

**AGREEMENT
CITY OF FRESNO, CALIFORNIA
CONSULTANT SERVICES**

THIS AGREEMENT is made and entered into effective the 21 day of May, 2019, by and between the CITY OF FRESNO, a California municipal corporation (hereinafter referred to as "CITY"), and CAROLLO ENGINEERS, INC., a Delaware corporation (hereinafter referred to as "CONSULTANT").

RECITALS

WHEREAS, CITY desires to obtain 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, hereinafter referred to as the "Project;" and

WHEREAS, CONSULTANT is engaged in the business of furnishing services as a Civil or Environmental Engineer and hereby represents that it desires to and is professionally and legally capable of performing the services called for by this Agreement; and

WHEREAS, CONSULTANT acknowledges that this Agreement is subject to the requirements of Fresno Municipal Code Section 4-107 and Administrative Order No. 6-19; and

WHEREAS, this Agreement will be administered for CITY by its Director of Public Utilities (hereinafter referred to as "Director") or his/her designee.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and of the covenants, conditions, and promises hereinafter contained to be kept and performed by the respective parties, it is mutually agreed as follows:

1. Scope of Services. CONSULTANT shall perform to the satisfaction of CITY the services described in **Exhibit A**, including all work incidental to, or necessary to perform, such services even though not specifically described in **Exhibit A**.

2. Term of Agreement and Time for Performance. This Agreement shall be effective from the date first set forth above and shall continue in full force and effect through the earlier of complete rendition of the services hereunder or December 10, 2019, subject to any earlier termination in accordance with this Agreement. The services of CONSULTANT as described in **Exhibit A** are to commence upon CITY'S issuance of a written "Notice to Proceed." Work shall be undertaken and completed in a sequence assuring expeditious completion, but in any event, all such services shall be completed within 225 consecutive calendar days from such authorization to proceed.

3. Compensation.

(a) CONSULTANT'S sole compensation for satisfactory performance of all services required or rendered pursuant to this Agreement shall be a total fee of Two Hundred Fifty Thousand dollars (\$250,000). Such fee includes all expenses incurred by CONSULTANT in performance of the services.

(b) Detailed statements shall be rendered monthly and will be payable in the normal course of CITY business.

(c) The parties may modify this Agreement to increase or decrease the scope of services or provide for the rendition of services not required by this Agreement, which modification shall include an adjustment to CONSULTANT'S compensation. Any change in the scope of services must be made by written amendment to the Agreement signed by an authorized representative for each party. CONSULTANT shall not be entitled to any additional compensation if services are performed prior to a signed written amendment.

4. Termination, Remedies and Force Majeure.

(a) This Agreement shall terminate without any liability of CITY to CONSULTANT upon the earlier of: (i) CONSULTANT'S filing for protection under the federal bankruptcy laws, or any bankruptcy petition or petition for receiver commenced by a third party against CONSULTANT; (ii) 7 calendar days prior written notice with or without cause by CITY to CONSULTANT; (iii) CITY'S non-appropriation of funds sufficient to meet its obligations hereunder during any CITY fiscal year of this Agreement, or insufficient funding for the Project; or (iv) expiration of this Agreement.

(b) Immediately upon any termination or expiration of this Agreement, CONSULTANT shall (i) immediately stop all work hereunder; (ii) immediately cause any and all of its subcontractors to cease work; and (iii) return to CITY any and all unearned payments and all properties and materials in the possession of CONSULTANT that are owned by CITY. Subject to the terms of this Agreement, CONSULTANT shall be paid compensation for services satisfactorily performed prior to the effective date of termination. CONSULTANT shall not be paid for any work or services performed or costs incurred which reasonably could have been avoided.

(c) In the event of termination due to failure of CONSULTANT to satisfactorily perform in accordance with the terms of this Agreement, CITY may withhold an amount that would otherwise be payable as an offset to, but not in excess of, CITY'S damages caused by such failure. In no event shall any payment by CITY pursuant to this Agreement constitute a waiver by CITY of any breach of this Agreement which may then exist on the part of CONSULTANT, nor shall such payment impair or prejudice any remedy available to CITY with respect to the breach.

(d) Upon any breach of this Agreement by CONSULTANT, CITY may (i) exercise any right, remedy (in contract, law or equity), or privilege which may be available to it under applicable laws of the State of California or any other applicable law; (ii) proceed by appropriate court action to enforce the terms of the Agreement; and/or (iii) recover all direct, indirect, consequential, economic and incidental damages for the breach of the Agreement. If it is determined that CITY improperly terminated this Agreement for default, such termination shall be deemed a termination for convenience.

(e) CONSULTANT shall provide CITY with adequate written assurances of future performance, upon Director's request, in the event CONSULTANT fails to comply with any terms or conditions of this Agreement.

(f) CONSULTANT shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of CONSULTANT and without its fault or negligence such as, acts of God or the public enemy, acts of CITY in its contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of

common carriers. CONSULTANT shall notify Director in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, and shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to Director of the cessation of such occurrence.

5. Confidential Information, Ownership of Documents and Copyright License.

(a) Any reports, information, or other data prepared or assembled by CONSULTANT pursuant to this Agreement shall not be made available to any individual or organization by CONSULTANT without the prior written approval of CITY. During the term of this Agreement, and thereafter, CONSULTANT shall not, without the prior written consent of CITY, disclose to anyone any Confidential Information. The term Confidential Information for the purposes of this Agreement shall include all proprietary and confidential information of CITY, including but not limited to business plans, marketing plans, financial information, designs, drawings, specifications, materials, compilations, documents, instruments, models, source or object codes and other information disclosed or submitted, orally, in writing, or by any other medium or media. All Confidential Information shall be and remain confidential and proprietary in CITY.

(b) Any and all original sketches, pencil tracings of working drawings, plans, computations, specifications, computer disk files, writings and other documents prepared or provided by CONSULTANT pursuant to this Agreement are the property of CITY at the time of preparation and shall be turned over to CITY upon expiration or termination of the Agreement or default by CONSULTANT. CONSULTANT grants CITY a copyright license to use such drawings and writings. CONSULTANT shall not permit the reproduction or use thereof by any other person except as otherwise expressly provided herein. CITY may modify the design including any drawings or writings. Any use by CITY of the aforesaid sketches, tracings, plans, computations, specifications, computer disk files, writings and other documents in completed form as to other projects or extensions of this Project, or in uncompleted form, without specific written verification by CONSULTANT will be at CITY'S sole risk and without liability or legal exposure to CONSULTANT. CONSULTANT may keep a copy of all drawings and specifications for its sole and exclusive use.

(c) If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall cause each subcontractor to also comply with the requirements of this Section 5.

(d) This Section 5 shall survive expiration or termination of this Agreement.

6. Professional Skill. It is further mutually understood and agreed by and between the parties hereto that inasmuch as CONSULTANT represents to CITY that CONSULTANT and its subcontractors, if any, are skilled in the profession and shall perform in accordance with the standards of said profession necessary to perform the services agreed to be done by it under this Agreement, CITY relies upon the skill of CONSULTANT and any subcontractors to do and perform such services in a skillful manner and CONSULTANT agrees to thus perform the services and require the same of any subcontractors. Therefore, any acceptance of such services by CITY shall not operate as a release of CONSULTANT or any subcontractors from said professional standards.

7. Indemnification. To the furthest extent allowed by law, CONSULTANT shall indemnify, hold harmless and defend CITY and each of its officers, officials, employees, agents

and volunteers from any and all loss, liability, fines, penalties, forfeitures, costs and damages (whether in contract, tort or strict liability, including but not limited to personal injury, death at any time and property damage), and from any and all claims, demands and actions in law or equity (including reasonable attorney's fees and litigation expenses) that arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of CONSULTANT, its principals, officers, employees, agents or volunteers in the performance of this Agreement.

If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall require each subcontractor to indemnify, hold harmless and defend CITY and each of its officers, officials, employees, agents and volunteers in accordance with the terms of the preceding paragraph.

This section shall survive termination or expiration of this Agreement.

8. Insurance.

(a) Throughout the life of this Agreement, CONSULTANT shall pay for and maintain in full force and effect all insurance as required in **Exhibit B**, which is incorporated into and part of this Agreement, with an insurance company(ies) either (i) admitted by the California Insurance Commissioner to do business in the State of California and rated no less than "A-VII" in the Best's Insurance Rating Guide, or (ii) as may be authorized in writing by CITY'S Risk Manager or his/her designee at any time and in his/her sole discretion. The required policies of insurance as stated in Exhibit B shall maintain limits of liability of not less than those amounts stated therein. However, the insurance limits available to CITY, its officers, officials, employees, agents and volunteers as additional insureds, shall be the greater of the minimum limits specified therein or the full limit of any insurance proceeds to the named insured.

(b) If at any time during the life of the Agreement or any extension, CONSULTANT or any of its subcontractors/sub-consultants fail to maintain any required insurance in full force and effect, all services and work under this Agreement shall be discontinued immediately, and all payments due or that become due to CONSULTANT shall be withheld until notice is received by CITY that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to CITY. Any failure to maintain the required insurance shall be sufficient cause for CITY to terminate this Agreement. No action taken by CITY pursuant to this section shall in any way relieve CONSULTANT of its responsibilities under this Agreement. The phrase "fail to maintain any required insurance" shall include, without limitation, notification received by CITY that an insurer has commenced proceedings, or has had proceedings commenced against it, indicating that the insurer is insolvent.

(c) The fact that insurance is obtained by CONSULTANT shall not be deemed to release or diminish the liability of CONSULTANT, including, without limitation, liability under the indemnity provisions of this Agreement. The duty to indemnify CITY shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by CONSULTANT. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of CONSULTANT, its principals, officers, agents, employees, persons under the supervision of CONSULTANT, vendors, suppliers, invitees, consultants, sub-consultants, subcontractors, or anyone employed directly or indirectly by any of them.

(d) If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall require each subcontractor/sub-consultant to provide insurance protection, as an additional insured, to the CITY and each of its

officers, officials, employees, agents and volunteers in accordance with the terms of this section, except that any required certificates and applicable endorsements shall be on file with CONSULTANT and CITY prior to the commencement of any services by the subcontractor. CONSULTANT and any subcontractor/sub-consultant shall establish additional insured status for CITY, its officers, officials, employees, agents and volunteers by using Insurance Service Office (ISO) Form CG 20 10 11 85 or both CG 20 10 10 01 and CG 20 37 10 01 or by an executed manuscript company endorsement providing additional insured status as broad as that contained in ISO Form CG 20 10 11 85.

9. Conflict of Interest and Non-Solicitation.

(a) Prior to CITY'S execution of this Agreement, CONSULTANT shall complete a City of Fresno conflict of interest disclosure statement in the form as set forth in **Exhibit C**. During the term of this Agreement, CONSULTANT shall have the obligation and duty to immediately notify CITY in writing of any change to the information provided by CONSULTANT in such statement.

(b) CONSULTANT shall comply, and require its subcontractors to comply, with all applicable (i) professional canons and requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code Section 1090 et. seq., the California Political Reform Act (California Government Code Section 87100 et. seq.), the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations Section 18700 et. seq.) and Section 4-112 of the Fresno Municipal Code (Ineligibility to Compete). At any time, upon written request of CITY, CONSULTANT shall provide a written opinion of its legal counsel and that of any subcontractor that, after a due diligent inquiry, CONSULTANT and the respective subcontractor(s) are in full compliance with all laws and regulations. CONSULTANT shall take, and require its subcontractors to take, reasonable steps to avoid any appearance of a conflict of interest. Upon discovery of any facts giving rise to the appearance of a conflict of interest, CONSULTANT shall immediately notify CITY of these facts in writing.

(c) In performing the work or services to be provided hereunder, CONSULTANT shall not employ or retain the services of any person while such person either is employed by CITY or is a member of any CITY council, commission, board, committee, or similar CITY body. This requirement may be waived in writing by the City Manager, if no actual or potential conflict is involved.

(d) CONSULTANT represents and warrants that it has not paid or agreed to pay any compensation, contingent or otherwise, direct or indirect, to solicit or procure this Agreement or any rights/benefits hereunder.

(e) Neither CONSULTANT, nor any of CONSULTANT'S subcontractors performing any services on this Project, shall bid for, assist anyone in the preparation of a bid for, or perform any services pursuant to, any other contract in connection with this Project. CONSULTANT and any of its subcontractors shall have no interest, direct or indirect, in any other contract with a third party in connection with this Project unless such interest is in accordance with all applicable law and fully disclosed to and approved by the City Manager, in advance and in writing.

(f) If CONSULTANT should subcontract all or any portion of the work to be performed or services to be provided under this Agreement, CONSULTANT shall include the provisions of this Section 9 in each subcontract and require its subcontractors to comply therewith.

(g) This Section 9 shall survive expiration or termination of this Agreement.

10. Recycling Program. In the event CONSULTANT maintains an office or operates a facility(ies), or is required herein to maintain or operate same, within the incorporated limits of the City of Fresno, CONSULTANT at its sole cost and expense shall:

- (i) Immediately establish and maintain a viable and ongoing recycling program, approved by CITY'S Solid Waste Management Division, for each office and facility. Literature describing CITY recycling programs is available from CITY'S Solid Waste Management Division and by calling City of Fresno Recycling Hotline at (559) 621-1111.
- (ii) Immediately contact CITY'S Solid Waste Management Division at (559) 621-1452 and schedule a free waste audit, and cooperate with such Division in their conduct of the audit for each office and facility.
- (iii) Cooperate with and demonstrate to the satisfaction of CITY'S Solid Waste Management Division the establishment of the recycling program in paragraph (i) above and the ongoing maintenance thereof.

11. General Terms.

(a) Except as otherwise provided by law, all notices expressly required of CITY within the body of this Agreement, and not otherwise specifically provided for, shall be effective only if signed by the Director or his/her designee.

(b) Records of CONSULTANT'S expenses pertaining to the Project shall be kept on a generally recognized accounting basis and shall be available to CITY or its authorized representatives upon request during regular business hours throughout the life of this Agreement and for a period of three years after final payment or, if longer, for any period required by law. In addition, all books, documents, papers, and records of CONSULTANT pertaining to the Project shall be available for the purpose of making audits, examinations, excerpts, and transcriptions for the same period of time. If any litigation, claim, negotiations, audit or other action is commenced before the expiration of said time period, all records shall be retained and made available to CITY until such action is resolved, or until the end of said time period whichever shall later occur. If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall cause each subcontractor to also comply with the requirements of this paragraph. This Section 11(b) shall survive expiration or termination of this Agreement.

(c) Prior to execution of this Agreement by CITY, CONSULTANT shall have provided evidence to CITY that CONSULTANT is licensed to perform the services called for by this Agreement (or that no license is required). If CONSULTANT should subcontract all or any portion of the work or services to be performed under this Agreement, CONSULTANT shall require each subcontractor to provide evidence to CITY that subcontractor is licensed to

perform the services called for by this Agreement (or that no license is required) before beginning work.

12. Nondiscrimination. To the extent required by controlling federal, state and local law, CONSULTANT shall not employ discriminatory practices in the provision of services, employment of personnel, or in any other respect on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era. Subject to the foregoing and during the performance of this Agreement, CONSULTANT agrees as follows:

(a) CONSULTANT will comply with all applicable laws and regulations providing that no person shall, on the grounds of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity made possible by or resulting from this Agreement.

(b) CONSULTANT will not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era. CONSULTANT shall ensure that applicants are employed, and the employees are treated during employment, without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era. Such requirement shall apply to CONSULTANT'S employment practices including, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONSULTANT agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provision of this nondiscrimination clause.

(c) CONSULTANT will, in all solicitations or advertisements for employees placed by or on behalf of CONSULTANT in pursuit hereof, state that all qualified applicants will receive consideration for employment without regard to race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era.

(d) CONSULTANT will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising such labor union or workers' representatives of CONSULTANT'S commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(e) If CONSULTANT should subcontract all or any portion of the services to be performed under this Agreement, CONSULTANT shall cause each subcontractor to also comply with the requirements of this Section 12.

13. Independent Contractor.

(a) In the furnishing of the services provided for herein, CONSULTANT is acting solely as an independent contractor. Neither CONSULTANT, nor any of its officers, agents or employees shall be deemed an officer, agent, employee, joint venturer, partner or associate of CITY for any purpose. CITY shall have no right to control or supervise or direct the manner or method by which CONSULTANT shall perform its work and functions. However, CITY shall retain the right to administer this Agreement so as to verify that CONSULTANT is performing its obligations in accordance with the terms and conditions thereof.

(b) This Agreement does not evidence a partnership or joint venture between CONSULTANT and CITY. CONSULTANT shall have no authority to bind CITY absent CITY'S express written consent. Except to the extent otherwise provided in this Agreement, CONSULTANT shall bear its own costs and expenses in pursuit thereof.

(c) Because of its status as an independent contractor, CONSULTANT and its officers, agents and employees shall have absolutely no right to employment rights and benefits available to CITY employees. CONSULTANT shall be solely liable and responsible for all payroll and tax withholding and for providing to, or on behalf of, its employees all employee benefits including, without limitation, health, welfare and retirement benefits. In addition, together with its other obligations under this Agreement, CONSULTANT shall be solely responsible, indemnify, defend and save CITY harmless from all matters relating to employment and tax withholding for and payment of CONSULTANT'S employees, including, without limitation, (i) compliance with Social Security and unemployment insurance withholding, payment of workers' compensation benefits, and all other laws and regulations governing matters of employee withholding, taxes and payment; and (ii) any claim of right or interest in CITY employment benefits, entitlements, programs and/or funds offered employees of CITY whether arising by reason of any common law, de facto, leased, or co-employee rights or other theory. It is acknowledged that during the term of this Agreement, CONSULTANT may be providing services to others unrelated to CITY or to this Agreement.

14. Notices. Any notice required or intended to be given to either party under the terms of this Agreement shall be in writing and shall be deemed to be duly given if delivered personally, transmitted by facsimile followed by telephone confirmation of receipt, or sent by United States registered or certified mail, with postage prepaid, return receipt requested, addressed to the party to which notice is to be given at the party's address set forth on the signature page of this Agreement or at such other address as the parties may from time to time designate by written notice. Notices served by United States mail in the manner above described shall be deemed sufficiently served or given at the time of the mailing thereof.

15. Binding. Subject to Section 16, below, once this Agreement is signed by all parties, it shall be binding upon, and shall inure to the benefit of, all parties, and each parties' respective heirs, successors, assigns, transferees, agents, servants, employees and representatives.

16. Assignment.

(a) This Agreement is personal to CONSULTANT and there shall be no assignment by CONSULTANT of its rights or obligations under this Agreement without the prior written approval of the City Manager or his/her designee. Any attempted assignment by CONSULTANT, its successors or assigns, shall be null and void unless approved in writing by the City Manager or his/her designee.

(b) CONSULTANT hereby agrees not to assign the payment of any monies due CONSULTANT from CITY under the terms of this Agreement to any other individual(s), corporation(s) or entity(ies). CITY retains the right to pay any and all monies due CONSULTANT directly to CONSULTANT.

17. Compliance With Law. In providing the services required under this Agreement, CONSULTANT shall at all times comply with all applicable laws of the United States, the State of California and CITY, and with all applicable regulations promulgated by federal, state, regional, or local administrative and regulatory agencies, now in force and as they may be enacted, issued, or amended during the term of this Agreement.

18. Waiver. The waiver by either party of a breach by the other of any provision of this Agreement shall not constitute a continuing waiver or a waiver of any subsequent breach of either the same or a different provision of this Agreement. No provisions of this Agreement may be waived unless in writing and signed by all parties to this Agreement. Waiver of any one provision herein shall not be deemed to be a waiver of any other provision herein.

19. Governing Law and Venue. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding, however, any conflict of laws rule which would apply the law of another jurisdiction. Venue for purposes of the filing of any action regarding the enforcement or interpretation of this Agreement and any rights and duties hereunder shall be Fresno County, California.

20. Headings. The section headings in this Agreement are for convenience and reference only and shall not be construed or held in any way to explain, modify or add to the interpretation or meaning of the provisions of this Agreement.

21. Severability. The provisions of this Agreement are severable. The invalidity, or unenforceability of any one provision in this Agreement shall not affect the other provisions.

22. Interpretation. The parties acknowledge that this Agreement in its final form is the result of the combined efforts of the parties and that, should any provision of this Agreement be found to be ambiguous in any way, such ambiguity shall not be resolved by construing this Agreement in favor of or against either party, but rather by construing the terms in accordance with their generally accepted meaning.

23. Attorney's Fees. If either party is required to commence any proceeding or legal action to enforce or interpret any term, covenant or condition of this Agreement, the prevailing party in such proceeding or action shall be entitled to recover from the other party its reasonable attorney's fees and legal expenses.

24. Exhibits. Each exhibit and attachment referenced in this Agreement is, by the reference, incorporated into and made a part of this Agreement.

25. Precedence of Documents. In the event of any conflict between the body of this Agreement and any Exhibit or Attachment hereto, the terms and conditions of the body of this Agreement shall control and take precedence over the terms and conditions expressed within the Exhibit or Attachment. Furthermore, any terms or conditions contained within any Exhibit or Attachment hereto which purport to modify the allocation of risk between the parties, provided for within the body of this Agreement, shall be null and void.

26. Cumulative Remedies. No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

27. No Third Party Beneficiaries. The rights, interests, duties and obligations defined within this Agreement are intended for the specific parties hereto as identified in the preamble of this Agreement. Notwithstanding anything stated to the contrary in this Agreement, it is not intended that any rights or interests in this Agreement benefit or flow to the interest of any third parties.

28. Extent of Agreement. Each party acknowledges that they have read and fully understand the contents of this Agreement. This Agreement represents the entire and integrated agreement between the parties with respect to the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be modified only by written instrument duly authorized and executed by both CITY and CONSULTANT

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

CITY OF FRESNO,
a California municipal corporation


By: 
Michael Carbajal,
Director
Department of Public Utilities

ATTEST:
YVONNE SPENCE, CMC
City Clerk

By: 
Deputy

No signature of City Attorney required.
Standard Document #DPU-S 8.0 has been
used without modification, as certified by
the undersigned.

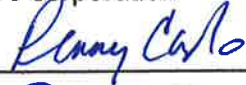
By: 
Anita Luera
Senior Engineering Technician
Department of Public Utilities

REVIEWED BY:

Rosa Lau Staggs,
Wastewater Manager
Department of Public Utilities

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

- Attachments:
1. Exhibit A - Scope of Services
 2. Exhibit B - Insurance Requirements
 3. Exhibit C - Conflict of Interest Disclosure Form

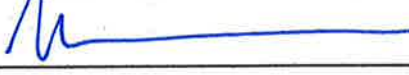
CAROLLO ENGINEERS, INC.,
a Delaware corporation

By: 

Name: Penny Carlo

Title: Associate Vice President

(if corporation or LLC, Board
Chair, Pres. or Vice Pres.)

By: 

Name: Michael W. Barnes

Title: Corporate Secretary

(if corporation or LLC, CFO,
Treasurer, Secretary or Assistant
Secretary)

Any Applicable Professional License:
Number: C55379
Name: Penny Abright Carlo
Date of Issuance: 7/24/1996

By: 

NAME: EMIL CASARES

TITLE: VICE PRESIDENT

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

Exhibit A

SCOPE OF SERVICES

Consultant Service Agreement between City of Fresno (“City”) and Carollo Engineers, Inc. (“Consultant”)

WORKPLANS FOR THE GROUNDWATER MONITORING NETWORK AND ARSENIC & MANGANESE GROUNDWATER ASSESSMENT

PROJECT TITLE

Under this Scope of Work, Carollo Engineers, Inc. (Carollo), in association with Luhdorff & Scalmanini, Consulting Engineers (LSCE), will provide professional engineering services to prepare Workplans for the Groundwater Monitoring Network and Arsenic and Manganese 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.

This 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 will establish the activities and tasks to be conducted to evaluate the impact of arsenic and manganese 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. The workplans will provide the justifications needed to support the proposed project objectives and elements, and include implementation schedules. The professional services required to complete the project deliverables are described below.

CONSULTANT's scope of work shall include the following tasks.

TASK 1 - PROJECT MANAGEMENT AND QUALITY 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 a Kick-Off Meeting, periodic meetings, work order administration, monthly progress reports, coordination with RWRF staff, and quality management.

TASK 1.1 - PROJECT MANAGEMENT, COMMUNICATION, AND COORDINATION

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 team and City team members. The decision log will contain decisions made during regular meetings, workshops, and phone conversations with RWRF staff. The decision log will list the date the decision was made, the type of

meeting in which it was made, individuals involved in making the decision, and the nature of the decision. The action item log will describe the outstanding action required, responsible party, and due date.

TASK 1.2 - PROJECT KICK-OFF MEETING

Carollo will facilitate a project Kick-off Meeting with RWRF staff to develop and define the City's goals and objectives for the workplans. This will be a working meeting with participation from key RWRF staff to discuss the RWRF goals and objectives, preferences, key concerns and project constraints. Additionally, Carollo will review the overall scope, schedule, and budget, and establish lines of communication between the Carollo team and RWRF staff. Carollo will provide an initial data request list and list of past studies and work to review. The list will be updated during the course of the project. Key members of the Carollo team will attend the Kick-Off Meeting.

TASK 1.3 - MEETINGS

One meeting will be held with the Regional Water Quality Control Board (RWQCB). Key staff from the City and Carollo team will attend. The purpose of the meeting is to review the WDR provisions applicable to the workplans, discuss any potential issues of concern, clarify RWQCB expectations for the workplans and the implementation phase.

Four progress meetings will be held at the RWRF. The progress meetings are anticipated to occur at approximately the following time frames in the project as the work develops:

- Same day and prior to the meeting with RWQCB, to discuss key findings of the background information review (Tasks 2.1 and 2.2) and to review the agenda items for the RWQCB meeting.
- To review progress on the conceptual model development (Task 4.2) and preceding tasks (Task 3 (data compilation and management), Task 4.2 (review of As/Mn studies) that support the development of the conceptual model and upcoming technical analyses for both workplans.
- To discuss and review development of the workplans
- To review the draft workplans.

TASK 1 DELIVERABLES

- Meeting minutes.
- Monthly progress reports.

TASK 2 – REVIEW BACKGROUND INFORMATION

This task pertains to reviewing general background information relative to both the monitoring well network workplan and the As/Mn workplan. The following subtasks will be performed as part of Task 2.

TASK 2.1 - REVIEW RWRF STUDY AREA AND GROUNDWATER INFLUENCES

Review current and past RWRF pond operations, effluent percolation and reclamation, and off-site land uses in the vicinity to confirm the team's understanding of regional influences on the groundwater quality, in addition to or independent of the RWRF. Current information (subsequent to the 2009 BPTC Evaluation and the 2015 Report of Waste Discharge) will be obtained and reviewed. The Carollo team will rely on findings from past research and analysis of the RWRF that was completed for the BPTC studies for historical context and legacy issues.

TASK 2.2 – REGULATORY REVIEW

The workplans need to be considered together within a regulatory context so the City can effectively plan for the Central Valley policies that will change the way the RWRF's discharge is managed and regulated.

The RWRF operates under WDR Order No. R5-2018-0080. The Carollo team will review the WDR at the onset of the project. The WDR established the need for the RWRF to develop the As/Mn and monitoring well evaluation workplans. The WDR lists the objectives and specific requirements for the workplans. The WDR also specifically prohibits any further degradation of As, Mn, and nitrate in the downgradient groundwater.

In addition to the WDR, the Carollo team will review the new plans and policies established in the Central Valley Salt and Nitrate Management Plan (SNMP) and the Basin Plan Amendment (BPA) for the Region 5 area. The BPA contains a new Nitrate Control Program and future salinity control measures. The Region 5 BPA was adopted by the Central Valley Water Board in May 2018. The programs will become effective after approval by the State Water Board and the Office of Administrative Law. While the timeframe is not known, planning ahead by the RWRF for the new policies starts with these initial workplans.

TASK 2.3 – SUMMARY MEMO

Summarize regulatory requirements and Central Valley policies that need to be considered for the workplans and for aligning the RWRF's long-term plans with the SNMP and CV-SALTS.

TASK 2 - DELIVERABLES

Summary Memo

TASK 3 – DATA COMPILATION AND MANAGEMENT

This task incorporates all of the tasks needed to assemble and process historical site groundwater data to support the other tasks of workplan development. Analysis of historical site data is critical for development of the physical conceptual site model, evaluating the monitoring

well network, and to provide the basis for future numerical modeling of groundwater and key constituents, including arsenic and manganese. The databases and associated analysis tools developed as part of this task will support these efforts.

TASK 3.1 – ASSEMBLE DATABASES

Groundwater data for the RWRF are currently stored in various Excel spreadsheets. Carollo will transfer the data from these spreadsheets into a relational database management system (DBMS) so that the data can be easily updated and queried for various subsequent analyses. Data tables will be created for different categories of data, for example, monitoring well information will be stored in a well information table, groundwater level and constituent concentration data will be stored in separate tables for each with all tables utilizing the location ID as the primary key to relate data in different tables.

In addition, Carollo will develop a geodatabase of site geographic features, e.g., monitoring well locations, extraction well locations, percolation ponds, irrigation plots, etc., that will allow data to be queried or displayed using geographic information systems (GIS).

Note that as part of developing our Statement of Qualifications, Carollo has already developed a preliminary geodatabase and has processed water quality data for the 5-year period ending in October 2018. The work for this task will utilize these preliminary databases as the starting point for work under this task. The City shall provide Carollo with all available data spreadsheets or existing databases relevant to this scope of work.

TASK 3.2 – ANALYZE GROUNDWATER DATA

Carollo will develop a set of queries and automated analysis tools that will allow for the assembled groundwater data to be extracted and processed into a useful format to support various analyses. These tools will include a set of database queries designed for common data needs, for example, extracting a time series of water levels or concentration data for a particular well or exporting observed water level or concentration data for a particular constituent for a snapshot in time for use in contour mapping. In addition, Carollo will develop a set of utilities for plotting time series water level or concentration data. These types of charts provide an invaluable tool for understanding how groundwater conditions vary over time at a particular well and across multiple wells completed in various units of the groundwater system beneath and in the vicinity of the RWRF. For efficiency, these tools will be adapted and customized for the RWRF from existing previously developed tools.

Analysis of groundwater data will address the use of USEPA's 2009 *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance*, as specified by WDRs Finding 81 and Attachment D. This will ensure the groundwater data analyses for both the As and Mn Assessment and the Monitoring Well Network are acceptable to the CVRWQCB. Other statistical approaches will be used to aid in the determination of the POC.

TASK 3.3 – CHARACTERIZE GROUNDWATER MOUND AND GRADIENT

Once the groundwater data have been assembled and analysis tool have been developed, the data will be used to characterize the groundwater system beneath and in the vicinity of the RWRF. This evaluation will inform the physical conceptual model for groundwater flow and arsenic/manganese transport as well as provide critical information for identifying the area to be included in the domestic well survey and for evaluating the existing groundwater monitoring network. This analysis will characterize aspects of the groundwater flow system including mounding beneath the RWRF, groundwater gradients and flow directions at different depth horizons beneath and in the vicinity of the RWRF, and spatial variations of water quality and chemistry including horizontal and vertical extent.

TASK 3 DELIVERABLES

- Databases of site groundwater monitoring data and geospatial features.
- Database queries for extracting groundwater level and chemistry data in time series by well or as a snapshot of all data for a specified time interval.
- Automated tools to create time series charts of groundwater level or chemical data by well.
- Technical memorandum describing the current characterization of groundwater flow and relevant water quality.

TASK 4 – AS/MN ASSESSMENT WORK PLAN

The Workplan will establish the overall approach to address the three objectives established in the WDR. The objectives are to:

- Evaluate horizontal and vertical extent of the elevated arsenic and manganese concentrations in the groundwater beneath and downgradient of the RWRF;
- Evaluate potential impacts of elevated concentrations on downgradient beneficial uses. This shall include conducting a survey of domestic wells within an appropriate radius of the RWRF, and proposing a sampling plan and schedule;
- Propose monitoring locations (new or existing wells) for the proposed point of compliance.

The Workplan will include a summary of the RWRF including current operations and historical practices that led to the release of naturally occurring As and Mn in the aquifer. The Workplan will include a statement of the problem. The proposed approach will integrate quantitative tools (analytical data, modeling and statistics) with an understanding of current and past land uses in the region. It will be important to consider geochemical and redox conditions, the regional/natural occurrence of As and Mn in groundwater, natural influences, and other potential contaminant sources. Other land uses within or near the zone of contribution of the RWRF discharge may also influence the occurrence and mobility of As and Mn in groundwater.

The As and Mn Assessment Workplan will use the physical conceptual model, planned numerical flow and transport modeling results, and other analyses to provide the scientific basis for the proposed POC. This includes improved understanding of the groundwater flow system

and a reasonable determination of the spatial extent of groundwater affected by the RWRF discharge, and the mobilization of As and Mn in groundwater due to the discharge.

The Workplan will propose the use of a numerical groundwater model to address the WDR objectives. A reactive transport model that couples physical and geochemical mechanisms controlling the fate of As and Mn is necessary to establish the As and Mn POC, inform the development of the updated monitoring well network, and assess possible impacts to private wells. The numerical model, along with complementary technical analyses, will provide the RWRF with the scientific basis to make sound decisions during implementation of this Workplan and in the future.

The Workplan will present a sampling strategy and plan to be conducted during implementation. Sampling will be needed to complete the Domestic Well Impact Evaluation. Sampling may also be needed to refine the monitoring well network and refine the location of the POC. Samples will be analyzed for As and Mn at a minimum. Consideration will be given to analyzing the domestic well samples for other analytes, including isotopes, to help identify probable sources and relative contributions from the sources.

The workplan will also propose an outreach campaign to help the RWRF effectively communicate with well owners in the area. The goal of the outreach campaign is to educate well owners about regional and local groundwater quality and increase well owner cooperation for the sampling program. The campaign will be developed in coordination with the City.

TASK 4.1 – REVIEW PRIOR AS/MN STUDIES

The concerns about elevated As and Mn concentrations in groundwater have been known for a long time. The RWRF has conducted numerous studies to investigate the causes and extent of the elevated As and Mn. These studies formed the basis for the need for an off-site POC. Carollo will review the prior work and data compiled during the course of those studies.

TASK 4.2 – DEVELOP PHYSICAL CONCEPTUAL MODEL

The purpose of the physical conceptual model is to provide a framework of understanding all aspects of the groundwater flow system including groundwater movement, recharge and percolation, geochemistry, and contaminant transport. The physical conceptual model will include a graphical representation of the hydrogeologic system (geologic cross sections), and it will also include descriptions of the hydrogeologic system and tables of supporting information. Developing an accurate physical conceptual model is the most important step in the process of a groundwater numerical modeling. A description of the physical conceptual model for groundwater flow and As/Mn dissolution, transport, and precipitation (along with other chemical parameters involved in the pertinent chemical transformations) should be included in the workplan because the conceptual model, coupled with the domestic well survey, forms the basis for evaluating potential downstream influence of the RWRF on the distribution of dissolved As/Mn in the groundwater system.

All of the knowledge from previous studies on As/Mn behavior feeds into the physical conceptual model along with the current characterization of groundwater flow and water quality conditions in the groundwater system. All subsequent analyses, including evaluation of As/Mn extent and potential downgradient impacts, identification of the area to be included in the initial domestic well survey, and assessment of the monitoring network, are derived from the conceptual model. In addition, the physical conceptual model will determine, in part, the level of complexity to be employed for future modeling of arsenic and manganese transport (either a more complex flow and reactive transport model or some type of geochemical model coupled with analytical flow/transport calculations) as part of the actual compliance assessment.

TASK 4.3 – DOMESTIC WELL SURVEY

The domestic well survey is a high priority task in the WDRs. The initial identification of potentially affected domestic wells must be included in the Workplan, along with a strategy and schedule for sampling wells (during the implementation phase) that could be impacted. The survey will preliminarily identify wells that are potentially located within the area where groundwater quality is influenced by the RWRF discharge. The initial survey is also planned to include wells that cannot plausibly be affected by RWRF discharge. The approach for conducting the well survey will initially rely on our current knowledge of the As and Mn plume as estimated to be associated with the RWRF as informed by the conceptual model. The approach will also consider the regional (natural) occurrence of As and Mn in groundwater, and this means that it will include domestic wells that are upgradient of the RWRF and/or otherwise in areas not anticipated to be influenced by discharges from the RWRF. The well survey will include collection of domestic well data from DWR's Well Completion Report database, along with aerial photography to identify domestic wells in the considered area.

- Review prior domestic well surveys conducted by the RWRF
- Evaluate mound and As/Mn plume
- Complete identification of domestic wells

TASK 4.4 – DEVELOP AS/MN ASSESSMENT WORKPLAN

The Workplan will summarize the following topics and the technical approach to address the WDR objective. The Workplan will integrate the work completed in Tasks 1 through 3 to inform the Workplan and findings from previous tasks in this Scope of Work:

- Background summary and statement of problem
- Purpose of Workplan
- Summary of regulations
- Beneficial uses of the groundwater
- Summary of existing studies/regional conditions
- Description of the physical conceptual model
- Modeling approach
- Statistical methods
- Findings from evaluation of monitoring well network, and proposal to install new wells, if necessary for purposes of the As/Mn Assessment

- Groundwater sampling plan
- Outreach strategy.

The Workplan will establish the main tasks, the sequence of work and implementation schedule for major milestones.

TASK 4.5 – RESPOND TO RWQCB COMMENTS

It is expected that a nominal effort may be needed to address and respond to any comments from the Board.

TASK 4 DELIVERABLES

- Draft As/Mn Assessment Workplan
- Final As/Mn Assessment Workplan
- Revised Final or Amendment (if needed following RWQCB review)

TASK 5 – WELL NETWORK EVALUATION AND INSTALLATION WORKPLAN

The Workplan for the monitoring well evaluation will address WDR Provision J.1.b., and the requirements set forth in Attachment D of the WDR. The Workplan will propose a two-tiered process for updating the monitoring well network.

- Tier 1 - general broad purpose network evaluation, as established in the WDR, Provision J.1.b.
- Tier 2 - additional wells to address the As/Mn POC.
- Possible other immediate wells to help fast-track the As/Mn evaluation

TASK 5.1 – DEVELOP WELL SPECIFICATIONS

Well specifications will be established based on expectations of the RWQCB and considerations of the anticipated compliance criteria established in the SNMP. The objectives to be accomplished with the updated monitoring network will be discussed at the meeting with the RWQCB. The monitoring well design criteria will include borehole diameter; casing and screen material, diameter, and centralizer spacing; type of well caps; anticipated depth of well, length of well casing, and length and position of perforated interval; thickness, position and composition of surface seal/sanitary seal, and intermediate bentonite seals (as applicable); anticipated screen slot size and filter pack; instrumentation and equipment; and wellhead security.

TASK 5.2 – EVALUATE EXISTING MONITORING WELL CONDITIONS

In 2009, the RWRF conducted a detailed evaluation of the physical condition of all wells in their monitoring well network. This evaluation will provide a foundation for this task. Carollo/LSCE will coordinate closely with the RWRF to review the past evaluation and conduct a site visit to confirm current conditions and identify potential issues and concerns. This task also includes reviewing groundwater quality data to help the team assess each monitoring well for non-structural issues that determine suitability or

functionality for continued use (dry or expected to become dry in the near future, off-site influences or pond operation influences on groundwater quality, contamination issues, etc.)

TASK 5.3 – DETERMINE SUITABILITY OF NETWORK

The network will be reviewed to determine overall suitability to characterize upgradient groundwater and downstream impacts. The analysis will be based on the physical conceptual model in conjunction with the planned discharge and reclamation pumping to gage the dimensions of the mound and transport vertically and horizontally beneath and in the vicinity of the RWRF as a result of pumping and discharge to land on adjacent fields.

For this task, the Carollo team proposes to use the methodology and tools available as part of the Monitoring and Remediation Optimization System (MAROS) software developed for the Air Force Civil Engineer Center (AFCEC) and endorsed by USEPA for design and evaluation of monitoring well networks. MAROS is a public-domain, data management and evaluation tool specifically designed to improve groundwater monitoring programs using both qualitative and quantitative methods to help determine the appropriate number of sample locations (well sufficiency and redundancy).

In addition to the tools available through the MAROS software, Carollo has developed specialty GIS tools for the assessment of monitoring well networks that will be used to determine the effectiveness of the existing well network and identify gaps. The monitoring well network analysis and design will specifically address both lateral and vertical extent of potential groundwater impacts.

In addition to the suitability analysis of the existing monitoring well network at the site, the results and findings from Tasks 4.2 and 4.3 will be used to inform off-site well suitability, with particular emphasis on regional data developed during the Conceptual Model and domestic well survey.

The monitoring well network evaluation will identify gaps and locations and depths where new wells are needed and will determine which wells, if any, can be abandoned due to structural or functional problems, if the location is problematic (influenced by non-RWRF activities), or the perforated depth is not appropriate to meet the monitoring objectives. A table with accompanying map(s) will be produced that includes rationales for each monitoring well in the network, as well as the timing for possible removal or replacement as needed.

TASK 5.4 - DEVELOP MAP OF PROPOSED NETWORK

Based on the outcomes of Tasks 5.2 and 5.3, Carollo/LSCE will develop a map of the proposed monitoring well network that shows the existing monitoring wells to be included in the proposed network, existing wells to be removed from the monitoring program and properly destroyed, and the locations of new wells to be installed to meet monitoring objectives.

TASK 5.5 - DEVELOP WELL NETWORK EVALUATION WORKPLAN

The Workplan will incorporate the findings from Tasks 5.1 through 5.4 into the following sections:

- General Information
- Drilling Details
- Monitoring Well Design
- Well Development Procedures
- Well Survey
- Schedule for Completion of Work (including a phased schedule for monitoring wells as needed for the As/Mn Assessment and/or to address other more immediate site characterization needs due to the extent of dry monitoring wells, followed by monitoring wells needed for POC purposes)
- (Appendix): Groundwater Sampling and Analysis Plan

TASK 5.6 – RESPOND TO RWQCB COMMENTS

It is expected that a nominal effort may be needed to address and respond to any comments from the Board.

TASK 5 DELIVERABLES

- Draft Workplan
- Final Workplan
- Revised Final (or Amendment) if needed following RWQCB review.

TIME OF PERFORMANCE

The draft workplans will be completed by November 15, 2019. The final workplans will be completed by December 10, 2019. If the RWQCB requires any revisions or concerns to address following their review of the workplans, Carollo will address the comments within the schedule dictated by the RWQCB.

SCHEDULE OF FEES

The method of payment for this project is lump sum. Total compensation for the services performed shall be \$250,000. The City shall pay Carollo in monthly installments based upon monthly progress reports of the percentage of work completed and invoices submitted by Carollo for services performed. Table A provides a breakdown of the fee by task and personnel.

TABLE A				
WORKPLANS FOR THE GROUNDWATER MONITORING NETWORK AND				
ARSENIC & MANGANESE GROUNDWATER ASSESSMENT				
April 3, 2019				
Task	Total	FY2019	FY2020	
Task 1. Project Management and Meetings	\$36,420	\$12,217	\$24,203	
1.1 Project Management, Communication and Coordination	\$11,830	\$0	\$11,830	
1.2 Kick-off Meeting	\$6,030	\$6,030	\$0	
1.3 Meetings	\$18,560	\$6,187	\$12,373	
Task 2. Review Background Information	\$13,020	\$13,020	\$0	
2.1 Review RWRf Study Area and Groundwater Influences	\$4,980	\$4,980	\$0	
2.2 Regulatory Review	\$3,130	\$3,130	\$0	
2.3 Summary Memo	\$4,910	\$4,910	\$0	
Task 3. Data Compilation and Management	\$24,050	\$24,050	\$0	
3.1 Assemble Databases	\$6,200	\$6,200	\$0	
3.2 Analyze Groundwater Data	\$6,870	\$6,870	\$0	
3.3 Characterize Groundwater Mound and Gradient	\$10,980	\$10,980	\$0	
Task 4. As/Mn Workplan	\$117,040	\$41,163	\$75,877	
4.1 Review Prior As/Mn Studies	\$11,220	\$11,220	\$0	
4.2 Develop Conceptual Model	\$55,490	\$27,745	\$27,745	
4.3 Domestic Well Survey	\$10,990	\$2,198	\$8,792	
4.4 Develop As/Mn Workplan	\$35,230	\$0	\$35,230	
4.5 Respond to RWQCB Comments	\$4,110	\$0	\$4,110	
Task 5. Well Network Evaluation Workplan	\$59,470	\$9,551	\$49,920	
5.1 Develop Well Specifications	\$6,670	\$5,003	\$1,668	
5.2 Evaluate Existing Monitoring Well Conditions	\$9,800	\$4,548	\$5,252	
5.3 Determine Suitability of Network	\$19,600	\$0	\$19,590	
5.4 Develop Map of Proposed Network	\$4,940	\$0	\$4,940	
5.5 Develop Well Network Evaluation Work Plan	\$14,140	\$0	\$14,140	
5.6 Respond to RWQCB comments	\$4,330	\$0	\$4,330	
TOTAL	\$250,000	\$100,000	\$150,000	

Exhibit B

INSURANCE REQUIREMENTS

Consultant Service Agreement between City of Fresno ("CITY") and Carollo Engineers, Inc. ("CONSULTANT")

WORKPLANS FOR THE GROUNDWATER MONITORING NETWORK AND ARSENIC & MANGANESE GROUNDWATER ASSESSMENT PROJECT TITLE

MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

1. The most current version of Insurance Services Office (ISO) Commercial General Liability Coverage Form CG 00 01, providing liability coverage arising out of your business operations. The Commercial General Liability policy shall be written on an occurrence form and shall provide coverage for "bodily injury," "property damage" and "personal and advertising injury" with coverage for premises and operations (including the use of owned and non-owned equipment), products and completed operations, and contractual liability (including, without limitation, indemnity obligations under the Agreement) with limits of liability not less than those set forth under "Minimum Limits of Insurance."
2. The most current version of ISO *Commercial Auto Coverage Form CA 00 01, providing liability coverage arising out of the ownership, maintenance or use of automobiles in the course of your business operations. The Automobile Policy shall be written on an occurrence form and shall provide coverage for all owned, hired, and non-owned automobiles or other licensed vehicles (Code 1- Any Auto). If personal automobile coverage is used, the CITY, its officers, officials, employees, agents, and volunteers are to be listed as additional insureds.
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. Professional Liability (Errors and Omissions) insurance appropriate to CONSULTANT's profession.

MINIMUM LIMITS OF INSURANCE

CONSULTANT, or any party the CONSULTANT subcontracts with, shall maintain limits of liability of not less than those set forth below. However, insurance limits available to CITY, its officers, officials, employees, agents, and volunteers as additional insureds, shall be the greater of the minimum limits specified herein or the full limit of any insurance proceeds available to the named insured:

1. **COMMERCIAL GENERAL LIABILITY:**
 - (i) \$1,000,000 per occurrence for bodily injury and property damage;
 - (ii) \$1,000,000 per occurrence for personal and advertising injury;
 - (iii) \$2,000,000 aggregate for products and completed operations; and,

- (iv) \$2,000,000 general aggregate applying separately to the work performed under the Agreement.
- 2. **COMMERCIAL AUTOMOBILE LIABILITY:**
\$1,000,000 per accident for bodily injury and property damage.
- 3. **WORKERS' COMPENSATION INSURANCE** as required by the State of California with statutory limits.
- 4. **EMPLOYER'S LIABILITY:**
 - (i) \$1,000,000 each accident for bodily injury;
 - (ii) \$1,000,000 disease each employee; and,
 - (iii) \$1,000,000 disease policy limit.
- 5. **PROFESSIONAL LIABILITY** (Errors and Omissions):
 - (i) \$1,000,000 per claim/occurrence; and,
 - (ii) \$2,000,000 policy aggregate.

UMBRELLA OR EXCESS INSURANCE

In the event CONSULTANT purchases an Umbrella or Excess insurance policy(ies) to meet the "Minimum Limits of Insurance," this insurance policy(ies) shall "follow form" and afford no less coverage than the primary insurance policy(ies). In addition, such Umbrella or Excess insurance policy(ies) shall also apply on a primary and non-contributory basis for the benefit of the CITY, its officers, officials, employees, agents, and volunteers.

DEDUCTIBLES AND SELF-INSURED RETENTIONS

CONSULTANT shall be responsible for payment of any deductibles contained in any insurance policy(ies) required herein and CONSULTANT shall also be responsible for payment of any self-insured retentions. Any deductibles or self-insured retentions must be declared to on the Certificate of Insurance, and approved by, the CITY's Risk Manager or designee. At the option of the CITY's Risk Manager or designee, either:

- (i) The insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CITY, its officers, officials, employees, agents, and volunteers; or
- (ii) CONSULTANT shall provide a financial guarantee, satisfactory to CITY's Risk Manager or designee, guaranteeing payment of losses and related investigations, claim administration and defense expenses. At no time shall CITY be responsible for the payment of any deductibles or self-insured retentions.

OTHER INSURANCE PROVISIONS/ENDORSEMENTS

The General Liability and Automobile Liability insurance policies are to contain, or be endorsed to contain, the following provisions:

- 1. CITY, its officers, officials, employees, agents, and volunteers are to be covered as additional insureds. CONSULTANT shall establish additional insured status for the City and for all ongoing and completed operations by use of ISO Form CG 20 10 11 85 or both CG 20 10 10 01 and CG 20 37 10 01 or by an executed manuscript insurance company

endorsement providing additional insured status as broad as that contained in ISO Form CG 20 10 11 85.

2. The coverage shall contain no special limitations on the scope of protection afforded to CITY, its officers, officials, employees, agents, and volunteers. Any available insurance proceeds in excess of the specified minimum limits and coverage shall be available to the Additional Insured.
3. For any claims relating to this Agreement, CONSULTANT's insurance coverage shall be primary insurance with respect to the CITY, its officers, officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, agents, and volunteers shall be excess of CONSULTANT's insurance and shall not contribute with it. CONSULTANT shall establish primary and non-contributory status by using ISO Form CG 20 01 04 13 or by an executed manuscript insurance company endorsement that provides primary and non-contributory status as broad as that contained in ISO Form CG 20 01 04 13.

The Workers' Compensation insurance policy is to contain, or be endorsed to contain, the following provision: CONSULTANT and its insurer shall waive any right of subrogation against CITY, its officers, officials, employees, agents, and volunteers.

If the Professional Liability (Errors and Omissions) insurance policy is written on a claims-made form:

1. The retroactive date must be shown, and must be before the effective date of the Agreement or the commencement of work by CONSULTANT.
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the Agreement work or termination of the Agreement, whichever occurs first, or, in the alternative, the policy shall be endorsed to provide not less than a five (5) year discovery period.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the effective date of the Agreement or the commencement of work by CONSULTANT, CONSULTANT must purchase "extended reporting" coverage for a minimum of five (5) years completion of the Agreement work or termination of the Agreement, whichever occurs first.
4. A copy of the claims reporting requirements must be submitted to CITY for review.
5. These requirements shall survive expiration or termination of the Agreement.

All policies of insurance required herein shall be endorsed to provide that the coverage shall not be cancelled, non-renewed, reduced in coverage or in limits except after thirty (30) calendar days written notice by certified mail, return receipt requested, has been given to CITY. CONSULTANT is also responsible for providing written notice to the CITY under the same terms and conditions. Upon issuance by the insurer, broker, or agent of a notice of cancellation, non-renewal, or reduction in coverage or in limits,

CONSULTANT shall furnish CITY with a new certificate and applicable endorsements for such policy(ies). In the event any policy is due to expire during the work to be performed for CITY, CONSULTANT shall provide a new certificate, and applicable endorsements, evidencing renewal of such policy not less than fifteen (15) calendar days prior to the expiration date of the expiring policy.

Should any of the required policies provide that the defense costs are paid within the Limits of Liability, thereby reducing the available limits by any defense costs, then the requirement for the Limits of Liability of these polices will be twice the above stated limits.

The fact that insurance is obtained by CONSULTANT shall not be deemed to release or diminish the liability of CONSULTANT, including, without limitation, liability under the indemnity provisions of this Agreement. The policy limits do not act as a limitation upon the amount of indemnification to be provided by CONSULTANT. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of CONSULTANT, its principals, officers, agents, employees, persons under the supervision of CONSULTANT, vendors, suppliers, invitees, consultants, sub-consultants, subcontractors, or anyone employed directly or indirectly by any of them.

SUBCONTRACTORS - If CONSULTANT subcontracts any or all of the services to be performed under this Agreement, CONSULTANT shall require, at the discretion of the CITY Risk Manager or designee, subcontractor(s) to enter into a separate Side Agreement with the City to provide required indemnification and insurance protection. Any required Side Agreement(s) and associated insurance documents for the subcontractor must be reviewed and preapproved by CITY Risk Manager or designee. If no Side Agreement is required, CONSULTANT will be solely responsible for ensuring that it's subcontractors maintain insurance coverage at levels no less than those required by applicable law and is customary in the relevant industry.

VERIFICATION OF COVERAGE

CONSULTANT shall furnish CITY with all certificate(s) and **applicable endorsements** effecting coverage required hereunder. All certificates and **applicable endorsements** are to be received and approved by the CITY'S Risk Manager or his/her designee prior to CITY'S execution of the Agreement and before work commences. All non-ISO endorsements amending policy coverage shall be executed by a licensed and authorized agent or broker. Upon request of CITY, CONSULTANT shall immediately furnish City with a complete copy of any insurance policy required under this Agreement, including all endorsements, with said copy certified by the underwriter to be a true and correct copy of the original policy. This requirement shall survive expiration or termination of this Agreement.

Exhibit C

DISCLOSURE OF CONFLICT OF INTEREST

WORKPLANS FOR THE GROUNDWATER MONITORING NETWORK AND
ARSENIC & MANGANESE GROUNDWATER ASSESSMENT
PROJECT TITLE

		YES*	NO
1	Are you currently in litigation with the City of Fresno or any of its agents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Do you represent any firm, organization or person who is in litigation with the City of Fresno?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Do you currently represent or perform work for any clients who do business with the City of Fresno?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Are you or any of your principals, managers or professionals, owners or investors in a business which does business with the City of Fresno, or in a business which is in litigation with the City of Fresno?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Are you or any of your principals, managers or professionals, related by blood or marriage to any City of Fresno employee who has any significant role in the subject matter of this service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Do you or any of your subcontractors have, or expect to have, any interest, direct or indirect, in any other contract in connection with this Project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
* If the answer to any question is yes, please explain in full below.			

Explanation: _____

Penny Carl
Signature

4-30-19
Date

Penny Carl
(name)

Carroll Engineers, Inc
(company)

710 W. Pinedale Ave.
(address)

Fresno, CA 93711
(city state zip)

Additional page(s) attached.

**FIRST AMENDMENT TO
AGREEMENT**

THIS FIRST AMENDMENT TO AGREEMENT (Amendment) made and entered into effect the 25th 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

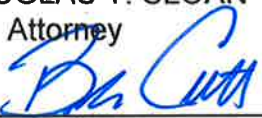
By: 
Michael Carbajal, Director
Department of Public Utilities

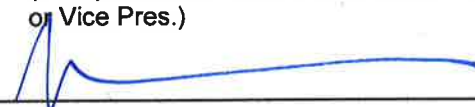
By: 

Name: Penny Carlo

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

APPROVED AS TO FORM:
DOUGLAS T. SLOAN
City Attorney

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

By: 

Name: Michael W. Barnes

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

ATTEST:
YVONNE SPENCE, CRM MMC
City Clerk

By:  10/25/19
Date
Deputy

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.