



PRAIRIE RESEARCH INSTITUTE

Illinois State Water Survey
2204 Griffith Drive
Champaign, IL 61820

OPERATION OF THE IMPERIAL VALLEY WATER AUTHORITY (IVWA) PRECIPITATION NETWORK

Monthly Progress Report for May 2019

June 13, 2019

Erin Bauer, Dana Grabowski, Kevin Rennels, and Steve Wilson

Phone: (217) 300-3471; (866) 292-7305 (toll-free); (217) 333-8466; (217) 333-0956

E-mail: ebauer@illinois.edu; dgrabows@illinois.edu

Raingage Network Operations

On June 5, 2019, Dana Grabowski serviced all gages and downloaded the digital data. All of the buckets were weighed and emptied. Sites #2, #3, and #4 were surveyed and calibrated with correlation coefficients of 0.99998 each. Site #8 was releveled.

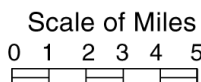
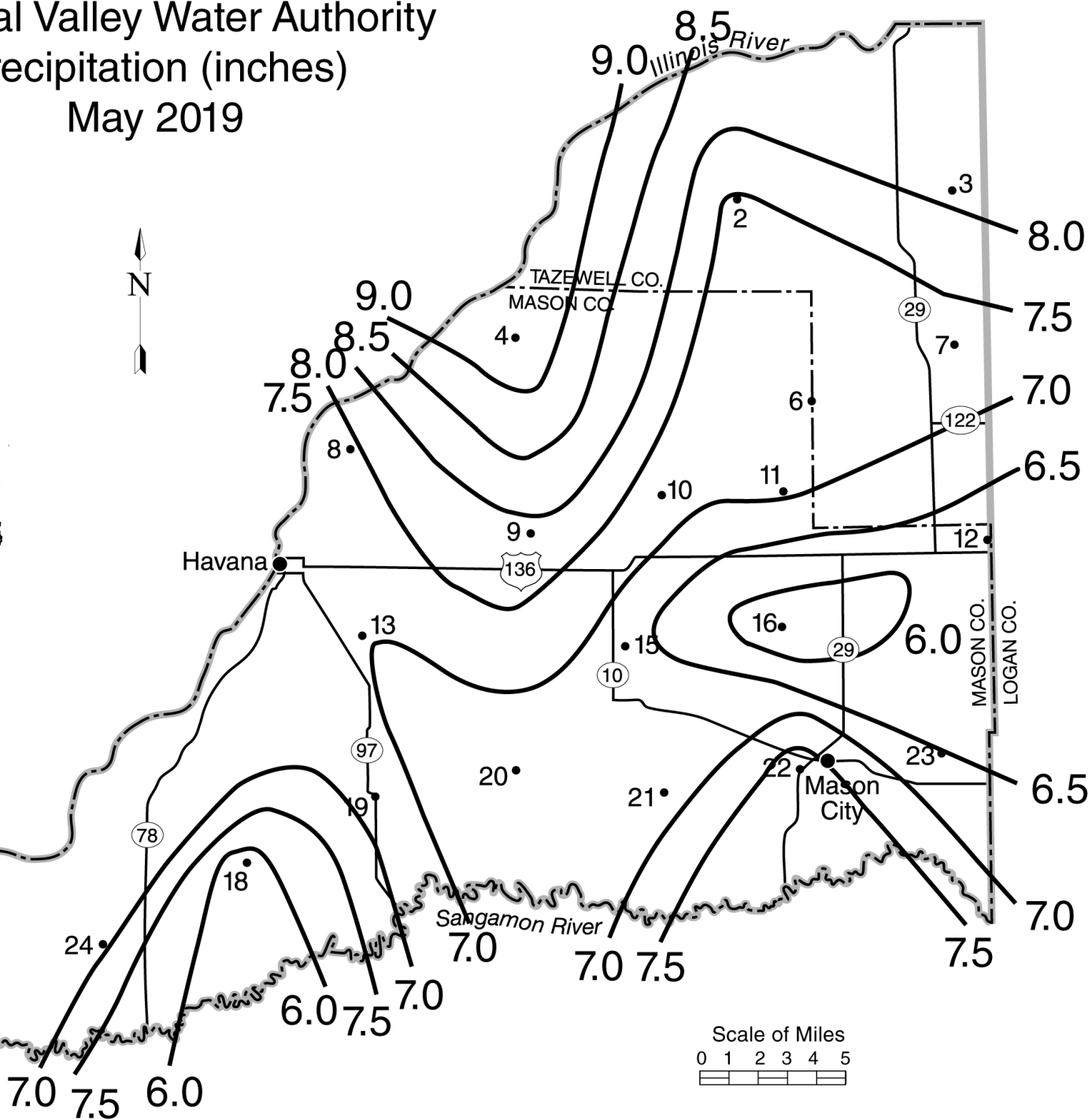
Several gages were found to have equipment issues this month, likely due to severe storms in the previous weeks and the day of the visit. A tree fell on gage #8, denting the gage housing. The collection buckets of gages #12 and #23 had been moved off center within the gage housing. At site #9, the evaporation pan had fallen into the bucket, and at site #11, the evaporation pan was clogged with debris and had standing water. All issues were corrected during these visits.

Data Analysis

Precipitation was underreported at gage #11 because of the clogged evaporation pan starting on May 21. Hourly precipitation data were estimated using the nearest neighbor interpolation method for May 21–31.

The average network precipitation for May 2019 was 7.12 inches, which is well above the previous 26-year network average. The largest monthly gage total was in the northwest portion of the network. Monthly gage totals varied 3.89 inches across the network, from 5.60 inches at site #16, north of Mason City, to 9.49 inches at site #4, near Goofy Ridge. The 1981–2010 30-year average precipitation amounts for May at Havana and Mason City are 3.67 and 4.07 inches, respectively. The May 2019 network average of 7.12 inches is 171 percent of the 26-year (1993–2018) IVWA May network average of 4.16 inches.

Imperial Valley Water Authority Precipitation (inches) May 2019



May 2019 Daily and Monthly Precipitation Amounts (inches), Imperial Valley Network

DAY	G 2	G 3	G 4	G 6	G 7	G 8	G 9	G 10	G 11	G 12	G 13	G 15	G 16	G 18	G 19	G 20	G 21	G 22	G 23	G 24
1	0.80	1.11	0.75	1.11	1.30	0.53	0.84	1.08	1.23	1.44	0.75	1.14	1.36	0.72	0.93	1.03	1.36	1.87	1.53	0.75
2	1.29	0.62	1.28	1.25	1.10	1.05	1.42	1.18	1.52	1.11	1.13	1.83	1.25	1.39	1.54	1.46	0.98	1.02	0.99	1.81
3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
7	0.01	----	----	0.01	0.01	----	----	----	----	----	----	0.01	----	----	----	----	----	----	----	0.01
8	0.19	0.15	0.65	0.17	0.13	0.38	0.20	0.09	0.06	0.19	0.42	0.11	0.14	0.12	0.44	0.06	0.06	0.31	0.15	0.14
9	0.01	0.02	----	0.01	0.04	0.01	0.01	----	----	0.07	----	----	0.01	0.01	0.01	0.01	0.01	----	0.04	----
10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11	0.09	0.06	0.05	0.08	0.08	0.06	0.06	0.03	0.05	0.16	0.13	0.13	0.16	0.12	0.21	0.12	0.15	0.23	0.17	0.24
12	0.10	0.09	0.05	0.08	0.12	0.06	0.06	0.03	0.06	0.08	0.04	0.05	0.03	0.09	0.09	0.09	0.05	0.06	0.08	0.13
13	----	----	----	----	0.01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
14	----	0.01	----	----	----	0.03	----	0.01	0.02	----	0.05	0.01	0.01	0.08	0.10	0.01	----	----	----	0.19
15	0.01	----	----	----	----	0.01	----	----	----	----	----	----	----	----	0.01	----	----	0.01	----	----
16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17	----	0.02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18	0.28	0.11	0.17	0.03	0.12	0.34	0.02	----	----	----	0.02	0.01	----	0.01	----	0.01	----	0.01	----	0.01
19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20	0.02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
21	1.19	1.30	1.21	1.03	1.05	1.17	1.24	1.28	1.06	0.92	1.19	1.28	1.07	1.22	1.32	1.19	1.06	1.22	0.89	1.32
22	0.38	0.44	0.43	0.33	0.63	0.48	0.81	0.27	0.37	0.12	0.14	0.09	0.06	0.05	0.10	0.08	0.48	0.40	0.63	0.19
23	0.14	0.16	0.13	0.19	0.20	0.31	0.24	0.25	0.23	0.21	0.15	0.17	0.19	0.25	0.26	0.25	0.27	0.29	0.26	0.23
24	0.71	0.97	1.30	0.58	0.23	0.46	0.13	0.40	0.19	----	----	----	----	0.01	0.04	----	----	----	----	0.05
25	0.64	0.97	1.19	0.83	0.91	0.93	1.48	0.93	0.76	0.54	1.43	0.64	0.42	0.43	0.62	0.87	0.79	0.66	0.59	0.46
26	0.20	0.17	0.26	0.33	0.23	0.35	0.28	0.30	0.40	0.14	0.41	0.25	0.18	0.76	0.74	0.54	0.45	0.46	0.27	0.83
27	----	0.01	0.01	----	----	0.05	----	----	----	----	----	----	----	----	----	----	----	----	----	----
28	0.68	1.08	1.47	0.73	0.71	0.46	0.77	0.65	0.55	0.76	0.84	0.38	0.35	0.18	0.51	0.51	0.61	0.43	0.40	0.40
29	0.66	0.44	0.41	0.34	0.31	0.71	0.30	0.58	0.37	0.34	0.27	0.53	0.27	0.24	0.21	0.27	0.31	0.60	0.33	0.22
30	0.05	0.38	0.13	0.28	0.10	0.01	0.05	0.18	0.21	0.14	0.05	0.09	0.10	0.03	0.05	0.11	0.13	0.21	0.19	0.06
31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Monthly	7.45	8.11	9.49	7.38	7.28	7.40	7.91	7.26	7.08	6.22	7.02	6.72	5.60	5.71	7.18	6.61	6.71	7.78	6.52	7.04
Network Average =	7.12		Imperial Valley Network																	