United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report
April 1, 2006

"In 1906 I offered to climb Mount Rose every month for a year to obtain temperatures on mountaintops. The United States Weather Bureau furnished the thermometers, the Adams Fund was available for research in agriculture, and the Nevada Agricultural Experiment Station was willing. The Study of snow was begun."
-Dr. James E. Church, The Snow Surveyors' Forum, Western Snow Conference, 1952.

This winter marks the centennial for snow survey in the western United States. Pictured to the right is Dr. James E. Church, the late classics professor at the University of Nevada - Reno, who is considered the father of snow surveys. In addition to setting up the first snow courses near Lake Tahoe, he is also responsible for inventing the first snow measurement tubes in 1909 and for making the first water supply forecast for Lake Tahoe in 1910.

The snow survey effort became a cooperative program in 1935 as a result of the dust bowl, when Congress appropriated $36,000 to the U.S. Department of Agriculture to conduct snow surveys for the purpose of forecasting irrigation water supplies and developing uniform equipment and methods for snow surveying and water supply forecasting. Over the years the program has expanded to include over 800 snow courses, more than 730 automated SNOTEL weather stations, and streamflow forecasting for 1300 points. The Idaho Snow Survey Data Collection Office alone collects nearly 10 MILLION data points annually!

The fascinating history of the NRCS Snow Survey Program, including stories and pictures of actual surveys, helicopter accidents, avalanches, moose attacks, economic analyses, floods, droughts, and saving the farm is being presented in weekly articles at:

http://www.wcc.nrcs.usda.gov/centennial.html

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

For more water supply and resource management information, or to subscribe to this publication

Contact - - Your local Natural Resources Conservation Service Office
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http://www.id.nrcs.usda.gov/snow/

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

IDAHO WATER SUPPLY OUTLOOK REPORT

April 1, 2006

SUMMARY

What a difference a year can make! Last April the entire state was mostly below 80% of average snowpack, this year the entire state is above 100%, the first time we have seen that since 1997! With the main snow accumulation season now behind us and the soils already quite wet, it will be an excellent water supply season this summer once the snowmelt begins. It might even be too good a water supply, some areas in central and southern Idaho are near record high snowpack and there is a real possibility of dangerous high flows depending on the weather patterns during the active snowmelt period. Abundant rain in southwest Idaho and southeast Oregon this first week in April is already causing excess low elevation snowmelt sending some rivers near and above flood stage. The Weiser, Camas, Little Wood and Owyhee basins hold a great deal of low and mid-elevation snow so any rain or warm temperatures over the next few weeks may cause real problems in those areas. Most other basins should be OK until the higher elevation snowpack starts melting and streams peak again in late May or early June.

SNOWPACK

March brought another month of winter to Idaho. Colder temperatures and a moist storm track steadily added to the snowpack in all basins. The Panhandle and Clearwater regions have the lowest snowpack in Idaho when compared against long term averages, however both of these basins still reached 100% of average by April 1. The rest of Idaho and the upper Snake in Wyoming are mainly in the 110 – 130% of average snowpack range with some notable exceptions. The Weiser, South Fork Boise, Big Wood, Little Wood and Big Lost are all in the 130 – 140% range, while the real ones to watch are Camas Creek (Fairfield) at 160%, Willow Creek (Ririe) at 145%, the Raft, Oakley and Salmon Falls between 138 and 144%, and the Bruneau and Owyhee basins at a whopping 156% of average! Some individual snow course and SNOTEL sites are at record high April 1 levels in the Weiser, Wood and Oakley basins with others scattered around showing fourth or fifth highest in the last 40 years. Overall, this is the biggest snow year since 1997.

PRECIPITATION

Mountain precipitation at SNOTEL stations was around 80% of normal north of the Salmon river, about 90% of average in the upper Snake region, and from 105 – 130% elsewhere around the state. Storms during the month were frequently out of the south and southwest which really favored the southern edge of the state and the Wood and Lost River basins. Those areas received almost 130% of the normal March amounts, highest in the state. The rest of central Idaho and the Bear River basin were in the range of 110 to 120% of normal. Temperatures remained relatively cold during March, allowing

additional snow to continue accumulating at the low and mid elevations, setting the stage for quick and flashy runoff from low elevation tributaries with any incoming rain or warming weather. Water year to date (since October 1) precipitation totals range from 100% of normal in the Panhandle region to 136% of average in the basins south of the Snake River, with most of central Idaho in the 125 to 130% of average range.

RESERVOIRS

Reservoir storage is looking very good with many in eastern, central and southern Idaho (and Owyhee) making releases to maintain space for this spring's abundant runoff. Most reservoirs across the state range from 70-110% of average. Little Wood is the lowest in terms of percent full at 18% of capacity, but that is good, having released extra water last month to create more space for the high water to come. Bear Lake, Salmon Falls, Blackfoot and Arrowrock are next lowest around 30% full, but the forecast for high runoff in those areas means the extra space is more a benefit than a detriment! Most reservoirs are expected to fill or come close to filling except for Bear Lake which was so low during the last six dry years that it still needs a couple more good runoff years to bring it back up to normal. As a result of the good snowpack and promising streamflow forecasts, reservoirs should remain full longer into the summer months.

Although NRCS does not advocate "flood sightseeing" an interesting hydrologic event is occurring and will continue until high water subsides at the Owyhee Reservoir dam. The spillway from Owyhee Reservoir is what is commonly called a "glory hole", a vertical circular structure about 40 feet in diameter. Water overflowing the spillway drops more than 300 feet into a tunnel and enters the Owyhee River downstream from the dam. It is now running about 5,000 cfs (April 4) and will probably get higher. It is an unusual spillway design on very few reservoirs nationwide and can be raised and lowered to control the water level. The last time water was released down the glory hole was in 1998.

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

Streamflow forecasts are generally higher than last month due to the above normal precipitation during March. The Panhandle and Clearwater forecasts however, remain about the same as last month and range from 90 to 110% of the normal volumes for the April through September period, the lowest in the state. From the Big Lost basin east through the Henrys Fork and upper Snake, all forecasts are in the 110 to 120% of normal range. Higher yet are the Weiser, Middle Fork Salmon, Boise near Boise, Payette near Horseshoe Bend, and Owyhee near Rome in the 130 to 150% range. But they don't stop there; the highest forecasts are over 150% of average. Big Wood below Magic Dam is forecast at 166% and Camas Creek near Blaine is 189% of normal for the April through July period, highest in the state. Oakley Reservoir inflow is projected at 179% of average, Salmon Falls Creek is 181% and the Bruneau River is forecast at 171%. The Bear River

forecasts are in the 120 to 140% of normal range. The Snake River near Heise is forecast at 111% of average, highest volume since 1999. Surface water supplies should be more than adequate for Idaho's numerous water users, except in the Little Lost basin where agricultural supplies may be marginal due to the near average forecast. Those basins where forecasts are above 130% of average have the potential for extreme high water this year depending on the weather regime as we get into the real snowmelt season. Those living near these areas should be aware of this possibility and prepare accordingly.

RECREATION

Rip roaring whitewater, awesome spring skiing and snowmobiling, a long and fun water skiing and lake boating season, this is what makes Idaho a recreation paradise, especially in a great snow year like the winter of 2005–2006. River running opportunities will be outstanding this year ranging from the early season desert canyon streams to the thrilling mid-season high water runs, into the expected prolonged above average flows through late summer on the main Salmon and finishing up with early fall controlled releases from Cascade and Palisades reservoirs into the Payette and South Fork Snake rivers. This should be one of the best whitewater seasons in almost ten years! Reservoirs will fill and remain full later into the summer for ideal water skiing, boating and fishing opportunities. Wow!

There are however, just a few drawbacks in a year like this. River runners should use caution as water levels could be very high during the peak flow period and carrying debris from recent forest fires. This potentially dangerous peak flow period usually lasts about a week when it does occur, but it is hard to predict exactly which week. Use caution and know your limits when floating as spring rains will cause rapid increases in the already saturated watersheds. The good snowpack will provide an extended river running season AFTER peak flows occur and rivers return to more moderate levels. Another drawback is the persistence of deep snow in the high country will make many roads and trails inaccessible until possibly mid July. And the avid fly fisher folks may also have to wait later in the summer to see optimal stream fishing conditions. Hey, small sacrifice, overall this will be a fantastic recreation season in Idaho!

WESTERN SNOW CONFERENCE

A tradition started in 1932 to share information about measuring snow and predicting streamflow for snowmelt dominated streams in the western U.S. This tradition became the Western Snow Conference. The 74th annual conference will be in Las Cruces, New Mexico April 17-20, 2006. Today, the Western Snow Conference provides an international forum for individuals and organizations to share their research and information on snow hydrology. This year's theme is "New Technologies Applied to Understanding Snow Processes and Improving Forecasting". Additional information for registration and lodging is on the Western Snow Conference web page at: http://www.westernsnowconference.org/

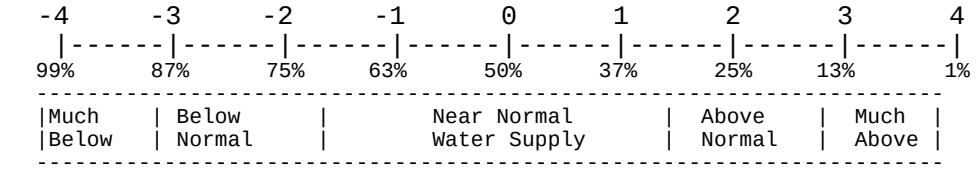
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of April 1, 2006

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.0 (abundant supply) to -4.0 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences. The SWSI analysis period is from 1971 to present.

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

BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-0.8	1983	NA
CLEARWATER	1.9	1999	NA
SALMON	1.4	1999	NA
WEISER	2.2	1999	NA
PAYETTE	2.2	1999	NA
BOISE	1.7	1996	-2.1
BIG WOOD	2.4	1998	-0.5
LITTLE WOOD	2.4	1997	-2.0
BIG LOST	2.4	1998	-0.5
LITTLE LOST	0.2	1980	0.0
HENRYS FORK	0.7	1993	-3.3
SNAKE (HEISE)	1.0	1998	-1.8
OAKLEY	3.5	1975	-1.0
SALMON FALLS	2.4	1976	-1.5
BRUNEAU	3.4	1975	NA
BEAR RIVER	-1.8	1990	-3.5

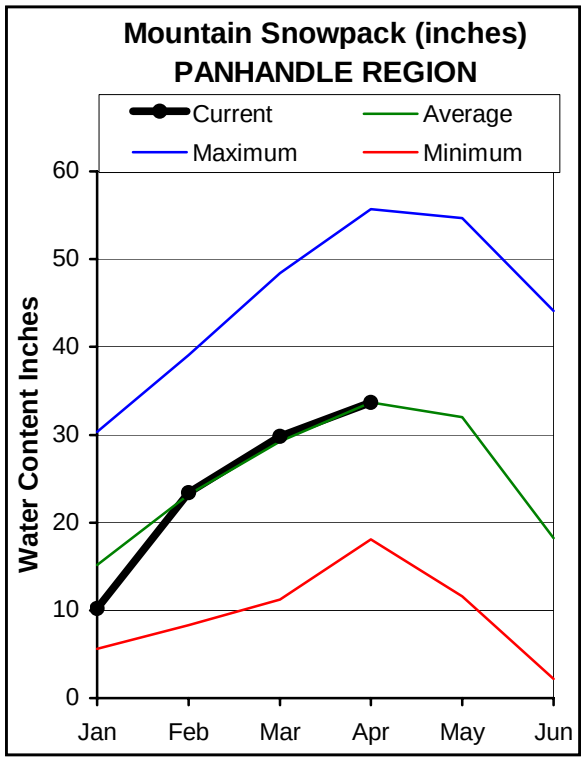
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

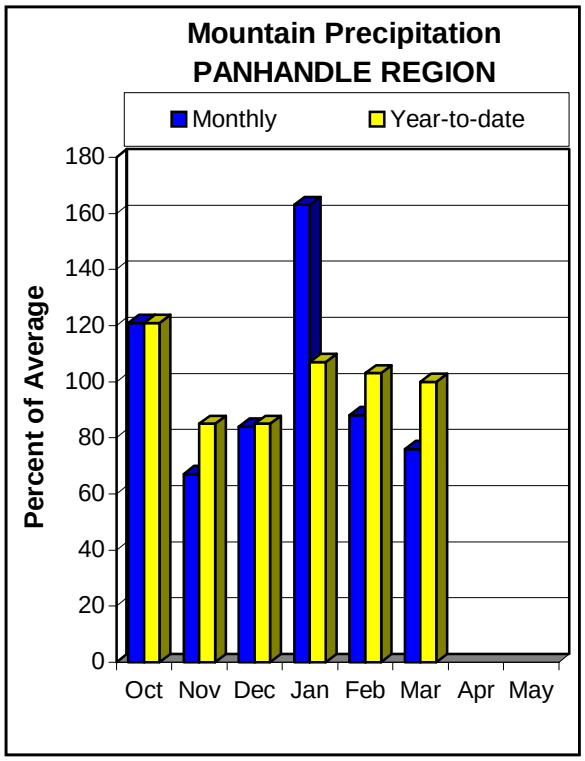


NA = Not Applicable

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

PANHANDLE REGION
APRIL 1, 2006





WATER SUPPLY OUTLOOK

March precipitation was the lowest in the state at 76% of average and below average for the fourth month this water year. Water year to date precipitation is right at average, but remains the lowest in the state. Snow still exists at many low elevation sites that had melted out by this time last year. Higher elevation locations have about twice last year's snow. Most basins are reporting near average snow water content levels except in the Palouse basin which is 75% of average while Priest and Rathdrum basins are 120%. Streamflow forecasts mirror the snow levels but are forecast at slightly smaller percentages with the Coeur d'Alene and St. Joe rivers which feed the Spokane River all at 90% of average. Pend Oreille Lake Inflow is forecast at 98% of average and the highest forecast is for Smith Creek at 108% of average.

PANHANDLE REGION
Streamflow Forecasts - April 1, 2006

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)
KOOTENAI at Leonia (1,2)	APR-JUL	5640	6270	6550	93	6830	7460	7040
	APR-SEP	5980	7070	7560	93	8050	9140	8120
MOYIE RIVER at Eastport	APR-JUL	330	360	380	94	400	430	405
	APR-SEP	340	375	395	94	415	450	420
SMITH CREEK	APR-JUL	111	124	133	108	142	155	123
	APR-SEP	116	131	141	109	151	166	129
BOUNDARY CREEK	APR-JUL	106	119	127	103	135	148	123
	APR-SEP	111	124	133	103	142	155	129
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	8690	10350	11100	98	11850	13510	11300
	APR-SEP	9550	11370	12200	98	13030	14850	12500
PEND OREILLE Lake Inflow (2)	APR-JUL	10450	11670	12500	98	13330	14550	12700
	APR-SEP	11360	12690	13600	98	14510	15840	13900
PRIEST near Priest River (1,2)	APR-JUL	705	795	835	103	875	970	815
	APR-SEP	670	820	890	102	955	1105	870
NF COEUR D'ALENE RIVER AT ENAVILLE	APR-JUL	520	605	665	90	725	810	740
	APR-SEP	550	640	700	90	760	850	780
ST. JOE at Calder	APR-JUL	855	960	1030	90	1100	1200	1140
	APR-SEP	910	1020	1090	91	1160	1270	1200
SPOKANE near Post Falls (2)	APR-JUL	1850	2130	2320	91	2510	2790	2550
	APR-SEP	1920	2210	2410	91	2610	2900	2650
SPOKANE at Long Lake (2)	APR-JUL	2010	2350	2580	91	2810	3150	2850
	APR-SEP	2200	2560	2800	91	3040	3400	3070

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2688.0	3164.0	1886.7
FLATHEAD LAKE	1791.0	664.7	1153.0	738.5
NOXON RAPIDS	335.0	308.9	326.6	272.9
PEND OREILLE	1561.3	862.6	916.5	763.6
COEUR D'ALENE	238.5	132.9	189.5	169.5
PRIEST LAKE	119.3	54.2	59.9	65.5

PANHANDLE REGION
Watershed Snowpack Analysis - April 1, 2006

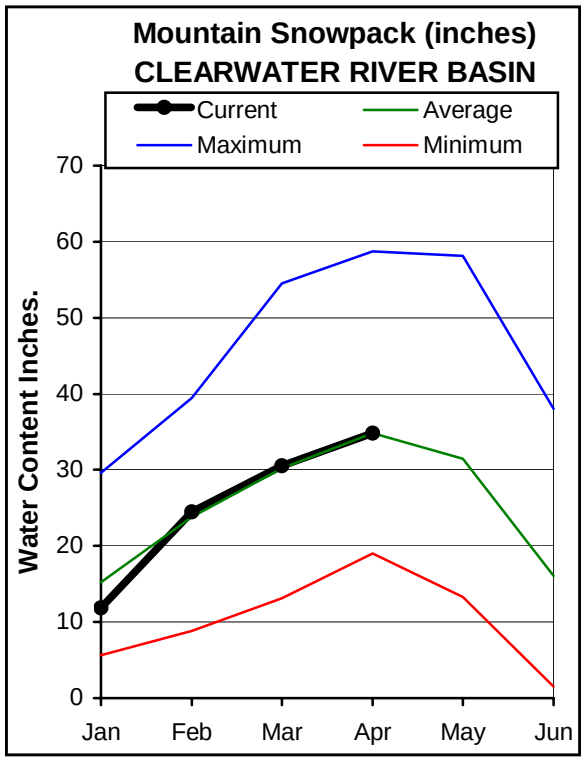
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	37	182	98
Moyie River	11	149	95
Priest River	5	213	120
Pend Oreille River	104	194	102
Rathdrum Creek	2	1841	124
Hayden Lake	1	0	102
Coeur d'Alene River	10	228	101
St. Joe River	6	197	97
Spokane River	15	239	100
Palouse River	2	1990	75

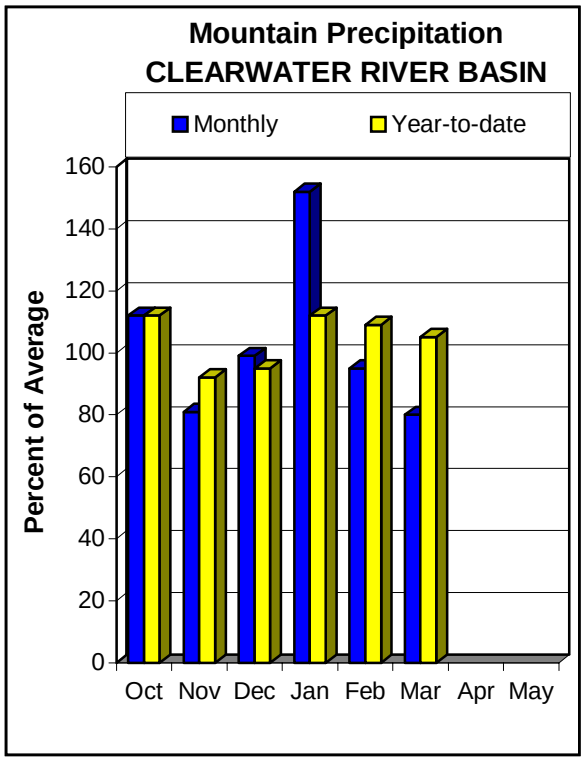
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 volume - actual volume may be affected by upstream water management.

CLEARWATER RIVER BASIN
APRIL 1, 2006





WATER SUPPLY OUTLOOK

March precipitation was below average for the second consecutive month at 80% of average. This is the fourth month with below average precipitation this water year. Precipitation for the water year is 105% of average, 50% better than last year, but nothing to brag about. Snowpacks range from 97% of average for the North Fork Clearwater basin to 110% for the Selway basin. The Lochsa basin is 103% of average. Overall, the Clearwater basin is normal at 99% of average with the snowpack better than 2003 but less than 2002. Dworshak Reservoir is 69% full, 109% of average. The Dworshak Reservoir inflow forecast is 96% of average. The Lochsa and Selway rivers are forecast at about 105% of average. The Clearwater River at Spalding is forecast at 104% of average. Water supplies should be adequate, however a wet spring would ensure stream runoff volumes are above average this year.

CLEARWATER RIVER BASIN
Streamflow Forecasts - April 1, 2006

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 near Lowell	APR-JUL	1940	2080	2180	106	2280	2420	2060
	APR-SEP	2040	2190	2300	106	2410	2560	2170
LOCHSA near Lowell	APR-JUL	1430	1540	1610	105	1680	1790	1530
	APR-SEP	1500	1610	1690	105	1770	1880	1610
DWORSHAK RESV INFLOW (1,2)	APR-JUL	1920	2350	2540	96	2730	3160	2640
	APR-SEP	2070	2500	2690	96	2880	3310	2800
CLEARWATER at Orofino (1)	APR-JUL	3600	4470	4870	105	5270	6140	4650
	APR-SEP	3850	4720	5120	105	5520	6390	4900
CLEARWATER at Spalding (1,2)	APR-JUL	5910	7130	7690	104	8250	9470	7430
	APR-SEP	6320	7540	8100	103	8660	9880	7850

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2401.9	3083.6	2205.4

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - April 1, 2006

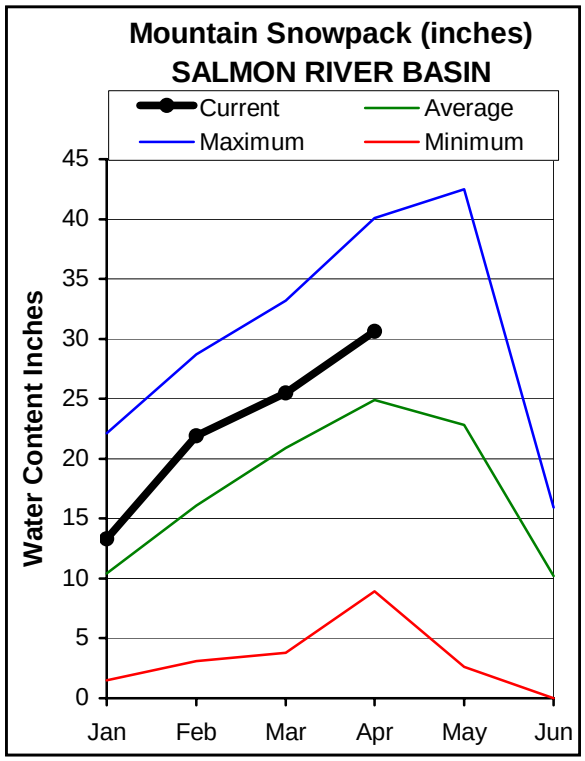
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	180	97
Lochsa River	4	217	103
Selway River	6	220	110
Clearwater Basin Total	19	196	99

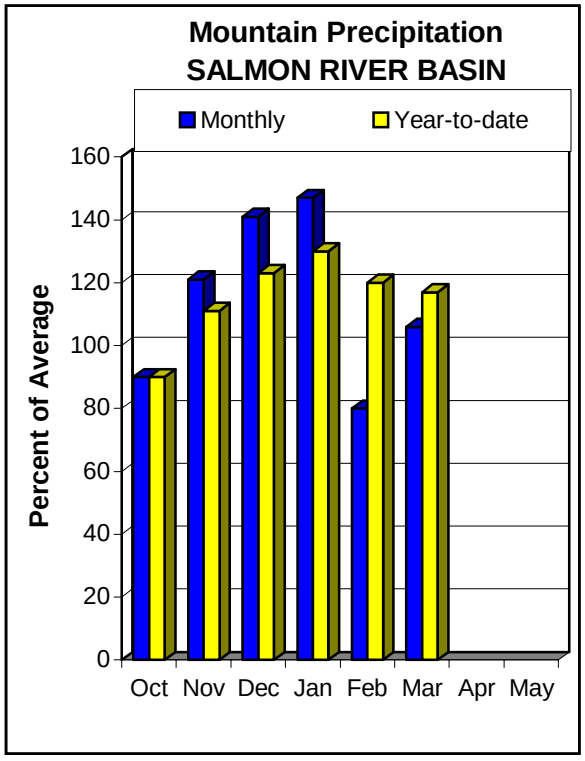
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 volume - actual volume may be affected by upstream water management.

SALMON RIVER BASIN
APRIL 1, 2006





WATER SUPPLY OUTLOOK

March precipitation was generally above average on the western and southern part of the basin and below average in the Lemhi basin area. Overall, precipitation was 106% of average in March and is 117% for the water year. Snowpack percentages are 107% of average in the Lemhi, and 120-125% for the Middle Fork, South Fork, Salmon River above Salmon, and Little Salmon basins. There is about twice the amount of snow water in the mountains as last year and the highest since 1999. Deadwood Summit SNOTEL site, located in central Idaho, is 119% of average with 55.6 inches of snow water, average is 46.6 inches. Record high amounts occurred on April 1 1974 with 88.6 inches. The Middle Fork Salmon River is forecast at 139% of average. Salmon River above Salmon is forecast at 125% and Lemhi River is forecast at 102%. The Salmon River at White Bird is forecast at 119% of average. With the snowpack similar to 1999, runoff volumes should also be similar to 1999 when the April-July runoff volume was 121% of average. Peak streamflow in 1999 occurred on May 30 at 80,900 cfs and a second peak on June 19 at 71,100 cfs. The Middle Fork Salmon River also had dual peaks on similar days at 12,500 (over 7.5 feet) and 8,700 cfs, and returned to 2 feet, around 900 cfs, in mid-August. With the good snow, there will be extended period of high water and a longer floating season on the Salmon River and its tributaries.

SALMON RIVER BASIN
Streamflow Forecasts - April 1, 2006

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)	APR-JUL	760	970	1070	125	1170	1380	855
	APR-SEP	930	1140	1240	124	1340	1550	1000
Lemhi River nr Lemhi	APR-JUL	64	78	88	102	99	116	86
	APR-SEP	75	93	107	102	122	145	105
MF Salmon at MF Lodge	APR-JUL	878	1002	1090	139	1182	1324	785
	APR-SEP	975	1112	1210	138	1312	1470	875
SALMON at White Bird (1)	APR-JUL	5570	6530	6960	119	7390	8350	5850
	APR-SEP	6320	7280	7710	119	8140	9100	6480

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

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

SALMON RIVER BASIN
Watershed Snowpack Analysis - April 1, 2006

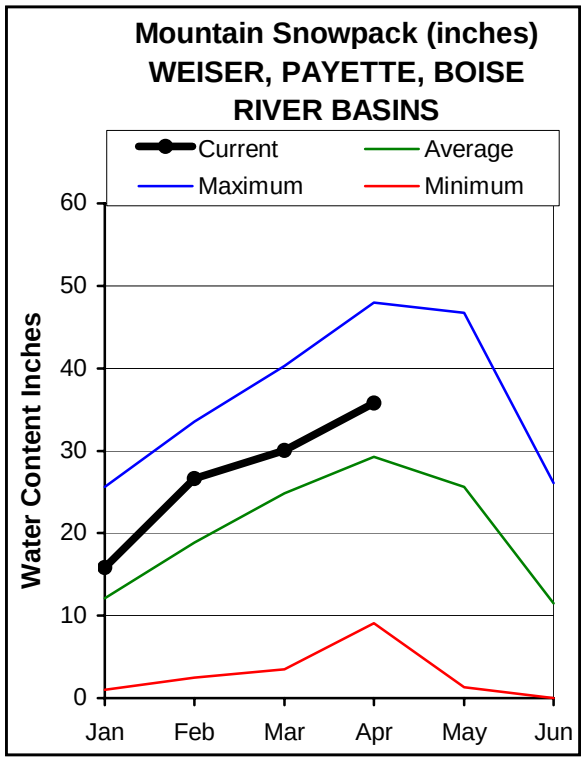
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	11	200	123
Lemhi River	11	173	107
Middle Fork Salmon River	3	205	119
South Fork Salmon River	3	206	121
Little Salmon River	4	204	125
Salmon Basin Total	32	195	117

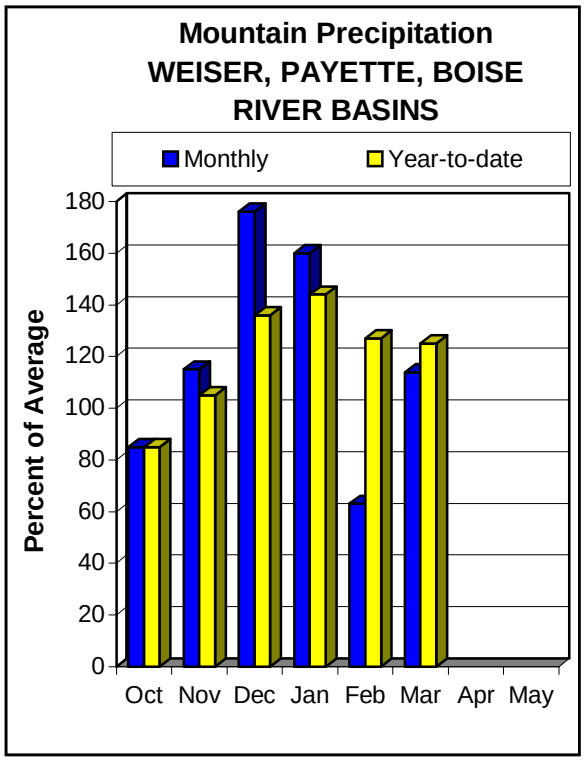
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 volume - actual volume may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS
APRIL 1, 2006





WATER SUPPLY OUTLOOK

March precipitation was greatest in the Weiser basin at 145% of average with Bear Saddle SNOTEL site, located 7 miles west of Cambridge, receiving 176%. Precipitation and snow water content at Bear Saddle are near record highs, 150% of average. Elsewhere, March precipitation was 110% of average in the Payette and Boise basins. Water year to date precipitation is 133% in the Weiser basin and 125% in the Payette and Boise basins. Snowpack is 150% of average in the Mann Creek, 135% in Weiser and South Fork Boise, and 125% in Boise and Payette basins. Reservoir releases to maintain space for snowmelt runoff are being made in the Boise and Payette systems. Streamflow forecasts are for 130% of average for the Payette River near Horseshoe Bend, 141% for the Boise River near Boise, and 142% for the Weiser River. The above normal precipitation has saturated soils. Cooler mountain temperatures are keeping moisture falling as snow in the higher elevations in early April. Streams will remain above average through the runoff season. Any additional future precipitation will only add more volume to the already predicted high volumes.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - April 1, 2006

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 near Weiser (1)	APR-SEP	420	540	595	142	650	770	420
SF PAYETTE at Lowman	APR-JUL	500	535	560	127	585	620	440
	APR-SEP	555	600	625	126	650	695	495
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	147	164	172	128	180	196	134
	APR-SEP	157	174	182	128	190	207	142
LAKE FORK PAYETTE near McCall	APR-JUL	97	105	110	129	115	123	85
	APR-SEP	102	110	115	129	120	128	89
NF PAYETTE at Cascade (1,2)	APR-JUL	545	625	660	127	695	775	520
	APR-SEP	570	650	685	127	720	800	540
NF PAYETTE nr Banks (2)	APR-JUL	715	790	840	130	890	965	645
	APR-SEP	760	845	900	130	955	1035	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	1790	2000	2090	130	2180	2390	1610
	APR-SEP	1910	2160	2280	130	2400	2650	1750
BOISE near Twin Springs (1)	APR-JUL	715	800	835	132	870	955	635
	APR-SEP	785	870	905	131	940	1025	690
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	665	735	770	143	805	875	540
	APR-SEP	725	795	830	143	865	935	580
MORES CREEK near Arrowrock Dam	APR-JUL	179	194	205	157	216	231	131
	APR-SEP	188	204	215	157	226	242	137
BOISE near Boise (1,2)	APR-JUN	1610	1730	1780	141	1830	1950	1260
	APR-JUL	1690	1900	1990	141	2080	2290	1410
	APR-SEP	1860	2070	2160	141	2250	2460	1530

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	10.2	7.9	8.8
CASCADE	693.2	409.3	502.5	428.8
DEADWOOD	161.9	78.1	77.1	91.6
ANDERSON RANCH	450.2	228.7	218.0	262.8
ARROWROCK	272.2	70.5	172.9	204.5
LUCKY PEAK	293.2	113.6	126.9	162.6
LAKE LOWELL (DEER FLAT)	165.2	87.2	108.7	126.9

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - April 1, 2006

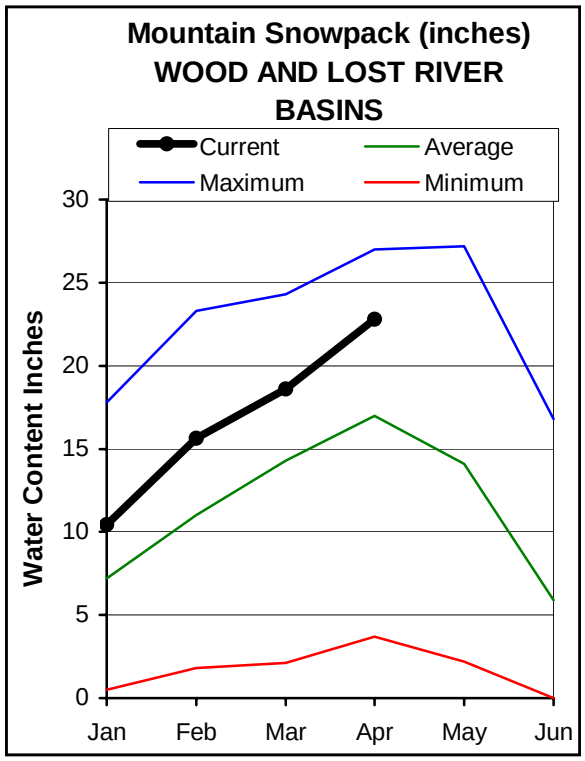
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	2	302	164
Weiser River	5	239	133
North Fork Payette	8	212	123
South Fork Payette	5	208	121
Payette Basin Total	14	204	122
Middle & North Fork Boise	5	214	121
South Fork Boise River	9	205	134
Mores Creek	5	218	127
Boise Basin Total	16	213	129
Canyon Creek	2	179	186

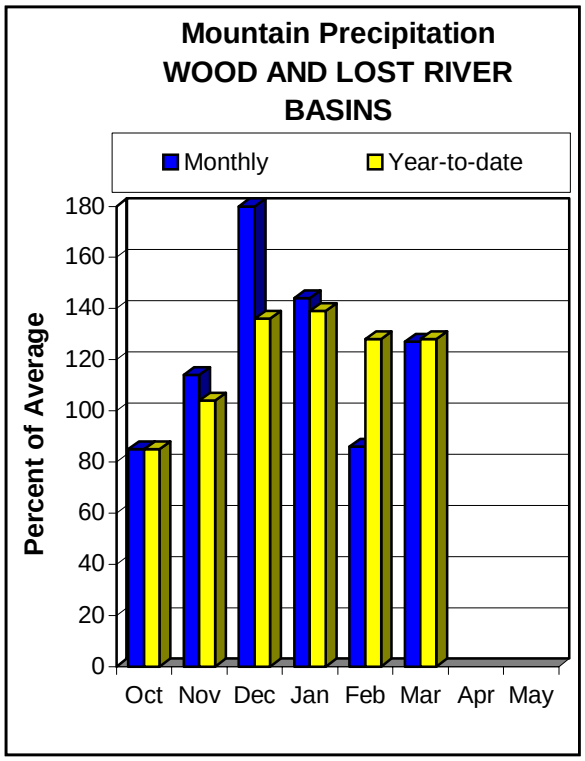
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 volume - actual volume may be affected by upstream water management.

WOOD and LOST RIVER BASINS
APRIL 1, 2006





WATER SUPPLY OUTLOOK

March precipitation made up for the below normal amounts in February with the central mountains receiving 126% of average, highest in the state. Amounts ranged from 120-160% of average for the 19 SNOTEL sites in these basins. Water year to date precipitation is 127% and it shows with the highest snowpacks in Camas Creek at 160% of average. Soldier RS SNOTEL site has the 8th highest snowpack since records start in 1938. Galena Summit SNOTEL at 157% of average is the highest since measurements start in 1949. Fishpole Lake snow course in the Big Lost basin has 33.9 inches of snow water and is the 5th highest since records start in 1961; only years 1983, 1997, 1995 and 1969 (from high to low) had more snow. Big Lost, Big Wood, Little Wood and Fish Creek basins are 135-140% of average. Snowpacks are just above average along the Montana border with Little Lost basin at 117% of average and Birch-Medicine Lodge basins at 107%. Magic Reservoir is 44% full and starting to release water as inflows are forecast at 172% of average. Little Wood Reservoir is 18% full and has been releasing water with its inflow forecast at 154% of average. Little Lost River is forecast 107% of average. Mackay Reservoir started releasing water and is 76% full, which is about average; inflow is forecast at 125% of average. The range of seasonal flows varies in the Big Lost River basin depending on groundwater levels and spring precipitation. Other similar snow years in the Big Lost are 1995 when April-June precipitation was 162% of average and runoff volume was 158% and 1999 when spring precipitation was 91% and runoff volume was 114%. April's weather will be critical in determining if snow continues accumulating or if the spring melt begins. With April beginning and projected to be wet and cool, water managers may wish to consider using the forecast under Future Wetter Conditions, 10 and 30% Chance of Exceedance based on their level of risk.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - April 1, 2006

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 at Hailey (1)	APR-JUL	289	350	380	149	411	484	255
	APR-SEP	327	396	430	148	465	547	290
BIG WOOD ab Magic Reservoir	APR-JUL	214	268	310	163	356	432	190
	APR-SEP	275	310	335	164	360	395	204
CAMAS CREEK near Blaine	APR-JUL	150	173	189	189	206	232	100
	APR-SEP	151	174	190	188	207	233	101
BIG WOOD below Magic Dam (2)	APR-JUL	415	465	500	172	535	585	290
	APR-SEP	435	490	525	172	560	615	305
LITTLE WOOD R ab High Five Ck	APR-JUL	94	109	120	154	131	149	78
	APR-SEP	102	118	130	153	142	161	85
LITTLE WOOD near Carey (2)	APR-JUL	113	126	134	154	142	155	87
	APR-SEP	123	136	145	154	154	167	94
BIG LOST at Howell Ranch	APR-JUL	171	194	210	121	225	250	173
	APR-SEP	195	220	240	122	260	285	197
BIG LOST bl Mackay Reservoir	APR-JUL	144	163	176	125	189	208	141
	APR-SEP	176	199	215	125	229	254	172
LITTLE LOST bl Wet Creek	APR-JUL	25	30	33	107	36	41	31
	APR-SEP	31	37	41	105	45	51	39

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	77.4	36.4	107.1
LITTLE WOOD	30.0	5.3	20.6	19.4
MACKAY	44.4	33.7	25.4	32.7

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - April 1, 2006

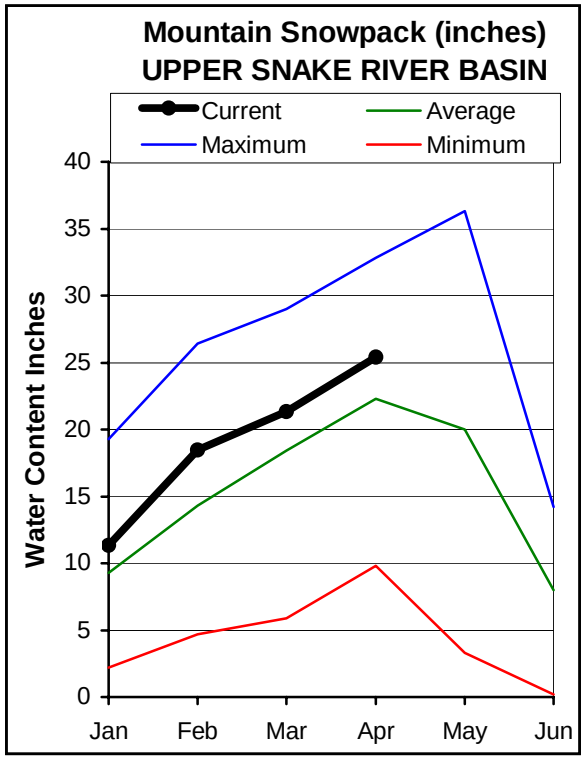
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	8	189	133
Camas Creek	5	230	160
Big Wood Basin Total	13	198	140
Fish Creek	3	157	143
Little Wood River	9	165	139
Big Lost River	7	168	135
Little Lost River	4	183	116
Birch-Medicine Lodge Cree	4	134	107
Camas-Beaver Creeks	4	122	124

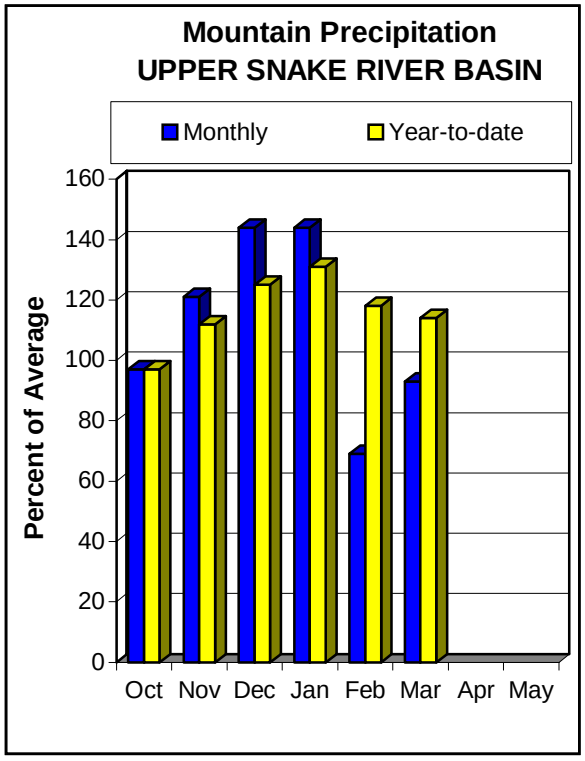
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 volume - actual volume may be affected by upstream water management.

UPPER SNAKE BASINS
APRIL 1, 2006





WATER SUPPLY OUTLOOK

For most of the season the Upper Snake basin has been on the edge of receiving the moisture that has come into southern and central Idaho. March precipitation in the Upper Snake ranged from 125% of average in the lower elevations along the Bear River divide to 70% in the Snake River tributaries in Wyoming. Overall, March precipitation was 93% of average and only below average here and in northern Idaho. Water year to date precipitation is still above average at 113% of average, and better than last year. Snowpacks range from average in the Gros Ventre and Hoback basins to 121% of average in Portneuf basin. Overall the snowpack in Henrys Fork and the Snake above Palisades and American Falls reservoirs is 111% of average. Combined reservoir storage for Palisades and Jackson is 56% of capacity, 89% of average. American Falls Reservoir is nearly full at 90% of capacity while Blackfoot Reservoir is only 29% full, less than half of average. Streamflow forecasts range from 105-125% of average with the Snake River near Heise forecast at 111% of average. With the best snow since 1999, surface water supplies should be adequate even if the minimum forecast of 100% of average occurs at Heise this year. In 1989 the snowpack was similar to this year and in the midst of a drought. Spring precipitation was below average, and the resulting streamflow in 1989 was only 93% of average. Even with a dry spring, there is only a 10 percent chance the volume will be less than the reasonable minimum forecast of 415,000 acre-feet or 100% of average. If the forecasts hold true, this will be the first time since 1999 that the Snake River near Heise April-July volume is above average which will help, but not overcome the remaining groundwater deficits left by the six year drought.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - April 1, 2006

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 near Ashton (2)	APR-JUL	530	575	605	106	635	680	570
	APR-SEP	720	775	810	106	845	900	765
HENRYS FORK near Rexburg (2)	APR-JUL	1470	1610	1700	109	1790	1930	1560
	APR-SEP	1940	2090	2200	110	2310	2460	2010
FALLS RIVER nr Ashton (2)	APR-JUL	345	385	410	108	435	475	380
	APR-SEP	405	455	485	108	515	565	450
TETON RIVER NEAR DRIGGS	APR-JUL	156	176	190	115	204	224	165
	APR-SEP	198	223	240	114	255	280	210
TETON near St. Anthony	APR-JUL	380	430	460	114	490	540	405
	APR-SEP	455	510	545	114	580	635	480
SNAKE at Flagg Ranch	APR-JUL	490	530	555	118	580	620	470
	APR-SEP	540	580	610	118	640	680	515
SNAKE nr Moran (1,2)	APR-JUL	785	865	905	111	945	1025	815
	APR-SEP	860	955	1000	111	1045	1145	905
PACIFIC CREEK at Moran	APR-JUL	157	174	186	109	198	215	171
	APR-SEP	167	185	197	111	207	227	178
SNAKE ab resv nr Alpine (1,2)	APR-JUL	2340	2540	2630	111	2720	2920	2370
	APR-SEP	2680	2920	3030	111	3140	3380	2730
GREYS above Palisades	APR-JUL	340	370	390	115	410	440	340
	APR-SEP	400	435	455	115	475	510	395
SALT near Etna	APR-JUL	325	365	390	115	415	455	340
	APR-SEP	400	450	480	114	510	560	420
SNAKE nr Irwin (1,2)	APR-JUL	3240	3560	3710	111	3860	4180	3330
	APR-SEP	3780	4150	4320	112	4490	4860	3870
SNAKE near Heise (2)	APR-JUL	3550	3790	3950	111	4110	4350	3560
	APR-SEP	4150	4430	4620	111	4810	5090	4160
WILLOW CREEK nr Ririe (2)	APR-JUL	84	99	110	136	122	140	81
BLACKFOOT RESV INFLOW	APR-JUN	119	139	153	128	167	187	120
SNAKE nr Blackfoot (1,2)	APR-JUL	4410	4930	5170	112	5410	5930	4600
	APR-SEP	5530	6050	6290	112	6530	7050	5620
PORTNEUF at Topaz	APR-JUL	88	96	102	126	108	116	81
	APR-SEP	104	113	120	120	127	136	100
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	2710	3450	3780	117	4110	4850	3240
	APR-SEP	3010	3750	4080	116	4410	5150	3510

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	85.6	69.2	85.5
ISLAND PARK	135.2	103.1	94.8	114.6
GRASSY LAKE	15.2	8.6	9.0	12.3
JACKSON LAKE	847.0	419.8	154.8	486.6
PALISADES	1400.0	845.4	710.2	941.5
RIRIE	80.5	47.8	35.9	41.6
BLACKFOOT	348.7	101.0	39.6	229.8
AMERICAN FALLS	1672.6	1508.5	1399.2	1443.2

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	12	150	112
Teton River	8	165	118
Henrys Fork above Rexburg	20	155	114
Snake above Jackson Lake	9	167	111
Gros Ventre River	3	147	97
Hoback River	5	139	101
Greys River	5	143	116
Salt River	5	131	115
Snake above Palisades	28	153	110
Willow Creek	7	186	145
Blackfoot River	5	166	124
Portneuf River	7	149	123
Snake abv American Falls	49	154	116

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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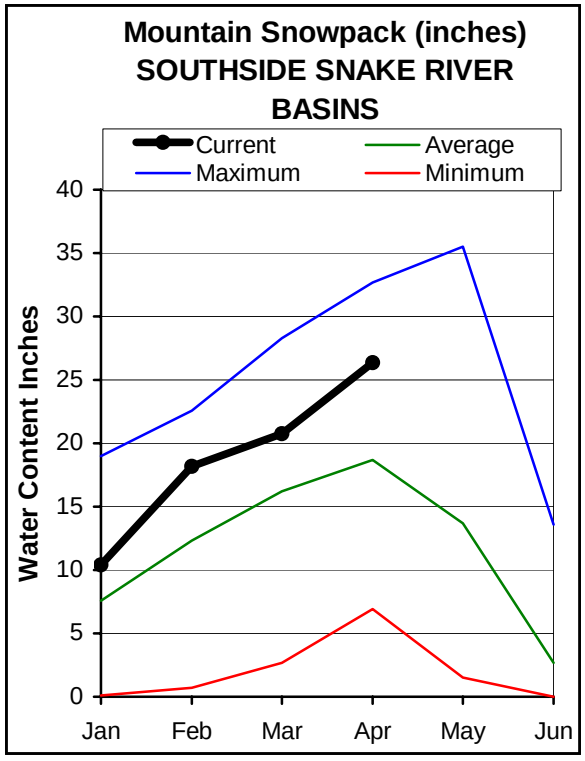
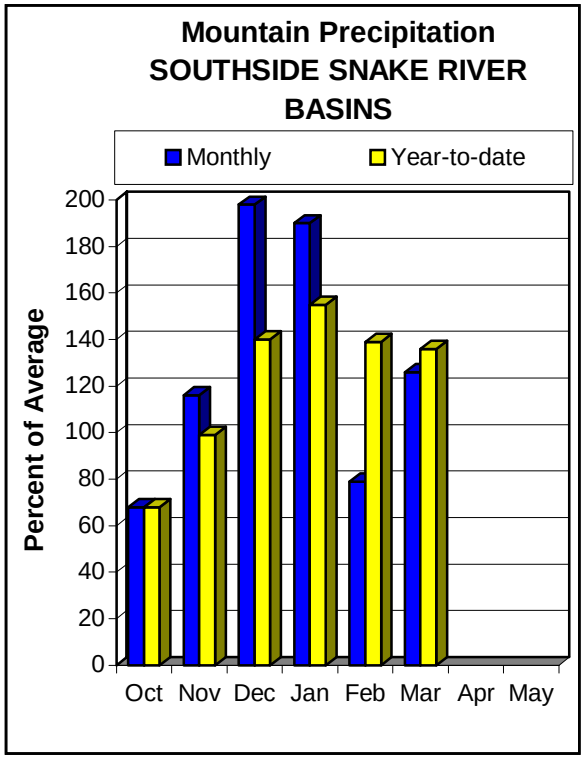
SOUTHSIDE SNAKE RIVER BASINS
APRIL 1, 2006





WATER SUPPLY OUTLOOK

April will be critical in determining if snow continues accumulating or starts melting. The National Weather Service forecasts call for cool and wet for at least the first half of April, which may delay snowmelt and keep the snow in place until warmer temperatures are more likely to occur. With April starting very wet already and projected to continue, river runners and water managers should consider using the forecast under Future Wetter Conditions, 10 and 30% Chance of Exceedance Forecasts, and their risk level to assist in their water management decisions. A quick summary of each basin follows. **Oakley Basin:** Howell Canyon SNOTEL site is 179% of average, tying its record high April 1 value from 1997 based on 56 years of measurements. Basin-wide the snowpack is 152% of average, 4th highest since 1961. Only 1971, 1984 and 1982 (from high to low) had more snow. In 1984 snow continued accumulating until early May while in 1982 and 1997 snow started melting in mid-April. Oakley reservoir has 41,000 acre-feet now, and can hold 75,600. Streamflow forecast is for 179% of average, 48,000 acre-feet, for April-July. This is the summation of Goose and Trapper creeks and does not include Birch Creek. Soils are primed and streamflow has been above average since December. Precipitation since October 1 at Bostetter RS SNOTEL site is at record high since its installation in 1982. **Salmon Falls Basin:** Snow is 137% of average, 5th highest since 1961 and highest since 1984. Streamflow forecast is for 181% of average for April-July, 132,000 acre-feet. The reservoir holds 182,600 acre-feet and currently has 57,400 acre-feet. **Bruneau basin:** Snowpack is 147% of average, 3rd highest since 1961. Only 1984, 1982 and 1975 (from high to low) had more snow. The streamflow forecast is for 171% of average; only years 1971, 1974 and 1984 had higher runoff since 1961 with flows ranging from 200-300% of average. **Owyhee Basin:** Snowpack is 139% of average, highest since 1984. Owyhee River near Gold Creek is forecast at 208% of average and reservoir inflow is at 200%. The reservoir is 81% full. The Owyhee and Bruneau rivers will peak again along with Goose and Salmon Falls creeks; April weather will be critical in determining final fill for Salmon Falls and Oakley reservoirs.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - April 1, 2006

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	APR-JUL	40	47	52	179	57	66	29
	APR-SEP	44	52	57	178	63	72	32
SALMON FALLS CREEK nr San Jacinto	APR-JUN	119	129	136	181	143	153	75
	APR-JUL	126	137	145	181	153	164	80
	APR-SEP	133	144	152	181	160	171	84
BRUNEAU near Hot Spring	APR-JUL	260	312	350	171	390	454	205
	APR-SEP	280	335	375	174	417	484	215
OWYHEE near Gold Creek (2)	APR-JUL	35	45	52	208	60	72	25
	APR-SEP	34	43	50	208	58	70	24
OWYHEE nr Owyhee (2)	APR-JUL	114	134	148	181	162	182	82
OWYHEE near Rome	APR-JUL	612	721	800	211	883	1013	380
OWYHEE RESV INFLOW (2)	APR-JUL	621	725	800	200	879	1002	400
	APR-SEP	666	773	850	198	931	1056	430
SUCCOR CK nr Jordan Valley	APR-JUL	13.6	17.4	20	165	23	27	12.1
SNAKE RIVER at King Hill (1,2)	APR-JUL	1705	2362	2660	91	2960	3615	2940
SNAKE RIVER near Murphy (1,2)	APR-JUL	2095	2779	3090	100	3400	4085	3090
Reynolds Creek nr Tollgate	APR-JUL	9.9	12.0	13.5	165	15.1	17.6	8.2
SNAKE RIVER at Weiser (1,2)	APR-JUL	5803	7004	7550	131	8095	9300	5770
SNAKE RIVER at Hells Canyon Dam (1,2	APR-JUL	6716	8053	8660	133	9265	10600	6490
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	20584	23965	25500	118	27040	30420	21600

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	75.6	41.0	18.5	36.0
SALMON FALLS	182.6	57.4	28.5	70.2
WILDHORSE RESERVOIR	71.5	47.3	19.2	46.2
OWYHEE	715.0	579.8	251.0	593.0
BROWNLEE	1420.0	949.9	1393.4	1029.5

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	6	139	138
Goose-Trapper Creeks	7	160	138
Salmon Falls Creek	8	185	144
Bruneau River	8	187	156
Reynolds Creek	6	184	119
Owyhee Basin Total	20	229	157

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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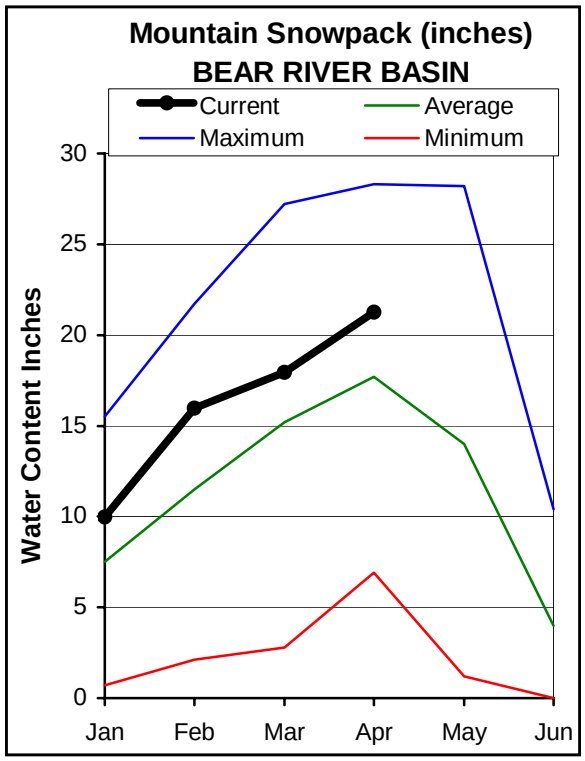
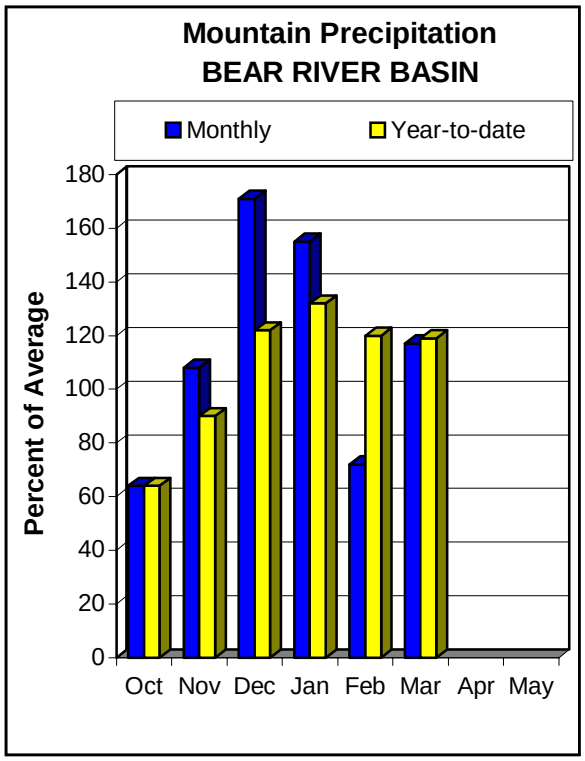
(2) - The value is natural volume - actual volume may be affected by upstream water management.

BEAR RIVER BASIN
APRIL 1, 2006





WATER SUPPLY OUTLOOK

Mountain precipitation during March in the Bear River basin was slightly above average at 109% of average. This kept the water year to date precipitation above average at 118% of average, and still above last year. Most snowpacks decreased slightly from a month ago except in the Malad River basin which was on the eastern edge of the storms entering southern Idaho. Malad basin snowpack is 122% of average based on Oxford Spring SNOTEL site, the same as in 1997 and the highest since 1984. Cub River and Mink Creek snowpacks are 137% of average while Montpelier, Smith, Thomas and upper Bear basins are 115%. Overall, the Bear River basin snowpack is 123% of average, best since 1997. Bear Lake storage is 444,300 acre-feet or 31% of capacity, which is about half of average. Streamflow forecasts range from 118-143% of average. The Bear River at Stewart Dam is forecast at 120% of average; last year's runoff was 106%. Surface water supplies will be adequate this year and any additional runoff will help increase Bear Lake reservoir storage from the low of 70,000 acre-feet in October 2004.

BEAR RIVER BASIN
Streamflow Forecasts - April 1, 2006

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 River nr UT-WY State Line	APR-JUL	112	126	135	120	144	158	113
	APR-SEP	121	137	148	118	159	175	125
Bear River ab Reservoir nr Woodruff	APR-JUL	125	150	167	123	184	209	136
	APR-SEP	132	158	175	123	192	216	142
Big Creek nr Randolph	APR-JUL	5.1	6.0	6.6	135	7.2	8.1	4.9
Smiths Fork nr Border	APR-JUL	103	114	122	118	130	141	103
	APR-SEP	118	131	140	116	149	162	121
Bear River at Stewart Dam	APR-JUL	211	251	280	120	311	359	234
	APR-SEP	234	278	310	118	344	397	262
Little Bear River at Paradise	APR-JUL	48	57	64	139	71	82	46
Logan R Abv State Dam Nr Logan	APR-JUL	149	167	180	143	193	214	126
Blacksmith Fk Abv Up&L Dam Nr Hyrum	APR-JUL	47	59	67	140	76	91	48

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	444.3	156.0	923.8
MONTPELIER CREEK	4.0	2.8	2.0	1.7

BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Smiths & Thomas Forks	4	122	116
Bear River ab WY-ID line	14	115	118
Montpelier Creek	2	123	114
Mink Creek	4	154	136
Cub River	3	148	140
Bear River ab ID-UT line	25	127	124
Malad River	3	161	122

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume 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 volume - actual volume 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 these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. **(Revised 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	0	--	75.60	--	75.6	Active
Salmon Falls	48.00	5.00	182.65	--	182.6	Active+Inactive
Wildhorse	--	--	71.50	--	71.5	Active
Owyhee	406.83	--	715.00	--	715.0	Active
Brownlee	0.45	444.70	975.30	--	1420.0	Inactive+Active
Bear River Basin						
Bear Lake	5.0 MAF	119.0	1302.00	--	1421.0	Active+Inactive: includes 119 that can be released
Montpelier Creek	0.21	--	3.84	--	4.0	Dead+Active

Interpreting Water Supply Forecasts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Assistance provided by
Tom Perkins, Senior Forecast Hydrologist,
NRCS, National Water and Climate Center, Portland, Oregon

Cooperative funding for printing provided by
Idaho Department of Water Resources

Numerous other agencies provide funding and/or
cooperative support for the collection, operation
and maintenance of the Snow Survey Program.
Their cooperation is greatly appreciated.