



INTERIM REPORT

PROJECT TITLE: MAWRC Research and Education Program

PROJECT NUMBER: 6091-23DD

REPORTING PERIOD: June 1- August 31

PRINCIPAL INVESTIGATOR: Warren Formo

ORGANIZATION: Minnesota Agricultural Water Resource Center

PHONE NUMBER: 952-237-9822

EMAIL: warren@mawrc.org

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.

Installation of monitoring equipment at the subsurface tile monitoring project located at Farmamerica south of Waseca, MN was completed this spring. Initial monitoring will serve as a calibration period for the multiple watershed zones within the field. The Farmamerica location will provide an excellent setting for showcasing conservation drainage in southern Minnesota and hosting field days with a state-of-the-art facility.

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

Discovery Farm Minnesota monitoring update for **06/01/2023 – 08/31/2023**.

2023 has marked the fourth straight year with generally below-normal precipitation. The summer months of June, July and August have been no different. Between all monitored farms, the collective three-month period was nearly -5.5 inches below the respective 30-year Normal rainfall on average, ranging from -4.39 inches to -7.85 inches. Nearly all individual months were below normal, ranging from nearly an inch below normal to almost 3.5 inches below normal. There were only two exceptions. The month of August in Stearns County was near the Normal (+0.06 inches) and August at Wright County was +0.43 inches above the 30-year Normal.

Subsurface tile drainage during the summer months was minimal. All sites had no subsurface drainage after early to mid-July, with a few locations stopping by mid-June. The only subsurface tile drainage during the month of August was at the Wright County farm for less than two days following a nearly three-inch rainfall.

Like subsurface tile drainage, there were minimal surface runoff events that occurred over the summer months. Wright County had two very small surface runoff events, one in July and one in August. The Stearns County paired watersheds each had one runoff event in June and the east site had a very small event in August. There were no surface runoff events at the McLeod or Redwood County farms during June, July or August.

Site	County	Month	Monthly Total Precipitation	30-Year Normal	Departure from Normal	Surface Runoff Samples	Tile Drainage Samples
MC1	McLeod	June	2.52	5.24	-2.70	0	1
		July	2.54	3.53	-0.99	0	0
		August	2.95	4.39	-1.44	0	0
RW1N	Redwood	June	1.23	4.24	-3.01	0	3
		July	0.98	3.91	-2.93	0	0
		August	3.29	4.14	-0.85	0	0
RW1S		June	1.42	4.24	-2.82	0	3
		July	0.68	3.91	-3.23	0	0
		August	2.96	4.14	-1.18	0	0
ST2 East	Stearns	June	-	3.75	-	0	3
		July	-	3.60	-	0	0
		August	-	4.00	-	1	0
ST2 West		June	2.33	3.75	-1.42	2	0
		July	1.62	3.60	-1.98	0	0
		August	4.06	4.00	+0.06	0	0
WA1N1	Waseca	June	-	5.38	-	-	2
		July	-	4.93	-	-	0
		August	-	4.82	-	-	0
WA1N2		June	2.02	5.38	-3.36	-	2
		July	1.52	4.93	-3.41	-	0
		August	3.66	4.82	-1.16	-	0
WA1SE		June	2.21	5.38	-3.17	-	2
		July	1.50	4.93	-3.43	-	0
		August	3.65	4.82	-1.17	-	0
WA1SW		June	-	5.38	-	-	2
		July	-	4.93	-	-	0
		August	-	4.82	-	-	0
WR1	Wright	June	1.00	4.42	-3.42	0	0
		July	2.09	3.49	-1.40	1	0
		August	3.86	3.43	+0.43	1	1

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.)*

A field day was held on August 10 at the Stearns County location. The event was organized by the AgriGrowth council and included many state legislators. The event showcased the conservation practices of the Janski Farm, including their participation in the Discovery Farms program.

Discovery Farms was represented at the Fishers and Farmers tour in the Cannon and Vermillion River watersheds on August 9 and 10. The main focus of the event was soil health and connections to aquatic habitat.

The MAWRC co-hosted a 4R Nutrient & Soil Management Field Day near Breckenridge with the Wilkin County SWCD, Cargill, Mosaic, and ETS. About 50 gathered to see plots comparing no-till, strip till and conventional tillage. Presentations on carbon markets, drainage research in NW MN, and soil health were well received.

A field day was held at the FarmAmerica Drainage Discovery Farms location on August 16. The crowd of about 30 included farmers, drainage contractors, SWCD staff and policymakers from the area. This outreach builds awareness of the Discovery Farms program and our work in drainage monitoring.

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