

# Memorandum

To: Papio-Missouri River Natural Resources District Programs Projects and Operations Subcommittee

From: Paul W. Woodward, PE, Groundwater Management Engineer

Date: October 5, 2021

Re: Groundwater Monitoring Joint Funding Agreement with USGS

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The purpose of the Platte and Elkhorn River Integrated Water Monitoring study was to gain a better understanding of the interaction between the Platte River, the Elkhorn River, and the alluvial aquifer between them. Objectives of the study were to quantify gains or losses from each river, determine the capability of the Elkhorn River to receive groundwater flow, and better estimate a timing of flow between the two rivers. The recently published report from USGS is available at: <https://pubs.er.usgs.gov/publication/sir20195048>.

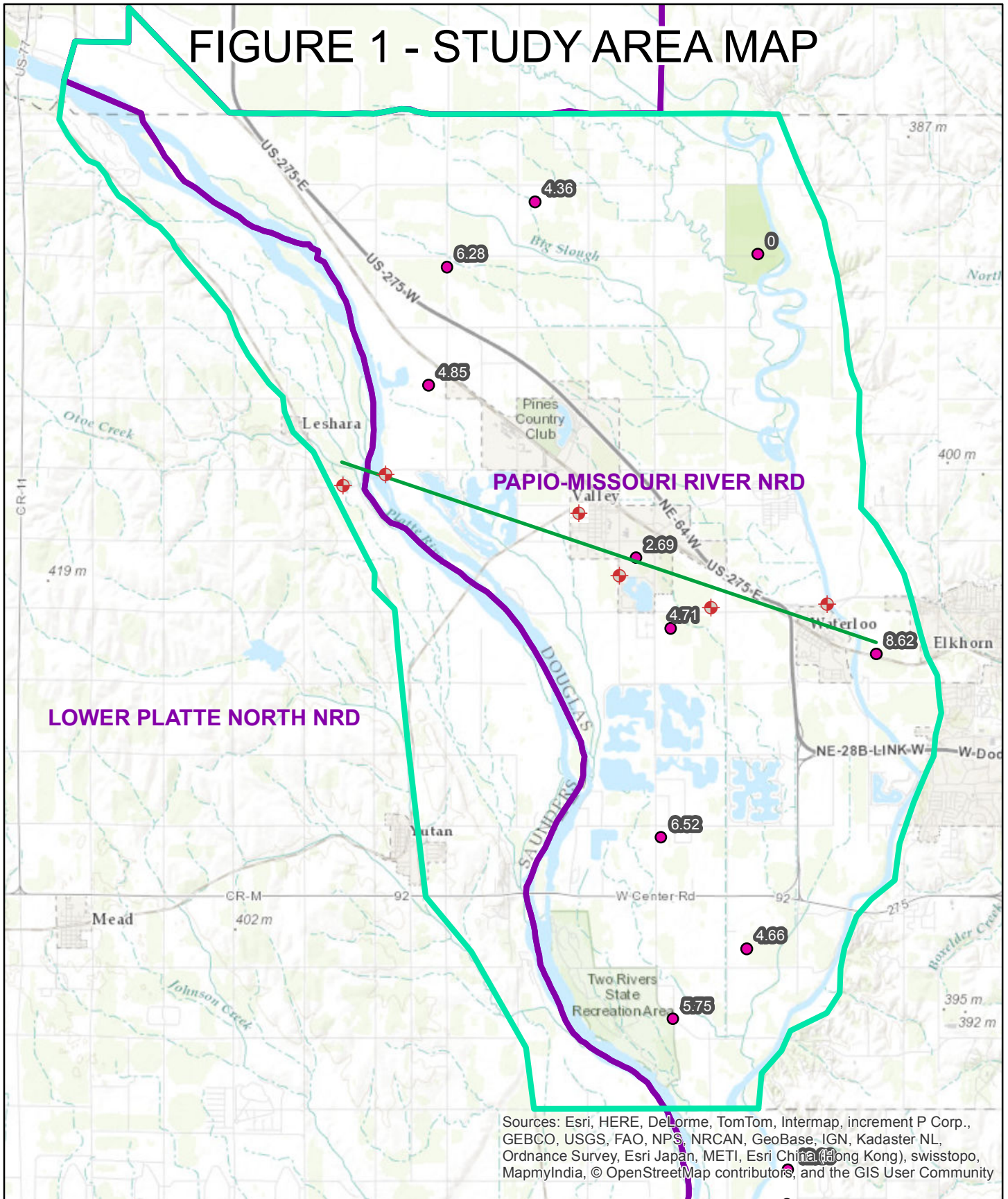
Recommendations from the study suggested that groundwater monitoring across the valley continue in order to improve understanding of timing and water movement between the Platte and Elkhorn River. The location of the six existing groundwater monitoring sites is shown in Figure 1.

These six groundwater monitoring sites are being used in the NRD's annual reporting for our IMP, Basin-Wide Plan, and Drought Contingency Plan. It is becoming increasingly important that a continuous groundwater level record be maintained throughout the year in order to better understand the periodic highs and lows, annual recharge, and potential drought impacts.

A Joint Funding Agreement between the USGS and the District has been prepared to have USGS continue the operation of these six groundwater monitoring sites and is attached. A detailed cost breakdown for each site is also attached for reference. The total cost for all six sites is \$17,720 and the USGS would provide cooperative funding of approximately 25% (same as last year). The duration of the agreement is for one year, from Oct. 1, 2021 to Sept. 30, 2022.

**Staff recommends that the subcommittee recommend to the Board of Directors that the General Manager be authorized to execute a Joint Funding Agreement with U.S. Geological Survey for a total cost to the District of \$13,350 for the continuation of groundwater monitoring in the Platte and Elkhorn River valley, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.**

# FIGURE 1 - STUDY AREA MAP





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. 22NRJFA00080 for the operation of six groundwater gages, as listed in the enclosed summary of proposed funding (Table 2). The total amount of the agreement is \$17,720 or \$4,370 for the U.S. Geological Survey and \$13,350 for the Papio-Missouri River Natural Resources District. 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 #: 22NRJFA00080  
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 six groundwater gages**, 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) \$4,370 by the party of the first part during the period  
October 1, 2021 to September 30, 2022
- (b) \$13,350 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: \$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> (<https://www2.usgs.gov/fsp/>).

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

Customer #: 6000000134  
Agreement #: 22NRJFA00080  
Project #: NR00GS1  
TIN #: 47-0542469

Water Resource Investigations

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](mailto: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: afflynn@usgs.gov

Customer Billing Point of Contact

Name: Marlin Petermann  
Assistant General Manager  
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Omaha, NE 68138  
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Fax:  
Email: [pmetermann@papionrd.org](mailto:pmetermann@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 2.** Summary of proposed funding for operation of six groundwater gages supported by the Papio-Missouri River Natural Resources District and other partners for period October 1, 2021 -- September 30, 2022.

[CR, continuous-record; CMF, USGS, Cooperative matching funds; PMR NRD, Papio-Missouri River Natural Resources District; USGS, U.S. Geological Survey; WL, Water Level]

USGS Station number	Station name	Supported Since Water Year				Gage type(s)
			USGS CMF	PMR NRD	Total	
*411736096170201	15N 10E 3CDDA1 Waterloo	2015	\$545	\$1,665	\$2,210	CR - 12 month: WL
411757096202501	15N 10E 6ACCC1 MUD-95	2015	\$820	\$2,505	\$3,325	CR - 12 month: WL
411845096211201	16N 9E 36NESE (Valley City Park shallow, P-Va1)	2017	\$820	\$2,505	\$3,325	CR - 12 month: WL
411903096245501	16N 9E33ABCD1 LPNNRD-80	2016	\$820	\$2,505	\$3,325	CR - 12 month: WL
*411911096241601	16N 9E34BBBD1 Leshara	2016	\$545	\$1,665	\$2,210	CR - 12 month: WL
411733096185501	15N 10E 5DDCB1 Valley-15	2016	\$820	\$2,505	\$3,325	CR - 12 month: WL
Funding partner totals			\$4,370	\$13,350	\$17,720	

\* Reduced cost for groundwater site due to proximity with adjacent streamgage