



United States
Department of
Agriculture

Soil
Conservation
Service



Utah

Basin Outlook Report

January 1, 1993



Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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STATE OF UTAH GENERAL OUTLOOK
January 1, 1993

SUMMARY

After six consecutive years of below normal snowpack and streamflow, wateryear 1993 holds some promise of at least an average snowpack accumulation. The good news is that most areas have near normal snowpacks, however watershed conditions across the state are in extremely poor condition. Baseflow in most streams and rivers is much below average, indicating depleted soil moisture and groundwater reserves. This also means reservoir inflows are extremely low and consequently won't gain much ground on the reservoir storage deficit until spring. Streamflow during the past runoff season was generally the second or third lowest on record. Most streamflow forecasts are for near or just slightly below average April through July runoff volumes.

SNOWPACK

Snowpacks in Utah, as measured by the SNOTEL system, are much higher than last year. Most areas have between 30% and 60% more snow this year than last, which indicates just how poor conditions were in water year 1992. Most areas of Utah have between 100 and 115% of average. The notable exceptions are the Escalante and Dirty Devil which have only 60% to 70% of normal.

PRECIPITATION

Mountain precipitation, as measured by the SCS SNOTEL system, was above average statewide with the exception of the Escalante and Dirty Devil drainages. These two areas received only 75% of normal. Most areas across Utah have between 100% and 130% of average seasonal (October through December) precipitation. This is 20% to 40% greater than last year.

The National Weather Service reports the lower elevation precipitation around the state as generally above average, 90% to 135% of average.

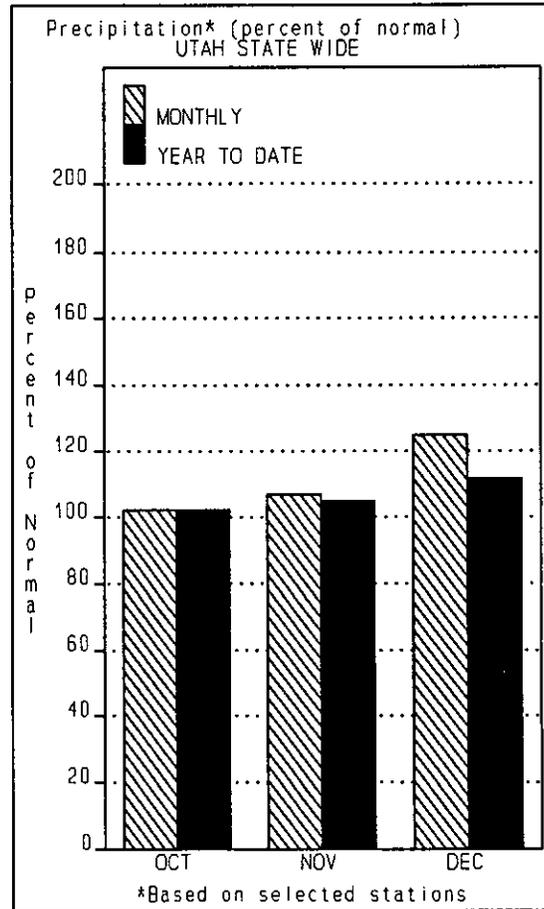
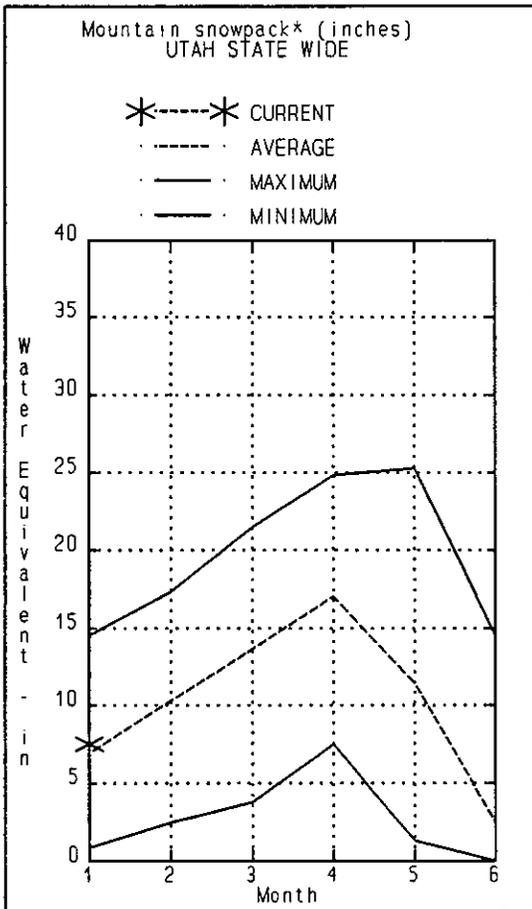
RESERVOIRS

Storage in 24 of Utah's key irrigation reservoirs is at 27% of capacity, compared to 50% last year. This is about 43% of normal for this time of year. Some of Utah's larger reservoirs stand only a remote chance of filling this season. These would include Bear Lake, Pineview, Jordanelle, Strawberry, Scofield and Sevier Bridge. Some of these could take several years of above average streamflow to fill.

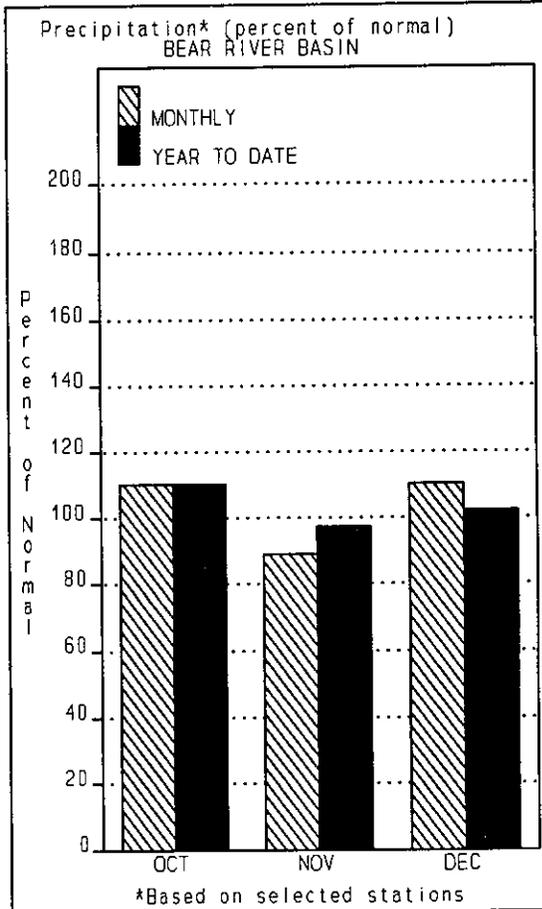
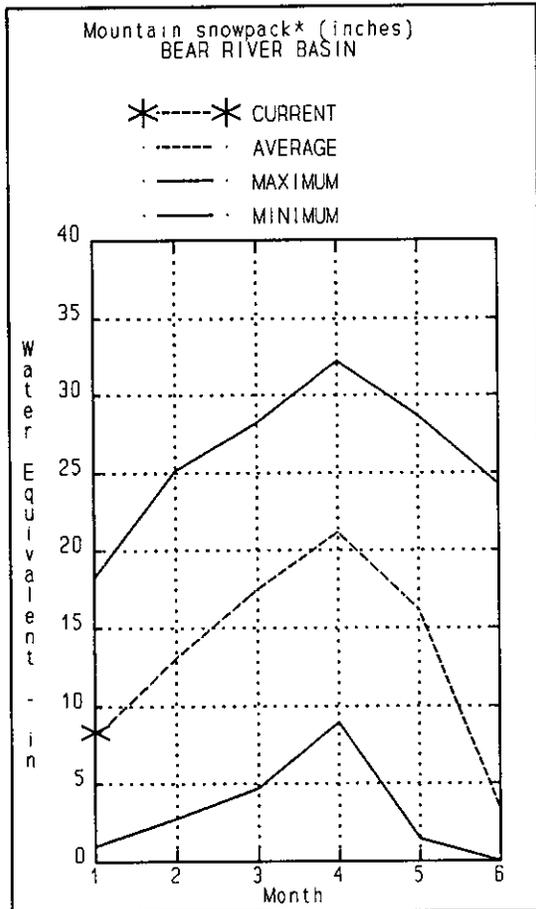
STREAMFLOW

Streamflow forecasts for springtime runoff are for near to slightly below average flow. This marks the seventh consecutive year of

below normal streamflow projections. Forecasts range from 80% on the Bear River to 125% in southeastern Utah. Most areas are forecast near 85% of normal streamflow, almost double the observed flows of last year.



BEAR RIVER BASIN
January 1, 1993



Snowpack water equivalent in the Bear River Basin is at 104% of average, considerably above last years 73% on January first. While snowpack is slightly above average, six years of drought has left soil moisture and groundwater severely depleted which will negatively impact snowmelt runoff. Mountain precipitation was near average from October through November, (106%) and above average in December (110%). The total seasonal accumulation is now 102% of the 1961-1990 average. Streamflow in the Bear River Basin has been extremely low, indicating poor overall watershed conditions. Reservoir storage is near 15% of capacity. Streamflow forecasts range from 77% to 86% of average.

BEAR RIVER BASIN
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)	30%	10%		
BEAR RIVER nr Ut-Wy Stateline	APR-JUL	65	84	97	84	110	129	115
BEAR RIVER nr Woodruff (2)	APR-JUL	15.0	80	124	83	168	235	149
BIG CREEK nr Randolph	APR-JUL	0.1	1.5	3.1	82	4.7	7.0	3.8
BEAR RIVER nr Randolph	APR-JUL	14.0	61	106	81	151	215	131
SMITHS FORK nr Border, WY	APR-SEP	61	82	97	82	112	133	118
THOMAS FORK nr WY-ID Stateline	APR-SEP	12.0	22	28	78	35	44	36
BEAR RIVER near Harer	APR-SEP	128	220	280	81	340	430	345
BEAR RIVER blw Stewart Dam (2)	APR-SEP	107	180	230	77	280	355	298
LOGAN RIVER near Logan	APR-JUL	47	74	92	86	110	137	107
BLACKSMITH FORK near Hyrum	APR-JUL	9.0	31	45	83	59	81	54

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of December

BEAR RIVER BASIN
Watershed Snowpack Analysis - January 1, 1993

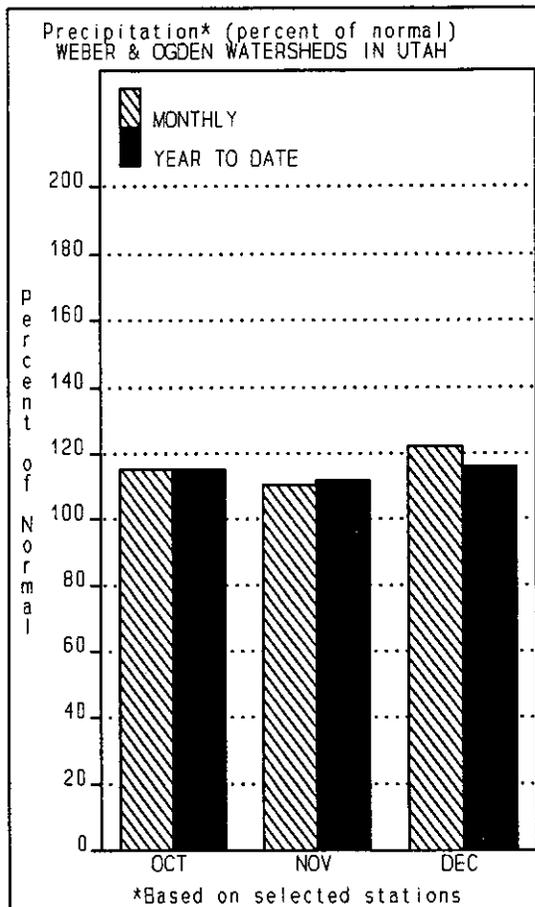
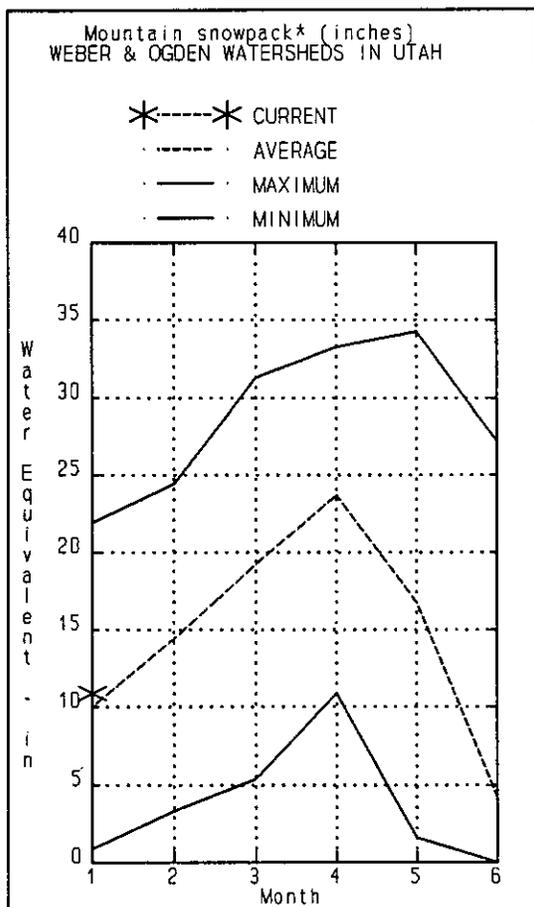
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	207.0	457.0	992.6	BEAR RIVER, UPPER (abv Ha	6	130	108
HYRUM		NO REPORT			BEAR RIVER, LOWER (blw Ha	8	152	100
PORCUPINE	11.3	3.0	4.6	2.8	LOGAN RIVER	4	151	101
WOODRUFF NARROWS	57.3	4.3	25.3	---	RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	1.7	0.7	---	BEAR RIVER BASIN	14	141	104

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

WEBER & OGDEN BASINS
January 1, 1993



Snowpacks on the Weber and Ogden watersheds are 40% to 50% greater than the past two years. Individual sites range from 80% to 140% with a basin average near 110% of normal. This is good news for a watershed that was particularly hard hit last year. Years of below normal snowpacks have severely depleted soil moisture and groundwater supplies. These deficits could negatively impact this years snowmelt runoff. Mountain precipitation, (October through December) is near 115% of average. Reservoir storage is near 30% of capacity, much lower than last year which was 62% of capacity. Streamflow forecasts range from 78% to 89% of normal.

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SMITH AND MOREHOUSE CREEK near Oakle	APR-JUN	12.0	20	26	87	32	40	30
WEBER RIVER near Oakley	APR-JUL	73	94	109	89	124	145	122
ROCKPORT RESERVOIR inflow	APR-JUL	66	96	116	86	136	166	135
CHALK CREEK at Coalville, Ut	APR-JUL	12.0	28	39	89	50	66	44
WEBER RIVER near Coalville, Ut	APR-JUL	58	89	110	81	131	163	136
ECHO RESERVOIR Inflow	APR-JUL	76	121	151	86	181	225	176
LOST CREEK Res Inflow	APR-JUL	1.3	8.1	14.3	83	21	30	17.2
EAST CANYON CREEK near Morgan	APR-JUL	11.0	20	25	83	31	39	30
WEBER RIVER at Gateway	APR-JUL	220	260	290	84	320	360	347
S FORK OGDEN RIVER nr Huntsville	APR-JUL	24	39	49	78	59	74	63
PINEVIEW RESERVOIR Inflow	APR-JUL	40	75	98	79	122	156	124
WHEELER CREEK near Huntsville	APR-JUL	2.4	4.1	5.2	84	6.3	8.0	6.2

WEBER & OGDEN WATERSHEDS in Utah
Reservoir Storage (1000 AF) - End of December

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - January 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	0.6	3.5	2.1	OGDEN RIVER	4	182	100
EAST CANYON	49.5	19.4	36.8	33.3	WEBER RIVER	8	154	116
ECHO	73.9	14.2	57.0	41.4	WEBER & OGDEN WATERSHEDS	12	163	110
LOST CREEK	22.5	6.6	11.6	12.7				
PINEVIEW	110.1	7.3	37.3	50.0				
ROCKPORT	60.9	23.0	23.7	34.1				
WILLARD BAY	215.0	92.2	166.4	104.9				

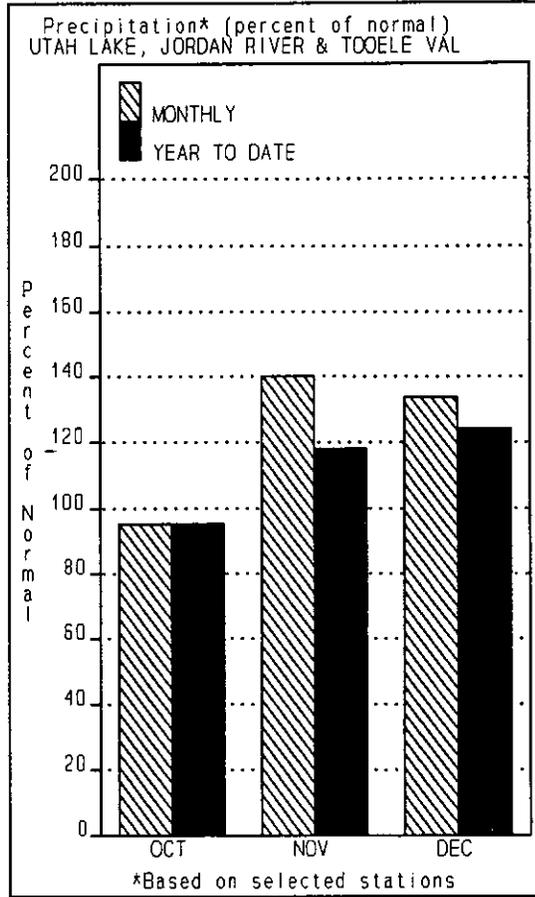
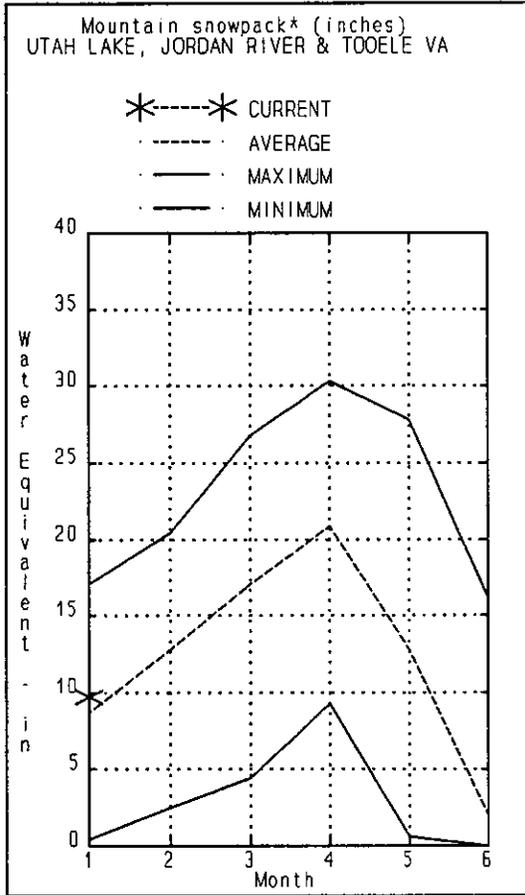
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(2) - The value is natural flow - actual flow may be affected by upstream water management.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY BASINS
January 1, 1993



Snowpack on the Provo - Utah Lake watershed is slightly above average (115%) and a little more than double what it was last year. In the Tooele area, snowpacks are even higher, near 130% of normal. Watershed conditions are suffering the effects of six drought years and may negatively affect snowmelt runoff. Seasonal mountain precipitation, (October through December) is near 124% of average. Storage in Utah Lake is quite low at 35% of capacity and in Deer Creek, 48% of capacity. Streamflow forecasts range from 82% to 95% of average.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
PAYSON CREEK near Payson	APR-JUL	0.3		4.4	92		8.5	4.8
SPANISH FORK near Castilla	APR-JUL	14.0		69	90		130	77
HOBBLE CREEK near Springville	APR-JUL	4.3		16.7	89		29	18.8
PROVO near Hailstone	APR-JUL	58		102	94		146	109
PROVO below Deer Creek Dam	APR-JUL	51	84	115	90	146	179	128
AMERICAN FORK near American Fk.	APR-JUL	13.0	26	30	94	34	47	32
UTAH LAKE inflow	APR-JUL	91	196	275	85	355	460	324
LITTLE COTTONWOOD CRK near SLC	APR-JUL	24	32	37	95	42	50	39
BIG COTTONWOOD CRK near SLC	APR-JUL	22	30	34	89	38	46	38
PARLEY'S CREEK near SLC	APR-JUL	3.8	10.1	13.5	85	16.9	23	15.9
MILL CREEK near SLC	APR-JUL	2.4	3.9	5.5	86	7.1	8.4	6.4
EMIGRATION CREEK near SLC	APR-JUL	0.1		3.9	93		7.7	4.2
CITY CREEK near SLC	APR-JUL	3.0	6.3	7.6	92	8.9	12.2	8.3
VERNON CREEK near Vernon	APR-JUN	0.1	0.5	0.9	82	1.3	1.9	1.1
SETTLEMENT CREEK near Tooele	APR-JUL	0.1	1.2	2.0	87	2.8	3.9	2.3
SOUTH WILLOW CREEK near Grantsville	APR-JUL	0.1	1.6	2.6	84	3.6	5.1	3.1

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of December

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - January 1, 1993

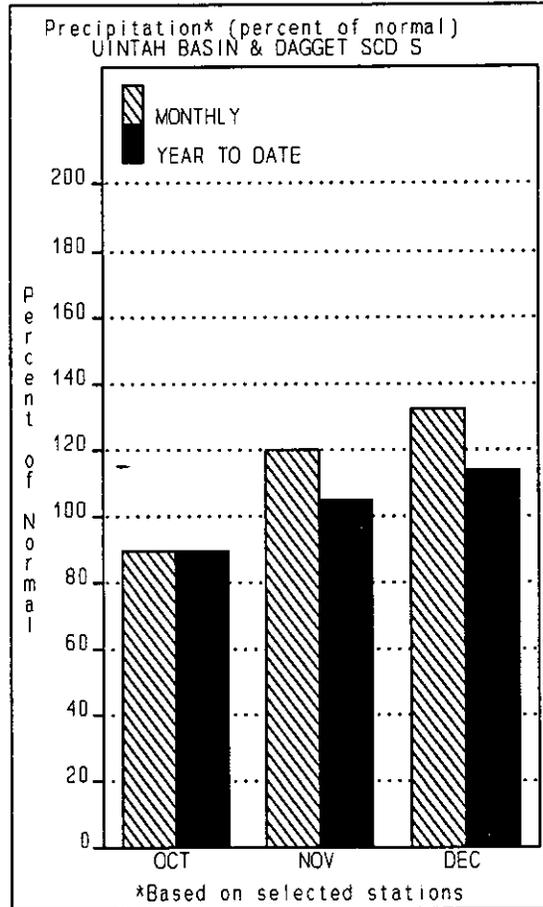
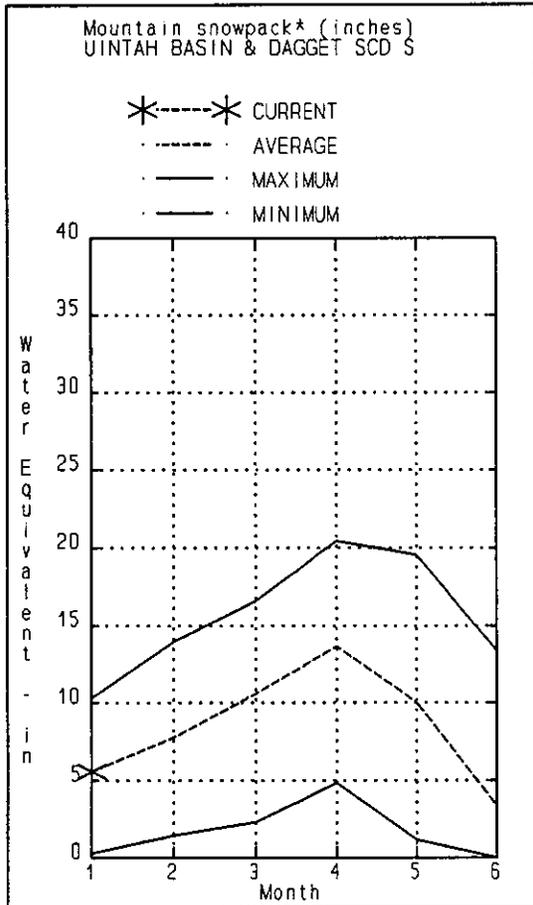
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	72.0	102.2	93.5	PROVO RIVER & UTAH LAKE	7	219	115
GRANTSVILLE	3.3	0.6	1.0	---	PROVO RIVER	4	220	113
SETTLEMENT CREEK	1.0	0.6	0.7	0.6	JORDAN RIVER & GREAT SALT	5	143	101
STRAWBERRY-ENLARGED	1105.9	383.9	481.3	---	TOOELE VALLEY WATERSHEDS	4	170	132
UTAH LAKE	870.9	304.4	392.4	601.6	UTAH LAKE, JORDAN RIVER &	16	174	113
VERNON CREEK	0.6	0.3	0.3	0.4				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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UINTAH BASIN & DAGGET SCD'S
January 1, 1993



Snowpacks across the Uintas and the Strawberry area are near average, ranging from 80% to 140% with most areas near 102% of normal. The north and south slopes have similar snowpacks this year as opposed to last year when the north slope consistently had a deeper pack. Seasonal precipitation, (October through December) is above average, near 115%. Reservoir storage is at 57% of capacity, 15% less than last year. Streamflow forecasts range from 90% to 102% of normal.

UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		===== Wetter =====>>				
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	61	78	89	93	100	117	96
STATE LINE RESERVOIR INFLOW	APR-JUL	18.0	25	29	97	34	40	30
HENRYS FORK nr Manila	APR-JUL	17.0	33	43	102	54	69	42
FLAMING GORGE RES INFLOW	APR-JUL	615	860	1030	81	1200	1450	1267
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	11.4	15.9	19.0	96	22	27	19.8
ASHLEY CK nr Vernal	APR-JUL	31	42	50	98	58	70	51
WF DUCHESNE R nr Hanna	APR-JUL	13.0	19.0	24	92	29	35	26
DUCHESNE R nr Tabiona	APR-JUL	64	83	95	90	107	126	105
ROCK CK nr Mountain Home	APR-JUL	57	74	85	90	97	114	94
UPPER STILLWATER RESV Inflow	APR-JUL	50	65	75	90	85	100	83
DUCHESNE R abv Knight Diversion	APR-JUL	100	142	170	89	198	240	191
STRAWBERRY RESV (enlarged) Inflow	APR-JUL	37	50	59	95	68	81	62
CURRENT CREEK RESV Inflow	APR-JUL	10.8	16.3	20	95	24	29	21
STARVATION RESV Inflow	APR-JUL	83	105	120	96	135	157	125
MOON LAKE Inflow	APR-JUL	40	53	62	89	71	84	70
YELLOWSTONE R nr Altonah	APR-JUL	36	52	63	97	74	90	65
DUCHESNE R at Myton 2	APR-JUL	118	197	250	95	305	380	263
WHITEROCKS R nr Whiterocks	APR-JUL	22	40	52	90	64	82	58
UINTA R nr Neola	APR-JUL	41	67	85	100	103	129	85
DUCHESNE R nr Randlett 2	APR-JUL	50	199	300	91	400	550	328

UINTAH BASIN & DAGGET SCD'S
Reservoir Storage (1000 AF) - End of December

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - January 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	3012.4	3326.6	---	UPPER GREEN RIVER in UTAH	6	96	107
MOON LAKE		NO REPORT			ASHLEY CREEK	2	136	107
RED FLEET	25.7	17.8	19.2	---	BLACK'S FORK RIVER	2	83	95
STEINAKER	33.4	13.1	21.6	18.2	SHEEP CREEK	1	88	142
STARVATION	165.3	101.0	120.5	105.2	DUCHESNE RIVER	11	154	101
STRAWBERRY-ENLARGED	1105.9	383.9	481.3	---	LAKE FORK-YELLOWSTONE CRE	4	121	92
					STRAWBERRY RIVER	4	231	108
					UINTAH-WHITEROCKS RIVERS	2	154	113
					UINTAH BASIN & DAGGET SCD	17	131	102

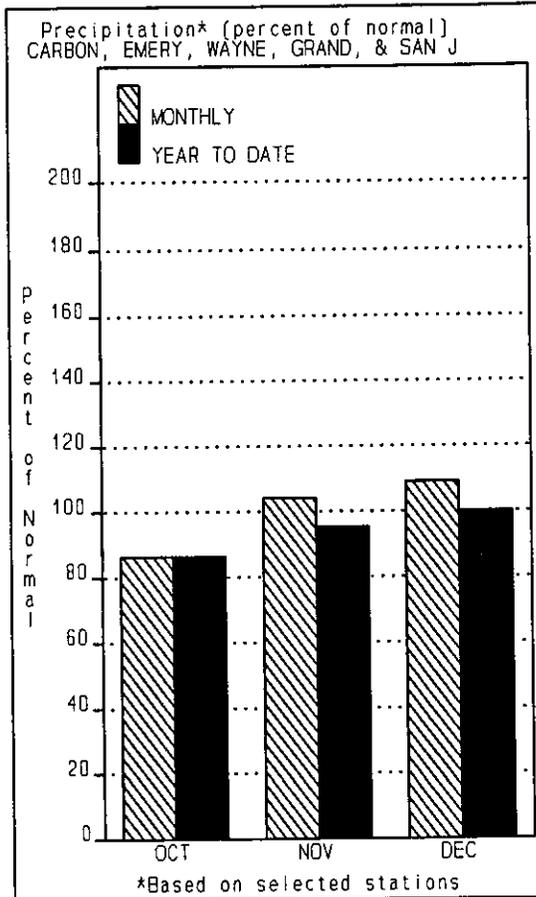
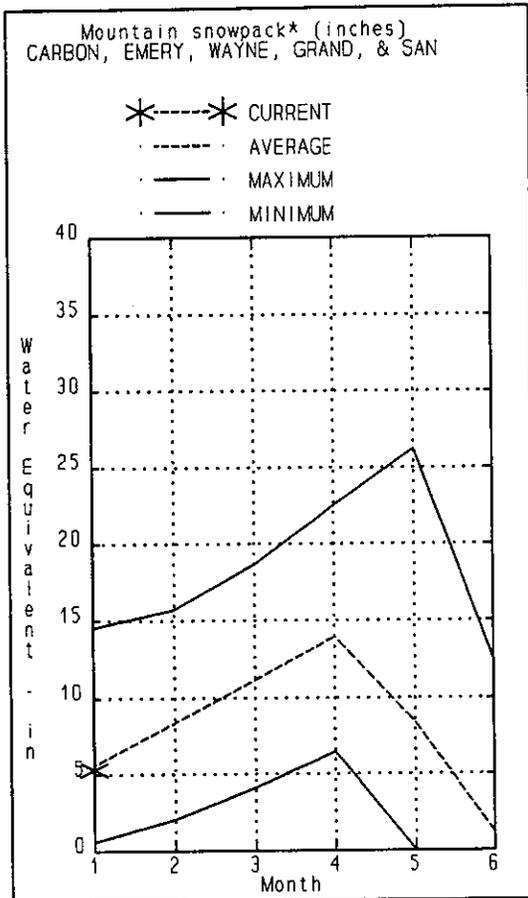
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(2) - The value is natural flow - actual flow may be affected by upstream water management.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN CO
January 1, 1993



The snowpacks in southeastern Utah range from much below average (62%) over the Dirty Devil watershed to much above average (140%) in the Book Cliff area. Snowpacks are typically 10% to 50% greater than last year. In general, water supply conditions are much better than last year. Seasonal mountain precipitation, (October through December) ranges from 81% to 130% of the 1961-1990 average. Reservoir storage is less than last year by about 10% and is near 27% of capacity. Streamflow forecasts range from 82% to 141% of average.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	Future Conditions <<==== Drier =====>> <==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
GOOSEBERRY CK nr Scofield	APR-JUL	5.4	8.7	11.0	92	13.3	16.6	12.0
SCOFIELD RESV Inflow	APR-JUL	29	39	46	105	53	63	44
WHITE R blw Tabbyune Ck	APR-JUL	6.5	13.6	18.5	99	23	31	18.7
GREEN R at Green River, UT	APR-JUL	1480	2180	2650	85	3120	3820	3132
ELECTRIC LAKE Inflow	APR-JUL	7.8	11.4	13.8	91	16.2	19.8	15.1
HUNTINGTON CK nr Huntington 2	APR-JUL	15.0	28	37	95	46	59	39
JOE'S VALLEY RESV Inflow	APR-JUL	25	41	52	98	63	80	53
FERRON CK nr Ferron	APR-JUL	18.0	30	38	97	46	58	39
COLORADO R nr Cisco	APR-JUL	1860	2920	3640	87	4360	5420	4165
MILL CK nr Moab	APR-JUL	1.5	4.6	6.8	124	9.0	12.1	5.5
INDIAN CK nr Monticello	MAR-JUL	0.8	6.5	10.4	125	14.3	20	8.3
SEVEN MILE CK nr Fish Lake	APR-JUL	0.4	3.3	5.3	82	7.3	10.2	6.5
MUDDY CK nr Emery	APR-JUL	0.6	10.1	16.6	85	23	33	19.6
LLOYD'S RESV Inflow	MAR-JUL	1.9	2.4	4.8	141	7.2	10.9	3.4
RECAPTURE RESV Inflow	MAR-JUL	0.9	4.9	7.6	125	10.3	14.3	6.1
SAN JUAN R nr Bluff	APR-JUL	440	825	1090	95	1350	1740	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of December

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - January 1, 1993

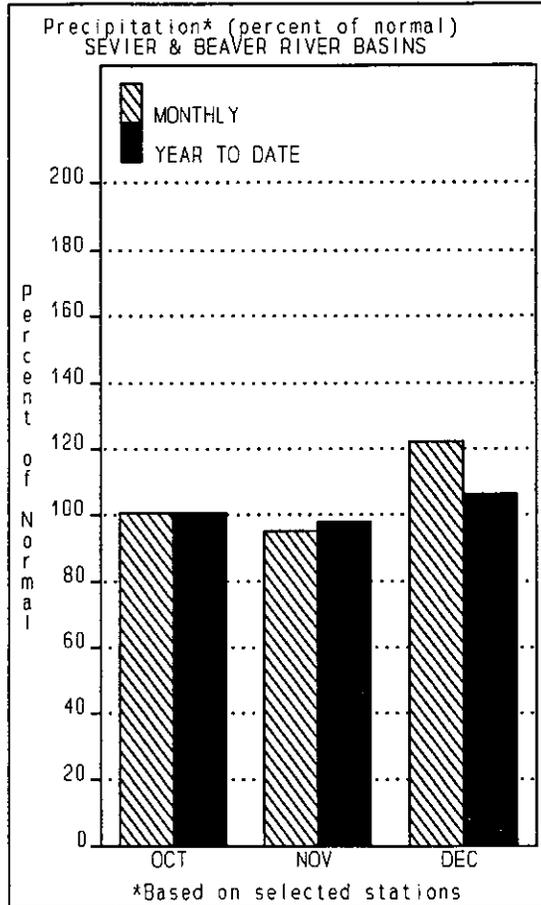
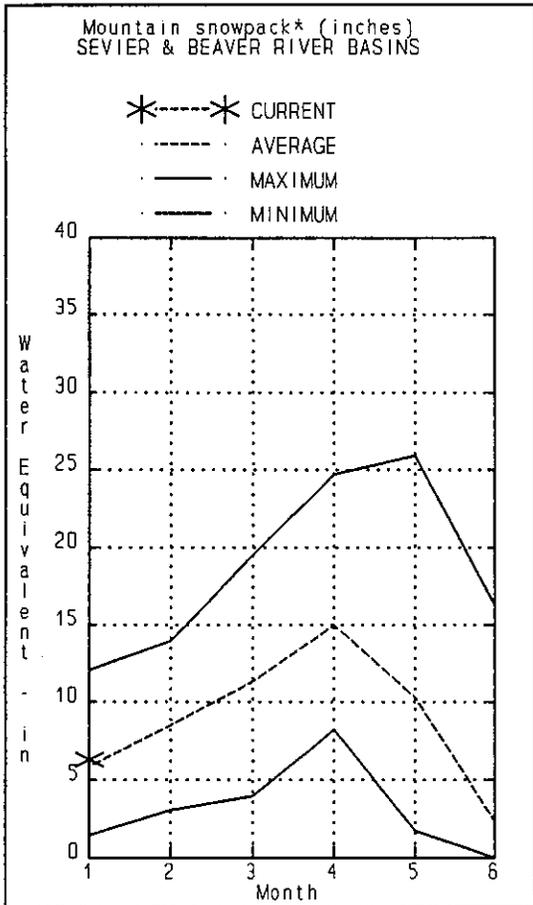
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	1.5	2.8	2.0	PRICE RIVER	3	193	107
JOE'S VALLEY	61.6	25.3	31.0	42.7	SAN RAFAEL RIVER	3	146	92
KEN'S LAKE	2.3	0.8	0.9	---	MUDDY CREEK	1	129	71
MILL SITE	16.7	10.9	11.4	3.0	FREMONT RIVER	3	69	62
SCOFIELD	65.8	2.8	8.3	30.3	LASAL MOUNTAINS	1	105	80
					BLUE MOUNTAINS	1	97	193
					WILLOW CREEK	1	129	200
					CARBON, EMERY, WAYNE, GRA	13	128	97

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

SEVIER & BEAVER RIVER BASINS
January 1, 1993



Snowpacks in the Sevier and Beaver watersheds are at 111% and 85% respectively. For the Sevier basin, this is 40% greater than last year. For the Beaver watershed, this snowpack is similar to that of last year. The Sevier and Beaver watersheds have had several consecutive years of drought and this will negatively impact snowmelt runoff volumes this spring. Seasonal mountain precipitation (October through December) is near average over the Sevier (106%) and the Beaver (99%). Reservoir storage in the Sevier Basin is 24% of capacity, 10% less than last year. Streamflow forecasts range from 77% to 93% of normal.

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SEVIER at Hatch	APR-JUL	5.0	35	49	91	63	93	54
SEVIER near Circleville	APR-JUL	19.0		67	89		115	75
SEVIER near Kingston	APR-JUL	19.0	55	73	88	91	127	83
ANTIMONY CREEK near Antimony	APR-JUL	2.7		5.7	77		8.7	7.4
E F SEVIER near Kingston	APR-JUL	5.0	15.0	25	83	35	53	30
SEVIER blw Piute Dam	APR-JUL	16.0	73	100	87	128	184	115
CLEAR CREEK near Sevier	APR-JUL	6.6		19.9	93		34	21
PLEASANT CREEK near Pleasant	APR-JUL	3.6		7.0	82		10.4	8.5
EPHRAIM CREEK near Ephraim	APR-JUL	4.7		10.8	86		17.0	12.6
SEVIER nr Gunnison	APR-JUL	65		200	84		425	239
CHICKEN CREEK near Levan	APR-JUL	2.1	3.1	3.8	81	4.5	5.5	4.7
OAK CREEK near Oak City	APR-JUL	0.1	0.6	1.4	82	2.2	3.4	1.7
BEAVER RIVER near Beaver	APR-JUL	2.0	14.0	23	89	32	46	26
MINERSVILLE RESERVOIR inflow	APR-JUL	1.5	7.4	14.0	84	21	30	16.7

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of December

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - January 1, 1993

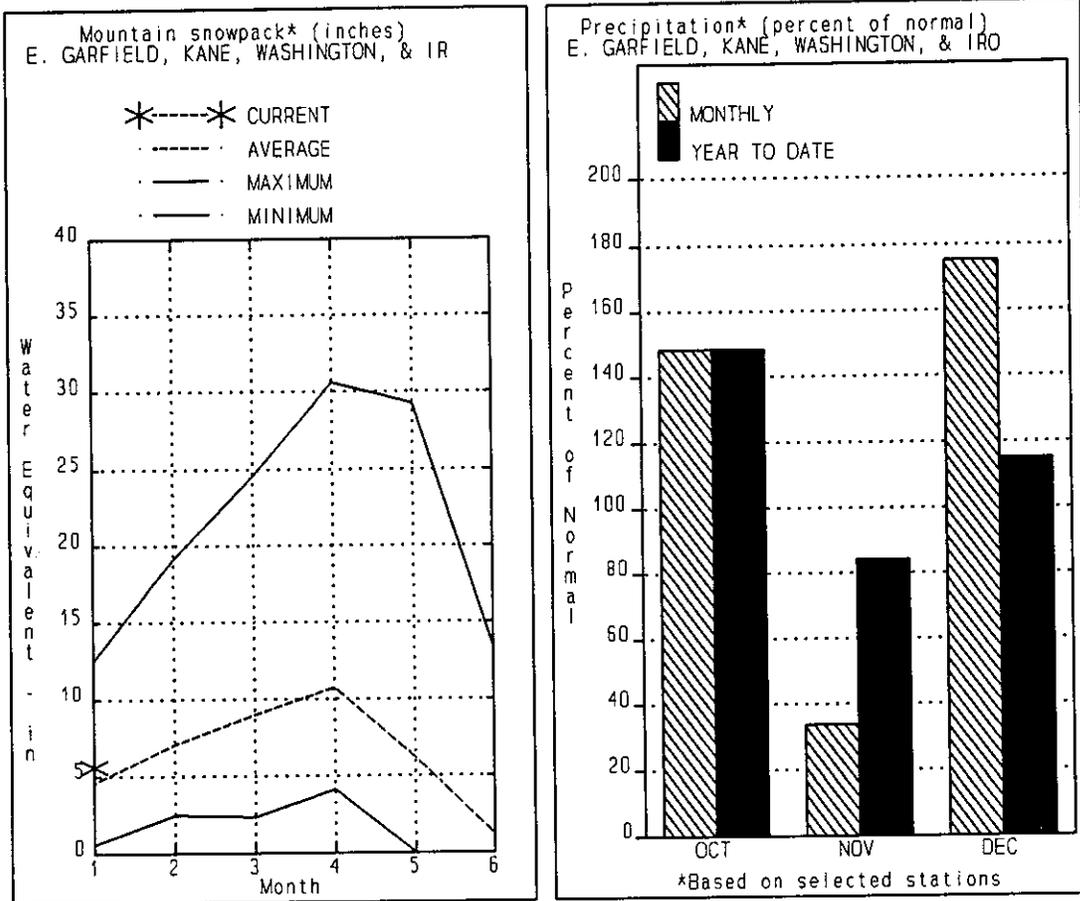
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	0.5	2.7	9.5	UPPER SEVIER RIVER (south	7	160	118
MINERSVILLE (RkyFd)	23.3	6.1	7.1	9.3	EAST FORK SEVIER RIVER	2	123	92
OTTER CREEK	52.5	12.9	17.7	23.8	SOUTH FORK SEVIER RIVER	5	175	128
PIUTE	71.8	19.9	17.8	29.3	LOWER SEVIER RIVER (inclu	6	156	105
SEVIER BRIDGE	236.0	58.6	92.5	87.0	BEAVER RIVER	2	120	85
PANQUITCH LAKE	22.3	4.9	4.1	---	SEVIER & BEAVER RIVER BAS	15	152	107

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

E. GARFIELD, KANE, WASHINGTON, & IRON CO.
January 1, 1993



Snowpack in the Virgin watershed is much above average (128%) and much below average in the Escalante (67%). Oddly enough, the Virgin is much better than last year and the Escalante, much worse. Seasonal mountain precipitation (October through December) is near 70% over the Escalante and 123% over the Virgin basin. Streamflow forecasts range from 83% to 90% of average.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - January 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *					30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)		
COAL CK nr Cedar City	APR-JUL	8.3	13.2	16.5	88	19.8	25	18.7
LAKE POWELL INFLOW	APR-JUL	3530	5420	6700	83	7980	9870	8086
VIRGIN R nr Hurricane	APR-JUL	34	56	71	90	86	108	79
SANTA CLARA R nr Pine Valley	APR-JUL	2.0	3.6	4.7	89	5.8	7.4	5.3

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of December

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - January 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNLOCK	10.4	8.6	5.1	---	VIRGIN RIVER	5	171	128
LAKE POWELL	24322.0	13337.0	14252.0	---	PAROWAN	2	161	106
QUAIL CREEK	40.0	34.0	33.0	---	ENTERPRISE TO NEW HARMONY	2	200	200
UPPER ENTERPRISE	10.0	6.2	0.9	---	COAL CREEK	2	175	108
LOWER ENTERPRISE	2.6	0.1	0.2	---	ESCALANTE RIVER	2	64	67
					E. GARFIELD, KANE, WASHIN	9	148	124

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE DATA

FOR THE STATE OF UTAH

As of JANUARY 1, 1993

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
ALTA CENTRAL	8800	12/29	55	16.8	16.3	19.0	DRY BREAD POND	8350				5.0	-
ASHLEY TWIN LAKES	10500						DRY BREAD POND SNOTL	8350	1/01	-	8.1S	5.4	9.6
BEAVER DAMS SNOTEL	8000	1/01	-	4.5S	2.4	4.6	EAST SHINGLE LAKE	9800				-	-
BEAVER DIVIDE SNOTL	8280	1/01	-	6.7S	3.3	4.8	EAST WILLOW CREEK SN	8250	1/01	-	4.0S	3.1	2.0
BEN LOMOND PK SNOTL	8000	1/01	-	15.8S	6.3	15.9	FARMINGTON CANYON L.	6950				7.8	-
BEN LOMOND TR SNOTL	6000	1/01	-	8.6S	2.8	11.1	FARMINGTON CN SNOTEL	8000	1/01	-	14.4S	9.5	12.3
BEVAN'S CABIN	6450				3.4	-	FARNSWORTH LK SNOTEL	9600	1/01	-	8.8S	6.8	8.7
BIG FLAT SNOTEL	10290	1/01	-	6.9S	6.5	8.7	FISH LAKE	8700				2.2	-
BIRCH CROSSING	8100				1.5	-	FIVE POINTS LAKE SNO	10920	1/01	-	6.9S	5.3	8.4
BLACK FLAT-U.M. CK S	9400	1/01	-	2.2S	2.6	4.2	FRANCES FLATS	6700	12/31	45	11.4	4.8	9.6
BLACK'S FORK GS-EF	9340				3.7	-	G.B.R.C. HEADQUARTER	8700				-	-
BLACK'S FORK JUNCTN	8930				4.7	-	G.B.R.C. MEADOWS	10000				6.6	-
BOX CREEK SNOTEL	9800	1/01	-	5.9S	2.7	5.5	GARDEN CITY SUMMIT	7600				4.4	-
BRIAN HEAD	10000				6.4	-	GEORGE CREEK	8840				-	-
BRIGHTON CABIN	8700	12/29	45	12.1	9.1	12.5	GOOSEBERRY R.S.	8400				4.1	-
BRIGHTON SNOTEL	8750	1/01	-	8.6S	8.9	8.9	GOOSEBERRY R.S. SNOT	7900	1/01	-	3.1S	2.0	4.7
BROWN DUCK SNOTEL	10600	1/01	-	7.7S	5.9	8.5	HARDSCRABBLE	6700				7.6	-
BRYCE CANYON	8000				3.3	2.0	HARRIS FLAT SNOTEL	7700	1/01	-	4.1S	2.4	3.1
BUCK FLAT SNOTEL	9800	1/01	-	6.7S	5.2	7.2	HAYDEN FORK	9400				3.2	-
BUCK PASTURE	9700				-	-	HAYDEN FORK SNOTEL	9100	1/01	-	6.6S	3.8	6.8
BUCKBOARD FLAT	9000				12.0	-	HENRY'S FORK	10000				-	-
BUG LAKE SNOTEL	7950	1/01	-	8.1S	5.5	8.8	HEWINTA SNOTEL	9500	1/01	-	4.0S	4.7	3.9
BURT'S-MILLER RANCH	7900				2.1	-	HICKSON PARK SNOTE	9100	1/01	-	3.7S	4.2	2.6
CAMP JACKSON	8600				12.2	-	HIDDEN SPRINGS	5500	12/31	20	5.0	1.3	4.5
CAMP JACKSON SNOTEL	8600	1/01	-	7.7S	7.9	4.0	HOBBLE CREEK SUMMIT	7420				2.4	-
CASTLE VALLEY SNOTL	9580	1/01	-	4.6S	2.8	5.2	HOLE-IN-ROCK SNOTEL	9150	1/01	-	3.0S	4.4	2.3
CHALK CK #1 SNOTEL	9100	1/01	-	13.9S	10.0	10.3	HORSE RIDGE SNOTEL	8260	1/01	-	11.8S	6.4	10.0
CHALK CK #2 SNOTEL	8200	1/01	-	8.2S	7.7	6.7	HUNTINGTON-HORSESHOE	9800				5.5	-
CHALK CREEK #3	7500				4.0	-	INDIAN CANYON SNOTEL	9100	1/01	-	4.5S	3.5	4.1
CHEPETA SNOTEL	10300	1/01	-	7.6S	4.7	6.1	JOHNSON VALLEY	8850				2.0	-
CITY CREEK	7500	12/31	52	13.7	7.8	15.7	KILFOIL CREEK	7300				3.7	-
CLEAR CK RIDG #1 SNT	9200	1/01	-	8.2S	3.7	8.1	KILLYON CANYON	6300	12/31	28	4.8	2.9	4.7
CLEAR CK RIDG #2 SNT	8000	1/01	-	7.2S	4.0	6.1	KIMBERLY MINE SNOTEL	9300	1/01	-	7.9S	5.3	5.8
CLEAR CREEK RIDGE #3	6600				2.4	-	KING'S CABIN SNOTEL	8730	1/01	-	5.8S	4.4	5.4
COLD WATER SPRINGS	6030				-	-	KLONDIKE NARROWS	7400				5.7	-
CORRAL	8200				-	-	KOLOB SNOTEL	9250	1/01	-	9.8S	7.7	7.2
CURRENT CREEK SNOTEL	8000	1/01	-	6.2S	2.2	4.3	LAKEFORK #1 SNOTEL	10100	1/01	-	6.4S	4.4	5.2
DANIELS-STRAWBERRY S	8000	1/01	-	6.6S	2.3	7.3	LAKEFORK BASIN SNOTE	10900	1/01	-	8.1S	8.4	9.6
DESERET PEAK	9250				7.2	-	LAKEFORK MOUNTAIN #3	8400				2.2	-
DESERET PEAK AM	9250				-	-	LAMBS CANYON	7400	12/31	39	10.0	4.7	7.3
DESERET PEAK SNOTEL	9250	1/01	-	12.0S	6.9	8.0	LASAL MOUNTAIN LOWER	8800				3.3	-
DILL'S CAMP SNOTEL	9200	1/01	-	4.4S	3.4	6.2	LASAL MOUNTAIN SNOTE	9850	1/01	-	4.5S	4.3	5.6
DONKEY RESERVOIR SNO	9800	1/01	-	2.2S	3.8	3.7	LILY LAKE SNOTEL	9050	1/01	-	5.9S	5.6	6.2

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
LITTLE BEAR LOWER	6000				1.7	-	STILLWATER CAMP	8550				3.7	-
LITTLE BEAR SNOTEL	6550	1/01	-	4.9S	2.3	6.6	STRAWBERRY DIVIDE SN	8400	1/01	-	8.3S	3.1	8.0
LITTLE GRASSY SNOTEL	6100	1/01	-	5.2S	1.3	1.1	STUART R.S.	7950				1.7	-
LONG FLAT SNOTEL	8000	1/01	-	4.0S	3.3	3.5	SUSC RANCH	8200				1.6	-
LONG VALLEY JCT. SNT	7500	1/01	-	4.3S	.8	1.2	TALL POLES	8800				4.2	-
LOOKOUT PEAK SNOTEL	8200	1/01	-	10.9S	7.0	12.7	THAYNES CANYON SNOTL	9200	1/01	-	10.1S	7.0	7.9
LOST CREEK RESERVOIR	6130				1.5	-	THISTLE FLAT	8500				-	-
MAMMOTH-COTTONWOOD SNT	8800	1/01	-	8.0S	4.0	7.4	TIMBERLINE	9100				-	-
MERCHANT VALLEY SNOT	8750	1/01	-	5.1S	3.5	5.5	TIMPANOGOS DIVIDE SN	8140	1/01	-	12.4S	5.1	9.4
MIDDLE CANYON	7000				4.4	-	TONY GROVE LK SNOTEL	8400	1/01	-	15.7S	10.8	14.5
MIDWAY VALLEY SNOTEL	9800	1/01	-	11.5S	7.2	10.0	TONY GROVE R.S.	6250				3.6	-
MILL CREEK	6950	12/31	44	12.5	6.8	9.0	TRIAL LAKE	9960				5.7	-
MILL-D NORTH SNOTEL	8960	1/01	-	11.5S	8.4	10.1	TRIAL LAKE SNOTEL	9960	1/01	-	10.8S	5.9	10.8
MILL-D SOUTH FORK	7400	12/29	31	8.9	5.8	8.4	TROUT CREEK SNOTEL	9400	1/01	-	4.8S	3.4	4.5
MINING FORK SNOTEL	8000	1/01	-	8.9S	3.9	5.7	UPPER JOES VALLEY	8900				2.2	-
MONTE CRISTO R.S.	8960				10.6	-	UPPER MILL CREEK	8300				-	-
MONTE CRISTO SNOTEL	8960	1/01	-	15.1S	11.7	11.0	VERNON CREEK SNOTEL	7500	1/01	-	4.9S	3.6	4.3
MOSBY MTN. SNOTEL	9500	1/01	-	4.4S	3.1	4.5	VIPONT	7670				-	-
MT. BALDY R.S.	9500				7.6	-	WEBSTER FLAT SNOTEL	9200	1/01	-	6.9S	3.3	7.0
MUD CREEK #2	8600				3.7	-	WHITE RIVER #1 SNOTE	8550	1/01	-	6.4S	4.0	5.6
OAK CREEK	7760				4.9	-	WHITE RIVER #3	7400				2.7	-
OTTER LAKE	9600				4.6	-	WIDTSONE #3 SNOTEL	9500	1/01	-	3.3S	4.8	4.5
PANQUITCH LAKE	8200				1.2	-	WRIGLEY CREEK	9000				3.3	-
PARLEY'S CANYON SNOT	7500	1/01	-	7.1S	3.8	8.2	YANKEE RESERVOIR	8700				2.2	-
PARLEY'S CANYON SUM.	7500	12/31	47	10.7	6.4	8.1	NOTE:						
PAYSON R.S. SNOTEL	8050	1/01	-	10.4S	4.1	7.9	The S flag following Water Content for SNOTEL sites indicates telemetered						
PICKLE KEG SNOTEL	9600	1/01	-	6.6S	5.2	6.7	data, the Depth reading preceding S flagged data was measured around the						
PINE CREEK SNOTEL	8800	1/01	-	10.7S	6.4	7.7	snow pillows at the time of the ground survey and may not be the same date as						
RED PINE RIDGE SNOTE	9200	1/01	-	7.1S	3.7	7.5	the telemetered value.						
REDDEN MINE LOWER	8500				4.4	-							
REES'S FLAT	7300				3.3	-							
ROCK CREEK SNOTEL	7900	1/01	-	3.8S	2.9	4.1							
ROCKY BASIN-SETTLEMT	8900				6.9	-							
ROCKY BN-SETTLEMT SN	8900	1/01	-	13.4S	8.6	11.8							
SEELEY CREEK SNOTEL	10000	1/01	-	6.3S	4.9	7.1							
SHINGLE MILL	6200				3.7	-							
SILVER LAKE(BRIGHT.)	8730	12/29	33	10.7	8.3	10.6							
SMITH MOREHOUSE SNTL	7600	1/01	-	7.2S	3.8	5.8							
SNOWBIRD SNOTEL	9700	1/01	-	17.5S	10.8	15.0							
SNOWBIRD-GAD VALLEY	9700				-	14.7							
SPIRIT LAKE	10300				9.2	-							
SQUAW SPRINGS	9300				1.7	-							
STEEL CREEK PARK SNO	10100	1/01	-	6.5S	8.0	7.2							

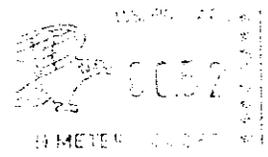
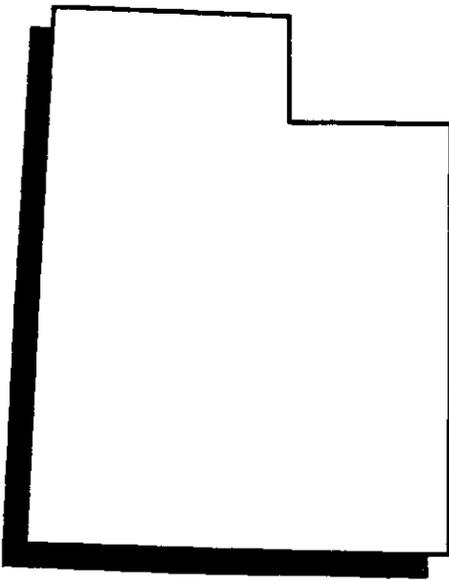
In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

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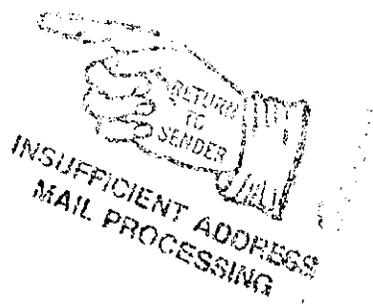
William (Bill) Richards
Chief
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SOIL CONSERVATION SERVICE

Utah
Basin Outlook Report
Soil Conservation Service
Salt Lake City, UT





United States
Department of
Agriculture

Soil
Conservation
Service



Utah

Basin Outlook Report

February 1, 1993



Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points.

Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

All programs and services of the USDA Soil Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

STATE OF UTAH GENERAL OUTLOOK
February 1, 1993

SUMMARY

January 1993 was a banner snowpack month for most areas of Utah. The first two weeks saw massive storms deposit much needed snow over virtually all elevations across the state. Snowpacks in southern Utah have increased most and now range from 140% to almost 250% of average. In the north with the exception of the Bear watershed, snowpacks increased 10% to 20% and now range from 120% to 130% of normal. The Bear River drainage declined as a percent of average and is now at 99% of normal. Streamflow during the past runoff season was generally the second or third lowest on record. Most streamflow forecasts are for near to slightly above average April through July runoff volumes in northern Utah and above average in the south.

SNOWPACK

Snowpacks in Utah, as measured by the SCS SNOTEL system, are much higher than last year. Most areas have between 50% and 150% more snow this year than last, indicating how poor conditions were in water year 1992. Snowpack totals are also much greater than in January, increasing 10% to 130% of average, almost double the normal monthly increase statewide. In southern Utah, snowpacks are currently greater than those normally measured in April. The Sevier River Basin has the second highest February first snowpack on record. Most areas of Utah with the exception of the Bear River, have between 120% and 150% of average.

PRECIPITATION

Mountain precipitation, as measured by the SCS SNOTEL system, was much above average statewide during January, with individual sites ranging from 119% to almost 600% of average. In southern Utah, January's precipitation was phenomenal with basin averages ranging from a low of 140% to a high of almost 500% of normal. Most areas across Utah received 150% to 200% of normal during the past month. The seasonal accumulation, (October through January) ranges from 102% on the Bear to 182% on the Virgin and the Escalante. This is 40% to 100% greater than last year.

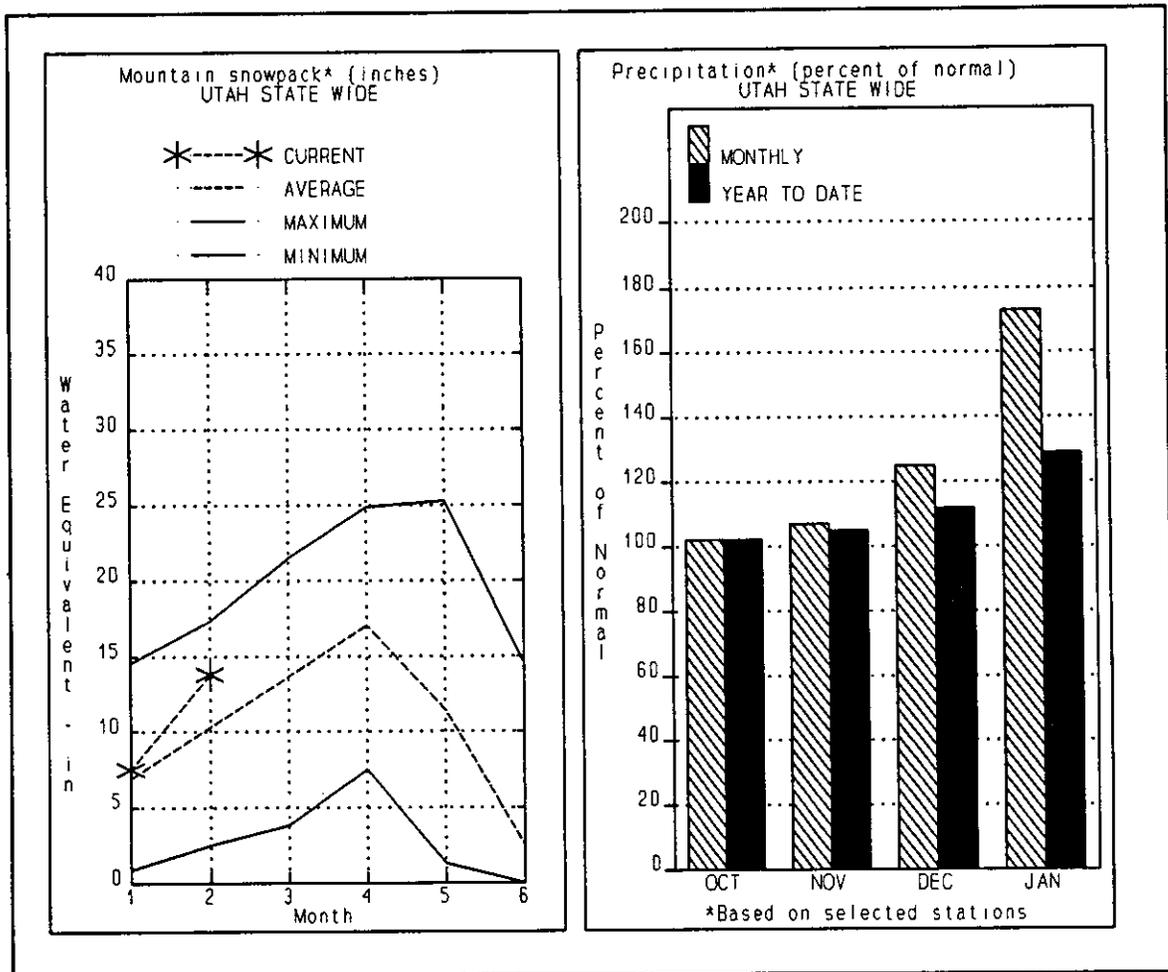
Low elevation precipitation, as measured by the National Weather Service was at record levels in many locations for January. Three stations broke all time records: Bryce Canyon, 7.38 inches (636%), Kanab, 7.45 inches (500%) and Zion National Park, 7.53 inches, 474% of normal. The only area that got the "short end of the stick" was the extreme north with Logan USU receiving 1.16 inches (83%) and Brigham City, 2.31 inches (125%). Seasonal precipitation, (October through January) now stands at 115% to 190% of normal.

RESERVOIRS

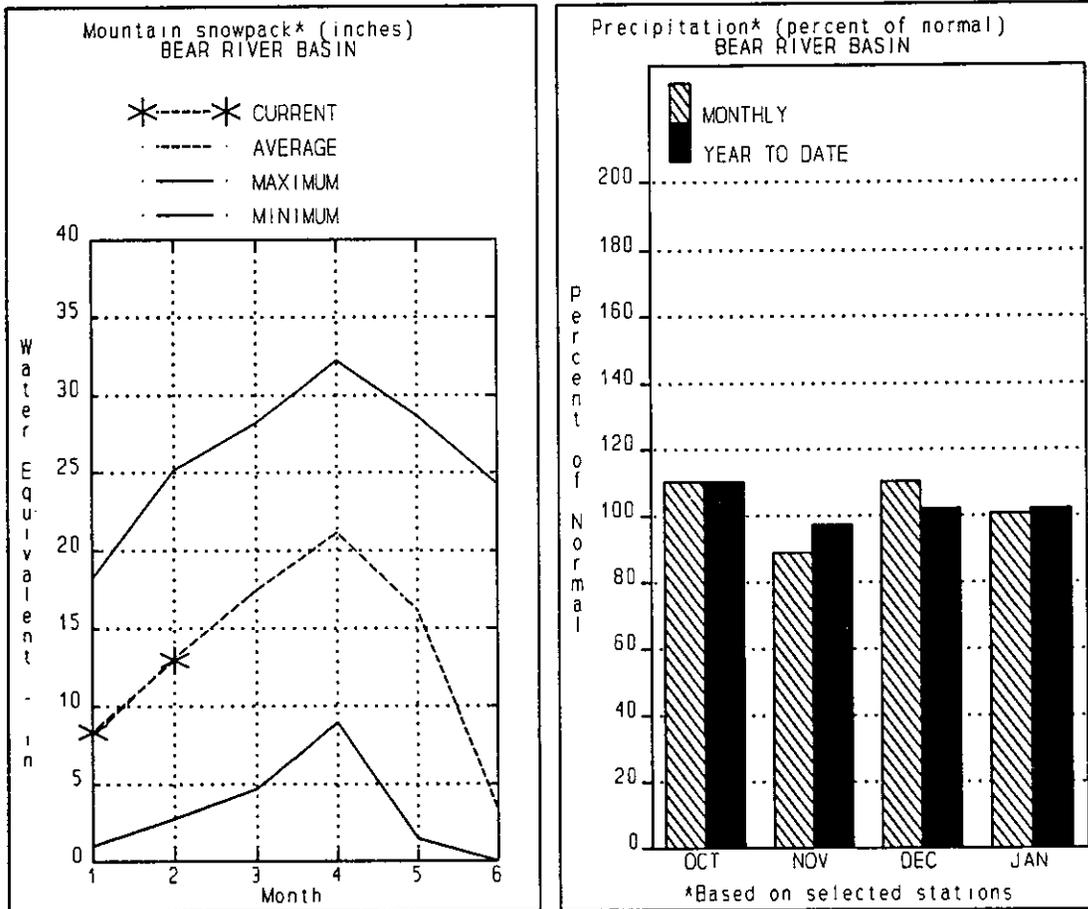
Storage in 23 of Utah's key irrigation reservoirs is at 39% of capacity, compared to 55% last year. This is about 63% of normal for this time of year. Some small reservoirs in southern Utah were able to fill this past month and in fact, some flooding occurred. Many of Utah's larger reservoirs however, stand only a remote chance of filling this season. These would include Bear Lake, Strawberry and Scofield, Utah Lake and Lake Powell. Some of these will take several years of above average streamflow to fill.

STREAMFLOW

Streamflow forecasts for springtime runoff are for near to slightly above average flow with the exception of southern Utah which is forecast at above to much above average. Forecasts range from near 85% on the Bear River and increase to near 150% in southern and southeastern Utah. Most areas are forecast near 100% to 125% of normal streamflow. In some watersheds, especially in northern Utah, average streamflow could mean very tight water supplies this summer.



BEAR RIVER BASIN
February 1, 1993



Snowpack water equivalent in the Bear River Basin is at 99% of average, a little less than double last years 53% but decreasing about 5% from last month. The Bear River Basin is the only area in the state which did not have significant snowpack gains during January. Six years of drought has left soil moisture and groundwater severely depleted which will negatively impact snowmelt runoff. Seasonal mountain precipitation (October through January), is near 102% of average. Small reservoir storage is near 47% of capacity with Bear Lake at only 15% of capacity. Streamflow forecasts are only near 80% of normal and water supplies could be scarce this summer.

BEAR RIVER BASIN
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	Future Conditions <<==== Drier ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
BEAR RIVER nr Ut-Wy Stateline	APR-JUL	68	87	100	87	113	132	115
BEAR RIVER nr Woodruff (2)	APR-JUL	24	87	130	87	173	235	149
BIG CREEK nr Randolph	APR-JUL	0.3	1.8	3.3	87	4.8	7.0	3.8
BEAR RIVER nr Randolph	APR-JUL	9.0	69	110	84	151	210	131
SMITHS FORK nr Border, WY	APR-SEP	61	82	97	82	112	133	118
THOMAS FORK nr WY-ID Stateline	APR-SEP	10.0	20	26	72	33	42	36
BEAR RIVER near Harer	APR-SEP	98	210	285	83	360	470	345
BEAR RIVER blw Stewart Dam (2)	APR-SEP	132	199	245	82	290	360	298
LOGAN RIVER near Logan	APR-JUL	44	73	92	86	111	140	107
BLACKSMITH FORK near Hyrum	APR-JUL	14.0	33	46	85	59	78	54

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of January

BEAR RIVER BASIN
Watershed Snowpack Analysis - February 1, 1993

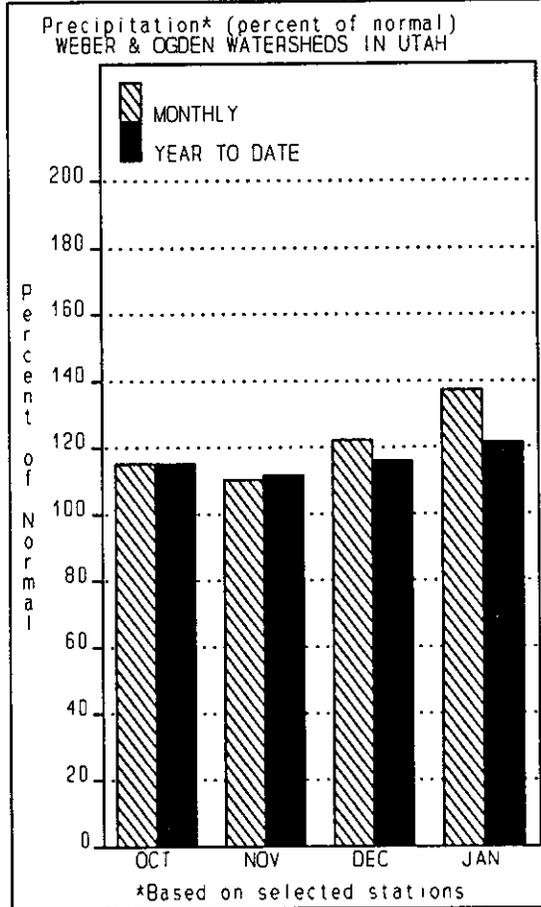
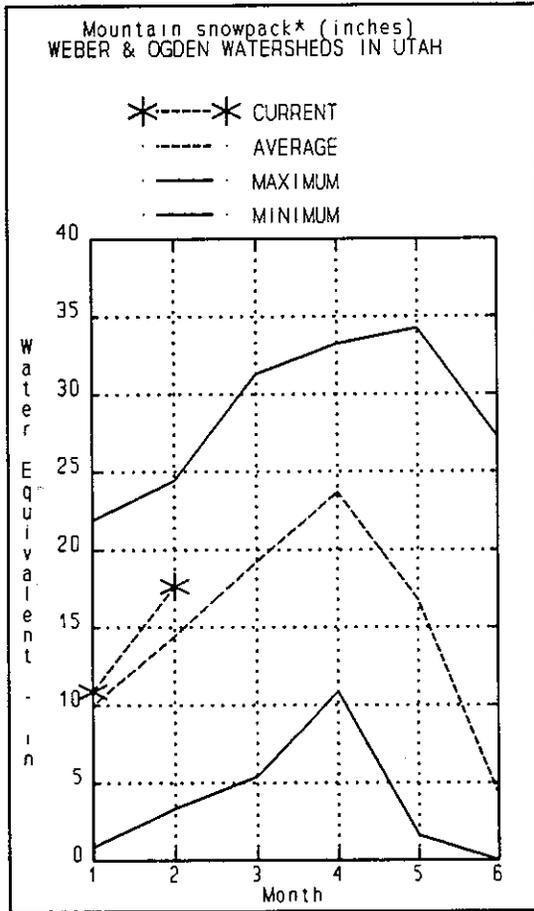
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	215.5	466.7	987.6	BEAR RIVER, UPPER (abv Ha	6	172	106
HYRUM	15.3	9.4	9.9	10.3	BEAR RIVER, LOWER (blw Ha	8	200	94
PORCUPINE	11.3	3.2	5.0	2.9	LOGAN RIVER	4	200	99
WOODRUFF NARROWS	57.3	5.0	27.0	---	RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	1.9	2.4	---	BEAR RIVER BASIN	14	187	99

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

WEBER & OGDEN BASINS
February 1, 1993



Snowpacks on the Weber and Ogden watersheds are more than double last years 55% of average, currently at 122% of normal, up 10% to 15% from last month. Individual sites range from 95% to 145% of average. Years of below normal snowpacks have severely depleted soil moisture and groundwater supplies. These deficits could negatively impact this years snowmelt runoff. Seasonal mountain precipitation, (October through January) is near 120% of average. Reservoir storage is near 33% of capacity, about half as much as last year. Pineview has only 10% of capacity. Streamflow forecasts range from 85% to 100% of normal, rising 5% to 10% from those issued last month.

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)
SMITH AND MOREHOUSE CREEK near Oakle	APR-JUN	17.0	24	29	97	34	41	30
WEBER RIVER near Oakley	APR-JUL	86	107	122	100	137	158	122
ROCKPORT RESERVOIR inflow	APR-JUL	81	111	131	97	151	181	135
CHALK CREEK at Coalville, Ut	APR-JUL	17.0	33	44	100	55	71	44
WEBER RIVER near Coalville, Ut	APR-JUL	78	109	130	96	151	183	136
ECHO RESERVOIR Inflow	APR-JUL	94	139	169	96	199	245	176
LOST CREEK Res Inflow	APR-JUL	3.3	11.0	16.2	94	21	29	17.2
EAST CANYON CREEK near Morgan	APR-JUL	15.0	24	29	97	35	43	30
WEBER RIVER at Gateway	APR-JUL	265	305	335	97	365	405	347
S FORK OGDEN RIVER nr Huntsville	APR-JUL	30	45	55	87	65	80	63
PINEVIEW RESERVOIR Inflow	APR-JUL	49	84	107	86	131	165	124
WHEELER CREEK near Huntsville	APR-JUL	3.2	4.6	5.5	89	6.4	7.8	6.2

WEBER & OGDEN WATERSHEDS in Utah
Reservoir Storage (1000 AF) - End of January

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - February 1, 1993

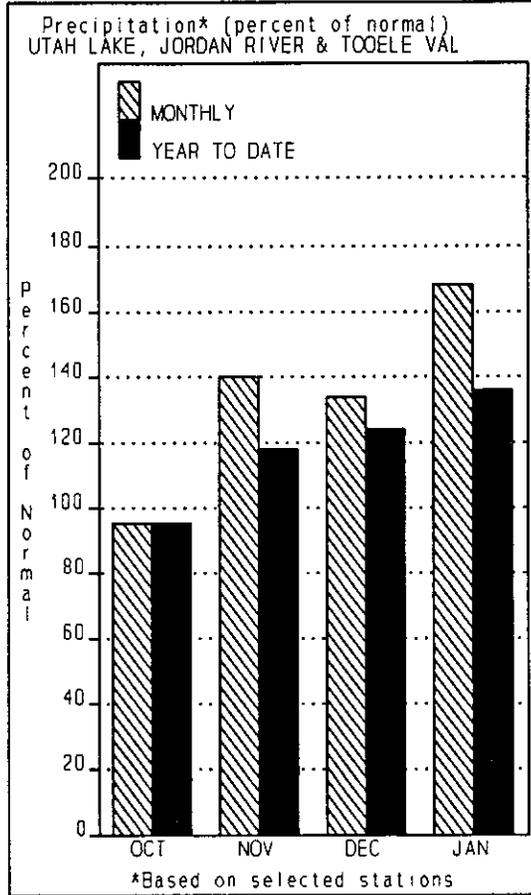
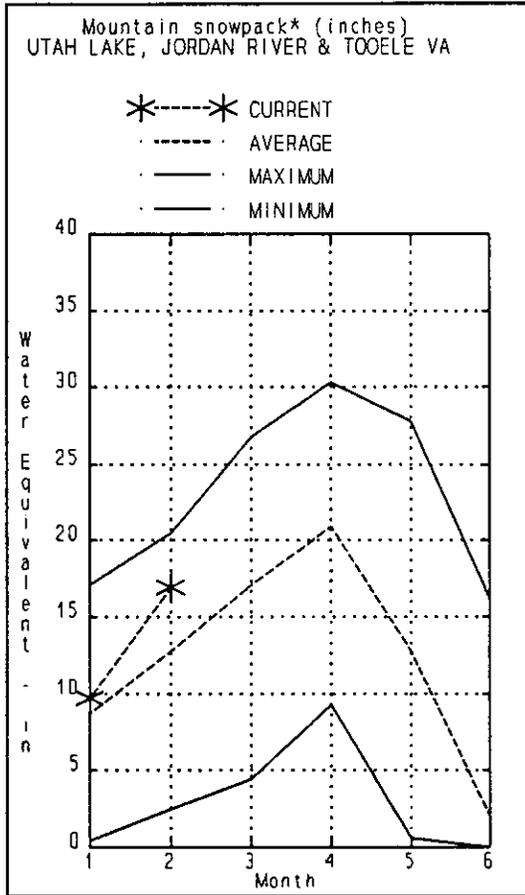
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	0.8	3.6	2.2	OGDEN RIVER	4	239	113
EAST CANYON	49.5	20.4	37.7	34.7	WEBER RIVER	8	217	127
ECHO	73.9	18.3	60.0	45.8	WEBER & OGDEN WATERSHEDS	12	224	122
LOST CREEK	22.5	6.8	12.8	13.1				
PINEVIEW	110.1	11.0	40.2	49.6				
ROCKPORT	60.9	27.5	30.7	31.9				
WILLARD BAY	215.0	95.0	168.0	110.6				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY BASINS
February 1, 1993



Snowpack on the Provo - Utah Lake watershed is above average (132%) and tremendously improved over last years 50% of normal. This is a 10% to 15% improvement from last month. In the Tooele area, snowpacks are even higher, near 153% of normal. Watershed conditions are suffering the effects of six drought years and may negatively affect snowmelt runoff. Seasonal mountain precipitation, (October through January) is near 135% of average. Storage in Utah Lake is quite low at 41% of capacity and in Deer Creek, 53% of capacity. Streamflow forecasts range from 100% to 110% of average, rising 10% to 15% from those issued last month.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
PAYSON CREEK near Payson	APR-JUL	2.0		5.3	110		8.6	4.8
SPANISH FORK near Castilla	APR-JUL	32		81	105		137	77
HOBBLE CREEK near Springville	APR-JUL	9.2		19.2	102		29	18.8
PROVO near Hailstone	APR-JUL	75	96	116	106	136	157	109
PROVO below Deer Creek Dam	APR-JUL	77	112	137	107	162	197	128
AMERICAN FORK near American Fk.	APR-JUL	27	34	38	119	42	49	32
UTAH LAKE inflow	APR-JUL	168	285	340	105	395	510	324
LITTLE COTTONWOOD CRK near SLC	APR-JUL	32	39	43	110	47	54	39
BIG COTTONWOOD CRK near SLC	APR-JUL	31	39	42	111	45	53	38
PARLEY'S CREEK near SLC	APR-JUL	7.2	14.4	17.2	108	20	27	15.9
MILL CREEK near SLC	APR-JUL	3.6	5.3	6.9	108	8.5	9.9	6.4
EMIGRATION CREEK near SLC	APR-JUL	0.4		4.1	98		7.8	4.2
CITY CREEK near SLC	APR-JUL	4.1	7.5	8.6	104	9.7	13.0	8.3
VERNON CREEK near Vernon	APR-JUN	0.1	0.6	1.0	91	1.4	1.9	1.1
SETTLEMENT CREEK near Tooele	APR-JUL	0.3	1.4	2.1	91	2.8	3.9	2.3
SOUTH WILLOW CREEK near Grantsville	APR-JUL	0.4	1.8	2.8	90	3.8	5.2	3.1

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of January

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - February 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	79.9	108.2	94.3	PROVO RIVER & UTAH LAKE	7	318	138
GRANTSVILLE	3.3	0.8	1.1	---	PROVO RIVER	4	345	133
SETTLEMENT CREEK	1.0	0.6	0.8	0.5	JORDAN RIVER & GREAT SALT	5	214	116
STRAWBERRY-ENLARGED	1105.9	380.7	491.3	---	TOOELE VALLEY WATERSHEDS	4	245	153
UTAH LAKE	870.9	353.6	429.7	648.6	UTAH LAKE, JORDAN RIVER &	16	257	132
VERNON CREEK	0.6	0.3	0.4	---				

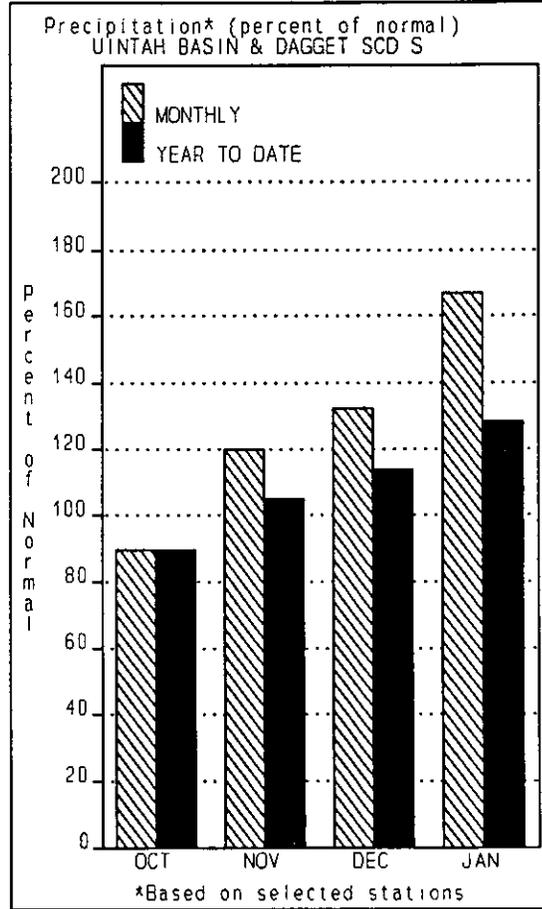
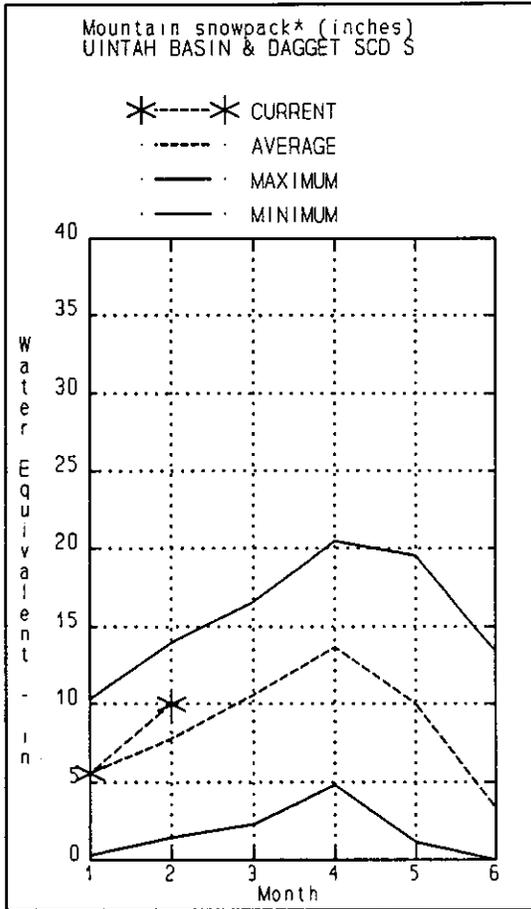
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

UINTAH BASIN & DAGGET SCD'S
February 1, 1993



Snowpacks across the Uintas and the Strawberry area are above average, with individual sites ranging from 90% to 170% with most areas near 130% of normal. This is 30% to 70% greater than last year and near 25% greater than last month. The increase in snowpack during the past month was almost twice the average accumulation. January mountain precipitation was almost 170% of average. Seasonal precipitation, (October through January) is above average, near 130% of normal. Reservoir storage is at 64% of capacity, 10% to 15% less than last year. Strawberry reservoir has about 34% of capacity. Streamflow forecasts range from 95% to 125% of normal, rising 10% to 20% from those issued last month.

UINTAH BASIN & DAGGET
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	66	81	92	95	103	118	96
STATE LINE RESERVOIR INFLOW	APR-JUL	20	26	30	100	34	40	30
HENRYS FORK nr Manila	APR-JUL	25	40	50	119	60	75	42
FLAMING GORGE RES INFLOW	APR-JUL	620	835	980	77	1130	1340	1267
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	17.0	21	24	121	27	31	20
ASHLEY CK nr Vernal	APR-JUL	47	58	65	127	72	83	51
WF DUCHESNE R nr Hanna	APR-JUL	20	25	29	111	33	38	26
DUCHESNE R nr Tabiona	APR-JUL	72	88	99	94	110	126	105
ROCK CK nr Mountain Home	APR-JUL	69	83	92	97	102	115	94
UPPER STILLWATER RESV Inflow	APR-JUL	60	73	81	100	89	102	81
DUCHESNE R abv Knight Diversion	APR-JUL	123	159	184	96	210	245	191
STRAWBERRY RESV (enlarged) Inflow	APR-JUL	53	63	70	118	77	87	59
CURRENT CREEK RESV Inflow	APR-JUL	18.0	22	25	119	28	32	21
STARVATION RESV Inflow	APR-JUL	109	128	140	112	152	171	125
MOON LAKE Inflow	APR-JUL	50	62	71	101	80	92	70
YELLOWSTONE R nr Altonah	APR-JUL	41	57	67	103	78	93	65
DUCHESNE R at Myton 2	APR-JUL	177	245	290	110	335	405	263
WHITEROCKS R nr Whiterocks	APR-JUL	43	59	70	120	81	97	58
UINTA R nr Neola	APR-JUL	61	84	100	117	116	139	85
DUCHESNE R nr Randlett 2	APR-JUL	125	275	375	114	475	625	328

UINTAH BASIN & DAGGET SCD'S
Reservoir Storage (1000 AF) - End of January

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - February 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	2994.8	3281.0	---	UPPER GREEN RIVER in UTAH	6	132	127
MOON LAKE		NO REPORT			ASHLEY CREEK	2	200	149
RED FLEET	25.7	19.5	19.1	---	BLACK'S FORK RIVER	2	102	91
STEINAKER	33.4	14.3	23.6	19.7	SHEEP CREEK	1	105	171
STARVATION	165.3	112.2	130.3	113.0	DUCHESNE RIVER	11	216	129
STRAWBERRY-ENLARGED	1105.9	380.7	491.3	---	LAKE FORK-YELLOWSTONE CRE	4	173	117
					STRAWBERRY RIVER	4	308	131
					UINTAH-WHITEROCKS RIVERS	2	194	156
					UINTAH BASIN & DAGGET SCD	17	185	128

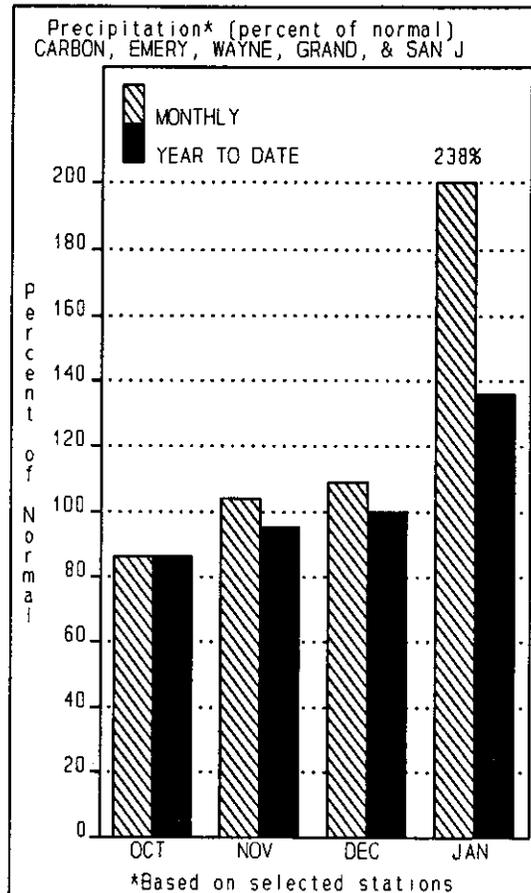
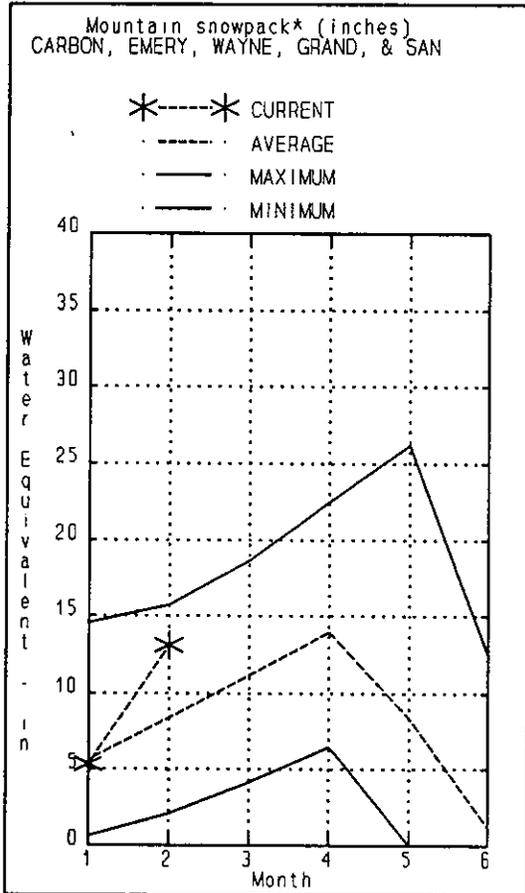
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN CO
February 1, 1993



Snowpacks in southeastern Utah have changed dramatically since January. The Dirty Devil has gone from 62% to nearly 140% of average. Individual sites range from 112% to 289% of normal. Snowpacks are typically double or triple last year's numbers and generally near 155% of average. January's snowpack accumulation was 275% of a normal increase. Overall, water supply conditions are much above average. January mountain precipitation was an incredible 238% of average. Seasonal mountain precipitation, (October through January) ranges from 99% to 200% of the 1961-1990 average. Reservoir storage is currently near 28% of capacity. Streamflow forecasts range from 100% to 200% of average.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
GOOSEBERRY CK nr Scofield	APR-JUL	7.6	10.5	12.5	104	14.5	17.4	12.0
SCOFIELD RESV Inflow	APR-JUL	34	42	48	109	54	62	44
WHITE R blw Tabbyune Ck	APR-JUL	10.3	16.1	20	106	24	30	18.7
GREEN R at Green River, UT	APR-JUL	1960	2580	3000	95	3420	4040	3132
ELECTRIC LAKE Inflow	APR-JUL	12.3	15.1	17.0	112	18.9	22	15.1
HUNTINGTON CK nr Huntington 2	APR-JUL	28	38	45	115	52	62	39
JOE'S VALLEY RESV Inflow	APR-JUL	35	50	60	113	70	85	53
FERRON CK nr Ferron	APR-JUL	34	43	50	128	57	66	39
COLORADO R nr Cisco	APR-JUL	2650	3540	4150	99	4760	5650	4165
MILL CK nr Moab	APR-JUL	2.9	6.4	8.7	158	11.0	14.5	5.5
INDIAN CK nr Monticello	MAR-JUL	8.4	13.3	16.7	201	20	25	8.3
SEVEN MILE CK nr Fish Lake	APR-JUL	2.2	5.2	7.2	110	9.2	12.2	6.5
MUDDY CK nr Emery	APR-JUL	11.0	18.0	23	117	28	36	20
LLOYD'S RESV Inflow	MAR-JUL	2.8	4.4	6.9	202	9.4	13.0	3.4
RECAPTURE RESV Inflow	MAR-JUL	6.3	9.8	12.2	200	14.6	18.1	6.1
SAN JUAN R nr Bluff	APR-JUL	880	1210	1440	125	1670	2000	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of January

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - February 1, 1993

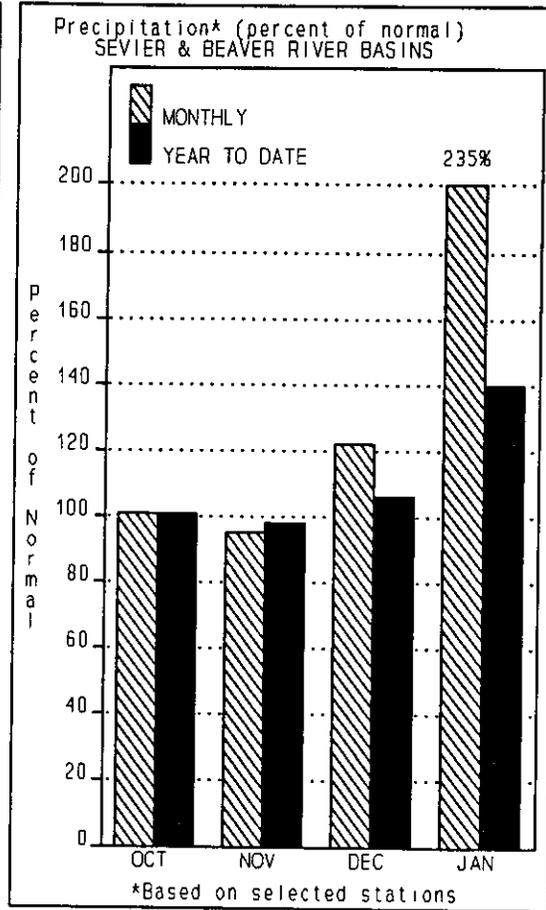
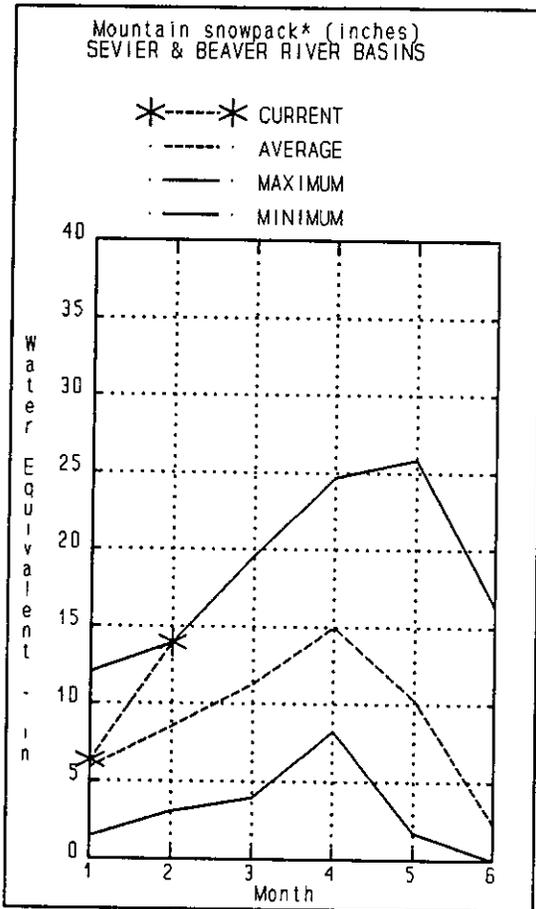
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	1.9	1.8	2.3	PRICE RIVER	3	270	135
JOE'S VALLEY	61.6	24.3	30.8	43.6	SAN RAFAEL RIVER	3	236	134
KEN'S LAKE	2.3	1.1	1.2	---	MUDDY CREEK	1	298	151
MILL SITE	16.7	11.6	11.4	3.5	FREMONT RIVER	3	195	165
SCOFIELD	65.8	3.7	8.8	31.3	LASAL MOUNTAINS	1	179	130
					BLUE MOUNTAINS	1	184	289
					WILLOW CREEK	1	284	257
					CARBON, EMERY, WAYNE, GRA	13	229	156

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

SEVIER & BEAVER RIVER BASINS
February 1, 1993



Snowpacks in the Sevier and Beaver watersheds are much greater than last year (80% to 100%) and even last month (50% to 70%) with sites ranging from 110% to nearly 500% of average. Snowpack is above normal over the entire basin and in fact is the second greatest February snowpack of record. January's increase in snowpack was almost three times greater than normal. Seasonal mountain precipitation (October through January) over the Sevier and Beaver basins is near 140% of normal. Reservoir storage in the Sevier Basin is 29% of capacity, less than last year. Streamflow forecasts are near 100% to 160% of normal.

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90%		70%		50% (Most Probable)			30%	10%
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	
SEVIER at Hatch	APR-JUL	62	79	91	169	103	120	54		
SEVIER near Circleville	APR-JUL	80		114	152		148	75		
SEVIER near Kingston	APR-JUL	85	109	124	149	139	162	83		
ANTIMONY CREEK near Antimony	APR-JUL	5.8		8.8	119		11.8	7.4		
E F SEVIER near Kingston	APR-JUL	22	41	48	160	55	74	30		
SEVIER blw Piute Dam	APR-JUL	98	144	166	144	188	235	115		
CLEAR CREEK near Sevier	APR-JUL	13.0		25	117		39	21		
PLEASANT CREEK near Pleasant	APR-JUL	5.8		8.7	102		11.6	8.5		
EPHRAIM CREEK near Ephraim	APR-JUL	7.9		13.7	109		19.4	12.6		
SEVIER nr Gunnison	APR-JUL	69		290	121		510	239		
CHICKEN CREEK near Levan	APR-JUL	2.4	3.4	4.1	87	4.8	5.8	4.7		
OAK CREEK near Oak City	APR-JUL	0.1	0.8	1.5	88	2.2	3.3	1.7		
BEAVER RIVER near Beaver	APR-JUL	9.0	22	30	116	38	51	26		
MINERSVILLE RESERVOIR inflow	APR-JUL	4.6	12.8	18.4	110	24	32	16.7		

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of January

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - February 1, 1993

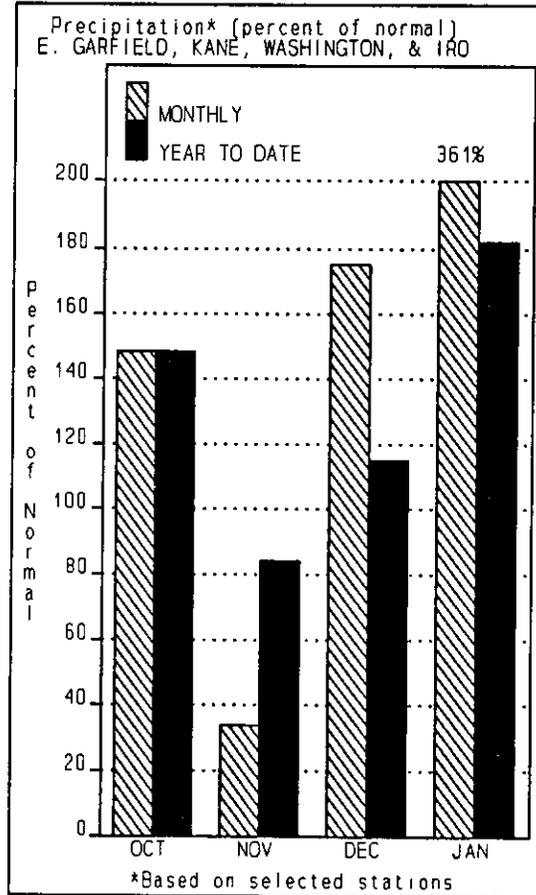
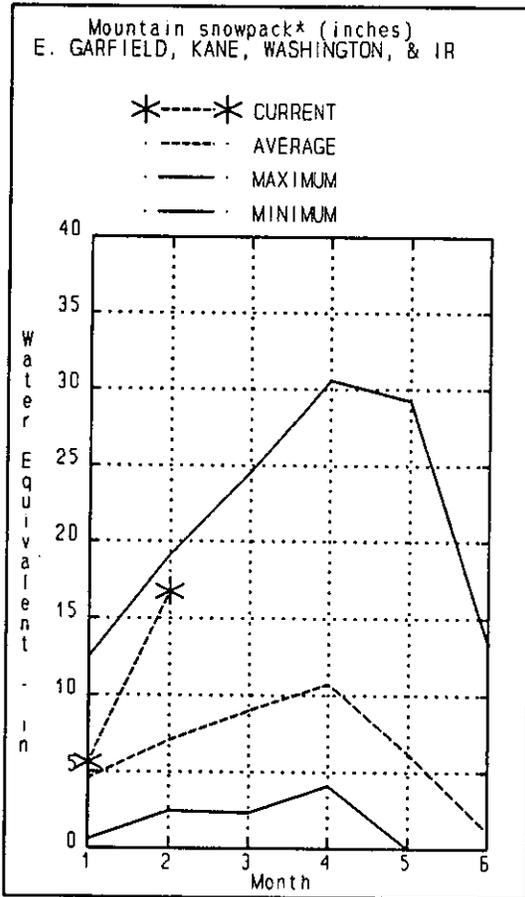
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	0.6	4.4	11.7	UPPER SEVIER RIVER (south	7	281	212
MINERSVILLE (RkyFd)	23.3	8.4	9.1	11.2	EAST FORK SEVIER RIVER	2	244	189
OTTER CREEK	52.5	17.6	22.0	27.5	SOUTH FORK SEVIER RIVER	5	295	220
PIUTE	71.8	29.8	25.8	36.9	LOWER SEVIER RIVER (inclu	6	196	122
SEVIER BRIDGE	236.0	60.0	103.3	101.1	BEAVER RIVER	2	190	156
PANQUITCH LAKE	22.3	5.8	4.3	---	SEVIER & BEAVER RIVER BAS	15	232	163

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

**E. GARFIELD, KANE, WASHINGTON, & IRON CO.
February 1, 1993**



Snowpack in the Escalante basin has gone from 67% last month to almost 200% of normal, an increase of almost 130% of average. Snowpacks in the Virgin watershed have increased dramatically as well, almost 450% of the normal January increase. Individual sites range from 130% to almost 700% of normal. There is above average snowpack at virtually all elevations and some rain induced flooding has already occurred. There is a high probability of snowmelt flooding as well, when low elevation packs begin to melt. Seasonal mountain precipitation (October through January) is near 149% over the Escalante and 179% over the Virgin basin. Streamflow forecasts range from 150% to 200% of average.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - February 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
COAL CK nr Cedar City	APR-JUL	21	25	28	149	31	35	18.7
LAKE POWELL INFLOW	APR-JUL	5610	6970	7900	97	8830	10200	8086
VIRGIN R nr Hurricane	APR-JUL	91	109	122	154	135	153	79
SANTA CLARA R nr Pine Valley	APR-JUL	7.4	8.8	9.7	183	10.6	12.0	53

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of January

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - February 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNLOCK	10.4	10.6	6.0	---	VIRGIN RIVER	5	307	232
LAKE POWELL	24322.0	13104.0	13897.0	---	PAROWAN	2	256	186
QUAIL CREEK		NO REPORT			ENTERPRISE TO NEW HARMONY	2	268	335
UPPER ENTERPRISE	10.0	7.9	1.0	---	COAL CREEK	2	304	194
LOWER ENTERPRISE	2.6	0.9	0.2	---	ESCALANTE RIVER	2	184	191
					E. GARFIELD, KANE, WASHIN	9	273	237

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE DATA FOR THE STATE OF UTAH As of FEBRUARY 1, 1993												
SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR	
ALTA CENTRAL	8800	2/01	88	30.6	18.4	DRY BREAD POND	8350	2/01	-	11.8S	6.7	
ASHLEY TWIN LAKES	10500				24.6	DRY BREAD POND SNOTL	8350				11.9	
BEAVER DAMS SNOTEL	8000	2/01	-	8.6S	3.7	EAST SHINGLE LAKE	9800	2/01	-	10.8S	3.8	
BEAVER DIVIDE SNOTL	8280	2/01	-	10.3S	3.8	EAST WILLOW CREEK SN	8250	2/01	-	10.8S	3.8	
BEN LOMOND PK SNOTL	8000	2/01	-	27.1S	7.9	FARMINGTON CANYON L.	6950	2/01	79	23.4S	9.2	
BEN LOMOND TR SNOTL	6000	2/01	59	16.1S	3.9	FARMINGTON CH SNOTEL	8000	2/01	-	13.0S	11.0	
BEVAN'S CABIN	6450				4.3	FARNORTH LK SNOTEL	9600	2/01	-	13.0S	8.7	
BIG FLAT SNOTEL	10290	2/01	-	15.2S	9.0	FISH LAKE	8700	2/01	-	12.5S	2.7	
BIRCH CROSSING	8100				2.3	FIVE POINTS LAKE SNO	10920	2/01	-	18.8	6.1	
BLACK FLAT-U.M. CK S	9400	2/01	-	7.0S	2.9	FRANCES FLATS	6700	1/28	60	18.8	7.6	
BLACK'S FORK GS-EF	9340				5.4	G.B.R.C. HEADQUARTER	8700				10.1	
BLACK'S FORK JUNCTN	8930				4.9	G.B.R.C. MEADOWS	10000				5.7	
BOX CREEK SNOTEL	9800	2/01	-	11.3S	3.9	GARDEN CITY SUMMIT	7600	2/01	-	10.4S	5.6	
BRIAN HEAD	10000				9.0	GEORGE CREEK	8840				5.6	
BRIGHTON CABIN	8700	2/01	71	22.7	10.4	GOOSEBERRY R.S.	8400	2/01	-	5.2S	3.5	
BRIGHTON SNOTEL	8750	2/01	-	17.1S	9.8	GOOSEBERRY R.S. SNOT	7900	2/01	-	14.6S	3.5	
BROWN DUCK SNOTEL	10600	2/01	-	12.8S	6.8	HARDSCRABBLE	6700	2/01	-	10.4S	8.5	
BRYCE CANYON	8000	1/31	49	11.2	4.9	HARRIS FLAT SNOTEL	7700	2/01	-	10.4S	3.5	
BUCK FLAT SNOTEL	9800	2/01	-	14.8S	6.3	HAYDEN FORK	9400	2/01	-	10.4S	3.8	
BUCK PASTURE	9700				-	HAYDEN FORK SNOTEL	9100	2/01	-	10.4S	4.3	
BUCKBOARD FLAT	9000	1/27	47	13.5	13.2	HENRY'S FORK	10000	2/01	-	5.6S	5.1	
BUG LAKE SNOTEL	7950	2/01	-	12.7S	6.7	HEWINTA SNOTEL	9500	2/01	-	6.0S	5.7	
BURT'S-MILLER RANCH	7900				2.9	HICKERSON PARK SNOTE	9100	1/28	31	9.5	3.4	
CAMP JACKSON	8600	1/27	65	19.2	13.8	HIDDEN SPRINGS	5500	2/01	-	5.2S	3.2	
CAMP JACKSON SNOTEL	8600	2/01	-	20.8S	11.3	HOBBLE CREEK SUMMIT	7420	2/01	-	17.8S	4.6	
CASTLE VALLEY SNOTL	9580	2/01	-	12.4S	5.3	HOLE-IN-ROCK SNOTEL	9150	2/01	-	17.8S	7.6	
CHALK CK #1 SNOTEL	9100	2/01	-	21.2S	11.3	HORSE RIDGE SNOTEL	8260	2/01	-	9.4S	7.6	
CHALK CK #2 SNOTEL	8200	2/01	-	12.9S	9.1	HUNTINGTON-HORSESHOE	9800	2/01	-	9.4S	4.7	
CHALK CREEK #3	7500				5.4	INDIAN CANYON SNOTEL	9100	2/01	-	9.4S	6.1	
CHEPETA SNOTEL	10300	2/01	-	11.9S	7.3	JOHNSON VALLEY	8850	2/01	-	26.1S	2.5	
CITY CREEK	7500	1/28	69	21.7	10.1	KILFOIL CREEK	7300	2/01	-	10.9S	4.5	
CLEAR CK RIDG #1 SNT	9200	2/01	-	15.6S	5.0	KILLYON CANYON	6300	1/28	35	10.1	4.2	
CLEAR CK RIDG #2 SNT	8000	2/01	-	13.4S	4.9	KIMBERLY MINE SNOTEL	9300	2/01	-	13.7S	7.2	
CLEAR CREEK RIDGE #3	6600				3.0	KING'S CABIN SNOTEL	8730	2/01	-	10.7S	5.9	
COLD WATER SPRINGS	6030	1/26	27	8.1	-	KLONDIKE NARROWS	7400	2/01	-	26.1S	7.2	
CORRAL	8200				-	KOLOB SNOTEL	9250	2/01	-	12.5	11.9	
CURRENT CREEK SNOTEL	8000	2/01	-	9.9S	2.5	LAKEFORK #1 SNOTEL	10100	2/01	-	10.9S	5.3	
DANIELS-STRAWBERRY S	8000	2/01	-	13.5S	3.8	LAKEFORK BASIN SNOTE	10900	2/01	-	13.6S	10.6	
DESERET PEAK	9250				10.4	LAKEFORK MOUNTAIN #3	8400	2/01	-	13.6S	3.3	
DESERET PEAK AM	9250	2/01	-	18.1S	8.3	LAMBS CANYON	7400	1/29	46	13.9	5.4	
DESERET PEAK SNOTEL	9250	2/01	-	13.4S	4.5	LASAL MOUNTAIN LOWER	8800	1/28	43	10.6	4.4	
DILL'S CAMP SNOTEL	9200	2/01	-	6.6S	4.9	LASAL MOUNTAIN SNOTE	9850	2/01	-	10.9S	6.1	
DONKEY RESERVOIR SNO	9800	2/01	-	6.6S	4.9	LILY LAKE SNOTEL	9050	2/01	-	8.8S	6.7	

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
LITTLE BEAR LOWER	6000				2.1	-	STILLWATER CAMP	8550				5.4	-
LITTLE BEAR SNOTEL	6550	2/01	-	8.2S	2.7	10.1	STRAWBERRY DIVIDE SN	8400	2/01	-	14.6S	4.4	11.8
LITTLE GRASSY SNOTEL	6100	2/01	-	15.7S	3.4	2.3	STUART R.S.	7950				2.3	-
LONG FLAT SNOTEL	8000	2/01	-	10.8S	6.5	5.6	SUSC RANCH	8200				2.9	-
LONG VALLEY JCT. SNT	7500	2/01	-	15.7S	2.2	3.2	TALL POLES	8800				6.3	-
LOOKOUT PEAK SNOTEL	8200	2/01	-	18.1S	8.6	19.5	THAYNES CANYON SNOTL	9200	2/01	-	17.7S	8.0	12.2
LOST CREEK RESERVOIR	6130				1.9	-	THISTLE FLAT	8500				-	-
MAMMOTH-COTTONWD SNT	8800	2/01	-	16.2S	6.1	11.8	TIMBERLINE	9100				-	-
MERCHANT VALLEY SNOT	8750	2/01	-	12.4S	5.5	7.0	TIMPANOGOS DIVIDE SN	8140	2/01	-	26.0S	5.9	15.1
MIDDLE CANYON	7000				5.4	-	TONY GROVE LK SNOTEL	8400	2/01	-	22.4S	11.7	22.0
MIDWAY VALLEY SNOTEL	9800	2/01	-	27.6S	10.3	13.9	TONY GROVE R.S.	6250				4.5	-
MILL CREEK	6950	1/29	54	16.9	8.1	13.4	TRIAL LAKE	9960				5.7	15.4
MILL-D NORTH SNOTEL	8960	2/01	-	18.7S	9.6	14.8	TRIAL LAKE SNOTEL	9960	2/01	-	16.8S	5.8	15.8
MILL-D SOUTH FORK	7400	2/01	50	14.8	6.6	12.7	TROUT CREEK SNOTEL	9400	2/01	-	9.1S	4.0	6.0
MINING FORK SNOTEL	8000	2/01	-	13.6S	4.0	8.0	UPPER JOES VALLEY	8900				2.7	-
MONTE CRISTO R.S.	8960				12.4	15.6	UPPER MILL CREEK	8300				-	-
MONTE CRISTO SNOTEL	8960	2/01	-	22.8S	13.8	17.3	VERNON CREEK SNOTEL	7500	2/01	44	10.7S	4.5	6.8
MOSSY MTN. SNOTEL	9500	2/01	-	10.0S	4.0	5.9	VIPONT	7670				-	-
MT. BALDY R.S.	9500				6.7	-	WEBSTER FLAT SNOTEL	9200	2/01	-	18.9S	5.0	10.1
MUD CREEK #2	8600				4.9	-	WHITE RIVER #1 SNOTE	8550	2/01	-	12.2S	5.2	8.6
OAK CREEK	7760				5.1	7.9	WHITE RIVER #3	7400				3.7	-
OTTER LAKE	9600				7.2	8.6	WIDTSOE #3 SNOTEL	9500	2/01	-	15.5S	7.1	6.6
PANOUTCH LAKE	8200				2.7	-	WRIGLEY CREEK	9000				4.2	-
PARLEY'S CANYON SNOT	7500	2/01	-	11.5S	4.2	12.1	YANKEE RESERVOIR	8700				2.9	-
PARLEY'S CANYON SUM.	7500	1/28	54	17.2	7.6	12.0	NOTE:						
PAYSON R.S. SNOTEL	8050	2/01	-	17.6S	6.4	11.3	The S flag following Water Content for SNOTEL sites indicates telemetered						
PICKLE KEG SNOTEL	9600	2/01	-	11.0S	6.9	10.0	data, the Depth reading preceeding S flagged data was measured around the						
PINE CREEK SNOTEL	8800	2/01	-	17.4S	7.6	10.4	snow pillows at the time of the ground survey and may not be the same date as						
RED PINE RIDGE SNOTE	9200	2/01	-	12.2S	4.4	10.9	the telemetered value.						
REDDEN MINE LOWER	8500				5.5	11.5							
REES'S FLAT	7300				5.1	8.8							
ROCK CREEK SNOTEL	7900	2/01	-	7.0S	3.0	5.3							
ROCKY BASIN-SETTLEMT	8900				9.7	15.7							
ROCKY BN-SETTLEMT SN	8900	2/01	-	21.6S	9.3	15.1							
SEELEY CREEK SNOTEL	10000	2/01	-	13.2S	6.3	8.7							
SHINGLE MILL	6200				4.6	5.9							
SILVER LAKE(BRIGHT-)	8730	2/01	60	18.6	9.1	15.6							
SMITH MOREHOUSE SNTL	7600	2/01	-	12.4S	4.7	8.7							
SNOWBIRD SNOTEL	9700	2/01	-	30.2S	12.4	22.0							
SNOWBIRD-GAD VALLEY	9700				16.0	21.5							
SPIRIT LAKE	10300				7.3	-							
SQUAW SPRINGS	9300				2.4	-							
STEEL CREEK PARK SNO	10100	2/01	-	9.0S	9.2	9.8							

In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

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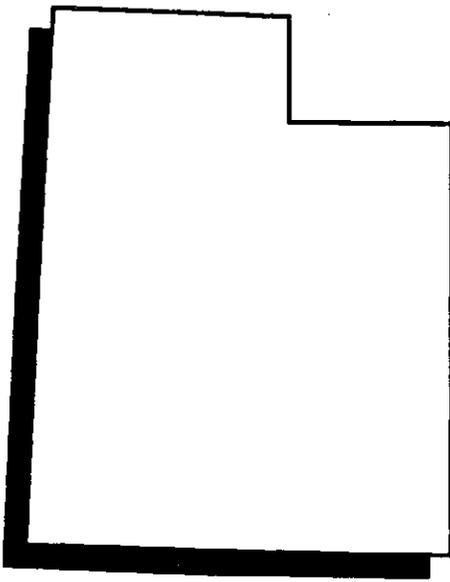
William (Bill) Richards
Chief
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Soil Conservation Service
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Snow Survey's New Address

United States Department of Agriculture
Soil Conservation Service
Snow Survey
245 N. Jimmy Doolittle Road
Salt Lake City, Utah 84084



Federal Building, Room 4402
125 South State Street
Salt Lake City, UT 84138



SOIL CONSERVATION SERVICE

Utah
Basin Outlook Report
Soil Conservation Service
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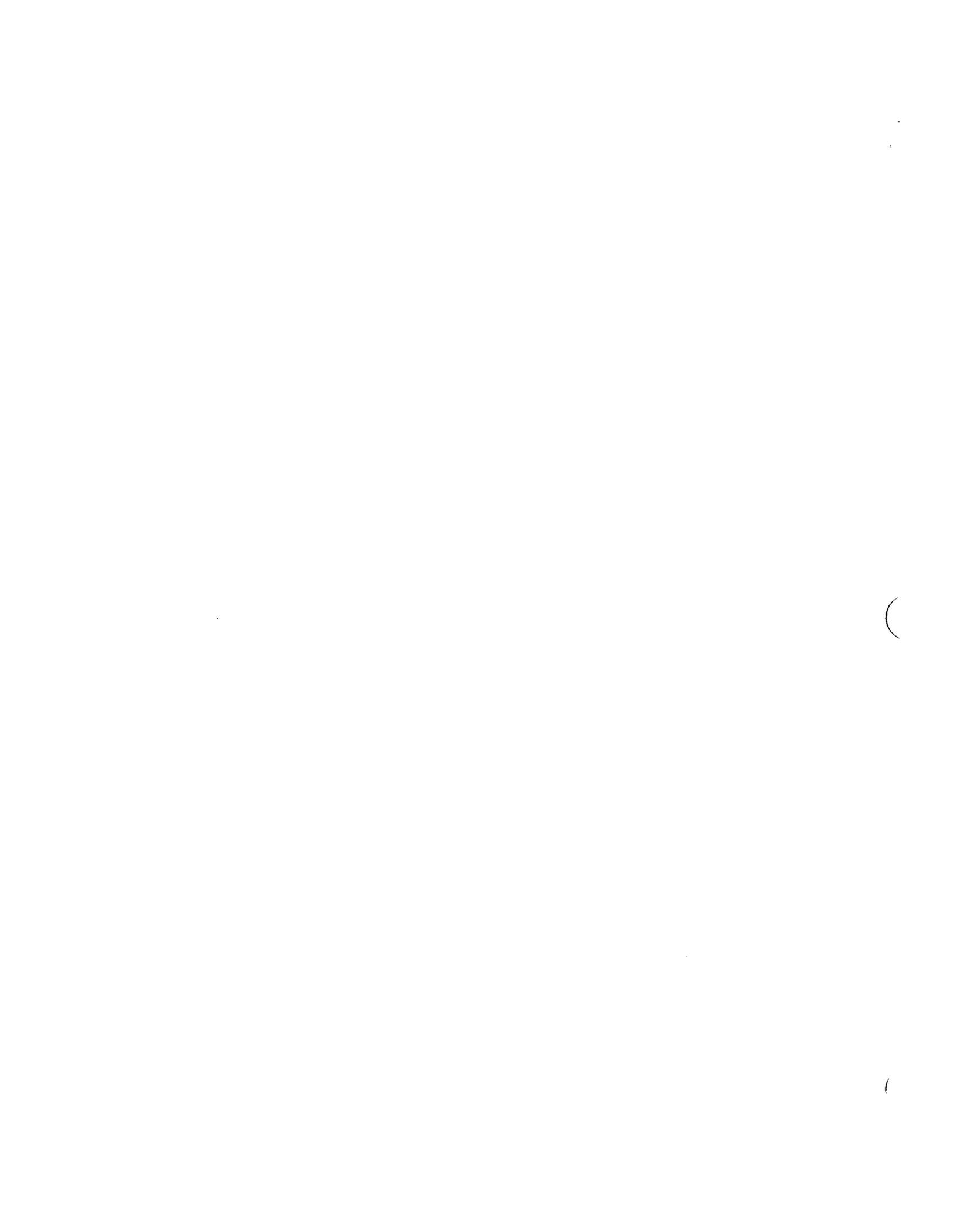


Utah

Basin Outlook Report

March 1, 1993





Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

All programs and services of the USDA Soil Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

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STATE OF UTAH GENERAL OUTLOOK
March 1, 1993

SUMMARY

February saw much the same weather patterns as January, incredibly wet in the south and near average in the north. Snowpacks in southern Utah are at all time record levels in many areas and at vitually all elevations. Areas that have had very little or no snow at all the past 6 years are now under a blanket of white. These extensive areas that have not contributed to snowmelt runoff in many years sit poised to generate significant streamflow this spring. There is a very high probability of some snowmelt flooding in southern Utah this spring. In the north, most areas have near to above average snowpacks as well as precipitation. The Bear River Basin will generate the lowest runoff and could have some water restrictions this summer.

SNOWPACK

Snowpacks in Utah, as measured by the SCS SNOTEL system, are much higher than last year, in most areas at least double. In southern Utah, there are 21 sites which have exceeded the record March 1 maximum snowpack. Some records like Kolob (current snow water equivalent is 39 inches and the previous maximum was 29) were absolutely shattered. In southern Utah, snowpacks are currently greater (1.5 to 2.5 times) than those normally measured in April. The Sevier, Virgin, Escalante, and southeastern Utah River Basins all have record snowpacks for March. Snowpacks are deep and continuous over almost all elevations in the south. In the north, packs are near to slightly above average ranging from 102% on the Bear to 136% on the Duchesne basin.

PRECIPITATION

Mountain precipitation, as measured by the SCS SNOTEL system, was near average over the Bear and Weber Watersheds and much above average over the rest of the state, ranging from 150% to 230% of normal. Some areas of southern Utah received a phenomenal 8 to 10 inches of precipitation during February. The seasonal accumulation, (October through January) ranges from 105% on the Bear to 194% on the Virgin and the Escalante. This is double last years numbers.

Precipitation figures from the National Weather Service indicate that February was a carbon copy of January, extremely wet in the south, and drier in the north. February was another record precipitation month in southern Utah, (400% - 700%) and below to near average in the north (70% - 120%).

RESERVOIRS

Storage in 25 of Utah's key irrigation reservoirs is at 35% of capacity, compared to 50% last year. This is about 52% of normal for this time of year. Some reservoirs in southern Utah are

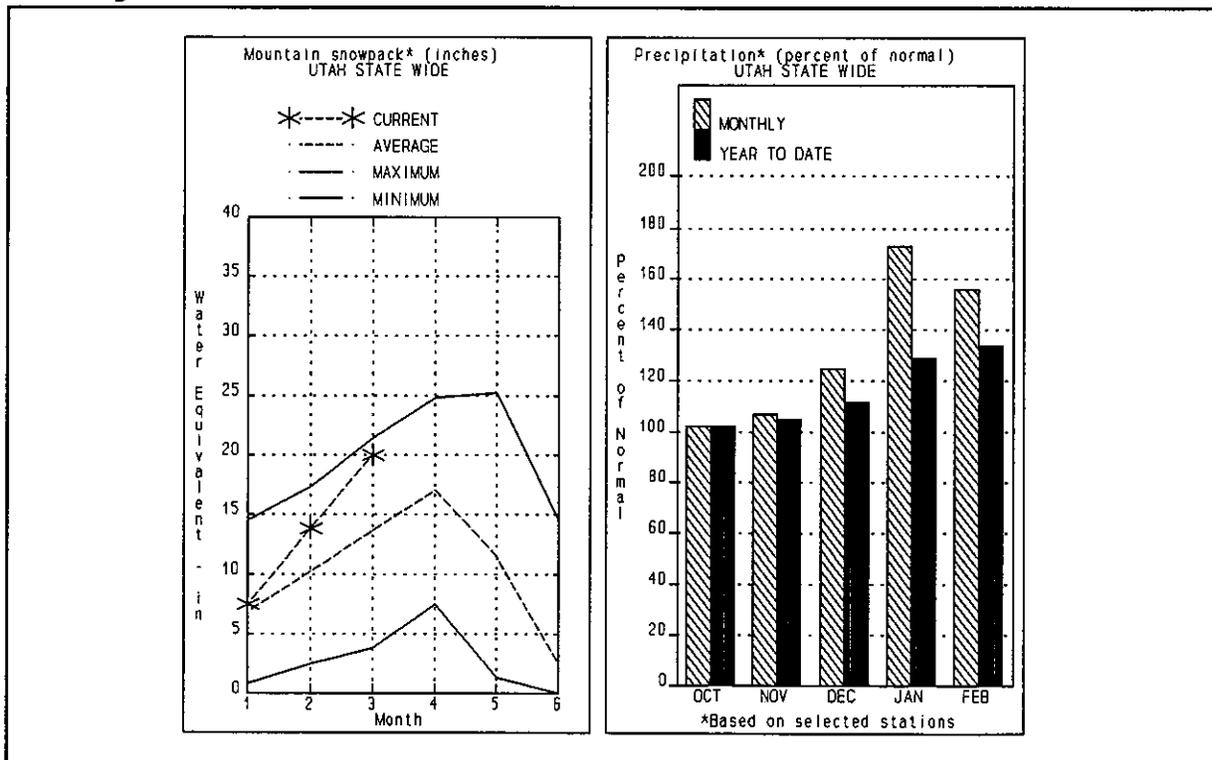
spilling water in order to make room for the forthcoming runoff and Water Managers in the north are trying to capture every drop that comes in to insure adequate supplies for the summer.

STREAMFLOW

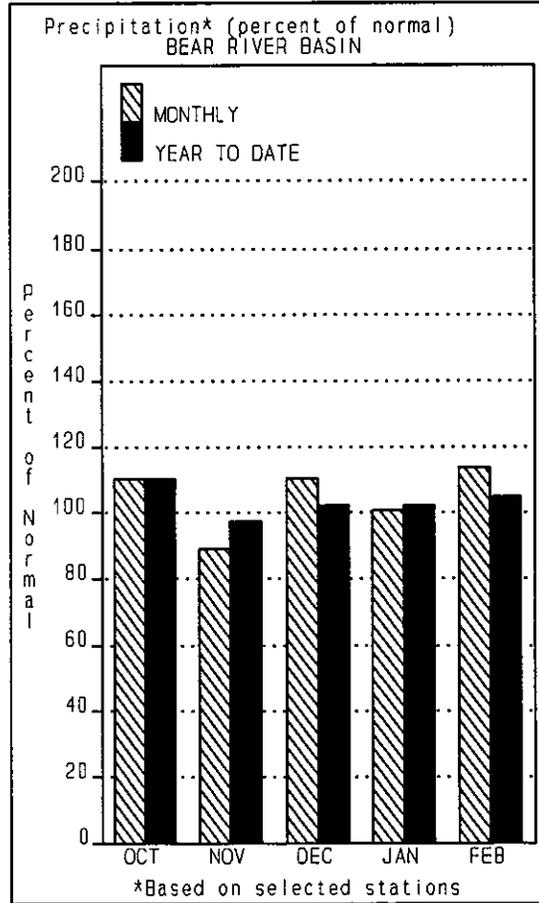
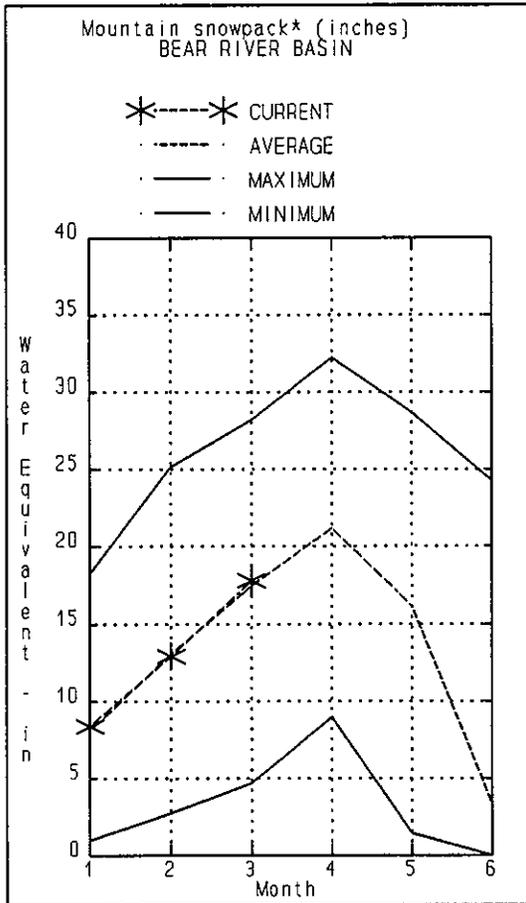
Streamflow forecasts for snowmelt runoff are for near to slightly above average flow in northern Utah. In the south, streamflow forecasts call for runoff that approaches the historical maximum recorded streamflow. Forecasts range from near 85% on the Bear River and increase to near 300% in southern and southeastern Utah. Most areas of the north are forecast near 100% to 125% of normal streamflow. In the south, there is a high probability of widespread snowmelt flooding. Because of the areal extent of this years snowpack, streams could be bankfull or above for an extended period of time. A good portion of the low and mid elevation snowpack must melt off during March to reduce the potential for 1983-1984 type flooding in southern Utah.

SPRING FLOOD POTENTIAL OUTLOOK

Flooding is likely to occur on the Virgin, Santa Clara, Upper Sevier Rivers and their tributaries as well as the drainages of southeastern Utah. Flooding problems have already occurred this winter in the Virgin watershed. Record precipitation during January and February has saturated soils leaving little infiltration capacity. Record snowpacks exist at all elevations. If the weather remains cool and wet, the potential for all types of flooding will be exacerbated.



BEAR RIVER BASIN
March 1, 1993



Snowpacks on the Bear River Watershed are near normal at 102% of average. This is about double the snowpack of last year but is still by far the lowest figure in the state. For 2 consecutive months, the Bear River basin has not had any significant increase in snowpack percentages. Six consecutive years of drought have left soil moisture and groundwater severely depleted which will negatively impact snowmelt runoff. February precipitation was 114% of normal bringing the seasonal mountain precipitation (October through February), to 105% of average. Small reservoir storage is average for March however Bear Lake has only 16% of capacity. Streamflow forecasts range from 79% to 87% of normal.

BEAR RIVER BASIN
Streamflow Forecasts - March 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
BEAR RIVER nr Ut-Wy Stateline	APR-JUL	72	89	100	86	112	128	115
BEAR RIVER nr Woodruff (2)	APR-JUL	28	89	130	87	171	230	149
BIG CREEK nr Randolph	APR-JUL	0.6	1.8	3.3	86	4.8	6.9	3.8
BEAR RIVER nr Randolph	APR-JUL	18.0	73	110	83	147	205	131
SMITHS FORK nr Border, WY	APR-SEP	67	85	97	82	109	127	118
THOMAS FORK nr WY-ID Stateline	APR-SEP	15.0	23	28	77	33	41	36
BEAR RIVER near Harer	APR-SEP	102	210	285	82	360	470	345
BEAR RIVER blw Stewart Dam (2)	APR-SEP	140	200	245	82	290	350	298
LOGAN RIVER near Logan	APR-JUL	47	74	92	85	110	137	107
BLACKSMITH FORK near Hyrum	APR-JUL	19.0	35	46	85	57	74	54

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of February

BEAR RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	230.2	480.1	992.5	BEAR RIVER, UPPER (abv Ha	6	175	108
HYRUM	15.3	10.7	11.6	10.8	BEAR RIVER, LOWER (blw Ha	8	204	98
PORCUPINE	11.3	3.5	6.5	3.7	LOGAN RIVER	4	201	99
WOODRUFF NARROWS	57.3	5.5	38.1	---	RAFT RIVER	2	167	131
WOODRUFF CREEK	4.0	2.0	---	---	BEAR RIVER BASIN	14	191	102

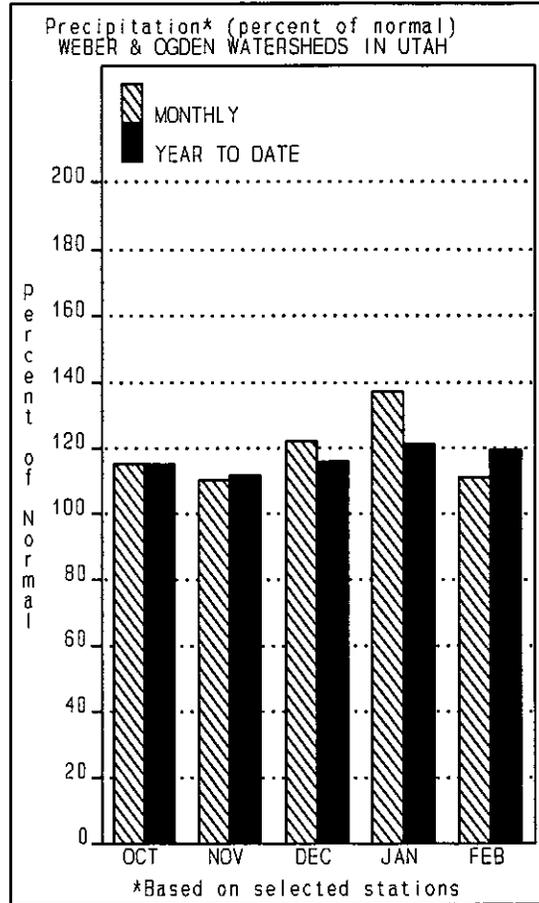
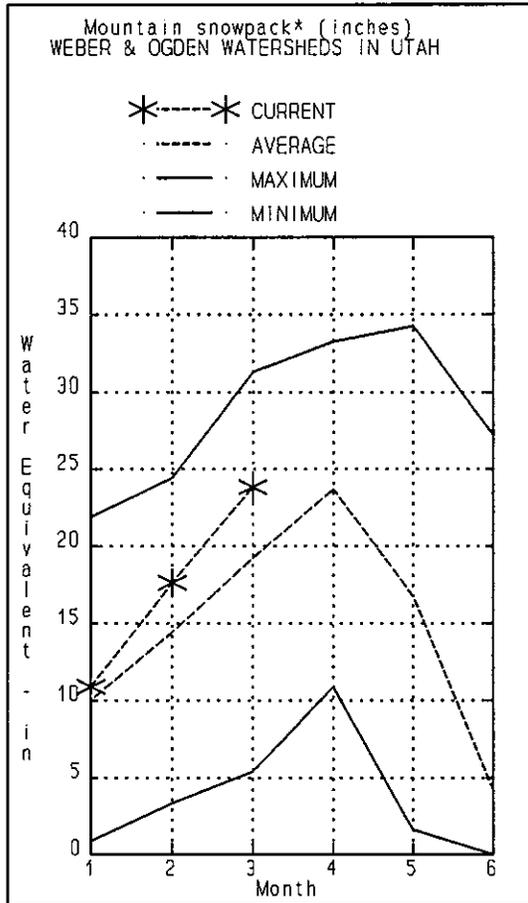
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The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

WEBER & OGDEN BASINS
March 1, 1993



Snowpacks on the Weber and Ogden watersheds are above average at 124% of normal, about the same as last month but near double the the pack of last year. Individual sites range from 95% to 165% of average. Years of below normal snowpacks have severely depleted soil moisture and groundwater supplies. These deficits could negatively impact this years snowmelt runoff. Precipitation in February was near average (111%) bringing the seasonal mountain precipitation, (October through February) is near 119% of average. Reservoir storage is near 38% of capacity, about two thirds as much as last year. Pineview has only 14% of capacity. Streamflow forecasts range from 90% to 110% of normal.

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - March 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SMITH AND MOREHOUSE CREEK near Oakle	APR-JUN	23	28	32	106	36	41	30
WEBER RIVER near Oakley	APR-JUL	102	121	133	109	145	164	122
ROCKPORT RESERVOIR inflow	APR-JUL	101	126	143	105	160	185	135
CHALK CREEK at Coalville, Ut	APR-JUL	27	40	49	111	58	71	44
WEBER RIVER near Coalville, Ut	APR-JUL	99	126	144	105	162	189	136
ECHO RESERVOIR Inflow	APR-JUL	114	156	185	105	215	255	176
LOST CREEK Res Inflow	APR-JUL	7.2	13.3	17.5	101	22	28	17.2
EAST CANYON CREEK near Morgan	APR-JUL	17.0	26	31	103	37	45	30
WEBER RIVER at Gateway	APR-JUL	295	335	364	104	390	435	347
S FORK OGDEN RIVER nr Huntsville	APR-JUL	39	50	58	92	66	77	63
PINEVIEW RESERVOIR Inflow	APR-JUL	60	90	110	88	130	160	124
WHEELER CREEK near Huntsville	APR-JUL	3.8	4.9	5.7	91	6.5	7.6	6.2

WEBER & OGDEN WATERSHEDS in Utah
Reservoir Storage (1000 AF) - End of February

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - March 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	0.9	4.1	2.3	OGDEN RIVER	4	209	118
EAST CANYON	49.5	21.4	39.0	27.7	WEBER RIVER	8	204	128
ECHO	73.9	21.7	64.0	49.5	WEBER & OGDEN WATERSHEDS	12	206	124
LOST CREEK	22.5	7.0	13.0	13.4				
PINEVIEW	110.1	15.6	45.0	48.7				
ROCKPORT	60.9	31.4	34.0	30.2				
WILLARD BAY	215.0	104.7	168.0	116.4				

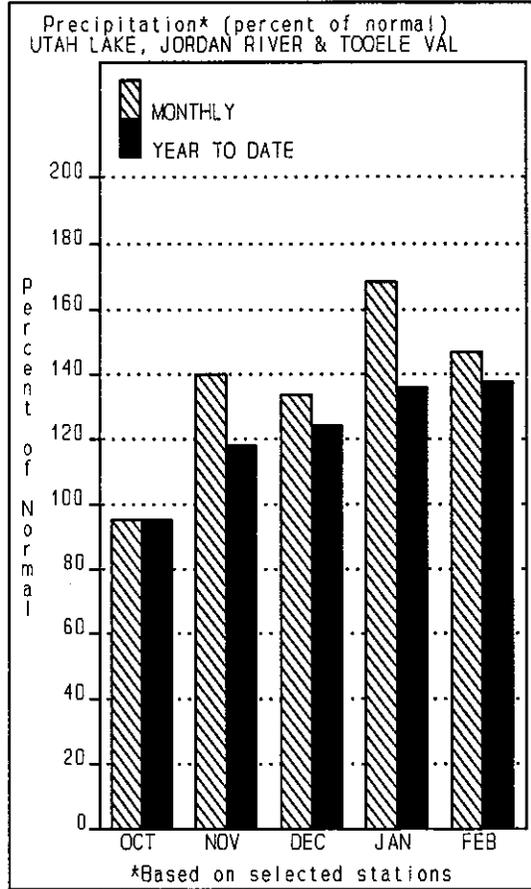
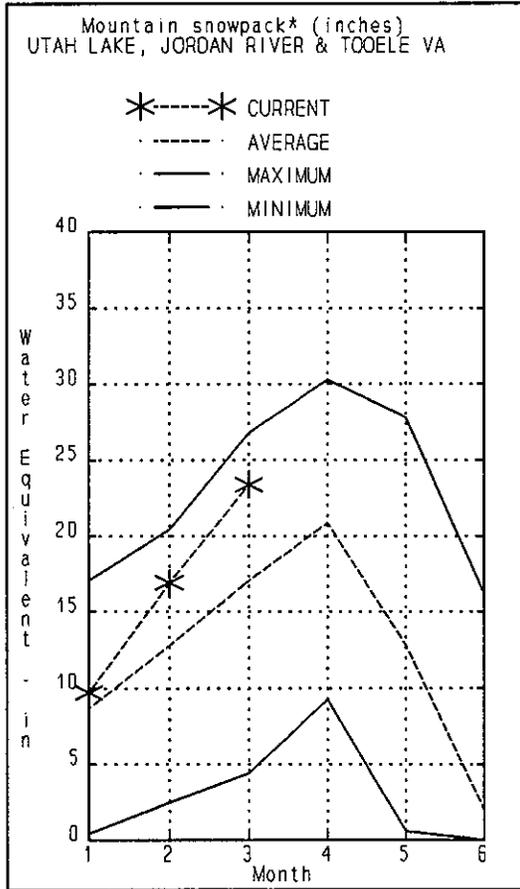
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY BASINS
March 1, 1993



Snowpack on the Provo - Utah Lake watershed is above average (136%) rising slightly from last month and more than double last years pack. In the Tooele area, snowpacks are even higher, near 160% of normal. Watershed conditions in general are improving but are still suffering the effects of six drought years which could negatively affect snowmelt runoff. February precipitation was much above average (147%) bringing the seasonal mountain precipitation, (October through February) to 138% of average. Storage in Utah Lake is quite low at 49% of capacity and in Deer Creek, 58% of capacity. Streamflow forecasts range from 100% to 135% of average, rising 5% to 10% from those issued last month.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - March 1, 1993

Forecast Point		Forecast	<<===== Drier ===== Future Conditions ===== Wetter =====>>						
			Chance Of Exceeding *						
90%	70%	50% (Most Probable)	30%	10%	30-Yr Avg.		Period		
			(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
PAYSON CREEK near Payson		APR-JUL	3.0		6.0	124		9.0	4.8
SPANISH FORK near Castilla		APR-JUL	49		93	120		107	74
HOBBLE CREEK near Springville		APR-JUL	16.0		24	127		32	19.0
PROVO near Hailstone		APR-JUL	86		124	113		162	109
PROVO below Deer Creek Dam		APR-JUL	96	130	149	116	168	205	128
AMERICAN FORK near American Fk.		APR-JUL	32	37	40	125	43	48	32
UTAH LAKE inflow		APR-JUL	194	305	350	108	395	505	324
LITTLE COTTONWOOD CRK near SLC		APR-JUL	33	41	44	112	47	55	39
BIG COTTONWOOD CRK near SLC		APR-JUL	32	40	43	113	46	54	38
PARLEY'S CREEK near SLC		APR-JUL	7.5	14.7	17.2	108	19.7	27	15.9
MILL CREEK near SLC		APR-JUL	3.7	5.8	6.9	107	8.0	9.9	6.5
EMIGRATION CREEK near SLC		APR-JUL	0.5		4.1	97		7.7	4.2
CITY CREEK near SLC		APR-JUL	4.3	7.6	8.6	103	9.6	12.9	8.3
VERNON CREEK near Vernon		APR-JUN	0.4	0.9	1.3	118	1.7	2.2	1.1
SETTLEMENT CREEK near Tooele		APR-JUL	1.0	2.0	2.7	117	3.4	4.4	2.3
ILLOW CREEK near Grantsville		APR-JUL	0.8	2.1	3.0	96	3.9	5.2	3.1

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of February

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - March 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	86.4	116.2	95.5	PROVO RIVER & UTAH LAKE	7	284	142
GRANTSVILLE	3.3	1.0	1.3	---	PROVO RIVER	4	291	137
SETTLEMENT CREEK	1.0	0.6	0.8	0.7	JORDAN RIVER & GREAT SALT	5	193	118
STRAWBERRY-ENLARGED	1105.9	376.7	488.4	---	TOOELE VALLEY WATERSHEDS	4	203	159
UTAH LAKE	870.9	426.5	472.2	689.4	UTAH LAKE, JORDAN RIVER &	16	226	136
VERNON CREEK	0.6	0.4	0.4	0.5				

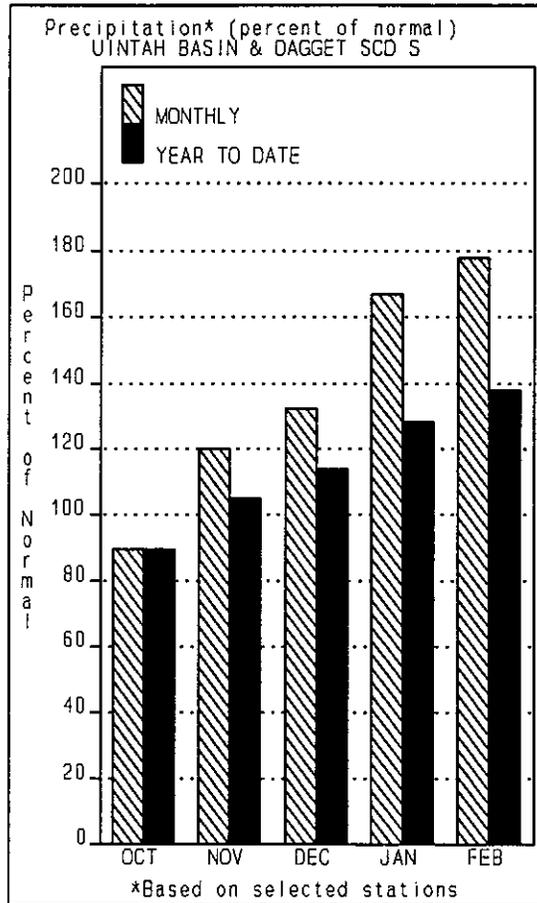
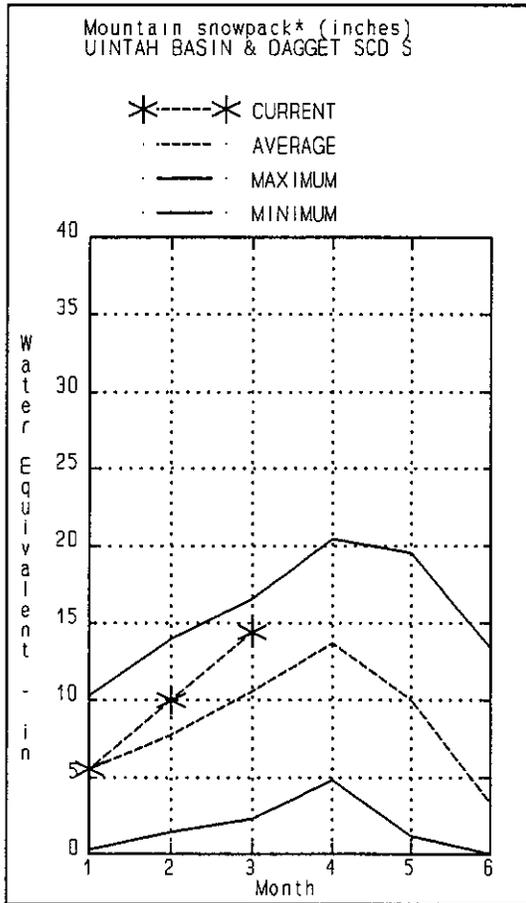
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The average is computed for the 1961-1990 base period.

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(2) - The value is natural flow - actual flow may be affected by upstream water management.

UINTAH BASIN & DAGGET SCD'S
March 1, 1993



Snowpacks across the Uintas and the Strawberry area are above average, (137%) rising about 5% from last month. Individual sites range from 98% to 162% of average. This is about double last years snowpack. February mountain precipitation was 178% of average bringing the seasonal precipitation, (October through February) to 138% of normal. Reservoir storage is at 70% of capacity, about 14% less than last year. Strawberry reservoir has about 34% of capacity. Streamflow forecasts range from 100% to 150% of normal, rising 10% to 20% from those issued last month.

UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - March 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	87	98	105	109	112	123	96
STATE LINE RESERVOIR INFLOW	APR-JUL	24	29	33	110	37	43	30
HENRYS FORK nr Manila	APR-JUL	32	46	56	133	66	80	42
FLAMING GORGE RES INFLOW	APR-JUL	670	855	980	77	1100	1290	1267
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	20	24	27	136	30	34	20
ASHLEY CK nr Vernal	APR-JUL	57	68	75	147	82	93	51
WF DUCHESNE R nr Hanna	APR-JUL	24	30	33	126	37	42	26
DUCHESNE R nr Tabiona	APR-JUL	96	111	122	116	133	148	105
ROCK CK nr Mountain Home	APR-JUL	88	100	109	115	118	130	94
UPPER STILLWATER RESV Inflow	APR-JUL	76	87	95	117	103	114	81
DUCHESNE R abv Knight Diversion	APR-JUL	166	200	225	117	250	285	191
STRAWBERRY RESV (enlarged) Inflow	APR-JUL	66	74	80	135	86	94	59
CURRENT CREEK RESV Inflow	APR-JUL	20	24	27	128	30	34	21
STARVATION RESV Inflow	APR-JUL	131	145	155	124	165	179	125
MOON LAKE Inflow	APR-JUL	67	78	85	121	92	103	70
YELLOWSTONE R nr Altonah	APR-JUL	59	71	80	123	89	101	65
YELLOWSTONE R at Myton 2	APR-JUL	265	320	360	136	400	455	263
WHITEROCKS R nr Whiterocks	APR-JUL	60	75	85	146	95	110	58
UINTA R nr Neola	APR-JUL	83	105	120	141	135	157	85
DUCHESNE R nr Randlett 2	APR-JUL	240	385	480	146	575	720	328

UINTAH BASIN & DAGGET SCD'S
Reservoir Storage (1000 AF) - End of February

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - March 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	2995.0	3273.0	---	UPPER GREEN RIVER in UTAH	6	142	129
MOON LAKE		NO REPORT			ASHLEY CREEK	2	191	152
RED FLEET	25.7	18.4	19.0	---	BLACK'S FORK RIVER	2	114	99
STEINAKER	33.4	16.2	25.5	21.1	SHEEP CREEK	1	117	150
STARVATION	165.3	122.6	140.8	112.1	DUCHESNE RIVER	11	218	140
STRAWBERRY-ENLARGED	1105.9	376.7	488.4	---	LAKE FORK-YELLOWSTONE CRE	4	193	128
					STRAWBERRY RIVER	4	254	138
					UINTAH-WHITEROCKS RIVERS	2	198	164
					UINTAH BASIN & DAGGET SCD	17	192	137

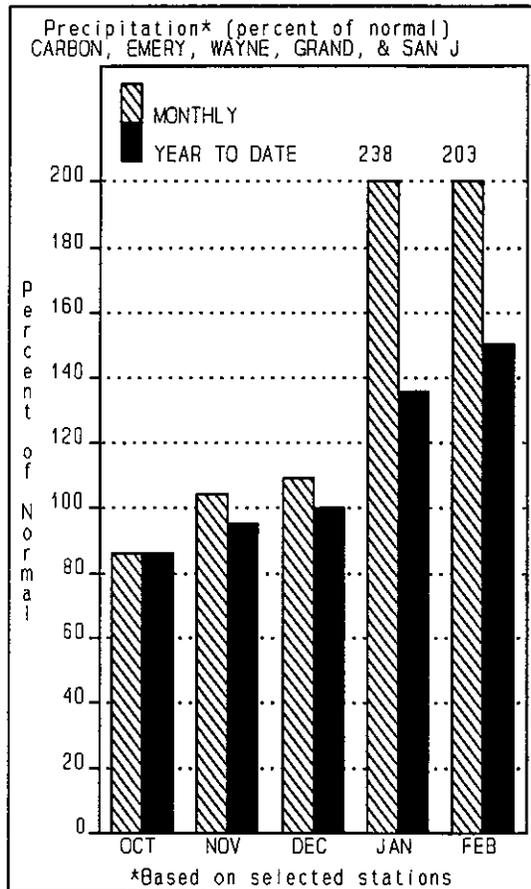
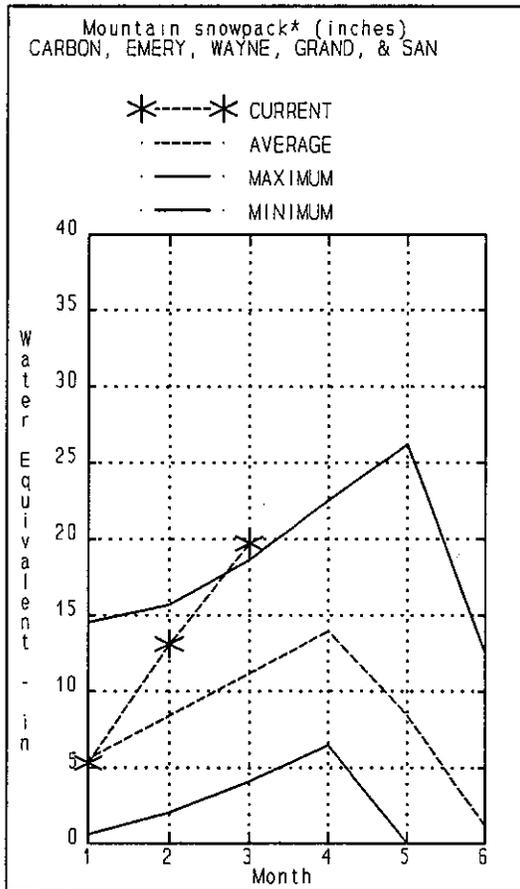
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† Storage is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN CO
March 1, 1993



Snowpacks in southeastern Utah continued to escalate in February, rising from 62% on January 1 to 140% on February 1 and are now at 177% of normal, a new basin average record. Individual sites range from 127% to 272% of normal. Snowpacks are typically double or triple last year's numbers. Overall, water supply conditions are much above average, and in certain areas, springtime snowmelt flooding could be a problem. February mountain precipitation was 203% of average. Seasonal mountain precipitation, (October through February) is near 150% of the 1961-1990 average. Reservoir storage is currently near 29% of capacity. Streamflow forecasts range from 120% in the north to well over 200% of average in the south.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.

Streamflow Forecasts - March 1, 1993

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg.	
		<<===== Drier =====>>		===== Wetter =====>>				
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	11.0	13.4	15.0	125	16.6	19.0	12.0
SCOFIELD RESV Inflow	APR-JUL	44	51	55	125	59	66	44
WHITE R blw Tabbyune Ck	APR-JUL	15.0	20	24	128	28	33	19.0
GREEN R at Green River, UT	APR-JUL	2450	2960	3300	105	3650	4150	3132
ELECTRIC LAKE Inflow	APR-JUL	15.6	17.7	19.1	126	21	23	15.1
HUNTINGTON CK nr Huntington 2	APR-JUL	37	45	50	128	55	63	39
JOE'S VALLEY RESV Inflow	APR-JUL	50	65	75	141	85	100	53
FERRON CK nr Ferron	APR-JUL	45	54	60	153	66	75	39
COLORADO R nr Cisco	APR-JUL	4490	5210	5700	136	6190	6910	4165
MILL CK nr Moab	APR-JUL	7.0	9.3	10.9	198	12.5	14.8	5.5
INDIAN CK nr Monticello	MAR-JUL	17.0	21	24	289	27	31	8.0
SEVEN MILE CK nr Fish Lake	APR-JUL	4.4	7.4	9.5	146	11.6	14.6	6.5
MUDDY CK nr Emery	APR-JUL	17.0	25	30	153	36	44	20
LLOYD'S RESV Inflow	MAR-JUL	6.8	9.9	12.0	352	14.1	17.2	3.4
RECAPTURE RESV Inflow	MAR-JUL	11.6	14.8	16.9	277	19.0	22	6.1
N R nr Bluff	APR-JUL	1460	1730	1920	166	2110	2390	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of February

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - March 1, 1993

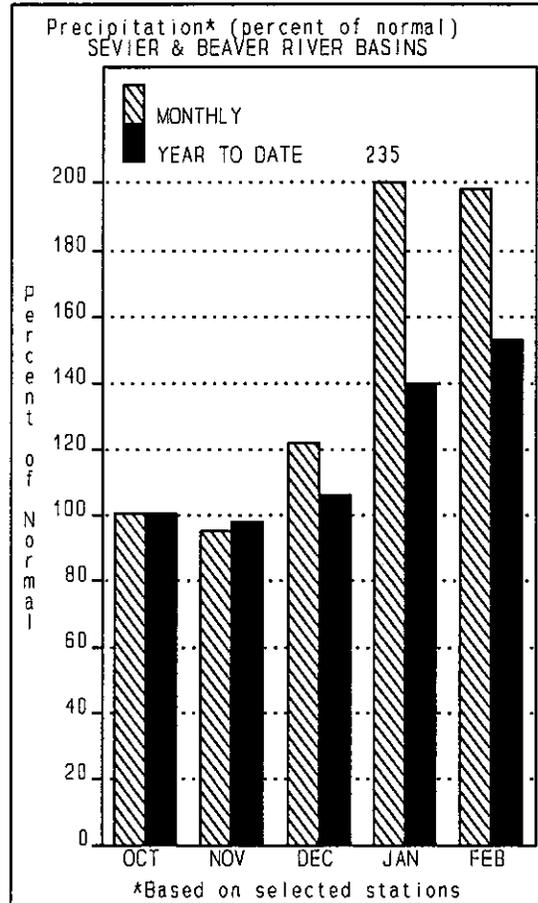
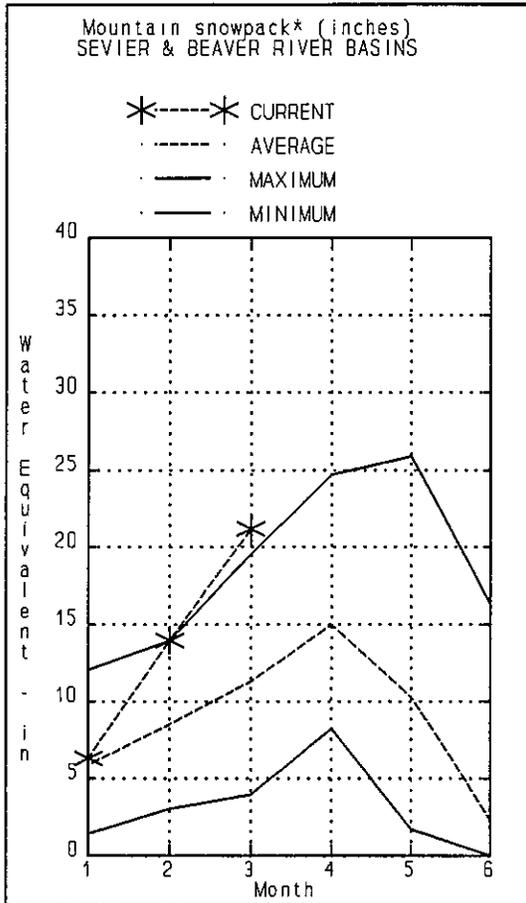
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	2.1	2.8	3.0	PRICE RIVER	3	260	146
JOE'S VALLEY	61.6	23.8	30.4	44.6	SAN RAFAEL RIVER	3	218	148
KEN'S LAKE	2.3	1.1	1.4	---	MUDDY CREEK	1	310	182
MILL SITE	16.7	12.0	10.3	4.0	FREMONT RIVER	3	217	213
SCOFIELD	65.8	5.0	9.6	32.2	LASAL MOUNTAINS	1	185	164
					BLUE MOUNTAINS	1	194	302
					WILLOW CREEK	1	256	252
					CARBON, EMERY, WAYNE, GRA	13	228	177

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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- (2) - The value is natural flow - actual flow may be affected by upstream water management.

SEVIER & BEAVER RIVER BASINS
March 1, 1993



Snowpacks in the Sevier River Basin have exceeded the all time record maximum level and are at 187% of average. Individual sites range from 130% to over 400% of average. This is more than double last years snowpack. Snowpack appears to be in excellent condition over the entire basin, especially at the low elevations. The watersheds will contribute runoff from most elevation zones which could cause significant snowmelt flooding. In fact, the prospect of some flooding is almost a certainty. Seasonal precipitation over the Sevier and Beaver basins is near 153% of normal. Reservoir storage in the Sevier Basin is 40% of capacity. Streamflow forecasts range from 100% in the north to 195% in the south.

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - March 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SEVIER at Hatch	APR-JUL	80	96	105	194	115	130	54
SEVIER near Circleville	APR-JUL	93		127	169		161	75
SEVIER near Kingston	APR-JUL	93	119	131	157	144	169	83
ANTIMONY CREEK near Antimony	APR-JUL	6.1		9.0	121		12.0	7.4
E F SEVIER near Kingston	APR-JUL	36	54	60	200	66	84	30
SEVIER blw Piute Dam	APR-JUL	136	187	205	178	225	275	115
CLEAR CREEK near Sevier	APR-JUL	17.0		28	130		40	21
PLEASANT CREEK near Pleasant	APR-JUL	6.9		9.5	111		12.1	8.5
EPHRAIM CREEK near Ephraim	APR-JUL	8.9		14.8	117		21	12.6
SEVIER nr Gunnison	APR-JUL	127		350	146		570	239
CHICKEN CREEK near Levan	APR-JUL	3.0	3.9	4.6	97	5.3	6.2	4.7
OAK CREEK near Oak City	APR-JUL	0.1	1.1	1.8	105	2.5	3.5	1.7
BEAVER RIVER near Beaver	APR-JUL	21	31	38	146	45	55	26
MINERSVILLE RESERVOIR inflow	APR-JUL	13.0	20	24	143	28	35	17.0

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of February

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - March 1, 1993

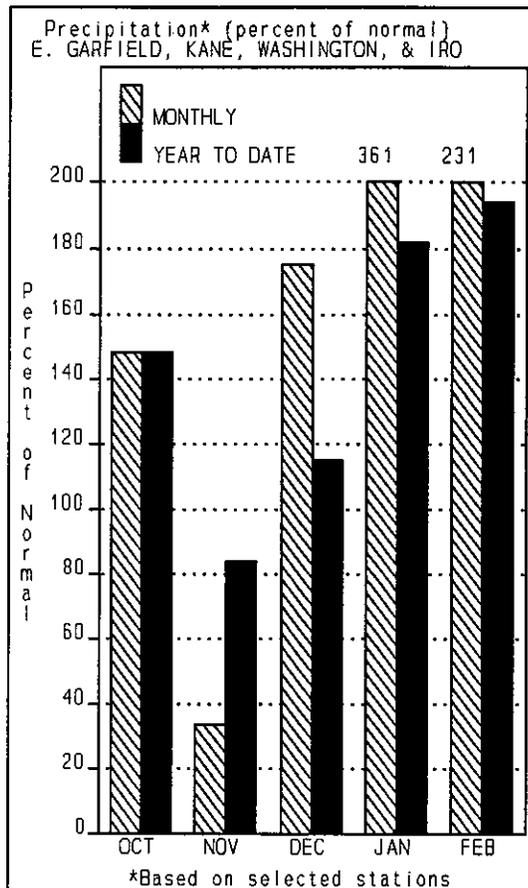
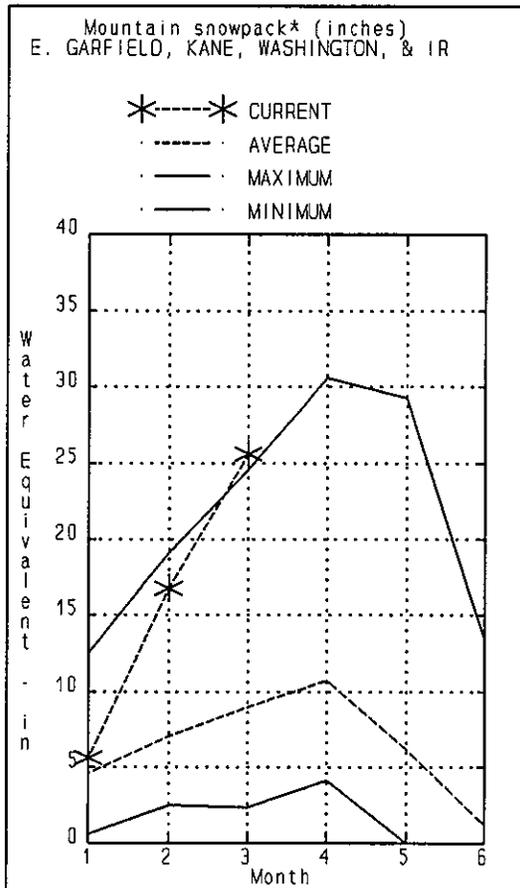
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	2.1	6.4	14.0	UPPER SEVIER RIVER (south	7	271	262
MINERSVILLE (RkyFd)	23.3	10.6	10.9	12.9	EAST FORK SEVIER RIVER	2	223	219
OTTER CREEK	52.5	22.6	26.5	31.2	SOUTH FORK SEVIER RIVER	5	289	278
PIUTE	71.8	33.6	25.3	41.5	LOWER SEVIER RIVER (inclu	6	183	126
SEVIER BRIDGE	236.0	92.1	122.6	119.6	BEAVER RIVER	2	211	180
PANQUITCH LAKE	22.3	6.0	5.0	---	SEVIER & BEAVER RIVER BAS	15	228	187

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

**E. GARFIELD, KANE, WASHINGTON, & IRON CO.
March 1, 1993**



Snowpacks across this entire region are at a new record high. There are 21 individual sites that have exceeded the previous maximum record, some by as much as 10 inches of snow water equivalent. Snowpacks are deep and continuous from low to high elevations and are near 285% of average. Individual sites range from 152% to 977% of average. Snowmelt runoff is likely to be generated from all elevation zones with a high probability of flooding. The runoff season will extend much longer than usual due to the extensive snowpack at the high elevations and could begin much earlier than usual due to the low elevation pack. Streamflow forecasts range from 200% to 375% of average.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - March 1, 1993

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)			30% (1000AF)	10% (1000AF)
COAL CK nr Cedar City	APR-JUL	37	41	43	229	46	49	19.0		
LAKE POWELL INFLOW	APR-JUL	7630	9100	10100	124	11100	12600	8086		
VIRGIN R nr Hurricane	APR-JUL	210	225	235	297	245	260	79		
SANTA CLARA R nr Pine Valley	APR-JUL	18.1	19.2	20	377	21	22	5.3		

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of February

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - March 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNLOCK	10.4	10.9	8.8	---	VIRGIN RIVER	5	284	278
LAKE POWELL	24322.0	12994.0	13745.0	---	PAROWAN	2	263	247
QUAIL CREEK		NO REPORT			ENTERPRISE TO NEW HARMONY	2	264	437
UPPER ENTERPRISE	10.0	12.0	2.0	0.8	COAL CREEK	2	277	235
LOWER ENTERPRISE	2.6	2.4	0.8	0.6	ESCALANTE RIVER	2	185	219
					E. GARFIELD, KANE, WASHIN	9	261	285

70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE D.
FOR THE STATE OF UTAH
AS OF MARCH 1, 1993

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE YEAR 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE YEAR 1961-90
ALTA CENTRAL	8800	2/26	113	37.2	23.8	32.0	DRY BREAD POND	8350	2/27	57	14.8	7.7	15.5
ASHLEY TWIN LAKES	10500	3/03	65	16.9	7.9	13.4	DRY BREAD POND SNOTL	8350	3/01	64	15.4S	9.3	16.0
BEAVER DAMS SNOTEL	8000	3/01	43	11.7S	5.8	9.5	EAST SHINGLE LAKE	9800	3/03	102	27.5	11.5	24.3
BEAVER DIVIDE SNOTL	8280	3/01	52	13.9S	5.8	10.0	EAST WILLOW CREEK SN	8250	3/01	-	15.1S	5.9	6.0
BEN LOMOND PK SNOTL	8000	3/01	113	39.8S	15.6	33.0	FARMINGTON CANYON L.	6950	2/27	82	25.9	15.2	19.6
BEN LOMOND TR SNOTL	6000	3/01	74	22.5S	7.7	18.0	FARMINGTON CN SNOTEL	8000	3/01	99	32.2S	16.9	23.6
BEVAN'S CABIN	6450	2/25	57	13.7	9.8	9.4	FARNSWORTH LK SNOTEL	9600	3/01	64	17.9S	11.3	15.5
BIG FLAT SNOTEL	10290	3/01	88	22.9S	11.4	14.1	FISH LAKE	8700	2/23	41	11.1	5.9	7.1
BIRCH CROSSING	8100	2/25	51	13.8	6.5	6.3	FIVE POINTS LAKE SNO	10920	3/01	-	18.4S	8.9	13.6
BLACK FLAT-U.M. CK S	9400	3/01	51	15.8S	4.6	7.9	FRANCES FLATS	6700	3/01	68	21.6	10.8	16.1
BLACK'S FORK GS-EF	9340	2/26	39	8.7	6.3	7.6	G.B.R.C. HEADQUARTER	8700	2/24	71	20.5	10.5	13.8
BLACK'S FORK JUNCTN	8930	2/26	40	8.6	5.8	7.5	G.B.R.C. MEADOWS	10000	2/24	82	23.3	11.1	19.2
BOX CREEK SNOTEL	9800	3/01	66	16.9S	6.3	9.8	GARDEN CITY SUMMIT	7600	2/27	51	13.5	9.1	14.7
BRIAN HEAD	10000	2/22	92	27.4	14.4	16.5	GEORGE CREEK	8840	02/28	75	22.0	16.2	17.4
BRIGHTON CABIN	8700	2/25	105	30.0	15.4	23.2	GOOSEBERRY R.S.	8400	2/23	41	11.6	8.3	9.9
BRIGHTON SNOTEL	8750	3/01	70	23.8S	14.1	18.0	GOOSEBERRY R.S. SNOT	7900	3/01	33	7.3S	4.6	9.0
BROWN DUCK SNOTEL	10600	3/01	81	18.0S	9.8	15.1	HARDSCRABBLE	6700	2/27	68	20.1	7.6	15.0
BRYCE CANYON	8000	2/28	59	18.2	7.9	4.3	HARRIS FLAT SNOTEL	7700	3/01	82	24.2S	7.3	5.7
BUCK FLAT SNOTEL	9800	3/01	73	21.7S	10.3	13.7	HAYDEN FORK	9400	2/26	52	14.1	5.9	13.1
BUCK PASTURE	9700	3/03	57	12.5	9.2	12.9	HAYDEN FORK SNOTEL	9100	3/01	60	14.4S	5.9	13.7
BUCKBOARD FLAT	9000	2/23	67	20.9	11.9	10.6	HENRY'S FORK	10000	3/03	45	10.8	9.7	11.2
BUG LAKE SNOTEL	7950	3/01	59	16.4S	8.8	17.0	HEWITA SNOTEL	9500	3/01	38	8.3S	7.1	8.5
BURT'S-MILLER RANCH	7900	2/26	29	6.2	2.7	4.6	HICKERSON PARK SNOTE	9100	3/01	39	7.5S	6.4	5.0
CAMP JACKSON	8600	2/23	86	29.0	14.4	11.2	HIDDEN SPRINGS	5500	3/01	37	11.8	2.6	6.4
CAMP JACKSON SNOTEL	8600	3/01	90	31.4S	16.2	10.4	HOBBLE CREEK SUMMIT	7420	2/25	70	18.5	7.0	12.7
CASTLE VALLEY SNOTL	9580	3/01	84	27.1S	9.5	10.1	HOLE-IN-ROCK SNOTEL	9150	3/01	37	7.1S	5.0	4.5
CHALK CK #1 SNOTEL	9100	3/01	86	27.5S	14.8	18.6	HORSE RIDGE SNOTEL	8260	3/01	73	22.7S	10.2	19.9
CHALK CK #2 SNOTEL	8200	3/01	60	16.8S	11.2	12.3	HUNTINGTON-HORSESHOE	9800	2/25	78	25.2	13.5	19.9
CHALK CREEK #3	7500	2/26	44	10.4	3.4	6.6	INDIAN CANYON SNOTEL	9100	3/01	62	14.4S	7.0	8.9
CHEPETA SNOTEL	10300	3/01	66	15.7S	9.4	10.8	JOHNSON VALLEY	8850	2/23	44	11.4	5.4	6.1
CITY CREEK	7500	3/01	82	27.5	13.9	23.5	KILFOIL CREEK	7300	2/27	56	15.2	7.0	12.1
CLEAR CK RIDG #1 SNT	9200	3/01	85	22.1S	7.7	15.8	KILLYON CANYON	6300	3/01	38	12.4	3.4	-
CLEAR CK RIDG #2 SNT	8000	3/01	68	18.5S	5.7	11.3	KIMBERLY MINE SNOTEL	9300	3/01	68	20.4S	10.1	11.6
CLEAR CREEK RIDGE #3	6600	2/25	43	10.6	3.7	7.4	KING'S CABIN SNOTEL	8730	3/01	53	14.3S	7.5	9.3
COLD WATER SPRINGS	6030	2/27	40	10.9	-	-	KLONDIKE NARROWS	7400	2/27	62	17.7	8.4	17.0
CORRAL	8200				-	-	KOLOB SNOTEL	9250	3/01	123	39.0S	18.9	16.7
CURRENT CREEK SNOTEL	8000	3/01	66	14.6S	5.2	9.2	LAKEFORK #1 SNOTEL	10100	3/01	66	16.2S	6.2	9.5
DANIELS-STRAMBERRY S	8000	3/01	74	18.9S	6.8	15.5	LAKEFORK BASIN SNOTE	10900	3/01	-	19.3S	12.4	18.0
DESERET PEAK	9250	3/01	64	20.8	13.8	20.2	LAKEFORK MOUNTAIN #3	8400	2/26	46	10.9	3.4	5.8
DESERET PEAK AM	9250	3/02	60	18.0	14.2	-	LAMBS CANYON	7400	3/01	59	18.2	8.8	14.3
DESERET PEAK SNOTEL	9250	3/01	74	25.3S	14.3	15.0	LASAL MOUNTAIN LOWER	8800	3/01	51	16.4	7.9	7.6
DILL'S CAMP SNOTEL	9200	3/01	72	21.7S	7.0	11.9	LASAL MOUNTAIN SNOTE	9850	3/01	65	17.9S	9.7	10.9
DONKEY RESERVOIR SNO	9800	3/01	45	10.2S	6.4	6.7	LILY LAKE SNOTEL	9050	3/01	54	12.7S	8.8	10.6

SNO	E	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR	1961-90	SN	RSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR	1961-90
LITTLE BEAR LOWER		6000	2/27	49	14.3	4.9	9.4	STILLWATER CAMP		8550	2/26	44	10.8	5.8	8.6
LITTLE BEAR SNOTEL		6550	3/01	49	11.6S	3.5	13.0	STRAWBERRY DIVIDE SN		8400	3/01	87	21.3S	8.2	16.4
LITTLE GRASSY SNOTEL		6100	3/01	40	21.5S	5.2	2.2	STUART R.S.		7950	2/24	48	11.5	5.2	6.3
LONG FLAT SNOTEL		8000	3/01	59	18.7S	10.0	7.0	SUSC RANCH		8200	2/25	79	24.0	7.3	8.0
LONG VALLEY JCT. SNT		7500	3/01	70	24.1S	3.9	4.3	TALL POLES		8800	2/25	77	21.7	11.5	11.7
LOOKOUT PEAK SNOTEL		8200	3/01	84	23.5S	12.4	25.4	THAYNES CANYON SNOTEL		9200	3/01	83	25.6S	12.0	17.3
LOST CREEK RESERVOIR		6130	2/27	37	8.9	1.6	5.4	THRISTLE FLAT		8500					
MAMMOTH-COTTONWD SNT		8800	3/01	81	23.9S	10.1	16.6	TIMBERLINE		9100					
MERCHANT VALLEY SNOT		8750	3/01	67	19.3S	8.6	9.3	TIMPANOGOS DIVIDE SN		8140	3/01	114	36.4S	10.3	20.4
MIDDLE CANYON		7000	2/25	70	18.0	10.8	11.5	TONY GROVE LK SNOTEL		8400	3/01	99	29.0S	15.9	29.3
MIDWAY VALLEY SNOTEL		9800	3/01	127	42.0S	16.8	17.9	TONY GROVE R.S.		6250	2/27	42	11.9	6.1	10.8
MILL CREEK		6950	3/01	71	21.7	10.6	17.6	TRIAL LAKE		9960	2/26	90	23.6	10.0	20.3
MILL-D NORTH SNOTEL		8960	3/01	83	24.2S	13.8	19.8	TRIAL LAKE SNOTEL		9960	3/01	101	22.7S	8.7	21.2
MILL-D SOUTH FORK		7400	2/26	66	18.7	9.8	16.7	TROUT CREEK SNOTEL		9400	3/01	49	12.0S	6.3	8.0
MINING FORK SNOTEL		8000	3/01	-	17.9S	8.5	12.5	UPPER JOES VALLEY		8900	2/24	56	13.4	6.1	9.3
MONTE CRISTO R.S.		8960	2/27	73	23.2	11.7	21.0	UPPER MILL CREEK		8300					
MONTE CRISTO SNOTEL		8960	3/01	82	29.3S	18.5	23.5	VERNON CREEK SNOTEL		7500	3/01	64	16.5S	7.7	9.2
MOSSY MTN. SNOTEL		9500	3/01	56	15.0S	6.1	7.9	VIPONT		7670	02/28	54	16.8	7.0	12.3
MT. BALDY R.S.		9500	2/24	82	23.1	13.8	19.6	WEBSTER FLAT SNOTEL		9200	3/01	95	29.3S	8.9	12.4
MUD CREEK #2		8600	2/24	74	16.6	7.0	11.8	WHITE RIVER #1 SNOTE		8550	3/01	64	18.1S	6.9	11.6
OAK CREEK		7760	2/22	55	15.0	5.5	10.3	WHITE RIVER #3		7400	2/24	43	11.6	4.5	7.8
OTTER LAKE		9600						WIDTSOE #3 SNOTEL		9500	3/01	80	23.1S	11.6	8.5
PANQUITCH LAKE		8200	2/22	48	12.7	4.5	4.4	WRIGLEY CREEK		9000	2/24	62	14.9	6.6	9.6
PARLEY'S CANYON SNOT		7500	3/01	58	15.1S	7.2	16.0	YANKEE RESERVOIR		8700	2/22	53	14.8	8.3	7.8
PARLEY'S CANYON SUM.		7500	3/01	65	20.4	10.8	15.7	NOTE:							
PAYSON R.S. SNOTEL		8050	3/01	66	23.8S	10.1	16.2	The S flag following Water Content for SNOTEL sites indicates telemetered							
PICKLE KEG SNOTEL		9600	3/01	65	15.6S	10.6	13.5	data. The Depth reading preceeding S flagged data was measured around the							
PINE CREEK SNOTEL		8800	3/01	61	23.9S	12.3	15.5	snow pillows at the time of the ground survey and may not be the same date as							
RED PINE RIDGE SNOTE		9200	3/01	78	18.1S	7.2	14.3	the telemetered value.							
REDDEN MINE LOWER		8500	2/26	84	22.6	8.1	15.0								
REES'S FLAT		7300	2/22	51	14.0	6.6	10.9								
ROCK CREEK SNOTEL		7900	3/01	51	12.9S	4.9	7.5								
ROCKY BASIN-SETTLEMT		8900	2/27	90	28.3	18.6	22.2								
ROCKY BN-SETTLEMT SN		8900	3/01	93	30.7S	14.0	20.0								
SEELEY CREEK SNOTEL		10000	3/01	64	19.2S	9.6	11.9								
SHINGLE MILL		6200	2/26	40	11.5	6.0	7.5								
SILVER LAKE(BRIGHT-)		8730	2/26	88	25.9	13.1	20.3								
SMITH MOREHOUSE SNTL		7600	3/01	64	17.5S	7.3	11.9								
SNOWBIRD SNOTEL		9700	3/01	-	41.1S	18.7	29.0								
SNOWBIRD-GAD VALLEY		9700				19.6	28.4								
SPIRIT LAKE		10300	2/26	53	14.6	9.4	10.1								
SQUAW SPRINGS		9300	2/23	47	12.2	5.5	6.4								
STEEL CREEK PARK SNO		10100	3/01	56	12.5S	11.1	12.6								

The S flag following Water Content for SNOTEL sites indicates telemetered data. The Depth reading preceeding S flagged data was measured around the snow pillows at the time of the ground survey and may not be the same date as the telemetered value.

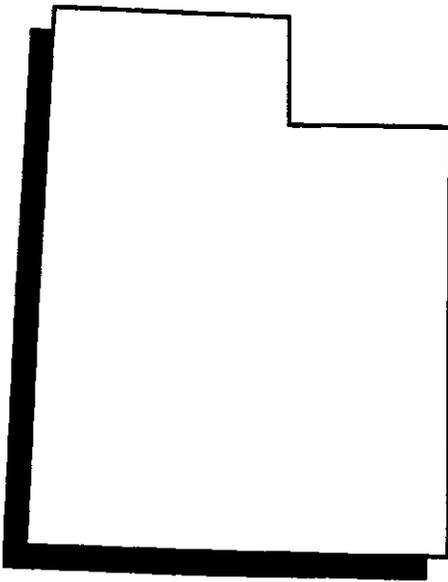
In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

Issued by

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SOIL CONSERVATION SERVICE

Utah
Basin Outlook Report
Soil Conservation Service
Salt Lake City, UT





United States
Department of
Agriculture

Soil
Conservation
Service



Utah

Basin Outlook Report

April 1, 1993



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Basin Outlook Reports

and

Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points.

Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff.

includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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STATE OF UTAH GENERAL OUTLOOK
April 1, 1993

SUMMARY

March weather patterns were excellent for general water supply conditions. In the south, warm temperatures were able to melt off much of the record low elevation snowpack without significant flooding and several moist storms brought additional snow to the north where it was most needed. Snowpacks in southern Utah remain much above normal in the higher elevations and so the potential of snowmelt flooding remains. In the north, most areas have near to above average snowpacks as well as precipitation. The Bear River Basin will generate the lowest runoff and could have some water restrictions this summer. In general, the water supply conditions are excellent, especially considering the past few years of drought.

SNOWPACK

Snowpacks in Utah, as measured by the SCS SNOTEL system, are much higher than last year, in most areas at least double. In southern Utah, snowpacks range from 40% to 340% of normal. Some sites such as Kolob and Midway Valley have more than 40 inches of snow water equivalent. In the north, packs are near to slightly above average ranging from 96% on the Bear to 123% on the Duchesne basin. Overall, snowpacks are in much better shape across the entire state than the past few years and should produce much greater snowmelt streamflow.

PRECIPITATION

Mountain precipitation in March, as measured by the SCS SNOTEL system, was above average in northern Utah, (100% to 130%) and much drier (70%) in south, reversing the pattern from previous months. The seasonal accumulation, (October through March) ranges from 110% on the Bear to 170% on the Virgin and the Escalante.

Precipitation figures from the National Weather Service indicate the same pattern at lower elevations. Areas of the state that were driest, mainly in the north, received the greatest precipitation. The southern portion of Utah, with potential snowmelt flooding problems, was warm and relatively dry. This pattern was probably the best climatological sequence for the past month statewide, augmenting snowpacks in the north, while lowering them in the south. A few of the larger percentages were: Vernal, 292%, Duchesne, 271% and Richfield, 218% of normal. Some of the smaller percentages include: Wendover, 42% and New Harmony, 40% of average.

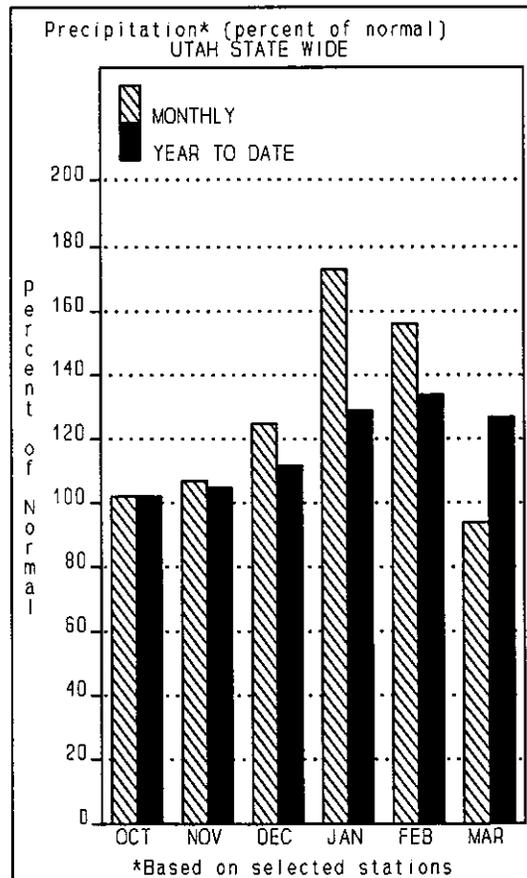
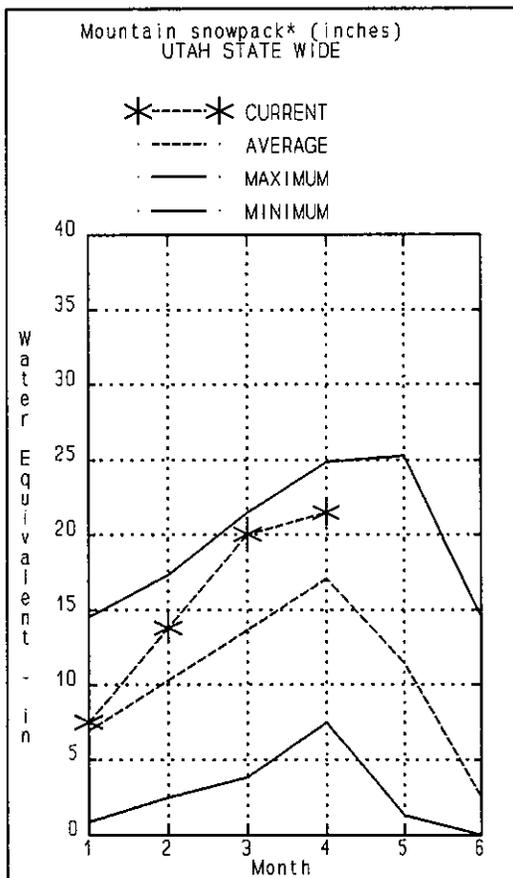
Seasonal precipitation (October through March) reflects the longer term weather pattern that has favored the southern end of Utah. The south currently has 155% to 220% of normal whereas the north has 120% to 160% of average.

RESERVOIRS

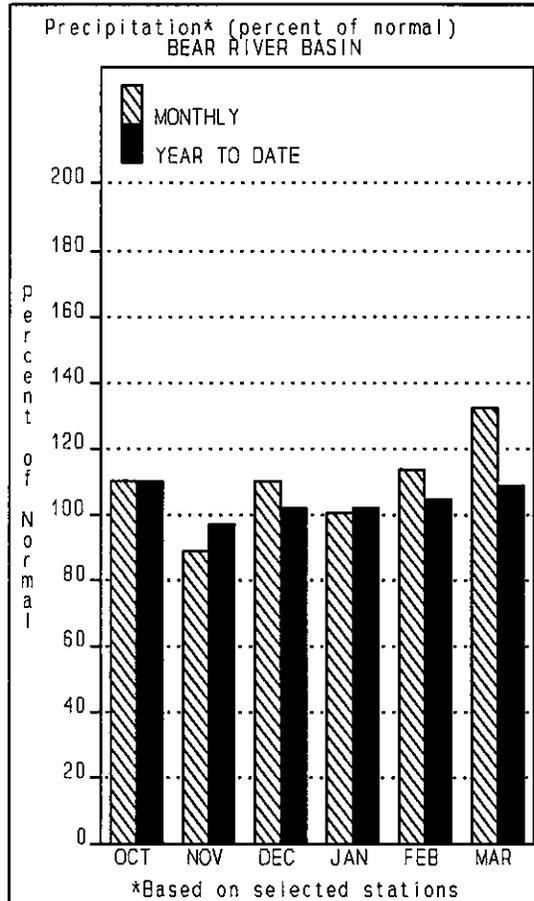
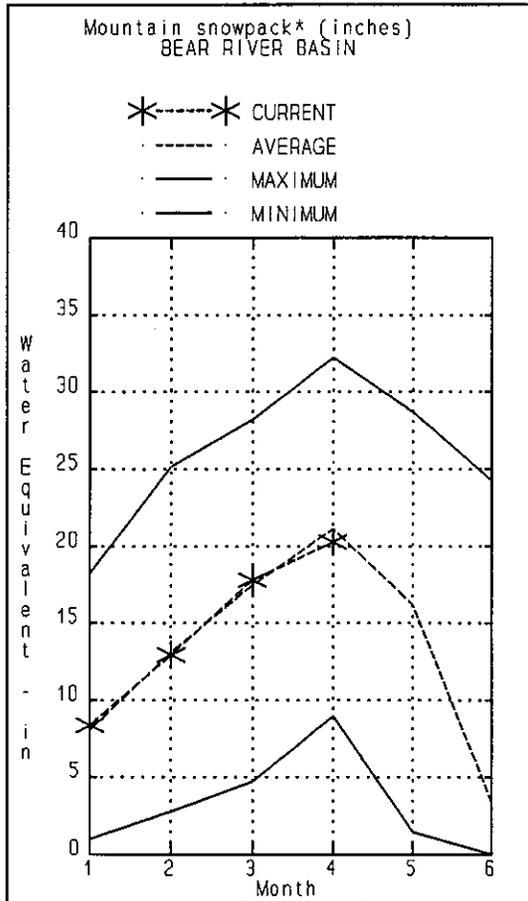
Storage in 23 of Utah's key irrigation reservoirs is at 58% of capacity, compared to 62% last year. This is about 82% of normal for this time of year. Most reservoirs are in relatively good shape for spring runoff and should provide an adequate water supply this summer.

STREAMFLOW

Streamflow forecasts for snowmelt runoff are for near to slightly above average flow in northern Utah. In the south, streamflow forecasts call for runoff that approaches the historical maximum recorded streamflow. Forecasts range from near 85% on the Bear River and increase to over 200% in southern and southeastern Utah. Most areas of the north are forecast near 100% to 125% of normal streamflow. In the south, there is still a high potential of some snowmelt flooding despite the uneventful loss of much of the low elevation snowpack. Because of the areal extent and depth of this years snowpack in southern Utah, streams could be bankfull or above for an extended period of time.



BEAR RIVER BASIN
April 1, 1993



Snowpacks on the Bear River Watershed are near normal at 96% of average. This is more than double the snowpack of last year but is still the lowest figure in the state. This is the third consecutive month that the Bear River basin has not had an increase in snowpack percentages. Six years of drought have left soil moisture and groundwater severely depleted which will negatively impact snowmelt runoff. March precipitation was 132% of normal bringing the seasonal mountain precipitation (October through March), to 109% of average. Small reservoir storage in the Bear River area is 87% of capacity however Bear Lake has only 19% of capacity. Streamflow forecasts range from 80% to 90% of normal.

BEAR RIVER BASIN
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
BEAR RIVER nr Ut-Wy Stateline	APR-JUL	77	92	102	89	112	127	115
BEAR RIVER nr Woodruff (2)	APR-JUL	32	92	132	89	173	230	149
BIG CREEK nr Randolph	APR-JUL	0.2	1.8	3.3	87	4.8	6.9	3.8
BEAR RIVER nr Randolph	APR-JUL	24	75	110	84	145	196	131
SMITHS FORK nr Border, WY	APR-SEP	74	89	100	85	111	126	118
THOMAS FORK nr WY-ID Stateline	APR-SEP	17.0	24	29	81	34	41	36
BEAR RIVER near Harer	APR-SEP	119	220	285	83	350	450	345
BEAR RIVER blw Stewart Dam (2)	APR-SEP	147	205	245	82	285	345	298
LOGAN RIVER near Logan	APR-JUL	62	80	92	86	104	122	107
BLACKSMITH FORK near Hyrum	APR-JUL	23	37	47	87	57	71	54

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of March

BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	272.2	505.8	1002.1	BEAR RIVER, UPPER (abv Ha	6	198	107
HYRUM	15.3	15.1	15.1	12.2	BEAR RIVER, LOWER (blw Ha	8	249	88
PORCUPINE	11.3	8.0	7.5	5.0	LOGAN RIVER	4	222	90
WOODRUFF NARROWS	57.3	24.3	50.8	---	RAFT RIVER	2	192	110
WOODRUFF CREEK	4.0	2.0	6.9	---	BEAR RIVER BASIN	14	223	96

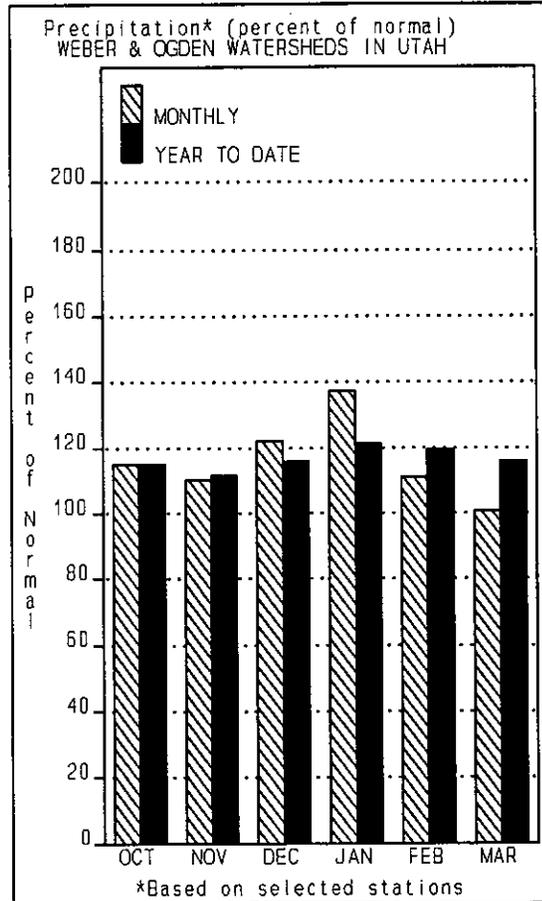
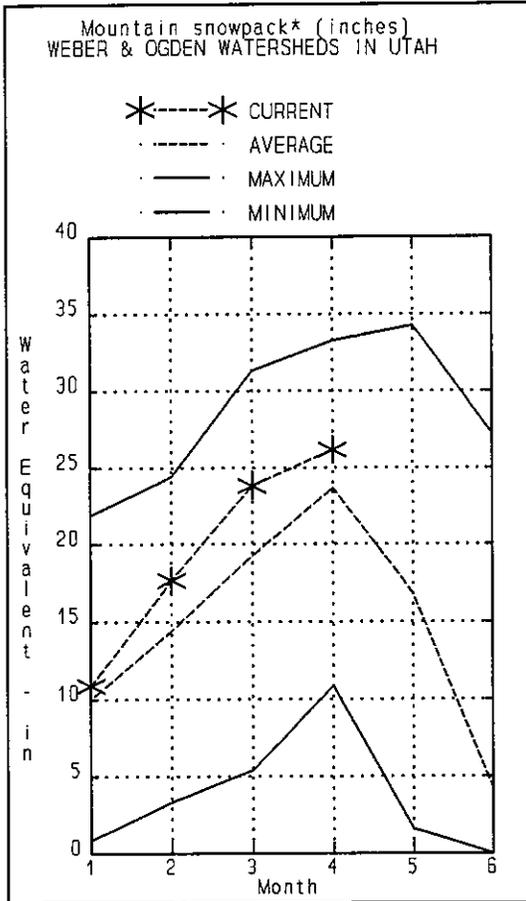
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

WEBER & OGDEN BASINS
April 1, 1993



Snowpacks on the Weber and Ogden watersheds are near average at 110% of normal, about the same as last month but near double the the pack of last year. Individual sites range from 70% to 137% of average. Water supply conditions are generally fair but much improved from past years. The past years of drought could negatively impact this years snowmelt runoff. Precipitation in March was 101% bringing the seasonal mountain precipitation, (October through March) to near 116% of average. Reservoir storage is near 53% of capacity. Pineview has 51% of capacity, up from only 14% last month. Streamflow forecasts range from 95% to 115% of normal.

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>							
		Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
SMITH AND MOREHOUSE CREEK near Oakley	APR-JUN	26	30	33	110	36	40	30	
WEBER RIVER near Oakley	APR-JUL	111	126	137	112	148	164	122	
ROCKPORT RESERVOIR inflow	APR-JUL	115	134	147	110	160	179	134	
CHALK CREEK at Coalville, Ut	APR-JUL	32	43	51	116	59	70	44	
WEBER RIVER near Coalville, Ut	APR-JUL	112	133	148	109	163	185	136	
ECHO RESERVOIR Inflow	APR-JUL	125	164	190	108	215	255	176	
LOST CREEK Res Inflow	APR-JUL	9.7	14.4	17.5	102	21	25	17.2	
EAST CANYON CREEK near Morgan	APR-JUL	22	27	31	103	35	40	30	
WEBER RIVER at Gateway	APR-JUL	300	340	370	107	400	440	347	
S FORK OGDEN RIVER nr Huntsville	APR-JUL	51	58	63	100	68	75	63	
PINEVIEW RESERVOIR Inflow	APR-JUL	83	104	118	95	132	153	124	
WHEELER CREEK near Huntsville	APR-JUL	4.4	5.3	5.9	95	6.5	7.4	6.2	

WEBER & OGDEN WATERSHEDS in Utah
Reservoir Storage (1000 AF) - End of March

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - April 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	1.8	4.6	2.6	OGDEN RIVER	4	258	103
EAST CANYON	49.5	28.2	39.3	36.6	WEBER RIVER	8	207	114
ECHO	73.9	36.3	68.3	49.5	WEBER & OGDEN WATERSHEDS	12	223	110
LOST CREEK	22.5	8.5	10.8	13.3				
PINEVIEW	110.1	56.7	53.2	55.6				
ROCKPORT	60.9	39.4	38.7	30.9				
WILLARD BAY	215.0	129.9	168.0	125.3				

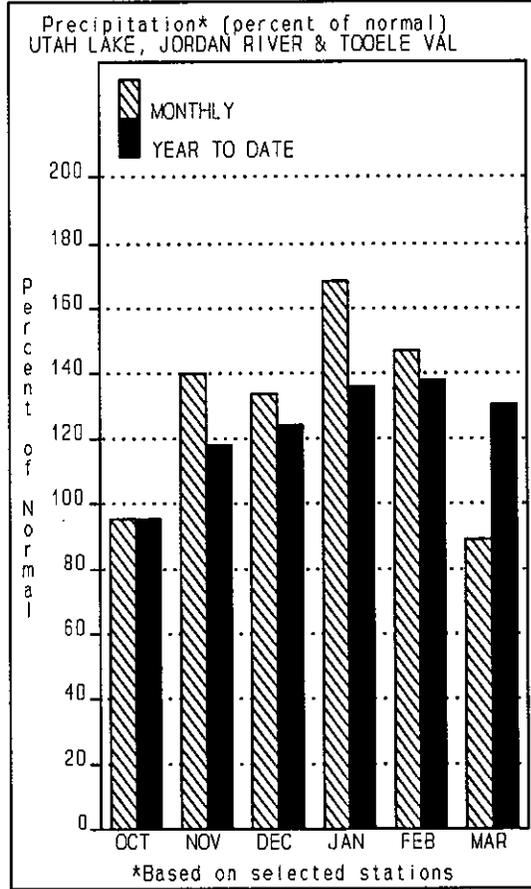
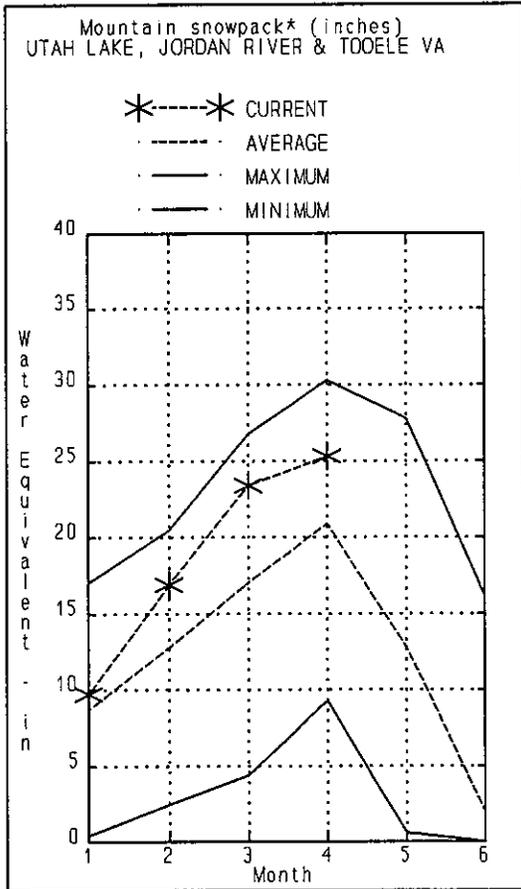
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY BASINS
April 1, 1993



Snowpack on the Provo - Utah Lake watershed is above average (121%) more than double last years pack. In the Tooele area, snowpacks are even higher, near 136% of normal. Watershed conditions are in fair condition and much improved from past years, but still reflect the effects of past drought years which could negatively affect snowmelt runoff. March precipitation was 89%, bringing the seasonal mountain precipitation, (October through March) to 130% of average. Storage in Utah Lake is at 59% of capacity and in Deer Creek, 72% of capacity. Streamflow forecasts range from 110% to 125% of average.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg. (1000AF)	
		<<===== Drier =====>>		===== Wetter =====>>				
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	Chance Of Exceeding * (% AVG.)	30% (1000AF)		10% (1000AF)
PAYSON CREEK near Payson	APR-JUL	3.6		5.6	117		7.6	4.8
SPANISH FORK near Castilla	APR-JUL	46		86	116		126	74
HOBBLE CREEK near Springville	APR-JUL	18.0		23	122		28	18.8
PROVO near Hailstone	APR-JUL	92	111	124	114	137	156	109
PROVO below Deer Creek Dam	APR-JUL	104	134	149	116	164	193	128
AMERICAN FORK near American Fk.	APR-JUL	33	38	40	125	42	47	32
UTAH LAKE inflow	APR-JUL	205	310	350	108	390	495	324
LITTLE COTTONWOOD CRK near SLC	APR-JUL	39	45	47	121	49	55	39
BIG COTTONWOOD CRK near SLC	APR-JUL	36	42	45	118	48	54	38
PARLEY'S CREEK near SLC	APR-JUL	7.5	13.1	15.6	98	18.1	24	15.9
MILL CREEK near SLC	APR-JUL	3.8	5.8	6.6	102	7.4	9.4	6.5
EMIGRATION CREEK near SLC	APR-JUL	1.1		4.3	102		7.5	4.2
CITY CREEK near SLC	APR-JUL	5.3	8.3	9.0	108	9.7	12.7	8.3
VERNON CREEK near Vernon	APR-JUN	0.5	1.0	1.3	118	1.6	2.1	1.1
SETTLEMENT CREEK near Tooele	APR-JUL	1.2	2.1	2.7	117	3.3	4.2	2.3
WILLOW CREEK near Grantsville	APR-JUL	0.8	2.0	2.8	90	3.6	4.8	3.1

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of March

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - April 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	107.5	122.8	97.9	PROVO RIVER & UTAH LAKE	7	288	119
GRANTSVILLE	3.3	1.8	1.6	---	PROVO RIVER	4	321	119
SETTLEMENT CREEK	1.0	0.6	0.8	0.6	JORDAN RIVER & GREAT SALT	5	202	115
STRAWBERRY-ENLARGED	1105.9	375.8	491.0	---	TOOELE VALLEY WATERSHEDS	4	194	136
UTAH LAKE	870.9	509.7	501.4	722.9	UTAH LAKE, JORDAN RIVER &	16	227	121
VERNON CREEK	0.6	0.6	0.6	0.5				

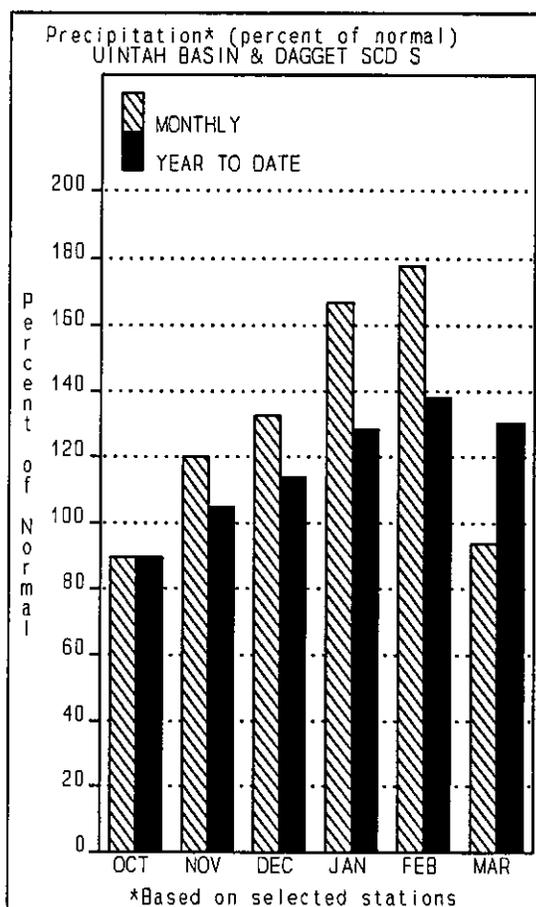
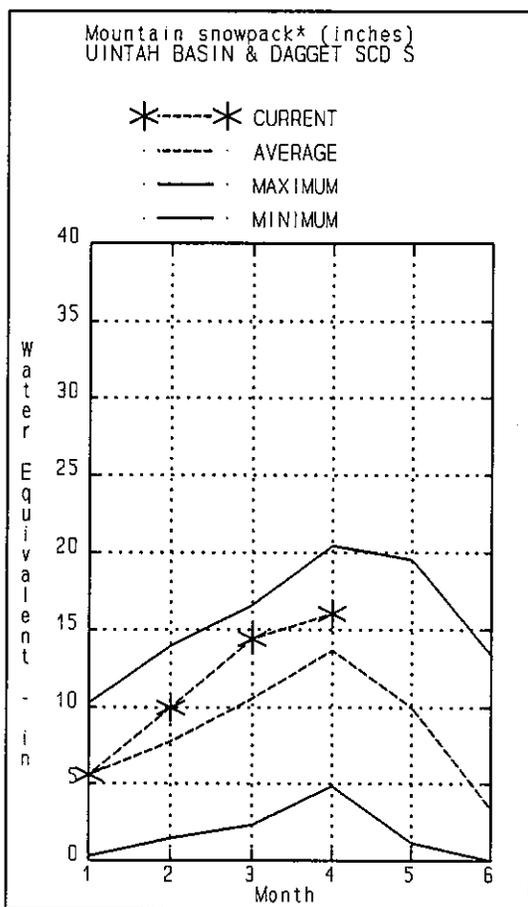
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

UINTAH BASIN & DAGGET SCD'S
April 1, 1993



Snowpacks across the Uintas and the Strawberry area are near to slightly above average, (100% to 120%), declining somewhat from last month. Individual sites range from 95% to 172% of average. This is about double last years snowpack. Overall, general water supply conditions are fair, but much improved over the past few years. February mountain precipitation was 94% of average bringing the seasonal precipitation, (October through March) to 130% of normal. Reservoir storage is at 79% of capacity. Strawberry reservoir has about 34% of capacity. Streamflow forecasts range from 110% to 140% of normal.

UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	91	99	105	109	111	119	96
STATE LINE RESERVOIR INFLOW	APR-JUL	24	30	33	110	37	42	30
HENRYS FORK nr Manila	APR-JUL	24	38	47	112	57	71	42
FLAMING GORGE RES INFLOW	APR-JUL	770	920	1020	81	1120	1270	1266
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	18.3	22	25	126	28	32	19.8
ASHLEY CK nr Vernal	APR-JUL	54	64	70	137	76	86	51
WF DUCHESNE R nr Hanna	APR-JUL	24	27	30	115	33	36	26
DUCHESNE R nr Tabiona	APR-JUL	98	111	120	114	129	142	105
ROCK CK nr Mountain Home	APR-JUL	90	101	109	116	117	128	94
UPPER STILLWATER RESV Inflow	APR-JUL	78	88	95	117	102	112	81
DUCHESNE R abv Knight Diversion	APR-JUL	168	199	220	115	240	270	191
STRAWBERRY RESV (enlarged) Inflow	APR-JUL	66	72	76	129	80	87	59
CURRANT CREEK RESV Inflow	APR-JUL	19.0	23	25	119	27	31	21
STARVATION RESV Inflow	APR-JUL	91	142	150	121	158	210	124
MOON LAKE Inflow	APR-JUL	69	79	85	121	91	101	70
STONE R nr Altonah	APR-JUL	59	70	77	118	84	95	65
NE R at Myton 2	APR-JUL	270	320	350	133	380	430	263
WHITEROCKS R nr Whiterocks	APR-JUL	66	76	83	143	90	100	58
UINTA R nr Neola	APR-JUL	93	108	118	139	128	143	85
DUCHESNE R nr Randlett 2	APR-JUL	260	365	460	140	555	660	328

UINTAH BASIN & DAGGET SCD'S
Reservoir Storage (1000 AF) - End of March

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - April 1, 1993

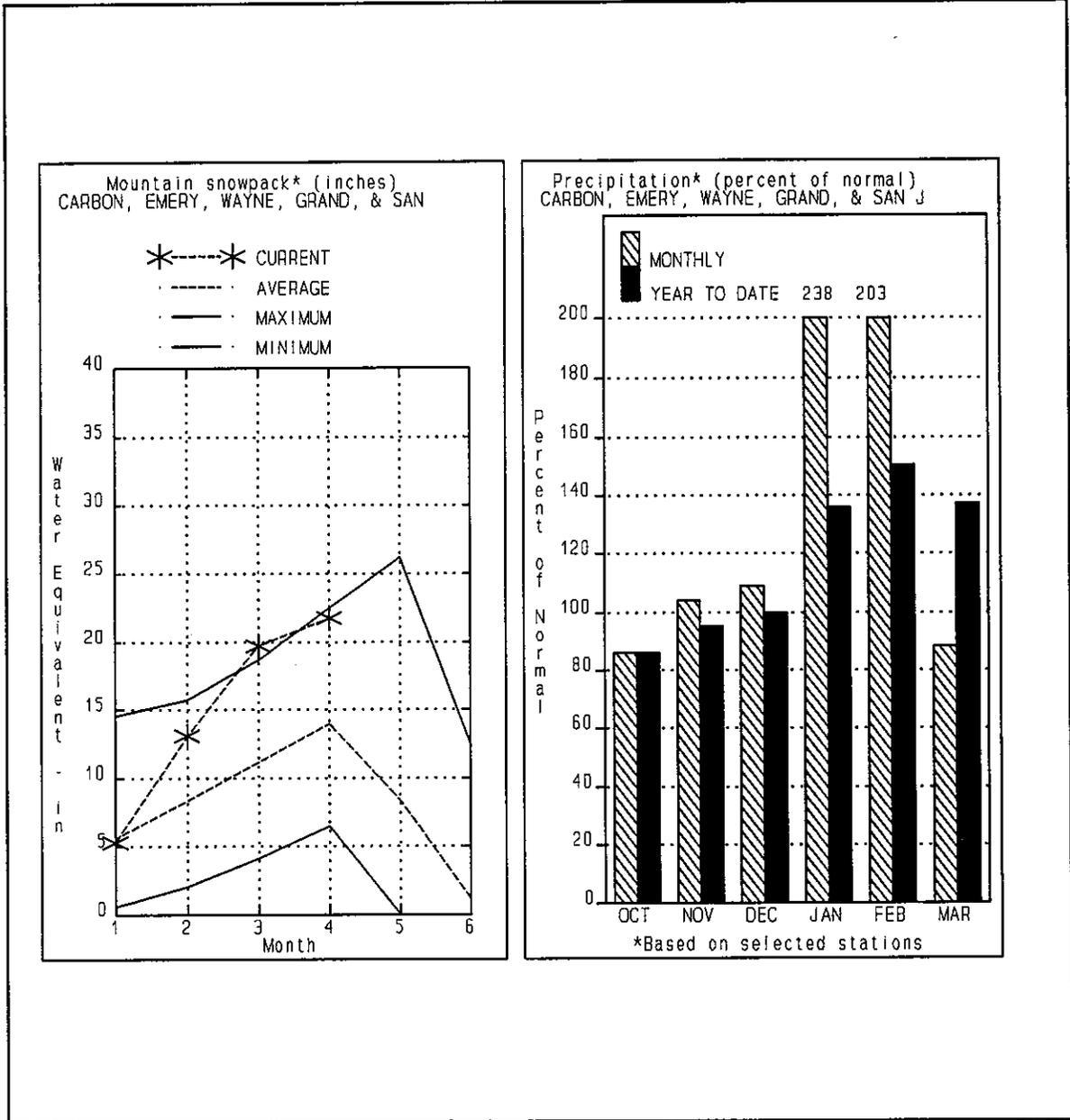
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	3068.1	3330.8	---	UPPER GREEN RIVER in UTAH	6	127	106
MOON LAKE		NO REPORT			ASHLEY CREEK	2	169	113
RED FLEET	25.7	19.4	19.4	---	BLACK'S FORK RIVER	2	112	90
STEINAKER	33.4	18.7	27.2	22.6	SHEEP CREEK	1	94	128
STARVATION	165.3	138.0	152.2	114.1	DUCHESNE RIVER	11	218	123
STRAWBERRY-ENLARGED	1105.9	375.8	491.0	---	LAKE FORK-YELLOWSTONE CRE	4	195	119
					STRAWBERRY RIVER	4	259	114
					UINTAH-WHITEROCKS RIVERS	2	189	149
					UINTAH BASIN & DAGGET SCD	17	185	118

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN CO
April 1, 1993



Snowpacks in southeastern Utah remain much above normal despite showing significant melt at the low and mid elevations. Snowpacks are now at 155% of average with individual sites ranging from 117% to 302% of normal. Snowpacks are typically double or triple last year's numbers. Overall, water supply conditions are much above average, and in certain areas, springtime snowmelt flooding could be a problem. March mountain precipitation was 88% of average. Seasonal mountain precipitation, (October through March) is near 137% of average. Reservoir storage is currently near 31% of capacity. Streamflow forecasts range from 110% in the north to well over 300% of average in the south.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>							
		Chance Of Exceeding *							30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
GOOSEBERRY CK nr Scofield	APR-JUL	12.0	13.6	14.8	126	16.0	18.0	11.7	
SCOFIELD RESV Inflow	APR-JUL	27	52	55	125	58	83	44	
WHITE R blw Tabbyune Ck	APR-JUL	17.0	21	24	128	27	31	18.7	
GREEN R at Green River, UT	APR-JUL	2660	3070	3350	106	3630	4040	3151	
ELECTRIC LAKE Inflow	APR-JUL	15.6	17.0	18.0	119	19.0	20	15.1	
HUNTINGTON CK nr Huntington 2	APR-JUL	32	47	50	122	54	68	41	
JOE'S VALLEY RESV Inflow	APR-JUL	58	68	75	142	82	92	53	
FERRON CK nr Ferron	APR-JUL	51	56	60	154	64	69	39	
COLORADO R nr Cisco	APR-JUL	4460	5360	5740	139	6120	7020	4132	
MILL CK nr Moab	APR-JUL	5.5	7.9	9.5	173	11.1	13.5	5.5	
INDIAN CK nr Monticello	MAR-JUL	18.7	21	23	277	25	27	8.3	
SEVEN MILE CK nr Fish Lake	APR-JUL	5.5	7.9	9.5	146	11.1	13.5	6.5	
MUDDY CK nr Emery	APR-JUL	23	24	28	143	32			
LLOYD'S RESV Inflow	MAR-JUL	7.8	10.0	11.5	338	13.0	15.2	3.4	
RECAPTURE RESV Inflow	MAR-JUL	13.1	15.2	16.6	272	18.0	20	6.1	
W R nr Bluff	APR-JUL	1370	1590	1750	152	1910	2130	1152	

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of March

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - April 1, 1993

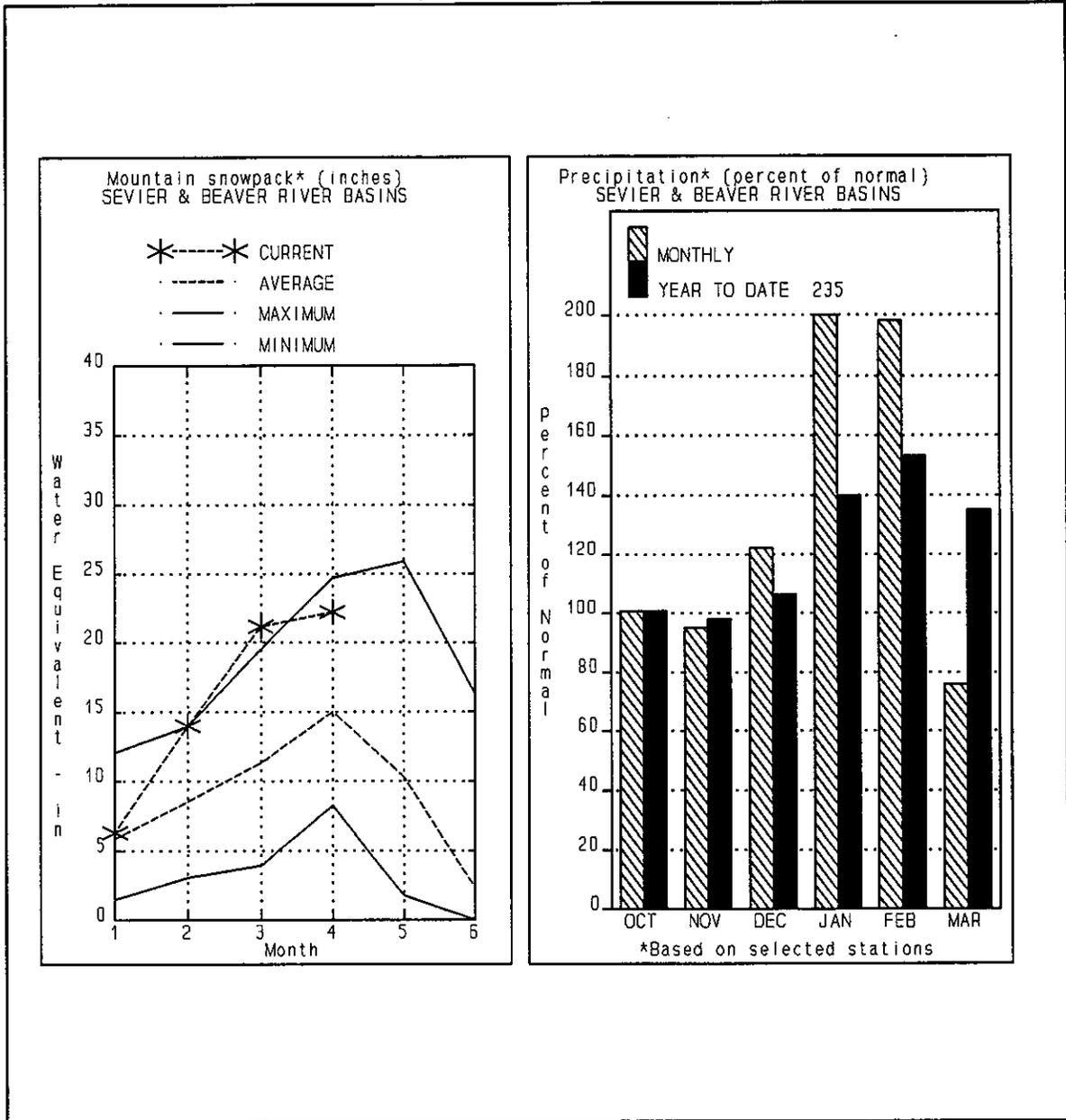
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	3.9	3.7	3.8	PRICE RIVER	3	245	131
JOE'S VALLEY	61.6	24.2	30.8	45.6	SAN RAFAEL RIVER	3	183	135
KEN'S LAKE	2.3	1.5	1.6	---	MUDDY CREEK	1	210	157
MILL SITE	16.7	11.6	11.4	4.6	FREMONT RIVER	3	158	180
SCOFIELD	65.8	6.8	11.5	33.3	LASAL MOUNTAINS	1	130	149
					BLUE MOUNTAINS	1	142	302
					WILLOW CREEK	1	194	183
					CARBON, EMERY, WAYNE, GRA	13	181	155

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

SEVIER & BEAVER RIVER BASINS
April 1, 1993



Snowpacks in the Sevier River Basin remain much above average, near 150% of normal. Individual sites range from 40% to over 340% of average. This is more than double last years snowpack. The watersheds will contribute runoff from most elevation zones which could cause snowmelt flooding. March precipitation was 76% of normal, bringing the seasonal mountain precipitation (October through March) over the Sevier and Beaver basins to near 135% of normal. Reservoir storage in the Sevier Basin is 53% of capacity. Streamflow forecasts range from 120% in the north to 190% in the south.

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SEVIER at Hatch	APR-JUL	83	93	100	185	107	117	54
SEVIER near Circleville	APR-JUL	111		136	181		161	75
SEVIER near Kingston	APR-JUL	97	115	125	151	135	153	83
ANTIMONY CREEK near Antimony	APR-JUL	6.6		9.0	122		11.4	7.4
E F SEVIER near Kingston	APR-JUL	36	51	57	190	63	78	30
SEVIER blw Piute Dam	APR-JUL	135	174	191	166	210	245	115
CLEAR CREEK near Sevier	APR-JUL	18.0		27	126		37	21
PLEASANT CREEK near Pleasant	APR-JUL	7.6		9.5	112		11.4	8.5
EPHRAIM CREEK near Ephraim	APR-JUL	10.3		14.8	117		19.2	12.6
SEVIER nr Gunnison	APR-JUL	115		325	136		535	239
CHICKEN CREEK near Levan	APR-JUL	3.3	4.1	4.6	98	5.1	5.9	4.7
OAK CREEK near Oak City	APR-JUL	0.4	1.3	1.9	112	2.5	3.4	1.7
BEAVER RIVER near Beaver	APR-JUL	25	33	39	150	45	53	26
MINERSVILLE RESERVOIR inflow	APR-JUL	14.4	20	24	144	28	34	16.7

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of March

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - April 1, 1993

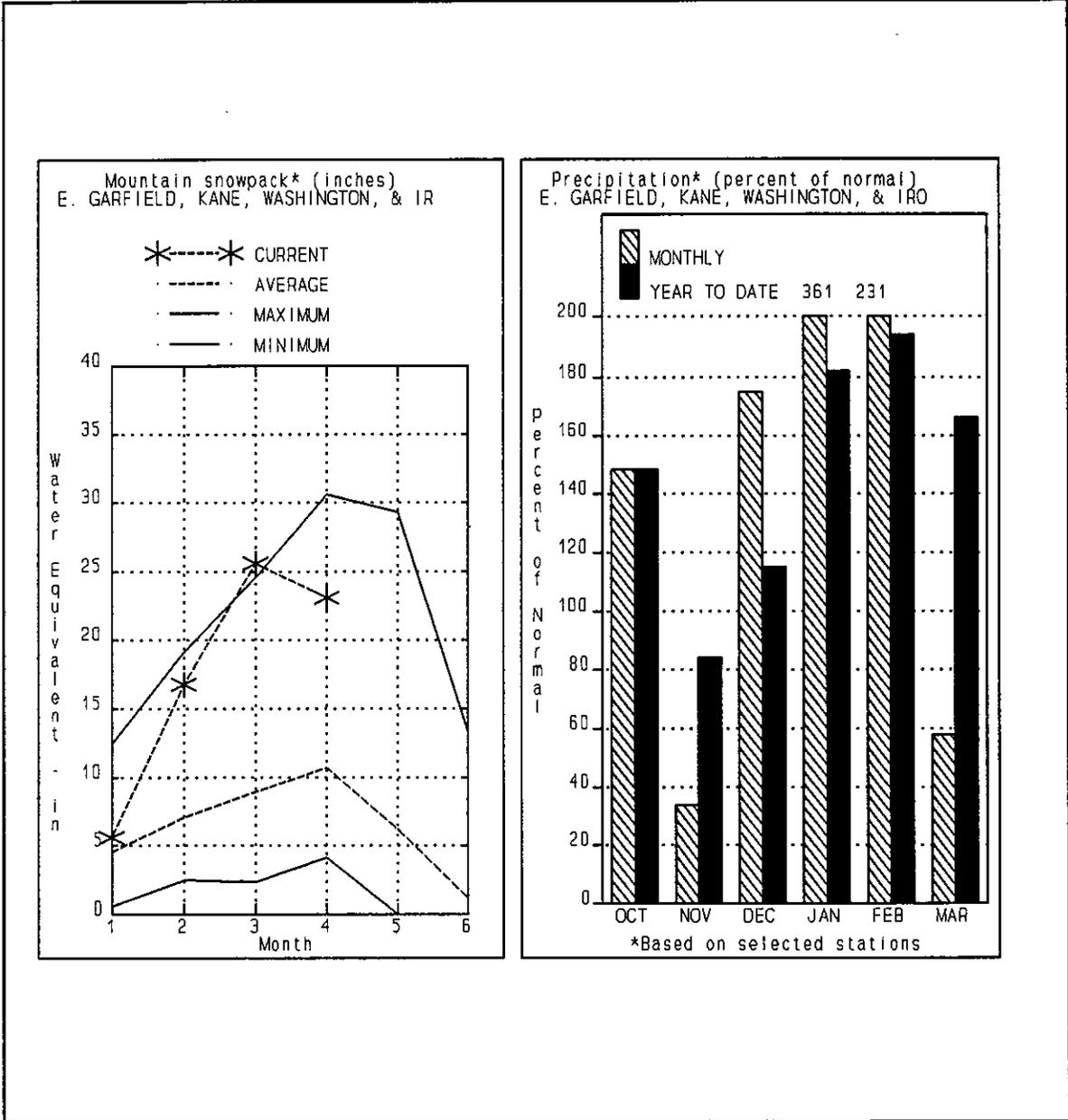
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	12.5	8.3	16.3	UPPER SEVIER RIVER (south	7	188	204
MINERSVILLE (RkyFd)	23.3	12.6	13.2	14.3	EAST FORK SEVIER RIVER	2	157	172
OTTER CREEK	52.5	31.3	32.0	35.8	SOUTH FORK SEVIER RIVER	5	201	218
PIUTE	71.8	45.3	34.6	46.2	LOWER SEVIER RIVER (inclu	6	163	105
SEVIER BRIDGE	236.0	113.0	133.2	136.2	BEAVER RIVER	2	153	145
PANQUITCH LAKE	22.3	7.3	5.7	---	SEVIER & BEAVER RIVER BAS	15	174	149

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

E. GARFIELD, KANE, WASHINGTON, & IRON CO.
April 1, 1993



Snowpacks across this entire region remain much above average, near 214% of normal. Much of the low and some mid elevation snowpack has melted during March, with some areas losing as much as 20 inches of water equivalent. Individual sites range from 138% to 338% of normal. There is still 30 to 45 inches of water equivalent at the high elevations which could generate snowmelt flooding. The runoff season will extend much longer than usual due to the extensive snowpack at the high elevations. March precipitation was 58% of normal bringing seasonal precipitation is 166% of normal. Streamflow forecasts range from 200% to 300% of average.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - April 1, 1993

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg. (1000AF)
		<<==== Drier =====		===== Wetter =====>>		Chance Of Exceeding * (1000AF) (% AVG.)	
		90% (1000AF)	70% (1000AF)	30% (1000AF)	10% (1000AF)		
COAL CK nr Cedar City	APR-JUL	31		40	213	49	18.8
LAKE POWELL INFLOW	APR-JUL			10100	125		8086
VIRGIN R nr Hurricane	APR-JUL	175		210	266	245	79
SANTA CLARA R nr Pine Valley	APR-JUL	15.0		17.0	321	20	5.3

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of March

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - April 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNLOCK	10.4	11.1	10.9	---	VIRGIN RIVER	5	201	218
LAKE POWELL	24322.0	13412.0	13699.0	---	PAROWAN	2	174	191
QUAIL CREEK	40.0	38.0	39.0	---	ENTERPRISE TO NEW HARMONY	2	124	275
UPPER ENTERPRISE	10.0	12.0	7.5	---	COAL CREEK	2	190	184
LOWER ENTERPRISE	2.6	2.4	2.0	---	ESCALANTE RIVER	2	133	181
					E. GARFIELD, KANE, WASHIN	9	177	214

70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

Issued by

William (Bill) Richards
Chief
Soil Conservation Service
U.S. Department of Agriculture

Released by

Francis T. Holt
State Conservationist
Soil Conservation Service
Salt Lake City, Utah

 **Snow Survey's New Address**
  **Correction on Zip Code**

Soil Conservation Service
Snow Survey
245 N. Jimmy Doolittle Road
Salt Lake City, Utah 84116

Telephone (801) 524-5213
FAX (801) 524-5564



United States
Department of
Agriculture

Soil
Conservation
Service



Utah

Basin Outlook Report

May 1, 1993



Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

All programs and services of the USDA Soil Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

STATE OF UTAH GENERAL OUTLOOK
May 1, 1993

SUMMARY

April weather patterns were excellent for general water supply conditions. The south continued to be relatively warm and dry which has allowed snowmelt at the mid elevations to proceed without significant flooding. In the north, snowpacks have increased significantly, giving water managers a little more breathing room. Snowpacks in southern Utah remain much above normal in the higher elevations and some potential for snowmelt flooding remains. In the north, most areas have above average snowpacks, vastly improved from April's figures. On the Bear River Basin which has shown poor water supply conditions all season, snowpacks have increased substantially since last month and are now above average. In general, the water supply conditions are excellent, especially considering the past few years of drought.

SNOWPACK

Snowpacks in Utah, as measured by the SCS SNOTEL system, are above to much above average. Last year, virtually all snowpacks had melted by this time with the exception of the very high elevations, thus this year snowpacks range from 2 to 28 times higher than last year. In southern Utah, snowpacks range from 140% to 200% of normal. In the north, snowpacks are much improved over last month and are now above average ranging from 132% on the Bear to 171% on the Provo/Jordan River basin. The snowpack loss rates in the south were close to records and in the north, snowpacks increased on the Bear and elsewhere had loss rates of only 30% to 50% of normal. Overall, snowpacks are in excellent shape across the entire state and should produce above average snowmelt streamflow.

PRECIPITATION

Mountain precipitation in April, as measured by the SCS SNOTEL system, was above average (136%) on the Bear River Basin and below normal (25% to 96%) over the rest of Utah. In general, the south was very dry last month and the north was near normal. The seasonal accumulation, (October through April) ranges from 113% on the Bear to 149% on the Virgin and the Escalante.

Precipitation figures from the National Weather Service indicate the same pattern at lower elevations. Areas of the state that were driest, mainly in the north, received the greatest precipitation. The southern portion of Utah, with potential snowmelt flooding problems, was warm and relatively dry.

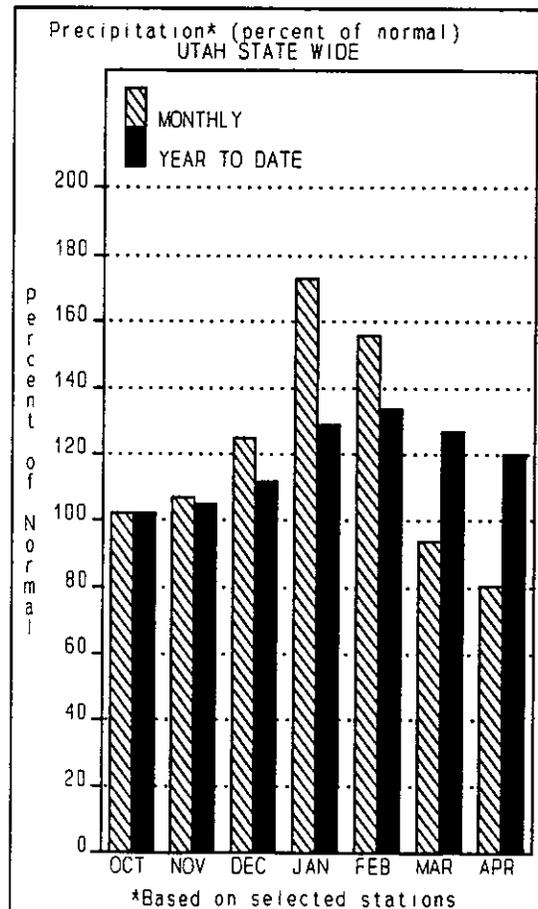
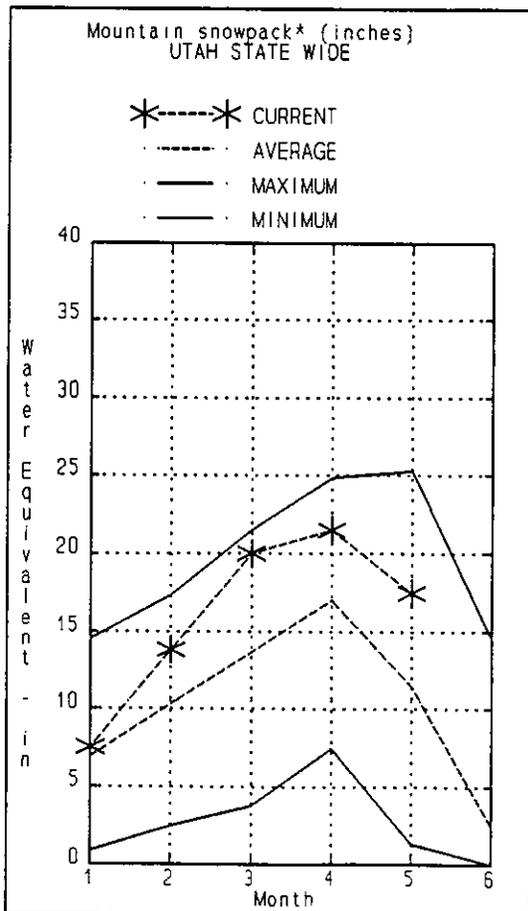
Seasonal precipitation (October through April) reflects the longer term weather pattern that has favored the southern end of Utah. The south currently has 140% to 200% of normal whereas the north has 115% to 150% of average.

RESERVOIRS

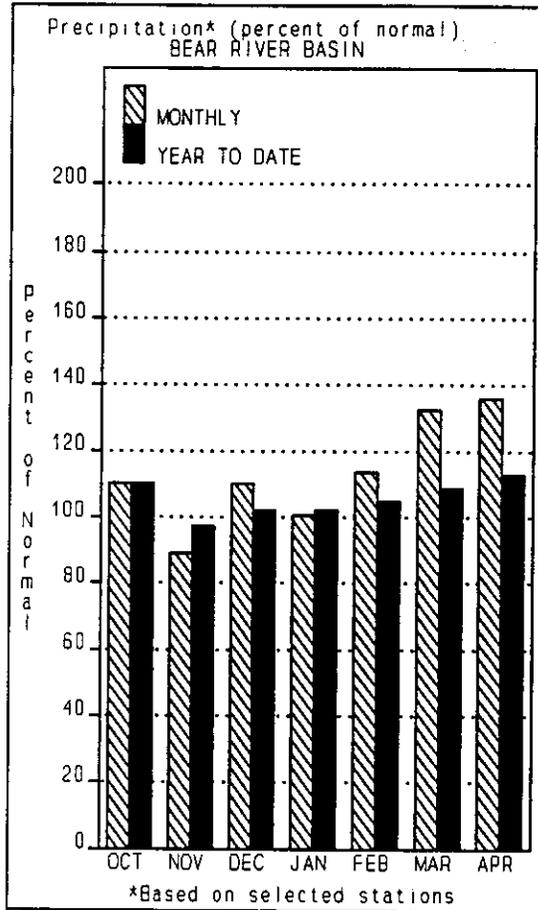
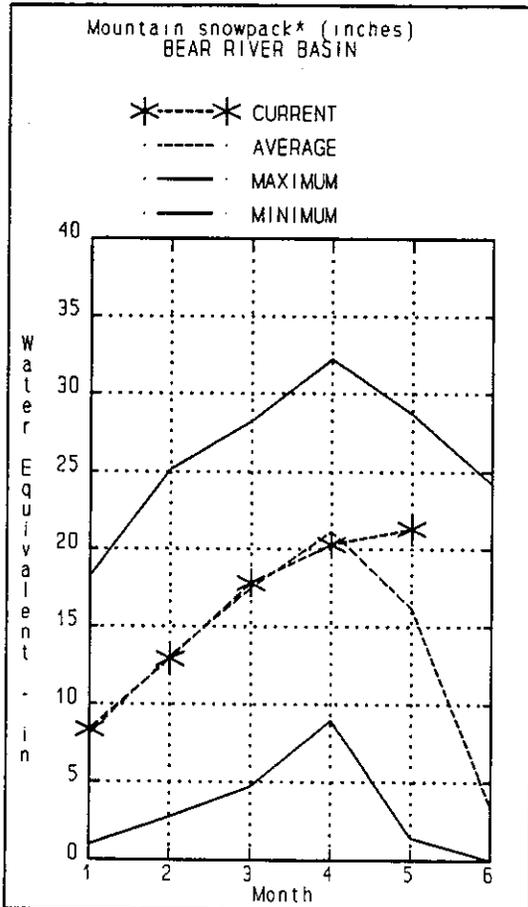
Storage in 22 of Utah's key irrigation reservoirs is at 49% of capacity, compared to 52% last year. This is about 66% of normal for this time of year. Most reservoirs are in relatively good shape for spring runoff and should provide an adequate water supply this summer.

STREAMFLOW

Streamflow forecasts for snowmelt runoff are for average to slightly above average flow in northern Utah. In the south, streamflow forecasts call for runoff that approaches the historical maximum recorded streamflow. Most areas of the north are forecast near 100% to 125% of normal streamflow and in the south, 130% to well over 200% of average. In the south, there is still potential for some snowmelt flooding despite the uneventful loss of much of the low and mid elevation snowpack.



BEAR RIVER BASIN
May 1, 1993



Snowpacks on the Bear River Watershed are much improved over last months figures, increasing from a basin average of 96% last month to 132% of normal on May first. Last year, virtually all the snow had melted by this time, in fact there is about 15 times more snow this year than last. Water supply conditions in the Bear River watershed have dramatically improved over the past month. April precipitation was 136% of normal bringing the seasonal mountain precipitation (October through April), to 113% of average. Reservoir storage in Bear Lake is 22% of capacity.

BEAR RIVER BASIN
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BEAR RIVER nr Ut-Wy Stateline	APR-JUL	96	106	113	98	120	130	115
BEAR RIVER nr Woodruff (2)	APR-JUL	51	107	145	97	183	240	149
BIG CREEK nr Randolph	APR-JUL	0.0	2.1	3.5	92	4.9	7.0	3.8
BEAR RIVER nr Randolph	APR-JUL	46	91	122	93	153	198	131
SMITHS FORK nr Border, WY	APR-SEP	87	99	107	91	115	127	118
THOMAS FORK nr WY-ID Stateline	APR-SEP	23	29	33	92	37	43	36
BEAR RIVER near Harer	APR-SEP	171	265	325	94	385	480	345
BEAR RIVER blw Stewart Dam (2)	APR-SEP	176	230	270	91	310	365	298
MONTPELIER CREEK nr Montpelier	MAY-JUL	5.8	8.0	9.5	96	11.0	13.2	9.9
CUB RIVER nr Preston	MAY-JUL	33	38	41	95	44	49	43
LOGAN RIVER near Logan	APR-JUL	78	95	107	100	119	136	107
BLACKSMITH FORK near Hyrum	APR-JUL	37	49	57	106	65	77	54

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of April

BEAR RIVER BASIN
Watershed Snowpack Analysis - May 1, 1993

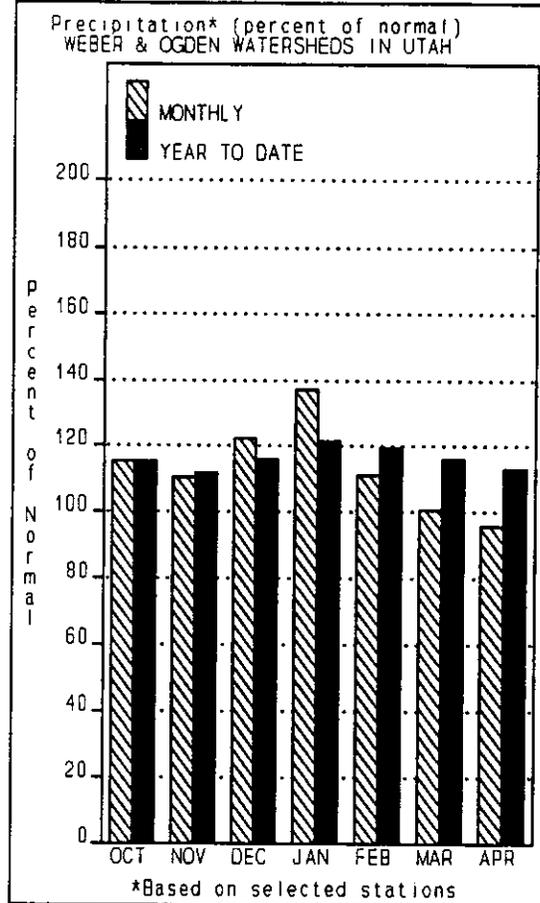
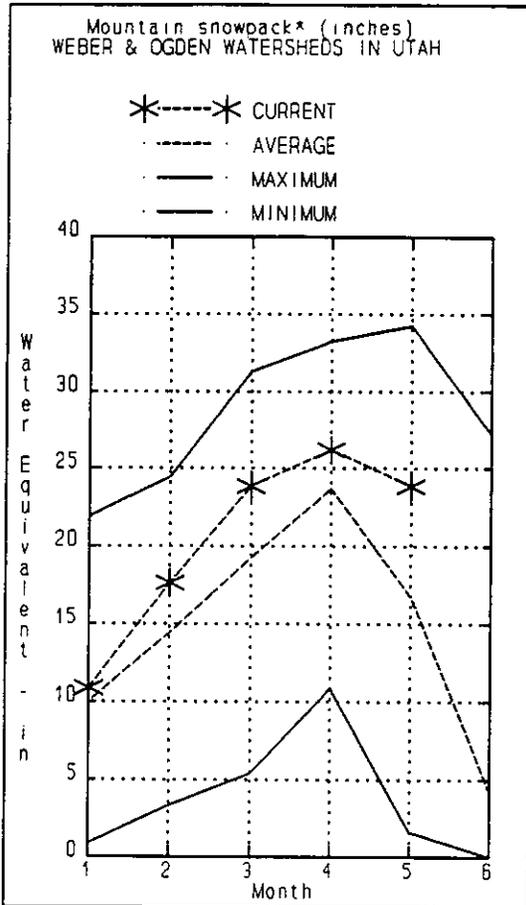
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	316.9	520.0	1059.0	BEAR RIVER, UPPER (abv Ha	6	1402	147
HYRUM	15.3	14.0	---	13.2	BEAR RIVER, LOWER (blw Ha	8	1669	121
PORCUPINE	11.3	11.3	8.5	9.5	LOGAN RIVER	4	1344	131
WOODRUFF NARROWS		NO REPORT			RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	4.0	4.0	---	BEAR RIVER BASIN	14	1530	132

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

WEBER & OGDEN BASINS
May 1, 1993



Snowpacks on the Weber and Ogden watersheds are much above average at 142% of normal, 32% higher than last month and about 14 times more than last year. Individual sites range from 33% to 258% of average. Much of the mid and most of the high elevation snowpack is just beginning to melt. Water supply conditions are excellent and much improved from past years. Precipitation in April was 96% bringing the seasonal mountain precipitation, (October through April) to near 113% of average. Reservoir storage is near 73% of capacity. Pineview has 77% of capacity, up from 51% last month.

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SMITH AND MOREHOUSE CREEK near Oakle	APR-JUN	29	33	35	117	38	41	30
WEBER RIVER near Oakley	APR-JUL	129	139	145	119	151	161	122
ROCKPORT RESERVOIR inflow	APR-JUL	137	148	155	116	162	173	134
CHALK CREEK at Coalville, Ut	APR-JUL	42	50	55	125	60	68	44
WEBER RIVER near Coalville, Ut	APR-JUL	136	149	158	116	167	180	136
ECHO RESERVOIR Inflow	APR-JUL	164	189	205	116	220	245	176
LOST CREEK Res Inflow	APR-JUL	11.8	16.0	18.8	109	22	26	17.2
EAST CANYON CREEK near Morgan	APR-JUL	24	29	33	110	37	42	30
WEBER RIVER at Gateway	APR-JUL	325	365	395	114	425	465	347
S FORK OGDEN RIVER nr Huntsville	APR-JUL	64	71	75	119	79	86	63
PINEVIEW RESERVOIR Inflow	APR-JUL	105	123	136	110	149	167	124
WHEELER CREEK near Huntsville	APR-JUL	5.0	5.9	6.6	106	7.3	8.2	6.2

WEBER & OGDEN WATERSHEDS in Utah Reservoir Storage (1000 AF) - End of April					WEBER & OGDEN WATERSHEDS in Utah Watershed Snowpack Analysis - May 1, 1993			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	2.7	6.7	2.6	OGDEN RIVER	4	2476	111
EAST CANYON	49.5	35.1	41.9	41.5	WEBER RIVER	8	1157	165
ECHO	73.9	46.4	66.7	54.2	WEBER & OGDEN WATERSHEDS	12	1402	142
LOST CREEK	22.5	11.8	13.6	14.3				
PINEVIEW	110.1	84.3	55.5	76.6				
ROCKPORT	60.9	41.3	42.2	36.8				
WILLARD BAY	215.0	169.8	172.5	139.7				

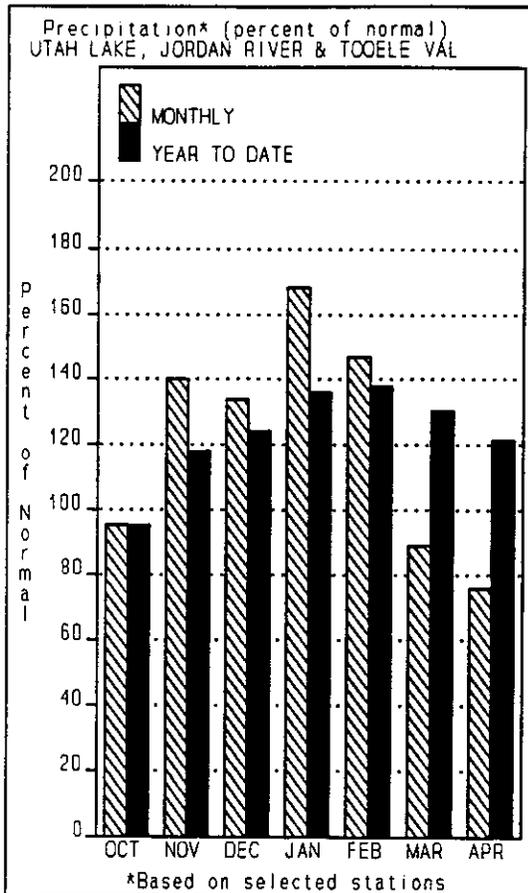
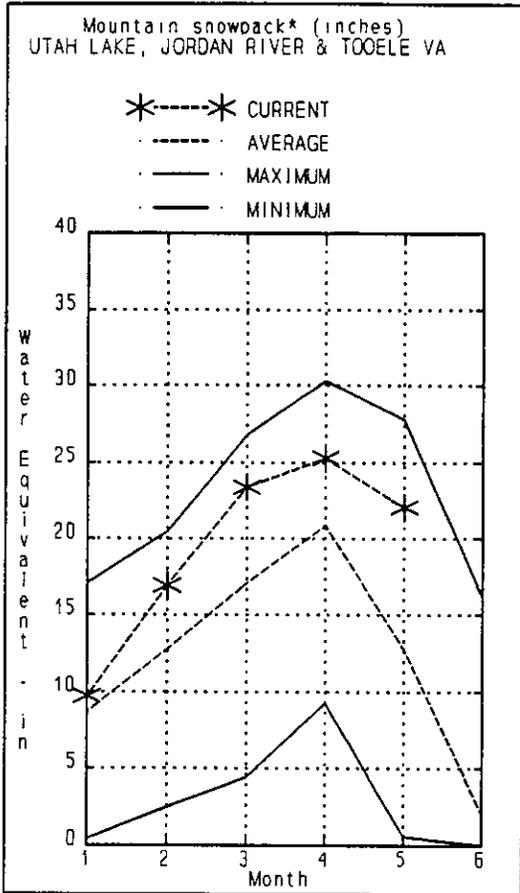
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

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(2) - The value is natural flow - actual flow may be affected by upstream water management.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY BASINS
May 1, 1993



Snowpack on the Provo - Utah Lake watershed is much above average (171%) about 28 times last years snowpack. Individual stations range from 80% to 280% of average. Much of the mid and high elevation snowpack is just beginning to melt. Water supply conditions are in excellent shape and much improved from past years. April precipitation was 76%, bringing the seasonal mountain precipitation, (October through April) to 121% of average. Storage in Utah Lake is at 64% of capacity and in Deer Creek, 77% of capacity.

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
PAYSON CREEK near Payson	APR-JUL	4.0		5.8	121		7.6	4.8
SPANISH FORK near Castilla	APR-JUL	78		86	116		112	74
HOBBLE CREEK near Springville	APR-JUL	18.4		23	122		28	18.8
PROVO near Hailstone	APR-JUL	102	117	128	117	140	155	109
PROVO below Deer Creek Dam	APR-JUL	115	136	153	120	170	191	128
AMERICAN FORK near American Fk.	APR-JUL	39	43	45	141	47	51	32
UTAH LAKE inflow	APR-JUL	230	320	370	114	420	510	324
LITTLE COTTONWOOD CRK near SLC	APR-JUL	43	49	50	128	52	57	39
BIG COTTONWOOD CRK near SLC	APR-JUL	42	47	49	129	51	56	38
PARLEY'S CREEK near SLC	APR-JUL	8.4	13.2	15.6	98	18.0	23	15.9
MILL CREEK near SLC	APR-JUL	4.3	6.6	6.9	106	7.2	9.5	6.5
EMIGRATION CREEK near SLC	APR-JUL	1.5		4.3	102		7.1	4.2
CITY CREEK near SLC	APR-JUL	5.7	8.5	9.0	108	9.5	12.3	8.3
VERNON CREEK near Vernon	APR-JUN	0.6	1.0	1.3	118	1.6	2.0	1.1
SETTLEMENT CREEK near Tooele	APR-JUL	1.3	2.1	2.7	117	3.3	4.1	2.3
SOUTH WILLOW CREEK near Grantsville	APR-JUL	1.4	2.5	3.2	103	3.9	5.0	3.1

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of April

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - May 1, 1993

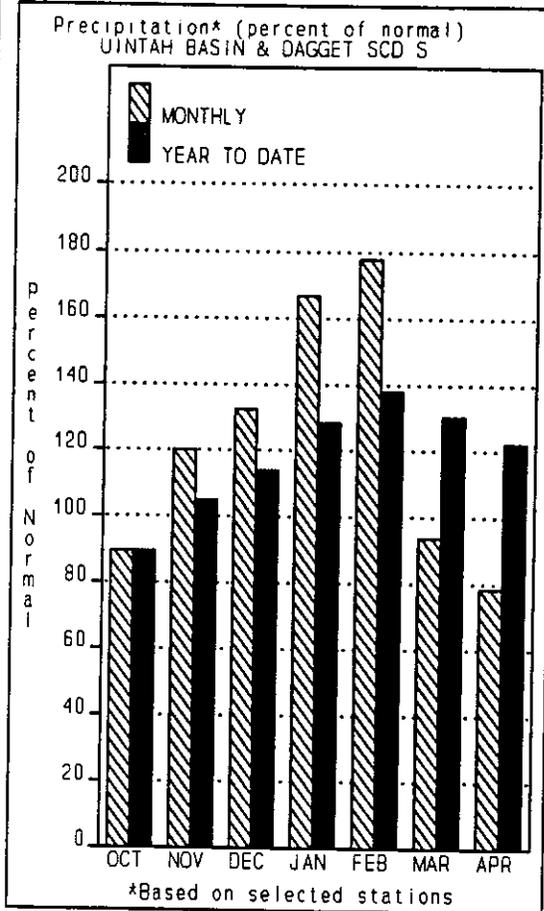
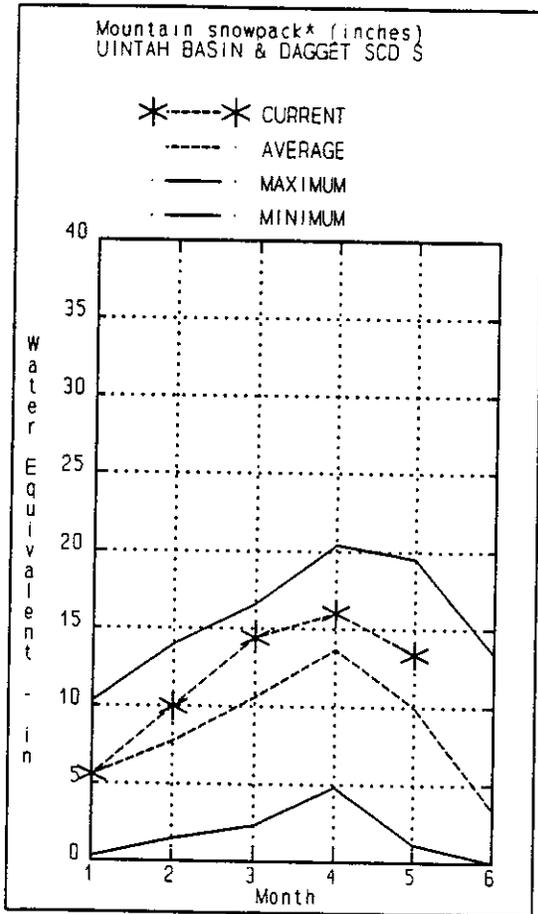
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	115.4	120.7	106.9	PROVO RIVER & UTAH LAKE	7	2798	138
GRANTSVILLE	3.3	2.3	1.8	---	PROVO RIVER	4	1767	138
SETTLEMENT CREEK	1.0	0.8	0.5	0.7	JORDAN RIVER & GREAT SALT	5	758	195
STRAWBERRY-ENLARGED	1105.9	385.0	485.4	---	TOOELE VALLEY WATERSHEDS	4	854	194
UTAH LAKE	870.9	553.4	480.7	766.8	UTAH LAKE, JORDAN RIVER &	16	1038	171
VERNON CREEK	0.6	0.6	0.6	0.6				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

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- (2) - The value is natural flow - actual flow may be affected by upstream water management.

UINTAH BASIN & DAGGET SCD'S
May 1, 1993



Snowpacks across the Uintas and the Strawberry area are much above average, (120% to 150%), improving somewhat from last month. Individual sites range from 70% to 250% of average. This is about 5 times last years snowpack. Overall, general water supply conditions are good, and much improved over the past few years. April mountain precipitation was 79% of average bringing the seasonal precipitation, (October through April) to 122% of normal. Reservoir storage is at 81% of capacity. Strawberry reservoir has about 35% of capacity.

UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	80	88	93	97	98	106	96
STATE LINE RESERVOIR INFLOW	APR-JUL	24	28	31	103	34	38	30
HENRYS FORK nr Manila	APR-JUL	26	39	48	114	57	70	42
FLAMING GORGE RES INFLOW	APR-JUL	720	1060	1150	91	1240	1580	1266
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	17.4	21	24	121	27	31	19.8
ASHLEY CK nr Vernal	APR-JUL	50	58	64	125	70	78	51
WF DUCHESNE R nr Hanna	APR-JUL	21	24	27	104	30	33	26
DUCHESNE R nr Tabiona	APR-JUL	95	104	110	105	116	125	105
ROCK CK nr Mountain Home	APR-JUL	83	93	100	106	107	117	94
UPPER STILLWATER RESV Inflow	APR-JUL	73	82	88	109	94	103	81
DUCHESNE R abv Knight Diversion	APR-JUL	162	183	200	105	215	245	191
STRAWBERRY RESV nr Soldier Springs	APR-JUL	50	59	65	110	71	81	59
CURRENT CREEK RESV Inflow	APR-JUL	18.0	21	23	110	25	29	21
STARVATION RESV Inflow	APR-JUL	114	123	130	105	137	146	124
MOON LAKE Inflow	APR-JUL	65	73	79	113	85	93	70
YELLOWSTONE R nr Altonah	APR-JUL	63	72	79	122	86	95	65
DUCHESNE R at Myton 2	APR-JUL	240	285	315	120	345	390	263
WHITEROCKS R nr Whiterocks	APR-JUL	62	71	78	134	85	94	58
UINTA R nr Neola	APR-JUL	88	102	112	132	122	136	85
DUCHESNE R nr Randlett 2	APR-JUL	250	330	420	128	510	590	328

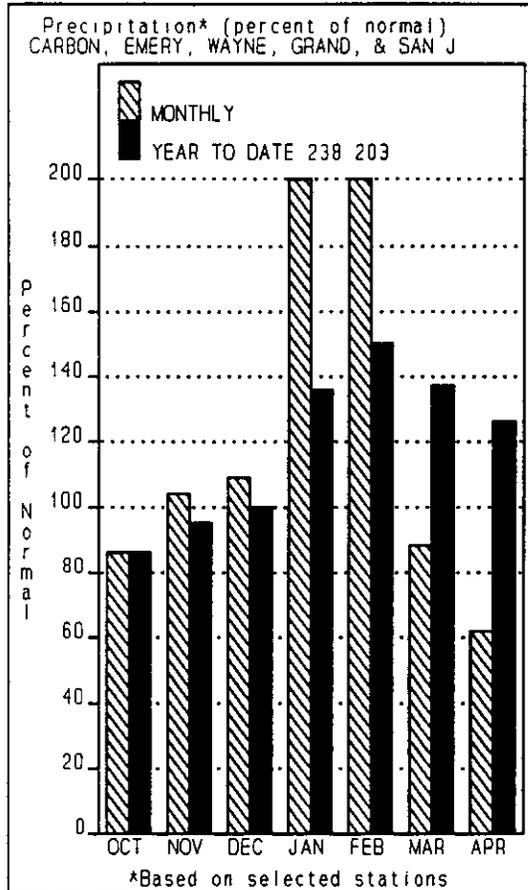
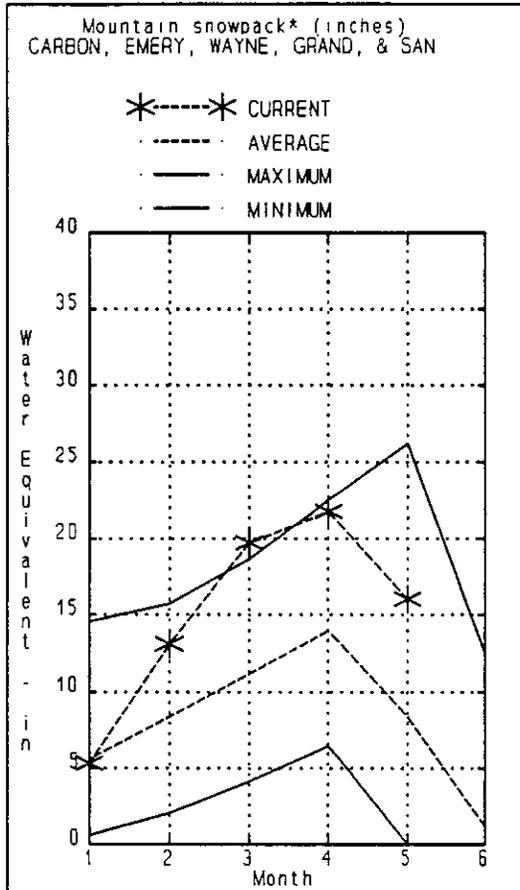
UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of April					UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - May 1, 1993			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	3115.5	3337.6	---	UPPER GREEN RIVER in UTAH	6	499	153
MOON LAKE	49.5	28.6	40.2	31.8	ASHLEY CREEK	2	0	155
RED FLEET	25.7	19.4	22.7	---	BLACK'S FORK RIVER	2	235	126
STEINAKER	33.4	20.2	25.9	23.0	SHEEP CREEK	1	0	290
STARVATION	165.3	151.7	149.3	113.5	DUCHESNE RIVER	11	492	129
STRAWBERRY-ENLARGED	1105.9	385.0	485.4	---	LAKE FORK-YELLOWSTONE CRE	4	287	121
					STRAWBERRY RIVER	4	0	129
					UINTAH-WHITEROCKS RIVERS	2	1336	149
					UINTAH BASIN & DAGGET SCD	17	494	135

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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CARBON, EMERY, WAYNE, GRAND, & SAN JUAN CO
May 1, 1993



Snowpacks in southeastern Utah remain much above normal despite showing significant melt at the low and mid elevations. Snowpacks are now at 189% of average with individual sites ranging from 135% to 300% of normal. Snowpacks are 11 times greater last year's numbers. Overall, water supply conditions are much above average, and in certain areas, springtime snowmelt flooding could be a problem. April mountain precipitation was 62% of average. Seasonal mountain precipitation, (October through April) is near 126% of average. Reservoir storage is currently near 35% of capacity.

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						30-Yr Avg. (1000AF)
		90%		50% (Most Probable)		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
GOOSEBERRY CK nr Scofield	APR-JUL	12.3	13.7	14.8	126	15.9	17.3	11.7
SCOFIELD RESV Inflow	APR-JUL	28	52	55	125	58	82	44
WHITE R blw Tabbyune Ck	APR-JUL	18.0	22	24	128	26	30	18.7
GREEN R at Green River, UT	APR-JUL	3030	3510	3750	119	3990	4470	3151
ELECTRIC LAKE Inflow	APR-JUL	15.2	16.6	17.5	116	18.4	19.8	15.1
HUNTINGTON CK nr Huntington 2	APR-JUL	32	45	48	117	51	64	41
JOE'S VALLEY RESV Inflow	APR-JUL	60	68	75	142	82	90	53
FERRON CK nr Ferron	APR-JUL	52	56	60	154	64	68	39
COLORADO R nr Cisco	APR-JUL	5170	5950	6260	152	6570	7360	4132
MILL CK nr Moab	APR-JUL	6.8	8.3	9.4	171	10.5	12.0	5.5
INDIAN CK nr Monticello	MAR-JUL	19.2	22	23	277	25	27	8.3
SEVEN MILE CK nr Fish Lake	APR-JUL	5.1	7.2	8.6	132	10.0	12.1	6.5
MUDDY CK nr Emery	APR-JUL	24	24	28	143	32	32	19.6
LLOYD'S RESV Inflow	MAR-JUL	7.9	10.0	11.4	335	12.8	14.9	3.4
RECAPTURE RESV Inflow	MAR-JUL	13.0	14.9	16.2	266	17.5	19.4	6.1
SAN JUAN R nr Bluff	APR-JUL	1380	1570	1690	147	1810	2000	1152

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of April

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - May 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	4.2	4.2	3.9	PRICE RIVER	3	0	171
JOE'S VALLEY	61.6	25.7	33.0	46.8	SAN RAFAEL RIVER	3	935	143
KEN'S LAKE	2.3	1.8	2.1	---	MUDDY CREEK	1	0	167
MILL SITE	16.7	10.4	---	6.3	FREMONT RIVER	3	402	224
SCOFIELD	65.8	12.2	13.3	36.6	LASAL MOUNTAINS	1	0	176
					BLUE MOUNTAINS	1	767	920
					WILLOW CREEK	1	0	0
					CARBON, EMERY, WAYNE, GRA	13	1137	189

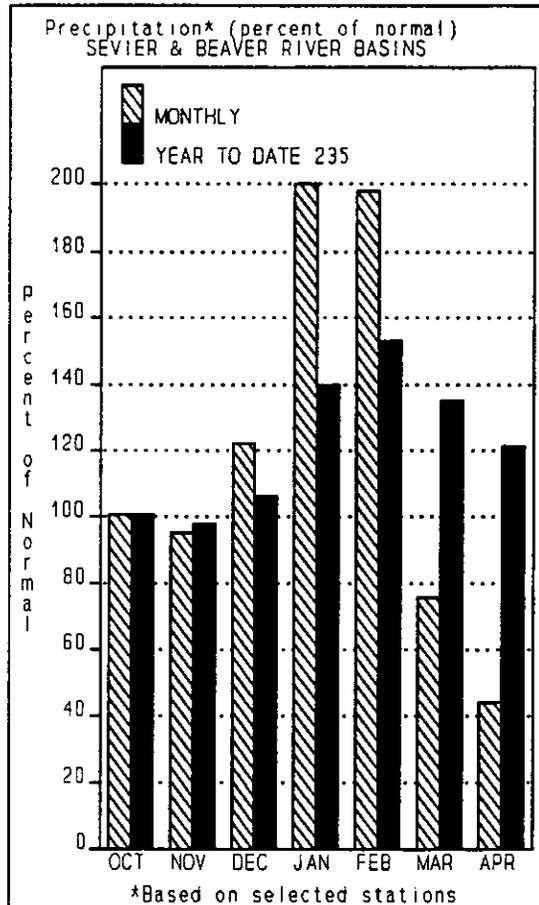
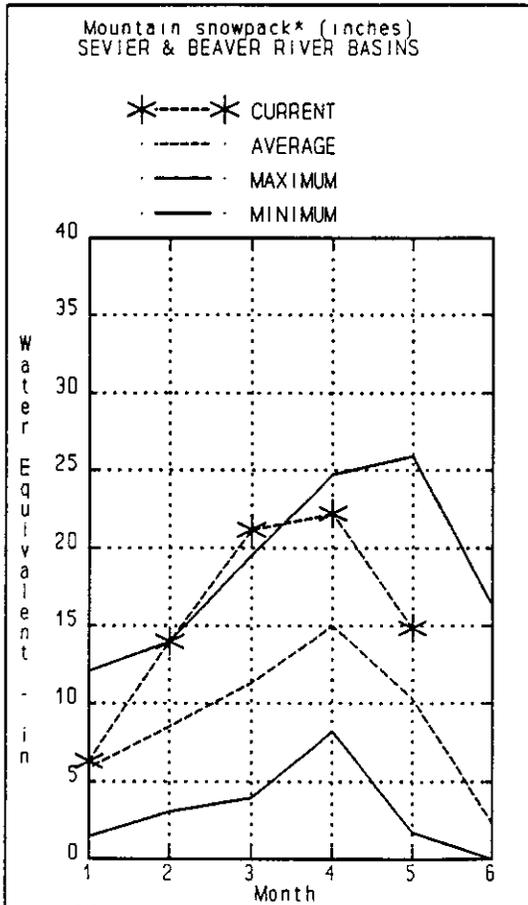
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

SEVIER & BEAVER RIVER BASINS
May 1, 1993



Snowpacks in the Sevier River Basin remain much above average, near 145% of normal. Individual sites range from 20% to over 250% of average. This is more than 4 times last years snowpack. In general, water supply conditions are in excellent shape. Melting snowpacks should provide adequate streamflow well into the summer. April precipitation was 44% of normal, bringing the seasonal mountain precipitation (October through April) over the Sevier and Beaver basins to near 121% of normal. Reservoir storage in the Sevier Basin is 58% of capacity.

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
SEVIER at Hatch	APR-JUL	84	93	100	185	107	116	54
SEVIER near Circleville	APR-JUL	112		136	181		160	75
SEVIER near Kingston	APR-JUL	98	115	125	151	136	152	83
ANTIMONY CREEK near Antimony	APR-JUL	7.2		9.0	122		10.8	7.4
E F SEVIER near Kingston	APR-JUL	37	50	57	190	64	77	30
SEVIER blw Piute Dam	APR-JUL	136	172	191	166	210	245	115
CLEAR CREEK near Sevier	APR-JUL	39		45	210		53	21
PLEASANT CREEK near Pleasant	APR-JUL	8.0		9.5	112		11.0	8.5
EPHRAIM CREEK near Ephraim	APR-JUL	11.1		14.8	117		18.4	12.6
SEVIER nr Gunnison	APR-JUL	120		325	136		530	239
CHICKEN CREEK near Levan	APR-JUL	3.7	4.5	5.1	109	5.7	6.5	4.7
OAK CREEK near Oak City	APR-JUL	0.8	1.5	2.0	118	2.5	3.2	1.7
BEAVER RIVER near Beaver	APR-JUL	28	35	40	154	45	52	26
MINERSVILLE RESERVOIR inflow	APR-JUL	15.5	21	24	144	28	33	16.7

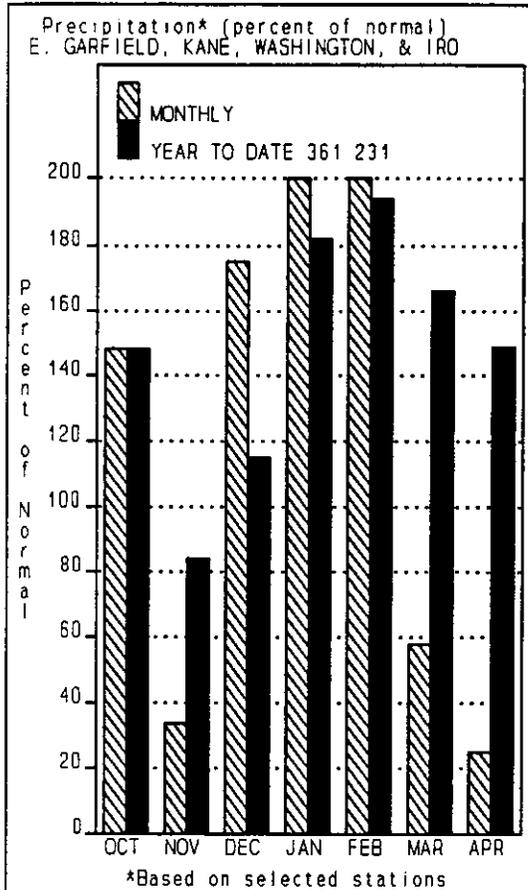
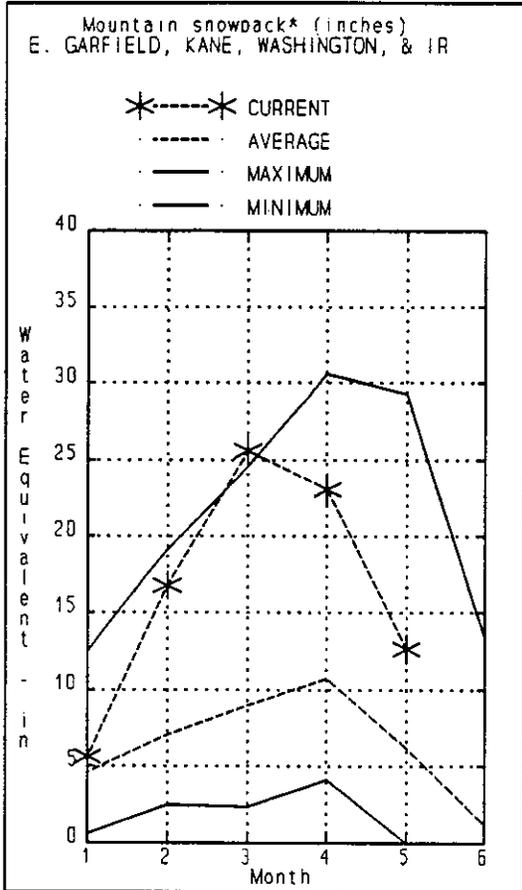
SEVIER & BEAVER RIVER BASINS Reservoir Storage (1000 AF) - End of April					SEVIER & BEAVER RIVER BASINS Watershed Snowpack Analysis - May 1, 1993			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	13.2	5.7	14.9	UPPER SEVIER RIVER (south	7	423	188
MINERSVILLE (RkyFd)	23.3	13.1	12.7	14.6	EAST FORK SEVIER RIVER	2	373	205
OTTER CREEK	52.5	43.0	36.8	39.5	SOUTH FORK SEVIER RIVER	5	452	182
PIUTE	71.8	59.1	30.1	44.7	LOWER SEVIER RIVER (inclu	6	761	111
SEVIER BRIDGE	236.0	104.8	106.0	136.0	BEAVER RIVER	2	233	135
PANQUITCH LAKE	22.3	10.7	7.8	---	SEVIER & BEAVER RIVER BAS	15	432	145

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

E. GARFIELD, KANE, WASHINGTON, & IRON CO.
May 1, 1993



Snowpacks across this entire region remain much above average, near 204% of normal about the same as last months figures. Much of the low and some mid elevation snowpack has melted during March and April. Individual sites range from 160% to 250% of normal. There is still 30 to 40 inches of water equivalent at the high elevations which could generate snowmelt flooding. The runoff season will extend much longer than usual due to the extensive snowpack at the high elevations. April precipitation was only 25% of normal bringing seasonal precipitation (October through April) to 149% of normal.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - May 1, 1993

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
COAL CK nr Cedar City	APR-JUL	32		40	213		48	18.8
LAKE POWELL INFLOW	APR-JUL			11000	136			8086
VIRGIN R nr Hurricane	APR-JUL	157		195	247		235	79
SANTA CLARA R nr Pine Valley	APR-JUL	15.0		17.0	321		19.0	5.3

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of April

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - May 1, 1993

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNLOCK	10.4	10.4	10.5	---	VIRGIN RIVER	5	335	200
LAKE POWELL	24322.0	14160.0	13913.0	---	PAROWAN	2	333	204
QUAIL CREEK	40.0	38.0	39.5	---	ENTERPRISE TO NEW HARMONY	2	0	0
UPPER ENTERPRISE	10.0	10.0	7.5	---	COAL CREEK	2	320	208
					ESCALANTE RIVER	2	281	255
					E. GARFIELD, KANE, WASHIN	9	320	204

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

SNOW COURSE DATA
FOR THE STATE OF UTAH
As of MAY 1, 1993

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
ALTA CENTRAL	8800	4/28	106	48.4	10.8	33.6	DONKEY RESERVOIR SNO	9800	5/01	28	6.0S	0.0	1.9
ASHLEY TWIN LAKES	10500	4/29	60	21.0	7.0	16.7	DRY BREAD POND	8350	4/26	46	19.9	0.3	16.4
BEAVER DAMS SNOTEL	8000	5/01	-	1.0S	0.0	5.5	DRY BREAD POND SNOTL	8350	5/01	-	17.4S	0.0	18.0
BEAVER DIVIDE SNOTL	8280	5/01	8	4.5S	0.0	3.4	EAST SHINGLE LAKE	9800	4/29	97	42.7	11.8	28.6
BEN LOMOND PK SNOTL	8000	5/01	83	36.2S	0.0	33.9	EAST WILLOW CREEK SN	8250	5/01	-	7.6S	0.0	0
BEN LOMOND TR SNOTL	6000	5/01	15	2.1S	0.0	6.4	FARMINGTON CANYON L.	6950	4/25	50	24.6	3.1	21.9
BEVAN'S CABIN	6450	4/25	10	4.7	0.0	4.6	FARMINGTON CN SNOTEL	8000	5/01	80	36.5S	0.6	19.9
BIG FLAT SNOTEL	10290	5/01	78	26.0S	15.6	20.2	FARNSWORTH LK SNOTEL	9600	5/01	63	23.3S	10.2	21.0
BIRCH CROSSING	8100	4/30	0	0.0	0.0	1.9	FISH LAKE	8700	4/24	20	8.4	0.0	5.2
BLACK FLAT-U.M. CK S	9400	5/01	29	11.6S	0.0	6.6	FIVE POINTS LAKE SNO	10920	5/01	60	23.2S	7.8	17.8
BLACK'S FORK GS-EF	9340	4/28	32	11.2	3.0	9.2	FRANCES FLATS	6700	4/29	20	9.6	0.0	0.7
BLACK'S FORK JUNCTN	8930	4/28	24	9.1	0.0	7.4	G.B.R.C. HEADQUARTER	8700	4/25	49	20.2	1.6	15.4
BOX CREEK SNOTEL	9800	5/01	44	14.8S	0.0	8.8	G.B.R.C. MEADOWS	10000	4/25	78	30.7	11.0	26.1
BRIAN HEAD	10000	4/24	69	28.9	14.7	21.6	GARDEN CITY SUMMIT	7600	4/26	40	15.8	3.2	15.9
BRIGHTON CABIN	8700	4/29	87	33.8	2.3	24.8	GEORGE CREEK	8840					
BRIGHTON SNOTEL	8750	5/01	67	31.8S	6.8	16.9	GOOSEBERRY R.S.	8400	4/24	22	9.4	0.0	9.1
BROWN DUCK SNOTEL	10600	5/01	-	22.4S	9.7	20.3	GOOSEBERRY R.S. SNOT	7900	5/01	0	0.0S	0.0	3.7
BRUCE CANYON	8000	4/28	0	0.0	0.0	0.8	HARDSCRABBLE	6700	4/25	34	15.6	0.0	9.9
BUCK FLAT SNOTEL	9800	5/01	48	20.3S	1.4	13.9	HARRIS FLAT SNOTEL	7700	5/01	-	3.2S	0.0	1.9
BUCK PASTURE	9700	4/29	63	22.0	8.0	17.1	HAYDEN FORK	9400	4/28	40	17.2	1.1	15.2
BUCKBOARD FLAT	9000	4/30	26	11.3	0.0	7.4	HAYDEN FORK SNOTEL	9100	5/01	-	16.9S	0.0	6.6
BUG LAKE SNOTEL	7950	5/01	48	18.4S	0.0	16.0	HENRY'S FORK	10000	4/29	45	14.4	9.0	13.6
BURT'S-MILLER RANCH	7900	4/28	0	0.0	0.0	2.0	HEWINTA SNOTEL	9500	5/01	24	9.8S	0.0	5.3
CAMP JACKSON	8600				0.5	6.4	HICKERSON PARK SNOTE	9100	5/01	22	8.4S	0.0	2.9
CAMP JACKSON SNOTEL	8600	5/01	-	18.4S	2.4	2.0	HIDDEN SPRINGS	5500	4/29	0	0.0	0.0	0.4
CASTLE VALLEY SNOTL	9580	5/01	39	14.6S	0.0	6.6	HOBBLE CREEK SUMMIT	7420	4/25	20	9.8	0.0	7.3
CHALK CK #1 SNOTEL	9100	5/01	77	37.1S	7.6	22.8	HOLE-IN-ROCK SNOTEL	9150	5/01	17	5.9S	0.0	2.3
CHALK CK #2 SNOTEL	8200	5/01	42	16.3S	0.0	9.8	HORSE RIDGE SNOTEL	8260	5/01	50	20.9S	0.0	14.4
CHALK CREEK #3	7500	4/26	4	1.8	0.0	2.6	HUNTINGTON-HORSESHOE	9800	4/25	77	30.9	9.4	24.9
CHEPETA SNOTEL	10300	5/01	-	16.7S	1.0	12.0	INDIAN CANYON SNOTEL	9100	5/01	37	11.1S	0.0	6.6
CITY CREEK	7500	4/29	51	26.0	0.0	18.3	JOHNSON VALLEY	8850	4/24	22	9.1	0.0	3.8
CLAYTON SPRINGS	10000				-	-	JONES CORRAL	9720					
CLEAR CK RIDG #1 SNT	9200	5/01	53	21.0S	0.0	14.1	KILFOIL CREEK	7300	4/26	32	13.5	0.0	9.9
CLEAR CK RIDG #2 SNT	8000	5/01	28	7.3S	0.0	5.6	KILLYON CANYON	6300	4/29	0	0.0	0.0	-
CLEAR CREEK RIDGE #3	6600	4/25	0	0.0	0.0	0.1	KIMBERLY MINE SNOTEL	9300	5/01	44	16.2S	0.0	12.1
COLD WATER SPRINGS	6030				-	-	KING'S CABIN SNOTEL	8730	5/01	24	10.5S	0.0	6.0
CORRAL	8200				-	-	KLONDIKE NARROWS	7400	4/26	40	19.5	0.0	14.1
CURRENT CREEK SNOTEL	8000	5/01	15	5.3S	0.0	2.6	KOLOB SNOTEL	9250	5/01	-	31.7S	9.7	16.4
DANIELS-STRAWBERRY S	8000	5/01	32	10.0S	0.0	9.7	LAKEFORK #1 SNOTEL	10100	5/01	44	15.8S	0.3	10.3
DESERET PEAK	9250				-	22.2	LAKEFORK BASIN SNOTE	10900	5/01	72	28.2S	13.4	25.9
DESERET PEAK AM	9250	4/25	49	22.0	7.4	-	LAKEFORK MOUNTAIN #3	8400	4/28	7	3.1	0.0	1.8
DESERET PEAK SNOTEL	9250	5/01	-	30.1S	7.4	13.5	LAMBS CANYON	7400	4/29	17	8.3	0.0	9.2
DILL'S CAMP SNOTEL	9200	5/01	36	14.9S	0.0	8.9	LASAL MOUNTAIN LOWER	8800	4/23	28	12.0	0.0	4.6

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
LASAL MOUNTAIN SNOTEL	9850	5/01	-	13.9S	0.0	7.9	SQUAW SPRINGS	9300	4/24	21	9.2	0.0	4.1
LILY LAKE SNOTEL	9050	5/01	42	17.6S	0.0	8.7	STEEL CREEK PARK SNO	10100	5/01	64	20.7S	13.0	18.9
LITTLE BEAR LOWER	6800	4/26	0	0.0	0.0	1.6	STILLWATER CAMP	8550	4/28	22	8.9	0.0	7.5
LITTLE BEAR SNOTEL	6550	5/01	0	0.0S	0.0	2.4	STRAWBERRY DIVIDE SN	8400	5/01	37	12.8S	0.0	11.5
LITTLE GRASSY SNOTEL	6100	5/01	0	0.0S	0.0	.0	STUART R.S.	7950	4/25	4	1.2	0.0	1.9
LONG FLAT SNOTEL	8000	5/01	-	0.0S	0.0	2.0	SUSC RANCH	8200	4/30	0	0.0	0.0	2.6
LONG VALLEY JCT. SNT	7500	5/01	0	0.0S	0.0	.0	TALL POLES	8800	4/30	25	11.3	4.4	11.9
LOOKOUT PEAK SNOTEL	8200	5/01	72	28.3S	0.0	10.0	THAYNES CANYON SNOTL	9200	5/01	-	31.0S	4.3	12.0
LOST CREEK RESERVOIR	6130	4/26	0	0.0	0.0	0.0	THISTLE FLAT	8500	-	-	-	-	-
MAMMOTH-COTTONWD SNT	8800	5/01	57	22.2S	0.0	12.4	TIMBERLINE	9100	-	-	-	-	-
MERCHANT VALLEY SNOT	8750	5/01	38	10.3S	0.0	6.7	TIMPANOGOS DIVIDE SN	8140	5/01	60	29.1S	0.0	16.8
MIDDLE CANYON	7000	4/25	18	8.4	0.0	8.5	TONY GROVE LK SNOTEL	8400	5/01	100	40.5S	5.3	30.5
MIDWAY VALLEY SNOTEL	9800	5/01	92	39.7S	16.3	20.0	TONY GROVE R.S.	6250	4/26	4	1.9	0.0	3.2
MILL CREEK	6950	4/29	48	20.3	1.2	18.8	TRIAL LAKE	9960	4/28	73	30.3	9.3	25.7
MILL-D NORTH SNOTEL	8960	5/01	81	33.6S	0.0	13.2	TRIAL LAKE SNOTEL	9960	5/01	-	30.6S	4.2	24.0
MILL-D SOUTH FORK	7400	4/29	29	13.7	0.0	13.4	TROUT CREEK SNOTEL	9400	5/01	-	9.6S	0.0	7.0
MINING FORK SNOTEL	8000	5/01	41	14.0S	0.0	2.8	UPPER JOES VALLEY	8900	4/25	22	9.2	0.0	5.7
MONTE CRISTO R.S.	8960	4/26	72	30.8	4.1	24.7	UPPER MILL CREEK	8300	-	-	-	-	-
MONTE CRISTO SNOTEL	8960	5/01	-	38.4S	3.8	26.2	VERNON CREEK SNOTEL	7500	5/01	-	5.4S	0.0	4.6
MOBY MTN. SNOTEL	9500	5/01	42	16.7S	1.5	10.4	VIPONT	7670	-	-	-	-	-
MT. BALDY R.S.	9500	4/25	77	29.4	12.8	25.2	WEBSTER FLAT SNOTEL	9200	5/01	41	12.4S	0.0	5.1
MUD CREEK #2	8600	4/25	30	13.0	0.0	8.2	WHITE RIVER #1 SNOTE	8550	5/01	33	12.6S	0.0	6.2
OAK CREEK	7760	4/24	31	12.5	0.0	9.0	WHITE RIVER #3	7400	4/25	0	0.0	0.0	0.6
OTTER LAKE	9600	5/01	-	20.8e	-	14.5	WIDTSONE #3 SNOTEL	9500	5/01	53	21.0S	9.6	8.7
PANQUITCH LAKE	8200	4/24	5	2.2	0.0	1.1	WRIGLEY CREEK	9000	4/25	33	13.7	0.0	8.0
PARLEY'S CANYON SNOT	7500	5/01	-	6.9S	0.0	8.5	YANKEE RESERVOIR	8700	4/24	24	9.9	0.0	6.6
PARLEY'S CANYON SUM.	7500	4/29	38	16.1	0.1	12.8	NOTE:	-	-	-	-	-	-
PAYSON R.S. SNOTEL	8050	5/01	44	15.0S	0.0	11.6	The S flag following Water Content for SNOTEL sites indicates telemetered	-	-	-	-	-	-
PICKLE KEG SNOTEL	9600	5/01	39	11.7S	0.0	14.0	data. The Depth reading preceding S flagged data was measured around the	-	-	-	-	-	-
PINE CREEK SNOTEL	8800	5/01	46	19.4S	0.0	13.0	snow pillows at the time of the ground survey and may not be the same date as	-	-	-	-	-	-
RED PINE RIDGE SNOTE	9200	5/01	49	16.5S	0.0	12.2	the telemetered value.	-	-	-	-	-	-
REDDEN MINE LOWER	8500	4/26	53	24.8	0.5	16.5	-	-	-	-	-	-	-
REES'S FLAT	7300	4/24	14	5.1	0.0	7.8	-	-	-	-	-	-	-
ROCK CREEK SNOTEL	7900	5/01	8	3.7S	0.0	1.1	-	-	-	-	-	-	-
ROCKY BASIN-SETTLEMT	8900	4/25	72	34.1	13.2	28.1	-	-	-	-	-	-	-
ROCKY BN-SETTLEMT SN	8900	5/01	-	31.6S	2.1	21.0	-	-	-	-	-	-	-
SEELEY CREEK SNOTEL	10000	5/01	63	22.1S	4.9	15.1	-	-	-	-	-	-	-
SHINGLE MILL	6200	4/30	0	0.0	0.0	2.7	-	-	-	-	-	-	-
SILVER LAKE(BRIGHT.)	8730	4/29	84	37.1	7.7	26.8	-	-	-	-	-	-	-
SMITH MOREHOUSE SNTL	7600	5/01	33	14.0S	0.0	6.1	-	-	-	-	-	-	-
SNOWBIRD SNOTEL	9700	5/01	-	52.6S	13.4	30.0	-	-	-	-	-	-	-
SNOWBIRD-GAD VALLEY	9700	4/30	133	56.2	15.8	37.3	-	-	-	-	-	-	-
SPIRIT LAKE	10300	4/28	45	15.4	8.5	15.3	-	-	-	-	-	-	-

May 6, 1993

To: Users of Snow Survey and Water Supply Information:

The Soil Conservation Service is continually evaluating the snow survey data collection network in order to improve the water supply forecasting program. The automated SNOTEL system has proven itself over the past decade to be an efficient and reliable means of collecting snowpack, precipitation, air temperature and related data.

When SNOTEL was first installed, most sites were located on snow course locations that had been proven to be excellent indicators of snowpack and water supply conditions. SNOTEL information is now being utilized in water supply forecasting in place of the old snow course data. SNOTEL provides more high quality and timely data than the older manual snow course system.

Over the past few years, the snow survey staff has carefully analyzed Utah's entire snow course network. Every drainage basin has been reviewed to determine the adequacy of the snow course and SNOTEL network for water supply forecasting. Advanced statistical analysis points out data collection locations which are inefficient or redundant.

Attached is a list of snow courses which are proposed for discontinuance. Most are colocated with SNOTEL sites, so there will be no data loss as the SNOTEL station will continue to provide data for these sites. Please review this list carefully. If there is a need to continue a snow course proposed for discontinuance, please send your comments to:

Soil Conservation Service, Snow Survey
245 N. Jimmy Doolittle Road
Salt Lake City, UT 84116

or call (801)524-5213, before September 15, 1993. Remember, no SNOTEL sites will be discontinued, only snow courses.

The bottom line of these efforts is improved services through more efficient use of resources. We do not intend to compromise services to the water users of the state. If you have specific needs for a snow course, please contact the Snow Survey Office.

SNOW COURSES PROPOSED FOR DISCONTINUATION IN 1993

Snow Course

Franklin Basin
Dry Bread Pond
Monte Cristo
Hayden Fork
Rocky Basin Settlement
Snowbird - Gad Valley
Shingle Mill
Camp Jackson

Basin

Bear River
Bear River
Bear River
Bear River
Tooele Valley
Little Cottonwood
Lower Sevier River
Blue Mountains

In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

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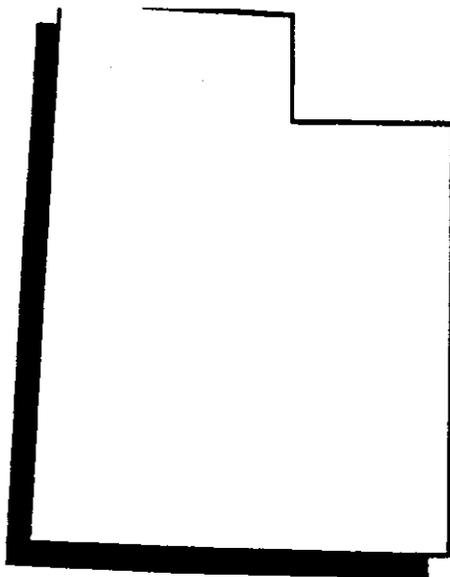
William (Bill) Richards
Chief
Soil Conservation Service
U.S. Department of Agriculture

Francis T. Holt
State Conservationist
Soil Conservation Service
Salt Lake City, Utah

 **Snow Survey's New Address**
  **Correction on Zip Code**

Soil Conservation Service
Snow Survey
245 N. Jimmy Doolittle Road
Salt Lake City, Utah 84116

Telephone (801) 524-5213
FAX (801) 524-5564



Federal Building, Room 4402
125 South State Street
Salt Lake City, UT 84138



SOIL CONSERVATION SERVICE

Utah
Basin Outlook Report
Soil Conservation Service
Salt Lake City, UT



