FEDERAL - STATE - PRIVATE

COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS for UTAH, BEAR and COLORADO RIVER BASIN

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

STATE ENGINEER of UTAH

In cooperation with Agricultural Experiment Stations at Arizona, Colorado and Utah; the State Engineers of Colorado, New Mexico and Wyoming; U.S. Forest Service; Bureau of Reclamation, U.S. National Park Service, U.S. Geological Survey; and other Federal, State, and private organizations.

AS OF

JAN. 1, 1961

USDA-SCS-PORTLAND, OREG. 1960

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for

UTAH, BEAR and COLORADO RIVER BASINS

JANUARY 1, 1961

Report Prepared

by

Gregory L. Pearson
Snow Survey Supervisor

and

James R. Talbot
Asst. Snow Survey Supervisor

Soil Conservation Service
222 South West Temple
Salt Lake City, Utah

***

Issued by

J. A. LIBBY
State Conservationist
Soil Conservation Service
Salt Lake City, Utah

Wayne D. Criddle
State Engineer
State of Utah
Salt Lake City, Utah

Dr. D. W. Thorne, Dir.
Utah Agricultural Exp. Station
Logan, Utah
Mimeograph Series #461

WATER SUPPLY OUTLOOK
as of
JANUARY 1, 1961

The January 1st snowpack is 86% of average for Utah as a whole, but varies from 46% on the American Fork river to 164% on the East Fork Sevier and Escalante rivers. Moisture in mountain soils is about average or a little above, except near Salt Lake and Ogden where it is definitely less than usual, and the upper Sevier and Virgin river watersheds which are much wetter than normal. Excluding Bear Lake, reservoir storage is 66% of last year and 46% of average. Most streamflow forecasts fall between 75% and 95% of average.

Although the present snowpack in Utah is less than average, it is more than twice the amount we had at this time last year, and nearly three times as much as the year before. Poorest snow cover lies on the watersheds of the following rivers: American Fork, Provo, Spanish Fork, Duchesne, Strawberry, Price, San Pitch and San Rafael. Also included is Clear Creek above Sevier. On these streams it varies from 46% to 70% of average.

Heaviest snow cover percentage-wise lies on the headwaters of the East Fork Sevier and Escalante rivers where it is 164%. At Tooele it is 115%, while on the Smith's Fork of the Bear river in Wyoming it is 113%. For other areas in Utah it varies between 70% and 97%.

Moisture in the soil underlying the snowpack - often a major factor influencing streamflow - is average or above except on the streams in the Salt Lake to Ogden area. On the Upper Sevier and Virgin river watersheds it is considerably above average.

Forecasts are made by combining the snowpack and soil moisture factors and assuming that average climatic conditions will prevail for the balance of the season. On this basis, next summer's streamflow during the April-September period is expected to be between about 80% and 95% of average, for most of the state. Lowest forecasts are in the areas of lightest snowpack. Streams expected to produce less than this are Parley's Creek near Salt Lake, East Canyon Creek near Morgan, and Price river near Heiner. Forecasts for these streams range between 65% and 75%. The East Fork of the Sevier is expected to yield about 125% while the South Fork of the Sevier at Hatch is forecast at about 115%, with 105% near Kingston.

While the water outlook is not too serious as yet, it can very quickly become so if the dry weather which has prevailed during December continues much longer.

This is particularly true for those dependent on reservoir storage rights, since the water stored in reservoirs as a carryover from last year is so much below average. This can be seen by referring to page 3 of this report.

Measurements of a few key snow courses indicate that the snowpack on the Green river in Wyoming is about 85% of average, while in Colorado it is mostly between about 55% and 85%.

Ordinarily 35% to 40% of the total snowpack to be expected has accumulated by the first of January. Since this leaves the major portion yet to come, the water supply prospects may change considerably, either up or down, as the rest of the winter's snow accumulates.

COMPARATIVE SNOW DATA

Summary of Snow Survey Data by Tributary Watersheds as of January 1, 1961

TRIBUTARY BASINS	No. of Courses Averaged	Years of Record	1961 Snow Water Expressed as Percent of 1960	1959	& 1943-57 Av.
GREAT BASIN					
Smith's Fork - Bear River	2	12-23	284	102	113*
Logan River	3	6-10	278	102	92*
Ogden River	3	5-7	145	284	97*
Weber River above Echo Dam	6	5-25	286	182	80*
East Canyon Creek	3	7-25	190	189	71*
Farmington Creek	2	7-9	721	224	85*
Salt Lake Area	4	7-25	209	204	76*
Tooele Area	1	4	277	235	115*
American Fork River	3	19-25	129	250	46
Provo River above Vivian Park	7	5-29	250	223	69*
Strawberry Reservoir Valley	1	29	121	425	64
Payson Creek	2	7-8	130	117	75*
Sevier River above Hatch	3	6-8	111	435	80*
East Fork Sevier River	2	10-22	202	314	164*
Clear Creek above Sevier	1	2	109	225	54*
Salina Creek	2	3	268	743	84*
San Pitch River	4	1-20	230	240	70*
Coal Creek-Cedar City	3	6-7	108	390	92*
COLORADO RIVER BASIN					
Duchesne-Strawberry Rivers	4	5-29	210	219	65*
Whiterocks - Uintah Rivers	3	3-4	384	397	92*
Price River	4	1-21	248	202	61*
San Rafael River	2	4-9	232	262	67*
Escalante River	2	10-22	202	314	164*
Virgin River	4	6-8	102	390	75*

* Several of the snow courses used in calculating these averages have only been measured for a few years on January 1, but have up to 36 years of record on April 1. The percent of average January 1 water content on these courses was calculated based on the percent of the April 1st water content of the snow that usually accumulates by January 1 on courses having such records, and that are similarly located as to elevation and exposure.

STATUS OF RESERVOIR STORAGE - JANUARY 1, 1961 (1)

BASIN and/or STREAM	RESERVOIR	USABLE CAPACITY 1000s AF	USABLE STORAGE - 1000 Acre Feet 1961	1960	1959	15-Yr. Av. 1943-57
		GREAT BASIN				
Bear River	Bear Lake	1421.0	774.1	916.0	977.5	806.4
Little Bear	Hyrum	15.3	6.1	8.6	9.8	9.8
Ogden	Pine View	110.0	5.3	7.7	11.8	7.2
Weber	Rockport	59.1	15.1	10.5	12.6	-
	Echo	73.9	18.3	19.2	16.0	26.3
	East Canyon	28.7	3.4	11.5	10.1	14.1
Provo	Deer Creek	149.7	53.4	60.2	86.2	84.8
Spanish Fork	Strawberry	270.0	54.1	102.7	149.5	128.6
Utah Lake	Utah Lake	1149.0(2)	244.5	385.1	488.6	516.7
Sevier River	Otter Creek	52.5	8.7	16.9	30.4	21.6
	Piute	74.0	11.5	15.8	42.6	29.6
	Sevier Bridge	236.0	20.5	30.1	62.9	120.1
Beaver River	Rocky Ford	23.3	4.7	4.3	10.4	11.9
		COLORADO RIVER DRAINAGE				
Lake Fork	Moon Lake	35.8	7.4	7.8	6.3	10.6
Price River	Scofield	65.8	2.0	5.5	32.0	13.7

(1) All data contained in this table supplied by the U. S. Geological Survey.

(2) Active capacity taken at 3.1 feet above compromise point.

SNOW SURVEYS - ABOUT JANUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In.)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
GREAT BASIN DRAINAGE									
UPPER BEAR RIVER (Above Harer, Idaho)									
CCC Camp x	10G7	7500	12/28	25	5.3	2.6	5.8	4.9	23
Salt River Summit x	10G8	7900	12/28	31	7.3	2.0	6.5	6.2*	12
Trial Lake x	10J8	9800	12/28	35	9.4	6.0	7.0	11.0**	5
LOWER BEAR RIVER (Below Harer, Idaho)									
Garden City Summit	11H7	7600	12/28	26	6.2	1.8	6.3	7.5*	10
Klondike Narrows	11H1	7400	12/28	28	8.3	3.3	-	7.2**	6
Tony Grove R.S.	11H3	6250	12/28	16	3.8	1.6	3.6	4.8**	9
OGDEN RIVER									
Ben Lomond(lower)	11H9	5850	12/30	18	5.1	3.7	1.2	5.8**	5
Mt. Ogden	11H10	8600	12/31	31	10.6	5.3	6.0	11.0**	7
Snow Basin	11H11	6420	12/30	22	5.5	2.8	2.2	5.2**	7
WEBER RIVER									
Beaver Creek R.S.	11J24	7500	12/28	10	3.3	0.6	1.5	4.1**	7
Lamb's Canyon x	11J14	6600	12/26	22	3.8	3.4	1.8	6.0*	12
Parley's Canyon Smt.	11J15	7500	12/29	23	6.0	2.1	2.9	7.3**	7
Silver Lake x	11J16	8725	12/26	25	7.8	4.5	5.2	11.5	25
Smith & Morehouse	11J4	7600	12/29	14	4.8	1.1	2.8	4.9**	7
Trial Lake x	10J8	9800	12/28	35	9.4	6.0	7.0	11.0**	5
PROVO RIVER & UTAH LAKE									
Camp Altamont	11J20	7300	12/29	16	3.2	2.4	1.0	7.3	25
Daniels-Strawberry Smt.	11J23	8000	12/28	16	3.4	2.8	0.8	5.3*	29
East Portal	11J7	7560		No Report		1.1	0.2	4.6*	22
Payson R. S.	11K1	8050	12/27	20	4.0	3.2	3.2	6.0**	8
Rock Bridge	11K2	6750	12/27	16	3.4	2.5	3.1	4.1**	7
Soapstone R.S.	11J25	7800	12/28	15	3.6	0.8	2.0	5.3**	8
South Fork R. S.	11J19	6100	12/29	6	1.7	2.6	0.9	4.1*	19
Strawberry Divide	11J8	8000		No Report		2.1	0.4	8.7*	21
Timpanogos Cave Camp	11J18	5500		No Report		0.8	0.5	2.2*	15
Timpanogos Divide	11J21	8140	12/29	22	6.0	3.2	2.5	11.4	25
Trial Lake	10J8	9800	12/28	35	9.4	6.0	7.0	11.0**	5

x - Adjacent Drainage
* - Average for 15-Year period partly estimated
** - Average for 15 year period mostly or wholly estimated

SNOW SURVEYS - ABOUT JANUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In.)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
JORDAN RIVER & GREAT SALT LAKE									
Farmington Canyon(u)	11J11	8000	12/28	32	8.9	1.1	4.4	10.5**	7
Farmington Canyon(1)	11J12	8000	12/28	31	7.6	1.2	3.1	8.9**	9
Lamb's Canyon	11J14	6600	12/26	22	3.8	3.4	1.8	6.0*	12
Middle Canyon	12J3	7000	12/28	20	6.1	2.2	2.6	5.3**	4
Mill D South Fork	11J10	7400	12/26	23	6.9	2.6	2.8	7.6**	7
Parley's Canyon Smt. x	11J15	7500	12/29	23	6.0	2.1	2.9	7.3**	7
Silver Lake	11J16	8725	12/26	25	7.8	4.5	5.2	11.5	25
UPPER SEVIER RIVER (South of Richfield, Utah)									
Bryce Canyon	12M8	8000	12/28	5	0.8	2.6	0.0	1.9**	6
Duck Creek R.S.	12M4	8560	12/29	14	3.4	3.6	0.0	5.0**	8
Harris Flat R.S.	12M5	7700	12/29	9	1.7	3.0	0.0	2.5**	8
Kimberly Mine	12L6	8900	12/28	15	3.6	3.3	1.6	6.7**	2
Long Valley Jct. x	12M6	7500	12/29	4	1.1	2.2	0.0	1.0**	7
Midway Valley	12M2	9800	12/29	31	10.0	5.5	2.3	9.7**	6
Widtsoe-Escalante Smt.	11M1	9500	12/27	18	5.0	2.0	0.0	3.2*	22
Widtsoe-Escalante #2	11M2	9500	12/27	23	6.9	4.5	2.2	4.0*	10
Widtsoe-Escalante #3	11M3	9500	12/27	32	9.6	5.4	3.4	-	2
LOWER SEVIER RIVER (Including San Pitch River)									
Beaver Dams	11K13	8000	12/28	14	3.2	1.7	1.2	3.9**	2
Farnsworth Lake	11L1	9900	12/27	25	6.6	2.8	2.3	7.4**	3
G.B.R.C. Headquarters	11K11	8700	12/30	19	4.5	3.0	2.3	5.8*	20
G.B.R.C. Meadows	11K10	10000	12/30	24	6.5	4.3	2.5	10.0**	9
Gooseberry R. S.	11L2	8400	12/27	17	3.6	1.2	0.6	4.6**	3
Gooseberry Reservoir x	11K4	8700	12/29	20	5.0	1.6	1.9	7.3**	4
Mammoth R.S.-Ctnwd. Crk	11K3	8800	12/29	22	5.2	1.7	-	7.7**	1
Mt. Baldy R. S.	11K12	9500	12/28	25	6.7	4.5	2.7	9.3**	2
COAL CREEK									
Midway Valley x	12M2	9800	12/29	31	10.0	5.5	2.3	9.7**	6
Urie Flat	12M10	8450	12/29	8	2.2	3.3	T	1.8**	6
Webster Flat x	12M3	9200	12/29	14	3.8	5.1	1.1	7.6**	7

x - Adjacent Drainage
* - Average for 15-year period partly estimated
** - Average for 15-year period mostly or wholly estimated.

SNOW SURVEYS - ABOUT JANUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
COLORADO RIVER DRAINAGE									
UPPER COLORADO RIVER (Above Glenwood Springs, Colo.)									
Berthoud Summit	5K14	11300	12/30	29	6.7	11.1	8.7	8.8 1/	6
Fremont Pass	6K8	11400	12/29	26	4.7	6.9	5.0	6.4 1/	5
Vail Pass	6K15	10000	12/29	21	4.5	4.7	4.7	5.4 1/	3
GUNNISON RIVER									
Porphyry Creek	6L3	10700	12/30	35	9.1	7.3	4.5	6.9 1/	5
Red Mountain Pass	7M15	11000	12/29	44	11.3	-	-	-	-
UPPER GREEN RIVER (Above Flaming Gorge Reservoir)									
East Rim Divide	10F17	7950	1/3	15	2.7	1.1	5.8	4.0 1/	10
YAMPA RIVER									
Columbine Lodge x	6J3	9300	12/28	36	7.6	10.1	10.3	9.2 1/	6
DUCHESNE RIVER									
Daniels-Strawberry Smt. x	11J23	8000	12/28	16	3.4	2.8	0.8	5.3*	29
East Portal x	11J7	7560	No Report			1.1	0.2	4.6*	22
Indian Canyon	10K1	9100	12/28	14	2.3	2.0	1.7	5.2*	21
Julius Park	9J6	9800	12/28	24	6.1	1.5	1.5	-	3
Mosby Mountain	9J5	9500	12/28	16	3.2	1.1	1.0	5.0**	4
Paradise Park	9J3	10100	12/28	24	6.8	1.5	1.5	5.7**	3
Soapstone R. S. x	11J25	7800	12/28	15	3.6	0.8	2.0	5.3**	8
Strawberry Divide x	11J8	8000	No Report			2.1	0.4	8.7*	21
Trial Lake x	10J8	9800	12/28	35	9.4	6.0	7.0	11.0**	5
PRICE RIVER									
Dry Valley Divide	11K8	7800	No Report			0.8	T	4.7*	15
Gooseberry Reservoir	11K4	8700	12/29	20	5.0	1.6	1.9	7.3**	4
Indian Canyon x	10K1	9100	12/28	14	2.3	2.0	1.7	5.2*	21
Mammoth R.S.-Ctnwd.Crk. x	11K3	8800	12/29	22	5.2	1.7	-	7.7**	1
Mud Creek #2	11K33	8300	12/29	16	3.1	1.2	1.5	5.0**	5
Staley Ranch	11K7	7600	No Report			0.3	T	2.6*	15

x - Adjacent Drainage
* - Average for 15-year period partly estimated
** - Average for 15-year period mostly or wholly estimated
1/ - Average for period of record

SNOW SURVEYS - ABOUT JANUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In.)	Water Content (In.)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
SAN RAFAEL RIVER									
Gooseberry Reservoir x	11K4	8700	12/29	20	5.0	1.6	1.9	7.3**	4
Mammoth R.S.-Ctnwd.Crk. x	11K3	8800	12/29	22	5.2	1.7	-	7.7**	1
FREMONT RIVER									
Farnsworth Lake x	11L1	9900	12/27	25	6.6	2.8	2.3	7.4**	3
MUDDY RIVER									
Mt. Baldy R.S. x	11K12	9500	12/28	25	6.7	4.5	2.7	9.3**	2
ESCALANTE RIVER									
Widtsoe-Escalante Smt.	11M1	9500	12/27	18	5.0	2.0	0.0	3.2*	22
Widtsoe-Escalante #2	11M2	9500	12/27	23	6.9	4.5	2.2	4.0*	10
Widtsoe-Escalante #3	11M3	9500	12/27	32	9.6	5.4	3.4	-	2
VIRGIN RIVER									
Duck Creek R.S.	12M4	8560	12/29	14	3.4	3.6	0.0	5.0**	8
Harris Flat R.S. x	12M5	7700	12/29	9	1.7	3.0	0.0	2.5**	8
Long Valley Junction	12M6	7500	12/29	4	1.1	2.2	0.0	1.0**	7
Midway Valley x	12M2	9400	12/29	31	10.0	5.5	2.3	9.7**	6
Webster Flat	12M3	9200	12/29	14	3.8	5.1	1.1	7.6**	7
SAN JUAN RIVER									
Spud Mountain	7M11	10700	12/29	28	6.9	10.1	5.5	11.6 1/	6
Upper San Juan	6M3	10000	12/27	29	7.3	13.9	7.3	13.2 1/	6
Wolf Creek Pass x	6M1	10000	12/27	26	7.3	14.8	5.7	12.1 1/	6
Wolf Creek Summit x	6M17	11000	12/27	30	7.8	20.8	6.4	14.1 1/	5

x - Adjacent Drainage
* - Average for 15-year period partly estimated
** - Average for 15-year period mostly or wholly estimated
1/ - Average for period of record

FEDERAL - STATE - PRIVATE

COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS for UTAH, BEAR and COLORADO RIVER BASIN

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,

and

STATE ENGINEER of UTAH

In cooperation with Agricultural Experiment Stations at Arizona, Colorado and Utah; the State Engineers of Colorado, New Mexico and Wyoming; U.S. Forest Service; Bureau of Reclamation, U.S. National Park Service, U.S. Geological Survey; and other Federal, State, and private organizations.

AS OF

FEB. 1, 1961

USDA SCS-PORTLAND, OREG. 1960

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for

UTAH, BEAR and COLORADO RIVER BASINS

FEBRUARY 1, 1961

Report Prepared

by

Gregory L. Pearson
Snow Survey Supervisor

James R. Talbot
Ass't. Snow Survey Supervisor

Soil Conservation Service
222 South West Temple
Salt Lake City, Utah

Issued by

J. A. LIBBY
State Conservationist
Soil Conservation Service
Salt Lake City, Utah

Wayne D. Criddle
State Engineer
State of Utah
Salt Lake City,Utah

Dr. D.W. Thorne, Dir.
Utah Agricultural Exp.Station
Logan, Utah
Mimeograph Series #462

PROSPECTIVE WATER SUPPLIES

Based on Snow Surveys Made on
UTAH, BEAR and UPPER COLORADO BASINS

February 1, 1961
Approximate Date

50 0 50 100
SCALE IN MILES

N

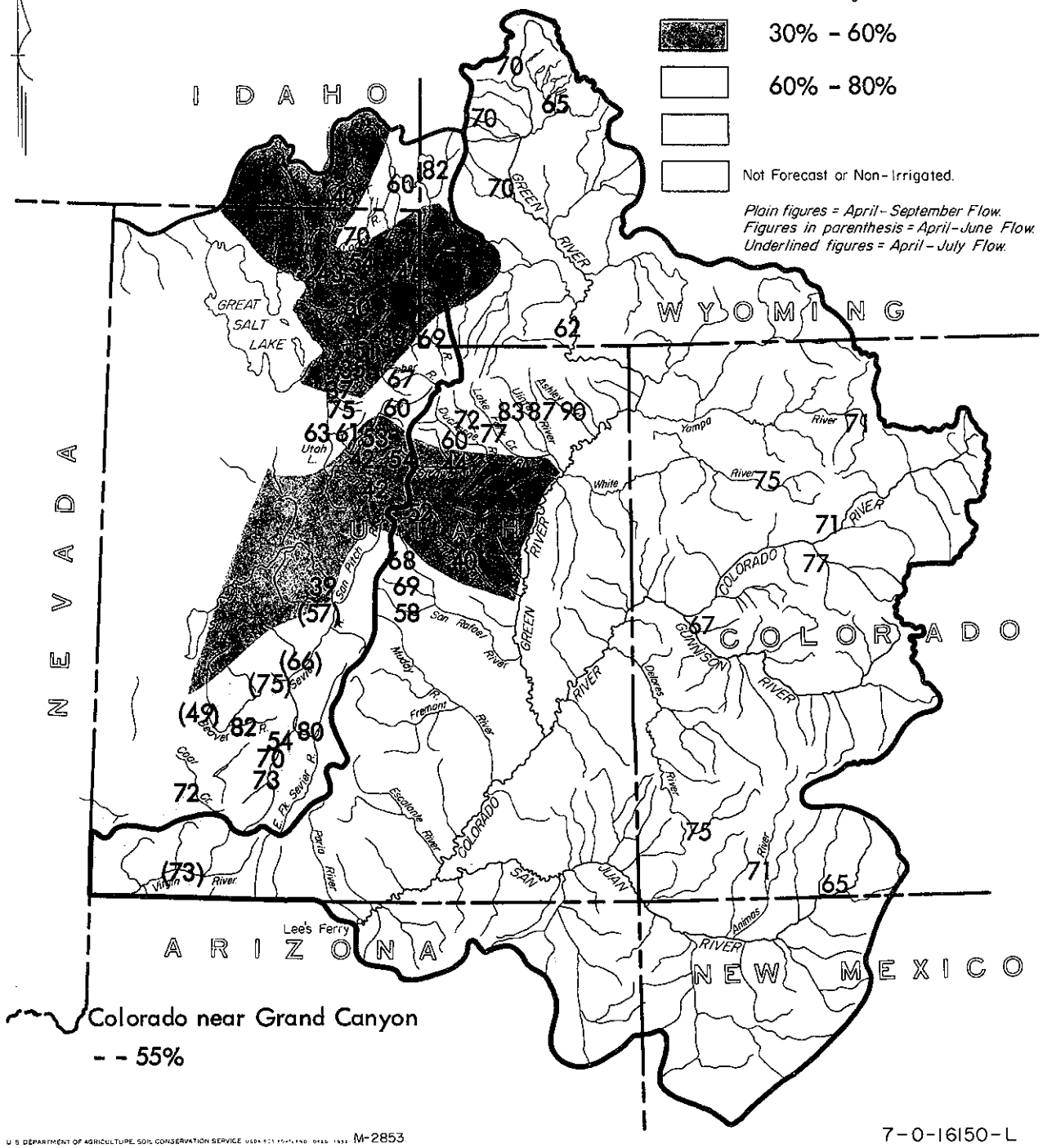
Forecast Stream Flow in Percent of 1943-57
15 Year Average

30% - 60%

60% - 80%

Not Forecast or Non-Irrigated.

Plain figures = April-September Flow.
Figures in parenthesis = April-June Flow.
Underlined figures = April-July Flow.



U. S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE USDA SCS PORTLAND OREG. 1961 M-2853

7-0-16150-L

WATER SUPPLY OUTLOOK
as of
FEBRUARY 1, 1961

* *
* A below average snowpack now lies on all watersheds of Utah and the *
* Bear river, with most watersheds having between one fourth and one *
* half of their average amounts. It is record to near record low in *
* northern and central areas, indicating that most streams in these *
* sections will run at one third to a little more than one half of *
* their usual amounts during the summer. Best outlook is on the *
* streams in the eastern half of the Uintah Basin, the East Fork *
* Sevier River and Beaver River near Beaver where forecasts range *
* from 80% to 90% pf average. Excluding Bear Lake, reservoir stor- *
* age is 66% of last year and 47% of average. *
* Colorado river tributaries in Colorado are expected to yield 65% *
* to 80% of average. In Wyoming, tributaries of the Green are fore- *
* cast at 60% to 70%. *
* *

UTAH & BEAR RIVER

The dry January just completed has resulted in a below average snowpack on all watersheds of Utah and the Bear river. It is record to near record low in northern and central areas, indicating that most streams in these sections will run at one third to a little more than one half of their usual amounts during the summer. Only a few streams can expect more than about 75% of normal. These are the streams in the Uintah Basin from the Uintah River eastward, Smith's Fork of the Bear river in Wyoming, the East Fork of the Sevier River and the Beaver River near Beaver, where forecasts range from 80% to 90% of average. Lower on the Beaver River, however, the inflow to Rocky Ford(Minersville) reservoir is expected to be only 49%.

Flows of 70% to 75% are expected for the streams originating near Cedar Breaks, for Clear Creek near Sevier, the Logan river, the Cottonwood Creeks near Salt Lake, and the western Uintah Basin from Rock Creek to Yellowstone Creek. Other areas can expect from 35% to 70%.

The dry weather of January has left most of the snow courses with essentially the same water content as they had a month ago. However, nearly half of them show light losses due to evaporation and melting, with the most pronounced losses on south and west facing slopes.

Although not generally realized, the outlook for the summer's streamflow in northern Utah is very similar to what it was a year ago now. One reason for the greater recognition of the seriousness of the water outlook this year is

that most of the snow we have came during October and November, with very little since then. This has allowed the south and west slopes to melt off. A year ago there was less snow in the fall, with enough coming in December and January to keep the mountains white. Snowfall during February last year was very heavy over the whole state, varying from one and one half to three times the usual amount. It was also near average or above in northern Utah during March. In spite of this, serious water shortages occurred. While it may happen, we cannot expect above average snowfall for the balance of this winter - there is as much chance that it will be below average as that it will be above. With reservoir storage about two thirds of last year and 47% of average, this gives cause for very grave concern about the water supply situation.

The bad part of having the snow melt from the south and west slopes so early is that evaporation is much greater from bare ground than from a snow surface. Evaporation will dry out the ground and then require water from future storms to wet it up again before there is any extra water to add to streamflow. The longer the ground stays bare, the greater the losses will be. Unless snow soon comes to cover the ground, next month's forecasts will be greatly reduced.

COLORADO RIVER BASIN

The snowpack for the entire Upper Colorado river basin is below average, most of it between 50% and 65% of average. In the state of Colorado, the Yampa, White, Upper Colorado, Gunnison, Dolores and San Juan rivers are all expected to produce between 65% and 80% of average streamflow. In Wyoming, the Green and its tributaries are forecast to yield between 60% and 70% of their usual amounts. Most of Utah's watersheds will yield between 60% and 75%.

In Arizona streamflow is expected to be below normal. However, the water supply outlook is good for most areas because of above average carryover reservoir storage - shown on page 6 of this report. Because of low storage in San Carlos reservoir, however, heavy pumping is expected along the Gila river.

STREAMFLOW FORECASTS - FEBRUARY 1, 1961

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
GREAT BASIN						
BEAR RIVER SYSTEM						
Bear nr Ut-Wyo. State Line	85	69	Apr-Sept	100	101	123
Bear nr Woodruff	60	45	Apr-Sept	77	81	133
Bear nr Randolph	35	30	Apr-Sept	35	44	115(*)
Smith's Fork nr Border, Wyo.	98	82	Apr-Sept	80	112	119
Bear at Harer, Idaho	180	60	Apr-Sept	124	189	299
Cub River nr Preston, Ida.	21	40	Apr-Sept	40	52	52(*)
Little Bear nr Paradise	20	43	Apr-Sept	19.0	42	46
Logan nr Logan (1)	100	70	Apr-Sept	102	139	143
Blacksmith Fork nr Hyrum(2)	36	54	Apr-Sept	37	61	67
WEBER-OGDEN RIVERS						
Weber nr Oakley	71	66	Apr-June	73	90	107
	90	67	Apr-Sept	91	106	134
Wanship Reservoir Inflow(3)	72	55	Apr-July	80	86	130*
Weber nr Coalville(4)	73	51	Apr-Sept	86	114	143
Chalk Crk at Coalville	15	36	Apr-Sept	16.8	19.7	42
East Canyon Crk nr Morgan(5)	10	35	Apr-Sept	10.2	32	28.7
So. Fork Ogden nr Huntsville	35	50	Apr-Sept	29.3	58	70
PROVO RIVER & UTAH LAKE						
Strawberry Reservoir Inflow(6)	30	54	Apr-Sept	10.4	52	56
Spanish Fork at Thistle	18	42	Apr-Sept	14.4	54	43
Hobble Crk nr Springville	10	42	Apr-Sept	5.9	27.3	23.7*
Provo nr Hailstone(7)	70	60	Apr-Sept	72	110	116*
Provo at Vivian Park(8)	85	53	Apr-Sept	81	149	159
American Fork nr American Fork	22	61	Apr-Sept	19.1	42	36
Utah Lake Inflow	200	63	Apr-Sept	195	295	317

(1) Includes U.P.&L. Co. tailrace and Logan, Hyde Park & Smithfield Canal.
(2) Above Utah Power & Light Company's dam.
(3) Observed flow Weber River near Wanship, Utah, plus change in storage in Wanship reservoir, plus diversion by Weber-Provo Canal.
(4) Includes diversion by Weber-Provo canal and change in storage in Wanship Reservoir.
(5) Observed flow plus change in storage in East Canyon Reservoir.
(6) Change in storage plus diversion thru Strawberry tunnel.
(7) Observed flow minus diversions thru Duchesne tunnel and Weber-Provo Canal.
(8) Observed flow plus change in storage in Deer Creek reservoir, minus diversions thru Duchesne tunnel & Weber-Provo Canal, plus diversion thru Salt Lake Aqueduct.
* - Partly estimated.

STREAMFLOW FORECASTS - FEBRUARY 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
JORDAN RIVER & SALT LAKE						
Little Cottonwood Crk nr SLC	29	74	Apr-Sept	28	42	39
Big Cottonwood nr SLC	30	75	Apr-Sept	31	50	40
Parley's Crk nr SLC	5.5	37	Apr-Sept	4.6	14.2	14.7
SEVIER RIVER						
Sevier at Hatch	26	74	Apr-June	11.0	72	35
	36	73	Apr-Sept	19.5	93	49
Sevier nr Circleville	30	70	Apr-Sept	16.0	92	43*
Sevier nr Kingston	13	53	Apr-June	2.9	60	24.6
	16	54	Apr-Sept	4.6	69	29.7
East Fork Sevier nr Kingston(9)	13	76	Apr-June	1.7	46	17.0
	17	80	Apr-Sept	5.2	49	21.3
Sevier below Piute Dam(10)	33	65	Apr-Sept	12.5	115	51
Clear Crk nr Sevier(abv.div.)	12	75	Apr-June	3.5	19.9	15.9*
Inflow						
Kingston to Vermillion Dam	31	66	Apr-June	9.0	78	47
Vermillion Dam to Gunnison	36	57	March-June	35	78	63
Salina Crk at Salina(11)	1.5	16	Apr-June	- -	- -	9.4*
BEAVER RIVER						
Beaver nr Beaver	18	81	Apr-June	6.4	33	22.3
	24	82	Apr-Sept	9.2	43	29.4
COAL CREEK						
Coal Crk nr Cedar City	12	72	Apr-Sept	7.0	32	16.6

(9) Observed flow plus change in storage in Otter Creek Reservoir
(10) Observed flow plus change in storage in Otter Crk & Piute Reservoirs.
(11) Gage is below diversions near Salina
* - Partly estimated.

STREAMFLOW FORECASTS - FEBRUARY 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
COLORADO RIVER BASIN						
GREEN RIVER TRIBUTARIES IN UTAH						
FLAMING GORGE TO DUCHESNE RIVER						
Ashley Creek nr Vernal	53	90	Apr-Sept	34	55	59
DUCHESNE RIVER						
Duchesne at Provo River (Trail nr Hanna)	27	64	Apr-Sept	- -	- -	42*
Duchesne nr Tabiona(12)	75	60	Apr-Sept	69	117	124
Rock Crk nr Mtn. Home	78	72	Apr-Sept	80	99	109
Strawberry at Duchesne	35	44	Apr-Sept	17.7	85	79
Lakefork below Moon Lake(13)	60	77	Apr-Sept	58	76	78
Uinta nr Neola	84	83	Apr-Sept	76	108	101
Whiterocks nr Whiterocks	58	87	Apr-Sept	51	63	67
PRICE RIVER						
Gooseberry Crk nr Scofield	9	71	Apr-Sept	6.3	15.4	12.6
Price nr Scofield(14)	21	52	Apr-Sept	14.0	51	40
Price nr Heiner(14)	28	40	Apr-Sept	15.5	108	70
SAN RAFAEL RIVER						
Huntington Crk nr Huntington	40	68	Apr-Sept	26.5	91	59
Cottonwood Crk nr Orangeville	41	69	Apr-Sept	23.0	83	59
Ferron Crk nr Ferron	25	58	Apr-Sept	17.9	66	43*
VIRGIN RIVER						
Virgin at Virgin	32	73	Apr-June	18.4	108	44

(12) Observed flow plus diversion through Duchesne Tunnel.
(13) Observed flow plus change in storage in Moon Lake reservoir.
(14) Observed flow plus change in storage in Scofield reservoir.
* - Partly estimated.

STREAMFLOW FORECASTS - FEBRUARY 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr Av. 1943-57
GREEN RIVER TRIBUTARIES IN WYOMING (Above Flaming Gorge Reservoir)						
Green at Warren Bridge, Wyo.	245	70	Apr-Sept	310	269	348
New Fork nr Boulder, Wyoming	170	65	Apr-Sept	201	156	260
No. Piney Crk nr Mason, Wyo.	29	70	Apr-Sept	32	35	41
Green nr Fontenelle, Wyo.	700	70	Apr-Sept	704	751	995
Green nr Linwood, Utah	850	62	Apr-Sept	868	1012	1381
GREEN RIVER TRIBUTARIES IN COLORADO						
Yampa at Steamboat Springs	201	71	Apr-Sept	250	328	283
White nr Meeker	250	75	Apr-Sept	269	390	335
COLORADO RIVER (Above jnct. with Green River)						
Colorado at Glenwood Spgs.(15)	1100	71	Apr-Sept	1164	1548	1546
Roaring Fork at Glenwood Spgs. (16)	620	77	Apr-Sept	623	722	803
Gunnison nr Grand Jct.	928	67	Apr-Sept	604	1856	1386
Dolores at Dolores	210	75	Apr-Sept	99	384	279
SAN JUAN RIVER						
San Juan at Rosa	380	65	Apr-Sept	239	901	587
Animas at Durango	335	71	Apr-Sept	244	626	475
COLORADO RIVER (Main Stem)						
Colorado nr Grand Canyon	4200	52	Apr-July	4034	9926	8056
	5000	55	Apr-Sept	4792	10642	9155

(15) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir plus Moffat ditch.

(16) Observed flow plus diversion through Twin Lakes Tunnel.

STATUS OF RESERVOIR STORAGE - FEBRUARY 1, 1961

BASIN and/or STREAM	RESERVOIR	USABLE CAPACITY 1000s AF	USABLE STORAGE - 1000 ACRE FEET 1961	1960	1959	15-Yr.Av. 1943-57
		GREAT BASIN				
Bear River	Bear Lake	1421.0	776.8	924.8	987.9	806.4
Little Bear	Hyrum	15.3	8.3	10.4	10.5	10.7
Ogden	Pine View	110.0	7.2	9.7	13.0	7.0
Weber	Rockport	59.1	15.3	12.2	10.9	- -
	Echo	73.9	22.0	23.0	22.6	27.0
	East Canyon	28.7	4.3	11.9	11.4	15.2
Provo	Deer Creek	149.7	55.1	62.5	84.5	83.1
Spanish Fork	Strawberry	270.0	55.5	104.3	151.6	131.9
Utah Lake	Utah Lake	1149.0*	267.5	433.1	538.9	568.2
Sevier River	Otter Creek	52.5	11.5	24.5	34.2	27.5
	Piute	74.0	17.8	23.7	51.7	38.0
	Sevier Bridge	236.0	28.6	39.8	75.6	134.6
Beaver River	Rocky Ford	23.3	5.7	5.7	12.4	13.6
		COLORADO RIVER BASIN				
Lake Fork	Moon Lake	35.8	8.8	9.4	7.8	12.4
Price River	Scofield	65.8	2.2	5.8	32.9	15.2
Colorado	Granby	465.5	68.8	250.5	287.3	212.9**
Blue	Green Mtn.	146.9	74.9	85.9	70.1	76.7
Gunnison	Taylor Park	106.2	29.1	43.4	51.4	61.0
Dolores	Groundhog	21.7	4.0	3.0	5.0	7.4
San Juan	Vallecito	126.3	no report	37.9	45.2	42.0
Little Colorado	Lyman	30.6	6.7	10.3	18.4	5.9
Colorado	Lake Mead	27,207.0	18,978.0	19,283.0	22,515.0	17,488.0
Colorado	Lake Mohave	1,810.0	1,696.0	1,780.0	1,678.0	1,426.6**
Colorado	Lake Havasu	619.4	543.6	540.0	547.7	549.4
Gila	San Carlos	1,205.0	6.0	180.6	110.8	98.4
Salt	Roosevelt	1,381.6	861.7	767.5	440.2	442.3
Salt	Apache	245.1	241.7	239.8	238.2	194.1
Salt	Canyon	57.9	52.1	57.1	54.4	33.4
Salt	Saguaro	69.8	51.1	66.6	65.9	28.7
Verde	Horseshoe	143.0	8.1	104.5	7.0	12.7**
Verde	Bartlett	180.0	28.0	152.0	101.3	41.4
Agua Fria	Lake Pleasant	163.8	27.0	47.3	18.0	22.9

* - Active capacity taken at 3.1 feet above compromise point.

** - Less than 15 years of record in the 1943-57 period.

COMPARATIVE SNOW DATA

Summary of Snow Survey Data by Tributary Watersheds as of February 1, 1961

TRIBUTARY BASINS	No of Courses Averaged	Years of Record	1961 Snow Water Expressed as Percent of 1960	1959	1943-57 Av.
GREAT BASIN					
Smith's Fork - Bear River	2	12-25	114	85	60*
Mink Creek - Cub River	3	5	95	87	56*
Logan River	3	7-14	94	82	54*
Blacksmith Fork	4	2-14	83	78	43*
Ogden River	6	2-9	72	96	45*
Weber River above Echo Dam	8	7-26	100	77	46*
East Canyon Creek	3	10-26	103	73	47*
Farmington Area	2	8-10	120	83	60*
Salt Lake Area	4	8-26	102	71	46*
Tooele Area	1	7	118	102	71*
American Fork River	2	26	42	98	26*
Provo River above Vivian Park	7	8-30	87	83	38
Strawberry Reservoir Valley	3	25-30	80	98	33
Mt. Nebo Area	2	7	66	64	42*
Sevier River above Hatch	3	6-17	57	399	48*
East Fork Sevier River	4	2-23	73	296	75*
Bryce Canyon	1	12	21	-	27*
Salina Creek	2	5	88	148	58*
San Pitch River	4	1-22	98	110	49*
Beaver River	3	10-11	108	174	51*
Coal Creek - Cedar City	3	6-9	59	238	52*
COLORADO RIVER BASIN					
Duchesne - Strawberry Rivers	5	8-30	80	83	37*
Lakefork River	3	8-10	38	89	27*
Whiterocks River	3	3-8	123	290	66*
Price River	5	1-25	80	96	37*
San Rafael Tributaries	7	5-10	92	108	44*
Escalante River	2	10-23	100	296	84*
Virgin River	4	6-17	53	347	46*
Upper Green River(Wyo)	9	3-7	121	62	-
Yampa River (Colo)	5	19-25	93	74	62
White River (Colo)	2	21-25	82	54	52
Colorado River above Grand Jct.	15	17-25	67	63	53
Gunnison - Dolores Rivers(Colo)	10	12-25	89	179	57*
San Juan-Animas Rivers(Colo)	7	10-24	52	173	51*

* - 15 year average values partly estimated

AVAILABLE SOIL MOISTURE

February 1, 1961

DRAINAGE BASIN & STATION	Station No. 1	Elev	Soil Profile in Inches Depth	Soil Profile in Inches Cap.	Date	Soil Moisture Content in Inches about Feb.1 1961	1960	1959	Av.	Years of Record
COLORADO STATIONS										
ROARING FORK										
Placita	7K7*	8800	48	8.0	Fall	0.1	2.4	0.1	1.5	6
Maroon	6K25*	8400	48	8.0	Fall	0.1	4.8	0.1	1.8	7
UPPER COLORADO										
Vail	6K5*	9200	48	8.0	Fall	0.2	5.2	0.6	2.2	7
Ranch Creek	5K18M	9400	48	7.0	Fall	3.9	5.7	4.3	4.2	5
Berthoud Pass	5K20*	9800	48	8.0	Fall	5.4	1.0	0.5	2.6	5
Vasquez Siphon	5K22*	9600	48	7.0	Fall	5.4	-	3.8	4.4	4
Gore	5J15*	8900	48	7.0	Fall	0.2	2.1	0.1	1.1	5
Blue River	6K21M	10500	48	7.0	Fall	1.3	4.4	0.4	2.7	5
King	6L9*	10500	48	8.0	Fall	2.6	5.9	7.3	6.1	5
SAN JUAN										
Mineral Creek	7M14M	10300	48	8.0	Fall	4.1	5.6	3.1	4.8	4
Molas Lake	7M12M	10500	48	8.0	Fall	0.9	3.2	2.5	3.4	4
Cascade	7M5M	8850	48	8.0	Fall	4.5	5.7	4.7	5.5	4

* Indicates soil moisture station only
M Indicates soil moisture station on snow course

SNOW SURVEYS - ABOUT FEBRUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In.)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
GREAT BASIN DRAINAGE									
UPPER BEAR RIVER (Above Harer, Idaho)									
Big Park a	10G11	8700	1/31	24	5.0	7.5	10.4	- -	2
CCC Camp x	10G7	7500	1/26	24	4.8	5.0	6.0	8.3	25
Piney LaBarge x	10G10	8820	1/30	27	7.7	6.3	11.4	- -	2
Poison Meadows x a	10G6	8500	1/31	43	14.5	11.5	- -	- -	1
Salt River Summit x	10G8	7900	1/26	30	6.6	5.0	7.4	10.6*	12
Trial Lake x	10J8	9800	1/30	33	8.5	9.4	10.9	17.1**	8
LOWER BEAR RIVER (Below Harer, Idaho)									
Beaver Crk-Skunk Crk.	11H14	7150	1/26	17	3.5	4.2	3.8	8.5**	8
Christensen Ranch	11G11	5600	1/26	17	3.8	4.4	4.9	5.8 1/	5
Cub River R. S.	11G12	5400	1/27	12	2.5	5.3	3.4	5.8 1/	5
Dry Bread Pond x	11H13	8230	1/26	17	3.8	6.1	6.1	12.3**	8
Dry Creek Flat	12G4	6350	1/30	2	0.6	4.7	2.3	4.9 1/	6
Emmigrant Summit	11G6	7350	1/25	29	8.7	- -	- -	- -	0
Garden City Summit	11H7	7600	1/24	24	6.4	5.8	7.1	12.5*	14
Klondike Narrows	11H1	7400	1/24	26	7.8	8.2	9.1	12.3**	7
Liberty Spring	11G15	8420	1/25	43	14.5	14.8	- -	- -	1
Oxford Mountain	12G3	6800	1/30	13	2.8	3.8	4.1	6.2 1/	6
Strawberry Creek	11G9	5800	1/26	18	3.9	4.7	4.4	7.3 1/	5
Strawberry Mink Divide	11G10	6800	1/26	31	8.2	7.0	8.2	13.1 1/	5
Tony Grove R. S.	11H3	6250	1/24	16	3.9	5.0	5.6	8.0*	12
Willow Flat	11G4	6100	1/27	20	5.0	5.8	6.8	9.9 1/	5
Steep Hollow #2	11H28	7700	1/24	32	10.0	- -	- -	- -	0
OGDEN RIVER									
Beaver Crk-Skunk Crk.	11H14	7150	1/26	17	3.5	4.2	3.8	8.5**	8
Ben Lomond(lower)	11H9	5850	1/26	17	4.7	8.9	3.5	9.0**	5
Dry Bread Pond	11H13	8230	1/26	17	3.8	6.1	6.1	12.3**	8
Mt. Ogden	11H10	8600	1/28	28	9.8	13.2	8.1	17.4**	9
Sagebrush Flat	11H15	6300	1/26	5	0.8	2.3	1.0	3.7 1/	8
Snow Basin	11H11	6420	1/28	20	6.0	6.9	3.3	8.8**	7

x - Adjacent Drainage
a - Aerial Marker, water content estimated
* - Average for 15-yr period partly estimated
** - Average for 15-yr period mostly or wholly estimated
1/ - Average for period of record

SNOW SURVEYS - ABOUT FEBRUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content: (In.)	Past Record Water Content(In) 1960	1959	1943-57 Av.	Prior Yrs.of Record
WEBER RIVER									
Beaver Creek R. S.	11J24	7500	1/30	9	1.9	1.9	2.4	6.2*	10
Chalk Creek #2	11J2	8000	1/25	22	5.3	4.3	5.2	9.5**	7
Chalk Creek #3	11J3	7500	1/25	12	2.9	2.1	3.7	5.1**	7
Lamb's Canyon x	11J14	6600	1/31	21	4.5	4.4	6.2	10.0*	15
Parley's Canyon Smt.	11J15	7500	1/28	21	5.7	5.1	8.2	11.5*	10
Silver Lake x	11J16	8725	1/28	25	7.6	7.9	9.9	16.8	26
Smith & Morehouse	11J4	7600	1/27	13	3.1	3.1	5.1	8.6**	7
Trial Lake x	10J8	9800	1/30	33	8.5	9.4	10.9	17.1**	8
PROVO RIVER & UTAH LAKE									
Camp Altamont	11J20	7300	1/27	15	3.0	9.1	3.4	12.9	26
Clear Creek Ridge #2	11K22	8000	1/29	19	3.8	3.9	3.9	8.5**	5
Clear Creek Ridge #3	11K23	6600	1/29	9	2.1	2.4	2.7	5.2**	5
Daniels-Strawberry Smt.	11J23	8000	1/26	15	3.2	5.4	3.4	10.5	30
East Portal	11J7	7560	1/29	15	3.3	1.8	1.1	8.7	25
Payson R. S.	11K1	8050	1/26	18	4.1	6.8	6.6	11.0**	7
Rock Bridge	11K2	6750	1/26	16	3.7	5.1	5.6	7.7**	7
Soapstone R. S.	11J25	7800	1/30	15	3.1	2.8	4.2	8.8*	10
South Fork R. S.	11J19	6100	1/27	5	1.6	6.4	2.7	5.9*	23
Strawberry Divide	11J8	8000	1/29	20	4.3	4.2	4.2	14.5	25
Timpanogos Cave Camp	11J18	5500	1/27	0	0.0	2.1	1.2	3.6*	18
Timpanogos Divide	11J21	8140	1/27	21	5.4	10.3	5.0	19.4	26
Trial Lake	10J8	9800	1/30	33	8.5	9.4	10.9	17.1**	8
JORDAN RIVER & GREAT SALT LAKE									
Farmington Cyn.(lower)	11J12	6950	1/30	30	8.6	7.8	10.4	14.4**	10
Farmington Cyn.(upper)	11J11	8000	1/30	30	9.6	7.4	11.5	16.4**	8
Lamb's Canyon	11J14	6600	1/31	21	4.5	4.4	6.2	10.0*	15
Middle Canyon	12J3	7000	1/30	20	5.9	5.0	5.8	8.3**	7
Mill D South Fork	11J10	7400	1/28	24	5.4	5.5	8.3	12.5**	8
Parley's Canyon Smt.x	11J15	7500	1/28	21	5.7	5.1	8.2	11.5*	10
Silver Lake	11J16	8725	1/28	25	7.6	7.9	9.9	16.8	26

x - Adjacent Drainage
* - Average for 15-yr period partly estimated
** - Average for 15-yr period mostly or wholly estimated.

SNOW SURVEYS - ABOUT FEBRUARY 1, 1961

DRAINAGE BASIN and SNOW COVER	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
UPPER SEVIER RIVER (South of Richfield, Utah)									
Big Flat x	12L7	10000	1/26	26	7.6	6.2	4.3	11.7*	10
Bryce Canyon	12M8	8000	1/28	6	0.9	4.2	0.0	3.3*	12
Duck Creek R. S.	12M4	8560	1/26	14	3.2	7.9	0.5	9.5*	17
Harris Flat R. S.	12M5	7700	1/26	7	1.9	7.1	0.7	6.0*	15
Long Valley Junction x	12M6	7500	1/26	0	0.0	4.7	0.0	4.2**	9
Midway Valley	12M2	9800	1/30	38	11.4	11.0	4.0	14.5**	6
Widtsoe-Escalante Smt.	11M1	9500	1/25	13	3.6	4.2	0.0	5.5*	23
Widtsoe-Escalante #2	11M2	9500	1/25	22	6.8	6.0	2.3	6.6*	10
Widtsoe-Escalante #3	11M3	9500	1/25	31	10.1	7.2	3.4	- -	2
LOWER SEVIER RIVER (Including San Pitch River)									
Farnsworth Lake	11L1	9900	1/26	23	6.4	7.0	4.3	11.3**	5
G.B.R.C. Headquarters	11K11	8700	1/27	23	5.4	5.3	4.6	9.1*	22
G.B.R.C. Meadows	11K10	10000	1/27	28	7.0	7.6	6.7	15.6*	10
Gooseberry R. S.	11L2	8400	1/26	17	4.1	4.8	2.8	7.0**	5
Gooseberry Reservoir x	11K4	8700	1/25	20	5.5	5.5	5.1	11.5*	10
Mammoth R.S.-Ctnwd Crk.	11K3	8800	1/25	20	5.4	5.6	- -	12.1**	3
Middle Fork	11K34	9600	1/30	28	7.0	- -	6.4	- -	3
Thistle Flat	11K35	8500	1/30	22	4.6	- -	4.5	- -	4
BEAVER RIVER									
Big Flat	12L7	10000	1/26	26	7.6	6.2	4.3	11.7*	10
Merchant's Valley	12L9	8200	1/26	11	3.0	3.3	1.3	6.5*	11
Otter Lake	12L8	9300	1/26	17	4.1	3.7	3.6	9.9*	10
COAL CREEK									
Midway Valley x	12M2	9800	1/30	38	11.4	11.0	4.0	14.5**	6
Urie Flat	12M10	8450	1/30	10	1.8	5.4	T	5.0**	6
Webster Flat	12M3	9200	1/30	21	4.6	11.1	2.4	11.2*	9

x - Adjacent Drainage
* - Average for 15-yr period partly estimated
** - Average for 15-yr period mostly or wholly estimated

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content(In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
COLORADO RIVER DRAINAGE									
DUCHESNE RIVER									
Daniels-Strawberry Smt.x	11J23	8000	1/26	15	3.2	5.4	3.4	10.5	30
East Portal x	11J7	7560	1/29	15	3.3	1.8	1.1	8.7	25
Indian Canyon	10K1	9100	1/27	15	2.7	4.6	3.1	8.6*	25
Julius Park	9J6	9800	1/27	23	6.1	4.8	2.2	- -	3
Lakefork Mountain	10J10	10500	1/26	13	2.7	4.6	3.4	8.1**	10
Lakefork Mountain #2	10J11	8900	1/26	6	1.2	4.1	1.9	6.0**	8
Lakefork Mountain #3	10J12	8100	1/26	4	1.0	3.7	0.8	4.8**	8
Mosby Mountain	9J5	9500	1/27	17	3.9	4.1	1.5	7.7**	8
Paradise Park	9J3	10100	1/27	23	7.0	4.8	2.1	8.7**	8
Soapstone R.S. x	11J25	7800	1/30	15	3.1	2.8	4.2	8.8*	10
Strawberry Divide x	11J8	8000	1/29	20	4.3	4.2	4.2	14.5	25
Trial Lake x	10J8	9800	1/30	33	8.5	9.4	10.9	17.1**	8
PRICE RIVER									
Dry Valley Divide	11K8	7800	1/28	11	2.0	3.2	2.1	8.0*	19
Gooseberry Reservoir	11K4	8700	1/25	20	5.5	5.5	5.1	11.5*	10
Indian Canyon x	10K1	9100	1/27	15	2.7	4.6	3.1	8.6*	25
Mud Creek #2	11K33	8300	1/28	17	2.9	3.6	3.1	8.3**	5
Mammoth R.S.-Ctnwd.Crk.x	11K3	8800	1/25	20	5.4	5.6	- -	12.1**	3
Staley Ranch	11K7	7600	1/28	9	1.7	1.6	1.0	5.5*	19
SAN RAFAEL RIVER									
Buck Flat	11K31	9400	1/27	21	4.5	4.6	3.5	10.0**	5
Gooseberry Reservoir x	11K4	8700	1/25	20	5.5	5.5	5.1	11.5*	10
Mammoth R.S.-Ctnwd.Crk x	11K3	8800	1/25	20	5.4	5.6	- -	12.1**	3
Red Pine Ridge	11K28	9400	1/26	19	4.2	3.9	5.2	10.9**	5
Rush Pond	11K38	9800	1/27	21	4.2	4.4	3.8	9.2**	5
Upper Joe's Valley	11K29	8800	1/26	11	2.1	2.7	2.6	6.0**	5
Wrigley Creek	11K32	9000	1/27	19	3.6	5.0	2.5	6.8**	5
FREMONT RIVER									
Farnsworth Lake x	11L1	9900	1/26	23	6.4	7.0	4.3	11.3**	5
ESCALANTE RIVER									
Widtsoe-Escalante Smt.	11M1	9500	1/25	13	3.6	4.2	0.0	5.5*	23
Widtsoe-Escalante #2	11M2	9500	1/25	22	6.8	6.0	2.3	6.6*	10
Widtsoe-Escalante #3	11M3	9500	1/25	31	10.1	7.2	3.4	- -	2
VIRGIN RIVER									
Duck Creek R.S.	12M4	8560	1/26	14	3.2	7.9	0.5	9.5*	17
Harris Flat R.S.	12M5	7700	1/26	7	1.9	7.1	0.7	6.0*	15
Long Valley Junction	12M6	7500	1/26	0	0.0	4.7	0.0	4.2**	9
Midway Valley x	12M2	9800	1/30	38	11.4	11.0	4.0	14.5**	6
Webster Flat	12M3	9200	1/30	21	4.6	11.1	2.4	11.2*	9

x - Adjacent Drainage
* - Average for 15-yr. period partly estimated
** - Average for 15-yr. period mostly or wholly estimated.

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yr. of Record
UPPER GREEN RIVER (Above Flaming Gorge Reservoir)								**	
Big Park a	10G11	8700	1/31	24	5.0	7.5	10.4	- -	2
Blind Bull a	10G2	8750	1/31	36	11.5	8.5	17.7	- -	2
Dinwoodie Glaciers x a	9F17	10500	1/24	10	3.0	7.0	6.3	- -	2
Dutch Joe R.S.	9G5	8700	1/30	22	4.5	2.5	5.3	6.1 1/	5
East Rim Divide	10F17	7950	1/26	15	2.8	3.5	6.9	6.3 1/	6
Grennier Meadows	8G4	9000	1/23	20	4.5	6.8	5.1	9.9	19
Gros Ventre Summit a	10F19	8750	1/31	19	4.0	5.0	NR	- -	4
Kendall R. S.	10F15	7900	1/27	17	3.3	3.0	6.1	6.2 1/	5
Loomis Park	10F16	8500	2/1	25	5.8	5.9	10.2	- -	4
Mulligan Park	9G1	8900	1/27	20	4.0	2.8	5.9	6.6 1/	5
Piney-LaBarge	10G10	8820	1/30	27	7.7	6.3	11.4	- -	2
Poison Meadows x a	10G6	8500	1/31	43	14.5	11.5	- -	- -	1
Snyder Basin R.S. #2	10G13	8040	1/30	25	6.4	5.0	9.3	- -	3
Soda Lake	10G14	8300	1/31	30	8.2	5.5	11.4	- -	4
South Pass	8G3	9000	1/23	21	4.2	5.2	5.6	10.3	19
Triple Peaks	10G15	8500	1/31	37	11.4	8.1	16.8	- -	4
Twenty Lakes x a	9G7	10500	1/24	8	2.0	3.0	2.0	- -	2
YAMPA RIVER									
Clark a	6J13	7800	1/28	26	4.7	4.9	6.1	--	2
Columbine Lodge x	6J3	9300	1/27	56	10.2	9.8	14.0	15.3	25
Dry Lake a	6J1	8200	1/28	38	6.8	8.2	11.6	13.2	19
Elk River a	6J4	8700	1/28	37	6.7	7.6	12.5	10.8	20
Lynx Pass x	6J6	9100	1/28	23	4.3	4.6	NS	7.7	20
Old Battle	6H10	9800	2/1	46	14.3	14.4	12.8	20.0	23
Rabbit Ears	6J9	9550	1/27	49	10.5	NS	17.4	17.8	8
Yampa View	6J10	8500	1/27	33	6.0	6.1	8.8	9.1	9
WHITE RIVER									
Burro Mountain a	7K2	9000	1/27	29	5.4	9.2	11.7	10.3	25
Rio Blanco	7J1	8500	1/25	23	5.2	5.0	8.4	9.9	21
UPPER COLORADO RIVER (Above Glenwood Springs, Colo.)									
Arro	5K6	9900	1/27	29	3.9	5.3	6.4	6.5	22
Berthoud Pass	5K3	9700	1/30	32	6.1	9.0	9.3	8.8	24
Berthoud Summit	5K14	11300	1/31	35	7.0	13.6	13.4	11.6	10
Blue River	6K21	10500	1/29	15	2.7	3.3	5.9	- -	4
Cameron Pass x a	5J1	10300	1/31	34	7.8	9.0	14.9	13.6	22
Fremont Pass	6K8	11400	1/28	31	6.7	9.8	8.6	10.3	25

a - Aerial marker, water content estimated. x - Adjacent Drainage NS - No Survey

** - Courses with less than 15 years in the period 1943-57 have all years prior to 1958 averaged. 1/ - Average for record period

SNOW SURVEYS - ABOUT FEBRUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av. **	Pri Yrs Rec
UPPER COLORADO RIVER (Above Glenwood Springs, Colo.) - Continued									
Frisco	6K13	9300	1/28	12	1.8	2.5	3.9	5.5	10
Glen-Mar Ranch	6K20	8850	1/27	23	3.7	3.0	4.4	6.1	13
Gore Pass	6J11	8900	1/28	17	3.7	3.5	5.3	6.6	9
Granby	5J16	8700	1/30	14	2.3	3.0	4.6	5.1	12
Grand Lake	5J19	8600	1/28	22	1.5	3.0	6.9	5.6	12
Grizzly Peak	5K9	11250	1/27	31	6.1	11.5	8.0	11.3	19
Hoosier Pass x	6K1	11400	1/27	25	6.0	8.1	8.4	7.2	22
Jones Pass	5K21	10400	1/30	31	5.4	8.2	NS	- -	4
Kokomo	6K18	10600	1/28	24	4.3	6.6	NS	- -	6
Lynx Pass	6J6	9100	1/28	23	4.3	4.6	NS	7.7	21
Monarch Lake	5J14	8500	No survey			5.0	9.7	8.9	9
Pando	6K19	9500	1/29	15	3.2	2.4	4.6	- -	6
Phantom Valley	5J4	9300	1/28	20	3.9	3.9	8.2	6.6	24
Ranch Creek	5K18	9400	1/21	24	1.9	4.2	6.5	- -	4
Shrine Pass	6K9	10500	1/29	29	5.2	9.6	8.2	10.8	19
Snake River	5K16	9700	1/29	15	2.3	2.4	4.2	5.8	9
Tennessee Pass x	6K2	10200	1/30	17	3.0	5.6	6.5	6.9	24
Vail Pass	6K15	10000	1/29	24	4.8	7.0	10.3	- -	7
Vasquez	5K19	9600	1/21	28	4.5	7.4	8.0	- -	4
Willow Creek Pass	6J5	9500	1/27	21	4.1	6.3	6.1	10.8	21
ROARING FORK									
Aspen	7K22	9700	1/27	25	4.8	8.3	- -	- -	1
Ind. Pass Tunnel	6K4	10200	1/20	23	4.3	9.1	7.3	10.6	25
Ivanhoe	6K10	10400	1/28	27	5.6	5.4	8.1	11.2	14
Lift	7K10	11250	1/27	32	8.1	7.6	6.1	- -	3
North Lost Trail a	7K1	9200	1/27	22	4.9	5.8	5.7	9.2	19
PLATEAU CREEK									
Mesa Lakes	7K4	10000	1/28	22	4.5	9.1	6.7	10.2	24
Trickle Divide a	7K5	10000	1/27	26	4.6	13.9	9.5	17.0	16
GUNNISON RIVER									
Alexander Lake a	7K3	10000	1/27	17	3.5	9.8	6.6	13.4	24
Cochetopa Pass x	6L6	10000	1/27	20	4.8	2.9	3.4	3.5	12
Crested Butte	6L1	9000	1/30	28	5.6	2.1	4.7	9.4	25
Ironton Park	7M6	9800	1/31	24	5.0	5.4	5.9	7.4	24
McClure Pass a	7K8	9500	1/27	21	5.3	11.5	7.7	- -	6
Park Cone	6L2	9700	1/27	24	3.5	4.3	3.0	7.0	25

a - Aerial marker, water content estimated. x - Adjacent Drainage NS - No Survey

** - Courses with less than 15 years in the period 1943-57 have all years prior to 1958 averaged.

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av. **	Prior Yrs. of Record
GUNNISON RIVER - Continued									
Park Reservoir a	7K6	9500	1/27	28	6.5	12.7	8.0	15.6	17
Porphyry Creek	6L3	10700	1/30	38	9.0	11.7	7.5	10.0	21
Red Mountain Pass	7M15	11000	1/28	55	12.2	18.9	NS	- -	3
Tomichi	6L7	10500	1/30	25	4.9	4.3	5.4	- -	2
Trickle Divide x a	7K5	10000	1/27	26	4.6	13.9	9.5	17.0	17
DOLORES RIVER									
Keystone	7L4	9950	1/30	30	5.0	- -	- -	- -	0
Lizard Head	7M3	10300	1/28	26	5.4	10.3	4.8	10.2	14
Long Gulch	7L3	9000	1/27	15	3.0	- -	- -	- -	0
Rico	7M1	8700	1/30	18	4.5	5.6	0.5	6.2	21
Telluride x	7M2	8600	1/27	24	3.9	3.6	2.8	5.1	22
Trout Lake	7M9	9700	1/27	26	4.6	6.8	3.5	8.5	12
SAN JUAN RIVER									
Cascade x	7M5	8850	1/28	23	4.2	8.9	2.2	9.1	22
Chama Divide x	6N2	7750	1/30	14	2.8	6.3	0.6	3.9	21
Chamita	6N3	8500	1/30	26	4.8	6.4	1.9	7.3	19
Howardville	7M13	9800	1/28	23	4.4	NS	NS	- -	6
Ironton Park x	7M6	9800	1/31	24	5.0	5.4	5.9	7.4	24
Mineral Creek	7M14	10300	1/28	25	4.6	NS	NS	- -	2
Molas Lake	7M12	10500	1/28	22	3.1	8.2	3.2	10.1	10
Red Mountain Pass x	7M15	11000	1/28	55	12.2	18.9	NS	- -	3
Silverton Sub-Station	7M4	9400	1/28	11	2.7	NS	NS	4.3	18
Spud Mountain	7M11	10700	1/28	36	7.7	17.6	6.0	16.4	10
Upper San Juan	6M3	10000	1/27	47	8.6	22.9	8.4	21.8	21
Wolf Creek Pass x	6M1	10000	1/27	47	7.6	21.4	6.4	19.5	21
Wolf Creek Summit x	6M17	11000	1/27	39	8.1	27.3	6.3	15.5	10
LITTLE COLORADO RIVER									
Baldy	9S1	9125	1/29	22	4.2	9.1	T	5.5*	10
Canyon Creek #2	10R7	7500	1/30	8	1.6	6.7	0.0	- -	3
Forest Dale	10R6	6430	1/31	2	0.6	2.5	0.0	1.5	21
Fort Apache	9R5	9160	1/29	22	4.2	9.0	2.4	6.1*	8
Fort Valley	11P2	7350	1/31	6	1.1	3.8	0.0	2.9*	14
Gentry	10R5	7600	1/30	8	1.3	6.8	0.0	3.0*	10
Happy Jack x	11R5	7630	1/30	11	2.1	4.7	0.0	3.0*	8
Heber	10R4	7600	1/30	9	1.7	6.4	0.0	3.2*	10
McNary	9R2	7200	1/31	6	1.2	6.3	0.0	2.7	22
Mormon Lake	11R4	7350	1/31	11	2.5	4.7	0.0	5.2*	13
Mormon Mountain	11R3	7500	1/31	12	2.7	6.8	0.0	5.1*	10
Nutrioso	9S4	8500	1/31	8	1.8	3.9	T	2.0	23

a - Aerial marker, water content estimated. x - Adjacent Drainage NS - No Survey
** - Courses with less than 15 years in the period 1943-57 have all years prior to 1958 averaged.
* - Average is for less than 15 years of record in the base period.

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
LOWER COLORADO									
Chalender x	12P1	7100	1/31	8	1.9	3.7	0.0	3.4*	14
Fort Valley	11P2	7350	1/31	6	1.1	3.8	0.0	2.9*	14
Grand Canyon	11P1	7500	1/31	8	1.7	3.5	T	2.6*	13
WILLIAMS RIVER									
Camp Wood x	12R1	5700	1/31	0	0.0	0.0	0.0	1.5*	15
Iron Springs	12R2	6200	1/28	0	0.0	2.5	0.0	1.7*	15
Willow Ranch	13P1	5000	report delayed			0.7	0.0	1.0*	12
GILA RIVER									
Bear Wallow	10T1	8100	2/1	6	1.8	10.7	0.0	3.0*	13
Beaver Head	9S6	8000	1/31	16	3.6	6.2	0.0	2.9	21
Coronado Trail	9S7	8000	1/31	12	3.4	3.9	0.0	2.6	23
Frisco Divide	8S1	8000	1/30	12	2.9	3.9	0.5	2.1	23
Ice King	8S6	8000	1/31	19	5.1	- -	- -	- -	0
Inman	7S2	7800	1/30	0	0.0	1.9	0.0	0.5*	15
Mogollon	8S2	7000	1/31	8	2.3	3.1	0.0	0.7*	8
Nutrioso	9S4	8500	1/31	8	1.8	3.9	T	2.0	23
Redstone Trail	8S7	8600	1/31	22	9.6	- -	- -	- -	0
Rose Canyon	10T2	7300	2/1	2	0.5	6.0	0.0	1.6*	13
State Line	9S8	8000	1/30	10	2.0	5.2	0.0	2.5	23
Taylor Creek	7S1	7850	1/30	0	0.0	1.4	0.0	0.6	19
SALT RIVER									
Baldy x	9S1	9125	1/29	22	4.2	9.1	T	5.5*	10
Beaver Head	9S6	8000	1/31	16	3.6	6.2	0.0	2.9	21
Canyon Creek #2	10R7	7500	1/30	8	1.6	6.7	0.0	- -	3
Coronado Trail	9S7	8000	1/31	12	3.4	3.9	0.0	2.6	23
Forest Dale	10R6	6430	1/31	2	0.6	2.5	0.0	1.5	21
Fort Apache x	9R5	9160	1/29	22	4.2	9.0	2.4	6.1*	8
Gentry	10R5	7600	1/30	8	1.3	6.8	0.0	3.0*	10
Heber	10R4	7600	1/30	9	1.7	6.4	0.0	3.2*	10
Maverick Fork	9S2	9050	1/29	23	4.7	10.9	0.0	6.4*	9
McNary	9R2	7200	1/31	6	1.2	6.3	0.0	2.7	22
Milk Ranch	9R1	7000	1/31	4	1.0	4.4	0.0	2.0	20
Nutrioso x	9S4	8500	1/31	8	1.8	3.9	T	2.0	23
Pacheta	9S5	7800	2/1	6	1.0	9.9	0.0	2.7*	11
Workman Creek	10S1	6900	1/27	8	2.1	9.3	0.4	3.4*	9
VERDE RIVER									
Camp Wood	12R1	5700	1/31	0	0.0	0.0	0.0	1.5*	15
Casner Park	11R2	6930	1/31	9	2.0	4.2	0.0	4.1*	10

x - Adjacent Drainage
* - Average is for less than 15 years of record in the base period.

SNOW SURVEYS - ABOUT FEBRUARY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
VERDE RIVER - Continued									
Chalender	12P1	7100	1/31	8	1.9	3.7	0.0	3.4*	14
Fort Valley x	11P2	7350	1/31	6	1.1	3.8	0.0	2.9*	14
Gaddes Canyon	12R4	7600	1/31	8	2.2	7.4	0.6	3.4*	7
Happy Jack	11R5	7630	1/30	11	2.1	4.7	0.0	3.0*	8
Iron Springs x	12R2	6200	1/28	0	0.0	2.5	0.0	1.7*	15
Mingus Mountain	12R3	7100	1/31	3	0.8	2.5	0.0	1.7*	14
Mormon Lake x	11R4	7350	1/31	11	2.5	4.7	0.0	5.2*	13
Mormon Mountain	11R3	7500	1/31	12	2.7	6.8	0.0	5.1*	10
Munds Park	11R1	6500	1/31	4	1.1	2.6	0.0	2.6*	10

x - Adjacent Drainage
* - Average is for less than 15 years of record in the base period

FEDERAL - STATE - PRIVATE

COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS for UTAH, BEAR and COLORADO RIVER BASIN

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,

and

STATE ENGINEER of UTAH

In cooperation with Agricultural Experiment Stations at Arizona, Colorado and Utah; the State Engineers of Colorado, New Mexico and Wyoming; U.S. Forest Service; Bureau of Reclamation, U.S. National Park Service, U.S. Geological Survey; and other Federal, State, and private organizations.

AS OF

MAR. 1, 1961

USDA-SCS-PORTLAND, OREG. 1960

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for

UTAH, BEAR and COLORADO RIVER BASINS

MARCH 1, 1961

Report Prepared

by

Gregory L. Pearson
Snow Survey Supervisor

and

James R. Talbot
Ass't. Snow Survey Suprv.

Soil Conservation Service
222 South West Temple
Salt Lake City, Utah

Issued by

J. A. LIBBY

State Conservationist
Soil Conservation Service
Salt Lake City, Utah

Wayne D. Criddle
State Engineer
State of Utah
Salt Lake City, Utah

Dr. D.W.Thorne, Dir.
Utah Agricultural Exp. Stati
Logan, Utah
Mimeograph Series #463

PROSPECTIVE WATER SUPPLIES

Based on Snow Surveys Made on UTAH, BEAR and UPPER COLORADO BASINS

March 1, 1961
Approximate Date

50 0 50 100
SCALE IN MILES

N

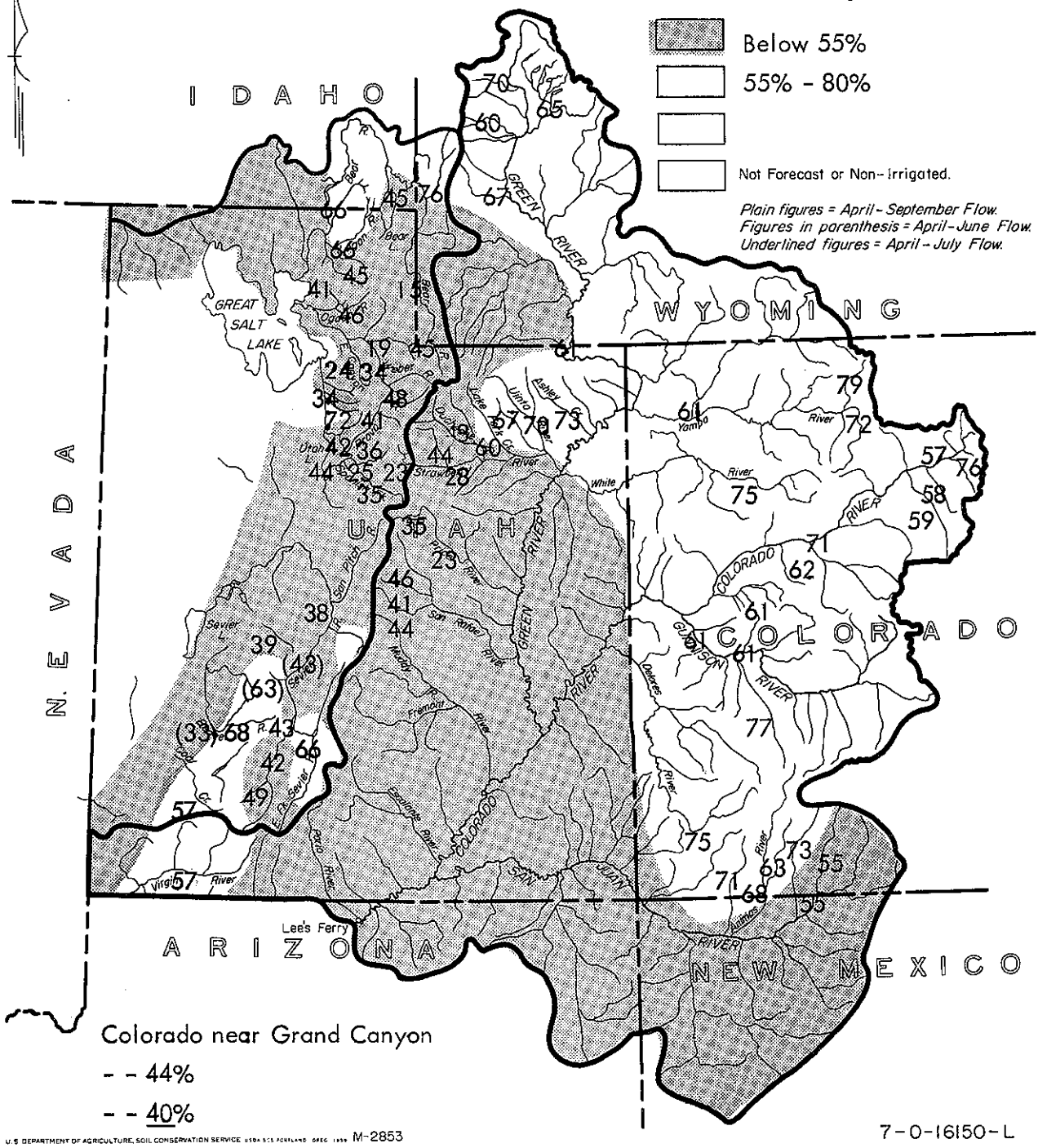
Forecast Stream Flow in Percent of 1943-57 15 Year Average

Below 55%

55% - 80%

Not Forecast or Non-Irrigated.

Plain figures = April-September Flow.
Figures in parenthesis = April-June Flow.
Underlined figures = April-July Flow.



Colorado near Grand Canyon
- - 44%
- - 40%

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE USDA SCS PORTLAND OREG. 1959 M-2853

7-0-16150-L

WATER SUPPLY OUTLOOK

as of

March 1, 1961

All sections of the State can expect definite water shortages during the coming summer, with most areas facing severely short supplies. Most streams will yield between one-fourth and one-half of their usual amounts. Low reservoir storage compounds the seriousness of the problem. Excluding Bear Lake, reservoir storage is 67% of last year and 49% of average. Colorado river tributaries in Colorado are expected to yield 55% to 75% of average. In Wyoming, tributaries of the Green are forecast at 60% to 70%.

UTAH & BEAR RIVER

For Utah as a whole - and the southern tributaries of the Bear river - the water outlook is the worst it has ever been at this time of year. About ninety percent of the snow courses show new record low readings for the last of February. As a result, most of the streams are expected to produce between one fourth and one half of their usual amounts.

The streams with the best outlook are those at the eastern end of the Uintah Basin, the streams with higher elevation watersheds near Salt Lake, Farmington and Tooele, the Logan and Cub rivers, Smith's Fork of the Bear river, Salina Creek and the East Fork of the Sevier river. These streams are expected to yield about 65% to 75% of average.

The Virgin river, Coal Creek at Cedar City, Parowan Creek and the Beaver river near Beaver, Lakefork below Moon Lake and Yellowstone Creek are all forecast at 55% to 60%. All other streams will get less than this, with low forecasts of 4% on the main Bear river below Randolph, 15% at Woodruff, 19% on Chalk Creek at Coalville, 23% for Strawberry reservoir inflow and the Price river at Heiner, 24% for East Canyon Creek near Morgan and 25% for Hobble Creek near Springville. Forecasts for all other streams lie between 25% and 55% of average.

The seriousness of the water outlook is compounded by the low storage water in most reservoirs, resulting from the last two dry years. A few reservoirs in the northern section have fairly good storage. These are Bear Lake, with 96% of the 1943-57 15-year average; Pineview with 3,600 acre feet more than usual; Echo with 91% and Rockport on the Weber which of course is new and so has no back record to compare with. Lowest carryover is in Scofield reservoir on the Price river, having only 14%.

Although the water outlook for most areas is the worst it has ever been at this time of year, if we have average climatic conditions - principally precipitation and temperature - prevailing for the balance of the season, streamflow will not drop quite as low as in 1934. In Utah in 1934 the month of March was extremely dry, with temperatures averaging over 6 degrees above normal. This caused excessive early snowmelt and was then followed by very dry weather during April, May and June. If our present drouth conditions continue this year, the streams can be expected to produce as little or less than they did in 1934. The forecasts given now of course assume that average conditions will prevail.

COLORADO RIVER BASIN

The snowpack for the entire upper Colorado river basin remains below average, with forecasts in Colorado and Wyoming remaining about the same as last month, but being lowered in some cases as much as 10%. In Utah forecasts have been reduced 15% to 25%.

In Colorado, streams are now forecast to yield between about 55% and 75% of average during the coming summer. In Wyoming they range from 60% to 70%, while in Utah the picture is worse, with forecasts ranging from 23% to 73%.

In Arizona streamflow is expected to be well below normal on the Verde, Salt, Tonto and Little Colorado rivers. The upper Gila river is nearer normal. The Verde and Little Colorado watersheds are in the poorest condition, with streamflow expected to be less than a third of average. Because of good reservoir storage there will be adequate water for irrigation in most sections of Arizona, except on the San Carlos Project, where storage and prospective streamflow are both very low.

STREAMFLOW FORECASTS - MARCH 1, 1961

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
GREAT BASIN						
BEAR RIVER SYSTEM						
Bear nr Ut-Wyo. State Line	55	45	Apr-Sept	100	101	123
Bear nr Woodruff	20	15	Apr-Sept	77	81	133
Bear nr Randolph	5	4	Apr-Sept	35	44	115(*)
Smith's Fork nr Border, Wyo.	90	76	Apr-Sept	80	112	119
Bear at Harer, Idaho	135	45	Apr-Sept	124	189	299
Cub River nr Preston, Ida.	34	66	Apr-Sept	40	52	52(*)
Little Bear nr Paradise	19	41	Apr-Sept	19.0	42	46
Logan nr Logan (1)	95	66	Apr-Sept	102	139	143
Blacksmith Fork nr Hyrum(2)	30	45	Apr-Sept	37	61	67
WEBER-OGDEN RIVERS						
Weber nr Oakley	52	49	Apr-June	73	90	107
	65	48	Apr-Sept	91	106	134
Wanship Reservoir Inflow(3)	51	39	Apr-July	80	86	130*
Weber nr Coalville(4)	48	34	Apr-Sept	86	114	143
Chalk Crk at Coalville	8	19	Apr-Sept	16.8	19.7	42
East Canyon Crk nr Morgan(5)	7	24	Apr-Sept	10.2	32	28.7
So. Fork Ogden nr Huntsville	32	46	Apr-Sept	29.3	58	70
PROVO RIVER & UTAH LAKE						
Strawberry Reservoir Inflow(6)	13	23	Apr-Sept	10.4	52	56
Spanish Fork at Thistle	15	35	Apr-Sept	14.4	54	43
Hobble Crk nr Springville	6	25	Apr-Sept	5.9	27.3	23.7*
Provo nr Hailstone(7)	48	41	Apr-Sept	72	110	116*
Provo at Vivian Park(8)	57	36	Apr-Sept	81	149	159
American Fork nr American Fork	15	42	Apr-Sept	19.1	42	36
Utah Lake Inflow	140	44	Apr-Sept	195	295	317

(1) Includes U.P.&L. Co. tailrace and Logan, Hyde Park & Smithfield Canal.
(2) Above Utah Power & Light Company's dam.
(3) Observed flow Weber River near Wanship, Utah, plus change in storage in Wanship reservoir, plus diversion by Weber-Provo Canal.
(4) Includes diversion by Weber-Provo canal and change in storage in Wanship Reservoir.
(5) Observed flow plus change in storage in East Canyon Reservoir.
(6) Change in storage plus diversion thru Strawberry tunnel.
(7) Observed flow minus diversions thru Duchesne tunnel and Weber-Provo Canal.
(8) Observed flow plus change in Storage in Deer Creek reservoir, minus diversions thru Duchesne tunnel & Weber-Provo Canal, plus diversion thru Salt Lake Aqueduct.
(*) Partly estimated.

STREAMFLOW FORECASTS - MARCH 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
JORDAN RIVER & SALT LAKE						
Little Cottonwood Crk nr SLC	26	67	Apr-Sept	28	42	39
Big Cottonwood nr SLC	29	72	Apr-Sept	31	50	40
Parley's Crk nr SLC	5	34	Apr-Sept	4.6	14.2	14.7
SEVIER RIVER						
Sevier at Hatch	17	49	Apr-June	11.0	72	35
	24	49	Apr-Sept	19.5	93	49
Sevier nr Circleville	18	42	Apr-Sept	16.0	92	43*
Sevier nr Kingston	5.5	22	Apr-June	2.9	60	24.6
	7	24	Apr-Sept	4.6	69	29.7
East Fork Sevier nr Kingston(9)	9.5	56	Apr-June	1.7	46	17.0
	14	66	Apr-Sept	5.2	49	21.3
Sevier below Piute Dam(10)	22	43	Apr-Sept	12.5	115	51
Clear Crk nr Sevier(abv. div.)	10	63	Apr.June	3.5	19.9	15.9*
Inflow						
Kingston to Vermillion Dam	20	43	Apr-June	9.0	78	47
Vermillion Dam to Gunnison	32	51	March-June	35	78	63
Salina Crk at Salina(11)	1.5	16	Apr-June	- -	- -	9.4*
Sevier River nr Gunnison	24	38	Apr-Sept	31	81	64
BEAVER RIVER						
Beaver nr Beaver	15	67	Apr-June	6.4	33	22.3
	20	68	Apr-Sept	9.2	43	29.4
Rockyford Reservoir Inflow(12)	3	33	Apr-June	2.0	21.4	9.2
PAVANT VALLEY						
Chalk Crk nr Fillmore	8	39	Apr-Sept	5.7	21.3	20.3*
COAL CREEK						
Coal Crk nr Cedar City	9.5	57	Apr-Sept	7.0	32	16.6

(9) Observed flow plus change in storage in Otter Creek Reservoir.
(10) Observed flow plus change in storage in Otter Crk & Piute Reservoirs.
(11) Gage is below diversions near Salina.
(12) Observed flow at Rockyford Dam, corrected for change in storage in Rockyford Reservoir.
* - Partly estimated.

STREAMFLOW FORECASTS - MARCH 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
COLORADO RIVER BASIN						
GREEN RIVER TRIBUTARIES IN UTAH						
FLAMING GORGE TO DUCHESNE RIVER						
Ashley Creek nr Vernal	43	73	Apr-Sept	34	55	59
DUCHESNE RIVER						
Duchesne at Provo River (Trail nr Hanna)	20	48	Apr-Sept	--	--	42*
Duchesne nr Tabiona(13)	55	44	Apr-Sept	69	117	124
Rock Crk nr Mtn. Home	52	48	Apr-Sept	80	99	109
Strawberry at Duchesne	22	28	Apr-Sept	17.7	85	79
Lakefork below Moon Lake(14)	47	60	Apr-Sept	58	76	78
Uinta nr Neola	68	67	Apr-Sept	76	108	101
Whiterocks nr Whiterocks	47	70	Apr-Sept	51	63	67
Yellowstone nr Altonah	47	59	Apr-Sept	55	78	79*
PRICE RIVER						
Gooseberry Crk nr Scofield	6	48	Apr-Sept	6.3	15.4	12.6
Price nr Scofield (15)	14	35	Apr-Sept	14.0	51	40
Price nr Heiner (15)	16	23	Apr-Sept	15.5	108	70
SAN RAFAEL RIVER						
Huntington Crk nr Huntington	27	46	Apr-Sept	26.5	91	59
Cottonwood Crk nr Orangeville	24	41	Apr-Sept	23.0	83	59
Ferron Crk nr Ferron	19	44	Apr-Sept	17.9	66	43*
VIRGIN RIVER						
Virgin at Virgin	25	57	Apr-June	18.4	108	44
GREEN RIVER TRIBUTARIES IN WYOMING (Above Flaming Gorge Reservoir)						
Green at Warren Bridge, Wyo.	245	70	Apr-Sept	310	269	348
New Fork nr Boulder, Wyoming	170	65	Apr-Sept	201	156	260
No. Piney Crk nr Mason, Wyo.	25	60	Apr-Sept	32	35	41
Green nr Fontenelle, Wyo.	670	67	Apr-Sept	704	751	995
Green nr Linwood, Utah	800	61	Apr-Sept	868	1012	1,381

(13) Observed flow plus diversion through Duchesne Tunnel
(14) Observed flow plus change in storage in Moon Lake reservoir.
(15) Observed flow plus change in storage in Scofield reservoir.
* - Partly estimated.

STREAMFLOW FORECASTS - MARCH 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Fore-cast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
GREEN RIVER TRIBUTARIES IN COLORADO						
Yampa at Steamboat Springs	205	72	Apr-Sept	250	328	283
Elk at Clark	170	79	Apr-Sept	154	219	215
Little Snake nr Lily	215	61	Apr-Sept	184	369	350
White nr Meeker	250	75	Apr-Sept	269	390	335
COLORADO RIVER (Above Jct. with Green River)						
Colorado nr Granby(16)	180	76	Apr-Sept	201	227	235
Willow Crk above Willow Crk Res.	25	57	Apr-Sept	31	43	44
Williams River nr Parshall	45	58	Apr-Sept	54	76	78
Blue above Green Mtn.Res.	170	59	Apr-Sept	231	262	290
Colorado at Glenwood Spgs.(17)	1,100	71	Apr-Sept	1,164	1,548	1,546
Roaring Fork at Glenwood Spgs.(18)	500	62	Apr-Sept	623	722	803
Plateau Crk nr Collbran	35	61	Apr-Sept	27	59	57
Surface Crk nr Cedaredge	11	61	Apr-Sept	11	23	18
Uncompahgre at Colona	112	77	Apr-Sept	100	225	145
Gunnison nr Grand Jct.	845	61	Apr-Sept	604	1,856	1,386
Dolores at Dolores	210	75	Apr-Sept	99	384	279
SAN JUAN RIVER						
Piedra nr Piedra	103	55	Apr-Sept	70	254	186
San Juan at Rosa	320	55	Apr-Sept	239	901	587
Los Pinos nr Bayfield(19)	160	73	Apr-Sept	122	273	220
Animas at Durango	325	68	Apr-Sept	244	626	475
Florida nr Durango	39	63	Apr-Sept	26	86	62
LaPlata at Hesperus	20	71	Apr-Sept	11	40	28
COLORADO RIVER - (Main Stem)						
Colorado nr Grand Canyon	3,200	40	Apr-July	4,034	9,926	8,056
	4,000	44	Apr-Sept	4,792	10,642	9,155

(16) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir.
(17) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir plus Moffat ditch.
(18) Observed flow plus diversion through Twin Lakes Tunnel.
(19) Observed flow plus change in storage in Vallecito reservoir.

STATUS OF RESERVOIR STORAGE - MARCH 1, 1961

BASIN and/or STREAM	RESERVOIR	Usable Capacity 1000s AF	USABLE STORAGE - 1000 ACRE FEET 1961	1960	1959	15-Yr.Av. 1943-57
			GREAT BASIN			
Bear River	Bear Lake	1421.0	785.5	955.5	1,003.0	815.6
Little Bear	Hyrum	15.3	10.8	10.5	10.6	10.7
Ogden	Pine View	110.0	10.8	12.3	16.0	7.2
Weber	Rockport	59.1	15.9	14.1	11.0	- -
	Echo	73.9	25.8	27.0	28.0	28.5
	East Canyon	28.7	5.4	13.1	12.7	16.0
Provo	Deer Creek	149.7	58.2	64.9	85.9	82.3
Spanish Fork	Strawberry	270.0	56.5	107.6	156.7	134.3
Utah Lake	Utah Lake	1149.0*	296.1	481.2	594.2	614.2
Sevier River	Otter Creek	52.5	15.2	24.8	37.2	31.9
	Piute	74.0	22.5	27.6	54.1	46.4
	Sevier Bridge	236.0	37.1	52.4	90.4	150.4
Beaver River	Rocky Ford	23.3	6.8	7.2	14.3	15.3
			COLORADO RIVER BASIN			
Lake Fork	Moon Lake	35.8	10.1	11.0	9.1	13.9
Price River	Scofield	65.8	2.3	6.6	34.5	16.3
Colorado	Granby	465.5	247.5	231.2	267.9	213.3
Blue	Green Mtn.	146.9	65.0	71.4	53.4	68.0
Gunnison	Taylor Park	106.2	31.1	46.2	54.3	60.9
Dolores	Groundhog	21.7	4.0	3.2	5.5	7.0
San Juan	Vallecito	126.3	42.1	39.7	46.1	41.0
Little Colorado	Lyman	30.6	6.8	10.6	18.7	6.3
Colorado	Lake Mead	27,207.0	18,755.0	19,124.0	21,190.0	16,929.0
Colorado	Lake Mohave	1,810.0	1,701.5	1,727.0	1,701.0	1,467.0**
Colorado	Lake Havasu	619.4	533.7	551.7	549.0	559.2
Gila	San Carlos	1,205.0	2.8	205.8	108.0	102.2
Salt	Roosevelt	1,381.6	841.4	834.1	450.6	432.8
Salt	Apache	245.1	241.6	238.8	238.3	203.5
Salt	Canyon	57.9	47.3	57.8	57.0	42.4
Salt	Saguaro	69.8	65.8	69.0	64.1	38.5
Verde	Horseshoe	143.0	1.5	124.6	25.5	16.8**
Verde	Bartlett	180.0	39.8	121.6	97.4	54.4
Agua Fria	Lake Pleasant	163.8	26.8	48.8	18.5	24.9

* - Active capacity taken at 3.1 feet above compromise point.
** - Less than 15 years of record in the 1943-57 period.

COMPARATIVE SNOW DATA

Summary of Snow Survey Data by Tributary Watersheds as of March 1, 1961

TRIBUTARY BASINS	No. of Courses Averaged	Years of Record	1961 Snow Water Expressed as Percent of 1960	1959	&	1943-57 Av.
GREAT BASIN						
Smith's Fork - Bear River(Wyo)	3	6-25	84	73		63 *
Strawberry-Mink Creeks(Ida)	3	1-6	80	85		68 *
Cub River (Ida)	3	6-10	74	79		68 *
Logan River	4	7.14	78	73		60 *
Blacksmith Fork-Little Bear	5	5-14	70	71		56 *
Malad River(Idaho)	2	6	60	74		68 *
Ogden River	6	7.13	63	73		58 *
Weber River above Echo Dam	8	10-26	67	62		50 *
Chalk Creek - Coalville	3	8-10	79	58		54 *
East Canyon Creek	3	13-26	75	73		57 *
Farmington Creek	2	10	82	84		67 *
Salt Lake Area	4	8-26	80	72		58 *
Tooele Area	1	7	74	86		80 *
American Fork River	3	6-26	35	43		27 *
Provo River above Vivian Park	6	10-30	54	51		39 *
Strawberry Reservoir Valley	3	25-30	44	49		34
Hobble Creek	2	6-8	48	44		38 *
Mt. Nebo Area	2	7-13	52	60		57 *
Sevier River above Panguitch	6	4-18	57	78		46 *
East Fork Sevier River	4	6-24	69	95		59 *
Clear Creek above Sevier	1	16	50	67		46 *
Salina Creek	2	8-10	85	102		68 *
San Pitch River	6	9-23	59	58		49 *
Chicken Creek - Levan	1	4	60	80		--
Chalk Creek - Fillmore	3	1-7	52	77		62 *
Beaver River	3	12-14	76	80		55 *
Parowan Creek	3	7-15	89	123		65 *
Coal Creek - Cedar City	4	6-15	55	72		42 *
COLORADO RIVER BASIN IN UTAH						
Duchesne River above Tabiona	3	14-30	56	51		40 *
Strawberry River	4	6-30	45	49		33 *
Lakefork River	2	8-10	42	36		28 *
Whiterocks-Uintah Rivers	3	2-10	90	96		50 *
Ashley Creek	4	10-12	74	72		44 *
Price River	7	6-23	47	42		32 *
San Rafael Tributaries	4	5-16	49	54		43 *
Fremont River	4	5-8	63	91		51 *
Escalante River	2	11-24	88	122		80 *
Virgin River	4	7-18	45	57		35 *
LaSal Mtns. near Moab	2	5-9	40	65		32 *
Blue Mtns. nr Monticello	2	5	34	80		38 *

* - 15 yr average values partly estimated.

AVAILABLE SOIL MOISTURE

March 1, 1961

DRAINAGE BASIN & STATION	Station No.1	Elev	Soil Profile in Inches Depth	Cap.	Date	Soil Moisture Content in Inches about Feb.1 1961	1960	1959	Av.	Years of Record
COLORADO STATIONS										
ROARING FORK										
Placita	7K7*	8800	48	8.0	Fall	0.1	2.4	0.1	1.5	6
Maroon	6K25*	8400	48	8.0	Fall	0.1	4.8	0.1	1.8	7
UPPER COLORADO										
Vail	6K5*	9200	48	8.0	Fall	0.2	5.2	0.6	2.2	7
Ranch Creek	5K18M	9400	48	7.0	Fall	3.9	5.7	4.3	4.2	5
Berthoud Pass	5K20*	9800	48	8.0	Fall	5.4	1.0	0.5	2.6	5
Vasquez Siphon	5K22*	9600	48	7.0	Fall	5.4	-	3.8	4.4	4
Gore	5J15*	8900	48	7.0	Fall	0.2	2.1	0.1	1.1	5
Blue River	6K21M	10500	48	7.0	Fall	1.3	4.4	0.4	2.7	5
King	6L9*	10500	48	8.0	Fall	2.6	5.9	7.3	6.1	5
SAN JUAN										
Mineral Creek	7M14M	10300	48	8.0	Fall	4.1	5.6	3.1	4.8	4
Molas Lake	7M12M	10500	48	8.0	Fall	0.9	3.2	2.5	3.4	4
Cascade	7M5M	8850	48	8.0	Fall	4.5	5.7	4.7	5.5	4

* Indicates soil moisture station only
M Indicates soil moisture station on snow course

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
GREAT BASIN DRAINAGE									
UPPER BEAR RIVER (Above Harer, Idaho)									
Big Park a	10G11	8700	2/27	39	10.0	NR	15.8	18.2 b	8
CCC Camp x	10G7	7500	2/23	29	6.5	9.3	9.3	10.4	25
Monte Cristo R.S.	11H12	8960	2/23	47	12.6	15.5	17.5	22.7*	11
Piney LaBarge x	10G10	8820	3/3	39	10.6	11.1	14.6	16.9 b	6
Poison Meadows x a	10G6	8500	2/27	59	17.0	NR	22.3	25.6 b	12
Salt River Summit x	10G8	7900	2/23	38	8.7	10.1	11.6	13.6*	13
Trial Lake x	10J8	9800	2/27	49	11.5	16.8	17.8	23.4*	15
LOWER BEAR RIVER (Below Harer, Idaho)									
Beaver Crk-Skunk Crk.	11H14	7150	2/23	26	6.8	9.6	8.9	11.6*	9
Christensen Ranch	11G11	5600	2/23	22	6.1	9.0	8.0	8.4 b	6
Cub River R.S.	11G12	5400	2/23	18	5.6	10.6	7.4	8.6 b	6
Dry Bread Pond x	11H13	8230	2/23	32	8.0	13.2	12.6	16.7*	13
Dry Creek Flat	12G4	6350	2/28	15	4.4	9.1	6.2	7.0 b	6
Emmigrant Summit	11G6	7350	2/24	48	13.9	- -	- -	22.1**	0
Franklin Basin R.S.	11G8	8200	2/27	52	16.0	17.2	19.7	23.6*	10
Garden City Summit	11H7	7600	2/27	39	9.9	11.0	12.4	17.4*	14
Klondike Narrows	11H1	7400	2/27	40	11.4	14.6	15.0	16.7**	7
Liberty Springs	11G15	8420	3/1	73	23.2	- -	- -	- -	0
Little Bear(lower)	11H26	6100	2/24	20	6.4	10.7	8.9	8.0**	5
Little Bear(upper)	11H25	6850	2/24	28	6.2	12.9	9.7	10.2**	5
Monte Cristo R.S.	11H12	8960	2/23	47	12.6	15.5	17.5	22.7*	11
Oxford Mountain	12G3	6800	2/28	27	6.2	8.7	8.0	8.5 b	6
Steep Hollow #2	11H28	7700	2/27	53	16.3	- -	19.8	- -	1
Strawberry Creek	11G9	5800	2/24	22	6.6	9.9	8.9	10.3 b	6
Strawberry Mink Divide	11G10	6800	2/24	46	13.6	14.7	14.1	17.6 b	6
Tony Grove R.S.	11H3	6250	2/27	22	5.4	10.2	10.1	11.2*	12
Willow Flat	11G4	6100	2/23	32	9.5	13.0	12.3	13.9 b	6
OGDEN RIVER									
Beaver Crk-Skunk Crk.	11H14	7150	2/23	26	6.8	9.6	8.9	11.6*	9
Ben Lomond(lower)	11H9	5850	2/24	21	7.0	17.8	9.7	12.3**	5
Dry Bread Pond	11H13	8230	2/23	32	8.0	13.2	12.6	16.7*	13
Monte Cristo R.S.	11H12	8960	2/23	47	12.6	15.5	17.5	22.7*	11
Mt. Ogden	11H10	8600	2/25	48	15.1	24.8	20.2	24.0*	11
Sagebrush Flat	11H15	6300	2/23	7	1.7	6.4	4.1	4.5 b	8
Snow Basin	11H11	6420	2/25	30	8.3	13.2	10.6	12.2**	7

x - Adjacent Drainage a - Aerial marker, water content estimated.
* - Average for 15-year period partly estimated.
** - Average for 15-year period mostly or wholly estimated.
b - Average for period of record.

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. o Recor
WEBER RIVER									
Beaver Creek R.S.	11J24	7500	2/27	14	3.8	6.6	7.0	8.4*	12
Chalk Creek #1	11J1	9100	2/23	45	10.0	14.0	17.0	20.8**	8
Chalk Creek #2	11J2	8000	2/23	34	7.2	8.6	11.3	13.2**	10
Chalk Creek #3	11J3	7500	2/23	19	4.2	5.1	8.4	6.9**	9
Lamb's Canyon x	11J14	6600	2/25	31	8.3	11.0	10.8	13.5*	20
Parley's Canyon Smt.	11J15	7500	2/27	37	9.3	12.4	13.3	15.7*	13
Redden Mine(lower)	11J6	8500	2/24	30	7.0	12.4	13.3	16.9*	10
Redden Mine(upper)	11J5	9000	2/24	34	8.0	13.5	15.4	17.9*	10
Silver Lake x	11J16	8725	2/25	39	10.8	14.3	15.0	21.4	26
Smith & Morehouse	11J4	7600	2/25	21	5.5	8.2	10.4	12.3*	10
Trial Lake x	10J8	9800	2/27	49	11.5	16.8	17.8	23.4*	15
PROVO RIVER & UTAH LAKE									
Camp Altamont	11J20	7300	2/27	15	4.2	13.0	9.3	16.3	26
Clear Creek Ridge #1	11K21	9200	2/28	33	6.8	12.7	12.2	15.2**	5
Clear Creek Ridge #2	11K22	8000	2/28	27	6.3	10.2	9.6	12.0**	6
Clear Creek Ridge #3	11K23	6600	2/28	14	3.5	6.6	6.1	7.0**	6
Daniels-Strawberry Smt.	11J23	8000	2/24	18	4.0	10.8	10.0	13.9	30
Dutchman R. S.	11J17	7500	2/27	19	4.9	14.6	13.6	18.0**	6
East Portal	11J7	7560	2/25	18	4.2	8.4	7.2	11.0*	26
Hobble Creek Summit	11J22	7300	2/24	21	4.7	10.4	11.9	13.4**	8
Packard Canyon	11J31	6400	2/24	16	4.3	8.2	9.0	10.5**	6
Payson R.S.	11K1	8050	2/23	31	7.8	15.0	13.2	15.5*	13
Rock Bridge	11K2	6750	2/23	24	6.8	11.8	11.1	10.7**	7
Soapstone R. S.	11J25	7800	2/27	24	5.2	8.1	11.0	12.0*	14
South Fork R. S.	11J19	6100	2/27	1	0.3	8.4	3.0	7.3*	23
Strawberry Divide	11J8	8000	2/25	28	6.2	13.5	12.7	18.1*	25
Timpanogos Cave Camp	11J18	5500	2/27	T	T	4.3	1.8	4.0*	19
Timpanogos Divide	11J21	8140	2/27	25	6.6	16.2	13.4	24.5	26
Trial Lake	10J8	9800	2/27	49	11.5	16.8	17.8	23.4*	15
JORDAN RIVER & GREAT SALT LAKE									
Farmington Canyon(lower)	11J12	6950	2/27	46	13.2	16.6	15.8	19.4**	10
Farmington Canyon(upper)	11J11	8000	2/27	51	14.7	17.4	17.7	22.5**	10
Lamb's Canyon	11J14	6600	2/25	31	8.3	11.0	10.8	13.5*	20
Middle Canyon	12J3	7000	2/23	35	9.0	12.2	10.4	11.3**	7
Mill D South Fork	11J10	7400	2/25	36	10.2	10.8	15.0	17.2**	8
Parley's Canyon Smt. x	11J15	7500	2/27	37	9.3	12.4	13.3	15.7*	13
Silver Lake	11J16	8725	2/25	39	10.8	14.3	15.0	21.4	26

x - Adjacent Drainage
* - Average for 15-year period partly estimated.
** - Average for 15-year period mostly or wholly estimated.

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
UPPER SEVIER RIVER (South of Richfield, Utah)									
Big Flat x	12L7	10000	2/26	37	10.2	10.8	10.6	15.8*	12
Box Creek	12L4	9800	2/21	28	6.2	9.1	8.2	12.0**	6
Bryce Canyon	12M8	8000	2/25	0	0.0	4.6	1.5	4.5*	14
Castle Valley	12M13	9700	2/28	28	7.2	11.0	8.6	12.0**	4
Cedar Breaks	12M1	10390	2/27	34	10.8	13.9	10.4	19.2*	15
Duck Creek R.S.	12M4	8560	2/27	16	4.1	10.4	9.1	13.5*	17
Fish Lake	11L3	8700	2/20	10	1.8	5.6	3.0	7.3**	6
Harris Flat R.S.	12M5	7700	2/27	5	1.5	8.4	6.6	9.0*	18
Kimberly Mine	12L6	8900	2/23	30	6.4	12.7	9.5	14.0*	16
Long Valley Jnct. x	12M6	7500	2/27	0	0.0	5.7	4.3	5.9*	12
Midway Valley	12M2	9800	2/27	37	11.7	14.0	11.4	20.1**	7
Panguitch Lake	12M7	8200	2/28	9	2.6	4.5	2.4	4.5**	9
Squaw Springs	12L5	9300	2/21	11	2.9	5.5	5.2	7.0**	6
Widtsoe-Escalante Smt.	11M1	9500	2/24	17	4.8	6.1	4.0	6.7*	24
Widtsoe-Escalante #2	11M2	9500	2/24	26	7.6	7.9	6.1	8.7*	11
Widtsoe-Escalante #3	11M3	9500	2/24	34	10.4	9.1	8.1	- -	2
LOWER SEVIER RIVER (Including San Pitch River)									
Bear Canyon	12L3	7200	2/24	22	5.2	11.2	6.5	8.3 b	7
Beaver Dams	11K13	8000	2/23	26	5.2	9.8	10.1	10.1**	9
Farnsworth Lake	11L1	9900	2/28	43	10.3	11.3	9.1	15.1**	8
G.B.R.C. Headqrts.	11K11	8700	2/27	32	7.5	12.5	13.0	13.6*	23
G.B.R.C. Meadows	11K10	10000	2/27	45	10.8	18.2	16.6	21.0*	11
Gooseberry R. S.	11L2	8400	2/28	30	6.3	8.0	7.0	9.3*	10
Gooseberry Reservoir	11K4	8700	2/24	29	7.4	11.9	13.7	16.2*	16
Mammoth R.S.-Ctnwd.Creek	11K3	8800	2/24	31	7.2	12.5	- -	17.1**	8
Middle Fork	11K34	9600	No Report			12.0	13.6	18.0 b	5
Mt. Baldy R.S.	11K12	9500	2/23	41	9.3	15.6	15.8	19.5**	9
Pine Creek	12L1	8700	2/23	36	8.1	16.3	11.0	13.3**	7
Rees' Flat	11K36	7300	2/21	28	6.1	10.2	7.6	- -	4
Shingle Mill	12L11	6200	2/24	23	6.1	10.3	- -	- -	1
Thistle Flat	11K35	8500	2/25	30	8.2	9.2	10.5	13.1 b	5
BEAVER RIVER									
Big Flat	12L7	10000	2/26	37	10.2	10.8	10.6	15.8*	12
Merchant's Valley	12L9	8200	2/23	15	4.1	7.4	6.5	9.0*	14
Otter Lake	12L8	9300	2/23	26	7.0	8.9	8.6	13.3*	13
PAROWAN CREEK									
Ed Ward Flat	12M12	8300	2/24	18	5.7	5.5	3.6	7.7**	7
Yankee Reservoir	12M11	8700	2/24	22	6.5	7.6	6.1	9.8**	6

x - Adjacent Drainage
* - Average for 15-year period partly estimated
** - Average for 15-year period mostly or wholly estimated
b - Average for period of record

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. o Recor
COAL CREEK									
Cedar Breaks	12M1	10390	2/27	34	10.8	13.9	10.4	19.2*	15
Midway Valley x	12M2	9800	2/27	37	11.7	14.0	11.4	20.1**	7
Urie Flat	12M10	8450	2/27	5	1.3	6.7	5.3	7.8**	6
Webster Flat	12M3	9200	2/27	19	5.5	13.9	9.8	15.6*	11
ENTERPRISE TO NEW HARMONY DRAINAGE									
Little Grassy Creek	13M4	6100	2/28	0	0.0	6.5	5.3	- -	2
Long Flat	13M2	8000	2/28	6	2.0	7.4	5.2	4.6 b	6
COLORADO RIVER DRAINAGE									
BRUSH CREEK									
Kings Cabin(lower)	9J2	8600	2/20	16	3.4	5.4	6.8	8.7*	12
Kings Cabin(upper)	9J1	8730	2/20	21	3.8	6.0	7.4	9.9*	12
DUCHESNE RIVER									
Daniels-Strawberry Smt.x	11J23	8000	2/24	18	4.0	10.8	10.0	13.9	30
East Portal x	11J7	7560	2/25	18	4.2	8.4	7.2	11.0*	26
Indian Canyon	10K1	9100	2/23	18	3.3	7.5	7.5	10.7*	23
Julius Park	9J6	9800	2/27	27	7.0	7.0	7.0	- -	2
Lakefork Mountain	10J10	10500	2/25	18	3.6	6.9	8.2	10.9*	10
Lakefork Mountain #2	10J11	8900	2/25	9	1.7	5.2	6.0	7.6**	8
Lakefork Mountain #3	10J12	8100	2/25	3	0.4	4.8	5.2	6.4**	8
Mosby Mountain	9J5	9500	2/27	19	3.9	5.8	5.3	10.2*	11
Paradise Park	9J3	10100	2/27	28	7.4	7.2	6.5	11.8*	10
Soapstone R.S. x	11J25	7800	2/27	24	5.2	8.1	11.0	12.0*	14
Strawberry Divide x	11J8	8000	2/25	28	6.2	13.5	12.7	18.1*	25
Trial Lake x	10J8	9800	2/27	49	11.5	16.8	17.8	23.4*	15
White River #1 x	10K2	8600	2/27	19	4.0	8.0	7.6	11.5 b	6
PRICE RIVER									
Corral	10K5	8200	2/28	10	2.0	6.6	6.2	7.1 b	5
Dry Valley Divide	11K8	7800	2/24	14	2.3	7.2	7.2	10.7*	20
Gooseberry Reservoir	11K4	8700	2/24	29	7.4	11.9	13.7	16.2*	16
Grassy Trail Crk-Left Fk.	10K3	7970	2/28	12	2.0	8.8	7.1	8.1 b	5
Indian Canyon x	10K1	9100	2/23	18	3.3	7.5	7.5	10.7*	23
Mammoth R.S.-Ctnwd Crk.x	11K3	8800	2/24	31	7.2	12.5	- -	17.1**	8
Mud Creek #2	11K33	8300	2/24	21	3.5	7.2	8.9	11.5**	6
Staley Ranch	11K7	7600	2/24	8	1.4	4.3	4.2	7.0*	20
White River #1	10K2	8600	2/27	19	4.0	8.0	7.6	11.5 b	6
White River #2	11K24	7600	2/27	13	2.8	6.3	5.9	8.0 b	6
White River #3	11K25	7400	2/24	9	1.8	8.4	6.2	8.3 b	6

x - Adjacent Drainage
* - Average for 15-year period partly estimated
** - Average for 15-year period mostly or wholly estimated
b - Average for period of record

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1961	1943-57 Av.	Prior Yrs. of Record
SAN RAFAEL RIVER									
Buck Flat	11K31	9400	2/24	29	5.8	13.4	10.5	13.5**	5
Gooseberry Reservoir x	11K4	8700	2/24	29	7.4	11.9	13.7	16.2*	16
Red Pine Ridge	11K28	9400	2/23	27	6.4	13.0	12.0	15.3**	6
Rush Pond	11K38	9800	2/24	27	5.9	11.2	9.4	12.4**	5
Seely Creek R.S.	11K9	10000	2/27	21	5.4	12.7	9.9	13.0*	9
Upper Joe's Valley	11K29	8800	2/23	14	2.8	9.3	7.8	8.4**	5
Wrigley Creek	11K32	9000	2/24	23	4.6	10.3	7.7	9.1**	5
MUDDY RIVER									
Mt. Baldy R.S. x	11K12	9500	2/23	41	9.3	15.6	15.8	19.5**	9
FREMONT RIVER									
Black's Flat-UM Creek	11L4	9250	2/20	24	4.8	7.4	6.2	8.8 b	5
Farnsworth Lake x	11L1	9900	2/28	43	10.3	11.3	9.1	15.1**	8
Fish Lake	11L3	8700	2/20	10	1.8	5.6	3.0	7.3**	6
Johnson Valley	11L6	8850	2/20	16	3.2	5.0	2.8	5.5 b	5
ESCALANTE RIVER									
Widtsoe-Escalante Smt.	11M1	9500	2/24	17	4.8	6.1	4.0	6.7*	24
Widtsoe-Escalante #2	11M2	9500	2/24	26	7.6	7.9	6.1	8.7*	11
Widtsoe-Escalante #3	11M3	9500	2/24	34	10.4	9.1	8.1	- -	2
VIRGIN RIVER									
Cedar Breaks x	12M1	10390	2/27	34	10.8	13.9	10.4	19.2*	15
Duck Creek R.S.	12M4	8560	2/27	16	4.1	10.4	9.1	13.5*	17
Harris Flat R.S.	12M5	7700	2/27	5	1.5	8.4	6.6	9.0*	18
Long Valley Junction	12M6	7500	2/27	0	0.0	5.7	4.3	5.9*	12
Midway Valley x	12M2	9800	2/27	37	11.7	14.0	11.4	20.1**	7
Webster Flat	12M3	9200	2/27	19	5.5	13.9	9.8	15.6*	11
SOUTHEASTERN UTAH DRAINAGES									
Buckboard Flat	9M1	9000	2/20	21	5.8	13.1	5.9	13.3**	5
Camp Jackson	9M2	8600	2/20	15	3.4	12.8	5.4	10.5 b	5
LaSal Mountain	9L1	8800	2/21	16	2.7	7.3	4.1	9.8**	9
LaSal Mountain(upper)	9L2	9600	2/21	24	4.9	11.8	7.6	13.8 b	5

x - Adjacent Drainage
* - Average for 15-year period partly estimated
** - Average for 15-year period mostly or wholly estimated
b - Average for period of record

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
UPPER GREEN RIVER (Above Flaming Gorge Reservoir)									
Big Park a	10G11	8700	2/27	39	10.0	NR	15.8	18.2 b	8
Black's Fork Jct.	10J22	8925	2/21	20	4.4	New Course			-
Blind Bull a	10G2	8750	2/27	60	17.0	NR	22.0	28.4 b	8
Dinwoodie Glaciers x a	9F17	10500	3/1	30	6.0	NR	9.7	- -	1
Dutch Joe R.S.	9G5	8700	2/27	26	5.4	5.7	6.5	8.1 b	9
East Fk.Black's Fk. G.S.	10J21	9300	2/21	19	3.6	New Course			-
East Rim Divide	10F17	7950	2/23	21	4.0	4.7	10.4	10.5	21
Grennier Meadows	8G4	9000	2/20	27	5.4	8.3	6.6	13.1	24
Gros Ventre Summit a	10F19	8750	2/27	34	8.0	14.0	11.9	11.0 b	13
Hewinta G.S.	10J4	9500	2/20	21	4.1	- -	- -	- -	1
Hickerson Park	9J8	9100	2/21	17	3.2	New Course			-
Kendall R. S.	10F15	7900	2/23	22	4.7	5.2	8.9	10.5*	20
Loomis Park	10F16	8500	2/24	34	7.9	9.1	16.0	15.9	20
Mulligan Park	9G1	8900	2/24	26	5.2	5.2	9.8	9.6	18
Piney-LaBarge	10G10	8820	3/3	39	10.6	11.1	14.6	16.9 b	6
Poison Meadows x a	10G6	8500	2/27	59	17.0	NR	22.3	25.6 b	12
Snyder Basin R.S.#2	10G13	8040	3/3	35	8.5	8.7	12.4	13.9 b	5
Soda Lake	10G14	8300	3/2	42	9.9	9.6	15.5	17.0 b	5
South Pass	8G3	9000	2/20	26	5.7	7.1	8.4	13.2	21
Spirit Lake	9J7	10300	2/21	36	8.9	New Course			-
Triple Peaks	10G15	8500	3/2	56	15.6	14.0	23.1	- -	4
Twenty Lakes x a	9G7	10500	No Report			NR	5.3	- -	1
YAMPA RIVER									
Bear River	7J3	9100	No Survey			NS	10.9	- -	3
Clark a	6J13	7800	2/26	31	6.2	7.6	12.0	12.8 b	5
Columbine Lodge x	6J3	9300	2/24	49	12.2	16.4	22.2	19.6	25
Dry Lake a	6J1	8200	2/27	55	11.3	16.2	18.5	17.1	22
Elk River a	6J4	8700	2/27	40	9.6	12.4	18.0	15.1	21
Lynx Pass x	6J6	9100	2/24	27	5.5	8.0	10.1	10.6	25
Old Battle x	6H10	9800	2/24	57	19.7	20.5	20.2	25.8	24
Rabbit Ears	6J9	9550	2/24	62	14.5	NS	NS	22.0 b	7
Yampa View	6J10	8500	2/24	37	8.3	11.1	13.8	13.6 b	10
WHITE RIVER									
Burro Mountain	7K2	9000	2/27	45	10.9	13.0	17.9	14.6	24
Rio Blanco	7J1	8500	2/27	33	7.8	13.1	14.4	13.1	22

x - Adjacent Drainage a - Aerial marker, water content estimated
* - Average for 15-year period partly estimated
b - Average for period of record

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
UPPER COLORADO RIVER (Above Glenwood Springs, Colo.)									
Arrow	5K6	9900	2/28	33	5.6	8.7	11.9	9.0	23
Berthoud Pass	5K3	9700	2/24	37	7.9	12.7	14.5	11.5	25
Berthoud Summit	5K14	11300	2/28	46	10.7	16.1	20.2	16.1 b	10
Blue River	6K21	10500	2/27	22	3.7	11.8	10.3	- -	4
Cameron Pass x a	5J1	10300	2/28	63	14.8	18.0	19.8	18.0	24
Cooper Hill x	6K23	10800	2/27	34	6.4	13.5	- -	- -	1
Fiddler Gulch	6K5	11000	No Survey			15.0	13.7	13.6	23
Fremont Pass	6K8	11400	2/24	34	7.4	14.2	12.9	13.2	25
Frisco	6K13	9300	2/24	15	2.7	4.3	7.7	7.6 b	10
Glen-Mar Ranch	6K20	8850	2/24	25	4.6	6.2	7.6	7.2 b	14
Gore Pass	6J11	8900	2/24	20	3.9	5.5	8.6	8.9 b	10
Granby	5J16	8700	2/24	13	2.8	4.9	6.4	6.2 b	12
Grand Lake	5J19	8600	2/27	24	4.8	5.0	9.3	7.2 b	12
Grizzly Peak	5K9	11250	2/23	35	7.3	14.9	14.5	14.9	19
Hoosier Pass x	6K1	11400	2/27	36	7.0	11.1	12.9	10.0	24
Jones Pass	5K21	10400	2/24	37	6.8	11.8	11.0	- -	4
Kokomo	6K18	10600	2/25	28	5.8	10.0	7.5	10.8 b	8
Lake Irene	5J10	10600	No Survey			NS	19.0	18.6	22
Lapland	5K7	9300	2/28	29	4.2	5.9	11.0	10.3	21
Lulu	5J7	10200	2/27	41	8.8	15.3	15.9	13.9	22
Lynx Pass	6J6	9100	2/24	27	5.5	8.0	10.1	10.6	25
Middle Fk. Camp Ground	5K4	9000	2/24	28	5.4	7.0	8.2	8.0	24
Milner Pass	5J24	10100	No Survey			NS	NS	- -	8
Monarch Lake	5J14	8500	2/26	29	5.8	9.0	10.4	11.0 b	13
N. Inlet Grand Lake	5J9	9000	No Survey			5.5	10.1	8.0	21
Pando	6K19	9500	2/24	20	4.4	6.1	8.0	9.2 b	8
Phantom Valley	5J4	9300	2/27	26	4.5	7.3	10.9	8.9	25
Ranch Creek	5K18	9400	2/27	25	4.6	5.4	9.4	- -	4
Shrine Pass	6K9	10500	2/24	35	7.7	14.8	13.8	14.0	19
Snake River	5K16	9700	2/23	15	3.0	4.4	7.5	8.1 b	10
Summit Ranch	6K14	10000	No Survey			NS	NS	7.7 b	5
Tennessee Pass x	6K2	10200	2/28	28	4.8	9.1	10.2	7.9	25
Vail Pass	6K15	10000	2/24	30	6.6	11.2	14.1	15.9 b	8
Vasquez Creek	5K19	9600	2/27	31	5.5	9.7	11.3	- -	4
Willow Creek Pass	6J5	9500	2/28	30	6.3	10.0	8.6	10.8	23

x - Adjacent Drainage
a - Aerial marker, water content estimated
b - Average for period of record

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960-	1959	1943-57 Av.	Prior Yrs. of Record
ROARING FORK									
Aspen	6K22	9700	2/23	34	6.8	17.4	- -	- -	-
Ind. Pass Tunnel	6K4	10200	2/26	34	6.8	13.1	15.8	14.3	24
Ivanhoe	6K10	10400	2/28	38	5.9	10.6	13.3	15.6 b	14
Lift	7K10	11250	2/23	50	10.6	10.2	10.5	- -	3
Nast	6K6	8700	2/27	17	2.0	NS	6.0	6.0	22
North Lost Trail a	7K1	9200	2/27	38	7.1	9.8	12.8	12.8	24
PLATEAU CREEK									
Mesa Lakes	7K4	10000	2/25	32	7.1	14.9	12.0	13.2	24
Trickle Divide a	7K5	10000	2/27	47	12.2	18.9	19.8	22.2	20
GUNNISON RIVER									
Alexander Lake a	7K3	10000	2/27	30	7.2	16.9	15.3	17.6	23
Blue Mesa	7L2	8700	2/27	25	4.0	5.5	6.0	- -	2
Cochetopa Pass x	6L6	10000	2/27	24	5.3	5.7	5.0	4.8 b	12
Crested Butte	6L1	9000	2/28	36	6.4	4.3	10.4	12.6	25
Ironton Park	7M6	9800	2/27	36	8.8	11.6	9.2	10.3	22
McClure Pass a	7K8	9500	2/27	32	8.6	14.1	16.5	15.3 b	11
Park Cone	6L2	9700	2/27	31	4.4	7.8	6.8	9.4	24
Park Reservoir a	7K6	9500	2/27	36	9.9	18.1	17.2	20.9	20
Porphyry Creek	6L3	10700	2/28	52	11.8	14.5	12.9	13.5	20
Red Mountain Pass	7M15	11000	2/28	66	16.4	27.4	22.3	25.2 b	10
Trickle Divide x a	7K5	10000	2/27	47	12.2	18.9	19.8	22.2	20
DOLORES RIVER									
Lizard Head	7M3	10300	2/26	32	8.0	12.3	21.1	13.2	19
Rico	7M1	8700	2/26	19	6.0	7.8	5.6	7.9	21
Telluride x	7M2	8600	2/27	25	4.5	5.3	6.0	6.7	22
Trout Lake	7M9	9700	2/27	33	6.4	13.0	9.5	11.6 b	12
SAN JUAN RIVER									
Cascade	7M5	8850	2/28	29	5.5	11.8	7.4	11.3	22
Chama Divide x	6N2	7750	2/27	14	3.0	6.1	0.4	4.4	21
Chamita x	6N3	8500	2/27	30	5.8	8.5	4.9	9.3	20
Howardville	7M13	9800	2/28	28	5.9	NS	7.8	9.7 b	8
Ironton Park x	7M6	9800	2/27	36	8.8	11.6	9.2	10.3	22
Mineral Creek	7M14	10300	2/28	33	6.0	13.7	11.4	13.1 b	10
Molas Lake	7M12	10500	2/28	26	5.1	10.2	7.0	12.6 b	10
Red Mountain Pass x	7M15	11000	2/28	66	16.4	27.4	22.3	25.2 b	10
Silverton Sub-Station	7M4	9400	2/28	12	2.5	7.4	3.6	5.1	20
Spud Mountain	7M11	10700	2/28	50	10.8	21.8	12.5	21.4 b	10
Upper San Juan	6M3	10000	2/25	48	11.8	30.1	18.1	27.6	23
Wolf Creek Pass x	6M1	10000	2/25	42	9.8	27.2	15.3	25.4	24
Wolf Creek Summit	6M17	11000	2/25	43	11.3	33.9	12.3	23.0 b	10

x - Adjacent Drainage
a - Aerial marker, water content estimated
b - Average for period of record.

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
LITTLE COLORADO RIVER									
Baldy	9S1	9125	2/26	16	5.1	11.8	2.8	5.9*	11
Canyon Creek #2	10R7	7500	2/27	4	0.7	8.7	2.3	- -	3
Forest Dale	10R6	6430	2/28	T	T	2.7	0.3	1.0	22
Fort Apache	9R5	9160	2/26	18	5.1	12.3	4.6	6.8*	10
Fort Valley	11P2	7350	2/28	0	0.0	5.6	2.7	2.3*	14
Gentry	10R5	7600	2/27	3	0.3	8.0	2.9	2.4*	9
Happy Jack x	11R5	7630	2/28	T	T	11.1	T	2.6*	9
Heber	10R4	7600	2/27	4	0.7	9.0	2.4	2.4*	10
McNary	9R2	7200	2/28	T	T	7.7	0.8	2.4	22
Mormon Lake	11R4	7350	2/28	3	1.1	7.5	2.1	4.9*	14
Mormon Mountain	11R3	7500	2/28	3	1.1	9.6	2.9	4.6*	11
Nutrioso	9S4	8500	2/28	4	1.0	3.8	T	1.7	23
LOWER COLORADO									
Chalender x	12P1	7100	2/28	1	0.6	6.1	3.4	2.8*	14
Fort Valley	11P2	7350	2/28	0	0.0	5.6	2.7	2.3*	14
Grand Canyon	11P1	7500	2/28	1	0.3	4.6	1.8	2.1*	14
WILLIAMS RIVER									
Camp Wood x	12R1	5700	3/1	0	0.0	0.6	2.5	0.8*	15
Iron Springs	12R2	6200	2/25	0	0.0	0.0	0.0	1.2*	15
Willow Ranch	13P1	5000	2/28	0	0.0	0.0	- -	0.5*	10
GILA RIVER									
Bear Wallow	10T1	8100	2/28	2	0.8	10.7	1.2	2.6*	13
Beaver Head	9S6	8000	2/28	8	2.3	6.3	T	2.3	22
Coronado Trail	9S7	8000	2/28	6	1.6	4.7	T	2.3	23
Frisco Divide	8S1	8000	2/28	4	1.4	4.7	0.9	1.7	23
Ice King	8S6	8000	2/28	17	3.9	- -	- -	- -	0
Inman	7S2	7800	2/27	0	0.0	0.4	0.0	0.5*	14
Mogollon	8S2	7000	2/28	7	1.8	3.2	T	1.3*	8
Nutrioso	9S4	8500	2/28	4	1.0	3.8	T	1.7	23
Redstone Trail	8S7	8600	2/28	19	4.6	- -	- -	- -	0
Rose Canyon	10T2	7300	2/28	0	0.0	5.8	0.0	0.7	13
State Line	9S8	8000	2/28	3	1.1	5.4	0.4	2.1	23
Taylor Creek	7S1	7850	2/27	0	0.0	T	0.0	0.4	18

x - Adjacent Drainage
* - Average is for less than 15-years of record in the base period.

SNOW SURVEYS - ABOUT MARCH 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
SALT RIVER									
Baldy x	9S1	9125	2/26	16	5.1	11.8	2.8	5.9*	11
Beaver Head	9S6	8000	2/28	8	2.3	6.3	T	2.3	22
Canyon Creek #2	10R7	7500	2/27	4	0.7	8.7	2.3	- -	3
Coronado Trail	9S7	8000	2/28	6	1.6	4.7	T	2.3	23
Forest Dale	10R6	6430	2/28	T	T	2.7	0.3	1.0	22
Fort Apache x	9R5	9160	2/26	18	5.1	12.3	4.6	6.8*	10
Gentry	10R5	7600	2/27	3	0.3	8.0	2.9	2.4*	9
Heber	10R4	7600	2/27	4	0.7	9.0	2.4	2.4*	10
Maverick Fork	9S2	9050	2/26	18	5.9	12.7	2.3	7.5*	10
McNary	9R2	7200	2/28	T	T	7.7	0.8	2.4	22
Milk Ranch	9R1	7000	2/28	T	T	4.5	0.0	0.9	20
Nutrioso	9S4	8500	2/28	4	1.0	3.8	T	1.7	23
Pacheta	9S5	7800	2/28	0	0.0	5.0	0.0	2.4*	10
Workman Creek	10S1	6900	No Report			10.4	1.9	1.5*	9
VERDE RIVER									
Camp Wood	12R1	5700	3/1	0	0.0	0.6	2.5	1.8*	15
Casner Park	11R2	6930	2/28	T	T	7.5	2.3	2.2*	10
Chalender	12P1	7100	2/28	1	0.6	6.1	3.4	2.8*	14
Fort Valley x	11P2	7350	2/28	0	0.0	5.6	2.7	2.3*	14
Gaddes Canyon	12R4	7600	2/28	3	0.8	9.4	5.2	2.7*	7
Happy Jack	11R5	7630	2/28	T	T	11.1	T	2.6*	9
Iron Springs x	12R2	6200	2/25	0	0.0	0.0	0.0	1.2*	15
Mingus Mountain	12R3	7100	2/28	0	0.0	2.5	1.7	1.1*	14
Mormon Lake x	11R4	7350	2/28	3	1.1	7.5	2.1	4.9*	14
Mormon Mountain	11R3	7500	2/28	3	1.1	9.6	2.9	4.6*	11
Munds Park	11R1	6500	2/28	0	0.0	5.4	1.7	1.6*	10
COLUMBIA RIVER									
RAFT RIVER									
Clear Creek Meadows	13H2	9050	2/23	42	9.2	- -	14.5	- -	1
One Mile Summit	13H1	7330	2/23	20	5.2	- -	7.5	- -	1

x - Adjacent Drainage
* - Average is for less than 15-years of record in the base period.

FEDERAL - STATE - PRIVATE

COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS for UTAH, BEAR and COLORADO RIVER BASIN

UNITED STATES DEPARTMENT of AGRICULTURE··SOIL CONSERVATION SERVICE,

and

STATE ENGINEER of UTAH

In cooperation with Agricultural Experiment Stations at Arizona, Colorado and Utah; the State Engineers of Colorado, New Mexico and Wyoming; U.S. Forest Service; Bureau of Reclamation, U.S. National Park Service, U.S. Geological Survey; and other Federal, State, and private organizations.

AS OF

APR. 1, 1961

USDA-SCS-PORTLAND, OREG. 1960

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for

UTAH, BEAR and COLORADO RIVER BASINS

APRIL 1, 1961

Report Prepared

by

Gregory L. Pearson
Snow Survey Supervisor

and

James R. Talbot
Ass't. Snow Survey Suprv.

Soil Conservation Service
222 South West Temple
Salt Lake City, Utah

Issued by

J. A. LIBBY

State Conservationist
Soil Conservation Service
Salt Lake City, Utah

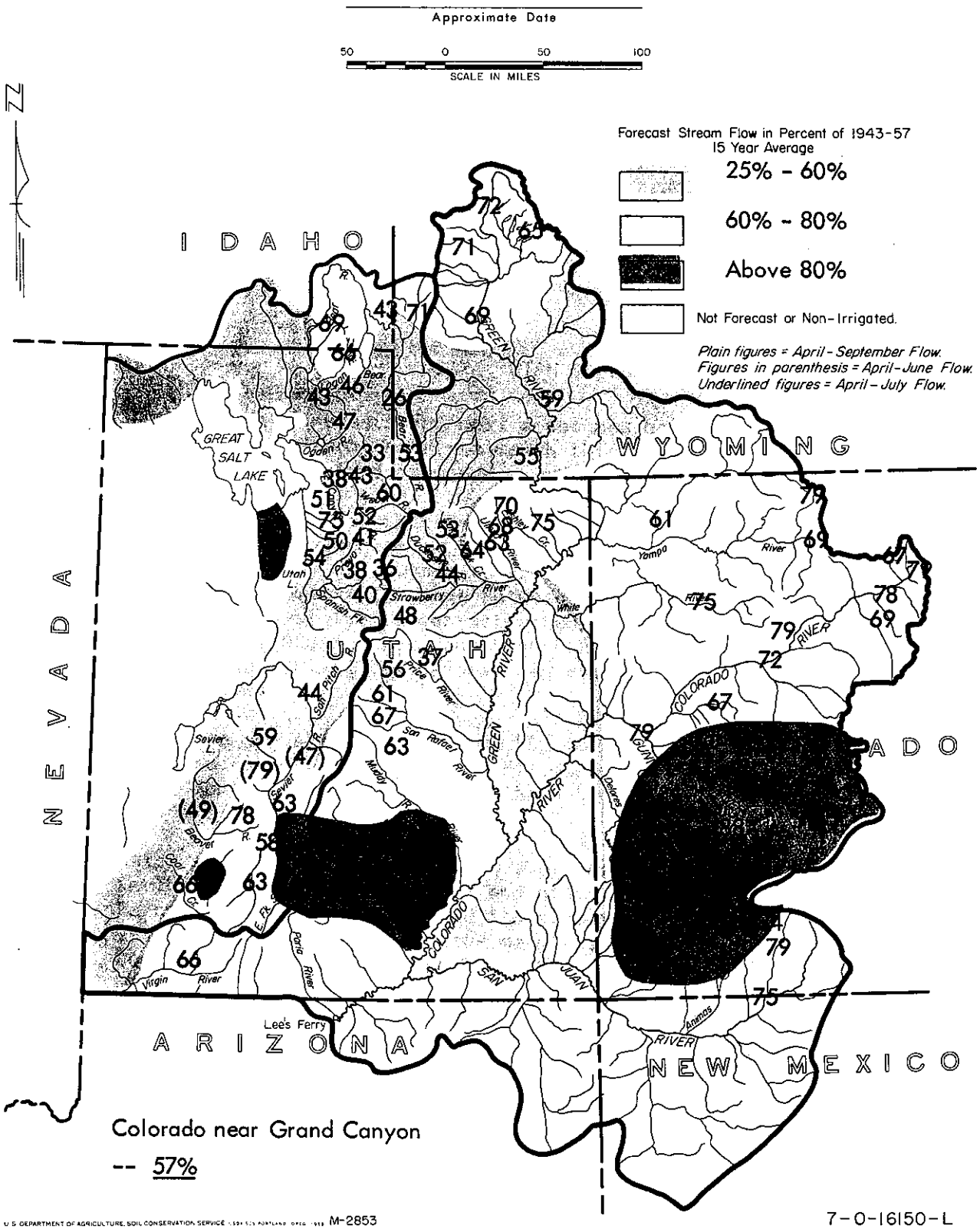
Wayne D. Criddle
State Engineer
State of Utah
Salt Lake City, Utah

Dr. S.W. Thorne, Dir.
Utah Agricultural Exp. Sta.
Logan, Utah
Mimeograph Series #464

PROSPECTIVE WATER SUPPLIES

Based on Snow Surveys Made on
UTAH, BEAR and UPPER COLORADO BASINS

April 5, 1961



U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE M-2853

7-0-16150-L

The distribution of the snowpack on the watersheds near Salt Lake, Tooele and on Parowan Creek is such that the heavier snows are on the low and intermediate elevations, while on the higher watersheds the snowpack is much lighter. This means that after the early snowmelt runoff the late season streamflow will drop much more rapidly than usual.

The weather of the next two months in particular will exert a deciding influence on just how severe the water shortage becomes. A return of the dry weather which prevailed during the winter months would drop streamflow to record or near record lows for most areas. Above average precipitation would help, but there is very little chance that spring storms will be enough above average to produce even near normal streamflow.

COLORADO RIVER BASIN

The snowpack for the upper Colorado river basin remains below average, with the exception of a few minor areas. Streamflow forecasts remain about the same as last month for the Green river and its tributaries in Wyoming and northern Utah, and on the following streams in Colorado - Yampa, Elk, Little Snake, Colorado above Granby, and White rivers. In central and southern Colorado and Utah, forecasts are up 10% to 25% above those of last month.

In Wyoming, streams are now forecast to yield between about 55% and 75% of average this summer. In Colorado the outlook is better, with forecasts ranging from 60% to 95%. Best outlook is for the Uncompagre, Dolores, Animas, Los Pinos, Florida and La Plata rivers which are expected to produce between 85% to 95%. In Utah the outlook ranges from 37% to a little above average.

STREAMFLOW FORECASTS - APRIL 1, 1961

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
GREAT BASIN						
BEAR RIVER SYSTEM						
Bear nr Ut-Wyo. State Line	65	53	Apr-Sept	100	101	123
Bear nr Woodruff	35	26	Apr-Sept	77	81	133
Bear nr Randolph	12	10	Apr-Sept	35	44	115*
Smith's Fork nr Border, Wyo.	84	71	Apr-Sept	80	112	119
Bear at Harer, Idaho	130	43	Apr-Sept	124	189	299
Cub River nr Preston, Ida.	36	69	Apr-Sept	40	52	52*
Little Bear nr Paradise	20	43	Apr-Sept	19.0	42	46
Logan nr Logan (1)	95	66	Apr-Sept	102	139	143
Blacksmith Fork nr Hyrum(2)	31	46	Apr-Sept	37	61	67
WEBER-OGDEN RIVERS						
Weber nr Oakley	64	60	Apr-June	73	90	107
	80	60	Apr-Sept	91	106	134
Wanship Reservoir Inflow(3)	63	48	Apr-July	80	86	130*
Weber nr Coalville(4)	61	43	Apr-Sept	86	114	143
Chalk Crk at Coalville	14	33	Apr-Sept	16.8	19.7	42
East Canyon Crk nr Morgan(5)	11	38	Apr-Sept	10.2	32	28.7
So. Fork Ogden nr Huntsville	33	47	Apr-Sept	29.3	58	70
PROVO RIVER & UTAH LAKE						
Strawberry Reservoir Inflow(6)	20	36	Apr-Sept	10.4	52	56
Spanish Fork at Thistle	17	40	Apr-Sept	14.4	54	43
Hobble Crk nr Springville	9	38	Apr-Sept	5.9	27.3	23.7*
Provo nr Hailstone(7)	60	52	Apr-Sept	72	110	116*
Provo at Vivian Park(8)	65	41	Apr-Sept	81	149	159
American Fork nr American Fork	18	50	Apr-Sept	19.1	42	36
Utah Lake Inflow	170	54	Apr-Sept	195	295	317

(1) Includes U.P.&L. tailrace and Logan, Hyde Park & Smithfield Canal.
(2) Above Utah Power & Light Company's dam.
(3) Observed flow Weber River near Wanship, Utah, plus change in storage in Wanship reservoir, plus diversion by Weber-Provo Canal.
(4) Includes diversion by Weber-Provo canal and change in storage in Wanship Reservoir.
(5) Observed flow plus change in storage in East Canyon Reservoir.
(6) Change in storage plus diversion thru Strawberry tunnel.
(7) Observed flow minus diversions thru Duchesne tunnel and Weber-Provo Canal.
(8) Observed flow plus change in storage in Deer Creek reservoir, minus diversions thru Duchesne tunnel & Weber-Provo Canal, plus diversion thru Salt Lake Aqueduct.

* - Partly estimated.

STREAMFLOW FORECASTS - APRIL 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
JORDAN RIVER & SALT LAKE						
Little Cottonwood Crk nr SLC	30	77	Apr-Sept	28	42	39
Big Cottonwood nr SLC	30	75	Apr-Sept	31	50	40
Parley's Crk nr SLC	7.5	51	Apr-Sept	4.6	14.2	14.7
SEVIER RIVER						
Sevier at Hatch	23	66	Apr-June	11.0	72	35
	31	63	Apr-Sept	19.5	93	49
Sevier nr Circleville	25	58	Apr-Sept	16.0	92	43*
Sevier nr Kingston	9.5	39	Apr-June	2.9	60	24.6
	12	40	Apr-Sept	4.6	69	29.7
East Fork Sevier nr Kingston(9)	14.5	85	Apr-June	1.7	46	17.0
	19	89	Apr-Sept	5.2	49	21.3
Sevier below Piute Dam(10)	32	63	Apr-Sept	12.5	115	51
Clear Crk nr Sevier(abv. div.)	12.5	79	Apr-June	3.5	19.9	15.9*
Inflow						
Kingston to Vermillion Dam	27	47	Apr-June	9.0	78	47
Vermillion Dam to Gunnison	37	59	March-June	35	78	63
Salina Crk at Salina(11)	6	64	Apr-June	- -	- -	9.4*
Sevier River nr Gunnison	28	44	Apr-Sept	31	81	64
BEAVER RIVER						
Beaver nr Beaver	18	81	Apr-June	6.4	33	22.3
	23	78	Apr-Sept	9.2	43	29.4
Rockyford Reservoir Inflow(12)	4.5	49	Apr-June	2.0	21.4	9.2
PAVANT VALLEY						
Chalk Crk nr Fillmore	12	59	Apr-Sept	5.7	21.3	20.3
COAL CREEK						
Coal Crk nr Cedar City	11	66	Apr-Sept	7.0	32	16.6

(9) Observed flow plus change in storage in Otter Creek Reservoir.
(10) Observed flow plus change in storage in Otter Crk & Piute Reservoirs.
(11) Gage is below diversions near Salina.
(12) Observed flow at Rockyford Dam, corrected for change in storage in Rockyford Reservoir.
* - Partly estimated.

STREAMFLOW FORECASTS - APRIL 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet: Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
COLORADO RIVER BASIN						
GREEN RIVER TRIBUTARIES IN UTAH						
WYOMING STATE LINE TO DUCHESNE RIVER						
Henry's Fork at Linwood	22	55	Apr-Sept	27.2	21.2	40
Ashley Creek nr Vernal	44	75	Apr-Sept	34	55	59
DUCHESNE RIVER						
Duchesne at Provo River (Trail nr Hanna)	23	55	Apr-Sept	- -	- -	42*
Duchesne nr Tabiona(13)	65	52	Apr-Sept	69	117	124
Rock Crk nr Mtn. Home	58	53	Apr-Sept	80	99	109
Strawberry at Duchesne	35	44	Apr-Sept	17.7	85	79
Lakefork below Moon Lake(14)	50	64	Apr-Sept	58	76	78
Uinta nr Neola	69	68	Apr-Sept	76	108	101
Whiterocks nr Whiterocks	48	70	Apr-Sept	51	63	67
Yellowstone nr Altonah	50	63	Apr-Sept	55	78	79*
PRICE RIVER						
Gooseberry Crk nr Scofield	7	56	Apr-Sept	6.3	15.4	12.6
Price nr Scofield(15)	19	48	Apr-Sept	14.0	51	40
Price nr Heiner(15)	26	37	Apr-Sept	15.5	108	70
SAN RAFAEL RIVER						
Huntington Crk nr Huntington	33	56	Apr-Sept	26.5	91	59
Cottonwood Crk nr Orangeville	36	61	Apr-Sept	23.0	83	59
Ferron Crk nr Ferron	29	67	Apr-Sept	17.9	66	43*
MUDDY RIVER						
Muddy Creek nr Emery	14.5	63	Apr-Sept	8.7	44	23.1*
Ivie Creek nr Emery	1.2	67	Apr-Sept	1.0	3.5	1.8*
VIRGIN RIVER						
Virgin at Virgin	29	66	Apr-June	18.4	108	44
GREEN RIVER TRIBUTARIES IN WYOMING (Above Flaming Gorge Reservoir)						
Green at Warren Bridge, Wyo.	250	72	Apr-Sept	310	269	348
New Fork nr Boulder, Wyoming	170	65	Apr-Sept	201	156	260
No. Piney Crk nr Mason, Wyo.	29	71	Apr-Sept	32	35	41
Green nr Fontenelle, Wyo.	685	69	Apr-Sept	704	751	995
Green nr Green River, Wyo.	710	59	Apr-Sept	734	820	1,200*

(13) Observed flow plus diversion through Duchesne Tunnel
(14) Observed flow plus change in storage in Moon Lake reservoir.
(15) Observed flow plus change in storage in Scofield reservoir.
* - Partly estimated.

STREAMFLOW FORECASTS - APRIL 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
GREEN RIVER TRIBUTARIES IN COLORADO						
Yampa at Steamboat Springs	196	69	Apr-Sept	250	328	283
Elk at Clark	170	79	Apr-Sept	154	219	215
Little Snake nr Lily	215	61	Apr-Sept	184	369	350
White nr Meeker	250	75	Apr-Sept	269	390	335
COLORADO RIVER (Above Jct. with Green River)						
Colorado nr Granby(16)	186	79	Apr-Sept	201	227	235
Willow Crk above Willow Crk Res.	29	67	Apr-Sept	31	43	44
Williams River nr Parshall	61	78	Apr-Sept	54	76	78
Blue above Green Mtn. Res.	200	69	Apr-Sept	231	262	290
Colorado at Glenwood Spgs.(17)	1,220	79	Apr-Sept	1,164	1,548	1,546
Roaring Fork at Glenwood Spgs.(18)	575	72	Apr-Sept	623	722	803
Plateau Crk nr Collbran	38	67	Apr-Sept	27	59	57
Surface Crk nr Cedaredge	15	83	Apr-Sept	11	23	18
Uncompahgre at Colona	127	88	Apr-Sept	100	225	145
Gunnison nr Grand Jct.	1,100	79	Apr-Sept	604	1,856	1,386
Dolores at Dolores	259	93	Apr-Sept	99	384	279
SAN JUAN RIVER						
Piedra nr Piedra	147	79	Apr-Sept	70	254	186
San Juan at Rosa	440	75	Apr-Sept	239	901	587
Los Pinos nr Bayfield(19)	185	84	Apr-Sept	122	273	220
Animas at Durango	413	87	Apr-Sept	244	626	475
Florida nr Durango	53	85	Apr-Sept	26	86	62
LaPlata at Hesperus	25	90	Apr-Sept	11	40	28
COLORADO RIVER - (Main Stem)						
Colorado nr Grand Canyon	4,600	57	Apr-July	4,034	9,926	8,056
	5,500	60	Apr-Sept	4,792	10,642	9,155

(16) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir.
(17) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir plus Moffat ditch.
(18) Observed flow plus diversion through Twin Lakes Tunnel.
(19) Observed flow plus change in storage in Vallecito reservoir.

STATUS OF RESERVOIR STORAGE - APRIL 1, 1961

BASIN and/or STREAM	RESERVOIR	Usable Capacity 1000s AF	USABLE STORAGE - 1000 ACRE FEET 1961	1960	1959	15-Yr.Av. 1943-57
			GREAT BASIN			
Bear River	Bear Lake	1421.0	808.9	995.4	1023.0	848.8
Little Bear	Hyrum	15.3	14.6	12.9	12.9	11.8
Ogden	Pine View	110.0	16.0	30.4	21.3	9.7
Weber	Rockport	59.1	17.2	18.1	11.2	- -
	Echo	73.9	34.2	40.8	38.2	35.7
	East Canyon	28.7	7.0 e	17.2	15.0	17.6
Provo	Deer Creek	149.7	67.9	75.9	85.9	84.2
Spanish Fork	Strawberry	270.0	59.0	109.6	157.7	137.6
Utah Lake	Utah Lake	1149.0 *	312.0	519.4	632.1	658.0
Sevier River	Otter Creek	52.5	20.5	30.2	40.2	36.7
	Piute	74.0	22.3	28.9	55.3	54.2
	Sevier Bridge	236.0	49.4	68.8	105.8	166.0
Beaver River	Rockyford	23.3	8.0	8.6	15.5	17.0
			COLORADO RIVER BASIN			
Lake Fork	Moon Lake	35.8	11.4	12.5	10.6	15.5
Price River	Scofield	65.8	3.9	8.0	35.9	17.9
Colorado	Granby	465.5	224.2	216.4	246.0	197.5
Blue	Green Mtn.	146.9	60.2	57.6	49.1	57.5
Gunnison	Taylor Park	106.2	34.0	49.9	56.7	62.2
Dolores	Groundhog	21.7	5.0	3.5	5.8	7.0
San Juan	Vallecito	126.3	44.3	44.3	47.0	40.7
Little Colorado	Lyman	30.6	6.8	16.7	18.7	6.8
Colorado	Lake Mead	27,207.0	18,212.0	19,171.0	20,739.0	16,438.0
Colorado	Lake Mohave	1,810.0	1,683.7	1,568.0	1,703.0	1,491.8**
Colorado	Lake Havasu	619.4	566.7	547.0	567.1	582.8
Gila	San Carlos	1,205.0	0.3	214.7	80.8	107.9
Salt	Roosevelt	1,381.6	816.9	1,021.9	405.1	471.7
Salt	Apache	245.1	214.6	235.4	242.0	209.7
Salt	Canyon	57.9	45.3	57.7	53.4	46.3
Salt	Saguaro	69.8	63.2	65.9	47.7	49.6
Verde	Horseshoe	143.0	16.3	75.9	43.3	30.6
Verde	Bartlett	180.0	29.5	145.1	71.3	70.9
Agua Fria	Lake Pleasant	163.8	26.6	49.7	18.3	29.8

* - Active capacity taken at 3.1 feet above compromise point.
** - Less than 15 years of record in the 1843-57 period.
e - Estimated.

AVAILABLE SOIL MOISTURE

APRIL 1, 1961

DRAINAGE BASIN & STATION	Station No. 1/	Elev	Soil Profile in Inches Depth	Soil Profile in Inches Cap.	Date	Soil Moisture Content In Inches about Apr.1 1961	1960	1959	Av.	Years of Record
COLORADO STATIONS										
ROARING FORK										
Placita	7K7*	8800	48	8.0	4/1	0.1	2.2	0.9	3.6	5
Maroon	6K25*	8400	48	8.0	4/1	0.1	1.8	0.2	1.2	7
UPPER COLORADO										
Vail	6K5*	9200	48	8.0	4/1	0.8	5.9	-	4.0	7
Ranch Creek	5K18M	9400	48	7.0	4/1	1.8	4.3	2.7	2.5	5
Berthoud Pass	5K20M	9800	48	8.0	4/1	4.0	3.0	0.1	1.2	5
Vasquez Siphon	5K22*	9600	48	7.0	4/1	4.2	-	3.9	3.2	4
Gore	5J15*	8900	48	7.0	4/1	0.5	0.7	0.1	0.8	5
Blue River	6K21M	10500	48	7.0	4/1	0.1	2.4	0.4	1.1	5
King	6L9*	10500	48	8.0	4/1	2.7	2.6	5.6	3.2	4
DOLORES										
Lizard Head	7M3M	10300	48	7.0	4/1	4.4	3.6	2.9	3.2	3
Dolores	8M1*	7500	48	7.0	4/1	4.8	3.2	2.0	2.6	3
Rico	7M1M	8700	48	7.0	4/1	3.9	3.3	1.6	2.5	3
SAN JUAN										
Mineral Creek	7M14M	10300	48	7.0	-	NS	5.0	3.1	3.0	4
Molas Lake	7M12M	10500	48	7.0	-	NS	1.3	0.4	1.8	4
Cascade	7M5M	8850	48	7.0	-	NS	5.3	5.3	4.2	4

NS - No Survey
1/ * - Indicates soil moisture station only
M - Indicates soil moisture station on snow course

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
GREAT BASIN DRAINAGE									
UPPER BEAR RIVER (Above Harer, Idaho)									
Big Park	10G11	8700	4/1	45	14.1	15.8	18.2	21.2*	10
CCC Camp x	10G7	7500	3/27	30	6.9	9.6	10.7	12.3	25
Goodman Ranch	10J6	7900	3/25	13	4.4	3.4	8.2	6.1	23
Hayden Fork	10J7	9300	3/23	30	8.9	NS	15.9	18.3**	8
Kelly Ranger Station	10G12	8200	3/31	38	11.4	15.0	16.0	18.8 a	10
Monte Cristo R.S.	11H12	8960	3/28	57	17.9	19.9	20.0	27.9	28
Piney LaBarge x	10G10	8820	3/27	40	11.6	13.6	18.7	20.5	24
Poison Meadows x	10G6	8500	3/27	68	21.4	23.3	27.3	30.4 a	13
Salt River Summit x	10G8	7900	3/27	36	10.0	12.3	14.3	16.2 a	13
Stillwater Camp	10J17	8550	3/23	26	7.3	8.8	14.1	11.9 a	6
Trial Lake x	10J8	9800	3/31	59	16.0	21.7	23.7	29.1	30
LOWER BEAR RIVER (Below Harer, Idaho)									
Beaver Crk-Skunk Crk.	11H14	7150	3/28	23	7.9	10.2	9.2	13.7**	9
Christensen Ranch	11G11	5600	3/29	18	4.4	7.6	7.4	8.0 a	6
Cub River R.S.	11G12	5400	3/30	16	4.6	6.7	5.9	7.2 a	6
Dry Bread Pond x	11H13	8230	3/28	39	11.8	15.5	12.9	20.0	23
Dry Creek Flat	12G4	6350	3/31	0	0.0	4.2	0.6	4.0 a	6
Emigrant Summit	11G6	7350	3/28	56	17.0	19.0	18.6	25.7	25
Emigration Canyon(mouth)	11G7	6500	3/29	18	4.8	9.2	7.7	9.7 a	8
Franklin Basin R.S.	11G8	8200	3/30	63	21.0	22.1	24.9	29.2	37
Garden City Summit	11H7	7600	3/30	40	12.9	14.0	16.0	20.3	30
Klondike Narrows	11H1	7400	3/30	43	15.2	18.0	17.8	20.0**	7
Liberty Springs	11G15	8420	3/28	90	29.6	32.9	- -	- -	1
Little Bear(lower)	11H26	5800	3/29	20	7.4	9.9	7.3	9.0**	5
Little Bear(upper)	11H25	6550	3/29	27	9.7	13.3	8.7	12.0**	5
Monte Cristo R.S.	11H12	8960	3/28	57	17.9	19.9	20.0	27.9	28
Oxford Mountain	12G3	6800	3/31	14	4.0	7.6	5.9	8.0 a	6
Slug Creek Divide	11G5	7225	3/28	37	10.9	12.8	11.9	16.8	25
Steep Hollow #1	11H27		3/24	71	24.9	-	-	-	0
Steep Hollow #2	11H28	7700	3/24	54	18.8	22.2	-	-	1
Strawberry Creek	11G9	5800	3/29	25	7.6	9.9	10.1	11.2 a	6
Strawberry Mink Divide	11G10	6800	3/29	50	16.4	16.8	17.4	20.6 a	6
Tony Grove R.S.	11H3	6250	3/30	18	6.3	9.2	9.6	10.5*	35
Willow Flat	11G4	6100	3/30	33	9.7	11.4	12.3	14.5 a	6

x - Adjacent Drainage
* - 15-year average partly estimated
** - 15-year average mostly or wholly estimated
a - Average for period of record

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
OGDEN RIVER									
Beaver Crk-Skunk Crk	11H14	7150	3/28	23	7.9	10.2	9.2	13.7*	9
Ben Lomond(lower)	11H9	5850	3/29	28	10.6	19.8	9.7	15.0**	7
Ben Lomond Peak	11H8	8000	3/29	72	24.4	36.3	21.1	36.0*	10
Dry Bread Pond	11H13	8230	3/28	39	11.8	15.5	12.9	20.0	23
Monte Cristo R. S. x	11H12	8960	3/28	57	17.9	19.9	20.0	27.9	28
Mt. Ogden	11H10	8600	3/25	64	21.9	30.2	21.7	30.5*	13
Sagebrush Flat	11H15	6300	3/28	0	0.0	T	0.0	1.2 a	8
Snow Basin	11H11	6420	3/25	30	8.4	15.0	9.4	14.9*	12
WEBER RIVER									
Beaver Creek R. S.	11J24	7500	3/31	15	5.6	4.6	6.8	9.3*	29
Chalk Creek #1	11J1	9100	3/29	61	16.4	16.9	21.3	25.7*	10
Chalk Creek #2	11J2	8000	3/29	42	11.6	9.9	15.0	16.2*	10
Chalk Creek #3	11J3	7500	3/29	24	7.2	3.8	8.8	7.6*	9
Lamb's Canyon	11J14	6600	3/27	38	11.8	11.6	13.0	15.6	26
Parley's Canyon Smt.	11J15	7500	3/29	43	14.9	15.7	14.1	19.0	27
Redden Mine(lower)	11J6	8500	3/30	40	10.7	15.3	15.7	21.0	31
Redden Mine(upper)	11J5	9000	3/30	42	12.7	15.6	17.6	22.1	31
Silver Lake x	11J16	8725	3/31	56	17.4	19.6	21.3	28.7	30
Smith & Morehouse	11J4	7600	3/30	28	9.1	8.5	11.9	14.1	32
Trial Lake x	10J8	9800	3/31	59	16.0	21.7	23.7	29.1	30
PROVO RIVER & UTAH LAKE									
Camp Altamont	11J20	7300	3/30	21	6.8	11.5	9.4	18.3	26
Clear Creek Ridge #1	11K21	9200	3/28	45	10.4	14.6	14.2	18.9**	6
Clear Creek Ridge #2	11K22	8000	3/28	34	8.4	10.6	10.7	15.0**	6
Clear Creek Ridge #3	11K23	6600	3/28	9	2.8	2.6	3.5	6.7**	6
Daniels-Strawberry Smt.	11J23	8000	3/30	32	9.6	11.1	13.2	16.4	31
Dutchman R. S.	11J17	7500	3/30	28	8.4	14.2	17.0	20.2	30
East Portal	11J7	7560	3/30	27	8.2	8.0	7.5	13.1	27
Hobble Creek Summit	11J22	7300	3/29	36	8.6	10.8	10.6	14.8	25
Packard Canyon	11J31	6400	3/29	27	6.6	7.8	7.3	10.5**	6
Payson R.S.	11K1	8050	3/27	48	11.6	17.8	14.4	19.1*	18
Rock Bridge	11K2	6750	3/27	33	8.6	12.7	10.9	13.3*	8
Soapstone R.S.	11J25	7800	3/31	25	7.4	9.0	12.2	14.0	30
South Fork R.S.	11J19	6100	3/30	0	0.0	2.6	1.0	4.8	26
Strawberry Divide	11J8	8000	3/30	46	12.9	15.0	14.3	22.1	27
Timpanogos Cave Camp	11J18	5500	3/30	0	0.0	0.0	0.0	2.2	26
Timpanogos Divide	11J21	8140	3/30	37	10.8	18.5	14.2	28.0	26
Trial Lake	10J8	9800	3/31	59	16.0	21.7	23.7	29.1	30

x - Adjacent drainage
* - 15-year average partly estimated
** - 15-year average mostly or wholly estimated
a - Average for period of record

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
JORDAN RIVER & GREAT SALT LAKE									
Bevans Cabin	12J2	6450	3/31	24	10.5	11.3	10.0	10.0 a	6
Farmington Canyon(lower)	11J12	6950	3/31	59	21.1	22.6	17.5	24.6*	10
Farmington Canyon(upper)	11J11	8000	3/31	66	21.6	25.4	20.8	28.6*	10
Lamb's Canyon	11J14	6600	3/27	38	11.8	11.6	13.0	15.6	26
Middle Canyon	12J3	7000	3/27	38	12.6	11.6	10.8	13.5**	7
Mill D. South Fork	11J10	7400	3/27	55	13.6	16.4	19.2	20.8	26
Parley's Canyon Smt. x	11J15	7500	3/29	43	14.9	15.7	14.1	19.0	27
Rocky Basin-Settlmt.Cyn.	12J1	8900	3/31	60	19.6	26.4	19.2	24.0 a	7
Silver Lake	11J16	8725	3/31	56	17.4	19.6	21.3	28.7	30
UPPER SEVIER RIVER South of Richfield, Utah									
Big Flat x	12L7	10000	3/26	68	15.8	16.8	11.7	20.0	25
Box Creek	12L4	9800	3/24	35	9.4	12.2	8.6	15.0**	6
Bryce Canyon	12M8	8000	3/29	4	0.7	1.0	0.0	4.0	25
Castle Valley	12M13	9700	3/30	43	12.4	10.8	7.5	14.0**	5
Cedar Breaks	12M1	10390	3/29	65	18.2	15.4	12.1	24.0	26
Duck Creek R.S.	12M4	8560	3/29	33	8.9	8.2	7.2	15.9	26
Fish Lake	11L3	8700	3/23	0	0.0	8.4	4.0	8.3	30
Harris Flat R.S.	12M5	7700	3/29	12	3.5	3.4	3.4	8.5	30
Kimberly Mine	12L6	8900	3/27	51	12.1	15.8	11.4	17.4	26
Long Valley Jnct. x	12M6	7500	3/29	3	0.6	0.0	0.0	4.2	24
Midway Valley	12M2	9800	3/29	63	17.8	17.0	13.4	25.2**	7
Panguitch Lake	12M7	8200	3/30	9	2.5	2.4	0.0	5.1	31
Squaw Springs	12L5	9300	3/24	16	3.8	7.0	4.4	9.2**	6
Widtsoe-Escalante Smt.	11M1	9500	3/28	28	8.4	3.9	1.8	7.5	29
Widtsoe-Secalante #2	11M2	9500	3/28	40	11.1	8.2	5.5	10.4*	11
Widtsoe-Escalante #3	11M3	9500	3/28	50	14.4	9.6	7.3	- -	2
LOWER SEVIER RIVER (Including San Pitch River)									
Bear Canyon	12L3	7200	3/29	32	8.1	12.1	7.8	9.5 a	7
Beaver Dams	11K13	8000	3/28	41	9.7	12.4	9.4	12.8*	10
Farnsworth Lake	11L1	9900	3/27	53	15.0	19.3	10.9	18.7*	10
G.B.R.C. Headquarters	11K11	8700	3/30	54	14.3	14.0	15.4	17.2	31
G.B.R.C. Meadows	11K10	10000	3/30	68	19.1	23.0	20.7	26.0	31
Gooseberry R. S.	11L2	8400	3/27	38	10.4	12.6	7.3	11.5	31
Gooseberry Reservoir x	11K4	8700	3/29	49	13.6	17.1	16.6	20.2	33
Huntington-Horseshoe x	11K5	9800	3/29	60	17.9	23.5	18.4	24.5	31
Mammoth R.S.-Cottonwd.Crk	11K3	8800	3/29	50	13.3	17.2	16.6	21.3	32
Middle Fork	11K34	9600	3/31	70	19.6	22.2	17.7	24.3 a	5
Mt.Baldy R.S.	11K12	9500	3/28	73	16.7	21.2	17.2	24.2*	10
Pine Creek	12L1	8700	3/28	50	12.6	16.1	10.4	16.5*	12
Rees' Flat	11K36	7300	3/24	32	8.4	13.5	8.1	12.8 a	5
Shingle Mill	12L11	6200	3/29	32	9.2	10.3	- -	- -	1
Thistle Flat	11K35	8500	3/31	49	13.5	14.3	12.4	16.1 a	5

x - Adjacent Drainage a - Average for period of record

* - 15-year average partly estimated ** - 15-year average mostly or wholly estimated

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
BEAVER RIVER									
Big Flat	12L7	10000	3/26	68	15.8	16.8	11.7	20.0	25
Merchant's Valley	12L9	8200	3/26	29	7.4	7.4	6.2	11.1	30
Otter Lake	12L8	9300	3/26	50	9.9	11.1	9.5	16.6	25
PAROWAN CREEK									
Ed Ward Flat	12M12	8300	3/28	33	9.8	6.4	2.9	7.9*	17
Yankee Reservoir	12M11	8700	3/28	43	10.8	8.4	5.4	11.0*	17
COAL CREEK									
Cedar Breaks	12M1	10390	3/29	65	18.2	15.4	12.1	24.0	26
Midway Valley x	12M2	9800	3/29	63	17.8	17.0	13.4	25.2**	7
Urie Flat	12M10	8450	3/29	16	4.3	3.9	2.3	7.3**	7
Webster Flat	12M3	9200	3/29	37	9.9	13.8	11.6	18.1	34
ENTERPRISE TO NEW HARMONY DRAINAGE									
Little Grassy Creek	13M4	6100	3/30	0	0.0	0.0	0.0	- -	2
Long Flat	13M2	8000	3/30	18	5.5	3.2	2.0	4.9 a	5
COLORADO RIVER DRAINAGE									
COLORADO RIVER DRAINAGES IN UTAH									
BRUSH CREEK									
King's Cabin(lower)	9J2	8600	3/23	19	4.9	5.4	9.6	10.5	31
King's Cabin(upper)	9J1	8730	3/23	24	5.3	6.2	10.3	12.0	31
DUCHESNE RIVER									
Brown Duck Lake	10J9	10300	4/3	35	9.0	11.7	13.8	19.7*	15
Currant Creek	11J32	7800	3/29	2	0.8	8.2	6.4	8.7 a	5
Daniels-Strawberry Smt.	11J23	8000	3/30	32	9.6	11.1	13.2	16.4	31
East Portal x	11J7	7560	3/30	27	8.2	8.0	7.5	13.1	27
Indian Canyon	10K1	9100	3/28	35	7.9	7.4	7.7	13.1	31
Jackson Park	10J19	11300	3/28	42	8.7	8.8	10.1	12.5 a	5
Julius Park	9J6	9800	3/27	44	10.3	7.7	8.2	- -	3
Lakefork Mountain	10J10	10500	3/31	32	7.2	8.2	8.6	13.6	30
Lakefork Mountain #2	10J11	8900	3/31	13	3.7	4.2	6.4	8.8**	8
Lakefork Mountain #3	10J12	8100	3/31	7	2.1	4.2	5.4	6.4**	8
Mosby Mountain	9J5	9500	3/27	32	6.2	5.1	6.1	12.7*	30
Paradise Park	9J3	10100	3/27	45	9.9	7.2	7.9	14.5*	29
Rock Creek	10J18	7900	3/30	5	1.7	5.0	5.2	6.3 a	6
Soapstone R.S. x	11J25	7800	3/31	25	7.4	9.0	12.2	14.0	30
Strawberry Divide x	11J8	8000	3/30	46	12.9	15.0	14.3	22.1	27
Trial Lake x	10J8	9800	3/31	59	16.0	21.7	23.7	29.1	30
White River #1 x	10K2	8600	3/30	29	8.4	8.2	8.8	12.7 a	6

x - Adjacent Drainage
* - 15-year average partly estimated
** - 15-year average mostly or wholly estimated
a - Average for period of record

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
PRICE RIVER									
Corral	10K5	8200	3/31	21	5.3	4.6	2.6	7.3 a	6
Dry Valley Divide	11K8	7800	3/28	22	5.8	8.0	6.7	11.7	26
Gooseberry Reservoir	11K4	8700	3/29	49	13.6	17.1	16.6	20.2	33
Grassy Trail Crk-Left Fk.	10K3	7970	3/31	23	5.6	8.4	6.2	8.7 a	6
Huntington Horseshoe x	11K5	9800	3/29	60	17.9	23.5	18.4	24.5	31
Indian Canyon x	10K1	9100	3/28	35	7.9	7.4	7.7	13.1	31
Mammoth R.S.-Cottonwd Crk.	11K3	8800	3/29	50	13.3	17.2	16.6	21.3	32
Mud Creek #2	11K33	8300	3/28	38	9.7	8.0	9.9	14.2**	6
Staley Ranch	11K7	7600	3/28	15	4.4	3.8	4.8	6.2*	24
White River #1	10K2	8600	3/30	29	8.4	8.2	8.8	12.7 a	6
White River #2	11K24	7600	3/30	15	4.9	6.4	5.1	7.9 a	6
White River #3	11K25	7400	3/30	13	4.3	7.4	4.6	8.0 a	6
SAN RAFAEL RIVER									
Buck Flat	11K31	9400	3/27	56	12.2	15.8	11.2	16.4**	5
Gooseberry Reservoir x	11K4	8700	3/29	49	13.6	17.1	16.6	20.2	33
Huntington-Horseshoe	11K5	9800	3/29	60	17.9	23.5	18.4	24.5	31
Red Pine Ridge	11K28	9400	3/28	51	12.2	15.7	12.6	19.1**	6
Rush Pond	11K38	9800	3/27	47	9.9	12.6	9.6	15.1**	6
Seely Creek R.S.	11K9	10000	3/30	44	12.5	14.9	9.5	15.8	31
Stuart R.S.	11K27	7950	3/29	12	2.9	4.2	4.6	7.7 a	6
Switchback	11K26	8600	3/29	42	10.6	11.4	11.4	18.3**	6
Upper Joe's Valley	11K29	8800	3/28	28	7.4	8.9	7.1	10.5**	5
Wrigley Creek	11K32	9000	3/27	35	7.6	11.8	7.7	11.0**	6
MUDDY RIVER									
Black's Fork	11K14	9200	3/24	31	8.6	13.2	11.1	16.5*	14
Dill's Camp	11K15	9200	3/24	25	6.6	11.4	8.4	14.0*	12
Mt. Baldy R.S. x	11K12	9500	3/28	73	16.7	21.2	17.2	24.2*	10
FREMONT RIVER									
Black's Flat-U.M.Crk.	11L4	9250	3/23	28	7.2	11.8	7.8	10.1 a	7
Donkey Reservoir	11L5	9800	3/21	39	11.6	7.0	4.1	7.0 a	7
Farnsworth Lake x	11L1	9900	3/27	53	15.0	19.3	10.9	18.7*	10
Fish Lake	11L3	8700	3/23	0	0.0	8.4	4.0	8.3	30
Johnson Valley	11L6	8850	3/23	18	5.0	8.5	4.4	7.1 a	6
ESCALANTE RIVER									
Widtsoe-Escalante Smt.	11M1	9500	3/28	28	8.4	3.9	1.8	7.5	29
Widtsoe-Escalante #2	11M2	9500	3/28	40	11.1	8.2	5.5	10.4*	11
Widtsoe-Escalante #3	11M3	9500	3/28	50	14.4	9.6	7.3	- -	2
VIRGIN RIVER									
Cedar Breaks x	12M1	10390	3/29	65	18.2	15.4	12.1	24.0	26
Duck Creek R.S.	12M4	8560	3/29	33	8.9	8.2	7.2	15.9	26
Harris Flat R.S.	12M5	7700	3/29	12	3.5	3.4	3.4	8.5	30
Long Valley Junction	12M6	7500	3/29	3	0.6	0.0	0.0	4.2	24
Midway Valley x	12M2	9800	3/29	63	17.8	17.0	13.4	25.2**	7
Webster Flat	12M3	9200	3/29	37	9.9	13.8	11.6	18.1	34

x - Adjacent Drainage a - Average for period of record

* - 15-year average partly estimated ** - 15-year average mostly or wholly estimate

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content(In) 1960	1959	1943-57 Av	Prior Yrs. of Record
SOUTHEASTERN UTAH DRAINAGES									
Buckboard Flat	9M1	9000	3/21	28	7.9	16.9	7.4	14.9	31
Camp Jackson	9M2	8600	3/21	24	6.8	16.3	- -	- -	4
LaSal Mountain	9L1	8800	3/22	27	7.3	11.5	7.1	11.0	30
LaSal Mountain(upper)	9L2	9400	3/22	37	9.6	19.0	11.5	18.3 a	5
UPPER GREEN RIVER (Above Flaming Gorge Reservoir)									
Big Park	10G11	8700	4/1	45	14.1	15.8	18.2	21.2 a	10
Black's Fork Jnct.	10J22	8925	3/24	27	7.4	New Course			0
Blind Bull e	10G2	8750	3/29	66	21.0	20.0	30.0	31.9 a	10
Dinwoodie Glaciers x e	9F17	10500	No Report			8.0	11.5	- -	2
Dutch Joe R.S.	9G5	8700	3/30	23	7.8	5.5	7.6	8.4*	20
East Fk.Black's Fork G.S.	10J21	9300	3/24	26	6.4	New Course			0
East Rim Divide	10F17	7950	3/27	24	6.5	7.6	10.3	12.4	25
Grennier Meadows	8G4	9000	3/24	37	8.4	11.1	10.0	16.1	24
Gros Ventre Summit	10F19	8750	3/31	37	9.8	8.9	13.7	12.7 a	13
Hewinta G.S.	10J4	9500	3/24	30	7.6	8.8	13.7	10.5	27
Hickerson Park	9J8	9100	3/24	26	6.4	New Course			0
Hole-in-the-Rock	10J1	9150	4/4	24	6.9	4.8	7.7	6.5	30
Hole-in-the-Rock R.S.	10J3	8300	4/4	7	2.8	1.2	2.0	1.5*	7
Kelly R.S.	10G12	8200	3/31	38	11.4	15.0	16.0	18.8 a	10
Kendall R.S. #1	10F15	7900	3/31	23	7.3	7.6	9.9	11.9	24
Loomis Park	10F16	8500	3/27	40	10.8	12.8	17.2	19.4	24
Middle Beaver Creek	10J2	8550	4/4	18	6.1	4.2	7.4	5.4*	7
Mulligan Park	9G1	8900	3/28	28	7.7	6.7	9.1	11.5	25
Piney LaBarge	10G10	8820	3/27	40	11.6	13.6	18.7	20.5	24
Poison Meadows x	10G6	8500	3/27	68	21.4	23.3	27.3	30.4 a	13
Snyder Basin R.S. #2	10G13	8040	3/27	32	8.4	11.5	15.8	16.1 a	6
Soda Lake	10G14	8300	3/29	40	12.9	12.9	18.1	18.8 a	5
South Pass	8G3	9000	3/24	40	8.7	10.2	11.6	16.4	21
Spirit Lake	9J7	10300	3/24	48	14.0	New Course			0
Steel Creek Park	10J20	10000	No Report			New Course			0
Triple Peaks	10G15	8500	3/29	56	19.3	19.2	27.8	- -	5
Twenty Lakes x e	9G7	10500	No Report			7.5	6.5	- -	2
YAMPA RIVER									
Bear River	7J3	9100	3/29	34	7.1	9.5	14.0	12.6 a	5
Clark	6J13	7800	3/28	23	7.0	8.9	11.7	12.8 a	5
Columbine Lodge x	6J3	9300	3/30	61	17.2	21.5	27.9	24.7	25
Dry Lake	6J1	8200	3/29	50	13.7	20.9	21.8	21.0	25
Elk River	6J4	8700	3/29	45	12.8	14.5	18.6	18.2	25
Lynx Pass x	6J6	9100	3/28	38	8.9	10.5	13.9	12.7	25
Old Battle x	6H10	9800	3/31	73	23.7	27.8	27.0	33.3	25
Rabbit Ears	6J9	9550	3/30	65	19.5	30.9	- -	28.4 a	7
Yampa View	6J10	8500	3/30	38	9.9	16.0	- -	18.1 a	8

x - Adjacent Drainage
e - Aerial marker, water content estimated
a - Average for period of record
* - 15-yr. average partly estimated.

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
WHITE RIVER									
Burro Mountain	7K2	9000	3/28	52	13.0	15.9	19.0	18.6	24
Rio Blanco	7J1	8500	3/30	37	11.8	17.4	17.9	16.7	25
UPPER COLORADO RIVER (Above Glenwood Springs, Colo.)									
Arrow	5K6	9900	3/28	35	9.7	13.1	15.3	11.6	23
Berthoud Pass	5K3	9700	3/28	46	11.9	15.9	17.9	15.0	25
Berthoud Summit	5K14	11300	3/30	55	18.2	21.6	25.7	20.3 a	10
Blue River	6K21	10500	3/30	25	5.4	8.6	14.1	- -	4
Cameron Pass x	5J1	10300	4/1	79	22.3	29.2	30.9	24.9	25
Cooper Hill x	6K23	10800	3/26	37	8.6	17.4	- -	- -	2
Fiddler Gulch	6K5	11000	3/28	49	11.3	19.1	18.2	17.2	24
Fremont Pass	6K8	11400	3/30	47	14.3	19.6	16.9	16.9	25
Frisco	6K13	9300	3/30	18	5.7	6.5	8.4	8.7 a	10
Glen-Mar Ranch	6K20	8850	3/29	30	7.3	6.1	10.7	8.8 a	14
Gore Pass	6J11	8900	3/28	30	6.6	8.4	11.5	9.2 a	12
Granby	5J16	8700	3/28	16	4.4	7.2	7.2	8.1 a	12
Grand Lake	5J19	8600	3/31	22	4.6	6.8	8.5	9.2 a	12
Grizzly Peak	5K9	11250	3/29	52	16.3	22.5	17.8	18.9	19
Hoosier Pass x	6K1	11400	3/30	44	10.4	14.0	17.9	13.1	25
Jones Pass	5K21	10400	3/28	50	12.6	16.4	17.2	- -	4
Kokomo	6K18	10600	3/30	36	9.2	15.6	13.0	13.2 a	9
Lake Irene	5J10	10600	3/30	56	14.1	19.9	20.1	22.9	23
Lapland	5K7	9300	3/28	27	5.5	8.0	14.4	12.1	23
Lulu	5J7	10200	3/26	45	10.5	18.6	19.1	17.6	23
Lynx Pass	6J6	9100	3/28	38	8.9	10.5	13.9	12.7	25
Middle Fk. Camp Ground	5K4	9000	3/29	33	8.2	9.4	11.6	9.7	25
Milner Pass	5J24	10100	3/30	37	8.4	15.0	15.3	14.4 a	9
Monarch Lake	5J14	8500	3/25	28	6.8	9.8	9.9	11.4 a	14
N.Inlet Grand Lake	5J9	9000	3/31	21	5.3	8.0	10.1	10.3	23
Pando	6K19	9500	3/30	28	8.7	11.2	10.6	11.7	9
Phantom Valley	5J4	9300	3/30	29	6.8	11.6	11.3	10.8	25
Ranch Creek	5K18	9400	3/28	29	6.9	10.3	11.8	- -	4
Shrine Pass	6K9	10500	3/30	47	13.3	20.4	17.6	18.3	19
Snake River	5K16	9700	3/31	16	4.6	7.4	10.7	9.3 a	10
Summit Ranch	6K14	10000	3/29	24	5.7	5.8	8.1	8.8 a	10
Tennessee Pass x	6K2	10200	3/28	33	8.6	11.2	12.5	10.0	25
Vail Pass	6K15	10000	3/30	39	10.8	16.2	20.1	19.3 a	9
Vasquez Creek	5K19	9600	3/28	36	9.2	15.2	12.5	- -	4
Willow Creek Pass	6J5	9500	3/28	38	9.8	14.4	12.4	13.6	23

x - Adjacent Drainage

a - Average for period of record

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
ROARING FORK									
Aspen	6K22	9700	3/27	45	10.1	19.6	- -	- -	2
Ind. Pass Tunnel	6K4	10200	3/29	44	10.9	19.9	18.9	18.7	25
Ivanhoe	6K10	10400	3/28	53	10.9	17.5	18.0	18.5 a	13
Lift	7K10	11250	3/27	57	16.6	15.6	13.5	- -	3
Nast	6K6	8700	3/29	19	2.8	3.3	7.2	6.1	24
North Lost Trail	7K1	9200	3/27	40	10.3	12.7	14.2	15.7	24
PLATEAU CREEK									
Mesa Lakes	7K4	10000	3/27	55	13.6	20.5	15.9	17.4	24
Trickle Divide	7K5	10000	3/30	77	22.6	26.8	22.5	28.9	21
GUNNISON RIVER									
Alexander Lake	7K3	10000	3/31	66	18.7	22.0	20.0	22.8	24
Blue Mesa	7L2	8700	3/30	25	7.2	8.7	- -	- -	2
Cochetopa Pass x	6L6	10000	3/28	24	6.2	6.5	6.0	5.4 a	12
Crested Butte	6L1	9000	3/29	47	11.1	10.4	11.8	15.3	25
Ironton Park	7M6	9800	3/30	48	13.0	14.3	14.7	13.1	23
Lake City	7M8	10300	3/31	26	6.9	9.3	8.1	8.8 a	12
McClure Pass	7K8	9500	3/27	39	9.6	15.3	13.4	16.3 a	11
Park Cone	6L2	9700	3/29	38	8.1	10.3	7.1	12.3	24
Park Reservoir	7K6	9500	3/30	72	20.3	23.4	20.5	26.8	21
Porphyry Creek	6L3	10700	3/28	58	15.8	20.2	15.4	17.1	21
Red Mountain Pass	7M15	11000	3/31	98	29.6	36.3	29.3	31.9 a	10
Trickle Divide x	7K5	10000	3/30	77	22.6	26.8	22.5	28.9	21
DOLORES RIVER									
Lizard Head	7M3	10300	3/29	60	14.9	18.2	13.1	17.6	25
Rico	7M1	8700	3/29	21	6.0	9.2	0.0	7.7	25
Telluride x	7M2	8600	3/27	27	7.2	4.5	3.8	6.8	25
Trout Lake	7M9	9700	3/30	45	11.0	17.0	11.0	14.0 a	12
SAN JUAN RIVER									
Cascade	7M5	8850	3/31	44	11.4	13.0	6.2	12.1	25
Chama Divide x	6N2	7750	3/30	14	1.5	1.6	0.0	1.7	21
Chamita x	6N3	8500	3/30	40	8.5	9.7	3.0	8.7	19
Howardville	7M13	9800	No Survey			14.8	9.2	12.2 a	10
Ironton Park x	7M6	9800	3/30	48	13.0	14.3	14.7	13.1	24
Mineral Creek	7M14	10300	3/31	53	13.4	18.1	13.0	14.2 a	10
Molas Lake	7M12	10500	3/31	38	10.4	14.3	8.4	13.9 a	10
Red Mountain Pass x	7M15	11000	3/31	98	29.6	36.3	29.3	31.9 a	10
Silverton Sub-Station	7M4	9400	3/31	18	5.9	8.8	3.5	5.1	23
Spud Mountain	7M11	10700	3/31	79	21.8	25.8	13.3	25.0 a	10
Upper San Juan	6M3	10000	3/30	102	26.5	33.2	19.0	33.9	25
Wolf Creek Pass x	6M1	10000	3/31	87	19.5	32.5	15.3	30.5	25
Wolf Creek Summit	6M17	11000	3/30	102	24.7	37.9	15.7	29.0 a	10

x - Adjacent Drainage

a - Average for period of record

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. o Recor
LITTLE COLORADO RIVER									
Baldy	9S1	9125	3/30	15	4.9	6.1	0.0	3.4*	10
Canyon Creek #2	10R7	7500	3/30	5	0.9	T	0.0	- -	3
Forest Dale	10R6	6430	3/30	3	0.4	0.0	0.0	0.0	20
Ft. Apache	9R5	9160	3/30	17	5.1	7.6	0.0	6.4*	10
Fort Valley	11P2	7350	3/31	8	2.3	0.0	0.0	1.2*	14
Gentry	10R5	7600	3/30	5	1.3	0.0	0.0	0.3*	7
Happy Jack x	11R5	7630	3/30	14	2.2	0.0	0.0	1.3*	6
Heber	10R4	7600	3/30	7	1.8	0.9	0.0	0.4*	7
McNary	9R2	7200	3/30	9	1.0	0.0	0.0	0.2	20
Mormon Lake	11R4	7350	3/31	11	2.1	0.0	0.0	3.5*	11
Mormon Mountain	11R3	7500	3/31	14	2.5	T	0.0	2.4*	8
Nutrioso	9S4	8500	No Survey			0.0	0.0	0.5	19
LOWER COLORADO									
Bright Angel	12N1	8400	No Survey			- -	- -	8.9*	11
Chalender x	12P1	7100	3/31	2	0.9	0.0	0.0	1.6*	14
Fort Valley	11P2	7350	3/31	8	2.3	0.0	0.0	1.2*	14
Grand Canyon	11P1	7500	3/31	6	2.1	0.0	0.0	1.2*	13
WILLIAMS RIVER									
Camp Wood x	12R1	5700	3/31	0	0.0	0.0	0.0	0.0*	14
Iron Springs	12R2	6200	No Survey			0.0	0.0	0.0*	14
Willow Ranch	13P1	5000	3/31	0	0.0	0.0	0.0	0.0*	8
GILA RIVER									
Bear Wallow	10T1	8100	3/31	5	1.1	10.5	0.0	0.9*	11
Beaver Head	9S6	8000	3/31	0.3	0.1	T	0.0	0.7	20
Coronado Trail	9S7	8000	No Survey			0.0	0.0	1.1	19
Frisco Divide	8S1	8000	3/31	0	0.0	0.0	0.0	0.5	20
Ice King	8S6	8000	3/31	20	5.2	- -	- -	- -	0
Inman	7S2	7800	3/31	T	T	0.0	0.0	0.0*	11
Mogollon	8S2	7000	3/31	2	0.5	0.0	0.0	0.3*	7
Nutrioso	9S4	8500	No Survey			0.0	0.0	0.5	19
Redstone Trail	8S7	8600	3/31	17	5.7	- -	- -	- -	0
Rose Canyon	10T2	7300	3/31	3	0.6	0.0	0.0	0.3*	11
State Line	9S8	8000	3/31	0	0.0	0.0	0.0	0.5	20
Taylor Creek	7S1	7850	3/31	T	T	0.0	0.0	0.0*	15

x - Adjacent Drainages

* - Average is for less than 15 years of record in the base period.

SNOW SURVEYS - ABOUT APRIL 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
SALT RIVER									
Baldy x	9S1	9125	3/30	15	4.9	6.1	0.0	3.4*	10
Beaver Head	9S6	8000	3/31	0.3	0.1	T	0.0	0.7	20
Canyon Creek #2	10R7	7500	3/30	5	0.9	T	0.0	- -	3
Coronado Trail	9S7	8000	No Survey			0.0	0.0	1.1	19
Forest Dale	10R6	6430	3/30	3	0.4	0.0	0.0	0.0	20
Ft. Apache x	9R5	9160	3/30	17	5.1	7.6	0.0	6.4*	10
Gentry	10R5	7600	3/30	5	1.3	0.0	0.0	0.3*	7
Heber	10R4	7600	3/30	7	1.8	0.9	0.0	0.4*	77
Maverick Fork	9S2	9050	3/30	16	4.9	8.2	0.0	5.5*	8
McNary	9R2	7200	3/30	9	1.0	0.0	0.0	0.2	20
Milk Ranch	9R1	7000	3/30	6	0.7	0.0	0.0	0.0	17
Nutrioso	9S4	8500	No Survey			0.0	0.0	0.5	19
Pacheta	9S5	7800	3/31	0	0.0	0.0	0.0	0.6*	8
Workman Creek	10S1	6900	3/31	3	1.4	NR	0.0	1.2*	7
VERDE RIVER									
Camp Wood	12R1	5700	3/31	0	0.0	0.0	0.0	0.0*	14
Casner Park	11R2	6930	3/31	13	2.3	0.0	0.0	1.0*	7
Chalender	12P1	7100	3/31	2	0.9	0.0	0.0	1.6*	14
Fort Valley x	11P2	7350	3/31	8	2.3	0.0	0.0	1.2*	14
Gaddes Canyon	12R4	7600	3/31	12	2.4	2.6	T	1.6*	6
Happy Jack	11R5	7630	3/30	14	2.2	0.0	0.0	1.3*	6
Iron Springs x	12R2	6200	No Survey			0.0	0.0	0.0*	14
Mingus Mountain	12R3	7100	3/31	6	1.1	0.0	0.0	0.0*	12
Mormon Lake x	11R4	7350	3/31	11	2.1	0.0	0.0	3.5*	11
Mormon Mountain	11R3	7500	3/31	14	2.5	T	0.0	2.4*	8
Munds Park	11R1	7500	3/31	9	1.8	0.0	0.0	0.6*	7
Snow Bowl	11P4	10260	3/31	27	6.4	- -	- -	- -	0
COLUMBIA RIVER									
RAFT RIVER									
Clear Creek Meadows	13H2	9050	3/26	56	13.5	15.1	15.5	- -	2
One Mile Summit	13H1	7330	3/26	29	7.1	6.7	7.7	- -	2

x - Adjacent Drainage

* - Average is for less than 15-years of record in the base period.

COLORADO RIVER BASINS

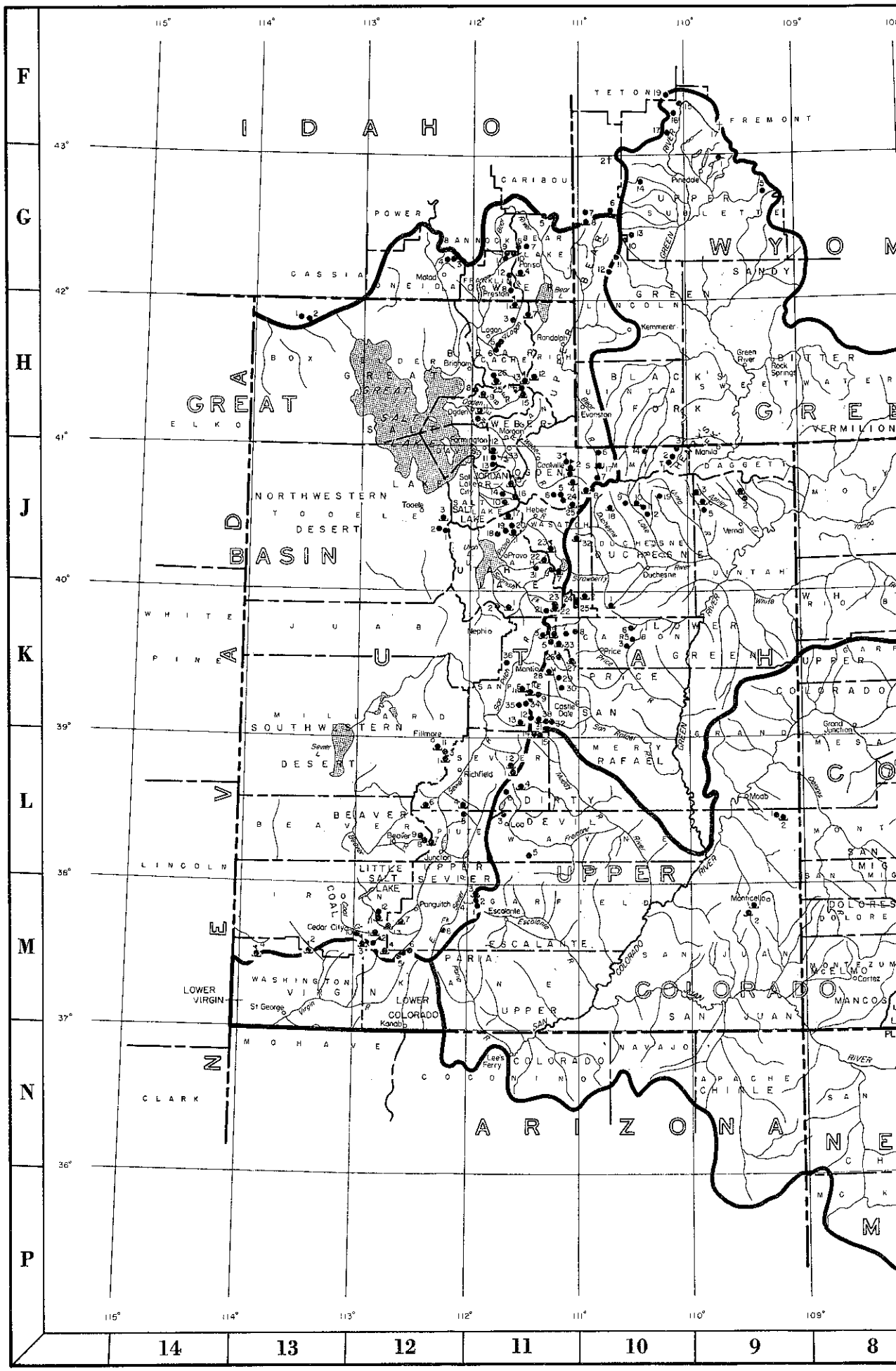
STATE	NAME	SEC. / LAT.	TWP. OR AND	RGE. / LONG.	ELEV.
	ROARING FORK				
C	Independence Pass Tunnel	24	11S	83W	10200
C	Lift	7	11S	84W	11250
C	Ivanoe	12	9S	82W	10400
C	Nast	1	9S	83W	8700
C	North Lost Trail	20	11S	87W	9200
	PLATEAU CREEK				
C	Mesa Lakes	35	11S	96W	10000
C	Trickle Divide	23	11S	94W	10000
	GUNNISON RIVER				
C	Park Cone	19	14S	82W	9700
C	Crested Butte	22	13S	86W	9000
C	Porphyry Creek	19	49N	6E	10700
C	Tomichi	30	49N	5E	10500
C	Cochetopa Pass x	12	45N	3E	10000
C	McClure Pass	1	11S	89W	9500
C	Trickle Divide x	23	11S	94W	10000
C	Park Reservoir	34	11S	94W	9500
C	Alexander Lake	2	12S	95W	10000
C	Blue Mesa	23	48N	5W	8700
C	Red Mountain Pass	13	42N	8W	11000
C	Ironton Park	29	43N	7W	9800
C	Lake City	13	43N	4W	10300
	DOLORES RIVER				
C	Lizzard Head	24	41N	10W	10300
C	Rico	11	39N	11W	8700
C	Trout Lake x	8	41N	9W	9700
C	Telluride x	6	42N	8W	8600
	SOUTHEASTERN UTAH DRAINAGES				
U	LaSal Mountain (upper)	3	27S	24E	9400
U	LaSal Mountain	5	27S	24E	8800
U	Buckboard Flat	36	33S	22E	9000
U	Camp Jackson	22	34S	22E	8600
	UPPER GREEN RIVER (Above Flaming Gorge Reservoir)				
W	Dinwoodie Glaciers x	43°14'		109°35'	10500
W	Gros Ventre Summit	36	40N	111W	8750
W	Kendall R. S.	23	38N	110W	7900
W	Loomis Park	14	37N	111W	8500
W	East Rim Divide	32	37N	111W	7950
W	Blind Bull x	6	34N	115W	8750
W	Soda Lake	14	33N	115W	8300
W	Mulligan Park	17	35N	108W	8900
W	Dutch Joe R. S.	32	31N	104W	8700
W	Poison Meadows x	29	30N	116W	8500
W	Snyder Basin R. S. #2	15	29N	114W	8040
W	Piney-LaBarge	19	29N	114W	8820
W	Big Park	7	27N	117W	8700
W	Kelly R. S.	13	26N	118W	8200
U	Hewinta R. S.	33	3N	13E	9500
U	Hole-in-the-Rock	13	2N	15E	9150
U	Middle Beaver Creek	31	3N	16E	8550
U	Hole-in-the-Rock R. S.	32	3N	16E	8300
	YAMPA RIVER				
C	Rabbit Ears	30	5N	83W	9550
C	Yampa View	21	5N	84W	8500
C	Lynx Pass x	2	1N	83W	9100
C	Bear River	14	1N	86W	9100
W	Old Battle	29	14N	85W	9800
C	Elk River	6	10N	85W	8700
C	Clark	24	9N	85W	7800
C	Dry Lake	26	7N	84W	8200
C	Columbine Lodge x	21	5N	82W	9300
	BRUSH CREEK				
U	King's Cabin (upper)	22	1S	21E	8730
U	King's Cabin (lower)	23 & 26	1S	21E	8600
	DUCHESNE RIVER				
U	Trial Lake x	5	2S	9E	9800
U	Soapstone R. S. x	9	3S	8E	7800
U	Daniels-Strawberry Summit x	20	2S	12W	8000
U	Strawberry Divide x	34 & 35	7S	6E	8000
U	East Portal x	36	7S	6E	7560
U	White River #1 x	11	10S	8E	8600
U	Currant Creek	31	1S	10W	7800
U	Indian Canyon	2	11S	10E	9100
U	Rock Creek	21	2N	7W	7900
U	Brown Duck Lake	2	2N	6W	10300
U	Lakefork Mountain	2 & 3	2N	5W	10500
U	Lakefork Mountain #2	17	2N	4W	8900
U	Lakefork Mountain #3	29	2N	4W	8100
U	Jackson Park	23	3N	4W	11300
U	Paradise Park	7	3N	1E	10100
U	Julius Park	20	3N	1E	9800
U	Mosby Mountain	27	2S	18E	9500
	WHITE RIVER				
C	Rio Blanco	28	1N	88W	8500
C	Burro Mountain	15	2S	91W	9000

NO.	STATE	NAME	SEC. / LAT.	TWP. OR AND	RGE. / LONG.	ELEV.
		PRICE RIVER				
11K5	U	Huntington-Horseshoe	12	14S	5E	9800
11K4P	U	Gooseberry Reservoir	25	13S	5E	8700
11K3P	U	Mammoth R. S.-Cottonwood Cr.	13 & 23	13S	5E	8800
11K33P	U	Mud Creek #2	4	14S	7E	8300
11K7	U	Staley Ranch	32	12S	7E	7600
11K8	U	Dry Valley Divide	20	12S	8E	7800
10K2P	U	White River #1	11	10S	8E	8600
11K24	U	White River #2	9	10S	8E	7600
11K25	U	White River #3	30	10S	8E	7400
10K1P	U	Indian Canyon x	2	11S	10E	9100
10K6	U	Timberline	28	13S	13E	9100
10K3	U	Grassy Trail Creek-Left Fork	2	14S	13E	7970
10K5	U	Corral	32	13S	14E	8200
		SAN RAFAEL RIVER				
11K5	U	Huntington-Horseshoe	12	14S	5E	9800
11K4P	U	Gooseberry Reservoir x	25	13S	5E	8700
11K26	U	Switchback	14	14S	6E	8600
11K27P	U	Stuart R. S.	8 & 9	15S	7E	7950
11K28P	U	Red Pine Ridge	5	16S	6E	9400
11K29	U	Upper Joe's Valley	21	16S	6E	8800
11K9	U	Seely Creek R. S.	25	17S	4E	10000
11K31P	U	Buck Flat	23	19S	4E	9400
11K38	U	Rush Pond	24	19S	4E	9800
11K32	U	Wrigley Creek	27	19S	5E	9000
		MUDDY RIVER				
11K14	U	Black's Fork	34	20S	4E	9200
11K15	U	Dill's Camp	27	20S	4E	9200
11K12	U	Mt. Baldy R. S. x	19	19S	4E	9500
		FREMONT RIVER				
11L1P	U	Farnsworth Lake x	27 & 33	23S	2E	9900
11L3	U	Fish Lake	35	26S	1E	8700
11L6	U	Johnson Valley	24	25S	2E	8850
11L4P	U	Black's Flat - U.M. Creek	33	24S	3E	9250
11L5	U	Donkey Reservoir	9	30S	4E	9800
		ESCALANTE RIVER				
11M1	U	Widtsoe-Escalante Summit	22	34S	1W	9500
11M2	U	Widtsoe-Escalante #2	22	34S	1W	9500
11M3P	U	Widtsoe-Escalante #3	22	34S	1W	9500
		SAN JUAN RIVER				
6M1	C	Wolf Creek Pass x	4	37N	2E	10000
6M17	C	Wolf Creek Summit	6	37N	2E	11000
6M3	C	Upper San Juan	1	37N	1E	10000
6N2	NM	Chama Divide x	36°52'		106°40'	7500
6N3	NM	Chamita x	36°56'		106°40'	8500
7M6	C	Ironton Park x	29	43N	7W	9800
7M15	C	Red Mountain Pass x	13	42N	8W	11000
7M12	C	Molas Lake	7	40N	7W	10500
7M14	C	Mineral Creek	35	42N	8W	10300
7M13	C	Howardville	15	41N	7W	9800
7M4	C	Silverton Sub-Station	10	41N	7W	9400
7M11	C	Spud Mountain	32	40N	8W	10700
7M5	C	Cascade	13	39N	9W	8850
		VIRGIN RIVER				
12M6	U	Long Valley Junction	22	38S	6W	7500
12M5	U	Harris Flat R. S. x	24	38S	7W	7700
12M4P	U	Duck Creek R. S. x	11	38S	8W	8560
12M1P	U	Cedar Breaks x	2	37S	9W	10390
12M2M	U	Midway Valley x	26	37S	9W	9800
12M3MP	U	Webster Flat	20	37S	9W	9200

LEGEND

Numbering System (example)

10J7	Snow Course Only.
10J7P	Snow Course and Precipitation Gage.
10J7M	Snow Course and Soil Moisture Station.
10J7A	Snow Course and Aerial Marker.
10J7MA	Snow Course, Soil Moisture Station and Aerial Marker.
10J7MP	Snow Course, Soil Moisture Station and Precipitation Gage.
10J7m	Soil Moisture Station Only.
10J7a	Aerial Marker Only.
10J7p	Storage Precipitation Gage Only.
x	Adjacent Drainage



U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG. 1959 M-2854

FEDERAL - STATE - PRIVATE

COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS for UTAH, BEAR and COLORADO RIVER BASIN

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,

and

STATE ENGINEER of UTAH

In cooperation with Agricultural Experiment Stations at Arizona, Colorado and Utah; the State Engineers of Colorado, New Mexico and Wyoming; U.S. Forest Service; Bureau of Reclamation, U.S. National Park Service, U.S. Geological Survey; and other Federal, State, and private organizations.

AS OF

MAY 1, 1961

USDA-SCS-PORTLAND, OREG. 1960

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS and WATER SUPPLY FORECASTS

for

UTAH, BEAR and COLORADO RIVER BASINS

MAY 1, 1961

Report Prepared

by

Gregory L. Pearson
Snow Survey Supervisor

and

James R. Talbot
Ass't. Snow Survey Suprv.

Soil Conservation Service
222 South West Temple
Salt Lake City, Utah

Issued by

J. A. LIBBY

State Conservationist
Soil Conservation Service
Salt Lake City, Utah

Wayne D. Criddle
State Engineer
State of Utah
Salt Lake City, Utah

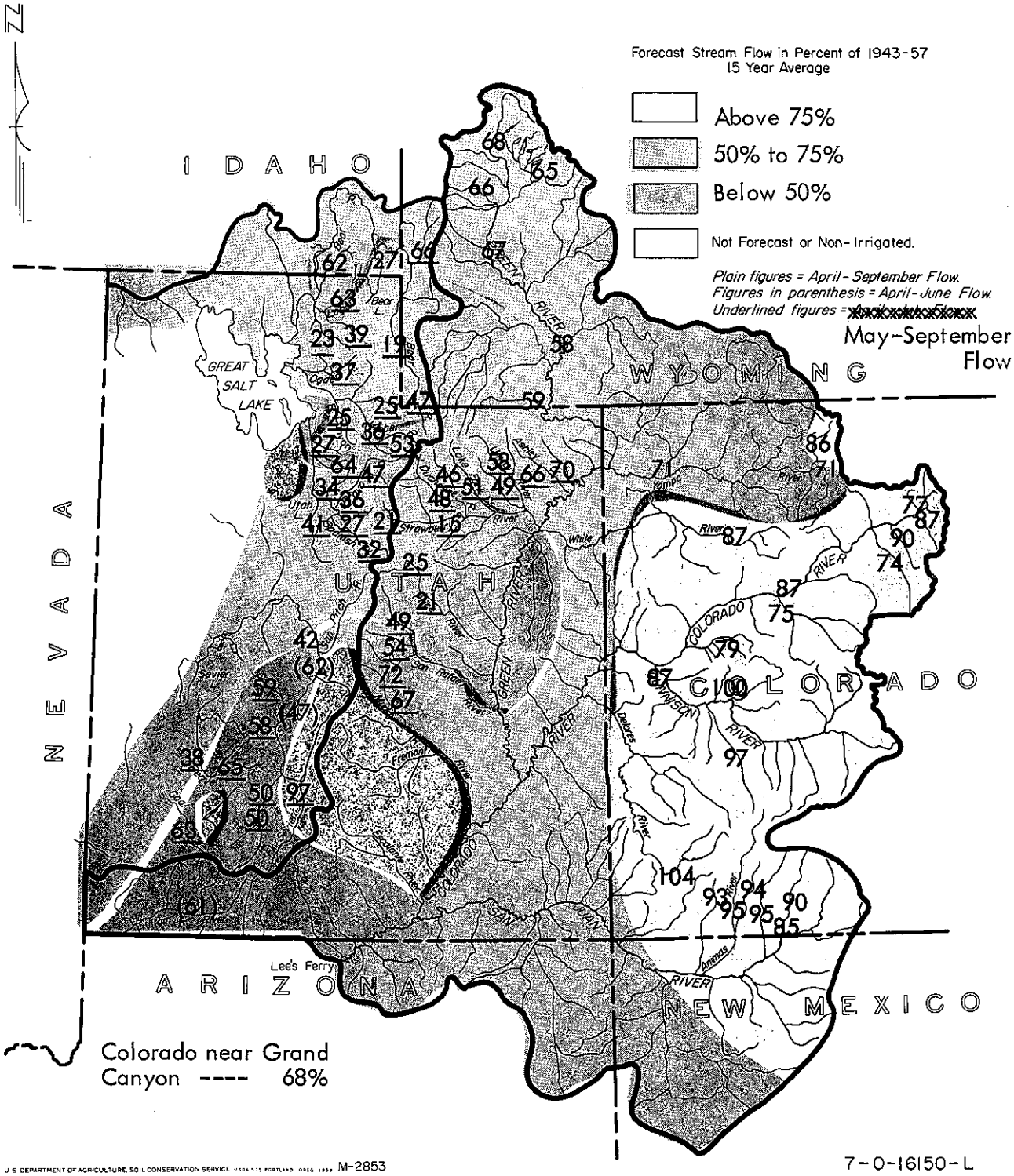
Dr. S.W. Thorne, Dir.
Utah Agricultural Exp. Station
Logan, Utah
Mimeograph Series # 465

PROSPECTIVE WATER SUPPLIES

Based on Snow Surveys Made on UTAH, BEAR and UPPER COLORADO BASINS

May 1, 1961
Approximate Date

50 0 50 100
SCALE IN MILES



U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE USDA-SCS PORTLAND, OREG. 1959 M-2853

7-0-16150-L

WATER SUPPLY OUTLOOK

as of

MAY 1, 1961

* *
* Light April precipitation reduced forecasts for most streams in Utah *
* from 5% to 20% below those of last month, with most watersheds now *
* expected to produce from 25% to 60% of average. Poorest outlook is *
* for the more heavily populated northern half of the state. Inflow *
* to reservoirs during April has been among the lowest years of record *
* Excluding Bear Lake, reservoir storage is 65% of last year and 49% *
* of average. *
* Colorado river triubtaries in Colorado are expected to yield between *
* 70% and 105% of average streamflow. In Wyoming, the Green river and *
* its tributaries are forecast at 58% to 68%. *
* *

UTAH & BEAR RIVER

The improvement to the water outlook which took place in March was largely dissipated by very light precipitation occurring over most of the state. The exception was a band running west to east from about the Ephraim-Richfield section to the vicinity of Moab and Monticello. In this section, precipitation measured in the mountains was about 110% to 135% of average, and resulted in forecasts being raised about 5% to 15% above that expected the first of April.

Climatic factors which influence the rate at which the snowpack melts have been below average this month. This will be helpful to those having the older primary water rights, since streamflow will hold up a little longer into the summer season than it would have done with normal snowmelt conditions. However, it will not add significantly to the total water supply.

The cool weather, coupled with the carryover effect on streamflow of last year's low runoff and this year's light snowpack, all combined to make streamflow this year among the lowest of record for the month of April. The U.S.Geological Survey reports that it was record low for the Weber river at Oakley and for Big Cottonwood Creek near Salt Lake, where runoff was 48.8% and 56.2% respectively, of the median flow for the 30 years - 1931-60.

Low reservoir storage (see page 7) accentuates the critical water outlook for this summer. Scofield reservoir has only 25% of average storage, while Sevier Bridge and East Canyon each have 35%. Piute reservoir has 39%, Strawberry 42% and Utah Lake 45%. The remaining Utah reservoirs range from 62% in Otter Creek to 88% in Bear Lake.

Areas having the most critical outlook, where forecasts range from 15% to 40% of the average May-September streamflow, include the following: Blacksmith Fork river, Little Bear river and all low elevation watersheds in Cache Valley; Bear river in the Woodruff-Randolph area; Ogden river, Weber river below Kamas valley, including all tributary streams; Provo river below Heber valley and all streams draining into Utah Lake; Strawberry reservoir; Strawberry and Price rivers, and inflow to Rocky Ford reservoir on the Beaver river.

Streams having the brightest prospects continue to be the East Fork of the Sevier river, Escalante river and other streams draining from the Aquarius Plateau, Parowan Creek and Salina Creek. These streams are expected to produce from 80% to average water supplies.

Another group of watersheds which are expected to yield between 40% and 60% of average include Huntington and Cottonwood Creeks of the San Rafael river, the upper San Pitch river(Mt. Pleasant and northward); Sevier river from Panguitch to Delta, Chalk Creek near Fillmore and streams in the Uintah Basin from the Duchesne river to the Uintah river.

The outlook is better than this for another group of streams where 60% to 80% is expected. These include the Logan and Cub rivers of Cache Valley, Farmington Creek, the Cottonwood Creeks near Salt Lake, streams near Tooele, tributaries of the San Pitch from Ephraim to Mayfield, the Beaver river near Beaver, Virgin river and Coal Creek near Cedar City. Also included are streams near Moab and Monticello.

COLORADO RIVER BASIN

In Colorado and Wyoming, just as in Utah, the factors which affect the rate of snowmelt have been below average, contributing to the fact that the flow of the Colorado river near Cisco, Utah and Green river at Green river, Utah was among the lowest years of record for April, with 49% of median at Cisco and 42% at Green river.

Above normal precipitation on most watersheds in Colorado has resulted in the forecasts being raised so that they are now expected to yield between 70% and 105% of average.

In Wyoming, light precipitation has resulted in lowered streamflow forecasts. These now range between 58% and 68% of average.

STREAMFLOW FORECASTS - MAY 1, 1961

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1960	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-yr. Av. 1943-57
GREAT BASIN						
BEAR RIVER SYSTEM						
Bear nr Ut-Wyo. State Line	55	47	May-Sept	96	97	116
Bear nr Woodruff	20	19	May-Sept	67	69	106
Bear nr Randolph	7	8	May-Sept	25	31	88*
Smith's Fork nr Border, Wyo.	69	66	May-Sept	73	107	104
Bear at Harer, Idaho	63	27	May-Sept	92	161	235
Cub River nr Preston, Ida.	29	62	May-Sept	36	48	47*
Little Bear nr Paradise	6.5	23	May-Sept	9.5	27	28
Logan nr Logan (1)	79	63	May-Sept	89	126	125
Blacksmith Fork nr Hyrum(2)	20	39	May Sept	28	50	51
WEBER-OGDEN RIVERS						
Weber nr Oakley	53	55	May-June	66	84	96
	65	53	May-Sept	84	100	122
Wanship Reservoir Inflow(3)	35	32	May-July	69	70	110*
Weber nr Coalville(4)	43	36	May-Sept	73	94	119
Chalk Crk at Coalville	8.5	25	May-Sept	13.1	15.5	34
East Canyon Crk nr Morgan(5)	4.5	25	May-Sept	7.6	19.2	18.1
So. Fork Ogden nr Huntsville	18	37	May-Sept	22	44	49
PROVO RIVER & UTAH LAKE						
Strawberry Reservoir Inflow(6)	9	21	May-Sept	4.0	45	42
Spanish Fork at Thistle	11	32	May-Sept	11.7	45	34
Hobble Crk nr Springville	4.5	27	May-Sept	4.7	21	16.5*
Provo nr Hailstone(7)	48	47	May-Sept	62	99	102*
Provo at Vivian Park(8)	47	36	May-Sept	68	126	129
American Fork nr Am. Fork	11	34	May-Sept	16.9	40	32
Utah Lake Inflow	95	41	May-Sept	136	216	234

(1) Includes U.P.&L. tailrace and Logan, Hyde Park & Smithfield Canal
(2) Above Utah Power & Light Company's dam.
(3) Observed flow Weber River near Wanship, Utah, plus change in storage in Wanship reservoir, plus diversion by Weber-Provo Canal.
(4) Includes diversion by Weber-Provo canal and change in storage in Wanship Reservoir.
(5) Observed flow plus change in storage in East Canyon Reservoir.
(6) Change in storage plus diversion thru Strawberry tunnel
(7) Observed flow minus diversions thru Duchesne tunnel and Weber-Provo Canal.
(8) Observed flow plus change in storage in Deer Creek reservoir, minus diversions thru Duchesne tunnel & Weber-Provo Canal, plus diversion thru Salt Lake Aqueduct.
* - Partly estimated.

STREAMFLOW FORECASTS - MAY 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1960	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av. 1943-57
JORDAN RIVER & SALT LAKE						
Little Cottonwood Crk nr SLC	23	64	May-Sept	26	40	36
Big Cottonwood Crk nr SLC	22	61	May-Sept	27	46	36
Parley's Crk nr SLC	3	27	May-Sept	3.6	11.1	11
BEAVER RIVER						
Beaver nr Beaver	11.5	61	May-June	4.4	29	18.9
	17	65	May-Sept	7.2	40	26
Rockyford Reservoir Inflow	3	38	May-June	2.0	16.9	8
COAL CREEK						
Coal Crk nr Cedar City	8.5	63	May-Sept	5.1	29	13.5
SEVIER RIVER						
Sevier at Hatch	17	61	May-June	7.2	62	28
	23	50	May-Sept	15.7	84	46
Sevier nr Circleville	17	50	May-Sept	11.8	75	34*
Sevier nr Kingston	4.5	28	May-June	1.1	43	15.9
	6.5	31	May-Sept	2.8	52	20.9
East Fork Sevier nr Kingston(9)	8.5	93	May-June	- -	30	9.1
	13	97	May-Sept	3.2	33	13.4
Sevier below Piute Dam(10)	22	69	May-Sept	9.7	84	35
Clear Crk nr Sevier(abv.Div.)	7	58	May-June	2.6	16	12.1*
Inflow						
Kingston to Vermillion Dam	22	47	Apr-June	9	78	47
Vermillion Dam to Gunnison	39	62	Mar-June	35	78	63
Salina Crk at Salina(11)	7	85	May-June	- -	- -	8.2*
Sevier nr Gunnison	27	42	Apr-Sept	31	81	64
PAVANT VALLEY						
Chalk Crk nr Fillmore	9.5	59	May-Sept	4.4	17.5	16*

(9) Observed flow plus change in storage in Otter Creek Reservoir.
(10) Observed flow plus change in storage in Otter Crk & Piute Reservoirs
(11) Gage is below diversions near Salina
* - Partly estimated.

STREAMFLOW FORECASTS - MAY 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr. Av 1943-57
COLORADO RIVER BASIN						
GREEN RIVER TRIBUTARIES IN UTAH						
WYOMING STATE LINE TO DUCHESNE RIVER						
Henry's Fork at Linwood	20	59	May-Sept	21.7	17.0	34
Ashley Creek nr Vernal	39	70	May-Sept	33	52	56
DUCHESNE RIVER						
Duchesne at Provo River Trail nr Hanna	20	50	May-Sept	- -	- -	40*
[illegible] nr Tabiona(12)	50	48	May-Sept	59	108	105
Rock Crk nr Mtn. [illegible]	48	46	May-Sept	76	95	104
Strawberry at Duchesne	10	15	May-Sept	12.9	74	65
Lakefork below Moon Lake(13)	38	51	May-Sept	56	74	74
Uinta nr Neola	56	58	May-Sept	72	103	96
Whiterocks nr Whiterocks	42	66	May-Sept	49	60	64
Yellowstone nr Altonah	37	49	May-Sept	52	74	75
PRICE RIVER						
Gooseberry Crk nr Scofield	4.5	39	May-Sept	5.8	14.4	11.4
Price nr Scofield (14)	8.5	25	May-Sept	10.5	47	34
Price nr Heiner (14)	12	21	May-Sept	10.7	91	56
SAN RAFAEL RIVER						
Huntington Crk nr Huntington	26	49	May-Sept	23.3	85	53
Cottonwood Crk nr Orangeville	30	54	May-Sept	21.0	79	56
Ferron Crk nr Ferron	28	72	May-Sept	16.0	62	39*
MUDDY RIVER						
Muddy Creek nr Emery	14	67	May-Sept	7.7	38	21.0*
Ivie Creek nr Emery	1.1	73	May-Sept	0.8	3.1	1.5*
VIRGIN RIVER						
Virgin at Virgin	27	61	Apr-June	18.4	108	44
GREEN RIVER TRIBUTARIES IN WYOMING (Above Flaming Gorge Reservoir)						
Green at Warren Bridge, Wyo.	237	68	Apr-Sept	310	269	348
New Fork nr Boulder, Wyoming	170	65	Apr-Sept	201	156	260
No.Piney Crk nr Mason, Wyo.	27	66	Apr-Sept	32	35	41
Green nr Fontenelle, Wyo.	667	67	Apr-Sept	704	751	995
Green nr Green River, Wyo.	690	58	Apr-Sept	734	820	1,200*

(12) Observed flow plus diversion through Duchesne Tunnel
(13) Observed flow plus change in storage in Moon Lake reservoir.
(14) Observed flow plus change in storage in Scofield reservoir.
* - Partly estimated.

STREAMFLOW FORECASTS - MAY 1, 1961

BASIN, STREAM and STATION	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1961	% 15-Yr. Av.	Forecast Period	Measured Runoff 1959	Measured Runoff 1958	15-Yr Av. 1943-57
GREEN RIVER TRIBUTARIES IN COLORADO						
Yampa at Steamboat Springs	220	71	Apr-Sept	250	328	283
Elk at Clark	185	86	Apr-Sept	154	219	215
Little Snake nr Lily	250	71	Apr-Sept	184	369	350
White nr Meeker	290	87	Apr-Sept	269	390	335
COLORADO RIVER (Above Jct. with Green River)						
Colorado nr Granby (16)	205	87	Apr-Sept	201	227	235
Willow Crk above Willow Crk.Res.	34	77	Apr-Sept	31	43	44
Williams River nr Parshall	70	90	Apr-Sept	54	76	78
Blue above Green Mtn. Res.	215	74	Apr-Sept	231	262	290
Colorado at Glenwood Spgs.(17)	1340	87	Apr-Sept	1164	1548	1546
Roaring Fork at Glenwood Spgs.(18)	600	75	Apr-Sept	623	722	803
Plateau Crk nr Collbran	45	79	Apr-Sept	27	59	57
Surface Crk nr Cedaredge	18	100	Apr-Sept	11	23	18
Uncompahgre at Colona	140	97	Apr-Sept	100	225	145
Gunnison nr Grand Jct.	1200	87	Apr-Sept	604	1856	1386
Dolores at Dolores	290	104	Apr-Sept	99	384	279
SAN JUAN RIVER						
Piedra nr Piedra	167	90	Apr-Sept	70	254	186
San Juan at Rosa	500	85	Apr-Sept	239	901	587
Los Pinos nr Bayfield(19)	210	95	Apr-Sept	122	273	220
Animas at Durango	450	95	Apr-Sept	244	626	475
Florida nr Durango	58	94	Apr-Sept	26	86	62
LaPlata at Hesperus	26	93	Apr-Sept	11	40	28
COLORADO RIVER - (Main Stem)						
Colorado nr Grand Canyon	5300	66	Apr-July	4034	9926	8056
	6200	68	Apr-Sept	4792	10642	9155

(16) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir.

(17) Observed flow plus diversions by Adams tunnel and Grand river ditch plus change in storage in Granby reservoir plus Moffat ditch.

(18) Observed flow plus diversion through Twin Lakes Tunnel.

(19) Observed flow plus change in storage in Vallecito reservoir.

STATUS OF RESERVOIR STORAGE - MAY 1, 1961

BASIN and/or STREAM	RESERVOIR	Usable Capacity 1000s AF	USABLE STORAGE - 1000 ACRE FEET 1961	1960	1959	15-Yr.Av. 1943-57
			GREAT BASIN			
Bear River	Bear Lake	1421.0	814.3	1039.6	1067.4	921.5
Little Bear	Hyrum	15.3	15.6	15.6	15.7	14.6
Ogden	Pineview	110.0	23.5	63.7	33.5	29.3
Weber	Rockport	59.1	17.9	20.9	12.4	- -
	Echo	73.9	37.6	52.0	49.0	54.8
	East Canyon	28.7	8.4	23.4	17.3	23.8
Provo	Deer Creek	149.7	70.5	89.5	84.6	94.9
Spanish Fork	Strawberry	270.0	63.6	117.0	163.6	150.1
Utah Lake	Utah Lake	1149.0 *	308.4	515.2	633.9	691.1
Sevier River	Otter Creek	52.5	25.7	31.6	40.2	41.4
	Piute	74.0	20.7	19.4	44.8	53.1
	Sevier Bridge	236.0	58.6	63.8	94.2	169.2
Beaver River	Rocky Ford	23.3	8.1	8.0	14.4	17.0
			COLORADO RIVER BASIN			
Lake Fork	Moon Lake	35.8	11.7	14.3	8.5	15.5
Price River	Scofield	65.8	5.9	10.8	34.3	23.9
Colorado	Granby	465.5	214.0	236.3	231.7	185.3
Blue	Green Mtn.	146.9	54.8	53.6	42.6	52.3
Gunnison	Taylor Park	106.2	38.5	61.3	51.1	67.0
Dolores	Groundhog	21.7	6.0	7.5	6.1	9.2
San Juan	Vallecito	126.3	60.0	50.6	51.4	64.3
Little Colorado	Lyman	30.6	7.2	20.3	17.8	9.6
Colorado	Lake Mead	27,207.0	17,885.0	19,876.0	20,252.0	16,451.0
Colorado	Lake Mohave	1,810.0	1,734.5	1,565.5	1,651.0	1,515.8**
Colorado	Lake Havasu	619.4	581.9	581.3	608.2	611.7
Gila	San Carlos	1,205.0	0.1	193.2	58.6	96.1
Salt	Roosevelt	1,381.6	790.8	1,095.8	379.9	497.0
Salt	Apache	245.1	199.7	235.0	217.4	219.0
Salt	Canyon	57.9	54.5	53.8	53.9	50.1
Salt	Saguaro	69.8	67.4	61.5	66.2	53.5
Verde	Horseshoe	143.0	36.1	56.6	31.3	20.9
Verde	Bartlett	180.0	26.4	106.1	66.2	76.3
Agua Fria	Lake Pleasant	163.8	26.1	48.9	17.8	29.4

* - Active capacity taken at 3.1 feet above compromise point.

** - Less than 15 years of record in the 1943-57 period.

APRIL PRECIPITATION DATA

(Measured at or near Snow Courses) (1)

DRAINAGE BASIN and RAINGAGE LOCATION		April Precipitation from date of Apr. 1 Snow Survey to Approximately May 1		Past Record			
		Date of Read. 1961	Precip-itation 1961 (In)	1960 (In)	1959 (In)	Yrs. of Record	Av. for Record Period (In)
GREAT BASIN DRAINAGE							
Bear River above Harer, Idaho							
Monte Cristo #2 (3)	8960	4/26	2.70	2.55	- -	1	- -
Salt River Summit	7900	4/23	[illegible]	3.50	2.70	3	3.13
Stillwater Camp	8550	4/27	3.10	2.15	2.30	5	2.41
Trial Lake x	9800	4/27	1.89	2.50	4.23	9	3.16
Bear River below Harer, Idaho							
Dry Bread Pond	8230	4/26	1.50	2.85	5.20	8	3.23
Garden City Summit	7600	4/25	1.50	3.10	4.68	6	3.02
Klondike Narrows	7400	4/25	1.85	3.35	2.20	6	3.51
Little Bear(upper)	6550	4/27	1.35	2.85	2.50	4	3.78
Monte Cristo #2 (3)	8960	4/26	2.70	2.55	- -	1	- -
Willow Flat	6100	4/28	1.88	3.23	4.50	5	3.99
Ogden River							
Ben Lomond(lower)	5850	4/27	1.25	3.10	4.80	6	4.12
Dry Bread Pond	8230	4/26	1.50	2.85	5.20	8	3.23
Monte Cristo #2 * (3)	8960	4/26	2.70	2.55	- -	1	- -
Sagebrush Flat	6300	4/26	1.00	2.65	3.35	5	2.58
Snow Basin	6420	4/28	2.80	3.25	5.38	2	4.32
Weber River							
Chalk Creek #2	8000	4/26	1.00	3.14	3.45	8	2.45
Mt. Dell Dam * (2)	5500	4/28	1.05	1.23	1.64	26**	2.68
Parley's Canyon Smt.	7500	4/28	2.51	3.78	3.85	8	4.54
Silver Lake(Brighton)*(2)	8725	4/28	1.89	4.80	2.70	30**	4.00
Smith & Morehouse	7600	4/28	2.05	3.20	3.75	6	3.17
Trial Lake *	9800	4/27	1.89	2.50	4.23	9	3.16

(1) Precipitation from non-recording raingages located on or near snow course and measured monthly, except that supplied by U.S. Weather Bureau, which was measured daily, as noted.

(2) Data measured daily and supplied by U.S. Weather Bureau. Mt. Dell Dam data figured from date of Lamb's Canyon snow survey.

(3) U.S. Weather Bureau raingage measured by SCS personnel.

* - Adjacent drainage.

** - Period of snow surveys.

APRIL PRECIPITATION DATA

(Measured at or near Snow Courses) (1)

DRAINAGE BASIN and RAINGAGE LOCATION	Elev.	April Precipitation from Date of April 1 Snow Survey to Approximately May 1: Date of Read. 1961	Precipitation 1961 (In)	Past Record: 1960 (In)	1959 (In)	Yrs. of Record	Av. for Record Period (In)
Provo River & Utah Lake							
Clear Creek Ridge #2	8000	4/26	2.00	2.84	2.90	5	2.76
Daniels-Strawberry Smt.	8000	4/27	1.30	2.00	1.80	6	2.42
Dutchman R.S.	7500	4/27	1.26	2.50	2.98	5	3.39
Hobble Creek Summit	7300	4/24	1.43	2.47	3.05	6	2.68
Payson R.S.	8050	4/24	3.00	2.37	3.01	6	3.51
Soapstone R.S.	7800	4/27	1.40	1.90	2.90	6	2.85
Strawberry Reservoir - East Portal (2)	7606	4/30	0.90	1.52	1.77	12	1.49
Timpanogos Divide (2)	8200	4/27	1.65	2.55	3.15	22	3.31
Trial Lake	9800	4/27	1.89	2.50	4.23	9	3.16
Jordan River & Great Salt Lake							
Farmington Guard Sta.(4)	7500	4/28	2.10	2.91	6.28	8	5.35
Farmington Rice(4)	7000	4/28	2.01	2.80	5.69	21	4.93
Middle Canyon-Tooele	7000	4/27	2.55	2.61	3.03	4	4.80
Mt. Dell Dam (3)	5500	4/28	1.05	1.23	1.64	26**	2.68
Parley's Canyon Smt.	7500	4/28	2.51	3.78	3.85	8	4.54
Silver Lake(Brighton)(3)	8725	4/28	1.89	4.80	2.70	30**	4.00
Sevier River above Richfield							
Box Creek	9800	4/24	2.40	1.82	1.64	5	3.18
Castle Valley	9700	4/28	1.65	2.40	0.83	4	3.30
Cedar Breaks (5)	10320	4/26	2.45	3.35	1.60	2	2.48
Duck Creek R.S.	8560	4/27	1.75	2.50	1.03	9	2.05
Kimberly Mine(upper)	8900	4/25	4.90	1.44	1.36	4	4.50
Panguitch Lake (5)	8200	4/28	0.90	0.95	0.20	8	0.92
Webster Flat *	9200	4/26	2.05	3.05	1.30	9	3.26
Widtsoe-Escalante #3	9500	4/26	2.32	1.15	1.45	5	2.56
Widtsoe R.S. (5)	7600	4/26	1.02	0.36	0.70	26**	0.96

(1) Precipitation from non-recording raingages located on or near snow course and measured monthly, except that supplied by U.S.Weather Bureau, which was measured daily, as noted.
(2) Data measured monthly, supplied by U.S.Weather Bureau.
(3) Data measured daily and supplied by U.S.Weather Bureau. Mt. Dell Dam data figured from date of Lamb's Canyon snow survey.
(4) Data supplied by U.S. Forest Service.
(5) U.S. Weather Bureau raingage measured by SCS personnel.
* - Adjacent drainage
** - Period of snow surveys.

APRIL PRECIPITATION DATA

(Measured at or near Snow Courses) (1)

DRAINAGE BASIN and RAINGAGE LOCATION	Elev.	April Precipitation from Date of April 1 Snow Survey to Approximately May 1		Past Record			
		Date of Read. 1961	Precipitation 1961 (In)	1960 (In)	1959 (In)	Yrs. of Record	Av. for Record Period (In)
Sevier River below Richfield Including San Pitch River							
Beaver Dams	8000	4/26	2.85	1.30	3.04	5	2.55
Farnsworth Lake	9900	4/25	5.27	2.23	3.25	5	4.15
G.B.R.C. Headquarters(3)	8700	4/28	3.72	2.76	3.05	30**	3.39
G.B.R.C. Meadows (3)	10000	4/28	4.18	3.74	2.88	25	3.66
G.B.R.C. Oaks (3)	7655	4/28	2.73	1.70	2.32	35	2.17
Gooseberry R. S.	7800	4/25	3.48	1.25	2.01	17**	2.62
Gooseberry Reservoir*	8700	4/27	1.75	3.33	3.20	7	3.03
Mammoth R.S. #2 * (2)	8600	4/27	1.54	3.58	- -	1	- -
Mt. Baldy R.S. #2	9500	4/26	3.18		New Gage	0	- -
Pine Creek	8700	4/27	5.15	2.62	4.92	4	4.96
Shingle Mill	6200	4/27	3.65	0.93	- -	1	- -
Beaver River							
Beaver Canyon P.H. (4)	7275	4/28	1.51	1.87	0.57	21	2.13
Big Flat	10000	4/25	3.15	1.45	2.55	7	3.06
Parowan Creek							
Yankee Reservoir	8700	4/24	2.60	0.75	1.90	4	2.94
Coal Creek							
Cedar Breaks (2)	10320	4/26	2.45	3.35	1.60	2	2.48
Webster Flat *	9200	4/26	2.05	3.05	1.30	9	3.26
Enterprise to New Harmony							
Little Grassy Creek	6100	4/27	1.35	0.75	0.10	2	0.42
Long Flat	8200	4/25	2.05	0.50	0.80	2	0.65

Precipitation from non-recording raingages located on or near snow course and
(1) measured monthly, except that supplied by U.S.Weather Bureau, which was measured daily, as noted.

(2) U.S. Weather Bureau raingage measured by SCS personnel.
(3) Data supplied by U.S. Forest Service.
(4) Data measured daily and supplied by U.S. Weather Bureau. Data figured from date of Merchant Valley snow survey.

* - Adjacent drainage
** - Period of Snow Surveys

APRIL PRECIPITATION DATA

(Measured at or near Snow Courses) (1)

DRAINAGE BASIN and RAINGAGE LOCATION	Elev.	April Precipitation from Date of April 1 Snow Survey to Approximately May 1					
		Date of Read. 1961	Precip-itation 1961 (In)	Past Record 1960 (In)	Past Record 1959 (In)	Past Record Yrs. of Record	Past Record Av. for Record Period (In)
COLORADO RIVER DRAINAGE							
Green River above Flaming Gorge							
Big Sandy Opening	9200	4/27	0.60	New Gage		0	- -
Black's Fork Junction	8925	4/24	2.65	New Gage		0	- -
East Fk.Black's Fork G.S.	9300	4/24	2.75	New Gage		0	- -
East Rim Divide	7950	4/25	0.60	New Gage		0	- -
Hewinta G.S.	9500	4/24	3.00	New Gage		0	- -
Snyder Basin #2	8040	4/29	1.60	New Gage		0	- -
Spirit Lake	10300	4/25	4.50	New Gage		0	- -
Brush Creek							
King's Cabin(upper)	8730	4/24	3.90	1.60	1.60	9	1.95
Duchesne River							
Currant Creek	7800	4/28	1.10	1.95	0.80	5	1.80
Daniels-Strawberry Smt.*	8000	4/27	1.30	2.00	1.80	6	2.42
Indian Canyon	9100	4/25	0.45	New Gage		0	- -
Julius Park	9800	4/26	1.40	2.05	2.80	2	2.42
Lakefork Mountain	10500	4/27	0.75	3.60	2.00	8	2.17
Moon Lake (2)	8150	4/30	0.40	1.80	1.15	21	1.48
Paradise Park	10100	4/26	1.35	1.95	2.70	6	2.12
Rock Creek	7900	4/26	0.45	1.30	1.15	5	1.32
Soapstone R.S. *	7800	4/27	1.40	1.90	2.90	6	2.85
Strawberry Reservoir - East Portal * (2)	7606	4/30	0.90	1.52	1.77	12	1.49
Trial Lake *	9800	4/27	1.89	2.50	4.23	9	3.16
White River #1 *	8600	4/26	1.10	2.70	0.80	4	2.28

(1) Precipitation from non-recording raingages located on or near snow course and measured monthly, except that supplied by U.S. Weather Bureau, which was measured daily, as noted.

(2) Data measured monthly, supplied by U.S.Weather Bureau

* - Adjacent drainage.

APRIL PRECIPITATION DATA

(Measured at or near Snow Courses) (1)

DRAINAGE BASIN and RAINGAGE LOCATION	Elev.	April Precipitation from Date of April 1 Snow Survey to Approximately May 1					
		Date of Read. 1961	Precip-itation 1961 (In)	Past Record 1960 (In)	Past Record 1959 (In)	Past Record Yrs of Record	Past Record Av. for Record Period (In)
Price River							
Clear Creek (3)	8300	5/1	1.18	1.56	2.10	25	1.94
Clear Creek Ridge #2 *	8000	4/26	2.00	2.84	2.90	5	2.76
Gooseberry Reservoir	8700	4/27	1.75	3.33	3.20	7	3.03
Indian Canyon	9100	4/25	0.45		New Gage	0	- -
Mammoth R.S. #2	8600	4/27	1.54	3.58	- -	1	3.58
Mud Creek #2	8300	4/26	1.70	2.96	1.45	4	2.40
White River #1	8600	4/26	1.10	2.70	0.80	4	2.28
San Rafael River							
Buck Flat	9400	4/24	2.60	2.00	3.90	5	3.16
G.B.R.C.Meadows * (2)	10000	4/28	4.18	3.74	2.88	25	3.66
Gooseberry Reservoir *	8700	4/27	1.75	3.33	3.20	7	3.03
Red Pine Ridge	9400	4/25	2.60	2.50	4.05	6	3.95
Stuart R.S.	7950	4/26	1.55	1.80	2.60	6	1.90
Fremont River							
Black's Flat-U.M. Creek	9250	4/21	2.98	1.67	2.06	5	2.85
Farnsworth Lake	9900	4/25	5.27	2.23	3.25	5	4.15
Escalante River							
Widtsoe-Escalante #3	9500	4/26	2.32	1.15	1.45	5	2.56

(1) Precipitation from non-recording raingages located on or near snow course and measured monthly, except that supplied by U.S. Weather Bureau, which was measured daily, as noted.

(2) Data supplied by U. S. Forest Service

(3) U.S.Weather Bureau raingage measured by SCS personnel.

* - Adjacent drainage.

APRIL PRECIPITATION DATA

(Measured at or near Snow Courses) (1)

DRAINAGE BASIN and RAINGAGE LOCATION	Elev.	April Precipitation from Date of April 1 Snow Survey to Approximately May 1					
		Date of Read. 1961	Precip-itation 1961 (In)	Past Record			
				1960 (In)	1959 (In)	Yrs. of Record	Av. for Record Period (In)
Virgin River							
Cedar Breaks * (3)	10320	4/26	2.45	3.35	1.60	2	2.48
Duck Creek R.S.	8560	4/27	1.75	2.50	1.03	9	2.05
Webster Flat	9200	4/26	2.05	3.05	1.30	9	3.26
Lower Colorado River (Southeastern Utah)							
Buckboard Flat	9000	4/20	4.55	1.45	2.05	5	2.34
Camp Jackson	8600	4/20	2.60	0.85	1.60	5	2.09
LaSal Mountain(upper)	9400	4/21	4.30	1.60	1.90	2	1.75

(1) Precipitation from non-recording raingages located on or near snow course and measured monthly, except that supplied by U.S. Weather Bureau, which was measured daily, as noted.

(3) U. S. Weather Bureau raingage measured by SCS personnel.

* - Adjacent drainage.

AVAILABLE SOIL MOISTURE

May 1, 1961

DRAINAGE BASIN & STATION	Station No. 1/	Elev	Soil Profile in Inches Depth	Soil Profile in Inches Cap.	Date	Soil Moisture Content In Inches about May 1 1961	1960	1959	Av.	Years of Record
COLORADO STATIONS										
ROARING FORK										
Placita	7K7*	8800	48	8.0	5/1	6.4	7.8	5.1	6.9	5
Maroon	6K25*	8400	48	8.0	5/1	7.4	7.8	8.0	7.4	7
UPPER COLORADO										
Vail	6K5*	9200	48	8.0	5/1	7.4	7.9	8.0	6.6	7
Ranch Creek	5K18M	9400	48	7.0	5/1	3.4	NR	4.2	4.6	5
Berthoud Pass	5K20*	9800	48	8.0	5/1	5.5	NR	0.1	2.0	5
Vasquez Siphon	5K22*	9600	48	7.0	5/1	6.4	NR	6.2	5.7	4
Gore	5J15*	8900	48	7.0	5/1	0.7	6.4	7.0	6.4	5
Blue River	6K21M	10500	48	7.0	5/1	0.8	3.9	1.4	2.9	5
King	6L9*	10500	48	8.0	5/1	4.6	5.4	6.3	6.1	4
DOLORES										
Lizard Head	7M3M	10300	48	7.0	5/1	5.4	3.9	5.3	4.4	3
Dolores	8M1*	7500	48	7.0	5/1	5.6	4.2	2.8	3.5	3
Rico	7M1M	8700	48	7.0	5/1	5.0	3.5	4.7	4.1	3
SAN JUAN										
Mineral Creek	7M14M	10300	48	7.0	No Survey		4.8	- -	5.7	4
Molas Lake	7M12M	10500	48	7.0	No Survey		4.4	- -	5.5	4
Cascade	7M5M	8850	48	7.0	No Survey		4.9	- -	5.7	4

1/ * - Indicates soil moisture station only

M - Indicates soil moisture station on snow course.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
GREAT BASIN DRAINAGE									
UPPER BEAR RIVER (Above Harer, Idaho)									
Big Park	10G11	8700	4/27	39	12.3	14.3	18.0	20.7*	9
CCC Camp x	10G7	7500	4/28	0	0.0	4.5	5.3	5.9*	11
Goodman Ranch	10J6	7900	4/27	0	0.0	0.0	0.0	0.8*	6
Hayden Fork	10J7	9300	4/27	23	8.6	8.8	13.4	14.7*	7
Kelly Ranger Station	10G12	8200	4/27	30	10.3	12.8	14.2	16.3*	5
Monte Cristo R.S.	11H12	8960	4/26	41	15.4	16.0	20.8	25.5*	10
Pincy LaBarge x	10G10	8820	4/29	23	8.4	9.3	16.0	15.4	24
Poison Meadows x	10G6	8500	4/29	55	20.5	23.9	28.7	31.7*	5
Salt River Summit	10G8	7900	4/28	16	5.7	8.4	10.0	10.2*	8
Stillwater Camp	10J17	8550	4/27	14	4.9	0.6	6.2	5.6*	6
Trial Lake x	10J8	9800	4/27	50	16.3	21.0	24.6	29.5*	13
LOWER BEAR RIVER (Below Harer, Idaho)									
Beaver Crk-Skunk Crk.	11H14	7150	4/27	0	0.0	T	0.0	3.8*	9
Dry Bread Pond x	11H13	8230	4/26	18	6.5	9.4	9.2	13.9*	10
Emmigrant Summit	11G6	7350	4/27	36	14.2	- -	- -	- -	0
Franklin Basin R.S.	11G8	8200	4/25	52	19.2	19.8	24.6	29.1*	5
Garden City Summit	11H7	7600	4/25	24	8.4	7.2	14.9	14.7*	9
Klondike Narrows	11H1	7400	4/25	21	7.8	9.2	13.0	14.7*	6
Little Bear(lower)	11H26	5800	4/27	0	0.0	0.7	0.0	- -	4
Little Bear(upper)	11H25	6550	4/27	0	0.0	1.3	0.0	- -	4
Monte Cristo R.S.	11H12	8960	4/26	41	15.4	16.0	20.8	25.5*	10
Oxford Mountain	12G3	6800	4/28	0	0.0	NS	0.0	- -	3
Steep Hollow #1	11H27	8500	4/25	65	27.2	26.3	32.4	- -	2
Steep Hollow #2	11H28	7700	4/25	36	14.4	14.8	17.8	- -	2
Strawberry Creek	11G9	5800	4/27	0	0.0	0.0	0.0	1.7*	5
Strawberry Mink Divide	11G10	6800	4/27	26	10.4	7.3	7.6	13.4*	5
Tony Grove R.S.	11H3	6250	4/25	0	0.0	0.0	0.0	0.6*	5
Willow Flat	11G4	6100	4/28	0	0.0	0.0	0.0	2.7*	5
OGDEN RIVER									
Beaver Crk-Skunk Crk.	11H14	7150	4/27	0	0.0	T	0.0	3.8*	9
Ben Lomond(lower)	11H9	5850	4/27	0	0.0	7.9	0.0	4.0*	7
Ben Lomond Peak	11H8	8000	4/27	49	19.6	30.1	17.3	30.2*	10
Dry Bread Pond	11H13	8230	4/26	18	6.5	9.4	9.2	13.9*	10
Monte Cristo R.S. x	11H12	8960	4/26	41	15.4	16.0	20.8	25.5*	10
Mt. Ogden	11H10	8600	4/28	48	21.4	25.3	21.1	28.3*	10
Sagebrush Flat	11H15	6300	4/26	0	0.0	0.0	0.0	0.0*	6
Snow Basin	11H11	6420	4/28	0	0.0	3.5	0.0	4.7*	7

x - Adjacent Drainage

* - Average for period of record.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
WEBER RIVER									
Beaver Creek R.S.	11J24	7500	4/27	0	0.0	0.0	0.0	1.0*	10
Chalk Creek #1	11J1	9100	4/26	49	17.2	17.4	22.6	23.9*	10
Chalk Creek #2	11J2	8000	4/26	28	9.3	6.5	10.7	11.1*	10
Chalk Creek #3	11J3	7500	4/26	0	0.0	1.4	0.0	1.4*	9
Lamb's Canyon x	11J14	6600	4/29	0	0.0	2.2	4.0	6.1*	10
Parley's Canyon Smt.	11J15	7500	4/28	16	5.9	4.9	5.6	10.3*	10
Redden Mine(lower)	11J6	8500	4/28	23	7.9	9.3	12.8	15.2*	10
Redden Mine(upper)	11J5	9000	4/28	26	9.4	9.8	15.2	17.2*	10
Silver Lake x	11J16	8725	4/29	39	14.9	17.4	19.2	25.1*	10
Smith & Morehouse	11J4	7600	4/28	Trace	Trace	1.4	T	5.4*	10
Trial Lake x	10J8	9800	4/27	50	16.3	21.0	24.6	29.5*	13
PROVO RIVER & UTAH LAKE									
Camp Altamont	11J20	7300	4/27	0	0.0	0.4	0.0	6.6*	8
Clear Creek Ridge #1	11K21	9200	4/26	31	9.0	9.8	9.2	15.7*	6
Clear Creek Ridge #2	11K22	8000	4/26	14	3.8	3.2	1.1	8.1*	6
Clear Creek Ridge #3	11K23	6600	4/26	0	0.0	0.0	0.0	0.2*	6
Daniels-Strawberry Smt.	11J23	8000	4/27	0	0.0	0.9	4.8	7.1*	9
Dutchman R.S.	11J17	7500	4/27	0	0.0	1.1	1.1	8.2*	6
Hobble Creek Summit	11J22	7300	4/24	6	1.8	1.0	0.7	4.4*	6
Packard Canyon	11J31	6400	4/24	0	0.0	T	0.0	- -	4
Payson R.S.	11K1	8050	4/24	24	7.8	7.8	4.4	11.3*	7
Rock Bridge	11K2	6750	4/24	10	2.9	0.0	0.0	4.8*	6
Soapstone R.S.	11J25	7800	4/27	Trace	Trace	0.0	0.0	4.3*	11
Timpanogos Divide	11J21	8140	4/27	19	6.2	10.2	8.1	18.7	20
Trial Lake	10J8	9800	4/27	50	16.3	21.0	24.6	29.5*	13
JORDAN RIVER & GREAT SALT LAKE									
Bevan's Cabin	12J2	6450	4/28	3	1.2	0.0	0.0	1.8*	5
Farmington Canyon(lower)	11J12	6950	4/28	39	15.6	16.8	- -	19.7*	9
Farmington Canyon(upper)	11J11	8000	4/28	53	19.9	22.5	- -	30.0*	9
Lamb's Canyon	11J14	6600	4/29	0	0.0	2.2	4.0	6.1*	10
Middle Canyon	12J3	7000	4/27	13	4.9	0.8	1.2	5.9*	7
Mill D. South Fork	11J10	7400	4/29	17	4.5	4.3	8.4	12.0*	9
Parley's Canyon Smt. x	11J15	7500	4/28	16	5.9	4.9	5.6	10.3*	10
Rocky Basin-Settlmt.Cyn.	12J1	8900	4/28	49	20.6	23.4	17.0	22.9*	7
Silver Lake	11J16	8725	4/29	39	14.9	17.4	19.2	25.1*	10

x - Adjacent Drainage

* - Average for period of record.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content: (In)	Past Record Water Content(In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
UPPER SEVIER RIVER (South of Richfield, Utah)									
Big Flat x	12L7	10000	4/25	52	16.8	13.7	9.2	20.0*	9
Box Creek	12L4	9800	4/24	27	8.9	4.1	4.0	10.7*	5
Castle Valley	12M13	9700	4/28	7	2.6	1.3	0.0	6.9*	5
Cedar Breaks	12M1	10390	4/26	43	15.6	4.1	4.7	16.5*	9
Duck Creek R.S.	12M4	8560	4/27	0	0.0	1.7	0.0	4.9*	10
Fish Lake	11L3	8700	4/21	0	0.0	0.0	0.0	3.7*	5
Harris Flat R.S.	12M5	7700	4/27	0	0.0	1.1	0.0	0.5*	9
Kimberly Mine	12L6	8900	4/25	37	12.1	7.0	3.6	13.4*	5
Midway Valley	12M2	9800	4/26	43	16.8	11.6	9.2	19.0*	7
Panguitch Lake	12M7	8200	4/28	0	0.0	T	0.0	T *	8
Squaw Springs	12L5	9300	4/24	4	2.5 a	0.0	0.0	3.3*	5
Widtsoe-Escalante Smt.	11M1	9500	4/26	12	4.8	0.0	0.0	1.8*	8
Widtsoe-Escalante #2	11M2	9500	4/26	28	10.1	1.9	0.0	4.1*	8
Widtsoe-Escalante #3	11M3	9500	4/26	37	13.0	2.4	0.0	- -	2
LOWER SEVIER RIVER (Including San Pitch River)									
Beaver Dams	11K13	8000	4/26	20	8.2	1.5	1.1	4.9*	8
Farnsworth Lake	11L1	9900	4/25	54	18.6	16.9	10.5	18.4*	8
G.B.R.C. Headquarters	11K11	8700	4/28	36	14.5	8.2	8.9	14.0*	9
G.B.R.C. Meadows	11K10	10000	4/28	55	21.0	22.5	19.9	28.5*	9
Gooseberry R.S.	11L2	8400	4/25	25	8.6	3.6	0.0	6.3*	8
Gooseberry Reservoir	11K4	8700	4/27	32	10.3	12.7	11.4	16.0*	13
Mammoth R.S.-Cottonwd.Crk	11K3	8800	4/27	32	10.2	13.1	11.0	- -	4
Middle Fork	11K34	9600		No Report		NR	18.8	- -	4
Mt. Baldy R.S.	11K12	9500	4/26	57	20.7	19.7	16.5	22.7*	8
Pine Creek	12L1	8700	4/27	29	10.8	3.3	0.2	- -	4
Thistle Flat	11K35	8500		No Report		NR	7.0	- -	4
BEAVER RIVER									
Big Flat	12L7	10000	4/25	52	16.8	13.7	9.2	20.0*	9
Merchant's Valley	12L9	8200	4/25	Trace	Trace	0.0	0.0	3.9*	9
Otter Lake	12L8	9300	4/25	24	8.2	1.3	6.4	13.7*	9
PAROWAN CREEK									
Ed Ward Flat	12M12	8300	4/24	Trace	Trace	0.0	0.0	1.6*	6
Yankee Reservoir	12M11	8700	4/24	21	6.4	0.0	0.0	5.0*	6
COAL CREEK									
Cedar Breaks	12M1	10390	4/26	43	15.6	4.1	4.7	16.5*	9
Midway Valley x	12M2	9800	4/26	43	16.8	11.6	9.2	19.0*	7
Urie Flat	12M10	8450	4/26	0	0.0	1.0	0.0	1.1*	6
Webster Flat	12M3	9200	4/26	13	3.6	1.6	0.7	9.8*	9

x - Adjacent Drainage

* - Average for period of record.

a - Partly estimated, includes ice layer on ground.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COVER	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
COLORADO RIVER DRAINAGE									
COLORADO RIVER DRAINAGES IN UTAH									
BRUSH CREEK									
King's Cabin(lower)	9J2	8600	4/24	12	4.2	1.0	3.3	4.1*	9
King's Cabin(upper)	9J1	8730	4/24	19	4.5	1.7	6.1	6.0*	9
DUCHESNE RIVER									
Daniels-Strawberry Smt. x	11J23	8000	4/27	0	0.0	0.9	4.8	7.1*	9
Indian Canyon	10K1	9100	4/25	17	4.7	3.3	NR	7.5*	5
Julius Park	9J6	9800	4/26	26	11.4	4.0	7.9	- -	3
Lakefork Mountain	10J10	10500	4/27	20	6.8	5.2	8.9	10.9*	9
Lakefork Mountain #2	10J11	8900	4/27	0	0.0	1.8	0.0	2.0*	7
Lakefork Mountain #3	10J12	8100	4/27	0	0.0	0.6	0.0	0.3*	7
Mosby Mountain	9J5	9500	4/26	24	7.1	2.5	5.1	8.1*	7
Paradise Park	9J3	10100	4/26	37	10.7	5.4	8.4	10.8*	7
Soapstone R.S. x	11J25	7800	4/27	Trace	Trace	0.0	0.0	4.3*	11
Trial Lake x	10J8	9800	4/27	50	16.3	21.0	24.6	29.5*	13
White River #1 x	10K2	8600	4/26	11	3.4	1.2	2.5	8.7*	5
PRICE RIVER									
Corral	10K5	8200		No Report		NR	- -	- -	1
Gooseberry Reservoir	11K4	8700	4/27	32	10.3	12.7	11.4	16.0*	13
Grassy Trail Crk-L.Fork	10K3	7970		No Report		NR	- -	- -	2
Indian Canyon x	10K1	9100	4/25	17	4.7	3.3	NR	7.5*	5
Mammoth R.S.-Cottonwd.Ck	11K3	8800	4/27	32	10.2	13.1	11.0	- -	4
Mud Creek #2	11K33	8300	4/26	8	2.1	2.0	3.4	- -	4
Timberline	10K6	9100		No Report		NR	- -	- -	
White River #1	10K2	8600	4/26	11	3.4	1.2	2.5	8.7	5
White River #2	11K24	7600	4/26	0	0.0	0.2	0.0	1.2*	5
White River #3	11K25	7400	4/26	0	0.0	T	0.0	0.4*	5
SAN RAFAEL RIVER									
Buck Flat	11K31	9400	4/24	34	11.6	11.4	8.4	16.6*	5
Gooseberry Reservoir x	11K4	8700	4/27	32	10.3	12.7	11.4	16.0*	13
Red Pine Ridge	11K28	9400	4/25	31	10.2	9.7	7.6	13.9*	6
Rush Pond	11K38	9800	4/24	28	8.9	6.4	5.4	11.0*	6
Seely Creek R.S.	11K9	10000	4/28	35	13.4	14.2	8.4	16.7*	8
Stuart R.S.	11K27	7950	4/26	0	0.0	0.1	0.0	2.1*	6
Switchback	11K26	8600	4/26	23	6.7	5.8	7.6	12.6*	6
Upper Joe's Valley	11K29	8800	4/25	13	3.3	1.3	0.0	- -	4
Wrigley Creek	11K32	9000	4/24	20	5.9	3.8	0.8	5.4*	6

x - Adjacent Drainage * - Average for period of record.

SNOW SURVEYS ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
FREMONT RIVER									
Black's Flat-U.M.Crk.	11L4	9250	4/21	23	7.3	5.5	3.0	8.9*	5
Farnsworth Lake x	11L1	9900	4/25	54	18.6	16.9	10.5	18.4*	8
Fish Lake	11L3	8700	4/21	0	0.0	0.0	0.0	3.7*	5
Johnson Valley	11L6	8850	4/21	0	0.0	0.0	0.0	3.4*	5
ESCALANTE RIVER									
Widtsoe-Escalante Smt.	11M1	9500	4/26	12	4.8	0.0	0.0	1.8*	8
Widtsoe-Escalante #2	11M2	9500	4/26	28	10.1	1.8	0.0	4.1*	8
Widtsoe-Escalante #3	11M3	9500	4/26	37	13.0	2.4	0.0	- -	2
VIRGIN RIVER									
Cedar Breaks x	12M1	10390	4/26	43	15.6	4.1	4.7	16.5*	9
Duck Creek R.S.	12M4	8560	4/27	0	0.0	1.7	0.0	4.9*	10
Harris Flat R.S.	12M5	7700	4/27	0	0.0	1.1	0.0	0.5*	9
Midway Valley x	12M2	9800	4/26	43	16.8	11.6	9.2	19.0*	7
Webster Flat	12M3	9200	4/26	13	3.6	1.6	0.7	9.8*	9
SOUTHEASTERN UTAH DRAINAGES									
Buckboard Flat	9M1	9000	4/20	22	7.2	4.5	0.0	- -	3
LaSal Mountain(upper)	9L2	9400	4/21	38	13.4	12.1	9.0	- -	2
UPPER GREEN RIVER (Above Flaming Gorge Reservoir)									
Big Park	10G11	8700	4/27	39	12.3	14.3	18.0	20.7*	9
Black's Fork Jnct.	10J22	8925	4/24	19	7.1	New Course			0
Dutch Joe R.S.	9G5	8700	4/27	11	4.8	0.0	5.2	4.3	21
East Fk.Black's Fork G.S.	10J21	9300	4/24	22	7.0	New Course			0
East Rim Divide	10F17	7950	4/25	16	5.8	2.9	9.8	10.1*	15
Grennier Meadows x	8G4	9000	4/23	33	7.1	6.8	6.2	15.5	24
Gros Ventre Summit	10F19	8750	4/30	32	10.4	6.7	11.9	11.2*	5
Hewinta R.S.	10J4	9500	4/24	27	9.8	- -	- -	- -	0
Hickerson Park	9J8	9100	4/25	19	6.8	New Course			0
Kelly R.S.	10G12	8200	4/27	30	10.3	12.8	14.2	16.3*	5
Kendall R.S.	10F15	7900	4/29	9	3.6	0.0	5.3	7.3	22
Loomis Park	10F16	8500	4/25	24	9.6	6.0	13.2	13.5	22
Mulligan Park	9G1	8900	4/26	18	7.0	0.0	6.5	8.0	25
Piney-LaBarge	10G10	8820	4/29	23	8.4	9.3	16.0	15.4	24
Poison Meadows x	10G6	8500	4/29	55	20.5	23.9	28.7	31.7*	5
Snyder Basin R.S. #2	10G13	8040	4/29	13	4.8	5.6	11.2	11.3*	6
Soda Lake	10G14	8300	4/30	23	8.8	8.3	15.3	15.7*	6
South Pass	8G3	9000	4/23	37	10.0	4.3	7.4	16.3	21
Spirit Lake	9J7	10300	4/25	49	15.6	New Course			0
Triple Peaks	10G15	8500	4/30	40	16.6	16.8	26.9	27.8*	5

x - Adjacent Drainage

* - Average for period of record.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content(In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
YAMPA RIVER									
Bear River	7J3	9100	4/28	24	8.3	1.2	10.8	8.9*	5
Clark	6J13	7800	4/24	12	4.0	0.0	4.7	4.5*	5
Columbine Lodge x	6J3	9300	4/27	54	20.0	13.7	28.1	21.3	25
Dry Lake	6J1	8200	4/27	42	15.4	9.6	20.7	15.2	25
Elk River	6J4	8700	4/26	40	14.3	8.8	16.8	12.8	25
Lynx Pass x	6J6	9100	4/26	32	10.5	2.8	10.0	7.5	25
Old Battle x	6H10	9800	4/28	76	27.4	27.0	29.5	34.1	25
Rabbit Ears	6J9	9550	4/27	73	25.4	28.0	- -	28.9*	8
Yampa View	6J10	8500	4/27	29	9.9	6.1	15.1	10.2*	10
WHITE RIVER									
Burro Mountain	7K2	9000	4/25	45	15.5	17.0	17.0	14.6	25
Rio Blanco	7J1	8500	4/26	34	12.6	1.0	9.7	10.2	25
UPPER COLORADO RIVER (Above Glenwood Springs, Colo.)									
Arrow	5K6	9900	4/27	37	10.8	8.2	12.2	7.8	23
Berthoud Pass	5K3	9700	4/27	49	15.5	13.1	18.1	14.3	25
Berthoud Summit	5K14	11300	5/1	60	19.8	21.7	23.6	22.5*	10
Blue River	6K21	10500	4/27	21	5.7	2.3	10.9	- -	4
Cameron Pass x	5J1	10300	4/29	78	27.5	26.0	29.7	25.6	25
Cooper Hill x	6K23	10800	4/28	41	10.4	16.3	- -	- -	2
Fiddlers Gulch	6K5	11000	4/27	46	14.6	15.3	19.5	15.9	23
Fremont Pass	6K8	11400	4/26	51	16.0	19.2	17.7	18.6	25
Frisco	6K13	9300	4/26	15	5.2	0.9	7.0	5.8*	10
Glen-Mar Ranch	6K20	8850	4/26	26	7.0	0.0	6.6	5.1*	14
Gore Pass	6J11	8900	4/26	30	8.5	1.9	9.9	8.1*	10
Granby	5J16	8700	4/26	10	3.6	0.0	5.0	3.2*	12
Grand Lake	5J19	8600	4/26	23	4.5	1.3	3.1	3.5*	12
Grizzly Peak	5K9	11250	4/26	55	19.2	18.2	21.2	20.1	19
Hoosier Pass x	6K1	11400	4/27	42	12.3	11.4	15.8	11.9	25
Jones Pass	5K21	10400	4/27	56	17.4	13.5	17.0	- -	4
Kokomo	6K18	10600	4/26	38	13.7	14.0	11.5	11.6*	9
Lake Irene	5J10	10600	4/27	68	18.1	23.0	23.4	24.3	23
Lapland	5K7	9300	4/27	31	7.9	3.3	10.3	9.1	23
Lulu	5J7	10200	4/30	52	16.8	18.2	19.1	19.0	21
Lynx Pass	6J6	9100	4/26	32	10.5	2.8	10.0	7.5	25
Middle Fk.Camp Ground	5K4	9000	4/26	32	9.7	2.2	8.2	6.0	25
Milner Pass	5J24	10100	4/27	44	11.5	10.2	12.4	11.0*	10
Monarch Lake	5J14	8500	4/27	18	6.1	4.9	6.5	5.9*	13
N.Inlet Grand Lake	5J9	9000	4/26	27	5.4	3.3	6.7	7.0	23
Pando	6K19	9500	4/27	23	8.9	5.0	10.5	8.7*	9

x - Adjacent Drainage

* - Average for period of record.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
UPPER COLORADO RIVER - Continued									
Phantom Valley	5J4	9300	4/27	28	6.3	2.8	5.5	6.6	25
Ranch Creek	5K18	9400	4/27	36	9.8	6.8	10.5	- -	4
Shrine Pass	6K9	10500	4/27	53	19.0	20.5	21.5	18.7	19
Snake River	5K16	9700	4/26	13	3.8	0.0	6.1	5.8*	10
Summit Ranch	6K14	10000	4/27	24	6.7	0.9	6.5	6.5*	10
Tennessee Pass x	6K2	10200	4/28	26	8.7	6.2	11.9	6.8	25
Vail Pass	6K15	10000	4/27	44	13.5	10.8	15.7	16.9*	9
Vasquez Creek	5K19	9600	4/28	37	10.7	10.9	15.6	- -	4
Willow Creek Pass	6J5	9500	4/26	42	13.2	7.6	9.9	11.5	23
ROARING FORK									
Aspen	6K22	9700	4/27	46	15.6	16.3	- -	- -	2
Ind. Pass Tunnel	6K4	10200	4/28	54	20.7	15.4	18.3	17.8	25
Ivanhoe	6K10	10400	4/24	55	14.4	- -	- -	18.8*	14
Lift	7K10	11250	4/27	62	19.1	10.8	- -	- -	3
Nast	6K6	8700	4/29	7	2.1	1.4	1.6	1.6	24
North Lost Trail	7K1	9200	4/26	33	11.7	0.4	9.7	8.8	25
PLATEAU CREEK									
Mesa Lakes	7K4	10000	4/26	50	18.9	16.4	14.1	14.4	24
Trickle Divide	7K5	10000	4/28	74	27.7	27.0	21.0	29.4	21
GUNNISON RIVER									
Alexander Lake	7K3	10000	4/29	57	21.9	22.5	14.1	22.7	24
Blue Mesa	7L2	8700	4/28	8	3.0	0.4	- -	- -	1
Cochetopa Pass x	6L6	10000	4/26	18	6.6	0.0	0.0	2.5*	12
Crested Butte	6L1	9000	4/27	21	10.0	0.0	8.8	7.9	25
Ironton Park	7M6	9800	4/27	36	14.3	8.7	11.6	7.0	23
Lake City	7M8	10300	4/29	11	3.8	3.4	3.2	3.5*	13
McClure Pass	7K8	9500	4/26	31	9.3	4.2	9.8	10.1*	11
Park Cone	6L2	9700	4/27	29	7.9	7.9	6.1	7.4	24
Park Reservoir	7K6	9500	4/28	66	25.8	23.7	18.5	25.5	20
Porphyry Creek	6L3	10700	4/27	57	17.9	15.6	17.7	16.7	21
Red Mountain Pass	7M15	11000	4/28	85	32.5	33.5	30.7	31.7*	10
Trickle Divide x	7K5	10000	4/28	74	27.7	27.0	21.0	29.4	21
DOLORES RIVER									
Lizard Head	7M3	10300	4/29	35	15.6	14.3	11.8	12.9	24
Rico	7M1	8700	4/27	0	0.0	0.0	0.0	1.3	24
Telluride x	7M2	8600	4/27	7	3.0	0.0	0.0	1.2	25
Trout Lake	7M9	9700	4/27	32	11.6	12.2	9.3	9.4*	12

x - Adjacent Drainage

* - Average for period of record.

SNOW SURVEYS - ABOUT MAY 1, 1961

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENTS 1961 Date of Survey	Snow Depth (In)	Water Content (In)	Past Record Water Content (In) 1960	1959	1943-57 Av.	Prior Yrs. of Record
SAN JUAN RIVER									
Cascade	7M5	8850	4/28	13	4.9	3.0	0.0	2.9	25
Howardville	7M13	9800	4/28	27	8.8	9.9	6.2	7.2*	10
Ironton Park x	7M6	9800	4/27	36	14.3	8.7	11.6	7.0	23
Mineral Creek	7M14	10300	4/28	36	13.3	12.1	11.4	12.2*	10
Molas Lake	7M12	10500	4/28	21	7.6	5.0	1.5	7.9*	10
Red Mountain Pass x	7M15	11000	4/28	85	32.5	33.5	30.7	31.7*	10
Silverton Sub-Station	7M4	9400	4/27	9	0.9	0.0	0.0	0.5	23
Spud Mountain	7M11	10700	4/28	56	21.5	20.8	13.4	24.4*	10
Upper San Juan	6M3	10000	4/27	65	26.9	19.8	18.3	30.3	25
Wolf Creek Pass x	6M1	10000	4/27	51	21.2	20.1	15.9	25.4	25
Wolf Creek Summit	6M17	11000	4/27	79	27.8	34.5	19.4	30.5*	10

x - Adjacent Drainage

* - Average for period of record.

SALT LAKE CITY, UTAH
MARCH 6, 1961

Streamflow for 1961 will be near a minimum of record unless precipitation during the spring months is far above normal. The material in this packet will help you to get maximum production from the limited water supply expected this year.

The packet contains (1) water supply forecast for the drainage basin, (2) suggestions on irrigation practices, (3) suggestions as to crops that will meet your needs and use the least amount of water.

The field offices of the Soil Conservation Districts, the Soil Conservation Service, County Agents, Utah State Engineer, and ASC County Committees have information that will help you with your water and crop problems. You are encouraged to ask them to help you.

J. A. Libby

J. A. LIBBY
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE

FIRST CL

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
222 S. W. TEMPLE
SALT LAKE CITY, UTAH

OFFICIAL BUSINESS

Special

WATER SUPPLY OUTLOOK

for Utah

SPRING, 1961

For the third year mountain snow storage hit a record or near record low for many watersheds of the state. The water situation is critical. It thus becomes imperative that every Utah farmer and rancher, and every local irrigation and water distributing authority cooperate in an endeavor to obtain the maximum beneficial use of the short water supply.

GEORGE D. CLYDE
GOVERNOR, STATE OF UTAH

vation of Water begins with the Snow Survey"