

WSF 2018 Annual Report # 4125

PROJECT: Secondary Bedrock Aquifer Reconnaissance Sampling in Eastern Nebraska –WSF Application #4125 (awarded April 2016)

DATE: MARCH 28, 2018
(FIRST ANNUAL REPORT DUE ON OR BEFORE APRIL 1, 2018)

See Application 4125 Section D #2 For Project Scope Summary and Timeline

PROJECT PROGRESS APRIL 2017 TO APRIL 2018:

The US Geological Survey (USGS) in cooperation with the Eastern Nebraska Water Resources Assessment (ENWRA) Natural Resources Districts (NRD) analyzed the samples collected (samples were previously collected by USGS between August 2016 to April 2017) for 34 targeted wells representing 18 locations throughout the region (some wells were nested, see Attachment 1). The 34 wells consisted of 14 private wells and 20 agency network monitoring wells screened within several secondary bedrock aquifers (Cretaceous Niobrara, Cretaceous Dakota, and Permian-Pennsylvanian System Units). The 34 wells planned for age and quality analyses. Laboratory analyses for major ions, trace elements, nutrients, and age tracers were completed for each of the samples. Initial preliminary analysis of the age dating results has been conducted for 26 of the samples as of March 2018 with eight C-14 dating results and USGS final vetting still in progress. The results of the water quality sampling are currently in the USGS NWIS database as preliminary.

ANTICIPATED ACTIVITIES FROM NOW UNTIL NEXT ANNUAL REPORT DUE APRIL 1, 2019:

Complete the eight age-dating analyses and final USGS vetting of the sample results, compile historical data available for the region, begin to analyze current and historical data together, continue interpretations and begin report writing, disseminate and present findings to stakeholders. A draft report is anticipated by December 2018 with final USGS publication planned for September 2019. Additionally, the results will be presented to stakeholders in early 2019 prior to the next annual WSF status report.

ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

Reimbursement Claims #1 through #3 totaling **\$94,620 have been received** from WSF (60% of USGS invoices). The last reimbursement claim (#4) is anticipated **before April 1, 2019**:

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 4125 WILL BE REALIZED:

Based on preliminary results provided by USGS at recent ENWRA meetings and at the February 22, 2018 webcast, the project is on target for achieving the benefits as described in the application.



ENWRA Bedrock Water Quality Reconnaissance Study

Amanda Flynn

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February 22, 2018

Sample Collection

- Sample collection:
 - August 2016 – April 2017
- Major ions, trace elements, nutrients, and age tracers
- 34 samples
 - 14 private wells
 - 20 monitoring wells

