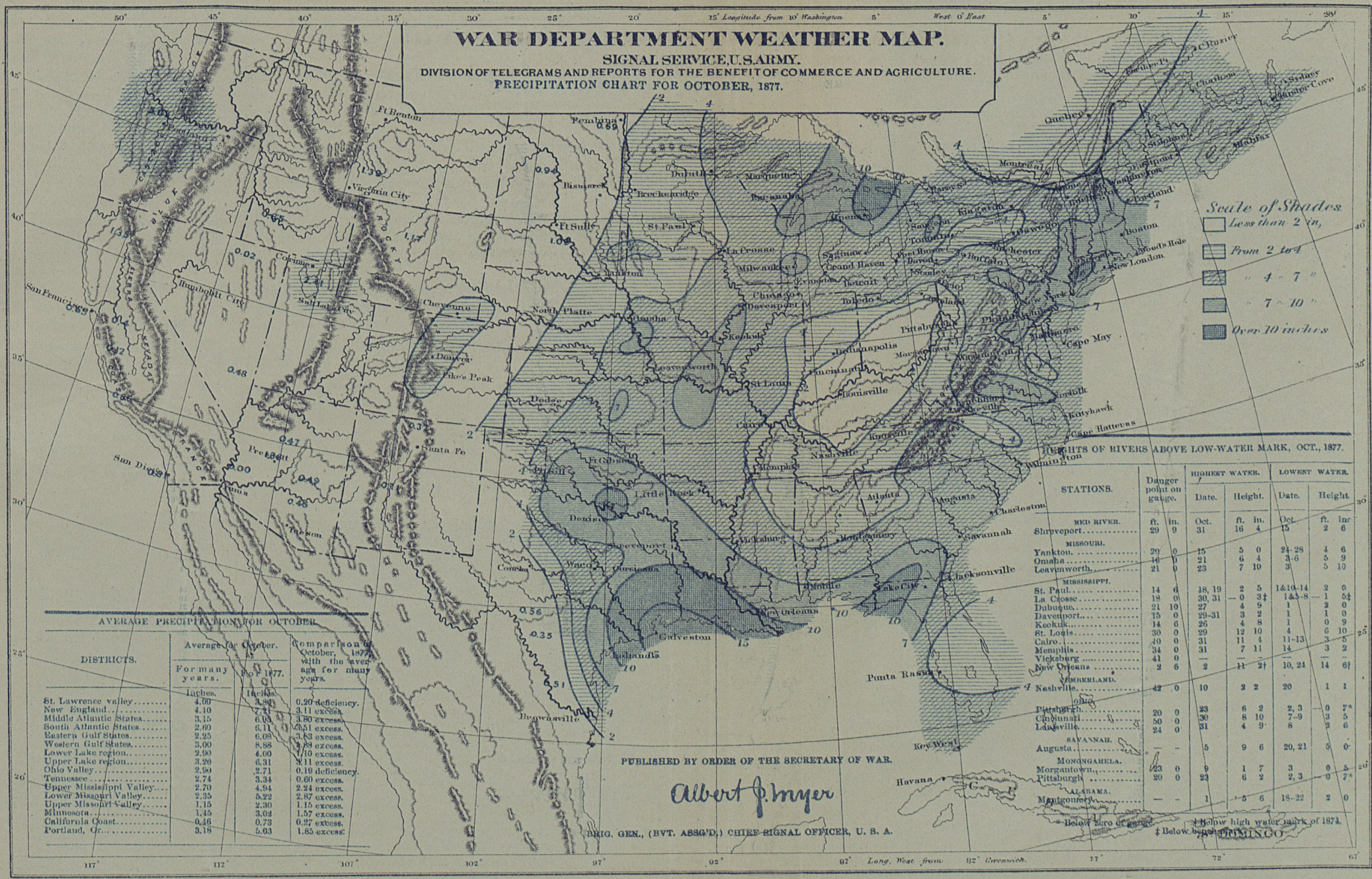
# WAR DEPARTMENT WEATHER MAP.

## SIGNAL SERVICE, U.S. ARMY.

DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

PRECIPITATION CHART FOR OCTOBER, 1877.

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### AVERAGE PRECIPITATION FOR OCTOBER.

| DISTRICTS. | Average for October. For many years. | Average for October. For 1877. | Comparison of October, 1877, with the average for many years. |
|---|---|---|---|
| | Inches. | Inches. | |
| St. Lawrence valley | 4.00 | 3.80 | 0.20 deficiency. |
| New England | 4.10 | 7.41 | 3.11 excess. |
| Middle Atlantic States | 3.15 | 6.95 | 3.80 excess. |
| South Atlantic States | 2.60 | 6.11 | 3.51 excess. |
| Eastern Gulf States | 2.25 | 6.08 | 3.83 excess. |
| Western Gulf States | 3.00 | 8.88 | 5.88 excess. |
| Lower Lake region | 2.90 | 4.00 | 1.10 excess. |
| Upper Lake region | 3.20 | 6.31 | 3.11 excess. |
| Ohio Valley | 2.90 | 2.71 | 0.19 deficiency. |
| Tennessee | 2.74 | 3.34 | 0.60 excess. |
| Upper Mississippi Valley | 2.70 | 4.94 | 2.24 excess. |
| Lower Missouri Valley | 2.35 | 5.22 | 2.87 excess. |
| Upper Missouri Valley | 1.15 | 2.30 | 1.15 excess. |
| Minnesota | 1.45 | 3.02 | 1.57 excess. |
| California Coast | 0.46 | 0.73 | 0.27 excess. |
| Portland, Or. | 3.18 | 5.03 | 1.85 excess. |

### HEIGHTS OF RIVERS ABOVE LOW-WATER MARK, OCT., 1877.

| STATIONS. | Danger point on gauge. | | Highest water. Date. | Highest water. Height. | | Lowest water. Date. | Lowest water. Height. | |
|---|---|---|---|---|---|---|---|---|
| | ft. | in. | Oct. | ft. | in. | Oct. | ft. | in. |
| RED RIVER. | | | | | | | | |
| Shreveport | 29 | 9 | 31 | 16 | 4 | 15 | 2 | 6 |
| MISSOURI. | | | | | | | | |
| Yankton | 20 | 0 | 15 | 5 | 0 | 24-28 | 4 | 6 |
| Omaha | 16 | 0 | 21 | 6 | 4 | 3-6 | 5 | 9 |
| Leavenworth | 21 | 0 | 23 | 7 | 10 | 3 | 5 | 10 |
| MISSISSIPPI. | | | | | | | | |
| St. Paul | 14 | 6 | 18, 19 | 2 | 5 | 1&10-14 | 2 | 0 |
| La Crosse | 18 | 0 | 30, 31 | — 0 | 3‡ | 1&5-8 | — 1 | 5‡ |
| Dubuque | 21 | 10 | 27 | 4 | 9 | 1 | 2 | 0 |
| Davenport | 15 | 0 | 29-31 | 3 | 2 | 1 | 1 | 0 |
| Keokuk | 14 | 6 | 26 | 4 | 8 | 1 | 0 | 9 |
| St. Louis | 30 | 0 | 29 | 12 | 10 | 4 | 6 | 10 |
| Cairo | 40 | 0 | 31 | 11 | 4 | 11-13 | 3 | 5 |
| Memphis | 34 | 0 | 31 | 7 | 11 | 14 | 3 | 2 |
| Vicksburg | 41 | 0 | — | — | — | — | — | — |
| New Orleans | 2 | 6 | 2 | 11 | 2† | 10, 24 | 14 | 6† |
| CUMBERLAND. | | | | | | | | |
| Nashville | 42 | 0 | 10 | 2 | 2 | 20 | 1 | 1 |
| OHIO. | | | | | | | | |
| Pittsburgh | 20 | 0 | 23 | 6 | 2 | 2, 3 | — 0 | 7* |
| Cincinnati | 50 | 0 | 30 | 8 | 10 | 7-9 | 3 | 5 |
| Louisville | 24 | 0 | 31 | 4 | 9 | 8 | 2 | 6 |
| SAVANNAH. | | | | | | | | |
| Augusta | — | — | 5 | 9 | 6 | 20, 21 | 5 | 0 |
| MONONGAHELA. | | | | | | | | |
| Morgantown | 23 | 0 | 9 | 1 | 7 | 3 | 0 | 5 |
| Pittsburgh | 20 | 0 | 23 | 6 | 2 | 2, 3 | 0 | 7* |
| ALABAMA. | | | | | | | | |
| Montgomery | — | — | 1 | 5 | 6 | 18-22 | 2 | 0 |

* Below zero of gauge. † Below high water mark of 1874. ‡ Below low water mark.