U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE
PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION
R. W. COWLIN, DIRECTOR

Research Note

Number 96 Portland, Oregon January 1954

1953 MIDSUMMER FUEL MOISTURES IN OREGON AND WASHINGTON NATIONAL FORESTS COMPARED WITH OTHER YEARS 1/

By

Owen P. Cramer, Meteorologist

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Flammability of Oregon and Washington national forests during the middle of the 1953 fire season was slightly less than the 1941-51 normal as indicated by slightly above normal fuel moistures (table 1). The rating is based on the 25 lowest daily observations of fuel-moisture indicator sticks in the July 16 to August 31 period. Records are from 68 key fire-danger stations near the exterior boundaries of the national forests.

The indicator stick permits a direct measure of the moisture content and flammability of exposed forest fuels such as dead brush, branch wood, and the surface of snags or logs. This material is particularly important in determining the rate at which fires spread in the Pacific Northwest. A more detailed discussion of the relation of fuel moisture to fire weather and forest flammability may be found in an earlier report. 2/

1/ Summaries of midsummer fuel moistures for 1948, 1949, 1951, and 1952 are given in Research Note Nos. 47, 58, 77, and 85, respectively.

2/ Cramer, Owen P. 1951 midsummer fuel moistures in Oregon and Washington national forests compared with other years. Research Note No. 77. Feb. 1952.

For western Washington, both fuel-moisture readings and fire-weather ratings [3/] show that conditions were damper than normal during the summer season. For western Oregon, fire-weather ratings showed an even less severe season than is indicated by fuel-moisture records. For the entire region, average fuel moisture during midsummer 1953 was only slightly higher than for either 1952 or the 1941-51 average. Since 1941, higher regionwide fuel moistures have been recorded in three years only: 1947, 1948, and 1949.

Few local exceptions to the regional trends of fuel moisture were apparent. The Deschutes-Fremont area was farthest above average with fuel moistures only slightly below the record high set in 1941 and equalled in 1948. Fuel moistures well above average also occurred in the Rogue-Siskiyou area where the 1953 average was exceeded only by 1948 and 1947. In eastern Washington and in the Blue Mountain areas, fuel moistures averaged higher in 1950 than in 1953. There was no apparent difference in trend between high-level and low-level stations.

3/ Cramer, Owen P. Forest fire danger in western Oregon and western Washington during 1953. Pacific Northwest Forest and Range Experiment Station. Research Note No. 94. Nov. 1953.

Table 1.--1953 subregion averages of the 25 lowest daily minimum fuel moistures at selected stations on the national forests during the period July 16-August 31 and comparative data

Area	No. of stations	Current year 1953	Previous year 1952	11-year average 1941-51	Highest of record 1941-53 [1]	Lowest of record 1941-53	Year of low record
		Fuel moisture percent [2]					
Oregon and Washington	68	7.6	7.1	7.4	9.6	6.1	1951
Washington	24	8.5	8.0	8.2	11.8	6.6	1951
Western Wash.	18	9.1	8.7	8.9	12.8	7.1	1951
Cascades	13	9.0	8.4	8.8	12.3	6.8	1951
Olympics	5	9.5 [3]	9.6	9.4	13.9	7.5	(1942 (1946
Eastern Wash.	6	6.6	5.8	6.2	9.5	4.6	1943
Oregon	44	7.1	6.5	6.9	8.6	5.9	1951
Western Oregon	30	7.6	6.8	7.4	9.2	6.3	1950
Cascades	13	7.4	6.9	7.4	9.3	6.2	1951
Rogue-Siskiyou	10	6.9	6.1	6.3	8.0	5.4	1950
Coast Range	7	8.9 [3]	8.4	9.1	11.8	7.7	1946
Eastern Oregon	14	6.1	5.7	5.6	7.3	4.7	1951
Blue Mts.	9	5.9	5.6	5.8	7.6	4.8	(1951 (1945
Deschutes-Fremont	5	6.5	5.9	5.4	6.8	4.4	1942

1/ All high records occurred in 1948 except Oregon Coast Range (1947).

2/ Average for number of stations indicated.

3/ Figure low--probably due to instrumental errors.