

2024 Annual Report

WSF Contract 5321

Water Quality Assessment

- **Project progress.**

- Specific to this study, a total of 30 surface water and 18 groundwater samples were obtained and analyzed for several constituents - including arsenic and the stable isotopes of water - from the following locations: Surface water - Platte River at Leshara and Platte River at Ashland; groundwater – numerous wells located in and around the City of Lincoln wellfield.
- River samples for this project were pooled with several hundred historic surface-water samples to develop statistical models (using the Weighted Regressions on Time, Discharge and Season (WRTDS) package in R) of daily arsenic at the Elkhorn River near Waterloo and the Platte River at Louisville. These models were used to explore arsenic trends in the two rivers.
- Spatial comparisons of arsenic were made to explore spatiotemporal differences in arsenic concentrations between the Elkhorn River and the Platte River upstream of its confluence with the Elkhorn River.
- Groundwater samples were pooled with data going back to the 1990s to explore for arsenic trends and to better understand groundwater flow paths in the study area.
- A report summarizing the findings has been drafted and is in the peer review process.
- There were no claims made against the WSF during 2023.

- **Project related activities planned for the coming year.**

- Calendar year 2023 expenses will be claimed in April 2024 (Claim #2).
- Data analysis and final report production will be ongoing in 2024 with an estimated final report publication date in the Fall of 2024.
- Project remains on schedule.

- **Forecasted or projected (estimated) cash flow for remainder of the project.**

WSF 5321 - Understanding Arsenic Trends in the Lower Platte River and the Surface Water Contribution to the City of Lincoln Water System Groundwater Wells Estimated Cash Flow (Cash flows are approximate)	
2023	2024
\$83,400 (WSF)	\$43,600 (WSF)

\$55,600 (Applicant Match)	\$29,400 (Applicant Match)
\$43,000 (Other Sources, USGS)	\$32,000 (Other Sources, USGS)
<p>Notes:</p> <ol style="list-style-type: none"> 1. Actual expenses for 2023 have not been claimed. Claim for 2023 expenses will be submitted in April 2024. 2. Applicant anticipates sufficient funds to meet financial obligations. 	

- **Reassessment of the likelihood that benefits projected in the application will be realized and, for the final report, a description of benefits realized or reasonably expected to be realized as compared to those stated in their application.**

There have been no changes made or forecasted as to reducing benefits anticipated and documented in the original application during this report period.

If you, or any Commission members, have questions related to the above report or the project itself, please feel free to contact me.

Thank you.

Steve Owen

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