FEDERAL-STATE-PRIVATE
COOPERATIVE SNOW SURVEYS

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

MAR. 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 Columbis 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

USDA-SCS-PORTLAND, OREG 1970

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MARCH 8, 1971

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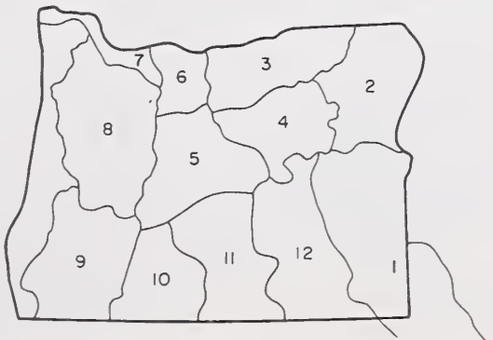
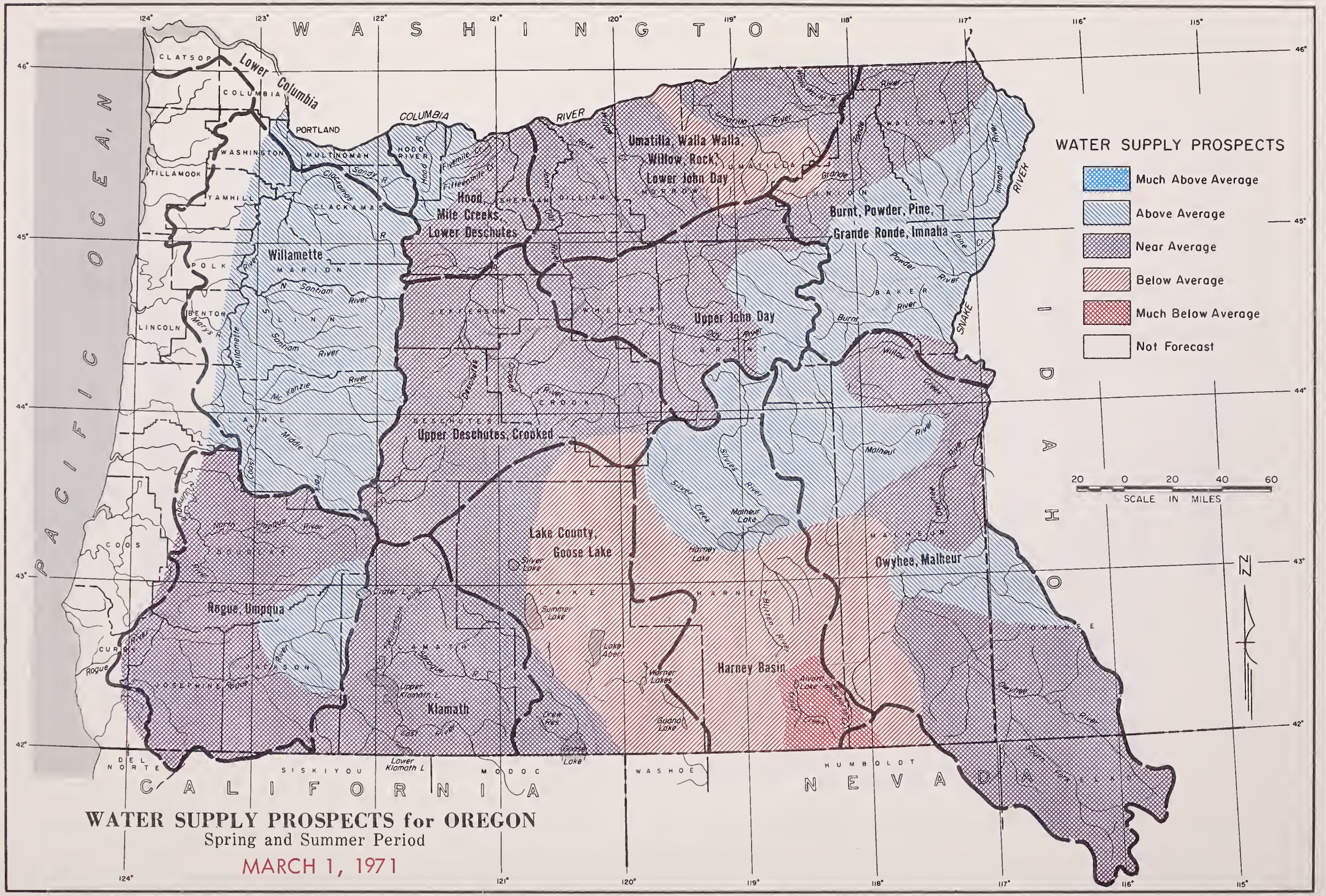


WATERSHED AREA LOCATIONS



WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

MARCH 1, 1971

WATER SUPPLY OUTLOOK for OREGON

MARCH 1, 1971

Excellent to average water supplies are in prospect for Oregon water users next spring and summer. The snowpack around the state varies considerably from poor to well above average. Reservoir storage continues to be excellent at near 135 percent of average.

SNOW COVER

A warm and dry February decreased the mountain snowpack on many snow courses and less than average increments were received at others during the month. The snow cover is heaviest in the Cascades where it ranges from 120 to 135 percent of average, down from last month's 160 percent. It is near normal elsewhere except on the Umatilla and Owyhee drainages where it is 75 percent of average. The low elevation snow courses in Eastern Oregon were nearly bare of snow on March first.

PRECIPITATION

February was a dry month, especially in southeastern Oregon where precipitation was only 40 to 50 percent of normal. The rest of the state received 60 to 70 percent of average amounts except for the Deschutes Basin, Willamette, and Rogue Valleys, which were near normal. Winter precipitation from November first to date has been above normal over most of Oregon, ranging from a high of 145 percent on the Deschutes watershed to a low of 87 percent of average on the Umatilla.

RESERVOIR STORAGE

Reservoired water supplies are excellent. Twenty-six Oregon reservoirs are storing 2,564,000 acre feet of water. Many are nearly full or will fill during the next several months. The storage is 132 percent of average for March 1.

SOIL MOISTURE

Watershed soils are wetter than normal and will benefit the snowmelt runoff. Soil moisture ranges from 110 percent to 120 percent of average, much better than for the past several years.

continued on next page

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STREAMFLOW

Because of the warm weather in February, streamflow was above average for the second month in a row. Flows were not nearly as high as January's extremes but were still 100 to 150 percent of normal

Forecasts of spring and summer streamflow on some representative Oregon rivers are as follows:

STREAM	FORECAST As percent of 1953-67 Average
Owyhee net Inflow	100
Grande Ronde near La Grande	90
Willamette, Mid. Fk. near Oakridge	115
Upper Klamath Lake net Inflow	98
Rogue at Raygold	105
Silvies near Burns	128
Columbia at The Dalles	117

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

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of

MARCH 1, 1971

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

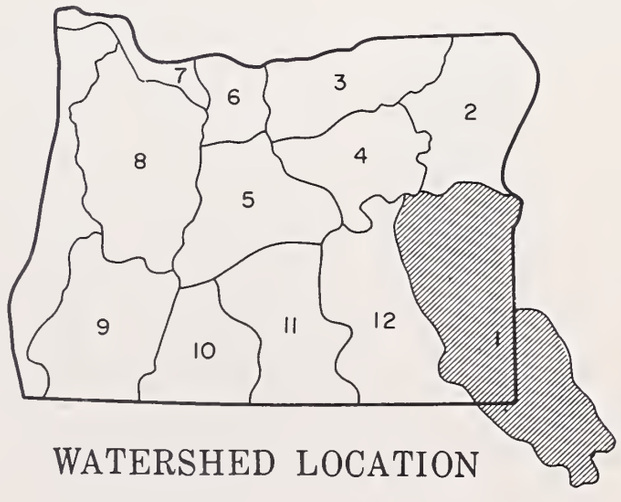
GENERAL OUTLOOK

MALHEUR COUNTY WATER USERS WHO HAVE ACCESS TO STORED WATER WILL HAVE EXCELLENT WATER SUPPLIES NEXT SPRING AND SUMMER. USERS DEPENDING DIRECTLY ON STREAMFLOW WILL EXPERIENCE SOME LATE SEASON SHORTAGES. THE SNOWPACK WAS FURTHER REDUCED BY LESS THAN NORMAL PRECIPITATION DURING FEBRUARY. THE SNOW COVER RANGED FROM 127 PERCENT OF AVERAGE ON THE JORDAN CREEK DRAINAGE TO 75 PERCENT ON THE OWYHEE DRAINAGE, REMAINING MAINLY AT THE HIGHER ELEVATIONS WHERE IT IS ABOVE AVERAGE. BASIN PRECIPITATION DURING THE MONTH WAS ONLY 56 PERCENT OF AVERAGE. WATERSHED SOILS ARE SATURATED AND WILL ENHANCE RUNOFF FROM ANY SPRING PRECIPITATION. WATER STORED IN RESERVOIRS IS 160 PERCENT OF THE NORMAL AMOUNTS FOR MARCH FIRST. THE OWYHEE NET INFLOW WAS 160 PERCENT OF NORMAL DURING FEBRUARY.

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	Average	Fair
Bully Creek	Average	Fair
Cow Creek	Average	Fair
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Excellent	Excellent
McDermitt Creek	Fair	Fair
Oregon Canyon Creek	Fair	Fair
Owyhee Project	Excellent	Excellent
Succor Creek	Average	Fair
Tenmile Creek	Fair	Fair
Vale-Oregon Irrig. Dist.	Excellent	Excellent
Warmsprings Irrig. Dist.	Excellent	Excellent
Willow Creek (Reservoired)	Excellent	Average



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Bully Creek at Warmsprings	8.0	70	March-May		11.4
Jordan Creek above Lone Tree Creek	112	132	April-July		85 [m]
	116	136	April-Sept.		85 [m]
Malheur near Drewsey	120	129	March-July		93
	90	125	April-Sept.		72
Malheur, North Fork at Beulah [d]	77	115	March-July		67
	67	112	April-Sept.		60
Owyhee Reservoir net Inflow [k]	369	100	March-July	353	369
	300	100	April-Sept.	306	300

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 [i]
Owyhee near Rome	1000	May 24	May 24
	250	June 28	June 20

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Agency Valley	60.0	45.2	43.3	30.5
Antelope	55.0	47.7	24.7	11.8
Bully Creek	30.0	22.6	21.8	12.7
Owyhee	715.0	674.0	673.2	411.8
Warmsprings	191.0	136.6	144.5	94.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [m]
Jordan Creek	1	122	106
Malheur River	3	108	109
Owyhee River	4	123	113

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	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Jordan Creek	4	100	127
Malheur River	5	81	103
Owyhee River	5	66	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.

Area 2

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

as of

MARCH 1, 1971

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

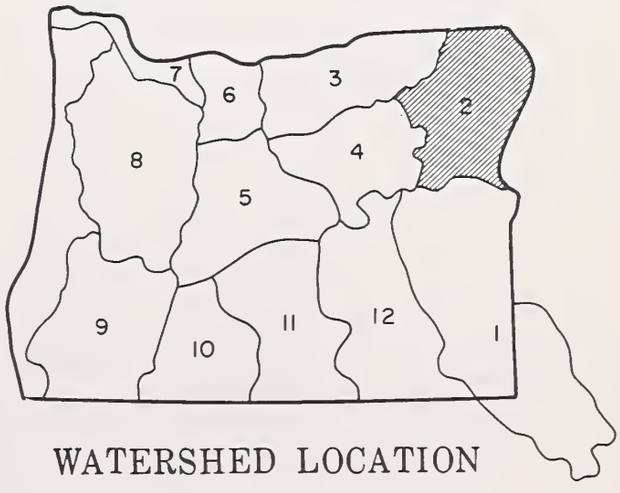
GENERAL OUTLOOK

ABOVE AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR WATER USERS IN THE AREA, EXCEPT FOR THE UPPER GRANDE RONDE BASIN WHICH WILL HAVE AVERAGE SUPPLIES WITH SOME SHORTAGES DEVELOPING IN THE LATE SEASON. THE SNOWPACK RANGES FROM 52 PERCENT OF AVERAGE ON THE GRANDE RONDE DRAINAGE TO 128 PERCENT ON THE POWDER RIVER DRAINAGE, WITH HIGHEST ACCUMULATIONS AT THE HIGHER ELEVATIONS. PRECIPITATION WAS 70 PERCENT OF AVERAGE DURING FEBRUARY. RESERVOIRS ARE STORING ABOVE AVERAGE AMOUNTS. THE SOIL MOISTURE CONTENT IS EXCELLENT AND WILL ENHANCE RUNOFF FROM SPRING PRECIPITATION. FEBRUARY FLOW OF THE GRANDE RONDE AT La GRANDE WAS 160 PERCENT OF AVERAGE.

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	Average
Baker Valley	Excellent	Average
Big Creek	Excellent	Average
Clover Cr. (nr. N. Powder)	Excellent	Average
Cove	Excellent	Average
Durkee	Excellent	Average
Eagle Valley	Excellent	Excellent
Elgin	Average	Average
Enterprise-Joseph	Excellent	Excellent
Hereford-Bridgeport	Excellent	Excellent
Imnaha River	Excellent	Average
La Grande-Island City	Average	Average
Lostine-Wallowa	Excellent	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



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Bear near Wallowa	75	114	April-Sept.		66
Burnt near Hereford [d]	50	116	March-July		43
	40	114	April-Sept.		35
Catherine near Union	75	117	April-Sept.	75	64
Eagle Creek abv. Skull Creek	208	124	April-July	195	168 [m]
	257	124	April-Sept.	211	182 [m]
Grande Ronde at La Grande	197	95	March-July	180	207
	157	90	April-Sept.	157	175
Hurricane near Joseph	50	106	April-Sept.	54	47
Imnaha at Imnaha	343	105	April-Sept.	295	327
Lostine near Lostine	127	102	April-Sept.	144	125
Powder near Baker	66	110	April-July		60
	69	111	April-Sept.		62
Wallowa, East Fork near Joseph [d]	12.9	102	March-Sept.		12.7
	12.1	101	April-Sept.		12.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	Average [m]
Burnt, Powder	2	104	127
Grande Ronde, Catherine Cr., Imnaha River	3	100	116

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Thief Valley	17.4	17.4	17.4	- -
Unity	25.2	18.3	16.1	11.9
Wallowa Lake	37.5	21.6	13.4	22.4
Phillips Lake	73.5	b	35.7	- -

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 [i]
Burnt River	4	84	113
Grande Ronde River above La Grande	4	102	52
Powder River	5	104	128
Wallowa, Imnaha, Catherine Creek	6	107	118

(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.

Area 3

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

as of

MARCH 1, 1971

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

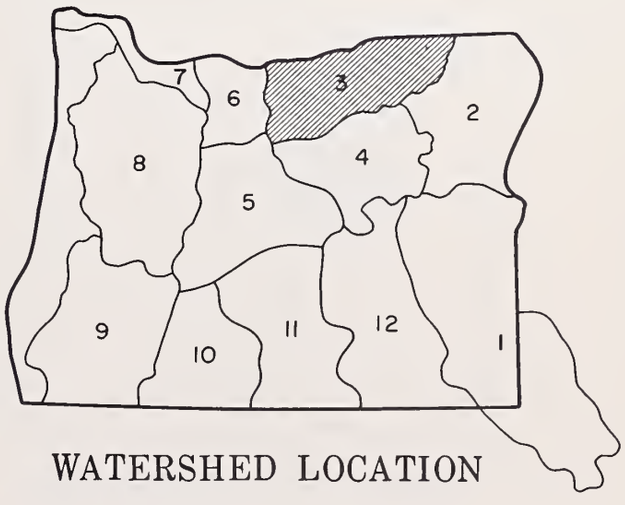
GENERAL OUTLOOK

AVERAGE TO BELOW AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR THE SPRING AND EARLY SUMMER OF 1971, WITH SHORTAGES DEVELOPING LATER IN THE SEASON ON STREAMS DRAINING INTO THE LOWER UMATILLA BASIN. THE SNOWPACK WAS DOWN TO 74 PERCENT OF AVERAGE ON UPPER McKAY CREEK AND NEAR AVERAGE ON THE WALLA WALLA DRAINAGE. PRECIPITATION IN THE AREA WAS ONLY 68 PERCENT OF AVERAGE DURING FEBRUARY. SOIL MOISTURE WAS NEAR AVERAGE. COLD SPRINGS AND McKAY RESERVOIRS WERE HOLDING SLIGHTLY ABOVE AVERAGE AMOUNTS OF WATER ON MARCH 1. THE UMATILLA AT PENDLETON FLOWED 108 PERCENT OF AVERAGE DURING MARCH.

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	Fair
Wildhorse Creek	Average	Average
Umatilla R. (Cold Springs Reservoir	Average	Fair
Umatilla R. (McKay Res.)	Average	Average
McKay Creek	Fair	Fair
Birch Creek	Fair	Fair
Butter Creek	Fair	Fair
Willow Creek	Fair	Fair
Rhea Creek	Fair	Fair
Rock Creek (John Day tributary)	Average	Average



WATERSHED LOCATION

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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Birch Creek at Rieth	20	83	March-July		24.3
	14.8	80	April-Sept.		18.4
Butter Creek near Pine City	9.5	77	March-July		12.4
McKay near Pilot Rock	20	74	April-July		27
	21	75	April-Sept.		28
Umatilla near Gibbon	92	93	March-Sept.		99
	77	96	April-Sept.		80
Umatilla at Pendleton	189	91	March-Sept.	212	208
	138	88	April-Sept.	159	155
Walla Walla, North Fork near Milton	21	105	March-Sept.		20
	16	100	April-Sept.		16.0
Walla Walla, South Fork near Milton	76	96	March-Sept.		79
	64	96	April-Sept.		67

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 [i]
Umatilla at Pendleton	550	June 14	June 22

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Cold Springs	50.0	42.0	35.6	40.3
McKay	73.8	41.3	66.2	35.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [m]
Umatilla, Walla Walla, McKay Creek	3	96	96

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	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
McKay Creek	3	82	53
Umatilla River	3	85	75
Walla Walla River	2	82	95

(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.

Area 4

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of

MARCH 1, 1971

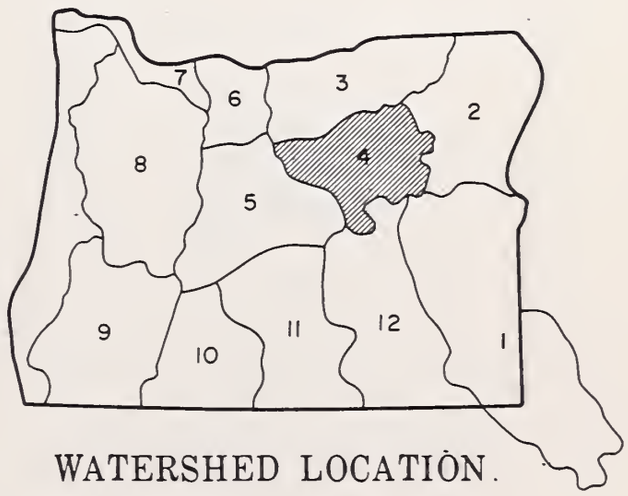
U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

NEAR AVERAGE TO ABOVE AVERAGE WATER SUPPLIES ARE FORECAST FOR WATER USERS IN THE JOHN DAY BASIN. THE SNOWPACK WAS REDUCED TO 90 PERCENT OF AVERAGE OVER THE BASIN. FEBRUARY PRECIPITATION WAS ONLY 64 PERCENT OF NORMAL. WATERSHED SOILS ARE WELL WETTED AND WILL ENHANCE RUNOFF FROM SPRING PRECIPITATION. THE JOHN DAY RIVER AT SERVICE CREEK FLOWED 114 PERCENT OF AVERAGE DURING FEBRUARY.

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	Average	Average



WATERSHED LOCATION.

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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average
Camas Creek near Ukiah	42	98	March-July		43
	32	91	April-Sept.		35
John Day at Prairie City	55	108	March-July		51
	49	107	April-Sept.		46
John Day, Middle Fork at Ritter	160	118	March-July		135
	140	121	April-Sept.		116
Strawberry near Prairie City	7.9	100	March-July		7.9
	8.4	100	April-Sept.		8.4
John Day, North Fork at Monument	780	114	March-July		682
	645	110	April-Sept.		589

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	Average [m]
John Day abv. Dayville	7	103	114
John Day, North Fork	2	107	114

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 [i]
John Day, North Fork	6	82	93
John Day abv. Dayville	4	81	90

(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

MARCH 1, 1971

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

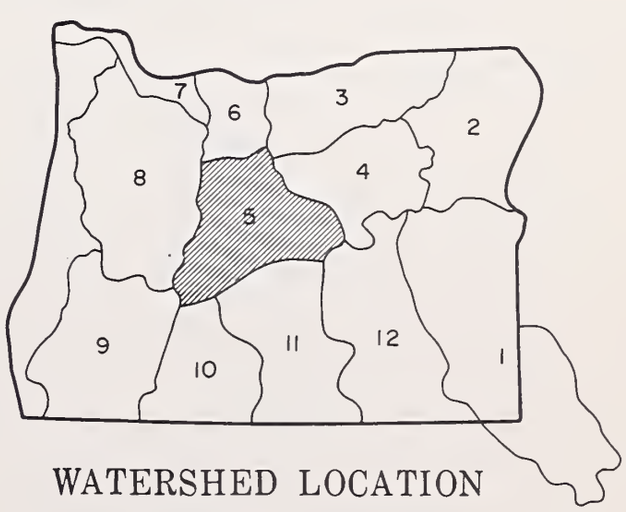
GENERAL OUTLOOK

AVERAGE TO ABOVE AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR WATER USERS IN THE AREA. THE SNOWPACK RANGED FROM 90 PERCENT OF AVERAGE ON THE CROOKED-OCHOCO WATERSHEDS TO 128 PERCENT ON THE DESCHUTES ABOVE WICKIUP. WATERSHED SOILS ARE WET AND WILL ENHANCE RUNOFF. FROM SPRING PRECIPITATION. FEBRUARY PRECIPITATION WAS 91 PERCENT OF NORMAL DURING FEBRUARY. CRANE PRAIRIE, CRESCENT LAKE AND WICKIUP RESERVOIRS HELD 90 PERCENT OF THE AVERAGE STORAGE ON MARCH FIRST. PRINEVILLE AND OCHOCO RESERVOIRS HELD 122 PERCENT OF AVERAGE. THE DESCHUTES AT MOODY FLOWED 95 PERCENT OF THE MARCH 1 AVERAGE.

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	Average	Average
Bear Creek	Average	Fair
Beaver Creek	Average	Fair
Camp Creek	Average	Fair
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creeks	Average	Fair
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Fair
North Unit Irrig. Dist.	Average	Fair
Ochoco Creek	Average	Fair
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrigation Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average



WATERSHED LOCATION

Report prepared by
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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Beaver Creek near Paulina	32	97	March-July		33
	17.3	86	April-Sept.		20
Crane Prairie Reservoir total Inflow [d]	119	121	March-July		98
	150	119	April-Sept.		126
Crescent at Crescent Lake [d]	28	108	March-July		26
	32	114	April-Sept.		28
Crooked near Post above Prineville Reservoir	134	96	March-July		140
	97	96	April-Sept.		101
Deschutes at Benham Falls [d]	430	109	April-July		393
	635	106	April-Sept.		596
Deschutes below Snow Creek	84	115	March-Sept.		73
	75	114	April-Sept.		66
Deschutes, Little near Lapine [d]	120	122	March-July		98
	120	126	April-Sept.		95
Ochoco Reservoir net Inflow	28	93	March-July		30
	20	87	April-Sept.		23
Odell near Crescent	36	120	April-Sept.		30
Squaw near Sisters	54	106	April-Sept.		51
Tumalo near Bend [d]	56	114	April-Sept.		49

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 [i]
Crane Prairie net Inflow	300	*	July 15
Deschutes at Bend	1500	*	July 1
Little Deschutes near La-Pine	400	June 22	June 7
	200	July 23	July 8

*Forecast issued April 1.

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Crane Prairie	55.3	45.6	45.0	46.6
Crescent Lake	86.9	46.0	41.4	49.2
Ochoco	47.5	40.5	40.7	27.5
Prineville	153.0	111.9	119.7	97.4
Wickiup	200.0	156.0	162.2	178.3

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [m]
Crooked R., Upper Deschutes River	3	103	107

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	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Crooked, Ochoco	4	98	92
Deschutes abv. Wickiup	3	146	122
Little Deschutes	4	164	128
Tumalo & Squaw Crs.	3	145	129

(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

MARCH 1, 1971

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

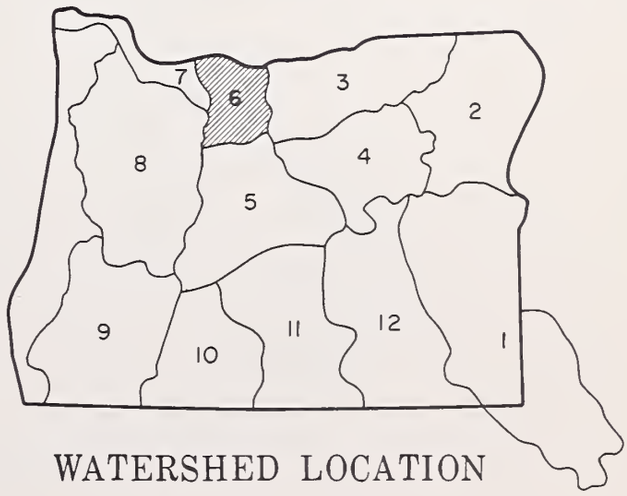
GENERAL OUTLOOK

ABOVE AVERAGE TO EXCELLENT WATER SUPPLIES ARE THE PROSPECT FOR WATER USERS IN THE HOOD RIVER VALLEY AND LOWER DESCHUTES AREA DURING THE COMING IRRIGATION SEASON. THE MOUNTAIN SNOWPACK IS 111 TO 136 PERCENT OF AVERAGE, DOWN ABOUT 25 PERCENT FROM LAST MONTH. PRECIPITATION WAS 73 PERCENT OF AVERAGE DURING FEBRUARY. WATERSHED SOILS WERE HOLDING AVERAGE AMOUNTS OF WATER ON MARCH 1. CLEAR LAKE (WASCO) RESERVOIR HELD 117 PERCENT OF AVERAGE AMOUNTS OF WATER ON MARCH 1.

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	Average
Dee Irrigation District	Excellent	Excellent
East Fork Irrig. Dist.	Excellent	Excellent
Farmers Irrigation Dist.	Excellent	Excellent
Hood River Irrigation Dist.	Excellent	Excellent
Juniper Flat	Excellent	Excellent
Middle Fork Irrig. Dist.	Excellent	Excellent
Mile Creeks	Excellent	Average
Mill Creek	Excellent	Average
Mount Hood Irrig. Dist.	Excellent	Excellent
Rock-Gate-Threemile Creeks	Excellent	Average
Tygh Creek	Excellent	Excellent
White River	Excellent	Excellent



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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Hood River near Hood River [d]	324	115	April-July		282
	370	110	April-Sept.		336
Hood, West Fork near Dee	163	116	April-July		140
	185	115	April-Sept.		161
White below Tygh Valley	141	110	April-July		128
	158	110	April-Sept.		144

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 [i]
Clear Branch Inflow	46*	July 15-31	

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Clear Lake (Wasco)	11.9	4.1	6.2	3.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [m]
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	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Hood River	6	141	136
Mile Creeks	3	76	111
White River	3	133	122

(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

MARCH 1, 1971

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

GENERAL OUTLOOK

ABOVE AVERAGE WATER SUPPLIES ARE THE OUTLOOK FOR THE MAIN STEM OF THE COLUMBIA RIVER. THE CANADIAN SNOWPACK IS 105 TO 125 PERCENT OF AVERAGE. IN THE U.S. PORTION OF THE BASIN THE SNOWPACK IS AVERAGE TO MUCH ABOVE AVERAGE IN ALL EXCEPT THE OCHOCO AND UMATILLA DRAINAGES IN OREGON, WHICH ARE 75 PERCENT OF AVERAGE. FEBRUARY WAS WARM AND DRY DURING THE FIRST THREE WEEKS AND THREE TO FIVE FEET OF NEW SNOW FELL ON THE CASCADES OF WASHINGTON AND OREGON DURING THE LAST WEEK. THE RIVER STAGE OF THE LOWER COLUMBIA WILL BE ABOVE AVERAGE FOR MAY AND JUNE.

COLUMBIA RIVER BASIN

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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 *i*
Sandy River	2	134	122

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average *i*
Columbia at The Dalles[d]	86,500	119	April-June		72,406
	123,000	117	April-Sept.		105,176
Sandy River near Marmot	399	111	April-July		359
	454	110	April-Sept.		413

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW[d] (1,000 A.F.) APR.— SEPT.	APR.— JUNE	MAY—JUNE	PEAK (1,000 c.f.s)	DATE
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

MARCH 1, 1971

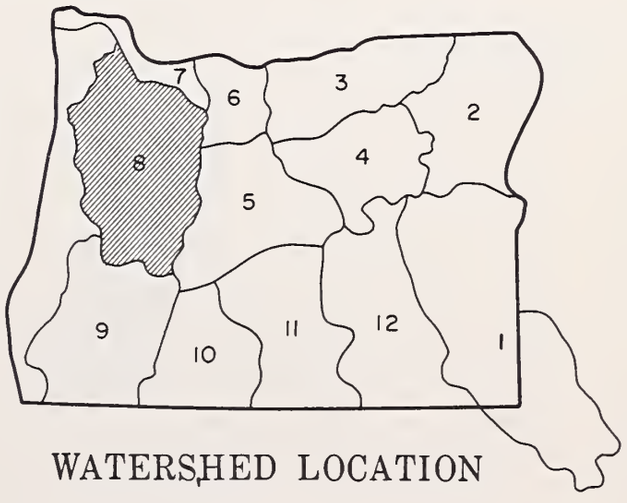
U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

WILLAMETTE VALLEY WATER USERS WILL EXPERIENCE EXCELLENT WATER SUPPLIES THIS SUMMER. THE SNOW COVER IN THE COAST RANGE AND THE CASCADES IS WELL ABOVE AVERAGE FOR THIS TIME OF YEAR. LATE FEBRUARY STORMS BROUGHT ACCUMULATION OF 3 TO 5 FEET OF NEW SNOW ON AN ALREADY ABOVE AVERAGE SNOWPACK. SOILS ARE WELL WETTED AND WILL BENEFIT THE SNOW MELT RUNOFF. PRECIPITATION IN FEBRUARY WAS 94 PERCENT OF AVERAGE AND HAS BEEN 20 PERCENT ABOVE NORMAL SINCE NOVEMBER. RESERVOIR STORAGE IS WELL ABOVE AVERAGE. STREAMFLOW WILL BE 110 TO 125 PERCENT OF THE USUAL THIS NEXT SPRING AND SUMMER.

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	Average
Clackamas	Excellent	Excellent
McKenzie	Excellent	Excellent
Molalla	Excellent	Average
Santiam, North	Excellent	Excellent
Santiam, South	Excellent	Excellent
Willamette, Coast Fork	Excellent	Excellent
Willamette, Middle Fork	Excellent	Excellent



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Clackamas at Big Bottom	150	112	April-July		134
	177	107	April-Sept.		166
Clackamas at Estacada	774	112	April-July		689
	881	110	April-Sept.		800
Clackamas above Three Lynx	574	111	April-July		517
	671	110	April-Sept.		610
McKenzie at McKenzie Bridge	511	110	April-July		465
	660	107	April-Sept.		614
McKenzie near Vida	1200	110	April-July		1087
	1430	108	April-Sept.		1321
McKenzie, South Fork near Rainbow	279	126	April-July		221
	306	121	April-Sept.		252
Oak Grove Fork above Power Intake	145	116	April-July		125
	193	118	April-Sept.		163
Row near Dorena	134	126	April-July		106
	138	125	April-Sept.		110
Santiam, North at Mehama [d]	975	122	April-July		800
	1090	121	April-Sept.		901
Santiam, South at Waterloo	685	115	April-July		596
	718	113	April-Sept.		633
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge [d]	853	118	April-July		725
	950	115	April-Sept.		828
Willamette, No. Fk. of Mid. Fk. near Oakridge	231	117	April-July		198
	249	114	April-Sept.		219
Willamette at Salem [d]	5300	113	April-July		4696
	5800	112	April-Sept.		5199

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Blue River	85.6*	47.9	- -	- -
Cottage Grove	30.0*	21.1	8.3	9.3
Cougar	155.2*	85.9	51.7	- -
Detroit	299.9*	155.6	132.8	94.9
Dorena	70.5*	48.2	18.7	21.1
Fall Creek	115.0*	65.5	4.2	- -
Fern Ridge	94.2*	49.4	36.4	33.4
Foster	30.0*	22.8	7.4	- -
Green Peter	270.0*	133.4	109.2	- -
Hills Creek	200.0*	118.9	95.4	63.3
Lookout Point	337.2*	194.4	128.4	116.9
Timothy Lake	61.7	59.9	59.1	47.8

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

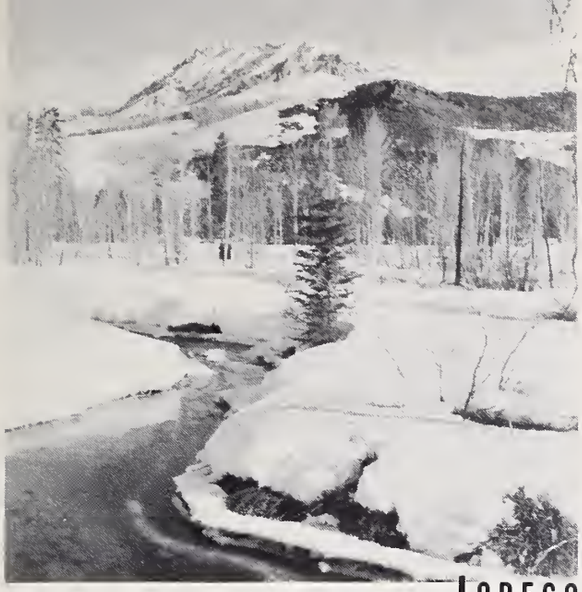
SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Clackamas River	2	179	139
McKenzie River	3	284	152
Row River	2	289 [e]	171 [e]
Santiam River	4	265	189
Willamette, Mid. Fk.	5	197	134

[e] Estimated.

(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

MARCH 1, 1971

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

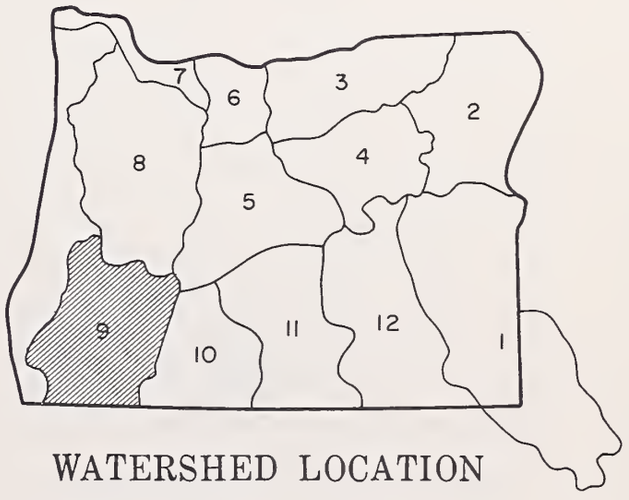
GENERAL OUTLOOK

EXCELLENT TO NEAR AVERAGE IS THE WATER SUPPLY OUTLOOK FOR THE ROGUE AND UMPQUA VALLEYS. RESERVOIRS ARE STORING ABOVE AVERAGE AMOUNTS AND WILL PROVIDE USERS WITH EXCELLENT SUPPLIES. LATE FEBRUARY STORMS BROUGHT HEAVY AMOUNTS OF SNOW TO THE MOUNTAINS. SNOW COURSES MEASURED BEFORE THE HEAVY SNOWFALL STARTED WERE BELOW AVERAGE, WHILE THOSE MEASURED DURING THE STORM WERE ABOVE AVERAGE. PRECIPITATION DURING THE MONTH WAS 94 PERCENT OF NORMAL. SOILS ARE WETTER THAN USUAL. MOST STREAMS WILL FLOW IN THE 100 TO 120 PERCENT OF AVERAGE RANGE NEXT SUMMER.

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	Excellent	Average
Butte Creek, Big	Excellent	Average
Butte Creek, Little	Excellent	Average
Cow Creek	Average	Average
Deer Creek	Average	Average
Elk Creek	Average	Average
Emigrant Creek (abv. Res.)	Excellent	Average
Evans Creek	Average	Average
Gold Hill Irrigation Dist.	Excellent	Average
Grants Pass Irrig. District	Excellent	Average
Grave Creek	Average	Average
Illinois River, East Fork	Average	Average
Illinois River, West Fork	Average	Average
Jump-off-Joe Creek	Average	Average
Neil Creek	Average	Average
Red Blanket Creek	Excellent	Average
Rogue River	Excellent	Average
Sucker Creek	Average	Average
Table Rock Irrig. Dist.	Excellent	Average
Thompson Creek	Average	Average
Wagner Creek	Average	Average
Williams Creek	Average	Average



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Applegate near Copper	135	96	April-Sept.		140
Clearwater above Trap Creek [d]	70	96	April-Sept.		73
Fourmile Lake net Inflow [d]	6.7	140	March-Sept.		4.8
	6.0	146	April-Sept.		4.1
Hyatt Reservoir net Inflow [d]	6.7	129	April-Sept.		5.2
Illinois River near Kerby	145	95	April-July		205
	200	95	April-Sept.		211
Little Butte, N. Fk. at Fish Lk. nr. Lake Cr. [d]	13.0	90	April-Sept.		14.4
Little Butte, South Fork near Lake Creek	40	121	April-July		33
Rogue above Prospect	321	119	April-July		269
	376	115	April-Sept.		326
Rogue, South Fork near Prospect [d]	72	116	April-July		62
	84	114	April-Sept.		74
Rogue River below South Fork	600	105	April-July		570 [h]
	745	105	April-Sept.		708 [h]
Rogue at Raygold near Central Point	818	105	April-July	537	781
	987	105	April-Sept.	672	941
Rogue at Grants Pass	920	98	April-Sept.		940
Umpqua, No. blw. Lemolo Res. nr Toketee Falls [d]	186	106	April-Sept.		176

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 [i]
Little Butte Creek, South Fork	100	June 2	May 27
Rogue at Raygold	1200	Sept. 3	Aug. 7

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Emigrant Lake	39.0	28.3	31.9	28.3*
Fish Lake	7.8	6.0	5.8	5.7
Fourmile Lake	16.1	8.5	11.2	9.9
Howard Prairie	60.0	56.1	56.1	26.1
Hyatt Prairie	16.1	14.9	14.8	10.7

*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	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Applegate	3	97	82
Bear Creek	1	---	158
Butte Creek	4	327	142
Illinois River	3	150	66
North Umpqua	3	281	126
Rogue River	6	148	115

(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
KLAMATH WATERSHEDS
OREGON

as of

MARCH 1, 1971

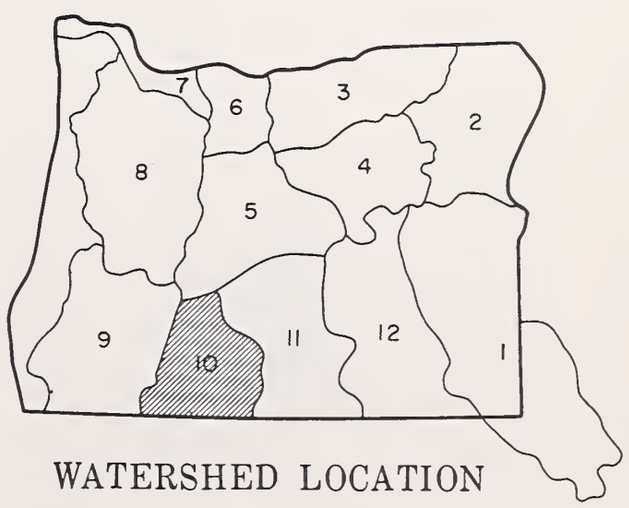
U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

EXCELLENT TO AVERAGE IS THE WATER SUPPLY OUTLOOK FOR KLAMATH COUNTY. RESERVOIR STORAGE IS ABOVE AVERAGE, CLOSE TO LAST YEAR'S EXCELLENT AMOUNTS, AND WILL PROVIDE PLENTY OF WATER TO USERS WITH ACCESS. THE SNOW COVER IS NEAR 110 PERCENT EXCEPT IN THE EASTERN PART OF THE COUNTY WHERE IT IS NEAR 70 PERCENT OF AVERAGE. SOILS ARE WETTER THAN USUAL AND SHOULD BENEFIT THE SNOWMELT RUNOFF. PRECIPITATION DURING FEBRUARY WAS 76 PERCENT OF AVERAGE, REFLECTING THE DROP IN THE SNOW-PACK FROM LAST MONTH. MOST STREAMS WILL FLOW NEAR NORMAL AMOUNTS THIS SUMMER. LOW ELEVATION STREAMS IN THE EASTERN PART OF THE COUNTY WILL PRODUCE BELOW AVERAGE AMOUNTS.

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

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



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Clear Lake Reservoir Inflow[k]	60	94	March-June		64
Gerber Reservoir Inflow	24	75	March-June		32
Sprague near Chiloquin	310	104	March-July		299
	288	97	April-Sept.		296
Upper Klamath Lake net Inflow	673	96	March-July	473	701
	610	98	April-Sept.	345	619
Williamson below Sprague River	510	100	March-July		510
	475	100	April-Sept.		475

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [m]
Upper Klamath	2	95	108

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Clear Lake	440.2	341.3	352.6	227.3
Gerber	94.0	79.6	81.7	48.6[m]
Upper Klamath Lake	584.0	446.3	488.5	421.5

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	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Lost River	4	104	88
Sprague River	3	130	100
Upper Klamath	8	149	97
Williamson River	3	161	108

(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

MARCH 1, 1971

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

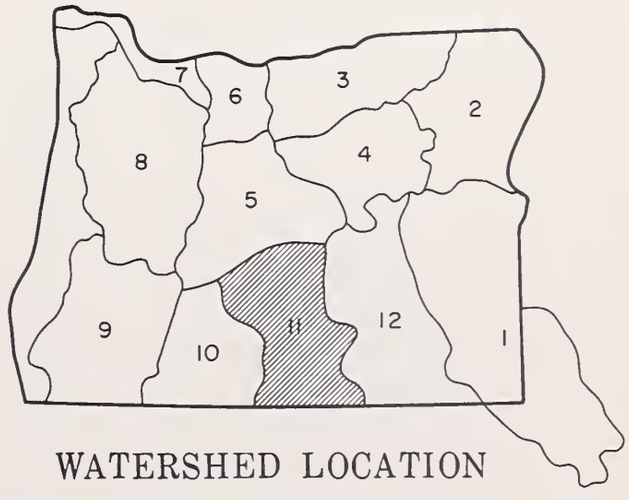
GENERAL OUTLOOK

ABOVE AVERAGE TO NEAR AVERAGE IS THE WATER SUPPLY OUTLOOK FOR LAKE COUNTY THIS COMING SUMMER. STORED WATER SUPPLIES ARE EXCELLENT WITH PRINCIPAL RESERVOIRS NEARLY FULL, A SITUATION THAT IS SIMILAR TO LAST YEAR AT THIS TIME. NEAR AVERAGE SUPPLIES WILL BE AVAILABLE FOR USERS DEPENDENT ON DIRECT DIVERSION. THE SNOW COVER IS NEAR NORMAL ON MOST WATERSHEDS. SOME LOW ELEVATION WATERSHEDS HAVE ONLY A FAIR SNOWPACK. PRECIPITATION FOR FEBRUARY WAS POOR AND 44 PERCENT OF AVERAGE. MOST STREAMS WILL FLOW NEAR NORMAL EXCEPT FOR THOSE AT LOWER ELEVATIONS WHICH WILL BE BELOW NORMAL.

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	Average	Fair
Crooked Creek	Average	Fair
Deep Creek	Average	Average
Dry Creek	Average	Fair
East Side Goose Lake	Average	Average
Guano Lake	Average	Fair
Honey Creek	Average	Average
Lakeview Water Users Assn.	Excellent	Excellent
Rock Creek (Hart Mountain)	Average	Fair
Silver-Buck Creeks	Average	Average
Summer Lake	Average	Fair
Thomas Creek	Average	Fair
Twentymile Creek	Fair	Fair
Warner Lakes	Fair	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average i
Chewaucan near Paisley	91	100	March-July		91
Deep above Adel	74	104	March-July		71
Drews Reservoir net Inflow [d]	39	85	March-July		46
Honey Creek near Plush	18.0	100	March-July		18.0
Silver Creek near Silver Lake	21	100	March-July		21
Twentymile near Adel	19	79	March-July		24

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	Average m
Chewaucan, Silver Creek, Drew Creek	1	89	107
Honey, Deep, 20-mile Crs.	1	107	107

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

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average i
Cottonwood	8.7	7.6	8.7	3.2*
Drews	63.0	61.8	63.2	38.3
Thompson Valley	19.5	17.8	- -	- -

*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 i
Chewaucan River	3	127	98
Deep Creek	3	89	110
Drew Creek	3	173	82
Honey Creek	3	100	91
Silver Creek	3	450	108
Twentymile Creek	3	88	68

(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

MARCH 1, 1971

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

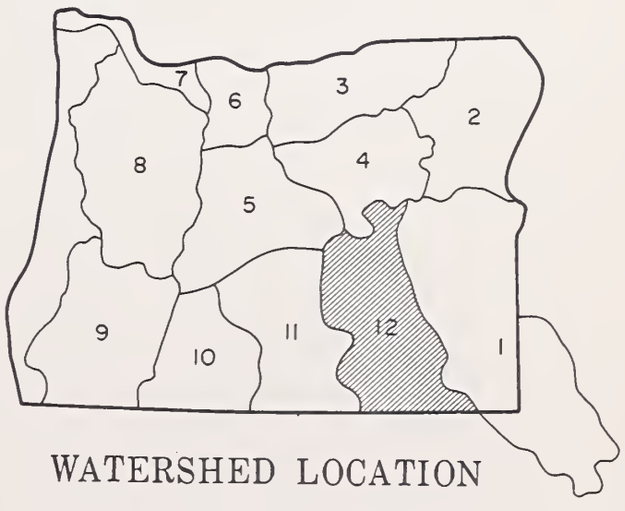
GENERAL OUTLOOK

MOST OF HARNEY COUNTY WILL HAVE NEAR AVERAGE WATER SUPPLIES THIS SUMMER. SOME SHORTAGES WILL OCCUR ON STREAMS SUCH AS RIDDLE CREEK WHERE THE SNOW MELTED AND RAN OFF IN JANUARY. SNOW COVER ON THE HIGHER WATERSHEDS SUCH AS THE SILVIES AND DONNER UND BLITZEN ARE A LITTLE ABOVE AVERAGE. SOILS ARE WELL WETTED AND IN BETTER CONDITION THAN LAST YEAR AT THIS TIME. FEBRUARY WAS A VERY DRY MONTH AS THE PRECIPITATION WAS ONLY 39 PERCENT OF AVERAGE. MOST STREAMS WILL FLOW AVERAGE TO ABOVE AVERAGE AMOUNTS THIS SUMMER EXCEPT FOR THE LOWER ELEVATION ONES, AND THEY WILL PRODUCE HALF OF NORMAL OR LESS.

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	Average	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	Poor
Whitehorse Creek	Fair	Poor



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Donner und Blitzen near Frenchglen	57	100	March-July	52	57
	55	100	April-Sept.	51	55
Silver near Riley	18.0	100	April-July		17.9
Silvies near Burns	128	127	March-July		101
	106	128	April-Sept.		83
Trout near Denio	4.3	56	March-July		7.7
	4.1	55	April-Sept.		7.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	Average [m]
Silvies River, Silver Cr.	3	102	107
Trout Cr., Donner und Blitzen River	2	112	122

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 [i]
Donner und Blitzen R.	4	96	108
Silver Creek	3	79	88
Silvies River	4	80	106
Trout Creek	3	27[e]	25[e]

[e]Estimated.

(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

MARCH 1, 1971

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR: Date of Survey	Snow Depth (In.)	Water Cont (In.)	PAST REC.: Water Content (inches) Last Yr.	Ave.[i]
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	2/26	22	7.5	6.3	4.2[h]
Battle Creek[e] (Ida.)	Late	report		0.4	3.1[m]
Bear Creek[e] (Nev.)	3/2	72	22.1	18.8	15.3[h]
Big Bend (Nev.)	2/23	27	8.3	9.2	6.9
Blue Mountain Springs	2/24	45	14.8	19.8	13.7
Blue Mtn. Springs Pillow	2/24	39	13.3	- -	- -
Buck Pasture[e]	Late	report		0.0	2.3[m]
Buckskin, Lower (Nev.)	2/23	20	7.1	8.2	6.7
Buckskin, Upper (Nev.)	2/23	14	4.7	13.1	7.2[h]
Bull Basin[e] (Ida.)	Late	report		0.0	1.1[m]
Bully Creek[e]	Late	report		2.1	2.7[m]
Call Meadow[e]	Late	report		8.6	3.5[m]
Columbia Basin[e] (Nev.)	3/2	21	6.1	6.6	- -
Cottonwood-Indian[e]	Late	report		0.0	0.7[m]
Crane Prairie	2/23	27	9.0	11.0	8.2
Crow Camp[e]	Late	report		0.0	1.0[m]
Disaster Peak (Nev.)	2/25	28	10.8	12.3	12.6
Eldorado Pass	2/26	11	3.8	0.7	2.7[h]
Fawn Creek[e] (Nev.)	3/2	9	2.6	2.6	- -
Fish Creek	3/1	72	25.9	24.9	19.6[h]
Flag Prairie[e]	Late	report		7.0	3.4[m]
Fox Creek (Nev.)	3/2	41	12.3	9.6	7.9[h]
Fry Canyon (Nev.)	2/23	10	3.7	7.9	6.0
Gold Creek (Nev.)	2/23	18	5.5	6.0	4.7
Granite Peak (Nev.)	2/24	41	16.3	18.3	10.7
Hyde Pasture[e] (Ida.)	Late	report		4.4	4.2[m]
Jack Creek, Lower (Nev.)		[c]			
Jack Creek, Upper (Nev.)	3/2	18	5.2	5.9	8.0
Jack Peak (Nev.)		[c]			
Lake Creek R. S.	2/23	30	9.7	13.6	9.2
Laurel Draw (Nev.)	2/24	13	4.0	6.4	6.2[h]
Logan Valley[e]	Late	report		9.7	6.3[m]
Lookout Butte[e]	Late	report		0.0	0.2[m]
Louse Canyon[e]	Late	report		0.4	3.1[m]
Martin Creek (Nev.)	2/23	20	7.1	9.3	7.8
Merritt Mountain[e] (Nev.)	3/2	9	2.6	7.9	- -
Midas (Nev.)	3/2	3	0.9	0.0	2.5[h]
Mud Flat (Ida.)	2/26	21	6.3	6.2	4.7[h]
Oregon Canyon[e]	Late	report		4.4	5.2[m]
Quinn Ridge[e] (Nev.)	Late	report		0.0	2.3[m]
Red Canyon[e] (Ida.)	Late	report		7.8	4.8[m]
Rock Spring	2/24	18	5.8	5.8	4.8
Rodeo Flat (Nev.)	2/23	2	0.4	6.2	5.5
76 Creek (Nev.)	3/2	41	12.3	15.4	9.1[h]
Silver City (Ida.)	3/2	49	15.7	15.5	12.5
Silvies	3/1	31	10.2	11.4	10.7[h]
South Mountain #2 (Ida.)	3/2	34	12.7	13.2	9.5
Stag Mountain[e] (Nev.)	3/2	9	2.6	1.9	- -
Stinking Water	2/24	T	T	0.0	2.7[h]
Succor Creek[e] (Ida.)	Late	report		4.4	5.0[m]
Taylor Canyon (Nev.)	2/23	5	3.1	3.3	4.2
Toe Jam[e] (Nev.)	3/2	21	6.1	8.9	- -
Tremewan Ranch (Nev.)	2/23	0	0.0	0.0	1.1
Triangle[e] (Ida.)	Late	report		0.0	0.6[m]
Trout Creek[e]	Late	report		6.7	6.3[m]
"V" Lake[e]	Late	report		4.9	3.6[m]
Vaught Ranch[e] (Ida.)	Late	report		3.0	- -
War Eagle[e] (Ida.)	Late	report		29.1	- -

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR: Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC.: Water Content (inches) Last Yr.	Ave.[i]
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1	2/25	105	35.4	29.8	31.2
Aneroid Lake #2	2/25	87	33.0	24.8	26.9
Anthony Lake	2/26	70	24.8	26.5	22.4
Bald Mountain[e] (Ore.)	3/1	69	22.1	22.4	19.9[m]
Beaver Reservoir	2/24	28	7.4	6.5	9.2
Beaver Reservoir (Alt.)	2/24	34	9.5	- -	- -
Big Sheep[e]	3/1	80	25.6	20.3	21.2[m]
Blue Mtn. Summit	2/26	30	8.5	8.2	7.2
Bourne	2/25	46	15.1	18.5	13.7
County Line	2/26	11	2.5	1.9	5.4
Dooley Mountain	2/23	29	9.8	9.1	7.2
Eilertson Meadows	2/24	30	12.2	13.2	9.7
Eldorado Pass	2/26	11	3.8	0.7	2.7[h]
Gold Center	2/25	42	14.3	15.3	11.0
Goodrich Lake	Late	report		45.0	27.9[h]
Intake House	2/24	36	11.5	11.3	- -
Little Alps	2/26	40	12.6	12.7	11.2[h]
Little Antone	2/26	21	6.8	7.2	- -
Lucky Strike	2/25	30	9.2	10.7	10.7[h]
Meacham	2/24	12	3.6	5.0	8.9
Mirror Lake[e]	3/1	192	61.4	68.4	56.5[m]
Moss Spring	3/1	82	26.8	21.2	19.9
Power Plant	2/24	20	6.4	5.2	- -
Schneider Meadows	2/26	103	37.4	32.2	26.4
Schoolmarm	2/26	5	1.1	0.9	4.6
Standley[e]	3/1	78	25.0	32.0	24.3[m]
Taylor Green	3/1	61	19.0	16.2	14.4[h]
Tipton	2/26	34	10.5	12.2	8.9
Tipton Snow Pillow	2/26	53	14.8	- -	- -
Tollgate	2/25	57	22.8	26.2	21.5
TV Ridge[e]	3/1	59	18.9	20.9	- -
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	2/26	22	6.9	9.6	9.6
Battle Mountain Summit	2/24	T	T	T	1.8[m]
Blue Mountain Camp	2/25	23	9.4	13.0	12.3[h]
Emigrant Springs	2/24	T	T	0.0	4.4
Lucky Strike	2/25	30	9.2	10.7	10.7[h]
Meacham	2/24	12	3.6	5.0	8.9
Tollgate	2/25	57	22.8	26.2	21.5
Weston Mountain	2/25	T	T	0.0	T[m]

BASIC DATA SUPPLEMENT 1

MARCH 1, 1971

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR: Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC.: Water Content (inches) Last Yr.	Ave.[i]
UPPER JOHN DAY WATERSHEDS					
Anthony Lake	2/26	70	24.8	26.5	22.4
Arbuckle Mountain	2/26	22	6.9	9.6	9.6
Battle Mountain Summit	2/24	T	T	T	1.8[m]
Beech Creek Summit	2/24	13	4.3	1.4	4.4
Blue Mountain Springs	2/24	45	14.8	19.8	13.7
Blue Mtn. Springs Pillow	2/24	39	13.3	- -	- -
Blue Mountain Summit	2/26	30	8.5	8.2	7.2
Derr	2/21	20	6.8	7.5	8.3[h]
East Fork Canyon[e]	Late report			- -	9.0[m]
Gold Center	2/25	42	14.3	15.3	11.0
Indian Creek Butte[e]	Late report			31.9	19.3[m]
Izee Summit	2/25	25	6.6	9.0	7.2
Lucky Strike	2/25	30	9.2	10.7	10.7[h]
Marks Creek	3/1	11	1.7	T	2.9
Ochoco Meadows	2/26	32	7.9	7.3	8.1
Olive Lake	3/1	57	18.8	19.4	16.5
Schoolmarm	2/26	5	1.1	0.9	4.6
Snow Mountain	2/25	38	11.6	13.7	11.0[h]
Starr Ridge	2/28	18	5.2	6.0	4.9
Tipton	2/26	34	10.5	12.2	8.9
Tipton Snow Pillow	2/26	53	14.8	- -	- -
Williams Ranch		[b]		0.0	1.3[m]
UPPER DESCHUTES, CROOKED WATERSHEDS					
Black Pine Spring	2/26	12	2.1	1.7	3.4
Caldwell Ranch	2/25	36	10.9	4.9	11.5[h]
Cascade Summit	3/1	120	35.3	17.6	24.0
Chemult	3/2	35	10.8	6.5	9.7
Deer Creek	2/25	66	18.4	12.0	- -
Derr	2/21	20	6.8	7.5	8.3[h]
Hogg Pass	2/26	127	45.5	28.4	33.1
Hungry Flat	3/1	30	10.2	1.0	5.3
Irish-Taylor	3/1		40.0[g]	25.9	31.5[h]
Irish-Taylor Pillow	3/2		43.9	- -	- -
Marks Creek	3/1	11	1.7	T	2.9
Mowich	2/22	14	4.2	1.2	4.8[h]
New Crescent Lake	2/22	40	13.3	9.7	12.9
New Dutchman Flat #2	3/1	140	54.0	41.0	43.3
Ochoco Meadows	2/26	32	7.9	7.3	8.1
Snow Mountain	2/25	38	11.6	13.7	11.0[h]
Snow Mountain Pillow	2/25	37	11.3	- -	- -
Tamarack	2/25	14	3.9	3.5	4.8
Tangent	3/1	79	27.2	18.3	19.8
Three Creek Butte	2/26	42	11.6	7.7	9.4[h]
Three Creek Meadow	2/26	61	19.1	15.3	16.0
Three Creek Mdw. Pillow	2/26	85	25.5	- -	- -
Waldo Lake	2/23	83	30.1	18.1	25.5[h]
Willamette Pass	2/24	112	43.7	29.2	33.7[h]
Willamette Pass Pillow	3/2		48.8	- -	- -

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR: Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC.: Water Content (inches) Last Yr.	Ave.[i]
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadow	2/25	33	10.1	10.9	9.6[h]
Clear Lake	2/23	24	9.4	7.8	8.2
Clear Lake (Experimental)	2/23	40	14.6	12.5	14.5[h]
Cooper Spur	3/1	46	12.6	9.4	10.8[h]
Cooper Spur (Alternate)	3/1	50	14.3	12.6	- -
Greenpoint Reservoir	Late report			17.1	12.5
Knebal Springs	2/25	16	5.8	8.4	6.2[h]
Parkdale	3/2	6	1.0	0.3	- -
Phlox Point	2/24	140	59.5	45.3	49.5
Red Hill	3/4	150	52.5	29.2	31.0
Still Creek	2/23	67	23.6	16.6	18.4
Still Creek (Alt. #2)	2/23	61	22.5	- -	- -
Switchback	3/2	60	19.2	13.8	11.5[m]
Tilly Jane	2/20	94	41.6	33.0	32.6
Ulrich Ranch Junction	2/25	12	3.9	6.8	2.1[m]
Umbrella Falls	3/2	208	77.1	51.2	- -
Upper Valley	3/1	16	2.4	4.6	- -
WILLAMETTE WATERSHEDS					
Cascade Summit	3/1	120	35.3	17.6	24.0
Champion	Late report			14.7	21.9
Clackamas Lake	3/1	63	16.4	8.8	10.0
Clear Lake	2/23	24	9.4	7.8	8.2
Clear Lake (Experimental)	2/23	40	14.6	12.5	14.5[h]
Dead Horse Grade	3/2	70	21.1	2.3	15.2
Detroit Town	2/26	21	3.0	0.0	0.5
Detroit Dam	2/26	17	2.7	0.0	0.5
Golden Curry Creek	Late report			1.0	4.7
Hogg Pass	2/26	127	45.5	28.4	33.1
Lake Harriet	3/2	18	4.0	- -	1.6[m]
Laurel Mountain	Late report			0.8	- -
Layng Creek	3/1	19	2.0	0.0	T
Lost Creek Ranch	3/2	38	10.3	0.0	3.0[h]
Lund Park	3/1	24	2.4	0.0	0.2
Marion Forks	2/26	75	21.0	2.4	11.2[h]
Marys Peak	2/26	54	16.0	0.0	9.0[m]
Marys Peak (Alternate)				0.0	- -
McCredie Springs	3/1	15	1.4	0.0	0.2
McKenzie	3/2	136	54.0	27.5	35.1
McKenzie Bridge	3/2	17	2.8	0.0	0.2
Meridian Dam	3/1	0	0.0	0.0	0.0
Mill City	2/26	7	1.8	0.0	0.0
Oakridge	3/1	3	0.3	0.0	T
Peavine Ridge	3/1		21.7[g]	9.6	14.1[h]
Peavine Ridge Pillow				- -	- -
Phlox Point	2/24	140	59.5	45.3	49.5
Railroad Overpass	3/1	18	2.0	0.0	2.4
Salt Creek Falls	3/1	83	20.5	1.8	12.8
Santiam Junction	2/26	95	29.1	9.9	19.2
Still Creek	2/23	67	23.6	16.6	18.4
Still Creek Alternate #2	2/23	61	22.5	- -	- -
Timothy Lake				11.2	9.6[m]
Valsetz Summit				0.1	- -
Vida	3/2	9	1.4	0.0	0.0
Waldo Lake	2/23	83	30.1	18.1	25.5[h]
Weaver Creek	Late report			0.0	0.8
White Branch Slide	3/2	38	9.7	0.0	5.3
Whitewater Bridge	2/26	48	12.2	0.0	3.4
Willamette Pass	2/24	112	43.7	29.2	33.7[h]
Willamette Pass Pillow	3/2		48.8	- -	- -

BASIC DATA SUPPLEMENT 1

MARCH 1, 1971

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR: Date of Survey	Snow Depth (In.)	Water Cont (In.)	PAST REC.: Water Content (inches) Last Yr.	Ave.[i]
ROGUE, UMPQUA WATERSHEDS					
Althouse	2/26	17	4.5	0.9	6.0
Althouse #2	2/26	21	5.6	0.4	- -
Annie Spring	3/2	139	45.1	36.8	36.3
Beaver Dam Creek	3/2	66	19.5	4.0	9.6[m]
Big Red Mountain	2/25	77	25.1	26.7	26.6
Billie Creek Divide	2/25	63	19.9	12.0	18.4
Caliban	2/25	83	28.8	33.3	- -
Champion		[b]		14.7	21.9
Cold Springs Camp	2/25	112	36.2	25.4	27.5[h]
Cold Springs Camp Pillow	3/2		32.1	- -	- -
Deadwood Junction	3/2	48	12.2	T	8.7[h]
Diamond-Crater Summit	2/22	93	35.4	23.7	30.5[h]
Diamond-Crater Sum. Alt.	2/22	86	30.3	22.2	- -
Diamond Lake	2/22	58	20.7	14.4	18.5
Fish Lake	2/25	56	16.6	4.4	11.7[h]
Fourmile Lake	2/25	63	22.8	15.8	20.6[h]
Grayback Peak	2/23	50	17.8	14.6	24.9
Howard Prairie	3/1	46	11.8	1.4	8.4[h]
Hyatt Prairie	3/2	43	10.7	T	7.4[h]
King Mountain #1	2/22	31	11.3	0.8	- -
King Mountain #2	2/22	19	7.2	0.0	- -
King Mountain #3	2/22	1	0.5	0.0	- -
King Mountain #4	2/22	0	0.0	0.0	- -
King Mountain #5	2/22	0	0.0	0.0	- -
King Mountain #6	2/22	0	0.0	0.0	- -
Little Red Mountain	2/25	58	17.2	20.7	21.6
Mt. Ashland Switchback	2/25	96	32.5	30.3	- -
Mule Creek	2/25	24	7.2	0.0	- -
North Umpqua	2/26	54	16.1	3.8	12.0[h]
Page Mountain	2/26	7	0.9	0.0	4.3[h]
Park Headquarters	3/2	177	60.3	51.8	47.5
Red Butte #1	2/24	40	15.4	1.1	10.8[h]
Red Butte #2	2/24	19	7.3	0.5	7.2[h]
Red Butte #3	2/24	9	3.2	0.0	7.2[h]
Red Butte #4	2/24	T	T	0.0	2.4[h]
Red Butte #5	2/24	0	0.0	0.0	T[m]
Red Butte #6	2/24	0	0.0	0.0	0.0[m]
Seven Lakes #2	2/23	84	33.3	34.9	32.1[h]
Seven Mile	2/23	72	26.6	- -	- -
Silver Burn	2/25	55	15.2	0.2	11.3
Siskiyou Summit	2/26	26	9.0	T	5.7
Siskiyou Summit Alt. #2	2/26	28	9.6	0.8	- -
Ski Bowl Road	2/25	76	28.3	22.8	- -
South Fork Canal	2/25	21	5.8	0.0	1.7
Trap Creek	2/26	46	14.4	T	10.0[h]
Whaleback	2/25	98	30.9	18.8	27.5

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR: Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC.: Water Content (inches) Last Yr.	Ave.[i]
KLAMATH WATERSHEDS					
Annie Spring	3/2	139	45.1	36.8	36.3
Beatty (PP&L)		[b]		0.0	0.1[m]
Billie Creek Divide	2/25	63	19.9	12.0	18.4
Bly Mountain	2/24	19	5.8	1.4	6.3[h]
Bly 101 Ranch (PP&L)		[b]		0.0	1.0[m]
Chemult	3/2	35	10.8	6.5	9.7
Chiloquin (PP&L)	2/28	4	0.6	0.0	0.5
Cold Springs Camp	2/25	112	36.2	25.4	27.5[h]
Cold Springs Camp Pillow	3/2		32.1	- -	- -
Crazyman Flat[e]	2/26	22	8.4	9.4	7.7[m]
Crowder Flat[e] (Calif.)	2/26	5	0.8	0.0	2.0[m]
Crystal (PP&L)	2/27	26	10.5	0.0	7.6
Diamond-Crater Summit	2/22	93	35.4	23.7	30.5[h]
Diamond-Crater Sum. Alt.	2/22	86	30.3	22.2	- -
Diamond Lake Jct. (97)	2/22	22	7.3	2.4	6.2[h]
Dog Hollow[e]	2/26	0	0.0	0.0	0.4[m]
Finley Corrals[e]	2/26	44	15.0	15.1	12.6[m]
Fort Klamath (PP&L)	2/27	5	0.6	0.0	3.1
Fourmile Lake	2/25	63	22.8	15.8	20.6[h]
Gerber	3/1	3	0.5	1.6	1.8[h]
Harriman (PP&L)	2/28	23	7.0[g]	0.0	2.7[m]
Hyatt Prairie Reservoir	3/2	43	10.7	T	7.4[h]
Kirk (PP&L)		[b]		- -	5.5[m]
Lake of the Woods	2/25	30	8.1	3.4	10.7
Park Headquarters	3/2	177	60.3	51.8	47.5
Pelican Guard Station	2/25	7	0.9	0.0	3.1[h]
Quartz Mountain	2/25	14	4.8	2.1	5.8
Quartz Mountain (Extension)	2/25	15	4.5	2.4	- -
Seven Lakes #2	2/23	84	33.3	34.9	32.1[h]
Seven Mile	2/23	72	26.6	- -	- -
State Line[e] (Calif.)	2/26	18	5.8	2.8	7.5[m]
Strawberry	2/25	18	5.7	4.6	6.6[h]
Summer Rim	2/26	42	15.5	16.0	13.8
Summer Rim Snow Pillow	2/26	48	16.3	- -	- -
Sun Mountain	2/26	60	21.1	18.3	20.8
Sycan Flat[e]	2/26	22	8.4	1.8	5.9[m]
Taylor Butte	2/24	15	4.8	1.6	5.3[h]
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	3/2	42	14.0	10.1	9.5
Bald Mountain (Nev.)	2/26	2	0.3	2.0	3.1
Bear Flat Meadow[e]	2/26	24	8.2	9.3	8.2[m]
Camas Creek	2/26	27	8.5	6.6	9.5
Cedar Pass (Calif.)	3/3	43	12.9	13.0	12.3
Colvin Creek[e]	2/26	8	1.2	1.1	- -
Cox Flat[e]	2/26	12	4.1	1.4	6.5[m]
Crowder Flat[e] (Calif.)	2/26	5	0.8	0.0	2.0[m]
Dismal Swamp[e] (Calif.)	2/26	36	12.2	13.0	13.4[m]
Finley Corrals[e]	2/26	44	15.0	15.1	12.6[m]
Hart Mountain[e]	2/26	3	0.5	0.1	1.6[m]
Little Bally Mtn.[e] (Nev.)	2/26	4	1.4	1.4	2.1[m]
Mt. Bidwell (Calif.)		[c]		- -	- -
North Star (Calif.)		[c]		- -	- -
Patton Meadows[e]	2/26	42	14.3	16.6	12.6[m]
Quartz Mountain	2/25	14	4.8	2.1	5.8
Quartz Mountain (Ext.)	2/25	15	4.5	2.4	- -
Sherman Valley[e]	2/26	26	8.6	9.3	10.0[m]
Silver Creek	2/26	6	2.1	0.0	2.9
State Line[e] (Calif.)	2/26	18	5.8	2.8	7.5[m]
Strawberry	2/25	18	5.7	4.6	6.6[h]
Summer Rim	2/26	36	13.7	16.0	13.8
Summer Rim Snow Pillow	2/26	48	16.3	- -	- -
Sycan Flat[e]	2/26	22	8.4	1.8	5.9[m]
Willow Creek[e]	2/26	6	0.9	0.7	3.2[m]

BASIC DATA SUPPLEMENT 1

MARCH 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]
HARNEY BASIN WATERSHEDS					
Blue Mountain Springs	2/24	45	14.8	19.8	13.7
Blue Mtn. Springs Pillow	2/24	39	13.3	- -	- -
Buck Pasture[e]	Late report			0.0	2.3[m]
Buckskin Lake[e]	Late report			0.0	0.2[m]
Call Meadows[e]	Late report			8.6	3.5[m]
Crow Camp[e]	DISCONTINUED			0.0	1.0[m]
Delintment Lake	2/24	18	5.3	8.0	6.5[h]
Denio Creek[e]	Late report			0.0	0.5[m]
Disaster Peak (Nev.)	2/25	28	10.8	12.3	12.6
Emigrant Butte	2/24	6	2.7	3.2	4.1[h]
Fish Creek[e]	3/1	72	25.9	24.9	19.6[h]
Hart Mountain[e]	2/26	3	0.5	0.1	1.6[m]
Idlewild Camp	2/24	16	4.9	5.6	4.6
Izee Summit	2/25	25	6.6	9.0	7.2
Lake Creek R. S.	2/23	30	9.7	13.6	9.2
Oregon Canyon[e]	Late report			4.4	5.2[m]
Rock Spring	2/24	18	5.8	5.8	4.8
Silvies	3/1	31	10.2	11.4	10.7[h]
Snow Mountain	2/25	38	11.6	13.7	11.0[h]
Snow Mountain Pillow	2/25	37	11.3	- -	- -
Starr Ridge	2/28	18	5.2	6.0	4.9
Stinking Water	2/24	T	T	0.0	2.7[h]
Trout Creek[e]	Late report			6.7	6.3[m]
"V" Lake[e]	Late report			4.9	3.6[m]

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]

(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

MARCH 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 [i]
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	[b]		10.9	11.4
Big Bend (Nev.)	6700	48	16.7	2/23	16.5	12.0	15.1
Blue Mountain Spring	5900	42	16.9	2/24	12.0	11.1	10.1
Crane Prairie	5375	48	18.2	2/23	17.6	15.5	15.9
Folly Farm	4450	30	12.5	[c]			
Jack Creek, Lower (Nev.)	6800	48	8.6	[c]			
Jordan Valley	4390	48	19.3	3/2	16.6	14.8	15.7
Mud Flat (Ida.)	5500	48	12.8	2/26	14.4	14.4[f]	11.4
Rodeo Flat (Nev.)	6800	42	11.0	2/23	7.7	4.0	- -
Taylor Canyon (Nev.)	6200	48	15.1	2/23	14.2	12.7	13.3
Triangle (Ida.)	5150	48	16.6	[c]			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	2/26	13.4	12.4	10.8
Dooley Mountain	5430	36	9.2	2/23	5.2	5.4	3.9
Emigrant Springs	3925	48	22.3	2/24	21.1	22.2	19.4
Ladd Summit	3730	48	18.9	2/28	13.6	14.0	10.5
Moss Springs	5850	36	25.8	2/27	16.0	14.6	- -
Tollgate	5070	48	23.6	2/25	15.4	17.1	20.1
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/24	13.8	13.0	13.0
Emigrant Springs	3925	48	22.3	2/24	21.1	22.2	19.4
Tollgate	5070	48	23.6	2/25	15.4	17.1	20.1
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/24	13.8	13.0	13.0
Beech Creek	4800	48	21.3	2/24	12.0	17.0	13.5
Blue Mountain Spring	5900	42	16.9	2/24	12.0	11.1	10.1
Blue Mountain Summit	5100	36	16.8	2/26	13.4	12.4	10.8
Derr	5670	24	9.0	2/21	8.1	8.6	8.2
Marks Creek	4540	36	14.1	3/1	13.6	12.3	11.3
Snow Mountain	6300	48	16.7	2/25	13.9	13.6	13.8
Starr Ridge	5150	36	10.6	2/26	10.6	10.6	9.6
Williams Ranch	4500	42	17.9	2/24	17.7	17.4	17.1
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	2/21	8.1	8.6	8.2
Marks Creek	4540	36	14.1	3/1	13.6	12.3	11.3
Snow Mountain	6300	48	16.7	2/25	13.9	13.6	13.8
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	3/1	14.4	14.2	- -
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	2/27	12.3	12.3	11.3

BASIC DATA SUPPLEMENT 2

MARCH 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 [i]
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	2/26	13.3	12.4	12.4
Quartz Mountain	5230	48	15.3	2/25	9.0	10.1	8.4
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	2/24	12.0	11.1	10.1
Fish Creek	7900	48	15.0	3/1	11.7	11.0	10.1
Folly Farm	4450	30	12.5	[c]		- -	- -
Silvies	6900	48	16.4	3/1	16.2	13.8	12.9
Snow Mountain	6300	48	16.7	2/25	13.9	13.6	13.8
Starr Ridge	5150	36	10.6	2/26	10.6	10.6	9.6
Willow-Bald	5000	24	6.6	2/24	6.6	6.2	5.2

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flou. (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

MARCH 1, 1971

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precip-itation	Last Year	Average
Allison Work Center (Harney County)	5320	1/28 to 2/26	0.50		
Althouse (Josephine County)	4530	1/29 to 2/26	3.27		
Arbuckle Mountain (Morrow County)	5400	1/29 to 2/26	3.97		
Big Red Mountain (Jackson County)	6240	1/26 to 2/25	7.62		
Camas Creek (Lake County)	5825	1/29 to 2/26	1.40		
Eilertson Meadows (Baker County	5400	1/26 to 2/24	0.75		
Fish Lake (Jackson County)	4865	1/28 to 2/25	0.57		
Quartz Mountain Summit (Lake County)	5530	1/28 to 2/25	0.80		
Schoolmarm (Umatilla County)	4775	1/29 to 2/26	2.10		
Silver Creek (Lake County)	4900	1/29 to 2/26	0.49		
Strawberry (Lake County)	5760	1/29 to 2/25	1.10		
Taylor Green (Union County)	5800	1/28 to 2/27	4.20		

OWYHEE, MALHEUR WATERSHEDS (1)

Owyhee River

NUMBER	NAME	SEC	TWP	RGE	ELEV
16G6	Antelope Ridge (Ida)	20	6S	1E	5900
16G9a	Battle Creek (Ida)	10	11S	1E	5700
15H1MA	Bear Creek (Nev)	31	46N	58E	7800
15H4MP	Big Bend (Nev)	30	45N	56E	6700
17G2m	Blue Mtn Pass	4	36S	42E	5290
17H2	Buckskin, Lower (Nev)	25	45N	39E	6700
17H1	Buckskin, Upper (Nev)	11	45N	39E	7200
16G10a	Bull Basin (Ida)	29	12S	5W	5600
16H6a	Columbia Basin (Nev)	31	44N	53E	6650
18H1	Disaster Peak (Nev)	6	47N	34E	6500
16H8a	Fawn Creek (Nev)	2	45N	53E	7000
18G2MPA	Fish Creek	4	33S	33E	7900
18G3m	Folly Farm Summit	8	30S	38E	4450
15H3	Fox Creek (Nev)	33	46N	58E	6800
15H7	Fry Canyon (Nev)	31	43N	54E	6700
15H5	Gold Creek (Nev)	31	45N	56E	6800
17H4	Granite Peak (Nev)	22	44N	39E	7800
16G5a	Hyde Pasture (Ida)	31	8S	3W	5800
16H1M	Jack Creek, Lower (Nev)	18	42N	53E	6800
16H2A	Jack Creek, Upper (Nev)	9	42N	53E	7250
16H4	Jack Peak (Nev)	28	42N	53E	8420
17G3m	Jordan Valley	2	30S	46E	4390
16H5	Laurel Draw (Nev)	30	45N	53E	6700
17G6a	Lookout Butte	2	40S	47E	5650
17G4a	Louse Canyon	27	40S	44E	6440
17H3	Martin Creek (Nev)	18	44N	40E	6700
15H20a	Merritt Mountain (Nev)	10	46N	54E	7000
16H3AP	Midas (Nev)	18	39N	46E	7200
16G7MP	Mud Flat (Ida)	34	9S	3W	5500
17G5a	Oregon Canyon	9	40S	40E	6950
17H6a	Quinn Ridge (Nev)	9	47N	41E	6300
16G11a	Red Canyon (Ida)	32	11S	4W	6500
15H6MP	Rodeo Flat (Nev)	36	43N	53E	6800
15H3A	76 Creek (Nev)	6	44N	58E	7100
16F3AP*	Silver City (Ida)	6	3S	3W	6400
18G1MPA	Silvies	35	32S	32½E	6900
16G1P	South Mountain No. 2 (Ida)	10	8S	5W	6340
15H19a	Stag Mountain (Nev)	32	41N	58E	7800
16F6a	Succor Creek (Ida)	25	3S	5W	6100
15H9MP	Taylor Canyon (Nev)	35	39N	53E	6200
16H7a	Toe Jam (Nev)	29	40N	50E	7700
15H8	Tremewan Ranch (Nev)	9	39N	55E	5700
16G4MA	Triangle (Ida)	25	7S	3W	5150
16G5a	Trout Creek	10	41S	38E	7800
18G7a	"V" Lake	31	35½S	32½E	6600
16G12a	Vaught Ranch (Ida)	10	11S	1W	5950
16G13a	War Eagle (Ida)	20	3S	3W	7700

Malheur River

NUMBER	NAME	SEC	TWP	RGE	ELEV
18E16MP	Blue Mountain Springs	21	13S	35E	5900
18F6a	Buck Pasture	21	29S	35E	5700
18E21a	Bully Creek	10	17S	37E	5300
18F7a	Call Meadows	29	20S	33E	5340
17F2a	Cottonwood-Indian	10	19S	39E	4320
18E19M	Crane Prairie	24	16S	34E	5375
18F8a	Crow Camp	26	23S	34E	5500
18E20	Eldorado Pass	20	14S	38E	4600
18E26a	Flag Prairie	32	16S	36E	4750
18E18	Lake Creek	10	16S	33½E	5120
18E22a	Logan Valley	13	16S	33½E	5100
18F1	Rock Spring	23	18S	32E	5100
18E32p*	S. Fk. Willow Cr.	2	16S	37E	5500
18F4P	Stinking Water	33	21S	34E	4800

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS (2)

Burnt River

NUMBER	NAME	SEC	TWP	RGE	ELEV
18E13M	Blue Mountain Summit	6	12S	36E	5098
17E1MP	Dooley Mountain	32	11S	40E	5430
18E20	Eldorado Pass	20	14S	38E	4600
18E8	Gold Center	21	9S	36E	5340
18E9P	Tipton	34	10S	35½E	5100

Powder River

NUMBER	NAME	SEC	TWP	RGE	ELEV
18E1P	Anthony Lake	18	7S	37E	7125
18E5	Bourne	33	8S	37E	5800
17E1MP	Dooley Mountain	32	11S	40E	5430
18E3	Eilertson Meadows	18	8S	38E	5400
18E8	Gold Center	21	9S	36E	5340
18E6A	Goodrich Lake	4	9S	38E	6775
18E29	Intake House	5	8S	38E	4930
17D12m	Ladd Summit	5	5S	39E	3730
18E23	Little Alps	10	7S	37E	6200
18E30	Little Antone	1	7S	37E	5000
18E28	Power Plant	33	7S	38E	3990
17D7P	Taylor Green	3	6S	42E	5740

Pine Creek

NUMBER	NAME	SEC	TWP	RGE	ELEV
17D8	Schneider Meadows	35	6S	45E	5400

Grande Ronde River

NUMBER	NAME	SEC	TWP	RGE	ELEV
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2P	Aneroid Lake No. 2	16	4S	45E	7300
18E1P	Anthony Lake	18	7S	37E	7125
17D10a	Bald Mountain	14 & 15	4S	41E	6700
18D9	Beaver Reservoir	8	5S	37E	5150
18D8P	County Line	28	4S	34E	4800
18D6P	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
17D13a	Mirror Lake	34	4S	44E	8200
17D6M	Moss Spring	28	3S	41E	5850
18D7	Schoolmarm	28	4S	34E	4775
17D11a	Standley	28	2S	42E	7400
17D7P	Taylor Green	3	6S	42E	5740
18D3M	Tollgate	32	4N	38E	5070
17D16a	TV Ridge No. 2	12	2S	43E	7000

Imnaha River

NUMBER	NAME	SEC	TWP	RGE	ELEV
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2P	Aneroid Lake No. 2	16	4S	45E	7300
17D14a	Big Sheep	33	4S	46E	6200

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

Umatilla River

NUMBER	NAME	SEC	TWP	RGE	ELEV
19D2P	Arbuckle Mountain	33	4S	29E	5400
18D12MP	Battle Mountain Summit	29	3S	31E	4340
18D4M	Emigrant Springs	29	1N	35E	3925
18D6P	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
18D3M	Tollgate	32	4N	38E	5070
18D13	Walla Walla Diversion	22	6N	38E	2400

Walla Walla River

NUMBER	NAME	SEC	TWP	RGE	ELEV
18D16	Blue Mountain Camp	35	4N	37E	4300
18D3M	Tollgate	32	4N	38E	5070
18D17	Weston Mountain	25	4N	35E	2700

Willow Creek

NUMBER	NAME	SEC	TWP	RGE	ELEV
19D2P	Arbuckle Mountain	33	4S	29E	5400
18E1P	Anthony Lake	18	7S	37E	7125

UPPER JOHN DAY WATERSHEDS (4)

Upper John Day River

NUMBER	NAME	SEC	TWP	RGE	ELEV
19D2P	Arbuckle Mountain	33	4S	29E	5400
18D12MP	Battle Mountain Summit	29	5S	31E	4340
19E2M	Beech Creek Summit	32 & 33	11S	30E	4650
18E16MP	Blue Mountain Springs	21	13S	35E	5900
18E13M	Blue Mountain Summit	6	12S	36E	5098
19E3MP	Derr	14	13S	23E	5670
18E27a	East Fork Canyon	15	15S	32E	5700
18E8	Gold Center	21	9S	36E	5340
18E24a	Indian Cr. Butte	5	15S	33E	6550
19E9P	Izee Summit	28	16S	29E	5293
18D6P	Lucky Strike	28	3S	32E	5050
20E1MP	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
18E7a	Olive Lake	14	9S	34E	6000
18D7	Schoolmarm	28	4S	34E	4775
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18E9P	Tipton	34	10S	35½E	5100
18E25MP	Williams Ranch	20	15S	32E	4500

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

Upper Deschutes River

NUMBER	NAME	SEC	TWP	RGE	ELEV
21E11	Black Pine Spring	14	16S	9E	4600
21F8	Caldwell Ranch	30	21S	8E	4400
22F3	Cascade Summit	7	23S	6E	4880
21F11	Chemult	21	27S	8E	4760
21F20P	Derr Creek	25	20S	7E	4554
21E6	Hogg Pass	24	13S	7½E	4755
21F4	Hungry Flat	30	18S	11E	4400
21F6*	Irish-Taylor	25	20S	6E	5500
21F17	Mowich	29	25S	8E	4700
21F10	New Crescent Lake	11	24S	6E	4800
21E16	New Dutchman Flat #2	21	18S	9E	6400
21F3	Tangent	28	18S	10E	5400
21E15	Three Creeks Butte	27	16S	9E	5200
21E13	Three Creeks Meadows	34	16S	9E	5650
22F2P	Waldo Lake	15	21S	6E	5500
22F14*	Willamette Pass	33	24S	5½E	5600

Crooked River

NUMBER	NAME	SEC	TWP	RGE	ELEV
19E3MP	Derr	14	13S	23E	5670
20E1MP	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
19F1M	Snow Mountain	1	19S	26E	6300
19E4	Tamarack	8	15S	25E	4800

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS (6)

Hood River

NUMBER	NAME	SEC	TWP	RGE	ELEV
21D6P	Brooks Meadows	2	2S	10E	4300
21D25M	Cooper Spur	6	2S	10E	3490
21D1	Greenpoint Reservoir	27	2N	9E	3200
21D20	Knebal Springs	31	1S	11E	3850
21D23	Parkdale	5	1S	10E	1770
21D8*	Phlox Point	7	3S	9E	5400
21D4	Red Hill	20	1S	9E	4400
21D9	Still Creek	25	3S	8½E	3670
21D28	Switchback	28	1S	9E	3255
21D7P	Tilly Jane	15	2S	9E	6000
21D21	Ulrich Ranch Junction	28	1S	11E	3350
21D30	Umbrella Falls	3	3S	9E	5400
21D24	Upper Valley	20	1S	10E	2530

Mile Creeks - Mosier Creek

NUMBER	NAME	SEC	TWP	RGE	ELEV
21D6P	Brooks Meadows	2	2S	10E	4300
21D20	Knebal Springs	31	1S	11E	3850
21D21	Ulrich Ranch Junction	28	1S	11E	3350

Lower Deschutes River

NUMBER	NAME	SEC	TWP	RGE	ELEV
21D12	Clear Lake	29	4S	9E	3500
21D22	Clear Lake Experimental	29	4S	9E	3500
21E6	Hogg Pass	24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

Sandy River

NUMBER	NAME	SEC	TWP	RGE	ELEV
21D8*	Phlox Point	7	3S	9E	5400
21D9	Still Creek	25	3S	8½E	3670

WILLAMETTE WATERSHEDS (8)

Clackamas River

NUMBER	NAME	SEC	TWP	RGE	ELEV
21D3	Clackamas Lake	35	5S	8½E	3400
21D12	Clear Lake	29	4S	9E	3500
21D14P*	Peavine Ridge	14 & 15	6S	7E	3500
21D8*	Phlox Point	7	3S	9E	5400
21D9	Still Creek	25	3S	8½E	3670

Santiam River

NUMBER	NAME	SEC	TWP	RGE	ELEV
22E1	Detroit (City)	1	10S	5E	1610
22E2	Detroit Dam	7	10S	5E	1580
21E6	Hogg Pass	24	13S	7½E	4755
21E4	Marion Forks	28	11S	7E	2730
22E3	Mill City	29	9S	3E	826
21E5	Santiam Junction	14	13S	7E	3990
21E3	Whitewater Bridge	20	10S	7E	2173

McKenzie River

NUMBER	NAME	SEC	TWP	RGE	ELEV
21E8	Dead Horse Grade	15	16S	7E	3800
22E4	Lost Creek Ranch	24	16S	6E	1936
21E7	McKenzie	35	15S	7½E	4800
22E5	McKenzie Bridge	13	16S	5E	1372
22E6	Vida	28	16S	2E	800
21E9	White Branch Slide	15	16S	7E	2800

Middle Fork Willamette River

NUMBER	NAME	SEC	TWP	RGE	ELEV
22F3	Cascade Summit	7	23S	6E	4880
22F6	McCredie Springs	31	21S	4E	2130
22F8	Meridian Dam	15	19S	1W	750
22F7	Oakridge	16	21S	3E	1310
22F5	Railroad Overpass	21	22S	5E	2750
22F4	Salt Creek Falls	32	23S	5½E	4000
22F2P	Waldo Lake	13	21S	6E	5500
22F14*	Willamette Pass	33	24S	5½E	5600

Coast Fork Willamette River

NUMBER	NAME	SEC	TWP	RGE	ELEV
22F9	Champion	12	23S	1E	4500
22F10	Golden Curry Creek	1	23S	1E	3130
22F13	Layng Creek No. 1	31	21S	1E	1200
22F12	Lund Park	22	22S	1E	1740
22F11	Weaver Creek	35	22S	1E	2440

Mary's River

NUMBER	NAME	SEC	TWP	RGE	ELEV
23E1	Mary's Peak	21	[illegible]	7W	1020

Luckiamute River

NUMBER	NAME	SEC	TWP	RGE	ELEV
23E2	Laurel Mountain	6	8S	7W	1000
23E3	Valsetz Summit	5	[illegible]	7W	1250

ROGUE, UMPQUA WATERSHEDS (9)

Rogue River

NUMBER	NAME	SEC	TWP	RGE	ELEV
23G4P	Althouse	17	41S	7W	4530
22G6	Annie Spring	19	31S	6E	6018
22G28	Beaver Dam Creek	1	38S	4E	5100
22G21P	Big Red Mountain	11	40S	1W	6250
22G13P	Billie Creek Divide	30	36S	5E	5300
22G30	Callahan	16	40S	1E	4500
22G27	Deadwood Junction	8	38S	4E	4600
22F19	Diamond-Crater Summit	34	28S	6E	5800
22G14P	Fish Lake	3	37S	4E	4665
22G12	Fourmile Lake	9	36S	5E	6000
23G3	Grayback Peak	9	40S	5W	6000
22G26	Howard Prairie	32	38S	4E	4500
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G22	Little Red Mountain	25	40S	2W	6500
22G31	Mt. Ashland Switchback	16	40S	1E	6400
23G14	Mule Creek	8	32S	9W	3680
23G5	Page Mountain	5	41S	7W	4045
22G5	Park Headquarters	8	31S	6E	6550
22G11	Seven Lakes No. 2	26	35S	5E	6700
22G2	Silver Burn	30	40S	4E	3720
22G20	Siskiyou Summit	17	40S	2E	4630
22G32	Ski Bowl Road	22	40S	1E	6000
22G9	South Fork Camp	12	35S	3E	3500
23G1	Whaleback	4	31S	3E	5025

Umpqua River

NUMBER	NAME	SEC	TWP	RGE	ELEV
22F9	Champion	12	23S	1E	4500
22F18P	Diamond Lake	29	27S	6E	5315
23G8	King Mountain No. 1	5	33S	4W	4500
23G9	King Mountain No. 2	4	33S	4W	4000
23G10	King Mountain No. 3	33	32S	4W	3648
23G11	King Mountain No. 4	33	32S	4W	3049
23G12	King Mountain No. 5	23 & 24	32S	4W	[illegible]
23G13	King Mountain No. 6	20	32S	4W	1830
22F16	North Umpqua	19	21S	1E	4215
22F23	Red Butte No. 1	16	27S	2W	[illegible]
22F24	Red Butte No. 2	30	27S	1W	[illegible]
22F25	Red Butte No. 3	30	27S	1W	3500
22F26	Red Butte No. 4	30	27S	1W	3700
22F27	Red Butte No. 5	20	27S	1W	3500
22F28	Red Butte No. 6	17	27S	1W	2000
22F17	Trap Creek	1	27S	4E	3800
23G1	Whaleback	4	31S	2E	5025

KLAMATH WATERSHEDS (10)

Klamath River

NUMBER	NAME	SEC	TWP	RGE	ELEV
22G6	Annie Spring	19	31S	6E	6018
22G13P	Billie Creek Divide	3	36S	5E	5300
21G5M	Bly Mountain	15 & 22	37S	11E	5090
21F11	Chemult	21	27S	8E	4750
22G24*	Cold Springs Camp	13	35S	5E	6100
20G12a	Crazyman Flat	9	34S	15E	6100
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
22F19	Diamond-Crater Summit	34	28S	6E	5800
21F18	Diamond Lake Jct. (#7)	1	29S	7E	4600
21G6a	Dog Hollow	1	40S	14E	4400
20G14a	Finley Corrals	11	36S	16E	6000
22G12	Fourmile Lake	9	36S	5E	6000
21G4P	Gerber	12	39S	11E	4850
22G26	Howard Prairie	32	38S	4E	4500
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G15	Lake of the Woods	11	37S	5E	4960
22G3	Park Headquarters	8	31S	6E	6550
22G25	Pelican Guard Station	9	36S	6E	4150
20G6MP	Quartz Mountain	2	38S	16E	5320
22G11	Seven Lakes No. 2	26	35S	5E	6200
[illegible]	Seven Mile	30	33S	6E	5725
20H1a	State Line (Cal)	21	48N	11E	5750
20G19AP	Strawberry	4	40S	16E	5760
20G22AP	Summer Rim	22	33S	16E	7200
21G2	Sun Mountain	22	32S	7½E	5350
20G13a	Sycan Flat	25	31S	14E	5300
21G3P	Taylor Butte	21	[illegible]	11E	5100

Pacific Power and Light Company's Snow Stations

NUMBER	NAME	SEC	TWP	RGE	ELEV
1	Beatty (PP&L)	22	36S	12E	4300
10	Bly 101 Ranch (PP&L)	22	35S	14E	4800
3	Chiloquin (PP&L)	14	34S	7E	4187
4	Crystal (PP&L)	26	34S	6E	4200
5	Fort Klamath (PP&L)	22	33S	7½E	4150
8	Harriman Lodge (PP&L)	3	36S	6E	4200
6	Kirk (PP&L)	1	33S	7E	4533

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

Goose Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G8MP	Camas Creek	6	40S	21E	5720
20G11A	Cox Flat	16	37S	18E	5750
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
20H3a	Dismal Swamp (Cal)	31	48N	23E	7200
20G17a	Lofton Meadow	28	38S	18E	6800
20G6MP	Quartz Mountain	2	38S	16E	5320
20H1a	State Line (Cal)	21	48N	11E	5750
20G19AP	Strawberry	1	40S	16E	5760
20G16a	Willow Creek	13	40S	21E	6020

Abert Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G18ap	Colvin Creek	12	36S	21E	6550
20G11A	Cox Flat	16	37S	18E	5750
20G14a	Finley Corrals	11	36S	16E	6000
20G4	Mill Creek	1	34S	17E	6200
20G6MP	Quartz Mountain	2	38S	16E	5320
20G10a	Sherman Valley	18	37S	21E	6600

Summer Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
20G12AP	Summer Rim	22	33S	16E	7200

Silver Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
21F12P	Silver Creek	25 & 26	29S	15E	4900
20G13a	Sycan Flat	25	31S	14E	5300

Warner Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
20G8MP	Camas Creek	5	39S	21E	5720
20H3a	Dismal Swamp (Cal)	31	48N	23E	7200
19G1a	Hart Mountain	1	36S	25E	6150
20G10a	Sherman Valley	15	37S	21E	6600
20G16a	Willow Creek	13	40S	21E	6020

Guano Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
19H1	Held Mountain (Nev)	17	45N	31E	6720
19G1a	Hart Mountain	1	36S	25E	6150
19H4a	Little Bally Mt. (Nev)	8	45N	19E	6500

HARNEY BASIN WATERSHED (12)

Silvies River - Silver Creek

NUMBER	NAME	SEC	TWP	RGE	ELEV
18F7a	Call Meadows	29	20S	33E	5340
19F1	Delintment Lake	28	19S	26E	6000
19F3	Emigrant Butte	14	21S	27E	5000
18F3P	Idlewild Camp	27	20S	31E	5300
19E9P	Izee Summit	28	16S	29E	5293
18F1	Rock Spring	23	18S	32E	5100
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18F4P	Stinking Water	33	21S	34E	4800
19F4m	Willowdale	17	23S	24E	5000

Donner Und Blitzen River

NUMBER	NAME	SEC	TWP	RGE	ELEV
18F6a	Buck Pasture	21	29S	35E	5700
18G2MPA	Fish Creek	4	33S	32½E	7900
19G1a	Hart Mountain	1	36S	25E	6150
18G1MPA	Silvies	35	32S	32½E	6900
18G7a	"V" Lake	31	35½S	32½E	6600

Trout and Whitehorse Creeks

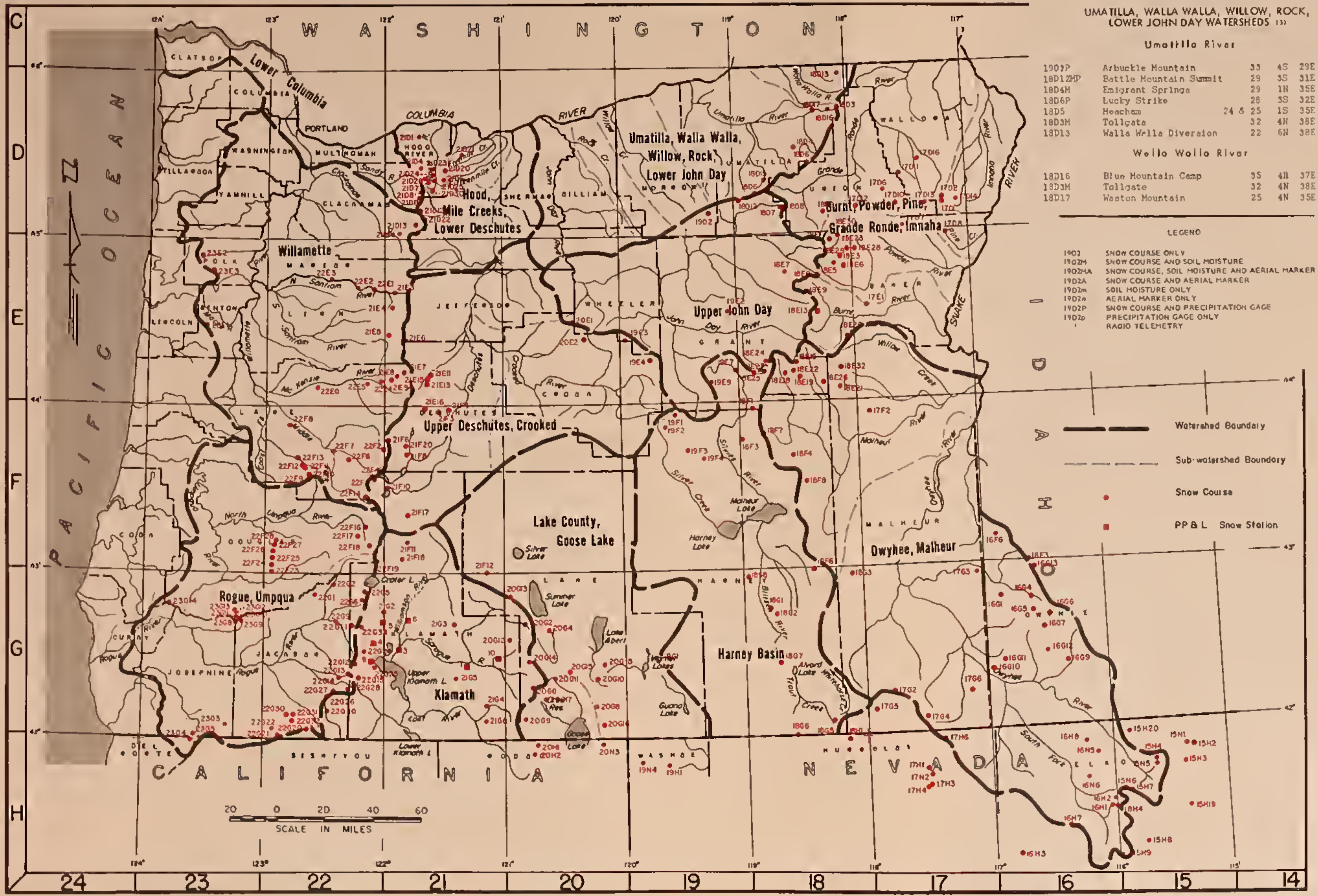
NUMBER	NAME	SEC	TWP	RGE	ELEV
16G6a	Denio Creek	14	41S	34E	6000
18H1	Disaster Peak (Nev)	6	47N	34E	6500
17G5a	Oregon Canyon	9	40S	40E	6950
16G5a	Trout Creek	10	41S	38E	7800

Harney Lake

NUMBER	NAME	SEC	TWP	RGE	ELEV
18F8a	Buckskin Lake	25	[illegible]	30E	5200

LEGEND

1902 SNOW COURSE ONLY
1902M SNOW COURSE AND SOIL MOISTURE
1902MA SNOW COURSE, SOIL MOISTURE AND AERIAL MARKER
1902A SNOW COURSE AND AERIAL MARKER
1902m SOIL MOISTURE ONLY
1902a AERIAL MARKER ONLY
1902P SNOW COURSE AND PRECIPITATION GAGE
1902b PRECIPITATION GAGE ONLY
* RADIO TELEMETRY



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
- Warmsprings 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

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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"

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