FOURTH AMENDMENT TO AGREEMENT

THIS FOURTH AMENDMENT TO AGREEMENT (Fourth Amendment) made and entered into as of this day of 2022, amends the Agreement entered into between the CITY OF FRESNO, a California municipal corporation (City), and CAROLLO ENGINEERS, INC., a Delaware corporation (Consultant).

RECITALS

WHEREAS, the City's Wastewater Management Division operates the Fresno-Clovis Regional Wastewater Reclamation Facility (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, City and 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 network and an arsenic and manganese assessment at the RWRF (Workplans) as required by the WDR for a total fee of \$250,000; and

WHEREAS, the First Amendment, made and entered into on October 25, 2019, expanded the scope of services to include an evaluation of domestic wells located in the vicinity of the RWRF in preparation of the Workplans and as required by the Board, and provided an increase in the amount of \$49,287 for a total fee of \$299,287; and

WHEREAS, the Second Amendment, made and entered into on April 16, 2020, expanded the scope of services to include completion of the Arsenic and Manganese Groundwater Compliance Assessment Report (As/Mn Report) as required by the WDR and in accordance with the approved Workplans, provided an additional increase in the amount of \$690,044 for a total fee of \$989,331, and provided an extension to the Agreement; and

WHEREAS, the Third Amendment, made and entered into on October 18, 2021, expanded the scope of services to include support for the construction of groundwater monitoring wells and review of groundwater data utilizing existing funds, and provided an extension to the Agreement; and

WHEREAS, the Fourth Amendment will allow for continued support during implementation of the Arsenic and Manganese Groundwater Compliance Assessment in accordance with the Workplans, the As/Mn Report, and the Action Plan for Arsenic in Domestic Wells previously submitted to the Board; as well as preparation of the resulting technical report required by the WDR; and

WHEREAS, the City and the Consultant desire to increase the compensation by \$111,810 and expand the scope of services to include the required additional services; and

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

AGREEMENT

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

1. The recitals listed above are incorporated herein and made a part of this Fourth Amendment.

- 2. Exhibit A of the Agreement is amended to expand the scope of services as indicated in Exhibit A3 attached hereto and incorporated herein by reference.
 - 3. Section 3(a) of the Agreement is amended to read as follows:
- "(a) CONSULTANT'S sole compensation for satisfactory performance of all services required or rendered pursuant to this Agreement shall be a total fee of One Million, One Hundred and One Thousand, One Hundred, and Forty-One dollars (\$1,101,141). Such fee includes all expenses incurred by Consultant in performance of the services."
- 4. Except as otherwise provided herein, the Agreement entered into by the City and the Consultant, dated May 21, 2019, and amended on October 25, 2019, April 16, 2020, and October 18, 2021, remains in full force and effect.

[Signatures follow on the next page.]

Attachment: Exhibit A3

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

CITY OF FRESNO,	CAROLLO ENGINEERS, INC.,
A CE I Corporation	A Delawarana Symporation
By:	By:
Brock D. Buche, PE, PLS Director of Public Utilities	Name: Paul Amico
	Title: Vice President
APPROVED AS TO FORM: RINA M. GONZALES	(If corporation or LLC., Board Chair, Pres. or Vice Pres.)
Interip City Att Dynam	DocuSigned by:
By:	By:
Angela M. Karst Date Deputy City Attorney	Name: Michael Barnes
	Title: Secretary
ATTEST: TODD STERMER, CMC	(If corporation or LLC., CFO., Treasurer, Secretary or Assistant Secretary)
City Cipousigned by:	
By:	
Deputy Date	

EXHIBIT A3

FOURTH AMENDMENT 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

The Fourth Amendment expands the scope of work to include Task 14 to provide ongoing support during the implementation phase of the Arsenic and Manganese (As/Mn) Compliance Assessment. The Fourth Amendment allows for ongoing evaluation of monitoring data, analysis of compliance well data, evaluation of potential impacts to downgradient wells, preparation of relevant portions of the annual report for 2022, interactions with the Central Valley Regional Water Quality Control Board (Board), and ongoing project management.

Task 14. As/Mn Compliance Implementation Support.

14.1. Ongoing Evaluation of Monitoring Data

The City continues to collect groundwater monitoring data from the monitoring well network as well as the domestic and agricultural wells. This data must be evaluated periodically to determine potential impacts and trends. This task includes periodic review of groundwater data provided by the City through the 3rd quarter of 2023.

For this evaluation, the data will be quality-checked by reviewing the sample collection records, field parameter data, and laboratory reports; any potential issues identified through this review process will be resolved before the data is approved for use. Once approved, the data will be added to the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF) Groundwater Data Information System. Once uploaded into the database, this data will be included in subsequent evaluations to support implementation of the As/MN Compliance Assessment.

14.2. Analysis of Point of Compliance (POC) Well Data

The Waste Discharge Requirements (WDR) mandate the use of statistical data analysis methods specified in the U.S. Environmental Protection Agency's 2009 Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (Unified Guidance) for evaluating compliance with the Groundwater Limitations of the WDR. A detailed methodology for compliance evaluation was proposed in the As/Mn Compliance Assessment Report. Carollo Engineers, Inc. (Carollo) and Luhdorff and Scalmanini Consulting Engineers (LSCE) will implement this statistical analysis as compliance data become available. This task also includes review of compliance well construction and completion, sampling methods, and other factors to determine acceptance of the wells for use as points of compliance.

14.3. Impact Evaluation for Downgradient Wells

The results of the ongoing domestic well sampling program will be used to identify domestic wells that may be impacted by RWRF operations. A thorough, in-depth evaluation will be completed for each of the wells preliminarily identified by initial screening as being potentially impacted by RWRF operations to determine if RWRF operations have resulted in the observed elevated concentrations of arsenic and/or manganese. Other factors to be included in this evaluation may include location of the well in relation to

the RWRF (e.g., upgradient, downgradient, cross-gradient), distance from the RWRF disposal ponds, other land uses in the vicinity of the well, concentrations of other constituents in the samples, and other data and information deemed relevant. A key aspect of this analysis is to determine whether RWRF operations have, or could in the future, contribute to an exceedance of the maximum contaminant level for arsenic or manganese at one of these locations.

14.4. Annual As/Mn Groundwater Compliance Assessment Progress Report for 2022

The WDR requires the annual submission of a technical progress report for the As/Mn Compliance Assessment due on February 1 of each year. Carollo/LSCE will prepare the elements of the progress report related to evaluation of monitoring data for arsenic and manganese including available domestic and agricultural well data.

14.5. Respond to the Central Valley Regional Water Quality Control Board Comments

It is expected that the Board will issue formal comments on the As/Mn Compliance Assessment Report, Action Plan for Arsenic in Domestic Wells, and Elevated Arsenic Levels in Domestic Wells Technical Memorandum. Therefore, effort has been included to address and respond to any comments from the Board. The Carollo/LSCE team will participate in meetings and discussions with the Board and prepare written responses or submittals in response to comments or questions from the Board as directed by the City.

14.6. Project Management

Carollo's project manager shall direct and coordinate the efforts of the project team members in order to deliver all of the components of the project. Project management includes: facilitation of meetings, work order administration, monthly progress reports, coordination with RWRF staff, and quality management.

The project manager will make staffing assignments, review work progress, coordinate quality management procedures, manage subconsultants, and communicate monthly progress reports to the City. The project manager shall manage the budget, schedule, and invoicing. The project manager will prepare and maintain decision and action item logs that will record the decisions made by the City throughout the project as well as action items assigned to the Carollo/LSCE team and City team members.

14.7. Meetings with the Central Valley Regional Water Quality Control Board (2)

Two meetings will be held with the Board. The first meeting will be scheduled to review the results of sampling results for domestic wells and to review Board comments on the Action Plan for Arsenic in Domestic Wells and the TM addressing Elevated Arsenic Levels in Domestic Wells.

A second meeting will be to review initial sampling data from the compliance wells with the Board once those wells have been installed.

14.8. Team Meetings

Progress meetings will be conducted with City staff. The progress meetings will be held as needed based on monitoring data, results for domestic wells, and Board feedback.