

RED RIVER VALLEY

Drainage Water Management Project

mn DEPARTMENT OF AGRICULTURE



Wilkin County, Minnesota

Status

Installation: 2015-2016

Data collection: 2017 - 2022

Contact

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Project Information

www.mda.state.mn.us/redrivalleydwm

Partners

List of partners on the reverse.

January 2021



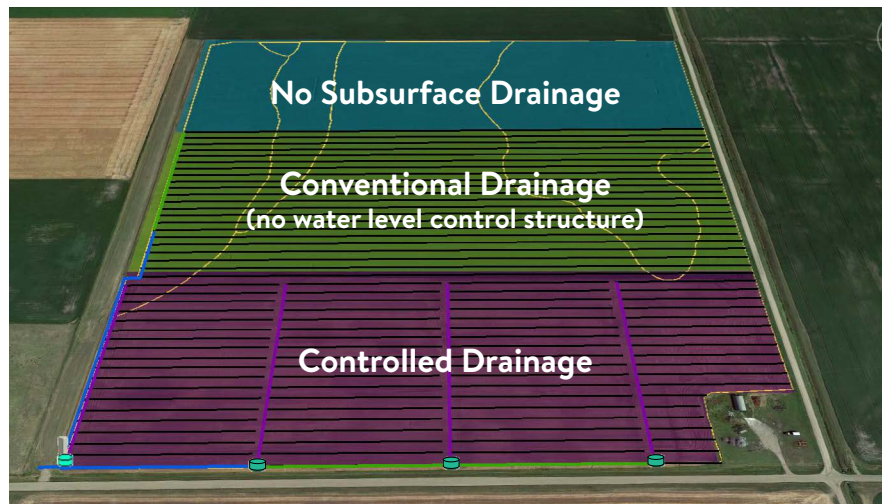
GOAL


Improve agricultural production and reduce flooding losses while minimizing the unwanted environmental impacts of subsurface drainage.

OBJECTIVE

Demonstrate controlled tile drainage as a flood mitigation practice as well as the water quality and quantity benefits. The project is intended to set an example to increase the adoption of drainage water management practices in the Red River Valley.

Field 1 comparison: 155 acres

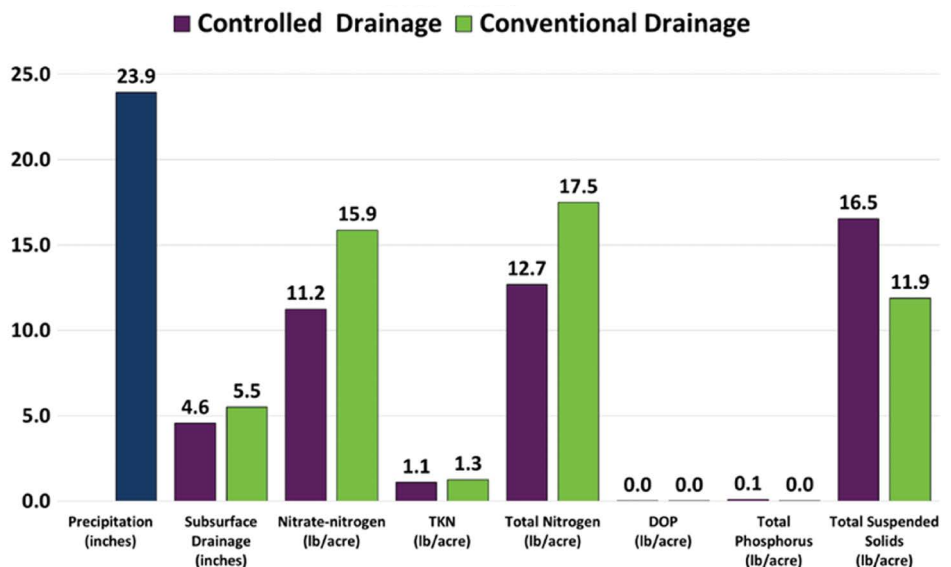


 Water level control structure

This on-farm research site is comparing three field treatments that represent drainage practices used in the local area.

Monitoring

Field 1, 2017-2019

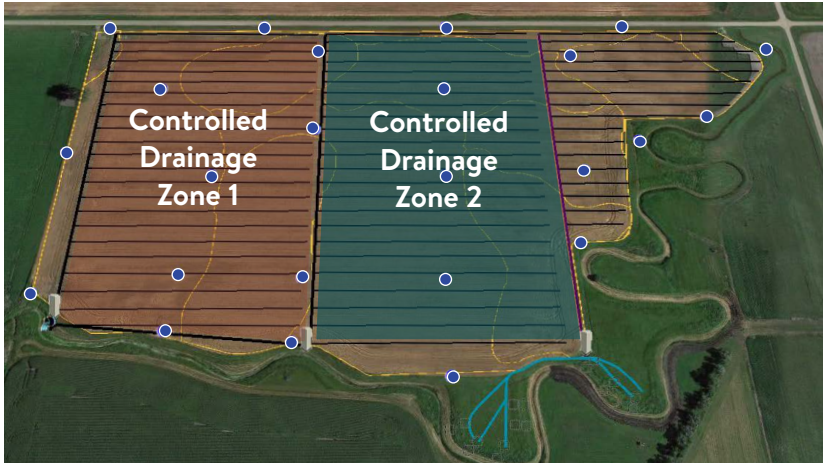


Monitoring results from subsurface drainage as an average for 2017-2019.

Crop yield, residual soil nutrients, soluble salts, planting and harvest dates are also recorded.

In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651-201-6000. TTY users can call the Minnesota Relay Service at 711. The MDA is an equal opportunity employer and provider.

Field 2: 65 acres



● Piezometer — Saturated Buffer

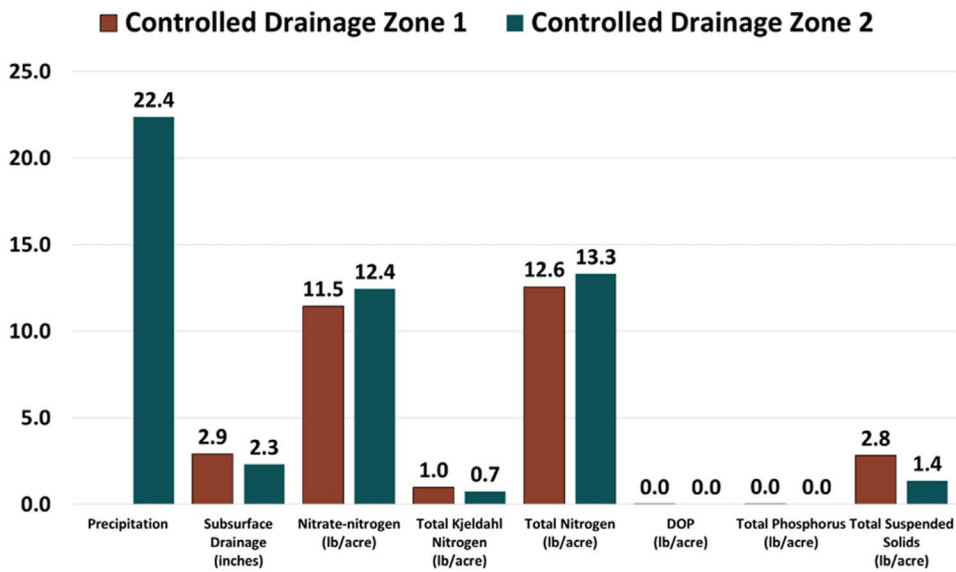
Field includes two treatments:

- Two zones of controlled drainage
- One zone with saturated buffer for nitrate-nitrogen removal from drainage water

Monitoring

- Depth to saturated soil within the root zone (piezometer)
- Crop yield, soil test results, planting, and harvest dates
- Nitrate-nitrogen removal through a saturated buffer vs traditional outlet

Field 2, 2017-2019



Average monitoring results from subsurface drainage for 2017-2019.

Thank you to our project partners

