

United States Department of the Interior

U.S. GEOLOGICAL SURVEY Texas Water Science Center 1505 Ferguson Lane Austin, TX 78754

July 22, 2020

Mr. Esteban Ramos Water Resources Manager City of Corpus Christi 1201 Leopard Street Corpus Christi, TX 78401

Dear Mr. Ramos:

Enclosed is one signed scan of our standard joint-funding agreement for the project(s) Oklahoma - Texas Water Science Center Water Resources Investigations, during the period October 1, 2020 through September 30, 2021 in the amount of \$166,350 from your agency. U.S. Geological Survey contributions for this agreement are \$28,950 for a combined total of \$195,300. Please sign and return one fully-executed original to <u>GS-W-OT_OTAdmin@usgs.gov</u>.

Federal law requires that we have a signed agreement before we start or continue work. Please return the signed agreement by **September 1, 2020**. If, for any reason, the agreement cannot be signed and returned by the date shown above, please contact Douglas Schnoebelen by phone number (210) 691-9262 or email dschnoebelen@usgs.gov to make alternative arrangements.

This is a fixed cost agreement to be billed quarterly via Down Payment Request (automated Form DI-1040). Please allow 30-days from the end of the billing period for issuance of the bill. If you experience any problems with your invoice(s), please contact Kandis Becher at phone number (682) 316-5051 or email at kkbecher@usgs.gov.

The results of all work performed under this agreement will be available for publication by the U.S. Geological Survey. We look forward to continuing this and future cooperative efforts in these mutually beneficial water resources studies.

Sincerely,

Timothy H. Raines

Timothy H. Raines Director

Enclosure 21SJJFATX029000 (1)

U.S. Department of the Interior U.S. Geological Survey Joint Funding Agreement FOR Water Resource Investigations

Customer #: 6000000486 Agreement #: 21SJJFATX029000 Project #: SJ009ME TIN #: 74-6000574

Fixed Cost Agreement YES[X]NO[]

THIS AGREEMENT is entered into as of the October 1, 2020, by the U.S. GEOLOGICAL SURVEY, Texas Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the City of Corpus Christi 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 (per attachment), 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) include In-Kind-Services in the amount of \$0.00

- (a) \$28,950 by the party of the first part during the period October 1, 2020 to September 30, 2021
- (b) \$166,350 by the party of the second part during the period October 1, 2020 to September 30, 2021
- (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0

Description of the USGS regional/national 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 (SOW) 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).

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

Customer #: 600000486 Agreement #: 21SJJFATX029000 Project #: SJ009ME TIN #: 74-6000574

Water Resource Investigations

9. Billing for this agreement will be rendered **<u>quarterly</u>**. Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

USGS Technical Point of Contact

Name: Douglas Schnoebelen
Branch Chief - South Texas
Address: 5563 DeZavala Road Suite 290
San Antonio, TX 78249
Telephone: (210) 691-9262
Fax: (210) 691-9270
Email: dschnoebelen@usgs.gov

USGS Billing Point of Contact

Name:	Kandis Becher Budget Analyst	Name:	M. P. Sudhakaran Water Resources Mgmt Ad
Address:	501 W. Felix Street Bldg 24	Address:	2726 Holly Road
Telephone:	Fort Worth, TX 76115 (682) 316-5051	Telephone:	Corpus Christi, TX 78415 (361) 826-3667
Fax: Email:	(682) 316-5022 kkbecher@usgs.gov	Fax: Email:	(361) 826-4420 mp@cctexas.com

U.S. Geological Survey United States **Department of Interior**

Customer Technical Point of Contact

Name: Esteban Ramos Water Resources Manager 1201 Leopard Street Address: Corpus Christi, TX 78401 (361) 826-3294 Telephone: Fax: Email: estebanr2@cctexas.gov

Customer Billing Point of Contact

Name:	M. P. Sudhakaran
	Water Resources Mgmt Advisor
Address:	2726 Holly Road
	Corpus Christi, TX 78415
Telephone:	(361) 826-3667
Fax:	(361) 826-4420
Email:	mp@cctexas.com

City of Corpus Christi

Signatures

<u>Signature</u>		
By RAINES Date: 2020.07.22 08:48:49 - 05'00' Date:	– Bv	
Name: Timothy H. Raines	Name:	
Title: Director	Title:	
	By	

Ву	Date:
Name:	
Title:	
Ву	Date:
Name:	
Title:	
Ву	Date:
Name:	

Title:

CITY OF CORPUS CHRISTI 21SJJFATX029000

Station Description Funds Funds Total 001: SURFACE WATER 08194000 Nueces River at Cotulia, TX Funds Funds 54,580.00 \$11,320.00 \$15,500 08194000 Nueces River near Tiden, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,500 08194500 Nueces River near Tiden, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,500 08205500 Frio River near Tiden, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08205900 Frio River near Deby, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206900 Frio River near Deby, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206900 Choke Canyon Reservoir nr Three Rivers, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08206900 Nueces River near Thate Rivers, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08210000 Nueces River near Thate Rivers, TX Reservoir Contents \$2,465.		21SJJFATX029000			
Number Description Funds Funds Funds 001: SURFACE WATER	Station			City of Corpus Christi	Total
001: SURFACE WATER 08194000 Nueces River at Cotulia, TX Full Range Streamflow Station Precipitation \$4,580.00 \$11,320.00 \$15,900 08194500 Nueces River near Tilden, TX Full Range Streamflow Station Precipitation \$4,580.00 \$11,320.00 \$15,900 08205500 Find River near Detby, TX Full Range Streamflow Station Precipitation \$4,580.00 \$11,320.00 \$15,900 08206500 Find River near Detby, TX Full Range Streamflow Station Precipitation \$4,580.00 \$11,320.00 \$15,900 08206900 Choke Canyon Reservoir nr Three Rivers, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08206900 Nueces River near Three Rivers, TX G below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08210000 Nueces River near Mathis, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River at Cotalinous Stages \$2,850.00 \$7,650.00 \$10,500<		Description			
Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08194500 Nueces River near Tilden, TX \$4,580.00 \$11,320.00 \$15,900 08205500 Frio River near Derby, TX \$4,580.00 \$11,320.00 \$15,900 08205600 Frio River near Derby, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206500 Frio River at Tilden, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206600 Frio River at Tilden, TX Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206900 Choke Canyon Reservoir nr Three Rivers, TX Reservoir Contents \$2,465.00 \$5,435.00 \$10,500 08206910 Deleow Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08210500 Lake Corpus Christi near Mathis, TX Reservoir Contents \$2,465.00 \$0,00 \$0 08210500 Lake Corpus Christi near Mathis, TX Reservoir Contents \$2,465.00 \$1,500.00 \$10,500 08211000 Nueces River and Mathis, TX S2,465.00 <	001: SURFA	•			
Full Range Streamflow Station Precipitation \$4,580.00 \$1,500.00 \$11,320.00 \$1,500.00 \$15,900 \$1,500.00 08205500 Frio River near Derby, TX Full Range Streamflow Station Precipitation \$4,580.00 \$11,320.00 \$1,500.00 \$15,900 \$1,500.00 08206600 Frio River at Tilden, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206900 Choke Canyon Reservoir rn Three Rivers, TX Reservoir Contentis \$2,465.00 \$5,435.00 \$10,500 08206910 Choke Canyon Reservoir Contentis \$2,465.00 \$5,435.00 \$10,500 08201000 Nueces River near Three Rivers, TX Q below Base and Continous Stages \$2,265.00 \$7,650.00 \$10,500 08210000 Nueces River near Mathis, TX Reservoir Contentis \$2,465.00 \$0,00 \$0,00 \$0,00 08211000 Nueces River above Bluntzer, TX Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 0821100 Nueces River at Catallen, TX Q below Base and Continous Stages \$2,850.00 \$10,500 \$10,500 08211500 Nueces River at Catallen, TX Q below Base and Continuous Stage \$0,00 \$10,500 \$13,500.00 \$13,500.00	08194000	Full Range Streamflow Station	\$4,580.00		
Full Range Streamflow Station Precipitation \$4,580.00 \$1,500.00 \$11,320.00 \$1,500.00 \$15,900 \$1,500.00 08206800 Frio River at Tilden, TX Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206900 Choke Canyon Reservoir nr Three Rivers, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08206910 Choke Canyon Res. outflow nr Three Rivers, TX Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08210000 Nueces River near Three Rivers, TX Q below Base and Continous Stages \$2,465.00 \$5,435.00 \$10,500 08210500 Lake Corpus Christi near Mathis, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX Reservoir Contents \$2,465.00 \$0.00 \$0 08211000 Nueces River above Bluntzer, TX Q below Base and Continous Stages \$2,850.00 \$10,500 \$10,500 08211500 Nueces River at Calalien, TX Q below Base and Continous Stage \$0.00 \$13,500.00 \$10,500 08211500 Nueces River at Calalien, TX Q below Base with AVM and Continuous Stage \$0.00 \$13,500.00 \$13,500.00 08211500 </td <td>08194500</td> <td>Full Range Streamflow Station</td> <td>\$4,580.00</td> <td></td> <td></td>	08194500	Full Range Streamflow Station	\$4,580.00		
Full Range Streamflow Station \$4,580.00 \$11,320.00 \$15,900 08206900 Choke Canyon Reservoir nr Three Rivers, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08206910 Choke Canyon Res. outflow nr Three Rivers, TX Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08210000 Nueces River near Three Rivers, TX Reservoir Contents \$0.00 \$10.500 \$10.500 \$10.500 \$15.900 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.50	08205500	Full Range Streamflow Station	\$4,580.00		
Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08206910 Choke Canyon Res. outflow nr Three Rivers, TX Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08210000 Nueces River near Three Rivers, TX GWSIP \$2,850.00 \$10.500 \$15.00 \$10.500 \$15.00 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 \$15.000 \$10.500 \$10.500 \$10.500 \$10.500 \$10.500 <t< td=""><td>08206600</td><td></td><td>\$4,580.00</td><td>\$11,320.00</td><td>\$15,900</td></t<>	08206600		\$4,580.00	\$11,320.00	\$15,900
Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08210000 Nueces River near Three Rivers, TX \$0.00 \$0.00 \$0 \$0 08210500 Lake Corpus Christi near Mathis, TX \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX \$2,465.00 \$0.00 \$0 08211200 Nueces River adove Bluntzer, TX \$2,850.00 \$7,650.00 \$10,500 08211200 Nueces River at Calallen, TX \$2,850.00 \$7,650.00 \$10,500 08211500 Nueces River at Calallen, TX \$0.00 \$1,500.00 \$1,500 08211500 Nueces River at Calallen, TX \$0.00 \$13,500.00 \$13,500 08211502 Nueces River nr Odem, TX \$28,950 \$90,950 \$119,900 08211502 Nueces Rv at Bluntzer, Tx \$28,950 \$90,950 \$13,500 08211200 Nueces Rv at Bluntzer, Tx \$28,950 \$90,950 \$143,000 08211502	08206900	-	\$2,465.00	\$5,435.00	\$7,900
GWSIP Full Range Streamflow Station \$0.00 \$0.00 \$0.00 08210500 Lake Corpus Christi near Mathis, TX Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX GWSIP \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX GWSIP \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0 08211200 Nueces River above Bluntzer, TX Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08211500 Nueces River at Calallen, TX GWSIP Full Range Streamflow Station \$0.00 \$0.00 \$10,500 08211500 Nueces River nr Odem, TX Q below Base with AVM and Continuous Stage \$0.00 \$13,500.00 \$13,500 08211502 Nueces Riv at Bluntzer, Tx Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm) \$0 \$43,000 \$43,000 08211502 Nueces Rv at Bluntzer, TX Temp. and Cond. Monitor (2-Parm) \$0 \$16,200 \$16,200 821150305 Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm) \$0 \$16,200 \$16,200	08206910	-	\$2,850.00	\$7,650.00	\$10,500
Reservoir Contents \$2,465.00 \$5,435.00 \$7,900 08211000 Nueces River near Mathis, TX \$0.00 \$0.00 \$0.00 \$0 08211200 Nueces River above Bluntzer, TX \$2,850.00 \$7,650.00 \$10,500 08211500 Nueces River above Bluntzer, TX \$2,850.00 \$7,650.00 \$10,500 08211500 Nueces River at Calallen, TX \$2,850.00 \$1,500.00 \$1,500 08211500 Nueces River at Calallen, TX \$0.00 \$0.00 \$0 08211500 Nueces River at Calallen, TX \$0.00 \$0.00 \$0 08211502 Nueces River nr Odem, TX \$0.00 \$13,500.00 \$13,500 08211502 Nueces River nr Odem, TX \$28,950 \$90,950 \$119,900 OUS:WATER ULLITY 08211200 Nueces Rv at Bluntzer, Tx \$28,950 \$90,950 \$43,000 08211502 Nueces Rv nr Odem, TX \$43,000 \$43,000 \$43,000 08211502 Nueces Rv nr Odem, TX \$16,200 \$16,200 \$16,200 821150305			\$0.00	\$0.00	\$0
GWSIPFull Range Streamflow Station\$0.00\$0.00\$0.00\$008211200Nueces River above Bluntzer, TX Q below Base and Continous Stages\$2,850.00\$7,650.00\$10,50008211500Nueces River at Calallen, TX GWSIPFull Range Streamflow Station\$0.00\$0.00\$1008211502Nueces River at Calallen, TX Q below Base with AVM and Continuous Stage\$0.00\$13,500.00\$13,50008211502Nueces River nr Odem, TX Q below Base with AVM and Continuous Stage\$0.00\$13,500.00\$13,500SURFACE WATER TOTAL:\$28,950\$90,950\$119,900O3:WATER UALITY Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm)\$0\$43,000\$43,00008211502Nueces Rv at Bluntzer, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200	08210500		\$2,465.00	\$5,435.00	\$7,900
Q below Base and Continous Stages \$2,850.00 \$7,650.00 \$10,500 08211500 Nueces River at Calallen, TX \$0.00 \$13,500.00 \$13,500.00 \$13,500.00 \$13,500.00 \$13,500.00 \$13,500.00 \$143,000 \$0.00 \$10,200 \$43,000 \$43,000 \$43,000 \$43,000 \$43,000 \$43,000 \$16,200 \$16,200 \$16,200 \$			\$0.00	\$0.00	\$0
GWSIPFull Range Streamflow Station\$0.00\$0.00\$0.00\$0.0008211502Nueces River nr Odem, TX Q below Base with AVM and Continuous Stage\$0.00\$13,500.00\$13,500.00SURFACE WATER TOTAL:\$28,950\$90,950\$119,900O03:WATER UALITY08211200Nueces Rv at Bluntzer, TX Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm)\$0\$43,000\$43,00008211502Nueces Rv nr Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200\$0\$16,200\$16,200\$16,200\$16,200	08211200	Q below Base and Continous Stages	\$2,850.00		
Q below Base with AVM and Continuous Stage \$0.00 \$13,500.00 \$13,500 SURFACE WATER TOTAL: \$28,950 \$90,950 \$119,900 O03:WATER QUALITY 08211200 Nueces Rv at Bluntzer, Tx Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm) \$0 \$43,000 \$43,000 08211502 Nueces Rv nr Odem, TX Temp. and Cond. Monitor (2-Parm) \$0 \$16,200 \$16,200 821150305 Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm) \$0 \$16,200 \$16,200			\$0.00	\$0.00	\$0
003:WATER QUALITY08211200Nueces Rv at Bluntzer, Tx Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm)\$0\$43,00008211502Nueces Rv nr Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200	08211502		\$0.00	\$13,500.00	\$13,500
08211200Nueces Rv at Bluntzer, Tx Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm)\$0\$43,00008211502Nueces Rv nr Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200		SURFACE WATER TOTAL:	\$28,950	\$90,950	\$119,900
Temp., Cond., pH, Diss. Oxy., Turbidity Monitor (5-Parm)\$0\$43,00008211502Nueces Rv nr Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200820\$16,200\$16,200\$16,200\$16,200\$16,200	003:WATER	QUALITY			
08211502Nueces Rv nr Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200					
Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200821150305Rincon Bayou Channel near Odem, TX Temp. and Cond. Monitor (2-Parm)\$0\$16,200\$16,200			\$0	\$43,000	\$43,000
Temp. and Cond. Monitor (2-Parm) \$0 \$16,200 \$16,200	08211502	-	\$0	\$16,200	\$16,200
WATER-QUALITY TOTAL: \$0 \$75,400 \$75,400	821150305	-	\$0	\$16,200	\$16,200
		WATER-QUALITY TOTAL:	\$0	\$75,400	\$75,400

PROJECT		USGS FUNDS	CITY OF CORPUS CHRISTI FUNDS	TOTAL FUNDS
SURFACE WATER: 00170 WATER QUALITY: 00370	_	\$28,950 \$0	\$90,950 \$75,400	\$119,900 \$75,400
	TOTAL	\$28,950	\$166,350	\$195,300