

CLIMATOLOGICAL DATA FOR SEPTEMBER, 1913.

DISTRICT NO. 9, COLORADO VALLEY.

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GENERAL SUMMARY.

Weak and ill-defined low-pressure areas attended by showers were common in the Colorado Basin during the first half of the month, the conditions being similar to those usual in August. During this period a number of high-pressure areas of moderate intensity moved eastward from the Pacific Northwest and crossed the Continental Divide in the distant north, as is common at this time of the year. Their tracks were too remote, however, to exert a marked effect on temperature conditions, thus delaying the occurrence of damaging frosts and permitting the gathering of the greater part of the fruit crop in the central part of the district. The last decade was marked by the most important storm of the month. On the 21st a shallow barometric trough covered the western part of the Rocky Mountain Plateau. During the drift eastward it deepened, and on the morning of the 22d a well-defined low-center overlay Wyoming and, 12 hours later, western Kansas. Meanwhile a high-pressure area was in course of development in the Pacific Northwest. While its crest followed closely the track of its predecessors in the early part of the month, the magnitude of the anticyclone was such as to admit of a spreading southward before crossing the Continental Divide. Along this part of the advancing high-pressure thunderstorms were general on the 22d. Wind was destructive at Grand Junction, and considerable fruit was blown from the trees in the vicinity. Sharp falls in temperature, with killing frosts here and there, attended as far south as northeastern Arizona and the adjacent part of New Mexico, bringing to a close the growing season in much of the central part of the district. In the mountain districts a fall of snow was general on the 22d, 23d, or 24th.

In the greater part of the district mean temperatures were lower than the normal, the deficiency being marked in western Colorado and adjacent parts of New Mexico and Arizona. Precipitation was somewhat above the normal in the northern and central areas, but deficient on the watersheds of the Mimbres, Gila, and lower Colorado. Deficient rainfall has been a feature of the season in Arizona. Most of the crops in unirrigated sections have been a failure, and ranges have been in poor or only fair condition. In the irrigated districts the water supply has, in most cases, been sufficient. A heavy drain has been made on the water stored in Roosevelt Reservoir. Ranges are reported in satisfactory condition in the high districts of western Wyoming.

TEMPERATURE.

The monthly mean temperature was 64.2°, or 1.4° below the normal. The mean for September, 1912, was 60.6°. The highest monthly mean was 87.4° at Mohawk,

Ariz., and the lowest, 42.9°, at Fraser, Colo. In the southern part of the district the first two days, which were cool, were followed by three weeks warmer than the normal. In the central and northern parts of the district during this period temperatures remained close to the normal. From the 22d, in the northern half, and the 23d, in the southern half of the district, temperatures were below the normal throughout the district, with marked deficiencies on the 23d, 24th, and 25th. The highest temperatures occurred during the first two decades, generally on the 4th and 5th in the northern, 10th and 11th and 19th and 20th in the southern areas. Readings of 100° or higher were noted at 30 stations in Arizona and at 1 in eastern Utah. The lowest temperatures occurred in the last decade. Freezing temperatures occurred in the different areas, except at the stations in southeastern Nevada. The highest temperature, 116°, occurred at Mohawk, Ariz., on the 20th, and the lowest, 6°, near Silverton, Colo., on the 24th.

Details of temperature are summarized in the following table:

Areas of States in district No. 9.	Temperature.					
	Mean.	Departure from normal.	Highest.	Station.	Lowest.	Station.
Western Wyoming.....	51.8	+1.4	86	At 2 stations..	8	Willow Creek Cabin.
Western Colorado.....	53.8	-1.9	93	Delta.....	6	Silverton (near).
Eastern Utah.....	59.7	± 0	101	St. George.....	17	Scofield.
Western New Mexico.....	60.9	-3.3	96	Deming.....	22	Luna.
Arizona.....	71.9	-1.3	116	Mohawk.....	19	Flagstaff No. 1.
Southeastern Nevada.....	71.4	+5.6	107	Logan.....	28	Caliente.

PRECIPITATION.

The average for the stations reporting was 1.45 inches, or 0.01 inch above the normal. The average for September, 1912, was 0.52 inch. Showers were general during the first half of the month, especially during the first decade. Precipitation was again general on the 22d, 23d, and 24th. In the extreme north and at high altitudes it was in the form of snow. Precipitation of an inch or more in 24 hours occurred at 5 stations in western Colorado, 6 in eastern Utah, 2 in western New Mexico, and 12 in Arizona. The greatest monthly amount was 5.51 inches at Spruce Lodge, Colo., while none occurred at Bluff, Utah, and Gila Bend, Mohawk, and Yuma, Ariz. Monthly snowfalls of 5 inches or more occurred at 1 station in western Wyoming, 12 in western Colorado, and 1 in eastern Utah. The maximum monthly fall was 19 inches at Spruce Lodge, Colo. The average

number of days with 0.01 inch or more precipitation was 7 in western Wyoming, 10 in western Colorado, 6 in eastern Utah, 7 in western New Mexico, 4 in Arizona, and 2 in southeastern Nevada. For the district as a whole the average was 6 days.

The average precipitation and departures from the normal on the different watersheds are given in the following table:

Watershed.

Green.		Grand.		San Juan.		Little Colorado.		Gila.		Mimbres.		Colorado proper.	
Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.
1.40	+0.28	2.14	+0.67	2.50	+0.91	2.23	+0.32	1.08	-0.38	1.33	-0.42	0.96	-0.20

MISCELLANEOUS.

The average amount of sunshine in percentages, with departures from the normal, was as follows: Grand Junction, 66, -10; Durango, 66, -17; Phoenix, 94, +7; and Yuma, 96, +4.

The relative humidity reported was: Grand Junction, 52, +6 per cent; Durango, 63, +5; Phoenix, 36, ±0; and Yuma, 43, -3.

RIVERS.

Rainfall during the first decade in the upper reaches of the Colorado caused a rise in that stream, the maximum stage at Yuma, Ariz., 18 feet, being reached on the 16th. The discharge for the month was below the average for the last seven years.

Heavy local rains near Cave Creek, Ariz., caused some damage to irrigation ditches in Salt River Valley on the 1st.

TABLE 1.—Climatological data for September, 1913. District No. 9—Continued.

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall, Number of rainy days, Number of clear days, Number of partly cloudy days, Number of cloudy days), Sky, Prevailing wind direction, Observers. Rows are categorized by Utah, New Mexico, and Arizona.

TABLE 3.—Maximum and minimum temperatures for September, 1913. District No. 9, Colorado Valley.

Table with columns for Wyoming (Daniel, Green River, Durango, Grand Junction, Gunnison, Meeker, Steamboat Springs), Colorado (Emery, Hite, Moab, St. George, Fort Duchesne), Utah (Bloomfield, Fort Bayard), and New Mexico. Rows show daily temperature data from Sept 1 to 30, including means.

Table for Arizona with columns for Douglas, Flagstaff, Fort Apache, Grand Canyon, Parker, Phoenix, Prescott, St. Michaels, Tucson, Yuma, and Logan, Nev. Rows show daily temperature data from Sept 1 to 30, including means.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record. § § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.