

WSF FINAL Status Report # 4132

PROJECT: Lower Platte South NRD Aquifer Framework Mapping –
WSF Application #4132 (awarded April 2016)

DATE: MAY 2, 2018

See Application 4132 Section D #2 For Project Scope Summary and Timeline

PROJECT PROGRESS APRIL 1 2018 TO MAY 2, 2018:

The final Lower Platte South Natural Resources District (LPSNRD) Airborne Electromagnetic Survey (AEM) report was provided by Aqua-Geo Frameworks, LLC (AGF) on November 10, 2017, approximately one week ahead of schedule. The final report summarized the AEM survey results and incorporated the results with existing cross section and Conservation and Survey Division (CSD) test-hole data, GIS spatial data, and NeDNR registered well data (select logs of registered wells were used for general reference and comparisons). The report included the following results:

- Full Report text as a pdf document
- Appendix 1 – LPSNRD AEM Flight Line 2D Profiles in pdf format
- Appendix 2 – LPSNRD AEM 3D Fence Diagrams and Voxel Images in pdf format
- Appendix 3 – Electronic deliverables (borehole data, raw and interpreted AEM datasets, GIS files etc.)
- Interactive Google Earth datasets and 164 associated interpreted profile images (also within Appendix 3)

The report pdf files (including Appendices 1 & 2) and interactive Google Earth datasets are publically available at <http://enwra.org/aem2016.html#lps>. Additionally, the full set of deliverables including the full Appendix 3 were provided to the NeDNR as electronic links through the NeDNR ftp and ENWRA Dropbox handout on April 20, 2018.

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

N/A, this report will serve as the FINAL closeout report for the Lower Platte South NRD Aquifer Framework Mapping –WSF Application #4132 Project (awarded April 2016).

ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

\$0 - The LPSNRD (40%) and WSF (60%) have completed funding obligations (\$416,666 total project costs) under grant award #4132.

LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 4132 WILL BE REALIZED:

From the 4132 WSF Application: “the Project will update the overall hydrogeologic framework and improve upon the previous modeling updates that supported the Fully Appropriated Basin (FAB) Report. The Project will also provide hydrogeologic data necessary for more effective implementation of the LPSNRD’s existing Ground Water Management Plan (GWMP)” ... “The District’s existing, previously collected ground water data, will be combined with the information collected during this Project by the staff and management of the LPSNRD and utilized by the Board to inform future decisions regarding the management and protection of ground water resources.”

Based on the presentation by AGF, initial evaluation of the final report by the LPSNRD, use of the report in public inquiries, and other anticipated planned analyses and evaluations, the project achieved the benefits to the LPSNRD as described in the application and is anticipated to continue to do so. Hydrogeological frameworks were provided for the Eagle, Elmwood, Union, Waverly and Weeping Water Community Water Supply Protection Areas (CWSPAs) and included estimated aquifer volume and water in storage values. The frameworks also included existing borehole data, digitized interpreted geological contacts, resistivity/lithology relationships, and identified potential recharge areas. The report (<http://enwra.org/aem2016.html#lps>) provided recommendations for future work to enhance groundwater management activities. Additionally, the data is being incorporated into the Nebraska GeoCloud (WSF award #4164) by the Conservation and Survey and U.S. Geological Survey (CSD and USGS).