

FEDERAL-STATE-PRIVATE  
COOPERATIVE SNOW SURVEYS

1.96  
R31F50  
C-2



U. S. DEPT. OF AGRICULTURE  
NATIONAL AGRICULTURAL LIBRARY  
RECEIVED

OCT 22 1971

PROCUREMENT SECTION  
CURRENT SERIAL RECORDS

# **WATER SUPPLY OUTLOOK FOR OREGON**

Prepared by

**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**

Collaborating with

**OREGON STATE UNIVERSITY**

and

**STATE ENGINEER of OREGON**

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF  
**MAY 1, 1971**

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR OREGON**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued*

MAY 8, 1971

KENNETH E. GRANT  
ADMINISTRATOR  
SOIL CONSERVATION SERVICE  
WASHINGTON, D C

|||||  
*Released by*

A. J. WEBBER  
STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
PORTLAND OREGON

*In Cooperation with*

G. BURTON WOOD  
DIRECTOR  
OREGON AGRICULTURAL  
EXPERIMENT STATION

CHRIS L. WHEELER  
STATE ENGINEER  
STATE OF OREGON

|||||  
*Report prepared by*

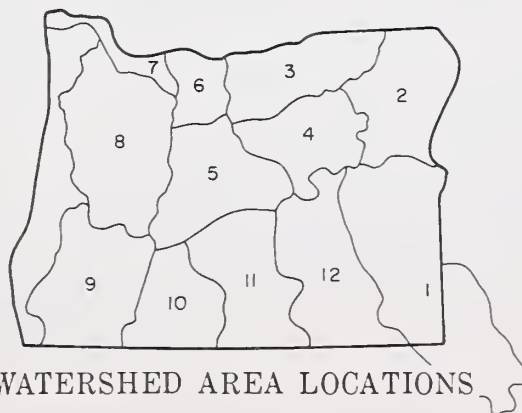
TOMMY A. GEORGE, Snow Survey Supervisor  
and

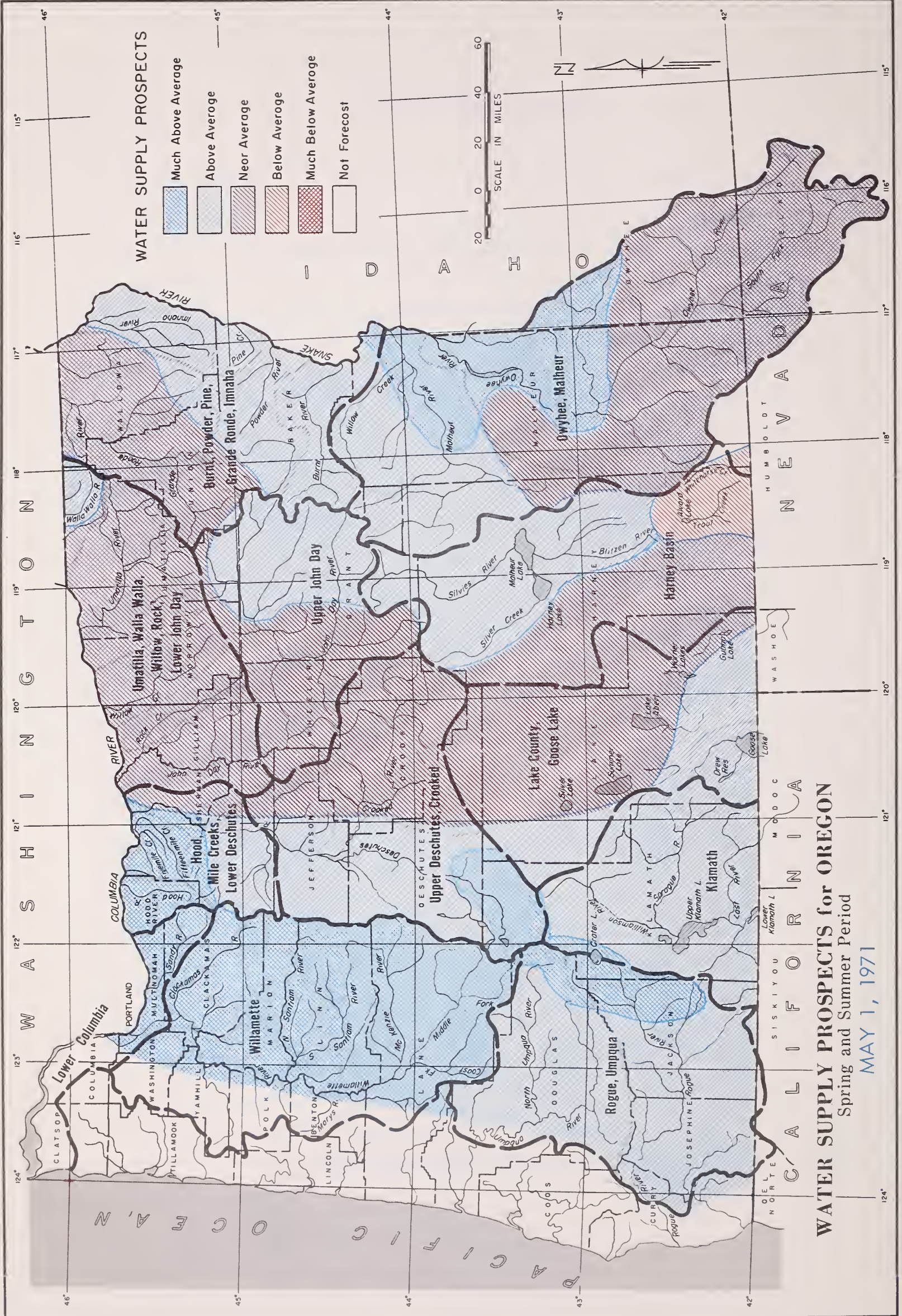
HOWARD M. VANCE, Assistant Snow Survey Supervisor  
SOIL CONSERVATION SERVICE  
1218 S W WASHINGTON ST  
PORTLAND, OREGON 97205



# TABLE OF CONTENTS

	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS	
OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROGUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
BASIC DATA SUPPLEMENTS	
I	SNOW
II	SOIL MOISTURE
III	PRECIPITATION
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....INSIDE BACK COVER	

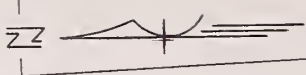




**WATER SUPPLY PROSPECTS**

- Much Above Average
- Above Average
- Near Average
- Below Average
- Much Below Average
- Not Forecast

SCALE IN MILES  
0 20 40 60



**WATER SUPPLY PROSPECTS for OREGON**  
Spring and Summer Period  
**MAY 1, 1971**

# WATER SUPPLY OUTLOOK for OREGON

May 1, 1971

The water supply outlook for Oregon is still excellent and remains unchanged from last month. The snowpack around the state is mostly much above average with many May 1 alltime records measured in the Cascades. Reservoirs are generally full and forecasted streamflows for this summer are above average.

## SNOW COVER

The May 1 snowpack is much above average in all areas of the state except the high desert areas of Southeastern Oregon. It is 125% to 175% in the rest of Eastern Oregon and nearly double normal amounts in the Cascades. Alltime records were measured in the vicinity of Mt. Hood.

## PRECIPITATION

Precipitation during April ranged from average in Western Oregon and Klamath County, on down to 60% of normal in most other areas in the state. Rainfall has been very good, however, during the water year up to May 1.

## RESERVOIR STORAGE

Major irrigation reservoirs are nearly full now with only 1 or 2 exceptions. Twenty-four reservoirs contained 2,813,000 acre feet of water on May 1. This is 94% of capacity and 119% of the average amount stored this time of year.

## STREAMFLOW

Streamflow in Western Oregon during April was above average as expected. Cool temperatures held the snowmelt back in much of Eastern Oregon with resultant below normal runoff. Exceptions were the Owyhee and Malheur rivers which produced flows much above average.

continued on next page

## STREAMFLOW (continued)

Representative May-July forecasts as a percent of normal are as follows:

<u>NAME</u>	<u>FORECAST % OF 1953-67 AVERAGE</u>
Owyhee Net Inflow	141
Malheur near Drewsey	118
Grande Ronde at La Grande	90
Umatilla at Pendleton	100
Willamette, Mid. Fk. near Oakridge	151
Rogue at Raygold	122
Silvies near Burns	100
Columbia at The Dalles	120

\* This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, NOAA National Weather Service, and other cooperators.





# WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS

OREGON

*as of*

May 1, 1971



U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

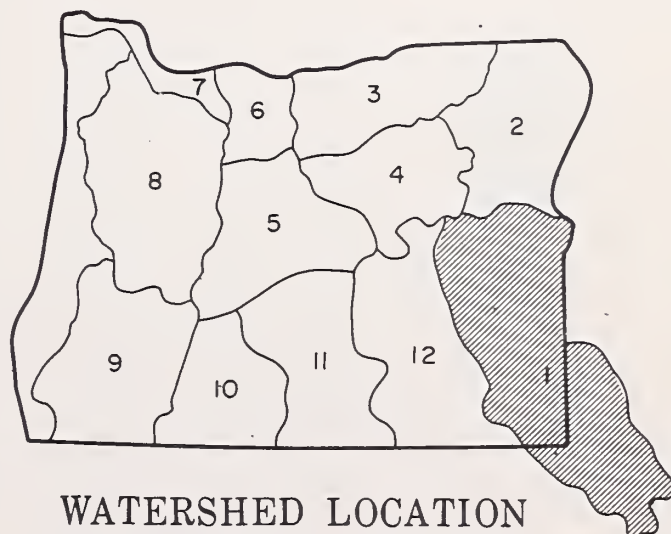
## GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE THE PROSPECT FOR WATER USERS IN THE OWYHEE AND MALHEUR WATERSHEDS THIS SPRING AND SUMMER. SNOW COVER IN THE AREA RANGES FROM 75 PERCENT ON THE OWYHEE WATERSHED TO 195 PERCENT ON THE UPPER MALHEUR. PRECIPITATION DURING APRIL WAS ONLY 64 PERCENT OF NORMAL. SOILS ARE WET AND WILL ENHANCE RUNOFF FROM SPRING PRECIPITATION. RESERVOIRS ARE NEARLY FULL.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek	Excellent	Average
Bully Creek	Excellent	Average
Cow Creek	Excellent	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist	Excellent	Excellent
McDermitt Creek	Average	Fair
Oregon Canyon Creek	Average	Fair
Owyhee Project	Excellent	Excellent
Succor Creek	Excellent	Excellent
Ternmile Creek	Average	Average
Vale-Oregon Irrig. Dist.	Excellent	Excellent
Warm Springs Irrig. Dist.	Excellent	Excellent
Willow Creek (Reservoired)	Excellent	Excellent



WATERSHED LOCATION

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Bully Creek at Warm Spring	25	190	March-May	b	13.1
Jordan Creek above Lone Tree Creek	66	138	May-July	b	48
Malheur near Drewsey	39	118	May-July	b	33
	40	118	May-Sept.	b	34
Malheur, North Fork at Beulah <sup>d</sup>	34	103	May-July	b	33
	40	105	May-Sept.	b	38
Owyhee Reservoir net Inflow <sup>k</sup>	225	141	May-July	233	160
	246	137	May-Sept.	255	179

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000	June 5	May 24
	250	July 5	June 20

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Antelope	70.0	b	55.0	30.7
Beulah Reservoir*	60.0	59.9	58.6	50.1
Bully Creek	30.0	29.8	28.6	20.6
Owyhee	715.0	698.2	696.6	531.9
Warm Springs	191.0	179.5	175.8	137.2
*Known as Agency Valley.				

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Jordan Creek	1	101	104
Malheur River	2	101	97
Owyhee River	3	107	99

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Jordan Creek	2	30	100
Malheur River	3	90	195
Owyhee River	3	25	75

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

*as of*

May 1, 1971



U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

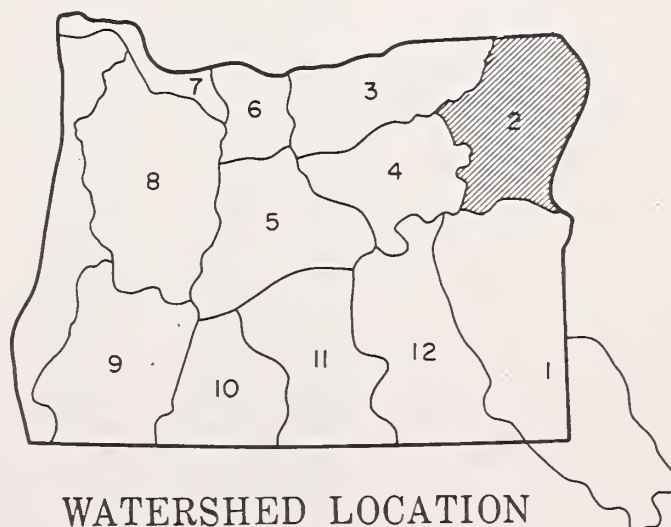
## GENERAL OUTLOOK

STREAMS HEADING IN THE WALLOWA AND BURNT RIVER DRAINAGES WILL HAVE EXCELLENT WATER SUPPLIES THIS SPRING AND SUMMER, AND ABOVE AVERAGE ELSEWHERE EXCEPT IN THE GRANDE RONDE BASIN WHICH WILL BE NEAR AVERAGE. SNOW COVER RANGES FROM 65 PERCENT OF NORMAL ON THE GRANDE RONDE TO 170 PERCENT ON THE BURNT RIVER DRAINAGE. THE SCHNEIDER MEADOWS SNOW COURSE ABOVE HALFWAY SET A MAY RECORD WITH 42.4 INCHES OF WATER. PRECIPITATION DURING THE MONTH WAS 72 PERCENT OF AVERAGE. SOIL MOISTURE IS GOOD ON MOUNTAIN WATERSHEDS. MOST RESERVOIRS ARE NEARLY FULL. THE GRANDE RONDE AT La GRANDE FLOWED 95 PERCENT OF NORMAL DURING APRIL.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope	Excellent	Excellent
Baker Valley	Excellent	Excellent
Big Creek	Excellent	Average
Clover Cr. (nr. N. Powder)	Excellent	Average
Cove	Excellent	Average
Durkee	Excellent	Average
Eagle Valley	Excellent	Average
Elgin	Average	Average
Enterprise-Joseph	Excellent	Excellent
Hereford-Bridgeport	Excellent	Excellent
Imnaha River	Excellent	Excellent
LaGrande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Creek	Excellent	Average
Pine Valley	Excellent	Excellent
Powder River-Elk Creek	Excellent	Average
Summerville	Average	Average
Sumpter Valley	Excellent	Average
Union-Hot Lake	Excellent	Average
Unity	Excellent	Average



Report prepared by

T. A. GEORGE AND H. M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		FORECAST PERIOD	PAST RECORD	
	FORECAST			THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Bear near Wallowa	67	118	May-Sept.	77	57
Burnt near Hereford <sup>d</sup>	17.4	122	May-July	23	14.3
	19.1	123	May-Sept.	24	15.5
Catherine near Union	62	119	May-Sept.	69	52
Eagle Creek above Skull Creek	188	131	May-July	182	143
	203	130	May-Sept.	198	156
Grande Ronde at La Grande	91	90	May-July	116	101
	96	91	May-Sept.	120	105
Hurricane Creek near Joseph	53	118	May-Sept.	53	45
Imnaha at Imnaha	302	118	May-Sept.	272	225
Lostine near Lostine	137	118	May-Sept.	141	116
Powder River near Baker	54	128	May-July	b	42
	56	127	May-Sept.	b	44
Wallowa, East Fork near Joseph <sup>d</sup>	10.4	120	May-July	b	8.7
	13.5	120	May-Sept.	b	11.2

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Burnt, Powder	2	103	111
Grande Ronde, Catherine Cr., Imnaha River	3	108	110

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Phillips Lake	73.5	68.7	53.2	--
Thief Valley	17.4	17.4	17.4	--
Unity	25.2	24.7	25.6	24.1
Wallowa Lake	37.5	24.0	16.1	25.9

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Burnt River	4	80	170
Grande Ronde River above La Grande	4	40	65
Powder River	5	95	155
Wallowa, Imnaha, Catherine Creek	6	100	135

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

*as of*

May 1, 1971



**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

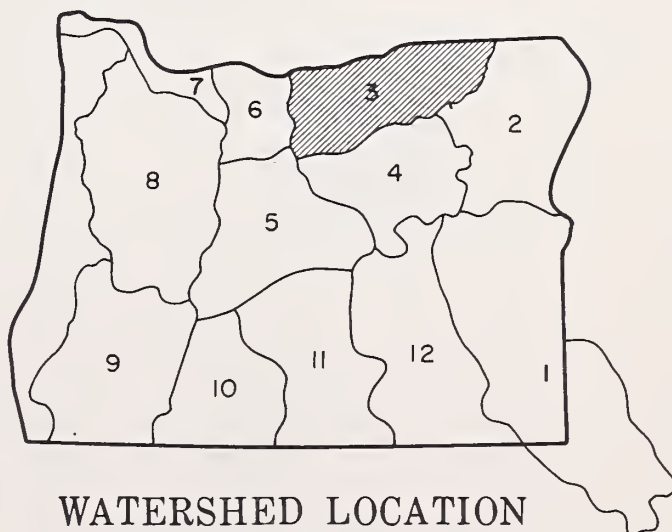
## GENERAL OUTLOOK

NEAR AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR AREA WATER USERS. SOME LATE SEASON SHORTAGES MAY DEVELOP ON LOW ELEVATION STREAMS DRAINING THE SOUTH SIDE OF THE BASIN. COOL WEATHER DURING THE MONTH HELPED RETAIN THE SNOWPACK AT 90 PERCENT OF NORMAL ON THE MCKAY DRAINAGE TO 160 PERCENT ON THE WALLA WALLA DRAINAGE. PRECIPITATION WAS 99 PERCENT OF AVERAGE. WATERSHED SOILS ARE WET AND WILL ENHANCE RUNOFF FROM SPRING PRECIPITATION. RESERVOIR STORAGE IS GOOD BUT MCKAY WILL NOT FILL. THE UMATILLA AT PENDLETON FLOWED 76 PERCENT OF NORMAL DURING THE MONTH.

### WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fork	Average	Average
Walla Walla River, So. Fork	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, Little	Average	Average
Couse Creek	Average	Average
Dry Creek	Average	Average
Pine Creek	Average	Average
Umatilla River, Main	Average	Average
Wildhorse Creek	Average	Average
Umatilla R. (Cold Springs Reservoir)	Average	Average
Umatilla R. (McKay Res.)	Average	Average
McKay Creek	Average	Fair
Birch Creek	Average	Fair
Butter Creek	Average	Fair
Willow Creek	Average	Fair
Rhea Creek	Average	Fair
Rock Creek (John Day Tributary)	Average	Average



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Birch Creek at Rieth	8.7	98	May-July	b	8.9
	8.7	98	May-Sept.	b	8.9
Butter Creek near Pine City	3.8	95	May-July	b	4.0
McKay near Pilot Rock	10.3	93	May-Sept.	b	11.0
Umatilla River near Gibbon	44	105	May-July	b	42
	50	104	May-Sept.	b	48
Umatilla River at Pendleton	75	100	May-July	89	75
	80	100	May-Sept.	93	80
Walla Walla, No. Fork near Milton	9.8	120	May-July	b	8.2
	10.5	121	May-Sept.	b	8.7
Walla Walla, So. Fork near Milton	39	103	May-July	b	38
	51	102	May-Sept.	b	50

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton	550	May 20	May 22

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Cold Springs	50.0	49.6	50.0	49.7
McKay	73.8	62.2	69.4	57.7

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Umatilla, Walla Walla, McKay Creek	3	99	101

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
McKay Creek	3	50	90
Umatilla River	3	65	125
Walla Walla River	2	75	160

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS

OREGON

*as of*

May 1, 1971



U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

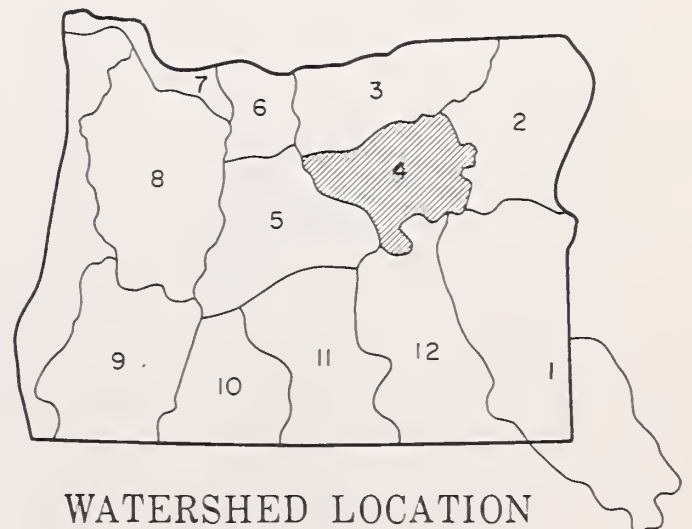
## GENERAL OUTLOOK

WATER USERS IN THE UPPER JOHN DAY BASIN WILL HAVE EXCELLENT WATER SUPPLIES THIS SPRING AND SUMMER. COOL WEATHER DURING APRIL HELPED TO MAINTAIN THE SNOWPACK AT 145 TO 160 PERCENT OF AVERAGE. PRECIPITATION WAS 85 PERCENT OF AVERAGE DURING THE MONTH. SOILS ARE SATURATED AND WILL BENEFIT RUNOFF. THE JOHN DAY AT SERVICE CREEK FLOWED 88 PERCENT OF AVERAGE DURING THE MONTH.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek	Excellent	Average
Beech Creek-Fox-Long Cr.	Excellent	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Average	Average
Cherry Creek	Average	Average
Indian-Pine Creeks	Average	Average
John Day River, Main Fork	Excellent	Average
John Day River, Mid. Fork	Excellent	Average
John Day River, N. Fork	Excellent	Average
John Day River, S. Fork	Excellent	Average
Monument-Kimberly	Excellent	Average
Strawberry Creek	Excellent	Average



WATERSHED LOCATION

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Camas Creek near Ukiah	15.6	80	May-July	b	19.5
	15.9	79	May-Sept.	b	20.1
John Day at Prairie City	31	103	May-July	b	30
	36	105	May-Sept.	b	34
John Day, Middle Fork at Ritter	82	117	May-July	84	70
	86	116	May-Sept.	87	74
John Day, North Fork at Monument	406	112	May-July	b	362
	423	112	May-Sept.	b	377
Strawberry near Prairie City	9.1	117	Apr.-July	9.9	7.7
	9.8	117	Apr.-Sept.	10.6	8.4

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
John Day abv. Dayville	6	106	106
John Day, North Fork	2	102	108

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
John Day, North Fork	7	75	145
John Day abv. Dayville	4	75	160

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



# WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

*as of*

May 1, 1971



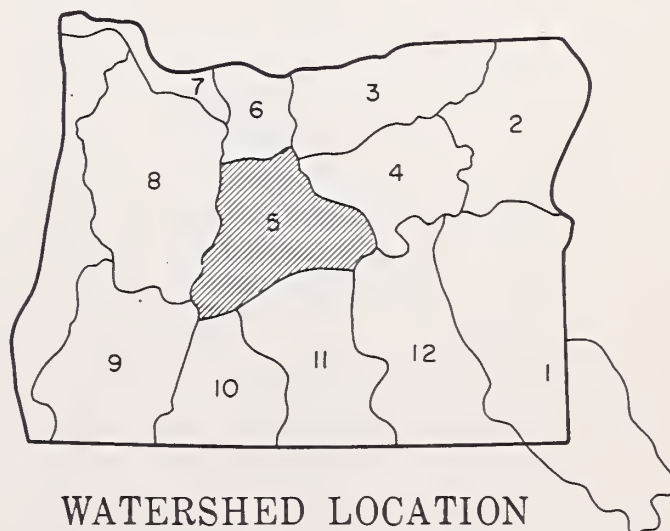
U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

## GENERAL OUTLOOK

ABOVE AVERAGE TO EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR WATER USERS IN THE CROOKED AND UPPER DESCHUTES WATERSHEDS. THE MOUNTAIN SNOWPACK REMAINED 140 TO 165 PERCENT OF AVERAGE DUE TO COOL TEMPERATURES DURING APRIL, WITH SOME SNOW COURSES SETTING NEW MAY 1 RECORD HIGHS. RAINFALL WAS ONLY 64 PERCENT OF AVERAGE DURING THE MONTH. SOILS ARE WELL WETTED AND WILL HELP RUNOFF. RESERVOIR STORAGE IS GOOD IN THE AREA.

### WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation District	Excellent	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Excellent	Excellent
Crooked River	Excellent	Average
Deschutes River	Excellent	Average
Hay-Trout Creeks	Average	Average
Lone Pine Irrig. Dist.	Excellent	Average
Mill Creek	Average	Average
North Unit Irrig. Dist.	Excellent	Average
Ochoco Creek	Excellent	Average
Sisters Irrigation Dist.	Excellent	Average
Snow Creek Irrig. Dist.	Excellent	Average
Squaw Creek Irrig. Dist.	Excellent	Excellent
Swalley Ditch	Excellent	Average
Tumalo Project	Excellent	Average
Walker Basin Irrig. Dist.	Excellent	Average



Report prepared by  
T. A. GEORGE AND H. M. VANCE  
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
1218 S. W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Beaver Creek near Paulina	6.6	99	May-July	b	6.7
	6.8	97	May-Sept.	b	7.0
Crane Prairie Reservoir total Inflow	92	135	May-July	b	68
	144	130	May-Sept.	b	111
Crescent at Crescent Lake <sup>d</sup>	23	124	May-July	b	18.5
	28	117	May-Sept.	b	24
Crooked near Post	37	97	May-July	b	38
	39	97	May-Sept.	b	40
Deschutes at Benham Falls <sup>d</sup>	357	117	May-July	b	305
	553	109	May-Sept.	b	509
Deschutes below Snow Creek	86	146	May-Sept.	b	59
Deschutes, Little near La Pine <sup>d</sup>	94	154	May-July	34	61
	109	149	May-Sept.	39	73
Ochoco Reservoir net Inflow	11.0	91	May-Sept.	b	12.1
Odell near Crescent	34	136	May-Sept.	b	25
Squaw near Sisters	58	123	May-Sept.	43	47
Tumalo near Bend <sup>d</sup>	50	116	May-Sept.	36	43

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow	300	Will not recede to 300	July 15
Deschutes at Bend	1500	Aug. 20	July 1
Little Deschutes near La Pine	400	June 22	June 7
	200	July 23	July 8

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Crane Prairie	55.3	46.6	38.0	45.8
Crescent Lake	86.9	50.6	44.2	50.7
Ochoco	47.5	44.2	46.5	38.5
Prineville	153.0	148.8	155.6	147.1 <sup>m</sup>
Wickiup	200.0	195.1	191.2	193.7

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Crooked R., Upper Deschutes River	1	105	106

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Crooked, Ochoco	-	-	-
Deschutes abv. Wickiup	1	150	140
Little Deschutes	4	185	165
Tumalo & Squaw Crs.	3	155	150

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



# WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

*as of*

May 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

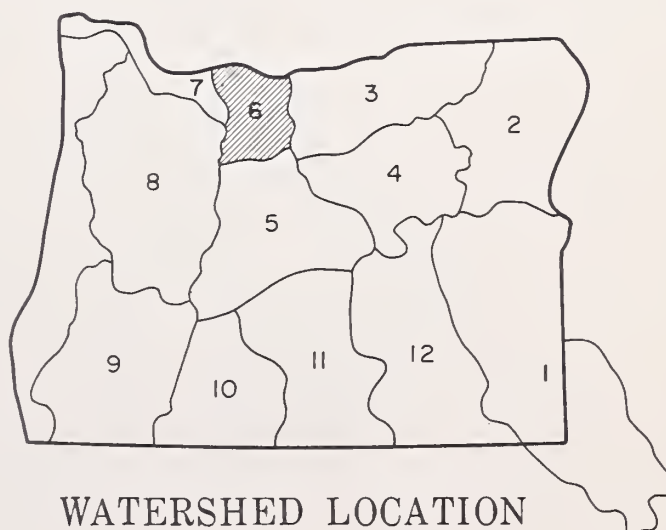
## GENERAL OUTLOOK

WASCO COUNTY WATER USERS WILL HAVE EXCELLENT WATER SUPPLIES AVAILABLE TO THEM DURING THIS SPRING AND SUMMER. COOL WEATHER DURING APRIL HAS KEPT THE MOUNTAIN SNOWPACK AT 185 PERCENT OF AVERAGE. TWO SNOW COURSES, PHLOX POINT NEAR TIMBERLINE LODGE AND UMBRELLA FALLS NEAR MT. HOOD MEADOWS, SET NEW RECORD WATER CONTENTS OF 105 INCHES AND 113 INCHES RESPECTIVELY. THE PHLOX POINT SNOW COURSE WAS ESTABLISHED IN 1937 AND UMBRELLA FALLS IN 1962. SEVERAL OTHER SNOW COURSES IN THE AREA SET MAY FIRST RECORDS. PRECIPITATION WAS 66 PERCENT OF AVERAGE. MOUNTAIN SOILS ARE WET. RESERVOIR STORAGE IS ABOVE AVERAGE FOR THIS TIME OF YEAR.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek)	Excellent	Excellent
Badger Creek	Excellent	Excellent
Dee Irrigation Dist.	Excellent	Excellent
East Fork Irrig. Dist.	Excellent	Excellent
Farmers Irrigation Dist.	Excellent	Excellent
Hood River Irrig. Dist.	Excellent	Excellent
Juniper Flat	Excellent	Excellent
Middle Fork Irrig. Dist.	Excellent	Excellent
Mile Creeks	Excellent	Excellent
Mill Creek	Excellent	Excellent
Mount Hood Irrig. Dist.	Excellent	Excellent
Rock-Gate-Threemile Crs.	Excellent	Excellent
Tygh Creek	Excellent	Excellent
White River	Excellent	Excellent



WATERSHED LOCATION

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>(i)</sup>
Hood near Tucker Bridge	260	137	May-July	b	189
	324	133	May-Sept.	b	243
Hood, West Fork near Dee	119	132	May-July	78	90
	142	127	May-Sept.	97	112
White below Tygh Valley	133	155	May-July	63	86
	150	146	May-Sept.	76	103

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	*55	July 15-31	
*Average cfs forecast to flow for this two-week period.			

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>(i)</sup>
Clear Lake (Wasco)	11.9	5.9	7.4	4.9

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>(i)</sup>
Hood River, Mile Creeks	1	101	--

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>(i)</sup>
Hood River	3	185	185
Mile Creeks	-	-	-
White River	3	185	185

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

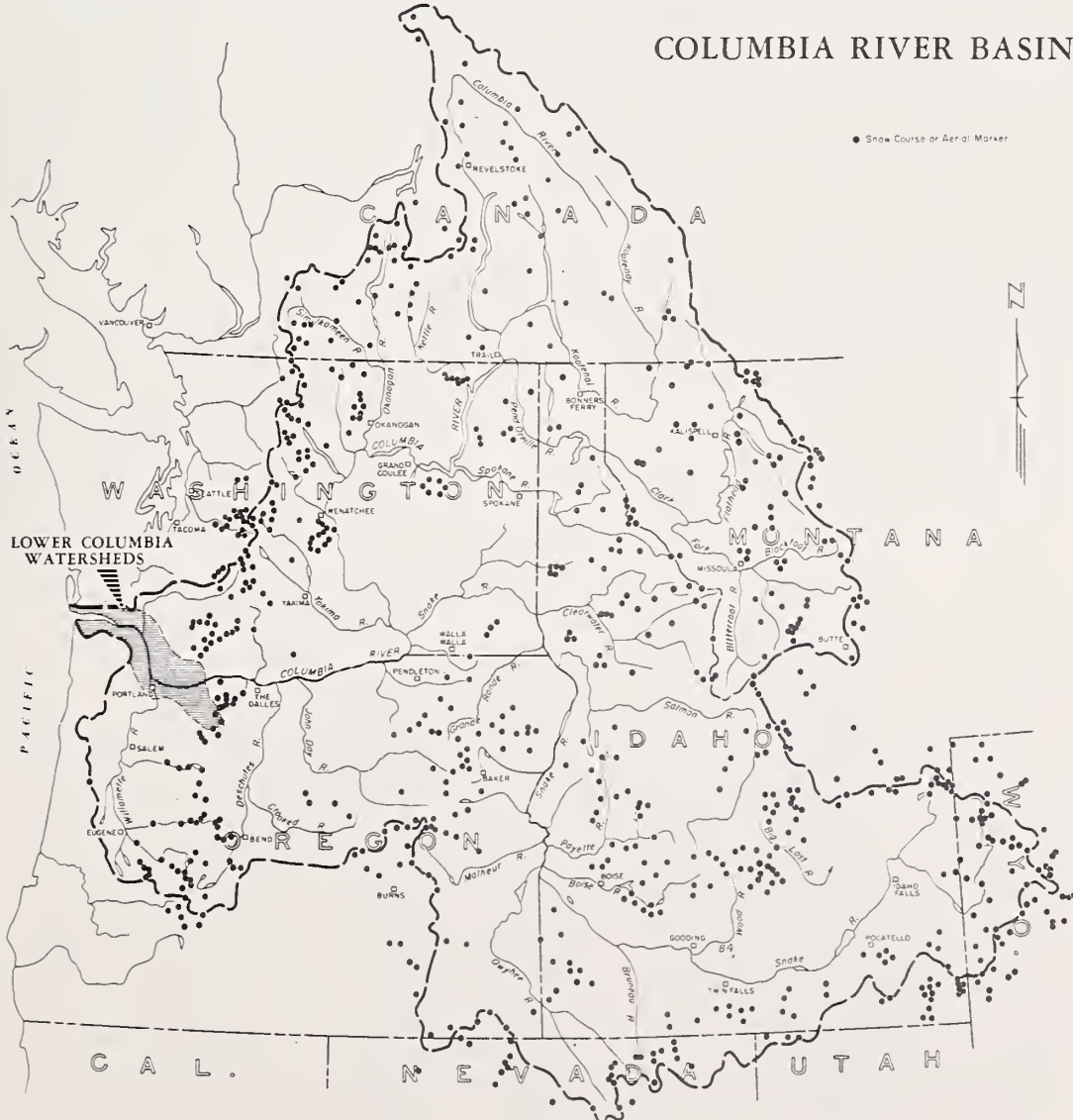
May 1, 1971



U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

## GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK IS EXCELLENT THROUGHOUT THE COLUMBIA BASIN. APRIL STORMS LEFT NEAR OR BELOW AVERAGE AMOUNTS OF PRECIPITATION IN MOST AREAS WITH A FEW AREAS ABOVE AVERAGE IN IDAHO. COOL WEATHER DELAYED SNOWMELT. MOST AREAS IN THE BASIN HAVE A NORMAL OR MUCH GREATER SNOWPACK. IT IS NEAR 150 TO 200 PERCENT ALONG THE CASCADE MOUNTAINS, EAST CENTRAL OREGON AND SOUTHERN IDAHO. THESE CONDITIONS MAINTAIN A SERIOUS FLOOD POTENTIAL FROM ABNORMALLY HEAVY SNOWPACKS ON MANY UPPER BASIN WATERSHEDS, PARTICULARLY IF ADVERSE TEMPERATURES OR PRECIPITATION SHOULD DEVELOP DURING THE MAIN SNOW-MELT PERIOD. THE FLOW OF THE COLUMBIA RIVER AT THE DALLES, OREGON WAS ABOVE AVERAGE DURING APRIL FOR THE FOURTH MONTH IN A ROW AND WILL CONTINUE AS SUCH FOR THE NEXT SEVERAL MONTHS.



Report prepared by  
T. A. GEORGE AND H. M. VANCE  
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Sandy River	2	180	175

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Columbia at The Dalles	72,200	121	May-June		59,688
	110,900	120	May-Sept.		92,457
Sandy River near Marmot	292	122	May-July		239
	348	119	May-Sept.		293

## HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW <sup>d</sup> (1,000 A.F.)			PEAK (1,000 c.f.s)	DATE
	APR. - SEPT.	APR. - JUNE	MAY - JUNE		
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

## LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

# WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

*as of*

May 1, 1971



U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

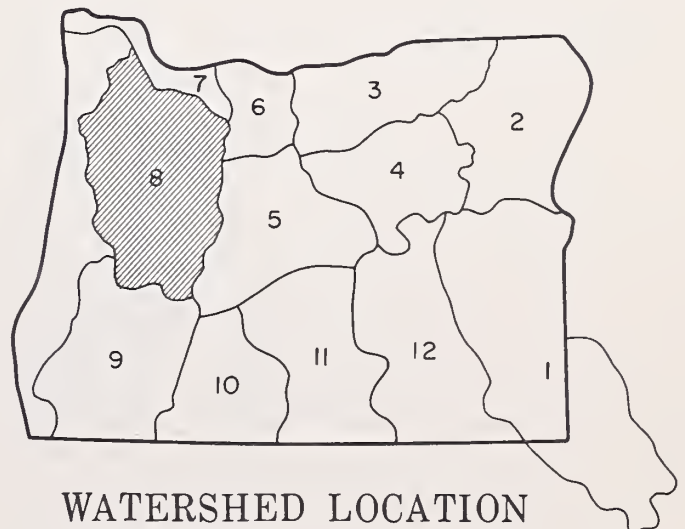
## GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK IN THE WILLAMETTE VALLEY REMAINS VERY BRIGHT. RECORD MAY 1 WATER CONTENTS WERE MEASURED AT MANY MEDIAN AND HIGH ELEVATION SNOW COURSES IN THE CASCADES. NORMAL RAINFALL AND COOL TEMPERATURES CAUSED MANY COURSES TO RECORD INCREASES IN WATER CONTENT INSTEAD OF DECREASES AS IS NORMAL FOR THIS TIME OF YEAR. FLOOD CONTROL RESERVOIRS HAVE BEEN LOWERED TO RECEIVE THE HEAVY SNOWMELT RUNOFF THAT IS EXPECTED DURING THE NEXT TWO MONTHS. STREAMS WILL PRODUCE VOLUMES DURING THE MAY-JULY PERIOD--NEAR THE HIGH AMOUNTS MEASURED IN 1950 AND 1956.

### WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya	Excellent	Excellent
Clackamas	Excellent	Excellent
McKenzie	Excellent	Excellent
Molalla	Excellent	Excellent
Santiam, North	Excellent	Excellent
Santiam, South	Excellent	Excellent
Willamette, Coast Fork	Excellent	Excellent
Willamette, Middle Fork	Excellent	Excellent



Report prepared by  
T.A. GEORGE AND H.M. VANCE  
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Clackamas at Estacada	616	135	May-July	358	455
	737	130	May-Sept.	466	566
Clackamas above Three Lynx	521	149	May-July	273	348
	629	142	May-Sept.	368	442
McKenzie at McKenzie Bridge	426	126	May-July	266	338
	595	122	May-Sept.	395	487
McKenzie near Vida	903	119	May-July	b	754
	1162	117	May-Sept.	b	989
McKenzie, So. Fork near Rainbow	194	131	May-July	b	148
	231	130	May-Sept.	b	178
Oak Grove Fork above Power Intake	124	138	May-July	76	90
	167	130	May-Sept.	115	128
Row near Dorena	79	136	May-July	b	58
	85	137	May-Sept.	b	62
Santiam, North at Mehama <sup>d</sup>	760	148	May-July	b	513
	880	143	May-Sept.	b	614
Santiam, South at Waterloo	485	144	May-July	b	337
	518	138	May-Sept.	b	375
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge <sup>d</sup>	740	151	May-July	394	490
	835	141	May-Sept.	485	593
Willamette, No. Fk. of Mid. Fk. near Oakridge	180	143	May-July	b	126
	200	136	May-Sept.	b	147
Willamette at Salem <sup>d</sup>	3750	135	May-July	b	2783
	4250	129	May-Sept.	b	3286

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Blue River	85.6*	10.8	--	--
Cottage Grove	30.0*	5.2	23.5	24.0
Cougar	155.2*	26.3	117.6	--
Detroit	299.9*	50.3	260.1	231.8
Dorena	70.5*	11.1	61.9	53.8
Fall Creek	115.0*	13.6	104.6	--
Fern Ridge	94.2*	0.0	80.6	86.6
Foster	30.0*	4.0	23.6	--
Green Peter	270.0*	42.8	236.5	--
Hills Creek	200.0*	50.6	159.2	163.1
Lookout Point	337.2*	64.2	267.0	290.3
Timothy Lake	61.7	58.4	61.4	55.3

\*Multiple purpose reservoir--space reserved primarily for flood runoff.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Clackamas River	2	370	265
McKenzie River	3	250	175
Row River	2	320	210
Santiam River	4	310	210
Willamette, Mid. Fk.	4	210	180

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



# WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

*as of*

May 1, 1971



**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

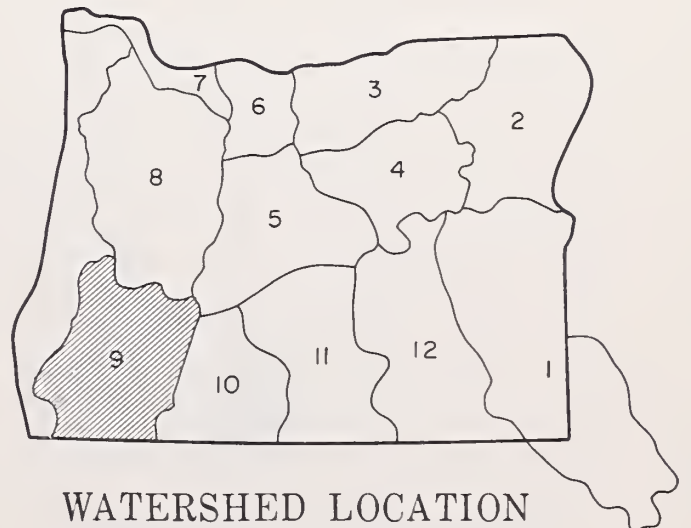
## GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK REMAINS EXCELLENT. RECORD AMOUNTS OF SNOW WERE MEASURED MAY 1 AT MANY SNOW COURSES ALONG THE CREST OF THE CASCADES. THE SNOW COVER IS NOW 190% OF AVERAGE. RAINFALL WAS 110 PERCENT OF NORMAL FOR APRIL. RUNOFF IN STREAMS AND RIVERS WAS ABOVE AVERAGE DURING APRIL. MAJOR RESERVOIRS ARE FULL OR NEARLY FULL WITH MUCH SNOWMELT YET TO OCCUR.

### WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek	Average	Average
Applegate River, Big	Average	Average
Applegate River, Little	Average	Average
Ashland Creek	Average	Average
Butte Creek, Big	Excellent	Average
Butte Creek, Little	Excellent	Average
Cow Creek	Excellent	Average
Deer Creek	Excellent	Average
Elk Creek	Excellent	Average
Emigrant Creek (abv. Res.)	Excellent	Average
Evans Creek	Excellent	Average
Gold Hill Irrigation Dist	Excellent	Average
Grants Pass Irrig. Dist.	Excellent	Average
Grave Creek	Excellent	Average
Illinois River, East Fork	Average	Average
Illinois River, West Fork	Average	Average
Jump-off-Joe Creek	Average	Average
Neil Creek	Excellent	Average
Red Blanket Creek	Excellent	Average
Rogue River	Excellent	Average
Sucker Creek	Average	Average
Table Rock Irrig. Dist.	Excellent	Average
Thompson Creek	Excellent	Average
Wagner Creek	Excellent	Average
Williams Creek	Excellent	Average



Report prepared by  
T. A. GEORGE AND H. M. VANCE  
**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE**  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Applegate near Copper	153	109	April-Sept.	b	140
Clearwater above Trap Creek <sup>d</sup>	61	102	May-Sept.	b	60
Fourmile Lake net Inflow	8.1	198	April-Sept.	b	4.1
Hyatt Reservoir net Inflow <sup>d</sup>	4.3	179	May-Sept.	b	2.4
Illinois River near Kerby	113	122	May-July	b	93
	118	119	May-Sept.	b	99
Little Butte, N. Fk. at Fish Lake nr. Lake Cr. <sup>d</sup>	15.0	122	May-Sept.	b	12.3
Little Butte, S. Fk. near Lake Creek	50	152	April-July	b	33
Rogue above Prospect	260	135	May-July	b	192
	340	136	May-Sept.	b	249
Rogue, South Fork near Prospect <sup>d</sup>	70	152	May-July	b	46
	81	142	May-Sept.	b	57
Rogue River below South Fork	490	119	May-July	b	413
	650	118	May-Sept.	b	551
Rogue at Raygold near Central Point	640	122	May-July	392	525
	806	118	May-Sept.	528	685
Rogue at Grants Pass	780	118	May-Sept.	b	662
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls <sup>d</sup>	172	117	May-Sept.	b	147

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Little Butte Creek, South Fork	100	June 17	May 27
Rogue at Raygold	1200	Sept 24	Aug. 7
	*2500	July 1	
	*1500	Aug. 15	

\*Average daily cfs forecast to flow on this date.

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Emigrant Lake*	39.0	38.9	39.0	36.7
Fish Lake	7.8	6.8	6.2	6.4
Fourmile Lake	16.1	13.0	12.7	11.8
Howard Prairie	60.0	63.1	60.6	40.1 <sup>m</sup>
Hyatt Prairie	16.1	16.0	16.2	14.2

\*Average for years of record (in base period) after reconstruction.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Applegate	-	-	-
Bear Creek	-	-	-
Butte Creek	2	260	170
Illinois River	-	-	-
North Umpqua	3	370	195
Rogue River	4	225	185

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-6 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

*as of*

May 1, 1971



**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

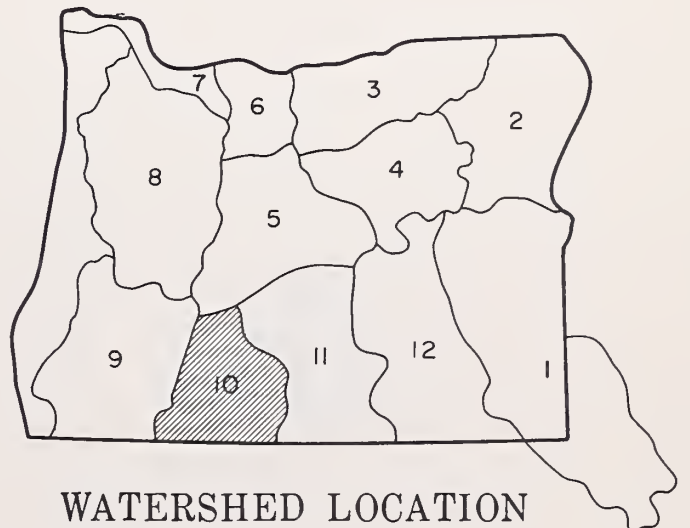
### GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK REMAINS VERY GOOD. RAINFALL WAS NEAR NORMAL DURING APRIL. MANY SNOW COURSES ALONG THE CREST OF THE CASCADES SET NEW RECORDS OF WATER CONTENT FOR MAY 1. THE SNOWPACK IN KLAMATH COUNTY IS 160% OF AVERAGE. RUNOFF INTO UPPER KLAMATH LAKE WAS 134% OF AVERAGE DURING APRIL. ALL RESERVOIRS ARE STORING EXCELLENT AMOUNTS OF WATER FOR THIS TIME OF YEAR.

### WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley	Excellent	Average
Lost River (Clear Lake)	Excellent	Average
Lost River (Gerber)	Excellent	Average
Lost River (Willow Res.)	Excellent	Average
Sprague River	Excellent	Average
Upper Klamath Lake	Excellent	Average
Williamson River	Excellent	Average



**WATERSHED LOCATION**

Report prepared by  
T.A. GEORGE AND H.M. VANCE  
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Clear Lake Reservoir Inflow	20	132	May-Sept.	b	15.1
Gerber Reservoir Inflow	8.2	164	May-Sept.	b	5.0
Sprague near Chiloquin	220	106	May-Sept.	b	208
Upper Klamath Lake net Inflow <sup>k</sup>	475	113	May-Sept.	234	419
Williamson below Sprague River	380	115	May-Sept.	b	331

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Upper Klamath	2	102	105

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Clear Lake	440.2	419.2	367.1	266.5
Gerber	94.0	94.6	91.2	65.5
Upper Klamath Lake	584.0	516.2	553.0	519.2

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Lost River	2	160	215
Sprague River	-	-	-
Upper Klamath	5	240	160
Williamson River	3	190	150

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

*as of*

May 1, 1971



**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

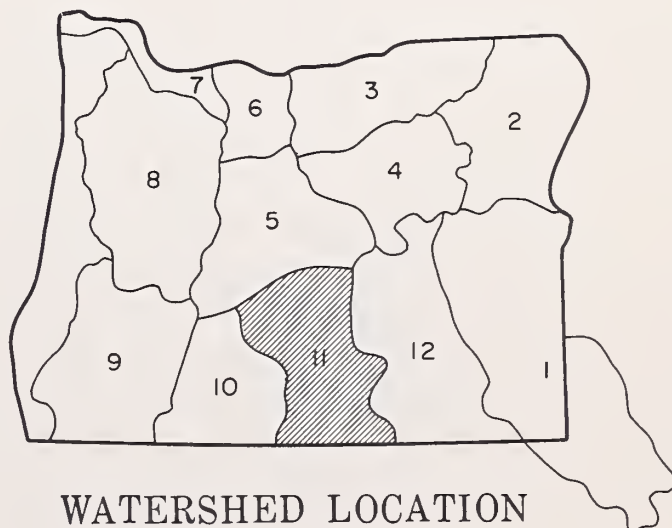
## GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK REMAINS ABOVE AVERAGE FOR LAKE COUNTY. RAINFALL WAS NEAR NORMAL DURING APRIL. AN EXCELLENT SNOWPACK FOR MAY 1 STILL EXISTS WITH MOST OF THE SNOW AT HIGHER ELEVATIONS. ALL MAJOR RESERVOIRS ARE FULL AND SPILLING. WATER USERS SHOULD EXPERIENCE A VERY GOOD YEAR.

### WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan River	Excellent	Average
Crooked Creek	Excellent	Average
Deep Creek	Excellent	Average
Dry Creek	Excellent	Average
East Side Goose Lake	Excellent	Average
Guano Lake	Excellent	Average
Honey Creek	Excellent	Average
Lakeview Water Users Assn.	Excellent	Excellent
Rock Creek (Hart Mountain)	Average	Average
Silver-Buck Creeks	Average	Average
Summer Lake	Excellent	Average
Thomas Creek	Average	Average
Twentymile Creek	Excellent	Average
Warner Lakes	Excellent	Average



Report prepared by  
T.A. GEORGE AND H.M. VANCE  
**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE**  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		FORECAST PERIOD	PAST RECORD	
	FORECAST			THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Chewaucan near Paisley	68	117	May-July	61	58
	72	116	May-Sept.	65	62
Deep above Adel	55	131	May-July	47	42
	57	130	May-Sept.	49	44
Drews Reservoir net Inflow <sup>d</sup>	14.0	124	May-July	b	11.3
Honey near Plush	12.8	122	May-July	10.5	10.5
	13.0	121	May-Sept.	10.6	10.7
Silver Creek near Silver Lake	10.3	85	May-July	b	12.1
	11.8	84	May-Sept.	b	14.0
Twentymile near Adel	11.5	120	May-July	b	9.6
	11.9	119	May-Sept.	b	10.0

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Chewaucan, Silver Creek, Drew Creek	1	100	106
Honey, Deep, 20-mile Cr.	1	102	101

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Cottonwood*	8.7	8.7	8.7	5.8
Drews	63.0	63.0	63.7	54.3
Thompson Valley	19.5	--	--	14.8

\*Average for years of record (in base period) after reconstruction.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Chewaucan River	3	110	115
Deep Creek	2	165	200
Drew Creek	2	-	150
Honey Creek	1	525	170
Silver Creek	-	-	-
Twentymile Creek	-	-	-

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

*as of*

May 1, 1971



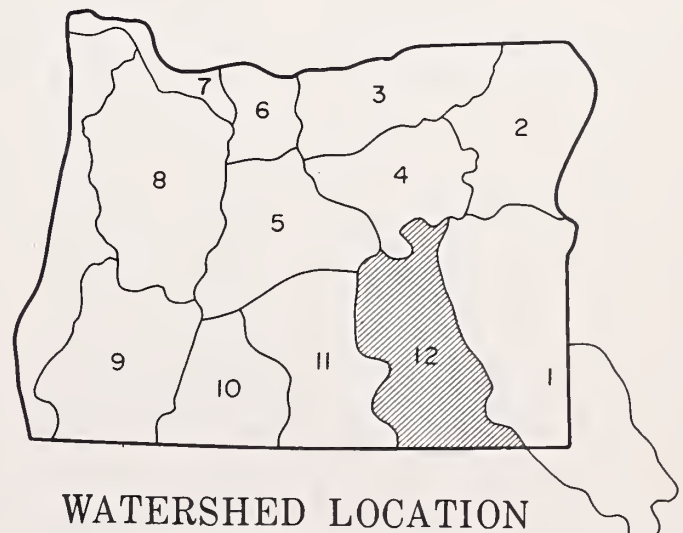
**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

## GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK REMAINS ABOUT THE SAME AS LAST MONTH. ALTHOUGH RAINFALL WAS ONLY 85% OF NORMAL DURING APRIL TEMPERATURES WERE COOL AND, AS A RESULT, A GOOD SNOWPACK STILL REMAINS. THE MOST SNOW IS AT THE HIGHER ELEVATIONS ON BOTH SILVIES AND STEENS MOUNTAINS WATERSHEDS. DESERT STREAMS WILL EXPERIENCE SOME SHORTAGES LATER ON IN THE SUMMER.

### WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Catlow Valley	Average	Fair
Cow Creek	Excellent	Average
Donner und Blitzen River	Excellent	Average
Mill-Coffeepot Creeks	Excellent	Average
Rattlesnake Creek	Excellent	Average
Silver Creek	Excellent	Average
Silvies River	Excellent	Average
Soldier-Prather Creek	Average	Fair
Trout Creek	Fair	Fair
Whitehorse Creek	Fair	Fair



Report prepared by  
T.A. GEORGE AND H.M. VANCE  
**U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE**  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Donner und Blitzen near Frenchglen	48	120	May-July	41	40
	54	120	May-Sept.	45	45
Silver near Riley	7.2	107	May-July	4.9	6.7
Silvies near Burns	39	100	May-July	42	39
	41	100	May-Sept.	44	41
Trout near Denio	3.0	54	May-July	6.9	5.5
	3.5	58	May-Sept.	7.3	6.0

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Silvies River, Silver Cr. Trout Cr., Donner und Blitzen River	2	104	105
	-	--	--

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Donner und Blitzen R.	-	-	-
Silver Creek	-	-	-
Silvies River	4	70	165
Trout Creek	-	-	-

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



# BASIC DATA SUPPLEMENT 1

MAY 1, 1971

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i.
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	c				
Battle Creek (Ida.)	c				
Bear Creek (Nev.)	4/29	62	23.8	26.3	19.4 <sup>h</sup>
Big Bend (Nev.)	4/30	1	0.1	5.1	0.9 <sup>h</sup>
Blue Mountain Springs	4/29	37	15.8	18.6	8.4 <sup>h</sup>
Blue Mtn. Springs Pillow	4/29		6.6	-	-
Buck Pasture <sup>e</sup>	c				
Buckskin, Lower (Nev.)	c				
Buckskin, Upper (Nev.)	c				
Bull Basin <sup>e</sup> (Ida.)	c				
Bully Creek <sup>e</sup>	c				
Call Meadow <sup>e</sup>	c				
Columbia Basin <sup>e</sup> (Nev.)	c				
Cottonwood-Indian <sup>e</sup>	c				
Crane Prairie	4/29	3	1.2	6.2	-
Crow Camp <sup>e</sup> DISCONTINUED					
Disaster Peak (Nev.)	c				
Eldorado Pass	4/30	0	0.0	0.0	0.0 <sup>m</sup>
Fawn Creek <sup>e</sup> (Nev.)	c				
Fish Creek	c				
Flag Prairie <sup>e</sup>	c				
Fox Creek (Nev.)	c				
Fry Canyon (Nev.)	4/30	0	0.0	4.7	1.0 <sup>h</sup>
Gold Creek (Nev.)	4/30	0	0.0	4.4	0.0 <sup>h</sup>
Granite Peak (Nev.)	c				
Hyde Pasture <sup>e</sup> (Ida.)	c				
Jack Creek, Lower (Nev.)	4/30	0	0.0	T	0.2 <sup>h</sup>
Jack Creek, Upper (Nev.)	4/30	17	6.6	8.7	3.5 <sup>h</sup>
Jack Peak (Nev.)	4/30	101	38.5	20.7	26.6 <sup>h</sup>
Lake Creek R. S.	4/28	3	1.0	6.8	-
Laurel Draw (Nev.)	c				
Logan Valley	c				
Lookout Butte <sup>e</sup>	c				
Louse Canyon <sup>e</sup>	c				
Martin Creek (Nev.)	c				
Merritt Mountain (Nev.)	c				
Midas <sup>e</sup> (Nev.)	c				
Mud Flat (Ida.)	c				
Oregon Canyon <sup>e</sup>	c				
Quinn Ridge <sup>e</sup> (Nev.)	c				
Red Canyon <sup>e</sup> (Ida.)	c				
Rock Spring	4/28	0	0.0	0.2	0.2 <sup>m</sup>
Rodeo Flat (Nev.)	4/30	0	0.0	3.0	1.2 <sup>h</sup>
76 Creek (Nev.)	c				
Silver City (Ida.)	b			20.5	6.7 <sup>h</sup>
Silvies	c				
South Mountain #2	5/3	9	4.3	15.2	-
Stag Mountain <sup>e</sup> (Nev.)	c				
Stinking Water	5/3	0	0.0	0.0	-
Succor Creek <sup>e</sup> (Ida.)	c				
Taylor Canyon (Nev.)	4/30	0	0.0	T	0.1 <sup>h</sup>
Toe Jam <sup>e</sup> (Nev.)	c				
Tremewan Ranch (Nev.)	4/30	0	0.0	T	-
Triangle (Ida.)	c				
Trout Creek <sup>e</sup>	c				
"V" Lake <sup>e</sup>	c				
Vaught Ranch <sup>e</sup> (Ida.)	c				
War Eagle <sup>e</sup> (Ida.)	c				

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i.
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1	4/29	112	49.2	44.8	39.7 <sup>m</sup>
Aneroid Lake #2	4/30	104	45.6	40.0	34.7 <sup>h</sup>
Anthony Lake	4/30	80	32.2	38.8	30.3 <sup>h</sup>
Bald Mountain <sup>e</sup> (Ore.)	4/30	60	25.8	37.7	20.1 <sup>m</sup>
Beaver Reservoir	4/28	22	7.2	10.6	6.9
Beaver Reservoir (Alt.)	4/29	35	9.3	-	-
Big Sheep <sup>e</sup>	4/30	68	30.0	26.6	22.0 <sup>m</sup>
Blue Mtn. Summit	4/29	6	2.0	5.6	1.9
Bourne	4/28	24	10.7	14.3	7.7 <sup>h</sup>
County Line	4/30	0	0.0	1.0	1.0 <sup>h</sup>
Dooley Mountain	4/26	15	5.9	4.9	1.9 <sup>h</sup>
Eilertson Meadows	4/27	19	7.7	11.1	4.5 <sup>h</sup>
Eldorado Pass	4/30	0	0.0	0.0	0.0 <sup>m</sup>
Gold Center	4/28	29	12.5	12.7	4.2 <sup>h</sup>
Goodrich Lake				51.4	27.0 <sup>h</sup>
Intake House	4/27	24	9.3	8.3	-
Little Alps	4/30	43	15.9	19.6	13.1 <sup>h</sup>
Little Antone	4/30	0	0.0	0.0	-
Lucky Strike	4/29	30	10.7	14.6	8.5 <sup>h</sup>
Meacham	4/28	T	T	5.5	2.4
Mirror Lake <sup>e</sup>	4/30	225	99.0	84.0	74.5 <sup>m</sup>
Moss Spring	4/30	70	30.2	32.4	21.2 <sup>h</sup>
Power Plant	4/27	0	0.0	0.0	-
Schneider Meadows	4/28	94	42.4	33.8	24.3 <sup>h</sup>
Schoolmarm <sup>e</sup>	4/30	0	0.0	0.0	0.5 <sup>h</sup>
Standley <sup>e</sup>	4/30	88	39.0	47.4	31.6 <sup>m</sup>
Taylor Green	4/30	39	16.8	20.8	-
Tipton	4/29	8	3.2	8.6	1.6 <sup>h</sup>
Tipton Snow Pillow					
Tollgate	4/27	56	26.9	34.3	18.0
TV Ridge <sup>e</sup>	4/30	75	33.0	30.3	-
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	4/30	5	2.1	11.8	2.8 <sup>h</sup>
Battle Mountain Summit	4/28	0	0.0	T	0.3 <sup>m</sup>
Blue Mountain Camp	4/27	17	7.2	11.4	3.3 <sup>h</sup>
Emigrant Springs	4/28	0	0.0	2.4	1.0
Lucky Strike	4/29	30	10.7	14.6	8.5 <sup>h</sup>
Meacham	4/28	T	T	5.5	2.4
Tollgate	4/27	56	26.9	34.3	18.0
Weston Mountain	4/27	0	0.0	0.0	0.0 <sup>m</sup>

# BASIC DATA SUPPLEMENT 1

MAY 1, 1971

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i
UPPER JOHN DAY WATERSHEDS					
Anthony Lake	4/30	80	32.2	38.8	30.3 <sup>h</sup>
Arbuckle Mountain	4/30	5	2.1	11.8	2.8 <sup>h</sup>
Battle Mountain Summit	4/28	0	0.0	T	0.3 <sup>h</sup>
Beech Creek Summit	4/27	1	0.4	T	0.6 <sup>h</sup>
Blue Mountain Springs	4/29	37	15.8	18.6	8.4 <sup>h</sup>
Blue Mtn. Springs Pillow	4/29		6.6	-	-
Blue Mountain Summit	4/29	6	2.0	5.6	1.9
Derr	c				
East Fork Canyon <sup>e</sup>	c				
Gold Center	4/28	29	12.5	12.7	4.2 <sup>h</sup>
Indian Creek Butte <sup>e</sup>	c				
Izee Summit	4/26	5	1.5	5.2	2.0 <sup>h</sup>
Lucky Strike	4/29	30	10.7	14.6	8.5 <sup>h</sup>
Marks Creek	4/29	0	0.0	0.0	T <sup>h</sup>
Ochoco Meadows	c				
Olive Lake <sup>e</sup>	4/29	62	27.0	25.5	16.5 <sup>h</sup>
Schoolmarm	4/30	0	0.0	0.0	0.5 <sup>h</sup>
Snow Mountain	c				
Starr Ridge	4/26	3	1.1	1.7	0.6 <sup>h</sup>
Tipton	4/29	8	3.2	8.6	1.6 <sup>h</sup>
Tipton Snow Pillow	Pillow flat				
Williams Ranch	c				
UPPER DESCHUTES, CROOKED WATERSHEDS					
Black Pine Spring	4/28	0	0.0	0.0	0.3
Caldwell Ranch	c				
Cascade Summit	4/30	101	46.9	22.8	25.3 <sup>h</sup>
Chemult	4/30	1	0.5	0.0	0.8 <sup>h</sup>
Deer Creek	c				
Derr	c				
Hogg Pass	4/30	135	65.8	37.4	41.6
Hungry Flat	4/29	0	0.0	0.0	0.0
Irish-Taylor	c				
Irish-Taylor Pillow	5/1		57.4	-	-
Marks Creek	4/29	0	0.0	0.0	T <sup>h</sup>
Mowich	4/29	0	0.0	0.0	0.0 <sup>h</sup>
New Crescent Lake	4/29	28	12.1	4.1	5.1
New Dutchman Flat #2	4/29	146	75.0	50.4	54.3
Ochoco Meadows	c				
Snow Mountain	c				
Snow Mountain Pillow	c				
Tamarack	c				
Tangent	4/29	56	27.2	13.9	11.9 <sup>h</sup>
Three Creek Butte	4/28	21	8.7	0.6	2.6 <sup>h</sup>
Three Creek Meadow	4/28	62	27.8	16.0	13.2
Three Creek Mdw. Pillow	4/28		34.9	17.5	-
Waldo Lake	c				
Willamette Pass	4/30	141	64.6	39.9	42.4
Willamette Pass Pillow	5/1		61.7	-	-

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadow					
Clear Lake	4/22	39	16.8	5.1	4.8 <sup>h</sup>
Clear Lake (Experimental)	4/22	55	24.0	9.2	12.4 <sup>h</sup>
Cooper Spur	4/30	22	9.0	0.0	-
Cooper Spur (Alt.)	4/30	35	15.7	0.0	-
Greenpoint Reservoir	4/30	56	26.6	12.2	-
Knebal Springs	c				
Parkdale	c				
Phlox Point	4/23	202	105.6	63.1	65.6
Red Hill	c				
Still Creek	4/22	96	42.9	20.4	19.0
Still Creek (Alt #2)	4/22	94	42.9	-	-
Switchback	4/30	43	20.2	-	-
Tilly Jane	c				
Ulrich Ranch Junction	c				
Umbrella Falls	5/1	208	113.0	72.1	-
Upper Valley	c				
WILLAMETTE WATERSHEDS					
Cascade Summit	4/30	101	46.9	22.8	25.3
Champion	4/29	120	57.8	19.3	26.3 <sup>h</sup>
Clackamas Lake	c				
Clear Lake	4/22	39	16.8	5.1	4.8 <sup>h</sup>
Clear Lake (Experimental)	4/22	55	24.0	9.2	12.4 <sup>h</sup>
Dead Horse Grade	4/30	57	26.8	1.5	11.9 <sup>h</sup>
Detroit (Town)	4/30	0	0.0	0.0	0.0
Detroit Dam	4/30	0	0.0	0.0	0.0
Golden Curry Creek	4/29	8	3.6	0.0	3.1 <sup>m</sup>
Hogg Pass	4/30	135	65.8	37.4	41.6
Lake Harriet	c				
Laurel Mountain	c				
Layng Creek	4/29	0	0.0	0.0	0.0 <sup>m</sup>
Lost Creek Ranch	4/30	0	0.0	0.0	0.0 <sup>h</sup>
Lund Park	4/29	0	0.0	0.0	0.0 <sup>m</sup>
Marion Forks	4/30	49	24.0	T	3.8 <sup>h</sup>
Marys Peak	c				
Marys Peak (Alt.)	c				
McCredie Springs	4/30	0	0.0	0.0	0.0
McKenzie	4/30	130	68.9	38.6	45.2
McKenzie Bridge	4/30	0	0.0	0.0	0.0 <sup>h</sup>
Meridian Dam	4/28	T	T	0.0	0.0
Mill City	4/30	0	0.0	0.0	0.0
Oakridge	4/30	0	0.0	0.0	0.0
Peavine Ridge	4/29		32.8	8.2	13.9 <sup>h</sup>
Peavine Ridge Pillow	c				
Phlox Point	4/23	202	105.6	63.1	65.6
Railroad Overpass	4/30	0	0.0	0.0	T
Salt Creek Falls	4/30	66	28.2	3.2	10.2
Santiam Junction	4/30	72	34.6	2.8	14.3
Still Creek	4/22	96	42.9	20.4	19.0
Still Creek Alt. #2	4/22	94	42.9	-	-
Timothy Lake	4/23	56	24.3	-	8.2 <sup>m</sup>
Valsetz Summit	c				
Vida	4/30	0	0.0	0.0	0.0 <sup>h</sup>
Waldo Lake	c				
Weaver Creek	4/29	0	0.0	0.0	0.0 <sup>m</sup>
White Branch Slide	4/30	14	5.3	0.3	1.1 <sup>h</sup>
Whitewater Bridge	4/30	0	0.0	0.0	T
Willamette Pass	4/30	141	64.6	39.9	42.4
Willamette Pass Pillow	5/1		61.7	-	-

# BASIC DATA SUPPLEMENT 1

MAY 1, 1971

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.
ROGUE, UMPQUA WATERSHEDS					
Althouse	c				
Althouse #2	c				
Annie Spring	4/30	144	65.5	50.1	43.1
Beaver Dam Creek	4/30	42	19.0	0.0	- -
Big Red Mountain	c				
Billie Creek Divide	5/3	53	24.0	9.3	13.9 <sup>h</sup>
Caliban	4/27	112	48.8	36.2	- -
Champion	4/29	120	57.8	19.3	26.3 <sup>h</sup>
Cold Springs Camp	4/27	120	54.2	29.7	- -
Cold Springs Camp Pillow	5/1		44.7	- -	- -
Deadwood Junction	4/30	18	7.5	0.0	- -
Diamond-Crater Summit	4/28	116	51.6	27.6	36.1 <sup>h</sup>
Diamond-Crater Sum. Alt.	4/28	103	41.8	25.6	- -
Diamond Lake	4/28	72	27.5	14.6	16.8
Fish Lake	5/3	41	16.0	3.0	5.1 <sup>m</sup>
Fourmile Lake	5/3	67	31.0	20.2	21.6 <sup>h</sup>
Grayback Peak	c				
Howard Prairie	4/30	16	5.9	0.0	- -
Hyatt Prairie	4/30	16	5.7	- -	- -
King Mountain #1	4/27	39	18.2	1.8	- -
King Mountain #2	4/27	28	11.5	0.5	- -
King Mountain #3	4/27	0	0.0	0.0	- -
King Mountain #4	4/27	0	0.0	0.0	- -
King Mountain #5	4/27	0	0.0	0.0	- -
King Mountain #6	4/27	0	0.0	0.0	- -
Little Red Mountain	c				
Mt. Ashland Switchback	4/27	117	50.7	34.3	- -
Mule Creek	4/27	30	14.2	1.2	- -
North Umpqua	4/28	31	14.4	T	5.3 <sup>h</sup>
Page Mountain	c				
Park Headquarters	4/30	181	83.3	62.2	59.1
Red Butte #1	4/26	73	31.9	3.8	12.6 <sup>h</sup>
Red Butte #2	4/26	35	16.5	1.8	3.7 <sup>h</sup>
Red Butte #3	4/26	9	3.8	0.6	1.2 <sup>h</sup>
Red Butte #4	4/26	0	0.0	0.0	0.0 <sup>m</sup>
Red Butte #5	4/26	0	0.0	0.0	0.0 <sup>m</sup>
Red Butte #6	4/26	0	0.0	0.0	0.0 <sup>m</sup>
Seven Lakes #2	c				
Seven Mile	c				
Silver Burn	4/29	31	14.0	0.0	3.0 <sup>h</sup>
Siskiyou Summit	4/28	0	0.0	0.0	- -
Siskiyou Summit Alt. #2	4/28	0	0.0	0.0	- -
Ski Bowl Road	4/27	100	42.2	21.1	- -
South Fork Canal	4/27	0	0.0	0.0	0.0 <sup>m</sup>
Trap Creek	4/27	26	12.0	T	5.4 <sup>h</sup>
Whaleback	c				

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.
KLAMATH WATERSHEDS					
Annie Spring	4/30	144	65.5	50.1	43.1
Beatty (PP&L)	c				
Billie Creek Divide	5/3	53	24.0	9.3	13.9 <sup>h</sup>
Bly Mountain	4/29	0	0.0	0.0	0.9 <sup>m</sup>
Bly 101 Ranch (PP&L)	c				
Chemult	4/30	1	0.5	0.0	0.8 <sup>h</sup>
Chiloquin (PP&L)	c				
Cold Springs Camp	4/27	120	54.2	29.7	- -
Cold Springs Camp Pillow	5/1		44.7	- -	- -
Crazyman Flat <sup>e</sup>	4/26	25	10.0	1.3	- -
Crowder Flat <sup>e</sup> (Calif.)	c				
Crystal (PP&L)	c				
Diamond-Crater Summit	4/28	116	51.6	27.6	36.1 <sup>h</sup>
Diamond-Crater Sum. Alt.	4/28	103	41.8	25.6	- -
Diamond Lake Jct. (97)	4/28	0	0.0	0.0	0.0 <sup>h</sup>
Dog Hollow	c				
Finley Corrals <sup>e</sup>	4/26	46	18.4	7.4	- -
Fort Klamath (PP&L)	c				
Fourmile Lake	5/3	67	31.0	20.2	21.6 <sup>h</sup>
Gerber	c				
Harriman (PP&L)	c				
Hyatt Prairie Reservoir	4/30	16	5.7	- -	- -
Kirk (PP&L)	c				
Lake of the Woods	4/27	27	10.1	2.1	6.3 <sup>h</sup>
Park Headquarters	4/30	181	83.3	62.2	59.1 <sup>h</sup>
Pelican Guard Station	4/27	0	0.0	0.0	0.0 <sup>h</sup>
Quartz Mountain	4/29	0	0.0	0.0	0.6 <sup>h</sup>
Quartz Mountain (Ext.)	4/29	0	0.0	0.0	- -
Seven Lakes #2	c				
Seven Mile	c				
State Line <sup>e</sup> (Calif.)	c				
Strawberry	4/30	8	3.2	0.0	1.4 <sup>h</sup>
Summer Rim <sup>e</sup>	4/26	48	19.2	17.8	- -
Summer Rim Snow Pillow	c				
Sun Mountain	4/26	70	30.1	18.3	- -
Sycan Flat <sup>e</sup>	c				
Taylor Butte	4/29	0	0.0	0.0	- -
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	4/30	33	12.0	8.2	3.4
Bald Mountain (Nev.)	c				
Bear Flat Meadow <sup>e</sup>	c				
Camas Creek	4/30	17	6.3	1.2	- -
Cedar Pass (Calif.)	4/30	46	20.4	14.7	9.5
Colvin Creek <sup>e</sup>	c				
Cox Flat <sup>e</sup>	c				
Crowder Flat <sup>e</sup> (Calif.)	c				
Dismal Swamp <sup>e</sup> (Calif.)	c				
Finley Corrals <sup>e</sup>	4/26	46	18.4	7.4	- -
Hart Mountain <sup>e</sup>	c				
Little Bally Mtn. <sup>e</sup> (Nev.)	c				
Mt. Bidwell (Calif.)	c				
North Star (Calif.)	c				
Patton Meadows <sup>e</sup>	4/26	48	19.2	15.9	- -
Quartz Mountain	4/29	0	0.0	0.0	0.6 <sup>h</sup>
Quartz Mountain (Ext.)	4/29	0	0.0	0.0	- -
Sherman Valley <sup>e</sup>	c				
Silver Creek	c				
State Line <sup>e</sup> (Calif.)	c				
Strawberry	4/30	8	3.2	0.0	1.4 <sup>h</sup>
Summer Rim <sup>e</sup>	4/26	48	19.2	17.8	- -
Summer Rim Snow Pillow	c				
Sycan Flat <sup>e</sup>	c				
Willow Creek <sup>e</sup>	c				

# BASIC DATA SUPPLEMENT 1

MAY 1, 1971

SNOW DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.		SNOW DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)			Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.					Last Yr.	Ave.
HARNEY BASIN WATERSHEDS											
Blue Mountain Springs	4/29	37	15.8	18.6	8.4 <sup>h</sup>						
Blue Mtn. Springs Pillow	4/29		6.6	--	--						
Buck Pasture <sup>e</sup>	c										
Buckskin Lake <sup>e</sup>	c										
Call Meadows <sup>e</sup>	c										
Crow Camp <sup>e</sup> (DISCONTINUED)	c										
Delintment Lake	c										
Denio Creek <sup>e</sup>	c										
Disaster Peak (Nev.)	c										
Emigrant Butte	c										
Fish Creek	c										
Hart Mountain <sup>e</sup>	c										
Idlewild Camp	4/28	0	0.0	0.0	0.9 <sup>h</sup>						
Izee Summit	4/26	5	1.5	5.2	2.0 <sup>h</sup>						
Lake Creek R.S.	4/28	3	1.0	6.8	--						
Oregon Canyon <sup>e</sup>	c										
Rock Spring	4/28	0	0.0	0.2	0.2 <sup>m</sup>						
Silvies	c										
Snow Mountain	c										
Snow Mountain Pillow	c										
Starr Ridge	4/26	3	1.1	1.7	0.6 <sup>h</sup>						
Stinking Water	5/3	0	0.0	0.0	--						
Trout Creek <sup>e</sup>	c										
"V" Lake <sup>e</sup>	c										

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# BASIC DATA SUPPLEMENT 2

MAY 1, 1971

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average <sup>i</sup>
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	c		11.5 <sup>f</sup>	- -
Big Bend (Nev.)	6700	48	16.7	4/30	16.7	16.7	16.5
Blue Mountain Spring	5900	42	16.9	4/29	12.9	12.3	13.2
Crane Prairie	5375	48	18.2	4/29	17.9	18.1	17.7
Folly Farm	4450	30	12.5	c			
Jack Creek, Lower (Nev.)	6800	48	8.6	4/30	7.5	8.1	8.4
Jordan Valley	4390	48	19.3	5/3	16.7	16.5	- -
Mud Flat (Ida.)	5500	48	12.8	c			
Rodeo Flat (Nev.)	6800	42	11.0	3/24	5.7 <sup>f</sup>	11.0	- -
Taylor Canyon (Nev.)	6200	48	15.1	4/30	15.1	11.8	14.6
Triangle (Ida.)	5150	48	16.6	c			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	4/29	16.6	16.0	14.6
Dooley Mountain	5430	36	9.2	4/26	7.2	7.0	6.8
Emigrant Springs	3925	48	22.3	4/28	22.1	21.2	20.9
Ladd Summit	3730	48	18.9	4/30	13.5	13.4	11.8
Moss Springs	5850	36	25.8	4/30	17.3	14.6	- -
Tollgate	5070	48	23.6	4/27	16.9	16.8	17.9
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	4/28	13.8	13.8	13.4
Emigrant Springs	3925	48	22.3	4/28	22.1	21.2	20.9
Tollgate	5070	48	23.6	4/27	16.9	16.8	17.9
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	4/28	13.8	13.8	13.4
Beech Creek	4800	48	21.3	4/27	18.2	16.7	16.3
Blue Mountain Spring	5900	42	16.9	4/29	12.9	12.3	13.2
Blue Mountain Summit	5100	36	16.8	4/29	16.6	16.0	14.6
Derr	5670	24	9.0	c			
Marks Creek	4540	36	14.1	4/29	13.9	13.2	13.1
Snow Mountain	6300	48	16.7	c			
Starr Ridge	5150	36	10.6	4/26	10.6	10.6	10.4
Williams Ranch	4500	42	17.9	4/26	17.7	16.4	16.8
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	c			
Marks Creek	4340	36	14.1	4/29	13.9	13.2	13.1
Snow Mountain	6300	48	16.7	c			
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	4/30	14.4	14.3	- -
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	4/29	12.8	12.3	12.3

# BASIC DATA SUPPLEMENT 2

MAY 1, 1971

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average <sup>i</sup>
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	4/30	13.2	13.0	13.1
Quartz Mountain	5230	48	15.3	4/29	10.0	10.0	9.4
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	4/29	12.9	12.3	13.2
Fish Creek	7900	48	15.0	c			
Folly Farm	4450	30	12.5	c			
Silvies	6900	48	16.4	c			
Snow Mountain	6300	48	16.7	c			
Starr Ridge	5150	36	10.6	4/26	10.6	10.6	10.4
Willow-Bald	5000	24	6.6	4/27	6.6	6.0	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# BASIC DATA SUPPLEMENT 3

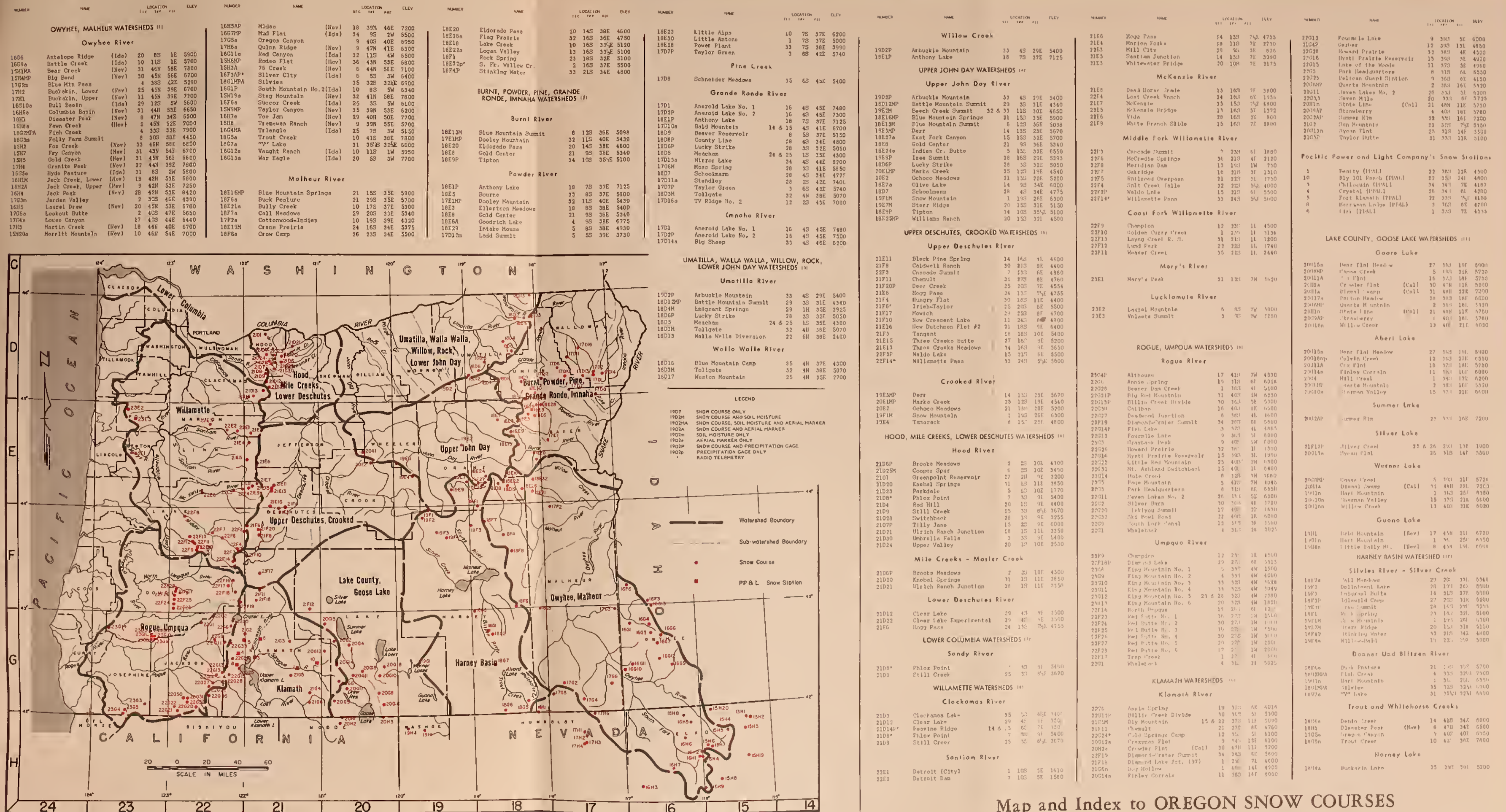
MAY 1, 1971

## PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average †
Arbuckle Mountain (Morrow County)	5400	3/29 to 4/30	2.47	3.55	--
Camas Creek (Lake County)	5825	3/31 to 4/30	2.95	2.60	--
County Line (Umatilla Co.-Starkey Hdqrs.)	4800	3/30 to 4/30	2.60	1.70	--
Crane Prairie (Grant County)	5375	3/26 to 4/29	2.00	--	--
Eilertson Meadows (Baker County)	5400	3/25 to 4/27	2.00	--	--
Marks Creek (Crook-Wheeler Cos.)	4540	3/26 to 4/29	1.15	--	--
Quartz Mountain Summit (Lake County)	5530	4/1 to 4/29	3.18	1.28	--
Strawberry (Lake County)	5760	3/31 to 4/30	2.65	1.40	--
Taylor Butte (Klamath County)	5040	3/31 to 4/29	1.65	0.20	--
Taylor Green (Union County)	5800	4/1 to 4/30	2.30	2.60	--







Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate  
in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys  
Nevada Cooperative Snow Surveys  
Oregon State University  
Oregon State Engineer and Corps of State Watermasters  
Oregon State Highway Engineers  
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey

FEDERAL

Department of Agriculture  
    Cooperative Extension Service  
    Forest Service  
    Soil Conservation Service  
Department of Commerce  
    Weather Bureau  
Department of the Interior  
    Bonneville Power Administration  
    Bureau of Land Management  
    Bureau of Reclamation  
    Fish and Wildlife Service  
    Geological Survey  
    National Park Service  
Department of National Defense  
    Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company  
Portland General Electric Company  
California-Pacific Utilities Company

MUNICIPALITIES

City of Baker  
City of La Grande  
City of The Dalles  
City of Walla Walla

IRRIGATION DISTRICTS

Arnold Irrigation District  
Associated Ditch Companies  
Burnt River Irrigation District  
Central Oregon Irrigation District  
East Fork Irrigation District  
Grants Pass Irrigation District  
Hood River Irrigation District  
Jordan Valley Irrigation District  
Juniper Flat Irrigation District  
Lakeview Water Users, Incorporated  
Medford Irrigation District  
Middle Fork Irrigation District  
North Board of Control - Owyhee Project  
North Unit Irrigation District  
Ochoco Irrigation District  
Rogue River Valley Irrigation District  
South Board of Control - Owyhee Project  
Squaw Creek Irrigation District  
Talent Irrigation District  
Tumalo Project  
Vale-Oregon Irrigation District  
Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

OFFICIAL BUSINESS

Return this entire sheet to above address, if you do NOT wish to receive this material , or if change of address is needed  (indicate change/s in address below, including ZIP code).



POSTAGE AND FEES PAID  
U. S. DEPARTMENT OF AGRICULTURE

# FIRST CLASS MAIL

## FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

*"The Conservation of Water begins  
with the Snow Survey"*

U.S. Dept. of Agriculture  
National Agricultural Library  
Current Serial Record  
Washington, D. C. 20250

S  
(2)