United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report June 1, 2003

Smiley Mountain SNOTEL site -- installed September 2002
at an elevation of 9,520 feet in the Big Lost River Mountains.

Standard sensors include: snow water, precipitation, and air temperature
Enhanced sensors include: soil moisture and temperature, wind, humidity, solar radiation, and snow depth

Basin Outlook Reports
and
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Boise, Idaho 83709-1574
(208) 378-5740

Internet Web Address
http://www.id.nrcs.usda.gov/snow

Water supply forecasts are produced in cooperation and coordination with the National Weather Service, NOAA

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 snow courses 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.

IDAHO WATER SUPPLY OUTLOOK REPORT

June 1, 2003

SUMMARY

May brought abundant moisture and cold temperatures the first half of the month with record or near record low temperatures on May 18. This changed dramatically to record high temperatures on May 28 in many valley and mountainous locations across central and southern Idaho. May mountainous precipitation ranged from 75-150% of average for May 1-20 with the highest amounts in the west-central mountains. Very little precipitation fell in the later half of May once the extreme high temperatures hit the state. It took about six months to build this winter's snowpack and will take 1-2 months to melt it. Well above average temperatures produce high snowmelt rates, melting the snow quickly and increasing streamflow very rapidly. This is good news and bad news, as it helped to get the snowmelt water into the reservoirs; however, there is not the remaining high elevation snow to sustain stream levels later this summer. Irrigation agricultural water shortages are expected across central, eastern and southern Idaho. Severe shortages will be in the Salmon Falls, Oakley, Blackfoot and the Bear River basins.

SNOWPACK

May started where the month of April, ended with more storms bringing cool, wet weather into Idaho and allowing some snow measuring stations to not reach their peak snow water content until mid-May. Record or near record cold temperatures and snow around May 18 gave way to the record high temperatures 10 days later.

Following is an analysis of May temperature data for Vienna Mine and snowmelt rates for Dollarhide Summit SNOTEL sites which reflect the extreme conditions across central and southern Idaho. The Vienna Mine site is located at 8,960 feet in elevation near the headwaters of the Salmon, South Fork Boise and Big Wood rivers in the heart of central Idaho. This site has 15 years of daily maximum, minimum and average temperature starting in 1989. Because of the short-term record and extreme temperature swings that occurred in May, this analysis is based on May temperature data and not on individual daily maximum and minimum temperatures.

May - Daily Minimum Temperature at Vienna Mine, degrees Fahrenheit:

Lowest May Temperature:	3 F May 8, 2002
Second Lowest Tie:	**9 F May 18, 2003**
	9 F May 10, 1999

The 9 F measured May 19, 2003, is the latest and coldest temperature measured in the 15-year temperature record for Vienna Mine.

May - Daily Maximum Temperature at Vienna Mine, degrees Fahrenheit:

Highest May Temperature:	**82 F May 28, 2003**
Second Highest:	73 F May 29 and 30, 2002

The 82 F measured May 28, 2003, is the earliest and warmest May temperature measured in the 15-year temperature record for Vienna Mine.

Near record and very late seasonal cold temperatures on May 18 gave way to an extended period of above normal temperatures and then record high valley and mountainous temperatures on May 28. This jump started the melting of Idaho's high elevation snowpack and then accelerated the melt rates to amounts that are normally reached just prior to when the sites melt out. During the record high temperatures in late May, many valley weather stations were 20 degrees Fahrenheit above their normal daily highs across central and southern Idaho.

Dollarhide Summit SNOTEL site, located at 8,420 feet and 7 miles west of Ketchum, reached its maximum melt rate of 2.2 inches of snow on May 29. This site was melting an average of 1.5 inches per day for the previous 7 days. Many streams in Idaho reached their peak flows on May 31 and then started decreasing with the onset of cooler temperatures on May 30. Cool temperatures the next few days reduced snowmelt rates to more seasonal rates of an inch a day or so, thus allowing streams to decrease from their peaks. By June 1, the snowmelt rate at Dollarhide Summit had decreased to 0.8 inches as a result of night temperatures near freezing. The rapid and accelerated snowmelt brought the water out of the mountains quickly, muddied the rivers and also carried a lot of trees and woody debris in the rivers.

Ironically, both previous record high and low temperatures for the month of May were from last year, 2002. Last year, the extreme temperatures on May 29 and 30 produced rapid melting of the remaining snow and resulted in the peak streamflow for the Middle Fork Salmon, South Fork Boise and Big Wood rivers.

Current snowpacks are the highest in the Little Salmon River basin at 165% of average as a result of the abundant snow still at the Brundage Reservoir SNOTEL site. Other basins with snowpack at 110-115% of average from north to south are: Priest, Selway, Lochsa, Middle Fork Salmon, South Fork Salmon, North Fork Payette and South Fork Payette. The St. Joe and Boise basins are 85% of average, Big Wood basin is 75%, Big Lost, Little Lost, Henrys Fork and Snake above Palisades are 36%. Elsewhere, most basins are near or all melted out.

PRECIPITATION

Well above average precipitation and cool temperatures the first half of May allowed higher elevation snow measuring sites to continue accumulating snow, especially in the central mountains. Nearly all of May's precipitation fell before May 20. Precipitation in May was the lowest at 75% of average in the central mountains and upper Snake basin and 80-90% in the Panhandle, Clearwater, Salmon, Southside and Bear basins. The west-central mountains received the highest May precipitation at 106% of average. Water year to date precipitation ranges from average in the Clearwater, Salmon and west-central basins to 76% in the Bear River basin.

RESERVOIRS

Reservoir storage continues to vary across the state with near to above average storage in the Boise, Payette, Brownlee, Little Wood, Dworshak reservoirs and Priest Lake. Magic Reservoir increased from 30% full a month ago to 44% full at the end of May. Mackay Reservoir increased from 54% full to 60% full. Jackson Lake and Palisades Reservoir have a combined storage of 63% full, 89% of average. Blackfoot and Oakley reservoirs are only 25% full, 35% of average. Owyhee and Bear Lake reservoirs are 30% full and 37% of average. Salmon Falls Reservoir remains the lowest in the state at only 15% full, 28% of average; 9th lowest May 31 storage since 1922.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report.

STREAMFLOW

Increased snow melt rates in May were both good and bad for water supplies - the temperatures melted a lot of snow quickly, resulting in high flows with some streams near or just above flood stage and moved the water into many reservoirs. Moderate temperatures would have melted the snow gradually with more water soaking into the ground. The bad news is the streams are dropping fairly quickly and there is not the above average higher elevation snowpack to sustain the flows in the later summer months. The exception is the Clearwater basin where the remaining snow could maintain or possibly increase streamflow levels on the tributaries. In general, the hydrograph shape across central Idaho will be more condensed this year with higher flows in a shorter time period due to the rapid melt of the snowpack and lack of above normal snowpacks when compared to the April 1 season peaks to sustain the summer flows. Additional precipitation will help keep streams higher this summer.

Residual streamflow forecasts for the June-July season vary with the remaining snow and elevations. The highest forecasts are from 100-113% of average for Smith Creek, Selway River, Lochsa River, Clearwater River at Spalding, Salmon River at White Bird, Deadwood River, Lake Fork Payette River, North Fork Payette River and Little Wood River. The lowest in the state are 8% of average for Blackfoot River and Bear River below Stewart Dam.

RECREATION

Most snowmelt streamflow peaks have probably occurred. The above average snow in the Selway basin should help maintain summer flows without greatly increasing future flows unless unseasonable hot temperatures and rain occurs. Drafting of reservoirs will start as inflows decrease below irrigation demand. Most southern Idaho reservoirs will be at or near their minimum storage levels by summer's end.

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of May 1, 2003

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

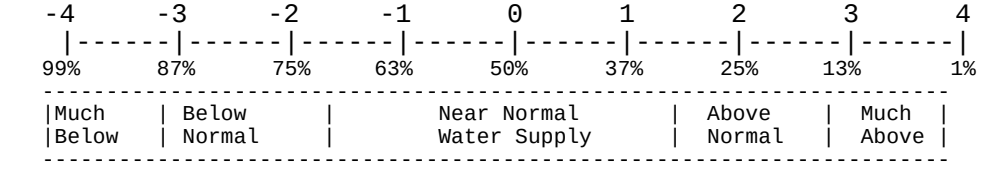
SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US National Weather Service
US Bureau of Reclamation
Idaho Water Users Association
US Army Corps of Engineers
Idaho Dept. of Water Resources
PacifiCorp

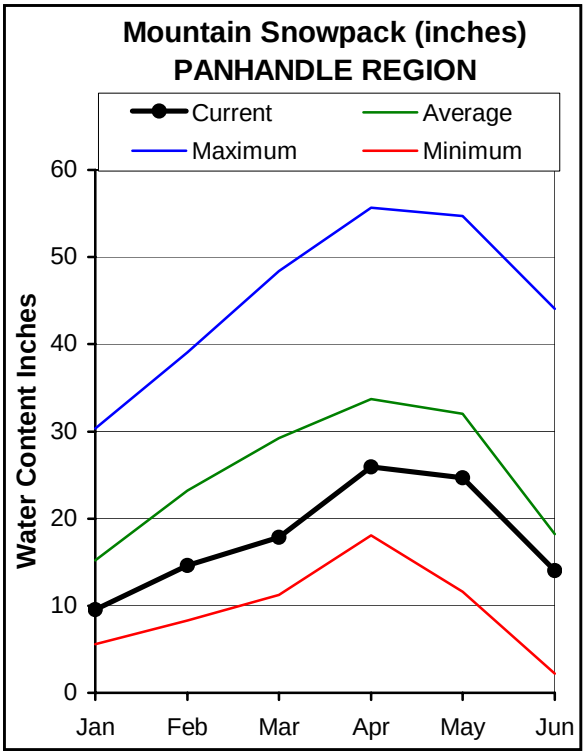
BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-2.4	1989/95	NA
CLEARWATER	1.4	1993	NA
SALMON	0.5	1986	NA
WEISER	-0.1	1986	NA
PAYETTE	-0.3	1981	NA
BOISE	-1.4	2000	-2.6
BIG WOOD	-2.4	2002	-1.4
LITTLE WOOD	-0.3	1996	-2.6
BIG LOST	-0.7	1985	-0.8
LITTLE LOST	-3.0	1992/88	0.0
HENRYS FORK	-2.0	1990/91	-3.3
SNAKE (HEISE)	-2.7	1994/87	-2.3
OAKLEY	-3.2	1990	0.0
SALMON FALLS	-3.3	2001	0.0
BRUNEAU	-2.9	2000	NA
BEAR RIVER	-3.9	2002	-3.8

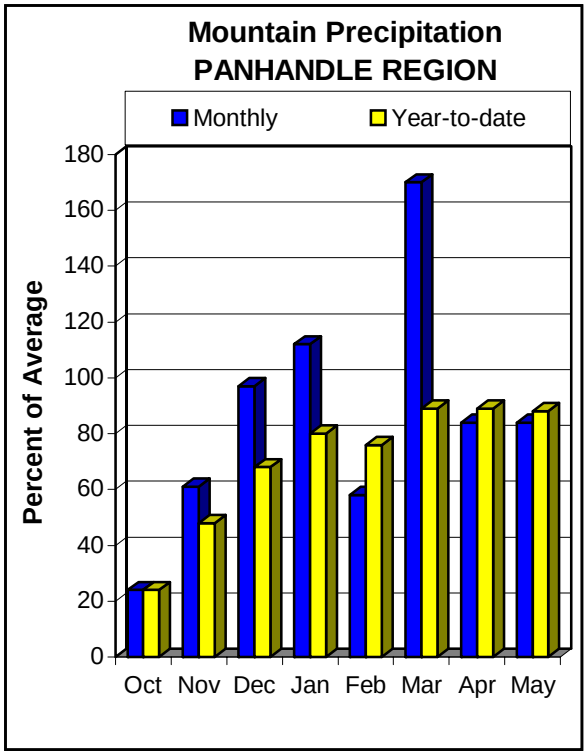
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION



Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.

PANHANDLE REGION
JUNE 1, 2003





WATER SUPPLY OUTLOOK

May precipitation was the same as in April at 84% of average. Water year to date precipitation is 88% of average and less than last year. The Panhandle Region snowpack is 77% of average, but only half of last year at this time. The remaining snow varies with elevation and is melted in the Rathdrum and Hayden Lake basins. The Coeur d'Alene basin is nearly melted at 13% of average. The St. Joe basin with more of its headwaters along the North Fork Clearwater River basin is 84% of average, half of last year. The Spokane basin is half of average and only a quarter of last year. The snowpack is better in the northern half of this region with the Priest basin at 115% of average, Kootenai basin at 74%, and the 44 sites above Pend Oreille Lake at 95% of average. The lakes and reservoirs in Idaho's Panhandle Region are 80-98% of average for the Coeur d'Alene, Pend Oreille and Priest lakes, respectively. Streamflow forecast range from 69% of average for Coeur d'Alene River to 100% for Smith Creek. Surface water supplies should be adequate to meet most, if not all, water users needs in this region.

PANHANDLE REGION
Streamflow Forecasts - June 1, 2003

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)
KOOTENAI at Leonia (1,2)	JUN-JUL	2410	2830	3020	80	3210	3630	3790
	JUN-SEP	3270	3770	4000	82	4230	4730	4880
MOYIE RIVER at Eastport	JUN-JUL	104	124	137	95	150	170	145
	JUN-SEP	114	136	151	94	166	188	160
SMITH CREEK	JUN-JUL	34	44	50	100	56	66	50
	JUN-SEP	37	48	56	100	64	75	56
BOUNDARY CREEK	JUN-JUL	33	40	44	96	48	55	46
	JUN-SEP	38	44	49	94	54	60	52
CLARK FK at Whitehorse Rpds (1,2)	JUN-JUL	3180	4210	4680	78	5150	6180	5984
	JUN-SEP	4060	5210	5730	80	6250	7400	7166
PEND OREILLE Lake Inflow (2)	JUN-JUL	3820	4570	5080	83	5590	6340	6120
	JUN-SEP	4760	5590	6150	84	6710	7540	7290
PRIEST near Priest River (1,2)	JUN-JUL	142	195	220	76	245	300	291
	JUN-SEP	180	240	270	78	300	360	345
COEUR D'ALENE at Enaville	JUN-JUL	43	83	110	69	137	177	159
	JUN-SEP	72	115	145	73	175	217	198
ST. JOE at Calder	JUN-JUL	215	265	300	79	335	385	380
	JUN-SEP	280	330	365	82	400	450	448
SPOKANE near Post Falls (2)	JUN-JUL	295	415	500	74	585	705	676
	JUN-SEP	365	495	580	75	665	795	773
SPOKANE at Long Lake (2)	JUN-JUL	425	560	650	77	740	875	840
	JUN-SEP	605	750	845	80	940	1085	1061

PANHANDLE REGION
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2988.0	2786.0	2588.0
FLATHEAD LAKE	1791.0	1547.0	1570.0	1499.2
NOXON RAPIDS	335.0	332.7	327.4	313.6
PEND OREILLE	1561.3	1222.7	1271.5	1333.1
COEUR D'ALENE	238.5	216.5	437.0	270.4
PRIEST LAKE	119.3	136.0	155.0	138.5

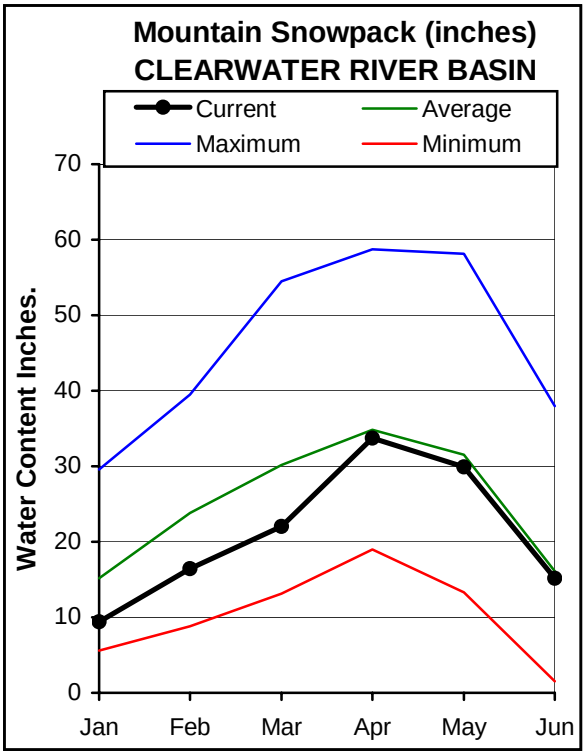
PANHANDLE REGION
Watershed Snowpack Analysis - June 1, 2003

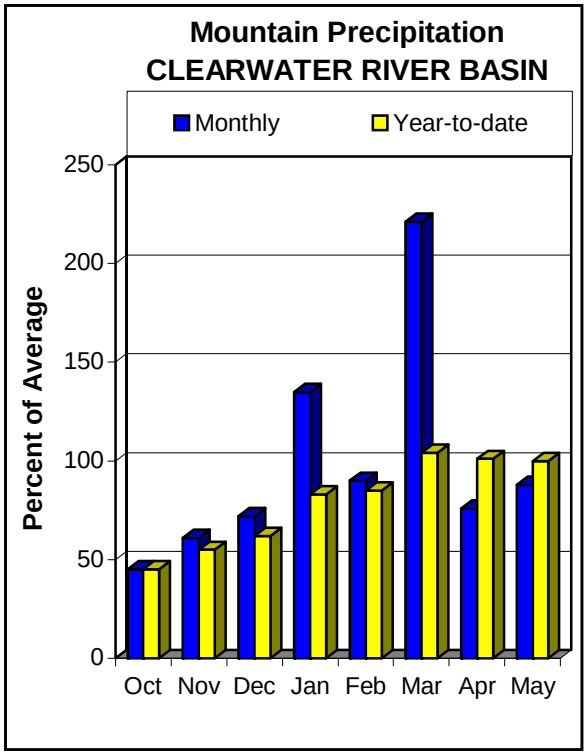
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	9	49	74
Moyie River	2	25	28
Priest River	2	117	115
Pend Oreille River	44	66	95
Rathdrum Creek	1	0	0
Hayden Lake	0	0	0
Coeur d'Alene River	4	7	13
St. Joe River	4	47	84
Spokane River	7	27	48
Palouse River	1	0	0

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

The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

CLEARWATER RIVER BASIN
JUNE 1, 2003





WATER SUPPLY OUTLOOK

May precipitation was 88% of average and is average for the water year. Warm temperatures in the later half of May increased streams rapidly across the snow-dominated basins. The remaining snow in the North Fork Clearwater basin is 91% of average, half of last year, and about the same as in 2000. The Lochsa basin snowpack is average for June 1; half of last year and about the same as in 1991. The Selway basin snowpack is 112% of average and just slightly better than last year. Overall, the Clearwater River snowpack is 96% of average, same as a month ago but much less than last year. Dworshak Reservoir is 89% full and has been passing excess water. The Selway and Lochsa rivers are forecast at 111% of average for the June-July period. Dworshak Reservoir Inflow is forecast at 84% of average. The above average snow in the Selway basin should help maintain summer flows without greatly increasing future flows unless unseasonable hot temperatures and rain occurs.

CLEARWATER RIVER BASIN
Streamflow Forecasts - June 1, 2003

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)
SELWAY near Lowell	JUN-JUL	890	980	1050	111	1120	1210	943
	JUN-SEP	990	1100	1170	111	1240	1350	1051
LOCHSA near Lowell	JUN-SEP	670	720	755	103	790	840	732
DWORSHAK RESV INFLOW (1,2)	JUN-JUL	495	710	805	84	900	1115	960
	JUN-SEP	615	840	945	84	1050	1270	1124
CLEARWATER at Orofino (1)	JUN-JUL	1570	1940	2100	107	2260	2630	1967
	JUN-SEP	1810	2200	2380	107	2560	2950	2222
CLEARWATER at Spalding (1,2)	JUN-JUL	2200	2990	3350	113	3710	4500	2959
	JUN-SEP	2560	3410	3800	113	4190	5040	3374

CLEARWATER RIVER BASIN
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	3089.5	2740.5	3040.7

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - June 1, 2003

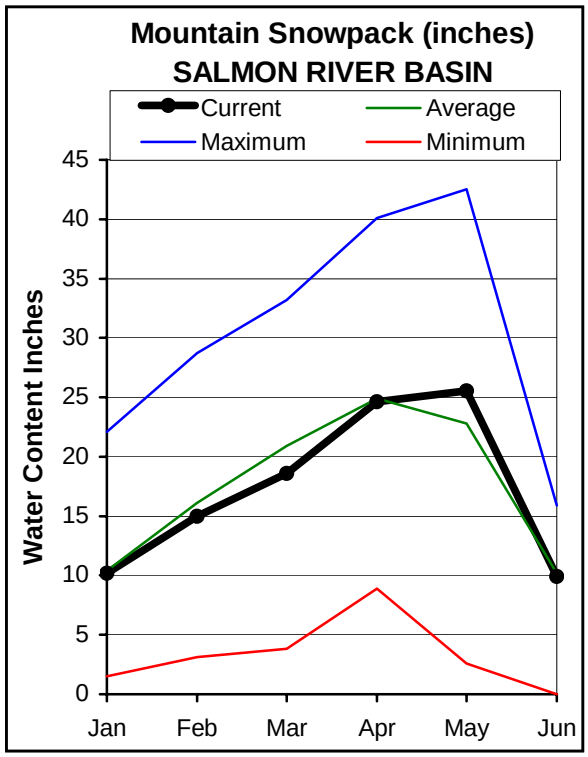
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	8	54	91
Lochsa River	2	52	105
Selway River	4	105	112
Clearwater Basin Total	14	60	96

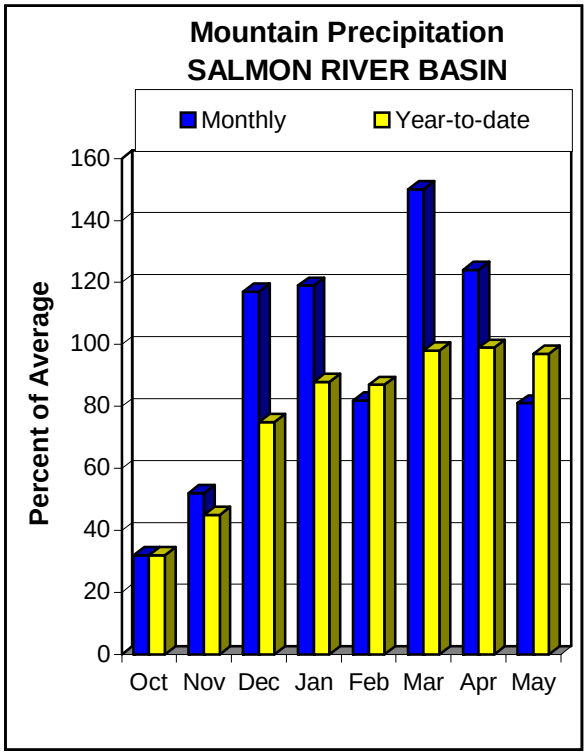
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

SALMON RIVER BASIN
JUNE 1, 2003





WATER SUPPLY OUTLOOK

Well above average precipitation and cool temperatures the first half of May allowed higher elevation snow measuring sites to continue accumulating snow. Overall, precipitation in May was 81% of average and is 97% for the water year. Near or record cold temperatures and snow in mid May changed to record high temperatures which increased snowmelt rates to 2 inches in late May. Cool temperatures at the end of May reduced snowmelt rates to more seasonal levels of an inch a day or so, allowing streams to decrease fairly rapidly. The rapid and accelerated snowmelt muddied the rivers and brought a lot of woody debris down the rivers. The Middle Fork Salmon River peaked at over 8 feet on May 31. The Salmon River at White Bird peaked at over 90,000 cfs on May 31, the highest flow since the summer of 1999. The remaining snow is 85% of average in the Lemhi and Salmon basin above the town of Salmon. The Middle Fork Salmon snowpack is 112% of average and the South Fork Salmon River snowpack is 105%. The Little Salmon River basin is 165% of average because of the above average snow at Brundage Reservoir SNOTEL site. These basins have more than twice the snow as a year ago. Overall, the Salmon basin snowpack is 97% of average and the highest since 1999.

SALMON RIVER BASIN
Streamflow Forecasts - June 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	JUN-JUL	425	460	475	90	490	525	528
	JUN-SEP	520	575	600	89	625	680	671
SALMON at White Bird (1)	JUN-JUL	2790	3180	3360	104	3540	3930	3222
	JUN-SEP	3330	3790	4000	104	4210	4670	3853

SALMON RIVER BASIN
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN
Watershed Snowpack Analysis - June 1, 2003

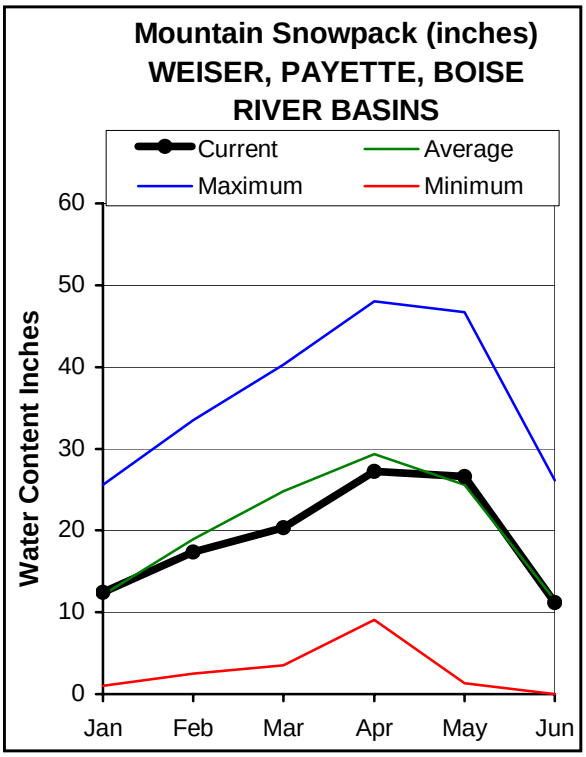
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	8	212	83
Lemhi River	6	123	88
Middle Fork Salmon River	3	234	112
South Fork Salmon River	3	214	105
Little Salmon River	4	271	165
Salmon Basin Total	23	189	97

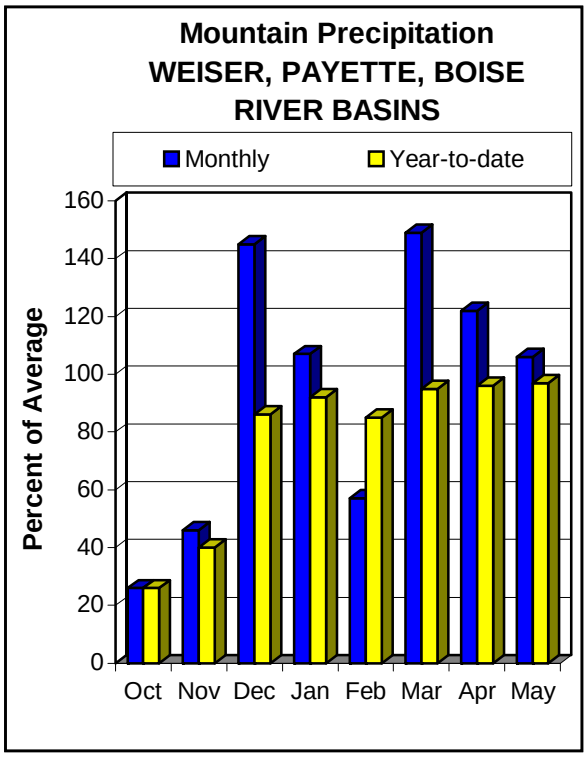
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS
JUNE 1, 2003





WATER SUPPLY OUTLOOK

May precipitation was 106% of average with nearly all of it falling before May 20. Record high temperatures at the end of the month accelerated the snowmelt and bringing the Payette River near Emmett to near flood stage on May 31. The remaining snow is 108% of average in the Payette basin, 84% in the North and Middle Forks of the Boise River, and 93% in the South Fork Boise River. The Payette Reservoir system is 89% full and will fill. Residual streamflow forecast for the Payette River near Horseshoe Bend is for 96% of average. The Boise reservoir system is 84% full, 104% of average. The Boise River near Boise is forecast at 90% of average for the June-September period. The Weiser River is forecast at 92% of average; Crane and Mann creek reservoirs filled and should provide adequate irrigation water. Rangeland is in good shape as a result of spring precipitation.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - June 1, 2003

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)
WEISER near Weiser (1)	JUN-JUL	57	87	101	92	115	145	110
	JUN-SEP	81	114	129	93	144	177	139
SF PAYETTE at Lowman	JUN-JUL	171	188	200	82	210	230	244
	JUN-SEP	220	235	250	83	265	280	300
DEADWOOD RESERVOIR Inflow (1,2)	JUN-JUL	55	65	70	106	75	85	66
	JUN-SEP	61	72	77	104	82	93	74
LAKE FORK PAYETTE near McCall	JUN-JUL	43	48	51	113	54	59	45
	JUN-SEP	42	49	54	113	59	66	48
NF PAYETTE at Cascade (1,2)	JUN-JUL	131	199	230	106	260	330	217
	JUN-SEP	159	230	265	103	300	370	258
NF PAYETTE nr Banks (2)	JUN-JUL	184	240	280	105	320	375	267
	JUN-SEP	215	280	320	102	360	425	314
PAYETTE nr Horseshoe Bend (1,2)	JUN-JUL	495	625	680	96	735	865	711
	JUN-SEP	610	740	800	94	860	995	854
BOISE near Twin Springs (1)	JUN-JUL	200	245	265	94	285	330	281
	JUN-SEP	245	295	315	94	335	385	335
SF BOISE at Anderson Ranch Dam (1,2)	JUN-JUL	153	184	198	89	210	245	223
	JUN-SEP	180	220	235	90	250	290	260
MORES CREEK near Arrowrock Dam	JUN-JUL	20	24	26	81	28	32	32
	JUN-SEP	24	27	30	81	33	36	37
BOISE near Boise (1,2)	JUN-JUL	405	475	505	89	535	605	567
	JUN-SEP	495	575	610	90	645	725	679

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	11.0	11.0	10.5
CASCADE	693.2	636.8	609.3	588.6
DEADWOOD	164.0	126.6	107.7	139.0
ANDERSON RANCH	450.2	331.1	276.8	388.7
ARROWROCK	272.2	247.6	224.9	191.9
LUCKY PEAK	293.2	274.6	287.2	242.3
LAKE LOWELL (DEER FLAT)	165.2	122.6	102.8	133.5

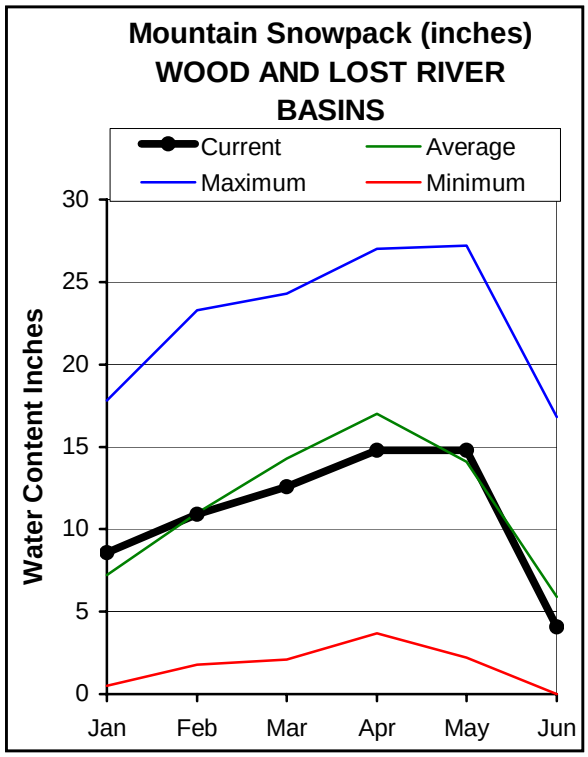
WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - June 1, 2003

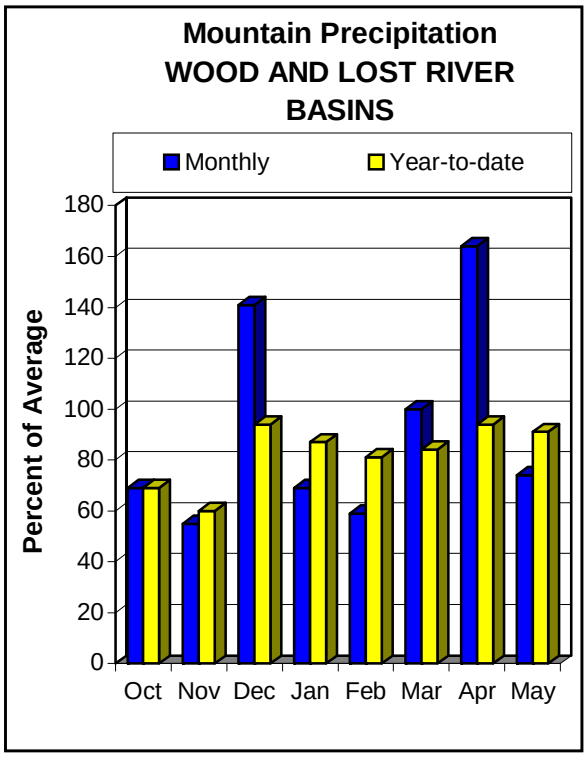
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	0	0
Weiser River	3	0	0
North Fork Payette	7	298	107
South Fork Payette	4	258	110
Payette Basin Total	12	282	108
Middle & North Fork Boise	5	195	84
South Fork Boise River	6	186	93
Mores Creek	2	0	19
Boise Basin Total	10	204	87
Canyon Creek	1	0	0

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

The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

WOOD and LOST RIVER BASINS
JUNE 1, 2003





WATER SUPPLY OUTLOOK

Precipitation in these central mountains in May was 74% of average, one of the lower amounts in the state. However, nearly all of the precipitation fell before May 20, allowing higher elevation sites to continue accumulating snow water content. Near record cold temperatures on May 18 gave way to record high on May 28. The rapid change in temperatures jump started the melting of the snowpack. Dollarhide Summit SNOTEL site, located at 8,420 feet and 7 miles west Ketchum, reached its maximum melt rate of 2.2 inches of snow on May 29, which is also when the Big Wood River at Hailey peaked at just over 4,000 cfs on May 31. The return of cooler temperatures decreased melt rates to 0.8 on June 1, also decreasing the river flow. The remaining snowpack is 75% of average in the Big Wood basin and ranges from 23-46% in the Little Wood, Big Lost, Little Lost, Birch and Medicine Lodge basins, respectively. Magic Reservoir increased to 44% of capacity, 54% full and is forecast at 65% of average for the June-September period. Little Wood Reservoir is full and forecast at 105% for the rest of the runoff season. The Big Lost River at Howell Ranch reached 3,800 cfs on May 31 and helped to increase Mackay Reservoir to 60% full. Residual streamflow for Mackay Reservoir is for 79% of average. Water supplies will be short in the Little Lost basin as a result of the low snowfall this year and lack of spring rains. The hot temperatures are good and bad -- they melted the snow quickly and got more water in the streams and reservoirs faster, but it will hurt us later this summer by the lack of higher elevation snows to sustain streamflows in the later summer months.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - June 1, 2003

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)
BIG WOOD at Hailey (1)	JUN-JUL	85	103	111	77	120	140	144
	JUN-SEP	106	128	139	79	150	177	177
BIG WOOD near Bellevue	JUN-JUL	42	57	68	67	80	101	101
	JUN-SEP	50	67	79	69	92	114	114
CAMAS CREEK near Blaine	JUN-JUL	0.5	1.4	2.2	17	3.2	5.0	13.2
	JUN-SEP	0.8	1.8	2.7	19	3.8	5.7	14.0
BIG WOOD below Magic Dam (2)	JUN-JUL	34	57	72	63	87	110	114
	JUN-SEP	46	69	85	65	101	124	130
LITTLE WOOD near Carey (2)	JUN-JUL	21	28	33	103	38	45	32
	JUN-SEP	28	36	41	105	46	54	39
BIG LOST at Howell Ranch	JUN-JUL	71	88	99	87	110	127	114
	JUN-SEP	89	108	121	87	134	153	139
BIG LOST below Mackay Reservoir (2)	JUN-JUL	51	66	77	79	88	103	97
	JUN-SEP	70	88	101	79	114	132	128
LITTLE LOST blw Wet Creek	JUN-JUL	7.1	10.0	12.0	66	14.0	17.1	18.1
	JUN-SEP	10.0	14.0	17.0	65	20	24	26

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	83.5	59.7	154.1
LITTLE WOOD	30.0	29.3	26.7	27.4
MACKAY	44.4	26.5	15.2	34.9

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - June 1, 2003

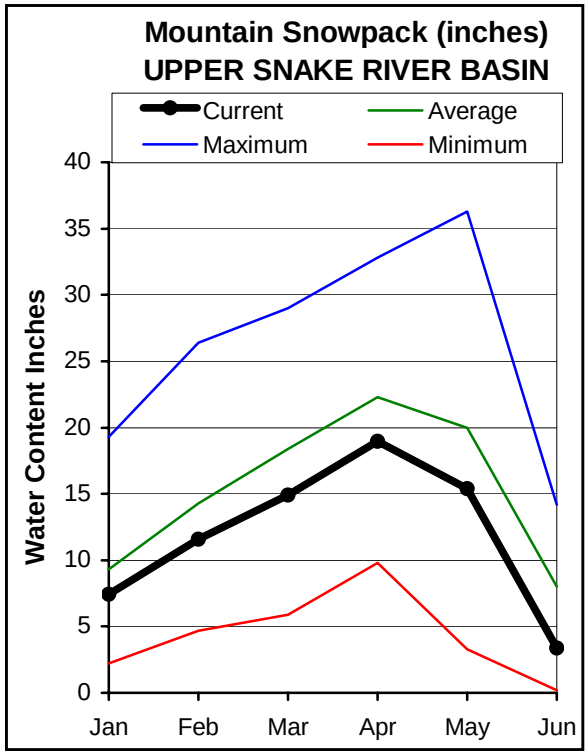
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	7	235	75
Camas Creek	2	0	0
Big Wood Basin Total	9	235	75
Fish Creek	0	0	0
Little Wood River	4	0	23
Big Lost River	4	0	36
Little Lost River	3	163	38
Birch-Medicine Lodge Cree	2	163	46
Camas-Beaver Creeks	2	0	0

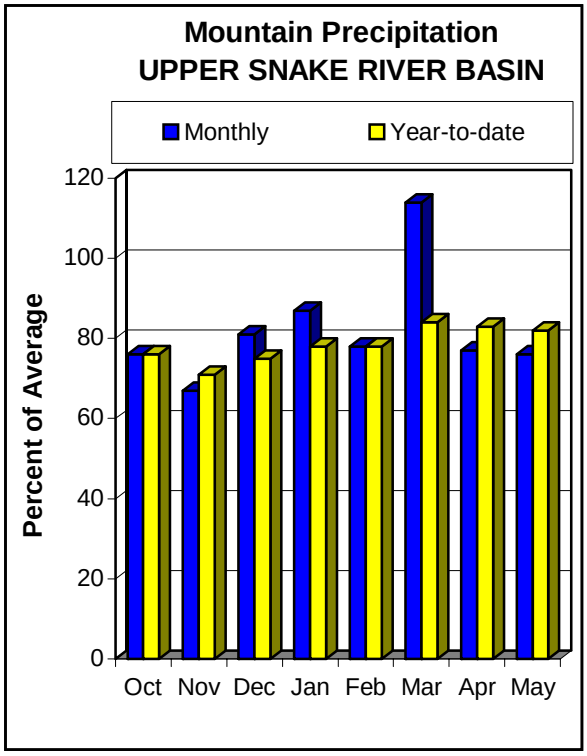
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

UPPER SNAKE RIVER BASIN
JUNE 1, 2003





WATER SUPPLY OUTLOOK

May precipitation was 76% of average, ranging from 1 to 4 inches for most sites while average May amounts range from 1.5 to 3.5 inches. Water year to date precipitation is 82% of average. The snow is melted in the lower elevations of Willow, Blackfoot, Portneuf basins and nearly in the Teton basin. The Snake River basin above Jackson Lake hosts the highest snowpack in this area, at only half of its June 1 average. The snowpack for the Snake basin above Palisades Reservoir is 36% of average and above American Falls Reservoir is 40%; both are less than last year at this time. Combined reservoir storage in Palisades Reservoir and Jackson Lake is 63% of capacity, 89% of average. The Snake River near Heise June-September forecast calls for 56% of average. Blackfoot Reservoir is 27% of capacity, 33% of average. Combined reservoir storage for the 8 major reservoirs are 62% of capacity, 77% of average, about the same as last year. American Falls Reservoir inflow is forecast at 51% of average for the June-September period. Some water supply shortages are expected.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - June 1, 2003

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)
HENRYS FORK near Ashton (2)	JUN-JUL	126	151	168	68	185	210	247
	JUN-SEP	255	285	310	71	335	365	438
HENRYS FORK near Rexburg (2)	JUN-JUL	270	330	375	45	420	480	830
	JUN-SEP	470	550	605	47	660	740	1284
FALLS near Squirrel (1,2)	JUN-JUL	48	87	105	52	123	162	204
	JUN-SEP	86	129	149	54	169	210	276
TETON near Driggs	JUN-JUL	41	55	64	59	73	87	108
	JUN-SEP	66	83	95	62	107	124	153
TETON near St. Anthony	JUN-JUL	106	135	155	65	175	205	240
	JUN-SEP	157	192	215	67	240	275	319
SNAKE near Moran (1,2)	JUN-SEP	210	315	365	63	415	520	578
PACIFIC CREEK at Moran	JUN-SEP	54	68	78	74	88	102	106
SNAKE above Palisades (2)	JUN-JUL	590	720	810	55	900	1030	1470
	JUN-SEP	800	945	1040	57	1135	1280	1835
GREYS above Palisades	JUN-JUL	64	84	98	52	112	132	188
	JUN-SEP	97	120	135	55	150	172	244
SALT near Etna	JUN-JUL	19.0	43	59	36	75	99	162
	JUN-SEP	60	87	106	44	125	152	239
PALISADES RESERVOIR INFLOW (1,2)	JUN-JUL	680	950	1070	55	1190	1460	1952
	JUN-SEP	1085	1385	1520	61	1660	1960	2496
SNAKE near Heise (2)	JUN-JUL	815	1010	1140	56	1270	1465	2054
	JUN-SEP	1255	1480	1630	62	1785	2005	2652
WILLOW CREEK nr Ririe (2)	JUN-JUL	0.2	0.8	1.4	7	2.2	3.7	20
BLACKFOOT RESV INFLOW	JUN-JUN	3.9	4.9	5.6	18	9.4	15.1	31
SNAKE nr Blackfoot (1,2)	JUN-JUL	1070	1480	1660	61	1840	2250	2740
	JUN-SEP	1980	2390	2570	66	2750	3160	3889
PORTNEUF at Topaz	JUN-JUL	6.7	12.1	15.8	43	19.5	25	37
	JUN-SEP	12.5	18.2	22	40	26	31	55
AMERICAN FALLS RESV INFLOW (1,2)	JUN-JUL	434	622	750	51	1000	1555	1479
	JUN-SEP	637	847	990	57	1240	1795	1742

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of May

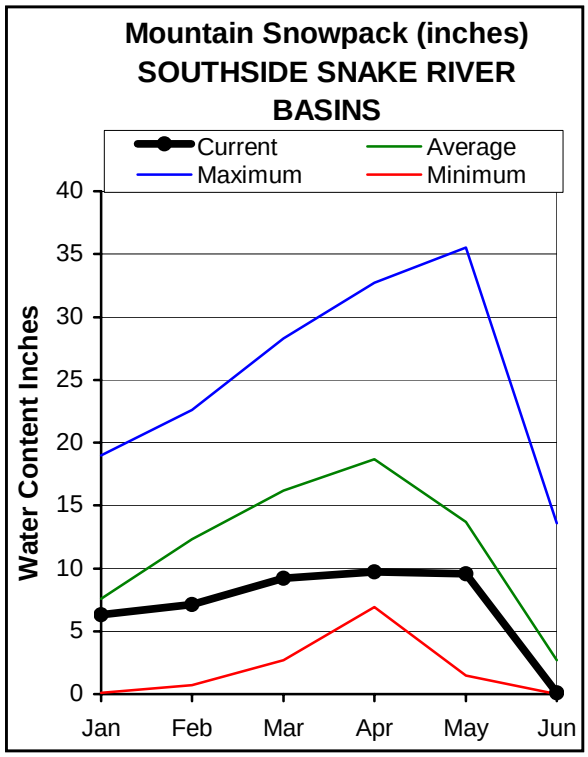
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	78.8	62.0	89.2
ISLAND PARK	135.2	132.0	128.9	132.8
GRASSY LAKE	15.2	13.6	13.3	14.4
JACKSON LAKE	847.0	615.3	462.6	572.6
PALISADES	1400.0	809.6	777.1	1033.6
RIRIE	80.5	45.2	45.0	70.3
BLACKFOOT	348.7	94.7	134.5	287.8
AMERICAN FALLS	1672.6	1051.8	1165.2	1476.1

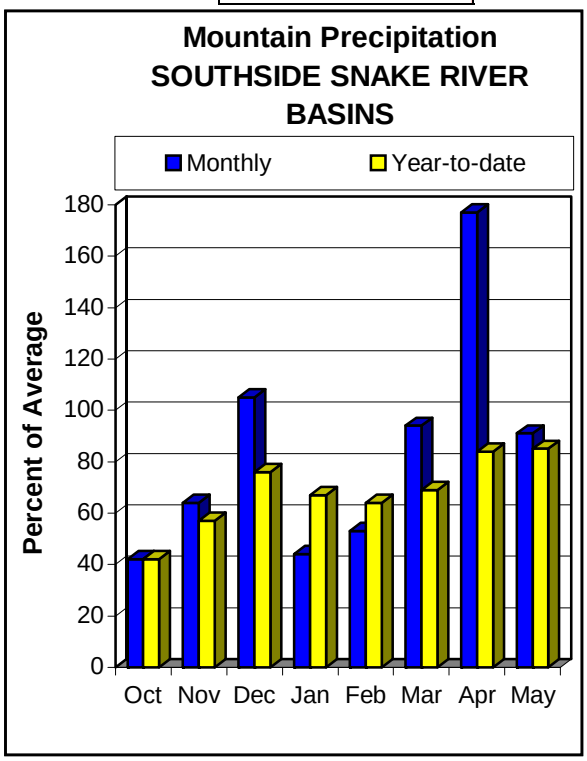
UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - June 1, 2003

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	7	83	41
Teton River	2	24	4
Henrys Fork above Rexburg	9	79	36
Snake above Jackson Lake	5	85	51
Gros Ventre River	2	93	59
Hoback River	5	71	28
Greys River	4	63	23
Salt River	3	0	0
Snake above Palisades	18	79	36
Willow Creek	2	0	0
Blackfoot River	2	0	0
Portneuf River	3	0	0
Snake abv American Falls	30	82	40

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS
JUNE 1, 2003





WATER SUPPLY OUTLOOK

May precipitation was 91% of average with greater amounts falling in the Owyhee basin and the least in the Oakley basin. Water year to date precipitation is 85% of average, about 10 percent less than last year. The snow has melted at all measuring sites in these basins. Hot air temperatures at the end of May brought the remaining snow off, producing one last increase in the Bruneau River and finally a small increase in Salmon Falls Creek. Streamflows never exceeded the long-term average in Salmon Falls Creek this year. The streamflow is even worse in the Oakley basin with both Goose and Trapper creeks remaining fairly flat through the snowmelt runoff season, except for a small increase in early May. Salmon Falls and Oakley reservoirs are 55% and 60% of average, respectively, and both are storing less water than last year. Owyhee Reservoir is 31% of capacity, 36% of average. Brownlee Reservoir is the bright spot and is full. Streamflows are dropping in early June as a result of no higher elevation snow. The streams will continue decreasing to their baseflow levels and remain well below normal to near record low later this summer if rains do not occur. Residual streamflow forecast for Salmon Falls Creek is for 23% of average, Bruneau River is 29%, Owyhee River is 28% and Oakley Inflow is 22%. Irrigation agricultural water supply shortages will be felt the hardest across these southern Idaho basins and the Bear River basin this year.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - June 1, 2003

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)
OAKLEY RESV INFLOW	JUN-JUL	0.49	1.17	1.80	22	2.56	3.93	8.20
	JUN-SEP	1.4	2.4	3.2	28	4.1	5.7	11.3
OAKLEY RESV STORAGE	JUN-30	6.4	9.5	11.6	29	13.7	16.8	40
SALMON FALLS CREEK nr San Jacinto	JUN-JUL	3.0	4.4	5.6	23	6.9	9.0	24
	JUN-SEP	4.8	6.7	8.1	29	9.7	12.2	28
SALMON FALLS RESV STORAGE	JUL-31	6.1	7.0	7.6	11	13.1	21	70
BRUNEAU near Hot Spring	JUN-JUL	9.6	17.4	24	29	32	45	82
	JUN-SEP	12.3	21	28	30	36	50	92
OWYHEE near Gold Creek (2)	JUN-JUL	0.17	0.04	0.37	13	1.05	2.67	2.90
OWYHEE near Rome	JUN-JUL	16.9	25	31	44	38	49	71
OWYHEE RESV INFLOW (2)	JUN-JUL	10.0	21	31	28	43	63	112
	JUN-SEP	28	35	41	50	47	57	82
SUCCOR CK nr Jordan Valley	JUN-JUL	0.15	0.18	0.20	8	0.42	0.75	2.42

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	74.5	17.4	25.9	45.0
SALMON FALLS	182.6	27.9	42.7	101.2
WILDHORSE RESERVOIR	71.5	31.6	42.9	58.4
OWYHEE	715.0	222.6	384.7	614.6
BROWNLEE	1419.3	1405.6	1406.4	1263.0

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - June 1, 2003

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	0	0
Goose-Trapper Creeks	3	0	0
Salmon Falls Creek	5	13	3
Bruneau River	5	13	3
Owyhee Basin Total	7	0	0

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

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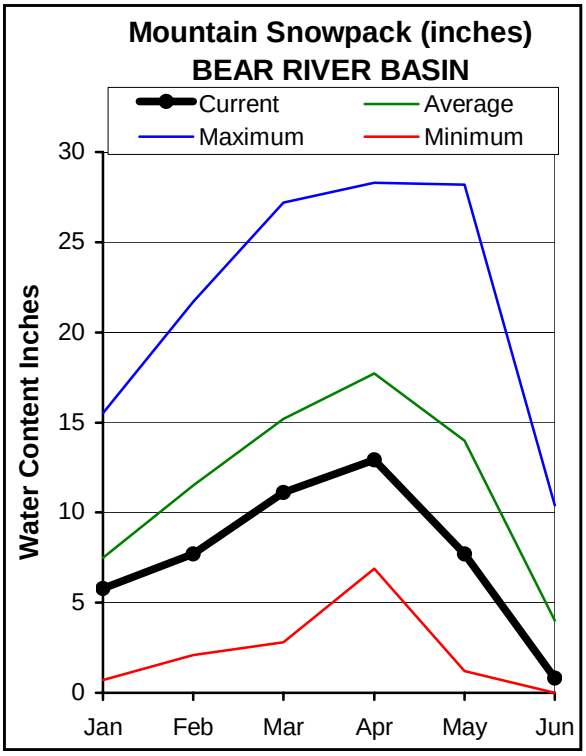
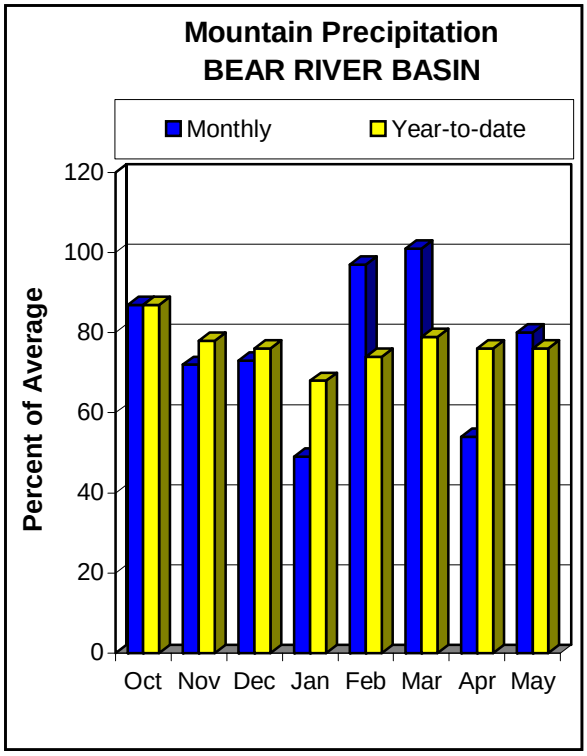
BEAR RIVER BASIN
JUNE 1, 2003





WATER SUPPLY OUTLOOK

May precipitation in the Bear River basin was 80% of average, nearly the lowest in the state. Water year to date precipitation is 76% of average, lowest in the state and slightly less than last year. Spring precipitation the past two months helped improve range and dryland farms in south eastern Idaho, but more moisture is needed with the onset of summer high temperatures in late May. All snow measuring sites have melted. Streamflows briefly increased to above average in the upper Bear River in Utah in late May, but not much runoff reached the lower Bear River, keeping flows below normal. Reservoir storage is 411,900 acre-feet; last year the lake was storing 631,000 acre-feet. This is the 3rd lowest May 31 storage since 1921; only years 1935 and 1936 had less. Bear Lake is projected to be at record low levels later this summer. With the Bear River near Stewart Dam forecast at 9% of average, water shortages will be more severe than last year.

BEAR RIVER BASIN
Streamflow Forecasts - June 1, 2003

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear R nr UT-WY State Line	APR-SEP	71	76	80	64	84	90	125
	JUN-SEP	26	30	34	42	38	45	82
Woodruff Narrows Res inflow	APR-SEP	33	46	56	39	67	86	142
	JUN-SEP	8.9	13.9	18.0	25	23	30	71
Smiths Fork nr Border	MAY-JUL	37	42	45	49	49	54	92
	MAY-SEP	42	48	53	49	58	67	109
Bear River blw Stewart Dam	MAY-JUL	14.0	17.0	20	9	49	91	225
	MAY-SEP	17.0	22	25	10	59	108	264

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	411.9	631.0	1052.3
MONTPELIER CREEK	4.0	3.5	2.2	3.3

BEAR RIVER BASIN
Watershed Snowpack Analysis - June 1, 2003

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Smiths & Thomas Forks	3	54	29
Bear River ab WY-ID line	10	54	9
Montpelier Creek	1	0	0
Mink Creek	1	0	0
Cub River	1	0	0
Bear River ab ID-UT line	15	54	7
Malad River	1	0	0

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

The average is computed for the 1971-2000 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 volume - actual volume may be affected by upstream water management.

Streamflow Adjustment List for All Forecasts Published in Idaho Water Supply Outlook Report: streamflow forecasts are projections of runoff volumes that would occur without influences from upstream reservoirs or diversions. These values are referred to as natural, unregulated or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and inter-basin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made for each forecast point**. (Revised Dec. 2005).**

Panhandle River Basins

Kootenai R at Leonia, ID
+ Lake Koocanusa (Storage Change)

Boundary Ck nr Porthill, ID – No Corrections

Moyie R at Eastport, ID – No Corrections

Smith Creek nr Porthill, ID – No Corrections

Clark Fork R at Whitehorse Rapids, ID
+ Hungry Horse (Storage Change)
+ Flathead Lake (Storage Change)
+ Noxon Rapids Resv (Storage Change)

Pend Oreille Lake Inflow, ID
+ Pend Oreille R at Newport, WA
+ Hungry Horse (Storage Change)
+ Flathead Lake (Storage Change)
+ Noxon Rapids (Storage Change
+ Pend Oreille Lake (Storage Change)
+ Priest Lake (Storage Change)

Priest R nr Priest R, ID
+ Priest Lake (Storage Change)

NF Coeur d'Alene R at Enaville, ID - No Corrections

St. Joe R at Calder, ID - No Corrections

Spokane R nr Post Falls, ID
+ Coeur d'Alene Lake (Storage Change)

Spokane R at Long Lake, WA
+ Coeur d'Alene Lake (Storage Change)
+ Long Lake, WA (Storage Change)

Clearwater River Basin

Selway R nr Lowell - No Corrections

Lochsa R nr Lowell - No Corrections

Dworshak Resv Inflow, ID
+ Clearwater R nr Peck, ID
- Clearwater R at Orofino, ID
+ Dworshak Resv (Storage Change)

Clearwater R at Orofino, ID - No Corrections

Clearwater R at Spalding, ID
+ Dworshak Resv (Storage Change)

Salmon River Basin

Salmon R at Salmon, ID - No Corrections

Lemhi R nr Lemhi, ID – No Corrections

MF Salmon R at MF Lodge, ID – No Corrections

Salmon R at White Bird, ID - No Corrections

Weiser, Payette, Boise River Basins

Weiser R nr Weiser, ID - No Corrections

SF Payette R at Lowman, ID - No Corrections

Deadwood Resv Inflow, ID
+ Deadwood R blw Deadwood Resv nr Lowman
+ Deadwood Resv (Storage Change)

Lake Fork Payette R nr Mccall, ID – No Corrections

NF Payette R at Cascade, ID
+ Cascade Resv (Storage Change)
+ Payette Lake (Storage Change)

NF Payette R nr Banks, ID
+ Cascade Resv (Storage Change)
+ Payette Lake (Storage Change)

Payette R nr Horseshoe Bend, ID
+ Cascade Resv (Storage Change)
+ Deadwood Resv (Storage Change)
+ Payette Lake (Storage Change)

Boise R nr Twin Springs, ID - No Corrections

SF Boise R at Anderson Ranch Dam, ID
+ Anderson Ranch Resv (Storage Change)

Boise R nr Boise, ID
+ Anderson Ranch Resv (Storage Change)
+ Arrowrock Resv (Storage Change)
+ Lucky Peak Resv (Storage Change)

Wood and Lost River Basins

Big Wood R at Hailey, ID - No Corrections

Big Wood R abv Magic Resv, ID
+ Big Wood R nr Bellevue, ID
+ Willow Ck

Camas Ck nr Blaine – No Corrections

Big Wood R blw Magic Dam nr Richfield, ID
+ Magic Resv (Storage Change)

Little Wood R abv High Five Ck, ID – No Corrections

Little Wood R nr Carey, ID
+ Little Wood Resv (Storage Change)

Big Lost R at Howell Ranch, ID - No Corrections

Big Lost R blw Mackay Resv nr Mackay, ID
+ Mackay Resv (Storage Change)

Little Lost R blw Wet Ck nr Howe, ID - No Corrections

Upper Snake River Basin

Henrys Fork nr Ashton, ID
+ Henrys Lake (Storage Change)
+ Island Park Resv (Storage Change)

Henrys Fork nr Rexburg, ID
+ Henrys Lake (Storage Change)
+ Island Park Resv (Storage Change)
+ Grassy Lake (Storage Change)
+ Diversions from Henrys Fk btw Ashton to St. Anthony, ID
+ Diversions from Henrys Fk btw St. Anthony to Rexburg, ID
+ Diversions from Falls R abv nr Ashton, ID
+ Diversions from Falls R nr Ashton to Chester, ID

Falls R nr Ashton, ID
+ Grassy Lake (Storage Change)
+ Diversions from Falls R abv nr Ashton, ID

Teton R nr Driggs, ID - No Corrections

Teton R nr St. Anthony, ID
- Cross Cut Canal into Teton R
+ Sum of Diversions for Teton R abv St. Anthony, ID

Snake R nr Moran, WY
+ Jackson Lake (Storage Change)

Pacific Ck at Moran, WY – No Corrections

Snake R abv Palisades, WY
+ Jackson Lake (Storage Change)

Greys R abv Palisades, WY – No Corrections
Salt R abv Palisades, WY – No Corrections
Snake R nr Irwin, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Snake R nr Heise, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Willow Ck nr Ririe, ID
+ Ririe Resv (Storage Change)
Blackfoot Resvervoir Inflow, ID
+ Blackfoot Reservoir releases
+ Blackfoot Resv (Storage Change
Snake R nr Blackfoot, ID
+ Palisades Resv (Storage Change)
+ Jackson Lake (Storage Change)
+ Diversions from Snake R btw Heise and Shelly
+ Diversions from Snake R btw Shelly and Blackfoot
Portneuf R at Topaz, ID - No Corrections
American Falls Resv Inflow, ID
+ Snake River at Neeley
+ All Corrections made for Henrys Fk nr Rexburg, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
+ Diversions from Snake R btw Heise and Shelly
+ Diversions from Snake R btw Shelly and Blackfoot

Southside Snake River Basins

Oakley Resv Inflow, ID
+ Goose Ck abv Trapper Ck
+ Trapper Ck nr Oakley
Salmon Falls Ck nr San Jacinto, NV - No Corrections
Bruneau R nr Hot Springs, ID - No Corrections
Owyhee R nr Gold Ck, NV
+ Wildhorse Resv (Storage Change)
Owyhee R nr Owyhee, NV
+ Wildhorse Resv (Storage Change)
Owyhee R nr Rome, OR – No Corrections
Owyhee Resv Inflow, OR
+ Owyhee R blw Owyhee Dam, OR
+ Owyhee Resv (Storage Change)
+ Diversions to North and South Canals
Succor Ck nr Jordan Valley, OR - No Corrections
Snake R at King Hill, ID - No Corrections
Snake R nr Murphy, ID - No Corrections
Snake R at Weiser, ID - No Corrections
Snake R at Hells Canyon Dam, ID
+ Brownlee Resv (Storage Change)

Bear River Basin

Bear R nr UT-WY Stateline, UT – No Corrections
Bear R abv Resv nr Woodruff, UT – No Corrections
Smiths Fork nr Border, WY - No Corrections
Bear R blw Stewart Dam nr Montpelier, ID
+ Bear R blw Stewart Dam
+ Rainbow Inlet Canal

Reservoir Capacity Definitions (Units in 1,000 Acre-Feet, KAF)

Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. This table lists volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. **(Revised Dec. 2005)**

Basin/ Reservoir	Dead Storage	Inactive Storage	Active Storage	Surcharge Storage	NRCS Capacity	NRCS Capacity Includes
Panhandle Region						
Hungry Horse	39.73	---	3451.00	---	3451.0	Active
Flathead Lake	Unknown	---	1791.00	---	1791.0	Active
Noxon Rapids	Unknown	---	335.00	---	335.0	Active
Pend Oreille	406.20	112.40	1042.70	---	1561.3	Dead+Inactive+Active
Coeur d'Alene	---	13.50	225.00	---	238.5	Inactive+Active
Priest Lake	20.00	28.00	71.30	---	119.3	Dead+Inactive+Active
Clearwater Basin						
Dworshak	---	1452.00	2016.00	---	3468.0	Inactive+Active
Weiser/Boise/Payette Basins						
Mann Creek	1.61	0.24	11.10	---	11.1	Active
Cascade	---	46.70	646.50	---	693.2	Inactive+Active
Deadwood	---	---	161.90	---	161.9	Active
Anderson Ranch	24.90	37.00	413.10	---	450.1	Inactive+Active
Arrowrock	---	---	272.20	---	272.2	Active
Lucky Peak	---	28.80	264.40	13.80	293.2	Inactive+Active
Lake Lowell	7.90	5.80	159.40	---	165.2	Inactive+Active
Wood/Lost Basins						
Magic	Unknown	---	191.50	---	191.5	Active
Little Wood	---	---	30.00	---	30.0	Active
Mackay	0.13	---	44.37	---	44.4	Active
Upper Snake Basin						
Henrys Lake	---	---	90.40	---	90.4	Active
Island Park	0.40	---	127.30	7.90	135.2	Active+Surcharge
Grassy Lake	---	---	15.18	---	15.2	Active
Jackson Lake	Unknown	---	847.00	---	847.0	Active
Palisades	44.10	155.50	1200.00	---	1400.0	Dead+Inactive+Active
Ririe	4.00	6.00	80.54	10.00	80.5	Active
Blackfoot	---	---	348.73	---	348.7	Active
American Falls	---	---	1672.60	---	1672.6	Active
Southside Snake Basins						
Oakley	---	---	75.60	---	75.6	Active
Salmon Falls	48.00	5.00	182.65	---	182.6	Active+Inactive
Wildhorse	---	---	71.50	---	71.5	Active
Owyhee	406.83	---	715.00	---	715.0	Active
Brownlee	0.45	444.70	975.30	---	1420.0	Inactive+Active
Bear River Basin						
Bear Lake	5.0 MAF	119.00	1302.00	---	1421.0	Active+Inactive: includes 119 that can be released
Montpelier Creek	0.21	---	3.84	---	4.0	Dead+Active

Interpreting Water Supply Forecasts

Introduction
Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

90 Percent Chance of Exceedance Forecast. There is a 90 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 10 percent chance that the actual streamflow volume will be less than this forecast value.

70 Percent Chance of Exceedance Forecast. There is a 70 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 30 percent chance that the actual streamflow volume will be less than this forecast value.

50 Percent Chance of Exceedance Forecast. There is a 50 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 50 percent chance that the actual streamflow volume will be less than this forecast value. Generally, this forecast is the middle of the range of possible streamflow volumes that can be produced given current conditions.

30 Percent Chance of Exceedance Forecast. There is a 30 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 70 percent chance that the actual streamflow volume will be less than this forecast value.

10 Percent Chance of Exceedance Forecast. There is a 10 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 90 percent chance that the actual streamflow volume will be less than this forecast value.

*Note: There is still a 20 percent chance that actual streamflow volumes will fall either below the 90 percent exceedance forecast or above the 10 percent exceedance forecast.

These forecasts represent the uncertainty inherent in making streamflow predictions. This uncertainty may include sources such as: unknown future weather conditions, uncertainties associated with the various prediction methodologies, and the spatial coverage of the data network in a given basin.

30-Year Average. The 30-year average streamflow for each forecast period is provided for comparison. The average is based on data from 1971-2000. The % AVG. column compares the 50% chance of exceedance forecast to the 30-year average streamflow; values above 100% denote when the 50% chance of exceedance forecast would be greater than the 30-year average streamflow.

AF - Acre-feet, forecasted volume of water are typically in thousands of acre-feet.

These forecasts are given to users to help make risk-based decisions. Users can select the forecast corresponding to the level of risk they are willing to accept in order to minimize the negative impacts of having more or less water than planned for.

To Decrease the Chance of Having Less Water than Planned for
A user might determine that making decisions based on a 50 percent chance of exceedance forecast is too much risk to take (there is still a 50% chance that the user will receive less than this amount). To reduce the risk of .having less water than planned for, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded such as the 90 or 70 percent exceedance forecasts.

To Decrease the Chance of Having More Water than Planned for
A user might determine that making decisions based on a 50 percent chance of exceedance forecast is too much risk to take (there is still a 50% chance that the user will receive more than this amount). To reduce the risk of having more water than planned for, users can base their operational decisions on one of the forecasts with a lesser chance of being exceeded such as the 30 or 10 percent exceedance forecasts.

Using the forecasts - an Example
Using the 50 Percent Exceedance Forecast. Using the example forecasts shown below, there is a 50% chance that actual streamflow volume at the Boise River near Twin Springs will be less than 685 KAF between April 1 and July 31. There is also a 50% chance that actual streamflow volume will be greater than 685 KAF.

Using the 90 and 70 Percent Exceedance Forecasts. If an unexpected shortage of water could cause problems (such as irrigated agriculture), users might want to plan on receiving 610 KAF (from the 70 percent exceedance forecast). There is a 30% chance of receiving *less* than 610 KAF.

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 443 KAF (from the **90** percent exceedance forecast). There is 10% chance of receiving less than 443 KAF.

Using the 30 or 10 Percent Exceedance Forecasts. If an unexpected excess of water could cause problems (such as operating a flood control reservoir), users might plan on receiving 760 KAF (from the 30 percent exceedance forecast). There is a 30% chance of receiving *more* than 760 KAF.

Alternatively, if users determine the risk of using the 30 percent exceedance forecast is too great, then they might plan on receiving 927 KAF (from the 10 percent exceedance forecast). There is a 10% chance of receiving more than 927 KAF.

Users could also choose a volume in between any of these values to reflect their desired risk level.

Weiser, Payette, Boise River Basins
Streamflow Forecasts – January 2006

Forecast Point	Forecast Period	Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000 AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF PAYETTE RIVER at Lowman	APR-JUL	329	414	471	109	528	613	432
	APR-SEP	369	459	521	107	583	673	488
BOISE RIVER near Twin Springs (1)	APR-JUL	443	610	685	109	760	927	631
	APR-SEP	495	670	750	109	830	1005	690

*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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Cooperative funding for printing provided by
Idaho Department of Water Resources

Numerous other agencies provide funding
and/or cooperative support. Their cooperation
is greatly appreciated.