



United States
Department of
Agriculture



Natural Resources
Conservation
Service

Oregon Basin Outlook Report

May 1, 2009



With peak snow behind us and snow packs melting across much of the state, members of the NRCS Snow Survey staff are in the field conducting site maintenance and repair. In many cases the work will consist of routine operational maintenance and upkeep but in some cases damage to Snotel sites will require long days filled with hard work as staff repair or replace snow monitoring equipment and instrumentation.

Contents

General Outlook	1
Owyhee and Malheur Basins	3
Burnt, Powder, Grand Ronde, and Imnaha Basins	5
Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins	9
Upper John Day Basin	11
Upper Deschutes and Crooked Basins	13
Hood, Mile Creeks, and Lower Deschutes Basins	17
Lower Columbia Basin	19
Willamette Basin	21
Rogue and Umpqua Basins	25
Klamath Basin	289
Lake County and Goose Lake.....	31
Harney Basin.....	33
Recession Forecasts for Oregon	35
Summary of Snow Course Data	37
Basin Outlook Reports; How Forecasts Are Made	39
Interpreting Water Supply Forecasts	40

General Outlook

May 1, 2009

SUMMARY

As May begins, the peak of the snow year has passed, and the snowmelt-runoff season has begun. In most Oregon basins, maximum snowpack was reached shortly after April 1 of this year. The snowmelt season was underway throughout the state by mid April. Even as the first of April and May snow measurements were near average, several basins in Southeaster Oregon, failed to reach average peak snowpack conditions for the season.

Due to below average precipitation since the beginning of the water year, the US Drought Monitor indicates abnormally dry conditions throughout Western Oregon and parts of Central Oregon. Moderate drought conditions are designated for all of Malheur County, most of Lake County, the southern half of Baker and Harney Counties and the southeast corner of Klamath county. <http://drought.unl.edu/DM/MONITOR.html>

SNOWPACK

Early in April, the snow continued to accumulate at higher elevations in the state while the snow began to melt gradually in the lower elevations. A warming trend beginning around April 18 saw temperatures statewide climbing to 10 to 15 degrees above normal, bringing rapid snowmelt. A week later, temperatures cooled to below normal, slowing the melt in many areas. May 1 snowpacks in Oregon ranged from 64 percent of average for the Owyhee and Malheur basin to 163 percent of average for the Hood, Mile Creeks and Lower Deschutes basin.

PRECIPITATION

April precipitation was below to near average for all basins in the state. April precipitation ranged from 56 percent of average for the Rogue and Umpqua basin to 108 percent of average for the Hood, Mile Creeks and Lower Deschutes basin.

Since the beginning of the water year, total precipitation for most basins in the state has been below average. Water year total precipitation in Oregon's water supply basins has ranged from 76 percent of average in Lake County to 103 percent of average in the Umatilla, Walla Walla, Rock and Lower John Day basin.

RESERVOIRS

Reservoirs in southeastern Oregon are well below average given the dry conditions in that region. Elsewhere in the state, the May 1 reservoir measurements were near to slightly below normal.

The May 1 storage at 26 major Oregon reservoirs analyzed in this publication was 78 percent of average. A total of 2,053,400 acre feet of water were stored on May 1, representing 63 percent of useable capacity. Last year at this time these same reservoirs stored 2,159,500 acre feet of water.

STREAMFLOW

May through September streamflow forecasts range from 55 percent of average for Deep Creek above Adel to 117 percent of average for the Oak Grove Fork (Clackamas) River above the power intake.

Due to below normal snowpacks, water users in the basins of southeast Oregon can expect that summer low flows will arrive earlier than normal this season. Water users in southeastern Oregon can expect well below normal water supply this coming summer.

Elsewhere in the state water users can expect a range of conditions. Some will see reduced water availability. Consult the individual basin reports for details.

STREAM	PERIOD	PERCENT OF AVERAGE
Owyhee Reservoir Inflow	May-September	62
Grande Ronde R at La Grande	May-September	96
Umatilla R at Pendleton	May-September	110
Deschutes R at Benham Falls	May-September	97
MF Willamette bl NF	June-October	90
Rogue R at Raygold	May-September	85
Upper Klamath Lake Inflow	May-September	79
Silvies R nr Burns	May-September	85

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

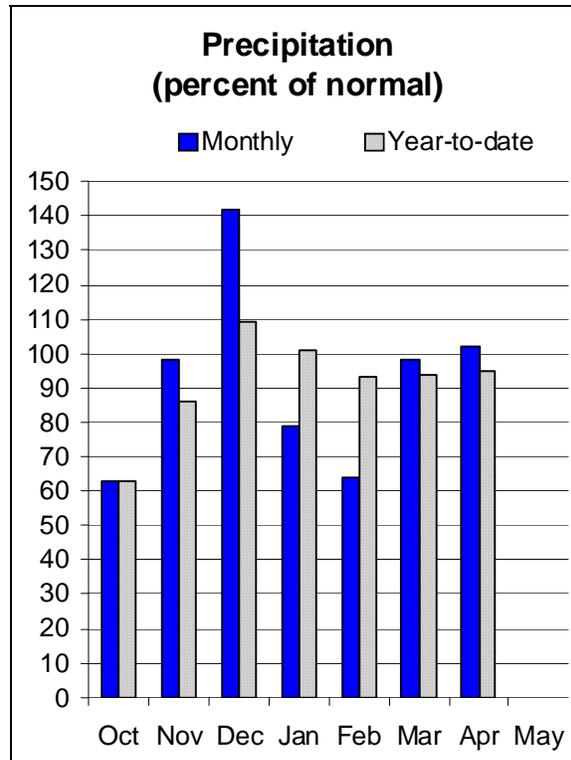
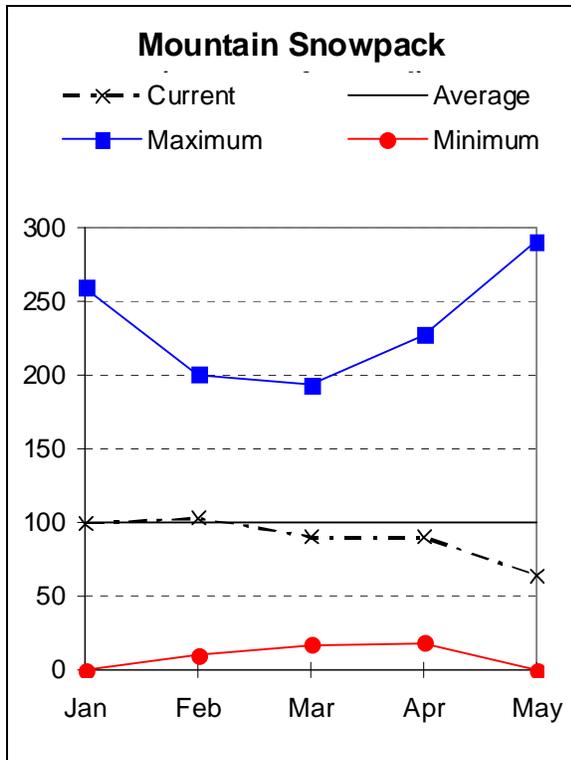
The forecasts in this bulletin are a result of coordinated activity between the Natural Resources Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

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

May 1, 2009



Water Supply Outlook

The snowpack in the Owyhee basin peaked near March 1 and began to slowly decline until mid April, when steady melt out began. In the Malheur, the snowpack did not peak until April 1 and has since begun to melt steadily. This winter both basins recorded a slightly below normal peak snowpack. The combined Owyhee and Malheur snowpack on May 1 was 64 percent of average, the lowest in the state. Measurements for the May 1 snowpack were taken at 10 SNOTEL sites in the Owyhee and Malheur basins.

Since the beginning of the water year, precipitation in the basin has been 95 percent of average. April precipitation in the Owyhee and Malheur basin was 102 percent of average.

At the end of April, storage at Beulah, Bully Creek, Owyhee and Warm Springs reservoirs was 61 percent of average and 51 percent of capacity. The May through September streamflow forecasts range from 61 to 74 percent of average. Most of the basin is designated by the US Drought Monitor as in a moderate drought condition. Water users in the basin can expect well below average water supply conditions for the May through September 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 - May 1, 2009

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Malheur R nr Drewsey	MAY-JUL	11.7	19.0	25	71	32	43	35
	MAY-SEP	13.0	21	27	73	34	46	37
NF Malheur R at Beulah	MAY-JUL	17.9	23	27	73	31	38	37
	MAY-SEP	21	27	32	74	37	45	43
Owyhee Reservoir Inflow (2)	MAY-JUL	16.0	83	140	62	220	346	225
	MAY-SEP	15.0	92	159	62	242	349	255
Owyhee R nr Rome	MAY-JUL	52	97	135	64	179	256	210
	MAY-SEP	57	102	140	61	184	259	230

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

OWYHEE AND MALHEUR BASINS
Watershed Snowpack Analysis - May 1, 2009

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	35.4	38.9	51.2	Owyhee	7	53	63
BULLY CREEK	30.0	17.0	20.4	25.6	Upper Malheur	3	37	69
OWYHEE	715.0	412.3	452.4	613.6	Jordan Creek	2	25	43
WARMSPRINGS	191.0	46.8	58.5	149.9	Bully Creek	0	0	0
					Willow 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.

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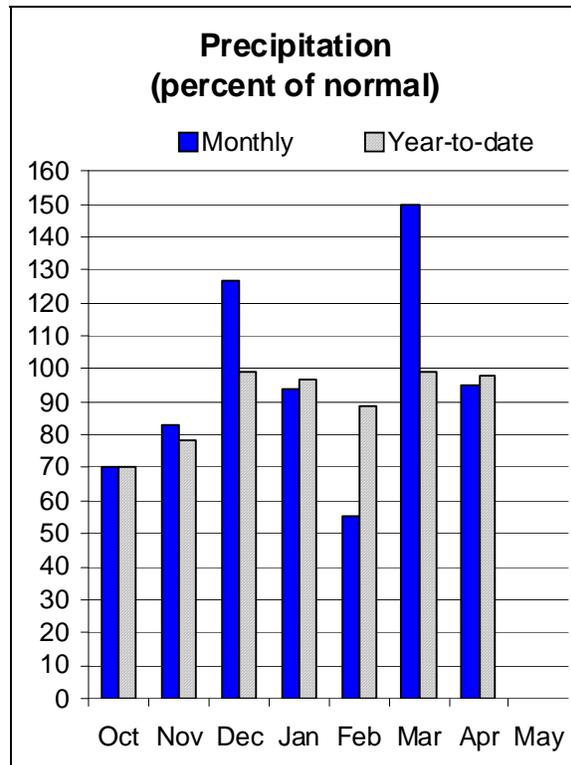
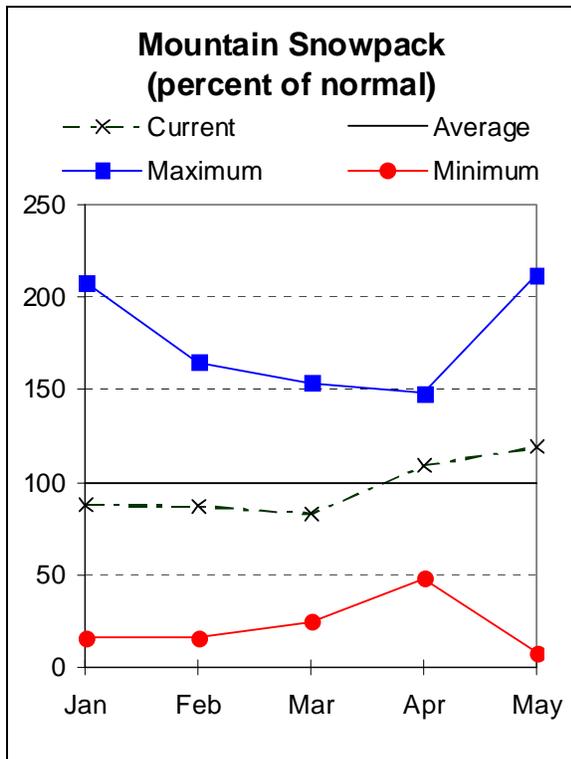
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Burnt, Powder, Grand Ronde, and Imnaha Basins

May 1, 2009



Water Supply Outlook

The snowpack reached its peak shortly after April 1 in the basin. By mid month, the melt out had begun. On May 1, the snowpack in the basin was measured to be 119 percent of average. May 1 snowpack measurements were taken at 15 SNOTEL sites and 2 snow courses in the basin.

April precipitation in the basin was 95 percent of average. Since the beginning of the water year, precipitation in the basin has been 98 percent of average.

At the end of April, storage at Phillips, Thief and Unity reservoirs was 94 percent of average and 82 percent of capacity. The May through September streamflow forecasts range from 62 to 96 percent of average. Water users in the basin can expect a range of well below to near average water supply conditions for the May through September period.

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 - May 1, 2009

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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	MAY-SEP	39	48	54	96	60	69	56
Burnt R nr Hereford	MAY-JUL	5.1	8.4	11.0	64	14.0	19.1	17.3
	MAY-SEP	5.8	9.2	11.9	62	15.0	20	19.1
Catherine Ck nr Union	MAY-JUL	35	40	44	90	48	54	49
	MAY-SEP	39	45	49	93	53	60	53
Deer Ck nr Sumpster	MAY-JUL	4.9	6.6	8.0	76	9.5	11.9	10.5
Grande Ronde R at La Grande	MAY-JUL	58	82	100	94	120	153	106
	MAY-SEP	63	88	108	96	130	165	112
Grande Ronde R at Troy	MAY-JUL	596	764	840	92	916	1084	910
	MAY-SEP	648	835	920	91	1005	1192	1010
Imnaha R at Imnaha	MAY-JUL	113	148	172	80	196	231	215
	MAY-SEP	125	162	187	78	212	249	240
Lostine R nr Lostine	MAY-JUL	73	84	92	89	100	113	103
	MAY-SEP	75	87	96	86	105	120	112
Pine Ck nr Oxbow	MAY-JUL	60	77	88	82	99	116	108
	MAY-SEP	65	82	93	82	104	121	114
Powder R nr Sumpster	MAY-JUL	23	29	34	83	39	48	41
	MAY-SEP	23	30	35	83	41	50	42
Wolf Ck Reservoir Inflow (2)	MAY-JUN	4.3	6.8	8.5	83	10.2	12.7	10.3

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BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Reservoir Storage (1000 AF) - End of April					BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Watershed Snowpack Analysis - May 1, 2009			
Reservoir	Usable Capacity	*** Usable Storage *** This Year Last Year Avg			Watershed	Number of Data Sites	This Year as % of Last Yr Average	
PHILLIPS LAKE	73.5	57.0	30.2	59.9	Upper Grande Ronde	9	70	144
THIEF VALLEY	17.4	13.6	13.5	17.5	Wallowa	4	79	106
UNITY	25.2	24.9	23.9	24.3	Imnaha	3	80	94
WALLOWA LAKE		NO REPORT			Powder	7	59	89
WOLF CREEK	10.4	11.1	4.5	9.4	Burnt	2	38	109

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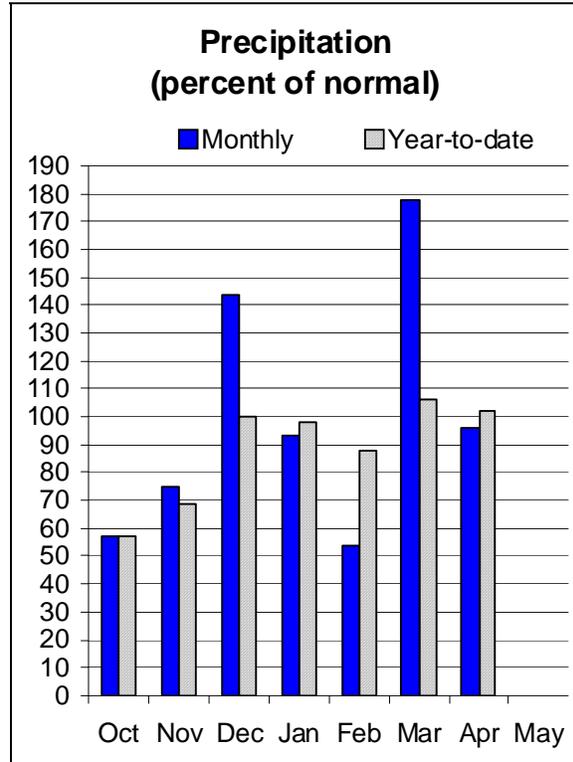
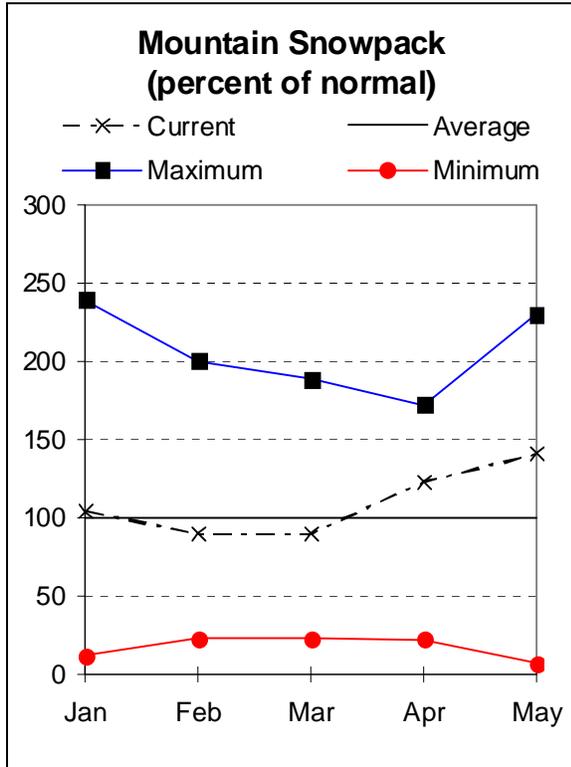
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Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins

May 1, 2009



Water Supply Outlook

The snowpack reached its peak shortly after April 1 in this basin. This winter brought above normal peak snowpack to most sites in the basin. The end of season snowfall in late March and early April has improved summer streamflow forecasts. As of May 1, the snowpack measured 141 percent of average. Snow measurements were gathered at 7 SNOTEL sites and 2 snow courses.

April precipitation in the basin was 96 percent of average. Since the beginning of the water year, precipitation in the basin has been 103 percent of average, the highest in the state.

At the end of April, storage at McKay and Cold Springs reservoirs was 93 percent of average and 78 percent of capacity. The May through September streamflow forecasts range from 100 to 113 percent of average. Water users in the basin can expect near average water supply conditions for the May through September period.

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 - May 1, 2009

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)	
Butter Ck nr Pine City	MAY-JUL	1.7	3.7	5.0	106	6.3	8.3	4.7
	MAY-SEP	2.5	4.5	5.8	106	7.1	9.1	5.5
McKay Ck nr Pilot Rock	MAY-SEP	1.8	8.8	13.6	110	18.4	25	12.4
Rhea Ck nr Heppner	MAY-JUL	0.7	2.5	3.7	109	4.9	6.7	3.4
	MAY-SEP	30	40	47	112	54	64	42
Umatilla R ab Meacham Ck nr Gibbon	MAY-JUL	30	40	47	112	54	64	42
	MAY-SEP	37	47	54	113	61	71	48
Umatilla R at Pendleton	MAY-JUL	43	68	86	110	104	129	78
	MAY-SEP	48	74	92	110	110	136	84
SF Walla Walla R nr Milton-Freewater	MAY-JUL	29	35	38	100	41	47	38
	MAY-SEP	41	47	51	100	55	61	51
Willow Ck ab Willow Ck Lake nr Heppn	MAY-JUL	1.6	3.2	4.4	100	5.6	7.2	4.4

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 April					Watershed Snowpack Analysis - May 1, 2009			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COLD SPRINGS	50.0	31.4	27.6	42.7	Walla Walla	3	84	163
MCKAY	73.8	65.5	55.2	61.6	Umatilla	7	75	145
WILLOW CREEK	1.8	1.8	2.1	---	McKay Creek	4	0	0

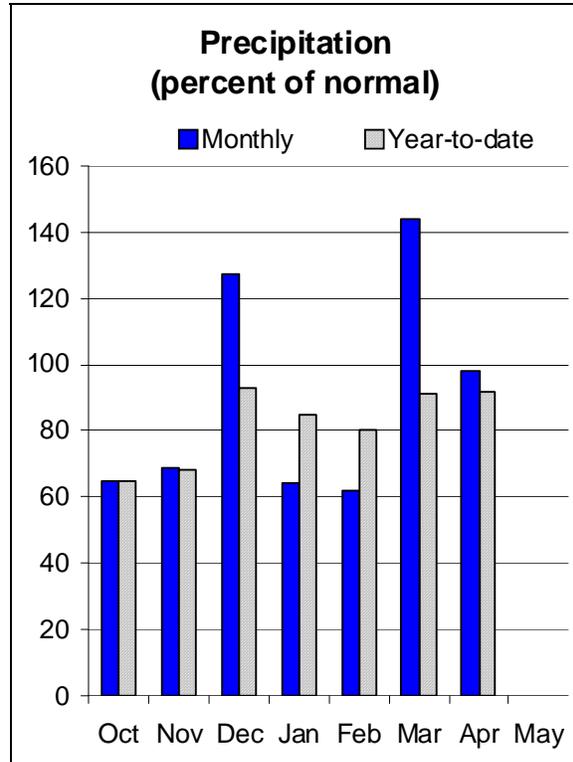
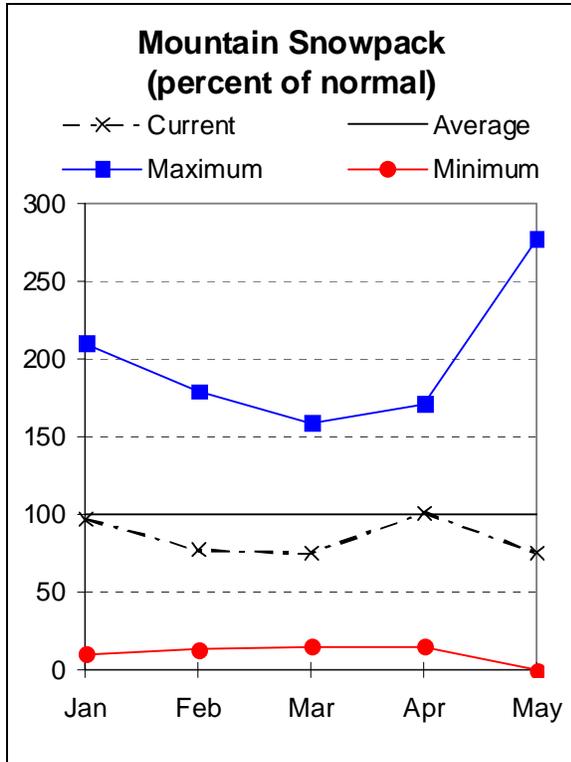
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 Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Upper John Day Basin

May 1, 2009



Water Supply Outlook

The Upper John Day basin snowpack peaked shortly after April 1, following a winter of less than average snowfall. The late season snowfall in late March and early April has improved summer streamflow forecasts. The May 1 snowpack in the Upper John Day basin was 75 percent of average. May 1 snow measurements were gathered at 13 SNOTEL sites.

Total precipitation since the beginning of the water year has been 92 percent of average. April precipitation in the Upper John Day basin was 98 percent of average.

Water supply forecasts for the May through September period range from 92 percent of average to 103 percent of average. Water users in the Upper John Day basin can expect near normal water supplies this coming summer.

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>

UPPER JOHN DAY BASIN
Streamflow Forecasts - May 1, 2009

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)
Camas Ck nr Ukiah	MAY-JUL	8.0	13.6	17.4	95	21	27	18.4
	MAY-SEP	8.7	14.4	18.2	95	22	28	19.2
MF John Day R at Ritter	MAY-JUL	45	64	76	97	88	107	78
	MAY-SEP	49	68	81	98	94	113	83
NF John Day R at Monument	MAY-JUL	220	305	365	97	425	510	375
	MAY-SEP	235	320	380	97	440	525	390
Mountain Ck nr Mitchell	MAY-JUL	1.2	2.0	2.5	93	3.0	3.8	2.7
	MAY-SEP	1.2	2.0	2.6	92	3.2	4.0	2.8
Strawberry Ck nr Prairie City	MAY-JUL	4.8	6.0	6.8	103	7.6	8.8	6.6
	MAY-SEP	5.4	6.7	7.5	103	8.3	9.6	7.3

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

UPPER JOHN DAY BASIN
Watershed Snowpack Analysis - May 1, 2009

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					North Fork John Day	7	46	81
					John Day above Kimberly	5	42	70

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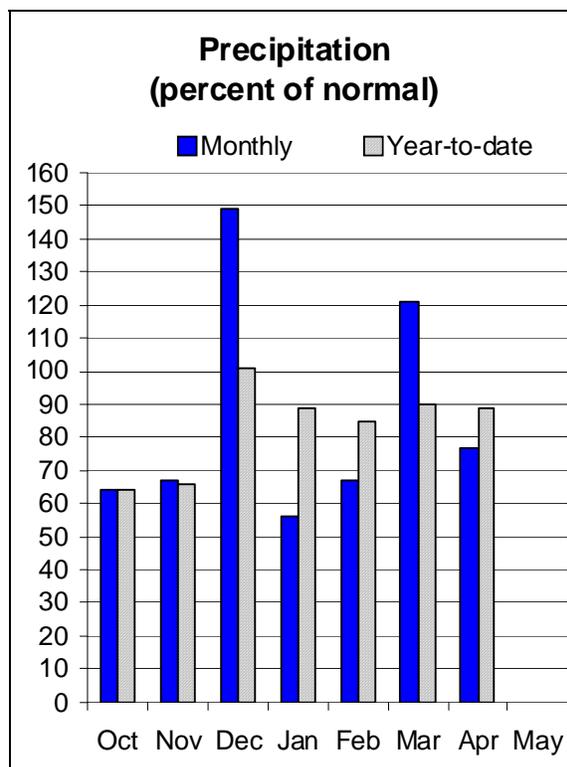
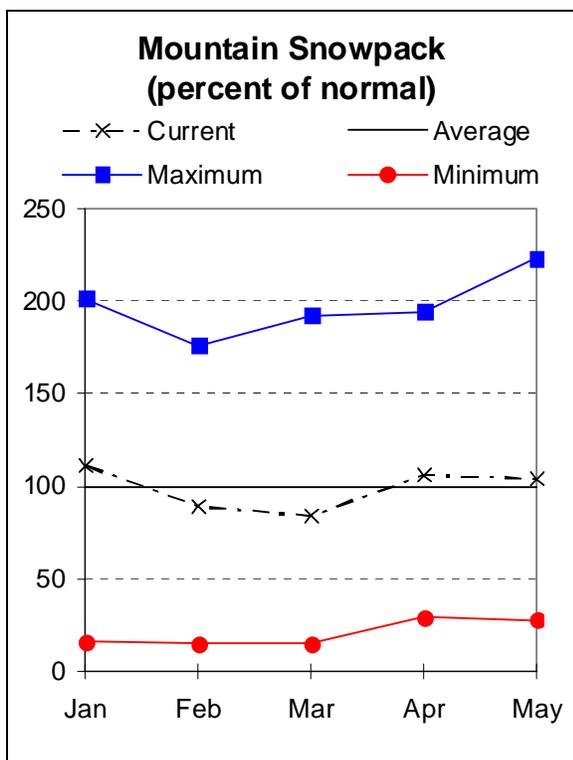
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Or visit: <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>



Upper Deschutes and Crooked Basins

May 1, 2009



Water Supply Outlook

The snowpack in the Upper Deschutes and Crooked basin reached its peak shortly after April 1. The May 1 snowpack in the Upper Deschutes and Crooked basin was 104 percent of average. May 1 snow measurements were gathered at 14 SNOTEL sites and 3 snow courses.

April precipitation in the basin was 77 percent of average. Since the beginning of the water year, precipitation in the basin has been 89 percent of average.

At the end of April, storage at 5 basin reservoirs was 103 percent of average or 89 percent of capacity. The May through September streamflow forecasts range from 84 to 100 percent of average.

Water users in the Upper Deschutes basin can expect near average streamflows this summer. Water users in the Crooked River can expect below average streamflows for the summer season.

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 - May 1, 2009

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)	MAY-JUL	36	43	47	96	51	58	49
	MAY-SEP	65	74	80	96	86	95	83
Crescent Ck nr Crescent (2)	MAY-JUL	8.8	12.0	14.1	100	16.2	19.4	14.1
	MAY-SEP	12.5	15.7	17.8	100	19.9	23	17.8
Deschutes R at Benham Falls nr Bend	MAY-JUL	235	250	260	96	270	285	270
	MAY-SEP	395	415	430	97	445	465	445
Deschutes R bl Snow Ck nr La Pine	MAY-JUL	17.6	23	26	96	29	34	27
	MAY-SEP	40	47	51	96	55	62	53
Little Deschutes R nr La Pine (2)	MAY-JUL	35	42	47	90	52	59	52
	MAY-SEP	41	49	55	90	61	69	61
Ochoco Reservoir Inflow (2)	MAY-JUL	0.5	5.4	8.7	85	12.0	16.9	10.3
	MAY-SEP	0.1	5.2	8.7	85	12.2	17.3	10.3
Prineville Reservoir Inflow (2)	MAY-JUL	12.7	28	38	86	48	63	44
	MAY-SEP	12.3	28	38	84	48	64	45
Whychus Ck nr Sisters	MAY-JUL	26	29	30	94	31	34	32
	MAY-SEP	37	39	41	93	43	45	44

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UPPER DESCHUTES AND CROOKED BASINS Reservoir Storage (1000 AF) - End of April					UPPER DESCHUTES AND CROOKED BASINS Watershed Snowpack Analysis - May 1, 2009			
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	49.6	48.1	44.9	Crooked	4	39	65
CRESCENT LAKE	86.9	66.0	50.0	55.5	Little Deschutes	4	63	105
OCHOCO	47.5	32.9	37.9	36.0	Deschutes above Wickiup R	4	61	120
PRINEVILLE	153.0	151.1	141.9	145.0	Tumalo and Squaw Creeks	5	70	101
WICKIUP	200.0	185.5	187.1	188.5				

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

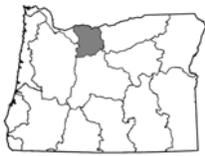
The average is computed for the 1971-2000 base period.

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

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>

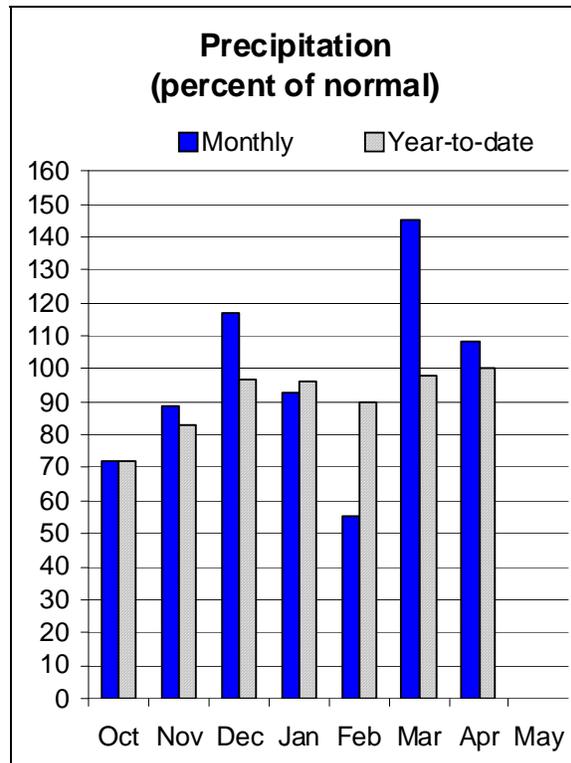
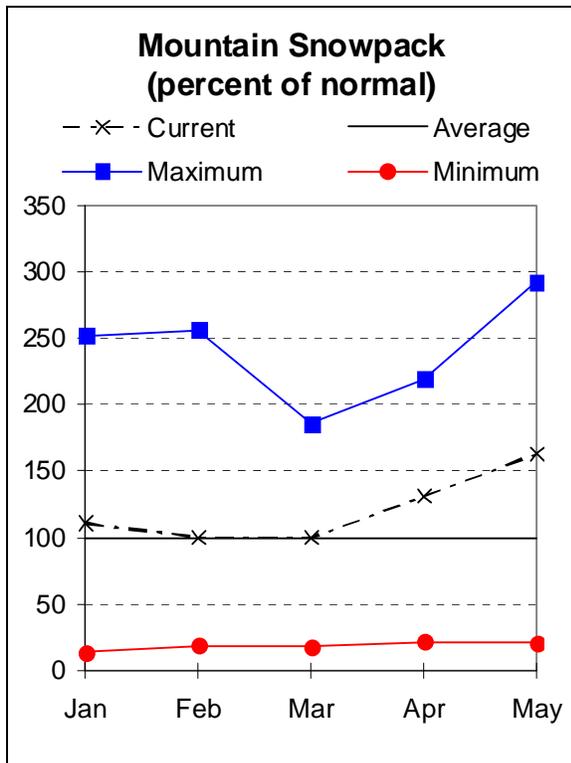
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Hood, Mile Creeks, and Lower Deschutes Basins

May 1, 2009



Water Supply Outlook

The May 1 snowpack in the Hood, Mile Creeks and Lower Deschutes basin was 163 percent of average, the highest in the state. The snowpack appears to have peaked shortly after April 1 followed by a gradual melt. As of May 1, the snowpack was beginning to gain again. May 1 snow measurements were recorded at 8 SNOTEL sites in the basin.

Since the beginning of the water year, precipitation in the basin has been 100 percent of average. April precipitation in the basin was 108 percent of average, the highest in the state.

The May through September streamflow forecast for Hood River at Tucker Bridge is 112 percent of average. Water users in the Hood, Mile Creeks, and Lower Deschutes basin can expect near normal streamflows this summer.

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 - May 1, 2009

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)						
		90% (1000AF)		70% (1000AF)			50% (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)	
		Chance Of Exceeding *										
Hood R at Tucker Bridge	MAY-JUL	148	162	171	112	180	194	153				
	MAY-SEP	192	210	220	112	230	250	196				

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

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS
Watershed Snowpack Analysis - May 1, 2009

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	6.6	1.9	5.2	Hood River	5	56	123
					Mile Creeks	0	0	0
					White River	4	70	145

* 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.

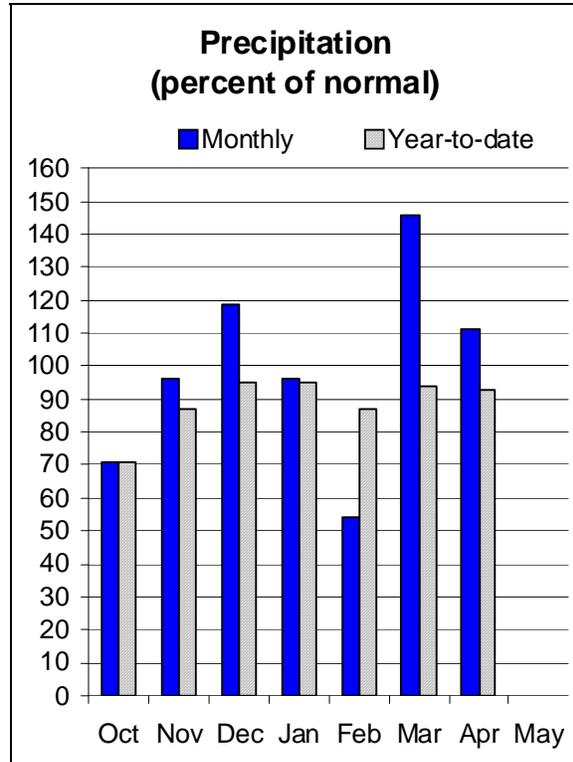
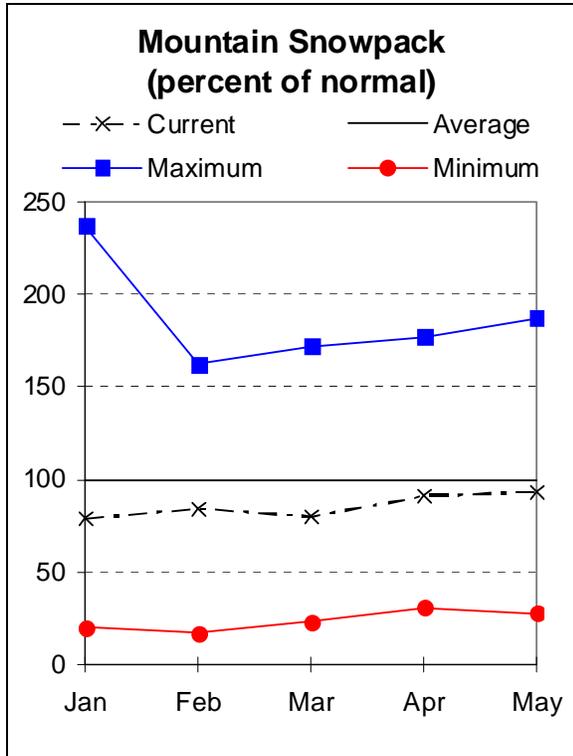
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For more information contact your local Natural Resources Conservation Service Office:
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Lower Columbia Basin

May 1, 2009



Water Supply Outlook

The May 1 snowpack for the entire Columbia basin above The Dalles is 93 percent of average. Water year to date precipitation over the entire Columbia basin was also 93 percent of average. In Oregon, the April precipitation in the Sandy basin was 111 average.

The May through September streamflow forecast for the Columbia at The Dalles is 88 percent of average. The May through September streamflow forecast for the Sandy near Marmot is 114 percent of average.

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 - May 1, 2009

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		90%		50%			30%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)		(1000AF)	(1000AF)
Columbia R at The Dalles (2)	MAY-JUL	52600	58900	61700	88	64500	70800	70500
	MAY-SEP	62700	70200	73600	87	77000	84500	84500
Sandy R nr Marmot	MAY-JUL	200	225	240	115	255	280	209
	MAY-SEP	250	275	295	114	315	340	259

LOWER COLUMBIA BASIN Reservoir Storage (1000 AF) - End of April					LOWER COLUMBIA BASIN Watershed Snowpack Analysis - May 1, 2009			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Sandy	7	57	159

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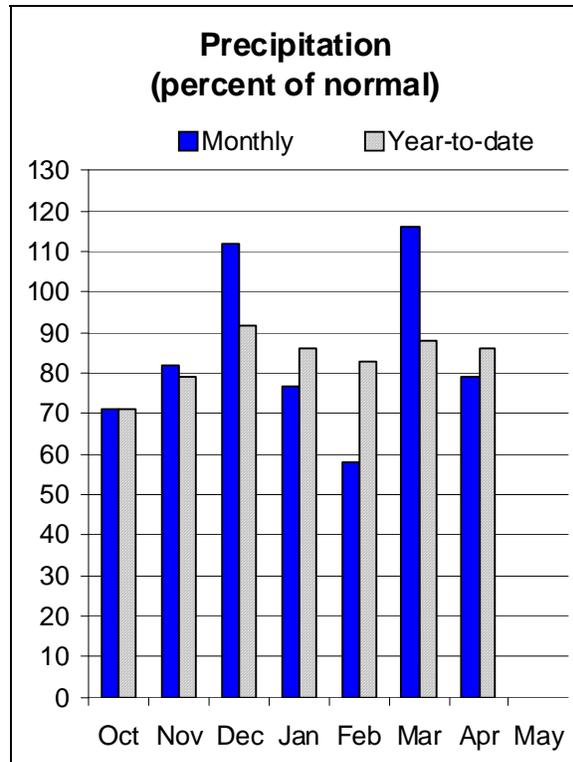
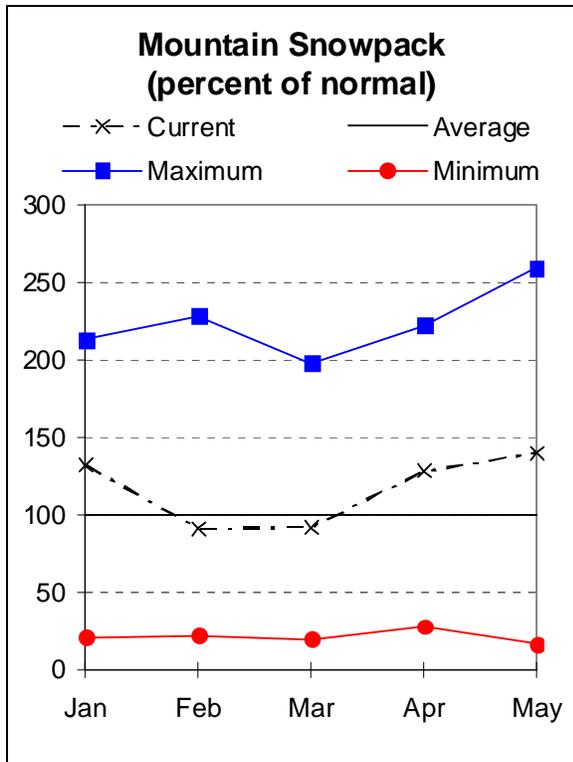
For more information contact your local Natural Resources Conservation Service Office:
Oregon City - (503) 656-3499

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



Willamette Basin

May 1, 2009



Water Supply Outlook

The Willamette basin snowpack peaked just after April 1 and began a gradual melt out. The May 1 snowpack in the Willamette basin was 140 percent of average. The peak snowpack for the winter was near to above average for most sites. May 1 snow measurements were taken at 20 SNOTEL sites.

April precipitation in the Willamette basin was 79 percent of average. Since the beginning of the water year, precipitation in the basin has been 86 percent of average.

At the end of April, storage at Henry Hagg and Timothy Lake reservoirs was near average. May through September streamflow forecasts in the Willamette basin range from 68 to 117 percent of average. Summer streamflow forecasts vary greatly depending on the percentage of snowmelt contribution to streamflow. Water users in snowmelt dominated tributaries of the Willamette can expect near average streamflows this coming summer. Water users in the rainfall dominated tributaries of the Willamette can expect below average conditions.

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>

WILLAMETTE BASIN
Streamflow Forecasts - May 1, 2009

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)
Blue River Lake Inflow (1,2)	MAY-JUN	18.5	33	40	93	47	62	43
	MAY-JUL	18.4	34	41	91	48	64	45
	MAY-SEP	19.6	35	42	89	49	64	47
Clackamas R at Estacada (2)	MAY-JUL	345	405	445	107	485	545	418
	MAY-SEP	440	505	550	105	595	660	526
Clackamas R ab Three Lynx (2)	MAY-JUL	265	305	330	106	355	395	312
	MAY-SEP	350	390	420	105	450	490	400
Cottage Grove Lake Inflow (1,2)	MAY-JUN	-2.1	9.6	14.9	82	20	32	18.2
	MAY-SEP	-1.9	10.6	16.2	81	22	34	20
Cougar Lake Inflow (1,2)	MAY-JUN	73	97	108	92	119	143	117
	MAY-SEP	105	133	145	90	157	185	161
Detroit Lake Inflow (1,2)	MAY-JUN	220	285	315	110	345	410	286
	MAY-JUL	265	345	380	109	415	495	349
	MAY-SEP	350	435	475	108	515	600	438
Dorena Lake Inflow (1,2)	MAY-JUN	17.8	48	61	94	74	104	65
	MAY-SEP	26	57	71	95	85	116	75
Fall Creek Lake Inflow (1,2)	MAY-JUN	12.1	38	50	96	62	88	52
	MAY-SEP	19.3	47	60	95	73	101	63
Fern Ridge Lake Inflow (1,2)	MAY-JUN		8.9	13.4	72	17.9	28	18.6
	MAY-SEP	-6.3	3.0	7.2	68	11.4	21	10.6
Foster Lake Inflow (1,2)	MAY-JUN	132	225	265	105	305	400	253
	MAY-JUL	151	250	295	104	340	440	284
	MAY-SEP	168	275	325	101	375	480	321
Green Peter Lake Inflow (1,2)	MAY-JUN	65	126	153	91	180	240	168
	MAY-JUL	73	138	167	89	196	260	188
	MAY-SEP	85	156	189	88	220	295	215

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 - May 1, 2009

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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)	
Hills Creek Lake Inflow (1,2)	MAY	48	74	86	93	98	124	93
	JUN-OCT	91	118	131	80	144	171	164
Little North Santiam R nr Mehama (1)	MAY-JUL	40	69	82	104	95	124	79
	MAY-SEP	51	79	92	103	105	133	89
Lookout Point Lake Inflow (1,2)	MAY	134	205	235	96	265	335	246
	JUN-OCT	225	305	340	85	375	455	402
McKenzie R bl Trail Bridge (2)	MAY-JUL	162	173	181	94	189	200	193
	MAY-SEP	235	250	260	93	270	285	279
McKenzie R nr Vida (1,2)	MAY-JUL	425	525	570	86	615	715	663
	MAY-SEP	585	700	750	85	800	915	888
Mohawk R nr Springfield	MAY-JUL	10.4	24	34	81	44	58	42
Oak Grove Fork R ab Power Intake	MAY-JUL	92	100	106	118	112	120	90
	MAY-SEP	130	141	148	117	155	166	127
North Santiam R at Mehama (1,2)	MAY-JUL	285	415	475	101	535	665	470
	MAY-SEP	365	505	570	100	635	775	572
South Santiam R at Waterloo (2)	MAY-JUL	190	265	315	100	365	440	314
	MAY-SEP	215	295	350	99	405	485	353
Scoggins Ck nr Gaston (2)	MAY-JUL	2.1	3.7	4.8	89	5.9	7.5	5.4
Thomas Ck nr Scio	MAY-JUL	12.3	25	33	85	41	54	39
MF Willamette R bl NF (1,2)	MAY	174	225	245	105	265	315	234
	JUN-OCT	255	320	350	90	380	445	391
Willamette R at Salem (1,2)	MAY-JUL	2290	2490	2580	100	2670	2870	2578
	MAY-SEP	2530	2890	3050	101	3210	3570	3036

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

WILLAMETTE BASIN Reservoir Storage (1000 AF) - End of April					WILLAMETTE BASIN Watershed Snowpack Analysis - May 1, 2009			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
BLUE RIVER	85.5	66.9	71.2	70.1	Clackamas	4	59	256
COTTAGE GROVE	29.8	22.3	23.3	25.9	McKenzie	7	51	117
COUGAR	155.2	106.1	111.0	188.3	Row River	1	61	156
DETROIT	300.7	275.9	243.2	293.6	Santiam	6	32	121
DORENA	70.5	51.8	52.9	62.0	Middle Fork Willamette	7	66	129
FALL CREEK	115.5	94.6	99.3	96.8				
FERN RIDGE	109.6	85.4	93.1	93.4				
FOSTER	29.7	1.0	1.3	11.7				
GREEN PETER	268.2	189.1	212.4	286.4				
HILLS CREEK	200.2	175.5	155.0	209.8				
LOOKOUT POINT	337.0	273.7	274.2	265.0				
TIMOTHY LAKE	61.7	57.3	49.2	56.9				
HENRY HAGG LAKE	53.0	53.4	53.1	52.7				

* 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.

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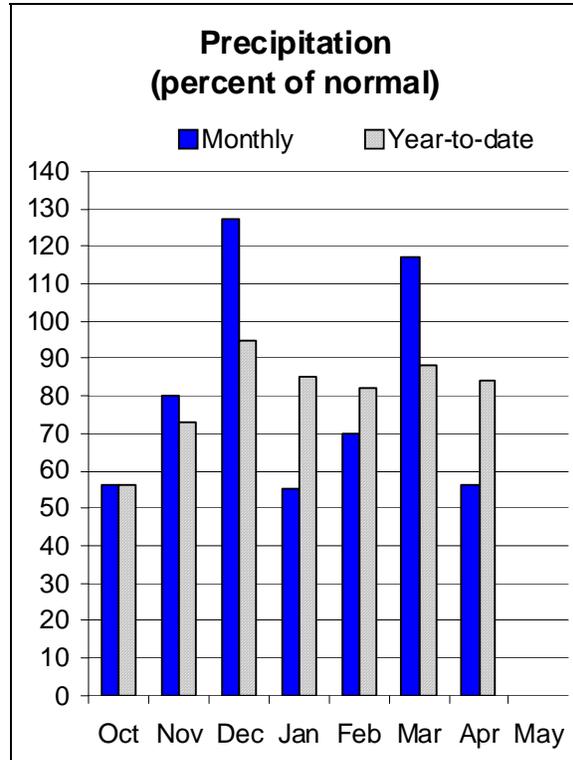
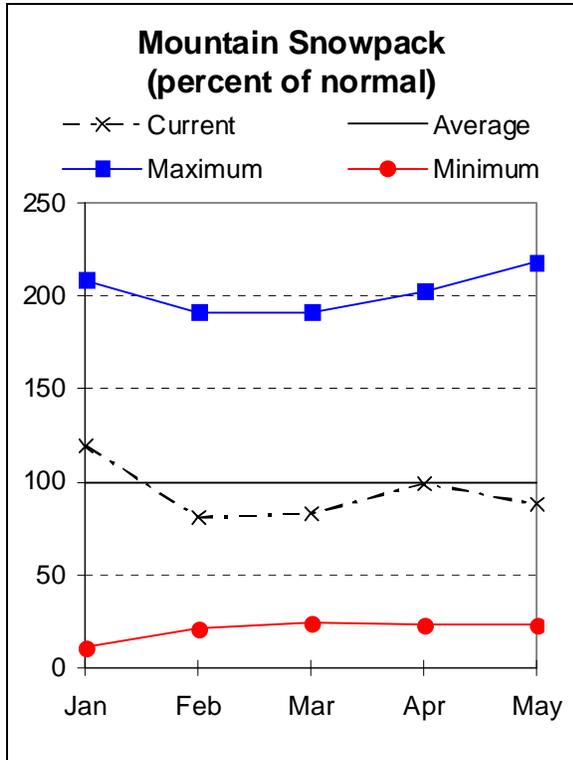
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Rogue and Umpqua Basins

May 1, 2009



Water Supply Outlook

The Rogue and Umpqua snowpack peaked shortly after April 1 and began a rapid melt out mid April. The May 1 snowpack in the Rogue and Umpqua basin was 88 percent of average. May 1 snow measurements were gathered at 11 SNOTEL sites and 15 snow courses.

April precipitation in the Rogue and Umpqua basin was 56 percent of average, the lowest in the state. Since the beginning of the water year, precipitation in the basin has been 84 percent of average.

At the end of April, storage at five Rogue and Umpqua basin reservoirs was 114 percent of average or 94 percent of capacity. May through September streamflow forecasts for the basin range from 60 to 109 percent of average. Reduced streamflow forecasts since last month reflect the lower than average rainfall conditions for the water year and the month of April.

Depending on their source, water users in the basin can expect well below to average water availability 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 - May 1, 2009

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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)	MAY-JUL	22	34	43	60	52	64	72
	MAY-SEP	25	38	47	60	56	69	78
SF Big Butte Ck nr Butte Falls	MAY-JUL	15.9	20	23	105	26	30	22
	MAY-SEP	23	29	32	103	35	41	31
Cow Ck nr Azalea (2)	MAY-JUL	1.3	4.6	6.8	86	9.0	12.3	7.9
	MAY-SEP	1.8	5.3	7.7	85	10.1	13.6	9.1
Hyatt Prairie Reservoir Inflow (2)	MAY-JUL	0.3	1.3	2.0	83	2.7	3.7	2.4
Illinois R at Kerby	MAY-JUL	17.0	43	61	74	79	105	83
	MAY-SEP	22	49	67	74	85	112	90
NF Little Butte Ck nr Lakecreek (2)	MAY-JUL	20	24	27	108	30	34	25
	MAY-SEP	34	39	43	109	47	52	40
Lost Creek Lake Inflow (2)	MAY-JUL	305	345	370	97	395	435	380
	MAY-SEP	420	470	500	97	530	580	515
Rogue R at Raygold (2)	MAY-JUL	270	355	410	85	465	550	480
	MAY-SEP	400	490	550	85	610	700	645
Rogue R at Grants Pass (2)	MAY-JUL	280	370	430	92	490	580	470
	MAY-SEP	395	495	560	91	625	725	615
Sucker Ck bl Ltl Grayback Ck nr Holl	MAY-JUL	11.7	17.8	22	71	26	32	31
	MAY-SEP	14.5	21	25	71	29	35	35
North Umpqua R at Winchester	MAY-JUL	325	420	485	99	550	645	490
	MAY-SEP	445	540	605	98	670	765	615
South Umpqua R nr Brockway	MAY-JUL	59	128	176	92	225	295	191
	MAY-SEP	72	144	194	92	245	315	210
South Umpqua R at Tiller	MAY-JUL	41	73	95	90	117	149	106
	MAY-SEP	49	82	104	90	126	159	116

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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>

ROGUE AND UMPQUA BASINS Reservoir Storage (1000 AF) - End of April					ROGUE AND UMPQUA BASINS Watershed Snowpack Analysis - May 1, 2009			
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	47.7	56.9	64.5	Applegate	5	43	55
EMIGRANT LAKE	39.0	38.8	38.9	35.9	Bear Creek	4	49	58
FISH LAKE	8.0	6.6	5.1	6.2	Little Butte Creek	6	43	112
FOURMILE LAKE	16.1	13.2	11.6	11.0	Illinois	1	0	0
HOWARD PRAIRIE	60.0	56.7	56.2	48.8	North Umpqua	6	44	120
HYATT PRAIRIE	16.1	16.0	16.3	13.3	Rogue River above Grants	20	50	81
LOST CREEK	315.0	175.9	169.5	283.2				

* 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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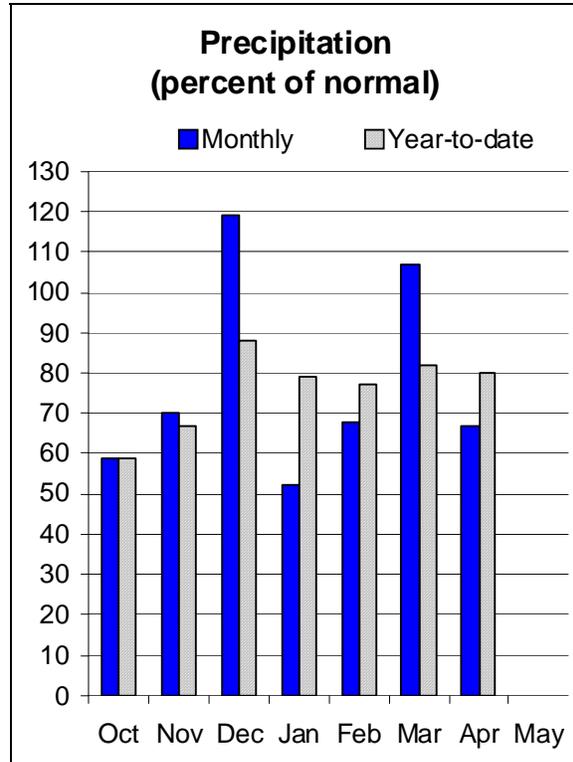
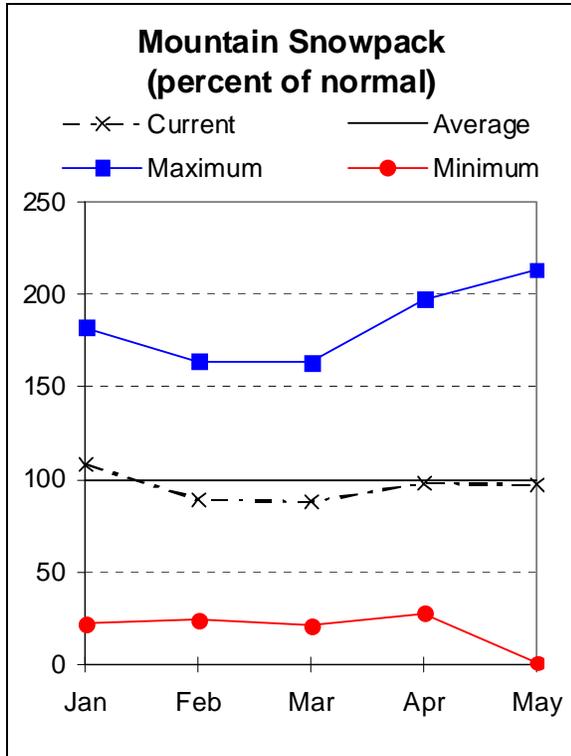
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For more information contact your local Natural Resources Conservation Service Office:
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Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>



Klamath Basin

May 1, 2009



Water Supply Outlook

The Klamath basin snowpack peaked near April 1 and began a slow melt out. The May 1 snowpack in the Klamath basin was 97 percent of average. May 1 snow measurements were taken at 15 SNOTEL sites and 4 snow courses.

April precipitation in the Klamath basin was only 67 percent of average. Since the beginning of the water year, precipitation in the basin has been 80 percent of average.

At the end of April, storage at Upper Klamath Lake, Clear Lake (CA) and Gerber reservoirs was 72 percent of average or 52 percent of capacity. The May through September streamflow forecasts for the Klamath basin range from 65 to 83 percent of average. Water users in the Klamath basin can expect reduced water availability this coming summer.

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 - May 1, 2009

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)	MAY-JUL	1.0	5.8	12.5	65	19.2	29	19.3
	MAY-SEP	1.9	10.8	16.9	65	23	32	26
Gerber Reservoir Inflow (2)	MAY-JUL	0.1	0.2	4.3	67	8.4	14.4	6.4
	MAY-SEP	0.2	0.4	4.4	67	8.4	14.3	6.6
Sprague R nr Chiloquin	MAY-JUL	50	77	95	74	113	140	128
	MAY-SEP	70	97	115	74	133	160	155
Upper Klamath Lake Inflow (1,2)	MAY-JUL	118	178	205	80	230	290	255
	MAY-SEP	177	240	270	79	300	365	340
Williamson R bl Sprague R nr Chiloqu	MAY-JUL	120	150	170	83	190	220	205
	MAY-SEP	168	199	220	83	240	270	265

KLAMATH BASIN Reservoir Storage (1000 AF) - End of April					KLAMATH BASIN Watershed Snowpack Analysis - May 1, 2009			
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	89.5	151.0	264.3	Lost	2	61	0
GERBER	94.3	57.6	81.1	72.9	Sprague	5	50	53
UPPER KLAMATH LAKE	523.7	444.0	464.1	483.4	Upper Klamath Lake	7	65	101
					Williamson River	5	71	92

* 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.

For more information contact your local Natural Resources Conservation Service Office:

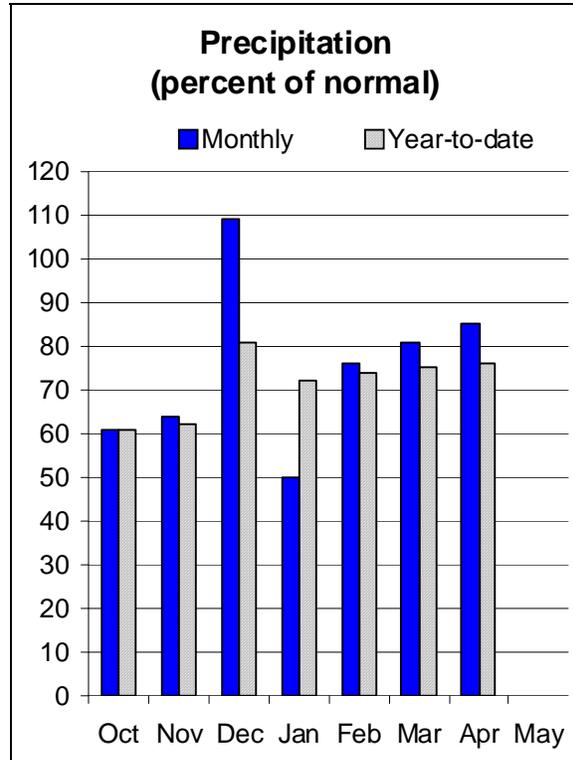
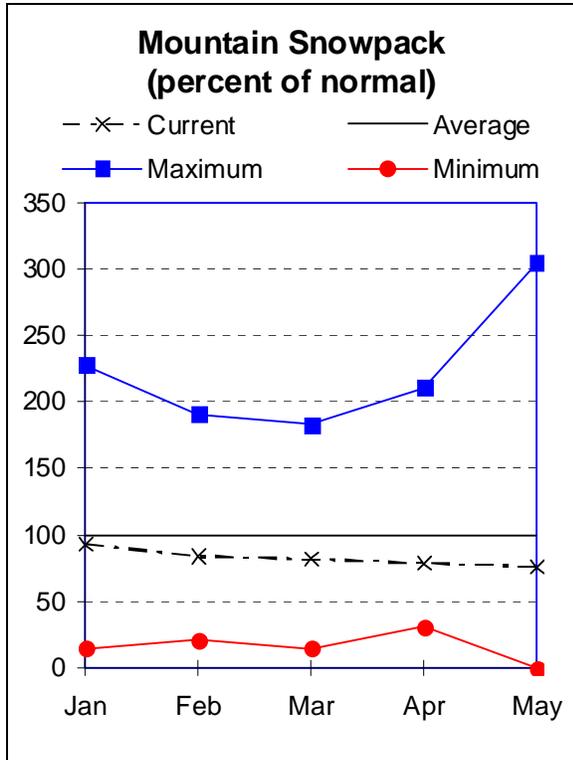
Klamath Falls - (541) 883-6932

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



Lake County and Goose Lake

May 1, 2009



Water Supply Outlook

The May 1 snowpack in Lake County and Goose Lake basin was 76 percent of average. The snowpack has been below average throughout the winter. May 1 snow measurements were gathered at 9 SNOTEL sites.

April precipitation in the Lake County and Goose Lake basin was 85 percent of average. Since the beginning of the water year, precipitation in the basin has been 76 percent of average, the lowest in the state.

At the end of April, storage in Drews and Cottonwood reservoirs was 54 percent of average or 44 percent of capacity. Spring inflows are expected to be well below average. May through September streamflow forecasts for the basin range from 55 to 74 percent of average. Water users in Lake County and Goose Lake basin can expect greatly reduced water availability this coming summer. Most of the basin is designated by the US Drought Monitor as in a moderate drought condition.

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

Or visit: <http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl>

LAKE COUNTY AND GOOSE LAKE BASINS
Streamflow Forecasts - May 1, 2009

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	MAY-JUL	17.3	28	35	67	42	53	52				
	MAY-SEP	20	31	38	68	45	56	56				
Deep Ck ab Adel	MAY-JUL	6.6	17.6	25	56	32	43	45				
	MAY-SEP	7.4	18.5	26	55	34	45	47				
Honey Ck nr Plush	MAY-JUL	1.2	5.0	7.5	69	10.0	13.8	10.8				
	MAY-SEP	1.3	5.0	7.6	69	10.2	13.9	11.0				
Silver Ck nr Silver Lake (2)	MAY-JUL	0.5	2.2	4.0	74	5.8	8.5	5.4				
	MAY-SEP	0.8	2.5	4.4	74	6.3	9.0	6.0				
Twentymile Ck nr Adel	MAY-JUL	0.5	2.5	7.4	70	12.3	19.5	10.6				
	MAY-SEP	0.8	2.9	7.8	70	12.7	20	11.1				

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

LAKE COUNTY AND GOOSE LAKE BASINS
Watershed Snowpack Analysis - May 1, 2009

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	9.3	6.7	Chewaucan River	3	49	57
DREWS	63.0	22.0	38.0	51.0	Deep Creek	0	0	0
					Drew Creek	2	0	0
					Honey Creek	0	0	0
					Silver Creek (Lake Co.)	4	42	53
					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.

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

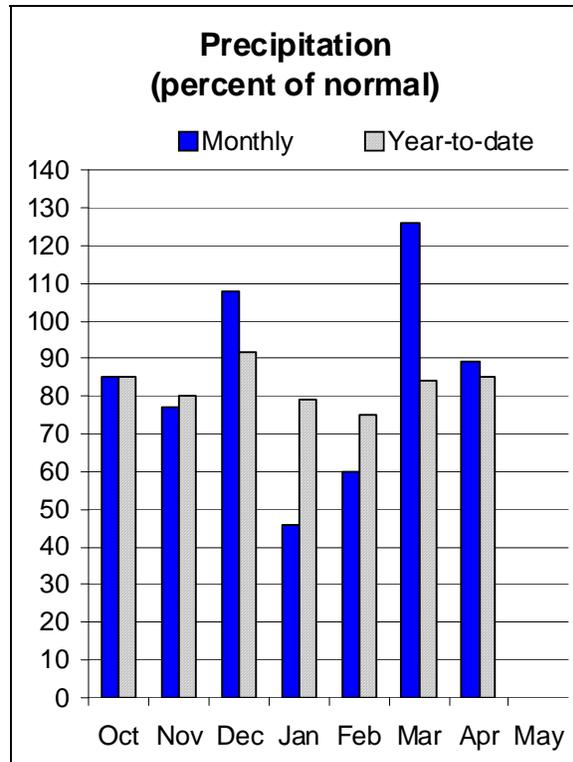
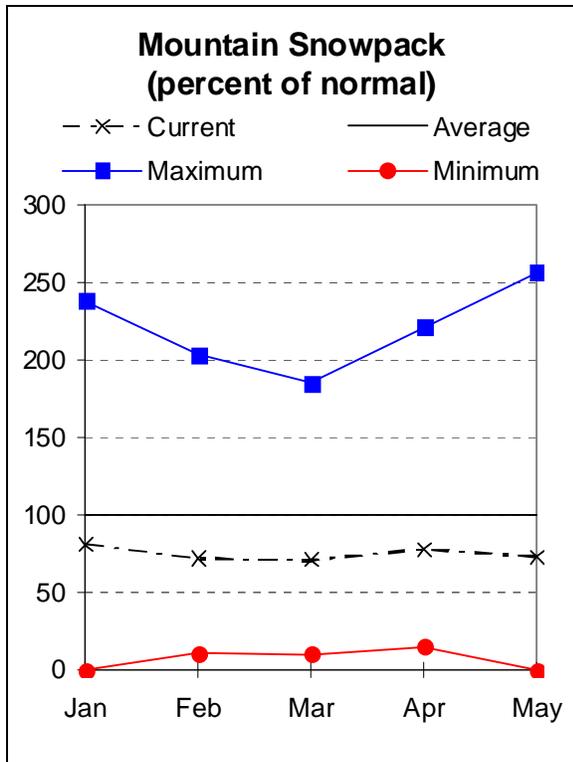
For more information contact your local Natural Resources Conservation Service Office:
Lakeview - (541) 947-2202

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



Harney Basin

May 1, 2009



Water Supply Outlook

The winter snowpack peaked shortly after April 1 and began to melt out steadily. The May 1 snowpack in the Harney basin was 73 percent of average. The Harney basin snowpack has been below average all season. Snow measurements for May 1 were gathered 9 SNOTEL sites.

April precipitation in the Harney basin was 89 percent of average. Since the beginning of the water year, precipitation in the basin has been only 85 percent of average.

May through September streamflow forecasts for the Harney basin range from 74 to 85 percent of average. Water users in the Harney basin can expect reduced water availability this coming summer. Most of the basin is designated by the US Drought Monitor as in a moderate drought condition.

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 - May 1, 2009

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Donner Und Blitzen R nr Frenchglen	MAY-JUL	19.2	32	40	80	48	61	50
	MAY-SEP	23	36	45	80	54	67	56
Silvies R nr Burns	MAY-JUL	12.9	30	42	86	54	71	49
	MAY-SEP	14.2	32	44	85	56	74	52
Trout Ck nr Denio	MAY-JUL	2.5	4.2	5.3	74	6.4	8.1	7.2
	MAY-SEP	3.0	4.7	5.8	74	6.9	8.6	7.8

HARNEY BASIN Reservoir Storage (1000 AF) - End of April					HARNEY BASIN Watershed Snowpack Analysis - May 1, 2009			
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	76	85
					Silver Creek (Harney Co.)	2	32	41
					Silvies River	5	35	57
					Trout Creek	2	81	74

* 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.

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>

Recession Forecasts for Oregon

NEW – Changes to Low Flow and Peak Flow Forecasts

Recession flow forecasts will be presented in a new format starting this year. Each forecast provides a range of possible outcomes representing the uncertainty of forecasting models. Forecast models have been redeveloped using post 1970 data and as a result average values have changed from previous years. The recession flow forecasts use exceedance probabilities in a format similar to the standard water supply forecasts presented in this document.

The types of forecasts in the table below are:

- 1) Threshold flow -- Date that the daily streamflow rate falls below the given threshold flow
- 2) Peak flow -- Maximum daily flow
- 3) Date of peak flow -- Date of occurrence of maximum daily flow
- 4) Average daily flow on a given date

Forecasts are included at key streamflow sites within the state that have reliable daily streamflow data. If you have questions, comments, or concerns about changes to forecasts, please contact the Snow Survey Data Collection Office.

OWYHEE AND MALHEUR BASINS					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
Owyhee R nr Rome	2000 cfs	March 26 observed			May 6
Owyhee R nr Rome	1000 cfs	April 4	May 2	May 30	May 18
Owyhee R nr Rome	500 cfs	April 24	May 19	June 13	June 2

UPPER JOHN DAY BASIN					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
John Day R at Service Creek	Average Daily Flow on Aug. 1st	75	260	445	271

UPPER DESCHUTES AND CROOKED BASINS					
FORECAST POINT	FORECAST THRESHOLD	FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----			LONG-TERM AVERAGE VALUE
		90%	50%	10%	
Crane Prairie Inflow	Date of Peak	May 15	May 29	June 12	May 25
Crane Prairie Inflow	Peak Flow	285	405	525	403
Crane Prairie Inflow	Average Daily Flow on Oct. 1st	237	270	303	269
Prineville Reservoir Inflow	113 cfs	May 18	June 7	June 27	June 3
Prineville Reservoir Inflow	75 cfs	May 24	June 13	July 3	June 11
Prineville Reservoir Inflow	50 cfs	May 30	June 20	July 11	June 19
Whychus Creek nr Sisters	100 cfs	July 24	August 16	September 8	August 16

ROGUE AND UMPQUA BASINS					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE ----- CHANCE OF EXCEEDING ----- ---</i>			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
South Umpqua R nr Brockway *	90 cfs	July 26	August 11	August 27	August 8
South Umpqua R at Tiller	140 cfs	June 23	July 11	July 29	July 11
South Umpqua R at Tiller	90 cfs	July 13	July 31	August 18	August 1
South Umpqua R at Tiller	60 cfs	August 8	September 1	September 25	August 28

South Umpqua R nr Brockway dates are based on streamflow data adjusted for releases from Galesville Reservoir to reflect natural flow conditions and do not match observed gage data. There is an approximately 20% chance in any given year that the flow will not recede below 90 cfs; the dates given here are for the event that the flow does recede below 90 cfs.

LAKE COUNTY AND GOOSE LAKE BASINS					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----</i>			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
Deep Ck ab Adel	100 cfs	May 21	June 5	June 20	June 17
Honey Ck nr Plush	100 cfs	April 10	May 5	May 30	May 16
Honey Ck nr Plush	50 cfs	April 29	May 22	June 14	June 4
Twentymile Ck nr Adel	50 cfs	April 15	May 11	June 6	May 30
Twentymile Ck nr Adel	10 cfs	June 8	June 27	July 16	July 7

HARNEY BASIN					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE ----- CHANCE OF EXCEEDING ----- -----</i>			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
Silvies R nr Burns	400 cfs	April 25	May 11	May 27	May 21
	200 cfs	May 4	May 25	June 15	June 2
	100 cfs	May 19	June 10	July 2	June 13
	50 cfs	June 10	July 3	July 26	July 3
Donner Und Blitzen R nr Frenchglen	200 cfs	May 31	June 15	June 30	June 20
Donner Und Blitzen R nr Frenchglen	100 cfs	June 20	July 5	July 20	July 9

Some of the dates for Honey Ck, Twentymile Ck, and Silvies R are in the past. These locations do not have real-time streamflow data, so it is not possible to determine whether these thresholds have already occurred or to make a more accurate prediction of the occurrence of the flow threshold crossing. The dates given in the table are those generated by the forecasting procedure.

Summary of Snow Course Data

MAY 1st, 2009

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon						
ANEROID LAKE SNOTEL	7400	5/01/09	68	22.8	29.4	26.2
ANNIE SPRING SNOTEL	6010	5/01/09	79	33.5	45.7	39.7
ANTHONY LAKE (REV)	7130	5/01/09	82	33.9	31.2	--
ARBUCKLE MTN SNOTEL	5770	5/01/09	38	15.1	16.7	15.0
BALD PETER	5400	4/30/09	69	27.2	--	--
BEAVER CREEK #1	4250	5/01/09	44	16.6	--	--
BEAVER CREEK #2	4250	5/01/09	19	6.6	--	--
BEAVER DAM CREEK	5100	5/01/09	8	4.0	16.7	4.1
BEAVER RES. SNOTEL	5150	5/01/09	15	5.9	19.5	1.4
BIG RED MTN SNOTEL	6050	5/01/09	42	18.4	35.2	26.4
BIGELOW CAMP SNOTEL	5130	5/01/09	0	.0	19.7	6.5
BILLIE CK DVD SNOTEL	5280	5/01/09	31	15.4	28.1	10.2
BLAZED ALDER SNOTEL	3650	5/01/09	106	48.0	91.8	23.3
BLUE MTN SPGS SNOTEL	5870	5/01/09	12	6.7	16.1	8.3
BOURNE SNOTEL	5850	5/01/09	13	5.2	16.9	9.1
BOWMAN SPRNGS SNOTEL	4530	5/01/09	0	.0	2.6	.8
CALIBAN ALT	6500	4/30/09	42	17.8	36.0	31.5
CASCADE SUM. SNOTEL	5100	5/01/09	73	31.1	51.9	27.9
CHEMULT ALT SNOTEL	4850	5/01/09	0	.0	.7	.7
CLACKAMAS LK. SNOTEL	3400	5/01/09	21	7.3	17.5	2.3
CLEAR LAKE SNOTEL	3810	5/01/09	39	13.3	25.7	5.8
COLD SPRINGS SNOTEL	5940	5/01/09	50	24.6	37.6	21.3
COUNTY LINE SNOTEL	4830	5/01/09	0	.0	.0	.4
CRAZYMEN FLAT SNOTEL	6180	5/01/09	0	1.2	10.9	6.3
DALY LAKE SNOTEL	3690	5/01/09	29	12.0	46.2	3.9
DEADWOOD JUNCTION	4600	5/01/09	0	.0	6.0	.8
DERR SNOTEL	5850	5/01/09	18	6.8	11.7	6.5
DIAMOND LAKE SNOTEL	5280	5/01/09	18	8.9	16.8	6.3
EILERTSON SNOTEL	5510	5/01/09	3	2.2	10.5	3.4
EMIGRANT SPGS SNOTEL	3800	5/01/09	0	.0	.0	.1
FISH CREEK SNOTEL	7660	5/01/09	59	23.2	28.5	28.6
FISH LK. SNOTEL	4660	5/01/09	5	2.0	17.4	1.4
FOURMILE LAKE SNOTEL	5970	5/01/09	53	24.3	32.4	23.5
GERBER RES SNOTEL	4890	5/01/09	0	.0	.0	.0
GOLD CENTER SNOTEL	5410	5/01/09	0	.0	4.1	1.0
GREENPOINT SNOTEL	3310	5/01/09	38	15.8	33.4	4.4
HIGH RIDGE SNOTEL	4920	5/01/09	65	26.9	36.3	15.9
HOGG PASS SNOTEL	4790	5/01/09	61	22.8	48.3	34.3
HOLLAND MDWS SNOTEL	4930	5/01/09	60	26.6	43.8	17.0
HOWARD PRAIRIE	4500	5/01/09	0	.0	6.3	.9
HUNGRY FLAT	4400	4/29/09	0	.0	.0	.0
IRISH-TAYLOR SNOTEL	5540	5/01/09	93	39.7	51.9	38.8
JUMP OFF JOE SNOTEL	3520	5/01/09	22	9.3	36.9	3.5
KING MTN #1	4500	4/29/09	1	.4	22.7	2.8
KING MTN #2 SNOTEL	4340	5/01/09	0	.0	11.2	.9
KING MTN #3	3650	4/29/09	0	.0	.0	.0
KING MTN #4	3050	4/29/09	0	.0	.0	.0
LAKE CK R.S. SNOTEL	5240	5/01/09	0	.0	2.1	1.3
LITTLE MEADOW SNOTEL	4020	5/01/09	73	32.1	71.1	16.9
LUCKY STRIKE SNOTEL	4970	5/01/09	0	.0	5.5	2.7
MADISON BUTTE SNOTEL	5150	5/01/09	---	.4	2.4	.4
MARION FORKS SNOTEL	2590	5/01/09	13	5.6	33.8	3.6
MARKS CREEK	4540	5/05/09	0	.0	.0	.1
MCKENZIE SNOTEL	4770	5/01/09	104	54.1	73.0	40.0
MEACHAM	4300	5/01/09	0	.0	.7	1.6
MILKSHAKES SNOTEL	5580	5/01/09	112	57.1	59.5	--
MILLER WOODS SNOTEL	420	5/01/09	0	.0	.0	--
MOSS SPRINGS SNOTEL	5760	5/01/09	58	24.5	28.4	22.3
MT ASHLAND SWBK.	6400	4/30/09	41	17.2	36.3	33.0

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon Continued						
MT HOOD TEST SNOTEL	5370	5/01/09	158	69.4	91.8	63.9
MT HOWARD SNOTEL	7910	5/01/09	54	22.5	22.2	16.9
MUD RIDGE SNOTEL	4070	5/01/09	82	40.9	52.2	18.2
NEW CRESCENT SNOTEL	4910	5/01/09	0	.0	9.3	3.0
NEW DUTCHMAN #3	6400	4/29/09	118	52.2	59.0	55.4
NORTH FK RES SNOTEL	3060	5/01/09	84	35.1	68.4	6.9
OCHOCO MEADOW SNOTEL	5430	5/01/09	0	.4	5.2	1.8
PARK H.Q. REV	6550	5/01/09	118	59.0	67.9	63.1
PEAVINE RIDGE SNOTEL	3420	5/01/09	31	15.4	35.5	3.7
QUARTZ MTN SNOTEL	5720	5/01/09	0	.0	.0	.1
RACING CREEK	4800	4/30/09	36	11.4	--	--
R.R. OVERPASS SNOTEL	2680	5/01/09	0	.0	.0	.0
RED BUTTE #1	4560	4/30/09	32	13.8	48.4	6.7
RED BUTTE #2	4000	4/30/09	0	.0	19.3	2.1
RED BUTTE #3	3500	4/30/09	0	.0	11.2	.2
RED BUTTE #4	3000	4/30/09	0	.0	.0	.0
RED HILL SNOTEL	4410	5/01/09	132	42.2	85.0	42.5
ROARING RIVER SNOTEL	4950	5/01/09	68	36.9	58.9	24.0
ROCK SPRINGS SNOTEL	5290	5/01/09	0	.0	.0	.1
SADDLE MTN SNOTEL	3110	5/01/09	0	.0	28.0	2.1
SALT CK FALLS SNOTEL	4220	5/01/09	48	25.7	45.4	10.5
SANTIAM JCT. SNOTEL	3740	5/01/09	1	3.4	32.4	8.0
SCHNEIDER MDW SNOTEL	5400	5/01/09	33	14.1	22.8	20.2
SEINE CREEK SNOTEL	2060	5/01/09	0	.0	.0	.0
SEVENMILE MARSH SNTL	5700	5/01/09	55	25.7	42.4	22.6
SILVER BURN	3720	5/01/09	3	1.7	19.6	.9
SILVER CREEK SNOTEL	5740	5/01/09	0	.0	3.0	1.6
SILVIES SNOTEL	6990	5/01/09	28	12.3	18.5	13.3
SKI BOWL ROAD	6000	4/30/09	30	12.7	27.8	23.1
SNOW MTN SNOTEL	6220	5/01/09	14	3.0	9.3	7.4
SF BULL RUN SNOTEL	2690	5/01/09	20	6.0	33.8	.1
STARR RIDGE SNOTEL	5250	5/01/09	0	.0	.0	.0
STRAWBERRY SNOTEL	5770	5/01/09	0	.0	.0	.8
SUMMER RIM SNOTEL	7080	5/01/09	26	9.9	11.9	13.0
SUMMIT LAKE SNOTEL	5610	5/01/09	96	43.2	55.2	39.4
SUN PASS SNOTEL	5400	5/01/09	8	5.6	19.1	--
SWAN LAKE MTN SNOTEL	6830	5/01/09	25	11.2	18.3	--
TANGENT	5400	4/29/09	7	1.6	18.6	11.3
TAYLOR BUTTE SNOTEL	5030	5/01/09	0	.0	.4	.1
TAYLOR GREEN SNOTEL	5740	5/01/09	22	10.2	21.2	10.3
THREE CK MEAD SNOTEL	5690	5/01/09	44	15.7	26.1	15.3
TIPTON SNOTEL	5150	5/01/09	11	6.3	12.7	4.8
TOKETTE AIRSTRIP SN	3240	5/01/09	0	.0	.0	--
TOLLGATE	5070	5/01/09	90	38.2	44.9	19.3
WOLF CREEK SNOTEL	5630	5/01/09	27	11.7	13.8	9.8
California						
ADIN MOUNTAIN	6350	4/30/09	12	4.2	5.9	6.5
ADIN MTN SNOTEL	6190	5/01/09	2	1.7	1.9	6.8
CEDAR PASS SNOTEL	7030	5/01/09	23	10.0	13.6	14.3
CROWDER FLAT SNOTEL	5170	5/01/09	0	.0	.0	.0
DISMAL SWAMP SNOTEL	7360	5/01/09	58	25.1	25.7	24.9
Idaho						
MUD FLAT SNOTEL	5730	5/01/09	0	.0	.0	.0
SOUTH MTN SNOTEL	6500	5/01/09	8	4.0	16.3	9.4
Nevada						
BEAR CREEK SNOTEL	7800	5/01/09	50	20.8	19.4	19.0
BIG BEND SNOTEL	6700	5/01/09	0	.0	5.6	2.3
BUCKSKIN,L SNOTEL	6700	5/01/09	0	.0	6.6	3.7
DISASTER PEAK SNOTEL	6500	5/01/09	0	.0	.0	2.9
FAWN CREEK SNOTEL	7050	5/01/09	29	9.9	12.7	14.5
GRANITE PEAK SNOTEL	7800	5/01/09	33	12.4	19.8	24.2
JACK CREEK, U SNOTEL	7280	5/01/09	41	14.7	14.2	17.0
LAMANCE CREEK SNOTEL	6000	5/01/09	0	.0	3.3	3.9
LAUREL DRAW SNOTEL	6700	5/01/09	0	.0	5.4	1.6
SEVENTYSIX CK SNOTEL	7100	5/01/09	2	.4	5.4	3.9
TAYLOR CANYON SNOTEL	6200	5/01/09	0	.0	.0	.3

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)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 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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