

Agenda Item: 6.

Memorandum

To: Programs, Projects and Operations Subcommittee
From: Amanda Grint, Water Resources Engineer
Date: December 4, 2013
Re: Contract Renewal with USGS to Operate the Papio Floodwarning System for 2014

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. Five stations report rain data and the remaining 17 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.

At the same time as the upgrade in 2012, the District entered in to an agreement with the USGS for them to begin maintenance and monitoring of the entire system. The attached proposal is a renewal of the maintenance contract with the USGS for 2014 in the total amount of \$143,175. The USGS will cost share at the rates outlined in the proposal. This year's contract maintains the same level of service from USGS as in 2013; however, due to funding cuts in the USGS Cooperative Water Program, their contribution has decreased to \$29,740 so that the District share is now \$113,435. Last year's contract had a District contribution of \$112,070. In the upcoming years, the USGS will continue to look for additional funding to help reduce the District's share.

The USGS efforts throughout 2013 provide quality data and valuable information for the NWS to improve the potential for forecasting in the Papio watershed. The PMRNRD, USGS, NWS continue to work together to further improve the system equipment and reporting.


Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute a proposed contract with the USGS in the amount of \$113,435.00 for the operation of the District's floodwarning system for the Papillion Creek Watershed.

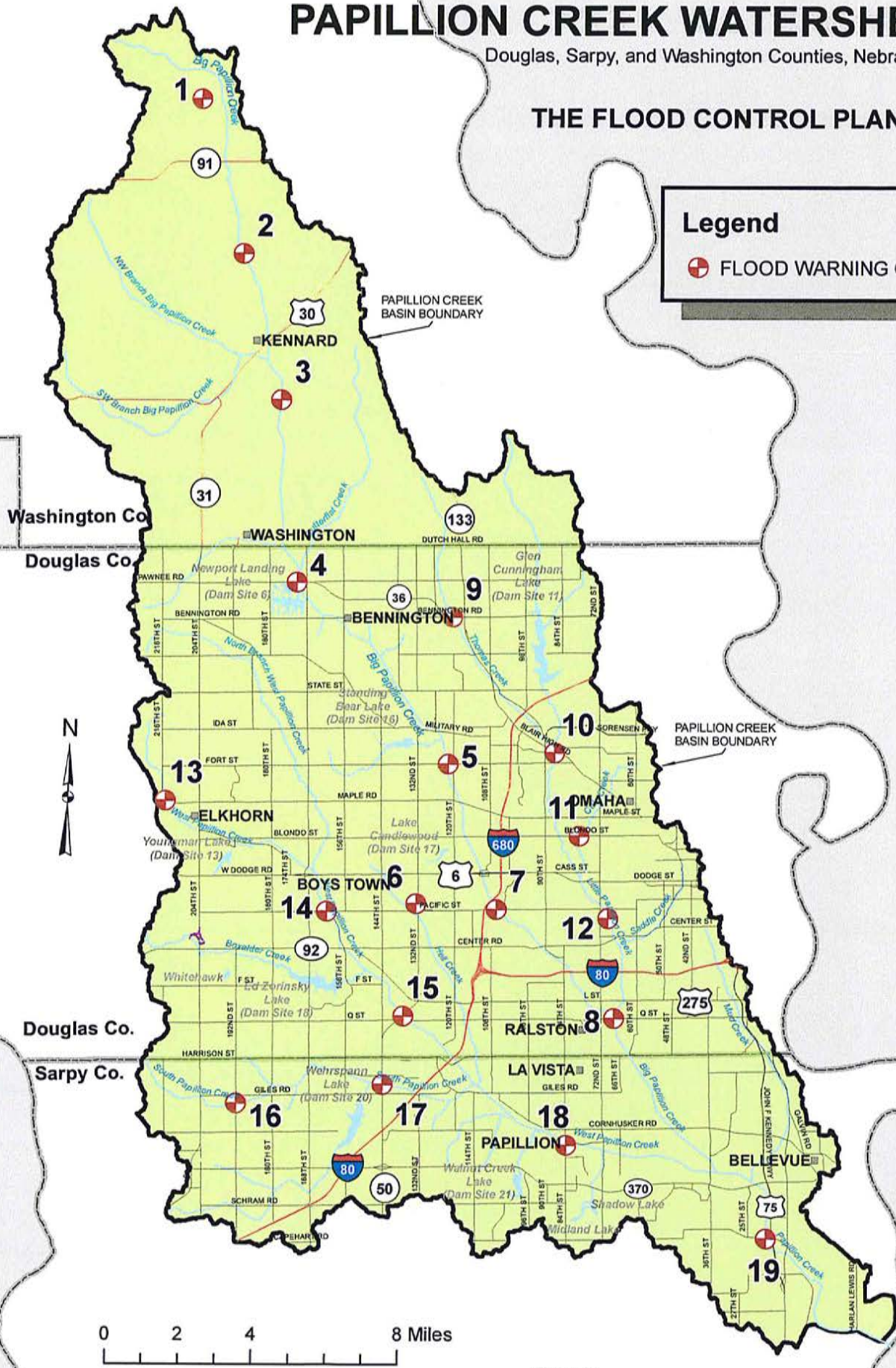
PAPILLION CREEK WATERSHED

Douglas, Sarpy, and Washington Counties, Nebraska

THE FLOOD CONTROL PLAN

Legend

 FLOOD WARNING GAGE



Alert Gauge Network Site List

Site No.	Location	Latitude Longitude		
1	ORUM 2 NE RAIN GAGE 2 miles Northeast of Orum along E-W County Rd., North ROW SW-1/4, SW-1/4, Section 31, T19N, Range 11E	41 96	34' 13'	13"N 55"W
2.	BIG PAPIILLION CREEK NEAR BLAIR 4 miles southwest of Blair Left ds. side of County Rd., Bridge NW-1/4, NW-1/4, Section 29, T18N, Range 11E	41 96	30' 12'	30"N 10"N
3.	BIG PAPIILLION CREEK NEAR KENNARD 1.5 Miles SE of Kennard Right ds. side of County Rd., Bridge SW-1/4, SW-1/4, Section 9, T17N, R11E	41 96	27' 11'	05"N 25"W
4.	BIG PAPIILLION CREEK NEAR BENNINGTON Hwy. 36, 1.5 miles NW of Bennington, Right ds. side of Hwy. 36 Bridge NE-1/4, NW-1/4 Section 9, T16N Range 11E	41 96	22' 11'	40"N 0"W
5.	BIG PAPIILLION AT 125TH & FORT ST., OMAHA At C.O.E. Stream Gage Left ds side of Fort St. Bridge NE-1/4, NE-1/4, Section 6, T15N, R12E	41 96	18' 06'	20"N 15"W
6.	BOYS TOWN RAIN GAGE Near 132nd St. in SE Boys Town At Horse Farm near 132nd & Pacific St. SE-1/4, SE-1/4, Section 24, T15N, Range 11E	41 96	15' 07'	05"N 15"W
7.	BIG PAPIILLION CREEK AT I-680 At Interstate Bridge Left ds. side of North bound Bridge SW-1/4, SW-1/4, Section 21, T15N, Range 12E	41 96	15' 04'	05"N 50"W
8.	BIG PAPIILLION CREEK AT RALSTON at "Q" Street Left us bank at Sewer Maintenance Bldg. SE-1/4, SW-1/4, Section 1, T14N, Range 12E	41 96	12' 01'	20"N 10"W
9.	THOMAS CREEK (Little Papio) BENNINGTON At Hwy 36 Bridge, West of Blair High Rd. Right side of Hwy 36 Bridge SE-1/4, SE-1/4, Section 7, T16N, Range 12E	41 96	21' 06'	20"N 0"W
10.	LITTLE PAPIILLION CREEK IRVINGTON At C.O.E. Stream Gage Left bank of Blair High Road SW-1/4, SE-1/4, Section 34, T16N, Range 12E	41 96	18' 02'	40"N 43"W
11.	COLE CREEK AT BLONDO STREET Cole Creek Dr. and Blondo St. Left ds bank near pipeline crossing. NE-1/4, NW-1/4, Section 14, T15N, Range 12E	41 96	16' 02'	40"N 43"W
12.	LITTLE PAPIILLION CREEK AT AKSARBEN At C.O.E. Stream Gage Along Left Bank SW-1/4, NW-1/4, Section 25, T15N, Range 12E	41 96	14' 01'	40"N 10"W
13.	WEST BRANCH PAPIILLION CREEK AT ELKHORN At Hwy. 64 Bridge Right US Bank Near Ramblewood Addition. SW-1/4, SW-1/4, Section 1, T15N, Range 10E	41 96	17' 15'	35"N 10"W
14.	WEST PAPIILLION CREEK AT DODGE STREET At 168th and West Dodge Road Left ds Bank NW-1/4, NW-1/4, Section 22, T15N, Range 11E	41 96	15' 10'	45"N 40"W

Alert Gauge Network Site List (Continued)

Site No.	Location	Latitude			Longitude		
15.	WEST PAPIILLION CREEK AT MILLARD At Millard Ave. Bridge Right ds bank at Autocare Mall SW-1/4, SE-1/4, Section 1, T14N, Range 11E	41	12'	25"N	96	07'	40"W
16.	SOUTH PAPIILLION CREEK NR GRETNA At 192nd St. Bridge Left Upstream Bank, N. Bridge near farm. NE-1/4, NW-1/4, Section 19, T14N, Range 11E	41	10'	20"N	96	12'	55"W
17.	SOUTH PAPIILLION CREEK NR CHALCO At Hwy. 50 Bridge, Right us Bank at Overpass NE-1/4, SE-1/4, Section 14, T14N, Range 11E	41	10'	50"N	96	08'	40"W
18.	WEST PAPIILLION CREEK AT PAPIILLION At 84th St. Bridge in Downtown, Right ds Bank. SW-1/4, NW-1/4, Section 26, T14N, Range 12E	41	09'	20"N	96	02'	35"W
19.	PAPIILLION CREEK AT FORT CROOK At Capehart Road Bridge, Left ds Bank NE-1/4, NW-1/4, Section 10, T13N, Range 13E	41	07'	06"N	95	56'	15"W
20	HITCHCOCK PARK RAIN GAGE Behind pool in park, NW of 42nd and "Q" St. SE-1/4, SW-1/4, Section 5, T14N, R13E	41	12'	32"N	95	58	40"W
21	CITY VEHICLE MAINTENANCE RAIN GAGE North of Corby, between 26th and 27th NE-1/4, SE-1/4, Section 9, T15N, R13E	41	17'	02"N	95	57'	02"W
22	FIRE STATION RAIN GAGE North of Airport, adjacent to Lindberg Dr. and Ida Street NE-1/4, NW-1/4, Section 35, T16N, R13E	41	18'	57"N	95	54'	55"W

Page 2 of 2

EMERGENCY OPERATIONS ALERT GAUGE SITE LIST



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Water Resources Discipline
Nebraska Water Science Center
5231 South 19th Street
Lincoln, NE 68512-1271

October 24, 2013

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

NOV 18 2013

Dear Mr. ^{John}~~Winkler~~:

Enclosed are two copies of Joint Funding Agreement No. 14EMNE000040 for the operation of one streamgage at Omaha Creek at Homer and 22 gages (9 stage/discharge/precipitation, 8 stage/precipitation/rating development, and 5 rain-only) in the Papillion Creek watershed as listed in the enclosed summary of proposed funding. The total amount of the agreement for Cooperative Water program funding is \$127,965 or \$14,530 for the U.S. Geological Survey and \$113,435 for the Papio-Missouri River Natural Resources District. Funds from the National Streamflow Information Program (NSIP), which are not included in the above amounts, have been used as a supplement to or in place of funds from the Cooperative Water Program. Please sign one copy of the agreement and return it to this office as soon as possible. The second copy is for your records. 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 in 2014. The results of all work under this agreement will be available for publication by the U.S. Geological Survey.

Please contact Jason Lambrecht at 402-328-4124 if you have any questions concerning this agreement.

Sincerely,

Robert B. Swanson, Director
USGS Nebraska Water Science Center

3 Enclosures

DUNS No. 949286512

Table 1. Summary of proposed funding for operation of stream gaging and rain stations supported by the Papio-Missouri River Natural Resources District and other partners for period October 1, 2013 – September 30, 2014.

[CR, continuous-record; SR, seasonal-record (Mar. 1-Oct. 31); CSG, crest-stage gage; CWP, Cooperative Water Program; PMR NRD, Papio-Missouri River Natural Resources District; NSIP, National Streamflow Information Program; RT, real-time (satellite telemetry); USGS, U.S. Geological Survey; Q, Discharge; ST, Stage; PR, Rain; RD, Stage-Discharge Rating Development]

USGS Station number	PMR NRD Station Number	Station name	Funding				Gage type(s)	Data to be published	Footnote
			USGS CWP	PMR NRD	USGS NSIP	Total			
06601000		Omaha Creek at Homer	\$0	\$8,305	\$5,950	\$14,255	RT CR - 12 month: Q, ST	Annual daily Q and ST for Oct. 1-Sept. 30.	a
413403096135001	1	Rain gage near Orum	\$250	\$1,230		\$1,480	RT SR - 8 month (Mar. 1 - Oct. 31): PR	Precipitation data collected, not published.	
06610705	2	Big Papillion Creek near Blair	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610710	3	Big Papillion Creek near Kennard	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610720	4	Big Papillion Creek near Bennington	\$1,600	\$8,280		\$9,880	RT 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	\$5,705	\$4,175	\$9,880	RT 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	\$250	\$1,230		\$1,480	RT SR - 8 month (Mar. 1 - Oct. 31): PR	Precipitation data collected, not published.	
06610740	7	Big Papillion Creek at Pacific St at Omaha	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610742	9	Thomas Creek near Bennington	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610750	10	Little Papillion Creek near Irvington	\$0	\$8,185	\$1,695	\$9,880	RT 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	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610765	12	Little Papillion Creek at Ak-Sar-Ben at Omaha	\$1,600	\$8,280		\$9,880	RT 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	\$1,600	\$8,280		\$9,880	RT SR - 8 month (Mar. 1 - Oct. 31): Q, ST, PR	Daily Q and ST for Mar. 1 - Oct. 31. Rain data collected, not published.	
06610773	13	West Papillion Creek at Elkhorn	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610780	14	West Papillion Creek at Pacific St at Omaha	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610785	15	West Papillion Creek at Millard	\$1,600	\$8,280		\$9,880	RT 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	\$660	\$3,415		\$4,075	RT SR - 8 month (Mar. 1 - Oct. 31): ST, PR, RD	ST for Mar. 1 - Oct. 31. Rain data collected, not published. Three measurements of discharge for rating development.	
06610788	17	South Papillion Creek at Chalco	\$1,600	\$8,280		\$9,880	RT 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	\$8,185	\$1,695	\$9,880	RT 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	\$8,185	\$1,695	\$9,880	RT 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
411232095584201	20	Rain Gage at Hitchcock Park at Omaha	\$250	\$1,230		\$1,480	RT SR - 8 month (Mar. 1 - Oct. 31): PR	Precipitation data collected, not published.	
411701095570601	21	Rain Gage at city Maintenance Shop at Omaha	\$250	\$1,230		\$1,480	RT SR - 8 month (Mar. 1 - Oct. 31): PR	Precipitation data collected, not published.	
411857095545301	22	Rain Gage at Eppley fire Station at Omaha	\$250	\$1,230		\$1,480	RT SR - 8 month (Mar. 1 - Oct. 31): PR	Precipitation data collected, not published.	
Funding partner totals			\$14,530	\$113,435	\$15,210	\$143,175			

a USGS NSIP funds used in place of CWP funds as match with PM NRD

Form 9-1366
(Oct. 2005)

**U.S. Department of the
Interior
U.S. Geological Survey
Joint Funding Agreement
FOR
WATER RESOURCES INVESTIGATIONS**

Customer #: 6000000134
Agreement #: 14EMNE000040
Project #: NR009R9
TIN #: 47-0542469
Fixed Cost Agreement Yes No

THIS AGREEMENT is entered into as of the 1st day of **October 2013**, by the **U.S. GEOLOGICAL SURVEY, 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 availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation the **operation of one streamgauge at Omaha Creek at Homer and 22 gages (9 stage/discharge/precipitation, 8 stage/precipitation/rating development, and 5 rain-only) in the Papillion Creek watershed**, 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.

(a) **\$14,530** by the party of the first part during the period
October 1, 2013 to September 30, 2014

(b) **\$113,435** by the party of the second part during the period
October 1, 2013 to September 30, 2014

- (c) 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.
- (d) 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.

Form 9-1366
continued

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

Customer #: 6000000134
Agreement #: 14EMNE000040
Project #: NR009R9
TIN #: 47-0542469

- 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 costs, 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.
- 9. USGS will issue billings utilizing Department of the Interior Bill for Collection (form DI-1040). Billing documents are to be rendered **quarterly**. Payments of bills are due within 60 days after the billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30 day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983).

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

Papio-Missouri River Natural Resources
District

USGS Point of Contact

Customer Point of Contact

Name: Jason Lambrecht
Address: 5231 South 19 St
Lincoln, NE 68512

Telephone: 402-328-4124
Email: jmlambre@usgs.gov

Name: Marlin Petermann
Address: 8901 South 154 St
Omaha, NE 68138

Telephone: 402-444-6222
Email: mpetermann@papionrd.org

Signatures

Signatures

By Robert B. Swanson Date 11/14/13
Name: Robert B. Swanson
Title: NEWS Director

By _____ Date _____
Name: _____
Title: _____

By _____ Date _____
Name: _____
Title: _____

By _____ Date _____
Name: _____
Title: _____