

PUBLIC WORKS MEMORANDUM
#6-2022

DATE: Feb. 14, 2022

TO: Honorable Mayor Meredith Leighty and City Council Members

THROUGH: Heather Geyer, City Manager *hmg*

FROM: Kent Kisselman PE, Director of Public Works *KHK*

SUBJECT: CR-47 – Aquifer Storage and Recovery Pilot Project Consultant Services

PURPOSE

To consider CR-47, a resolution approving a contract with Leonard Rice Consulting Engineers, Inc. dba LRE Water for consulting and design services related to the Aquifer Storage and Recovery pilot well project.

BACKGROUND

Water supply planning for the City, as presented in the Integrated Water Resources Plan (IWRP), has indicated that there is a current and future gap between Northglenn's available water supply and the City's demand. Currently, the largest limitation to increasing Northglenn's water supply is the lack of available storage. The IWRP suggested two potential water storage options: 1) Increasing storage in Standley Lake; and 2) Aquifer Storage and Recovery (ASR).

Staff is currently researching and pursuing the viability of both options but have reached a point with the ASR option to conduct a pilot study.

The implementation of an ASR program in Northglenn has the following project phases:

- ASR Feasibility Study Phase I – complete
- ASR Feasibility Study Phase II – complete
- ASR Pilot Study (construction and testing of a single set of wells)
- ASR System Construction and Implementation (construction of a complete series of ASR wells)

In 2020, Northglenn completed the first phase of the ASR feasibility study, which began the investigation into the viability of injecting and recovering treated water into the Denver Basin Aquifers that lie under Northglenn. Phase I of the feasibility study looked broadly at water quality, hydrogeology, cost and permitting. Phase I results indicated that ASR is feasible, but additional evaluation of water quality and well condition was necessary.

In 2021, Phase II of the feasibility study was undertaken. After further evaluation of Northglenn's existing wells, and more in-depth modeling of water quality, it was determined that ASR is indeed a cost-effective way for Northglenn to increase water supply storage. With this confirmation, LRE Water completed and submitted permitting applications to the Environmental Protection Agency and the Colorado Department of Public Health and Environment and developed 90% drawings for an ASR pilot system to be located at the Water Treatment Facility.

The ASR Pilot Project scope of work includes finalizing construction drawings and then the construction of a complete ASR injection and recovery system using one well, to be located at the Water Treatment Facility. The consultant for this phase would complete the construction drawings, assist the City in the scope of work and RFP process for hiring a contractor to construct the pilot system, and assist with construction project management.

A Request for Proposal (RFP) was issued for this project and the City received two proposals. The proposed project scope and qualifications between the two firms were quite different. LRE Water was selected due to their previous work on the City's ASR Feasibility Study, along with their previous experience with Construction Management-At-Risk (CMAR) projects and construction project management. LRE Water is also one of the most experienced water engineering and consulting firms in the Front Range, working on ASR projects.

BUDGET/TIME IMPLICATIONS

This contract is for the 2022 calendar year. Funds are allocated from the 2022 Water Fund.

	Amount
2022 ASR Pilot Project Budget Appropriation	\$3,500,000
LRE Water Consultants Contract	(\$436,833)
Funds Remaining	\$3,063,167

STAFF RECOMMENDATION

Attached is CR-47, a resolution that, if approved, would authorize the Mayor to execute an agreement between the City and LRE Water for ASR Pilot Project consulting services in an amount not to exceed \$436,833. Staff recommends approval of CR-47.

STAFF REFERENCE

If Council members have any questions, please contact Kent Kisselman, Director of Public Works, at kkisselman@northglenn.org or 303.450.4005.

CR-47 – Aquifer Storage & Recovery Pilot Project Consultant Services
LRE Water Professional Services Agreement

SPONSORED BY: MAYOR LEIGHTY

COUNCIL MEMBER'S RESOLUTION

RESOLUTION NO.

No. CR-47
Series of 2022

Series of 2022

A RESOLUTION APPROVING A PROFESSIONAL SERVICES AGREEMENT BETWEEN THE CITY OF NORTHGLENN AND LEONARD RICE CONSULTING ENGINEERS, INC. FOR AQUIFER STORAGE AND RECOVERY PILOT PROJECT CONSULTING SERVICES

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. The Professional Services Agreement between the City of Northglenn and Leonard Rice Consulting Engineers, Inc. dba LRE Water, attached hereto, in an amount not to exceed \$436,833.00 for Aquifer Storage and Recovery Pilot Project Consulting Services is hereby approved and the Mayor is authorized to execute same on behalf of the City of Northglenn.

DATED, at Northglenn, Colorado, this _____ day of _____, 2022.

MEREDITH LEIGHTY
Mayor

ATTEST:

JOHANNA SMALL, CMC
City Clerk

APPROVED AS TO FORM:

COREY Y. HOFFMANN
City Attorney

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT is made and entered into this _____ day of _____, 20____, by and between the City of Northglenn, State of Colorado (hereinafter referred to as the "City") and Leonard Rice Consulting Engineers, Inc dba LRE Water (hereinafter referred to as "Consultant").

RECITALS:

- A. The City requires professional services.
- B. Consultant has held itself out to the City as having the requisite expertise and experience to perform the required work for the Project.

NOW, THEREFORE, it is hereby agreed for the consideration hereinafter set forth, that Consultant shall provide to the City, professional consulting services for the Project.

I. SCOPE OF SERVICES

Consultant shall furnish all labor and materials to perform the work and services required for the complete and prompt execution and performance of all duties, obligations, and responsibilities for the Project which are described or reasonably implied from **Exhibit A** which is attached hereto and incorporated herein by this reference.

II. THE CITY'S OBLIGATIONS/CONFIDENTIALITY

The City shall provide Consultant with reports and such other data as may be available to the City and reasonably required by Consultant to perform hereunder. No project information shall be disclosed by Consultant to third parties without prior written consent of the City or pursuant to a lawful court order directing such disclosure. All documents provided by the City to Consultant shall be returned to the City. Consultant is authorized by the City to retain copies of such data and materials at Consultant's expense.

III. OWNERSHIP OF WORK PRODUCT

The City acknowledges that the Consultant's work product is an instrument of professional service. Nevertheless, the products prepared under this Agreement shall become the property of the City upon completion of the work.

IV. COMPENSATION

A. In consideration for the completion of the services specified herein by Consultant, the City shall pay Consultant an amount not to exceed four hundred thirty-six thousand eight hundred thirty-three (\$436,833). Payment shall be made in accordance with the schedule of charges in **Exhibit B** which is attached hereto and incorporated herein by this reference. Invoices will be itemized and include hourly breakdown for all personnel and other charges. The maximum fee specified herein shall include all fees and expenses incurred by Consultant in performing all services hereunder.

B. Consultant may submit monthly or periodic statements requesting payment. Such request shall be based upon the amount and value of the work and services performed by Consultant under this Agreement except as otherwise supplemented or accompanied by such supporting data as may be required by the City.

1. All invoices, including Consultant's verified payment request, shall be submitted by Consultant to the City no later than the twenty-fourth (24th) day of each month for payment pursuant

to the terms of this Agreement. In the event Consultant fails to submit any invoice on or before the twenty-fourth (24th) day of any given month, Consultant defers its right to payment pursuant to said late invoice until the twenty-fourth (24th) day of the following month.

2. Progress payments may be claimed on a monthly basis for reimbursable costs actually incurred to date as supported by detailed statements, including hourly breakdowns for all personnel and other charges. The amounts of all such monthly payments shall be paid within thirty (30) days after the timely receipt of invoice as provided by this Agreement.

C. The City has the right to ask for clarification on any Consultant invoice after receipt of the invoice by the City.

D. In the event payment for services rendered has not been made within forty-five (45) days from the receipt of the invoice for any uncontested billing, interest will accrue at the legal rate of interest. In the event payment has not been made within ninety (90) days from the receipt of the invoice for any uncontested billing, Consultant may, after giving seven (7) days written notice and without penalty or liability of any nature, suspend all work on all authorized services specified herein. In the event payment in full is not received within thirty (30) days of giving the seven (7) days written notice, Consultant may terminate this Agreement. Upon receipt of payment in full for services rendered, Consultant will continue with all authorized services.

E. Final payment shall be made within sixty (60) calendar days after all data and reports (which are suitable for reproduction and distribution by the City) required by this Agreement have been turned over to and approved by the City and upon receipt by the City of Consultant's certification that services required herein by Consultant have been fully completed in accordance with this Agreement and all data and reports for the Project.

V. COMMENCEMENT AND COMPLETION OF WORK

Within seven (7) days of receipt from the City of a Notice to Proceed, Consultant shall commence work on all its obligations as set forth in the Scope of Services or that portion of such obligations as is specified in said Notice. Except as may be changed in writing by the City, the Project shall be complete, and Consultant shall furnish the City the specified deliverables as provided in **Exhibit A**.

VI. CHANGES IN SCOPE OF SERVICES

A change in the Scope of Services shall constitute any material change or amendment of services or work which is different from or additional to the Scope of Services specified in Section I of this Agreement. No such change, including any additional compensation, shall be effective, or paid unless authorized by written amendment executed by the City. If Consultant proceeds without such written authorization, then Consultant shall be deemed to have waived any claim for additional compensation, including a claim based on the theory of unjust enrichment, quantum merit or implied contract. Except as expressly provided herein, no agent, employee, or representative of the City shall have the authority to enter into any changes or modifications, either directly or implied by a course of action, relating to the terms and scope of this Agreement.

VII. PROFESSIONAL RESPONSIBILITY

A. Consultant hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.

B. The work performed by Consultant shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community.

C. Consultant shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by Consultant under this Agreement. Consultant shall, without additional compensation, correct or resolve any errors or deficiencies in his designs, drawings, specifications, reports, and other services, which fall below the standard of professional practice, and reimburse the City for construction costs caused by errors and omissions which fall below the standard of professional practice.

D. Approval by the City of drawings, designs, specifications, reports, and incidental work or materials furnished hereunder shall not in any way relieve Consultant of responsibility for technical adequacy of the work. Neither the City's review, approval or acceptance of, nor payment for, any of the services shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and Consultant shall be and remain liable in accordance with applicable performance of any of the services furnished under this Agreement.

E. The rights and remedies of the City provided for under this Agreement are in addition to any other rights and remedies provided by law.

VIII. WORKER WITHOUT AUTHORIZATION

A. Certification. By entering into this Agreement, Consultant hereby certifies that, at the time of this certification, it does not knowingly employ or contract with a worker without authorization who will perform work under the Agreement and that Consultant will participate in either the E-Verify Program administered by the United States Department of Homeland Security and Social Security Administration or the Department Program administered by the Colorado Department of Labor and Employment in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the Agreement.

B. Prohibited Acts. Consultant shall not:

1. Knowingly employ or contract with a worker without authorization to perform work under this Agreement; or

2. Enter into a contract with a subcontractor that fails to certify to Consultant that the subcontractor shall not knowingly employ or contract with a worker without authorization to perform work under this Agreement.

C. Verification.

1. Consultant has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement through participation in either the E-Verify Program or the Department Program.

2. Consultant shall not use the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

3. If Consultant obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with a worker without authorization who is performing work under the Agreement, Consultant shall:

a. Notify the subcontractor and the City within three (3) days that Consultant has actual knowledge that the subcontractor is employing or contracting with a worker without authorization who is performing work under the Agreement; and

b. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to subparagraph (a) hereof, the subcontractor does not stop employing or contracting with the worker without authorization who is performing work under the Agreement; except that Consultant shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with a worker without authorization who is performing work under the Agreement.

D. Duty to Comply with Investigations. Consultant shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation conducted pursuant to C.R.S. § 8-17.5-102(5)(a) to ensure that Consultant is complying with the terms of this Agreement.

E. If Consultant does not currently employ any employees, Consultant shall sign the NO Employee Affidavit attached hereto.

F. If Consultant wishes to verify the lawful presence of newly hired employees who perform work under the Agreement via the Department Program, Consultant shall sign the Department Program Affidavit attached hereto.

IX. INDEMNIFICATION

A. INDEMNIFICATION – GENERAL: The City cannot and by this Agreement does not agree to indemnify, hold harmless, exonerate or assume the defense of the Consultant or any other person or entity whatsoever, for any purpose whatsoever. Provided that the claims, demands, suits, actions or proceedings of any kind are not the result of professional negligence, the Consultant, to the fullest extent permitted by law, shall defend, indemnify and hold harmless the City, its Council members, officials, officers, directors, agents and employees from any and all claims, demands, suits, actions or proceedings of any kind or nature whatsoever, including worker's compensation claims, in any way resulting from or arising from the services rendered by Consultant, its employees, agents or subconsultants, or others for whom the Consultant is legally liable, under this Agreement; provided, however, that the Consultant need not indemnify or save harmless the City, its Council members, its officers, agents and employees from damages resulting from the negligence of the Council members, officials, officers, directors, agents and employees.

B. INDEMNIFICATION FOR PROFESSIONAL NEGLIGENCE: The Consultant shall, to the fullest extent permitted by law, indemnify and hold harmless the City, its Council members, and any of its officials, officers, directors, and employees from and against damages, liability, losses, costs and expenses, including reasonable attorneys fees, but only to the extent caused by or arising out of the negligent acts, errors or omissions of the Consultant, its employees, agents or subconsultants, or others for whom the Consultant is legally liable, in the performance of professional services under this Agreement. The Consultant is not obligated under this subparagraph IX.B. to indemnify the City for the negligent acts of the City, its Council members, or any of its officials, officers, directors, agents and employees.

C. INDEMNIFICATION – COSTS: Consultant shall, to the fullest extent permitted by law, defend, investigate, handle, respond to, and provide defense for and defend against, any such liability, claims or demands at the sole expense of Consultant or, upon mutual agreement of the parties, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with any such liability, claims or demands. Consultant shall, to the fullest extent permitted by law, bear all other reasonable costs and expenses related thereto, including court costs and reasonable attorney fees, whether or not any such liability, claims or demands alleged are groundless, false or fraudulent. If it is determined by the final judgment of a court of any competent jurisdiction that such injury, loss or damage was caused in whole or in part by the act, omission or other fault of the City, its Council members, officials, officers, directors, agents and employees, the City shall reimburse Consultant for the portion of the judgment attributable to such act, omission or other fault of the City, its Council members, officials, officers, directors, agents and employees.

D. To the extent this Agreement is subject to C.R.S. § 13-50.5-102(8), Contractor's liability under this provision shall be to the fullest extent of, but shall not exceed, that amount represented by the degree or percentage of negligence or fault attributable to Contractor, any subcontractor of Contractor, or any officer, employee, representative, or agent of Contractor or of any subcontractor of Contractor. If Contractor is providing architectural, engineering, surveying or other design services under this Agreement, the extent of Contractor's obligation to defend, indemnify and hold harmless the City may be determined only after Contractor's liability or fault has been determined by adjudication, alternative dispute resolution or otherwise resolved by mutual agreement of the Parties, as provided by C.R.S. § 13-50.5-102(8)(c).

X. INSURANCE

A. Consultant agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX, above. Such insurance shall be in addition to any other insurance requirements imposed by this Agreement or by law. Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section IX, above, by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

B. Consultant shall procure and maintain and shall cause any subcontractor of Consultant to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX, above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Worker's Compensation Insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Contract, and Employer's Liability Insurance with minimum limits of five hundred thousand dollars (\$500,000) each incident, five hundred thousand dollars (\$500,000) disease - policy limit, and five hundred thousand dollars (\$500,000) disease - each employee.

2. Commercial general liability insurance with minimum combined single limits of one million dollars (\$1,000,000) each occurrence and two million dollars (\$2,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall contain a severability of interests provision.

3. Professional liability insurance with minimum limits of six hundred thousand dollars (\$600,000) each claim and one million dollars (\$1,000,000) general aggregate.

C. The policy required by paragraph 2. above shall be endorsed to include the City and the City's officers, employees, and consultants as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, its employees, or its consultants shall be excess and not contributory insurance to that provided by Consultant. No additional insured endorsement to the policy required by paragraph 1. above shall contain any exclusion for bodily injury or property damage arising from completed operations. Consultant shall be solely responsible for any deductible losses under any policy required above.

D. The certificate of insurance provided for the City shall be completed by Consultant's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the City prior to commencement of the Agreement. No other form of certificate shall be used. If the City is named as an additional insured on any policy which does not allow for the automatic addition of additional insureds, the Consultant's insurance agent shall also provide a copy of all accompanying endorsements recognizing the City as an

additional insured. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the City. The completed certificate of insurance shall be sent to:

City of Northglenn
Attn: Kathy Kvasnicka
11701 Community Center Drive
Northglenn, Colorado 80233-8061

E. Failure on the part of Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of agreement upon which the City may immediately terminate this Agreement, or at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.

F. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

G. The parties hereto understand and agree that the City, its officers, and its employees, are relying on, and do not waive or intend to waive by any provision of this Agreement, the monetary limitations (presently three hundred fifty thousand dollars (\$350,000) per person and nine hundred ninety thousand dollars (\$990,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Colo. Rev. Stat., §§ 24-10-101, et seq., as from time to time amended, or otherwise available to the City, its officers, or its employees.

XI. NON-ASSIGNABILITY

Neither this Agreement, nor any of the rights or obligations of the parties hereto, shall be assigned by either party without the written consent of the other.

XII. TERMINATION

This Agreement shall terminate at such time as the work in Section I is completed and the requirements of this Agreement are satisfied, or upon the City's providing Consultant with seven (7) days advance written notice, whichever occurs first. In the event the Agreement is terminated by the City's issuance of said written notice of intent to terminate, the City shall pay Consultant for all work previously authorized and completed prior to the date of termination. If, however, Consultant has substantially or materially breached the standards and terms of this Agreement, the City shall have any remedy or right of set-off available at law and equity. If the Agreement is terminated for any reason other than cause prior to completion of the Project, any use of documents by the City thereafter shall be at the City's sole risk, unless otherwise consented to by Consultant.

XIII. CONFLICT OF INTEREST

The Consultant shall disclose any personal or private interest related to property or business within the City. Upon disclosure of any such personal or private interest, the City shall determine if the interest constitutes a conflict of interest. If the City determines that a conflict of interest exists, the City may treat such conflict of interest as a default and terminate this Agreement.

XIV. VENUE

This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in the County of Adams, State of Colorado.

XV. INDEPENDENT CONTRACTOR

Consultant is an independent contractor. Notwithstanding any provision appearing in this Agreement, all personnel assigned by Consultant to perform work under the terms of this Agreement shall be, and remain at all times, employees or agents of Consultant for all purposes. Consultant shall make no representation that it is the employee of the City for any purposes.

XVI. NO WAIVER

Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligation of this Agreement.

XVII. ENTIRE AGREEMENT

This Agreement and the attached **Exhibits A and B** is the entire Agreement between Consultant and the City, superseding all prior oral or written communications. None of the provisions of this Agreement may be amended, modified, or changed, except as specified herein.

XVIII. SUBJECT TO ANNUAL APPROPRIATION

Consistent with Article X, Section 20 of the Colorado Constitution, any financial obligations of the City not to be performed during the current fiscal year are subject to annual appropriation, and thus any obligations of the City hereunder shall extend only to monies currently appropriated.

XIX. NOTICE

Any notice or communication between Consultant and the City which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

The City: City of Northglenn
 11701 Community Center Drive
 Northglenn, Colorado 80233-8061

Consultant: Leonard Rice Consulting Engineers dba LRE Water
 1221 Auraria Parkway
 Denver, CO 80204

IN WITNESS WHEREOF, the parties hereto each herewith subscribe the same in duplicate.

CITY OF NORTHGLENN, COLORADO

By: _____

ATTEST:

Meredith Leighty

Print Name

Mayor

Title Date

Johanna Small, CMC Date
City Clerk

APPROVED AS TO FORM:

Corey Y. Hoffmann Date
City Attorney

CONSULTANT:

By: _____

William H. Franczak, P.E., Esq.

Print Name

ATTEST:

By: _____
David C. Colvin

David C. Colvin
Print Name

Vice President - Risk Management

Title Date

1/17/22

Project Manager 1/4/22

Title Date

PROJECT APPROACH

The ASR Pilot site design, construction and testing has some remaining uncertainties that will be addressed by a team approach during a CMAR project delivery. The tasks below are planned to form a cohesive team, collaboratively finalize design and permitting, construct the site, and perform pilot testing that confirm or refute ASR's role in future water supplies and storage for the City. The result will be valuable infrastructure that is adaptable to City's decision on ASR integration.

TASK 1: CONSTRUCTION MANAGER PROCUREMENT SUPPORT

The LRE Water team will work with the City to select the best Construction Manager (CM) through the ongoing procurement process. We have excellent relationships with the major drilling companies qualified for Denver Basin work. We will provide review of candidate CM submittals, short list company recommendations, participate in interviews, and bring the context of our recent experience with these companies to the decision making process.

We will use the 60% designs to create a bid package for short listed CM candidates to use as the basis for a preliminary bid. We will provide bid review and a recommendation for CM selection. We will support the City during contract negotiations with the selected CM.

We will support the City by planning and facilitating meetings related to the CM procurement. Expected meetings include: Statement of Qualifications (SOQ) review/shortlist recommendations; short-listed candidate interviews; pre-bid candidate presentation; bid opening; bid review/CM recommendation; and CM contract negotiation.

This project will benefit from open communication within a cohesive team consisting of the City staff, the LRE Water team, and the selected CM. Selecting the right CM is critical for a successful pilot project and this procurement process will be the starting point of developing a collaborative project team.

TASK 1 DELIVERABLES

- CM SOQ review with short list CM candidate recommendations
- Bid package based on 60% design
- CM bid review and recommendation for award

TASK 1 ASSUMPTIONS

- CM will be under separate contract to the City
- The City will provide standard bid package materials including procurement forms and contract documents
- All meetings will be online (The LRE Water team is available for in-person meetings with the City and CM candidates as budget, schedule, and health regulations allow.)

TASK 2: 90% GMP AND FINAL DESIGN

The 60% design is complete in many respects and is sufficient for a fair and informative CM bidding process, but a number of uncertainties remain that will benefit from design and construction team coordination.

There is uncertainty in the ideal alignment of pipelines that will connect the ASR site with existing City infrastructure. One option avoids the Terminal Reservoir embankment, connecting to the WTF from the east, through a complex network of existing subsurface utilities. Another pipeline path avoids the utility coordination challenges, but requires installing the pipeline through the Terminal Reservoir embankment, where state regulators will require concrete encased pipe. In today's world of supply chain disruption, material shortages, and pricing uncertainty, contractor input during value engineering of the alignment options will be important. The LRE Water Team will coordinate with the CM to evaluate pricing and constructability while finalizing the pipeline alignment.

Another uncertainty exists in the well design, particularly in the Arapahoe aquifers. The Laramie-Fox Hills aquifer has more information available because the City has drilled several wells into it, including LF-5 at the proposed pilot site. The historical information from these wells provides real world validation of well yield and water quality data to inform well design. The City has one Arapahoe well that is completed in both the Upper and Lower aquifers as currently administered by DWR. The Upper Arapahoe is designated as not nontributary, while the Lower Arapahoe is nontributary. This water rights distinction will need to be weighed against the aquifer properties that are relatively uncertain because of the lack of well data in these aquifers.

The LRE Water team will work with the CM to develop a drilling plan that addresses these Arapahoe aquifer uncertainties through the collection of critical data during the drilling process. We will also create an adaptable design that will be flexible for developing the final well design(s) based on the data collected during drilling process. This approach will require upfront and ongoing coordination between the LRE Water team, the City, the CM, and regulators. Our team is structured to facilitate that communication and decision making.

THE LRE WATER ADVANTAGE

During the City of Greeley's Terry Ranch ASR due diligence investigation, LRE Water coordinated adaptive aquifer investigation and well construction with buy in from Greeley, the drilling contractor, subcontractors, and regulators. This all occurred under a tight deadline and was implemented in a transparent manner with public review. Additional information about LRE's work on the Terry Ranch project is available at <https://greeleygov.com/services/ws/trp/test-results-and-transparency>

The LRE team will work closely with the CM to address uncertainties and gaps in the 60% design to create a 90% design package for the City's review. We will provide this to the City for input to discuss during a 90% design review workshop with the CM. The LRE Water team will incorporate comments into a final design for permitting and construction.

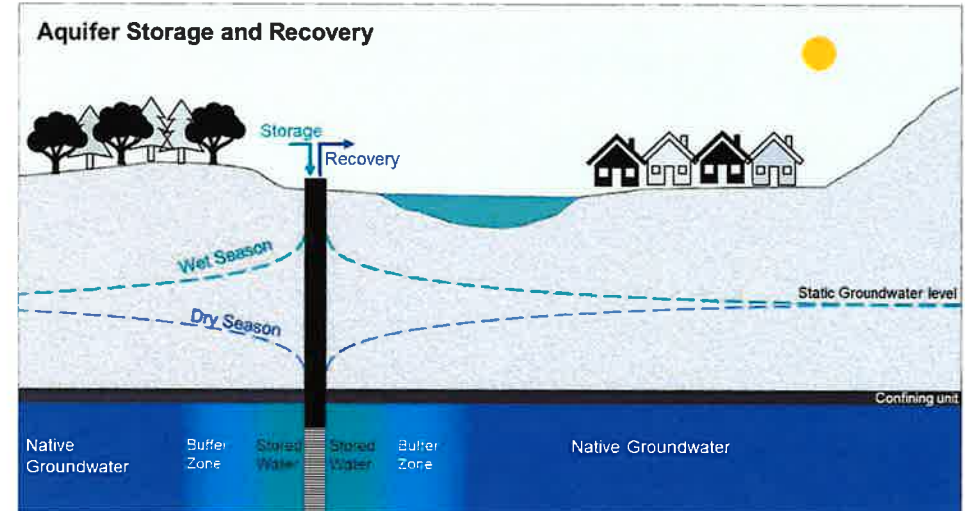
The 90% design will be the basis for the CM's development of a Guaranteed Maximum Price (GMP). The LRE Water team will support the City with review of the GMP and negotiations with the CM. If a mutually acceptable GMP is not identified, the final design can be used as part of a public bid package under a design-bid-build project delivery approach.

TASK 2 DELIVERABLES

- 90% GMP Design package and workshop materials
- 100% Design package

TASK 2 ASSUMPTIONS

- City staff will provide review and comment on 90% design
- The City will provide available front-end specifications, design details, GMP/bid package content, and contract documents
- The City will provide topographic survey, potholing, and geotechnical investigations as needed by the design team.
- An acceptable GMP will be negotiated and a design-bid-build bidding process will be unnecessary
- Design task budget does not include costs for laboratory, geotechnical, or survey work.



TASK 3: PERMITTING

The primary permits required for the ASR pilot project are administered under the US EPA Underground Injection Control (UIC) program and the Colorado Division of Water Resources (DWR) Artificial Recharge Extraction Rules (2 CCR 402-11). The LRE Water team has drafted applications during the Phase 2 project and will be positioned to efficiently finalize permit applications. We will continue on-going dialogue with both agencies to address any concerns they may have before submitting applications. We will facilitate pre-application meetings with both the EPA and DWR.

EPA UIC permitting is a multi-step process that will require interactions with permitting agencies before, during, and after the pilot testing. The LRE Water team has worked with the City and the EPA to develop a permitting plan that will result in complete applications, increasing the likelihood of expedited permit approvals. We have prepared a draft Rule Authorization (RA) request, the process that the EPA has indicated they will use to cover the pilot testing. This RA is based on currently available information, does not require significant public comment, and details how the pilot testing will collect the data required for the next step of the process, a UIC Well Area Permit application. If piloting proves ASR to be valuable for integration into the City's water storage and supply, the LRE Water team will prepare a draft UIC Permit application as part of the pilot report described below.

DWR permitting is a multi-faceted process that will include a well permitting approach that can accommodate multiple Arapahoe well completion scenarios. The LRE Water team maintains excellent relationships with DWR regulators and will work with the DWR to evaluate the groundwater administration and water rights issues associated with the Arapahoe aquifers. The nontributary status, grandfathered dual completion construction of the City's A-7 well, and uncertainty in aquifer conditions (confined versus unconfined, net sand, etc.) will all be considered. We will prepare applications for DWR well permits and a permit to extract/use artificially recharged water.

THE LRE WATER ADVANTAGE

The LRE Water team has an established rapport with the EPA and DWR on this and other ASR projects. Understanding their concerns will improve our applications and communications so that we don't have permitting delays on the project.

TASK 3 DELIVERABLES

- EPA and DWR pre-application meeting materials
- EPA UIC Rule Authorization application
- DWR well permit applications
- DWR application for artificial recharge water extraction and use

TASK 3 ASSUMPTIONS

- The City will sign all permit applications
- The City will pay application fees

TASK 4: CONSTRUCTION ADMINISTRATION

During construction, the LRE Water team will provide construction administration services including part-time construction observation for construction of groundwater wells, associated pipelines, infrastructure, electrical, controls, and instrumentation. We will coordinate, review, and document testing of the equipment installed by the CM.

We will work closely with the CM to minimize the need for long periods of onsite engineering construction observation, while making sure we are there for critical well drilling, construction, and testing activities. Such well drilling activities include critical drilling depths (aquifer transitions, total depth), geophysical logging, downhole testing, sidewall coring, well construction, well development, and aquifer testing.

We will coordinate a preconstruction meeting with the CM and City staff. We will review shop drawings, perform part-time construction observation and provide engineering consultation. We will coordinate, review and document testing of the equipment installed by the CM. We will attend weekly construction meetings online, by phone, or on site. The LRE team will respond to requests for information (RFIs), prepare change orders, review/approve submittals, and review/approve pay estimates.

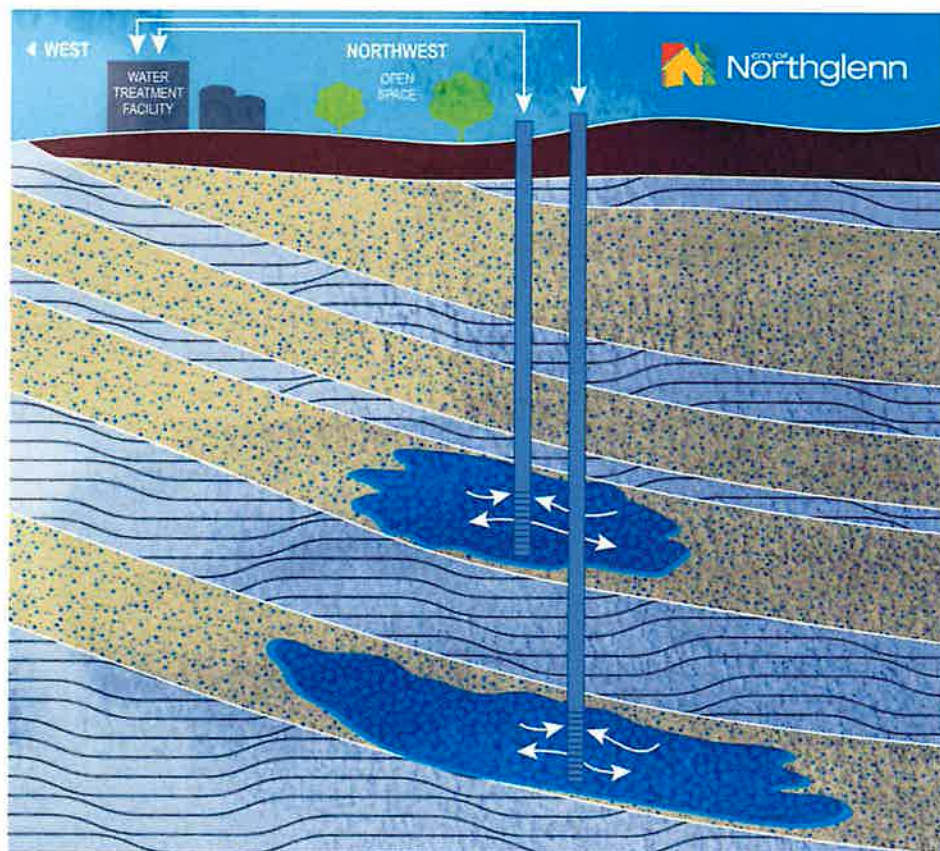
During the commissioning phase, the LRE Water team will conduct a project start-up at the ASR pilot site and prepare a punch list of items to be completed by the CM. We will prepare record drawings based on the CM's redlines. We will review the operations and maintenance manuals provided by the material suppliers and CM and prepare a record controls narrative based in coordination with City staff and WTF operators.

TASK 4 DELIVERABLES

- Record Drawings
- Controls narrative and operational guidelines

TASK 4 ASSUMPTIONS

- The LRE Water team will review up to sixty (60) shop drawings, twenty (20) resubmittals, four (4) RFQs, six (6) RFIs, five (5) change orders, and six (6) pay estimates.
- Drilling observation by the LRE Water team will consist of daily field visits with observation of critical drilling and construction activities and are assumed will average 20-hours per week.
- Other field observation will consist of up to 14 hours per week over a 20 week period.
- The LRE Water team will attend a weekly one-hour, online construction meeting.



TASK 5: PILOT TEST OPERATIONS

After the site is constructed and commissioned by the CM, the LRE Water team will develop a pilot testing plan that meets the requirements set by the EPA to obtain a UIC Well Area permit and that provides data to evaluate the feasibility of integrating ASR into the City's raw water supplies.

We will perform pilot testing that targets maximizing well injection/recovery rates while providing necessary water quality data. Well injection/recovery rates can be optimized through operational cycling similar to filter backwashing. During pilot test operations, we will work to automate ASR procedures to create a user friendly system.

The team will collect samples of 100% native groundwater to characterize before well cycling begins. Additional samples of recovered water will be collected throughout recovery and from the end of each recovery cycle. We will determine the level of mixing with native groundwaters through conductivity as a natural tracer (at a minimum). If additional water quality evaluation is necessary, bench-scale jar tests can be conducted by mixing the native and recovered water with raw Terminal Reservoir water to confirm chemical dosing, treatability, and finished water quality compared to historical treatment plant data.

THE LRE WATER ADVANTAGE

Our team includes Gary Gin, who helped Phoenix develop ASR with operators who were primarily experienced in surface water systems. His lessons learned will guide our procedures and system automation so that we can develop a user-friendly system that encourages use.

TASK 5 DELIVERABLES

- Pilot testing plan
- Pilot test database

TASK 5 ASSUMPTIONS

- Bench-scale jar tests will not be included in the initial budget, and can be added if determined to provide valuable information.
- City staff will work with the LRE Water team to coordinate water supplies for test injection
- Laboratory costs are not included in the task budget.

TASK 6: PILOT ASR REPORT

The LRE Water team will create a report that summarizes the ASR pilot system final design, permitting, construction, and pilot testing. We will document meetings and decisions with the regulators, the drilling and construction process. We will include appendices with final approved permits and as-built system drawings from previous tasks.

We will document the pilot testing process, operations, and data collected. We will analyze the test data and provide conclusions and recommendations on the viability of ASR integration into the City's existing storage and supply infrastructure.

If ASR is deemed viable, we will provide detailed operations and maintenance (O&M) plans that will simplify the use of the ASR system. We will coordinate a workshop with City staff to review the draft Pilot ASR Report and O&M Plan. We will incorporate City comments into a report and final O&M plan that can effectively guide use of the system in the future. We will also provide alternative roadmaps for expansion of ASR throughout the City's service area. If ASR is infeasible for integration with the WTF potable raw water supplies, we will provide a summary of alternative pilot site uses to consider in the future, such as non-potable ASR or extraction of non-renewable groundwater supplies.

The LRE Water team will be available to support City staff by developing communication tools such as project summary handouts and presentations for meetings with City Council, the City Manager, and other City leadership. We will also coordinate a pilot project summary workshop for City staff from Water Resources and other departments.

TASK 6 DELIVERABLES

- ASR Report including final approved permits, as-built drawings, pilot testing results, ASR O&M Plan, and future system use recommendations
- Pilot ASR Workshop materials

TASK 6 ASSUMPTIONS

- We will provide City staff a draft report for review and comment
- City staff will make the ultimate ASR viability determination with guidance and recommendations from the LRE Water team

TASK 7: GENERAL GROUNDWATER CONSULTING SERVICES

It is often hard to predict what tasks will arise in water resource management. The interconnectivity of water assets can cause ripple effects that require unplanned support. As such, the LRE Water team will provide general consulting for groundwater issues that the City encounters that are not identified in this proposal.

Rate Schedule and Project Cost

The budget summary provided in the table below reflects our current understanding of the scope of work. LRE Water hourly billing rates are provided on the next page.

ASR Pilot Budget Summary

Task No.	Task Name	Hours	Labor Cost	Expenses	Sub Cost	Task Total
01	CM Procurement Support	116	\$21,792	\$280	\$15,042	\$37,114
02	Final Design	152	\$28,352	\$0	\$65,758	\$94,110
03	Permitting	194	\$32,650	\$140	\$0	\$32,790
04	Construction Administration	352	\$54,972	\$1,120	\$27,051	\$83,143
05	Pilot Test Operations	516	\$76,300	\$4,900	\$27,944	\$109,144
06	Pilot ASR Report	228	\$39,820	\$0	\$24,760	\$64,580
07	General Groundwater Services	72	\$15,672	\$280	\$0	\$15,952

Totals	1,630	\$269,558	\$6,720	\$160,555	\$436,833
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LRE WATER

2022 RATE SCHEDULE

Effective December 26, 2021

	<u>Hourly Rate</u>
Student Intern.....	\$65- \$95
Data Processor/Admin Support	\$75 - \$135
Technician/IT Support	\$100 - \$140
Staff I	
Engineer/Hydrologist/Geologist/Scientist	\$100 - \$140
Staff II	
Engineer/Hydrologist/Geologist/Scientist	\$115 - \$150
Staff III	
Engineer/Hydrologist/Geologist/Scientist	\$135 - \$175
Project	
Engineer/Hydrologist/Geologist/Scientist	\$155 - \$185
Senior Project	
Engineer/Hydrologist/Geologist/Scientist	\$160 - \$195
Project Manager	\$165 - \$205
Senior Project Manager	\$170 - \$260
Principal, Senior Advisor	\$200 - \$275

Expenses such as laboratory analysis, obtaining aerial photos, or other special services incurred directly in connection with the project are billed at cost plus 5 percent to cover handling and administration. Reimbursable expenses billed at cost include airfare, automobile rental, and other travel or per diem costs including mileage billed at the current IRS rate (rounded up to the nearest \$0.05). Subconsultants to LRE are billed at cost plus 10 percent.

**PROSPECTIVE CONTRACTOR'S CERTIFICATE REGARDING EMPLOYING OR
CONTRACTING WITH A WORKER WITHOUT AUTHORIZATION**

FROM: L2E water
(Prospective Contractor)

TO: City of Northglenn
11701 Community Center Drive
Northglenn, Colorado 80233-8061

Project Name ASR Pilot Project

Bid Number 2021-025

Project No. 2022-001

As a prospective Contractor for the above-identified bid, I (we) do hereby certify that, as of the date of this certification, I (we) do not knowingly employ or contract with a worker without authorization who will perform work under the Agreement and that I (we) will confirm the employment eligibility of all employees who are newly hired for employment to perform work under the Agreement through participation in either the E-Verify Program administered by the United States Department of Homeland Security and Social Security Administration or the Department Program administered by the Colorado Department of Labor and Employment.

Executed this 14th day of January, 2022.

Prospective Contractor L2E water

By: [Signature]

Title: Vice President - Risk Management

To be completed if contractor is providing services and has employees.

DEPARTMENT PROGRAM AFFIDAVIT

(To be completed if Contractor participates in the
Department of Labor Lawful Presence Verification Program)

I, LRE water, as a public contractor under contract with the City of Northglenn (the "City"), hereby affirm that:

1. I have examined or will examine the legal work status of all employees who are newly hired for employment to perform work under this public contract for services ("Contract") with the City within twenty (20) days after such hiring date;

2. I have retained or will retain file copies of all documents required by 8 U.S.C. § 1324a, which verify the employment eligibility and identity of newly hired employees who perform work under this Contract; and

3. I have not and will not alter or falsify the identification documents for my newly hired employees who perform work under this Contract.

[Signature]
Contractor Signature

1/14/22
Date

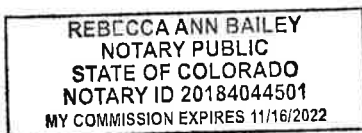
STATE OF COLORADO)
COUNTY OF Denver) ss.)

The foregoing instrument was subscribed, sworn to and acknowledged before me this 14th day of January, 2022, by William H. Fronczak as Vice President of LRE Water.

My commission expires: 11/16/2022

(SEAL)

[Signature]
Notary Public



To be completed if contractor is providing services and has employees.