Water Sustainability Fund 2020 Annual Report #4118

Estimating Recharge Towards Sustainable Groundwater and Agriculture, Central Platte NRD

Award Amount: $151,680

Current Project Activities

Project progress includes collecting recharge information at each of the 8 recharge sites established by USGS and CPNRD in 2008. The site equipment includes weather station instruments, telecommunications equipment (cell phone modem), Campbell Scientific data logger, water level recorder, and heat dissipation probes. The data collected at each site is transmitted daily to the USGS office in Lincoln to a computer and uploaded to the USGS NWIS system for storage and monitoring. Soils samples and water samples have also been collected and analyzed this past year for chloride and nitrate movement.

2020 Project Activities

CPNRD is working with a vadose zone modeler to incorporate the collected data into a 1-D HYDRUS model. The data collected and associated model will aid in understanding of how recharge occurs with different land-use throughout the District. Field instruments will continue to collect climatic and sub-surface data.

Project Partners

To begin meeting the overarching project goals, a cooperative partnership between the Central Platte Natural Resources District (CPNRD), U.S. Geological Survey (USGS) Nebraska Water Science Center (NWSC), and San Francisco State University (SFSU) was put in place by contracts to establish 8 the recharge assessment sites.

Projected Project Expenses for Remainder of Project

We intend to expend the entirety of the project budget by July of this year.

Reassessment of Project Benefits

We have not reassessed the project benefits and it will probably be toward the end of this year before model development is completed. Based on how usable the models are will determine how much benefit comes from the project.