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Climate of Priest River Experimental Forest, Northern Idaho

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RESEARCH SUMMARY

This report describes the climate of Priest River Experimental Forest, in the northern Idaho panhandle. Primary year-round data are from the "control station" located at its present site near Forest headquarters since 1916. The analysis includes temperature and precipitation fluctuations or trends. Further details are provided by fire-weather data, summarized for valley and lookout locations. Topographic and local site differences in climate are examined, utilizing data obtained from past studies in the Forest. Climatic characteristics at Priest River are found to apply to much of the Idaho panhandle area.

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INTRODUCTION

Established in 1911, the Priest River Experimental Forest, in the northern Idaho panhandle, has long served as a field laboratory for research into timber management, genetic improvement of trees, forest insects and diseases, forest fire hazard and control, watershed management, and wildlife habitat (Wellner 1976). (For brevity, this locale will also be referred to as "Priest River," "the Experimental Forest," or "the Forest.") Throughout this time, weather data have been collected to gain knowledge about the relevant weather and climatic factors. Climate and weather not only affect the trees directly, acting as controls on their growth and the distribution of forest types, but also influence the effects of fire, insects, and diseases. Many of the studies at Priest River up to 1950 are described in detail by Wellner and others (1951). For an extensive listing of publications reporting research results, see Wellner (1976).

Studies on the relationship of weather or climate to fire danger and occurrence include those by Larsen and Delavan (1922), Gisborne (1925, 1931), and Hayes (1941). Relationships between climate and forest types or cover are presented by Jemison (1934) and Larsen (1930, 1940). In the field of watershed management, Packer (1962, 1971) and Haupt (1979) have studied the effects of altitude, aspect, and forest cover on snow accumulation and melt. Additional references are mentioned and quoted in the course of this report.

The first comprehensive summary of Priest River climatological data was presented by Jemison (1932a); tables covering 50 years of data were prepared by Doty (1961). The present report updates and expands upon these summaries, for the purpose of providing information of use to forest researchers and managers in the Experimental Forest and adjacent areas; climatic similarity with adjacent northern Idaho is examined. Topographic and local site variations in climate are included. This report does not cover climate-related or derivative factors such as soil temperature, evaporation, fuel moisture, and fire-danger indexes. Measurements of the first two factors have been largely limited to earlier years and are included by Jemison (1932a).

Because our objective is to present climatic information, physical or technical explanations have been largely assigned to references. Where needed, elementary background knowledge of weather and climate may be gained from Schroeder and Buck (1970); Critchfield (1974).

DESCRIPTION OF THE AREA

The Priest River Experimental Forest is located 12 air miles (20 km) north-northeast of the town of Priest River, Idaho, in the Kaniksu National Forest (fig. 1). It covers an area of 6,368 acres (2 758 ha). Latitude is about 48°21′ N; longitude, mostly 116°45′ to 116°50′ W.

Figure 1.—Location of Priest River Experimental Forest (PREF), Idaho, and adjacent stations mentioned in text.

Situated near the southern end of the Selkirk Mountains, on a generally westerly slope, the Experimental Forest has an elevational range from about 2,220 ft to nearly 6,000 ft (675 to 1 825 m). The mountainous terrain is cut by Canyon Creek and Benton Creek, leaving ridges that run in a generally east-west direction (fig. 2).

The Experimental Forest contains most of the forest cover types of the Northern Rocky Mountains. The percentage-area distribution has changed with time, due to cutting, disease, insects, and natural succession. Western white pine (*Pinus monticola*) was, for many years, the most abundant timber type; now (Wellner 1976) the dominant types are western larch-Douglas-fir (*Larix occidentalis-Pseudotsuga menziesii*) and Douglas-fir, followed by western hemlock-grand fir (*Tsuga heterophylla-Abies grandis*) and subalpine fir (*Abies lasiocarpa*). About two-thirds of the forest cover is over 100 years old.

Since its establishment, there have been no large wildfires within the Experimental Forest other than the Highlanding Fire in 1922 (Wellner 1976); this burned 400 acres (160 ha). There were close calls from the 18,000-acre (7 300-ha) Quartz Creek Fire in 1926 (Gisborne 1927) and the 31,000-acre (9 450-ha) Freeman Lake Fire in 1931 (Jemison 1932b). These fires came within 1 to 2 miles of the Experimental Forest. The Sundance Fire in 1967 did not threaten this Forest but occurred as close as 7 miles (11 km) to the north; it burned more than 50,000 acres (20 000 ha) in 9 hours (Anderson 1968).

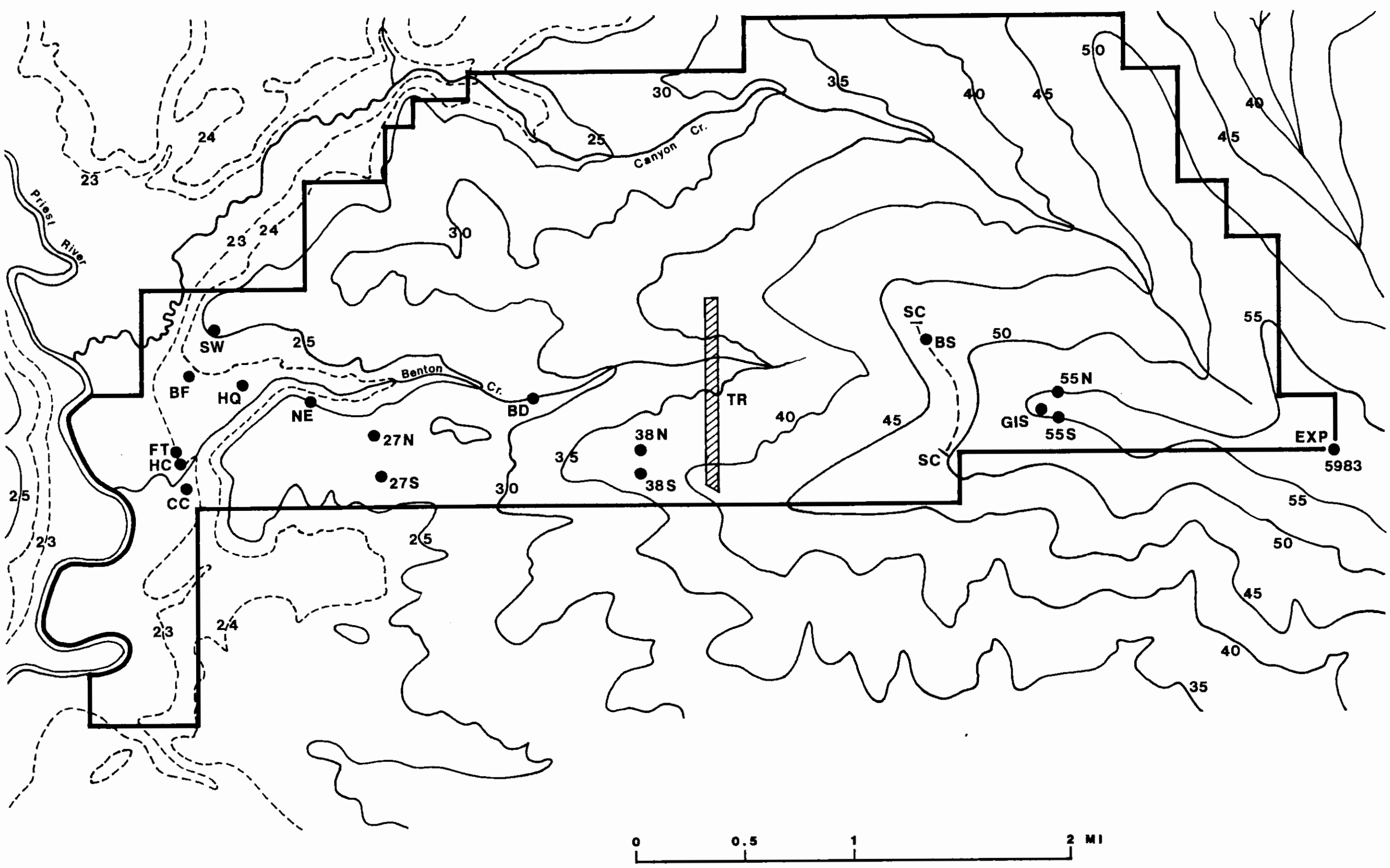


Figure 2.—Topography of Priest River Experimental Forest and locations of stations or measurement places mentioned in text. Elevation contours (labeled in hundreds of feet) are drawn at 500-ft (152-m) intervals, except for dashed lines at 100-ft (30-m) intervals. HQ denotes control station at headquarters; CC, clearcut, or fire-weather station site; HC, half-cut site; FT, full-timbered site; BD, Benton Dam; BS, Benton Spring; GIS, Gisborne Lookout; EXP, Experimental Lookout. 27N, 27S, 38N, 38S, 55N, and 55S are altitude-aspect station sites on north (N) and south (S) slopes at 2,700, 3,800, and 5,500 ft (825, 1 160, and 1 675 m) elevation. BF is original control station (1912-16) on Benton Flat; SW and NE, southwest and northeast slope stations during same years. SC denotes end points of Benton Spring snow course (dashed line); TR, transect for snow studies. Benton Meadow snow course is in HQ vicinity.

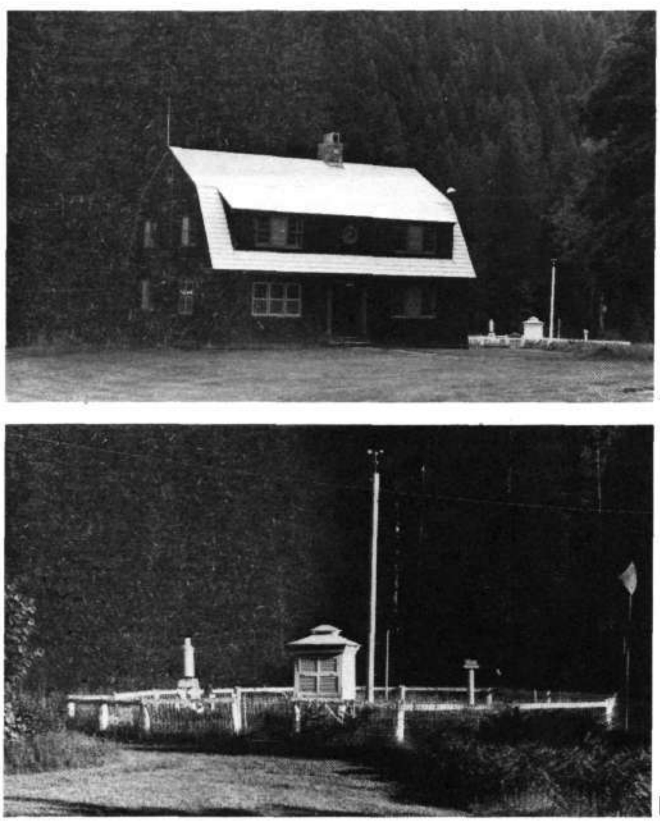
STATIONS; DATA; METHODS

Station locations, past and present, are included in figure 2. The year-round data summarized in this report are primarily from the "control" weather station, located near the Experimental Forest headquarters building (figs. 3A and 3B); elevation is 2,380 ft (725 m). This station has been at its present site since 1916; the original control station was 0.25 mi (0.4 km) to the west-northwest—in a former clearing on Benton flat—at a similar elevation. The recorded data are based on a 24-hour period ending at 5 p.m. P.s.t., the daily observation time. Such a long, continuous record at the same site is exceptional in the Northern Rocky Mountains. There has, however, been some change in the immediate surroundings due to growth of trees. The station was in the center of a clearing in earlier years (Jemison 1932a), but now the forest edge is much closer.

Most of the control station data through 1977 were obtained from a magnetic tape provided by Dr. Myron Molnau, State Climatologist, University of Idaho, Moscow. With this tape, 10-day summary tables were produced by computer programs described by Bradshaw (1981). Further data were hand-tabulated from "Climatological Data" monthly summaries for Idaho, published by the National Oceanic and Atmospheric Administration (NOAA) and predecessor agencies such as the U.S. Weather Bureau.

The year-round precipitation data have been augmented by measurements at two additional stations (figs. 4A and 4B)—located at Benton Dam (2,650 ft [808 m]) and near Benton Spring (at 4,775 ft [1 455 m]); records date from 1941 and 1960, respectively. The amounts at Benton Dam—from a weighing-type recording gage—were compiled from U.S. Weather Bureau (1964), original forms, and "Hourly Precipitation Data" summaries published for Idaho. The amounts for Benton Spring—read monthly from a storage gage—were obtained mostly from an annual publication, "Storage-gage Precipitation Data for the Western United States," discontinued in 1977. More recent data for this station and Benton Dam were provided by Priest River annual reports (for example, Carpenter 1979) and personal communication from Mr. Calvin L. Carpenter, Superintendent of Priest River Experimental Forest.

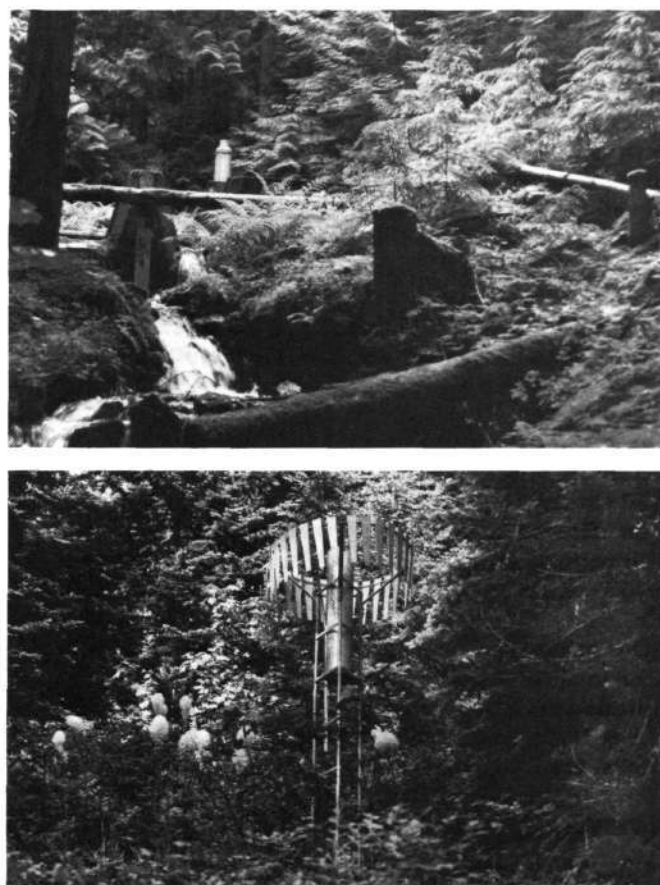
This report also utilizes monthly snowpack data—depth and water content—from snow-survey courses adjoining Benton Spring and Benton Meadow (near the control station), published by the Soil Conservation Service, as well as streamflow data recorded at Benton Dam. The latter were obtained from Stage (1957) and the Forestry Sciences Laboratory, Moscow, Idaho. The year-round monthly temperature averages at mountain-top level have been estimated from those at two former



A

B

Figure 3.—"Control" weather station, Priest River Experimental Forest. A: Location, near headquarters building. B: Close-up view; precipitation gages toward left—weighing-type gage on platform, thermometer shelter in center.



A

B

Figure 4.—Additional stations at Priest River Experimental Forest. A: Benton Dam precipitation and stream-gaging station; B: Benton Spring precipitation gage, storage type with wind shield.

stations—Mullan Pass, Idaho, and Mount Spokane, Wash.—obtained, respectively, from U.S. Weather Bureau (1964) and "Climatological Data" monthly summaries for Washington.

Fire-Weather Data

Climatic details for the fire season were obtained from tapes at the National Fire-Weather Data Library, Fort Collins, Colo. (Furman and Brink 1975), used with the computer programs of Bradshaw (1981); also from original fire-weather observation forms filed at the Northern Forest Fire Laboratory, Missoula, Mont. The data include relative humidity, wind, and lightning activity, as well as temperature and precipitation. In the Priest River valley area, the fire-weather data base covers the months May through October. The observations were begun in 1922; official records were from the control station until 1945, thereafter from the clearcut flammability-station site (Hayes 1941). This location (figs. 5A and 5B) is 2,800 ft (850 m) southwest of the control station and 80 ft (25 m) lower in elevation. Observations were discontinued in 1978. Comparative data have been summarized for the continuing fire-weather (or fire-danger rating) station 17 miles (27 km) to the north-northwest at Priest Lake Ranger Station (fig. 5C), elevation 2,590 ft (790 m); the station was located 4 miles (6 km) further north prior to 1964. Until about 1970, the observation season at Priest Lake generally covered only the months June through September.

Fire-weather data, limited to July-August, are also summarized for Gisborne Mountain Lookout (figs. 6A-D), which maintained observations from 1933 until 1978. (This lookout was named Looking Glass prior to 1951.) Elevation at the tower base is 5,595 ft (1 706 m), but the weather station (except for wind measurements) was on slightly lower ground to the southeast. The mountaintop observations were originally taken at Experimental Lookout, 5,983 ft (1 824 m), which was located at the southeastern tip of the Forest, 1.4 miles (2.2 km) from Gisborne; records date from 1917 (Larsen 1922a) to 1932.

The fire-weather observation time was at 4:30 or 5 p.m. P.s.t. in earlier years and near 3 p.m. from about 1950 through 1973, after which it was changed to 12 noon. The respective changes were made in accordance with regional and national standards. Until the late 1940's, observations were also made in the morning at 8 a.m.

Our examination of topographic and local site variations in climate utilized recording charts from former altitude-aspect and flammability stations (Jemison 1934; Hayes 1941; Wellner 1976). These charts, from the 1930's, are filed at the Northern Forest Fire Laboratory.

Averages; "Normals"

Climatic averages presented in this report include those for standard 30-year "normal" periods, as adopted by international convention; the normal values are revised every 10 years. The 30-year length tends to balance out short-term fluctuations, but actually a longer period such as 50 years is desirable for precipitation (World

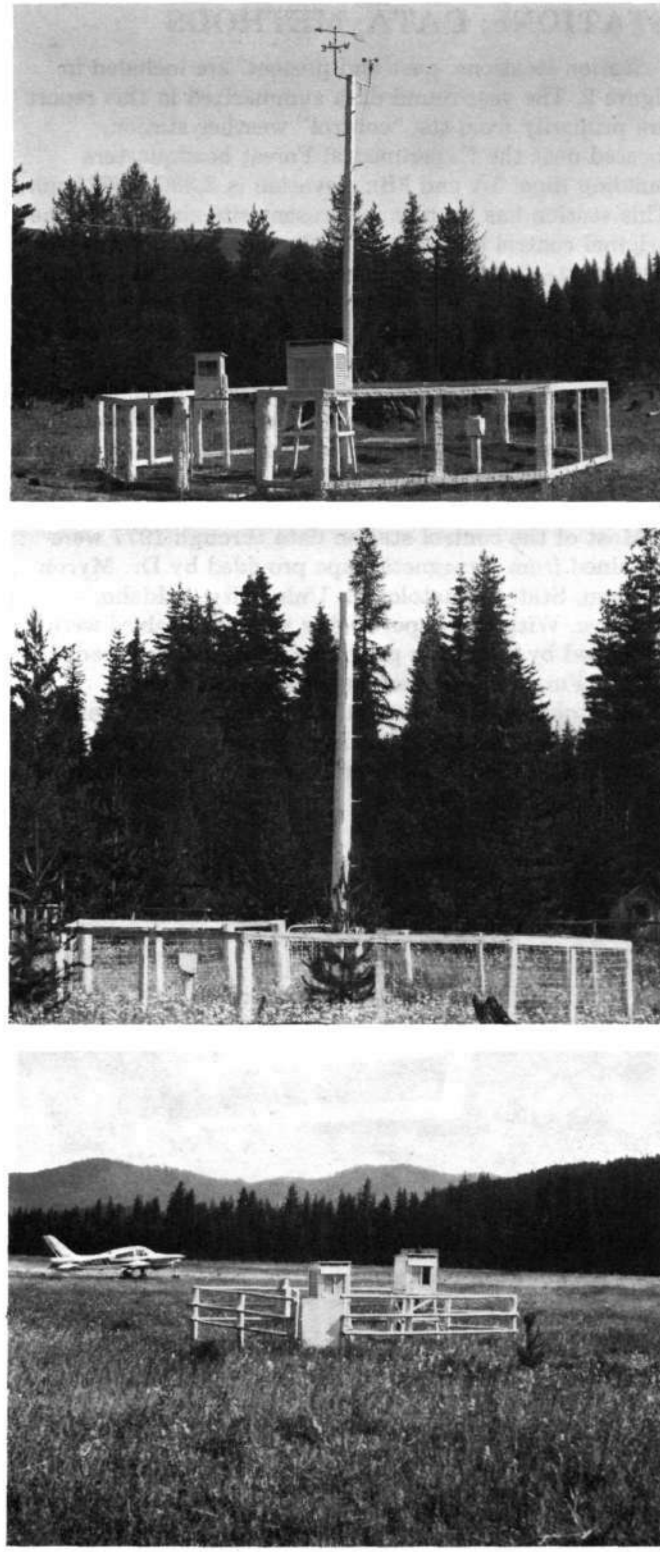

A
B
C

Figure 5.—A and B: Fire-weather station in clearcut area, Priest River Experimental Forest; discontinued in 1978. View toward southeast, in 1966 (A); site as it appeared in 1982, looking north (B). C: Fire-weather station at Priest Lake, Idaho, at airstrip across road from Ranger Station. Wind sock and anemometer are on pole to left (south-southeast), outside of picture.

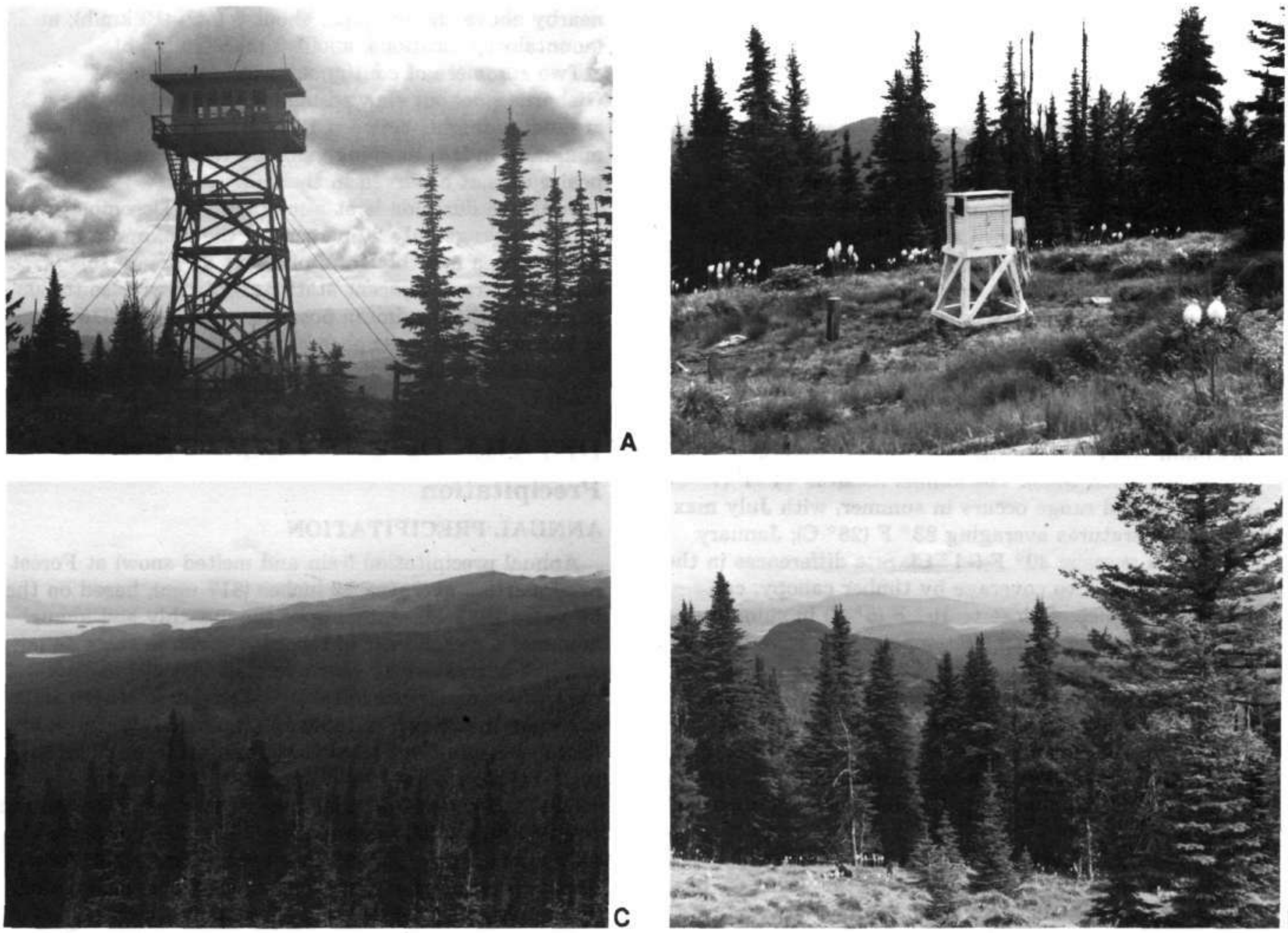


Figure 6.—Views at or from Gisborne Mountain Lookout, Priest River Experimental Forest. A: Tower, looking west. B: Fire-weather station, discontinued in 1978, as it appeared in 1982. Site is short distance southeast of tower. C: View to north, showing Priest Lake and Sundance Mountain (right). D: View to south.

Meteorological Organization 1967) and has thus been employed here. A 20-year data sample, however, has been used for averages (and frequency distributions) for some of the fire-weather elements; plotted 10-day values have been smoothed. This shorter length is based on availability of data at an unchanged observation time. In other cases, adjustments of short-term averages to longer (or standard) periods have been made, based on the "ratio method" for precipitation and the "difference method" for temperature. These methods, described further by Oliver (1973), use comparisons with adjacent stations having the full length of record.

Detailed listings and tabular summaries of data are given in the appendix. Further climatic details for Priest River and the surrounding northern Idaho area may be found in tables presented by the Pacific Northwest River Basins Commission (1968).

CONDENSED CLIMATIC SUMMARY

The climate of the Priest River area, like that of other places, is controlled by a combination of large-scale and small-scale factors, whose effects may vary with the time of year. The large-scale factors here include latitude, relative position on the North American continent, prevailing hemispheric wind patterns, and extensive mountain barriers. Small-scale or local factors include the topographic setting and position (valley, slope, or ridge location), as well as orientation or aspect, and vegetative cover. Elevation may cover various scales.

Broadly, the Priest River-Idaho panhandle climate is transitional between a northern Pacific coastal type and a continental type. The Pacific influence is noted particularly by the late autumn and winter maximum in cloudiness and precipitation; also in the relatively moderate average winter temperatures, compared with areas east of the Rocky Mountains. Summer is characteristically sunny and dry, though July and August are the only distinct summer months. July and August are thus also the peak fire-danger months.

Annual precipitation (rain and melted snow) averages 32 inches (817 mm) at the Forest headquarters; about 50 inches (1 270 mm) at locations near 5,500 ft (1 675 m) elevation. Wettest months are normally November, December, and January. Close to 60 percent of the annual total occurs during the period November through

March. A slight, secondary peak in precipitation normally appears in May and June, followed by a sharp decrease in July. Snowfall accounts for more than 50 percent of the total precipitation at elevations above 4,800 ft (1 460 m). Snow cover usually persists in the valley from early December through the end of March; seasonal maximum depth averages 30 inches (75 cm). High-elevation snowpack reaches a depth of 5 ft (1.5 m) or more in March and April and may linger into June.

The main season of lightning (or thunderstorm) activity extends from late May through August. Storms occur within the Priest River vicinity on an average of 3 or 4 days each in June, July, and August.

Monthly mean temperatures at headquarters range from 24° F (-4° C) in January to 65° F (18° C) in July; these are midpoint values between the average daily maximum and minimum temperatures (based on a 5 p.m. observation time). The annual mean is 44° F (7° C). A large diurnal range occurs in summer, with July maximum temperatures averaging 83° F (28° C); January maximums average 30° F (-1° C). Site differences in the valley, as related to coverage by timber canopy, can make a difference of close to 10° F (6° C) in summertime diurnal range. Extreme temperatures have been as high as 103° to 105° F (about 40° C) and as low as -36° F (-38° C). Temperature inversions are commonplace, particularly on the clear summer and early autumn nights. The July mean temperature at Gisborne Lookout is only 4° F lower than at headquarters (3,200 ft [975 m] lower in elevation), due to daily minimums averaging 4° F higher.

The frost-free season, defined as the period with minimum temperatures staying above 32° F (0° C), has an average length in the valley of 96 days at headquarters but only 65 days in a clearcut area (at the former fire-weather station); close to 120 days under a full timber canopy. The season is longer at adjacent slope locations, particularly in the "thermal belt" around 3,500 ft (1 070 m), but is less than 100 days again at 5,500 ft (1 675 m).

Relative humidity is usually high throughout the day in late autumn and winter, averaging 70 to 80 percent or higher in midafternoon. In July and August, afternoon values average near 35 percent in the valley and 45 percent at 5,500 ft. Humidity below 20 percent was observed in the clearcut on about 20 percent of the days from late July to late August. Summer nighttime humidity in the valley typically recovers to over 90 or 95 percent by dawn. On the slopes above the temperature inversion, at the same time, humidity may average only 50 to 60 percent.

Winds in this area have a prevailing (most frequent) direction from the southwest during all or most of the year. Local terrain effects modify the larger-scale wind that occurs in the adjacent free atmosphere. A nighttime drainage effect is indicated in the headquarters area by a prevailing early morning wind direction from the northwest during the fire-weather season. Observed windspeeds are quite low throughout the year in the valley area, due in part to the sheltering by surrounding timber. Summer afternoon winds at 20 ft (6 m) above ground in the clearcut average 3 to 4 mi/h (5-6 km/h); nearby above the treetops, about 6 mi/h (10 km/h); at mountaintop locations, about 9 mi/h (15 km/h).

Two summers of continuous wind recording at Gisborne Lookout showed highest average speeds around midnight, between 10 and 11 mi/h (17 km/h); a minimum in late morning. This pattern is nearly opposite of that observed in the valley.

Sunshine duration is at a minimum in December, when it may average only 20 percent of the maximum possible, giving a monthly total of about 50 hours; this is estimated from adjacent stations. July has close to 80 percent of the maximum possible, with about 375 hours of sunshine in fully exposed locations.

A basic statistical summary of the climate is given in table 1.

DETAILS OF THE CLIMATE

Precipitation

ANNUAL PRECIPITATION

Annual precipitation (rain and melted snow) at Forest headquarters averages 32 inches (817 mm), based on the 50 years 1931-80. A listing of the monthly and annual amounts for each year of record is given in table 14 (appendix); successive 10-year averages and 30-year normals are summarized in table 2. Ten-day averages and extremes are shown in table 15 (appendix). Water-year (October-September) totals have ranged from 17 inches (442 mm) in 1976-77 to 47 inches (1 188 mm) in 1973-74. Ten-year (decadal) annual averages have ranged from 26 inches (650 mm) during 1921-30 to 34 inches (861 mm) during 1951-60. A 40-year comparison shows annual precipitation averaging about 2 percent greater at Benton Dam, 1.3 miles (2.1 km) to the east.

The Benton Spring storage gage, near 4,800 ft (1 460 m), indicates a relatively small elevational increase in precipitation, with the annual total here averaging 37 inches (950 mm). The Benton Spring snow survey data, however, indicate that the gage catch is too low. For example, the average snowpack water content for 1963-77 (latest 15-year period used by the USDA Soil Conservation Service for comparative purposes) shows an increase of 5.6 inches (142 mm) during January and 3.8 inches (97 mm) during February; the corresponding average precipitation inside the gage was only 4.6 inches (117 mm) and 2.9 inches (75 mm), respectively.

Gage catch can easily be reduced by wind (Hayes 1944)—particularly in the case of snow (Wilson 1954; Linsley, Jr. and others 1958), but the Benton Spring gage site (fig. 4B) is rather sheltered. The gage itself is equipped with a standard shield to reduce wind effects. A possible alternate explanation is interception of windborne snow by the sheltering trees. On the snow course, there is a noticeable variation in snowpack between measuring points (from which an average is obtained), although this is attributed to differences in canopy situated more directly overhead (communication from Calvin L. Carpenter). An adjustment of the Benton Spring precipitation, as described below, gave an annual average of 42 inches (1 070 mm).

Much heavier precipitation is indicated, by snow surveys, to the east in the Schweitzer Basin ski area,

Table 1.—Climatic averages and extremes at Priest River Experimental Forest control station. Based on 24-hour period ending at 5 p.m. P.s.t., and on years 1931-80 for averages and 1912-82 for extremes, except as noted

	Temperature, °F							Precipitation total, inches							Snowfall				
	Averages			Extremes[1]															
Month	Daily maximum	Daily minimum	Monthly	Highest	Year	Lowest	Year	Average	Maximum monthly	Year	Minimum monthly	Year	Maximum daily	Year	Average	Maximum monthly	Year	Maximum daily	Year
Jan.	30.1	17.5	23.8	49	1953	-33	1950	4.28	8.38	1954	0.70	1949	1.74	1967	29.1	89.0	1969	16.0	1969+[5]
Feb.	37.1	20.2	28.7	57	1947	-35	1933	3.10	6.53	1949	.57	1913	1.73	1970	15.8	53.3	1937	13.5	1948
Mar.	45.0	24.1	34.6	68	1947	-18	1945	2.75	5.99	1945	.25	1926	1.90	1966	6.9	35.2	1951	8.5	1975
Apr.	56.9	30.1	43.5	88	1934	-1	1936	2.01	4.53	1955	.30	1924	1.50	1982	.6	10.3	1922	5.2	1933
May	67.1	37.6	52.4	97	1936	18	1954	2.28	6.24	1941	.37	1937	2.05	1925	.1	3.0	1943	2.0	1943
June	73.4	43.9	58.7	96	1973	27	1952	2.31	4.92	1948	.14	1922	1.51	1946	.0	2.0	1916	2.0	1916
July	82.8	46.5	64.7	101	1934	31	1979+	.99	3.43	1948	T[7]	1973+	1.34	1937	.0	.0		.0	
Aug.	81.6	44.7	63.2	103	1961	30	1969+	1.15	4.24	1926	T	1969+	1.66	1918	.0	.0		.0	
Sept.	71.6	39.1	55.4	96	1938	16	1934	1.59	7.50	1927	.03	1943	1.65	1927	T	1.0	1971	1.0	1971
Oct.	56.6	32.9	44.8	83	1943	-5	1935	2.82	8.31	1947	.18	1974	1.75	1951	.8	9.5	1919	5.0	1933
Nov.	39.1	26.7	32.9	64	1965	-16	1955	4.03	10.46	1973	.11	1929	2.40	1959	10.2	37.7	1973	10.5	1973
Dec.	32.5	22.6	27.6	55	1933	-36	1968	4.86	11.22	1933	.91	1913	2.21	1951	24.9	56.3	1951	20.0	1951
Year	56.2	32.2	44.2	103	Aug. 1961	-36	Dec. 1968	32.17	11.22	Dec. 1933	T	July 1973+	2.40	Nov. 1959	88.4	89.0	Jan. 1969	20.0	Dec. 1951

	Wind		Average number of days							
			Sunrise to sunset[3]							
Month	Average 24-h speed,[2] mi/h	Prevailing direction[3]	Clear	Partly cloudy	Cloudy	Precipitation ≥ 0.01 inch	Snowfall ≥ 1.0 inch	Thunderstorms[4]	Max. temp. ≥ 90°F	Min. temp. ≤ 32°F
Jan.	1.3	SW	5	5	21	18	9		0	30
Feb.	1.4	SW	7	7	14	13	5	*[6]	0	26
Mar.	1.9	SW	9	10	12	13	3	*	0	28
Apr.	2.1	SW	10	9	11	11	*	1	0	21
May	2.1	SW	11	10	10	11	*	3	*	7
June	2.0	SW	10	10	10	11	0	4	1	1
July	1.9	SW	19	8	4	5	0	3	7	*
Aug.	1.7	SW	19	7	5	6	0	3	5	1
Sept.	1.5	SW	14	7	9	8	*	1	1	6
Oct.	1.2	SW	11	7	13	11	*	*	0	15
Nov.	1.1	SW	5	6	19	14	3	*	0	24
Dec.	1.2	SW	5	4	22	17	8		0	29
Year	1.6	SW	126	89	150	136	28	16	14	188

[1]For period 1931-80. Highest in earlier years: March, 70 in 1915; June, 97 in 1912; July, 102 in 1924. Lowest in earlier years: June, 24 in 1918; July, 29 in 1917; August, 26 in 1914.
[2]For period 1912-36; measurements 8 ft above ground.
[3]For period 1912-47.
[4]For period 1931-70.
[5]+ =Occurrence also in earlier years.
[6]* =Less than one-half.
[7]T =Trace, an amount too small to measure.

Table 2.—Ten-year (decadal) and 30-year "normal" average precipitation, inches, Priest River Experimental Forest control station

Period	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Decade													
1912-20 (9 years)	3.79	2.96	2.77	2.18	2.55	2.00	1.34	1.30	1.97	2.28	4.30	3.57	31.01
1921-30	3.43	2.80	1.90	1.76	1.62	1.63	.41	1.25	1.68	2.45	2.94	3.76	25.60
1931-40	4.52	2.99	2.90	1.81	1.26	1.82	.73	.40	1.46	2.90	3.55	5.72	30.05
1941-50	3.15	3.01	3.03	2.18	2.94	3.28	1.10	.99	1.88	3.91	4.00	4.05	33.52
1951-60	5.26	3.41	2.59	2.09	2.35	2.71	.88	1.28	1.46	3.06	4.22	4.57	33.88
1961-70	4.75	2.81	2.85	1.97	2.32	2.17	.83	1.21	1.64	2.68	4.27	4.95	32.47
1971-80	3.72	3.29	2.35	1.99	2.54	1.60	1.43	1.88	1.52	1.57	4.10	5.00	30.99
30 Years													
1912-40 (29 years)	3.92	2.92	2.51	1.91	1.78	1.81	.81	.97	1.69	2.55	3.57	4.37	28.81
1921-50	3.70	2.93	2.61	1.92	1.94	2.24	.75	.88	1.67	3.09	3.50	4.51	29.74
1931-60	4.31	3.13	2.84	2.03	2.18	2.59	.90	.89	1.60	3.29	3.92	4.78	32.46
1941-70	4.39	3.08	2.83	2.08	2.54	2.71	.94	1.16	1.66	3.22	4.17	4.52	33.30
1951-80	4.58	3.17	2.60	2.02	2.41	2.16	1.05	1.46	1.54	2.44	4.20	4.84	32.47

6 to 7 air miles (10 km) from Benton Spring (see later section). Within the Experimental Forest, an annual average of about 50 inches (1 270 mm) is indicated at 5,500 ft (1 675 m), based on 4 years of intensive snow sampling (Packer 1962); an adjustment has been made for the abnormally high snowpack during this period, 1949–52. The seasonal maximum water content at this elevation averaged 37 inches (940 mm). The corresponding average at 4,800-ft (1 463-m) locations was 23 inches (585 mm); it was actually a few inches more than this at Benton Spring (with snowpack about 25 percent above normal).

MONTHLY DISTRIBUTION

The pattern of monthly precipitation (fig. 7) shows a decided peak in late autumn-early winter. Amounts at Priest River headquarters average 4.0 inches (100 mm) or greater in November, December, and January, with close to 5.0 inches (125 mm) in December. Extreme monthly totals have reached 11 inches (285 mm). A slight secondary peak occurs in May and June, followed by a sharp decrease to the summertime minimum in July and August. Monthly amounts then average around 1.0 inch (25 to 29 mm). The averages shown for Benton Spring include an adjustment for the suspected deficiency, mentioned above. The adjustment, limited to the snow season, used a smoothed curve of ratios of Benton Spring/headquarters monthly precipitation based on 22 years; the ratios—initially relatively low in winter—were extrapolated upward from those in spring and early autumn. About 59 percent of the annual precipitation at headquarters is received during the months November through March; the proportion is 60.5 percent at Benton Spring using the adjusted averages, only 56 percent using the observed gage catch.

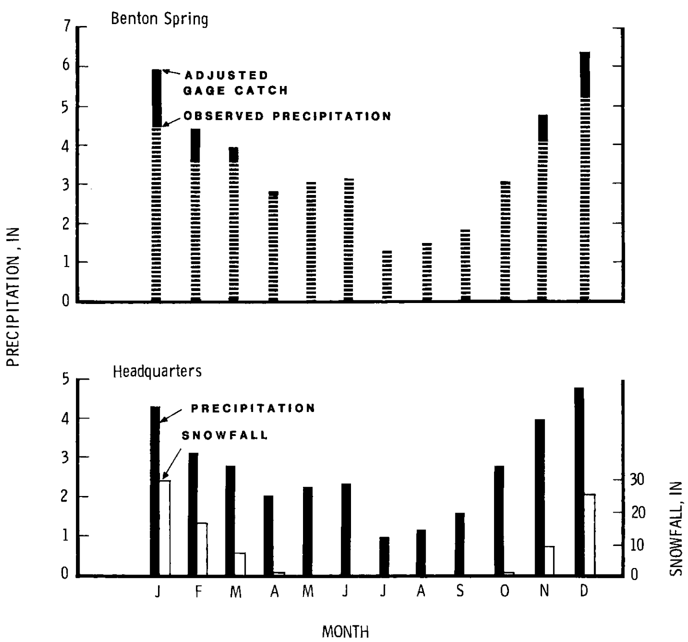


Figure 7.—Monthly average precipitation, Priest River Experimental Forest. Lower panel: At headquarters (control station), based on 50 years 1931-80; snowfall (open bars) is plotted on scale (right side) proportional to that of precipitation, assuming an average of 1.0 inch water equivalence from 12.0 inches snowfall. Upper panel: Near Benton Spring (4,800 ft), 22 years of storage gage data adjusted to 1931-80 (hatched bars or portions of bars); averages further adjusted for deficient gage catch of snow are shown by shaded bar extensions.

DAILY PRECIPITATION

Frequencies of various daily precipitation amounts at headquarters are shown in table 16 (appendix). The maximum on record for any day (5 p.m. to 5 p.m.) is 2.4 inches (61 mm) in November 1959; Benton Dam received 2.5 inches (63 mm) during a different 24-hour period in the same storm. These amounts are well below the 24-hour maximum expected according to maps by Miller and others (1973); they show 3.6 inches (91 mm) for a 100-year period and 3.0 inches (76 mm) for only a 25-year period.

Maximum 1-hour precipitation at Benton Dam is summarized in table 3. The extreme for the 40-year period, 1941-80, is 0.90 inch (23 mm), recorded in both June 1948 and July 1958. This amount is somewhat higher than that calculated for a similar period using the above reference; a 1-hour extreme of 1.0 inch (25 mm) is calculated for a 100-year period. A 6-hour extreme of 1.5 inches (38 mm) occurred at Benton Dam in December 1961. The cool-season precipitation, nevertheless, occurs with relatively low 1-hour maximum amounts; it accumulates over long durations. For the years 1941-66, Benton Dam had an average of 147 hours in both December and January with 0.01 inch (0.25 mm) or more, compared with 19 hours in July and 27 hours in August.

SNOWFALL

Annual snowfall at headquarters averages 88 inches (225 cm), based on the years 1931-80. This amount represents the sum of individual daily accumulations, before melting or settling occurs. The monthly average snowfall is included in figure 7; the averages are plotted on a scale such that their approximate water equivalent may be compared with the total precipitation (shown by the shaded bars). For this purpose, we assumed an overall snowfall density of 0.083—that is, 1.0 inch (25 mm) of water in 12.0 inches (30.5 cm) of newly fallen snow, though much variation can be expected between individual storms. A similar average density has been found elsewhere (Landsberg 1958).

Monthly and annual amounts for each year (or snow season) of record are listed in table 17 (appendix). December and January are usually the snowiest months, with 50-year averages of 25 and 29 inches (63 and 74 cm), respectively, at headquarters (table 1). Even so, figure 7 indicates that over half of the December precipitation here occurs as rain; almost half in January. Overall, about 23 percent of the annual precipitation is contributed by snowfall.

Seasonal snowfall totals at headquarters have ranged from 26 inches (66 cm)—most recently in 1976-77—to 154 inches (391 cm) in 1949-50. Monthly totals have been as high as 89 inches (226 cm) in January 1969; only 2 inches (6 cm) fell during January 1981. Maximum 1-day snowfall of 20 inches (51 cm) occurred in December 1951; 2-day snowfall reached 25 inches (64 cm) in January 1951.

Annual snowfall probably averages over 300 inches (760 cm) at a 5,500-ft (1 675-m) elevation. Here, it contributes about 55 percent of the annual precipitation (based on stations in the northern half of Idaho [Finklin 1983]).

Snow Cover; Snowpack.—In an average season, the headquarters area has about 120 days with 1 inch or more of snow cover. The number of such days has varied from 152 in 1935-36 to 35 in 1980-81. The period of continuous, day-to-day, cover has a median duration from December 5 to March 30. This cover has begun as early as November 10, 1931, and has remained as late as April 18, 1975. Snow cover was present during the entire month of January in all but 2 of the 50 years 1931-80 and throughout February in all but 4 years. But in 1981, there was practically none during these two months.

Snow depth at headquarters (table 4) has been as great as 54 inches (137 cm), in January 1969, compared with an average seasonal maximum of 30 inches (75 cm). The maximum occurs more frequently in February than in January. At the Benton Spring snow course, the depth usually peaks in March or April; it averages close to 5 ft (1.5 m) on the March 1 and April 1 monthly survey dates. A record depth of 93 inches (236 cm) was measured in 1956, on March 1. The snow lasts well into May here and into June at higher locations. Water content on April 1 at Benton Spring averages 20 inches (515 mm). To the east, water content averages 31 inches (785 mm) at Schweitzer Bowl (at a similar, 4,800-ft [1 463-m] elevation) and 48 inches (1 215 mm) at Schweitzer Ridge (6,200 ft [1 890 m]).

Detailed measurements cited by Wellner and others (1951) show much less snowpack on south-facing slopes than on north-facing slopes— particularly toward late season (March and later). The ground becomes bare about a month earlier on the south slopes at lower and middle elevations; perhaps 2 weeks earlier on the south slope at 5,500 ft (1 675 m). Consistently more snow was indicated in forest openings than under timber, except near the time of disappearance. Larsen (1940) showed similar slope-related differences, comparing lower-slope

Table 3.—Monthly maximum 1-hour precipitation, inches, at Benton Dam, Priest River Experimental Forest, during 40 years 1941-80

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Median	0.15	0.15	0.15	0.13	0.17	0.20	0.19	0.21	0.15	0.15	0.15	0.15	0.37
Highest	.40	.32	.28	.28	.50	.90	.90	.52	.81	.29	.27	.29	.90
Year	1966	1972	1958	1961	1978	1948	1958	1964	1942	1961, 1970	1942	1961	1948, 1958

Table 4.—Average snow depth (D) and snowpack water content (W), at end of month; maximum snow depth (Max D) during month; Priest River Experimental Forest

Location, period of record		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
		Inches							
Control station,									
1931-80	D	*[1]	3	12	20	19	5	0	
1912-81	Max D	5	21	41	54	51	50	28	
	Year	1919	1915	1964	1969	1969	1916	1917	
Benton Meadow,									
1937-80	W			2.8	5.0	6.2	3.2	0	
Benton Spring,									
1937-80	D		12	31	47	55	56	36	0
	W		M[2]	8.4	13.7	18.2	20.4	15.4	0

[1]* = Occurrence too rare for meaningful average.
[2]M = Missing; not measured.

stations having southwest and northeast aspects. Elevation, aspect, and canopy effects on snowpack are analyzed by Packer (1962), using statistical methods. Packer (1971) also analyzes the effects on snowmelt.

STREAMFLOW

The streamflow (or runoff) regime of Benton Creek is compared in figure 8 with that of precipitation. (The precipitation, based on the 50 years 1931-80, is within 1 percent of its average for the 34 years, 1940-73, of available runoff data.) The effect of water storage in snowpack and subsequent release with snowmelt is very evident. Overall, 32 percent of the total runoff occurs in May; 53 percent in April and May combined. The average date of peak runoff is May 4; median date, May 10. The peak has occurred as early as February 26, in 1958, and as late as May 29, in 1962. The springtime peak flows are analyzed in detail by Haupt (1968).

For the 950-acre (385-ha) drainage area above Benton Dam, annual runoff averages about 1,275 acre-ft (157 ha-m), from a discharge rate averaging just 1.8 ft³/s (0.05 m³/s); the rate averages 6.6 ft³/s (0.19 m³/s) in May. Highest daily average discharge was 22.6 ft³/s (0.64 m³/s) on April 27, 1952. Depth of runoff distributed

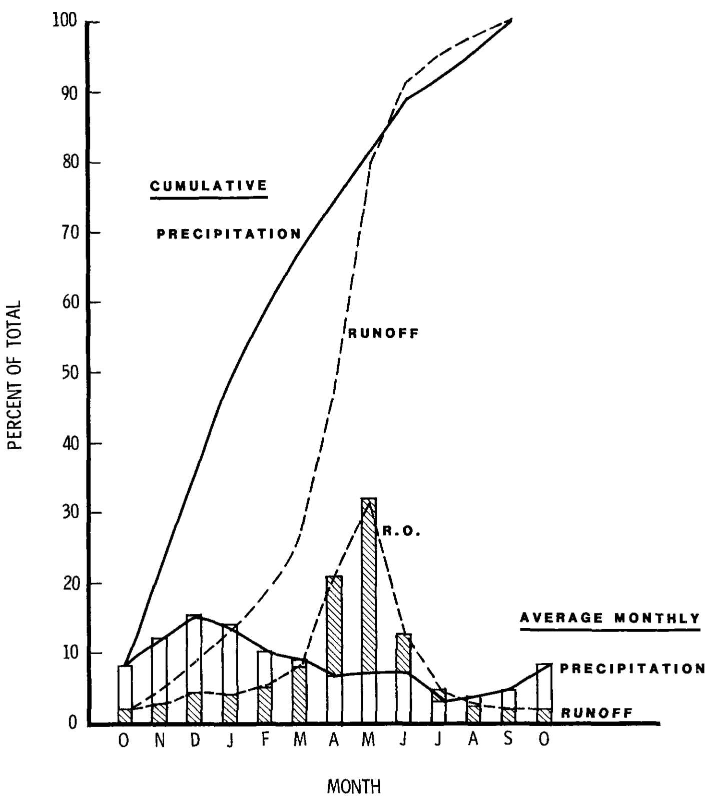


Figure 8.—Comparison of average water-year regimes of precipitation and runoff in Priest River Experimental Forest. Precipitation is a two-station average, from control station and Benton Spring, based on or adjusted to 50 years 1931-80. Runoff is that of Benton Creek, measured at Benton Dam, during 1940-73. Monthly and cumulative monthly amounts are in percentage of water-year total.

uniformly over the drainage would be 16 inches (400 mm), or about 40 percent of the areal average precipitation of close to 40 inches (1 000 mm). About 24 inches (600 mm) of this precipitation is apparently utilized in evapotranspiration. Annual runoff depth has varied from 6.0 inches (153 mm) in water year 1944 to 25.3 inches (643 mm) in 1956.

The water-year runoff has only a fair correlation with water-year precipitation at the control station; the 34-year correlation coefficient, r, was 0.71. Using September-August, September-June, or October-June precipitation, r was 0.78 to 0.79. Dividing the precipitation into seasons, Stage (1957), with 16 years of data, obtained a multiple regression having a correlation coefficient of 0.92.

FIRE-SEASON PRECIPITATION

Ten-day details of valley-area precipitation (taken from tables 15 and 16, appendix) are given in figure 9; these cover the official fire season, May through October, and about a month before and after. Much of the irregularity seen in the averages and frequencies, even with 50 years of data, is probably accidental. The broader features show the large decrease in precipitation that usually commences around early July and a moderate increase

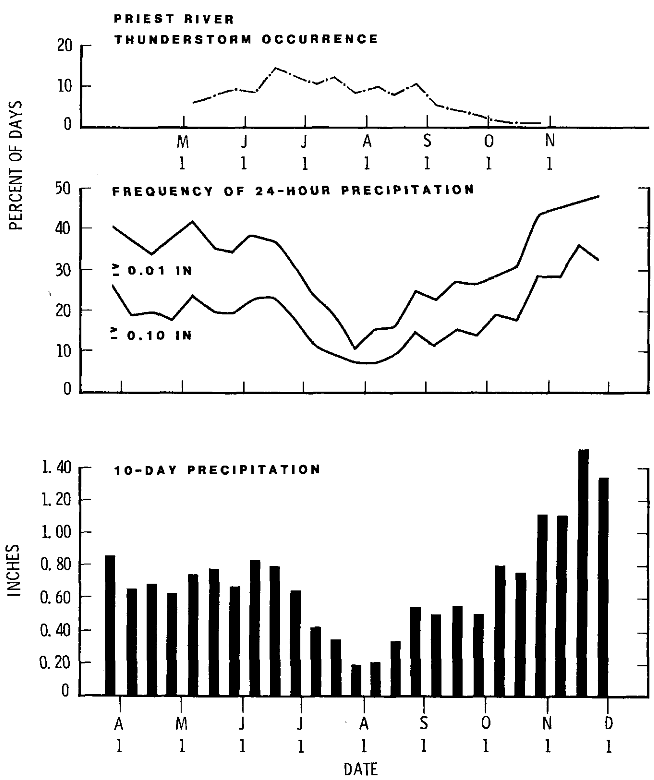


Figure 9.—Average regimes of 10-day precipitation and thunderstorm occurrence, Priest River Experimental Forest headquarters area (control station); based on 50 years 1931-80. In bottom panel, totals for 11-day periods have been adjusted to 10 days.

in late August, with little further change during September; then, an upward trend to wet late autumn conditions. Although July and August are normally dry, large variation can occur from one year to another and between decades (tables 2 and 14). At the control station, the 2-month precipitation totaled 0.3 inch (8 mm) in 1967; 6.4 inches (163 mm) in 1978.

Ten-day averages and frequencies are presented also for Priest Lake Ranger Station and Gisborne Lookout, in tables 18 and 19 (appendix); these cover a shorter season and some of the periods have incomplete data. Overall, the July-August precipitation at Priest Lake averages about 10 percent greater than at the Priest River control station. For the same months, Gisborne Lookout receives about 25 percent more than the control station.

THUNDERSTORMS

The main season of lightning (or thunderstorm) activity extends from late May through August (fig. 9, top panel). During this time, storms within about a 20-mile (32-km) distance occur on about 10 to 15 percent of the days. Thus, July and August, the peak fire-danger months, each have an average of 3 days with storms observed at the valley location; 4 days at Gisborne Lookout. Detailed lightning observations at this lookout during 1956-71 for Project Skyfire, Northern Forest Fire Laboratory, showed that 73 percent of the July-August storms began between 12 noon and 12 midnight, P.s.t. Based on 15-minute counts of cloud-to-ground discharges during 1960-71, the Lightning Activity Level (LAL) as defined in the National Fire Danger Rating System (Deeming and others 1977) was 2 on 51 percent of the thunderstorm days (or on 6 percent of all days). LAL was 3 on 21 percent of the storm days; 4, on 7 percent; 5, on 21 percent.

PRECIPITATION TRENDS

Precipitation trends or fluctuations during the past 70 years are depicted in figure 10, using two forms of smoothing. These employ 11-year running means and 5-year weighted means, both representing overlapping sequences of years. The first form gives equal weighting to each year's data; the second, portraying short-term fluctuations, applies successive weighting of 1, 4, 6, 4, and 1. Values are plotted as percentages of the 1931-80 average.

The graphs of annual precipitation show the well-known dry period centered in the 1920's and 1930's. Analyzing tree rings in northern Idaho, Leaphart and Stage (1971) found that this period represented the most adverse growth conditions for western white pine in three centuries. Following a recovery centered in the 1950's, an overall downward tendency is indicated in more recent years. The "winter" (November-March), late spring (May-June), and summer (July-August) graphs also show dry conditions in the 1920's and 1930's, but they display some opposing tendencies since that time. For example, May-June precipitation was rather high in the 1940's (opposite of the winter pattern), then declined until very recently; while July-August precipitation

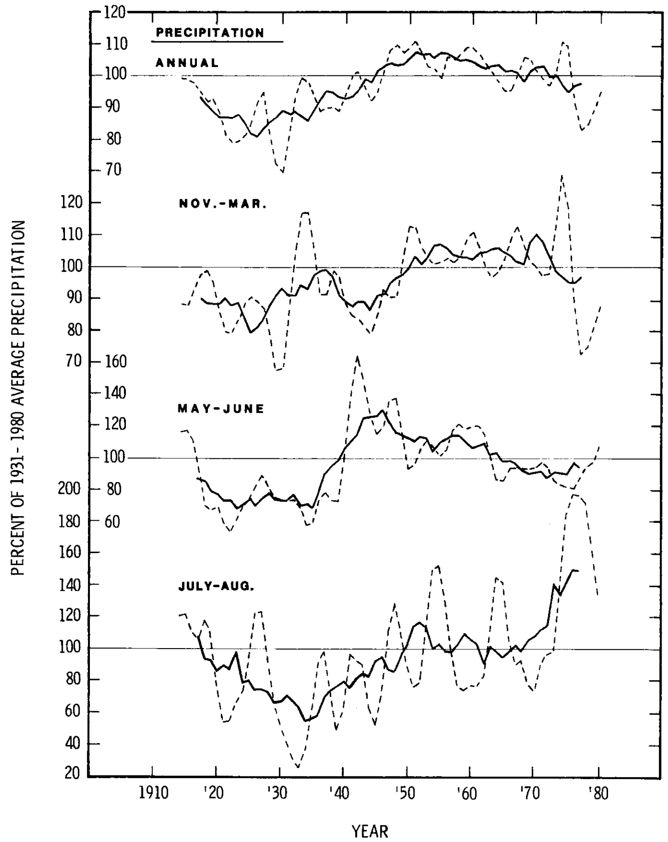


Figure 10.—Precipitation fluctuations during 70 years since 1912 at Priest River Experimental Forest, control station. Eleven-year running means (solid lines) and 5-year weighted means (dashed lines) are plotted at midpoint years (for example, the means for 1970-80 and 1973-77 are plotted at 1975).

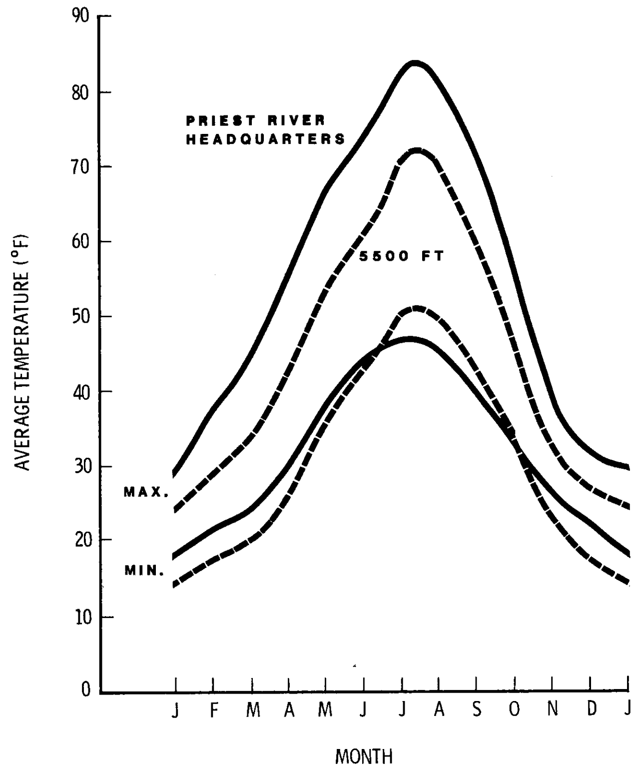


Figure 11.—Average daily maximum ana minimum temperatures at valley and mountaintop locations, Priest River Experimental Forest; based on 24 hours ending at 5 p.m. and 30-year normal period, 1951-80. Mountaintop averages are estimated (see text).

shows an irregular increase into the 1950's, then an exceptional increase during the 1970's. The 5-year weighted mean summertime precipitation centered around 1976, 1977, and 1978 was nearly 200 percent of the 1931-80 average; this mean had been as low as 25 percent in the early 1930's.

Graphs representing stations farther south in northern Idaho and extreme eastern Washington (Finklin 1983) show similar precipitation characteristics. For earlier years, these graphs indicate a relatively wet period near the beginning of this century.

Temperature

The normal yearly course of temperature is portrayed in figure 11, for both headquarters and a 5,500 ft (1 675 m) elevation. Averages at this mountaintop level have been estimated from those atop Mount Spokane, Wash., and Mullan Pass, Idaho, at about 5,900 to 6,000 ft (1 800 to 1 835 m). The estimates—adjusting for elevation and period of record—were tuned to be consistent with the July and August averages from Gisborne Lookout.

For the normal period, 1951-80, average daily maximum temperatures at headquarters range from 30° F (-1° C) in January to 82° F (28° C) in July; average minimums range from 18° F (-8° C) to 47° F (8° C). Monthly mean temperatures—taken as midpoint values between the maximum and minimum—are thus 24° F (-4° C) in January and 65° F (18° C) in July; the annual mean is 44° F (7° C). These means are based on 24-hour maximum and minimum data observed at 5 p.m. P.s.t., and may be about 1° F higher than means based on actual calendar-day data or individual hourly readings (explanations are given by Rumbaugh 1934; Baker 1975). At 5,500 ft (1 675 m), the monthly means range from about 20° F (-7° C) to 61° F (16° C)—only a few degrees lower than those at headquarters. This small elevational decrease reflects the presence of temperature inversions. These are mainly a nighttime phenomenon but also affect daytime temperatures in autumn and winter.

Inversion effects on daytime (or maximum) temperature are greatest in December and January, when, most often, a warmer airmass aloft may override cold air entrenched in the valley. Conversely, the daytime temperature decrease with elevation, or "lapse rate," is generally strongest in spring; average maximums at 5,500 ft (1 675 m) then run 13° or 14° F (7° or 8° C) below those at headquarters. The difference is 1° or 2° F less in July and August. On the other hand, during these two months and early autumn, nighttime inversions—from radiational cooling favored by clear skies (Schroeder and Buck 1970)—result in lower average minimum temperatures at headquarters than at 5,500 ft.

Temperatures for each year of record at the control station, through 1982, are listed in table 20 (appendix); successive 10-year averages and 30-year normals, in table 5. Ten-day averages and extremes are shown in tables 21, 22, and 23 (appendix); frequency distributions of daily values, in tables 24 and 25 (appendix). The coldest month of record is January 1937, with a mean of 6.5° F (-14° C), including an average minimum of -4.4° F (-20° C). The warmest month is July 1975, with 70.4° F (21° C), resulting from a high average minimum; the highest average maximum, 90.7° F (33° C), occurred in August 1967. Extreme maximum for any day is 103° F (39° C) recorded in August 1961—the clearcut (fire-weather) station reached 105° F (41° C); the minimum is -36° F (-38° C) in December 1968. The extremes show a smaller range at higher elevations. Mount Spokane, Wash., had -28° F (-33° C) in December 1968; Gisborne Lookout, 95° F (35° C) in August 1961.

For most months of the year, the 1971-80 average minimum temperatures (table 5) show an increase over those during 1961-70 and preceding decades; the increase is particularly large in July and August, about 3° F (1.5° C). Possibly up to 1.0° F of this summertime increase may be a result of a change that occurred in observation practice—using a hygrothermograph trace, rather than actual maximum and minimum thermometer readings, to obtain the daily temperature extremes. There may thus be effects of slower response often found in hygrothermographs, as well as possible bias in calibration.

A comparison in table 6 shows that the 3° F increase in control station minimum temperature was slightly greater than that observed at the Priest River fire-weather station (before its termination in 1978) and at Priest Lake. Data from five adjacent climatological stations give a corresponding increase averaging only 0.5° F relative to 1961-70; 1.5° F since 1951-60, though this ranges from 0.4° F at Sandpoint to 2.7° F at Newport.

FROST-FREE PERIOD

As shown in table 7, the control station has an average length of 96 days between last-spring and first-autumn minimum temperatures of 32° F (0° C) or lower. The respective average threshold dates are June 4 and September 8. There is an average length of 137 days between occurrences of 28° F (-2° C) or lower. These temperatures are usually reached under fair-weather conditions—by radiational cooling—and are accompanied by frost formation.

The frost-free season is shorter at the clearcut site, averaging 29 days shorter between dates of 32° F. For both the 32° F and 28° F thresholds, the season at valley locations may average close to 2 months longer under a full timber canopy than in the clearcut. This is indicated by 6 years of recording charts from the former flammability stations. Four years of charts indicate an even longer season without freezing temperatures at the former 2,700-ft (823-m) and 3,800-ft (1 160-m) altitude-aspect stations. The season becomes short again at highest elevations, as shown in table 7 for Mount Spokane and Mullan Pass, at 5,900 to 6,000 ft (1 800 to 1 835 m); it may be about 2 weeks longer than this at 5,500 ft (1 675 m). The threshold occurrences at these elevations are often with blustery conditions, sometimes with late-spring and early-autumn storms that bring snow.

Table 5.—Ten-year (decadal) and 30-year "normal" average daily maximum and minimum temperatures, °F, at Priest River Experimental Forest control station

Period		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Decade														
1912-20	Max.	30.5	36.8	45.4	57.5	64.2	74.0	82.1	81.6	69.7	55.0	39.8	31.5	55.8
(9 years)	Min.	15.2	17.3	22.4	28.3	34.4	39.7	43.5	41.9	36.0	29.9	25.8	18.5	29.4
1921-30	Max.	29.1	37.0	46.5	57.3	67.5	74.5	84.7	82.4	70.1	57.1	39.7	31.2	56.5
	Min.	15.8	18.7	24.2	29.5	36.0	42.7	44.8	43.7	36.9	31.4	26.7	19.4	30.9
1931-40	Max.	31.5	35.1	46.0	58.8	68.9	74.7	83.8	83.3	72.4	57.5	39.9	34.3	57.3
	Min.	18.9	15.9	24.9	30.3	36.9	43.3	46.1	42.4	38.9	33.3	26.5	23.7	31.8
1941-50	Max.	29.1	38.5	46.0	58.6	67.0	71.9	82.6	81.1	71.5	56.6	40.0	33.0	56.4
	Min.	13.4	19.1	23.4	30.1	37.7	43.6	46.4	44.5	38.6	32.9	27.4	21.5	31.6
1951-60	Max.	31.1	36.8	43.7	56.3	67.2	72.4	82.6	79.9	71.6	56.5	39.2	32.6	55.8
	Min.	18.9	20.0	22.4	29.3	37.5	43.1	45.8	43.9	38.7	32.7	24.5	22.7	31.6
1961-70	Max.	30.5	38.7	45.0	54.9	66.2	74.5	82.6	82.3	71.5	55.3	39.5	31.4	56.0
	Min.	19.4	22.2	23.7	29.8	37.1	44.2	45.9	44.8	38.8	32.7	27.9	22.3	32.4
1971-80	Max.	28.6	36.2	44.1	55.9	66.2	73.6	82.2	81.2	70.9	57.0	37.1	31.4	55.3
	Min.	16.8	23.6	25.9	31.0	38.9	45.1	48.5	47.6	40.6	32.9	27.0	23.0	33.4
30 Years														
1931-60	Max.	30.6	36.8	45.2	57.9	67.7	73.0	83.0	81.4	71.8	56.9	39.7	33.3	56.5
	Min.	17.1	18.3	23.6	29.9	37.4	43.3	46.1	43.6	38.7	33.0	26.1	22.6	31.6
1941-70	Max.	30.2	38.0	44.9	56.6	66.8	73.0	82.6	81.1	71.5	56.2	39.9	32.3	56.1
	Min.	17.2	20.4	23.1	29.7	37.4	43.6	46.0	44.4	38.7	32.8	26.6	22.2	31.9
1951-80	Max.	29.9	37.2	44.3	55.7	66.5	73.5	82.4	81.1	71.3	56.3	38.6	31.8	55.7
	Min.	18.4	21.9	24.0	30.1	37.8	44.1	46.7	45.5	39.4	32.8	26.5	22.7	32.5

Table 6.—Station comparison, by decades, of average daily maximum and minimum temperatures, °F, observed during July and August

Period		PREF 17	PRFW 15[3]	PLFW 15[3]	BONF 17[4]	CDAL 17-15	NEWP 17-15	PTHL 17[4]	SAPT 17	5STA
		Station[1] and daily observation time[2]								
		Average temperature, July and August combined								
1951-60	Max.	81.3	83.1		83.2	85.7	84.8	83.2	80.1	83.4
	Min.	44.9	42.0		48.7	51.3	43.8	48.1	47.7	47.9
1961-70	Max.	82.5	83.4		83.0	86.0	85.4	82.4	81.0	83.5
	Min.	45.4	43.0		49.0	52.5	45.8	49.0	48.2	48.9
1971-80	Max.	81.7			83.1	84.7	84.0	80.9	80.8	82.7
	Min.	48.1		42.5	49.9	52.9	46.5	49.8	48.1	49.4
1964-70	Min.	45.2	42.7	40.6						
1971-77	Min.	48.0	44.7	42.2						

[1]PREF denotes Priest River Experimental Forest Control Station; PRFW, Priest River fire-weather station (terminated after 1977); PLFW, Priest Lake fire-weather station (location since 1964); BONF, Bonners Ferry, Idaho; CDAL, Coeur d'Alene, Idaho; NEWP, Newport, Wash.; PTHL, Porthill, Idaho; SAPT, Sandpoint, Idaho; 5STA, average of five preceding stations.
[2]Time based on 24-hour clock; thus 17 denotes 5 p.m. local time.
[3]Time changed to 12 in 1974.
[4]Time changed to 07 in 1975.

Table 7.—Freezing temperature thresholds, °F. Observed dates of last occurrence in spring (or until July 31) and first occurrence in autumn (or after July 31), Priest River Experimental Forest valley area and adjacent mountain stations

	Date[1] of last spring minimum			Date of first autumn minimum			Number of days between dates		
	24°	28° or lower	32°	32°	28° or lower	24°	24°	28° or lower	32°
Priest River control station, 50 years 1931-80:									
Mean	4/17	5/11	6/4	9/8	9/24	10/14	180	136	96
Standard dev., days	13	13	19	14	13	15	20	21	27
Median	4/19	5/12	5/31	9/9	9/22	10/14	182	133	101
Earliest,	3/17	4/13	4/17	8/7	9/3	9/8			
year	1958	1980	1980	1946	1956	1962			
Latest,	5/11	6/13	7/30	10/7	11/5	11/14			
year	1959	1952	1933	1940	1940	1956			
Maximum,							228	203	139
year							1940	1940	1968
Minimum,							133	92	34
year							1965	1952	1933
Priest River fire-weather station (clearcut), 28 years 1946-73:									
Mean		5/18	6/19	8/23	9/10			115	65
Difference, days[2]		+6	+14	−15	−11			−17	−29
Median		5/19	6/18	8/23	9/10				
Mullan Pass, Idaho (10 to 15 years during 1942-57) and Mount Spokane, Wash. (12 years during 1959-72); two-station average:									
Mean	5/12	6/6	6/23	9/9	9/21	10/5	146	107	78
Median	5/9	6/8	6/26	9/9	9/22	10/5			

[1]Month number/day number; thus 4/17 is April 17.
[2]Mean date minus that at control station during same years.

TEMPERATURE TRENDS

Past trends or fluctuations of temperatures at the control station are depicted in figure 12. As with precipitation in figure 10, the observed values have been smoothed; here they are plotted as degree differences from the 1931-80 average.

The graphs—for annual, winter, and summer mean temperatures—all show a warming trend from the beginning of record until about 1940; this is generally concurrent with the notable period of below-average precipitation (fig. 10). Graphs for an area to the south (Finklin 1983) indicate that this warming trend had begun only a few years earlier. The 11-year annual and summertime means in that area varied little for at least 30 years prior to the 1910's; wintertime means rose 4° F (2° C) from about the mid-1880's to 1900, then fell 2° F (1° C) by the early 1910's. After 1940, figure 12 shows a cooling until about 1950 to 1955; since then, to date, an overall warming for the year and summer—this has occurred without the dry conditions of the 1930's. The more irregular winter temperature pattern indicates an overall decline since the early 1960's.

Recent 11-year July-August means at the control station have been about 1.0° F higher than those of the 1930's, but this excess is due to the higher minimum temperatures noted earlier—maximum temperatures are down (table 5). For the above-mentioned area to the south, a graph shows recent July-August means peaking about 0.5° F above the 1930's level. The 1960's and 1970's temperature trends in northern Idaho are contrary to some of the cooling publicized for eastern parts of the United States. This difference may follow from the east-west spacing between prevailing upper-air trough and ridge locations.

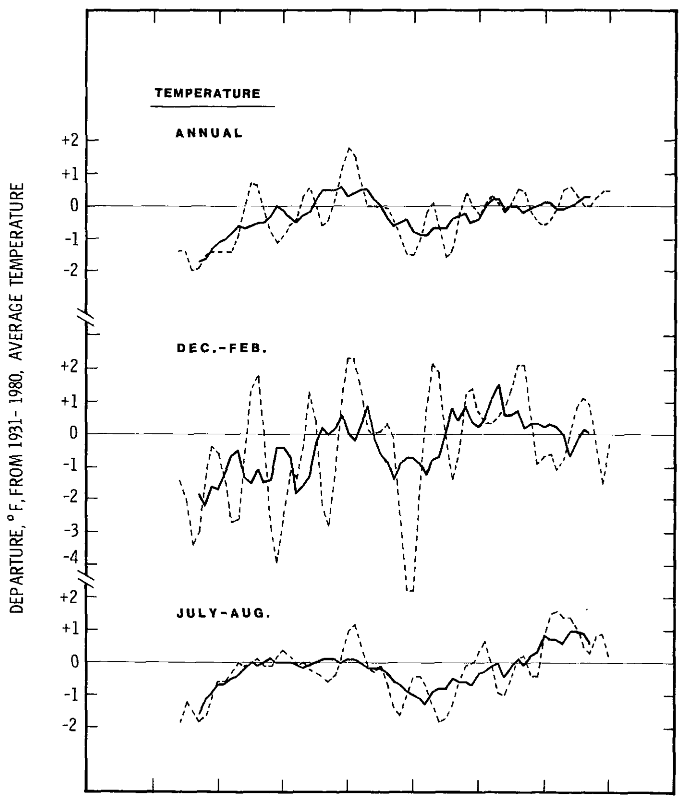


Figure 12.—Temperature fluctuations during 70 years since 1912 at Priest River Experimental Forest, control station; based on averages of observed daily maximum and minimum values. Eleven-year running means (solid lines) and 5-year weighted means (dashed lines) are plotted at midpoint years.

Relative Humidity

Relative humidity is recorded continuously throughout the year on hygrothermograph charts at the control station, but the data have not been tabulated; accuracy is uncertain, particularly during winter. Available year-round humidity averages, based on psychrometer readings, cover only the period prior to 1919 and a 5 p.m. P.s.t. observation time. Otherwise, humidity data for Priest River are limited to the fire-weather season—with readings at 8 a.m. and 5 p.m. until about 1950; once-daily at 3 p.m. in subsequent years. In the valley these data are from the clearcut site beginning in 1945.

The general annual pattern of relative humidity may be obtained from figure 13. Afternoon averages at Priest River (valley location) are shown, together with afternoon and early morning averages elsewhere in the Northern Rockies; both a valley and a ridgetop location are represented. Relative humidity tends to vary inversely

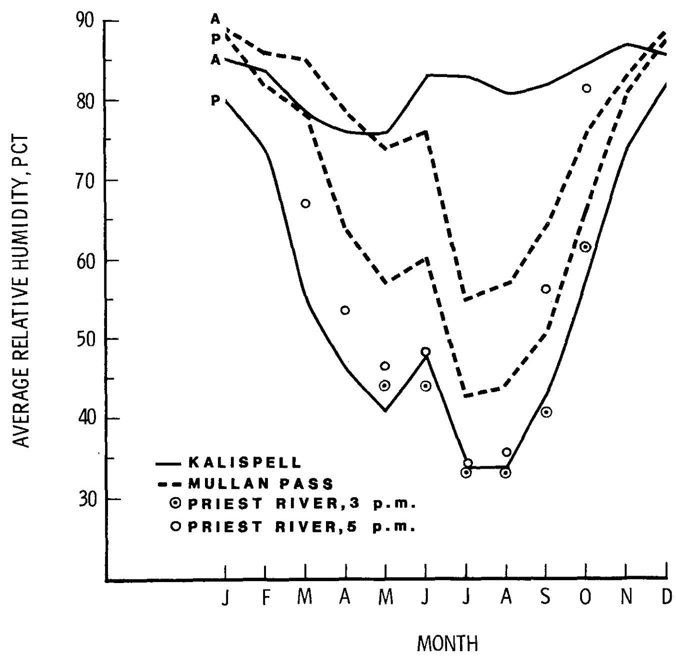


Figure 13.—Graphs of monthly average relative humidity at 4 a.m. (A) and 4 p.m. (P) at Kalispell, Mont., airport (based on years 1950-70) and Mullan Pass, Idaho (1950-54 data adjusted to longer period). Superimposed are averages for Priest River Experimental Forest, valley area, at 4:30-5:00 p.m. (based on 1921-50, except 1912-18 for March) and at 3 p.m. (based on 1951-70). Times are P.s.t.

with temperature (Schroeder and Buck 1970), and this largely accounts for the diurnal differences seen in this figure; also for higher afternoon values at higher elevations. The 3 p.m. averages at Priest River, during May through October, are generally similar to the afternoon averages shown for Kalispell, Mont.; higher values occur at Priest River by 5 p.m., particularly in late season. Early morning humidity in the Priest River valley area probably averages higher throughout the year than at Kalispell; it averages above 90 percent in summer, as seen later. As inferred from figure 13, relative humidity in the Experimental Forest is high throughout most days during November through February, averaging 70 to 80 percent or higher in midafternoon. With a slight interruption in the showery month of June, the afternoon average decreases sharply during spring, reaching July-August levels of about 34 percent in the valley.

TEMPERATURE AND RELATIVE HUMIDITY DURING FIRE SEASON

Figure 14 shows the trends of midafternoon temperature and relative humidity during the fire season. Even with smoothing, the 10-day averages show a pronounced change near the end of June, toward the warm and dry conditions peaking in mid-July to mid-August. This change corresponds with the decrease in rainfall seen in figure 9. With an elevational difference of about 3,280 ft (1 000 m), the temperature differences indicate an average summer afternoon lapse rate of 4.0° F per 1,000 ft (7.3° C per 1,000 m) between the valley bottom (clearcut area) and the lookout. As shown later, however, temperatures at intervening slope locations can vary several degrees or more from lapse-rate estimates. Further temperature and humidity details are given in tables 26 and 27 (appendix). Noteworthy is the combination of extremely high afternoon temperature and low relative humidity that persisted during the 10-day period August 11-20, 1967—the year of the Sundance Fire run, north of the Experimental Forest (Anderson 1968). The lowest recorded daily humidity value at Priest River, 5 percent, occurred in August 1961.

Percentage frequencies (or probabilities) of various temperature and humidity values are graphed in figure 15. Again, the curves reveal a turn toward summertime levels near the end of June. Occurrence of a midafternoon relative humidity below 30 percent in the valley has a 23 percent chance in mid-June; a 62 percent chance by late July. Additional details are given in tables 28 and 29 (appendix).

Combined frequencies of temperature and relative humidity, together with windspeed, are given in table 30 (appendix). The frequencies of values beyond certain

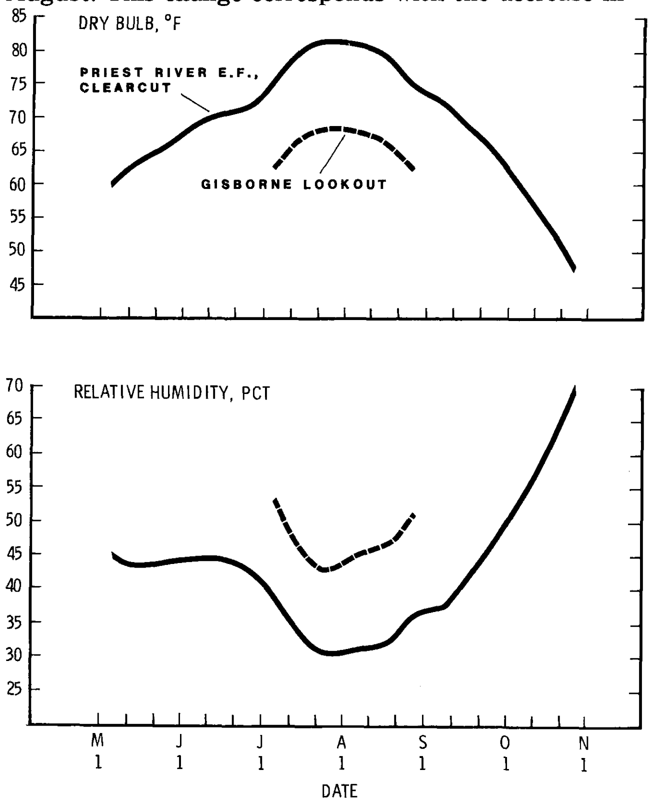


Figure 14.—Ten-day average dry bulb temperature and relative humidity at 3 p.m. P.s.t. at valley and mountaintop locations, Priest River Experimental Forest; based on years 1951-70. Curves are drawn through smoothed values plotted at middle of 10-day period; smoothing used 1-4-1 weighting applied to original values of three consecutive periods.

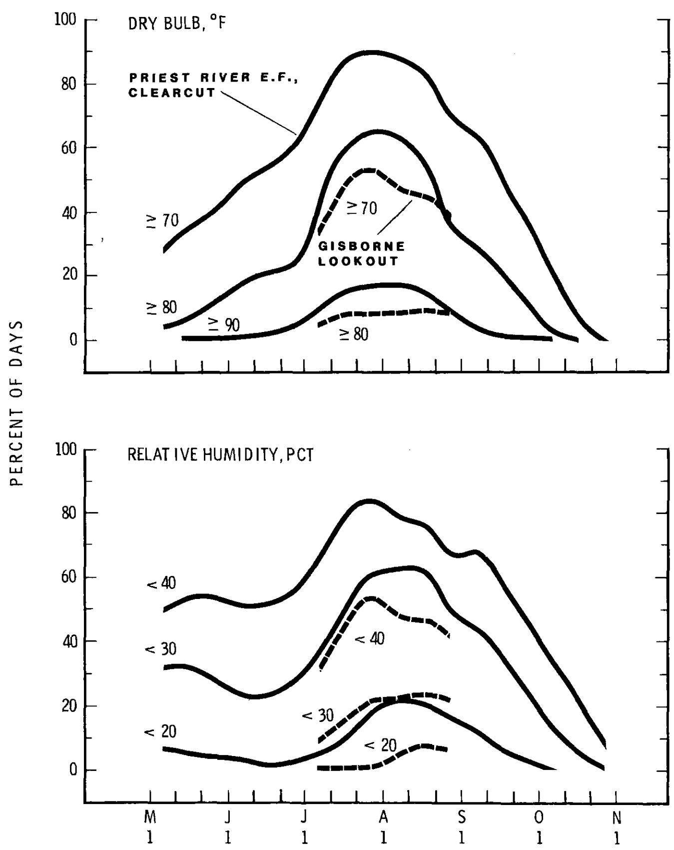


Figure 15.—Ten-day frequencies of specified dry bulb temperature and relative humidity at 3 p.m. P.s.t. at valley and mountaintop locations, Priest River Experimental Forest; based on years 1951-70. Curves are drawn through smoothed values, as in figure 14.

limits, rather than within the classes shown, may be obtained by appropriate summation.

Ten-day details are also given (tables 31 and 32, appendix) for average daily maximum and minimum temperatures. The Priest River data—from the clearcut area—differ somewhat from those in tables 16 and 17 (appendix) for the control station; the frequency distributions (not shown) also differ. Periods of record are different, but the site differences are the main factor. For the same 20-year period, 1951-70, July-August maximum temperatures averaged 1.3° F lower at the control station than in the clearcut; the minimums, 2.6° F higher.

Topographic and Local Site Effects.--Further local and topographic variations in temperature are summarized in table 8. This tabulation utilizes data from fire-weather observation forms and also the recording charts for the 1930's altitude-aspect and flammability stations. The averages, though based on only four summers, demonstrate that temperatures at a slope location do not necessarily fit a simple elevational gradient or lapse rate. Local surroundings are an important consideration in addition to aspect. The thermal belt described by Hayes (1941) is a few hundred feet below the 3,800-ft (1 160-m) elevation. Here, near the average nighttime inversion top, minimum temperatures during July-August averaged as much as 15° F (8° C) higher than at the clearcut site. A similar inversion and thermal belt was detected by a mobile survey described by Schaefer (1957), which also found large contrasts in dewpoint temperature. The inversion magnitude may average about half as large during the more cloudy, showery months of May and June (Hayes 1941). Average July-August temperatures at headquarters were very similar to those at the half-cut site in table 8. The clearcut, half-cut, and full-timber sites show notable differences in diurnal temperature range—differences amounting to as much as 9° F (5° C)—but have a close similarity in monthly mean temperature.

Jemison (1934) presents maximum temperatures at these three sites during July-August 1933, showing differences similar to those in table 8. He also reveals large differences in soil temperature, duff temperature, relative humidity, fuel moisture, wind, and evaporation. Afternoon relative humidity in the clearcut averaged 9 percent lower than in full timber; 2 percent lower than in the half-cut area. A summary of measurements nearby at "open, one-third cover, and uncut" locations in July-August 1919 is given by Larsen (1922b; 1924).

A contrast between the original control station and two nearby, lower-slope stations—at about 2,500 ft (762 m) elevation—is shown by Larsen (1940); data covered the years 1912-16. Maximum temperatures during the May-September period averaged 4.5° F (2.5° C) higher on a southwest slope than on a northeast slope; afternoon relative humidity, 7 percent lower. Overall, during the year, minimum temperatures on these slopes averaged 4° or 5° F (2° to 3° C) higher than on the flat.

Diurnal Variation of Temperature and Humidity.—The average daily course of temperature during July-August at low and high elevations is depicted in figure 16; relative humidity, in figure 17. As noted in the legends, the curves are based on available recording charts covering only a few years; they do, however, give averages compatible with long-term afternoon and early morning data. The contrast seen between locations illustrates earlier comments about diurnal range, nighttime inversion effects, and the dependence of relative humidity on temperature. The curves show the warmest, driest time of day is usually between 2 and 4 p.m. P.s.t. The fire-weather observation time of 3 p.m., used prior to 1974,

Table 8.—Comparison of average temperatures, °F, in Priest River Experimental Forest during study by Hayes (1941); data for July and August combined, 1935-38

Station, elevation (ft)	Minimum, overnight	Maximum, daytime	Mean
Lookout, 5,580	51.4	69.1	60.3
5,500, N aspect	51.7	69.3	60.5
5,500, S	51.2	68.1	59.7
3,800, N	55.4	78.4	66.9
3,800, S	56.6	77.2	66.9
2,700, N	49.7	81.2	65.5
2,700, S	52.6	81.6	67.1
Control, 2,380	44.5	80.9	62.7
Clearcut, 2,300	41.9	83.1	62.5
Half-cut, 2,300	44.3	80.5	62.4
Full-timber, 2,300	45.7	78.4	62.1

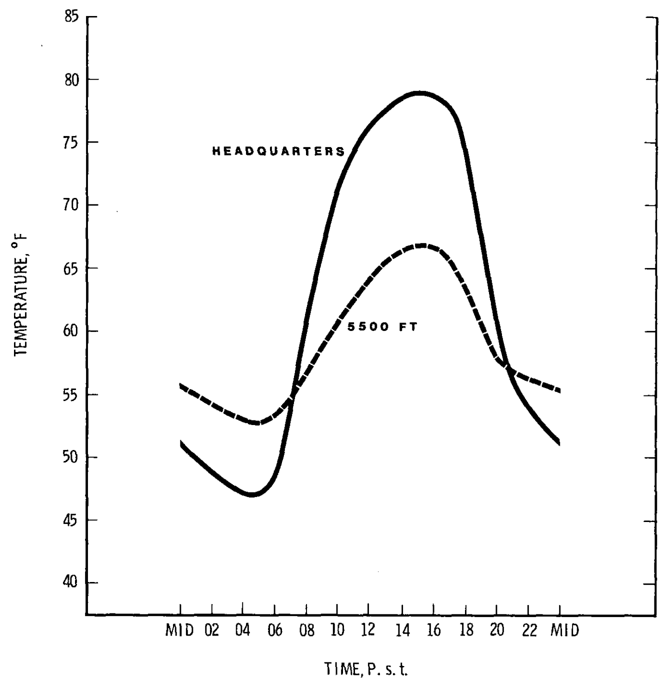


Figure 16.—Average diurnal course of temperature, July-August, Priest River Experimental Forest. Curve for control station is based on averages from recording charts at clearcut site, adjusted to smaller diurnal range. Curve for 5,500 ft uses several years of charts from Looking Glass (now Gisborne) Lookout and 1937-38 charts from north-aspect and south-aspect stations.

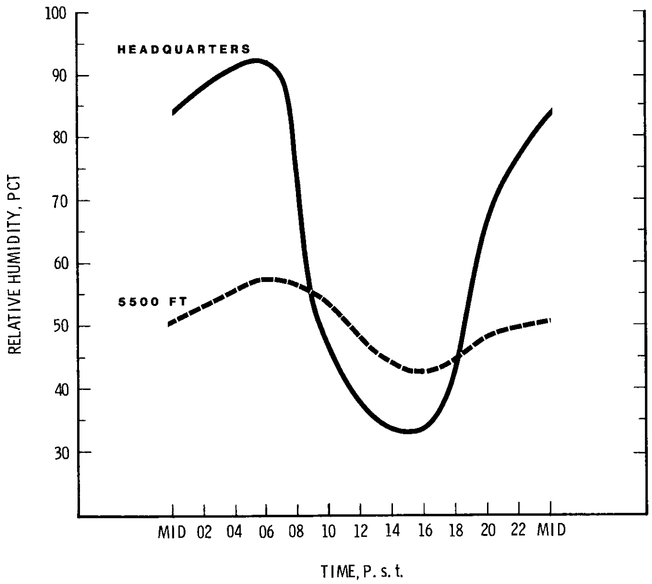


Figure 17.—Average diurnal course of relative humidity, July-August, Priest River Experimental Forest. Curve for control station is based on 1935-39 recording charts from former half-cut flammability station. Curve for 5,500 ft is based on stations used in figure 16.

thus tended to represent the afternoon extreme conditions. At the observation time now in use throughout the Northern Rockies, 12 noon P.s.t. (1 p.m. m.s.t.), it can be seen that temperatures in the Priest River area may average 2° or 3° F (1.5° C) lower than previously; relative humidity, perhaps 5 percent higher.

Comparison with Priest Lake Fire-Weather Data.— Because fire-weather observations are no longer taken at Priest River, a comparison of past data may aid in making estimates from the continuing observations at Priest Lake Ranger Station. This station has been at its present site since 1964. (Earlier data were observed 4 mi [6 km] further north.) Table 9 shows average differences in observed values during 1964-73; also the differences prior to 1964 to indicate effects of the Priest Lake station change. Overall, during June through September, the afternoon temperature at Priest Lake averages 1° F lower than at the Priest River clearcut site. The relative humidity averages practically the same—within ±1 percent—at the two stations in June, July, and August, but 3 percent higher at Priest Lake in September; humidity at the earlier Priest Lake station averaged about 5 percent higher in July-August. Table 9 also indicates higher windspeeds at Priest Lake, which can be expected from its more open station location (fig. 5C).

Wind

Average windspeeds observed in the Priest River-northern Idaho area are summarized in figure 18. Comparability among the available stations is affected by differences in period of record and anemometer height—the present standard (Fischer and Hardy 1976) is 20 ft (6 m) above open, level ground or nearby treetops. Nevertheless, figure 18 shows some distinct features. The graph for Mullan Pass indicates that on exposed high terrain, windspeeds may average highest in winter; lowest, in July and August. This is the tendency of the free-atmosphere wind, above the mountainous topography and its local effects, as indicated on normal upper-air maps near 10,000 ft (3 000 m). In contrast, in the sheltered valley area at headquarters, 24-hour average speeds at 8 ft (2.4 m) above the ground are very light throughout the year, with the least wind in autumn and winter.

Prevailing (most frequent) wind direction was from the southwest or south during most of the year at Mullan Pass; northwest in summer. At the control station, the prevailing direction during daylight hours is southwesterly year-round. In comparison, average wind in the free air near 10,000 ft (3 000 m) is from the west or west-northwest in winter, west-southwest in summer.

WIND DURING FIRE SEASON

In the Priest River area, figure 18 indicates that summer afternoon windspeeds on the mountaintops average 8 or 9 mi/h (13 to 14 km/h); the same average applies for a 24-hour period. In the valley, afternoon speeds during May through August average near 3.5 mi/h (6 km/h) in the clearcut; 6 mi/h (10 km/h) at 150 ft (45 m) above ground and well above surrounding treetops. These valley averages decrease in September and October. The speeds at 150 ft are similar to those observed at the Priest Lake Ranger Station airstrip. Combined frequencies of afternoon speeds and directions are presented in

Table 9.—Differences in average temperature, relative humidity, and windspeed at Priest Lake Ranger Station (PL) and Priest River Experimental Forest, clearcut site (PR)

Month	Difference, PL minus PR, during 1964-73 (and during 1951-63, in parentheses, at previous PL location)			
	Temperature, °F		Relative Humidity, percent	Wind, mi/h
	At 3 p.m.	Minimum	at 3 p.m.	at 3 p.m.
June	−0.7	−2.8	+0.7	+2.7
July	−0.7 (−1.0)	−2.4 (0.0)	−0.7 (+4.8)	+3.2 (+2.3)
August	−1.2 (−1.1)	−2.1 (−0.1)	−0.1 (+5.6)	+3.2 (+2.2)
September	−1.6	−2.2	+3.2	+2.3

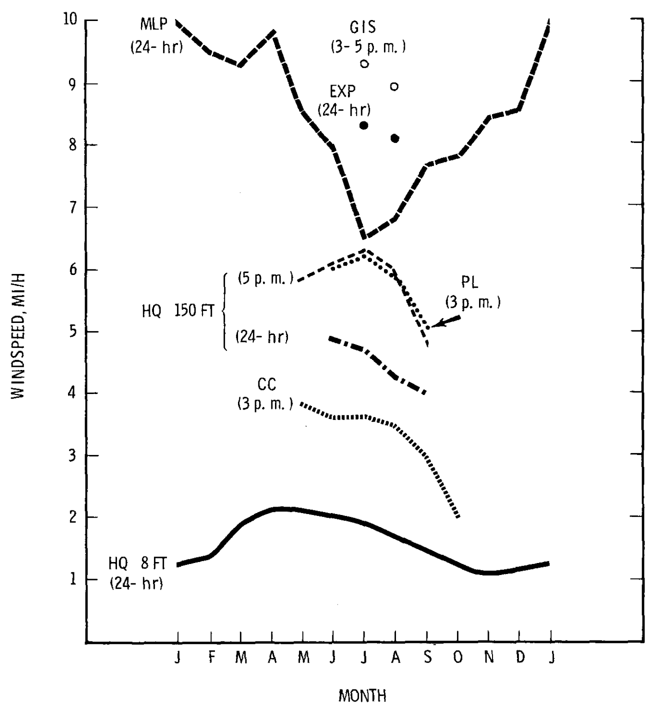


Figure 18.—Average windspeed for 24-hour period or midafternoon observation time, as noted in parentheses, Priest River Experimental Forest (PREF)-northern Idaho area. At Mullan Pass (MLP), based on years 1950-54; PREF headquarters (HQ), at 8-ft height, based on 1912-36, and 150-ft height, 1924-33; PREF fire-weather station (in clearcut, CC) and Priest Lake Ranger Station (PL), 1951-70; Gisborne Lookout (GIS), 1933-60; Experimental Station Lookout (EXP), 1926-32.

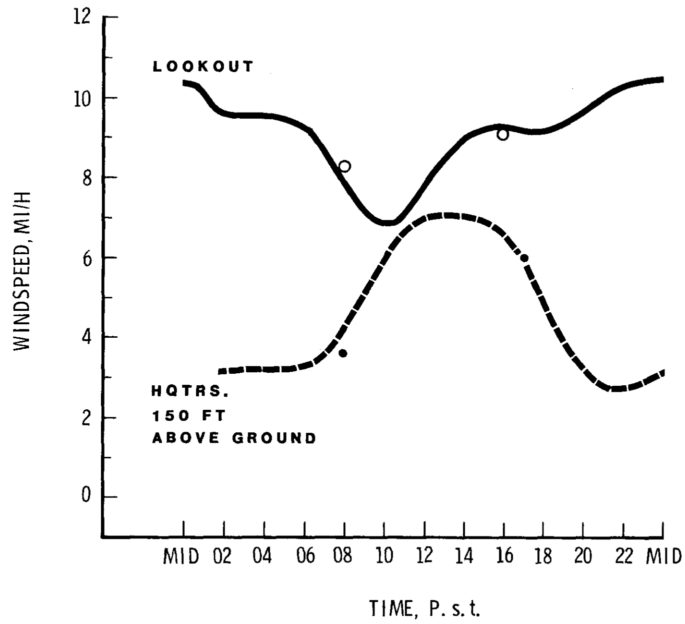


Figure 19.—Average diurnal course of windspeed during July-August, Priest River Experimental Forest; atop 150-ft tower near headquarters (based on years 1938-40), and at Gisborne Lookout (based on 1942 and 1944). Heavy dots denote average 8 a.m. and 5 p.m. speeds at 150 ft (based on 1931-44, including data from former exposure on towering treetop). Open circles denote average 8 a.m. speeds (during 1933-47) and 3 to 5 p.m. speeds (during 1933-60) at Lookout.

table 33 (appendix); the directions, at both valley and lookout locations, are predominantly from the southwest. Frequencies of windspeeds may also be obtained from table 30 (appendix).

As indicated in figure 19, winds in the valley area typically decrease in late afternoon and evening. Atop the 150-ft (45-m) tower, average speeds were down to 3 mi/h (5 km/h) from about 10 p.m. to 6 a.m. during July-August. At Gisborne Lookout, at over 50 ft (15 m) above ground, chart recordings available for two summers often showed a wind increase during the evening, giving highest average speeds—10 mi/h (16 km/h)—at around midnight; the wind reached a minimum at around 10 a.m. At this time, the speed was nearly the same as in the valley above the forest canopy. Nighttime wind increases have been characterized for mountaintop locations (Baughman 1981). Though such increases do not show up everywhere (Court 1978), they have previously been noted in averages obtained at two lookouts in southern Idaho (Hanna 1933).

Nighttime wind directions do not appear to change much on the mountaintops; 8 a.m. winds at Gisborne during July-August 1933–40 were from a southerly quadrant (S, SW, or SE) on 76 percent of the days. At the headquarters location, prevailing 8 a.m. wind direction during 1931–44 was from the northwest, suggesting nighttime air drainage down the Priest River Valley. Even so, at least at this daylight hour, this wind direction occurred on only 45 percent of the July-August days; south or southwest, on 32 percent. The prevalence of southwest and south winds in the afternoon may be enhanced by a daytime upvalley breeze (Schroeder and Buck 1970).

The mountaintop windspeed pattern in figure 19 differs from that shown by Hayes (1941) for a median day in August, 1936–38. His diagrams, using measurements 7.5 ft (2.3 m) above ground, portray an afternoon maximum at all elevations on slopes up to 5,500 ft (1 675 m). This maximum is greater on south slopes than on north slopes, possibly as a result of greater upslope breeze and also greater exposure to the larger-scale wind. The maximum speed shown at 5,500 ft was 6 mi/h (10 km/h); nighttime speeds were down to 3 or 4 mi/h in contrast with speeds of 10 mi/h (16 km/h) in figure 19. Differences in anemometer height could possibly explain the difference in afternoon speeds (Ayer 1960).

An examination by decades reveals a peculiar decrease in windspeeds observed at Gisborne Lookout. Table 28 (appendix) for this station is thus based only on the years 1951–60, rather than 1951–70. The afternoon speeds averaged 10.0 mi/h (16 km/h) in July-August 1933–40; 9.0 mi/h in 1941–50; 8.5 mi/h in 1951–60; 6.1 mi/h in 1961–70. The most recent decrease seems too large to be explained by natural variation. The anemometer has remained exposed atop the lookout (fig. 6A and communication from Calvin L. Carpenter).

A change in instrument (from 4-cup anemometer to a more accurate 3-cup type) may account for some of the decrease in earlier years.

Extreme July and August windspeeds shown by Hanna (1939) reached 49 mi/h (79 km/h) at Gisborne Lookout; this was the maximum 5-minute average recorded at any time of day during an 8-year period in the 1930's. The individual monthly extreme values averaged 32 mi/h (52 km/h). Near headquarters at 150 feet (45 m) above ground, the corresponding values recorded during a 5-year period were 29 mi/h and 23 mi/h (47 km/h and 37 km/h).

Local Site Effects.—The reduction of windspeed within a dense timber stand is shown by Gisborne (1941). Measurements were made near headquarters on the 150-ft (45-m) tower, which was constructed in the 1930's (Fitzgerald 1958) (fig. 20). Wind at 2 ft (0.6 m) and 49 ft (15 m) heights, under the canopy, averaged only 1 or 2 mi/h on the windiest days. Speeds on these days were near 15 mi/h (24 km/h) atop the tower, which was about 50 ft (15 m) above the surrounding trees at that time.

Differences in windspeed related to local exposure or aspect are shown by Larsen (1940), using 24-hour data recorded 9 ft (2.7 m) above ground. Wind during the period May-September averaged 2.9 mi/h (4.7 km/h) on a southwest slope near headquarters; 0.9 mi/h (1.4 km/h) on a northeast slope; 1.7 mi/h (2.7 km/h) on the flat.

Figure 20.—The 150-ft meteorological tower within timber stand near headquarters, Priest River Experimental Forest, as it appeared in 1982.

Cloudiness; Sunshine; Solar Radiation

The period late autumn through early winter is the cloudiest time of year; summer, the clearest. The monthly average numbers of days characterized as clear, partly cloudy, and cloudy at Priest River are listed in table 1. Such observations were recorded and published until 1948. The three categories are based on cloud cover, sunrise to sunset, averaging 0 to 3 tenths, 4 to 7 tenths, and 8 to 10 tenths, respectively. The average numbers of clear days range from 5 each in November, December, and January to 19 in July and August; the numbers of cloudy days, from 4 in July to 22 in December. More cloudy days and fewer clear days are noted at the nearest airport stations, which record such days on the basis of hourly observations. For example, Kalispell, Mont., Lewiston, Idaho, and Spokane, Wash.—drier locations than Priest River—all have averages of only 2 or 3 clear days in December and January; 25 or 26 cloudy days in December. Part of the difference may lie in classifiying days with high, thin (cirrus-type) clouds through which the sun can shine.

Actual sunshine information for this area is lacking. A solar-radiation recorder has been in operation at the control station for many years, but data tabulations from the charts are not available. Estimated values are thus presented, based on adjacent station data; also on maps from Environmental Science Services Administration (1968). These maps can, of course, give only an approximation in mountainous areas.

The estimated monthly percentages of maximum possible sunshine are shown in figure 21. These range from about 20 percent in December to nearly 80 percent in July. For a location with level horizons and no shading by trees, the percentages would translate into totals of about 50 hours of sunshine during December and 375 hours during July; about 2,500 hours for the entire year.

The incoming solar radiation—the solar energy received with sunshine and also through cloud cover—is estimated in figure 22. The values refer to radiation as received on an unobstructed horizontal surface at lower elevations. Values include the direct-beam radiation and the diffuse, or scattered, radiation (Reifsnyder and Lull 1965, Schroeder and Buck 1970). The average monthly totals (curve "a") range from near 2,500 langleys (gm-cal/cm^2) in December to 19,000 langleys in July. The annual aggregate is about 125,000 langleys. Curve "b" indicates the radiation that may be received on the clearest days, free of haze. For conversion to units of Watt h/m^2, the numbers of langleys are multiplied by 0.0861.

Within the Experimental Forest, differences from the above values can be expected according to slope aspect and angle; also due to local surroundings that block or reflect sunshine. Generally more radiation should be received on the mountaintops than in the valley bottom (Geiger 1965). The elevational difference in radiation loss, by absorption in the atmosphere above, is an important factor.

The effects of slope are greater in winter than in summer. During December and January, a south-facing 30° (58 percent) slope may receive nearly twice as much total

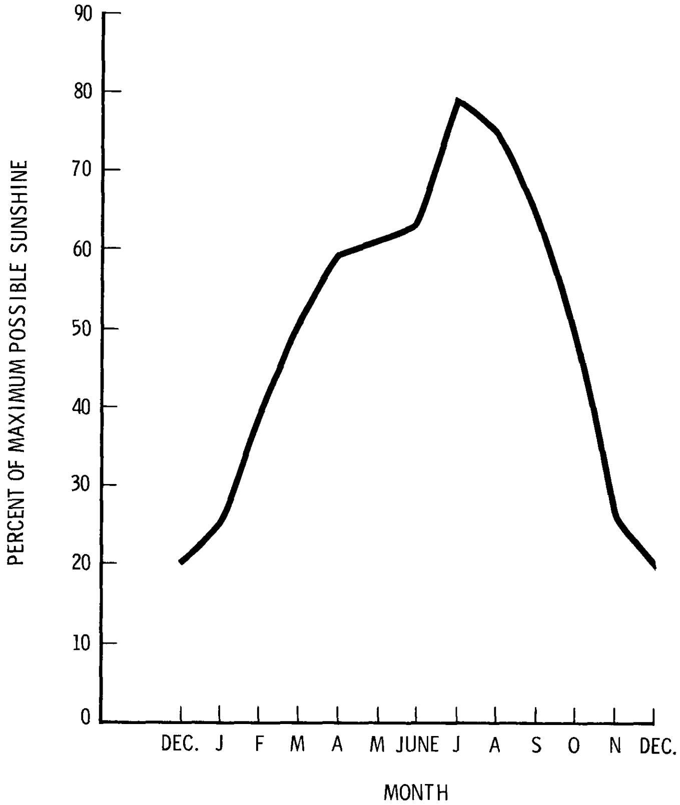


Figure 21.—Monthly average percentage of maximum possible sunshine duration, estimated for Priest River Experimental Forest.

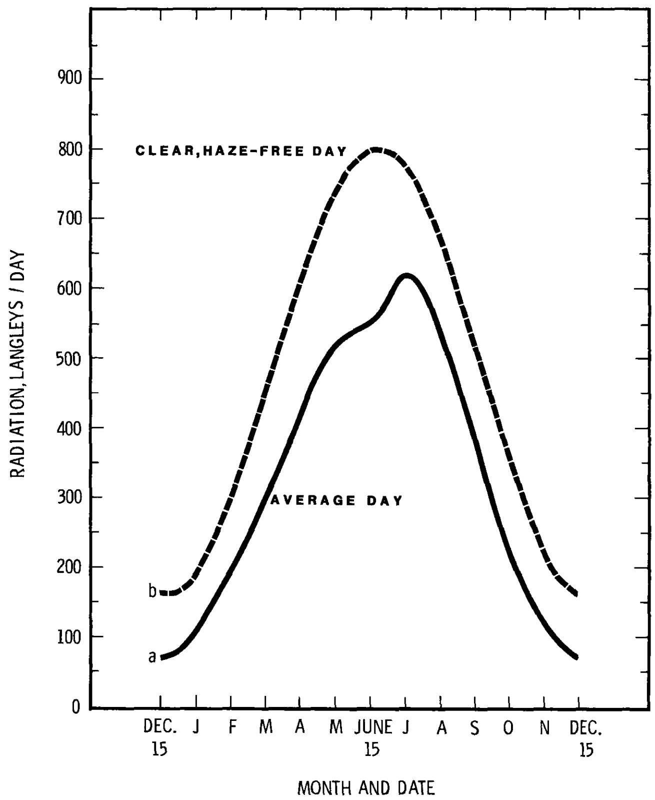


Figure 22.—Annual regime of solar radiation (direct and diffuse) estimated for Priest River Experimental Forest, lower-elevation location; langleys (gm-cal/cm²) per day received on unobstructed horizontal surface. Vertical marks represent midmonth.

radiation (direct and diffuse) as a horizontal surface. A north-facing 30° slope may receive one-half as much radiation as the horizontal and all of this will be diffuse. These estimates utilize direct radiation data obtained from Buffo and others (1972). During July, the 30° south slope should receive about the same total radiation as the horizontal; the north slope, perhaps 80 percent as much.

COMPARISON WITH SURROUNDING AREA

Although this report has focused on the Priest River Experimental Forest, the climatic description may apply also to a larger area of the Idaho panhandle, where the forests are similar. The panhandle area lies within a broadly similar climatic region, though horizontal gradients and local, topographic variations do occur. This final section examines how closely some climatic statistics at Priest River compare with those at other available stations. Year-round data are based on a 30-year normal period and are limited to valley (or canyon) locations.

Temperature, Annual Regime

Table 10 lists the monthly and annual mean temperatures at the valley locations. These means, which average the daily maximum and minimum values, offer a comparison that tends to reduce the influences of local exposure and related differences in diurnal temperature range; such differences have already been shown between sites at Priest River. Stations have been grouped into two forest areas in figure 23. Panel A indicates that the monthly mean temperatures at the control station are generally 1.0° to 1.5° F (about 0.7° C) lower than those based on six other stations in the Kaniksu vicinity. Most of this difference could be attributed to the higher valley floor at Priest River, 345 ft (105 m) above the average elevation for the six stations. The elevational effect is countered very little by effect of latitude; the average location of the six stations is at a point just 14 miles (23 km) northeast of Priest River.

Noticeably larger temperature differences are seen in a comparison with four stations in the Coeur d'Alene-St. Joe vicinity; the overall elevation is similar to that at the control station. In this case, the geographic location,

Table 10.—Monthly and annual mean temperatures at Priest River Experimental Forest control station and at adjacent valley or canyon stations in Idaho panhandle, except as noted; based on 30-year normal period, 1941-70 (EF denotes Experimental Forest and RS denotes Ranger Station)

Station, elevation (ft)		Mean Temperatures												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
		°F												
Priest River EF	2,380	23.7	29.3	34.1	43.2	52.1	58.3	64.3	62.8	55.1	44.5	33.1	27.3	44.0
Avery RS (former loc.)	2,492	27.5	32.9	27.3	45.9	54.6	60.9	68.0	67.0	59.3	48.4	36.0	29.9	47.3
Bonners Ferry, 1 SW	1,850	25.0	31.1	36.7	46.4	54.7	60.8	67.0	65.3	57.1	45.7	34.4	28.7	46.1
Coeur d'Alene RS	2,158	27.4	33.0	37.3	46.2	55.0	61.5	69.1	68.1	59.9	48.8	37.5	31.4	47.9
Heron 2 NW, Mont.	2,240	24.3	29.8	34.0	43.7	51.9	57.9	63.6	61.9	54.5	44.5	34.0	28.0	44.0
Metaline Falls, Wash.[1]	2,107	24.2	30.4	36.1	45.6	54.3	60.4	66.7	65.1	57.9	46.7	33.8	27.8	45.8
Newport, Wash.	2,135	24.3	30.6	35.8	44.7	53.0	59.4	65.6	63.8	56.2	45.6	34.3	28.0	45.1
Porthill	1,775	23.8	29.5	35.3	45.8	54.5	60.5	66.6	64.7	56.3	45.1	34.1	27.9	45.3
Saint Maries	2,145	27.5	33.7	37.9	46.2	54.4	60.7	67.4	65.9	58.5	49.2	37.0	30.9	47.4
Sandpoint Exp. Sta.	2,100	25.7	31.2	35.7	45.0	53.3	59.4	65.2	63.6	56.0	45.7	35.1	29.1	45.4
Wallace, Woodland Park	2,950	25.4	30.6	34.1	42.8	50.9	57.0	64.1	62.7	55.3	46.0	35.2	28.8	44.4

[1]Based on 23 or 24 years to 1965.

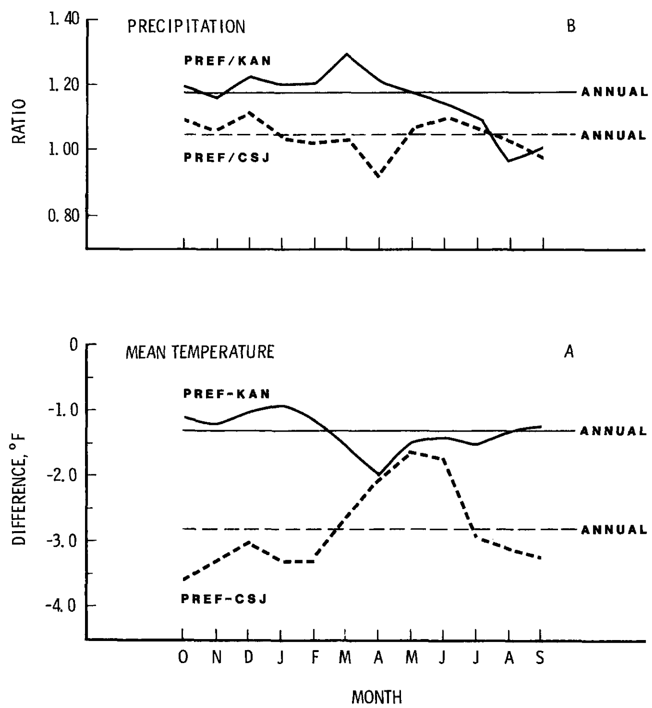


Figure 23.—Comparison of monthly average temperature and precipitation at Priest River Experimental Forest control station (PREF) and adjacent valley or canyon stations in Kaniksu National Forest vicinity (KAN) and Coeur d'Alene-St. Joe National Forests vicinity (CSJ); based on 30-year normals, 1941-70. Panel A: Temperature differences, PREF minus KAN (six-station average), solid line, and PREF minus CSJ (four-station average), dashed line. Panel B: Precipitation ratios, PREF to KAN and CSJ station averages.

averaging 68 miles (110 km) south-southeast of Priest River, could account for about 1.0° to 1.5° F (about 0.7° C) of the difference (based on average gradients in the free atmosphere near 10,000 ft [3 000 m]).

In table 11, the monthly temperatures are expressed relative to the annual mean. Although the actual monthly means differ between locations, the similarity in this table indicates that the shape of the annual curve at Priest River is typical for the Idaho panhandle.

Precipitation, Annual Regime

Table 12 lists the monthly and annual average precipitation. As indicated in figure 23B, amounts at the Priest River control station average somewhat higher than the overall average for valley locations in the Idaho panhandle. Amounts are about the same, however, at nearby Sandpoint and are slightly higher at valley (or canyon) stations to the southeast, near Avery, Heron, and Wallace. Table 13 compares the cumulative monthly precipitation, expressed in percentage of water-year total. The resulting distributions at Priest River and over the larger Kaniksu and Coeur d'Alene-St. Joe areas are nearly identical.

At higher elevations, snow surveys indicate that much of the Idaho panhandle has heavier precipitation than Priest River Experimental Forest. As noted earlier, at approximately 4,800 ft (1 463 m), the April 1 snowpack water content at Schweitzer Bowl averages 31 inches (785 mm), compared with 20 inches (515 mm) at Benton Spring. At the four other snow courses near this elevation, the corresponding water content averages between 30 inches (755 mm) at Copper Ridge, east of Coeur d'Alene, and 49 inches (1 240 mm) at Smith Creek, northwest of Bonners Ferry; the latter amount implies about 80 inches (2 000 mm) annual precipitation.

Table 11.—Monthly mean temperatures, expressed as differences from annual mean temperature, based on 30-year normal period, 1941-70; at Priest River Experimental Forest control station (PREF) and groupings of stations in Kaniksu National Forest vicinity (KAN) and Coeur d'Alene-St. Joe National Forests vicinity (CSJ)

Station or grouping	Difference from annual mean											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	°F											
PREF	−20.3	−14.7	−9.9	−0.8	+8.1	+14.3	+20.3	+18.8	+11.1	+0.5	−10.9	−16.7
KAN[1]	−20.7	−14.9	−9.7	−.1	+8.3	+14.4	+20.5	+18.8	+11.0	+.3	−11.0	−17.0
CSF[2]	−19.8	−14.2	−10.1	−1.5	+7.0	+13.3	+20.4	+19.2	+11.5	+1.4	−10.4	−16.5

[1]Average from six stations: Bonners Ferry, Heron, Metaline Falls, Newport, Porthill, and Sandpoint.
[2]Average from four stations: Avery, Coeur d'Alene, Saint Maries, and Wallace (Woodland Park).

Table 12.—Average monthly precipitation at Priest River Experimental Forest control station and at adjacent valley or canyon stations in Idaho panhandle, except as noted; based on 30-year normal period, 1941-70. (EF denotes Experimental Forest and RS denotes Ranger Station)

Station	Average precipitation												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
	Inches												
Priest River EF	4.39	3.08	2.83	2.08	2.54	2.71	0.94	1.16	1.66	3.22	4.17	4.52	33.30
Avery RS (former location)	4.29	3.17	2.91	2.59	2.60	2.72	1.08	1.28	1.90	3.18	4.07	4.07	33.86
Bonners Ferry 1 SW	3.40	2.13	1.72	1.26	1.67	1.85	.80	1.00	1.50	2.39	3.43	3.39	24.54
Coeur d'Alene RS	3.64	2.42	2.13	1.67	2.15	2.03	.67	.97	1.26	2.38	3.27	3.44	26.03
Heron 2 NW, Mont.	4.63	3.47	2.84	2.11	2.48	2.89	.81	1.39	2.07	3.15	4.39	4.47	34.70
Metaline Falls, Wash.[1]	3.14	2.28	1.97	1.70	2.43	2.84	1.19	1.39	1.53	2.73	3.20	3.49	27.89
Newport, Wash.	3.75	2.61	2.36	1.88	2.19	2.01	.75	1.01	1.53	2.77	3.70	3.74	28.30
Porthill	2.40	1.57	1.44	1.20	1.81	2.11	.82	1.22	1.44	1.91	2.50	2.45	20.87
Saint Maries	4.20	2.97	2.68	2.13	2.23	2.31	.71	1.01	1.47	2.61	3.74	3.92	29.98
Sandpoint Exp. Sta.	4.52	3.23	2.74	2.08	2.36	2.44	.73	1.17	1.83	3.32	4.27	4.52	33.21
Wallace, Woodland Park	4.75	3.44	3.20	2.64	2.58	2.83	1.07	1.23	2.12	3.62	4.60	4.84	36.92

[1]Based on 23 or 24 years to 1965, plus 5 or 6 years at Boundary Dam (located 9 miles to north).

Table 13.—Average cumulative water-year precipitation at end of each month, in percentage of annual total, based on 30-year normal period, 1941-70; at Priest River Experimental Forest control station (PREF) and groupings of stations as in table 11

Station or grouping	Cumulative water-year precipitation, at end of month											
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.
	Percent of total											
PREF	9.7	22.2	35.8	48.9	58.2	66.7	72.9	80.6	88.7	91.5	95.0	100.0
KAN[1]	9.6	22.2	35.3	48.1	57.2	64.9	70.9	78.6	86.9	89.9	94.2	100.0
CSF[2]	9.3	21.7	34.5	47.8	57.2	65.9	73.0	80.5	88.3	91.1	94.7	100.0

[1]Average from six stations: Bonners Ferry, Heron, Metaline Falls, Newport, Porthill, and Sandpoint.
[2]Average from four stations: Avery, Coeur d'Alene, Saint Maries, and Wallace (Woodland Park).

Afternoon Temperature, Relative Humidity, and Wind During Fire Season

July-August average afternoon temperature and relative humidity at fire-weather stations are mapped in figure 24; wind, in figure 25. The data, for 1500 P.s.t., are based on only a 10-year period, 1961-70, to maximize the number of stations having comparable years of record. The stations are limited to the Kaniksu and Coeur d'Alene National Forests and vicinity. (Data shown for Spokane, Wash., are not included in the calculations.) The 2-month average tends to compensate for unrepresentative averages of the individual months. For example, August 1961-70 afternoons, overall, were warmer than normal in the Idaho panhandle (example, table 5); July 1961-70, near or slightly cooler than normal. Adjustments were made for incomplete records at lookouts, which commonly are vacant in early July and late August—particularly with cool, moist conditions.

Calculations show that the temperature (or "dry bulb") at Priest River, clearcut site, averages 0.9° F (0.5° C) lower than at the eight other valley stations (which average slightly lower in elevation); relative humidity, 0.5 percent higher. Including the 11 lookouts, the overall lapse rate of afternoon dry bulb between stations is 4.1° F per 1,000 ft (7.5° C per 1 000 m)—close to the rate found between the Priest River clearcut and Gisborne Lookout. Little relationship is found between average relative humidity and elevation at the valley stations (which lie within a narrow elevational range), but the higher averages at adjacent lookouts give an overall increase of 3.5 percent per 1,000 ft (305 m)—near the rate of 3.8 percent per 1,000 ft found at Priest River.

As within the Experimental Forest, summer afternoon winds are from a prevailing southwesterly direction over most of the Idaho panhandle (and adjacent eastern Washington) (fig. 25). Some exceptions are seen, related to local topography (such as intervening terrain and valley or canyon orientation). As shown earlier in the

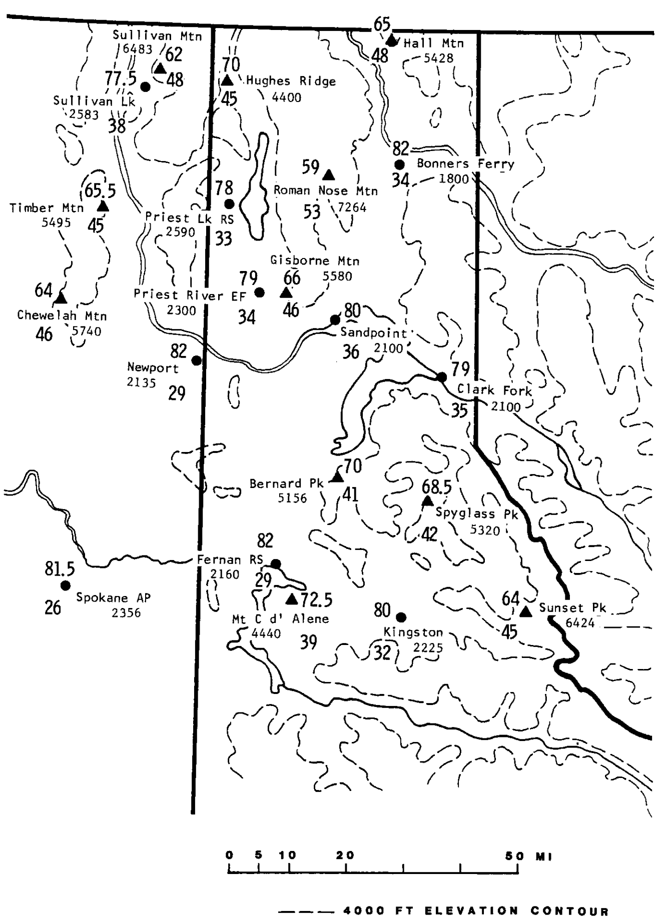


Figure 24.—Summer afternoon average temperature, °F (upper number) and relative humidity, percent, at stations in Idaho panhandle and adjacent Washington; at 1500 P.s.t., average for July and August combined, based on years 1961-70. Small numbers below station names are elevations, ft m.s.l. Averages for lookouts (locations shown by triangles) have been adjusted for missing data (see text). Averages at Priest Lake (from 1964-73 data at present station) and Sandpoint (from 1963-70 data) have also been adjusted.

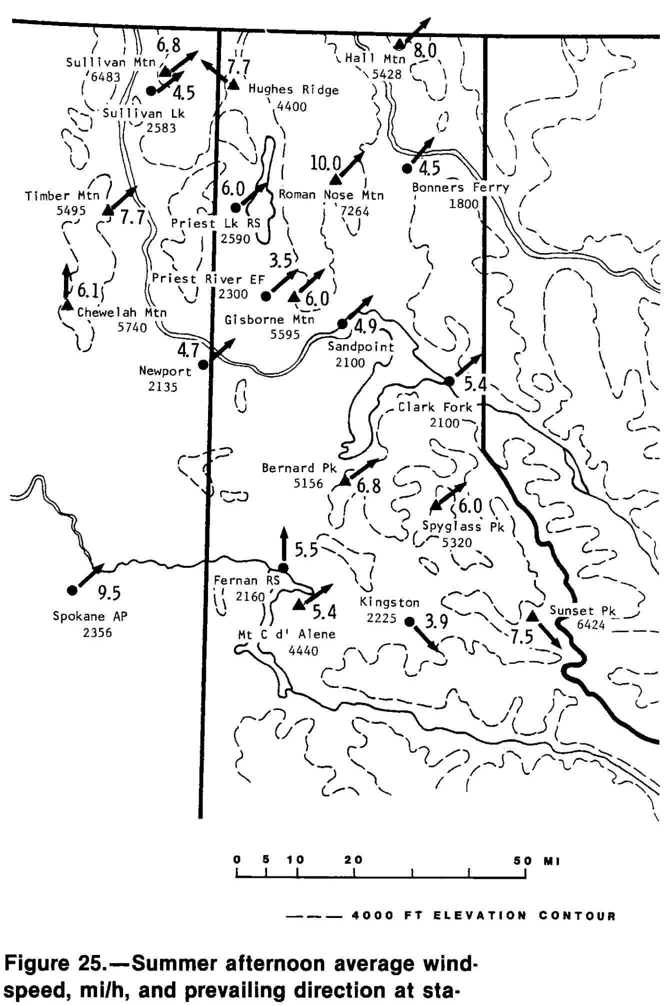


Figure 25.—Summer afternoon average wind-speed, mi/h, and prevailing direction at stations as in figure 24; based on available observations at 1500 P.s.t. during July-August, 1961-70. Directions are shown by arrows (pointing downwind).

comparison with Priest Lake, windspeeds in the Priest River valley area are relatively low. Speeds at the other valley stations averaged generally near 5.0 mi/h (8.0 km/h), one-third higher than at Priest River. Windspeeds at the 10 surrounding lookouts, at elevations averaging 5,615 ft (1 712 m), had an overall average of 6.5 mi/h (10.5 km/h)—just 0.5 mi/h higher than the Gisborne Lookout average for 1961-70, which earlier was found to be rather low when compared with speeds in previous decades. The lookout windspeeds, while higher than at adjacent valley locations, show a weak correlation with elevation (r was 0.36). The highest lookout, on Roman Nose Mountain, did have the highest average speed, 10 mi/h (16 km/h).

In summary, the above comparisons indicate that the climatic data for Priest River Experimental Forest closely follow the pattern found over most of the Idaho panhandle. Numerical values are also similar in many cases, particularly when adjustments are made for elevation and latitude differences. Similar local topographic effects may be expected. The Priest River valley area, representing a location with well-timbered surroundings, does have lower windspeeds than surrounding fire-weather stations.

CONCLUDING REMARKS

The Priest River Experimental Forest contains within its 10-mi^2 (25-km^2) area the climatic characteristics identified with mountainous areas in general; these are superimposed upon the characteristics related to its geographic location. Resulting statistics have been presented. In a comparison with adjacent stations, these statistics were found to follow the seasonal pattern occurring over the larger Idaho panhandle area—numerical values were also similar in many cases.

Priest River stands out in its history of weather and climatological observations. These have been taken at permanent stations and also at a variety of sites as part of various studies. The aggregate of measurements represents the efforts of many persons throughout the years. Local effects of elevation, slope, and timber cover are reflected in the data thus obtained. Our climatic description has borrowed upon much of this resource; there were additional data not as readily available in publications or not as yet tabulated into usable form. The findings for Priest River, representing much of adjacent northern Idaho, add to the store of knowledge that researchers and managers may draw upon for inferences in forested mountain areas elsewhere.

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APPENDIX: Detailed Listings and Summaries of Data—Tables 14 through 33

Table 14.—Monthly and annual precipitation, 1911-82, at Priest River Experimental Forest control station

Year	Precipitation												
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
	Inches												
1911												4.37	
1912	5.14	3.30	1.27	2.46	2.68	2.14	2.58	2.68	1.51	3.35	5.83	4.06	37.00
1913	3.77	.57	2.17	1.33	2.24	3.31	1.22	.69	2.10	1.76	7.03	.91	27.09
1914	5.95	3.14	2.02	2.58	2.36	2.94	1.83	.17	3.70	3.85	4.57	1.20	34.31
1915	1.10	2.36	1.55	2.34	3.65	1.53	3.05	.28	1.72	2.24	5.12	5.57	30.51
1916	4.51	2.54	5.93	2.00	2.59	3.23	1.66	1.22	1.86	1.15	3.30	2.82	32.81
1917	2.86	2.38	3.29	3.41	3.00	1.76	.04	.06	.66	.63	1.76	7.63	27.48
1918	3.16	4.18	2.89	.37	1.24	.84	.60	4.22	.61	4.36	3.80	2.86	29.13
1919	5.75	5.35	4.31	2.28	2.23	.20	.04	1.52	1.62	1.44	2.68	2.30	29.72
1920	1.86	2.83	1.47	2.89	2.99	2.07	1.07	.82	3.99	1.98	4.65	4.62	31.24
1921	3.71	2.59	2.84	2.87	.91	.87	.14	.48	1.03	2.54	3.72	2.23	23.93
1922	2.00	1.66	2.35	3.59	1.07	.14	.20	.68	2.04	3.85	.59	7.54	25.71
1923	5.96	.90	1.55	1.07	2.26	2.06	.68	1.12	.63	1.77	3.21	4.45	25.66
1924	4.08	3.55	.99	.30	.82	1.50	.33	1.41	1.19	2.96	4.32	2.78	24.23
1925	5.63	4.81	1.91	1.24	2.59	1.22	.07	.39	1.01	.73	2.43	4.55	26.58
1926	3.25	4.19	.25	.70	2.06	.85	.16	4.24	2.40	2.44	4.00	2.99	27.53
1927	4.60	5.23	1.65	1.29	2.71	3.23	.76	1.52	7.50	3.62	6.29	2.93	41.33
1928	1.90	.74	4.66	2.80	.81	1.79	1.66	.60	.05	3.12	2.50	3.76	24.39
1929	1.79	.62	1.61	1.62	.74	2.76	.03	.31	.38	1.13	.11	4.92	16.02
1930	1.39	3.73	1.14	2.15	2.18	1.63	.06	1.78	.61	2.29	2.20	1.42	20.58
1931	4.01	2.88	3.99	1.32	1.10	1.55	.49	T[1]	2.10	3.00	4.37	6.82	31.63
1932	4.67	3.63	3.84	3.63	3.01	.84	.48	.41	.50	2.79	5.71	5.75	35.26
1933	4.82	2.03	3.57	.64	1.49	1.97	.08	.29	2.28	3.37	1.95	11.22	33.71
1934	6.67	1.05	2.74	1.78	1.47	.75	.04	.08	.81	4.95	5.85	5.63	31.82
1935	6.70	1.15	2.59	.64	.72	1.28	1.36	.69	.15	2.13	2.55	3.08	23.04
1936	4.84	2.30	1.75	.98	1.36	2.37	.59	.73	2.84	.59	.40	4.21	22.96
1937	2.93	4.78	1.29	4.42	.37	4.35	2.65	.83	1.73	2.68	7.69	6.40	40.12
1938	4.44	3.26	3.83	1.42	.91	1.41	.68	.66	.54	2.81	2.23	3.72	25.91
1939	3.97	2.84	1.79	.61	.82	3.03	.33	.07	.69	2.48	1.41	6.15	24.19
1940	2.18	5.96	3.65	2.65	1.30	.63	.55	.25	2.91	4.23	3.37	4.17	31.85
1941	3.25	1.76	1.44	.48	6.24	2.73	.72	1.94	4.69	2.31	3.66	6.66	35.88
1942	1.54	1.93	1.80	1.95	4.69	4.06	2.60	.30	.71	2.96	6.02	4.29	32.85
1943	3.14	2.09	3.55	2.92	3.15	3.24	.65	1.19	.03	5.25	1.37	2.96	29.54
1944	2.48	1.67	.96	2.55	2.42	3.16	.40	.69	1.86	1.49	2.97	2.39	23.04
1945	3.88	2.71	5.99	1.59	3.14	1.83	.62	.36	3.15	3.20	4.88	3.70	35.05
1946	4.20	3.57	3.50	3.03	1.11	4.19	.42	.41	2.24	2.84	5.53	3.83	34.87
1947	3.64	1.75	2.31	1.84	.94	4.24	.47	2.11	2.80	8.31	2.14	2.84	33.39
1948	3.09	4.23	1.56	4.51	5.18	4.92	3.43	.91	1.06	1.41	5.03	4.10	39.43
1949	.70	6.53	3.65	1.22	1.65	.85	.40	.62	1.76	3.22	4.79	5.01	30.40
1950	5.58	3.82	5.57	1.70	.92	3.54	1.26	1.39	.51	8.12	3.62	4.73	40.76
1951	5.42	3.51	3.28	.56	1.82	2.31	.91	.62	1.78	8.19	3.89	6.62	38.91
1952	5.32	2.14	2.00	1.34	1.04	4.10	.46	.22	.45	.47	1.25	4.84	23.63
1953	8.31	2.23	2.32	2.47	2.33	2.88	.09	2.42	.38	.89	3.10	4.40	31.82
1954	8.38	3.29	1.92	2.17	1.95	3.31	1.49	2.84	.89	.97	3.31	3.61	34.13
1955	2.46	3.33	2.37	4.53	1.60	2.93	2.72	.01	3.19	5.46	5.75	7.46	41.81
1956	4.99	3.92	3.16	.47	1.27	2.21	2.06	1.57	.66	3.68	.66	4.31	28.96
1957	2.31	5.20	2.53	1.40	4.83	2.30	.19	1.23	.64	3.29	2.40	5.37	31.69
1958	4.71	5.57	2.29	3.82	.61	4.13	.70	.90	1.36	1.95	5.47	4.10	35.61
1959	7.57	2.57	2.18	1.99	3.98	1.93	.21	1.16	4.04	2.77	7.79	3.26	39.45
1960	3.11	2.33	3.84	2.18	4.10	.97	T	1.81	1.19	2.93	8.58	1.74	32.78
1961	3.58	5.96	3.04	2.23	4.52	1.53	.90	.84	.79	4.05	2.57	6.52	36.53
1962	2.42	1.85	3.36	1.82	4.67	.60	.44	.99	2.92	3.04	6.71	3.89	32.71
1963	1.40	3.43	3.25	3.02	2.03	2.93	1.20	.43	1.26	2.45	6.11	2.71	30.22
1964	5.12	.78	3.86	1.25	1.37	2.16	1.50	2.72	2.20	.50	5.49	6.95	33.90
1965	3.34	3.43	.36	2.87	1.64	1.35	.72	2.79	1.00	.38	4.07	3.76	25.71
1966	5.19	1.18	4.80	.54	1.46	4.09	1.15	.92	.31	1.61	6.65	6.51	34.41
1967	7.93	1.40	4.12	2.12	1.48	2.54	.26	.05	.35	4.79	2.46	3.12	30.62
1968	4.88	4.24	2.41	1.07	1.68	2.17	.84	3.27	2.39	5.09	4.46	5.84	38.34
1969	6.78	2.06	1.16	3.39	2.89	2.24	.80	T	2.98	1.55	1.94	4.15	29.94
1970	6.87	3.77	2.17	1.42	1.49	2.06	.53	.12	2.20	3.31	2.28	6.07	32.29
1971	4.43	2.54	3.37	2.58	1.78	3.13	.87	1.84	2.07	1.89	2.98	5.25	32.73
1972	4.23	3.59	2.69	2.43	1.90	3.23	1.34	1.42	1.83	.78	2.57	5.24	31.16
1973	4.09	1.09	1.71	.81	2.30	.61	T	.47	2.61	2.51	10.46	7.77	34.43
1974	8.26	3.96	3.58	1.98	3.49	.73	2.19	.86	.98	.18	7.81	5.02	39.04
1975	3.55	4.32	2.61	2.14	1.62	2.31	2.13	2.83	.33	3.68	2.98	3.76	32.26
1976	2.80	4.50	1.75	2.52	1.98	1.28	.90	3.66	.12	.89	1.36	1.85	23.61
1977	1.24	1.11	2.28	.32	2.42	1.02	.50	2.20	2.21	1.66	4.02	7.27	26.25
1978	3.62	2.15	1.45	2.53	4.73	1.22	3.41	2.98	1.73	.25	2.48	1.46	28.01
1979	1.10	6.45	1.46	2.05	2.44	.72	1.36	.84	.98	2.81	1.46	5.64	27.31
1980	3.92	3.17	2.65	2.53	2.77	1.72	1.56	1.72	2.32	1.03	4.91	6.78	35.08
1981	1.09	4.25	1.66	3.20	3.14	4.32	1.96	.04	1.59	3.02	2.96	4.30	31.53
1982	4.26	6.04	4.08	4.15	1.60	2.15	1.94	.64	2.49	2.06	4.05	5.24	38.70
50-year average, 1931-80	4.28	3.10	2.75	2.01	2.28	2.31	.99	1.15	1.59	2.82	4.03	4.86	32.17

[1]T = trace, an amount too small to measure.

Table 15.—Precipitation statistics for Priest River Experimental Forest control station; amounts in inches. Mean totals are based on 50 years, 1931-80. Extremes are for 1912-82; listed year (first two digits omitted) is the most recent in cases of more than one occurrence. Number .00 denotes either zero or trace (less than 0.005 inch)

P R E C I P I T A T I O N — BY 10 (OR 11)-DAY AND MONTHLY PERIODS

STATION NUMBER 107386 — PRIEST RIVER EXP FOR (CONTROL STN) — YRS 1931-1980 EXCEPT AS NOTED

	10-DAY AND MONTHLY TOTALS					MAXIMUM DAILY TOTALS			
				1912-1982		1912-1982			
PERIOD BEGINS	MEAN TOTAL	STD DEV	MEDIAN	HIGHEST TOT, YR	LOWEST TOT, YR	EXTREME, YR	AVG MAX	STD DEV	MEDIAN
JAN 1	1.36	.99	1.23	3.81 23	.00 20	1.23 59	.54	.34	.54
JAN 11	1.56	1.22	1.36	6.12 74	.00 46	1.74 67	.67	.48	.61
JAN 21	1.36	1.04	1.08	3.73 70	.00 80	1.60 59	.57	.42	.51
FEB 1	1.14	.77	1.08	3.09 49	.00 54	1.53 49	.47	.35	.42
FEB 11	1.01	.89	.83	3.58 70	.00 34	1.73 70	.45	.37	.37
FEB 21	0.95	.87	.70	3.41 57	.00 70	1.53 58	.45	.37	.39
MAR 1	0.91	.66	.78	3.63 66	.00 65	1.90 66	.43	.33	.37
MAR 11	0.88	.73	.71	3.18 45	.00 30	1.38 50	.37	.26	.32
MAR 21	0.96	.72	.83	2.73 43	.00 66	.97 67	.40	.25	.37
APR 1	0.67	.55	.51	2.17 63	.00 77	1.17 71	.34	.26	.34
APR 11	0.70	.72	.44	2.84 37	.00 51	1.50 82	.34	.28	.27
APR 21	0.64	.56	.44	2.13 53	.00 77	1.16 53	.35	.29	.28
MAY 1	0.75	.67	.67	3.41 61	.00 71	1.07 79	.34	.22	.28
MAY 11	0.79	.87	.53	3.98 57	.00 79	1.69 41	.41	.38	.33
MAY 21	0.74	.70	.49	2.53 25	.00 50	2.05 25	.38	.36	.30
JUN 1	0.84	.72	.70	2.79 47	.00 65	1.51 46	.43	.38	.36
JUN 11	0.81	.70	.80	3.10 37	.00 67	1.47 16	.41	.28	.44
JUN 21	0.66	.64	.59	2.74 55	.00 77	1.48 55	.36	.32	.27
JUL 1	0.43	.46	.27	1.66 48	.00 73	1.09 48	.27	.26	.15
JUL 11	0.36	.52	.12	2.11 78	.00 73	1.34 37	.21	.26	.10
JUL 21	0.21	.29	.05	1.29 15	.00 80	.87 37	.14	.20	.04
AUG 1	0.21	.31	.06	1.44 18	.00 81	.77 19	.13	.18	.04
AUG 11	0.34	.58	.06	2.63 68	.00 81	1.66 18	.20	.20	.04
AUG 21	0.61	.64	.45	2.62 26	.00 74	1.24 75	.36	.36	.27
SEP 1	0.51	.63	.24	2.96 27	.00 73	1.62 40	.32	.38	.13
SEP 11	0.57	.58	.39	3.44 27	.00 75	1.65 27	.32	.33	.26
SEP 21	0.51	.59	.32	2.16 55	.00 79	1.16 62	.28	.29	.19
OCT 1	0.81	.90	.53	3.61 55	.00 80	1.75 51	.40	.43	.28
OCT 11	0.77	.95	.44	4.78 47	.00 81	1.45 46	.37	.36	.32
OCT 21	1.24	1.01	.90	3.82 50	.00 65	1.57 18	.50	.36	.42
NOV 1	1.14	.75	1.05	4.31 12	.00 81	1.31 18	.58	.34	.59
NOV 11	1.54	1.28	1.35	5.08 73	.00 44	2.40 59	.63	.52	.54
NOV 21	1.35	.98	1.15	3.67 62	.00 56	1.75 80	.60	.42	.50
DEC 1	1.50	.92	1.34	3.21 70	.00 72	1.64 41	.61	.35	.54
DEC 11	1.61	1.32	1.39	6.60 33	.00 76	2.21 51	.64	.50	.56
DEC 21	1.75	1.02	1.64	3.95 37	.08 30	1.30 74	.65	.31	.63
MONTH									
JAN	4.28	1.94	4.05	8.38 54	.70 49	1.74 67	.90	.38	.84
FEB	3.10	1.48	3.03	6.53 49	.57 13	1.73 70	.75	.37	.69
MAR	2.75	1.15	2.60	5.99 45	.25 26	1.90 66	.62	.29	.57
APR	2.01	1.08	1.99	4.53 55	.30 24	1.50 82	.59	.24	.60
MAY	2.28	1.39	1.80	6.24 41	.37 37	2.05 25	.65	.36	.57
JUN	2.31	1.19	2.23	4.92 48	.14 22	1.51 46	.67	.33	.66
JUL	0.99	.85	.71	3.43 48	.00 73	1.34 37	.37	.27	.34
AUG	1.15	.98	.85	4.24 26	.00 69	1.66 18	.49	.36	.43
SEP	1.59	1.09	1.55	7.50 27	.03 43	1.65 27	.59	.36	.51
OCT	2.82	1.94	2.73	8.31 47	.18 74	1.75 51	.76	.39	.67
NOV	4.03	2.23	3.64	10.46 73	.11 29	2.40 59	.90	.39	.86
DEC	4.86	1.83	4.57	11.22 33	.91 13	2.21 51	.91	.37	.91
ANNUAL	32.17	4.99	32.50	41.81 55	16.02 29	2.40 59			

Table 16.—Frequency distribution of daily precipitation amounts at Priest River Experimental Forest control station; based on years 1931 through 1977

PRECIPITATION - PERCENTAGE FREQUENCY OF DAILY AMOUNTS (INCHES)

- GIVEN TO NEAREST TENTH PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 107386 PRIEST RIVER EXP FOR (CONTROL STN) 1931-1977

PERIOD BEGINS	TOTAL NUM. DAYS	AMOUNT EQUAL TO OR GREATER THAN 0.01	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.50	2.00	3.00
JAN 1	470	540	426	343	238	164	130	85	64	28	13			
JAN 11	470	562	466	377	247	177	134	102	77	34	30	11		
JAN 21	517	509	398	319	217	157	108	77	56	25	15	2		
FEB 1	470	472	389	328	211	132	83	55	34	19	9	2		
FEB 11	470	447	330	253	157	119	87	68	49	17	11	2		
FEB 21	388	446	366	276	198	142	98	64	46	26	13	3		
MAR 1	470	421	343	262	179	123	72	43	21	9	6	2		
MAR 11	470	445	336	266	177	109	70	36	13	6	4			
MAR 21	517	412	338	277	176	106	70	37	21	8				
APR 1	470	372	277	185	128	72	55	30	19	2	2			
APR 11	470	340	251	196	115	85	55	38	26	11				
APR 21	470	374	240	172	98	72	49	38	21	6	4			
MAY 1	470	419	300	228	132	70	49	26	13	4				
MAY 11	470	360	268	196	130	91	60	43	30	19	9	2		
MAY 21	517	340	232	184	108	64	46	31	23	14	10			
JUN 1	470	394	298	234	164	102	70	43	28	15	9	2		
JUN 11	470	372	289	232	145	98	77	53	36	9				
JUN 21	470	323	249	191	115	81	64	36	21	9	2			
JUL 1	470	221	177	106	64	49	30	19	11	4	2			
JUL 11	470	161	123	89	51	38	19	13	11	2	2			
JUL 21	517	114	85	72	43	23	10	4	4	2				
AUG 1	470	157	109	72	38	26	11	6	2					
AUG 11	470	140	98	79	49	38	30	19	2					
AUG 21	517	244	176	141	93	64	54	33	23	14	8			
SEP 1	470	217	145	106	72	51	40	28	26	15	9	2		
SEP 11	470	268	204	153	98	68	45	34	26	11	2			
SEP 21	470	272	189	147	91	66	45	30	19	11	2			
OCT 1	470	302	243	202	162	102	72	49	30	19	11	4		
OCT 11	470	311	232	179	126	98	74	60	43	19	6			
OCT 21	517	441	358	294	207	149	99	68	46	25	14			
NOV 1	470	455	362	283	185	143	96	77	57	26	13			
NOV 11	470	487	428	370	277	194	151	100	72	45	26	9	2	
NOV 21	470	489	398	332	232	168	115	83	57	34	17	4		
DEC 1	470	555	472	385	257	185	117	65	57	30	19	2		
DEC 11	470	543	457	377	266	202	147	109	74	47	23	9	2	
DEC 21	517	594	497	406	282	201	155	108	72	31	19			
MONTH														
JAN	4402	532	426	346	225	159	117	80	56	27	17	3		
FEB	4013	452	366	285	187	129	86	58	40	19	11	2		
MAR	4402	416	327	260	169	104	68	35	19	7	3	*		
APR	4260	363	257	188	115	77	49	33	20	6	2			
MAY	4402	365	258	197	119	72	48	29	20	11	5	1		
JUN	4260	353	266	202	128	83	60	39	27	9	4	*		
JUL	4402	167	118	81	50	35	20	12	9	3	1			
AUG	4402	184	126	93	57	41	31	20	12	7	4	*		
SEP	4260	262	185	137	89	62	44	32	24	12	6	1		
OCT	4402	358	280	223	154	109	76	55	35	19	9	1		
NOV	4260	465	385	318	223	162	116	85	60	32	17	3	*	
DEC	4402	550	454	367	255	185	134	97	66	34	19	2	*	

* LESS THAN 1

Table 17.—Monthly and annual snowfall, 1911-82, at Priest River Experimental Forest control station

Year	Snowfall												
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	Annual
	Inches												
1911-12				M[1]	M	38.4	20.4	10.6	8.9	1.0	0.0		M
12-13				1.0	3.3	27.3	57.8	3.9	11.0	.0	.0		104.3
13-14				.5	15.0	10.0	36.1	17.0	4.2	T[2]	.0		82.8
14-15				.0	8.7	15.8	14.2	10.9	1.0	7.0	.0		57.6
15-16				.0	31.4	34.8	44.1	14.3	22.6	.0	T	2.0	149.2
16-17				T	19.1	29.7	23.5	30.4	25.3	4.0	.0		132.0
17-18				2.8	3.0	31.0	16.2	22.7	3.5	.0	.0		79.2
18-19				.0	.7	12.5	16.6	31.9	19.0	.0	.0		80.7
19-20				9.5	15.6	3.1	9.2	4.4	6.2	5.1	T		53.1
1920-21				.0	T	18.5	27.3	15.2	13.9	1.2	.0		76.1
21-22				.0	19.5	11.9	20.7	15.5	21.2	10.3	.0		99.1
22-23				2.0	2.4	50.8	35.8	14.2	10.3	.5	T		116.0
23-24				.0	5.3	41.6	21.4	5.0	5.0	.3	T	T	78.6
24-25				.0	9.8	23.0	40.1	11.0	3.7	.0	.0		87.6
25-26				2.0	1.3	6.2	24.8	13.4	T	4.0	.0		51.7
26-27			.4	.0	T	15.8	28.5	20.1	5.6	.0	T		70.4
27-28				T	18.2	40.5	12.6	3.7	7.0	4.3	.0		86.3
28-29				T	1.8	26.4	27.3	6.9	.7	5.6	.0		68.7
29-30				T	T	13.1	14.6	12.9	1.2	.0	.0		41.8
1930-31				6.5	15.8	12.6	17.5	9.9	3.2	.8	T		66.3
31-32				.3	18.7	48.1	36.6	24.0	9.5	.0	.0		137.2
32-33				2.6	4.4	40.0	40.7	22.5	4.6	8.5	.0		123.3
33-34			T	5.3	.5	19.5	15.8	3.1	1.7	T	.0		45.9
34-35			T	.5	5.4	44.5	46.3	4.3	8.3	T	T		109.3
35-36				.5	11.4	13.2	30.9	19.4	6.0	.0	.0		81.4
36-37				.0	2.0	19.1	44.9	53.3	.4	T	.0		119.7
37-38				.0	4.2	42.2	14.6	32.8	1.9	.0	T		95.7
38-39				.0	8.2	20.3	26.5	23.2	11.8	.5	.0		90.5
39-40				3.0	.0	6.4	11.8	22.7	2.6	T	.0		46.5
1940-41				T	14.8	11.9	17.6	3.0	.0	.0	.0		47.3
41-42				.0	T	14.5	5.2	7.2	5.2	T	1.0		33.1
42-43				.0	26.5	28.5	42.5	17.0	5.2	.0	3.0		122.7
43-44				T	T	5.5	11.5	8.4	1.0	.0	.0		26.4
44-45				.0	10.7	14.1	11.3	4.4	5.5	4.5	.0		50.5
45-46				1.8	14.5	13.3	25.1	21.9	3.5	T	.0		80.1
46-47				.1	24.3	19.2	26.9	1.5	1.5	T	.0		73.5
47-48			T	.0	6.0	12.7	14.3	23.9	8.4	T	.0		65.3
48-49				.5	13.9	52.5	12.4	44.5	14.5	T	T		138.3
49-50				.0	T	43.3	84.2	19.6	6.8	T	.0		153.9
1950-51				.0	21.5	22.5	40.1	12.8	35.2	.0	T		132.1
51-52			T	4.0	3.2	56.3	63.4	13.4	10.0[3]	.1	.0		150.4
52-53				.0	T	33.5	20.8	10.4	.6	1.0	.0		66.3
53-54				.0	3.1	11.9	72.9	10.3	.4	.0	.0		98.6
54-55				T	T	17.9	26.8	31.1	11.3	6.5	.5		94.1
55-56				.4	30.4	31.6	28.9	31.1	8.1	1.6	.0		132.1
56-57				1.8	3.6	11.0	36.5	27.6	10.7	.0	.0		91.2
57-58				3.8	5.7	27.7	17.8	1.9	1.8	T	.0		58.7
58-59				.0	24.2	24.1	24.6	24.7	5.3	.0	.0		102.9
59-60				.0	19.8	10.8	21.9	9.6	13.6	2.2	.0		77.9
1960-61				.0	14.4	12.1	10.3	12.7	6.6	T	.0		56.1
61-62				1.5	22.3	45.8	19.1	0.9	16.4	T	.0		106.0
62-63				.0	6.1	4.9	4.6	10.2	T	T	.0		25.8
63-64				.0	5.4	21.1	46.3	6.3	23.5	.0	T		102.6
64-65				.0	13.7	55.7	24.7	11.9	.4	.0	.0		106.4
65-66				.0	10.8	36.5	37.2	7.0	10.0	T	T		101.5
66-67				T	8.5	15.3	27.4	9.5	12.0	1.0	.0		73.7
67-68				T	12.6	19.9	36.0	4.0	1.5	1.0	.0		75.0
68-69				.0	9.0	39.5	89.0	15.0	.8	.0	.0		153.3
69-70				.0	3.0	22.6	43.5	3.0	11.0	T	.0		83.1
1970-71				.0	9.0	43.0	23.5	14.3	11.8	T	T		101.6
71-72			1.0	2.0	8.0	54.8	22.6	13.1	2.0	T	.0		103.5
72-73				1.0	5.5	8.3	26.0	6.0	T	.0	.0		46.8
73-74				T	37.7	19.8	23.5	24.5	5.5	.0	T		111.0
74-75				.0	1.0	23.0	33.9	33.0	17.7	2.0	T		110.6
75-76				2.0	18.1	8.8	25.9	28.8	8.0	1.0	.0		92.6
76-77				.0	1.0	12.0	8.9	4.4	T	.0	.0		26.3
77-78				.0	9.4	40.4	27.4	12.7	2.0	.0	T		91.9
78-79				.0	15.8	12.9	16.6	23.4	3.0	.0	.0		71.7
79-80				.5	6.4	19.3	18.5[3]	9.4	16.0	.0	.0		70.1
1980-81				.0	3.5	25.4	2.4	3.3	.0	.0	.0		34.6
81-82				.0	.0	21.0	44.0	18.8	.7	2.0	.0		86.5
50-year average 1931-80			T	.8	10.2	24.9	29.1	15.8	6.9	.6	.1		88.4

[1]M = missing.
[2]T = trace, an amount too small to measure.
[3]Includes estimates for days with missing data.

Table 18.—Precipitation (inches) during fire season at additional stations in or near Priest River Experimental Forest; statistics based on indicated years

P R E C I P I T A T I O N BY 10 (OR 11)-DAY AND MONTHLY PERIODS

STATION NUMBER 100204 PRIEST LAKE R.S. YRS 1951-1980

	10-DAY AND MONTHLY TOTALS						I	MAXIMUM DAILY TOTALS			
PERIOD BEGINS	NO. YRS	MEAN TOTAL	STD DEV	MEDIAN	HIGHEST TOT, YR	LOWEST TOT,YR	I	EXTREME YR	AVG MAX	STD DEV	MEDIAN
JUN 1	17	.651	.464	.660	1.48 67	.00 65	I	.88 71	.318	.235	.300
JUN 11	20	.767	.480	.630	2.00 65	.03 69	I	.87 52	.389	.225	.360
JUN 21	19	.616	.577	.500	2.15 69	.00 77	I	.82 67	.313	.260	.300
JUL 1	30	.565	.604	.340	1.96 78	.00 73	I	1.28 78	.325	.329	.260
JUL 11	30	.338	.394	.185	1.33 56	.00 73	I	1.09 56	.226	.275	.125
JUL 21	30	.239	.398	.040	1.43 75	.00 80	I	.78 61	.148	.220	.035
AUG 1	30	.318	.404	.055	1.18 76	.00 79	I	.94 53	.217	.289	.040
AUG 11	30	.586	.899	.150	3.51 68	.00 73	I	1.65 80	.307	.445	.100
AUG 21	30	.718	.670	.500	2.44 54	.00 74	I	.90 53	.335	.274	.270
SEP 1	28	.430	.426	.290	1.29 60	.00 72	I	1.24 60	.281	.283	.235
SEP 11	24	.515	.635	.275	2.71 68	.00 76	I	1.55 68	.299	.347	.215
SEP 21	19	.650	.632	.500	2.01 69	.00 79	I	.82 72	.318	.287	.280
MONTH							I				
JUN	16	2.011	.798	2.185	3.38 53	.66 74	I	.88 71	.537	.187	.515
JUL	30	1.141	.862	.980	3.45 78	.03 60	I	1.28 78	.482	.314	.430
AUG	30	1.622	1.343	1.420	4.90 54	.00 69	I	1.65 80	.534	.413	.450
SEP	19	1.508	.883	1.350	3.16 71	.11 76	I	1.55 68	.516	.224	.570

P R E C I P I T A T I O N BY 10 (OR 11)-DAY AND MONTHLY PERIODS

STATION NUMBER 100202 GISBORNE LOOKOUT YRS 1951-1978

	10-DAY AND MONTHLY TOTALS						I	MAXIMUM DAILY TOTALS			
PERIOD BEGINS	NO. YRS	MEAN TOTAL	STD DEV	MEDIAN	HIGHEST TOT, YR	LOWEST TOT,YR	I	EXTREME YR	AVG MAX	STD DEV	MEDIAN
JUL 1	26	.623	.637	.355	2.22 54	.00 73	I	1.09 54	.337	.310	.255
JUL 11	28	.459	.542	.245	1.92 75	.00 69	I	1.03 75	.275	.312	.175
JUL 21	28	.270	.372	.060	1.15 55	.00 73	I	.87 58	.164	.229	.060
AUG 1	28	.393	.491	.190	1.87 76	.00 78	I	.70 53	.224	.225	.150
AUG 11	28	.515	.781	.080	2.90#68	.00 73	I	1.15 78	.222	.310	.070
AUG 21	16	.826	.794	.780	2.43 77	.00 70	I	1.28 76	.517	.448	.640
MONTH							I				
JUL		1.328*			3.52 55	.00 53	I	1.09 54	.503	.299	.515
AUG		1.734*			5.91 76	.00 69	I	1.28 76	.558	.414	.640

YRS 1931-1978/

PERIOD BEGINS								
JUL 1	45	.489	.586	.300	2.22 54	.00 53	I	1.25 48
JUL 11	47	.379	.495	.150	2.02 75	.00 69	I	1.03 75
JUL 21	48	.289	.366	.110	1.31 48	.00 73	I	.87 58
AUG 1	48	.332	.483	.115	2.04 48	.00 78	I	1.47 48
AUG 11	48	.387	.638	.065	2.90#68	.00 73	I	1.15 78
AUG 21	36	.697	.678	.475	2.43 77	.00 70	I	1.28 76
MONTH								
JULY		1.157*						
AUG		1.416*						

* SUM OF MEANS FOR THE THREE 10 (OR 11)-DAY PERIODS
# INCLUDES ESTIMATES FOR MISSING DAYS
/ INCLUDES DATA FROM FORMER EXPERIMENTAL STATION LOOKOUT FOR 1931 AND 1932

Table 19.—Frequency distribution of daily precipitation amounts at stations as in table 18

PRECIPITATION - PERCENTAGE FREQUENCY OF DAILY AMOUNTS (INCHES)

- GIVEN TO NEAREST TENTH PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100204 PRIEST LAKE R.S. 1951-1980

PERIOD BEGINS	TOTAL NUM. DAYS	TR	AMOUNT EQUAL TO OR GREATER THAN 0.01	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.50	2.00
JUN 1	174	57	368	310	241	144	69	34	29	23	6			
JUN 11	199	20	417	296	226	156	95	45	40	25	10			
JUN 21	202	10	386	282	198	114	84	64	35	25	10			
JUL 1	300	17	317	203	143	90	67	50	37	27	7	7		
JUL 11	298	34	221	144	81	60	37	23	17	10	3	3		
JUL 21	330	9	124	91	64	36	27	18	9	6				
AUG 1	300	23	177	113	83	50	37	27	20	10	10			
AUG 11	300	13	227	173	137	90	60	47	37	33	17	10	3	
AUG 21	330	15	370	261	200	109	67	48	33	18	9			
SEP 1	280	25	243	189	121	71	50	29	14	11	7	4		
SEP 11	240	25	238	192	158	100	67	29	25	13	4	4	4	
SEP 21	192	26	302	234	182	109	73	68	52	26	5			
MONTH														
JUN	575	28	391	296	221	137	83	49	35	24	9			
JUL	928	19	218	144	95	61	43	30	20	14	3	3		
AUG	930	17	261	185	142	84	55	41	30	20	12	3	1	
SEP	712	25	257	202	150	91	62	39	28	15	6	3	1	

PRECIPITATION - PERCENTAGE FREQUENCY OF DAILY AMOUNTS (INCHES)

- GIVEN TO NEAREST TENTH PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1978

PERIOD BEGINS	TOTAL NUM. DAYS	TR	AMOUNT EQUAL TO OR GREATER THAN 0.01	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.80	1.00	1.50	2.00
JUL 1	261	27	314	234	195	111	73	50	34	31	8	4		
JUL 11	280	29	239	143	121	75	54	46	32	18	11	4		
JUL 21	308	16	140	101	84	49	26	15	10	6	3			
AUG 1	280	43	225	168	121	86	46	36	14	7				
AUG 11	276	40	207	159	127	76	54	47	43	18	4	4		
AUG 21	179	6	279	223	168	123	89	61	56	56	28	17		
MONTH														
JUL	849	24	226	155	131	77	49	37	25	18	7	2		
AUG	735	33	231	178	135	91	60	46	35	23	8	5		

Table 20.—Monthly and annual average temperatures, 1911-82, at Priest River Experimental Forest control station; based on 24-hour period ending at 5 p.m. P.s.t.

Year		Average Daily Maximum and Minimum Temperatures												
		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
		°F												
1911	Max.												30.6	
	Min.												20.3	
1912		29.9	39.7	46.1	58.5	67.7	79.1	76.7	74.0	65.1	51.0	40.9	33.5	55.2
		14.1	21.2	17.3	28.4	35.3	42.0	44.5	41.5	31.9	26.9	25.7	20.4	29.1
1913		28.5	33.8	41.6	57.5	64.8	74.4	79.5	81.6	71.3	52.2	41.1	32.5	55.0
		11.0	3.4	18.8	26.0	34.0	41.9	40.5	40.6	33.8	27.0	27.7	21.4	27.3
1914		35.7	36.6	49.6	59.8	69.4	71.6	84.1	83.7	65.7	57.0	41.7	28.9	57.0
		23.2	17.0	23.6	29.6	35.3	39.8	43.8	40.0	36.4	34.6	30.1	12.4	30.5
1915		31.0	40.6	53.1	64.7	63.7	71.9	77.8	88.3	67.4	57.1	37.0	30.9	57.1
		17.6	25.5	25.9	31.9	39.0	39.1	44.6	46.3	36.3	33.1	24.5	18.4	31.9
1916		20.4	37.8	44.0	57.7	60.0	71.8	78.8	81.5	70.5	56.6	37.2	26.9	53.6
		-.5	18.5	26.1	27.4	32.1	39.2	43.5	41.5	36.1	25.1	20.2	11.9	26.8
1917		29.2	34.9	38.3	49.1	64.7	71.1	85.8	85.6	73.7	60.0	44.0	36.8	56.2
		11.2	18.3	16.2	28.0	34.0	38.8	42.0	39.8	38.2	26.6	30.0	23.9	29.0
1918		32.9	34.5	46.9	59.7	62.9	79.9	83.6	74.8	76.7	57.5	39.6	33.7	57.0
		21.8	13.9	25.5	25.6	31.3	40.5	44.5	41.1	37.3	36.5	25.3	20.8	30.5
1919		35.6	34.8	44.7	59.0	64.2	75.5	86.1	83.3	71.1	51.3	34.9	27.0	55.7
		20.2	20.6	23.2	29.3	35.8	36.8	42.3	42.5	35.5	26.8	22.0	11.2	28.9
1920		31.4	38.9	44.2	51.3	60.4	70.3	86.1	82.0	66.0	52.5	42.1	34.3	55.0
		18.1	17.4	25.0	28.3	33.1	38.8	45.6	43.8	38.4	32.5	26.4	24.2	31.0
1921		33.7	37.2	45.2	51.8	67.1	74.6	82.1	82.5	63.5	60.1	38.3	31.4	55.8
		20.7	21.1	24.1	30.5	35.6	44.4	40.6	42.8	33.4	30.3	25.6	16.3	30.5
1922		26.1	31.4	41.7	51.1	64.7	81.0	85.2	83.5	72.3	60.1	38.0	25.8	55.2
		11.2	8.9	21.5	28.6	33.1	42.7	42.4	45.7	38.2	32.9	24.6	10.8	28.5
1923		34.6	32.5	45.6	57.5	64.1	71.0	84.7	81.9	75.6	59.4	40.3	33.6	56.9
		22.0	8.9	19.5	27.6	36.9	44.7	47.9	44.4	36.6	32.1	29.1	22.4	31.2
1924		27.4	42.8	45.2	56.8	74.4	74.9	85.4	79.1	73.1	55.4	37.8	26.7	56.6
		11.7	27.1	26.3	27.3	35.5	39.1	44.2	43.0	36.7	31.7	26.9	10.5	30.0
1925		34.4	41.1	47.1	63.1	70.3	75.9	87.8	81.1	71.2	55.1	40.8	36.8	58.8
		21.0	27.9	26.5	30.4	37.4	43.6	45.5	42.7	39.0	26.5	26.7	30.5	33.2
1926		30.5	40.3	52.9	65.4	66.0	77.6	87.5	79.7	63.0	57.8	43.3	31.9	58.1
		24.3	27.5	25.2	31.3	37.2	40.5	46.8	43.4	33.5	34.1	29.4	22.7	33.0
1927		30.9	36.6	43.8	55.8	61.4	73.5	82.6	82.2	65.2	54.5	40.0	26.3	54.5
		18.5	22.0	23.4	27.8	35.5	45.5	45.7	44.2	40.5	35.8	29.5	9.8	31.5
1928		30.7	37.7	48.0	53.3	73.8	72.5	83.8	81.7	75.5	55.5	39.5	31.2	57.0
		21.1	16.0	26.0	30.2	36.9	42.8	47.7	41.5	35.1	31.9	27.2	21.5	31.6
1929		20.3	30.0	45.7	53.9	67.7	72.3	83.6	87.3	69.5	60.3	40.8	36.6	55.8
		6.3	5.3	26.9	28.4	35.9	42.7	41.9	42.8	34.7	28.2	21.0	27.6	28.6
1930		22.3	40.6	49.6	64.0	65.3	71.6	84.6	85.1	71.6	52.3	38.1	31.3	56.4
		.7	22.1	22.6	32.9	36.4	40.6	44.8	46.0	41.0	30.7	26.7	21.8	30.5
1931		34.5	37.6	45.1	58.6	71.1	72.7	84.7[1]	85.4	68.7	57.5	37.6	31.1	57.2
		25.8	21.8	27.1	30.3	36.8	43.2[1]	44.4[1]	40.9	37.6	29.5	20.4	20.3	31.7
1932		28.1	33.7	41.8	56.5	65.1	75.5	80.5	83.0	74.1	53.5	42.5	30.5	55.4
		15.9	12.5	22.6	31.3	37.1	43.2	44.3	44.6	34.7	33.1	31.3	15.4	30.5
1933		33.0	28.4	43.5	56.4	61.7	75.8	84.3	85.2	65.5	58.8	43.5	38.7	56.4
		21.2	9.0	24.3	27.6	35.3	41.8	44.5	44.5	37.5	32.5	29.9	28.2	31.5
1934		37.1	44.3	54.0	69.3	71.4	75.8	84.0	85.6	67.8	57.1	45.4	34.2	60.6
		26.4	23.2	27.5	34.9	39.7	42.6	44.7	42.1	36.0	34.4	34.0	25.4	34.3
1935		32.1	39.6	40.2	54.1	67.9	72.8	81.9	80.5	76.3	54.7	35.9	31.7	55.7
		18.1	17.8	22.0	26.3	33.1	41.6	46.5	41.8	38.5	29.8	22.8	25.5	30.4
1936		34.3	23.1	44.0	60.7	73.7	75.6	85.7	84.0	69.5	62.8	37.1	35.0	57.3
		22.0	1.0	22.7	38.5	40.4	46.1	45.5	43.0	38.0	30.1	20.7	24.5	30.3
1937		17.4	34.4	48.4	51.7	69.5	74.4	83.2	77.1	72.9	59.0	41.4	34.5	55.4
		-4.4	13.6	24.0	30.5	35.4	44.5	49.0	41.7	39.2	36.5	31.5	24.2	30.5
1938		32.7	38.3	44.8	58.9	66.9	76.4	85.8	81.2	80.3	58.0	36.7	34.1	57.9
		20.8	21.6	26.9	30.1	36.3	44.5	48.0	40.4	43.1	34.7	22.9	21.8	32.7
1939		34.6	33.6	47.3	62.8	70.2	68.2	84.1	85.7	73.1	56.3	43.1	38.6	58.3
		25.3	13.0	23.9	30.3	36.6	41.3	45.7	42.1	38.3	32.3	26.8	27.7	32.1
1940		31.0	37.7	50.8	59.1	71.8	80.0	84.2	85.3	75.6	57.5	35.7	34.1	58.6
		17.4	25.4	27.6	33.3	38.6	43.2	48.6	42.7	46.1	39.6	24.3	24.3	34.3

(con.)

Table 20.—(con.)

Year		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
		Average Daily Maximum and Minimum Temperatures												
		°F												
1941	Max.	34.7	42.3	55.9	64.3	66.1	73.1	86.1	79.1	62.1	53.9	44.8	34.8	58.2
	Min.	24.4	23.9	27.2	32.8	40.4	46.5	50.3	47.7	41.6	34.7	30.0	25.5	35.5
1942		28.4	37.0	47.3	62.0	63.2	68.6	82.7	83.7	75.2	60.0	36.8	33.2	56.6
		14.1	21.8	23.9	30.4	38.1	42.9	48.3	45.7	38.1	32.6	25.7	23.9	32.2
1943		25.8	41.7	41.1	60.8	62.2	68.8	82.1	80.0	77.8	58.3	41.2	32.0	56.0
		11.2	21.2	17.6	31.2	35.1	41.0	46.2	42.9	35.6	34.5	27.7	20.3	30.4
1944		33.5	39.0	44.7	60.7	68.3	74.5	83.3	80.8	74.7	65.5	40.5	31.8	58.2
		18.8	20.3	21.0	30.3	38.0	44.9	45.2	43.7	40.7	34.1	29.4	15.7	31.9
1945		35.8	40.5	43.9	53.1	68.7	71.3	85.3	84.9	68.3	60.2	38.3	32.6	57.0
		16.3	15.1	21.4	27.3	37.8	43.0	46.2	43.4	37.8	33.1	27.1	21.7	30.9
1946		33.5	38.3	46.0	58.4	70.8	70.8	82.5	82.3	68.7	51.5	39.2	34.5	56.5
		20.8	20.6	28.5	31.7	37.0	41.9	45.1	43.4	38.5	27.9	22.9	21.7	31.7
1947		29.8	42.0	51.6	59.5	71.5	70.0	83.0	79.5	68.5	54.1	36.9	34.2	56.8
		14.3	18.4	26.1	30.6	38.3	43.5	45.4	43.3	40.1	38.6	27.7	25.2	32.7
1948		31.8	35.2	43.9	51.9	64.1	76.1	76.8	75.5	70.4	58.3	38.7	27.9	54.3
		16.6	17.3	20.7	29.9	39.7	49.0	45.5	45.8	38.8	29.2	26.1	14.5	31.1
1949		19.9	33.7	45.5	62.0	71.4	74.0	82.2	82.6	73.6	53.2	44.5	33.1	56.4
		−2.2	12.4	22.7	29.1	38.9	39.9	45.0	44.0	38.3	28.1	31.3	19.3	29.0
1950		18.2	35.3	40.5	53.0	64.1	72.2	81.7	82.8	75.4	51.4	39.3	35.6	54.2
		−.8	19.7	24.4	27.3	33.9	43.6	46.8	45.4	36.3	36.3	26.3	27.6	30.6
1951		31.9	37.2	41.4	60.7	66.6	71.8	84.2	81.2	71.1	51.0	38.7	27.2	55.3
		17.8	18.0	18.9	26.0	37.1	40.7	45.0	44.4	37.0	35.8	26.3	14.6	30.2
1952		29.7	37.0	44.1	60.5	68.5	71.7	82.5	81.6	76.7	67.4	39.6	32.7	57.7
		17.2	19.6	22.4	27.5	37.0	42.2	44.7	43.5	38.4	28.3	22.8	25.4	30.8
1953		39.5	40.8	47.1	54.1	65.7	67.4	82.1	81.0	72.7	61.0	43.8	35.4	57.7
		30.2	23.1	25.5	31.1	36.1	43.2	44.3	46.1	38.6	32.1	29.3	25.8	33.9
1954		30.2	40.3	43.0	52.1	67.7	68.1	79.5	76.1	68.0	54.7	45.7	33.2	55.0
		17.2	26.0	19.6	28.1	35.9	41.4	44.6	44.0	41.1	30.0	32.5	24.2	32.1
1955		31.2	33.0	37.3	48.7	60.2	74.9	77.5	82.3	69.8	54.0	32.9	30.6	52.8
		21.8	14.9	16.0	27.8	34.1	42.9	48.1	39.9	39.1	35.6	18.7	17.1	29.8
1956		32.2	30.4	42.6	60.3	70.0	70.3	82.7	80.2	72.5	53.3	36.7	33.9	55.5
		20.2	13.7	22.8	29.6	39.2	42.1	47.6	45.0	38.0	33.9	22.7	22.9	31.6
1957		22.6	36.0	44.4	57.5	71.5	73.5	79.4	78.5	77.1	51.8	39.6	36.1	55.8
		5.1	17.2	24.2	30.2	42.3	45.7	44.3	41.8	37.8	33.9	23.9	26.5	31.2
1958		33.9	41.9	46.9	54.9	77.5	77.7	85.5	88.3	70.7	60.5	38.4	34.2	59.3
		25.6	29.0	26.5	31.5	41.1	47.8	47.8	46.8	38.5	30.6	24.4	25.5	34.6
1959		32.9	35.4	45.0	57.8	62.3	73.3	84.0	75.6	63.7	53.4	36.8	32.3	54.5
		19.7	19.4	25.3	30.8	34.6	43.7	44.9	43.4	41.4	33.9	18.6	23.3	31.7
1960		27.1	36.3	45.1	55.9	61.5	75.1	88.5	74.5	73.4	58.2	40.0	30.2	55.5
		13.8	18.8	23.1	30.6	37.3	41.3	46.2	44.2	36.7	32.5	26.2	21.9	31.1
1961		34.0	40.2	47.5	54.4	65.6	81.6	85.6	89.0	67.6	52.9	37.1	31.0	57.3
		21.8	28.7	27.4	30.6	38.6	44.6	47.8	48.5	35.3	31.5	20.5	19.0	32.9
1962		28.1	36.9	42.2	61.5	62.4	74.0	81.6	78.2	74.2	54.7	42.1	35.2	56.0
		12.1	20.7	23.1	30.2	37.7	41.1	43.0	44.7	37.4	34.8	31.6	27.8	32.1
1963		26.5	41.0	47.7	56.1	67.4	73.4	79.6	84.1	78.8	60.5	40.7	31.0	57.3
		12.7	25.3	27.3	31.0	35.9	45.5	45.5	45.6	42.3	34.7	29.6	22.6	33.2
1964		33.3	38.9	41.5	53.3	64.5	73.2	83.1	75.2	66.9	59.0	37.6	28.5	54.6
		23.8	18.0	22.3	28.6	36.5	44.6	45.7	42.3	35.6	31.6	28.2	17.6	31.3
1965		32.7	37.1	45.0	58.8	64.4	73.7	83.2	79.8	63.2	59.8	42.0	32.8	56.2
		25.1	20.3	15.3	30.7	34.4	41.8	46.7	48.3	35.2	32.9	31.4	24.7	32.3
1966		32.3	38.1	45.4	56.7	70.7	69.2	80.9	82.4	77.7	55.5	39.5	34.5	57.0
		23.4	23.3	24.6	29.8	37.4	41.7	45.9	43.5	42.5	33.3	28.7	28.5	33.6
1967		34.5	40.2	41.2	50.7	64.4	76.2	84.8	90.7	81.8	54.1	39.7	30.5	57.5
		25.3	22.9	24.5	28.2	37.3	45.2	44.8	44.1	39.7	34.3	27.3	20.4	32.9
1968		31.0	41.6	49.0	53.9	65.5	71.3	84.5	75.3	67.7	50.5	38.3	28.1	54.8
		18.9	20.8	27.1	29.1	36.3	42.9	45.3	46.2	41.0	32.3	27.9	16.6	32.1
1969		23.7	34.7	47.0	55.2	69.3	75.1	78.7	81.7	70.3	52.6	39.8	32.1	55.1
		12.3	19.4	23.0	31.6	39.7	47.1	44.2	41.3	42.3	31.5	27.2	25.7	32.2
1970		28.4	38.5	43.7	48.3	68.1	77.5	84.0	86.2	67.1	53.7	38.6	30.6	55.5
		18.4	22.7	22.3	28.6	37.1	47.4	50.0	43.5	37.1	30.5	26.6	20.4	32.1

(con.)

Table 20.—(con.)

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
	Average Daily Maximum and Minimum Temperatures												
	°F												
1971	31.8	36.3	40.7	54.5	69.5	69.6	82.7	87.8	64.9	53.1	36.7	28.5	54.8
	21.7	22.2	22.5	30.0	38.6	45.1	46.9	47.0	37.4	30.8	28.0	17.8	32.4
1972	27.7	36.2	46.2	50.8	69.1	72.5	79.1	85.1	65.8	57.7	39.1	27.6	54.8
	12.3	21.9	28.0	28.1	41.3	47.3	46.9	49.5	38.7	31.5	29.6	17.3	32.7
1973	28.5	39.0	46.8	57.0	69.0	73.7	86.2	84.0	71.5	53.6	35.2	32.1	56.5
	16.0	22.3	27.4	29.3	38.3	44.9	46.1	45.8	42.5	36.5	27.7	26.9	33.7
1974	28.8	36.5	42.7	55.2	61.2	78.9	80.8	82.5	76.0	61.8	40.0	34.0	56.6
	17.8	26.3	26.7	34.8	37.2	47.4	49.3	46.6	39.1	28.3	32.5	27.3	34.5
1975	29.4	33.0	41.0	51.4	66.4	71.4	86.7	77.3	75.9	53.7	37.0	32.8	54.8
	19.2	18.5	25.1	28.6	38.1	45.0	54.1	48.0	39.3	38.0	24.8	23.7	33.6
1976	31.8	35.1	40.1	53.7	69.1	69.4	80.2	75.6	76.4	57.4	39.3	31.5	55.0
	23.8	22.4	20.8	31.5	36.8	41.8	47.9	49.5	40.3	31.7	25.7	24.5	33.1
1977	26.9	39.2	44.3	62.6	60.4	76.1	79.5	82.7	65.3	56.2	36.0	31.5	55.1
	17.1	24.9	27.3	29.4	36.8	44.9	45.3	47.9	41.4	32.3	25.4	22.1	32.9
1978	32.3	38.1	48.5	56.3	62.1	76.4	81.3	76.2	66.3	59.0	35.2	25.5	54.8
	24.0	28.6	29.3	34.7	39.2	45.7	50.9	48.9	44.4	31.8	23.9	13.2	34.6
1979	18.4	32.8	47.1	54.5	68.4	77.0	84.9	85.7	77.4	59.5	34.3	36.6	56.4
	3.6	22.4	24.9	29.8	39.3	45.2	49.0	48.5[1]	41.7	35.1	22.5	29.2	32.7
1980	26.5	35.7	43.5	62.7	66.5	70.7	80.1	74.7	69.7	57.9	38.6	34.0	55.1
	12.6	26.6	26.6	33.7	43.3	43.8	48.4	44.4	41.6	33.2	30.0	27.6	34.3
1981	33.1	39.5	51.1	54.4	62.7	65.9	79.0	84.5	71.3	52.3	41.0	31.9	55.6
	25.6	24.0	27.7	32.4	40.5	43.0	46.7	47.7	40.5	34.0	31.5	23.3	34.7
1982	28.1	34.3	44.8	52.5	66.8	77.6	77.0	79.9	69.8	52.5	34.9	30.2	54.0
	18.9	19.8	28.2	28.0	37.6	48.4	47.5	47.6	42.6	34.5	25.7	22.6	33.5
50-year average 1931-80													
	30.1	37.1	45.0	56.9	67.1	73.4	82.8	81.6	71.6	56.6	39.1	32.5	56.2
	17.5	20.2	24.1	30.1	37.6	43.9	46.5	44.7	39.1	32.9	26.7	22.6	32.2

[1]Includes corrections of confirmed errors in published climatological data.

Table 21.—Daily maximum temperatures (°F) at Priest River Experimental Forest control station; statistics based on years 1931 through 1977, except 1912-82 where indicated, and on 24-hour period ending at 5 p.m. P.s.t.

M A X I M U M   D A I L Y   T E M P E R A T U R E

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 107386   PRIEST RIVER EXP FOR (CONTROL STN)

1931-1977
EXCEPT AS NOTED

PERIOD BEGINS	10-DAY AND MONTHLY PERIOD MEANS: MEAN	STD. DEV.	MEDIAN	1912-1982 HIGHEST AVG,YR	1912-1982 LOWEST AVG,YR	10-DAY AND MONTHLY EXTREME DAILY VALUES: 1912-1982 HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	1912-1982 LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
JAN 1	29.8	6.2	30.0	39.3 45	6.6 79	49 53	37.1	5.9	37.0	-2 79	22.2	8.6	25.0	JAN 1
JAN 11	30.5	6.1	32.0	40.0 53	13.5 50	49 53	38.5	5.6	39.0	1 35	21.5	9.0	22.5	JAN 11
JAN 21	30.8	6.2	32.0	40.8 19	10.9 29	49 12	39.1	6.6	41.0	0 29	21.4	8.9	25.0	JAN 21
FEB 1	34.7	5.6	35.0	42.7 34	17.6 36	51 63	42.4	4.9	42.0	0 36	26.1	9.3	29.0	FEB 1
FEB 11	37.3	5.2	37.0	50.2 34	16.9 36	56 30	44.4	4.7	45.0	-1 23	30.0	7.9	32.0	FEB 11
FEB 21	39.9	4.4	40.0	47.7 68	26.5 62	57 47	46.2	5.1	45.0	20 62	33.1	5.3	35.0	FEB 21
MAR 1	41.5	5.2	40.0	52.0 65	31.4 51	63 53	48.9	5.6	48.0	18 60	34.0	6.2	35.0	MAR 1
MAR 11	44.9	4.6	44.0	60.0 47	37.2 21	68 47	52.4	6.4	51.0	26 21	37.4	4.8	38.0	MAR 11
MAR 21	48.0	5.2	47.0	61.5 41	39.0 13	70 15	56.7	6.7	57.0	28 64	39.9	5.4	40.0	MAR 21
APR 1	53.2	5.4	52.0	68.6 25	44.2 20	76 77	62.2	6.7	62.0	29 36	44.4	4.8	44.0	APR 1
APR 11	57.0	7.0	55.0	72.9 36	44.8 55	85 36	67.3	8.0	67.0	37 22	46.8	5.8	46.0	APR 11
APR 21	60.2	5.8	59.0	73.5 77	49.8 70	88 34	71.6	7.6	70.0	39 21	50.3	5.2	50.0	APR 21
MAY 1	63.9	6.1	63.0	79.5 66	53.2 49	90 66	74.3	7.1	75.0	41 61	53.0	6.4	52.0	MAY 1
MAY 11	67.2	5.5	67.0	81.8 24	52.7 24	89 73	77.8	6.3	78.0	41 67	55.3	6.0	57.0	MAY 11
MAY 21	70.1	5.6	69.0	84.0 56	56.6 20	97 36	80.1	6.4	80.0	43 44	57.8	5.7	58.0	MAY 21
JUN 1	71.6	5.1	70.0	81.1 69	63.0 39	92 18	81.0	5.5	81.0	46 66	60.6	6.2	60.0	JUN 1
JUN 11	73.4	5.9	72.0	89.2 74	61.3 81	95 40	82.3	6.0	82.0	51 81	62.7	6.9	62.0	JUN 11
JUN 21	75.1	5.2	74.0	88.4 25	63.5 69	97 12	84.9	5.8	85.0	54 69	63.8	6.2	63.0	JUN 21
JUL 1	79.9	5.1	80.0	94.0 75	68.7 82	102 24	88.0	4.8	88.0	55 55	69.7	6.6	70.0	JUL 1
JUL 11	83.3	4.7	82.0	92.8 60	72.2 15	101 18	91.4	4.9	92.0	63 71	73.3	6.0	73.0	JUL 11
JUL 21	85.0	3.9	85.0	93.2 28	77.4 40	101 34	92.4	3.8	93.0	59 48	74.3	7.1	76.0	JUL 21
AUG 1	83.8	4.4	83.0	92.9 71	75.0 64	103 61	91.2	4.4	92.0	59 64	73.8	6.3	74.0	AUG 1
AUG 11	83.1	5.4	83.0	96.2 67	66.6 78	98 67	90.6	4.3	90.0	52 16	73.4	7.9	74.0	AUG 11
AUG 21	78.6	6.0	79.0	89.2 15	63.5 60	98 67	88.7	5.7	89.0	49 12	67.3	7.1	68.0	AUG 21
SEP 1	76.2	5.4	75.0	86.6 63	61.7 12	96 38	85.4	5.9	85.0	51 22	65.0	6.9	66.0	SEP 1
SEP 11	70.9	6.3	70.0	86.1 38	54.1 14	93 38	81.5	6.5	82.0	47 47	59.9	6.5	59.0	SEP 11
SEP 21	67.7	7.9	66.0	81.6 67	54.3 72	90 67	76.8	7.7	77.0	43 34	57.9	8.2	57.0	SEP 21
OCT 1	62.3	6.6	61.5	79.9 43	50.8 27	83 43	72.2	6.7	74.0	39 70	52.2	8.0	50.0	OCT 1
OCT 11	57.4	4.9	57.0	68.0 44	46.6 30	82 34	66.2	5.6	66.0	33 30	48.8	5.5	47.5	OCT 11
OCT 21	50.2	5.3	50.0	62.2 44	36.6 19	70 52	59.1	6.0	60.0	21 35	40.9	6.2	41.5	OCT 21
NOV 1	43.5	3.9	43.0	50.6 65	34.1 73	64 65	51.3	5.2	50.0	21 45	36.0	4.5	36.0	NOV 1
NOV 11	38.7	4.3	38.0	47.6 34	22.5 55	55 53	45.7	4.6	45.0	12 55	31.9	5.6	33.0	NOV 11
NOV 21	35.8	4.0	35.0	46.3 33	27.1 31	58 49	44.2	5.3	44.0	15 75	29.1	4.8	30.0	NOV 21
DEC 1	33.8	4.1	33.0	44.7 39	18.7 72	53 41	41.9	5.5	42.0	4 19	26.6	6.4	27.0	DEC 1
DEC 11	32.0	4.9	32.0	41.7 17	15.5 22	54 17	39.5	4.5	38.0	0 19	24.9	7.4	25.0	DEC 11
DEC 21	32.0	4.1	32.0	40.5 80	19.2 68	55 33	40.1	4.7	39.0	-10 68	23.2	6.9	24.0	DEC 21
MONTH														MONTH
JAN	30.4	4.6	31.0	39.5 53	17.4 37	49 53	42.7	4.0	43.0	-2 79	15.9	8.7	14.0	JAN
FEB	37.2	3.8	37.0	44.2 34	23.1 36	57 47	48.3	3.8	49.0	-1 23	23.9	8.8	25.0	FEB
MAR	44.9	3.6	44.0	55.9 41	37.3 55	70 15	57.7	6.2	57.0	18 60	32.4	5.8	33.0	MAR
APR	56.8	4.4	56.0	69.3 34	48.3 70	88 34	73.5	7.1	73.0	29 36	42.7	3.8	43.0	APR
MAY	67.2	3.6	67.0	77.5 58	60.0 16	97 36	82.6	5.3	82.0	41 67	49.7	4.5	49.0	MAY
JUN	73.3	3.2	73.0	81.6 61	65.9 81	97 12	88.0	3.8	88.0	46 66	56.9	4.5	57.0	JUN
JUL	82.8	2.5	83.0	88.5 60	76.7 12	102 24	94.4	3.3	94.0	55 55	66.4	4.9	66.0	JUL
AUG	81.7	4.0	82.0	90.7 67	74.0 12	103 61	93.3	3.5	94.0	49 12	65.5	6.3	66.0	AUG
SEP	71.6	4.8	71.0	81.8 67	62.1 41	96 38	86.7	5.0	87.0	43 34	54.2	5.3	55.0	SEP
OCT	56.4	3.8	55.5	67.4 52	50.5 68	83 43	73.1	5.4	74.0	21 35	40.0	5.4	40.0	OCT
NOV	39.4	2.9	39.0	45.7 54	32.9 55	64 65	52.1	4.8	52.0	12 55	27.5	5.2	29.0	NOV
DEC	32.6	2.6	32.0	38.7 33	25.5 78	55 33	44.4	4.5	45.0	-10 68	19.6	7.3	22.0	DEC

Table 22.—Daily minimum temperature statistics as in table 21

M I N I M U M   D A I L Y   T E M P E R A T U R E

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 107386   PRIEST RIVER EXP FOR (CONTROL STN)

1931-1977
EXCEPT AS NOTED

	10-DAY AND MONTHLY PERIOD MEANS			1912-1982		10-DAY AND MONTHLY EXTREME DAILY VALUES								
PERIOD BEGINS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	1912-1982 HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	1912-1982 LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
JAN 1	18.4	9.1	20.0	30.6 39	-12.1 79	37 53	28.4	5.6	30.0	-28 24	5.5	13.0	8.0	JAN 1
JAN 11	18.4	9.7	19.0	32.0 53	-13.5 16	40 20	28.9	5.7	31.0	-29 25	2.3	15.7	5.0	JAN 11
JAN 21	16.5	10.1	17.0	31.7 53	-10.6 57	35 74	28.8	7.1	31.0	-33 50	-0.3	14.7	0.0	JAN 21
FEB 1	19.1	8.5	19.0	30.2 78	-6.5 36	36 51	29.3	4.9	31.0	-35 33	1.7	15.0	6.0	FEB 1
FEB 11	20.1	8.3	20.0	31.2 58	-12.6 36	41 81	30.3	3.6	31.0	-28 36	7.4	12.6	9.0	FEB 11
FEB 21	21.8	6.1	22.5	32.3 76	-5.0 22	39 72	30.8	3.6	32.0	-18 18	11.0	9.4	13.0	FEB 21
MAR 1	21.3	5.1	22.0	29.2 77	6.1 43	38 14	31.3	3.1	32.0	-18 45	8.7	9.9	11.0	MAR 1
MAR 11	24.0	4.1	24.0	32.2 72	12.7 65	40 41	32.1	2.3	32.0	-7 13	13.6	8.5	16.0	MAR 11
MAR 21	26.0	3.6	26.0	33.6 78	16.3 13	41 41	33.5	2.9	33.0	-10 13	16.2	7.3	17.0	MAR 21
APR 1	27.9	3.1	28.0	33.4 40	18.0 36	43 41	35.3	3.6	35.0	-1 36	20.5	5.1	22.0	APR 1
APR 11	29.9	2.0	29.0	36.3 26	25.1 51	46 38	37.9	3.2	37.0	14 27	23.2	3.2	24.0	APR 11
APR 21	32.1	3.0	31.0	41.4 34	26.0 54	55 78	40.6	4.1	41.0	14 23	25.3	3.4	25.0	APR 21
MAY 1	34.8	2.8	35.0	43.6 80	27.8 65	53 41	43.1	3.8	43.0	18 54	27.3	3.5	27.0	MAY 1
MAY 11	37.0	2.8	36.0	43.4 57	29.9 43	54 41	45.6	4.3	45.0	23 18	29.3	3.4	28.0	MAY 11
MAY 21	40.2	3.1	40.0	48.4 58	30.2 18	58 39	49.8	3.9	49.0	23 20	31.7	4.0	31.0	MAY 21
JUN 1	42.9	3.4	43.0	51.1 57	33.0 19	59 72	51.1	4.3	51.0	24 18	35.0	3.7	35.0	JUN 1
JUN 11	44.0	2.9	44.0	50.3 74	36.4 19	61 63	52.3	3.6	52.0	27 52	35.6	4.1	35.0	JUN 11
JUN 21	44.5	3.3	44.0	55.4 82	38.6 56	63 70	53.0	4.3	53.0	31 34	36.7	3.5	36.0	JUN 21
JUL 1	45.4	3.1	44.0	55.6 75	38.9 19	62 18	53.7	3.4	54.0	31 79	37.7	3.8	37.0	JUL 1
JUL 11	47.0	2.9	46.0	55.5 75	37.0 13	64 75	55.5	4.0	55.0	31 19	39.4	3.6	39.0	JUL 11
JUL 21	46.6	2.7	47.0	52.1 71	38.0 16	63 80	54.4	4.5	54.0	29 17	39.3	3.7	39.0	JUL 21
AUG 1	45.5	3.5	45.0	54.9 76	37.6 17	63 73	53.5	4.8	53.0	31 14	39.0	3.8	39.0	AUG 1
AUG 11	44.4	2.8	43.0	51.3 79	37.4 13	62 32	52.6	4.0	52.0	29 20	37.1	4.0	37.0	AUG 11
AUG 21	43.6	2.9	43.0	51.9 79	35.9 14	61 76	52.6	4.2	53.0	26 14	35.7	3.6	36.0	AUG 21
SEP 1	41.3	2.9	41.0	50.6 78	34.6 56	60 30	51.0	4.0	51.0	23 21	32.9	3.8	33.0	SEP 1
SEP 11	38.8	3.6	39.0	47.6 40	28.6 12	56 75	48.0	3.9	48.0	19 34	30.1	4.5	29.0	SEP 11
SEP 21	36.7	3.8	36.0	45.8 40	26.0 26	57 67	46.2	4.8	46.0	16 34	29.1	4.7	28.0	SEP 21
OCT 1	34.2	3.5	33.0	43.0 51	22.6 16	54 29	44.2	4.6	44.0	14 32	26.1	4.1	26.0	OCT 1
OCT 11	32.8	4.2	33.0	41.1 47	23.9 46	51 67	42.8	4.4	44.0	15 71	24.5	4.5	24.5	OCT 11
OCT 21	31.3	3.6	31.0	39.5 73	20.9 35	50 37	40.5	4.2	41.0	-5 35	21.9	6.3	22.0	OCT 21
NOV 1	26.2	4.8	28.0	39.8 80	13.7 35	46 75	36.3	4.5	37.0	-7 35	19.6	7.6	21.0	NOV 1
NOV 11	27.0	6.2	28.0	36.2 54	3.4 55	42 41	35.1	3.2	35.0	-16 55	17.7	10.4	20.0	NOV 11
NOV 21	25.0	5.6	25.0	32.8 20	4.6 31	45 49	32.8	4.9	32.0	-4 75	15.2	7.9	16.0	NOV 21
DEC 1	24.0	5.2	24.0	31.7 25	-4.0 19	41 75	32.5	3.4	32.0	-23 19	12.0	9.6	15.0	DEC 1
DEC 11	22.1	7.6	22.0	33.4 66	-8.6 22	39 24	30.6	4.0	32.0	-25 24	11.0	12.5	12.0	DEC 11
DEC 21	21.8	6.5	22.0	32.8 80	3.7 68	43 33	30.9	3.7	32.0	-36 68	8.3	11.8	9.0	DEC 21

MONTH														MONTH
JAN	17.7	7.2	18.0	30.2 53	-4.4 37	40 20	32.0	3.8	32.0	-33 50	-7.4	12.6	-1.0	JAN
FEB	19.9	5.2	20.0	29.0 59	1.0 36	41 81	33.0	1.5	33.0	-35 33	-2.3	13.3	-0.5	FEB
MAR	23.8	3.1	24.0	29.3 78	15.3 65	41 41	34.4	2.1	34.0	-18 45	6.1	9.6	8.0	MAR
APR	29.9	1.9	30.0	34.9 34	25.6 18	55 78	41.7	3.6	42.0	-1 36	19.6	4.8	20.0	APR
MAY	37.4	2.0	37.0	43.3 80	31.6 18	58 39	50.5	3.4	50.0	18 54	26.3	2.9	26.0	MAY
JUN	43.8	2.2	43.0	49.0 48	36.6 19	63 70	55.5	3.3	56.0	24 18	32.9	3.0	33.0	JUN
JUL	46.4	2.0	45.0	54.1 75	40.5 13	64 75	57.6	3.4	57.0	29 17	35.8	2.9	36.0	JUL
AUG	44.5	2.4	44.0	49.5 72	39.6 17	63 73	56.3	3.3	56.0	26 14	34.2	2.8	34.0	AUG
SEP	38.9	2.4	38.0	46.7 40	31.9 12	60 30	52.2	3.3	52.0	16 34	26.9	3.4	26.0	SEP
OCT	32.7	2.6	32.0	38.6 47	25.1 16	54 29	46.5	3.1	46.0	-5 35	20.3	5.7	21.0	OCT
NOV	26.7	3.7	27.0	34.0 34	18.6 59	46 75	38.1	3.5	38.0	-16 55	10.8	9.6	12.0	NOV
DEC	22.6	3.9	23.0	30.5 25	9.6 27	43 33	34.0	3.0	33.0	-36 68	1.5	11.3	3.0	DEC

Table 23.—Mean temperature statistics as in table 21; based on arithmetic average of daily maximum and minimum temperatures

M E A N   D A I L Y   T E M P E R A T U R E

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 107386   PRIEST RIVER EXP FOR (CONTROL STN)

1931-1977
EXCEPT AS NOTED

PERIOD BEGINS	10-DAY AND MONTHLY PERIOD MEANS: MEAN	STD. DEV.	MEDIAN	1912-1982 HIGHEST AVG,YR	1912-1982 LOWEST AVG,YR	10-DAY AND MONTHLY EXTREME DAILY VALUES: 1912-1982 HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	1912-1982 LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
JAN 1	24.1	7.5	25.0	33.9 23	-2.7 79	43 53	32.1	5.3	33.0	-15 79	14.1	10.8	17.0	JAN 1
JAN 11	24.4	7.6	27.0	36.0 53	0.6 16	43 53	33.0	5.4	34.0	-14 35	12.0	11.9	13.0	JAN 11
JAN 21	23.6	8.0	24.0	35.7 53	0.3 29	41 53	33.0	6.8	35.0	-14 50	11.1	11.3	13.0	JAN 21
FEB 1	26.4	6.6	27.0	35.2 34	5.5 36	43 51	34.7	4.5	35.0	-17 33	15.0	12.2	17.0	FEB 1
FEB 11	28.7	6.4	29.0	36.8 58	2.0 36	45 81	36.0	3.9	36.0	-14 23	19.9	10.4	22.0	FEB 11
FEB 21	30.8	4.6	31.0	37.7 58	13.7 22	44 47	36.6	3.9	37.0	4 57	23.3	7.3	25.0	FEB 21
MAR 1	31.4	4.6	31.0	39.1 41	21.4 51	46 14	38.0	3.4	38.0	1 55	23.1	8.4	24.0	MAR 1
MAR 11	34.4	3.5	34.0	43.3 47	27.1 17	49 72	39.9	3.3	39.0	10 13	26.9	6.1	29.0	MAR 11
MAR 21	37.0	3.9	37.0	45.1 41	27.6 13	49 41	42.6	3.4	43.0	11 13	30.0	6.4	32.0	MAR 21
APR 1	40.5	3.5	40.0	48.7 25	31.7 36	56 34	46.1	3.8	46.0	14 36	34.6	4.8	35.0	APR 1
APR 11	43.4	4.0	42.0	54.2 26	36.6 70	60 26	49.3	4.5	49.0	29 22	37.1	3.9	37.0	APR 11
APR 21	46.2	3.9	45.0	57.4 34	39.0 54	66 39	53.0	5.4	53.0	30 54	39.5	3.7	39.0	APR 21
MAY 1	49.4	3.7	49.0	58.6 66	43.1 50	65 66	56.7	4.5	57.0	34 54	42.5	4.0	42.0	MAY 1
MAY 11	52.1	3.6	51.0	60.7 24	43.4 74	58 49	59.6	4.7	59.0	35 19	44.2	3.8	45.0	MAY 11
MAY 21	55.2	3.9	54.0	66.2 58	44.6 20	72 72	62.9	4.3	63.0	39 44	46.9	4.1	47.0	MAY 21
JUN 1	57.2	3.6	56.0	65.2 69	50.1 39	73 70	63.6	4.5	63.0	41 66	50.4	4.4	50.0	JUN 1
JUN 11	58.7	3.8	58.0	69.7 74	52.4 42	74 74	65.3	4.3	65.0	44 54	51.2	4.1	51.0	JUN 11
JUN 21	59.8	3.5	59.0	68.4 25	54.2 46	76 73	67.1	4.1	67.0	44 20	52.1	3.8	51.0	JUN 21
JUL 1	62.6	3.6	62.0	74.8 75	55.9 12	78 75	69.2	3.2	69.0	47 55	55.5	3.9	56.0	JUL 1
JUL 11	65.1	3.3	65.0	72.7 41	56.6 15	79 75	71.2	3.4	71.0	48 43	58.1	3.6	58.0	JUL 11
JUL 21	65.8	2.5	66.0	71.8 71	57.7 16	79 28	71.6	3.0	72.0	49 17	58.2	3.8	58.0	JUL 21
AUG 1	64.7	3.2	64.0	72.6 71	58.1 64	78 61	69.7	3.8	70.0	49 64	58.2	3.8	58.0	AUG 1
AUG 11	63.8	3.2	64.0	70.9 67	55.0 18	78 32	69.5	3.4	69.0	47 13	57.4	4.7	57.0	AUG 11
AUG 21	61.1	3.2	60.0	68.2 15	53.0 60	76 67	67.6	3.6	67.0	40 12	53.7	3.9	54.0	AUG 21
SEP 1	58.8	3.3	58.0	65.2 63	49.6 21	74 38	65.1	4.3	65.0	40 21	51.6	4.0	51.0	SEP 1
SEP 11	54.6	3.6	54.0	63.6 38	44.9 65	69 75	61.9	4.1	63.0	37 65	46.9	4.6	47.0	SEP 11
SEP 21	52.2	4.9	52.0	61.3 38	41.7 26	72 67	57.9	5.1	58.0	33 34	46.0	5.8	45.0	SEP 21
OCT 1	48.2	3.8	48.0	59.9 43	40.1 16	63 43	54.4	4.2	54.5	30 19	41.3	5.2	41.0	OCT 1
OCT 11	45.1	3.0	45.0	51.5 44	36.8 30	59 44	51.5	3.6	52.0	28 17	38.3	3.3	38.0	OCT 11
OCT 21	40.8	3.4	41.0	49.5 37	29.9 19	57 60	47.6	4.4	47.5	9 35	32.9	5.8	34.0	OCT 21
NOV 1	35.9	3.8	35.0	43.6 80	24.7 35	54 75	42.3	4.1	42.0	9 35	28.9	5.8	30.0	NOV 1
NOV 11	32.9	5.0	33.0	40.9 54	12.9 55	46 62	39.5	3.4	40.0	0 55	25.6	7.9	27.0	NOV 11
NOV 21	30.4	4.5	30.0	38.0 49	15.9 31	51 49	37.7	4.8	37.0	6 75	22.4	6.1	23.0	NOV 21
DEC 1	25.9	4.4	28.0	37.9 39	7.5 19	46 41	36.6	4.2	36.0	-9 19	19.5	7.7	21.0	DEC 1
DEC 11	27.1	6.1	27.0	35.8 66	3.4 22	45 24	34.4	3.7	34.0	-12 19	18.0	9.9	19.0	DEC 11
DEC 21	26.9	5.1	27.0	36.7 80	11.5 68	49 33	34.8	3.8	34.0	-23 68	15.9	9.0	17.0	DEC 21

MONTH	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	MONTH
JAN	24.0	5.8	24.0	34.8 53	6.5 37	43 53	36.4	3.3	37.0	-15 79	4.9	10.4	3.0	JAN
FEB	28.5	4.3	29.0	35.5 58	12.0 36	45 81	38.6	2.6	39.0	-17 33	11.8	10.8	15.5	FEB
MAR	34.4	3.0	34.0	41.5 41	26.7 55	49 72	43.1	3.0	43.0	1 55	20.9	8.1	23.0	MAR
APR	43.4	2.7	43.0	52.1 34	38.2 55	66 39	54.0	5.0	54.0	14 36	33.5	4.5	34.0	APR
MAY	52.3	2.6	52.0	59.3 58	46.0 16	72 72	64.1	3.6	64.0	34 54	40.8	2.8	40.0	MAY
JUN	58.6	2.3	58.0	63.1 74	54.5 20	76 73	69.3	3.1	69.0	41 66	47.9	3.0	48.0	JUN
JUL	64.6	1.8	64.0	70.4 75	60.0 13	79 75	73.3	2.5	73.0	47 55	54.0	3.3	54.0	JUL
AUG	63.1	2.3	63.0	68.7 61	57.8 12	78 61	71.5	3.0	72.0	40 12	52.8	3.1	53.0	AUG
SEP	55.3	2.9	55.0	61.7 38	48.2 26	74 38	66.0	3.6	66.0	33 34	43.5	3.8	44.0	SEP
OCT	44.6	2.0	44.0	49.8 44	38.9 12	63 43	55.5	3.3	55.0	9 35	32.4	5.5	34.0	OCT
NOV	33.0	3.1	32.0	39.7 34	25.8 55	54 75	43.3	3.7	43.0	0 55	19.9	7.2	21.0	NOV
DEC	27.6	3.1	28.0	33.6 25	17.8 22	49 33	38.4	3.5	38.0	-23 68	10.9	9.1	12.0	DEC

Table 24.—Frequency distribution of daily maximum temperatures at Priest River Experimental Forest control station; based on years 1931-77 and 24-hour period ending at 5 p.m. P.s.t.

MAXIMUM DAILY TEMPERATURE

PERCENTAGE FREQUENCY DISTRIBUTION OF DAILY VALUES
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 107386 PRIEST RIVER EXP FOR (CONTROL STN) 1931-1977

TEMPERATURE RANGE

PRD. BEGINS	BELOW 0	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	85 TO 89	90 TO 94	95 TO 99	100 AND ABOVE	PRD. BEGINS
JAN 1		4	13	40	64	87	183	317	217	64	11												JAN 1
JAN 11		13	15	21	68	89	168	287	232	89	17												JAN 11
JAN 21		4	19	37	70	68	168	261	234	114	25												JAN 21
FEB 1		4	6	13	23	49	98	221	321	198	55	11											FEB 1
FEB 11			6	9	11	19	51	187	360	226	98	34											FEB 11
FEB 21						26	23	113	325	291	147	70	5										FEB 21
MAR 1					2	13	30	104	240	291	185	91	36	6									MAR 1
MAR 11							6	21	138	385	243	119	47	21	19								MAR 11
MAR 21							6	23	79	242	277	166	112	74	21								MAR 21
APR 1							2	2	11	113	240	238	183	109	74	26	2						APR 1
APR 11									2	77	166	217	155	160	106	66	38	11	2				APR 11
APR 21										19	81	187	236	174	140	77	51	28	6				APR 21
MAY 1										6	36	145	168	179	149	155	115	34	11	2			MAY 1
MAY 11										2	26	70	132	155	206	166	145	66	32				MAY 11
MAY 21										2	2	35	91	157	180	203	172	93	52	10	4		MAY 21
JUN 1											2	21	66	109	209	232	181	98	79	4			JUN 1
JUN 11												15	38	109	164	232	200	123	85	32	2		JUN 11
JUN 21												6	34	87	149	190	175	188	130	38	2		JUN 21
JUL 1													9	23	62	166	202	240	187	94	17		JUL 1
JUL 11														11	28	91	172	236	228	183	49	2	JUL 11
JUL 21													2	2	41	35	106	236	284	250	43	2	JUL 21
AUG 1													2	9	19	74	160	236	279	191	23	6	AUG 1
AUG 11												2	2	19	32	79	149	230	283	149	55		AUG 11
AUG 21												2	15	58	114	128	182	203	186	89	23		AUG 21
SEP 1												4	32	70	136	168	200	213	119	51	6		SEP 1
SEP 11											6	34	113	130	149	172	168	160	55	13			SEP 11
SEP 21										2	28	77	138	153	144	163	155	103	30	6			SEP 21
OCT 1									2	15	85	137	191	146	152	152	98	22					OCT 1
OCT 11									2	33	117	235	224	200	126	54	7	2					OCT 11
OCT 21						4		20	59	143	261	210	143	123	34	4							OCT 21
NOV 1						2	11	62	191	272	287	138	28	9									NOV 1
NOV 11				6	11	13	26	153	336	291	121	36	4										NOV 11
NOV 21					6	23	96	313	304	164	68	23	2										NOV 21
DEC 1			6	11	15	19	170	323	291	98	51	15											DEC 1
DEC 11		2	4	13	28	87	170	328	249	98	21												DEC 11
DEC 21	4	2		4	27	93	184	318	258	78	29	2	2										DEC 21
MONTH																							MONTH
JAN		7	16	33	67	81	173	288	228	90	18												JAN
FEB		2	5	8	12	32	59	178	336	235	97	36	2										FEB
MAR					1	4	14	49	150	304	236	127	67	35	14								MAR
APR							1	1	4	70	162	214	191	148	107	56	30	13	3				APR
MAY										3	21	82	129	163	178	176	145	65	32	4	1		MAY
JUN											1	14	46	101	174	218	185	136	98	25	1		JUN
JUL													3	12	43	95	159	237	235	178	36	1	JUL
AUG												1	7	30	57	95	164	222	247	141	34	2	AUG
SEP										1	11	38	94	117	143	168	174	159	68	23	2		SEP
OCT						1		7	22	66	158	194	185	155	102	68	34	8					OCT
NOV				2	6	13	44	176	277	243	159	67	11	3									NOV
DEC	1	1	3	9	23	67	175	323	266	91	34	5	1										DEC

Table 25.—Frequency distribution of daily minimum temperatures as in table 24

M I N I M U M   D A I L Y   T E M P E R A T U R E

PERCENTAGE FREQUENCY DISTRIBUTION OF DAILY VALUES
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 107386   PRIEST RIVER EXP FOR (CONTROL STN)   1931-1977

TEMPERATURE RANGE

PRD. BEGINS	BELOW 0	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	85 TO 89	90 TO 94	95 TO 99	100 AND ABOVE	PRD. BEGINS
JAN 1	100	55	66	64	121	206	213	164	11														JAN 1
JAN 11	113	45	51	87	115	155	236	185	13														JAN 11
JAN 21	126	52	95	118	97	122	178	205	8														JAN 21
FEB 1	96	46	80	83	117	187	204	183	4														FEB 1
FEB 11	61	50	41	100	126	183	213	224	2														FEB 11
FEB 21	32	18	50	92	153	182	247	218	8														FEB 21
MAR 1	30	17	60	87	166	202	230	198	11														MAR 1
MAR 11	13	21	23	57	106	200	306	255	15	2													MAR 11
MAR 21	10	2	15	35	87	190	329	282	48	2													MAR 21
APR 1	2	2	6	13	45	155	374	294	91	17													APR 1
APR 11					21	115	361	279	168	34	2												APR 11
APR 21					4	74	289	315	200	91	23	2											APR 21
MAY 1					4	15	166	311	298	151	51	4											MAY 1
MAY 11						2	115	245	291	232	87	28											MAY 11
MAY 21							41	166	259	267	180	72	15										MAY 21
JUN 1							6	81	211	296	260	111	34	2									JUN 1
JUN 11							4	66	177	253	323	145	30	2									JUN 11
JUN 21								32	204	277	266	166	45	11									JUN 21
JUL 1								32	126	301	279	183	77	2									JUL 1
JUL 11								6	94	247	323	230	74	26									JUL 11
JUL 21								8	79	251	356	236	54	14	2								JUL 21
AUG 1								6	126	306	336	162	49	15									AUG 1
AUG 11								32	155	349	277	143	40	4									AUG 11
AUG 21								66	190	298	280	133	27	6									AUG 21
SEP 1						2	30	128	238	291	189	94	28										SEP 1
SEP 11					2	11	79	179	268	253	160	43	6										SEP 11
SEP 21					2	6	161	224	273	209	90	30	4										SEP 21
OCT 1				2	7	37	207	309	241	124	52	22											OCT 1
OCT 11					24	98	226	241	209	137	63	2											OCT 11
OCT 21	2	2	2	4	18	125	246	277	204	95	24	2											OCT 21
NOV 1	4	6	4	30	81	123	279	296	123	51	2												NOV 1
NOV 11	13	15	17	43	72	83	289	345	109	15													NOV 11
NOV 21	17	11	23	72	91	160	264	302	53	4	2												NOV 21
DEC 1	23	17	28	55	100	215	249	291	15	6													DEC 1
DEC 11	34	38	51	85	117	151	226	264	34														DEC 11
DEC 21	37	35	43	83	107	190	266	231	6	4													DEC 21
MONTH																							MONTH
JAN	113	51	71	91	111	160	208	185	10														JAN
FEB	65	39	56	92	131	184	220	208	5														FEB
MAR	17	13	32	59	119	197	290	246	25	1													MAR
APR	1	1	2	4	23	115	348	296	153	48	9	1											APR
MAY					1	5	105	238	282	218	108	36	5										MAY
JUN							4	60	197	275	283	140	36	5									JUN
JUL								15	99	266	321	217	68	14	1								JUL
AUG								36	158	317	297	146	38	8									AUG
SEP					1	6	90	177	260	251	147	56	13										SEP
OCT	1	1	1	2	16	88	227	276	218	118	46	8											OCT
NOV	11	11	15	48	82	122	277	314	95	23	1												NOV
DEC	32	30	41	75	108	185	247	261	18	3													DEC

Table 26.—Dry bulb temperature (°F) observed at 3 p.m. P.s.t. at fire-weather stations in Priest River Experimental Forest. Data are for complete 20 years, 1951-70, at clearcut station; for indicated numbers of years at Gisborne Lookout

DRY BULB TEMPERATURE

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

	10-DAY AND MONTHLY PERIOD MEANS					10-DAY AND MONTHLY EXTREME DAILY VALUES								
PERIOD BEGINS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
MAY 1	60.1	6.4	58.5	73.1 66	50.7 63	87 66	72.8	7.5	71.5	40 67	47.8	6.0	46.5	MAY 1
MAY 11	64.2	5.0	65.0	72.3 58	54.8 60	85 54	78.1	5.1	78.5	35 55	48.9	6.1	48.0	MAY 11
MAY 21	65.8	6.1	65.5	78.9 58	56.5 55	90 58	79.1	5.7	79.5	39 60	51.2	6.4	51.0	MAY 21
JUN 1	69.4	6.1	67.5	80.4 69	59.7 54	90 70	81.1	5.4	81.0	45 66	56.0	7.3	56.0	JUN 1
JUN 11	70.6	6.5	67.5	83.1 61	61.6 54	94 61	82.7	5.6	82.0	48 57	57.6	6.0	56.0	JUN 11
JUN 21	70.6	5.4	70.0	79.0 70	60.4 69	91 58	82.1	6.2	81.0	47 68	55.9	5.8	55.5	JUN 21
JUL 1	76.2	5.6	75.5	88.9 68	66.8 55	96 64	88.5	3.8	88.0	50 66	62.2	8.5	62.5	JUL 1
JUL 11	80.9	5.2	79.5	92.4 60	73.4 68	101 60	91.0	4.6	92.0	59 65	68.8	7.0	69.5	JUL 11
JUL 21	81.9	4.7	82.0	87.7 60	72.9 70	97 59	90.4	4.5	91.0	54 54	68.9	8.5	68.5	JUL 21
AUG 1	80.8	5.3	81.5	88.7 61	71.1 57	104 61	90.8	5.3	91.5	54 56	67.6	7.7	67.0	AUG 1
AUG 11	80.4	6.7	80.5	95.8 67	65.9 68	99 67	89.8	4.8	90.5	54 68	69.1	9.7	69.5	AUG 11
AUG 21	74.3	6.9	74.0	86.5 70	60.5 60	98 58	87.4	7.8	86.5	52 64	60.4	7.2	59.0	AUG 21
SEP 1	73.8	6.3	73.0	85.4 63	63.9 64	92 58	83.8	5.4	84.0	50 62	61.1	8.8	60.5	SEP 1
SEP 11	68.6	6.9	69.0	78.3 56	54.7 65	90 53	81.4	6.6	83.5	41 65	53.9	5.5	53.5	SEP 11
SEP 21	65.9	8.0	64.0	79.3 52	53.9 61	91 66	76.4	8.3	76.0	43 59	52.7	6.9	51.0	SEP 21
OCT 1	59.2	5.4	58.5	69.1 52	51.2 57	79 63	71.1	6.1	73.0	39 59	47.2	5.5	46.5	OCT 1
OCT 11	54.4	5.0	55.0	64.5 63	42.9 51	74 63	63.8	7.3	66.5	33 51	44.7	4.1	45.0	OCT 11
OCT 21	47.9	5.2	46.5	59.1 65	37.1 51	68 60	57.5	7.2	57.5	27 57	40.3	6.2	40.5	OCT 21
MONTH														MONTH
MAY	63.5	4.2	62.5	74.2 58	56.8 55	90 58	81.9	4.1	82.5	35 55	44.5	4.0	45.0	MAY
JUN	70.2	3.8	69.5	78.8 61	63.5 53	94 61	86.3	4.2	87.0	45 66	51.0	3.5	50.0	JUN
JUL	79.7	3.1	80.0	87.7 60	75.5 55	101 60	93.2	3.3	93.5	50 66	58.8	6.0	58.5	JUL
AUG	78.4	4.8	78.0	88.2 67	70.7 64	104 61	93.6	4.2	94.0	52 64	57.8	5.4	56.5	AUG
SEP	69.4	5.1	68.5	78.9 67	61.3 59	92 58	85.7	5.0	86.5	41 65	49.3	4.0	50.0	SEP
OCT	53.6	3.9	52.5	59.9 53	45.0 51	79 63	71.7	5.2	73.0	27 57	38.8	4.7	39.0	OCT

DRY BULB TEMPERATURE

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1970

	10-DAY AND MONTHLY PERIOD MEANS						10-DAY AND MONTHLY EXTREME DAILY VALUES								
PERIOD BEGINS	NUM. YRS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
JUL 1	19	63.2	5.9	64.0	75.3 66	52.8 55	85 64	76.0	4.4	76.0	39 66	48.6	6.6	49.0	JUL 1
JUL 11	20	68.1	5.1	67.5	80.3 60	60.0 68	87 70	78.7	4.9	79.0	45 57	56.0	6.7	55.5	JUL 11
JUL 21	20	68.9	5.0	69.0	77.5 62	59.5 70	86 59	78.2	4.8	79.0	38 54	55.7	9.6	55.0	JUL 21
AUG 1	20	67.5	5.4	68.0	76.1 61	57.0 62	93 61	79.3	5.3	80.0	40 56	54.1	7.8	54.5	AUG 1
AUG 11	20	67.4	6.6	67.0	83.1 67	52.6#68	87 67	77.4	4.8	76.5	41 64	55.7	9.5	55.5	AUG 11
AUG 21	12	64.1	8.0	63.0	75.6 70	46.0#60	87 69	76.9	11.0	80.5	38 60	50.9	8.6	52.0	AUG 21
		61.3@													
MONTH															MONTH
JUL		66.8*	3.3		74.8 60	61.8 55	87 70	81.4	3.3	82.0	38 54	46.1	4.7	46.0	JUL
AUG		66.2*	4.5		75.8 67	57.2 64	93 61	82.1	4.4	82.0	38 60	47.0	5.8	45.5	AUG
		65.3@													

INCLUDES ESTIMATE FOR DAYS WITH MISSING DATA
* VALUE DERIVED FROM THE THREE 10-DAY MEANS
@ PRECEDING VALUE ADJUSTED TO COMPLETE 20-YEAR PERIOD

Table 27.—Relative humidity (percent) observed at 3 p.m. P.s.t. as in table 26

RELATIVE HUMIDITY

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

PRD. BEGINS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PRD. BEGINS
	10-DAY AND MONTHLY PERIOD MEANS					10-DAY AND MONTHLY EXTREMES								
MAY 1	45.1	12.1	44.5	72.8 61	27.6 66	100 67	76.8	14.7	78.0	10 66	24.4	9.2	23.0	MAY 1
MAY 11	42.9	9.6	41.0	57.1 60	27.7 64	100 61	77.7	16.1	81.5	11 58	20.7	5.5	20.0	MAY 11
MAY 21	44.3	7.3	42.5	61.5 53	32.2 63	94 69	80.4	12.0	82.0	15 66	22.2	4.0	21.0	MAY 21
JUN 1	44.4	10.3	45.0	62.4 53	22.2 65	94 57	74.9	18.6	80.0	8 65	23.9	7.6	23.5	JUN 1
JUN 11	44.6	9.5	42.0	61.3 70	29.4 69	94 70	73.9	17.4	82.0	17 66	25.1	4.5	24.5	JUN 11
JUN 21	43.7	11.4	39.5	69.6 69	27.1 62	100 53	76.3	19.5	83.5	17 70	24.1	5.5	24.0	JUN 21
JUL 1	39.4	8.5	39.0	52.0 69	22.8 68	94 69	68.6	19.9	72.0	17 67	22.8	4.6	23.0	JUL 1
JUL 11	32.9	6.9	33.5	43.0 56	21.0 60	89 65	55.6	19.7	52.0	14 60	21.0	3.7	22.0	JUL 11
JUL 21	29.3	7.1	27.0	46.5 55	19.4 56	94 70	56.2	22.5	48.5	11 53	17.7	3.7	17.0	JUL 21
AUG 1	31.9	9.1	28.5	51.6 62	20.4 59	94 53	62.1	20.7	64.5	5 61	17.0	4.6	16.5	AUG 1
AUG 11	30.2	10.1	27.5	57.3 68	12.9 67	94 59	55.0	22.0	49.0	9 67	16.5	3.1	16.5	AUG 11
AUG 21	37.8	12.9	35.5	61.5 54	20.5 67	94 65	68.6	24.2	73.0	9 66	20.7	8.3	19.0	AUG 21
SEP 1	35.3	9.3	34.5	53.4 70	22.4 67	100 70	66.0	21.2	63.5	13 67	20.1	5.1	21.0	SEP 1
SEP 11	42.4	13.1	40.0	71.0 59	27.1 51	94 59	75.3	17.6	80.5	11 68	21.8	6.3	20.5	SEP 11
SEP 21	45.5	12.3	46.0	69.0 59	20.5 67	94 69	77.6	19.6	88.0	7 67	25.9	7.9	26.5	SEP 21
OCT 1	54.8	12.6	55.0	87.8 51	36.3 66	100 69	88.1	12.8	93.0	19 52	30.8	12.3	28.0	OCT 1
OCT 11	58.9	13.0	56.0	89.4 51	33.8 69	100 70	86.8	10.6	89.5	21 69	37.5	11.5	34.0	OCT 11
OCT 21	70.0	9.7	72.0	90.6 51	48.8 65	100 70	93.0	7.8	93.0	28 65	45.4	13.0	45.0	OCT 21
MONTH														MONTH
MAY	44.1	6.1	43.5	56.6 61	34.6 58	100 67	89.8	6.2	92.0	10 66	17.9	3.8	18.0	MAY
JUN	44.2	5.4	44.0	57.4 53	34.5 60	100 53	90.1	4.8	90.5	8 65	19.3	4.9	18.5	JUN
JUL	33.7	4.7	33.0	43.7 55	23.9 60	94 70	80.5	13.0	86.0	11 53	17.0	3.3	16.5	JUL
AUG	33.5	8.0	31.5	47.1 64	19.5 67	94 65	82.8	14.8	87.5	5 61	14.1	3.6	15.5	AUG
SEP	41.0	7.8	40.5	60.8 59	24.9 67	100 70	89.9	7.1	93.0	7 67	17.2	4.5	17.0	SEP
OCT	61.5	9.6	58.5	89.3 51	50.3 66	100 70	96.0	3.7	93.5	19 52	28.8	9.8	26.0	OCT

RELATIVE HUMIDITY

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1970

PERIOD BEGINS	NUM. YRS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
		10-DAY AND MONTHLY PERIOD MEANS					10-DAY AND MONTHLY EXTREME DAILY VALUES								
JUL 1	19	53.3	11.1	53.0	72.4#55	31.3 68	100 66	85.3	14.2	89.0	18 52	31.3	10.0	31.0	JUL 1
JUL 11	20	45.6	9.7	46.0	62.0 57	24.4 60	100 65	69.6	19.5	74.0	15 60	27.8	6.7	29.0	JUL 11
JUL 21	20	42.0	10.9	40.5	70.3 55	28.3 51	100 70	69.0	23.5	63.5	18 60	25.8	4.6	26.5	JUL 21
AUG 1	20	46.5	13.6	43.5	76.9 57	28.9 67	100 64	73.5	20.3	70.5	10 70	26.5	10.1	26.5	AUG 1
AUG 11	20	44.6	13.8	43.0	67.5#68	16.6 67	100 68	73.2	21.9	73.0	9 70	25.4	9.1	24.0	AUG 11
AUG 21	12	47.5	16.4	45.5	75.0#60	16.5 70	100 64	74.9	24.4	79.0	7 70	28.8	13.8	25.5	AUG 21
		53.0@													
MONTH															MONTH
JUL		46.8*	8.0		64.3 55	30.4 60	100 70	90.3	12.6	93.0	15 60	22.7	5.0	22.0	JUL
AUG		46.2*	11.3		67.1 57	23.6 67	100 68	89.6	13.3	97.0	7 70	22.1	8.1	22.0	AUG
		48.0@													

INCLUDES ESTIMATE FOR DAYS WITH MISSING DATA
* VALUE DERIVED FROM THE THREE 10-DAY MEANS
@ PRECEDING VALUE ADJUSTED TO COMPLETE 20-YR PERIOD

Table 28.—Frequency distribution of dry bulb temperatures (°F) observed at 3 p.m. P.s.t.

DRY BULB TEMPERATURE

PERCENTAGE FREQUENCY DISTRIBUTION OF DAILY VALUES
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

TEMPERATURE RANGE

PRD. BEGINS	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	85 TO 89	90 TO 94	95 TO 99	100 AND ABOVE	PRD. BEGINS
MAY 1									40	110	245	140	85	135	135	70	35	5				MAY 1
MAY 11								5	20	85	120	120	135	140	175	135	60	5				MAY 11
MAY 21								5	14	36	95	159	132	168	173	105	86	23	5			MAY 21
JUN 1										25	80	65	160	160	160	185	115	45	5			JUN 1
JUN 11										5	55	100	170	135	165	145	110	100	15			JUN 11
JUN 21										10	50	70	155	140	205	185	75	90	20			JUN 21
JUL 1											30	50	60	110	170	145	215	125	90	5		JUL 1
JUL 11												10	30	70	135	160	240	185	135	30	5	JUL 11
JUL 21											5	9	27	55	73	150	250	273	136	23		JUL 21
AUG 1											5	15	30	75	110	150	260	180	145	25	5	AUG 1
AUG 11											10	35	40	35	100	175	240	205	100	60		AUG 11
AUG 21											36	73	77	150	168	177	123	105	68	23		AUG 21
SEP 1											30	55	100	135	190	175	160	105	50			SEP 1
SEP 11									5	10	90	170	130	100	140	140	155	55	5			SEP 11
SEP 21									5	55	105	145	175	135	115	120	105	35	5			SEP 21
OCT 1								20	30	145	145	210	140	100	135	75						OCT 1
OCT 11							10	5	50	195	300	190	115	95	40							OCT 11
OCT 21						5	18	127	191	245	236	105	45	27								OCT 21
MONTH																						MONTH
MAY								3	24	76	152	140	118	148	161	103	61	11	2			MAY
JUNE										13	62	78	162	145	177	172	100	78	13			JUN
JUL											11	23	39	77	124	152	235	197	121	19	2	JUL
AUG											18	42	50	89	127	168	205	161	103	35	2	AUG
SEP									3	22	75	123	135	123	148	145	140	65	20			SEP
OCT						2	10	53	94	197	227	166	98	73	56	24						OCT

DRY BULB TEMPERATURE

PERCENTAGE FREQUENCY DISTRIBUTION OF DAILY VALUES
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1970

TEMPERATURE RANGE

PRD. BEGINS	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	85 TO 89	90 TO 94	95 TO 99	100 AND ABOVE	PRD. BEGINS
JUL 1								16	32	58	111	163	116	174	168	121	37	5				JUL 1
JUL 11										20	55	105	160	160	225	180	80	15				JUL 11
JUL 21								5		32	50	41	127	195	282	200	64	5				JUL 21
AUG 1									20	30	55	70	155	215	220	155	60	15	5			AUG 1
AUG 11									15	56	31	71	128	214	255	133	66	31				AUG 11
AUG 21 (12 YRS)								15	38	53	75	113	195	135	128	135	68	45				AUG 21
MONTH																						MONTH
JUL								7	10	36	70	100	134	177	228	169	61	8				JUL
AUG (12 YRS)								4	23	45	51	81	155	195	210	142	64	28	2			AUG

Table 29.—Frequency distribution of relative humidity (percent) observed at 3 p.m. P.s.t.

RELATIVE HUMIDITY

PERCENTAGE FREQUENCY DISTRIBUTION OF DAILY VALUES
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

PRD. BEGINS	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	85 TO 89	90 TO 94	95 TO 99	100	PRD. BEGINS
MAY 1			15	50	101	141	111	60	55	101	65	60	40	50	20	40	30	20	30		10	MAY 1
MAY 11			5	55	175	100	115	90	75	70	55	45	30	40	20	25	30	30	35		5	MAY 11
MAY 21				32	86	159	145	118	73	64	59	55	23	23	23	50	27	36	27			MAY 21
JUN 1		5	5	30	90	95	160	115	130	65	25	40	50	55	25	45	25	20	20			JUN 1
JUN 11				10	65	150	125	155	115	85	70	15	45	30	35	10	45	20	25			JUN 11
JUN 21				30	75	155	220	85	70	70	40	65	25	15	20	20	40	40	25		5	JUN 21
JUL 1				60	105	175	180	130	100	25	35	40	40	15	10	25	20	30	10			JUL 1
JUL 11			10	70	195	205	230	95	35	50	25	20	15	5	25	10		10				JUL 11
JUL 21			18	177	250	205	150	68	36	18	9	9	18	5	5	5	9	14	5			JUL 21
AUG 1		5	20	200	185	195	100	65	60	20	25	25	25	20	20	5	20	5	5			AUG 1
AUG 11		5	70	145	275	175	95	35	40	50	10	25	5	15		30	10		15			AUG 11
AUG 21		5	45	114	145	159	114	55	64	45	41	50	41	14	36	5	14	27	27			AUG 21
SEP 1			25	105	175	155	165	95	65	40	45	15	35	5	15	20	15	15			10	SEP 1
SEP 11			10	60	115	180	130	105	60	40	50	30	15	35	45	35	25	40	25			SEP 11
SEP 21		5	10	25	85	130	130	90	125	75	45	65	25	30	15	40	15	30	60			SEP 21
OCT 1				5	55	70	130	80	110	40	75	35	55	50	50	60	15	40	95		35	OCT 1
OCT 11					20	20	80	125	80	60	65	90	60	55	80	35	60	75	65		30	OCT 11
OCT 21						9	23	27	18	77	68	59	109	95	82	77	100	64	141		50	OCT 21
MONTH																						MONTH
MAY			6	45	120	134	124	90	68	78	60	53	31	37	21	39	29	29	31		5	MAY
JUN		2	2	23	77	133	168	118	105	73	45	40	40	33	27	25	37	27	23		2	JUN
JUL			10	105	185	195	185	97	56	31	23	23	24	8	13	13	10	18	5			JUL
AUG		5	45	152	200	176	103	52	55	39	26	34	24	16	19	13	15	11	16			AUG
SEP		2	15	63	125	155	142	97	83	52	47	37	25	23	25	32	18	28	28		3	SEP
OCT				2	24	32	76	76	68	60	69	61	76	68	71	58	60	60	102		39	OCT

RELATIVE HUMIDITY

PERCENTAGE FREQUENCY DISTRIBUTION OF DAILY VALUES
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1970

PRD. BEGINS	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	85 TO 89	90 TO 94	95 TO 99	100	PRD. BEGINS
JUL 1				5	26	63	84	132	89	121	89	63	47	63	47	26	32	26	53		32	JUL 1
JUL 11				15	40	85	105	210	115	90	105	55	40	30	40	10	25	25	5		5	JUL 11
JUL 21				9	68	155	173	177	123	100	50	27	14	18	18			5	27		36	JUL 21
AUG 1			5	25	70	105	115	135	120	95	45	60	55	20	40	15	15	5	35		40	AUG 1
AUG 11		5	41	46	77	82	112	122	122	92	61	26	36	36	41	15	20	20	26		20	AUG 11
AUG 21 (12 YRS)		15	23	60	75	135	90	75	90	83	60	30	23	75	38		8	23	53		45	AUG 21
MONTH																						MONTH
JUL				10	46	104	123	174	110	103	80	48	33	36	34	11	18	18	28		25	JUL
AUG (12 YRS)		6	23	42	74	104	108	115	113	91	55	40	40	40	40	11	15	15	36		34	AUG

Table 30.—Frequency distribution of three-way combinations of dry bulb temperature (°F), relative humidity (percent), and windspeed (mi/h) at 3 p.m. P.s.t.

T E M P E R A T U R E - R E L A T I V E H U M I D I T Y - W I N D S P E E D
PERCENTAGE FREQUENCY OF OCCURRENCE FOR SELECTED COMBINATIONS
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

MONTH MAY

WIND SPEED 0-4 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94		2								
85-89	2		7							
80-84		12	25	7	2					
75-79		13	35	12	2					
70-74		10	45	30	8	2				
65-69		10	25	28	13	13				
60-64		2	8	18	17	8	10	5		
55-59			8	10	22	22	13	13	5	2
50-54				7	22	23	20	15	18	7
45-49			2	2	2	7	10	18	12	8
40-44								3	7	8
35-39									2	2
30-34										
30										
TOTAL	2	48	154	113	86	75	53	55	43	27
NUMBER	1	29	93	68	52	45	32	33	26	16

WIND SPEED 5-9 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89			3							
80-84		8	8							
75-79		15	16	8	2					
70-74		3	28	30	5					
65-69		5	20	12	15	3	2	2		
60-64		2	15	17	5	7		2	2	
55-59			8	8	8	10	2		3	
50-54		2		7	12	7	3	2	2	2
45-49				2	3		2	2	5	2
40-44						2		2		
35-39										
30-34										
30										
TOTAL		35	101	83	50	28	8	8	12	3
NUMBER	0	21	61	50	30	17	5	5	7	2

WIND SPEED 10-14 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84										
75-79										
70-74			2							
65-69				2						
60-64				2						
55-59						2				
50-54							2			
45-49										
40-44							2			
35-39										
30-34										
30										
TOTAL			2	3		2	3			
NUMBER	0	0	1	2	0	1	2	0	U	0

WIND SPEED 15-19 MPH / WIND SPEED GREATER/EQUAL 20 MPH / TOTAL NUMBER

TEMP. DEG F	15-19: 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100	≥20: 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100	TOTAL NUMBER
[100																					********
95-99																					********
90-94																					2********
85-89																					12********
80-84																					61********
75-79																					104********
70-74																					163********
65-69			2																		151********
60-64																					118********
55-59			2																		138********
50-54					2			2													151********
45-49																					75********
40-44																					23********
35-39																					3********
30-34																					********
30																					********
TOTAL			3		2			2													1000
NUMBER	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	603

MONTH JUN

WIND SPEED 0-4 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94			7	3						
85-89		9	31	19	2					
80-84		5	26	29	3					
75-79		10	48	46	9	2				
70-74		3	26	51	19	3	9			
65-69			10	36	29	22	5	3		
60-64			2	10	21	26	21	14	7	
55-59					3	5	9	21	15	9
50-54					2	3	7	3	27	9
45-49								3	2	3
40-44										
35-39										
30-34										
30										
TOTAL		27	149	195	87	62	50	44	51	21
NUMBER	0	16	87	114	51	36	29	26	30	12

WIND SPEED 5-9 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94			3							
85-89		3	9	5						
80-84	2	2	19	12	2					
75-79		2	26	26	3					
70-74		3	22	17	17	5				
65-69			3	21	12	5				
60-64			2	7	26	12	10	3		
55-59				3		2	3	2	3	
50-54					3	2	3			
45-49							2		3	
40-44										
35-39										
30-34										
30										
TOTAL	2	10	84	91	63	26	19	5	7	
NUMBER	1	6	49	53	37	15	11	3	4	0

WIND SPEED 10-14 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84				2						
75-79			3							
70-74			2							
65-69										
60-64										
55-59						2				
50-54										
45-49										
40-44										
35-39										
30-34										
30										
TOTAL			5	2		2				
NUMBER	0	0	3	1	0	1	0	0	U	0

WIND SPEED 15-19 MPH / WIND SPEED GREATER/EQUAL 20 MPH / TOTAL NUMBER

TEMP. DEG F	15-19: 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100	≥20: 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100	TOTAL NUMBER
[100																					********
95-99																					********
90-94																					14********
85-89																					77********
80-84																					101********
75-79																					174********
70-74																					178********
65-69																					147********
60-64																					159********
55-59																					77********
50-54																					60********
45-49																					14********
40-44																					********
35-39																					********
30-34																					********
30																					********
TOTAL																					1000
NUMBER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	585

Table 30.—(con.)

T E M P E R A T U R E - R E L A T I V E H U M I D I T Y - W I N D S P E E D
PERCENTAGE FREQUENCY OF OCCURRENCE FOR SELECTED COMBINATIONS
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

MONTH JUL

WIND SPEED 0-4 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99		13	5	2						
90-94		31	46	15						
85-89		38	88	15	2					
80-84		20	84	43	15	2				
75-79			33	43	15	3	2			
70-74			15	40	17	12	8		2	
65-69			5	8	8	15	10	7	2	
60-64				2	3	8	3	8	5	
55-59						2		5	8	2
50-54							2	3	3	2
45-49										
40-44										
35-39										
30-34										
30										
TOTAL		103	276	167	60	41	25	23	20	3
NUMBER	0	62	167	101	36	25	15	14	12	2

WIND SPEED 5-9 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100		2								
95-99										
90-94		13	13	3						
85-89		17	26	12						
80-84		12	40	18	3					
75-79		7	22	25						
70-74			10	17	3	2		2		
65-69		2	3	7	7	3				
60-64				2	2	2	2			
55-59										
50-54									2	
45-49										
40-44										
35-39										
30-34										
30										
TOTAL		51	114	83	15	7	2	2	2	
NUMBER	0	31	69	50	9	4	1	1	1	0

WIND SPEED 10-14 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89		2	2							
80-84										
75-79										
70-74										
65-69			2							
60-64							2			
55-59										
50-54										
45-49										
40-44										
35-39										
30-34										
30										
TOTAL		2	3				2			
NUMBER	0	1	2	0	0	0	1	0	0	0

WIND SPEED 15-19 MPH / WIND SPEED GREATER/EQUAL 20 MPH / TOTAL NUMBER

TEMP. DEG F	15-19 MPH										GREATER/EQUAL 20 MPH										TOTAL NUMBER
[100																					2********
95-99																					20********
90-94																					123********
85-89																					200********
80-84																					237********
75-79																					149********
70-74																					126********
65-69																					78********
60-64																					38********
55-59																					17********
50-54																					12********
45-49																					********
40-44																					********
35-39																					********
30-34																					********
30																					********
TOTAL																					1000
NUMBER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	604

MONTH AUG

WIND SPEED 0-4 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100		2								
95-99	3	25								
90-94		53	17	2						
85-89		51	60	7						
80-84		27	91	25	3		2			
75-79		12	61	25	10	3				
70-74		3	27	28	22	10	5	2		
65-69			3	5	15	20	10	10		
60-64				3	7	13	12	5	7	
55-59					2	7	7	3	8	7
50-54							2		8	5
45-49										
40-44										
35-39										
30-34										
30										
TOTAL	3	173	259	95	58	53	37	20	23	12
NUMBER	2	104	156	57	35	32	22	12	14	7

WIND SPEED 5-9 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99		8								
90-94	2	25	7							
85-89	2	22	22							
80-84		13	32	8						
75-79	2	2	30	18	5	2				
70-74			8	13	8					
65-69			3	5	5	3	2	3		
60-64				2		2	2			
55-59						2	2	3		2
50-54									2	
45-49										
40-44										
35-39										
30-34										
30										
TOTAL	5	70	101	47	18	8	5	7	2	2
NUMBER	3	42	61	28	11	5	3	4	1	1

WIND SPEED 10-14 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89			2							
80-84		2								
75-79										
70-74										
65-69										
60-64										
55-59										
50-54										
45-49										
40-44										
35-39										
30-34										
30										
TOTAL		2	2							
NUMBER	0	1	1	0	0	0	0	0	0	0

WIND SPEED 15-19 MPH / WIND SPEED GREATER/EQUAL 20 MPH / TOTAL NUMBER

TEMP. DEG F	15-19 MPH										GREATER/EQUAL 20 MPH										TOTAL NUMBER
[100																					2********
95-99																					37********
90-94																					105********
85-89																					164********
80-84																					203********
75-79																					169********
70-74																					126********
65-69																					85********
60-64																					51********
55-59																					42********
50-54																					17********
45-49																					********
40-44																					********
35-39																					********
30-34																					********
30																					********
TOTAL																					1000
NUMBER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	602

Table 30.—(con.)

TEMPERATURE - RELATIVE HUMIDITY - WINDSPEED
PERCENTAGE FREQUENCY OF OCCURRENCE FOR SELECTED COMBINATIONS
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

MONTH SEP

TEMP. DEG F	WIND SPEED 0-4 MPH, RELATIVE HUMIDITY 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100	WIND SPEED 5-9 MPH, RELATIVE HUMIDITY 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100																				
95-99																				
90-94		10	3									5								
85-89		23	31	2								9	3							
80-84		17	73	26	3	2						9	12							
75-79		7	75	35	2	2						2	14	10						
70-74	2	7	45	40	21	2						3	14	10						
65-69			23	23	36	12	5	2	2			2	9	7	9					
60-64			9	28	31	24	9	7	5				5	3	5	5	3			
55-59			5	7	14	17	14	21	9	9			2	5	2	7	5		3	
50-54		2	2	7	3	5	7	9	19	16			2					3	2	
45-49				2			2	9	3	5										
40-44																2				
35-39																				
30-34																				
30																				
TOTAL	2	66	265	168	111	64	36	47	38	29		29	61	36	16	14	9	3	5	
NUMBER	1	38	153	97	64	37	21	27	22	17	0	17	35	21	9	8	5	2	3	0

TEMP. DEG F	WIND SPEED 10-14 MPH, RELATIVE HUMIDITY 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84										
75-79										
70-74										
65-69										
60-64										
55-59										
50-54										
45-49										
40-44										
35-39										
30-34										
30										
TOTAL										
NUMBER	0	0	0	0	0	0	0	0	U	0

TEMP. DEG F	WIND SPEED 15-19 MPH										WIND SPEED GREATER/EQUAL 20 MPH										TOTAL NUMBER
[100																					********
95-99																					********
90-94																					19********
85-89																					68********
80-84																					142********
75-79																					146********
70-74																					144********
65-69																					128********
60-64																					135********
55-59																					120********
50-54																					76********
45-49																					21********
40-44																					2********
35-39																					********
30-34																					********
30																					********
TOTAL																					1000
NUMBER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	577

MONTH OCT

TEMP. DEG F	WIND SPEED 0-4 MPH, RELATIVE HUMIDITY 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100	WIND SPEED 5-9 MPH, RELATIVE HUMIDITY 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100																				
95-99																				
90-94																				
85-89																				
80-84																				
75-79		2	13	6									2							
70-74		2	13	19	11		2						4	6						
65-69			9	26	32	4	4						2		2					
60-64			6	24	17	28	9	6	2				2		2	2				
55-59			9	35	37	22	22	15	6	7				7	4	6				
50-54			2	13	20	32	35	32	39	19				9	4	4	7		2	2
45-49			2	6	9	22	33	43	30	35					2	4		2		4
40-44						4	11	17	19	33						2	2	2		4
35-39						2	6	2	19	30							2			
30-34									6	6										
30																			2	
TOTAL		4	54	128	126	113	122	113	119	130			9	22	13	17	11	4	4	9
NUMBER	0	2	29	69	68	61	66	61	64	70	0	0	5	12	7	9	6	2	2	5

TEMP. DEG F	WIND SPEED 10-14 MPH, RELATIVE HUMIDITY 1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84										
75-79										
70-74										
65-69										
60-64										
55-59										
50-54										
45-49										
40-44							2			
35-39										
30-34										
30										
TOTAL							2			
NUMBER	0	0	0	0	0	0	1	0	U	0

TEMP. DEG F	WIND SPEED 15-19 MPH										WIND SPEED GREATER/EQUAL 20 MPH										TOTAL NUMBER
[100																					********
95-99																					********
90-94																					********
85-89																					********
80-84																					********
75-79																					22********
70-74																					56********
65-69																					78********
60-64																					96********
55-59																					171********
50-54																					219********
45-49																					191********
40-44																					95********
35-39																					59********
30-34																					11********
30																					2********
TOTAL																					1000
NUMBER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	539

Table 30.—(con.)

T E M P E R A T U R E - R E L A T I V E H U M I D I T Y - W I N D S P E E D
PERCENTAGE FREQUENCY OF OCCURRENCE FOR SELECTED COMBINATIONS
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100202 GISBORNE LO 1951-1970

MONTH JUL

WIND SPEED 0-4 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89		3	2							
80-84		3	15	5						
75-79		2	21	21	5	3				
70-74			13	21	10	7	3			
65-69			2	18	28	5	5			
60-64			2	8	15	5	5	3	2	
55-59						8	7	5	3	
50-54						2	3	5	5	3
45-49					2				2	7
40-44									2	
35-39										2
30-34										
30										
TOTAL		8	54	74	59	30	23	13	13	12
NUMBER	0	5	33	45	36	18	14	8	8	7

WIND SPEED 5-9 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89			3							
80-84			12	15	3					
75-79		7	36	31	8					
70-74			13	67	33	8				
65-69			5	23	31	12	2			
60-64				8	21	15	5	2		
55-59				5	3	15	7	10	7	
50-54						2	8	3	5	7
45-49									5	7
40-44								2		5
35-39										
30-34										
30										
TOTAL		7	69	150	100	51	21	16	16	18
NUMBER	0	4	42	91	61	31	13	10	10	11

WIND SPEED 10-14 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84			5	3						
75-79			15	12	2					
70-74			7	18	13	3				
65-69			3	21	8	3	3			
60-64				7	12	12	3			
55-59				2	8	2	12	3		
50-54					2		3	5	7	5
45-49								2		8
40-44										2
35-39										3
30-34										
30										
TOTAL			30	63	44	20	21	10	7	18
NUMBER	0	0	18	38	27	12	13	6	4	11

WIND SPEED 15-19 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84										
75-79			2							
70-74			3	5	2					
65-69				3	2		2			
60-64				3	2	3	2			
55-59						3				
50-54				2		2				
45-49								2		3
40-44										
35-39										2
30-34										
30										
TOTAL			5	13	5	8	3	2		5
NUMBER	0	0	3	8	3	5	2	1	0	3

WIND SPEED GREATER/EQUAL 20 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84										
75-79			2							
70-74				2						
65-69				2						
60-64				2						
55-59						2				
50-54							3			
45-49										
40-44										
35-39										
30-34										
30										
TOTAL			2	5		2	3			
NUMBER	0	0	1	3	0	1	2	0	0	0

TOTAL NUMBER

TEMP. DEG F	TOTAL NUMBER
[100	********
95-99	********
90-94	********
85-89	8********
80-84	61********
75-79	166********
70-74	229********
65-69	178********
60-64	135********
55-59	100********
50-54	71********
45-49	36********
40-44	10********
35-39	7********
30-34	********
30	********
TOTAL	1000
NUMBER	608

MONTH AUG

WIND SPEED 0-4 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94		2								
85-89		6	6							
80-84		6	15							
75-79		2	19	13	2					
70-74		2	10	21	6	4	6			
65-69			4	17	10	2	4	2		
60-64				2	17	13	4	4		
55-59					4	4	2	6	6	
50-54							2	2	6	6
45-49							4			6
40-44										6
35-39										
30-34										
30										
TOTAL		17	54	54	38	23	21	13	12	17
NUMBER	0	9	28	28	20	12	11	7	6	9

WIND SPEED 5-9 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89	2	8	2							
80-84	2	13	13	6						
75-79	2	8	44	17	4					
70-74		4	21	48	21	8	2			
65-69	2		13	42	44	8	4			
60-64		2		10	29	13	8	6	2	
55-59				2	2	10	12	8	2	
50-54							4	2	4	6
45-49						2	2	4	4	13
40-44									2	13
35-39										4
30-34										
30										
TOTAL	8	35	94	125	100	40	31	19	13	36
NUMBER	4	18	49	65	52	21	16	10	7	13

WIND SPEED 10-14 MPH — RELATIVE HUMIDITY

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89	2		4							
80-84	2	2		4						
75-79		4	15	2	2					
70-74		2	10	29	6	4				
65-69		2		6	15	4				
60-64				8	10	6	6	2		
55-59					4	2	6	6		2
50-54					2		6	2	4	2
45-49									2	6
40-44										2
35-39										
30-34										
30										
TOTAL	4	10	29	48	38	15	17	10	6	12
NUMBER	2	5	15	25	20	8	9	5	3	6

WIND SPEED 15-19 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84										
75-79			2	4						
70-74				4	4					
65-69			2	2		6				
60-64					4	2	2	2		
55-59					2					
50-54										2
45-49						2				
40-44										
35-39										
30-34										
30										
TOTAL			4	10	10	10	2	2		2
NUMBER	0	0	2	5	5	5	1	1	0	1

WIND SPEED GREATER/EQUAL 20 MPH

TEMP. DEG F	1 TO 10	11 TO 20	21 TO 30	31 TO 40	41 TO 50	51 TO 60	61 TO 70	71 TO 80	81 TO 90	91 TO 100
[100										
95-99										
90-94										
85-89										
80-84			2							
75-79		2	2							
70-74			2							
65-69				2	2		2			
60-64					2		2			
55-59							2			
50-54							2			
45-49										2
40-44										
35-39										
30-34										
30										
TOTAL		2	6	2	4		8			2
NUMBER	0	1	3	1	2	0	4	0	0	1

TOTAL NUMBER

TEMP. DEG F	TOTAL NUMBER
[100	********
95-99	********
90-94	2********
85-89	29********
80-84	65********
75-79	144********
70-74	211********
65-69	194********
60-64	154********
55-59	79********
50-54	50********
45-49	46********
40-44	23********
35-39	4********
30-34	********
30	********
TOTAL	1000
NUMBER	521

Table 31.—Daily maximum temperature (°F) at fire-weather stations in Priest River Experimental Forest; statistics based on 24-hour period ending at 3 p.m. P.s.t. Data are for complete 20 years, 1951-70, at clearcut station; for indicated numbers of years at Gisborne Lookout

MAXIMUM DAILY TEMPERATURE

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

PERIOD BEGINS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
	10-DAY AND MONTHLY PERIOD MEANS					10-DAY AND MONTHLY EXTREME DAILY VALUES								
MAY 1	63.9	5.9	62.0	75.3 57	54.7 61	89 66	74.4	7.4	74.0	42 61	52.2	6.7	51.0	MAY 1
MAY 11	68.5	4.7	69.0	76.9 58	59.6 66	87 56	79.7	4.4	79.5	44 67	54.8	5.9	55.0	MAY 11
MAY 21	70.4	5.9	69.0	85.0 58	60.9 55	92 58	80.1	5.9	80.5	48 60	59.7	7.1	58.5	MAY 21
JUN 1	73.6	5.6	72.0	83.5 69	65.9 54	92 70	82.2	5.1	81.0	47 66	62.9	6.9	63.0	JUN 1
JUN 11	74.5	5.7	72.0	85.4 61	66.5 54	94 61	83.7	5.1	82.0	56 70	63.9	5.8	63.5	JUN 11
JUN 21	75.3	5.0	74.0	83.5 70	65.9 69	94 55	83.8	6.0	82.5	52 65	63.0	4.7	63.5	JUN 21
JUL 1	80.1	4.8	79.0	90.6 68	70.5 55	97 64	89.5	4.2	88.5	54 55	68.3	6.7	69.0	JUL 1
JUL 11	84.6	4.9	84.5	95.0 60	76.6 63	101 60	92.3	4.3	93.5	60 65	74.7	6.3	75.0	JUL 11
JUL 21	85.5	4.3	86.0	92.2 62	78.1 63	100 59	92.4	4.0	92.0	65 65	76.0	6.8	77.0	JUL 21
AUG 1	84.8	5.2	86.0	93.1 61	75.1 64	105 61	92.6	5.4	94.0	62 56	75.1	6.9	77.0	AUG 1
AUG 11	84.5	6.1	84.0	97.8 67	72.0 68	101 67	91.4	5.0	91.5	56 59	73.8	10.1	76.0	AUG 11
AUG 21	78.6	7.1	77.0	90.3 70	65.4 60	98 70	89.6	6.9	89.0	54 66	67.9	8.6	67.0	AUG 21
SEP 1	77.9	5.9	77.5	88.1 55	68.1 64	97 67	86.3	6.0	86.0	56 64	67.6	8.1	68.0	SEP 1
SEP 11	73.1	6.5	73.0	82.3 56	58.0 65	92 69	84.2	6.5	84.5	49 65	60.4	6.2	59.5	SEP 11
SEP 21	69.3	7.6	67.5	83.8 52	58.1 61	91 66	78.1	8.3	76.5	49 68	58.5	7.5	57.5	SEP 21
OCT 1	63.6	5.7	63.0	78.9 52	56.0 69	82 52	74.6	5.8	76.5	40 58	51.4	7.8	51.5	OCT 1
OCT 11	58.7	5.7	58.0	68.8 52	48.6 51	75 63	66.5	6.4	67.5	40 51	49.8	4.7	49.5	OCT 11
OCT 21	52.6	5.4	52.0	61.7 52	43.5 51	72 52	61.0	7.1	62.5	33 57	43.5	5.7	43.5	OCT 21
MONTH														MONTH
MAY	67.7	3.9	67.0	78.6 58	61.4 55	92 58	82.9	4.4	84.0	42 61	49.8	4.3	49.5	MAY
JUN	74.5	3.5	73.5	82.4 61	69.1 53	94 61	87.4	3.8	87.0	47 66	58.7	4.7	59.5	JUN
JUL	83.5	3.0	83.0	90.5 60	77.6 63	101 60	94.7	3.2	95.0	54 55	66.9	6.1	67.5	JUL
AUG	82.5	5.0	82.0	91.9 67	75.5 64	105 61	95.4	4.1	95.5	54 66	66.1	8.4	64.5	AUG
SEP	73.4	4.9	73.0	81.7 67	64.2 65	97 67	88.0	5.3	88.5	49 68	55.3	3.9	56.0	SEP
OCT	58.1	4.4	56.0	69.5 52	51.5 51	82 52	75.1	4.8	76.5	33 57	42.2	4.5	41.5	OCT

MAXIMUM DAILY TEMPERATURE

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1970

PERIOD BEGINS	NUM. YRS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
		10-DAY AND MONTHLY PERIOD MEANS					10-DAY AND MONTHLY EXTREME DAILY VALUES								
JUL 1	18	67.8	5.6	68.5	77.5 68	56.4#55	85 64	77.4	4.2	77.5	39 55	56.2	8.1	58.0	JUL 1
JUL 11	19	72.4	4.8	72.0	82.1 60	64.5 63	87 70	79.7	4.6	79.0	51 63	61.3	6.3	60.0	JUL 11
JUL 21	20	73.1	4.7	72.0	81.1 62	65.7 70	91 59	79.9	4.6	60.0	47 65	61.6	6.1	64.0	JUL 21
AUG 1	19	72.1	5.1	72.0	81.5 61	61.3 64	95 61	80.5	5.9	81.0	46 56	61.1	7.0	61.0	AUG 1
AUG 11	19	72.3	6.4	71.0	86.0 67	57.5#68	88 67	79.2	4.8	78.0	42 68	61.0	11.1	63.0	AUG 11
AUG 21	12	69.4 66.5@	7.6	68.0	80.1 70	51.0#60	90 70	80.5	8.5	83.0	45 64	58.2	8.4	60.0	AUG 21
MONTH															MONTH
JUL		71.2*	3.1		78.0 60	66.1#55	91 59	82.2	3.8	82.5	39 55	53.7	7.3	53.0	JUL
AUG		71.2* 70.2@	4.6		79.9 61	62.0#64	95 61	83.9	5.0	84.0	42 68	54.5	7.7	57.0	AUG

INCLUDES ESTIMATE FOR DAYS WITH MISSING DATA
* VALUE DERIVED FROM THE THREE 10-DAY MEANS
@ PRECEDING VALUE ADJUSTED TO COMPLETE 20-YEAR PERIOD

Table 32.—Daily minimum temperature (°F) as in table 31

MINIMUM DAILY TEMPERATURE

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMPER 100205 PRIEST RIVER EXP FOR (CLEARCUT) 1951-1970

	10-DAY AND MONTHLY PERIOD MEANS					10-DAY AND MONTHLY EXTREME DAILY VALUES								
PERIOD BEGINS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
MAY 1	33.6	3.0	33.5	39.2 57	26.9 65	48 51	42.1	3.3	43.0	16 54	25.9	4.0	26.0	MAY 1
MAY 11	35.9	2.5	35.0	41.7 57	29.8 63	51 70	44.4	4.2	44.5	22 59	28.1	3.6	27.0	MAY 11
MAY 21	38.6	3.2	38.0	45.5 58	32.5 51	53 66	47.7	3.7	48.0	24 64	30.4	4.6	30.5	MAY 21
JUN 1	42.3	3.6	42.5	48.4 69	36.3 60	58 70	50.6	4.4	51.0	27 51	33.4	3.5	33.0	JUN 1
JUN 11	42.1	2.7	41.0	47.6 61	38.0 55	59 63	50.7	3.5	50.5	27 56	32.8	3.9	32.0	JUN 11
JUN 21	42.2	3.3	41.5	48.2 70	36.6 56	60 70	51.6	4.8	51.0	29 64	34.1	2.9	34.0	JUN 21
JUL 1	43.3	2.6	43.5	47.1 63	38.7 62	62 68	52.1	4.3	52.5	30 52	35.0	2.9	35.0	JUL 1
JUL 11	44.4	2.7	43.5	49.7 55	39.8 62	63 55	53.2	5.1	53.0	30 62	37.7	3.8	38.0	JUL 11
JUL 21	42.9	3.1	42.0	50.0 55	37.2 54	59 64	51.8	6.0	52.5	32 63	35.7	3.2	34.5	JUL 21
AUG 1	42.4	3.7	41.0	50.1 65	37.5 69	60 65	51.2	6.2	52.0	31 57	35.6	3.8	34.5	AUG 1
AUG 11	41.4	3.2	41.5	46.5 61	36.5 70	59 65	50.3	4.5	51.0	30 69	34.2	2.7	34.0	AUG 11
AUG 21	40.9	3.5	41.0	45.6 61	33.0 55	59 66	50.7	5.3	51.5	27 69	32.2	4.0	31.5	AUG 21
SEP 1	37.7	3.0	38.0	42.9 70	31.2 56	60 67	48.4	4.8	48.0	22 62	29.2	4.0	28.5	SEP 1
SEP 11	36.3	4.4	36.0	43.9 59	30.0 70	55 63	45.7	5.2	48.0	18 57	27.4	4.7	27.0	SEP 11
SEP 21	35.0	4.0	35.0	42.4 69	28.7 58	56 67	45.1	4.4	45.5	21 70	26.6	5.0	26.0	SEP 21
OCT 1	32.4	3.6	31.5	42.2 51	26.8 52	51 51	42.5	5.0	42.5	18 58	24.6	3.9	23.5	OCT 1
OCT 11	31.7	4.0	31.5	38.5 55	21.8 69	51 67	42.2	4.9	42.0	16 69	22.8	3.7	22.5	OCT 11
OCT 21	30.3	3.5	30.0	35.9 60	22.6 58	47 63	40.3	4.4	41.5	15 70	21.1	3.9	21.0	OCT 21
MONTH														MONTH
MAY	36.1	2.0	35.0	40.2 57	33.1 55	53 66	48.8	3.1	49.0	16 54	24.9	3.7	24.5	MAY
JUN	42.2	2.3	41.0	46.3 69	38.6 60	60 70	54.6	3.1	53.5	27 56	31.0	2.3	32.0	JUN
JUL	43.5	1.8	43.0	47.7 55	40.8 53	63 55	55.9	5.0	55.0	30 62	33.0	1.5	33.0	JUL
AUG	41.5	2.5	41.0	46.4 65	36.5 55	60 65	54.6	3.5	55.5	27 69	31.1	2.7	31.0	AUG
SEP	36.3	2.7	35.0	40.6 59	32.9 60	60 67	50.2	3.6	50.0	18 57	24.1	3.4	23.5	SEP
OCT	31.4	2.5	31.0	35.2 51	26.0 52	51 67	45.6	3.3	45.0	15 70	19.8	3.1	20.0	OCT

MINIMUM DAILY TEMPERATURE

MEAN, STANDARD DEVIATION, AND EXTREME VALUES

STATION NUMBER 100202 GISBORNE LOOKOUT 1951-1970

	10-DAY AND MONTHLY PERIOD MEANS						10-DAY AND MONTHLY EXTREME DAILY VALUES								
PERIOD BEGINS	NUM. YRS	MEAN	STD. DEV.	MEDIAN	HIGHEST AVG,YR	LOWEST AVG,YR	HIGH,YR	AVG. HIGH	STD. DEV.	MEDIAN HIGH	LOW,YR	AVG. LOW	STD. DEV.	MEDIAN LOW	PERIOD BEGINS
JUL 1	18	47.8	4.5	47.0	58.3 68	40.0#55	65 68	57.6	5.1	57.5	30 55	37.9	3.8	39.0	JUL 1
JUL 11	19	50.7	4.6	49.5	62.1 60	44.2 68	69 60	59.5	4.6	60.0	35 57	42.0	4.6	42.5	JUL 11
JUL 21	20	51.3	3.9	51.0	58.2 60	44.7 70	68 60	60.3	4.3	60.0	33 54	40.9	5.3	40.5	JUL 21
AUG 1	19	50.6	4.1	50.0	58.0 65	43.9 56	70 61	60.1	4.7	60.0	33 56	41.3	4.2	42.0	AUG 1
AUG 11	19	50.5	5.5	49.0	65.9 67	43.3 66	70 67	58.5	4.8	59.0	33 54	42.3	7.2	40.0	AUG 11
AUG 21	12	47.6 46.3@	5.5	47.0	55.4 70	37.0#60	68 66	58.9	7.4	61.0	32 60	38.5	3.7	39.0	AUG 21
MONTH															MONTH
JUL		50.0*	2.8		57.0 60	46.6#55	69 60	62.2	3.5	62.5	30 55	36.5	3.3	37.0	JUL
AUG		49.5* 49.0@	3.8		58.1 67	43.5#64	70 67	63.1	4.1	63.0	32 60	37.6	3.4	38.0	AUG

INCLUDES ESTIMATE FOR DAYS WITH MISSING DATA
* VALUE DERIVED FROM THE THREE 10-DAY MEANS
@ PRECEDING VALUE ADJUSTED TO COMPLETE 20-YEAR PERIOD

Table 33.—Windspeed (mi/h) observed at 3 p.m. P.s.t.; average speed and frequency distribution by direction

W I N D   S P E E D - D I R E C T I O N
PERCENTAGE FREQUENCY OF OCCURRENCE BY DIRECTION FOR SELECTED SPEED INCREMENTS
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100205   PRIEST RIVER EXP FOR (CLEARCUT)   1951-1970

MONTH MAY — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	21	35	8	13									29	48	3.0
E	14	23	12	20									26	43	3.2
SE	26	43	44	74	4	7							74	124	4.3
S	43	72	69	115	4	7	1	2					117	196	4.2
SW	43	72	82	137	5	8	1	2					131	219	4.2
W	55	92	55	92	5	8	1	2					116	194	3.9
NW	27	45	24	40	2	3							53	89	3.7
N	21	35	11	18			1	2					33	55	3.5
CLM	19	32											19	32	.0
TOT	269	450	305	510	20	33	4	7					598		3.8

MONTH JUN — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	14	24	13	22	1	2							28	48	3.3
E	16	27	7	12	1	2							24	41	3.2
SE	33	57	53	91									86	148	3.8
S	49	84	51	87	3	5							103	177	3.7
SW	70	120	76	130	6	10							152	261	3.8
W	49	84	52	89	1	2							102	175	3.7
NW	19	33	18	31	3	5							40	69	3.9
N	17	29	9	15	2	3							28	48	3.5
CLM	20	34											20	34	.0
TOT	287	492	279	479	17	29							583		3.6

MONTH JUL — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	18	30	10	17									28	46	3.0
E	17	28	8	13									25	41	3.0
SE	33	55	33	55	2	3							68	113	3.8
S	41	68	57	94	5	8	1	2					104	172	4.1
SW	73	121	119	197	2	3							194	321	4.0
W	61	101	43	71	1	2							105	174	3.4
NW	31	51	12	20	2	3							45	75	3.2
N	9	15	12	20									21	35	3.6
CLM	14	23											14	23	.0
TOT	297	492	294	487	12	20	1	2					604		3.6

MONTH AUG — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	17	28	8	13									25	42	2.6
E	13	22	9	15									22	37	3.3
SE	34	57	33	55	2	3							69	115	3.6
S	49	82	56	93									105	175	3.7
SW	76	126	87	145	4	7							167	278	3.9
W	60	100	60	100									120	200	3.4
NW	30	50	14	23	1	2							45	75	3.2
N	30	50	11	18									41	68	2.9
CLM	7	12											7	12	.0
TOT	316	526	278	463	7	12							601		3.5

MONTH SEP — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	20	35	7	12									27	47	2.9
E	19	33	8	14									27	47	2.7
SE	45	79	27	47	2	3							74	129	3.1
S	40	70	45	79									85	149	3.6
SW	81	142	60	105	3	5							144	252	3.4
W	68	119	33	58									101	177	2.9
NW	45	79	14	24	2	3							61	107	2.9
N	28	49	5	9									33	58	2.5
CLM	20	35											20	35	.0
TOT	366	640	199	348	7	12							572		3.0

MONTH OCT — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	36	68	3	6	1	2							40	75	1.8
E	21	40	6	11									27	51	2.4
SE	44	83	12	23									56	105	2.3
S	46	87	24	45	1	2							71	134	3.2
SW	76	143	28	53									104	196	2.5
W	51	96	12	23									63	119	2.4
NW	49	92	6	11									55	104	1.9
N	39	73	1	2	1	2							41	77	1.8
CLM	74	139											74	139	.0
TOT	436	821	92	173	3	6							531		2.0

STATION NUMBER 100204   PRIEST LAKE RS   1951-1970

MONTH JUN — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	1	4	4	14	2	7							7	25	6.3
E	7	25	4	14			1	4					12	42	4.3
SE	9	32	18	63	10	35					1	4	38	133	5.9
S	18	63	28	98	20	70	5	18	1	4			72	253	6.6
SW	30	105	53	166	27	95	1	4	1	4			112	393	5.8
W	8	28	12	42	11	39							31	109	6.1
NW			4	14	2	7							6	21	6.0
N	1	4	2	7	4	14							7	25	7.4
CLM															
TOT	74	260	125	439	76	267	7	25	2	7	1	4	285		6.0

MONTH JUL — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	3	5											3	5	2.3
E	1	2	3	5	2	3							6	10	5.5
SE	14	23	40	65	10	16	3	5					67	110	5.8
S	47	77	89	146	47	77	2	3					185	303	5.8
SW	44	72	125	205	88	144	15	25					272	445	6.7
W	12	20	21	34	11	18	1	2					45	74	5.7
NW	3	5	7	11	10	16	2	3					22	36	7.4
N	2	3	4	7	2	3	1	2					9	15	6.8
CLM	2	3											2	3	.0
TOT	128	209	289	473	170	278	24	39					611		6.2

MONTH AUG — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	1	2											1	2	3.0
E	2	3	8	13	1	2							11	18	4.6
SE	17	28	27	44	10	16							54	88	4.7
S	49	80	69	112	41	67	5	8					164	266	5.6
SW	66	107	127	206	91	148	9	15					293	476	6.3
W	20	32	22	36	12	19	1	2					55	89	5.3
NW	5	8	18	29	6	10	2	3					31	50	6.6
N			2	3	2	3	1	2					5	8	8.6
CLM	2	3											2	3	.0
TOT	162	263	273	443	163	265	18	29					616		5.9

MONTH SEP — WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	2	5	1	3	1	3			1	3			5	13	8.0
E	6	16	5	13									11	29	3.7
SE	10	27	19	51	3	8							32	85	4.5
S	45	120	42	112	17	45							104	277	4.4
SW	44	117	65	173	29	77	6	16	1	3			145	386	5.6
W	18	48	10	27	12	32							40	106	5.1
NW	4	11	8	21	2	5	1	3					15	40	6.3
N	10	27	7	19	5	13							22	59	4.9
CLM	2	5											2	5	.0
TOT	141	375	157	418	69	184	7	19	2	5			376		5.1

W I N D   S P E E D - D I R E C T I O N
PERCENTAGE FREQUENCY OF OCCURRENCE BY DIRECTION FOR SELECTED SPEED INCREMENTS
-GIVEN TO TENTHS PERCENT, DECIMAL POINT OMITTED

STATION NUMBER 100202   GISBORNE LO   1951-1960

MONTH JUL

WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE	4	14	5	17	1	3			1	3			11	37	5.9
E	1	3	1	3			2	7					4	14	9.5
SE	1	3	6	20	4	14							11	37	6.9
S	3	10	29	99	35	119	12	41	2	7			81	276	8.9
SW	7	24	47	160	58	197	25	85	5	17			142	483	9.1
W	6	20	9	31	3	10	2	7	1	3			21	71	7.0
NW			7	24	7	24	2	7	1	3			17	58	9.4
N	1	3	2	7	1	3	2	7			1	3	7	24	11.4
CLM															
TOT	23	78	106	361	109	371	45	153	10	34	1	3	294		8.8

MONTH AUG

WIND SPEED, MPH

DIR.	0-3 N.	0-3 PCT	4-7 N.	4-7 PCT	8-12 N.	8-12 PCT	13-18 N.	13-18 PCT	19-24 N.	19-24 PCT	>24 N.	>24 PCT	TOTAL N.	TOTAL PCT	AVG SPEED
NE			2	8	1	4	2	8					5	20	10.2
E	1	4	1	4	1	4							3	12	4.7
SE			5	20	3	12	1	4					9	36	8.0
S	2	8	15	60	26	104	6	24			1	4	50	200	9.2
SW	10	40	46	184	42	168	18	72	8	32			124	496	9.2
W	2	8	24	96	9	36							35	140	6.4
NW	4	16	6	24	4	16	1	4					15	60	6.3
N	1	4	7	28	1	4							9	36	5.4
CLM															
TOT	20	80	106	424	87	348	28	112	8	32	1	4	250		8.4

Finklin, Arnold I. Climate of Priest River Experimental Forest, northern Idaho. Gen. Tech. Rep. INT-159. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station; 1983. 53 p.

Detailed climatic description of Priest River Experimental Forest; applies to much of the northern Idaho panhandle. Covers year-round pattern and focuses on the fire season. Topographic and local site differences in climate are examined; also, climatic trends or fluctuations during the past 70 years. Includes numerous tables and graphs. Written particularly for forest managers and researchers.

KEYWORDS: climate, mountain climatology, fire-weather, climatic fluctuations

The Intermountain Station, headquartered in Ogden, Utah, is one of eight regional experiment stations charged with providing scientific knowledge to help resource managers meet human needs and protect forest and range ecosystems.

The Intermountain Station includes the States of Montana, Idaho, Utah, Nevada, and western Wyoming. About 231 million acres, or 85 percent, of the land area in the Station territory are classified as forest and rangeland. These lands include grasslands, deserts, shrublands, alpine areas, and well-stocked forests. They supply fiber for forest industries; minerals for energy and industrial development; and water for domestic and industrial consumption. They also provide recreation opportunities for millions of visitors each year.

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