

Memorandum

To: Projects, Programs and Operations Subcommittee

From: Terry Schumacher, Land & Water Programs Coordinator

Date: April 28, 2025

RE: Amendment No. 1. for the Silver Creek Watershed Site 35A Small Flood Control and Water Quality Project

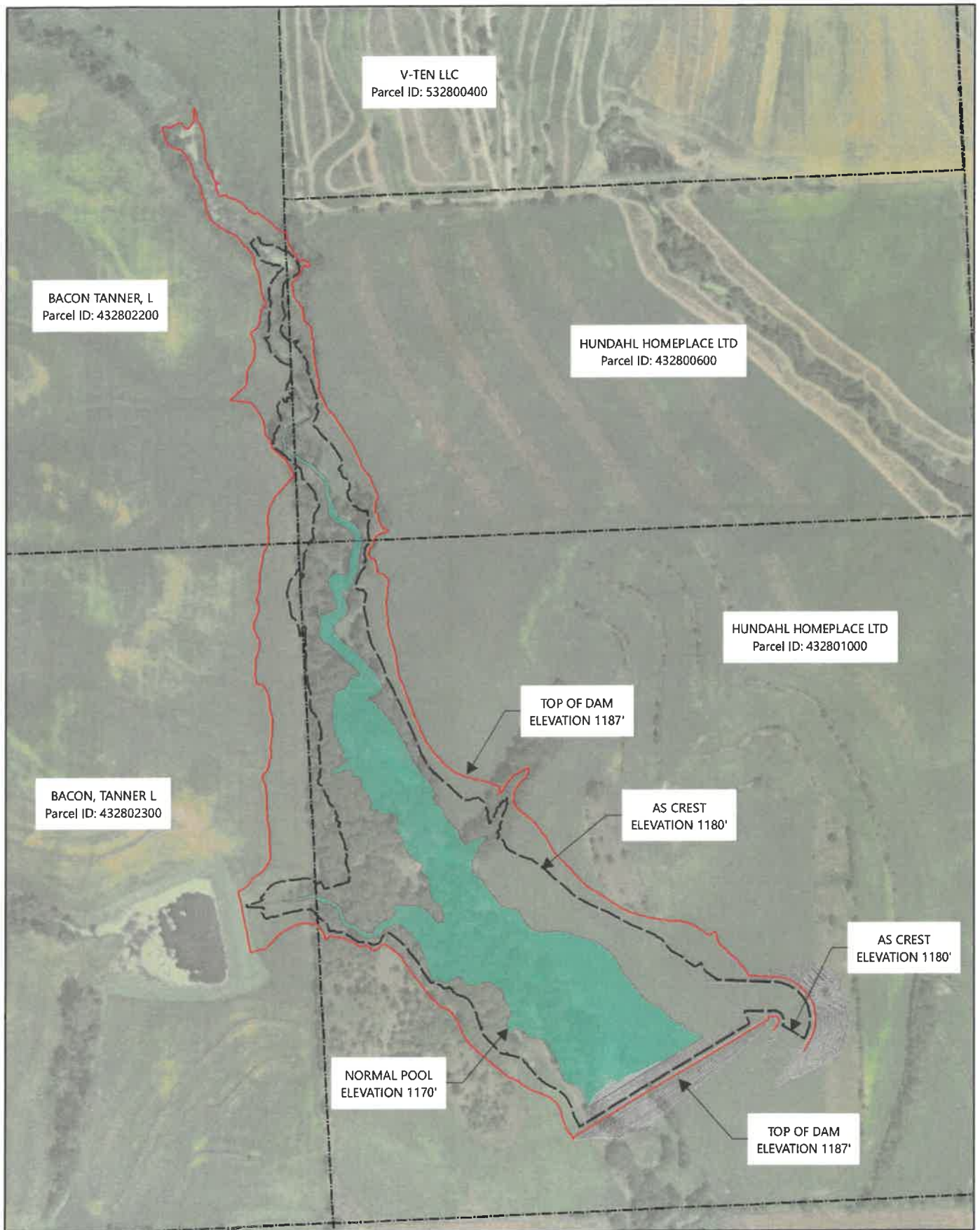
In December 2024, the Board of Directors approved an agreement with Houston Engineering, Inc. to provide the necessary services to determine the hazard class, 404 permit requirements, provide geotechnical investigation and preliminary design for the Silver Creek Site 35A located in Burt County, Nebraska.

The next phase of the professional services required for the project is final design/construction documents, permitting and mitigation, bidding and construction oversight services. Also included is completion of the WSF application. Houston Engineering, Inc. and District staff have discussed and prepared a professional services agreement with a scope of services agreement for Amendment No. 1 of the project.

Houston Engineering Inc. proposes providing professional services in contract Amendment No. 1 for a total not to exceed amount of \$837,596.00; see attached Exhibit K for further details on task descriptions and the fee breakdown. This would bring the total contract, including Amendment No. 1 to \$994,022.00.

The proposed scope of work, cost estimate and schedule are attached.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the proposed Amendment No. 1 with Houston Engineering, Inc. for the Silver Creek Watershed Site 35A Project, in an amount not to exceed \$837,596.00 bringing the total contract not to exceed amount of \$994,022.00 , subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.



Silver Creek 35-A Proposed Site Plan

Silver Creek Watershed Site 35A Project
Papio-Missouri River Natural Resources District



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HOUSTON
engineering, inc.

This is **EXHIBIT K**, consisting of **2** pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated **12 December 2024**.

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 1

The Effective Date of this Amendment is: 8 May 2025.

Background Data

Effective Date of Owner-Engineer Agreement: 12 December 2024

Owner: Papio-Missouri River Natural Resources District

Engineer: Houston Engineering

Project: Silver Creek 35A Small Flood Control and Water Quality Structure

Nature of Amendment:

- ☒ **Additional Services to be performed by Engineer**
- ☐ **Modifications to services of Engineer**
- ☐ **Modifications to responsibilities of Owner**
- ☐ **Modifications of payment to Engineer**
- ☐ **Modifications to time(s) for rendering services**
- ☐ **Modifications to other terms and conditions of the Agreement**

Description of Modifications:

The Additional Services includes the work required to complete the Water Sustainability Fund grant application, final design, permitting, and bidding and construction oversight services. Details of the work to be performed by the Engineer are described in Attachment 1 - Proposed Scope of Additional Services and the associated fees are provided in Attachment 2 - Fee Estimate.

MODIFIED VERSION of

Exhibit K – Amendment to Owner-Engineer Agreement.

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Agreement Summary:

Original agreement amount:	\$ <u>156,426.00</u>
Net change for prior amendments:	\$ <u>---</u>
This amendment amount:	\$ <u>837,596.00</u>
Adjusted Agreement amount:	\$ <u>994,022.00</u>

Change in time for services (days or date, as applicable): _____

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:

Papio-Missouri River Natural Resources District

By: _____

Name: John Winkler

Title: General Manager

Date Signed:

ENGINEER:

Houston Engineering

By:  _____

Name: Mike Sotak

Title: Senior Engineer, Principal

Date Signed: 29 April 2025

MODIFIED VERSION of

Exhibit K – Amendment to Owner-Engineer Agreement.

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Attachment 1 to Exhibit K – Proposed Scope of Additional Services

A phased approach for contracting has been developed to make decisions and identify key design criteria that will impact the total effort to complete this project. The Preliminary Investigations phase has been completed to inform the design requirements for completing the project. The work included in this Proposed Scope of Additional Services is to complete the final design, permitting, bidding, and construction oversight of the Silver Creek 35A structure.

1 PROJECT MANAGEMENT

1.1 Client Coordination and Meetings

Preparation for and attendance of up to two (2) project review meetings, with the Papio-Missouri River Natural Resources District (Papio NRD) and landowner if appropriate. Project review meetings will occur to make critical design decisions and to review findings. Meeting minutes and project task lists will be prepared by Houston Engineering and distributed after each meeting for review by the Papio NRD. This task also includes supplemental communication via email, telephone, or video conference as needed to relay information and request feedback.

1.2 Agency Coordination (NDNR, Burt County)

Coordination with the Dam Safety Division of the Nebraska Department of Natural Resources (NDNR) to discuss the dam design and site consideration. Coordinate with Burt County to discuss breach path protection options of the mapped area downstream of the site.

1.3 Project Administration and Internal Coordination

Perform project administration tasks such as task tracking, budget checks, organization of materials and information needs to complete tasks, and internal guidance to staff assign tasks, to ensure efficiency, and task completeness.

1.4 Invoicing and Schedule Updates

Preparation of monthly project invoices and a summary of work completed during the invoicing period. Invoices will be sent to the Papio NRD prior to the first Wednesday of the month. Updates will include budget and schedule tracking.

2 SURVEY AND MAPPING

2.1 Initial Site Survey

Preliminary design task only; no additional services required.

2.2 Data Gathering, Processing and Basemap Development

Preliminary design task only; no additional services required.

2.3 Drone Flight

Perform one drone flight upon completion of construction to obtain photographs and videos of the site and project features.

2.4 Topography Survey and Processing

Field survey of channel in the dam location identified in the Preliminary Investigation Phase and site features to supplement available LiDAR mapping for finalizing the base map for design work.

3 ENVIRONMENTAL ASSESSMENTS AND PERMITTING

3.1 Wetland Delineation - Desktop, Field Assessment and Reporting

Perform the following services for areas required for mitigation of the impacts from the Silver Creek 35A dam embankment and inundation from the permanent pool. Includes a wetland delineation and ordinary high-water mark (OHWM) determination at the potential dam and permanent pool locations. A wetland delineation will be performed in accordance with the USACE 1987 Wetland Delineation Manual and USACE 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) and will include all required documents and the preparation of a final report to detail waters of the U.S. (WOUS) findings. This includes desktop investigations, field work, and the development of documents required for the final report.

3.2 NeSCAP - Desktop, Field Assessment and Reporting

Perform the following services for areas required for mitigation of the impacts from the Silver Creek 35A dam embankment and inundation from the permanent pool. The stream function assessment will follow the Nebraska Stream Condition Assessment Procedure (NeSCAP) as developed by the USACE (2016) and will include a formal stream condition assessment report for existing conditions and design conditions. This includes desktop preparations, field work, and the development of documents required for the final report.

3.3 Alternatives Analysis

Preliminary design task only; no additional services required.

3.4 Determine 404 Permitting and Mitigation Requirements

Preliminary design task only; no additional services required.

3.5 USACE 404 Preapplication Meeting

Prepare for, conduct, and document a pre-application meeting with USACE Regulatory regarding the 404 permit, project impacts, and mitigation requirements.

3.6 404 Application Package

Complete the 404 application and prepare a submittal package with project information for USACE review. The package will include the delineation report and the stream conditions assessment report, Pre-Construction Notification (PCN) document, mitigation plan, and construction plan sheets for the project.

3.7 Mitigation Design Coordination and Review

Provide mitigation requirements and assist in the development of mitigation strategies and design approaches to be implemented on the Hundahl property. Provide input and review of construction documents to ensure the mitigation plan is implemented within the current construction project.

3.8 Mitigation Report and Monitoring Plan

Develop the final mitigation report and monitoring plan that are required for the issuance of the 404 permit from the USACE.

3.9 Address USACE Comments and Resubmit (1)

Revise and update permit application documents to address one round of comments from the USACE on the 404 permit application package and resubmit.

4 GEOTECHNICAL SERVICES

4.1 Review Existing Information

Preliminary design task only; no additional services required.

4.2 Develop Boring and Soil Sampling Plan

Preliminary design task only; no additional services required.

4.3 Geotechnical Modeling

Modeling and geotechnical design of in-situ and w/ project conditions for all applicable geotechnical considerations for project including seepage, settlement, and stability conditions. Develop dam design requirements and site-specific layouts of dam features.

4.4 Soil Borings and Testing

Perform all drilling, sampling and associated field work to conduct, log, sample and document all below ground investigations for the project. Includes all in laboratory testing of geotechnical samples to report design parameters to be used in geotechnical design.

4.5 Develop Geotechnical Report

Develop the geotechnical report and draft necessary figures to document the geotechnical findings and design recommendations for the Silver Creek 35A significant hazard dam.

5 MODELING AND PRELIMINARY DESIGN

All subtasks are preliminary design only; no additional services required.

6 WATER SUSTAINABILITY FUND GRANT APPLICATION

6.1 Coordination and Meetings/Reviews with Papio NRD and NDNR

Perform necessary agency coordination to determine grant feasibility and components to develop of a strong application for the project.

6.2 Benefits Calculations

Modeling and calculations required to determine the flood benefits, environmental benefits, , and any other monetary benefits to use to support the financial need for the project.

6.3 Preparation and Submittal of WSF Application

Prepare a grant application for the Water Sustainability Fund. Funding application will include all required technical, environmental and economic discussions to highlight all project features that pertain to the Fund's project criteria and scoring system. All services required to submit and follow up on the grant application are included.

7 FINAL DESIGN AND CONSTRUCTION DOCUMENTS

7.1 Principal Spillway and Auxiliary Spillway/Training Dike Design

Develop the principal spillway and auxiliary spillway alignments and elevation profiles. Develop principal spillway camber as a function of geotechnical recommendations based on anticipated settlement. Determine auxiliary spillway and training dike geometry to safely return water to the channel on the project site.

7.2 Internal Drainage Design

Based on anticipated geotechnical recommendations, design the internal drainage system, site specific layout, and provide details for cleanouts, inspection ports, and elevations.

7.3 Structural Design

Provide detailed structural plans and detail drawings for placement and layout of principal spillway risers, required gates and valves, and impact basin.

7.4 Instrumentation Layout

Based upon recommendations in geotechnical reports, provide layout and details for placement of proposed piezometers, settlement plates and movement markers.

7.5 Stream Mitigation Design

Develop design concepts and details to meet the stream mitigation requirements. Coordinate with NRD on feasible site locations/design alternatives. Perform grading and calculations to estimate quantities.

7.6 Site Grading, Borrow, and Earthwork Balance Plan

Perform site grading for the proposed fill and excavations required for the project. Develop a borrow plan that balances the earthwork fill material requirements and excavation volumes to ensure sufficient material is available for construction of the project. Grading of borrow areas in main reservoir and prioritization of borrow sources to be identified and documented.

7.7 SWPP Planning and Design

Develop the seeding plan and placement of stormwater pollution prevention components throughout the project site to stabilize disturbed area and prevent sediment transport in runoff.

7.8 Quantities and Cost Estimating

Includes efforts to calculating quantities for material and bid line items for estimating an opinion of probable cost to provide to the Papio NRD for budgeting and project bidding.

7.9 Final Design Report

Develop a design report that summarizes site specific conditions, inputs, and decisions for project components referenced above.

7.10 50% Construction Plans

Perform necessary drafting and development of plan sheets to develop a 50% set of construction plans for the design work referenced above for review by the Papio NRD.

7.11 90% Construction Plans

Update the 50% plan set with additional detail and incorporate changes from comments received during plan review. Perform necessary drafting to develop a 90% set of construction plans for the design work referenced above for review by the Papio NRD and NDNR Dam Safety.

7.12 Final Construction Plans

Update the 90% plan set with final details and incorporate changes from comments received during plan review to be used for project bidding.

7.13 Prepare Project Specifications

Prepare technical project specifications required for construction and NDNR review. Populate NRD's most recent front-end specifications with all required project information.

7.14 Prepare Emergency Action Plan

Prepare EAP in accordance with current NDNR requirements, including all communication tree needs and breach routing. Deliverable is executable EAP Plan, approved by NDNR.

8 STATE PERMITTING

8.1 NDEE - NPDES

Prepare permit application for the NPDES permit and submit to NDEE. Task includes any permit revisions and agency coordination required for permit.

8.2 NDNR – Dam Approval

Prepare permit application for the review and approval of dam plans from the NDNR Dam Safety required for dam construction. Task includes any permit revisions and agency coordination required for permit.

8.3 NDNR – Storage of Water

Prepare permit application to impound water from the NDNR Dam Safety required for dam construction. Task includes any permit revisions and agency coordination required for permit.

9 PROJECT BIDDING

9.1 Preparation of Bid Documents

Prepare necessary bid documents, coordinate the bid announcement, distribute information to contractors about the advertised bid package. All information to contractors will be transmitted

electronically along with information about which printers have the plans available to print hard copies. Prepare and process any bid addendum for bid clarifications as needed.

9.2 Pre-Bid Meeting

Preparation for and attendance of one pre-bid meeting with interested contractors and other project stakeholders. The meeting will visit the project site and include a review of the plans and address any inquiries about the project. Prepare meeting minutes and responses to questions asked during the meeting to be distributed to all interested parties.

9.3 Contractor Coordination

Answer questions and provide any additional design information requested by contractors interested in bidding the project.

9.4 Attend Bid Letting

Attendance of the bid opening and collection of bids. Perform verification of bids and bonds and develop summary of bids.

9.5 Review Bids and Letter of Recommendation

Review bids and gather background information and references on contractors to make engineer's recommendation of award. Provide a formal written letter of recommendation to the Papio NRD.

9.6 Contract Execution

Upon award of the project by the Papio NRD board, a Notice of Award will be prepared by Houston Engineering and followed by a Notice to Proceed once all applicable information from contractor is received.

10 CONSTRUCTION OVERSIGHT SERVICES

10.1 Construction Kickoff Meeting

Preparation for and attendance of a pre-construction meeting with the selected contractor, the Papio NRD and other stakeholders to discuss all pertinent construction-related project issues. This includes preparation and distribution of meeting minutes.

10.2 Submittal Review

Coordinate with the contractor, review product submittals and shop drawings, and compare to project specifications for approvals.

10.3 On-Site Construction Observation and Field Test/Surveys

Includes on-site observation of the project to ensure the contractor is constructing the project as designed. Includes travel to and from the site, and inspections of all materials placed, quality control surveys, monitoring instrumentation, and performing compaction testing of earth embankments. Includes coordination with the contractor on necessary changes based on observations. Assumes a seven-month construction window, with staff on site full-time for five months and part-time observation for two months.

10.4 Weekly Construction Reports

Develop construction reports with detailed descriptions and photos of construction activities and submit to the Papio NRD on a weekly basis.

10.5 Pay Request and Change Order Processing

Review requests, verify quantities and process pay requests and change orders.

10.6 Preparation of As-Built

Data collection of final site conditions upon completion of construction required for the as-built drawings. Prepare as-built drawings to document the projects as constructed and provide an electronic copy to the Papio NRD.



Silver Creek 35A Small Flood Control and Water Quality Structure
Amendment 1 for WSF Application Preparation, Final Design, Permitting, Bidding and Construction Services
Attachment 2 to Exhibit K - Fee Estimate
Papio-Missouri River Natural Resources District
Burt County, NE

Houston Engineering											
Tasks	Prj Manager	PIC	Sr Engineer	Prj Engineer	Prj Engineer	Roenglk	PE Staff (Varies)	Assistant Eng	Admin	Expenses	Total
1 Project Management											
1.1 Client Coordination and Meetings	12	6								\$ 4,752.00	
1.2 Agency Coordination (NDNR, Burt County)	8	4								\$ 3,168.00	
1.3 Project Administration and Internal Coordination	12									\$ 2,976.00	
1.4 Invoicing and Schedule Updates	10								20	\$ 4,980.00	
Task 1 Total	\$10,416	\$2,960	\$0	\$0	\$0	\$206	\$206	\$172	\$125		\$15,876
2 Survey and Mapping											
2.1 Initial Site Survey											
2.2 Data Gathering, Processing, and Basemap Development											
2.3 Drone Flights (1 Post Project)											
2.4 Topography Survey and Processing											
Task 2 Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,160	\$0	\$550	\$7,770
3 Environmental Assessments and Permitting											
3.1 Wetland Delineation - Desktop, Field Assessment, and Reporting											
3.2 NeSCAP - Desktop, Field Assessment, and Reporting											
3.3 Alternatives Analysis											
3.4 Determine 404 Permitting and Mitigation Requirements											
3.5 USACE 404 Preapplication Meeting	1										
3.6 404 Application Package	1										
3.7 Mitigation Design Coordination and Review	2										
3.8 Mitigation Report and Monitoring Plan	4										
3.9 Address USACE Comments and Resubmit	2										
Task 3 Total	\$2,480	\$0	\$0	\$10,416	\$0	\$0	\$2,472	\$14,620	\$0	\$500	\$30,488
4 Geotechnical Services											
4.1 Review Existing Information											
4.2 Develop Boring and Soil Sampling Plan											
4.3 Geotechnical Modeling	2		40							\$65,240.00	
4.4 Soil Borings and Testing			4							\$103,474.00	
4.5 Develop Geotechnical Report			20							\$26,980.00	
Task 4 Total	\$496	\$0	\$17,216	\$0	\$78,542	\$0	\$0	\$3,440	\$0	\$95,000	\$195,694
5 Modeling and Preliminary Design											
5.1 Sediment Load Modeling and Reservoir Sizing											
5.2 Hydrologic Modeling											
5.3 Hydraulic Modeling and Outlet Structure Sizing											
5.4 Breach Routing											
5.5 Hazard Class Determination											
5.6 Embankment Design											
5.7 Alternatives Analysis Design and Drafting											
5.8 Sheets Setup and Preliminary Schematics											
5.9 Preliminary Investigations Technical Memorandum											
5.10 Cost Estimates											
Task 5 Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6 Water Sustainability Fund Grant Application											
6.1 Coordination and Meetings/Reviews with Papio NRD and NDNR	8	2									
6.2 Benefit Calculations											
6.3 Preparation and Submittal of WSF Application	24	4	4	16	24		24		8		
Task 6 Total	\$7,936	\$1,776	\$1,076	\$4,960	\$4,944	\$0	\$4,944	\$0	\$1,000	\$0	\$26,036



Task	Additional time required for stream mitigation site only	Additional time required for stream mitigation site only	Additional time required for stream mitigation site only	Additional time required for stream mitigation site only	Additional time required for stream mitigation site only
Notes/Assumptions					
3.1 Additional time required for stream mitigation site only					
3.2 Additional time required for stream mitigation site only					
3.6 Assumes project falls within limitations of a Nationwide or Regional General Permit and no Individual Permit or 404(b)(1) alternatives analysis is required. Does not include any additional field work.					
3.7 Assumes compensatory mitigation will occur at previously identified locations on the Hurdahl property					
10.3 Construction occurs over 7 months; 5 months for full observation and travel for 6-days a week, 2 months part-time observation and travel (4 partial days a week).					