

## MEMORANDUM

TO: Programs, Projects and Operations Subcommittee

FROM: Amanda Grint, Water Resources Engineer

SUBJECT: Renewal of USGS Maintenance Agreement for Papio Floodwarning System Gages

DATE: October 4, 2021

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In 1993, the District worked with the US Army Corps of Engineers (USACE) to install a flood warning system for the Papillion Creek Watershed. The system was upgraded in 2012 and consists of 22 gage stations. Four stations report rain data and the remaining 18 stations report rain and stream stage data. The attached map shows the location of the gages. The data is reported real time and is available to the public through the National Weather Service (NWS) and USGS web sites. The address of the NWS website is <http://water.weather.gov/ahps2/index.php?wfo=oax>. An agreement is in place with Douglas County, Sarpy County, Washington County and the City of Omaha to share the cost of the system.

The attached joint funding agreement for consideration is an annual renewal of the maintenance contract with the USGS for 2022 in the total amount of \$164,140. The USGS will cost share \$16,875, through their Cooperative Matching Funds and \$19,670 through the Groundwater and Streamflow Information Program. The District cost share totals \$127,595, for operation and maintenance of the gages. Table 1 of the agreement provides a cost breakdown and includes the gage type and data collected for each site. The District cost share for operation and maintenance in 2021 was \$126,095.

The quality data provided by USGS is valuable to NWS to improve forecasting and issuance of flood warnings in the Papio watershed and to the District for operation and monitoring of the Papio flood control systems. Each year the USGS works to record high flows and provide the District and its partners improved data for rating curves (flow vs. stage) at each site.

**Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the proposed Joint Funding Agreement with the USGS in the amount of \$127,595 in District funds for the operation of the District's floodwarning system for 2022, subject to changes deemed necessary by the General Manager.**



United States Department of the Interior  
U.S. GEOLOGICAL SURVEY  
Nebraska Water Science Center  
5231 South 19<sup>th</sup> Street  
Lincoln, NE 68512-1271

September 16, 2021

John Winkler  
Papio-Missouri River Natural Resources District  
8901 South 154 Street  
Omaha, NE 68138

Dear Mr. Winkler:

Enclosed are two copies of Joint Funding Agreement No. 22NRJFA00040 for the operation of one streamgage at Omaha Creek at Homer and 21 gages (9 stage/discharge/precipitation, 8 stage/precipitation, and 4 rain-only) in the Papillion Creek watershed, as listed in the enclosed summary of proposed funding (Table 1). The total amount of the agreement is \$144,470; or \$16,875 for U.S. Geological Survey (USGS) and \$127,595 for the Papio-Missouri River Natural Resources District (PMR NRD) for operation and maintenance of gages. Funds in the amount of \$19,670 from the Groundwater and Streamflow Information Program (GWSIP), which are not included in the above amount, have been used as a supplement to or in place of Cooperative Matching Funds. Please sign the agreement and return by email to [aflynn@usgs.gov](mailto:aflynn@usgs.gov). Work cannot be continued until we receive the signed agreement.

Work performed with funds from this agreement will be conducted on a fixed price basis under the authority of statute 43 USC 36C. Billings will be rendered quarterly. The results of all work under this agreement will be available for publication by the U.S. Geological Survey.

For more information or any questions concerning this agreement, please contact Jason Lambrecht at 402-328-4124.

Sincerely,

Steven M. Peterson, Director  
USGS Nebraska Water Science Center

3 Enclosures

DUNS No. 949286512

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

Customer #: 6000000134  
Agreement #: 22NRJFA00040  
Project #: NR00GS1  
TIN #: 47-0542469

Fixed Cost Agreement YES[ X ] NO[ ]

THIS AGREEMENT is entered into as of October 1, 2021, by the U.S. GEOLOGICAL SURVEY, Nebraska Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT 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 **the operation of one streamgage at Omaha Creek at Homer and 21 gages (9 stage/discharge/precipitation, 8 stage/precipitation , and 4 rain-only) in the Papillion Creek watershed, as listed in the enclosed summary of proposed funding**, 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) \$16,875 by the party of the first part during the period  
October 1, 2021 to September 30, 2022
- (b) \$127,595 by the party of the second part during the period  
October 1, 2021 to September 30, 2022
- (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$19,670  
  
Description of the USGS regional/national program:  
Groundwater and 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 (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  
Water Resource Investigations

Customer #: 6000000134  
Agreement #: 22NRJFA00040  
Project #: NR00GS1  
TIN #: 47-0542469

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.

**USGS Technical Point of Contact**

Name: Jason Lambrecht  
Hydrologic Data Section Chief  
Address: 5231 South 19th  
Lincoln, NE 68512  
Telephone: (402) 328-4124  
Fax: (402) 328-4101  
Email: jmlambre@usgs.gov

**Customer Technical Point of Contact**

Name: Marlin Petermann  
Assistant General Manager  
Address: 8901 South 154<sup>th</sup> St  
Omaha, NE 68138  
Telephone: (402) 444-6222  
Fax:  
Email: mpetermann@papionrd.org

**USGS Billing Point of Contact**

Name: Amanda Flynn  
Budget Analyst  
Address: 5231 South 19th  
Lincoln, NE 68512  
Telephone: (402) 328-4144  
Fax: (402) 328-4101  
Email: aflynn@usgs.gov

**Customer Billing Point of Contact**

Name: Marlin Petermann  
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Email: mpetermann@papionrd.org

U.S. Geological Survey  
United States  
Department of Interior

Papio- Missouri River Natural Resources District

Signature

By \_\_\_\_\_  
Name: Steven M. Peterson  
Title: Director

Signatures

By \_\_\_\_\_ Date: \_\_\_\_\_  
Name:  
Title:

By \_\_\_\_\_ Date: \_\_\_\_\_  
Name:  
Title:

By \_\_\_\_\_ Date: \_\_\_\_\_  
Name:  
Title:

**Table 1.** Summary of proposed funding for operation of stream gages and rain stations supported by the Papio-Missouri River Natural Resources District and other partners for period October 1, 2021 -- September 30, 2022.

[CR, continuous-record; SR, seasonal-record (Mar. 1-Oct. 31); CMF, USGS, Cooperative matching funds; PMR NRD, Papio-Missouri River Natural Resources District; GWSIP, Groundwater Streamflow Information Program; USGS, U.S. Geological Survey; Q, Discharge; ST, Stage; PR, Rain]

USGS Station number	PMR NRD Station Number	Station name	USGS CMF	PMR NRD	USGS GWSIP	Total	Gage type(s)	Data to be published	Footnote
06601000		Omaha Creek at Homer	\$0	\$9,055	\$6,385	\$15,440	CR - 12 month: Q, ST	Annual daily Q and ST for Oct. 1-Sept. 30.	a
413403096135001	1	Rain gage near Orum	\$270	\$1,350		\$1,620	SR - 8 month (Mar. 1 - Oct. 31): PR	Rain data collected, not published.	
06610705	2	Big Papillion Creek near Blair	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610710	3	Big Papillion Creek near Kennard	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610720	4	Big Papillion Creek near Bennington	\$1,705	\$9,115		\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610732	5	Big Papillion Creek at Fort Street at Omaha	\$0	\$6,265	\$4,555	\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	a
411504096071601	6	Rain Gage at Boys Town at Omaha	\$270	\$1,350		\$1,620	SR - 8 month (Mar. 1 - Oct. 31): PR	Rain data collected, not published.	
06610740	7	Big Papillion Creek at Pacific St at Omaha	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610742	9	Thomas Creek near Bennington	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610750	10	Little Papillion Creek near Irvington	\$0	\$8,410	\$2,410	\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	a
06610760	11	Cole Creek at Blondo Street at Omaha	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610765	12	Little Papillion Creek at Ak-Sar-Ben at Omaha	\$1,705	\$9,115		\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610770	8	Big Papillion Creek at Q Street at Omaha	\$3,335	\$12,105		\$15,440	CR - 12 month: Q, ST; SR - 8 month (Mar. 1 - Oct. 31): PR	Annual daily Q and ST for Oct. 1-Sept. 30. Rain data collected, not published.	
06610773	13	West Papillion Creek at Elkhorn	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610780	14	West Papillion Creek at Pacific St at Omaha	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610785	15	West Papillion Creek at Millard	\$1,705	\$9,115		\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610786	16	South Papillion Creek near Gretna	\$705	\$3,745		\$4,450	SR - 8 month (Mar. 1 - Oct. 31): ST, PR	ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610788	17	South Papillion Creek at Chalco	\$1,705	\$9,115		\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610793	18	(West) Papillion Creek at Papillion	\$0	\$8,435	\$2,385	\$10,820	SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	a
06610795	19	Papillion Creek at Fort Crook	\$0	\$11,505	\$3,935	\$15,440	CR - 12 month: Q, ST; SR - 8 month (Mar. 1 - Oct. 31): PR	Annual daily Q and ST for Oct. 1-Sept. 30. Rain data collected, not published.	a
411232095584201	20	Rain Gage at Hitchcock Park at Omaha	\$270	\$1,350		\$1,620	SR - 8 month (Mar. 1 - Oct. 31): PR	Rain data collected, not published.	
411701095570601	21	Rain Gage at City Maintenance Shop at Omaha	\$270	\$1,350		\$1,620	SR - 8 month (Mar. 1 - Oct. 31): PR	Rain data collected, not published.	
Funding partner totals			\$16,875	\$127,595	\$19,670	\$164,140			

a USGS GWSIP funds used in place of CMF as match with PM NRD