



## United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
Colorado Water Science Center  
Southeast Colorado Office  
201 E. 9<sup>th</sup> Street  
Pueblo, CO 81003  
(719) 562-2840

November 13, 2023

Stephanie Gonzales, Secretary/Treasurer  
Arkansas River Compact Administration  
PO Box 1106  
Lamar, CO 81052

Dear Ms. Gonzales:

Enclosed is an original Joint Funding Agreement (JFA) for calendar year 2024, between the Arkansas River Compact Association (ARCA) and the U.S. Geological Survey (USGS) to operate and maintain streamflow gages and a water-quality monitor as listed in the attachment. The total program is for \$92,469 and is described in the following table:

<b>ARCA</b>	<b>USGS GWSIP Funds</b>	<b>Total</b>
\$66,363	\$26,106	\$92,469

Work performed with funds from this agreement will be conducted on a fixed-price basis. The results of all work under this agreement will be available for publication by the U.S. Geological Survey. If this program is satisfactory, please sign and return to Meghan Patterson at [mpatterson@usgs.gov](mailto:mpatterson@usgs.gov) and Krystal Brown at [kbrown@usgs.gov](mailto:kbrown@usgs.gov).

USGS policy requires us to obtain approval from our Regional Director to conduct work without a signed agreement. To assist us in complying with this policy, we request that you return the signed agreement by December 31, 2023. We appreciate whatever special effort you and others in your organization will make to respond to this request. If you have questions or concerns with this agreement please contact me at 719 250-0096 or Meghan Patterson at 720-456-5081.

Sincerely,

Krystal Brown  
Supervisory Hydrologic Technician

U.S. Department of the Interior  
U.S. Geological Survey  
Joint Funding Agreement  
FOR WATER RESOURCES INVESTIGATIONS

Customer No: 6000001032  
Agreement No: 24REJFACO 219  
Project No:  
TIN #: 840811823

Fixed Cost  
Agreement

Yes  No

THIS AGREEMENT is entered into as of the **1<sup>st</sup> day of January, 2024** by the U.S. GEOLOGICAL SURVEY, Colorado Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the **Arkansas River Compact Administration**, party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation Water Resource Investigations, **operation of streamgages and a water quality monitor**, herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.
2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) includes In-Kind Services in the amount of **\$0.00**.
  - (a) **\$0.00** by the party of the first part during the period **January 1, 2024 to December 31, 2024**
  - (b) **\$66,363.00** by the party of the second part during the period **January 1, 2024 to December 31, 2024**
  - (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of:  
**\$26,106.00** Description of USGS regional/national program: **Groundwater Streamflow Information Program**
  - (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
  - (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.
3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.
4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.
5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.
6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.
7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program and, if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties. The Parties acknowledge that scientific information and data developed as a result of the scope of work are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website ( <https://www.usgs.gov/about/organization/science-support/science-quality-and-integrity/fundamental-science-practices>).
9. Billing for this agreement will be rendered **quarterly**. Invoices not paid within 60 days from date of bill will bear Interest, Penalties, and Administrative costs as the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. 3717) established by the U.S. Treasury.

**U.S. Department of the Interior  
U.S. Geological Survey  
Joint Funding Agreement  
FOR WATER RESOURCES INVESTIGATIONS**

**Customer No: 6000001032  
Agreement No: 24REJFACO 219  
Project No:  
TIN #: 840811823  
Fixed Cost Agreement  Yes  No**

USGS Technical Point of Contact  
Name: Krystal Brown  
Title: Supervisory Hydrologic Technician  
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Customer Technical Point of Contact  
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Telephone: 719-688-0799  
Fax:  
Email: arca.co.ks@gmail.com

USGS Billing Point of Contact  
Name: Meghan Patterson  
Title: Budget Analyst  
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U.S. Geological Survey  
United States  
Department of Interior

Arkansas River Compact Administration

SIGNATURE

SIGNATURES

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: (acting for) Matthew Ely  
Title: Director, CWSC/USGS

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: Stephanie Gonzales  
Title: Secretary Treasurer

PROGRAM ELEMENT 1

## OPERATION AND MAINTENANCE OF STREAM GAGES

Discharge measurements will be made at each of the sites (table 1) following USGS guidelines. Supplemental measurements will be made following flood events and/or during times when releases from John Martin Reservoir are ongoing. Supplemental measurements are considered additional to what the USGS would make to meet the requirements of USGS policies and procedures on streamgaging. Additionally, supplemental measurements will be made in coordination with requests from both the Colorado and Kansas Division of Water Resources. Measurements will be requested by email to the USGS, [kbrown@usgs.gov](mailto:kbrown@usgs.gov) and [ethredge@usgs.gov](mailto:ethredge@usgs.gov) or by calling Krystal Brown at 719-250-0096 or Dustin Ethredge at 719-568-2829. Upon the request of a supplemental discharge measurement, the USGS will make a measurement as soon as practical and within 72 hours. Measurements made at each site shall be implemented, with corresponding shifts to the rating, as soon as practical but no later than 24 hours following the measurements. The USGS will make arrangements for weekend or off-hour measurements if critical needs are identified by Kansas or Colorado. The associated costs for this proposed work are listed in the following table.

Table 1. Summary of Program between the U.S. Geological Survey, Colorado Water Science Center and Arkansas River Compact Administration, January 1, 2024 to December 31, 2024

Station number	Station name	Notes <sup>1</sup>	ARCA Funding CY2024	USGS Cooperative Matching Funds	USGS GWSIP Funds	Total Gage Cost	Surface-water Prioritization <sup>2</sup>
07119500	Apishapa R. near Fowler	--	\$13,208	--	\$7,392	\$20,600	HIGH
07124000	Arkansas R. at Las Animas <sup>3</sup>	A	\$4,306	--	\$2,089	\$6,395	HIGH
07128500	Purgatoire R. near Las Animas <sup>3</sup>	A	\$4,306	--	\$2,089	\$6,395	HIGH
07130500	Arkansas R. below John Martin Reservoir <sup>3</sup>	A	\$4,306	--	\$2,089	\$6,395	HIGH
07133000	Arkansas R. at Lamar <sup>3</sup>	A	\$4,306	--	\$2,089	\$6,395	HIGH
07134180	Arkansas R. near Granada <sup>3</sup>	A	\$5,833	--	\$2,089	\$7,922	HIGH
07134990	Wild Horse Creek	B	\$8,491	--	\$3,526	\$12,017	MEDIUM
07135500	Arkansas River at Holly	A	\$7,922	--	--	\$7,922	HIGH
Totals			\$52,678	--	\$21,363	\$74,041	

<sup>1</sup>Tasks included are explained as follows:

- Note A Funding is for about six supplemental measurements per year (April-November).  
Note B Funding for seasonal (April-October) O&M.

<sup>2</sup> Surface-water prioritization USGS match percentage: High=35.9%; Medium=29.3%

<sup>3</sup>Basic operation and maintenance is funded by the Groundwater and Streamflow Information Program (GWSIP) not shown included in the total.

## PROGRAM ELEMENT 2

### OPERATION OF WATER-QUALITY MONITOR

Numerous changes in water operations and/or land uses in the Arkansas River basin have been proposed or decreed. Many of the changes are likely to cause changes in streamflow and water quality throughout the basin. A network of gaging stations and water-quality monitors distributed from Lake County to the CO-KS Stateline can be used to assess changes in streamflow and salinity caused by changes in water operations and/or changes in land use. A network of 11 continuous water-quality monitors are operated by the USGS and jointly funded by USGS and multiple cooperating agencies in Southeastern Colorado. In addition, the USGS Kansas Water Science Center operates a continuous water-quality monitor at the Arkansas River at Coolidge which provides information of salinity at the CO-KS Stateline.

Additional data are needed to monitor salinity and help assess potential effects of changes in water and land-uses on salinity in the Arkansas River basin. Collection of specific conductance data, which is directly related to salinity, provides key information needed to evaluate potential temporal and spatial changes in salinity in the basin.

For 2024, the program includes the operation of a continuous-recording specific-conductance and water temperature monitor at the Arkansas River below John Martin Reservoir. Water-quality data will be stored in computer accessible files and are available on the world-wide web at <http://waterdata.usgs.gov>.

Station Number	Station Name	ARCA Funding CY2024	USGS GWSIP Funds	Total Cost
07130500	Arkansas R. below John Martin Reservoir	\$13,685	\$4,743	\$18,428
		\$13,685	\$4,743	\$18,428