

Form 9-1366  
(May 2018)

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

Customer #: 6000000503  
Agreement #: 20MCJFA0405  
Project #:  
TIN #:  
Fixed Cost Agreement  Yes  No

FOR  
WATER RESOURCES INVESTIGATIONS

THIS AGREEMENT is entered into as of the 20 day of December of 2019, by the **U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR**, party of the first part, and the **PUERTO RICO ELECTRIC POWER AUTHORITY**, party of the second part.

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation **WATER RESOURCES INVESTIGATIONS (Annual Program) – Scope of Work (SOW) in Attachment(s)**, 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.

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(a) **\$169,533.00** by the party of the first part during the period  
January 1, 2020 to December 31, 2020

(b) **\$609,927.00** by the party of the second part during the period  
January 1, 2020 to December 31, 2020

**Total: \$779,460**

(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:

(e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between both 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. **If a station is found malfunctioning, it must be repaired or serviced by the USGS within 30 working days.**
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

U.S. Department of the Interior  
U.S. Geological Survey  
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TIN #:

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://www2.usgs.gov/fsp/>).
9. Billing for this agreement will be rendered **QUARTERLY**. 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.

U.S. Geological Survey (USGS)  
United States  
Department of the Interior

Commonwealth of Puerto Rico  
Puerto Rico Electric Power Authority (PREPA)

USGS Technical Point of Contact

Name: David Hernandez  
Hydrologic Data Chief – San Juan  
Office

Address: USGS Caribbean-Florida Water  
Science Center – San Juan Office  
GSA Center, 651 Federal Drive  
(Road 28), Suite 400-15  
Guaynabo, PR 00965-5703

PREPA Technical Point of Contact

Name: Eng. José Bermúdez  
Chief – Irrigation, Dams, and Reservoirs  
Division

Address: P.O. Box 364267  
San Juan, Puerto Rico 00936-4267

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Form 9-1366  
continued

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

Customer #: 600000503  
Agreement #: 20MCJFA0405  
Project #:  
TIN #:

**USGS Billing Point of Contact**

**PREPA Billing Point of Contact**

Name: Milagros Ortiz  
Administrative Operations Assistant

Name: Eng. José Bermúdez  
Chief – Irrigation, Dams, and Reservoirs  
Division

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Science Center – San Juan Office  
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**U.S. Geological Survey (USGS)  
United States  
Department of the Interior**

**Commonwealth of Puerto Rico  
Puerto Rico Electric Power Authority (PREPA)**

Name: David M. Sumner, Ph.D., PG  
Address: USGS Caribbean-Florida Water Science  
Center – Director's Office  
4446 Pet Lane, Suite 108  
Lutz, Florida 33559

Name: Eng. José F. Ortiz-Vázquez  
Address: P.O. Box 364267  
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Email: [jose.ortiz@prepa.com](mailto:jose.ortiz@prepa.com)

**Signatures**

**Signatures**

By  Date 10-10-2019

By  Date December 20, 2019

Name: David M. Sumner, Ph.D., PG  
S.S. 530-19-6958

Name: Eng. José F. Ortiz-Vázquez  
S.S. 660-43-3747

Title: Director, USGS Caribbean-Florida Water  
Science Center

Title: Chief Executive Officer

**DUNS#: 137783937**

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**Addendum I**  
**to the**  
**U.S. Department of the Interior**  
**U.S. Geological Survey**  
**JOINT FUNDING AGREEMENT 20MCJFA0405**

All payments made by PREPA for works or services performed under this Joint Funding Agreement will be charged to the following PREPA's budget accounts numbers:

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Payment for Services under this Agreement will not be made until this Agreement is properly registered in the Office of the Comptroller of the Government of Puerto Rico pursuant to Law Number 18 of October 30, 1975, as amended.

Both parties acknowledge and agree that the Services may be provided to another entity of the Executive Branch which enters into an interagency agreement with PREPA or by direct disposition of the Office of the Chief of Staff. Such work will be performed under the same terms and conditions in terms of hours of work and compensation set forth in this Agreement. For the purpose of this clause, the term "entity of the Executive Branch" includes all agencies of the Government of Puerto Rico, as well as public instrumentalities, public corporations.

Pursuant to Memorandum No. 2017-001, Circular Letter 141-17, of the Office of the Chief of Staff of the Governor of Puerto Rico (*Secretaría de la Gobernación*) and the Office of Management and Budget (*Oficina de Gerencia y Presupuesto – OGP*), the Chief of Staff shall have the authority to terminate this Agreement at any time. If so directed by the Chief of Staff, PREPA will terminate this Agreement by delivering to the USGS a notice of termination (in accordance with the terms cited in the Joint Funding Agreement) specifying the extent to which the performance of the work under this Agreement is terminated, and the effective date of termination. Upon the effective date of termination, the USGS shall immediately discontinue all services affected and deliver to PREPA all information, studies and other materials property of PREPA. In the event of a termination by notice, PREPA shall be liable only for payment of services rendered up to and including the effective date of termination.

Signatures

By:  Date 10-10-2019  
David M. Sumner, Ph.D., PG  
Director, USGS Caribbean-Florida Water  
Science Center

By:  Date December 20, 2019  
Eng. José F. Ortiz Vázquez  
PREPA's Chief Executive Officer

**COST ESTIMATES**  
(Cover Sheet)

**JAN. 1, 2020 TO DEC. 31, 2020 COOPERATIVE WATER RESOURCES INVESTIGATIONS PROGRAM  
PUERTO RICO ELECTRIC POWER AUTHORITY (PREPA) AND U.S. GEOLOGICAL SURVEY (USGS)**

PROJECTS	PREPA FUNDS	USGS FUNDS	TOTAL FUNDS
<b>SURFACE-WATER PROGRAM</b>			
ANNUAL OPERATION & MAINTENANCE OF LAKE STATIONS / COLLECTION & PROCESSING OF LAKE ELEVATION DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY	\$53,460	\$41,140	\$94,600
ANNUAL OPERATION & MAINTENANCE OF LAKE AND RAIN-GAGE STATIONS / COLLECTION & PROCESSING OF LAKE ELEVATION AND PRECIPITATION DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY	\$65,580	\$36,010	\$101,590
ANNUAL OPERATION & MAINTENANCE OF CONTINUOUS DISCHARGE & RAIN-GAGE STATIONS / COLLECTION & PROCESSING OF DISCHARGE, AND PRECIPITATION DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY	\$42,020	\$17,350	\$59,370
<b>IRRIGATION SYSTEMS</b> -- ANNUAL OPERATION & MAINTENANCE OF RIVER AND CANAL CONTINUOUS DISCHARGE STATIONS / COLLECTION & PROCESSING OF CONTINUOUS DISCHARGE DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY	\$438,190	\$71,150	\$509,340
<b>STAND ALONE RAIN GAGE NETWORK</b> - ANNUAL OPERATION & MAINTENANCE OF STAND ALONE RAIN GAGES	\$6,917	\$3,483	\$10,400
<b>GATE-OPENING SENSORS</b> - ANNUAL OPERATION AND MAINTENANCE	\$3,760	\$400	\$4,160
<b>TOTALS</b>	<b>\$609,927</b>	<b>\$169,533</b>	<b>\$779,460</b>

Attachment to: JFA 20MCJFA0405

**CALENDAR YEAR 2020 COOPERATIVE WATER RESOURCES INVESTIGATIONS PROGRAM  
PUERTO RICO ELECTRIC POWER AUTHORITY (PREPA) AND U.S. GEOLOGICAL SURVEY (USGS)  
(Detailed Cost Estimates for Station Operations)**

PROJECT	PREPA FUNDS	USGS FUNDS	TOTAL FUNDS
<b>SURFACE-WATER PROGRAM</b>			
<b>ANNUAL OPERATION &amp; MAINTENANCE OF LAKE STATIONS / COLLECTION &amp; PROCESSING OF LAKE ELEVATION DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY</b>	<b>53,460</b>	<b>41,140</b>	<b>94,600</b>
1 50010800 Lago Guajataca at Damsite near Quebradillas	5,700	4,700	10,400
2 50020100 Lago Garzas near Adjuntas	5,700	4,700	10,400
3 50020550 Lago Adjuntas at Damsite	5,990	4,410	10,400
4 50026140 Lago Caonillas at Damsite near Utuado	5,700	4,700	10,400
5 50075550 Lago Icacos at Damsite (Office Display)	7,570	3,830	11,400
6 50111300 Lago Guayabal at Damsite near Juana Díaz	5,700	4,700	10,400
7 50125780 Lago Lucchetti at Damsite near Yauco	5,700	4,700	10,400
8 50128900 Lago Loco at Damsite near Yauco	5,700	4,700	10,400
9 50141500 Lago Guayo at Damsite near Castañer	5,700	4,700	10,400
<b>ANNUAL OPERATION &amp; MAINTENANCE OF LAKE AND RAIN GAGE STATIONS / COLLECTION &amp; PROCESSING OF LAKE ELEVATION AND PRECIPITATION DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY</b>	<b>65,580</b>	<b>36,010</b>	<b>101,590</b>
1 50023110 Lago Vivi near Utuado	7,690	5,410	13,100
2 50032290 Lago El Guineo at Damsite near Villalba	7,690	5,410	13,100
3 50032590 Lago de Matrullas at Damsite near Orocovis	8,490	4,610	13,100
4 50039995 Lago Carite Spillway (Lake Elev, High flow discharge, Rain Gage)	13,330	7,760	21,090
5 50093045 Lago Patillas at Damsite near Patillas (Office Display)	11,000	4,000	15,000
6 50095800 Lago Melanía near Guayama	8,690	4,410	13,100
7 50106850 Lago Coamo near Los Llanos	8,690	4,410	13,100
<b>ANNUAL OPERATION &amp; MAINTENANCE OF CONTINUOUS DISCHARGE &amp; RAIN-GAGE STATIONS / COLLECTION &amp; PROCESSING OF DISCHARGE AND PRECIPITATION DATA AT NEAR REAL-TIME USING SATELLITE TELEMETRY</b>	<b>42,020</b>	<b>17,350</b>	<b>59,370</b>
1 50126150 Río Yauco above Diversion Monserrate near Yauco (Rain Gage)	14,840	5,850	20,690
2 50011200 Río Guajataca below Lago Guajataca	11,990	6,000	17,990
3 50093120 Río Grande de Patillas below Lago Patillas	13,490	4,500	17,990
4 50010500 Río Guajataca at Lares ( Add on Rain Gage Only)	1,700	1,000	2,700



PROJECT	PREPA FUNDS	USGS FUNDS	TOTAL FUNDS
<b>IRRIGATION SYSTEM PROGRAM</b>			
<b>ANNUAL OPERATION &amp; MAINTENANCE OF RIVER AND CANAL CONTINUOUS DISCHARGE STATIONS / COLLECTION AND PROCESSING OF CONTINUOUS DISCHARGE AT NEAR REAL-TIME USING SATELLITE TELEMETRY</b>	<b>438,190</b>	<b>71,150</b>	<b>509,340</b>
<b>Guajataca Irrigation System</b>	<b>86,850</b>	<b>13,500</b>	<b>100,350</b>
1 50011000 Canal Diversion Lago Guajataca	15,740	2,250	17,990
2 50011085 Canal de Moca above Lago Regulador (E-13), Isabela	15,740	2,250	17,990
3 50011128 Canal Moca above Aguadilla Plant, Aguadilla	15,740	2,250	17,990
4 50011180 Canal de Aguadilla above Lago Ramey, Aguadilla (Gage Height Only)	8,150	2,250	10,400
5 182743067004200 Canal Principal Diversion Blw Forebay, Isabela, PR	15,740	2,250	17,990
6 182830067035900 Canal Principal Diversion Abv. Lago Guerrero, Isabela, PR	15,740	2,250	17,990
<b>Juana Díaz Irrigation System</b>	<b>68,660</b>	<b>13,700</b>	<b>82,360</b>
1 50110650 Río Jacaguas above Lago Guayabal	13,290	4,700	17,990
2 50111320 Canal de Juana Díaz at Piedra Aguzada near Juana Díaz	15,740	2,250	17,990
3 50111330 Canal de Juana Díaz at Paso Seco near Santa Isabel	15,740	2,250	17,990
4 50111340 Canal de Juana Díaz at Bo. Peñuelas near Salinas	15,740	2,250	17,990
5 50111311 Canal East and West Forebay below Lago Guayabal	8,150	2,250	10,400
<b>Patillas Irrigation System</b>	<b>156,760</b>	<b>25,950</b>	<b>182,710</b>
1 50093000 Río Marín near Patillas	13,290	4,700	17,990
2 50093053 Canal de Patillas at Forebay	15,740	2,250	17,990
3 50093075 Canal de Patillas above Guayama filtration plant	15,740	2,250	17,990
4 50093078 Canal de Patillas below Guayama filtration plant	15,740	2,250	17,990
5 50093083 Canal de Patillas above AES intake at Guayama	15,740	2,250	17,990
6 50093084 AES Intake Canal at Canal de Patillas, Guayama (Gage Height only)	9,400	1,000	10,400
7 50093090 Canal de Patillas above El Legado intake	15,740	2,250	17,990
8 50093110 Canal de Patillas at Intake 113, Salinas	15,740	2,250	17,990
9 50093115 Canal de Patillas at Intake 123, Salinas	15,740	2,250	17,990
10 50094545 Canal Guamani at Carite Forebay (Gage Height only)	8,150	2,250	10,400
11 50095000 Canal de Guamani Oeste at Hwy 15, Guayama	15,740	2,250	17,990
<b>Valle de Lajas Irrigation System</b>	<b>125,920</b>	<b>18,000</b>	<b>143,920</b>
1 50128905 Canal de Riego de Lajas below Lago Loco Dam, Yauco	15,740	2,250	17,990
2 50128907 Lateral M5L, Canal de Riego de Lajas, Sabana Grande	15,740	2,250	17,990
3 50128920 Canal de Riego de Lajas above Majinas filtration plant	15,740	2,250	17,990
4 50128925 Canal de Riego de Lajas below Majinas filtration plant	15,740	2,250	17,990
5 50128933 Canal de Riego de Lajas above Lajas filtration plant, Lajas	15,740	2,250	17,990
6 50128940 Canal de Riego de Lajas below Lajas filtration plant, Lajas	15,740	2,250	17,990
7 50128945 Canal de Riego de Lajas at Barrio Palmarejo near Lajas	15,740	2,250	17,990
8 50128948 Canal de Riego de Lajas at Barrio Betances	15,740	2,250	17,990



PROJECT	PREPA FUNDS	USGS FUNDS	TOTAL FUNDS
<b>STAND ALONE RAIN GAGE NETWORK</b>	<b>6,917</b>	<b>3,483</b>	<b>10,400</b>
1 182134066544600 Bo. Guajataca Raingage above Lago Guajataca at PR-455	3,200	2,000	5,200
2 50999970 Barrio Apeadero Raingage near Villalba	3,717	1,483	5,200
<b>ANNUAL OPERATION AND MAINTENANCE OF GATE-OPENING SENSORS</b>			
1 50093045 Lago Patillas at Damsite nr Patillas (3-gate opening sensors)	<b>3,760</b>	<b>400</b>	<b>4,160</b>

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**GOBIERNO DE PUERTO RICO**  
Autoridad de Energía Eléctrica de Puerto Rico

U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY  
JOINT FUNDING AGREEMENT 20MCJFA0405  
EXPENSES DISTRIBUTION

DISTRICT	ACCOUNT	AMOUNT
Riego Guayama	20-5003-60215-550-213	\$207,030.00
Riego Juana Díaz	20-6001-60010-550-214	\$ 83,050.00
Riego Isabela	30-5006-50061-550-215	\$109,440.00
Riego Yauco	40-6003-60460-550-217	\$131,620.00
Caonillas / Dos Bocas	01-4022-64200-555-306	\$ 19,380.00
Garzas	01-4022-64200-555-312	\$ 31,940.00
Toro Negro	01-4022-64300-555-310	\$ 27,467.00
	<b>TOTAL</b>	<b>\$609,927.00</b>



**Apartado 364267 San Juan, Puerto Rico 00936-4267**

"Somos un patrono con igualdad de oportunidades en el empleo y no discriminamos por razón de raza, color, sexo, edad, origen social o nacional, condición social afiliación política, ideas políticas o religiosas; por ser víctima o ser percibida(o) como víctima de violencia doméstica, agresión sexual o acoso, sin importar estado civil, orientación sexual, identidad de género o estatus migratorio; por impedimento físico, mental o ambos por condición de veterano(a) o por información genética."