

MEMORANDUM

TO: Programs, Projects & Operations Subcommittee

FROM: Ian Ghanavati, Water Resources Engineer

SUBJECT: Water Sustainability Fund Grant Application for the Southern Sarpy Watersheds Partnership Springfield Creek Project

DATE: February 11, 2025

Since 2016, the Papio NRD has been a partner of and the administrating agent for the Southern Sarpy Watersheds Partnership (SSWP). The SSWP's other partners include Sarpy County and the Cities of Bellevue, Gretna, Papillion, and Springfield. The SSWP was formed to develop and implement a Watershed Management Plan for southern Sarpy County, which is expected to rapidly develop as sewer service becomes available in the area. The Watershed Management Plan was finalized in 2024 and produced a number of policies and projects to be implemented in the area; an exhibit of the project plan is attached and more information on the SSWP can be found on its website: <https://southernsarpy.org/>.

Due to the anticipated land transition in southern Sarpy County from agricultural to more impervious commercial and residential development, peak stream flow rates following rain events are expected to increase. The higher flows will act more erosively on the stream beds and banks, which are composed predominantly of Peoria Loess, a soil that is naturally susceptible to erosion even at low velocities. These factors, in addition to the plan to develop beginning from the top of the watershed, leaves downstream communities such as Springfield exposed to considerable stream widening and erosion in the future. While the majority of the streams in the watershed will be protected with zoning setbacks and/or grade stabilization constructed alongside new development (SSWP Policy Group #3), a continuous segment of stream running along the western edge of the City of Springfield was identified as a separate SSWP project due to the projected impact that the modeled stream widening would have on adjacent infrastructure. An exhibit showing this impact is attached.

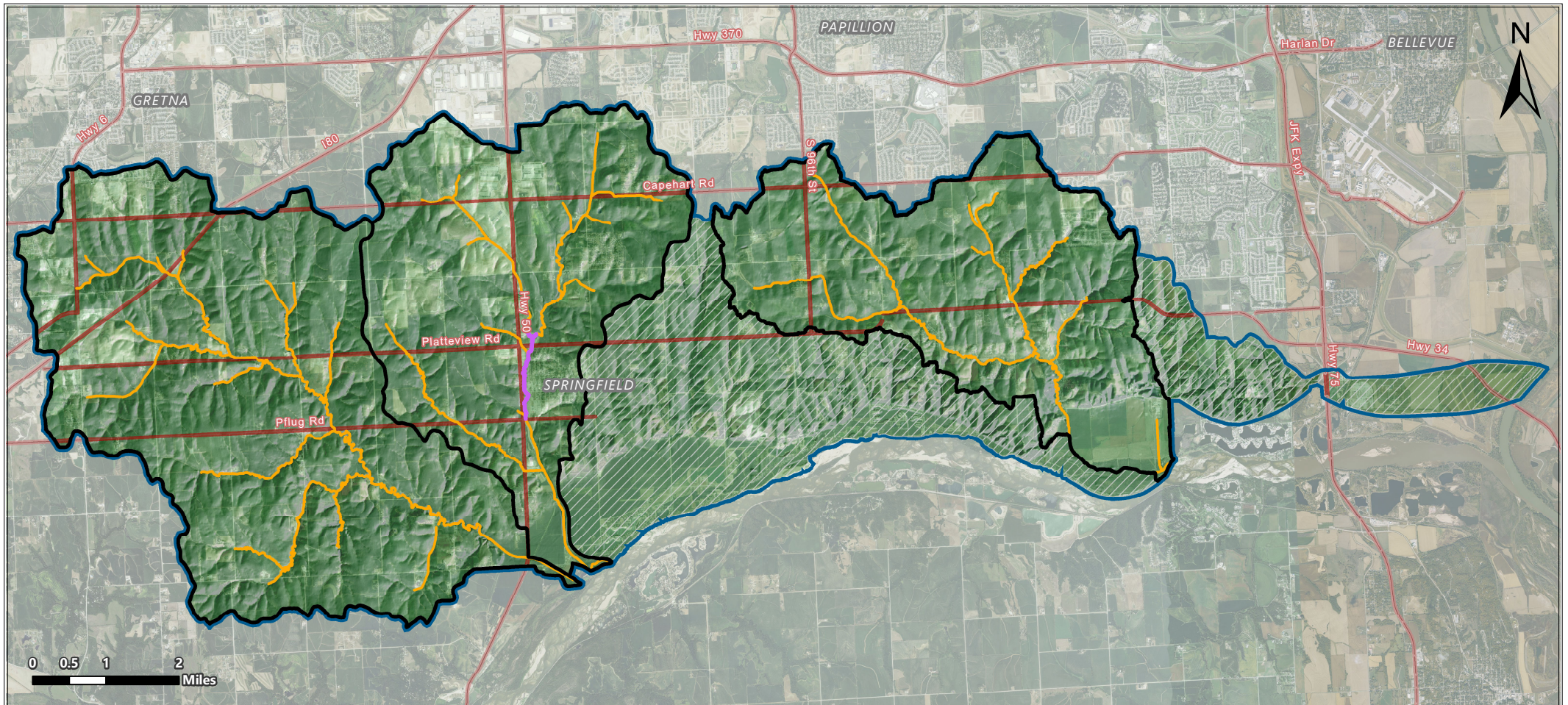
To address the Springfield Creek degradation, the SSWP Watershed Management Plan recommends the construction of a bank stabilization project along the stream. Additional planning and design of this project was not included in the Watershed Management Plan and is yet to be completed by the SSWP. This Water Sustainability Fund application would request support for the conceptual design and feasibility planning of a bank stabilization project in the area. The project will fully assess the existing bank condition and impacted infrastructure, generate design recommendations and alternatives, and produce sufficient conceptual technical materials to support follow up grant applications at both the federal and state level for final design and construction. The Water Sustainability Fund offers a 60% cost share, and this project will apply as a "small project" requesting less than

Attachments: SSWP Watershed Management Plan Map, Infrastructure and Improvements within Existing Springfield Creek Setback Area Figure

\$250,000 cost share. As the administering agent, the Papio NRD would apply on behalf of the SSWP and will be responsible for the 40% sponsor match, which will be funded out of the Southern Sarpy Watersheds Partnership Fund, composed of membership dues paid by the SSWP Partners and watershed fees paid by new development in the southern Sarpy County Watershed Management Area.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute and submit a Water Sustainability Fund application in the amount of 60% of eligible project costs for the Springfield Creek Bank Stabilization Project, subject to such other terms and conditions as the General Manager determines necessary and Legal Counsel approves as to form.

Southern Sarpy Watersheds Partnership (SSWP) Watershed Management Plan



- Watershed Boundaries
- Watershed Management Area ^a.
- Major Roads
- City of Springfield Channel Stabilization Project ^b.
- Stream Project Segments ^c.
- Future Planned Study Areas

KEY WATERSHED MANAGEMENT POLICIES

- 1) 2- and 10-year peak discharge maintained by new development
- 2) Green space corridors of 3:1 + 50' maintained along all watercourses (not mapped)
- 3) Grade control structures installed in all streams with a drainage area greater than 0.5 mi² as mapped by the Stream Project Segments.

WATERSHED MANAGEMENT COSTS: \$70 Million (in 2022 Dollars)

NOTES

- ^a. The Watershed Management Area is the area subject to the plans and policies defined in the Watershed Plan.
- ^b. A proposed grade and bank stabilization project by the Partnership.
- ^c. 65 miles of stream were identified based on having a drainage area greater than 0.5 mi². Grade stabilization projects designed to prevent more than 4 ft of degradation will be constructed or funded by the SSWP in these streams.

Figure F.9. Infrastructure and Improvements within Existing Springfield Creek Setback Area

