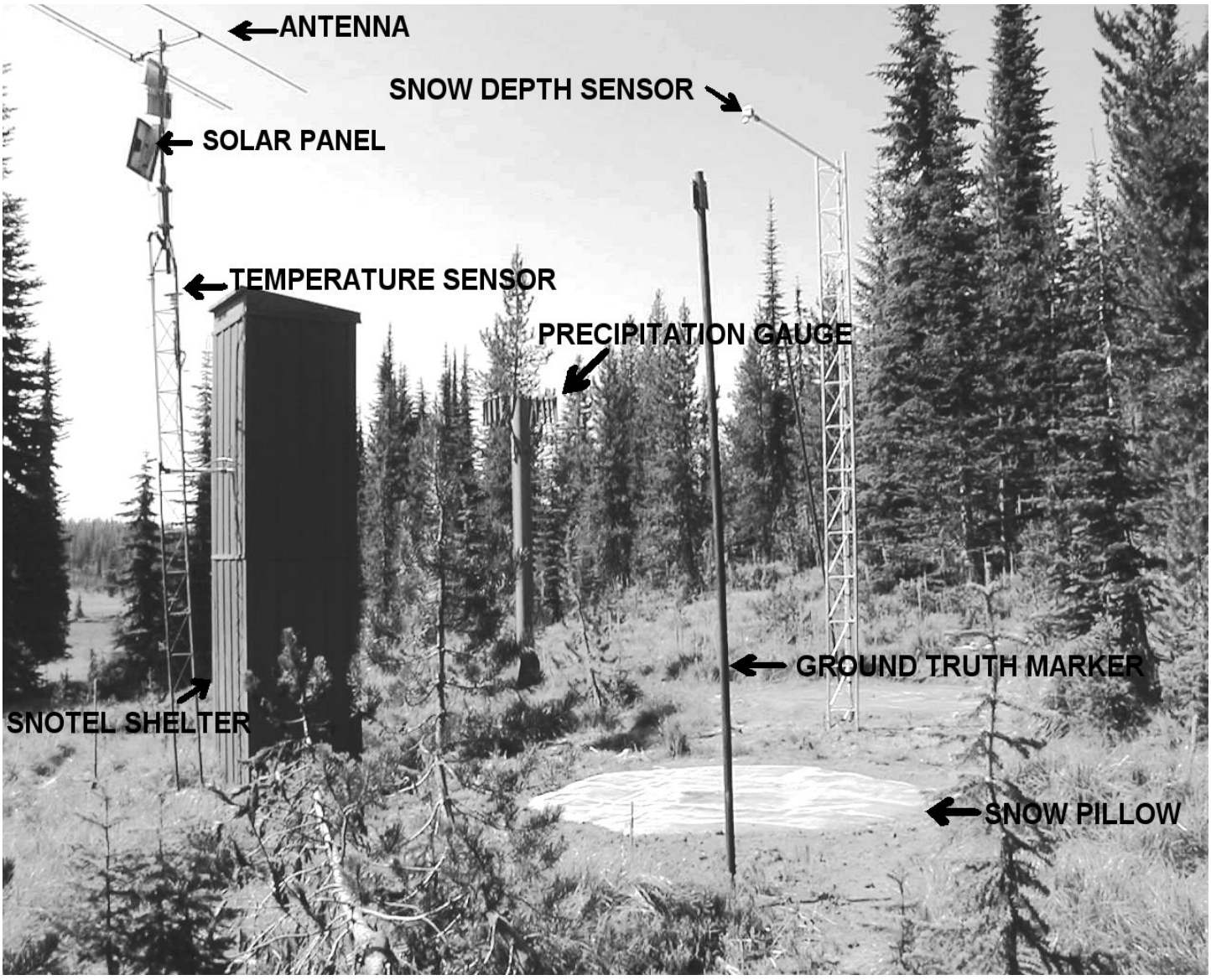
United States Department of Agriculture

Natural Resources Conservation Service

Idaho Basin Outlook Report January 1, 2002



Crater Meadows SNOTEL Site, North Fork Clearwater River Basin, Idaho

Basin Outlook Reports
and
Federal - State - Private
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http://idsnow.id.nrcs.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. 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

January 1, 2002

SUMMARY

Snowfall in the first half of winter was promising and delightful for winter recreation, but much more snow is still needed to provide adequate water supplies for irrigation, river runners, reservoir recreation, fish, hydropower and all those other users and uses. Currently, snowpacks range from 85-160% of average for most basins in Idaho, but this is only 35-65% of the April 1 seasonal peak. Combined storage for the state's 21 reservoirs and lakes is the 3rd lowest since 1958. The dry summer and fall have left a soil moisture deficit in parts of southern and eastern Idaho. Rivers remain low after last summer's near record low streamflow. Even with the current good snowpack on the ground that is starting to exceed last year's April 1 peak amounts, nobody can say the "Drought is over in Idaho." With more than half the winter still to come, the water supply picture can change for the better or worse. Keep those fingers crossed that the storms come back to Idaho like they did between Thanksgiving and Christmas and don't go to Buffalo, New York!

SNOWPACK

The majority of Idaho's snowpacks range from 85% of average in the upper Snake basins to 160% in the basins south of the Snake River basins. The lowest snowpacks are 75% of average along the Idaho-Montana border in the Lochsa, Lemhi and Birch-Medicine Lodge basins. The highest snowpacks are in the lower elevations. Some of these sites are 200% of average and have even exceeded their seasonal average peaks. However, these are not the primary snow producing zones in Idaho. The higher elevation zones are, and this is where we need the snow to continue accumulating. With more than half the winter still to come, the water supply outlook could change for the better or worse. The amount of snow currently on the ground is only 35-65% of the normal seasonal peak that occurs around April 1. So we still have a way to go to reach these peaks by the end of the snow accumulation season. Let's keep our fingers crossed and hope the jet stream comes back across Idaho like it did between Thanksgiving and Christmas!

PRECIPITATION

After a slow start, Mother Nature brought a series of storms between Thanksgiving and Christmas to jump-start the snow season in Idaho. December precipitation ranged from near normal in northern Idaho to almost twice normal across southern Idaho, especially in the low elevation snow zones. Fall rains and snow helped to recharge the soil moisture profile north of the Salmon River basin; however, the southern half of Idaho may still have a soil moisture deficit, especially where the first fall precipitation event fell as snow and remained on the ground. Water year to date precipitation is near normal in the Salmon, Wood and Lost, Upper Snake and Bear basins. Water year to date precipitation is 114-122% of average in the Panhandle, Clearwater, Weiser, Payette, Boise, and basins south of the Snake River.

RESERVOIRS

Reservoir storage remains low throughout Idaho. Priest Lake, Dworshak, Lucky Peak and Brownlee reservoirs are reporting average storage for December 31. The southern Idaho reservoirs of Salmon Falls and Oakley are nearly empty. Salmon Falls Reservoir is the lowest in the state at 5% of capacity, 19% of average--the lowest December 31 storage reading since 1962. Oakley Reservoir is 13% full, 38% of average; Owyhee Reservoir is 15% full, 26% of average. The 8 major reservoirs in the upper Snake are one-third full or half of normal. Jackson Lake is 16% full, and Palisades Reservoir is only 31% full. The Payette reservoir system is 44% full, 70% of average; the Boise system is 34% full, 62% of average. The December 31 combined storage for 21 Idaho reservoirs and lakes is the 3rd lowest since 1958. The lowest years were December 31, 1992, and 1994 which also followed severe drought years.

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

Streamflows remain low in Idaho, but that is normal for this time of year. Observed runoff for the April-July runoff season last year was low as predicted and ranged from 30-60% of average. With dry antecedent soil moisture and residual effects of the past drought years, water users should look at all five Exceedance Probability forecasts published this year to base their water management decisions. The "Interpreting Streamflow Forecasts" in the printed version further explains use of these Exceedance Forecasts. The Most Probable Streamflow Forecasts in Idaho range from 70-110% of average. The lowest forecasts are in the mainstem Snake River - American Falls inflow, Blackfoot Reservoir inflow, Snake River at King Hill and near Murphy at about 70% of average. The highest forecast is for Owyhee Reservoir inflow at 110% of average.

RECREATION

Abundant snowfall after Thanksgiving jump started Idaho's winter recreation season. Cold temperatures have kept the snow light, dry and consistent with few noticeable layers. As a result, snow depths are above average for this time of year making conditions great for skiers and snowmobilers. Much more snow is needed in the high country to ensure a good boating season. For those river runners looking to select the best dates for floating the Salmon basin the potential range is wide open. A quick analysis of other years with a snowpack in the 90-110% of average range on January 1, resulted in the April-July Salmon River at White Bird ranging from 46% of average in 1992 to 130% in 1976.

WHAT'S NEW?!

New Streamflow Forecasts:
Streamflow forecasts were requested and developed for the Selway River near Lowell and Lochsa River near Lowell. These forecasts will help determine the water supply in the headwaters of the Clearwater River and provide specific forecasts for river runners.

New 30 Year Average:
Averages used for comparison purposes were updated from the 1961-1990 period to the 1971-2000 period. The new averages are reflected in this publication. Old averages are being used for a few stations, which were discontinued, or water year 2000 is not available yet. These will be updated as the analysis is completed. The 30-year average period is based on World Meteorological Organization standards that water forecast agencies have adapted. Averages are revised or updated every 10 years. The most recent 30-year period is used for comparison purposes because it represents the current climatological conditions. Daily SNOTEL averages were developed for snow water content values and precipitation. Monthly averages were developed for snow courses, end of month reservoir storage and streamflow and are available on our Web page at: http://idsnow.id.nrcs.usda.gov/

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IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of January 1, 2002

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

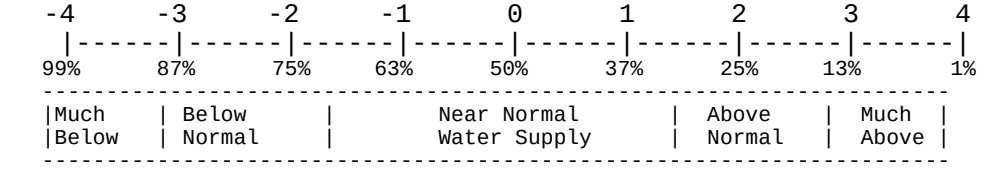
SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

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

US National Weather Service
US Bureau of Reclamation
Idaho Water Users Association
US Army Corps of Engineers
Idaho Dept. of Water Resources
PacifiCorp

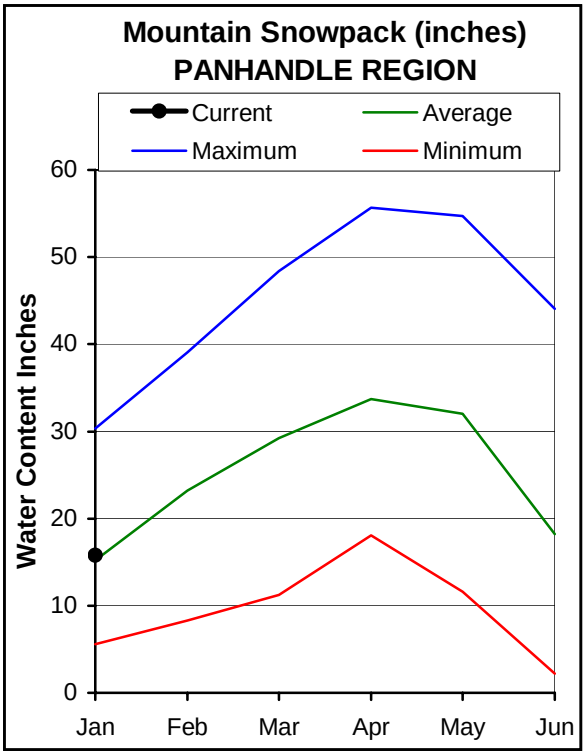
BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-0.2	1984	NA
CLEARWATER	0.8	1990	NA
SALMON	0.2	1980	NA
WEISER	0.7	1980	NA
PAYETTE	-0.1	1976	NA
BOISE	-0.1	2000	-2.6
BIG WOOD	-1.4	2000	-1.4
LITTLE WOOD	0.4	1996	-2.6
BIG LOST	-0.7	1993	-0.8
LITTLE LOST	0.0	1996	0.0
HENRYS FORK	-1.5	1979	-3.3
SNAKE (AMERICAN FALLS)	-1.9	1989	-2.0
OAKLEY	-0.4	1994	0.0
SALMON FALLS	-0.1	1989	0.0
BRUNEAU	1.0	1996	NA
OWYHEE			NA
BEAR RIVER	-2.9	1990	-3.8

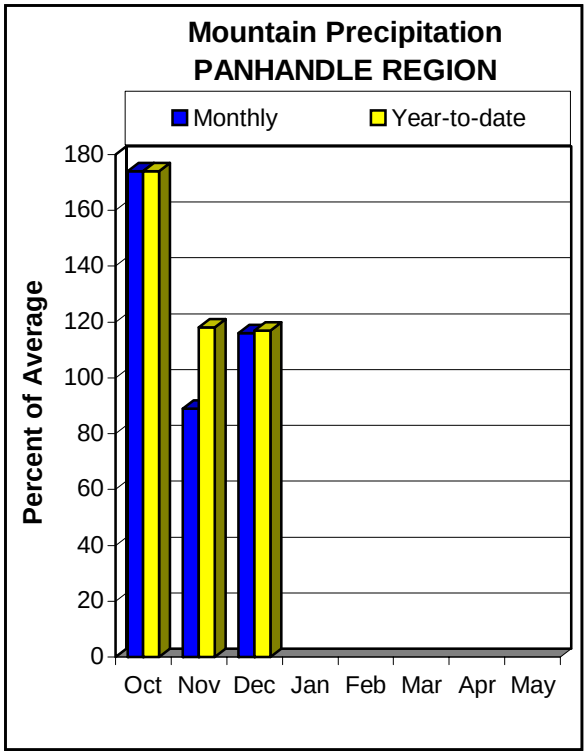
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION



Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.

PANHANDLE REGION
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

The new water year started with October precipitation at 174% of average. November precipitation was 89% of average. December, one of the larger precipitation months, brought 116% of average precipitation. Water year to date precipitation is 117% of average, more than twice the amount that fell by this time last year. The snowpack ranges from 86% of average in the Pend Oreille basin to 129% in the Priest River basin. Bear Mountain SNOTEL site is currently at 30.6 inches of snow water and is about to exceed last year's peak of 31.2 inches of snow water that occurred on May 2! This is great news, but with more than half the winter still to come, snowpacks need to continue to build in the higher elevations. Priest Lake is storing near normal levels while Pend Oreille and Coeur d'Alene Lake are at 81% and 59% of average, respectively. Streamflow forecasts call for a range from 85-105% of average for these northern Idaho streams.

PANHANDLE REGION
Streamflow Forecasts - January 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	APR-JUL	4794	6091	6680	93	7269	8566	7199
	APR-SEP	5648	7045	7680	93	8315	9712	8275
MOYIE RIVER at Eastport	APR-JUL	243	303	344	85	385	445	405
	APR-SEP	252	315	357	85	399	462	420
SMITH CREEK	APR-JUL	101	119	131	107	143	161	123
	APR-SEP	104	124	137	106	150	170	129
BOUNDARY CREEK	APR-JUL	95	112	123	100	134	151	123
	APR-SEP	100	117	129	100	141	158	129
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	4699	8090	9630	85	11170	14561	11400
	APR-SEP	5173	8905	10600	85	12295	16027	12500
PEND OREILLE Lake Inflow (2)	APR-JUL	6675	9149	10830	85	12511	14985	12700
	APR-SEP	5929	9437	11820	85	14203	17711	13900
PRIEST near Priest River (1,2)	APR-JUL	634	776	840	104	904	1046	810
	APR-SEP	669	817	885	102	953	1101	865
COEUR D'ALENE at Enaville	APR-JUL	572	698	784	106	870	996	740
	APR-SEP	604	735	825	106	915	1046	780
ST. JOE at Calder	APR-JUL	870	1054	1179	103	1304	1488	1140
	APR-SEP	933	1121	1248	104	1375	1563	1200
SPOKANE near Post Falls (2)	APR-JUL	1880	2374	2710	106	3046	3540	2550
	APR-SEP	1956	2464	2810	106	3156	3664	2650
SPOKANE at Long Lake (2)	APR-JUL	1968	2606	3039	107	3472	4110	2850
	APR-SEP	2135	2807	3264	106	3721	4393	3070

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2560.0	2520.0	2420.9
FLATHEAD LAKE	1791.0	1437.0	989.4	1192.7
NOXON RAPIDS	335.0	317.5	317.9	315.8
PEND OREILLE	1561.3	542.1	729.1	673.4
COEUR D'ALENE	238.5	64.6	27.0	110.1
PRIEST LAKE	119.3	57.5	50.0	55.7

PANHANDLE REGION
Watershed Snowpack Analysis - January 1, 2002

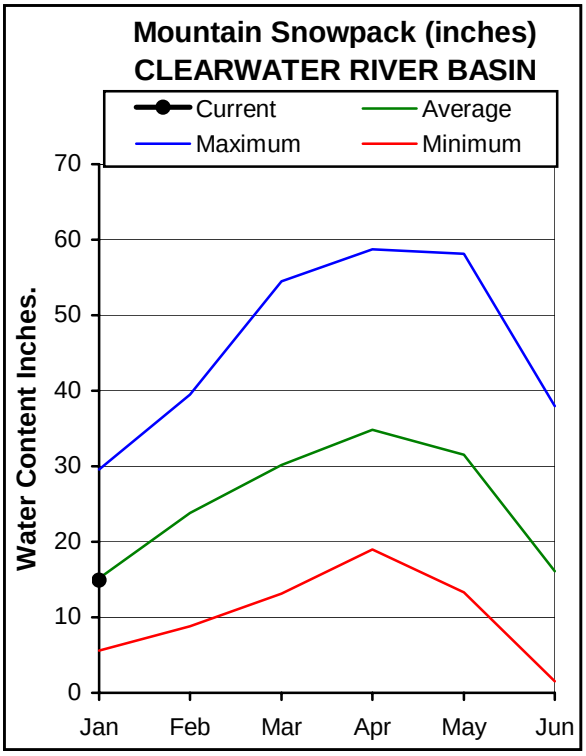
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	15	194	98
Moyie River	5	165	91
Priest River	4	199	129
Pend Oreille River	65	144	86
Rathdrum Creek	3	203	158
Hayden Lake	0	0	0
Coeur d'Alene River	6	178	111
St. Joe River	3	202	102
Spokane River	11	190	119
Palouse River	1	132	122

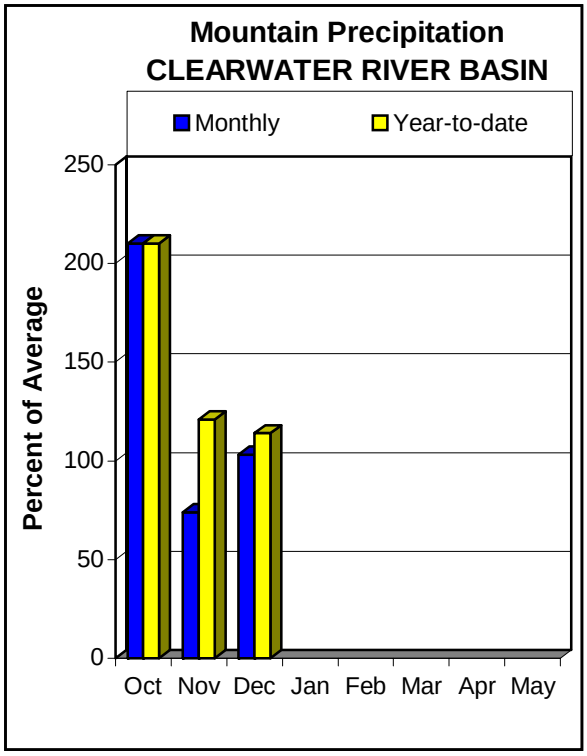
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

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

CLEARWATER RIVER BASIN
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

The new water year started on the right note with most SNOTEL sites receiving 10-20 inches for the October-November period. For many stations in the Clearwater River basin, this was the most recorded in October since daily SNOTEL precipitation records started nearly 20 years ago. December brought near normal precipitation amounts. Water year to date precipitation amounts remain above normal at 114% of average. Fall rains helped to recharge the soil moisture. As a result, this is one area of the state that may have a minimal soil moisture deficit, if any. Snowpacks range from a low of 75% of average in the Lochsa River to normal on the North Fork Clearwater River basin. Overall the Clearwater basin is 97% of average. Dworshak Reservoir is 66% of capacity, 103% of average. Just a reminder: NRCS includes the 1,452,000 acre-feet of inactive storage in our storage totals. The inactive storage accounts for 41% of the total capacity of the reservoir. Streamflow forecasts call for near normal runoff for this season. With more than half the winter still to come, normal or above normal precipitation is needed for the remaining winter months.

CLEARWATER RIVER BASIN
Streamflow Forecasts - January 1, 2002

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 near Lowell	APR-JUL	1368	1684	1899	92	2114	2430	2060
	APR-SEP	1443	1775	2001	92	2227	2559	2170
LOCHSA near Lowell	APR-JUL	1026	1261	1421	93	1581	1816	1530
	APR-SEP	1095	1334	1496	93	1658	1897	1610
DWORSHAK RESV INFLOW (1,2)	APR-JUL	1716	2393	2700	102	3007	3684	2640
	APR-SEP	1600	2467	2860	102	3253	4120	2800
CLEARWATER at Orofino (1)	APR-JUL	3164	4186	4650	100	5114	6136	4650
	APR-SEP	3370	4422	4900	100	5378	6430	4900
CLEARWATER at Spalding (1,2)	APR-JUL	4897	6687	7500	102	8313	10103	7350
	APR-SEP	5350	7179	8010	102	8841	10670	7850

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2285.8	2199.2	2228.2

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - January 1, 2002

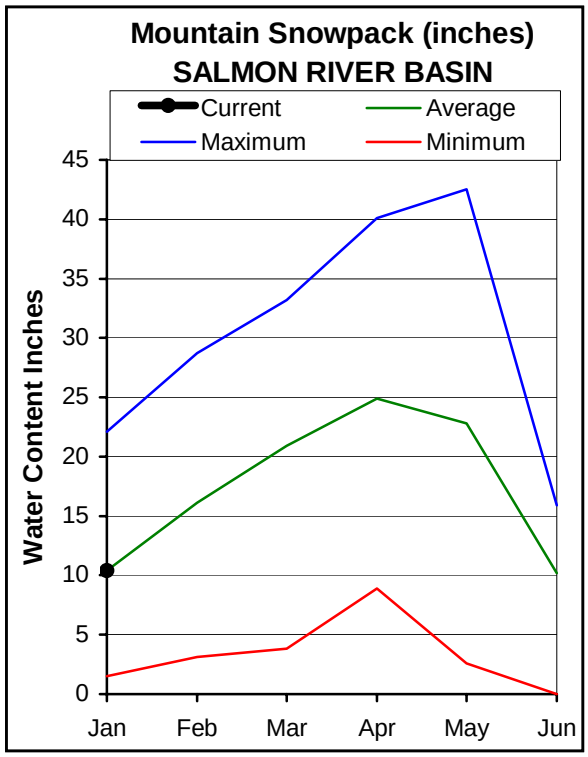
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	172	100
Lochsa River	3	118	75
Selway River	4	135	90
Clearwater Basin Total	17	158	97

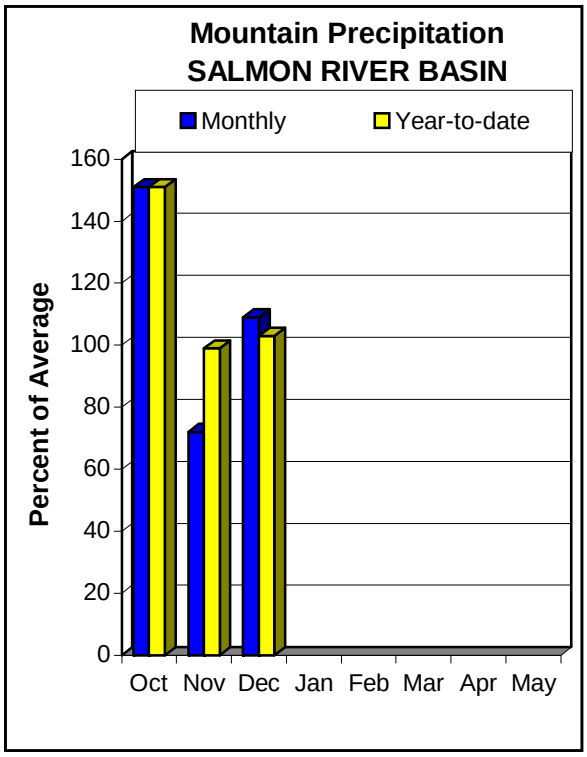
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

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

SALMON RIVER BASIN
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

December precipitation was 109% of average. Precipitation for the water year is normal. Snowpack percentages range from 78% of average for the Lemhi River basin, one of the lowest percentages in the state, to 115% for the Little Salmon River basin, twice the amount from a year ago. The snowpack on the Middle Fork Salmon River basin is 93% of average. Overall, the Salmon River basin is 94% of average. Streamflow forecasts call for 100% of average for the Salmon River at Salmon and 98% for the Salmon River at White Bird. A quick analysis of previous years with a snowpack in the 90-110% of average range on January 1, resulted in the April-July volume for the Salmon River at White Bird ranging from 46% of average in 1992 to 130% in 1976. River runners and water users of all types should hope for above normal precipitation for the remaining winter months to ensure a good water year.

SALMON RIVER BASIN
Streamflow Forecasts - January 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	APR-JUL	527	753	856	100	959	1185	855
	APR-SEP	641	887	999	100	1111	1357	1000
SALMON at White Bird (1)	APR-JUL	3777	5113	5720	98	6327	7663	5850
	APR-SEP	4235	5689	6350	98	7011	8465	6480

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

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

SALMON RIVER BASIN
Watershed Snowpack Analysis - January 1, 2002

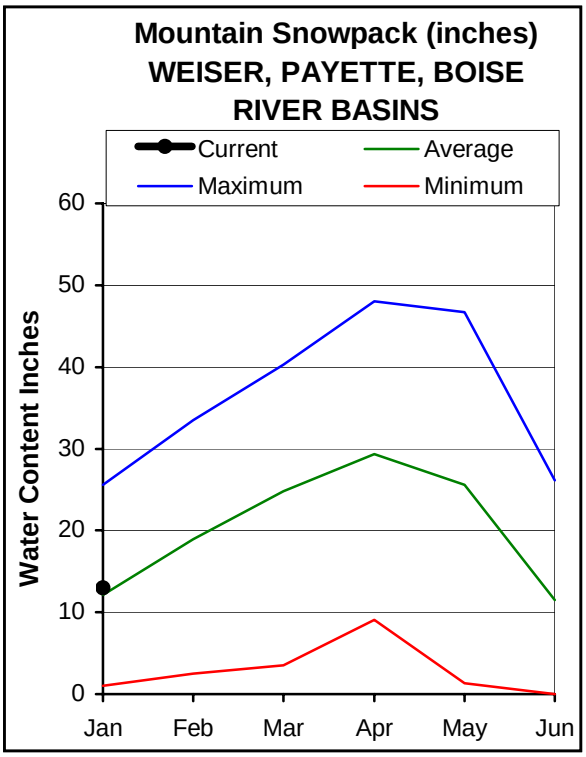
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Salmon River ab Salmon	9	139	92
Lemhi River	6	96	78
Middle Fork Salmon River	3	170	93
South Fork Salmon River	3	174	100
Little Salmon River	4	203	115
Salmon Basin Total	24	146	94

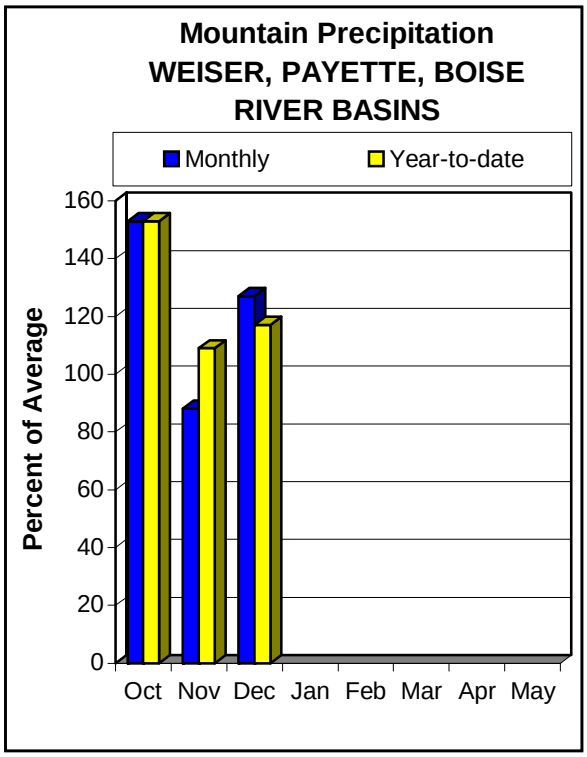
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

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

WEISER, PAYETTE, BOISE RIVER BASINS JANUARY 1, 2002





WATER SUPPLY OUTLOOK

December precipitation varied across these west-central basins with low elevation SNOTEL sites such as Prairie and Camas Creek Divide receiving 170% of average. Higher elevation SNOTEL sites such as Deadwood Summit and Vienna Mine only received about 118% of average. Water year to date precipitation stands at 117% of average. The snowpack around 5,000 feet in elevation is nearly twice normal and has exceeded its seasonal average peak in some areas. This is good news, but the high elevation is much more critical in providing the snowmelt and runoff that feed the streams and fill our reservoirs. Some higher elevation SNOTEL sites are starting to exceed their peaks from last year. For example, Deadwood Summit SNOTEL site has 18.4 inches of snow water, which is normal for January 1 and twice the amount from a year ago. Deadwood Summit peaked on April 23, 2001, at 19.3 inches of snow water. The normal seasonal peak for Deadwood Summit is 48.2 inches of snow water on April 16, so we still have a long ways to get there. As a result of this precipitation pattern, snowpack percentages are the greatest in the low elevation drainages of Mores Creek at 164% of average and Mann Creek and Weiser basins at 130%. The Middle and North Fork Boise basins snowpack is the lowest at 110% of average. The Payette reservoir system is 44% full, 70% of average; the Boise system is 34% full, 62% of average. Streamflow forecasts call for near normal streamflows. The first half of winter looks promising, but much more snow is needed in the second half.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - January 1, 2002

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 near Weiser (1)	APR-SEP	189	351	425	101	499	661	420
SF PAYETTE at Lowman	APR-JUL	292	377	434	99	491	576	440
	APR-SEP	333	423	485	98	547	637	495
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	96	128	143	107	158	190	134
	APR-SEP	102	136	151	106	166	200	142
LAKE FORK PAYETTE near McCall	APR-JUL	68	80	88	104	96	108	85
	APR-SEP	71	83	92	103	100	112	89
NF PAYETTE at Cascade (1,2)	APR-JUL	307	453	520	106	587	733	490
	APR-SEP	328	484	555	105	626	782	530
NF PAYETTE nr Banks (2)	APR-JUL	450	585	677	105	769	904	645
	APR-SEP	487	629	725	105	821	963	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	1016	1484	1697	105	1910	2378	1610
	APR-SEP	1121	1615	1840	105	2065	2559	1750
BOISE near Twin Springs (1)	APR-JUL	398	565	640	101	715	882	635
	APR-SEP	435	610	690	100	770	945	690
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	307	467	540	100	613	773	540
	APR-SEP	335	502	578	100	654	821	580
MORES CREEK near Arrowrock Dam	APR-JUL	84	113	132	101	151	180	131
	APR-SEP	86	115	135	101	155	184	134
BOISE near Boise (1,2)	APR-JUN	797	1133	1285	102	1437	1773	1260
	APR-JUL	837	1238	1420	101	1602	2003	1410
	APR-SEP	935	1355	1545	101	1735	2155	1530

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	1.0	1.2	3.3
CASCADE	693.2	326.5	414.3	456.4
DEADWOOD	164.0	53.1	92.5	82.5
ANDERSON RANCH	450.2	78.9	281.5	296.8
ARROWROCK	272.2	168.4	92.1	173.1
LUCKY PEAK	293.2	100.5	103.8	95.5
LAKE LOWELL (DEER FLAT)	165.2	28.2	98.4	98.4

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2002

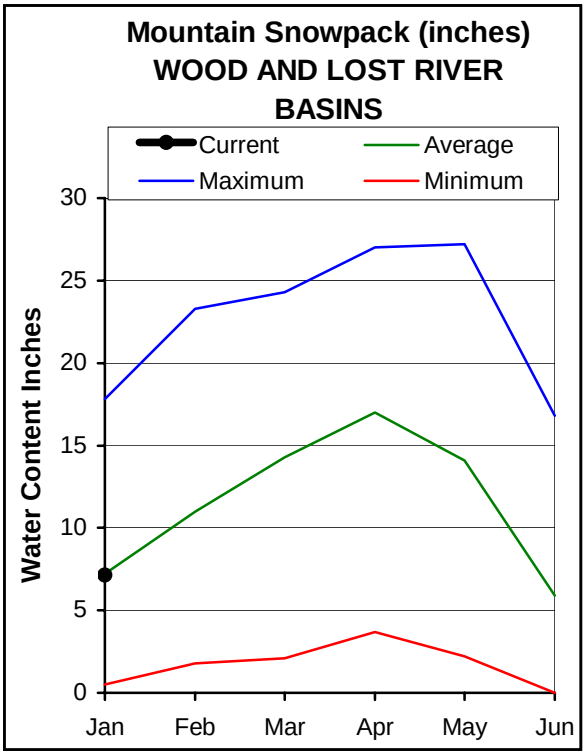
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	215	132
Weiser River	3	210	126
North Fork Payette	8	174	111
South Fork Payette	5	171	112
Payette Basin Total	14	171	116
Middle & North Fork Boise	6	158	110
South Fork Boise River	9	166	131
Mores Creek	5	152	164
Boise Basin Total	16	160	137
Canyon Creek	2	270	250

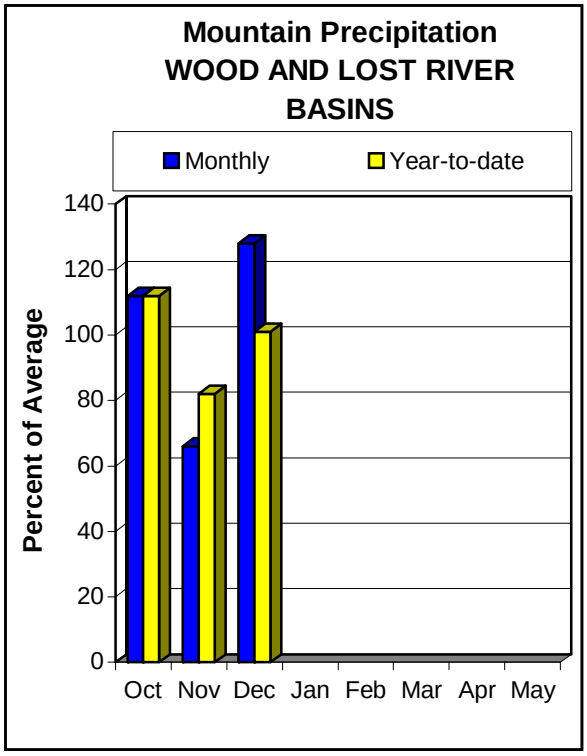
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

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

WOOD and LOST RIVER BASINS
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

The new water year started with above normal precipitation, 112% in October followed by November with only 66%, the lowest in the state. December brought 128% of average precipitation. Water year to date is normal. Low elevation snowpacks are off to a great start with Camas Creek at 169% of average. However, the higher elevation snowpacks, which are the most important, are only normal in the Big Wood and Little Wood basins. The snowpack decreases to 93% of average in the Big Lost and only 77% in the Birch-Medicine Lodge basins. Reservoir storage remains low and ranges from 7% full in Magic Reservoir to 34% full for Mackay Reservoir. Streamflow forecasts range from 80-100% of average. Much more snow is needed to satisfy the numerous water needs in these basins. Let's hope Mother Nature gets back on track and delivers more snow to these central Idaho Mountains.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - January 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD at Hailey (1)	APR-JUL	110	183	222	87	265	373	255
	APR-SEP	123	202	245	85	292	408	290
BIG WOOD near Bellevue	APR-JUL	70	120	162	86	210	292	188
	APR-SEP	79	131	174	87	223	307	200
CAMAS CREEK near Blaine	APR-JUL	45	76	102	103	132	183	99
	APR-SEP	45	77	103	102	133	184	101
BIG WOOD below Magic Dam (2)	APR-JUL	71	184	261	90	338	451	290
	APR-SEP	74	191	270	89	349	466	305
LITTLE WOOD near Carey (2)	MAR-JUL	36	69	91	95	113	146	96
	MAR-SEP	41	75	98	94	121	155	104
BIG LOST at Howell Ranch	APR-JUN	89	119	139	104	159	189	134
	APR-JUL	108	150	179	104	208	250	172
	APR-SEP	127	173	205	104	237	283	197
BIG LOST below Mackay Reservoir (2)	APR-JUL	66	107	135	95	163	204	142
	APR-SEP	86	131	161	93	191	236	173
LITTLE LOST blw Wet Creek	APR-JUL	24	29	33	107	37	42	31
	APR-SEP	28	35	39	100	44	50	39

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	13.7	38.5	79.7
LITTLE WOOD	30.0	6.5	11.3	14.1
MACKAY	44.4	15.0	14.0	23.7

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - January 1, 2002

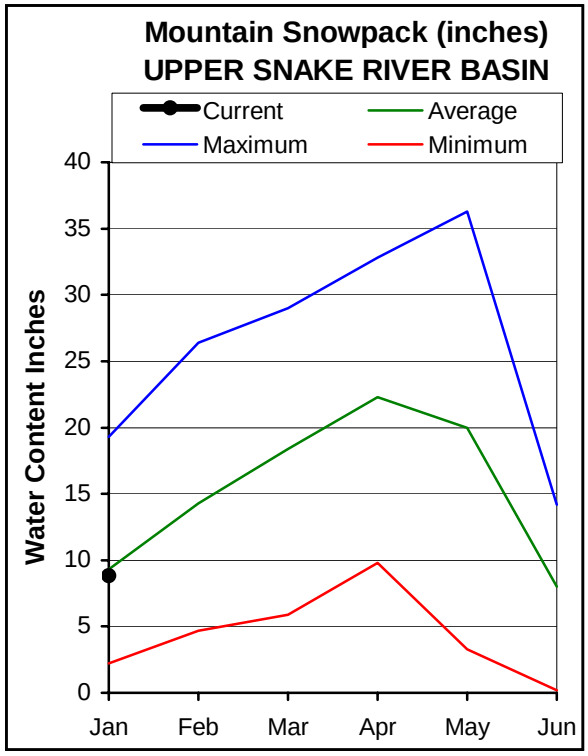
Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Big Wood ab Hailey	8	144	102
Camas Creek	5	196	169
Big Wood Basin Total	12	158	121
Little Wood River	4	162	103
Fish Creek	0	0	0
Big Lost River	5	126	93
Little Lost River	3	109	82
Birch-Medicine Lodge Cree	2	86	77
Camas-Beaver Creeks	4	190	128

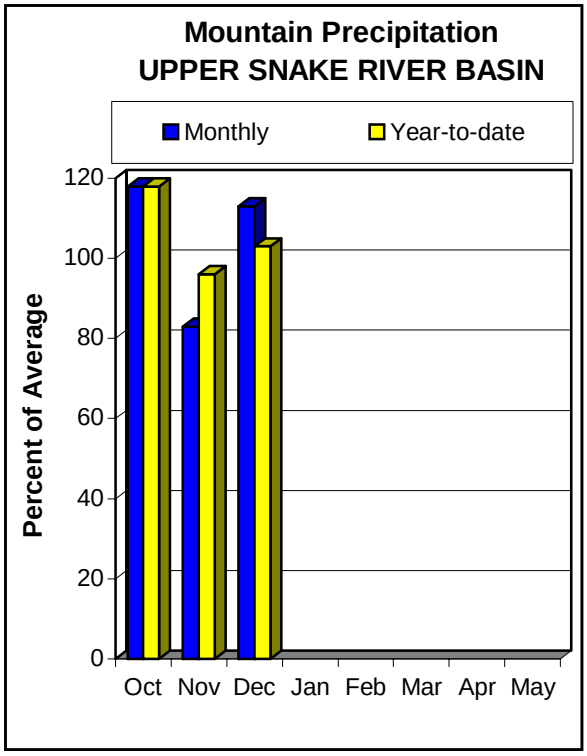
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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

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

UPPER SNAKE RIVER BASIN
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

Some of the season's first fall precipitation events fell as snow in the high country in the upper Snake basin. This means part of this winter's snowpack will be absorbed directly into the ground to recharge the soil profile. October precipitation was 118% of average, November was 83% and December brought 112%. Precipitation for the water year is normal at 102% of average. Snowpacks are the greatest in the low elevation drainages of Blackfoot, Willow, and Portneuf basins ranging from 106-115% of average, respectively. The lowest snowpacks are in the Teton, Snake above Jackson Lake, and Salt basins at 82% of average. Overall, the Snake basin above Palisades Reservoir is 86% of average, Henrys Fork is 91% and the Snake above American Falls reservoir is 92%. The 8 major reservoirs in the upper Snake basin are one-third full or half of normal. Jackson Lake is the lowest at 16% of capacity and Palisades Reservoir is only 31% full. Streamflow forecasts call for 75-90% of average. The season can still improve with more than half the winter still to come, but stay tuned we'll be watching these basins closely.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - January 1, 2002

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 near Ashton (2)	APR-JUL	369	424	462	81	500	555	570
	APR-SEP	495	561	605	80	649	715	760
HENRYS FORK near Rexburg (2)	APR-JUL	974	1144	1260	81	1376	1546	1560
	APR-SEP	1292	1484	1615	80	1746	1938	2020
FALLS near Squirrel (1,2)	APR-JUL	234	293	320	83	347	406	385
	APR-SEP	280	348	378	83	408	476	455
TETON near Driggs	APR-JUL	91	121	142	86	163	193	165
	APR-SEP	123	160	185	88	210	247	210
TETON near St. Anthony	APR-JUL	234	298	342	84	386	450	405
	APR-SEP	272	345	395	82	445	518	480
SNAKE near Moran (1,2)	APR-SEP	514	676	750	83	824	986	905
PACIFIC CREEK at Moran	APR-SEP	93	119	137	77	155	181	178
SNAKE above Palisades (2)	APR-JUL	1484	1788	1994	84	2200	2504	2370
	APR-SEP	1732	2073	2305	84	2537	2878	2730
GREYS above Palisades	APR-JUL	209	268	309	91	350	409	340
	APR-SEP	245	310	355	90	400	465	395
SALT near Etna	APR-JUL	182	252	299	88	346	416	340
	APR-SEP	226	306	360	86	414	494	420
PALISADES RESERVOIR INFLOW (1,2)	APR-JUL	1874	2533	2832	85	3131	3790	3330
	APR-SEP	2212	2953	3290	85	3627	4368	3870
SNAKE near Heise (2)	APR-JUL	2225	2701	3025	85	3349	3825	3560
	APR-SEP	2597	3141	3510	84	3879	4423	4160
BLACKFOOT RESV INFLOW	APR-JUN	30	63	86	72	109	142	120
SNAKE nr Blackfoot (1,2)	APR-JUL	2328	3366	3837	73	4308	5346	5260
	APR-SEP	3022	4186	4714	72	5242	6406	6540
PORTNEUF at Topaz	MAR-JUL	51	64	73	82	82	95	89
	MAR-SEP	63	79	89	82	99	115	109
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	790	1835	2310	71	2785	3830	3240
	APR-SEP	830	1999	2530	72	3061	4230	3510

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

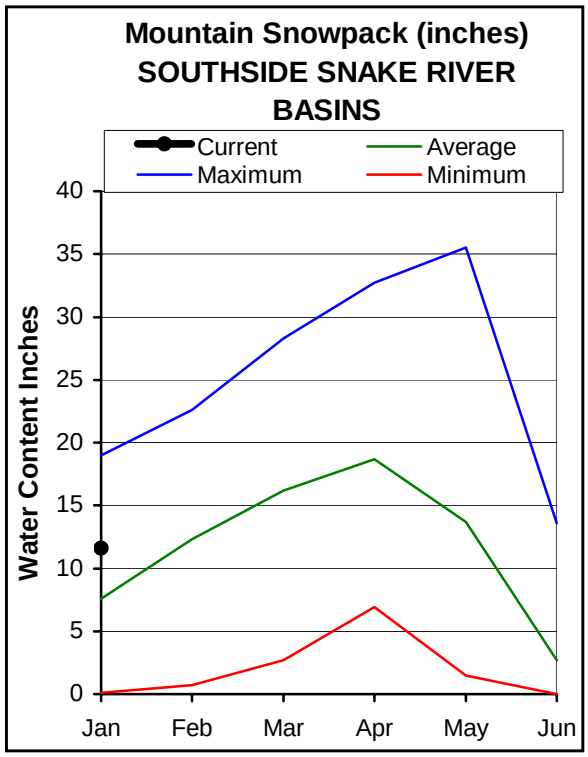
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	53.1	84.0	82.5
ISLAND PARK	135.2	68.8	107.9	96.1
GRASSY LAKE	15.2	9.2	12.6	11.6
JACKSON LAKE	847.0	137.4	637.6	481.7
PALISADES	1400.0	439.3	575.0	1036.5
RIRIE	80.5	27.9	39.4	34.5
BLACKFOOT	348.7	101.2	195.6	215.3
AMERICAN FALLS	1672.6	697.9	854.9	986.6

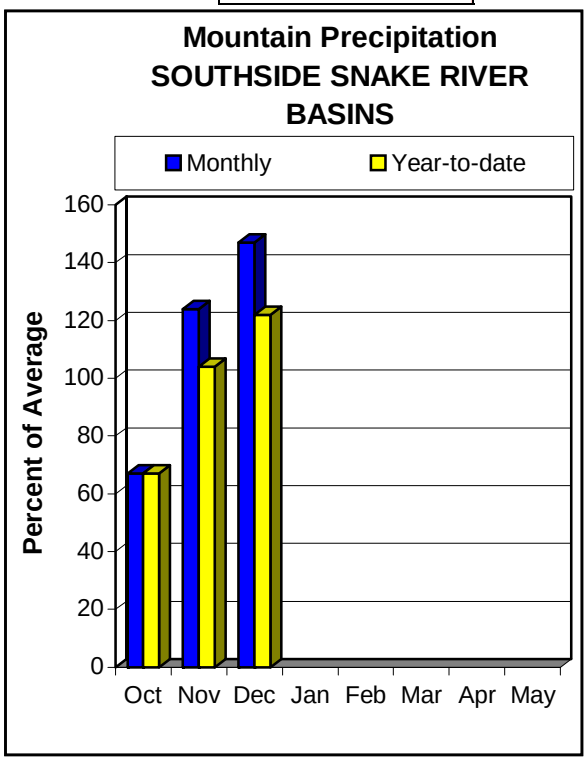
UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - January 1, 2002

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	10	147	96
Teton River	7	101	83
Henrys Fork above Rexburg	17	127	91
Snake above Jackson Lake	9	123	83
Gros Ventre River	2	125	91
Hoback River	5	119	90
Greys River	3	117	86
Salt River	3	100	81
Snake above Palisades	21	119	86
Willow Creek	7	113	112
Blackfoot River	3	122	106
Portneuf River	2	170	115
Snake abv American Falls	31	121	92

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table. The average is computed for the 1971-2000 base period.
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

The new water year started off slow in these southern Idaho basins with October precipitation at just 67% of average. November was better at 124% of average. December precipitation was like an early Christmas present with amounts ranging 110-190% of average. Snowpacks also shot up like a good day on the stock market with the Oakley basin snowpack reporting over 200% of average in mid-December. With the lack of moisture the last week of December, snowpack percentages dropped 20-30 percentage points. On January 1, snowpacks ranged from 145% of average in the Salmon Falls and Bruneau basins to 160% of average in the Oakley and Owyhee basins. Much more snow is needed, because even the Oakley basin has only two-thirds of its April 1 seasonal peak. These southern Idaho reservoirs are nearly empty. Salmon Falls Reservoirs is the lowest in the state at 5% of capacity, 19% of average--the lowest December 31 storage reading since 1962. Oakley Reservoir is 13% full, 38% of average; Owyhee Reservoir is 15% full, 26% of average. Streamflow forecasts range from 95-115% of average in these high desert streams. With more than half the season still to come, let's hope the snow doesn't stop here and keeps falling the rest of the winter season.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - January 1, 2002

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESV INFLOW	MAR-JUL	18.7	26	32	95	39	49	34
	MAR-SEP	21	29	35	95	42	53	37
OAKLEY RESV STORAGE	FEB-28	11.3	13.6	15.1	48	16.6	18.9	31
	MAR-31	16.9	19.8	22	61	24	27	36
	APR-30	23	26	29	71	32	36	41
SALMON FALLS CREEK nr San Jacinto	MAR-JUN	58	78	93	105	110	136	89
	MAR-JUL	57	77	93	100	110	138	93
	MAR-SEP	60	80	96	98	113	141	98
SALMON FALLS RESV STORAGE	FEB-28	11.3	15.0	17.5	29	20	24	60
	MAR-31	22	29	33	47	38	45	70
	APR-30	40	49	56	63	62	72	89
BRUNEAU near Hot Spring	MAR-JUL	161	212	250	104	291	358	240
	MAR-SEP	164	216	255	102	298	366	250
OWYHEE near Gold Creek (2)	MAR-JUL	18.5	27	33	103	39	48	32
OWYHEE nr Owyhee (2)	APR-JUL	33	64	85	104	106	137	82
OWYHEE near Rome	FEB-JUL	477	700	875	118	1070	1393	740
OWYHEE RESV INFLOW (2)	FEB-JUL	434	642	806	112	989	1292	720
	FEB-SEP	461	671	836	110	1019	1323	760
SUCCOR CK nr Jordan Valley	FEB-JUL	9.3	16.4	21	110	26	33	19.3
SNAKE RIVER at King Hill (1,2)	APR-JUL			1890	65			2896
SNAKE RIVER near Murphy (1,2)	APR-JUL			1980	66			2980
SNAKE RIVER at Weiser (1,2)	APR-JUL			4180	77			5465
SNAKE RIVER at Hells Canyon Dam (1,2	APR-JUL			4850	79			6129
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	9127	16604	20000	92	23396	30873	21650

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	74.5	9.8	21.6	25.7
SALMON FALLS	182.6	9.8	15.4	52.6
WILDHORSE RESERVOIR	71.5	20.9	35.0	37.8
OWYHEE	715.0	104.0	251.2	398.1
BROWNLEE	1419.3	1340.1	1328.8	1303.0

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2002

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Raft River	1	205	177
Goose-Trapper Creeks	3	187	162
Salmon Falls Creek	6	153	142
Bruneau River	5	170	148
Owyhee Basin Total	8	191	155

* 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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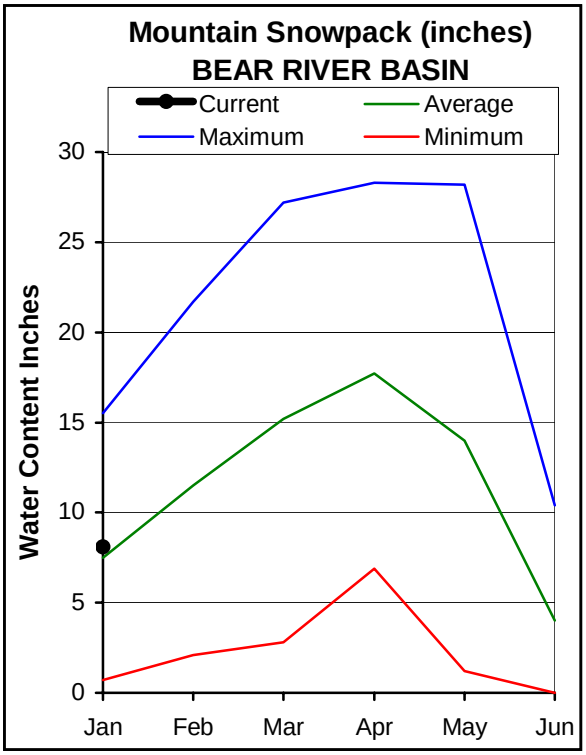
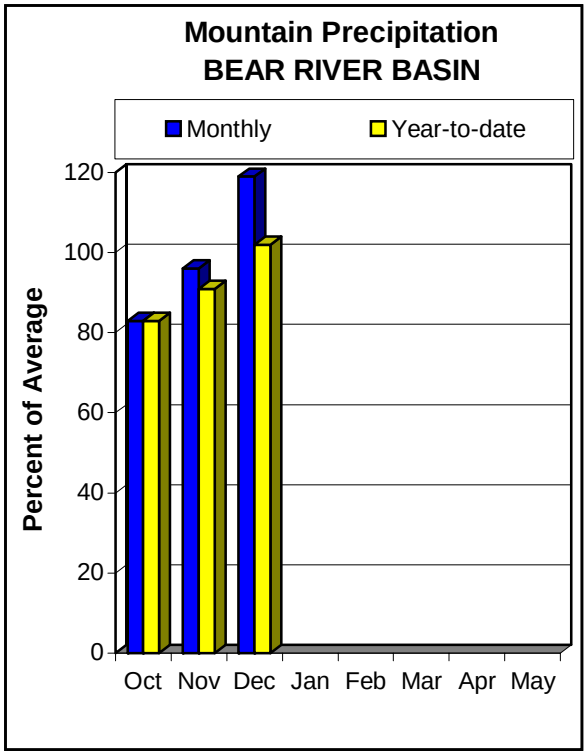
BEAR RIVER BASIN
JANUARY 1, 2002





WATER SUPPLY OUTLOOK

December brought above normal precipitation to the Bear River basin and also increased the water year to date precipitation to just above normal. Snow water content levels are near normal in most of these basins ranging from 95-115% of average. Some low elevation snow measuring stations, such as Oxford Spring SNOTEL at 6,740 feet in the Malad basin, has 7.3 inches of snow water; average is 4.9 inches. Last year at this time this site had 4.0 inches of snow water. Reservoir storage remains low with Bear Lake at 40% of capacity, 63% of average. Montpelier Creek Reservoir is 20% of capacity, which is about half of normal. Streamflow forecasts reflect the dry conditions from last year and call for only 85% of average. The water supply outlook can still improve with more than half the season still to come.

BEAR RIVER BASIN
Streamflow Forecasts - January 1, 2002

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 Randolph, UT	APR-JUL	17.0	65	97	84	129	177	115
	APR-SEP	20	71	106	85	141	192	125
SMITHS FK nr Border, WY	APR-JUL	51	70	87	85	108	150	102
	APR-SEP	60	81	100	85	123	167	118
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	12.5	19.8	27	82	37	58	33
	APR-SEP	13.9	22	29	81	39	61	36
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	125	193	240	83	287	355	288
	APR-SEP	148	223	275	84	327	402	327
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	5.7	8.0	10.2	84	12.9	18.4	12.2
	APR-SEP	7.4	9.9	12.0	85	14.6	19.5	14.2
CUB R nr Preston	APR-JUL	23	34	41	87	48	59	47

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	574.3	858.8	907.5
MONTPELIER CREEK	4.0	0.8	1.2	1.7

BEAR RIVER BASIN
Watershed Snowpack Analysis - January 1, 2002

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	3	122	100
Bear River ab WY-ID line	4	124	99
Montpelier Creek	1	139	96
Mink Creek	1	145	112
Cub River	1	138	119
Bear River ab ID-UT line	9	140	107
Malad River	1	183	149

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

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

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural 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 Dec. 2005).**

Panhandle River Basins

Kootenai R at Leonia, ID
+ Lake Koocanusa (Storage Change)

Boundary Ck nr Porthill, ID – No Corrections

Moyie R at Eastport, ID – No Corrections

Smith Creek nr Porthill, ID – No Corrections

Clark Fork R at Whitehorse Rapids, ID
+ Hungry Horse (Storage Change)
+ Flathead Lake (Storage Change)
+ Noxon Rapids Resv (Storage Change)

Pend Oreille Lake Inflow, ID
+ Pend Oreille R at Newport, WA
+ Hungry Horse (Storage Change)
+ Flathead Lake (Storage Change)
+ Noxon Rapids (Storage Change
+ Pend Oreille Lake (Storage Change)
+ Priest Lake (Storage Change)

Priest R nr Priest R, ID
+ Priest Lake (Storage Change)

NF Coeur d'Alene R at Enaville, ID - No Corrections

St. Joe R at Calder, ID - No Corrections

Spokane R nr Post Falls, ID
+ Coeur d'Alene Lake (Storage Change)

Spokane R at Long Lake, WA
+ Coeur d'Alene Lake (Storage Change)
+ Long Lake, WA (Storage Change)

Clearwater River Basin

Selway R nr Lowell - No Corrections

Lochsa R nr Lowell - No Corrections

Dworshak Resv Inflow, ID
+ Clearwater R nr Peck, ID
- Clearwater R at Orofino, ID
+ Dworshak Resv (Storage Change)

Clearwater R at Orofino, ID - No Corrections

Clearwater R at Spalding, ID
+ Dworshak Resv (Storage Change)

Salmon River Basin

Salmon R at Salmon, ID - No Corrections

Lemhi R nr Lemhi, ID – No Corrections

MF Salmon R at MF Lodge, ID – No Corrections

Salmon R at White Bird, ID - No Corrections

Weiser, Payette, Boise River Basins

Weiser R nr Weiser, ID - No Corrections

SF Payette R at Lowman, ID - No Corrections

Deadwood Resv Inflow, ID
+ Deadwood R blw Deadwood Resv nr Lowman
+ Deadwood Resv (Storage Change)

Lake Fork Payette R nr Mccall, ID – No Corrections

NF Payette R at Cascade, ID
+ Cascade Resv (Storage Change)
+ Payette Lake (Storage Change)

NF Payette R nr Banks, ID
+ Cascade Resv (Storage Change)
+ Payette Lake (Storage Change)

Payette R nr Horseshoe Bend, ID
+ Cascade Resv (Storage Change)
+ Deadwood Resv (Storage Change)
+ Payette Lake (Storage Change)

Boise R nr Twin Springs, ID - No Corrections

SF Boise R at Anderson Ranch Dam, ID
+ Anderson Ranch Resv (Storage Change)

Boise R nr Boise, ID
+ Anderson Ranch Resv (Storage Change)
+ Arrowrock Resv (Storage Change)
+ Lucky Peak Resv (Storage Change)

Wood and Lost River Basins

Big Wood R at Hailey, ID - No Corrections

Big Wood R abv Magic Resv, ID
+ Big Wood R nr Bellevue, ID
+ Willow Ck

Camas Ck nr Blaine – No Corrections

Big Wood R blw Magic Dam nr Richfield, ID
+ Magic Resv (Storage Change)

Little Wood R abv High Five Ck, ID – No Corrections

Little Wood R nr Carey, ID
+ Little Wood Resv (Storage Change)

Big Lost R at Howell Ranch, ID - No Corrections

Big Lost R blw Mackay Resv nr Mackay, ID
+ Mackay Resv (Storage Change)

Little Lost R blw Wet Ck nr Howe, ID - No Corrections

Upper Snake River Basin

Henrys Fork nr Ashton, ID
+ Henrys Lake (Storage Change)
+ Island Park Resv (Storage Change)

Henrys Fork nr Rexburg, ID
+ Henrys Lake (Storage Change)
+ Island Park Resv (Storage Change)
+ Grassy Lake (Storage Change)
+ Diversions from Henrys Fk btw Ashton to St. Anthony, ID
+ Diversions from Henrys Fk btw St. Anthony to Rexburg, ID
+ Diversions from Falls R abv nr Ashton, ID
+ Diversions from Falls R nr Ashton to Chester, ID

Falls R nr Ashton, ID
+ Grassy Lake (Storage Change)
+ Diversions from Falls R abv nr Ashton, ID

Teton R nr Driggs, ID - No Corrections

Teton R nr St. Anthony, ID
- Cross Cut Canal into Teton R
+ Sum of Diversions for Teton R abv St. Anthony, ID

Snake R nr Moran, WY
+ Jackson Lake (Storage Change)

Pacific Ck at Moran, WY – No Corrections

Snake R abv Palisades, WY
+ Jackson Lake (Storage Change)

Greys R abv Palisades, WY – No Corrections
Salt R abv Palisades, WY – No Corrections
Snake R nr Irwin, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Snake R nr Heise, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Willow Ck nr Ririe, ID
+ Ririe Resv (Storage Change)
Blackfoot Resvervoir Inflow, ID
+ Blackfoot Reservoir releases
+ Blackfoot Resv (Storage Change
Snake R nr Blackfoot, ID
+ Palisades Resv (Storage Change)
+ Jackson Lake (Storage Change)
+ Diversions from Snake R btw Heise and Shelly
+ Diversions from Snake R btw Shelly and Blackfoot
Portneuf R at Topaz, ID - No Corrections
American Falls Resv Inflow, ID
+ Snake River at Neeley
+ All Corrections made for Henrys Fk nr Rexburg, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
+ Diversions from Snake R btw Heise and Shelly
+ Diversions from Snake R btw Shelly and Blackfoot

Southside Snake River Basins

Oakley Resv Inflow, ID
+ Goose Ck abv Trapper Ck
+ Trapper Ck nr Oakley
Salmon Falls Ck nr San Jacinto, NV - No Corrections
Bruneau R nr Hot Springs, ID - No Corrections
Owyhee R nr Gold Ck, NV
+ Wildhorse Resv (Storage Change)
Owyhee R nr Owyhee, NV
+ Wildhorse Resv (Storage Change)
Owyhee R nr Rome, OR – No Corrections
Owyhee Resv Inflow, OR
+ Owyhee R blw Owyhee Dam, OR
+ Owyhee Resv (Storage Change)
+ Diversions to North and South Canals
Succor Ck nr Jordan Valley, OR - No Corrections
Snake R at King Hill, ID - No Corrections
Snake R nr Murphy, ID - No Corrections
Snake R at Weiser, ID - No Corrections
Snake R at Hells Canyon Dam, ID
+ Brownlee Resv (Storage Change)

Bear River Basin

Bear R nr UT-WY Stateline, UT – No Corrections
Bear R abv Resv nr Woodruff, UT – No Corrections
Smiths Fork nr Border, WY - No Corrections
Bear R blw Stewart Dam nr Montpelier, ID
+ Bear R blw Stewart Dam
+ Rainbow Inlet Canal

Reservoir Capacity Definitions (Units in 1,000 Acre-Feet, KAF)

Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. This table lists volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. **(Revised Dec. 2005)**

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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