

Idaho Water Supply Outlook Report April 1, 2003



Long Valley SNOTEL Site with almost all snow melted on March 17, 2003

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

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or

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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.

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IDAHO WATER SUPPLY OUTLOOK REPORT

April 1, 2003

SUMMARY

March precipitation improved the water supply story north of the Snake River, but the outlook remains pessimistic for basins south of the Snake River. With near average snowpacks or better in north central Idaho, streamflow forecasts mirror the snow levels and should provide adequate river flows for the numerous users. However, pockets of below average snowpacks and streamflow forecasts can be found in parts of northern Idaho in the Coeur d'Alene, St. Joe, and low elevation basins of the Hayden Lake and Rathdrum area. West central and eastern Idaho snowpacks and streamflow forecasts improved during March and range from about 70-90% of average for most basins. The central Idaho streams - Big Wood, Big Lost, Little Lost - are forecast around 60-75% of average, and irrigated agricultural shortages are expected. The water supply outlook deteriorates even more across southern Idaho where snowpacks are 40-70% of average and reservoir storage ranges from half of capacity to almost empty. Streamflow forecasts are for 20-40% of average in the Owyhee, Bruneau, Salmon Falls, Oakley, parts of the Bear, and other low elevation drainages of southern Idaho. Irrigation water shortages are expected. The severity of shortage depends on your water right and source, precipitation and air temperatures for the rest of spring and summer.

SNOWPACK

Clearwater River basin snowpacks increased the greatest amount in the state during March with gains as high as 28 percentage points from a month ago, a result of receiving 200+% of average precipitation. Slightly below average March precipitation across southern Idaho was enough to keep the snowpacks at about 50% of average in the basins south of the Snake River. The highest snowpacks in Idaho are in the Selway and Lochsa basins at about 110% of average. Next are the Payette, Salmon and Clearwater basins at near average. The Boise snowpack is 81% of average. The Big Wood basin above Hailey snowpack is 94% of average. The Henrys Fork snowpack is 80% of average while the Snake above Palisades Reservoir is 91%. The snowpack above American Falls is 82% of average, the same as last year.

PRECIPITATION

March brought abundant moisture to north central Idaho but did not deliver enough precipitation in the basins south of the Snake River. Precipitation in the Clearwater basin was 221% of average with a few stations receiving more than 250% of average. March precipitation was 170% of average in the Panhandle Region and around 150% in the west-central mountains. The Upper Snake basin received above average precipitation in the mainstem Snake River basin and below average in the Henrys Fork basin. Bear River precipitation was near average. For the basins north of the Snake River, water year to date precipitation ranges from about 85% of average in the Panhandle Region and upper Snake to near normal in the Clearwater and Salmon basins. Lowest water year total precipitation is in the basins south of the Snake River at 69% of average and the Bear River at 79% of average. When compared to last year at this time, only the Salmon basin has received more precipitation than last year. The other basins range from just below last year to less the 3/4 of last year in the Southside Snake River basins.

RESERVOIRS

February and March brought moisture to the northern half of the state. All lakes and reservoirs from Cascade Reservoir north are reporting above average storage. Dworshak Reservoir is 90% full, 141% of average, the highest March 31 storage since the reservoir was built. The Boise reservoir system is 53% full, 85% of average. The combined reservoir storage for the 8 major reservoirs in the upper Snake is 56% full, 77% of average. Low storage remains across central and southern Idaho. Magic Reservoir is 19% full. Mackay Reservoir is 47% full, lowest since 1938. Owyhee Reservoir is 28% full, about 90,000 acre-feet less than a year ago. Oakley Reservoir is 23% full, same as last year. Salmon Falls Reservoir is 11% full, same as last year; and Bear Lake 27% full, about 200,000 acre-feet less than last year.

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

Streamflow forecasts increased from a month ago in northern and central Idaho and remained about the same across southern Idaho. The Panhandle Region streams are forecast at 75-85% of average. The Clearwater and Salmon basins are forecast at 90-100% of average. Streams from the Owyhee to the Bear rivers are forecast at 20-40% of average including the low elevation streams of Willow, Blackfoot and Portneuf rivers. Elsewhere, most streams across central and eastern Idaho are forecast at 70-90% of average.

As a result of the low reservoir storage and below average projected streamflow, irrigated agriculture shortages are expected in the Big Wood, Mackay, Owyhee, Salmon Falls, Oakley and Bear river basins. Severity of water shortages depends on your water right and source, future spring and summer precipitation and air temperatures.

RECREATION

March's precipitation produced some of the best skiing of the year in Idaho and provided much needed moisture in north-central Idaho's whitewater playground. The near average or better snowpacks in the Salmon and Clearwater basin should provide great spring and summer floating levels. These good flows in Idaho's central rivers will hopefully make up for the low streamflow levels expected in the high desert streams south of the Snake River. Spring precipitation and temperatures will determine the magnitude and duration of the streamflow peaks. Snow densities are around 40%, which means the snow is ripe and ready to start melting with the onset of warmer temperatures.

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of April 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.

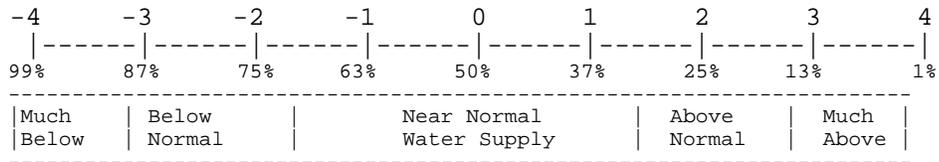
The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US National Weather Service
 US Bureau of Reclamation
 Idaho Water Users Association

US Army Corps of Engineers
 Idaho Dept. of Water Resources
 PacifiCorp

<i>BASIN or REGION</i>	<i>SWSI Value</i>	<i>Most Recent Year With Similar SWSI Value</i>	<i>Agricultural Water Supply Shortage May Occur When SWSI is Less Than</i>
PANHANDLE	-2.4	1998	NA
CLEARWATER	1.9	1999	NA
SALMON	-0.2	2002	NA
WEISER	-1.6	2000	NA
PAYETTE	-0.8	2000	NA
BOISE	-1.4	1989	-2.6
BIG WOOD	-2.4	1989	-1.4
LITTLE WOOD	-0.5	1996	-2.6
BIG LOST	-1.7	1987	-0.8
LITTLE LOST	-3.2	2000	0.0
HENRYS FORK	-2.3	1990/91	-3.3
SNAKE (HEISE)	-2.7	1994	-2.3
OAKLEY	-3.4	1994	0.0
SALMON FALLS	-3.4	2001	0.0
BRUNEAU	-3.2	2002	NA
BEAR RIVER	-3.9	2002	-3.8

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

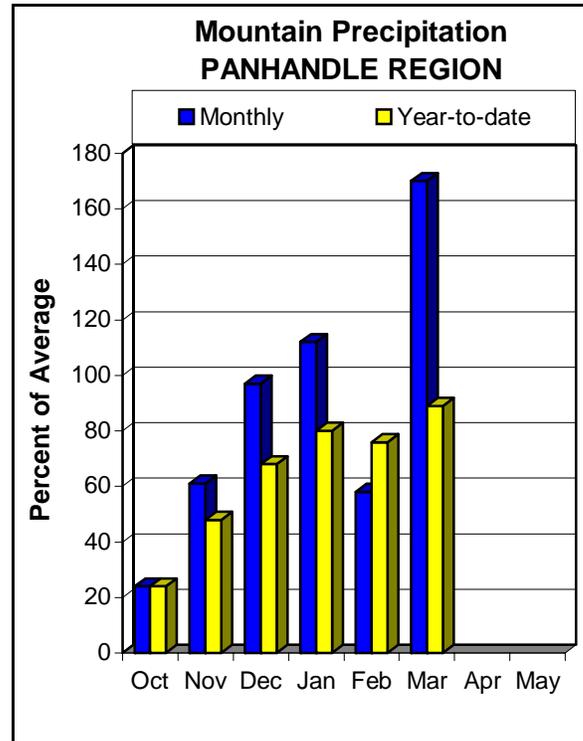
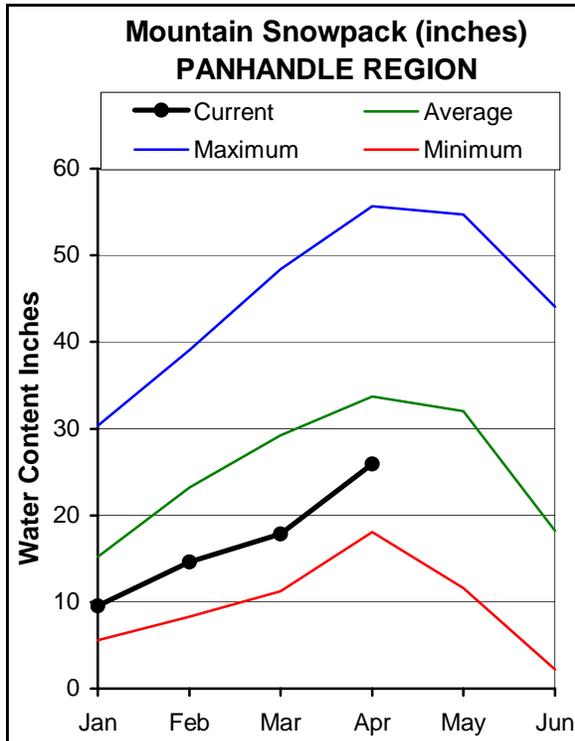
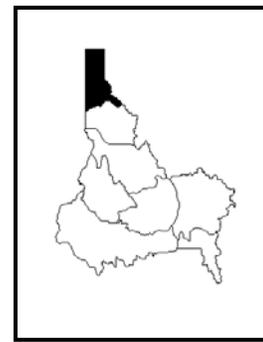


Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and 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.

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PANHANDLE REGION

APRIL 1, 2003



WATER SUPPLY OUTLOOK

March precipitation was 170% of average and increased snowpack percentages up to 15 percentage points from last month in the higher elevation basins. Lower elevation basins saw more moisture but not all falling as snow. Water year to date precipitation remains below average at 89%, about 3/4 of last year's amount by this time. The highest snowpack percentages are in the Pend Oreille basin at 92% of average, up from 73% a month ago. Snowpacks in the Kootenai and Priest basins are about 85% of average. The Coeur d'Alene basin snowpack is 65% of average while the St. Joe basin snowpack is 72%. The low elevation snowpacks in the Rathdrum and Hayden Lake drainages are 40% of average and have less than a quarter the snow from a year ago. When these basins are combined, this puts the Spokane basin snowpack at 59% of average, less than half of last year's. The water storage in the lakes and reservoirs in the Panhandle Region are all reporting above average storage levels. Forecasts range from 73-84% of average with the lowest in the St. Joe and Coeur d'Alene basins. Water supplies should be adequate to meet most needs; however, the below average snow levels may result in below average stream levels by summer's end, especially if future precipitation is less than normal.

PANHANDLE REGION
Streamflow Forecasts - April 1, 2003

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)	
KOOTENAI at Leonia (1,2)	APR-JUL	4740	5370	5650	80	5930	6560	7035				
	APR-SEP	4940	6030	6520	80	7010	8100	8125				
MOYIE RIVER at Eastport	APR-JUL	275	305	325	81	345	375	403				
	APR-SEP	275	310	330	79	350	385	418				
SMITH CREEK	APR-JUL	74	87	96	78	105	118	123				
	APR-SEP	73	88	98	76	108	123	129				
BOUNDARY CREEK	APR-JUL	84	97	105	85	113	126	123				
	APR-SEP	88	101	110	85	119	132	129				
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	6870	8530	9280	82	10030	11690	11280				
	APR-SEP	7550	9370	10200	82	11030	12850	12460				
PEND OREILLE Lake Inflow (2)	APR-JUL	8350	9570	10400	82	11230	12450	12700				
	APR-SEP	9060	10390	11300	81	12210	13540	13900				
PRIEST near Priest River (1,2)	APR-JUL	550	640	680	84	720	810	814				
	APR-SEP	505	655	725	84	795	945	868				
COEUR D'ALENE at Enaville	APR-JUL	450	535	595	81	655	740	739				
	APR-SEP	475	565	625	80	685	775	778				
ST. JOE at Calder	APR-JUL	670	775	845	74	915	1020	1136				
	APR-SEP	710	820	890	74	960	1070	1205				
SPOKANE near Post Falls (2)	APR-JUL	1400	1680	1870	73	2060	2340	2552				
	APR-SEP	1450	1740	1940	73	2140	2430	2650				
SPOKANE at Long Lake (2)	APR-JUL	1570	1910	2140	75	2370	2710	2851				
	APR-SEP	1720	2080	2320	76	2560	2920	3072				

PANHANDLE REGION Reservoir Storage (1000 AF) - End of March					PANHANDLE REGION Watershed Snowpack Analysis - April 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNGRY HORSE	3451.0	2355.0	2357.0	1886.7	Kootenai ab Bonners Ferry	32	75	83
FLATHEAD LAKE	1791.0	1145.0	701.4	738.5	Moyie River	9	80	79
NOXON RAPIDS	335.0	327.2	325.9	272.9	Priest River	5	86	88
PEND OREILLE	1561.3	894.9	549.0	763.6	Pend Oreille River	106	86	92
COEUR D'ALENE	238.5	211.5	142.5	169.5	Rathdrum Creek	5	23	37
PRIEST LAKE	119.3	83.7	53.2	65.5	Hayden Lake	2	20	40
					Coeur d'Alene River	10	47	65
					St. Joe River	6	54	72
					Spokane River	19	40	59
					Palouse River	2	20	37

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

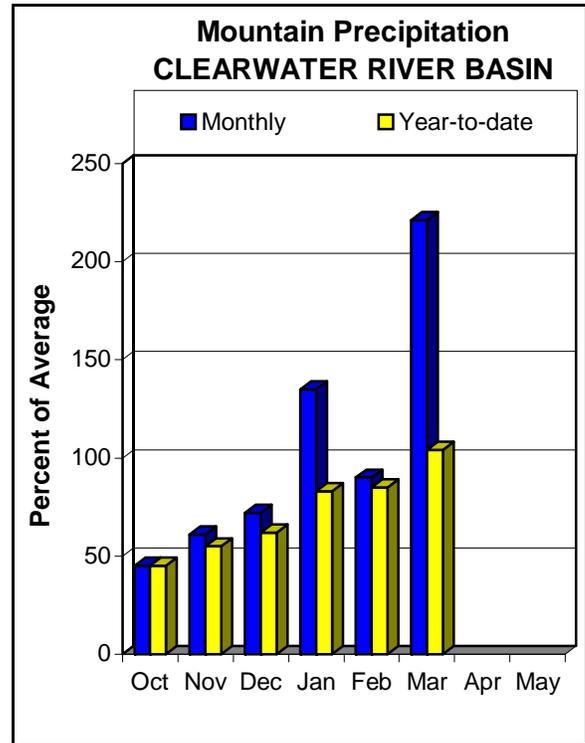
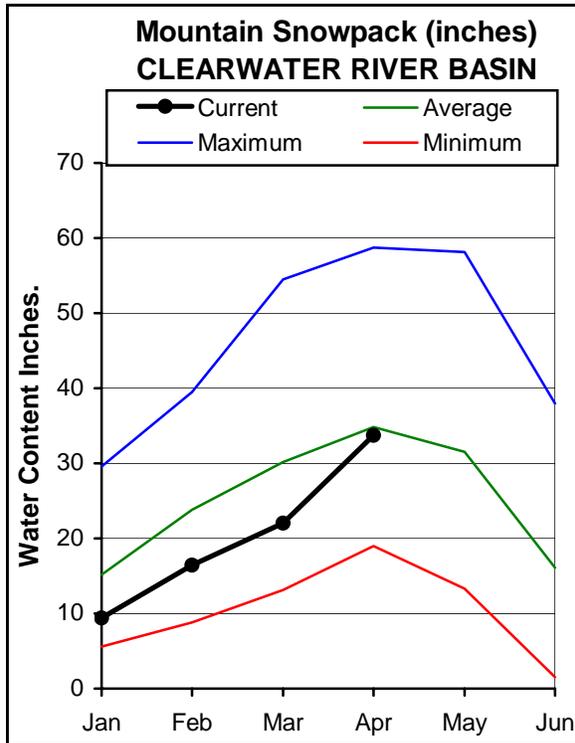
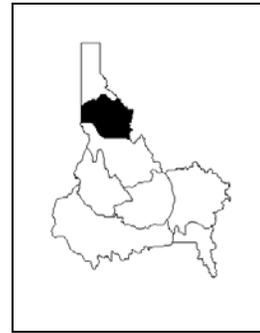
The average is computed for the 1971-2000 base period.

(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

APRIL 1, 2003



WATER SUPPLY OUTLOOK

March brought a tremendous amount of precipitation to the Clearwater basin. Only 3 of the 14 SNOTEL sites received less than 200% of average precipitation. The other sites received 200-260% of their average March precipitation amounts! Overall, the precipitation was 221% of average. This increased the water year to date precipitation from 85% of average a month ago to 104%. Crater Meadows SNOTEL site received 9 inches of snow water over a 5-day period in early March. Snowpack percentages increased 25 percentage points from a month ago and are now 93% of average for North Fork Clearwater, 111% for the Lochsa and 113% for the Selway rivers. The low elevation Palouse basin is only 37% of average, less than a quarter of last year. Overall, the Clearwater River basin is 97% of average. The snow is now greater than last year in the Selway and Lochsa basins but still less than last year in the North Fork Clearwater basin. Dworshak Reservoir is 90% full, 141% of average, and will have more water to manage for numerous demands. River runners should see a much better boating season than most people expected in this area especially after El Nino was knocking at our door in early winter and then deteriorating in February, allowing for abundant moisture to hit the inland Northwest. With average or better snowpacks, there is always that chance of high snowmelt streamflow peaks. Spring precipitation and temperatures will determine the magnitude and duration of high flows but with snow densities around 40%, the snow is ripe and ready to start melting with the onset of extended warmer temperatures.

CLEARWATER RIVER BASIN
Streamflow Forecasts - April 1, 2003

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)	
SELWAY near Lowell	APR-JUL	1890	2030	2130	103	2230	2370	2062				
	APR-SEP	1970	2120	2230	103	2340	2490	2170				
LOCHSA near Lowell	APR-JUL	1310	1420	1490	97	1560	1670	1530				
	APR-SEP	1380	1490	1570	98	1650	1760	1609				
DWORKSHAK RESV INFLOW (1,2)	APR-JUL	1770	2200	2390	91	2580	3010	2635				
	APR-SEP	1920	2350	2540	91	2730	3160	2799				
CLEARWATER at Orofino (1)	APR-JUL	3090	3960	4360	94	4760	5630	4645				
	APR-SEP	3350	4220	4620	94	5020	5890	4900				
CLEARWATER at Spalding (1,2)	APR-JUL	5090	6310	6870	92	7430	8650	7435				
	APR-SEP	5510	6730	7290	93	7850	9070	7850				

CLEARWATER RIVER BASIN Reservoir Storage (1000 AF) - End of March					CLEARWATER RIVER BASIN Watershed Snowpack Analysis - April 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DWORKSHAK	3468.0	3117.2	2175.8	2205.4	North Fork Clearwater	9	76	93
					Lochsa River	4	103	111
					Selway River	6	106	113
					Clearwater Basin Total	19	83	97

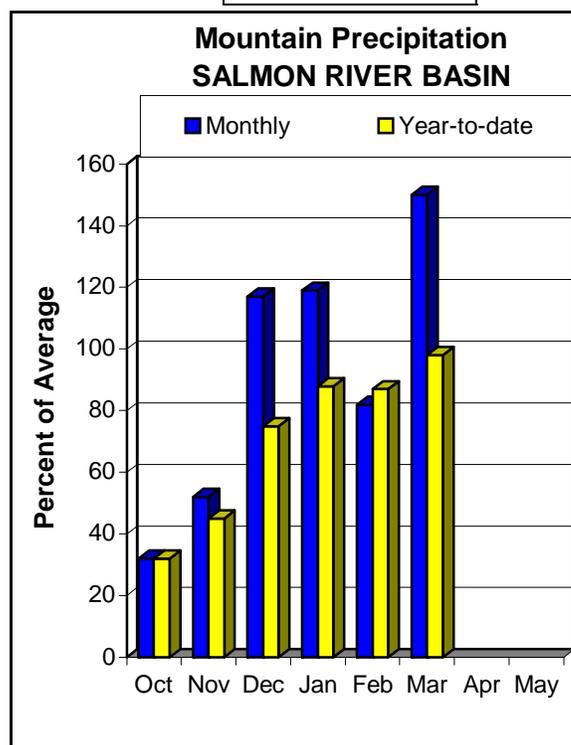
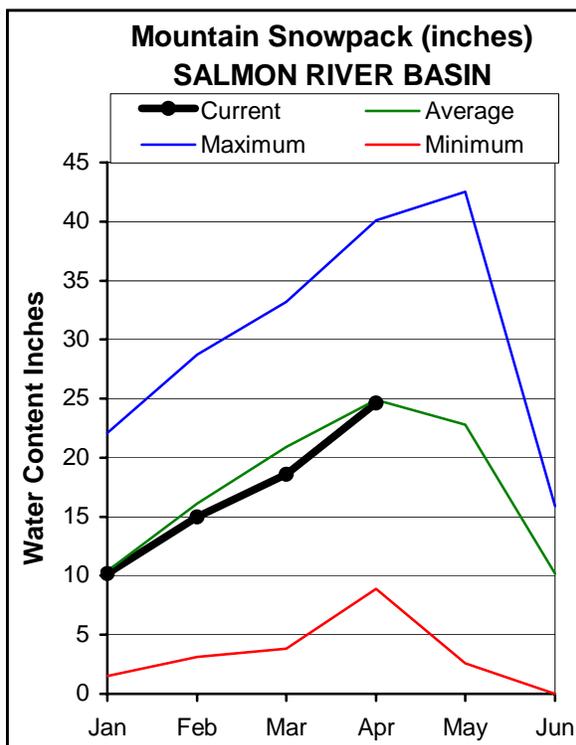
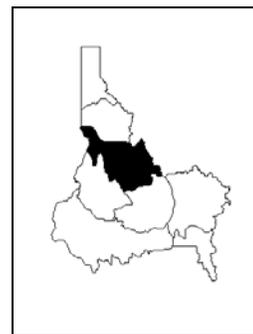
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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.

SALMON RIVER BASIN

APRIL 1, 2003



WATER SUPPLY OUTLOOK

March brought precipitation that was about 150% of average to the Salmon River basin. Water year to date precipitation is 96% of average and slightly higher than last year at this time. The snowpack in the Salmon basin ranges from 91% of average in the Lemhi basin to 99% in the Little Salmon and South Fork basins. The Middle Fork Salmon River snowpack is 96% of average. Overall, the Salmon basin snowpack increased 10 percentage points from last month and is now 100% of average. All basins have more snow than last year except in the Little Salmon, which is a low to mid-elevation basin. Streamflow forecasts increased from last month and now call for 90% of average for the Salmon River above Salmon and 94% for the Salmon River at White Bird. On April 1, 2002, the Salmon basin snow was 87% of average and yielded a summer streamflow runoff of 80% of average. Almost all snow measuring sites in the Salmon basin have more snow than last year, except a few lower elevation stations, thus improving the water supply outlook during March. There is always that chance of high snowmelt streamflow peaks which depend heavily on spring precipitation and temperatures when the snow is ripe and melting, but overall water users and river runners should see streamflow levels better than last year.

SALMON RIVER BASIN
Streamflow Forecasts - April 1, 2003

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)
SALMON at Salmon (1)	APR-JUL	460	675	770	90	865	1080	857
	APR-SEP	590	805	900	90	1000	1210	1000
SALMON at White Bird (1)	APR-JUL	4100	5060	5490	94	5920	6880	5851
	APR-SEP	4690	5650	6080	94	6510	7470	6482

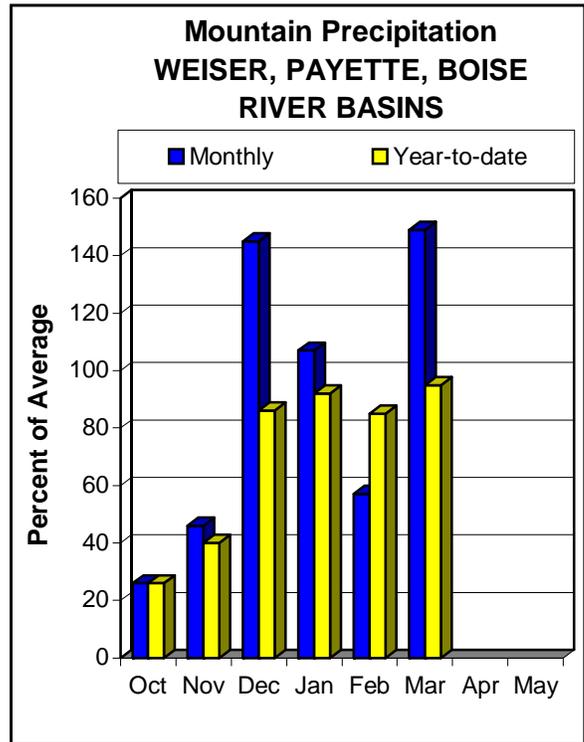
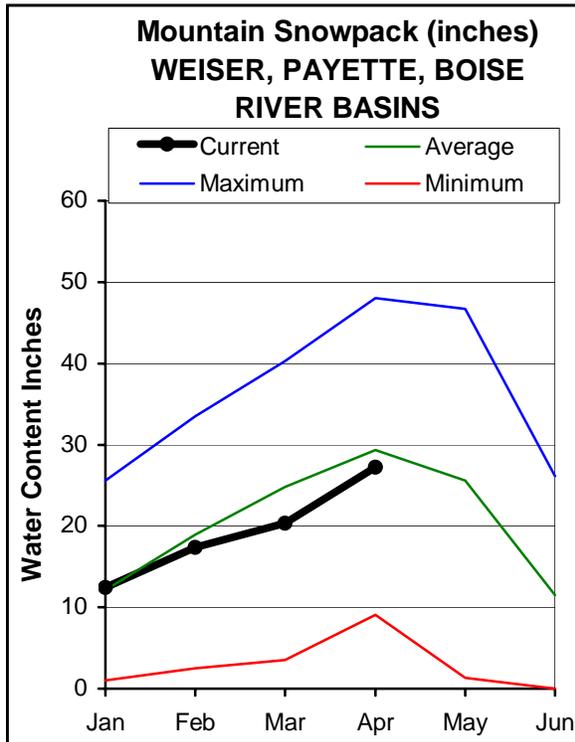
SALMON RIVER BASIN Reservoir Storage (1000 AF) - End of March					SALMON RIVER BASIN Watershed Snowpack Analysis - April 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Salmon River ab Salmon	11	118	96
					Lemhi River	10	126	91
					Middle Fork Salmon River	3	114	96
					South Fork Salmon River	3	108	98
					Little Salmon River	4	92	99
					Salmon Basin Total	31	114	100

* 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 APRIL 1, 2003



WATER SUPPLY OUTLOOK

March brought precipitation that was 150% of average with temperatures cold enough to keep the moisture falling mostly as snow in the mountains. Water year to date precipitation increased to 93% of average, the same as last year at this time. Snowpack percentages increased about 10 percentage points from last month and are now 81% of average in the Boise and Weiser basins and 94% in the Payette basin. There is not much snow below 6,000 feet. The snowpack in the lower elevation drainage of Mann Creek is 67% of average, half of last year, and Mores Creek is 74%, 3/4 of last year. The Boise reservoir system is 53% of capacity, 85% of average, and has about 120,000 acre-feet more this year than last year. The lack of snow in the low and mid-elevations will provide interesting runoff scenarios in contrast to last year. Higher elevation snow sites have exceeded last year's peak, which is great news, but snow is nearly non-existent below 6,000 feet. Last year the Boise basin snow was 98% of average on April 1, and yielded summer streamflow that was 78% of average. The Boise River near Boise is forecast at 82% of average and should provide adequate irrigation supplies. The Payette River near Horseshoe Bend is forecast at 86% of average and should provide adequate irrigation and good river running opportunities. The Weiser River is forecast at 77% of average and could use more rain to keep natural streamflows higher later in the summer.

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

Forecast Point	Forecast Period	<<===== Drier =====>>		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		Chance Of Exceeding *		Chance Of Exceeding *		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
WEISER near Weiser (1)	APR-SEP	150	270	325	77	380	500	420
SF PAYETTE at Lowman	APR-JUL	340	375	400	91	425	460	438
	APR-SEP	380	425	450	91	475	520	494
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	98	115	123	92	131	148	134
	APR-SEP	105	122	130	92	138	155	142
LAKE FORK PAYETTE near McCall	APR-JUL	65	73	78	92	83	91	85
	APR-SEP	69	77	82	92	87	95	89
NF PAYETTE at Cascade (1,2)	APR-JUL	315	395	430	88	465	545	488
	APR-SEP	355	435	470	89	505	585	530
NF PAYETTE nr Banks (2)	APR-JUL	425	500	550	86	600	675	643
	APR-SEP	450	535	590	86	645	730	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	1090	1300	1390	86	1480	1690	1610
	APR-SEP	1140	1390	1510	86	1630	1880	1755
BOISE near Twin Springs (1)	APR-JUL	415	500	535	84	570	655	636
	APR-SEP	460	545	580	84	615	700	691
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	330	400	435	80	470	540	542
	APR-SEP	360	430	465	80	500	570	579
MORES CREEK near Arrowrock Dam	APR-JUL	57	72	83	63	94	109	131
	APR-SEP	59	75	86	63	97	113	137
BOISE near Boise (1,2)	APR-JUN	865	980	1030	82	1080	1200	1258
	APR-JUL	855	1060	1150	81	1240	1450	1414
	APR-SEP	945	1150	1240	81	1330	1540	1526

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

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

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MANN CREEK	11.1	10.0	8.3	8.8	Mann Creek	2	53	67
CASCADE	693.2	514.2	359.6	428.8	Weiser River	5	62	80
DEADWOOD	164.0	64.7	54.5	91.6	North Fork Payette	8	93	97
ANDERSON RANCH	450.2	165.8	81.9	262.8	South Fork Payette	5	101	91
ARROWROCK	272.2	232.5	242.5	204.5	Payette Basin Total	14	97	94
LUCKY PEAK	293.2	140.1	147.5	162.6	Middle & North Fork Boise	5	93	84
LAKE LOWELL (DEER FLAT)	165.2	86.5	81.4	126.9	South Fork Boise River	8	91	86
					Mores Creek	5	67	74
					Boise Basin Total	15	83	81
					Canyon Creek	1	34	41

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

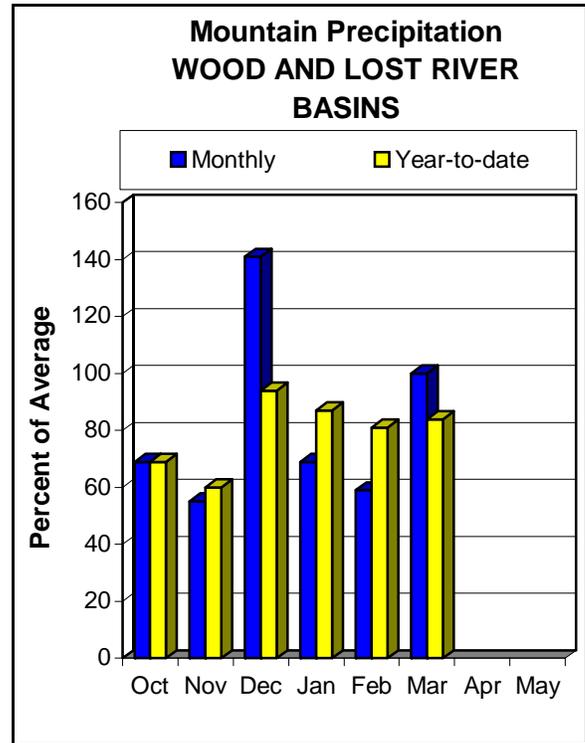
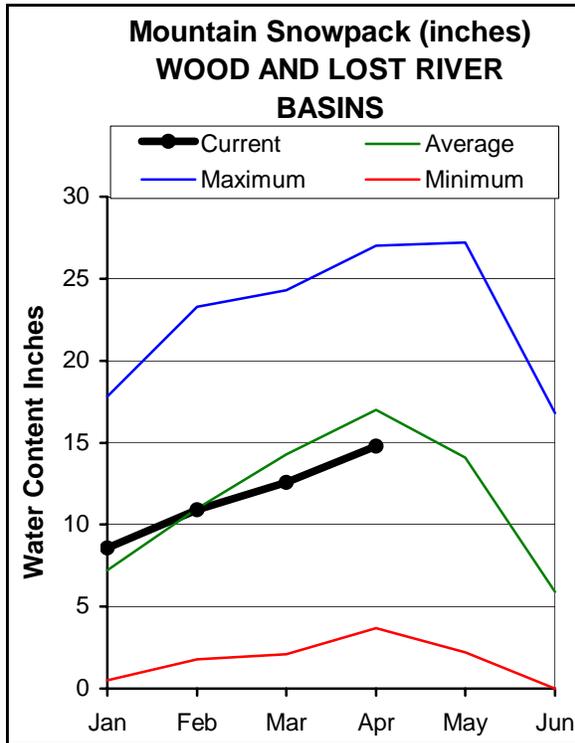
The average is computed for the 1971-2000 base period.

(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

APRIL 1, 2003



WATER SUPPLY OUTLOOK

March precipitation decreased from west to east across the central Idaho mountains with Vienna Mine SNOTEL, near the Salmon-Wood-Boise triple basin divide, receiving the most at 175% of average. The least March precipitation was in the Little Lost and Mud Lake area at 40% of average. Water year to date precipitation is 84% of average, the same as last year. The highest snowpack percentages are in the Big Wood Basin above Hailey at 94% of average, a little better than last year. However, Camas Creek snowpack is 59% of average, about half of last year, bringing the Big Wood basin as a whole to 86% of average, the same as last year. The Little Wood basin is 78% of average, same as last year. The Big Lost basin is 86% average, slightly better than last year. The Little Lost, Birch, Medicine Lodge, Camas and Beaver basins are 65-70% of average. Storage in Magic Reservoir remains low at only 19% of capacity and has about 10,000 acre-feet more than last year. However, this is the 4th lowest March 31 storage since 1937 with only lower storage in 2002, 1991, and 1992. Mackay Reservoir is 47% of capacity, the lowest March 31 storage since 1938 other than when drafting occurred in 1997 and 1969 because of heavy snowfall and runoff. Streamflow forecasts call for 62% of average for Magic Reservoir inflow, 75% for Little Wood Reservoir inflow and 74% for Mackay Reservoir inflow. Agricultural irrigation shortages are expected for the Magic and Mackay reservoir water users and Little Lost River water users. Little Wood users should have adequate supplies but could be tight if future precipitation is below normal.

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

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)					
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (Most Probable) (% AVG.)		30% (1000AF)		10% (1000AF)		
BIG WOOD at Hailey (1)	APR-JUL	124	165	186	73	208	261	256				
	APR-SEP	140	187	210	73	235	294	289				
BIG WOOD near Bellevue	APR-JUL	65	93	115	61	139	179	188				
	APR-SEP	73	102	125	62	150	191	201				
CAMAS CREEK near Blaine	APR-JUL	23	33	40	40	48	61	100				
	APR-SEP	24	34	41	41	49	62	101				
BIG WOOD below Magic Dam (2)	APR-JUL	95	146	181	62	217	267	291				
	APR-SEP	101	155	191	62	226	281	307				
LITTLE WOOD near Carey (2)	APR-JUL	44	57	65	75	73	86	87				
	APR-SEP	49	62	71	76	80	93	94				
BIG LOST at Howell Ranch	APR-JUN	80	97	108	81	119	136	134				
	APR-JUL	102	125	140	81	155	178	172				
	APR-SEP	117	142	160	81	179	204	197				
BIG LOST below Mackay Reservoir (2)	APR-JUL	66	89	105	74	121	144	142				
	APR-SEP	84	110	128	74	146	172	173				
LITTLE LOST blw Wet Creek	APR-JUL	11.9	16.1	19.0	61	22	26	31				
	APR-SEP	14.3	20	24	62	28	34	39				

WOOD AND LOST RIVER BASINS Reservoir Storage (1000 AF) - End of March					WOOD AND LOST RIVER BASINS Watershed Snowpack Analysis - April 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MAGIC	191.5	36.7	26.1	107.1	Big Wood ab Hailey	8	116	94
LITTLE WOOD	30.0	18.6	15.3	19.4	Camas Creek	4	58	59
MACKAY	44.4	21.0	25.4	32.7	Big Wood Basin Total	12	100	86
					Fish Creek	3	60	54
					Little Wood River	9	99	78
					Big Lost River	7	110	86
					Little Lost River	3	92	67
					Birch-Medicine Lodge Cree	4	96	71
Camas-Beaver Creeks	4	80	66					

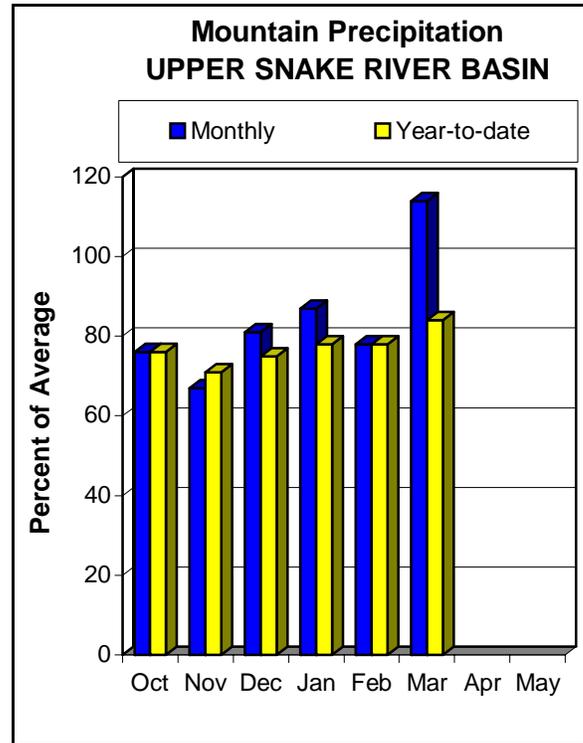
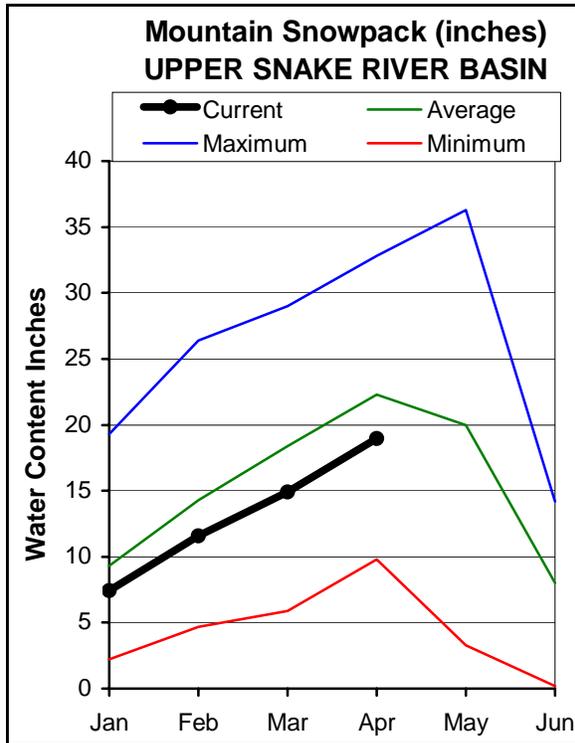
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The average is computed for the 1971-2000 base period.

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

UPPER SNAKE RIVER BASIN

APRIL 1, 2003



WATER SUPPLY OUTLOOK

March precipitation varied across the upper Snake basin with a few SNOTEL sites in the Henrys Fork receiving only half of their March average, while sites in the mainstem Snake River in Wyoming received 175% of average. Overall, precipitation was 114% of average, bringing the water year to date precipitation to 84%, about the same as last year. Snowpacks in the Henrys Fork are about the same as a month ago at 80% of average and the same as last year. The Snake above Jackson and Snake above Palisades snowpacks increased 10-12 percentage points from last month and are now better than last year at 90% and 91% of average, respectively. The lower elevation snowpacks are 72% of average in Willow and Blackfoot basins, while the Portneuf basin is only 53%. Overall, the Snake River snowpack above American Falls Reservoir is 82% of average, same as a year ago. Combined reservoir storage in Palisades Reservoir and Jackson Lake is 41% of capacity, 65% of average. Overall, the combined reservoir storage for the 8 major reservoirs in the upper Snake is 56% of capacity, 77% of average, slightly better than a year ago. The Henrys Fork near Rexburg streamflow forecast remains low at 58%. The Snake River near Heise is forecast at 80% of average indicating water supplies may be marginal. With this year's snow better than last year for the mainstem Snake above Palisades Reservoir, the streamflow should also be better than last year which was only 65% of average from a snowpack that was 80% of average on April 1, 2002. Above normal spring and summer precipitation will help ensure adequate water supplies.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - April 1, 2003

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		Chance Of Exceeding *		Chance Of Exceeding *				
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)		30% (1000AF)	10% (1000AF)
HENRYS FORK near Ashton (2)	APR-JUL	315	360	390	68	420	465	571
	APR-SEP	435	490	525	69	560	615	763
HENRYS FORK near Rexburg (2)	APR-JUL	670	805	900	58	990	1130	1559
	APR-SEP	895	1050	1160	58	1270	1420	2013
FALLS near Squirrel (1,2)	APR-JUL	223	270	290	75	310	355	386
	APR-SEP	275	320	340	75	360	405	456
TETON near Driggs	APR-JUL	91	111	125	76	139	159	165
	APR-SEP	118	143	160	76	177	202	210
TETON near St. Anthony	APR-JUL	220	270	300	74	330	380	403
	APR-SEP	270	325	360	75	395	450	482
SNAKE near Moran (1,2)	APR-SEP	635	730	775	86	820	915	904
PACIFIC CREEK at Moran	APR-SEP	126	144	156	88	168	186	178
SNAKE above Palisades (2)	APR-JUL	1800	1930	2020	85	2110	2240	2370
	APR-SEP	2050	2210	2320	85	2430	2590	2735
GREYS above Palisades	APR-JUL	215	245	265	78	285	315	338
	APR-SEP	255	290	310	79	330	365	394
SALT near Etna	APR-JUL	168	208	235	69	263	303	342
	APR-SEP	212	260	290	69	320	370	419
PALISADES RESERVOIR INFLOW (1,2)	APR-JUL	2210	2530	2680	81	2830	3150	3331
	APR-SEP	2580	2950	3120	81	3290	3660	3875
SNAKE near Heise (2)	APR-JUL	2440	2680	2840	80	3000	3240	3561
	APR-SEP	2850	3130	3320	80	3510	3790	4159
WILLOW CREEK nr Ririe (2)	APR-JUL	25	33	40	49	47	59	81
BLACKFOOT RESV INFLOW	APR-JUN	17.0	38	52	43	66	86	120
PORINEUF at Topaz	APR-JUL	23	31	37	46	43	51	81
	APR-SEP	30	39	46	46	53	62	100
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	965	1695	2030	63	2365	3100	3242
	APR-SEP	1130	1870	2200	63	2530	3270	3505

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

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

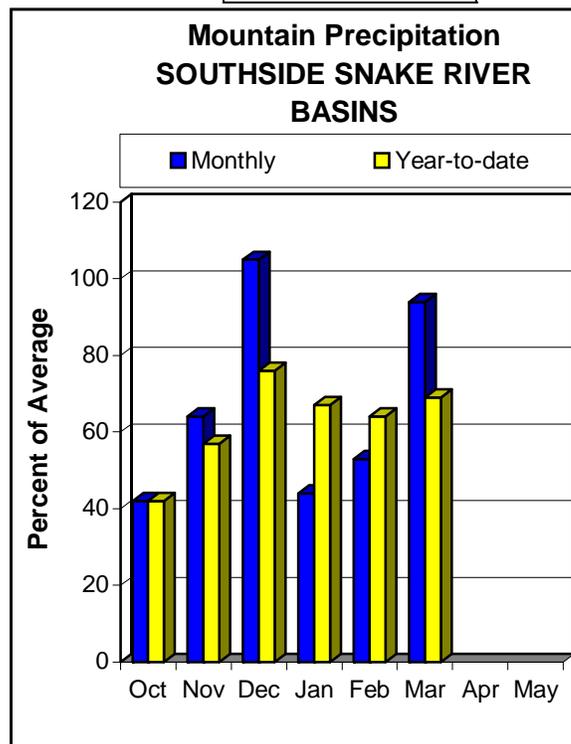
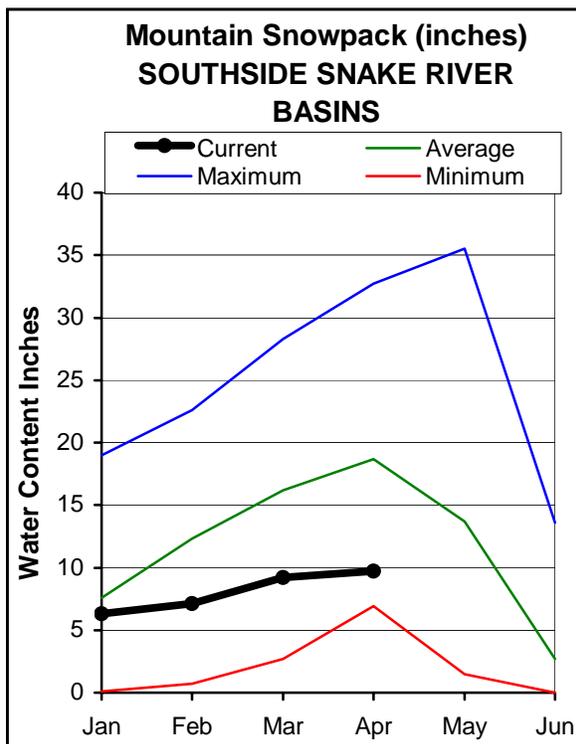
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HENRYS LAKE	90.4	71.0	57.3	85.5	Henry Fork-Falls River	12	89	77
ISLAND PARK	135.2	98.8	108.7	114.6	Teton River	8	112	86
GRASSY LAKE	15.2	12.9	9.8	12.3	Henry Fork above Rexburg	20	97	80
JACKSON LAKE	847.0	294.8	165.6	486.6	Snake above Jackson Lake	9	108	90
PALISADES	1400.0	628.6	577.4	941.5	Gros Ventre River	4	102	88
RIRIE	80.5	39.0	32.6	41.6	Hoback River	6	108	87
BLACKFOOT	348.7	77.7	116.2	229.8	Greys River	5	117	92
AMERICAN FALLS	1672.6	1349.4	1366.1	1443.2	Salt River	5	117	91
					Snake above Palisades	31	113	91
					Willow Creek	7	88	71
					Blackfoot River	5	97	73
					Portneuf River	7	63	53
					Snake abv American Falls	53	100	82

* 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.

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SOUTHSIDE SNAKE RIVER BASINS APRIL 1, 2003



WATER SUPPLY OUTLOOK

For the 3rd consecutive month, these basins south of the Snake River received the least amount of precipitation in the state, 94% of average. March precipitation ranged from 80-110% of average for most SNOTEL sites in these high desert streams. Water year to date precipitation is 69% of average, the lowest in the state and only about 3/4 of last year's amount. Snowpacks remain the lowest in state at half of average. The snow is also about half of last year except in the Owyhee basin, which is only a third of last year. Only 4 of the 19 aerial markers that monitor snow in the Owyhee basin area had any snow on March 27. Salmon Falls Reservoir is 11% of capacity, 27% of average. This is about the same as last year, but 5,000 acre-feet less than in 2001, and the lowest March 31 storage since 1955. Oakley Reservoir is 23% of capacity, half of average, and the same as last year. Owyhee Reservoir has only increased from 20% full February 1, to 25% full March 1 and is now just 28% full; this is only 34% of average. Streamflow forecasts remain low ranging from 23-42% of average in these high desert streams. Water users should be prepared for agricultural irrigation water shortages in the Owyhee, Salmon Falls and Oakley basins. A wet spring and summer will help reduce irrigation demand but will not change the total amount of surface water available.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - April 1, 2003

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		Chance Of Exceeding *		Chance Of Exceeding *				
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)	30% (1000AF)		10% (1000AF)	
OAKLEY RESV INFLOW	APR-JUL	4.5	7.0	9.1	31	11.4	15.4	29
	APR-SEP	5.0	7.7	9.9	31	12.4	16.5	32
OAKLEY RESV STORAGE	APR-30	15.0	16.8	18.0	44	19.2	21	41
	MAY-31	10.5	14.3	16.9	38	19.5	23	45
	JUN-30	4.3	9.9	13.7	34	17.5	23	40
SALMON FALLS CREEK nr San Jacinto	APR-JUN	14.8	22	28	37	35	45	75
	APR-JUL	14.8	23	29	36	36	48	80
	APR-SEP	16.3	25	31	37	38	50	84
SALMON FALLS RESV STORAGE	APR-30	17.6	22	25	28	28	32	89
	MAY-31	15.0	23	29	29	35	43	101
BRUNEAU near Hot Spring	APR-JUL	45	68	86	42	107	141	206
	APR-SEP	47	71	90	42	111	147	216
OWYHEE near Gold Creek (2)	APR-JUL	2.2	5.1	7.7	29	10.8	16.4	27
OWYHEE nr Owyhee (2)	APR-JUL	11.8	16.7	20	24	34	54	82
OWYHEE near Rome	APR-JUL	48	82	110	29	142	197	378
OWYHEE RESV INFLOW (2)	APR-JUL	39	69	93	23	121	169	398
	APR-SEP	44	75	100	23	129	178	428
SUCCOR CK nr Jordan Valley	APR-JUL	1.4	2.3	2.9	24	5.5	9.3	12.1
SNAKE RIVER at King Hill (1,2)	APR-JUL	805	1462	1760	58	2060	2715	3045
SNAKE RIVER near Murphy (1,2)	APR-JUL	785	1469	1780	58	2090	2775	3092
SNAKE RIVER at Weiser (1,2)	APR-JUL	1193	2394	2940	51	3485	4690	5765
SNAKE RIVER at Hells Canyon Dam (1,2)	APR-JUL	1496	2833	3440	53	4045	5380	6493
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	12184	15565	17100	79	18640	22020	21550

SOUTHSIDE SNAKE RIVER BASINS Reservoir Storage (1000 AF) - End of March					SOUTHSIDE SNAKE RIVER BASINS Watershed Snowpack Analysis - April 1, 2003			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
OAKLEY	74.5	17.1	17.3	36.0	Raft River	6	50	52
SALMON FALLS	182.6	19.3	18.9	70.2	Goose-Trapper Creeks	7	43	46
WILDHORSE RESERVOIR	71.5	22.7	24.0	46.2	Salmon Falls Creek	8	47	50
OWYHEE	715.0	198.8	285.2	593.0	Bruneau River	8	48	51
BROWNLEE		NO REPORT			Owyhee Basin Total	20	34	48

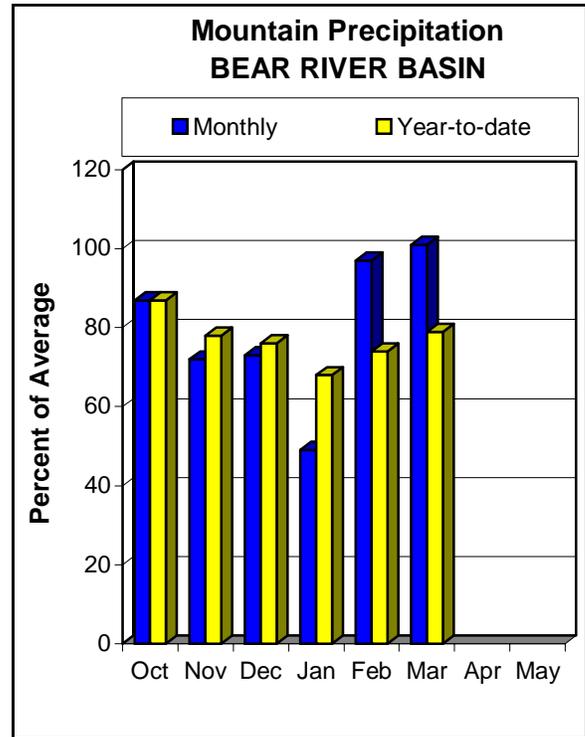
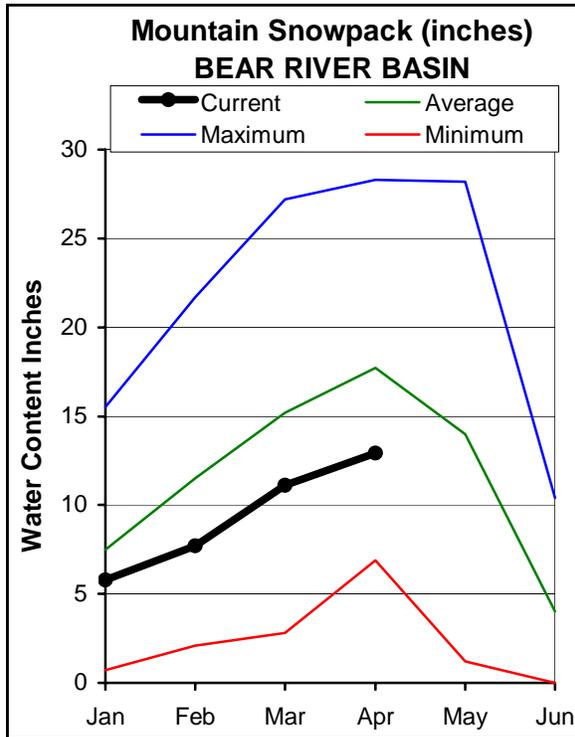
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The average is computed for the 1971-2000 base period.

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BEAR RIVER BASIN

APRIL 1, 2003



WATER SUPPLY OUTLOOK

March precipitation varied across the basin ranging from 70-120% of average for most SNOTEL sites. For the basin as a whole, March precipitation was right at average. Water year to date precipitation is 79% of average, same as last year. Snowpack percentages range from 60% of average for Mink Creek to 87% for Smith and Thomas Forks. Overall, the Bear River basin is 70% of average, slightly less than last year. However, Bear Lake is storing about 200,000 acre-feet less water than last year and is currently 27% of capacity, 42% of average. The Bear River below Stewart Dam is forecast at 38% of average, but remember flows were only about 10% of average each of the last two summers. Therefore, water users should see natural streamflows similar to last year-- snowmelt peak flows of low and short duration. Water supplies will most likely be quite short; users should be prepared for the third consecutive year with low streamflows and even less storage water available. A cool, wet spring and summer will help decrease irrigation demand and extend water use.

BEAR RIVER BASIN
Streamflow Forecasts - April 1, 2003

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 *										
Bear R nr UT-WY State Line	APR-SEP	60	70	77	62	85	98	125				
Woodruff Narrows Res inflow	APR-SEP	29	44	55	39	68	89	142				
Smiths Fork nr Border	APR-JUL	46	56	63	61	71	86	103				
	APR-SEP	55	66	74	63	83	99	118				
Bear River blw Stewart Dam	APR-JUL	14.0	69	106	37	143	198	288				
	APR-SEP	20	82	125	38	168	231	327				

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of March					BEAR RIVER BASIN Watershed Snowpack Analysis - April 1, 2003			
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	389.1	605.5	923.8	Smiths & Thomas Forks	4	116	87
MONPELIER CREEK	4.0	1.8	1.0	1.7	Bear River ab WY-ID line	14	99	74
					Montpelier Creek	2	117	80
					Mink Creek	4	76	60
					Cub River	3	88	71
					Bear River ab ID-UT line	25	93	70
					Malad River	3	63	49

* 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 Reservoir 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)**

<u>Basin/ Reservoir</u>	<u>Dead Storage</u>	<u>Inactive Storage</u>	<u>Active Storage</u>	<u>Surcharge Storage</u>	<u>NRCS Capacity</u>	<u>NRCS Capacity Includes</u>
<u>Panhandle Region</u>						
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
<u>Clearwater Basin</u>						
Dworshak	---	1452.00	2016.00	---	3468.0	Inactive+Active
<u>Weiser/Boise/Pavette Basins</u>						
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
<u>Wood/Lost Basins</u>						
Magic	Unknown	---	191.50	---	191.5	Active
Little Wood	---	---	30.00	---	30.0	Active
Mackay	0.13	---	44.37	---	44.4	Active
<u>Upper Snake Basin</u>						
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
<u>Southside Snake Basins</u>						
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
<u>Bear River Basin</u>						
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)	(% 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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