



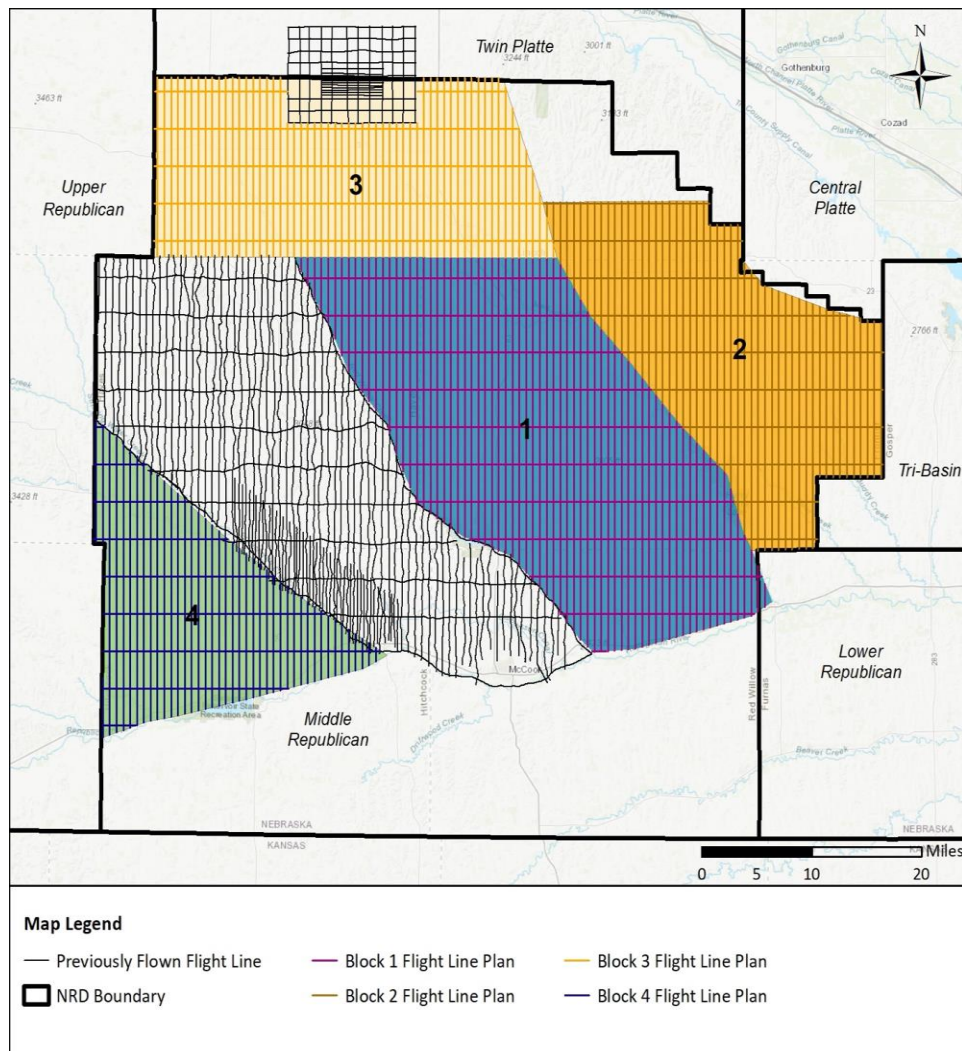
WSF 2025 Annual Report

Grant Application No. 5315

Titled: MRNRD Map and Model for Water Balance

Grant Amount: \$1,222,899.17

Project Progress:



Blocks 3 and 4 were flown during the summer of 2024. This was the final flight for the AEM data collection portion of this grant. All QA/QC data has also been completed for this and is now being processed. Jesse Korus with UNL has been doing data processing to turn this data from resistance values into aquifer properties we can use in a groundwater model. He has finalized all the data processing and has transferred that information to our modeling consultants to

input into the model. We have used 90% of the budget of this grant to date and expect to finalize all parts of this grant by the end of this year.

Project Activities for coming year:

Activities for the upcoming year will include model calibration of phase II of the project and assessment of the accuracy of the groundwater model with AEM data included. We will then determine the value of using AEM surveys to develop groundwater models by comparing scenarios run in each version of the model. We hope to finalize this project in the coming months.

Reassessment of the Project Benefits:

Jesse Korus has done an initial assessment of the AEM data compared to our current knowledge of the aquifer. The assessment has shown that in certain areas the aquifer is modeled at +/- 60ft difference in saturated thickness. Our hope is that the modeled results will reflect this change and give us a better product.

Summary:

The AEM flights have been completed and MRNRD basin model has been completed to approximately 90% completion. The GUI tool has also been complete, and we are being trained in the uses and abilities of this tool. We look forward to seeing how AEM compares traditional model development techniques and the additional impacts they have on making water management decisions.