

WSF 2025 Status Report # 10064

PROJECT: LLNRD/LPNNRD – Nitrates Legacy Assessment Project –
WSF Application #10064 (awarded August 23, 2023)

DATE: MARCH 27, 2025
(FIRST ANNUAL REPORT DUE ON
OR BEFORE APRIL 1, 2025)

See Application 10064, Part 7 For Project Tasks Summary and Timeline

PROJECT PROGRESS UP TO APRIL 2025:

In late summer 2023, the Lower Loup NRD and Lower Platte NRD worked with the USGS to sample selected wells for water-quality and age tracer isotopes. A total of 12 monitoring wells were sampled in Platte and Nance Counties within the Lower Loup NRD and 12 domestic wells were sampled in Platte, Colfax, and Dodge Counties in the Lower Platte North NRD. Samples from selected wells were sent to labs for nutrients, major ion, trace elements, stable isotopes, and selected age tracer analyses. Results were received back from the lab in January 2025 and processed by USGS personnel to determine groundwater age and associate the results with nitrate concentrations. Nitrates ranged from 0.04 to 57.4 mg/L, 12 of the samples exceeded the EPA maximum contaminant level of 10 mg/L. Results show that nitrate is not correlated with well depth. All samples that exceed 10 mg/L are less than 27 years old with the highest 3 sample results being less than 5-years old. Data was shared with both LPN and LLNRD Board Members during their regular meetings.

ANTICIPATED ACTIVITIES FROM NOW UNTIL THE NEXT ANNUAL REPORT DUE APRIL 1, 2026:

The USGS will continue conducting geochemical modeling to determine groundwater age distributions and publicly share the results of this study for peer review. A draft scientific investigative journal is being created by USGS personnel, and a draft will be submitted to the LL & LPNNRDs for review. Anticipated completion of the report and study is fall 2025.

ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

\$408,200 – The USGS (\$137,000), LLNRD (\$54,000), LPNNRD (\$54,000) and WSF (\$163,200) all have funding obligations towards this project under grant #10064.

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 10020 WILL BE REALIZED:

Based on the previous project results and LLNRD's and LPNNRD's experience with working through the WSF, the project is on target for achieving all benefits described in the original application.