible, since the results are needed to complete the As/Mn workplan. The deadlines for the draft and final As/Mn Workplans were established in the initial scope of work. They are November 15, 2019, and December 10, 2019, respectively.

PAYMENT

Total compensation for services performed in accordance with this Amendment shall be forty-nine thousand two hundred eighty-seven dollars \$49,287.