BLUE LAKE RESERVOIR CO. LLC

Nancy Knowlton/President

April 12, 2018

Anna Mauss

Colorado Water Conservation Board

1313 Sherman St. #718

Denver, CO 80203

Re: Request for Feasibility Study Grant for Blue Lake Reservoir Company LLC

Dear Ms. Mauss,

We have submitted preliminary application for CWCB loan for Upper Black Creek Reservoir Dam ID 360127. We have hired GEI Consultants to perform the required engineering. We request a Grant, in a maximum amount of $49,992, to pay for 50% of the cost of the Feasibility Study for the project. The study would be in accordance with the CWCB Guidelines you have provided us.

The engineering scope of work, budget, and cost estimate are attached.

Sincerely,

Nancy Knowlton 4/12/18

Nancy Knowlton

President BLR LLC

nknowlton@aol.com

1999 Sunburst Dr

Vail, CO 81657

970 376-1590

GEI Consultants

February 21, 2018

Ms. Nancy Knowlton
Summit Trust
47-705 Vintage Drive E
Indian Wells, CA 92210

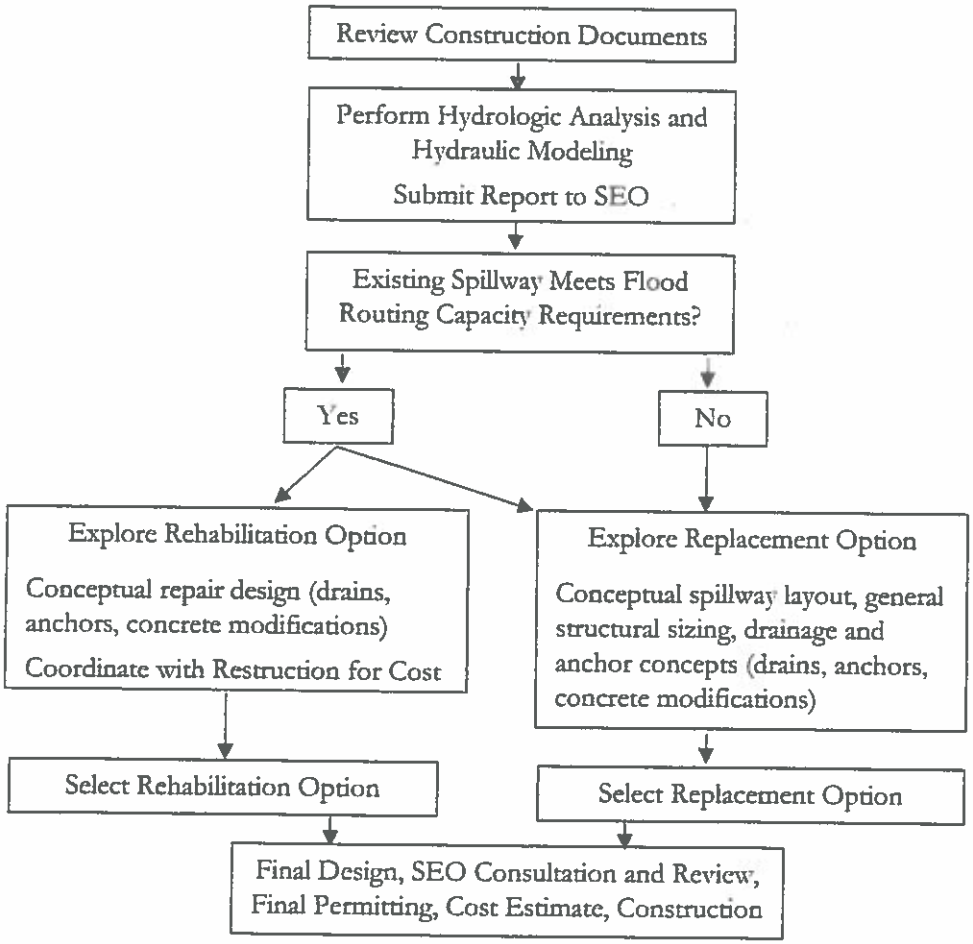
Consulting Engineers and Scientists

Subject: Upper Black Creek Reservoir Spillway Feasibility Study

Dear Ms. Knowlton:

GEI Consultants, Inc. (GEI) is submitting this proposal, which includes a scope of work, schedule, and budget for conducting a Feasibility Study for improvements to the Upper Black Creek Reservoir Spillway. We hope this information is useful to assist Summit Trust (Trust) with obtaining grant funding to complete required spillway maintenance activities at Upper Black Creek Dam.

The Colorado State Engineer's Office (SEO) Dam Safety division has placed a storage restriction on Upper Black Creek Dam. The existing spillway at the dam has structural, drainage, and flood routing capacity issues which need to be addressed by the Trust to remove the restriction. Additionally, the SEO is in the process of updating their processes and requirements for developing the Inflow Design Floods (IDFs) for high alpine dams. With implementations of these new regulations, the required flood routing capacity could increase or decrease from the IDF previously developed for the dam. In general, the required work flow is as follows:



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

GEI Consultants

GEI's intent with this scope of work is to provide the Trust with a roadmap for navigating the Federal and State regulatory processes associated with these modifications and to work with the selected contractor (Restruction Corp.) to develop sensible plans to bring the dam back into compliance with the SEO. We will work with representatives of the Trust during decision making points to help you make informed decisions which consider the life expectancy of the selected modification, constructability, and ease of permitting.

Enclosed, please find our recommended scope of work, schedule, and budget for the Feasibility Study. We look forward to working with you in development of these alternatives through this process and getting the restriction removed from your reservoir as soon as possible. If you have any additional needs associated with this grant application, please contact me at (303)264-1088 or cmasching@geiconsultants.com.

Consulting Engineers and Scientists

Sincerely,

GEI Consultants

Chad Masching, PE
Senior Consultant

Lee Bergstedt
Vice President

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

Summit Trust
Upper Black Creek Reservoir Spillway
February 21, 2018

SCOPE OF WORK

The following section provides a detailed description of our proposed scope of work to complete the Feasibility Study for the Upper Black Creek Reservoir Spillway modifications.

Task 1. Hydrology and Hydraulics (H&H)

The hydrology and hydraulic analyses will be conducted to supplement and update the work previously completed for the reservoir. We understand that the SEO will be revising its guidelines associated with estimating rainfall and determining basin parameters for high alpine reservoirs. These modifications will likely require the hydraulic model to be completed again. We understand that the SEO has updated the HEC-HMS model developed by Resource Engineering, Inc. We will review the existing hydraulic information and perform updated analyses in accordance with the SEO's Hydrologic Basin Response Parameter Estimation Guidelines (Sabol, 2008), SEO Rules and Regulations for Dam Safety and Construction (SEO, 2007), and any updates to the guidelines and regulations currently being developed by the SEO.

The following steps will be followed during the H&H analysis:

1. Review existing basin delineation and watershed characteristics and update as necessary;
2. Estimate the magnitude of the frequency event rainfall and probable maximum precipitation;
3. Modify the rainfall-runoff model to estimate the magnitude of the inflow design flood to the reservoir;
4. Route the flood through the spillway to evaluate capacity and overtopping;
5. Develop alternative spillway configuration(s) to meet SEO freeboard requirements if overtopping occurs.
6. Prepare deliverables.

Subtask 1.1 Basin Delineation and Watershed Characterization

GEI will review the existing watershed delineation prepared by Resource Engineering, Inc. and compare to the best publicly available topographic mapping and elevation data. It is anticipated that the physical basin parameters, such as soil type, land use, vegetative cover, and ground slope used to estimate the soil infiltration and initial abstractions from the Resource Engineering study have not changed significantly and will be adapted for the revised H&H study. GEI will perform sensitivity analyses of the loss rate parameters to provide a comprehensive evaluation of the Inflow Design Flood (IDF). Rainfall-runoff temporal distributions will be developed using synthetic unit hydrographs for the watershed. Unit hydrograph parameters will be developed based on physical basin parameters such as basin slope and landuse types. The US Bureau of Reclamation Rocky Mountain Thunderstorm unit hydrograph was used in the previous study and accepted by the SEO. It is anticipated that this hydrograph will be used again. GEI will perform sensitivity analyses of the unit hydrograph parameters to provide a comprehensive evaluation of the IDF.

Subtask 1.2 Estimate Frequency Event Rainfall and Probable Maximum Precipitation

Upper Black Creek Reservoir Dam is classified as a Small, Significant Hazard dam by the SEO. The size and hazard classification of a dam determines the precipitation requirements when estimating the Inflow Design Flood. Based on the current SEO Rules and Regulations, a small, significant hazard dam must safely pass 40 percent of the Probable Maximum Precipitation (PMP). In addition to the PMP, frequency event rainfall will be developed for return periods of 1-, 2-, 5-, 10-, 50-, 100- and 500-years based on the appropriate National Oceanic and Atmospheric Administration (NOAA) Atlas. These frequency rainfall events will aid in determining construction risk and sizing cofferdams for construction as well as estimating a recurrence interval for the IDF. GEI will estimate the PMP based on new guidance being developed by the SEO.

Subtask 1.3 – Modifications to Rainfall-Runoff Model

GEI will modify the previously developed rainfall-runoff model using the latest version of the U.S. Army Corps of Engineers (USACE) HEC-HMS computer program, which will be used to determine the magnitude and temporal distribution of the flood inflow hydrographs. Key rainfall-runoff input parameters from the previously developed model, including rainfall, soil loss rates, unit hydrographs, reservoir elevation-capacity data, spillway rating curves, and initial watershed and reservoir conditions will be reviewed and adjusted as necessary. GEI will perform rainfall-runoff simulations for the identified flood scenarios 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.

Subtask 1.4 – Existing Spillway Evaluation

GEI will re-evaluate the existing spillway configuration at Upper Black Creek Reservoir to determine if it is adequate to safely pass the IDF for a small, significant hazard dam. The evaluation will include comparing the existing spillway discharge capacity to the IDF reservoir outflow estimates and providing estimates of the IDF residual freeboard using the existing spillway. The evaluation will determine the magnitude of modifications that may be required at the spillway. Based on the previous IDF parameters, the existing spillway is undersized.

Subtask 1.5 – Replacement Spillway Conceptual Layouts

If the evaluation performed in Task 1.4 indicates that the existing spillway does not have the required discharge capacity to safely pass the updated IDF, GEI will prepare a conceptual layout of the replacement spillway which be sized to safely pass the updated IDF without modifying the dam crest height or spillway crest invert. It is our understanding that the reservoir normal water level (spillway crest invert) will not change from the existing condition to maintain the current water rights in the reservoir. GEI will also develop a second spillway layout which either incorporates a small dam crest raise (less than 2 feet), a more efficient control structure, or a combination of both to meet the SEO flood routing criteria.

Subtask 1.6 – Hydrology and Hydraulics Technical Memorandum

The results of Task 1 will be documented in a Hydrology and Hydraulics Technical Memorandum (TM) which will be submitted to the Trust, SEO and Restruction for review and acceptance prior to advancing the feasibility study and conceptual design further. The Hydrology and Hydraulic TM will be included as an appendix to the Feasibility Study Report. The TM will include all study assumptions, modeling methods, calculations, IDF results and conclusions and recommendations for the evaluated alternatives. The report will also provide figures and maps supporting the hydrologic study development and conclusions. The conceptual layouts developed in this task will include detailed technical descriptions of the replacement spillway(s), develop spillway discharge rating curve(s), and provide conceptual level drawings of the plan, profile, and schematic details for each alternative developed.

Assumptions:

- The existing HEC-HMS model, as modified by the SEO will be provided to GEI electronically.

Task 2. Permitting Support

Permitting for the project may become critical path for construction and is a high priority once the preferred spillway modifications have been selected. If spillway rehabilitation is an option and all work can be completed on the structure itself without impacts within the ordinary high-water mark, the work may be able to be completed outside of the jurisdiction of the USACE. However, it is assumed for budgeting and scoping purposes that significant spillway modifications will be required which will bring the project within the jurisdiction of the USACE. Baseline natural resources surveys are assumed to be conducted for the project site, including a waters of the U.S. delineation (e.g., wetlands, ordinary high water mark) and a habitat survey

for any potential sensitive species that may be present or have potential to be present within the project area. To most efficiently inform the design and formulate permitting documents, these surveys will be conducted concurrently during the Feasibility Study and after completion of Task 1. Potential adverse impacts to protected species (e.g., migratory birds) will be documented and fully evaluated, if necessary, conservation measures will be integrated into required permit application materials.

When the project is at 60 percent design, the Clean Water Act 404 permit application will be submitted along with the design packet to the USACE, Sacramento District for review. While there will be some early coordination with the USACE, the application will not be made until the design reaches the 60 percent design stage. Given the emphasis on maintenance with potential modifications to the spillway, a Nationwide Permit (NWP) 3 may be appropriate for this project, further discussions with the USACE will be held following notice to proceed in order to finalize corresponding NWP. All permitting activities will be closely coordinated with the design team, as schedule is critical to ensure that permits are in-hand prior to construction in 2019.

Assumptions:

- All work can be completed under a NWP (i.e., an Individual Permit will not be required).
- No threatened or endangered species habitat are encountered within the project area, necessitating Section 7 consultation under the Endangered Species Act.
- Storage is not being increased for the reservoir.
- Compliance with the National Historic Preservation Act, Section 106 can be satisfied through a desktop evaluation of existing online State and Federal databases.
- Budget does not include work associated with the formulation of a mitigation plan, should one be required.

Task 3. Feasibility Study Report and Conceptual Design

The Feasibility Study Report will be compiled to meet the requirements of the Colorado Water Conservation Board Feasibility Study grant. The report will include the existing conditions, previous studies (concrete condition, geotechnical investigation, permitting, and updated H&H. The modification alternatives will be described and shown as report figures. Conceptual design level drawings will be developed which will be used to develop an opinion of probable construction cost, with input from Restruction. The conceptual design will be advanced to approximately the 30 percent design level.

Assumptions:

- Topographic mapping is required in order to complete the design requirements. The report from Resource Engineering indicated that a previous bathymetric survey had been conducted. It is assumed that this survey will be available, but a detailed survey of the dam is and spillway is not available. GEI has provided a line item to conduct a drone based photogrammetric survey using a local datum as an option to be used for development of construction documents.

Summit Trust
Upper Black Creek Reservoir Spillway
February 21, 2018

SCHEDULE

The initial schedule will be based on the acceptance of the grant proposal and the issuance of the modified hydrologic guidelines by the SEO. GEI has assumed that this work will begin on April 1, 2018.

Award of Grant	March 30, 2018
Update SEO Hydraulic Guidelines	March 30, 2018
Hydraulic Evaluations	April 1, 2018 – May 15, 2018
Submittal of H&H Tech Memo	June 1, 2018
Feasibility Study Report and Conceptual Design	June 1, 2018 – August 15, 2018
Permitting – Delineation and Surveys	Week of July 1, 2018
Final Design (additional task)	September 1, 2018 – December 15, 2018
Permitting – NWP submittal and USACE review	October 1, 2018 – January 15, 2019
SEO Final Design Review	January 1, 2019 – April 1, 2019
Resolve SEO comments (in final design task)	April 1, 2019 – May 1, 2019
Permit for Construction	May 15, 2019
Construction	July 1, 2019 – November 1, 2019

Summit Trust
Upper Black Creek Reservoir Spillway
February 21, 2018

BUDGET

The budget for the Feasibility Study and Conceptual Design is provided in the table below.

Task	Hours	Labor Budget	Expense Budget	Total Budget
Task 1: H&H Study and Tech Memo	210	$24,130	0	$24,130
Task 2: Permitting	95	$14,625	$95	$14,720
Task 3: Feasibility Study Report and Conceptual Design	500	$55,855	$5,189*	$61,044
			Feasibility Study Total	**$99,894**

* Includes $5,000 allowance for UAV (Drone) survey

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Water Project Loan Program

Application Type

☑ Prequalification *(Attach 3 years of financial statements)* ☐ Loan Approval *(Attach Loan Feasibility Study)*

Agency/Company Information

Company / Borrower Name: Blue Lake Reservoir Company LLC

Authorized Agent &Title: Nancy V. Knowlton

Address: 1999 Sunburst Dr. Vail, CO 81657

Phone: (970-376-1590 | Email: nknowlton@aol.com

Organization Type: ☐ Ditch Co, ☐ District, ☐ Municipality ☑ other: _____ | Incorporated? ☑ YES ☐ NO

County: Summit | Number of Shares/Taps: NA

Water District: Division 5 District 36 | Avg. Water Diverted/Yr storage/428 acres acre-feet

Number of Shareholders/Customers Served: 12 | Current Assessment per Share $ NA (Ditch Co)

Federal ID Number: 82-515-7871 | Average monthly water bill $ NA (Municipality)

Contact Information

Project Representative: David R. Knowlton

Phone: 651-270-7943 | Email: dknowlton88@live.com

Engineer: Chad Masching GEI Consultants

Phone: 303-662-0100 | Email: cmasching@geiconsultants.com

Attorney: Glenn Porzak Porzak Browning & Bushong LLP

Phone: (303-443-6800 | Email: gporzak@pbblaw.com

Project Information

Project Name: Upper Black Creek Reservoir / Spillway Improvements

Brief Description of Project: (Attach separate sheets if needed)

Upper Black Creek Reservoir is currently in Restricted Classification due to Spillway defiencies. Currently we are working on Feasibility Study to determine improvements to Upper Black Creek Spillway Dam ID 360127

General Location: (Attach Map of Area)

Located 24 miles northwest of Silverthorne and 5 miles upstream Black Creek from Green Mtn. Res.

Estimated Engineering Costs: TBD | Estimated Construction Costs: TBD

Other Costs (Describe Above): TBD | Estimated Total Project Costs: TBD

Requested Loan Amount: | Requested Loan Term (10, 20, or 30 years): _____ Years

Project Start Date(s) Design: April,15,2018 | Construction: July, 2019

Signature

04/12/18

Trust Member

V.P. BLR Co, LLC

Signature / Title Date

Return to: Finance Section Attn: Anna Mauss
1313 Sherman St #718
Denver, CO 80203
Ph. 303/866.3449
e-mail: anna.mauss@state.co.us

Form **W-9**
(Rev. November 2017)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Blue Lake Reservoir Company

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☑ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ C

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
1999 Sunburst Drive

Requester's name and address (optional)
Nancy Knowlton, President

6 City, state, and ZIP code
Vail, CO 81657

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
			–			–				

or

Employer identification number
8	2	–	5	1	5	7	8	7	1

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶ Nancy K. Knowlton Date ▶ 4/11/18

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*