

1313 Sherman Street, Room 718
Denver, CO 80203

April 5, 2017

Upper Arkansas Water Conservancy District
Attn: Ralph "Terry" Scanga Jr, Manager
P.O. Box 1090
Salida, CO 81201

RE: Notice to Proceed – WSRF Grant – **CTGG1 2017-1733– Groundwater and Surface Water Interactions and Potential for Underground Storage in the Arkansas River Basin**

Dear Ralph,

This letter is to inform you that contract to assist in the above WSRF grant project has been approved. The original contract documents will be mailed to you.

With the executed agreement, you are now able to proceed with the project and invoice the State of Colorado for costs incurred through June 30, 2020. Please provide the project name, contract/PO number, and basin when corresponding with or invoicing for your project along with back-up documentation of cost incurred for the WSRF portion of the grant according to the original scope of work. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 30 days after review and signed approval of the project manager.

Please refer to the WSRF Criteria & Guidelines for reporting requirements for the six month progress reports and final deliverable requirements in order to avoid a delay in payment. A 90-day advance notice is required in the event you are seeking an amendment to the term of the contract and will require an official letter of request to the CWCB project manager briefly describing the need for the extension, updated insurance certificates and updated schedule.

If you have any questions or concerns regarding this project, please contact Andy Moore, Project Manager at 303-866-3441 x3229 or at andy.moore@state.co.us. When submitting invoices and progress reports, send to the PM and cc me at dori.vigil@state.co.us. You can contact me at 303-866-3441 ext. 3250 for additional invoicing and payment disbursement questions.

Thank you.

Sincerely,

//s//

Doriann Vigil
Program Assistant II
O 303-866-3441 ext. 3250
1313 Sherman Street, Rm. 719, Denver, CO 80203
Dori.vigil@state.co.us / cwcb.state.co.com

Cc: Chelsey Nutter
Jack Globe
Brett Gracely

Attachments



**STATE OF COLORADO
COLORADO WATER CONSERVATION BOARD
GRANT AGREEMENT
with
UPPER ARKANSAS WATER CONSERVANCY DISTRICT**

TABLE OF CONTENTS

1. PARTIES.....	1
2. EFFECTIVE DATE AND NOTICE OF NONLIABILITY.....	1
3. RECITALS.....	1
4. DEFINITIONS.....	2
5. TERM and EARLY TERMINATION.....	3
6. STATEMENT OF WORK.....	3
7. PAYMENTS TO GRANTEE.....	3
8. REPORTING - NOTIFICATION.....	4
9. GRANTEE RECORDS.....	5
10. CONFIDENTIAL INFORMATION-STATE RECORDS.....	5
11. CONFLICTS OF INTEREST.....	6
12. REPRESENTATIONS AND WARRANTIES.....	6
13. INSURANCE.....	7
14. BREACH.....	8
15. REMEDIES.....	8
16. NOTICES and REPRESENTATIVES.....	10
17. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE.....	10
18. GOVERNMENTAL IMMUNITY.....	11
19. STATEWIDE GRANT MANAGEMENT SYSTEM.....	11
20. GENERAL PROVISIONS.....	11
21. COLORADO SPECIAL PROVISIONS.....	13
22. SIGNATURE PAGE.....	16
23. EXHIBIT A - STATEMENT OF WORK.....	Exhibit A
24. EXHIBIT B – PERFORMANCE MONITORING PROVISIONS.....	Exhibit B

1. PARTIES

This Grant Agreement (hereinafter called “Grant”) is entered into by and between Upper Arkansas Water Conservancy District, 339 E. Rainbow Blvd., #101, Salida, CO 81201 (hereinafter called “Grantee”), and the STATE OF COLORADO acting by and through the Department of Natural Resources, Colorado Water Conservation Board (hereinafter called the “State or CWCB”).

2. EFFECTIVE DATE AND NOTICE OF NONLIABILITY.

This Grant shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the “Effective Date”). The State shall not be liable to pay or reimburse Grantee for any performance hereunder, including, but not limited to costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

3. RECITALS

A. Authority, Appropriation, and Approval

Authority for the agency entering into this Contract arises from Colorado Revised Statutes (CRS) 39-29-109(2)(c), 37-75-104(2)(c) and 37-75-102 et al., and Senate Bill 06-179 adopted by the 2006 General Assembly, and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination have been accomplished from and with appropriate agencies.

B. Consideration

The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Grant.

C. Purpose

The Water Supply Reserve Account provides money for grants and loans to complete water activities, which are broadly defined and include water supply and environmental projects and/or studies. This Grant project is for the **Groundwater and Surface Water Interactions and Potential for Underground Storage in the Arkansas River Basin**.

D. References

All references in this Grant to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

4. DEFINITIONS

The following terms as used herein shall be construed and interpreted as follows:

A. Budget

“Budget” means the budget for the Work described in **Exhibit A**.

B. Evaluation

“Evaluation” means the process of examining Grantee’s Work and rating it based on criteria established in §6 and **Exhibit A and B**.

C. Exhibits and other Attachments

The following are attached hereto and incorporated by reference herein: **Exhibit A** (Statement of Work), **Exhibit B** (Performance Monitoring Provisions).

D. Goods

“Goods” means tangible material acquired, produced, or delivered by Grantee either separately or in conjunction with the Services Grantee renders hereunder.

E. Grant

“Grant” means this Grant, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Grant, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

F. Grant Funds

“Grant Funds” means available funds payable by the State to Grantee pursuant to this Grant.

G. Party or Parties

“Party” means the State or Grantee and “Parties” means both the State and Grantee.

H. Program

“Program” means the Water Supply Reserve Account grant program that provides the funding for this Grant.

I. Review

“Review” means examining Grantee’s Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in §6 and **Exhibit A and B**.

J. Services

“Services” means the required services to be performed by Grantee pursuant to this Grant.

K. Subgrantee

“Subgrantee” means third-parties, if any, engaged by Grantee to aid in performance of its obligations.

L. Work

“Work” means the tasks and activities Grantee is required to perform to fulfill its obligations under this Grant and **Exhibit A and B**, including the performance of the Services and delivery of the Goods.

M. Work Product

“Work Product” means the tangible or intangible results of Grantee’s Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys, maps, materials, or work product of any type, including drafts.

5. TERM

A. Initial Term-Work Commencement

The Parties’ respective performances under this Grant shall commence on the date the Agreement is signed by the State Controller or delegate (Effective Date). This Grant shall terminate on June 30, 2020 unless sooner terminated or further extended as specified elsewhere herein.

B. Two Month Extension

The State, at its sole discretion upon written notice to Grantee as provided in **§16**, may unilaterally extend the term of this Grant for a period not to exceed two months if the Parties are negotiating a replacement Grant at or near the end of any initial term or any extension thereof. The provisions of this Grant in effect when such notice is given, including, but not limited to prices, rates, and delivery requirements, shall remain in effect during the two month extension. The two-month extension shall immediately terminate when and if a replacement Grant is approved and signed by the Colorado State Controller.

6. STATEMENT OF WORK

A. Completion

Grantee shall complete the Work and its other obligations as described herein and in **Exhibit A** on or before June 30, 2020. The State shall not be liable to compensate Grantee for any Work performed prior to the Effective Date or after the termination of this Grant.

B. Goods and Services

Grantee shall procure Goods and Services necessary to complete the Work. Such procurement shall be accomplished using the Grant Funds and shall not increase the maximum amount payable hereunder by the State.

C. Employees

All persons employed by Grantee or Subgrantees shall be considered Grantee’s or Subgrantees’ employee(s) for all purposes hereunder and shall not be employees of the State for any purpose as a result of this Grant.

7. PAYMENTS TO GRANTEE

The State shall, in accordance with the provisions of this **§7**, pay Grantee in the following amounts and using the methods set forth below:

A. Maximum Amount

The maximum amount payable under this Grant to Grantee by the State is \$306,618 as determined by the State from available funds. Grantee agrees to provide any additional funds required for the successful completion of the Work. Payments to Grantee are limited to the unpaid obligated balance of the Grant as set forth in **Exhibit A**. The maximum amount payable by the State to Grantee during each State fiscal year of this Grant shall be:

\$ 306,618 in FY2017
\$306,618 in FY2018, minus any funds expended in FY2017
\$306,618 in FY2019, minus any funds expended in FY2017 and FY2018
\$306,618 in FY2020, minus any funds expended in FY2017, FY2018 and FY2019

B. Payment

i. Interim and Final Payments

Any payment allowed under this Grant or in **Exhibit A** shall comply with State Fiscal Rules and be made in accordance with the provisions of this Grant or such Exhibit. Grantee shall initiate any payment requests by submitting invoices to the State in the form and manner set forth and approved by the State.

ii. Interest

The State shall fully pay each invoice within 45 days of receipt thereof if the amount invoiced represents performance by Grantee previously accepted by the State. Uncontested amounts not paid by the State within 45 days may, if Grantee so requests, bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. Grantee shall invoice the State separately for accrued interest on delinquent amounts. The billing shall reference the delinquent payment, the number of day's interest to be paid and the interest rate.

iii. Available Funds-Contingency-Termination

The State is prohibited by law from making fiscal commitments beyond the term of the State's current fiscal year. Therefore, Grantee's compensation is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions, set forth below. If federal funds are used with this Grant in whole or in part, the State's performance hereunder is contingent upon the continuing availability of such funds. Payments pursuant to this Grant shall be made only from available funds encumbered for this Grant and the State's liability for such payments shall be limited to the amount remaining of such encumbered funds. If State or federal funds are not appropriated, or otherwise become unavailable to fund this Grant, the State may immediately terminate this Grant in whole or in part without further liability in accordance with the provisions herein.

iv. Erroneous Payments

At the State's sole discretion, payments made to Grantee in error for any reason, including, but not limited to overpayments or improper payments, and unexpended or excess funds received by Grantee, may be recovered from Grantee by deduction from subsequent payments under this Grant or other Grants, grants or agreements between the State and Grantee or by other appropriate methods and collected as a debt due to the State. Such funds shall not be paid to any person or entity other than the State.

C. Use of Funds

Grant Funds shall be used only for eligible costs identified herein and/or in the Budget. The State's total consideration shall not exceed the maximum amount shown herein.

D. Matching Funds

Grantee shall provide matching funds as provided in **Exhibit A**. Grantee shall have raised the full amount of matching funds prior to the Effective Date and shall report to the State regarding the status of such funds upon request.

8. REPORTING - NOTIFICATION

Reports, Evaluations, and Reviews required under this **§8** shall be in accordance with the procedures of and in such form as prescribed by the State and in accordance with **§19**, if applicable.

A. Performance, Progress, Personnel, and Funds

State shall submit a report to the Grantee upon expiration or sooner termination of this Grant, containing an Evaluation and Review of Grantee's performance and the final status of Grantee's obligations hereunder. In addition, Grantee shall comply with all reporting requirements, if any, set forth in **Exhibit A and B**.

B. Litigation Reporting

Within 10 days after being served with any pleading in a legal action filed with a court or administrative agency, related to this Grant or which may affect Grantee's ability to perform its obligations hereunder, Grantee shall notify the State of such action and deliver copies of such pleadings to the State's principal representative as identified herein. If the State's principal representative is not then serving, such notice and copies shall be delivered to the Executive Director of Colorado Department of Natural Resources.

C. Performance Outside the State of Colorado and/or the United States

[Not applicable if Grant Funds include any federal funds] Following the Effective Date, Grantee shall provide written notice to the State, in accordance with **§16 (Notices and Representatives)**, within 20 days of the earlier to occur of Grantee's decision to perform, or its execution of an agreement with a Subgrantee to perform, Services outside the State of Colorado and/or the United States. Such notice shall specify the type of Services to be performed outside the State of Colorado and/or the United States and the reason why it is necessary or advantageous to perform such Services at such location or locations. All notices received by the State pursuant to this **§8.C** shall be posted on the Colorado Department of Personnel &

Administration's website. Knowing failure by Grantee to provide notice to the State under this §8.C shall constitute a material breach of this Grant.

D. Noncompliance

Grantee's failure to provide reports and notify the State in a timely manner in accordance with this §8 may result in the delay of payment of funds and/or termination as provided under this Grant.

E. Subgrants

Copies of any and all subgrants entered into by Grantee to perform its obligations hereunder shall be submitted to the State or its principal representative upon request by the State. Any and all subgrants entered into by Grantee related to its performance hereunder shall comply with all applicable federal and state laws and shall provide that such subgrants be governed by the laws of the State of Colorado.

9. GRANTEE RECORDS

Grantee shall make, keep, maintain and allow inspection and monitoring of the following records:

A. Maintenance

Grantee shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services (including, but not limited to the operation of programs) or Goods hereunder. Grantee shall maintain such records (the Record Retention Period) until the last to occur of the following: (i) a period of three years after the date this Grant is completed or terminated, or (ii) final payment is made hereunder, whichever is later, or (iii) for such further period as may be necessary to resolve any pending matters, or (iv) if an audit is occurring, or Grantee has received notice that an audit is pending, then until such audit has been completed and its findings have been resolved (the "Record Retention Period").

B. Inspection

Grantee shall permit the State, the federal government and any other duly authorized agent of a governmental agency to audit, inspect, examine, excerpt, copy and/or transcribe Grantee's records related to this Grant during the Record Retention Period for a period of three years following termination of this Grant or final payment hereunder, whichever is later, to assure compliance with the terms hereof or to evaluate Grantee's performance hereunder. The State reserves the right to inspect the Work at all reasonable times and places during the term of this Grant, including any extension. If the Work fails to conform to the requirements of this Grant, the State may require Grantee promptly to bring the Work into conformity with Grant requirements, at Grantee's sole expense. If the Work cannot be brought into conformance by re-performance or other corrective measures, the State may require Grantee to take necessary action to ensure that future performance conforms to Grant requirements and exercise the remedies available under this Grant, at law or inequity in lieu of or in conjunction with such corrective measures.

C. Monitoring

Grantee shall permit the State, the federal government, and other governmental agencies having jurisdiction, in their sole discretion, to monitor all activities conducted by Grantee pursuant to the terms of this Grant using any reasonable procedure, including, but not limited to: internal evaluation procedures, examination of program data, special analyses, on-site checking, formal audit examinations, or any other procedures. All monitoring controlled by the State shall be performed in a manner that shall not unduly interfere with Grantee's performance hereunder.

D. Final Audit Report

If an audit is performed on Grantee's records for any fiscal year covering a portion of the term of this Grant, Grantee shall submit a copy of the final audit report to the State or its principal representative at the address specified herein.

10. CONFIDENTIAL INFORMATION-STATE RECORDS

Grantee shall comply with the provisions of this §10 if it becomes privy to confidential information in connection with its performance hereunder. Confidential information, includes, but is not necessarily limited to, state records, personnel records, and information concerning individuals.

A. Confidentiality

Grantee shall keep all State records and information confidential at all times and to comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State records and information in the possession of Grantee shall be immediately forwarded to the State's principal representative.

B. Notification

Grantee shall notify its agent, employees, Subgrantees, and assigns who may come into contact with State records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before they are permitted to access such records and information.

C. Use, Security, and Retention

Confidential information of any kind shall not be distributed or sold to any third party or used by Grantee or its agents in any way, except as authorized by this Grant or approved in writing by the State. Grantee shall provide and maintain a secure environment that ensures confidentiality of all State records and other confidential information wherever located. Confidential information shall not be retained in any files or otherwise by Grantee or its agents, except as permitted in this Grant or approved in writing by the State.

D. Disclosure-Liability

Disclosure of State records or other confidential information by Grantee for any reason may be cause for legal action by third parties against Grantee, the State or their respective agents. Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Subgrantees, or assignees pursuant to this §10.

11. CONFLICTS OF INTEREST

Grantee shall not engage in any business or personal activities or practices or maintain any relationships which conflict in any way with the full performance of Grantee's obligations hereunder. Grantee acknowledges that with respect to this Grant, even the appearance of a conflict of interest is harmful to the State's interests. Absent the State's prior written approval, Grantee shall refrain from any practices, activities or relationships that reasonably appear to be in conflict with the full performance of Grantee's obligations to the State hereunder. If a conflict or appearance exists, or if Grantee is uncertain whether a conflict or the appearance of a conflict of interest exists, Grantee shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the apparent conflict constitutes a breach of this Grant.

12. REPRESENTATIONS AND WARRANTIES

Grantee makes the following specific representations and warranties, each of which was relied on by the State in entering into this Grant.

A. Standard and Manner of Performance

Grantee shall perform its obligations hereunder in accordance with the highest standards of care, skill and diligence in the industry, trades or profession and in the sequence and manner set forth in this Grant.

B. Legal Authority – Grantee and Grantee's Signatory

Grantee warrants that it possesses the legal authority to enter into this Grant and that it has taken all actions required by its procedures, by-laws, and/or applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Grant, or any part thereof, and to bind Grantee to its terms. If requested by the State, Grantee shall provide the State with proof of Grantee's authority to enter into this Grant within 15 days of receiving such request.

C. Licenses, Permits, Etc.

Grantee represents and warrants that as of the Effective Date it has, and that at all times during the term hereof it shall have, at its sole expense, all licenses, certifications, approvals, insurance, permits, and other authorization required by law to perform its obligations hereunder. Grantee warrants that it shall maintain all necessary licenses, certifications, approvals, insurance, permits, and other authorizations required to properly perform this Grant, without reimbursement by the State or other adjustment in Grant Funds. Additionally, all employees and agents of Grantee performing Services under this Grant shall hold all

required licenses or certifications, if any, to perform their responsibilities. Grantee, if a foreign corporation or other foreign entity transacting business in the State of Colorado, further warrants that it currently has obtained and shall maintain any applicable certificate of authority to transact business in the State of Colorado and has designated a registered agent in Colorado to accept service of process. Any revocation, withdrawal or non-renewal of licenses, certifications, approvals, insurance, permits or any such similar requirements necessary for Grantee to properly perform the terms of this Grant shall be deemed to be a material breach by Grantee and constitute grounds for termination of this Grant.

13. INSURANCE

Grantee and its Subgrantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Subgrantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Subgrantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in §13(B) with respect to Subgrantees that are not "public entities".

B. Grantee and Subgrantees

Grantee shall require each Grant with Subgrantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Subgrantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows: (a) \$1,000,000 each occurrence; (b) \$2,000,000 general aggregate; (c) \$1,000,000 products and completed operations aggregate; and (d) \$50,000 any one fire. If any aggregate limit is reduced below \$1,000,000 because of claims made or paid, Subgrantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Subgrantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and Grantee shall forward such notice to the State in accordance with §16 (Notices and Representatives) within seven days of Grantee's receipt of such notice.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Subgrantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Subgrantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Subgrantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any subgrant, Grantee and each Subgrantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this §13.

14. BREACH

A. Defined

In addition to any breaches specified in other sections of this Grant, the failure of either Party to perform any of its material obligations hereunder, in whole or in part or in a timely or satisfactory manner, constitutes a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Grantee, or the appointment of a receiver or similar officer for Grantee or any of its property, which is not vacated or fully stayed within 20 days after the institution or occurrence thereof, shall also constitute a breach.

B. Notice and Cure Period

In the event of a breach, notice of such shall be given in writing by the aggrieved Party to the other Party in the manner provided in §16. If such breach is not cured within 30 days of receipt of written notice, or if a cure cannot be completed within 30 days, or if cure of the breach has not begun within 30 days and pursued with due diligence, the State may exercise any of the remedies set forth in §15. Notwithstanding anything to the contrary herein, the State, in its sole discretion, need not provide advance notice or a cure period and may immediately terminate this Grant in whole or in part if reasonably necessary to preserve public safety or to prevent immediate public crisis.

15. REMEDIES

If Grantee is in breach under any provision of this Grant, the State shall have all of the remedies listed in this §15 in addition to all other remedies set forth in other sections of this Grant following the notice and cure period set forth in §14(B). The State may exercise any or all of the remedies available to it, in its sole discretion, concurrently or consecutively.

A. Termination for Cause and/or Breach

If Grantee fails to perform any of its obligations hereunder with such diligence as is required to ensure its completion in accordance with the provisions of this Grant and in a timely manner, the State may notify Grantee of such non-performance in accordance with the provisions herein. If Grantee thereafter fails to promptly cure such non-performance within the cure period, the State, at its option, may terminate this entire Grant or such part of this Grant as to which there has been delay or a failure to properly perform. Exercise by the State of this right shall not be deemed a breach of its obligations hereunder. Grantee shall continue performance of this Grant to the extent not terminated, if any.

i. Obligations and Rights

To the extent specified in any termination notice, Grantee shall not incur further obligations or render further performance hereunder past the effective date of such notice, and shall terminate outstanding orders and subcontracts with third parties. However, Grantee shall complete and deliver to the State all

Work, Services and Goods not cancelled by the termination notice and may incur obligations as are necessary to do so within this Grant's terms. At the sole discretion of the State, Grantee shall assign to the State all of Grantee's right, title, and interest under such terminated orders or subcontracts. Upon termination, Grantee shall take timely, reasonable and necessary action to protect and preserve property in the possession of Grantee in which the State has an interest. All materials owned by the State in the possession of Grantee shall be immediately returned to the State. All Work Product, at the option of the State, shall be delivered by Grantee to the State and shall become the State's property.

ii. Payments

The State shall reimburse Grantee only for accepted performance up to the date of termination. If, after termination by the State, it is determined that Grantee was not in breach or that Grantee's action or inaction was excusable, such termination shall be treated as a termination in the public interest and the rights and obligations of the Parties shall be the same as if this Grant had been terminated in the public interest, as described herein.

iii. Damages and Withholding

Notwithstanding any other remedial action by the State, Grantee also shall remain liable to the State for any damages sustained by the State by virtue of any breach under this Grant by Grantee and the State may withhold any payment to Grantee for the purpose of mitigating the State's damages, until such time as the exact amount of damages due to the State from Grantee is determined. The State may withhold any amount that may be due to Grantee as the State deems necessary to protect the State, including loss as a result of outstanding liens or claims of former lien holders, or to reimburse the State for the excess costs incurred in procuring similar goods or services. Grantee shall be liable for excess costs incurred by the State in procuring from third parties replacement Work, Services or substitute Goods as cover.

B. Early Termination in the Public Interest

The State is entering into this Grant for the purpose of carrying out the public policy of the State of Colorado, as determined by its Governor, General Assembly, and/or Courts. If this Grant ceases to further the public policy of the State, the State, in its sole discretion, may terminate this Grant in whole or in part. Exercise by the State of this right shall not constitute a breach of the State's obligations hereunder. This subsection shall not apply to a termination of this Grant by the State for cause or breach by Grantee, which shall be governed by §15(A) or as otherwise specifically provided for herein.

i. Method and Content

The State shall notify Grantee of such termination in accordance with §16. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Grant.

ii. Obligations and Rights

Upon receipt of a termination notice, Grantee shall be subject to and comply with the same obligations and rights set forth in §15(A)(i).

iii. Payments

If this Grant is terminated by the State pursuant to this §15(B), Grantee shall be paid an amount which bears the same ratio to the total reimbursement under this Grant as the Services satisfactorily performed bear to the total Services covered by this Grant, less payments previously made. Additionally, if this Grant is less than 60% completed, the State may reimburse Grantee for a portion of actual out-of-pocket expenses (not otherwise reimbursed under this Grant) incurred by Grantee which are directly attributable to the uncompleted portion of Grantee's obligations hereunder; provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Grantee hereunder.

C. Remedies Not Involving Termination

The State, in its sole discretion, may exercise one or more of the following remedies in addition to other remedies available to it:

i. Suspend Performance

Suspend Grantee's performance with respect to all or any portion of this Grant pending necessary corrective action as specified by the State without entitling Grantee to an adjustment in price/cost or performance schedule. Grantee shall promptly cease performance and incurring costs in accordance

with the State's directive and the State shall not be liable for costs incurred by Grantee after the suspension of performance under this provision.

ii. Withhold Payment

Withhold payment to Grantee until corrections in Grantee's performance are satisfactorily made and completed.

iii. Deny Payment

Deny payment for those obligations not performed, that due to Grantee's actions or inactions, cannot be performed or, if performed, would be of no value to the State; provided, that any denial of payment shall be reasonably related to the value to the State of the obligations not performed.

iv. Removal

Demand removal of any of Grantee's employees, agents, or Subgrantees whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable, or whose continued relation to this Grant is deemed to be contrary to the public interest or not in the State's best interest.

v. Intellectual Property

If Grantee infringes on a patent, copyright, trademark, trade secret or other intellectual property right while performing its obligations under this Grant, Grantee shall, at the State's option (a) obtain for the State or Grantee the right to use such products and services; (b) replace any Goods, Services, or other product involved with non-infringing products or modify them so that they become non-infringing; or, (c) if neither of the foregoing alternatives are reasonably available, remove any infringing Goods, Services, or products and refund the price paid therefore to the State.

16. NOTICES and REPRESENTATIVES

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party's principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

A. State:

Andy Moore, Project Manager
Colorado Water Conservation Board
Water Project Loan Program
1313 Sherman Street, Suite 718
Denver, CO 80203
Andy.Moore@state.co.us

B. Grantee:

Ralph "Terry" Scanga Jr., Manager
Upper Arkansas Water Conservancy District
P.O. Box 1090
Salida, CO 81201
manager@uawcd.com

17. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE

Any software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials, or Work Product of any type, including drafts, prepared by Grantee in the performance of its obligations under this Grant shall be the exclusive property of the State and, all Work Product shall be delivered to the State by Grantee upon completion or termination hereof. The State's exclusive rights in such Work Product shall include, but not be limited to, the right to copy, publish, display, transfer, and prepare derivative works. Grantee shall not use, willingly allow, cause or permit such Work Product to be used for any purpose other than the performance of Grantee's obligations hereunder without the prior written consent of the State.

18. GOVERNMENTAL IMMUNITY

Notwithstanding any other provision to the contrary, nothing herein shall constitute a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended. Liability for claims for injuries to persons or property arising from the negligence of the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act and the risk management statutes, CRS §24-30-1501, et seq., as amended.

19. STATEWIDE GRANT MANAGEMENT SYSTEM

If the maximum amount payable to Grantee under this Grant is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this §19 applies.

Grantee agrees to be governed, and to abide, by the provisions of CRS §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102 concerning the monitoring of vendor performance on state Grants and inclusion of Grant performance information in a statewide Grant management system.

Grantee's performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Grant, State law, including CRS §24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Grantee's performance shall be part of the normal Grant administration process and Grantee's performance will be systematically recorded in the statewide Grant Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Grantee's obligations under this Grant shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Grantee's obligations. Such performance information shall be entered into the statewide Grant Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Grant term. Grantee shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain work progress.

Should the final performance Evaluation and Review determine that Grantee demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel & Administration (Executive Director), upon request by the CWCB, and showing of good cause, may debar Grantee and prohibit Grantee from bidding on future Grants. Grantee may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or correction of the evaluation (CRS §24-105-102(6)), or (b) under CRS §24-105-102(6), exercising the debarment protest and appeal rights provided in CRS §§24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Grantee, by the Executive Director, upon a showing of good cause.

20. GENERAL PROVISIONS

A. Assignment and Subgrants

Grantee's rights and obligations hereunder are personal and may not be transferred, assigned or subgranted without the prior, written consent of the State. Any attempt at assignment, transfer, or subgranting without such consent shall be void. All assignments, subgrants, or Subgrantees approved by Grantee or the State are subject to all of the provisions hereof. Grantee shall be solely responsible for all aspects of subgranting arrangements and performance.

B. Binding Effect

Except as otherwise provided in §20(A), all provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties' respective heirs, legal representatives, successors, and assigns.

C. Captions

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

D. Counterparts

This Grant may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

E. Entire Understanding

This Grant represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or effect whatsoever, unless embodied herein.

F. Indemnification-General

Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Subgrantees, or assignees pursuant to the terms of this Grant; however, the provisions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., as applicable, as now or hereafter amended.

G. Jurisdiction and Venue

All suits, actions, or proceedings related to this Grant shall be held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

H. Modification

i. By the Parties

Except as specifically provided in this Grant, modifications of this Grant shall not be effective unless agreed to in writing by the Parties in an amendment to this Grant, properly executed and approved in accordance with applicable Colorado State law, State Fiscal Rules, and Office of the State Controller Policies, including, but not limited to, the policy entitled MODIFICATIONS OF CONTRACTS - TOOLS AND FORMS.

ii. By Operation of Law

This Grant is subject to such modifications as may be required by changes in Federal or Colorado State law, or their implementing regulations. Any such required modification automatically shall be incorporated into and be part of this Grant on the effective date of such change, as if fully set forth herein.

I. Order of Precedence

The provisions of this Grant shall govern the relationship of the Parties. In the event of conflicts or inconsistencies between this Grant and its exhibits and attachments including, but not limited to, those provided by Grantee, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

- i. Colorado Special Provisions,**
- ii. The provisions of the main body of this Grant,**
- iii. Exhibit A,**
- iv. Exhibit B,**

J. Severability

Provided this Grant can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof.

K. Survival of Certain Grant Terms

Notwithstanding anything herein to the contrary, provisions of this Grant requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if Grantee fails to perform or comply as required.

L. Taxes

The State is exempt from all federal excise taxes under IRC Chapter 32 (No. 84-730123K) and from all State and local government sales and use taxes under CRS §§39-26-101 and 201 et seq. Such exemptions apply when materials are purchased or services rendered to benefit the State; provided however, that certain political subdivisions (e.g., City of Denver) may require payment of sales or use taxes even though the product or service is provided to the State. Grantee shall be solely liable for paying such taxes as the State is prohibited from paying for or reimbursing Grantee for them.

M. Third Party Beneficiaries

Enforcement of this Grant and all rights and obligations hereunder are reserved solely to the Parties, and not to any third party. Any services or benefits which third parties receive as a result of this Grant are incidental to the Grant, and do not create any rights for such third parties.

N. Waiver

Waiver of any breach of a term, provision, or requirement of this Grant, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

O. CORA Disclosure

To the extent not prohibited by federal law, this Grant and the performance measures and standards under CRS §24-103.5-101, if any, are subject to public release through the Colorado Open Records Act, CRS §24-72-101, et seq.

21. COLORADO SPECIAL PROVISIONS

These Special Provisions apply to all Grants except where noted in italics.

A. 1. CONTROLLER'S APPROVAL. CRS §24-30-202 (1).

This Grant shall not be deemed valid until it has been approved by the Colorado State Controller or designee.

B. 2. FUND AVAILABILITY. CRS §24-30-202(5.5).

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. 3. GOVERNMENTAL IMMUNITY.

No term or condition of this Grant shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. 4. INDEPENDENT CONTRACTOR

Grantee shall perform its duties hereunder as an independent contractor and not as an employee. Neither Grantee nor any agent or employee of Grantee shall be deemed to be an agent or employee of the State. Grantee and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Grantee or any of its agents or employees. Unemployment insurance benefits will be available to Grantee and its employees and agents only if such coverage is made available by Grantee or a third party. Grantee shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Grant. Grantee shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. Grantee shall (a) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

E. 5. COMPLIANCE WITH LAW.

Grantee shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. 6. CHOICE OF LAW.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this grant. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any

provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Grant, to the extent capable of execution.

G. 7. BINDING ARBITRATION PROHIBITED.

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this Grant or incorporated herein by reference shall be null and void.

H. 8. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.

State or other public funds payable under this Grant shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Grantee hereby certifies and warrants that, during the term of this Grant and any extensions, Grantee has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Grantee is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Grant, including, without limitation, immediate termination of this Grant and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. 9. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. CRS §§24-18-201 and 24-50-507.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Grant. Grantee has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Grantee's services and Grantee shall not employ any person having such known interests.

J. 10. VENDOR OFFSET. CRS §§24-30-202 (1) and 24-30-202.4.

[Not applicable to intergovernmental agreements] Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. 11. PUBLIC GRANTS FOR SERVICES. CRS §8-17.5-101.

[Not applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services] Grantee certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Grant and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Grant, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Grantee shall not knowingly employ or contract with an illegal alien to perform work under this Grant or enter into a grant with a Subgrantee that fails to certify to Grantee that the Subgrantee shall not knowingly employ or contract with an illegal alien to perform work under this Grant. Grantee (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Grant is being performed, (b) shall notify the Subgrantee and the granting State agency within three days if Grantee has actual knowledge that a Subgrantee is employing or contracting with an illegal alien for work under this Grant, (c) shall terminate the subgrant if a Subgrantee does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Grantee participates in the State program, Grantee shall deliver to the granting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming

that Grantee has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Grantee fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the granting State agency, institution of higher education or political subdivision may terminate this Grant for breach and, if so terminated, Grantee shall be liable for damages.

L. 12. PUBLIC GRANTS WITH NATURAL PERSONS. CRS §24-76.5-101.

Grantee, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this Grant.

SPs Effective 1/1/09


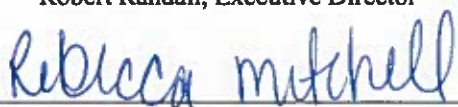
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22. SIGNATURE PAGE

Grant Contract#: CTGG1 2017- 1733
CMS#98296

THE PARTIES HERETO HAVE EXECUTED THIS GRANT

* Persons signing for Grantee hereby swear and affirm that they are authorized to act on Grantee's behalf and acknowledge that the State is relying on their representations to that effect.

<p style="text-align: center;">GRANTEE Upper Arkansas Water Conservancy District</p> <p>By: (Print) Ralph L. Scanga Title: General Manager</p> <p> *Signature</p> <p>Date: March 14, 2017</p>	<p style="text-align: center;">STATE OF COLORADO John W. Hickenlooper GOVERNOR Department of Natural Resources Robert Randall, Executive Director</p> <p> By: Rebecca Mitchell, Section Chief, Water Supply Planning, CWCB</p> <p>Signatory avers to the State Controller or delegate that Grantee has not begun performance or that a Statutory Violation waiver has been requested under Fiscal Rules</p> <p>Date: <u>3-21-17</u></p>
<p>By: Title:</p> <p>_____</p> <p>*Signature</p> <p>Date: _____</p>	<p style="text-align: center;">LEGAL REVIEW</p> <p>By: <u>N/A</u> Signature - Assistant Attorney General</p> <p>Date: _____</p>

ALL GRANTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Grants. This Grant is not valid until signed and dated below by the State Controller or delegate. Grantee is not authorized to begin performance until such time. If Grantee begins performing prior thereto, the State of Colorado is not obligated to pay Grantee for such performance or for any goods and/or services provided hereunder.

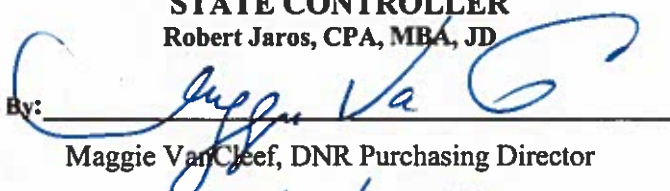
<p style="text-align: center;">STATE CONTROLLER Robert Jaros, CPA, MBA, JD</p> <p>By:  Maggie VanCleeef, DNR Purchasing Director</p> <p>Date: <u>3/31/2017</u></p>

Exhibit A
Statement of Work
Date: 7/27/16 revised 02/24/17

WATER ACTIVITY NAME – Groundwater & Surface-Water Interactions and Potential for Underground Water Storage: Phase 2

GRANT RECIPIENT – Upper Arkansas Water Conservancy District

FUNDING SOURCE – WSRA- State and Basin Funding

INTRODUCTION AND BACKGROUND

The *Groundwater and Surface-Water Interaction and Potential for Underground Water Storage* study will address the ‘gap’ through the evaluation of the available supply of water and the water balance of the Upper Arkansas Basin. This study will provide the tools necessary to manage future water supplies and will offer insight on the potential for alluvial aquifer storage, and create a mechanism for evaluating and implementing efficient irrigation practices. This study will quantify surface-water and groundwater, including recharge rates, and characterize the interactions between them in order to estimate the availability and sustainability of water resources and the effects that changes in water use or climate might have on water supplies. Agriculture represents the largest user group in the upper basin and agricultural water management will be evaluated through field-scale irrigation management data collection to create an agricultural water balance. Study results will meet both Basin and State needs for consumptive and non-consumptive use. Study results can be used for both water and land use planning and will provide important data for future water management and storage options. This study will provide data for multiple purposes through a collaborative approach to meet future water challenges and addresses all measurable objectives identified in Colorado’s Water Plan.

MEETING THE NEEDS OF THE COLORADO WATER PLAN

Critical Action Plan Implementation Goals Met:

1. **Supply & Demand (A)**- Data generated from the study will help meet the supply & demand gap by quantifying the water supply availability in the upper basin. It will also will allow for better management practices and an understanding of the groundwater & surface-water interactions. Data can be used to plan for increased demands, drought scenarios, and potential for aquifer storage;
2. **Conservation (B)** - This project will address conservation through the future development of aquifer storage. Storage is essential for the success of conservation and data from this study will provide insight on possible underground storage sites. Aquifer storage will promote conservation by placing stored water underground and reducing evaporative loss associated with traditional surface storage vessels;
3. **Land Use (C)**- The study will promote land use planning in the upper basin. Data from this study will help land use planners strategically plan for expected growth. Understanding the availability of water resources will be critical in future land use planning and will allow for accurate management of land and water in the upper basin.
4. **Agriculture (D)**- – An agricultural water balance will be produced for a number of study sites using sprinkler irrigation. Knowledge of the different water balance components will help irrigators reduce costs and increase water efficiency through the use of irrigation scheduling. Information from this study will include baseline P/ET data, contour maps of groundwater levels and flow directions, and groundwater

recharge data that can help manage reservoir operations including flood control and drought storage to help meet irrigation needs;

5. **Storage (E)**-A main objective of this study is to identify potential areas for alluvial aquifer storage. Phase 1 of this study helped identify areas in the Buena Vista-Salida region that are expected to provide approximately 20,000 acre-feet of underground storage. Areas in the Wet Mountain Valley have been previously identified as having high potential for aquifer storage. Aquifer storage reduces the need for traditional surface storage and conserves water by reducing evaporative loss;
6. **Watershed Health, Environment, and Recreation (F)** – An understanding of groundwater surface-water interactions can assist in the future water supply availability and the future management of the flows that recreation and the environment depend on. Data generated regarding the level of the water table can be used to protect lake and stream levels and help develop management strategies that balance water needs for consumptive and non-consumptive uses;
7. **Funding (G)** – This project uses a variety of funding mechanisms through multiple partnerships and matching funds. The Upper Arkansas Water Conservancy District (UAWCD) will be working in partnership with the United States Geological Survey (USGS) and Colorado State University (CSU) to provide matching funds. Local City and County officials are being asked to provide support for this study that will benefit the entire upper basin; and,
8. **Education, Outreach, and Innovation (H)** – The final report and study results will be presented at several meetings and conferences throughout the basin. The USGS and CSU, when appropriate, will produce journal articles on their findings and provide data and maps on their website for public viewing. Educational materials will also be produced and delivered to interested parties throughout the basin.

OBJECTIVES

1. Design, install (as appropriate), and monitor a surface and groundwater network and soil moisture network suitable to create an accurate water budget for the study area.
2. Determine the hydraulic properties of the alluvial aquifer within the study area.
3. Estimate stream-accretion response-time factors of the alluvial aquifer to hypothetical recharge scenarios for the Arkansas River, Grape and Texas Creeks within the study area.

TASKS

TASK A – Hydraulic Properties of Aquifers

Description of Task

This task will determine the hydraulic properties of the principal aquifers. Pumped-well aquifer or specific-capacity tests of large-capacity wells and instantaneous change (slug) tests of small-capacity wells will be done to determine hydraulic properties of the alluvial and basin-fill aquifers.

Method/Procedure

1. Discharge aquifer tests (pumped-well tests)- This testing will be done using available public-supply wells or well fields as control wells and available nearby wells as observation wells. Where depth to water is near land-surface, temporary piezometers may be installed for use as water-table observation wells. If observation wells are not available and it is impractical to install temporary piezometers, then specific-capacity tests will be used to estimate transmissivity. Success of this task assumes cooperation from well owners.
2. Slug tests or specific-capacity tests- These tests will be done in at least 50 small-capacity wells (domestic) wells to determine spatial variability of hydraulic properties of the alluvial and basin-fill aquifers.

3. Results from aquifer, specific-capacity, and slug tests – Test results will be submitted for approval to the Regional Groundwater Specialist.

Task B — Stream-Aquifer Interaction

Description of task

Multiple methods will be used to evaluate stream-aquifer interaction for perennial streams, including the Arkansas River, Grape and Texas Creeks.

Method/Procedure

1. Compile Data- Streamflow and diversion data will be compiled from the Colorado Division of Water Resources (CDWR), the Upper Arkansas Water Conservancy District (UAWCD), and the USGS National Water Information System (NWIS). [Data compiled for this task will also be used for Task 3— Water Budget]
2. Evaluate Data-Streamflow and diversion data will be evaluated to estimate magnitude and seasonality of gains or losses and to define stream reaches in which stream-aquifer interaction is substantial (greater than 5-10 percent of seasonal flow).
3. Gain-loss investigations – Conduct seepage runs or tracer-injection tests will be done on selected stream reaches which are suspected of having substantial gains or losses.
4. Monitor- Continuously monitor stream stage and shallow groundwater levels and surface-water and groundwater temperatures will take place at selected sites.
5. Flux Estimates- Use heat-transport methods as described in Rosenberry and LaBaugh (2008), to estimate flux between streams and shallow aquifers.

Task C — Water Budget

Description of Task

Available climate, geologic, geospatial, hydrologic, well, and water-use data from local, State, and Federal agencies, educational institutions, water conservancy districts, and water providers will be reviewed and compiled in a relational database. Data gaps will be documented during the data compilation and review and will be considered during selection of data-collection sites (Healy and others, 2007).

Method/ Procedure

1. Measurements- Water levels will be measured periodically (four to six times per year for two years) in at least 50 selected wells to define regional water-level surfaces and to monitor seasonal fluctuations of water levels. Wells included in the monitoring network will be selected to compliment those in an existing long-term network, operated by the USGS, and with those that will be installed and measured by Colorado State University. Water-level recorders (submersible pressure transducers) will be installed in selected wells during the study to evaluate short-term and seasonal changes in water levels.
2. Evapotranspiration (ET)- ET from irrigated land will be estimated continuously at for sites, using the radiation energy balance (REB) method. Instantaneous ET rates will be measured monthly at multiple sites in four selected irrigated fields during May-September, using a hemispherical chamber (Stannard, 1988). Instantaneous ET measurements will be correlated with the estimates from the REB method to estimate daily evapotranspiration rates for irrigated pasture and cropland. Precipitation and air temperature also will be measured continuously at four sites for use in estimating the local water balance.
3. Stream-Aquifer Testing- Stream stage and groundwater levels and surface (stream) and subsurface temperatures will be measured at two sites each on four perennial mountain-front streams to estimate mountain-front seepage losses (groundwater recharge, where streams flow across permeable alluvial and basin-fill deposits near the mountain front). If suitable sites are accessible, additional sites will be similarly instrumented on selected intermittent mountain-front streams.

4. Stream-Aquifer Interchange- Hydraulic connection between groundwater and surface water (stream-aquifer interchange) of the Arkansas River and its major tributaries will be determined using aquifer-test and/or heat-transport methods (Rosenberry and LaBaugh, 2008). [See Task 2.]
5. Ditch-Aquifer Testing- Canal (ditch) stage, groundwater levels, and surface (canal) and subsurface temperatures will be measured for selected irrigation canals or ditches to estimate conveyance losses. Conveyance losses will be determined using mass-balance and heat-transport methods (Rosenberry and LaBaugh, 2008). Not all sites in the study area can be instrumented however, no less than five percent of all diversion structures will be instrumented and measured periodically to estimate errors in reported diversions.
6. Water Budget- A water budget will be developed using data from existing and planned data-collection networks and data collected during this study. Some components of the water budget may be estimated using analytical or numerical models. Major components of the water-budget for the study area that are difficult or impossible to measure directly and that may be estimated using analytical or numerical models include:
 - Subsurface inflow along the mountain front will be estimated for selected drainage basins using available geospatial, meteorological, and streamflow data and a precipitation-runoff-groundwater-flow model (GSFLOW; Markstrom and others, 2008).
 - Recharge from precipitation on non-irrigated land and from precipitation and applied water on irrigated land will be estimated from meteorological data and land- and water-use data, using the Farm Package of MODFLOW (FMP; Schmid and others, 2006).

Task D — Irrigation Water Management

Description of Task

Agricultural contributions to a water balance model are critically important for understanding surface and groundwater interactions. A network of monitoring sites will be installed along an elevational gradient and will include fields in Custer, Fremont, and Chaffee counties. Data collected at the sites will contribute to a surface and groundwater balance model and provide data for validating an irrigation scheduling tool. The data will be used to validate the Water Irrigation Scheduler for Efficient Application (WISE) which has built-in assumptions for high mountain hay crops. Data will also be used to better understand hydrologic fluxes under a variety of irrigation conditions.

Method/ Procedure

1. Data Collection Through Measurement - Soil moisture will be measured continuously at three locations and three depths (for a total of nine measurements) at each field site. Irrigation amounts will be measured using a tipping bucket rain gauge. Soil hydraulic properties will be measured through field and lab procedures.
2. External Data Compilation- Data collection from existing data sources will be compiled for use in an agricultural water balance equation. Evapotranspiration data will be compiled from the Colorado Agricultural Meteorological Network (CoAgMet) and previous studies by the USGS. Soil classification data will be collected from the NRCS SSURGO dataset and used in the irrigation scheduling tool.
3. Irrigation Scheduling Tool Validation – Field data will be used to test the assumptions of the model including: volumetric water content, soil moisture deficit, rooting depth, field capacity, and permanent wilting point.

Task E— Potential for Aquifer Storage and Recovery

Description of Task

Data collected and analyzed for Tasks A-C will be used to evaluate potential for aquifer storage and recovery in the study area.

Method/ Procedure

- Data and Analysis- Data will be compiled and analyzed from all previous tasks to identify potential areas for aquifer storage. Hydraulic properties of the aquifers, determined in Tasks A and B, will be used to identify these areas.
- Mapping- Maps (GIS layers) will be prepared showing the altitude and depth of the water table of seasonal changes in water levels, potential areas for aquifer storage, and geologic features.
- Models- Analytical and numerical models may be used to demonstrate methods of estimating the residence times for hypothetical aquifer-storage and recovery projects.

Task F - Deliverables for Tasks A- E and Final Reporting

USGS

Study results and data from all tasks will be published in a comprehensive USGS Scientific Investigations Report. As funding permits, the USGS may publish journal articles using study results in order to advance scientific knowledge. Results from approved aquifer, specific-capacity, and slug tests in the study area will be available for release to the public through various USGS portals. Data, mapping and reporting will also be made available to the public through USGS portals. Presentations of Phase 2 results will be conducted throughout the Basin and for all participating agencies.

CSU

CSU will provide an outreach and education campaign, that will be formulated to deliver the results to the public. Appropriate formats will include oral presentations, published reports, and field demonstrations. Data will be made available through peer reviewed literature and stakeholder publications. The WISE irrigation scheduling tool will be refined using the observed data and tested. Presentations of Phase 2 results will be conducted throughout the Basin and for all participating agencies.

UAWCD

UAWCD will provide progress reports and final reporting to the CWCB, Arkansas Basin Roundtable, Participating Entities, and the Public.

Water Balance Budget and Schedule

Task	Description	Start Date	Finish Date
A	Hydraulic Data Collection	03/31/2017	06/30/19
B	Stream-Aquifer Data Collection	03/31/2017	06/30/19
C	Water Budget	03/31/2017	06/30/19
D	Agricultural Water Budget	03/31/2017	06/30/2020
E	Potential for Aquifer Storage	03/31/2017	06/30/2020
F	Reporting	03/31/2017	06/30/2020

Water Balance Study- Phase 2 Budget (Over a 3-Year Period)					
Total Personnel Cost by Task					
Tasks	Description	USGS	CSU	UAWCD Project Management	Total
A- Hydraulic Properties of Aquifers	Determine hydraulic properties of principal aquifers	\$ 134,700		\$ 9,429	\$ 144,129
B- Stream Aquifer Interactions	Evaluate stream-aquifer interactions for perennial streams	\$ 141,300		\$ 9,891	\$ 151,191
C- Water Budget	Available data will be reviewed and compiled in a relational database	\$ 106,700		\$ 7,469	\$ 114,169
D- Irrigation Water Management	Network of soil moisture monitoring sites and data		\$ 74,117	\$ 5,188	\$ 79,305
E- Aquifer Storage & Reporting	Analyze and evaluate data for potential for aquifer storage and reporting	\$ 166,600		\$ 11,662	\$ 178,262
Totals		\$ 549,300	\$ 74,117	\$ 43,639	\$ 667,056
Percent Totals		82%	11%	7%	100%

Water Balance Study- Phase 2 Budget (Over a 3-year Period)						
Funding Request and Cost Share By Task						
Tasks	USGS Cost Share	CSU Cost Share	UAWCD & Local Cost Share	WSRA Basin Funds	WSRA State Funds	Total
Task A	\$47,100		\$27,727	\$10,000	\$51,323	\$136,150
Task B	\$49,500		\$27,727	\$10,000	\$51,323	\$138,550
Task C	\$37,400		\$27,727	\$10,000	\$51,324	\$126,451
Task D	-	\$29,503	\$27,727	\$10,000	\$51,324	\$118,554
Task E	\$58,300		\$27,727	\$10,000	\$51,324	\$147,351
Totals	\$192,300	\$29,503	\$138,635	\$50,000	\$256,618	\$667,056
%	29%	4%	21%	7%	38%	100%

*UAWCD = \$25,000 Cash Match
\$43,639 In-Kind Match (Project Management 7% Project Total)

*Local Match = \$30,000 Chaffee County & Municipalities
\$30,000 Fremont County & Municipalities
\$10,000 Custer County & Municipalities

Exhibit B
UPPER ARKANSAS WATER CONSERVANCY DISTRICT
Water Supply Reserve Account Grant
Performance Monitoring Provisions

Statutory Requirements

For each personal services contract with a value over \$100,000, the individual selected by the state agency or institution of higher education (IHE), pursuant to CRS§ 24-103.5-101(3), shall monitor the contractor's work under the contract and shall certify as to whether the contractor is complying with the terms of the contract pursuant to CRS§ 24-103.5-101(5).

- (a) Performance measures and standards developed specifically for the contract by the governmental body administering the contract. The performance measures and standards shall be negotiated by the governmental body and the vendor prior to execution of the contract and shall be incorporated into the contract. The measures and standards shall be used by the governmental body to evaluate the performance of the governmental body and the vendor under the contract.
- (b) An accountability section that requires the vendor to report regularly on achievement of the performance measures and standards specified in the contract and that allows the governmental body to withhold payment until successful completion of all or part of the contract and the achievement of established performance standards. The accountability section shall include a requirement that payment by the governmental body to the vendor shall be made without delay upon successful completion of all or any part of the contract in accordance with the payment schedule specified in the contract or as otherwise agreed upon by the parties.
- (c) Monitoring requirements that specify how the governmental body and the vendor will evaluate each others' performance, including progress reports, site visits, inspections, and reviews of performance data. The governmental body shall use one or more monitoring processes to ensure that the results, objectives, and obligations of the contract are met.
- (d) Methods and mechanisms to resolve any situation in which the governmental body's monitoring assessment determines noncompliance, including termination of the contract.

Performance Monitoring Standards

Performance monitoring for this contract shall include the following:

- (a) Performance measures and standards: Grantee shall maintain receipts for all projects expenses and documentation of the minimum in-kind contributions per the budget in Exhibit A, Tasks A-F. Per WSRA Criteria and Guidelines, retainage of 10% of the grant funds shall be withheld until receipt of the final report and all other deliverables.
General Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract until the construction begins. The progress report shall describe the completion or partial completion of the statement of work leading up to the advertisement for bid and including a description of any major issues that have occurred and any corrective action taken to address these issues.
Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents the project. This report may contain photographs, summaries of meetings and reports/studies. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions per the budget in Exhibit A. Per WSRA Criteria and Guidelines, retainage of the grant funds shall be withheld until receipt of the final report and all other deliverables.
- (b) Accountability: Per WSRA Criteria and Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must certify that all grant conditions have been complied with on each invoice. In addition, per WSRA Criteria and Guidelines progress reports must be submitted at least once every 6 months. A final project report must be submitted and approved before final project payment and release of retainage.

(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A and Paragraphs 9 & 19 of the contract. Progress shall be detailed in the required invoice documentation and progress reports as detailed above. Additional inspections or field consultations will be arranged as may be necessary.

(d) Noncompliance Resolution: Per paragraphs 9, 14, 15, and 19 of the contract: payment will be withheld until grantee is current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the purchase order or contract.