EXHIBIT 1

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT, between the Board of Water Works of Pueblo, Colorado (herein referred to as Pueblo Water), and GEI Consultants, Inc. (GEI) is as follows:

ARTICLE 1 – SERVICES TO BE PERFORMED BY GEI

GEI will perform the services described in Attachment A, which is attached hereto and incorporated by reference as part of this Agreement. All deliverables provided by GEI, as provided in this Agreement, will be Pueblo Water's property. GEI is not liable for any claims, liability or cost arising or allegedly arising out of any unauthorized modification or misuse of the project deliverables by Pueblo Water or any person or entity that acquires or obtains the plans and specifications from or through Pueblo Water.

ARTICLE 2 – COMPENSATION

Pueblo Water will pay GEI for the performance of Services an amount not to exceed $304,056 as described in Attachment A. Monthly invoices will be issued by GEI for all Services performed under the terms of this Agreement. Pueblo Water shall pay each invoice within net 30 days. Interest at the rate of 1 percent per month will be charged on all past-due amounts, unless not permitted by law.

ARTICLE 3 – STANDARD OF CARE

GEI will exercise the same degree of care, skill, and diligence in the performance of the Services as is ordinarily provided by members of GEI's profession currently practicing in the same locality under similar circumstances.

ARTICLE 4 – INSURANCE

During the performance of the Services under this Agreement, GEI and any subcontractors will maintain the following insurance: 1) General Liability Insurance, with a limit of $1,000,000 for each occurrence and $1,000,000 in the aggregate. 2) Automobile Liability Insurance, with a combined single limit of $1,000,000 for all Owned, Hired and Non-owned Autos. 3) Workers Compensation Insurance in accordance with statutory requirements and Employers Liability Insurance, with a limit of $500,000 for each occurrence. 4) Professional Liability Insurance, with a limit of $1,000,000 per claim and in the aggregate.

GEI will, upon written request, furnish Pueblo Water certificates of insurance. GEI and any subcontractors will be required to include Pueblo Water and GEI as additional insured on their

General Liability and Auto Liability Insurance policies including Primary and Non-Contributory language. A waiver of subrogation must be included under all coverage's except Professional Liability. Copies of the Additional Insured Endorsements and Waivers of Subrogation must be furnished with the certificates of insurance.

Subject to the stability of the insurance market, GEI agrees that the provisions for Professional Liability Insurance will remain in force for a period of two (2) years following termination of this Agreement.

The insurance coverage enumerated in this Article will be primary over any insurance carried by Pueblo Water and constitute requirements; said enumeration will in no way lessen or limit the liability of GEI under the terms of this Agreement. GEI may procure and maintain, at GEI's own cost and expense, any additional kinds and amounts of insurance that, in GEI's own judgment, may be necessary for GEI's protection.

ARTICLE 5 – PUEBLO WATER RESPONSIBILITIES

Pueblo Water will supply or cause to be supplied to GEI, information and data currently existing and available, without costs, to Pueblo Water, which is required by GEI.

ARTICLE 6 – TERMINATION OF AGREEMENT

Pueblo Water will have the right to terminate this Agreement for Pueblo Water's convenience upon written notice to GEI, and GEI will terminate performance of Services on a schedule acceptable to Pueblo Water. Such notice shall be delivered at least fifteen (15) days prior to the termination date contained in said notice unless otherwise agreed in writing by the parties. In the event of termination for Pueblo Water's convenience, Pueblo Water will pay GEI for services rendered to the date of termination, subject only to the satisfactory performance of GEI's obligations under this Agreement. Such payment shall be GEI's sole right and remedy for such termination.

ARTICLE 7 – CAPTIONS AND HEADINGS

The captions and headings in this Agreement are for convenience of reference only, and will not be used to interpret, define, or limit its provisions.

ARTICLE 8 – SEVERABILITY

If any term or condition of this Agreement or the application thereof to any person(s) or circumstances is held invalid, such invalidity will not affect other terms, conditions or applications which can be given effect without the invalid term, condition or application. To this end, the terms and conditions of this Agreement are declared severable.

ARTICLE 9 – NO THIRD PARTY BENEFICIARIES

Nothing contained in this Agreement is intended to confer upon any person other than the parties hereto any rights, benefits or remedies of any kind or character whatsoever, and, except as otherwise specifically stated herein, no person will be deemed a third party beneficiary under or by reason of this Agreement

ARTICLE 10 – CONSTRUCTION AGAINST THE DRAFTER

In the event of an ambiguity in this Agreement, the rule of construction that ambiguities will be construed against the drafter is inapplicable, and the parties hereto are to be treated as equals and no party will be treated with favor or disfavor.

ARTICLE 11 – ASSIGNMENT

Except as described in Attachment A, GEI will not assign or subcontract any portion of this Agreement without the express and prior written consent of Pueblo Water.

ARTICLE 12 – MODIFICATIONS

This Agreement may not be modified or amended except by a written instrument executed by or on behalf of each of the parties to this Agreement which specifically states that it amends this Agreement.

ARTICLE 13 – WAIVER

The failure of either party to insist upon strict performance of any of the provisions contained in this Agreement will not constitute a waiver of its rights as set forth in this Agreement, at law or in equity, or a waiver of any other provisions or subsequent default by the other party.

ARTICLE 14 – ENTIRE AGREEMENT

This Agreement, including any addenda, exhibits, attachments, supplements and schedules, constitutes the entire agreement between Pueblo Water and GEI with respect to the subject matter hereof and supersedes all other oral and written representations, understandings or agreements relating to this Agreement.

ARTICLE 15 – COMPLIANCE WITH LAW

GEI will comply with applicable Federal, state and local laws, orders, rules and regulations relating to the performance of the Services.

ARTICLE 16 – INDEPENDENT CONTRACTOR

The parties agree that GEI is acting, and will continue to act, as an independent contractor and not as an employee of Pueblo Water in GEI's performance under this Agreement.

(A) FOR THIS AGREEMENT AND FOR ALL OTHER LAWFUL PURPOSES, GEI SHALL BE CONSIDERED AN INDEPENDENT CONTRACTOR AND NOT AN EMPLOYEE OF PUEBLO WATER, AND THEREFORE GEI AT ALL TIMES RESERVES THE RIGHT TO CONTROL ITS OWN EMPLOYEES, SUBCONTRACTORS OR AGENTS. THE SOLE INTEREST AND RESPONSIBILITY OF GEI IS TO ENSURE THAT THE ABOVE-DESCRIBED SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAW, RECOGNIZED STANDARDS OF PRACTICE, AND THE TERMS OF THIS AGREEMENT. NEITHER GEI, NOR ANY OF ITS EMPLOYEES SHALL BE ENTITLED TO UNEMPLOYMENT COMPENSATION INSURANCE BENEFITS UNLESS SUCH COVERAGE IS PROVIDED BY GEI OR SOME ENTITY OTHER THAN PUEBLO WATER.

(B) GEI SHALL PROCURE AND MAINTAIN IN FULL FORCE AND EFFECT AT ALL TIMES DURING THE PERFORMANCE OF SERVICES UNDER THIS AGREEMENT WORKERS' COMPENSATION INSURANCE AS PROVIDED BY COLORADO STATUTES, IRRESPECTIVE OF THE NUMBER OF EMPLOYEES ENGAGED IN THE WORK.

(C) GEI AGREES TO PAY ALL APPLICABLE STATE AND FEDERAL TAXES ON THE MONIES RECEIVED BY GEI UNDER THIS AGREEMENT.

ARTICLE 17 – GOVERNMENTAL IMMUNITY

No term or condition of this Agreement is to be construed or interpreted as a waiver, express or implied, by Pueblo Water of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, C.R.S. §24-10-101 et seq., as applicable now or hereafter.

ARTICLE 18 – NOTICE

All notices and other communications that are required or permitted to be given to the parties under this Agreement will be sufficient in all respects if given in writing and delivered in person, by express courier, or by First Class U.S. Mail, postage prepaid. Notice delivered in person or

by courier will be effective upon such delivery; notice provided through U.S. Mail will be effective three days after deposit in the U.S. Mail. Notice will be given to the receiving party at the following addresses:

If to GEI: GEI Consultants, Inc.
Attn: Nick D. Miller, P.E., Project Manager
4601 DTC Boulevard, Suite 900
Denver, CO 80237

If to Pueblo Water: Board of Water Works of Pueblo, Colorado
Attn: Executive Director

Mail:	or	Hand Delivery:
P.O. Box 400		319 West 4th Street
Pueblo, CO 81002-0400		Pueblo, CO 81003

or to such other address as such party may have given to the other by notice pursuant to this Article.

ARTICLE 19 – GOVERNING LAW AND VENUE

This Agreement will be governed by the laws of the State of Colorado in all respects, including matters of validity, construction, performance, and enforcement. Venue on any action arising out of this Agreement will be proper only in Pueblo County, State of Colorado.

ARTICLE 20 – DEFAULT

Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either party should fail or refuse to perform according to the terms of this Agreement, such party may be declared in default thereof.

ARTICLE 21 – REMEDIES

In the event a party has been declared in default, such defaulting party shall be allowed a period of ten (10) business days to provide a corrective action plan to cure said default. In the event the default remains uncorrected within a mutually agreed to cure date by the parties or if the parties cannot agree upon a cure date, the party declaring default may elect to (a) terminate the Agreement and seek damages; (b) treat the Agreement as continuing and require specific performance; or (c) pursue any other remedy at law or equity.

ARTICLE 22 – INDEMNIFICATION

GEI agrees to indemnify Pueblo Water for any claims, damages, losses, and costs, including, but not limited to, attorney's fees and litigation costs, arising out of claims by third parties for property damage or bodily injury, including death, to the proportionate extent caused by the negligence or willful misconduct of GEI, GEI's employees, affiliated corporations, and subcontractors in connection with the Services.

ARTICLE 23 – FORCE MAJEURE

Any delays in or failure of performance by GEI shall not constitute breach hereunder if and to the extent such delays or failures of performance are caused by occurrences beyond the reasonable control of GEI. In the event that any event of force majeure as herein defined occurs, GEI shall be entitled to a reasonable extension of time and compensation for performance of its Services under this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the 17th day of May, 2022.

BOARD OF WATER WORKS OF PUEBLO, COLORADO

By: _____

Seth J. Clayton, Executive Director

GEI CONSULTANTS, INC.

By: _____

Nick Miller, Senior Project Manager

May 10, 2022

Geotechnical
Environmental
Water Resources
Ecological

Mr. Alan Ward
Water Resources Division Manager
Board of Water Works of Pueblo, Colorado
319 W. 4th Street
Pueblo, CO 81002

Subject: Proposal for Clear Creek Reservoir Enlargement Study – Phase 2

Dear Mr. Ward:

The Board of Water Works of Pueblo, Colorado (Pueblo Water) is committed to providing the highest quality water to its customers and ensuring that Pueblo's water supply system is operated and maintained in an efficient and cost-effective manner. With this mission in mind, Pueblo Water would like to continue to evaluate enlargement alternatives at Clear Creek Reservoir, to potentially store both its native and trans-mountain water and assess some dam safety improvements at this facility. GEI Consultants, Inc. (GEI) appreciates this opportunity to provide Pueblo Water our proposal to study the Clear Creek Reservoir enlargement and assist Pueblo Water in achieving its objectives for this project.

Pueblo Water has teamed with Colorado Springs Utilities (CS-U) to help support the advancement of the conceptual designs for the Clear Creek Dam. GEI previously evaluated four conceptual reservoir raise alternatives that ranged from a 4-foot raise up to a 36-foot raise. The reservoir raise alternatives would have maximum storages that range from about 12,600 acre-feet up to about 29,900 acre-feet. Based on discussions with Pueblo Water and CS-U, the team would like to advance the largest reservoir raise alternative with a maximum storage volume of about 29,900 acre-feet and maximum normal pool at elevation (El.) 8916.0.

Through our conversations with Pueblo Water, GEI envisions the main goals of the enlargement study will be to:

- Perform detailed topographic surveys of the site to develop base maps for use in final design;
- Assess technical feasibility and potential issues associated with enlargement of storage capacity;

GEI Consultants, Inc.
4601 DTC Boulevard, Suite 900, Denver, CO 80237
303.662.0100 fax: 303.662.8757

- Identify constructability issues that may affect feasibility and cost of the enlargement;
- Prepare reliable construction cost estimates of the enlargement conceptual designs;
- Determine whether there is an optimal point for the enlargement alternatives between El. 8912 and El. 8920, where additional storage can be obtained most cost-effectively; and
- Prepare a report documenting assumptions, analysis results, findings and recommendations, including conceptual level drawings depicting the enlargement alternatives.

Proposed Scope of Work

The primary sources of information to support the study will be prior reports and existing monitoring data. The following tasks will be undertaken to complete the Phase 2 Clear Creek Reservoir Enlargement Study:

1. **Topographic Survey:** GEI will utilize our subcontractor River Science to perform a land survey, obtain high resolution elevation data and aerial imagery with an unmanned aircraft system (UAS). We will incorporate the bathymetric survey performed in 2016 into our data set. River Science will provide GEI with a combined Digital Elevation Model (DEM) of the entire site that will be certified by a Professional Land Surveyor (PLS). Details of River Science's scope of work is included as **Attachment 1**.

2. **Site Reconnaissance:** Perform engineering and geologic reconnaissance mapping of potential borrow areas upstream of the dam, near the right abutment and within potential spillway areas. The mapping will focus on characterizing the materials and the extent and variability of the materials. A key component of the mapping will be to identify potential borrow materials on site. The engineering and geologic reconnaissance mapping will provide additional site-specific data to support reservoir enlargement alternatives.

3. **Preliminary Geotechnical Investigation:** GEI will perform a preliminary geotechnical investigation at Clear Creek Dam to identify and classify potential borrow sources on or nearby Pueblo Water property. The intent of the investigation will be to assess the potential volume and material properties available on site. The preliminary investigation will include a series of geophysical surveys accompanied with test pits to identify and assess the material variations shown in the geophysical survey lines. Based on our previous drilling experience at the site, drilling boreholes is very challenging due to the presence of large boulders. Accordingly, we did not

include any boreholes because the test pits can accomplish the task in a more cost-effective manner. The preliminary investigation will focus on possible borrow locations upstream near the campground, near the proposed spillway structure and excavation on BLM land by the South Dike, and along the proposed route for the raised Forest Service access road. For any excavation on federal land, consultation will be performed with respective agency's regional office to ensure compliance with permitting requirements. Investigations performed within wetlands or other waters are permitted under a Nationwide Permit (NWP) 6 for Surveying Activities, pre-construction notification is not required for this NWP. The proposed preliminary geotechnical investigation is summarized in **Attachment 2**. The geotechnical investigation will include a limited laboratory testing program to determine the material properties of the samples collected. The laboratory testing will focus on material classifications and gradations to evaluate if the materials are suitable for use in raising the embankment dam. The preliminary geotechnical investigation and laboratory testing will be summarized and documented in the Enlargement Study Report (Task 9).

In addition to performing the geotechnical investigation, GEI will also utilize our previously developed GeoStudio seepage and slope stability models to evaluate the stability of Highway 24 with the raised reservoir levels. Based on the previous study results, the critical sections for Highway 24 were at the embankment maximum section and through the South Dike section. These sections showed an increased phreatic surface and pore water pressures through the highway embankment due to the raised reservoir water surface selected for larger embankment alternatives. The previous analyses generally focused on the dam embankment seepage and slope stability results and identified the increased phreatic surface through the highway embankment. Since Pueblo Water is choosing to move forward with the larger reservoir and embankment raise alternative, additional evaluations of the impacts to the Highway 24 embankment will be performed. The additional evaluations will focus on potential modifications to mitigation measures to minimize impacts on the highway. The potential mitigations could include a deeper or wider cutoff wall configuration and a larger more effective seepage collection system. In addition, we will evaluate varied subsurface stratigraphy configurations to assess the impacts the assumed stratigraphy has on the seepage results. Additionally, we will perform sensitivity analyses of the foundation and highway embankment material properties to determine the potential impacts the assumed material properties have on the seepage and stability results at the highway embankment. The results of the seepage and stability analyses will be documented in a draft Geotechnical Evaluation

Technical Memorandum (TM) for review and comment by Pueblo Water and CS-U. The TM will be finalized based on the comments and will be included as an appendix in the Enlargement Study Report (Task 9).

4. **Hydrology:** GEI will complete a hydrologic hazard analysis in accordance with the Colorado SEO 2020 Rules and Regulations for Dam Safety and Construction. The first step in this process is to update the Clear Creek Dam hydrology study developed in 2016 with the new rainfall values developed in the 2020 Colorado-New Mexico Regional Extreme Precipitation Study (REPS) Tool. The previous hydrology study performed by GEI defined the watershed boundary, evaluated soils infiltration, estimated basin response, and routed the flood through the watershed and reservoir past the dam. The Probable Maximum Precipitation (PMP) for the watershed was developed using Hydrometeorological Report (HMR) 51 and HMR 52, which have been superseded with the REPS study for the Colorado area.

   The principal determinant of spillway sizing criteria and related design features for dam safety is based on the consequences that would occur if a dam fails during a hydrologic event, or the hydrologic hazard. The new hydrologic hazard approach uses consequences to determine an Inflow Design Flood (IDF) magnitude that results in risk that is acceptably low. Hydrologic hazard determination involves dam breach analysis associated with flood routing, and downstream consequence analysis. Consequence analysis includes estimating Population at Risk (PAR), warning adequacy, fatality rates, and expected life loss. For Clear Creek Dam, the existing sunny day dam failure inundates large parts of Buena Vista, and other developed areas. Increasing the reservoir storage and level will increase the risks to downstream PAR. Due to the location of hazards within the floodplain of the downstream reach, GEI is assuming that Pueblo Water will accept an Extreme Hydrologic Hazard rating for the new facility. Based on an Extreme Hydrologic Hazard, the proposed spillway for the expanded facility will be required to pass the controlling Probable Maximum Flood (PMF).

   GEI will update the precipitation values and comprehensive rainfall-runoff model using the existing basin delineation, loss rates, unit hydrographs, and routing parameters as well as the new PMP values developed with the 2020 REPS Tool. Other key input parameters for the hydrologic model include reservoir storage capacity, estimated spillway rating curves, and initial watershed and reservoir conditions. GEI will perform rainfall-runoff simulations for the PMF scenarios developed in the REPS Tool, which includes the 6-hour, 24-hour, and 72-hour storm

events, and route the floods through the reservoir and spillway. Inflows, outflows, and peak water surface elevations at the reservoir will be reported for the evaluated floods.

A Hydrology Report will be submitted to Pueblo Water for review and acceptance prior to advancing the enlargement study. The report will include all study assumptions, modeling methods, calculations, PMF results, and conclusions and recommendations for Clear Creek Dam and the enlargement study. The report will also include figures and maps supporting the hydrologic study development and conclusions. The Hydrology Report will be prepared as a separate document that can be submitted to the SEO for review and approval at Pueblo Water's discretion.

5. **Reservoir Enlargement Conceptual Design:** GEI will review prior engineering reports and data documenting the configuration, construction and performance of the existing dam and appurtenant facilities. Following the survey and base map developed, GEI will advance the design concept for raising the storage level in the reservoir and address other dam safety improvements. The design concept will include a detailed assessment of impacts on the private property upstream of the reservoir that would be inundated by the raised reservoir. The design concept will determine if there are critical design considerations for the enlargement alternatives between El. 8912 and El. 8920. The dam enlargement concept will be a zoned earthen embankment downstream crest raise as shown in the previous enlargement study (GEI, 2016). GEI will review our previous seepage and stability model and results of the enlargement alternatives and determine if any adjustments are needed to improve the performance of the embankment. Following the updated hydrologic study and IDF development, appropriate spillway and outlet works configurations will be incorporated into the raise design concept. GEI will develop design criteria to establish the design intents of the new outlet works and spillway. The design criteria and design configurations will be described in detail in the Reservoir Enlargement Study Report (Task 9). The reservoir enlargement conceptual design will also include preliminary design of the county road realignment on the north side of the reservoir, which will include plan and profile views and typical sections. These will be used to support quantity development for the cost estimate.

6. **Constructability Assessments and Opinion of Probable Construction Costs (OPCC):** GEI will review and update the previously developed construction cost estimates for the conceptual design of the enlargement alternative. GEI will assess construction-related issues, particularly materials availability, processing and

handling of materials, and site access. The constructability assessment will include borrow development and borrow sourcing analysis. The assessment will identify up to three locations and determine the property owner, haul distance to and from the site, and the potential implications on the construction cost estimates should that site be used. The study results will provide Pueblo Water information needed to initiate early discussions with any of the potential identified property owners. Additional construction considerations will include weather and construction season at high elevation, reservoir drawdown and water control, dewatering, construction risks, and other factors. These considerations will be factored into the OPCC prepared using quantity estimates and unit costs developed by GEI. The constructability assessment, borrow sourcing study results, and OPCC will be summarized in the Reservoir Enlargement Study Report (Task 9).

7. **Evaluation of Enlargement Options:** GEI dam experts will prepare for and facilitate a workshop with Pueblo Water and CS-U to review the design concepts, constructability issues and cost estimates and preform an interactive evaluation of the enlargement options and determine the preferred reservoir raise elevation between El. 8912 and El. 8920 (targeting a total storage capacity of approximately 30,000 acre-feet). This evaluation will consider the base dam safety improvements, additional costs for added storage, borrow and material availability, impacts on the upstream private property, county road realignment, and other potential construction-related and permitting issues.

8. **Environmental Permitting Evaluation:** GEI is including a detailed scope of work in **Attachment 3**, which details the initial tasks we anticipate will be required to successfully permit the dam and reservoir raise at Clear Creek Reservoir. While historical natural resource surveys have been completed for the site, the extent and type of studies necessary for the proposed project need to be updated and/or verified to support evaluation of a feasible permitting path forward. Under Phase I, GEI proposes to perform preliminary desktop investigations followed by field surveys for areas below the reservoir, and verification of conditions and habitat at locations above the reservoir. Following field work, GEI will prepare a report which summarizes the assessment, resources identified, as well as challenges and fatal flaws. This report will also detail future surveys and/or data collection necessary to successfully permit the project. Our team of environmental scientists, ecologists, and biologists will complete all onsite natural resource assessments with the specific goal of using the outcome of these surveys to inform the design and associated environmental permitting that will occur as part of the future Phase II (not included

in this scope). Based on our knowledge of the site, the proposed project area includes land owned by the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM); therefore, we anticipate that compliance with the National Environmental Policy Act (NEPA) will be required. Therefore, all tasks performed under Phase I will be implemented with this in mind. GEI will also utilize the information gathered from surveys, design, and project objectives to facilitate the formulation of a Purpose and Need Statement to support future permitting efforts.

9. **Reservoir Enlargement Study Report:** GEI will prepare a draft report with analysis results, findings, and recommendations, as well as conceptual level drawings to depict the enlargement conceptual design. Following discussion with Pueblo Water staff and receipt of review comments, we will prepare a final report.

10. **Project Management:** GEI assumes there will be formal project meetings with Pueblo Water to discuss key project issues. For each of these meetings, we will establish an agenda, facilitate discussions and prepare meeting minutes. The proposed formal meetings are as follows:

    - Kickoff Meeting
    - Progress Review Meeting (after Task 4)
    - Enlargement Evaluation Workshop (during Task 7)
    - Draft Report Review Meeting (during Task 9)

    GEI will schedule bi-weekly phone meetings to address/resolve issues as they may arise, provide progress updates, discuss project findings and obtain direction for the study. Our approach to project delivery is founded on open communication and being responsive to your needs, and we will work proactively in partnership with Pueblo Water's project manager to complete this phase of the project in an effective and efficient manner. GEI's project manager will prepare monthly written progress reports that will accompany our invoices.

Proposed Budget

GEI's proposed budget to perform this work, based on the scope of work presented above, is estimated to be $304,056. The following table summarizes the cost breakdown, by task, for the proposed efforts:

Task	Total Hours	GEI Labor	GEI Expenses	Sub-Consultants	Total
Task 1 – Surveying and Base Mapping	14	$2,966	$178	$22,239	$25,383
Task 2 – Site Reconnaissance	38	$8,786	$1,103	-	$9,889
Task 3 – Preliminary Geotechnical Investigation	415	$69,739	$11,384	$11,500	$92,623
Task 4 – Hydrology	90	$14,680	$881	-	$15,561
Task 5 – Reservoir Enlargement Conceptual Design	168	$25,816	$1,549	-	$27,365
Task 6 – Constructability Assessments and OPCC	48	$8,448	$507	-	$8,955
Task 7 – Evaluation of Enlargement Options	42	$7,270	$436	-	$7,706
Task 8 - Environmental Permitting Evaluation	416	$50,050	$4,128	$34,039	$88,217
Task 9 – Study Report	72	$12,024	$721	-	$12,745
Task 10 – Project Management	64	$14,728	$884	-	$15,612
Total:	**1,367**	**$214,507**	**$21,771**	**$67,778**	**$304,056**

A detailed breakdown of the total hours, expenses and subconsultant costs are provided in **Attachment 4**.

Project Schedule

Once a Notice-To-Proceed (NTP) is issued, we anticipate that the services associated with this study can be completed within approximately 10 months. The first draft version of the Study Report to Pueblo Water is anticipated to be submitted within 9 months from NTP and would finalize the report within three weeks of receiving Pueblo Water's comments on the draft report.

Project Team

GEI has assembled a team of highly qualified professionals with the project experience, technical knowledge and project management skills to provide a high quality, cost effective, on-schedule, and on-budget delivery of this study.

Nick Miller, P.E. is our proposed Project Manager, providing direction for all aspects of the study and responsible for all project deliverables. He has nearly 20 years of progressive engineering and management experience, primarily related to embankment dams, spillways, outlet works and dam appurtenances. Nick's primary experience includes the planning and design of dams, feasibility studies, spillway design and analysis, dam breach and inundation studies, probable maximum flood (PMF) studies and extensive hydrologic and hydraulic computer modeling. He also has experience in dam construction oversight, inspections and construction management services. In addition to being a licensed professional engineer, he is a professional hydrologist certified by the American Institute of Hydrology.

Chad Masching, P.E. brings 20 years of progressively responsible experience in dam engineering and water resource planning. Chad is skilled in civil, geotechnical, structural, and hydraulic design and his experience includes the planning and design of embankment and concrete dams, spillways, outlet works and conveyance piping, surface water management and groundwater relief systems and deep foundations. Chad will serve as the senior technical reviewer, providing overall technical guidance to the project team, similar to the role he played on the 2016 Study.

Nate Jorgensen, P.E. will serve as the Project Engineer and the Hydrology & Hydraulics Lead. He brings nearly 10 years of experience on dam projects nationwide for municipal, state, private, and federal agencies. Nate's experience includes the planning and design of spillways, dam breach and inundation studies, probable maximum flood (PMF) studies and hydrologic modeling.

Andrew Lockman, P.G., is a geological engineer with an in-depth background in embankment design, rehabilitation, and restoration and fully understands the geotechnical aspects of this project, including the issues related to seepage, concerns related to borrow materials, construction considerations, and stability concerns. He is skilled in geologic mapping and has mapped the geology for water storage dams in Colorado and has performed field mapping for the Colorado Geological Survey's Keystone Quadrangle map. The project team identified above will be supported by GEI staff engineers, office support resources and CADD technicians.

Sarah Skigen-Caird is an environmental scientist with over 18 years of professional experience. She has worked extensively with aquatic and terrestrial ecosystems, vegetation surveys, wildlife surveys, wetland delineations, CWA 404 permitting, restoration of disturbed systems, and biomonitoring study design. Sarah has ongoing work throughout

Colorado and the intermountain west leading natural resource surveys and permit acquisition for projects ranging from dam rehabilitation to restoration of food damaged stream reaches. Sarah's work includes permitting activities within the Albuquerque, Omaha, and Sacramento Districts.

GEI is very enthusiastic about delivering engineering services on the Clear Creek Reservoir Enlargement Study and we appreciate your consideration of our proposal. We have assembled a very strong and well experienced project delivery team that looks forward to the opportunity to serve Pueblo Water on this project. Should you have any questions regarding our proposed efforts, please contact Nick Miller at (303) 264-1046 or nmiller@geiconsultants.com.

Sincerely,
GEI Consultants, Inc.

Nick D. Miller, P.E.
Project Manager

Chad M. Masching, P.E.
Vice President

Attachment 1 – Surveying Subconsultant Scope of Work

ATTACHMENT A TO CONTRACT

River Science
430 Main Street
Canon City, CO 81212

Clear Creek Reservoir Elevation Model

April 4, 2022

Attn: Nick Miller

RE: Clear Creek Reservoir Elevation Model (revised SOW)

SCOPE OF WORK

A feasibility study to assess the potential of raising Clear Creek Dam has requested River Science to provide elevation data for the reservoir's surrounding land. River Science and associates are experts in generating high accuracy and precision digital elevation models (DEMs) that often require bathymetric surveys. Working relationships with Red Rock Land Surveys Inc, provides professional land surveyor certified work when required. To complete this topographic survey, River Science will complete the following three tasks to survey the area of interest shown in Figure 1.

Figure 1: Proposed survey area (blue polygon) of the surrounding lake and lakebed elevation (bathymetry).

TASK 1 – LAND SURVEY

River Science will generate a DEM and orthoimage of the land surrounding the reservoir using a photogrammetric technique known as Structure-from-Motion (SfM). This will be accomplished following protocols of Javernick, et al., 2014 and will require ground control points (GCPs), aerial imagery, and SfM processing. GCPs are necessary to transform the DEM into the appropriate projected coordinate system (i.e. State Plane Colorado, North, US Feet, or as requested by GEI). GCP centroids will be surveyed with RTK-GPS and placed strategically to capture i) the surrounding elevations > 35 feet above the existing dam and ii) the entire dam structure.

SUBTASK 1A – CERTIFIED ELEVATIONS

During this field work, additional RTK-GPS points will be collected by Red Rocks Land Surveys to independently quantify the accuracy and precision of the DEM (i.e. ground truthing). This data will be used to independently certify the elevations provided by this work and allow GEI the ability to design construction plans on the final DEM deliverables.

River Science
430 Main Street
Canon City, CO 81212

Clear Creek Reservoir Elevation Model

TASK 2 – AERIAL IMAGERY ACQUISITION

Aerial imagery will be collected from an unmanned aircraft system (UAS, or drone). Imagery will be full color and high resolution (i.e. ground sample distances of <10 cm) and captured with significant forward and side overlap (i.e. 70%) necessary for the SfM image alignment and scene reconstruction.

TASK 3 - DEM GENERATION

The final task will be combining the land and existing bathymetric surveys into a single DEM. This will be accomplished by merging the two separate point cloud datasets into a single point cloud, and creating a surface using a Triangular Irregular Networks (TIN) and breaklines (dam structure, water surface elevation, etc.). This TIN will then be converted into raster format (geoTIFF) and contours at the request of GEI. The final DEM will have elevation root mean square errors less than 0.10 meters (i.e. Level 2 DEM Quality set by the National Geospatial Program Standards) in non-vegetated areas.

ASSUMPTIONS:

This proposal assumes the following:

- GEI will coordinate with all landowners to ensure they are well informed of the survey and that River Science has access and permission in all necessary areas.
- River Science will have the right to use an UTV all around the lake where the soil conditions are suitable
- River Science will have the ability to fly UAS (drones) for aerial image acquisition over the area outlined in Figure 1. If a special use permit is required, River Science will include a bill for time and expenses.
- Land survey work will be conducted during leaf-off conditions and relatively free of snow to provide the best ground survey and elevation representation.

DELIVERABLES

- DEM
- Orthoimagery
- Contours at requested interval spacings (e.g. 0.1, 0.5, and/or 1-foot intervals)
- Accuracy Report with Elevation Certification Letter

River Science
430 Main Street
Canon City, CO 81212

Clear Creek Reservoir Elevation Model

COST

The proposed bid (Table 1) includes all associated cost for this project.

Table 1: Tasks and labor costs based on expediated project timeline.

Task	Cost
Task 1 - Land Survey	$5,376
Task 1A - Certified Elevations	$2,400
Task 2 - Image Acquisition	$2,464
Task 3 - DEM Generation and Report	$6,832
Expenses (travel, lodging, etc.)	$3,145
10% Contingency	$2,022
Total	**$22,239**

Please let me know if you have any questions.

Luke Javernick, PH.D.
Executive Director
www.River.Science
719.428.9609

REFERERNCE

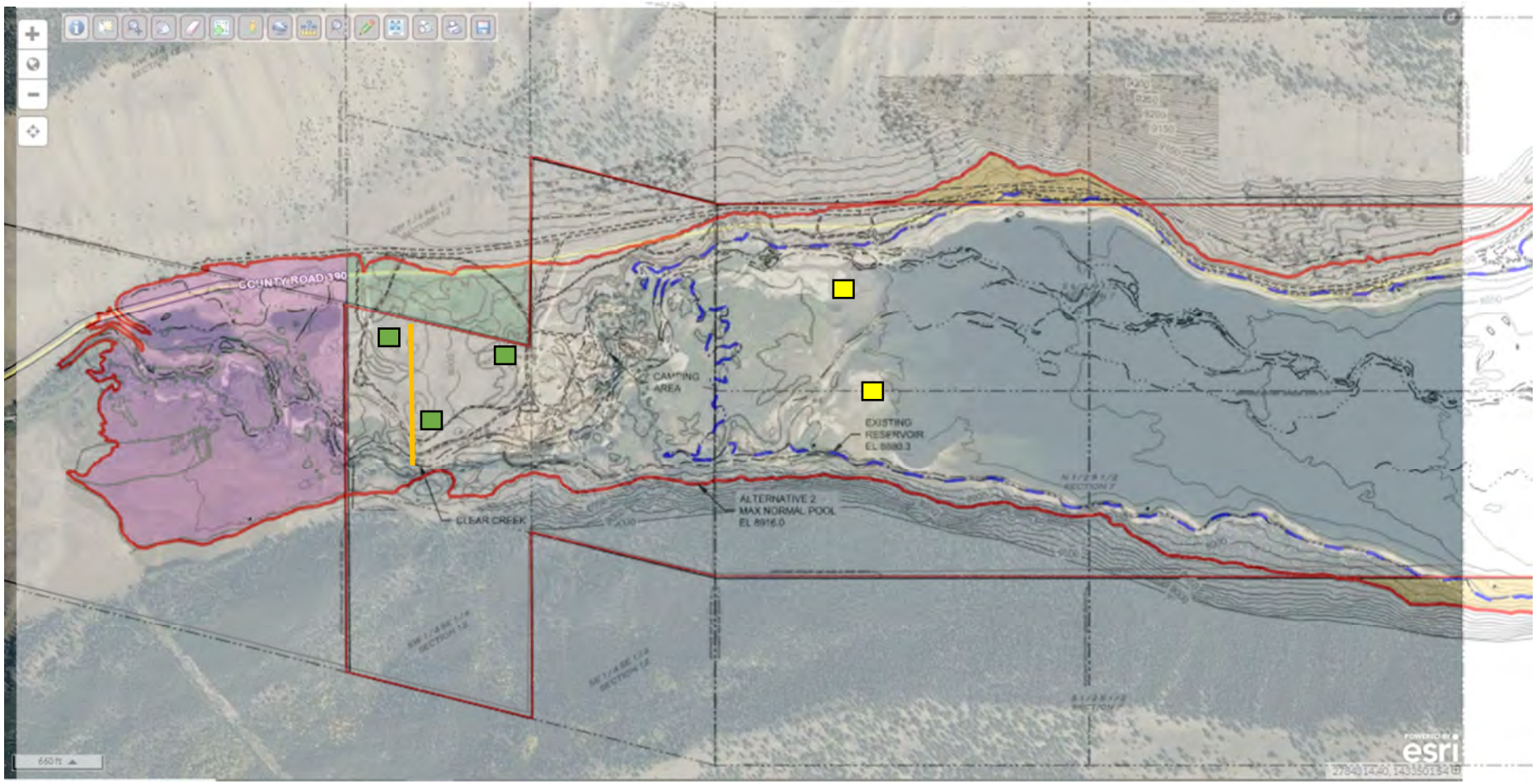
Javernick L, Brasington J, Caruso B. (2014). Modelling the topography of shallow braided rivers using structure-from-motion photogrammetry, 213(0):166–182. doi:10.1016/j.geomorph.2014.01.006

ATTACHMENT 2 - Proposed Geotechnical Investigation

Geophysics Line
Test pit
Shallow bulk sample

Preliminary Borrow Investigation Area 1 – Near Camping Area

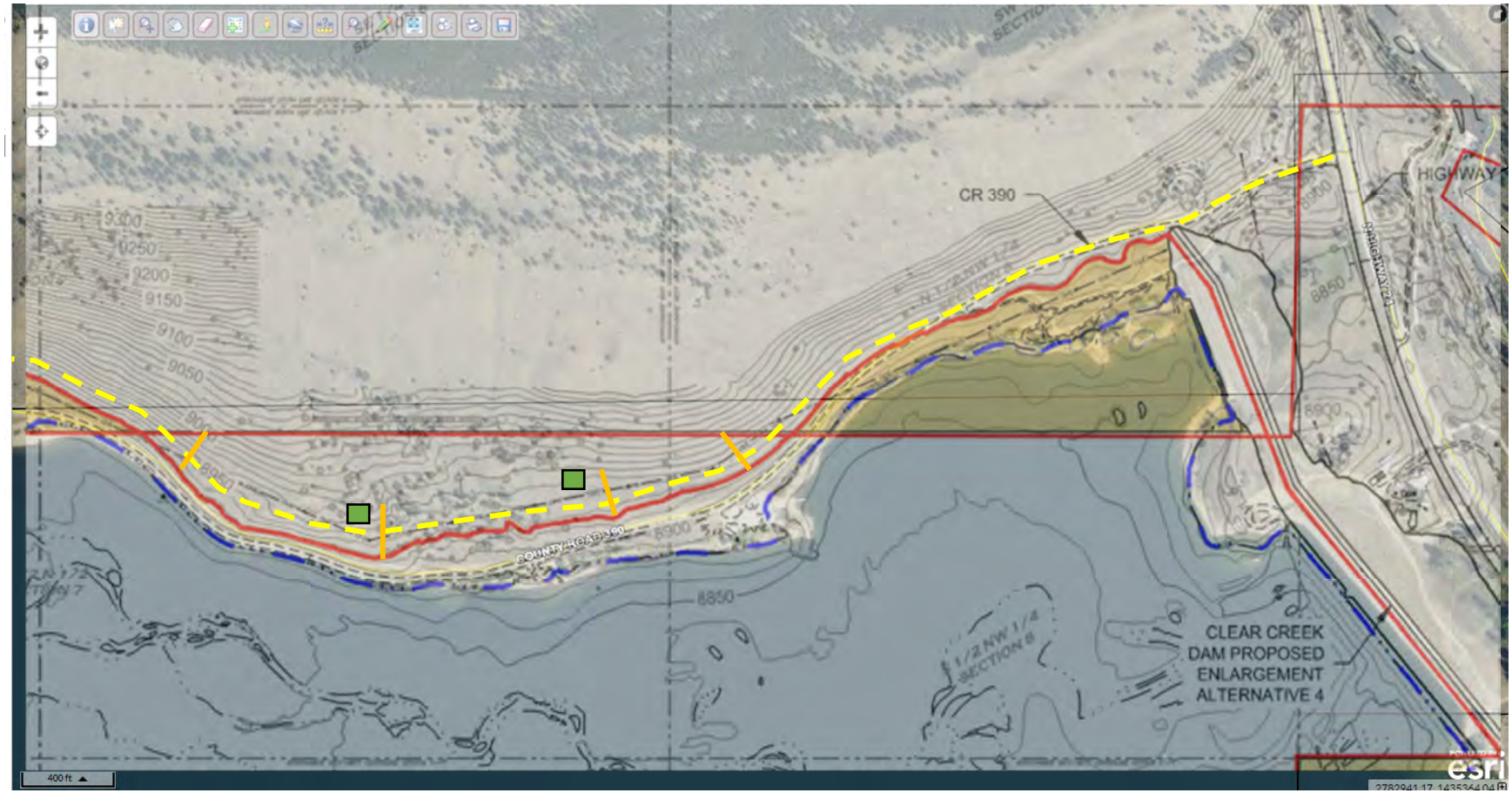
- 3 test pits, 2 shallow bulk samples
- 1 geophysics line



Geophysics Line
Test pit

Forest Service Road Realignment – Roadway

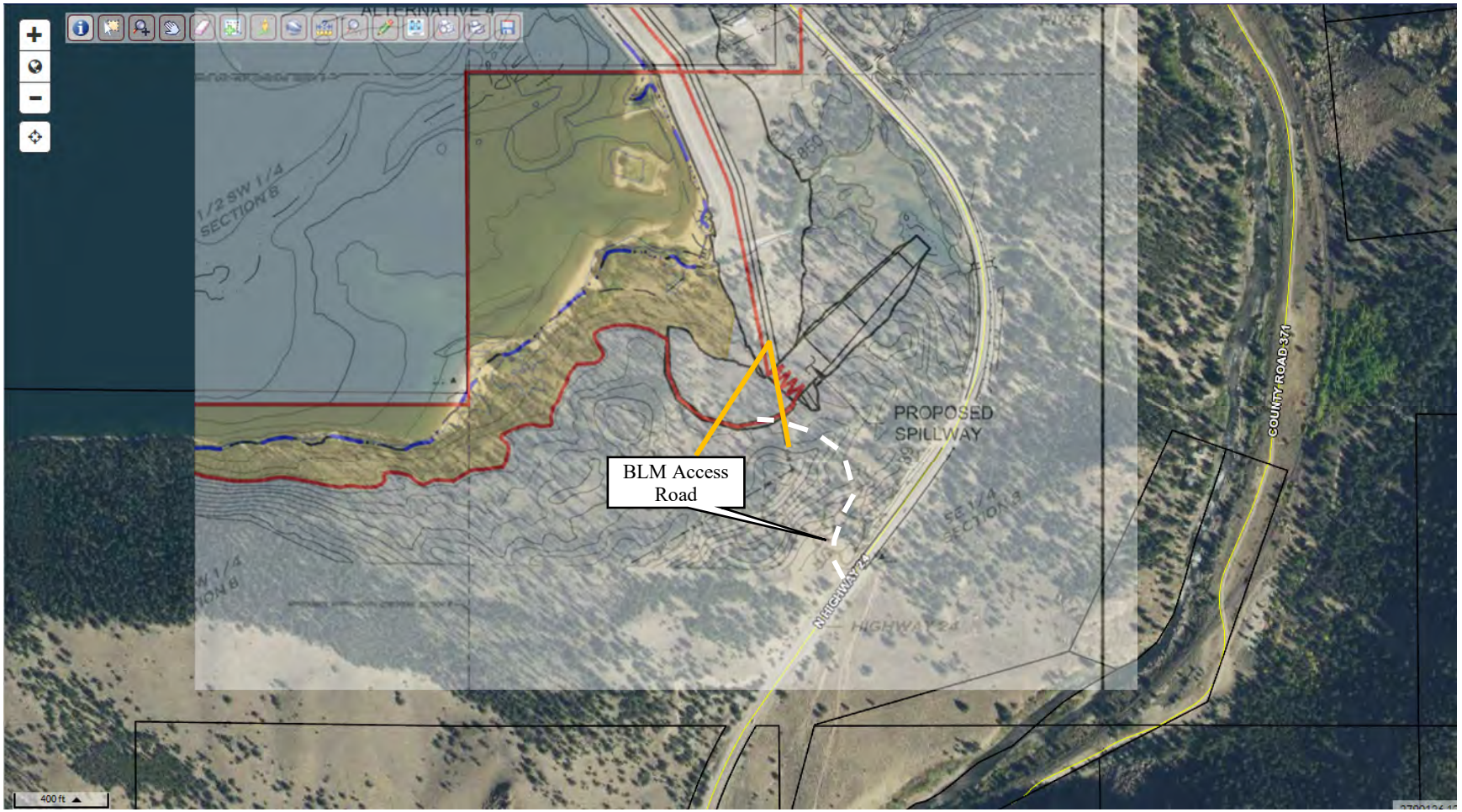
- 2 Test pits
- 4 geophysics lines



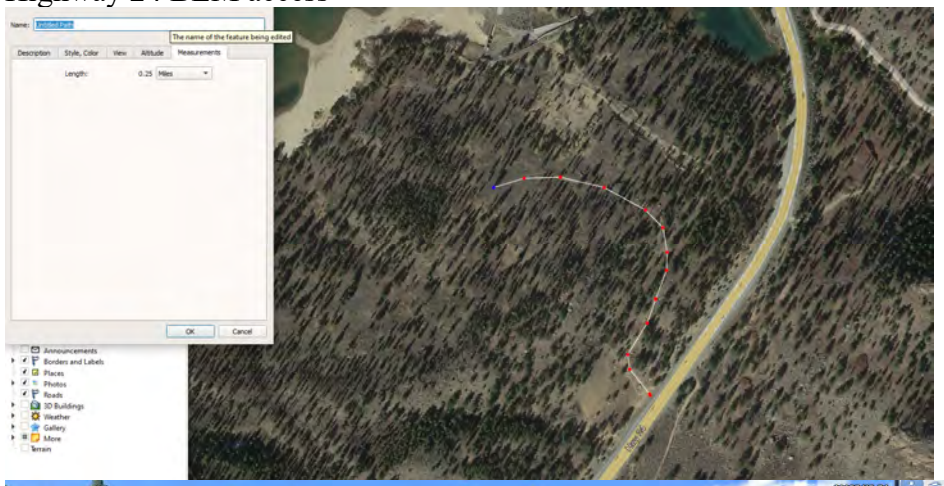
Geophysics Line

BLM Land - Spillway Excavation and Borrow Investigation

- 2 long geophysics lines for excavation and borrow investigation
- Geologic reconnaissance



Highway 24 BLM access



Attachment 3 - Development of a Permitting Scope and Program: Phase I

GEI is including the following scope of work which details the initial tasks we anticipate will be required to successfully permit the dam raise at Clear Creek Reservoir. While historical natural resource surveys have been completed for the site, the extent and type of studies necessary for the proposed project need to be updated and/or verified in order to support the permitting path forward. Under Phase I, Task 1 GEI will perform preliminary desktop investigations followed by field surveys to delineate aquatic resources and habitat below the dam. Conditions for the area upstream of the dam will be verified, including wetlands and sensitive habitats (not to include those areas designated as private land). Task 2 will evaluate all resource inventories, potential challenges, and identify supplemental surveys necessary to address any data gaps. The report generated as a result of Task 2 analysis will summarize all available data and identify any fatal flaws, should they exist. Task 3 will be specifically focused on facilitating formulation of a Purpose and Need Statement for the project, as required under the National Environmental Policy Act (NEPA), GEI will support Pueblo and CS-U in this process.

Our team of environmental scientists, ecologists, and biologists will complete all onsite natural resource assessments with the specific goal of using the outcome of these surveys to inform the design and associated environmental permitting that will occur as part of the future Phase II (not included in this scope). Based on our knowledge of the site, the proposed project area includes land owned by the U.S. Forest Service (USFS) and the Bureau of land Management (BLM); therefore, we anticipate that compliance with NEPA will be required. Therefore, all tasks performed under Phase I will be implemented with this in mind.

Task 1: Field Surveys to Support Fatal Flaw Analysis

In advance of the site visit, GEI staff will conduct a preliminary desktop investigation using aerial photography, National Wetland Inventory (NWI) maps, Natural Resources Conservation Service (NRCS) soil survey maps, the National Wetland Plant List, Colorado Natural Heritage Program Wetland Inventory maps, and other relevant historic documents, photos, maps, and information sources to identify key areas for further investigation. Surveys previously completed for the site will also be reviewed as well as the Information for Planning and Consultation (IPaC) and Raptor Nest databases maintained by the U.S. Fish and Wildlife Service (USFWS) and Colorado Parks and Wildlife (CPW), respectively, as well as other key sensitive species information. This review will be completed within two weeks of receiving notice to proceed.

1a. Natural Resource Surveys

Aquatic Resources

GEI will plan to perform field surveys in July 2022 for the project area. This will include surveys of downstream wetlands and those fringing wetlands around the perimeter of the reservoir. Our aquatic resources delineation will utilize methods outlined in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and associated Regional Supplements. The onsite investigation will include an assessment of soils, hydrology, and vegetation within each key area. The surveys above the reservoir will be for verification of conditions only, an official delineation for this area will be conducted once irrigation is fully terminated. All wetland boundaries and sample

points for relevant areas will be mapped in the field using a handheld Trimble Geo 7X or similar with sub-meter accuracy. Collected data will be post-processed using Pathfinder Office software to produce easy to read wetland maps.

Previous studies completed for the area upstream of the reservoir suggest that fens may be present. Fens are high-value aquatic systems and often treated with enhanced protections by regulatory agencies. This area has also been subject to the influences of irrigation for many years. Therefore, official delineation for this area above the reservoir will be delayed until after irrigation is terminated. While hydrologically artificial wetlands (i.e., those created as a result of irrigation) are typically not regulated, they generally cannot be differentiated from natural wetlands without halting irrigation for one or more growing seasons. In order to address this problematic condition, the surveys for this area will occur once irrigation activities have been terminated for at least one growing season.

GEI will also conduct a delineation of the ordinary high water mark (OHWM) for the reservoir and any downstream waterbodies within the relevant portions of the project area. The survey will include the perimeter of the reservoir and extent of Clear Creek within the project area. The delineation of the OHWM will employ methods as detailed in the relevant U.S. Army Corps of Engineers (USACE) guidance documents. Floodplain units will be mapped at select locations indicating a representative cross-section.

Sensitive Habitats

Habitat for sensitive species potentially located within or adjacent to the project area will be documented during field surveys. Surveys completed by Johnson Environmental Consulting in 2021 identified the presence of adult boreal toads above the reservoir. Early communication with Colorado Parks and Wildlife (CPW) has also indicated boreal toad populations within this drainage, both above and below the reservoir. Given the state listed status of this species, GEI will focus on the identification of potential habitat areas during field surveys as well as conduct call surveys to ensure these locations are considered during design development. To allow for accurate recordation of this species' habitat and presence within the project area, field data will be collected during the breeding season which occurs at this elevation from late May into September.

Our field surveys will also consider any additional sensitive species and habitat likely to be present within the area based on state and/or federal listings.

1b. Cultural Resources Class 1 and 2 Survey

Background Literature Review and Pre-Field Tasks

Logan Simpson will conduct a records search prior to beginning fieldwork. The search will include the inventory area and a surrounding one-mile buffer. The search will be conducted through the History Colorado, Office of Archaeology and Historic Preservation (OAHP). The cultural resources files at the BLM Royal Gorge Field Office and the USFS Leadville Ranger District will be examined to examine any site or project files not yet accessioned at OAHP. Other sources (e.g., historic documents, newspapers, General Land Office plats, etc.) will be consulted as necessary. The results of the literature review will provide data to re-locate/update previously recorded sites and provide information for the prehistoric, indigenous, and historic context for the area. The results of this file

search will be used to inform the project and permitting agencies as a field investigation scope of work is developed. In addition to the file search, the pre-field tasks include submitting a Field Work Authorization (FWA) to the BLM and a FWA and Work Plan to the USFS. The file search must be completed prior to the submittal of the USFS FWA Work Plan, as the results are required by the plan.

Development of a Cultural Resources Field Investigation Scope of Work

The information in the file search will be used to develop a scope of work for the field investigation by the project proponent, permitting federal agencies, GEI, and Logan Simpson. Issues to consider in the development of the scope of work include which federal agency has jurisdiction; the Area of Potential Affect (APE) as defined by the federal agency; status of previous cultural resource investigations; locations and types of previously located prehistoric and historic sites; the presence/absence and location of areas within the project that have a high probability of preserving cultural resources; and any other issues that may impact significant cultural resources.

The estimated budget of $34,038 provided by Logan Simpson includes a full Class III survey field inventory, but costs for this field survey and reporting will need to be finalized once the work plan under this task has been completed (see attached scope of work from Logan Simpson).

Task 2: Environmental Permitting Fatal Flaw Analysis and Permitting Timeline

All historic information, combined with results from the 2022 field effort will be summarized, along with the information from the preliminary cultural work plan development. All data will be incorporated into a comprehensive report. This analysis will evaluate permitting requirements, additional work required to address data gaps, any fatal flaws, and ultimately establish a draft permitting timeline based on available information. Options for mitigation will be explored during this evaluation in an effort to address any potential adverse impacts.

Deliverable for Tasks 1 and 2: Comprehensive report which will address federal, state, and local permitting requirements, environmental resources present, identification of issues, challenges, and any fatal flaws. Resource-specific reports will be attached as appendices (e.g., aquatic resources delineation report). This deliverable is tentatively anticipated to be completed by the end of August 2022 but may need to be adjusted based on field survey timelines and work plan approvals from USFS and BLM.

Task 3: Purpose and Need Development Support

Our team of permitting experts will support Pueblo and CS-U through the process of developing a Purpose and Need Statement for the project. This statement will provide the basis for future permitting and provide a framework for agency and stakeholder engagement. We will use the previously completed studies and reports, coupled with 2022 data, to establish clear goals and objectives for the project, this will then inform the development of the Purpose and Need Statement. Information regarding water demand, operations, and water rights will be discussed as it relates to each utility. These topics will then be discussed in relation to the environmental impacts that may result from the project and how best to frame the Purpose Statement in consideration of these variables. The goal will be to arrive at a concise project purpose which will then help to inform

(and support) why the project is needed at this time, in this location. Additional data needs will be identified during this process.

Once finalized, a cohesive and accurate Purpose and Need Statement can be presented to federal and other regulatory agencies and shared with the public as the permitting process moves forward.

Deliverable Task 3: We expect 2 – 3 internal calls will be held to support this effort. Meeting minutes will be captured by our team. The Purpose and Need Statement will be the basis for a draft report detailing the essential data and critical components required to justify, and ultimately permit, the project.

Assumptions

- An Environmental Assessment is not included in this scope of work.
- Species-specific Biological Assessments are not included in this scope of work.
- Surveys will not be completed for areas of the project that overlap on private land.
- An evaluation of Traditional Cultural Properties and/or conducting ethnographic research is not included in scope.
- Public outreach is not included under Phase I services.

Based on current status of project, we anticipate the following agencies and associated permitting will be required:

PERMITTING AGENCY	REGULATORY STATUTE/ PERMITS REQUIRED	SUPPORTING STUDIES AND MATERIALS REQUIRED	ANTICIPATED SCHEDULE
LOCAL			
Chaffee County	1041 Permit	• Pre-application conference • Conceptual level design (minimum) and site maps for County review and public hearing process • Written narrative of assessed natural resources and associated impacts	• Complete application is submitted by the County to the appropriate CPW office for review and comment. • CPW shall be permitted up to 45 days to review and offer comment. • Following receipt of comment from CPW, the County Administrator shall either issue a Statement of No Impact or notify that a permit must be obtained to satisfy the requirements of Chapter 9 of the 1041 Regulations.
STATE OF COLORADO			
Colorado Department of Natural Resources			
Colorado Parks and Wildlife	Consultation if state-sensitive species or habitat present	• State listed sensitive species and associated habitat. • Mitigation plan if species or habitat found.	Consultation runs concurrent with CWA 404 and 1041 permit schedule
Colorado Department of Public Health and Environment			
Water Quality Control Division	Clean Water Act (CWA) 401*	• Erosion and Stormwater Control Plan	60-90 days; Submitted in advance of CWA 404 permit
FEDERAL			
U.S. Army Corps of Engineers, Albuquerque District	CWA 404	• Site development plans • Terrestrial and aquatic biological surveys • Wetlands and ordinary high water mark delineations • Reclamation/Mitigation Plan (stream/wetland disturbance areas)	Once application is determined to be complete: NWP will be issued in 60-90 days; IP will be issued in 90-120 days
U.S. Fish and Wildlife Service, Grand Junction Office	Endangered Species Act (ESA); Section 7 Consultation via CWA 404 permit if T&E species or habitat present	• Federally listed threatened and endangered species and associated habitat • Mitigation plan if species or habitat found	Consultation runs concurrent with CWA 404 permit schedule
U.S. Forest Service, Gunnison National Forest	Special Use Permit	• Application with supporting project-related information • Summary of impacts (i.e., tree removal) • Mitigation plan, if required due to impacts	Consultation runs concurrent with CWA 404 permit schedule

PERMITTING AGENCY	REGULATORY STATUTE/ PERMITS REQUIRED	SUPPORTING STUDIES AND MATERIALS REQUIRED	ANTICIPATED SCHEDULE
Office of Historic Preservation & Archaeology	National Historic Preservation Act (NHPA); Section 106 consultation via CWA 404 permit, if resources impacted	• Class III cultural resources surveys • Mitigation/recovery plan if resources found	Consultation runs concurrent with CWA 404 permit schedule

*Required if project impacts dictate an Individual Permit, as Nationwide Permits are programmatically certified.

LOGANSIMPSON

May 3, 2022

Sarah Skigen-Caird
Ecology Division Manager/Sr. Environmental Scientist
GEI Consultants, Inc.
4601 DTC Boulevard, Suite 900 Denver, CO 80237

Re: Clear Creek Dam Class Resources Investigation

Dear Mrs. Skigen-Caird:

Logan Simpson is pleased to provide this proposal for a full Class III cultural resource inventory for the Clear Creek project in Chaffee County, Colorado. The attached Scope of Work describes the services that we will provide. In compensation for this effort, we are requesting **$3,943 Cost Not to Exceed for the File Search and assistance developing a field scope of work**. **If a full field inventory is required, the additional cost will be $30,095.** This amount will be recalculated once the actual scope of work has been determined by the project proponent and permitting agencies.

We look forward to the opportunity to work with you. If you need any additional information, please call me at (928) 226-0016 or email me at elaurila@logansimpson.com.

Sincerely,

Erick Laurila
Principal

LOGAN SIMPSON

Clear Creek Dam Project Cultural Resources Investigation
Scope of Work

Introduction

GEI is seeking a cultural resources investigation for improvements/construction in support of the Clear Dam Rehabilitation Project, Chaffee County, Colorado. This effort will likely require the disturbance of 250 – 300 acres through construction and inundation located on private lands and lands under the jurisdiction of the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). The project will likely require a Section 404 permit from the U.S. Army Corps of Engineers (USACE). The project will cause ground disturbance, is located on federally administered lands, may require a Section 404 permit, and is therefore considered an undertaking and requires a cultural resources investigation in support of compliance with Section 106 of the National Historic Preservation Act. Logan Simpson has permits in good standing to conduct cultural resources investigations on BLM lands in Colorado (C-72890), Forest Service lands in Colorado (R2CRM015), and on state, local, and private lands in Colorado (OAHP 79286).

Task 1. Background Literature Review and Pre-Field Tasks

Logan Simpson will conduct a records search prior to beginning fieldwork. The search will include the inventory area and a surrounding one-mile buffer. The search will be conducted through the History Colorado, Office of Archaeology and Historic Preservation (OAHP). The cultural resources files at the BLM Royal Gorge Field Office and the USFS Leadville Ranger District will be examined to examine any site or project files not yet accessioned at OAHP. Other sources (e.g., historic documents, newspapers, General Land Office plats, etc.) will be consulted as necessary. The results of the literature review will provide data to re-locate/update previously recorded sites and provide information for the prehistoric, indigenous, and historic context for the area. The results of this file search will be used to inform the project and permitting agencies as a field investigation scope-of-work (SOW) is developed

In addition to the file search, the pre-field tasks include submitting a Field Work Authorization (FWA) to the BLM and a FWA and Work Plan to the USFS. The file search must be completed prior to the submittal of the USFS FWA Work Plan, as the results are required by the plan.

Task 2. Development of a Cultural Resources Field Investigation SOW

The information in the file search will be used to develop a SOW for the field investigation by the project proponent, permitting federal agencies, GEI, and Logan Simpson. Issues to consider in the development of the SOW include which federal agency has jurisdiction; the Area of Potential Affect (APE) as defined by the federal agency; status of previous cultural resource investigations; locations and types of previously located prehistoric and historic sites; the presence/absence and location of areas within the project that have a high probability of preserving cultural resources; and any other issues that may impact significant cultural resources.

Task 3. Recalculation of Fieldwork and Reporting Costs

Once a SOW is in place, the costs to conduct and report on the fieldwork will be recalculated to reflect the revised SOW.

Task 4. Fieldwork and Reporting

Fieldwork will be conducted using a professional grade Global Positioning System (GPS) unit; the GPS unit will be set to North American Datum (NAD) 1983, UTM Zone 13N. The APE will be uploaded onto a handheld Trimble NOMAD Global Positioning System (GPS) receiver set to datum and projection to aid in navigation. Additionally, all previously recorded sites (if any are identified during the background literature review) will be uploaded to aid in their relocation.

The inventory will be conducted by walking parallel transects within the project area spaced no more than 20 meters (m) apart. Drainage channels and other sediment exposures will be inspected for exposed subsurface profiles. Site recording will include a written description, photographic documentation, and GPS-based mapping. Previously recorded sites within the survey area will be updated as needed. All cultural resources identified will be recorded to OAHP and federal agency standards. All identified cultural resources meeting the criteria of a site or isolated find will be documented on Colorado Cultural Resources Survey forms.

The project may require an historic architectural evaluation of the Clear Creek Dam. The dam was built in 1902 and qualifies as an historic structure. The dam is not listed as a recorded historic resource in the OAHP files; thus, it has not been evaluated for historic significance. The dam will be mapped, photographed, and described following using OAHP guidelines. Research will also be undertaken to provide a historic context for the dam in terms of water development in the Upper Arkansas River Basin in the early 1900s.

A report detailing the methods and results of the background research, field survey, and historic dam evaluation will be prepared to current OAHP, BLM, and USFS standards. The report will include a description of the project undertaking; results of the literature review; description of field methods; inventory results; and recommendations for any further work should such work be necessary. One copy of the draft report will be submitted to GEI for review. After any corrections are made corrections If revisions to the draft are required, Logan Simpson will address those comments within 10 (10) business days. Copies of the final report will be delivered to GEI and the federal agencies.

Schedule

Upon the notice-to-proceed (NTP) Logan Simpson will initiate the file search and the field work authorization process. This task will also include compiling a work plan for the USFS and having remote meetings with the BLM and USFS to discuss project specifics. This task should take 14 days, depending on agency schedules, to complete.

Once the pre-field tasks are completed the field work will be conducted. The field work is scheduled to take six days. No field work can be conducted until the ground is free of all snow cover. The draft report and site firms will require 45 days to complete once the field work is finished. The BLM and USFS require 30 days to review draft reports and site forms. Once the agency comments are received, the final report and site forms will be submitted within 14 days.

Assuming the NTP is issued on May 15, 2022, and the project area is free of snow by June 1, 2022, the entire project will be completed by September 5, 2022.

Assumptions

- GEI will assist with project coordination with the BLM and USFS

- GIS shape files delineating the project boundary will be provided before the initiation of the project tasks.
- The project area will not exceed 250 acres.
- All previously recorded, and/or newly discovered sites, will require recording/updating. No more than nine sites (including the dam) will require documentation.
- A draft report will be produced for review by the BLM and USFS including the results of the Class III inventory and historic architectural evaluation if required. A final report will be produced incorporating edits from the review.
- Additional cultural resources services, including, but not limited to, monitoring, testing and/or data recovery, Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) level documentation, and tribal consultation are not included in this scope of work
- Logan Simpson is not responsible for conducting an evaluation of Traditional Cultural Properties or conducting ethnographic research. If requested this service can be added.
- Logan Simpson is not responsible for delays to schedule due to inclement weather and fieldwork cannot commence until the ground is snow free.
- Access to the project area will be provided.

Cost Table

Cultural Resource Tasks – Clear Creek Dam

Task	Hrs.	Cost	Comment
Pre-Field	29	$ 3,943	File search, meetings, mobilization, project management. SOW Revision and Work Plan
Field Inventory	150	$ 14,681	All fieldwork on 250 acres
Dam Evaluation	54	$ 4,376	Historic architecture work
Reports	139	$ 11,039	Draft and Final, includes site forms
Total	**377**	**$ 34, 039**	

ATTACHMENT A TO CONTRACT

Attachment 4 - Detailed Budget Breakdown

GEI CONSULTANTS, INC.
PROJECT NAME: Clear Creek Dam Enalrgement
PHASE: Phase 2
TASK:
DATE: 5/10/2022
TASK CODE:

Task 1 - Topographic and Bathymetric Surveys
Task 2 - Site Reconnaissance
Task 3 - Preliminary Geotechnical Investigation and Evaluations
Task 4 - Hydrology
Task 5 - Reservoir Enlargement Conceptual Design
Task 6 - Constructability and Costs
Task 7 - Evaluate Enlargement Options
Task 8 - Environmental Permitting Evaluation*(Ecology Rates)
Task 9 - Study Report
Task 10 - Project Management

LABOR COSTS	RATE	Task 1 - Topographic and Bathymetric Surveys		Task 2 - Site Reconnaissance		Task 3 - Preliminary Geotechnical Investigation and Evaluations		Task 4 - Hydrology		Task 5 - Reservoir Enlargement Conceptual Design		Task 6 - Constructability and Costs		Task 7 - Evaluate Enlargement Options		Task 8 - Environmental Permitting Evaluation* (Ecology Rates)		Task 9 - Study Report		Task 10 - Project Management		TOTAL # or HOURS for THIS PHASE	TOTAL BUDGET FOR THIS PHASE
		TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET	TOTAL # or HOURS	TOTAL BUDGET		
Technical Review	$ 298.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
Project Manager VIII	$ 298.00	0	$ -	0	$ -	0	$ -	10	$ 2,980	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	10	$ 2,980
Project Manager VII	$ 262.00	8	$ 2,096	28	$ 7,336	34	$ 8,908	0	$ -	24	$ 6,288	16	$ 4,192	12	$ 3,144	0	$ -	16	$ 4,192	48	$ 12,576	186	$ 48,732
Project Manager VI	$ 217.00	0	$ -	0	$ -	24	$ 5,208	0	$ -	0	$ -	0	$ -	0	$ -	179	$ 26,850	0	$ -	0	$ -	203	$ 32,058
Senior Engineer V	$ 186.00	0	$ -	0	$ -	94	$ 17,484	20	$ 3,720	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	114	$ 21,204
Staff Engineer IV	$ 160.00	0	$ -	0	$ -	124	$ 19,840	0	$ -	40	$ 6,400	0	$ -	4	$ 640	137	$ 13,700	0	$ -	8	$ 1,280	313	$ 41,860
Staff Engineer III	$ 145.00	6	$ 870	10	$ 1,450	24	$ 3,480	0	$ -	0	$ -	0	$ -	6	$ 870	100	$ 9,500	48	$ 6,960	0	$ -	194	$ 23,130
Staff Engineer II	$ 133.00	0	$ -	0	$ -	93	$ 12,369	60	$ 7,980	40	$ 5,320	32	$ 4,256	16	$ 2,128	0	$ -	0	$ -	0	$ -	241	$ 32,053
Staff Engineer I	$ 120.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
Drafting	$ 122.00	0	$ -	0	$ -	4	$ 488	0	$ -	64	$ 7,808	0	$ -	4	$ 488	0	$ -	0	$ -	0	$ -	72	$ 8,784
Word Processing	$ 109.00	0	$ -	0	$ -	18	$ 1,962	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	8	$ 872	8	$ 872	34	$ 3,706
TOTAL LABOR COSTS		14	$ 2,966	38	$ 8,786	415	$ 69,739	90	$ 14,680	168	$ 25,816	48	$ 8,448	42	$ 7,270	416	$ 50,050	72	$ 12,024	64	$ 14,728	1367	$ 214,507
SUBCONTRACT COSTS																							
River Science	$ 22,239.00	1	$ 22,239	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 22,239
Excavator and Test Pits	$ 8,000.00	0	$ -	0	$ -	1	$ 8,000	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 8,000
Lab Testing	$ 3,500.00	0	$ -	0	$ -	1	$ 3,500	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 3,500
Geophysics	$ 7,200.00	0	$ -	0	$ -	1	$ 7,200	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 7,200
Cultural Resources Sub	$ 34,039.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 34,039	0	$ -	0	$ -	1	$ 34,039
TOTAL SUBCONTRACT COSTS		1	$ 22,239	0	$ -	3	$ 18,700	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 34,039	0	$ -	0	$ -	5	$ 74,978
OTHER DIRECT COSTS																							
		0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
EXPENSES/BUDGET = 6.00%		0	$ 178	0	$ 527	0	$ 4,184	0	$ 881	0	$ 1,549	0	$ 507	0	$ 436	0	$ 3,003	0	$ 721	0	$ 884	0	$ 12,870
TOTAL OTHER DIRECT COSTS		0	$ 178	0	$ 527	0	$ 4,184	0	$ 881	0	$ 1,549	0	$ 507	0	$ 436	0	$ 3,003	0	$ 721	0	$ 884	0	$ 12,870
TRAVEL																							
AIRFARE	$ 600.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
MOTEL	$ 150.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	5	$ 750	0	$ -	0	$ -	5	$ 750
MEALS	$ 75.00	0	$ -	3	$ 225	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	5	$ 375	0	$ -	0	$ -	8	$ 600
RENTAL CAR	$ 100.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
MILEAGE	$ 0.59	0	$ -	600	$ 351	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	600	$ 351
PARKING	$ 21.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
TOTAL TRAVEL COSTS			$ -		$ 576		$ -		$ -		$ -		$ -		$ -		$ 1,125		$ -		$ -		$ 1,701
TOTAL PROJECT COSTS			**$ 25,383**	**0**	**$ 9,889**		**$ 92,623**		**$ 15,561**		**$ 27,365**		**$ 8,955**		**$ 7,706**		**$ 88,217**	**0**	**$ 12,745**	**0**	**$ 15,612**		**$ 304,056**