United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report
June 1, 2010

Earning late season turns at Bogus Basin on May 23, 2010

May began where April left off with more above average precipitation. Statewide amounts ranged from 115-150% of average for the month. Many SNOTEL sites saw additional late season accumulation, but Bogus Basin SNOTEL recorded the single largest one day storm with 16 inches on May 22nd. That amount ties the resort's one day snowfall record since the SNOTEL site started keeping track of daily data in 2000. The two prior 16 inch storms occurred on November 9, 2002 and December 8, 2004. The May 22nd storm hung over the Treasure Valley. The Boise airport received 1.41 inches of rain (3rd greatest calendar day amount ever measured in May) and South Mountain SNOTEL in the Owyhee's picked up 14 inches of snow, marking the storm's southern perimeter. SNOTEL sites slightly further afield from the Treasure Valley, including Mores Creek Summit and Trinity Mountain, only saw a couple inches of snow which emphasizes the storm's localized nature.

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

For more water supply and resource management information contact:

Your local Natural Resources Conservation Service Office
or
Natural Resources Conservation Service
Snow Surveys
9173 West Barnes Drive, Suite C
Boise, Idaho 83709-1574

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

Phone: (208) 378-5740

To join a free email subscription list contact us by email at: IDBOISE-NRCS-SNOW@one.usda.gov

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. 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, 2010

SUMMARY

Mother Nature delivered the cool and wet spring that was needed to overcome the deficits caused by the lack of snowfall this winter. The El Nino weather pattern snapped the last week of March and since then storms have brought average or better precipitation for two months. May precipitation ranged from 115-155% of average across the state and allowed a few higher elevation sites to continue accumulating snow. Snowpacks vary across the state. Lower elevation basins are nearly melted out while the snowpacks are near 95% of the June 1 average in the higher elevations of the Salmon, Upper Snake and Bear River basins. Melting of this year's mountain snowpack has started and stopped several times as several major cold fronts pushed across the state. This is the third consecutive spring when cooler than normal temperatures have reduced irrigation demand. Summertime stream baseflows will likely be improved by the lingering snowpack. These changes to the weather have resulted in an incredible turn-around; we now expect adequate water supplies for most of Idaho's numerous users.

This month, the streamflow forecasts period shifts from the May-June to the June-July period. A result of the period shift and the cool, wet weather, forecasts have increased 5 to 40 percentage points from last month. June-July forecasts range from 45% of average for the Little Wood River to near average for Salmon Falls Creek and Oakley Reservoir inflow. The wet spring reduced irrigation demand, allowing more water to go into reservoir storage, which will stretch the limited runoff. Many reservoirs remain near full. Water managers are observing the weather and irrigation demand to help guide their decisions related to performing final fill of reservoirs. The amount of carryover storage for next year depends on when drafting of the reservoirs starts; this will be determined by how the remaining snow melts, by how much more rain falls, and by how hot summer months are.

SNOWPACK

Current snow water content levels vary across the state and depend largely on the amount of high elevation area in the basin. Idaho's major basins range from 55-95% of average listed here in ascending order: the Spokane, Clearwater, Henrys Fork, Payette, Panhandle, Boise, Big Wood, Upper Snake, Bear and Salmon basins. Other basins such as Weiser, Little Lost, Owyhee, Bruneau, Salmon Falls and Oakley are reporting average or greater snow because a few sites still have snow water and the June 1 averages are small amounts. Higher elevation areas in central Idaho and the Upper Snake still have key snowpacks that will provide additional late season melt. For example Smiley Mountain, Meadow Lake and Grand Targhee SNOTEL sites (all above 9,000 feet) just reached their peak snow water content during the last few days of May.

PRECIPITATION

As mentioned in last month's Idaho Water Supply Report "Additional precipitation and cool temperatures this spring will help stretch the limited water supplies even though it may make working the fields difficult." This is exactly what happened. May precipitation was average or better across the whole state for the second month in a row. The highest amounts were 140-170% of average in the Salmon, Little Lost, Bear, Oakley, Salmon Falls, Bruneau and Owyhee basins. Pockets of near average amounts fell in the Teton, Mud Lake, and Camas basins. Water year-to-date precipitation ranges from 75% of average in Clearwater and Upper Snake basin to 96% in the Southside Snake River basins. The National Weather Service forecast calls for the first week in June to continue the trends of below normal temperatures and above normal precipitation. The long range forecast for the second week in June suggests the weather may start drying out, but there is a considerable amount of uncertainty in weather forecasts beyond 5 days. The questions that everyone is asking are: "How long will the cool, wet weather continue?" And, "when will those hot summer days arrive?" The cool temperatures

experienced so far this spring are more similar to the past two years, rather than those hot temperatures experienced in the first half of this decade. Some climatologists say that the cool spring may be partially explained by a shift in the Pacific Decadal Oscillation (PDO) to a cool and wet phase after the 2007 water year. It may take several years to verify that it actually did switch from the warm/dry cycle to a cool/wet cycle; this cycle generally switches every 20-30 years. Climatologists continue to learn more about the PDO cycle, as well as, El Nino and La Nina, and other interactions between the ocean and the atmosphere. Events such as the strong El Nino in 1984, when Southern Idaho saw record high snow levels and a late May snowmelt, serve to increase interest and the resources devoted to study these ocean-atmosphere interactions.

RESERVOIRS

For much of the season, reservoir storage was the bright spot in this year's water supply outlook. With low snowpacks, Idaho's water managers were storing as much water as possible and preparing for shortages this irrigation season. Now, thanks to a wet April and May, these shortages have been all but erased in most basins. The lowest reservoir storage is in Bear Lake and Owyhee Reservoir at 59% of average, next is Oakley and Salmon Falls reservoirs at about 72% of average, followed by Blackfoot and Magic Reservoirs at 85% of average. The rest of the lakes and reservoirs are near average or better. The added spring moisture will benefit the numerous users of these multi-purpose reservoirs including irrigators, boaters, river runners, hydro-power generators, as well as, fish and wildlife.

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

Despite a wet month, streamflows in May were below average for the month. Highest monthly percentages were about 75% of average in Salmon Falls Creek, Bruneau, Weiser and the NF Coeur d'Alene rivers; the lowest was 10% for Bear River below Stewart Dam. Several streams were in the 25-40% of average streamflow range including Big Lost, Big Wood, Camas, Little Wood, Portneuf, Willow, Smiths Fork and Snake River above Palisades Reservoir. The Snake River near Flagg Ranch in Yellowstone NP was only 43% of average and at times was near record low and often below the 10th percentile. Normally, streams peak from mid-May to early June, so the monthly average amounts are high in these months. The cool weather is limiting snowmelt so the melt water is not there to feed the streams this year, yet. May precipitation continued falling in the form of snow in the higher elevations. This all means there is more streamflow to come when the warm weather returns. Streamflow forecasts increased for the second consecutive month. However, the forecast periods also switched from the May-July to June-July periods. The increase in percentage points means that there is a larger volume of water to come in a shorter time period. Current streamflow forecasts for the June-July period ranges from a low of 30-45% for Camas Creek, Bear River below Stewart Dam and Little Wood River to near average for Salmon Falls Creek and Oakley Reservoir inflow. The Snake River near Heise is forecast at 61% of average, while the Boise and Salmon rivers are forecast at about 75% of average.

RECREATION

Ideally, the April and May precipitation would have been better if it fell during the winter for all to enjoy and plan accordingly, but we'll take what we can get. Snow in May extended the ski season for those that don't mind the uphill hike as observed in this month's cover photo. April and May rains are providing a tremendous boost to the Idaho's rangelands which are green and filled with blooms; last year's June precipitation fell a little too late to provide as much benefit as it could have. Above average snowpacks now exist in the higher elevations above 8,000 feet in various regions of the state, so check those local SNOTEL sites before you head to the high country or you may find yourself post-holing in areas that are typically snow free.

We're reprinting the next paragraph from our May 1 report since the same conditions exist and since many SNOTEL sites received 1 to 3.5 inches of rain on June 2nd causing a fast rise in the Boise, Big Wood, Big Lost, MF Salmon, Lochsa and Selway rivers. Such rain driven conditions can take river runners beyond their comfort zone in a hurry. Snowmelt dominated peaks are much easier to predict. Enjoy the whitewater, but play it safe until you (and us) are sure the streams are in recession.

"When the soil is primed from mid April to mid June, spring rainfall can significantly change or influence peak flows. Heavy rains changed the peak flows in May 2005 during the snowmelt period and in June 2009 at the tail end of the snowmelt season. Intensity of rain and consecutive days with rain can also influence peaks. In a year with low snowpacks, rain generated peaks may sometimes be higher than the snowmelt dominated streamflow peaks. Keep your eye on the sky, whether you're a river runner or water manager. For the most current information see the NRCS's Peak Streamflow Resources page: http://www.id.nrcs.usda.gov/snow/watersupply/peakflow.html
These snowmelt–streamflow relationship graphs are updated several times a week during the snowmelt-runoff season."

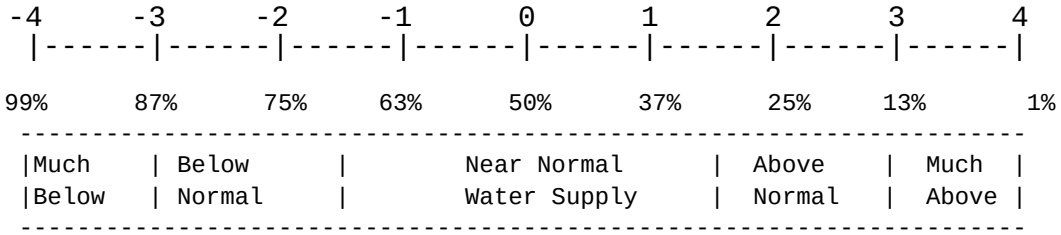
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) JUNE 1, 2010

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	-2.2	2005	NA
SALMON	-0.6	2006	NA
WEISER	-1.1	2009	NA
PAYETTE	-1.1	2000	NA
BOISE	-1.0	2008	-2.4
BIG WOOD	-0.3	2005	-0.7
LITTLE WOOD	-1.4	2008	-2.1
BIG LOST	-1.1	2008	-0.1
LITTLE LOST	-1.6	2006	0.6
TETON	-2.0	2002	NA
HENRYS FORK	-2.1	2004	-3.4
SNAKE (HEISE)	-1.6	2005	-1.6
OAKLEY	-1.1	2009	-1.1
SALMON FALLS	-0.5	2005	-1.5
BRUNEAU	2.0	2005	NA
OWYHEE	-3.0	2002	-3.0
BEAR RIVER	-1.8	2007	-3.1

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

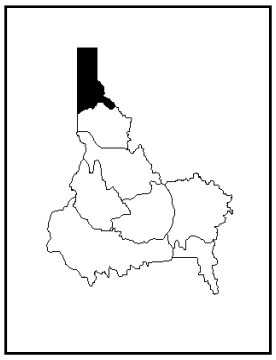


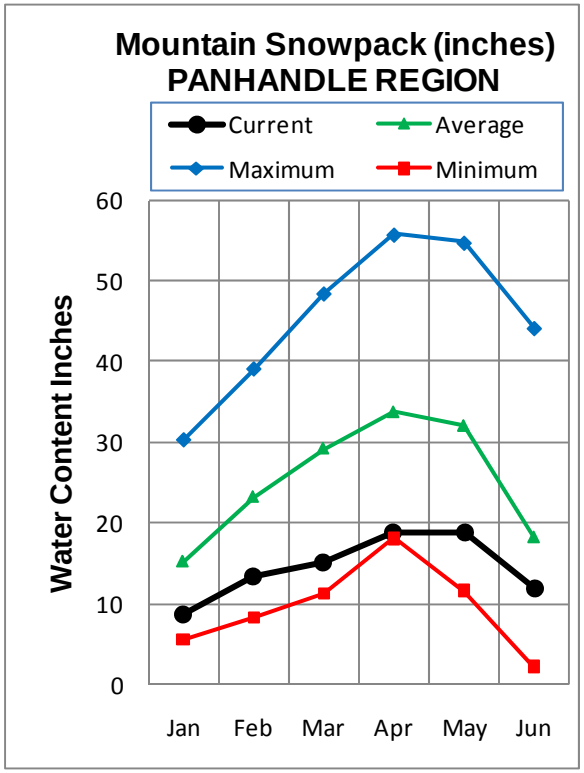
NA = Not Applicable

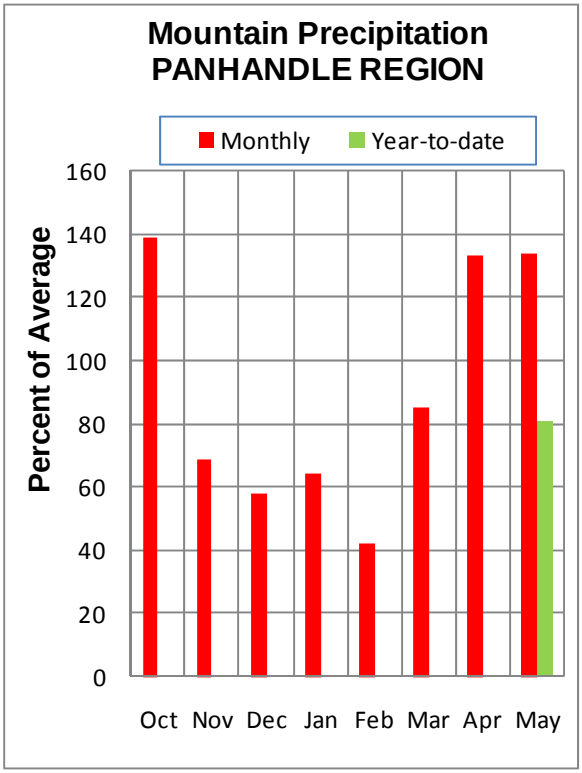
Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and 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, 2010







WATER SUPPLY OUTLOOK

The month of May continued the trend that April started and brought 134% of average precipitation to the northern part of the state. Temperatures remained cool and the skies delivered lots of moisture. This weather prevented the north facing slopes from losing much snow and delayed the streamflow peaks. Currently, the snowpack is about 77% of average in the Panhandle basins and down to 56% of average further south in the Spokane drainage's high country. The extended rainy season helped top off Lake Coeur d'Alene and Priest lakes, which are near full. Generally speaking, the summer streamflow forecasts have improved about 10 percentage points from last month owing to the above average spring precipitation. The lowest forecasts call for 55-65% of average for the Moyie, Smith Creek, Boundary Creek, NF Coeur d'Alene, St. Joe and the Spokane through September. The best forecasts are from 75-85% of average for the Kootenai, Clark Fork, Pend Oreille and Priest rivers for the rest of the summer.

PANHANDLE REGION
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	JUN-JUL	2100	2690	2960	76	3230	3820	3920
	JUN-SEP	2750	3470	3800	76	4130	4850	5000
MOYIE RIVER at Eastport	JUN-JUL	49	75	93	64	111	137	145
	JUN-SEP	54	83	102	64	121	150	160
SMITH CREEK	JUN-JUL	8.4	20	28	56	36	48	50
	JUN-SEP	7.1	22	32	57	42	57	56
BOUNDARY CREEK	JUN-JUL	10.8	19.9	26	57	32	41	46
	JUN-SEP	12.4	22	29	56	36	46	52
CLARK FK at Whitehorse Rpds (1,2)	JUN-JUL	3350	4170	4550	81	4930	5750	5620
	JUN-SEP	3950	4990	5460	81	5930	6970	6750
PEND OREILLE Lake Inflow (2)	JUN-JUL	3830	4460	4890	80	5320	5950	6120
	JUN-SEP	4490	5280	5820	80	6360	7150	7280
PRIEST near Priest River (1,2)	JUN-JUL	182	230	250	86	270	320	290
	JUN-SEP	210	270	295	86	320	380	345
NF COEUR D'ALENE RIVER at Enaville	JUN-JUL	61	86	104	65	122	147	159
	JUN-SEP	78	109	129	65	149	180	198
ST. JOE at Calder	JUN-JUL	103	167	210	55	255	315	380
	JUN-SEP	138	205	250	56	295	360	450
SPOKANE near Post Falls (2)	JUN-JUL	235	320	380	56	440	525	675
	JUN-SEP	230	345	425	55	505	620	775
SPOKANE at Long Lake (2)	JUN-JUL	365	460	525	63	590	685	840
	JUN-SEP	447	580	670	63	760	893	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	1243.9	1356.9	1333.1
COEUR D'ALENE	238.5	229.0	262.7	270.4
PRIEST LAKE	119.3	126.4	129.2	138.5

PANHANDLE REGION
Watershed Snowpack Analysis - June 1, 2010

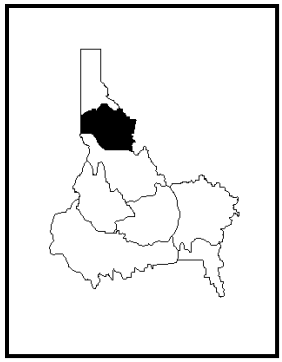
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	8	103	90
Moyie River	1	113	78
Priest River	2	88	91
Pend Oreille River	44	104	101
Rathdrum Creek	1	0	0
Hayden Lake	0	0	0
Coeur d'Alene River	4	101	44
St. Joe River	4	64	61
Spokane River	9	71	56
Palouse River	1	0	0

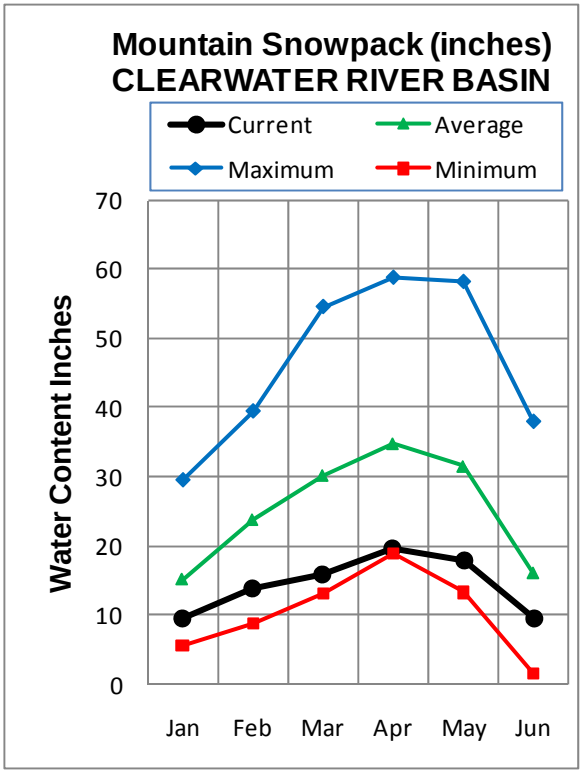
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

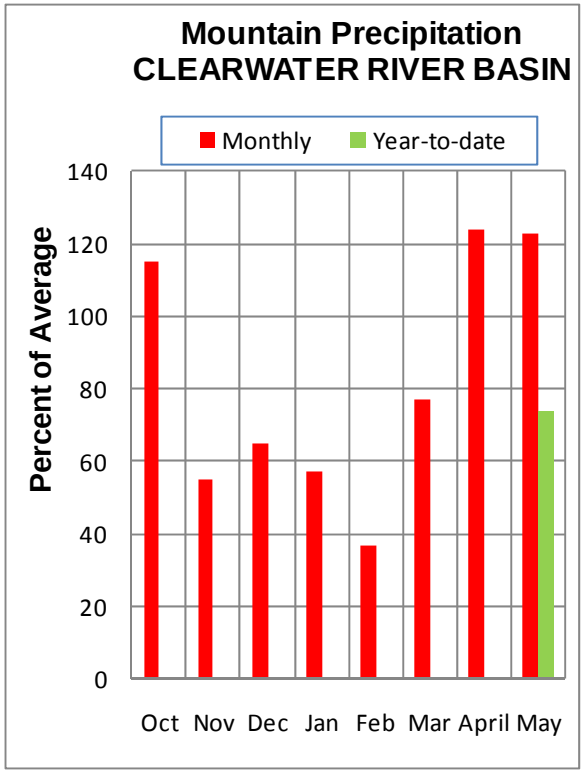
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

CLEARWATER RIVER BASIN

JUNE 1, 2010







WATER SUPPLY OUTLOOK

The snowpack remained much below average all winter, but 123% of average precipitation that fell in both April and May, helped continue to build the snowpack in the higher elevations and otherwise delay the snowmelt. While these two consecutive months delivered above average precipitation, the water year-to-date precipitation is only 74% of average and illustrates just how dry this winter was. As of June 1, the overall snowpack in the mountains of the Clearwater basin is 62% of average. Peak streamflows would have occurred much sooner if the weather had not turned cool as it did. Streamflows are on the rise in early June from heavy rains on June 2 and have exceeded previous peaks. The Lochsa River monthly streamflow for April through May was only 63% of normal and is a result of both lack of a good snowpack and cool weather slowly melting the snow. The snowpack at Lolo Pass and the Lochsa's streamflow hydrograph have tracked similar to 2001 up to now. The early June rain is adding a large increase in flows and will extend the floating season, which would have been shorter because of the lack of snow in the high country. If reservoir recreation floats your boat, then the good news is that Dworshak Reservoir is 90% full, similar to last year's volume. The overall water supply outlook has not changed much; but early June rains added a much needed boost to the outlook. The streamflow volumes for the Selway, Lochsa, Clearwater and Dworshak Reservoir inflow are all forecast at about 60% of normal through the rest of the summer.

CLEARWATER RIVER BASIN
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Selway R nr Lowell	JUN-JUL	330	450	535	57	620	740	945
	JUN-SEP	395	530	620	59	710	845	1050
Lochsa R nr Lowell	JUN-JUL	225	310	370	57	430	515	655
	JUN-SEP	275	370	435	59	500	595	735
DWORSHAK Resv. Inflow (1,2)	JUN-JUL	230	415	500	52	585	770	960
	JUN-SEP	290	505	600	54	695	910	1120
CLEARWATER R at Orofino (1)	JUN-JUL	505	950	1150	58	1350	1790	1970
	JUN-SEP	635	1130	1360	61	1590	2090	2220
CLEARWATER R at Spalding (1,2)	JUN-JUL	680	1350	1650	56	1950	2620	2960
	JUN-SEP	845	1610	1950	58	2290	3050	3370

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	3115.1	3113.9	3085.8

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - June 1, 2010

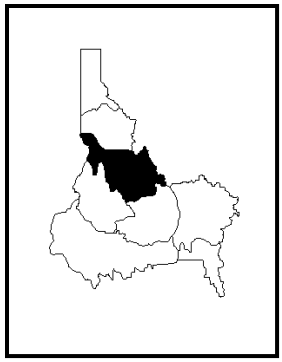
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
North Fork Clearwater	8	70	62
Lochsa River	2	39	28
Selway River	4	65	68
Clearwater Basin Total	14	67	62

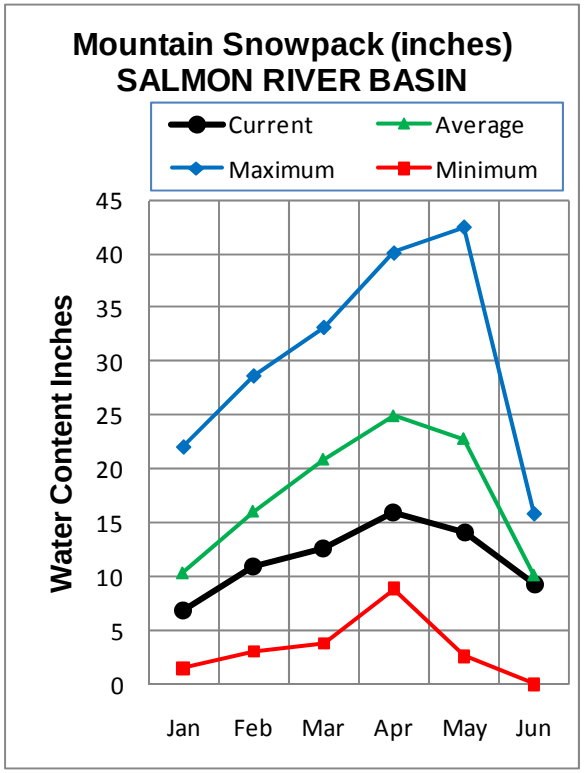
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

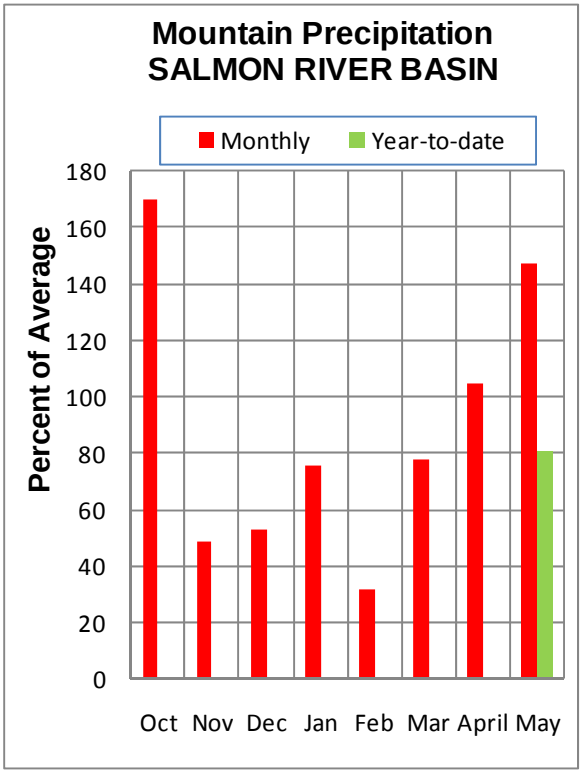
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SALMON RIVER BASIN

JUNE 1, 2010







WATER SUPPLY OUTLOOK

The SNOTEL sites in the Salmon basin received almost one and a half times the average amount of precipitation for the month of May. Even though April was also above average, the water year-to-date precipitation is 81% of average on June 1. The best precipitation months are usually November through February, making it almost impossible to catch up in the springtime when average amounts are less. The cool and wet spring allowed the snow to reside in the hills longer and some sites above 8,000 feet actually have above average snow water content on June 1. This is the first month all season with above average amounts. Abundant rains on June 2 produced a fast rise in streamflow; current peaks have exceeded the previous peaks. River runners should watch the weather closely as streams are changing quickly with the saturated soils, remaining snow and high intensity 24 hour rainfall. The early June peaks will help extend the floating season later into the summer months. Streamflow volumes in the Salmon basin call for about 75% of average amounts, but could be more with the recent June rains.

SALMON RIVER BASIN
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	JUN-JUL	280	350	380	72	410	480	530
	JUN-SEP	360	450	490	73	530	620	670
Lemhi R nr Lemhi	JUN-JUL	28	33	37	71	41	47	52
	JUN-SEP	40	47	52	73	58	66	71
MF Salmon at MF Lodge	JUN-JUL	220	280	320	72	360	420	445
	JUN-SEP	265	340	390	74	440	515	530
Salmon at White Bird (1)	JUN-JUL	1630	2190	2450	76	2710	3270	3220
	JUN-SEP	2030	2700	3000	78	3300	3970	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, 2010

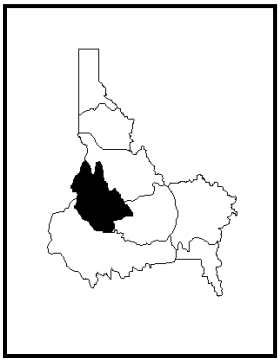
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	7	152	102
Lemhi River	6	188	170
Middle Fork Salmon River	3	109	70
South Fork Salmon River	3	154	66
Little Salmon River	4	0	108
Salmon Basin Total	23	147	99

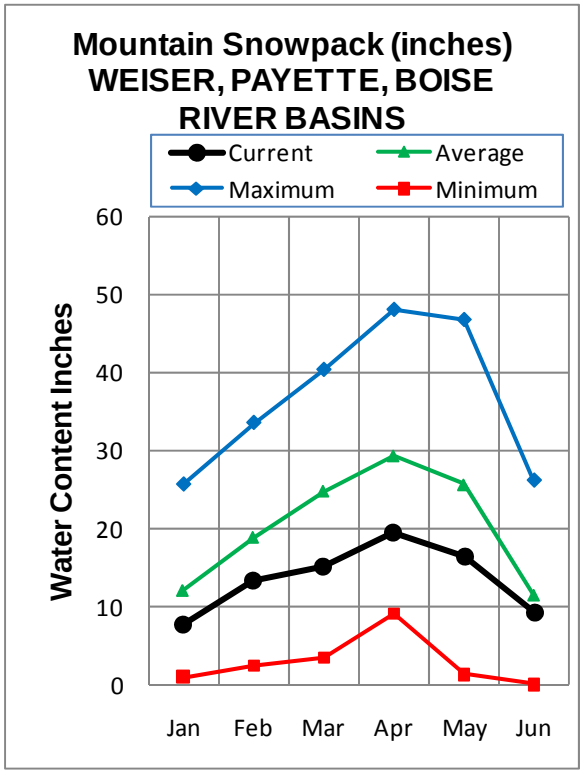
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

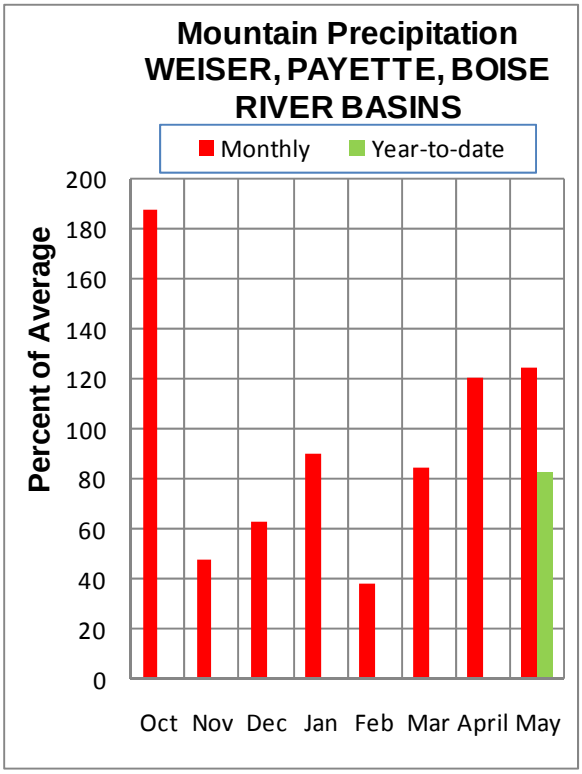
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS

JUNE 1, 2010







WATER SUPPLY OUTLOOK

Excellent spring precipitation has combined with below average temperatures to help stretch summer water supplies in west central Idaho. The Boise and Weiser basins both saw over 120% of average monthly precipitation in May, while Payette had slightly more with 130%. SNOTEL sites across the region saw significant snowfall amounts, but the 16 inches at Bogus Basin on May 22nd was the most. As of June 1 nearly all the snow is gone at measuring sites in the Weiser basin, while sites in the Payette and Boise basins are 75% and 88% of average for the date. This amount is 150% of last year despite peak snowpack numbers in April being less than last year. Streams have seen two moderate peaks this spring and another one is likely once warm weather returns to melt off the remaining snow. Most reservoirs in the Payette and Boise systems continue to store average or better amounts. 1988 continues to be a good comparison year. Peak snow amounts were similar and the timing and magnitude of peak streamflows have also been similar. The biggest difference is that this season's snowmelt is occurring more slowly than 1988, so expect the possibility of higher recession flows once the final snowmelt peak has occurred. Payette reservoirs are expected to fill by mid-June. Salmon augmentation flows from the Payette reservoirs will begin in mid-June. With the additional June 2 rain events, the Boise reservoir system will probably fill now even though about 40,000 acre-ft of flow augmentation water was released from the system in May. It is likely that most or all of the reservoir storage accounts will fill however. Normal summertime flows are expected below Lucky Peak through August, unless the system fills and flood control releases are required. Overall, the cool, wet weather has turned around the water supply picture and reservoir storage and streamflow is now expected to meet demands on the Boise system even if the summer turns hot and dry.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Weiser R nr Weiser (1)	JUN-JUL	41	66	80	73	95	133	110
	JUN-SEP	58	85	100	72	116	154	139
SF Payette R at Lowman	JUN-JUL	138	154	166	68	178	196	245
	JUN-SEP	181	200	215	72	230	250	300
Deadwood Resv Inflow (1,2)	JUN-JUL	36	46	50	76	54	64	66
	JUN-SEP	41	53	58	78	63	75	74
Lake Fork Payette R nr McCall	JUN-JUL	18.8	23	26	58	29	34	45
	JUN-SEP	20	25	28	58	31	37	48
NF Payette R at Cascade (1,2)	JUN-JUL	64	108	128	60	148	192	215
	JUN-SEP	67	114	135	57	156	205	235
NF Payette R nr Banks (2)	JUN-JUL	59	116	155	59	194	250	265
	JUN-SEP	63	124	165	57	205	265	290
Payette R nr Horseshoe Bend (1,2)	JUN-JUL	285	415	470	66	525	655	710
	JUN-SEP	380	510	570	69	630	760	830
Boise R nr Twin Springs (1)	JUN-JUL	180	215	230	82	245	280	280
	JUN-SEP	220	260	280	84	300	340	335
SF BOISE at Anderson Ranch Dam (1,2)	JUN-JUL	112	145	160	71	175	210	225
	JUN-SEP	129	167	185	71	205	240	260
MORES CK nr Arrowrock Dam	JUN-JUL	13.6	18.4	22	69	26	32	32
	JUN-SEP	16.4	22	26	70	31	38	37
Boise R nr Boise (1,2)	JUN-JUL	335	405	435	77	465	535	565
	JUN-SEP	415	495	530	78	565	645	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	11.0	10.6	10.5
CASCADE	693.2	635.2	660.5	588.6
DEADWOOD	161.9	135.0	149.8	139.0
ANDERSON RANCH	450.2	400.7	436.5	388.7
ARROWROCK	272.2	150.3	247.0	191.9
LUCKY PEAK	293.2	284.8	288.9	242.3
LAKE LOWELL (DEER FLAT)	165.2	150.2	133.8	133.5

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - June 1, 2010

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	0	0
Weiser River	3	0	1160
North Fork Payette	6	229	61
South Fork Payette	4	118	77
Payette Basin Total	11	166	75
Middle & North Fork Boise	5	163	78
South Fork Boise River	6	146	84
Mores Creek	2	0	103
Boise Basin Total	10	167	88
Canyon Creek	1	0	0

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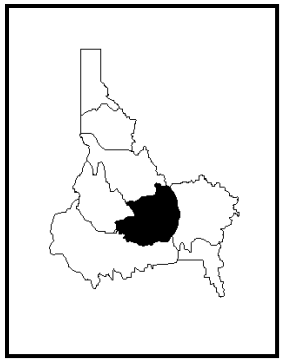
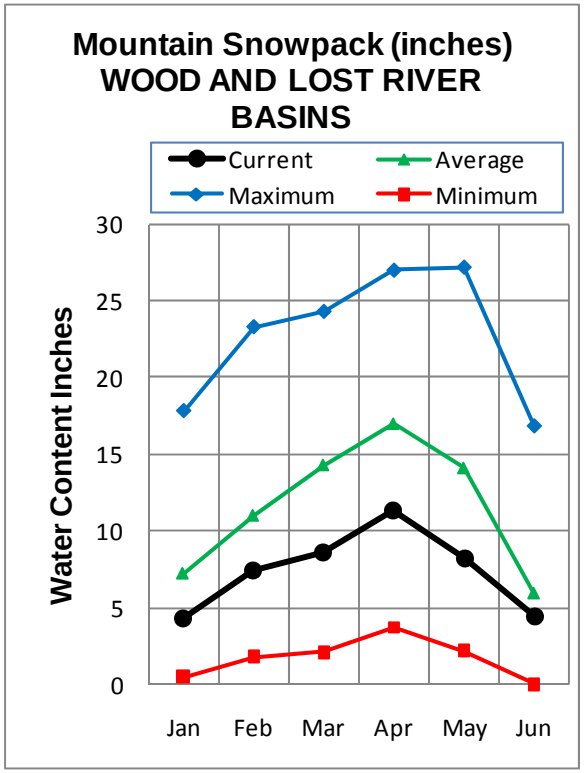
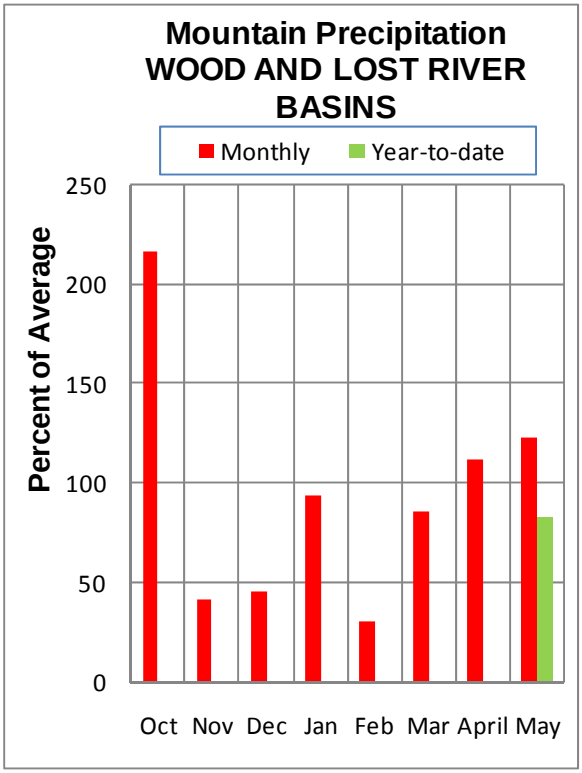
WOOD and LOST RIVER BASINS

JUNE 1, 2010







WATER SUPPLY OUTLOOK

A cool, wet May has improved the water supply outlook enough to make a difference; particularly in the Big Wood basin. May precipitation was above average across the board with 112-119% falling in the Little Wood, Big Lost and Big Wood basins, and up to 156% in the Little Lost. Water year-to-date precipitation since October for the region is now 83% of average. Streamflow in May has been up and down with the weather and another peak is still to come for the Big Wood and Little Wood rivers. There will be another peak to come in the Big and Little Lost rivers driven by snowmelt above 9,000 feet where the June 1 snowpacks are 130-150% of average at Galena Summit, Meadow Lake, and Smiley Mountain SNOTEL sites. In fact, Meadow Lake and Smiley Mountain SNOTEL are currently at their peak snow water amounts for the season. There is a greater spread in forecast percentages for the June-July period than was observed last month. The best forecast is 79% of average for the Big Wood River at Hailey, next is the Little Lost River at 66%, followed by the Big Lost River at Howell Ranch at 55% and the Little Wood River near Carey at 48% of average. Camas Creek's snowpack is all gone and its June-July forecast is for 30% of average. Reservoir releases have outpaced inflows this month and Magic is 68% of capacity, while Little Wood and Mackay are storing 95% of capacity. With more snow still to melt, reservoir drafting will be moderated by inflows until later in June. The Surface Water Supply Index, which combines reservoir storage with streamflow forecasts, is now predicting adequate supplies for the Big Wood basin thanks to the cool, wet weather. The Little Wood basin will also have enough water, but the precipitation the past two months has not been enough to meet the needs in the Big Lost and Little Lost basins where supplies may be tight.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Big Wood R At Hailey (1)	JUN-JUL	68	100	114	79	128	160	144
	JUN-SEP	85	123	140	79	157	195	177
Big Wood R ab Magic Reservoir	JUN-JUL	41	59	72	71	85	103	102
	JUN-SEP	50	71	85	73	99	120	116
Camas Ck nr Blaine	JUN-JUL	1.0	2.6	4.0	30	5.8	8.9	13.2
	JUN-SEP	1.3	3.0	4.5	32	6.4	9.7	14.0
BIG WOOD below Magic Dam (2)	JUN-JUL	37	60	75	66	90	113	114
	JUN-SEP	51	74	90	69	106	129	130
LITTLE WOOD R abv High Five Ck	JUN-JUL	8.6	12.2	15.0	46	18.1	23	33
	JUN-SEP	10.3	14.6	18.0	46	22	28	39
LITTLE WOOD near Carey (2)	JUN-JUL	3.7	10.7	15.5	48	20	27	32
	JUN-SEP	5.4	13.2	18.5	47	24	32	39
BIG LOST at Howell Ranch	JUN-JUL	41	54	63	55	73	89	114
	JUN-SEP	51	66	78	56	91	111	139
BIG LOST blw Mackay Resv	JUN-JUL	30	41	48	50	55	66	96
	JUN-SEP	46	60	70	55	80	94	127
Little Lost R nr Howe	JUN-JUL	8.4	10.5	12.0	66	13.6	16.2	18.1
	JUN-SEP	12.3	15.2	17.4	67	19.7	23	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	130.9	108.5	154.1
LITTLE WOOD	30.0	27.3	29.8	27.4
MACKAY	44.4	43.3	38.1	34.9

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - June 1, 2010

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	7	209	83
Camas Creek	2	0	0
Big Wood Basin Total	9	209	83
Fish Creek	0	0	0
Little Wood River	4	0	28
Big Lost River	4	0	0
Little Lost River	3	235	110
Birch-Medicine Lodge Cree	2	342	192
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.

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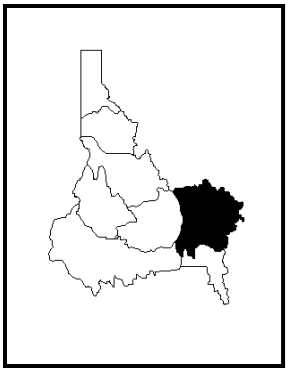
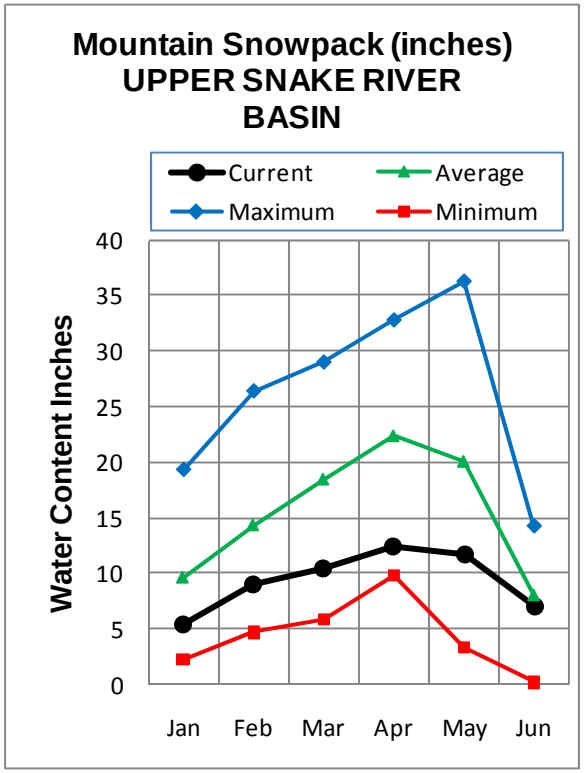
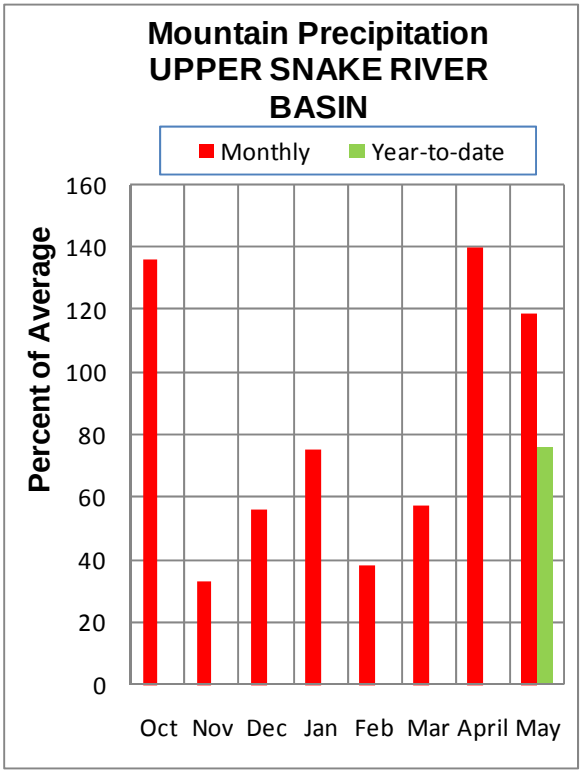
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER SNAKE BASIN

JUNE 1, 2010







WATER SUPPLY OUTLOOK

May's above average precipitation and cool temperatures slowed snowmelt and added snow at higher elevation sites. Overall, May precipitation was 119% of average, down from April's 140% of average amount. Snow has accumulated throughout the month at Grand Targhee SNOTEL, except for a brief period of melt in mid-May. Cool temperatures are holding snow in the mountains and the June 1 snowpack is 90% of average; in 2001 when peak snow water amounts were the same as this year, no snow was left by June 1. With the exception of two peaks, streamflow was below the 10th percentile for most of May at the Snake River at Flagg Ranch gage due to the lack of snowmelt, but expect this and other streams to rise once temperatures warm up. The delayed snowmelt has really helped water supplies. The reservoir system is still 85% of capacity, 106% of average. The Surface Water Supply Index, which combines reservoir storage with the June-September streamflow forecast for the Snake River near Heise, is predicting marginally adequate irrigation supplies for the remainder of the season. This is a dramatic turn-around since April 1 when we were reporting that the snowpack at Lewis Lake SNOTEL was the 4th lowest amount since 1919. Streamflow forecasts for the May-July period range from 50-70% of average for most streams in the basin. The exceptions are: American Falls Inflow forecast at 35% of average and the Salt River forecast at 86%.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK nr Ashton (2)	JUN-JUL	127	149	165	67	182	210	245
	JUN-SEP	265	300	325	74	350	390	440
HENRYS FORK near Rexburg (2)	JUN-JUL	430	490	535	65	580	640	830
	JUN-SEP	730	815	870	68	925	1010	1280
Falls R nr Ashton (2)	JUN-JUL	86	108	125	63	143	171	199
	JUN-SEP	131	159	180	67	200	235	270
Teton R nr Driggs	JUN-JUL	48	58	65	60	73	85	108
	JUN-SEP	71	85	95	62	106	123	153
Teton R nr St. Anthony	JUN-JUL	114	135	150	63	166	191	240
	JUN-SEP	165	191	210	66	230	260	320
Snake R at Flagg Ranch	JUN-JUL	121	153	175	61	197	230	285
	JUN-SEP	123	160	185	55	210	245	335
Snake R nr Moran	JUN-JUL	220	265	300	61	335	405	490
	JUN-SEP	275	335	375	65	415	505	580
Pacific Ck at Moran	JUN-JUL	18.0	37	50	50	63	82	100
	JUN-SEP	21	40	54	51	68	87	106
Buffalo Fork ab Lava nr Moran, WY	JUN-JUL	111	137	155	69	173	199	225
	JUN-SEP	132	164	185	69	205	240	268
Gros Ventre R at Kelly, WY	JUN-JUL	23	57	80	67	103	137	119
	JUN-JUL	23	57	80	67	103	137	119
SNAKE abv Resv nr Alpine (1,2)	JUN-JUL	590	710	790	54	870	1050	1470
	JUN-SEP	755	915	1020	55	1130	1360	1840
Greys R nr Alpine	JUN-JUL	127	141	150	80	159	173	188
	JUN-SEP	167	187	200	82	215	235	245
Salt R nr Etna	JUN-JUL	93	127	150	93	173	205	162
	JUN-SEP	144	189	220	92	250	295	240
SNAKE nr Irwin (1,2)	JUN-JUL	790	1060	1180	61	1300	1570	1950
	JUN-SEP	1120	1420	1560	62	1700	2000	2500
SNAKE near Heise (2)	JUN-JUL	925	1120	1250	61	1380	1570	2050
	JUN-SEP	1290	1520	1670	63	1820	2050	2650
WILLOW CREEK nr Ririe (2)	JUN-JUL	3.1	7.8	11.0	55	14.2	18.9	20
Portneuf R at Topaz	JUN-JUL	16.6	19.7	22	60	24	28	37
	JUN-SEP	26	31	34	62	37	43	55
Snake River at Neeley (1,2)	JUN-JUL	165	425	580	35	760	1250	1660
	JUN-SEP	235	530	705	34	905	1430	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	89.4	89.9	89.2
ISLAND PARK	135.2	134.2	125.7	132.8
GRASSY LAKE	15.2	15.3	15.2	14.4
JACKSON LAKE	847.0	741.1	742.1	572.6
PALISADES	1400.0	1137.9	944.8	1033.6
RIRIE	80.5	69.1	80.2	70.3
BLACKFOOT	348.7	248.7	174.2	287.8
AMERICAN FALLS	1672.6	1447.5	1616.0	1476.1

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - June 1, 2010

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	5	140	73
Teton River	2	96	66
Henrys Fork above Rexburg	7	131	72
Snake above Jackson Lake	5	110	81
Pacific Creek	2	77	98
Gros Ventre River	2	119	88
Hoback River	5	95	67
Greys River	4	148	116
Salt River	3	254	126
Snake above Palisades	17	124	90
Willow Creek	2	0	0
Blackfoot River	2	0	0
Portneuf River	3	0	36
Snake abv American Falls	27	121	87

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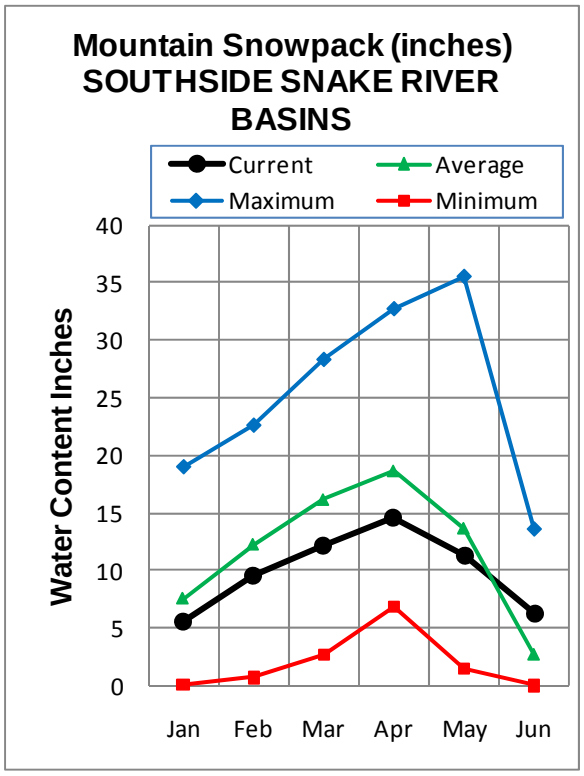
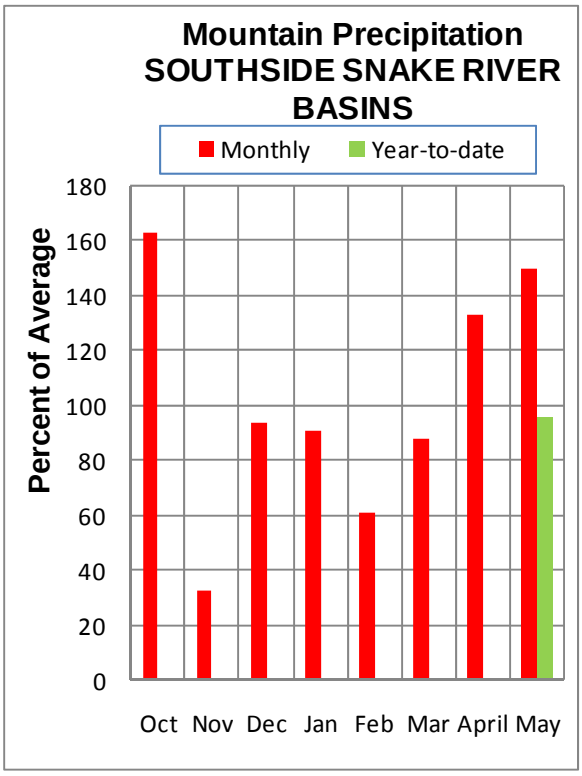
SOUTHSIDE SNAKE RIVER BASINS

JUNE 1, 2010





WATER SUPPLY OUTLOOK

Irrigation shortages in the Southside basins are not likely thanks to May precipitation of 145-155% of average and continued cool temperatures for the month. Most snow measuring sites in these basins have melted out. The sites at or above 8,000 feet, which include Howell Canyon, Bear Creek and Pole Creek SNOTEL sites, are measuring 13-16 inches of snow water; about 2 to 3 times their average June 1 amounts. The high elevation snow will not be enough to cause higher streamflow peaks than have already occurred but it should help keep recession flows up in the Oakley, Bruneau and Salmon Falls basins. It's hard to believe based on the gloom and doom forecasted earlier this year, but the June-July streamflow period is forecast slightly above average for Oakley Reservoir inflow, Salmon Falls Creek and the Bruneau River. Oakley and Salmon Falls reservoirs are storing about 40% of capacity, which is about 75% of average. Owyhee Reservoir is 50% full, 58% of average. Combining current reservoir storage with the 50% chance of exceedance streamflow forecast indicates that all basins should have adequate supplies to make it through the rest of the irrigation season.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Oakley Reservoir Inflow	JUN-JUL	5.1	7.1	8.6	105	10.3	13.1	8.2
	JUN-SEP	7.7	10.1	12.0	106	14.0	17.3	11.3
OAKLEY RESV STORAGE	JUNE	35	38	40	100	42	45	40
Salmon Falls Ck nr San Jacinto	JUN-JUL	16.9	22	25	104	29	35	24
	JUN-SEP	20	25	29	104	33	39	28
SALMON FALLS RESV STORAGE	JUNE	81	89	94	99	99	107	95
	JULY	56	64	70	99	76	84	71
Bruneau R nr Hot Springs	JUN-JUL	66	80	90	110	101	117	82
	JUN-SEP	74	89	100	109	112	130	92
Owyhee R nr Gold Creek (2)	JUN-JUL	0.1	0.7	1.4	92	3.0	4.4	1.5
	JUN-SEP	0.0	0.1	0.3	96	0.5	0.9	0.3
Owyhee R nr Rome	JUN-JUL	29	42	53	75	65	84	71
	JUN-SEP	42	58	70	77	83	105	91
Owyhee R blw Owyhee Dam (2)	JUN-JUL	-31.0	22	59	72	96	149	82
	JUN-SEP	-27.0	38	83	74	128	193	112
Reynolds Ck at Tollgate	JUN-JUL	0.7	1.1	1.5	80	1.9	2.6	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	31.9	32.1	45.0
SALMON FALLS	182.6	75.6	72.6	101.2
WILDHORSE RESERVOIR	71.5	48.1	45.7	58.4
OWYHEE	715.0	355.2	394.2	614.6
BROWNLEE	1420.0	1367.8	1391.2	1263.0

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - June 1, 2010

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	0	403
Goose-Trapper Creeks	3	0	403
Salmon Falls Creek	5	0	190
Bruneau River	5	0	189
Reynolds Creek	0	0	0
Owyhee Basin Total	7	0	114

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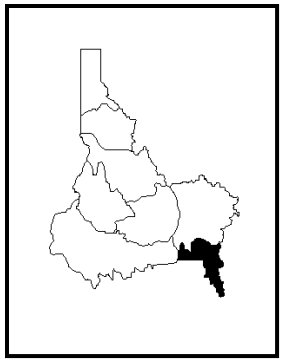
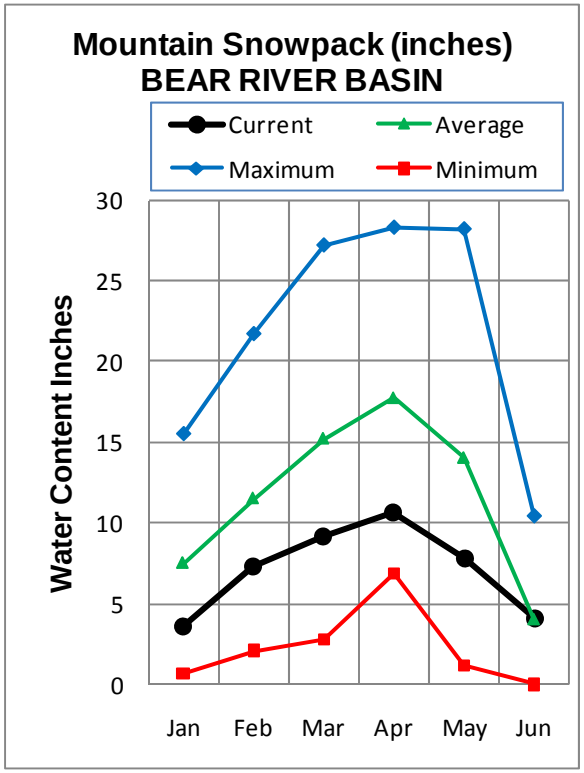
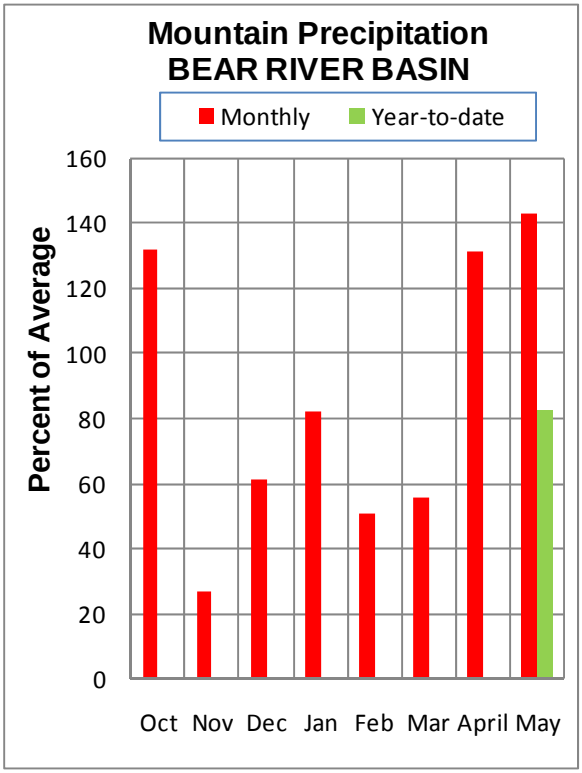
BEAR RIVER BASIN

JUNE 1, 2010







WATER SUPPLY OUTLOOK

Mountain precipitation was 143% of average during the month of May. The spring precipitation decreased irrigation demand, boosted the reservoir storage and kept the soils from drying out in the snow-free areas. Bear Lake is now half full at 618,000 acre-feet, and should supplement the summer streamflow enough to provide water users with adequate supplies since about 475,000 acre-feet is the total amount needed. This year's water supplies are similar to 2007. The streamflow forecasts vary dramatically depending on the location. The best forecast calls for average amounts for the Bear River above the reservoir during the June through September period. The next best forecast is for 85% of average for the Bear near the Utah-Wyoming state line for the same period. The Smith's Fork, Big Creek and the Blacksmith Fork will see volumes in the 65-75% of average range and the lowest will occur at the Bear River below the Dam, which is forecast at near 40% of normal. The spring precipitation is welcomed, but it does not change the need for a good snowpack next year to provide adequate supplies for the following summer.

BEAR RIVER BASIN
Streamflow Forecasts - June 1, 2010

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear R nr UT-WY State Line	APR-JUL	69	81	89	79	97	109	113
	JUN-JUL	48	58	65	93	72	82	70
	APR-SEP	81	95	105	84	115	129	125
	JUN-SEP	62	73	81	99	89	100	82
Bear R abv Resv. nr Woodruff	APR-JUL	68	86	99	73	112	130	136
	JUN-JUL	34	47	55	86	63	76	64
	APR-SEP	84	102	115	81	128	146	142
	JUN-SEP	49	62	71	100	80	93	71
Big Creek nr Randolph	APR-JUL	1.9	2.1	2.2	45	2.3	2.5	4.9
	JUN-JUL	0.5	1.0	1.4	62	2.0	3.0	2.3
Smiths Fk nr Border, WY	APR-JUL	32	47	57	55	67	82	103
	APR-SEP	58	71	80	66	89	102	121
	JUN-JUL	26	33	38	62	43	50	61
	JUN-SEP	46	55	61	79	67	76	77
Bear R blw Stewart Dam	APR-JUL	2.0	24	58	25	92	143	234
	APR-SEP	8.0	34	72	28	110	167	262
	JUN-JUL	3.0	18.0	41	37	64	97	110
	JUN-SEP	4.0	25	55	40	85	128	138
Little Bear at Paradise, UT	APR-JUL	10.1	18.7	24	52	30	39	46
	JUN-JUL	2.8	5.6	7.5	63	9.4	12.2	11.9
Logan R nr Logan, UT	APR-JUL	42	59	70	56	81	98	126
	JUN-JUL	30	38	43	61	48	56	70
Blacksmith Fk nr Hyrum, UT	APR-JUL	3.5	15.7	24	50	32	44	48
	JUN-JUL	4.0	8.8	12.0	60	15.2	20	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	617.9	520.0	1052.3
MONTPELIER CREEK	4.0	4.1	4.0	3.3

BEAR RIVER BASIN
Watershed Snowpack Analysis - June 1, 2010

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	3	157	123
Bear River ab WY-ID line	9	338	102
Montpelier Creek	1	0	0
Mink Creek	1	0	57
Cub River	1	0	91
Bear River ab ID-UT line	15	429	94
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

Buffalo Fork ab Lava Ck nr Moran, WY – No Corrections

Gros Ventre R at Kelly, WY – No Corrections

Snake R abv Palisades, WY
+ Jackson Lake (Storage Change)
Greys R abv Palisades, WY – No Corrections
Salt R abv Palisades, WY – No Corrections
Snake R nr Irwin, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Snake R nr Heise, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Willow Ck nr Ririe, ID
+ Ririe Resv (Storage Change)
Blackfoot Reservoir Inflow, ID
+ Blackfoot Reservoir releases
+ Blackfoot Resv (Storage Change
Portneuf R at Topaz, ID - No Corrections
Snake 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
(Does not include inflow from Birch Creek)
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						
Montpelier Creek	0.21	---	3.84	---	4.0	Dead+Active
Bear Lake	5.0 MAF	119.00	1302.00	---	1421.0	Active+Inactive: Includes 119 that can be released

Interpreting Water Supply Forecasts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OFFICIAL BUSINESS

Issued by
Dave White, Chief
Natural Resources Conservation Service
Washington, DC

Released by
Jeff Burwell, State Conservationist
Dave Hoover, Assistant State Conservationist
Natural Resources Conservation Service
Boise, Idaho

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

Assistance provided by
Jolyne Lea, Forecast Hydrologist
Rashawn Tama, Forecast Hydrologist
NRCS, National Water and Climate Center, Portland, Oregon

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