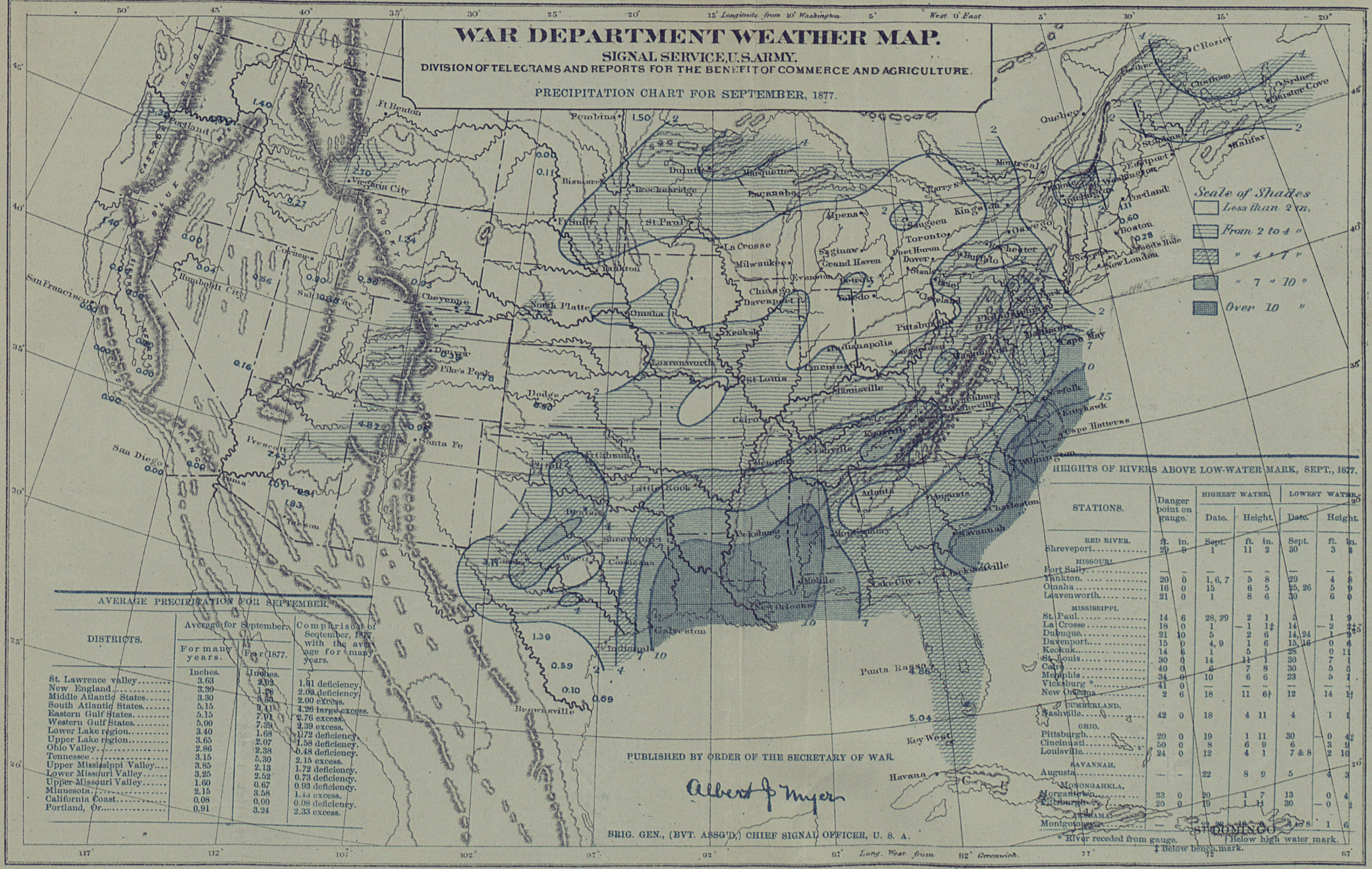
No. III.

# WAR DEPARTMENT WEATHER MAP.

## SIGNAL SERVICE, U.S. ARMY.

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

PRECIPITATION CHART FOR SEPTEMBER, 1877.




AVERAGE PRECIPITATION FOR SEPTEMBER.

| DISTRICTS. | Average for September. For many years. | Average for September. For 1877. | Comparison of Seqtember, 1877, with the average for many years. |
|---|---|---|---|
| | Inches. | Inches. | |
| St. Lawrence valley | 3.63 | 2.02 | 1.61 deficiency. |
| New England | 3.30 | 1.28 | 2.02 deficiency. |
| Middle Atlantic States | 3.30 | 5.30 | 2.00 excess. |
| South Atlantic States | 5.15 | 9.41 | 4.26 large excess. |
| Eastern Gulf States | 5.15 | 7.91 | 2.76 excess. |
| Western Gulf States | 5.00 | 7.39 | 2.39 excess. |
| Lower Lake region | 3.40 | 1.68 | 1.72 deficiency. |
| Upper Lake region | 3.65 | 2.07 | 1.58 deficiency. |
| Ohio Valley | 2.86 | 2.38 | 0.48 deficiency. |
| Tennessee | 3.15 | 5.30 | 2.15 excess. |
| Upper Mississippi Valley | 3.85 | 2.13 | 1.72 deficiency. |
| Lower Missouri Valley | 3.25 | 2.52 | 0.73 deficiency. |
| Upper Missouri Valley | 1.60 | 0.67 | 0.93 deficiency. |
| Minnesota | 2.15 | 3.58 | 1.43 excess. |
| California Coast | 0.08 | 0.00 | 0.08 deficiency. |
| Portland, Or. | 0.91 | 3.24 | 2.33 excess. |

HEIGHTS OF RIVERS ABOVE LOW-WATER MARK, SEPT., 1877.

| STATIONS. | Danger point on gauge. | | Highest Water. Date. | Highest Water. Height. | | Lowest Water. Date. | Lowest Water. Height. | |
|---|---|---|---|---|---|---|---|---|
| | ft. | in. | Sept. | ft. | in. | Sept. | ft. | in. |
| RED RIVER. | | | | | | | | |
| Shreveport | 29 | 0 | 1 | 11 | 2 | 30 | 3 | 4 |
| MISSOURI. | | | | | | | | |
| Fort Sully | — | — | — | — | — | — | — | — |
| Yankton | 20 | 0 | 1, 6, 7 | 5 | 8 | 29 | 4 | 8 |
| Omaha | 16 | 0 | 15 | 6 | 5 | 25, 26 | 5 | 9 |
| Leavenworth | 21 | 0 | 1 | 8 | 6 | 30 | 6 | 0 |
| MISSISSIPPI. | | | | | | | | |
| St. Paul | 14 | 6 | 28, 29 | 2 | 1 | 5 | 1 | 9 |
| La Crosse | 18 | 0 | 1 | — 1 | 1‡ | 14 | — 2 | 2‡ |
| Dubuque | 21 | 10 | 5 | 2 | 6 | 14, 24 | 1 | 9 |
| Davenport | 15 | 0 | 4, 9 | 1 | 6 | 15, 16 | 0 | 6 |
| Keokuk | 14 | 6 | 1 | 5 | 1 | 28 | 0 | 11 |
| St. Louis | 30 | 0 | 14 | 11 | 1 | 30 | 7 | 1 |
| Cairo | 40 | 0 | 6 | 7 | 8 | 30 | 5 | 5 |
| Memphis | 34 | 0 | 10 | 6 | 6 | 23 | 5 | 1 |
| Vicksburg * | 41 | 0 | — | — | — | — | — | — |
| New Orleans | 2 | 6 | 18 | 11 | 6† | 12 | 14 | 1† |
| CUMBERLAND. | | | | | | | | |
| Nashville | 42 | 0 | 18 | 4 | 11 | 4 | 1 | 1 |
| OHIO. | | | | | | | | |
| Pittsburgh | 20 | 0 | 19 | 1 | 11 | 30 | — 0 | 4‡ |
| Cincinnati | 50 | 0 | 8 | 6 | 9 | 6 | 3 | 9 |
| Louisville | 24 | 0 | 12 | 4 | 1 | 7 & 8 | 2 | 10 |
| SAVANNAH. | | | | | | | | |
| Augusta | — | — | 22 | 8 | 9 | 5 | 4 | 3 |
| MONONGAHELA. | | | | | | | | |
| Morgantown | 23 | 0 | 20 | 1 | 7 | 13 | 0 | 4 |
| Pittsburgh | 20 | 0 | 19 | 1 | 11 | 30 | — 0 | ‡ |
| ALABAMA. | | | | | | | | |
| Montgomery | — | — | 22, 28 | 19 | 0 | 4 to 8 | 1 | 6 |

* River receded from gauge. † Below high water mark. ‡ Below bench mark.

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