



United States  
Department of  
Agriculture



Natural Resources  
Conservation  
Service

# Oregon Basin Outlook Report

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June 1, 2008



# Contents

<b>General Outlook .....</b>	<b>1</b>
Owyhee and Malheur Basins .....	3
Burnt, Powder, Grand Ronde, and Imnaha Basins .....	5
Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins .....	8
Upper John Day Basin .....	10
Upper Deschutes and Crooked Basins .....	12
Hood, Mile Creeks, and Lower Deschutes Basins .....	15
Lower Columbia Basin .....	17
Willamette Basin .....	19
Rogue and Umpqua Basins .....	23
Klamath Basin .....	26
Lake County and Goose Lake.....	28
Harney Basin.....	30
<b>Generalized Streamflow Forecasts .....</b>	<b>32</b>
<b>Low Flow Forecasts for Oregon .....</b>	<b>33</b>
<b>Summary of Snow Course Data .....</b>	<b>35</b>
<b>Basin Outlook Reports; How Forecasts Are Made .....</b>	<b>37</b>
<b>Interpreting Water Supply Forecasts .....</b>	<b>38</b>

# General Outlook

June 1, 2008

## SUMMARY

As of June 1, snowpack conditions are quite variable across the state. Record high snowpacks that were recorded last month began to melt out throughout Oregon in May. Complete melt out is a couple of weeks later this year than normal. Snow persists in many mid to high elevation sites throughout the state. New record snowpacks were recorded at 10 mid elevation SNOTEL sites along the Cascade crest in Oregon on June 1.

Apart from a short duration heat wave mid month, May temperatures were generally lower than normal throughout Oregon. Nonetheless, the midmonth warming kicked off the beginning of the snow melt season and steady, sometimes rapid snowmelt has followed.

Precipitation totals since the beginning of the water year range from 92 percent of average for the Lake County area to 118 percent of average for the Hood, Mile Creeks and Lower Deschutes basin. Most basins have received near normal cumulative precipitation since October 1.

Streamflow forecasts for the June through September period range from well above average in the western and northern basins to well below average in parts of southeastern Oregon. Gerber and Clear Lake Reservoirs can expect below normal summer inflow as will Owyhee Reservoir. Elsewhere in the state, water supply is forecast to be near to above average. Water users may reference the streamflow forecast tables in this report for site specific details. This will be the last Oregon Water Supply Outlook Report for 2008. The next publication will be issued in January 2009.

## SNOWPACK

Following the record snowpacks observed on May 1, the melt season began in earnest. Sustained snow melt rates of up to an inch of water per day have swollen streams and rivers across the state. Snow persists at many mid and upper elevation SNOTEL sites in Oregon on June 1. The Upper John Day was the only basin in the state that had no snow at its SNOTEL sites on June 1. The southeastern corner of the state had below normal snowpacks on June 1, reflecting the May melt out. SNOTEL sites from the Wallowa and Blue Mountains, the Cascades and Siskiyou all reported above normal snow water contents for June 1.

## PRECIPITATION

While the Willamette basin set records for June 1 snowpack, May precipitation in the Willamette basin was well below average at 67 percent of normal. Below normal May precipitation was recorded throughout western Oregon from the Rogue to the Deschutes basins. In eastern Oregon, May precipitation was above average. A late May storm brought 2 to 5 inches of rain to the Lake County area over a period of a couple of days. May precipitation was 147 percent of average in Lake County. Overall precipitation since the beginning of the water year has been near to slightly above normal across the state.

## RESERVOIRS

Reservoirs throughout the state began to fill as snowmelt got underway last month. At the same time, irrigation was in use in some basins tapping stored water resources. The June 1 storage at 27 major Oregon reservoirs analyzed in this publication was 86 percent of average. A total of 2,244,100 acre feet of water was stored on June 1, a net increase of 68,900 acre feet from last month. Last year at this time reservoirs stored 2,212,400 acre feet.

## STREAMFLOW

<b>STREAM</b>	<b>PERIOD</b>	<b>PERCENT OF AVERAGE</b>
Owyhee Net Inflow	June-July	54
Grande Ronde at La Grande	June-September	156
Umatilla at Pendleton	June- September	121
Deschutes at Benham Falls	June- September	116
Willamette MF near Oakridge	June-October	129
Rogue at Raygold	June-September	120
Upper Klamath L. Net Inflow	June-September	99
Silvies near Burns	June- September	110

Some of these forecasts assume that normal weather conditions will occur from now to the end of the forecast period.

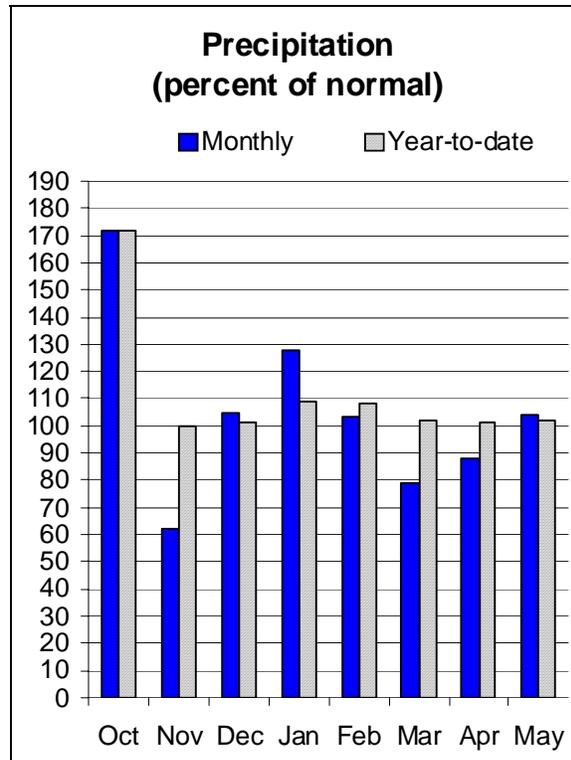
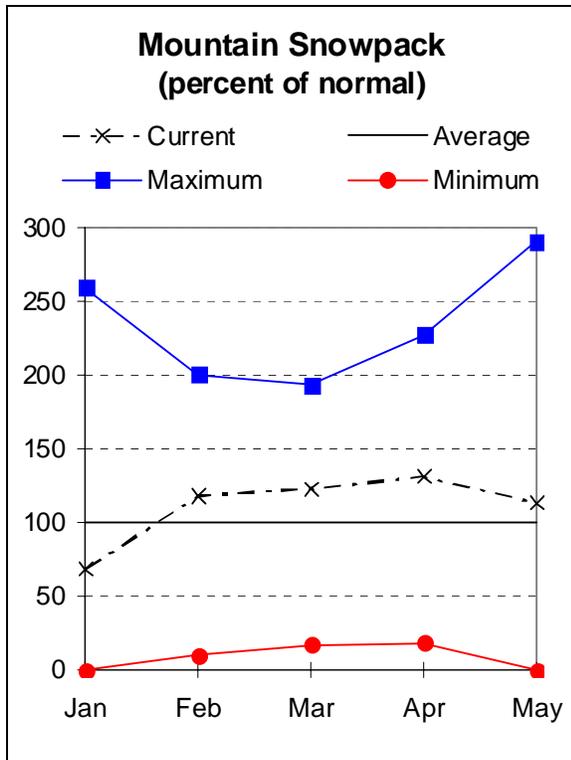
The forecasts in this bulletin are a result of coordinated activity between the Natural Resources Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.



# Owyhee and Malheur Basins

June 1, 2008



## Water Supply Outlook

At last report, the Oregon portions of the Owyhee and Malheur basins had a deeper than average snowpack. Owyhee and Malheur SNOTEL sites in Oregon, Idaho and Nevada lost most of their snow by June 1. The combined Owyhee and Malheur melt out was 1 to 2 weeks earlier than normal. May precipitation was near normal in the basin. Total precipitation since the beginning of the water year has been near normal.

At the end of May, 4 reservoirs in the Owyhee and Malheur basin held only 71 percent of their average storage or 59 percent of their capacity.

Streamflow forecasts for the Owyhee reflect the significant influence of the Nevada and Idaho headwaters. The 50 percent exceedance forecast for the June through September inflow to Owyhee Reservoir is 59 percent of average, with large error bounds. See the adjacent streamflow forecast table. The Malheur near Drewsey is forecast to flow at 134 percent of average for the same period.

For more information contact your local Natural Resources Conservation Service Office:  
Ontario - (541) 889-7637

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

OWYHEE AND MALHEUR BASINS  
Streamflow Forecasts - June 1, 2008

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)					
		90%		70%		50%		30%		10%		
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)
		Chance Of Exceeding *										
Malheur R nr Drewsey	JUN-JUL	10.8	13.0	14.6	127	16.3	19.0	11.5				
	JUN-SEP	12.0	15.6	18.4	134	21	26	13.7				
NF Malheur R at Beulah	JUN-JUL	13.9	16.9	19.1	125	21	25	15.3				
	JUN-SEP	19.2	23	26	124	29	34	21				
Owyhee Reservoir Inflow (2)	JUN-JUL	1.6	7.4	44	54	81	134	82				
	JUN-SEP	2.0	21	66	59	111	176	112				
Owyhee R nr Rome	JUN-JUL	18.3	29	38	54	48	65	71				
	JUN-SEP	29	42	53	58	65	84	91				

OWYHEE AND MALHEUR BASINS  
Reservoir Storage (1000 AF) - End of May

OWYHEE AND MALHEUR BASINS  
Watershed Snowpack Analysis - June 1, 2008

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEULAH RES	60.0	49.1	40.0	46.9	Owyhee River	7	0	0
BULLY CREEK	30.0	17.1	19.6	23.4	Malheur	3	0	0
OWYHEE	715.0	456.1	482.6	614.6	Jordan Creek	1	0	0
WARMSPRINGS	191.0	69.7	102.4	145.9	Bully Creek	0	0	0

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

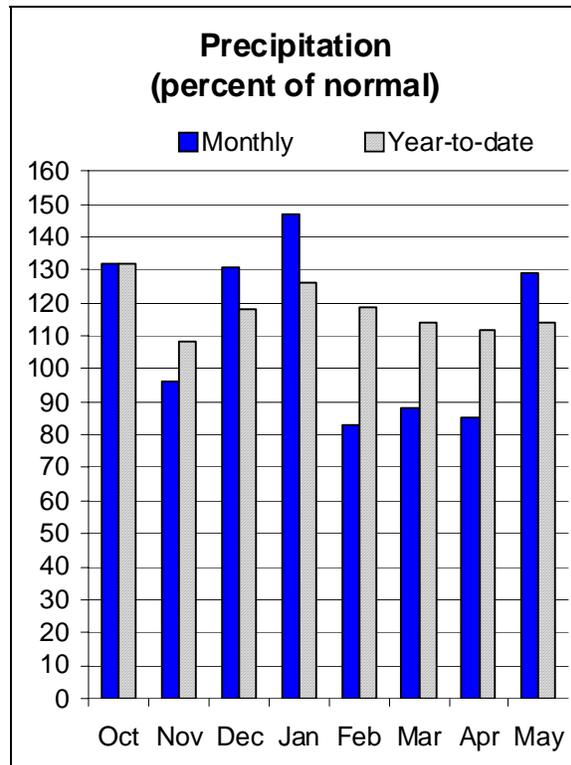
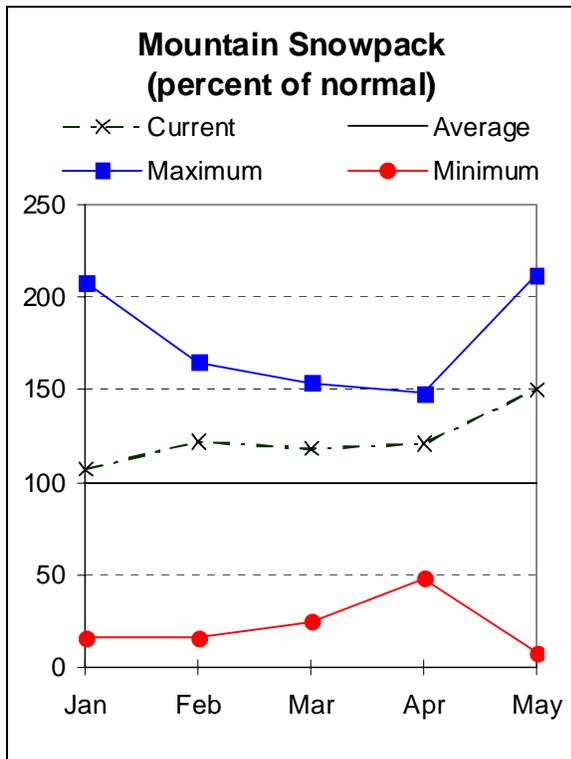
The average is computed for the 1971-2000 base period.

- (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.



# Burnt, Powder, Grand Ronde, and Imnaha Basins

June 1, 2008



## Water Supply Outlook

On May 1, the snow water content was well above average in the Burnt, Powder, Pine, Grande Ronde and Imnaha basin. Despite a month of snow melt, the basin had twice the average June 1 snowpack. It appears that complete melt out is 2 to 3 weeks later than normal in the basin. Following drier than normal monthly precipitation in February, March, and April, May precipitation was above average. Since the beginning of the water year, total precipitation has been 114 percent of average.

At the end of May, 3 reservoirs in the basin held 87 percent of their average storage or 59 percent of their capacity. More runoff is expected as the late season snow melts.

Streamflow forecasts in the Burnt, Powder, Pine, Grande Ronde and Imnaha basin range from 120 percent of average for the Grande Ronde at Troy and the Imnaha at Imnaha to 192 percent of average for the Powder near Sumpter. Water users can expect above average supplies this coming season.

For more information contact your local Natural Resources Conservation Service Office:  
 Enterprise- (541) 426-4588; Baker City - (541) 523-7121; LaGrande - (541) 963-4178  
 Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

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BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)	10% (1000AF)
Bear Ck nr Wallowa	JUN-SEP	35	39	47	134	45	49	35
Burnt R nr Hereford	JUN-JUL	4.6	6.2	7.5	147	8.9	11.1	5.1
	JUN-SEP	6.8	8.7	10.1	144	11.6	14.1	7.0
Catherine Ck nr Union	JUN-JUL	29	32	35	140	38	42	25
	JUN-SEP	34	37	40	138	43	47	29
Deer Ck nr Sumpster	JUN-JUL	5.3	6.6	7.5	197	8.5	10.1	3.8
Grande Ronde R at La Grande	JUN-JUL	37	48	57	158	66	81	36
	JUN-SEP	44	57	67	156	78	95	43
Grande Ronde R at Troy	JUN-JUL	425	515	555	118	595	685	470
	JUN-SEP	515	625	680	120	725	835	565
Imnaha R at Imnaha	JUN-JUL	122	136	145	123	154	168	118
	JUN-SEP	144	160	171	120	182	198	142
Lostine R nr Lostine	JUN-JUL	73	82	88	119	95	105	74
	JUN-SEP	83	93	100	121	107	119	83
Pine Ck nr Oxbow	JUN-JUL	56	63	68	124	73	80	55
	JUN-SEP	63	71	76	123	81	89	62
Powder R nr Sumpster	JUN-JUL	25	30	34	189	38	44	18.0
	JUN-SEP	27	32	36	192	40	46	18.8
Wolf Ck Reservoir Inflow (2)	JUN-JUL	1.7	2.7	3.5	182	4.4	6.0	1.9

\* 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.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Reservoir Storage (1000 AF) - End of May					BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
PHILLIPS LAKE	73.5	52.9	41.5	65.3	Grande Ronde ab LaGrande	5	0	1185
THIEF VALLEY	17.4	14.2	8.5	17.0	Powder River	5	0	0
UNITY	25.2	24.9	18.3	23.1	Wallowa,Imnaha,Catherine	5	778	207
WALLOWA LAKE	37.5	19.6	22.6	28.0	Burnt River	3	0	0
WOLF CREEK	10.4	11.1	4.2	9.8				

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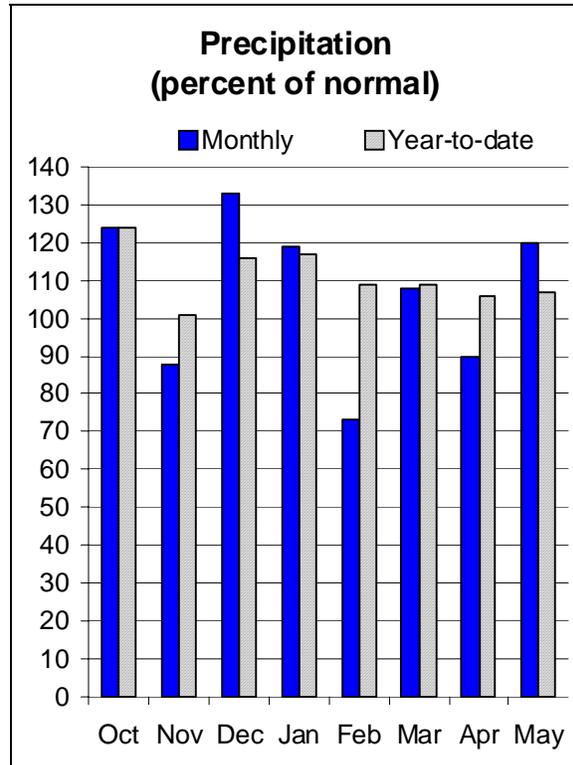
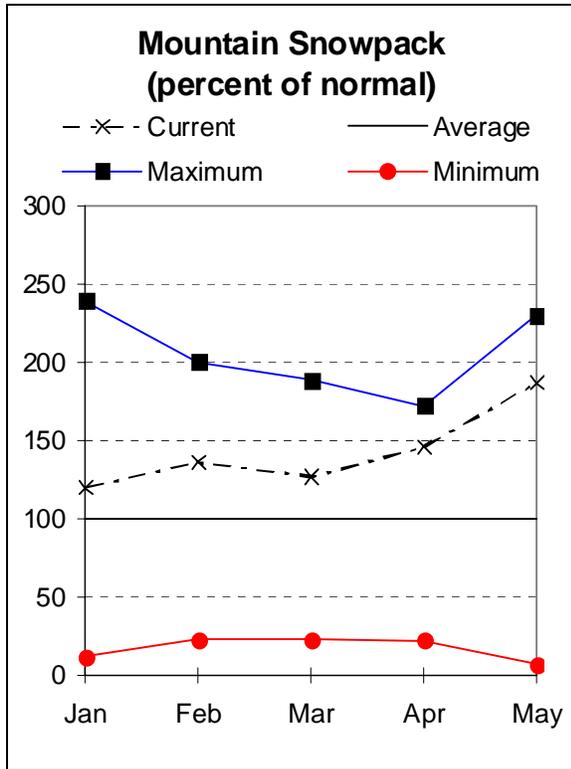
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# Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins

June 1, 2008



## Water Supply Outlook

The Umatilla, Walla Walla, Willow, Rock and Lower John Day had an enormous snowpack this water year. While there was considerable melt during the month of May, the June 1 basin wide snowpack is still well above average. The melt out appears to be running 2 to 3 weeks later than normal this season. June melt rates will be influenced by temperature and moisture patterns, but it is anticipated that streams and rivers influenced by snow melt will be running high this month.

Following a drier than normal April, precipitation for the month of May was above average in the basin. Since the beginning of the water year, total precipitation has been 107 percent of average.

June 1 storage at McKay and Cold Springs reservoirs was 89 percent of average or 73 percent of capacity, an improvement over last month.

June through September streamflow forecasts in the Umatilla, Walla Walla, Willow, Rock and Lower John Day basin range from 109 percent of average for McKay Creek near Pilot Rock and the South Fork Walla Walla near Milton Freewater to 121 percent of average for the Umatilla at Pendleton. Water users in the basin can expect near to above average streamflows this coming summer.

For more information contact your local Natural Resources Conservation Service Office:  
 Pendleton - (541) 278-8049; Heppner - (541) 676-5021; Condon - (541) 384-2671  
 Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS  
Streamflow Forecasts - June 1, 2008

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)	10% (1000AF)
Butter Ck nr Pine City	JUN-JUL	1.0	1.5	1.9	115	2.3	2.8	1.6
	JUN-SEP	1.4	2.1	2.5	120	2.9	3.6	2.1
McKay Ck nr Pilot Rock	JUN-SEP	0.5	2.3	3.5	109	4.7	6.5	3.2
Rhea Ck nr Heppner	JUN-JUL	0.8	1.5	1.9	128	2.4	3.0	1.5
Umatilla R ab Meacham Ck nr Gibbon	JUN-JUL	11.8	15.1	17.3	120	19.5	23	14.4
	JUN-SEP	18.2	22	24	120	26	30	20
Umatilla R at Pendleton	JUN-JUL	12.8	22	28	122	34	43	23
	JUN-SEP	19.4	29	35	121	41	51	29
SF Walla Walla R nr Milton-Freewater	JUN-JUL	17.0	20	22	115	24	27	19.2
	JUN-SEP	30	33	36	109	39	42	33
Willow Ck ab Willow Ck Lake nr Heppn	JUN-JUL	0.6	1.2	1.6	110	2.1	2.7	1.5

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS					UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS			
Reservoir Storage (1000 AF) - End of May					Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of Last Yr Average	
		This Year	Last Year	Avg			Last Yr	Average
COLD SPRINGS	50.0	27.3	25.6	39.2	Walla Walla River	2	0	705
MCKAY	73.8	62.8	54.0	62.0	Umatilla River	5	0	811
WILLOW CREEK	1.8	1.9	1.9	---	McKay Creek	3	0	0

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

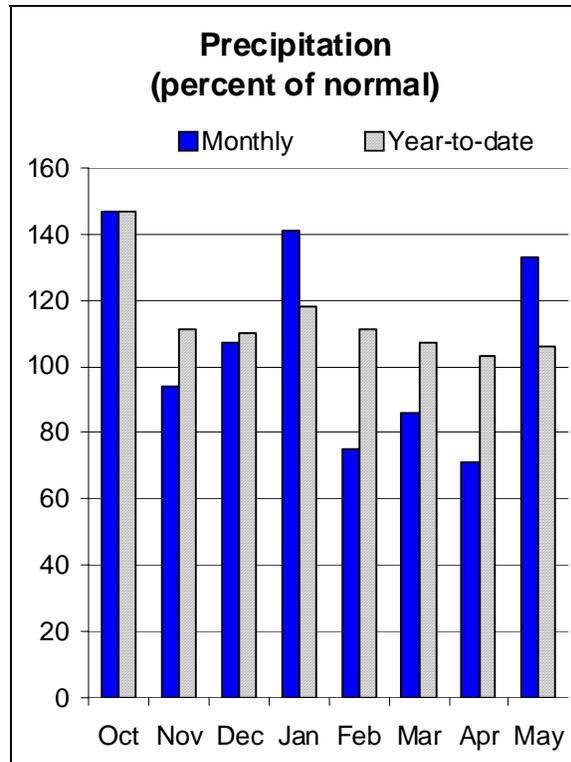
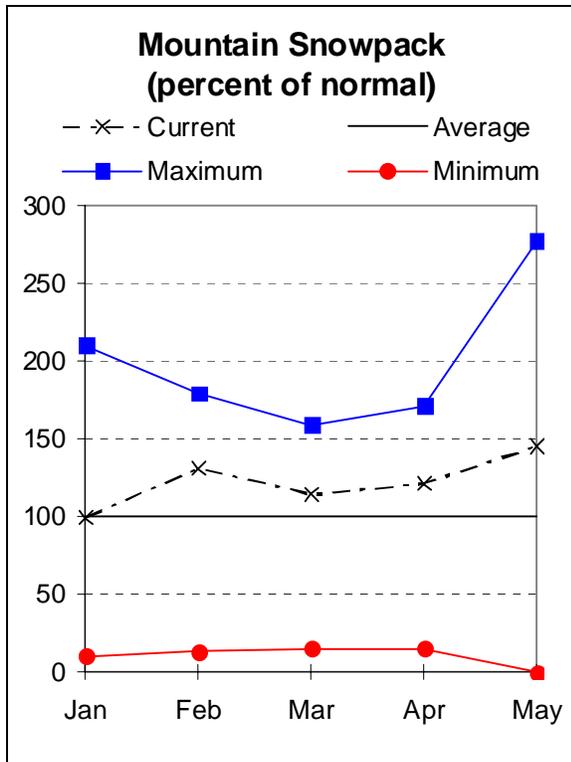
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# Upper John Day Basin

June 1, 2008



## Water Supply Outlook

The Upper John Day had a higher than average snowpack on May 1. Rapid melt out during the month resulted in all SNOTEL sites in the basin losing their snow by June 1. The Upper John Day was the only basin in the state with no snow recorded at SNOTEL sites on June 1.

Following drier than normal monthly precipitation in February, March, and April, May precipitation was above average. Since the beginning of the water year, precipitation in the Upper John Day basin has been near normal.

The June through September streamflow forecast for the Upper John Day basin ranges from 110 percent of average for Camas Creek near Ukiah to 130 percent of average for Mountain Creek near Mitchell. Elsewhere in the basin, the Middle Fork of the John Day at Ritter is forecast to flow at 129 percent of average. Water users in the Upper John Day basin can expect above average streamflows this coming season.

For more information contact your local Natural Resources Conservation Service Office:  
John Day - (541) 575-0135

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

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UPPER JOHN DAY BASIN  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
Camas Ck nr Ukiah	JUN-JUL	2.2	4.3	5.8	110	7.3	9.4	5.3
	JUN-SEP	2.9	5.1	6.6	110	8.1	10.3	6.0
MF John Day R at Ritter	JUN-JUL	23	31	37	128	43	51	29
	JUN-SEP	29	38	44	129	50	59	34
NF John Day R at Monument	JUN-JUL	112	147	171	126	195	230	136
	JUN-SEP	132	170	195	127	220	260	154
Mountain Ck nr Mitchell	JUN-JUL	0.7	1.0	1.2	130	1.4	1.7	0.9
	JUN-SEP	0.8	1.1	1.3	130	1.5	1.9	1.0
Strawberry Ck nr Prairie City	JUN-JUL	4.2	5.2	5.9	130	6.6	7.6	4.5
	JUN-SEP	5.0	6.1	6.8	130	7.5	8.6	5.2

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UPPER JOHN DAY BASIN  
Reservoir Storage (1000 AF) - End of May

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UPPER JOHN DAY BASIN  
Watershed Snowpack Analysis - June 1, 2008

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Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					John Day, North Fork	7	0	0
					John Day above Dayville	4	0	0

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

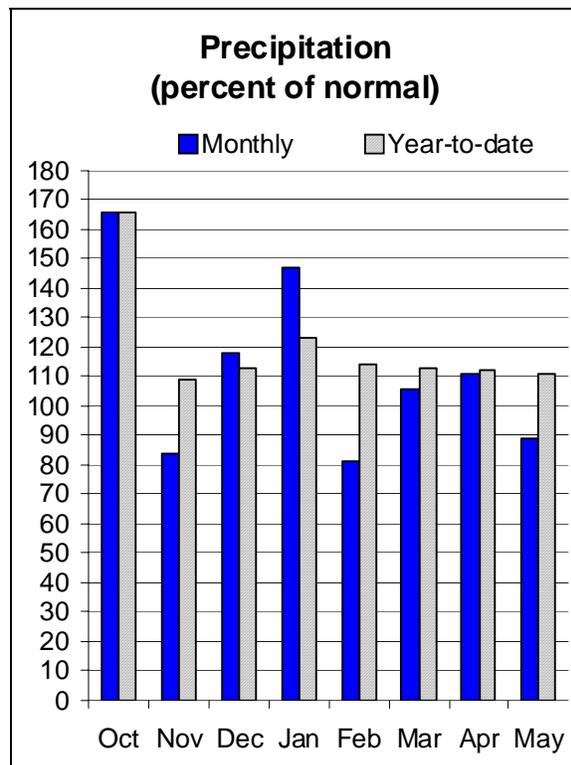
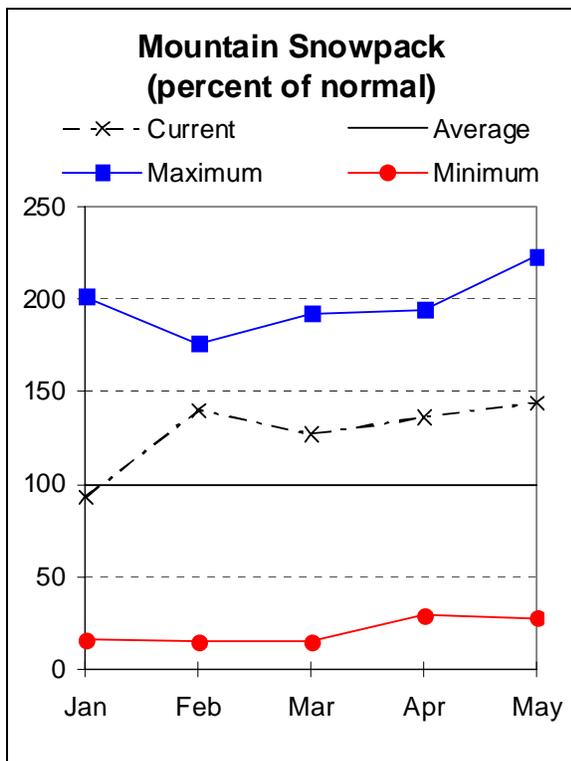
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# Upper Deschutes and Crooked Basins

June 1, 2008



## Water Supply Outlook

The June 1 snowpack in the Upper Deschutes and Crooked River basin was well above average. Due to the deep winter snows and a cooler than normal spring, the melt out appears to be running 3 weeks later than normal. Precipitation for the month of May was slightly below normal. Since the beginning of the water year, total precipitation has been 111 percent of average.

June 1 reservoir storage in the Upper Deschutes and Crooked River basin was 103 percent of average or 85 percent of capacity.

June through September streamflow forecasts in the Upper Deschutes and Crooked River basins range from 116 percent of average for the Deschutes at Benham Falls to 135 percent of average for the inflow to Ochoco Reservoir. Elsewhere in the basin, the inflow to Prineville reservoir is expected to be 129 percent of average. Water users in the Upper Deschutes and Crooked River basin can anticipate higher than normal streamflows this coming summer.

For more information contact your local Natural Resources Conservation Service Office:  
Redmond (541) 923-4358

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

UPPER DESCHUTES AND CROOKED BASINS  
Streamflow Forecasts - June 1, 2008

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)
Crane Prairie Reservoir Inflow (2)	JUN-JUL	38	41	44	129	47	50	34
	JUN-SEP	78	85	89	131	93	100	68
Crescent Ck nr Crescent (2)	JUN-JUL	5.5	7.7	9.2	115	10.7	12.9	8.0
	JUN-SEP	9.5	12.2	14.1	121	16.0	18.7	11.7
Deschutes R at Benham Falls nr Bend	JUN-JUL	184	197	205	116	215	225	177
	JUN-SEP	375	395	410	116	425	445	355
Deschutes R bl Snow Ck nr La Pine	JUN-JUL	17.0	21	23	118	25	29	19.5
	JUN-SEP	44	50	54	120	58	64	45
Little Deschutes R nr La Pine (2)	JUN-JUL	22	28	32	123	36	42	26
	JUN-SEP	30	37	42	120	47	54	35
Ochoco Reservoir Inflow (2)	JUN-JUL	0.2	1.7	3.8	131	5.9	8.9	2.9
	JUN-SEP	0.3	1.6	3.9	135	6.2	9.5	2.9
Prineville Reservoir Inflow (2)	JUN-JUL	1.1	7.6	12.0	130	16.4	23	9.2
	JUN-SEP	1.0	8.2	13.0	129	17.8	25	10.1
Whychus Ck nr Sisters	JUN-JUL	25	27	28	117	29	31	24
	JUN-SEP	39	41	43	119	45	47	36

\* 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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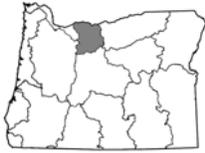
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UPPER DESCHUTES AND CROOKED BASINS Reservoir Storage (1000 AF) - End of May					UPPER DESCHUTES AND CROOKED BASINS Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
CRANE PRAIRIE	55.3	55.1	48.1	42.5	Crooked, Ochoco	3	0	0
CRESCENT LAKE	86.9	56.8	53.6	58.9	Deschutes above Wickiup	3	342	176
OCHOCO	47.5	42.5	37.9	35.9	Little Deschutes	4	275	215
PRINEVILLE	153.0	148.7	139.5	142.2	Tumalo and Squaw Creeks	1	0	532
WICKIUP	200.0	157.9	150.9	166.6				

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

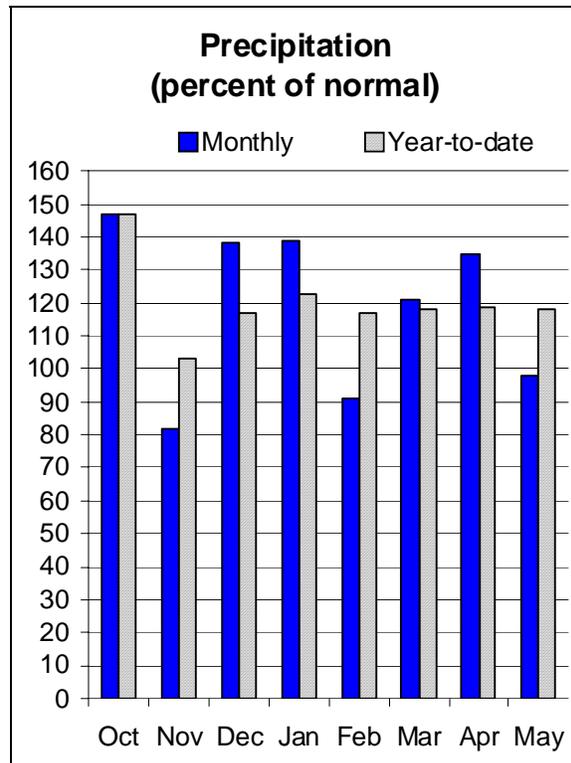
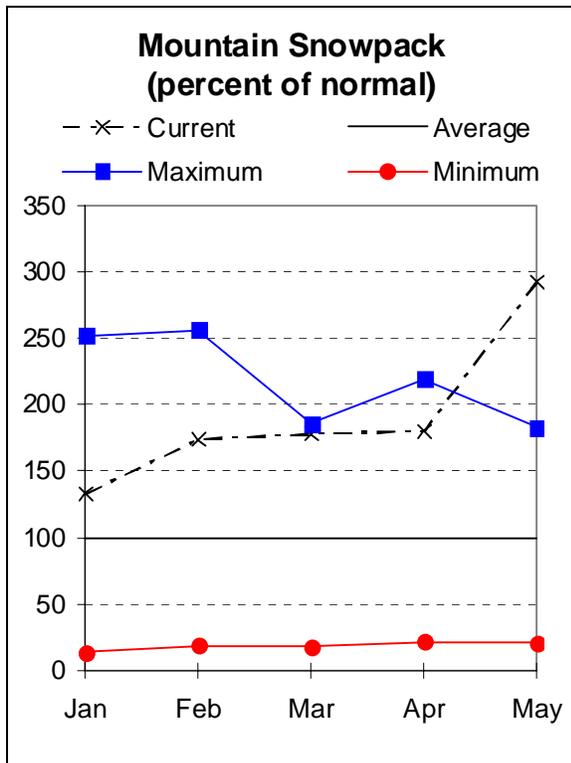
The average is computed for the 1971-2000 base period.

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# Hood, Mile Creeks, and Lower Deschutes Basins

June 1, 2008



## Water Supply Outlook

New snow water records were set at 4 SNOTEL sites in the Hood, Mile Creeks and Lower Deschutes basin on June 1. Basinwide, the June 1 snowpack was well above average. While melt has been steady throughout the month of May, the record snowpack is expected to melt out several weeks later than normal.

Precipitation for the month of May was slightly below normal. Since the beginning of the water year, total precipitation has been 118 percent of average.

The May through September streamflow forecast for Hood River at Tucker Bridge is 180 percent of normal, reflecting the record snowpack in the basin. Water users can expect an abundant water supply this coming season.

For more information contact your local Natural Resources Conservation Service Office:  
The Dalles (541) 296-6178

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS  
Streamflow Forecasts - June 1, 2008

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)					
		90%		70%		50%		30%		10%		
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(% AVG.)		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)
Hood R at Tucker Bridge	JUN-JUL	132	142	148	181	154	164	82				
	JUN-SEP	205	215	225	180	235	245	125				

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS  
Reservoir Storage (1000 AF) - End of May

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS  
Watershed Snowpack Analysis - June 1, 2008

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (WASCO)	11.9	5.3	5.8	5.9	Hood River	6	635	335
					Mile Creeks	0	0	0
					White River	3	408	216

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

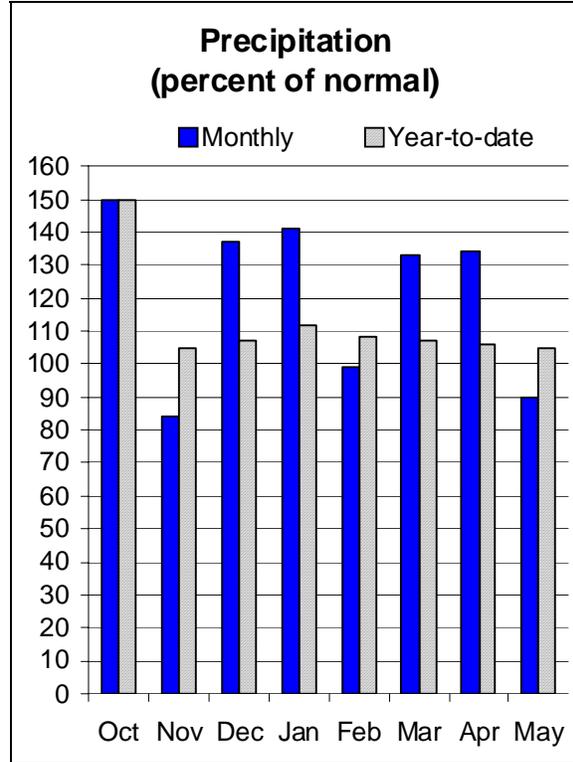
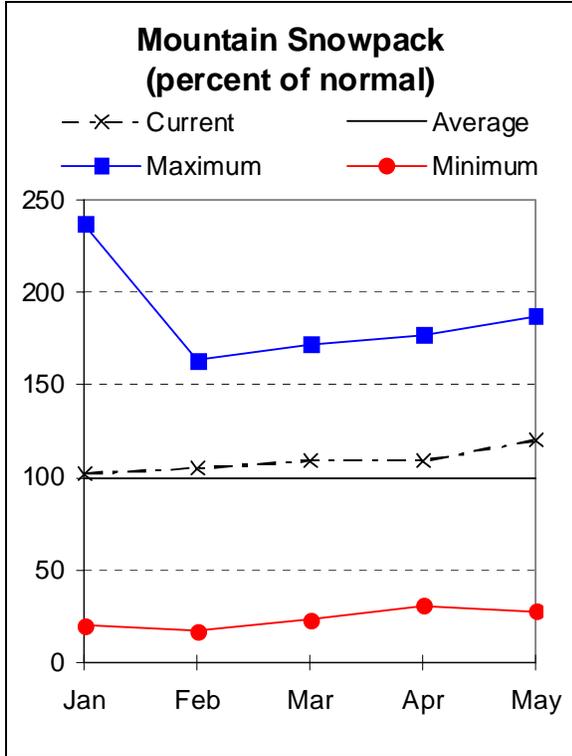
The average is computed for the 1971-2000 base period.

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# Lower Columbia Basin

June 1, 2008



## Water Supply Outlook

The June 1 snowpack in the Lower Columbia basin was much greater than normal. While melt has been steady throughout the month of May, the record snowpack is expected to melt out several weeks later than normal.

Precipitation for the month of May was slightly below normal. Since the beginning of the water year, total precipitation has been 122 percent of average.

The June through September forecast for the Columbia River at The Dalles is near average. For the Sandy River near Marmot, the June through September streamflow is forecast to be 129 percent of average. Water users in the Lower Columbia tributaries can expect abundant water runoff this season.

For more information contact your local Natural Resources Conservation Service Office:  
Oregon City - (503) 656-3499

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

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LOWER COLUMBIA BASIN  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)			30% (1000AF)
Columbia R at The Dalles (1,2)	JUN-JUL	38500	43400	45700	104	48000	52900	43800
	JUN-SEP	49000	55500	58500	101	61500	68000	57800
Sandy R nr Marmot	JUN-JUL	117	132	142	130	152	167	109
	JUN-SEP	173	192	205	129	220	235	159

LOWER COLUMBIA BASIN Reservoir Storage (1000 AF) - End of May					LOWER COLUMBIA BASIN Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Sandy River	5	828	395

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

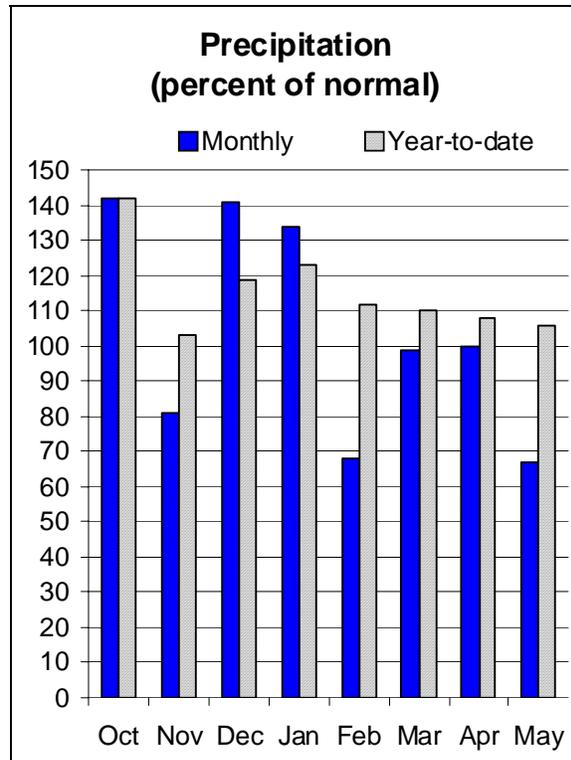
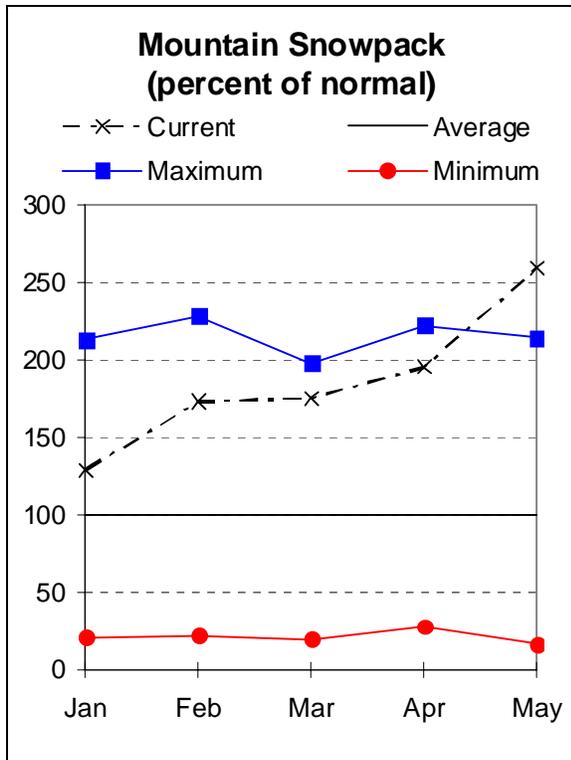
The average is computed for the 1971-2000 base period.

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# Willamette Basin

June 1, 2008



## Water Supply Outlook

New snow water records were set at 6 SNOTEL sites in the Willamette basin on June 1. Basin wide, the June 1 snowpack was well above average. While melt has been steady throughout the month of May, the record snowpack is expected to melt out several weeks later than normal. Precipitation for the month of May was well below normal at 67 percent of average. Since the beginning of the water year, total precipitation has been 106 percent of average.

June 1 reservoir storage at Henry Hagg and Timothy Lake reservoirs was 103 percent of average or 101 percent of capacity.

Willamette basin streamflow forecasts for the June through September period range from 117 percent of average for the McKenzie near Vida to 170 percent of average for the inflow to Detroit Lake. Elsewhere in the basin, the Willamette at Salem is forecast to flow 127 percent of average for the June through September period. Water users in the Willamette can expect above average to well above average flows this coming summer.

For more information contact your local Natural Resources Conservation Service Office:  
 Eugene - (541) 465-6436; Portland - (503) 231-2270; Tangent - (541) 967-5925; Oregon City - (503) 656-3499;  
 Hillsboro - (503) 648-3174; McMinnville - (503) 472-1474  
 Salem - (503) 399-5746; Dallas - (503) 623-5534  
 Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

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WILLAMETTE BASIN  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		=====		Chance Of Exceeding *			=====	
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Blue River Lake Inflow (1,2)	JUN-JUL	8.6	18.5	23	140	28	37	16.4
	JUN-SEP	12.0	22	27	141	32	42	19.1
Clackamas R at Estacada (2)	JUN-JUL	240	275	295	141	315	350	210
	JUN-SEP	380	420	445	140	470	510	318
Clackamas R ab Three Lynx (2)	JUN-JUL	186	205	220	139	235	255	158
	JUN-SEP	300	325	340	138	355	380	246
Cottage Grove Lake Inflow (1,2)	JUN-SEP	3.9	9.5	12.0	120	14.5	20	10.0
Cougar Lake Inflow (1,2)	JUN-JUL	59	73	79	123	85	99	64
	JUN-SEP	85	102	109	123	116	133	89
Detroit Lake Inflow (1,2)	JUN-JUL	230	280	305	170	330	380	179
	JUN-SEP	365	425	455	170	485	545	268
Dorena Lake Inflow (1,2)	JUN-SEP	13.2	32	40	129	48	67	31
Fall Creek Lake Inflow (1,2)	JUN-JUL	8.9	24	31	135	38	53	23
	JUN-SEP	15.2	32	39	135	46	63	29
Fern Ridge Lake Inflow (1,2)	JUN-JUL	0.3	1.0	1.4	107	1.7	2.4	1.3
Foster Lake Inflow (1,2)	JUN-JUL	80	132	155	130	178	230	119
	JUN-SEP	119	175	200	128	225	280	156
Green Peter Lake Inflow (1,2)	JUN-JUL	53	87	103	130	119	153	79
	JUN-SEP	79	117	134	128	151	189	105
Hills Creek Lake Inflow (1,2)	JUN-OCT	156	184	196	120	210	235	164
Little North Santiam R nr Mehama (1)	JUN-JUL	23	39	46	135	53	69	34
	JUN-SEP	36	52	59	134	66	82	44
Lookout Point Lake Inflow (1,2)	JUN-OCT	415	485	520	129	555	625	402

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\* 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.

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

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WILLAMETTE BASIN  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
McKenzie R bl Trail Bridge (2)	JUN-JUL	138	146	152	132	158	166	115
	JUN-SEP	240	250	260	130	270	280	200
McKenzie R nr Vida (1,2)	JUN-JUL	335	395	420	117	445	505	360
	JUN-SEP	575	650	685	117	720	795	584
Mohawk R nr Springfield	JUN-JUL	11.4	19.5	25	141	30	39	17.7
Oak Grove Fork R ab Power Intake	JUN-JUL	71	77	81	162	85	91	50
	JUN-SEP	125	133	139	160	145	153	87
North Santiam R at Mehama (1,2)	JUN-JUL	230	280	305	131	330	380	233
	JUN-SEP	330	400	435	130	470	540	336
South Santiam R at Waterloo (2)	JUN-JUL	93	142	175	135	210	255	130
	JUN-SEP	140	191	225	133	260	310	169
Scoggins Ck nr Gaston (2)	JUN-JUL	0.7	1.4	1.8	105	2.3	3.0	1.7
Thomas Ck nr Scio	JUN-JUL	5.9	13.6	18.9	110	24	32	17.2
MF Willamette R bl NF (1,2)	JUN-OCT	415	475	505	129	535	595	391
Willamette R at Salem (1,2)	JUN-JUL	1090	1390	1530	127	1670	1970	1207
	JUN-SEP	1260	1840	2110	127	2380	2960	1664

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WILLAMETTE BASIN Reservoir Storage (1000 AF) - End of May					WILLAMETTE BASIN Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	as % of Average
BLUE RIVER	85.5	78.1	52.6	78.2	Clackamas River	4	0	1775
COTTAGE GROVE	29.8	28.6	22.6	29.9	McKenzie River	3	0	363
COUGAR	155.2	132.0	110.2	205.4	Row River	1	0	1157
DETROIT	300.7	272.2	280.3	317.5	Santiam River	6	0	672
DORENA	70.5	64.3	53.3	71.3	Willamette, Middle Fork	6	550	347
FALL CREEK	115.5	107.6	77.7	107.0				
FERN RIDGE	109.6	94.1	83.3	95.9				
FOSTER	29.7	24.8	25.0	28.5				
GREEN PETER	268.2	225.1	144.3	306.6				
HILLS CREEK	200.2	194.4	144.5	232.5				
LOOKOUT POINT	337.0	312.2	214.3	307.7				
TIMOTHY LAKE	61.7	63.0	63.5	60.8				
HENRY HAGG LAKE	53.0	53.3	52.1	52.4				

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

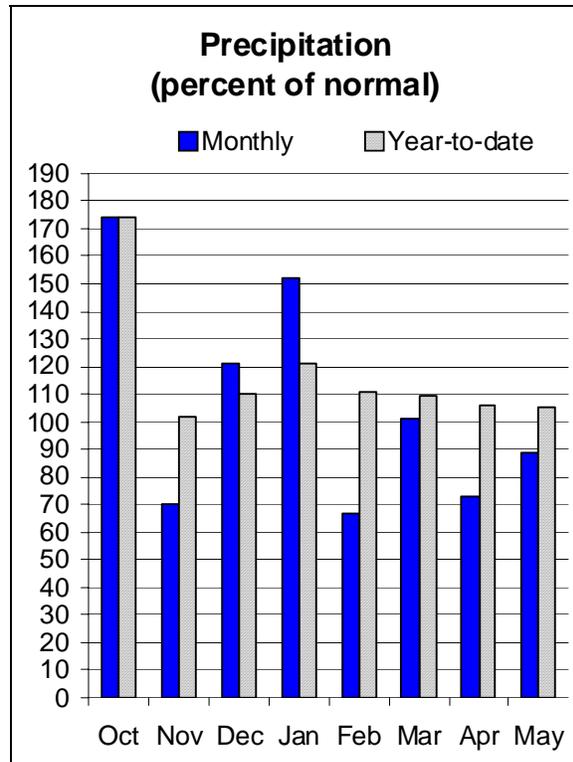
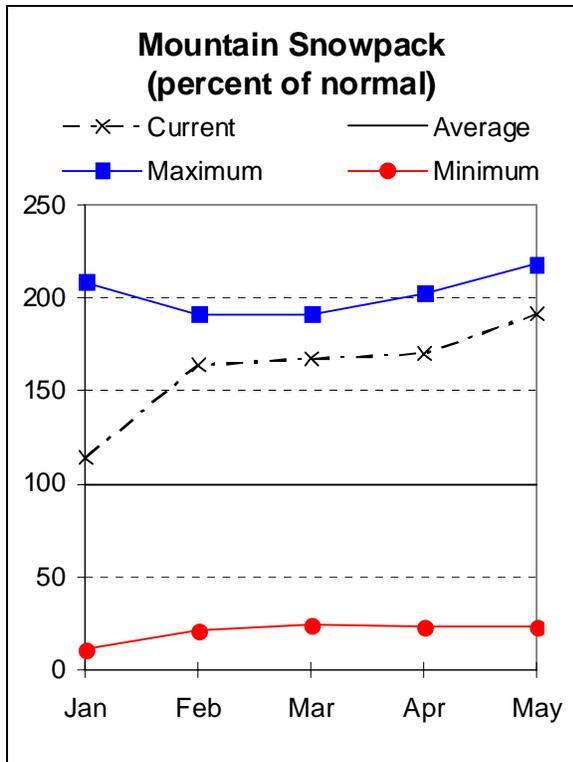
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# Rogue and Umpqua Basins

June 1, 2008



## Water Supply Outlook

The Rogue and Umpqua had a much larger than average spring snow pack. On June 1, the snowpack was 131 percent of average. Melt out appears to be 2 weeks later than normal. Precipitation for the month of May was slightly below normal at 89 percent of average. Since the beginning of the water year, total precipitation has been 105 percent of average in the basin.

Storage at reservoirs in the Rogue and Umpqua basin on June 1 was 117 percent of average or 99 percent of capacity.

The June through September streamflow forecasts in the Rogue and Umpqua basin range from 110 percent of average for the North Umpqua at Winchester to 131 percent of average for the South Umpqua near Brockway and for Cow Creek near Azalea. Elsewhere in the basin, the Rogue at Grants Pass is forecast to be 120 percent of average for the June through September streamflows. Water users in the Rogue and Umpqua basin can expect above average supplies this coming summer.

For more information contact your local Natural Resources Conservation Service Office:  
 Roseburg - (541) 673-8316; Medford - (541) 776-4267  
 Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

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ROGUE AND UMPQUA BASINS  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)
Applegate Lake Inflow (2)	JUN-JUL	19.8	28	33	110	38	46	30
	JUN-SEP	26	34	40	111	46	54	36
SF Big Butte Ck nr Butte Falls	JUN-JUL	11.4	13.5	14.9	125	16.3	18.4	11.9
	JUN-SEP	21	24	26	123	28	31	21
Cow Ck nr Azalea (2)	JUN-JUL	2.4	3.4	4.0	133	4.6	5.6	3.0
	JUN-SEP	2.8	4.4	5.5	131	6.6	8.2	4.2
Hyatt Prairie Reservoir Inflow (2)	JUN-JUL	0.0	0.2	0.5	110	0.8	1.3	0.5
Illinois R at Kerby	JUN-JUL	13.8	26	35	117	44	56	30
	JUN-SEP	19.1	32	41	111	50	63	37
NF Little Butte Ck nr Lakecreek (2)	JUN-JUL	16.5	19.2	21	121	23	26	17.4
	JUN-SEP	33	37	40	126	43	47	32
Lost Creek Lake Inflow (2)	JUN-JUL	225	250	265	121	280	305	220
	JUN-SEP	360	395	415	117	435	470	355
Rogue R at Raygold (2)	JUN-JUL	235	275	305	120	335	375	255
	JUN-SEP	430	475	505	120	535	580	420
Rogue R at Grants Pass (2)	JUN-JUL	220	260	290	121	320	360	240
	JUN-SEP	375	425	460	120	495	545	385
Sucker Ck bl Ltl Grayback Ck nr Holl	JUN-JUL	11.2	14.2	16.3	120	18.4	21	13.6
	JUN-SEP	15.4	18.7	21	118	23	27	17.8
North Umpqua R at Winchester	JUN-JUL	198	240	265	110	290	330	240
	JUN-SEP	325	365	395	110	425	465	360
South Umpqua R nr Brockway	JUN-JUL	59	80	94	136	108	129	69
	JUN-SEP	81	103	118	131	133	155	90
South Umpqua R at Tiller	JUN-JUL	30	43	52	127	61	74	41
	JUN-SEP	41	54	63	124	72	85	51

\* 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.

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

ROGUE AND UMPQUA BASINS Reservoir Storage (1000 AF) - End of May					ROGUE AND UMPQUA BASINS Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
APPLEGATE	75.2	61.6	62.0	66.8	Applegate River	2	0	157
EMIGRANT LAKE	39.0	39.0	37.1	35.3	Bear Creek	1	0	157
FISH LAKE	8.0	6.7	7.3	6.6	Butte Creek	3	0	153
FOURMILE LAKE	16.1	14.8	16.3	12.5	Illinois River	1	0	0
HOWARD PRAIRIE	60.0	61.3	59.8	50.2	North Umpqua River	3	291	255
HYATT PRAIRIE	16.1	15.8	16.0	13.5	Rogue River	9	238	124
LOST CREEK	315.0	156.9	167.2	305.3				

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

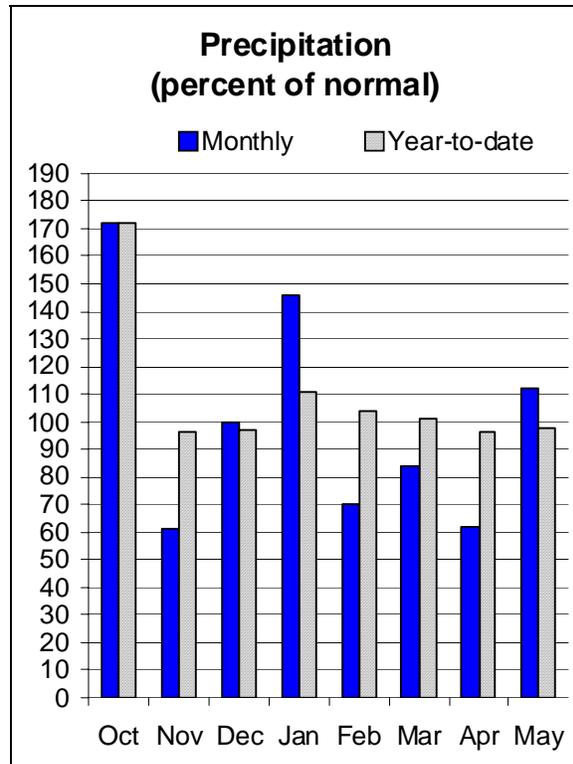
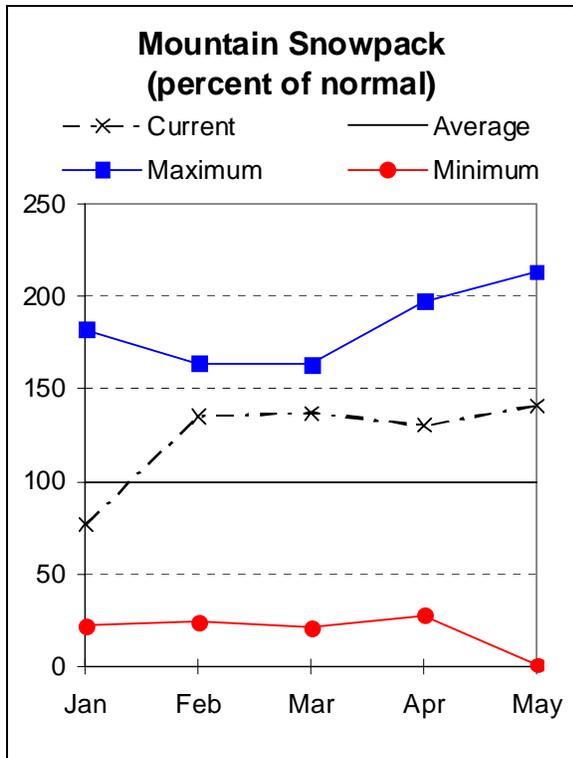
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# Klamath Basin

June 1, 2008



## Water Supply Outlook

The snowpack in the Klamath basin was well above average this winter. Due to colder than normal spring temperatures, the melt out was about 1 week later than normal and continues at some sites as of June 1. As of this date, 5 SNOTEL sites in the basin report snow on the ground. The June 1 snowpack in the Klamath basin was 127 percent of average.

Following a drier than normal April, May precipitation in the Klamath basin was slightly above average. Since the beginning of the water year, Klamath basin precipitation has been near average.

At the end of April, reservoir storage in the Klamath basin was 85 percent of average or 61 percent of capacity. June through September streamflow forecasts range from 72 percent of average for the Inflow to Clear Lake (California) to 99 percent of average for the Williamson River below Sprague near Chiloquin. Elsewhere in the basin, the June through September Upper Klamath Lake Inflow is forecast to be near average.

For more information contact your local Natural Resources Conservation Service Office:  
Klamath Falls - (541) 883-6932

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

KLAMATH BASIN  
Streamflow Forecasts - June 1, 2008

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Clear Lake Inflow (2)	JUN-JUL	0.2	1.7	5.2	72	8.7	13.9	7.2
	JUN-SEP	0.3	5.3	8.7	72	12.1	17.1	12.1
Gerber Reservoir Inflow (2)	JUN-JUL	0.1	0.3	1.4	77	2.5	4.0	1.8
	JUN-SEP	0.1	0.8	1.8	75	2.8	4.4	2.4
Sprague R nr Chiloquin	JUN-JUL	31	42	49	88	56	67	56
	JUN-SEP	50	63	72	88	81	94	82
Upper Klamath Lake Inflow (1,2)	JUN-JUL	60	93	108	98	123	156	110
	JUN-SEP	127	174	195	99	215	265	198
Williamson R bl Sprague R nr Chiloqu	JUN-JUL	75	88	97	99	106	119	98
	JUN-SEP	131	148	160	99	172	189	162

KLAMATH BASIN Reservoir Storage (1000 AF) - End of May					KLAMATH BASIN Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (CALIF)	513.3	150.1	158.6	256.5	Lost River	2	0	0
GERBER	94.3	76.9	76.1	68.4	Sprague River	3	0	0
UPPER KLAMATH LAKE	523.7	464.9	433.5	487.0	Upper Klamath Lake	9	248	130
					Williamson River	4	142	105

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

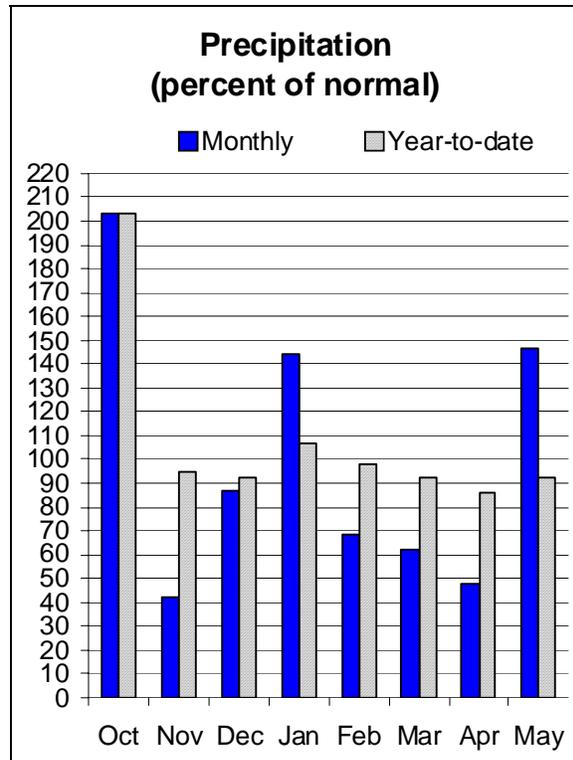
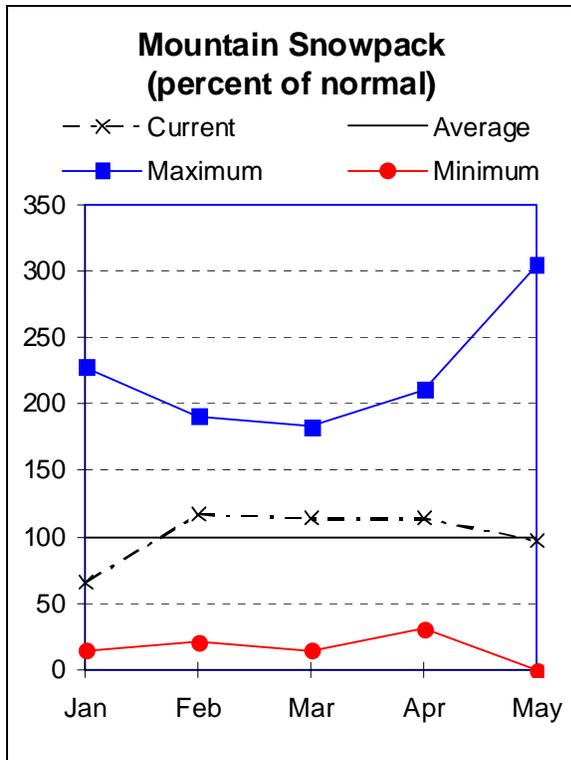
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# Lake County and Goose Lake

June 1, 2008



## Water Supply Outlook

Following an average winter snowpack, the June 1 snow water content in Lake County and Goose Basin was well below normal. Rapid melt out occurred during the month of May. On June 1, only 1 SNOTEL site in the basin had snow remaining. Normally 4 out of 7 SNOTEL sites in the basin have snow on June 1. Precipitation for the month of May was 147 percent of average, the highest in the state. A late May storm brought 2 to 5 inches of rain to the Lake County area over a period of a couple of days. Since the beginning of the water year, total precipitation has been 92 percent of average.

Storage at Cottonwood, Drews and Thompson Valley reservoirs on June 1 was 88 percent of average or 70 percent of capacity.

June through September streamflow forecasts in the Lake County and Goose Lake basin range from 86 percent of average for the Chewaucan near Paisley to 98 percent of average for Twentymile Creek near Adel.

For more information contact your local Natural Resources Conservation Service Office:  
Lakeview - (541) 947-2202

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

LAKE COUNTY AND GOOSE LAKE BASINS  
Streamflow Forecasts - June 1, 2008

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)		(1000AF)	(1000AF)	(1000AF)	(1000AF)
Chewaucan R nr Paisley	JUN-JUL	8.6	13.6	17.0	83	20	25	20				
	JUN-SEP	12.2	17.4	21	86	25	30	25				
Deep Ck ab Adel	JUN-JUL	8.3	11.8	14.2	90	16.6	20	15.7				
	JUN-SEP	9.6	13.3	15.8	89	18.3	22	17.8				
Honey Ck nr Plush	JUN-JUL	1.6	2.5	3.1	91	3.7	4.6	3.4				
	JUN-SEP	1.6	2.6	3.2	89	3.8	4.8	3.6				
Silver Ck nr Silver Lake (2)	JUN-JUL	0.0	0.2	0.8	90	1.4	2.2	0.9				
Twentymile Ck nr Adel	JUN-JUL	1.6	3.0	4.0	97	5.0	6.4	4.1				
	JUN-SEP	2.0	3.5	4.5	98	5.5	7.0	4.6				

LAKE COUNTY AND GOOSE LAKE BASINS  
Reservoir Storage (1000 AF) - End of May

LAKE COUNTY AND GOOSE LAKE BASINS  
Watershed Snowpack Analysis - June 1, 2008

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COTTONWOOD	8.7	9.3	7.9	6.8	Chewaucan River	2	0	0
DREWS	63.0	37.0	46.3	51.0	Deep Creek	0	0	0
THOMPSON VALLEY	18.4	16.9	15.4	13.8	Drew Creek	2	0	0
					Honey Creek	0	0	0
					Silver Creek (Lake Co.)	3	0	0
					Twentymile Creek	0	0	0

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

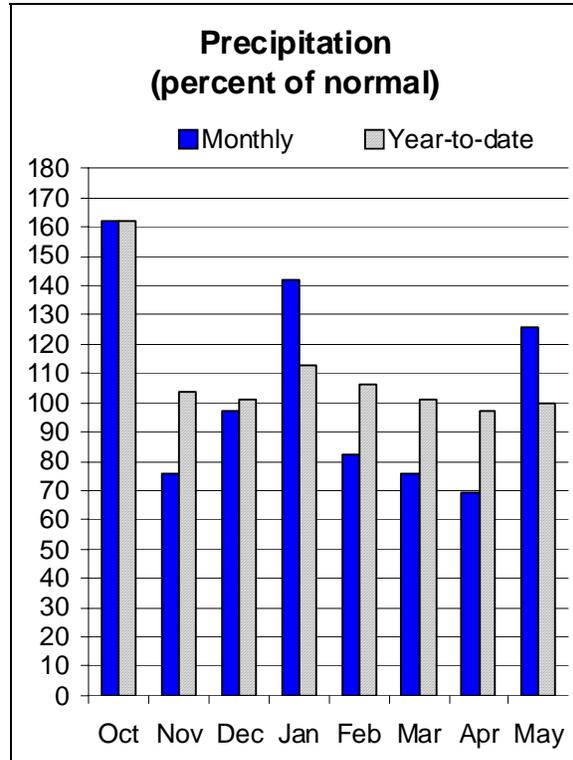
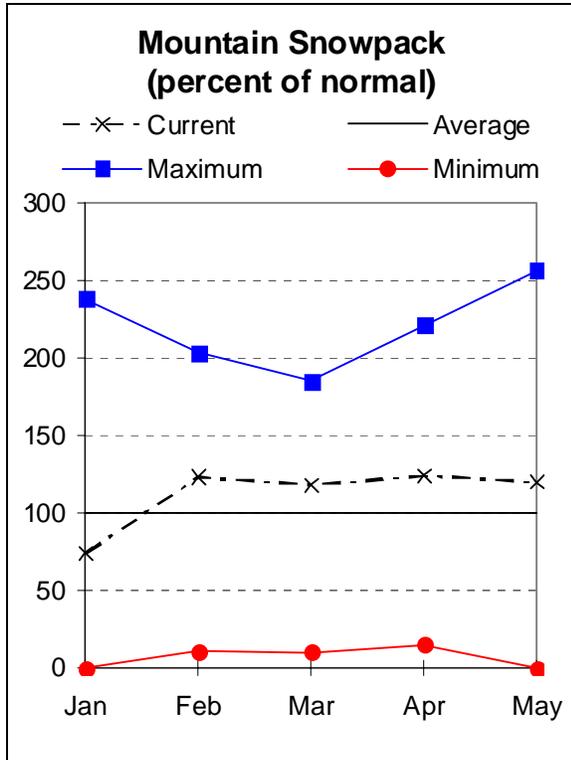
The average is computed for the 1971-2000 base period.

- (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.



# Harney Basin

June 1, 2008



## Water Supply Outlook

Following an average winter snowpack, the June 1 snow water content in the Harney Basin was well below normal. On June 1, only 1 SNOTEL site in the basin had snow remaining. Normally 3 out of 8 SNOTEL sites in the basin have snow on June 1. Precipitation for the month of May was slightly higher than normal. Since the beginning of the water year, total precipitation has been near average.

June through September streamflow forecasts range from 76 percent of average for Trout Creek near Denio to 110 percent of average for the Silvies River near Burns. Summer water supply forecasts in the basin vary locally and users can expect below to near average conditions.

For more information contact your local Natural Resources Conservation Service Office:  
Hines - (541) 573-6446

Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>

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HARNEY BASIN  
Streamflow Forecasts - June 1, 2008

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
Donner Und Blitzen R nr Frenchglen	JUN-JUL	12.1	16.4	19.4	78	22	27	25
	JUN-SEP	16.6	22	25	81	28	33	31
Silvies R nr Burns	JUN-JUL	4.2	10.4	14.6	110	18.8	25	13.3
	JUN-SEP	5.7	12.8	17.6	110	22	30	16.0
Trout Ck Nr Denio	JUN-JUL	1.0	1.7	2.2	76	2.7	3.4	2.9
	JUN-SEP	1.3	2.1	2.7	76	3.3	4.1	3.6

HARNEY BASIN Reservoir Storage (1000 AF) - End of May					HARNEY BASIN Watershed Snowpack Analysis - June 1, 2008			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Donner und Blitzen River	2	0	60
					Silver Creek (Harney Co)	2	0	0
					Silvies River	5	0	0
					Trout Creek	1	0	0

=====

\* 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.

# Generalized Streamflow Forecasts

June 1, 2008

FORECAST POINT TO BE DISCONTINUED	GENERALIZED WY 2008 STREAMFLOW FORECAST (JUN - SEP)
SUCCOR CK nr Jordan Valley	ABOVE AVERAGE
ANTHONY CK bl NF nr North Powder	ABOVE AVERAGE
BIG CK bl Burn Ck nr Medical Spgs	ABOVE AVERAGE
HURRICANE CREEK near Joseph	ABOVE AVERAGE
EF WALLOWA near Joseph	ABOVE AVERAGE
WALLOWA at Joseph (2)	ABOVE AVERAGE
COUSE CREEK near Milton-Freewater	NEAR AVERAGE
ROCK CREEK above Whyte	NEAR AVERAGE
NF CROOKED blw Lookout Ck	NEAR AVERAGE
WHYCHUS CREEK near Sisters	NEAR AVERAGE
TUMALO CREEK near Bend	NEAR AVERAGE
WF HOOD near Dee	ABOVE AVERAGE
WHITE below Tygh Valley	ABOVE AVERAGE
CLEARWATER above Trap Creek (2)	ABOVE AVERAGE
FOURMILE LAKE net Inflow (2)	ABOVE AVERAGE
GRAVE CREEK at Pease Bridge	ABOVE AVERAGE
NORTH UMPQUA nr Toketee Falls (2)	ABOVE AVERAGE
BRIDGE CK nr Spahr Ranch	NEAR AVERAGE
COTTONWOOD CK nr Lakeview (2)	NEAR AVERAGE
DREWS RESERVOIR net Inflow (2)	NEAR AVERAGE
SILVER CK nr Riley	NEAR AVERAGE

The streamflow at the points above can no longer be modeled within an acceptable level of certainty. Forecasts at these sites will be completely discontinued in water year 2009.

# Low Flow Forecasts for Oregon

June 1, 2008

<b>OWYHEE AND MALHEUR BASINS</b>			
<i>FORECAST POINT</i>	<i>LOW FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Owyhee nr Rome	2000	May 3	May 21
	1000	Jun 6	June 2
	500	Jun 15	June 17

<b>BURNT, POWDER, PINE, GRAND RONDE AND IMNAHA BASINS</b>			
<i>FORECAST POINT</i>	<i>LOW FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Eagle Ck above Skull Ck	225	Jul 30	July 22
	160	Aug 12	August 5
Catherine Ck nr Union	45	August 1	Avg Value = 49 cfs
	100	Jul 3	July 9
	50	Jul 22	July 28
Powder near Sumpter	100	Jun 18	June 25
	20	Jul 14	July 22
Deer Ck above Phillips Resv nr Sumpter	40	Jun 10	June 17
	10	Jul 1	July 6

<b>UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS</b>			
<i>FORECAST POINT</i>	<i>LOW FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Umatilla at Pendleton	550	Jun 10	May 17
SF Walla Walla nr Milton	200	Jun 16	June 9
	110	August-September	Avg Value = 105 cfs

<b>UPPER JOHN DAY</b>			
<i>FORECAST POINT</i>	<i>LOW FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
John Day at Service Ck	220	August 1	Avg Value = 212 cfs

<b>UPPER DESCHUTES AND CROOKED BASINS</b>			
<i>FORECAST POINT</i>	<i>FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Carne Prairie net inflow	350	Peak	
	210	Oct 31	
	Peak	May 28	
Crooked R	100	Jun 11	
Little Deschutes nr LaPine	400	Jun 7	June 7
	200	Jul 5	July 8
Whychus Cr nr Sisters	100	Aug 20	August 16
Tumalo Ck nr Bend	235	Jun 27	June 23
	207	Jun 29	June 25
	150	Jul 6	July 5
	71	Aug 9	August 7

<b>HOOD, MILE CREEKS, AND LOWER DESCHUTES BASINS</b>			
<i>FORECAST POINT</i>	<i>FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Clear Branch Inflow	45*	July 15-31	39 cfs**
*Average cfs forecast to flow for this two-week period.			
** Average cfs for period of record			
White bl Tygh Valley	200	Jul 10	July 3
	155	Aug 1	Avg Value = 145

<b>ROGUE AND UMPQUA BASINS</b>			
<i>FORECAST POINT</i>	<i>FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Cow Ck nr Azalea	20	Jul 10	July 4
	10	Aug 25	August 19
Little Butte Cr SF	100	Jun 11	May 15
South Umpqua nr Brockway	90	Sep 8	August 28
South Umpqua at Tiller	140	Jul 21	July 12
	90	Aug 6	July 28
	60	Aug 30	August 24

<b>LAKE COUNTY AND GOOSE LAKE BASINS</b>			
<i>FORECAST POINT</i>	<i>FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Deep Ck abv Adel	100	Jun 14	June 21
Honey Ck nr Plush	100	May 5	May 15
	50	May 20	May 30
Twentymile nr Adel	50	May 20	June 2
	10	Jun 22	July 3

<b>HARNEY BASIN</b>			
<i>FORECAST POINT</i>	<i>FLOW CFS</i>	<i>FORECAST DATE OF LOW FLOW</i>	<i>AVERAGE DATE OF LOW FLOW</i>
Silvies nr Burns	400	Jun 9	May 5
	200	Jun 20	May 21
	100	Jun 30	June 9
	50	Jul 10	June 23
Donner und Blitzen	200	Jun 10	June 15
	100	Jul 1	July 5

# Summary of Snow Course Data

June 2008

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon						
ANEROID LAKE SNOTEL	7410	6/01/08	60	26.2	7.8	15.5
ANNIE SPRING SNOTEL	6010	6/01/08	57	26.4	9.7	22.8
ARBUCKLE MTN SNOTEL	5770	6/01/08	0	.0	.0	.7
BEAVER RES. SNOTEL	5150	6/01/08	0	.0	.0	.0
BIG RED MTN SNOTEL	6050	6/01/08	16	13.0	.0	8.3
BIGELOW CAMP SNOTEL	5120	6/01/08	0	.0	.0	.0
BILLIE CK DVD SNOTEL	5300	6/01/08	0	.0	.0	.0
BLAZED ALDER SNOTEL	3650	6/01/08	---	73.2	.0	5.0
BLUE MTN SPGS SNOTEL	5900	6/01/08	0	.0	.0	.0
BOURNE SNOTEL	5850	6/01/08	0	.0	.0	.1
BOWMAN SPRNGS SNOTEL	4530	6/01/08	0	.0	.0	.0
CASCADE SUM. SNOTEL	5100	6/01/08	39	20.2	.0	5.9
CHEMULT ALT SNOTEL	4850	6/01/08	0	.0	.0	.0
CLACKAMAS LK. SNOTEL	3400	6/01/08	0	.0	.0	.0
CLEAR LAKE SNOTEL	3810	6/01/08	15	6.4	.0	.3
COLD SPRINGS SNOTEL	5940	6/01/08	16	9.6	.0	4.5
COUNTY LINE SNOTEL	4800	6/01/08	0	.0	.0	.1
CRAZYMAN FLAT SNOTEL	6180	6/01/08	0	.0	.0	.0
DALY LAKE SNOTEL	3690	6/01/08	29	14.6	.0	.5
DERR SNOTEL	5850	6/01/08	0	.0	.0	.0
DIAMOND LAKE SNOTEL	5320	6/01/08	0	.0	.0	.3
EILERTSON SNOTEL	5510	6/01/08	0	.0	.0	.0
EMIGRANT SPGS SNOTEL	3800	6/01/08	0	.0	.0	.0
FISH CREEK SNOTEL	7660	6/01/08	20	9.4	.0	13.8
FISH LK. SNOTEL	4670	6/01/08	0	.0	.0	.0
FOURMILE LAKE SNOTEL	6000	6/01/08	14	9.5	.0	6.2
GERBER RES SNOTEL	4850	6/01/08	0	.0	.0	.0
GOLD CENTER SNOTEL	5410	6/01/08	0	.0	.0	.0
GREENPOINT SNOTEL	3310	6/01/08	0	.0	.0	.0
HIGH RIDGE SNOTEL	4920	6/01/08	19	15.4	.0	1.2
HOGG PASS SNOTEL	4760	6/01/08	48	19.8	.0	10.8
HOLLAND MDWS SNOTEL	4900	6/01/08	50	24.3	.0	2.1
IRISH-TAYLOR SNOTEL	5500	6/01/08	78	36.2	16.5	26.1
JUMP OFF JOE SNOTEL	3520	6/01/08	21	10.7	.0	.2
KING MTN #2 SNOTEL	4340	6/01/08	0	.0	.0	.0
LAKE CK R.S. SNOTEL	5200	6/01/08	0	.0	.0	.0
LITTLE MEADOW SNOTEL	4000	6/01/08	84	43.9	.0	3.6
LUCKY STRIKE SNOTEL	4970	6/01/08	0	.0	.0	.0
MADISON BUTTE SNOTEL	5150	6/01/08	0	.0	.0	.0
MARION FORKS SNOTEL	2600	6/01/08	19	12.4	.0	.0
MOSS SPRINGS SNOTEL	5760	6/01/08	27	13.1	.0	4.0
MT HOOD TEST SNOTEL	5400	6/01/08	144	72.1	26.6	48.1
MT HOWARD SNOTEL	7910	6/01/08	29	14.3	.0	7.8
MUD RIDGE SNOTEL	4070	6/01/08	53	30.0	.0	1.8
NEW CRESCENT SNOTEL	4910	6/01/08	0	.0	.0	.0
NORTH FK RES SNOTEL	3060	6/01/08	88	38.5	.0	.5
OCHOCO MEADOW SNOTEL	5430	6/01/08	0	.0	.0	.0
PARK H.Q. REV	6550	5/30/08	87	47.8	33.6	45.3
PEAVINE RIDGE SNOTEL	3420	6/01/08	10	6.2	.0	.3
QUARTZ MTN SNOTEL	5720	6/01/08	0	.0	.0	.0
R.R. OVERPASS SNOTEL	2680	6/01/08	0	.0	.0	.0
RED HILL SNOTEL	4400	6/01/08	115	57.8	11.1	16.3
ROARING RIVER SNOTEL	4950	6/01/08	46	28.3	.0	5.2
ROCK SPRINGS SNOTEL	5290	6/01/08	0	.0	.0	.0

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon Continued...						
SADDLE MTN SNOTEL	3110	6/01/08	0	.0	.0	.0
SALT CK FALLS SNOTEL	4220	6/01/08	22	17.3	.0	.5
SANTIAM JCT. SNOTEL	3750	6/01/08	0	.0	.0	.0
SCHNEIDER MDW SNOTEL	5400	6/01/08	15	7.1	.0	1.9
SEINE CREEK SNOTEL	2060	6/01/08	0	.0	.0	.0
SEVENMILE MARSH SNTL	5700	6/01/08	31	16.4	.0	6.5
SILVER CREEK SNOTEL	5740	6/01/08	0	.0	.0	.0
SILVIES SNOTEL	6990	6/01/08	0	.0	.0	1.8
SNOW MTN SNOTEL	6220	6/01/08	0	.0	.0	.1
SF BULL RUN SNOTEL	2690	6/01/08	4	1.9	.0	.0
STARR RIDGE SNOTEL	5250	6/01/08	0	.0	.0	.0
STRAWBERRY SNOTEL	5760	6/01/08	0	.0	.0	.0
SUMMER RIM SNOTEL	7100	6/01/08	0	.0	.0	1.2
SUMMIT LAKE SNOTEL	5600	6/01/08	83	49.7	25.4	26.6
TAYLOR BUTTE SNOTEL	5030	6/01/08	0	.0	.0	.0
TAYLOR GREEN SNOTEL	5740	6/01/08	0	.0	.0	.1
THREE CK MEAD SNOTEL	5650	6/01/08	23	10.1	.0	1.9
TIPTON SNOTEL	5150	6/01/08	0	.0	.0	.0
WOLF CREEK SNOTEL	5630	6/01/08	0	.0	.0	.1
California						
ADIN MTN SNOTEL	6350	6/01/08	0	.0	.0	.7
CEDAR PASS SNOTEL	7100	6/01/08	0	.0	.0	2.7
CROWDER FLAT SNOTEL	5200	6/01/08	0	.0	.0	--
DISMAL SWAMP SNOTEL	7000	6/01/08	19	7.4	.0	8.6
Idaho						
MUD FLAT SNOTEL	5730	6/01/08	0	.0	.0	.0
SOUTH MTN SNOTEL	6500	6/01/08	0	.0	.0	.0
Nevada						
BEAR CREEK SNOTEL	7800	6/01/08	---	1.5	.0	7.1
BIG BEND SNOTEL	6700	6/01/08	0	.0	.0	.1
BUCKSKIN,L SNOTEL	6700	6/01/08	0	.0	.0	.0
DISASTER PEAK SNOTEL	6500	6/01/08	0	.0	.0	.0
FAWN CREEK SNOTEL	7050	6/01/08	0	.0	.0	1.4
GRANITE PEAK SNOTEL	7800	6/01/08	1	.6	.0	11.9
JACK CREEK, U SNOTEL	7280	6/01/08	0	.0	.0	2.8
LAMANCE CREEK SNOTEL	6000	6/01/08	0	.0	.0	.0
LAUREL DRAW SNOTEL	6700	6/01/08	0	.0	.0	.0
SEVENTYSIX CK SNOTEL	7100	6/01/08	0	.0	.0	.0
TAYLOR CANYON SNOTEL	6200	6/01/08	0	.0	.0	.0

(d) denotes discontinued site.

# Basin Outlook Reports; How Forecasts Are Made

## And Federal – State – Private Cooperative Snow Surveys

*For more water supply and resource management information, contact:*

**USDA, Natural Resources Conservation Service  
Snow Survey Office  
1201 NE Lloyd; Suite 900  
Portland, OR 97232**

**Phone: (503) 414-3270**

**Web site: <http://www.or.nrcs.usda.gov/snow/index.html>**

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 snowcourses 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.

# Interpreting Water Supply Forecasts

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.

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**OWYHEE AND MALHEUR BASINS**

**Streamflow Forecasts - February 1, 2006**

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
MALHEUR near Drewsey	FEB-JUL	148	184	210	165	238	282	127
	APR-SEP	87	110	128	168	147	177	76
NF MALHEUR at Beulah	FEB-JUL	108	127	141	157	156	178	90
OWYHEE RESV INFLOW (2)	FEB-JUL	602	792	935	134	1090	1340	700
	APR-SEP	341	473	575	134	687	869	430

\* 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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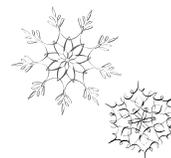
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