United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report
May 1, 2008

Winter lingers due to cold April air temperatures. This picture was taken Saturday, April 26th, 2008 from the approach to Lost River Peak near Mackay, Idaho. In the background, Mackay Reservoir remains partly frozen, the White Knob Mountains proudly hold onto their seasonal snowpack while only the lowest elevations have melted. The cold temperatures have many implications from delayed runoff, below average streamflows, low inflows to reservoirs and delayed irrigation to longer winter recreation and mangy, hungry wildlife searching for nutrition in the valleys. Now we wait to see how the remaining snow melts: If a sustained warm spell occurs, then streams will increase quickly along with reservoir inflows but if cold weather lingers the snow will gradually melt and possible delaying peak snow melt streamflows. The good news is that snowmelt streamflow volumes will provide longer river recreation season, healthy fisheries, hydropower and hopefully yield adequate irrigation supplies through the summer when the snow finally melts.

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual 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

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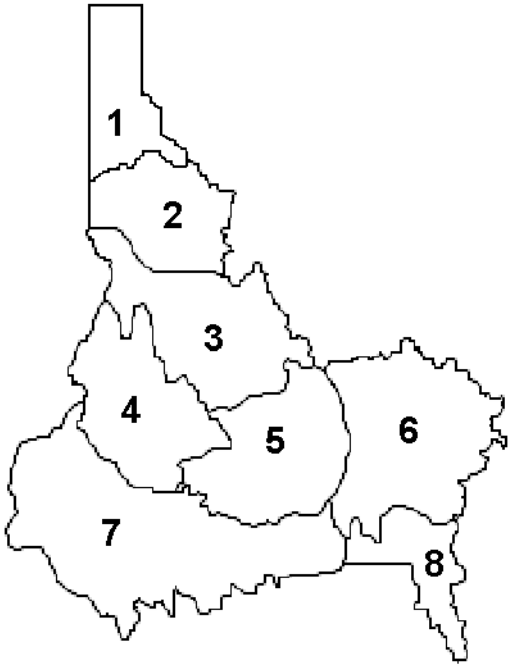

[ ] - Annual Data Summary Report - published after each water year: contains individual snow course measurements, snow water equivalent and precipitation data from SNOTEL (SNOw TELemetry) stations, and the 1971-2000 averages.

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IDAHO WATER SUPPLY OUTLOOK REPORT

May 1, 2008

SUMMARY

Idaho's water supply is looking promising this year, but could be too much to handle depending how it comes off. It still comes down to future weather. April precipitation ranged from 45% of average in the Wood and Lost basins to 90% in northern Idaho. April's cool weather and below normal precipitation preserved Idaho's snowpack and kept April's runoff at minimum levels. Unseasonably warm temperatures in May could send high volumes of water flowing from the mountains to the rivers, especially in the northern half of the state. However, this weather pattern has also been ideal for mitigating high runoff from this year's above average low elevation snow by slowly melting it. Snowpacks range from twice normal in the low elevation Rathdrum and Palouse basins to normal in parts of the Boise, Big Wood, Big Lost, Little Lost and Bear basins. With the delayed melt, streamflow forecasts now call for 120-140% of average runoff volumes in the Snake headwaters, Teton, Payette, Clearwater, Coeur d'Alene, Spokane, Priest and Smith basins. Most reservoirs are in good shape at 70-95% of average and are just waiting for the runoff. Surface water irrigation should be adequate in most basins but could be tight in the Bear, Salmon Falls, Big Wood, Big Lost and Little Lost.

Moderate temperatures and spring precipitation will allow the snow to gradually melt reducing flood threats and efficiencies of the snow to produce streamflow. For example, the Owyhee River had a tremendous snowpack of 144% of average on March 1, but a dry spring and gradual melt allowed the peak snowmelt streamflow to already occur. Projected seasonal runoff for the March-July period is only expected to be 80% of average. Similar observations were seen in Sierra-Nevada basins when dry weather and sublimation of the snowpack produced minimal streamflow. Reno, Nevada received 0.7 inches of precipitation for March-April and tied its lowest rainfall since 1906. Let's hope for normal temperatures and precipitation this spring. Water users and managers across southern Idaho should monitor the efficiency of the snow to produce streamflow closely in May and if the trend is for less runoff as observed in other basins, may wish to consider using a smaller volume forecast.

SNOWPACK

April temperatures were 6-10 degrees F below normal in the Pacific Northwest and Northern Rockies. These cold temperatures allowed moisture to fall as snow in higher elevations, delay snow melt and push snowpack percent of average levels higher for this time of year. Snow water content amounts just reached their peak amounts at the end of April in the Panhandle Region, Clearwater, Salmon, Payette, Henrys Fork, Teton and Upper Snake basins. The highest snowpacks are twice normal in the low elevation drainages of Rathdrum and Palouse basins based on a single measuring station in these basins. The highest snowpacks remain along the west side of the state from the Weiser basin at 168% of average to the Kootenai River basin flowing from Canada which is 121%. The snowpack is 140-160% of average in the Coeur d'Alene, Spokane, North Fork Clearwater, Lochsa, and Selway basins. The Selway River May 1 snowpack is the third highest since 1975 and 9th highest since 1961! Overall, the Clearwater River basin snowpack is 143% of average, highest since 1997. The Salmon basin snowpack increases from 107% of average in the Lemhi basin to 160% in the Little Salmon basin; overall, the Salmon basin is 120%. The Boise and Little Wood basins are about 115% of average; Big Wood basin is 106%. The snowpack decreases to near normal levels in the Big Lost and Little Lost basins. The Snake River basin snowpack above Palisades Reservoir is 116% of average. Basins across southern Idaho's high desert streams range from 120% of average in the Owyhee to 143% in the Raft River. The Bear River snowpack is near average with a few tributaries above average and few below average while the single SNOTEL site (Oxford Spring) in the Malad basin just melted out.

PRECIPITATION

The precipitation trend for the past few months is downward, and below normal in most basins. If this was the middle of winter, this would be key indicator to watch. Remember the dry spell during the last winter? Luckily for Idaho's numerous water users, we have accumulated our annual water supply in our mountains and are now just waiting for more of the snow to melt and be utilized for irrigation, hydropower, fish, wildlife and summer recreation. April precipitation ranged from 90% of average in the Clearwater and Panhandle Region to 40% in the Big Wood, Little Wood and Big Lost basins. Across central Idaho, which includes the Salmon, Weiser, Payette, Boise, Wood, and Lost river basins, this was the third consecutive month of below normal precipitation. In the Bear River, monthly precipitation was below normal for the second consecutive month; this basin also hosts the lowest water year to date precipitation amounts in the state at 94% of average. After one month of above average precipitation in March, the Upper Snake basin precipitation was again below normal at only 65% of average in April. April precipitation was slightly below normal in northern Idaho for only the third time this water year; this may actually be good news where abundant snowpacks are waiting to melt.

It is interesting to note, that SNOTEL sites in the Clearwater basin only need 2-10 inches of precipitation (or less than 10 percent of their annual precipitation amounts) to exceed their average annual precipitation amounts which range from 40-75 inches per year. Sites in the Big Lost and Little Lost basins need 8-13 inches of precipitation to reach their average annual amounts of 20-34 inches; this equates to 30-50% of their annual total. Overall, water year to date precipitation is near average ranging from about 95-115% of average, but it seems like it should be higher as nearly all the moisture fell as snow this year and is just waiting to melt and produce our annual streamflow.

RESERVOIRS

Reservoir storage amounts are slowly creeping up. The right combination of weather has kept streamflow at minimal levels this winter. This combination includes: cold temperatures allowing moisture to fall as snow rather than rain, frozen streams in mid-winter, no winter thaw or rain event, a dry and cold March, and now below normal April precipitation. The St. Joe River at Calder was record low in late April while several other higher elevation streams were also closing in on their minimal levels for the same period. In contrast, the Owyhee River near Rome peaked at 8,000 cfs on April 16, two months later than last year's peak of 4,650 cfs on February 12. Any significant rain would boost streams and could still produce additional flow in the near future but the ideal window is getting narrow as even soil moisture sensors indicate soils are drying out in the Owyhee basin. Owyhee Reservoir increased from 44% full last month to 63% full on April 30 and may be nearing its peak for the year if dry weather continues. Magic Reservoir also rebounded from 15% full last month to 34% full with Camas Creek finally thawing out and flowing. Camas Creek peaked at 680 cfs on April 27, but could rise again with additional rain or hot weather in early May. Unfortunately, the Big Wood snowpack may not be enough to fill the reservoir the rest of the way. April inflows to Bear Lake, Oakley and Salmon Falls reservoirs have been minimal and the reservoirs are only are 20-40% full and will not fill. Most other reservoirs are 50-80% of capacity and are maintaining storage space for the snowmelt runoff. Whether or not reservoirs fill completely or not may come down to timing of runoff and irrigation demand.

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

It is amazing how low the streamflows have been with all that snow in the mountains. Cold temperatures are keeping Idaho's frozen liquid gold in the mountains. What is worth more - an ounce of gold or an acre-foot of water? With the dry weather occurring across central and southern Idaho, the benefits of cold temperatures are overriding the lack of precipitation. These cooler temperatures are an ideal melt scenario for the abundant low elevation snowpack and also reduce irrigation demand. However, this could be detrimental if a rapid warm spell occurs in May and suddenly melts the abundant high elevation snowpack. Ideally, normal springtime temperatures would allow water managers to wisely and properly manage this year's runoff; unusually hot temperatures would cause rapid flow increases and potential flooding, especially in the northern third of Idaho.

Overall, streamflow forecast percentages went up from last month. This is due to cool April temperatures that prevented melt and reduced April streamflow to below normal or even near record low levels. Since less runoff occurred in April, the rest of the snow is left to runoff in a shorter May-July period. The highest forecasts call for near 140-150% of average in Clearwater basin and Panhandle Region. The lowest are 80-90% of average the Wood and Lost river basins. Near normal volumes are predicted in the Boise, Upper Snake, Salmon Falls, and Oakley basins. The Bear River is forecast for slightly above average flows in the headwaters and decreases to 43% of average for the Bear River at Stewart Dam. Surface water irrigation supplies should be adequate in most basins, but could be tight for the Bear, Big Wood, Little Lost, Big Lost and Salmon Falls water users.

Note: Forecasts published in this report are NRCS guidance forecasts. NRCS is using SNOTEL data in a timely manner to provide timely streamflow forecast for users. Official jointly coordinated and published forecasts by the USDA Natural Resources Conservation Service and the US Department of Commerce, NOAA, National Weather Service are available at the joint west-wide Water Supply Outlook for the Western US at http://www.wcc.nrcs.usda.gov/wsf/westwide.html.

RECREATION

With streams forecast at near average or better, water supplies will be adequate for irrigators, provide excellent boating and river running opportunities, and hydropower. The delayed melt and cooler temperatures will also, hopefully, put a damper or delay wildfires. Timing and magnitude of snowmelt driven streamflow peaks depend on spring temperatures and precipitation. With above normal snowpacks from the Payette basin north, the potential is there for high peak flows. It appears the Owyhee, Weiser and Camas streams have peaked from snowmelt, but additional rains could kick them in again. The Bruneau River which is forecast at near average will have a good floating season. The Payette River, forecast at 117% of average will have a long season as always with Cascade and Deadwood reservoirs releasing irrigation water well after the seasonal peaks occur. The Middle Fork and South Fork Salmon river are primed with a snowpack at about 110% of average. Lack of water will not be a concern this year; however, moving and floating debris will be this spring. The Salmon River is forecast at 103% of average and will be sediment ridden during the peak flows which could exceed 70,000 cfs. As mentioned last month, caution should be used during high flows and when the streams are on the rising limb of the hydrograph. This is when the streams may erode banks and carry logs and debris down the river. There is concern about additional debris and logs in the river due to the extreme fires of 2007 in Idaho. Have fun, but be careful, play it safe and know your river running capabilities and limits.

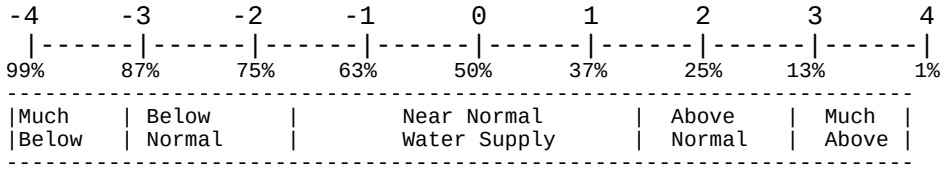
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of May 1, 2008

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 +4.0 (abundant supply) to -4.0 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences. The SWSI analysis period is from 1971 to present.

SWSI values provide a more comprehensive outlook of water availability by combining streamflow forecasts and reservoir storage where appropriate. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been determined for some basins to indicate the potential for agricultural irrigation water shortages.

BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	2.7	1999	NA
CLEARWATER	2.3	2002	NA
SALMON	0.5	2003	NA
WEISER	2.3	1999	NA
PAYETTE	0.5	1993	NA
BOISE	-0.1	2003	-2.3
BIG WOOD	-0.8	2005/2000	-0.7
LITTLE WOOD	0.1	2003	-2.0
BIG LOST	-0.1	2005	-0.3
LITTLE LOST	-0.1	2006	0.6
HENRYS FORK	0.7	2006	-3.3
SNAKE (HEISE)	0.5	2006	-1.6
OAKLEY	-0.3	2007	-1.2
SALMON FALLS	-1.6	2005	-1.6
BRUNEAU	0.5	1999	NA
BEAR RIVER	-3.4	1992/2005	-3.5

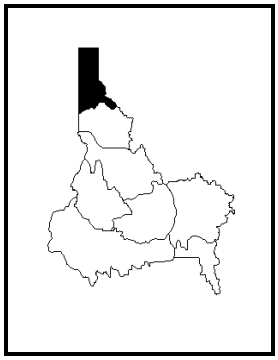
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

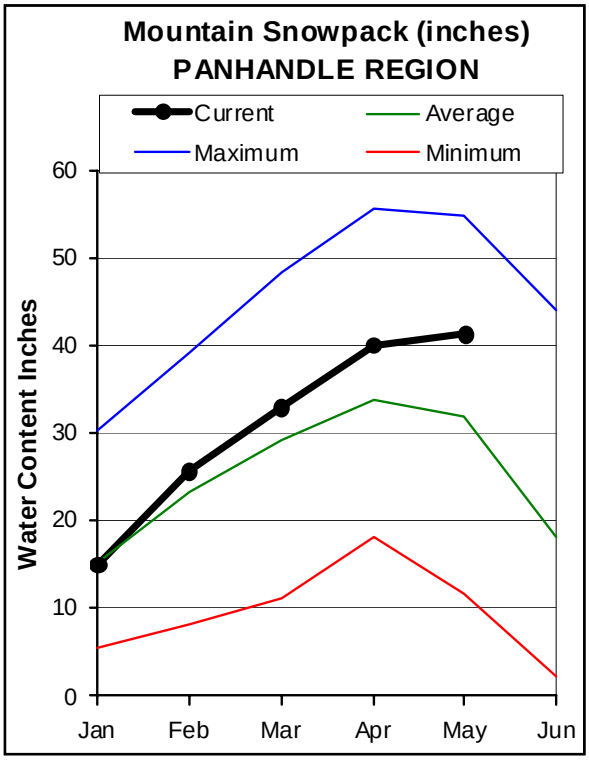


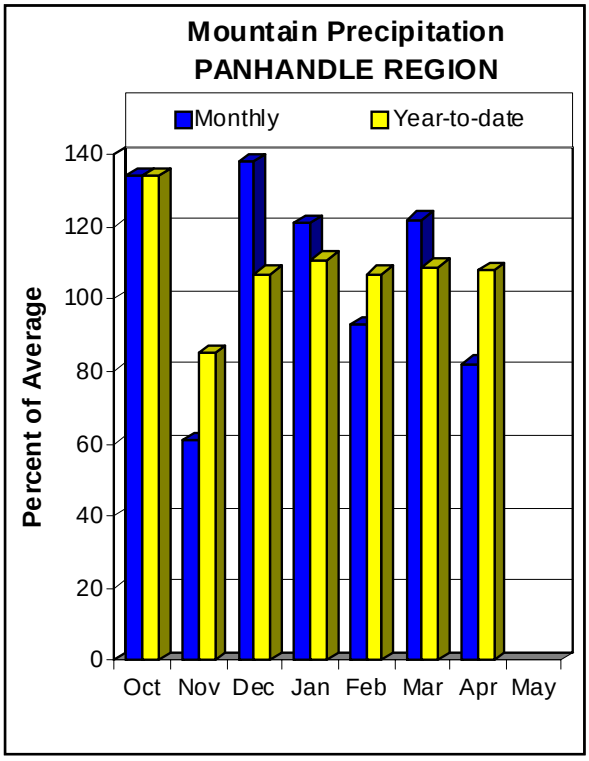
NA = Not Applicable

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
MAY 1, 2008







WATER SUPPLY OUTLOOK

Take hope Panhandle, remember what outdoor writer Hal Borland wrote "No winter lasts forever; no spring skips its turn." With time this is proving true, but until recently the Panhandle was still in the grips of winter. April precipitation was 82% of average, but below normal temperatures allowed it to fall as snow in the mountains and add to an already deep snowpack. As a result the Panhandle's snowpack didn't peak until the last week of April, two weeks later than normal. As of May 1 the snowpack is 129% of average for the region. The greatest snowpack is found in the Rathdrum Creek area with well over the twice the average amount; prompting flood control managers to draw down Twin Lakes in preparation for the large runoff. Snowpack in the Spokane and Coeur d'Alene basins are also deep, at more than 150% of average. The lower elevation sites that we have been talking about all winter in the Coeur d'Alene basin continue to hold above average snow. Fourth of July Summit snow course (3,200 feet) has 14.4 inches of snow water, three-times the next greatest May 1st amount (1975) out of 45 years of measurement. Humboldt Gulch SNOTEL (4,200 feet) near Wallace has finally started to melt but it still has its greatest May 1st snowpack in 48 years of measurement. Similarly near Priest Lake, this is the first time that Benton Meadow snow course has had snow on May 1st since measurements began 69 years ago. Up and down temperatures caused streams to begin to rise only to fall mid-month. Lakes around the region haven't received much runoff yet and their storage reflects this with below average amounts ranging from 60-90% of average, and 50-70% of capacity. Above average streamflow forecasts promise to erase all storage deficits by the end of the snowmelt season. Forecasts range from about 106% for the Kootenai and Moyie rivers to 150% for the North Fork Coeur d'Alene River. The Spokane River near Post Falls is forecast at 141% of average, while the Priest River will flow at 145%. Pend Oreille Lake storage is 54% of capacity, and inflow is forecast at 112%. The risk of unregulated streams overtopping their banks this spring is a concern, especially if temperatures warm to seasonable or above average values in May.

PANHANDLE REGION
Streamflow Forecasts - May 1, 2008

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)	MAY-JUL	5740	6290	6540	106	6790	7340	6170
	MAY-SEP	6750	7390	7680	106	7970	8610	7250
MOYIE RIVER at Eastport	MAY-JUL	290	330	355	108	380	420	330
	MAY-SEP	305	350	375	109	400	445	345
SMITH CREEK	MAY-JUL	105	117	125	120	133	145	104
	MAY-SEP	111	124	133	120	142	155	111
BOUNDARY CREEK	MAY-JUL	102	111	117	115	123	132	102
	MAY-SEP	109	118	124	115	130	139	108
CLARK FK at Whitehorse Rpds (1,2)	MAY-JUL	9920	10500	10700	112	10900	11500	9590
	MAY-SEP	11400	11800	12000	112	12200	12600	10700
PEND OREILLE Lake Inflow (2)	MAY-JUL	11400	11700	11900	112	12100	12400	10600
	MAY-SEP	12700	13000	13200	112	13400	13700	11800
PRIEST near Priest River (1,2)	MAY-JUL	735	840	890	145	940	1040	615
	MAY-SEP	815	920	970	145	1020	1120	670
NF COEUR D'ALENE RIVER at Enaville	MAY-JUL	555	615	660	150	705	765	440
	MAY-SEP	610	675	720	150	765	830	480
ST. JOE at Calder	MAY-JUL	1000	1080	1130	134	1180	1260	845
	MAY-SEP	1090	1170	1220	134	1270	1350	910
SPOKANE near Post Falls (2)	MAY-JUL	2070	2240	2360	141	2480	2650	1670
	MAY-SEP	2210	2370	2490	141	2610	2770	1770
SPOKANE at Long Lake (2)	MAY-JUL	2170	2440	2620	137	2800	3070	1910
	MAY-SEP	2450	2730	2920	137	3110	3390	2130

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2184.0	2926.0	1954.8
FLATHEAD LAKE	1791.0	671.8	896.6	931.9
NOXON RAPIDS	335.0	313.0	318.8	272.3
PEND OREILLE	1561.3	835.9	938.1	916.7
COEUR D'ALENE	238.5	170.4	167.9	249.7
PRIEST LAKE	119.3	61.6	100.1	102.5

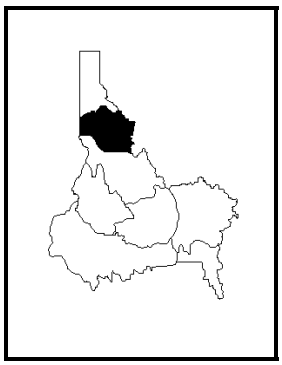
PANHANDLE REGION
Watershed Snowpack Analysis - May 1, 2008

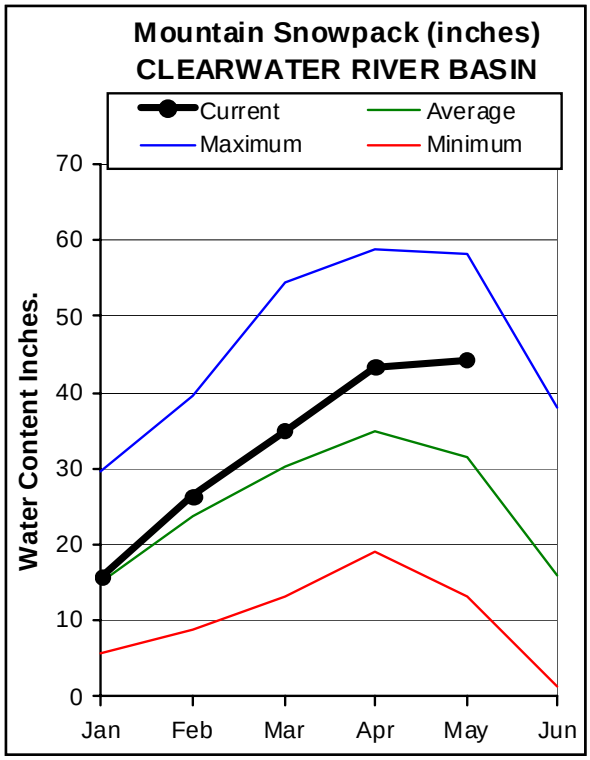
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	28	132	121
Moyie River	10	104	113
Priest River	5	166	129
Pend Oreille River	89	178	132
Rathdrum Creek	1	1223	238
Hayden Lake	0	0	0
Coeur d'Alene River	5	295	164
St. Joe River	4	189	136
Spokane River	8	279	154
Palouse River	1	0	203

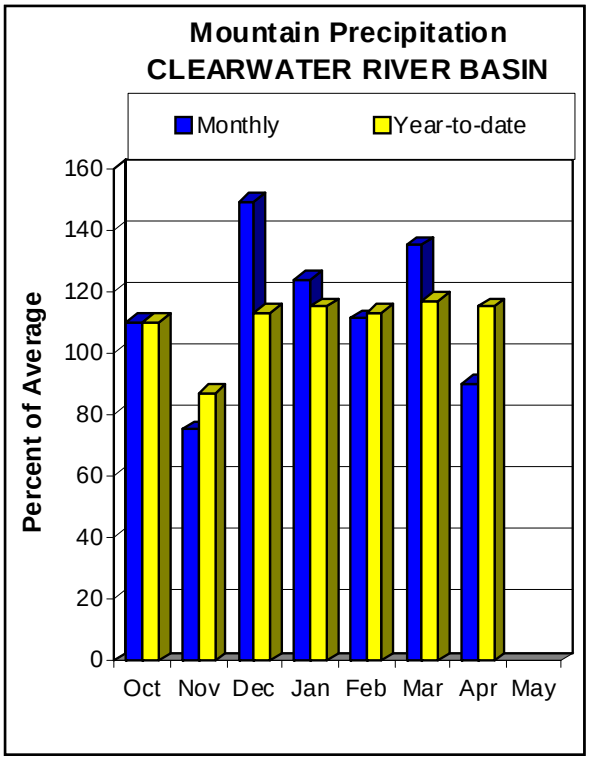
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

CLEARWATER RIVER BASIN
MAY 1, 2008







WATER SUPPLY OUTLOOK

Comparing the major river basins in Idaho, the Clearwater has the highest May 1 snowpack this year ranging from 139% of average in the North Fork Clearwater, to 152% in the Selway and 155% in the Lochsa. These snowpacks are some of the best in the last 37 years. Snow indexes show that the overall the Clearwater snowpack is the third best since 1976. April precipitation (82% of average) fell below average for only the second month since the water year began in October. Precipitation since October 1 is 108% of average. Even though precipitation was below average, cool temperatures kept existing snow from melting and allowed new snow to continue to accumulate. These cool conditions have prevented consolidation of the snow at high elevations, delaying melt for a few weeks. Dworshak Reservoir is currently storing 72% of average, 50% of capacity and May-July inflow is forecast at 122% of average. Magnitude and timing of peak flows depend not only on snowmelt rates but also spring precipitation and temperatures. The current snow index in the Selway basin is most the similar to 1971 when the Selway River near Lowell peaked at 35,800 cfs. In the Lochsa basin snowpacks are similar to 1999, when the Lochsa River near Lowell topped at 23,800 cfs. For the North Fork Clearwater, 1975 is the most similar year; that year the river peaked at 21,600 cfs. With the abundant snowpack and high streamflow forecasts, water users and river runners will be assured of high flows and abundant volumes that will provide an excellent whitewater season.

CLEARWATER RIVER BASIN
Streamflow Forecasts - May 1, 2008

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 R nr Lowell	MAY-JUL	2060	2200	2300	134	2400	2540	1720
	MAY-SEP	2140	2310	2420	132	2530	2700	1830
Lochsa R nr Lowell	MAY-JUL	1610	1700	1760	141	1820	1910	1250
	MAY-SEP	1680	1780	1850	139	1920	2020	1330
Dworshak Reservoir Inflow	MAY-JUL	1950	2270	2410	122	2550	2870	1970
	MAY-SEP	2090	2430	2590	122	2750	3090	2130
Clearwater R at Orofino	MAY-JUL	4050	4570	4800	129	5030	5550	3730
	MAY-SEP	4320	4870	5120	128	5370	5920	3990
Clearwater R at Spalding	MAY-JUL	6000	6800	7160	124	7520	8320	5770
	MAY-SEP	6420	7280	7670	124	8060	8920	6190

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	1743.2	3005.0	2421.3

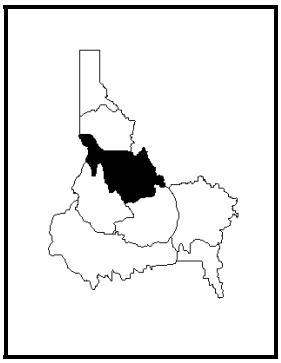
CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - May 1, 2008

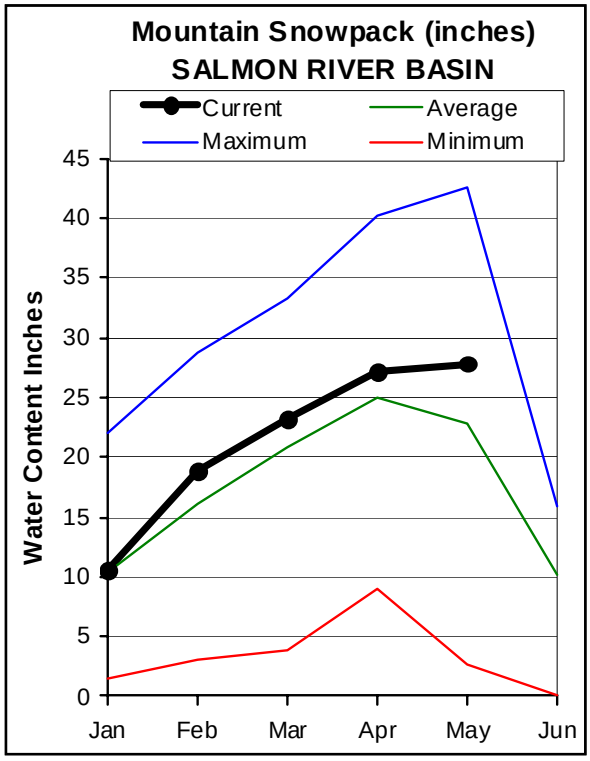
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	192	139
Lochsa River	3	279	155
Selway River	4	265	152
Clearwater Basin Total	16	209	143

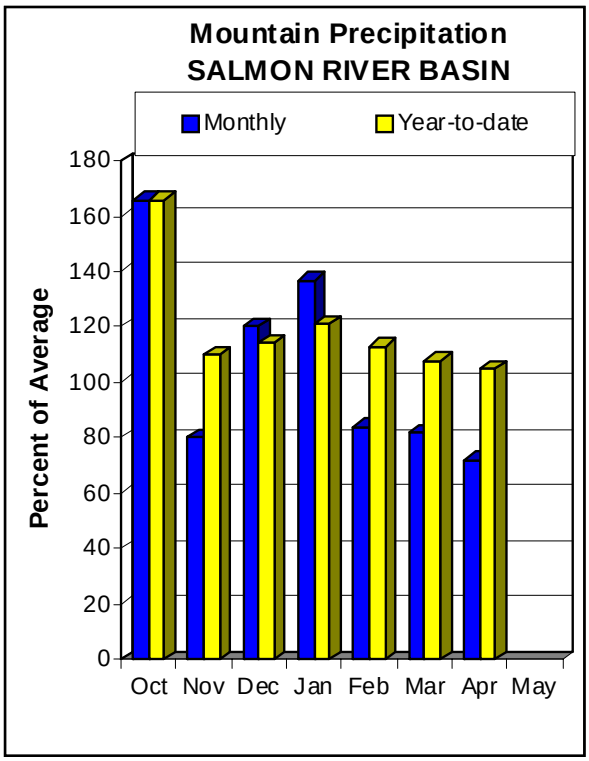
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

SALMON RIVER BASIN
MAY 1, 2008







WATER SUPPLY OUTLOOK

The Salmon basin's snowpack peaked two weeks later than average. Even though April precipitation was 72% of average for the basin, cool temperatures allowed new snow to be added to the existing snowpack and prevented much melting from occurring. As of May 1 the Salmon basin snowpack ranges from a high of 160% of average in the Little Salmon to 107% of average in the Lemhi. This is the third highest May 1 snowpack since 1981 for the Little Salmon basin. Snow in the main Salmon above Salmon, Middle Fork and South Fork ranges from 109-112% respectively. Basin-wide snowpacks are not quite as big as 2006. The most similar snowpack occurred in 1984. Water year to date precipitation since October 1 stands at 105%, slightly above average. Summer streamflow volumes are forecast at about 104% of average for the Lemhi River near Lemhi, the Salmon River at Salmon and for the Salmon River at White Bird; 115% for the Middle Fork Salmon River. The cool spring is delaying melt and the threat of an early fire season, but it is also increasing the chance of seeing high flows when temperatures do heat up to seasonal values in May and June. The Middle Fork Salmon River generally peaks when the snow at Banner Summit SNOTEL is half melted. This year Banner peaked at 28.4 inches of snow water on April 12th, since then only a couple of inches have melted off. Don't expect a snowmelt driven peak flow on the Middle Fork until mid-to-late May unless temperatures heat up. Estimating peak flows for the Middle Fork Salmon near Middle Fork Lodge is challenging since USGS flow measurements were not made from 1982-1998. The most similar years when data are available include 1980 and 1978 when the river peaked at about 9,350 cfs. The main stem Salmon River at White Bird peaked at 90,200 cfs in 1984. It is safe to say this year that peak flows will be high; spring precipitation and temperature will influence snowmelt rates and determine the magnitude and timing of snowmelt peak flows. River runners should be aware as increasing flows could unleash additional logs and debris from last season's fires. Be patient as there will be an extended floating season this year due to the excellent snowpack.

SALMON RIVER BASIN
Streamflow Forecasts - May 1, 2008

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)
Salmon R at Salmon	MAY-JUL	590	725	785	103	845	980	760
	MAY-SEP	695	860	935	104	1010	1170	900
Lemhi R nr Lemhi	MAY-JUL	51	64	73	104	83	99	70
	MAY-SEP	68	82	93	105	104	122	89
MF Salmon R at MF Lodge	MAY-JUL	650	740	805	115	870	960	700
	MAY-SEP	715	825	900	115	975	1080	785
Salmon R at White Bird	MAY-JUL	4150	4970	5340	104	5710	6530	5150
	MAY-SEP	4610	5550	5970	103	6390	7330	5780

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

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

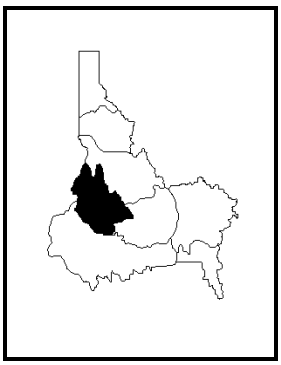
SALMON RIVER BASIN
Watershed Snowpack Analysis - May 1, 2008

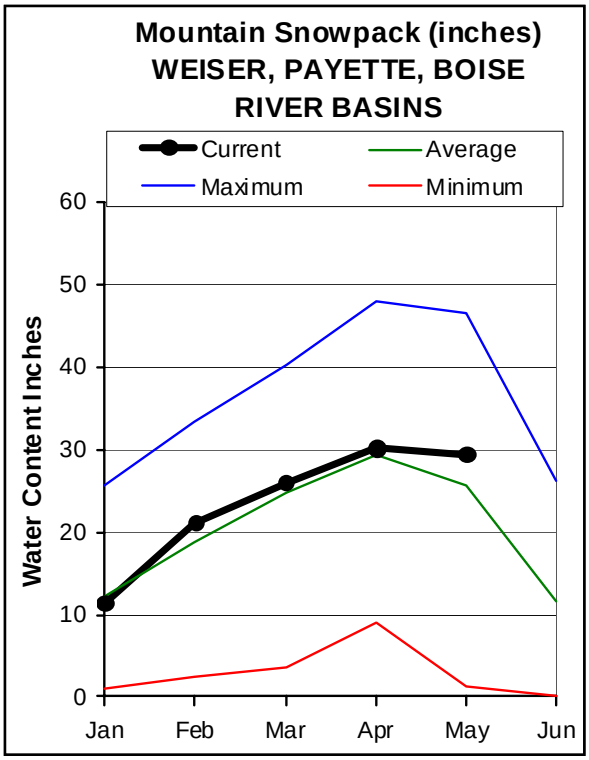
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	9	212	109
Lemhi River	7	160	107
Middle Fork Salmon River	3	238	110
South Fork Salmon River	3	216	112
Little Salmon River	4	425	160
Salmon Basin Total	25	218	120

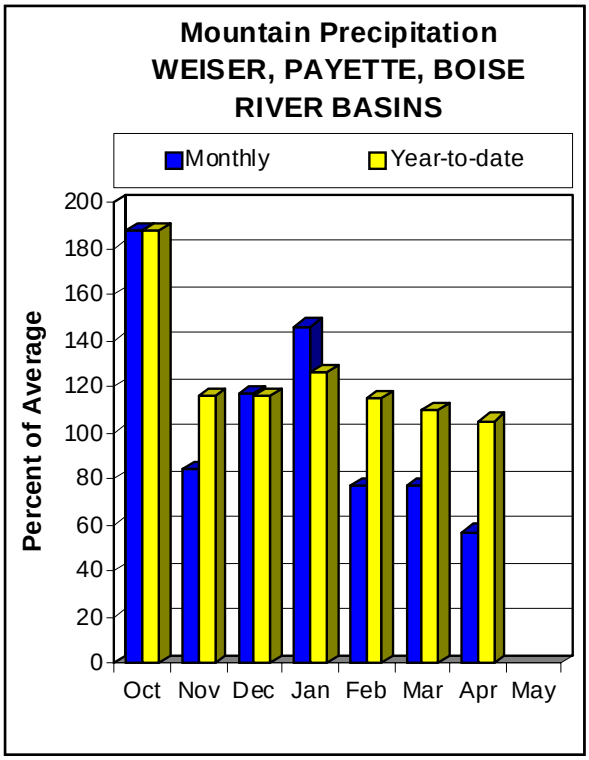
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

WEISER, PAYETTE, BOISE RIVER BASINS
MAY 1, 2008







WATER SUPPLY OUTLOOK

April precipitation in these west-central mountains was only 57% of average, even less than last year. Water year to date precipitation is 105% of average. Up and down temperatures allowed low snow to melt and still accumulate in the higher elevations. Some sites just reached their peak snow water at the end of April. The Weiser basin snowpack is 168% of average, highest May 1 since 1999. The Payette basin snowpack ranges from 140% in the North Fork Payette basin to 120% in the South Fork Payette. Overall, the Payette basin snowpack is more than twice last year but still less than in 2006. The Boise basin snowpack ranges from 102% of average in the Middle and North Fork Boise, to 147% in Mores Creek. Overall, the Boise basin is 114% of average, twice last year but much less than in 2006. The Payette reservoir system is 90% of average, 59% full and is ready for the runoff after the ice melts off of Cascade Reservoir. The Payette River near Horseshoe Bend is forecast at 117% of average; the runoff in 2006 was 123% of average. The Boise reservoir system is 95% of average, 65% full and system should fill as streams are forecast at 95-105% of average. The Weiser River is forecast at 135% of average for the May-September period, highest since 1998. Water supplies will be adequate in these west-central basins for the numerous users.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - May 1, 2008

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 R nr Weiser	MAY-JUL	215	305	350	137	400	520	255
	MAY-SEP	240	335	385	135	435	565	285
SF Payette R at Lowman	MAY-JUL	360	395	420	111	445	485	380
	MAY-SEP	415	450	480	110	510	550	435
Deadwood Reservoir Inflow	MAY-JUL	104	121	128	110	135	152	116
	MAY-SEP	112	131	140	112	149	168	125
Lake Fork Payette R nr McCall	MAY-JUL	79	87	92	121	97	106	76
	MAY-SEP	82	90	96	122	102	111	79
NF Payette R at Cascade	MAY-JUL	400	470	500	121	535	605	415
	MAY-SEP	405	485	520	120	555	635	435
NF Payette R nr Banks	MAY-JUL	525	590	630	120	670	735	525
	MAY-SEP	540	610	655	119	700	770	550
Payette R nr Horseshoe Bend	MAY-JUL	1220	1380	1460	112	1540	1700	1310
	MAY-SEP	1410	1590	1670	117	1750	1930	1430
Boise R nr Twin Springs	MAY-JUL	410	495	535	105	575	660	510
	MAY-SEP	460	550	595	105	640	730	565
SF Boise R at Anderson Ranch Dam	MAY-JUL	275	360	395	92	430	515	430
	MAY-SEP	305	390	430	93	470	555	465
Mores Ck nr Arrowrock Dam	MAY-JUL	51	67	79	100	92	113	79
	MAY-SEP	55	71	84	99	98	120	85
Boise R nr Boise	MAY-JUL	825	965	1030	95	1090	1240	1080
	MAY-SEP	920	1070	1140	96	1210	1360	1190

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	10.8	10.2	10.5
CASCADE	693.2	434.2	588.7	462.5
DEADWOOD	161.9	73.3	132.4	103.4
ANDERSON RANCH	450.2	178.3	375.3	302.3
ARROWROCK	272.2	243.2	253.8	180.9
LUCKY PEAK	293.2	234.2	266.9	207.9
LAKE LOWELL (DEER FLAT)	165.2	85.8	97.9	141.5

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - May 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	485	150
Weiser River	3	805	168
North Fork Payette	8	311	140
South Fork Payette	5	263	120
Payette Basin Total	14	289	133
Middle & North Fork Boise	5	206	102
South Fork Boise River	7	200	101
Mores Creek	4	397	147
Boise Basin Total	13	248	114
Canyon Creek	1	0	243

* 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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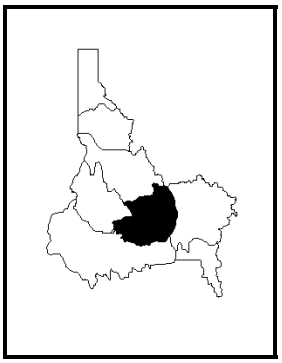
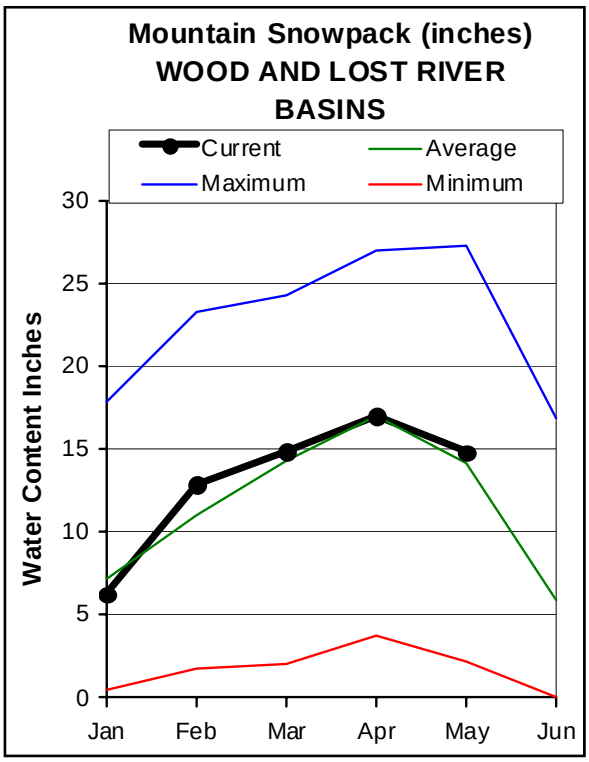
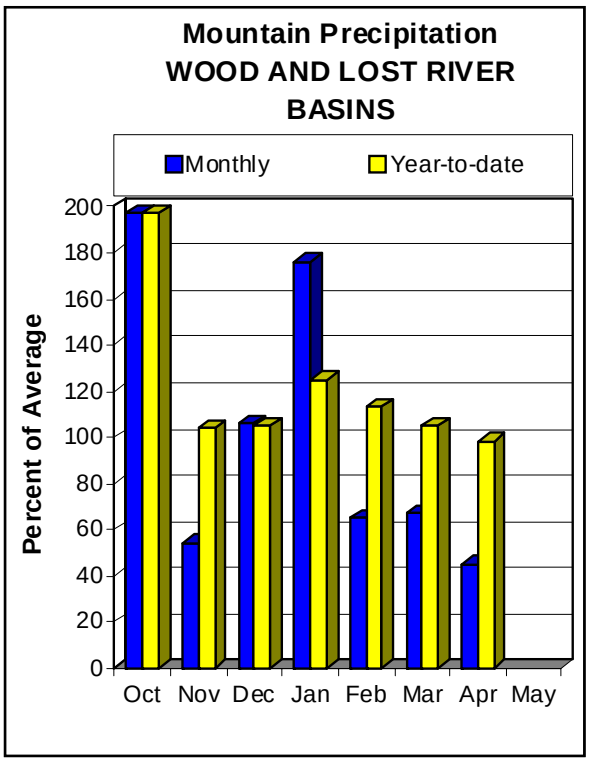
WOOD and LOST RIVER BASINS
MAY 1, 2008







WATER SUPPLY OUTLOOK

Compared to the rest of the state, the Wood and Lost basins were the driest region during April with only 45% of normal precipitation. In January, these basins were off to a good start accumulating snow and receiving ample precipitation. As winter progressed, below average precipitation fell each month from February through April. The negative cumulative side effects began to take its toll on the winter storage in the mountains. Currently snowpacks are above average at 105% for these basins as a whole. For most basins, the mountain snowpack accumulated very similar to the thirty year averages that are used for comparison. However, now cooler temperatures are delaying the melt and have pushed the snowpack percentages higher. Snowpacks are now beginning to melt in the mid-elevations but upper elevations are still holding onto their seasonal snow. Camas Creek peaked in mid-April at 700 cfs and allowed Magic Reservoir to increase from 15% of capacity last month to 34% of capacity. Little Wood is half full and Mackay is 69% full and remains partly frozen. Most streams are forecast at 80-90% of average for the May-July period, except Camas Creek at 74%. The highest streamflow forecast for May through July is for the Big Lost River near Howell Ranch and Little Wood River above High Five Creek at 95% of normal. The Big Wood River above and below Magic Reservoir is forecast for 83%. The Surface Water Supply Index (SWSI), which combines streamflow and reservoir storage, indicates tight water supplies based on the 50% Exceedance Forecast in these Wood and Lost river basins. Cooler summer temperatures and summer precipitation would provide some relief for summer water woes and extend the limited supply.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - May 1, 2008

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 River at Hailey	MAY-JUL	136	182	205	91	230	290	225
	MAY-SEP	155	210	235	90	265	330	260
Big Wood R ab Magic Reservoir	MAY-JUL	78	113	136	82	159	194	165
	MAY-SEP	88	126	151	84	176	215	179
Camas Ck nr Blaine	MAY-JUL	10.9	22	32	74	44	64	43
	MAY-SEP	12.8	25	35	80	47	68	44
Big Wood R bl Magic Dam	MAY-JUL	98	141	171	83	200	245	205
	MAY-SEP	108	154	185	84	215	260	220
Little Wood R ab High Five Creek	MAY-JUL	35	47	55	95	64	79	58
	MAY-SEP	39	52	61	94	71	88	65
Little Wood R nr Carey	MAY-JUL	40	51	58	94	65	76	62
	MAY-SEP	44	56	64	91	72	84	70
Big Lost R at Howell Ranch	MAY-JUL	111	135	152	94	171	200	162
	MAY-SEP	126	154	174	94	196	230	186
Big Lost R bl Mackay Res	MAY-JUL	95	108	117	91	126	139	129
	MAY-SEP	117	134	145	91	156	173	159
Little Lost R nr Howe	MAY-JUL	17.4	21	24	89	27	32	27
	MAY-SEP	22	26	30	86	34	40	35

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	64.2	167.2	150.4
LITTLE WOOD	30.0	14.7	29.0	24.3
MACKAY	44.4	30.6	38.5	34.6

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - May 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	7	235	101
Camas Creek	3	0	156
Big Wood Basin Total	10	274	106
Fish Creek	0	0	0
Little Wood River	4	662	116
Big Lost River	4	371	94
Little Lost River	3	286	103
Birch-Medicine Lodge Cree	2	166	100
Camas-Beaver Creeks	2	1383	121

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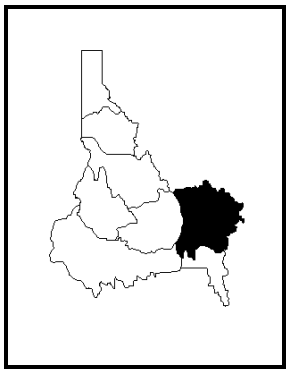
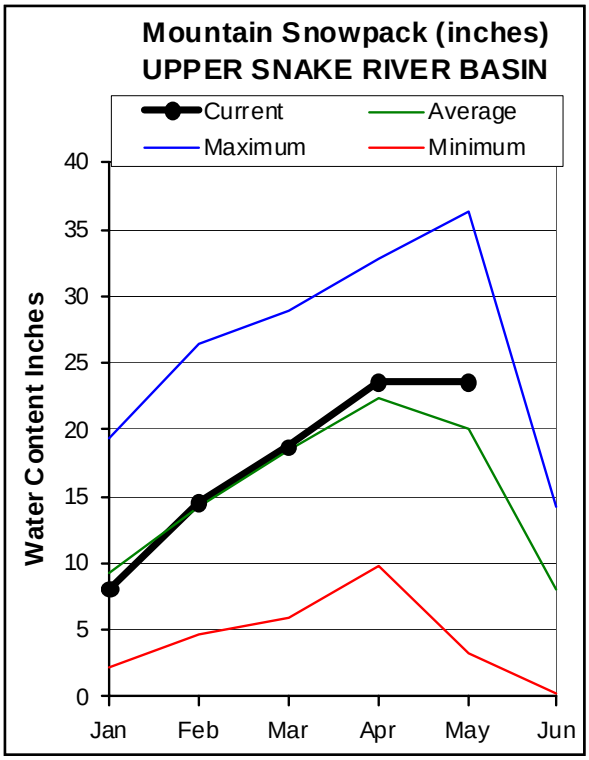
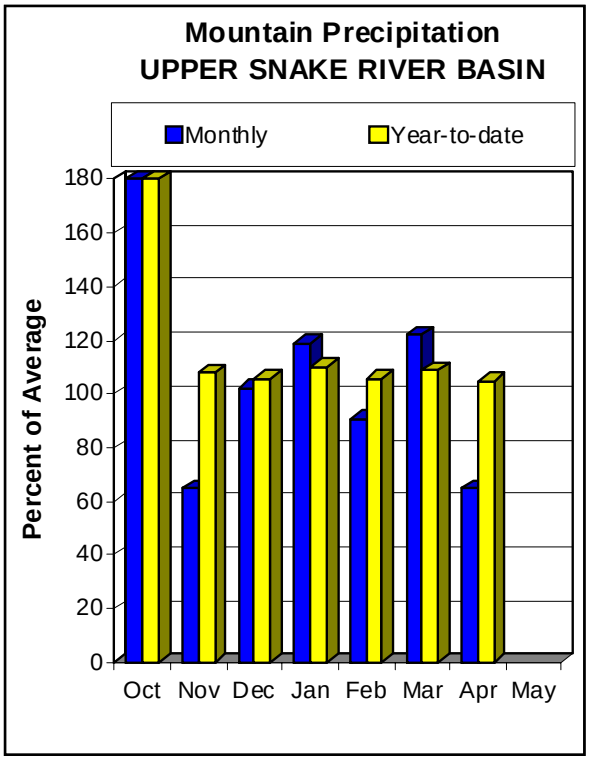
UPPER SNAKE BASINS
MAY 1, 2008







WATER SUPPLY OUTLOOK

After one month of above normal precipitation, April precipitation was below normal again at 65% of average in the Upper Snake basin. However, cool temperatures allowed the snow to continue building until the end of April. Current snowpack percentages in most basins are about 120% of average. A few exceptions are the lower elevation basins of Willow, Blackfoot and Portneuf drainages that are 142-198% of average. The May 1 snowpack in the Snake River above Jackson Lake and Teton basin is the highest since 1997. The snowpack for the Snake River above Palisades Reservoir is 116% of average, highest May 1 snowpack since 1999. The remaining snowpack above American Falls Reservoir is 126% of average, three times the amount of last year, and the highest since 1999. Combined storage in Palisades Reservoir and Jackson Lake is 82% of average, 48% full; these will be the hardest reservoirs to fill. The other reservoirs are in better shape, with the exception of Blackfoot Reservoir which is only 41% of average, 30% full and will not fill. Streamflow forecasts for the May-September period is for 120-124% of average for the Snake River at Flagg Ranch, Pacific Creek, and Teton River. The Snake River near Heise is forecast at 105% of average and should provide adequate surface irrigation supplies when combined with reservoir storage. The reservoir system should fill or come close but final fill will depend on timing of runoff and irrigation demand in May and June.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - May 1, 2008

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 nr Ashton	MAY-JUL	390	445	490	109	535	605	450
	MAY-SEP	555	625	680	105	735	820	645
Henrys Fork nr Rexburg	MAY-JUL	1260	1360	1430	108	1500	1600	1330
	MAY-SEP	1690	1810	1890	106	1970	2090	1780
Falls R nr Ashton	MAY-JUL	280	315	345	103	375	420	335
	MAY-SEP	340	390	420	104	455	505	405
Teton R nr Driggs	MAY-JUL	138	157	170	119	184	205	143
	MAY-SEP	182	205	225	120	245	270	188
Teton R nr St. Anthony	MAY-JUL	365	410	440	124	470	520	355
	MAY-SEP	440	495	530	122	570	630	435
Snake River At Flagg Ranch	MAY-JUL	480	520	545	120	570	610	455
	MAY-SEP	525	570	600	119	630	675	505
Snake R Nr Moran	MAY-JUL	740	840	885	118	930	1030	750
	MAY-SEP	815	930	980	117	1030	1140	840
Pacific Ck At Moran	MAY-JUL	153	179	196	123	215	240	160
	MAY-SEP	158	184	200	120	220	245	167
Snake R Nr Alpine	MAY-JUL	2050	2290	2400	111	2510	2750	2160
	MAY-SEP	2290	2590	2720	108	2850	3150	2530
Greys R Nr Alpine	MAY-JUL	255	280	300	100	320	345	300
	MAY-SEP	305	340	360	101	380	415	355
Salt R Nr Etna	MAY-JUL	220	270	300	107	330	380	280
	MAY-SEP	285	340	380	106	420	475	360
Snake R nr Irwin	MAY-JUL	2800	3070	3200	107	3330	3600	2980
	MAY-SEP	3240	3560	3700	105	3840	4160	3520
Snake R nr Heise	MAY-JUL	3060	3260	3400	107	3540	3740	3170
	MAY-SEP	3570	3800	3960	105	4120	4350	3760
Willow Ck nr Ririe	MAY-JUL	39	53	64	107	76	95	60
Blackfoot R ab Res nr Henry	MAY-JUN	36	52	64	114	78	100	56
Portneuf R at Topaz	MAY-JUL	53	62	68	105	75	85	65
	MAY-SEP	72	83	90	107	98	110	84
Snake River at Neeley	MAY-JUL	2070	2720	3020	114	3320	3970	2640
	MAY-SEP	2210	2920	3250	112	3580	4290	2910

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	82.8	85.3	87.4
ISLAND PARK	135.2	114.7	130.5	123.2
GRASSY LAKE	15.2	13.9	13.4	12.7
JACKSON LAKE	847.0	361.1	681.2	471.1
PALISADES	1400.0	725.9	1297.7	862.6
RIRIE	80.5	46.4	61.9	56.2
BLACKFOOT	348.7	105.6	208.5	256.3
AMERICAN FALLS	1672.6	1305.6	1623.6	1493.8

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - May 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	10	276	125
Teton River	8	338	121
Henrys Fork above Rexburg	18	298	124
Snake above Jackson Lake	6	271	123
Gros Ventre River	3	212	111
Hoback River	5	232	98
Greys River	5	164	106
Salt River	5	312	127
Snake above Palisades	23	260	116
Willow Creek	7	0	198
Blackfoot River	3	0	142
Portneuf River	6	1288	162
Snake abv American Falls	41	311	126

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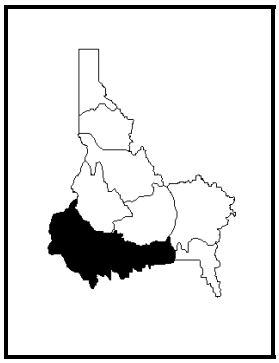
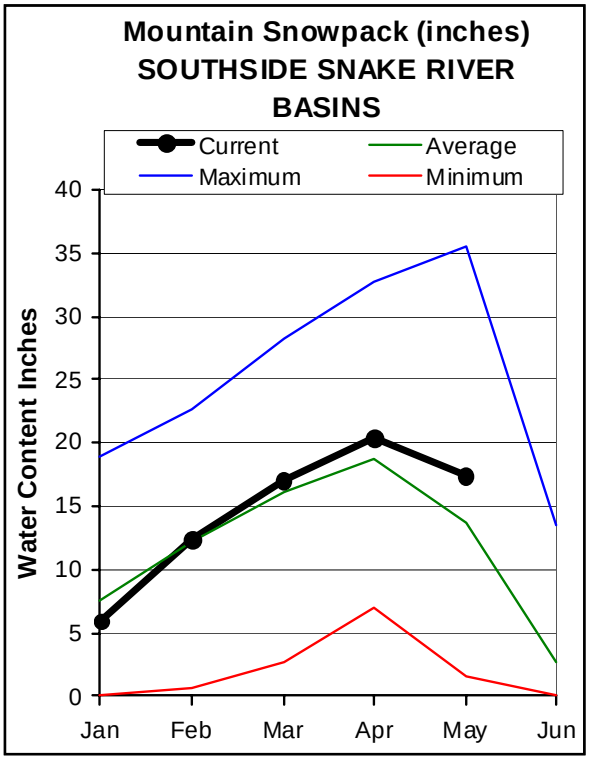
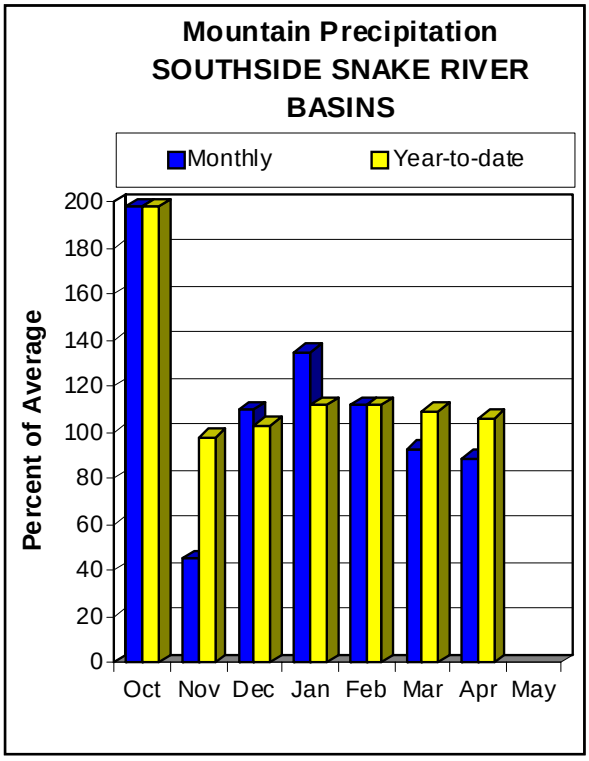
SOUTHSIDE SNAKE RIVER BASINS
MAY 1, 2008







WATER SUPPLY OUTLOOK

Where did the snow go? There is still snow in the high country, but all the low snow melted producing little streamflow because of the gradual melt caused by cool temperatures. April precipitation was 89% of average, even less than last year. The snowpack remains above average and waiting to melt when an extended period of warmer temperatures occurs. Snowpacks are near 140% of average in the Raft and Oakley basins, and 120-130% in the Salmon Falls, Bruneau, Reynolds and Owyhee basins. Streamflow was only 45% of average in April in Salmon Falls Creek and has only been above average twice since May 2006. The Owyhee River near Rome peaked April 16th at 8,000 cfs. The remaining snow will help sustain flows but will not be enough to exceed the previous peak unless rain falls or hot weather occurs soon. Soil moisture sensors indicate that the soils are already drying. Owyhee Reservoir is 74% of average, 63% full and nearing its peak for the season. Salmon Falls Reservoir is 52% of average, 25% full, while Oakley Reservoir is 80% of average, 44% full. Water supplies should be adequate but could be tight for the Salmon Falls tract farmers depending upon spring rains and irrigation demand. Streamflow forecasts call for 85-105% of average for the Bruneau, Salmon Falls and Oakley reservoir inflow, but could flow at a lesser volume if dry spring and moderate temperatures occur.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - May 1, 2008

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 Reservoir Inflow	MAY-JUL	13.5	18.3	22	105	26	33	21
	MAY-SEP	15.5	21	25	104	29	37	24
OAKLEY RESV STORAGE	MAY	39	42	44	98	46	49	45
	JULY	19.5	23	26	85	29	33	31
Salmon Falls Ck nr San Jacinto	MAY-JUL	35	47	57	100	67	84	57
	MAY-SEP	38	51	61	98	72	89	62
SALMON FALLS RESV STORAGE	MAY	79	85	90	89	95	101	101
	JULY	23	34	42	44	50	61	95
Bruneau R nr Hot Springs	MAY-JUL	94	128	154	95	183	230	162
	MAY-SEP	100	136	163	94	193	240	173
Owyhee R nr Gold Creek	MAY-JUL	0.1	1.4	4.3	36	9.6	23	12.0
	MAY-SEP	0.1	0.5	2.4	22	6.9	21	10.7
Owyhee R nr Owyhee	MAY-JUL	27	42	54	108	67	89	50
Owyhee R nr Rome	MAY-JUL	91	148	194	92	245	335	210
	MAY-SEP	108	167	215	94	270	360	230
Owyhee R blw Owyhee Dam	MAY-JUL	-57.0	93	195	87	295	445	225
	MAY-SEP	-46.0	112	220	86	330	485	255
Reynolds Ck at Tollgate	MAY-JUL	4.6	5.7	6.5	114	7.4	8.8	5.7

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	75.6	32.9	51.6	41.0
SALMON FALLS	182.6	45.9	96.6	87.9
WILDHORSE RESERVOIR	71.5	39.9	57.9	55.8
OWYHEE	715.0	452.4	554.9	613.6
BROWNLEE	1420.0	844.4	1335.9	1069.2

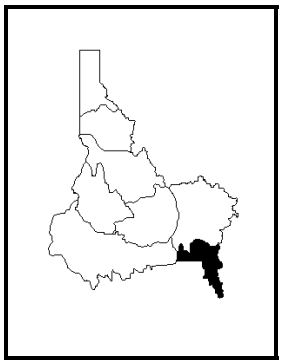
SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - May 1, 2008

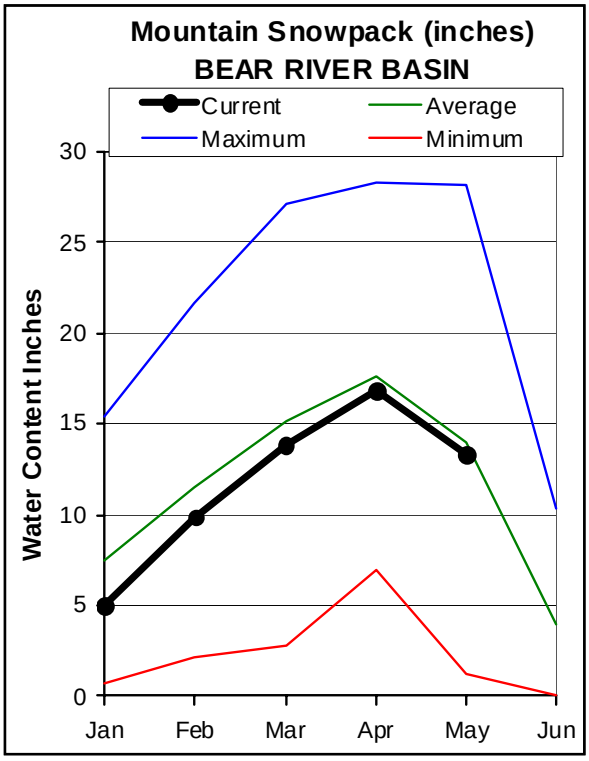
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	142	143
Goose-Trapper Creeks	4	279	139
Salmon Falls Creek	7	243	121
Bruneau River	5	223	128
Reynolds Creek	6	242	127
Owyhee Basin Total	7	2464	120

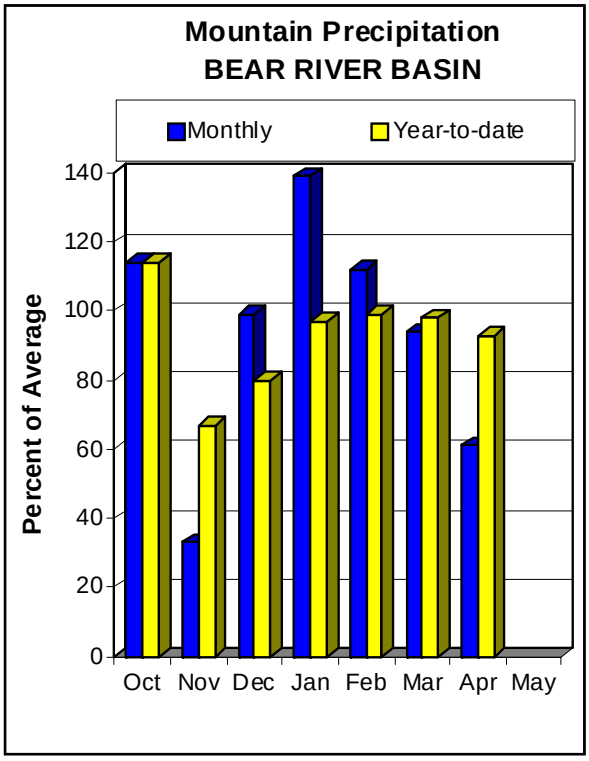
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

BEAR RIVER BASIN
MAY 1, 2008







WATER SUPPLY OUTLOOK

Bear Basin's snowpack inched its way above the normal seasonal peak the second week of April just before it started melting. As of May 1 the basin-wide snowpack is 95% of average thanks to cool temperatures that are preventing rapid melt from occurring. April precipitation was 61% of average, while water year to date precipitation since October 1st is 93% of average. The best snowpacks are in the Cub River area at 112% of average and the least is at the one SNOTEL site (Oxford Spring) in the Malad basin, which has already melted out. In other areas Mink Creek has an average May 1 snowpack, while snow is 105% of average for Montpelier Creek and the Bear River above both the Wyoming-Idaho border and Idaho-Utah border. Cool, dry weather is better for water supplies than hot, dry weather since irrigation demand is less under the first set of conditions. Current storage in Bear Lake is 430,964 acre-feet which equates to 30% of capacity and 44% of average. Streamflow above Bear Lake is forecast for slightly above the average volume. The Bear River at Stewart Dam streamflow forecast decreased this month to 43% of average. Smiths Fork is forecast at 82% of average while some of the headwater streams in Utah are forecast at slightly above average volumes. The Surface Water Supply Index (SWSI), which combines current reservoir storage and forecasted streamflow indicates that surface water supplies should be marginally adequate for the Bear Lake water users based on the 50% Chance of Exceedance Forecast. Using this forecast, water supplies will be a little better than 2005, and similar to 1992. Hopefully May will bring good precipitation to extend this year's limited water supplies.

BEAR RIVER BASIN
Streamflow Forecasts - May 1, 2008

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 River nr UT-WY State Line	APR-JUL	99	107	113	100	119	127	113
	MAY-JUL	93	101	107	100	113	121	107
	APR-SEP	112	121	128	102	135	144	125
	MAY-SEP	106	115	122	103	129	138	119
Bear River ab Reservoir nr Woodruff	APR-JUL	88	106	119	88	132	150	136
	MAY-JUL	82	99	111	96	123	140	116
	APR-SEP	99	117	130	92	143	161	142
	MAY-SEP	93	110	122	100	134	151	122
Big Creek nr Randolph	APR-JUL	3.7	4.2	4.5	92	4.8	5.3	4.9
	MAY-JUL	1.7	3.0	4.0	93	5.2	7.2	4.3
Smiths Fork nr Border	APR-JUL	76	81	84	82	87	92	103
	APR-SEP	82	88	92	76	96	102	121
	MAY-JUL	72	77	80	84	83	88	95
	MAY-SEP	78	84	88	79	92	98	112
Bear River at Stewart Dam	APR-JUL	74	94	110	47	127	154	234
	APR-SEP	83	107	125	48	144	175	262
	MAY-JUL	26	58	80	43	102	134	186
	MAY-SEP	35	71	95	44	119	155	214
Little Bear River at Paradise	APR-JUL	35	41	45	98	49	56	46
	MAY-JUL	19.3	26	32	100	38	48	32
Logan R Abv State Dam Nr Logan	APR-JUL	94	102	107	85	113	121	126
	MAY-JUL	76	90	100	93	111	128	108
Blacksmith Fk Abv Up&L Dam Nr Hyrum	APR-JUL	29	34	38	79	42	48	48
	MAY-JUL	19.6	27	32	80	38	47	40

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	431.0	650.7	971.0
MONTPELIER CREEK	4.0	1.9	3.5	2.5

BEAR RIVER BASIN
Watershed Snowpack Analysis - May 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	4	158	98
Bear River ab WY-ID line	12	271	105
Montpelier Creek	2	162	105
Mink Creek	1	402	99
Cub River	1	316	112
Bear River ab ID-UT line	20	296	107
Malad River	1	0	0

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

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

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 Nov. 2007).**

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
Portneuf R at Topaz, ID - No Corrections
Snake R at Neeley, ID
+ Snake R at Neeley (observed)
+ 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 Rome, OR – No Corrections
Owyhee R blw Owyhee Dam, OR
+ Owyhee R blw Owyhee Dam, OR (observed)
+ Owyhee Resv (Storage Change)
+ Diversions to North and South Canals
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 these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. **(Revised Nov. 2007)**

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	0	--	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	119.0	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

USDA Natural Resources Conservation Service
9173 West Barnes Drive, Suite C
Boise ID 83709-1574
USDA Natural Resources Conservation Service

OFFICIAL BUSINESS
9173 West Barnes Drive, Suite C
Boise ID 83709-1574

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Arlen Lancaster, Chief
Natural Resources Conservation Service
Washington, DC

Released by
Richard Sims, State Conservationist
Dave Hoover, Assistant State Conservationist
Natural Resources Conservation Service
Boise, Idaho

Prepared by
Snow Survey Staff
Ron Abramovich, Water Supply Specialist
Philip Morrisey, Data Collection Officer
Jeff Anderson, Hydrologist
Julie Koeberle, Hydrologist
Jeff Graham, Electronics Technician
Chad Gipson, Electronics Technician

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