



## **PRAIRIE RESEARCH INSTITUTE**

Illinois State Water Survey  
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# **OPERATION OF THE IMPERIAL VALLEY WATER AUTHORITY (IVWA) PRECIPITATION NETWORK**

Monthly Progress Report for December 2018

January 17, 2019

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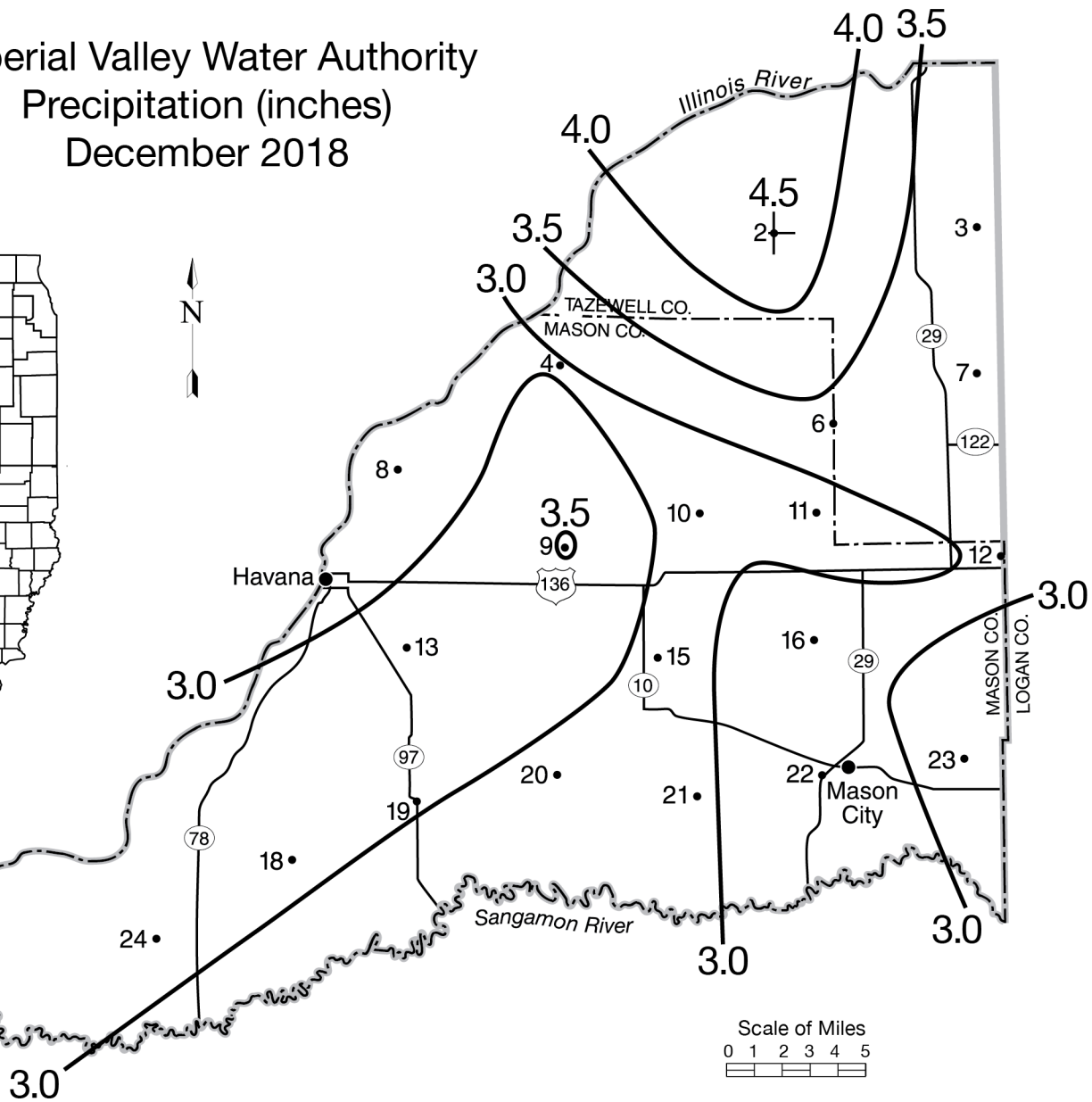
### Raingage Network Operations

On January 3, 2019, Dana Grabowski serviced all gages and downloaded the digital data. All of the buckets were weighed and the new tare weight for each bucket was recorded. The logger battery was replaced at sites #2, #10, #20, and #23. The logger at site #20 lost power on December 30 around 3 AM. The precipitation event data on December 31 for site #20 was estimated using nearest-neighbor distance weighted interpolation.

### Data Analysis

The average network precipitation for December 2018 was 3.12 inches, which is above the previous 26-year network average. The largest monthly gage total was in the northern portion of the network. Monthly gage totals varied 1.89 inches across the network, from 2.61 inches at site #8, north of Havana, to 4.50 inches at site #2, north of Manito. Without site #2, the network precipitation variation would be 0.91 inches. The 1981–2010 30-year average precipitation amounts for December at Havana and Mason City are 2.76 and 2.33 inches, respectively. The December 2018 network average of 3.12 inches is 160 percent of the 26-year (1992–2017) IVWA December network average of 1.95 inches.

# Imperial Valley Water Authority Precipitation (inches) December 2018



December 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	1.83	1.30	1.14	1.38	1.02	0.97	1.27	0.91	1.00	0.81	1.19	0.83	1.16	1.39	0.82	0.79	0.83	0.98	0.65	1.22
2	0.11	0.04	0.05	0.03	0.05	0.06	0.07	0.05	0.02	0.03	0.06	0.02	0.01	----	0.03	0.01	0.02	0.04	0.05	0.02
3	0.04	----	0.02	0.03	0.03	0.01	0.05	0.03	0.01	0.01	0.03	0.02	0.01	0.01	0.04	0.01	0.01	0.02	----	----
4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6	0.02	0.01	----	0.01	----	----	0.03	----	0.02	0.01	0.02	----	----	0.01	0.04	0.01	0.02	0.03	0.01	0.03
7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
13	0.40	0.31	0.22	0.28	0.32	0.24	0.33	0.28	0.31	0.32	0.28	0.30	0.34	0.21	0.30	0.28	0.27	0.30	0.30	0.27
14	0.17	0.14	0.14	0.21	0.19	0.15	0.16	0.15	0.16	0.16	0.17	0.14	0.13	0.12	0.16	0.15	0.19	0.17	0.17	0.17
15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20	0.14	0.08	0.03	0.08	0.08	0.04	0.09	0.04	----	0.07	0.04	0.07	0.08	0.05	0.10	0.07	0.10	0.09	0.03	0.07
21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
26	0.06	0.01	0.01	0.01	----	----	0.02	----	----	----	----	0.01	0.02	----	----	----	0.01	0.01	----	0.02
27	0.88	0.36	0.62	0.44	0.62	0.35	0.62	0.54	0.42	0.76	0.62	0.58	0.61	0.57	0.65	0.58	0.56	0.67	0.56	0.54
28	----	----	----	----	0.01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
31	0.85	0.77	0.76	0.85	0.79	0.79	0.88	0.79	0.83	0.90	0.87	0.88	0.88	0.78	0.93	0.97	0.88	1.05	1.02	0.91
Monthly	4.50	3.02	2.99	3.32	3.11	2.61	3.52	2.79	2.77	3.07	3.28	2.85	3.24	3.14	3.07	2.87	2.89	3.36	2.79	3.25

Network Average = 3.12 Imperial Valley Network