



INTERIM REPORT

PROJECT TITLE: MAWRC Research and Education Program
PROJECT NUMBER: 6091-23DD
REPORTING PERIOD: December 1, 2023- March 31, 2024
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1.) PROJECT ACTIVITIES COMPLETED DURING THE REPORTING PERIOD. (*Describe project progress specific to goals, objectives, and deliverables identified in the project workplan.*)

Ongoing sample collection and maintenance of monitoring sites are all within scope of the project. The drier summer has resulted in fewer samples to be collected, which demonstrates the water-holding capacity of soils on fields being monitored, which represent a large portion of Minnesota cropland.

2.) IDENTIFY ANY SIGNIFICANT FINDINGS AND RESULTS OF THE PROJECT TO DATE.

Discovery Farm Minnesota monitoring update for **12/01/2023 – 02/29/2024**.

The reporting period was marked by near or record warmth across most of Minnesota. In the Twin Cities, the winter (December, January and February) had an average temperature more than 10 degrees above average and set a new all time high record. The sites experienced rain events in mid and late December which in most years would have been snowfall. The largest rain event occurred December 24th-26th at the McLeod and Wright County sites, both receiving over two inches of precipitation. The McLeod tile drainage had flow from this storm event throughout the rest of the reporting period. The Wright County saw tile flow from late December into early January. One of the two drainage sites in Redwood County had trickle flow from the end of December through the end of February. The Waseca County sites at Farmamerica had no flow during the reporting period. The months of January and February had below normal precipitation for all sites. None of the locations had surface runoff during the reporting period. As of the end of February no sites had a snowpack, which will likely result in limited or no snowmelt runoff at most sites the spring of 2024.

Note that all precipitation data during the winter months is taken from the nearest National Weather Service reporting station, as the Discovery Farm rain gages are not able to accurately measure frozen precipitation.

Site	County	Month	Monthly Total Precipitation	30-Year Normal	Departure from Normal	Surface Runoff Samples	Tile Drainage Samples
MC1	McLeod	December	3.03	1.07	+1.96	0	5
		January	0.12	0.66	-0.54	0	1
		February	0.62	0.84	-0.22	0	3
RW1N	Redwood	December	1.11	0.88	+0.23	0	1
		January	0.36	0.85	-0.49	0	0
		February	0.13	0.66	-0.53	0	1
RW1S		December	1.11	0.88	+0.23	0	0
		January	0.36	0.85	-0.49	0	0
		February	0.13	0.66	-0.53	0	0
WA1N1	Waseca	December	-	1.50	-	-	0
		January	-	1.27	-	-	0
		February	-	1.20	-	-	0
WA1N2		December	1.77	1.50	+0.27	-	0
		January	0.45	1.27	-0.82	-	0
		February	0.52	1.20	-0.68	-	0
WA1SE		December	1.77	1.50	+0.27	-	0
		January	0.45	1.27	-0.82	-	0
		February	0.52	1.20	-0.68	-	0
WA1SW		December	-	1.50	-	-	0
		January	-	1.27	-	-	0
		February	-	1.20	-	-	0
WR1	Wright	December	3.30	0.85	+2.45	0	2
		January	0.18	0.58	-0.40	0	2
		February	0.62	0.85	-0.23	0	0

3.) CHALLENGES ENCOUNTERED. *(Describe any challenges that you encountered related to project progress specific to goals, objectives, and deliverables identified in the project workplan.)*

No challenges were experienced in the current period.

4.) FINANCIAL INFORMATION *(Describe any budget challenges and provide specific reasons for deviations from the projected project spending.)*

Project budget is on track.

5.) EDUCATION AND OUTREACH ACTIVITIES. *(Describe any conferences, workshops, field days, etc attended, number of contacts at each event, and/or publications developed to disseminate project results.)*

The MAWRC organized and co-hosted two nutrient management education programs in February. These events were delivered in-person and via Zoom, with a combined audience of nearly 400. This year marked the 16th Annual Nutrient Management Conference and the 10th Annual Nitrogen Management Conference. Presentations for these and past conferences can be found at [Minnesota Agricultural Water Resource Center - YouTube](#) .

The MAWRC participated at the annual Prairie Grains Conference, Minnesota State Cattlemen’s Conference and MN Ag Expo.

The MAWRC continues to provide representation for farmers at the Clean Water Council and BWSR Drainage Work Group.

MAWRC staff has provided information about nitrates and private wells in Southeast Minnesota, assisting in responding to concerns about fertilizer use associated with corn production. We also provided two articles published in The Farmer magazine relating to this topic.

MAWRC staff participated in a Soil Health Field Day highlighting farmer conservation efforts in the karst region. This field day was held on February 30 and attended by more than 100 farmers and interested persons.

MAWRC hosted a webinar on March 21st providing an update and first year data from the controlled drainage project at Farmamerica.

The MAWRC offered nitrate screening for private well owners in conjunction with an Advanced Nitrogen Smart session in St. Charles on March 26. 19 well samples were brought in. Results were similar to MDA well testing results in the area, with 11 samples at the no-detect level and 16 below the nitrate drinking water standard. The event provided an opportunity to discuss nitrate trends and well treatment.

The MAWRC continues to provide representation for farmers at the Clean Water Council and BWSR Drainage Work Group.

MAWRC staff participated in a Multi-State Discovery Farms webinar on March 26 and provided an update on chloride data collected at Discovery Farms sites.