

Memorandum

To: Programs, Projects, and Operations Subcommittee
From: Lori Ann Laster, Stormwater Management Engineer
Date: August 29, 2022
Re: Contract Amendment #2 with HDR for Flanagan Wetland Monitoring

As part of the conditions for the U.S. Army Corps of Engineers 404 permit for Flanagan Lake (Dam Site 15A), the District was required to construct 6.8 acres of emerging wetlands and 7.2 acres of forested wetlands to mitigate for the construction of the project. The permit requires five years of monitoring for emerging wetlands and ten years of monitoring for the forested wetlands. Additionally, the District is required to perform a stream functional assessment for a stream reach to ensure the direct fill impacts of the dam structure have been mitigated.

In April 2018, the District signed a contract with HDR Engineering, Inc. to perform the wetland and stream monitoring services for a total of \$24,271. The original contract was to provide three years of monitoring and reporting services, ending in 2020. In 2021, a no-cost amendment to that contract was approved to provide an additional year of monitoring services as HDR had remaining funds in the contract.

Currently, there is one more year of emerging wetland and stream function monitoring and six more years of forested wetland monitoring to complete. HDR has prepared a contract amendment to perform the remaining six years of monitoring. The cost of the amendment is \$49,727 for a total contract amount not to exceed \$73,998.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the enclosed Professional Services Contract Amendment between the District and HDR Engineering, Inc. for monitoring services for Flanagan Lake increasing the maximum contract fee to \$73,998, subject to changes deemed necessary by the General Manager and approval as to form by District legal counsel.

AMENDMENT No. 2 TO AGREEMENT No. 1
FOR
ENGINEERING SERVICES

WHEREAS:

HDR ENGINEERING, INC. ("HDR") entered into an Agreement on April 10, 2018 to perform engineering services for three (3) years of annual compliance monitoring of the PEMA/C and PFOA wetland mitigation, stream channel monitoring, and stream functional assessment (Special Conditions #8, 9, 10, 12, and 13) at the P-MRNRD DS-15A (Site) located in Douglas County ("the Project");

Papio-Missouri River Natural Resources District (OWNER) desires to amend this Agreement in order for HDR to perform services beyond those previously contemplated which included:

- Agreement #1 (April 10, 2018; \$24,271) – Three (3) years of monitoring PEMA/C and PFOA wetland mitigation, stream channel monitoring, and stream functional assessment
- Amendment #1 (June 14, 2021; No fee change) – One (1) year of monitoring PEMA/C and PFOA wetland mitigation, stream channel monitoring, and stream functional assessment

HDR is willing to amend the agreement and perform the additional engineering services.

NOW, THEREFORE, HDR and OWNER do hereby agree:

The Agreement and the terms and conditions therein shall remain unchanged other than those sections and exhibits listed below;

Section I shall be amended with the attached Exhibit A.

Section IV shall be amended by \$49,727.00 for a total not to exceed amount of \$73,998.00.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the day and year written below:

HDR ENGINEERING, INC. ("HDR")

PAPIO-MISSOURI RIVER NATURAL
RESOURCES DISTRICT ("OWNER")

By: _____

By: _____

Print Name: Matthew B. Tondl, P.E.

Print Name: John Winkler

Title: Senior Vice President

Title: General Manager

Date: _____

Date: _____



EXHIBIT A

Papio-Missouri River Natural Resources District DS-15A Section 404 Permit Compliance Monitoring – Amendment #2 Douglas County, NE

ENGINEERING PROPOSAL

BACKGROUND AND BASIS OF PROPOSAL

The U.S. Army Corps of Engineers (USACE), Omaha District, Regulatory office, issued a Section 404 permit No. 2006-10091-WEH for the construction of Dam Site 15A (DS-15A) in March of 2014, and amended in January of 2015. This permit listed general and special conditions. The Section 404 Permit contains special conditions which outline the fulfillment of the terms of the permit. Special Conditions # 8, 9, 10, 11, 12, and 13 require that the Papio-Missouri River Natural Resources District (P-MRNRD) monitor their annual progress towards fulfillment of these Special Conditions and report their progress to the USACE in an annual report.

Special Condition #8 requires that the P-MRNRD address potential erosion impacts in the channel downstream of the dam due to a reduced sediment load. The condition requires P-MRNRD measure and record channel cross-sections at three points below the energy dissipater annually for five years after completion of construction. Results of the measurements must then be included in an annual monitoring report.

Special Conditions #9 and 12 require P-MRNRD mitigate 1.70 acres of PEMA/C and 1.80 acres of PFOA wetland impacts at a 4:1 ratio (total of 6.8 acres of PEMA/c and 7.2 acres of PFOA) through the construction of a compensatory wetland mitigation site around the conservation pool elevation of the reservoir, conduct annual monitoring of wetland development annually for a minimum of five (5) consecutive years for the PEMA/C wetlands and ten (10) consecutive years for the PFOA wetlands, and submit the results of monitoring in an annual report to be submitted to USACE no later than December 1 of each year.

Special Condition #10 requires P-MRNRD complete a stream functional assessment for one reach of North Branch West Papillion Creek for a period of five (5) years to document the successful mitigation (net stream functional gain of 12,219 functional units) for the direct fill impacts on 1,365 linear feet of perennial stream.

Special Condition #11 requires buffer strips be set aside around all mitigation sites and the entire perimeter of the normal pool measuring no less than 50 feet from the edge of the mitigation site or pool outward. The buffer strips shall be protected to ensure that it does not compromise its function.

Special Condition #13 requires P-MRNRD complete stream functional assessment for a period of five (5) years to document the successful mitigation (net stream functional gain) generated through the implementation of DS-15A project (dam construction, vegetative plantings, land use controls). This includes three cross-sections, one at each end and one in the middle of the project site to evaluate the variables of the steam functional assessment.

Special Conditions #9, 10, 11, and 14 require notification to USACE of completion of construction of the project and construction of the mitigation sites and buffer strips, including dates of construction and seeding, planting lists, seed bag tags, or receipts from seed and planting of the seed.



SCOPE OF SERVICES – MISCELLANEOUS PROFESSIONAL SERVICES

This Scope of Services is for the final six (6) years of annual compliance monitoring of the PEMA/C and PFOA wetland mitigation, stream channel monitoring, and stream functional assessment (Special Conditions #8, 9, 10, 12, and 13) at the P-MRNRD DS-15A (Site) located in Douglas County. The tasks detailed below are anticipated to be required of the Project.

Task 100	Project Management
Task 200	Stream Channel Monitoring
Task 300	Stream Function Monitoring
Task 400	Wetland Mitigation Site Monitoring
Task 500	Annual Site Monitoring Report

The HDR Team proposes to provide the following professional services.

TASK 100 – Project Management

- Objective:** Plan and manage HDR services, coordination with P-MRNRD on Project progress and deliverables, and perform quality control on deliverables.
- HDR Activities:** Conduct general Project management tasks. Includes development of project initiation forms including monthly invoicing, progress reporting, Project close out activities, quality control, and other administration Project activities. Perform quality reviews of deliverables.
- Deliverables:** Monthly invoices and progress reports
- Key Understandings:** This project assumes a six (6) year schedule with primary project activities occurring over five month timeframe throughout each year to accomplish the site visit, reporting, and response to comments.

TASK 200 – Stream Channel Monitoring

- Objective:** Report the cross-section measurements at three permanently established points below the energy dissipater annually after completion of construction as per Special Condition # 8. Four (4) years have been completed and one (1) year is remaining.
- HDR Activities:** Provide a drawing of channel cross-sections at three permanently established points below the energy dissipater. Describe any observed changes to the cross-sections as compared to the pre- and post-construction baseline survey.
- Deliverables:** Stream channel results will be provided to the USACE in an annual joint Site Monitoring Report.
- Key Understandings:** Channel cross-sections locations have been defined and are located at three points:
- Point 1 – 100 feet below the energy dissipater



- Point 2 – 100 feet downstream from transition from graded to undisturbed channel
- Point 3 – 500 feet downstream from Point 2

Cross-section survey will be provided annually by P-MRNRD. No remedial action investigations are included in this proposal.

TASK 300 – Stream Function Monitoring

- Objective:** Perform one (1) year of annual stream functional assessments to document the progress towards fulfillment of Special Conditions #10 and 13 of the Section 404 Permit.
- HDR Activities:** Perform annual stream functional assessment using Nebraska Stream Condition Assessment Procedure (October 2016), including on-site observation and documentation of site development with ground-level photography and available aerial photography. The assessment will be performed on one reach of the North Branch West Papillion Cree (upstream of State Street) and at three cross-sections of DS-15A.
- Deliverables:** Stream functional assessment results will be submitted to the USACE as part of the annual joint Site Monitoring Report.
- Key Understandings:** The stream functional assessment performed for the Section 404 permit scored 343,361 functional units, and scores post-project for DS-15A shall be equal to or greater than the 404 permit value. In addition, the value of the mitigation reach upstream of State Street shall score 12,219 functional units or greater. The riparian reaches and sampling points used to establish the proposed post-project condition will be replicated to the extent possible for the annual monitoring.

TASK 400 – Wetland Mitigation Site Monitoring

- Objective:** Perform one (1) year of annual monitoring of the PEMA/C wetlands and six (6) PFOA wetlands to document the progress towards fulfillment of Special Conditions #9 and 12 of the Section 404 Permit.
- HDR Activities:** Four (4) years of PEMA/C and PFOA monitoring have been completed to date. HDR will perform continued annual monitoring, for a period of one year for the PEMA/C wetlands and six years for the PFOA wetlands. Annual monitoring will include the established photo points, sampling points, and will document vegetation, hydrology, and hydric soil development. Wetland boundaries will be mapped using sub-meter GPS technology. Per the 2013 Compensatory Mitigation Plan, the *1987 Army Corps of Engineers Wetlands Delineation Manual (and Midwest Regional Supplement)* will be used to document the establishment of wetland areas. The performance standards identified in the 2013 Compensatory Wetland Mitigation Plan will be used to relate progress towards the established target values.
- Deliverables:** Wetland mitigation results will be submitted to the USACE in an annual joint Site Monitoring Report.



Key Understandings: The anticipated area requiring monitoring is approximately 7 acres of PEMA/C wetland and 7 acres of PFOA wetland and would be visited once a year. This task does not include activities associated with any remedial actions identified for the site but can be performed as Additional Services. Additional years of monitoring would be needed to fulfill permit conditions.

TASK 500 – Annual Site Monitoring Report

Objective: HDR will develop an Annual Site Monitoring Report which will include the results of the stream channel, stream function, and wetland mitigation monitoring.

HDR Activities: Development of a Draft and Final Annual Site Monitoring Report will be produced and include:

- Summary of Site monitoring results and annual progress in fulfillment of special conditions of the Section 404 Permit
- Results of stream cross-section measurements
- Results of Nebraska Stream Condition Assessment Procedure
- Aerial figure(s) depicting wetland development and acreage
- Wetland determination data forms from established sample points
- Site photographs

Deliverables: Draft and Final Annual Site Monitoring Report.

Key Understandings: P-MRNRD to review Draft Annual Site Monitoring Report prior to finalization and submittal to USACE.

PROJECT SCHEDULE

HDR proposes to implement this Project within the following schedule:

<u>Activity</u>	<u>Anticipated Completion Date</u>
Annual Monitoring	October 31 of each year
Draft Report	November 15 of each year
Final Report	December 1 of each year

ESTIMATED FEE

The following estimate fee includes labor and reimbursable expenses are as noted in Attachment A.

**Papio-Missouri Natural Resources District
DS-15A Section 404 Permit Compliance Monitoring - Amendment #2**

STAFF-HOUR TABULATION

TASK	Proj. Man.	Sr. Scientist	Scientist	GIS	Sr. Engineer	Accountant	Total
Task 100 Project Management	26	0	0	0	0	30	56
Task 200 Stream Cross-Section Monitoring	1	1	0	0	0	0	2
Task 300 Stream Functional Assessment	0	0	6	6	0	0	12
Task 400 Wetland Mitigation Monitoring	24	0	24	36	0	0	84
Task 500 Annual Monitoring Report	72	24	72	24	0	0	192
TOTAL HOURS	123	25	102	66	0	30	346

LABOR COST BY TASK

TASK	LABOR COST
Task 100	\$ 7,890
Task 200	\$ 400
Task 300	\$ 1,590
Task 400	\$ 11,910
Task 500	\$ 27,530
Total	\$ 49,320

ESTIMATED DIRECT EXPENSES SUMMARY				
	QUANT	UNIT	UNIT COST	TOT. COST
GPS (per day)	6	Days	\$ 50.00	\$ 300.00
Equipment	0	Days	\$ -	\$ -
Mileage	120	Miles	\$ 0.54	\$ 64.80
Copies (11 x 17 color)	60	Pages	\$ 0.30	\$ 18.00
Copies (8.5 x 11 color)	44	Pages	\$ 0.15	\$ 12.60
Copies (8.5 x 11 b/w)	300	Pages	\$ 0.03	\$ 9.00
Copies (11 x 17 b/w)	30	Pages	\$ 0.09	\$ 2.70
0	0	LS	\$ -	\$ -
Total Direct Expenses Cost:				\$ 407

TOTAL PROJECT COST: \$ 49,727