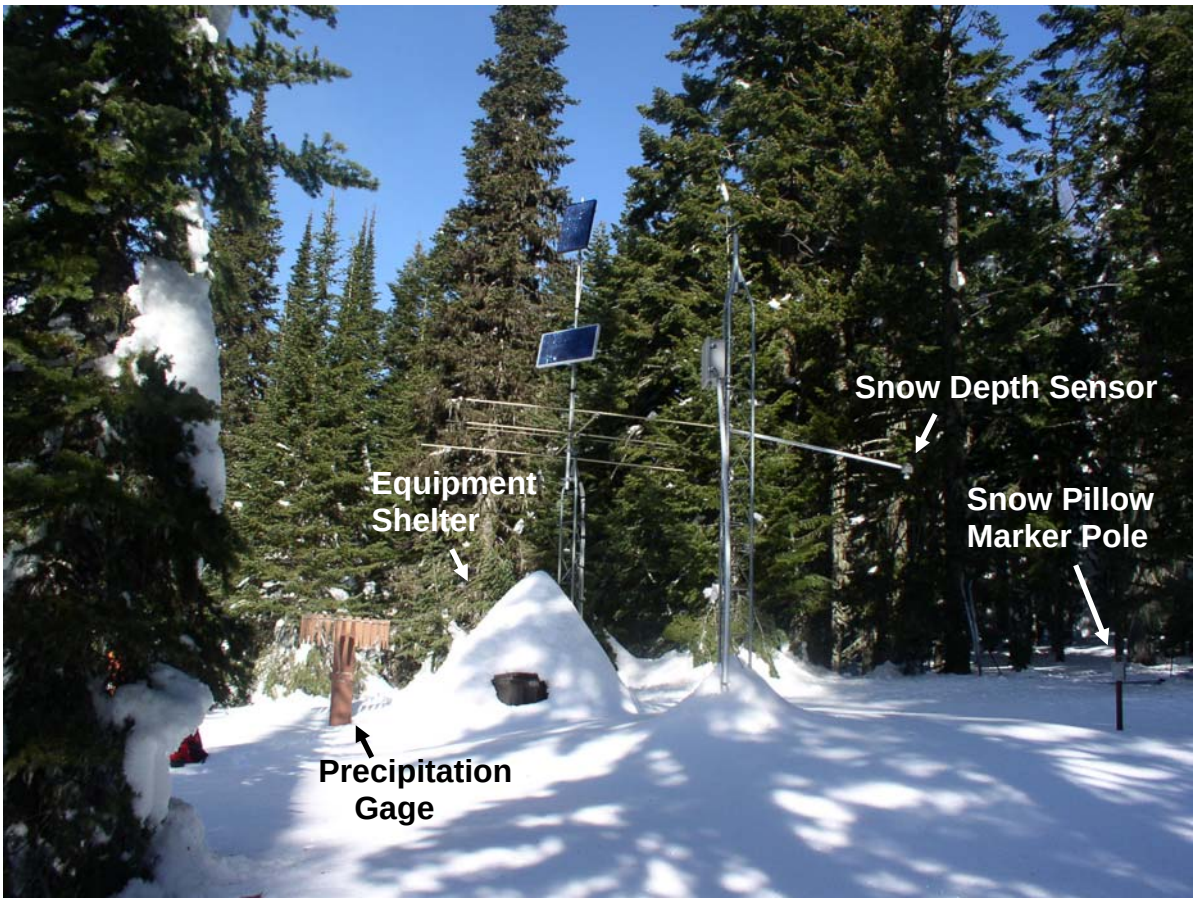
United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report
March 1, 2008



WOW! Who turned on the snow faucet this year? La Nina of course! This photo of the Quartz Peak SNOTEL site on Mount Spokane in eastern Washington, taken February 21, 2008, shows the effect of a near record snowpack this season across mid elevations in the Pacific Northwest. The eight-foot equipment shelter is nearly buried, while the 12-foot precipitation gage and the ten-foot snow pillow marker pole seem barely tall enough! The snow water content is 25.6 inches in the 79 inch deep snowpack recorded by the ultrasonic depth sensor on the boom overhanging the snow pillow. This is the third highest water content on this date since the site was installed in 1987, below the record 38 inches in 1997 and 28 inches in 1999. The site is at 4700 feet elevation and, with the current snowpack at 133 percent of average, represents a large area at low to mid elevations having extreme amounts of snow and with it a growing concern for early spring flooding as the weather warms during March and April. NRCS is working closely with the National Weather Service and Idaho Department of Homeland Security to monitor this situation and keep the public and local officials informed as the snowpack "ripens" and begins melting in March. High elevation snowpacks are above normal but not extreme, and will provide abundant summer streamflow this year.

Basin Outlook Reports
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http://www.id.nrcs.usda.gov/snow/

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

March 1, 2008

SUMMARY

Believe it or not, even with abundant snow in Idaho's lower elevations more snow is needed in Idaho's mountains to ensure an adequate water supply. Current snowpacks are 95-130% of average across the state and the lower elevation snowpacks are up to 200% of average in Northern Idaho. However, if March is dry like last year, Idaho's snowpacks would peak at only 80-100% of average in early April. A dry spell in February allowed residents to finish digging out in the valleys where snowpacks remain above average to well above average. February precipitation ranged from only 65% of average in the Wood and Lost basins to about 110% of average in the Clearwater, Southside Snake basins and Bear River basin. Precipitation for the water year ranges from near average in the Bear, Panhandle and Upper Snake to 115% in the across west-central Idaho. Current streamflow forecasts range from 68% of average for the Bear River at Stewart Dam to 120% in the Clearwater basin. With reservoir storage at average or less across the state, average or better precipitation is needed to maintain snowpacks and keep water supply forecasts from decreasing during March. The wild card in this year's water supply picture is still how the above normal low elevation snowpack will melt. A gradual melt will help prime the hydrologic system while a rapid runoff will jump start this year's runoff and contains the potential for flooding in unregulated basins. With one more month to go this winter, water users will be keeping an eye on the sky this month and into the spring, as Mother Nature may still have surprises on the horizon.

SNOWPACK

Overall, Idaho's snowpacks are near average. This analysis includes snow that is above average to well above average in lower elevations and near average to slightly above average in higher elevations. The higher elevations are the bigger runoff producing zones and responsible for sustaining streamflows. Low elevation snowpacks can melt rapidly resulting in sudden increases in streamflow but the duration is often short. The snowpack percentages described in this report are based on the first of month measurements which includes the 118 SNOTEL sites in and around Idaho but also Idaho's 100 manually measured snow courses. The snow courses supplement SNOTEL data to give a more complete inventory of Idaho's snow levels, but are not used as much anymore to predict streamflow. Most of the monthly and mid-month streamflow forecast equations are based on the automated SNOTEL data that reports reliably in daily and hourly increments. Daily data also allow us to produce Daily Water Supply Forecasts to monitor mid-month changes. See this link for daily NRCS forecasts: http://www.id.nrcs.usda.gov/snow/watersupply/daily_guidance.html

March weather will determine how the low elevation snow melts: a gradual melt in March and early April will mitigate flood threats while a rapid melt or several days of precipitation would jump start the runoff season. The low elevation drainages in northern Idaho have the highest snowpacks in the state with Rathdrum at 162% of average, Hayden Lake at 196% and Palouse at 177%. The St. Joe basin snowpack is 118% of average while Coeur d'Alene basin snowpack is 134%. Combining these basins puts the Spokane basin snowpack at 137% of average. The Clearwater basin snowpack is 115% of average while the Salmon basin is slightly less at 110%. The lower elevation Little Salmon basin is 120% of average and Weiser basin is 116% due to the low elevation snow. The snowpack across central Idaho from the Payette basin to the Little Lost basin is from 105-115% of average. The Henrys Fork snowpack is near average. The snowpack in the tributaries above Palisades Reservoir on the Snake River ranges from 87% of average in the Hoback River to 103% in the Salt River. Overall, the snowpack above Palisades Reservoir is 97% of average, about 25% better than last year. Across southern Idaho, the snowpack ranges from 85-130% of average.

PRECIPITATION

After January's series of storms brought above average moisture into Idaho, February's weather patterns brought high winds and variable amounts of precipitation across the state. February precipitation was near 110% of average in the Clearwater and basins south of the Snake River including the Bear River basin. The lowest February amounts fell in the Little Wood and Big Lost basins at 65% of average. February amounts in the Upper Snake basin were 91% of average in the Snake basin above Palisades and only 82% of average in the Henrys Fork and Teton basins. Precipitation since the water year started October 1 ranges from near average, 99-107%, in the Bear, Panhandle region and Upper Snake basin, and to 112-115% in the Southside Snake, Wood, Lost, Weiser, Payette, Boise, Clearwater and Salmon basins. Average or better precipitation is needed to maintain snowpacks to meet water supply needs. A month of below normal precipitation, especially in eastern Idaho and Upper Snake basin in Wyoming, will decrease the seasonal water supply forecasts. Remember last year, a dry second half of winter followed by a dry spring and summer resulted in decreasing runoff volumes for Idaho's numerous water users.

RESERVOIRS

Cool and moderate temperatures in February produced little streamflow, which means reservoirs did not change much during the previous month. Reservoir storage is 117% of average in Pend Oreille Lake, and near average or better in Dworshak, the Payette reservoir system, Grassy Lake and Ririe reservoirs. The next highest storage levels, when compared to the 1971-2000 February 28 averages, are 70-85% of average in the Boise reservoir storage system, Mackay, Oakley, Brownlee and Montpelier reservoirs. Reservoir storage in Little Wood is 59% of average; Salmon Falls is 54% of average; Owyhee is 44% of average; Bear Lake is 41% of average; and Magic is 27% of average. With below normal reservoir storage across central and southern Idaho, average or better spring and summer streamflows are needed to ensure adequate surface irrigation supplies. Water managers will be watching March snowfall, which will finish the accumulation period of the snowpack and then turn their attention to spring air temperatures and precipitation during snowmelt. These spring conditions will determine inflow rates and whether or not reservoir storage releases are needed to reduce flood risks while ensuring refill.

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

February streamflow remained low throughout the state as a result of moderate temperatures with only the snow in the lowest elevations starting to melt. Warm March days followed by cool nights would continue to gradually melt the lower elevation snowpack and reduce flood potential from snow. If the lower snow remains though March and into April, then the chance of having hot temperatures is more likely to occur which would rapidly melt the remaining snow. This happened in the Treasure Valley in Dry Creek and Mores Creek in early April 2006.

The higher elevation snow is not ripe to melt yet. With higher elevation snowpacks only near average and reservoir storage below normal, more snow is still needed in some of Idaho's mountains to ensure adequate streamflow to meet irrigation needs. Current streamflow forecasts range from around 68% of average in the Bear River basin to 120% in the Clearwater basin. The Bear River forecast displays a similar range with headwater streams in Utah forecast at 111% of average while downstream forecasts decrease to 68% for the Bear River at Stewart Dam. Runoff volumes of at least 55% of average are needed to meet adequate surface irrigation supplies for Bear Lake water users. The Snake River near Heise is forecast at 95% of average based on the 50% chance of exceedance forecast. The reasonable minimum forecast is 87% of average based on future dry conditions and volumes greater than 84% of average are needed to meet surface irrigation demands. Users should use current and future weather conditions to determine which exceedance forecast to use. Remember last year when streamflow

forecasts decreased each month and then conditions got worse as observed flows were much less than predicted due to a dry and hot summer. As mentioned last month, river watchers and water managers can count on multiple streamflow peaks this year due to the abundant low elevation snow. Timing of streamflow peaks will depend on air temperatures and if rain occurs both of which will control snowmelt rates.

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

It all started when the groundhog did not see his shadow on February 2nd. Those who love snow rejoiced and those who enjoy the outdoors in warmer temperatures sighed. The first week of February continued to bring the snowfall to the mountains and cold temperatures kept it light and fluffy. Skiers, snowboarders and snowmobile powder hounds were enjoying the gift from nature. If snowshoeing, skate skiing, cross-country skiing, fair weather skiing is more your style, then the rest of February was a treat for you. High atmospheric pressure settled in after the first of February and allowed for beautiful sunny skies and a break from cloudy stormy weather inducing spring fever. The warmer temperatures and sunshine began to stiffen the snowpack some so that novice snowmobilers would have a break from getting stuck and backcountry skiers and riders could enjoy the quieter part of mountains as the avalanche danger decreased. The snowpacks are not ripe and ready to melt yet; although things could change soon with the lack of precipitation and warming temperatures. As of March 1, 8 feet or more of snow can be found in the mountains in the Panhandle, Clearwater and higher elevations above 8000 feet in other parts of Idaho! According to 118 SNOTEL sites in Idaho’s network, the shallowest snow is at Reynolds Creek in southern Idaho’s Owyhee basin, 18 inches deep; the deepest snow is in northern Idaho at Schweitzer Basin SNOTEL site, 149 inches. The average of all of our snow depth sensors, including these two extremes is 70 inches. These snowpacks will continue to bring good news for river runners if rafting or kayaking in whitewater is more your style. Most of the rivers throughout the state are forecast to flow near normal volumes throughout the summer. The Selway, Lochsa and Salmon rivers are forecast at 105-110% through the summer and will provide excellent whitewater recreation opportunities. The lowest streamflow forecasts are south of the Snake River in the Bear River basin at 68% of normal at Stewart Dam. The high desert rivers south of the Snake River are forecast at 90-100% of average and will be floatable this year, but will have a much shorter season than Idaho's central and northern rivers. The Middle Fork Salmon River and Salmon River at White Bird are forecast near 110% of average, but be aware of the potential for down logs and river debris from last year's forest fires. The timing and magnitude of peak streamflows are completely dependent on how the snow melts, which is governed by air temperatures and precipitation. Hikers and mountain bikers may have to start a little later than last year, but add a little spring precipitation and the wildflowers will be a nice treat when you are there.

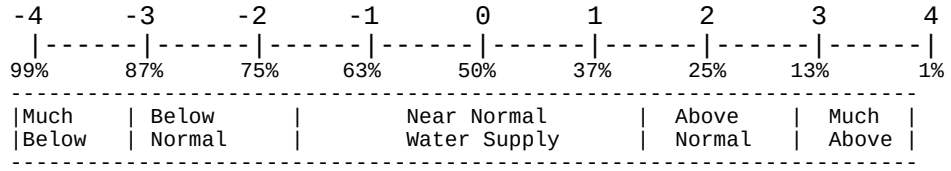
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of March 1, 2008

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	1.1	2000	NA
CLEARWATER	2.3	2002	NA
SALMON	1.2	2006	NA
WEISER	1.0	1997	NA
PAYETTE	1.2	1998	NA
BOISE	0.3	2000	-1.7
BIG WOOD	-0.1	2000	-0.5
LITTLE WOOD	0.3	2005	-2.0
BIG LOST	-0.1	1993/1985	-0.1
LITTLE LOST	-0.1	1990/2005	0.4
HENRYS FORK	0.5	2006	-3.3
SNAKE (HEISE)	0.3	2006	-1.6
OAKLEY	-0.3	2007	-1.2
SALMON FALLS	-1.0	2007	-1.6
BRUNEAU	-0.8	2004	NA
BEAR RIVER	-1.8	2002	-3.3

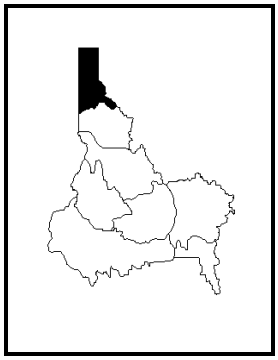
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

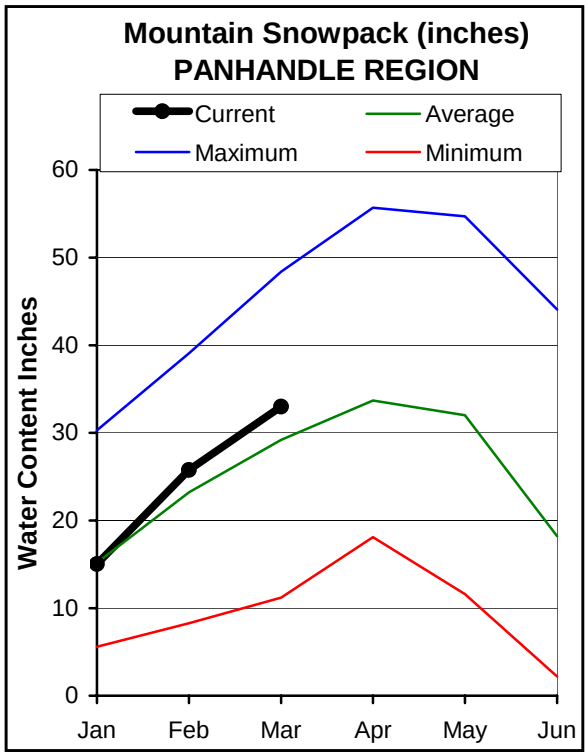


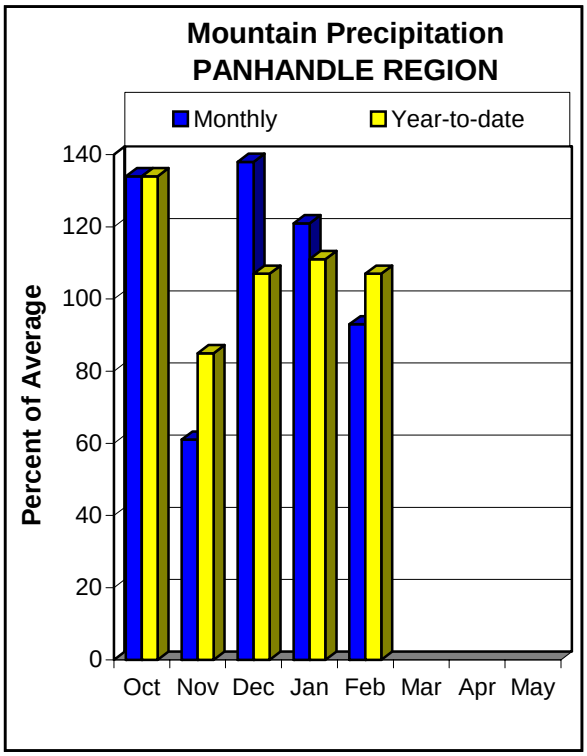
NA = Not Applicable

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
MARCH 1, 2008







WATER SUPPLY OUTLOOK

Sunny skies in mid-February gave the Panhandle's storm battered residents a chance to dig out. February precipitation was a little below average while water year precipitation since October 1 continues to be slightly above average. Region-wide snowpacks are 113% of average for March 1; this represents 92% of the average April 1 peak amount. Reaching near normal peak amounts by March 1 is news worthy, but the news making story continues to be the fear of flooding caused by the snowpack at lower elevations. Humboldt Gulch SNOTEL (4,200 feet) near Wallace and Fourth of July Summit snow course (3,200 feet) a little further down I-90 have 176% and 195% of average snow respectively. Similar totals exist to the north at Benton Meadow snow course (2,370 feet) near Sandpoint which has 189% of average snow and at Sherwin SNOTEL to the south in the headwaters of the St. Maries River which has 141% of average. Taken as a group these lower elevation sites have 172% of average snow as of March 1; 4th highest amount out of 49 years of measurements. The warmer temperatures during the latter half of the month produced some gradual melting, which was observed at both Humboldt Gulch and Sherwin SNOTEL sites, causing streams across the region to rise. These warm, dry days and cool nights are ideal conditions to melt the low elevation snow and keep the river within its banks. If March brings above freezing nighttime low temperatures combined with rain and wind, which can aid in melting snow, then expect streams to rise rapidly and jump their banks. Plenty of storage exists in the regions lakes as Pend Oreille Lake is 117% of average, 58% of capacity; Coeur d'Alene Lake contains 38% of average, 23% of capacity; and Priest Lake has 85% of average and 41% of capacity. Summer streamflow forecasts range from 100-110% of average for the region for the April–September period. Spring is on its way but let's hope it arrives gradually.

PANHANDLE REGION
Streamflow Forecasts - March 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)	APR-JUL	5937	6668	7000	99	7332	8063	7040
	APR-SEP	6763	7641	8040	99	8439	9317	8120
MOYIE RIVER at Eastport	APR-JUL	360	390	415	103	440	470	405
	APR-SEP	370	405	430	102	455	490	420
SMITH CREEK	APR-JUL	106	120	130	106	140	154	123
	APR-SEP	110	126	137	106	148	164	129
BOUNDARY CREEK	APR-JUL	105	117	125	102	133	145	123
	APR-SEP	112	124	132	102	140	152	129
PEND OREILLE Lake Inflow (2)	APR-JUL	12200	12500	12700	100	12900	13200	12700
	APR-SEP	13300	13700	13900	100	14100	14400	13900
PRIEST near Priest River (1,2)	APR-JUL	665	825	895	110	965	1130	815
	APR-SEP	715	880	955	110	1030	1200	870
NF COEUR D'ALENE RIVER at Enaville	APR-JUL	565	705	805	109	905	1050	740
	APR-SEP	605	750	850	109	950	1090	780
ST. JOE at Calder	APR-JUL	1010	1150	1250	110	1350	1490	1140
	APR-SEP	1080	1220	1320	110	1420	1560	1200
SPOKANE near Post Falls (2)	APR-JUL	2210	2560	2800	110	3040	3390	2550
	APR-SEP	2330	2680	2920	110	3160	3510	2650
SPOKANE at Long Lake (2)	APR-JUL	2450	2840	3100	109	3360	3750	2850
	APR-SEP	2660	3070	3350	109	3630	4040	3070

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2434.0	2799.0	2047.6
FLATHEAD LAKE	1791.0	725.3	822.1	802.7
NOXON RAPIDS	335.0	309.2	325.5	297.5
PEND OREILLE	1561.3	912.0	658.6	778.8
COEUR D'ALENE	238.5	54.9	127.5	144.9
PRIEST LAKE	119.3	48.5	56.9	56.8

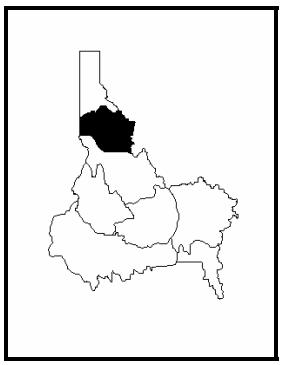
PANHANDLE REGION
Watershed Snowpack Analysis - March 1, 2008

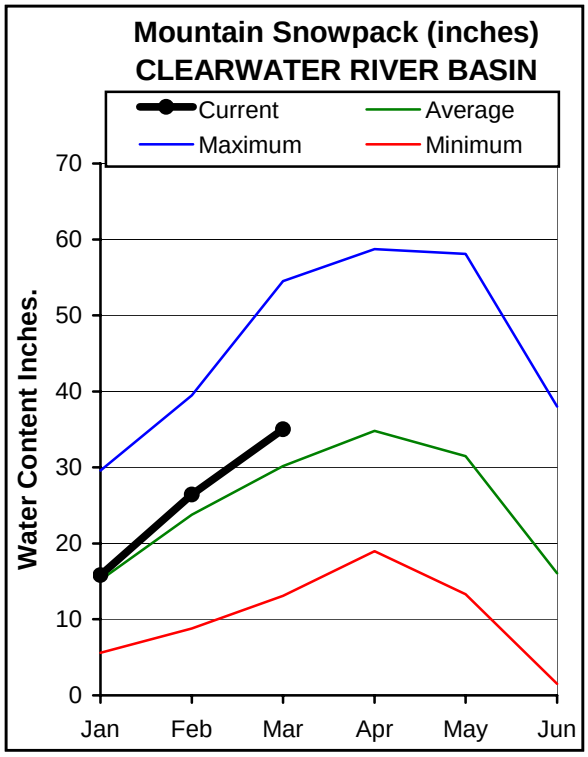
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	25	106	107
Moyie River	9	95	100
Priest River	4	123	116
Pend Oreille River	93	123	109
Rathdrum Creek	3	143	162
Hayden Lake	2	163	196
Coeur d'Alene River	9	140	134
St. Joe River	5	130	118
Spokane River	16	140	137
Palouse River	2	204	177

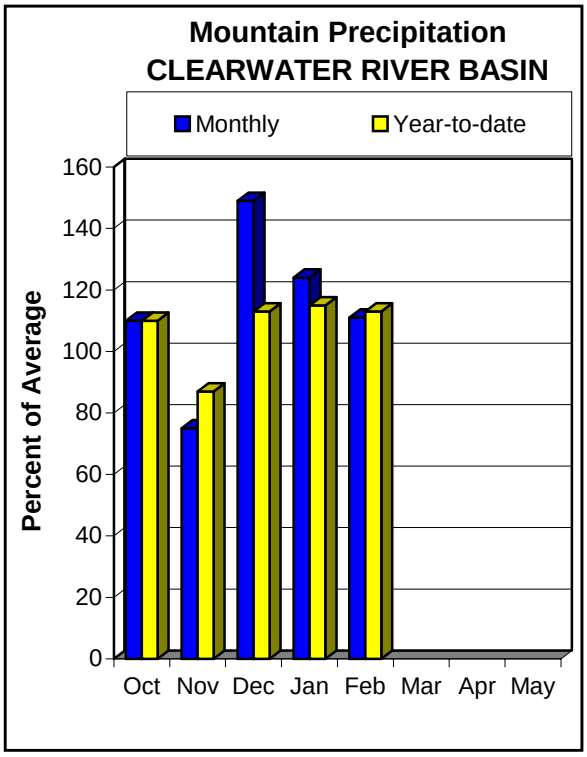
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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
MARCH 1, 2008







WATER SUPPLY OUTLOOK

The Clearwater Basin continues to pile up snow. February brought 111% of average monthly precipitation and water year to date precipitation is 113% of average. The best snow is found in the Lochsa basin at 121% of average, followed by the Selway and North Fork Clearwater basins at about 115%, which also represents the basin-wide the March 1 snowpack. Like a student who works ahead to finish a term paper early, the Clearwater basin has already passed its normal peak. Since much of the Clearwater continues to gain snow through mid-April it's a good bet this student will be earning extra credit points the rest of the winter. The snow is distributed across a range of elevations with the lower elevation sites having percentages that are most above average. Three lower elevation measuring sites including Shanghai Summit SNOTEL, as well as, Pierce Ranger Station and Crooked Fork snow courses have 121-127% of average snow. Looking back, 2002 had similar low and mid-elevation snow that produced multiple peak flows on the rivers in the region. Summer streamflow for the April-September period is forecast to flow 112-120% of average for the Lochsa, Selway and North Fork Clearwater rivers. Dworshak Reservoir contains average storage amounts and is 65% of capacity. Spring temperature and precipitation will determine timing and magnitude of the seasonal snowmelt peak flows, but don't be surprised to see multiple peaks similar to 2002.

CLEARWATER RIVER BASIN
Streamflow Forecasts - March 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	APR-JUL	1960	2170	2310	112	2450	2660	2060
	APR-SEP	2060	2280	2430	112	2580	2800	2170
Lochsa R nr Lowell	APR-JUL	1430	1600	1720	112	1840	2010	1530
	APR-SEP	1500	1680	1800	112	1920	2100	1610
Dworshak Reservoir Inflow	APR-JUL	2150	2690	2930	111	3170	3710	2640
	APR-SEP	2310	2880	3140	112	3400	3970	2800
Clearwater R at Orofino	APR-JUL	4220	5000	5360	115	5720	6500	4650
	APR-SEP	4460	5280	5660	116	6040	6860	4900
Clearwater R at Spalding	APR-JUL	7070	8330	8900	120	9470	10700	7430
	APR-SEP	7460	8790	9390	120	9990	11300	7850

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2261.4	2482.5	2247.3

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	129	114
Lochsa River	3	141	121
Selway River	5	133	115
Clearwater Basin Total	17	131	115

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

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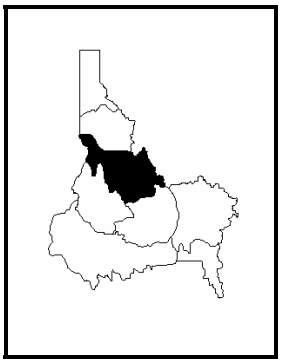
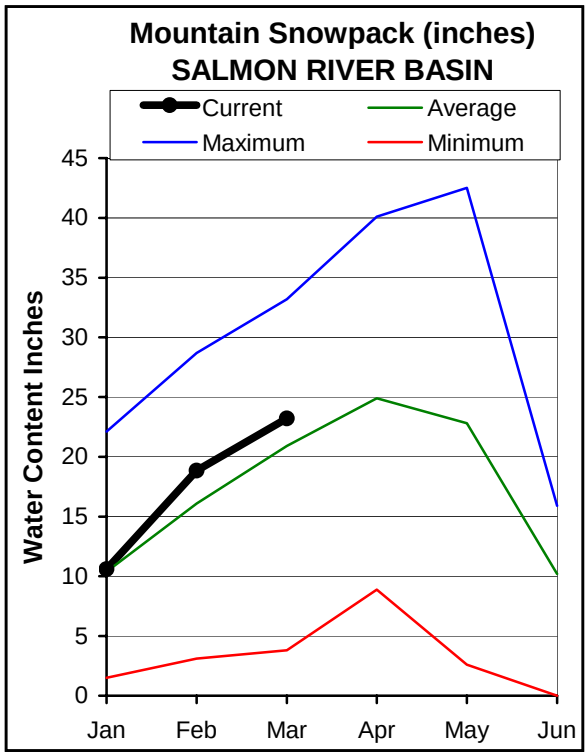
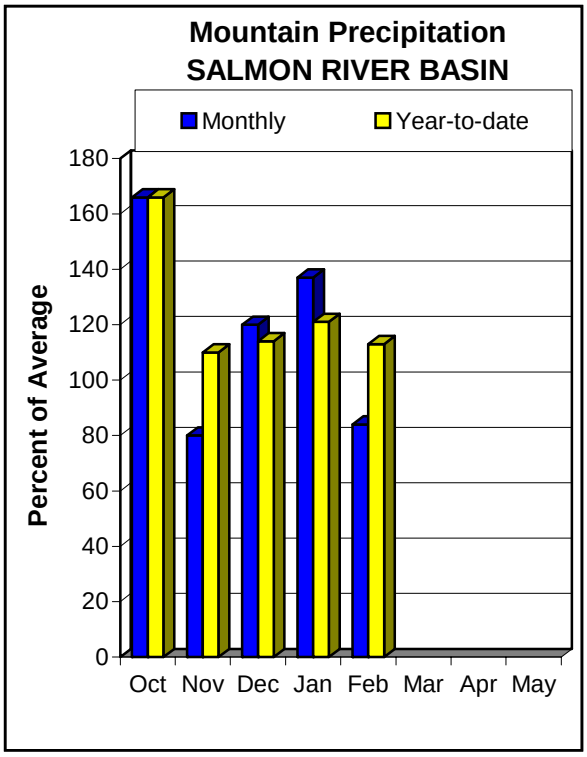
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SALMON RIVER BASIN
MARCH 1, 2008







WATER SUPPLY OUTLOOK

Mid-February brought sunny skies to the River of No Return headwaters, delighting mountain recreationists with stable snow conditions and spring-like temperatures. Even though February precipitation dipped to 84% of average, water year precipitation since October 1 remains above average at 113%. Snowpacks are 110% of average for the basin. As the season's storms pile up on top of each other the basin's blanket of snow is currently 88% of the average peak. Long range weather forecasts call for a return of winter with above average precipitation and below average temperatures predicted in March. If this forecast holds true reaching the average peak should be no problem. As mentioned last month the low to mid-elevation snowpack continues to be further above average relative to the higher elevation zone. The Little Salmon basin is a good example of this; it's having is biggest winter since 1999. Sites in the Little Salmon such as Bear Basin SNOTEL, just west of McCall at 5,350 feet, and West Branch SNOTEL, west of New Meadows at 5,560 feet, have 120% and 129% of average snow water respectively. These mid-elevation sites indicate a well developed snowpack across all elevations. Summer streamflow volumes are forecast at 105% of average for the Salmon River at Salmon and Lemhi River near Lemhi. The Salmon River at Whitebird is forecast at 110% of average while the Middle Fork Salmon River is higher at 116%. The current snowpack is reminiscent of March 1, 2006; that spring saw above average precipitation add to the snowpack (as predicted this month), increasing it to 125% of average by mid-April. During the spring of 2006, daily runoff in the Little Salmon River was 6,020 cfs; the Middle Fork Salmon peaked at 26,900 cfs while the main stem Salmon River at Whitebird reached 90,300 cfs. Similar flows are possible this spring but that depends on spring precipitation and air temperatures.

SALMON RIVER BASIN
Streamflow Forecasts - March 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)
Salmon R at Salmon	APR-JUL	625	815	900	105	985	1170	855
	APR-SEP	710	930	1030	103	1130	1350	1000
Lemhi R nr Lemhi	APR-JUL	54	75	91	106	109	138	86
	APR-SEP	68	92	110	105	130	162	105
MF Salmon R at MF Lodge	APR-JUL	665	810	910	116	1010	1150	785
	APR-SEP	740	900	1010	115	1120	1280	875
Salmon R at White Bird	APR-JUL	4650	5830	6370	109	6910	8090	5850
	APR-SEP	5180	6500	7100	110	7700	9020	6480

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

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

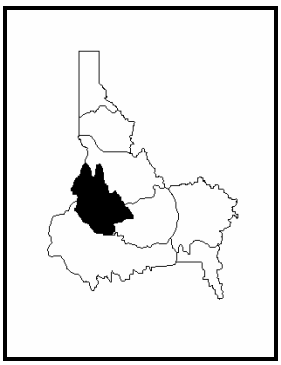
SALMON RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

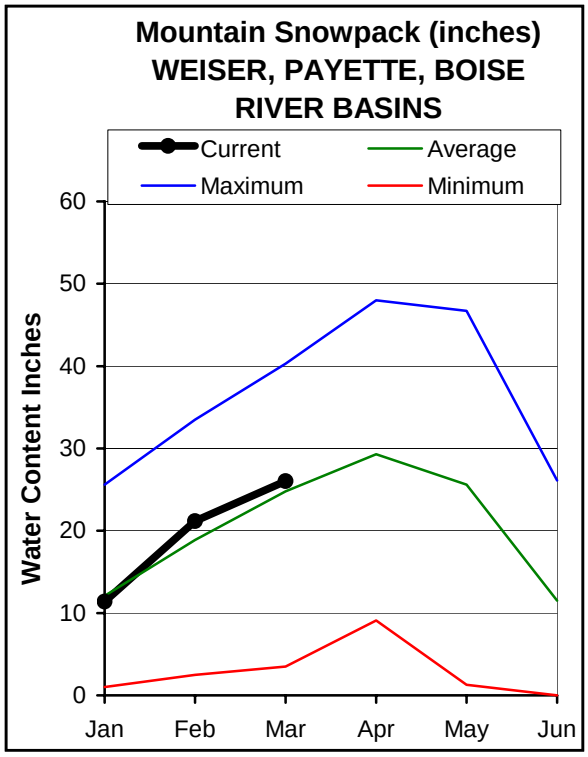
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	11	123	105
Lemhi River	10	130	112
Middle Fork Salmon River	3	123	103
South Fork Salmon River	3	128	107
Little Salmon River	4	145	120
Salmon Basin Total	29	131	110

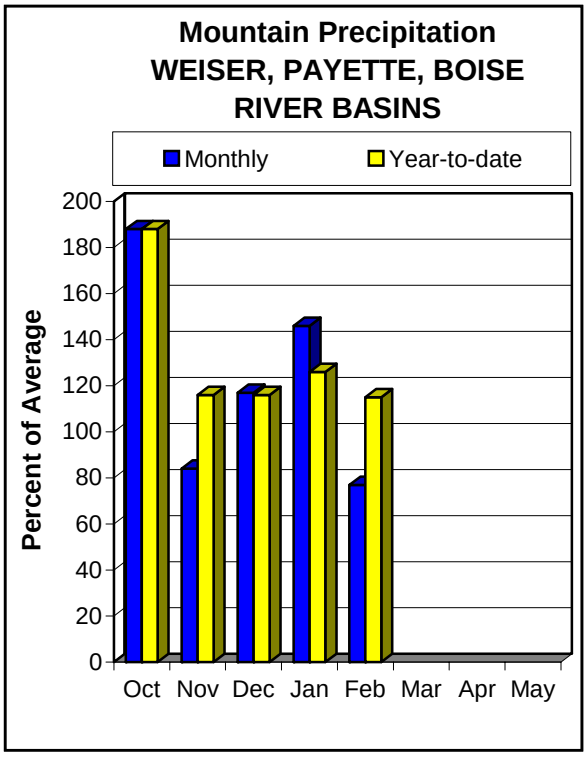
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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
MARCH 1, 2008







WATER SUPPLY OUTLOOK

The Weiser basin continues to have a slightly higher snowpack compared to the Boise and Payette at 116% of average. A low elevation snow index for the Weiser Basin, which is the combination of snow water content values from three snow courses below 4200 feet in elevation, indicates that the March 1 snow is the highest since records start in 1996. The second highest was in 2001 and there was bare ground in 1996, 2003 and 2005. This snow in the valley raises concerns of spring flooding if rapid warming temperatures or heavy rains occur during snowmelt. The Payette and Boise basins have near 110% of normal snow water content in the mountains. While these mountains are in good shape for stored water as of March 1, average precipitation for the month of March is needed (about 5 inches on average) to keep the snowpacks above average for the seasonal snow water peaks, which occurs in April. Hopefully March will bring the moisture since February's precipitation only ended up at 76% of normal for the Boise, Weiser and Payette. If no more precipitation falls between now and April 1, the Weiser basin will wind up with about 100% of normal snow but only near 85% for the Payette and Boise basins. Current streams are still forecast to flow with normal to above normal volumes for the April-July period. As you might guess, the Weiser will have the highest flows at 117% of average, the Payette River near Horseshoe Bend is forecast at 112% and the lowest forecast is for 99% for the Boise River near Boise. The Boise reservoir system is 82% of average, 48% of capacity, while the Payette system is 106% of average, 65% of capacity. Water supplies and river recreation should both be adequate and enjoyable through the summer.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - March 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	MAR-JUL	360	550	650	117	760	1030	555
	APR-SEP	265	410	490	117	575	785	420
SF Payette R at Lowman	APR-JUL	350	400	440	100	480	540	440
	APR-SEP	395	455	495	100	540	605	495
Deadwood Reservoir Inflow	APR-JUL	105	132	144	108	156	183	134
	APR-SEP	113	142	155	109	168	197	142
Lake Fork Payette R nr McCall	APR-JUL	73	84	92	108	100	114	85
	APR-SEP	72	84	92	103	101	114	89
NF Payette R at Cascade	APR-JUL	380	500	550	106	600	720	520
	APR-SEP	410	530	585	108	640	760	540
NF Payette R nr Banks	APR-JUL	570	660	725	107	790	880	675
	APR-SEP	595	695	760	109	825	925	700
Payette R nr Horseshoe Bend	APR-JUL	1420	1700	1830	112	1960	2240	1640
	APR-SEP	1470	1810	1960	111	2110	2450	1760
Boise R nr Twin Springs	APR-JUL	460	580	635	100	690	810	635
	APR-SEP	500	630	690	100	750	880	690
SF Boise R at Anderson Ranch Dam	APR-JUL	370	490	540	100	590	710	540
	APR-SEP	395	515	570	98	625	745	580
Mores Ck nr Arrowrock Dam	APR-JUL	78	105	126	96	149	185	131
	APR-SEP	82	110	131	96	154	192	137
Boise R nr Boise	APR-JUN	965	1150	1240	98	1330	1520	1260
	APR-JUL	985	1270	1400	99	1530	1810	1410
	APR-SEP	1050	1360	1500	98	1640	1950	1530

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	2.2	4.2	6.1
CASCADE	693.2	490.5	508.9	438.3
DEADWOOD	161.9	66.8	103.2	88.5
ANDERSON RANCH	450.2	150.3	310.5	268.0
ARROWROCK	272.2	241.2	242.2	210.4
LUCKY PEAK	293.2	99.2	137.8	120.4
LAKE LOWELL (DEER FLAT)	165.2	80.3	95.9	109.1

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	2	134	99
Weiser River	5	155	116
North Fork Payette	8	140	114
South Fork Payette	5	129	105
Payette Basin Total	14	134	111
Middle & North Fork Boise	5	124	96
South Fork Boise River	9	149	107
Mores Creek	5	155	120
Boise Basin Total	16	147	109
Canyon Creek	2	191	128

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

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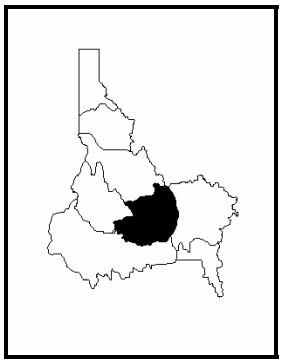
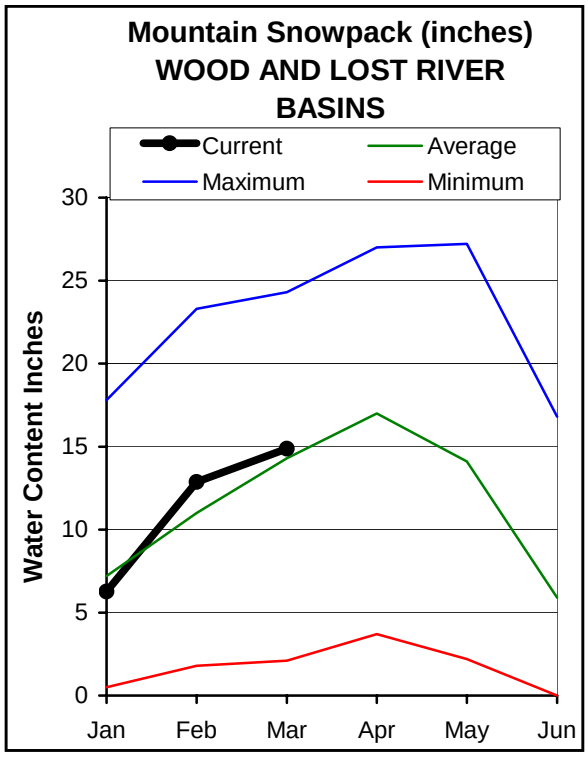
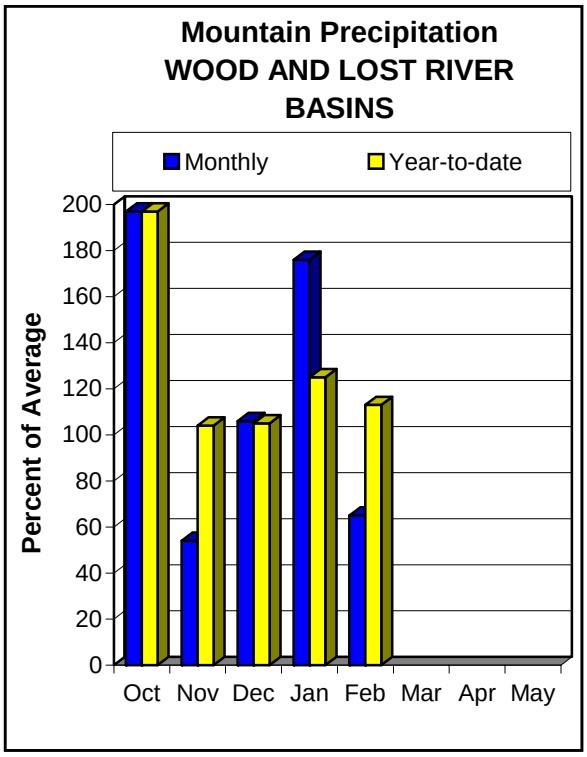
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WOOD and LOST RIVER BASINS
MARCH 1, 2008







WATER SUPPLY OUTLOOK

It's hard to believe that the snow water content is only average to slightly above average for this time of year considering all the snow received in January. The cold temperatures allowed for deep, light snow to accumulate, which made for happy winter sports enthusiasts but did not help build the water content as much. As of March 1, the best snowpack is in the Little Lost basin where the snow is 115% of normal; Beaver-Camas drainages are second best at 113%; 106% for the Big Wood; 104% for the Little Wood and Big Lost. Historical snow indexes which combine several SNOTEL sites and the sum of their water content shows that Camas and Beaver and the Little Lost basins have snow amounts very close to 2006. February's precipitation only ended up at 65% of average for these basins. Average March precipitation and cold temperatures will definitely be needed to preserve the above average snowpacks. If March is dry for the rest of the month, the mountains in these basins will end up near 80% of the seasonal snow water peak, which occurs in early April. The highest runoff is forecast for the Little Wood River for March-July at near average while the lowest flows are predicted for the Little Lost near Howe at 90% for the April-July period. The reservoirs are still low from usage last summer. Magic is storing water at 13% of capacity, 27% of average; Little Wood is 35% of capacity, 59% of average; Mackay is 58% of capacity, 83% of average. The Surface Water Supply Index, which combines reservoir storage and streamflow projections, indicates marginally adequate summer water supplies in the Big Wood River below Magic Dam due to the lower reservoir storage even with the good snowpack and streamflow forecasts. However, the Little Wood River should have adequate water supplies based on the Surface Water Supply Index and the associated 50% exceedance forecast.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - March 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	APR-JUL	135	210	250	98	295	400	255
	APR-SEP	154	240	285	98	335	455	290
Big Wood R ab Magic Reservoir	APR-JUL	105	153	185	97	215	265	190
	APR-SEP	114	165	200	98	235	285	205
Camas Ck nr Blaine	APR-JUL	42	67	87	87	110	148	100
	APR-SEP	43	68	88	87	111	149	101
Big Wood R bl Magic Dam	APR-JUL	152	225	275	95	325	400	290
	APR-SEP	167	245	295	97	345	425	305
Little Wood R ab High Five Creek	MAR-JUL	46	68	85	100	104	136	85
	MAR-SEP	51	75	94	102	115	149	92
Little Wood R nr Carey	MAR-JUL	65	85	98	102	111	131	96
	MAR-SEP	67	88	102	98	116	137	104
Big Lost R at Howell Ranch	APR-JUL	105	142	170	98	200	250	173
	APR-SEP	120	163	195	99	230	290	197
Big Lost R bl Mackay Res	APR-JUL	80	116	140	99	164	200	141
	APR-SEP	92	135	165	96	195	240	172
Little Lost R nr Howe	APR-JUL	17.3	23	28	90	33	41	31
	APR-SEP	21	28	34	87	40	50	39

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	24.1	124.7	89.7
LITTLE WOOD	30.0	10.5	27.6	17.7
MACKAY	44.4	25.6	31.0	30.8

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	8	143	103
Camas Creek	5	160	115
Big Wood Basin Total	13	148	106
Fish Creek	3	133	94
Little Wood River	9	144	104
Big Lost River	7	153	104
Little Lost River	4	142	115
Birch-Medicine Lodge Cree	4	148	111
Camas-Beaver Creeks	4	142	113

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

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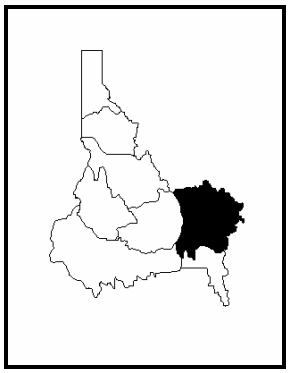
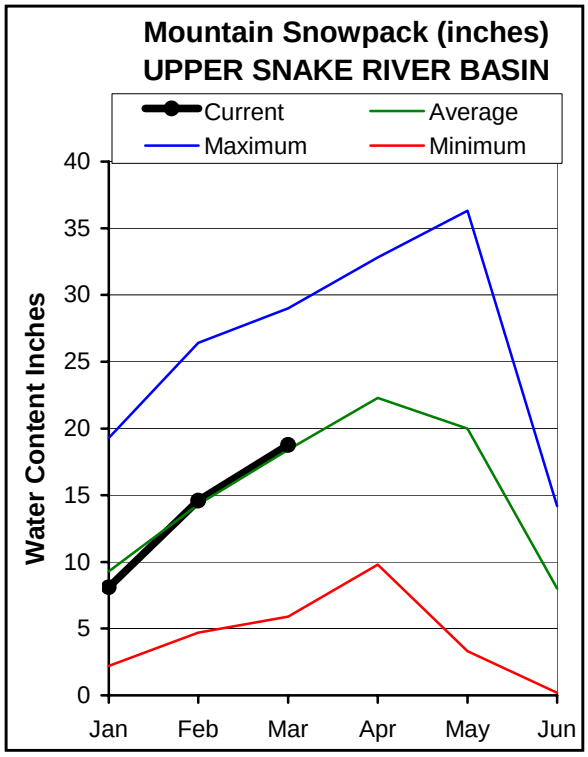
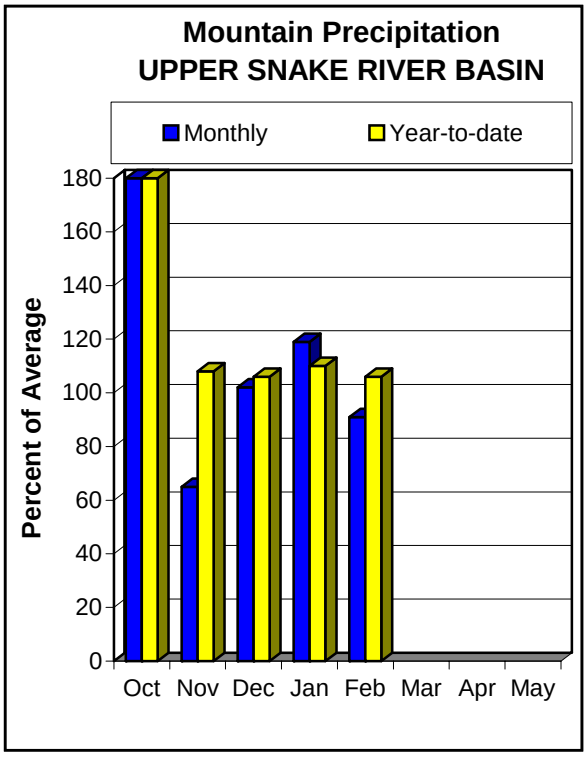
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER SNAKE BASINS
MARCH 1, 2008







WATER SUPPLY OUTLOOK

The Upper Snake basin has missed out on snow storms that neighboring basins received. The snowpack is 102% of average overall as of March 1 but only 76% of the normal seasonal snow peak. The best snowpack is in the Willow Creek drainage at 112% of normal and the lowest snows are located in the Hoback River in western Wyoming at 87% of normal. The snowpack in the Snake River above Palisades is 97% of average, better than last year when the snowpack was only 79% of average. Unlike the snowpack, the reservoir storage remains low. The combined storage of Palisades Reservoir and Jackson Lake is 59% of average, 40% of capacity. Last year the combined storage was 111% of average, 75% of capacity. American Falls is 86% of normal, 65% of capacity and should fill. Average March precipitation or better is needed to achieve average snow amounts prior to the runoff period in April. Streams are currently forecast to flow near average for the April through July period. The combination of spring rains and a cooler summer than last year would help to stretch this year's water supply. The Surface Water Supply Index, which combines reservoir storage and projected streamflow at the Snake River near Heise, indicates that the summer surface water supplies will be adequate, based on the 50% exceedance values. This forecast assumes average precipitation and climatic conditions through the runoff season. If the weather is dryer than normal, then count on marginally adequate supplies with the possibility of some shortages. If the spring weather brings above normal precipitation over the next several months, then we can take a sigh of relief.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - March 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	APR-JUL	445	515	570	100	625	710	570
	APR-SEP	605	690	755	99	820	920	765
Henrys Fork nr Rexburg	APR-JUL	1260	1420	1530	98	1640	1800	1560
	APR-SEP	1660	1840	1960	98	2080	2260	2010
Falls R nr Ashton	APR-JUL	305	345	375	99	405	455	380
	APR-SEP	360	410	445	99	480	540	450
Teton R nr Driggs	APR-JUL	126	151	170	103	190	220	165
	APR-SEP	158	191	215	102	240	280	210
Teton R nr St. Anthony	APR-JUL	305	365	410	101	455	530	405
	APR-SEP	370	440	490	102	545	630	480
Snake River At Flagg Ranch	APR-JUL	395	450	485	98	520	575	495
	APR-SEP	440	500	540	99	580	640	545
Snake R Nr Moran	APR-JUL	635	760	815	100	870	995	815
	APR-SEP	700	845	910	101	975	1120	905
Pacific Ck At Moran	APR-JUL	130	157	175	102	193	220	171
	APR-SEP	138	166	185	104	205	230	178
Snake R Nr Alpine	APR-JUL	1910	2250	2410	102	2570	2910	2370
	APR-SEP	2200	2610	2790	102	2970	3380	2730
Greys R Nr Alpine	APR-JUL	255	295	320	94	345	385	340
	APR-SEP	300	345	375	95	405	450	395
Salt R Nr Etna	APR-JUL	210	280	325	96	370	440	340
	APR-SEP	260	345	400	95	455	540	420
Snake R nr Irwin	APR-JUL	2790	3230	3430	103	3630	4070	3330
	APR-SEP	3250	3740	3960	102	4180	4670	3870
Snake R nr Heise	APR-JUL	3110	3440	3660	103	3880	4210	3560
	APR-SEP	3630	4000	4250	102	4500	4870	4160
Willow Ck nr Ririe	MAR-JUL	46	64	78	89	93	119	88
Blackfoot R ab Res nr Henry	APR-JUN	39	56	69	95	84	108	73
Portneuf R at Topaz	MAR-JUL	61	72	81	91	90	104	89
	MAR-SEP	72	85	95	87	105	121	109
Snake River at Neeley	APR-JUL	2080	2900	3270	101	3640	4460	3240
	APR-SEP	2250	3140	3540	101	3940	4830	3510

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	79.5	82.3	84.4
ISLAND PARK	135.2	94.4	118.0	107.1
GRASSY LAKE	15.2	13.4	12.4	12.0
JACKSON LAKE	847.0	335.4	635.9	494.0
PALISADES	1400.0	567.3	1053.4	1033.1
RIRIE	80.5	40.2	44.5	38.5
BLACKFOOT	348.7	90.8	173.4	224.7
AMERICAN FALLS	1672.6	1089.3	1415.6	1271.1

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	12	131	105
Teton River	8	135	99
Henrys Fork above Rexburg	20	132	103
Snake above Jackson Lake	9	119	95
Gros Ventre River	3	136	102
Hoback River	5	122	87
Greys River	5	126	98
Salt River	5	129	103
Snake above Palisades	28	125	97
Willow Creek	7	141	112
Blackfoot River	5	134	103
Portneuf River	7	144	104
Snake abv American Falls	49	130	101

* 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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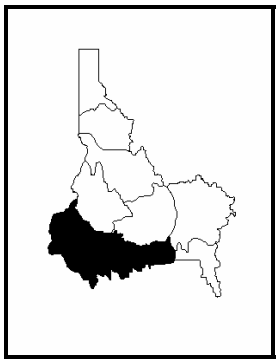
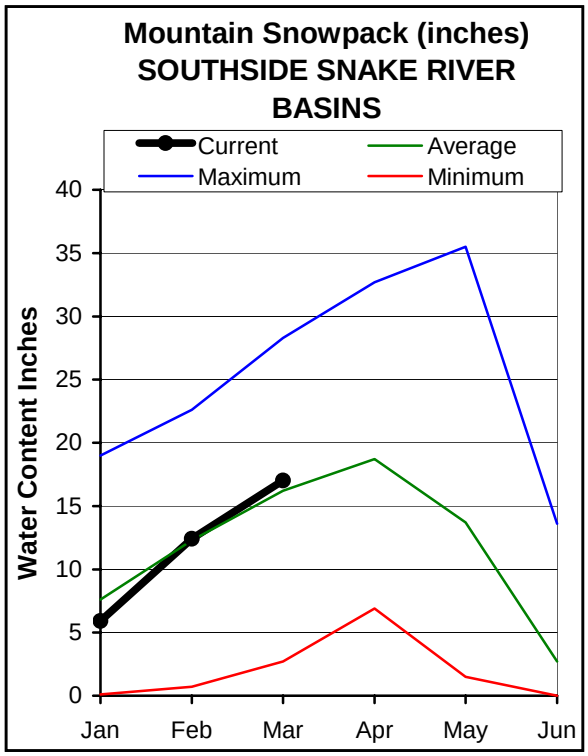
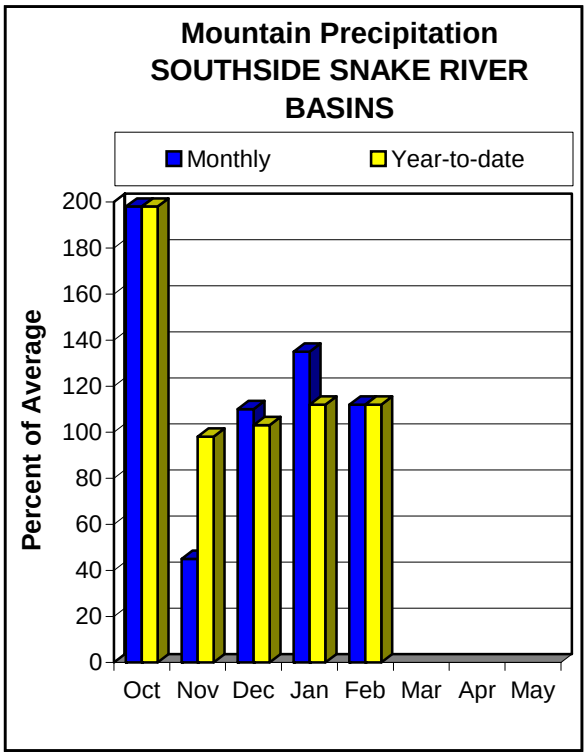
SOUTHSIDE SNAKE RIVER BASINS
MARCH 1, 2008







WATER SUPPLY OUTLOOK

The Southside Snake basins have slightly above average snowpacks, with the Owyhee basin having the best snow at 130% of average. These desert mountains are doing much better than last year. A snow index in the Owyhee basin which combines the March 1 snow water content from six SNOTEL sites shows that the mountains are holding an average of 11.4 inches this year and only 6.2 inches last year, nearly twice as much! The Oakley Basin, Salmon Falls and Bruneau drainages are near 110% of average. The current snowpacks in the region are near 85% of the seasonal peak, which means that is where we will end up for the season if no new snow falls over the next few weeks. The snowpacks are good news, but the lower reservoir storage is still troubling. Salmon Falls Reservoir is currently the least full at 18% of capacity, 54% of average; Oakley is storing the best relative to normal at 85% of normal, 35% of capacity. Oakley Reservoir Inflow is forecast at 91% of average and should provide adequate irrigation supplies. The Owyhee River near Rome, Bruneau River and Salmon Falls Creek are forecast at 89-100%. The Owyhee basin snowpack is not ripe yet but this is one of the first basins to start melting and producing streamflow. The weather over the next few weeks will determine how the snow comes off, which will control the magnitude and timing of peak streamflows in this high desert basin. Given that the Owyhee basin is the first to melt, we may be able to use its hydrologic response and gleam some insights on soil saturation and how efficient the snow is in delivering water to the reservoirs. This guidance may provide additional knowledge and insights to manage the limited water in other basins across southern Idaho as efficiently as possible.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - March 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	MAR-JUL	16.8	25	31	91	38	50	34
	MAR-SEP	18.7	27	34	92	41	54	37
OAKLEY RESV STORAGE	MAR-31	33	34	35	97	36	37	36
	APR-30	37	39	41	100	43	45	41
	MAY-31	36	40	43	96	46	50	45
Salmon Falls Ck nr San Jacinto	MAR-JUN	54	70	83	93	97	118	89
	MAR-JUL	55	73	87	94	102	126	93
	MAR-SEP	58	77	91	93	106	131	98
SALMON FALLS RESV STORAGE	MAR-31	63	67	70	100	73	77	70
	APR-30	73	79	83	94	87	93	88
	MAY-31	82	91	98	97	105	114	101
Bruneau R nr Hot Springs	MAR-JUL	127	174	210	89	250	315	235
	MAR-SEP	134	182	220	88	260	330	250
Owyhee R nr Gold Creek	MAR-JUL	16.4	23	29	91	36	47	32
	MAR-SEP	18.2	25	30	97	36	46	31
Owyhee R nr Rome	MAR-JUL	335	455	550	95	650	815	580
	MAR-SEP	350	475	570	95	675	840	600
Owyhee R blw Owyhee Dam	MAR-JUL	60	350	545	89	740	1030	615
	MAR-SEP	63	360	565	88	770	1070	645
	APR-SEP	85	285	420	98	555	755	430
Reynolds Ck at Tollgate	MAR-JUL	6.1	7.9	9.2	95	10.6	12.9	9.7

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	75.6	26.7	43.1	31.4
SALMON FALLS	182.6	32.1	77.8	59.8
WILDHORSE RESERVOIR	71.5	29.8	50.9	40.1
OWYHEE	715.0	215.8	531.6	489.1
BROWNLEE	1420.0	904.7	1147.8	1090.5

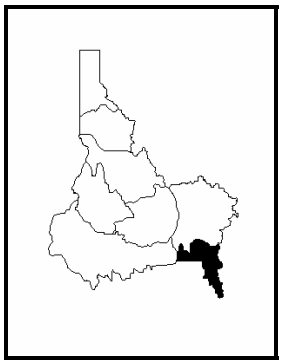
SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - March 1, 2008

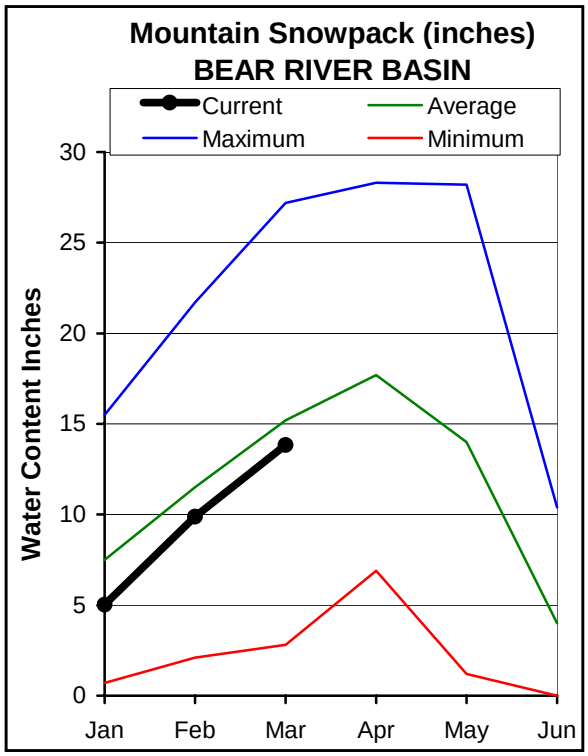
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	6	134	116
Goose-Trapper Creeks	7	139	112
Salmon Falls Creek	8	164	112
Bruneau River	8	160	109
Reynolds Creek	6	143	105
Owyhee Basin Total	20	204	130

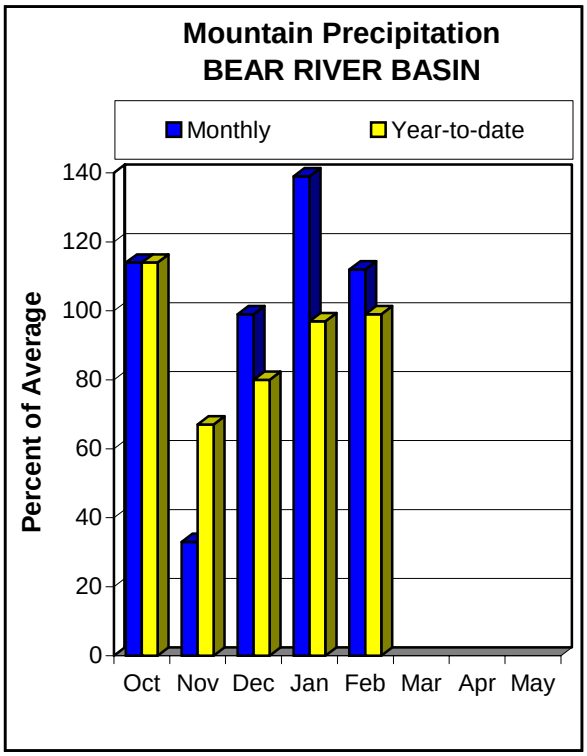
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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
MARCH 1, 2008







WATER SUPPLY OUTLOOK

For the third month in a row the Bear River Basin received above average monthly precipitation. February had 112% of average precipitation which brought the water year to date precipitation to average. Overall the snowpack in the Bear River basin reached 91% this month. The best snow is in the Malad and Mink basins which have about 108% of average. At the other end of the spectrum is Montpelier Creek, which is worst in the state, at 85% of average. Current storage in Bear Lake is 375,900 acre-feet which equates to 26% of capacity, 41% of average. The Bear River at Stewart Dam streamflow forecast increased to 68% of average for the April-July period. The Little Bear River at Paradise is forecast for 100% of average and forecasts for the Bear River near the Utah–Wyoming border and above the reservoir near Woodruff are forecast at about 110% of average. The Surface Water Supply Index which combines current reservoir storage and forecasted streamflow indicates that surface water supplies should be adequate based on the 50% chance of exceedance forecast. Expect water supplies similar to 2002 based on this index. Even though the Bear basin has one of the lowest snowpacks in the state, it has a good shot of ending up with an average snowpack in April if it can maintain its momentum. The relationship between snow and streamflow is not always a one-to- one relationship especially in below normal snow years, but having a near normal snowpack on April 1 would be good news for the Bear River water users.

BEAR RIVER BASIN
Streamflow Forecasts - March 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)
Bear River nr UT-WY State Line	APR-JUL	96	113	125	111	137	154	113
	APR-SEP	105	124	138	110	152	171	125
Bear River ab Reservoir nr Woodruff	APR-JUL	98	126	145	107	164	192	136
	APR-SEP	106	134	154	109	174	200	142
Big Creek nr Randolph	APR-JUL	2.9	4.0	4.7	96	5.4	6.5	4.9
Smiths Fork nr Border	APR-JUL	65	79	88	85	97	111	103
	APR-SEP	82	98	108	89	118	134	121
Bear River at Stewart Dam	APR-JUL	98	133	160	68	190	240	234
	APR-SEP	103	141	170	65	200	255	262
Little Bear River at Paradise	APR-JUL	29	39	46	100	54	66	46
Logan R Abv State Dam Nr Logan	APR-JUL	82	99	112	89	126	147	126
Blacksmith Fk Abv Up&L Dam Nr Hyrum	APR-JUL	29	40	48	100	57	71	48

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	375.9	549.7	910.7
MONTPELIER CREEK	4.0	1.2	2.1	1.7

BEAR RIVER BASIN
Watershed Snowpack Analysis - March 1, 2008

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	4	118	88
Bear River ab WY-ID line	12	135	100
Montpelier Creek	2	113	85
Mink Creek	4	142	107
Cub River	3	152	105
Bear River ab ID-UT line	26	137	101
Malad River	3	155	108

* 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 Resvervoir Inflow, ID
+ Blackfoot Reservoir releases
+ Blackfoot Resv (Storage Change
Portneuf R at Topaz, ID - No Corrections
Snake River at Neeley, ID
+ Snake River 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

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