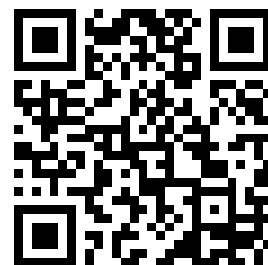

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DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

GEN. PUB.



DEPARTMENT OF COMMERCE

WEATHER BUREAU

✓ COOPERATIVE SNOW INVESTIGATIONS

HYDROMETEOROLOGICAL LOG

OF THE

WILLAMETTE BASIN SNOW LABORATORY

1947-48 and 1948-49

Water Years

AUGUST 1951

SOUTH PACIFIC DIVISION

CORPS OF ENGINEERS, U. S. ARMY

SAN FRANCISCO, CALIFORNIA

D103.2: Sm6²
082 952/5246



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TABLE OF CONTENTS

<u>Title</u>	<u>Page</u>
Introduction	1
Map of Willamette Basin Snow Laboratory	7
Table of Terrain Parameters for Stations	8
Site Maps of Laboratory Stations	9
Aerial Photographs of Station Sites	24
Photographs of Stations	27
Instrumentation of Laboratory	32
Chart Showing Status of Data	33
Synopsis of Hydrometeorological Data - 1947-1948	34
Synopsis of Hydrometeorological Data - 1948-1949	35
Synopsis of Hydrometeorological Data for Significant Periods of Streamflow	36
Hourly Data for Significant Periods of Streamflow	37
Summary of Temperatures, Precipitation, and Streamflow for 1947-1948 Water Year	42
Summary of Temperatures, Precipitation, and Streamflow for 1948-1949 Water Year	43
Chart showing Mean Streamflow, Temperature, and Precipitation	44
Seasonal Catch of Storage Gages - 1947-1948	45
Frequency of Precipitation at Station 1 (Headquarters)	46
Major Precipitation Periods	47
Hourly Precipitation at Station 1B	48
Snow Data - Mean Depth, Water Equivalent, Density	72
Six-hourly Precipitation at Station 2	80
Streamflow Data - 1947-1949	83
Daily Values of Hydrometeorological Elements	87
Upper Air Data for Medford, Oregon	108

COOPERATIVE SNOW INVESTIGATIONS

HYDROMETEOROLOGICAL LOG
OF THE WILLAMETTE BASIN SNOW LABORATORY

1947-1948 and 1948-1949 WATER YEARS

INTRODUCTION

1. General. This hydrometeorological log has been referred to previously in progress reports as Technical Report 21. It is essentially a presentation of basic observational data from the Willamette Basin Snow Laboratory of the Cooperative Snow Investigations of the Corps of Engineers (Department of the Army) and the Weather Bureau (Department of Commerce).

The background, organization, and objectives of this program along with brief descriptions of each of the three field laboratories, and tables showing the instrumentation and observational program, are given in Technical Report 6-4 of the Cooperative Snow Investigations.

2. Laboratory Area. a. Basin Map. A map of the Willamette Basin Snow Laboratory is included, showing topography, drainage, and the location of trails and observational stations. The map was prepared from aerial photographs, with controls and interpretations as noted on the map (page 7).

b. Terrain Parameters. On page 8 is a table on which are shown the terrain parameters for each station. Definitions of each of these parameters are given at the bottom of the summary table.

c. Station Site Maps. On pages 9-23 are site maps for stations 1 - 32 and for station 35, which have been prepared from field sketches. The scale of these maps is indicated, and the maps show the nature of the terrain and the exposures of the precipitation gages and snow courses.

d. Aerial Photographs. On pages 24-26 are aerial photographs of station sites which should be compared with the field sketches of station sites. Scale is indicated, as well as the location of each station. Some stations which are shown were not active

during the period of this log; these stations will be indicated by an asterisk beside the station number in the index which follows.

<u>Page 24:</u>	<u>Station #</u>	<u>Type</u>	<u>Remarks: location, elevation</u>
	1A	Meteorological Sta.	West Side Camp; elev. 4240'
	1B	Meteorological Sta.	Elev. 4059'
	1C	Snow course	Elev. 4243'
	2	Rain gage	South Squaw Mtn; elev. 4624'
	2B,3	Snow courses	Same location
	4	Snow course	600' north of Station 5; elev. 4180'
	5	Rain gage	Elev. 4160'
	*18	Rain gage	Elev. 4181'
	*19	Snow course	Same location
<u>Page 25:</u>	6	Rain gage	Elev. 4087'
	7	Snow course	Same location
	8	Rain gage	Wolf Meadow; elev. 3265'
	9	Snow course	400' west of Station 8
	10	Water stage recorder	Wolf Creek; elev. 2965'
	12	Rain gage	Carpenter Mtn. SW of Lookout; elev. 4950'
	13	Snow course	Same location
	14	Water stage recorder	Elev. 1959'
	*20	Rain gage	Elev. 3290'
	*20B	Snow course	Same location
	*25	Rain gage	Elev. 2120'
	*26	Snow course	Same location
	*27	Rain gage	Elev. 2120'
	*28	Snow course	Same location
	*29	Rain gage	Carpenter Mtn. SW of Lookout; elev. 5055'
	*30	Snow course	Same location
	*35	Ground Water well	Elev. 3330'
<u>Page 26:</u>	15	Rain gage	North Squaw Mtn.; elev. 4925'
	16	Snow course	Same location
	17	Snow course	Road junction; elev. 4525'
	*21	Rain gage	Confluence; elev. 2634'
	*22	Snow course	Same location
	23	Water stage recorder	Mann Creek; elev. 2490'
	24	Water stage recorder	Wolf Creek; elev. 2491'
	*31	Rain gage	Wolf Rock Saddle; elev. 3690'
	*32	Snow course	Same location
	*33	Water stage recorder	Upper Mann Creek; elev. 3978'
	*34	Snow course	Same location
	*36	Ground water well	Upper Mann Creek; elev. 3969'

e. Photographs of Stations and Instruments. On pages 27-31 are photographs showing some of the stations, instruments, and observational conditions in the Willamette Basin Snow Laboratory. Short descriptions of these photographs follow with the numbers of the photographs indicated.

1. Panorama of the basin showing the typical forest cover (about ninety per cent), taken from Squaw Mountain looking WSW, with Wolf Rock at extreme left. (August 6, 1948)
2. View of Carpenter Mountain, looking SE from East Bear Pass.
3. Bear Pass Road along Squaw Mountain. Elevation 4550 feet. (January 20, 1948)
4. Bear Pass Road near the seven mile post. Elevation 4400 feet. (January 15, 1948)
5. Station 2, looking north. (March, 1950)
6. Duraluminum Sacramento-Type Tower, 25 feet high, supporting 96" Stevens Gage at Station 6. Looking NW. (July 24, 1949)
7. Same station (Station 6), looking SW. (March, 1950)
8. Close-up showing typical mounting of instruments on tower. Station 21, looking SW. Note dense forest surrounding instrument and the slope of the terrain.
9. Station 8 at Wolf Meadow, looking NE. (March, 1950)
10. Observer at Station 33, looking west. (March, 1950)
11. Same station (Station 33) in background, looking north. (March, 1950)
12. Observer taking snow measurements at Station 16, ESE of Squaw Mountain. Station 15 in background showing Sacramento Type-B 200" storage gage used during period of this log. (April, 1948)
13. Observers taking snow measurements at Station 1C. (March, 1950)
14. Station 15, looking south. (December 11, 1947)
15. Meteorological station at Headquarters, Station 1A. (January, 1948)
16. Stations 31, 32, looking north. (March, 1950)
17. Observer at Station 36, Ground Water Well. (March, 1950)
18. Station 5, Rain gage.
19. Friez Tower at Headquarters Station, Station 1A. Note deflection of horizontal members of tower, due to projection condition of loading during the settlement of the snowpack. (July 23, 1949)
20. Looking upstream at Mann Creek Gage. (July, 1949)
21. Looking upstream at Blue River Gage. (July, 1949)

3. Observational Program. a. Instrumentation. A summary of the observational program is given on page 32 showing the elements observed and the number and type of instruments used each of the two seasons covered by this report.

b. Bar Chart. On page 33 is a bar chart showing on a time scale the period of record and the status of the data, including the height above ground of precipitation gages and the number of points in each snow course.

4. Processing and Organizing of Data. The data in this log are presented in sections, largely on a basis of elements. Each section corresponds to a portion of this narrative in which the data are briefly described. Where applicable, brief statements are included on the quality of the data and on any unusual observational conditions. In general, daily means, ranges, or totals of each available element are included for the period of record, 1 October 1947 to 30 September 1949, with hourly data being shown for selected portions of this period. There are a few photographs, and figures showing the relationships of certain combinations of elements.

The data reduction, transcription, computation, and related processes used in the preparation of this log have been controlled by random and stratified verification to produce the maximum volume of acceptable data. The tolerance which, in general, is that described in the manual of procedures of the Cooperative Snow Investigations, is based on the inherent characteristics of the instruments and observational methods, and is consistent with standard scientific and observational practice. Insofar as is practicable, values are estimated or interpolated where objective evidence is available in order to fill occasional gaps in the record.

5. Synopsis of Hydrometeorological Data. On page 34 the concurrent values of significant hydrometeorological elements for the 1947-1948 season are given on a time scale, October through June. On page 35 are similar data for the 1948-1949 season.

6. Data for Significant Periods of Streamflow. Data on streamflow, precipitation, temperature, daily snowfall, and snow depth are given on an expanded time scale for the following periods of the 1948-1949 season (page 36): 2-15 October 1948; 5-22 December 1948; 26 April through 6 May 1949; and 7-21 May 1949.

The tables on pages 37-41 give hourly values of air temperature at Eugene, Oregon; precipitation at Station 1B; and streamflow at Blue River, Mann Creek, and Wolf Creek for these significant periods of streamflow.

7. Precipitation, Snow, and Streamflow Data. On pages 42-43 are tables showing seasonal summaries of temperatures, monthly precipitation, and streamflow for the Willamette Basin Snow Laboratory stations and for the other stations mentioned below. Temperatures are given for the Headquarters Station (Station 1) of the laboratory and for McKenzie Bridge, Oregon, a nearby Weather Bureau cooperative station.

The 27-year monthly mean temperatures for McKenzie Bridge, Oregon, are included with the 1947-1948 data.

Monthly precipitation data for each laboratory station and for McKenzie Bridge, Oregon, are given along with the mean monthly precipitation figures for the stations indicated. The monthly precipitation data are based on mass curves derived from the data recorded from Sacramento Type-B 200" storage gages. The storage precipitation data for the 1948-1949 season are unreliable due to unsatisfactory weigh-outs. The 27-year monthly mean precipitation data for McKenzie Bridge, Oregon, is included with the data for 1947-1948.

The chart on page 44 shows by ordinates the values of the mean monthly streamflow for Blue River, Mann Creek, and Wolf Creek, with the monthly precipitation at the Headquarters Station, and by superimposed curves, the mean monthly temperature for Station 1A for the year 1948-1949.

On page 45 is a summary of the seasonal catch of storage gages for the year 1947-1948. The catch at Stations 12 and 15 appears deficient as compared with the catches at the other stations and with values of snowpack water equivalent nearby. The deficiency of the catch at these stations may be ascribed partly to the extreme steepness of the terrain at the stations, where strong updrafts prevail during storms. The stick measurements early in the season are not precise measures of precipitation due to the large ratio of the area of the bottom of the gage to that of the orifice.

These storage gage data were used in computing, from mass curves of available recorder data, the monthly precipitation values given in the tables on pages 42-43. Mass curves were made from the available stick readings and other data for 1948-1949, and adjustments were made and used in providing the values for the table on page 43.

Daily frequencies of precipitation at Headquarters Station (Station 1) are given on page 39. The record begins in November, 1947; the phase of precipitation was not reported until January, 1948. It may be noted that measurable precipitation occurred on about half the days during the period covered.

Major precipitation periods, showing the duration, total precipitation and the maximum daily and hourly rates of precipitation, are given on page 47.

A summary of the hourly precipitation at Station 1B, Headquarters Station, is given on pages 48-71 for the period October, 1947, to September, 1949. Special notice should be given to the symbols indicating estimated values, accumulations, and other irregularities. Details on the exposure of this and other stations may be found by referring to the site maps and table of terrain parameters.

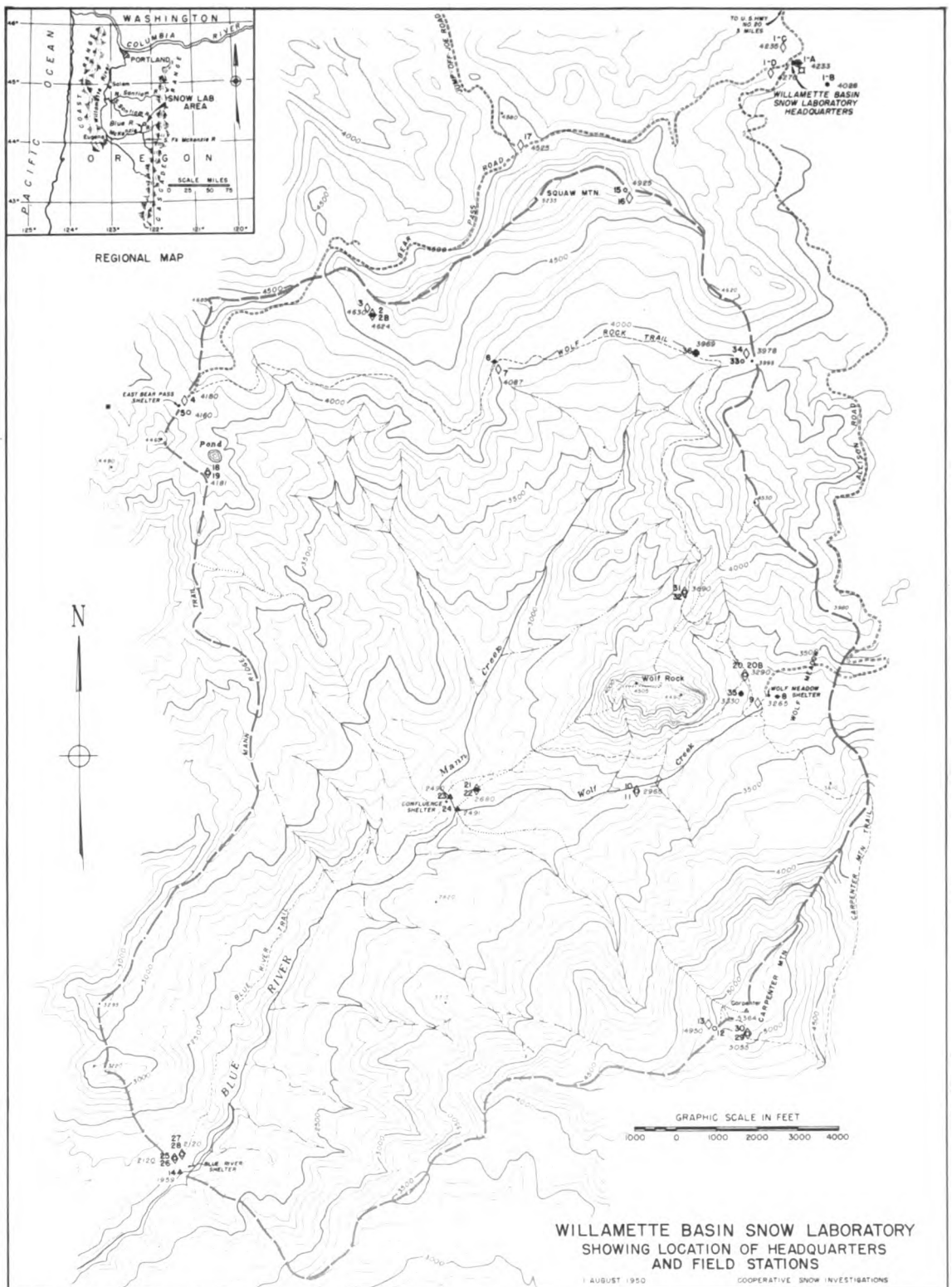
Snow data are given in four sections. The first section, page 72, covers the 1947-1948 season for selected observations at Station 1C, and for the observations at stations 2, 3, 4, 7, 9, 13, 16, and 19 for the mean depth and the range of depths. The second section, page 73, covers the 1947-1948 season for Station 1C for the mean depth and the range of depths. The third section, pages 74-77, covers the 1948-1949 season for stations 2, 3, 4, 7, 13, 16, 17, and 19 for water equivalent, density, and mean depth of snow, and for standard deviation and standard error. The fourth section, pages 78-79, covers these elements for Station 1C for the 1948-1949 season. The data on water equivalent and density for the 1947-1948 season were unreliable because of difficulties in taking adequate cores. For Station 1C daily data are presented for portions of each season. For the other stations the observations are made about twice each month.

Tables of six-hourly precipitation at Station 2 for January, 1949, through September, 1949, are given on pages 80-82.

On pages 83-86 are four tables showing the mean daily streamflow for Blue River during the 1947-1948 and 1948-1949 seasons and for Mann Creek and Wolf Creek for 1948-1949. These streamflow stations have been established, through a transfer of funds from the Corps of Engineers, by the United States Geological Survey. Although many of the measurements are made by Corps of Engineer employees, the USGS reduces the data and computes the streamflow. These streamflow data are provisional at the time of publication of this log.

8. Table of Daily Values of Hydrometeorological Elements. On pages 87-107 are the daily values, where available, for January, 1948, through September, 1949, for the following elements and stations: current weather, maximum and minimum temperatures, dew point temperatures and wind direction at 1600 PST, and snowfall at Station 1A; precipitation at Station 1B taken from midnight to midnight; depth, water equivalent, and density of the snowpack at Station 1C; and streamflow for Blue River, Mann Creek, and Wolf Creek. The dewpoint temperatures are computed by Weather Bureau psychrometric tables from wet and dry-bulb temperature observations or from hygrothermograph records.

9. Upper Air Data. A table of air temperature, wind direction and wind speed at the 700 millibar level for Medford, Oregon, 1500 GMT, October, 1947, to June, 1949, is given on page 108.



LEGEND

MEASUREMENT TAKEN	NONRECORDING	RECORDING
PRECIPITATION	○	●
PRECIPITATION, TEMPERATURE	○	●
SNOW COURSE	◇	
STREAM FLOW		▲
GROUND WATER WELLS		◆
SNOW TEMPERATURE, SOIL TEMPERATURE	⊠	

NOTE VERTICAL CONTROL - Allimeter Elevations by U S F S
HORIZONTAL CONTROL - Multiplex Extension between 4th order Triangulation
established by U S F S, 1927 General Adjustment
PROJECTION - Polyconic
PHOTOGRAPHY - U S F S, 15 August 1946
TOPOGRAPHY - By Multiplex Aero-projector
ACCURACY - Good Reconnaissance

ROAD, UNPAVED	---
TRAILS	---
100 FOOT CONTOURS	---
BOUNDARY OF SNOW LABORATORY	---
BOUNDARY OF SUB-DRAINAGE AREA WITHIN LABORATORY AREA	---
MAIN STREAMS	---
TRIBUTARY STREAMS	---
POND	○
ELEVATION OF TRIANGULATION STATION	△ 5364
ELEVATION OF PEAKS	X 3610

SOURCE - CORPS OF ENGINEERS MAP
PORTLAND DISTRICT, Dwg No WB-1-2/25, Dec 1949

STATION TOPOGRAPHIC PARAMETERS - WILLAMETTE BASIN GROW LABORATORY										
STATION - IDENTIFICATION	REMARKS	DATE ESTABLISHED	PERIOD OF OPERATION	ELEVATION (feet above M.S.L.)	EXPOSURE ORIENTATION ¹ (degrees)	SLOPE ² (%)	ASPECT ³ (degrees)	CURVATURE ⁴ Vert.	CURVATURE ⁴ Horz.	OPEN AREA ⁵
1-A Meteorological	Meteorological station near headquarters, 18 ft. tower.	27 Dec. 1947	to present	1433		0		-	0	
1-B Precipitation	Rising precipitation gage near headquarters, 10 ft. tower (Price).	31 Oct. 1947	to present	1438		5	25	-	0	
1-C Snow Course	6 pt. snow course near headquarters.	13 Feb. 1948	to present	1433		15	65	-	+	
2 Meteorological	S. W. face Squaw Mt., 25' tower installed 25 July 49 (Secta, Stevens gage); Stevens installed Feb. 49. Shelter house 20'. Hygrothermograph 15'.	10 Oct. 1947	to present	1464	95 - 10	80	210	-	+	2
2-B Snow Course	S.W. face Squaw Mt.	19 Jan. 1948	to present	1464	95 - 10	80	210	-	+	2
3 Snow Course	3 pt. snow course on S.W. face Squaw Mt.	19 Jan. 1948	to present	1490	125 - 145	25	225	-	+	2
4 Snow Course	10 pt. snow course at Bear Pass Shelter.	15 Jan. 1948	to present	1180	90 - 195; 230 - 310	middle	-			0
5 Precipitation	Secto Stor. gage, 20' tower.	20 Sep. 1947	to present	1360	40 - 210; 270 - 310	10	110	+	-	1
6 Meteorological	Wolf Rock Trail and Mann Creek- 20 ft. tower (Secta, Stevens gage); Hygrothermograph.	24 Sep. 1947	to present	1487	45 - 190	30	115	-	-	3
7 Snow Course	6 pt. snow course at Wolf Rock Trail and Mann Cr.	20 Jan. 1948	to present	1487	45 - 190	30	115	-	-	3
8 Meteorological	Wolf Meadow- 15 ft. tower (Secta gage); 10 ft. tower (hygrothermograph).	3 Oct. 1947	to present	3855	75 - 115; 220 - 250	flat	-	0	0	3
9 Snow Course	6 pt. snow course at Wolf Meadow	21 Jan. 1948	to present	3855	75 - 115; 220 - 250	5	120	-	+	0
10 Precipitation	Wolf Creek- 15 ft. tower (Secta gage).	5 Oct. 1947	to present	2955	250 - 295	10	305	-	-	0
12 Precipitation	Carpenter Mts- 20 ft. tower (Secta gage).	28 Sep. 1947	to present	1690	100 - 5	30	265	+	+	3
13 Snow Course	6 pt. snow course on Carpenter Mt.	6 Feb. 1948	to present	1690	100 - 5	30	265	+	+	3
14 Stream gage	Blue River	2 Nov. 1947	to present	1999	220 - 230	valley	-	-	-	0
15 Precipitation	S.W. face Squaw Mt- 15 ft. tower (Secta gage)	21 Sep. 1947	to present	1425	ridge	30	195	+	+	1
16 Snow Course	11 pt. snow course on S.W. face Squaw Mt.	25 Jan. 1948	to present	1425	ridge	30	195	+	+	1
17 Snow Course	6 pt. snow course at Junction Bear Pass and Jugg-off Joe Road	4 Feb. 1948	to present	1425	215 - 25	10	300	-	0	0
18 Precipitation	Mann Ridge- 15 ft. tower (Secta gage)	7 Jan. 1948	to present	1181	35 - 210	30	20	+	+	0
19 Snow Course	5 pt. snow course on Mann Ridge	7 Jan. 1948	to present	1181	35 - 210	30	20	+	+	0
20 Precipitation	Bear Wolf Rock- 20 ft. tower (Secta gage)	13 Aug. 1948	to present	3890	90 - 120; 195 - 215	5	20	-	-	0
20-B Snow Course	5 pt. snow course near Wolf Rock		to present	3890	90 - 120; 195 - 215	5	20	-	-	0
21 Meteorological	Near Confluence Shelter- 20 ft. tower (Stevens gage); 15 ft. tower (hygrothermograph)	20 Oct. 1948	to present	2680	350 - 5; 175 - 270	55	18	+	+	0
22 Snow Course	5 pt. snow course near Confluence Shelter		to present	2680	350 - 5; 175 - 270	55	18	+	+	0
23 Stream Flow	Stream gage on Mann Creek	20 Sep. 1948	to present	2120	210 - 220	5	110	-	-	0
24 Stream Flow	Stream gage on Wolf Creek	15 Sep. 1948	to present	2121	215 - 250	15	215	-	-	0
25 Precipitation	Blue River Trail- 10 ft. tower (Secta gage)	30 Aug. 1948	to present	2120	45 - 55; 210 - 225	25	195	+	+	0
26 Snow Course	3 pt. snow course near Blue River Trail and Blue River Shelter.			2120	45 - 55; 210 - 225	25	195	+	+	0
27 Precipitation	On Blue River Trail near Blue River Shelter- 10 ft. tower (Secta gage)	30 Aug. 1948	to present	2120	40 - 50; 215 - 210	20	150	+	+	0
28 Snow Course	3 pt. snow course same location station #27			2120	40 - 50; 215 - 210	20	150	+	+	0
29 Precipitation	S.W. face Carpenter Mts- 15 ft. tower (Secta gage)	17 Aug. 1948	to present	5095	40 - 380	10	250	0	+	3
30 Snow Course	3 pt. snow course same location station #29		to present	5095	40 - 380	10	250	0	+	3
31 Precipitation	Wolf Rock Middle- 15 ft. tower (Secta gage)	11 Aug. 1948	to present	3690	220 - 310	30	205	+	+	0
32 Snow Course	3 pt. snow course same location station #31		to present	3690	220 - 310	30	205	+	+	0
33 Precipitation	Winn Middle- 15 ft. tower (Secta gage)	5 Jul. 1948	to present	3978	50 - 110; 210 - 300	middle	-	-	+	2
34 Snow Course	6 pt. snow course same location station #33	5 Jul. 1948	to present	3978	50 - 110; 210 - 300	middle	-			2
35 Ground Water	Bear Wolf Meadow Shelter	5 Sep. 1948	to present	3330	75 - 110; 190 - 250	20	100	-	+	0
36 Ground Water	Wolf Rock Trail, three mile post	3 Sep. 1948	to present	3969	25 - 115; 190 - 300	30	200	+	-	0
GENERAL NOTES: 1. ORIENTATION EXPOSURE Part of horizon having no land over 100 ft. above the station within a half-mile radius, measured clockwise from 0° North. 2. SLOPE Increase in elevation per unit horizontal distance expressed in percent. Slopes given are the maximum at a given station stated to the nearest 5%. 3. ASPECT Direction of maximum slope measured clockwise from 0° North. 4. CURVATURE Convex + Concave - Neutral 0 5. OPEN AREA 0 - Less than an acre of open ground surface 1 - One acre to less than three acres of open ground surface 2 - Three acres to less than eight acres of open ground surface 3 - Eight acres or greater of open ground surface										

STATION - I-A - TOWER

1-C - S.C.

1-D - S.C

1-E - G.W. WELL

1-G - G.W. WELL

SCALE 1" = 100'

4300

DENSE TREES
/100 ±/

LOWELL HOUSE

HEADQUARTERS

STA. 1-E
GROUND, WATER WELL

STATION 1-A
METEOROLOGIC TOWER

HEMLOCK TREES BEA

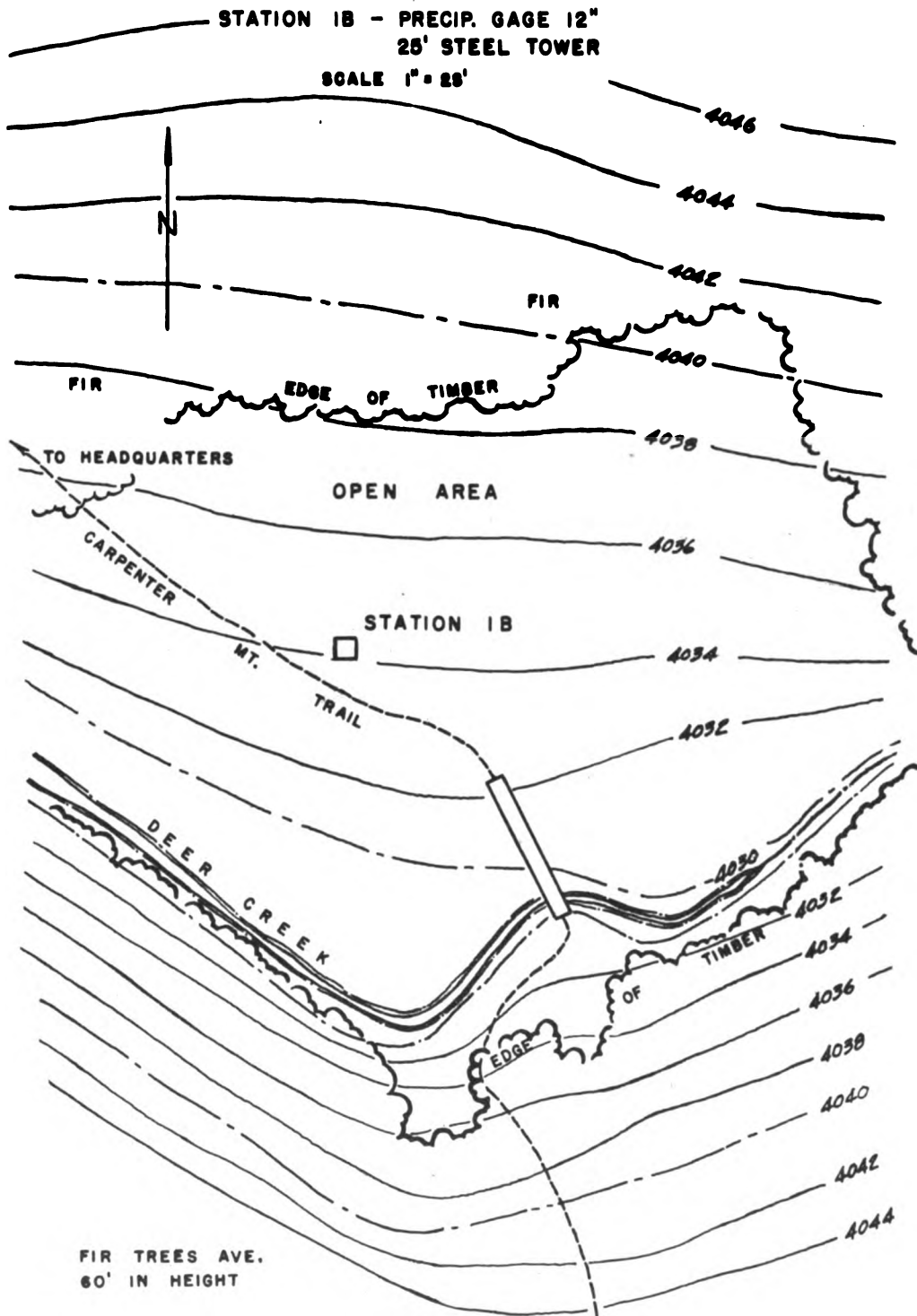
~~STATION - D~~

ALBERS

OPEN
AREA

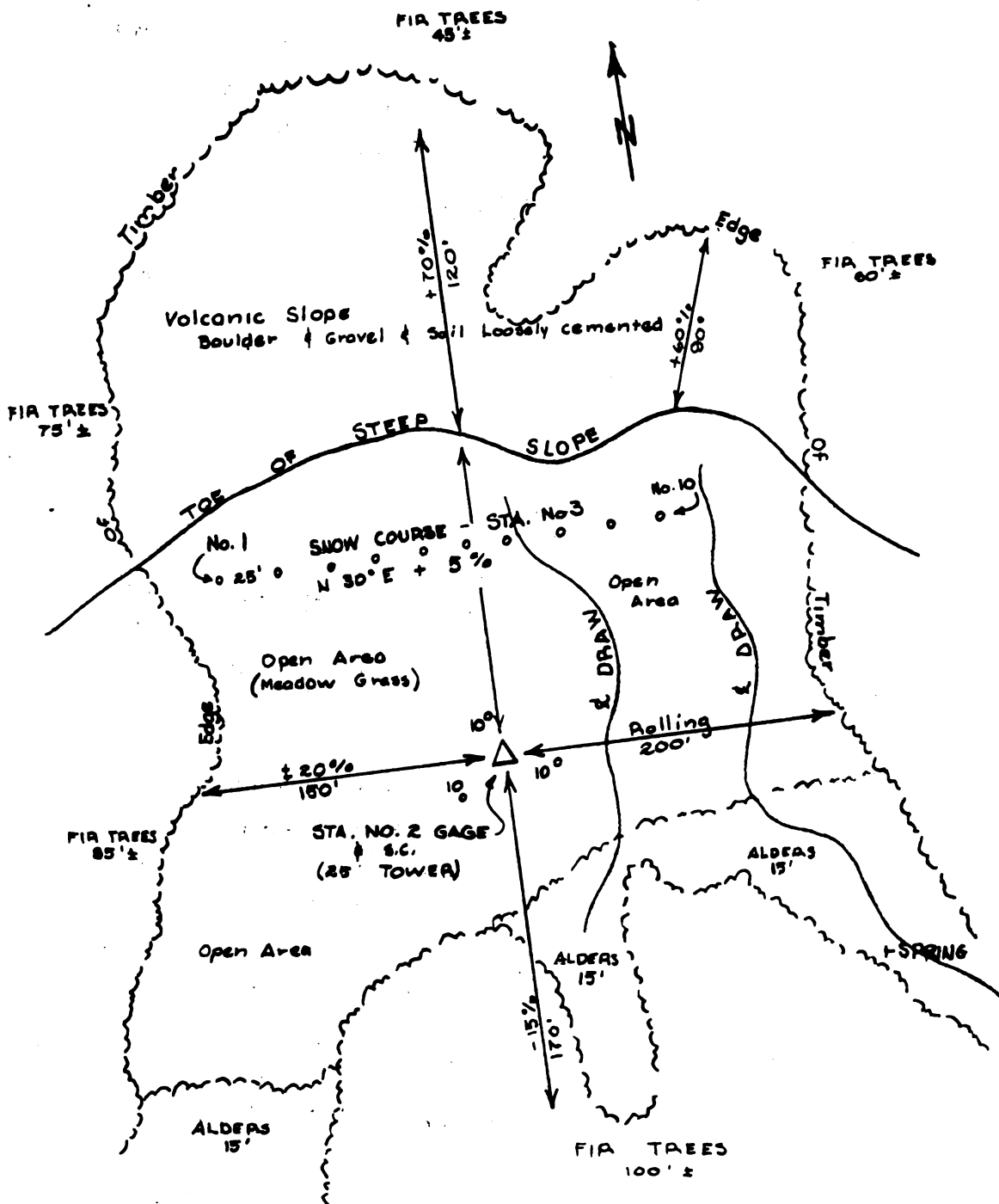
CARPENTER MTN.
TRAIL

STA. 1-B



STATIONS: 2 GAGE - 25.C
3 - S.C

Scale 1" = 125' ±



STATIONS: 4 SNOW COURSE
5 STORAGE GAGE

DEEP DRAW

WOLF ROCK TRAIL

BEAR PASS ROAD

SHELTER

TRAILER FRAME

STATION NO. 5 (20' TOWER)

FIR TREES 90' ±

FIR TREES 80' ±

FIR TREES 100' ±

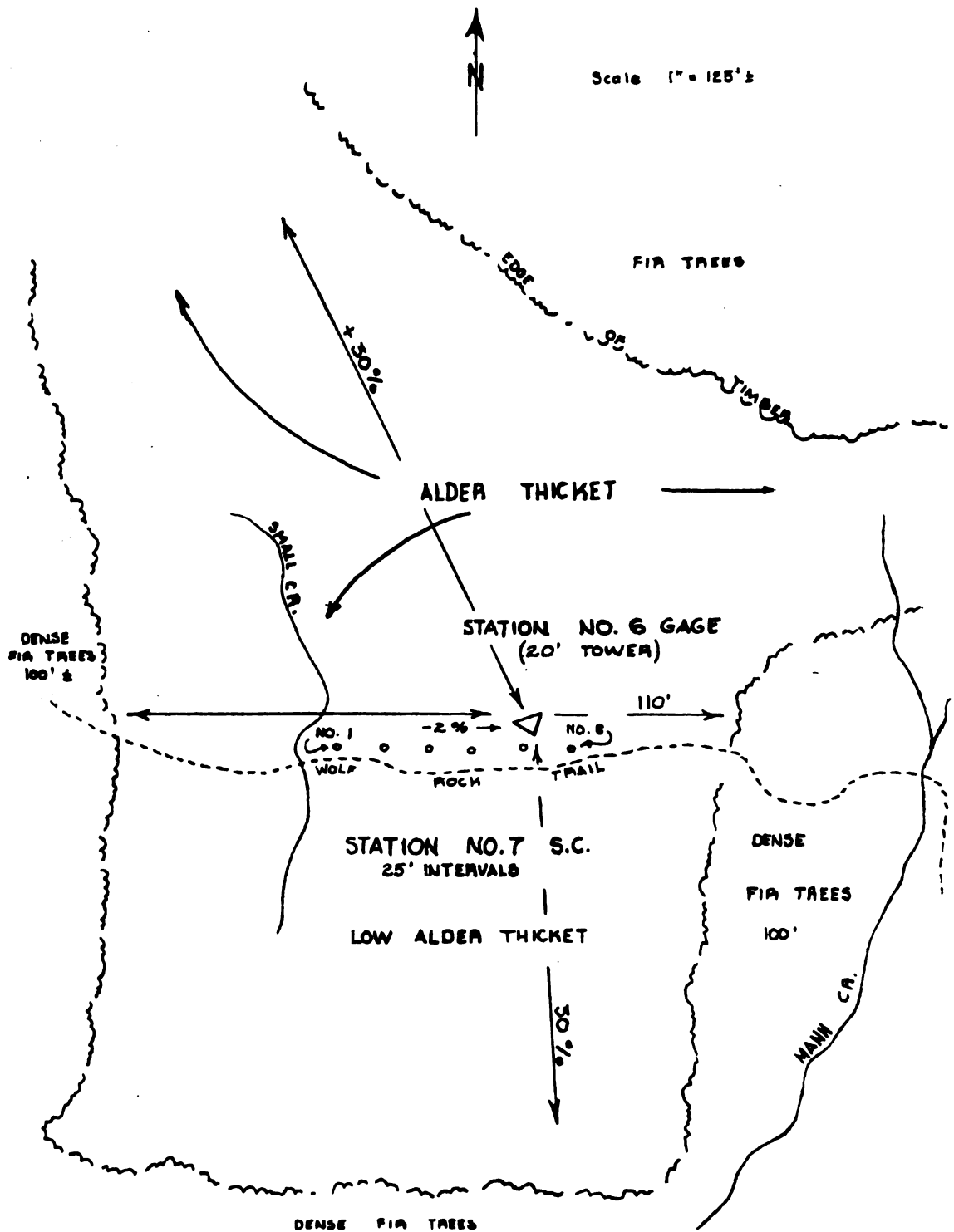
ALDER THICKET 15' HIGH

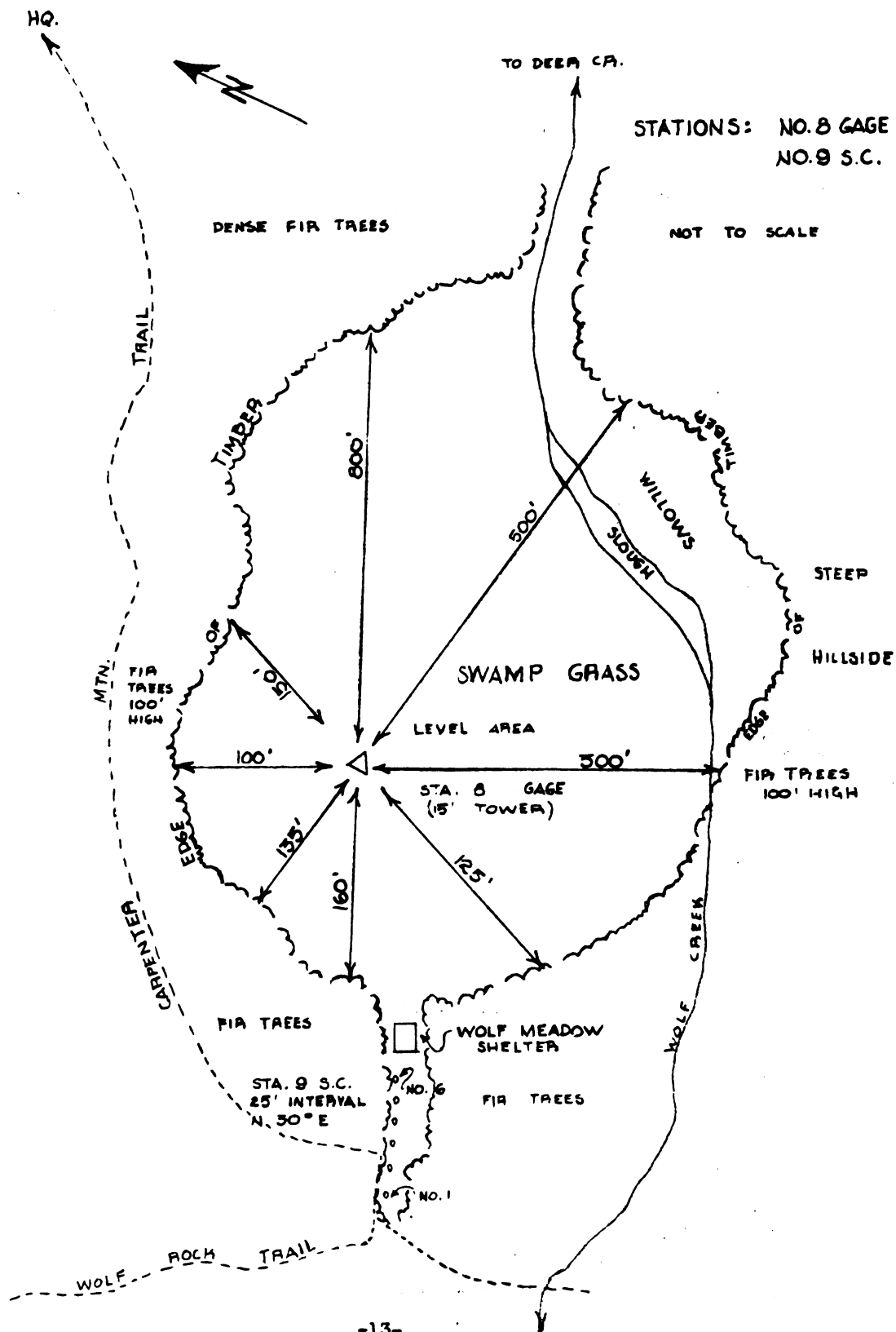
TIMBER

Scale 1" = 125' ±

-11-

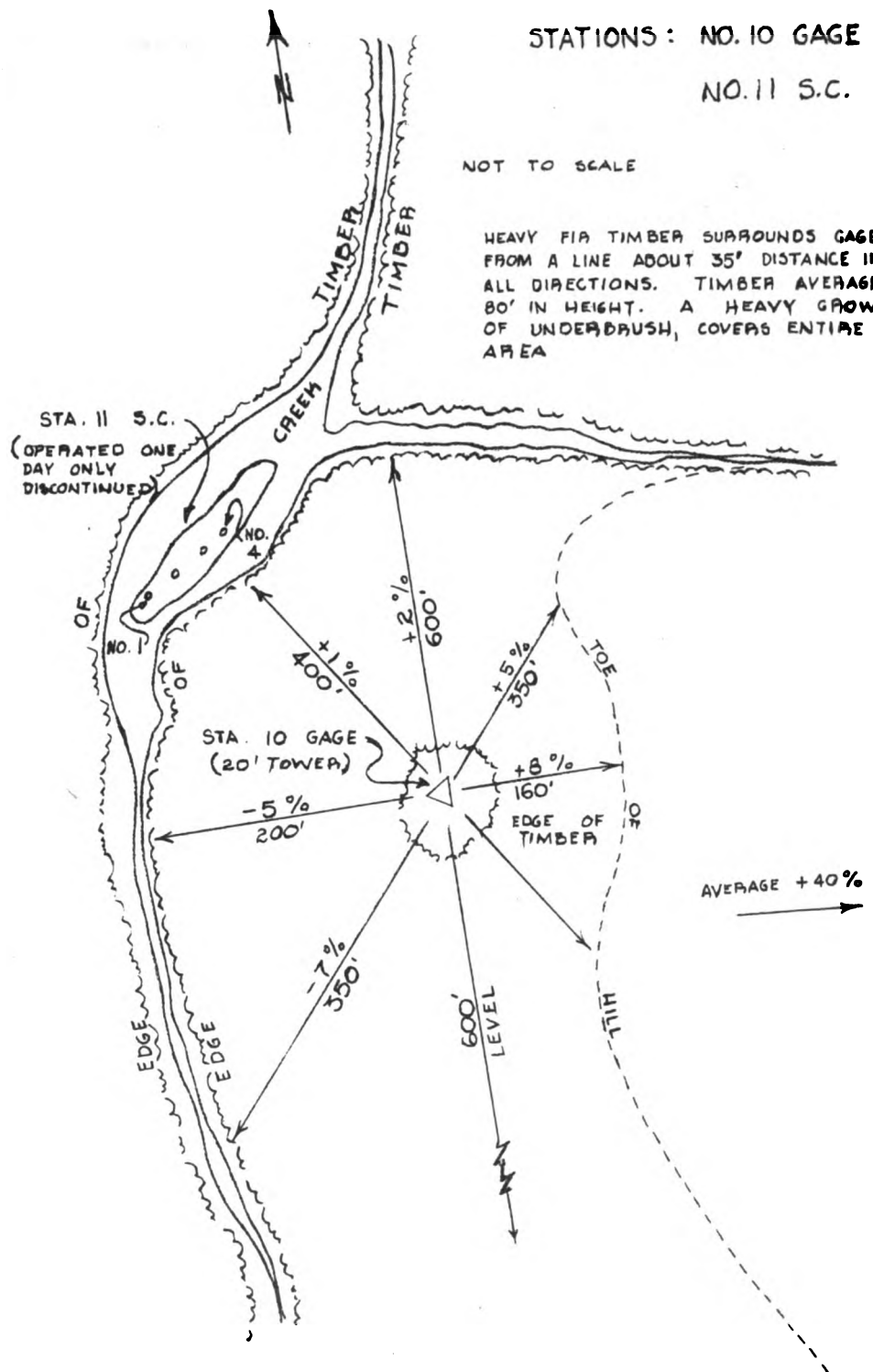
STATIONS: 6 GAGE
7 SNOW COURSE





NO. 11 S.C.

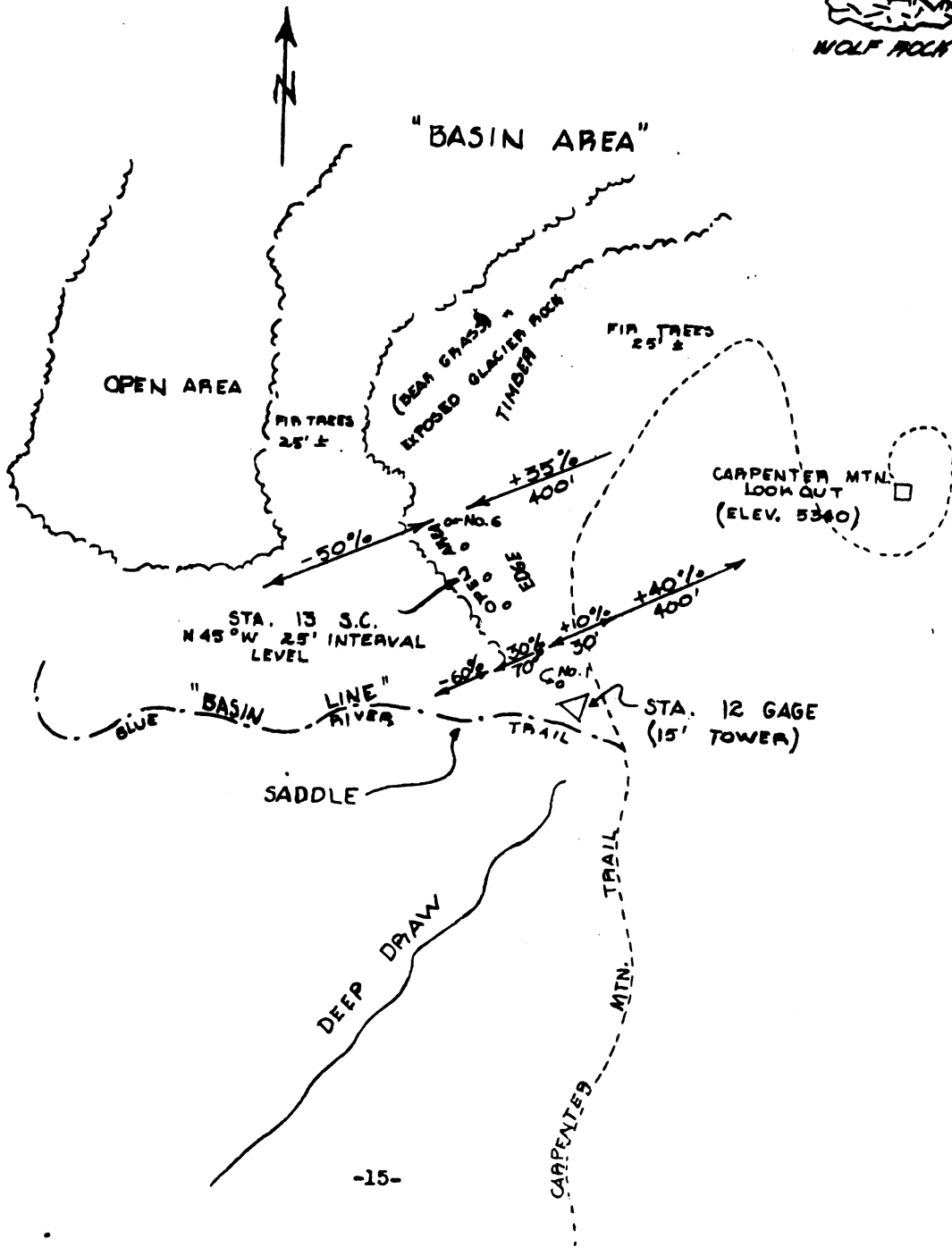
HEAVY FIR TIMBER SURROUNDS GAGE FROM A LINE ABOUT 35' DISTANCE IN ALL DIRECTIONS. TIMBER AVERAGES 80' IN HEIGHT. A HEAVY GROWTH OF UNDERBRUSH, COVERS ENTIRE AREA



STATION: NO. 12 GAGE
NO. 13 S.C.

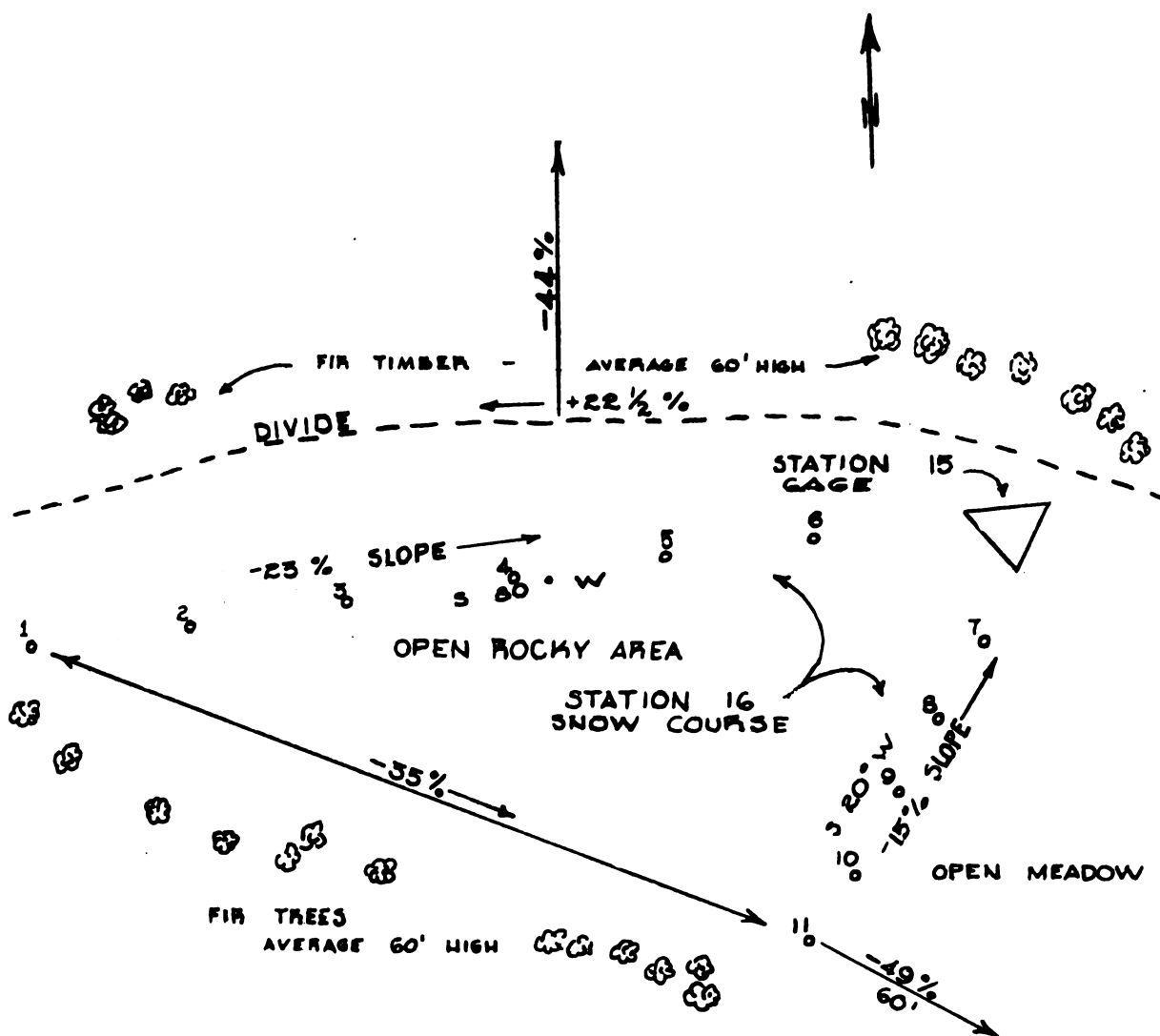
ELEV. 5100' ±

NOT TO SCALE



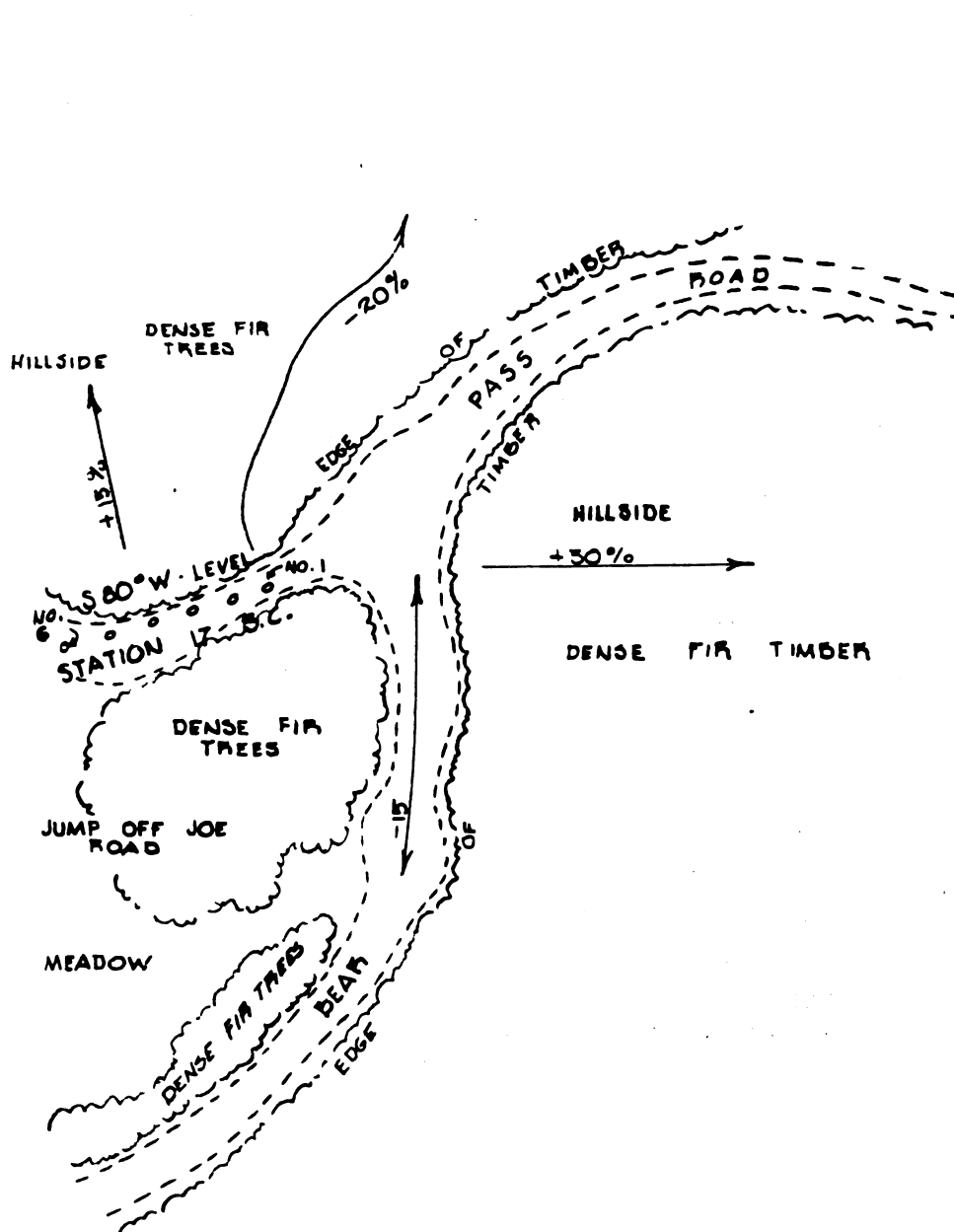
STATIONS: NO. 15 GAGE
NO. 16 S.C.

ELEV. 5000' ±



STATION : NO. 17 S. C.
JUMP OFF JOE ROAD

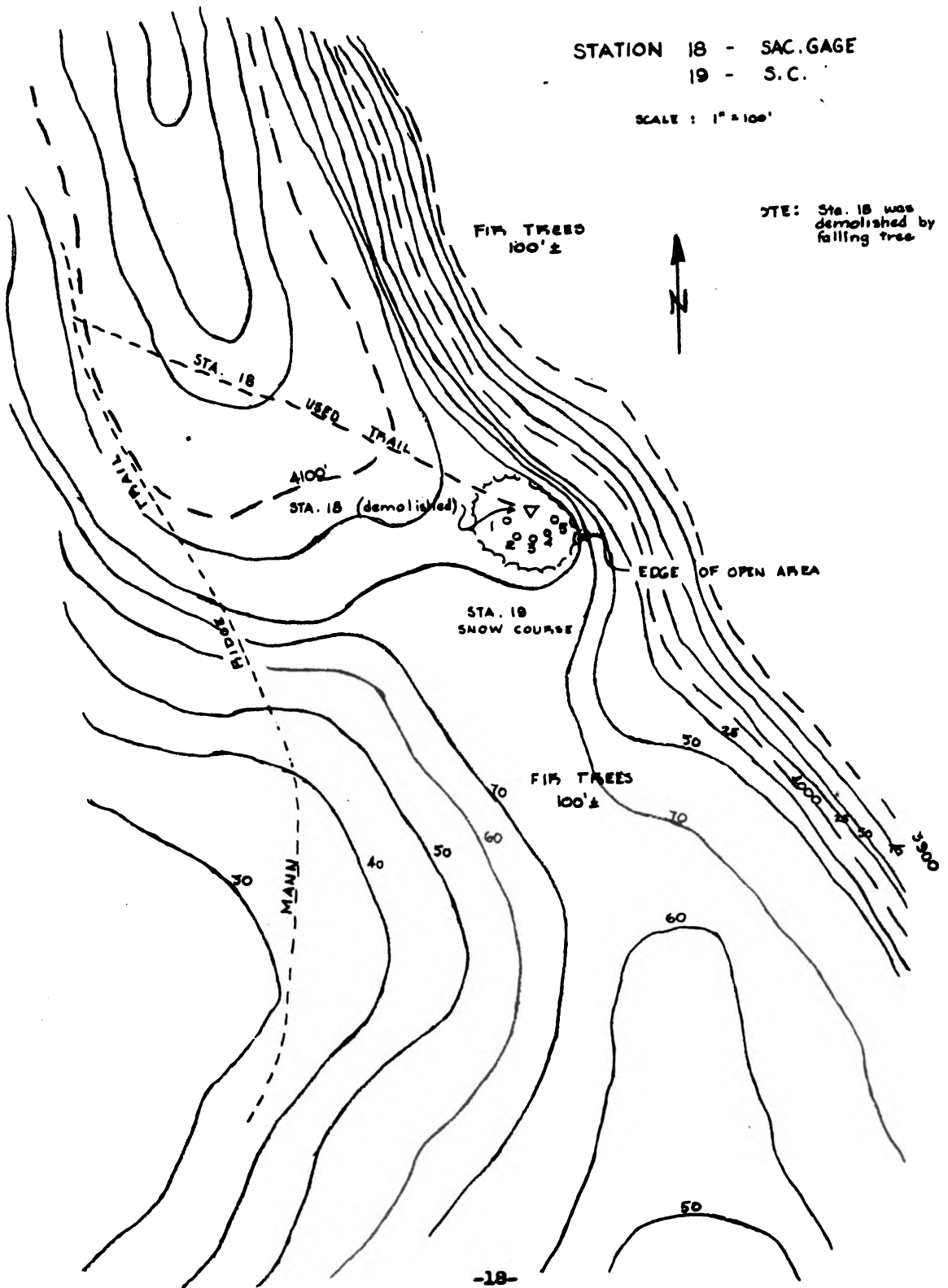
Scale 1" = 125'



STATION 18 - SAC. GAGE
19 - S.C.

SCALE : 1" = 100'

NOTE: Sta. 18 was
demolished by
falling tree



STATION - 20 - GAGE
- 20-B - S.C.
- 35 - G.W. WELL

SCALE 1" = 100'

SMALL CREEK
(dry 5 months per year)

TO EAST BEAM PASS
SHELTER

SMALL CREEK
(flows year round)

STATIONS 20 and
20-B

3260'

USED CONFLUENCE

STATION 35
GROUND WATER WELL

WATER
SUPPLY

PROPOSED
DAM SITE

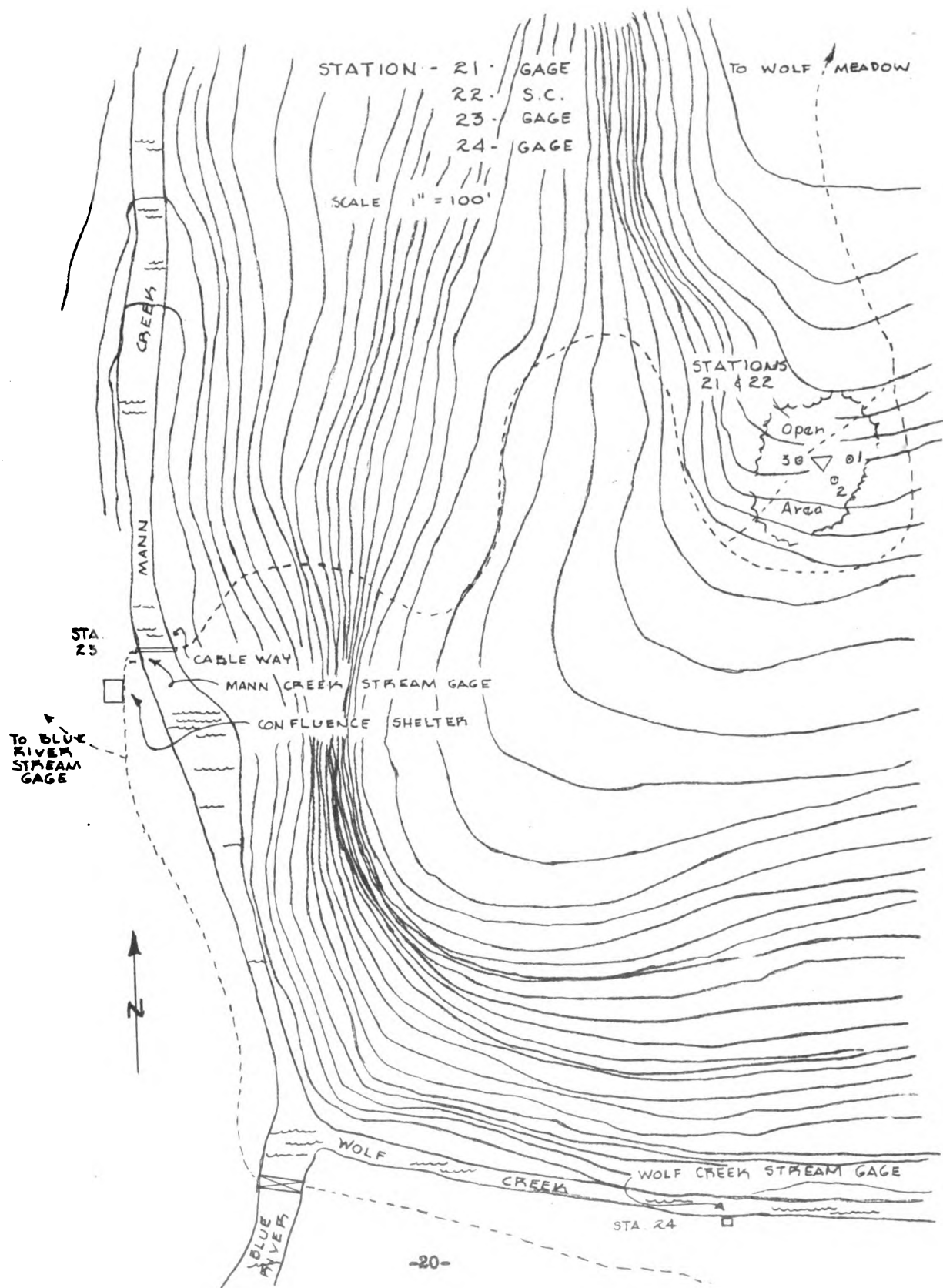
WOLF CREEK

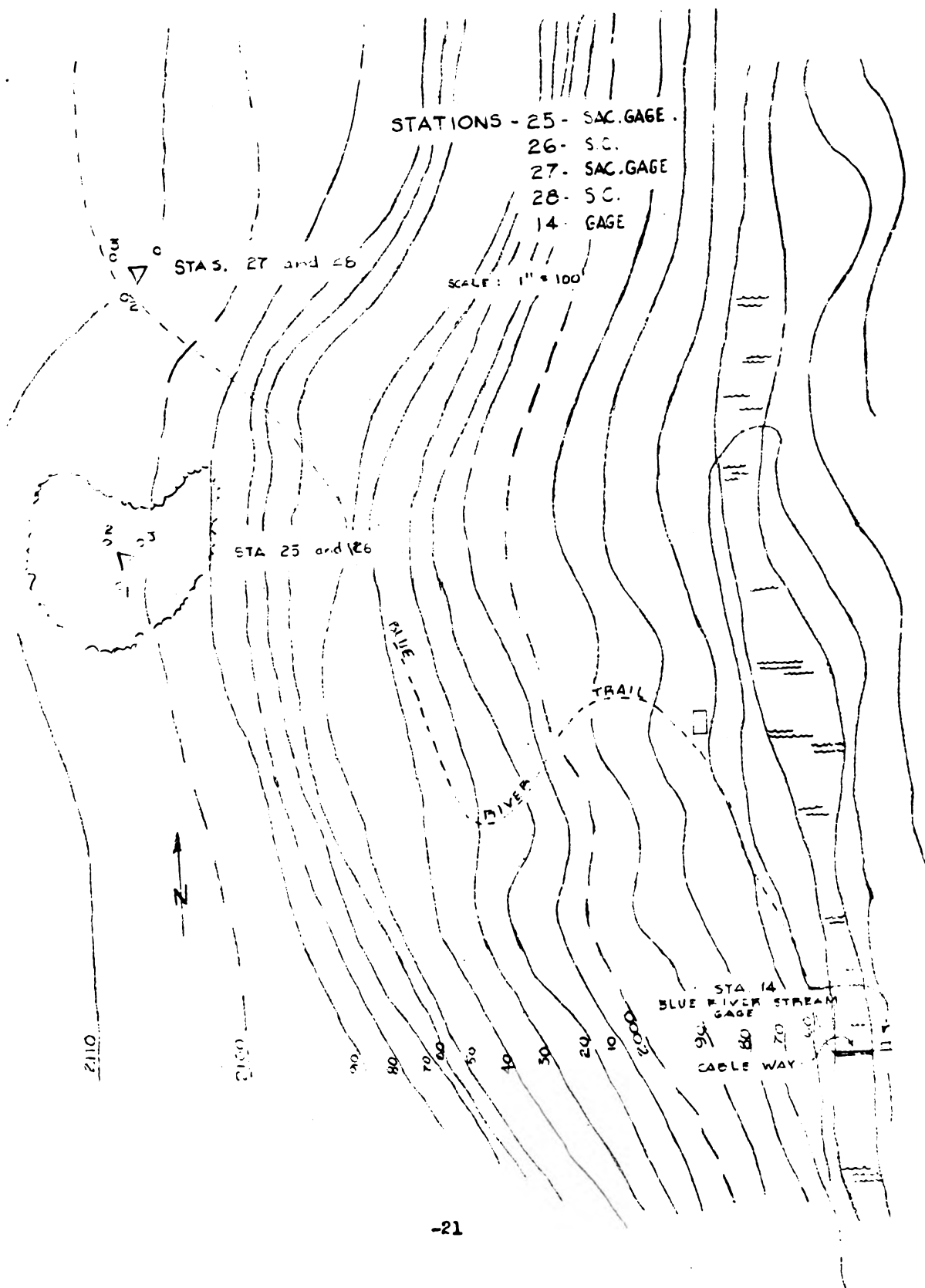
PROPOSED STAFF
GAGE



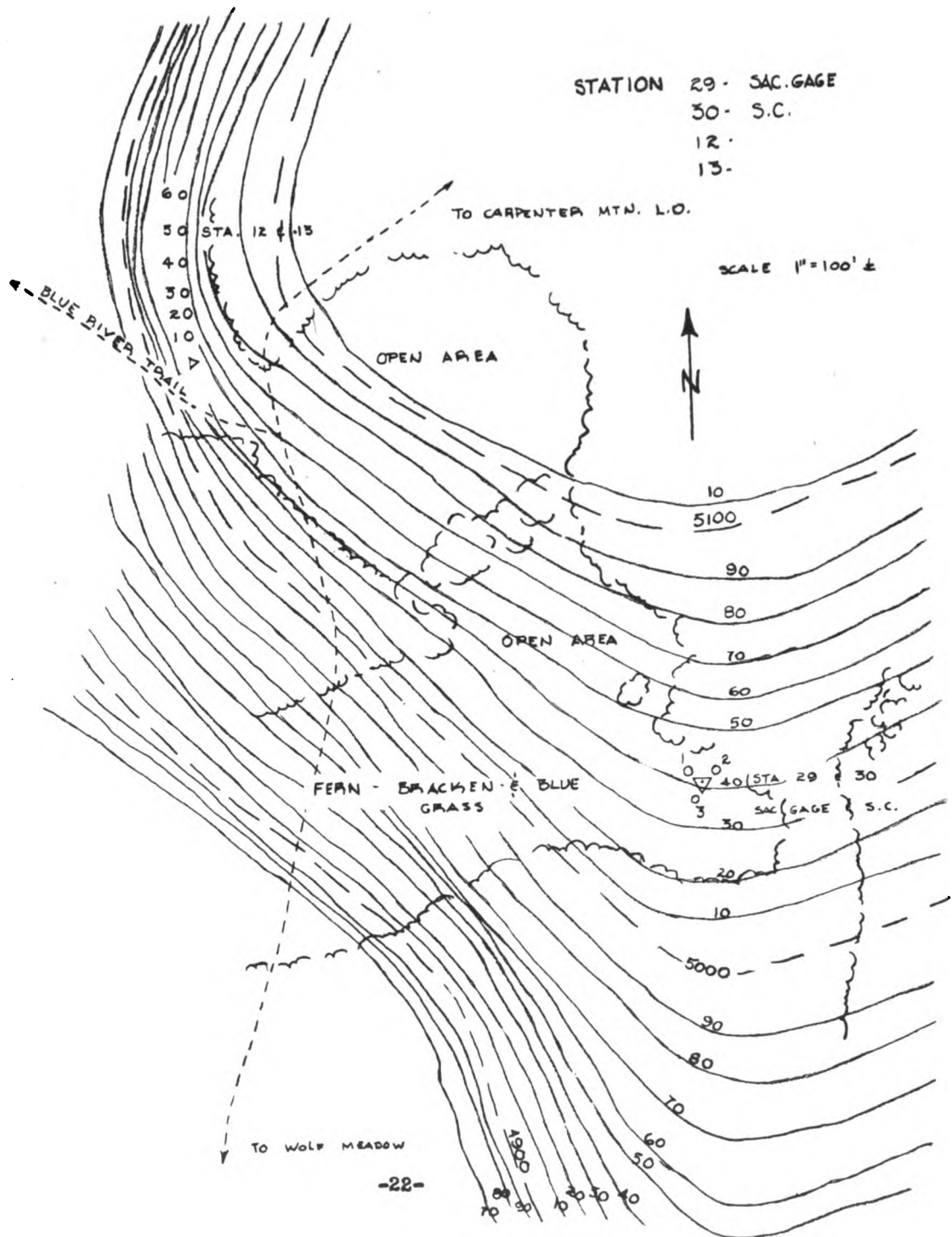
-19-

3260'



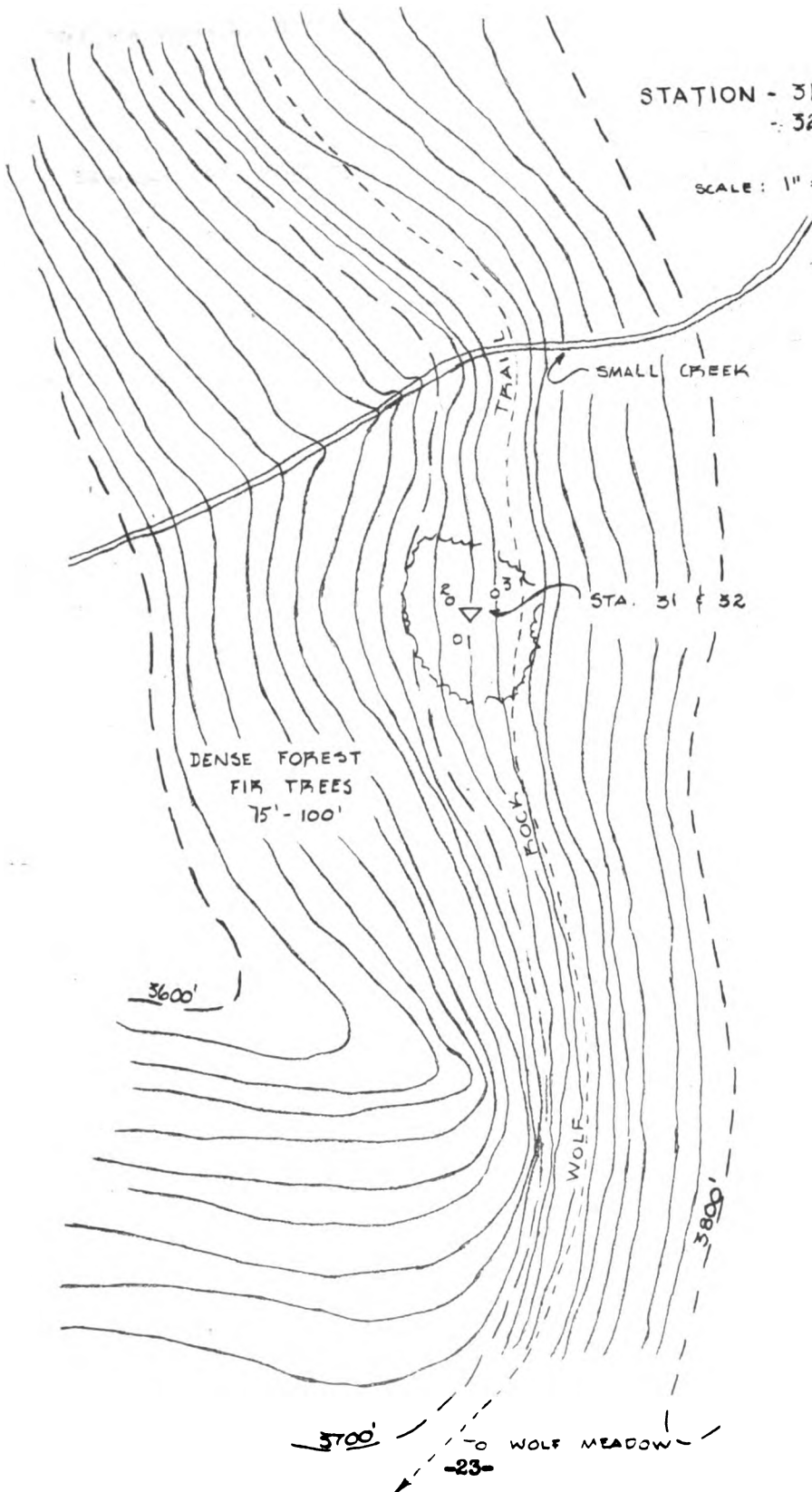


□ CARPENTER MTN. L.O.



STATION - 31 - SAC. GAGE
- 32 - S.C.

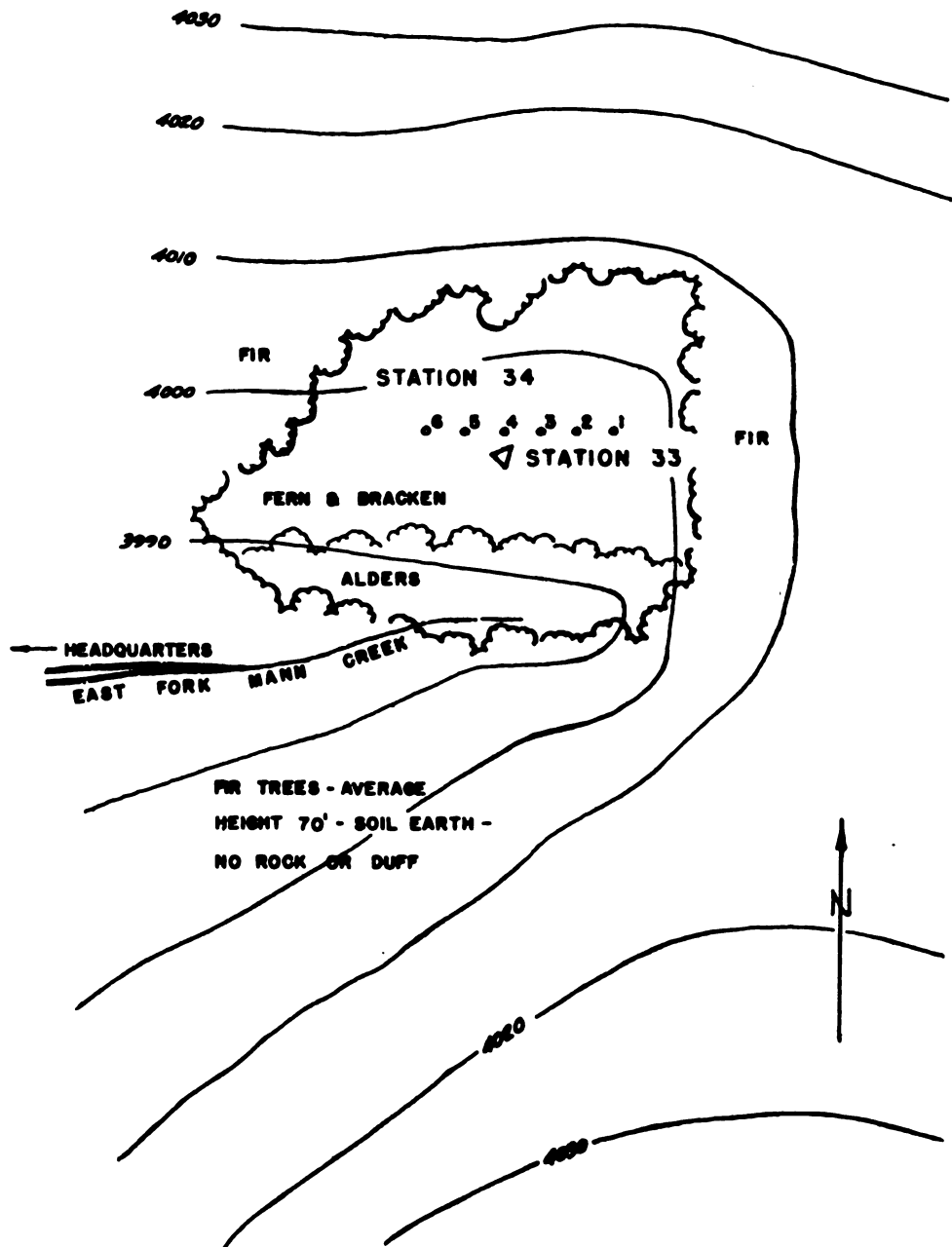
SCALE: 1" = 100' ±



STATION - 33 - SAC. GAGE 200"

- 34 - SNOW COURSE

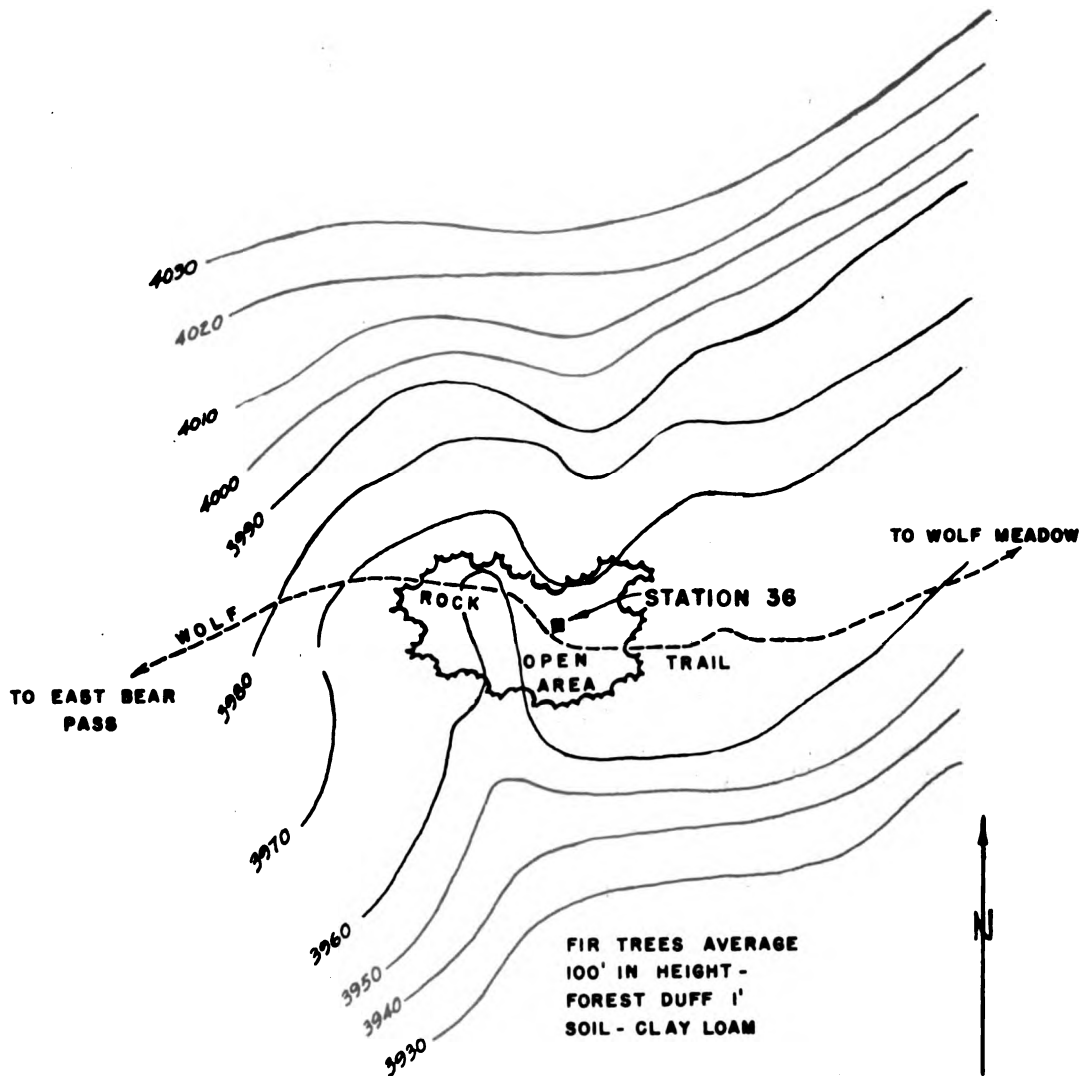
SCALE 1" = 100'

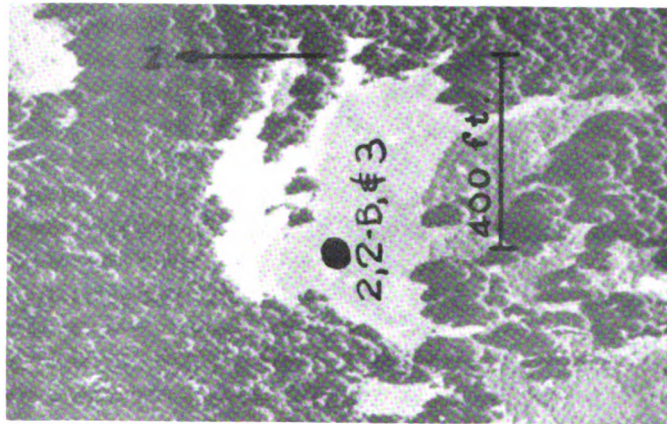
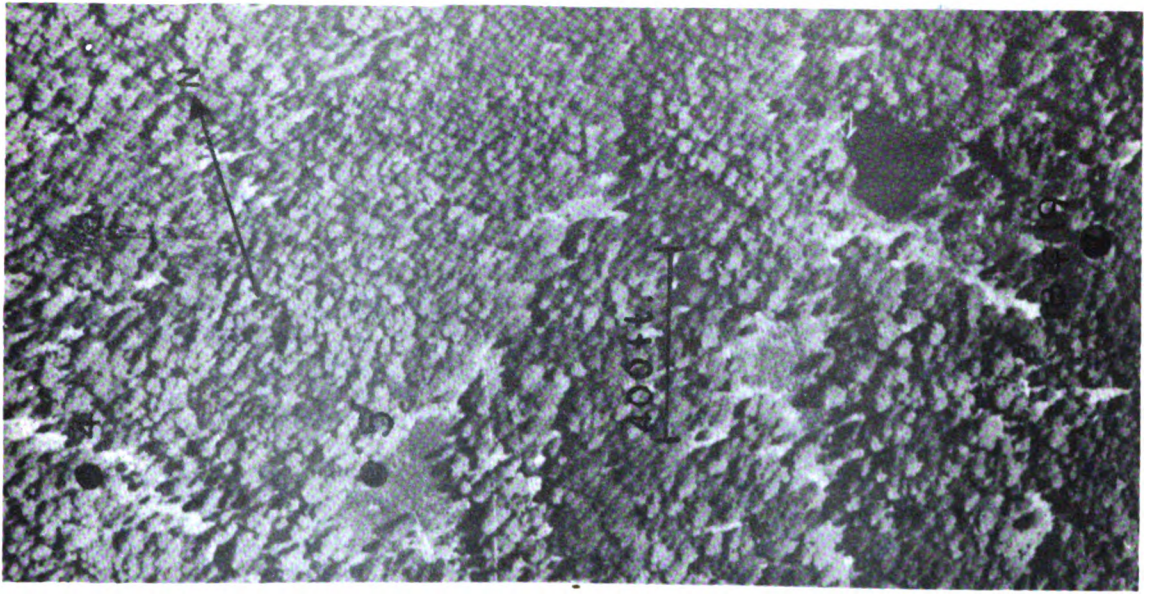


- 23a -

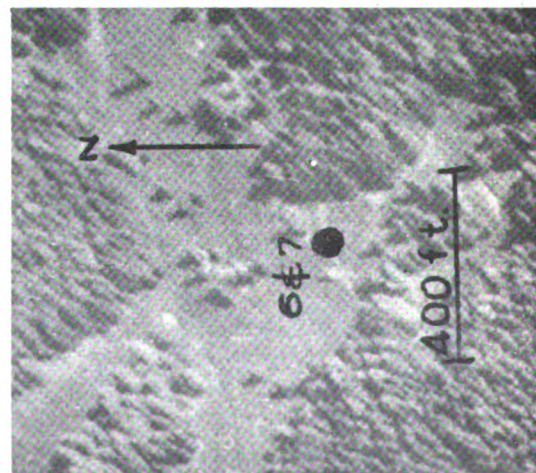
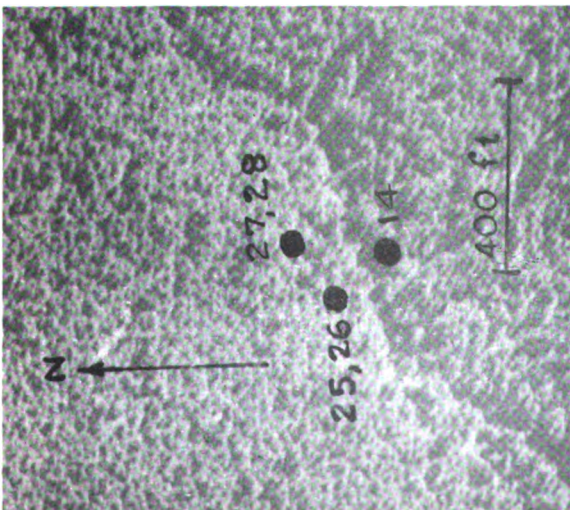
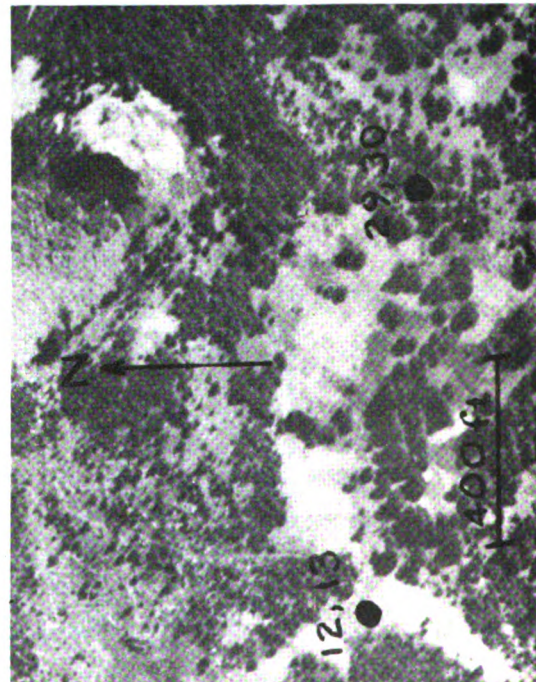
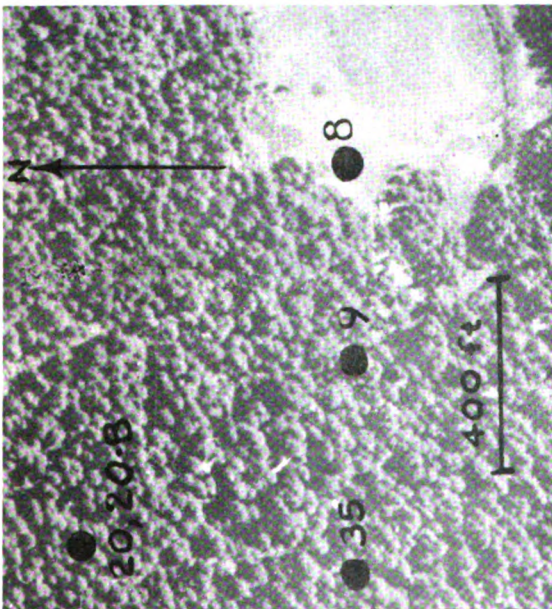
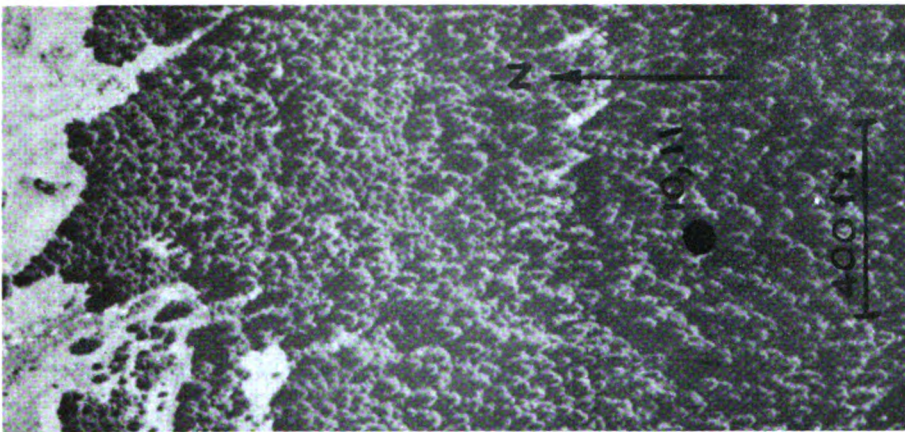
STATION - 36 - GROUND WATER WELL

SCALE 1" = 100'

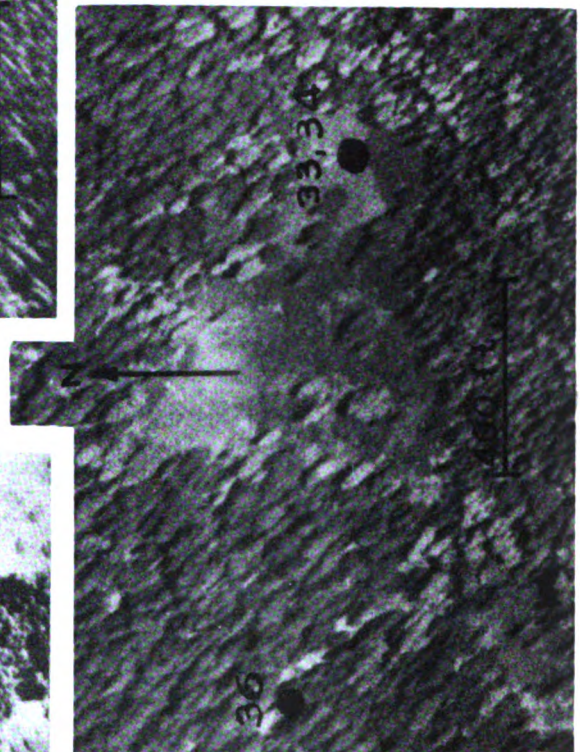
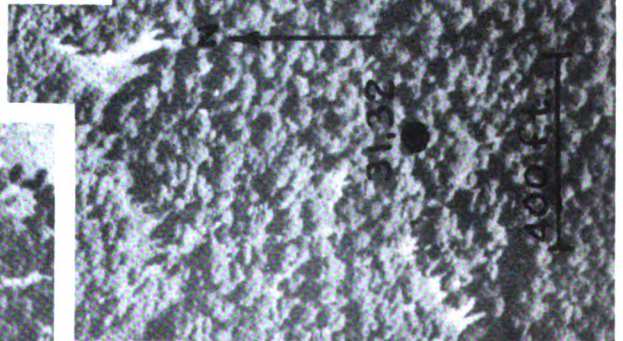
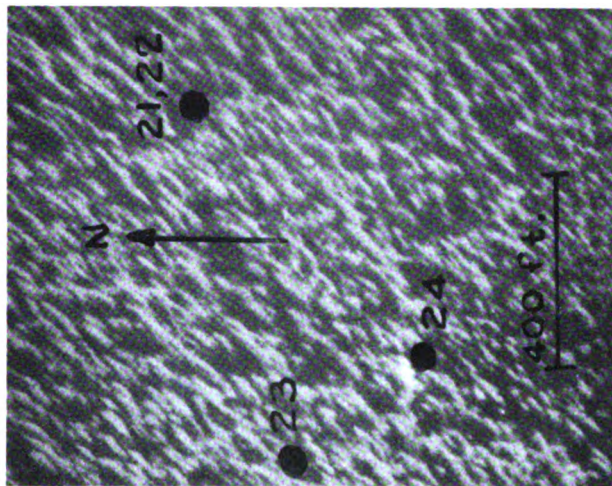
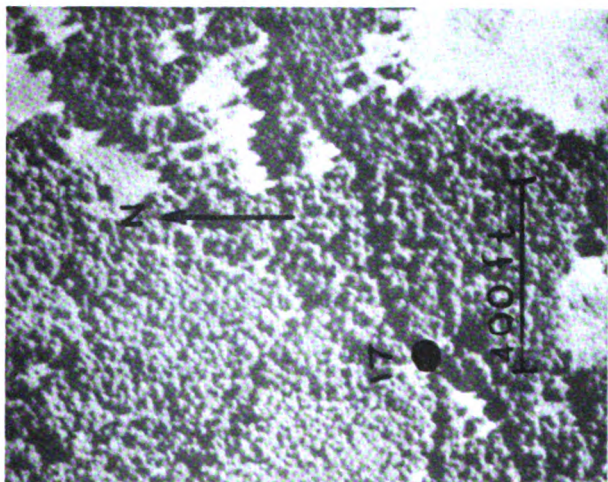
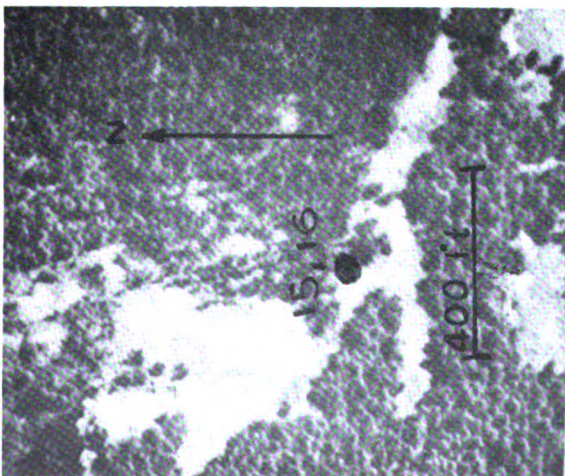




AERIAL PHOTOGRAPHS

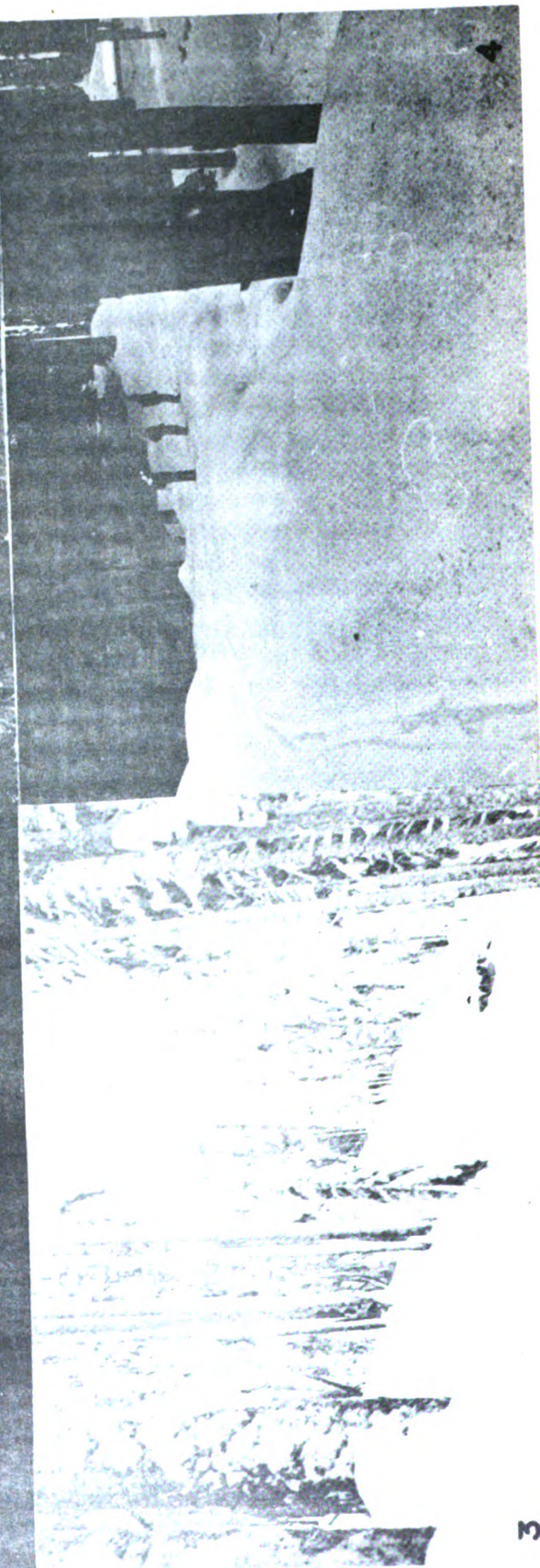


AERIAL PHOTOGRAPHS

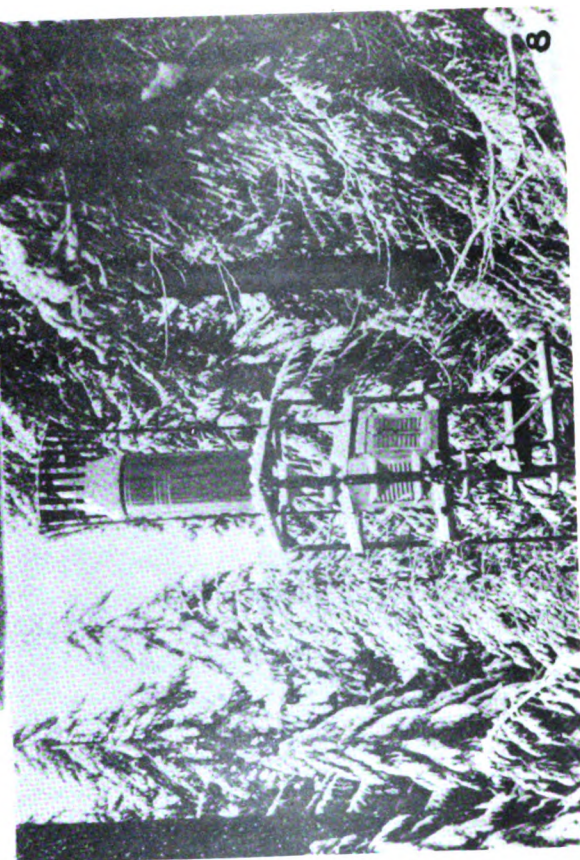
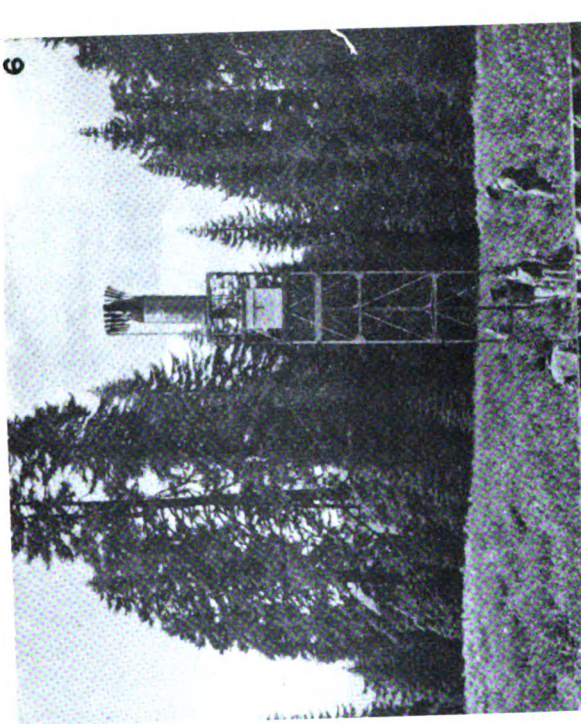
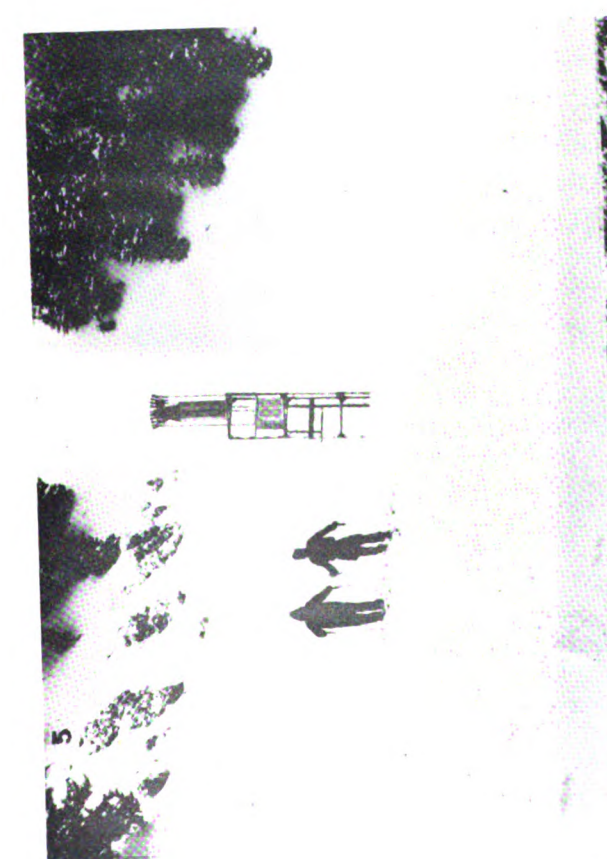


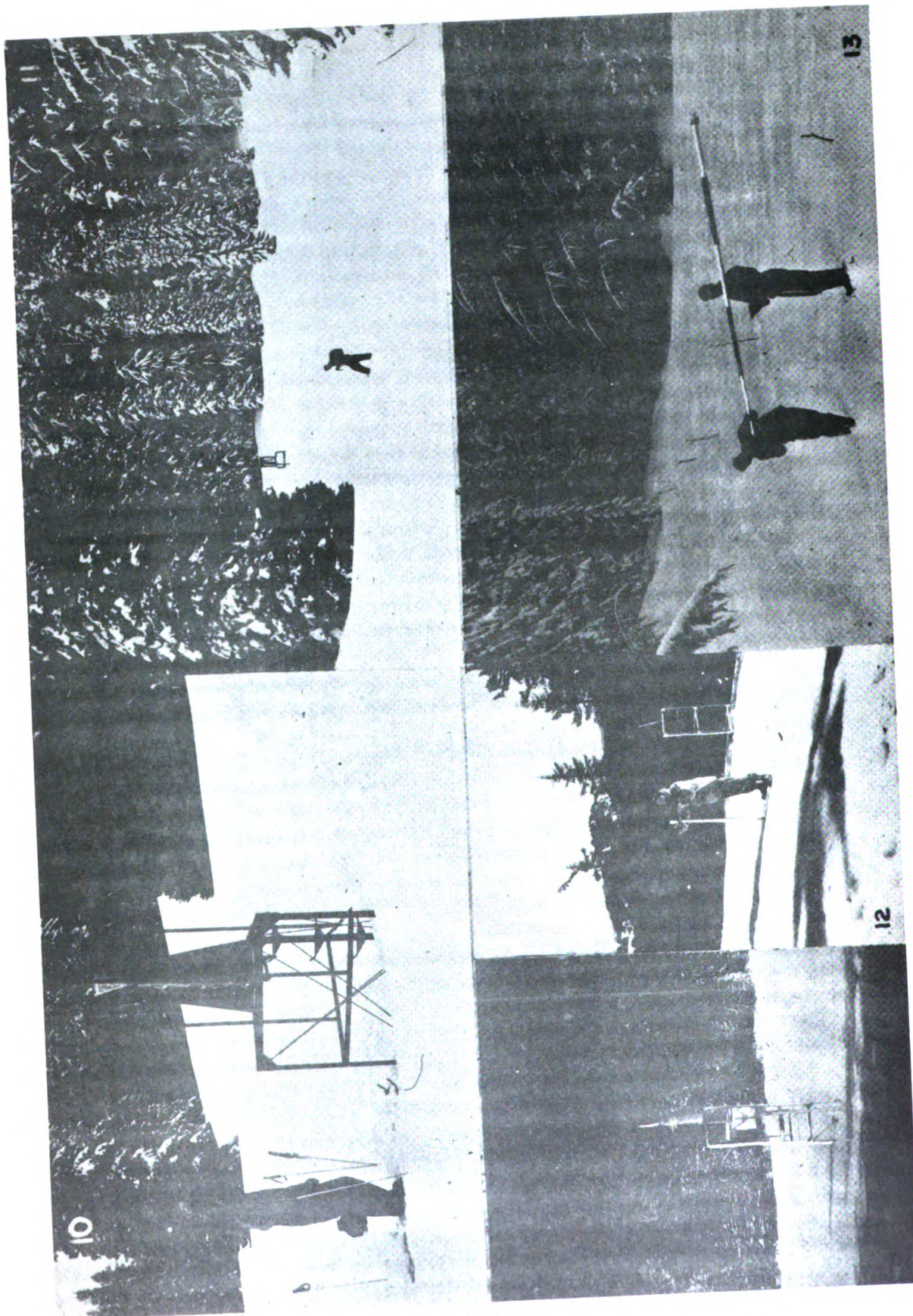
AERIAL PHOTOGRAPHS

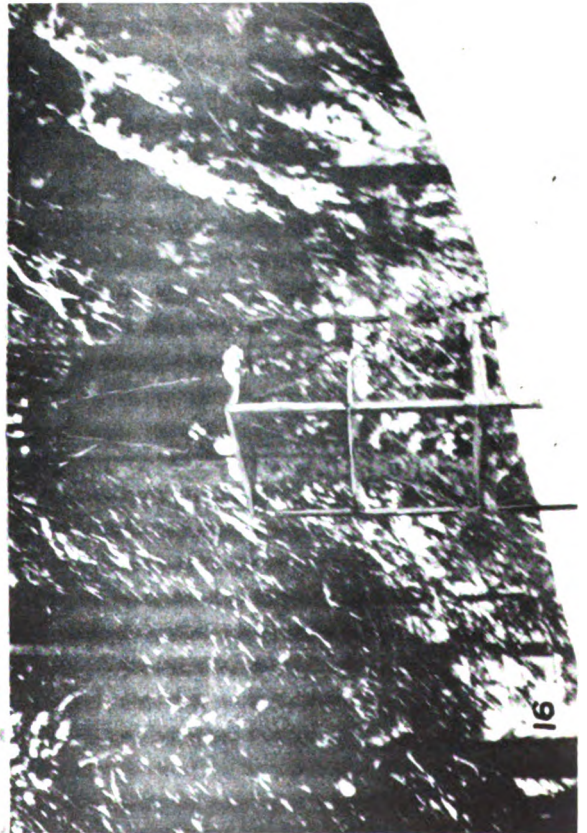
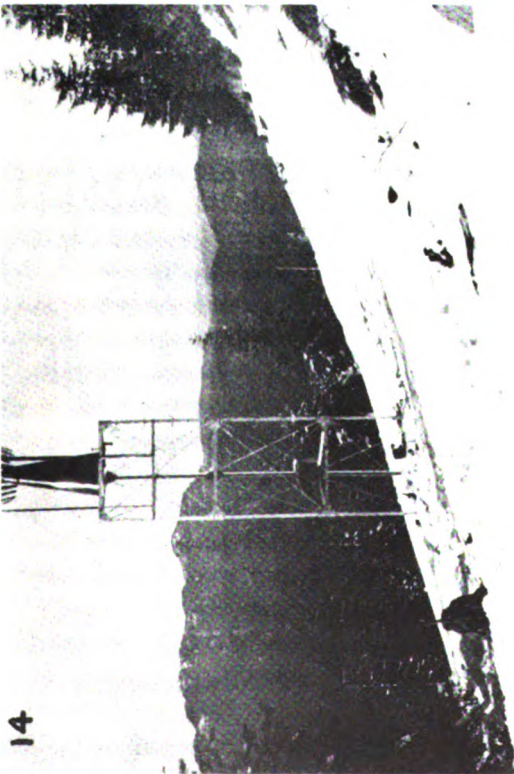
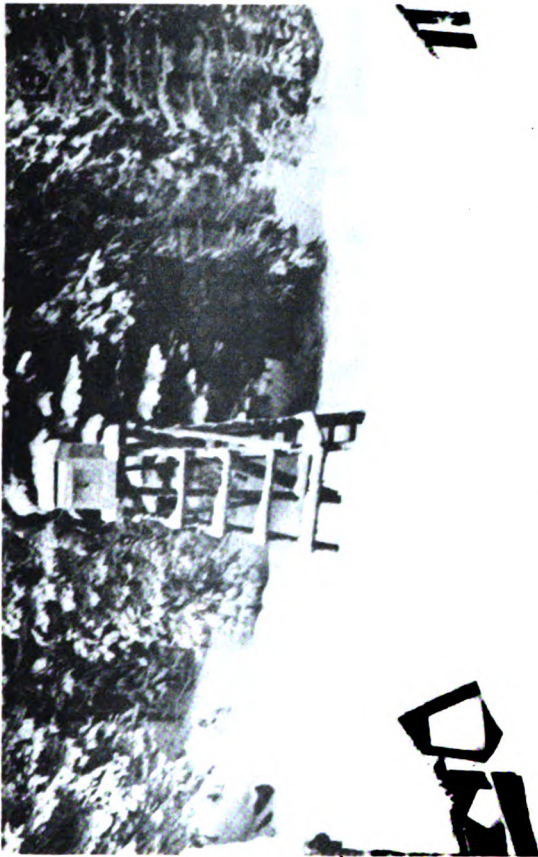
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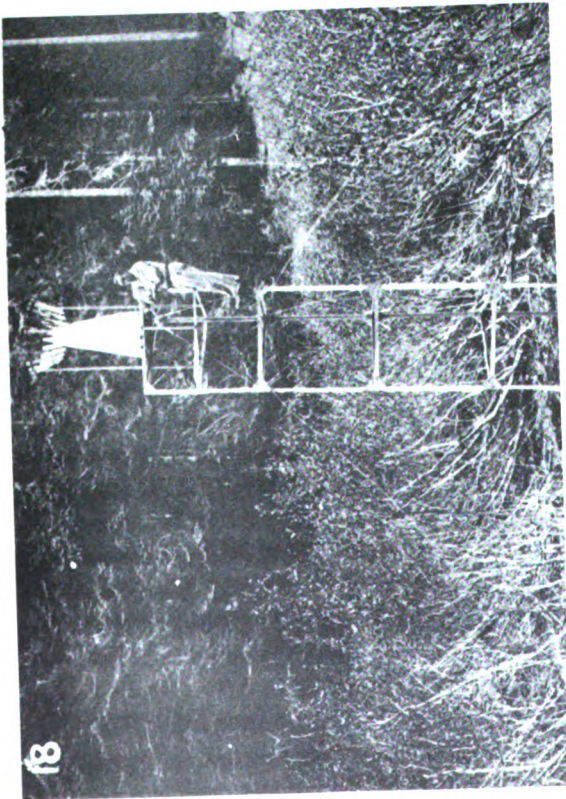
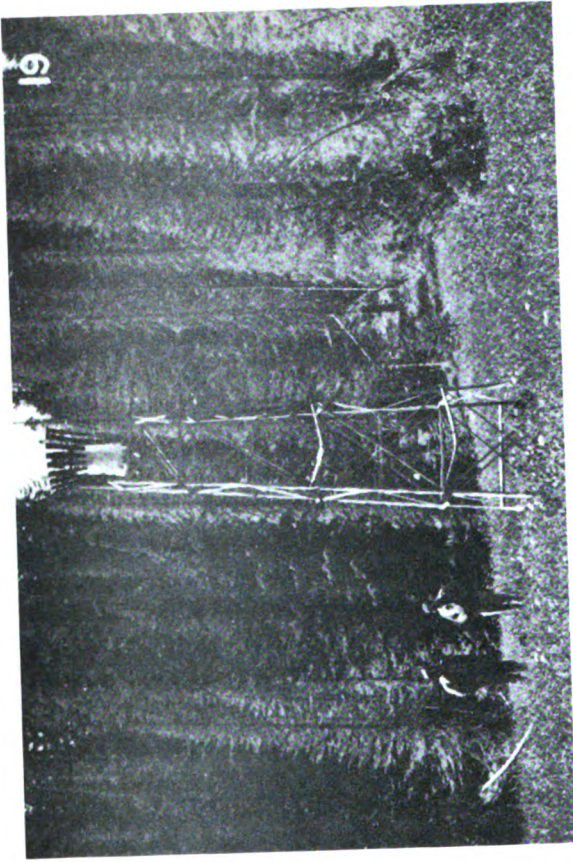


3







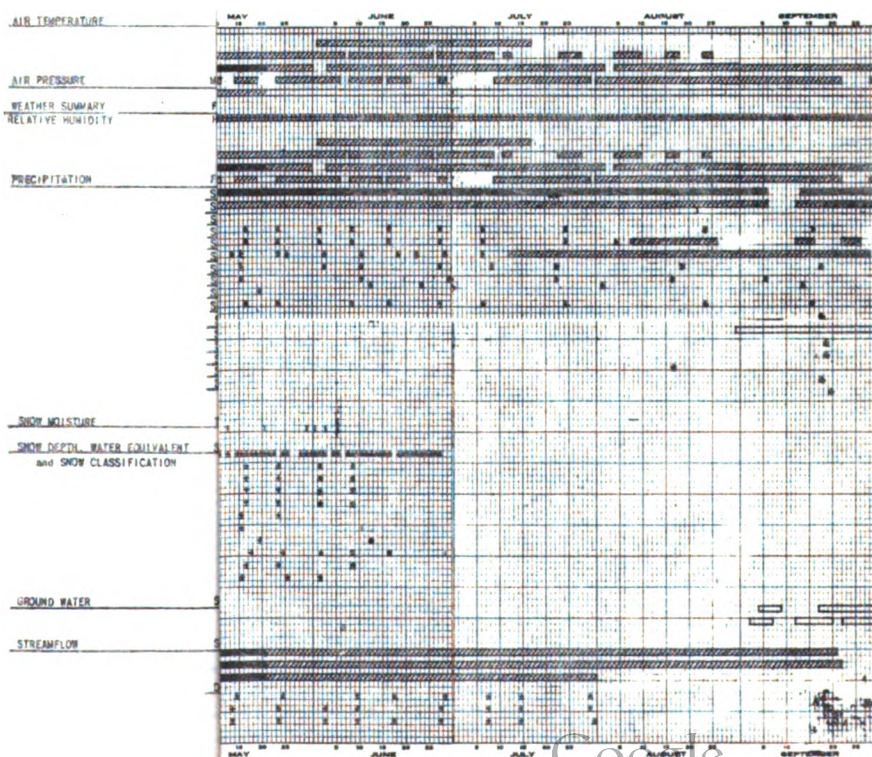
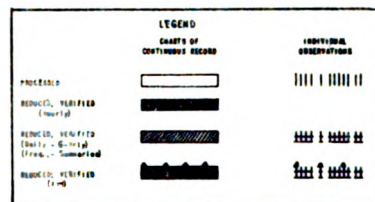
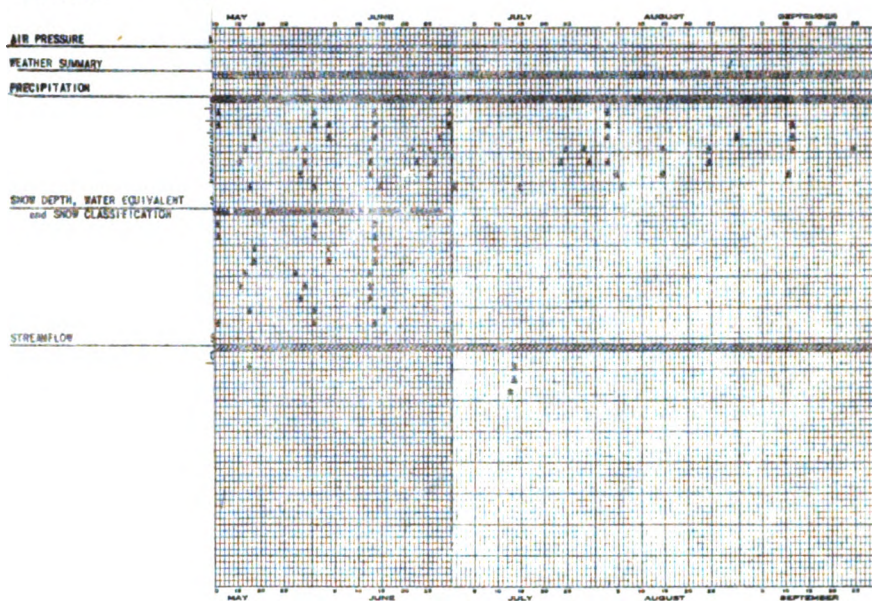


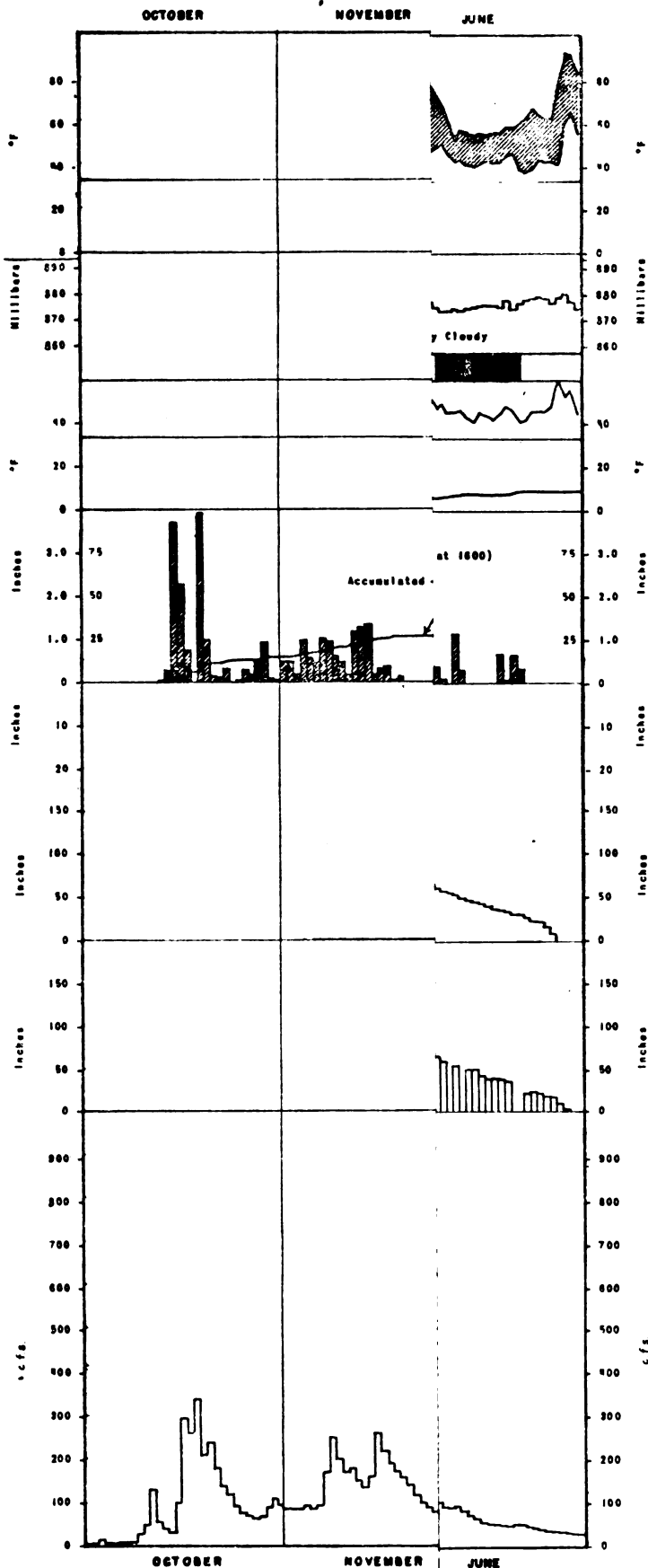
SUMMARY OF OBSERVATIONAL PROGRAM

Observed Element	Instrument	Number in Use on 1 January	
		1948	1949
Precipitation	Friez Recorder	1	1
	Stevens Recorder	0	1
	Sacramento (Type B)	7	7
	Snow Board	1	1
Temperature	Max. & Min. Thermometer	1	1
Humidity	Psychrometer	0	1
Atmospheric Pressure	Microbarograph	0	1
Snow Pack	Snow Course	0	10
Stream Flow	Stevens Water Stage Recorder	1	3

AS OF 1 AUGUST 1951

ELEMENT	IN
1. <u>NAME</u>	1. <u>NAME</u>
2. <u>DATE</u>	2. <u>DATE</u>
3. <u>TIME</u>	3. <u>TIME</u>
4. <u>LOCATION</u>	4. <u>LOCATION</u>
5. <u>DESCRIPTION</u>	5. <u>DESCRIPTION</u>
6. <u>REMARKS</u>	6. <u>REMARKS</u>
7. <u>SIGNATURE</u>	7. <u>SIGNATURE</u>
8. <u>INITIALS</u>	8. <u>INITIALS</u>
9. <u>REMARKS</u>	9. <u>REMARKS</u>
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99. <u>REMARKS</u>	99. <u>REMARKS</u>
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Surface Air Temperature

Station 1-A

Station Air Pressure

& Cloudiness

Station 1-A

Dew Point

Station 1-A

Precipitation

Station 1-B

Depth of Snow on the Ground

Station 1-A Elev 4233

Station 7 Elev 4087

Station 9 Elev 3265

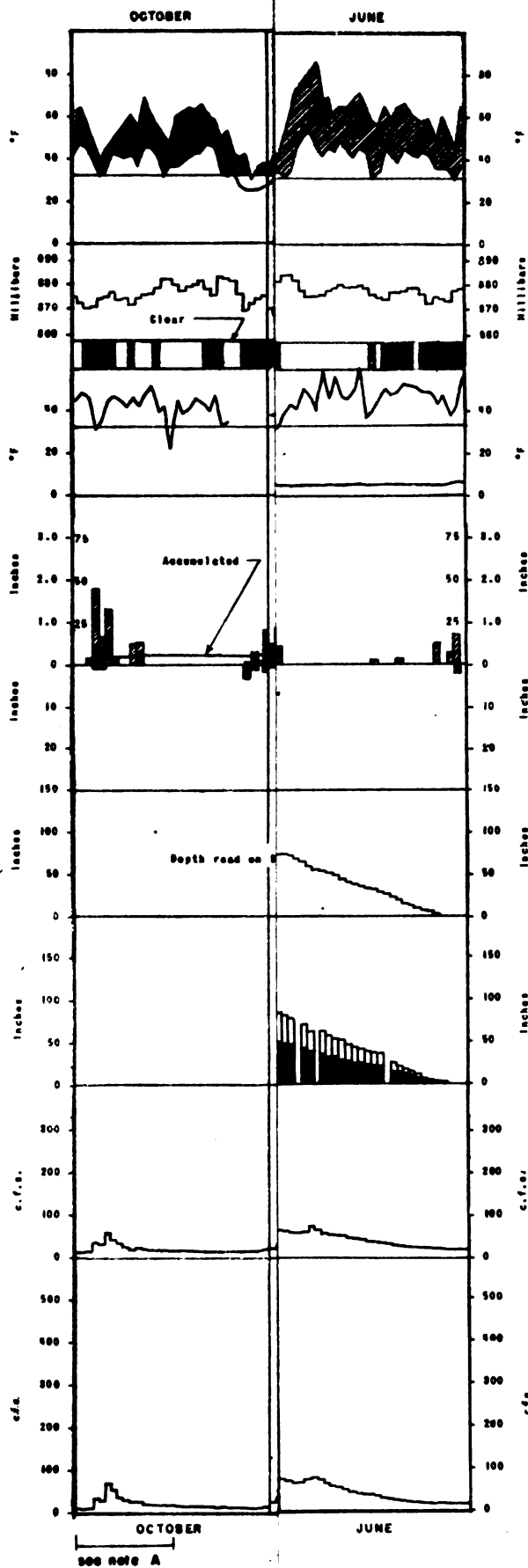
Depth of Snow on the Ground

Station 1-C Elev 4235

Streamflow

Station 14

Numbers on hydrographs are
instantaneous peak values



Surface Air Temperature
Station I-A

Station Air Pressure &
Cloudiness
Station I-A

Dew Points
Station I-A

Precipitation
Station I-B

Snowfall
Station I-A

Depth of Snow on the Ground
& Water Equivalent
Station I-A Elev. 4233
Station 9 Elev. 3265

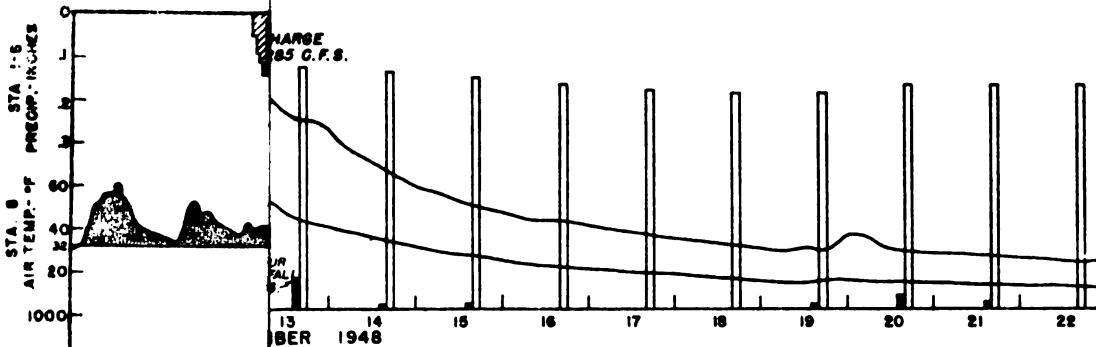
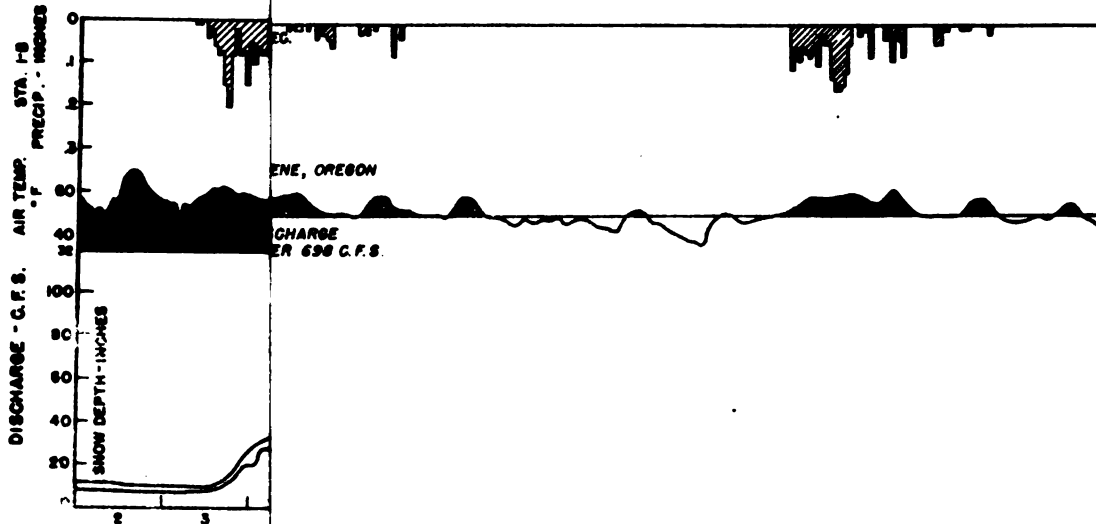
Depth of Snow on the Ground
& Water Equivalent
Station I-C Elev. 4235

Streamflow
Station 23

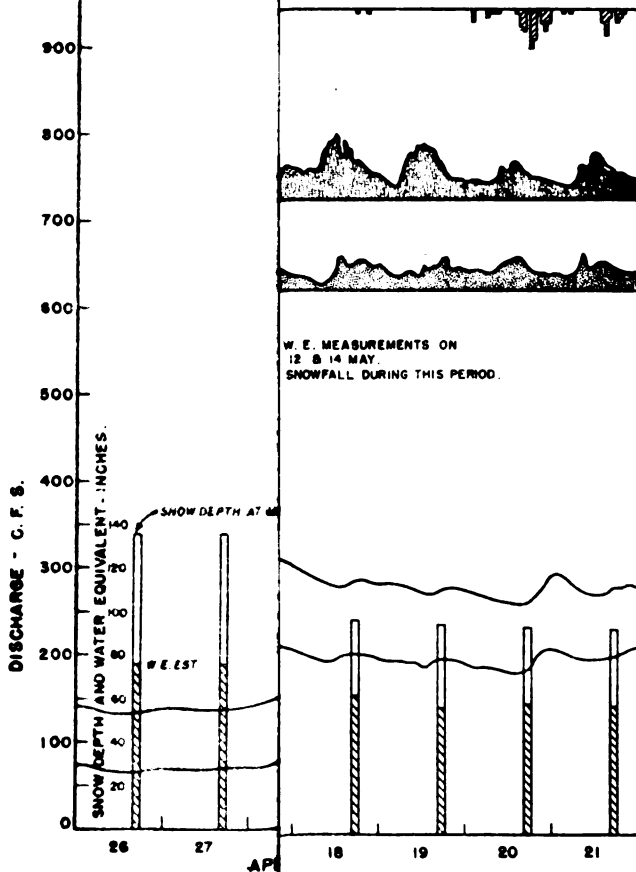
Streamflow
Station 14

Numbers on hydrographs are
instantaneous peak values

Note A:
See page 29 for these periods
on expanded time scale



NOTE: NO HOURLY TEMPERATURES OBSERVED
AT THE LABORATORY IN 1948



WILLAMETTE BASIN SNOW LABORATORY

SIGNIFICANT HYDROGRAPHS
AND CONCURRENT
HYDROMETEOROLOGICAL ELEMENTS

1948 - 1949 WATER YEAR

Cooperative Snow Investigations

FOR PERIODS OF SIGNIFICANT STREAM RISE

2 OCT. - 15 OCT. 1948

Date	Item	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Day	
Oct. 2	Air Temperature, Eugene	57	54	53	51	50	52	50	50	54	57	57	63	67	70	70	69	68	64	62	60	58	57	56	55	0	65
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	Discharge, Blue River	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	
	Discharge, Mann Creek	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	6.7	
	Discharge, Wolf Creek	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.9
3	Air Temperature, Eugene	55	55	55	50	54	54	53	54	56	57	58	59	60	62	61	63	62	61	60	59	59	59	59	58	58	58
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	.01	.01	0	.04	.02	.06	.08	.07	.15	.20	.08	.02	.08	.07	.15	.05	1.09	
	Discharge, Blue River	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12	13	14	15	16	17	22	25	25	13	
	Discharge, Mann Creek	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	8	9	12	15	18	21	20	19	19	7.9	
	Discharge, Wolf Creek	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.6	3.8	4.1	4.5	4.8	5.1	5.5	5.9	6.1	6.3	2.9
4	Air Temperature, Eugene	57	56	56	56	55	55	55	55	56	56	58	60	59	59	62	61	60	57	53	51	51	51	51	51	51	49
	Precipitation, Sta. 1-B	.10	.06	.08	.08	.05	.10	.09	.05	.08	.04	.08	.13	.02	0	0	.02	0	0	0	.03	.04	.01	.08	.02	1.16	
	Discharge, Blue River	25	30	33	33	33	33	34	35	38	40	42	43	43	43	42	40	39	36	35	34	33	32	31	30	35	
	Discharge, Mann Creek	22	28	26	27	27	27	27	28	30	32	33	33	33	32	30	28	27	26	25	24	24	24	23	23	27	
	Discharge, Wolf Creek	6.8	7.0	7.0	7.1	7.3	7.6	7.8	8.1	8.4	8.7	8.9	9.2	9.3	9.8	9.7	9.4	9.0	8.8	8.6	8.4	8.2	8.1	8.0	7.9	7.8	7.0
5	Air Temperature, Eugene	50	49	46	47	48	48	48	49	51	52	55	54	60	60	59	57	56	55	54	52	52	51	51	51	51	40
	Precipitation, Sta. 1-B	0	0	0	0	0	.05	.03	.04	.04	.02	0	.10	.02	.07	.03	.05	.05	.06	.04	0	.01	.02	.02	.01	.66	
	Discharge, Blue River	30	29	28	28	28	27	27	28	28	29	29	29	29	29	30	30	32	32	35	36	38	39	38	37	31	
	Discharge, Mann Creek	23	22	22	21	20	20	20	20	21	21	22	22	21	21	22	23	25	27	29	30	31	30	29	29	24	
	Discharge, Wolf Creek	7.7	7.5	7.4	7.2	7.1	6.9	7.0	7.1	7.1	7.2	7.2	7.3	7.3	7.4	7.4	7.5	7.6	7.8	7.9	8.0	8.0	8.0	8.1	8.1	8.1	6.3
6	Air Temperature, Eugene	51	50	51	51	51	51	52	58	55	62	62	62	62	69	66	63	64	68	61	61	60	59	59	59	56	55
	Precipitation, Sta. 1-B	.05	.05	.05	.06	.04	.11	.12	.12	.10	.12	.08	.10	.03	.05	.02	.01	.01	.04	.01	0	0	0	0	0	1.17	
	Discharge, Blue River	37	38	39	41	44	46	50	54	65	75	87	92	98	97	96	93	90	87	84	82	80	78	76	75	70	
	Discharge, Mann Creek	29	30	32	34	37	39	41	43	45	48	50	50	50	50	50	48	45	42	41	39	36	34	32	30	52	
	Discharge, Wolf Creek	8.1	8.2	8.4	8.7	9.1	9.5	10.2	11.0	12.5	14.0	15.7	17.5	18.2	19.0	19.1	19.1	18.6	18.2	17.8	17.5	17.0	16.5	16.2	16.1	11	5.0
7	Air Temperature, Eugene	57	57	57	56	55	55	54	55	59	64	65	67	66	59	56	56	56	56	55	54	53	52	51	51	0	43
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	
	Discharge, Blue River	73	71	69	67	65	63	62	61	60	58	57	56	55	54	53	53	52	51	50	49	48	48	47	47	47	
	Discharge, Mann Creek	49	48	47	46	44	43	41	40	39	38	37	36	36	35	35	34	33	32	31	30	30	30	30	30	30	
	Discharge, Wolf Creek	15.9	15.7	15.5	15.3	15.0	14.8	14.6	14.4	14.2	13.9	13.7	13.5	13.4	13.3	13.2	13.1	12.9	12.8	12.7	12.6	12.5	12.3	12.2	12.1	11	5.0
8	Air Temperature, Eugene	50	50	49	47	48	49	48	49	50	52	53	54	54	62	64	65	63	59	54	50	48	47	47	46	46	53
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	.05	.03	.01	0	0	.01	0	0	0	0	0	0	0	0	0	.05	
	Discharge, Blue River	46	46	46	46	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
	Discharge, Mann Creek	29	29	29	29	28	28	28	28	28	27	27	27	26	26	26	26	26	26	26	26	26	26	26	26	26	
	Discharge, Wolf Creek	12.0	12.0	11.9	11.9	11.8	11.8	11.7	11.7	11.6	11.6	11.5	11.5	11.4	11.2	11.1	11.0	10.9	10.8	10.6	10.5	10.4	10.2	10.1	10.0	8.7	5.0
9	Air Temperature, Eugene	44	47	49	48	49	50	50	50	52	54	55	58	59	62	65	67	67	62	56	55	53	52	51	50	0	41
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Discharge, Blue River	23	23	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	31	
	Discharge, Mann Creek	20	20	20	20	20	20	19	19	19	19	19	18	18	18	17	17	17	17	17	17	17	17	17	17	17	
	Discharge, Wolf Creek	9.9	9.8	9.8	9.7	9.6	9.6	9.5	9.4	9.3	9.2	9.2	9.1	9.1	9.0	9.0	8.9	8.9	8.8	8.8	8.7	8.7	8.6	8.6	8.5	7.0	5.0
10	Air Temperature, Eugene	49	47	46	46	45	44	45	47	51	57	62	67	72	70	68	64	59	58	57	56	54	53	52	51	0	62
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.10	.03	.27	.12	.07	0	0	.59	
	Discharge, Blue River	28	28	27	27	26	26	26	26	25	25	25	25	25	25	24	24	24	24	23	24	25	27	30	32	27	
	Discharge, Mann Creek	16	16	16	16	16	16	16	16	16	16	16	15	15	15	15	15	15	14	14	15	16	19	22	26	16	
	Discharge, Wolf Creek	8.5	8.4	8.4	8.3	8.3	8.2	8.2	8.2	8.1	8.1	8.0	8.0	8.0	8.0	7.9	7.9	7.8	7.8	7.8	8.1	8.5	9.0	9.5	10.0	5.4	5.0
11	Air Temperature, Eugene	51	51	51	50	50	50	48	50	51	54	54	54	56	58	59	60	59	55	52	50	48	47	47	45	45	55
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Discharge, Blue River	41	40	37	34	32	31	30	30	29	29	28	27	27	26	26	26	25	25	25	25	24	24	24	24	27	
	Discharge, Mann Creek	26	26	23	20	19	18	18	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	15	17	
	Discharge, Wolf Creek	10.9	10.8	9.6	9.5	9.1	9.2	9.1	9.1	9.0	8.9	8.9	8.8	8.8	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	6.3	5.0
12	Air Temperature, Eugene	45	43	44	43	41	39	39	40	47	49	53	57	61	65	66	67	65	60	55	52	51	54	50	48	0	46
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	
	Discharge, Blue River	24	24	24	24	24	23	23	23	23	23	23	23	22	22	22	22	22	22	21	21	21	21	21	21	11	
	Discharge, Mann Creek	15	15	15	15	15	15	15	15	15	15	15	15	14	14	14	14	14	14	14	14	14	14	14	13	11	
	Discharge, Wolf Creek	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.1	7.1	7.0	7.0	6.9	6.9	6.8	6.8	6.8	6.7	6.7	6.7	6.6	6.6	6.6	6.5	6.5	4.8	5.0
13	Air Temperature, Eugene	46	47	45	42	44	44	48	48	50	51	52	54	56	59	64	65	64	58	54	54	58	55	54	51	0	62
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	
	Discharge, Blue River	21	21	21	21	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	19	19	19	19	19	19	
	Discharge, Mann Creek	13	13	13	13	13	13	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	11	12	
	Discharge, Wolf Creek	6.5	6.5	6.4	6.4	6.4	6.3	6.3	6.3	6.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.0	6.0	6.0	4.1	5.0
14	Air Temperature, Eugene	53	53	53	52	52	52	52	52	53	53	54	56	56	56	57	57	57	54	49	49	46	45	46	48	0	42
	Precipitation, Sta. 1-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

* Data from Eugene, Oregon, Weather Bureau First Order Station, Elevation 344 ft., 81 miles WNW of laboratory area.

In the last column headed "Day":

Temperatures shown are Max. and Min. at Laboratory Headquarters (Station 1A) from Max. and Min. thermometers read at 1600 daily.

Precipitation - Daily totals

Discharge - Daily means from U.S.G.S. unpublished records. These will not necessarily agree with means of hourly values listed here.

HOURLY VALUES OF AIR TEMPERATURE, PRECIPITATION, AND DISCHARGE FOR PERIODS OF SIGNIFICANT STREAM RISE

5 DEC. - 22 DEC. 1948

Date	Item	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Day	
Dec. 5	Air Temperature, Eugene	40	41	41	41	41	40	41	40	40	41	43	44	44	44	44	44	42	41	40	39	37	37	36	37	36	28 22
	Precipitation, Sta. 1-B	.09	.05	.15	.09	.06	.11	.03	.08	.10	.10	.09	.09	.08	.08	.07	.06	.05	.04	.03	.03	.04	.03	.02	.01	.01	28 22
	Discharge, Blue River	95	95	93	93	93	92	92	92	91	90	89	88	88	88	87	86	85	84	84	84	83	82	81	80	90	30
	Discharge, Mann Creek	42	41	41	41	41	41	41	41	40	40	40	39	38	37	37	37	37	37	35	35	35	34	34	34	34	38
6	Air Temperature, Eugene	36	36	36	37	36	36	35	34	35	38	40	41	43	42	42	40	41	41	41	41	41	41	40	42	28 24	
	Precipitation, Sta. 1-B	.09	.15	.09	.06	.11	.03	.08	.10	.10	.09	.09	.08	.08	.07	.06	.05	.04	.03	.03	.04	.03	.02	.01	.01	28 24	
	Discharge, Blue River	80	80	79	79	79	78	78	78	77	77	77	76	75	75	74	74	74	74	73	73	72	72	73	73	76	
	Discharge, Mann Creek	34	34	34	34	34	34	33	32	31	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	33	
7	Air Temperature, Eugene	36	36	36	37	36	36	35	34	35	38	40	41	43	42	42	40	41	41	41	41	41	41	40	42	36 26	
	Precipitation, Sta. 1-B	.09	.15	.09	.06	.11	.03	.08	.10	.10	.09	.09	.08	.08	.07	.06	.05	.04	.03	.03	.04	.03	.02	.01	.01	36 26	
	Discharge, Blue River	74	75	72	73	78	80	82	85	88	96	107	111	122	140	150	156	158	158	156	154	153	152	149	147	114	
	Discharge, Mann Creek	30	29	29	30	32	33	33	35	39	43	45	60	75	82	85	85	86	84	80	80	77	75	74	74	55	
8	Air Temperature, Eugene	40	39	38	38	38	37	37	37	38	43	43	44	44	45	45	45	45	46	46	47	47	47	47	47	36 26	
	Precipitation, Sta. 1-B	.09	.15	.09	.06	.11	.03	.08	.10	.10	.09	.09	.08	.08	.07	.06	.05	.04	.03	.03	.04	.03	.02	.01	.01	36 26	
	Discharge, Blue River	145	143	141	140	138	136	135	133	132	131	130	129	128	127	127	126	126	125	123	123	123	123	122	122	131	
	Discharge, Mann Creek	72	70	70	69	68	67	66	65	64	64	63	63	62	61	61	60	60	60	60	60	60	60	60	62	66	
9	Air Temperature, Eugene	48	48	48	48	49	50	49	49	50	50	49	47	46	45	45	45	44	42	40	42	42	41	42	42	35 29	
	Precipitation, Sta. 1-B	.09	.06	.05	.10	.05	.08	.05	.01	.06	.06	.25	.15	.15	.15	.10	.10	.08	.02	.0	.06	.02	.02	.10	.05	182	
	Discharge, Blue River	134	135	135	143	148	151	154	158	161	167	173	182	200	210	210	210	210	210	210	210	209	209	208	208	182	
	Discharge, Mann Creek	63	64	65	67	70	72	74	75	77	79	80	87	98	106	107	110	111	110	108	106	105	106	105	104	89	
10	Air Temperature, Eugene	42	42	42	42	42	42	42	42	43	42	42	42	43	44	44	44	45	45	45	45	45	45	45	45	33 27	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	104	101	99	99	98	97	96	96	95	94	93	92	90	90	88	89	89	89	88	86	84	83	84	85	91	
	Discharge, Mann Creek	38	38	38	38	38	38	37	37	37	37	37	37	37	37	36	36	36	36	35	35	34	34	34	34	37	
11	Air Temperature, Eugene	41	41	40	40	41	44	45	46	47	48	48	47	47	46	47	48	49	52	52	52	52	50	47	46	33 28	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	180	180	180	180	179	179	179	180	183	186	190	200	205	208	210	212	220	240	280	370	460	550	630	680	243	
	Discharge, Mann Creek	34	34	34	34	34	34	35	35	35	36	36	37	37	38	38	39	40	42	44	50	63	68	75	80	103	
12	Air Temperature, Eugene	46	46	46	46	46	42	40	41	40	43	44	48	47	46	45	42	42	41	39	39	38	38	39	38	40	37 27
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	710	700	680	660	620	580	550	530	510	500	480	460	445	435	420	405	395	380	365	350	335	325	315	305	480	
	Discharge, Mann Creek	280	275	270	265	255	250	240	233	223	215	205	200	190	185	180	175	170	165	160	155	152	148	146	144	202	
13	Air Temperature, Eugene	39	39	38	38	38	38	39	39	38	40	41	42	42	42	42	42	42	40	40	36	36	34	34	33	30 26	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	300	290	280	270	258	254	250	246	243	239	235	232	228	224	220	219	215	210	208	208	208	205	205	205	255	
	Discharge, Mann Creek	142	140	137	133	130	128	128	128	128	128	128	113	113	113	113	113	100	100	100	100	100	100	99	98	109	
14	Air Temperature, Eugene	32	33	34	33	32	33	33	32	33	36	37	39	41	42	41	41	39	37	36	35	35	35	35	34	29 22	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	201	197	193	189	185	182	180	178	176	174	172	170	168	165	163	160	158	155	153	151	149	147	145	143	175	
	Discharge, Mann Creek	93	93	93	93	93	86	86	86	86	86	86	80	80	80	80	80	74	74	74	74	74	74	74	74	78	
15	Air Temperature, Eugene	33	32	32	32	32	32	31	31	32	34	36	38	41	42	41	41	39	35	34	32	32	32	31	31	24 20	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	142	141	139	138	136	135	133	131	130	129	127	125	124	123	122	121	119	118	117	116	115	114	113	112	128	
	Discharge, Mann Creek	70	70	70	70	70	66	65	65	65	65	65	62	62	62	62	62	58	58	58	58	58	58	58	57	57	
16	Air Temperature, Eugene	30	30	29	27	27	27	30	30	30	29	29	29	30	30	31	32	32	28	30	30	30	30	30	30	24 12	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	111	110	109	109	108	107	106	105	105	104	103	102	101	100	99	99	98	97	96	96	95	94	93	93	105	
	Discharge, Mann Creek	55	55	55	55	55	52	52	52	52	52	52	50	50	50	50	50	50	48	48	48	48	48	48	46	46	
17	Air Temperature, Eugene	29	28	27	26	26	26	26	25	27	30	32	34	35	36	36	35	33	29	28	29	26	26	25	24	24 12	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	205	
	Discharge, Blue River	92	91	91	90	89	89	88	87	87	86	85	85	84	83	83	82	81	81	80	79	79	78	78	78	86	
	Discharge, Mann Creek	46	46	46	46	46	44	44	44	44	44	44	42	42	42	42	42	40	40	40	40	40	40	40	38	38	
18	Air Temperature, Eugene	22	22	21	20	20	20	19	19	22	26	29	31	33	34	35	34	33	30	28	28	28	29	29	30	28 15	
	Precipitation, Sta. 1-B	.03	.06	.04	.07	.09	.11	.13	.12	.10	.10	.10	.10	.10	.09	.08	.08	.08	.08	.0							

26 APR. - 6 MAY 1949

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HOURLY VALUES OF AIR TEMPERATURE, DEW POINT, PRECIPITATION AND DISCHARGE PERIODS OF SIGNIFICANT STREAM RISE

7 MAY - 21 MAY 1949

Date	Item	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Day		
May 7	Air Temperature, Sta. 6	50	50	51	52	51	55	58	61	64	64	64	63	61	60	53	50	48	48	48	48	49	50	48	47	64	47	
	Air Temperature, Sta. 8	35	34	34	34	34	36	40	45	50	51	53	53	52	53	51	49	46	44	44	40	39	38	38	38	53	34	
	Air Temperature, Sta. 21	40	39	39	39	40	42	46	49	53	60	60	62	62	62	62	62	64	50	46	44	42	41	41	62	39		
	Dew Point, Sta. 8	35	34	34	34	34	36	40	42	44	39	39	39	38	39	38	39	38	38	37	40	39	38	38	38	64	34	
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Precipitation, Sta. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge, Blue River	148	148	148	148	148	148	148	149	149	149	149	150	150	151	152	153	154	156	157	158	159	160	161	161	162	162	155
Discharge, Mann Creek	90	90	90	90	90	90	90	90	90	90	91	91	92	93	93	94	96	98	100	101	103	105	106	107	108	91	28	
Discharge, Wolf Creek	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
8	Air Temperature, Sta. 6	45	46	46	46	48	50	57	57	57	54	52	52	50	50	48	46	46	45	44	44	44	43	43	43	43	57	43
	Air Temperature, Sta. 8	37	37	37	36	37	37	40	40	45	48	50	54	56	51	49	47	46	44	43	43	41	39	39	38	38	56	36
	Air Temperature, Sta. 21	41	41	41	40	40	40	41	43	48	52	56	61	66	64	58	55	53	49	47	43	41	40	40	40	66	40	
	Dew Point, Sta. 8	37	37	37	36	37	37	40	39	39	41	42	42	40	43	43	43	43	43	43	41	39	39	38	38	43	36	
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Precipitation, Sta. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge, Blue River	162	162	162	161	161	161	161	161	161	160	160	161	162	162	163	164	165	166	168	168	169	169	168	168	168	168	169
Discharge, Mann Creek	109	109	109	109	109	109	109	109	109	109	109	110	110	111	111	112	113	114	115	115	115	115	115	115	115	115	105	
Discharge, Wolf Creek	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	28	28	28	28	28	28	28	28	28	28	28	28	
9	Air Temperature, Sta. 6	43	44	44	44	44	44	47	47	47	44	42	42	40	40	38	36	36	35	32	32	32	32	32	32	64	44	
	Air Temperature, Sta. 8	37	37	36	35	35	36	38	41	47	50	56	63	70	76	73	72	70	62	53	48	45	44	43	42	41	42	
	Air Temperature, Sta. 21	40	39	38	38	38	39	41	43	47	54	63	70	76	73	72	70	62	53	48	45	44	43	42	41	42		
	Dew Point, Sta. 8	37	37	36	35	35	36	38	41	47	44	50	47	46	46	46	44	39	42	40	43	42	41	40	39	50	35	
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Precipitation, Sta. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge, Blue River	168	167	167	166	166	165	165	165	165	164	167	169	172	175	177	180	183	186	189	189	189	189	189	189	189	189	181
Discharge, Mann Creek	115	115	115	115	115	115	115	115	115	114	113	112	111	111	112	113	114	115	115	115	115	115	115	115	115	113	109	
Discharge, Wolf Creek	28	28	28	28	28	28	28	28	28	28	28	28	28	28	29	30	30	30	30	31	31	32	32	32	32	32	29	
10	Air Temperature, Sta. 6	47	47	47	46	46	45	47	49	53	60	64	66	67	68	68	66	62	60	55	53	53	52	52	53	68	45	
	Air Temperature, Sta. 8	38	37	37	36	36	36	37	42	49	51	54	56	60	62	64	60	54	50	46	45	43	42	40	39	58	35	
	Air Temperature, Sta. 21	41	40	40	40	40	40	41	43	48	54	60	70	76	80	78	74	70	64	54	50	46	44	43	42	80	39	
	Dew Point, Sta. 8	38	37	37	36	36	36	37	41	43	43	46	48	47	43	43	49	47	47	45	45	43	42	40	39	49	36	
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Precipitation, Sta. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge, Blue River	188	187	186	186	185	185	184	184	183	183	186	190	193	196	196	197	197	198	198	199	201	202	202	202	202	202	202
Discharge, Mann Creek	134	134	133	133	133	133	133	133	133	132	132	131	131	133	139	143	147	150	153	155	155	155	155	155	155	155	133	
Discharge, Wolf Creek	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	33	33	34	34	35	35	35	36	36	36	36	32	
11	Air Temperature, Sta. 6	53	55	55	55	54	54	57	62	66	70	71	73	73	73	74	72	65	58	55	54	55	55	59	56	74	53	
	Air Temperature, Sta. 8	39	38	37	37	36	36	41	47	52	57	67	76	84	88	86	82	56	54	49	46	45	44	44	44	76	35	
	Air Temperature, Sta. 21	42	41	40	40	40	40	42	45	50	57	68	76	83	84	82	78	70	64	54	50	46	44	43	42	80	39	
	Dew Point, Sta. 8	39	38	37	37	36	36	41	47	47	47	51	53	41	43	44	44	38	35	38	40	43	45	44	44	54	35	
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.01	0	.01	0	0	0	0	.02	
	Precipitation, Sta. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge, Blue River	201	200	199	198	197	197	196	196	196	196	196	197	203	209	212	213	215	216	216	216	216	215	215	215	214	211	211
Discharge, Mann Creek	155	158	158	158	158	158	155	152	151	150	150	150	152	158	163	167	170	171	172	173	174	173	173	172	172	156		
Discharge, Wolf Creek	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	37	38	39	39	39	40	40	40	40	40	34		
12	Air Temperature, Sta. 6	54	54	55	57	58	57	60	59	66	72	72	73	70	70	61	58	52	56	55	55	54	54	54	52	73	52	
	Air Temperature, Sta. 8	43	42	42	42	41	40	40	44	47	51	55	60	66	65	64	56	48	46	46	46	44	43	42	41	66	40	
	Air Temperature, Sta. 21	44	42	42	42	41	40	40	41	41	41	43	40	47	48	50	50	48	46	46	46	44	43	42	41	50	40	
	Dew Point, Sta. 8	43	42	42	42	41	40	40	41	41	41	43	40	47	48	50	50	48	46	46	46	44	43	42	41	50	40	
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.05	.05	0	0	0	0	0	.10	
	Precipitation, Sta. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge, Blue River	214	213	213	212	212	211	211	210	210	210	211	212	214	216	218	218	217	217	217	216	216	216	215	215	215	230	
Discharge, Mann Creek	172	172	171	171	170	170	170	169	168	167	166	165	167	170	173	176	180	180	180	180	180	180	179	178	178	170		
Discharge, Wolf Creek	40	40	40	40	40	40	40	40	40	40	40	40	40	40	39	39	40	40	41	41	42	42	42	42	42	42	37	
13	Air Temperature, Sta. 6	51	51	51	50	50	50	52	51	53	55	55	62	65	65	63	58	54	52	51	51	50	50	49	49	65	49	
	Air Temperature, Sta. 8	41	40	39	38	38	38	39	42	43	46	47	47	52														

HOURLY VALUES OF AIR TEMPERATURE, DEW POINT, PRECIPITATION AND DISCHARGE FOR PERIODS OF SIGNIFICANT STREAM RISE

7 MAY - 21 MAY 1949

Date	Item	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Day	
15	Air Temperature, Sta. 6	44	44	43	42	43	43	44	44	45	47	52	54	54	56	51	48	46	44	44	42	42	42	42	43	43	56 42
	Air Temperature, Sta. 8	42	42	42	41	41	41	41	41	42	43	44	44	44	45	44	43	42	41	41	41	41	41	41	41	41	57 41
	Air Temperature, Sta. 21	44	44	43	42	43	43	44	44	45	47	52	54	54	56	51	48	46	44	44	42	42	42	42	43	43	56 42
	Dew Point, Sta. 8	42	42	42	41	41	41	41	41	42	43	44	44	44	45	44	43	42	41	41	41	41	41	41	41	41	49 41
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Precipitation, Sta. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Discharge, Blue River	194	193	193	192	191	188	182	182	181	181	179	177	177	177	176	177	178	179	179	178	176	173	171	169	167	196
	Discharge, Mann Creek	147	146	145	144	143	142	140	140	139	139	137	135	134	133	135	136	138	138	136	134	132	130	128	127	126	131
	Discharge, Wolf Creek	39	39	39	39	39	39	39	39	39	39	39	37	37	37	37	37	37	37	36	36	36	36	36	35	35	39
16	Air Temperature, Sta. 6	41	40	40	39	40	40	41	42	45	48	51	52	54	53	47	44	42	40	39	38	41	41	40	38	37	57 38
	Air Temperature, Sta. 8	40	40	40	39	39	38	40	41	42	43	44	44	44	45	47	48	48	48	47	46	43	42	42	41	41	57 41
	Air Temperature, Sta. 21	43	44	43	44	43	44	44	45	46	48	50	56	62	65	62	61	54	52	50	46	43	42	42	41	41	65 41
	Dew Point, Sta. 8	40	40	40	39	39	38	43	39	42	39	42	40	40	39	37	38	39	39	39	38	41	41	40	38	37	43 37
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Precipitation, Sta. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Discharge, Blue River	166	164	163	162	161	161	160	159	158	156	155	154	152	153	155	157	156	156	155	153	152	150	149	148	148	166
	Discharge, Mann Creek	124	123	122	121	119	117	115	114	113	112	111	110	111	113	116	119	116	114	112	110	109	107	105	104	101	109
	Discharge, Wolf Creek	35	35	35	35	35	35	35	35	35	35	35	33	33	33	33	33	33	33	33	33	33	33	33	33	31	34
17	Air Temperature, Sta. 6	37	37	36	36	36	36	37	39	41	41	42	42	43	42	41	42	44	44	45	45	46	46	48	48	48	48 36
	Air Temperature, Sta. 8	40	40	39	38	38	39	40	41	42	43	44	44	44	44	45	47	48	48	46	44	46	46	46	46	46	48 38
	Air Temperature, Sta. 21	37	37	36	36	36	36	37	39	39	40	40	41	43	42	41	42	43	41	42	42	40	40	40	40	40	43 36
	Dew Point, Sta. 8	40	40	40	39	39	38	43	39	42	39	42	40	40	39	37	38	39	39	39	38	41	41	40	38	37	43 37
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Precipitation, Sta. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Discharge, Blue River	147	146	145	143	142	141	140	139	137	136	135	134	133	132	131	130	129	128	126	125	124	124	123	123	123	138
	Discharge, Mann Creek	104	103	101	100	99	98	97	97	96	95	94	93	93	92	91	90	90	89	88	87	86	86	85	85	85	88
	Discharge, Wolf Creek	30	30	30	30	30	30	30	30	30	30	30	29	29	29	28	28	28	27	26	25	25	25	25	25	25	28
18	Air Temperature, Sta. 6	44	44	43	44	44	42	47	44	47	54	58	58	57	56	52	53	53	52	50	47	46	48	46	45	45	58 42
	Air Temperature, Sta. 8	47	47	46	46	46	45	46	51	54	57	60	61	56	54	57	55	52	49	47	45	44	44	44	44	44	64 44
	Air Temperature, Sta. 21	46	46	45	45	45	46	46	49	54	57	62	68	65	65	65	64	62	58	52	48	46	46	46	46	46	68 45
	Dew Point, Sta. 8	39	39	39	38	38	37	40	35	36	36	38	39	47	46	45	43	42	44	46	45	44	44	44	44	44	47 35
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Precipitation, Sta. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Discharge, Blue River	122	121	120	120	119	118	117	117	116	115	114	114	114	114	115	116	117	117	117	116	116	116	116	116	116	121
	Discharge, Mann Creek	85	84	83	82	81	81	81	80	79	79	78	80	82	83	84	84	83	83	83	82	82	82	81	81	81	79
	Discharge, Wolf Creek	25	24	24	24	23	23	23	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	27
19	Air Temperature, Sta. 6	44	43	42	42	40	40	43	44	48	52	53	54	54	54	50	47	46	44	42	42	41	41	41	41	40	54 40
	Air Temperature, Sta. 8	44	42	40	39	38	38	40	45	52	54	56	57	58	56	56	53	52	48	48	44	42	42	42	42	41	58 38
	Air Temperature, Sta. 21	46	46	42	41	40	40	41	48	50	54	56	57	58	56	56	53	52	48	48	44	42	42	42	42	41	58 38
	Dew Point, Sta. 8	44	42	40	39	38	38	40	41	40	40	40	38	43	41	44	41	41	47	48	42	42	42	42	42	41	48 38
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Precipitation, Sta. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Discharge, Blue River	115	115	115	115	115	114	114	113	112	112	111	111	110	110	111	111	112	112	113	113	113	112	112	112	111	114
	Discharge, Mann Creek	80	80	80	80	80	80	80	79	79	78	78	76	77	79	80	80	82	82	82	81	80	80	79	78	78	76
	Discharge, Wolf Creek	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	25
20	Air Temperature, Sta. 6	40	40	40	39	39	39	39	40	41	44	45	46	48	46	44	44	43	42	40	40	40	40	39	39	39	48 39
	Air Temperature, Sta. 8	41	41	41	41	41	40	41	41	41	44	47	47	48	46	44	44	44	44	43	42	41	41	41	41	41	49 40
	Air Temperature, Sta. 21	40	40	40	39	39	39	40	41	41	44	45	46	48	46	44	44	43	42	40	40	40	40	39	39	39	47 39
	Dew Point, Sta. 8	41	41	41	41	41	40	41	41	41	44	46	46	45	47	47	46	44	42	40	40	40	40	39	39	39	47 39
	Precipitation, Sta. 1-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Precipitation, Sta. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Discharge, Blue River	111	110	110	109	109	108	108	108	107	107	106	106	106	106	105	104	105	105	109	112	114	116	118	119	119	112
	Discharge, Mann Creek	76	76	76	76	75	75	75	75	74	74	74	73	73	73	74	75	76	76	78	82	84	85	85	85	85	75
	Discharge, Wolf Creek	21	21	20	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	20	21	21	22	22	22	22	26
21	Air Temperature, Sta. 6	40	40	40	40	40	40	43	45	50	50	51	52	52	48	45	45	43	42	41	41	41	41	41	41	41	52 40
	Air Temperature, Sta. 8	40	40	40	39	38	38	40	48	47	50	52	53	52	48	46	47	46	44	44	43	43	42	41	41	41	53 38
	Air Temperature, Sta. 21	40	40	40	39	38	38	40	48	47																	

**Summary of Temperatures,
Monthly Precipitation, and Runoff 1947-1948**
(precipitation in inches)

Station	Elevation	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	% of Mean*
1B	4030	18.4	12.4	12.1	15.6	21.6	13.6	12.7	7.3	3.9	2.1	1.8	6.3	127.8	118
2	4625	21.8	14.5	8.9	12.7	12.3	10.1	8.4	3.7	2.6	1.6	0.9	2.8	100.3	93
5	4160	18.4	11.0	8.6	21.1	20.6	9.5	4.2	5.0	1.3	1.8	1.9	5.8	109.2	101
6	4090	17.5	12.0	10.0	15.9	16.5	11.0	6.7	4.9	1.1	1.6	1.3	4.7	103.2	96
8	3265	11.3	14.7	9.4	15.7	11.4	7.9	8.7	6.1	3.5	1.8	2.8	5.4	99.0	92
10	2965	Incomplete													
12	4950	Not reliable													
15	4925	Not reliable													
Mean*		17.5	12.9	9.8	16.2	16.5	10.4	8.1	5.4	2.5	1.8	1.7	5.0	107.8	
McKenzie Bridge 1947-1948	1375	13.2	9.3	6.9	11.2	13.5	7.5	5.8	6.0	2.9	1.4	1.2	3.3	82.3	
27-yr. Av.		5.8	10.6	10.6	10.1	8.1	7.5	4.3	4.1	3.0	0.9	0.8	2.6	68.3	

(Runoff = inches)

Station	Sta.No.	D.A.	Elev.	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Blue River 14-yr. Av. 1947-1948	USGS	75		1.8	7.2	10.1	9.3	8.3	8.5	8.8	6.5	3.0	1.0	0.5	0.5	65.5
Blue River Laboratory	14	11.5	1960	9.5	10.9	6.4	16.4	10.9	6.8	9.6	10.1	4.0	1.2	0.6	0.7	87.1
				9.6	12.6	8.0	16.0	7.9	5.8	10.1	12.9	6.4	1.8	0.9	0.9	92.9

(Temperature = °F)

Station	Elevation	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean
McKenzie Bridge 27-yr. Av. 1947-1948	1375	52	42	36	35	38	44	50	55	60	66	64	59	50
Headquarters Station 1A	4235	51	41	37	32	34	-	-	-	-	63	62	61	-
		-	-	-	33	29	30	34	41	54	57	54	51	-

* Monthly precipitation data for 1947-1948 based on mass curves. See page 5.

* Mean of stations 1B, 2, 5, 6, and 8.

Summary of Temperatures,
Monthly Precipitation and Runoff - 1948-1949
(precipitation in inches) /

Station	Elevation	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	% of Mean*
1B	4030	6.5	18.9	12.8	4.3	30.1	9.4	5.7	9.3	2.1	0.4	0.3	3.2	103.0	108
2	4625	2.3	22.6	18.2	2.4	24.5	7.8	3.9	6.4	1.6	0.4	0.0	2.0	92.1	96
5	4160	8.4	29.5	29.5	5.0	33.1	8.0	2.4	8.5	1.5	0.0	0.0	1.9	127.8	134
6	4090	4.3	12.7	8.4	4.0	34.5	6.3	1.2	8.0	1.7	2.2	0.3	2.2	85.8	90
8	3265	5.4	17.4	19.8	3.4	24.2	6.8	3.3	6.5	1.3	2.2	0.2	2.2	92.7	97
10	2965	4.9	12.4	8.1	3.1	20.6	7.5	2.8	7.9	1.2	2.0	1.6	0.8	72.9	76
12	4950	4.1	15.4	10.3	2.4	16.5	2.4	4.9	7.8	1.9	1.5	0.2	2.0	69.4	73
15	4925	4.1	14.0	13.6	4.1	16.2	5.2	3.3	6.4	1.0	0.9	0.2	2.3	71.3	75
Mean*		5.3	18.9	16.1	3.7	27.8	7.6	3.2	7.8	1.6	1.2	0.4	2.0	95.6	

(Runoff - inches)

Station	Sta.No.	D.A.	Elev.	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Blue River	USGS	75		1.6	7.3	13.1	2.4	11.5	11.3	11.3	12.6	2.5	0.9	0.5	0.4	75.4
Blue River Laboratory	14	11.5	1960	2.0	6.5	11.1	2.7	9.0	11.2	14.4	18.2	4.7	1.2	0.5	0.4	81.9
Mann Creek	23	5.12	2490	2.9	8.4	10.8	2.1	8.4	10.8	17.6	25.4	7.1	1.5	0.6	0.4	96.0
Wolf Creek	24	2.06	2490	2.5	8.6	12.7	2.7	9.2	12.1	15.2	18.0	4.0	1.6	0.9	0.8	88.3

(Temperature - °F)

Station	Elevation	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean
McKenzie Bridge Hdqtrs.	1575	-	40	32	26	36	42	52	58	61	65	-	-	-
Station 1A	4235	46	33	25	23	28	33	41	46	52	58	56	55	41

/ Monthly precipitation data for 1948-1949 are mostly estimated. See pages 4-5 for further explanation.

* Mean of stations 1B, 2, 5, 6, 8, and 10. Stations 12 and 15 are deficient in catch. See page 5.

MONTHLY RUNOFF AND PRECIPITATION

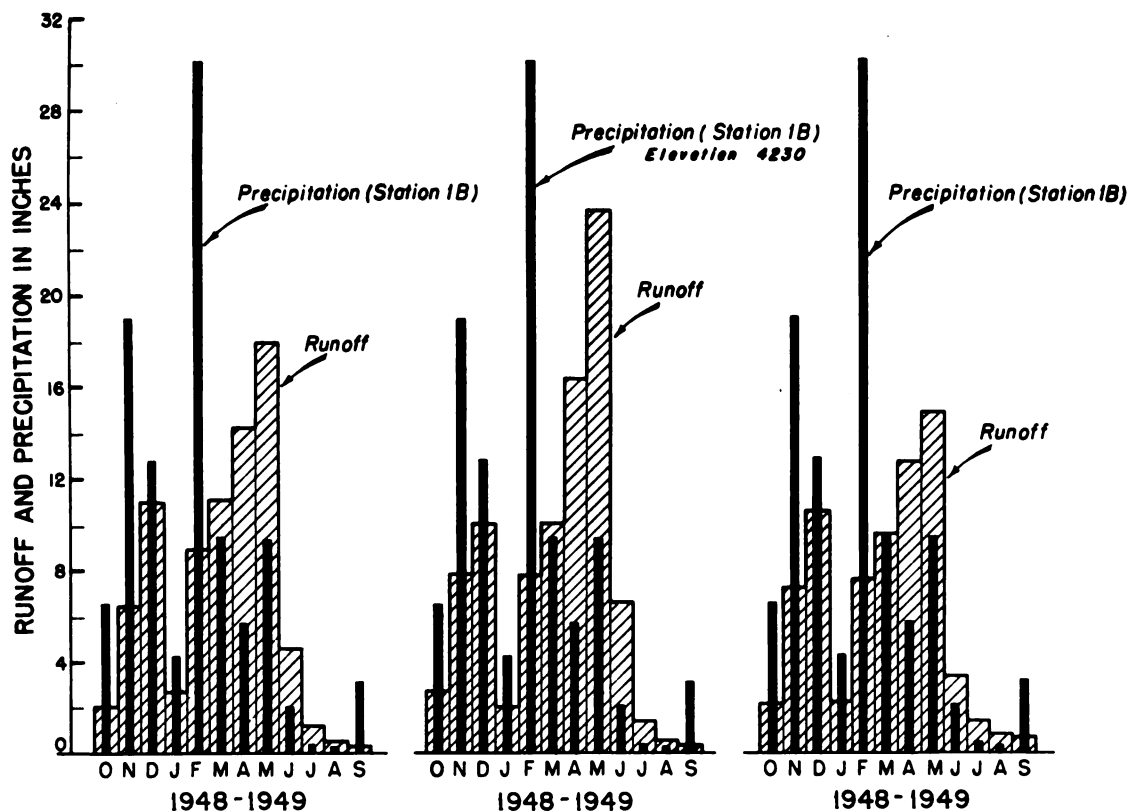
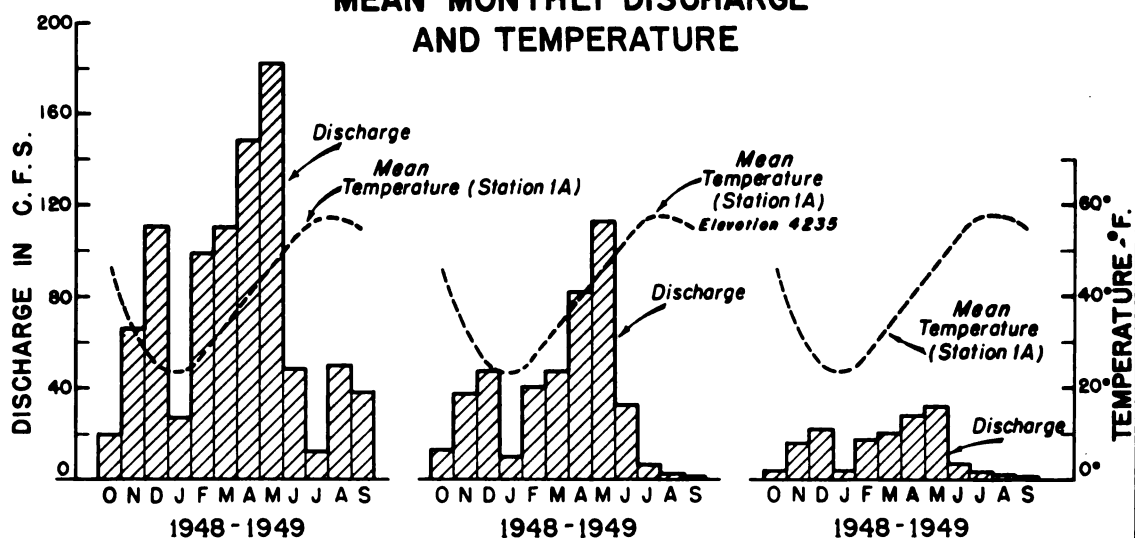


FIG. 19

MEAN MONTHLY DISCHARGE AND TEMPERATURE



BLUE R. above QUENTIN CR. MANN CR. at CONFLUENCE WOLF CR. at CONFLUENCE
D. A. = 11.5 SQ. MI. D. A. = 5.12 SQ. MI. D. A. = 2.06 SQ. MI.

WILLAMETTE BASIN SNOW LABORATORY

WILLAMETTE BASIN SNOW LABORATORY
Precipitation (inches) 1947-1948
Sacramento Type-B 200" Storage Gage

Station 2		Station 5		Station 6		Station 8		Station 10		Station 12		Station 15	
Date	Incre- ment	Date	Incre- ment	Date	Incre- ment	Date	Incre- ment	Date	Incre- ment	Date	Incre- ment	Date	Incre- ment
1 Oct	0.00	20 Sep	0.00	24 Sep	0.00	3 Oct	0.00	29 Nov	0.00	28 Sep	0.00	2 Oct	0.00
26 Nov	35.90	20 Oct	16.57	24 Nov	30.36	27 Nov	30.53	21 Dec	7.23	5 Dec	21.39	4 Nov	14.25
9 Dec	4.33	24 Oct	1.74	8 Dec	4.37	4 Dec	2.05	2 Jan	5.50	1 Jan	4.37	25 Nov	5.46
20 Dec	2.56	4 Nov	2.16	21 Dec	2.19	22 Dec	6.21	21 Jan	10.72	6 Feb	7.61	14 Dec	3.88
28 Dec	1.77	9 Dec	5.50	31 Dec	3.90	2 Jan	5.14	5 Feb	0.56	22 Feb	4.20	4 Jan	4.10
4 Jan	10.35	20 Dec	2.05	20 Jan	15.44	21 Jan	11.85	20 Feb	7.72	7 Mar	2.20	9 Jan	6.71
4 Feb	2.25	28 Dec	2.17	5 Feb	1.12	20 Feb	5.73	7 Mar	7.09	25 Mar	3.10	9 Mar	6.61
14 Feb	6.06	4 Jan	9.06	20 Feb	7.62	6 Mar	7.49	24 Mar	6.83	24 Apr	5.05	26 Mar	4.27
8 Mar	7.93	16 Jan	9.25	6 Mar	9.85	24 Mar	5.37	13 Apr	5.64	29 May	4.17	15 Apr	2.13
23 Mar	7.68	19 Feb	7.99	24 Mar	7.52	13 Apr	6.11	25 Apr	3.66	26 Jun	0.00	26 Apr	2.13
15 Apr	6.39	6 Mar	9.62	14 Apr	8.11	24 Apr	2.58	16 May	4.55			18 May	4.17
28 Apr	3.63	23 Mar	8.21	28 Apr	3.45	17 May	4.93	30 May	2.21			1 Jun	0.00
11 May	3.46	14 Apr	7.04	19 May	5.15	28 May	2.03	13 Jun	0.40				
1 Jun	0.51	28 Apr	2.50	4 Jun	0.00	30 May	0.42	23 Jun	0.83				
30 Jun	0.00	11 May	4.25	14 Jun	0.76	13 Jun	0.00	27 Jun	0.00				
		1 Jun	0.86	28 Jun	0.40	22 Jun	4.05						
		30 Jun	0.00			26 Jun	0.00						
Season Totals	92.82		88.97		100.24		94.49		62.94		52.09		53.71

Daily Frequencies of Precipitation
(more than 0.01 inch per day)

Headquarters Station

Type	Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Rain, Snow, or Both.	47-48	-	24	25	18	17	24	25	26	9	7	9	10	169
	48-49	11	25	23	16	21	25	11	12	8	6	6	6	171
Snow only or snow with rain.	47-48	-	-	-	10	17	21	18	10	0	0	0	5	81
	48-49	5	19	23	11	20	15	8	5	3	0	0	0	109
Rain only.	47-48	-	-	-	8	0	3	7	16	9	7	9	5	64
	48-49	6	6	0	5	1	10	3	7	5	6	6	7	62

Major Precipitation Periods

Period	Precipitation at Station 1B			
	No. of days of pept.	Total (inches)	Maximum	
			Midnight to Midnight (inches)	Hourly intensity (in./hr.)
14 - 20 Oct 1947	7	12.15	3.97*	-
21 Oct - 21 Nov 1947	31	14.76	1.38	0.20
27 Dec 47-12 Jan 48	15	20.17	4.70	0.39
7 - 9 Feb 1948	3	4.49	2.93	0.20
14 - 23 Feb 1948	9	13.67	4.62	0.26
12 - 25 Mar 1948	13	9.40	1.82*	0.20
3 - 6 Oct 1948	3	4.08	1.17	0.20
30 Oct-3 Nov 1948	3	3.68	1.28	0.27
14 Nov-1' Dec 1948	27	31.12	2.89	0.35
2 - 23 Feb 1949	21	30.26	2.74	0.35
28 Apr - 2 May 1949	4	7.50	4.49	0.25

* estimated

REMARKS: / - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown. *Estimated value - from Eugene Oregon record.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.		Eugene Oregon record.																								
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2																										2
3																										3
4																										4
5																										5
6																										6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12
13																										13
14																										14
15																										15
16																										16
17																										17
18																										18
19																										19
20																										20
21																										21
22																										22
23																										23
24																										24
25																										25
26																										26
27																										27
28																										28
29																										29
30																										30
31																										31

Station activated October 11
(First ppt.)

Monthly Values: 15.02

STATION NUMBER 1 B

Month: October Year: 1947

Reduced by: Willamette Basin Snow Laboratory

Date: Precipitation, inches, Standard Pries Recorder

Verified by:

Cooperative Snow Investigations

PSD Form 51a (5/11/44)
7 Sep 1944

REMARKS: - - - Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1	0.01	0.05	0.05	0.08	0.06	0.06	0.04	0.02		0.01	0.02	0.03	0.01	0.01			0.02	0.05	0.01	0.02	0.11	0.10	0.05	0.02	0.53	1
2	0.01	0.01	0.01	0.02		0.06			0.01	0.04		0.01		0.01	0.01		0.01	0.01	0.01	0.02	0.11	0.10	0.05	0.02	0.52	2
3	0.02	0.02	0.02	0.02	0.01	0.01	0.01		0.01		0.02					0.01	0.01	0.01	0.01	0.01	0.02				0.21	3
4					0.02	0.03	0.05	0.06	0.03	0.01	0.08	0.03	0.08	0.03		0.06	0.16	0.11	0.05	0.01	0.04	0.06	0.04	0.04	0.99	4
5				0.01							0.01			0.03	0.03	0.05	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.60	5
6	0.04	0.02	0.03	0.04	0.03	0.03	0.02	0.05	0.02	0.01	0.02	0.04	0.01	0.01	0.01	0.02				0.01	0.02	0.02	0.02	0.03	0.49	6
7	0.04	0.03	0.04	0.04	0.04	0.04	0.08	0.03	0.05	0.06	0.03	0.01	0.06	0.04	0.04	0.03	0.03	0.03	0.04	0.05	0.04	0.03	0.08	0.08	1.04	7
8	0.07	0.11	0.12	0.18	0.06	0.02	0.01	0.04	0.04	0.07			0.02	0.05		0.03	0.10	0.05							0.97	8
9				0.01		0.01				0.02	0.09	0.01		0.01			0.01	0.01	0.01	0.01	0.01	0.02		0.01	0.23	9
10	0.01	0.01	0.02	0.04	0.02			0.01	0.03	0.05	0.08	0.02	0.02	0.01					0.02	0.02	0.03	0.04	0.10	0.05	0.65	10
11	0.01	0.04	0.04	0.02	0.04	0.03	0.02	0.02			0.03	0.13	0.07	0.01	0.01		0.01		0.01	0.01			0.02	0.01	0.53	11
12	0.01	0.02	0.01	0.01						0.02	0.02													0.01	0.11	12
13	0.02	0.02	0.06	0.15	0.18	0.11	0.08	0.02	0.02	0.03	0.04	0.10	0.02	0.03	0.03	0.04	0.03	0.01	0.05	0.01	0.06	0.05	0.03	0.01	1.20	13
14	0.02	0.03	0.04	0.02	0.02	0.02	0.01	0.02	0.02	0.03	0.10	0.04	0.06	0.07	0.14	0.10	0.08	0.12	0.06	0.06	0.05	0.07	0.07	0.06	1.31	14
15	0.08	0.07	0.05	0.08	0.10	0.07	0.04	0.08	0.12	0.13	0.05	0.12	0.04	0.04	0.10	0.07	0.05	0.04		0.02	0.01		0.01	0.01	1.38	15
16	0.01	0.01			0.02		0.02			0.01	0.01	0.02	0.04	0.02	0.01		0.01	0.01						0.01	0.20	16
17	0.02		0.01	0.02	0.02	0.04	0.02	0.03	0.02	0.03	0.03	0.10													0.34	17
18						0.02	0.07		0.05	0.04	0.02	0.03	0.05	0.04	0.02		0.05								0.39	18
19												0.02											0.01	0.04	0.07	19
20	0.01		0.02		0.01			0.01			0.03	0.02	0.01	0.01	0.02		0.02			0.02					0.18	20
21			0.01		0.01																				0.02	21
22																										22
23																										23
24																										24
25									0.01			0.01													0.02	25
26																										26
27																										27
28																										28
29													0.01										0.01		0.02	29
30	0.01						0.01		0.01	0.10	0.02	0.02	0.02	0.03	0.03		0.02	0.01	0.04	0.02				0.01	0.35	30
31																										31

Reduced by:		Verified by:		Monthly Values: 12.36	
Laboratory:	Willamette Basin Snow Laboratory	Precipitation, inches, Standard Fries Recorder		STATION NUMBER 1 B	Month: November Year: 1947

REMARKS: ✓ - - ✓ Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown. Reading taken on the hour. Amount of precipitation since previous hour unless indicated otherwise.

[illegible]

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1	0.02	0.01	0.04	0.03	0.04	0.03	0.02	0.01	0.01		0.01	0.04	0.02	0.02	0.02	0.02		0.03							0.37	1
2																										2
3																	0.01	0.04	0.05	0.08	0.10	0.07			1	3
4	0.01	0.01	0.01	0.01	0.01	0.01	0.01									0.02			0.02						0.46	4
5			0.04	0.01	0.02	0.01					0.01														0.09	5
6																										6
7																			0.01	0.10	0.10	0.09	0.15	0.45	7	
8	0.16	0.19	0.15	0.10	0.13	0.12	0.12	0.13	0.15	0.11	0.17	0.17	0.16	0.19	0.20	0.14	0.14	0.12	0.03		0.02	0.10	0.05	0.08	2.93	8
9	0.05	0.04	0.07	0.07	0.08	0.01	0.07	0.05	0.07	0.04	0.07	0.04	0.04	0.03	0.02	0.06	0.09	0.06	0.05		0.06	0.02	0.01	0.01	1.11	9
10	0.02	0.02				0.01			0.01		0.01						0.02								0.09	10
11																										11
12																0.01									0.01	12
13																										13
14										0.02	0.05	0.04	0.02		0.01		0.10	0.11	0.12	0.12	0.16	0.15	0.12	0.11	1	14
15	0.20	0.22	0.16	0.24	0.04	0.04	0.02	0.01	0.04	0.02	0.17	0.07	0.09	0.08	0.05	0.06	0.07	0.02	0.07	0.06	0.04	0.01	0.06	0.02	1	15
16	0.05	0.07	0.06	0.06	0.04	0.05	0.09	0.05	0.03	0.07	0.13	0.11	0.11	0.19	0.03	0.07	0.11	0.02	0.02	0.01		0.01			4.87	16
17	0.01											0.01			0.01									0.02	0.05	17
18	0.19	0.20	0.14	0.11	0.09	0.05	0.01	0.10	0.02	0.04	0.01	0.01	0.02												0.99	18
19																		0.01	0.02	0.02				0.01	0.06	19
20			0.01			0.01					0.01				0.02	0.06	0.09	0.09	0.11	0.15	0.15	0.15	0.25	0.19	1.29	20
21	0.21	0.16	0.19	0.15	0.20	0.22	0.16	0.10	0.18	0.15	0.15	0.17	0.18	0.19	0.26	0.25	0.15	0.21	0.19	0.20	0.19	0.21	0.30	0.25	4.62	21
22	0.19	0.10	0.01	0.03	0.07	0.09	0.05	0.02	0.09	0.04	0.02	0.05	0.09	0.05	0.08	0.06	0.01	0.12	0.03	0.11	0.05	0.07	0.02	0.01	1.46	22
23	0.03	0.01	0.01	0.02			0.02	0.01		0.02	0.01	0.01	0.09	0.06	0.02	0.02									0.33	23
24												0.01													0.01	24
25																	0.03	0.08	0.08	0.05	0.10	0.16	0.12	0.10	0.72	25
26	0.08	0.21	0.16	0.15	0.08	0.02	0.05	0.01	0.06		0.01	0.01	0.01	0.02	0.03	0.10	0.07	0.06							1.13	26
27					0.02	0.05	0.04	0.02	0.05	0.02	0.02	0.04	0.02	0.04	0.01	0.02	0.02	0.07	0.02	0.03	0.03	0.05	0.02	0.01	0.60	27
28	0.01										0.01	0.02	0.01				0.01								0.06	28
29																										29
30																										30
31																										31
Reduced by:																									21.70	
Verified by:																									Monthly Values:	
Laboratory: Willamette Basin Snow Laboratory																									STATION NUMBER	
Date: Precipitation, inches, Standard Pries Recorder																									Month: February	
																									Year: 1948	

Cooperative Snow Investigations

PSD Form 51a (Rev. 11/1/46)
7 Sep 1948

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown. *Estimated value - from Eugene Oregon record.																																	
READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																																	
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date							
1						0.01	0.03	0.04	0.03	0.04	0.03	0.04	0.08	0.06	0.09	0.08	0.09	0.03	0.04	0.04	0.04	0.02	0.04	0.02		0.81	1						
2	0.03	0.02	0.02	0.02	0.01	0.01			0.03	0.03	0.02	0.03	0.01	0.02								0.01	0.02		0.01	0.89	2						
3	0.01										0.01														0.02	3							
4																										4							
5									0.04	0.06	0.02	0.01	0.01	0.02	0.02	0.01	0.03	0.01	0.02	0.01		0.01	0.01	0.01	0.29	5							
6	0.01	0.01	0.01	0.01	0.02	0.01		0.01	0.03	0.04	0.01	0.01												0.01	0.18	6							
7	0.01															0.02									0.03	7							
8							0.02	0.05	0.08	0.12	0.16	0.07		0.01	0.02	0.03	0.03		0.01	0.01	0.02	0.03	0.05	0.05	0.79	8							
9	0.02	0.02	0.01	0.01	0.01	0.01		0.01		0.02		0.07	0.01		0.02	0.01	0.01								0.24	9							
10													0.01												0.01	10							
11																										11							
12																	0.01	0.03	0.01	0.05	0.05	0.04	0.05	0.05	0.29	12							
13	0.03					0.01			0.04								0.01				0.01				0.11	13							
14			0.01	0.04	0.08	0.12	0.04	0.07	0.07	0.02			0.01	0.03			0.03	0.03	0.04	0.01	0.06	0.03	0.01	0.01	0.81	14							
15	0.04	0.02	0.05	0.03	0.03	0.02	0.01	0.03	0.01	0.05	0.01	0.01					0.02								0.33	15							
16		0.05	0.09	0.05	0.03	0.05	0.01	0.01				0.04	0.01	0.05	0.04	0.07	0.04	0.03		0.01		0.02	0.02		0.53	16							
17					0.01					0.01		0.01			0.03	0.02	0.01		0.01	0.05	0.03			0.01	0.28	17							
18	0.01	0.04	0.05	0.05	0.08	0.09	0.12	0.11	0.10	0.08	0.07	0.05	0.04	0.02	0.01	0.04	0.05	0.02	0.01		0.08	0.01		1.13	18								
19	0.02				0.04	0.05	0.01				0.06	0.03	0.04	0.03	0.04	0.07	0.11	0.05	-	-	-	-	-	0.95	19								
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59	0.05	0.06	0.05	0.06	0.07	0.02	0.06	0.51	20							
21	0.09	0.01	0.03	0.02	0.04	0.04	0.05	0.06	0.10	0.06	0.04					0.08	0.07	0.10	0.10	0.12	0.08	0.11	0.12	0.12	1.44	21							
22	0.09	0.20	0.19	0.12	0.13	0.14	0.16	0.12	0.12	0.08	0.04	0.03	0.07		0.01	0.01	0.03	0.24	0.04	0.03				1.82	22								
23											0.01	0.01	0.01	0.01		0.03								0.06	23								
24											0.01			0.11	0.10	0.03	0.05	0.01	0.08	0.02	0.03	0.01	0.02	0.02	0.49	24							
25	0.01	0.05	0.04	0.05	0.04	0.01		0.01	0.05		0.05	0.05	0.10	0.04	0.01		0.05		0.06	0.01					0.63	25							
26											0.01	0.01	0.01			0.01								0.04	26								
27																										27							
28																								0.02	0.02	28							
29	0.02			0.01		0.03	0.02	0.03	0.02	0.05	0.05	0.07	0.06	0.07	0.06	0.09	0.11	0.11	0.13	0.10	0.05	0.03	0.01	0.04	1.16	29							
30	0.02	0.05	0.02	0.03	0.01	0.01	0.02	0.01	0.01	0.03	0.02	0.03	0.03	0.02	0.01		0.01						0.01	0.01	0.35	30							
31		0.01			0.01																				0.02	31							
Reduced by:																								Monthly Values: 13.65									
Laboratory: Willamette Basin Snow Laboratory																								STATION NUMBER 1 B									
Date: Precipitation, inches, Standard Pries Recorder																								Month: March Year: 1948									

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown. READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																															
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date					
1																							0.01	0.01	/			1			
2	0.01	0.01	0.01	0.04	0.04	0.06	0.05	0.03	0.03	0.03	0.13	0.08	0.04	0.03	0.05	0.04	0.11	0.05	0.09	0.10	0.09	0.02	0.04		1.20		2				
3	0.05	0.02	0.02	0.01	0.01	0.01	0.03	0.02			0.03	0.05	0.05	0.05	0.02	0.01									0.38		3				
4				0.01					0.08	0.08			0.08	0.07	0.15	0.05	0.05			0.05	0.06				0.73		4				
5		0.04	0.01	0.06	0.11	0.07	0.05	0.06	0.10	0.04	0.05	0.01	0.01	0.01		0.03		0.01	0.01	0.03	0.04			0.01	0.75		5				
6	0.01	0.08		0.08	0.09	0.03	0.02	0.04	0.04	0.05	0.04	0.07	0.06	0.01	0.04	0.06	0.07	0.13	0.01		0.01				0.94		6				
7											0.01	0.01													0.02		7				
8											0.03	0.03	0.04			0.02			0.01	0.02	0.02	0.06	0.10	0.07	0.37		8				
9	0.07	0.02			0.01	0.02	0.14	0.06	0.04	0.01	0.05	0.01	0.09	0.05		0.04		0.02			0.04				0.67		9				
10		0.05	0.05	0.05	0.08	0.06	0.06	0.05	0.05	0.07	0.03	0.08	0.07	0.05	0.04	0.04	0.02	0.02	0.01	0.01	0.06	0.01			0.96		10				
11				/	-	0.08	0.01	0.03	0.02				0.02	0.03	0.04	0.02	0.03	0.01			0.01				0.30		11				
12	0.02	0.01				0.01										0.04					0.02				0.10		12				
13										0.01														0.03	0.04		13				
14	0.05	0.01	0.03	0.01		0.01	0.01	0.03				0.02		0.01		0.01						0.01			0.20		14				
15	0.01	0.01	0.01								0.03								0.04		0.04			0.01	0.14		15				
16						0.02	0.03		0.04	0.01							0.02				0.01				0.13		16				
17	0.11	0.06	0.05	0.05	0.08			0.01	0.01		0.09	0.06	0.03	0.02	0.08	0.05	0.02	0.01	0.01	0.01		0.01	0.01		0.77		17				
18				0.01	0.01	0.01											0.02								0.05		18				
19																											19				
20																											20				
21																											21				
22	0.05	0.01	0.03	0.07	0.06	0.02		0.04	0.11	0.06	0.04	0.10	0.09	0.01	0.05		0.08	0.11	0.02	0.07	0.02	0.06	0.03	0.02	0.54		22				
23	0.01	0.04	0.03	0.02	0.01	0.02	0.02	0.03	0.05	/	-	-	-	-	-	0.28	0.01	0.02	0.01		0.01	0.01	0.01	0.01	0.59		23				
24								0.01	0.05	0.05	0.01	0.04	0.05	0.03	0.08	0.09	0.05	0.25	0.08	0.02	0.02	0.06	0.02	0.04	0.90		24				
25	0.04	0.02	0.03	0.05	0.02	0.03	0.01	0.01	0.10	0.03		0.01	0.01	0.01	0.08	0.01	0.02	0.06	0.06	0.01	0.01				0.61		25				
26				/	-	-	0.04		0.06	0.15		0.01	0.04	0.04	0.07	0.01	0.08								0.50		26				
27														0.01											0.01		27				
28	0.01	0.01	0.01	0.04	0.03	0.03	0.01	0.02	0.04	0.03	0.02	0.01	0.01		0.01		0.01	0.01						0.30		28					
29											0.01		0.01	0.01							0.01	0.02	0.01		0.09		29				
30				0.01							0.02	0.04	0.01	0.02	0.01	0.01			0.10						0.25		30				
31																											31				
Reduced by:																									Monthly Values:						
Verified by:																									12.66						
Laboratory: Willamette Basin Snow Laboratory																									STATION NUMBER 1 B						
Date: Precipitation, inches, Standard Fries Recorder																									Month: April Year: 1948						

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown. READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																										
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2							0.01		0.01	0.03	0.05	0.01	0.04	0.01	0.04	0.01	0.04	0.01	0.04		0.06	0.08	0.02	0.08	0.54	2
3	0.10	0.04	0.05	0.03	/	-	0.42	0.15	0.16	0.26	0.20	0.23	0.21	0.06	0.05	0.01	0.01	0.03		0.03	0.01				1.05	3
4										0.01						0.01		0.01	0.01	0.01	0.03	0.03	0.01	0.04	0.16	4
5	0.01	0.04	0.01	0.04	0.01	0.01	0.03	0.01																	0.16	5
6		0.02	0.05	0.06	0.12	0.08	0.07	0.07	0.08	0.02	0.02		0.01				0.02								0.62	6
7			0.01	0.01	0.07	0.07	0.01		0.04	0.01	0.01	0.03	0.02	0.04	0.08	0.06	0.01	0.01	0.02		0.01	0.01	0.01		0.53	7
8	0.01	0.02	0.05	0.01	0.03	0.01		0.03	0.03	0.03	0.02	0.01	0.03			0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.39	8
9								0.01								0.01									0.02	9
10																										10
11																				0.01				0.01	0.02	11
12								0.10	0.14	0.06	0.03	0.05	0.03	0.07	0.17	0.05	0.16	0.03	0.04	0.03			0.08	0.03	1.07	12
13	0.06	0.02					0.04	0.02			0.01	0.01	0.01	0.01	0.01	0.06	0.03	0.03	/	/	-	-	-	-	/	13
14	-	-	-	-	-	-	-	-	-	-	0.20						0.03	0.03							40.51	14
15																										15
16											0.01	0.04	0.04	0.01	0.01	0.04	0.04	0.10	0.11	0.12	0.03				0.55	16
17			0.01	0.01	0.01	0.01		0.01						0.01	0.01	0.01	0.01					0.02			0.10	17
18	0.02							0.01		0.01	0.01	0.01	0.01	0.02	0.01										0.10	18
19		0.03		0.01	0.01	0.02	0.03			0.01	0.01	0.01	0.01	0.02								0.01	0.01		0.18	19
20																	0.02	0.07	0.01		0.01	0.01	0.01	0.01	0.13	20
21								0.06	0.01	0.02						0.01	0.03								0.13	21
22																										22
23																										23
24															0.03	0.02									0.05	24
25																										25
26																										26
27																0.01		0.02	0.02	0.04	0.10	0.07	0.08	0.06	0.40	27
28	0.05	0.05	0.01	0.01	0.01	0.01			0.01								0.08	0.19		0.01					0.43	28
29						0.01		0.01									0.01		0.02		0.05		0.01		0.11	29
30																				0.06					0.06	30
31					0.01							0.04	0.01												0.06	31
Reduced by: _____ Laboratory: Willamette Basin Snow Laboratory Date: _____ Precipitation, inches, Standard Friez Recorder Verified by: _____ Monthly Values: 7.37 STATION NUMBER 1 B Month: May Year: 1948																										

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2																										2
3																										3
4		0.01	0.01				0.01	0.01																	0.04	4
5																										5
6																										6
7																		0.11	0.09	0.01	0.21	0.01			0.43	7
8																/	-	-	-	-	-	-	-	-	/	8
9																	0.17	0.57	0.24	0.01	0.01				0.17	9
10																	0.02	0.57	0.24	0.01	0.01	0.02	0.01	0.16	1.04	10
11	0.04	0.01	0.04			0.05	0.03		0.01	0.01															0.19	11
12		0.05	0.06						0.02		0.01	0.01	0.09				0.01								0.25	12
13																										13
14																										14
15																										15
16																		0.02							0.02	16
17																				0.12	0.20	0.13	0.02		0.47	17
18																	0.10	0.05	0.05						0.26	18
19																										19
20	0.04	0.04	0.03	0.04	0.03	0.02	0.01	0.04	0.01	0.02	0.04	0.02	0.09	0.07	0.10	0.08	0.03	0.10	0.01	0.01	0.01	0.01	0.02	0.88	0.11	20
21		0.02	0.01	0.03	0.01	0.01																				21
22																										22
23																										23
24																										24
25																										25
26																										26
27																										27
28																										28
29																										29
30																										30
31																										31

Verified by:

Monthly Values: 3.86

Date:

Precipitation, inches, Standard Pries Recorder

STATION NUMBER 1 B

Month: June
Year: 1948

Laboratory: Willamette Basin
Snow Laboratory

PSD Form 51a (5/5/41)
7 Sep 1948

Cooperative Snow Investigations

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.
READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2																										2
3																										3
4																										4
5			0.03	0.05	0.11	0.01								0.01	0.03	0.11	0.05	0.04	0.02	0.02	0.01		0.01	0.01	0.51	5
6			0.04					0.01	0.03					0.05		0.01	0.13	0.01	0.13	0.01	0.02	0.02	0.05	0.09	0.47	6
7		0.05	0.03	0.01			0.01									0.01									0.11	7
8																										8
9																										9
10																										10
11																										11
12																										12
13																										13
14																										14
15																										15
16																										16
17																										17
18																										18
19																										19
20																										20
21																										21
22																										22
23																										23
24																										24
25																										25
26							0.03																		0.03	26
27		0.05	0.04	0.01	0.03	0.02	0.05	0.06	0.02	0.08	0.10	0.10	0.10	0.03	0.05		0.10	0.06	0.04						0.84	27
28								0.02				0.02	0.01												0.05	28
29																										29
30																										30
31																	0.05								0.05	31

Reduced by: _____ **Verified by:** _____ **Monthly Values:** 2.06

Laboratory: Willamette Basin Snow Laboratory **Date:** _____ **STATION NUMBER:** 1 B **Month:** July **Year:** 1948

PSD Form 51a (Clue 1) 7 Sep 1948 Cooperative Snow Investigations

REMARKS: - - - Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.
READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																									1	
2																									2	
3																									3	
4																									4	
5																									5	
6																									6	
7																									7	
8																									8	
9																									9	
10																									10	
11																									11	
12																	0.03								12	
13																							0.03		13	
14																						0.02			14	
15		0.05		0.04	0.01			0.03	0.01	0.01													0.15		15	
16																									16	
17							0.05																0.05		17	
18					0.05				0.03														0.08		18	
19										0.01	0.01												0.02		19	
20																									20	
21																						0.05			21	
22	0.20	0.20	0.09	0.03		0.02			0.01		0.05		0.03	0.03	0.01	0.03	0.03	0.08			0.01	0.06	0.05		22	
23	0.05	0.12	0.03	0.03	0.05		0.05	0.02	0.03				0.03					0.02							23	
24													0.01											0.43	24	
25																								0.01	25	
26																									26	
27																									27	
28																									28	
29																									29	
30									0.03	0.04			0.01											0.08	30	
31																									31	

Reduced by:
Verified by:
Monthly Values: 1.01

Laboratory: Willamette Basin Snow Laboratory
Date:
Precipitation, inches, Standard Pries Recorder
Month: August
Year: 1948

PSD Form 51a (Rev. 11-7-39)

Cooperative Snow Investigations

REMARKS:		READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																								Daily Total	Date
Date		0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400		
1																											1
2																							0.04	0.01	0.01	0.06	2
3	0.01																									0.01	3
4																											4
5																											5
6																											6
7																											7
8																											8
9																								0.02		0.02	9
10										0.01			0.01	0.01												0.03	10
11													0.03			0.01	0.01									0.05	11
12																											12
13																											13
14										0.05	0.06	0.04	0.04	0.01											0.06	0.26	14
15	0.02		0.01																							0.03	15
16							0.06	0.01	0.03		0.01		0.02													0.13	16
17			0.03	0.01	0.01				0.03					0.02												0.10	17
18																											18
19																											19
20																											20
21																											21
22				0.05	0.10	0.05	0.05	0.06	0.14	0.29	0.17	0.14	0.11	0.04	0.10	0.14	0.07	0.04	0.08	0.02	0.02	0.04	0.09	0.13	0.12	2.05	22
23	0.01	0.04	0.10	0.05	0.05	0.01	0.03	0.01	0.05	0.03	0.03	0.32	0.06	0.04				0.04	0.06	0.06	0.06	0.04	0.03	0.01	0.03	1.08	23
24			0.02		0.04	0.01			0.13	0.02		0.02	0.03	0.04	0.03	0.02										0.36	24
25															0.05	0.15	0.10	0.06	0.04	0.05	0.03	0.02	0.04	0.06	0.07	0.67	25
26	0.03	0.06	0.04	0.03	0.01		0.01			0.05	0.25	0.05	0.10	0.05	0.05	0.05	0.05	0.08	0.02	0.02	0.03	0.03	0.02		0.03	1.06	26
27	0.01	0.01								0.02		0.01						0.02								0.07	27
28					0.03	0.02	0.03	0.03	0.03	0.02	0.04	0.06	0.01	0.03												0.27	28
29										0.02																0.02	29
30																											30
31																											31
Reduced by:		Monthly Values:																								6.27	
Laboratory: Willamette Basin Snow Laboratory		Precipitation, inches, Standard Pries Recorder																								STATION NUMBER 1 B	Month: September Year: 1948

REMARKS:

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date	
1																										1	
2																										2	
3									0.01	0.01		0.04	0.02	0.06	0.08	0.07	0.15	0.20	0.08	0.02	0.08	0.07	0.15	0.05	1.09	3	
4	0.10	0.06	0.08	0.08	0.05	0.10	0.09	0.05	0.08	0.04	0.08	0.13	0.02			0.02				0.03	0.04	0.01	0.08	0.02	1.16	4	
5						0.05	0.03	0.04	0.04	0.02		0.10	0.02	0.07	0.03	0.05	0.05	0.06	0.04		0.01	0.02	0.02	0.01	0.66	5	
6	0.05	0.05	0.05	0.06	0.04	0.11	0.12	0.12	0.10	0.12	0.08	0.10	0.03	0.05	0.02	0.01	0.01	0.04	0.01						1.17	6	
7																										7	
8										0.03		0.01			0.01										0.05	8	
9																										9	
10																			0.10	0.03	0.27	0.12	0.07		0.59	10	
11																										11	
12																										12	
13																										13	
14																										14	
15																										15	
16																										16	
17																										17	
18																										18	
19																										19	
20																										20	
21																										21	
22																										22	
23																	0.02	0.01	0.01				0.17	0.03	0.24	23	
24	0.02	0.05	0.03		0.05	0.03	0.02		0.03	0.02															0.25	24	
25										0.01	0.03														0.04	25	
26																										26	
27																										27	
28																0.03	0.05	0.02	0.05	0.03	0.04	0.04	0.03	0.01	0.30	28	
29						0.01				0.02			0.01				0.01								0.05	29	
30															0.03	0.04	0.08	0.08	0.05	0.05	0.05	0.07	0.04	0.01	0.50	30	
31	0.01	0.01						0.03	0.05	0.04	0.06	0.04	0.05	0.03	0.02	0.04	0.01								0.39	31	
Reduced by:																								Monthly Values:		6.49	
Laboratory: Willamette Basin Snow Laboratory																								Date: Precipitation, inches, Standard Fries Recorder		Month: October Year: 1948	

REMARKS:		READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																								Daily Total	Date
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date	
1	0.10					0.05	0.10	0.10	0.10	0.05	0.03	0.03	0.01	0.01		0.04	0.16	0.25	0.10	0.13	0.02	0.03	0.04	0.03	1.25	1	
2	0.05					0.03	0.02		0.02	0.03		0.05	0.06	0.04		0.03	0.01	0.06	0.21	0.20	0.13	0.05	0.07	1.28	2		
3			0.02	0.22							0.04	0.01		0.01			0.04	0.06						0.75	3		
4																								0.06	4		
5			0.01		0.02	0.03	0.06	0.06	0.01			0.02		0.01			0.01							0.23	5		
6																									6		
7					0.01	0.01																		0.02	7		
8																									8		
9																									9		
10																									10		
11																									11		
12																									12		
13																									13		
14			0.01	0.01	0.02							0.05	0.15	0.25	0.15	0.08	0.06	0.02	0.06	0.10	0.13	0.11	0.09	0.10	1.39	14	
15	0.10	0.09	0.03	0.03	0.15	0.23	0.04	0.03	0.04	0.11	0.09	0.03	0.05	0.05	0.01	0.04	0.03		0.03	0.05	0.07	0.10	0.05	0.01	1.46	15	
16			0.01	0.13	0.10	0.18	0.15	0.10	0.04	0.07	0.04	0.15	0.07	0.04	0.02		0.10	0.02	0.01	0.02		0.03	0.01	0.06	1.35	16	
17	0.08	0.01	0.11	0.15	0.19	0.11	0.14	0.01		0.09	0.02	0.02	0.03	0.01	0.01	0.03									1.01	17	
18													0.10	0.02	0.01	0.02	0.06	0.04	0.05	0.10	0.15	0.02		0.07	0.64	18	
19	0.13		0.06	0.09	0.07	0.08	0.04	0.03	0.05	0.04	0.08	0.11	0.12	0.12	0.11	0.07					0.01			0.04	1.28	19	
20		0.01	0.02		0.02		0.02	0.03	0.07	0.01	0.02	0.02					0.01								0.23	20	
21																								0.01	0.01	0.01	21
22	0.01						0.09	0.06	0.03	0.02	0.03	0.02	0.01		0.01										0.28	22	
23												0.02		0.06	0.15	0.30	0.35	0.25	0.30	0.15	0.10	0.11	0.01		1.90	23	
24	0.04	0.03					0.03	0.04	0.06	0.05	0.08	0.03	0.03	0.03	0.05	0.03	0.03	0.01							0.54	24	
25		0.04	0.03	0.01	0.04	0.02	0.04	0.04	0.08	0.05	0.12	0.13	0.17	0.15	0.08	0.02	0.12	0.02	0.06	0.05	0.05	0.10	0.10		1.52	25	
26		0.02	0.01	0.08	0.04				0.02	0.08	0.05	0.07	0.02	0.05	0.03	0.10	0.05		0.01					0.01	0.67	26	
27			0.01	0.01								0.04	0.01	0.02											0.10	27	
28			0.04	0.14	0.19	0.05	0.15	0.09	0.01	0.03	0.07		0.04	0.01	0.03	0.01	0.02		0.01						0.99	28	
29													0.16	0.20	0.15	0.03									0.54	29	
30	0.02	0.15	0.06	0.06	0.04	0.15	0.15	0.15	0.05	0.20	0.06	0.04	0.08	0.01	0.11	0.04	0.01								1.38	30	
31																										31	
Reduced by:		Verified by:																								Monthly Values:	18.88
Laboratory: Willagette Basin Snow Laboratory		Data: Precipitation, inches, Standard Fries Recorder																								STATION NUMBER 1 B	Month: November Year: 1946

REMARKS: - - - Indicates period of unknown distribution with total on last hour. Single dagget used if time of beginning unknown. **Missing Record READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																											
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date	
1		0.03	0.02					0.01	0.01										0.03	0.03	0.06	0.01	0.08	0.09	0.37	1	
2	0.14	0.20	0.20	0.25	0.17	0.17	0.14	0.14	0.12	0.13	0.10	0.15	0.15	0.12	0.14	0.20	0.08	0.09	0.03	0.03	0.02	0.05	0.05	0.02	2.89	2	
3	0.05	0.08	0.07	0.04	0.01	0.04	0.03	0.03			0.02		0.06	0.10	0.03	0.03	-	-	0.73						41.32	3	
4													0.05	0.05	0.05	0.08	0.17	0.10	0.05	0.06	0.07	0.12	0.10	0.90	4		
5		0.05	0.15	0.09	0.06	0.11	0.03	**																**	5		
6																								**	6		
7																								**	7		
8																								**	8		
9	0.09	0.06	0.05	0.10	0.05	0.05	0.05	0.01	0.04	0.06	0.25	0.15	0.15	0.15	0.10	0.10	0.08	0.02	0.09	0.11	0.10	0.13	0.09	0.03	1.81	9	
10	0.03	0.06	0.04	0.07	0.09	0.11	0.13	0.12	0.10	0.20	0.20	0.15	0.06	0.09	0.06	**								**	10		
11																								**	11		
12																								**	12		
13																			0.02	0.02		0.03		0.02	0.12	13	
14	0.03	0.05								0.02	0.01	0.02		0.01					0.07		0.03		0.01	0.01	0.26	14	
15	0.01	0.01	0.01																						0.03	15	
16																										16	
17																										17	
18																										18	
19										0.10	0.05	0.08	0.05	0.06	0.07	0.05	0.09	0.02	0.04	0.04	0.12	0.15	0.15	0.14	1.21	19	
20	0.11	0.04			0.02		0.01	0.07				0.03		0.08	0.01		0.03	0.07							0.47	20	
21		0.04	0.05	0.01	0.01				0.01	0.01							0.02								0.15	21	
22																										22	
23																										23	
24															0.04	0.04	0.01	0.01							0.10	24	
25			0.03	0.02	0.01										0.03										0.09	25	
26																										26	
27						0.04		0.01					0.01	0.02											0.05	27	
28	0.01	0.01											0.02						0.03	0.06	0.04		0.08	0.12	0.37	28	
29	0.15	0.09	0.16	0.13	0.17	0.10	0.15	0.08	0.07	0.10	0.09	0.01	0.05				0.14	0.01		0.01					1.51	29	
30											0.02	0.01	0.01		0.01		0.01								0.05	30	
31			0.06	0.09	0.19	0.07	0.09	0.08	0.05	0.02	0.05	0.01	0.07	0.02	0.03	0.02									0.85	31	
Reduced by:																								Monthly Values:			12.55
Laboratory: Willamette Basin Snow Laboratory												Precipitation, inches, Standard Fries Recorder												STATION NUMBER 1 B			Month: December Year: 1948

Cooperative Snow Investigations

PSD Form 51a(C1641)
7 Sep 1948

REMARKS: - - - Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.																										
READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																										
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1	0.16	0.19	0.20	0.20	0.10	0.08	0.02	0.05	0.03	0.01	0.01	0.07	0.01	0.02	0.01	0.10	0.01				0.02	0.01	0.02		1.32	1
2					0.01		0.01					0.02					0.01								0.03	2
3																								0.02		3
4																										4
5																										5
6																										6
7								0.02	0.01	0.07	0.06	0.04	0.06		0.06	0.04		0.05	0.05		0.03	0.01	0.01		0.51	7
8	0.01	0.01	0.02	0.01				0.02	0.01				0.01			0.01	0.02								0.12	8
9																					0.01				0.01	9
10																										10
11																										11
12				0.01																					0.01	12
13																										13
14																					0.02	0.01			0.03	14
15				0.03	0.02	0.02									0.02	0.02	0.01								0.10	15
16																		0.01							0.01	16
17											0.01	0.01													0.02	17
18																	0.01	0.01							0.02	18
19											0.03		0.02					0.01							0.06	19
20																	0.10					0.05	0.09		0.24	20
21	0.06	0.08	0.04	0.03	0.03	0.06	0.01	0.03	0.16	0.10	0.10	0.04	0.13	0.10	0.05	0.01	0.04	0.05		0.01	0.04				1.17	21
22											0.01						0.03								0.04	22
23																										23
24																										24
25																										25
26											0.01	0.06	0.02	0.01	0.02	0.07	0.04	0.02	0.01	0.01					0.27	26
27	0.01	0.01	0.01	0.01	0.01	0.01	0.01				0.02	0.01	0.01	0.01		0.02									0.12	27
28																										28
29																		0.01			0.01				0.02	29
30			0.01		0.02	0.01	0.02	0.01	0.02	0.02		0.01			0.01		0.01								0.14	30
31																										31

Reduced by:	Verified by:																			Monthly Values:	4.26
Laboratory:	Precipitation, inches, Standard Fries Recorder																			STATION NUMBER	1 B
	Date:																			Month:	January
																				Year:	1949

REMARKS: - - - Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2																									0.81	2
3	0.05	0.07	0.10	0.15	0.11	0.13	0.11	0.09	0.11	0.05	0.08	0.04	0.06	0.01	0.04	0.02		0.09	0.08	0.08	0.08	0.08	0.11	0.11	1.85	3
4	0.13	0.14	0.11	0.16	0.14	0.15	0.10	0.05	0.05	0.14	0.02		0.05	0.05	0.03	0.04		0.04	0.02	0.02	0.01	0.01	0.01	0.02	1.53	4
5	0.02			0.02					0.01	0.02			0.01	0.01	0.01	0.01		0.01	0.01	0.01	0.06	0.06	0.12	0.10	0.47	5
6	0.15	0.25	0.19	0.14	0.17	0.14	0.12	✓	-	-	✓0.70	0.14	0.10	0.05	✓	-	✓0.42		0.03	0.05	0.06	0.04	0.04	0.05	2.84	6
7	0.04	0.02	0.03	0.02	✓	-	-	-	-	-	-	-	-	-	-	✓0.70	0.03	0.02				0.01	0.04	0.03	0.94	7
8	0.04	0.05	0.05	0.03	0.04	0.03	0.03	0.03	0.07	0.04	0.06	0.05	0.05	0.05	0.09	0.04	0.05	0.05	0.10	0.09	0.06	0.02	0.03	0.01	1.18	8
9	0.03	0.01	0.01	0.01	0.03	0.02	0.04	0.04	0.03	0.07	0.10	0.10	0.20	0.15	0.15	0.20	0.25	0.20	0.20	0.25	0.20	0.10	0.10	0.15	2.64	9
10	0.28	0.32	0.25	0.30	0.20	0.25	0.35	0.20	0.25	0.20							0.01	0.02	0.01	0.01		0.05	0.02	0.02	2.74	10
11	0.01		0.02	0.01							0.02	✓	-	-	✓0.13									0.01	0.20	11
12	0.01		0.02	0.03	0.02	0.01		0.01	0.01	✓	-	-	-	-	-	✓0.21									0.32	12
13																	0.03				0.01	0.02	0.01		0.07	13
14	0.02		0.01	0.02	0.02			0.01	0.02	0.02	0.07	0.08	0.12	0.08	0.13	0.12	0.10	0.15	0.14	0.16	0.19	0.21	0.10	0.15	1.92	14
15	0.10	✓	-	-	-	-	-	-	-	-	✓0.70	✓	-	-	-	✓0.32	0.03	0.14	0.05	0.01	0.04	0.01	0.05	0.02	1.47	15
16	-	-	✓0.67		0.04	0.01	0.06	0.04	0.05	0.10	0.10	0.10	0.09	0.08	-	✓0.25	-	-	-	-	-	-	-	-	✓	16
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓2.08	0.04	0.01	0.01	0.03	0.02	0.05	0.05	0.05	✓3.92	17
18	0.06	0.07	0.05	0.02	0.02	0.03				0.04	0.06			0.02	0.01		0.02	0.01							0.38	18
19														0.02	0.01		0.04		0.01	0.05		0.01	0.03		0.17	19
20		0.05	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓1.32	0.10	0.10	0.10	0.11	0.07	0.05	0.03	0.04	✓2.50	22
23	0.17	0.01	0.02							0.10	0.01	0.01													0.32	23
24																										24
25																										25
26																										26
27																										27
28																										28
29																										29
30																										30
31																										31

Reduced by:		Verified by:		Monthly Values:		26.27
Laboratory: Willamette Basin Snow Laboratory		Date: Precipitation, inches, Standard Pries Recorder		STATION NUMBER 1 B		Month: February Year: 1949

Verified by:

Monthly Values: 26.27

Date: Precipitation, inches, Standard Pries Recorder

Station Number 1 B
Month: February
Year: 1949

Laboratory: Willamette Basin
Snow Laboratory

Cooperative Snow Investigations

PSD Form 51 (2-14-41)
7 Sep 1948

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.
 READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total		Date
1																											1
2																											2
3																											3
4						✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓		4
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓		5
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓0.42				0.01					✓0.43		6
7																											7
8	0.01	0.03	0.01	0.03	0.03	0.04	0.04	0.06	0.05	0.07	0.08	0.13	0.06	0.06	0.05	0.04	0.04	0.06	0.07	0.04	0.07	0.01	0.02	0.01	1.11		8
9	0.02	0.01			✓	-	-	✓0.03		0.02															0.08		9
10																											10
11									0.05	0.09	0.01						0.03	0.02	0.01				0.02		0.25		11
12																											12
13						0.02		0.01				0.01	0.01	0.01	0.01										0.07		13
14																0.01	0.03								0.04		14
15													0.03	0.02	0.05	0.02	0.05	0.01	0.01	0.05	0.11	0.17	0.11	0.09	0.83		15
16	0.13	0.09	0.07	0.02													0.02		0.01	0.01					0.37		16
17		0.01				0.01	0.04	0.05	0.05	0.01			0.01	0.01	0.06	0.05		0.04	0.04	0.03	0.03	0.05	0.05	0.54		17	
18	0.04	0.06	0.04	0.01					0.01	0.02		0.01	0.01			0.03									0.23		18
19													0.02	0.11		0.16	0.09	0.01	0.01	0.01	0.01	0.04	0.01	0.48		19	
20	0.03	0.06	0.03	0.06	0.07	0.05	0.05	0.05	0.05	0.03	0.04	0.05	0.02		0.01	0.01	0.11	0.08	0.09	0.08	0.03	0.01	0.03	0.01	1.05		20
21	0.02	0.03	0.01	0.01	0.02	✓	-	-	-	-	✓0.22	0.04	0.04		0.11	0.06			0.01	0.02	0.04				0.01	0.64	21
22									0.02	0.01				0.01											0.01	0.05	22
23									0.01	0.08	0.06	0.03	0.01	0.01	0.02	0.01	0.07								0.30		23
24																											24
25								0.10	0.05	0.05	0.05	0.06	0.02		0.04									0.01	0.38		25
26	0.08	0.04	0.06	0.03	0.05	0.06	0.09	0.05	0.12	0.11	0.12	0.09	0.09	0.07	0.05		0.03	0.06	0.01	0.03	0.02	0.05	0.01	0.01	1.33		26
27		0.04	0.01		0.01				0.07	0.01	0.01	0.01	0.01		0.02	0.10	0.09	0.03	0.03	0.01	0.08	0.03	0.02	0.01	0.58		27
28																											28
29																									0.36		29
30																									0.24		30
31												0.01		0.01	0.01			0.10	0.08	0.08	0.04	0.02	0.03	0.01	0.02	0.02	31

Verified by:

Reduced by:

Data: Precipitation, inches, Standard Friez Recorder

Laboratory: Willamette Basin
Snow Laboratory

Month: March
Year: 1949

PSD Form 51a (Rev. 4-1-77)
7 Sep 1948

Cooperative Snow Investigations

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1										0.02	0.01				0.02	0.01		0.02	0.01	0.01	0.01	0.01	0.01		0.13	1
2					0.01																				0.01	2
3																										3
4																										4
5																										5
6																										6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12
13																										13
14																										14
15																										15
16																										16
17																										17
18																										18
19				0.04	0.08	0.08	0.04	0.02	0.14	0.05	0.06	0.01	0.01			0.01	0.04	0.02	0.03	0.03	0.05	0.03	0.01	0.05	0.80	19
20	0.07	0.07	0.05	0.03	0.02	0.05	0.03	0.04	0.09	0.04	0.04	0.01						0.01	0.07	0.06	0.05	0.05	0.05	0.01	0.75	20
21			0.03	0.02	0.01	0.03	0.03	0.07	0.04	0.04	0.07	0.07	0.09	0.07	0.04	0.05	0.04	0.05	0.01	0.02	0.02	0.01	0.01	0.02	0.84	21
22	0.01	0.01	0.01		0.01				0.01	0.03	0.06	0.06	0.09	0.06	0.04	0.02	0.01								0.06	22
23									0.01	0.01						0.02	0.01								0.38	23
24																										24
25																										25
26																										26
27																										27
28				0.05	0.09	0.11	0.14	0.02	0.06	0.04	0.04	0.06	0.02	0.05	0.08	0.03	0.06		0.03	0.03	0.01	0.01	0.05		0.99	28
29	0.01	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.05	0.05	0.05	0.08	0.01	0.01	0.06	0.04	0.05	0.03	0.04	0.03					0.66	29
30			0.05							0.01	0.04	0.01	0.04	0.05	0.06	0.05	0.10	0.09	0.13	0.13	0.18	0.06	0.14	0.11	1.12	30
31																										31

Reduced by:

Verified by:

Monthly Values:

5.74

Laboratory: Willamette Basin
Snow Laboratory

Date: Precipitation, inches, Standard Friez Recorder

STATION NUMBER
1 B

Month: April
Year: 1949

PSD Form
1 Sep 1948 51a(2441)

Cooperative Snow Investigations

REMARKS: / - - / Indicates period of unknown distribution with total on last hour. Single dagger used if time of beginning unknown.

READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.

Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date	
1	0.02	0.06	0.03	0.01	0.02	0.02	0.03	0.01	0.01	0.05	0.04	0.01	0.01	0.01	0.01	0.01	0.01								0.36	1	
2																										2	
3																										3	
4																										4	
5																										5	
6																										6	
7																										7	
8																										8	
9																										9	
10																										10	
11																										11	
12																										12	
13																										13	
14																										14	
15																										15	
16							0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01											0.09	16	
17																										17	
18																										18	
19																										19	
20																0.09	0.05									0.14	20
21																										21	
22																										22	
23																										23	
24																										24	
25																	0.03		0.01	0.01	0.02	0.01	0.01	0.06	0.15	25	
26		0.01	0.08	0.07	0.06	0.06		0.01	0.01	0.01	0.02	0.01	0.01			0.02									0.37	26	
27															0.02											0.02	27
28	0.01						0.01	0.01	0.03	0.04	0.06	0.03	0.01	0.01	0.05		0.01	0.02	0.06	0.06	0.05		0.01		0.47	28	
29	0.01	0.06	0.07	0.02	0.04	0.02	0.07	0.06	0.01	0.02	0.02	0.03	0.01			0.04										0.48	29
30											0.01																30
31																											31

Reduced by:		Verified by:										Monthly Values:										2.08	
Laboratory: Willamette Basin Snow Laboratory		Precipitation, inches, Standard Pries Recorder										STATION NUMBER 1 B										Month: June Year: 1949	

Verified by:

Monthly Values: 2.08

Laboratory: Willamette Basin Snow Laboratory	Date: Precipitation, inches, Standard Fries Recorder	Station Number: 1 B	Month: June
			Year: 1949

REMARKS:																										
READINGS TAKEN ON THE HOUR. AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																										
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2																										2
3																										3
4																										4
5																										5
6																										6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12
13																										13
14																										14
15																										15
16																										16
17														0.01			0.01								0.02	17
18																										18
19													0.09	0.01		0.02	0.01								0.13	19
20											0.01					0.01									0.02	20
21																										21
22																										22
23					0.01				0.02		0.01	0.01	0.01								0.01				0.06	23
24				0.01	0.01			0.01	0.01	0.01	0.04	0.01	0.03	0.01											0.14	24
25				0.01	0.01			0.01												0.01					0.04	25
26																									0.01	26
27																										27
28																										28
29																										29
30																										30
31																										31

Reduced by:	Verified by:		Monthly Values:	0.42
Laboratory:	Precipitation, Standard Pries Recorder, inches		STATION NUMBER	1 B
Willamette Basin Snow Laboratory	Date:	Month:	Year:	1949
		July		

Date		0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																											1
2																											2
3																											3
4																											4
5																											5
6																											6
7									0.02	0.02			0.01	0.02		0.01		0.01					0.01			0.10	7
8								0.01										0.01								0.02	8
9																											9
10																											10
11																											11
12				0.04				0.01		0.06	0.02	0.02	0.01	0.01	0.01	0.01										0.19	12
13																											13
14																											14
15																											15
16																											16
17																											17
18																											18
19																											19
20																											20
21																											21
22																											22
23																											23
24																											24
25																											25
26																											26
27																											27
28																											28
29																											29
30																											30
31																											31
Reduced by:																									Monthly Values:		0.31
Laboratory:		Willamette Basin Snow Laboratory																							STATION NUMBER		1B
Date:		Precipitation, Standard Pries Recorder, inches																							Month:		August
																									Year:		1949

PSD Form 51a (City 1)
1 Sep 1948
Cooperative Snow Investigations

REMARKS:																										
* Estimated value - from Eugene Oregon record.																										
READINGS TAKEN ON THE HOUR, AMOUNT OF PRECIPITATION SINCE PREVIOUS HOUR UNLESS INDICATED OTHERWISE.																										
Date	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Daily Total	Date
1																										1
2																										2
3																										3
4																										4
5																										5
6																*	*	*	*	*	*	*	*	*	*	6
7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7
8	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	8
9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10
11																								0.79	0.79	11
12																										12
13																										13
14																										14
15		0.10	0.10	0.01	0.01						0.03	0.08	0.04	0.01	0.02	0.19	0.16	0.10	0.12	0.13	0.15	0.06	0.09	0.05	0.30	15
16		0.08	0.05		0.02		0.09	0.01	0.01		0.03	0.01	0.05		0.12	0.02	0.01								0.50	16
17																										17
18																										18
19																										19
20																										20
21																										21
22																										22
23																										23
24																										24
25																										25
26																										26
27																										27
28												0.01	0.02		0.01										0.09	28
29						0.01	0.01	0.01					0.02			0.03	0.02								0.10	29
30																										30
31																										31

Reduced by:	Monthly Values:		3.23
Laboratory:	Willamette Basin Snow Laboratory	STATION NUMBER	1B
Date:	Precipitation, inches, Standard Friez Recorder		Month: September Year: 1949

Sta. 2B, 3 pts., elev 4625

PSD Form 51a (Rev. 11-7-59)

REMARKS:

[illegible]

PSD Form 51a (Rev. 11-7-59)

WILLAMETTE BASIN SNOW LABORATORY Station 2

PRECIPITATION FROM RECORDING GAGES

Accumulated Precipitation for 6 hour intervals ending at time shown																	1948-1949	
OCTOBER						NOVEMBER						JANUARY						
DATE	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	DATE		
1																1		
2																2		
3																3		
4																4		
5																5		
6																6		
7										.7						7		
8																8		
9																9		
10																10		
11																11		
12																12		
13																13		
14																14		
15																15		
16																16		
17																17		
18																18		
19																19		
20														.2	.2	20		
21											.3	.3	.4	.2	1.2	21		
22																22		
23																23		
24																24		
25																25		
26													.1		.1	26		
27											.1			.1	.2	27		
28																28		
29																29		
30												.1			.1	30		
31																31		
Total for Month						Total for Month						Total for Month					Incomplete	

Remarks: ≠ Recording gage put in operation

Remarks: # Recording gage put in operation

PRECIPITATION FROM RECORDING GAGES Station 2																					WILLAMETTE BASIN SNOW LABORATORY		
Accumulated Precipitation for 6 hour intervals ending at time shown																					1949		
FEBRUARY										MARCH										APRIL	MAY		
DATE	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	DATE		
1																.1					1		
2					.6																2		
3	.6	.5	.3	.4	1.8																3		
4	.6	.5	.2	.1	1.2																4		
5		.1		.3	.4		.1	.1		.2											5		
6	-	-	-	-	-																6		
7	-	-	-	-	-																7		
8	-	-	-	-	-		.3	.3	.2	.8											8		
9	-	-	-	-	-		.2			.2											9		
10	-	-	-	-	-																10		
11	-	-	-	-	-					.1											11		
12	-	-	-	-	18.8			.1		.1											12		
13				.2	.2	.1				.1											13		
14	.1	.2	.5	.6	1.4																14		
15	.6	.2	.4	.5	1.7		.1	.1	.3	.5											15		
16	.1	.3	.5	.1	1.0	.2				.2											16		
17	.2	.6	.4	.2	1.4		.1	.2	.1	.4											17		
18	-	-	-	-	-	.2	.1	.1	.1	.4											18		
19	-	-	-	-	13.9			.2		.2											19		
20						.2	.2	.2	.4	1.0	.1	.1			.4						20		
21				.3	.3	.1	.1	.2		.4	.1	.2			.5			.1	.2	.3	21		
22	.1	.1		.1	.3		.1			.1		.3			.3						22		
23	.4	.5	.3	.3	1.5		.2			.2			.2		.2						23		
24		.4			.4			.1		.1		.1			.1						24		
25		.2			.2	.1	.2			.3											25		
26						.2	1.0*	.2		1.2*											26		
27																					27		
28							.2			.2		.1	.1	.2	.4						28		
29							.1	.1		.2		.4	.2		.6						29		
30							.1			.1		.2	.2	.4	.8						30		
31														.3	.2					.5	31		
Total for Month					25.1	Total for Month					8.1	Total for Month					3.9	Total for Month					6.4

Remarks: / total ppt. over period of unknown distribution; * estimated

Remarks: * total ppt. over period of unknown distribution; * estimated

WILLAMETTE BASIN SNOW LABORATORY Station 2

PRECIPITATION FROM RECORDING GAGES

Accumulated Precipitation for 6 hour intervals ending at time shown																1949							
JUNE						JULY						AUGUST				SEPTEMBER							
DATE	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	0600	1200	1800	2400	Daily Total	DATE							
1	.2	.1	.2	.5												1							
2																2							
3																3							
4																4							
5																5							
6																6							
7																7							
8																8							
9																9							
10																10							
11																11							
12																12							
13																13							
14																14							
15																15							
16																16							
17																17							
18																18							
19																19							
20																20							
21																21							
22																22							
23																23							
24																24							
25																25							
26	.2	.1			.1			.1		.2		.1				26							
27					.3											27							
28		.1		.2	.3											28							
29	.2	.2			.4						.1				.1	29							
30																30							
31																31							
Total for Month					1.6	Total for Month					.5	Total for Month					.1	Total for Month					2.8

Remarks: / total ppt. over period of unknown distribution

Remarks: 1/ total ppt. over period of unknown distribution

730.4mm
12 July 1949 46 (11111)

Cooperative Snow Investigations

Station 14, Blue River 1947-1948

Mean Daily Streamflow, c.f.s.

D.A. = 11.5 sq. mi.

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4	85	70	212	27	90	103	67	110	27	14.0	5.7
2	6	85	62	446	26	78	102	62	117	26	12.0	5.7
3	15	95	73	248	25	67	102	164	114	25	11.0	5.7
4	9	90	67	181	24	60	94	190	98	23	11.0	5.2
5	9	85	61	163	23	54	84	158	91	25	10.0	5.2
6	9	95	56	862	22	49	72	199	97	24	9.6	5.2
7	9	170	55	962	22	47	64	184	102	24	9.2	5.2
8	10	250	51	401	24	45	58	150	102	22	9.2	4.7
9	27	200	49	214	22	44	58	128	92	20	9.2	4.7
10	48	170	45	148	21	40	58	108	90	19	8.6	4.7
11	130	180	45	119	19	39	56	98	94	18	8.6	4.3
12	55	150	44	97	19	37	55	107	80	17	8.0	4.3
13	40	135	70	85	19	36	54	124	72	17	8.0	4.3
14	31	160	90	73	20	36	64	114	62	17	8.0	4.3
15	100	260	82	66	41	35	90	107	56	17	8.0	4.7
16	297	220	76	60	66	35	124	117	52	17	8.0	4.7
17	262	190	94	56	90	36	135	130	51	17	7.4	4.7
18	341	170	135	52	110	36	140	117	49	16	7.4	4.7
19	210	158	158	49	97	34	133	105	45	15	7.4	4.3
20	240	140	126	47	82	33	138	102	52	15	7.4	4.3
21	180	115	110	44	178	40	150	110	49	14	6.8	4.3
22	140	97	100	44	434	84	166	110	44	14	9.6	10.0
23	120	86	94	44	205	74	175	117	41	13	16.0	18.0
24	90	76	86	44	138	68	160	135	39	13	10.0	17.0
25	75	72	82	41	117	61	166	160	36	13	8.6	14.0
26	70	73	80	39	187	56	138	163	35	13	8.0	27.0
27	65	76	85	36	158	56	115	152	34	13	7.4	26.0
28	70	74	96	35	126	64	98	150	31	13	6.8	22.0
29	90	70	88	33	102	97	85	133	29	13	6.2	17.0
30	110	73	79	30		138	74	119	28	12	6.8	15.0
31	95		78	28		119		112		14	6.2	
Mean	95.4	130	80.2	160	84.3	57.7	104	129	66.4	17.6	8.85	8.90
Runoff (in.)	9.56	12.6	8.04	16.0	7.90	5.78	10.1	12.9	6.44	1.77	0.89	0.86

Station 14, Blue River 1948-1949

Mean Daily Streamflow, c.f.s.

D.A. = 11.5 sq. mi.

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	13	24	78	40	17	122	61	513	82	21.0	6.8	3.5
2	11	35	148	35	17	115	56	691	78	19.0	6.8	3.5
3	13	64	122	34	18	114	54	345	74	18.0	6.8	3.5
4	35	45	102	34	18	112	58	217	74	17.0	6.2	3.1
5	31	39	90	31	18	115	73	169	82	17.0	6.2	3.1
6	70	36	76	33	19	112	91	145	86	17.0	6.2	3.1
7	55	33	114	34	20	103	112	155	80	16.0	6.2	3.1
8	39	27	131	34	18	96	119	169	72	15.0	6.2	3.1
9	31	26	181	35	21	85	124	181	66	14.0	6.2	3.9
10	27	24	205	35	66	78	155	202	62	14.0	5.7	4.3
11	27	22	243	35	76	76	184	211	58	13.0	5.7	3.9
12	22	21	480	35	54	80	175	230	52	13.0	5.7	3.5
13	20	19	255	29	44	80	150	220	49	13.0	5.7	3.1
14	19	24	175	28	40	84	138	205	47	13.0	5.2	3.1
15	17	36	128	27	37	90	145	196	44	12.0	5.2	5.2
16	17	62	105	25	60	140	178	166	41	11.0	4.7	13.0
17	16	62	86	25	135	155	208	138	39	11.0	4.3	6.8
18	15	51	74	24	272	190	211	121	35	11.0	4.3	4.7
19	13	107	68	24	266	196	199	114	33	10.0	4.3	3.9
20	13	112	70	23	190	175	196	112	31	10.0	4.3	3.9
21	13	91	61	22	142	181	184	117	30	9.6	4.3	3.5
22	13	90	55	22	187	155	211	112	28	9.6	3.9	3.1
23	11	122	51	21	244	130	220	107	27	9.6	3.9	3.1
24	13	199	48	20	199	112	199	108	26	9.2	3.9	3.1
25	11	140	44	20	166	100	160	114	25	9.2	3.9	2.7
26	10	108	41	19	155	92	138	117	26	9.2	3.9	2.7
27	10	88	40	19	142	85	142	108	24	8.6	3.5	2.7
28	10	105	37	19	131	78	163	97	23	8.0	3.5	2.7
29	10	103	42	18		74	181	88	26	8.0	3.5	3.1
30	11	90	39	18		68	169	79	22	7.4	3.5	3.5
31	16		39	18		62		80		6.8	3.5	
Mean	20.4	66.8	111	27.0	99.0	111	148	182	48.1	12.3	4.97	3.85
Runoff (in.)	2.04	6.48	11.1	2.70	8.96	11.2	14.4	18.2	4.66	1.23	0.50	0.37

Station 23, Mann Creek 1948-1949

Mean Daily Streamflow, c.f.s.

D.A. = 5.12 sq. mi.

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7.9	15	31	14.0	6	55	24	276	58	12.0	4.0	1.8
2	6.7	23	68	13.0	6	51	22	335	55	11.0	3.7	1.6
3	7.9	39	56	12.0	6	51	22	182	51	11.0	3.5	1.6
4	27.0	27	45	12.0	6	50	25	118	51	10.0	3.5	1.5
5	24.0	24	38	12.0	6	50	31	86	57	9.7	3.3	1.5
6	52.0	22	33	12.0	7	49	42	78	63	9.2	3.3	1.5
7	37.0	21	55	13.0	7	46	55	91	58	8.4	3.3	1.5
8	25.0	19	66	12.0	6	41	58	105	49	7.9	3.3	1.5
9	19.0	16	89	11.0	7	36	61	114	45	7.9	3.1	2.5
10	16.0	15	91	11.0	31	32	81	133	43	7.4	2.9	2.3
11	17.0	14	103	11.0	34	30	99	156	41	7.0	2.9	2.0
12	14.0	14	202	11.0	20	32	91	170	37	6.7	2.9	1.8
13	12.0	12	109	10.0	16	31	79	158	35	6.4	2.9	1.6
14	11.0	16	74	10.0	14	32	72	147	33	6.4	2.7	1.5
15	10.0	21	57	9.2	13	36	79	131	29	6.1	2.5	3.7
16	9.7	36	46	8.8	22	62	102	109	28	6.1	2.5	6.7
17	8.8	35	38	8.8	50	70	116	88	25	6.1	2.5	3.1
18	8.4	30	32	8.8	116	83	116	79	22	6.1	2.5	2.2
19	7.9	65	29	8.4	116	86	112	76	21	6.1	2.3	2.0
20	7.4	63	28	7.9	79	79	102	75	21	6.1	2.2	1.8
21	6.7	48	24	7.9	60	79	103	78	19	5.8	2.2	1.5
22	6.4	51	22	7.9	79	68	127	75	18	5.5	2.2	1.4
23	6.4	74	21	7.4	114	58	131	74	18	5.5	2.0	1.4
24	6.7	137	19	7.4	83	50	114	78	16	5.5	2.0	1.4
25	6.4	82	18	7.0	68	45	91	84	15	5.2	1.9	1.3
26	5.8	58	17	7.4	67	41	79	88	16	4.9	1.9	1.3
27	5.8	45	15	7.0	63	36	82	78	14	4.9	1.8	1.4
28	5.8	49	14	6.7	58	32	99	68	14	4.9	1.8	1.5
29	6.1	46	16	6.7		29	110	60	15	4.6	1.8	1.5
30	6.7	39	14	6.4		27	99	54	13	4.3	1.8	1.6
31	9.2		14	6.1		25		56		4.0	1.8	
Mean	12.9	38.5	47.9	9.48	41.4	48.1	80.8	113	32.7	6.86	2.61	1.93
Runoff (in.)	2.91	8.40	10.8	2.13	8.42	10.8	17.6	25.4	7.12	1.54	0.59	0.42

Station 24, Wolf Creek 1948-1949

Mean Daily Streamflow, c.f.s.

D.A. = 2.06 sq. in.

Date	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.1	6.3	13.0	6.6	2.7	23	12	60	13.0	4.1	2.0	1.0
2	2.9	9.0	32.0	6.2	2.7	22	10	96	11.0	3.6	2.0	1.0
3	2.9	16.0	29.0	6.4	2.7	21	10	67	10.0	3.4	2.0	1.0
4	7.0	11.0	23.0	6.4	2.6	21	12	46	10.0	3.2	2.0	1.0
5	6.3	11.0	19.0	6.4	2.5	21	14	35	12.0	3.2	1.9	1.0
6	11.0	11.0	17.0	7.0	2.9	21	17	30	13.0	3.2	1.9	1.0
7	11.0	9.8	24.0	6.3	3.3	20	19	28	12.0	3.2	1.9	1.0
8	8.7	9.0	30.0	5.6	2.6	20	20	28	11.0	3.1	1.9	1.1
9	7.0	8.3	36.0	6.3	2.8	19	21	29	11.0	2.9	1.9	2.3
10	5.4	7.3	37.0	5.9	13.0	18	23	32	9.8	3.1	1.8	2.1
11	6.3	7.0	41.0	5.9	14.0	17	28	34	9.0	3.1	1.8	1.9
12	4.8	6.3	75.0	5.6	9.0	18	30	37	8.3	3.1	1.8	1.7
13	4.1	5.6	49.0	5.4	6.8	17	28	42	8.0	3.2	1.7	1.5
14	3.8	7.3	38.0	5.4	6.0	18	25	40	7.3	3.1	1.6	1.3
15	3.6	9.8	33.0	5.1	5.4	19	25	39	6.6	2.9	1.6	2.5
16	3.6	14.0	28.0	5.1	11.0	22	32	34	6.3	2.7	1.6	5.0
17	3.4	14.0	24.0	4.7	22.0	28	41	28	5.6	2.7	1.6	2.5
18	3.2	13.0	21.0	4.4	47.0	33	44	27	4.8	2.7	1.6	1.9
19	3.1	25.0	18.0	4.0	59.0	36	43	25	4.6	2.7	1.5	1.6
20	3.1	27.0	15.0	3.8	40.0	33	41	24	4.8	2.7	1.4	1.4
21	2.9	22.0	13.0	3.6	27.0	32	37	26	5.1	2.7	1.4	1.3
22	2.9	21.0	12.0	3.6	35.0	29	40	24	5.1	2.7	1.4	1.1
23	2.7	27.0	11.0	3.5	47.0	25	42	22	4.8	2.7	1.4	1.2
24	3.1	47.0	10.0	3.5	55.0	23	38	22	4.6	2.7	1.3	1.2
25	2.9	34.0	9.0	3.3	28.0	21	35	22	4.6	2.7	1.3	1.2
26	2.7	25.0	8.4	3.3	27.0	19	31	22	4.4	2.7	1.3	1.2
27	2.7	19.0	8.0	3.1	26.0	17	30	19	4.4	2.7	1.2	1.2
28	2.7	21.0	7.4	2.9	24.0	16	31	18	4.1	2.3	1.2	1.2
29	2.9	19.0	8.0	2.8		15	34	16	4.4	2.1	1.2	1.2
30	3.1	16.0	7.4	2.8		13	31	14	4.1	2.1	1.2	1.2
31	4.4		6.6	2.7		12		13		2.1	1.1	
Mean	4.43	15.9	22.7	4.77	18.1	21.6	28.1	32.2	7.46	2.88	1.60	1.53
Runoff (in.)	2.48	8.62	12.7	2.67	9.15	12.1	15.2	18.0	4.04	1.61	0.89	0.83

DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS													See 1B Fries data for explanation of popt. symbols	
JANUARY 1948 (observations at 0800 Jan 1-20; 1600 Jan 21-31)														
Date	Current Weather	Air Temperature		Dew Point °F	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date
		Max °F	Min °F			All Types Inches	Snow-fall 24 hrs Inches	Depth Inches	Water Equi- valent Inches	Density %	Blue River cfs	Hess Creek cfs	Wolf Creek cfs	
		Sta 1A	Sta 1A			Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1B	Sta 23	Sta 24	
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Snow		34.5	29.5			✓	##				212		1
2	Snow		31.0	26.0			✓5.62	##				446		2
3	Snow		32.5	28.0			0.61	8.00				248		3
4	Snow		30.0	23.5			1.19	1.00				181		4
5	Rain		38.0	26.5			1.62	0				163		5
6	Snow, rain		43.0	33.0			4.70	0				862		6
7	Clear		33.0	28.0			2.27	3.00				962		7
8	Clear		31.0	22.5			0.11	0				401		8
9	Snow		33.0	23.0			0.19	3.00				214		9
10	Snow		29.0	27.5			0.27	5.00				148		10
11	Overcast		31.0	24.0			✓	0				119		11
12	Clear		31.0	23.0			✓0.48	0				97		12
13	Clear		42.1	32.0			0.04	0				85		13
14	Clear		35.5	24.5			0.01	0				73		14
15	Clear		56.0	37.4				0				66		15
16	Clear		45.8	32.9				0				60		16
17	Clear		46.9	33.8				0				56		17
18	High Clouds		47.1	34.2				0				52		18
19	High Clouds		44.4	30.2				0				49		19
20	High Clouds		44.0	33.7				0				47		20
21	Clear		47.0	35.4				0				44		21
22	High Clouds		42.5	33.7				0				44		22
23	Clear		43.9	34.3				0				44		23
24	Clear		38.9	28.8				0				44		24
25	Partly Cloudy		33.7	22.6				0				41		25
26	Clear		33.2	17.0				0				39		26
27	Hi - Overcast		40.5	18.4				0				36		27
28	Clear		46.6	30.2			✓	0				35		28
29	Snow		37.2	11.1			✓0.23	1.00				33		29
30	Overcast		32.8	10.4			0.05	1.50				30		30
31	Overcast		31.4	21.1			0.06	0				28		31
Sum							17.55	22.5						
Mean			38.2	26.9								160		

Cooperative Snow Investigations

Rept. from midnight to midnight
 WILLAMETTE BASIN SNOW LABORATORY
 FEBRUARY 1948
 DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS
 (Observations at 1600 PST)
 See 1B Fries data for explanation of ppt. symbols

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of	Min of			All Types	Snow-fall 24 hrs	Depth	Water Equivalent	Density	Blue River	Wann Creek	Wolf Creek	
	Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1B	Sta 2B	Sta 2B	
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Snow	26.3	21.1		**	0.37	5.00				27			1
2	Clear	26.8	15.2		**		0				26			2
3	Partly Cloudy	28.8	12.2		W	/	0				25			3
4	Snow	24.8	13.9		S	0.48	5.50				24			4
5	Snow	28.0	21.0		S	0.09	0				23			5
6	Clear	31.7	8.1		W		0				22			6
7	Overcast	29.1	18.0		W	0.45	0				22			7
8	Snow	31.1	25.3		SW	2.93	17.00				24			8
9	Snow	30.0	22.8		SW	1.11	15.00				22			9
10	Partly Cloudy	27.4	20.8		E	0.09	4.00				21			10
11	Clear	32.0	15.2		calm		0				19			11
12	Clear	40.5	21.5		N	0.01	0				19			12
13	Overcast	36.1	28.0		calm		0				19			13
14	Rain, snow	33.6	26.8		SW	/	0.40	84.5			20			14
15	Snow	34.2	29.5		SW	/	19.00	98.0			41			15
16	Rain	37.8	28.9		SW	4.87	3.00	96.6			66			16
17	Partly Cloudy	47.0	39.7		SW	0.05	0	93.2			90			17
18	Cloudy	40.2	27.0		SW	0.99	1.50	90.2			110			18
19	Cloudy	30.5	23.2		SW	0.06	0				97			19
20	Cloudy, snow	31.9	26.2		SW	1.29	1.75	84.9			82			20
21	Rain, snow	36.7	29.8		SW	4.62	20.00				178			21
22	Snow	49.0	27.2		SW	1.46	9.50	99.4			434			22
23	Partly Cloudy	28.1	22.6		calm	0.33	5.00				205			23
24	Clear	38.7	29.9		SW	0.01	0				138			24
25	Overcast, rain	43.0	32.6		SW	0.72	0				117			25
26	Snow	41.6	25.5		SW	1.13	3.50	99.0			187			26
27	Snow	29.0	22.3		SW	0.60	4.75	102.2			158			27
28	Partly Cloudy	33.5	23.2		W	0.06	1.50	97.6			126			28
29	Overcast	33.5	23.0		SW		0	101.8			102			29
30														30
31														31
Sums						21.70	113.4							
Means		33.9	23.3								84.3			

Pept. from midnight to midnight													See 1B Friez data for explanation of pept. symbols			
WILLAMETTE BASIN SNOW LABORATORY													MARCH 1948		(Observations at 1600 PST)	
Date	Current Weather	Air Temperature		Dew Point of Sta 1A	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date		
		Max of Sta 1A	Min of Sta 1A			All Types Inches Sta 1B	Snow-fall 24 hrs Inches Sta 1A	Depth Inches Sta 1C	Water Equi- valent Inches Sta 1C	Density % Sta 1C	Blue River cfs Sta 1A	Hann Creek cfs Sta 2A	Wolf Creek cfs Sta 2B			
		1	2			3	4	5	6	7	8	9	10		11	12
1	Snow	32.2	26.8		W	0.81	4.00	106.3				90			1	
2	Snow	30.9	21.9		W	0.89	5.00					78			2	
3	Clear	32.5	15.3		SW	0.02	0.50					67			3	
4	Clear	37.4	20.2		Calm		0					60			4	
5	Snow	36.8	30.0		SW	0.89	2.00					54			5	
6	Snow, cloudy	34.8	30.5		NE	0.18	0.75					49			6	
7	Overcast	32.5	24.8		Calm	0.05	0					47			7	
8	Snow	32.8	25.9		S	0.79	4.37	105.2				45			8	
9	O'cast, snow	32.9	28.0		SW	0.24	2.75					44			9	
10	Clear	34.0	14.3		SW	0.01	0					40			10	
11	Overcast	36.8	24.4		SW		0	107.7				39			11	
12	Cloudy	38.0	31.0		SW	0.29	T					37			12	
13	Partly Cloudy	37.1	28.0		SW	0.11	1.75	104.8				36			13	
14	Snow	33.5	26.4		SW	0.81	4.75	109.4				36			14	
15	Partly Cloudy	31.2	25.5		SW	0.33	5.50	117.3				35			15	
16	Snow	33.8	26.5		S	0.53	4.00	121.5				35			16	
17	Overcast	32.2	27.0		SW	0.28	1.75	115.0				36			17	
18	Snow	31.8	25.1		W	1.13	12.00	127.7				36			18	
19	Snow	28.3	20.7		NE	*0.95	7.00					34			19	
20	Snow	29.5	21.5		SW	*0.51	6.00					33			20	
21	Rain, snow	33.9	27.1		SW	*1.44	2.50					40			21	
22	Overcast	33.8	25.5		SW	*1.82	14.00	143.0				84			22	
23	Overcast	35.8	22.5		SW	0.08	0.75	141.5				74			23	
24	Snow	35.2	25.5		SE	0.49	3.00					68			24	
25	Snow	30.5	24.5		SW	0.63	6.95					61			25	
26	Clear	40.4	21.8		SW	0.04	1.25					56			26	
27	Clear	46.5	31.5		SW		0					56			27	
28	Cloudy	51.7	35.2		NE	0.02	0					64			28	
29	Rain	49.0	23.8		SW	1.16	0	127.5				97			29	
30	Clear	36.0	26.6		W	0.36	0					138			30	
31	Clear	40.5	28.9		SW	0.02	0					119			31	
Sums						13.65	90.4									
Means		34.3	25.3									57.7				

Rept. from midnight to midnight DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS Willamette Basin Snow Laboratory APRIL 1948 (Observations at 1600 PST)														See 1B Fries data for explanation of rept. symbols
Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max	Min			All Types	Snow-fall 24 hrs	Depth	Water Equivalent	Density	Blue River	Mann Creek	Wolf Creek	
		Sta 1A	Sta 1A			Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1A	Sta 2A	Sta 2A	
1		2	3	4	5	6	7	8	9	10	11	12	13	
1	Clear	49.5	31.4	(?)	SW	✓	0	121.3			103			1
2	Snow	47.9	30.5	(?)	S	✓	1.20	4.00			102			2
3	Snow	33.2	21.5	(?)	S	0.38	6.00				102			3
4	Snow	29.0	21.0	(?)	SW	0.73	8.00				94			4
5	Snow	29.5	22.0	(?)	W	0.75	9.50				84			5
6	Snow	30.5	22.5	(?)	SW	0.94	8.50				72			6
7	Partly Cloudy	37.5	20.8	(?)	SW	0.02	3.00	154.4			64			7
8	Cloudy, snow	34.5	24.5	(?)	SE	0.37	1.00	147.7			58			8
9	Snow	33.7	29.0	(?)	SW	0.67	5.75	147.8			58			9
10	Snow	34.0	27.5	(?)	NE	0.96	8.00	151.4			58			10
11	Snow	33.0	26.8	(?)	SE	0.30	2.50	153.0			56			11
12	Overcast	34.2	25.2	(?)	SW	0.10	0				55			12
13	Clear	42.0	25.8	(?)	SW	0.04	0				54			13
14	Clear	46.3	34.1	43	SW	0.20	0				64			14
15	Partly Cloudy	51.8	36.6	40	SW	0.14	0	135.0			90			15
16	Overcast	46.6	32.9	36	SW	0.13	0				124			16
17	Rain, snow	38.3	32.2	34	SW	0.77	0	133.7			135			17
18	Partly Cloudy	47.5	31.8	35	SW	0.06	0				140			18
19	Clear	55.5	33.4	35	SW		0	131.7			133			19
20	Clear	55.4	36.3	28	SW		0	128.8			138			20
21	Rain	50.8	36.0	35	SW	0.54	0	127.5			150			21
22	Snow	36.8	31.6	(?)	SW	1.14	2.50	128.0			166			22
23	Snow	34.1	30.3	(?)	SW	0.59	5.00	131.0			175			23
24	Rain	37.0	29.1	34	SW	0.90	0.75	130.6			160			24
25	Snow	37.3	27.4	(?)	NE	0.61	3.00	131.8			166			25
26	Snow	31.4	23.0	(?)	SW	0.50	6.75	138.9			138			26
27	Cloudy	35.4	18.2	(?)	SW	0.01	0	117.6			115			27
28	Snow	34.0	26.8	(?)	SW	0.30	1.75				98			28
29	Cloudy	49.8	23.0	(?)	SW	0.07	0	117.6			85			29
30	Cloudy, snow	35.4	29.8	(?)	SW	0.25	0	132.6			74			30
31														31
Sum						12.66	76.0							
Mean		39.6	27.1								104			

DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS													See 1B Friez data for explanation of ppt. symbols	
Willamette Basin Snow Laboratory MAY 1948													(Observations at 1600 PST)	
Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of Sta 1A	Min of Sta 1A			All Types Inches Sta 1B	Snow-fall 24 hrs Inches Sta 1A	Depth Inches Sta 1C	Water Equivalent Inches Sta 1C	Density % Sta 1C	Blue River cfs Sta 1A	Hann Creek cfs Sta 2A	Wolf Creek cfs Sta 2B	
		1	2	3	4	5	6	7	8	9	10	11	12	
1	Clear	39.0	26.5	(?)	NW		0.50	135.8			67			1
2	Rain, snow	36.0	28.4	36	N	0.54	0	133.7			62			2
3	Rain, snow	38.6	32.3	34	W	1.05	0.50	134.8			164			3
4	Overcast	39.8	29.5	35	SW	0.16	0.25	132.6			190			4
5	Overcast	49.5	32.8	41	SW	0.16	0				158			5
6	Partly Cloudy	45.0	36.0	36	SW	0.62	0	129.8			199			6
7	Snow	39.0	29.5	(?)	S	0.53	3.25	133.0			184			7
8	Snow	37.5	29.2	(?)	SW	0.39	1.75	133.7			150			8
9	Partly Cloudy	43.8	27.3	37	SW	0.02	0.50	132.3			128			9
10	Overcast	40.2	30.5	33	SW		0	127.3			108			10
11	Clear	50.5	31.0	36	Calm	0.02	0	107.2			98			11
12	Rain	46.3	36.2	37	SW	1.07	0	122.8			107			12
13	Snow	38.2	30.0	(?)	SW	1	1.00	127.2			124			13
14	Partly Cloudy	42.0	29.0	36	SW	0.51	1.75				114			14
15	Overcast	61.6	32.8	38	SW		0	124.9			107			15
16	Rain	51.0	35.0	38	SW	0.55	0	120.4			117			16
17	Rain	40.7	33.2	35	SW	0.10	0	118.3			130			17
18	Rain, snow	35.8	30.7	(?)	SW	0.10	0.25	119.1			117			18
19	Rain, fog	36.2	31.8	(?)	SW	0.18	0	120.5			105			19
20	Overcast	53.2	33.3	40	S	0.13	0	118.9			102			20
21	Rain, fog	47.0	34.6	37	Calm	0.13	0				110			21
22	Clear	52.3	34.0	41	SW		0	115.6			110			22
23	Clear	64.5	38.7	38	SW		0	111.5			117			23
24	Partly Cloudy	69.2	42.8	43	SW	0.05	0	108.4			135			24
25	Clear	63.0	39.8	44	SW		0	104.4			160			25
26	Clear	62.7	41.7	42	SW		0	99.5	50.2	50	163			26
27	Rain	53.8	37.7	38	SW	0.40	0	98.1	51.0	51	152			27
28	Rain	46.5	34.0	38	Calm	0.43	0	99.9	47.6	48	150			28
29	Showers	49.0	34.5	39	Calm	0.11	0	97.3	51.8	52	133			29
30	Partly Cloudy	54.5	37.5	43	N	0.06	0	94.8	48.0	48	119			30
31	Overcast	49.7	38.4	42	SW	0.06	0	91.9			112			31
Sums						7.37	9.75							
Means		47.5	33.4								129			

Pept. from midnight to midnight
 DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS
 See 1B Fries data for explanation of pept. symbols

Willamette Basin Snow Laboratory
 JUNE 1948

(Observations at 1600 PST)

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max Of	Min Of			All Types	Snow- fall 24 hrs	Depth	Water Equi- valent	Density	Blue River	Mann Creek	Wolf Creek	
				Sta 1A	Sta 1A									
		Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1A	
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Clear	62.9	39.0	49	SW			88.5	45.0	51	110			1
2	Clear	69.5	43.3	46	SW			85.2	41.8	49	117			2
3	Cloudy	57.0	38.0	38	W			82.8	43.1	52	114			3
4	Cloudy, rain	44.8	35.2	37	SW	0.04		81.1	42.2	52	98			4
5	Clear	66.2	37.0	43	NE			77.5	41.8	54	91			5
6	Clear	76.4	48.5	47	NE			72.7	39.8	55	97			6
7	Partly Cloudy	77.6	46.0	55	SW	0.45		64.6	35.2	54	102			7
8	Clear	72.8	47.8	48	SW	✓		64.8	35.4	55	102			8
9	Showers	66.0	48.6	50	SW	0.17		59.3	32.1	54	92			9
10	Cloudy	59.0	43.9	46	SW	1.04		Partly			90			10
11	Partly Cloudy	50.6	41.8	46	SW	0.19		52.1	28.8	55	94			11
12	Showers	56.3	43.0	48	NE	0.25					80			12
13	Partly Cloudy	54.2	40.3	44	NE						72			13
14	Partly Cloudy	53.2	39.2	42	SW			48.5	28.2	58	62			14
15	Cloudy	53.6	39.5	46	SW			39.8	22.3	56	56			15
16	Partly Cloudy	53.2	41.6	44	SW	0.02		37.6	20.1	53	52			16
17	Partly Cloudy	54.2	40.9	43	NE	0.47		37.6	20.9	52	51			17
18	Rain	54.2	41.8	45	NE	0.26		36.8	19.5	53	49			18
19	Partly Cloudy	57.0	44.4	49	NE			37.9	21.1	56	45			19
20	Rain	56.9	44.7	46	Calm	0.88					52			20
21	Rain	59.8	38.5	42	NE	0.11					49			21
22	Clear	61.8	36.5	43	NE			19.0	11.4	60	44			22
23	Clear	65.6	37.5	47	NE			22.3	11.6	52	41			23
24	Clear	63.0	41.7	47	NE			21.3	11.5	54	39			24
25	Clear	61.1	40.8	47	NE			17.8	10.1	57	36			25
26	Clear	64.5	41.2	49	N			16.8	10.0	60	35			26
27	Clear	78.5	40.0	61	N			9.3	4.3	46	34			27
28	Clear	91.9	57.0	53	NE			2.5	1.3	52	31			28
29	Clear	91.0	64.0	56	NE						29			29
30	Clear	81.5	54.8	45	NW						28			30
31														31
Sum						3.86								
Mean		63.7	43.2								66.4			

Dept. from midnight to midnight DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS															
Willamette Basin Snow Laboratory JULY 1948 (Observations at 1600PST)															
Date	Current Weather	Air Temperature		Dew Point °F Sta 1A	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date	
		Max °F Sta 1A	Min °F Sta 1A			All Types Inches Sta 1B	Snow-fall 24 hrs Inches Sta 1A	Depth Inches Sta 1C	Water Equivalent Inches Sta 1C	Density % Sta 1C	Blue River cfs Sta 1A	Hann Creek cfs Sta 29	Wolf Creek cfs Sta 28		
		1	2			3	4	5	6	7	8	9	10		11
1	Clear	68.5	43.8	40	NE							27			1
2	Clear	63.7	37.3	42	NE							26			2
3	Clear	67.0	46.0	47	NW							25			3
4	Clear	63.8	43.2	44	NE							23			4
5	Rain	61.0	40.0	44	Calm	0.51						25			5
6	Rain	58.0	41.0	43	NE	0.47						24			6
7	Rain	54.2	37.8	42	NE	0.11						24			7
8	Partly Cloudy	63.2	42.8	42	NE							22			8
9	Partly Cloudy	65.0	46.9	42	SW							20			9
10	Cloudy	62.2	49.0	51	NE							19			10
11	Partly Cloudy	57.5	42.7	41	SW							18			11
12	Clear	72.2	40.2	49	NE							17			12
13	Clear	68.8	44.7	47	NE							17			13
14	Clear	71.6	45.4	49	NE							17			14
15	Clear	75.4	51.8	54	NE							17			15
16	Clear	81.0	57.0	56	NW							17			16
17	Clear	74.3	56.5	56	NE							17			17
18	Clear	68.0	49.8	47	NE							16			18
19	Cloudy	58.0	46.0	50	SW							15			19
20	Clear	68.0	47.7	53	W							15			20
21	Clear	72.0	48.0	54	NW							14			21
22	Clear	68.5	49.5	46	NE							14			22
23	Cloudy	65.0	47.5		NE							13			23
24	Clear	65.8	42.0	48	NE							13			24
25	Clear	69.2	45.4	48	NE							13			25
26	Clear	71.1	47.8	46	SW	0.03						13			26
27	Rain	64.0	39.7	44	SW	0.84						13			27
28	Overcast	50.0	39.4	47	NE	0.05						13			28
29	Clear	72.6	42.7	54	NE							13			29
30	Clear	80.8	56.5	61	NE							12			30
31	Partly Cloudy	79.0	57.4	48	SW	0.05						14			31
Sums						2.06									
Means		66.9	45.9									17.6			

Rept. from mid night to mid night DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS

Willamette Basin Snow Laboratory AUGUST 1948

(Observations at 1600 PST)

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max Of Sta 1A	Min Of Sta 1A			Of Sta 1A	All Types Inches Sta 1B	Snow- fall 24 hrs Inches Sta 1A	Depth Inches Sta 1C	Water Equi- valent Inches Sta 1C	Density %	Blue River cfs Sta 1A	Hann Creek cfs Sta 23	
Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1A	Sta 23	Sta 25		
1	2	3	4	5	6	7	8	9	10	11	12	13		
1	Clear	73.5	55.2	58	NE						14		1	
2	Clear	71.7	51.8	55	SW						12		2	
3	Fog	66.0	51.2	52	NE						11		3	
4	Partly Cloudy	55.8	44.5	43	NW						11		4	
5	Clear	62.5	39.6	47	NE						10		5	
6	Clear	64.0	46.7	48	NE						9.6		6	
7	Clear	67.3	44.8	50	NE						9.2		7	
8	Partly Cloudy	63.9	46.4	53	NE						9.2		8	
9	Clear	61.8	48.8	51	NE						9.2		9	
10	Clear	66.0	47.5	49	NE						8.6		10	
11	Clear	66.0	47.0	52	NW						8.6		11	
12	Clear	66.0	43.8	45	NE						8.0		12	
13	Partly Cloudy	62.0	48.5	47	NW	0.03					8.0		13	
14	Clear	67.2	43.3	51	SW	0.02					8.0		14	
15	Overcast	60.0	41.2	45	SW	0.15					8.0		15	
16	Partly Cloudy	65.7	42.3	46	SW						8.0		16	
17	Rain	59.3	46.5	52	NE	0.05					7.4		17	
18	Overcast	56.5	46.5	49	SW	0.08					7.4		18	
19	Showers	53.0	43.4	47	NE	0.02					7.4		19	
20	Clear	64.4	40.8	50	NW						7.4		20	
21	Partly Cloudy	60.2	49.0	50	SW	0.05					6.8		21	
22	Rain	56.2	45.2	46	SW	0.90					9.6		22	
23	Rain	48.0	43.0	45	SW	0.43					16		23	
24	Cloudy	50.8	43.4	48	NE	0.01					10		24	
25	Clear	70.5	45.5	55	NW						8.6		25	
26	Clear	62.0	49.5	49	SW						8.0		26	
27	Clear	65.8	43.5	40	NE						7.4		27	
28	Clear	72.0	47.7	43	NE						6.8		28	
29	Clear	69.5	56.2	38	SW						6.2		29	
30	Cloudy	53.0	46.6	49	SW	0.08					6.8		30	
31	Clear	63.7	40.5	51	SW						6.2		31	
Sum						1.01								
Mean		62.6	46.0								8.85			

Cooperative Snow Investigations

Pop't. from midnight to midnight														
DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS														
Willamette Basin Snow Laboratory SEPTEMBER 1948 (Observations at 1600 PST)														
Date	Current Weather	Air Temperature		Snow Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of	Min of			All Types	Snow-fall	Depth	Water Equivalent	Density	Blue River	Mean Creek	Wolf Creek	
		Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Inches Sta 1B	Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1A	cfs Sta 2B	
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Clear	69.5	46.0	54	SW		0					5.7		1
2	Partly Cloudy	64.4	46.8	47	NE	0.06	0					5.7		2
3	Clear	61.4	42.3	42	NW	0.01	0					5.7		3
4	Clear	57.4	36.5	45	NW		0					5.2		4
5	Clear	60.0	38.4	46	NW		0					5.2		5
6	Clear	63.6	40.0	51	NW		0					5.2		6
7	Clear	71.0	50.0	38	SW		0					5.2		7
8	Clear	73.5	56.0	48	SW		0					4.7		8
9	Clear	81.2	60.7	44	NW	0.02	0					4.7		9
10	Clear	80.0	61.6	45	SW	0.03	0					4.7		10
11	Clear	75.6	57.2	48	SW	0.05	0					4.3		11
12	Clear	76.0	57.8	29	NW		0					4.3		12
13	Clear	74.0	58.8	47	SW		0					4.3		13
14	Cloudy	68.3	40.0	44	SW	0.26	0					4.3		14
15	Clear	46.4	37.6	41	SW	0.03	0					4.7		15
16	Cloudy	50.0	40.2	44	SW	0.13	0					4.7		16
17	Cloudy	50.5	43.0	47	SW	0.10	0					4.7		17
18	Cloudy	56.4	43.6	47	NE		0					4.7		18
19	Clear	63.0	44.4	48	SW		0					4.3		19
20	Clear	58.4	43.2	46	SW		0					4.3		20
21	Cloudy	56.5	42.2	40	SW		0					4.3		21
22	Cloudy	53.4	32.0		SW	2.05	1.30					10		22
23	Snow	34.0	30.4		SW	1.08	8.50					18		23
24	Snow	33.6	30.4		SW	0.36	4.20					17		24
25	Snow	39.5	32.0		NE	0.67	0.30					14		25
26	Snow	34.0	31.5		SW	1.06	6.50					27		26
27	Rain	53.0	31.5	47	SW	0.07	0					26		27
28	Clear	48.3	35.0	35	NW	0.27	0					22		28
29	Clear	53.4	32.0	41	NW	0.02	0					17		29
30	Clear	51.3	38.2	41	NE		0					15		30
31														31
Sums						6.27	20.8							
Means		58.5	42.5									8.90		

Cooperative Snow Investigations

Rept. from midnight DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS
to midnight
Willetts Basin Snow Laboratory

OCTOBER 1948

(Observations at 1600 PST)

Date	Current Weather	Air Temperature		Dew Point of Sta 1A	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date
		Max of Sta 1A	Min of Sta 1A			All Types inches Sta 1B	Snow- fall 24 hrs inches Sta 1A	Depth inches Sta 1C	Water Equi- valent inches Sta 1C	Density % Sta 1C	Blue River cfs Sta 1A	Hann Creek cfs Sta 2B	Wolf Creek cfs Sta 2B	
Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1A	Sta 2B	Sta 2B		
1	2	3	4	5	6	7	8	9	10	11	12	13		
1	Clear	62.6	42.7	45	NE		0				13	7.9	3.1	1
2	Clear	65.0	47.7	49	SW		0				11	6.7	2.9	2
3	Overcast	58.2	45.7	47	SW	1.09	0				13	7.9	2.9	3
4	Overcast	49.0	38.6	31	SW	1.16	0.50				35	27	7.0	4
5	Rain, snow	39.6	32.0	35	SW	0.66	0.50				31	24	6.3	5
6	Rain	46.5	35.0	45	SW	1.17	0				70	52	11	6
7	Cloudy	50.2	43.0	47	NW		0				55	37	11	7
8	Clear	53.0	42.5	45	SW	0.05	0				39	25	8.7	8
9	Clear	57.8	41.0	42	SW		0				31	19	7.0	9
10	Partly Cloudy	62.2	41.6	47	SW	0.59	0				27	16	5.4	10
11	Clear	54.6	37.0	43	NW		0				27	17	6.3	11
12	Clear	68.7	46.5	48	SW		0				22	14	4.8	12
13	Clear	62.0	45.5	52	SW		0				20	12	4.1	13
14	Fog	56.2	41.6	40	calm		0				19	11	3.8	14
15	Clear	52.5	31.7	42	SW		0				17	10	3.6	15
16	Clear	47.0	37.3	22	SW		0				17	9.7	3.6	16
17	Clear	60.0	37.0	45	NW		0				16	8.8	3.4	17
18	Clear	62.2	38.0	39	NE		0				15	8.4	3.2	18
19	Clear	64.5	40.4	41	NW		0				13	7.9	3.1	19
20	Clear	63.0	43.2	46	SW		0				13	7.4	3.1	20
21	Clear	66.2	43.5	44	NW		0				13	6.7	2.9	21
22	Cloudy	62.4	48.4	40	SW		0				13	6.4	2.9	22
23	Cloudy	58.0	46.4	47	SW	0.24	0				11	6.4	2.7	23
24	Partly Cloudy	50.2	33.0	33	SW	0.25	0				13	6.7	3.1	24
25	Clear	53.2	31.5	34	NW	0.04	0				11	6.4	2.9	25
26	Clear	43.3	33.2		NW		0				10	5.8	2.7	26
27	Clear	41.2	27.9	24	SW		0				9.6	5.8	2.7	27
28	Snow	42.9	30.4		NE	0.30	3.00				9.6	5.8	2.7	28
29	Cloudy	33.7	29.5		NE	0.05	1.00				10	6.1	2.9	29
30	Rain	37.3	30.3	36	SW	0.50	0				11	6.7	3.1	30
31	Snow	38.2	31.4		SE	0.39	1.75				16	9.2	4.4	31
Sums						6.49	6.75							
Means		53.5	38.4								20.4	12.9	4.45	

Dept. from midnight to midnight DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS NOVEMBER 1948 Willamette Basin Snow Laboratory (Observations at 1600 PST)														
Date	Current Weather Station 1A	Air Temperature		Dew Point °F Sta 1A	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date
		Max of Sta 1A	Min of Sta 1A			All Types Inches Sta 1B	Snow-fall 24 hrs Inches Sta 1A	Depth Inches Sta 1C	Water Equivalent Inches Sta 1C	Density % Sta 1C	Olney River cfs Sta 1B	Mann Creek cfs Sta 2B	Wolf Creek cfs Sta 2B	
		1	2	3	4	5	6	7	8	9	10	11	12	
1	Rain, snow	38.4	29.9	38	SW	1.25	0.50				24	15	6.3	1
2	Rain	43.2	30.8	38	S	1.28	**				35	23	9.0	2
3	Snow	43.8	29.4		SW	0.75	**				64	39	16	3
4	Partly Cloudy	33.3	25.2		SW	0.06	0.75				45	27	11	4
5	Partly Cloudy	36.0	26.1		NW	0.23	0.50				39	24	11	5
6	Partly Cloudy	36.3	28.9		NW		0				36	22	11	6
7	Partly Cloudy	33.2	24.2		NW	0.02	0.30				33	21	9.8	7
8	Clear	45.8	25.3	21	SW		0				27	19	9.0	8
9	Clear	49.4	34.6	30	N		0				26	16	8.3	9
10	Clear	45.0	34.1	33	N		0				24	15	7.3	10
11	Clear	46.8	35.5	35	N		0				22	14	7.0	11
12	Clear	47.0	37.1	16	W		0				21	14	6.3	12
13	Overcast	45.0	31.8	37	SW		0				19	12	5.6	13
14	Rain, snow	44.0	31.5		SW	1.39	1.00				24	16	7.3	14
15	Snow	32.2	29.0		SW	1.46	18.80				36	21	9.8	15
16	Snow	33.0	28.2		SW	1.36	7.70				62	36	14	16
17	Snow	32.1	26.2		W	1.01	10.00				62	35	14	17
18	Rain, snow	32.0	28.1		SW	0.64	0				51	30	13	18
19	Snow	35.2	31.4		SW	1.28	4.00				107	65	25	19
20	Snow	34.0	29.1		SW	0.23	1.00				112	63	27	20
21	Cloudy	34.3	26.2		NW	0.01	0				91	48	22	21
22	Rain	39.9	32.1	35	S	0.28	0				90	51	21	22
23	Rain	39.3	31.6	38	SW	1.90	0				122	74	27	23
24	Snow	43.2	38.6		S	0.54	3.30				199	137	54	24
25	Snow	32.5	27.4		S	1.52	9.00				140	82	30	25
26	Snow	30.0	21.2		N	0.67	9.30				108	58	22	26
27	Partly Cloudy	31.0	23.6		W	0.10	0.40				88	45	19	27
28	Snow	32.8	26.0		N	0.99	9.30				105	49	21	28
29	Clear	31.3	20.0		S	0.54	0.30				103	46	18	29
30	Snow	30.7	25.3		NE	1.38	8.00				90	39	16	30
31														31
Sums						18.88	78.7							
Means		37.7	28.0								66.8	38.5	15.9	

Cooperative Snow Investigations

Pop't. from midnight to midnight

DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS

See 1-2 Prior date for explanation of pop't. symbols

Willamette Basin Snow Laboratory

DECEMBER 1948

(Observations at 1600 PST)

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max	Min			All Types	Snow-fall	Depth	Water Equivalent	Density	Blue River	Hann Creek	Wolf Creek	
		Sta 1A	Sta 1A			inches Sta 1B	inches Sta 1A	inches Sta 1C	inches Sta 1C	% Sta 1C	cfs Sta 1A	cfs Sta 2A	cfs Sta 2A	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Cloudy	29.2	24.2		S	0.37	0.80				78	31	13	1
2	Snow	37.3	27.5		SW	2.89	17.00	60.0			148	68	32	2
3	Partly Cloudy	30.5	20.8		SE	1.32	8.50	64.2			122	56	29	3
4	Snow	26.4	18.0		S	0.90	4.30	63.1			102	45	23	4
5	Snow	28.0	22.5		E	-	17.00				90	38	19	5
6	Snow	27.5	23.8		S	-	9.00	78.2			76	33	17	6
7	Snow	35.8	25.9		NE	-	8.10				114	55	24	7
8	Snow	36.0	26.5		SW	-	2.25				131	66	30	8
9	Rain, snow	34.7	29.0		SW	1.81	4.70				181	89	36	9
10	Snow	33.0	27.3		SW	-	10.70				205	91	37	10
11	Snow	33.0	28.0		SW	-	12.40				243	103	41	11
12	Snow	36.7	26.7		S	-	8.00				480	202	75	12
13	Snow	29.5	25.5		S	0.12	13.20				255	109	49	13
14	Snow	29.2	21.6		NE	0.26	2.30				175	74	38	14
15	Partly Cloudy	24.2	20.2		SW	0.03	2.75				128	57	33	15
16	Clear	23.8	11.9		SW		0				105	46	28	16
17	Clear	24.3	12.3		NE		0				86	38	24	17
18	Clear	28.0	14.8		SW		0				74	32	21	18
19	Snow	36.6	20.4		S	1.21	2.50				68	29	18	19
20	Snow	32.0	23.4		NW	0.47	6.50				70	28	15	20
21	Partly Cloudy	25.8	19.5		SW	0.15	3.50				61	24	13	21
22	Clear	24.0	17.5		SW		0				55	22	12	22
23	Clear	22.0	11.4		SW		0				51	21	11	23
24	Partly Cloudy	18.0	9.0		SW	0.10	1.00				48	19	10	24
25	Partly Cloudy	23.0	15.4		SW	0.09	0.60				44	18	9.0	25
26	Clear	27.0	14.6		SW		0				41	17	8.4	26
27	Partly Cloudy	30.5	18.2		SW	0.05	0	90.6			40	15	8.0	27
28	Partly Cloudy	32.0	23.0		SW	0.37	0	88.8			37	14	7.4	28
29	Cloudy, snow	33.0	25.4		SW	1.51	12.00				42	16	8.0	29
30	Cloudy, snow	30.0	20.2		SW	0.05	0.25	102.0			39	14	7.4	30
31	Snow	38.3	26.4		S	0.85	5.00				39	14	6.6	31
Sums						12.55	152.5							
Means		29.6	21.0								111	47.9	22.7	

Rept. from midnight to midnight
 WILLAMETTE BASIN SNOW LABORATORY
 DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS.
 JANUARY 1949
 (Observations at 1600 PST)

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of	Min of			All Types	Snow-fall 24 hrs	Depth	Water Equivalent	Density	Blue River	Hann Creek	Wolf Creek	
		Sta 1A	Sta 1A			Inches Sta 1B	Inches Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1A	cfs Sta 2A	cfs Sta 3A	
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Snow	28.0	20.4	(?)	S	1.32	21.50				40	14	6.6	1
2	Partly Cloudy	21.6	13.4	(?)	W	0.03	1.75				35	13	6.2	2
3	Clear	19.6	10.0	(?)	SE	0.02	0				34	12	5.8	3
4	Clear	28.4	12.8	(?)	N		0				34	12	5.4	4
5	Clear	34.4	24.5	(?)	N		0	113.2	38.6	34	31	12	5.4	5
6	Clear	40.0	31.2		N		0	110.0	39.3	36	33	12	7.0	6
7	Snow	38.2	19.9		SE	0.51	1.60	111.2	39.3	35	34	13	6.3	7
8	Snow	21.0	14.4		NE	0.12	4.00				34	12	5.6	8
9	Partly Cloudy	16.2	4.5		E	0.01	0				35	11	6.3	9
10	Partly Cloudy	8.3	0.2		SW		0				35	11	5.9	10
11	Partly Cloudy	21.2	4.0		NW		0				35	11	5.9	11
12	Partly Cloudy	34.1	14.0		NW	0.01	0				35	11	5.6	12
13	Partly Cloudy	41.8	23.9		W		0				29	10	5.4	13
14	Light rain	44.0	24.8		N	0.03	0.10				28	10	5.4	14
15	Snow	32.0	22.0		N	0.10	1.00	103.1	37.6	36	27	9.2	5.1	15
16	Clear	35.8	17.5		N	0.01	0	104.2	39.7	38	25	8.8	5.1	16
17	Cloudy	33.2	25.5		N	0.02	0	100.6	38.0	38	25	8.8	4.7	17
18	Clear	37.0	18.5		N	0.02	0	104.1	39.6	38	24	8.8	4.4	18
19	Cloudy	30.2	16.2		SW	0.02	0.75	101.3	39.4	39	24	8.4	4.0	19
20	Partly Cloudy	21.0	17.0		W	0.24	0				23	7.9	3.8	20
21	Cloudy	20.5	15.0		W	0.17	13.00				22	7.9	3.6	21
22	Clear	23.0	14.5		NW	0.04	0				22	7.9	3.6	22
23	Clear	16.3	7.0		E		0	115.3	42.7	37	21	7.4	3.5	23
24	Clear	17.6	0.9		NW		0				20	7.4	3.5	24
25	Clear	31.0	0.5		N		0				20	7.0	3.3	25
26	Snow	32.5	23.1		S	0.27	2.00	110.5	41.9	38	19	7.4	3.3	26
27	Snow	31.6	25.8		S	0.12	1.50	111.2	41.2	37	19	7.0	3.1	27
28	Clear	34.4	19.6		S		0				19	6.7	2.9	28
29	Partly Cloudy	41.0	23.6		SW	0.02	0				18	6.7	2.8	29
30	Snow	35.2	25.0		N	0.14	0.75				18	6.4	2.8	30
31	Partly Cloudy	27.5	14.6		N		0	106.1	41.0	39	18	6.1	2.7	31
Sum						4.26	47.95							
Mean		28.8	16.2								27.0	9.48	4.68	

Cooperative Snow Investigations

Rept. from midnight to midnight
 DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS
 FEBRUARY 1949
 (Observations at 1600 F.)
 See 1B Fries data for explanation of rept. symbols

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max	Min			All Types	Snow-fall 24 hrs	Depth	Water Equivalent	Density	Blue River	Hann Creek	Wolf Creek	
		Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1B	Sta 1A	Sta 1C	Sta 1C	Sta 1C	Sta 1A	Sta 23	Sta 25	
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Partly Cloudy	25.2	13.5	(?)	N		0	107.8	43.1	40	17	6.1	2.7	1
2	Snow	23.8	16.2	(?)	N	0.81	3.00				17	6.1	2.7	2
3	Snow	24.0	19.9	(?)	SE	1.86	16.50				18	6.1	2.7	3
4	Snow	29.2	17.1	(?)	E	1.53	15.00				18	6.0	2.6	4
5	Snow	20.5	15.2	(?)	S	0.47	5.00	146.3	46.1	32	18	5.8	2.5	5
6	Snow	25.2	18.1	(?)	SE	2.84	22.00				19	7.0	2.9	6
7	Snow	22.5	17.5	(?)	NE	0.94	18.00				20	7.0	3.3	7
8	Snow	27.0	21.6	(?)	SW	1.18	9.00				18	5.5	2.6	8
9	Snow, rain	**	**	(?)	**	2.64	12.00				21	6.7	2.8	9
10	Snow	32.5	23.0	(?)	E	2.74	7.00				66	31	13	10
11	Snow	23.5	15.5	(?)	NW	0.20	**				76	34	14	11
12	Snow	21.5	15.6	(?)	NE	0.32	7.00				54	20	9.0	12
13	Snow	19.5	6.2	(?)	S	0.07	0				44	16	6.8	13
14	Snow	25.5	17.2	(?)	SE	1.92	7.00	157.6	55.3	35	40	14	6.0	14
15	Rain, snow	32.0	26.2	(?)	S	1.47	14.50	177.3	60.5	34	37	13	5.4	15
16	Rain, snow	33.2	28.6	34	SW	✓	6.50				60	22	11	16
17	Snow	34.0	31.2	32	S	✓	5.92	5.00			135	50	22	17
18	Rain, snow	35.0	31.0	35	N	0.38	13.00				272	116	47	18
19	Clear	40.4	31.8	33	S	0.17	0				266	116	59	19
20	Partly Cloudy	34.0	27.8	33	S	✓	0.50	179.1	70.1	39	190	79	40	20
21	Cloudy	42.4	31.0	36	S	✓	0				142	60	27	21
22	Rain, snow	39.0	31.7	33	S	✓	2.50	2.75			187	79	35	22
23	Clear	36.0	34.0	33	SW	0.32	2.75				244	114	47	23
24	Clear	46.0	32.2	34	NW		0				199	83	35	24
25	Clear	48.8	31.5	30	SW		0				166	68	28	25
26	Clear	47.2	34.3	30	SW		0	162.7	70.5	43	155	67	27	26
27	Clear	48.0	31.5	29	SW		0				142	63	26	27
28	Clear	47.8	29.5	30	N		0				131	58	24	28
29														29
30														30
31														31
Sum						26.27	166.5							
Mean		32.7	24.0								99.0	41.4	18.1	

DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS													See 1B Friez data for explanation of ppt. symbols	
Ptpt. from midnight to midnight														
Willamette Basin Snow Laboratory MARCH 1949 (Observations at 1600 PST)														
Date	Current Weather	Air Temperature		Dew Point	Wind Direc- tion	Precipitation		Snow Pack			Stream Flow			Date
		Max Of	Min Of			All Types	Snow- fall 24 hrs	Depth	Water Equi- valent	Density	Blue River	Nam Creek	Wolf Creek	
		Sta 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Inches Sta 1B	Inches Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1A	cfs Sta 2A	
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	Cloudy	39.4	31.5	31	SW		0	161.2	76.0	47	122	55	23	1
2	Partly Cloudy	42.8	32.0	30	SW		0				115	51	22	2
3	Partly Cloudy	40.6	32.2	29	SE		0				114	51	21	3
4	Showers	41.8	32.2	34	N	f	0				112	50	21	4
5	Snow	36.2	30.0	32	S	f	1.50				115	50	21	5
6	Light snow	41.0	27.0	33	S	f	0.43	0			112	49	20	6
7	Partly Cloudy	32.4	24.8	32	N		0				103	46	19	7
8	Snow	33.5	27.8	28	S	1.11	6.75				96	41	17	8
9	Partly Cloudy	32.0	24.8	30	NW	0.08	4.00				85	36	15	9
10	Partly Cloudy	35.2	27.0	27	SW		0				78	32	14	10
11	Cloudy, snow	42.0	29.0	33	SW	0.25	0	165.7	74.3	45	76	30	13	11
12	Partly Cloudy	43.5	30.3	33	SW		0				80	32	14	12
13	Partly Cloudy	38.0	30.8	36	SW	0.07	0				80	31	13	13
14	Cldy, lt. rain	38.8	33.0	34	SW	0.04	0				84	32	14	14
15	Cldy, lt. rain	45.5	33.0	37	SW	0.83	0				90	36	16	15
16	Partly Cloudy	44.0	32.4	32	SW	0.37	0	154.5	73.5	48	140	62	21	16
17	Rain	40.3	32.5	37	SE	0.54	0				155	70	28	17
18	Cloudy	41.3	33.4	35	SW	0.23	0				190	83	33	18
19	Snow	40.4	32.0	32	SE	0.48	0.50				196	86	36	19
20	Snow	33.5	28.8	32	S	1.05	4.00	157.5	78.0	50	175	79	33	20
21	Snow	34.0	28.5	30	S	0.64	6.50				181	79	32	21
22	Clear	38.2	24.8	33	N	0.05	0				155	68	29	22
23	Snow	34.8	29.0	32	N	0.30	2.50	162.0	78.2	48	130	58	25	23
24	Partly Cloudy	33.8	26.5	31	SW		0				112	50	23	24
25	Snow	33.4	26.0	29	SW	0.38	1.80				100	45	21	25
26	Snow	32.6	26.0	32	S	1.33	7.00	174.8	73.0	42	92	41	19	26
27	Snow	33.0	24.0	27	SW	0.58	5.00				85	36	17	27
28	Snow	33.0	25.4	29	NW		1.00				78	32	16	28
29	Cloudy	35.0	23.5	32	SW	0.36	0.20				74	29	15	29
30	Partly Cloudy	32.4	25.0	28	NW	0.24	4.50				68	27	13	30
31	Clear	40.7	21.5	34	SW	0.02	0	167.9	77.0	46	62	25	12	31
Sums						9.38	45.25							
Averages		36.4	29.1								111	48.1	20.5	

Rept. from midnight to midnight
 Willamette Basin Snow Laboratory APRIL 1949

(Observations at 1600 PST)

See 1B Price data for explanation of
 ppt. symbols

Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of	Min of			All Types	Snow-fall 24 hrs	Depth	Water Equivalent	Density	Blue River	Mann Creek	Wolf Creek	
		Sta 1A	Sta 1A			Inches Sta 1B	Inches Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1A	cfs Sta 23	cfs Sta 26	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Cloudy	36.1	28.6	33	SW	0.13	0	154.5	73.5	46	61	24	12	1
2	Clear	36.4	25.8	30	NE	0.01	0.25				56	22	10	2
3	Clear	53.0	24.2	29	SW		0				54	22	10	3
4	Clear	56.0	34.6	27	NW		0				58	25	12	4
5	Clear	55.3	34.7	32	NE		0	162.7	77.0	48	73	31	14	5
6	Clear	55.3	34.0	32	NE		0				91	42	17	6
7	Partly Cloudy	48.2	33.8	35	NE		0	163.9	74.8	46	112	55	19	7
8	Clear	48.5	32.0	33	NW		0				119	58	20	8
9	Clear	58.0	34.0	34	NW		0				124	61	21	9
10	Clear	56.0	37.5	36	NW		0				155	81	23	10
11	Partly Cloudy	48.0	33.5	32	N		0				184	99	28	11
12	Partly Cloudy	43.3	30.7	30	SW		0.25				175	91	30	12
13	Clear	51.2	29.0	31	N		0	153.9	78.1	51	150	79	28	13
14	Clear	56.2	35.4	23	SW		0				138	72	25	14
15	Clear	62.6	37.0	40	SW		0	152.7	77.5	51	145	79	25	15
16	Clear	61.0	37.6	35	NW		0				178	102	32	16
17	Cloudy	50.0	36.0	40	NW		0				208	116	41	17
18	Partly Cloudy	48.4	34.2	36	E		0	147.0	77.3	49	211	116	44	18
19	Rain, snow	43.0	30.3	33	SW	0.80	0.50	146.3	72.5	50	199	112	43	19
20	Showers	39.0	32.0	37	SW	0.75	0				196	102	41	20
21	Rain	47.8	31.6	36	SW	0.84	0.25	141.4	74.2	52	184	103	37	21
22	Partly Cloudy	52.3	34.2	40	SW	0.06	0	140.3	72.5	52	211	127	40	22
23	Cloudy	46.2	32.2	33	SW	0.38	0.30	142.1	74.1	52	220	131	42	23
24	Clear	46.0	26.5	32	SW		0	141.6	75.7	54	199	114	38	24
25	Clear	51.4	27.0	35	N		0	141.0	76.0	54	160	91	35	25
26	Partly Cloudy	59.7	35.2	40	NE		0				138	79	31	26
27	Partly Cloudy	52.0	35.4	35	SW		0	138.2	75.3	56	142	82	30	27
28	Rain, snow	45.8	32.9	33	NE	0.99	0.50	137.2	71.8	52	163	99	31	28
29	Snow	36.0	30.4	32	N	0.66	3.50	137.0	65.5	48	181	110	34	29
30	Cloudy	33.4	31.0	32	S	1.12	1.50				169	99	31	30
31														31
Sum						5.74	7.05							
Mean		49.1	32.3								148	80.8	28.1	

Dept. of Agriculture to the Public														DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS														See 1B Friez data for explanation of dept. symbols													
Willamette Basin Snow Laboratory														MAY 1949														(Observations at 1600 PST)													
Date	Current Weather	Air Temperature		Dew Point	Wind Direc- tion	Precipitation		Snow Pack			Stream Flow			Date																											
		Max Of	Min Of			All Types	Snow- fall	Depth	Water Equi- valent	Density	Blue River	Nam Creek	Wolf Creek																												
		Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Inches Sta 1B	Inches Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1B	cfs Sta 2B		cfs Sta 3B																										
		1	2	3	4	5	6	7	8	9	10	11	12	13																											
1	Rain, snow	40.0	31.6	38	NW	4.49	0					513	276	60	1																										
2	Rain, snow	40.0	30.5	38	NE	1.23	3.50	135.8	63.0	46	691	335	93	2																											
3	Cloudy	35.6	26.9	32	NE	0.12	0.75	141.9	67.0	47	345	182	67	3																											
4	Partly Cloudy	44.6	26.8	34	W		0	137.0	70.3	51	217	118	46	4																											
5	Clear	56.5	31.5	26	SW		0	137.3	74.8	54	169	86	35	5																											
6	Clear	62.5	39.8	30	SW		0	133.7	74.3	56	145	78	30	6																											
7	Partly Cloudy	71.3	42.6	38	NE		0	131.5	75.7	58	155	91	28	7																											
8	Partly Cloudy	57.0	38.0	40	N		0	131.9	74.5	56	169	105	28	8																											
9	Clear	59.2	36.0	46	N		0	127.1	70.7	56	181	114	29	9																											
10	Clear	64.5	39.5	39	N		0				202	133	32	10																											
11	Partly Cloudy	73.0	43.9	39	SW	0.08	0	120.1	68.0	57	211	156	34	11																											
12	Partly Cloudy	72.2	46.8	42	S	0.10	0				230	170	37	12																											
13	Partly Cloudy	60.0	31.0	44	SW		0	117.2	66.2	56	220	158	42	13																											
14	Rain	59.7	41.4	42	S	0.14	0				205	147	40	14																											
15	Partly Cloudy	52.5	37.0	40	N		0	111.5	65.5	59	196	131	39	15																											
16	Partly Cloudy	51.2	34.0	36	NW	0.04	0	110.1	63.6	58	166	109	34	16																											
17	Rain, snow	55.5	30.8	36	N	0.18	0	108.3	59.6	55	138	88	28	17																											
18	Partly Cloudy	56.4	35.5	40	N		0	106.9	62.5	58	121	79	27	18																											
19	Cloudy	59.5	35.5	39	NE	0.02	0	105.1	59.3	56	114	76	25	19																											
20	Rain	45.8	35.1	40	SW	0.46	0	104.9	60.3	58	112	75	24	20																											
21	Rain	49.7	35.1	40	SW	0.19	0	100.7	58.8	58	117	78	26	21																											
22	Partly Cloudy	49.9	36.5	40	SW	0.02	0	100.7	58.0	58	112	75	24	22																											
23	Partly Cloudy	55.2	37.6	40	NE	0.01	0	98.4	57.0	58	107	74	22	23																											
24	Clear	69.8	39.0	42	N		0	90.1	54.8	61	108	78	22	24																											
25	Clear	59.3	42.5	48	N		0	93.0	54.3	58	114	84	22	25																											
26	Partly Cloudy	70.2	42.0	37	SW		0				117	88	22	26																											
27	Partly Cloudy	63.3	37.2	43	NE		0				108	78	19	27																											
28	Rain	48.6	39.0	39	NE	0.03	0				97	68	18	28																											
29	Cloudy	54.0	34.6	35	N		0	82.9	50.1	60	88	60	16	29																											
30	Partly Cloudy	53.0	31.5	38	SW	0.09	0	84.9	50.7	60	79	54	14	30																											
31	Rain, snow	45.8	32.0	34	SW	0.79	0.30	78.8	46.8	59	80	56	13	31																											
Sum						7.93	4.55																																		
Mean		55.8	36.1								182	113	32.8																												

Rept. from midnight to midnight **DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS** See 1B Fries data for explanation of rept. symbols
 Willamette Basin Snow Laboratory **JUNE 1949** (Observations at 1600 PST)

Date	Current Weather	Air Temperature		Snow Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of	Min of			All Types	Snow-fall 24 hrs	Depth	Water Equivalent	Density	Blue River	Mann Creek	Wolf Creek	
		Sta 1A	Sta 2A	Sta 3A	Sta 4A	Inches Sta 1B	Inches Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1B	cfs Sta 2B	cfs Sta 2B	
1		2	3	4	5	6	7	8	9	10	11	12	13	
1	Rain	41.0	33.6	36	NE	0.36	0	83.3	49.7	60	82	58	13	1
2	Clear	52.0	32.0	39	W		0	80.1	48.0	60	78	55	11	2
3	Clear	65.3	34.5	43	SE		0	77.0	48.8	81	74	51	10	3
4	Clear	73.6	45.0	42	N		0				74	51	10	4
5	Clear	76.4	51.5	52	SW		0	70.2	43.2	62	82	57	12	5
6	Clear	82.0	53.5	48	N		0	61.0	35.8	59	86	63	13	6
7	Clear	87.2	46.0	40	N		0				80	58	12	7
8	Clear	68.0	41.5	60	N		0	62.3	35.0	56	72	49	11	8
9	Clear	69.0	45.6	46	N		0	57.8	33.0	57	66	45	11	9
10	Clear	61.5	44.4	56	N		0	53.6	32.4	60	62	43	9.8	10
11	Clear	65.0	48.8	47	N		0	50.7	29.8	59	58	41	9.0	11
12	Clear	64.4	45.2	46	N		0	45.5	28.8	63	52	37	8.3	12
13	Clear	68.6	41.5	50	NE		0	43.6	24.7	56	49	35	8.0	13
14	Clear	71.5	46.2	61	N		0	40.9	25.7	63	47	33	7.3	14
15	Clear	66.0	44.2	37	N		0	38.8	22.8	59	44	29	6.6	15
16	Snow, rain	57.6	30.8	39	NE	0.09	0	38.2	21.2	55	41	28	6.3	16
17	Clear	56.5	33.8	47	SW		0	38.0	21.2	56	39	25	5.6	17
18	Partly Cloudy	66.0	46.4	51	SE		0				35	22	4.8	18
19	Partly Cloudy	59.0	42.0	48	NW		0	26.3	15.3	59	33	21	4.6	19
20	Showers	64.6	39.0	49	N	0.14	0	21.1	15.2	71	31	21	4.8	20
21	Partly Cloudy	67.2	45.2	53	N		0	18.5	13.2	71	30	19	5.1	21
22	Partly Cloudy	61.5	42.8	52	SW		0	16.1	11.8	72	28	18	5.1	22
23	Clear	60.2	41.7	51	SW		0	12.2	8.7	73	27	18	4.8	23
24	Cloudy	58.3	44.0	49	SW		0	8.0	6.2	72	26	16	4.6	24
25	Partly Cloudy	58.7	42.8	49	SW	0.15	0	5.2	3.2	56	25	15	4.6	25
26	Rain	48.0	35.5	43	N	0.37	0	5.1	3.3	65	26	16	4.4	26
27	Partly Cloudy	59.5	35.5	47	N	0.02	0	3.8	3.2	83	24	14	4.4	27
28	Partly Cloudy	53.0	36.2	38	N	0.47	0	no more snow after 28 June			23	14	4.1	28
29	Partly Cloudy	46.2	31.3	41	N	0.48	2.00				26	15	4.4	29
30	Partly Cloudy	64.8	37.0	56	SW		0				22	13	4.1	30
31														31
Sums						2.11	2.00							
Means		63.0	41.2								48.1	32.7	7.46	

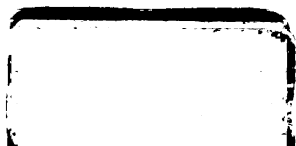
DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS														See 1B Fries data for explanation of Ppt. Symbols	
JULY 1949														(Observations at 1600 EST)	
Willamette Basin Snow Laboratory															
Date	Current Weather	Air Temperature		Dew Point Sta 1A	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date	
		Max of Sta 1A	Min of Sta 1A			All Types Sta 1B	Snow-fall 24 hrs Sta 1A	Depth Sta 1C	Water Equivalent Sta 1C	Density Sta 1C	Blue River Sta 1B	Honn Creek Sta 2B	Wolf Creek Sta 2B		
Station 1A	Sta 1A	Sta 1A	Sta 1A	Sta 1A	Inches Sta 1B	Inches Sta 1A	Inches Sta 1C	Inches Sta 1C	% Sta 1C	cfs Sta 1B	cfs Sta 2B	cfs Sta 2B			
1	2	3	4	5	6	7	8	9	10	11	12	13			
1	Clear	64.3	42.6	48	SW		0				21	12	4.1	1	
2	Clear	70.0	44.6	56	N		0				19	11	3.6	2	
3	Clear	64.6	44.8	42	N		0				18	11	3.4	3	
4	Clear	65.4	42.4	44	N		0				17	10	3.2	4	
5	Partly Cloudy	60.2	39.6	44	N		0				17	9.7	3.2	5	
6	Clear	59.1	38.8	37	NE		0				17	9.2	3.2	6	
7	Clear	67.2	39.3	44	N		0				16	8.4	3.2	7	
8	Clear	78.0	50.0	51	N		0				15	7.9	3.1	8	
9	Partly Cloudy	74.0	55.1	54	N		0				14	7.9	2.9	9	
10	Clear	74.2	48.9	50	N		0				14	7.4	3.1	10	
11	Clear	71.8	48.4	41	N		0				13	7.0	3.1	11	
12	Clear	88.4	49.5	51	N		0				13	6.7	3.1	12	
13	Clear	88.4	54.0	44	N		0				13	6.4	3.2	13	
14	Clear	87.1	57.9	44	NE		0				13	6.4	3.1	14	
15	Clear	81.0	56.8	46	SW		0				12	6.1	2.9	15	
16	Partly Cloudy	65.1	42.1	41	N		0				11	6.1	2.7	16	
17	Clear	73.3	44.9	49	N	0.02	0				11	6.1	2.7	17	
18	Partly Cloudy	69.2	44.3	42	N		0				11	6.1	2.7	18	
19	Rain	53.5	41.5	44	SW	0.13	0				10	6.1	2.7	19	
20	Clear	62.4	39.8	45	N	0.02	0				10	6.1	2.7	20	
21	Clear	64.8	**	46	SW		0				9.6	5.8	2.7	21	
22	Partly Cloudy	65.5	45.5	50	SW		0				9.6	5.5	2.7	22	
23	Cloudy	62.0	46.8	49	SW	0.06	0				9.6	5.5	2.7	23	
24	Rain	57.8	40.5	48	SW	0.14	0				9.2	5.5	2.7	24	
25	Cloudy	56.8	43.2	53	SW	0.04	0				9.2	5.2	2.7	25	
26	Partly Cloudy	57.0	44.7	42	SW	0.01	0				9.2	4.9	2.7	26	
27	Partly Cloudy	58.8	41.0	43	N		0				8.6	4.9	2.7	27	
28	Clear	69.5	41.3	52	N		0				8.0	4.9	2.3	28	
29	Clear	80.6	53.6	54	N		0				8.0	4.6	2.1	29	
30	Clear	83.0	56.0	56	NE		0				7.4	4.3	2.1	30	
31	Partly Cloudy	78.1	60.4	55	N		0				6.8	4.0	2.1	31	
Sums						0.42									
Means		69.2	45.0								12.3	6.86	2.88		

Cooperative Snow Investigations

Dept. from midnight to midnight DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS														
Willamette Basin Snow Laboratory AUGUST 1949 (Observations at 1600 PSF)														
Date	Current Weather	Air Temperature		Dew Point	Wind Direction	Precipitation		Snow Pack			Stream Flow			Date
		Max of Sta 1A	Min of Sta 1A			All Types Sta 1B	Snow-fall 24 hrs Sta 1A	Depth Sta 1C	Water Equivalent Sta 1C	Density Sta 1C	Blue River Sta 1A	Mann Creek Sta 2A	Wolf Creek Sta 2B	
		1	2	3	4	5	6	7	8	9	10	11	12	
1	Clear	80.8	59.6	56	N						6.8	4.0	2.0	1
2	Partly Cloudy	77.0	54.0	53	N						6.8	3.7	2.0	2
3	Clear	69.0	51.0	50	N						6.8	3.5	2.0	3
4	Clear	68.5	44.1	47	N						6.2	3.5	2.0	4
5	Partly Cloudy	65.0	47.4	**	SW						6.2	3.3	1.9	5
6	Clear	64.2	42.9	47	SW						6.2	3.3	1.9	6
7	Cloudy	61.0	42.0	**	SW	0.10					6.2	3.3	1.9	7
8	Clear	64.0	39.0	50	NE	0.02					6.2	3.3	1.9	8
9	Partly Cloudy	62.0	43.8	48	NE						6.2	3.1	1.9	9
10	Partly Cloudy	65.0	42.5	49	S						5.7	2.9	1.8	10
11	Partly Cloudy	59.6	46.0	50	S						5.7	2.9	1.8	11
12	Partly Cloudy	60.0	43.0	47	N	0.19					5.7	2.9	1.8	12
13	Clear	60.5	37.0	42	SW						5.7	2.9	1.7	13
14	Clear	60.0	42.2	47	W						5.2	2.7	1.6	14
15	Clear	68.2	45.3	51	S						5.2	2.5	1.6	15
16	Clear	67.0	46.8	52	N						4.7	2.5	1.6	16
17	Clear	66.0	42.0	51	S						4.3	2.5	1.6	17
18	Clear	66.9	45.0	51	N						4.3	2.5	1.6	18
19	Clear	69.5	46.3	50	N						4.3	2.3	1.5	19
20	Partly Cloudy	65.4	46.2	48	N						4.3	2.2	1.4	20
21	Clear	62.3	44.5	47	N						4.3	2.2	1.4	21
22	Clear	59.5	43.5	45	N						3.9	2.2	1.4	22
23	Clear	59.3	41.9	49	S						3.9	2.0	1.4	23
24	Partly Cloudy	70.2	43.6	42	N						3.9	2.0	1.3	24
25	Clear	60.0	41.4	44	N						3.9	1.9	1.3	25
26	Clear	72.0	45.3	50	N						3.9	1.9	1.3	26
27	Partly Cloudy	76.2	53.6	52	NE						3.5	1.8	1.2	27
28	Partly Cloudy	76.0	55.8	52	NE						3.5	1.8	1.2	28
29	Clear	77.8	53.2	60	S						3.5	1.8	1.2	29
30	Clear	73.0	50.2	55	NW						3.5	1.8	1.2	30
31	Clear	71.0	46.6	56	N						3.5	1.8	1.1	31
Sum						0.31								
Mean		66.8	45.9								4.97	2.61	1.60	

Pept. from midnight to midnight													DAILY VALUES OF HYDROLOGIC AND METEOROLOGIC ELEMENTS			See 1B Friez data for explanation of pept. symbols		
Willamette basin Snow Laboratory													SEPTEMBER 1949			(Observations at 1600 PST)		
Date	Current Weather	Air Temperature		Dew Point of Sta 1A	Wind Direction Sta 1A	Precipitation		Snow Pack			Stream Flow			Date				
		Max of Sta 1A	Min of Sta 1A			All Types Inches Sta 1B	Snow-fall 24 hrs Inches Sta 1A	Depth Inches Sta 1C	Water Equivalent Inches Sta 1C	Density % Sta 1C	Five River cfs Sta 1A	Mann Creek cfs Sta 23	Wolf Creek cfs Sta 25					
		1	2	3	4	5	6	7	8	9	10	11	12		13			
1		70.0	50.2	56	NW						3.5	1.8	1.0	1				
2		73.8	49.0	54	N						3.5	1.6	1.0	2				
3		77.5	56.5	50	N						3.5	1.6	1.0	3				
4		74.0	55.0	53	SE						3.1	1.5	1.0	4				
5		66.0	48.2	56	SW						3.1	1.5	1.0	5				
6		69.2	49.4	55	N	*					3.1	1.5	1.0	6				
7		74.0	49.0	47	N	*					3.1	1.5	1.0	7				
8		Lightning, pm	70.0	51.2	40	SW	*					3.1	1.5	1.1	8			
9		Lightning, pm	51.6	48.6	48	N	*					3.9	2.5	2.3	9			
10			48.0	44.0	46	NE	0.79					4.3	2.3	2.1	10			
11		53.9	35.2	44	SW						3.9	2.0	1.9	11				
12		65.4	38.0	37	SW						3.5	1.8	1.7	12				
13		67.2	46.4	46	N						3.1	1.6	1.5	13				
14		62.2	45.8	44	S	0.30					3.1	1.5	1.3	14				
15		56.3	47.5	51	S	1.45					5.2	3.7	2.5	15				
16		Hail, pm	53.0	34.5	40	NW	0.50					13	6.7	5.0	16			
17		69.5	31.2	36	S						6.8	3.1	2.5	17				
18				41.6	47	SW					4.7	2.2	1.9	18				
19		52.3	43.0	46	N						3.9	2.0	1.6	19				
20		63.4	37.5	42	NW						3.9	1.8	1.4	20				
21		78.0	48.2	44	S						3.5	1.5	1.3	21				
22		77.8	54.7	44	N						3.1	1.4	1.1	22				
23		69.5	54.6	42	SW						3.1	1.4	1.2	23				
24		62.0	33.9	32	N						3.1	1.4	1.2	24				
25		High Winds	67.9	38.8	42	NE						2.7	1.3	1.2	25			
26		73.7	57.3	61	NW						2.7	1.3	1.2	26				
27		72.9	58.0	47	SW						2.7	1.4	1.2	27				
28		67.6	45.1	48	N	0.09					2.7	1.5	1.2	28				
29		Heavy o'cast, fog	50.6	32.5	45	N	0.10					3.1	1.5	1.2	29			
30			50.8	27.5	43	NW						3.5	1.6	1.2	30			
31														31				
3ums						3.23												
Means		65.1	46.6								3.85	1.93	1.53					

WATER YEAR	DATE	AIR TEMPERATURE °C (TENTHS)	WIND DIRECTION Tens of Degrees (TENTHS)	WIND DIRECTION Tens of Degrees	WIND SPEED Miles Per Hour	AIR TEMPERATURE °C (TENTHS)	WIND DIRECTION Tens of Degrees	WIND SPEED Miles Per Hour	AIR TEMPERATURE °C (TENTHS)	WIND DIRECTION Tens of Degrees	WIND SPEED Miles Per Hour	AIR TEMPERATURE °C (TENTHS)	WIND DIRECTION Tens of Degrees	WIND SPEED Miles Per Hour
		OCTOBE JUNE				JULY			AUGUST			SEPTEMBER		
1947 - 1948	01	6	26	2		49	24	19	82	28	10	81	22	26
	02	8	29	6	15	15	20	4	73	20	12	90	23	30
	03	77	32	1	24	13	11	5	67	21	17	61		
	04	50	23	6		13	17	10	58			57	33	13
	05	20	24	8	6	40			62	30	12	55	33	14
	06	28	23	4	26	48			59	27	12	85	1	23
	07	44	18	7		12	26	25	67	21	14	106	11	10
	08	48	24	00	19	6	23	22	40	20	20	102	17	5
	09	30	21	9	28	20	20	20	32	21	11	90	17	5
	10	32	24	1		26	23	28	25	21	13	104	16	10
	11	63	34	6		29	28	11	42	22	13	103	26	7
	12	51	2	7		51	32	9	35	23	11	67	28	31
	13	59	35	4		62	33	8	14	26	17	62	22	48
	14	12	24	6		67	34	13	48	23	25	7	22	59
	15	8	7			87	35	7	31	24	25	4	27	17
	16	58	23	4		78	18	37	9	22	34	8		
	17	23	25	7		73	21	13	-	1	20	32	6	
	18	20	24	9		71	27	20	-	21	21	-	19	3
	19	14	25	9	35	49	34	18	9			58	19	9
	20	61	00		22	69	34	10	71	33	12	59	22	27
	21	67	34	00	35	86	23	9	32	22	23	49	22	26
	22	9	21	8	36	55	22	27	-	25		21		
	23	40	26	3	36	33	23	30	-	37	21	86	26	34
	24	22	31	6	14	38	26	9	34	3	20	-105		
	25	51	22	3	15	54	25	7	63	4	10	-	66	44
	26	14	23	1	3	58	25	13	66	22	27	-	92	10
	27	14	21	4	21	35			33	25	19	-	29	10
	28	73	22	6	7	27	2	23	64	21	24	-	31	
	29	59	20	8	18	98	4	23	68	22	35		47	
	30	61	24	8		94	22	9	36	23	33		42	
	31	10	22			70	18	12	91	23	10			
1948 - 1949	01	59	23	0	34	15			Note: Temperatures are listed to tenths of a degree UPPER AIR DATA 700 MB LEVEL MEDFORD, OREGON Observations at 1500 GMT OCTOBER 1947 - JUNE 1949 Data from U.S. Weather Bureau COOPERATIVE SNOW INVESTIGATIONS					
	02	29	19	0	36	25								
	03	9		0	3	25								
	04	10		0	8	15								
	05	58		0	1	20								
	06	2		0	27	5								
	07	49		0	20	10								
	08	53		0	29	15								
	09	46	28	0	24	15								
	10	29	21	0	20	15								
	11	17		0	1	10								
	12	61		0	34	10								
	13	38		0	3	20								
	14	4		0	1	5								
	15	3		0	35	20								
	16	53		0	33	35								
	17	83	19	0	2	15								
	18	57	22	0	10	10								
	19	29	25	0	36	10								
	20	60	13	0	21	5								
	21	54	22	0	13	15								
	22	58	18	0	27	15								
	23	13	21	0	34	20								
	24	43		0	33	20								
	25	40		0	33	20								
	26	11	32	0	25	35								
	27	15		0	28	15								
	28	10	31	0	26	30								
	29	109		0	31	10								
	30	6		0	19	10								
	31	55		0										



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