United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report
June 1, 2009

Mores Creek Summit SNOTEL

This picture of the Mores Creek Summit SNOTEL, located north of Idaho City in the Boise Basin, was taken on May 28th, 2009, and features the last remnants of the site's snowpack and the emergence of the snow pillows. The Mores Creek SNOTEL measured the peak snow water content (29.7 inches) on April 11th, 2009. It took over four months to accumulate the snow pack and 48 days to dwindle the site's snow water content to zero on May 29th, 2009. During that time, the average melt rate was 0.6 inches per day and the maximum melt rate exhibited just prior to melt-out was approximately 1.5 inches per day.

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

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Contact - - Your local Natural Resources Conservation Service Office
or
Natural Resources Conservation Service
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(208) 378-5740

Internet Web Address
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

June 1, 2009

SUMMARY

Moderate temperatures and timely precipitation is turning the 2009 runoff season into a moderate year. May precipitation ranged from above average in the west-central and northern basins to about half of average in the Little Lost basin. June 1 snow levels range from melted out in many of the southern Idaho basins to almost average in the Clearwater basin. Residual streamflow forecasts for June-July are less than a month ago and range from 50-100% of average for most of the state. Overall, most reservoirs should fill; the exceptions are the reservoirs in central and across southern Idaho. Irrigation supplies may be tight for users in the Magic, Mackay, Little Lost, Salmon Falls, Oakley, and Bear Lake basins. Depending on the summer's irrigation demand, better carryover reservoir storage for next year is also favoring basins that had better carryover from last year; these include Dworshak, Payette, Boise and Upper Snake reservoirs.

SNOWPACK

The snow is running out. Current basins reporting no snow as percent of average at the snow measuring sites in their basins are Weiser, Little Wood, Big Lost, Oakley, Salmon Falls and Bruneau basins. The Clearwater basin has the highest snowpack at 92% percent of average. The June 1 snowpack in other basins is: 86% in Northern Panhandle, 78% in Spokane, 67% in Salmon, 74% in Snake above Palisades Reservoir, near 55% in Boise and Henrys Fork basins, and 69% in the Teton basin. Elsewhere the snowpack is less than 50% of average and will soon be melted. There is still snow present in the Idaho's higher elevations above many of the snow measuring stations which will help sustain flows into early summer. This is especially true in the Teton basin, where Grand Targhee SNOTEL site, elevation 9,260 feet, has 40 inches of snow water and 78 inches of snow on the ground. This site is currently losing about an inch of water a day and two inches in depth a day. Last year it melted out July 15 and should be melted before the end of June.

PRECIPITATION

Average or better May precipitation amounts fell in the region from the Big Wood basin to the west central mountains and north to the Canadian border. The South Fork Payette basin received the greatest May amount at 157% of average. The least amounts fell in the Little Lost and Mud Lake area at only 45% of average. Elsewhere, May precipitation amounts ranged from 70-85% of average across Idaho's southern basins, western Wyoming, Little Wood and Big Lost basins. Water year-to-date precipitation sounds encouraging with near average amounts and the biggest precipitation months behind us, but it does not always correlate one to one with streamflow. Average precipitation for the water year is good for the forests, dryland and rangelands, but the timing and intensity of rain will affect streamflow runoff in a positive or negative manner. The highest water year-to-date amounts are in Oakley, Salmon Falls and Bruneau basins at 108% of average. Lowest amounts are the Northern Panhandle Region and Weiser basin 86% of average. Elsewhere, amounts range from 91-104% of average. Additional spring moisture would improve the runoff in basins that still have snow to melt, and cooler summer temperatures will keep irrigation demand at moderate levels and may help reduce fire potential.

RESERVOIRS

Most reservoirs are in the 90% of capacity range and waiting for the inflows to subside for final fill of the reservoirs. The exceptions are reservoirs in central and southern Idaho that we have been talking about all season. Reservoir storage, from highest to lowest: Mackay is 86% full, Magic and Owyhee are 55% full, Oakley and Salmon Falls are 41% full and Bear Lake is 37%. The two major upper Snake reservoirs that are still waiting for additional runoff are Jackson Lake at 88% full and Palisades at 67% full. These reservoirs will fill physically based on the projected runoff, but additional moisture will help ensure the allocations for Jackson Lake and Palisades Reservoir also fill. May precipitation, was 85% of average in the Snake basin above Palisades and additional moisture in the first half of June would certainly help.

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

The runoff this year can best be described at fairly controlled. Streams increased with warmer temperatures in mid-April and then decreased with cooler temperatures later in the month. The streams rebounded with warmer temperatures in mid-May only to level off at higher flow levels with moderate temperatures but the momentum of the melting snow was still present feeding the streams and maintaining the higher manageable flows. As a result, there were multiple peaks from the snowpack this year. A few streams, like the Teton River and Buffalo Fork in eastern Idaho and western Wyoming, have not peaked yet from this year's snowmelt. Streams in full recession are Owyhee, Salmon Falls, Goose Creek, Trapper Creek, Camas Creek near Blaine, and Weiser.

Residual streamflow forecasts for the June-September period are for near average in the Clearwater and Upper Snake basins. Streams across central and southern Idaho are forecast in the 45-75% of average range. While the Salmon basin and Panhandle Region streams are forecast at 80-90% of average.

Note: Forecasts published in this report are NRCS forecasts. NRCS uses timely SNOTEL data to provide streamflow forecasts. Jointly coordinated published forecasts by the USDA NRCS and the NOAA NWS are available from the joint west-wide Water Supply Outlook for the Western US at http://www.wcc.nrcs.usda.gov/wsf/westwide.html. The forecast numbers mentioned in this narrative are the volume under the 50% Chance of Exceeding, which means there is a 50% chance the volume will be greater or less than the given value. Water users may wish to use a lesser exceedance forecast to reduce the risk of coming up water short or greater volume to mitigate high flow potential.

RECREATION

Enjoy! The snowmelt runoff season is here! Moderate melt produced moderate streamflow peaks this year. The Bruneau River, in southern Idaho, is still receding and flowing at 1,000 cfs, as of early June. While Idaho's famous whitewater rivers in the Clearwater and Salmon basin have just peaked are just starting to receded to lower, fun family floating levels. Know your boating limits and boating confidence while the rivers are still high and additional rain can change the flows fairly rapidly due to saturated soils from the receding snowpack.

To provide guidance to water managers and river runners, there are a number of graphs on the Idaho NRCS Peak Streamflow Resources page: http://www.id.nrcs.usda.gov/snow/watersupply/peakflow.html. A number of these graphs illustrate the relationships between snow and streamflow peaks for Idaho's major basins. Similar snow years and historic flow exceedance levels are also included as references for this year's conditions. Projections are made periodically after the snowmelt peaks have occurred and streams are recession. These graphs are manually updated once a week or more during the runoff season and less often in the summer months.

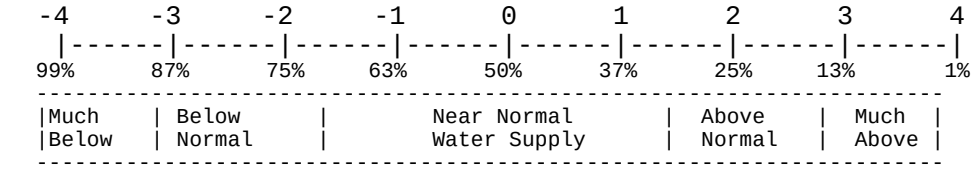
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of June 1, 2009

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*
CLEARWATER	0.8	2004	NA
SALMON	0.1	2003	NA
WEISER	-1.3	2004	NA
PAYETTE	-0.8	2003	NA
BOISE	-0.4	2008	-2.2
BIG WOOD	-1.5	2008	-0.7
LITTLE WOOD	-0.2	2003	-2.1
BIG LOST	-0.4	2003	-0.1
LITTLE LOST	-1.3	2006	0.6
HENRYS FORK	-0.1	2006	-3.3
SNAKE (HEISE)	0.4	1980	-1.5
OWYHEE	-3.0	2002	-3.0
OAKLEY	-1.3	1993	-1.1
SALMON FALLS	-1.5	1989	-1.5
BRUNEAU	-0.9	2008	NA
BEAR RIVER	-2.6	1993	-3.5

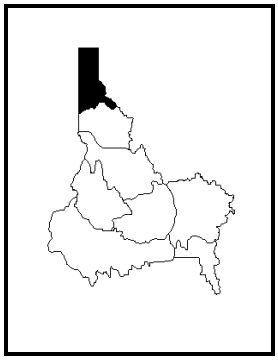
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

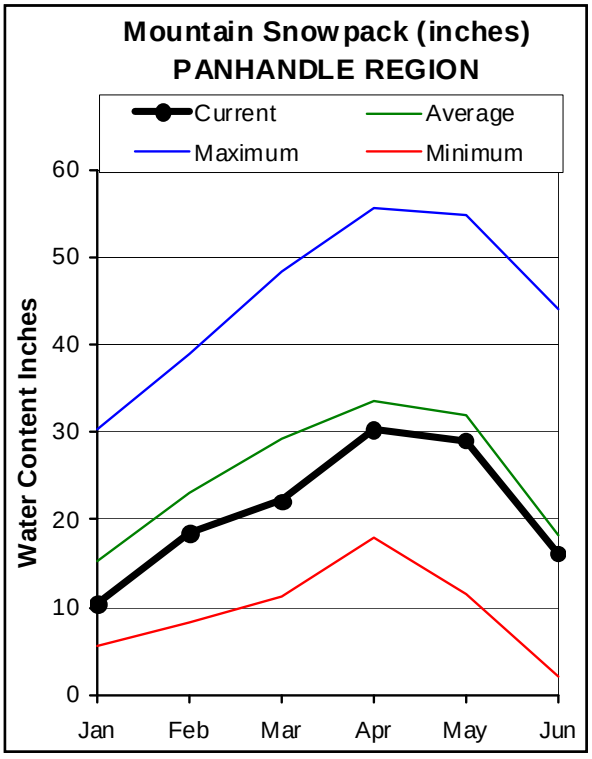


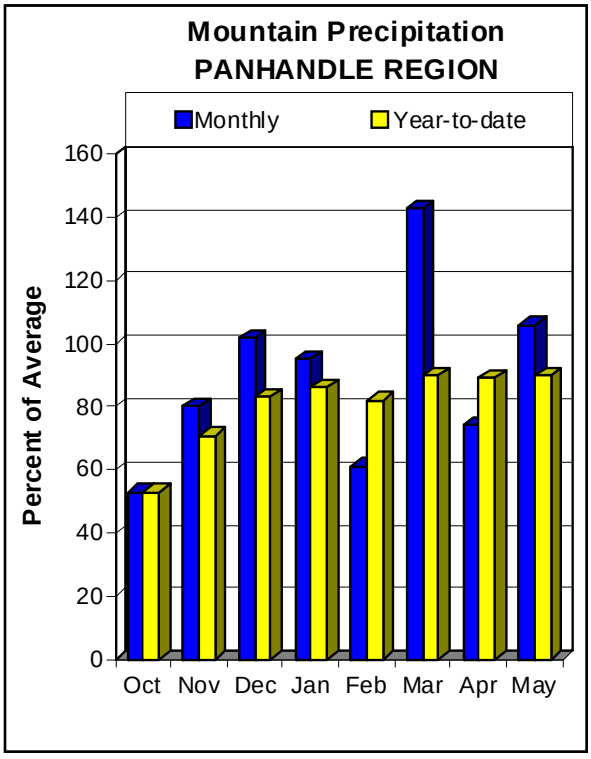
NA = Not Applicable

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
JUNE 1, 2009







WATER SUPPLY OUTLOOK

The month of May marks only the second month besides March with above average precipitation since January. The water year-to-date precipitation is 90% of average as of June 1. The winter's snowpack has melted below 5000 feet according to the SNOTEL sites. Above that elevation band on June 1, the snow ranged from 41% of average in the Coeur d'Alene River basin, 69% in the Moyie, 78% in the Spokane, 87% in the Kootenai above Bonners Ferry, near 95% in the St. Joe and Pend Oreille River up to 104% of average in the Priest River drainage. The streamflow forecasts for the Kootenai, Priest, North Fork Coeur d'Alene and the Spokane are near 90% of average. The Moyie River, Boundary and Smith Creeks are forecast at 78% 73%, 80% of normal, respectively. The best streamflow volume forecast can be found where the mountains held onto their snow in the Priest River, which is forecast at 94% of average for June through September.

PANHANDLE REGION
Streamflow Forecasts - June 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	JUN-JUL	2590	3130	3380	86	3630	4170	3920
	JUN-SEP	3270	3980	4300	86	4620	5330	5000
MOYIE RIVER at Eastport	JUN-JUL	64	93	113	78	133	162	145
	JUN-SEP	73	104	125	78	146	177	160
SMITH CREEK	JUN-JUL	21	32	40	80	48	59	50
	JUN-SEP	23	36	45	80	54	67	56
BOUNDARY CREEK	JUN-JUL	17.4	27	34	74	41	51	46
	JUN-SEP	21	31	38	73	45	55	52
CLARK FK at Whitehorse Rpds (1,2)	JUN-JUL	4920	5110	5200	93	5290	5480	5620
	JUN-SEP	5830	6120	6250	93	6380	6670	6750
PEND OREILLE Lake Inflow (2)	JUN-JUL	5250	5490	5650	92	5810	6050	6120
	JUN-SEP	6290	6550	6720	92	6890	7150	7280
PRIEST near Priest River (1,2)	JUN-JUL	161	240	275	95	310	390	290
	JUN-SEP	200	285	325	94	365	450	345
NF COEUR D'ALENE RIVER at Enaville	JUN-JUL	102	130	149	94	168	196	159
	JUN-SEP	132	163	184	93	205	235	198
ST. JOE at Calder	JUN-JUL	275	310	335	88	360	395	380
	JUN-SEP	325	365	395	88	425	465	450
SPOKANE near Post Falls (2)	JUN-JUL	500	565	605	90	645	710	675
	JUN-SEP	565	640	690	89	740	815	775
SPOKANE at Long Lake (2)	JUN-JUL	540	675	765	91	855	990	840
	JUN-SEP	725	870	965	91	1060	1210	1060

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE		NO REPORT		
FLATHEAD LAKE		NO REPORT		
NOXON RAPIDS		NO REPORT		
PEND OREILLE	1561.3	1356.9	518.6	1333.1
COEUR D'ALENE	238.5	262.7	488.4	270.4
PRIEST LAKE	119.3	129.2	156.9	138.5

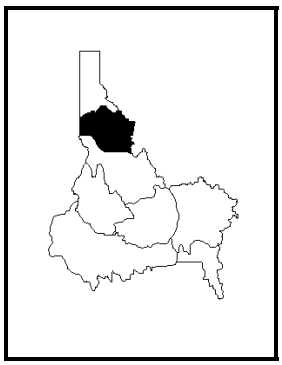
PANHANDLE REGION
Watershed Snowpack Analysis - June 1, 2009

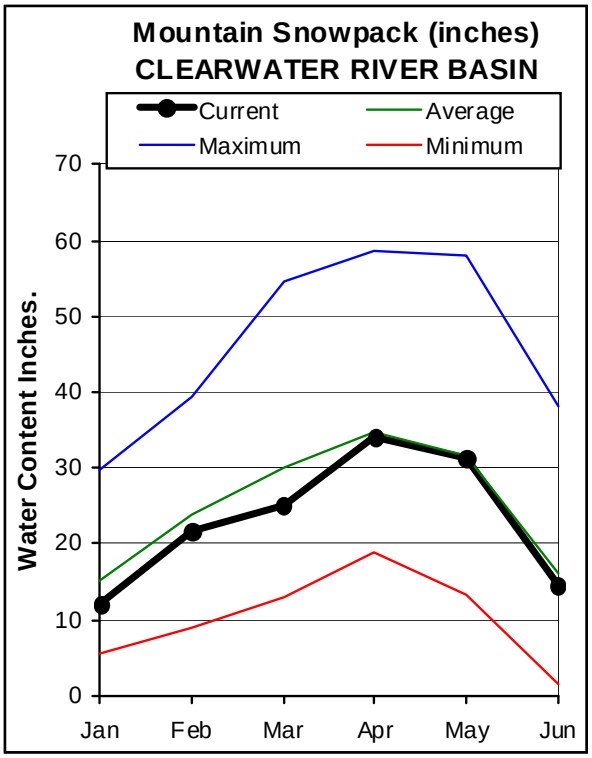
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	8	74	87
Moyie River	1	88	69
Priest River	2	81	104
Pend Oreille River	44	66	97
Rathdrum Creek	1	0	0
Hayden Lake	0	0	0
Coeur d'Alene River	4	20	41
St. Joe River	4	63	95
Spokane River	9	45	78
Palouse River	1	0	0

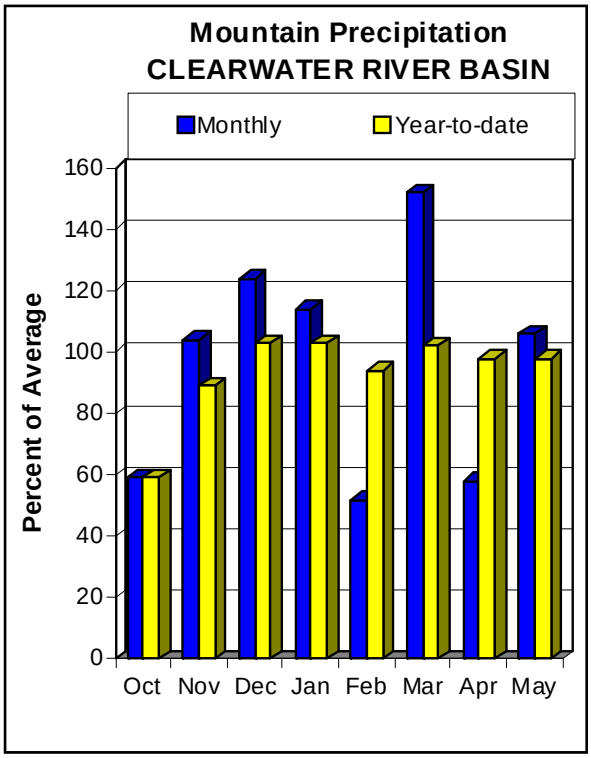
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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.

CLEARWATER RIVER BASIN
JUNE 1, 2009







WATER SUPPLY OUTLOOK

This snow year, the Clearwater started off slow in January and then made up for lost time since March. May brought 106% of average precipitation to the Clearwater SNOTEL sites, which is part of the near average precipitation for the entire water year. The snow waited until May to start melting and lost over an inch of snow water per day once the sun started shining. The snow that is left is at 92% of average overall for the Clearwater basin. The best snowpack is in the Selway basin at 106% of average. The North Fork Clearwater has 89% of average snow and the Lochsa lost the most and is 73% of average. These rivers have been flowing high during the last few weeks of May. The Clearwater, Lochsa and Selway have all had greater than 110% of average volumes of water coming down the channels for the past month. The Selway River near Lowell had the highest volume with respect to average at 128%! The highest daily instantaneous peak so far occurred on May 31 at 31,900cfs around 2am. There may be another peak left depending on how the remaining snow melts and if rain or hot temperatures occur. As far as seasonal volume streamflow forecasts go, the outlook is for 104% of average flows through September for the Selway, 90% for the Lochsa and 95-100% for the Clearwater. These flows and Dworshak's 90% full status should provide excellent river recreation opportunities and lake days through the summer whether you like whitewater, power boating or more relaxed floating and fishing.

CLEARWATER RIVER BASIN
Streamflow Forecasts - June 1, 2009

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	JUN-JUL	785	907	990	105	1073	1195	945
	JUN-SEP	864	998	1090	104	1182	1316	1050
Lochsa R nr Lowell	JUN-JUL	439	526	585	89	644	731	655
	JUN-SEP	502	596	660	90	724	818	735
DWORSHAK RESV Inflow (1,2)	JUN-JUL	578	765	850	89	935	1122	960
	JUN-SEP	699	913	1010	90	1107	1321	1120
CLEARWATER R at Orofino (1)	JUN-JUL	1325	1769	1970	100	2171	2615	1970
	JUN-SEP	1494	1993	2220	100	2447	2946	2220
CLEARWATER at Spalding (1,2)	JUN-JUL	1849	2517	2820	95	3123	3791	2960
	JUN-SEP	2127	2886	3230	96	3574	4333	3370

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	3113.9	2761.9	3040.7

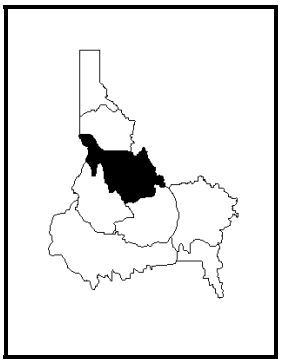
CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - June 1, 2009

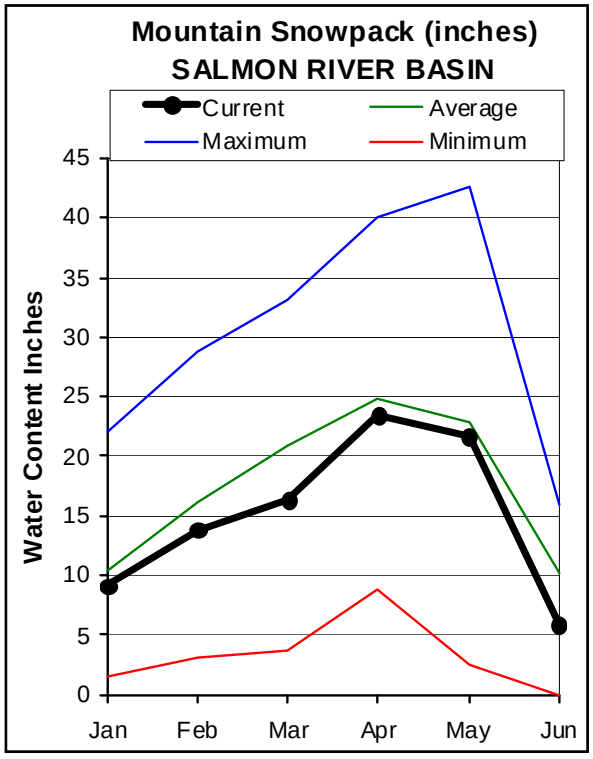
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	8	52	89
Lochsa River	2	32	73
Selway River	4	61	106
Clearwater Basin Total	14	54	92

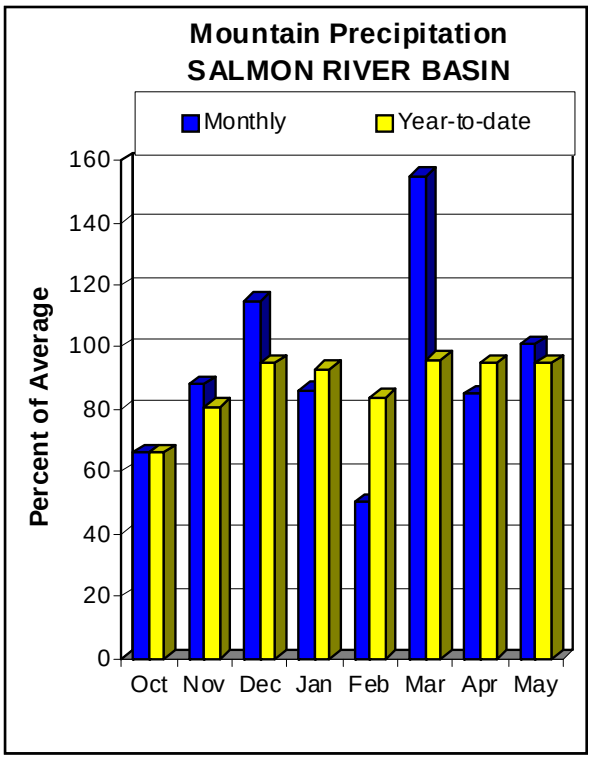
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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
JUNE 1, 2009







WATER SUPPLY OUTLOOK

Once again, the Salmon basin had an average month of precipitation during the month of May and the water year-to-date precipitation is 95% of average for the first of June. Current snowpack is 67% of average overall for the Salmon basin. The snowpack reached its average peak snow water content earlier this year and some sites well surpassed the average. The snowpack has been melting fast over the last few weeks; up to two inches of water per day at some sites. There is no snow left at the snow sites in the little Salmon drainage; the snow is 43% of average in the South Fork; near 65% in the Middle Fork and Salmon above Salmon drainages and up to 90% of average snow is left in the Lemhi basin. The fast melting snow caused rivers to rise. May streamflow volumes for the Middle Fork Salmon at MF Lodge was 141% of average; and near 120% of average for the main River of no Return at White Bird. Streamflow forecasts call for 80-91% of average volumes to flow by these Salmon stream gages through September, which will lead to a very good river recreation season barring too hot and dry conditions.

SALMON RIVER BASIN
Streamflow Forecasts - June 1, 2009

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 at Salmon (1)	JUN-JUL	317	384	415	78	446	513	530
	JUN-SEP	404	494	535	80	576	666	670
Lemhi R nr Lemhi	JUN-JUL	32	38	42	81	46	53	52
	JUN-SEP	46	53	59	83	65	74	71
MF Salmon at MF Lodge	JUN-JUL	302	360	400	90	440	498	445
	JUN-SEP	357	430	480	91	530	603	530
Salmon at White Bird (1)	JUN-JUL	1959	2524	2780	86	3036	3601	3220
	JUN-SEP	2386	3052	3355	87	3658	4324	3850

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

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

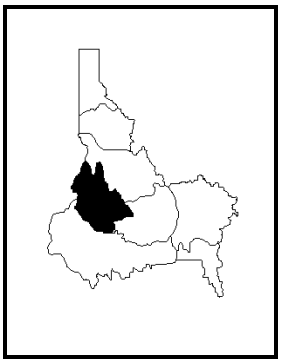
SALMON RIVER BASIN
Watershed Snowpack Analysis - June 1, 2009

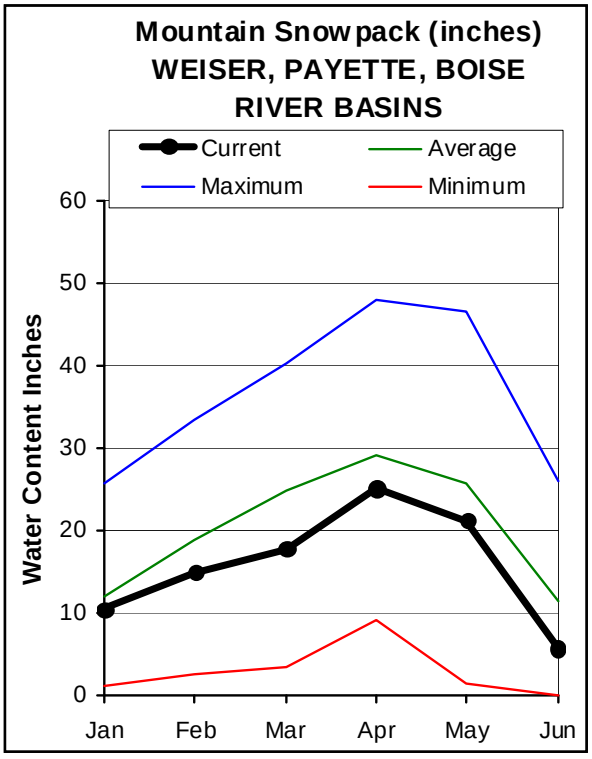
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	7	82	68
Lemhi River	6	72	90
Middle Fork Salmon River	3	91	65
South Fork Salmon River	3	51	43
Little Salmon River	4	0	0
Salmon Basin Total	23	62	67

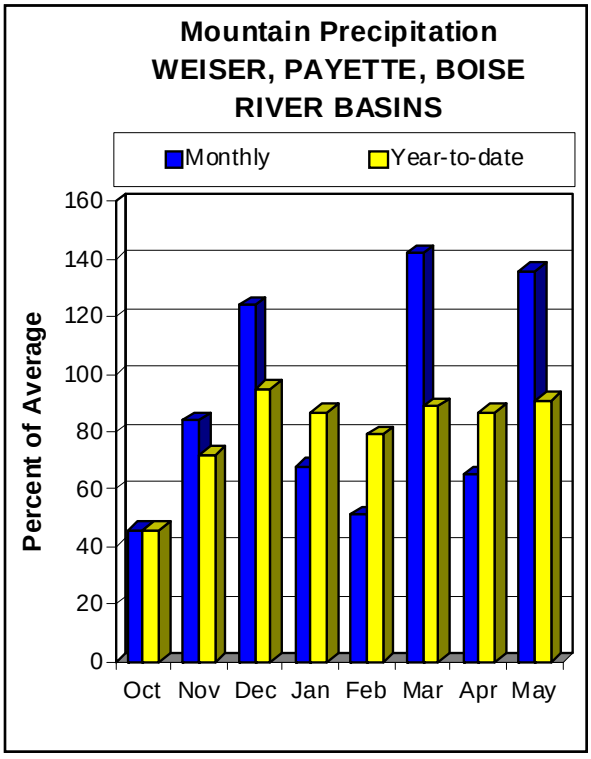
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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
JUNE 1, 2009







WATER SUPPLY OUTLOOK

The month of May's 136% of average precipitation improved the summer streamflow forecasts. These west-central Idaho Mountains struggled this winter for accumulating snow, and as of June 1 this region only had half of normal snow. The Weiser basin SNOTEL sites have melted and the Boise and Payette are both near 50% of normal; the South Fork Payette highlands has the most snow in the region at 65% of normal. The good spring precipitation has improved the water supply picture and the forecasts for June through September streamflow are now in the 60-77% range. The highest streamflow volume forecast is for the South Fork Payette River at Lowman at 77% of normal. Except in the Weiser basin, forecast at 65% of average, the regional water supply should be adequate since the Boise and Payette reservoir systems are near full and above average at the end of May.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - June 1, 2009

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 (1)	JUN-JUL	31	54	66	60	80	115	110
	JUN-SEP	51	77	91	66	106	143	139
SF Payette R at Lowman	JUN-JUL	151	168	180	74	192	212	245
	JUN-SEP	195	215	230	77	245	268	300
Deadwood Resv Inflow (1,2)	JUN-JUL	32	42	46	70	50	60	66
	JUN-SEP	37	49	54	73	59	71	74
Lake Fork Payette R nr McCall	JUN-JUL	21	25	28	62	31	37	45
	JUN-SEP	22	27	30	63	34	39	48
NF Payette R at Cascade (1,2)	JUN-JUL	71	115	135	63	155	199	215
	JUN-SEP	74	121	142	60	163	210	235
NF Payette R nr Banks (2)	JUN-JUL	69	126	165	62	204	261	265
	JUN-SEP	73	134	175	60	216	277	290
Payette R nr Horseshoe Bend (1,2)	JUN-JUL	317	443	500	70	557	683	710
	JUN-SEP	413	545	605	73	665	797	830
Boise R nr Twin Springs (1)	JUN-JUL	141	175	191	68	207	241	280
	JUN-SEP	174	216	235	70	254	296	335
SF BOISE at Anderson Ranch Dam (1,2)	JUN-JUL	87	120	135	60	150	183	225
	JUN-SEP	106	144	162	62	180	218	260
MORES CK nr Arrowrock Dam	JUN-JUL	12.8	17.4	21	66	25	31	32
	JUN-SEP	16.4	22	26	70	31	38	37
BOISE near Boise (1,2)	JUN-JUL	270	339	370	66	401	470	565
	JUN-SEP	350	429	465	68	501	580	680

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	10.6	11.0	10.5
CASCADE	693.2	660.5	618.6	588.6
DEADWOOD	161.9	149.8	139.6	139.0
ANDERSON RANCH	450.2	436.5	339.9	388.7
ARROWROCK	272.2	247.0	251.3	191.9
LUCKY PEAK	293.2	288.9	282.5	242.3
LAKE LOWELL (DEER FLAT)	165.2	133.8	82.7	133.5

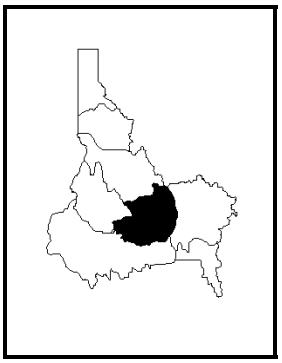
WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - June 1, 2009

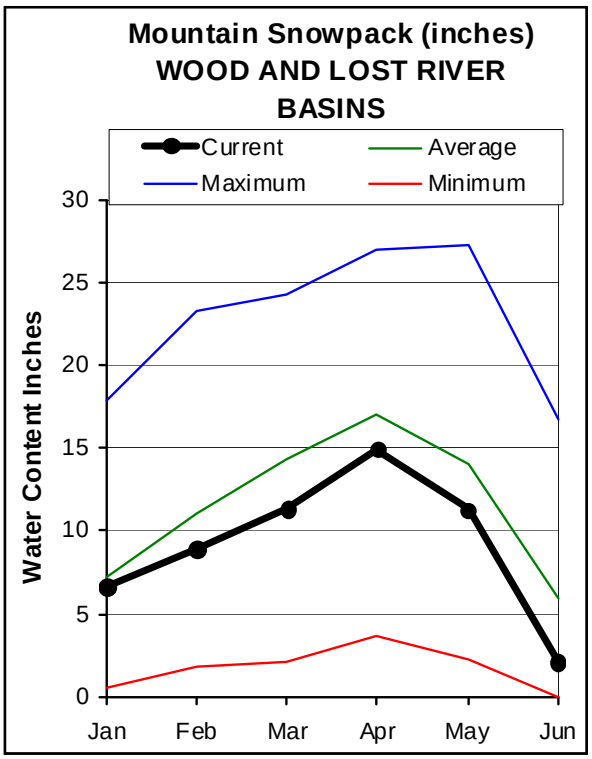
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	0	0
Weiser River	3	0	0
North Fork Payette	6	21	27
South Fork Payette	4	86	65
Payette Basin Total	11	46	45
Middle & North Fork Boise	5	64	48
South Fork Boise River	6	67	57
Mores Creek	2	0	0
Boise Basin Total	10	66	52
Canyon Creek	1	0	0

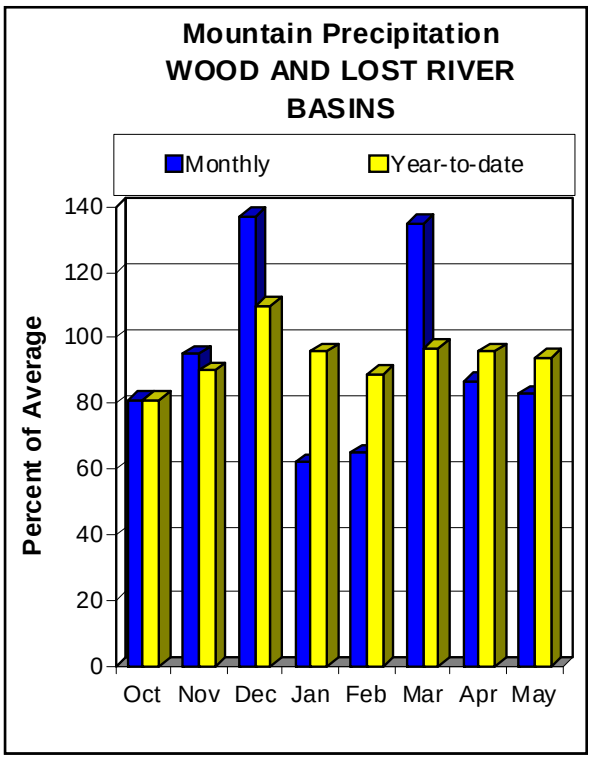
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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.

WOOD and LOST RIVER BASINS
JUNE 1, 2009







WATER SUPPLY OUTLOOK

The SNOTEL sites near 9,000 feet are the only sites with snow left in the Wood and Lost basins, which equates to 35% of average snow water content overall as of June 1. The precipitation in May was only 83% of average leaving the water year-to-date precipitation at 94% of average. The rapidly melting snow and the low spring precipitation conditions have caused the streamflow forecasts to drop some from last month. The Little Wood and Big Wood River streamflow June-September forecasts are for 49-62% of normal; followed by the Big Lost and Little Lost rivers forecast at about 68% of average during the same period. As of June 1, the Little Wood Reservoir is almost full, while Mackay Reservoir is 86% of capacity, and both reservoirs are almost 110% of average. Magic Reservoir has had the toughest time with these low snow years and is only 57% full; 70% of average. Water supplies will be tight for water users that are downstream of Magic Reservoir especially. However, if cool and wet conditions continue, then the impacts will be less severe.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - June 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD at Hailey (1)	JUN-JUL	56	73	81	56	90	110	144
	JUN-SEP	76	99	110	62	122	151	177
Big Wood R ab Magic Reservoir	JUN-JUL	14.0	32	45	44	58	76	102
	JUN-SEP	23	44	58	50	72	93	116
Camas Ck nr Blaine	JUN-JUL	2.0	4.0	5.8	44	7.9	11.5	13.2
	JUN-SEP	2.4	4.5	6.4	46	8.6	12.4	14.0
BIG WOOD below Magic Dam (2)	JUN-JUL	13.0	36	51	45	66	89	114
	JUN-SEP	25	48	64	49	80	103	130
LITTLE WOOD R abv High Five Ck	JUN-JUL	10.9	14.9	18.0	55	21	27	33
	JUN-SEP	14.1	19.2	23	59	27	34	39
LITTLE WOOD near Carey (2)	JUN-JUL	6.2	13.2	18.0	56	23	30	32
	JUN-SEP	9.9	17.7	23	59	28	36	39
BIG LOST at Howell Ranch	JUN-JUL	51	65	75	66	86	103	114
	JUN-SEP	63	80	93	67	107	129	139
BIG LOST blw Mackay Resv	JUN-JUL	42	53	60	63	67	78	96
	JUN-SEP	60	74	84	66	94	108	127
Little Lost R nr Howe	JUN-JUL	9.2	11.4	13.0	72	14.7	17.4	18.1
	JUN-SEP	12.8	15.8	18.0	69	20	24	26

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	108.5	103.0	154.1
LITTLE WOOD	30.0	29.8	22.6	27.4
MACKAY	44.4	38.1	34.9	34.9

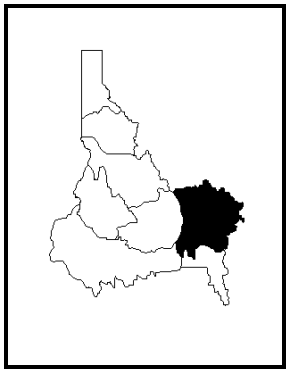
WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - June 1, 2009

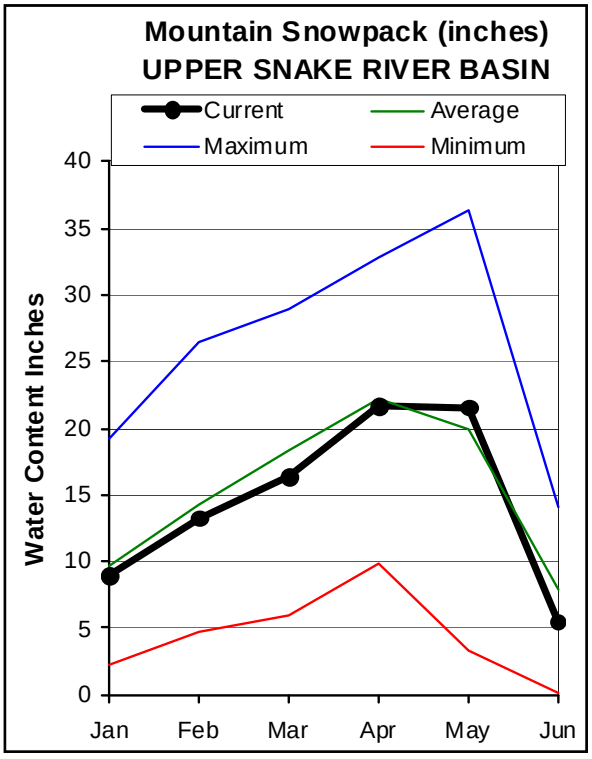
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	7	54	39
Camas Creek	2	0	0
Big Wood Basin Total	9	54	39
Fish Creek	0	0	0
Little Wood River	4	0	0
Big Lost River	4	0	0
Little Lost River	3	59	47
Birch-Medicine Lodge Cree	2	50	56
Camas-Beaver Creeks	2	0	0

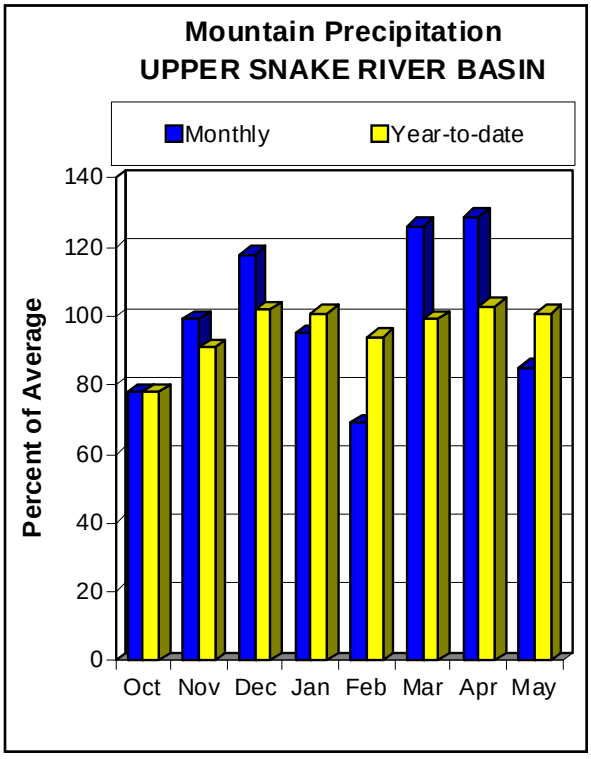
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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.

UPPER SNAKE BASINS
JUNE 1, 2009







WATER SUPPLY OUTLOOK

The past three out of four years, the snowpack has been above average in the upper Snake Basin in May. Each year has behaved slightly different during snowmelt and runoff. Last year, the temperatures remained cold and the snow was 149% of average on June 1. On June 1, 2006, the snow was 72% of normal and began melting quickly during mid-May with warm temperatures. This year the snow is 69% of normal on the same date and some of the SNOTEL sites above 8500 feet are hanging on to above average snow amounts for this time of year. The water year-to-date precipitation is average for this time of year even though the precipitation during the month of May was only 85% of average. The rivers in the upper Snake basin had above average streamflow volumes during the month of May. The streamflows have helped most of the reservoirs in the upper Snake to store near average or better amounts. Henrys Lake, Grassy Lake, Island Park, Ririe and American Falls are full or near full. Palisades is 67% full and Jackson is 88% of capacity. Good snow, good precipitation and good reservoir storage means good streamflow forecasts through September. However, the above average streamflow that has already occurred during May will keep the summer streamflows from reaching above average volumes through September. The best forecasts are where the pockets of good June 1 snow still exist: Pacific Creek near Moran is forecast at 108%; the Snake at Flagg Ranch, the Greys and Salt Rivers are forecast at near average volumes through September. Streams that are forecast in the 85-95% of average range are: the Henrys Fork, Falls River, Teton River, Snake near Moran, above the Reservoir near Alpine, near Heise and also near Irwin. The lowest seasonal volume forecasts are for further downstream at the Portneuf near Topaz at 75% of average and the Snake River near Neeley at 66% of normal. Water supplies should be adequate for most water users this summer. Wet and cool conditions will improve the situation even more.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - June 1, 2009

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 (2)	JUN-JUL	176	201	220	90	239	269	245
	JUN-SEP	323	362	390	89	419	463	440
HENRYS FORK near Rexburg (2)	JUN-JUL	594	657	700	84	743	806	830
	JUN-SEP	942	1024	1080	84	1136	1218	1280
Falls R nr Ashton (2)	JUN-JUL	124	151	170	85	191	223	199
	JUN-SEP	175	208	232	86	257	297	270
Teton R nr Driggs	JUN-JUL	74	86	95	88	104	119	108
	JUN-SEP	101	118	130	85	143	162	153
Teton R nr St. Anthony	JUN-JUL	149	173	190	79	208	236	240
	JUN-SEP	214	244	265	83	287	322	320
Snake R at Flagg Ranch	JUN-JUL	226	258	280	98	302	334	285
	JUN-SEP	263	300	325	97	350	387	335
Snake R nr Moran	JUN-JUL	346	417	450	92	483	554	490
	JUN-SEP	412	500	540	93	580	668	580
Pacific Ck at Moran	JUN-JUL	72	91	104	104	117	136	100
	JUN-SEP	81	100	114	108	128	147	106
SNAKE abv Resv nr Alpine (1,2)	JUN-JUL	1130	1309	1390	95	1471	1650	1470
	JUN-SEP	1386	1623	1730	94	1837	2074	1840
Greys R nr Alpine	JUN-JUL	172	186	195	104	204	218	188
	JUN-SEP	217	237	250	102	263	283	245
Salt R nr Etna	JUN-JUL	103	137	160	99	183	217	162
	JUN-SEP	164	209	240	100	271	316	240
SNAKE nr Irwin (1,2)	JUN-JUL	1481	1749	1870	96	1991	2259	1950
	JUN-SEP	1944	2244	2380	95	2516	2816	2500
SNAKE near Heise (2)	JUN-JUL	1646	1839	1970	96	2101	2294	2050
	JUN-SEP	2153	2377	2530	96	2683	2907	2650
WILLOW CREEK nr Ririe (2)	JUN-JUL	13.1	17.8	21	105	24	29	20
Portneuf R at Topaz	JUN-JUL	21	25	27	73	30	34	37
	JUN-SEP	32	37	41	75	45	51	55
Snake River at Neeley	JUN-JUL	534	951	1180	71	1433	2078	1660
	JUN-SEP	659	1114	1360	66	1630	2312	2070

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

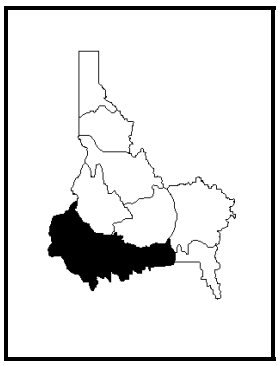
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	89.9	89.3	89.2
ISLAND PARK	135.2	125.7	137.3	132.8
GRASSY LAKE	15.2	15.2	15.4	14.4
JACKSON LAKE	847.0	742.1	598.3	572.6
PALISADES	1400.0	944.8	867.9	1033.6
RIRIE	80.5	80.2	71.2	70.3
BLACKFOOT	348.7	174.21	134.9	287.8
AMERICAN FALLS	1672.6	1616.0	1269.7	1476.1

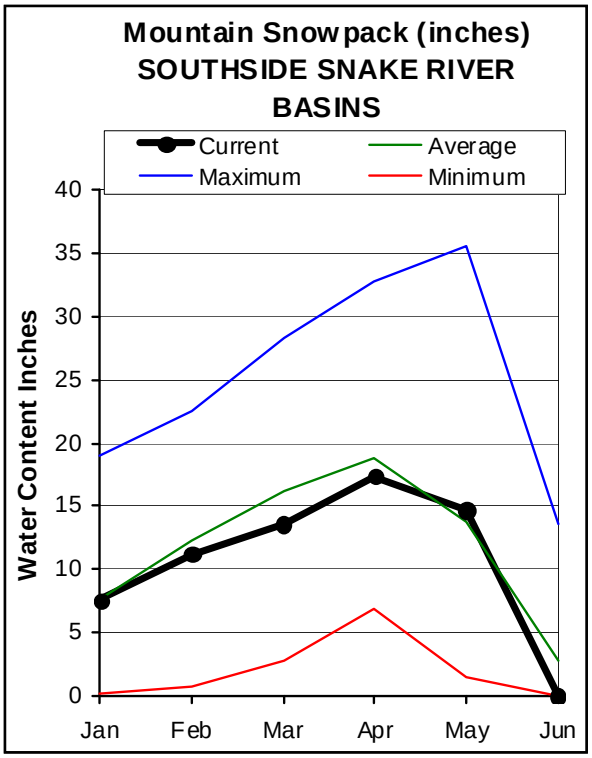
UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - June 1, 2009

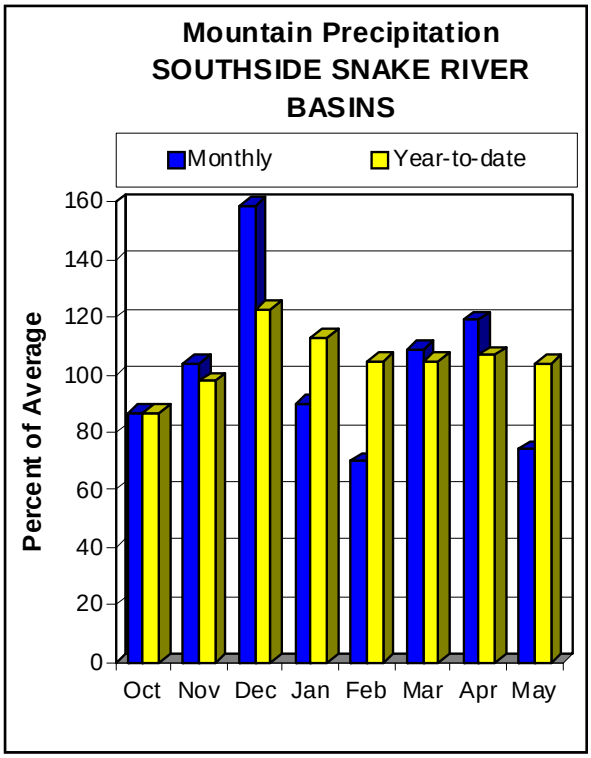
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	5	35	52
Teton River	2	45	69
Henrys Fork above Rexburg	7	37	55
Snake above Jackson Lake	5	48	74
Pacific Creek	2	73	127
Gros Ventre River	2	72	79
Hoback River	5	70	71
Greys River	4	62	79
Salt River	3	34	51
Snake above Palisades	17	56	74
Willow Creek	2	0	0
Blackfoot River	2	0	0
Portneuf River	3	0	0
Snake abv American Falls	27	52	72

* 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.

SOUTHSIDE SNAKE RIVER BASINS
JUNE 1, 2009







WATER SUPPLY OUTLOOK

The southside Snake reservoirs are only about half full and about 75% of average, this includes: Salmon Falls, Oakley, Wildhorse and Lake Owyhee. The snow has melted at the SNOTEL sites in the Owyhee Mountains, Bruneau and Salmon Falls drainages, only the highest elevations has snow. The good news is that the mountains received a near normal snowpack this year overall; even if it melted out a little early. The precipitation for May was only 74% of average, but other good months of precipitation resulted in the water year-to-date precipitation at 104% of average as of June 1. Besides the low reservoir storage, cumulative dry years since 2000 have resulted in low streamflow volume forecasts in the past years. Current streamflow forecasts range from near 50% of normal for the Owyhee River and Salmon Falls Creek, to 60-65% for the Bruneau River and Oakley Reservoir inflow.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - June 1, 2009

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	JUN-JUL	2.5	3.9	5.1	62	6.4	8.6	8.2
	JUN-SEP	4.1	6.0	7.4	66	9.0	11.7	11.3
OAKLEY RESV STORAGE	JULY	18.3	21	23	75	25	28	31
Salmon Falls Ck nr San Jacinto	JUN-JUL	8.1	11.4	14.0	58	16.8	21	24
	JUN-SEP	10.5	14.2	17.0	61	20	25	28
SALMON FALLS RESV STORAGE	JUNE	57	65	70	0	75	83	0.0
	JULY	36	44	50	0	56	64	0.0
Bruneau R nr Hot Springs	JUN-JUL	33	43	50	61	58	71	82
	JUN-SEP	38	50	58	63	67	82	92
Owyhee R nr Gold Creek (2)	JUN-JUL	0.0	0.2	0.7	46	1.2	2.8	1.5
	JUN-SEP	0.0	0.0	0.1	36	0.2	0.3	0.3
Owyhee R nr Rome	JUN-JUL	13.6	23	31	44	40	56	71
	JUN-SEP	23	34	44	48	55	73	91
Owyhee R blw Owyhee Dam (2)	JUN-JUL	1.6	8.2	37	45	74	119	82
	JUN-SEP	3.0	15.0	57	51	102	156	112
Reynolds Ck at Tollgate	JUN-JUL	0.6	1.0	1.4	75	1.8	2.5	1.9

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	75.6	32.1	41.5	45.0
SALMON FALLS	182.6	72.6	54.5	101.2
WILDHORSE RESERVOIR	71.5	45.7	48.5	58.4
OWYHEE	715.0	394.2	456.1	614.6
BROWNLEE	1420.0	1391.2	1356.2	1263.0

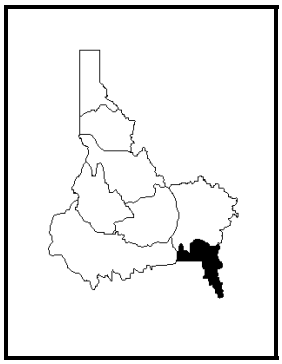
SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - June 1, 2009

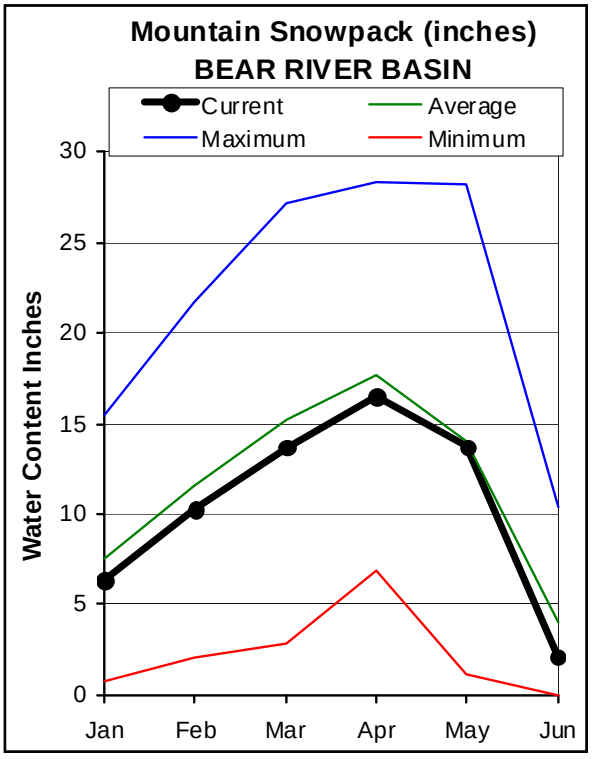
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	0	0
Goose-Trapper Creeks	3	0	0
Salmon Falls Creek	5	0	0
Bruneau River	5	0	0
Reynolds Creek	0	0	0
Owyhee Basin Total	7	0	0

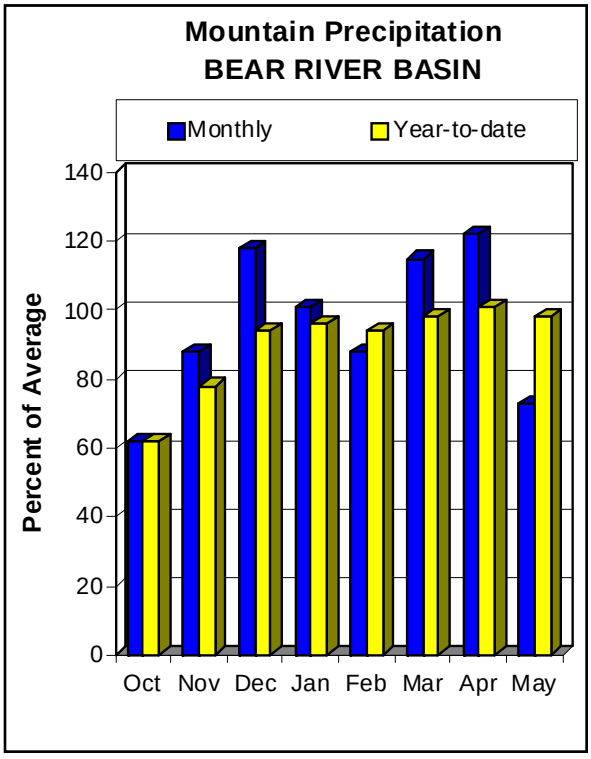
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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.

BEAR RIVER BASIN
JUNE 1, 2009







WATER SUPPLY OUTLOOK

Precipitation for the Bear River basin remains at average values for the water year-to-date. Although precipitation during the past few months was above average, May precipitation was only 73% of average. The snowpack was only half of normal on June 1 because of the melt during the last few weeks of May but the mountains did manage to receive a near normal snowpack earlier this year. The streamflow forecasts call for near 90% of average volumes of water to flow down the channels for most of the rivers in the Bear basin through September. The best flow with respect to average is forecast to occur at the Bear River near the Utah-Wyoming border and above the Reservoir at 100% average through September. The lowest flow will occur below Stewart Dam at 63% of average. The Bear River water users will be able to meet their needs based on the Surface Water Supply Index (SWSI), which combines current Bear Lake storage and the 50% Exceedance Streamflow Volume Forecast. If spring continues to bring cool temperatures and precipitation, then water users can expect more water, and less if the temperatures are hot and the weather is dry.

BEAR RIVER BASIN
Streamflow Forecasts - June 1, 2009

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 R nr UT-WY State Line	APR-JUL	100	112	120	106	128	140	113
	JUN-JUL	40	50	57	81	64	74	70
	APR-SEP	116	130	140	112	150	164	125
	JUN-SEP	59	70	78	95	86	97	82
Bear River ab Reservoir nr Woodruff	APR-JUL	86	104	117	86	130	148	136
	JUN-JUL	19.0	32	40	63	48	61	64
	APR-SEP	99	117	130	92	143	161	142
	JUN-SEP	43	56	65	92	74	87	71
Big Creek nr Randolph	APR-JUL	2.1	2.3	2.4	49	2.5	2.7	4.9
	JUN-JUL	0.3	0.8	1.2	52	1.7	2.6	2.3
Smiths Fork nr Border	APR-JUL	89	93	95	92	97	101	103
	APR-SEP	102	107	110	91	113	118	121
	JUN-JUL	49	53	55	90	57	61	61
	JUN-SEP	62	67	70	91	73	78	77
Bear River at Stewart Dam	APR-JUL	97	118	133	57	149	175	234
	APR-SEP	108	132	150	57	169	199	262
	JUN-JUL	18.0	48	68	62	88	118	110
	JUN-SEP	31	64	87	63	110	143	138
Little Bear at Paradise, UT	APR-JUL	35	43	49	107	55	63	46
	JUN-JUL	3.3	6.1	8.0	67	9.9	12.7	11.9
Logan nr Logan, UT	APR-JUL	82	99	110	87	121	138	126
Logan R nr Logan, UT	JUN-JUL	39	47	52	74	57	65	70
Blacksmith Fk nr Hyrum, UT	APR-JUL	24	36	44	92	52	64	48
	JUN-JUL	8.0	12.8	16.0	80	19.2	24	20

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	520.0	474.4	1052.3
MONTPELIER CREEK	4.0	4.0	3.4	3.3

BEAR RIVER BASIN
Watershed Snowpack Analysis - June 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	3	79	78
Bear River ab WY-ID line	9	33	30
Montpelier Creek	1	0	0
Mink Creek	1	0	0
Cub River	1	0	0
Bear River ab ID-UT line	15	23	22
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 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 volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. **(Revised Dec. 2005)**

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

Interpreting Water Supply Forecasts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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