Annual Report - WSF Contract 5321 for Water Quality Assessment

- **Project progress.**

    - All data used in this study have been finalized and were used in the report. Models utilizing the data have been developed. Specific USGS models and data used in this report include:

        - A total of 30 surface water and 18 groundwater samples obtained for this study 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)) 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 in surface water and groundwater 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. Assessments of redox conditions were done when available in specific monitoring wells.

    - A report summarizing the findings has been drafted and is through colleague review. The report will soon be edited by National USGS Scientific Publishing Network that will ensure the report meets expected USGS standards and follows all fundamental science practices. This step will be followed by final report approvals and online publication.

    - Data analysis is complete, the report draft is complete, and report review will be ongoing in early 2025.

    - An estimated final report publication date in the summer of 2025

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

- Calendar year 2024 expenses will be claimed in April 2025 (Claim #3) and there are no future expenses expected with this study.
- Project is a few months behind schedule based on the USGS review process.

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

Once calendar year 2024 expenses are claimed, there will be no future expenses expected with this study.

<table>
<tr><td colspan="2">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)</td></tr>
<tr><td>2024</td><td>2025</td></tr>
<tr><td>$43,600 (WSF)

$29,400 (Applicant Match)

$32,000 (Other Sources, USGS)</td><td>No additional funding</td></tr>
<tr><td colspan="2">Notes:

1. Actual expenses for 2024 have not been claimed. Claim for 2024 expenses will be submitted in April 2025.

2. Applicant anticipates sufficient funds to meet financial obligations.</td></tr>
</table>

- **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.

LINCOLN
Transportation and Utilities

Steve Owen, PE
Assistant City Engineer | Lincoln Water System

City of Lincoln | Transportation and Utilities
Office: 402-441-5925 | Fax: 402-441-8493

Mobile: 402-499-4058

2021 North 27th Street
Lincoln, NE 68503
lincoln.ne.gov/LTU