



EDWARDS AQUIFER
AUTHORITY

JOINT FUNDING AGREEMENT NUMBER 16-813-AM
BETWEEN THE
EDWARDS AQUIFER AUTHORITY
AND
UNITED STATES DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
FOR DATA COLLECTION SERVICES

Agreement: _____

Customer No: TX043

Project No: 86539ME

Tax ID No. 74-6026194

This Joint Funding Agreement ("Agreement") for hydrologic information, data collection, and monitoring is made and entered into effective as of the 1st day of October, 2016, by and between the EDWARDS AQUIFER AUTHORITY ("EAA"), a political subdivision of the State of Texas, with its principal place of business located at 900 E. Quincy Street, San Antonio, Texas 78215, and the UNITED STATES GEOLOGICAL SURVEY ("Survey"), an agency of the United States Government, with an office located at 1505 Ferguson Lane, Austin, Texas 78754. The Survey's legal authority to enter into this agreement is 43 USC 36C; 43 USC 50, and 43 USC 50b. Each of these entities is, at times, referred to individually as "Party," and both are referred to collectively as "Parties."

For and in consideration of the mutual promises and benefits contained herein, the sufficiency of which is hereby acknowledged, the EAA and the Survey agree as follows:

ARTICLE I
DESCRIPTION OF WORK

Subject to the terms and conditions of this Agreement, the Survey hereby agrees to perform the work set forth in the Scope of Work dated October 1, 2016, a copy of which is attached hereto as Exhibit A, is incorporated herein for all purposes, and is a part of this Agreement. The Survey hereby accepts such engagement and agrees to devote its best talents, efforts, and abilities and furnish all labor, machinery, equipment, tools and transportation necessary in the furtherance of its engagement hereby. The Scope of Work specifically identifies the work to be performed by the Survey over the term of this Agreement and contains a schedule for performance of the work and a budget broken down by the two (2) specific tasks that make up the Scope of Work ("Tasks"). In exchange, the EAA agrees to fund a portion of the costs incurred by the Survey, as set forth in more detail in Article II below. The EAA may request changes or additions to the Scope of Work during the progress of the study, and upon mutual agreement, the EAA and the Survey will make the necessary written revisions to the Scope of Work and project schedule to reflect such requested changes as set forth in Articles III and VI below.

ARTICLE II
JOINT FUNDING

- A. For the term of this Agreement, the total costs for each of the Tasks as enumerated in Exhibit A are estimated to be as follows:

Task 1	\$435,105.
Task 2	<u>\$ 48,000.</u>
Total:	\$483,105.

The Survey agrees to be directly responsible for the payment of any invoices, costs or expenses incurred by it or any of its subcontractors in the performance of this Agreement.

- B. The EAA agrees to reimburse the Survey for a portion of the costs the Survey incurs in performing the two tasks enumerated in Exhibit A, in the following amounts for each Task:

<u>Task</u>	<u>EAA's Contribution</u>	<u>and USGS's Contribution*</u>	<u>Total</u>
Task 1	\$305,740.	\$129,365.	\$435,105.
Task 2	<u>\$ 28,250.</u>	<u>\$ 19,750.</u>	<u>\$ 48,000.</u>
Total	\$333,990.	\$149,115.	\$483,105.

** Includes \$92,700 for stream gauges funded by the National Stream Information Program.*

- C. As a prerequisite to receiving such reimbursement from the EAA, the Survey shall deliver separate, quarterly invoices at the end of each December, March, June, and September to the EAA for the costs and expenses incurred by the Survey in the previous quarter for each Task identified in Exhibit A. Payments of invoices are due within 60 days after the receipt of and approval by the EAA of each such invoice. If not paid by the due date, interest on unpaid amounts will be charged at the current Treasury rate for each 30-day period, or portion thereof, that the payment is delayed beyond the due date (31 USC 3717; Comptroller General File B-212222, August 23, 1983). The EAA's contribution for this Agreement will be \$333,990. The Survey's contribution for this Agreement will be \$149,115.

ARTICLE III
ALTERATIONS TO AGREEMENT AND SCOPE OF WORK

Either Party may request, in writing, changes or additions to the Scope of Work of this Agreement during the progress of the work. Upon such request, the Survey will propose the necessary revisions to the specific Tasks, associated schedule and costs. These revisions must be accepted by both Parties in writing. No amendments to this Agreement shall be considered valid unless the amendments have been approved by both Parties in writing.

ARTICLE IV COMPLETION OF WORK

The Survey shall have until September 30, 2017, to complete all work identified in the Scope of Work. All work shall be completed in compliance with the schedule of Tasks and budget as set forth in the Scope of Work.

ARTICLE V TERM OF JOINT FUNDING AGREEMENT

This Agreement shall be effective on the date indicated in the first paragraph above and shall continue in effect through September 30, 2017. This Agreement is subject to annual appropriations by the Survey and the EAA, but the Survey and the EAA represent that they will use their reasonable best efforts to obtain the proper appropriations to fund this Agreement as necessary for any future year or portion thereof during which this Agreement will be in effect. The Parties acknowledge that it may be desirable to continue the work identified in Tasks 1 and 2 after September 30, 2017. If so, the Parties may, by written agreement, renew this Agreement for an additional period and upon terms and for such consideration mutually agreed upon by the Parties at such time.

ARTICLE VI INSPECTION AND TERMINATION

During the progress of the work, all operations of the Survey pertaining to this project shall be open to the inspection of the EAA, and if the work is not being carried out in a mutually satisfactory manner, the EAA may terminate this Agreement upon the failure of the Survey to cure the unsatisfactory condition within 60 days after receipt of written notice to the Survey. Either Party may, with or without cause, terminate this Agreement by giving 30 days' written notice to the other. In the case of any termination of this Agreement, the Survey will be reimbursed by the EAA for the EAA's pro rata share of costs incurred up to the time of termination in accordance with Article II above. In the event of early termination, insofar as possible, all work in progress will be brought to a logical termination point and a final settlement of payments shall be made. Copies of all finished and unfinished documents, data, studies, surveys, drawings, maps, reports, photographs, and other materials prepared by the Survey will be delivered to the EAA and will become the property of the EAA. If applicable, the Survey shall be entitled to receive from the EAA, the EAA's pro rata share of reasonable compensation for any additional costs associated with terminating Tasks prior to completion.

ARTICLE VII DATA SHARING

- A. The Parties agree to freely share with each other all data generated from the performance of this Agreement. The Survey shall furnish copies of reports of the results of investigations performed by the Survey to the EAA for internal use and review upon completion of necessary review. Review of report manuscripts by the EAA and the Survey shall be completed expeditiously. Both Parties shall have the privilege of publishing the records, reports, and

report manuscripts provided that all publications by either Party shall contain a statement of the cooperative relations between the Parties. Original tracings of all drawings and illustrations, which are a part of these reports, shall be furnished to the EAA to permit their reproduction for publications and reports by the EAA.

- B. The original records from each individual Task conducted under the terms of this Agreement shall be retained by the Survey. Copies of all such data shall be furnished to the EAA.
- C. When requested by the EAA, the Survey shall make reasonable efforts to allow and accommodate EAA staff or representatives to accompany or observe Survey personnel in carrying out the work under this Agreement.

ARTICLE VIII SURVEY PERSONNEL AND CONTRACTORS

- A. The Survey will provide any personnel necessary for its performance of the Tasks hereunder. The Survey will be responsible for its employees in all respects, including, without limitation, its compliance with applicable laws and their safety, including without limitation, all Occupational Safety and Health Administration (OSHA) standards, requirements and regulations.
- B. The Survey will be responsible for its contractors in all respects, including without limitation, their compliance with applicable law and their safety, including without limitation, OSHA standards, requirements, and regulations.

ARTICLE IX EQUAL EMPLOYMENT OPPORTUNITY

In the performance of this Agreement, the Survey will comply with the provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 200d), and Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794). The Survey shall not discriminate on the grounds of race, color, national origin, sex, religion, marital status, age, creed, Vietnam-Era or Disabled Veterans status or the presence of any sensory, mental or physical handicap.

ARTICLE X NOTICES

- A. All notices and communications under this Agreement to be mailed or delivered to the EAA shall be sent to the EAA's principal place of business as follows, unless and until the Survey is otherwise notified:

EDWARDS AQUIFER AUTHORITY
900 E. QUINCY STREET
SAN ANTONIO, TX 78215
ATTN: ROLAND RUIZ, GENERAL MANAGER

- B. All notices and communications under this Agreement to be mailed or delivered to the Survey shall be sent to the address as follows, unless and until the EAA is otherwise notified:

UNITED STATES GEOLOGICAL SURVEY
TEXAS WATER SCIENCE CENTER
1505 FERGUSON LANE
AUSTIN, TX 78754-4733
ATTN: ROBERT L. JOSEPH, DIRECTOR

- C. Any notices and communications required to be given in writing by one Party to the other shall be considered as having been given to the addressee on the date the communication is posted by the sending Party.

ARTICLE XI RECORDS AND RIGHTS TO MATERIALS

- A. The Survey and the EAA will collaborate as provided herein and as may be otherwise required for proper performance hereunder. The Survey will, upon request by the EAA, at any time, provide the EAA with all financial information necessary to enable the EAA to determine the financial condition of work efforts covered by this Agreement.
- B. The Survey shall retain a record or copies of all data developed in the course of performing the work hereunder and said materials will be supplied to the EAA upon request after expiration or termination of this Agreement.

ARTICLE XII GENERAL

- A. Entire Agreement. This Agreement constitutes the entire agreement between the Parties regarding the data collection activities of the Survey and the EAA pertaining to the Scope of Work set forth in Exhibit A, and there are no representations, warranties, agreements or commitments between the Parties hereto except as set forth herein. No amendments to this Agreement shall be binding on the Parties hereto unless in writing and signed by both Parties.
- B. Non-Waiver. The waiver by any party hereto of a breach of any term or provision of this Agreement shall not be construed as a waiver of any subsequent breach.
- C. Governing Law. This Agreement is deemed to have been made and to be performable in the State of Texas, and all questions relating to the Agreement shall be governed by the applicable laws of the United States and the State of Texas.
- D. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

- E. Binding Effect. The provisions of this Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns; provided, however, that the Survey may not assign any of its rights nor delegate any of its duties hereunder without the EAA's prior written consent.
- F. Validity. The invalidity of any provision or provisions of this Agreement shall not affect any other provision of this Agreement, which shall remain in full force and effect, nor shall the invalidity of a portion of any provision of this Agreement affect the balance of such provision.
- G. Captions. The captions of the various sections of this Agreement are for descriptive purposes only and shall not alter or affect the terms and conditions of this Agreement.
- H. Independent Party. Nothing in this Agreement will be construed to constitute either Party as a partner, employee or agent of the other Party, nor will either Party have the authority to bind the other in any respect. Each Party will remain an independent Party responsible for its own actions except as otherwise specifically provided herein.

IN WITNESS WHEREOF, the parties have executed this Agreement in duplicate counterparts, both having equal force and effect, on the date first above written.

EDWARDS AQUIFER AUTHORITY

UNITED STATES
GEOLOGICAL SURVEY
TEXAS WATER SCIENCE CENTER

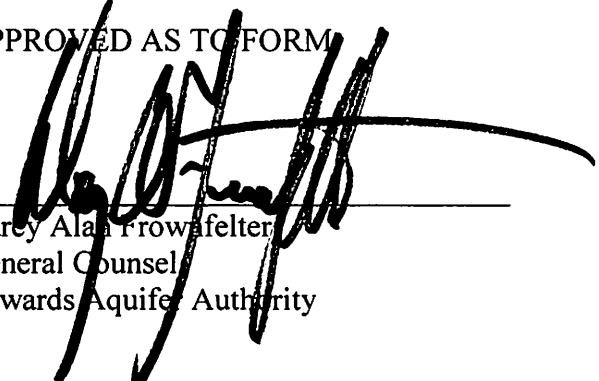
By: _____
Roland Ruiz
General Manager

By: _____
Robert L. Joseph
Director

ATTEST:

By: _____
Jennifer Wong-Esparza
Assistant to Board Secretary

APPROVED AS TO FORM



Darcy Alan Frowd
General Counsel
Edwards Aquifer Authority

EXHIBIT A
JOINT FUNDING AGREEMENT NUMBER 16-813-AM
BETWEEN THE
EDWARDS AQUIFER AUTHORITY
AND
UNITED STATES DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
FOR DATA COLLECTION SERVICES

Scope of Work
October 1, 2016

The Survey will be responsible for conducting and completing the following tasks:

TASK 1. Surface-Water and Springflow Gauging: Operate and maintain fourteen (14) full-range streamflow gauges, six (6) discharge below base stations, two (2) springflow separation stations, two (2) periodic measurement stations, and six (6) National Stream Information Program (NSIP) gauges in the Edwards Aquifer region. The NSIP gauges will be completely funded by the USGS. These gauges, which will provide discharge data from zero flow to flood stage on streamflow, are identified by their Survey name and number designation as follows:

Full-Range Streamflow Gauges

Hueco Springs near New Braunfels (08168000)
Cibolo Creek at Selma (08185000)
Sabinal River near Sabinal (08198000)
Leona River Springflow near Uvalde (08204005)
Dry Frio at FM 2690 near Knippa (08196300)
Leona River at CR 429A near Uvalde (08203450)
Salado Creek at Blanco Road San Antonio (08178593)
Middle Verde Creek at SH 173 near Bandera (08200977)
Helotes Creek at Helotes (08181400)
San Geronimo Creek near Helotes (08180586)
Comal River – old channel (oc) near Landa Lake, New Braunfels (08168913)
Comal River – new channel (nc) near Landa Lake, New Braunfels (08168932)
Blanco River near Fischer Store Road (08170950)
Medina River at English Crossing near Pipe Creek (08178990)

Discharge Below Base Stations

Sabinal River below Mill Creek near Vanderpool (08197936)
Cibolo Creek at Smithson Valley Road (08184050)
Blanco River at Halifax Ranch near Kyle (08171290)
Cibolo Creek near Specht Road (08183978)
Nueces River at CR 414 near Montell (08189998)
Nueces River near Barksdale (0818999010)

Springflow Separation Stations

Comal Springs at New Braunfels (08168710)

San Marcos Springs at San Marcos (08170000)

Periodic Measurement Stations

San Antonio Springs at San Antonio (08177818)

San Pedro Springs at San Antonio (08178090)

National Stream Information Program (NSIP) (Funded by USGS)

West Nueces River near Brackettville (08190500)

San Marcos River at San Marcos (08170500)

Nueces River below Uvalde (08192000)

Frio River at Concan (08195000)

Medina River at Bandera (08178880)

Comal River at New Braunfels (08169000)

The full-range streamflow and discharge below base gauges shall be operational and take continuous recordings from the effective date of this Agreement through the date this Agreement terminates or expires. Manual flow measurements will be made at the San Marcos River, and Comal River at New Braunfels every two weeks. Additional measurements will be made monthly at the Comal River at New Braunfels using an Acoustic Doppler Current Profiler (ADCP). The Comal River (oc), Comal River (nc) and the Hueco Springs gauges will be measured at least once per month. Manual flow measurements will also be made at the San Antonio Springs and San Pedro Springs periodic measurement stations at least once per month. Deliverables include daily data posted on the internet, quarterly reports for the quarters ending in December, March, June, and September by the following months, and data tables provided to the EAA by January 31, 2017, and data published in the USGS annual report by April 1, 2017.

TASK 2. Compute Recharge and Springflow Discharge: Collect and compile data to compute recharge to the Edwards Aquifer from the nine gauged basins in the Edwards Aquifer drainage area and the spring discharge from the Edwards Aquifer via the Comal, San Marcos, San Antonio, San Pedro, Leona, and Hueco Springs. This will be accomplished by:

- Compiling springflow data collected by the Survey pursuant to Task 1 and report all current and historical data on the National Water Information System (NWIS) website.
- Collecting and compiling rainfall data collected by the EAA, National Oceanic and Atmospheric Administration, and rainfall observers.
- Computing recharge to the Edwards Aquifer using methods outlined in “Method of Estimating Natural Recharge to the Edwards Aquifer in the San Antonio Area, Texas,” 1978, USGS WRI-7810, by Celso Puente.
- Collecting and compiling water-level data collected by the EAA.

The Survey will transmit a compilation of estimated monthly and annual aquifer recharge and springflow discharge by basin for the 2016 calendar year to the EAA by April 1, 2017. Complete computational data and spreadsheets will be provided with the compilation tables.

EXPENSES

TASK Number	EAA Contribution	SURVEY Contribution	Total
1. Surface-Water and Springflow Gauging	\$305,740.	\$129,365.	\$435,105.
2. Compute Recharge and Springflow Discharge	\$28,250.	\$19,750.	\$48,000.
Totals	\$333,990.	\$149,115.	\$483,105.

PAYMENT

The EAA will pay its contribution share to the Survey on a quarterly basis upon demonstrated successful completion of the tasks outlined in this Scope of Work, scheduled for completion September 30, 2017, in accordance with the billing and payment provisions in the Agreement. Alternate payment arrangements may be established upon mutual agreement between the EAA and the Survey, as set forth in writing.

<u>Task</u>	<u>EAA's Contribution</u>	<u>USGS's Contribution</u>	<u>Total</u>
Task 1	\$305,740.	\$129,365.	\$435,105.
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