



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 October 2020
November 13, 2020

Erin Bauer, Daniel Abrams, Steve Wilson, and Kevin Rennels
Phone: (217) 300-3471; (866) 292-7305 (toll-free); (217) 333-8466; (217) 333-0956
E-mail: ebauer@illinois.edu

Raingage Network Operations

On November 5, Erin visited and weighed the precipitation collections for 11 gages (8, 9, 13, 15, 16, 18, 19, 20, 21, 22, 23). The collections were weighed, and the buckets were emptied and cleaned. To winterize the gages, low-tox antifreeze was added to each bucket and the evaporation shield was removed.

As reported in the September 2020 report, the gage at site #21 had been damaged and found lying on the ground, thus no data were collected at site #21 during October. A replacement gage was installed at site #21, which calibrated with a coefficient of 0.99996. At gage #20, a groundhog had dug a deep hole directly under the gage. There were leaves in the hole, so it is hoped that this hole was already abandoned. The hole was refilled and mounded with soil. Gage #9 calibrated with a coefficient of 0.99998. Logger batteries were replaced at sites #15 and #22.

On November 6, Erin visited and weighed the precipitation collections for eight gages (2, 3, 4, 6, 7, 10, 11, 12). The collections were weighed, and the buckets were emptied and cleaned. To winterize the gages, low-tox antifreeze was added to each bucket, and the evaporation shield was removed. Gage #11 calibrated with a coefficient of 0.99999. The logger battery of gage #13 was replaced.

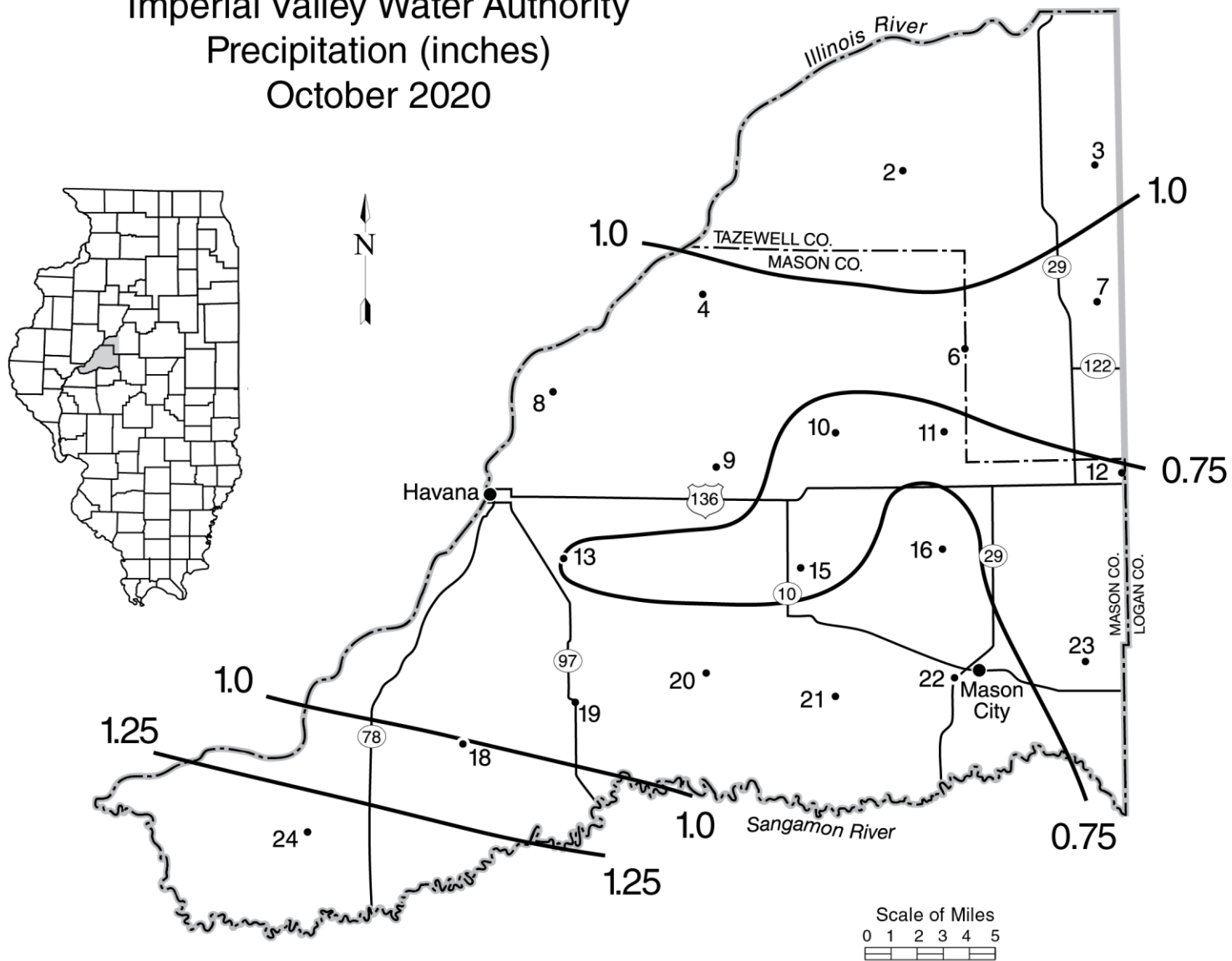
Precipitation data for gages #9 and #12 are downloaded by modem every hour.

Data Analysis

Gage #13 and #22 loggers experienced low battery and precipitation data were not collected. October data for gages #13, #21, and #22 were interpolated from nearby gage 15-minute precipitation values.

The average network precipitation for October 2020 was 0.88 inches, which is well below the previous 28-year network average. Monthly gage totals varied 0.64 inches across the network, from 0.46 inches at site #12, north of San Jose, to 1.37 inches at site #24, southeast of Snicarte. The 1981–2010 30-year average precipitation amounts for October at Havana and Mason City are 3.04 and 2.87 inches, respectively. This was the second driest October since 1992. Since then, the driest October was in 1997 with a network average of 0.47 inches. The October 2020 network average of 0.88 inches is 32 percent of the 28-year (1992–2019) IVWA October network average of 2.75 inches.

Imperial Valley Water Authority Precipitation (inches) October 2020



October 2020 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	1.16	0.63	0.95	0.86	1.17	0.85	1.06	0.99	0.98	1.25	0.99	1.31	0.97	1.30	0.86	1.27	0.54	0.83	1.19	0.78
2	0.01	----	0.01	----	0.01	0.01	----	0.01	0.01	0.01	0.02	----	----	0.01	0.01	----	0.01	0.01	----	----
3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6	0.53	0.30	0.64	0.48	0.42	0.02	0.11	0.25	0.52	0.21	----	0.04	0.19	0.01	----	----	----	0.01*	0.06	----
7	1.52	0.34	0.27	0.02	0.13	0.13	----	0.06	----	0.13	----	----	0.04	0.05	0.02	----	----	0.01*	----	0.08
8	0.13	0.32	0.03	0.07	0.35	----	0.05	0.03	0.19	0.08	0.01	0.03	0.20	0.02	0.01	0.11	0.12	0.08*	0.14	0.02
9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
10	0.02	----	0.01	----	----	0.01	----	----	----	0.01	0.01	----	----	----	----	----	0.02	----	----	----
11	0.05	----	0.02	0.03	----	0.03	0.05	0.01	0.04	0.03	0.01	0.04	0.01	0.01	0.01	0.03	0.03	0.01*	----	0.01
12	1.40	1.23	1.62	1.41	1.37	1.73	1.17	1.35	1.25	0.77	1.30	1.34	1.19	1.50	1.39	1.45	1.04	1.06*	0.62	2.24
13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
26	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
27	0.36	0.35	0.34	0.39	0.35	0.44	0.02	0.41	0.35	0.18	0.15*	0.48	0.38	0.51	0.57	0.48	0.12	0.32*	0.44	0.60
28	0.14	0.16	0.12	0.12	0.13	0.12	0.46	0.12	0.11	0.13	0.19*	0.10	0.14	0.07	0.08	0.10	0.11	0.07*	0.05	0.10
29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
30	0.01	0.01	----	----	----	0.02	----	0.02	----	0.01	----	----	----	----	----	----	0.02	----	0.01	----
Monthly	5.33	3.34	4.01	3.38	3.93	3.36	2.92	3.25	3.45	2.81	2.68*	3.34	3.12	3.48	2.95	3.44	2.01	2.40*	2.51	3.83

Network Average = 3.28 Imperial Valley Network

Note: * Estimated data