

PROFESSIONAL SERVICES AGREEMENT WITH
CH2M HILL ENGINEERS, INC.
SRP Well Testing and Improvements Evaluation

This Agreement for well testing and improvements ("Agreement") is effective and entered into between CITY OF GLENDALE, an Arizona municipal corporation ("City"), and CH2M Hill Engineers, Inc., a Delaware corporation, authorized to do business in Arizona, and doing business in Arizona (the "Consultant"), as of the 21 day of November, 2014.

RECITALS

- A. City intends to undertake a project for the benefit of the public and with public funds that is more fully set forth in **Exhibit A**, (the "Project");
- B. City desires to retain the professional services of Consultant to perform those specific duties and produce the specific work as set forth in the attached Scope of Work ("SOW"), which is attached hereto as **Exhibit B**;
- C. Consultant desires to provide City with professional services ("Services") consistent with the best consulting or architectural practices and standards set forth in this Agreement, in order to complete the Projects; and
- D. City and Consultant desire to memorialize their agreement with this document.

AGREEMENT

In consideration of the Recitals, which are confirmed as true and correct and incorporated by this reference, the mutual promises and covenants contained in this Agreement, and other good and valuable consideration, City and Consultant agree as follows:

1. **Key Personnel; Sub-Consultants.**

- 1.1 **Professional Services.** Consultant will provide all services necessary to assure the Project is completed in a timely and efficient manner, consistent with Project requirements, including, but not limited to, working in close interaction and interfacing with City and its designated employees, and working closely with others, including other contractors or consultants, retained by City.
- 1.2 **Project Team.**
 - a. **Project Manager.**
 - (1) Consultant will designate an employee as Project Manager with sufficient training, knowledge, and experience to, in the City's option, complete the Project and handle all aspects of the Project such that the work produced by Consultant is consistent with applicable standards as detailed in this Agreement;
 - (2) The City must approve the designated Project Manager; and
 - (3) To assure the Project schedule is met, Project Manager may be required to devote no less than a specific amount of time as set out in **Exhibit A**.
 - b. **Project Team.**
 - (1) The Project manager and all other employees assigned to the project by Consultant will comprise the "Project Team."
 - (2) Project Manager will have responsibility for and will supervise all other employees assigned to the project by Consultant.
 - (3) Consultant will provide a Project Team to perform all work necessary to complete the Project.

- (4) Consultant certifies that members of the Project Team meet or exceed the level of competence that the City may reasonably expect of a person performing his or her assigned duties, and that he or she will not commit any acts or omissions detrimental to the development, implementation or completion of the Project.

d. Sub-Consultants.

- (1) Consultant may engage specific technical Consultant (each a "Sub-Consultant") to furnish certain service functions.
- (2) Consultant will remain fully responsible for Sub-Consultant's services.
- (3) Sub-Consultants must be approved by the City, unless the Sub-Consultant was previously mentioned in the response to the solicitation.
- (4) Consultant shall certify by letter that contracts with Sub-Consultants have been executed incorporating requirements and standards as set forth in this Agreement.

2. **Schedule.** The Services will be undertaken in a manner that ensures the Project is completed in a timely and efficient manner in accordance with **Exhibit C** appended hereto.

3. **Consultant's Work.**

3.1 Standard. Consultant must perform services in accordance with the standards of due diligence, care, and quality prevailing among Consultants having substantial experience with the successful furnishing of services for projects that are equivalent in size, scope, quality, and other criteria under the Project and identified in this Agreement.

3.2 Licensing. Consultant warrants that:

- a. Consultant and Sub-Consultants will hold all appropriate and required licenses, registrations and other approvals necessary for the lawful furnishing of services ("Approvals"); and
- b. Consultant certifies it has not been debarred or otherwise legally excluded from contracting with any federal, state, or local governmental entity ("Debarment"). The Parties agree:
 - (1) City is under no obligation to ascertain or confirm the existence or issuance of any Approvals or Debarments or to examine Consultant's contracting ability.
 - (2) Consultant must notify City immediately if any Approvals or Debarment changes during the Agreement's duration and the failure of the Consultant to notify City as required will constitute a material default under the Agreement.

3.3 Compliance. Services will be furnished in compliance with applicable federal, state, county and local statutes, rules, regulations, ordinances, building codes, life safety codes, and other standards and criteria designated by City.

3.4 Coordination; Interaction.

- a. For projects that the City believes requires the coordination of various professional services, Consultant will work in close consultation with City to proactively interact with any other professionals retained by City on the Project ("Coordinating Project Professionals").
- b. Subject to any limitations expressly stated in the Project Budget, Consultant will meet to review the Project, Schedule, Project Budget, and in-progress work with Coordinating Project Professionals and City as often and for durations as City reasonably considers necessary in order to ensure the timely work delivery and Project completion.
- c. For projects not involving Coordinating Project Professionals, Consultant will proactively interact with any other Consultants when directed by City to obtain or disseminate timely information for the proper execution of the Project.

Project Professionals and City as often and for durations as City reasonably considers necessary in order to ensure the timely work delivery and Project completion

- c. For projects not involving Coordinating Project Professionals, Consultant will proactively interact with any other Consultants when directed by City to obtain or disseminate timely information for the proper execution of the Project.

3.5 Work Product.

- a. **Ownership.** Upon receipt of payment for services furnished, Consultant grants to City, and will cause its Sub-Consultants to grant to the City, the exclusive ownership of and all copyrights, if any, to evaluations, reports, drawings, specifications, project manuals, surveys, estimates, reviews, minutes, all "architectural work" as defined in the United States Copyright Act, 17 U.S.C § 101, *et seq.*, and other intellectual work product as may be applicable ("Work Product")
 - (1) This grant is effective whether the Work Product is on paper (e.g., a "hard copy"), in electronic format, or in some other form.
 - (2) Consultant warrants, and agrees to indemnify, hold harmless and defend City for, from and against any claim that any Work Product infringes on third-party proprietary interests
- b. **Delivery.** Consultant will deliver to City copies of the preliminary and completed Work Product promptly as they are prepared
- c. **City Use**
 - (1) City may reuse the Work Product at its sole discretion
 - (2) In the event the Work Product is used for another project without further consultations with Consultant, the City agrees to indemnify and hold Consultant harmless from any claim arising out of the Work Product.
 - (3) In such case, City shall also remove any seal and title block from the Work Product.

4. **Compensation for the Project.**

- 4.1 Compensation Consultant's compensation for the Project, including those furnished by its Sub-Consultants will not exceed **\$48,392.00**, for the entire potential term (Initial Term and any renewals) of this Agreement as provided in Section 13 below, as specifically detailed in **Exhibit D** (the "Compensation").
- 4.2 Change in Scope of Project. The Compensation may be equitably adjusted if the originally contemplated scope of services as outlined in the SOW is significantly modified.
 - a. Adjustments to the Compensation require a written amendment to this Agreement and may require City Council approval
 - b. Additional services which are outside the scope of the Project contained in this Agreement may not be performed by the Consultant without prior written authorization from the City.

5. **Billings and Payment.**

5.1 Applications

- a. Consultant will submit monthly invoices (each, a "Payment Application") to City's Project Manager and City will remit payments based upon the Payment Application as stated below.
- b. The period covered by each Payment Application will be one calendar month ending on the last day of the month or as specified in the solicitation

5.2 Payment

- a. After a full and complete Payment Application is received, City will process and remit payment within 30 days
- b. Payment may be subject to or conditioned upon City's receipt of:
 - (1) Completed work generated by Consultant and its Sub-Consultants; and
 - (2) Unconditional waivers and releases on final payment from Sub-Consultants as City may reasonably request to assure the Project will be free of claims arising from required performances under this Agreement.

5.3 Review and Withholding City's Project Manager will timely review and certify Payment Applications.

- a. If the Payment Application is rejected, the Project Manager will issue a written listing of the items not approved for payment.
- b. City may withhold an amount sufficient to pay expenses that City reasonably expects to incur in correcting the deficiency or deficiencies rejected for payment.

6. **Termination.**

6.1 For Convenience. City may terminate this Agreement for convenience, without cause, by delivering a written termination notice stating the effective termination date, which may not be less than 30 days following the date of delivery.

- a. Consultant will be equitably compensated for Service and Repair furnished prior to receipt of the termination notice and for reasonable costs incurred.
- b. Consultant will also be similarly compensated for any approved effort expended and approved costs incurred that are directly associated with project closeout and delivery of the required items to the City.

6.2 For Cause. City may terminate this Agreement for cause if Consultant fails to cure any breach of this Agreement within seven days after receipt of written notice specifying the breach.

- a. Consultant will not be entitled to further payment until after City has determined its damages. If City's damages resulting from the breach, as determined by City, are less than the equitable amount due but not paid Consultant for Service and Repair furnished, City will pay the amount due to Consultant, less City's damages, in accordance with the provision of § 5
- b. If City's direct damages exceed amounts otherwise due to Consultant, Consultant must pay the difference to City immediately upon demand; however, Consultant will not be subject to consequential damages of more than \$1,000,000 or the amount of this Agreement, whichever is greater

7. **Conflict.** Consultant acknowledges this Agreement is subject to A.R.S § 38-511, which allows for cancellation of this Agreement in the event any person who is significantly involved in initiating, negotiating, securing, drafting, or creating the Agreement on City's behalf is also an employee, agent, or consultant of any other party to this Agreement.

8. **Insurance.**

8.1 Requirements Consultant must obtain and maintain the following insurance ("Required Insurance"):

- a. Consultant and Sub-Consultants. Consultant, and each Sub-Consultant performing work or providing materials related to this Agreement must procure and maintain the insurance coverages described below (collectively referred to herein as the "Consultant's Policies"), until each Party's obligations under this Agreement are completed.

- b. **General Liability.**
 - (1) Consultant must at all times relevant hereto carry a commercial general liability policy with a combined single limit of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate for each property damage and contractual property damage
 - (2) Sub-contractors must at all times relevant hereto carry a general commercial liability policy with a combined single limit of at least \$1,000,000 per occurrence.
 - (3) This commercial general liability insurance must include independent Consultants' liability, contractual liability, broad form property coverage, XCU hazards if requested by the City, and a separation of insurance provision.
 - (4) These limits may be met through a combination of primary and excess liability coverage.
- c. **Professional Liability.** Consultant must maintain a professional errors and omissions policy providing a minimum limit of \$1,000,000 for each claim and a \$2,000,000 aggregate limit.
- d. **Auto** A business auto policy providing a liability limit of at least \$1,000,000 per accident for Consultant and \$1,000,000 per accident for Sub-Consultants and covering owned, non-owned and hired automobiles
- e. **Workers' Compensation and Employer's Liability.** Consultant and sub-Consultant must, at all times relevant hereto, carry a workers' compensation and employer's liability policy providing at least the minimum benefits required by Arizona law.
- f. **Notice of Changes.** Consultant must provide not less than 30 days' advance written notice to City Representative of:
 - (1) Cancellation or termination of Consultant or Sub-Consultant's Policies;
 - (2) Reduction of the coverage limits of any of Consultant or and Sub-Consultant's Policies; and
 - (3) Any other material modification of Consultant or Sub-Consultant's Policies related to this Agreement.
- g. **Certificates of Insurance.**
 - (1) Within 10 business days after the execution of the Agreement, Consultant must deliver to City Representative certificates of insurance for each of Consultant and Sub-Consultant's Policies, which will confirm the existence or issuance of Consultant and Sub-Consultant's Policies in accordance with the provisions of this section, and copies of the endorsements of Consultant and Sub-Consultant's Policies in accordance with the provisions of this section.
 - (2) City is and will be under no obligation either to ascertain or confirm the existence or issuance of Consultant and Sub-Consultant's Policies, or to examine Consultant and Sub-Consultant's Policies, or to inform Consultant or Sub-Consultant in the event that any coverage does not comply with the requirements of this section
 - (3) Consultant's failure to secure and maintain Consultant Policies and to assure Sub-Consultant policies as required will constitute a material default under the Agreement.
- h. **Other Consultants or Vendors.**
 - (1) Other Consultants or vendors that may be contracted with in connection with the Project must procure and maintain insurance coverage as is appropriate to their particular contract.

- (2) This insurance coverage must comply with the requirements set forth above for Consultant's Policies (e.g., the requirements pertaining to endorsements to name the parties as additional insured parties and certificates of insurance)
- i Policies Except with respect to workers' compensation and employer's liability coverages, City must be named and properly endorsed as additional insureds on all liability policies required by this section.
 - (1) The coverage extended to additional insureds must be primary and must not contribute with any insurance or self insurance policies or programs maintained by the additional insureds.
 - (2) All insurance policies obtained pursuant to this section must be with companies legally authorized to do business in the State of Arizona and reasonably acceptable to all parties

8.2 Sub-Consultants.

- a. Consultant must also cause its Sub-Consultants to obtain and maintain the Required Insurance.
- b. City may consider waiving these insurance requirements for a specific Sub-Consultant if City is satisfied the amounts required are not commercially available to the Sub-Consultant and the insurance the Sub-Consultant does have is appropriate for the Sub-Consultant's work under this Agreement.
- c. Consultant and Sub-Consultants must provide to the City proof of the Required Insurance whenever requested.

8.3 Indemnification.

- a. To the fullest extent permitted by law, Consultant must defend, indemnify, and hold harmless City and its elected officials, officers, employees and agents (each, an "Indemnified Party," collectively, the "Indemnified Parties"), for, from, and against any and all claims, demands, actions, damages, judgments, settlements, personal injury (including sickness, disease, death, and bodily harm), property damage (including loss of use), infringement, governmental action and all other losses and expenses, including attorneys' fees and litigation expenses (each, a "Demand or Expense"; collectively, "Demands or Expenses") asserted by a third-party (i.e. a person or entity other than City or Consultant) and that arises out of or results from the breach of this Agreement by the Consultant or the Consultant's negligent actions, errors or omissions (including any Sub-Consultant or other person or firm employed by Consultant), whether sustained before or after completion of the Project
- b. This indemnity and hold harmless provision applies even if a Demand or Expense is in part due to the Indemnified Party's or third party's negligence or breach of a responsibility under this Agreement, but in that event, Consultant shall be liable only to the extent the Demand or Expense results from the negligence or breach of a responsibility of Consultant or of any person or entity for whom Consultant is responsible.
- c. Consultant is not required to indemnify any Indemnified Parties for, from, or against any Demand or Expense resulting from the Indemnified Party's sole negligence or other fault solely attributable to the Indemnified Party.

9. **Immigration Law Compliance.**

- 9.1 Consultant, and on behalf of any Sub-Consultant or Sub-Contractor, warrants, to the extent applicable under A.R.S. § 41-4401, compliance with all federal immigration laws and regulations that relate to their employees as well as compliance with A.R.S. § 23-214(A) which requires registration and participation with the E-Verify Program.

- 9.2 Any breach of warranty under subsection 9.1 above is considered a material breach of this Agreement and is subject to penalties up to and including termination of this Agreement.
- 9.3 City retains the legal right to inspect the papers of any Consultant, Sub-Consultant or Sub-Contractor employee who performs work under this Agreement to ensure that the Consultant or any Consultant, Sub-Consultant or Sub-Contractor is compliant with the warranty under subsection 9.1 above.
- 9.4 City may conduct random inspections, and upon request of City, Consultant shall provide copies of papers and records of Consultant demonstrating continued compliance with the warranty under subsection 9.1 above. Consultant agrees to keep papers and records available for inspection by the City during normal business hours and will cooperate with City in exercise of its statutory duties and not deny access to its business premises or applicable papers or records for the purposes of enforcement of this section.
- 9.5 Consultant agrees to incorporate into any subcontracts under this Agreement the same obligations imposed upon Consultant and expressly accrue those obligations directly to the benefit of the City. Consultant also agrees to require any Sub-Consultant or Sub-Contractor to incorporate into each of its own subcontracts under this Agreement the same obligations above and expressly accrue those obligations to the benefit of the City.
- 9.6 Consultant's warranty and obligations under this section to the City is continuing throughout the term of this Agreement or until such time as the City determines, in its sole discretion, that Arizona law has been modified in that compliance with this section is no longer a requirement.
- 9.7 The "E-Verify Program" above means the employment verification program administered by the United States Department of Homeland Security, the Social Security Administration, or any successor program.

10. Notices.

- 10.1 A notice, request or other communication that is required or permitted under this Agreement (each a "Notice") will be effective only if:
- a. The Notice is in writing; and
 - b. Delivered in person or by overnight courier service (delivery charges prepaid), certified or registered mail (return receipt requested), and
 - c. Notice will be deemed to have been delivered to the person to whom it is addressed as of the date of receipt, if
 - (1) Received on a business day, or before 5:00 p.m., at the address for Notices identified for the Party in this Agreement by U.S. Mail, hand delivery, or overnight courier service on or before 5:00 p.m.; or
 - (2) As of the next business day after receipt, if received after 5:00 p.m.
 - d. The burden of proof of the place and time of delivery is upon the Party giving the Notice, and
 - e. Digitalized signatures and copies of signatures will have the same effect as original signatures.

10.2 Representatives.

- a. Consultant. Consultant's representative (the "Consultant's Representative") authorized to act on Consultant's behalf with respect to the Project, and his or her address for Notice delivery is:

CH2M Hill Engineers, Inc.
c/o Ryan Rhoades
1501 W Fountainhead Pkwy, Suite 401
Tempe, AZ 85282

- b. City. City's representative ("City's Representative") authorized to act on City's behalf, and his or her address for Notice delivery is:

City of Glendale
c/o Craig Johnson
Executive Director, Water Services
7070 W. Northern Avenue
Glendale, Arizona 85301

With required copy to:

City Manager
City of Glendale
5850 West Glendale Avenue
Glendale, Arizona 85301

City Attorney
City of Glendale
5850 West Glendale Avenue
Glendale, Arizona 85301

- c. Concurrent Notices.

- (1) All notices to City's representative must be given concurrently to City Manager and City Attorney.
- (2) A notice will not be deemed to have been received by City's representative until the time that it has also been received by City Manager and City Attorney.
- (3) City may appoint one or more designees for the purpose of receiving notice by delivery of a written notice to Consultant identifying the designee(s) and their respective addresses for notices

- d. Changes. Consultant or City may change its representative or information on Notice, by giving Notice of the change in accordance with this section at least ten days prior to the change.

11. **Financing Assignment.** City may assign this Agreement to any City-affiliated entity, including a non-profit corporation or other entity whose primary purpose is to own or manage the Project.

12. **Entire Agreement; Survival; Counterparts; Signatures.**

12.1 Integration This Agreement contains, except as stated below, the entire agreement between City and Consultant and supersedes all prior conversations and negotiations between the parties regarding the Project or this Agreement.

- a. Neither Party has made any representations, warranties or agreements as to any matters concerning the Agreement's subject matter.
- b. Representations, statements, conditions, or warranties not contained in this Agreement will not be binding on the parties
- c. The solicitation, any addendums and the response submitted by the Consultant are incorporated into this Agreement as if attached hereto. Any Consultant response modifies the original solicitation as stated. Inconsistencies between the solicitation, any addendums

and the response or any excerpts attached as **Exhibit A** and this Agreement will be resolved by the terms and conditions stated in this Agreement.

12.2 Interpretation

- a. The parties fairly negotiated the Agreement's provisions to the extent they believed necessary and with the legal representation they deemed appropriate.
- b. The parties are of equal bargaining position and this Agreement must be construed equally between the parties without consideration of which of the parties may have drafted this Agreement
- c. The Agreement will be interpreted in accordance with the laws of the State of Arizona

12.3 Survival. Except as specifically provided otherwise in this Agreement, each warranty, representation, indemnification and hold harmless provision, insurance requirement, and every other right, remedy and responsibility of a Party, will survive completion of the Project, or the earlier termination of this Agreement.

12.4 Amendment No amendment to this Agreement will be binding unless in writing and executed by the parties. Any amendment may be subject to City Council approval Electronic signature blocks do not constitute execution

12.5 Remedies. All rights and remedies provided in this Agreement are cumulative and the exercise of any one or more right or remedy will not affect any other rights or remedies under this Agreement or applicable law.

12.6 Severability. If any provision of this Agreement is voided or found unenforceable, that determination will not affect the validity of the other provisions, and the voided or unenforceable provision will be deemed reformed to conform to applicable law.

12.7 Counterparts. This Agreement may be executed in counterparts, and all counterparts will together comprise one instrument.

13. **Term**. The term of this Agreement commences upon the Effective Date and continues for a period of one year. There are no renewals of this Agreement contemplated by the Parties. This Agreement terminates on the one year anniversary of the Effective Date, unless the Parties mutually agree to an amendment of the term of this Agreement in a signed writing.

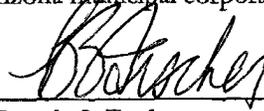
14. **Dispute Resolution**. Each claim, controversy and dispute (each a "Dispute") between Consultant and City will be resolved in accordance with **Exhibit E**. The final determination will be made by the City

15. **Exhibits**. The following exhibits, with reference to the term in which they are first referenced, are incorporated by this reference

Exhibit A	Project
Exhibit B	Scope of Work
Exhibit C	Schedule
Exhibit D	Compensation
Exhibit E	Dispute Resolution

The parties enter into this Agreement as of the effective date shown above.

City of Glendale,
an Arizona municipal corporation



By: Brenda S. Fischer
Its: City Manager

ATTEST:



Pam Hanna
City Clerk

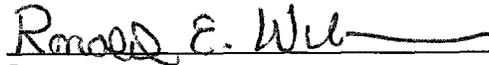
(SEAL)

APPROVED AS TO FORM:



Michael D. Bailey
City Attorney

CH2M Hill Engineers, Inc
a Delaware corporation



By:
Its: Vice President

EXHIBIT A
Professional Services Agreement

PROJECT

(Cover Page)

EXHIBIT A - PROJECT
CITY OF GLENDALE
UTILITIES DEPARTMENT
SRP WELL TESTING AND IMPROVEMENTS EVALUTATION

Pumps were installed at two existing SRP well sites, COG 15 (SRP 6.0E-13.0N / ADWR 55-608400) and COG 17 (SRP 6.5E-14.0N / ADWR 55-608401), as part of the Oasis Groundwater Treatment Plant (GWTP) that began operation in 2011. These groundwater wells are owned and operated by SRP, with an agreement for use by the City of Glendale (GLENDALE). Both well pumps were designed by SRP with a constant rate motor that is a standard for SRP. The pumps were originally designed for two scenarios: (1) open discharge in the SRP system, and (2) to the GWTP through a pressurized conveyance system.

When the groundwater treatment system is operating, these two wells produce high turbidity and excessive suspended solids that cause plugging of the bag filters within an hour or two at the GWTP and limiting GLENDALE's use of this supply. The descriptions of the wells are as follows:

COG 15 (SRP 6E-13N)	COG 17 (SRP 6.5E-14N)
- Location: 67 th Ave and Olive	- Location: 63rd Ave and Peoria
- Pump setting: 422 ft BGS	- Pump setting: 502 ft BGS
- Design Capacity: 1700 GPM at 490' total dynamic head	- Design Capacity: 1100 GPM at 570' total dynamic head
- Pressure at property line: 75 psi at full GWTP capacity	- Pressure at property line: 70 psi at full GWTP capacity
- Pumping water level: 300 ft BGS	- Pumping water level: 420 ft BGS
- Static Water level: 250 ft BGS	- Static water level: 270 ft BGS
- Pump Horsepower: 300 HP	- Pump Horsepower: 300 HP
- Pump Speed: 1800 RPM	- Pump Speed: 1800 RPM

A meeting was held between SRP and GLENDALE to discuss options to address this issue and it was concluded that variable frequency drives (VFDs) could be installed to allow both parties to use the wells with separate pressure requirements. A temporary VFD was installed by SRP at COG 17 in July 2014 so that hydraulic and water quality performance can be confirmed prior to full-scale implementation. SRP will perform additional modifications to the wells under a separate contract between GLENDALE and SRP.

EXHIBIT B
Professional Services Agreement

SCOPE OF WORK

(Cover Page)

EXHIBIT B - SCOPE OF WORK

GLENDALE has selected CH2M HILL to provide engineering services for hydraulic and water quality testing at the SRP wells with VFDs installed and performance of the bag filters as described in the tasks below.

Task 1. Project Management

The purpose of this task is to manage, coordinate and lead the CH2M HILL team activities. This task addresses routine planning and setup activities. It includes development of the project schedule, project team formation and staffing, and project planning, and invoicing. A brief project status report listing on-going and completed activities will be provided on a monthly basis.

Task 2. Develop Testing Protocol

Water quality and hydraulic testing will be conducted at COG 15 and COG 17 for a duration of six weeks. The wells will initially be pumped to waste until turbidity is less than 1 NTU so not to plug the bag filters and upset the Oasis Groundwater Treatment Plant (GWTP) process. This step may take up to two days at each well. Afterwards, the groundwater from the well will be discharged to the GWTP to review performance of the bag filters.

CH2M HILL will prepare a written test protocol including water quality sampling parameters, frequency, and duration at various flow rates for the purpose of evaluating technologies for water quality improvements. Water quality sampling and testing will be conducted by GLENDALE and may include the following: turbidity, total suspended solids, pH, alkalinity, carbonate, bicarbonate, silicon, total hardness, iron, manganese, arsenic, and nitrate. Water quality samples will be collected at six different pumping rates.

A draft test protocol will be submitted to GLENDALE for review and comment, which will be addressed in the final test protocol. A meeting will be conducted by a representative of CH2M HILL to discuss the test protocol with the City and SRP.

Task 3. Conduct VFD Pilot Testing

Hydraulic and water quality testing will be conducted at COG 15 and COG 17 including water quality sampling and testing and hydraulic testing using a VFD. GLENDALE will operate the pumps onsite and manually adjust the VFD and coordinate any operational issues with SRP. After flushing of the initial well discharge to waste and turbidity is less than 1 NTU, water will be allowed to enter the GWTP conveyance system. The water quality must be such that all regulatory standards can be met after treatment through the GWTP at the discretion of the direct operator in charge.

The COG 15 pump has a constant rate motor and will be used for this testing at a single speed. Initially with the addition of the SRP well, caution must be exercised by turning down the other GLENDALE system wells so that the increase of velocity from COG 17 does not flush out excess debris in the pipeline to the downstream bag filters. In addition, the plant staff will be prepared with immediate change out of the bags in case plugging occurs. All three bag filter units will be prepared with clean bag filters and used simultaneously to best equalize the velocities across each unit to reduce the differential pressure across each filter and minimize headloss.

Once testing begins, CH2M HILL will participate in one day of testing. Field data such as flows, pressures, pump speeds, differential pressure, well head pressures, and influent PRV readings will be recorded at the different pump speeds for hydraulic analysis. GLENDALE will perform additional water quality sampling and testing for parameters described in the test protocol at least weekly for 6 weeks and provide results to CH2M HILL in excel format.

The test data will be used to help identify water quality and hydraulic improvements needed at COG 15 and COG well 17 in order for GLENDALE to utilize it as a source well for the GWTP under different operation scenarios. The test data will also be used to help define the treatment and hydraulic improvements needed at the well sites.

Task 4 - Water Quality Improvement Evaluation

The GWTP utilizes 5 micron bag filters as pretreatment to the ion exchange system. The pretreatment requirements for the IX system are 90% removal of 10 micron particles. The replacement interval of the bag filters when SRP wells are used has been unsatisfactory to GLENDALE in the past. CH2MHILL will review available technologies for water quality improvements including the following alternatives:

1. Redevelopment of the existing wells to improve water quality,
2. Localized well head treatment systems including a sand separator concept by the use of centrifugal action or automatic backwashing pre-filters at the well site, and
3. Centralized treatment at the GWTP for pretreatment or replacement of the existing bag filters including automatic backwashing pre-filters.

CH2MHILL will gather information from equipment vendors related to the available technologies:

- Equipment specification
- Water quality and hydraulic performance
- Design criteria for optimum performance
- Operational and maintenance requirements

Preliminary equipment sizing and selection criteria, site constraints, backwash considerations, building requirements, and facility integration will be evaluated for each technology. The evaluation will provide a comparison of technologies including a table of advantages and disadvantages. A conceptual layout of equipment and appurtenance, including number of units required, will be developed. CH2M HILL will provide a budgetary cost estimate for each technology application.

CH2M HILL will develop a technical memorandum with a recommendations for water quality improvements. A meeting will be held to discuss the evaluation and recommendation. GLENDALE comments will be addressed in the final memorandum.

Task 5 - Hydraulic Analysis

CH2M HILL will perform a hydraulic analysis of the GWTP and the conveyance system under the following well operating conditions considering the new VFD installations at the SRP wells:

Scenario	Well Simulation	Purpose
Scenario 1	COG 15 only	Represents low flow hydraulic conditions and minimum pressure requirement at COG 15
Scenario 2	COG 17 only	Represents low flow hydraulic conditions and minimum pressure requirement at COG 17
Scenario 3	All existing wells	Represents maximum flows and system pressures with all existing wells in operation
Scenario 4	All existing and future wells	Represents maximum flows and system pressures with the addition of future well COG 1 in operation

For each scenario, the analysis will also consider the following hydraulic conditions:

- Clean and dirty head loss through the bag filters at the GWTP as provided by Pentair, the bag filter manufacturer
- Clean and dirty head loss through the IX vessels at the GWTP as provided by Layne Christianson, the IX manufacturer
- Range of flows of 0 and 15 MGD through GWTP bypass
- With and without well head treatment (sand separators or automatic backwash pre-filters) at COG 15 and COG 17
- With and without centralized treatment (automatic backwash pre-filters) at the GWTP

CH2M HILL will prepare a technical memorandum describing the inputs and results of the hydraulic analysis. It will describe the acceptable turn down range of the proposed VFDs at the COG 15 and COG 17. It will also describe any hydraulic modifications needed in order to implement water quality improvements.

EXHIBIT C
Professional Services Agreement

SCHEDULE

(Cover Page)

EXHIBIT D
Professional Services Agreement

COMPENSATION

METHOD AND AMOUNT OF COMPENSATION

Time and Materials based on the billable rates listed in the Attachment A - Fee Estimate.

NOT-TO-EXCEED AMOUNT

The total amount of compensation paid to Consultant for full completion of all work required by the Project during the entire term of the Project must not exceed \$48,392.

DETAILED PROJECT COMPENSATION

Provided in Attachment A - Fee Estimate.

EXHIBIT D
Attachment A - Fee Estimate
SRP Well Testing and Improvements Evaluation

Fee Estimate

Task No.	Description	Senior PM Rhoades Billable Rate \$ 186	Project Engineer Candelaria \$ 125	Well Specialist Bral \$ 198	Treatment Specialist Odell \$ 210	Cost Estimator Lawson \$ 186	Mech Engineer Ji \$ 182	Account/ Admin Aboud \$ 78	Total Hours	Labor	Travel/ Expense	Total Cost
		52	112	16	16	24	64	24	308	\$ 48,192	\$ 200	\$ 48,392
1	Project Management	16						16	32	\$ 4,227	\$ 200	\$ 4,427
2	Develop Testing Protocol	8	24						32	\$ 4,489	\$ -	\$ 4,489
3	Hydraulic and Water Quality Testing	4	24						28	\$ 3,745	\$ -	\$ 3,745
4	Water Quality Improvement Evaluation	12	64	16	16	24		4	136	\$ 21,538	\$ -	\$ 21,538
5	Hydraulic Analysis	12					64	4	80	\$ 14,194	\$ -	\$ 14,194

**PROFESSIONAL SERVICES AGREEMENT WITH
CH2M HILL ENGINEERS, INC.**

SRP Well Testing and Improvements Evaluation

EXHIBIT E

DISPUTE RESOLUTION

1. Disputes.

- 1.1 Commitment. The parties commit to resolving all disputes promptly, equitably, and in a good-faith, cost-effective manner.
- 1.2 Application. The provisions of this Exhibit will be used by the parties to resolve all controversies, claims, or disputes ("Dispute") arising out of or related to this Agreement-including Disputes regarding any alleged breaches of this Agreement.
- 1.3 Initiation. A party may initiate a Dispute by delivery of written notice of the Dispute, including the specifics of the Dispute, to the Representative of the other party as required in this Agreement.
- 1.4 Informal Resolution. When a Dispute notice is given, the parties will designate a member of their senior management who will be authorized to expeditiously resolve the Dispute.
- a. The parties will provide each other with reasonable access during normal business hours to any and all non-privileged records, information and data pertaining to any Dispute in order to assist in resolving the Dispute as expeditiously and cost effectively as possible,
 - b. The parties' senior managers will meet within 10 business days to discuss and attempt to resolve the Dispute promptly, equitably, and in a good faith manner, and
 - c. The Senior Managers will agree to subsequent meetings if both parties agree that further meetings are necessary to reach a resolution of the Dispute.

2. Arbitration.

- 2.1 Rules. If the parties are unable to resolve the Dispute by negotiation within 30 days from the Dispute notice, and unless otherwise informal discussions are extended by the mutual agreement, the parties may agree, in writing, that the Dispute will be decided by binding arbitration in accordance with Commercial Rules of the AAA, as amended herein. Although the arbitration will be conducted in accordance with AAA Rules, it will not be administered by the AAA, but will be heard independently.
- a. The parties will exercise best efforts to select an arbitrator within 5 business days after agreement for arbitration. If the parties have not agreed upon an arbitrator within this period, the parties will submit the selection of the arbitrator to one of the principals of the mediation firm of Scott & Skelly, LLC, who will then select the arbitrator. The parties will equally share the fees and costs incurred in the selection of the arbitrator.
 - b. The arbitrator selected must be an attorney with at least 10 years experience, be independent, impartial, and not have engaged in any business for or adverse to either Party for at least 10 years.
- 2.2 Discovery. The extent and the time set for discovery will be as determined by the arbitrator. Each Party must, however, within ten (10) days of selection of an arbitrator deliver to the other Party copies of all documents in the delivering party's possession that are relevant to the dispute.
- 2.3 Hearing. The arbitration hearing will be held within 90 days of the appointment of the arbitrator. The arbitration hearing, all proceedings, and all discovery will be conducted in Glendale, Arizona

unless otherwise agreed by the parties or required as a result of witness location. Telephonic hearings and other reasonable arrangements may be used to minimize costs.

2.4 **Award.** At the arbitration hearing, each Party will submit its position to the arbitrator, evidence to support that position, and the exact award sought in this matter with specificity. The arbitrator must select the award sought by one of the parties as the final judgment and may not independently alter or modify the awards sought by the parties, fashion any remedy, or make any equitable order. The arbitrator has no authority to consider or award punitive damages.

2.5 **Final Decision.** The Arbitrator's decision should be rendered within 15 days after the arbitration hearing is concluded. This decision will be final and binding on the Parties.

2.6 **Costs.** The prevailing party may enter the arbitration in any court having jurisdiction in order to convert it to a judgment. The non-prevailing party shall pay all of the prevailing party's arbitration costs and expenses, including reasonable attorney's fees and costs.

3. **Services to Continue Pending Dispute.** Unless otherwise agreed to in writing, Consultant must continue to perform and maintain progress of required services during any Dispute resolution or arbitration proceedings, and City will continue to make payment to Consultant in accordance with this Agreement.

4. **Exceptions.**

4.1 **Third Party Claims.** City and Consultant are not required to arbitrate any third-party claim, cross-claim, counter claim, or other claim or defense of a third-party who is not obligated by contract to arbitrate disputes with City and Consultant.

4.2 **Liens.** City or Consultant may commence and prosecute a civil action to contest a lien or stop notice, or enforce any lien or stop notice, but only to the extent the lien or stop notice the Party seeks to enforce is enforceable under Arizona Law, including, without limitation, an action under A.R.S. § 33-420, without the necessity of initiating or exhausting the procedures of this Exhibit

4.3 **Governmental Actions** This Exhibit does not apply to, and must not be construed to require arbitration of, any claims, actions or other process filed or issued by City of Glendale Building Safety Department or any other agency of City acting in its governmental permitting or other regulatory capacity.