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VIRGINIA SECTION.

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GENERAL SUMMARY.

Although the annual mean temperature for the State was above the normal, the summer months were, with the exception of two warm spells of short duration, cool and pleasant. The temperature for March was the most unusual in the year, being as low as that of December, and, with the exception of January, colder than any of the remaining months of the year.

While the average precipitation for the year was slightly less than the normal, at no time did drought conditions become marked, although the want of moisture was becoming noticeable in the northern portion of Middle Virginia during the latter portion of November. The first month in the year had the greatest amount of precipitation ever recorded in January, while never before, so far as known, have March and April been so dry. Beginning with May, which had a deficiency in moisture, and extending through to November, inclusive, the rainfall alternated monthly below and above the normal, except in the western portion of the State in June, where it continued deficient. The ground was well stored with water during most of this period, and crops made excellent progress.

THE WEATHER BY MONTHS.

JANUARY.—The opening month of the year was one of the most disagreeable winter months of which there is authentic record. The first 6 days were fair with temperature slightly below the normal. On the 7th light rains occurred in the Tidewater district, and heavy rains in Middle Virginia and the Great Valley. This was followed by a 3-day fair weather period attended by high temperature. On the 11th the weather turned colder, and the second general storm of the month set in. On the 14th the weather again became fair and warm, and continued, with mostly clear skies, until the 17th. On the 18th snowfall was general throughout the State. After the passage of this storm a cold wave set in, and on the 20th temperature as low as 5° below zero was recorded. The temperature then moderated and another period with precipitation occurred, during which heavy rains were recorded in the southern portion of the Tidewater district. The 28th brought more cold, with rain and snow, which were followed on the 30th by general precipitation of rain, sleet, and snow.

FEBRUARY.—With the exception of the years 1909 and 1911, February of the present year was the warmest on record. The most interesting feature of the month's precipitation was the lack of uniformity in its distribution. Frequent temperature changes, cloudy and stormy weather during the first 3 days, supplemented by the cool wave that set in about a week later, together with three short intervals of precipitation, comprised the disagreeable features of a month otherwise mostly pleasant. In the long periods of warm weather there were, depending upon the sections considered, from 6 to 10 days with temperatures exceeding the normal by from 10° to 20°, and the coldest day of the month was milder than the day of lowest temperature in every preceding February for the past 23 years.

MARCH.—The mean temperature for the month was 2° lower than that of any preceding March on record. It was colder by practically the same amount than the preceding February, and, what is most remarkable, it was as low as one-third of the mean temperatures of February during the past 24 years. The low temperatures of the month were remarkably uniform, no marked extremes being recorded; in fact, as low or lower

temperatures have occurred in 17 of the 24 years for which records are available. Not since the beginning of record has there been so little precipitation reported in any month as during March of the present year. In all sections of the State one-third or less of the month's average moisture was recorded, the greatest portion of which fell between the 5th and the 8th. The month was also remarkable for the absence of long periods of cloudiness, and for the frequency of killing frosts.

APRIL.—This month has the distinction of breaking more records than any month of the year. After the coldest March on record, this month followed with the highest mean temperature ever known in April. It also has a maximum temperature that has been equaled but once since 1891. The cold weather with which March closed continued until the 6th, when moderately warm weather was experienced until the 20th. A gradual increase in heat then took place, and from the 23d to the 30th a hot wave covered the State, and temperatures as high as ever before known in April were recorded. The current month also makes a record for having the least precipitation ever recorded during April, very little rain falling after the 12th. The snowstorm of April 2-3 was another record breaker. Not only was the greatest monthly fall for April exceeded, but a greater 24-hour fall was never previously recorded in the State. The maximum wind velocity and the average percentage of sunshine for the month were also exceeded.

MAY.—While the mean temperature for May was slightly below the normal, there were pronounced fluctuations from warm to cold weather during the first half of the month without reaching extremes. There were two cool waves in the second decade having several days with mean temperature decidedly lower than the normal. Generally the highest temperatures were reported on the 16th and 23d, while the 28th was the coldest day in the east and the 6th or 10th the coldest in the west. The deficiency in precipitation that had characterized the year 1915 so far continued throughout May. The ill effect of this wide-spread deficiency, however, was greatly lessened by the favorable distribution of the precipitation throughout the month, especially after the 11th, when rain fell somewhere in the State on nearly every day.

JUNE.—After two months of warm weather, June opened with a 5-day period during which the temperature was more than 10° below the normal. From the 6th the temperature gradually increased until the 13th, when the maximum for the month was recorded at nearly all stations in the State. High temperatures continued until the 23d, when a second cool period set in which continued until the close of the month. The mean temperature was the lowest, save three, of the June records for the past 24 years. While there was a slight excess in the rainfall for the State, it was unevenly distributed, the central and eastern portions having an excess, while a deficiency occurred in the western portion. Much of the rain which fell during the first three days of the month occurred at an excessive rate, thus minimizing its value to agriculture.

JULY.—While the State, as a whole, was deficient in rainfall, the month was showery throughout, there being but 3 days in Middle Virginia and the Great Valley, and 4 days in the Tidewater district, without rain. Following May and June, July also passed with mean temperatures below the normal. The month opened with temperatures at or slightly in excess of the normal, and continued so until the 5th, when a decided turn to colder weather took place, and on the 6th, the lowest readings of the month were recorded. After the 10th there was a steady change toward warmer weather until the 16th, when the maximum for the month was recorded, with readings of 100°, or higher, in each section.

AUGUST.—This month was marked by an excess in precipitation that has been greater in August but four times during

the past 25 years. The month started with a 4-day period in which heavy rains were reported from nearly all stations in the State, and again, on the 11th and 12th, heavy rain fell in the Great Valley and Middle Virginia, and the month closed with good general rains over the entire State. The high temperature with which August opened continued until the 6th, when it became slightly cooler, although temperatures remained above the normal until the 18th, when a 3-day spell of decidedly cooler weather was experienced. The heat then gradually increased until the 26th, when another cool period set in, which continued until the end of the month. August was the fourth consecutive month with temperatures below the normal.

SEPTEMBER.—September was deficient in rainfall in the eastern and middle divisions, while a slight excess occurred in the western division of the State. Most of the month's rainfall occurred in two periods, one from the 2d to the 6th, and the other from the 18th to the 21st, inclusive. Following four month's of deficiency, September's temperature was 2° in excess of the normal. The first 6 days of the month were cool and pleasant, then followed a 15-day period which, though not marked by any extremely high temperatures, was uniformly hot and rather dry. This was followed by cooler on the 22d, 23d, and 24th, during which time temperature as low as 33° was recorded, and frosts occurred in the northern and western portions of the State.

OCTOBER.—While the average precipitation for October was greater than the normal, it practically all fell during the first 8 days. Light general rains from the 14th to the 21st constituted the remainder of the month's precipitation. Excessive rainfall occurred generally over the middle division and the Great Valley on the 1st. The mean temperature was 2.9° above the normal. In some of the counties in the central portion of the Great Valley the excess was between 4° and 5°. There were three groups of warm days, 3d to 5th in Tidewater section, 13th to 15th in Middle Virginia, and 15th and 16th in the Great Valley. Cool waves overspread the State on the 3d and the 25th. Frost was general in the Tidewater district on the 10th, and in Middle Virginia and the Great Valley on the 25th.

NOVEMBER.—As in September and October, the temperature for November was above the normal, the excess for the current month being 1.5°, a departure that has been exceeded but six times in this month during the past 25 years. The maximum, 87°, is the highest ever recorded in the State during November. The total precipitation for the month was less than the normal, and the greater portion fell during a 9-day period embracing the 12th and 20th. While the deficiency for the month was not so great as in some of the preceding years, the want of moisture was becoming noticeable in the northern portion of central Virginia. The first snow of the winter fell in the northwestern portion of the Great Valley on the 15th, and in the central and southern portions of the Great Valley on the 29th and 30th.

DECEMBER.—The deficiency in temperature for December was created by the persistent and uniformly cool weather that prevailed from the 1st to the 22d. From the 23d to the close of the month temperatures in excess of the normal were reported from all stations in the State. The precipitation, much of which fell in the form of sleet and snow, was slightly below the normal. During the first 10 days practically no precipitation was recorded, then followed an 8-day period of stormy weather, with rain, snow, and sleet. This, in turn, was followed by 6 days of fair and warmer weather. From the 26th to the 29th a second storm period covered the State, during which the greatest precipitation for the month occurred at most stations. With the passage of this storm the weather failed to clear, and the close of the month was unsettled.

COMPARATIVE ANNUAL DATA.

Year.	Mean temperature.	Highest.	Lowest.	Average precipitation.	Average snow-fall.	No. of rainy days.	No. of clear days.	No. of partly cloudy days.	No. of cloudy days.
1892	54.8	106	-8	40.01	.....	95	163	101	102
1893	55.1	104	-25	46.83	23.1	103	156	100	109
1894	57.0	106	-11	35.97	17.0	88	166	104	95
1895	54.6	107	-18	38.09	38.8	94	174	103	88
1896	56.4	105	-10	42.89	12.3	93	163	106	97
1897	56.0	103	-15	40.81	11.8	92	172	99	95
1898	56.5	105	-9	44.80	8.7	108	162	101	102
1899	56.4	106	-20	43.18	36.7	98	176	95	94
1900	57.0	107	-8	39.33	18.6	86	181	91	93
1901	55.3	106	-14	50.17	9.5	100	167	94	104
1902	55.6	108	0	51.42	14.9	95	170	97	98
1903	55.1	105	-13	44.85	8.4	95	172	89	104
1904	53.8	100	-14	36.18	24.9	96	170	101	95
1905	54.8	98	-15	43.58	18.5	111	155	112	98
1906	56.3	102	-2	49.56	15.2	124	143	120	102
1907	54.3	97	-16	44.19	17.4	115	159	115	91
1908	55.4	102	-20	45.21	30.0	110	162	108	96
1909	55.5	102	-5	39.81	12.9	101	171	104	90
1910	54.7	102	-9	41.37	20.3	112	151	116	98
1911	56.8	104	0	41.50	9.2	115	149	110	106
1912	54.5	100	-25	39.19	24.6	103	165	106	95
1913	57.2	102	-3	42.75	4.0	100	178	98	89
1914	55.0	103	-17	37.17	39.8	101	168	100	97
1915	55.8	101	-5	39.12	13.5	97	160	116	89

CLIMATOLOGICAL DATA, 1915.

Month.	Temperature.			Precipitation.			Number of days.			
	Mean.	Highest.	Lowest.	Average.	Greatest 24-hour rain.	Average snow-fall.	Rainy.	Clear.	Partly cloudy.	Cloudy.
January	36.4	69	-5	5.24	4.00	2.6	10	11	6	14
February	40.6	76	9	3.41	2.30	1.1	7	13	6	9
March	38.5	66	11	1.26	1.24	3.6	5	15	9	7
April	58.0	100	16	1.42	1.92	3.1	4	17	9	4
May	63.6	91	30	3.30	2.50	0.0	10	12	11	8
June	69.4	95	31	4.84	5.24	0.0	9	13	10	7
July	74.6	101	35	3.90	3.40	0.0	11	13	13	5
August	73.3	99	40	5.88	3.70	0.0	12	12	11	8
September	69.9	97	33	2.51	2.76	0.0	6	16	8	6
October	59.3	86	19	3.75	4.62	0.0	7	16	7	8
November	47.4	87	14	1.51	2.05	0.1	5	17	8	5
December	35.8	76	6	2.96	1.84	3.5	7	11	9	11

KILLING FROSTS, 1915.

Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
TIDEWATER VIRGINIA.			MIDDLE VIRGINIA—CON.		
Ashland	Apr. 5	Oct. 25	Lassiter	Apr. 5	Oct. 8
Cape Henry	Apr. 2	Nov. 17	Leeds Manor	Apr. 4	Oct. 24
Diamond Springs	Apr. 2	Nov. 11	Lincoln	Apr. 16	Oct. 11
Doswell	Apr. 5	Oct. 25	Lynchburg	Apr. 16	Oct. 11
Eastville	Apr. 5	Nov. 7	Mount Weather	Apr. 14	Oct. 10
Ivor	Apr. 3	Oct. 10	New Canton	Apr. 18	Oct. 10
Newport News	Mar. 26	Nov. 15	Quantico	Apr. 16	Oct. 25
Norfolk	Mar. 28	Nov. 23	Randolph	.....	Oct. 11
Richmond	Apr. 1	Oct. 25	Rocky Mount	Apr. 16	Oct. 11
Runnymede	Apr. 16	Oct. 10	Sweetnam	Apr. 8	Oct. 11
Wachapreague	Apr. 4	Nov. 11	Washington, D. C.	Apr. 3	.....
Warsaw	Apr. 8	Oct. 25	THE GREAT VALLEY.		
West Point	Apr. 15	Nov. 6	Blacksburg	Apr. 18	Oct. 25
Williamsburg	Apr. 5	Nov. 4	Buchanan	.....	Nov. 16
MIDDLE VIRGINIA.			Burkes Garden	Apr. 19	Oct. 9
Callaville	Apr. 16	Nov. 3	Catawaba Sanatorium	Apr. 14	Nov. 16
Catharpin	Apr. 16	Nov. 4	Dale Enterprise	Apr. 18	Oct. 9
Charlottesville	Apr. 4	Nov. 16	Elk Knob	Apr. 4	Oct. 9
Clarksville	Apr. 1	Nov. 16	Lexington	Apr. 18	Oct. 10
Columbia	Apr. 18	Nov. 10	Roanoke	Apr. 16	Oct. 11
Culpeper	Apr. 16	Oct. 10	Staunton	Apr. 15	Oct. 9
Danville	Apr. 5	Nov. 4	Winchester	Apr. 4	Nov. 6
Fredericksburg	Apr. 5	Nov. 4	Woodstock	Apr. 16	Oct. 10
Gordonsville	Apr. 5	Oct. 10	Wytheville	Apr. 14	Oct. 10

ERRATA.

May, 1915, page 38, Eastville, maximum temperatures from 18th to 25th, inclusive, should be, respectively, 75, 68, 67, 82, 84, 86, 88, 85. October, page 76, means, tidewater, clear days should be 17 instead of 12.