



## **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 2018

November 12, 2018

Erin Bauer and Dana Grabowski  
Phone: (217) 300-3471; (866) 292-7305 (toll-free)  
E-mail: ebauer@illinois.edu; dgrabows@illinois.edu

Kevin Rennels and Steve Wilson  
Phones: (217) 333-8466; 333-0956

### Raingage Network Operations

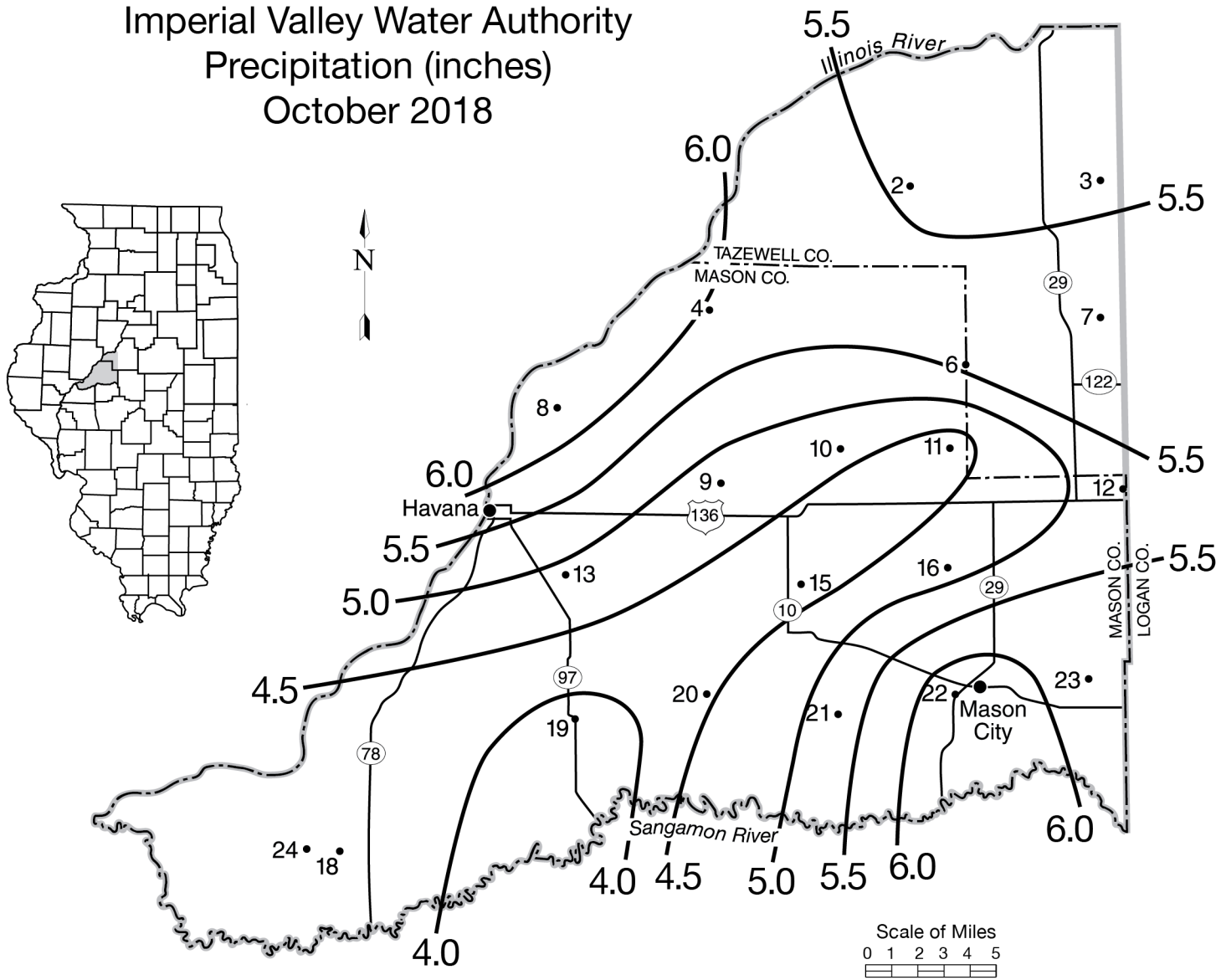
On October 17, Dana Grabowski and Erin Bauer moved the gage from site #24 to Sunrise FS in Kilbourne, Illinois. This gage was moved to distribute the gages more evenly across this area. The new site is approximately 0.62 miles slightly west of due south from the old #18 site near the Sand Prairie-Scrub Oak Nature Preserve, northwest of Kilbourne. The new gage location is N40°08'58.1", W90°05'18.8" at an elevation of 537 feet. The gage was calibrated with a correlation coefficient of 0.99999. A site survey and pictures were taken at the old and new sites. Sites #13, #15, and #16 were calibrated with correlation coefficients of 0.99999, 1.00000, and 0.99999, respectively. These buckets were also weighed, emptied, and cleaned during the visit.

Dana Grabowski serviced all gages and downloaded the digital data on November 1, 2018. All of the collections were weighed and the buckets were emptied and cleaned. Calibrations were performed at sites #8, #9, and #11 with correlation coefficients of 1.00000, 0.99999, and 0.99995, respectively. The battery was replaced at site #11.

## Data Analysis

The average network precipitation for October 2018 was 5.04 inches, which is well above the previous 26-year network average and the third highest October network precipitation since 1992. The largest monthly gage precipitation totals were along the river in the northern part and in the southeastern corner of Mason County. The smallest gage total was in central Mason County, north of Kilbourne. Monthly gage totals varied 2.53 inches across the network, from 3.85 inches at site #19, north of Kilbourne, to 6.38 inches at site #8, north of Havana. The 1981–2010 30-year average precipitation amounts for October at Havana and Mason City are 3.04 and 2.87 inches, respectively. The October 2018 network average of 5.04 inches is 186 percent of the 26-year (1992–2017) IVWA October network average of 2.72 inches. Since 1992, the highest network precipitation for October occurred in 2009 with 8.08 inches; the second highest occurred in 2004 with 5.17 inches.

# Imperial Valley Water Authority Precipitation (inches) October 2018



October 2018 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	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4	0.03	0.07	0.05	0.17	0.26	0.02	0.08	0.19	0.35	0.30	0.03	0.31	0.35	0.18	0.16	0.41	0.41	0.46	0.23	----
5	2.07	2.17	2.09	2.35	2.43	1.39	1.67	1.67	1.11	0.86	1.30	0.89	0.63	1.06	0.81	0.84	0.87	1.05	1.25	1.31
6	0.55	0.51	0.61	0.25	0.26	0.53	0.23	0.38	0.23	0.21	0.58	0.15	0.33	0.32	0.30	0.22	0.37	0.36	0.61	0.40
7	1.14	1.07	1.54	1.06	1.26	2.41	1.11	0.76	1.41	2.26	1.45	1.19	1.67	1.17	1.13	1.40	1.79	2.46	2.01	1.27
8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
10	0.12	0.03	0.08	0.05	----	0.23	0.11	0.09	----	----	0.08	0.11	0.04	0.11	0.11	0.13	0.03	0.02	0.03	0.12
11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
12	0.19	0.11	0.14	0.14	0.15	0.14	0.15	0.13	0.05	0.07	0.13	0.12	0.13	0.18	0.14	0.12	0.12	0.14	0.07	0.18
13	----	0.01	0.01	0.01	0.02	0.01	0.01	0.01	----	----	0.01	0.01	0.01	----	0.01	0.01	----	0.01	----	----
14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
15	0.13	0.08	0.11	0.12	0.11	0.12	0.16	0.09	0.05	0.05	0.15	0.09	0.04	0.11	0.12	0.08	0.10	0.12	0.09	0.13
16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
26	0.25	0.29	0.20	0.23	0.33	0.24	0.19	0.22	0.09	0.41	0.18	0.23	0.35	0.18	0.17	0.15	0.23	0.51	0.29	----
27	----	----	----	----	0.01	----	----	----	0.04	0.01	----	----	0.01	0.01	----	----	----	0.02	0.02	----
28	0.03	0.05	0.02	0.04	----	0.02	0.04	----	----	0.01	0.01	0.04	0.04	0.01	0.02	----	----	----	0.03	----
29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
30	----	0.04	0.01	----	----	----	----	----	----	0.03	----	0.01	0.11	----	----	0.02	0.02	----	0.01	----
31	0.96	0.90	1.13	1.15	1.10	1.27	0.96	1.04	0.98	1.07	0.92	1.05	1.11	0.92	0.88	1.08	1.26	1.22	1.12	----
Monthly	5.47	5.33	5.99	5.57	5.93	6.38	4.71	4.58	4.31	5.28	4.84	4.20	4.82	4.25	3.85	4.46	5.20	6.37	5.76	3.41*

Network Average = 5.04 Imperial Valley Network

\* Partial month total, gage moved to new location on October 17, 2018.