

WSF 2025 Annual Report # 5312

PROJECT: ENWRA Groundwater Recharge Mapping and Focus Area Assessments #5312 (awarded December 2021)

DATE: APRIL 1, 2025

(ANNUAL REPORT DUE ON OR BEFORE APRIL 1, 2025)

See Application 5312 For Project Scope Summary and Timeline

PROJECT PROGRESS APRIL 2024 TO APRIL 2025:

The U. S. Geological Survey (USGS) finalized the regional High Moderate Low Recharge Potential map and updated the results discussions in their draft report. The addition of the 2023 and 2024 deliverables was key to filling in gaps for a data lean area on the recharge map and updating the most data dense of the AEM blocks (reinverted Sprague-Firth AEM blocks on the western part of Dorchester Sterling Paleochannel [DSP]). The team adjusted the Project end date (originally projected December 31, 2024) in order to incorporate the AEM survey updates along with general review of the 2024 NRD geologic model deliverables (example: LPSNRD WSF#5311 aquifer vulnerability and groundwater flow maps). The UNL CSD team built the cross-sections and an online interactive map portal for the Project deliverable to demonstrate the hydrogeological relationships for the Phase 2 Focus Areas. The cross-section locations were designed to showcase the Focus Area recharge characteristics serving as a coarse level interpretive view based in an interactive map environment with the regional high-moderate-low recharge basemap and supporting dataset layers. The detail of the multiple cross sections for each of Focus Areas highlighted recharge related examples which translate to the various regional geologic settings (paleochannel, unconfined, confined, perched, secondary bedrock aquifer unit example displays). The USGS wrote descriptive text regarding potential saturation, vulnerability and sustainability gleaned for each Focus Area into the Draft USGS report. The CSD and USGS project team members and ENWRA hosted a Tradeshow room at the NRD Legislative Conference January 27, 2025 as well as presentation January 28, 2025 by Aaron Young and Chris Hobza during the break out sessions the following day. Each of the USGS and CSD agreements with ENWRA were extended out to close June 30, 2025. A link to the updated Preliminary Map currently in progress: <https://go.unl.edu/enwra2024map>

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

Further refinements are nearing completion for the Knox County Focus Area that was expanded beyond the original proposed boundary so CSD's recent systematic county-based workflow could be capitalized on. The Project Focus Area now covers a larger part of Knox County within the ENWRA region. An additional presentation of the Project is planned for the Nebraska Groundwater Council meeting April 22, 2025 held with multiple attending agencies. The final reporting is expected on or before June 30, 2025 and will be summarized in the anticipated close-out report with a pending copy of the USGS publication and a published interactive map portal anticipated to be available at that time.

ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

The fourth reimbursement for the project, Claim 4 (\$24,683.71), was received by ENWRA August 27, 2024. The fifth and final reimbursement claim, Claim 5, is anticipated to be about \$23,780 (60% of the last of the eligible USGS and UNL CSD costs) likely submitted on or near the 2025 fiscal year end in June 30, 2025. The final claim will close out the \$144,000 award.

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 5312 WILL BE REALIZED:

Based on previous project results provided by USGS and UNL CSD and summary herein, the project is on target for achieving the benefits as described in the application.