

Division of Publications
Utah State Agricultural Experiment Station
Logan, Utah

Mimeograph Sheet No. 226
April 1, 1940

R. A. Work

U T A H C O O P E R A T I V E S N O W S U R V E Y S

and

W A T E R - S U P P L Y F O R E C A S T S

1940

Cooperators

Utah State Agricultural Experiment Station

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United States Weather Bureau

United States Forest Service

Division of Irrigation
of
Soil Conservation Service

by

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WATER SUPPLY FORECAST FOR UTAH, 1940

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During the period from March 26 to April 1, snow surveys were completed on all of the Utah Cooperative snow courses. The water content in snow storage at this time may be taken as indicative of the April-September and July-September runoff with, of course, later modification of estimates in accordance with subsequent storms and temperature conditions.

This report presents:

1. Forecasts of April-September and July-September runoff for the streams on whose drainage areas snow surveys have been conducted for a sufficient number of years to make it possible to forecast streamflow quantitatively.
2. A brief statement of conditions on other watersheds of the state, based on available reports.
3. A water forecast summary by drainage basins.
4. A comparison of runoff from principal Utah streams.
5. Storage in reservoirs as of April 1.
6. Results of annual snow surveys grouped according to stream basins.

Bear River Above Bear Lake and the Bear Lake Drainage.

In 1939 the April-September yield of the Bear River at Stewart Dam was 93,480 acre feet and the July-September yield 9,680 acre feet. The yield of the streams tributary to Bear Lake for the same periods was 38,930 and 6,220 acre feet, respectively. The rise of the lake level in 1939 was from 5914.6 feet on April 1 to a maximum of 5915.8 feet on June 1, from which it fell to 5912.5 feet on October 1. By March 1, 1940, the elevation of the lake surface was 5912.51 feet which represents approximately 650,000 acre feet of available water.

This is the equivalent of nearly two years irrigation supply for the lands served from this source. The water users having rights to Bear Lake storage will, therefore, not suffer a water shortage during 1940.

The snow surveys on the head waters of the Bear River and near Bear Lake show a high cover only 83 per cent of that in 1939 and no low cover. The snow cover and ground conditions indicate that the April-September yield of Bear River at Stewart Dam in 1940 will be approximately 85,000 acre feet and the yield of

the Bear Lake tributary streams for the same period approximately 25,000 acre feet. The level of Bear Lake will probably rise to 5913.3 feet maximum and fall by the end of the irrigation season to 5909.5 feet. Due to the unusually dry conditions of the soil the natural flow users will probably not receive more than 75 per cent as much water as was available in 1939.

Logan River Drainage

The April-September yield of the Logan River in 1939 was 92,530 acre feet with 28,700 acre feet running off during the July-September period. The river was discharging on September 1, 1939, 115 c. f. s. as compared to a predicted flow of 130 c. f. s. The maximum discharge occurred on May 5 in the amount of 600 c. f. s.

Although, in general the high snow cover on the Logan River watershed is slightly greater than in 1939, the absence of low snow and the dry condition of the ground under the high cover which was brought about by deficient precipitation in the fall of 1939, will materially reduce the April-September runoff during the season of 1940. The July-September runoff, however, will probably be near that in 1939 if the spring and summer precipitation is normal. The snow cover below 8,000 feet elevation on the Logan River watershed is approximately 82 per cent of that in 1939 while above 8,000 feet it is 107 per cent of that in 1939. The unusually dry fall of 1939 and the absence of low snow will materially reduce the April-September yield of the river.

Assuming a 2 inch reduction in water content of the snow cover for priming the soil and a normal precipitation during April, May and June, the Logan River should yield this year 80,000 acre feet during the April-September period and 29,000 acre feet during the July-September period or 87 and 100 per cent of the 1939 flow, respectively. There will be less early spring water but about the same late season water as was available on the Logan last year. The maximum discharge will probably not exceed 600 c. f. s. with a minimum flow of 110 c. f. s. at the end of September.

Cub River Drainage.

The snow cover at Franklin Basin is representative of the conditions on the Cub River Watershed. This year that cover is 105 per cent of 1939 and 61 per cent of the long time normal. The deficiency of low snow, however, will materially reduce the yield. The soil under the snow is dry and to date there has been little rise in streamflow. There will be little spring high water but the late season flow should compare favorably with that in 1939.

Maple, High, Summit, and Providence Creeks.

These drainages are all on the west side of the Bear River Range and are relatively short and steep. The low snow is entirely gone from these areas, but at 7,000 feet the cover is better than it was in 1939 by 15 per cent. The dry condition of the watersheds under the snow will more than offset the increased snow cover. The late season flow from these streams can be expected to be similar to that in 1939, but there will be less spring high water.

Blacksmith Fork Drainage Area.

The snow cover on the Blacksmith Fork drainage this year is much lighter than in 1939 particularly at the lower elevations. Pre-April melting has taken off all the snow up to 7,000 feet elevation, and the south slopes are bare above

that elevation with little resulting runoff. The snow cover at Mount Logan, Monte Cristo, Garden City Summit, and Blake Ranger Station averages only 90 per cent of that in 1939. The April-September yield of the Blacksmith Fork River in 1939 was 33,750 acre feet with 11,940 acre feet running off during July-September. Allowing for some loss in priming the soil the April-September yield this year should be approximately 30,000 acre feet and the July-September yield 10,000 acre feet. The late season flow may be as low as 50 c. f. s.

Little Bear River Drainage.

The Little Bear River has an average elevation lower than the Blacksmith Fork. The high cover averages 90 per cent of that in 1939, but the low cover is very deficient. There will be little high water in this stream. The late season flow will be slightly less than in 1939. The Hyrum Reservoir will be full by April 6. The early season irrigators will divert all of the natural flow within one week so there will be little waste over the Hyrum spillway.

Ogden River Drainage.

The April-September yield of the Ogden River above Huntsville in 1939 was 36,400 acre feet of which 6,240 feet ran off during the July-September period. The snow cover at Geertsen Creek, Monte Cristo and Wheeler Basin snow courses this year averages only 75 per cent of that in 1939. The low snow is all gone and the yield from the high snow will be reduced due to dry soil under the snow. The South Fork of the Ogden above Huntsville will yield during April-September of 1940 not to exceed 29,000 acre feet of which probably 5,000 acre feet will runoff during July-September. On April 1, the Pine View Reservoir contained 17,955 acre feet out of a 41,000 acre foot capacity. Early season demands for irrigation will limit the water available for storage and unless abnormally high temperatures prevail during melting season the Pine View Reservoir will not fill to more than 35,000 acre feet this year.

Weber River Drainage.

The major portion of the water in Weber River comes from four main tributaries: Chalk Creek, Lost Creek, East Canyon and the main Weber above Oakley. Snow courses are located on each of these tributaries. At 7,000 feet elevation on Chalk Creek there was no snow on April 1 this year. On the head waters of Lost Creek there was 14.4 inches of water in the snow. No records are available on this watershed prior to this year. The snow cover on the higher areas in East Canyon are similar to 1939, but the low snow is all gone. The East Canyon Reservoir contained on April 1, 21,000 out of a capacity of 28,000 acre feet. This reservoir will completely fill.

The Weber River above Oakley last year yielded 83,680 acre feet of which 14,270 acre feet runoff during the July-September period. This was considerably less than was indicated by the snow cover on April 1, 1939. The snow cover on the upper Weber River this year averages 95 per cent of that in 1939. This year, however, the low snow cover is gone and the soil is dry under the snow cover on the higher elevations. The Weber River will yield during the April-September period this year not to exceed 80,000 acre feet of which probably 12,000 acre feet will runoff during the July-September period.

The Echo reservoir contained on April 1, 1940, a total of 19,000 acre feet. Its capacity is 74,000 acre feet. Unless unusually high temperatures prevail and

unless heavy precipitation occurs during April and May this reservoir will not fill this year.

Salt Lake Watersheds.

These watersheds include City, Emigration, Parleys, Big Cottonwood and Little Cottonwood creeks. The snow cover on these areas is represented by snow courses at Parley's Canyon Summit, Silver Lake, and Mill D South Fork. The average water content of the snow cover on these watersheds this year is 96 per cent of that in 1939. The April-September yield of Big Cottonwood Creek in 1939 was 27,500 acre feet of which 5,000 acre feet ran off during the July-September period. This year the yield per unit of snow cover will be less than last year because of the dry soil under the snow and the absence of low snow. It is estimated that the April-September yield of Big Cottonwood Creek in 1940 will not exceed 25,000 acre feet of which 5,000 acre feet will probably run off during the July-September period.

Provo River and Utah Lake Drainage.

The April-September yield of the Provo River at Provo in 1939 was 101,600 acre feet of which 28,600 acre feet ran off during the July-September period. The snow cover on the headwaters of the Provo River, as indicated by the April 1 surveys, has a water content 89 per cent of that in 1939. The low snow has entirely disappeared and the ground is quite dry under the high cover. Unless abnormally high temperatures prevail during April and May there will be no unusually high spring runoff this year.

The melting this year has been early with the low snow disappearing without an increase in stream discharge. The yield per unit of water in snow storage will be less than in 1939. The probable April-September yield of the Provo River at the forks will not exceed 86,000 acre feet of which approximately 25,000 acre feet will run off during the July-September period.

There is at present 372,000 acre feet of water in Utah Lake. Unless unusually high melting temperatures prevail there will be little runoff from the Provo River available for storage in Utah Lake this year.

There is, however, sufficient water in Utah Lake now to provide a full irrigation water supply during the 1940 season. Rigid conservation should be practiced so that a reserve may be built up in Utah Lake to protect the users against future dry years.

American Fork River Drainage.

The snow storage on the American Fork River watershed is represented by measurements at the Dutchman Ranger Station, South Fork Ranger Station, Camp Altamont, and Timpanogas Divide snow courses. The snow cover at the Dutchman Ranger Station is 78 per cent of that in 1939, while at South Fork there are only a few patches of snow along the course. At Altamont the snow cover is only 83 per cent of that in 1939 and at the Timpanogas Divide 84 per cent. Practically all of the snow cover has disappeared below 7,000 feet elevation and some melting has taken place at the higher elevations. The deficient ground moisture under the high snow cover will reduce the yield from the snow cover, below that indicated by the April 1st water content. It is estimated that with normal precipitation and temperature during this spring no excess high water can be expected

and the seasonal flow from American Fork River will probably not exceed 75 per cent of that in 1939. The discharge of the American Fork River on October 1st of this year should not be appreciably less than that in 1939.

Hobble, Payson, Santaquin Creeks and Spanish Fork River.

The runoff to be expected from these water sheds is indicated by the snow cover at the Hobble Creek Divide, East Portal and the Mammoth Ranger Station. The average content at these three courses is 104 per cent of that in 1939. The low snow cover has, however, entirely disappeared from this area and the ground under the high cover is fairly dry. There will be little, if any, excessive spring high flow from any of these streams. The April-September runoff and the discharge of each of these streams on the first of October should be very nearly equal to that in 1939.

Strawberry Reservoir.

The snow cover on the Strawberry Watershed above the Strawberry Reservoir is slightly greater than that in 1939. The storage in the Strawberry Reservoir on the first of April is only 54,280 acre feet as compared to 88,180 acre feet in 1939. Most of the snow cover in the valley area above the reservoir has melted and the yield from this watershed can not be expected to be as great as in 1939. It is estimated that the inflow into the reservoir from the snow cover during the spring of 1940 will not exceed 85 per cent of that in 1939.

San Pitch Drainage.

The snow cover on the west side of the Wasatch Plateau which drains into the San Pitch River contains approximately 137 per cent as much water as in 1939. The low snow cover in this area is deficient and the soil under the high cover is dry, as a result, little high water from any of these streams can be expected unless unusually high melting temperatures prevail. It is estimated that the seasonal runoff from these tributaries to the San Pitch River will vary from 100 to 110 per cent of that in 1939.

Salina Creek Drainage.

The snow storage on the Salina Creek watershed as measured at the Gooseberry Ranger Station snow course is 94 per cent of that in 1939. Since the snow course was measured about March 24 considerable melting has taken place with little rise in the flow of Salina Creek. By April 1st all of the low snow had disappeared. Little high spring flow can be expected from this watershed and the seasonal yield will probably not exceed 80 per cent of that in 1939.

Clear Creek Drainage.

The snow storage on this watershed is 118 per cent of that in 1939. The snow cover below 7,500 feet has entirely disappeared with no appreciable rise in the flow of Clear Creek. The ground under the high cover is dry and will absorb much of the remaining snow cover. It is estimated that the April-September runoff from this area will not exceed 85 per cent of that in 1939.

Main Sevier River Drainage.

The water in snow storage on the Sevier River above Salina is indicated by snow courses at Widstoc-Escalante Summit, Panguitch Lake, Harris Flat Ranger Station, Duck Creek Ranger Station, Cedar Breaks and Fish Lake, is only 70 per cent of that in 1939. There has been considerable pre-April melting on this watershed. The ground under the high snow cover is dry and the low area is entirely bare. The absence of low snow will preclude any excessive high spring flow on this watershed, and the deficiency of high snow together with the dry soil will materially reduce the runoff available to natural flow users. The natural flow from the Sevier River for the April-September period will probably not exceed 60 per cent of that in 1939. The Sevier River at Kingston is effected by the discharge from the Otter Creek Reservoir. The total April-September flow of the Sevier River at Kingston can not be expected to exceed a total of 25,000 acre feet of which probably 13,000 acre feet will run off during the July-September period.

The Otter Creek Reservoir contained on April 1, 1940, 30,400 acre feet of water out of a capacity of 52,600 acre feet. The East Fork of the Sevier from which the major portion of this storage water comes was practically depleted of snow cover on April 1st, and it is not expected that the maximum storage in the Otter Creek Reservoir this year will exceed 40,000 acre feet.

The Piute Reservoir contained on April 1, 1940, 59,000 acre feet out of a capacity of 90,000 acre feet as compared with 67,000 acre feet on the same date of 1939. The earliness of the season will preclude much of an increase in Piute storage this year.

The Sevier Bridge Reservoir on April 1, 1940, contained 122,820 acre feet as compared with 150,000 acre feet last year. The capacity of the reservoir is 236,000 acre feet. Due to the earliness of the season and the need for early irrigation in the Sevier Valley it is doubtful if the maximum storage in the Sevier Bridge Reservoir exceeds 125,000 acre feet this year.

The Gunnison Reservoir in west Millard County contained on April 1, 1940, 11,000 acre feet of water as compared with 16,500 acre feet last year and a capacity of 20,000 acre feet. The maximum storage in the Gunnison Reservoir will probably not exceed 15,000 acre feet.

The absence of low snow on the Sevier Reservoir watershed eliminates the possibility of unusual high spring flow and the earliness of the season will create a heavy irrigation demand which will consume practically the entire spring flow of this system. The late season flow will probably not exceed 70 per cent of that in 1939 and thus the natural flow users will suffer a severe water shortage. There is sufficient water in the storage reservoirs, however, to carry the storage rights throughout the season.

Fillmore Drainage.

The snow cover on the Fillmore Watersheds this year is considerably heavier than in 1939 being 144 per cent of that year. The low snow, however, has disappeared and the ground is dry under the high cover. No high water can be expected this year on any of the streams draining the west side of the Pavant Range. The seasonal flow of these streams can be expected to be somewhat greater than that in 1939, possibly as much as 110 per cent.

Coal Creek Drainage.

The high snow cover on the Coal Creek Watershed this year contains only 83 per cent of that in 1939. Low snow cover has entirely disappeared up as far as the Woods Ranch and the west face of the Kolob Mountain is practically bare. Considerable pre-April melting has taken place on the high watersheds, but in spite of this the ground under the snow is quite dry and heavy watershed losses from the snow cover can be expected. The April-September yield of Coal Creek in 1939 was 11,800 acre feet of which 2,200 acre feet ran off during the July-September period. It is estimated that the April-September yield in 1940 from Coal Creek will not exceed 9,000 acre feet of which 3,000 acre feet may be expected to run off during the July-September period.

Beaver River Drainage.

The snow cover on the Beaver River Watershed this year is approximately 170 per cent of that in 1939. Although the cover below the 7,500 feet has entirely disappeared and the ground is dry under the high cover, it is estimated that the April-September yield of the Beaver River during 1940 will be approximately 24,000 acre feet as compared to 16,600 acre feet in 1939. Of this 24,000 acre feet approximately 6,000 acre feet can be expected to run off during the July-September period. The absence of low snow, however, will eliminate any prospects for spring high water unless unusually high melting temperatures prevail during April and May.

Virgin River Watershed.

The snow cover on the watershed of the Virgin River is only 76 per cent of that in 1939. The low snow cover has entirely disappeared and some melting has taken place on the higher areas. The dryness of the soil under the high cover will cause large watershed losses this year. The main fork of the Virgin River can be expected to yield not more than 75 per cent of that in 1939, while the flow from the Santa Clara Creek will probably be as much as 95 per cent of that in 1939. The yield of the Virgin River at Virgin for the April-September period will probably not exceed 52,000 acre feet of which approximately 25,000 may be expected to run off during the July-September period.

Salt Creek at Nephi

There are no snow courses on this watershed, but the Mammoth Ranger Station which is located about 15 miles to the east gives a fair index of the probable water supply. An estimate based on this snow course indicates that the runoff in 1940 will be approximately equal to that in 1939. There will, however, be no high spring flow unless unusual melting temperatures prevail during April and May.

Price River Drainage.

The Price River at Helper is affected by the releases from the Scofield Reservoir, as well as by the snow cover on the upper Price River watersheds. On April 1, 1939, the snow courses at Staley's Ranch, 7,600 feet elevation, Dry Valley Divide, 7,000 feet elevation and Clear Creek, 8,100 feet elevation were bare as was the entire valley floor around the Scofield Reservoir. This year on April 1st the water content of the snow cover was 3.2, 8.2, 4.6 inches, respectively. The

high snow cover as indicated by the measurements at the Mammoth Ranger Station, the Gooseberry Reservoir Site and the Huntington Horseshoe contains on an average of 23.2 inches of snow which is 127 per cent of that in 1939. The storage in the Scofield Reservoir on April 1, 1940, was 6,000 acre feet as compared with 12,500 acre feet on the same day of 1939. The low cover this year, however, will more than compensate for this smaller storage, and the high cover should yield approximately the same water as in 1939. It is estimated that the maximum storage in the Scofield Reservoir will not exceed 25,000 acre feet in 1940. The discharge from the Scofield Reservoir during the summer of 1940 should possibly equal that in 1939, and the yield of the Price River at Helper should, therefore, be indicated by the snow cover on the head waters of the Price River and the Indian Canyon Summit. The snow cover on these courses on April 1, 1940, was 115 per cent of that on the same date of 1939. The dryness of the watershed under the snow cover, however, will materially reduce the yield this year. It is estimated that the April-September yield of the Price River at Helper this year will not exceed 47,000 acre feet of which approximately 14,000 acre feet will run off during the July-September period.

Ashley Creek.

The April-September yield of Ashley Creek during 1939 was 45,000 acre feet of which 12,500 acre feet ran off during the July-September period. The snow cover as measured at Paradise Park, Mosby Mountain and King's Cabin indicates a potential water supply only 54 per cent of that in 1939. This potential water supply must be reduced to compensate for deficient ground moisture and low snow cover. It is estimated that the April-September yield of Ashley Creek in 1940 will not exceed 20,000 acre feet of which probably not more than 9,000 acre feet will run off during the July-September period. This is by far the worst year of record, exceeding even the dry year of 1934. No high water can be expected.

Uinta River and Whiterocks Creek.

Water in snow storage on these watersheds is considerably less than in 1939, averaging only 52 per cent of that year. The low snow has entirely disappeared and considerable pre-April melting has taken place on the higher areas. The April-September yield of Whiterocks Creek at Whiterocks for 1939 was 50,000 acre feet of which 17,900 acre feet ran off during the July-September period. In 1940 the yield for the same periods will probably not exceed 25,000 and 10,000 acre feet, respectively.

The yield of the Uinta River at Neola during the April-September period of 1939 was 77,900 acre feet of which 33,300 acre feet ran off during the July-September period. In 1940 the yields for the same respective periods can not be expected to exceed 40,000 and 25,000 acre feet.

Lake Fork Drainage.

The snow cover on the high areas at the head of Lake Fork this year is 80 per cent of that in 1939. The low snow is all gone and watershed losses due to dry ground under snow will be heavy. There will be no high spring runoff and the seasonal yield will probably not exceed 70 per cent of that in 1939.

Duchesne River Drainage.

This stream heads near the west end of the Uintah mountains. There are no snow courses directly on this area, but the Lost Lake snow course on the Provo River is fairly representative of the conditions on the headwaters of the Duchesne. The snow cover at Lost Lake this year is 94 per cent of that in 1939. The absence of low snow and the dry soil under the high snow will reduce the yield from this stream. In 1940 the April-September yield will probably not exceed 80 per cent of that in 1939 or 60,000 acre feet during the April-September period of which probably 19,000 acre feet will runoff during the July-September period.

North Side of the Uintah Mountains.

The snow cover on the watersheds located on the north side of the Uintah Mountains is represented by snow measurements at the Hewinta, and Hole-in-the-Rock Ranger Stations and at the Beaver Meadows Reservoir. The Beaver Meadows course was located this year and only one years measurements are available. The average cover at the other two stations is only 70 per cent of that in 1939. The low snow has entirely disappeared and the dryness of the soil under the high snow will further reduce the yield from the streams draining the north side of the Uintah Mountains. There will be no high spring flow and the seasonal yield will not exceed 70 per cent of that in 1939.

La Sal Mountain Area.

The snow cover in the La Sal National Forest this year is 136 per cent of that in 1939 and it exceeds every year since 1931 except 1937. The water supply for irrigation purposes this year will probably be at least 25 per cent greater than in 1939.

Blue Mountain Area.

The snow cover in this area is slightly greater than in 1939 and the seasonal yield should be equal to or slightly greater than that in 1939.

SUMMARY

It is seen from the foregoing detailed analysis that the snow cover on the watersheds of Utah this year is very spotted; that it contains on most areas considerably less water than last year; that the low snow cover has melted off all of the watersheds and that in general the soil under the high cover is dry. Watershed yields in general will be less per unit of snow cover because of the deficient fall precipitation which usually primes the soil and because of the early melting of the low snow cover. On April 1, 1940, the discharge of the major streams in the state was less than on the same date in 1939 in spite of the early melt of the low snow cover.

There are a few areas in the state where the water supply prospects for 1940 are better than they were in 1939. These areas and their probable 1940 runoff expressed in percent of the 1939 runoff are as follows:-- San Pitch Tributaries 110, Fillmore Watersheds 110, Bear River 145, Price River, South Utah Lake Tributaries and Salt Creek 100, and South Eastern Utah 115. Except for these bright spots the 1940 water supplies in Utah will be less than in 1939 and in general will average about as follows in per cent of the 1939 runoff:-- Northern Utah 85, Central Utah 95, Southern Utah 75, Uintah Basin 60, South Eastern Utah 115, North Side Uintah Mountains 70.

The following summary tabulation shows the expected 1940 yields for the April-September period by drainage basins:

SUMMARY TABULATION
Water Supply Prospects in Utah, 1940

Name of Drainage Area	Forecasted 1940 Runoff in % of that in 1939	Forecasted 1940 Run-off in % of the long time normal discharge	Est. Max. Reservoir Storage in 1940 in A.F.	
Bear River above Bear Lake	60	--	2 Season Supply	
Logan River	86	49		
Cub River	90	--		
Maple, High, Summit & Providence Creeks	95	--		
Blacksmith Fork	89	41		
Little Bear River	90	--		
Ogden River	80	45		
Weber River	90	54		35,000
Salt Lake Watersheds	90	55		88,000
Provo River	85	46		
Utah Lake				
American Fork River	75	--	400,000	
Utah Lake Tributaries South of Provo	100	--		
Strawberry Reservoir	85	--		
San Pitch Tributaries	110	--	75,000	
Salina Creek	80	--		
Clear Creek	85	--		
Main Scovier River	85	--		
Fillmore Drainage	110	43	270,000	
Coal Creek	76	--		

(Tabulation cont'd.)

Summary Tabulation cont'd.

Name of Drainage Area	Forecasted 1940 Runoff in % of that in 1939	Forecasted 1940 Run- off in % of the long time normal discharge	Est. Max. Reser- voir Storage in 1940 in A.F.
Beaver River	145	72	25,000
Virgin River	77	54	
Salt Creek	100	--	
Price River	100	55	
Ashley Creek	44	31	
Uinta River	50	44	
Whiterocks Creek	51	47	
Lake Fork River	70		
Duchesne River	80	52	
North Side Uintah Mt.	70	--	
La Sal National Forest	125	--	
AVERAGE	86	49	

It can be seen from the summary tabulation that several areas in the state will suffer serious water shortages this year. Again as in 1939 the water users holding the primary rights to natural flow will suffer most severely.

The supply of storage water this year will not be as great as it was in 1939, but the amount of storage available will fully provide in most cases for the 1940 demands of those holding storage rights or a combination of storage and natural flow rights.

Except for the east half of the Uinta Basin, the pending water shortage this year is not as severe as in 1934, but it will probably be the next shortest year of record. Therefore, all water users should begin at once to plan for a rigid conservation of available supplies and the development of supplemental supplies in the drier areas. Ditches and canals should be cleared immediately so that early spring runoff can be utilized where storage is not available.

Due to the absence of low snow on all the watersheds, unusually high water during the spring runoff period is not to be expected. However, high runoff for a few days is possible if a combination of temperature and spring precipitation develops which will melt the high snow at a rapid rate. All owners of reservoirs should, therefore, examine their spillways and outlet works, clean and repair their trash racks and see that their gate operating devices are in working order.

The following tables give a brief summary of the water supply forecasts, reservoir storage, and the snow cover data for 1940.

Table I -- FORECAST SUMMARY --

NAME OF STREAM OR BASIN	Run-off in 1000's of Acre-Feet												Expected Runoff for 1940 in per-cent of 1939	
	1940		1939		1938		1937		I		II		I	II
	I	II	I	II	I	II	I	II	I	II	I	II	I	II
BEAR RIVER														
Bear River at Stewart Dam	85.0	25.0	148.6	25.2	295.6	55.0			53.3	11.0			57.2	99.2
Bear Lake Drainage	25.0	---	33.9	6.2	35.7	13.7							64.3	---
CACHE VALLEY STREAMS														
Miscellaneous Small Streams													90.0	
Logan River	80.0	29.0	92.5	28.7	147.1	43.4			199.4	39.7			86.5	99.0
Blacksmith Fork River	30.0	10.0	33.7	11.9	59.4	18.6			58.6	17.6			89.0	84.0
Little Bear River													90.0	--
WEBER RIVER														
South Fork of Ogden River	29.0	5.0	36.4	6.2	60.7	8.4			62.9	8.1			79.7	80.7
Weber River at Oakley	80.0	12.0	83.7	14.3	132.4	21.9			107.8	17.6			95.6	83.9
SALT LAKE CITY WATERSHEDS														
Big Cottonwood Creek	25.0	5.0	27.5	5.0	40.7	7.5			32.6	6.2			91.0	100.0
PROVO RIVER AND UTAH LAKE														
American Fork River													75.0	
Provo River	86.0	25.0	101.6	23.6	180.8	49.6			173.2	47.7			24.7	91.0
Hobble Creek													100.0	
Spanish Fork River													100.0	
SEVIER RIVER														
San Pitch Tributaries													110.0	
Salina Creek													50.0	
Clear Creek													85.0	
East Fork of Sevier													80.0	
Sevier River at Kingston	25.0	13.0	29.6	13.5	70.9	10.4			87.6	14.2			84.5	96.4
INDEPENDENT STREAMS														
Fillmore Watersheds													110.0	
Beaver River	24.0	6.0	16.6	4.4	36.0	7.6			47.7	8.8			144.5	136.2
Coal Creek near Cedar City	9.0	3.0	11.8	3.2	32.1	4.1			32.8	3.96			76.2	93.8
UINTAH BASIN STREAMS														
Duchesne River at Tabiona	60.0	19.0	74.7	15.0	124.9	25.4			122.7	26.4			80.4	126.8
Whiterocks Creek at Whiterocks	25.0	10.0	50.0	17.9	87.4	26.2			82.3	24.8			50.0	85.0
Ashley Creek at Vernal	20.0	9.0	45.1	12.5	66.4	19.2			67.7	18.3			44.3	72.0

Table I (cont'd.)

-- FORECAST SUMMARY --

NAME OF STREAM OR BASIN	Run-off in 1000's of Acre Feet						Expected Run-off for 1940 in Percent of 1939		
	1940		1939		1938		1937		
	I	II	I	II	I	II	I	II	
NORTH SIDE UTAH MOUNTAINS								70.0	
PRICE RIVER									
Price River	47.0	14.0	47.4	14.2	73.4	23.4	105.4	27.6	99.6
Huntington Creek	50.0	12.0	39.8	10.7	56.9	14.6	62.2	15.5	112.0
Cottonwood Creek	58.0	8.0	48.0	6.9	60.3	9.0	62.1	12.2	116.0
VIRGIN RIVER									
Virgin River	52.0	25.0	68.3	33.6	124.6	22.3	148.4	26.0	74.5
LA SAL MOUNTAINS									
Mill Creek									125.0
MONTICELLO AREA									
Montezuma Creek									115.0
SALT CREEK at Nephi							21.0	4.4	100.0

I - April to September, inclusive

II - July to September, inclusive

COMPARISON OF RUNOFF FROM PRINCIPAL UTAH STREAMS

In 1000's of Acre-Feet

Table II

NAME OF STREAM	April-September Runoff				July-September Runoff				Forecast for 1940		
	Average	1936	1937	1938	1939	Average	1936	1937		1938	1939
Ashley Creek near Vernal	64.0	33.4	67.7	66.5	45.1	15.9	13.1	18.3	19.2	12.5	9.0
Bear River at Harer	286.0	356.2		295.6	148.6	59.7	57.2		55.0	25.2	25.0
Beaver River at Beaver	33.3	41.2	47.7	36.0	16.6	7.9	11.6	8.8	7.7	4.4	6.0
Big Cottonwood near Salt Lake City	45.0	40.6	32.6	40.7	27.5	11.5	7.2	6.2	7.5	5.0	5.0
Blacksmith Fork at Hyrum	72.5	90.0	58.6	59.4	33.7	24.2	20.1	17.6	18.6	11.9	10.0
Coal Creek near Cedar City		16.1	32.8	32.1	11.8	9.0	5.4	4.0	4.1	3.2	3.0
Cottonwood Creek at Orangeville	72.1	69.3	62.1	60.3	48.0	15.5	12.9	12.6	9.0	6.9	8.0
Duchesne River at Tabiona	114.3	140.0	107.2	124.9	74.7	23.0	33.0	26.4	25.4	15.0	19.0
Huntington Creek near Huntington	62.4	74.8	62.2	56.9	39.8	15.6	14.9	15.5	14.6	10.7	12.0
Logan River at Logan	164.7	200.0	119.4	147.1	92.5	54.0	51.1	39.7	43.4	28.7	29.0
Ogden River, S. Fork near Huntsville	64.7	109.5	62.9	60.7	36.4	8.6	8.7	8.1	8.4	6.2	5.0
Price River near Helper	85.2	80.0	105.4	73.4	47.4	16.7	20.9	27.6	23.4	14.2	14.0
Provo River at Provo	185.9	184.0	178.2	180.8	101.6	50.1	43.8	47.6	49.6	28.6	26.0
Sevier River near Kingston	57.6	23.5	87.6	70.9	29.6	15.5	11.8	14.2	10.4	13.5	13.0
Uinta River near Ncola	89.4	88.2	115.3	131.1	77.9	38.4	45.7	52.3	48.1	33.3	25.0
Virgin River at Virgin	95.8	63.3	148.4	124.6	68.3	31.0	27.9	26.0	22.3	33.6	25.0
Weber River at Oakley	148.7	160.5	107.8	132.4	85.7	30.5	27.9	17.6	21.9	14.3	12.0
Whiterocks River near Whiterocks	52.7	52.7	82.3	87.4	50.0	19.1	26.0	24.8	26.2	17.9	10.0

AVAILABLE STORAGE IN PRINCIPAL RESERVOIRS

ACRE-FEET - APRIL

Reservoir	Maximum Capacity	Content, April 1, in Acre-feet					Per Cent Filled	
		1935	1936	1937	1938	1939		1940
Bear Lake	1,420,000	161,350	71,000	396,750	582,700	794,000	678,000	48
Utah Lake	830,000	118,000	141,000	303,000	392,900	463,000	372,000	45
Echo Reservoir	74,000	36,440	15,400	49,000	55,470	37,150	19,000	26
East Canyon	28,000	7,300	17,400	20,000	10,640	19,310	21,000	75
Strawberry	278,000	12,720	15,100	61,500	81,580	88,180	54,280	20
Seofield	30,000	2,000	12,000	15,750	8,000	17,000	6,000	20
Rocky Ford	25,070	6,200	10,266	20,000	19,600	18,600	10,130	40
Sevier Bridge	236,000	29,250	41,680	67,600	89,500	150,000	122,820	52
Piute	90,000	27,360	39,290	45,500	78,000	67,000	59,000	66
Otter Creek	52,600	14,600	17,050	22,700	40,000	44,800	30,400	58
Gunnison	20,000	1,500	3,500	20,000	18,500	16,500	11,000	55
Hyrum	14,600			9,721	10,430	9,950	13,200	90
Fine View	41,000			13,263	26,100	10,650	17,955	44

Table IV

 UTAH COOPERATIVE SNOW SURVEYS - 1940
 (Data for all Snow Courses)

SNOW COURSES BY DRAINAGE AREAS	Course No.	Elevation in Feet	Date of Survey	Depth of Snow in Inches	Water Content of Snow in Inches	Density in Per cent	Corresponding Water Content			Normal Water Content in Snow to April 1 in inches	Water Content of Snow on Date of Survey in % of Normal	Corresponding Percent Last Year	Moisture Condi- tion Under Snow
							1937	1938	1939				
CACHE VALLEY STREAMS													
Franklin Basin (Idaho)	1	8200	3/30/40	56.6	21.8	38.6	20.8	24.8	20.4	35.5	61.5	57.5	Moist
Tony Grove Lake	2	8300	3/30/40	67.5	20.7	30.7	32.5	36.5	25.2	45.1	45.9	55.9	Moist
Tony Grove Ran. Sta.	3	6250	3/30/40	5.9	2.0	33.8	15.2	11.4	5.5	11.3	17.5	48.7	Moist
Spring Hollow No. 3	4	7000	3/30/40	21.8	8.1	37.1	16.2	14.5	8.5	19.0	42.6	44.7	Wet
Spring Hollow No. 4	5	8000	3/30/40	60.8	20.5	32.7	25.0	21.9	19.4	32.7	64.7	59.4	Moist
Mount Logan	6	9000	3/30/40	65.6	23.5	35.8	27.4	27.5	20.8	39.1	60.0	53.2	Moist
Smithfield Spring	7	7000	3/30/40	51.3	20.6	40.1	23.8	23.1	17.8	----	---	----	---
Placksmith Fork	8	Abandoned					10.9	18.0	----				---
Garden City Summit	9	8200	3/28/40	35.6	12.6	35.4	16.5	20.4	16.7	24.4	51.6	69.5	Wet
Blake Ranger Station	12-A	8000	3/29/40	35.6	10.7	30.0	13.3	23.6	11.5		----	----	Moist
BEAR RIVER													
Garden City Summit	9	8200	3/29/40	35.6	12.6	35.4	18.5	20.4	16.7	24.4	51.6	68.5	Wet
Headwaters of Bear R.	10	8600	3/30/40	24.7	7.2	29.1	8.2	7.9	9.6	---	---	---	---
Goodman Ranch	10-A	7900	3/25/40	17.7	5.5	31.0	3.7	5.9		---	---	---	---
Monte Cristo Ran. Sta.	12	9000	3/28/40	52.2	17.0	31.6	18.8	30.7	20.3	20.4	82.5	99.5	Moist
OGDEN RIVER:													
Huntsville-Wheeler Div.	11-A	5775	3/30/40	No	Snow		15.0	4.0	3.6	11.1	---	32.4	---
Monte Cristo Ran. Sta.	12	9000	3/28/40	52.2	17.0	31.6	18.8	30.7	20.3	20.4	82.5	99.5	Moist
Blake Ranger Station	12-A	8000	3/29/40	35.6	10.7	30.0	13.3	23.6	11.5	---	---	---	Moist
Geertsen Creek	12-B	8200	3/30/40	49.3	17.9	36.3	23.0	17.2	14.9	---	---	---	Wet
WEBER RIVER:													
Parley's Canyon Summit	15	7500	3/27/40	40.1	14.4	35.9	19.1	17.2	14.6	21.4	67.3	68.2	---
Beaver Creek Ran. Sta.	24	7500	3/29/40	10.5	3.3	31.4	11.0	8.5	4.6	10.5	31.4	43.8	---
Washington Long Lake	27	10300	3/27/40	69.4	23.6	34.1	33.6	30.6	24.4	43.1	54.8	56.6	---
Airway Beacon-Chalk Cr.	29	7000	3/26/40	No	Snow		6.0	3.1	N.S.	---	---	---	---
Smith and Morehouse	30	7600	3/25/40	26.6	10.1	38.0	13.7	14.1	9.9	14.9	67.8	66.4	Moist

UTAH COOPERATIVE SNOW SURVEYS - 1939-40
(Data for all Snow Courses)

Table IV (Con'd.)

SNOW COURSES BY DRAINAGE AREAS	Course No.	Elevation in Feet	Date of Survey	Depth of Snow in Inches	Water Content of Snow in Inches	Den- sity in per cent	Corresponding Water Content			Normal Water Content in Snow to April 1st in Inches	Water Content of Snow on Date of Survey in % of Normal	Corres- ponding Percent Last Year	Mois- ture Con- dition Under Snow
							1937	1938	1939				
WEBER RIVER: (Cont.)													
Redden Mine (Upper)	31	9000	3/28/40	42.6	15.9	37.3	22.1	21.4	17.7	24.2	63.2	70.7	Moist
Redden Mine (Lower)	31-A	8500	3/28/40	42.9	14.8	38.2	21.8	21.7	16.5				
SALT LAKE WATERSHEDS:													
Parrish Creek Summit	13	8000	3/28/40	61.7	24.0	38.9	29.7	24.5	17.8				Moist
Barnard Creek	13-A	8000	3/28/40	64.2	26.1	40.6	33.4	24.3	21.0				Moist
Hornet Creek	13-B	8100		Abandoned			18.3						
Lamb's Canyon	14	6600	3/29/40	28.6	11.5	40.2	18.8	16.0	10.0				
Parley's Canyon Summit	15	7500	3/27/40	40.1	14.4	35.9	19.1	17.2	14.6			68.2	
Silver Lake	16	8725	3/29/40	50.4	18.4	36.8	24.7	26.7	20.5				Wet
Mill D South Fork	16-A	7400	3/30/40	41.9	17.3	41.3	19.9	18.8	17.3				Wet
South Willow Creek	66	8000	3/28/40	33.7	13.2	34.1							Moist
PROVO RIVER & UTAMI LAKE													
Dutchman Ranger Sta.	17	7500	3/29/40	32.9	11.0	33.5	25.8	18.1	14.1	26.5	41.5	53.2	
Timpanogos Cave Camp	18	5500		No snow				N.S.	N.S.				
South Fork Ranger Sta.	19	6100		Patchy			7.5E	Patchy					
Camp Altamont	20	7300	3/26/40	25.5	8.4	35.7	25.3	19.6	10.1				
Timpanogos Loop Road D	21	8200	3/28/40	35.2	13.3	37.8	32.2	26.5	15.8				
Aspen Grove	21-A	6900	3/28/40	19.9	7.5	57.7	26.7	17.0	10.7				
Y.L.H.I.A. Site	21-B	6000		Patchy			16.0	7.2	5.3				
Hobble Creek Summit	22	7300	3/29/40	26.9	10.3	36.3	17.6	11.7	7.6				
Daniels-Strawberry Sum.	23	8000	3/29/40	30.0	10.3	34.3	20.9	15.9	10.2	21.5	48.0	47.4	Moist
Beaver Creek Ranger Sta.	24	7500	3/29/40	10.5	3.3	31.4	11.0	8.5	4.6	10.5	31.4	43.8	
Scopstone Ranger Sta.	25	7800	3/28/40	20.1	8.0	30.6	12.0	12.0	7.3	15.2	52.6	48.0	
Trial Lake	26	9800	3/27/40	59.9	19.9	33.3	28.9	27.9	21.3	36.3	54.9	58.7	
Washington Long Lake	27	10300	3/27/40	69.4	23.6	34.1	33.6	30.6	24.4	43.1	54.8	56.6	
Lost Lake	28	9900	3/27/40	54.3	19.4	33.9	27.6	24.8	19.6	33.8	54.5	58.0	
STRAWBERRY RESERVOIR:													
Daniels-Strawberry Sum	23	8000	3/29/40	30.0	10.3	34.3	20.9	15.9	10.2	21.5	48.0	47.4	

UTAH COOPERATIVE SNOW SURVEYS - 1939-40
(Data for all Snow Courses)

SNOW COURSES BY DRAINAGE AREAS	Course No.	Elev- ation in Feet	Date of Survey	Depth of Snow in Inches	Water Content of Snow in Inches	Den- sity in per cent	Corresponding Water Content		Normal Water Content in Snow to April 1st in Inches	Water Content of Snow on Date of Survey in % of Normal	Corres- ponding Percent Last Year	Mois- ture Condi- tion Under Snow
							1937	1938 1939				
STRAWBERRY RESERVOIR: Cont'd.												
East Portal	33	7560	3/28/40	28.5	10.0	35.1	17.4	12.0	8.3	--	--	---
East Portal-Strawberry Divide	33-A	8000	3/25/40	45.7	17.4	38.1	25.6	19.4	17.8	--	--	---
NORTH SIDE UTAH MTS.:												
Hewinta Ranger Station	34	9500	.	No	Report		8.4	7.1	6.3	--	--	---
Hole-in-the-Rock	35	9150	3/25/40	18.6	3.8	20.4	5.5	7.9	5.6	--	--	---
Beaver Meadows	67	8500	3/30/40	21.5	6.1	28.3				--	--	---
SOUTH SIDE UTAH MTS.:												
Lake Fork Mountain	36	10500	3/26/40	22.5	4.1	18.2	(Est.) 14.1	9.5	5.1	--	--	---
Paradise Park	37	10500	3/29/40	23.7	3.8	16.0	17.5	12.3	7.3	--	--	---
Mosby Mountain No. 1	38	9700	3/31/40	31.5	5.1	23.5	13.5	10.7	6.1	--	--	---
Mosby Mountain No. 2	38-A	9500	3/31/40	26.1	5.3	23.2	16.9	12.3	6.6	--	--	---
King's Cabin No. 1	39	8800	3/27/40	22.9	4.3	18.8	12.4	11.7	6.7	--	52.4	Wet
King's Cabin No. 2	39-A	8600	3/27/40	14.4	3.3	22.9	12.3	10.4	6.4	--	--	---
Indian Canyon	40	9100	3/27/40	20.0	4.2	21.0	14.3	12.4	5.4	--	--	---
PRICE RIVER:												
Indian Canyon	40	9100	3/27/40	20.0	4.2	21.0	14.3	12.4	5.4	--	--	---
Gooseberry Reservoir S	41	8700	3/30/40	51.6	20.6	40.0	24.2	20.5	16.0	28.3	56.5	---
Mammoth Ranger Station	42	8800	3/29/40	52.6	21.0	39.9	26.8	22.4	16.8	29.0	57.9	---
Staley Ranch	42-A	7600	3/29/40	10.2	3.2	31.4	10.7	7.3	N.S.	--	--	---
Dry Valley Divide	42-B	7800	3/29/40	24.3	8.2	33.7	11.5	12.3	N.S.	--	--	---
Clear Creek	42-C	8150	3/29/40	11.3	4.6	40.7	12.1	9.4	N.S.	--	--	---
Huntington Horseshoe	43	9800	3/30/40	70.0	28.1	40.1	28.9	26.1	21.8	31.8	63.6	---
FILLMORE:												
Pine Creek-Chalk	49	8500	3/29/40	42.8	15.3	35.8	16.2	15.7	10.6	--	--	---
HUNTINGTON, COTTONWOOD, AND FERRON CREEKS:												
Huntington Horseshoe	43	9300	3/30/40	70.0	28.1	40.1	28.9	26.1	21.8	31.8	63.6	---

UTAH COOPERATIVE SNOW SURVEYS - 1939-40
(Data for all Snow Courses)

Table IV (Cont'd.)

SNOW COURSES BY DRAINAGE AREAS	Course No.	Elevation in Feet	Date of Survey	Depth of Snow in Inches	Water Content of Snow in Inches	Density in Per cent	Corresponding Water Content			Normal Water Content in Snow to April 1st in Inches	Water Content of Snow on Date of Survey in % of Normal	Corres- ponding Percent Last Year	Mois- ture Condi- tion Under Snow
							1937	1938	1939				
HUNTINGTON, COTTONWOOD, & FERRON CREEKS: (Cont'd.)													
G.B.E.S. Alpine	47	10,240	3/27/40	65.4	24.6	37.6	20.7	20.8	20.5	--	--	--	--
Seeley Cr. R.S. No. 1	48	10,000	3/27/40	62.7	24.0	38.3	21.9	20.7	20.0	22.5	98.3	75.5	--
Seeley Cr. R.S. No. 2	48-A	10,000	3/27/40	52.7	19.4	36.8	15.0	15.9	12.8				--
SAN FITCH RIVER:													
Mammoth Ranger Station	42	8,800	3/29/40	52.6	21.0	39.9	26.8	22.4	16.8	29.0	72.5	57.9	--
G.B.E.S. Oaks Ran. Sta.	44	7,550	3/28/40	26.3	9.1	34.6	8.7	8.6	4.2	--	--	--	--
G.B.E.S. Headquarters	45	8,700	3/28/40	53.0	20.7	39.1	18.4	17.8	15.3	--	--	--	--
G.B.E.S. Meadows	46	10,000	3/27/40	63.6	22.9	36.0	21.6	22.4	20.8	--	--	--	--
G.B.E.S. Alpine	47	10,240	3/27/40	65.4	24.6	37.6	20.7	20.8	20.5	--	--	--	--
SEVIER RIVER:													
Gooseberry Ranger Sta.	50	8,400	3/27/40	41.5	9.7	23.4	12.3	10.2	10.3	--	--	--	--
Fish Lake	51	8,700	3/23/40	22.3	7.6	34.1	7.2	7.0	6.1	--	--	--	--
Kimberly Mine (Lower)	52	8,300	3/29/40	32.2	11.5	35.7	15.2	16.1	9.4	13.1	99.2	84.0	--
Kimberly Mine (Upper)	52-A	8,900	3/29/40	40.8	14.0	34.2	24.4	19.6	12.0				--
Widtsoc-Escalante Sum.	53	9,500	3/30/40	15.5	4.5	29.0	14.7	11.1	7.4	11.6	38.8	63.7	--
Bryce Canyon	54	8,000	3/29/40	No	Snow	56.4	13.6	8.5	3.9	--	--	--	--
Panguitch Lake	55	8,200	3/25/40	5.5	3.1		11.5	9.9	6.0	5.9	52.6	101.7	--
Gravel Springs Junction	56	7,500	3/29/40	No	Snow		13.7	8.8	N.S.	--	--	--	--
Harris Flat Ranger Sta.	57	7,700	3/30/40		Patchy		21.2	13.4	3.6	12.4	--	29.0	--
Duck Creek Spring	58	8,560	3/29/40	17.5	7.0	40.0	23.9	20.1	10.1	--	--	--	--
Cedar Breaks	59	10,200	3/29/40	51.5	16.0	31.1	41.2	29.1	18.7	--	--	--	--
BEAVER RIVER:													
Merchants Valley	63	8,200	3/30/40	31.8	12.5	39.3	16.8	14.6	6.1	11.5	103.5	53.0	--
Otter Lake	63-A	9,300	3/30/40	49.7	17.8	35.8	23.0	20.7	11.3	--	--	--	--
Big Flat	63-B	10,000	3/30/40	56.6	20.7	36.5	26.4	23.4	13.9	--	--	--	--

UTAH COOPERATIVE SNOW SURVEYS - 1939-40
(Data for all Snow Courses)

Table IV (Cont'd.)

SNOW COURSES BY DRAINAGE AREAS	Course No.	Elevation in Feet	Date of Survey	Depth of Snow in Inches	Water Content of Snow in Inches	Density in Per cent	Corresponding Water Content			Normal Water Content in Snow to April 1st in Inches	Water Content of Snow on Date of Survey in % of Normal	Corresponding Percent Last Year	Mois- ture Cond- ition Under Snow
							1937	1938	1939				
COAL CREEK:													
Cedar Breaks	59	10,200	3/29/40	51.5	16.0	31.1	41.2	29.1	18.7	--	--	--	
Co-op Flat	60	9,500	3/29/40	28.4	10.9	38.4	31.2	24.3	13.1	57.4	69.0	--	
Webster Flat	61	9,200	3/28/40	28.9	11.0	38.1	30.0	27.6	14.0	59.1	75.3	--	
VIRGEN RIVER:													
Gravel Springs Junct.	56	7,500	3/29/40	No	Snow Patchy		13.7	8.8	N.S.	--	--	--	
Harris Flat Ranger Sta	57	7,700	3/30/40		7.0	40.0	21.2	13.4	3.6	--	29.0	--	
Duck Creek Ranger St.	58	8,560	3/29/40	17.5	16.0	31.1	28.9	20.1	10.1	--	--	--	
Cedar Breaks	59	10,200	3/29/40	51.5	10.9	38.4	41.2	29.1	18.7	--	--	--	
Co-op Flat	60	9,500	3/29/40	28.4	10.9	38.4	31.2	24.3	13.1	57.4	69.0	--	
Webster Flat	61	9,200	3/28/40	28.9	11.0	38.1	30.0	27.6	14.0	59.1	75.3	--	
SANTA CLARA RIVER:													
Pine Valley	62	9,150	3/27/40	38.9	16.1	41.4	23.7	23.8	14.1	--	--	--	
LA SAL & BLUE MOUNTAIN:													
La Sal Mountain	64	8,500	3/28/40	28.3	9.3	32.8	11.2	7.8	6.8	--	--	--	
Buckboard Flat	65	9,000	No Report	No Report			24.4	14.4	13.8	--	--	--	