

United States Department of the Interior

U.S. GEOLOGICAL SURVEY Ohio-Kentucky-Indiana Water Science Center

OHIO 6460 Busch Boulevard, Suite 100 Columbus, Ohio 43229-1737 KENTUCKY 9818 Bluegrass Parkway Louisville, Kentucky 40299-1906 INDIANA 5957 Lakeside Boulevard Indianapolis, Indiana 46278-1996

May 26, 2022

Mr. Matthew Steele Water Supply and Treatment Coordinator City of Columbus, OH 910 Dublin Road Columbus, Ohio 43215

Dear Mr. Steele:

Enclosed is a signed original of our standard joint-funding agreement 23NFJFA00000201 for the for the investigation of water resources in the Scioto River and tributaries in the vicinity of Columbus, Pickaway County well field, Hellbranch Run water discharge and suspended sediments, and concentration of selected water quality parameters, during the period October 1, 2022 through September 30, 2023 in the amount of \$473,044 from your agency. U.S. Geological Survey contributions for this agreement are \$71,795 for a combined total of \$544,839. Please sign and return one fully-executed original to Damon Williams at the Indianapolis address above or email to dlwilliams@usgs.gov.

Federal law requires that we have a signed agreement before we start or continue work. Please return the signed agreement by **October 1, 2022**. If, for any reason, the agreement cannot be signed and returned by the date shown above, please contact David Straub by phone number (614) 430-7744 or email destraub@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 Damon Williams at phone number (317) 600-2774 or email at dlwilliams@usgs.gov.

The results of all work performed under this agreement will be available for publication by the U.S. Geological Survey. The U.S. Geological Survey appreciates the opportunity to work with the City of Columbus and looks forward to continuing the relationship in future fiscal years.

Sincerely,

David Straub Deputy Director

Enclosure 23NFJFA00000201 (1)

Form 9-1366 (May 2018)

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

Water Resource Investigations

Customer #: 6000000249 Agreement #: 23NFJFA00000201

Project #: NF00GWQ TIN #: 31-6400223

Fixed Cost Agreement YES[X]NO[]

THIS AGREEMENT is entered into as of the October 1, 2022, by the U.S. GEOLOGICAL SURVEY, OKI Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the City of Columbus, OH 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) \$71,795 by the party of the first part during the period October 1, 2022 to September 30, 2023
 - (b) \$473,044 by the party of the second part during the period October 1, 2022 to September 30, 2023
 - (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).

Form 9-1366 (May 2018)

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

Customer #: 6000000249
Agreement #: 23NFJFA00000201
Project #: NF00GWQ
TIN #: 31-6400223

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		Customer Technical Point of Contact
Name: Address: Telephone: Fax:	David Straub Supervisory Hydrologist (Engineer) 6460 Busch Blvd Suite 100 Columbus OH 43229-1753 US Columbus, OH 43229-1753 (614) 430-7744 (614) 430-7777	Name: Address: Telephone: Fax: Email:	Matthew Steele Water Supply and Treatment Coordinator 910 Dublin Road Columbus, Ohio 43215 (614) 645-7020 mksteele@columbus.gov
Email:	destraub@usgs.gov		· ·
	USGS Billing Point of Contact		Customer Billing Point of Contact
Name: Address: Telephone: Fax: Email:	Damon Williams Budget Analyst 5957 Lakeside Blvd. Indianapolis, IN 46278 (317) 600-2774 (317) 290-3313 dlwilliams@usgs.gov	Name: Address: Telephone: Fax: Email:	Matthew Steele Water Supply and Treatment Coordinator 910 Dublin Road Columbus, Ohio 43215 (614) 645-7020 mksteele@columbus.gov
	U.S. Geological Survey United States Department of Interior		City of Columbus, OH
	<u>Signature</u>		<u>Signatures</u>
By Name: David Title: Deputy	d Straub	By Name: Title:	Date:
		By Name: Title:	Date:
		By Name: Title:	Date:

City of Columbus, OH

Attachment for 23NFJFA00000201 10/1/2022 to 9/30/2023

SURFACE WATER

DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST
Scioto River near Prospect OH Full Range Streamflow Station	QCONT	0.5	l SW Total:	\$3,820	\$6,940		\$10,760
Mill Creek near Bellepoint OH Full Range Streamflow Station	QCONT	0.44	1 SW Total:	\$3,490	\$6,710		\$10,200
OShaughnessy Reservoir near Dublin OH Elevation, Continuous	ELEVCONT	0.88	1 SW Total:	\$2,180	\$3,500		\$5,680
Scioto River below OShaughnessy Dam nr Dublin O. Full Range Streamflow Station	H QCONT	0.6	1 SW Total:	\$3,820	\$8,940		\$12,760
Griggs Reservoir at Columbus OH Elevation, Continuous	ELEVCONT	0.5	1 SW Total:	\$2,180	\$3,500		\$5,680
Scioto River at 5th Ave at Columbus OH Full Range Streamflow Station	QCONT	1	1 SW Total:		\$14,500		\$14,500
Olentangy River near Delaware OH Full Range Streamflow Station	QCONT	0.34	1 SW Total:	\$2,720	\$4,780		\$7,500
Olentangy River near Worthington OH Full Range Streamflow Station	QCONT	0.57	1 SW Total:	\$3,490	\$8,410		\$11,900
Olentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station	QCONT	1	1 SW Total:		\$14,500		\$14,500
Big Walnut Creek at Sunbury OH Full Range Streamflow Station	QCONT	1	1 SW Total:	\$4,020	\$10,480		\$14,500
Hoover Reservoir at Central College OH Elevation, Continuous	ELEVCONT	0.91	1 SW Total:	\$2,180	\$3,500		\$5,680
Big Walnut Creek at Central College OH Full Range Streamflow Station	QCONT	1	1 SW Total:	\$4,020	\$10,480		\$14,500
Alum Creek near Kilbourne OH Full Range Streamflow Station	QCONT	1	1 SW Total:	\$3,050	\$11,450		\$14,500
Big Walnut Creek at Rees OH Full Range Streamflow Station	QCONT	1	1 SW Total:	\$4,020	\$10,480		\$14,500
Scioto River near Commercial Point OH Full Range Streamflow Station	QCONT	1	1 SW Total:	\$4,180	\$10,320		\$14,500
Hellbranch Run near Harrisburg OH Full Range Streamflow Station	QCONT	1	1 SW Total:	\$2,515	\$11,985		\$14,500
Full Range Streamflow Station	QCONT	1	1		\$14,500		
	Scioto River near Prospect OH Full Range Streamflow Station Mill Creek near Bellepoint OH Full Range Streamflow Station OShaughnessy Reservoir near Dublin OH Elevation, Continuous Scioto River below OShaughnessy Dam nr Dublin OF Full Range Streamflow Station Griggs Reservoir at Columbus OH Elevation, Continuous Scioto River at 5th Ave at Columbus OH Full Range Streamflow Station Olentangy River near Delaware OH Full Range Streamflow Station Olentangy River near Worthington OH Full Range Streamflow Station Olentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station Big Walnut Creek at Sunbury OH Full Range Streamflow Station Hoover Reservoir at Central College OH Elevation, Continuous Big Walnut Creek at Central College OH Full Range Streamflow Station Alum Creek near Kilbourne OH Full Range Streamflow Station Big Walnut Creek at Rees OH Full Range Streamflow Station Scioto River near Commercial Point OH Full Range Streamflow Station Hellbranch Run near Harrisburg OH Full Range Streamflow Station	Scioto River near Prospect OH Full Range Streamflow Station Mill Creek near Bellepoint OH Full Range Streamflow Station OShaughnessy Reservoir near Dublin OH Elevation, Continuous ELEVCONT Scioto River below OShaughnessy Dam nr Dublin OH Full Range Streamflow Station Griggs Reservoir at Columbus OH Elevation, Continuous ELEVCONT Scioto River at 5th Ave at Columbus OH Full Range Streamflow Station Olentangy River near Delaware OH Full Range Streamflow Station Olentangy River near Worthington OH Full Range Streamflow Station Olentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station Olentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station Olentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station OCONT Hoover Reservoir at Central College OH Elevation, Continuous ELEVCONT Big Walnut Creek at Central College OH Elevation, Continuous ELEVCONT Big Walnut Creek at Central College OH Full Range Streamflow Station QCONT Alum Creek near Kilbourne OH Full Range Streamflow Station QCONT Big Walnut Creek at Rees OH Full Range Streamflow Station QCONT Alum Creek near Kilbourne OH Full Range Streamflow Station QCONT Big Walnut Creek at Rees OH Full Range Streamflow Station QCONT Hellbranch Run rear Commercial Point OH Full Range Streamflow Station QCONT	Scioto River near Prospect OH Full Range Streamflow Station Mill Creek near Bellepoint OH Full Range Streamflow Station OCONT OShaughnessy Reservoir near Dublin OH Elevation, Continuous Scioto River below OShaughnessy Dam nr Dublin OH Full Range Streamflow Station OCONT O.6 Griggs Reservoir at Columbus OH Elevation, Continuous ELEVCONT O.6 Griggs Reservoir at Columbus OH Elevation, Continuous ELEVCONT O.5 Scioto River at 5th Ave at Columbus OH Full Range Streamflow Station OCONT OLentangy River near Delaware OH Full Range Streamflow Station OLentangy River near Worthington OH Full Range Streamflow Station OLentangy River near Worthington OH Full Range Streamflow Station OLentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station OLentangy River at J H Herrick Dr at Columbus OH Full Range Streamflow Station OLENTANGE Streamflow Station OLENTANGE Streamflow Station OLENTANGE Streamflow Station OLENTANGE Streamflow Station DELEVCONT 1 Hoover Reservoir at Central College OH Elevation, Continuous ELEVCONT OLENTANGE Streamflow Station OCONT 1 Hoover Reservoir at Central College OH Elevation, Continuous ELEVCONT OLENTANGE Streamflow Station OCONT 1 Hoover Reservoir at Central College OH Full Range Streamflow Station OCONT 1 Alum Creek near Kilbourne OH Full Range Streamflow Station OCONT 1 Big Walnut Creek at Rees OH Full Range Streamflow Station OCONT 1 Scioto River near Commercial Point OH Full Range Streamflow Station OCONT 1 Hellbranch Run near Harrisburg OH Full Range Streamflow Station OCONT 1 Hellbranch Run near Harrisburg OH Full Range Streamflow Station OCONT 1	Scioto River near Prospect OH Full Range Streamflow Station	Scioto River near Prospect OH Full Range Streamflow Station	Scitor River near Prospect OH Full Range Streamflow Station	Scioto River near Prospect OH Full Range Streamflow Station

SW Grand Total: \$45,685 \$154,975

\$200,660

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST
03219500	Scioto River near Prospect OH Water-Quality Monitor, Continuous (Two Bridges)	WQCONT	1	1 WQ Total:		\$21,000		\$21,000
03220500	OShaughnessy Reservoir near Dublin OH miscellaneous QW	QW-MISC	1	1 WQ Total:	\$167	\$500		\$667
03220510	Scioto R. at OShaughnessy Dam near Dublin OH Water-Quality Monitor, Continuous (Two Bridges)	WQCONT	1	1 WQ Total:		\$21,000		\$21,000
03221500	Griggs Reservoir at Columbus OH miscellaneous QW	QW-MISC	1	l WQ Total:	\$167	\$500		\$667
03228039	Scioto River above Shadeville OH Water-Quality Monitor, Continuous (Two Bridges)	WQCONT	1	l WQ Total:		\$22,000		\$22,000
03228300	Big Walnut Creek at Sunbury OH Water-Quality Monitor, Continuous (Two Bridges)	WQCONT	1	1 WQ Total:		\$21,000		\$21,000
03228400	Hoover Reservoir at Central College OH miscellaneous QW	QW-MISC	1	1 WQ Total:	\$166	\$500		\$666
03230450	Hellbranch Run near Harrisburg OH Periodic Sample Collection and Processing	WQSPER	1	1 WQ Total:		\$25,000		\$25,000
032304XX	Periodic Sample Collection and Processing Water-Quality Monitor, Continuous (Two Bridges)	WQSPER WQCONT	1 1	1 1 WQ Total:		\$25,000 \$55,500		\$80,500
394534082595200	PK-236 ESW-6C Periodic Sample Collection and Processing Water-Quality Monitor, Continuous (Two Bridges)	WQSPER WQCONT	1 1	1 1 WQ Total:	\$3,000 \$7,000	\$3,000 \$7,000		\$20,000
				WQ Grand Total:	\$10,500	\$202,000		\$212,500

GROUND WATER

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST
394534082595200	PK-236 ESW-6C Groundwater level, Continuous	GWCONT	1	1 GW Total:		\$2,000		\$2,000
394903083015400	FR-366 Groundwater level, Continuous	GWCONT	1	1 GW Total:		\$2,000		\$2,000
395008082593100	FR-126 M13 Groundwater level, Continuous	GWCONT	1	1 GW Total:		\$2,000		\$2,000
395039082585800	FR-115 TH-67 Groundwater level, Continuous	GWCONT	1	1 GW Total:		\$2,000		\$2,000
395055082592400	FR-271 PARSONS AVE WTP DEEP WELL Groundwater level, Continuous	AT COLUMBUS OH GWCONT	1	1 GW Total:		\$2,000		\$2,000
395055082592401	FR-272 PARSONS AVE WTP SHALLOW Groundwater level, Continuous	WELL AT COLUMBUS O	H 1	1 GW Total:		\$2,000		\$2,000
,				GW Grand Total:		\$12,000		\$12,000

SEDIMENT

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST
03230450	Hellbranch Run near Harrisburg OH Daily Suspended Sedment	DSuspSed	1	1 SED Total:		\$36,400		\$36,400
032304XX	Daily Suspended Sedment	DSuspSed	1	l SED Total:		\$36,400		\$36,400
				SED Grand Total:		\$72,800		\$72,800

CLIMATE

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST
401410082510500	Rain gage at Sunbury OH Precipitation, Continuous	PRECIPCONT	1	1 CLIM Total:		\$750		\$750
				CLIM Grand Total:		\$750		\$750

SUMMARY FOR 23NFJFA00000201										
City of Columbus, OH										
ТҮРЕ	_	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST					
SURFACE WATER (SW)	_	\$45,685	\$154,975		\$200,660					
(WQ)		\$10,500	\$202,000		\$212,500					
GROUND WATER (GW)			\$12,000		\$12,000					
SEDIMENT (SED)			\$72,800		\$72,800					
CLIMATE (CLIM)			\$750		\$750					
	GRAND TOTAL	\$71,795	\$473,044		\$544,839					