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Agriculture

Natural
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Service

Utah

Basin Outlook Report

January 1, 1998



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 in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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STATE OF UTAH GENERAL OUTLOOK

Jan 1, 1998

SUMMARY

What a difference one year can make in the water supply conditions of Utah. Last year snowpacks were approaching and exceeding record levels and this year most of the state is far below normal at 69% of average. This is just 40% of the snow Utah had last season. Southern Utah has slightly better conditions ranging from 70% to 85% of normal whereas in the north, conditions are worse, 58% to 78% of average. The Bear River Basin currently has just 28% of last years phenomenal snowpack. With all of the exposure that El Nino has received this year, many people had expectations of tremendous snowfall again this season. This certainly hasn't materialized yet and, especially in northern Utah, may not happen at all. There is, however, a potential repeat of 1983, a strong El Nino year where snowpacks were near normal until about April when storm after storm brought snowpacks to record levels. There is simply not enough predictive capacity to ascertain what specific affects this El Nino may have on various areas of the state at this time. Southern Utah in general, has a greater probability of receiving high snowpacks than does northern Utah. December precipitation was much below average over the entire state, ranging from near 45% to about 75% of normal. The seasonal accumulation (Oct-Dec) is near 80% of normal. Snowmelt runoff conditions are generally poor across the state and most areas will see below to much below average streamflow this spring. Streams could peak early and recede quickly, yielding much below normal volumes. The bright spot in this rather dismal outlook is that reservoir storage is excellent and most reservoirs should fill in spite of the poor streamflow outlook.

SNOWPACK

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 69% of normal, down dramatically from last years record packs. Snowpacks in the north are much below average ranging from 60% to 80% and in the south, below average at 70% to 85%. There have been only 2 years (1980 and 1996) since 1960 that have started with a statewide snowpack this low and that subsequently ended up average or above. In both cases, January was the swing month that brought snowpacks above average.

PRECIPITATION

Mountain precipitation in December, as measured by the NRCS SNOTEL system, was much below normal at 61% of average statewide. This brings the seasonal accumulation (Oct-Dec) to 79% of average. December precipitation was dismal in the north (45%-65%) and merely pathetic in the south at 70% -75% of normal.

National Weather Service December precipitation figures show below to much below normal precipitation statewide resulting from a split jetstream deflecting moisture mainly

to the south. The southern aspect of the split has moved as far as the Arizona - Mexico border. Lower precipitation amounts include: Wendover - 0%, Hanksville - 3%, and Midway - 26%. Above average include: Randolph - 262%, Tooele - 189%, Bountiful - 143%, Ogden - 131% and Cottonwood - 122%.

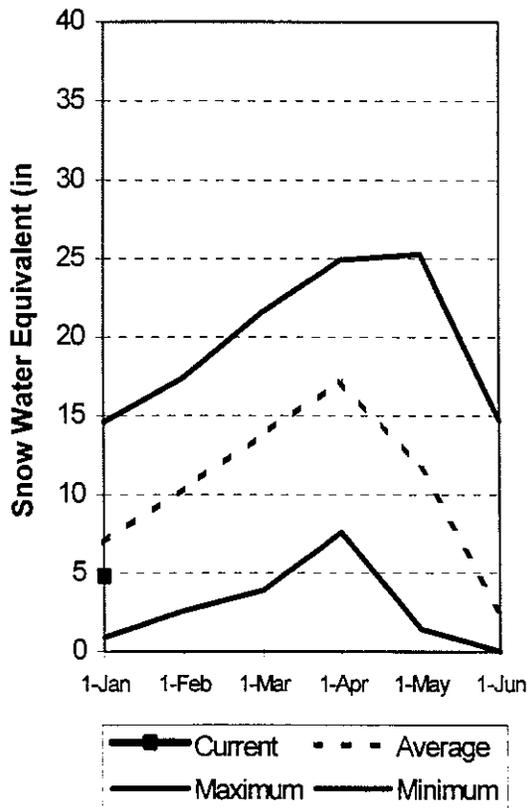
RESERVOIRS

Storage in 40 of Utah's key irrigation reservoirs is at 84% of capacity. Excellent reservoir storage may be the key to adequate water supplies this year.

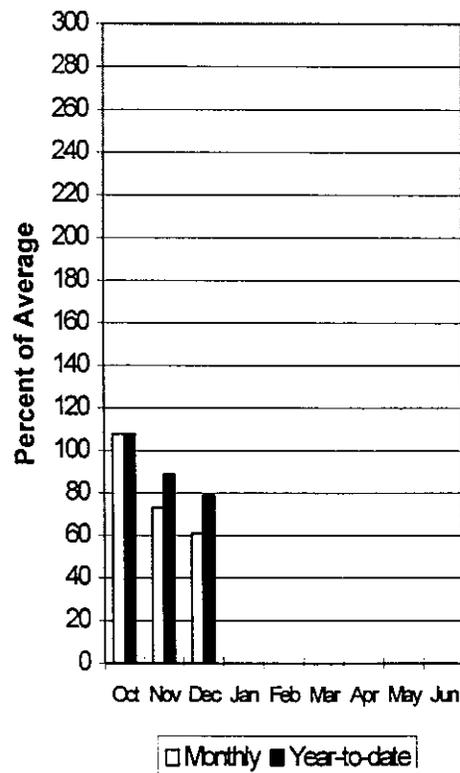
STREAMFLOW

Expected snowmelt streamflows range from below to much below average levels throughout Utah. In the north, much below average conditions prevail whereas in the south, below and near normal streamflow is expected. Streamflows in Utah could have much lower peak flows, shorter duration and earlier peaks than normal. There is still a the majority of snowpack accumulation remaining in this water year and conditions could change dramatically. Given current conditions some water supply shortages could be expected in areas with little or no reservoir storage.

Mountain Snowpack



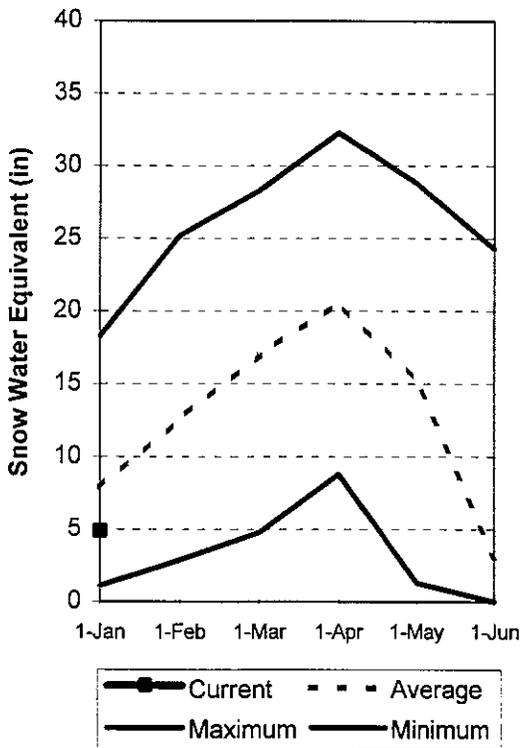
Precipitation



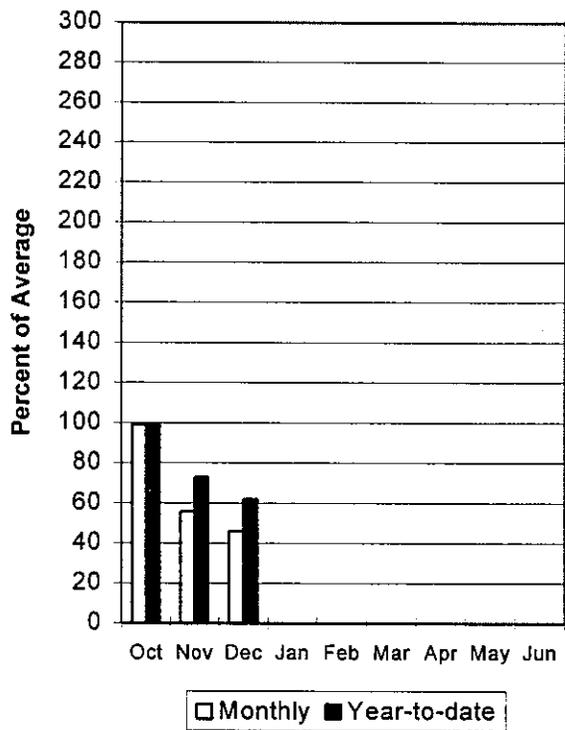
Bear River Basin Jan 1, 1998

Snowpack on the Bear River Basin is much below average at 61% of normal, ranging from 43% to 80% at specific sites. Snowpacks on the Bear River are only 28% of those recorded last year. The first part of the water year has been extremely dry over the entire basin. December precipitation was much below normal at 46%, which brings the seasonal accumulation (Oct-Dec) to 62% of average. Streamflow runoff conditions are poor and below to much below average runoff is expected. The wild card in this situation is how El Nino may affect later snowpack accumulation. Reservoir storage is excellent at 80% capacity.

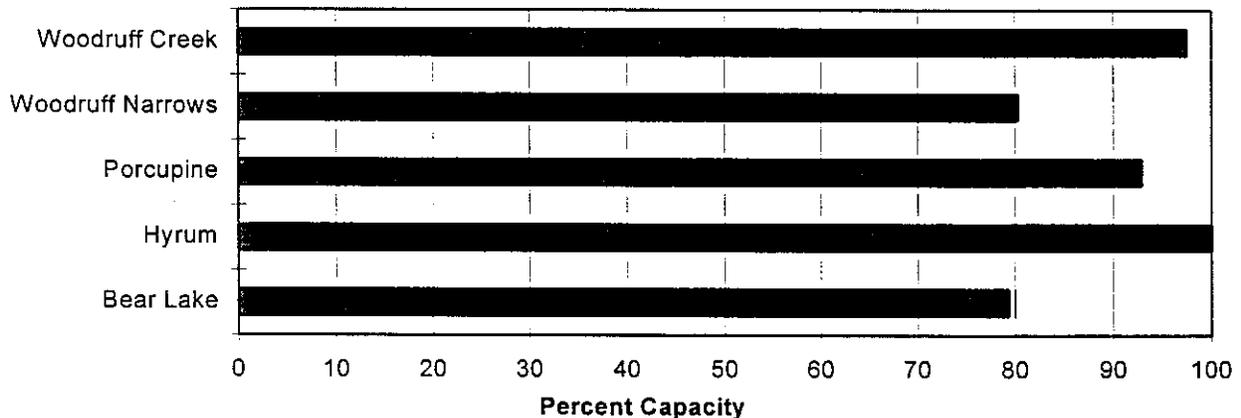
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



BEAR RIVER BASIN
Streamflow Forecasts - January 1, 1998

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)	(1000AF)		
Bear R nr UT-WY State Line	APR-JUL	56	69	80	70	93	115	115				
BEAR R nr Woodruff, UT	APR-JUL	48	72	95	64	126	189	149				
BIG CK nr Randolph	APR-JUL	0.08	0.83	2.40	63	3.97	6.29	3.80				
BEAR R nr Randolph, UT	APR-JUL	1.0	41	73	62	105	153	118				
SMITHS FK nr Border, WY	APR-JUL	42	59	73	72	91	126	102				
THOMAS FK nr WY-ID State Line	APR-JUL	8.3	13.2	18.0	55	25	39	33				
MONTPELIER CK nr Montpelier (2)	APR-JUL	3.9	5.5	7.0	57	8.9	12.6	12.2				
CUB R nr Preston	APR-JUL	17.0	28	35	75	42	53	47				
L BEAR RIVER at Paradise, UT	APR-JUL	142	204	260	58	332	475	446				
LOGAN R nr Logan	APR-JUL	43	58	72	67	89	121	107				
BLACKSMITH Fk nr Hyrum	APR-JUL	21	29	35	65	43	57	54				

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

BEAR RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

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	1127.3	897.5	992.6	BEAR RIVER, UPPER (abv Ha	6	32	65
HYRUM	15.3	15.3	11.9	10.0	BEAR RIVER, LOWER (blw Ha	7	26	60
PORCUPINE	11.3	10.5	10.5	2.8	LOGAN RIVER	4	28	64
WOODRUFF NARROWS	57.3	46.0	30.2	---	RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	3.9	2.4	---	BEAR RIVER BASIN	13	29	62

* 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.

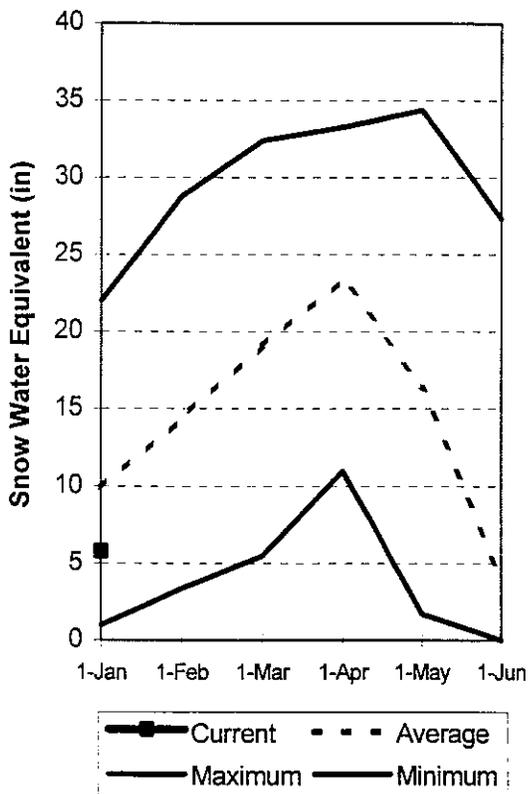
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Weber and Ogden River Basins

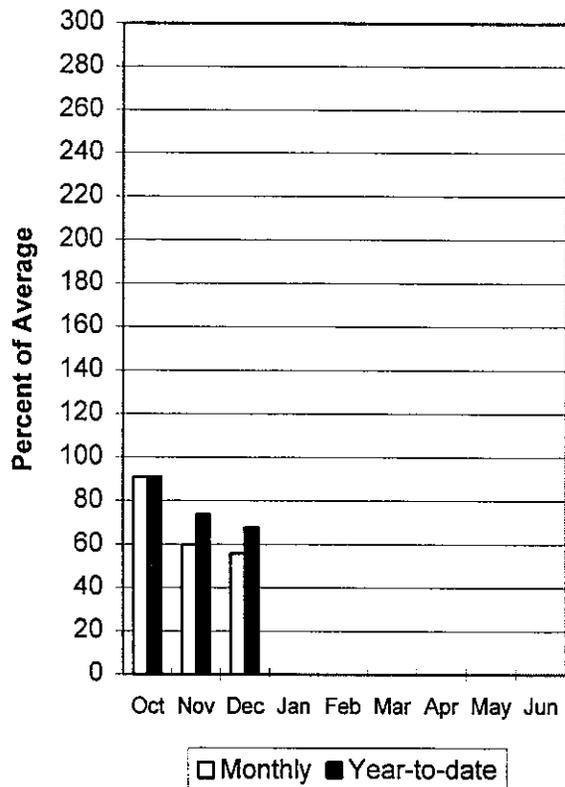
Jan 1, 1998

Snowpack on the Weber and Ogden Watersheds is at 58% of average, just 30% of last years pack. Individual sites range from 39% to 93% of average. To reach an average snowpack by April 1, 130% of normal snowpack accumulation is required. Precipitation during December was much below normal at 56% of average, bringing the seasonal accumulation (Oct-Dec) to 62% of average. Reservoir storage on the Weber system is at 71% of capacity. General water supply conditions are poor. Snowmelt streamflows could have lower and earlier peaks of shorter duration than normal.

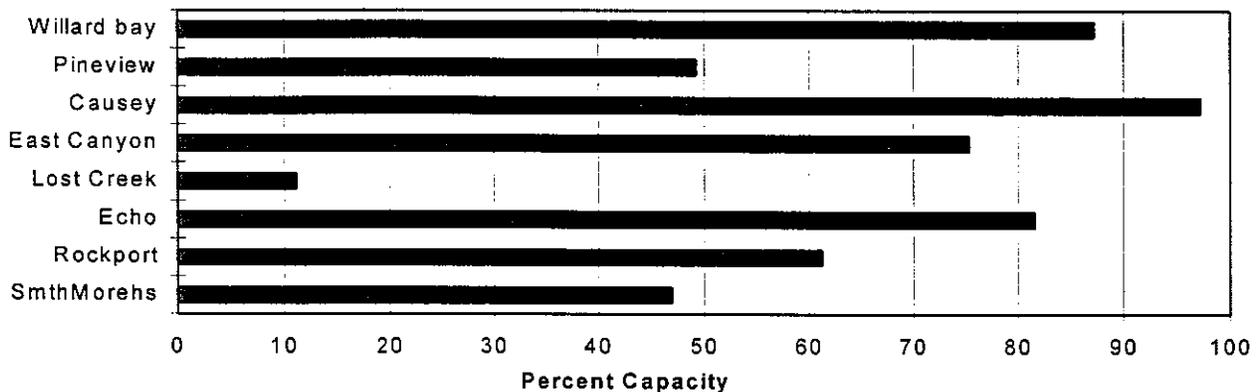
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - January 1, 1998

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)	
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	8.2	16.4	22	73	28	36	30
WEBER R nr Oakley	APR-JUL	49	70	85	70	100	121	122
ROCKPORT RESERVOIR inflow	APR-JUL	39	69	89	66	109	139	134
CHALK CK at Coalville, Ut	APR-JUL	3.8	20	31	71	42	58	44
WEBER R nr Coalville, Ut	APR-JUL	38	69	90	66	111	142	136
ECHO RESERVOIR Inflow	APR-JUL	40	85	115	65	145	190	176
LOST CK Res Inflow	APR-JUL	0.3	5.1	11.3	66	17.5	27	17.2
E CANYON CK nr Morgan	APR-JUL	8.3	16.5	22	73	28	36	30
WEBER R at Gateway	APR-JUL	151	192	220	63	248	289	347
S FORK OGDEN R nr Huntsville	APR-JUL	12.2	27	37	59	47	62	63
PINEVIEW RESERVOIR Inflow	APR-JUL	12.0	46	70	57	94	128	124
WHEELER CK nr Huntsville	APR-JUL	0.44	2.08	3.20	52	4.32	5.96	6.20

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

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - January 1, 1998

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	6.9	2.9	2.1	OGDEN RIVER	4	24	50
EAST CANYON	49.5	37.3	37.7	33.3	WEBER RIVER	8	36	66
ECHO	73.9	60.3	52.5	41.4	WEBER & OGDEN WATERSHEDS	12	31	59
LOST CREEK	22.5	2.5	8.1	12.7				
PINEVIEW	110.1	54.2	44.7	50.0				
ROCKPORT	60.9	37.3	34.8	34.1				
WILLARD BAY	215.0	187.4	179.7	104.9				

* 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.

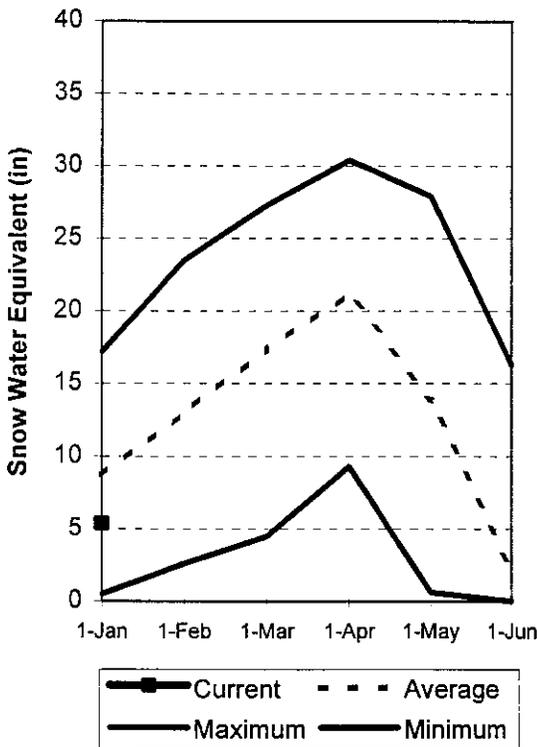
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Utah Lake, Jordan River & Tooele Valley Basins

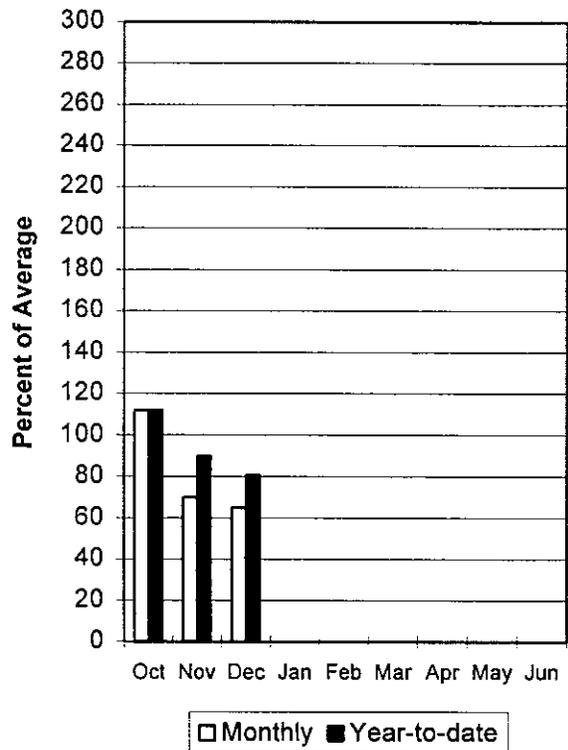
Jan 1, 1998

Snowpacks over these watersheds are much below average at 62% of normal, just 37% of last year. Individual sites range from 41% to 102% of average. To reach an average April 1 snowpack, 127% of normal snow accumulation is required. Precipitation during December was much below normal at 65% , bringing the seasonal accumulation (Oct-Dec) to 81% of average. Reservoir storage is at 92% of capacity. Water supply conditions are poor and below average peak flows, with shorter flow durations, can be expected.

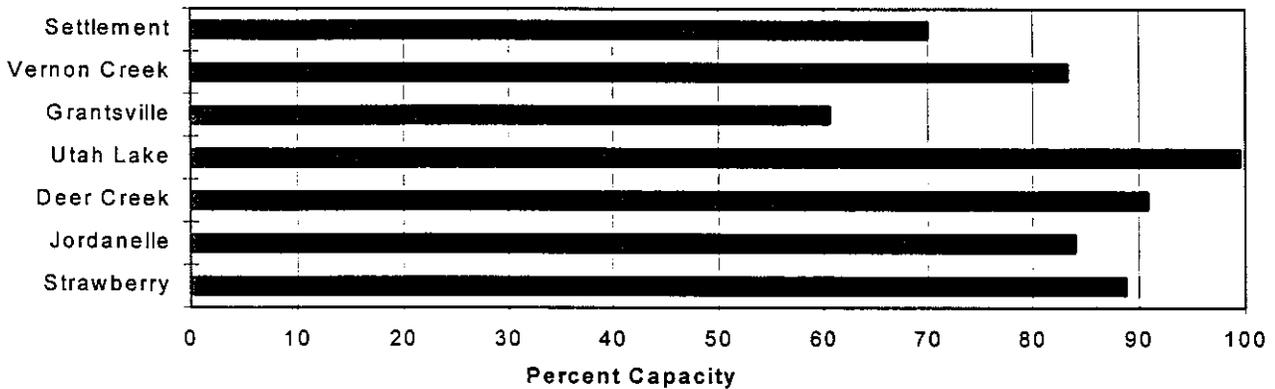
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		90% (1000AF)		70% (1000AF)		50% (Most Probable) (1000AF) (% AVG.)		
		30% (1000AF)		10% (1000AF)				
PAYSON CK nr Payson	APR-JUL	1.01	1.68	2.90	66	4.12	6.86	4.40
SPANISH FORK nr Castilla	APR-JUL	8.1	26	50	68	75	116	74
HOBBLE CK nr Springville	APR-JUL	2.3	6.8	11.0	59	15.2	23	18.8
PROVO R nr Hailstone	APR-JUL	22	49	66	61	83	110	109
PROVO R below Deer Creek Dam	APR-JUL	4.0	48	75	59	102	146	128
AMERICAN FORK nr American Fk.	APR-JUL	2.9	13.6	20	63	26	37	32
UTAH LAKE inflow	APR-JUL	10.0	134	210	65	454	411	324
L COTTONWOOD CRK nr SLC	APR-JUL	14.8	23	28	72	33	41	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	17.1	24	29	76	34	41	38
PARLEY'S CK nr SLC	APR-JUL	0.6	6.7	10.4	65	14.1	20	15.9
MILL CK nr SLC	APR-JUL	1.43	3.27	4.40	68	5.53	7.54	6.50
DELL FK nr SLC	APR-JUL	0.99	2.88	4.70	66	6.52	9.87	7.10
EMIGRATION CK nr SLC	APR-JUL	0.42	1.45	2.90	69	4.35	6.72	4.20
CITY CK nr SLC	APR-JUL	1.58	4.42	6.20	75	7.98	10.79	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	457	750	1050	78	1471	2413	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	369	883	1600	70	2898	6938	2300
S WILLOW CK nr Grantsville	APR-JUL	0.03	1.08	2.10	68	3.12	4.62	3.10

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

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - January 1, 1998

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	136.0	124.5	93.5	PROVO RIVER & UTAH LAKE	7	30	55
GRANTSVILLE	3.3	2.0	1.4	---	PROVO RIVER	4	23	48
SETTLEMENT CREEK	1.0	0.7	0.8	0.6	JORDAN RIVER & GREAT SALT	5	36	56
STRAWBERRY-ENLARGED	1105.9	982.0	825.4	---	TOOELE VALLEY WATERSHEDS	4	57	87
UTAH LAKE	870.9	866.8	827.4	601.6	UTAH LAKE, JORDAN RIVER &	16	37	62
VERNON CREEK	0.6	0.5	0.4	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.

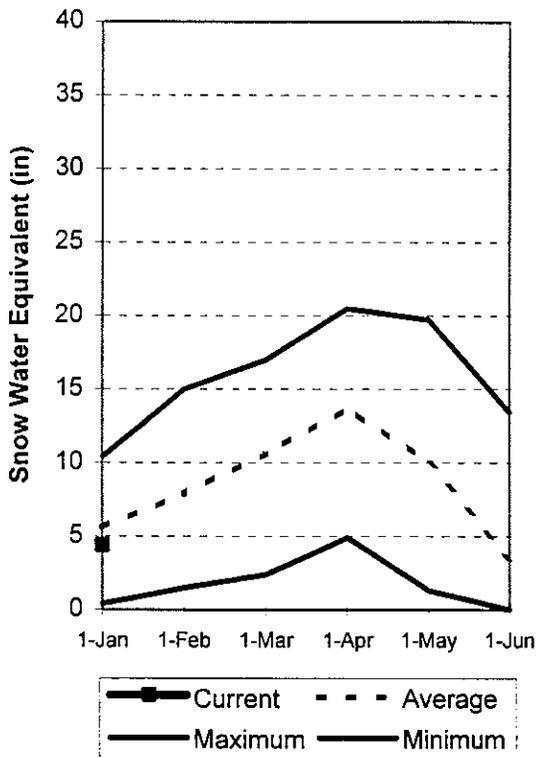
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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Uintah Basin and Dagget SCD's

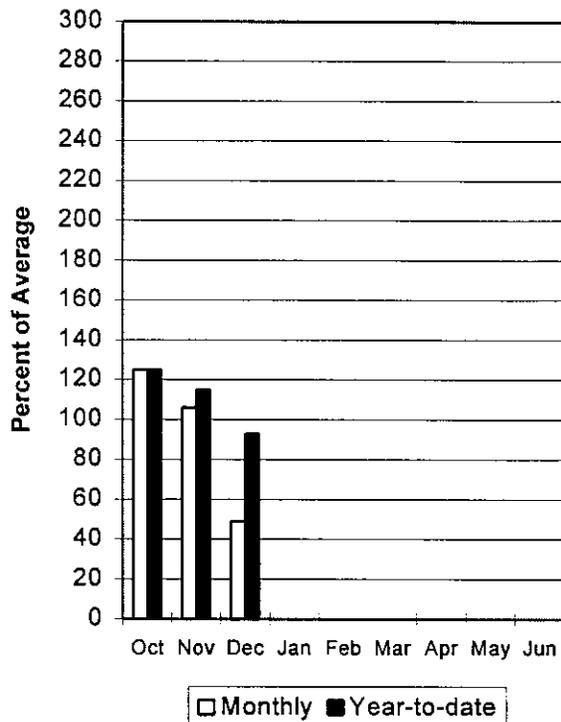
Jan 1, 1998

Snowpacks across the Uintah Basin and North Slope areas are near to much below average. The North Slope is at 106% and the Uintah Basin is near 50% to 75% of average. Snowpacks in these areas are 35% to 45% of last year. Precipitation during December was near 50% of normal, bringing the seasonal accumulation (Oct-Dec) to 93% of average. Reservoir storage is at 87% of capacity. Water supply conditions are near average on the north slope and poor over the Uintah Basin. Snowmelt streamflow could have earlier and lower peaks with shorter duration. Areas without adequate reservoir storage may have water shortages.

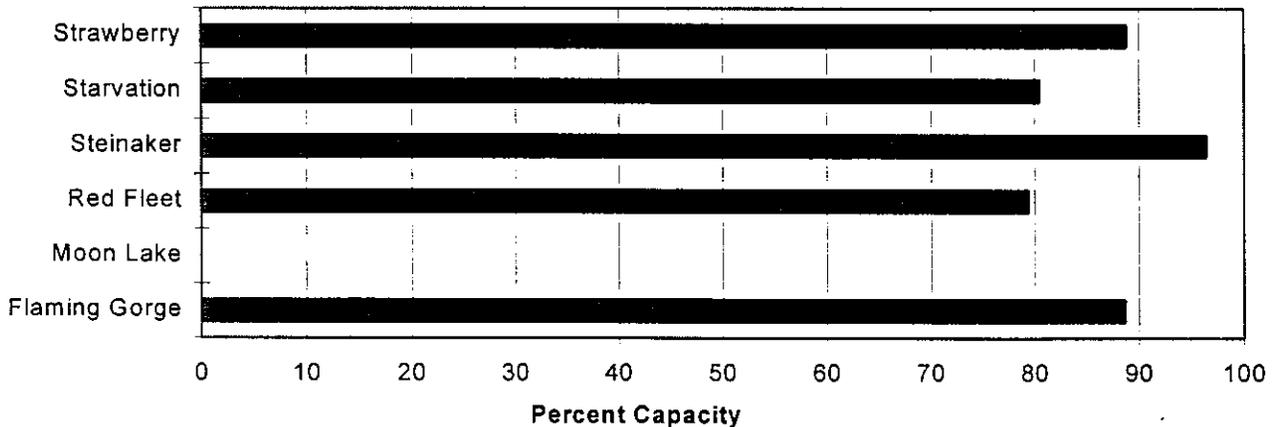
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		===== Wetter =====>>				
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)	Chance Of Exceeding * (% AVG.)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	52	69	80	83	91	108	96
STATE LINE RESERVOIR INFLOW	APR-JUL	12.8	19.5	24	80	29	35	30
HENRYS FORK nr Manila	APR-JUL	3.4	17.5	28	67	39	54	42
FLAMING GORGE RES INFLOW	APR-JUL	392	507	675	56	843	1090	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	9.7	14.2	17.3	87	20	25	19.8
ASHLEY CK nr Vernal	APR-JUL	21	32	40	78	48	60	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	8.1	13.1	17.2	66	22	30	26
DUCHESNE R nr Tabiona	APR-JUL	45	64	76	72	88	107	105
ROCK CK nr Mountain Home	APR-JUL	42	59	70	75	82	99	94
UPPER STILLWATER RESV inflow	APR-JUL	29	47	60	74	73	92	81
DUCHESNE R abv Knight Diversion	APR-JUL	65	107	135	71	163	205	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	12.9	27	40	68	55	82	59
CURRENT CREEK RESV Inflow	APR-JUL	5.8	11.3	15.0	71	18.7	24	21
STARVATION RESERVOIR inflow	APR-JUL	32	51	80	68	109	151	117
MOON LAKE Inflow	APR-JUL	33	46	55	80	64	77	69
YELLOWSTONE R nr Altonah	APR-JUL	23	39	50	77	61	77	65
DUCHESNE R at Myton	APR-JUL	21	88	140	53	192	268	267
WHITEROCKS R nr Whiterocks	APR-JUL	17.8	36	48	83	60	78	58
UINTA R nr Neola	APR-JUL	26	52	70	82	88	114	85
DUCHESNE R nr Randlett	APR-JUL	30	69	170	52	271	420	328

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

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - January 1, 1998

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	3323.0	3249.0	---	UPPER GREEN RIVER in UTAH	6	72	106
MOON LAKE		NO REPORT			ASHLEY CREEK	2	48	77
RED FLEET	25.7	21.0	18.0	---	BLACK'S FORK RIVER	2	70	94
STEINAKER	33.4	32.0	16.8	18.2	SHEEP CREEK	1	160	215
STARVATION	165.3	133.0	147.3	105.2	DUCHESNE RIVER	11	35	68
STRAWBERRY-ENLARGED	1105.9	982.0	825.4	---	LAKE FORK-YELLOWSTONE CRE	4	47	78
					STRAWBERRY RIVER	4	24	50
					UINTAH-WHITEROCKS RIVERS	2	38	74
					UINTAH BASIN & DAGGET SCD	17	44	78

* 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.

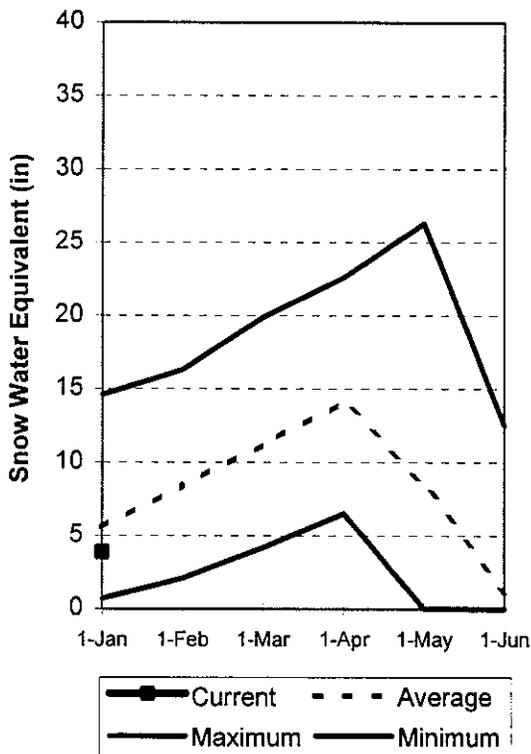
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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

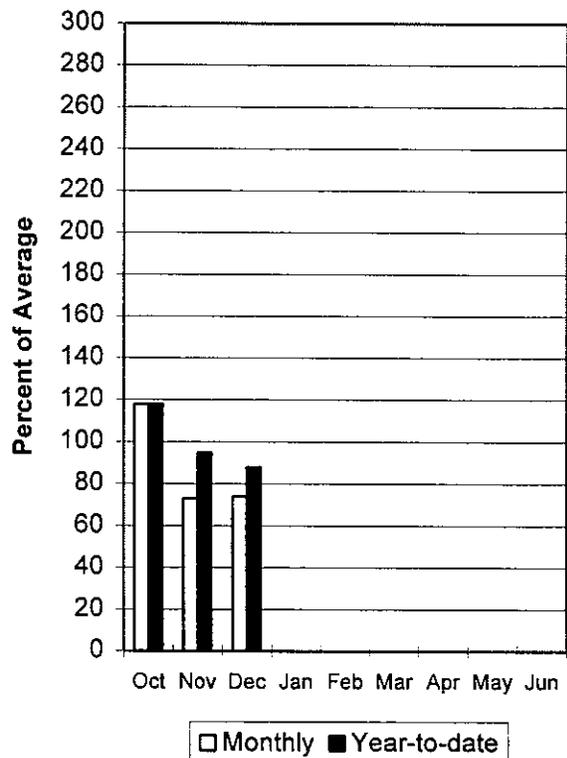
Carbon, Emery, Wayne, Grand and San Juan Co. Jan 1, 1998

Snowpacks in this region are at 70% of average, only 42% of last year. Individual sites range from 43% to 170% of average. Precipitation during December was below average at 74%, bringing the seasonal accumulation (Oct-Dec) to 88% of normal. Reservoir storage is at 74% of capacity. General water supply conditions are poor throughout the region and below to much below average flows are expected. Snowmelt streamflow could have lower and earlier peaks of shorter duration. Areas without adequate reservoir storage could have shortages.

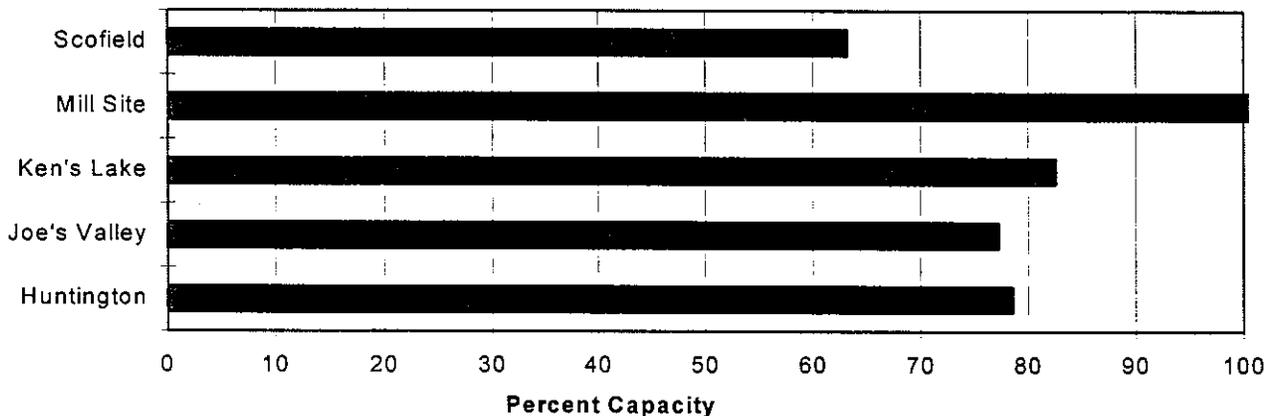
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



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

Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50% (Most Probable)			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)		(1000AF)	(1000AF)	(1000AF)	(1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	4.4	7.7	10.0	86	12.3	15.6	11.7				
SCOFIELD RESV Inflow	APR-JUL	17.7	28	35	80	42	52	44				
WHITE R blw Tabbyune Ck	APR-JUL	2.0	9.1	14.0	75	18.9	26	18.7				
GREEN R at Green River, UT	APR-JUL	831	1527	2000	64	2473	3169	3151				
ELECTRIC LAKE inflow	APR-JUL	5.4	9.3	12.5	83	16.2	23	15.1				
HUNTINGTON CK nr Huntington	APR-JUL	13.2	26	35	85	44	57	41				
JOE'S VALLEY RESV Inflow	APR-JUL	14.5	31	42	79	53	70	53				
FERRON CK nr Ferron	APR-JUL	10.2	22	30	77	38	50	39				
COLORADO R nr Cisco	APR-JUL	1924	2981	3700	90	4419	5476	4132				
MILL CK at Sheley Tunnel	APR-JUL	2.42	3.90	5.40	90	7.47	12.05	6.00				
SEVEN MILE CK nr Fish Lake	APR-JUL	2.66	3.21	5.20	80	7.19	10.13	6.50				
MUDDY CK nr Emery	APR-JUL	4.0	9.0	15.5	79	22	32	19.6				
LLOYD'S RESERVOIR inflow	MAR-JUL	0.09	0.17	1.80	62	4.25	7.85	2.90				
RECAPTURE RESERVOIR inflow	MAR-JUL	0.14	1.24	2.60	65	4.47	8.13	4.00				
SAN JUAN R nr Bluff	APR-JUL	450	837	1100	96	1363	1750	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, 1998

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	3.3	4.0	2.0	PRICE RIVER	3	35	72
JOE'S VALLEY	61.6	47.6	40.6	42.7	SAN RAFAEL RIVER	3	40	60
KEN'S LAKE	2.3	1.9	0.4	---	MUDDY CREEK	1	30	50
MILL SITE	16.7	16.9	10.5	3.0	FREMONT RIVER	3	42	65
SCOFIELD	65.8	42.2	19.6	30.3	LASAL MOUNTAINS	1	79	86
					BLUE MOUNTAINS	1	46	93
					WILLOW CREEK	1	92	170
					CARBON, EMERY, WAYNE, GRA	13	42	70

* 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.

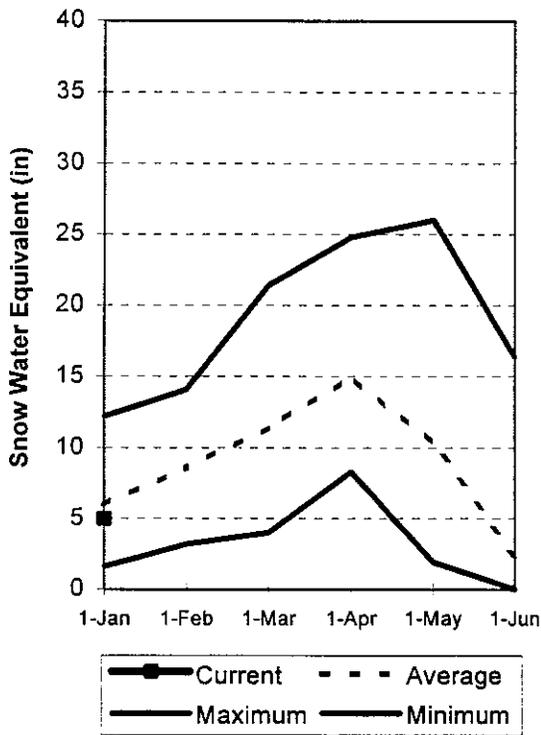
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Sevier and Beaver River Basins

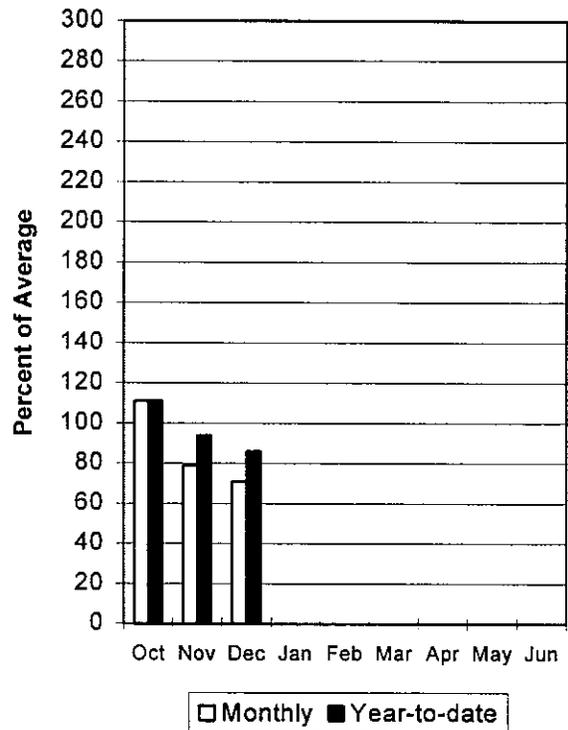
Jan 1, 1998

Snowpacks on the Sevier River Basin are below normal at 85% of average, the second highest basin average in the state. The Beaver River Basin is the highest at 90% of normal. Individual sites range from 32% to 139% of average. Precipitation during December was much below average at 71% of normal, bringing the seasonal accumulation (Oct-Dec) to 86% of average. Reservoir storage is at 80% of capacity. General water supply conditions are below normal and streamflows should be below to near average and could have lower peaks and duration. Areas without reservoir storage could have shortages.

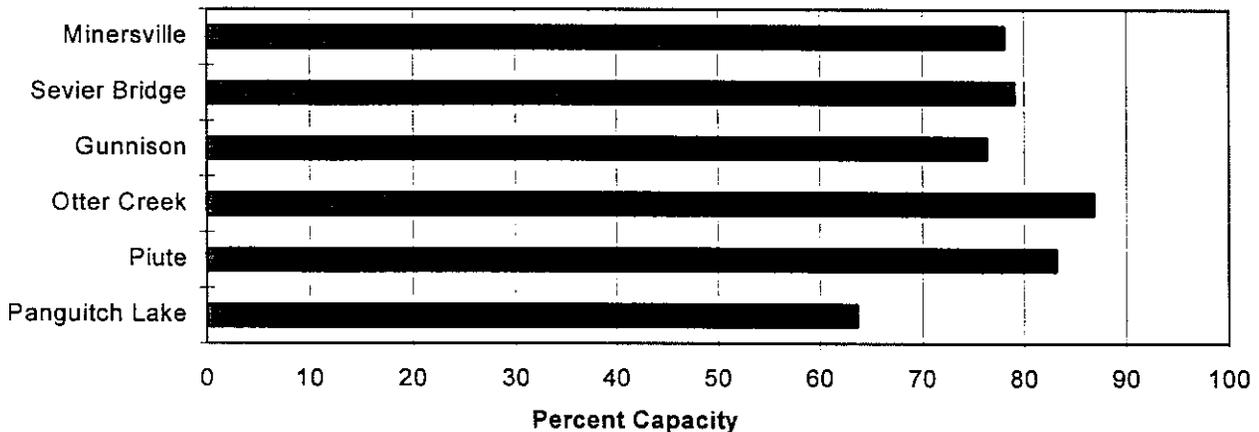
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90% (1000AF)		70% (1000AF)		50% (Most Probable) (1000AF) (% AVG.)			30% (1000AF) 10% (1000AF)	
		Chance Of Exceeding *								
SEVIER R at Hatch	APR-JUL	3.8	32	48	89	65	92	54		
SEVIER R nr Circleville	APR-JUL	17.1	46	65	87	84	113	75		
SEVIER R nr Kingston	APR-JUL	15.8	50	70	84	90	124	83		
ANTIMONY CK nr Antimony	APR-JUL	2.12	4.09	5.10	70	6.11	8.10	7.30		
E F SEVIER R nr Kingston	APR-JUL	5.1	10.5	21	70	32	49	30		
SEVIER R blw Piute Dam	APR-JUL	14.0	67	98	85	129	182	115		
CLEAR CK nr Sevier	APR-JUL	2.7	11.0	16.0	76	21	29	21		
SALINA CK at Salina	APR-JUL	1.1	4.9	13.7	78	23	39	17.6		
PLEASANT CK nr Pleasant	APR-JUL	3.40	5.62	6.80	80	7.98	10.28	8.50		
EPHRAIM CK nr Ephraim	APR-JUL	3.2	7.1	9.3	74	11.5	15.5	12.6		
SEVIER R nr Gunnison	APR-JUL	65	116	200	84	284	425	239		
CHICKEN CK nr Levan	APR-JUL	1.08	2.14	3.40	72	5.41	6.44	4.70		
OAK CK nr Oak City (Acre Feet)	APR-JUL	549	896	1250	70	1744	2847	1777		
BEAVER R nr Beaver	APR-JUL	13.9	17.3	20	77	23	29	26		

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

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - January 1, 1998

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	15.5	10.6	9.5	UPPER SEVIER RIVER (south	7	60	75
MINERSVILLE (RkyFd)	23.3	18.2	8.8	9.3	EAST FORK SEVIER RIVER	2	54	75
OTTER CREEK	52.5	45.6	21.9	23.8	SOUTH FORK SEVIER RIVER	5	63	75
PIUTE	71.8	59.7	37.6	29.3	LOWER SEVIER RIVER (inclu	6	68	91
SEVIER BRIDGE	236.0	186.6	142.7	87.0	BEAVER RIVER	2	65	90
PANGUITCH LAKE	22.3	14.2	9.2	---	SEVIER & BEAVER RIVER BAS	15	65	85

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

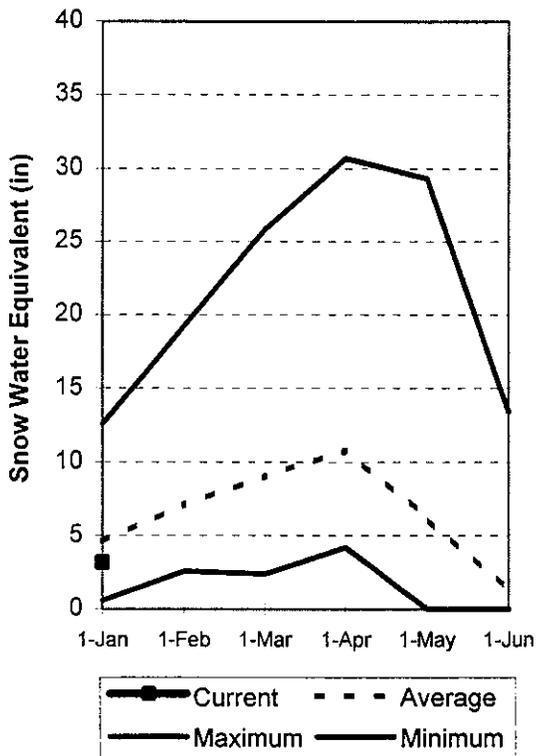
The average is computed for the 1961-1990 base period.

- (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.

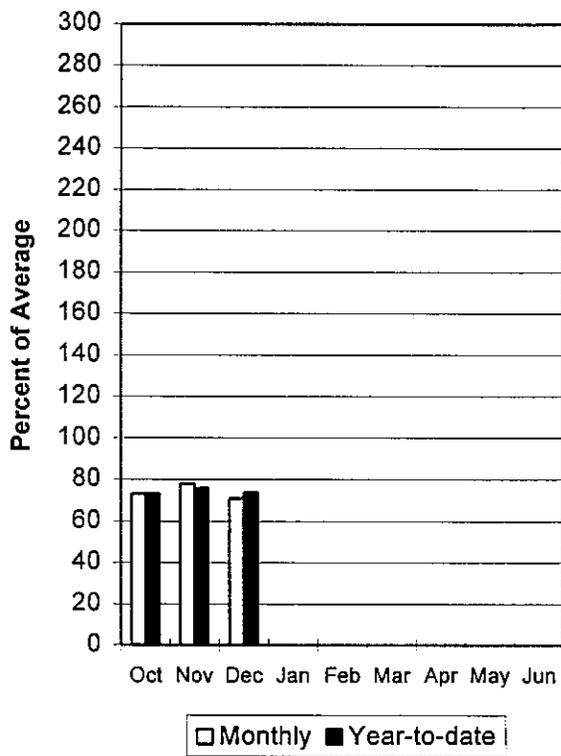
E. Garfield, Kane, Washington, & Iron co. Jan 1, 1998

Snowpacks in this region are below normal at 70% of average, a little over half of last year's value. Individual sites range from 26% to 136% of average. Snowpacks in these areas can change dramatically throughout the season and may increase later in the spring. Precipitation during December was below normal at 71% of average, bringing the seasonal accumulation (Oct-Dec) to 74% of normal. General water supply conditions are below average, peak flows may be lower, earlier and of shorter duration. Reservoir storage is at 72% of capacity. Areas without adequate reservoir storage may have shortages.

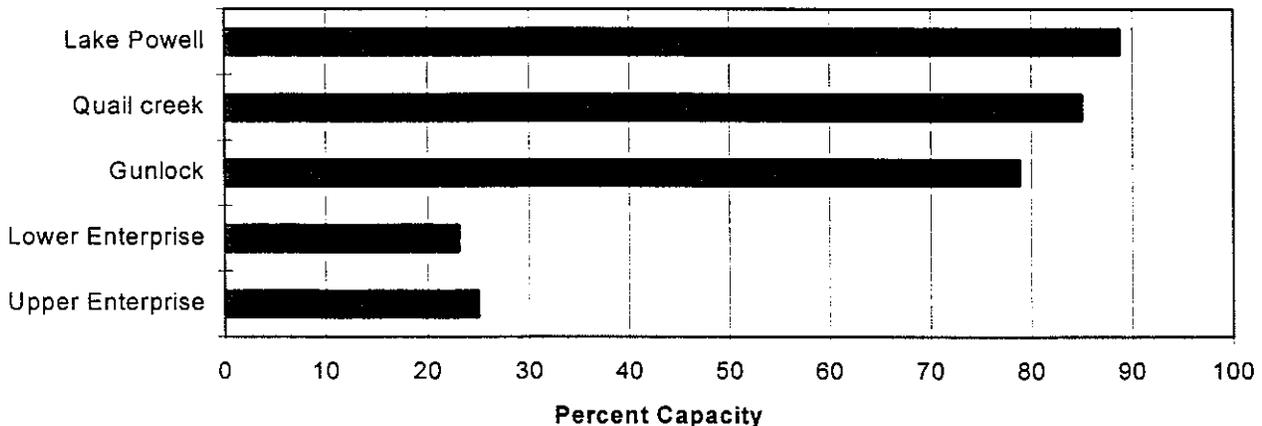
Mountain Snowpack



Precipitation



Reservoir Storage 1/1/98



E. GARFIELD, KANE, WASHINGTON, & IRON Co.

Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90% (1000AF)		70% (1000AF)		50% (Most Probable) (1000AF) (% AVG.)			30% (1000AF)		10% (1000AF)	
		Chance Of Exceeding *										
COAL CK nr Cedar City	APR-JUL	4.1	7.4	12.7	68	18.0	28	18.8				
LAKE POWELL INFLOW	APR-JUL	3171		6500	84		10056	7735				
VIRGIN R nr Hurricane	APR-JUL	25	65	80	101	95	171	79				
SANTA CLARA R nr Pine Valley	APR-JUL	2.01	4.40	5.50	104	6.60	11.98	5.30				

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

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - January 1, 1998

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	8.2	6.7	---	VIRGIN RIVER	5	64	74
LAKE POWELL	24322.0	21595.0	20498.0	---	PAROWAN	2	71	84
QUAIL CREEK	40.0	34.0	35.5	---	ENTERPRISE TO NEW HARMONY	2	65	52
UPPER ENTERPRISE	10.0	2.5	3.6	---	COAL CREEK	2	75	72
LOWER ENTERPRISE	2.6	0.6	0.6	---	ESCALANTE RIVER	2	44	66
					E. GARFIELD, KANE, WASHIN	9	59	70

* 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 COURSES
FOR THE STATE FAH
As of JANUARY 1, 1998

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
AGUA CANYON SNOTEL	8900	1/01	-	2.4S	3.4	-	DRY BREAD POND SNOTL	8350	1/01	-	4.2S	19.3	9.6
ALTA CENTRAL	8800	1/02	38	11.2	23.6	19.0	DRY FORK SNOTEL	7160	1/01	-	8.9S	8.0	-
ASHLEY TWIN LAKES	10500	-	-	-	-	-	EAST SHINGLE LAKE	9800	-	-	-	-	-
BEAVER DAMS SNOTEL	8000	1/01	-	2.4S	4.8	4.6	EAST WILLOW CREEK SN	8250	1/01	-	3.4S	3.7	2.0
BEAVER DIVIDE SNOTL	8280	1/01	-	2.5S	10.4	4.8	FARMINGTON CANYON L.	6950	-	-	-	-	-
BEN LOMOND PK SNOTL	8000	1/01	-	6.4S	38.5	15.9	FARMINGTON CN SNOTEL	8000	1/01	-	10.7S	24.9	12.3
BEN LOMOND TR SNOTL	6000	1/01	-	4.3S	18.3	11.1	FARNSWORTH LK SNOTEL	9600	1/01	-	7.4S	9.3	8.7
BEVAN'S CABIN	6450	-	-	-	-	-	FISH LAKE	8700	-	-	-	-	-
BIG FLAT SNOTEL	10290	1/01	-	6.9S	11.2	8.7	FIVE POINTS LAKE SNO	10920	1/01	-	5.6S	12.8	8.4
BIRCH CROSSING	8100	-	-	-	-	-	FRANCES FLATS	6700	12/31	28	6.5	-	9.6
BLACK FLAT-U.M. CK S	9400	1/01	-	2.7S	6.7	4.2	G.B.R.C. HEADQUARTER	8700	-	-	-	-	-
BLACK'S FORK GS-EF	9340	-	-	-	-	-	G.B.R.C. MEADOWS	10000	-	-	-	-	-
BLACK'S FORK JUNCTN	8930	-	-	-	-	-	GARDEN CITY SUMMIT	7600	-	-	-	-	-
BOX CREEK SNOTEL	9800	1/01	-	4.8S	7.5	5.5	GEORGE CREEK	8840	-	-	-	-	-
BRIAN HEAD	10000	-	-	-	-	-	GOOSEBERRY R.S.	8400	-	-	-	-	-
BRIGHTON CABIN	8700	12/29	31	7.7	21.5	12.5	GOOSEBERRY R.S. SNOT	7900	1/01	-	2.5S	3.6	4.7
BRIGHTON SNOTEL	8750	1/01	-	5.6S	16.7	8.9	HARDSCRABLE SNOTEL	7250	1/01	-	4.2S	14.1	9.3
BROWN DUCK SNOTEL	10600	1/01	-	4.6S	13.9	8.5	HARRIS FLAT SNOTEL	7700	1/01	-	1.0S	2.9	3.1
BRYCE CANYON	8000	-	-	-	-	-	HAYDEN FORK SNOTEL	9100	1/01	-	4.0S	10.8	6.8
BUCK FLAT SNOTEL	9800	1/01	-	5.5S	13.6	7.2	HENRY'S FORK	10000	-	-	-	-	-
BUCK PASTURE	9700	-	-	-	-	-	HEWINTA SNOTEL	9500	1/01	-	4.3S	6.4	3.9
BUCKBOARD FLAT	9000	-	-	-	-	-	HICKERSON PARK SNOTE	9100	1/01	-	5.6S	3.5	2.6
BUG LAKE SNOTEL	7950	1/01	-	5.2S	19.6	8.8	HIDDEN SPRINGS	5500	12/31	15	3.2	2.1	4.5
BURT'S-MILLER RANCH	7900	-	-	-	-	-	HOBBLE CREEK SUMMIT	7420	-	-	-	-	-
CAMP JACKSON SNOTEL	8600	1/01	-	3.7S	8.1	4.0	HOLE-IN-ROCK SNOTEL	9150	1/01	-	3.8S	4.1	2.3
CASTLE VALLEY SNOTL	9580	1/01	-	4.1S	7.1	5.2	HORSE RIDGE SNOTEL	8260	1/01	-	5.2S	22.1	10.0
CHALK CK #1 SNOTEL	9100	1/01	-	7.2S	18.2	10.3	HUNTINGTON-HORSESHOE	9800	-	-	-	-	-
CHALK CK #2 SNOTEL	8200	1/01	-	6.2S	12.2	6.7	INDIAN CANYON SNOTEL	9100	1/01	-	3.2S	8.9	4.1
CHALK CREEK #3	7500	-	-	-	-	-	JOHNSON VALLEY	8850	-	-	-	-	-
CHEPETA SNOTEL	10300	1/01	-	5.1S	9.2	6.1	KILFOIL CREEK	7300	-	-	-	-	-
CITY CREEK	7500	12/31	32	8.0	16.2	15.7	KILLYON CANYON	6300	12/30	13	2.9	3.7	4.7
CLEAR CK RIDG #1 SNT	9200	1/01	-	5.9S	15.2	8.1	KIMBERLY MINE SNOTEL	9300	1/01	-	4.8S	7.1	5.8
CLEAR CK RIDG #2 SMT	8000	1/01	-	4.8S	10.7	6.1	KING'S CABIN SNOTEL	8730	1/01	-	4.4S	9.6	5.4
CLEAR CREEK RIDGE #3	6600	-	-	-	-	-	KLONDIKE NARROWS	7400	-	-	-	-	-
COLD WATER SPRINGS	6030	-	-	-	-	-	KOLOB SNOTEL	9250	1/01	-	7.4S	11.5	7.2
CORRAL	8200	-	-	-	-	-	LAKEFORK #1 SNOTEL	10100	1/01	-	7.1S	11.0	5.2
CURRENT CREEK SNOTEL	8000	1/01	-	1.9S	8.9	4.3	LAKEFORK BASIN SNOTE	10900	1/01	-	7.5S	15.0	9.6
DANIELS-STRAWBERRY S	8000	1/01	-	3.0S	16.2	7.3	LAKEFORK MOUNTAIN #3	8400	-	-	-	-	-
DESERET PEAK	9250	-	-	-	-	-	LAMBS CANYON	7400	12/30	22	4.9	12.5	7.3
DESERET PEAK AM	9250	-	-	-	-	-	LASAL MOUNTAIN LOWER	8900	-	-	-	-	-
DESERET PEAK SNOTEL	9250	1/01	-	7.1S	10.7	7.7	LASAL MOUNTAIN SNOTE	9850	1/01	-	4.8S	6.1	5.6
DILL'S CAMP SNOTEL	9200	1/01	-	3.1S	10.3	6.2	LILLY LAKE SNOTEL	9050	1/01	-	4.8S	10.0	6.2
DONKEY RESERVOIR SNO	9800	1/01	-	2.7S	6.0	3.7	LITTLE BEAR LOWER	6000	-	-	-	-	-

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 SNOTEL	6550	1/01	-	3.4S	13.8	6.6	THISTLE FLAT	8500					
LITTLE GRASSY SNOTEL	6100	1/01	-	1.5S	2.1	1.1	TIMBERLINE	9100					
LONG FLAT SNOTEL	8000	1/01	-	0.9S	1.6	3.5	TIMPANOGOS DIVIDE SN	8140	1/01	-	4.9S	20.2	9.4
LONG VALLEY JCT. SNT	7500	1/01	-	0.5S	2.3	1.2	TONY GROVE LK SNOTEL	8400	1/01	-	9.8S	30.9	14.5
LOOKOUT PEAK SNOTEL	8200	1/01	-	6.7S	20.1	12.7	TONY GROVE R.S.	6250					
LOST CREEK RESERVOIR	6130						TRIAL LAKE	9960					
MAMMOTH-COTTONWD SNT	8800	1/01	-	6.8S	15.2	7.4	TRIAL LAKE SNOTEL	9960	1/01	-	5.0S	20.4	10.8
MERCHANT VALLEY SNOT	8750	1/01	-	5.9S	8.4	5.5	TROUT CREEK SNOTEL	9400	1/01	-	3.2S	6.1	4.5
MIDDLE CANYON	7000						UPPER JOES VALLEY	8900					
MIDWAY VALLEY SNOTEL	9800	1/01	-	8.7S	10.9	10.0	VERNON CREEK SNOTEL	7500	1/01	-	3.8S	7.1	4.3
MILL CREEK	6950	12/30	26	6.7	12.4	9.0	VIPONT	7670					
MILL-D NORTH SNOTEL	8960	1/01	-	6.9S	18.2	10.1	WEBSTER FLAT SNOTEL	9200	1/01	-	3.6S	5.4	7.0
MILL-D SOUTH FORK	7400	12/29	22	5.7	1.4	8.4	WHITE RIVER #1 SNOTE	8550	1/01	-	2.4S	12.2	5.6
MINING FORK SNOTEL	8000	1/01	-	6.2S	12.4	6.1	WHITE RIVER #3	7400					
MONTE CRISTO SNOTEL	8960	1/01	-	8.8S	23.4	11.0	WIDTSOE #3 SNOTEL	9500	1/01	-	2.7S	6.4	4.5
MOSBY MTN. SNOTEL	9500	1/01	-	2.7S	11.4	4.5	WRIGLEY CREEK	9000					
MT. BALDY R.S.	9500						YANKEE RESERVOIR	8700					
MOD CREEK #2	8600												
OAK CREEK	7760												
PANQUITCH LAKE	8200												
PARLEY'S CANYON SNOT	7500	1/01	-	3.4S	8.9	8.2							
PARLEY'S CANYON SUM.	7500	12/30	26	6.5	12.7	8.1							
PAYSON R.S. SNOTEL	8050	1/01	-	3.7S	7.8	7.9							
PICKLE KEG SNOTEL	9600	1/01	-	6.3S	7.7	6.7							
PINE CREEK SNOTEL	8800	1/01	-	10.7S	12.4	7.7							
RED PINE RIDGE SNOTE	9200	1/01	-	3.5S	9.2	7.5							
REDDEN MINE LOWER	8500												
REES'S FLAT	7300												
ROCK CREEK SNOTEL	7900	1/01	-	2.9S	9.9	4.1							
ROCKY BN-SETTLEMT SN	8900	1/01	-	8.9S	15.6	11.8							
SEELEY CREEK SNOTEL	10000	1/01	-	4.0S	9.9	7.1							
SILVER LAKE (BRIGHT.)	8730	12/29	28	7.2	20.7	10.6							
SMITH MOREHOUSE SNTL	7600	1/01	-	3.8S	9.5	5.8							
SNOWBIRD SNOTEL	9700	1/01	-	8.2S	21.3	15.0							
SPIRIT LAKE	10300												
SQUAW SPRINGS	9300												
STEEL CREEK PARK SNO	10100	1/01	-	6.1S	8.4	7.2							
STILLWATER CAMP	8550												
STRAWBERRY DIVIDE SN	8400	1/01	-	3.8S	16.5	8.0							
STUART R.S.	7950												
SUSC RANCH	8200												
TALL POLES	8800												
THAYNES CANYON SNOTL	9200	1/01	-	5.7S	16.6	7.9							

NOTE:
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.

Issued by

Paul W. Johnson

Chief

**Natural Resources Conservation Service
U.S. Department of Agriculture**

Released by

Phillip J. Nelson

State Conservationist

**Natural Resources Conservation Service
Salt Lake City, Utah**



245 North Jimmy Doolittle Road
Salt Lake City, UT 84116



Utah
Basin Outlook Report
Natural Resources Conservation Service
Salt Lake City, UT



USDA United States
Department of
Agriculture

Natural
Resources
Conservation
Service

Utah

Basin Outlook Report

February 1, 1998



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 in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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STATE OF UTAH GENERAL OUTLOOK

Feb 1, 1998

SUMMARY

What a difference one month can make in the water supply conditions of Utah. Last month snowpacks were just 69% of average and in just a few storms, snowpacks came up to near average conditions. This is still only about 50% of the snow Utah had last season. Northern Utah has slightly better conditions ranging from near to slightly above average whereas in the south, snowpacks are slightly below to near average, a reversal from the January 1 conditions. Some sites in northern Utah had 20 to 25 inches of snow water equivalent increase this past month, most coming in a relatively short 2 week period. The southeast area and the Virgin Basin currently have the lowest snowpacks at about 80% of normal. January precipitation was much above average over northern Utah (130% - 210%) and near normal in the southern areas (90% - 110%). The seasonal accumulation (Oct-Jan) is 100% of normal with little variability across the state. Snowmelt runoff conditions are near normal across the state, a little lower in the south, slightly more in the north. Most areas will see near to below average streamflow this spring. Streams could still peak early and recede quickly, yielding below normal volumes. Current streamflow is above average due to warm temperatures and low elevation snowmelt, high baseflow and rainfall. Reservoir storage is in excellent condition and most reservoirs should easily fill.

SNOWPACK

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 101% of normal, about half of last years record packs. Snowpacks in the north are near to slightly above average ranging from 95% to 110% and in the south, near to below average at 80% to 100%. Some low elevation snowpacks have decreased due to the extremely warm temperatures. January saw a remarkable swing in snowpacks from much below normal to near and even slightly above average. Historically, these types of years have finished near to slightly above normal.

PRECIPITATION

Mountain precipitation in January, as measured by the NRCS SNOTEL system, was much above normal (130% - 210%) in the north and near normal (90% - 110%) in the south. This brings the seasonal accumulation (Oct-Jan) to 100% of average.

National Weather Service January precipitation figures show above average precipitation across the majority of the state. The split jet stream pattern that plagued the area for most of December moved into a westerly flow bringing copious amounts of moisture (2 to 3 times normal) to the state, particularly from the 9th through the 20th of the month. Some of the higher amounts in the state were centered across northern Utah and include:

Randolph - 490%, Logan historic Farm - 298%, Logan USU - 299%, Richmond - 277% and Trenton - 308%.

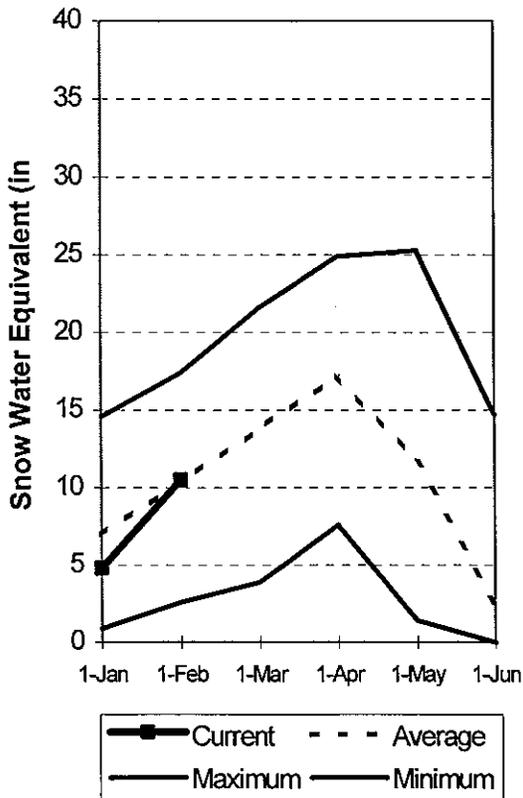
RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 85% of capacity. Many reservoirs are near capacity and expect to be full and spilling soon.

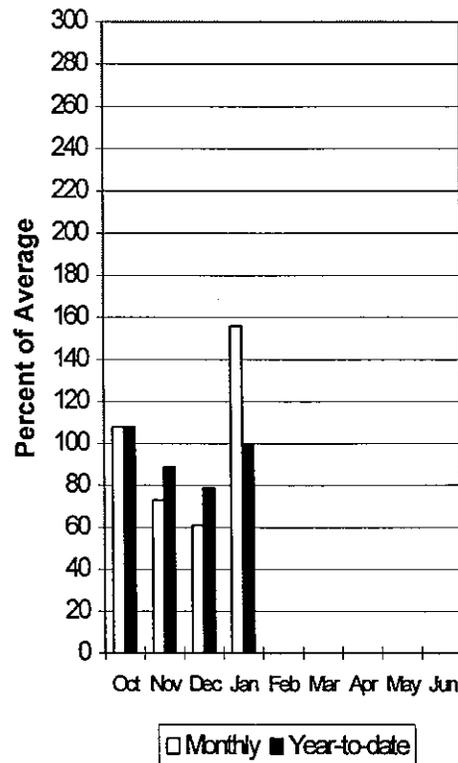
STREAMFLOW

Expected snowmelt streamflows range from below to near average levels throughout Utah. In the north, average conditions prevail whereas in the south, below and near normal streamflow is expected. Streamflows in Utah still could have much lower peak flows, shorter duration and earlier peaks than normal. There are still two critical snowpack accumulation months ahead which could significantly alter the current conditions. Given current conditions, water supply should be near normal.

Mountain Snowpack



Precipitation

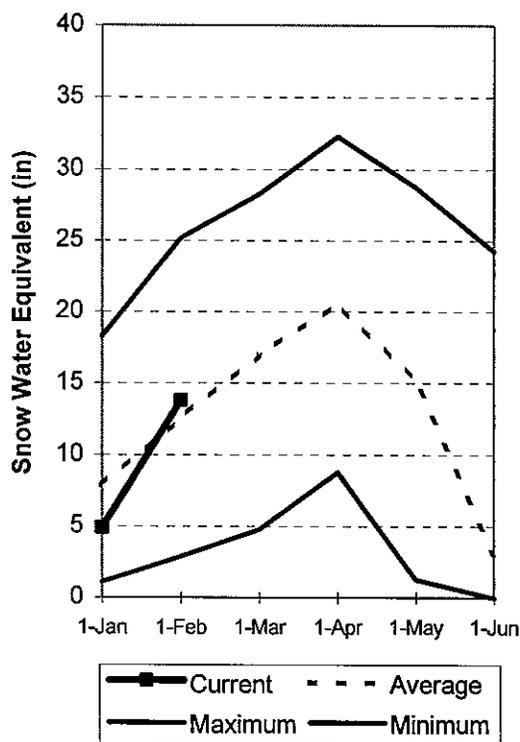


Bear River Basin

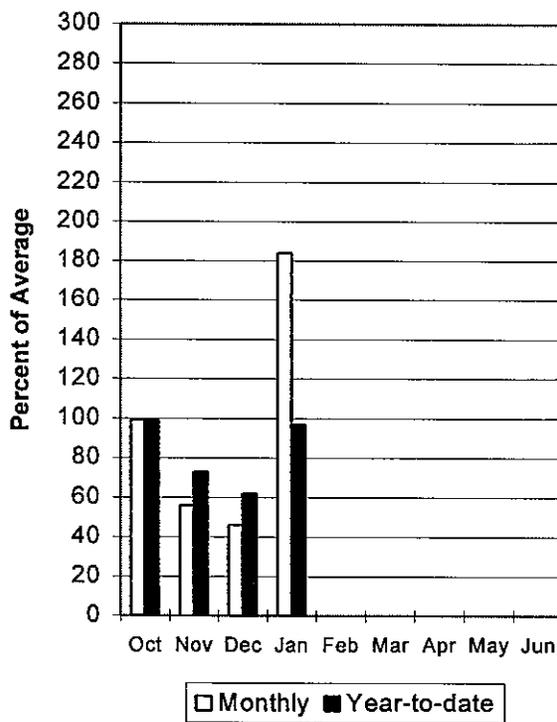
Feb 1, 1998

Snowpack on the Bear River Basin is near average at 109% of normal, up 48% relative to last month. Specific sites range from 91% to 122% of normal. Snowpacks on the Bear River are only 55% of those recorded last year. January precipitation was much above normal at 184%, which brings the seasonal accumulation (Oct-Jan) to 97% of average. Streamflow runoff conditions are near average, considerably better than last month. Only two critical months of snowpack accumulation remain in this season. Reservoir storage is excellent at 79% capacity.

Mountain Snowpack

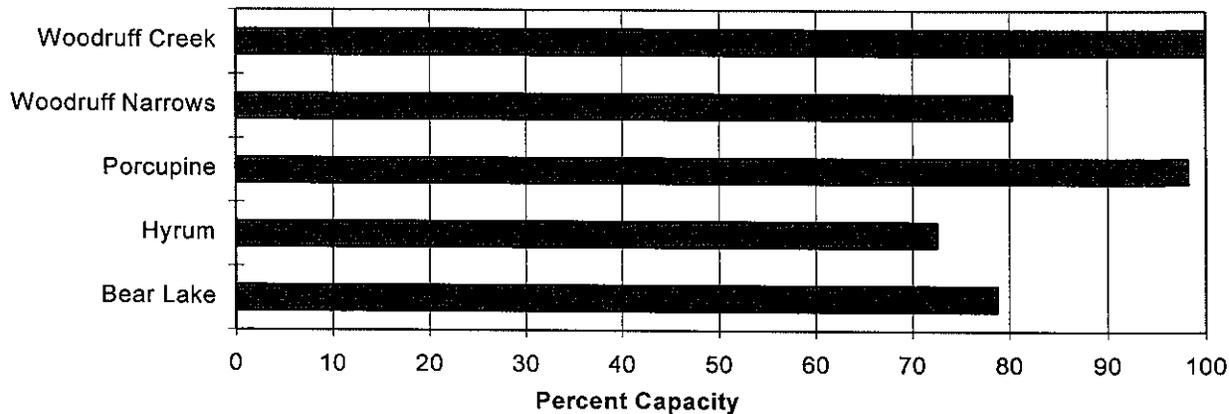


Precipitation



Reservoir Storage

2/1/98



BEAR RIVER BASIN
Streamflow Forecasts - February 1, 1998

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 R nr UT-WY State Line	APR-JUL	67	82	93	81	106	129	115
BEAR R nr Woodruff, UT	APR-JUL	65	94	120	81	153	220	149
BIG CK nr Randolph	APR-JUL	0.08	1.78	3.30	87	4.82	7.05	3.80
BEAR R nr Randolph, UT	APR-JUL	21	64	94	80	124	167	118
SMITHS FK nr Border, WY	APR-JUL	56	71	84	82	99	127	102
THOMAS FK nr WY-ID State Line	APR-JUL	13.3	19.3	25	76	32	47	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	104	167	210	73	253	316	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	6.3	8.2	9.9	81	11.9	15.7	12.2
CUB R nr Preston	APR-JUL	34	42	48	102	54	62	47
L BEAR RIVER at Paradise, UT	APR-JUL	288	391	480	108	590	799	446
LOGAN R nr Logan	APR-JUL	68	88	105	98	125	162	107
BLACKSMITH Fk nr Hyrum	APR-JUL	38	50	59	109	70	91	54

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

BEAR RIVER BASIN
Watershed Snowpack Analysis - February 1, 1998

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	1118.9	929.5	987.6	BEAR RIVER, UPPER (abv Ha)	6	53	100
HYRUM	15.3	11.1	2.6	10.3	BEAR RIVER, LOWER (blw Ha)	7	55	117
PORCUPINE	11.3	11.1	10.8	2.9	LOGAN RIVER	4	56	127
WOODRUFF NARROWS	57.3	46.0	30.2	---	RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	4.0	3.0	---	BEAR RIVER BASIN	13	54	110

* 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.

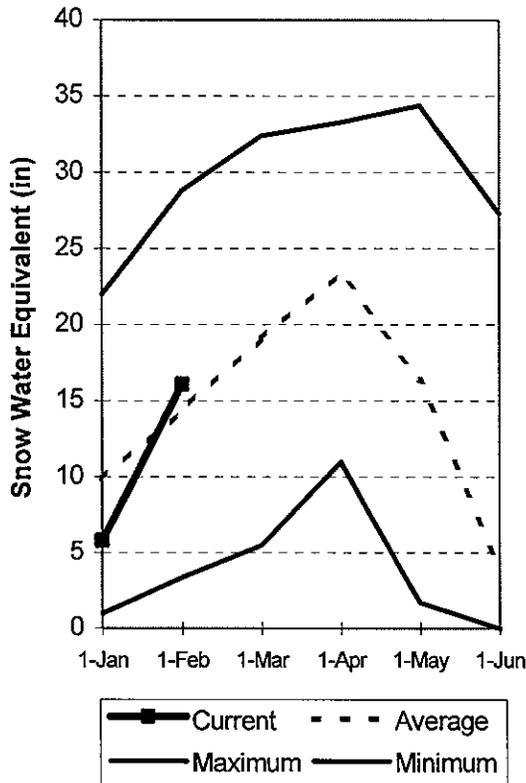
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Weber and Ogden River Basins

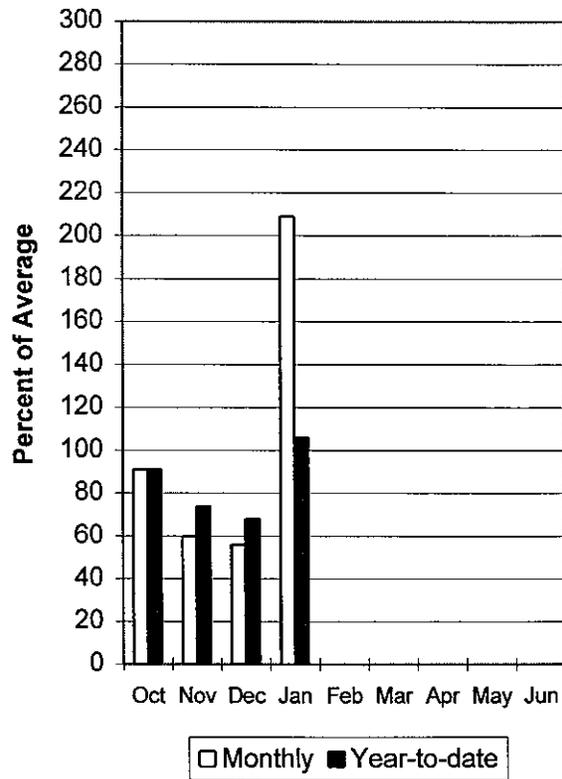
Feb 1, 1998

Snowpack on the Weber and Ogden Watersheds is at 112% of average, up 54% relative to last month but still just 56% of last years pack. Individual sites range from 100% to 133% of average. This area currently has the highest snowpack in the state. Precipitation during January was much above normal at 209% of average, bringing the seasonal accumulation (Oct-Jan) to 106% of average. Reservoir storage on the Weber system is at 72% of capacity. General water supply conditions are near normal. Snowmelt streamflows could still have lower and earlier peaks of shorter duration than normal.

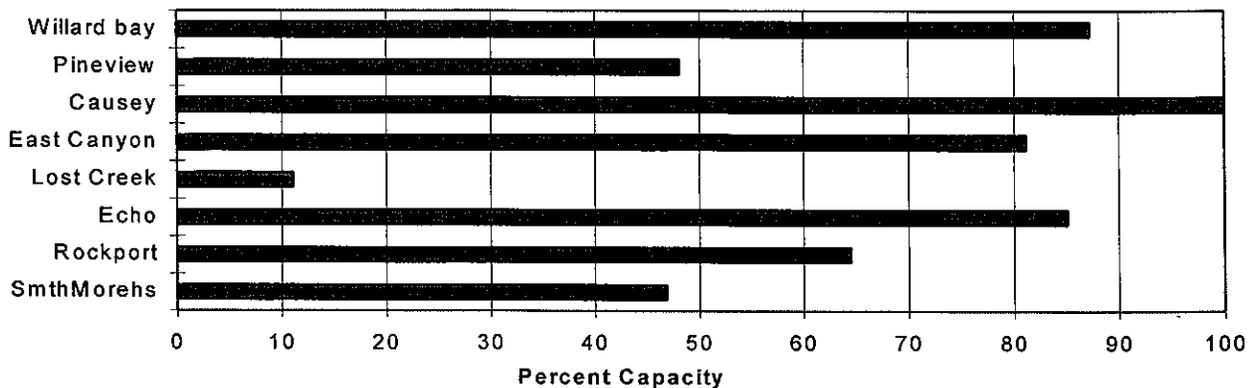
Mountain Snowpack



Precipitation



Reservoir Storage 2/1/98



WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - February 1, 1998

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Chance Of Exceeding *		Wetter		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	17.4	24	29	97	34	41	30
WEBER R nr Oakley	APR-JUL	84	105	120	98	135	156	122
ROCKPORT RESEROIR inflow	APR-JUL	82	112	132	99	152	182	134
CHALK CK at Coalville, Ut	APR-JUL	18.8	35	46	105	57	73	44
WEBER R nr Coalville, Ut	APR-JUL	87	118	139	102	160	191	136
ECHO RESEROIR Inflow	APR-JUL	101	146	176	100	206	251	176
LOST CK Res Inflow	APR-JUL	4.1	11.8	17.0	99	22	30	17.2
E CANYON CK nr Morgan	APR-JUL	14.3	23	28	93	34	42	30
WEBER R at Gateway	APR-JUL	276	317	345	99	373	414	347
S FORK OGDEN R nr Huntsville	APR-JUL	41	56	66	105	76	91	63
PINEVIEW RESERVOIR Inflow	APR-JUL	73	107	131	106	155	189	124
WHEELER CK nr Huntsville	APR-JUL	4.26	5.65	6.60	107	7.55	8.94	6.20

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

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - February 1, 1998

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	7.1	4.1	2.2	OGDEN RIVER	4	57	122
EAST CANYON	49.5	40.2	37.6	34.7	WEBER RIVER	8	55	105
ECHO	73.9	62.9	49.3	45.8	WEBER & OGDEN WATERSHEDS	12	56	112
LOST CREEK	22.5	2.5	6.7	13.1				
PINEVIEW	110.1	53.0	54.0	49.6				
ROCKPORT	60.9	39.3	32.0	31.9				
WILLARD BAY	215.0	187.6	177.8	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.

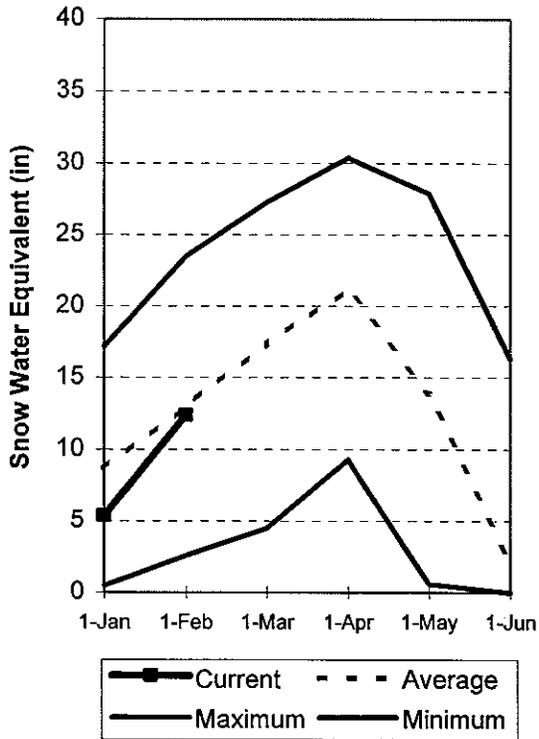
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Utah Lake, Jordan River & Tooele Valley Basins

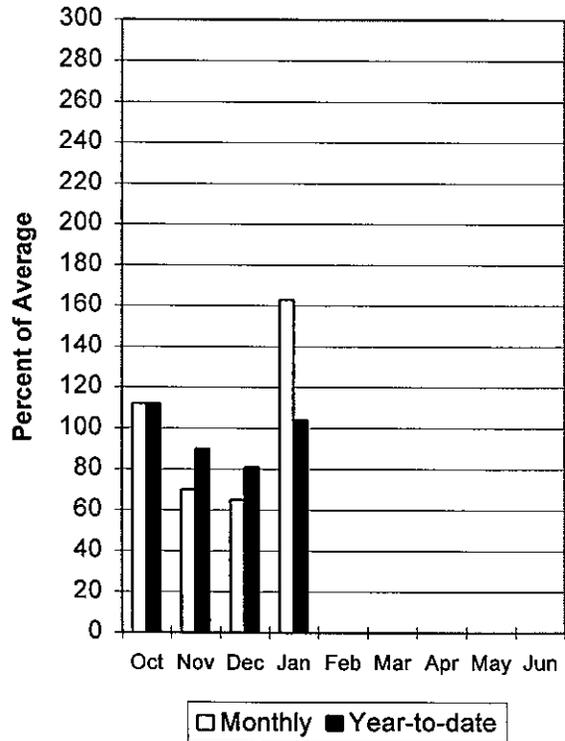
Feb 1, 1998

Snowpacks over these watersheds are near average at 96% of normal, up 34% relative to last month and still just 53% of last year. Individual sites range from 76% to 138% of average. Warm temperatures could affect low elevation snowpacks. Precipitation during January was much above normal at 163% , bringing the seasonal accumulation (Oct-Jan) to 104% of average. Reservoir storage is at 93% of capacity. Water supply conditions are near normal, but flows could still peak early, with below average peak flows, and potentially with shorter flow durations.

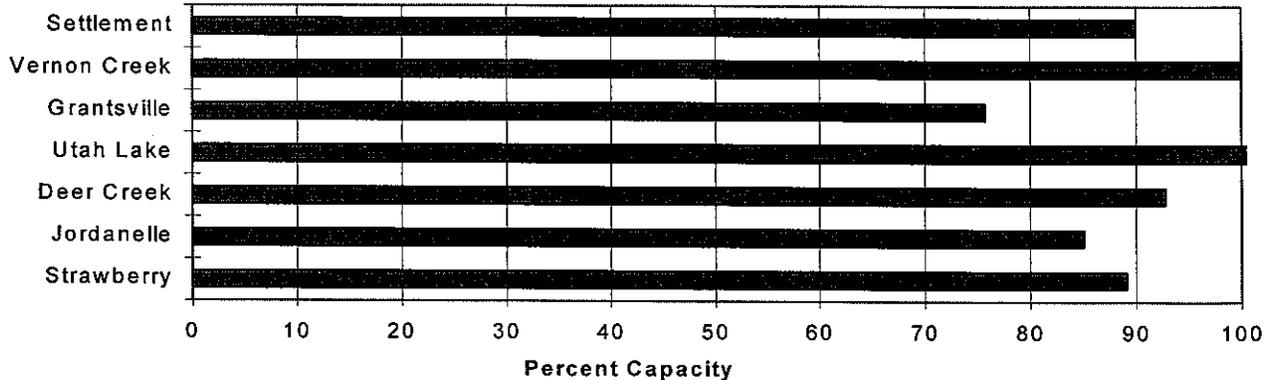
Mountain Snowpack



Precipitation



Reservoir Storage 2/1/98



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - February 1, 1998

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 CK nr Payson	APR-JUL	1.98	2.33	3.10	71	4.88	6.60	4.40
SPANISH FORK nr Castilla	APR-JUL	8.1	38	62	84	86	127	74
HOBBLE CK nr Springville	APR-JUL	3.0	9.6	13.0	69	16.4	23	18.8
PROVO R nr Hailstone	APR-JUL	50		91	84		132	109
PROVO R below Deer Creek Dam	APR-JUL	36		104	81		172	128
AMERICAN FORK nr American Fk.	APR-JUL	14.1	21	25	78	29	36	32
UTAH LAKE inflow	APR-JUL	65		255	79		444	324
L COTTONWOOD CRK nr SLC	APR-JUL	23	30	34	87	38	45	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	21	28	32	84	36	43	38
PARLEY'S CK nr SLC	APR-JUL	1.1	7.4	11.2	70	15.0	21	15.9
MILL CK nr SLC	APR-JUL	2.02	3.99	5.20	80	6.41	8.39	6.50
DELL FK nr SLC	APR-JUL	0.78	3.68	5.30	75	6.92	9.80	7.10
EMIGRATION CK nr SLC	APR-JUL	0.42	1.89	3.30	79	4.71	7.01	4.20
CITY CK nr SLC	APR-JUL	1.99	4.79	6.50	78	8.21	11.04	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	823	1176	1500	112	1913	2733	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	897	1691	2600	113	3997	7535	2300
S WILLOW CK nr Grantsville	APR-JUL	1.04	2.45	3.40	110	4.35	5.76	3.0

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

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - February 1, 1998

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	138.9	124.0	94.3	PROVO RIVER & UTAH LAKE	7	45	87
GRANTSVILLE	3.3	2.5	1.8	---	PROVO RIVER	4	40	84
SETTLEMENT CREEK	1.0	0.9	0.9	0.5	JORDAN RIVER & GREAT SALT	5	56	92
STRAWBERRY-ENLARGED	1105.9	985.7	835.3	---	TOOELE VALLEY WATERSHEDS	4	64	119
UTAH LAKE	870.9	888.5	892.3	648.6	UTAH LAKE, JORDAN RIVER &	16	53	96
VERNON CREEK	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.

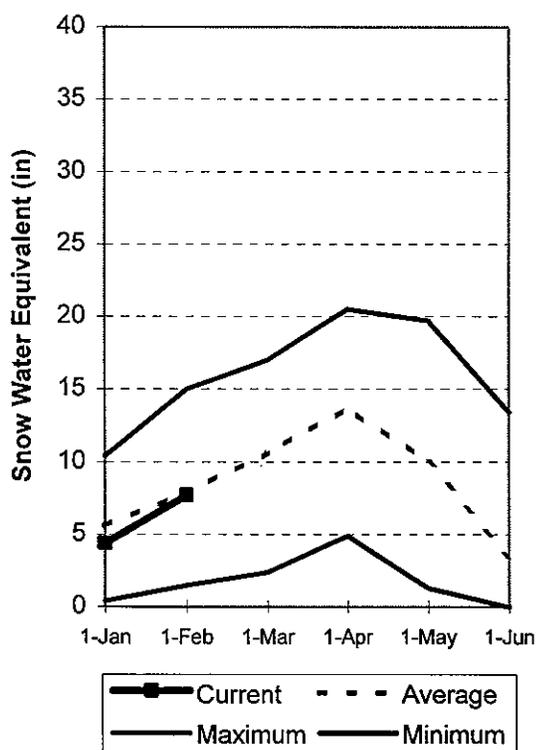
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Uintah Basin and Dagget SCD's

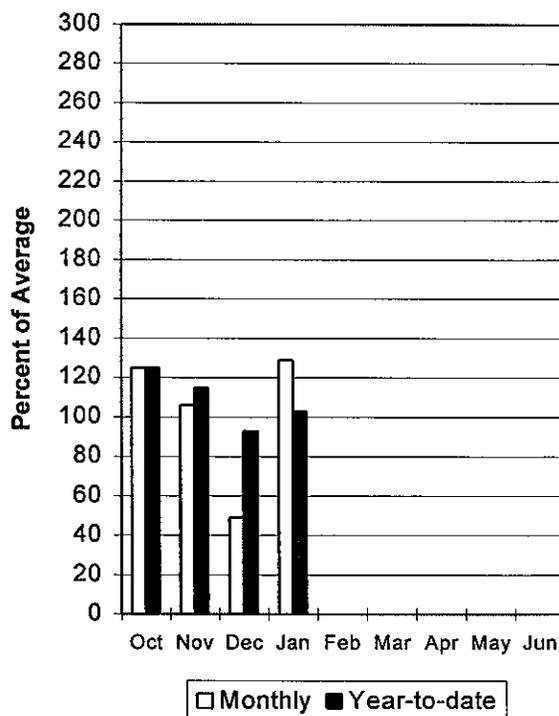
Feb 1, 1998

Snowpacks across the Uintah Basin and North Slope areas are near average. The North Slope is at 109% and the Uintah Basin ranges from near 85% to 105% of average. Snowpacks in these areas are 50% to 70% of last year. Precipitation during January was near 130% of normal, bringing the seasonal accumulation (Oct-Jan) to 103% of average. Reservoir storage is at 90% of capacity. Water supply conditions are near average on the north slope near to slightly below normal over the Uintah Basin. Snowmelt streamflow could still have earlier and lower peaks with shorter duration.

Mountain Snowpack

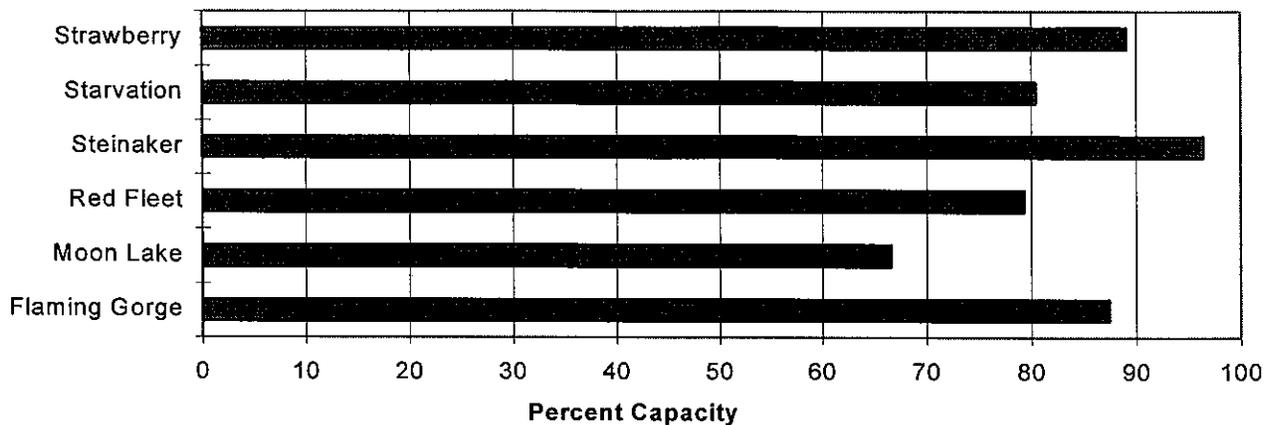


Precipitation



Reservoir Storage

2/1/98



UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - February 1, 1998

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	54	69	80	83	91	106	96
STATE LINE RESERVOIR INFLOW	APR-JUL	13.7	19.8	24	80	28	34	30
HENRY'S FORK nr Manila	APR-JUL	13.0	23	33	79	43	58	42
FLAMING GORGE RES INFLOW	APR-JUL	502	805	950	79	1095	1399	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	10.3	14.6	17.5	88	20	25	19.8
ASHLEY CK nr Vernal	APR-JUL	25	36	43	84	50	61	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	10.9	16.4	20	77	24	29	26
DUCHESNE R nr Tabiona	APR-JUL	62	78	89	85	100	116	105
ROCK CK nr Mountain Home	APR-JUL	56	76	85	90	95	115	94
UPPER STILLWATER RESV inflow	APR-JUL	49	64	75	93	86	101	81
DUCHESNE R abv Knight Diversion	APR-JUL	104	140	165	87	190	226	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	24	35	45	76	56	74	59
CURRENT CREEK RESV Inflow	APR-JUL	8.8	13.1	16.0	76	18.9	23	21
STARVATION RESERVOIR inflow	APR-JUL	43	74	95	81	116	147	117
MOON LAKE Inflow	APR-JUL	40	56	65	94	74	90	69
YELLOWSTONE R nr Altonah	APR-JUL	32	48	58	89	69	84	67
DUCHESNE R at Myton	APR-JUL	91	162	210	80	258	329	217
WHITEROCKS R nr Whiterocks	APR-JUL	25	41	52	90	63	79	58
UINTA R nr Neola	APR-JUL	37	60	76	89	92	115	85
DUCHESNE R nr Randlett	APR-JUL	108	159	260	79	361	489	328

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

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - February 1, 1998

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	3279.0	3215.6	---	UPPER GREEN RIVER in UTAH	6	70	109
MOON LAKE	49.5	33.0	19.0	29.1	ASHLEY CREEK	2	48	82
RED FLEET	25.7	20.4	18.4	---	BLACK'S FORK RIVER	2	78	109
STEINAKER	33.4	32.2	18.9	19.7	SHEEP CREEK	1	121	180
STARVATION	165.3	133.0	142.4	113.0	DUCHESNE RIVER	11	46	93
STRAWBERRY-ENLARGED	1105.9	985.7	835.3	---	LAKE FORK-YELLOWSTONE CRE	4	57	103
					STRAWBERRY RIVER	4	39	84
					UINTAH-WHITEROCKS RIVERS	2	40	84
					UINTAH BASIN & DAGGET SCD	17	51	98

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

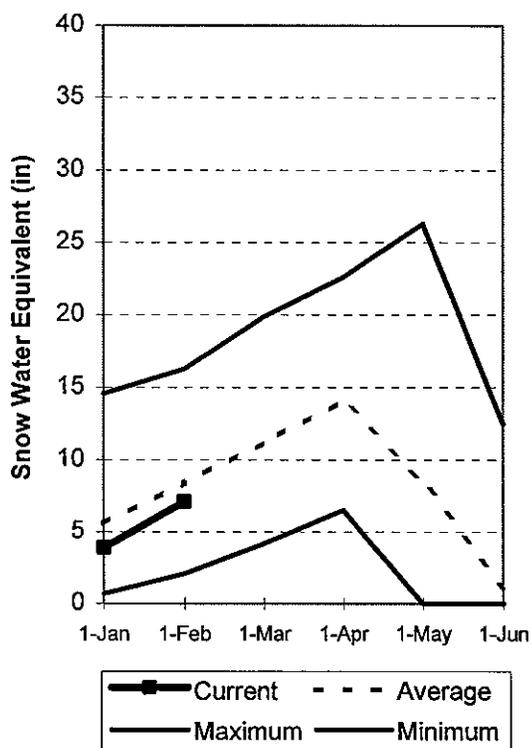
The average is computed for the 1961-1990 base period.

- (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.

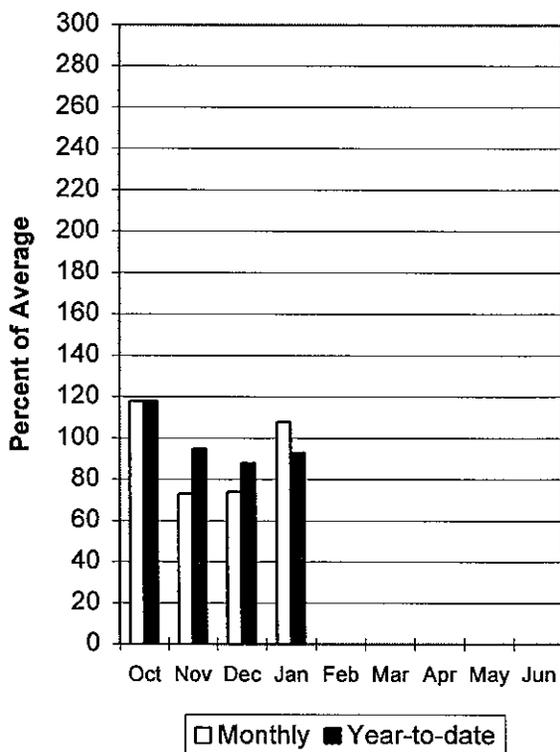
Carbon, Emery, Wayne, Grand and San Juan Co. Feb 1, 1998

Snowpacks in this region are at 85% of average, only 44% of last year. Individual sites range from 60% to 126% of average. Precipitation during January was near average at 108%, bringing the seasonal accumulation (Oct-Jan) to 93% of normal. Reservoir storage is at 74% of capacity. General water supply conditions are near to below average throughout the region and below to much below average flows are expected. Snowmelt streamflow could have lower and earlier peaks of shorter duration. Areas without adequate reservoir storage could have shortages.

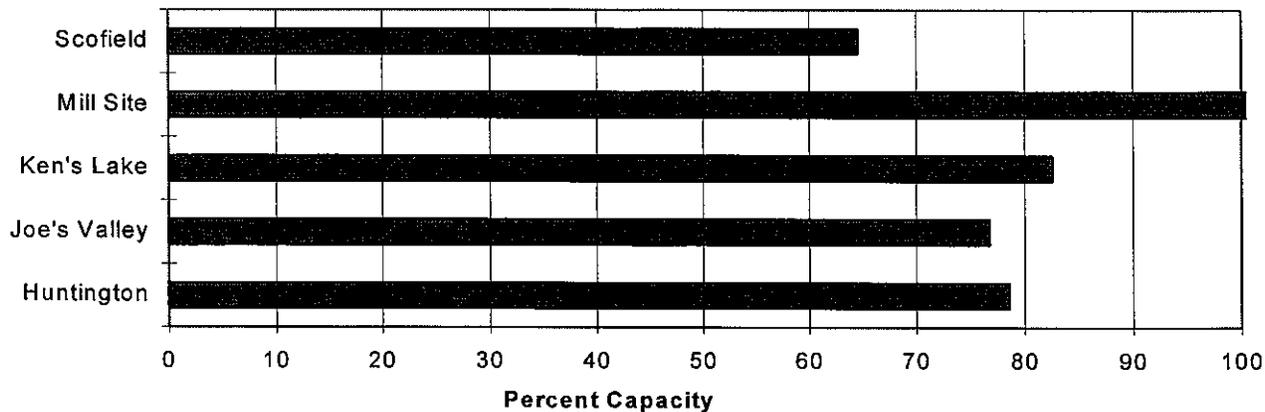
Mountain Snowpack



Precipitation



Reservoir Storage 2/1/98



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - February 1, 1998

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)
GOOSEBERRY CK nr Scofield	APR-JUL	5.0	8.5	10.5	90	12.5	16.0	11.7
SCOFIELD RESV Inflow	APR-JUL	7.9	31	37	84	43	75	44
WHITE R blw Tabbyune Ck	APR-JUL	5.6	11.6	15.5	83	19.4	25	18.7
GREEN R at Green River, UT	APR-JUL	1657	2278	2700	86	3122	3743	3151
ELECTRIC LAKE inflow	APR-JUL	7.2	10.1	12.5	83	15.6	21	15.1
HUNTINGTON CK nr Huntington	APR-JUL	11.1	28	35	85	42	59	41
JOE'S VALLEY RESV Inflow	APR-JUL	25	40	50	94	60	75	53
FERRON CK nr Ferron	APR-JUL	21	30	37	95	44	53	39

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, 1998

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	3.3	4.2	2.3	PRICE RIVER	3	44	94
JOE'S VALLEY	61.6	47.3	40.5	43.6	SAN RAFAEL RIVER	3	47	86
KEN'S LAKE	2.3	1.9	0.6	---	MUDDY CREEK	1	37	71
MILL SITE	16.7	16.9	10.3	3.5	FREMONT RIVER	3	34	65
SCOFIELD	65.8	42.5	21.3	31.3	LASAL MOUNTAINS	1	62	82
					BLUE MOUNTAINS	1	32	85
					WILLOW CREEK	1	71	126
					CARBON, EMERY, WAYNE, GRA	13	44	85

* 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.

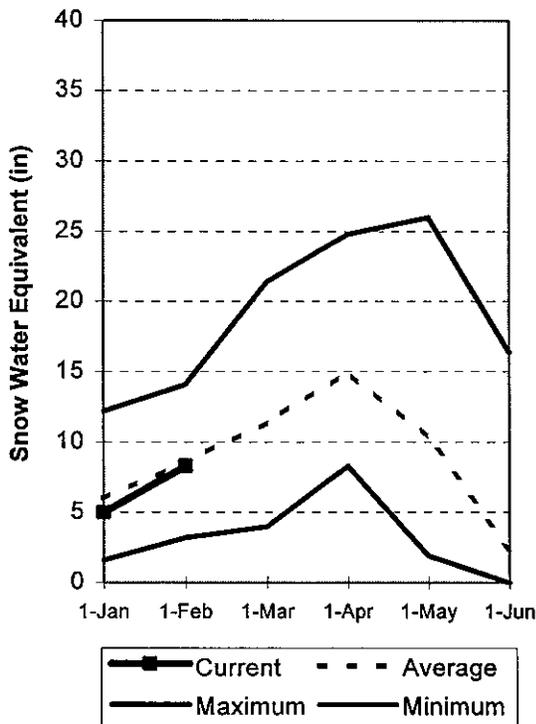
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Sevier and Beaver River Basins

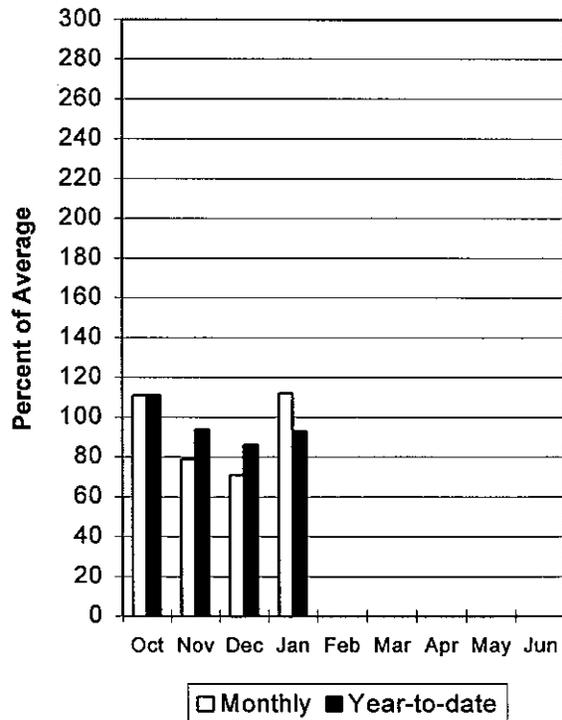
Feb 1, 1998

Snowpacks on the Sevier River Basin are near normal at 97% of average. The Beaver River Basin is the highest at 123% while the upper Sevier is lowest at 83% of average. Individual sites range from 58% to 161% of average. Precipitation during January was slightly above average at 112% of normal, bringing the seasonal accumulation (Oct-Jan) to 93% of average. Reservoir storage is at 90% of capacity. General water supply conditions are near to below normal and streamflows could have lower peaks and duration. Areas without reservoir storage could have shortages.

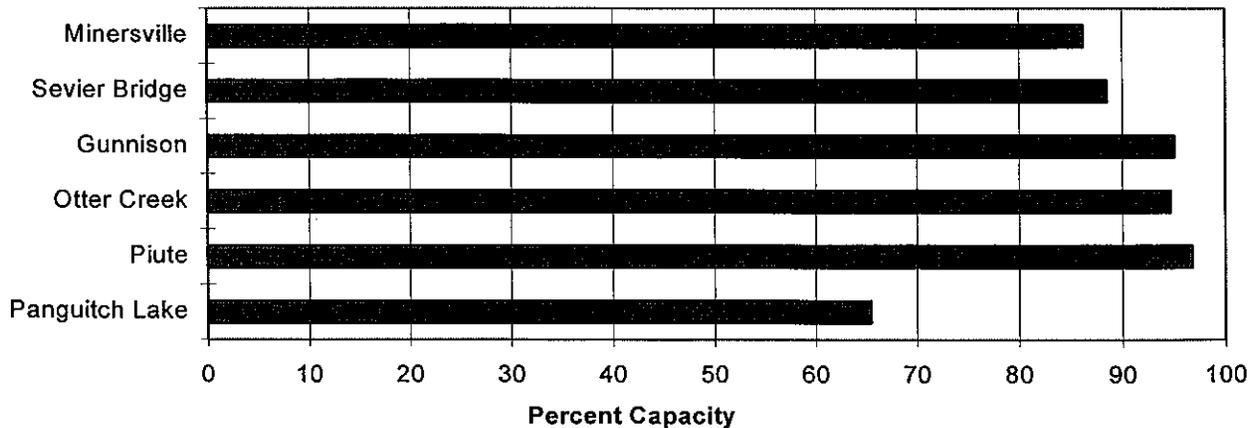
Mountain Snowpack



Precipitation



Reservoir Storage 2/1/98



SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - February 1, 1998

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)		
		90% (1000AF)		70% (1000AF)		50% (Most Probable) (1000AF) (% AVG.)			30% (1000AF) 10% (1000AF)	
		Chance Of Exceeding *								
SEVIER R at Hatch	APR-JUL	18.9	38	48	89	58	77	54		
SEVIER R nr Circleville	APR-JUL	33	53	67	89	81	102	75		
SEVIER R nr Kingston	APR-JUL	32	56	70	84	84	108	83		
ANTIMONY CK nr Antimony	APR-JUL	2.04	4.08	5.10	70	6.12	7.96	7.30		
E F SEVIER R nr Kingston	APR-JUL	5.1	11.1	21	70	31	47	30		
SEVIER R blw Piute Dam	APR-JUL	32		100	87		168	115		
CLEAR CK nr Sevier	APR-JUL	3.4	11.2	16.0	76	21	29	21		
SALINA CK at Salina	APR-JUL	1.1	4.6	13.7	78	23	39	17.6		
PLEASANT CK nr Pleasant	APR-JUL	4.34	6.17	7.20	85	8.23	10.11	8.50		
EPHRAIM CK nr Ephraim	APR-JUL	3.8	7.5	9.5	75	11.5	15.2	12.6		
SEVIER R nr Gunnison	APR-JUL	65	136	210	88	284	430	239		
CHICKEN CK nr Levan	APR-JUL	1.96	3.38	4.90	104	7.11	12.27	4.70		
OAK CK nr Oak City (Acre Feet)	APR-JUL	985	1410	1800	101	2297	3290	1777		
BEAVER R nr Beaver	APR-JUL	21	26	29	112	33	40	26		
MINERSVILLE RESERVOIR Inflow	APR-JUL	8.5	13.7	19.0	114	26	43	16.7		

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

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - February 1, 1998

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	19.3	15.4	11.7	UPPER SEVIER RIVER (south	7	52	83
MINERSVILLE (RkyFd)	23.3	20.1	10.6	11.2	EAST FORK SEVIER RIVER	2	48	84
OTTER CREEK	52.5	49.7	26.5	27.5	SOUTH FORK SEVIER RIVER	5	54	83
PIUTE	71.8	69.5	49.4	36.9	LOWER SEVIER RIVER (inclu	6	68	102
SEVIER BRIDGE	236.0	209.0	161.3	101.1	BEAVER RIVER	2	60	123
PANGUITCH LAKE	22.3	14.6	10.0	---	SEVIER & BEAVER RIVER BAS	15	60	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.

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - February 1, 1998

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		90% (1000AF)		70% (1000AF)		50% (Most Probable) (1000AF) (% AVG.)		
		Drier		Wetter		Chance Of Exceeding *		
COAL CK nr Cedar City	APR-JUL	2.1	9.6	14.0	75	18.4	26	18.8
LAKE POWELL Inflow	APR-JUL	3713		6900	89		10056	7735
VIRGIN R nr Hurricane	APR-JUL	15.0		70	89		125	79
SANTA CLARA R nr Pine Valley	APR-JUL	1.48		4.50	85		9.49	5.30

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

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - February 1, 1998

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	8.9	10.4	---	VIRGIN RIVER	5	57	82
LAKE POWELL	24322.0	21102.0	19991.0	---	PAROWAN	2	58	87
QUAIL CREEK	40.0	35.0	37.1	---	ENTERPRISE TO NEW HARMONY	2	69	72
UPPER ENTERPRISE	10.0	2.5	5.5	---	COAL CREEK	2	64	80
LOWER ENTERPRISE	2.6	0.6	0.8	---	ESCALANTE RIVER	2	37	67
					E. GARFIELD, KANE, WASHIN	9	54	78

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

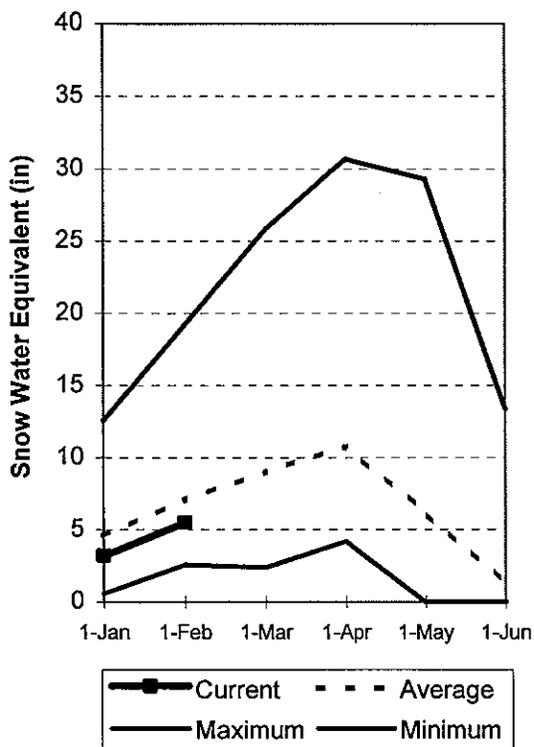
The average is computed for the 1961-1990 base period.

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

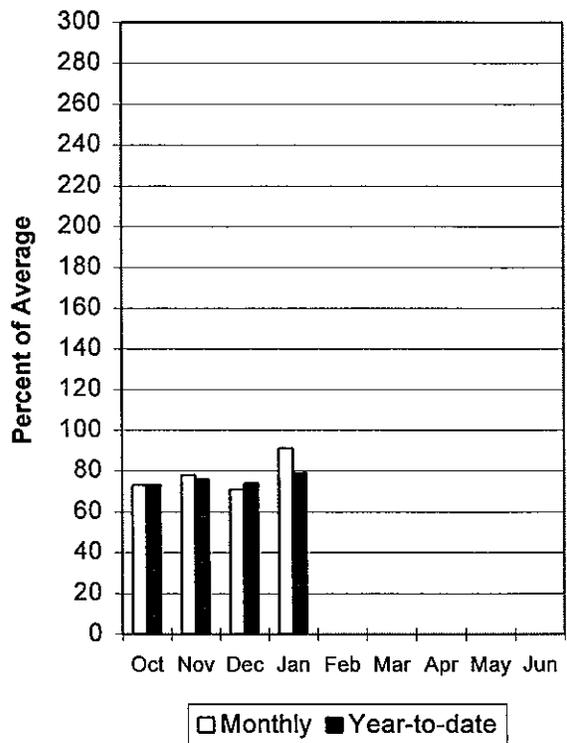
E. Garfield, Kane, Washington, & Iron co. Feb 1, 1998

Snowpacks in this region are below normal at 78% of average, a little over half of last year's value and the lowest area of the state. Individual sites range from 58% to 102% of average. Snowpacks in these areas can change dramatically and may increase later in the spring. Precipitation during January was near normal at 91% of average, bringing the seasonal accumulation (Oct-Jan) to 79% of normal. General water supply conditions are below average. Peak flows may be lower, earlier and of shorter duration. Reservoir storage is at 75% of capacity. Areas without adequate reservoir storage may have shortages.

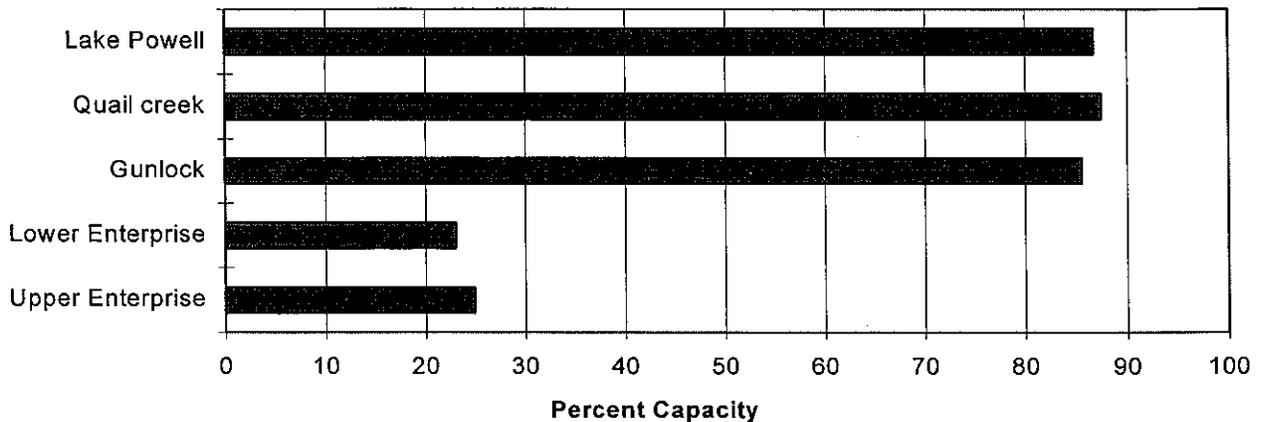
Mountain Snowpack



Precipitation



Reservoir Storage 2/1/98



SNOW COURSE
FOR THE STATE OF UTAH
As of FEBRUARY 1, 1998

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR 1961-90	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR 1961-90
AGUA CANYON SNOTEL	8900	2/01	-	4.2S	7.3	DRY BREAD POND SNOTEL	8350	2/01	-	12.5S	27.9
ALTA CENTRAL	8800	1/28	80	24.3	37.9	DRY FORK SNOTEL	7160	2/01	-	12.6S	13.1
ASHLEY TWIN LAKES	10500					EAST SHINGLE LAKE	9800				
BEAVER DAMS SNOTEL	8000	2/01	-	5.2S	9.5	EAST WILLOW CREEK SN	8250	2/01	-	5.3S	7.5
BEAVER DIVIDE SNOTEL	8280	2/01	-	7.6S	15.2	FARMINGTON CANYON L.	6950				
BEN LOMOND PK SNOTEL	8000	2/01	-	32.2S	59.6	FARMINGTON CN SNOTEL	8000	2/01	-	26.6S	41.1
BEN LOMOND TR SNOTEL	6000	2/01	-	19.8S	27.4	FARNSWORTH LK SNOTEL	9600	2/01	-	10.7S	14.8
BEVAN'S CABIN	6450					FISH LAKE	8700				
BIG FLAT SNOTEL	10290	2/01	-	11.9S	19.5	FIVE POINTS LAKE SNO	10920	2/01	-	9.5S	19.0
BIRCH CROSSING	8100					FRANCES FLATS	6700	1/29	52	15.3	20.0
BLACK FLAT-U.M. CK S	9400	2/01	-	3.6S	12.3	G.B.R.C. HEADQUARTER	8700				
BLACK'S FORK GS-BF	9340					G.B.R.C. MEADOWS	10000				
BLACK'S FORK JUNCTN	8930					GARDEN CITY SUMMIT	7600				
BOX CREEK SNOTEL	9800	2/01	-	7.5S	12.8	GEORGE CREEK	8840				
BRIAN HEAD	10000					GOOSEBERRY R.S.	8400				
BRIGHTON CABIN	8700	1/30	63	18.5	27.8	GOOSEBERRY R.S. SNOT	7900	2/01	-	4.2S	6.0
BRIGHTON SNOTEL	8750	2/01	-	14.1S	24.4	HARDSCRABBLE SNOTEL	7250	2/01	-	14.1S	23.9
BROWN DUCK SNOTEL	10600	2/01	-	10.4S	19.5	HARRIS FLAT SNOTEL	7700	2/01	-	3.0S	7.1
BRYCE CANYON	8000					HAYDEN FORK SNOTEL	9100	2/01	-	8.7S	16.6
BUCK FLAT SNOTEL	9800	2/01	-	11.4S	23.6	HENRY'S FORK	10000				
BUCK PASTURE	9700					HEWINTA SNOTEL	9500	2/01	-	7.9S	10.0
BUCKBOARD FLAT	9000					HICKERSON PARK SNOTE	9100	2/01	-	6.3S	5.2
BUG LAKE SNOTEL	7950	2/01	-	14.5S	26.6	HIDDEN SPRINGS	5500	1/29	20	6.1	3.0
BURT'S-MILLER RANCH	7900					HOBBLE CREEK SUMMIT	7420				
CAMP JACKSON SNOTEL	8600	2/01	-	6.1S	18.9	HOLE-IN-ROCK SNOTEL	9150	2/01	-	4.6S	6.0
CASTLE VALLEY SNOTEL	9580	2/01	-	5.9S	12.7	HORSE RIDGE SNOTEL	8260	2/01	-	15.6S	32.5
CHALK CK #1 SNOTEL	9100	2/01	-	14.2S	25.7	HUNTINGTON-HORSESHOE	9800				
CHALK CK #2 SNOTEL	8200	2/01	-	10.4S	17.0	INDIAN CANYON SNOTEL	9100	2/01	-	5.9S	14.3
CHALK CREEK #3	7500					JOHNSON VALLEY	8850				
CHEPETA SNOTEL	10300	2/01	-	6.8S	13.2	KILFOIL CREEK	7300				
CITY CREEK	7500	1/29	64	19.4	28.7	KILLYON CANYON	6300	2/02	27	7.5	7.6
CLEAR CK RIDG #1 SNT	9200	2/01	-	11.4S	25.1	KIMBERLY MINE SNOTEL	9300	2/01	-	7.9S	12.5
CLEAR CK RIDG #2 SNT	8000	2/01	-	9.4S	17.5	KING'S CABIN SNOTEL	8730	2/01	-	6.3S	14.0
CLEAR CREEK RIDGE #3	6600					KLONDIKE NARROWS	7400				
COLD WATER SPRINGS	6030					KOLOB SNOTEL	9250	2/01	-	12.1S	19.5
CORRAL	8200					LAKEFORK #1 SNOTEL	10100	2/01	-	11.5S	16.7
CURRENT CREEK SNOTEL	8000	2/01	-	4.7S	12.2	LAKEFORK BASIN SNOTE	10900	2/01	-	12.4S	22.3
DANIELS-STRAWBERRY S	8000	2/01	-	8.7S	24.7	LAKEFORK MOUNTAIN #3	8400				
DESERET PEAK	9250					LAMBS CANYON	7400	2/03	43	11.0	17.6
DESERET PEAK AM	9250					LASAL MOUNTAIN LOWER	8800				
DESERET PEAK SNOTEL	9250	2/01	-	15.0S	19.5	LASAL MOUNTAIN SNOTE	9850	2/01	-	6.9S	11.1
DILL'S CAMP SNOTEL	9200	2/01	-	6.3S	17.1	LILY LAKE SNOTEL	9050	2/01	-	8.7S	13.6
DONKEY RESERVOIR SNO	9800	2/01	-	3.4S	8.7	LITTLE BEAR LOWER	6000				

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR	SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST AVERAGE YEAR
LITTLE BEAR SNOTEL	6550	2/01	-	13.0S	20.4	THISTLE FLAT	8500				
LITTLE GRASSY SNOTEL	6100	2/01	-	2.2S	3.6	TIMBERLINE	9100				
LONG FLAT SNOTEL	8000	2/01	-	3.5S	4.7	TIMPANOGOS DIVIDE SN	8140	2/01	-	12.9S	33.2
LONG VALLEY JCT. SNT	7500	2/01	-	2.0S	6.5	TONY GROVE LK SNOTEL	8400	2/01	-	30.3S	48.5
LOOKOUT PEAK SNOTEL	8200	2/01	-	18.6S	29.0	TONY GROVE R. S.	6250				
LOST CREEK RESERVOIR	6130	9960				15.4					
MANMOUTH-COTTONWOOD SNT	8800	2/01	-	12.8S	25.4	TRIAL LAKE SNOTEL	9960	2/01	-	12.7S	30.7
MERCHANT VALLEY SNOT	8750	2/01	-	9.8S	16.7	TROUT CREEK SNOTEL	9400	2/01	-	4.6S	8.6
MIDDLE CANYON	7000					UPPER JOES VALLEY	8900				
MIDWAY VALLEY SNOTEL	9800	2/01	-	12.8S	19.6	VERNON CREEK SNOTEL	7500	2/01	-	7.9S	14.6
MILL CREEK	6950	2/03	47	13.0	19.3	VIPONT	7670				
MILL-D NORTH SNOTEL	8960	2/01	-	16.9S	28.5	WEBSTER FLAT SNOTEL	9200	2/01	-	6.4S	10.5
MILL-D SOUTH FORK	7400	1/30	52	12.5	20.3	WHITE RIVER #1 SNOTE	8550	2/01	-	6.4S	19.0
MINING FORK SNOTEL	8000	2/01	-	14.1S	21.9	WHITE RIVER #3	7400				
MONTE CRISTO SNOTEL	8960	2/01	-	19.9S	33.9	WIDTSOE #3 SNOTEL	9500	2/01	-	4.4S	12.2
MOSBY MTN. SNOTEL	9500	2/01	-	4.9S	16.0	WRIGLEY CREEK	9000				
MT. BALDY R. S.	9500					YANKEE RESERVOIR	8700				
MUD CREEK #2	8600					NOTE:					
OAK CREEK	7760	2/01	-	7.7e	-						
PANQUITCH LAKE	8200					The S flag following Water Content for SNOTEL sites indicates telemetered data.					
PARLEY'S CANYON SNOT	7500	2/01	-	8.6S	15.5						
PARLEY'S CANYON SUM.	7500	2/03	45	11.7	18.4						
PAYSON R. S. SNOTEL	8050	2/01	-	8.6S	13.8						
PICKLE KEG SNOTEL	9600	2/01	-	10.1S	13.5						
PINE CREEK SNOTEL	8800	2/01	-	16.7S	18.8						
RED PINE RIDGE SNOTE	9200	2/01	-	7.4S	16.0						
REDDEN MINE LOWER	8500										
REES'S FLAT	7300										
ROCK CREEK SNOTEL	7900	2/01	-	5.8S	14.3						
ROCKY BN-SETTLEMT SN	8900	2/01	-	14.0S	24.1						
SEELEY CREEK SNOTEL	10000	2/01	-	7.0S	15.1						
SILVER LAKE (BRIGHT.)	8730	1/28	58	17.2	32.8						
SMITH MOREHOUSE SNTL	7600	2/01	-	9.2S	15.1						
SNOWBIRD SNOTEL	9700	2/01	-	17.8S	38.0						
SPIRIT LAKE	10300										
SQUAW SPRINGS	9300										
STEEL CREEK PARK SNO	10100	2/01	-	9.6S	12.3						
STILLWATER CAMP	8550										
STRAWBERRY DIVIDE SN	8400	2/01	-	10.9S	26.0						
STUART R. S.	7950										
SUSC RANCH	8200										
TALL POLES	8800										
THAYNES CANYON SNOTL	9200	2/01	-	13.2S	24.7						

Issued by

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Utah
Basin Outlook Report
Natural Resources Conservation Service
Salt Lake City, UT



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Natural
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Utah

Basin Outlook Report

March 1, 1998



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 in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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STATE OF UTAH GENERAL OUTLOOK

Mar 1, 1998

SUMMARY

February was extremely wet in southern Utah where snowpacks increased from 80% to 120% -130% of average. In the north, snowpacks saw far less dramatic changes, the Bear remaining essentially the same and the rest recording small to moderate gains. Northern Utah snowpacks now range from 105% to 120% of average. There are some specific areas of concern along the Wasatch Front, basically from Bountiful to North Ogden. Lake effect storms have concentrated snow accumulations in this area ranging from 145% to 163% of average. Snowpacks in the Tooele Valley area have also increased substantially and average 150% of normal. Snowmelt runoff from these areas could be substantial. In southern Utah, snowpacks increased dramatically, going from the lowest last month to the highest overall basin average this month. The southern areas received 1.7 to 3.2 times the normal snowpack accumulation. Should the maximum recorded March snowpack accumulation occur in this area, April 1 values would range from 125% to 180% of average. February precipitation increased significantly the further south one goes. On the Bear River Drainage, precipitation was near normal, increasing to 125% on the Weber, to 175% on the Provo and climaxing at 200% of average over the Virgin basin. The average across the state was 155% of normal. The seasonal accumulation (Oct-Feb) is 111% of normal. Snowmelt runoff conditions are near normal in northern Utah and near to above average in the south. Most areas will see near average streamflow this spring. Should the weather patterns influencing snowpack accumulation in the south shift to the north and linger, northern areas could see dramatic snowpack increases during March and potentially through April. Reservoir storage is in excellent condition and most reservoirs should easily fill.

SNOWPACK

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 116% of normal, up 15% relative to last month and about 70% of last years record packs. Snowpacks in the north are near to slightly above average ranging from 105% to 120% and in the south, above average, near 130%. February saw a swing in snowpacks from north to south, with the south increasing almost 50% relative to last month. The snowpack accumulation over March and potentially April will be critical determining the potential for any high streamflows.

PRECIPITATION

Mountain precipitation in February, as measured by the NRCS SNOTEL system, was near to much above normal (105% - 175%) in the north and much above normal (165% - 200%) in the south. This brings the seasonal accumulation (Oct-Jan) to 111% of average. National Weather Service February precipitation figures show much above average

precipitation across the majority of the state due to the moist westerly flow. Although storm activity was constant, moisture from individual storms was not that high. Most stations recorded above average precipitation for the month. Some of the higher amounts were: Green River - 553%, Alpine - 269%, Salt Lake Airport - 398%, Capitol Reef - 271% and St George - 363% of average.

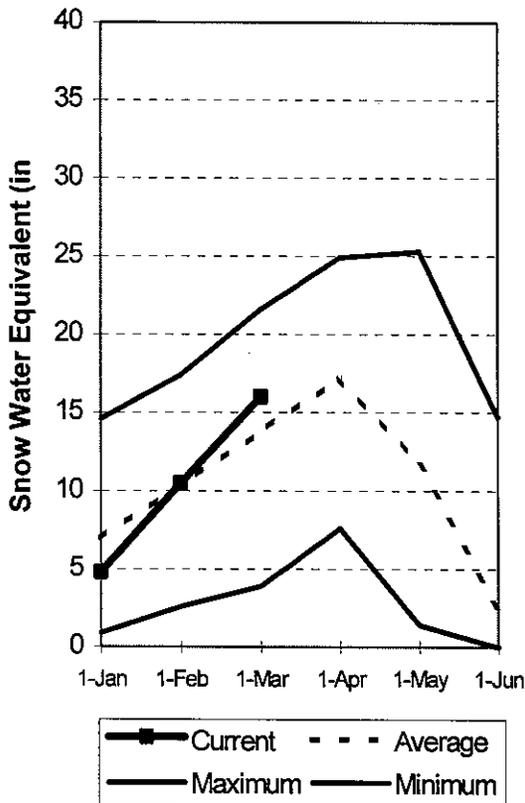
RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 86% of capacity. Many reservoirs are near capacity and expect to be full and spilling soon.

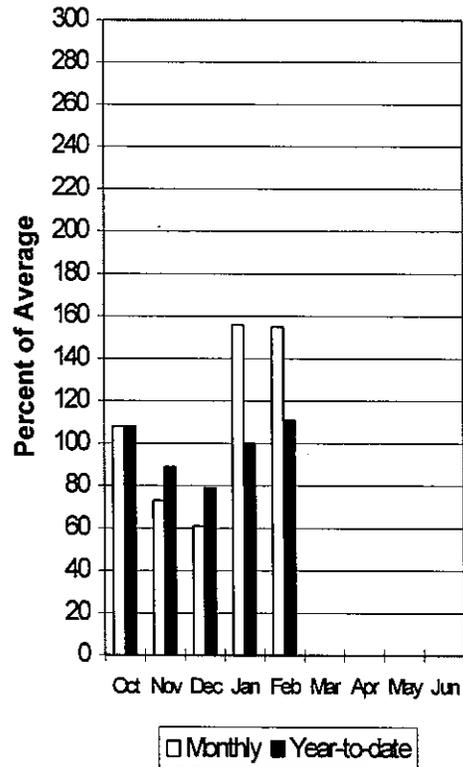
STREAMFLOW

Snowmelt streamflows are expected to be near average levels throughout Utah. There is only one snowpack accumulation month remaining in this season, given normal climatic conditions. However, climatic conditions over the next several months will play a critical role in determining the extent, duration or even if any snowmelt runoff problems occur.

Mountain Snowpack



Precipitation

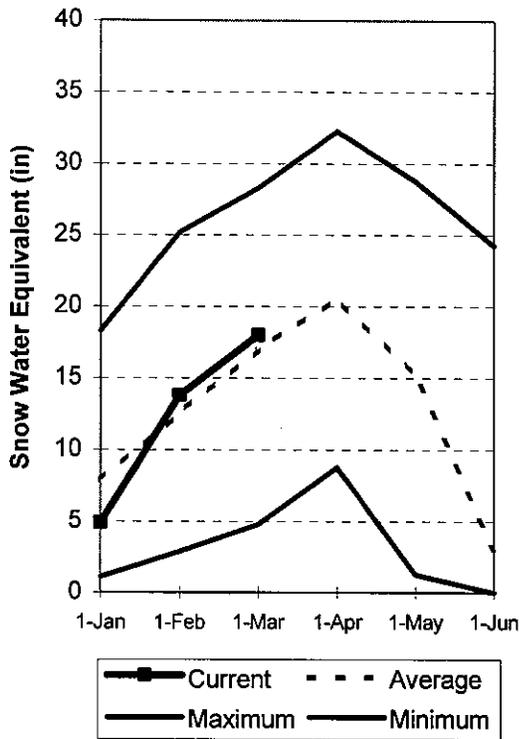


Bear River Basin

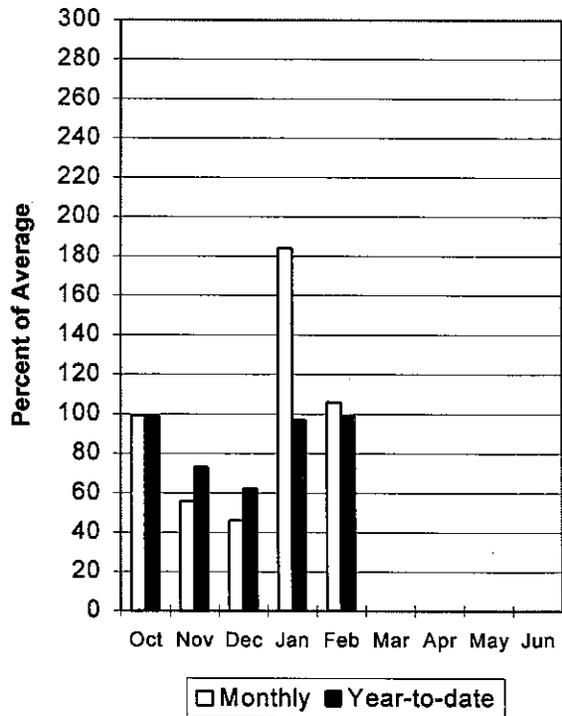
Mar 1, 1998

Snowpack on the Bear River Basin is near average at 106% of normal, about the same as last month. Specific sites range from 85% to 186% of normal. Snowpacks on the Bear River are only 65% of those recorded last year, but could increase significantly if the weather patterns in southern Utah move northward. February precipitation was near normal at 106%, which brings the seasonal accumulation (Oct-Feb) to 99% of average. Snowmelt runoff conditions are near average with one critical month of snowpack accumulation remaining in this season. Reservoir storage is excellent at 78% capacity.

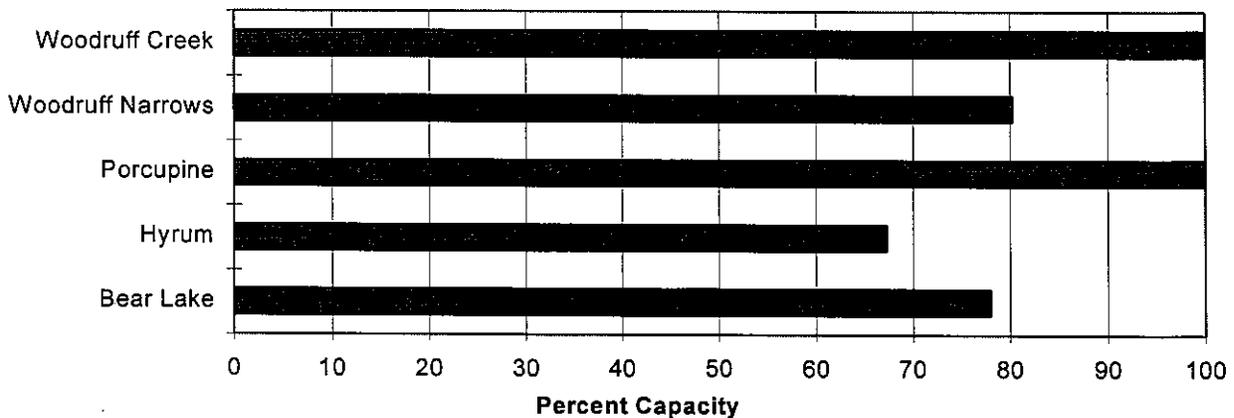
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



BEAR RIVER BASIN
Streamflow Forecasts - March 1, 1998

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 R nr UT-WY State Line	APR-JUL	73	87	98	85	110	131	115
BEAR R nr Woodruff, UT	APR-JUL	72	101	127	85	160	224	149
BIG CK nr Randolph	APR-JUL	0.08	1.94	3.40	90	4.86	7.02	3.80
BEAR R nr Randolph, UT	APR-JUL	31	72	100	85	128	169	118
SMITHS FK nr Border, WY	APR-JUL	64	79	91	89	105	130	102
THOMAS FK nr WY-ID State Line	APR-JUL	15.5	22	27	82	34	47	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	121	183	225	78	267	329	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	6.7	8.5	10.0	82	11.7	14.9	12.2
CUB R nr Preston	APR-JUL	39	46	50	106	55	61	47
L BEAR RIVER at Paradise, UT	APR-JUL	342	436	515	116	608	776	446
LOGAN R nr Logan	APR-JUL	85	102	115	108	130	156	107
BLACKSMITH Fk nr Hyrum	APR-JUL	43	53	61	113	71	87	54

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

BEAR RIVER BASIN
Watershed Snowpack Analysis - March 1, 1998

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	1109.9	943.2	992.5	BEAR RIVER, UPPER (abv Ha	6	62	97
HYRUM	15.3	10.3	11.1	10.8	BEAR RIVER, LOWER (blw Ha	7	66	114
PORCUPINE	11.3	11.3	11.0	3.7	LOGAN RIVER	4	65	122
WOODRUFF NARROWS	57.3	46.0	30.2	---	RAFT RIVER	1	79	120
WOODRUFF CREEK	4.0	4.0	2.1	---	BEAR RIVER BASIN	13	65	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.

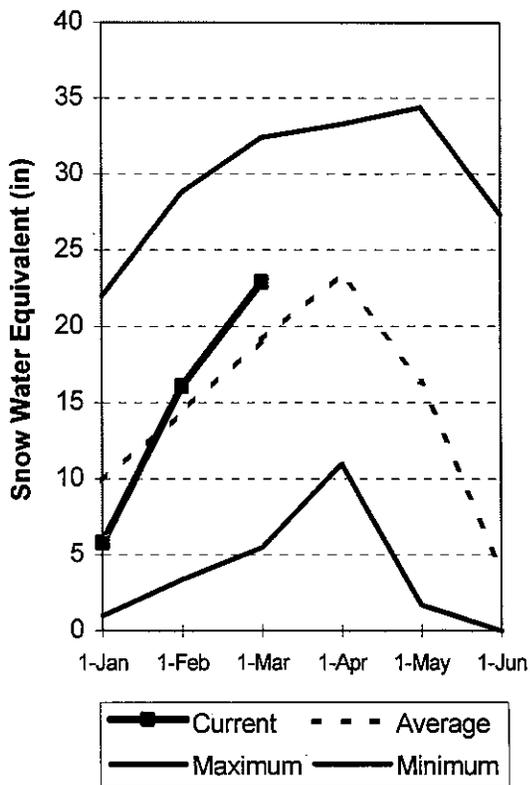
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Weber and Ogden River Basins

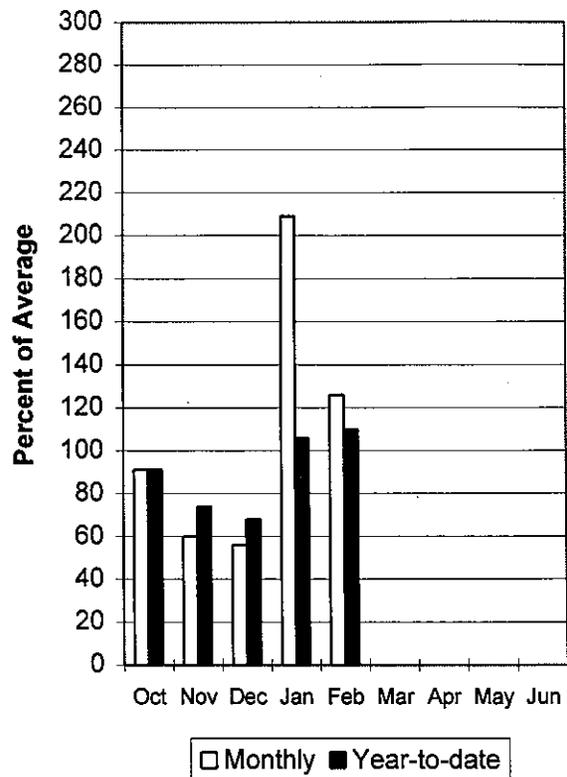
Mar 1, 1998

Snowpack on the Weber and Ogden Watersheds is at 120% of average, up 8% relative to last month but still just 65% of last year. Individual sites range from 100% to 161% of average. Lake effect storms have enhanced snowfall along the Wasatch Front. Snowpacks could increase significantly if weather patterns in southern Utah move northward. Precipitation during February was above normal at 126% of average, bringing the seasonal accumulation (Oct-Feb) to 110% of average. Reservoir storage on the Weber system is at 70% of capacity. General water supply conditions are near to above normal.

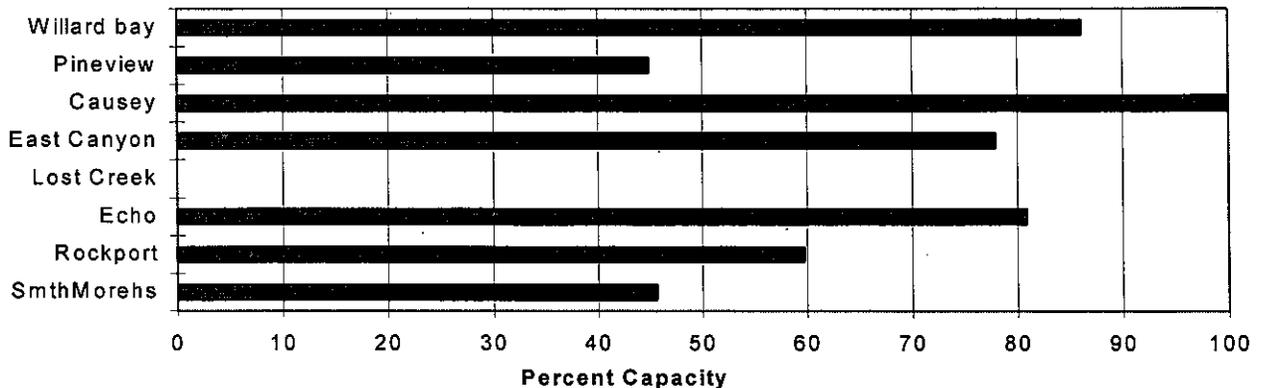
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - March 1, 1998

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50% (Most Probable)			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)		(1000AF)	(1000AF)	(1000AF)	(1000AF)
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	22	27	31	103	35	40	30				
WEBER R nr Oakley	APR-JUL	94	113	125	103	137	156	122				
ROCKPORT RESEROIR inflow	APR-JUL	96	121	138	103	155	180	134				
CHALK CK at Coalville, Ut	APR-JUL	25	38	47	107	56	69	44				
WEBER R nr Coalville, Ut	APR-JUL	95	122	140	103	158	185	136				
ECHO RESEROIR Inflow	APR-JUL	112	154	183	104	212	254	176				
LOST CK Res Inflow	APR-JUL	7.2	13.3	17.5	102	22	28	17.2				
E CANYON CK nr Morgan	APR-JUL	16.3	25	30	100	36	44	30				
WEBER R at Gateway	APR-JUL	296	337	365	105	393	434	347				
S FORK OGDEN R nr Huntsville	APR-JUL	49	60	68	108	76	87	63				
PINEVIEW RESEROIR Inflow	APR-JUL	88	118	138	111	158	188	124				
WHEELER CK nr Huntsville	APR-JUL	5.43	6.54	7.30	118	8.06	9.17	6.20				

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

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - March 1, 1998

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	7.1	4.6	2.3	OGDEN RIVER	4	72	132
EAST CANYON	49.5	39.9	31.1	27.7	WEBER RIVER	8	69	112
ECHO	73.9	60.2	32.6	49.5	WEBER & OGDEN WATERSHEDS	12	70	120
LOST CREEK	22.5	2.5	5.3	13.4				
PINEVIEW	110.1	49.5	48.1	48.7				
ROCKPORT	60.9	37.2	28.0	30.2				
WILLARD BAY	215.0	187.6	173.7	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.

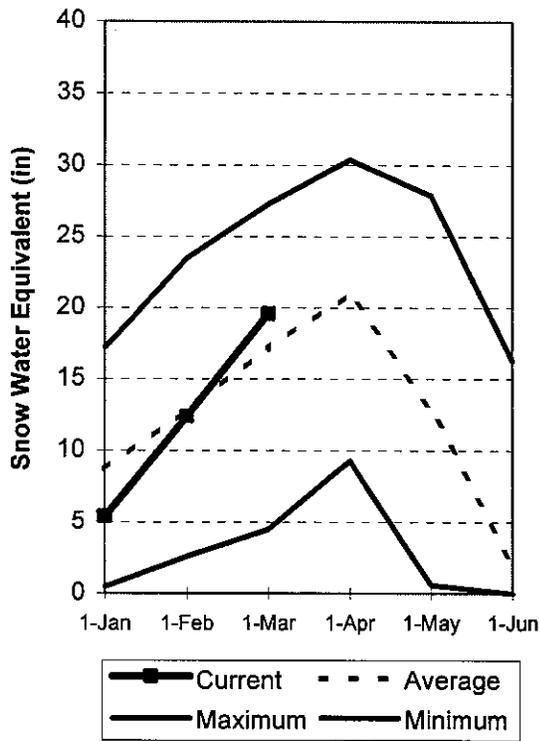
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Utah Lake, Jordan River & Tooele Valley Basins

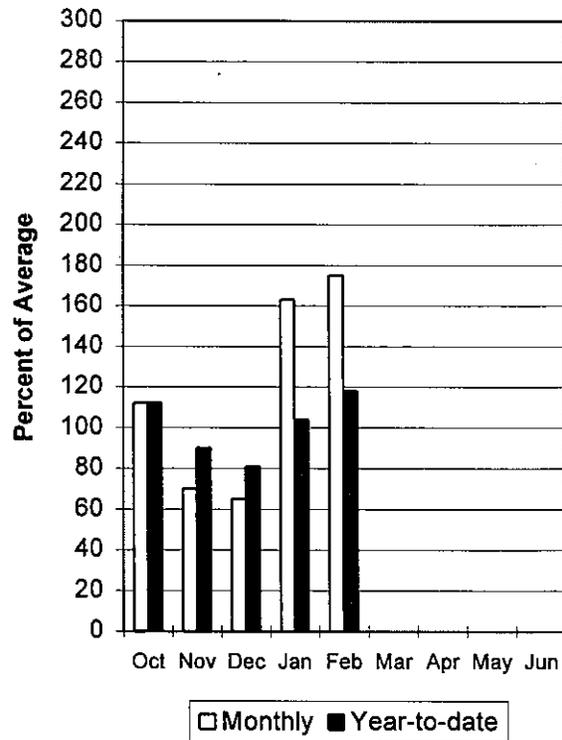
Mar 1, 1998

Snowpacks over these watersheds are near average at 113% of normal, up 17% relative to last month and still just 72% of last year. Individual sites range from 96% to 160% of average. The Tooele Valley area is much above average (156%) due to lake effect storms. Precipitation during February was much above normal at 175%, bringing the seasonal accumulation (Oct-Feb) to 118% of average. Reservoir storage is at 94% of capacity. Water supply conditions are near normal with one critical snowpack accumulation month remaining. Snowpacks could increase significantly if southern Utah weather patterns shift north.

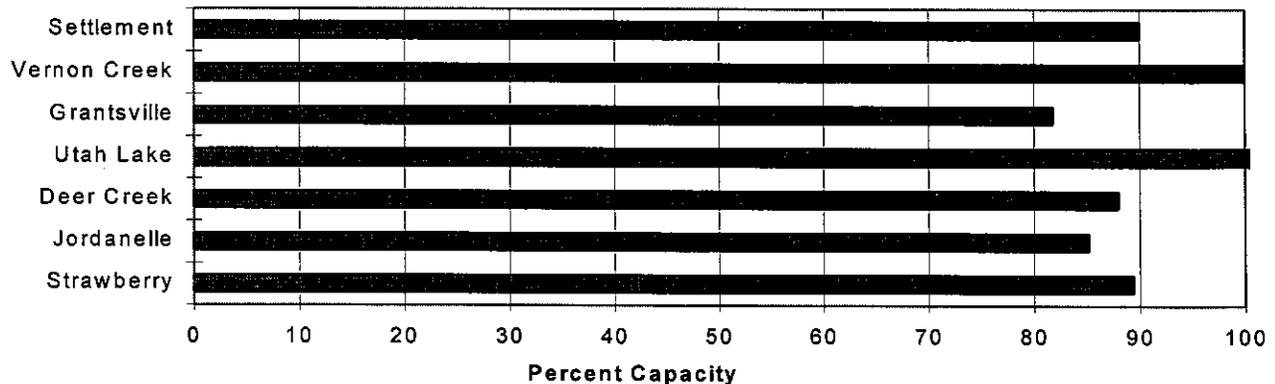
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - March 1, 1998

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)	
PAYSON CK nr Payson	APR-JUL	0.79	2.99	4.10	93	5.21	7.39	4.40		
SPANISH FORK nr Castilla	APR-JUL	8.9	49	72	97	96	135	74		
HOBBLE CK nr Springville	APR-JUL	9.2	14.5	17.0	90	19.5	25	18.8		
PROVO R nr Hailstone	APR-JUL	58		96	88		134	109		
PROVO R below Deer Creek Dam	APR-JUL	54		112	88		170	128		
AMERICAN FORK nr American Fk.	APR-JUL	22	27	30	94	33	38	32		
UTAH LAKE inflow	APR-JUL	81		265	82		450	324		
L COTTONWOOD CRK nr SLC	APR-JUL	31	38	42	108	46	53	39		
BIG COTTONWOOD CRK nr SLC	APR-JUL	29	36	40	105	44	51	38		
PARLEY'S CK nr SLC	APR-JUL	6.0	12.0	15.7	99	19.4	25	15.9		
MILL CK nr SLC	APR-JUL	3.77	5.72	6.90	106	8.08	10.01	6.50		
DELL FK nr SLC	APR-JUL	2.98	5.56	7.00	99	8.44	11.01	7.10		
EMIGRATION CK nr SLC	APR-JUL	1.01	3.22	4.60	110	5.98	8.19	4.20		
CITY CK nr SLC	APR-JUL	4.81	7.45	9.10	110	10.75	13.36	8.30		
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	878	1255	1600	119	2040	2915	1340		
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	953	1811	2800	122	4330	8229	2300		
S WILLOW CK nr Grantsville	APR-JUL	1.46	2.79	3.70	119	4.61	5.94	3.10		

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

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - March 1, 1998

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	131.7	112.2	95.5	PROVO RIVER & UTAH LAKE	7	61	100
GRANTSVILLE	3.3	2.7	2.3	---	PROVO RIVER	4	55	94
SETTLEMENT CREEK	1.0	0.9	0.8	0.7	JORDAN RIVER & GREAT SALT	5	72	105
STRAWBERRY-ENLARGED	1105.9	989.3	839.6	---	TOOELE VALLEY WATERSHEDS	4	93	150
UTAH LAKE	870.9	907.5	931.5	689.4	UTAH LAKE, JORDAN RIVER &	16	72	113
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.

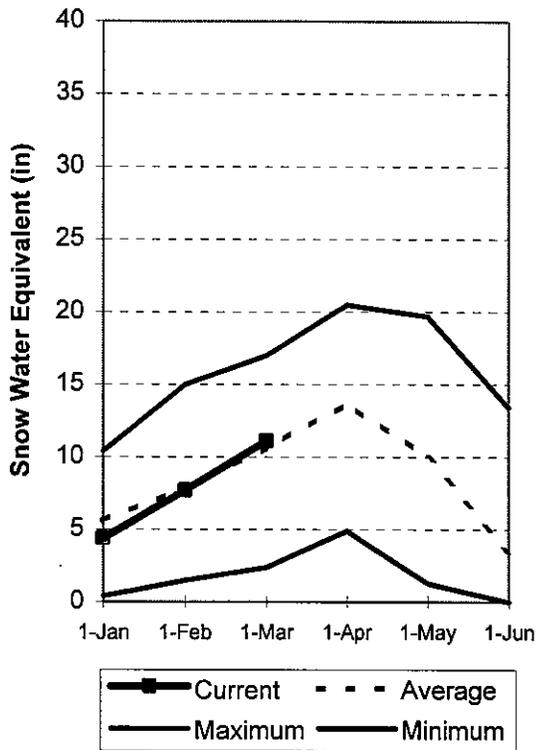
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Uintah Basin and Dagget SCD's

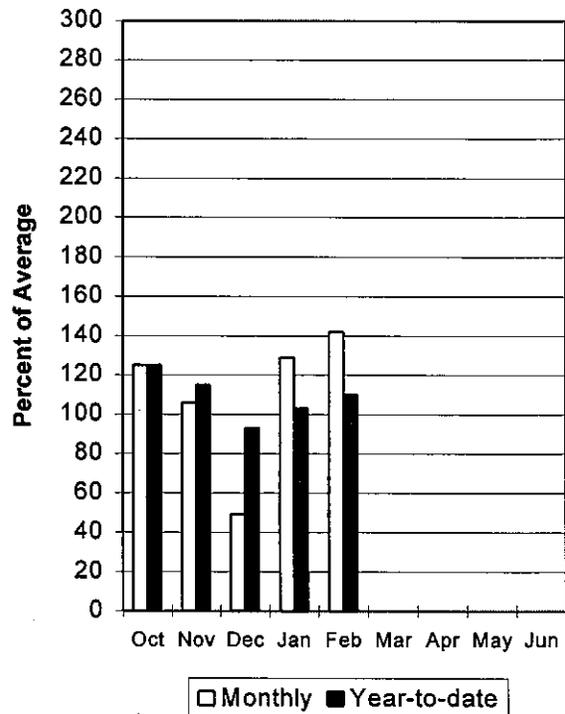
Mar 1, 1998

Snowpacks across the Uintah Basin and North Slope areas are near average. The North Slope is at 111% and the Uintah Basin ranges from near 98% to 107% of average. Snowpacks in these areas are 60% to 80% of last year. Precipitation during February was near 142% of normal, bringing the seasonal accumulation (Oct-Feb) to 110% of average. Reservoir storage is at 91% of capacity. Water supply conditions are near average on both the north slope and the Uintah Basin. Snowmelt streamflow could still have earlier and lower peaks with shorter duration than normal.

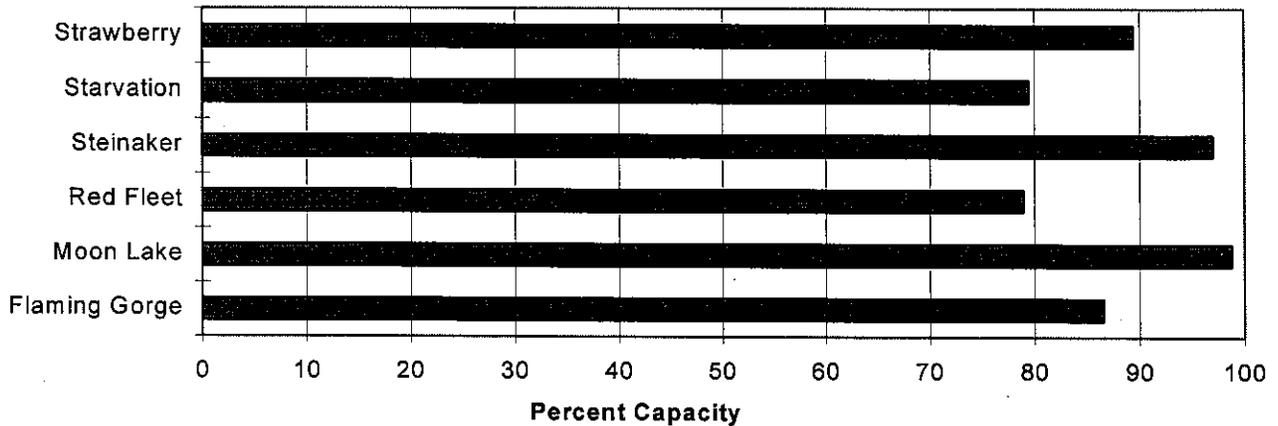
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



UINTAH BASIN & DAGGET SCD'S
 Streamflow Forecasts - March 1, 1998

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	92	103	110	115	117	128	96
STATE LINE RESERVOIR INFLOW	APR-JUL	25	30	34	113	38	44	30
HENRYS FORK nr Manila	APR-JUL	35	49	59	141	69	83	42
FLAMING GORGE RES INFLOW	APR-JUL	646	925	1050	88	1175	1447	1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	11.8	16.1	19.0	96	22	26	19.8
ASHLEY CK nr Vernal	APR-JUL	32	43	50	98	57	68	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	13.9	19.6	24	92	29	37	26
DUCHESNE R nr Tabiona	APR-JUL	79	94	105	100	116	131	105
ROCK CK nr Mountain Home	APR-JUL	74	86	95	101	104	116	94
UPPER STILLWATER RESV inflow	APR-JUL	61	72	80	99	88	99	81
DUCHESNE R abv Knight Diversion	APR-JUL	136	171	195	103	219	254	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	35	49	60	102	72	91	59
CURRENT CREEK RESV Inflow	APR-JUL	12.9	17.1	20	95	23	27	21
STARVATION RESERVOIR inflow	APR-JUL	86	109	125	107	141	164	117
MOON LAKE Inflow	APR-JUL	57	68	75	109	82	93	69
YELLOWSTONE R nr Altonah	APR-JUL	51	63	72	111	81	93	65
DUCHESNE R at Myton	APR-JUL	190	256	300	114	344	410	263
WHITEROCKS R nr Whiterocks	APR-JUL	35	50	60	103	70	85	58
UINTA R nr Neola	APR-JUL	53	75	90	106	105	127	85
DUCHESNE R nr Randlett	APR-JUL	135	278	375	114	472	615	328

UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of February					UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - March 1, 1998			
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	3247.0	3150.6	---	UPPER GREEN RIVER in UTAH	6	78	111
MOON LAKE	49.5	48.9	21.7	30.5	ASHLEY CREEK	2	60	93
RED FLEET	25.7	20.3	18.7	---	BLACK'S FORK RIVER	2	80	102
STEINAKER	33.4	32.4	20.5	21.1	SHEEP CREEK	1	126	176
STARVATION	165.3	131.4	142.0	112.1	DUCHESNE RIVER	11	62	103
STRAWBERRY-ENLARGED	1105.9	989.3	839.6	---	LAKE FORK-YELLOWSTONE CRE	4	69	107
					STRAWBERRY RIVER	4	57	98
					UINTAH-WHITEROCKS RIVERS	2	56	95
					UINTAH BASIN & DAGGET SCD	17	65	105

* 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.

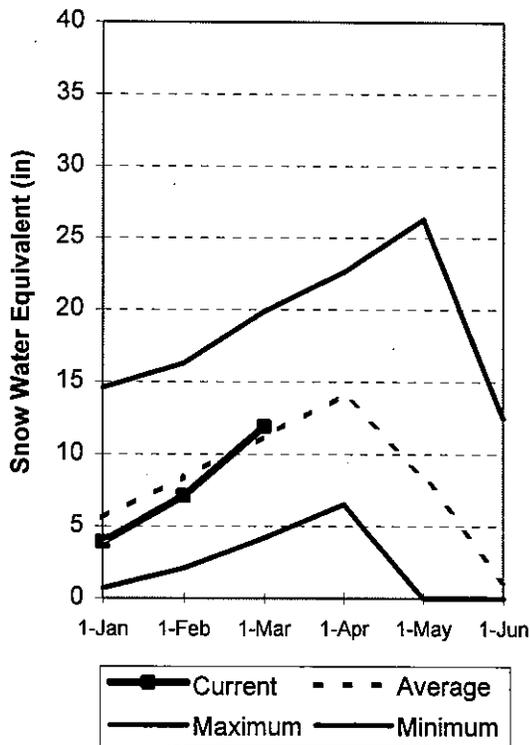
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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

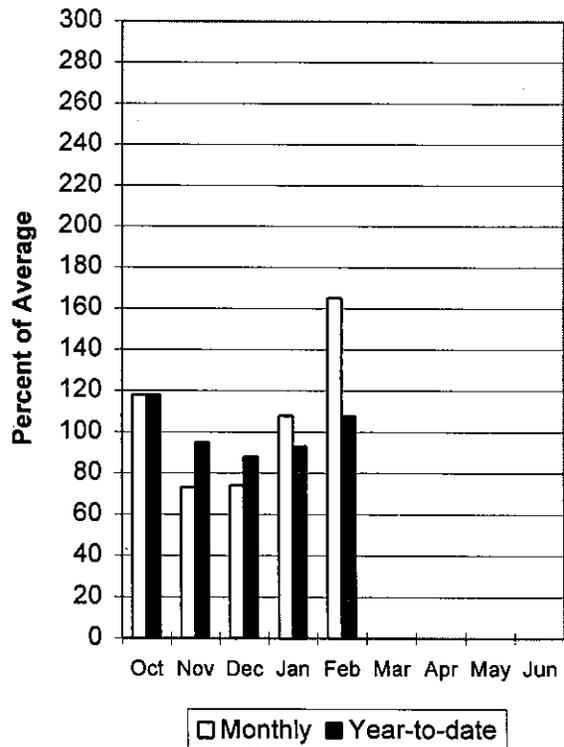
Carbon, Emery, Wayne, Grand and San Juan Co. Mar 1, 1998

Snowpacks in this region are at 105% of average, up 20% relative to last month but still only 61% of last year. Individual sites range from 80% to 142% of average. Precipitation during February was much above average at 165%, bringing the seasonal accumulation (Oct-Feb) to 108% of normal. Reservoir storage is at 78% of capacity. With only one critical month remaining in the snowpack accumulation season, general water supply conditions are near average throughout the region and near to below average flows are expected. Snowmelt streamflow could still have lower and earlier peaks of shorter duration.

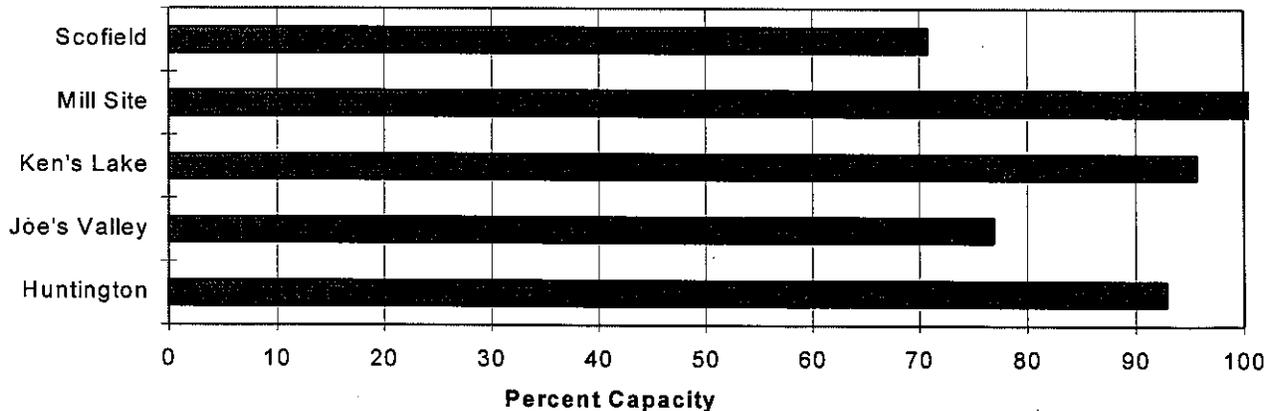
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - March 1, 1998

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg. (1000AF)	
		Drier		Wetter		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)			10% (1000AF)
GOOSEBERRY CK nr Scofield	APR-JUL	7.4	10.4	12.0	103	13.6	16.6	11.7
SCOFIELD RESV Inflow	APR-JUL	7.9	36	40	91	44	75	44
WHITE R blw Tabbyune Ck	APR-JUL	7.9	13.3	17.0	91	21	26	18.7
GREEN R at Green River, UT	APR-JUL	2347	2855	3200	102	3545	4053	3151
ELECTRIC LAKE inflow	APR-JUL	10.3	13.5	16.0	106	18.8	24	15.1
HUNTINGTON CK nr Huntington	APR-JUL	16.8	34	39	95	44	61	41
JOE'S VALLEY RESV Inflow	APR-JUL	30	45	55	104	65	80	53
FERRON CK nr Ferron	APR-JUL	25	34	40	103	46	55	39
COLORADO R nr Cisco	APR-JUL	2617	3339	3830	93	4321	5043	4132
MILL CK at Sheley Tunnel	APR-JUL	3.91	5.30	6.50	108	7.98	10.79	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	2.42	5.44	7.50	115	9.56	12.58	6.50
MUDDY CK nr Emery	APR-JUL	7.5	15.5	21	107	27	35	19.6
LLOYD'S RESERVOIR inflow	MAR-JUL	0.52	1.04	2.60	90	4.69	7.77	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	0.99	2.35	3.60	90	5.11	7.83	4.00
SAN JUAN R nr Bluff	APR-JUL	346	702	890	77	1078	1428	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, 1998

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	4.2	3.0	PRICE RIVER	3	55	105
JOE'S VALLEY	61.6	47.4	39.4	44.6	SAN RAFAEL RIVER	3	66	105
KEN'S LAKE	2.3	2.2	0.8	---	MUDDY CREEK	1	62	104
MILL SITE	16.7	16.9	10.4	4.0	FREMONT RIVER	3	61	103
SCOFIELD	65.8	46.6	23.2	32.2	LASAL MOUNTAINS	1	78	94
					BLUE MOUNTAINS	1	49	109
					WILLOW CREEK	1	84	142
					CARBON, EMERY, WAYNE, GRA	13	61	105

* 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.

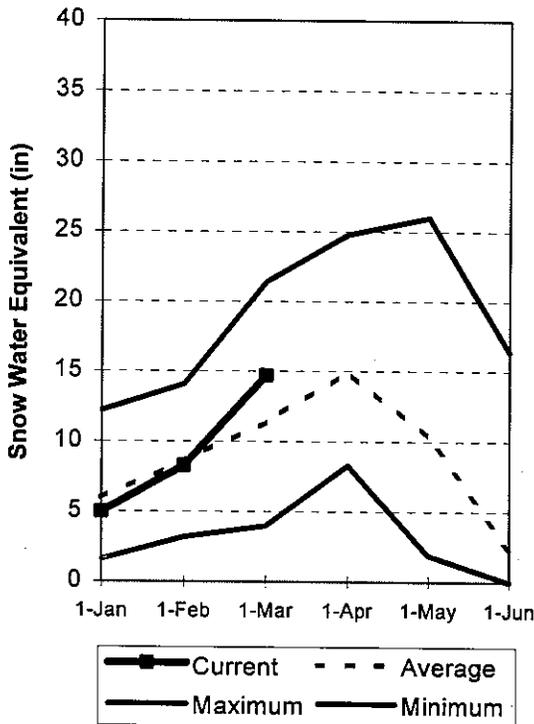
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Sevier and Beaver River Basins

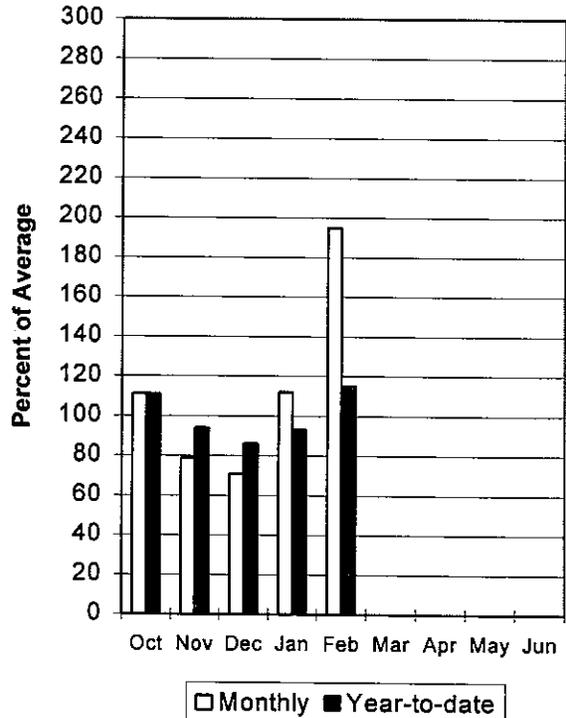
Mar 1, 1998

Snowpacks on the Sevier River Basin are near normal at 129% of average, up 32% relative to last month, more than twice the normal increase. The Beaver River Basin is the highest at 136% while the lower Sevier is lowest at 123% of normal. Individual sites range from 94% to 161% of average. Precipitation during February was much above average at 195% of normal, bringing the seasonal accumulation (Oct-Feb) to 115% of average. Reservoir storage is at 94% of capacity. General water supply conditions are near to above average. Given the current weather patterns, significant snowpack accumulations could occur in March and April. Water managers should be aware of that potential.

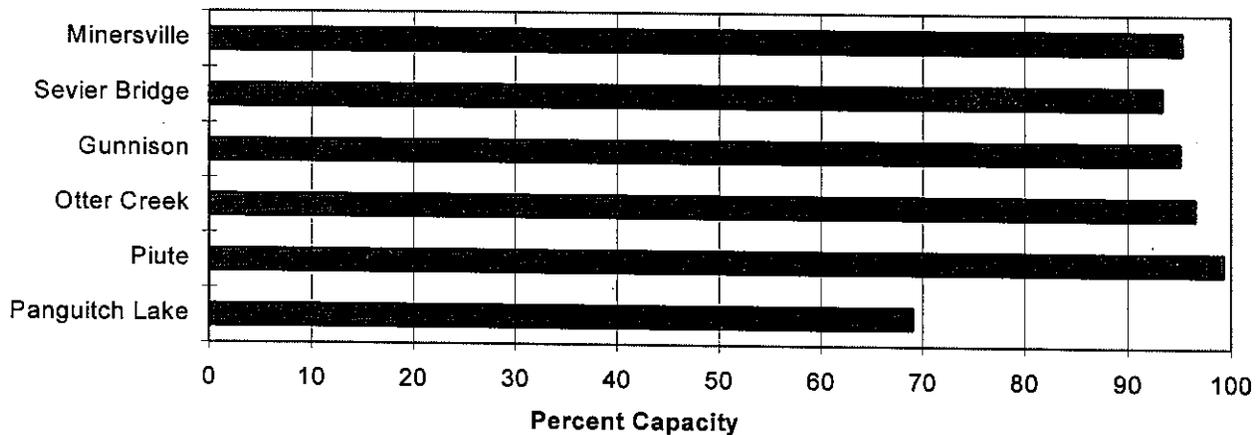
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - March 1, 1998

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)	
SEVIER R at Hatch	APR-JUL	33	49	58	107	68	83	54		
SEVIER R nr Circleville	APR-JUL	45	66	79	105	93	113	75		
SEVIER R nr Kingston	APR-JUL	45	69	83	100	97	121	83		
ANTIMONY CK nr Antimony	APR-JUL	4.37	6.38	7.40	100	8.42	10.43	7.40		
E F SEVIER R nr Kingston	APR-JUL	8.1	23	32	107	41	56	30		
SEVIER R blw Piute Dam	APR-JUL	52		121	105		190	115		
CLEAR CK nr Sevier	APR-JUL	10.9	17.7	22	105	26	33	21		
SALINA CK at Salina	APR-JUL	0.5	10.2	17.0	97	26	41	17.6		
PLEASANT CK nr Pleasant	APR-JUL	5.44	7.12	8.00	94	8.88	10.63	8.50		
EPHRAIM CK nr Ephraim	APR-JUL	7.3	11.0	13.1	104	15.2	18.9	12.6		
SEVIER R nr Gunnison	APR-JUL	24	161	245	103	329	466	239		
CHICKEN CK nr Levan	APR-JUL	2.34	3.72	5.10	109	7.00	11.14	4.70		
OAK CK nr Oak City (Acre Feet)	APR-JUL	1149	1549	1900	107	2330	3142	1777		
BEAVER R nr Beaver	APR-JUL	24	29	33	127	38	46	26		
MINERSVILLE RESERVOIR Inflow	APR-JUL	12.7	17.6	22	132	28	38	16.7		

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

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - March 1, 1998

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	19.3	17.5	14.0	UPPER SEVIER RIVER (south	7	92	132
MINERSVILLE (RkyFd)	23.3	22.2	12.0	12.9	EAST FORK SEVIER RIVER	2	85	132
OTTER CREEK	52.5	50.7	34.5	31.2	SOUTH FORK SEVIER RIVER	5	94	132
PIUTE	71.8	71.3	57.9	41.5	LOWER SEVIER RIVER (inclu	6	85	123
SEVIER BRIDGE	236.0	220.3	178.0	119.6	BEAVER RIVER	2	77	136
PANGUITCH LAKE	22.3	15.4	10.1	---	SEVIER & BEAVER RIVER BAS	15	86	129

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

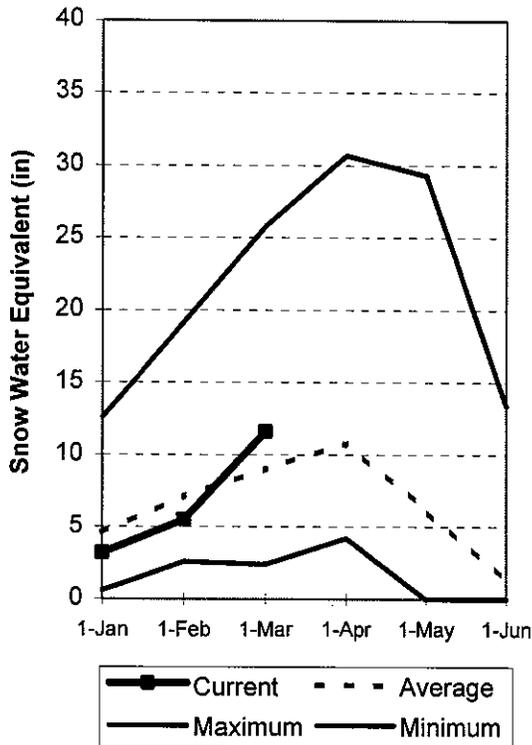
The average is computed for the 1961-1990 base period.

- (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.

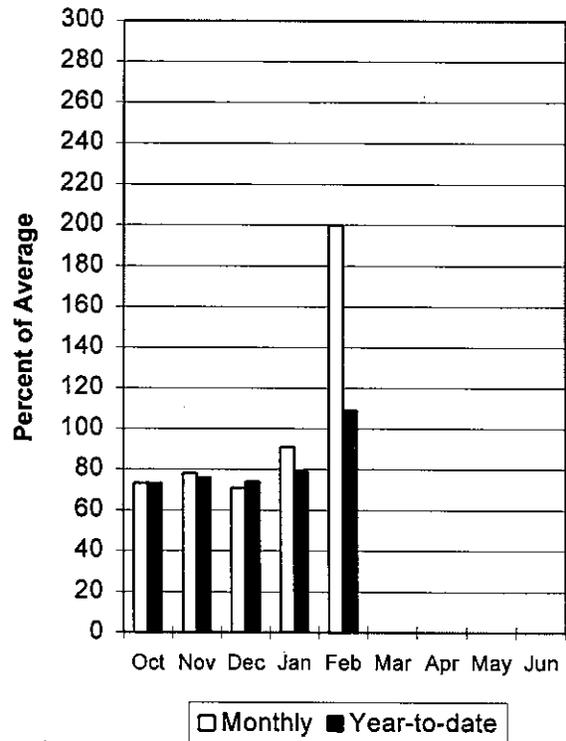
E. Garfield, Kane, Washington, & Iron co. Mar 1, 1998

Snowpacks in this region are above normal at 135% of average, up 57% relative to last month, over 3 times the normal February increase. This area has gone from the lowest to the highest percentage snowpack in the state over the past month. Individual sites range from 92% to 395% of average. Snowpacks in these areas can change dramatically and may increase even more in March. Precipitation during February was much above normal at 200% of average, bringing the seasonal accumulation (Oct-Feb) to 109% of normal. Reservoir storage is at 91% of capacity.

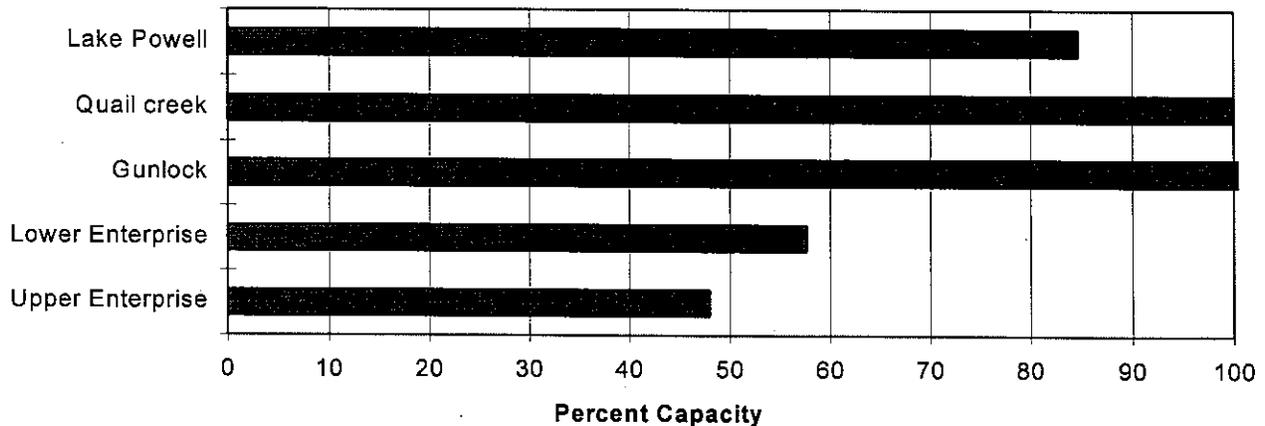
Mountain Snowpack



Precipitation



Reservoir Storage 2/28/98



E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - March 1, 1998

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Wetter		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
COAL CK nr Cedar City	APR-JUL	9.0	15.9	20	106	24	31	18.8
LAKE POWELL INFLOW	APR-JUL	4933	6402	7400	96	8398	9867	7735
VIRGIN R nr Hurricane	APR-JUL	25		86	109		135	79
SANTA CLARA R nr Pine Valley	APR-JUL	2.01		6.00	113		10.02	5.30

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

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - March 1, 1998

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	10.8	10.3	---	VIRGIN RIVER	5	105	131
LAKE POWELL	24322.0	20617.0	19321.0	---	PAROWAN	2	95	125
QUAIL CREEK	40.0	40.0	37.1	---	ENTERPRISE TO NEW HARMONY	2	201	188
UPPER ENTERPRISE	10.0	4.8	5.5	0.8	COAL CREEK	2	108	122
LOWER ENTERPRISE	2.6	1.5	1.0	0.6	ESCALANTE RIVER	2	71	114
					E. GARFIELD, KANE, WASHIN	9	105	135

* 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 MARCH 1, 1998

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
AGUA CANYON SNOTEL	8900	3/01	-	8.3S	8.5	-	DRY BREAD POND SNOTEL	8350	3/01	-	16.6S	29.4	16.0
ALTA CENTRAL	8800	2/26	130	36.1	44.4	32.0	DRY FORK SNOTEL	7160	3/01	-	20.3S	16.2	-
ASHLEY TWIN LAKES	10500					13.4	EAST SHINGLE LAKE	9800					24.3
BEAVER DAMS SNOTEL	8000	3/01	-	9.2S	12.3	9.5	EAST WILLOW CREEK SN	8250	3/01	-	8.5S	10.1	6.0
BEAVER DIVIDE SNOTEL	8280	3/01	-	10.5S	15.5	10.0	FARMINGTON CANYON I.	6950	3/02	103	31.3	26.0	19.6
BEN LOWMOND PK SNOTEL	8000	3/01	-	47.7S	67.7	33.0	FARMINGTON CN SNOTEL	8000	3/01	-	38.1S	46.9	23.6
BEN LOWMOND TR SNOTEL	6000	3/01	-	29.3S	30.7	18.0	FARNSWORTH LK SNOTEL	9600	3/01	-	16.8S	19.4	15.5
BEVAN'S CABIN	6450	3/02	53	15.3	9.6	9.4	FISH LAKE	8700	2/28	39	9.5	8.1	7.1
BIG FLAT SNOTEL	10250	3/01	-	17.5S	22.5	14.1	FIVE POINTS LAKE SNO	10920	3/01	-	13.4S	22.2	13.6
BIRCH CROSSING	8100	3/03	31	5.8	9.0	6.3	FRANCES FLATS	6700	3/03	82	25.5	23.4	16.1
BLACK FLAT-U.M. CK S	9400	3/01	-	6.3S	14.3	7.9	G.B.R.C. HEADQUARTER	8700	2/28	56	14.2	18.0	13.8
BLACK'S FORK GS-EF	9340	3/01	36	9.8	8.6	7.6	G.B.R.C. MEADOWS	10000	2/28	68	18.0	28.8	19.2
BLACK'S FORK JUNCTN	8930	3/01	37	9.3	9.8	7.5	GARDEN CITY SUMMIT	7600	3/02	50	12.6	18.8	14.7
BOX CREEK SNOTEL	9800	3/01	-	13.9S	14.4	9.8	GEORGE CREEK	8840	3/01	69	20.8	26.2	17.4
BRIAN HEAD	10000	2/27	78	20.5	19.5	16.5	GOOSEBERRY R.S.	8400	2/28	46	10.6	11.8	9.9
BRIGHTON CABIN	8700	2/27	88	25.4	34.2	23.2	GOOSEBERRY R.S. SNOT	7900	3/01	-	8.2S	9.3	9.0
BRIGHTON SNOTEL	8750	3/01	-	20.5S	27.5	18.0	HARDSCRABBLE SNOTEL	7250	3/01	-	19.9S	25.7	17.1
BROWN DUCK SNOTEL	10600	3/01	-	15.2S	21.8	15.1	HARRIS FLAT SNOTEL	7700	3/01	-	9.2S	8.2	5.7
BRUCE CANYON	8000	2/25	27	5.8	4.5	4.3	HAYDEN FORK SNOTEL	9100	3/01	-	11.4S	19.0	13.7
BUCK FLAT SNOTEL	9800	3/01	-	17.2S	28.8	13.7	HENRY'S FORK	10000	3/01	54	13.3	12.9	11.2
BUCK PASTURE	9700	3/01	62	17.1	17.0	12.9	HEWINTA SNOTEL	9500	3/01	-	9.3S	12.4	8.5
BUCKBOARD FLAT	9000	2/26	36	8.4	17.8	10.6	HICKERSON PARK SNOTE	9100	3/01	-	8.8S	7.0	5.0
BUG LAKE SNOTEL	7950	3/01	-	18.2S	29.6	17.0	HIDDEN SPRINGS	5500	3/03	35	10.2	4.8	6.4
BURT'S-MILLER RANCH	7900	3/01	21	4.6	5.9	4.6	HOBLE CREEK SUMMIT	7420	2/28	60	16.2	19.7	12.7
CAMP JACKSON SNOTEL	8600	3/01	-	11.3S	23.1	10.4	HOLE-IN-ROCK SNOTEL	9150	3/01	-	6.6S	7.4	4.5
CASTLE VALLEY SNOTEL	9580	3/01	-	12.1S	15.2	10.1	HORSE RIDGE SNOTEL	8260	3/01	-	21.1S	35.5	19.9
CHALK CK #1 SNOTEL	9100	3/01	-	19.1S	29.4	18.6	HUNTINGTON-HORSESHOE	9800	2/28	71	22.2	30.9	19.9
CHALK CK #2 SNOTEL	8200	3/01	-	13.8S	20.1	12.3	INDIAN CANYON SNOTEL	9100	3/01	-	10.2S	16.6	8.9
CHALK CREEK #3	7500	3/01	28	6.6	9.2	6.6	JOHNSON VALLEY	8850	2/28	35	8.2	7.6	6.1
CHEPETA SNOTEL	10300	3/01	-	9.6S	14.4	10.8	KILFOIL CREEK	7300	3/02	50	13.1	20.0	12.1
CITY CREEK	7500	3/03	94	29.4	32.4	23.5	KILLYON CANYON	6300	2/25	48	11.1	9.7	-
CLEAR CK RIDG #1 SNT	9200	3/01	-	17.6S	30.0	15.8	KIMBERLY MINE SNOTEL	9300	3/01	-	14.9S	17.0	11.6
CLEAR CK RIDG #2 SNT	8000	3/01	-	13.9S	20.6	11.3	KING'S CABIN SNOTEL	8730	3/01	-	8.8S	16.0	9.3
CLEAR CREEK RIDGE #3	6600					7.4	KLONDIKE NARROWS	7400	3/02	58	16.9	23.8	17.0
COLD WATER SPRINGS	6030					-	KOLOBO SNOTEL	9250	3/01	-	22.1S	21.5	16.7
CORRAL	8200					-	LAKEFORK #1 SNOTEL	10100	3/01	-	15.4S	18.5	9.5
CURRENT CREEK SNOTEL	8000	3/01	-	7.5S	13.4	9.2	LAKEFORK BASIN SNOTE	10900	3/01	-	16.2S	25.3	18.0
DANIELS-STRAWBERRY S	8000	3/01	-	14.9S	27.0	15.5	LAKEFORK MOUNTAIN #3	8400	3/01	33	6.4	11.4	5.8
DESERET PEAK	9250					22.0	LAMBS CANYON	7400	3/04	62	17.1	20.2	14.3
DESERET PEAK AM	9250					20.6	LASAL MOUNTAIN LOWER	8800	2/26	32	8.4	10.2	7.6
DESERET PEAK SNOTEL	9250	3/01	-	22.7S	22.1	16.4	LASAL MOUNTAIN SNOTE	9850	3/01	-	10.3S	13.2	10.9
DILL'S CAMP SNOTEL	9200	3/01	-	12.4S	19.9	11.9	LILY LAKE SNOTEL	9050	3/01	-	11.6S	16.2	10.6
DONKEY RESERVOIR SNO	9800	3/01	-	7.2S	10.6	6.7	LITTLE BEAR LOWER	6000	3/02	58	17.5	15.6	9.4

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 SNOTEL	6550	3/01	-	18.4S	23.4	13.0	THISTLE FLAT	8500					
LITTLE GRASSY SNOTEL	6100	3/01	-	8.7S	1.5	2.2	TIMBERLINE	9100					
LONG FLAT SNOTEL	8000	3/01	-	8.6S	7.1	7.0	TIMPANOGOS DIVIDE SN	8140	3/01	-	20.0S	38.1	20.4
LONG VALLEY JCT. SNT	7500	3/01	-	6.5S	7.4	4.3	TONY GROVE LK SNOTEL	8400	3/01	-	37.6S	51.2	29.3
LOOKOUT PEAK SNOTEL	8200	3/01	-	27.2S	33.4	25.4	TONY GROVE R.S.	6250	3/02	50	14.3	15.8	10.8
LOST CREEK RESERVOIR	6130	9/80	3/24	66B	2012.2	36.4	20.3						
MAMMOTH-COTTONWOOD SNT	8800	3/01	-	18.2S	31.3	16.6	TRIAL LAKE SNOTEL	9960	3/01	-	17.9S	33.9	21.2
MERCHANT VALLEY SNOT	8750	3/01	-	14.3S	19.8	9.3	TROUT CREEK SNOTEL	9400	3/01	-	7.3S	10.7	8.0
MIDDLE CANYON	7000	3/02	62	18.4	14.0	11.5	UPPER JOES VALLEY	8900	2/28	42	9.9	13.9	9.3
MIDWAY VALLEY SNOTEL	9800	3/01	-	23.0S	21.9	17.9	VERNON CREEK SNOTEL	7500	3/01	-	16.9S	19.3	9.2
MILL CREEK	6950	3/04	76	21.2	21.8	17.6	VIPONT	7670					
MILL-D NORTH SNOTEL	8960	3/01	-	24.1S	33.1	19.8	WEBSTER FLAT SNOTEL	9200	3/01	-	14.0S	12.3	12.4
MILL-D SOUTH FORK	7400	2/27	76	19.3	23.2	16.7	WHITE RIVER #1 SNOTE	8550	3/01	-	10.5S	22.3	11.6
MINING FORK SNOTEL	8000	3/01	-	23.0S	26.7	14.4	WHITE RIVER #3	7400	2/28	31	7.5	10.5	7.8
MONTI CRISTO SNOTEL	8960	3/01	-	25.9S	38.1	23.5	WIDTSON #3 SNOTEL	9500	3/01	-	10.2S	14.0	8.5
MOSBY MTN. SNOTEL	9500	3/01	-	8.2S	17.5	7.9	WRIGLEY CREEK	9000	2/28	44	9.5	15.1	9.6
MT. BALDY R. S.	9500	02/28	77	21.6	27.0	19.6	YANKEE RESERVOIR	8700	2/27	45	10.3	11.4	7.8
MUD CREEK #2	8600	2/28	50	12.0	21.1	11.8							
OAK CREEK	7760	2/27	51	11.6	10.5	10.3							
PANQUITCH LAKE	8200	2/27	21	4.4	4.2	4.4							
PARLEY'S CANYON SNOT	7500	3/01	-	13.9S	17.6	16.0							
PARLEY'S CANYON SUM.	7500	3/02	67	18.5	20.7	15.7							
PAYSON R.S. SNOTEL	8050	3/01	-	16.1S	17.2	16.2							
PICKLE KEG SNOTEL	9600	3/01	-	17.5S	17.1	13.5							
PINE CREEK SNOTEL	8800	3/01	-	28.4S	26.1	15.5							
RED PINE RIDGE SNOTE	9200	3/01	-	12.2S	17.7	14.3							
REDDEN MINE LOWER	8500	3/01	59	16.3	22.3	15.0							
REES'S FLAT	7300	2/27	53	12.4	14.1	10.9							
ROCK CREEK SNOTEL	7900	3/01	-	9.1S	15.5	7.5							
ROCKY BN-SETTLEMT SN	8900	3/01	-	27.1S	28.8	20.0							
SEEBLEY CREEK SNOTEL	10000	3/01	-	12.3S	16.9	11.9							
SILVER LAKE (BRIGHT.)	8730	2/26	87	26.0	32.9	20.3							
SMITH MOREHOUSE SNTL	7600	3/01	-	13.0S	17.5	11.9							
SNOWBIRD SNOTEL	9700	3/01	-	27.7S	46.0	29.0							
SPIRIT LAKE	10300	3/01	52	12.3	13.1	10.1							
SQUAW SPRINGS	9300	2/28	41	9.4	8.1	6.4							
STEEL CREEK PARK SNO	10100	3/01	-	12.2S	14.5	12.6							
STILLWATER CAMP	8550	3/01	39	9.0	13.2	8.6							
STRAWBERRY DIVIDE SN	8400	3/01	-	16.6S	29.3	16.4							
STUART R. S.	7950					6.3							
SUSC RANCH	8200	3/03	41	8.5	8.5	8.0							
TALL POLES	8800	3/03	53	14.0	16.0	11.7							
THAYNES CANYON SNOTL	9200	3/01	-	21.0S	28.5	17.3							

NOTE:

The S flag following Water Content for SNOTEL sites indicates telemetered data.

Issued by

Paul W. Johnson
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Salt Lake City, Utah



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Salt Lake City, UT 84116



Utah
Basin Outlook Report
Natural Resources Conservation Service
Salt Lake City, UT



USDA United States
Department of
Agriculture

Natural
Resources
Conservation
Service

Utah

Basin Outlook Report

April 1, 1998



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 in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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STATE OF UTAH GENERAL OUTLOOK

Apr 1, 1998

SUMMARY

The month of March was pretty average in most respects regarding water supply conditions. Snowpacks percentages across the state changed very little, indicating average accumulations statewide. Precipitation was near average with the exception of the Uintah Basin which had 136% of normal, a far cry from some of the amounts registered in February, some of which exceeded 200% of normal. The real anomaly during the month was the warm temperatures that have brought snowpacks to the melt stage a bit on the early side. Snowpacks across the state are near average, with the only real exceptions being the Virgin at 128%, the Tooele valley and the Wasatch Front from Bountiful to North Ogden which have 130 to 150% of normal. Snowpacks on the Virgin are melting rapidly and shouldn't present significant problems. The Wasatch Front and the Tooele Valley packs are just beginning to melt and significant streamflows can be expected. Both areas have well above average low elevation snowpacks. In general, snowpacks across the state are about as close to average as they ever get. March precipitation was near normal statewide at 107%, bringing the seasonal accumulation to 111% of average. Snowmelt runoff conditions are near normal in northern Utah and near to slightly above average in the south. Most areas will see near average streamflow this spring. Reservoir storage is in excellent condition and most reservoirs should easily fill.

SNOWPACK

Snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 108% of normal, down 8% relative to last month and about 87% of last years record packs. Snowpacks in the north are near average ranging from 96% to 110% and in the south, near to above average, 100% to near 128%. This is the typical peak of most snowpacks across the state and signals the beginning of the melt season. March accumulations were near normal across the state. Highest snowpacks are on the Virgin, Tooele Valley and on the Wasatch Front from Bountiful to North Ogden.

PRECIPITATION

Mountain precipitation in February, as measured by the NRCS SNOTEL system, was near normal (92% - 115%) across the entire state except the Uintah Basin which had 136% of average. This brings the seasonal accumulation (Oct-Mar) to 111% of average statewide.

National Weather Service March precipitation figures show generally normal to above normal amounts with a few exceptions in the south central area where numbers were smaller. The numbers were generally uniform as a result of a persistent western flow pattern influenced by the El Nino phenomenon. As most areas recorded near normal

amounts, areas with much above normal were scarce. Randolph received the highest amount with 376% of average.

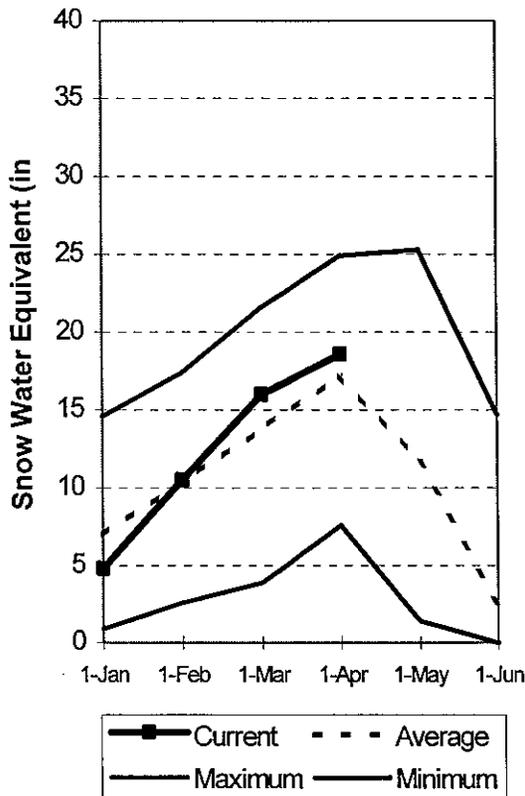
RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 87% of capacity. Many reservoirs are near capacity and expected to be full and spilling soon.

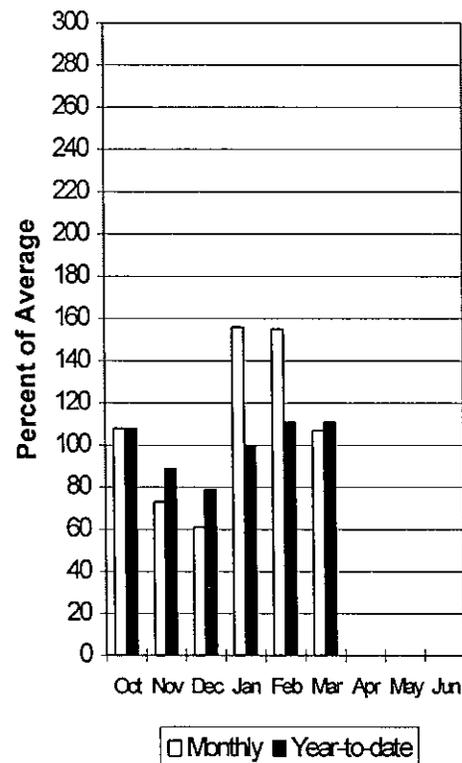
STREAMFLOW

Snowmelt streamflows are expected to be near to slightly below average levels throughout Utah, with the exception of the Sevier, Virgin, and Tooele Valley areas which should have near to above average streamflows. In general, water supply conditions are in excellent shape and adequate supplies are anticipated. Climatic conditions over the next several month will determine the extent, duration or even if any snowmelt runoff problems occur.

Mountain Snowpack



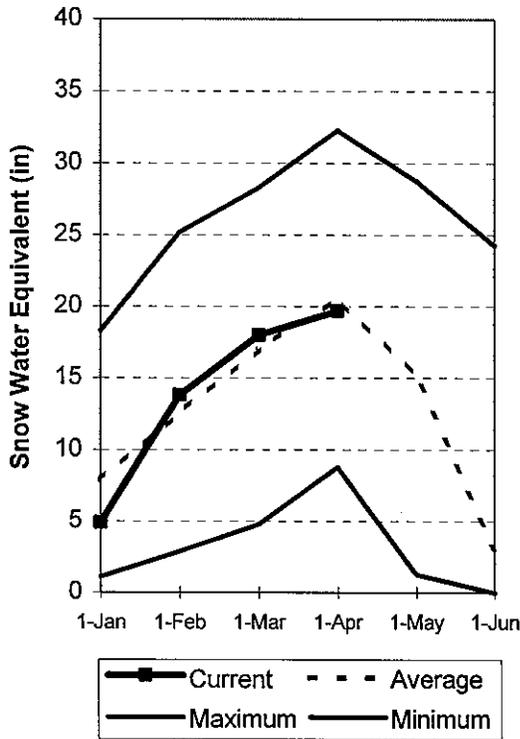
Precipitation



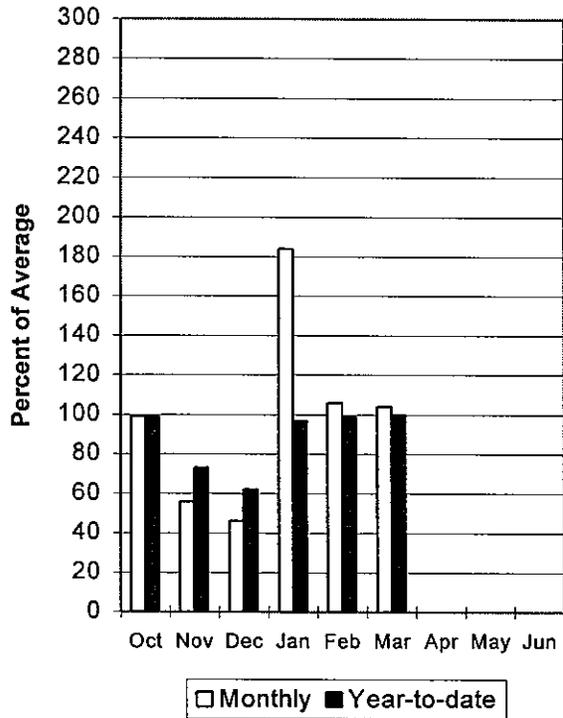
Bear River Basin Apr 1, 1998

Snowpack on the Bear River Basin is near average at 96% of normal, down about 10% relative to last month. Specific sites range from 75% to 161% of normal. Snowpacks on the Bear River are only 68% of those recorded last year. Snowmelt is occurring and runoff volumes are expected to be near to below average. March precipitation was near normal at 104%, which brings the seasonal accumulation (Oct-Mar) to 100% of average. Snowmelt runoff conditions are near average at the beginning of the ablation season. Reservoir storage is excellent at 76% capacity, with small reservoirs full.

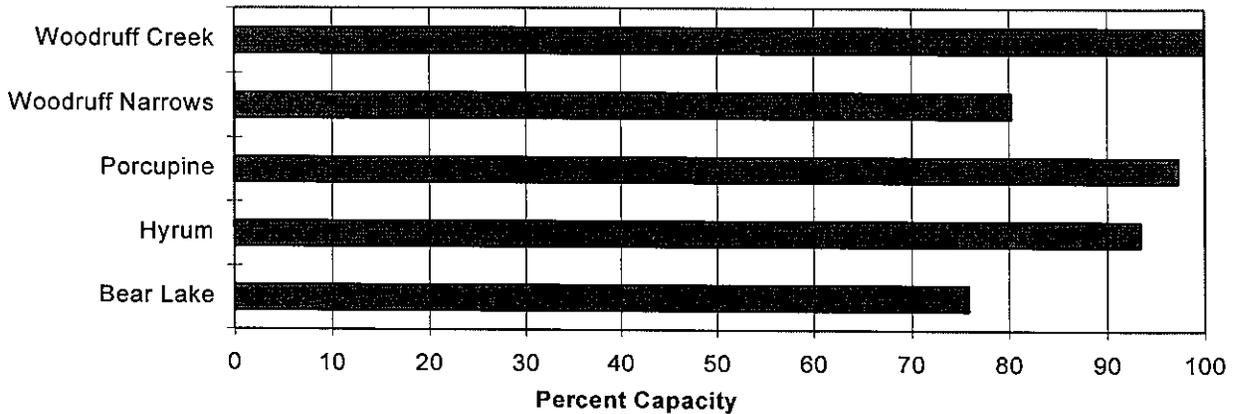
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



BEAR RIVER BASIN
Streamflow Forecasts - April 1, 1998

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 R nr UT-WY State Line	APR-JUL	77	89	98	85	108	124	115
BEAR R nr Woodruff, UT	APR-JUL	76	103	127	85	156	211	149
BIG CK nr Randolph	APR-JUL	0.11	1.94	3.40	90	4.86	7.02	3.80
BEAR R nr Randolph, UT	APR-JUL	35	74	100	85	126	165	118
SMITHS FK nr Border, WY	APR-JUL	62	75	85	83	96	116	102
THOMAS FK nr WY-ID State Line	APR-JUL	15.3	21	25	76	31	41	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	118	173	210	73	247	302	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	6.3	7.9	9.2	75	10.7	13.5	12.2
CUB R nr Preston	APR-JUL	34	39	43	92	47	52	47
L BEAR RIVER at Paradise, UT	APR-JUL	341	421	485	109	559	689	446
LOGAN R nr Logan	APR-JUL	91	102	110	103	119	132	107
BLACKSMITH Fk nr Hyrum	APR-JUL	47	52	56	104	60	67	54

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

BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 1998

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as %	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	1078.6	945.3	1002.1	BEAR RIVER, UPPER (abv Ha	6	71	95
HYRUM	15.3	14.3	11.5	12.2	BEAR RIVER, LOWER (blw Ha	7	67	98
PORCUPINE	11.3	11.0	11.3	5.0	LOGAN RIVER	4	68	107
WOODRUFF NARROWS	57.3	46.0	57.3	---	RAFT RIVER	2	73	100
WOODRUFF CREEK	4.0	4.0	4.0	---	BEAR RIVER BASIN	13	68	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.

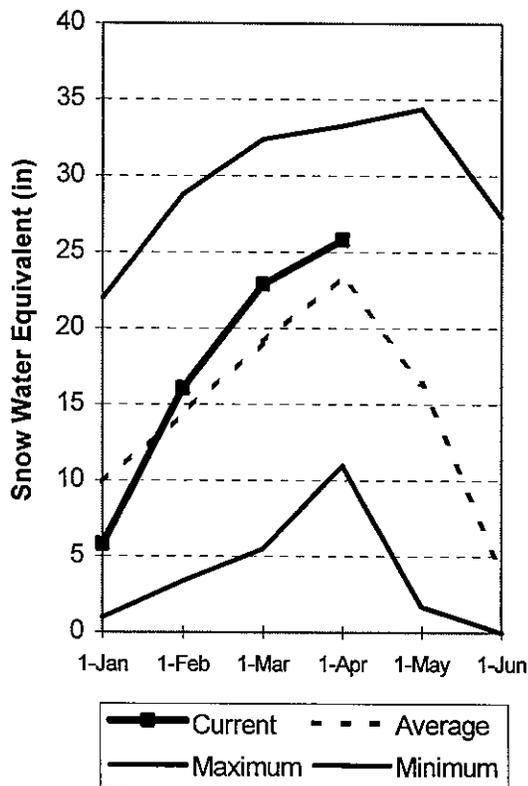
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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

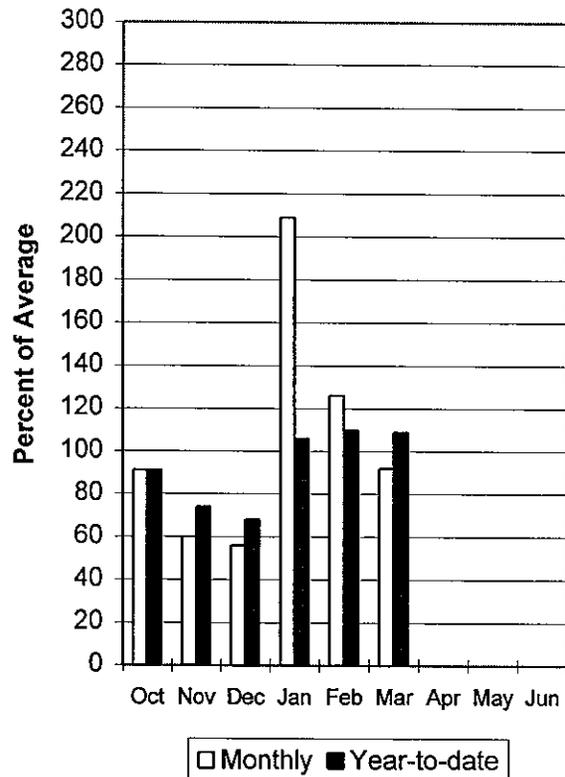
Weber and Ogden River Basins Apr 1, 1998

Snowpack on the Weber and Ogden Watersheds is at 110% of average, down percentagewise 10% relative to last month but still just 78% of last year. Individual sites range from 84% to 151% of average. Precipitation during March was near normal at 92% of average, bringing the seasonal accumulation (Oct-Mar) to 109% of average. Snowmelt runoff conditions are very near average and near to below normal streamflows are expected. Reservoir storage on the Weber system is at 72% of capacity and all reservoirs should easily fill, with the exception of Lost Creek Reservoir which has ongoing work being performed.

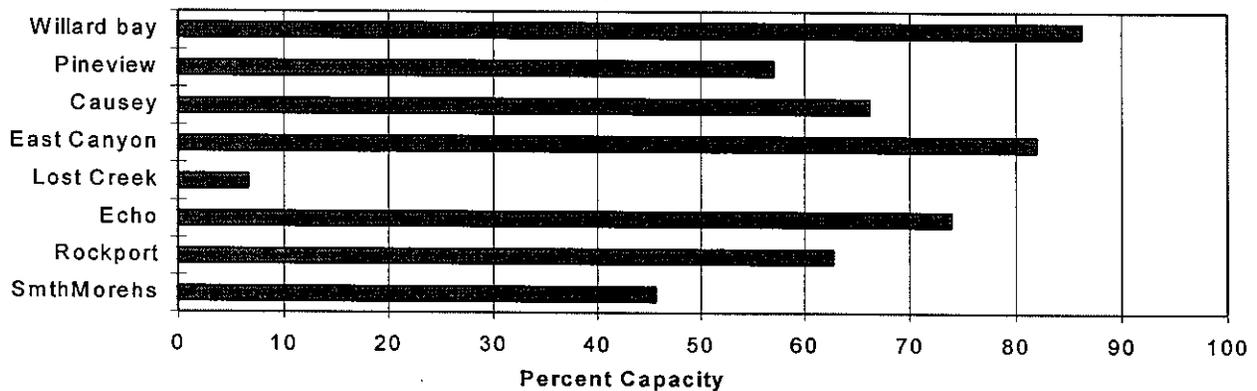
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - April 1, 1998

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 CK nr Oakley	APR-JUN	23	27	30	100	33	37	30
WEBER R nr Oakley	APR-JUL	96	111	122	100	133	148	122
ROCKPORT RESEROIR inflow	APR-JUL	102	121	134	100	147	166	134
CHALK CK at Coalville, Ut	APR-JUL	27	38	46	105	54	65	44
WEBER R nr Coalville, Ut	APR-JUL	100	121	136	100	151	172	136
ECHO RESEROIR Inflow	APR-JUL	111	150	176	100	202	241	176
LOST CK Res Inflow	APR-JUL	9.4	14.1	17.2	100	20	25	17.2
E CANYON CK nr Morgan	APR-JUL	21	26	30	100	34	39	30
WEBER R at Gateway	APR-JUL	276	317	345	99	373	414	347
S FORK OGDEN R nr Huntsville	APR-JUL	57	64	69	110	74	81	63
PINEVIEW RESEROIR Inflow	APR-JUL	110	131	145	117	159	180	124
WHEELER CK nr Huntsville	APR-JUL	5.47	6.38	7.00	113	7.62	8.53	6.20

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

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - April 1, 1998

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Aver
CAUSEY	7.1	4.7	7.1	2.6	OGDEN RIVER	4	79	120
EAST CANYON	49.5	40.6	31.2	36.6	WEBER RIVER	8	76	105
ECHO	73.9	54.7	26.8	49.5	WEBER & OGDEN WATERSHEDS	12	77	111
LOST CREEK	22.5	1.5	0.0	13.3				
PINEVIEW	110.1	62.8	46.7	55.6				
ROCKPORT	60.9	38.2	26.8	30.9				
WILLARD BAY	215.0	185.5	170.8	125.3				

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

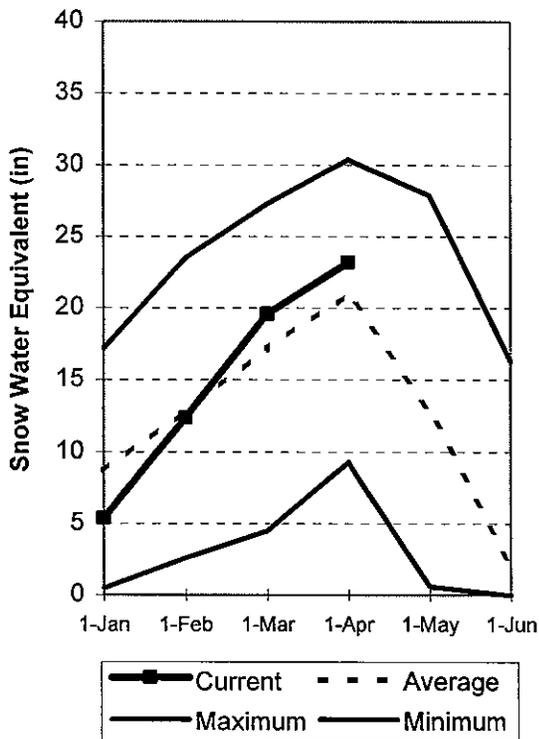
The average is computed for the 1961-1990 base period.

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

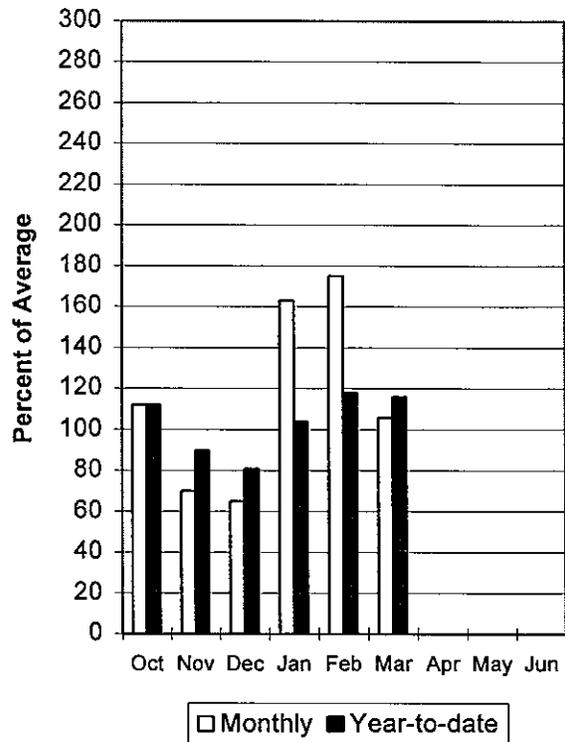
Utah Lake, Jordan River & Tooele Valley Basins Apr 1, 1998

Snowpacks over these watersheds are near average at 109% of normal, about the same as last month and still just 86% of last year. Individual sites range from 81% to 166% of average. The Tooele Valley area is much above average (141%) due to lake effect storms. Precipitation during March was near normal at 106% , bringing the seasonal accumulation (Oct-Mar) to 116% of average. Reservoir storage is at 95% of capacity. Water supply conditions in general are near normal and near to below average runoff is expected.

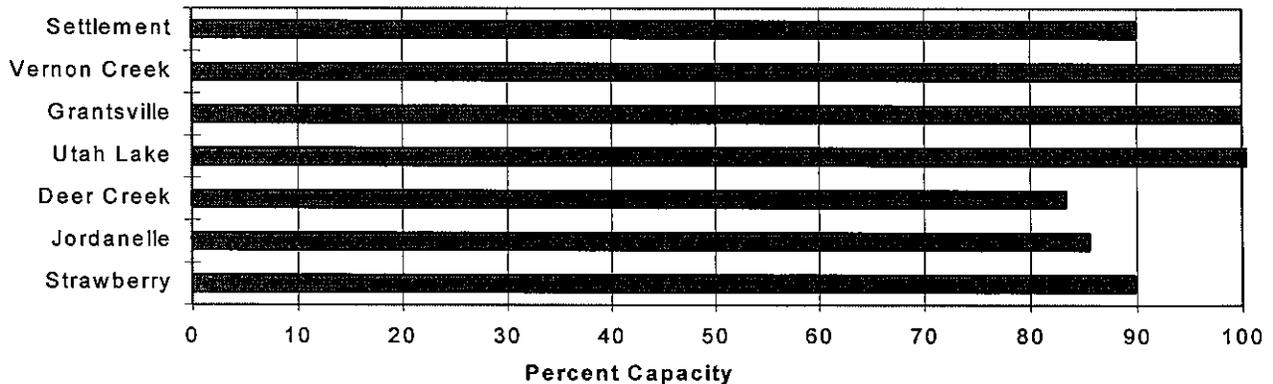
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - April 1, 1998

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)
PAYSON CK nr Payson	APR-JUL	0.62	2.57	3.60	82	4.63	6.60	4.40
SPANISH FORK nr Castilla	APR-JUL	14.1	48	68	92	88	122	74
HOBBLE CK nr Springville	APR-JUL	11.7	15.3	17.0	90	18.7	22	18.8
PROVO R nr Hailstone	APR-JUL	55		92	84		129	109
PROVO R below Deer Creek Dam	APR-JUL	52	85	105	82	125	157	128
AMERICAN FORK nr American Fk.	APR-JUL	23	27	30	94	33	37	32
UTAH LAKE inflow	APR-JUL	104		255	79		405	324
L COTTONWOOD CRK nr SLC	APR-JUL	34	39	42	108	45	50	39
BIG COTTONWOOD CRK nr SLC	APR-JUL	31	37	40	105	43	49	38
PARLEY'S CK nr SLC	APR-JUL	8.1	13.2	16.3	103	19.4	25	15.9
MILL CK nr SLC	APR-JUL	4.49	6.23	7.30	112	8.37	10.07	6.50
DELL FK nr SLC	APR-JUL	3.27	5.94	7.40	104	8.86	11.50	7.10
EMIGRATION CK nr SLC	APR-JUL	1.39	3.40	4.60	110	5.80	7.81	4.20
CITY CK nr SLC	APR-JUL	5.06	7.42	8.80	106	10.18	12.53	8.30
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	1190	1621	2000	149	2467	3361	1340
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	1205	2116	3100	135	4542	7976	2300
S WILLOW CK nr Grantsville	APR-JUL	2.10	3.29	4.10	132	4.91	6.10	3.4

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

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - April 1, 1998

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	124.8	112.9	97.9	PROVO RIVER & UTAH LAKE	7	73	91
GRANTSVILLE	3.3	3.3	3.0	---	PROVO RIVER	4	66	89
SETTLEMENT CREEK	1.0	0.9	0.9	0.6	JORDAN RIVER & GREAT SALT	5	83	110
STRAWBERRY-ENLARGED	1105.9	993.3	850.7	---	TOOELE VALLEY WATERSHEDS	4	115	141
UTAH LAKE	870.9	931.5	950.8	722.9	UTAH LAKE, JORDAN RIVER &	16	86	109
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.

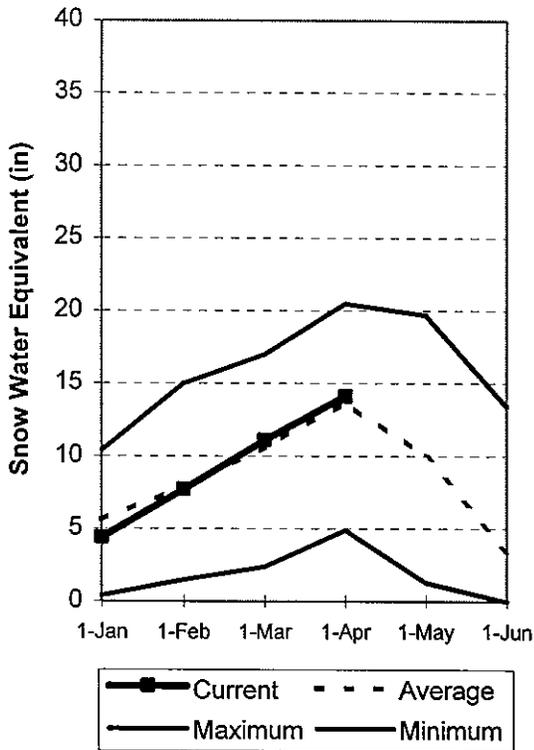
The average is computed for the 1961-1990 base period.

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

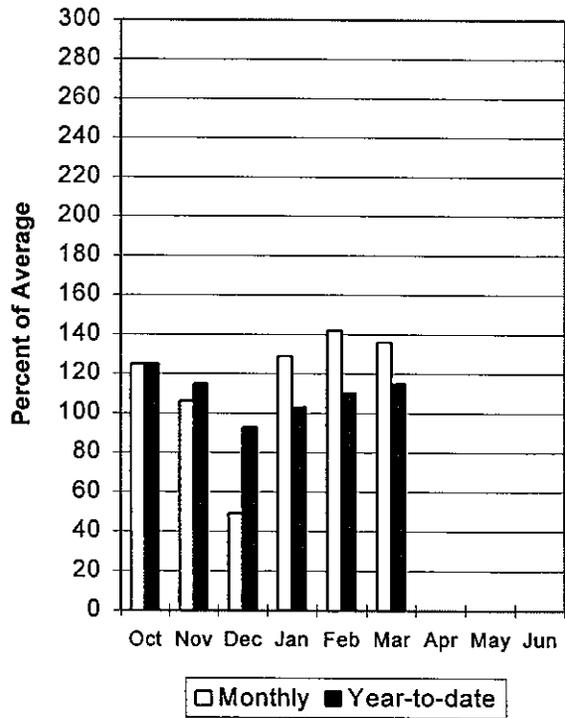
Uintah Basin and Dagget SCD's Apr 1, 1998

Snowpacks across the Uintah Basin and North Slope areas are near average. The North Slope is at 112% and the Uintah Basin ranges from near 91% to 107% of average. Snowpacks in these areas are 70% to 100% of last year. Precipitation during March was near 136% of normal, bringing the seasonal accumulation (Oct-Mar) to 115% of average. Reservoir storage is at 91% of capacity. Water supply conditions are near average on both the north slope and the Uintah Basin. Snowmelt streamflow is expected to be near to below normal.

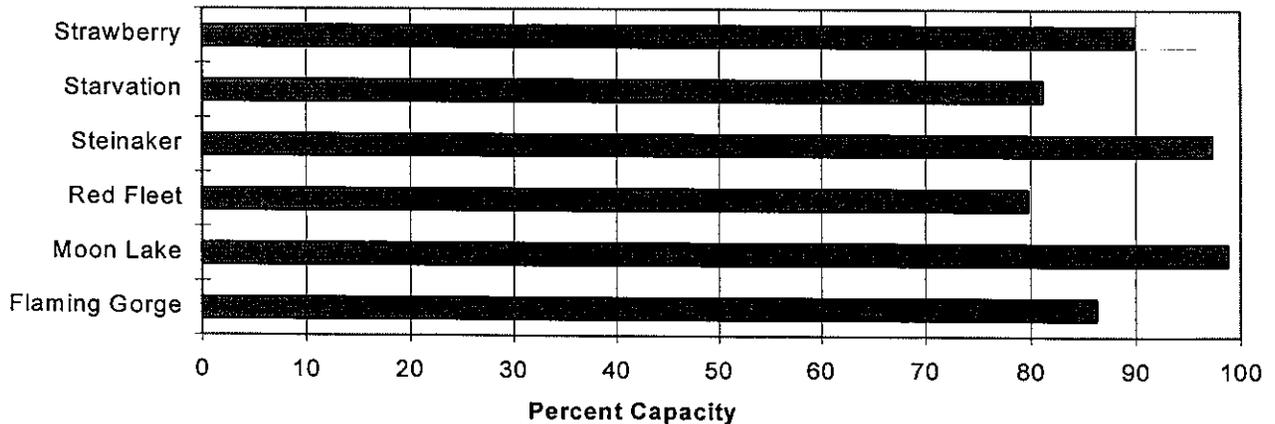
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - April 1, 1998

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)	(% AVG.)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	86	94	100	104	106	114	96
STATE LINE RESERVOIR INFLOW	APR-JUL	25	31	34	113	38	43	30
HENRYS FORK nr Manila	APR-JUL	36	50	59	141	69	83	42
FLAMING GORGE RES INFLOW	APR-JUL			1000	84			1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	12.3	16.3	19.0	96	22	26	19.8
ASHLEY CK nr Vernal	APR-JUL	34	44	50	98	56	66	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	13.9	18.5	22	85	26	32	26
DUCHESNE R nr Tabiona	APR-JUL	68	81	90	86	99	112	105
ROCK CK nr Mountain Home	APR-JUL	76	87	95	101	103	114	94
UPPER STILLWATER RESV inflow	APR-JUL	59	72	80	99	89	101	81
DUCHESNE R abv Knight Diversion	APR-JUL	113	144	165	87	186	217	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	32	42	50	85	59	73	59
CURRAMT CREEK RESV Inflow	APR-JUL	12.1	15.6	18.0	86	20	24	21
STARVATION RESERVOIR inflow	APR-JUL	67	90	105	90	120	143	117
MOON LAKE Inflow	APR-JUL	59	69	75	109	81	91	60
YELLOWSTONE R nr Altonah	APR-JUL	54	65	72	111	79	90	
DUCHESNE R at Myton	APR-JUL	149	209	250	95	291	351	263
WHITEROCKS R nr Whiterocks	APR-JUL	43	53	60	103	67	77	58
UINTA R nr Neola	APR-JUL	65	80	90	106	100	115	85
DUCHESNE R nr Randlett	APR-JUL	121	219	315	96	411	508	328

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

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - April 1, 1998

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	3235.0	3184.9	---	UPPER GREEN RIVER in UTAH	6	110	111
MOON LAKE	49.5	48.5	21.7	32.0	ASHLEY CREEK	2	103	103
RED FLEET	25.7	20.5	18.9	---	BLACK'S FORK RIVER	2	101	98
STEINAKER	33.4	32.5	23.2	22.6	SHEEP CREEK	1	138	170
STARVATION	165.3	135.2	132.6	114.1	DUCHESNE RIVER	11	76	101
STRAWBERRY-ENLARGED	1105.9	993.3	850.7	---	LAKE FORK-YELLOWSTONE CRE	4	83	106
					STRAWBERRY RIVER	4	70	91
					UINTAH-WHITEROCKS RIVERS	2	82	107
					UINTAH BASIN & DAGGET SCD	17	84	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.

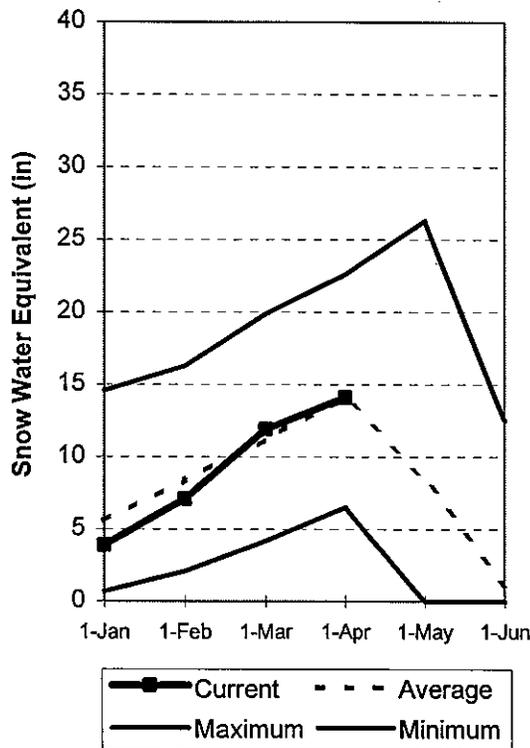
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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

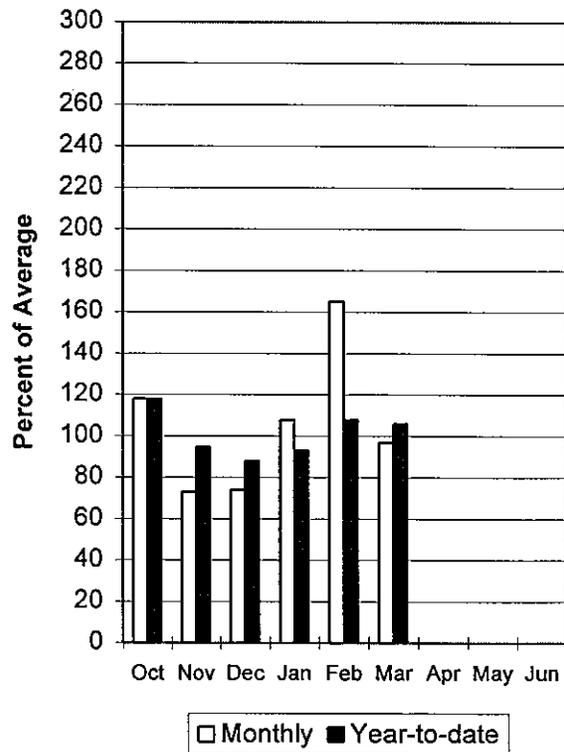
Carbon, Emery, Wayne, Grand and San Juan Co. Apr 1, 1998

Snowpacks in this region are at 100% of average, about the same as last month but still only 80% of last year. Individual sites range from 79% to 141% of average. Precipitation during March was near average at 97%, bringing the seasonal accumulation (Oct-Mar) to 106% of normal. Reservoir storage is at 78% of capacity. General water supply conditions are near average throughout the region and near to below average flows are expected. Snowmelt streamflow could still have lower and earlier peaks of shorter duration.

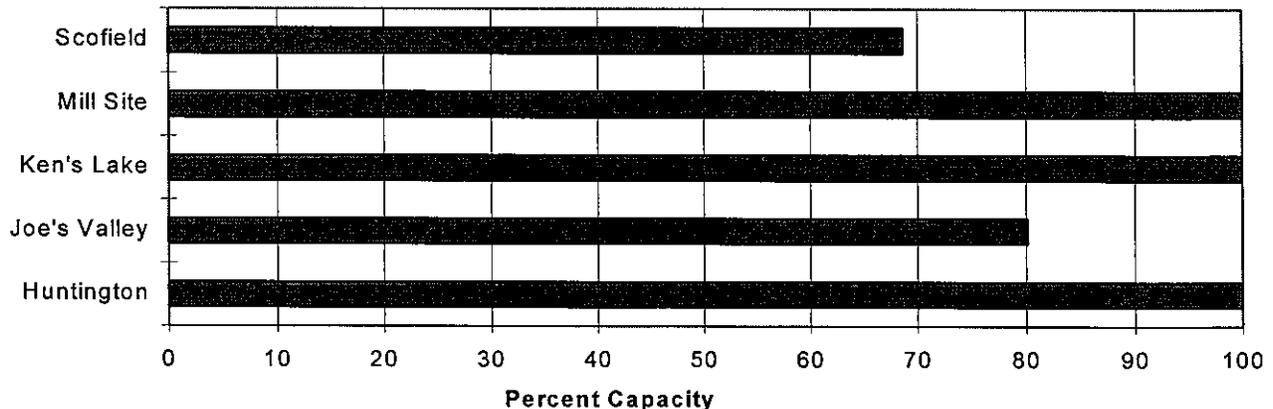
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - April 1, 1998

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)		
GOOSEBERRY CK nr Scofield	APR-JUL	8.0	10.3	11.5	98	12.7	15.0	11.7
SCOFIELD RESV Inflow	APR-JUL	7.0	32	35	80	38	63	44
WHITE R blw Tabbyune Ck	APR-JUL	9.4	13.4	16.0	86	18.6	23	18.7
GREEN R at Green River, UT	APR-JUL	2206	2619	2900	92	3181	3594	3151
ELECTRIC LAKE inflow	APR-JUL	11.0	13.3	15.0	99	16.9	19.9	15.1
HUNTINGTON CK nr Huntington	APR-JUL	13.1	34	37	90	41	61	41
JOE'S VALLEY RESV Inflow	APR-JUL	33	43	50	94	57	67	53
FERRON CK nr Ferron	APR-JUL	29	35	39	100	43	49	39
COLORADO R nr Cisco	APR-JUL	2561	3120	3500	85	3880	4439	4132
MILL CK at Sheley Tunnel	APR-JUL	3.54	4.65	5.60	93	6.74	8.85	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	1.98	4.37	6.00	92	7.63	10.02	6.50
MUDDY CK nr Emery	APR-JUL	8.3	14.7	19.0	97	23	30	19.6
LLOYD'S RESERVOIR inflow	MAR-JUL	1.01	1.12	2.60	90	4.08	6.25	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	1.31	2.54	3.60	90	4.85	7.04	4.00
SAN JUAN R nr Bluff	APR-JUL	516	745	900	78	1055	1284	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, 1998

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	4.1	3.8	PRICE RIVER	3	67	96
JOE'S VALLEY	61.6	49.4	29.4	45.6	SAN RAFAEL RIVER	3	81	97
KEN'S LAKE	2.3	2.3	1.0	---	MUDDY CREEK	1	82	97
MILL SITE	16.7	16.7	11.0	4.6	FREMONT RIVER	3	90	97
SCOFIELD	65.8	45.2	17.2	33.3	LASAL MOUNTAINS	1	128	93
					BLUE MOUNTAINS	1	73	139
					WILLOW CREEK	1	122	141
					CARBON, EMERY, WAYNE, GRA	13	80	100

* 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.

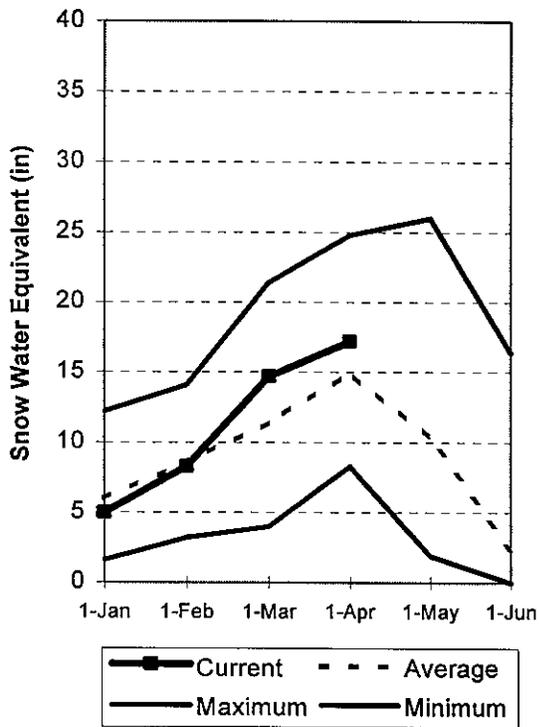
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

Sevier and Beaver River Basins

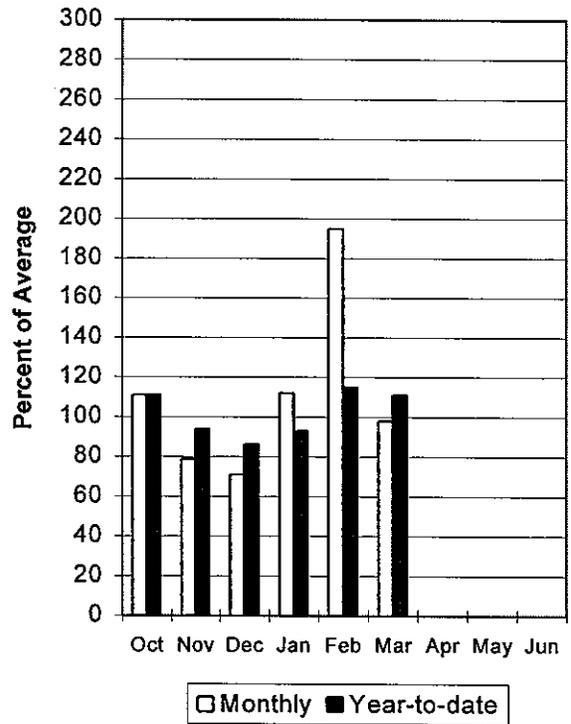
Apr 1, 1998

Snowpacks on the Sevier River Basin are near to slightly above normal at 115% of average, down percentagewise somewhat relative to last month. The Beaver River Basin is the highest at 129% while the lower Sevier is lowest at 104% of average. Individual sites range from 75% to 140% of average. Precipitation during March was near average at 98% of normal, bringing the seasonal accumulation (Oct-Mar) to 111% of average. Reservoir storage is at 97% of capacity. General water supply conditions are near to above average. Snowmelt streamflow is expected to be near to above normal as well.

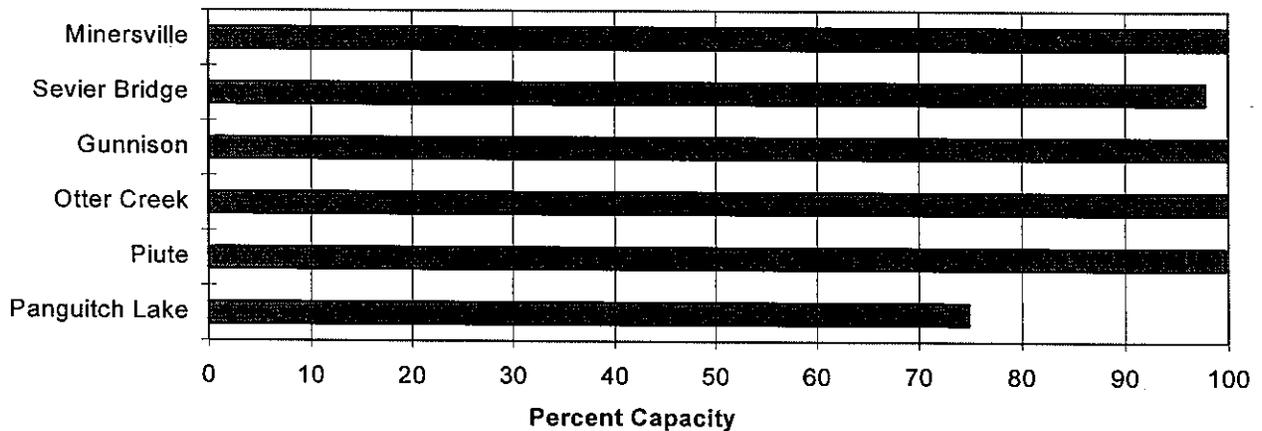
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - April 1, 1998

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 R at Hatch	APR-JUL	45	56	62	115	68	79	54
SEVIER R nr Circleville	APR-JUL	57	72	82	109	92	107	75
SEVIER R nr Kingston	APR-JUL	57	79	85	102	91	113	83
ANTIMONY CK nr Antimony	APR-JUL	5.48	7.05	7.90	107	8.75	10.29	7.40
E F SEVIER R nr Kingston	APR-JUL	12.9	26	34	113	42	55	30
SEVIER R blw Piute Dam	APR-JUL	69		125	109		181	115
CLEAR CK nr Sevier	APR-JUL	14.9	21	24	114	27	33	21
SALINA CK at Salina	APR-JUL	0.5		15.0	85		37	17.6
PLEASANT CK nr Pleasant	APR-JUL	5.61	6.86	7.50	88	8.14	9.44	8.50
EPHRAIM CK nr Ephraim	APR-JUL	8.7	11.6	13.1	104	14.6	17.5	12.6
SEVIER R nr Gunnison	APR-JUL	41	176	250	105	324	459	239
CHICKEN CK nr Levan	APR-JUL	3.53	4.49	5.30	113	6.25	7.96	4.70
OAK CK nr Oak City (Acre Feet)	APR-JUL	1307	1658	1950	110	2293	2909	1777
BEAVER R nr Beaver	APR-JUL	25	30	33	127	37	43	26
MINERSVILLE RESERVOIR Inflow	APR-JUL	18.2	20	22	132	24	27	16.7

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

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - April 1, 1998

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	20.3	20.3	16.3	UPPER SEVIER RIVER (south	7	151	124
MINERSVILLE (RkyFd)	23.3	23.3	13.7	14.3	EAST FORK SEVIER RIVER	2	120	116
OTTER CREEK	52.5	52.5	41.1	35.8	SOUTH FORK SEVIER RIVER	5	168	128
PIUTE	71.8	71.6	63.6	46.2	LOWER SEVIER RIVER (inclu	6	108	104
SEVIER BRIDGE	236.0	230.8	204.6	136.2	BEAVER RIVER	2	101	129
PANGUITCH LAKE	22.3	16.7	11.4	---	SEVIER & BEAVER RIVER BAS	15	121	115

* 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.

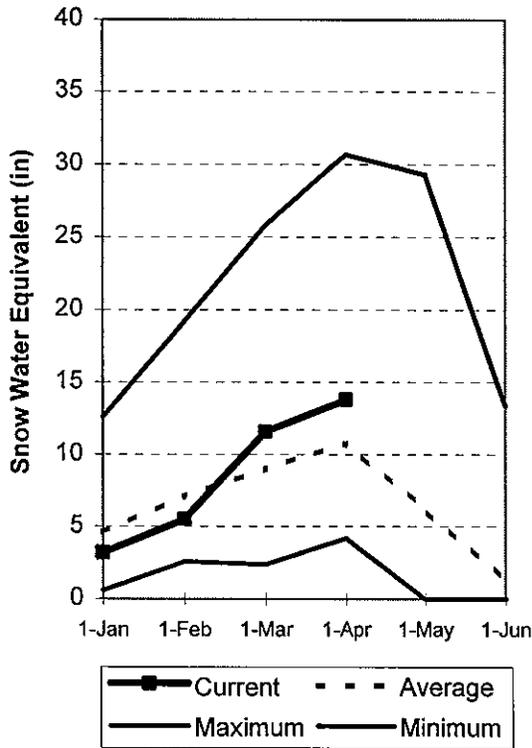
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural flow - actual flow may be affected by upstream water management.

E. Garfield, Kane, Washington, & Iron co.

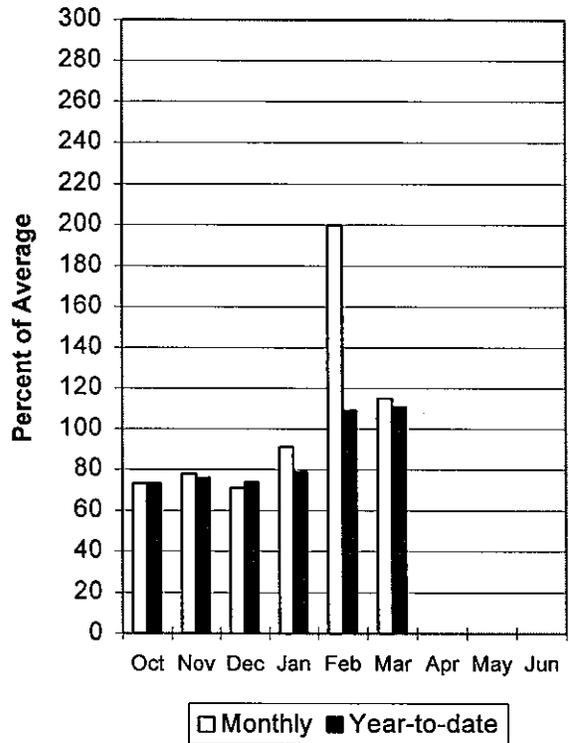
Apr 1, 1998

Snowpacks in this region are above normal at 128% of average, about the same as last month but more than 180% more than last year. Individual sites range from 88% to 175% of average. Snowmelt is progressing rapidly and streamflows will increase as well. Precipitation during March was slightly above average at 115% of average, bringing the seasonal accumulation (Oct-Mar) to 111% of normal. Reservoir storage is at 91% of capacity. General water supply conditions are above average and above normal streamflows are expected.

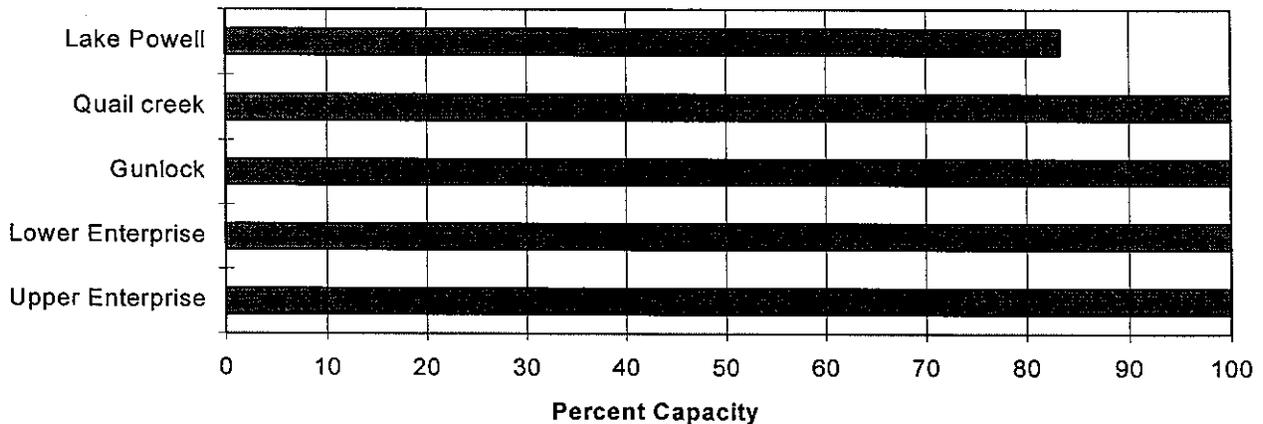
Mountain Snowpack



Precipitation



Reservoir Storage 3/31/98



E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - April 1, 1998

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)		
COAL CK nr Cedar City	APR-JUL	11.1	16.8	20	106	23	29	18.8
LAKE POWELL INFLOW	APR-JUL			6800	88			7735
VIRGIN R nr Hurricane	APR-JUL	40	68	90	114	110	135	79
SANTA CLARA R nr Pine Valley	APR-JUL	3.02	4.98	6.50	123	8.00	10.02	5.30

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

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - April 1, 1998

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	10.0	---	VIRGIN RIVER	5	203	125
LAKE POWELL	24322.0	20273.0	18918.0	---	PAROWAN	2	153	123
QUAIL CREEK	40.0	40.0	40.0	---	ENTERPRISE TO NEW HARMONY	2	0	220
UPPER ENTERPRISE	10.0	10.0	5.5	---	COAL CREEK	2	183	112
LOWER ENTERPRISE	2.6	2.6	1.2	---	ESCALANTE RIVER	2	99	113
					E. GARFIELD, KANE, WASHIN	9	185	128

* 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, A
FOR THE STATE OF UTAH
As of APRIL 1, 1998

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
AGUA CANYON SNOTEL	8900	4/01	-	9.5	2.0	-	DRY BREAD POND SNOTEL	8350	4/01	-	18.7	29.8	19.9
ALTA CENTRAL	8800	4/02	106	41.9	42.1	38.7	DRY FORK SNOTEL	7160	4/01	-	23.2	15.7	-
ASHLEY TWIN LAKES	10500					16.8	EAST SHINGLE LAKE	9800					29.0
BEAVER DAMS SNOTEL	8200	4/01	-	9.2	6.7	12.3	EAST WILLOW CREEK SN	8250	4/01	-	10.0	8.2	7.1
BEEVER DIVIDE SNOTEL	8800	4/01	-	10.6	13.8	11.4	FARMINGTON CANYON L.	6950	4/02	89	35.2	29.2	24.4
BEN LOMOND PK SNOTEL	8000	4/01	-	53.5	68.7	40.8	FARMINGTON CN SNOTEL	8000	4/01	-	43.5	51.6	31.1
BEN LOMOND TR SNOTEL	6000	4/01	-	30.2	28.6	20.0	FARNSWORTH LK SNOTEL	9600	4/01	-	20.5	21.7	20.5
BEVAN'S CABIN	6450	4/03	49	17.9	10.1	11.7	FISH LAKE	8700	3/31	30	11.0	7.0	8.3
BIG FLAT SNOTEL	10290	4/01	-	23.1	21.2	18.9	FIVE POINTS LAKE SNO	10920	4/01	-	19.0	25.0	17.5
BIRCH CROSSING	8100	3/31	24	6.8	2.8	6.0	FRANCES FLATS	6700	4/01	64	25.8	17.5	14.5
BLACK FLAT-U.M. CK S	9400	4/01	-	6.9	9.9	10.3	G.B.R.C. HEADQUARTER	8700	3/31	51	16.1	17.3	17.2
BLACK'S FORK GS-EF	9340	4/01	36	11.3	8.9	9.6	G.B.R.C. MEADOWS	10000	3/31	72	22.7	27.4	24.2
BLACK'S FORK JUNCTN	8930	4/01	31	9.5	9.3	9.4	GARDEN CITY SUMMIT	7600	4/02	47	16.6	21.7	17.6
BOX CREEK SNOTEL	9800	4/01	-	16.0	12.2	13.8	GEORGE CREEK	8840	3/31	69	23.4	30.4	23.1
BRIAN HEAD	10000	3/31	82	25.9	19.5	21.2	GOOSEBERRY R.S.	8400	3/31	34	12.0	10.7	12.5
BRIGHTON CABIN	8700	4/02	76	28.0	35.2	27.3	GOOSEBERRY R.S. SNOT	7900	4/01	-	7.3	3.2	11.7
BRIGHTON SNOTEL	8750	4/01	-	25.5	26.7	23.1	HARDSCRABBLE SNOTEL	7250	4/01	-	19.6	21.7	18.2
BROWN DUCK SNOTEL	10600	4/01	-	19.0	23.1	18.9	HARRIS FLAT SNOTEL	7700	4/01	-	9.6	1.4	6.5
BRYCE CANYON	8000	3/29	17	3.9	0.0	3.6	HAYDEN FORK SNOTEL	9100	4/01	-	13.0	18.4	16.5
BUCK FLAT SNOTEL	9800	4/01	-	19.5	27.7	18.1	HENRY'S FORK	10000	4/01	53	16.2	11.9	14.0
BUCK PASTURE	9700	4/01	62	19.6	15.4	16.1	HEWINTA SNOTEL	9500	4/01	-	11.0	11.0	11.5
BUCKBOARD FLAT	9000	3/30	44	12.0	13.1	12.6	HICKERSON PARK SNOTE	9100	4/01	-	11.7	8.5	6.9
BUG LAKE SNOTEL	7950	4/01	-	19.9	33.4	21.3	HIDDEN SPRINGS	5500	4/01	15	5.5	0.0	3.6
BURT'S-MILLER RANCH	7900	4/01	8	2.3	2.9	5.7	HOBBLE CREEK SUMMIT	7420	4/01	45	16.0	17.9	14.3
CAMP JACKSON SNOTEL	8600	4/01	-	13.6	18.7	9.8	HOLE-IN-ROCK SNOTEL	9150	4/01	-	8.9	6.2	6.5
CAMP VALLEY SNOTEL	9580	4/01	-	16.6	10.7	14.4	HORSE RIDGE SNOTEL	8260	4/01	-	22.9	38.1	23.3
CHALK CK #1 SNOTEL	9100	4/01	-	23.8	32.3	23.9	HUNTINGTON-HORSESHOE	9800	3/31	76	27.5	29.8	24.2
CHALK CK #2 SNOTEL	8200	4/01	-	16.3	22.5	15.8	INDIAN CANYON SNOTEL	9100	4/01	-	12.7	14.8	11.8
CHALK CREEK #3	7500	4/01	20	6.3	6.7	7.5	JOHNSON VALLEY	8850	3/31	25	8.6	6.4	7.1
CHEPETA SNOTEL	10300	4/01	-	15.7	15.4	14.3	KILFOIL CREEK	7300	4/02	42	14.7	21.6	14.2
CITY CREEK	7500	4/01	77	31.9	31.0	27.3	KILLYON CANYON	6300	3/30	27	8.0	0.5	-
CLEAR CK RIDG #1 SNT	9200	4/01	-	19.9	28.6	19.8	KIMBERLY MINE SNOTEL	9300	4/01	-	17.7	14.1	16.2
CLEAR CK RIDG #2 SNT	8000	4/01	-	15.7	18.6	14.7	KING'S CABIN SNOTEL	8730	4/01	-	12.0	13.4	11.8
CLEAR CREEK RIDGE #3	6600	4/01	-			5.5	KLONDIKE NARROWS	7400	4/02	41	17.6	25.0	19.9
COLD WATER SPRINGS	6030						KOLOBO SNOTEL	9250	4/01	-	30.1	17.3	23.6
CORRAL	8200	3/31	33	11.2	10.7	9.4	LAKEFORK #1 SNOTEL	10100	4/01	-	17.8	16.2	12.1
CURRENT CREEK SNOTEL	8000	4/01	-	7.9	13.6	11.0	LAKEFORK BASIN SNOTE	10900	4/01	-	20.2	27.8	23.4
DANIELS-SITWABERRY S	8000	4/01	-	16.3	23.9	18.3	LAKEFORK MOUNTAIN #3	8400	4/01	21	6.5	9.0	6.1
DESERET PEAK	9250	3/31	75	25.4	20.3	19.2	LAMBS CANYON	7400	3/31	52	17.6	18.4	17.0
DESERET PEAK AM	9250	3/31	60	20.4	16.4	16.7	LASAL MOUNTAIN LOWER	8800	3/31	32	9.6	7.2	9.7
DESERET PEAK SNOTEL	9250	4/01	-	27.8	23.6	21.7	LASAL MOUNTAIN SNOTE	9850	4/01	-	12.9	10.1	13.8
DILL'S CAMP SNOTEL	9200	4/01	-	14.7	17.9	15.1	LILLY LAKE SNOTEL	9050	4/01	-	14.8	17.0	13.4
DONKEY RESERVOIR SNO	9800	4/01	-	9.1	10.4	8.4	LITTLE BEAR LOWER	6000	4/02	39	15.6	13.9	9.7

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 SNOTEL	6550	4/01	-	16.4	17.2	12.4	THISTLE FLAT	8500	3/31	52	17.1	18.2	17.3
LITTLE GRASSY SNOTEL	6100	4/01	-	2.7	0.0	.1	TIMBERLINE	9100	3/31	53	15.8	17.2	14.8
LONG FLAT SNOTEL	8000	4/01	-	9.6	0.0	5.5	TIMPANOGOS DIVIDE SN	8140	4/01	-	23.2	36.2	25.5
LONG VALLEY JCT. SNT	7500	4/01	-	3.4	0.0	.1	TONY GROVE LK SNOTEL	8400	4/01	-	41.6	53.9	36.9
LOOKOUT PEAK SNOTEL	8200	4/01	-	32.0	37.4	26.5	TONY GROVE R.S.	6250	4/02	31	12.0	15.2	11.5
LOST CREEK/SEKIBIR	6130	4/01	4/01	265	22.8	35.4	TRIAL LAKE SNOTEL	9960	4/01	-	21.0	34.2	25.0
MAMMOTH-COTTONWD SNT	8800	4/01	-	20.5	30.1	21.0	TROUT CREEK SNOTEL	9400	4/01	-	12.2	10.2	11.8
MERCHANT VALLEY SNOT	8750	4/01	-	17.3	18.7	12.4	UPPER JOES VALLEY	8900	3/31	29	9.4	12.0	10.4
MIDDLE CANYON	7000	4/03	57	20.8	11.7	14.4	VERNON CREEK SNOTEL	7500	4/01	-	19.3	14.7	12.1
MIDWAY VALLEY SNOTEL	9800	4/01	-	31.5	20.7	24.6	VIPONT	7670	3/31	40	15.4	23.0	15.8
MILL CREEK	6950	3/31	70	24.4	24.1	20.9	WEBSTER FLAT SNOTEL	9200	4/01	-	14.5	4.5	16.5
MILL-D NORTH SNOTEL	8960	4/01	-	29.2	34.5	24.1	WHITE RIVER #1 SNOTE	8550	4/01	-	12.2	20.3	13.9
MILL-D SOUTH FORK	7400	4/02	55	21.1	21.4	19.6	WHITE RIVER #3	7400	4/01	7	1.2	6.4	7.0
MINING FORK SNOTEL	8000	4/01	-	27.3	25.9	16.4	WIDTSEE #3 SNOTEL	9500	4/01	-	14.0	12.9	12.1
MONTE CRISTO SNOTEL	8960	4/01	-	30.2	40.8	29.9	WRIGLEY CREEK	9000	3/31	37	10.8	13.4	11.4
MOSSY MTN. SNOTEL	9500	4/01	-	11.8	18.1	11.3	YANKEE RESERVOIR	8700	3/31	38	12.4	10.3	10.0
MT. BALDY R.S.	9500	3/31	77	25.2	29.0	24.3	NOTE:						
MUD CREEK #2	8600	3/31	42	13.0	20.1	13.7	The S flag following Water Content for SNOTEL sites indicates telemetered						
OAK CREEK	7760	3/31	52	14.0	10.4	12.9	data.						
PANQUITCH LAKE	8200	3/31	14	3.2	.4	4.0							
PARLEY'S CANYON SNOT	7500	4/01	-	15.5	16.3	19.1							
PARLEY'S CANYON SUM.	7500	3/31	60	21.1	20.9	18.8							
PAYSON R.S. SNOTEL	8050	4/01	-	18.4	15.4	22.6							
PICKLE KEG SNOTEL	9600	4/01	-	20.7	16.0	18.8							
PINE CREEK SNOTEL	8800	4/01	-	31.2	23.6	21.4							
RED PINE RIDGE SNOTE	9200	4/01	-	14.3	16.7	18.0							
REDDEN MINE LOWER	8500	4/01	52	18.6	20.3	18.2							
REES'S FLAT	7300	3/31	41	12.9	12.4	13.3							
ROCK CREEK SNOTEL	7900	4/01	-	9.0	14.7	8.6							
ROCKY BN-SETTLEMT SN	8900	4/01	-	33.0	28.9	26.0							
SEELY CREEK SNOTEL	10000	4/01	-	15.9	16.9	15.3							
SILVER LAKE (BRIGHT.)	8730	4/02	73	30.1	34.6	25.8							
SMITH MOREHOUSE SNTL	7600	4/01	-	14.3	15.6	14.6							
SNOWBIRD SNOTEL	9700	4/01	-	36.8	52.6	33.5							
SPIRIT LAKE	10300	4/01	61	16.4	14.2	13.5							
SQUAW SPRINGS	9300	3/31	29	8.8	6.2	7.2							
STEEL CREEK PARK SNO	10100	4/01	-	16.5	16.2	16.6							
STILLWATER CAMP	8550	4/01	31	9.8	11.9	10.8							
STRAWBERRY DIVIDE SN	8400	4/01	-	18.6	27.3	19.8							
STUART R.S.	7950		-			7.6							
SUSC RANCH	8200	3/31	39	13.3	0.0	7.0							
TALL POLES	8800	3/31	53	19.3	14.6	14.7							
THAYNES CANYON SNOTL	9200	4/01	-	26.0	30.0	22.1							

Issued by

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Utah
Basin Outlook Report
Natural Resources Conservation Service
Salt Lake City, UT



USDA United States
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Agriculture

Natural
Resources
Conservation
Service

Utah

Basin Outlook Report

May 1, 1998



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 in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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STATE OF UTAH GENERAL OUTLOOK

May 1, 1998

SUMMARY

April was a month of contrasts - cool and wet for the first three weeks, then very warm and dry for the remainder. Snowpacks actually increased throughout much of April, finally peaking during the latter half of the month. This situation of increasing snowpacks when they would typically be decreasing rapidly, makes the percent of average figures escalate quickly. Those who watch only the 'percent of basin average snowpack' figures may quickly be misled to believe that disaster is eminent. However, this situation is actually quite common, occurring, on average 30% to 35% of the time. In about one of every three years, snowpacks peak on May first instead of April. The past month was quite cool in the mountains and statewide Utah experienced only 43% of normal April Snowmelt. Some snowpacks such as the Uintahs had only 22% of normal snowmelt, again, not an uncommon situation. Snowpacks that continue to increase into the month of May, such as the infamous 1983 scenario are quite rare. Currently, snowpacks are near to above average across the state, but are melting rapidly, losing 0.5 to 1.5 inches of snow water equivalent per day. Much of the low elevation snowpacks have already melted which reduces the potential of extremely high streamflows considerably. The exceptions are: the Tooele Valley and the Wasatch Front from Bountiful to North Ogden. These areas still have significant low elevation snowpacks although they, for the most part, are much lower than last year and present proportionately less potential for high streamflows. Snowpacks range from 101% on the Bear to 195% of average over southern Utah. April precipitation was near average statewide (93%) bringing the seasonal total (Oct-Apr) to 109% of normal. Precipitation was lighter in the north (75%-95%) and greater in the south, 100% to 150% of normal. Snowmelt runoff conditions are near normal in northern Utah and near to slightly above average in the south. Most areas will see near average streamflow this spring. Reservoir storage is in excellent condition and most reservoirs should easily fill.

SNOWPACK

May first snowpacks in Utah, as measured by the NRCS SNOTEL system, are at 139% of normal, up 31% relative to last month and about 85% of last years snowpacks. Again, this does not reflect more snowpack than on April 1, simply the lack of snowmelt, which is not uncommon. Snowpacks in the north are near average ranging from 101% to 153% and in the south, near to above average, 140% to near 195%. Snowmelt is progressing rapidly across the state.

PRECIPITATION

Mountain precipitation in April, as measured by the NRCS SNOTEL system, was below normal in the north (75% - 95%) and above normal in the south, 100% to 150% of average. This brings the seasonal accumulation (Oct-Apr) to 109% of average statewide.

National Weather Service figures indicate that April precipitation was mostly normal to above normal influenced by a light westerly flow during the first half of the month, with a sustained ridge over the second half. Only a few stations recorded much above normal amounts: Zion National Park - 228%, Hanksville - 214% and Alpine at 210% of average.

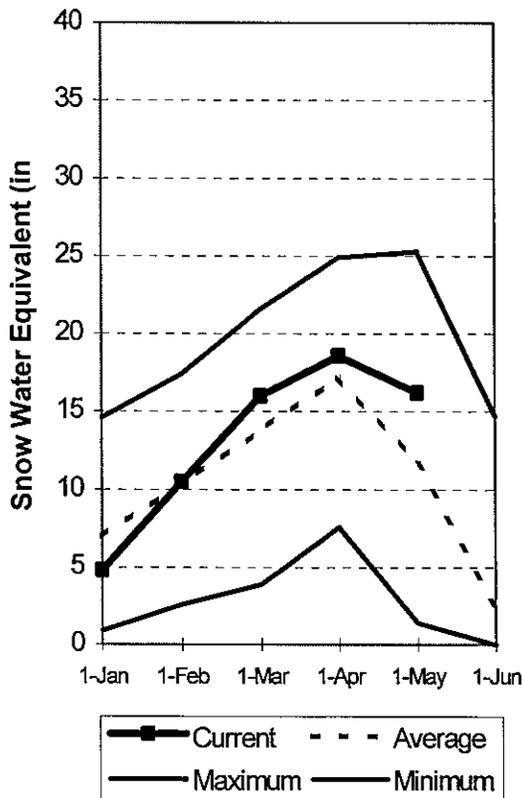
RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 88% of capacity. Many reservoirs are full and spilling.

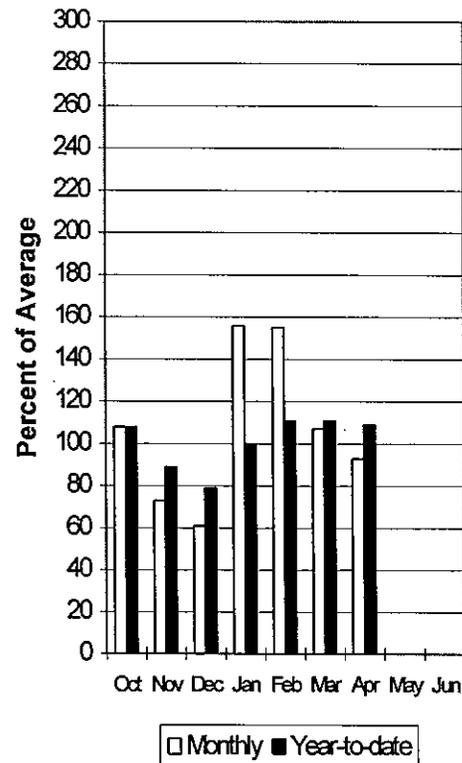
STREAMFLOW

Snowmelt streamflows are expected to be near to slightly above average levels throughout Utah. In general, water supply conditions are in excellent shape and adequate supplies are anticipated. Climatic conditions over the next several weeks will determine the extent and duration of snowmelt runoff and if any problems will occur.

Mountain Snowpack



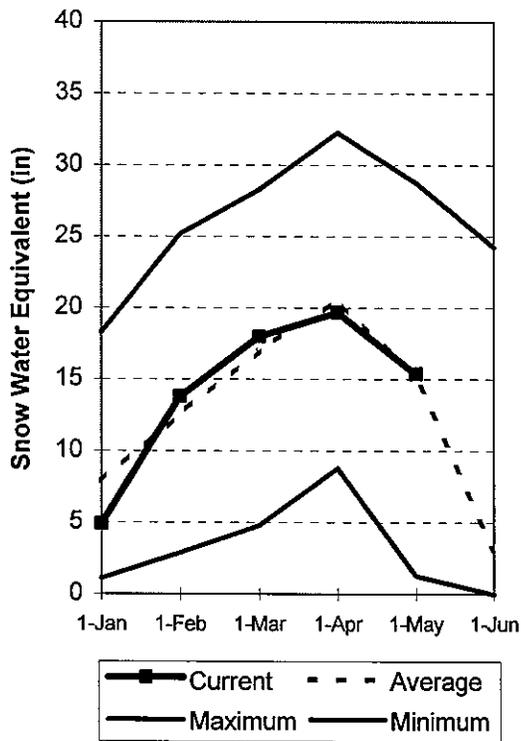
Precipitation



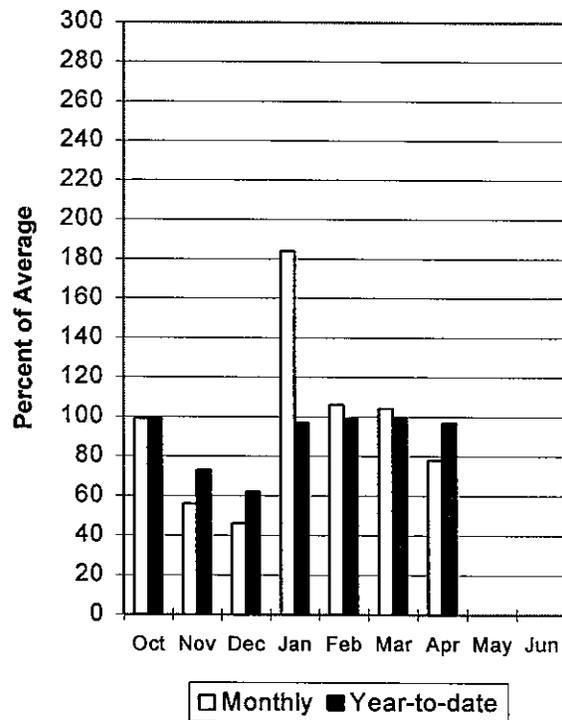
Bear River Basin May 1, 1998

Snowpack on the Bear River Basin is near average at 101% of normal, about the same percentagewise as last month. Specific sites range from 0% to 180% of normal. Snowpacks on the Bear River are only 58% of those recorded last year. Snowmelt is proceeding rapidly and runoff volumes are expected to be near to below average. April precipitation was below normal at 78%, which brings the seasonal accumulation (Oct-Apr) to 97% of average. Snowmelt runoff conditions are near average as the snowmelt season approaches its peak. Reservoir storage is excellent at 82% capacity, with small reservoirs full.

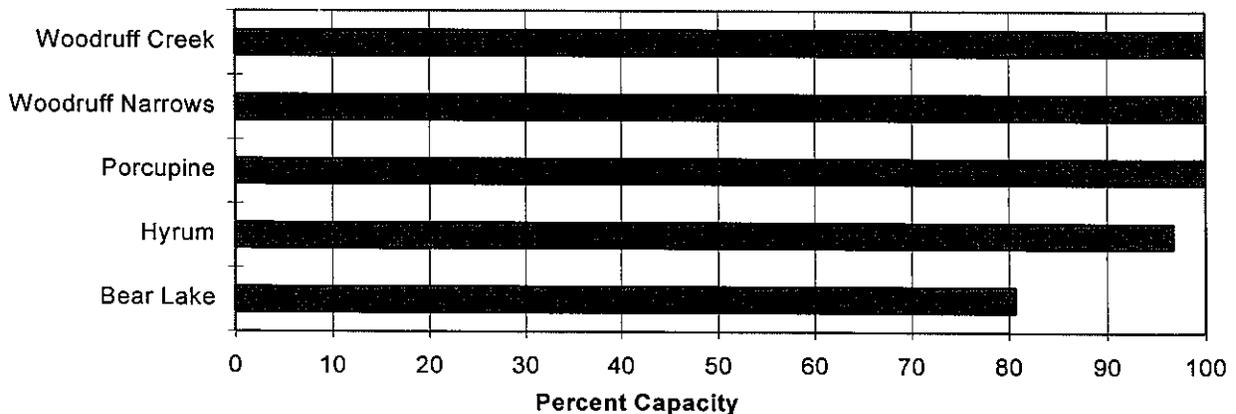
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



BEAR RIVER BASIN
Streamflow Forecasts - May 1, 1998

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 R nr UT-WY State Line	APR-JUL	95	102	107	93	112	121	115
BEAR R nr Woodruff, UT	APR-JUL	90	116	137	92	162	209	149
BIG CK nr Randolph	APR-JUL	0.04	2.07	3.50	92	4.93	7.04	3.80
BEAR R nr Randolph, UT	APR-JUL	56	86	106	90	126	156	118
SMITHS FK nr Border, WY	APR-JUL	68	79	87	85	96	111	102
THOMAS FK nr WY-ID State Line	APR-JUL	17.5	23	27	82	32	42	33
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	156	203	235	82	267	314	288
MONTPELIER CK nr Montpelier (2)	APR-JUL	6.5	8.0	9.2	75	10.6	13.0	12.2
CUB R nr Preston	APR-JUL	35	40	43	92	46	51	47
L BEAR RIVER at Paradise, UT	APR-JUL	40	47	52	117	58	67	44.6
LOGAN R nr Logan	APR-JUL	106	114	120	112	126	136	107
BLACKSMITH Fk nr Hyrum	APR-JUL	49	55	59	109	64	71	54

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of April					BEAR RIVER BASIN Watershed Snowpack Analysis - May 1, 1998			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as %	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	1147.0	1023.0	1059.0	BEAR RIVER, UPPER (abv Ha	6	64	109
HYRUM	15.3	14.8	12.3	13.2	BEAR RIVER, LOWER (blw Ha	7	55	101
PORCUPINE	11.3	11.3	11.3	9.5	LOGAN RIVER	4	57	122
WOODRUFF NARROWS	57.3	57.3	57.3	---	RAFT RIVER	0	0	0
WOODRUFF CREEK	4.0	4.0	4.0	---	BEAR RIVER BASIN	13	59	104

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

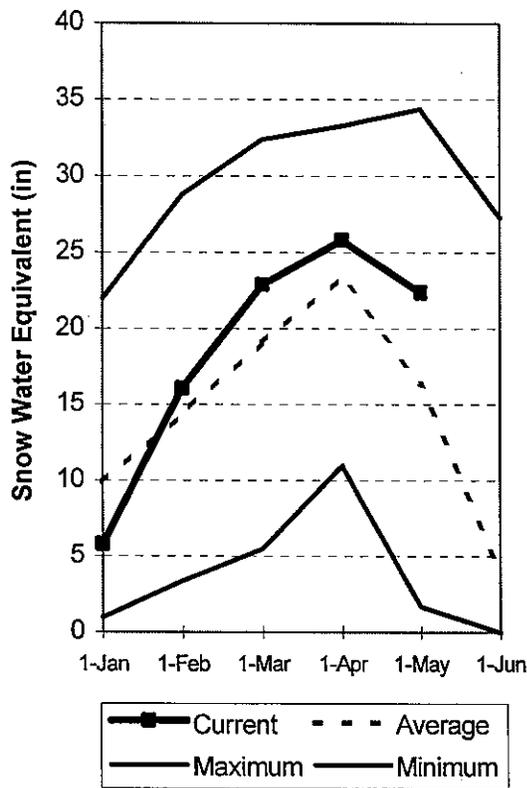
The average is computed for the 1961-1990 base period.

- (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.

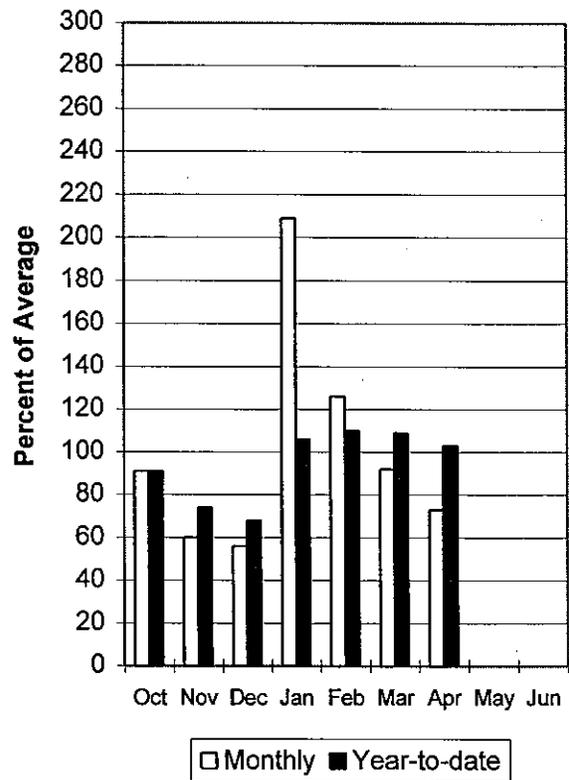
Weber and Ogden River Basins May 1, 1998

Snowpack on the Weber and Ogden Watersheds is at 137% of average, up percentagewise 27% relative to last month but still just 76% of last year. A cool April resulted in a below normal (50%) snowmelt for the month. Individual sites range from 0% to near 300% of average. Precipitation during April was below normal at 73% of average, bringing the seasonal accumulation (Oct-Apr) to 103% of average. Snowmelt runoff conditions are very near average and near to above normal streamflows are expected. Reservoir storage on the Weber system is at 69% of capacity and all reservoirs should easily fill.

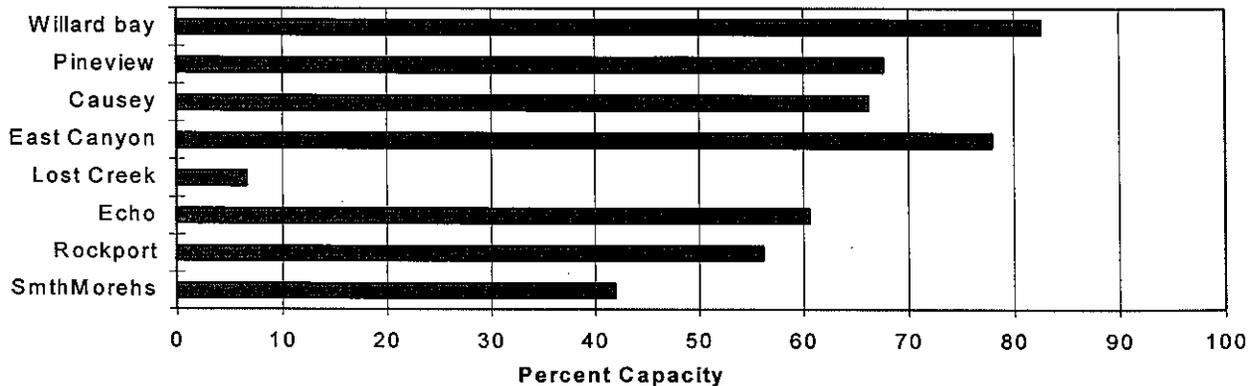
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - May 1, 1998

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)		
SMITH AND MOREHOUSE CK nr Oakley	APR-JUN	26	30	32	107	35	38	30
WEBER R nr Oakley	APR-JUL	118	128	134	110	140	150	122
ROCKPORT RESEROIR inflow	APR-JUL	126	137	144	108	151	162	134
CHALK CK at Coalville, Ut	APR-JUL	36	44	49	111	54	62	44
WEBER R nr Coalville, Ut	APR-JUL	126	139	148	109	157	170	136
ECHO RESEROIR Inflow	APR-JUL	154	178	195	111	212	236	176
LOST CK Res Inflow	APR-JUL	11.0	15.2	18.0	105	21	25	17.2
E CANYON CK nr Morgan	APR-JUL	22	27	31	103	35	40	30
WEBER R at Gateway	APR-JUL	316	357	385	111	413	454	347
S FORK OGDEN R nr Huntsville	APR-JUL	61	68	72	114	76	83	63
PINEVIEW RESEROIR Inflow	APR-JUL	119	137	150	121	163	181	124
WHEELER CK nr Huntsville	APR-JUL	5.59	6.55	7.20	116	7.85	8.81	6.20

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

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - May 1, 1998

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Aver
CAUSEY	7.1	4.7	7.1	2.6	OGDEN RIVER	4	78	137
EAST CANYON	49.5	38.6	37.3	41.5	WEBER RIVER	8	74	140
ECHO	73.9	44.8	27.5	54.2	WEBER & OGDEN WATERSHEDS	12	76	139
LOST CREEK	22.5	1.5	2.9	14.3				
PINEVIEW	110.1	74.5	65.5	76.6				
ROCKPORT	60.9	34.2	27.7	36.8				
WILLARD BAY	215.0	177.7	173.1	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.

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

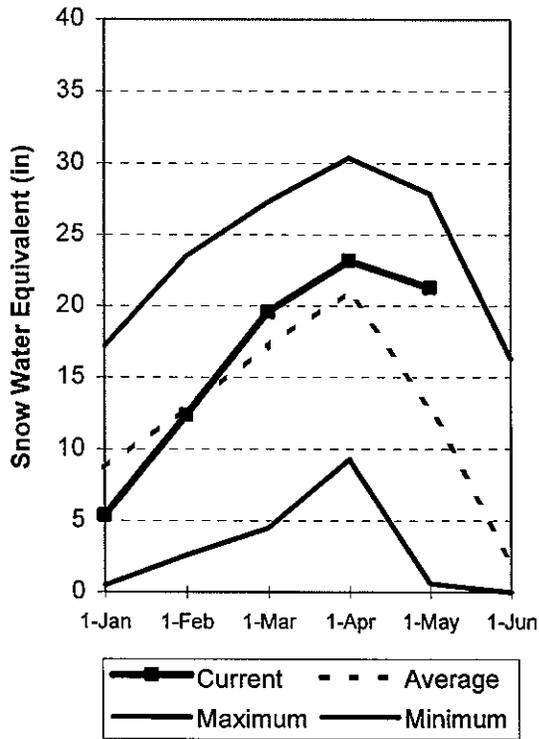
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Utah Lake, Jordan River & Tooele Valley Basins

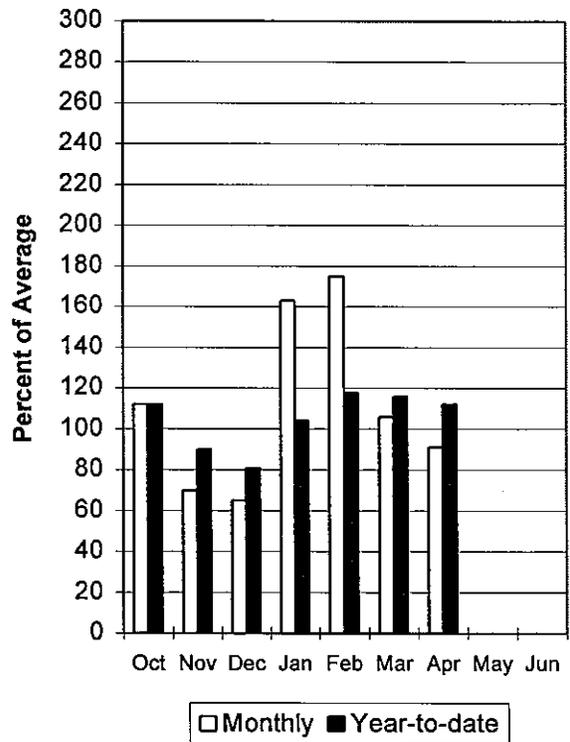
May 1, 1998

Snowpacks over these watersheds are above average at 153% of normal, up percentagewise significantly from last month and still just 88% of last year. Lower than normal snowmelt (23%), not an increase in snowpack, accounts for the increase. Individual sites range from 0% to 350% of average. The Tooele Valley area is much above average (180%) due to lake effect storms. Precipitation during April was near normal at 91% , bringing the seasonal accumulation (Oct-Apr) to 112% of average. Reservoir storage is at 97% of capacity. Water supply conditions are near normal and near average runoff is expected.

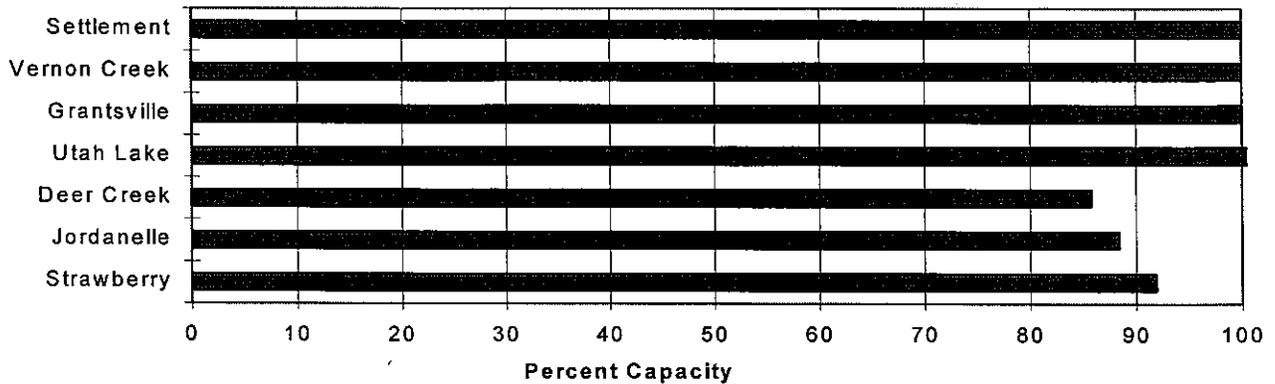
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow forecasts - May 1, 1998

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)	
PAYSON CK nr Payson	APR-JUL	1.32	3.12	4.30	98	5.48	7.30	4.40		
SPANISH FORK nr Castilla	APR-JUL	16.3	49	68	92	87	120	74		
HOBBLE CK nr Springville	APR-JUL	14.5	17.6	19.0	101	20	24	18.8		
PROVO R nr Hailstone	APR-JUL	66		97	89		128	109		
PROVO R below Deer Creek Dam	APR-JUL	65		110	86		155	128		
AMERICAN FORK nr American Fk.	APR-JUL	28	32	34	106	36	40	32		
UTAH LAKE inflow	APR-JUL	126		270	83		415	324		
L COTTONWOOD CRK nr SLC	APR-JUL	38	43	45	115	48	52	39		
BIG COTTONWOOD CRK nr SLC	APR-JUL	39	43	46	121	49	53	38		
PARLEY'S CK nr SLC	APR-JUL	11.8	16.1	18.8	118	22	26	15.9		
MILL CK nr SLC	APR-JUL	4.88	6.50	7.50	115	8.50	10.07	6.50		
DELL FK nr SLC	APR-JUL	4.40	6.75	8.00	113	9.25	11.57	7.10		
EMIGRATION CK nr SLC	APR-JUL	2.02	3.75	4.80	114	5.85	7.60	4.20		
CITY CK nr SLC	APR-JUL	6.97	9.05	10.30	124	11.55	13.61	8.30		
VERNON CK nr Vernon (in Acre Feet)	APR-JUL	1261	1709	2100	157	2580	3497	1340		
SETTLEMENT CK nr Tooele (in Acre Fee	APR-JUL	2773	3129	3400	148	3694	4169	2300		
S WILLOW CK nr Grantsville	APR-JUL	2.79	3.87	4.60	148	5.33	6.41	3.		

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

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - May 1, 1998

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	128.5	113.6	106.9	PROVO RIVER & UTAH LAKE	7	74	113
GRANTSVILLE	3.3	3.3	3.3	---	PROVO RIVER	4	67	106
SETTLEMENT CREEK	1.0	1.0	0.8	0.7	JORDAN RIVER & GREAT SALT	5	82	175
STRAWBERRY-ENLARGED	1105.9	1017.0	880.3	---	TOOELE VALLEY WATERSHEDS	4	120	180
UTAH LAKE	870.9	950.8	960.5	766.8	UTAH LAKE, JORDAN RIVER &	16	88	153
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.

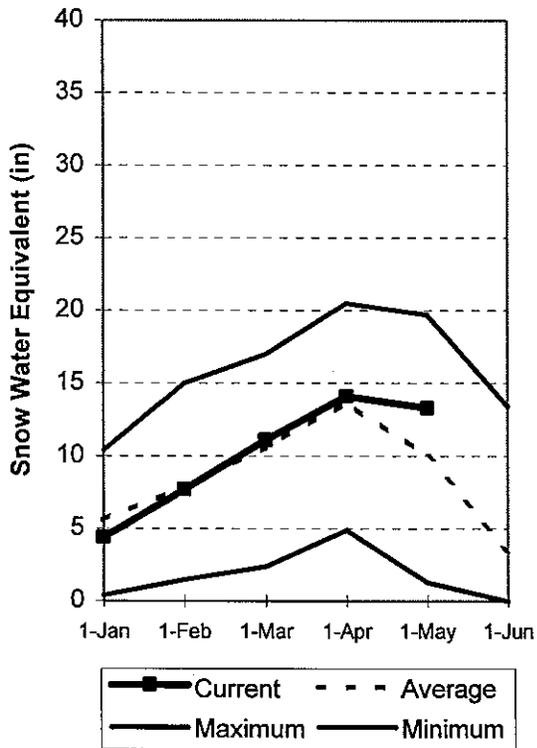
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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

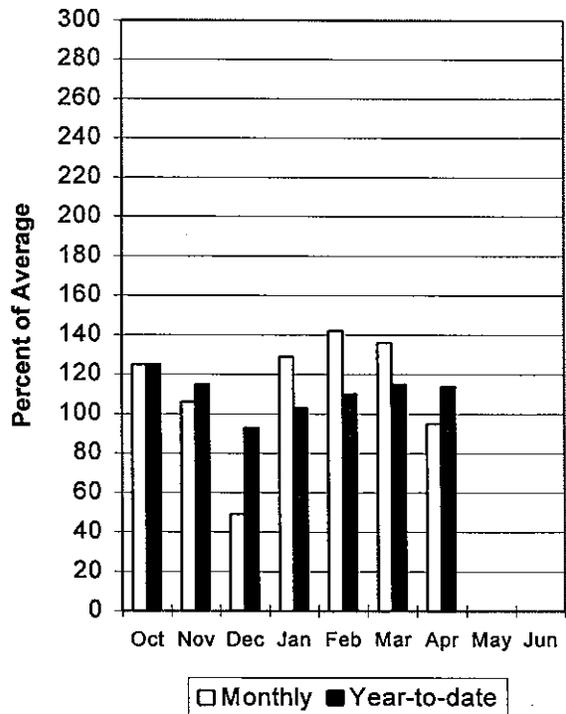
Uintah Basin and Dagget SCD's May 1, 1998

Snowpacks across the Uintah Basin and North Slope areas are above average (133%). The North Slope is at 167% and the Uintah Basin ranges from near 110% to 140% of average. Snowpacks in these areas are 88% of last year. April was very cool and had only 22% of the average snowmelt. Precipitation during April was near 95% of normal, bringing the seasonal accumulation (Oct-Apr) to 114% of average. Reservoir storage is at 91% of capacity. Water supply conditions are excellent on both the north slope and the Uintah Basin. Snowmelt streamflow is expected to be near to above normal.

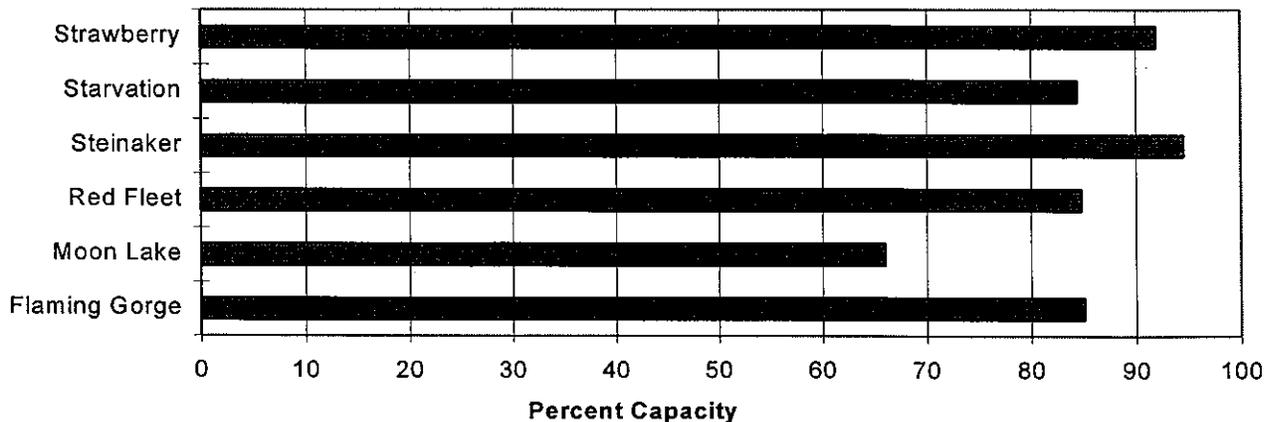
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - May 1, 1998

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Future Conditions		Wetter		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
MEEKS CABIN RESERVOIR Inflow	APR-JUL	90	98	103	107	108	116	96
STATE LINE RESERVOIR INFLOW	APR-JUL	26	30	33	110	36	40	30
HENRYS FORK nr Manila	APR-JUL	34	47	56	133	65	78	42
FLAMING GORGE RES INFLOW	APR-JUL			1100	92			1196
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	16.4	20	23	116	26	30	19.8
ASHLEY CK nr Vernal	APR-JUL	46	54	60	118	66	74	51
WF DUCHESNE RIVER nr Hanna	APR-JUL	17.2	22	26	100	30	37	26
DUCHESNE R nr Tabiona	APR-JUL	92	101	107	102	113	122	105
ROCK CK nr Mountain Home	APR-JUL	78	88	95	101	102	112	94
UPPER STILLWATER RESV inflow	APR-JUL	64	75	82	101	90	100	81
DUCHESNE R abv Knight Diversion	APR-JUL	152	178	195	103	212	238	189
STRAWBERRY RES nr Soldier Springs	APR-JUL	43	53	60	102	68	80	59
CURRENT CREEK RESV Inflow	APR-JUL	16.5	19.8	22	105	24	28	21
STARVATION RESERVOIR inflow	APR-JUL	95	113	125	107	137	155	117
MOON LAKE Inflow	APR-JUL	66	74	80	116	86	94	69
YELLOWSTONE R nr Altonah	APR-JUL	64	73	80	123	87	96	65
DUCHESNE R at Myton	APR-JUL	221	277	315	120	353	409	2
WHITEROCKS R nr Whiterocks	APR-JUL	56	65	72	124	79	88	
UINTA R nr Neola	APR-JUL	79	93	103	121	113	127	85
DUCHESNE R nr Randlett	APR-JUL	179	314	405	124	496	631	328

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

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - May 1, 1998

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	3190.6	3087.0	---	UPPER GREEN RIVER in UTAH	6	101	167
MOON LAKE	49.5	32.7	26.2	31.8	ASHLEY CREEK	2	88	162
RED FLEET	25.7	21.8	17.9	---	BLACK'S FORK RIVER	2	103	123
STEINAKER	33.4	31.6	25.6	23.0	SHEEP CREEK	1	123	400
STARVATION	165.3	139.6	129.3	113.5	DUCHESNE RIVER	11	83	121
STRAWBERRY-ENLARGED	1105.9	1017.0	880.3	---	LAKE FORK-YELLOWSTONE CRE	4	89	113
					STRAWBERRY RIVER	4	67	123
					UINTAH-WHITEROCKS RIVERS	2	97	143
					UINTAH BASIN & DAGGET SCD	17	88	133

* 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.

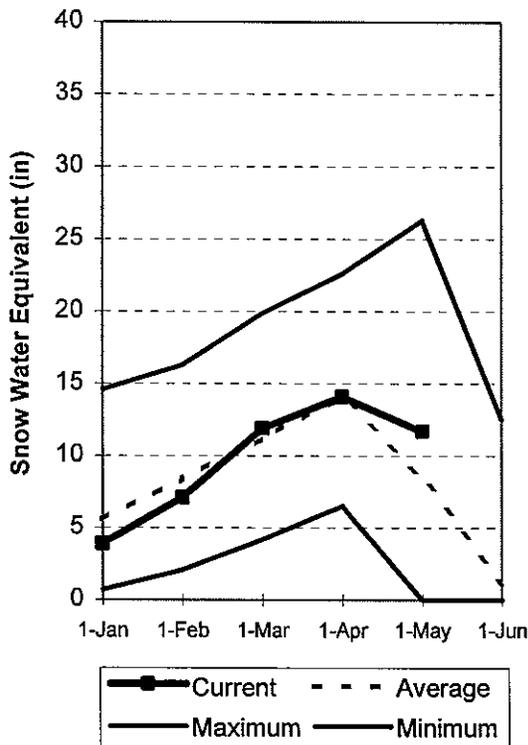
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

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

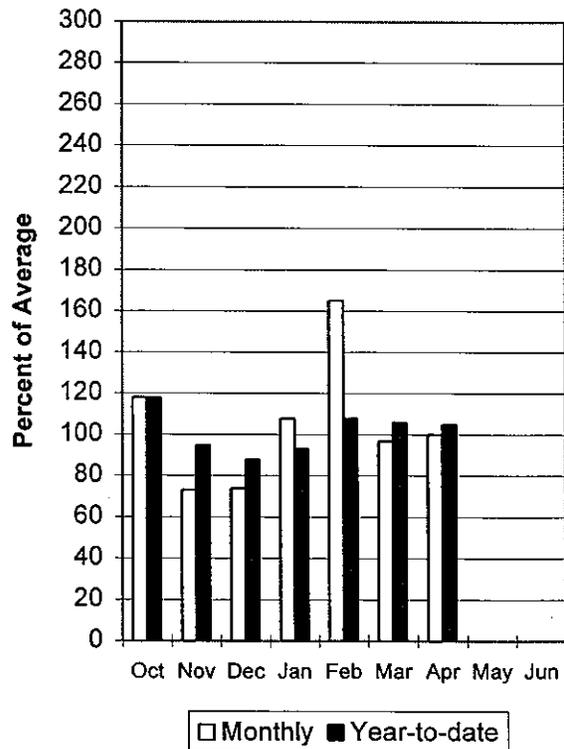
Carbon, Emery, Wayne, Grand and San Juan Co. May 1, 1998

Snowpacks in this region are at 139% of average, only 77% of last year. Individual sites range from 0% to over 400% of average. Although the percent of average is higher this month than last, it does not reflect more snow, merely that April was cool and had only 43% of normal snowmelt. Precipitation during April was average at 100%, bringing the seasonal accumulation (Oct-Apr) to 105% of normal. Reservoir storage is at 75% of capacity. General water supply conditions are near average throughout the region and near average flows are expected.

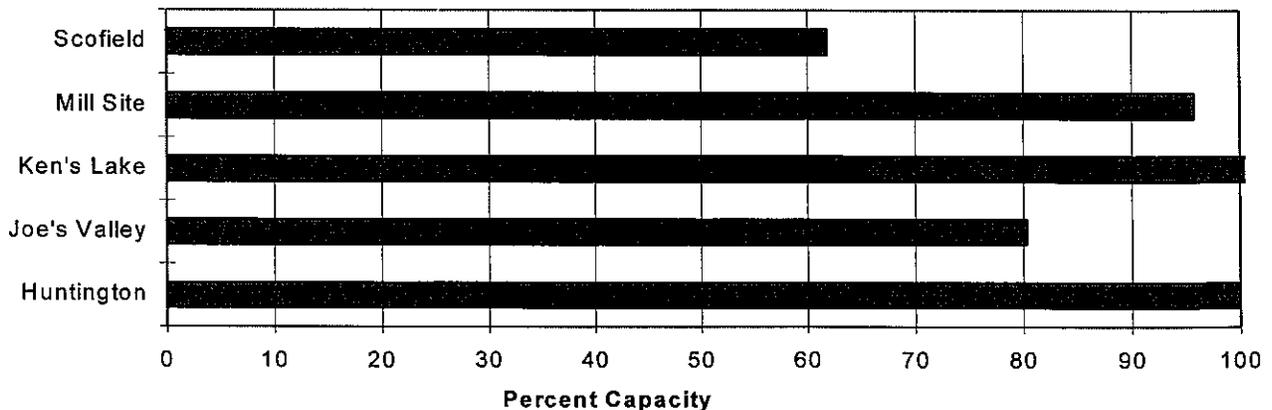
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - May 1, 1998

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)		
GOOSEBERRY CK nr Scofield	APR-JUL	7.8	10.4	11.5	98	12.6	15.2	11.7
SCOFIELD RESV Inflow	APR-JUL	13.2	37	40	91	43	67	44
WHITE R blw Tabbyune Ck	APR-JUL	11.1	14.6	17.0	91	19.4	23	18.7
GREEN R at Green River, UT	APR-JUL	2700	3057	3300	105	3543	3900	3151
ELECTRIC LAKE inflow	APR-JUL	12.0	14.3	16.0	106	17.9	21	15.1
HUNTINGTON CK nr Huntington	APR-JUL	18.9	39	42	102	45	65	41
JOE'S VALLEY RESV Inflow	APR-JUL	36	46	53	100	60	70	53
FERRON CK nr Ferron	APR-JUL	33	38	42	108	46	51	39
COLORADO R nr Cisco	APR-JUL	3281	3739	4050	98	4361	4819	4132
MILL CK at Sheley Tunnel	APR-JUL	4.12	5.41	6.50	108	7.81	10.25	6.00
SEVEN MILE CK nr Fish Lake	APR-JUL	4.02	6.09	7.50	115	8.91	10.98	6.50
MUDDY CK nr Emery	APR-JUL	16.1	18.8	21	107	23	26	19.6
LLOYD'S RESERVOIR inflow	MAR-JUL	1.28	1.77	3.20	110	4.63	6.74	2.90
RECAPTURE RESERVOIR inflow	MAR-JUL	2.11	3.60	4.85	121	6.28	8.72	4.00
SAN JUAN R nr Bluff	APR-JUL	732	913	1035	90	1157	1338	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, 1998

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	62	130
JOE'S VALLEY	61.6	49.5	29.2	46.8	SAN RAFAEL RIVER	3	73	111
KEN'S LAKE	2.3	2.4	1.4	---	MUDDY CREEK	1	75	117
MILL SITE	16.7	16.0	12.7	6.3	FREMONT RIVER	3	93	165
SCOFIELD	65.8	40.7	26.4	36.6	LASAL MOUNTAINS	1	170	144
					BLUE MOUNTAINS	1	63	400
					WILLOW CREEK	1	143	0
					CARBON, EMERY, WAYNE, GRA	13	77	139

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

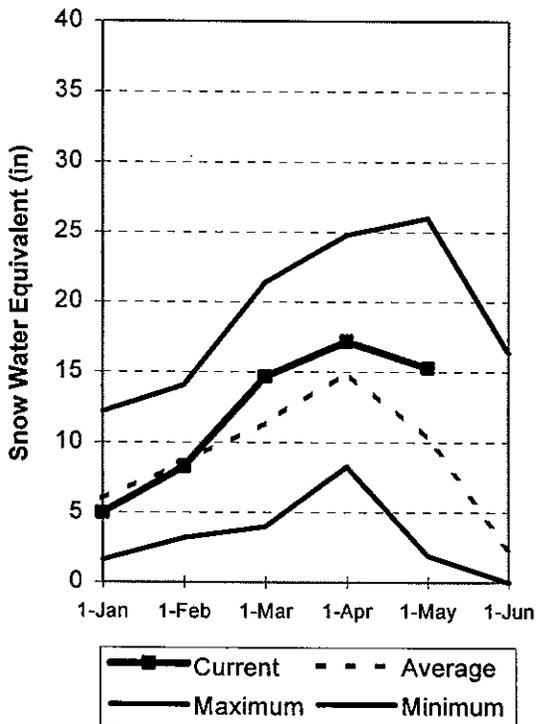
The average is computed for the 1961-1990 base period.

- (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.

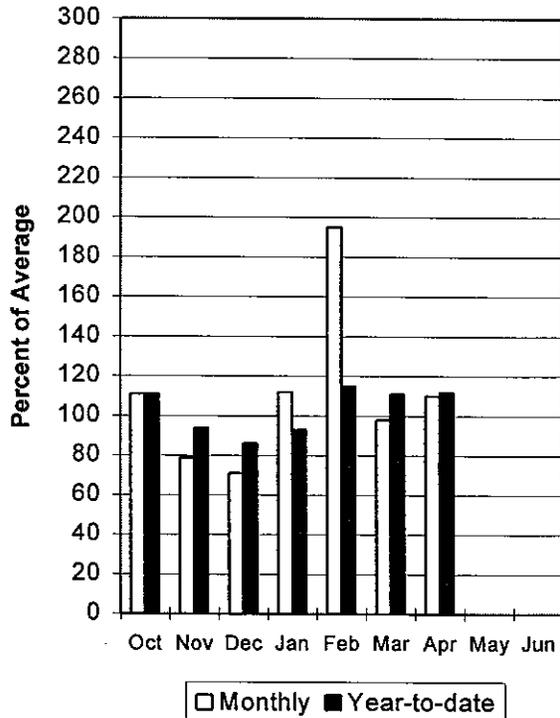
Sevier and Beaver River Basins May 1, 1998

Snowpacks on the Sevier River Basin are much above normal at 149% of average, up percentagewise relative to last month. A cool April which resulted in only 40% of normal snowmelt, not increased snow water equivalent, accounted for the steep percent of average snowpack increase. The Beaver River Basin is the highest at 157% while the lower Sevier is lowest at 132% of normal. Individual sites range from 0% to 225% of average. Precipitation during April was near average at 110% of normal, bringing the seasonal accumulation (Oct-Apr) to 112% of average. Reservoir storage is at 92% of capacity. General water supply conditions are near to above average.

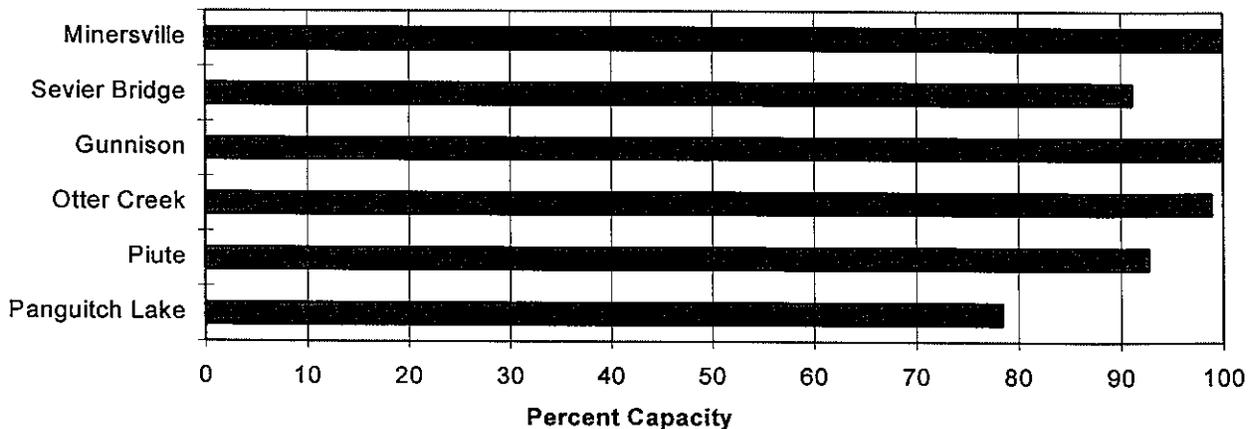
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - May 1, 1998

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)	
SEVIER R at Hatch	APR-JUL	52	62	68	126	74	84	54		
SEVIER R nr Circleville	APR-JUL	66	81	90	120	99	114	75		
SEVIER R nr Kingston	APR-JUL	72	89	99	119	109	126	83		
ANTIMONY CK nr Antimony	APR-JUL	6.73	7.86	8.50	115	9.14	10.29	7.40		
E F SEVIER R nr Kingston	APR-JUL	18.9	32	39	130	46	59	30		
SEVIER R blw Piute Dam	APR-JUL	76		131	114		186	115		
CLEAR CK nr Sevier	APR-JUL	17.0	22	24	114	27	31	21		
SALINA CK at Salina	APR-JUL	0.5	10.6	17.0	97	23	36	17.6		
PLEASANT CK nr Pleasant	APR-JUL	6.46	7.51	8.00	94	8.49	9.52	8.50		
EPHRAIM CK nr Ephraim	APR-JUL	10.0	12.2	13.5	107	14.8	17.1	12.6		
SEVIER R nr Gunnison	APR-JUL	60	180	265	111	350	471	239		
CHICKEN CK nr Levan	APR-JUL	4.01	4.89	5.60	119	6.42	7.83	4.70		
OAK CK nr Oak City (Acre Feet)	APR-JUL	1540	1851	2100	118	2382	2863	1777		
BEAVER R nr Beaver	APR-JUL	27	31	35	135	39	46	26		
MINERSVILLE RESERVOIR Inflow	APR-JUL	21	22	23	138	24	25	16.7		

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

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - May 1, 1998

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	20.3	18.0	14.9	UPPER SEVIER RIVER (south	7	157	165
MINERSVILLE (RkyFd)	23.3	23.3	15.1	14.6	EAST FORK SEVIER RIVER	2	123	168
OTTER CREEK	52.5	51.9	48.4	39.5	SOUTH FORK SEVIER RIVER	5	179	164
PIUTE	71.8	66.6	61.3	44.7	LOWER SEVIER RIVER (inclu	6	97	132
SEVIER BRIDGE	236.0	215.1	185.7	136.0	BEAVER RIVER	2	107	157
PANGUITCH LAKE	22.3	17.5	13.3	---	SEVIER & BEAVER RIVER BAS	15	118	149

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

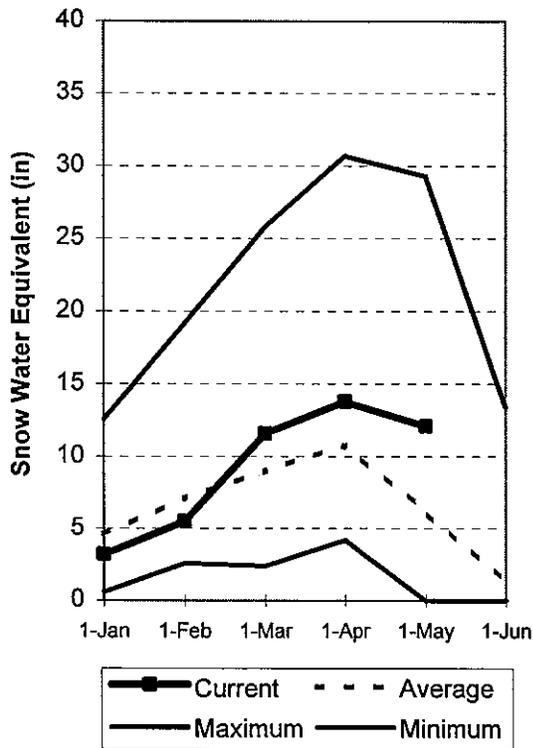
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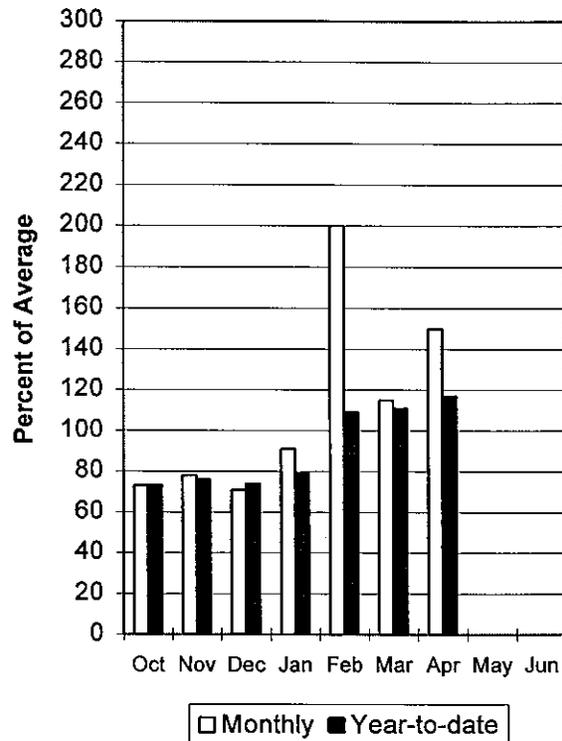
E. Garfield, Kane, Washington, & Iron co. May 1, 1998

Snowpacks in this region are much above normal at 195% of average, about 220% of last year. Individual sites range from 0% to over 430% of average. A cool April has resulted in much below normal snowmelt, 37% of average thus far in the season. Snowmelt should progress rapidly from here on and streamflows will increase quickly as well. Precipitation during April was much above normal at 150% of average, bringing the seasonal accumulation (Oct-Apr) to 117% of normal. Reservoir storage is at 100% of capacity. General water supply conditions are above average.

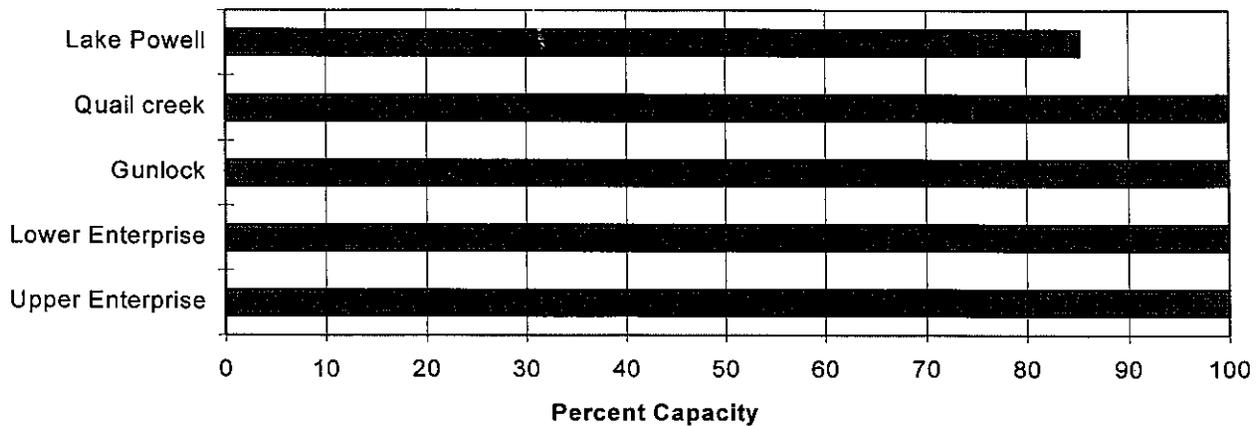
Mountain Snowpack



Precipitation



Reservoir Storage 4/30/98



E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - May 1, 1998

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)
COAL CK nr Cedar City	APR-JUL	15.0	20	23	122	26	31	18.8
LAKE POWELL INFLOW	APR-JUL			7700	100			7735
VIRGIN R nr Hurricane	APR-JUL	50		90	114		135	79
SANTA CLARA R nr Pine Valley	APR-JUL	3.02		6.80	128		10.02	5.30

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

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - May 1, 1998

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	9.9	---	VIRGIN RIVER	5	294	194
LAKE POWELL	24322.0	20746.0	19108.0	---	PAROWAN	2	208	169
QUAIL CREEK	40.0	40.0	40.0	---	ENTERPRISE TO NEW HARMONY	2	0	105
UPPER ENTERPRISE	10.0	10.0	5.5	---	COAL CREEK	2	267	192
LOWER ENTERPRISE	2.6	2.6	1.2	---	ESCALANTE RIVER	2	108	216
					E. GARFIELD, KANE, WASHIN	9	219	195

* 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 .FA
 FOR THE STATE OF UTAH
 As of MAY 1, 1998

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
AGUA CANYON SNOTEL	8900	5/01	-	4.0	0.0	-	DRY BREAD POND SNOTEL	8350	5/01	-	14.7	26.7	18.0
ALTA CENTRAL	8800	4/28	93	41.7	46.7	33.6	DRY FORK SNOTEL	7160	5/01	-	17.7	8.4	-
ASHLEY TWIN LAKES	10500					16.7	EAST SHINGLE LAKE	9800					28.6
BEAVER DAMS SNOTEL	8000	5/01	-	3.8	0.0	5.5	EAST WILLOW CREEK SN	8250	5/01	-	6.0	4.2	.0
BEAVER DIVIDE SNOTEL	8280	5/01	-	3.4	4.0	3.4	FARMINGTON CANYON L.	6950	4/26	84	36.9	26.6	21.9
BEN LOMOND PK SNOTEL	8000	5/01	-	54.6	63.8	33.9	FARMINGTON CN SNOTEL	8000	5/01	-	41.5	50.5	19.9
BEN LOMOND TR SNOTEL	6000	5/01	-	18.6	16.3	6.4	FARNSWORTH LK SNOTEL	9600	5/01	-	24.4	26.6	21.0
BEVAN'S CABIN	6450	4/26	39	16.7	6.2	4.6	FISH LAKE	8700	4/27	24	10.4	1.4	5.2
BIG FLAT SNOTEL	10290	5/01	-	26.7	24.6	20.2	FIVE POINTS LAKE SNO	10920	5/01	-	21.2	24.7	17.8
BIRCH CROSSING	8100	4/30	6	2.8	0.0	1.9	FRANCES FLATS	6700	4/29	39	18.6	6.1	0.7
BLACK FLAT-U.M. CK S	9400	5/01	-	5.4	9.2	6.6	G.B.R.C. HEADQUARTER	8700	4/27	42	16.9	17.1	15.4
BLACK'S FORK GS-EF	9340	4/28	30	10.4	6.8	9.2	G.B.R.C. MEADOWS	10000	4/27	68	27.1	33.7	26.1
BLACK'S FORK JUNCTN	8930	4/26	24	9.1	6.5	7.4	GARDEN CITY SUMMIT	7600	4/26	40	16.3	22.0	15.9
BOX CREEK SNOTEL	9800	5/01	-	14.7	11.1	8.8	GEORGE CREEK	8840					-
BRIAN HEAD	10000	4/27	78	29.3	20.8	21.6	GOOSEBERRY R.S.	8400	4/27	28	11.9	9.7	9.1
BRIGHTON CABIN	8700	5/01	63	29.3	31.9	24.8	GOOSEBERRY R.S. SNOT	7900	5/01	-	0.4	0.0	3.7
BRIGHTON SNOTEL	8750	5/01	-	25.2	29.5	16.9	HARDSCRABBLE SNOTEL	7250	5/01	-	11.2	13.1	10.6
BROWN DUCK SNOTEL	10600	5/01	-	21.3	27.2	20.3	HARRIS FLAT SNOTEL	7700	5/01	-	3.0	0.0	1.9
BRYCE CANYON	8000	4/30	0	0.0	0.0	0.8	HAYDEN FORK SNOTEL	9100	5/01	-	11.0	15.0	6.6
BUCK FLAT SNOTEL	9800	5/01	-	17.8	27.5	13.9	HENRY'S FORK	10000	4/26	55	20.7	11.5	13.6
BUCK PASTURE	9700	4/26	53	18.7	13.9	17.1	HEWINTA SNOTEL	9500	5/01	-	9.1	8.6	5.3
BUCKBOARD FLAT	9000	5/05	18	6.6	1.2	7.4	HICKERSON PARK SNOTE	9100	5/01	-	11.6	9.4	2.9
BUG LAKE SNOTEL	7950	5/01	-	17.7	34.3	16.0	HIDDEN SPRINGS	5500	4/29	0	0.0	0.0	0.4
BURT'S-MILLER RANCH	7900	4/26	0	0.0	0.0	2.0	HOBBLE CREEK SUMMIT	7420	4/27	24	10.6	10.8	7.3
CAMP JACKSON SNOTEL	8600	5/01	-	8.0	12.6	2.0	HOLE-IN-ROCK SNOTEL	9150	5/01	-	8.4	8.0	2.3
CASTLE VALLEY SNOTEL	9580	5/01	-	13.0	3.5	6.6	HORSE RIDGE SNOTEL	8260	5/01	-	16.7	33.5	14.4
CHALK CK #1 SNOTEL	9100	5/01	-	23.9	35.0	22.8	HUNTINGTON-HORSESHOE	9800	4/27	72	30.8	33.8	24.9
CHALK CK #2 SNOTEL	8200	5/01	-	11.5	17.4	9.8	INDIAN CANYON SNOTEL	9100	5/01	-	11.5	13.3	6.6
CHALK CREEK #3	7500	4/26	2	0.8	0.0	2.6	JOHNSON VALLEY	8850	4/27	18	7.6	1.3	3.8
CHEPETA SNOTEL	10300	5/01	-	16.8	14.6	12.0	KILFOIL CREEK	7300	4/26	30	12.7	17.8	9.9
CITY CREEK	7500	4/29	65	33.4	28.2	18.3	KILLYON CANYON	6300	4/27	0	0.0	0.0	-
CLEAR CK RIDG #1 SNT	9200	5/01	-	16.4	25.5	14.1	KIMBERLY MINE SNOTEL	9300	5/01	-	18.5	15.6	12.1
CLEAR CK RIDG #2 SNT	8000	5/01	-	7.7	11.2	5.6	KING'S CABIN SNOTEL	8730	5/01	-	9.6	12.7	6.0
CLEAR CREEK RIDGE #3	6600					0.1	KIOWA NARROWS	7400	4/26	30	14.0	18.8	14.1
COLD WATER SPRINGS	6030					-	KOLOB SNOTEL	9250	5/01	-	32.8	10.5	16.4
CORRAL	8200					-	LAKEFORK #1 SNOTEL	10100	5/01	-	18.7	12.6	10.3
CURRENT CREEK SNOTEL	8000	5/01	-	2.9	5.2	2.6	LAKEFORK BASIN SNOTE	10900	5/01	-	23.0	30.2	25.9
DANIELS-STRAWBERRY S	8000	5/01	-	10.8	17.1	9.7	LAKEFORK MOUNTAIN #3	8400	4/26	12	4.5	5.8	1.8
DESERET PEAK	9250					18.2	LAMBS CANYON	7400	4/30	27	12.2	10.7	9.2
DESERET PEAK AM	9250					15.3	LASAL MOUNTAIN LOWER	8800	5/05	2	1.0	2.6	4.6
DESERET PEAK SNOTEL	9250	5/01	-	29.7	28.6	20.6	LASAL MOUNTAIN SNOTE	9850	5/01	-	11.4	6.7	7.9
DILL'S CAMP SNOTEL	9200	5/01	-	10.4	13.9	8.9	LILLY LAKE SNOTEL	9050	5/01	-	12.2	16.1	8.7
DONKEY RESERVOIR SNO	9800	5/01	-	8.2	8.5	1.9	LITTLE BEAR LOWER	6000	4/26	22	9.1	1.5	1.6

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
LITTLE BEAR SNOTEL	6550	5/01	-	4.4	4.5	2.4	THISTLE FLAT	8500					
LITTLE GRASSY SNOTEL	6100	5/01	-	0.0	0.0	.0	TIMBERLINE	9100					
LONG FLAT SNOTEL	8000	5/01	-	2.1	0.0	2.0	TIMPANOGOS DIVIDE SN	8140	5/01	-	19.3	26.6	16.8
LONG VALLEY JCT. SNT	7500	5/01	-	0.0	0.0	.0	TONY GROVE LK SNOTEL	8400	5/01	-	39.5	55.0	30.5
LOOKOUT PEAK SNOTEL	8200	5/01	-	30.8	35.7	10.0	TONY GROVE R.S.	6250	4/26	13	5.1	4.0	3.2
LOST CREEK RESERVOIR	6130	4/26	4/26	0.68	23.9	38.0	25.7						
MAMMOTH-COTTONWOOD SNT	8800	5/01	-	17.8	29.1	12.4	TRIAL LAKE SNOTEL	9960	5/01	-	23.9	37.9	24.0
MERCHANT VALLEY SNOT	8750	5/01	-	15.6	14.8	6.7	TROUT CREEK SNOTEL	9400	5/01	-	11.5	11.3	7.0
MIDDLE CANYON	7000	4/26	45	19.4	6.5	8.5	UPPER JOES VALLEY	8900	4/27	17	7.4	6.3	5.7
MIDWAY VALLEY SNOTEL	9800	5/01	-	32.0	18.1	20.0	VERNON CREEK SNOTEL	7500	5/01	-	13.6	4.7	4.6
MILL CREEK	6950	4/30	57	24.2	24.5	18.8	VIPONT	7670					
MILL-D NORTH SNOTEL	8960	5/01	-	28.5	35.6	13.2	WEBSTER FLAT SNOTEL	9200	5/01	-	16.3	0.0	5.1
MILL-D SOUTH FORK	7400	5/01	33	15.6	15.5	13.4	WHITE RIVER #1 SNOTE	8550	5/01	-	8.2	13.5	6.2
MINING FORK SNOTEL	8000	5/01	-	27.9	26.6	13.1	WHITE RIVER #3	7400	4/27	0	0.0	0.0	0.6
MONTE CRISTO SNOTEL	8960	5/01	-	28.1	42.5	26.2	WIDTSONE #3 SNOTEL	9500	5/01	-	14.7	12.8	8.7
MOSSY MTN. SNOTEL	9500	5/01	-	15.2	18.5	10.4	WRIGLEY CREEK	9000	4/27	28	10.2	11.1	8.0
MT. BALDY R.S.	9500	4/27	72	28.8	33.7	25.2	YANKEE RESERVOIR	8700	4/27	33	11.9	9.5	6.6
MUD CREEK #2	8600	4/27	30	12.6	17.5	8.2	NOTE:						
OAK CREEK	7760	4/27	44	16.1	7.6	9.0	The S flag following Water Content for SNOTEL sites indicates telemetered						
PANQUITCH LAKE	8200	4/27	0	0.0	0.0	1.1	data.						
PARLEY'S CANYON SNOT	7500	5/01	-	10.1	9.2	8.5							
PARLEY'S CANYON SUM.	7500	4/30	35	16.2	17.2	12.8							
PAYSON R.S. SNOTEL	8050	5/01	-	15.1	9.0	11.6							
PICKLE KEG SNOTEL	9600	5/01	-	15.7	14.9	14.0							
PINE CREEK SNOTEL	8800	5/01	-	29.5	24.2	13.0							
RED PINE RIDGE SNOTE	9200	5/01	-	11.5	14.4	12.2							
REDDEN MINE LOWER	8500	4/26	43	19.2	18.7	16.5							
REES'S FLAT	7300	4/27	20	8.4	4.1	7.8							
ROCK CREEK SNOTEL	7900	5/01	-	2.0	4.3	1.1							
ROCKY BN-SETTLEMT SN	8900	5/01	-	35.3	29.0	21.0							
SEELEY CREEK SNOTEL	10000	5/01	-	16.6	21.3	15.1							
SILVER LAKE (BRIGHT.)	8730	4/28	66	31.8	35.4	26.8							
SMITH MOREHOUSE SNTL	7600	5/01	-	8.7	8.2	6.1							
SNOWHARD SNOTEL	9700	5/01	-	43.2	57.2	30.0							
SPIRIT LAKE	10300	4/28	66	20.3	15.5	15.3							
SQUAW SPRINGS	9300	4/27	20	7.6	2.7	4.1							
STEEL CREEK PARK SNO	10100	5/01	-	20.7	20.4	18.9							
STILLWATER CAMP	8550	4/26	23	8.6	7.5	7.5							
STRAWBERRY DIVIDE SN	8400	5/01	-	12.3	20.1	11.5							
STUART R.S.	7950					1.9							
SUSC RANCH	8200	4/30	14	6.8	0.0	2.6							
TALL POLES	8800	4/30	46	19.5	13.2	11.9							
THAYNES CANYON SNOTL	9200	5/01	-	27.9	29.7	12.0							

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