

**FIRST AMENDMENT
TO AGREEMENT**

THIS FIRST AMENDMENT (the “First Amendment”) to Agreement is made and entered into this **17 day of March, 2010** by and between the CITY OF NAPLES, a Florida Municipal Corporation (the “City”), and **Hazen and Sawyer, P.C.** (the “Contractor”).

W I T N E S S E T H

WHEREAS, the City and the Contractor entered into that certain Agreement to furnish professional services dated **3rd day of June, 2009 (Resolution 09-12452)** (the “Original Agreement”) for **Professional Engineering Services to provide aquifer storage and recovery test well construction administration at the Wastewater Treatment Plant** (‘Project’); and

WHEREAS, the parties desire to amend the Original Agreement by this First Amendment so that the Contractor will provide additional services pursuant to the terms and conditions contained herein.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and in consideration of the mutual covenants, promises and conditions herein set forth, it is hereby acknowledged and agreed as follows:

1. The above recitals are true and correct and are incorporated herein by this Reference.
2. “Article Five, Compensation” shall be amended for the provision of additional fees by the Contractor **in the amount not-to-exceed \$357,320.00 for the implementation of the Integrated Water Resources Plan.**
3. The terms of this First Amendment shall control and take precedence over any and all terms, provisions and conditions of Original Agreement which might vary, contradict or otherwise be inconsistent with the terms and conditions hereof. All of the other terms, provisions and conditions of Original Agreement, except as expressly amended and modified by this First Amendment, shall remain unchanged and are hereby ratified and confirmed and shall remain in full force and effect.
4. This First Amendment may be executed in any number of counterparts, each of which shall be deemed to be an original as against any part whose signature appears thereon and all of which shall together constitute one and the same instrument.

IN WITNESS WHEREOF, the City and the Contractor have caused this First Amendment to be duly executed by their duly authorized officers, all as of the day and year first above written.

CITY:

CITY OF NAPLES, FLORIDA

ATTEST:

By: _____
Tara Norman, City Clerk

By: _____
A William Moss, City Manager

Approved as to form and legal sufficiency:

By: _____
Robert D. Pritt, City Attorney

Hazen and Sawyer, P.C.

witness

By: _____

Name: _____

Title: _____

ATTACHMENT A

City of Naples City Task Order No. 4

Hazen and Sawyer Project No.: 41000-004 Aquifer Storage and Recovery Implementation – Phase 2

February 24, 2010

OVERVIEW

The City of Naples City Council (hereinafter **City**) requested that Hazen and Sawyer, P.C. (hereinafter **H&S**) assist the City with engineering services for expansion of their reclaimed water / surface water aquifer storage and recovery (ASR) system. This system is an integral part of the City's Water Use Permit (WUP) and is a requirement by the South Florida Water Management District (District) as an element of the permit to assist the City in addressing irrigation demands. This work is related to the ongoing water use permitting assistance efforts for which Hazen and Sawyer was selected.

Services provided in this Task Order include construction management and inspection related to construction and testing of additional ASR and monitor wells at the City's wastewater treatment plant (WWTP). The scope of work described in this Task Order is organized authorization into tasks as follows:

- Task 1 – Preliminary Design
- Task 2 – Final Design
- Task 3 – Permitting
- Task 4 – Construction Bid Services
- Task 5 – Construction Contract Administration
- Task 6 – Detailed Observation
- Task 7 – Additional Services

Specific tasks included in this Task Order are preliminary design of temporary surface facilities to allow testing of the ASR system. Also included is preparation of the Florida Department of Environmental Protection (FDEP) Class V well construction permit and operating permit, and related permitting assistance of ASR wells. A WUP from the District for withdrawal from the Golden Gate Canal will also be prepared. Bid services will be provided as will construction contract administration and detailed observation. Included in the construction contract

administration task (i.e., Task 5) are general coordination efforts needed to assist the City in complying with requirements of the District and Big Cypress Basin related to funding from the Alternative Water Supply program. In addition, Task 5 will also include preparation of a well completion report which will be used to support a Class V injection well operating permit application.

SCOPE OF SERVICES

TASK 1 – PRELIMINARY DESIGN

The preliminary design task will focus on development of a conceptual design for the surface facilities that will be used to recharge / inject reclaimed water into the ASR well and then recover the stored water to the existing filters for post treatment and mixing prior to distribution for irrigation. Surface facilities include piping, power service, mechanical equipment, hydraulic analyses, and instrumentation. Also included will be preparation of a preliminary cost estimate and construction schedule.

1.1 – General Management

Provide services for the management of engineering services during the construction period. Such management activities shall include project coordination with the City, contractor and resident project representative. Attend coordination meetings with contractor and City during course of project. General management shall also include scheduling specialty inspections, and general correspondence with City, construction contractor and subcontractors.

1.2 – Preliminary Well Site Selection and Piping and Power Layout

Meet with **City** staff to confirm the location of the new ASR wells at the existing WWTP site. It is assumed that no additional easements will be required. It is also assumed that no environmental features exist within the proposed project area. If environmental features such as wetlands exist, additional scope and fee will be required to address such issues. If needed, the **City** will obtain required easements for construction of the wells. Specific requirements will be discussed with **City** once the exact well locations have been determined.

Identify pipeline routes from the new wells to a connection with the existing ASR transmission system. The analysis of potential pipeline and power routes will be completed in conjunction with piping system modeling prepared under Task 1.3.

1.3 – Preliminary Hydraulic Analyses

A hydraulic analysis will be conducted to establish transmission sizing and minimum pump requirements. The model will be used in conjunction with other work elements to evaluate the sizing

and selection of transmission system piping and pumping systems. The computer model shall utilize WaterCAD hydraulic modeling software.

The **City** recognizes that the final determination of pumping-unit sizing criteria (i.e., Total Dynamic Head and motor size) cannot be known until the new ASR wells are constructed and the well hydraulic performance testing results are available. As a result, this preliminary assessment will assume the following:

- Maximum well hydraulic capacity is assumed to be 1,400 gallons per minute (i.e., 2 mgd);
- Design pumping rate for the new well pumps is assumed to be between 700 to 1,400 gallons per minute (1 to 2 mgd);
- Reasonable values for the static water level and drawdown level in the new wells will be assumed based on available data;
- The backpressure at the connection between the new and the existing piping will be assumed based on discussions with **City**. If required, perform pressure-recording on the existing raw water transmission main to assess the potential backpressure at the connection between the new and the existing piping.

The findings of the preliminary hydraulic analyses shall be incorporated into the preliminary design memorandum.

1.4 – Electrical Requirements

Evaluate proposed wellfield configuration for electrical power distribution system requirements and make recommendations for system configuration. Coordinate with WWTP staff for preliminary discussion of available options for electrical service.

Issues include phase imbalance, voltage irregularity, and intermittent outages. Review primary power quality issues with the **City** and make recommendations regarding electrical device protection equipment that should be included in detailed design.

Evaluate proposed wellfield configuration for emergency power distribution system requirements, and make recommendations for system configuration.

1.5 – Preliminary Opinion of Probable Construction Cost

The purpose of this task is to prepare a preliminary opinion of the construction cost for the recommended well and raw water transmission pipeline configuration. The preliminary construction cost estimate shall include the well drilling, raw water pumps, raw water pipeline, electrical provisions including generator(s), and remote monitoring and control system.

1.6 – Preliminary Project Delivery Schedule

The purpose of this task is to prepare a preliminary project delivery schedule that includes design, permitting, bidding, and construction. The schedule will be prepared for the overall project; however, the activities will be divided between bid packages for wells and surface equipment. The schedule will be prepared using Microsoft Project 2000.

1.7 – Preliminary Design Technical Memorandum

Prepare a draft preliminary design technical memorandum that incorporates the findings developed during Task 1. Four (4) copies of the draft preliminary design technical memorandum will be submitted to the **City**.

A meeting shall be scheduled within two weeks of submittal of the draft preliminary design technical memorandum to the **City**. The purpose of the meeting is to collect **City** input on the Draft preliminary design technical memorandum. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review of the Draft preliminary design technical memorandum review meeting will be incorporated and a final version of the memorandum will be prepared. Ten (10) copies Final FDEP Preliminary Design Technical Memorandum will be submitted to the **City**.

TASK 2 – FINAL DESIGN (temporary surface facilities)

The final design task will focus on preparation of engineering specifications and drawings for the various components that are required to construct the temporary surface facilities described in the conceptual design. These facilities will be required to allow testing of the ASR wells as prescribed by FDEP. The final product will be a set of documents that can be bid to existing utility contractors to perform said work. It is anticipated that up to three sets of documents may be required.

2.1 – Prepare 60% Contract Documents

Prepare the preliminary design (i.e., 60% design stage) contract documents (i.e., drawings and technical specifications) for the surface facilities. Prepare contract documents for bidding by the City's annual utility contractors as one package.

The mechanical facilities associated with the ASR demonstration project will consist of using existing reclaimed water distribution pumps to deliver reclaimed water quality water supplied by the wastewater treatment facility's traveling bridge sand filter and chlorine contact tank facilities to ASR No. 1. Transmission of the reclaimed water to ASR No. 1 will occur through the use of a portion of an existing 10-inch diameter distribution line. The 10-inch distribution line is

equipped with an existing propeller flow meter which will be used to monitor the amount of flow being sent to ASR No. 1. Additional 10-inch or greater diameter piping will be designed to complete the transmission portion of supplying reclaimed water to ASR No. 1. The transmission line may be increased in size to facilitate additional transmission capacity to serve the additional ASR wells planned within the vicinity of the WWTF. Final siting of the additional ASR wells will be performed prior to final selection of the pipe diameter for the transmission main providing supply water to the ASR No. 1. Starting from the existing 10-inch diameter reuse water meter assembly adjacent to the Chlorine Contact Tanks, alignment of the transmission main supplying reclaimed water to ASR No. 1 and other ASR wells within the vicinity of ASR No. 1 will be within the area between Reuse Storage Tank Nos. 1 and 2 to the east and the north/south road east of the effluent filters to the west.

The ASR No. 1 recovery pipeline will be designed to discharge into the influent chamber of the Effluent Filters to allow blending of the withdrawal product with secondary effluent prior to filtration. The withdrawal transmission main will consist of a flow meter on the ASR well head to monitor and control the withdrawal rate from ASR No. 1. The existing pumps proposed for use as withdrawal pumps will be equipped with either existing variable frequency drives or diaphragm type flow control valves to regulate the withdrawal rate from ASR No. 1.

Prepare cost estimates to provide **City** with an up to date progress estimate of projected probable construction costs. Estimates will be prepared and forwarded to **City** at the 60% design completion stage.

Schedule review meetings/workshops to receive input at the 60% design completion stage. Based on comments received make subsequent revisions to the documents. This does not include out of scope changes outside of the recommendations identified in the final preliminary design memorandum.

Furnish four (4) sets of the 60% contract documents and 60% opinion of probable construction cost for each bid package. A meeting shall be scheduled within two weeks of submittal of the 60% complete contract documents to the **City**. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review will be incorporated into the final set of contract documents.

2.2 – Prepare Final Contract Documents

Based on input received at review meeting, prepare the final (100%) contract documents (i.e., drawings and technical specification) and cost estimate.

Conduct a 100% completion stage project peer review to provide QA/QC of the final contract documents and cost estimate prior to submittal. The review will include final interdisciplinary checks, general coordination and constructability issues.

Furnish four (4) sets of the final (100%) contract documents and opinion of probable construction cost for the bid package.

Approximately two weeks after delivery of the final (100%) contract documents schedule a final review meeting so that any changes that may be necessary to meet the project's budgetary requirements can be incorporated. This does not include out of scope changes outside of the recommendations identified in the final preliminary design memorandum. The purpose of the meeting is to collect **City** input on the 100% complete contract documents. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review of the 100% complete contract documents review meeting will be incorporated and a final version of the contract documents will be prepared. Ten (10) copies 100% complete contract documents will be submitted to the **City**.

TASK 3 - PERMITTING

The permitting task will address permitting related to construction and testing of ASR Well No. 1 and ASR Well No. 2. Also included is the permitting required to construct the surface facilities previously discussed and preparation of the Water Use Permit for withdrawals from the Golden Gate Canal. It is anticipated that the surface facilities will require Building Department Permits for items such as electrical service.

3.1 – Preparation of FDEP Class V Well Construction Permit

Prepare a Class V Well Construction Permit for up to four ASR wells. The permit will include addressing questions noted in pages 11 and 12 of 14 in FDEP Form 62-528.900(1). Four (4) copies of the Draft Class V Well Construction Permit will be prepared and submitted to the City for review.

A meeting shall be scheduled within two weeks of submittal of the draft permit to the **City**. The purpose of the meeting is to collect **City** input on the Draft Well Construction Permit. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review of the Draft Well Construction Permit review meeting will be incorporated and a final version of the permit will be prepared. Ten (10) copies Final FDEP Well Construction Permit will be submitted to the **City**.

Prepare up to three (3) written responses to the regulatory agencies request for additional information (RAI) regarding the permit application referenced above.

3.2 – Preparation of FDEP Class V Well Operation Permit

Prepare a Class V Well Operation Permit for up to four ASR wells. The permit will include addressing questions noted in pages 12 and 13 of 14 in FDEP Form 62-528.900(1). Four (4) copies of the Draft Class V Well Operation Permit will be prepared and submitted to the City for review.

A meeting shall be scheduled within two weeks of submittal of the draft permit to the **City**. The purpose of the meeting is to collect **City** input on the Draft Well Operation Permit. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review of the Draft Well Operation Permit review meeting will be incorporated and a final version of the permit will be prepared. Ten (10) copies Final FDEP Well Operation Permit will be submitted to the **City**.

Prepare up to three (3) written responses to the regulatory agencies request for additional information (RAI) regarding the permit application referenced above.

3.3 – Preparation of District WUP from Golden Gate Canal

Prepare an application for a irrigation consumptive use permit as directed by the District in their Request of Additional Information (application #080612-12) dated January 6, 2010. This permit request will request a separate allocation for the irrigation of landscaping provided by the City's reclaimed water distribution system supplemented by surface water from the Golden Gate Canal. This application will also include the proposed ASR wells for off-season storage of irrigation water. A withdrawal of 5 mgd will be requested.

Previously estimated demands will be used for the existing uses and include those anticipated in the next 5 years. It is understood that the District may limit the permit duration and may only issue permits for new uses from sources of limited availability for a 5 year initial duration.

Criteria for the withdrawal of surface water will be determined subject to the availability of excess stormwater. It is expected that this will entail the identification of specific on / off criteria based on stages in the Canal.

A meeting shall be scheduled within two weeks of submittal of the draft permit to the **City**. The purpose of the meeting is to collect **City** input on the Golden Gate Canal WUP. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review of the Draft Golden Gate Canal WUP review meeting will be incorporated and a final version of the permit will be prepared. Ten (10) copies Final District

Golden Gate Canal WUP will be submitted to the **City**.

Prepare up to two (2) written responses to the regulatory agencies request for additional information (RAI) regarding the permit application referenced above.

3.4 – Building Department Permit Assistance

Supply the contractor with eight (8) signed and sealed bid-set contract documents for the contractor to apply and acquire a City Building Department permit. The contractor shall be responsible for obtaining the building department permit.

Assist the contractor in obtaining a construction permit from the City of Naples Building Department. Assistance will include correspondence with the Bid Package and the City Building Department, coordination and attendance at meetings with the City County Building Department to address comments regarding the design intent, revisions of drawings and specifications to meet the requirements of the Building Department.

TASK 4 – CONSTRUCTION BID SERVICES

The construction bid services include assisting the City on an as needed basis during bidding of work related to the surface facilities, and if necessary with the ASR wells. Services will include communication, coordination and review of proposals for completeness and compliance with engineering specifications and drawings. The engineer will also prepare bid review letters with recommendations for award.

4.1 – General Management

Services to be provided during the bidding and award phase are as follow:

1. Attend pre-bid meeting for each bid package with prospective bidders from the City's list of annual utility contractors;
2. Assist with preparation of addenda and issue addenda as appropriate to interpret or clarify contract documents;
3. Provide **City** with a recommendation as to the acceptability of subcontractors, suppliers and other persons and organizations proposed by the bidders for those portions of the work as to which such acceptability is required by the contract documents;
4. Provide **City** with a recommendation to make a contract award, as necessary;
5. Prepare up to twenty (20) conforms sets of contract documents.

TASK 5 – CONSTRUCTION CONTRACT ADMINISTRATION

The construction contract administration task is intended to provide overall project management for the project as well as assistance with implementation of the ASR well and surface facilities. Work will include overall construction contract management and preparation of final reports needed to support FDEP permitting. The anticipated duration of this contract is 24 months.

5.1 – General Management

Provide services for the management of engineering services during the construction period. Such management activities will include project coordination with the City, contractor and resident project representative. Attend coordination meetings with contractor and City during course of project. General management will also include scheduling specialty inspections, and general correspondence with City, construction contractor and subcontractors.

Maintain orderly files for correspondence reports of job conferences, shop drawings and sample submission, reproductions of original Contract Documents including change orders, field orders, additional drawings issued subsequent to the execution of the contract, clarifications and interpretations of the Contract Documents, progress reports, and other project related documents. Assist with review and evaluation of cycle testing / storage zone development data through the duration of this project.

Receive and log correspondence, change orders, shop drawings, and submittals received from the contractor.

5.2 – Contract Interpretations and Clarifications

Prepare and issue necessary technical interpretations and clarifications of the Contract Documents in a timely manner. Make recommendations on requests of the contractor and the City as to the acceptability of construction or the interpretation of the technical requirements of the Contract Documents.

5.3 – Change Orders

Review the technical appropriateness, project cost and / or schedule impacts because of changes submitted by the contractor, requested by the **City** or recommended by the **H&S**. Changes may be the result of unforeseen conditions or interferences identified by the contractor during the routine progress of work, inadvertent omissions (betterment) issues in the contract documents, or additional improvements requested by the City after the project bid date.

Comment on the technical aspects and impact of the change request in terms of project cost and schedule. Prepare change orders and negotiate changes in contract time and cost with the contractor. Prepare an analysis of the change request indicating reasons for acceptance, references to applicable sections of the contract documents that validate or disclaim the change request, and if accepted, a statement noting that the requested cost / schedule impacts are fair and reasonable. Prepare, recommend and submit for City's approval such change orders.

Services do not include claims analysis or litigation support.

5.4 – Work Change Directives

Due to the fast track nature of this project, the City authorizes H&S to issue work change directives after review with the City. A work change directive will be a written directive to the contractor issued after contract execution, signed by the City and recommended by H&S ordering an addition, deletion or revision in the work. A work change directive will not change the Contract price or time, but is evident that the parties expect that the change directed or documented by a work change directive will be incorporated into a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time.

Issue work change directives only when necessary to avoid potential project delivery delays associated with the time needed to negotiate and process change orders.

5.5 – Shop Drawings

Review shop drawings and any other submittals (except detailed construction progress schedules) that the contractor is required to submit by the Contract Documents. Reviews will be completed within twenty-one (21) calendar days of H&S's receipt of the submittal except for special items requiring longer review time if so noted in the Contract Documents. The review will be for conformance with the design intent and compliance with the information presented in the Contract Documents. Determine the acceptability of materials and equipment proposed by the contractor. Shop drawings will be returned to the contractor with H&S's written comments and recommendations concerning their completeness under the Contract Document.

Retain one copy of each shop drawing for delivery to the City at the end of the project.

5.6 – Pay Requests

Review the construction contractor's monthly applications for payment and accompanying data and recommend approval of payments due to the construction contractor. H&S's recommendation of any payment requested in an application for payment will constitute a representation by H&S to the City as an experienced and qualified professional, that based on H&S's Resident Project Representative on-site observations of construction in progress; that, to the best of H&S's knowledge and belief, that

construction has progressed to the point indicated and that the quality of construction is in substantial accordance with the Contract Documents.

Process pay requests in accordance with the Florida Prompt Payment Act. All incoming invoices processed by H&S will be mechanically stamped with the date received.

5.7 – Construction Schedule Submittal Review

The contractor shall be required to submit detailed construction progress schedules on a monthly basis. Review the contractor's progress schedule for acceptance. Acceptance will demonstrate that the schedule is acceptable with respect to the Contract Documents.

5.8 – Project Progress Reports

Prepare monthly project progress reports on an as needed basis to document project status as required for compliance with the District's Alternative Water Supply program. A memorandum summarizing the hydrogeologic data collected during the well construction and testing will also be prepared and submitted to the District to document completion of the project and close-out of the funding requirements.

5.9 – Well Completion Reports

Prepare and submit a well completion report that documents the well construction and testing. This report will be used to support the Class V Injection Well construction and testing permit application to be submitted to the FDEP under separate contract. Four (4) copies of the Draft Well Construction Report will be submitted to the **City** for review.

A meeting will be scheduled within two week of submittal of the draft report to the **City**. The purpose of the meeting is to collect **City** input on the Draft Well Construction Report. Meeting minutes will be prepared and distributed to summarize discussions of the meeting. Comments received from **City** during review of the Draft Well Construction Report Review Meeting will be incorporated and a final version of the report shall be prepared. Ten (10) copies of the Final Well Construction Report will be submitted.

TASK 6 – DETAILED OBSERVATION

The detailed observation task includes the field work related to oversee the construction and testing of the monitor well, second ASR well, and surface facilities. Work will include preparation of daily reports, communication with applicable regulatory agencies, and general compliance with the contract documents. Also included will be oversight during testing, notification of substantial and final completion, and project closeout services. Well construction is estimated to last for a period of 180 days (i.e., substantial completion), while construction of the surface facilities could take 90 to

120 days. Services during cycle testing consisting of data collection assistance, evaluation of data, and reporting of data are included in this task.

6.1 – Resident Project Representative

Furnish Resident Project Representative (RPR) to observe construction and testing activities as follows:

- Construction Observation – Conduct on-site observations of construction in progress to assist in determining if construction is proceeding in substantial accordance with the Contract Documents, and that completed construction conforms to the Contract Documents. Inform H&S and the Contractor whenever RPR believes that any construction is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approval required to be made, or has been damaged before final payment.
- Photographic Record – Provide a photographic record of the construction, beginning with pre-construction documentation and completing with post-construction photographs. Photographs shall be digital type taken to define the progress of the project and unusual or important construction events as deemed necessary.
- General Coordination – Coordinate submittal of O&M manuals, operation and maintenance training plans and schedules, startup and testing plans and scheduled, and assist the City to establish a schedule and venue for training sessions. Oversee substantial and final completion inspections, coordinate delivery of spare parts and warranties, and maintain the punch list. Upon RPR issuance of a punch list for a substantially complete work element, the RPR will follow up to assure that punch list items are corrected and/or completed.
- Coordinate Laboratory Testing – Coordinate with City’s testing laboratory to schedule water sample collection and laboratory tests as requested by the contractor and required by the Contract Documents.
- Observe Regulatory Agency Inspections – Accompany visiting inspectors representing public or other agencies having jurisdiction over the project, record the outcome of these inspections in the daily reports which will be recorded on H&S’s standard forms.

- Daily Log – Keep a daily diary and / or log book recording hours on the job site, weather conditions, data pertaining to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as in observing test procedures. Forward the RPR’s completed daily logs to the City on a regular basis.

- Construction Progress Meetings – Chair periodic progress meetings with the construction contractor and the City to review project status and identify issues that may affect the project schedule. Such issues may include suggested changes and/or methods to keep the project on schedule (except for the construction contractor's means, methods, techniques, sequences or procedures of construction). Prepare and issue written meeting minutes to the City and the Contractor. Additional representatives of H&S (i.e., technical experts, project manager, etc.) will accompany the RPR as necessary during the construction and testing period as specific needs arise.

- Well Performance Testing – RPR will coordinate with the well drilling contractor to observe and record hydraulic information during the performance testing of the new wells. The performance testing requirements will be outlined for the well drilling contractor in the Contract Documents. Information to be recorded for use in design of pumping equipment includes:
 - ✓ Pumping rate
 - ✓ Water levels every two minutes during the pumping period
 - ✓ Static water level prior to pumping
 - ✓ Drawdown

- Geological Log – Collection and analysis of drill cutting and preparation of a log of drill cutting lithology.

6.2 – Specialty Inspections

Furnish the periodic services of engineering staff experience in water supply well construction to supplement the RPR during the construction and testing period as appropriate to perform specialized inspections associated with work and compliance reporting in accordance with regulatory agency construction permit sworn statement requirements.

Specialty inspection labor will include attendance at field meetings requested by the City.

6.3 – Substantial Completion Inspections

Conduct substantial completion inspections when requested by the contractor and the RPR recommends that the work is sufficiently complete to warrant a substantial completion inspection. The following substantial completion inspections are contemplated:

- One (1) substantial completion inspection

During the substantial completion inspection the inspection staff will prepare initial punch list items requiring completion or correction to the satisfaction of City. The RPR will be responsible for maintaining the punch-list and issuing updates to the punch-list on a periodic basis.

6.4 – Project Closeout Services

Upon the request of the contractor and concurrence of the RPR and the City, conduct final inspections of portions of the project as they are finished to determine if construction has been completed in substantial accordance with the contract documents and the construction contractor has fulfilled its obligations there under. The following project closeout inspections are contemplated:

- One (1) project closeout inspection

Based on the results of the final inspection, judge the work complete or not complete. If the work is judged complete, issue a “notice of final acceptance and recommendation for final payment”.

TASK 7 – ADDITIONAL SERVICES

The additional services task includes services related to startup and operation of facilities. This task is anticipated to be used on an as-needed basis whereby the City would call on the design engineer for assistance during general operation of facilities and troubleshooting should issues arise.

7.1 – General Startup, Testing and Operator Assistance

Provide assistance as requested by **City** related to general startup and operation. Level of effort is based on the total fee authorized by the **City**.

7.2 – Additional Services (as authorized)

Provide additional services, at costs agreed upon by the **City** and **H&S** and as authorized by the **City**, which may arise during the course of the work that are consistent with the intent of the original work order; but, were not envisioned as part of the original or amended scope of work. A proposal to perform Additional Services will be submitted prior to the performance of the work. The proposal will include the specific services to be performed, time to complete, compensation, and an explanation as to why the services were not previously envisioned as part of the scope of work.

Services may include design, permitting, construction oversight and inspection, and any other service related to the City’s ASR system. The proposed Additional Services must be approved by the **City** in writing in advance of performance of said Additional Services. Failure to notify the **City** in writing of Additional Services shall be deemed a waiver of any claim by the **H&S** that such services were Additional Services. Additional written authorization from the **City** will be required for any charges that exceed the predetermined upper limit.

List of Deliverables:

Deliverable	Description
1.7	Draft Preliminary Design Technical Memorandum
1.7	Final Preliminary Design Technical Memorandum
2.1	60% complete contract documents for surface facilities
2.2	Minutes from review of 60% complete contract documents
2.4	100% complete contract documents for surface facilities
2.4	Minutes from review of 100% complete contract documents
3.1	Draft FDEP Class V Well Construction Permit
3.1	Minutes from review well construction permit meeting
3.1	Final FDEP Class V Well Construction Permit
3.2	Draft FDEP Class V Well Operation Permit
3.2	Minutes from review operation permit meeting
3.2	Final FDEP Class V Well Operation Permit
3.3	Draft District WUP Permit from Golden Gate Canal
3.3	Minutes from review meeting
3.3	Final District WUP Permit from Golden Gate Canal
4.1	Award review and recommendation letter
4.1	Conform sets of contract documents
5.1	Weekly construction reports
5.6	Pay request recommendations (as applicable)
5.8	Monthly project progress report for AWS
5.9	Draft well completion report
5.9	Final completion report
6.1	Daily construction reports
6.1	Minutes from construction meetings
6.3	Substantial completion letter
6.4	Final completion letter

7.0	Summary memo of services provided per assignment
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COMPENSATION

Compensation for the above services will be based on a lump sum basis based on the level of effort and percent complete noted in that attached fee schedule and as shown below:

Task	Description	Estimated Cost
1	Preliminary design	\$24,426
2	Final design	\$36,780
3	Permitting	\$55,668
4	Construction Bid Services	\$7,302
5	Construction Contract Administration	\$47,020
6	Detailed Observation	\$176,132
7	Additional Services	\$9,992
	Total Cost	\$357,320

The total cost for services for this package will not exceed **\$357,320.00** without formally amending the Scope of Work.

SCHEDULE

The schedule for the proposed services is presented below:

Deliverable	Description	Estimated months from NTP
1	Preliminary design	20
2	Final design	22
3	Permitting	36
4	Construction Bid Services	18
5	Construction Contract Administration	18
6	Detailed Observation	18
7	Additional Services	TBD
	Total	~24

NTP = Notice to proceed

TBD = To be determined

Key Assumptions

A list of project assumptions is presented below:

- 1) The total construction duration (ASR well and surface facilities) is estimated to be 270 calendar days.
- 2) The City shall assign a project manager to serve as liaison between other parties (e.g., City and Consultants).
- 3) Permits besides those listed in this task order are considered beyond the scope of services and will require additional scope and fee.
- 4) The City shall provide written comments within two weeks of submittal of document.
- 5) The City will pay for all permit fees.
- 6) The City will be provided with four (4) copies of draft documents.
- 7) The City will be provided with ten (10) copies of final documents.
- 8) H&S will not proceed with work above the level of effort estimated in the attached fee schedule without prior approval from the City.
- 9) The City will provide record drawings of all facilities.
- 10) The City will provide soft digs for utility locations as needed.