



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

December 3, 2014

Lower Arkansas Valley Water Conservancy District
Attn: Mr. Jay Winner
P.O. Box 1120
Glenwood Springs, Co 81602

RE: Notice to Proceed - WSRA Grant – FIRI Analysis and Tailwater Return Flow Study
on Fort Lyon Canal

Dear Mr. Winner,

This letter is to inform you that the contract to assist in the above WSRA grant project was signed on December 1, 2014. The original contract will be mailed to you.

With the executed contract, you are now able to proceed with the project and invoice the State of Colorado for costs incurred through May 31, 2017. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 45 days after the project manager approval. I wish you much success in your project.

If you have any questions or concerns regarding the project, please contact me.

Sincerely,

//s//

Brent Newman

Program Manager

Water Supply Planning Section

O 303.866.3441 x3222 | C 303.681.8420

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STATE OF COLORADO
Colorado Water Conservation Board
Grant Agreement
with
Lower Arkansas Valley Water Conservancy District
Contract Number CTGG1 2015-2155

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1. PARTIES

This Grant Agreement (hereinafter called “Grant”) is entered into by and between Lower Arkansas Valley Water Conservancy District (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, is for FIRI Analysis and Tailwater Return Flow Study on Fort Lyon Canal Project 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**.

C. Exhibits and other Attachments

The following are attached hereto and incorporated by reference herein: **Exhibit A and B**.

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. Sub-grantee

“Sub-grantee” 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 and EARLY TERMINATION.

A. Initial Term-Work Commencement

The Parties respective performances under this Grant shall commence on the later of either the Effective Date or December 1, 2014. This Grant shall terminate on May 31, 2017 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 (and not merely seeking a term extension) 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 May 31, 2017. 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 Sub-grantees shall be considered Grantee's or Sub-grantees' 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 \$175,137, 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:

\$175,137 in FY2015
\$175,137 in FY2016, minues any funds expended in FY2015
\$175,137 in FY2017, minues any funds expended in FY2015 and FY2016

i. Advance, Iterim 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 party other than the State.

B. 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.

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 on 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. The State shall notify the Grantee in writing and notate any State records and information that are classified by the State as being "Confidential" and given to the Grantee in connection with its performance hereunder. The provisions of this Section 10 shall only apply to such notated records and information.

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, Sub-grantees, 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, Sub-grantees, 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 Grantees 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 Sub-grantees 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 Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee'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 sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, 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 Sub-grantee 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 Grantual liability, personal injury, and advertising liability with minimum limits as follows: (a) \$1,000,000 each occurrence; (b) \$1,000,000 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, Sub-grantee 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 Sub-grantees 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 Sub-grantees 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 Sub-grantees 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 Sub-grantee 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 sub-grant, Grantee and each Sub-grantee 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 sub-Grants 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 sub-Grants. 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, 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 Sub-grantees 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:

Brent Newman, Project Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Suite 718
Denver, CO 80203
Brent.newman@state.co.us

B. Grantee:

Jay Winner, General Manager
Lower Arkansas Valley Water Conservancy District
801 Swink Avenue
Rocky Ford, CO 81067
jwinner@centurytel.net

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 nonexclusive property of the State and, all Work Product shall be delivered to the State by Grantee upon completion or termination hereof. The State's nonexclusive rights in such Work Product shall include, but not be limited to, the right to copy, publish, display, transfer, and prepare derivative works.

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 and 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 showing of good cause.

20. GENERAL PROVISIONS

A. Assignment and SubGrants

Unless otherwise specified in Exhibit A, Statement of Work, 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, subGranting without such consent shall be void. All assignments, subGrants, or Sub-grantees 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 affect 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, Sub-grantees, 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 both 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 GRANTS - 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 State and Grantee. 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 and 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

The 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 shall 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 Grant, 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 contract 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. 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 Grant with an illegal alien who shall perform work under this Grant and shall 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 Grant with an illegal alien to perform work under this Grant or enter into a Grant with a Sub-grantee that fails to certify to Grantee that the Sub-grantee shall not knowingly employ or Grant 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 Sub-grantee and the Granting State agency within three days if Grantee has actual knowledge that a Sub-grantee is employing or Granting with an illegal alien for work under this Grant, (c) shall terminate the subGrant if a Sub-grantee does not stop employing or Granting 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 Routing Number

CMS#74756**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>GRANTEE Lower Arkansas Valley Water Conservancy District By: Jay Winner Title: General Manager</p> <p> *Signature Date: <u>11/14/14</u></p>	<p>STATE OF COLORADO John W. Hickenlooper GOVERNOR Department of Natural Resources Mike King, Executive Director</p> <p> By: Rebecca Mitchell, Section Chief, Water Supply Planning Section, CWCB 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 Date: <u>11-18-14</u></p>
<p>2nd Grantee Signature if Needed By: Title:</p> <p>_____ *Signature Date: _____</p>	<p>LEGAL REVIEW John W. Suthers, Attorney General</p> <p>By:  Signature - Assistant Attorney General 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>STATE CONTROLLER Robert Jaros, CPA, MBA, JD</p> <p>By:  Name and Title: Susan Borup, DNR Controller Date: <u>12/1/14</u></p>
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Exhibit A

Statement of Work

WATER ACTIVITY NAME – FIRI Analysis and Tailwater Return Flow Study on Fort Lyon Canal

GRANT RECIPIENT – Lower Arkansas Valley Water Conservancy District

FUNDING SOURCE – Water Supply Reserve Account (Statewide and Arkansas Basin)

INTRODUCTION AND BACKGROUND

The Lower Arkansas Valley Water Conservancy District (“Lower Ark”) is committed to preserving agriculture in the Lower Arkansas River Basin. In the face of competing demands on limited water resources, encouraging improvements in irrigation efficiency and agricultural productivity is critical in preserving the agricultural economy and supporting rural communities. However, this must be achieved in a manner that ensures compliance with the Arkansas River Compact. Since adoption of the “Compact Rules Governing Improvements to Surface Water Irrigation Systems in the Arkansas River Basin in Colorado” (the “Irrigation Improvements Rules”) in 2011, Lower Ark has stepped forward to prepare and administer the only Rule 10 Compact compliance plans on behalf of irrigation system improvement owners.

After operating a single Rule 10 Plan for the first two years, Lower Ark recognized the unique needs of the Fort Lyon Canal Company Rule 10 Plan members and determined that these needs would be better addressed under a separate Rule 10 Plan. The Fort Lyon Canal, at over 113 miles long and irrigating approximately 94,000 acres, is the largest irrigation canal in Colorado. The Fort Lyon Canal is typically a water-short system, and Fort Lyon shareholders also make up approximately 2/3 of the irrigated acreage covered by Compact compliance plans. In the fall of 2013, a Fort Lyon Rule 10 Association (FLR10) was formed and was recently incorporated in order to establish a cooperative, self-sustaining entity for Fort Lyon Canal shareholders who face compact compliance obligations under the Irrigation Improvements Rules.

The FIRI Analysis and Tailwater Return Flow Study on the Fort Lyon Canal (the “Project”) will first follow the Farm Irrigation Rating Index (FIRI) method to evaluate irrigation efficiency on a section of the Fort Lyon Canal. Those results will be cross-checked by conducting a small-scale investigation of tailwater return flows. The Project will enable a better understanding of both farm irrigation efficiency and how and in what amount tailwater return flows actually accrue to the Arkansas River for use in a variety of contexts. With respect to Compact compliance issues, the results of the study will be compared to the irrigation efficiency factor and tailwater assumption contained in the Irrigation System Analysis Model (the “ISAM”), as derived from the H-I Model.

The ISAM was developed to provide a standard means for evaluating whether a specific irrigation system improvement results in a reduction or change in the amount, timing, or location of historical seepage losses or return flows in violation of Article IV-D of the Arkansas River Compact and to implement the Irrigation Improvements Rules. The ISAM allows for a comparison of computed seepage losses and return flows between the pre-improvement and post-improvement conditions. In making this comparison, for flood irrigation (pre-improvement conditions) the ISAM assumes a standard 9.65% of farm headgate deliveries are returned to the river as tailwater and a 65% maximum irrigation efficiency factor. The tailwater assumption and

irrigation efficiency factor are widely believed to be overly-conservative, particularly on the water-short Fort Lyon Canal where most of the tailwater from one field is likely beneficially used by crops on other fields and does not reach the stream system. If the irrigation efficiency factor and tailwater assumption in the ISAM are, in fact, overly-conservative (i.e., there is less than 9.65% of tailwater return flows from flood-irrigated farms and the percentage of crop consumption (irrigation efficiency) is greater), then return flow maintenance deliveries are being made pursuant to Compact compliance plans in excess of actual changes to return flows associated with the installation and use of irrigation system improvements under the Irrigation Improvements Rules.

Given the extensive physical size of the Fort Lyon Canal, the Project will be pursued in a phased approach. The first phase for which Applicant is currently seeking funding, will involve two parts. First, Applicant will select a limited number of farms on a single section of the Fort Lyon Canal to provide sufficient data on tailwater return flows to evaluate whether the initial results support pursuing a more broad-based, geographically extensive study on a canal-wide basis. Then it will utilize the Farm Irrigation Rating Index (FIRI) method to analyze irrigation efficiency. This analysis will involve extensive data collection and observation pertaining to irrigation management and systems with the goal of establishing a representative irrigation efficiency.

The goal of Phase One of the Project would be to obtain high quality data on farm efficiency and actual amounts of tailwater return flows occurring from flood-irrigated farms on a subset of the Fort Lyon Canal. This data and analysis could then be used to assess whether broader on-site field irrigation evaluations would be beneficial and are justified for future phases. If undertaken, the more extensive, second phase would be conducted with the aim of adjusting the tailwater assumption and irrigation efficiency factor in the H-I Model and the ISAM to more accurately reflect actual conditions. By reducing the return flow maintenance deliveries required by Compact compliance plans operating under the Irrigation Improvements Rules, pressure on limited water supplies to meet these delivery obligations will similarly be lessened and additional water sources will remain available for beneficial use to meet other demands within the Arkansas River Basin. Additionally, the transferrable yield associated with Fort Lyon shares in both temporary and permanent changes could be increased as a result of reductions in assumed tailwater return flows and increases in irrigation efficiency. The Project's data could also be incorporated into the anticipated Arkansas Decision Support System and similar water management tools providing high-quality information to assist in Basin-wide water management decisions. Each of these potential Project outcomes could directly lead to reductions in the agricultural and M&I gap identified in the Arkansas Basin Consumptive Needs Assessment: 2030 (2008).

OBJECTIVES

The objectives are as follows:

- Objective 1 – Collect High-Quality Data on Tailwater Return Flows from Flood-Irrigated Farms: Applicant will identify 3-5 representative farms within a single section of the Fort Lyon Canal and will conduct measuring and monitoring for one or two irrigation seasons to gather data on tailwater return flows. This may include intensive monitoring activities on one or more fields selected from the participating farms to obtain highly detailed data.

- Objective 2 – Analyze Data and Verify Tailwater Results: Data gathered will be analyzed to determine actual tailwater return flows and compare those to the factors obtained from the FIRI analysis.
- Objective 3 – Collect and Analyze High-Quality Data on Farm Irrigation Efficiency: Applicant will collect irrigation management and system data and make necessary field observations following the Farm Irrigation Rating Index (FIRI) method to allow for determination of the six water management factors and the nine system factors. A potential irrigation efficiency will be established utilizing published technical data. Data gathered will be studied and considered to determine the appropriate management and system factors used in the FIRI analysis that have positive and negative impacts on efficiency to arrive at an average irrigation efficiency.
- Objective 4 – Evaluate Potential for Phase Two to Support Possible Integration of Results into the H-I Model and the ISAM: After completion of Phase One of the Project, Applicant will evaluate, in coordination with interested parties and the Division 2 Engineer's Office, whether the results justify and support a broader study to perform more extensive field-specific evaluations on a canal-wide basis. The methodologies and approaches used in conducting both this Phase One and a potential Phase Two of the Project will be designed to provide a basis for any potential adjustment to the H-I Model's and ISAM's tailwater and farm efficiency assumption.

TASKS

TASK 1 – Farm Identification

Description of Task

This task will identify three to five flood-irrigated farms located within a single section of the Fort Lyon Canal that represent a broad range of characteristics under the Fort Lyon Canal, including farm size (individual field sizes and overall farm size), terrain, type of irrigation delivery system (earthen ditch, concrete ditch, gated pipe, etc.), and feasibility of monitoring tailwater return flows and other irrigation efficiency parameters.

Method/Procedure

Farms with the necessary characteristics will be identified through review of maps, aerial photographs, soil maps, and meetings with persons knowledgeable about farms located on the Fort Lyon Canal. Owners of suitable farms for inclusion in the study will be contacted to determine whether they are willing to participate in the study. Meeting(s) with Division 2 Engineering personnel will take place to discuss potential farms for inclusion and obtain input as to preferred farm locations. Meetings will also take place with the Fort Lyon Canal Company board and superintendent to explain the purpose and operations plan of the study and address any questions or concerns they may have.

Deliverable

This task deliverable will be maps and legal descriptions of the selected farms, the locations and types of equipment to be installed on each farm, and description as to the basis for inclusion in the study.

TASK 2 – Purchase and Installation of Equipment

Description of Task

This task will carefully consider and determine locations of flow measurement equipment and determine the appropriate type and size of measuring and recording equipment. Applicant will then purchase and properly install the equipment.

Method/Procedure

Applicant will work with the owners of the participating farms to determine proper locations for flow measurement/recording equipment installation to ensure collection of accurate and reliable data. This task will also require research and conversations with irrigation measurement/recording device experts to determine the proper equipment to be used in the study. Applicant will confirm with Division 2 Engineering personnel that the selected equipment is acceptable and standard for irrigation flow measurement and measurement of crop consumption.

The study area will be assessed to determine the appropriate type of measurement equipment, but in general, Parshall, trapezoidal and cutthroat flumes, as well as sharp-crested weirs will be used, all equipped with automatic data loggers to measure tailwater amounts. Permanent measurement structures owned by study participants will also be used when feasible. Once selected, equipment will be installed using standard installation procedures and Applicant will provide an opportunity to Division 2 Engineering personnel to inspect the equipment.

Deliverable

This task will be completed with documentation of the equipment purchased and a brief narrative and/or photographs showing the sites where the measuring and monitoring equipment was installed.

TASK 3 – Site Monitoring and Data Collection

Description of Task

This task will be to monitor and collect flow data from all equipment within the study and ensure each remains properly installed.

Method/Procedure

When possible, measurement devices will be checked prior to an irrigation run to ensure all equipment remains in good working condition. With the long length of the Fort Lyon Canal and the large number of head gates it serves in relation to its relatively small capacity, it is operated in numerous sections. Therefore, only farmers in the currently-active section are allowed to receive water at one time. This period of time when water can be received is called a “run”. Typically, farmers are given around 12 hours of notice prior to receiving water and each run is normally 48 hours in length. This method of operation will facilitate monitoring and data collection activities. Following completion of a run, study personnel will return to each measurement device and download all flow data. Data will be given a preliminary review to ensure it is reasonable and representative of the flows and volumes expected for that field.

Deliverable

The deliverable for this task item will be the data log sheets for each of the farms included in the study and any summaries of such data.

TASK 4 – Data Processing and Analysis

Description of Task

Once all above tasks have been completed, study personnel will analyze the flow data to determine the amount of tailwater lost from each farm as a total volume and as a percentage of volume applied to the farm.

Method/Procedure

Tailwater measured from each farm will be analyzed as a total volume and as a percentage of supply delivered to the farm. Precipitation data will be downloaded from the CoAgMet weather station nearest to each farm. Tailwater amounts will be reduced by the amount of precipitation occurring during an irrigation event at a specific farm. This analysis will be performed for each farm on an irrigation run basis and a yearly basis.

Deliverable

The deliverable for this task item will be a report that: (1) describes the methods and procedures used during the study and (2) summarizes the study results and conclusions.

TASK 5 – Conduct Farm Irrigation Rating Index Analysis

Description of Task

This task will determine potential irrigation efficiencies and the factors used in the FIRI method analysis and to perform the FIRI method analysis on a farm-by-farm basis for farms included in the study.

Method/Procedure

For farms utilized in the study, Applicant will observe and document the range of irrigation management practices, methods used and system infrastructure. Management documentation will include, among others, ability to measure water and soil moisture, irrigation expertise, level of irrigation system maintenance, and ability to control water deliveries. System documentation will include, among others, ability to distribute water efficiently and apply uniformly, slopes and length of fields, ability to reuse tailwater, and flexibility and maintenance level of irrigation equipment.

Applicant will then conduct the FIRI method analysis. This begins with an analysis of potential efficiency for different types of irrigation systems and then considers numerous management and system factors that have positive and negative impacts on efficiency to arrive at an actual farm irrigation efficiency for the farm being analyzed. Once potential efficiencies are selected, irrigation efficiencies will be determined using the FIRI method on a farm-by-farm basis for participating farms.

Deliverable

This task deliverable will include documentation and summary of irrigation efficiencies obtained through the FIRI method.

TASK 6 – Evaluation of Potential Phase Two of Project

Description of Task

The results of this Project will be carefully evaluated by Applicant, in cooperation with other interested parties including the Division 2 Engineer, to determine whether the results justify pursuing a second phase of the Project that would include a more detailed and extensive

irrigation efficiency evaluation. Phase Two of the Study could potentially support a modification to the H-I Model and the ISAM.

Method/Procedure

Study personnel will meet with Division 2 personnel and other appropriate State water officials to present the results of this first phase of the Project. Applicant will also meet with other interested parties, such as the Fort Lyon Canal Board, to discuss the results of Phase One. Applicant will then determine whether the results of Phase One are sufficient to justify pursuing a second phase that would involve a more extensive irrigation efficiency study along the Fort Lyon Canal. Results from Phase Two may support a potential modification to the H-I Model and the ISAM pursuant to the procedure set forth in the Irrigation Improvements Rules.

Deliverable

Applicant will prepare a recommendation as to whether a second phase of the Project should be pursued, which will include the various considerations upon which such recommendation is based and whether the recommendation is supported by the Division 2 Engineer's Office and other interested parties.

REPORTING AND FINAL DELIVERABLE

Reporting

The Applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work 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 results of the project and documents how the project was completed. This report may contain maps, photographs, summaries of meetings and engineering reports/designs.

Exhibit B
Lower Arkansas Valley 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. 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.

Exhibit B

(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.

BUDGET

Anticipated budget tables for the Project are provided below. These tasks correspond to those identified above.

	Equipment/ Direct Costs	Labor	Total Project Costs
Task 1 – Farm Identification	\$ 1,400	\$ 7,315	\$ 8,715
Task 2 – Purchase and Installation of Equipment	\$ 89,680	\$ 9,375	\$ 99,055
Task 3 – Site Monitoring and Data Collection	\$ 10,340	\$ 46,100	\$ 56,440
Task 4 – Data Processing and Analysis	\$ 1,307	\$ 35,120	\$ 36,427
Task 5 – Conduct FIRI Analysis	\$ 672	\$ 12,080	\$ 12,752
Task 6 – Evaluate Potential for Phase Two	\$ 448	\$ 11,300	\$ 11,748
Total Costs	\$ 103,847	\$ 121,290	\$ 225,137
Matching Funds			\$ 50,000
Total Grant Request (Basin and Statewide)			\$ 175,137

Hours:

	Project Manager/ Engineer	Staff Engineer	Engineering Technician	Legal	Total
Billing Rate	\$150	\$55	\$50	\$240	
Task 1 – Farm Identification	30	25		6	\$ 7,315
Task 2 – Purchase and Installation of Equipment	40	25	40		\$ 9,375
Task 3 – Site Monitoring and Data Collection	150	20	450		\$ 46,100
Task 4 – Data Processing and Analysis	200	40	20	8	\$ 35,120
Task 5 – Conduct FIRI Analysis	40	40	20	12	\$ 12,080
Task 6 – Evaluate Potential for Phase Two	20	20		30	\$ 11,300
Total Cost					\$ 121,290

Other Direct Costs:

Item:	Mileage (\$0.56/mi)	Materials	In-Kind Contributions	Total
Task 1 – Farm Identification	2,500			\$ 1,400
Task 2 – Purchase and Installation of Equipment	3,000	\$ 88,000		\$ 89,680
Task 3 – Site Monitoring and Data Collection	14,000	\$ 2,500		\$ 10,340
Task 4 – Data Processing and Analysis	540	\$ 1,005		\$ 1,307
Task 5 – Conduct FIRI Analysis	1,200			\$ 672
Task 6 – Evaluate Potential for Phase Two	800			\$ 448
Total Cost				\$ 103,847

SCHEDULE

A project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP) is as follows:

Task	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Task 1 – Farm Identification												
Task 2 - Equipment												
Task 3 – Site Monitoring and Data Collection												
Task 4 – Data Processing and Analysis												
Task 5 – FIRI Analysis												
Task 6 – Evaluate Phase Two												

Task	Month															
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Task 1																
Task 1																
Task 2																
Task 3																
Task 4																
Task 5																
Task 6																