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

1942

by

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(In charge of Utah Cooperative Snow Surveys)

Utah Agricultural Experiment Station  
Department of Irrigation of Drainage

Irrigation Division  
of the  
Soil Conservation Service  
United States Weather Bureau

Utah State Engineer  
United States Forest Service  
United States Park Service

United States Geological Survey  
Cooperating.

INDEX TO SNOW COURSES

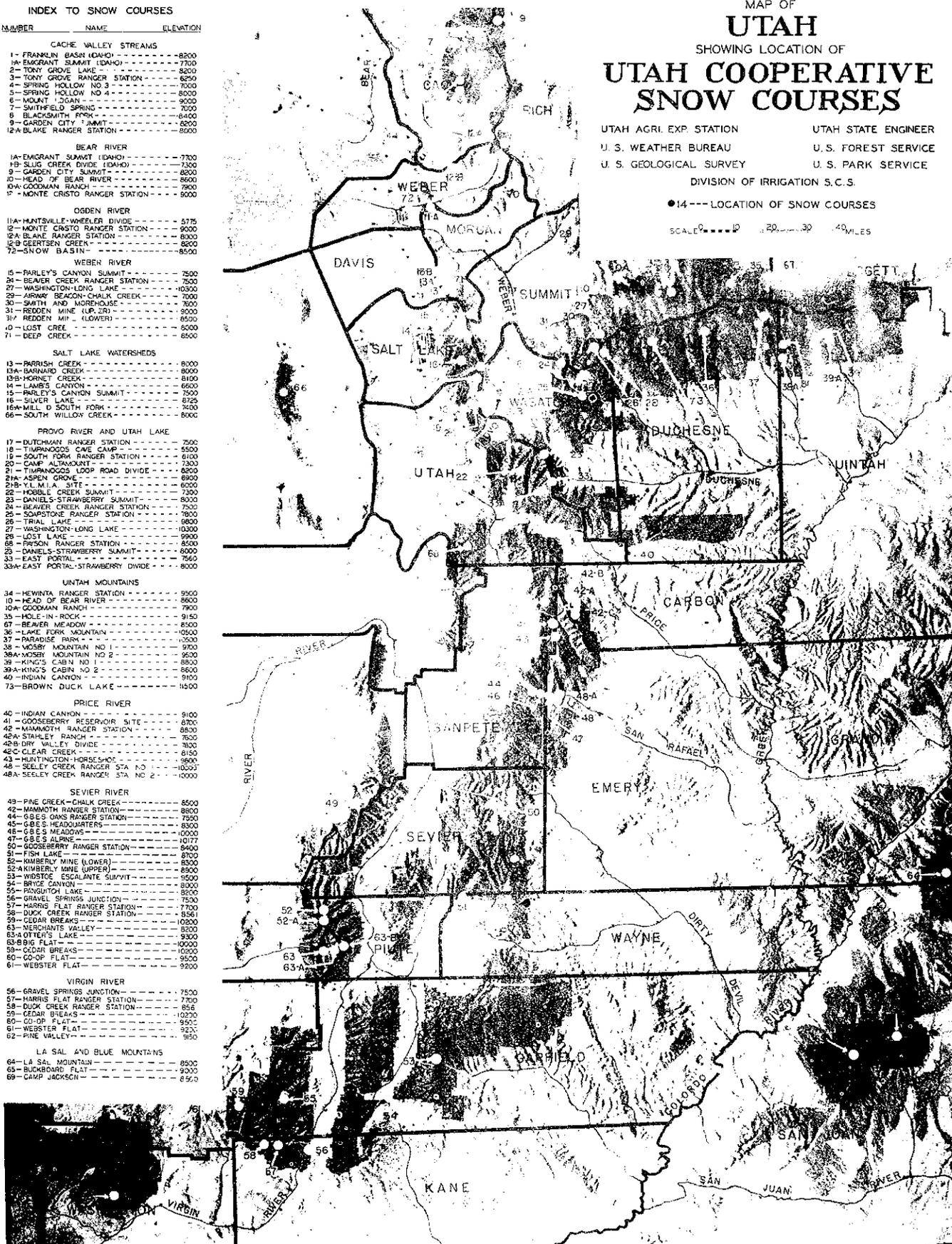
NUMBER	NAME	ELEVATION
<b>CACHE VALLEY STREAMS</b>		
1	FRANKLIN BASIN (IDAHO)	8200
1A	EMIGRANT SUMMIT (IDAHO)	7700
2	TONY GROVE LAKE	8200
3	TONY GROVE RANGER STATION	6250
4	SPRING HOLLOW NO 3	7000
5	SPRING HOLLOW NO 2	8000
6	MOUNT LOGAN	9000
7	SMITHFIELD SPRINGS	7000
8	BLACKSMITH FORK	8200
9	GARDEN CITY SUMMIT	8200
12A	BLAKE RANGER STATION	8000
<b>BEAR RIVER</b>		
1A	EMIGRANT SUMMIT (IDAHO)	7700
1B	SULLY CREEK DIVIDE (IDAHO)	7300
9	GARDEN CITY SUMMIT	8200
10	HEAD OF BEAR RIVER	8600
10A	GOODMAN RANCH	7900
12	MONTE CRISTO RANGER STATION	9000
<b>OGDEN RIVER</b>		
11A	HUNTSVILLE-WHEELER DIVIDE	5775
12	MONTE CRISTO RANGER STATION	9000
12A	BLAKE RANGER STATION	8000
12B	GERSTEIN CREEK	8200
72	SNOW BASIN	8500
<b>WEBER RIVER</b>		
15	PARLEY'S CANYON SUMMIT	7500
24	BEAVER CREEK RANGER STATION	7500
27	WASHINGTON-LONG LAKE	8200
29	ARMY BEACON-CHALK CREEK	7000
30	SMITH AND WAREHOUSE	7000
31	RODDEN MINE (UPPER)	8750
31 1/2	RODDEN MINE (LOWER)	8500
40	LOST CREEK	6000
71	DEEP CREEK	8500
<b>SALT LAKE WATERSHEDS</b>		
13	PARRISH CREEK	8000
13A	BARNARD CREEK	8000
13B	HORNET CREEK	8100
14	LAMB'S CANYON	6600
15	PARLEY'S CANYON SUMMIT	7500
16	SILVER LAKE	7500
16A	MILL D SOUTH FORK	7400
66	SOUTH WILLOW CREEK	8000
<b>PROVO RIVER AND UTAH LAKE</b>		
17	DUTCHMAN RANGER STATION	7500
18	TIMPANOGOS CAVE CAMP	5500
19	SOUTH FORK RANGER STATION	8100
20	CAMP ALTMOUNT	7300
21	TIMPANOGOS LOOP ROAD DIVIDE	8200
21A	ASPEN GROVE	8900
21B	Y.L.M.A. SITE	6000
22	MOBILE CREEK SUMMIT	7300
23	DANIELS-STRAWBERRY SUMMIT	8000
24	BEAVER CREEK RANGER STATION	7500
25	SOPSTONE RANGER STATION	7500
26	TRIAL LAKE	9800
27	WASHINGTON-LONG LAKE	10300
28	LOST LAKE	7500
88	PRYSON RANGER STATION	8500
29	DANIELS-STRAWBERRY SUMMIT	8000
33	EAST PORTAL	7650
33A	EAST PORTAL-STRAWBERRY DIVIDE	8000
<b>UINTAH MOUNTAINS</b>		
34	HEWINTA RANGER STATION	9500
10	HEAD OF BEAR RIVER	8600
10A	GOODMAN RANCH	7900
35	HOLE-IN-ROCK	9100
67	BEAVER MEADOW	8500
36	LAKE FORK MOUNTAIN	10500
37	PARADISE PARK	7300
38	MOSEY MOUNTAIN NO 1	9700
38A	MOSEY MOUNTAIN NO 2	9600
39	KING'S CABIN NO 1	8500
39A	KING'S CABIN NO 2	8600
40	INDIAN CANYON	9100
73	BROWN DUCK LAKE	14500
<b>PRICE RIVER</b>		
40	INDIAN CANYON	9100
41	GOOSEBERRY RESERVOIR SITE	8700
42	MAMMOTH RANGER STATION	8000
42A	STAHLEY RANCH	7600
42B	DRY VALLEY DIVIDE	7600
43	CLEAR CREEK	8150
43	HUNTINGTON-HORSE SHOE	9600
48	SEILEY CREEK RANGER STA NO 1	10000
48A	SEILEY CREEK RANGER STA NO 2	10000
<b>SEVIER RIVER</b>		
49	PINE CREEK-CHALK CREEK	8500
42	MAMMOTH RANGER STATION	8000
44	G-B-E'S OAKS RANGER STATION	7900
45	G-B-E'S HEADQUARTERS	8300
46	G-B-E'S MEADOWS	8500
47	G-B-E'S ALPINE	10177
50	GOOSEBERRY RANGER STATION	8400
51	FISH LAKE	7000
52	KIMBERLY MINE (LOWER)	8300
52A	KIMBERLY MINE (UPPER)	8900
53	WINDY ESCALANTE SUMMIT	5500
54	BRUCE CANYON	8000
55	PRYNGTON LAKE	8200
56	GRAVEL SPRINGS JUNCTION	7500
57	HARRIS FLAT RANGER STATION	7700
58	DUCK CREEK RANGER STATION	8566
59	CEDAR BREAKS	10200
63	MERCHANTS VALLEY	8200
63A	OTTIE'S LAKE	9300
63B	FLAT	9500
63C	FLAT	10200
60	CO-OP FLAT	9500
61	WEBSTER FLAT	9200
61	WEBSTER FLAT	9200
<b>VIRGIN RIVER</b>		
56	GRAVEL SPRINGS JUNCTION	7500
57	HARRIS FLAT RANGER STATION	7700
58	DUCK CREEK RANGER STATION	8566
59	CEDAR BREAKS	10200
60	CO-OP FLAT	9500
61	WEBSTER FLAT	9200
62	PINE VALLEY	9850
<b>LA SAL AND BLUE MOUNTAINS</b>		
64	LA SAL MOUNTAIN	8900
65	BUCKHORN FLAT	9300
69	CAMP JACKSON	8500

MAP OF  
**UTAH**  
SHOWING LOCATION OF  
**UTAH COOPERATIVE  
SNOW COURSES**

UTAH AGRI. EXP. STATION      UTAH STATE ENGINEER  
U. S. WEATHER BUREAU      U. S. FOREST SERVICE  
U. S. GEOLOGICAL SURVEY      U. S. PARK SERVICE  
DIVISION OF IRRIGATION S.C.S.

● 14 --- LOCATION OF SNOW COURSES

SCALE 0 10 20 30 40 MILES



WATER SUPPLY FORECAST FOR UTAH, 1942

George D. Clyde, Irrigation Engineer  
Utah Agricultural Experiment Station

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During the period from March 28 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 precipitation and temperature conditions. The forecasts for 1941 were materially changed by abnormally heavy precipitation on the high watersheds during April, May and June.

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 at Harer, Idaho.

There is a United States Geological Survey gaging station at Harer, Idaho. This station is about 10 miles above the Stewart Dam at which the intake to the Rainbow feeder canal is located. The record shows the 24-year average April-September runoff at Harer to be 236,000 acre feet, with 59,700 acre feet of this running off during the July-September period. During 1940-41, the runoff for these periods was 139,400 and 45,200 acre feet respectively.

The water content of the snow cover, as measured at Garden City Summit, Monte Cristo and the Head of Bear River is about 11 percent higher than in 1941 but at the lower elevations and along the Bear River bottoms above Evanston it is nearly twice as great as in 1941. The heavy rains during April, May and June of 1941 increased the runoff at Harer far beyond that indicated by the snow cover on April 1, 1941.

With normal spring precipitation and temperature the runoff at Harer, Idaho, for the April-September period should equal approximately 150,000 acre feet with 50,000 acre feet running off during the months of July-September.

Bear River at Stewart Dam:

The discharge at Stewart Dam is an approximate measure of the water available for storage in Bear Lake. It is diverted through the Rainbow Canal. From April 1, 1941 to April 1, 1942 approximately 122,000 acre feet was available at Stewart Dam. For the same period (April 1942-April 1943) the water available for storage in Bear Lake should be approximately equal to 135,000 acre feet, of this approximately 85,000 acre feet should runoff during the period April-September 1942.

Streams Tributary to Bear Lake:

The yield from local streams tributary to Bear Lake in 1942 should exceed that in 1941. It is estimated that the yield to Bear Lake for the 12-months period April 1942 to April 1943 will be 60,000 acre feet of which 40,000 acre feet should runoff during the period April-September, 1942.

Probable Maximum Elevation of Bear Lake:

The maximum elevation reached by Bear Lake in 1941 was 5809.10. This represents an available storage of 434,900 acre feet. In 1942 the maximum elevation of Bear Lake will probably not exceed 5,808.8 feet unless abnormal spring precipitation and early high melting temperatures occur. If the storage reaches this elevation by the end of the snow melting period there will be an available storage in Bear Lake of 415,800 acre feet. In order to avoid depleting the reserve storage in Bear Lake during 1942, rigid water conservation measures should be put into effect.

Logan River Drainage:

The April-September yield of the Logan River in 1941 was 66,800 acre feet with 23,000 acre feet running off during the July-September period. The 1924-41 average April-September and July-September runoff is 117,000 and 36,600 acre feet, respectively. The river was discharging on September 1, 1941, 105 c. f.s. as compared to a predicted flow of 100 c.f.s. The maximum discharge occurred on May 14 in the amount of 410 c.f.s.

The high snow cover this year contains slightly more water than in 1941, but the cover below 7,000 feet is almost double that in 1941. The heavy fall rains of 1941 filled the soil storage and the runoff yield during 1942 per unit of water in snow storage should be greater than in 1941. There will be more spring high water in 1942, and the flood stage will reach considerably higher peak. The total April-September runoff will probably reach 90,000 acre feet with approximately 29,000 acre feet running off during the July-September period. The maximum discharge will probably not exceed 700 c.f.s. with a minimum September flow of 100 c.f.s.

Cub River Drainage:

The snow cover at Franklin Basin is representative of the conditions on the Cub River watershed. This year that cover is 116 percent of 1941 and 70 percent of the 1924-41 average. The snow cover at low elevations is much heavier than in 1941. The soil under the snow is wet but to date there has been

little rise in streamflow. The spring flow will be somewhat higher than in 1941 and the late season flow will hold up better.

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. There is still considerable snow on the lower slopes and the cover is much heavier at the higher elevations. The late season flow from these streams can be expected to be better than in 1941. The spring runoff will reach higher stages than it did in 1941.

Blacksmith Fork Drainage:

The snow cover on the Blacksmith Fork drainage this year is much heavier than in 1941, particularly at the lower elevations. On the higher levels the cover is about 11 percent greater than in 1941. The soil is moist under the snow, the result of heavy fall precipitation. The April-September yield of the Blacksmith Fork River in 1941 was 20,600 acre feet with 8,100 acre feet running off during July-September. The soil priming losses this year will be less than in 1941 and the April-September yield should be approximately 35,000 acre feet and the July-September yield 13,000 acre feet. There was no high water on the Blacksmith Fork during 1941 and the minimum flow was 40 c.f.s. There will be little high water this year although the discharge may go as high as 200 c.f.s.

Little Bear River Drainage:

The Little Bear River has an average elevation lower than the Blacksmith Fork. The high cover is slightly more than in 1941, but the low cover is approximately 50 percent higher. There will be little high water but the late season flow is expected to be greater than in 1941. The Hyrum Reservoir will fill but the early season irrigators will divert most of the natural flow so there will be little waste over the Hyrum spillway.

Ogden River Drainage:

The April-September yield of the Ogden River above Huntsville in 1941 was 30,500 acre feet of which 5,700 acre feet ran off during the July-September period. The snow cover at Goertson Creek and Monte Cristo this year averages 111 percent of that in 1941. There is still considerable snow on the low slopes. The South Fork of the Ogden above Huntsville will yield during April-September of 1942 not to exceed 42,000 acre feet of which probably 7,000 acre feet will run off during July-September. On April 1 of this year the Pine View Reservoir contained 8,500 acre feet out of a 41,000 acre foot capacity. There will be sufficient early runoff to fill the Pine View Reservoir to capacity 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. The snow cover on the higher areas in East Canyon is 114 percent of that in 1941. Moisture in the earth mantle is high. The East Canyon Reservoir contained on April 1, 21,000 out of a capacity of 28,000 acre feet. The east Canyon Reservoir will fill to capacity.

The Weber River above Oakley last year yielded 100,900 acre feet of which 20,000 acre feet ran off during the July-September period. The snow cover on the upper Weber River this year averages 144 percent of that in 1941. The low snow cover is heavier than in 1941 and the soil is moist under the snow.

The Weber River will yield during the April-September period this year not to exceed 120,000 acre feet of which probably 25,000 acre feet will run off during the July-September period.

The Echo Reservoir contained on April 1, 1942 a total of 21,000 acre feet. Its capacity is 74,000 acre feet. With normal precipitation and temperature conditions, the Echo Reservoir will fill this year.

#### Salt Lake Watersheds:

These watersheds include City, Emigration, Parley's, Big Cottonwood, and Little Cottonwood Creeks. The snow cover on these areas is represented by snow courses at Parleys' Canyon Summit, Silver Lake, and Mill "D" South Fork. The average water content of the snow cover on these watersheds this year is 125 percent of that in 1941. The April-September yield of Big Cottonwood Creek in 1941 was 40,400 acre feet of which 9,300 acre feet ran off during the July-September period. The large yield during 1941 from a relatively light snow cover was due to abnormally heavy precipitation during the months of April, May, and June of 1941. With a normal April-June precipitation, the yield in 1942 for the April-September period should reach 40,000 acre feet with 9,000 acre feet running off during the July-September period.

#### Provo River and Utah Lake Drainage

The April-September yield of the Provo River at Provo in 1941 was 137,200 acre feet of which 50,200 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 equal to that in 1941. The low snow cover is heavier by about 15 percent. The earth mantle is wet. The yield per unit of water in snow storage will be greater than in 1941, but unless abnormally high temperatures prevail during April and May there will be no unusually high spring runoff this year. The probable April-September yield of the Provo River at the forks will not exceed 130,000 acre feet of which approximately 35,000 acre feet will run off during the July-September period. The abnormally heavy precipitation on the watershed during April, May and June in 1941 caused the runoff during that year to greatly exceed that indicated by the April 1 snow cover.

There are at present 391,000 acre feet of water in Utah Lake. The heavier low snow cover this year will increase the amount of water available for storage in Utah Lake and Deer Creek. Regardless of the spring runoff there is sufficient water in Utah Lake now to provide a full irrigation water supply during the 1942 season. Rigid conservation should be practiced, however, 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 this year is much heavier than last year. This is particularly true at the lower elevations. At the Cave Camp, elevation 5,500 feet, there was 3.4 inches of water in the snow on April 1. The high stations show an average increase over last year of 19 percent.

The runoff last year greatly exceeded that indicated by the April 1 snow cover. This was due to unusually heavy precipitation at high elevations during April, May and June of 1941. This year the runoff will probably equal but not exceed that in 1941.

Hobble, Payson, Santaquin Creeks and Spanish Fork River:

The runoff to be expected from these watersheds is indicated by the snow cover at the Hobble Creek Divide, East Portal and the Mammoth Ranger Station. The average water content at these three courses is 11 percent higher than in 1941. The low snow cover is heavier and a higher spring runoff can be expected as well as a greater total April-September flow.

Strawberry Reservoir:

The snow cover on the Strawberry watershed above the Strawberry Reservoir is 114 percent of that in 1941. The storage in the Strawberry Reservoir on the first of April this year was only 47,000 acre feet as compared to 33,300 acre feet in 1941. The ground under the snow is well saturated. Little melting has taken place. The yield to the reservoir during the spring runoff this year should equal 20,000 acre feet. The maximum storage available this year should therefore be about 67,000 acre feet.

San Pitch Drainage:

The snow cover on the west side of the Wasatch Plateau which drains into San Pitch River contains approximately 115 percent as much water as in 1941. The low snow cover in this area is heavier and the soil under the high cover is wet. Little high water from any of these streams can be expected unless unusually high melting temperatures prevail. With normal spring precipitation it is estimated that the seasonal runoff from the tributaries to the San Pitch River will be approximately equal to that in 1941.

Salina Creek Drainage:

The snow storage on the Salina Creek watershed as measured at the Gooseberry Ranger Station snow course, is 97 percent of that in 1941. The low snow cover has melted with slight rise in streamflow. The ground moisture conditions are better than in 1941 and a seasonal discharge equal to that in 1941 can be expected.

Clear Creek Drainage:

The snow storage on this watershed is 32 percent greater than in 1941. The earth mantle is moist. With normal spring precipitation, a seasonal runoff somewhat greater than in 1941 can be expected.

Main Sevier River Drainage:

The water in snow storage on the Sevier River above Salina as indicated by snow courses at Widstoe-Escalante Summit, Panguitch Lake, Harris Flat Ranger Station, Duck Creek Ranger Station, Cedar Breaks and Fish Lake, varies widely this year. The drainage area above Otter Creek reservoir, as indicated by the measurements at Fish Lake, has a heavy snow cover. It is 240 percent of 1941. At Panguitch Lake, Widstoe-Escalante Summit and Cedar Breaks, it is about equal to that in 1941.

At the Harris Flat Ranger Station and at the Duck Creek Ranger Station it is only 64 and 76 percent of 1941, respectively. At Gravel Springs Junction the snow is patchy where last year on the same date there was 8.1 inches depth of water. This deficiency of low snow cover is the reverse of conditions further north. Except for the drainage above the Otter Creek Reservoir, high spring runoff is not to be expected. The high snow cover will improve natural flow rights.

The Otter Creek reservoir will fill to capacity. The Piute Reservoir contained on April 1, 1942, 64,571 acre feet out of a capacity of 90,000 as compared with 51,740 acre feet on the same date in 1941. Rapid melting during the first 20 days in April will add considerably to the Piute storage and it is believed that with normal melting temperatures the reservoir will fill to its safe capacity.

The Sevier Bridge Reservoir on April 1, 1942 contained 211,495 acre feet as compared with 94,000 acre feet last year. The capacity of the reservoir is 236,000 acre feet. Under normal melting conditions this reservoir will fill to capacity this year.

The Gunnison Reservoir in west Millard County was spilling water on April 1, 1942.

In spite of the relatively heavy snow cover on the Sevier River watershed, little high water is to be expected unless abnormally high temperatures prevail. The late season flow will probably exceed 100 percent of that in 1941. There will be sufficient water in the storage reservoirs on the Sevier River to carry the storage rights throughout the season and the water prospects for the primary users are about the same as in 1941.

#### Fillmore Drainage:

The snow cover on the Fillmore watersheds this year is 15 percent above that in 1941. The low snow has disappeared but the ground is moist 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 about 15 percent greater than in 1941.

#### Coal Creek Drainage:

The high snow cover on the Coal Creek Watershed this year contains 95 percent as much water as in 1941. The earth mantle was well primed by the fall rains and this should increase the water yield from the snow cover. The April-September yield of Coal Creek in 1941 was 36,900 acre feet of which 4,500 acre feet ran off during the July-September period. It is estimated that the April-September yield in 1941 from Coal Creek will not exceed 35,000 acre feet of which 4,500 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 75 percent of that in 1941. The low snow cover is relatively light but the earth mantle is well primed with moisture. It is estimated that the April-September yield of the Beaver River during 1942 will be approximately 32,000 acre feet as compared to 54,700 acre feet in 1941. Of this 32,000 acre feet approximately 8,000 acre feet can be expected to run off during the July-September period.

With normal spring precipitation and temperature the maximum flow will probably not exceed 500 c.f.s. and the minimum may go as low as 30 c.f.s. The Rocky Ford reservoir is nearly full. Its gates should be controlled so as to pass safely the potential runoff.

Virgin River Watershed:

The high snow cover on the Virgin River watershed this year is only 94 percent of that in 1941. The low cover is only 70 percent of that in 1941. The runoff during 1941 was far in excess of that indicated by the April 1, 1941 snow cover. This excess runoff resulted from abnormally heavy precipitation on the high watersheds during April, May and June of 1941. Assuming a normal spring precipitation for 1942 the main fork of the Virgin River can be expected to yield approximately 110,000 acre feet during the April-September period and 24,000 acre feet during the July-September period.

The Santa Clara Creek will yield not more than 75 percent of that in 1941.

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 1942 will be approximately equal to that in 1941. 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, 1942, the snow courses on the headwaters of Fish Creek showed a water content about equal to that in 1941. The low snow cover is somewhat heavier than in 1941. The storage in the Scofield Reservoir on April 1, 1942 was 22,400 acre feet as compared with 5,000 acre feet on the same day of 1941.

Based on the snow cover on April 1, 1942, it is estimated that the runoff above the Scofield reservoir during the April-September period this year will be approximately 30,000 acre feet, of which approximately 20,000 acre feet will run off during the months of April and May.

To provide for safe passage of the potential runoff, the outlet gates should be opened immediately and kept open to a degree that will insure a full reservoir at the end of May. A careful check should be made on the rate of melting of the snow cover.

The discharge of the Price River at Helper is dependent upon the releases of stored water from the Scofield Reservoir as well as the precipitation on the watershed. The snow cover on the headwaters of Price River on April 1, 1942, was practically the same as in 1941. Assuming a normal precipitation during April-June, the runoff will be considerably less than that in 1941 because of the heavy spring rains that year. It is estimated that 65,000 acre feet will pass Helper during the April-September period of which 20,000 will runoff during the July-September period.

Huntington Creek:

The discharge of Huntington Creek at Huntington this year will probably reach 65,000 acre feet for the April-September period and 15,000 acre feet during July-September.

Cottonwood Creek:

The discharge of Cottonwood Creek at Orangeville this year may reach 70,000 acre feet for the April-September period and as much as 11,000 acre feet during July-September.

Ashley Creek:

The April-September yield of Ashley Creek during 1941 was 76,800 acre feet, of which 22,600 acre feet ran off during the July-September period. The snow cover, as measured at Lake Fork Mountain and King's Cabin, indicates a potential water supply equal to that in 1941. It is estimated that the April-September yield of Ashley Creek in 1942 will not exceed 50,000 acre feet of which probably not more than 12,000 acre feet will run off during the July-September period.

Uinta River and Whiterocks Creek:

Water in snow storage on these watersheds this year is approximately equal that in 1941. The April-September yield of Whiterocks Creek at Whiterocks for 1941 was 96,500 acre feet of which 26,400 acre feet ran off during the July-September period. Assuming normal precipitation during April-June, the same yield for the same period in 1942 will probably not exceed 65,000 and 16,000 acre feet, respectively.

The yield of the Uinta River at Neola during the April-September period of 1941 was 156,000 acre feet of which 57,200 acre feet ran off during the July-September period. In 1942 the yields for the same respective periods can not be expected to exceed 80,000 and 30,000 acre feet.

Lake Fork Drainage:

The snow cover on the high areas at the head of Lake Fork this year is 114 percent of that in 1941. The low snow cover is light but the ground is moist. There will be no high spring runoff and the seasonal yield with normal precipitation will probably not exceed 70 percent of that in 1941.

Duchesne River Drainage:

This stream head near the west end of the Uinta Mountains. There are no snow courses directly on the 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 122 percent of that in 1941. In 1942 the April-September yield will probably not exceed 90,000 acre feet during the April-September period of which probably 22,000 acre feet will run off during the July-September period. The excess runoff in 1941 over that indicated by the snow cover was due to abnormal precipitation following the snow surveys.

North Side of the Uinta Mountains:

The snow cover on the watersheds, located on the north side of the Uinta Mountains, is represented by snow measurements at the Hewinta, and Hole-in-the-Rock Ranger Stations. The average cover at the Hole-in-the-Rock is 116 percent of that in 1941. There will be no high spring flow and the seasonal yield will probably be 25 percent less than in 1941, unless abnormally heavy rains occur again during April, May and June.

Blue Mountain Area:

The snow cover in this area is only 88 percent of that in 1941. The seasonal yield with a normal spring precipitation will probably not exceed 80 percent of that in 1941.

La Sal Mountain Area:

The snow cover on the LaSal Mountain this year is 40 percent greater than that in 1941. With normal spring precipitation, the runoff will probably not exceed that in 1941 because of the heavy spring rains that year.

S U M M A R Y

The Utah Cooperative snow surveys show that with a normal spring precipitation, there will be no serious water shortages on any of the streams in Utah during 1942. The surveys show further that in the absence of unusually high melting temperatures there will be little spring high water on most of the streams.

The snow cover is spotted but in general over the entire state, it is heavier than in 1941. The high cover is deficient over Northern Utah with relatively more snow at the lower elevations. In Southern Utah the reverse is true. There the high cover is relatively heavier.

The yield from the snow cover in 1942 will be less than in 1941 unless abnormally high precipitation occurs during April, May and June as it did in 1941. This condition is not to be expected and, therefore, although the snow cover measured on April 1, 1942 is heavier than on the same day in 1941, the seasonal runoff in all instances will be considerably less.

The soil moisture conditions on all watersheds are favorable to a minimum watershed loss during melting. The soil is not frozen and this condition is favorable to a better late season flow.

The holdover storage in the reservoirs of the state is the largest in years. All small reservoirs will fill. Only Bear Lake, Utah Lake and the Strawberry reservoir are expected not to fill. There will be sufficient water to meet all the irrigation needs for lands having storage rights.

In spite of the improved water supply prospects this year over that in 1940 and 1941 it must still be remembered that the natural flow of most of the streams in the state will still be considerably below the long time average.

The data of Table II shows that the forecasted April-September runoff on the different streams will vary from 45 percent on the Duchesne to 123 percent on the Whiterock of the long time normal. The July-September runoff will vary from 45 to 117 percent of the long time normal.

Water conservation should be practiced by all users. The use of storage should be limited to the absolute needs in order that the hold-over may be built up for next year. All water users should clean their canals immediately in order that they may take advantage of the early spring flow where storage reservoirs are not available.

The following tables give a brief summary of the water supply forecasts, reservoir storage and the snow cover data for 1942.

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-- FORECAST SUMMARY --

NAME OF STREAM OR BASIN	Run-off in 1000' of Acre-Feet										Expected Run-off in 1942 in per cent. of 1941	
	1942*		1941		1940		1939		I	II	I	II
	I	II	I	II	I	II	I	II				
BEAR RIVER Bear River at Harer, Idaho Bear Lake Drainage	150.0	50.0	139.4	45.2	39.5	13.2	148.6	25.2	107	160	101	
CACHE VALLEY STREAMS Logan River Blacksmith Fork River	90.0 35.0	29.0 13.0	66.8 20.6	23.0 8.2	77.0 23.9	24.5 9.1	92.5 33.7	23.7 11.9	135	170	126 158	
WEBER RIVER South Fork of Ogden River Weber River at Oakley	42.0 120.0	7.0 25.0	30.5 100.9	5.7 20.1	28.0 72.6	5.2 11.7	36.4 85.7	6.2 14.3	138	119	123 124	
SALT LAKE CITY WATERSHEDS Big Cottonwood Creek	40.0	9.0	40.4	9.3	24.6	3.0	27.5	5.0	99		97	
PROVO RIVER Provo River	130.0	35.0	137.2	50.2	76.4	28.3	110.2	32.9	94		70	
SEVIER RIVER Spa Pitch Tributaries Salina Creek Sevier River at Kingston			103.7	17.8	16.1	9.7	29.6	13.5	100	100	100	
INDEPENDENT STREAMS Fillmore Watersheds Beaver River Coal Creek near Cedar City	32.0 35.0	6.0 4.5	54.7 36.9	11.1 4.3	30.3 13.1	5.1 3.0	16.6 11.6	4.4 3.2	115	58	73 104	
UINTAH BASIN STREAMS Duchesne River at Tabiona Whiterocks River at Whiterocks Ashley Creek at Vernal	90.0 65.0 50.0	22.0 16.0 12.0	113.0 96.5 76.8	23.0 26.4 22.6	62.3 33.4 38.3	14.4 11.6 9.3	74.7 50.0 45.1	15.0 17.9 12.5	80	67	96 61 53	
PRICE RIVER Price River Huntington Creek Cottonwood Creek	65.0 65.0 70.0	20.0 15.0 11.0	99.3 75.6 76.7	29.0 13.8 13.0	48.1 47.2 24.6	18.3 10.5 3.6	47.4 39.8 48.0	14.2 10.7 6.9	65	86	69 80 65	
VIRGIN RIVER Virgin River	110.0	24.0	172.5	27.9	61.5	24.4	38.3	33.0	64		86	

I - April to September, inclusive  
 II - July to September, inclusive  
 \* - Forecasted Flow

COMPARISON OF RUN-OFF FROM PRINCIPAL UTAH STREAMS  
In 1000's of Acre-Feet

Table II

NAME OF STREAMS	April-September Run-off					July-September Run-off					Forecast for 1942	
	Average	1938	1939	1940	1941	Forecast for 1942	Average	1938	1939	1940		1941
Ashley Creek near Vernal	64.0	66.5	45.1	38.3	76.8	50.0	15.9	19.2	12.5	9.3	22.6	12.0
Bear River at Harer	286.0	295.6	148.6	39.5	139.4	150.0	59.7	55.0	25.2	13.2	45.2	50.0
Beaver River at Beaver	33.3	36.0	16.6	30.3	54.7	32.0	7.9	7.7	4.4	5.1	11.1	8.0
Big Cottonwood Creek near Salt Lake City	45.0	40.7	27.5	24.6	40.4	40.0	11.5	7.5	5.0	3.6	9.3	9.0
Blacksmith Fork at Hyrum	72.5	59.4	33.7	23.9	20.6	35.0	24.2	18.6	11.9	9.1	8.2	13.0
Coal Creek near Cedar City		32.1	11.6	13.1	36.9	35.0		3.1	3.2	3.0	4.3	4.5
Cottonwood Creek at Orangeville	72.1	60.3	48.0	24.6	76.7	70.0	15.5	9.0	6.9	3.6	13.0	11.0
Duchesne River at Tabiona	114.3	124.9	74.7	62.3	113.0	90.0	28.0	25.4	15.0	14.4	23.0	22.0
Huntington Creek near Huntington	62.4	56.9	39.8	47.2	75.6	65.0	15.6	14.6	10.7	10.5	18.8	15.0
Logan River at Logan	164.7	147.1	92.5	77.0	66.8	90.0	54.0	43.4	28.7	24.5	23.0	29.0
Ogden River, S. Fork near Huntsville	64.7	60.7	26.4	23.0	30.5	42.0	8.6	6.4	6.2	5.2	5.7	7.0
Price River near Helper	35.2	73.4	47.4	43.1	99.3	65.0	15.7	23.4	14.2	18.3	29.0	20.0
Provo River at Provo	135.9	130.8	110.2	87.4	137.2	130.0	50.1	49.6	32.9	28.3	50.2	35.0
Sevier River near Kingston	57.6	70.9	29.6	13.1	103.7	80.0	15.5	10.4	13.5	9.7	17.8	30.0
Uinta River near Noola	89.4	131.1	77.9	58.3	156.0	80.0	33.4	45.1	33.3	22.3	57.2	50.0
Virgin River at Virgin	95.8	124.6	69.3	61.5	172.5	110.0	31.0	22.3	33.6	24.4	27.9	24.0
Weber River at Oakley	143.7	132.4	83.7	72.6	100.9	120.0	30.5	21.9	14.3	11.7	20.1	25.0
Whiterocks River near Whiterocks	52.7	87.4	50.0	33.4	96.5	65.0	19.1	26.2	17.9	11.6	26.4	16.0

Table III

## AVAILABLE STORAGE IN PRINCIPAL RESERVOIRS

ACRE-FEET - APRIL 1

Reservoir	Maximum Capacity	Contents on April 1, in Acre-feet						Percent Filled in 1942
		1937	1938	1939	1940	1941	1942	
Bear Lake	1,420,000	396,750	582,700	794,000	678,000	406,500	370,080	26.1
East Canyon	28,000	20,000	10,640	19,700	21,000	12,650	22,000	78.5
Echo Reservoir	74,000	49,000	55,470	37,150	19,000	18,140	20,500	27.7
Gunnison	20,000	20,000	18,500	16,500	11,000	11,000	20,000	100.0
Hyrum	14,600	9,721	10,430	9,950	13,200	10,000	13,200	90.5
Moon Lake	30,100	New	5,900	29,900	15,700	21,500	30,100	100.0
Otter Creek	52,600	22,700	40,000	44,800	30,400	24,730	52,600	100.0
Pine View	41,000	1,500	26,100	10,650	17,955	6,620	6,500	20.7
Piute	90,000	45,500	78,000	67,000	59,000	51,740	64,570	71.9
Rocky Ford	25,070	20,000	19,600	18,600	10,130	12,300	21,880	87.3
Scofield	30,000	15,750	8,000	15,500	6,000	5,000	22,400	74.6
Sevier Bridge	236,000	67,600	89,500	150,000	122,820	94,000	211,500	89.5
Strawberry	278,000	61,500	81,580	88,180	54,230	33,200	44,400	15.9
Utah Lake	830,000	303,000	392,900	463,000	372,000	279,000	391,000	47.1

UTAH COOPERATIVE SNOW SURVEYS - 1942  
(Data for all Snow Courses)

Table IV

SNOW COURSES BY DRAINAGE AREAS	Congress 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 of Snow on April 1 in Inches	Water Content of Snow on Date of Survey in % of Normal	Corres- ponding Percent Last Year	Mois- ture Cond- ition Under Snow
							1939	1940	1941				
CACHE VALLEY STREAMS													
Franklin Basin (Idaho)	1	8200	3-29-42	56.9	17.8	31.3	20.4	21.8	15.4	35.5	80.2	43.4	
Tony Grove Lake	2	8300	3-28-42	65.5	23.3	36.1	25.2	27.0	21.7	45.1	51.6	48.0	
Tony Grove Ranger Sta.	3	6250	3-29-42	25.0	7.8	31.2	5.5	2.0	4.6	11.3	69.0	40.7	
Spring Hollow No. 3	4	7000	3-29-42	36.4	12.3	33.8	8.5	8.1	9.8	19.0	64.8	51.5	
Spring Hollow No. 4	5	8000	3-29-42	64.4	21.4	33.3	19.4	20.5	13.4	32.7	65.5	53.3	moist
Mount Logan	6	9000	3-29-42	62.7	22.5	35.9	20.8	23.5	19.4	39.1	57.5	49.6	moist
Smithfield Spring	7	7000	4-1-42	51.1	20.3	39.7	17.8	20.6	17.1	24.4	57.3	52.5	
Garden City Summit	9	8200	3-28-42	45.3	14.1	31.1	16.7	12.6	12.3	24.4	57.8	52.5	
Blake Ranger Station	12-A	8000	3-28-42	45.3	14.1	31.1	16.7	12.6	12.3	24.4	57.8	52.5	
BEAR RIVER													
Garden City Summit	9	8200	3-28-42	45.3	14.1	31.1	16.7	12.6	12.3	24.4	57.8	52.5	
Headwaters of Bear R.	10	8600	3-30-42	36.7	6.3	17.1	9.6	7.2	5.6				
Goodman Ranch	10-A	7900	3-29-42	22.7	3.1	13.6	--	5.5	1.6				
Monte Cristo Ran. Sta.	12	9000	3-30-42	58.1	18.2	31.2	20.3	17.0	13.4	20.4	85.2	30.4	
OGDEN RIVER													
Huntsville-Wheeler Div	11-A	5775	3-31-42	30.3	5.7	28.7	3.6	N.S.	N.R.	11.1	160.5		
Monte Cristo Ran. Sta.	12	9000	3-30-42	58.1	18.2	31.3	20.3	17.0	16.4	20.4	89.2	80.4	
Blake Ranger Station	12-A	8000	3-30-42	58.1	18.2	31.3	11.5	10.7	11.6				
Geertsen Creek	12-B	8200	3-31-42	49.2	18.7	38.0	14.9	17.9	16.7				
WEBER RIVER													
Parley's Canyon Summit	15	7500	3-25-42	57.4	19.2	33.5	14.6	14.4	16.8	21.4	89.0	78.4	wet
Beaver Creek Ran. Sta.	24	7500	3-30-42	24.8	7.7	31.0	4.6	3.3	4.9	10.5	73.4	46.6	
Washington Long Creek	27	10300	4-1-42	79.6	28.2	35.4	24.4	23.6	13.8	45.1	65.3	45.9	
Airway Beacon-Chalk Cr.	29	7000	3-27-42	44.3	14.5	32.7	N.S.	N.S.	N.S.	14.9	97.3	63.7	moist
Smith and Morehouse	30	7600	3-27-42	44.3	14.5	32.7	9.9	10.1	9.5				

UTAH COOPERATIVE SNOW SURVEYS - 1942  
(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 of Snow on April 1 in Inches	Water Content of snow on date of Survey in % of Normal	Corres- ponding Percent last year	Mois- ture Condi- tion under Snow
							1939	1940	1941				
WEBER RIVER (cont.)													
Redden Mine (Upper)	31	9000	3-28-42	54.9	21.2	38.7	17.7	15.9	15.6	24.4	85.7	62.7	wet
Redden Mine (Lower)	31-A	8500	3-28-42	55.5	20.6	37.1	16.5	14.8	15.0				
SALT LAKE WATERSHEDS				Abandoned									
Parrish Creek Summit	13	8000		77.8	30.8	39.6	17.8	24.0	25.5				
Barnard Creek	13-A	8000	3-31-42	50.4	16.2	32.2	21.0	26.1	26.0				
Lamb's Canyon	14	6600	3-28-42	57.4	19.2	33.5	10.0	11.5	14.6				
Parleys Canyon Summit	15	7500	3-25-42	72.7	26.4	36.3	14.6	14.4	16.8	21.4	89.7	78.4	
Silver Lake	16	8725	3-29-42	60.3	22.4	37.1	20.5	18.4	19.9				
Mill D South Fork	16-A	7400	5-29-42				17.3	17.3	15.7				
South Willow Creek	66	8000						13.2	19.2				
PROVO R. & UTAH LAKE													
Dutchman Ranger Station	17	7500	3-31-42	46.6	18.9	40.4	14.1	11.0	18.1	26.5	71.3	68.3	
Timpanogos Cave Camp	18	5500	3-27-42	8.7	3.4	39.1	N.S.	N.S.	N.S.				
South Fork Ranger Sta.	19	6100	3-27-42	26.8	11.4	42.5	N.S.	N.S.	4.9				
Camp Altamont	20	7300	3-27-42	48.3	19.2	39.8	10.1	8.4	16.0				
Timpanogos Loop Road Div.	21	8200	3-27-42	67.0	25.7	38.4	15.8	13.3	21.5				
Aspen Grove	21-A	6900	3-27-42	45.6	18.3	40.1	10.7	7.5	17.8				
Y.L.M.I.A. Site	21-B	6000	3-27-42	27.8	12.2	44.0	5.3	Patchy	11.5				
Hobble Creek Summit	22	7300	3-30-42	36.7	12.7	34.6	7.6	10.3	10.2				
Daniels-Strawberry Sum.	23	8000	3-30-42	43.0	13.4	31.2	10.2	10.3	11.1	21.5	62.4	51.6	
Beaver Creek Ran. Sta.	24	7500	3-30-42	24.6	7.7	31.0	4.6	3.3	4.9	10.5	73.2	46.6	
Soapstone Range# Sta.	25	7800	3-31-42	37.1	11.7	31.5	7.3	8.1	8.7	15.2	77.0	57.1	
Trial Lake	26	9800	3-31-42	73.1	23.9	32.7	21.3	19.9	18.5	36.3	65.9	51.0	
Washington Long Lake	27	10300	4-1-42	79.6	28.2	35.4	24.4	23.6	19.8	43.1	65.4	45.9	
Lost Lake	28	9900	4-1-42	65.7	21.6	32.9	19.6	18.4	17.7	33.8	63.9	52.4	
STRAWBERRY RESERVOIR													
Daniels-Strawberry Sum.	23	8000	3-30-42	43.0	13.4	31.2	10.2	10.3	11.1	21.5	62.4	51.6	

UTAH COOPERATIVE SNOW SURVEYS - 1942

(Data for all Snow Courses)

SNOW COURSES BY DRAINAGE AREAS	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 of Snow on April 1 in Inches	Water Content of Snow on Date of Survey in % of Normal	Corres- ponding Percent Last Year	Mois- ture Cond- ition Under Snow
						1939	1940	1941				
STRAWBERRY RES. (cont.)												
Last Portal	7560	3-31-42	39.6	11.8	29.8	8.8	10.0	10.3				
East Portal-Strawberry Divide	8000	3-31-42	46.1	18.1	32.2	17.8	17.4	16.9				
NORTH SIDE UINTAH MT.												
Hewinta Ranger Station	9500	3-28-42	41.2	10.7	26.0	6.3	N.Rep.	N.R.				
Hole-in-the-Rock	9150	3-18-42	30.7	5.8	16.2	5.6	3.8	5.0				
Beaver Meadows	8500						6.1	7.3				
SOUTH SIDE UINTAH MT.												
Lake Fork Mountain	10500	3-26-42	56.5	11.4	20.2	5.1	4.1	9.1				
Paradise Park	10500	3-26-42	52.3	11.7	22.4	7.3	3.8	5.6				
Mosby Mountain No. 1	9700	3-26-42	42.6	8.5	19.9	6.1	5.1	9.9				
Mosby Mountain No. 2	9500	3-26-42	48.4	8.7	18.0	6.6	5.0	8.2				
King's Cabin No. 1	8800	3-24-42	35.7	7.1	19.9	6.5	4.3	8.0	12.6	56.4	70.6	
King's Cabin No. 2	8600	3-24-42	32.3	7.1	22.0	6.4	3.3	3.9				
Indian Canyon	9100	3-28-42	42.2	9.2	21.8	5.4	4.2	8.7				
PRICE RIVER												
Indian Canyon	9100	3-28-42	42.2	9.2	21.8	5.4	4.2	3.7				
Gooseberry Reservoir	8700	3-29-42	63.0	20.3	32.2	16.0	20.6	20.3	28.3	71.9	71.8	
Mammoth Ranger Station	8000	3-28-42	64.7	22.1	34.2	18.8	21.0	21.7	29.0	76.3	74.9	
Staley Ranch	7600	3-31-42	24.3	5.3	21.8	N.S.	5.2	3.9				
Dry Valley Divide	7000	3-31-42	34.1	8.3	24.3	N.S.	8.2	7.3				
Clear Creek	6150	3-31-42	25.2	6.8	27.0	N.S.	4.6	7.7				
Huntington Horseshoe	9800	3-29-42	80.4	27.1	33.7	21.6	28.1	26.9	51.3	85.2	84.5	
FILLMORE												
Pine Creek-Chalk Creek	8500	3-30-42	41.1	12.8	31.1	10.6	15.3	11.2				
HUNTINGTON, COTTONWOOD AND FERRON CREEKS												
Huntington Horseshoe	9800	3-29-42	80.4	27.1	33.7	21.8	28.1	26.9	31.8	85.2	81.5	

UTLH COOPERATIVE SNOW SURVEYS - 1942  
(Data for all Snow Courses)

Table IV (cont.)

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 of Snow on April 1 in Inch.	Water Content of Snow on Date of Survey in % of Normal	Corresponding Percent of Last Year	Mois- ture Condi- tion Under Snow
							1939	1940	1941				
HUNTINGTON, COTTONWOOD & FERRON CRK. (cont.)													
G.B.E.S. Alpine	47	10240	3-27-42	76.3	25.2	33.5	20.5	24.6	22.4				
Seeley Cr. R.S. No. 1	48	10000	3-27-42	78.7	25.8	32.8	20.0	24.0	21.6	22.5	103.0	89.9	
Seeley Cr. R.S. No. 2	48-A	10000	3-28-42	61.1	20.0	32.7	12.0	19.4	16.1				
SAN PITCH RIVER													
Mammoth Ranger Station	42	8800	3-28-42	64.7	22.1	34.2	16.8	21.0	21.7	29.0	76.3	74.9	
G.B.E.S. Oaks Man. Sta.	44	7550	3-29-42	28.9	7.7	26.6	4.2	9.1	5.9				
G.B.E.S. Headquarters	45	8700	3-28-42	53.6	17.0	31.7	15.3	20.7	16.1				
G.B.E.S. Meadows	46	10000	3-27-42	77.6	25.2	32.5	20.8	22.9	21.0				
G.B.E.S. Alpine	47	10240	3-27-42	76.3	25.2	34.0	20.5	24.6	22.4				
SEVIER RIVER													
Gooseberry Ranger Sta.	50	8400	3-27-42	44.7	10.7	24.0	10.3	9.7	11.2				
Fish Lake	51	8700	3-27-42	34.0	6.7	19.8	6.1	7.6	8.2				
Kimberly Mine (Lower)	52	8300	3-28-42	45.7	14.7	32.1	3.1	11.5	10.6	13.2	100.0		
Kimberly Mine (Upper)	52-A	8900	3-28-42	58.0	18.9	32.6	12.0	14.0	14.6				
Widstoe-Escalante Sum.	53	9500	3-30-42	35.3	12.2	34.6	7.4	4.5	13.3	11.6	105.0	114.8	
Bryce Canyon	54	8000	3-28-42	20.1	6.6	32.8	3.9	N.S.	7.4	5.9	134.0	128.3	
Panquitch Lake	55	8200	3-25-42	23.4	7.9	33.6	6.0	3.1	7.6				
Gravel Springs Junction	56	7500					N.S.	N.S.	8.1				
Harris Flat Ranger Sta.	57	7700	3-31-42	29.0	9.1	31.4	3.6	Patchy	14.2	12.4	73.4	114.5	
Duck Creek Spring	58	8560	3-27-42	66.2	17.4	26.3	10.1	7.0	22.8				
Cedar Breaks	59	10200	3-27-42	75.0	24.8	33.1	13.7	16.0	25.1				
BEAVER RIVER													
Merchants Valley	63	8200	3-30-42	39.5	10.8	27.4	6.1	12.5	16.2	11.5	94.0	141.0	
Otter Lake	63-A	9300	3-29-42	53.3	15.1	28.3	11.3	17.8	19.7				
Big Flat	63-B	10000	3-29-42	67.7	19.3	28.5	13.9	20.7	23.6				

UTAH COOPERATIVE SNOW SURVEYS - 1942  
(Data for all Snow Coreses)

Table IV (cont.)

SNOW COURSES BY DRAINAGE AREAS	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 of Snow on April 1 in Inches	Water Content of Snow on Date of Survey in % of Normal	Corres- ponding Percent Last Year	Mois- ture Condi- tion Under Snow
						1939	1940	1941				
COAL CREEK												
Cedar Breaks	59 10200	3-27-42	75.0	24.8	33.1	18.7	16.0	25.1				
Co-op Flat	60 9500	3-26-42	63.8	21.6	33.9	13.1	10.9	21.8	19.0	113.8	114.8	
Webster Flat	61 9200	3-29-42	57.5	19.6	34.1	14.0	11.0	23.0	18.6	105.3	123.6	
VIRGIN RIVER												
Gray el Springs Junct.	56 7500											
Harris Flat Ranger Sta.	57 7700	3-31-42	29.0	9.1	31.4	N.S.	N.S.	8.1	12.4	73.4	114.5	
Duck Creek Ranger Sta.	58 8560	3-27-42	66.2	17.4	26.3	10.1	7.0	22.8				
Cedar Breaks	59 10200	3-27-42	75.0	24.8	33.1	18.7	16.0	25.1				
Co-op Flat	60 9500	3-26-42	63.8	21.6	33.9	13.1	10.9	21.8	19.0	113.8	114.8	
Webster Flat	61 9200	3-29-42	57.5	19.6	34.1	14.0	11.0	23.0	18.6	105.3	123.6	
SANTA CLARA RIVER												
Pine Valley	62 9150	3-27-42	61.1	21.3	34.8	14.1	16.1	27.6				
LA SAL & BLUE MT.												
La Sal Mountain	64 8500	3-28-42	48.8	15.2	31.2	6.8	9.3	10.9				
Buckboard Flat	65 9000	3-29-42	46.5	14.4	31.5	13.8	7.5	16.3				