



# LIVESTOCK WATER SUPPLY PROGRAM ENDS



Green dots represent locations of completed Program projects.

## Program Highlights:

- Activated in June 2017 and deactivated December 2019
- 45 of 53 ND Counties were included in the Program
- Over 500 water supply projects were completed
- 361 applicants completed projects
- Nearly \$1.5 million in cost-share funding was provided to producers

Throughout the program, State Water Commission staff received many positive comments from producers who were truly grateful for the assistance in developing water supplies during times of drought.

The Drought Disaster Livestock Water Supply Assistance Program (Program) is administered by the State Water Commission. The Program can be activated in times of severe drought and provides cost-share assistance to producers to develop long-term, drought resistant water supplies for livestock in areas of need.

The Program was most recently activated by Governor Burgum and the Commission during early summer 2017 in response to severe drought in 28 counties, mostly in western and west-central North Dakota. During 2017 and 2018, more counties throughout the state became eligible for the program as drought conditions worsened. In early 2019, there were still small pockets within the state classified as being in a severe drought. By September 2019, no counties within ND were classified as being in a severe drought, and the Program was deactivated in December 2019.

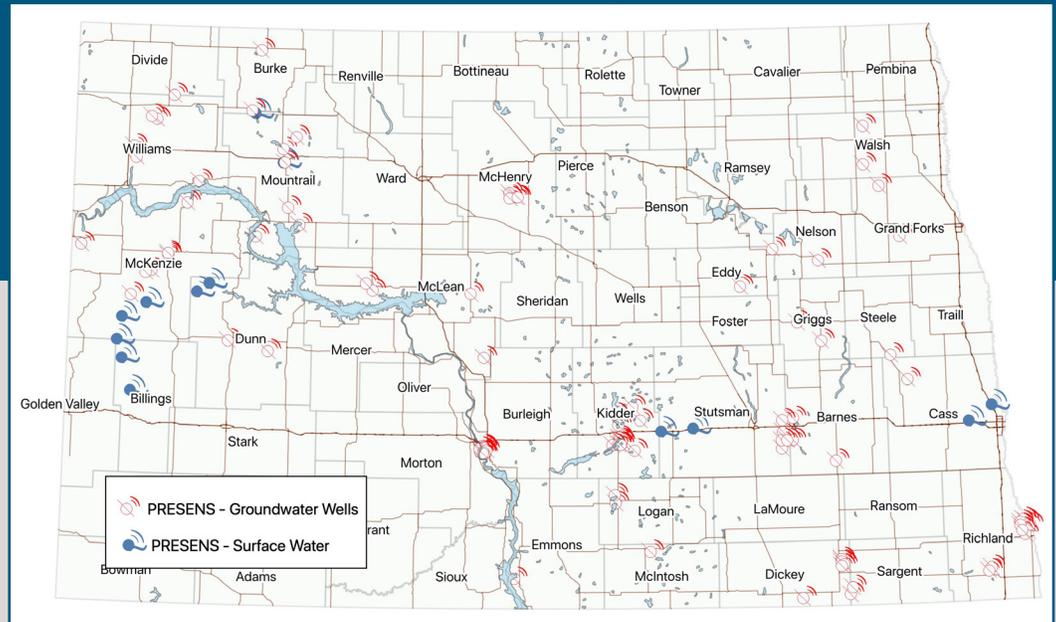
Upon activation in 2017, the program provided cost-share to fund 50% of project costs up to \$3,500 per project. But during the 2019 Legislative Session, that amount was increased to \$4,500. Examples of completed projects include new wells, rural water system connections, pipeline extensions, pasture taps and associated works, labor, materials, and equipment rentals for work completed by the producer.

# PRESENS THRIVES WITH CONTINUED SUCCESS



A PRESENS unit with visible solar panels and data collection device inside the compartment.

Water Commission's MapService showcasing PRESENS locations.



In 2017, the State Water Commission launched an innovative and robust technology that would not only expand data collection, but would do it more efficiently and effectively while implementing overall cost savings and also required no additional staff in the process. The progressive technology that utilizes a solar-powered remote sensing device called PRESENS was designed and tested by our existing agency staff of IT professionals, hydrologists, and technicians.

PRESENS delivers real-time environmental data from sensors located in remote locations, where it is then uploaded to publicly accessible databases at the State Water Commission (SWC) and Office of the State Engineer (OSE). The name PRESENS is an acronym for Pushing REmote SENSors, but also is meant to convey a sense that the SWC and OSE have a data collection "presence" all across the state, and are constantly collecting valuable water resource data needed for sound scientific decision-making on water development, planning, and appropriation.

During the 2019 field season, the agency observed the successful deployment of over 110 PRESENS devices at ground water and surface water sites. The devices have been installed across the state at many notable points of interest including the scenic Little Missouri River valley, throughout the Williston Basin in the northwest region of the state, in the southeast area of North Dakota, the Spiritwood aquifer region, and throughout the Central Dakota aquifer in Kidder County.

The PRESENS device, consists of a multi-channel data acquisition board, capable of cellular or satellite communications, and quickly deploys on a fence post. PRESENS has the potential to see widespread use. Although

originally designed to provide real-time water level and stream gage data, with signal inputs of current, voltage, serial, and SDI-12, a wide range of measurements using common environmental sensors is available.

With the possibility of any sensor being connected, PRESENS proves to be even more beneficial with various divisions within the SWC using the technology to expand data management and monitoring capabilities. Currently, the Water Appropriations Division is scheduled to deploy more units to ground water and surface water sites across the state. The Regulatory Division plans on utilizing the technology by monitoring up to 10 sites, including drains and surface water bodies. Additionally, the Atmospheric Resource Board plans on adding advanced weather monitoring devices with PRESENS at specific sites of their own, with the potential of adding weather stations to existing real-time sites.

Throughout the 2020 field season, the agency is anticipating it will deploy another 100-150 PRESENS devices. This exceptional technology has provided the Water Commission and Office of the State Engineer with the ability, utility, and advancement that is fundamental to meeting challenges and continued growth in data collection efforts that will drive effective management of North Dakota's water resources now and in the future.

For more information on PRESENS or to view the real-time data, please go to: [https://www.swc.nd.gov/info\\_edu/map\\_data\\_resources/](https://www.swc.nd.gov/info_edu/map_data_resources/) or contact David Hisz at [dhisz@nd.gov](mailto:dhisz@nd.gov).