

**USGS National Ground-Water Monitoring Network Cooperative Agreement**  
**Final Technical Report.**

**A. Project Information Summary**

1. Award Number: G21AS00473
2. Agency Name: University of Nebraska-Lincoln, School of Natural Resources,  
Conservation & Survey Division
3. Title: UNL Proposal to Replace Monitoring Equipment at Eight Sites.
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5. Award Term: November 1<sup>st</sup> 2021 – October 31, 2022
6. Final Report Date: 12/15/2022

**Overview of work planned and accomplished during the project:**

The University of Nebraska-Lincoln, School of Natural Resources, Conservation & Survey Division (CSD) received \$20,315 under Objective 6 to replace data logger/transmitters at eight NGWMN sites. Data logger/transmitters were replaced at all proposed sites, and are currently functioning as expected.

**Detailed description of work accomplished under Objective 6:**

Under Objective 6, datalogger/transmitters were replaced at eight sites listed in Table 1. Equipment at existing sites was more than a decade old and was experiencing stability issues at some sites. Furthermore, the transmission protocols used by the existing equipment were set to become incompatible with the GOES satellite network beginning in 2023 (now extended to 2026). Existing Suton Satlink 2 logger/transmitters were replaced with new Sutron Satlink 3 logger transmitters to bring sites into compliance with new transmission protocols. Equipment was installed and programmed by CSD geologist Aaron Young. Serial numbers for all sites are listed in Table 1. All sites are currently functioning and sending data to the NGWMN as expected. Performing this work will greatly benefit the NGWMN by continuing to serve continuous water level data from valuable trend water level sites in the northern High Plains Aquifer. No data was collected as part of this agreement.

Table 1

NGWMN Site Name	NGWMN site ID	Year existing logger transmitter installed	Total depth	Monitoring category	Date new equipment installed	Sutron Satlink 3 SN
Sioux North	18	2008	110	Trend	7/19/2022	21110415
Banner County	25	2008	85	Trend	7/19/2022	21110567
Sidney	23	2008	57	Trend	7/19/2022	21110536
Angora	26	2008	58	Trend	7/21/2022	21110514
Dawes County	16	2008	197	Trend	7/21/2022	21120630
Arthur County	8	2012	25	Trend	7/20/2022	21111251
NW Custer County*	54 and 52	2009	450 and 40	Trend	9/13/2022	21120631
Holbrook	33	2009	110	Trend	9/12/2022	22030256

\*NW Custer County is a nested well site. The datalogger/transmitter at this site services two pressure transducers for NGWMN well 52 and 54.