WATER SUSTAINABILITY FUND APPLICATION FOR SPRINGFIELD CREEK STABILIZATION EVALUATION AND PRELIMINARY DESIGN

March 2025

OVERVIEW

This document contains the cover letter, letters of support, completed WSF application, and bibliography for the Springfield Creek Stabilization Evaluation and Preliminary Design Project.

Please direct any questions on the application or any requests for referenced information to Ian Ghanavati (ighanavati@papionrd.org).

Submitted by the Papio NRD on behalf of the Southern Sarpy Watersheds Partnership

PAPIO
MISSOURI RIVER
NATURAL RESOURCES DISTRICT

March 25, 2025

Nebraska Natural Resources Commission
301 Centennial Mall South
P.O. Box 94676
Lincoln, NE 68509-4676

RE: Water Sustainability Fund Application – Springfield Creek Stabilization Evaluation and Preliminary Design

Dear Commissioners,

The Papio-Missouri River Natural Resources District (District) and the Southern Sarpy Watersheds Partnership (SSWP) have worked closely and collaboratively since 2016 to develop policies, programs, and projects intended to protect and preserve the natural resources present in the southern Sarpy County area. The proposed Springfield Creek Stabilization project is one of the priority projects identified by the SSWP and if successful will have far reaching effects including the preservation of natural resources, the protection of private property and public infrastructure, and the improvement of stream water quality.

The District, on behalf of the SSWP, is requesting $240,000 in financial assistance from the Water Sustainability Fund for evaluation, preliminary design, and permitting of the project. These are fundamental steps towards realizing the project benefits stated above.

The District's Board of Directors approved the Watershed Management Plan of the Southern Sarpy Watersheds Partnership, which contains this project, on April 9, 2024. The Board of Directors also approved the submission of this project application on February 13, 2025. The project has the full support of the District. If you have any questions or require any further information, please contact me at (402) 444-6222.

Sincerely,

John Winkler
General Manager

Sarpy County Board of Commissioners

1210 GOLDEN GATE DRIVE #1250
PAPILLION, NE 68046-2895
593-4155
www.sarpy.gov
ADMINISTRATOR Bonnie N. Moore
DEPUTY ADMINISTRATOR Scott Bovick
CHIEF FINANCIAL OFFICER Dan Toleikis

March 27, 2025

Nebraska Natural Resources Commission
301 Centennial Mall South
P.O. Box 94676
Lincoln, NE 68509-4676

RE: Water Sustainability Fund Application – Springfield Creek Stabilization Evaluation and Preliminary Design

Dear Commissioners,

As the fastest growing county in the state of Nebraska, Sarpy County is uniquely committed to advancing development that spurs economic activity and new growth while preserving our natural resources. The Sarpy County Board of Commissioners is glad to support the Sarpy cities and our community partners in seeking water sustainability funding for such efforts.

These funds would support the Springfield Creek Stabilization project, which will benefit not just the City of Springfield but all of southern Sarpy County.

Sarpy County's greatest growth potential is concentrated in our southern region. As the area develops, a continuous segment of Springfield Creek is at substantial risk of future widening due to erosive rain events and bank degradation that will threaten public and private infrastructure. The anticipated channel widening would impact up to 43 acres of already developed land valued in total at approximately $10.1 million.

The Papio NRD on behalf of the Southern Sarpy Watersheds Partnership is seeking $240,000 in Water Sustainability Funds to fully assess the existing bank condition, generate alternative design solutions, recommend a course of action and produce sufficient technical materials to support next steps, among other things.

The Papio NRD has a long history of executing successful stream stabilization projects within its district, and we are confident this project would be similarly managed to the benefit of tens of thousands of Sarpy County residents.

Thank you for your consideration.

Sincerely,

David Klug
Chair, Sarpy County Board of Commissioners

Cc: Deb Houghtaling, County Clerk/ROD

SPRINGFIELD
NEBRASKA

March 26, 2025

Nebraska Natural Resources Commission
301 Centennial Mall South
P.O. Box 94676
Lincoln, NE 68509-4676

RE: Water Sustainability Fund Application – Springfield Creek Stabilization Evaluation and Preliminary Design

Dear Commissioners and Scoring Committee Members,

For years, the City of Springfield (the City) has worked closely with the Papio-Missouri River Natural Resources District on developing a comprehensive management plan centered on the water quality and quantity of not just the City but all of southern Sarpy County. Careful study, planning and outreach has been completed by the entire Southern Sarpy Watersheds Partnership to identify the challenges facing the area and develop realizable solutions. The concept for the Springfield Creek Stabilization project proposed in this application was produced by this effort and is an opportunity to address the challenges which face an important area of the City; an area which contains tremendous value in its natural resources, its recreation, and its productive commercial and public use.

As a member of the Southern Sarpy Watersheds Partnership and as the governing jurisdiction of the project area, the City supports the evaluation, design, and eventual construction of a bank stabilization project along Springfield Creek. This project is vital in sustaining the long-term safety, value, and prosperity of an area that serves not just the City but the larger community within southern Sarpy County.

We thank you for your consideration and encourage you to approve the Water Sustainability Fund application for this project.

Sincerely,

Kathleen R. Gottsch
City Administrator & Treasurer
City of Springfield

NEBRASKA NATURAL RESOURCES COMMISSION

Water Sustainability Fund

Application for Funding

Section A.

ADMINISTRATIVE

PROJECT NAME: Springfield Creek Stabilization – Evaluation and Preliminary Design

SPONSOR'S *PRIMARY CONTACT INFORMATION* **(Not Consultant's)**

Sponsor Business Name: Papio-Missouri River Natural Resources District

Sponsor Contact's Name: John Winkler, General Manager

Sponsor Contact's Address: 8901 S. 154th Street, Omaha, NE, 68138-3621

Sponsor Contact's Phone: 402-444-6222

Sponsor Contact's Email: ighanavati@papionrd.org

1. **Funding** amount requested from the Water Sustainability Fund:

   Grant amount requested. $ 240,000

   - If requesting less than 60% cost share, what %? N/A

   If a loan is requested amount requested. $ N/A

   - How many years repayment period? N/A
   - Supply a complete year-by-year repayment schedule. N/A

2. **Neb. Rev. Stat. § 2-1507 (2)**

   Are you applying for a **combined sewer overflow project**? YES☐ NO☒

   If yes:

- Do you have a Long Term Control Plan that is currently approved by the Nebraska Department of Environmental Quality? YES☐ NO☒
- Attach a copy to your application. N/A
- What is the population served by your project? N/A
- Provide a demonstration of need. N/A
- **Do not complete the remainder of the application.**

3. **Permits Required/Obtained** Attach a copy of each that has been obtained. For those needed, but not yet obtained (box **"NO"** checked), 1.) State when you will apply for the permit, 2.) When you anticipate receiving the permit, and 3.) Your estimated cost to obtain the permit.

(N/A = Not applicable/not asking for cost share to obtain)
(Yes = See attached)
(No = Might need, don't have & are asking for 60% cost share to obtain)

G&P - T&E consultation (required)	N/A☒	Obtained: YES☐	NO☐
DNR Surface Water Right	N/A☒	Obtained: YES☐	NO☐
USACE (e.g., 404/other Permit)	N/A☐	Obtained: YES☐	NO☒
FEMA (CLOMR)	N/A☒	Obtained: YES☐	NO☐
Local Zoning/Construction	N/A☒	Obtained: YES☐	NO☐
Cultural Resources Evaluation	N/A☒	Obtained: YES☐	NO☐
Other (provide explanation below)	N/A☒	Obtained: YES☐	NO☐

One of the goals of this project will be to develop the necessary technical materials to submit for Section 404 permitting and conduct any required coordination with the U.S. Army Corps of Engineers to secure permitting. The proposed project is a channel and bank stabilization project in a major stream segment, making the need for Section 404 permitting unavoidable.

4. **Partnerships**

List each Partner / Co-sponsor, attach documentation of agreement:

The Papio-Missouri River Natural Resources District (Papio NRD) will be acting as the primary sponsor of the Springfield Creek Bank Stabilization Project (Project). The Project was identified as a priority in the Southern Sarpy Watersheds Partnership (SSWP) 2024 Watershed Management Plan[1]. The Papio NRD serves as the administering agent for the SSWP, which also includes the following members: City of Springfield (Springfield), City of Bellevue (Bellevue), City of Gretna (Gretna), City of Papillion (Papillion), Sarpy County

Identify the roles and responsibilities of each Partner / Co-sponsor involved in the proposed project regardless of whether each is an additional funding source.

Papio-Missouri River Natural Resources District (Papio NRD):
The Papio NRD is a co-sponsor and the lead agency for this project. As the acting administering agent of the Southern Sarpy Watersheds Partnership (SSWP), the Papio NRD's role will be to serve as the fiscal agent for the consulting contract, manage the consultant selected for the engineering evaluation and preliminary design, and coordinate with the other members of the SSWP on project progress and final work products.

City of Springfield:
As a member of the SSWP and a governing jurisdiction of the project area, Springfield is a project co-sponsor and will coordinate on project progress and review all work products.

City of Bellevue:
As a member of the SSWP, Bellevue is a project co-sponsor and will coordinate on project progress and review all work products.

City of Gretna:
As a member of the SSWP, Gretna is a project co-sponsor and will coordinate on project progress and review all work products.

City of Papillion:
As a member of the SSWP, Papillion is a project co-sponsor and will coordinate on project progress and review all work products.

Sarpy County:
As a member of the SSWP and a governing jurisdiction of the project area, Sarpy County is a project co-sponsor and will coordinate on project progress and review all work products.

5. **Other Sources of Funding**

Identify the costs of the entire project, what costs each other source of funding will be applied to, and whether each of these other sources of funding is confirmed. If not, please identify those entities and list the date when confirmation is expected. Explain how you will implement the project if these sources are not obtained.

The total project cost is estimated to be $400,000. This cost will support hiring a professional engineering firm to assist in completing an engineering evaluation, preliminary design, and permitting for the Project. Local cost-share will be provided by the Southern Sarpy Watersheds Partnership Fund, which is administered by the Papio NRD. The full project cost and timeline breakdown is included below.

Task No.	Task Description	Duration	Total Cost	Papio NRD Cost	WSF Cost
1	Project Management & Coordination	300 days	$ 20,000.00	$ 8,000.00	$ 12,000.00
2	Engineering Evaluation, Analysis, & Reporting	60 days	$ 60,000.00	$ 24,000.00	$ 36,000.00
3	Preliminary Design	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
4	Permitting	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
			$ 400,000.00	**$ 160,000.00**	**$240,000.00**

Table 1. Project Tasks, Costs, and Duration

6. **Overview**

In 1,000 words *or less*, provide a brief description of your project including the nature/purpose of the project and its objectives. Do not exceed one page!

Water Sustainability Funds are requested to support the engineering evaluation and preliminary design of a stream bank and grade stabilization project on a continuous segment of Springfield Creek. Without intervention, this segment is expected to experience significant channel degradation and widening, threatening public and private infrastructure within the City of Springfield. This project will fully assess the existing bank condition and anticipated future infrastructure impacts, generate alternative design solutions, recommend a course of action, secure 404 permitting and produce sufficient technical materials to support next steps which would include additional grant applications, final design, and construction.

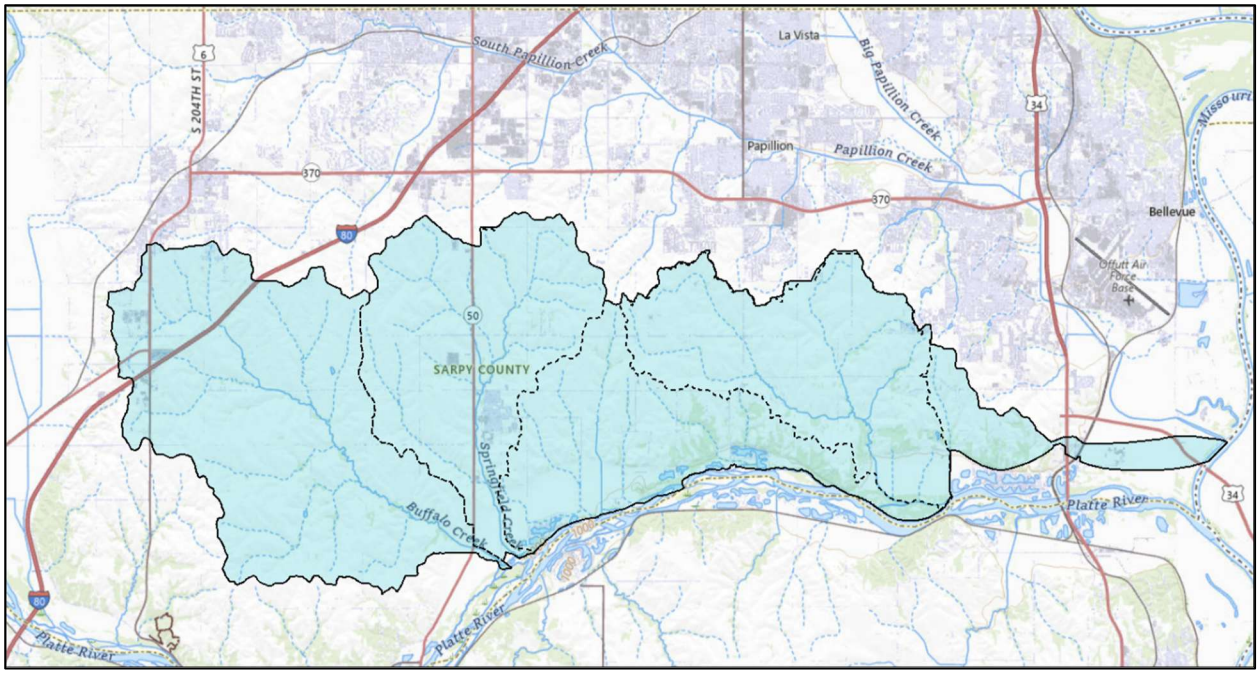

Figure 1. Southern Sarpy Watersheds Partnership Watershed Management Area

This project is sponsored by the Southern Sarpy Watersheds Partnership (SSWP). In 2016, the SSWP was formed by the Cities of Springfield, Bellevue, Gretna, and Papillion, Sarpy County and the Papio NRD. In anticipation of the rapid urban and sub-urban development of southern Sarpy County, the SSWP developed a Watershed Management Plan (WMP)[1] to identify and protect the natural resources and local infrastructure within its Watershed Management Area (Figure 1), which includes the major sub-basins of Buffalo Creek, Springfield Creek, and Zwiebel Creek. The WMP was finalized in 2024 and includes baseline assessments of the hydrology, hydraulics, water quality, environmental resources, and stream conditions in the Watershed Management Area. This data was ultimately used to produce policies and projects to be implemented within the watershed. One of the primary project recommendations is the stream bank and grade stabilization project through the City of Springfield.

The existing land use in the Springfield Creek Watershed is primarily agricultural. As the area develops, increased impervious land use and storm sewer connectivity from commercial and residential development will result in higher stream flow volumes and peak rates and therefore more erosive flows following rain events. Additionally, the soil type within the Watershed is predominantly Peoria Loess which is naturally susceptible to erosion even at low velocities and will face an increased risk of rapid erosion due to the expected peak flow increases. Finally, the Watershed is anticipated to develop from upstream to downstream, making downstream communities such as the City of Springfield particularly vulnerable to increased stream flow and channel degradation as the effect of additional impervious area accumulates upstream.

When assessed in the SSWP WMP, a continuous segment of Springfield Creek which runs through the City of Springfield was found to be at substantial risk of future widening

due to bank degradation (Figure 2). The segment, approximately 1.3 miles in length, has 3 major road crossings at Platteview Road, Main Street, and Pflug Road and two additional crossings by the MOPAC trail. The anticipated channel widening, shown as the red “existing setback” boundary in Figure 2, would impact up to 43 acres of already developed land with total valuations of approximately $10.1 million. This includes commercial parcels, such as a Casey’s Gas Station and various automotive businesses, and public parcels, such as the Sarpy County Fairgrounds and sections of the MOPAC trail. Stream degradation is expected to be a major issue across the entire SSWP Watershed Management Area; in many cases where the land transition is yet to occur, stabilization measures can and will be incorporated alongside new development in cooperation with the developer. For this continuous segment of Springfield Creek however, stabilization measures must be evaluated and implemented to protect the already existing infrastructure.

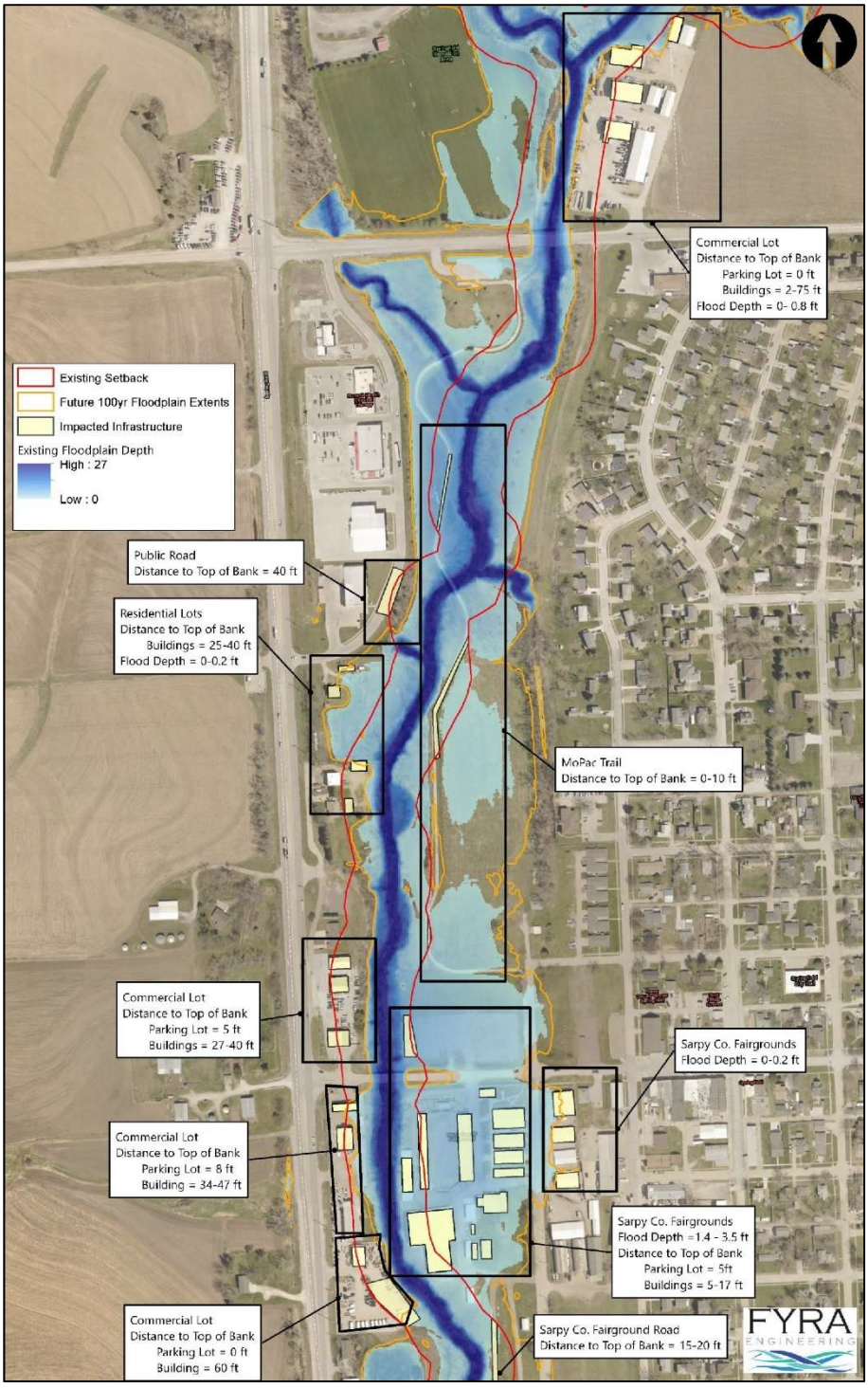

Figure 2. Springfield Creek Setback and Impacts

This project would provide funding for the engineering evaluation and preliminary design of a stream bank and grade stabilization project through the identified segment of Springfield Creek. The project will:

- Fully assess the condition of the existing stream bank and grade through the project segment, as well as any existing bank or grade protection
- Identify future infrastructure impacts and necessary project stakeholders
- Generate alternative design solutions for bank stabilization
- Recommend a course of action
- Secure 404 permitting
- Produce a set of preliminary design (60%) plans for the recommended design with an engineer's opinion of probable cost
- Produce a technical report detailing the project evaluation and design, as well as an assessment of the necessary land rights and funding requirements for the project to move forward

These materials will ultimately be utilized for final design and construction, as well as application to additional grants at the local, state, and federal level.

7. **Project Tasks and Timeline**

Identify what activities will be conducted to complete the project, and the anticipated completion date.

For multiyear projects please list (using the following example):

Tasks	Year 1$	Year 2$	Year 3$	Remaining	Total $ Amt.
Permits	$18,000				$18,000
Engineering		$96,000			$96,000
Construction		$87,000	$96,000		$183,000
Close-out				$8,000	$8,000
				TOTAL	$305,000

- What activities (Tasks) are to be completed.
- An estimate of each Tasks expenditures/cost per year.
- Activities in years 4 through project completion under a single column.

The project is not anticipated to take longer than one year and a 10 month period has been identified for the project. The exact duration will be determined in coordination with the selected consultant. The table below represents the anticipated tasks, fee, and duration.

Task No.	Task Description	Duration	Total Cost	Papio NRD Cost	WSF Cost
1	Project Management & Coordination	300 days	$ 20,000.00	$ 8,000.00	$ 12,000.00
2	Engineering Evaluation, Analysis, & Reporting	60 days	$ 60,000.00	$ 24,000.00	$ 36,000.00
3	Preliminary Design	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
4	Permitting	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
			$ 400,000.00	**$ 160,000.00**	**$240,000.00**

Table 1. Project Tasks, Costs, and Duration

8. **IMP**

Do you have an **Integrated Management Plan** in place, or have you initiated one? YES☒ NO☐ Sponsor is not an NRD☐

Section B.

DNR DIRECTOR'S FINDINGS

Prove Engineering & Technical Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 004)

1. Does your project include physical construction (defined as moving dirt, directing water, physically constructing something, or installing equipment)?
YES☐ NO☒

If you answered "YES" you must answer all questions in section 1.A.
If you answer "NO" you must answer all questions in section 1.B.

If "YES", it is considered mostly structural, so answer the following:

1.A.1 Insert a feasibility report to comply with Title 261, Chapter 2, including engineering and technical data; N/A

1.A.2 Describe the plan of development (004.01 A); N/A

1.A.3 Include a description of all field investigations made to substantiate the feasibility report (004.01 B); N/A

1.A.4 Provide maps, drawings, charts, tables, etc., used as a basis for the feasibility report (004.01 C); N/A

1.A.5 Describe any necessary water and/or land rights including pertinent water supply and water quality information (004.01 D); N/A

1.A.6 Discuss each component of the final plan (004.01 E); N/A

1.A.7 When applicable include the geologic investigation required for the project (004.01 E 1); N/A

1.A.8 When applicable include the hydrologic data investigation required for the project (004.01 E 2); N/A

1.A.9 When applicable include the criteria for final design including, but not limited to, soil mechanics, hydraulic, hydrologic, structural, embankments and foundation criteria (004.01 E 3). N/A

If “NO”, it is considered mostly non-structural, so answer the following:

1.B.1 Insert data necessary to establish technical feasibility (004.02);

Based on the SSWP Watershed Management Plan’s[1] assessment (see Section A.6 - Overview above or Section B.1.B.3 below for discussion), the continuous segment of Springfield Creek identified in Figure 2 was recommended as a SSWP priority for stream bank and grade control project implementation to protect the health of the stream and its adjacent infrastructure. This WSF application proposes the next steps in that project, through engineering evaluation of the Springfield Creek project segment and subsequent preliminary design of bank stabilization measures.

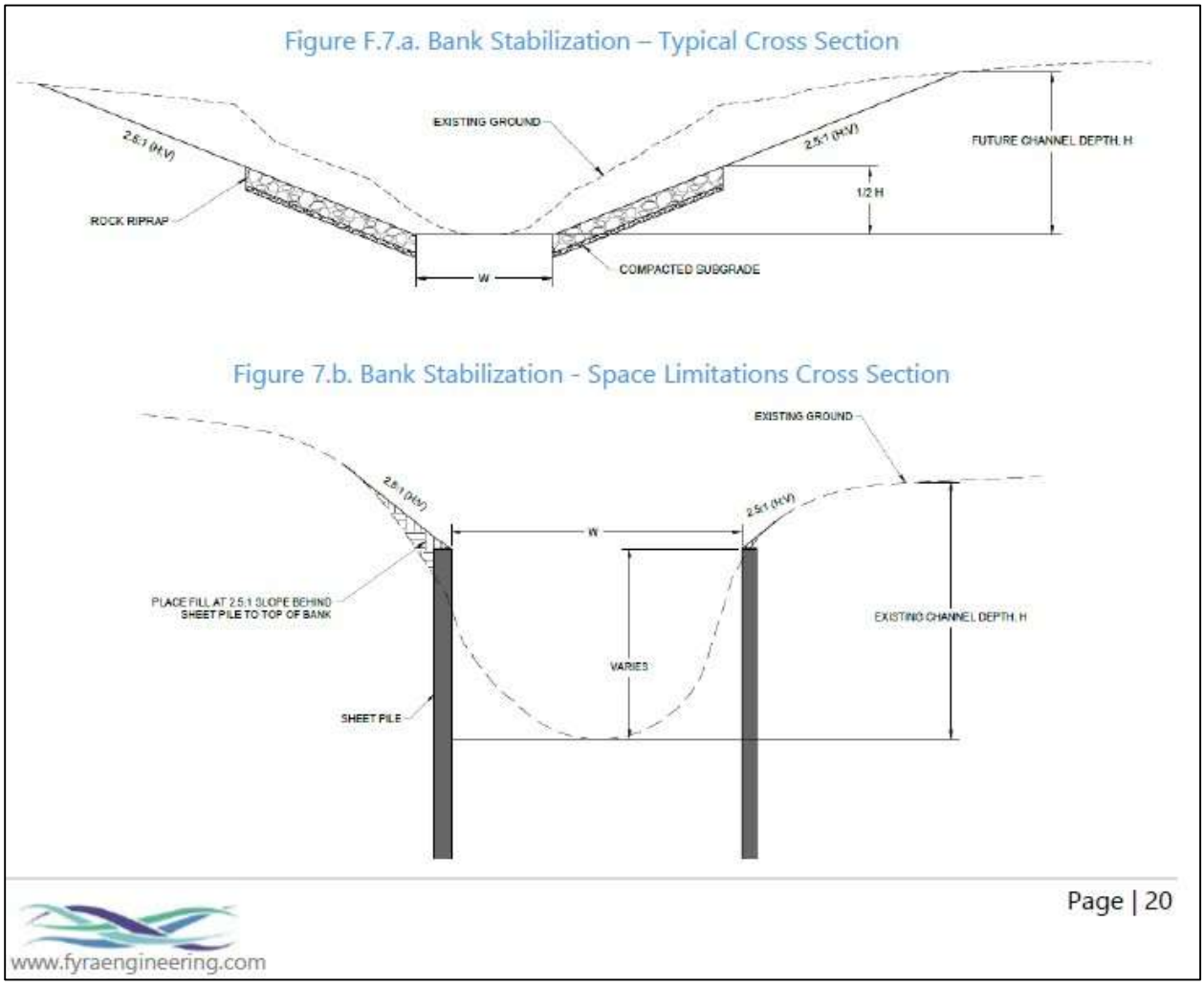

Figure 3. SSWP Watershed Management Plan[1] Bank Stabilization Concepts, Typical Cross Sections

As necessary, the assumptions and conclusions reached in the SSWP Watershed Management Plan[1] will be revisited and refined to assess the existing condition of the

identified project stream segment and its future impacts to existing infrastructure. The Watershed Management Plan[1] already provides concepts for bank stabilization (Figure 3) which will be considered alongside additional alternatives based on available space, cost, permitting impacts, and other relevant factors. Both structural (e.g. rip-rap trenches, vertical sheet pile) and non-structural (e.g. bioengineering solutions, right-of-way acquisition for stream buffer) will be considered for use in combination along the project stream segment, with a high degree of required structural intervention expected due to the close proximity of infrastructure along Springfield Creek. Results of the evaluation and recommendations for next steps and design solutions will be presented to and discussed with the SSWP for input. Ultimately, 60% preliminary design plans will be produced for a selected approach, as well as a technical report detailing the project evaluation and design and an assessment of land rights and funding requirements. Further details on the plan of development and its methods can be found in the following section.

Figure 4. Successful Bank Stabilization of the Little Papio Channel by the Papio NRD

This project will be managed by the Papio NRD, which has a long history of successful stream stabilization projects within its District that have followed similar approaches. Figure 4 provides a photo of a successful slough repair and bank stabilization project along the Little Papillion Creek by the Papio NRD. The engineering evaluation and

preliminary design will be completed by a qualified engineering firm with staff licensed to practice as Professional Engineers in the State of Nebraska. Procurement of professional services will be competitive and follow the Papio NRD's Policy No. 15.2: Purchasing – Professional Services[2].

1.B.2 Discuss the plan of development (004.02 A);

A general workplan with tasks and associated fees has been developed to guide the completion of this project and is included again in the table below. Additional description of each task is also included. The major tasks include project management and coordination, engineering evaluation, analysis, and reporting, preliminary design, and permitting.

Task No.	Task Description	Duration	Total Cost	Papio NRD Cost	WSF Cost
1	Project Management & Coordination	300 days	$ 20,000.00	$ 8,000.00	$ 12,000.00
2	Engineering Evaluation, Analysis, & Reporting	60 days	$ 60,000.00	$ 24,000.00	$ 36,000.00
3	Preliminary Design	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
4	Permitting	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
			$ 400,000.00	**$ 160,000.00**	**$240,000.00**

Table 1. Project Tasks, Costs, and Duration

Project Management and Coordination

This task will include a kickoff meeting with the Papio NRD and the City of Springfield to discuss the goals of the project and introduce the primary points of contact. This task will also include all project coordination meetings and presentations, which will include in-person meetings and/or calls between the engineering consultant and the Papio NRD and City of Springfield on project direction, as well as more formal progress updates to the entire SSWP and one summary presentation to the Papio NRD Board of Directors. Coordination will generally be undertaken on major project components where review and input from stakeholders will be required including on proposed designs and alternatives, associated costs, funding sources, and the final report.

This task will also include necessary budget for the engineering consultant to prepare monthly invoices, progress reports, meeting agendas and meeting notes.

Engineering Evaluation, Analysis, and Reporting

This task will include desktop data collection, field investigation, and conceptual plan development to propose design alternatives and associated cost and permitting requirements. This task's goal will be to fully assess the problem, define project criteria

and constraints, generate probable solutions and determine a recommended path forward to be taken into the preliminary design and permitting tasks.

The desktop data collection will consist primarily of a review of the information gathered for and produced by the SSWP Watershed Management Plan[1]. This data will be provided by the Papio NRD and assessed to determine any knowledge gaps for the Springfield Creek Stabilization project. Data to be reviewed includes, but is not limited to:

- LiDAR topographic information to assess geomorphic evolution of the stream
- Existing infrastructure data, including utilities and road crossings, to assess likely impacts
- Existing hydrologic and hydraulic information pertaining to the project, to assess stream flow conditions
- Existing environmental resources and stream conditions assessment from the SSWP Watershed Management Plan[1]

The field investigation will consist of an in-person site visit to the Springfield Creek project stream segment. The field investigation will assess the existing conditions of the project segment, including its bank conditions and the infrastructure present. Topographic survey will be completed to collect stream cross-section information for evaluation and design. The results of the desktop data and in-field investigations will be summarized as appendices in the final report.

The evaluation will include conceptual plan development consisting of potential alternatives for stabilization along the project segment. Conceptual plans will consider structural and non-structural approaches in combination along the segment, with associated assessments of permitting impacts and general probable construction costs. These factors, along with the relative ability to meet the project goals, will be compared to arrive at a recommended design approach for the Springfield Creek project segment. Example sheets/concepts will be produced as necessary.

Lastly, this task will include the delivery of a final report detailing the evaluation and design, as well as any coordination and outreach which was used to guide the project forward. It will also include a work plan and expected effort for the subsequent steps for the project. The report, in addition to the 60% plan set, will be submitted as final deliverables for the project and will be presented to the SSWP and to the Papio NRD Board of Directors.

<u>Preliminary Design</u>

This task will include the production of preliminary (60%) design drawings for the recommended design determined in the evaluation and analysis task. Such drawings will include a cover sheet, site plan with stationing, and typical sections/typical details along the site. Limits of right-of-way necessary for project access or construction will be identified, with legal descriptions prepared if needed. Project phasing will be outlined and included in the design report. A summary of quantities and engineer’s opinion of probable cost will also be provided.

Permitting

This task will include the development of the necessary documentation for submission of Section 404 permitting, as well as coordination with regulatory agencies. A pre-application meeting will be held with the U.S. Army Corps of Engineers to discuss compliance with Section 404 of the Clean Water Act. Wetland delineations will be completed for as necessary for locations identified as requiring stabilization. A stream assessment using the U.S. Army Corps of Engineers Nebraska Stream Condition Assessment Procedure (NeSCAP) will be completed to evaluate the physical and biological attributes of the stream and help determine potential impacts.

1.B.3 Describe field or research investigations utilized to substantiate the project conception (004.02 B);

The streams in the SSWP's Management Area are generally experiencing deteriorating stream health regarding water quality, stream stability, and habitat conditions. This effect is most apparent in the downstream mainstem channels, such as Springfield Creek, where active stream degradation and widening is already occurring. The SSWP Watershed Management Plan[1] completed a rapid field stream assessment, showing that just from existing land use the downstream main stems are already rated much more poorly for stability (Figure 5). These conditions are expected to accelerate as the land use transitions from primarily agricultural towards more urban and sub-urban use. The increasing impervious area and storm sewer connectivity will result in increased stormwater runoff volume and peak flow rates, which translates to higher channel velocities and shear stress on stream beds and banks. The streams, composed primarily of Peoria Loess, are naturally susceptible to erosion even at the lower existing velocities, compounding this effect. The loss of land, habitat, and stream function from channel widening, degradation and bank failure is expected and poses a major risk to existing infrastructure.

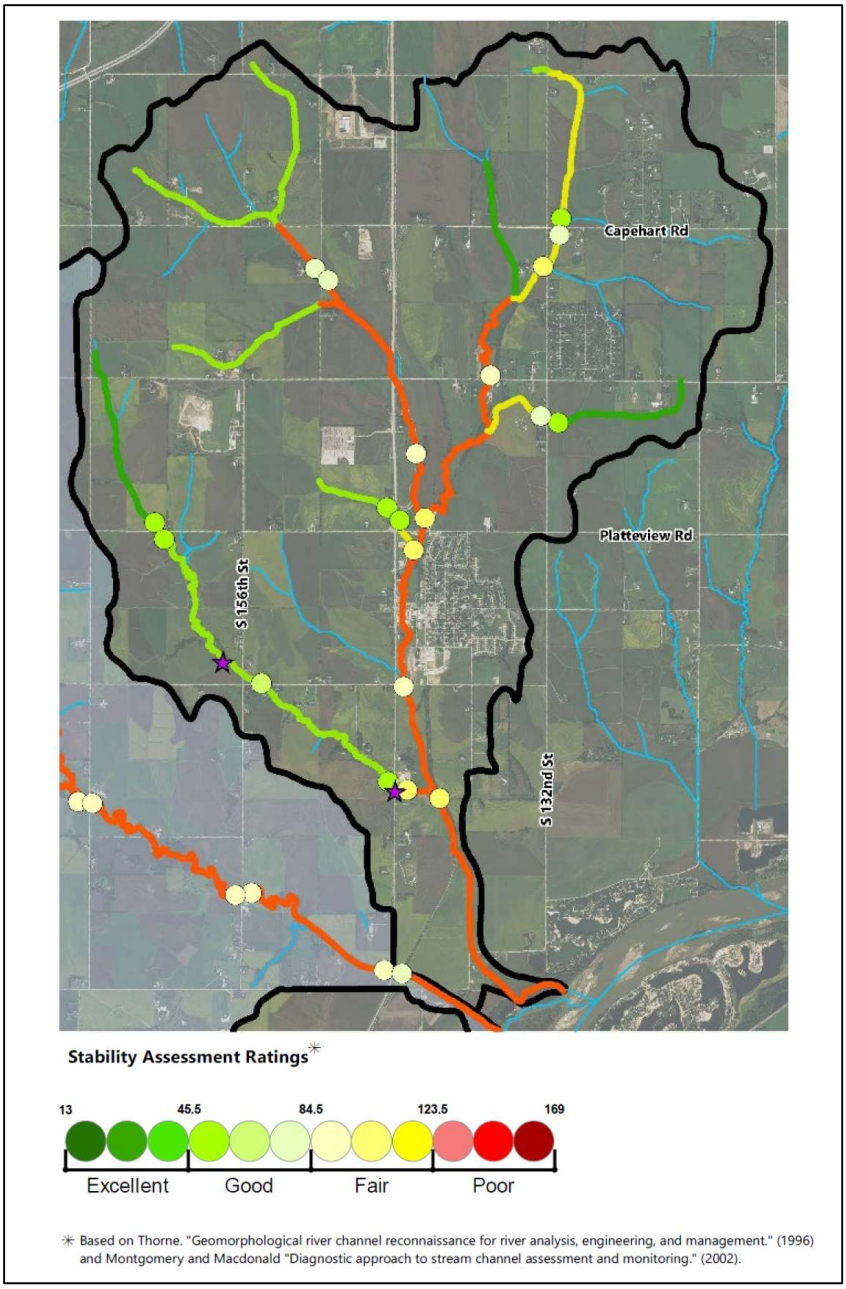

Figure 5. Springfield Creek Stream Stability Assessment Ratings

In 2017, the SSWP commissioned a Watershed Management Plan[1] for southern Sarpy County, which included an assessment of the potential severity of the widespread stream degradation and widening effect in the Management Area. The Watershed Management Plan[1], finalized in 2024, developed future degraded streambed elevation profiles for the main stems including Springfield Creek. The developed profiles considered existing hard points and grade control structures (such as road culverts or stabilized utility crossings) along the stream length, as well as a maximum degradation limit (approximately 30 feet) estimated at where harder clay soil is encountered underneath the existing loess soil. The information was used to project an estimated “stable slope” that the mainstems would

reach without additional intervention. Table 1 below shows the estimated degradation depth at the downstream end of the major crossings which occur on the continuous segment of Springfield Creek that is the focus of this project. Each crossing is expected to see 10+ feet of vertical degradation at future grade, showing that there is a clear risk to the existing infrastructure that must be mitigated with stream stabilization measures.

Infrastructure	Station	Estimated Degradation Depth - Downstream End (Feet)
Pflug Rd. Bridge	57 + 00	14
Main Street Bridge	85 + 71	15
MOPAC Trail Bridge	102 + 50	15
Platteview Road Bridge	115 + 10	13

Table 2. Springfield Creek Infrastructure and Degradation Estimates

Additionally, the SSWP has adopted a stream setback policy intended to prevent private property and infrastructure from being constructed too close to streams within an area of degradation risk. The recommended setback is based on the existing depth of the stream at the time of development and is calculated as three times the depth of the stream plus an additional fifty feet from the edge of the existing stream bottom on both sides of the channel. In areas of new development, this setback is preventative. Along Springfield Creek, this setback can be used to estimate the amount of infrastructure at risk to future damage due to stream widening and bank failure. The setback along the project segment includes 43 acres of land, composed of both private and public property, valued at approximately $10.1 million. See Table 3 and Figure 5 below. Not shown, but of additional value within the setback area, is the MOPAC trail on the east side of the stream and the newly constructed interceptor sanitary sewer. Stabilization of the stream will also protect these features and help reduce the risk of significant financial costs from degradation damage to the trail or the new sewer system.

Parcel ID	Owner	Assessed Value	Area (Ft^2)
010378758	SARPY COUNTY AGRL SOCIETY INC	$39,204	393
011234288	SARPY COUNTY & CITIES WASTEWATER AGENCY	$4,848	49,223
011589279	WILLIAMS ENTERPRISES LLC	$148,865	14,361
011589278	WILLIAMS ENTERPRISES LLC	$205,309	27,051
011589282	WILLIAMS ENTERPRISES LLC	$120,945	73,110
011234261	SARPY COUNTY & CITIES WASTEWATER AGENCY	$1,050	1,060
011156708	SARPY COUNTY & CITIES WASTEWATER AGENCY	$8,325	13,773
010404031	HAGERTY/CONNIE R	$363,961	68,560
011591617	CITY OF SPRINGFIELD	$0	4,552
010392548	MITCHELL KURT W & SUSAN R	$1,212,500	2,399
010765263	WILLIAMS ENTERPRISES LLC	$1,504,138	121,342
010404384	TURF MASTER DELUXE INC	$355,923	27,339
011575418	CASEY'S RETAIL COMPANY	$717,928	60,040
010764720	THE SARPY COUNTY AGRICULTURAL	$297,387	39,217

010404376	TURF MASTER DELUXE INC	$55,537	33,838
011575419	WILLIAMS ENTERPRISES LLC	$446,272	28,698
010764739	SARPY COUNTY AGRICULTURAL SOCIETY	$77,049	30,861
010404058	HR 50 PROPERTY LLC	$243,708	49,951
010356746	CITY OF SPRINGFIELD	$29,232	312,745
010764682	SARPY COUNTY AGRICULTURAL SOCIETY INC	$120,443	38,822
010383441	MEISINGER/JERRY G & BONNIE	$248,062	118,630
011594923	CITY OF SPRINGFIELD	$240	1,565
011594885	CITY OF SPRINGFIELD	$10,949	57
011594939	CITY OF SPRINGFIELD	$2,640	11,685
011589280	WILLIAMS ENTERPRISES LLC	$147,239	8,475
010380787	SPRINGFIELD FARM LLC	$517,069	69,164
010378685	SARPY COUNTY AGRICULTURAL	$315,570	19,099
010401504	THE SARPY COUNTY AGRICULTURAL	$78,350	284
010401512	SARPY COUNTY AGRICULTURAL SOCIETY	$234,960	44,881
010401830	SARPY COUNTY AGRICULTURAL SOCIETY	$280,566	21,465
010764747	SARPY COUNTY AGRICULTURAL SOCIETY	$35,206	23,416
011599010	SARPY COUNTY AGRICULTURAL	$388,158	3,754
010383395	GOTTSCH/LYLE A	$232,423	7,181
011255269	CITY OF SPRINGFIELD NEBRASKA	$0	216,056
011618474	SARPY COUNTY AGRL SOCIETY INC	$1,732,233	343,509
	TOTALS:	**$10,176,289**	**1,886,552**

Table 3. Springfield Creek Impacted Property & Valuations

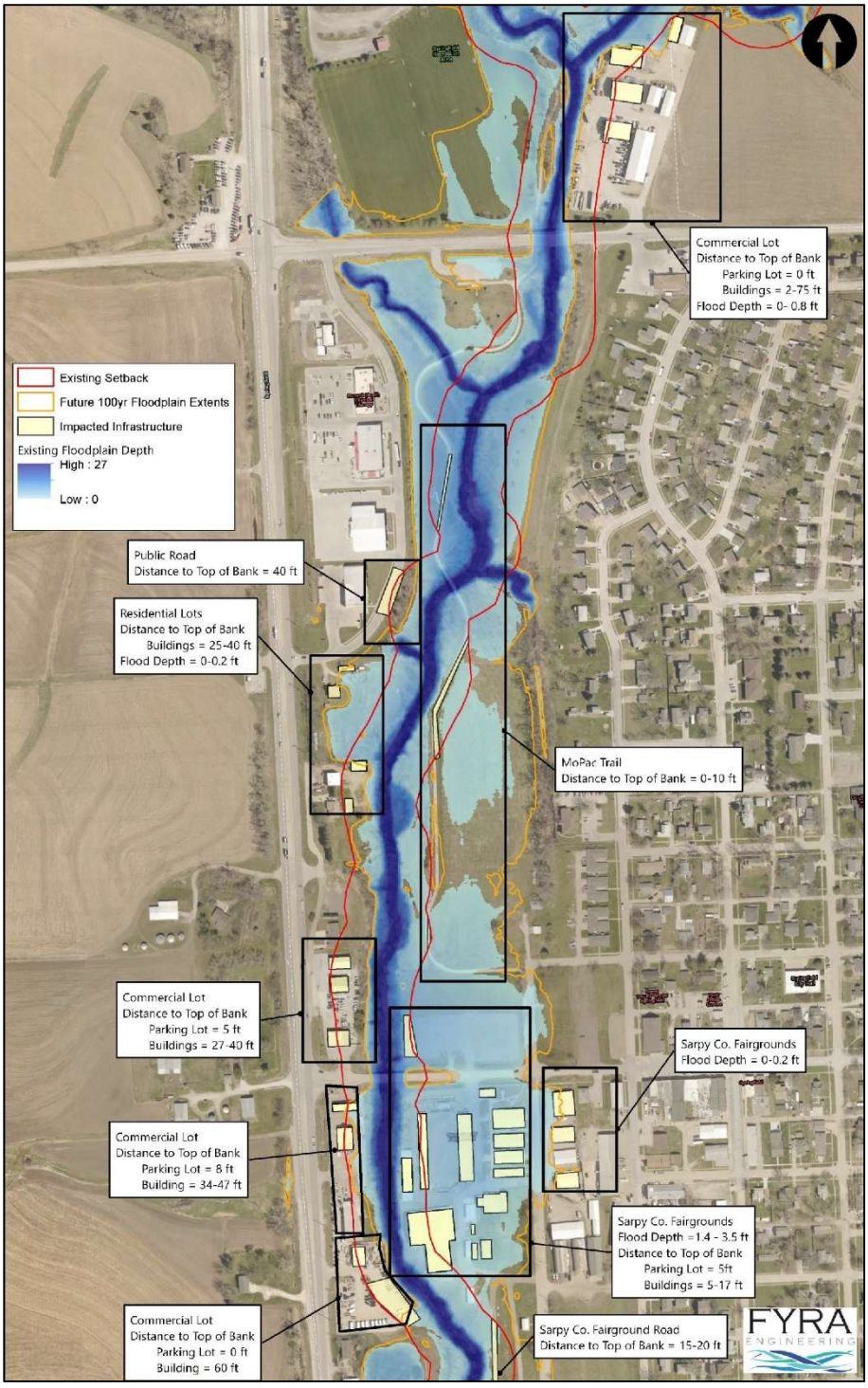

Figure 2. Springfield Creek Setback and Impacts

1.B.4 Describe any necessary water and/or land rights (004.02 C);

At this time, no water or land rights are necessary as part of this project. One of the goals of the engineering analysis and evaluation will be to determine what additional land rights may be necessary for the construction of the project.

1.B.5 Discuss the anticipated effects, if any, of the project upon the development and/or operation of existing or envisioned structural measures including a brief description of any such measure (004.02 D).

This project is strictly the evaluation and preliminary design phase and will result in no immediate affect to the development or operation of any existing or envisioned structural measure. That said, provided that the approach is found feasible in the engineering analysis, it is anticipated that the preliminary design completed as a part of this project will lead to the final design and construction of structural bank stabilization within a large portion of the Springfield Creek project segment. Due to their cost and impact, structural measures will be limited to where necessary to achieve the project goal of protecting the health of Springfield Creek and its adjacent infrastructure. However, given the space constraints along the project reach it is anticipated that structural intervention will be inevitable. Such intervention will most likely consist of rock-filled trenches on graded bank slopes or vertical sheet wall installations as shown above in the Figure 3 typical cross-sections. Other alternatives, both structural and non-structural, will be considered in the alternatives analysis of this project.

Prove Economic Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 005)

2. Provide evidence that there are no known means of accomplishing the same purpose or purposes more economically, by describing the next best alternative.

At this stage the next best alternative to further engineering evaluation and preliminary design of the Springfield Creek project segment is a do-nothing alternative. As discussed in Sections A.6 - Overview and B.1.B.3 above, without intervention this continuous segment of Springfield Creek is expected to experience up to 15’ of degradation at major road crossings and impacts to adjacent private and public property with total valuations of approximately $10.1 million. These anticipated damages far exceed the proposed scope for evaluation of the area and selection of the best possible solution to address the degradation along Springfield Creek.

Additionally, the Papio NRD is an experienced entity in managing professional services contracts for similar projects involving bank stabilization, grade control, and stream rehabilitation. This will ensure that the project is efficient and focused on addressing the area and considering solutions. Lastly, the project will be funded locally via the Southern Sarpy Watersheds Partnership Fund, which consists of contributions from each SSWP member and of fees collected from development in the SSWP Management Area. This is an efficient way of spreading the funding across a number of entities with interest in preserving and enhancing the health of the southern Sarpy County watersheds.

3. Document all sources and report all **costs** and **benefit data** using current data, (commodity prices, recreation benefit prices, and wildlife prices as prescribed by the Director) using both dollar values and other units of measurement when appropriate (environmental, social, cultural, data improvement, etc.). The period of analysis for economic feasibility studies is the project life. (Title 261, CH 2 - 005).

The total cost estimate for this project is $400,000 and is based on similar professional services contracts that the Papio NRD has held previously. The scope and task fee for this project was adapted from those previous projects and adjusted based on inflation and relative project size and complexity.

A primary benefit of this project is its ability to build on data collected and developed as part of the SSWP Watershed Management Plan[1], which is anticipated to expedite the engineering evaluation of the Springfield Creek project segment. Furthermore, a 60% design is a preferred level of detail to bring to future funding applications. By completing this project, it is more likely that the SSWP will be able score well on grants which may support final design and construction including those at the federal level such as the FEMA BRIC grant.

At this stage, with no specific design selected and construction not scoped, a detailed benefit-cost analysis is not practical. However, based upon the analysis already done, it is the conclusion of previous engineering consultants and the SSWP that the benefits of prudent evaluation and preventative stabilization of this segment of Springfield Creek will exceed the costs of allowing the area to degrade further and waiting to address impacts until they occur. The potential future costs of non-intervention were determined in the watershed-wide planning phase, and this next step of detailed evaluation and solution planning is the best method for determining and comparing the cost of prevention through stabilization.

3.A Describe any relevant cost information including, but not limited to the engineering and inspection costs, capital construction costs, annual operation and maintenance costs, and replacement costs. Cost information shall also include the estimated construction period as well as the estimated project life (005.01).

An estimate to complete the engineering evaluation and preliminary design as described in the plan of work above is included in Table 1, reproduced below for reference.

Task No.	Task Description	Duration	Total Cost	Papio NRD Cost	WSF Cost
1	Project Management & Coordination	300 days	$ 20,000.00	$ 8,000.00	$ 12,000.00
2	Engineering Evaluation, Analysis, & Reporting	60 days	$ 60,000.00	$ 24,000.00	$ 36,000.00
3	Preliminary Design	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
4	Permitting	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
			$ 400,000.00	**$ 160,000.00**	**$240,000.00**

Table 1. Project Tasks, Costs, and Duration

3.B Only primary tangible benefits may be counted in providing the monetary benefit information and shall be displayed by year for the project life. In a multi-purpose project, estimate benefits for each purpose, by year, for the life of the project. Describe intangible or secondary benefits (if any) separately. In a case where there is no generally accepted method for calculation of primary tangible benefits describe how the project will increase water sustainability, in a way that justifies economic feasibility of the project such that the finding can be approved by the Director and the Commission (005.02).

From the project scope proposed here, no primary tangible benefits to the project stakeholders will be realized. However, upon finalization of the engineering evaluation and preliminary design, the SSWP will use the produced technical information to move forward with final design and construction. It will also be used for application to additional grants at the federal level, such as the FEMA BRIC grant, decreasing the demand from local and state funding if received. Summarily, completion of this project scope will realize the following benefits for the SSWP:

- Completion of a full evaluation of the project segment and its impacts, to ensure that all stakeholders are accounted for and that a comprehensive approach is being taken
- Completion of a preliminary design and opinion of probable cost, to be used for budgeting and planning the remainder of the project
- Completion of Section 404 permitting requirements
- Production of sufficient technical materials to support applications to federal grants for additional funding support

Assuming the project is constructed, the expected primary tangible benefits would be tied to the stabilization of Springfield Creek and include:

- The prevention of damage to or failure of public infrastructure including major road and trail crossings along the creek
- The conservation of the stream corridor, which consists of park space, public fairgrounds, private property and commercial real estate that would otherwise be impacted

There would be additional secondary benefits from reduction of erosion along the Springfield Creek project segment which in turn reduces sediment loading of the stream, benefitting water quality and downstream aquatic habitat. The aesthetic improvements from the stream restoration and stabilization may also be considered, as well as the benefits to the preservation of the existing recreation and commerce that exist within the area.

3.C Present all cost and benefit data in a table to indicate the annual cash flow for the life of the project (005.03).

One of the primary goals of the project is to generate technical information to better assess the costs and benefits of the project; at this stage, all cost data is best reflected in Table 1 below.

Task No.	Task Description	Duration	Total Cost	Papio NRD Cost	WSF Cost
1	Project Management & Coordination	300 days	$ 20,000.00	$ 8,000.00	$ 12,000.00
2	Engineering Evaluation, Analysis, & Reporting	60 days	$ 60,000.00	$ 24,000.00	$ 36,000.00
3	Preliminary Design	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
4	Permitting	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
			$ 400,000.00	**$ 160,000.00**	**$240,000.00**

Table 1. Project Tasks, Costs, and Duration

3.D In the case of projects for which there is no generally accepted method for calculation of primary tangible benefits and if the project will increase water sustainability, demonstrate the economic feasibility of such proposal by such method as the Director and the Commission deem appropriate (005.04). (For example, show costs of and describe the next best alternative.)

Based on analysis completed thus far, the SSWP is confident that the existing state of the Springfield Creek project segment and its forecasted degradation will result in impacts, potentially valued at upwards of $10.1 million dollars in infrastructure damage and loss of productive land if intervention is not taken. The proposed evaluation and 60% preliminary design for stream bank and grade stabilization is a fundamental step in moving the project forward and ensuring that a comprehensive solution is developed for the area. While no primary tangible benefits will be produced (see discussion above in Question 3.B) it will serve to drive the remainder of the effort forward, in which primary tangible benefits will be realized. These benefits will be identified more clearly in this stage of the project, which will also provide a guide to complete final design, construction, funding planning, and additional grant applications.

There is no reasonable alternative for the evaluation and preliminary design phase of the project aside from a do-nothing approach as stated in Question 2 above.

Prove Financial Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 006)

4. Provide evidence that sufficient funds are available to complete the proposal.

In FY25 the Southern Sarpy Watersheds Partnership Fund[3], which is the operating budget for all SSWP activities, projected its Total Resources to be $4,061,373. These funds are used to support a variety of programs and projects in the SSWP Watershed Management Area; however, even if the full projected expenditures in FY25 are realized the anticipated Operating Reserve to be carried into FY26 (when this project will be budgeted for) is $2,124,953. The Fund is supported by both annual member dues and by watershed fees made available as the Watershed Management Area develops. Furthermore, this project was included in the SSWP Watershed Management Plan[1] as an expected plan cost, regardless of external funding availability. The SSWP is equipped with sufficient funds to support this project.

5. Provide evidence that sufficient annual revenue is available to repay the reimbursable costs and to cover OM&R (operate, maintain, and replace).

Annually, the Southern Sarpy Watersheds Partnership Fund collects both member dues and watershed fees, as well as a small amount of interest depending on its operating reserve.

Membership dues total $200,000 per year and are paid as set below in Table 4.

Member	Percent Contribution	Dollar Contribution
Bellevue	12%	$ 25,000.00
Gretna	9%	$ 17,000.00
Papillion	13%	$ 27,000.00
Springfield	7%	$ 14,000.00
Sarpy County	25%	$ 51,000.00
Papio NRD	33%	$ 66,000.00
Total Annual Contributions	100%	$ 200,000.00

Table 4. Membership Dues

Watershed fees are collected by the SSWP members with zoning jurisdiction from new development as set below in Table 5. Such fees are remitted to the Fund annually by the members.

Fee Category	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
	July 1, 2024-June 30, 2025	July 1, 2025-June 30, 2026	July 1, 2026-June 30, 2027	July 1, 2027 June 30, 2028	July 1, 2028 June 30, 2029
Single Family Residential per dwelling unit (also includes low-density multi-family up to 4-plexes)	$1058	$1090	$1122	$1,156	$1,191
High-Density Multi-Family Residential per gross acre (beyond 4-plexes)	$4,656	$4,795	$4,939	$5,087	$5,240
Commercial/Industrial/Institutional per gross acre	$5,642	$5,812	$5,986	$6,166	$6,351

Table 5. Watershed Fees

See Table 6 below for the amount of annual revenue collected by the SSWP in FY24 and the amount projected to be collected in FY25.

Revenue Source	FY24 Actual Revenue	FY25 Projected Revenue
Member Dues	$ 226,000.00	$ 200,000.00
Watershed Fees	$ 295,750.00	$ 495,000.00
Interest Income	$ 34,341.00	$ 20,000.00
Total Revenue	$ 556,091.00	$ 715,000.00

Table 6. SSWP FY24 Actual Revenue and FY25 Projected Revenue

Based on the above evidence, the SSWP has sufficient annual revenue available to repay the reimbursable costs of the proposed project.

6. If a loan is involved, provide sufficient documentation to prove that the loan can be repaid during the repayment life of the proposal.

N/A; no loans will be involved in this project.

7. Describe how the plan of development minimizes impacts on the natural environment (i.e. timing vs nesting/migration, etc.).

No environmental impact will occur as a direct result of the evaluation and preliminary design proposed in this project.

8. Explain how you are qualified, responsible and legally capable of carrying out the project for which you are seeking funds.

The SSWP is an organization formed by the Papio NRD and the surrounding local zoning jurisdictions and is committed to acting in concert to propose and implement programs and projects which protect the health of the watersheds in southern Sarpy County. The SSWP was formed through an agreement made in compliance with the Nebraska Interlocal Cooperation Act, in which it is stated that the Papio NRD will act as the SSWP administering agent. It is the duty of the administering agent to enter contracts on behalf of the SSWP and administer the SSWP's funds as directed by the SSWP members. This project application has unanimous support from the SSWP members.

Furthermore, the Papio NRD works to reduce erosion within its District and has set policies and procedures for selecting and retaining professional services for engineering design. The Papio NRD has a long history of the successful completion of many such similar projects.

9. Explain how your project considers plans and programs of the state and resources development plans of the political subdivisions of the state.

One of the goals of the Water Sustainability Fund is to:

> *"Contribute to multiple water supply management goals including flood control, reducing threats to property damage, agricultural uses, municipal and industrial uses, recreational benefits, wildlife habitat, conservation, and preservation of water resources."*

This project primarily aims to reduce threats to public infrastructure and private property and to conserve productive stream side land due to the threat of stream degradation, as discussed prior in this project application. Such land is currently used both for recreational benefits as well as private benefit to landowners. Additionally, stabilization of the Springfield Creek project segment will result in decreased stream sediment loading due to erosion, resulting in secondary impacts to water quality and downstream wildlife habitat including decreased turbidity and gains of riparian habitat due to decreased bank erosion and failure.

Furthermore, this project was conceived directly from the watershed planning effort initiated by the Papio NRD, Sarpy County, City of Bellevue, City of Gretna, City of Papillion, and City of Springfield all of which are political subdivisions of the state. The SSWP Watershed Management Plan[1] is a comprehensive resource development plan for southern Sarpy County concerned with the protection of natural resources and local infrastructure threatened by the changes in stormwater dynamics due to land development.

10. Are land rights necessary to complete your project? YES☐ NO☒

If yes:

10.A Provide a complete listing of all lands involved in the project. N/A

10.B Attach proof of ownership for each easements, rights-of-way and fee title currently held. N/A

10.C Provide assurance that you can hold or can acquire title to all lands not currently held. N/A

11. Identify how you possess all necessary authority to undertake or participate in the project.

The SSWP is an organization formed by the Papio NRD and the surrounding local zoning jurisdictions and is committed to acting in concert to propose and implement programs and projects which protect the health of the watersheds in southern Sarpy County. The SSWP was formed through an agreement made in compliance with the Nebraska Interlocal Cooperation Act, in which it is stated that the Papio NRD will act as the SSWP administering agent. It is the duty of the administering agent to enter contracts on behalf of the SSWP and administer the SSWP's funds as directed by the SSWP members. This project application has unanimous support from the SSWP members.

12. Identify the probable consequences (environmental and ecological) that may result if the project is or is not completed.

Directly, no environmental or ecological consequences will be realized with the completion of this phase of the project. Were the project to not be completed and Springfield Creek were to remain unprotected, it is expected that the stream corridor would continue to deepen and widen resulting in the loss of adjacent land, impacts to public and private property, damage or failure of public infrastructure in the form of road and trail crossings, continued and increasing sediment loading of Springfield Creek downstream, and likely eventual failure of the Springfield Creek banks resulting in threats to public safety, destruction of habitat, obstruction of stream flow, and negative aesthetic impacts to a recreational area.

On the other hand, if Springfield Creek is stabilized, the benefits will include the prevention of the above-described damage to infrastructure and property and the conservation of the stream corridor and its recreational value. It will also reduce erosion and therefore sediment loading, likely resulting in water quality benefits and downstream habitat benefits related to decreased turbidity.

Section C.

NRC SCORING

In the NRC's scoring process, points will be given to each project in ranking the projects, with the total number of points determining the final project ranking list.

The following 15 criteria constitute the items for which points will be assigned. Point assignments will be 0 to 6 for items (1) - (9); and 0 to 3 for items (10) - (15). Two additional points will be awarded to projects which address issues determined by the NRC to be the result of a federal mandate.

Notes:

- The responses to one criterion ***will not*** be considered in the scoring of other criteria. Repeat references as needed to support documentation in each criterion as appropriate. The 15 categories are specified by statute and will be used to create scoring matrixes which will ultimately determine which projects receive funding.

- There is a total of 72 possible points, plus two bonus points. The potential number of points awarded for each criteria are noted above. Once points are assigned, they will be added to determine a final score. The scores will determine ranking.

- The Commission recommends providing the requested information and the requests are not intended to limit the information an applicant may provide. An applicant should include additional information that is believed will assist the Commission in understanding a proposal so that it can be awarded the points to which it is entitled.

Complete any of the following (15) criteria which apply to your project. Your response will be reviewed and scored by the NRC. Place an N/A (not applicable) in any that do not apply, an N/A will automatically be placed in any response fields left blank.

1. Remediates or mitigates threats to drinking water;

    - Describe the specific threats to drinking water the project will address.
    - Identify whose drinking water, how many people are affected, how will project remediate or mitigate.
    - Provide a history of issues and tried solutions.
    - Provide detail regarding long-range impacts if issues are not resolved.

The Springfield Creek project segment is located within the City of Springfield Wellhead Protection Area and is located upstream of a number of Well Head Protection Areas along the Platte River (Figure 6). By reducing erosion and sediment loading to the stream, this

project will improve the immediate and downstream quality of raw water drawn for potable use. This includes improvements to the City of Springfield, City of Papillion, City of Omaha (via Metropolitan Utilities District Platte South Wellfield) and all other communities currently drawing water from the Platte River and those communities that have taking water from the Platte River planned in their future.

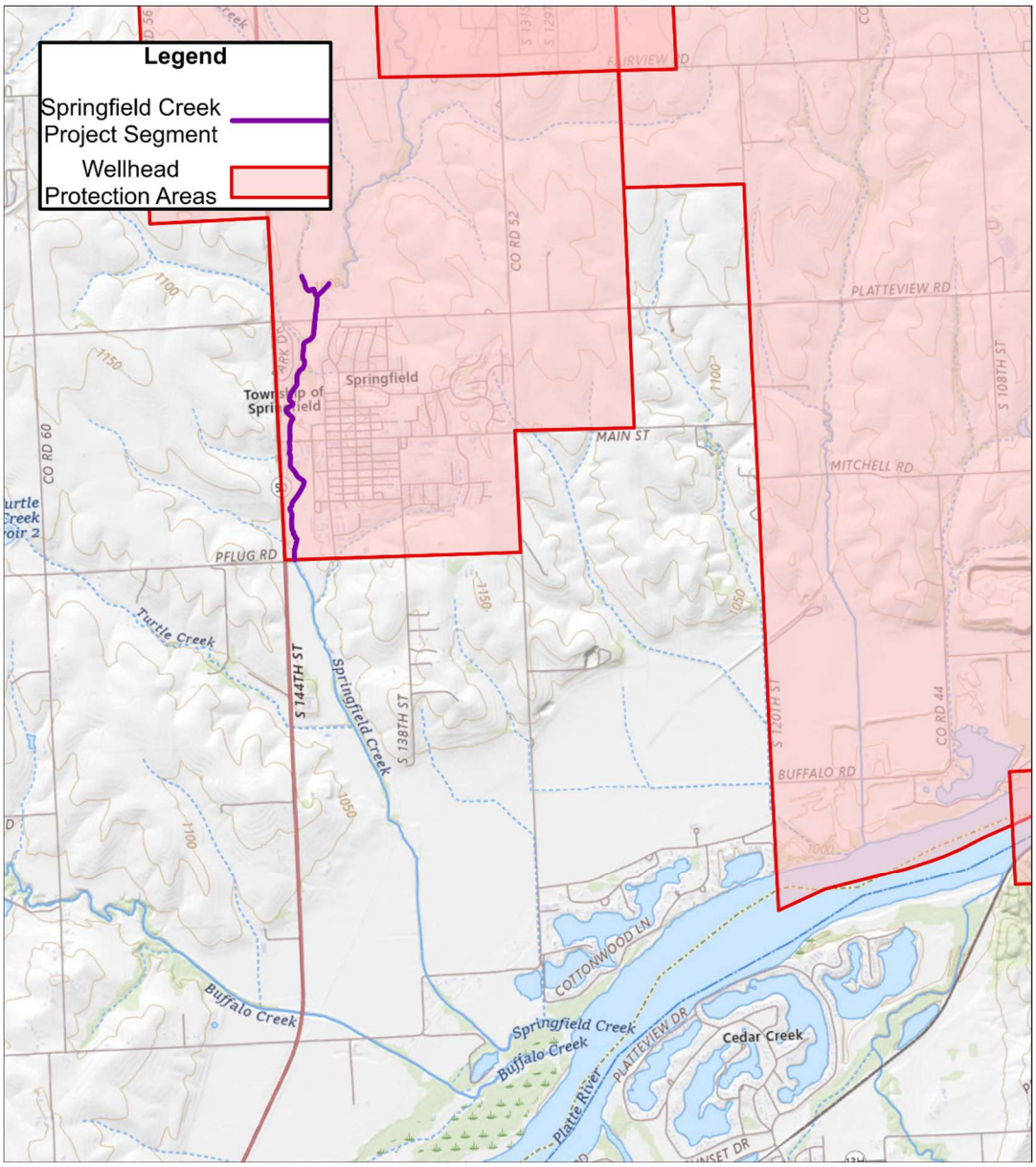

Figure 6. Wellhead Protection Areas and Project Location[4]

2. Meets the goals and objectives of an approved integrated management plan or ground water management plan;

    - Identify the specific plan that is being referenced including date, who issued it and whether it is an IMP or GW management plan.

- Provide the history of work completed to achieve the goals of this plan.
- List which goals and objectives of the management plan the project provides benefits for and how the project provides those benefits.

In August of 2014 the Papio NRD and Nebraska Department of Natural Resources released their voluntary Integrated Management Plan[6] (IMP). As stated, Goal 1 of the IMP is to:

> "Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development."

The Springfield Creek project was produced from the Southern Sarpy Watersheds Partnership's 2024 Watershed Management Plan[1], which was a multi-jurisdictional effort to develop and implement water use policies and projects within the Papio NRD's District (specifically southern Sarpy County). The proposed stabilization project has the goal of protecting the existing surface water uses of Springfield Creek, as well as preserving its water quality for designated groundwater uses of agricultural supply and aquatic life within the Springfield Wellhead Protection Area. Additionally, the IMP designates Objective 1.2 to be:

> "Minimize invasive vegetation encroachment in river channels"

Stabilization of Springfield Creek, which will likely require grading and reshaping of the degraded banks, presents and opportunity to address invasive vegetation that has presented itself as the water quality and geomorphology of the stream has deteriorated.

3. Contributes to water sustainability goals by increasing aquifer recharge, reducing aquifer depletion, or increasing streamflow;

   List the following information that is applicable:

   - The location, area and amount of recharge;
   - The location, area and amount that aquifer depletion will be reduced;
   - The reach, amount and timing of increased streamflow. Describe how the project will meet these objectives and what the source of the water is;
   - Provide a detailed listing of cross basin benefits, if any.

Installation of bank stabilization reduces bank shear stress and erosion, which translates to increased stream flows. This effect would be observed along the entire project reach, where stabilization is implemented.

4. Contributes to multiple water supply goals, including, but not limited to, flood control, agricultural use, municipal and industrial uses, recreational benefits, wildlife habitat, conservation of water resources, and preservation of water resources;

- List the goals the project provides benefits.
- Describe how the project will provide these benefits
- Provide a long range forecast of the expected benefits this project could have versus continuing on current path.

The evaluation and preliminary design of the Springfield Creek stabilization project is an essential step in identifying an effective solution and approach to address the ongoing degradation of the stream segment. While immediate tangible benefits will not be observed in this phase, it will serve as a guide for final design and construction of the project. Ultimately, a number of water supply goals will be realized by the project's implementation and those are detailed below.

Flood Control:
Springfield Creek serves as a primary conveyance path for stormwater and much of the adjacent infrastructure to the project segment is located within the existing floodplain. While the primary purpose for this project is not to increase storage within the stream nor decrease the floodplain footprint, all suggested designs will consider impacts to stream hydraulics and ensure that the existing infrastructure is not adversely affected. Allowing the stream to continue to degrade unchecked could result in stream obstructions from bank failure and alterations in stream course affecting the existing floodplain limits.

Recreational Benefits:
The MOPAC trail runs along the full 1.3 mile segment of Springfield Creek identified in this project, crossing the stream twice downstream of Platteview Road. In some areas, it exists within 10 feet to the top of bank and projections of the future degradation of the stream put the downstream end of the trail crossing at ~15 feet of vertical degradation. This project will help preserve the stream corridor that the MOPAC trail is located in and prevent damage to the existing trail surface and stream crossings. Allowing the stream to continue to degrade unchecked will result in bank failures that will impact the trail's current alignment, resulting in a loss of recreational value and potential hazard to trail users.

Figure 7. MOPAC Trail adjacent to Springfield Creek and Sarpy County Fairgrounds

Water Quality Impacting Wildlife Habitat, Agricultural Use, and Aesthetics:

In the 2022 Nebraska Water Quality Integrated Report, Springfield Creek was identified as currently supporting both aquatic life and agricultural water supply uses. As the Springfield Creek watershed continues to develop, sustainable management means these uses must be protected for future generations. The projected trend of Springfield Creek's continued erosion will result in avoidable sedimentation of stream flow, unless stabilized. Increased sedimentation results in more turbid water, negatively impacting light penetration and ecological productivity, as well as habitat quality and stream aesthetics. Sediment particles can also provide attachment places for other pollutants, such as metals and bacteria, and is a concern for water supply[5]. The Springfield Creek stabilization project will reduce erosion and sedimentation, mitigating these effects and preserving the current stream habitat, agricultural use, and aesthetics.

Figure 8. Existing Springfield Creek bank failure immediately downstream of MOPAC Trail stream crossing

Conservation of Water Resources:

The value of the water resources of a stream can be viewed holistically as its water quantity and quality, its geomorphology (stream course, bed, and banks), and its habitat which includes the adjacent land that makes up the “stream corridor”. In the proposed project, the conservation of Springfield Creek is the primary focus and each of these elements will benefit from the stabilization of the creek. As stated above, Springfield Creek currently provides designated beneficial uses for water quality and quantity, has identified habitat, and has observable adjacent infrastructure that is in operation within

the stream corridor. Each of these uses will be better conserved with implementation of the stabilization project.

5. Maximizes the beneficial use of Nebraska's water resources for the benefit of the state's residents;

    - Describe how the project will maximize the increased beneficial use of Nebraska's water resources.
    - Describe the beneficial uses that will be reduced, if any.
    - Describe how the project provides a beneficial impact to the state's residents.

Springfield Creek currently provides beneficial use as conveyance for stormwater, a source of recreation, aesthetic benefits, habitat improvement, water quality improvement, and opportunities for education regarding all of the above. There will be no net reduction in beneficial use regarding any of these factors as a result of the proposed project. Any unavoidable impacts will be documented through the environmental permitting process, which will be based on the stream assessments completed as part of this initial evaluation. Those unavoidable impacts will be offset through approved mitigation measures and the Papio NRD often has succeeded in mitigating for more than it impacts in past projects that it has managed. This project will provide benefit to the adjacent land owners and larger Springfield community by preserving the existing recreation, habitat, and aesthetic benefit that Springfield Creek provides. It will provide benefit to the Springfield Creek Watershed by limiting erosion and improving downstream water quality. It will not negatively impact the ability of Springfield Creek to convey flood waters and will stabilize the stream to prevent future bank failure and obstruction of the waterway.

6. Is cost-effective;

    - List the estimated construction costs, O/M costs, land and water acquisition costs, alternative options, value of benefits gained.
    - Compare these costs to other methods of achieving the same benefits.
    - List the costs of the project.
    - Describe how it is a cost effective project or alternative.

A cost summary of the estimated project tasks and fee is included in Table 1, which is reproduced below. All costs are associated with the necessary tasks for engineering evaluation and preliminary design of the Springfield Creek grade and bank stabilization project.

Task No.	Task Description	Duration	Total Cost	Papio NRD Cost	WSF Cost
1	Project Management & Coordination	300 days	$ 20,000.00	$ 8,000.00	$ 12,000.00
2	Engineering Evaluation, Analysis, & Reporting	60 days	$ 60,000.00	$ 24,000.00	$ 36,000.00
3	Preliminary Design	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
4	Permitting	120 days	$ 160,000.00	$ 64,000.00	$ 96,000.00
			$ 400,000.00	**$ 160,000.00**	**$240,000.00**

Table 1. Project Tasks, Costs, and Duration

As discussed in the Economic Feasibility Section, the trending degradation of Springfield Creek will result in upwards of $10.1 million dollars in damages to infrastructure and private property. Table 3 is reproduced below and reflects the individual impacts anticipated. These costs can be considered as the alternative do-nothing approach to the Springfield Creek project segment. Evaluation and preliminary design of stream stabilization measures intended to intervene in this phenomenon are necessary fundamental steps to move the project forward and identify the most cost-effective and beneficial solution, as well as provide a technical foundation to be used in securing additional funding through grant applications. The final design and construction of this project will be a major undertaking that will involve coordination and partnerships among multiple agencies. The evaluation and preliminary design phase, proposed herein, is a key step in ensuring that the SSWP reaches future phases well prepared from a technical and budgetary perspective.

Parcel ID	Owner	Assessed Value	Area (Ft^2)
010378758	SARPY COUNTY AGRL SOCIETY INC	$39,204	393
011234288	SARPY COUNTY & CITIES WASTEWATER AGENCY	$4,848	49,223
011589279	WILLIAMS ENTERPRISES LLC	$148,865	14,361
011589278	WILLIAMS ENTERPRISES LLC	$205,309	27,051
011589282	WILLIAMS ENTERPRISES LLC	$120,945	73,110
011234261	SARPY COUNTY & CITIES WASTEWATER AGENCY	$1,050	1,060
011156708	SARPY COUNTY & CITIES WASTEWATER AGENCY	$8,325	13,773
010404031	HAGERTY/CONNIE R	$363,961	68,560
011591617	CITY OF SPRINGFIELD	$0	4,552
010392548	MITCHELL KURT W & SUSAN R	$1,212,500	2,399
010765263	WILLIAMS ENTERPRISES LLC	$1,504,138	121,342
010404384	TURF MASTER DELUXE INC	$355,923	27,339
011575418	CASEY'S RETAIL COMPANY	$717,928	60,040
010764720	THE SARPY COUNTY AGRICULTURAL	$297,387	39,217
010404376	TURF MASTER DELUXE INC	$55,537	33,838
011575419	WILLIAMS ENTERPRISES LLC	$446,272	28,698
010764739	SARPY COUNTY AGRICULTURAL SOCIETY	$77,049	30,861
010404058	HR 50 PROPERTY LLC	$243,708	49,951

010356746	CITY OF SPRINGFIELD	$29,232	312,745
010764682	SARPY COUNTY AGRICULTURAL SOCIETY INC	$120,443	38,822
010383441	MEISINGER/JERRY G & BONNIE	$248,062	118,630
011594923	CITY OF SPRINGFIELD	$240	1,565
011594885	CITY OF SPRINGFIELD	$10,949	57
011594939	CITY OF SPRINGFIELD	$2,640	11,685
011589280	WILLIAMS ENTERPRISES LLC	$147,239	8,475
010380787	SPRINGFIELD FARM LLC	$517,069	69,164
010378685	SARPY COUNTY AGRICULTURAL	$315,570	19,099
010401504	THE SARPY COUNTY AGRICULTURAL	$78,350	284
010401512	SARPY COUNTY AGRICULTURAL SOCIETY	$234,960	44,881
010401830	SARPY COUNTY AGRICULTURAL SOCIETY	$280,566	21,465
010764747	SARPY COUNTY AGRICULTURAL SOCIETY	$35,206	23,416
011599010	SARPY COUNTY AGRICULTURAL	$388,158	3,754
010383395	GOTTSCH/LYLE A	$232,423	7,181
011255269	CITY OF SPRINGFIELD NEBRASKA	$0	216,056
011618474	SARPY COUNTY AGRL SOCIETY INC	$1,732,233	343,509
	TOTALS:	**$10,176,289**	**1,886,552**

Table 3. Springfield Creek Impacted Property & Valuations

7. Helps the state meet its obligations under interstate compacts, decrees, or other state contracts or agreements or federal law;

   - Identify the interstate compact, decree, state contract or agreement or federal law.
   - Describe how the project will help the state meet its obligations under compacts, decrees, state contracts or agreements or federal law.
   - Describe current deficiencies and document how the project will reduce deficiencies.

N/A

8. Reduces threats to property damage or protects critical infrastructure that consists of the physical assets, systems, and networks vital to the state or the United States such that their incapacitation would have a debilitating effect on public security or public health and safety;

   - Identify the property that the project is intended to reduce threats to.
   - Describe and quantify reductions in threats to critical infrastructure provided by the project and how the infrastructure is vital to Nebraska or the United States.
   - Identify the potential value of cost savings resulting from completion of the project.
   - Describe the benefits for public security, public health and safety.

The Southern Sarpy Watersheds Partnership (SSWP) Watershed Management Plan[1] finalized in 2024, developed future degraded streambed elevation profiles for the main stems in southern Sarpy County including Springfield Creek. The developed profiles considered existing hard points and grade control structures (such as road culverts or stabilized utility crossings) along the stream length, as well as a maximum degradation limit (approximately 30 feet) estimated at where harder clay soil is encountered underneath the existing loess. The information was used to project an estimated "stable slope" that the mainstems would reach without additional intervention. Table 2 below shows the estimated degradation depth at the downstream end of the major crossings which occur on the continuous segment of Springfield Creek that is the focus of this project. Each crossing is expected to see 10+ feet of vertical degradation at future grade, showing that there is a clear risk to the existing infrastructure that must be mitigated with stream stabilization measures.

Infrastructure	Station	Estimated Degradation Depth - Downstream End (Feet)
Pflug Rd. Bridge	57 + 00	14
Main Street Bridge	85 + 71	15
MOPAC Trail Bridge	102 + 50	15
Platteview Road Bridge	115 + 10	13

Table 2. Springfield Creek Infrastructure and Degradation Estimates

Figure 9. Pflug Road crossing on Springfield Creek

Additionally, the SSWP has adopted a stream setback policy intended to prevent private property and infrastructure from being constructed too close to streams within an area of degradation risk. The recommended setback is based on the existing depth of the stream at the time of development and is calculated as three times the depth of the stream plus an additional fifty feet from the edge of the existing stream bottom on both sides of the channel. In areas of new development, this setback is preventative. Along Springfield Creek, this setback can be used to estimate the amount of infrastructure at risk to future damage due to stream widening and bank failure. The setback along the project segment includes 43 acres of land, composed of both private and public property, valued at approximately $10. million. See Table 3 and Figure 2 below for lot information. Not shown, but of additional value within the setback area, is the MOPAC trail on the east side of the stream and the newly constructed interceptor sanitary sewer. Stabilization of the stream will protect these features and help reduce the risk of significant financial costs from degradation damage to the trail or the new sewer system.

Parcel ID	Owner	Assessed Value	Area (Ft^2)
010378758	SARPY COUNTY AGRL SOCIETY INC	$39,204	393
011234288	SARPY COUNTY & CITIES WASTEWATER AGENCY	$4,848	49,223
011589279	WILLIAMS ENTERPRISES LLC	$148,865	14,361
011589278	WILLIAMS ENTERPRISES LLC	$205,309	27,051
011589282	WILLIAMS ENTERPRISES LLC	$120,945	73,110
011234261	SARPY COUNTY & CITIES WASTEWATER AGENCY	$1,050	1,060
011156708	SARPY COUNTY & CITIES WASTEWATER AGENCY	$8,325	13,773
010404031	HAGERTY/CONNIE R	$363,961	68,560
011591617	CITY OF SPRINGFIELD	$0	4,552
010392548	MITCHELL KURT W & SUSAN R	$1,212,500	2,399
010765263	WILLIAMS ENTERPRISES LLC	$1,504,138	121,342
010404384	TURF MASTER DELUXE INC	$355,923	27,339
011575418	CASEY'S RETAIL COMPANY	$717,928	60,040
010764720	THE SARPY COUNTY AGRICULTURAL	$297,387	39,217
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010401504	THE SARPY COUNTY AGRICULTURAL	$78,350	284
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Table 3. Springfield Creek Impacted Property & Valuations

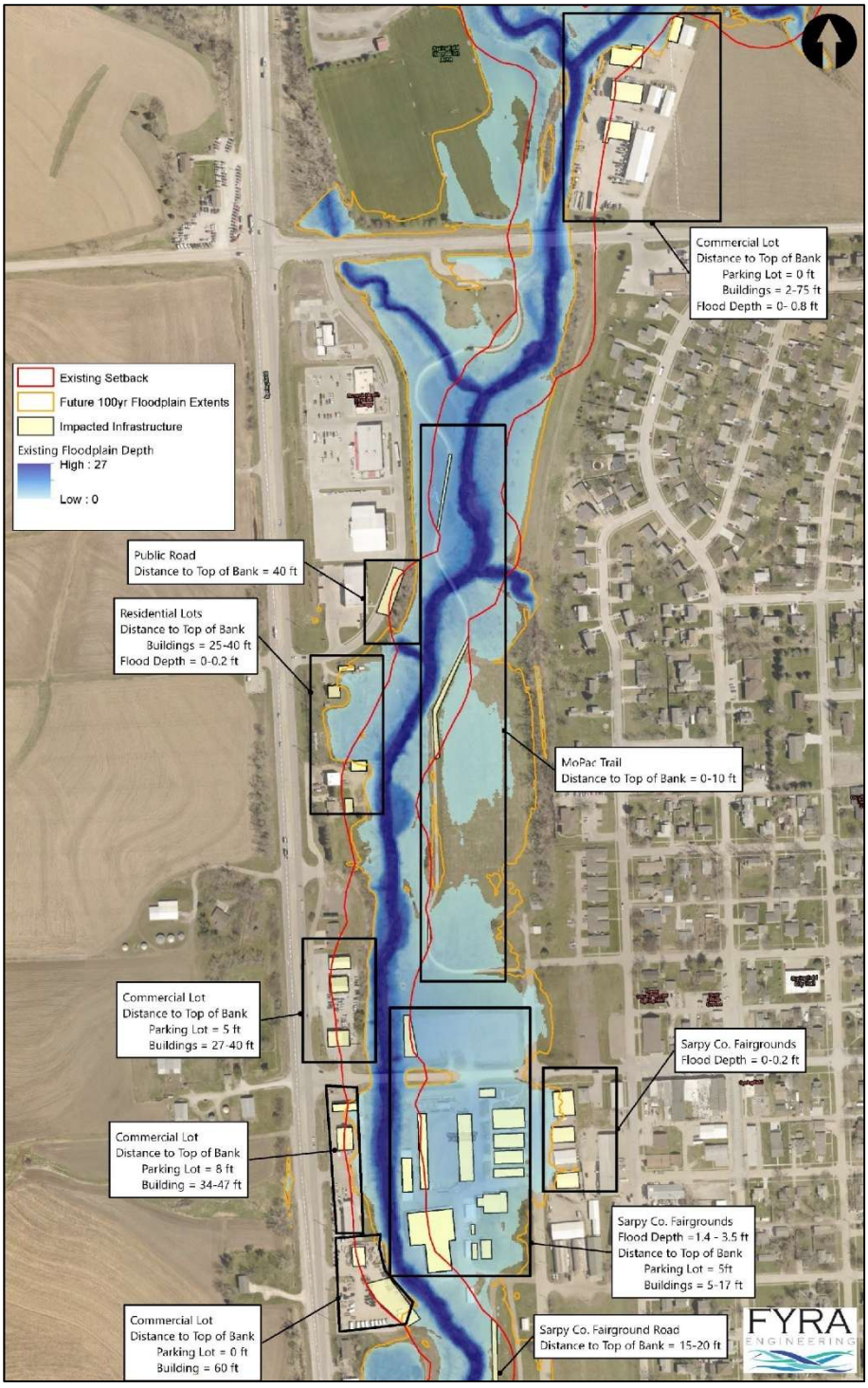

Figure 2. Springfield Creek Setback and Impacts

Intervention in this segment of Springfield Creek now can stabilize the geomorphology of the stream, preventing the estimated loss of land and property, as well as damages or more costly repairs to the major crossings and adjacent land which holds valuable commercial property, public property, utilities, and recreation features. Furthermore,

stabilization will prevent likely bank failures or sloughing, which presents a threat not only to physical assets but also to individuals who live, work, and recreate near Springfield Creek.

9. Improves water quality;

    - Describe what quality issue(s) is/are to be improved.
    - Describe and quantify how the project improves water quality, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.
    - Describe other possible solutions to remedy this issue.
    - Describe the history of the water quality issue including previous attempts to remedy the problem and the results obtained.

The Springfield Creek project segment is located within the City of Springfield Wellhead Protection Area and is located upstream of a number of Well Head Protection Areas along the Platte River (Figure 6). By virtue of reducing erosion and therefore reducing sediment loading to the stream, this project will improve the immediate and downstream quality of raw water drawn for potable use. This includes improvements to the City of Springfield, City of Papillion, City of Omaha (via Metropolitan Utilities District Platte South Wellfield) and all other communities currently drawing water from the Platte River and those communities that have taking water from the Platte River planned in their future.

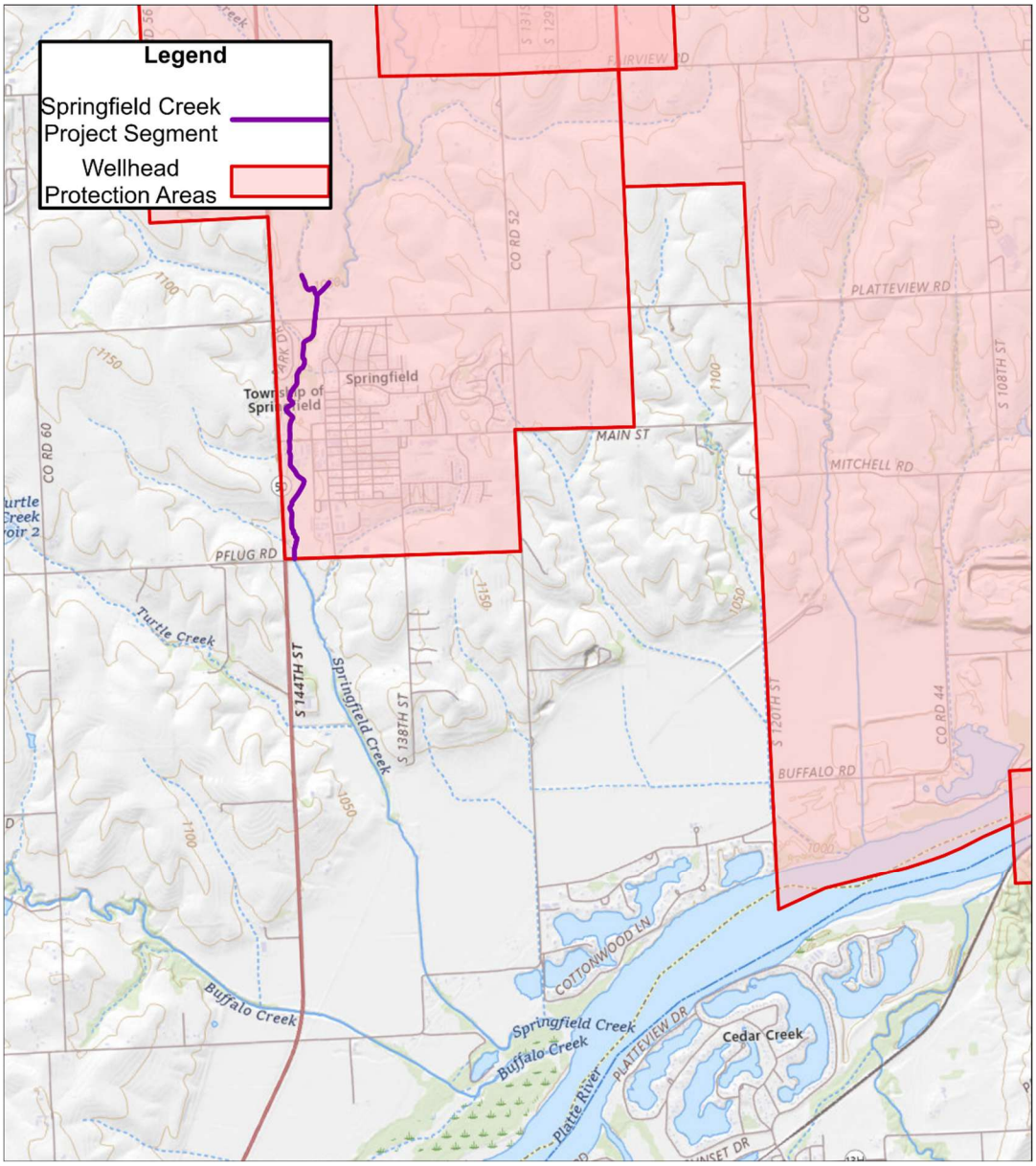

Figure 6. Wellhead Protection Areas and Project Location[4]

10. Has utilized all available funding resources of the local jurisdiction to support the program, project, or activity;

    - Identify the local jurisdiction that supports the project.
    - List current property tax levy, valuations, or other sources of revenue for the sponsoring entity.
    - List other funding sources for the project.

This project is being funded and supported by the Southern Sarpy Watersheds Partnership (SSWP), which collects funds from 6 local political subdivisions (the Papio

NRD, Sarpy County, Bellevue, Gretna, Papillion, and Springfield) as well as from private development in southern Sarpy County through watershed fees. It therefore is funded as efficiently as possible and maximizes funding from a mix of public and private sources. In FY25 the Southern Sarpy Watersheds Partnership Fund[3], which is the operating budget for all SSWP activities, projected its Total Resources to be $4,061,373. These funds are used to support a variety of programs and projects in the SSWP Watershed Management Area; however, even if the full projected expenditures in FY25 are realized the anticipated Operating Reserve to be carried into FY26 (when this project will be budgeted for) is $2,124,953. All current sources of revenue/funding are listed below. While the SSWP has steady revenue and a healthy operating reserve, it has a number of programs and projects that it has committed to support as southern Sarpy County develops, and careful financial planning is crucial to successful project implementation.

Membership dues total $200,000 per year and are paid as set below in Table 4.

Member	Percent Contribution	Dollar Contribution
Bellevue	12%	$ 25,000.00
Gretna	9%	$ 17,000.00
Papillion	13%	$ 27,000.00
Springfield	7%	$ 14,000.00
Sarpy County	25%	$ 51,000.00
Papio NRD	33%	$ 66,000.00
Total Annual Contributions	100%	$ 200,000.00

Table 4. Membership Dues

Watershed fees are collected by SSWP members with zoning jurisdiction from new development as set in Table 5. Fees are remitted to the Fund annually by the members.

Fee Category	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
	July 1, 2024-June 30, 2025	July 1, 2025-June 30, 2026	July 1, 2026-June 30, 2027	July 1, 2027 June 30, 2028	July 1, 2028 June 30, 2029
Single Family Residential per dwelling unit (also includes low-density multi-family up to 4-plexes)	$1058	$1090	$1122	$1,156	$1,191
High-Density Multi-Family Residential per gross acre (beyond 4-plexes)	$4,656	$4,795	$4,939	$5,087	$5,240
Commercial/Industrial/Institutional per gross acre	$5,642	$5,812	$5,986	$6,166	$6,351

Table 5. Watershed Fees

See Table 6 below for the amount of annual revenue collected by the SSWP in FY24 and the amount projected to be collected in FY25.

Revenue Source	FY24 Actual Revenue	FY25 Projected Revenue
Member Dues	$ 226,000.00	$ 200,000.00
Watershed Fees	$ 295,750.00	$ 495,000.00
Interest Income	$ 34,341.00	$ 20,000.00
Total Revenue	$ 556,091.00	$ 715,000.00

Table 6. SSWP FY24 Actual Revenue and FY25 Projected Revenue

11. Has a local jurisdiction with plans in place that support sustainable water use;

- List the local jurisdiction and identify specific plans being referenced that are in place to support sustainable water use.
- Provide the history of work completed to achieve the goals of these plans.
- List which goals and objectives this project will provide benefits for and how this project supports or contributes to those plans.
- Describe and quantify how the project supports sustainable water use, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.
- List all stakeholders involved in project.
- Identify who benefits from this project.

Water sustainability is commonly defined as the practice of managing water resources to meet current needs, without compromising the needs of future communities. The Water Sustainability Fund was built to support this goal, working with sponsors on programs, projects, and activities which range from drinking water supply to recreational benefit. Analogously, the Southern Sarpy Watersheds Partnership (SSWP) was formed to sustainably manage the natural resources and existing infrastructure in southern Sarpy County by five local jurisdictions (Sarpy County, City of Bellevue, City of Gretna, City of Papillion, and City of Springfield) and the Papio NRD. The SSWP has a vested interest in the area and began its management strategy by developing a long-term Watershed Management Plan[1] which identifies programs and projects in the major focus areas of Water Quality Improvement, Peak Flow Management, Stream Corridor Preservation, Erosion and Sediment Control, and Floodplain Management. The proposed Springfield Creek stabilization project is one such recommendation from the Watershed Management Plan[1]. Historically, work by the SSWP in southern Sarpy County has consisted of broad assessments and studies to determine the most pressing issues; the SSWP is now at a stage where it is ready to move forward with implementation of projects to address those issues. Individually, the organizations which make up the SSWP have historically been involved in numerous plans, programs, and projects benefitting southern Sarpy County. The Papio NRD alone has been involved in developing Water Quality Management[1] and Integrated Management Plans[6], in constructing flood control and stream stabilization

projects, and in developing cost-share programs to encourage sustainable watershed management across its jurisdiction.

The Springfield Creek stabilization project supports several sustainable and beneficial water uses. The primary purpose of the project is to reduce threats to infrastructure and property adjacent to the stream while simultaneously preserving the stream corridor's natural and recreational benefits. Secondarily, the project will preserve Springfield Creek's ability to convey stormwater in a flood prone area and support the water quality of Springfield Creek by reducing erosion and sedimentation of the stream; the water quality effect will further support its designated uses for aquatic life and agricultural water supply[7]. The 1.3 mile stretch of Springfield Creek identified for this project runs along the west side of the City of Springfield, which has a population of approximately 1,620 people[8]. Bordering the stream are a number of private businesses primarily to the west and the Sarpy County fairgrounds and MOPAC trail primarily to the east. Much of the property resides within 10 feet of the stream bank. While Springfield Creek represents an important natural and cultural resource to the City of Springfield whose use must be supported, it also presents a danger to adjacent infrastructure and must therefore be stabilized and protected from further degradation.

As stated above, the City of Springfield will be a primary stakeholder and beneficiary of this project. However, the entirety of Sarpy County and its relevant political subdivisions (Sarpy County, Bellevue, Gretna, Papillion, and the Papio NRD) are also stakeholders through the SSWP and will also be beneficiaries, as the recreational and natural value of Springfield Creek is realized by individuals outside of the immediate jurisdiction. Furthermore, the health of a watershed is interconnected and stabilization of one section of Springfield Creek will protect the downstream (through reduced sedimentation of water supply) and the upstream (through prevention of advancing degradation and head cut upwards). Lastly, there are likely other stakeholders (e.g. Sarpy County and Cities Wastewater Agency, Sarpy County Agricultural Society, private property owners, etc.) that will be identified and included in the proposed evaluation and design project.

12. Addresses a statewide problem or issue;

- List the issues or problems addressed by the project and why they should be considered statewide.
- Describe how the project will address each issue and/or problem.
- Describe the total number of people and/or total number of acres that would receive benefits.
- Identify the benefit, to the state, this project would provide.

Stream degradation is a primary threat to Nebraskans in highly urbanized areas, such as those present in eastern Nebraska. As seen in the neighboring Papillion Creek Watershed, as development progresses the effect on streams, if not controlled, can result in costly impacts to public infrastructure and private property. The same problem is expected to be widespread in southern Sarpy County if not managed with preventative solutions such as the proposed Springfield Creek bank stabilization project.

Flooding is another prevalent issue within urbanized areas in eastern Nebraska. This project will help to address that issue by maintaining the stormwater conveyance of Springfield Creek, which may otherwise be impacted by bank failure and excessive degradation.

Lastly, the project also supports a benefit to the state by maintaining the existing recreational and commercial opportunities that exist along Springfield Creek. These opportunities support the local economy of the City of Springfield and act as a magnet to tourists and visitors, increasing economic development further.

13. Contributes to the state's ability to leverage state dollars with local or federal government partners or other partners to maximize the use of its resources;

    - List other funding sources or other partners, and the amount each will contribute, in a funding matrix.
    - Describe how each source of funding is made available if the project is funded.
    - Provide a copy or evidence of each commitment, for each separate source, of match dollars and funding partners.
    - Describe how you will proceed if other funding sources do not come through.

This project is being funded and supported by the Southern Sarpy Watersheds Partnership (SSWP), which collects funds from 6 local political subdivisions (the Papio NRD, Sarpy County, City of Bellevue, City of Gretna, City of Papillion, and City of Springfield) as well as from private development in southern Sarpy County through watershed fees. Contributions from WSF would therefore be matched locally not by a single sponsor, but by an efficient mix of sponsors through the SSWP that aims to maximize local partnerships.

To date, the SSWP has not secured any grant funding to support its programs or projects. By partnering with WSF, the SSWP hopes to first leverage state funding along with the local funding already available to accomplish a work plan which will allow for additional grants at the federal level, as well as additional state agency funding if applicable. WFPO Program funding through the NRCS and BRIC Program funding through FEMA have specifically been scoped as a future opportunities for this project. One major goal of the proposed evaluation and preliminary design is to develop technical and economic materials which allow the project to be as competitive as possible for these grants.

If this application to the WSF is not successful, the SSWP will regroup and potentially reapply or seek alternative funding sources. It may pursue a more limited scope funded internally to become more competitive, if necessary.

In FY25 the Southern Sarpy Watersheds Partnership Fund[3], which is the operating budget for all SSWP activities, projected its Total Resources to be $4,061,373. These funds are used to support a variety of programs and projects in the SSWP Watershed Management Area; however, even if the full projected expenditures in FY25 are realized

the anticipated Operating Reserve to be carried into FY26 (when this project will be budgeted for) is $2,124,953. All current sources of revenue/funding are listed below. While the SSWP has steady revenue and a healthy operating reserve, it has a number of programs and projects that it has committed to support as southern Sarpy County develops, and careful financial planning is crucial to successful project implementation.

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Table 6. SSWP FY24 Actual Revenue and FY25 Projected Revenue

14. Contributes to watershed health and function;

- Describe how the project will contribute to watershed health and function in detail and list all of the watersheds affected.

The streams in southern Sarpy County are generally experiencing deteriorating stream health regarding water quality, stream stability, and habitat conditions. This is true of each watershed in the area, though the focus of this project is the Springfield Creek watershed. Across the Springfield Creek watershed, stream degradation and instability has already occurred and is anticipated to worsen with further watershed build-out. The existing state of the streams was assessed by the Southern Sarpy Watersheds Partnership (SSWP) in its Watershed Management Plan[1] using a rapid field stream assessment; the results of this assessment for Springfield Creek are shown in Figure 5 below. The Springfield Creek project stream proposed for intervention in this project is among the worst in the watershed as evaluated for stability.

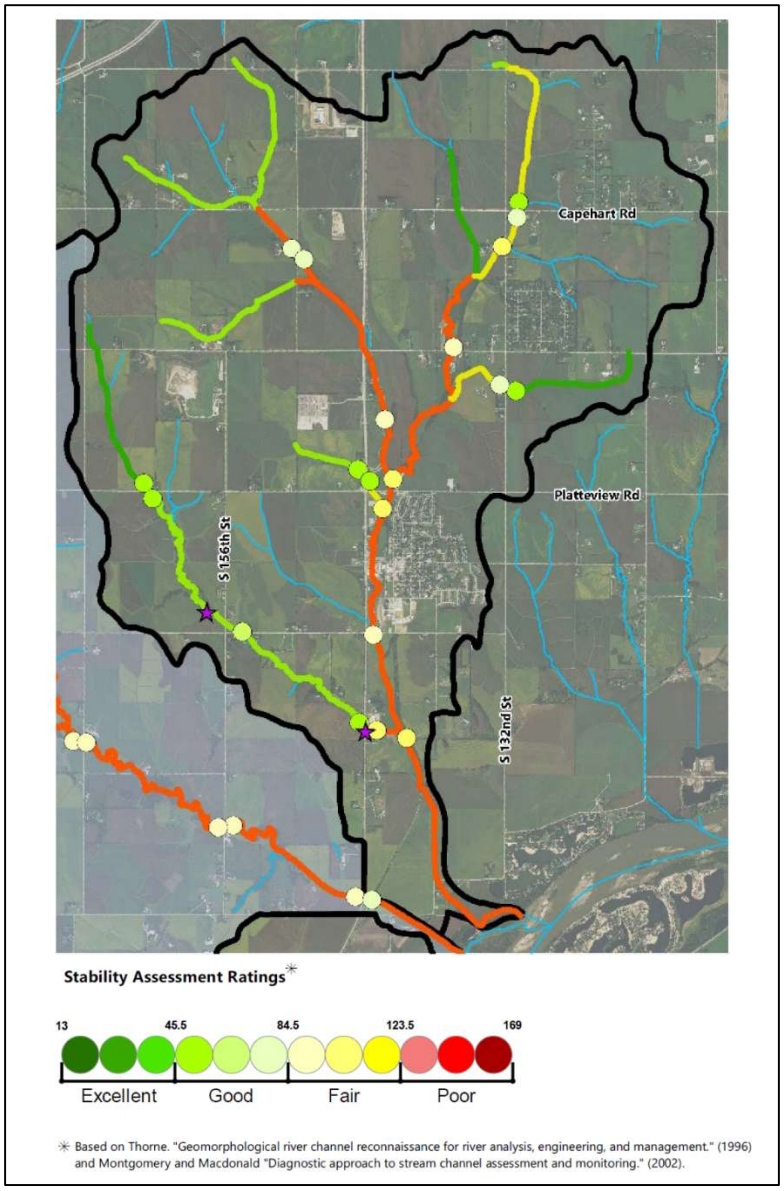

Figure 5. Springfield Creek Stream Stability Assessment Ratings

Fundamentally, this project is focused on stream corridor conservation and proposes to address the ongoing degradation by evaluating the Springfield Creek project segment and completing preliminary design of a restoration and stabilization plan. A major aspect of that evaluation and design will be completing an updated stream assessment of the waterway within the project area according to the methodologies and procedures outlined by the U.S. Army Corps of Engineers Nebraska Stream Condition Assessment Procedure (NeSCAP). This will evaluate the physical and biological attributes of the stream within the project area and allow for comparison to post project design conditions, which will be valuable in determining the stream health and functional impacts that the project will impart to the stream. The goal will be to increase stream function through methods including but not limited to increases in habitat stability, improvement to riparian buffer

communities, improvement in hydraulic conveyance, decreases in erosion, and creation of new habitat by natural colonization or plantings. This information will also be used for completing Section 404 permitting as stated within the project work plan.

15. Uses objectives described in the annual report and plan of work for the state water planning and review process issued by the department.

    - Identify the date of the Annual Report utilized.
    - List any and all objectives of the Annual Report intended to be met by the project
    - Explain how the project meets each objective.

The 2024 Nebraska Department of Natural Resources Annual Report[9] states its goals as follows:

1. Establish strong state leadership, involvement, and support for science-based decision making that is necessary to sustain state and local water management outcomes.
2. Provide high-quality products and services through the performance of our duties in the areas of floodplain management, flood mitigation planning, dam safety, and survey to promote the safety of all Nebraskans.
3. Develop and implement customized and decentralized water management plans established through collaboration with local Natural Resources Districts and stakeholders that provide for long-term sustainability of the state's water resources.
4. Encourage strong public engagement with multiple constituents and stakeholder groups in planning and implementation activities to ensure that local and state needs are addressed.
5. Protect existing water uses through collaborative investments in water resource projects, planning, administration, and permitting of surface water rights, and the registration of groundwater wells.
6. Provide agency-wide services and support in the areas of information technology and transparent data sharing, business improvement, public information, and administration of state-aid funds in conjunction with the Natural Resources Commission.

The proposed project supports goals (1), (2), (3), (4), and (5) as follows:

Goals (1), (3), and (4): The Springfield Creek project was produced through the Southern Sarpy Watersheds Partnership (SSWP) independent development of a Watershed Management Plan to plan for long-term sustainability of its resources (see Goal 3). The Plan utilized scientific and engineering based study in order to understand the challenges which southern Sarpy County faced and devise potential solutions to address them (see Goal 1). Additionally the plan conducted careful outreach with stakeholders, from public citizens and agencies to private entities such as local developers, to ensure that needs were addressed across the area (see Goal 4). Approval by the Natural Resources

Commission of this WSF application would aid the SSWP in implementing the plan that it has developed.

Goals (2) and (5): The proposed evaluation and preliminary design would be performed by a professional engineering firm well qualified to produce work of the highest technical quality. The immediate project administrator, the Papio NRD, also has decades of experience in stream stabilization and would further control the quality of the ultimate work product. This project, when implemented, would have a direct impact on the safety of the residents and visitors of the City of Springfield (see Goal 2). Lastly, much of the focus of this project is on protection and preservation of the existing use of Springfield Creek and its surrounding land; the project planning completed thus far has been supported by the collaborative investment of the six members of the SSWP and the additional support of the Natural Resources Commission through the WSF grant would be one more partner in an effort to promote and implement local water management planning within the state of Nebraska.

16. Federal Mandate Bonus. If you believe that your project is designed to meet the requirements of a federal mandate which furthers the goals of the WSF, then:

    - Describe the federal mandate.
    - Provide documentary evidence of the federal mandate.
    - Describe how the project meets the requirements of the federal mandate.
    - Describe the relationship between the federal mandate and how the project furthers the goals of water sustainability.

The Papio NRD maintains a responsibility to meet Total Maximum Daily Loads (TMDLs) for bacteria in streams in southern Sarpy County as a sponsor of the Water Quality Management Plan for the area (published through the Lower Platte River Corridor Alliance)[10]. The Springfield Creek stabilization project will reduce sedimentation in the stream and lower turbidity. High turbidity can promote bacteria and other pathogens within water supply sources by providing shelter and encouraging regrowth[5]. Previous studies have exhibited a strong relationship between the removal of turbidity and the removal of protozoa[5]. The stabilization of Springfield Creek will support the Water Quality Management Plan by reducing this effect in the stream and improving its water quality, sustaining the use of the stream as a water supply source for future generations.

The Water Sustainability Fund states that one of its goals is to “contribute to multiple water supply management goals including flood control, reducing threats to property damage, agricultural uses, municipal and industrial uses, recreational benefits, wildlife habitat, conservation, and preservation of water resources.” Furthermore, water sustainability is commonly defined as the practice of managing water resources to meet current needs, without compromising the needs of future communities. Stabilization of Springfield Creek achieves this goal in every water supply management category identified by the WSF, and does so by meeting the standards of multiple water management plans (Integrated Management Plan, Watershed Management Plan, Water Quality Management Plan) that have been produced or sponsored by the Papio NRD.

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