

## **WSF 2021 Annual Report #5243**

Project: **Lower Elkhorn Natural Resources District's District Wide Groundwater Model – WSF Application #5243**

Date: 2/22/2021

### PROJECT PROGRESS TO DATE:

#### Lower Elkhorn Model

- The project team has worked with NeDNR on obtaining data from the Lower Platte Missouri Tributaries (LPMT) watershed model to assist with the transient model calibration.
- NeDNR accepted the steady state model, allowing construction to begin on the transient model in January 2021.
- The steady state model was complete as of December 2020. Model files were provided to NeDNR.
- A model methodology report was created (and has been continuously updated) to ensure the project team and NeDNR both understand next steps and model development processes.
- Initial construction of the steady state model was completed in August 2020.
- Multiple full group meetings with the project team, LENRD, and NeDNR have been held to provide updates, answer questions, and to review the project schedule on 5/5/2020, 7/7/2020, 9/24/2020, 11/12/2020, and 2/9/2021.

#### Model Application Tool

- As of February 2021, the project team has worked with LENRD to move the GUI to a cloud-based platform, rather than the desktop-based application that was originally scoped.
- Work began on the Graphic User Interface (GUI) in December 2020 including a prototype of the cloud-based GUI was shared with the team.

#### Final Report and Hydrogeologic Framework Report

- Over 40 geologic cross sections were delivered to LENRD and UNL CSD staff for review in December 2020.
- The draft hydrogeologic assessment report text was reviewed and shared with LENRD staff in January 2021.
- The project team delivered final Leapfrog data and the explorer tool to LENRD and NeDNR staff in August 2020.
- All AEM was incorporated into the hydrogeologic framework using a total of six layers.

### ANTICIPATED ACTIVITIES FROM APRIL 1, 2021 UNTIL NEXT ANNUAL REPORT DUE APRIL 1, 2022:

#### Lower Elkhorn Model

- It is anticipated that the transient model will be complete by May 2021. The timeframe for approval will be dependent upon reviews and edits based on NeDNR reviews.

#### Model Application Tool

- The cloud-based GUI will be complete in June 2021, pending changes and edits after NeDNR reviews.

#### Final Report and Hydrogeologic Framework Report

- A final deliverable will include a combination of the report, cross sections, and all maps, anticipated for March 2021.

#### ANTICIPATED CASH FLOW FOR REMAINDER OF THE PROJECT:

- To date, \$137,400.00 in grant funds and \$91,600.00 in LENRD matching funds have been expended for a total of \$229,000.00. The remaining \$64,200.00 in grant funding and \$42,800.00 in match is anticipated to be spent before the next annual report.

#### LIKELIHOOD THAT BENEFITS PROJECTED IN APPLICATION 5243 WILL BE REALIZED:

- It is expected that all the original project benefits will be achieved as described in the application in addition to the benefit of a cloud-based GUI.