United States
Department of
Agriculture

Natural Resources
Conservation
Service

Oregon
Basin Outlook Report

January 1, 2009

Contents

General Outlook

January 1, 2009

SUMMARY

Welcome to the Oregon Water Supply Outlook Report for water year 2009. The 2009 report features changes to what was previously the low flow forecasts. This year, the Oregon Water Supply Outlook report will feature hydrograph recession forecasts for given dates and flows. The recession forecasts are presented in detail later in this document.

Water users may also notice some updates to the Watershed Snowpack Analysis tables in each basin. Watershed names have been updated to match Hydrologic Unit Code nomenclature, new SNOTEL sites have been added, and discontinued snow courses have been removed.

Water year 2008 ended September 30 with near normal precipitation reported in most of Oregon's basins. Water year 2009 began with less than normal precipitation in the months of October and November, followed by a series of cold, wet storms in mid December bringing much needed precipitation to the State.

As of January 1, the Oregon snowpack was near normal in all basins except the northeast and southeast corners of the state.

SNOWPACK

Mountain snow accumulation began later than normal this year. Throughout the state, early December temperatures were 5-10 degrees warmer than normal. By mid December, temperatures dropped and a series of cold, wet storms moved into the region bringing snow to all elevations. As of January 1, the mountain snowpack ranged from 81 percent of average in the Harney basin to 132 percent of average in the Willamette basin.

PRECIPITATION

The months of October and November were drier than normal over most of the state of Oregon. On December 1, most basins were reporting 60-80 percent of normal precipitation for the water year. Precipitation levels began to recover in mid December. Late December storms continued to bring rain and snow to the mountains. Total December precipitation was near to above normal in all basins of Oregon. By January 1, most Oregon water supply basins were recording near normal precipitation for the water year. Water year precipitation totals for January 1 range from 81 percent of average for Lake County to 109 percent of average for the Owyhee and Malheur basins.

RESERVOIRS

Over the summer, real-time measurements were discontinued at Thompson Valley Reservoir in Lake County. At this time there is no plan to reinstate data collection at this site. As a result, the Oregon Water Supply Outlook Report will no longer contain summary information for Thompson Valley Reservoir. Water users may contact the local water master for more information.

The January 1 storage at 26 major Oregon reservoirs analyzed in this publication was 73 percent of average. A total of 1,192,900 acre feet of water were stored on January 1, representing 38 percent of useable capacity. Last year at this time these same reservoirs stored 1,071,000 acre feet of water or 34 percent of capacity.

STREAMFLOW

At this point in the season the April through September streamflow forecasts range from 79 percent of average for the Malheur River near Drewsey to 110 percent of average for Scoggins Creek near Gaston. Many streams in the state are forecast to be near average for this period. This report will be updated monthly, January through June.

A summary of streamflow forecasts for Oregon follows:

STREAM	PERIOD	PERCENT OF AVERAGE
Owyhee Reservoir Inflow	April-September	93
Grande Ronde R at La Grande	April-September	90
Umatilla R at Pendleton	April-September	101
Deschutes R at Benham Falls	April-September	103
MF Willamette R bl NF	April-September	105
Rogue R at Raygold	April-September	101
Upper Klamath L. Net Inflow	April-September	85
Silvies R near Burns	April-September	97

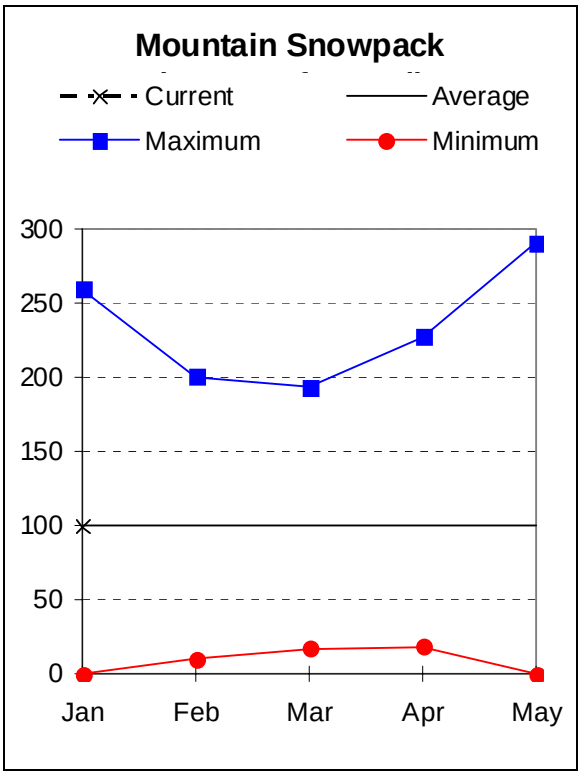
Some of these forecasts assume that normal weather conditions will occur from now to the end of the forecast period.

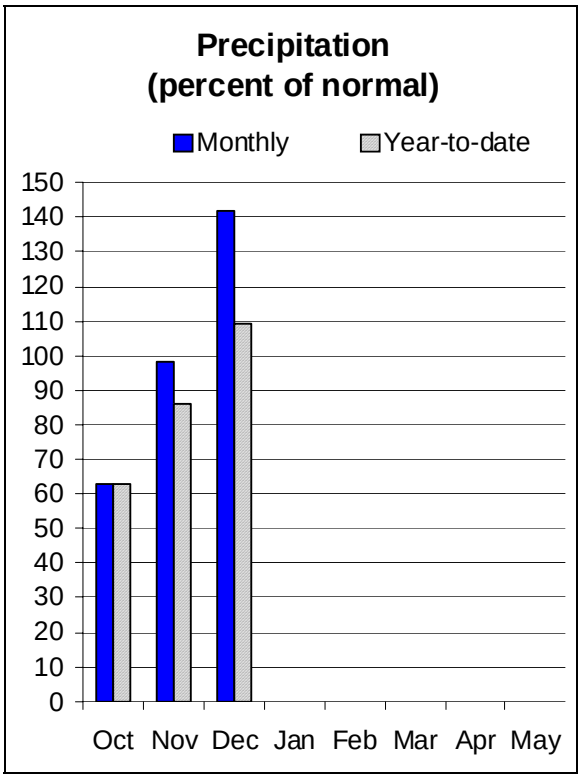
The forecasts in this bulletin are a result of coordinated activity between the Natural Resources Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

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

January 1, 2009





Water Supply Outlook

The Owyhee and Malheur basins ended water year 2008 with near normal precipitation. Since the beginning of water year 2009, precipitation in the Owyhee and Malheur basins has been near normal with most precipitation falling in December. The January 1 snowpack was 99 percent of average in the Owyhee and Malheur basins.

January 1 storage at the four irrigation reservoirs in the Owyhee and Malheur basins was 43 percent of average or 22 percent of capacity.

At this point in the season, the April through September streamflow forecasts in the Owyhee and Malheur basins are somewhat below average. The April through September streamflow forecasts range from 79 percent of average for the Malheur River near Drewsey to 93 percent of average for the Owyhee Reservoir Inflow. Elsewhere in the basins, the Owyhee River near Rome is forecast to be 91 percent of average for the April through September period. Summer water supplies in the Owhyee and Malheur basins may fall below average this year.

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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Malheur R nr Drewsey	FEB-JUL	40	74	102	80	135	192	127
	APR-SEP	19.3	41	60	79	83	123	76
NF Malheur R at Beulah	FEB-JUL	30	53	73	81	96	136	90
Owyhee Reservoir Inflow (2)	FEB-JUL	11.0	343	620	89	897	1304	700
	FEB-SEP	12.0	373	660	90	947	1370	730
	APR-SEP	7.0	241	400	93	559	793	430
Owyhee R nr Rome	FEB-JUL	274	458	610	93	783	1078	655
	FEB-SEP	287	475	629	93	805	1103	675
	APR-SEP	158	271	365	91	473	658	400

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEULAH RES	60.0	11.7	9.4	22.8
BULLY CREEK	30.0	6.4	3.9	11.1
OWYHEE	715.0	185.7	173.9	398.1
WARMSPRINGS	191.0	14.7	11.9	78.5

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

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Owyhee	8	157	104
Upper Malheur	4	93	87
Jordan Creek	3	135	106
Bully Creek	0	0	0
Willow Creek	2	76	118

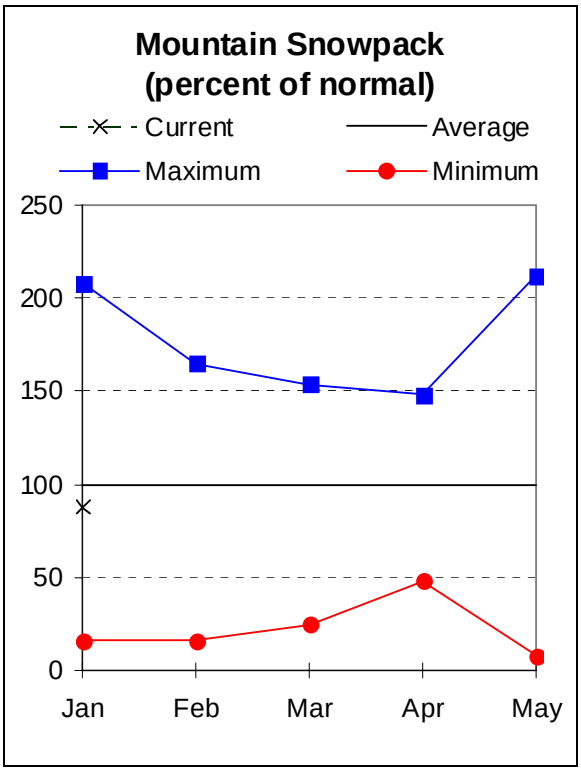
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

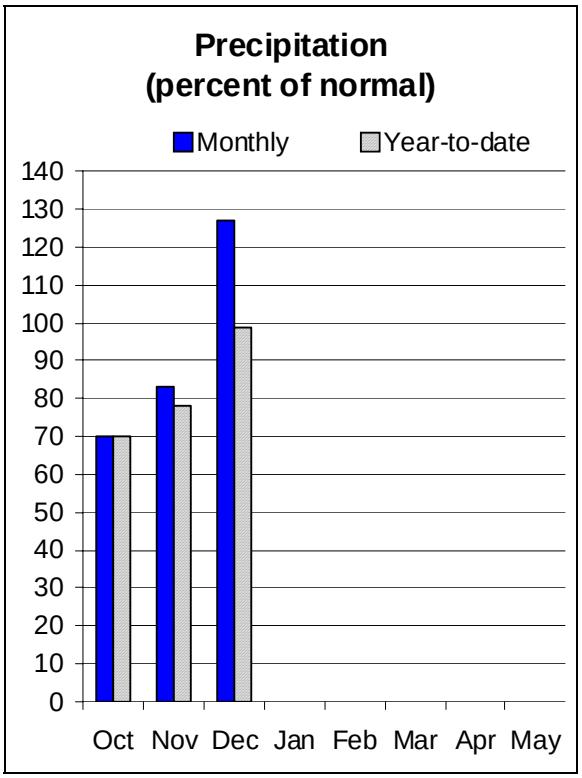
The average is computed for the 1971-2000 base period.

(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

January 1, 2009





Water Supply Outlook

The Burnt, Powder, Pine, Grande Ronde, and Imnaha basins ended water year 2008 with near normal precipitation. Since the beginning of water year 2009, precipitation in these basins has been near normal as well. The January 1 snowpack was 88 percent of average in the basins, nearly the lowest in the state.

January 1 storage at Phillips Lake, Thief Valley and Unity reservoirs was 85 percent of average or 47 percent of capacity.

At this point in the season, the April through September streamflow forecasts in the Burnt, Powder, Pine, Grande Ronde and Imnaha basins range from 82 percent of average for the Burnt River near Hereford to 94 percent of average for the Grande Ronde River at Troy and Hurricane Creek near Joseph. Summer water supplies may fall below average this year.

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

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear Ck nr Wallowa	APR-SEP	38	50	58	89	66	79	65
Burnt R nr Hereford	FEB-JUL	24	37	47	83	59	78	57
	APR-SEP	15.1	24	32	82	41	55	39
Catherine Ck nr Union	APR-JUL	39	49	56	90	64	77	62
	APR-SEP	42	52	60	91	68	82	66
Deer Ck nr Sumpter	FEB-JUL	10.9	15.4	18.9	97	23	29	19.4
Grande Ronde R at La Grande	MAR-JUL	152	194	225	91	259	313	247
	APR-SEP	108	143	169	90	198	244	188
Grande Ronde R at Troy	MAR-JUL	741	1252	1484	94	1716	2227	1580
	APR-SEP	612	1076	1286	94	1496	1960	1370
Imnaha R at Imnaha	APR-JUL	125	190	234	87	278	343	270
	APR-SEP	138	207	253	86	300	369	295
Lostine R nr Lostine	APR-JUL	77	89	98	88	108	122	112
	APR-SEP	77	93	105	87	118	138	121
Pine Ck nr Oxbow	FEB-JUL	105	157	192	92	227	279	208
	APR-JUL	70	107	133	90	159	196	148
	APR-SEP	73	112	138	90	164	203	154
Powder R nr Sumpter	FEB-JUL	38	55	68	92	82	106	74
	APR-JUL	27	39	49	85	60	78	58
	APR-SEP	26	39	50	85	62	82	59
Wolf Ck Reservoir Inflow (2)	MAR-JUN	8.4	11.6	13.8	85	16.0	19.2	16.2

* 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 December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
PHILLIPS LAKE	73.5	34.6	7.6	38.4
THIEF VALLEY	17.4	12.1	6.6	15.5
UNITY	25.2	8.2	5.1	10.6
WALLOWA LAKE	37.5	13.4	6.2	17.4
WOLF CREEK	10.4	2.8	0.9	3.1

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Upper Grande Ronde	9	82	99
Wallowa	4	80	79
Imnaha	4	71	63
Powder	11	73	78
Burnt	4	78	98

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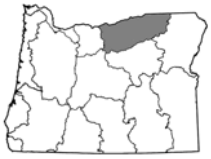
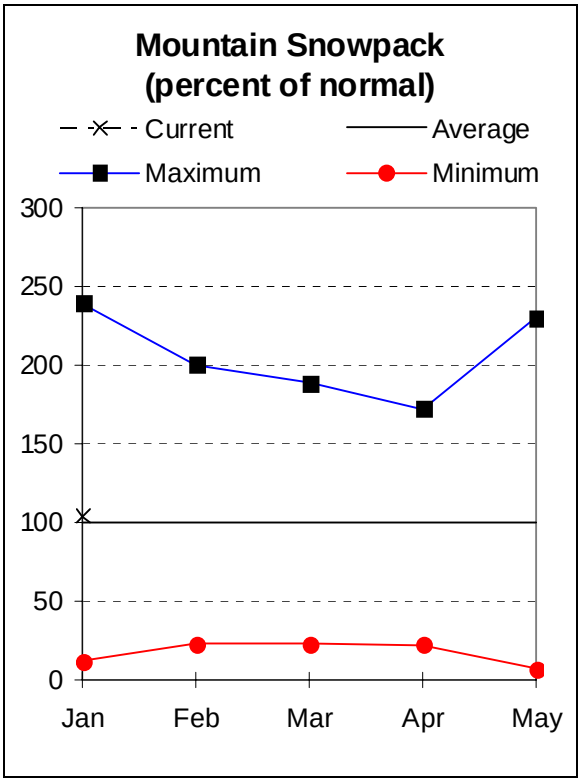
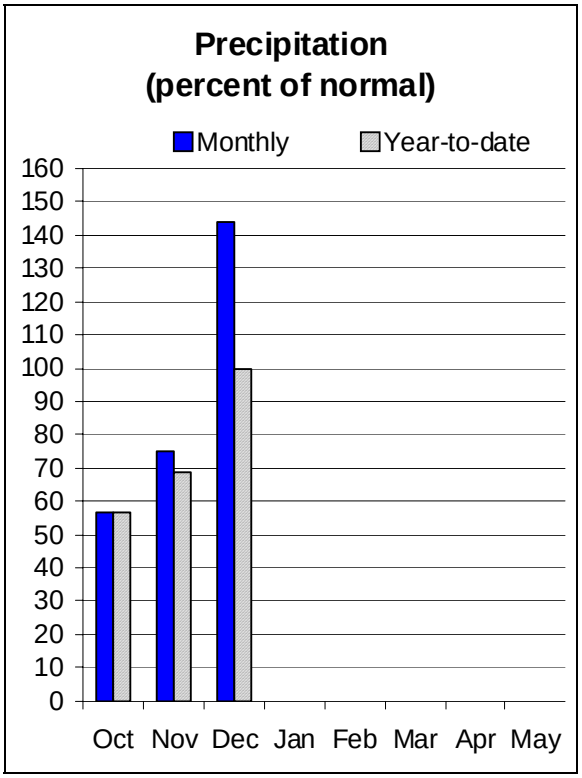


Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins

January 1, 2009





Water Supply Outlook

The Umatilla, Walla Walla, Willow, Rock and Lower John Day basins ended water year 2008 with near normal precipitation. Water year 2009 began with a dry October and November. December precipitation was well above average, mostly falling as snow. As of January 1, total precipitation for water year 2009 is near average. The January 1 snowpack was 104 percent of average.

January 1 storage at Cold Springs and McKay reservoirs was 47 percent of average or 14 percent of capacity.

At this point in the season, the April through September streamflow forecasts are expected to be near average. In particular, the April through September forecast for both the Umatilla River at Pendleton and the South Fork Walla Walla River near Milton are expected to be 101 percent of average. Currently, water users can look forward to normal 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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Butter Ck nr Pine City	MAR-JUL	7.9	12.3	15.3	102	18.3	23	15.0
	APR-SEP	5.1	8.0	10.0	98	12.0	14.9	10.2
McKay Ck nr Pilot Rock	APR-SEP	8.4	20	28	104	36	48	27
Rhea Ck nr Heppner	FEB-JUL	6.5	11.1	14.2	105	17.3	22	13.5
Umatilla R ab Meacham Ck nr Gibbon	APR-JUL	52	66	75	103	84	98	73
	MAR-SEP	82	98	109	103	120	136	106
	APR-SEP	58	72	81	103	90	104	79
Umatilla R at Pendleton	APR-JUL	95	128	150	101	172	205	149
	MAR-SEP	161	200	230	100	260	300	230
	APR-SEP	102	135	157	101	179	210	155
SF Walla Walla R nr Milton-Freewater	APR-JUL	45	51	55	102	59	65	54
	MAR-SEP	69	77	82	101	87	95	81
	APR-SEP	57	63	68	102	73	79	67
Willow Ck ab Willow Ck Lake nr Heppn	FEB-JUL	5.4	9.4	12.1	91	14.8	18.8	13.3
	APR-JUL	2.2	4.9	6.8	92	8.7	11.4	7.4

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
COLD SPRINGS	50.0	1.2	3.2	14.3
MCKAY	73.8	16.6	10.7	23.6
WILLOW CREEK	1.8	0.0	0.0	---

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Walla Walla	3	70	95
Umatilla	7	87	108
McKay Creek	4	121	122

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

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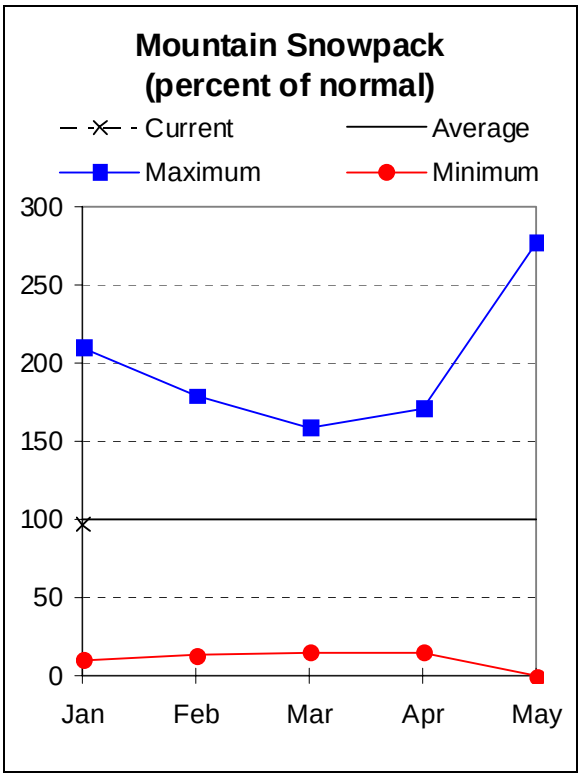
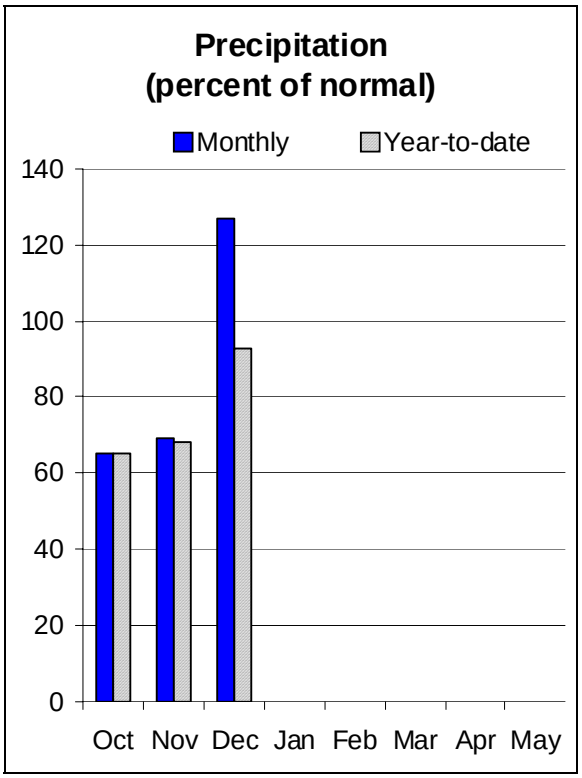
Upper John Day Basin

January 1, 2009





Water Supply Outlook

The Upper John Day basin finished water year 2008 with near normal precipitation. Water year 2009 began with a dry October and November. December precipitation was above average. As of January 1, total precipitation for water year 2009 was 93 percent of average. On January 1, the snowpack in the Upper John Day basin was 97 percent of average.

At this point in the season, the April through September streamflow forecasts in the Upper John Day basin are near average. In particular, the April through September forecast for Camas Creek near Ukiah is expected to be 100 percent of average. The April through September forecast for the North Fork John Day River at Monument is 94 percent of average. Currently, water users in the basin can look forward to normal streamflows 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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Camas Ck nr Ukiah	MAR-JUL	35	45	52	100	59	69	52
	APR-SEP	22	32	38	100	44	54	38
MF John Day R at Ritter	MAR-JUL	87	124	150	94	176	215	159
	APR-SEP	66	98	120	94	142	174	128
NF John Day R at Monument	MAR-JUL	455	630	750	95	870	1040	790
	APR-SEP	340	485	580	94	675	820	615
Mountain Ck nr Mitchell	FEB-JUL	3.1	5.7	7.5	107	9.3	11.9	7.0
	APR-SEP	2.0	3.8	5.0	108	6.2	8.0	4.6
Strawberry Ck nr Prairie City	MAR-JUL	4.1	6.0	7.3	99	8.6	10.5	7.4
	APR-SEP	4.5	6.4	7.7	99	9.0	10.9	7.8

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

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

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork John Day	7	89	99
John Day above Kimberly	5	91	81

* 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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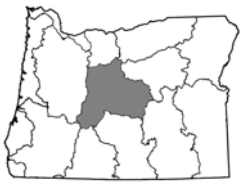
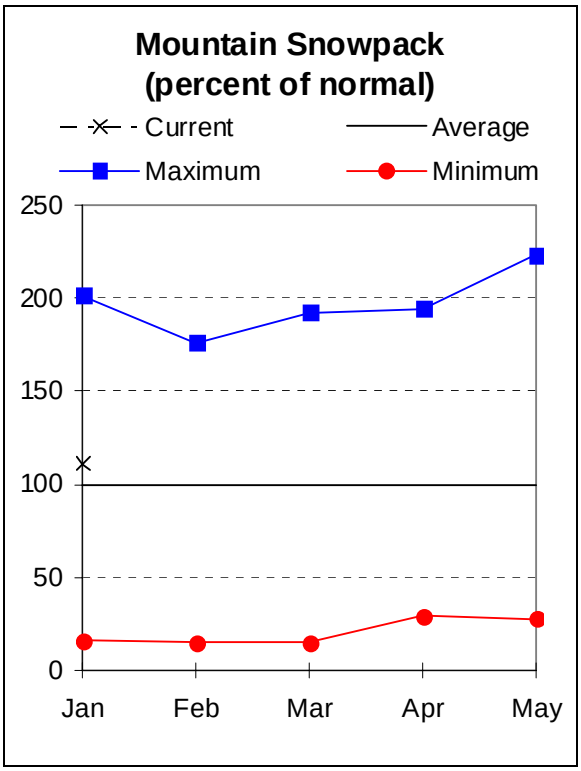
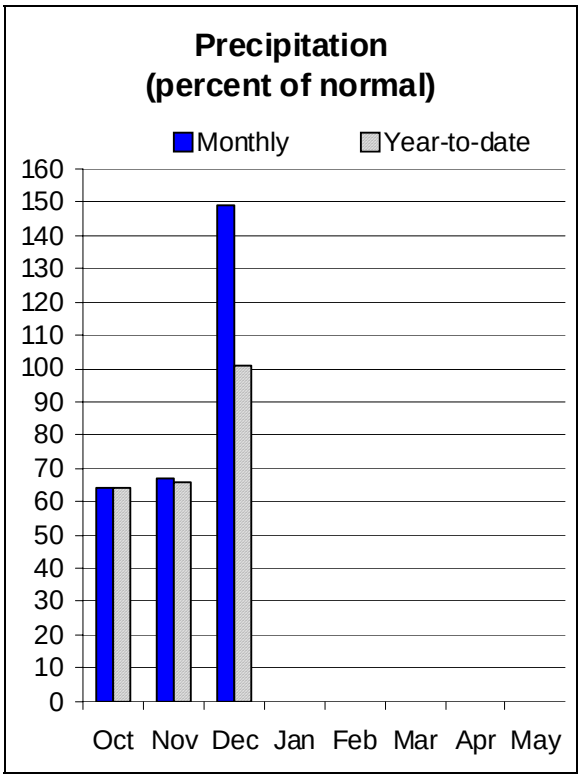


Upper Deschutes and Crooked Basins

January 1, 2009





Water Supply Outlook

The Upper Deschutes and Crooked River basins ended water year 2008 with near normal precipitation. Water year 2009 began with a dry October and November. December precipitation in the Upper Deschutes and Crooked river basin was well above average. As of January 1, total precipitation for water year 2009 was 101 percent of average. On January 1, the snowpack in the Upper Deschutes and Crooked River basins was 111 percent of average.

January 1 storage at five irrigation reservoirs in the Upper Deschutes and Crooked River basins was 116 percent of average or 71 percent of capacity.

At this point in the season, the April through September streamflows for most points in these basins are expected to be near average. In particular, the April through September forecast for Ochoco and Prineville reservoir inflows are expected to be 105 and 101 percent of average, respectively. The
Deschutes River at Benham Falls near Bend is expected to be 103 percent of average for the same period. The April through September forecast for Whychus Creek near Sisters is 92 percent of average. Currently, most water users can look forward to 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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Crane Prairie Reservoir Inflow (2)	FEB-JUL	61	75	85	109	95	109	78
	APR-JUL	44	55	63	107	71	82	59
	FEB-SEP	90	108	120	107	132	150	112
	APR-SEP	73	89	100	108	111	127	93
Crescent Ck nr Crescent (2)	FEB-JUL	14.1	20	24	104	28	34	23
	APR-JUL	10.3	15.0	18.1	105	21	26	17.2
	FEB-SEP	17.0	24	28	104	32	39	27
	APR-SEP	13.4	18.5	22	105	25	31	21
Deschutes R at Benham Falls nr Bend	FEB-JUL	450	490	520	104	550	590	500
	APR-JUL	310	340	360	103	380	410	350
	FEB-SEP	615	665	700	103	735	785	680
	APR-SEP	475	515	540	103	565	605	525
Deschutes R bl Snow Ck nr La Pine	FEB-JUL	33	42	48	107	54	63	45
	APR-JUL	24	30	35	106	40	46	33
	FEB-SEP	56	67	75	106	83	94	71
	APR-SEP	47	57	63	107	69	79	59
Little Deschutes R nr La Pine (2)	FEB-JUL	71	94	110	109	126	149	101
	APR-JUL	51	67	77	109	87	103	71
	FEB-SEP	78	103	120	109	137	162	110
	APR-SEP	58	75	87	109	99	116	80
Ochoco Reservoir Inflow (2)	FEB-JUL	24	36	45	105	54	66	43
	APR-JUL	12.3	18.6	23	105	27	34	22
	FEB-SEP	23	36	45	105	54	67	43
	APR-SEP	11.7	18.4	23	105	28	34	22
Prineville Reservoir Inflow (2)	FEB-JUL	110	179	225	102	270	340	221
	APR-JUL	53	86	109	101	132	165	108
	FEB-SEP	109	178	225	101	270	340	222
	APR-SEP	53	87	110	101	133	167	109
Whychus Ck nr Sisters	FEB-JUL	29	36	40	94	44	51	43
	APR-JUL	26	30	33	92	36	40	36
	FEB-SEP	38	46	51	94	56	64	54
	APR-SEP	35	41	45	92	49	55	49

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

UPPER DESCHUTES AND CROOKED BASINS
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CRANE PRAIRIE	55.3	41.5	39.8	36.7
CRESCENT LAKE	86.9	61.5	43.6	47.5
OCHOCO	47.5	21.8	18.6	18.1
PRINEVILLE	153.0	86.6	79.7	85.3
WICKIUP	200.0	171.3	142.0	142.2

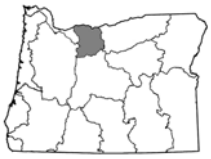
UPPER DESCHUTES AND CROOKED BASINS
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Crooked	4	108	102
Little Deschutes	4	117	121
Deschutes above Wickiup R	4	109	128
Tumalo and Squaw Creeks	5	116	107

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

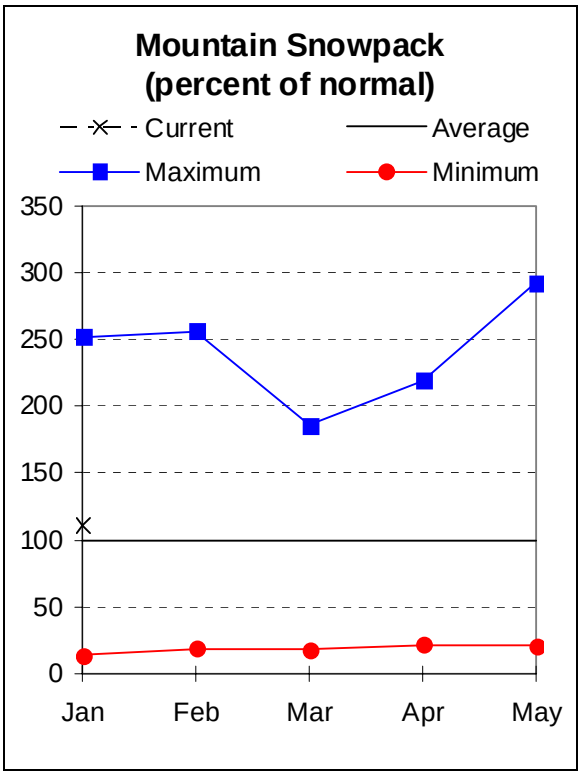
The average is computed for the 1971-2000 base period.

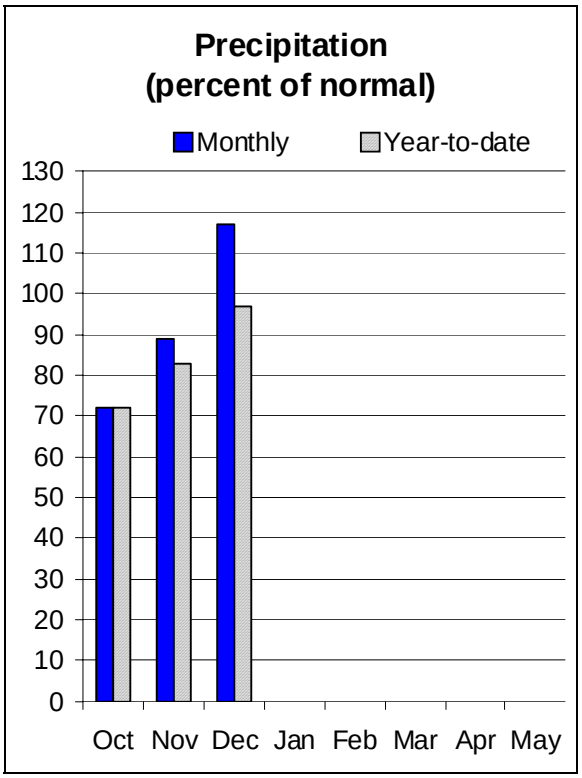
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.



Hood, Mile Creeks, and Lower Deschutes Basins

January 1, 2009





Water Supply Outlook

The Hood, Mile Creeks and Lower Deschutes basins ended water year 2008 with above average precipitation. Water year 2009 began with a dry October and November. December precipitation was 117 percent of average. As of January 1, total precipitation for water year 2009 has been 97 percent of average. On January 1, the snowpack in the Hood, Mile Creeks and Lower Deschutes basins was 111 percent of average.

At this point in the season, the April through September streamflow forecast for the Hood River at Tucker bridge is 90 percent of average. Water users in the Hood, Mile Creeks and Lower Deschutes may expect close to average streamflows this coming 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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Hood R at Tucker Bridge	APR-JUL	136	177	205	90	235	275	228
	APR-SEP	167	215	245	90	275	325	271

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CLEAR LAKE (WASCO)	11.9	4.2	0.7	---

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Hood River	7	91	104
Mile Creeks	2	88	93
White River	5	84	88

* 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.
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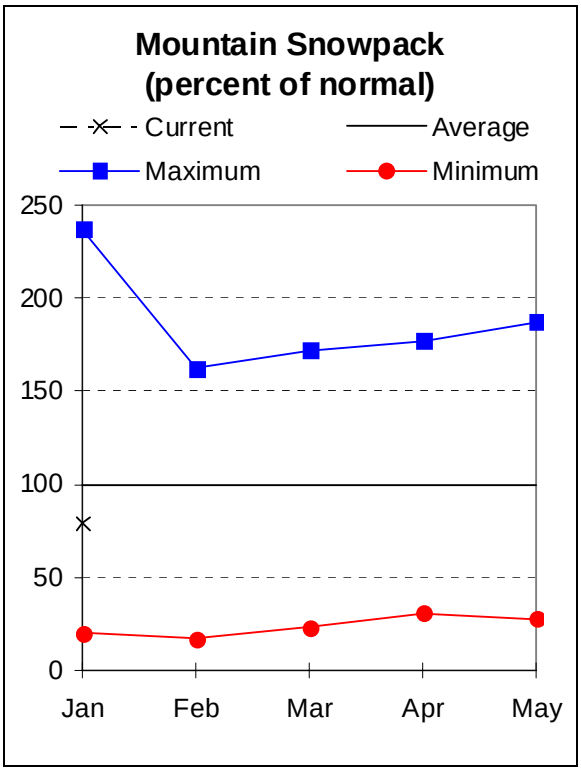
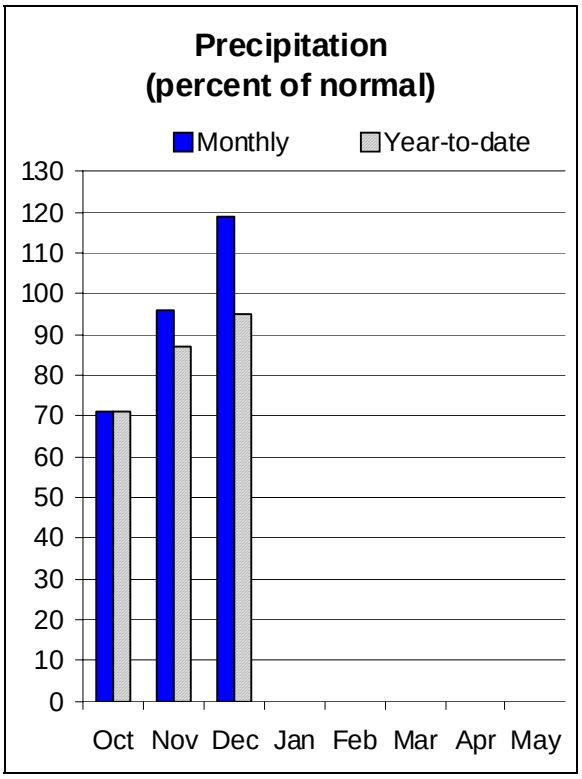
Lower Columbia Basin

January 1, 2009





Water Supply Outlook

On January 1, the snowpack in the Columbia basin above The Dalles was 79 percent of average. While it's still early in the season, the snowpack has a lot of catching up to do. The three largest contributing basins, the Columbia headwaters in Canada, the Kootenay and Pend Oreille all were recording below average snowpacks on January 1.

Since the beginning of the water year, precipitation in the Columbia basin has been 95 percent of average. December precipitation in the Sandy basin was 119 percent of average.

At this point in the season, the April through September streamflow forecast for the Columbia at The Dalles is 88 percent of average. For the Sandy near Marmot, the April through September streamflow forecast is 98 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

LOWER COLUMBIA BASIN
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>>					30-Yr Avg. (1000AF)
		Chance Of Exceeding *					
		90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	
Columbia R at The Dalles (2)	APR-JUL	49000	66500	74400	88	82300	99800	84600
	APR-SEP	57400	77700	87000	88	96300	117000	98600
Sandy R nr Marmot	APR-JUL	250	280	305	97	330	360	313
	APR-SEP	295	330	355	98	380	415	363

LOWER COLUMBIA BASIN
Reservoir Storage (1000 AF) - End of December

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

LOWER COLUMBIA BASIN
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Sandy	7	91	128

* 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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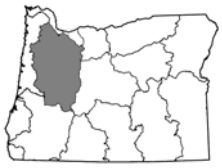
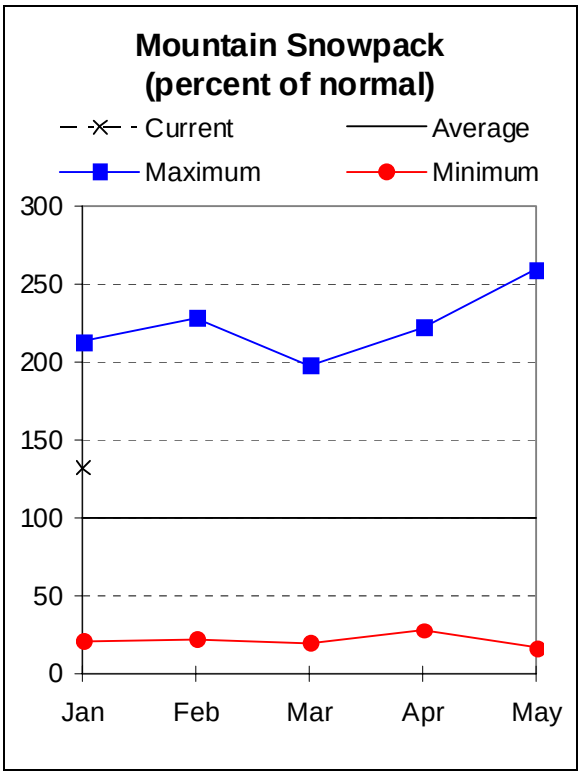
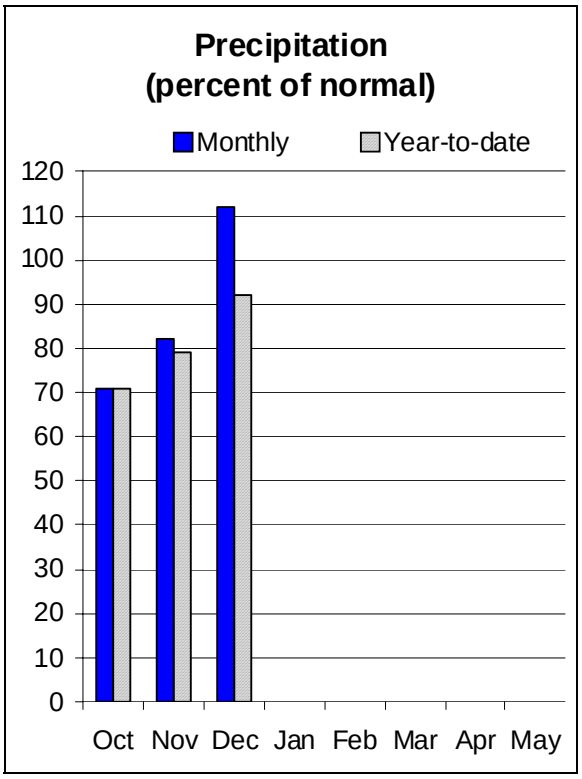


Willamette Basin

January 1, 2009





Water Supply Outlook

The Willamette basin ended water year 2008 with near normal precipitation. Water year 2009 started with a drier than normal October and November. December precipitation was above average in the Willamette Basin. As of January 1, total precipitation for water year 2009 was 92 percent of average. On January 1, the snowpack in the Willamette River basin was 132 percent of average, the highest in the state.

The January 1 storage at Timothy Lake and Henry Hagg reservoirs in the Willamette basin was 94 percent of average or 65 percent of capacity.

The April through September streamflow forecasts for the Willamette basin range from 93 percent of average for the inflow to Green Peter Lake to 110 percent of average for Scoggins Creek near Gaston. Elsewhere in the basin, near average conditions are forecast including 100 percent of average for the Willamette River at Salem. Currently, most water users in the basin can look forward to normal streamflows 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

WILLAMETTE BASIN
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Blue River Lake Inflow (1,2)	FEB-MAY	118	151	166	102	181	215	163
	APR-SEP	48	71	81	94	91	114	86
Clackamas R at Estacada (2)	APR-JUL	475	575	640	100	705	805	640
	APR-SEP	575	680	750	100	820	925	748
Clackamas R ab Three Lynx (2)	APR-JUL	350	420	465	98	510	580	474
	APR-SEP	430	500	550	98	600	670	562
Cottage Grove Lake Inflow (1,2)	FEB-MAY	49	77	90	103	103	131	87
	APR-SEP	18.0	34	41	95	48	64	43
Cougar Lake Inflow (1,2)	FEB-MAY	220	275	300	105	325	380	285
	APR-SEP	162	205	225	98	245	290	230
Detroit Lake Inflow (1,2)	FEB-MAY	535	705	780	105	855	1020	744
	APR-JUL	330	465	530	100	595	730	528
	APR-SEP	405	550	615	100	680	825	616
Dorena Lake Inflow (1,2)	FEB-MAY	165	240	275	108	310	385	255
	APR-SEP	54	105	128	105	151	200	122
Fall Creek Lake Inflow (1,2)	FEB-MAY	140	185	205	104	225	270	197
Fern Ridge Lake Inflow (1,2)	FEB-MAY	77	154	189	105	225	300	180
	APR-SEP	22	41	50	100	59	78	50
Foster Lake Inflow (1,2)	FEB-MAY	540	800	920	105	1040	1300	878
	APR-JUL	280	425	490	100	555	700	490
	APR-SEP	310	460	525	100	590	740	527
Green Peter Lake Inflow (1,2)	FEB-MAY	390	555	630	104	705	870	604
	APR-JUL	152	255	300	92	345	450	327
	APR-SEP	182	285	330	93	375	480	354
Hills Creek Lake Inflow (1,2)	FEB-MAY	250	355	405	104	455	560	388
	APR-JUL	148	230	270	98	310	390	277
	APR-SEP	210	280	310	97	340	410	320
	JUN-OCT	74	113	131	80	149	188	164
Little North Santiam R nr Mehama (1)	APR-JUL	75	109	125	94	141	175	133
	APR-SEP	84	119	135	94	151	186	143

WILLAMETTE BASIN
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lookout Point Lake Inflow (1,2)	FEB-MAY	650	930	1060	103	1190	1470	1025
	APR-JUL	430	625	710	98	795	990	726
	APR-SEP	525	720	810	98	900	1100	828
	JUN-OCT	175	290	345	86	400	515	402
McKenzie R bl Trail Bridge (2)	APR-JUL	210	235	255	96	275	300	266
	APR-SEP	330	360	385	95	410	440	404
McKenzie R nr Vida (1,2)	APR-JUL	750	920	995	102	1070	1240	977
	APR-SEP	945	1130	1220	102	1310	1500	1201
Mohawk R nr Springfield	JAN-JUL	166	230	270	101	310	375	268
Oak Grove Fork R ab Power Intake	APR-JUL	102	119	130	100	141	158	130
	APR-SEP	135	154	167	100	180	199	167
North Santiam R at Mehama (1,2)	APR-JUL	495	655	730	100	805	965	732
	APR-SEP	600	760	830	100	900	1060	834
South Santiam R at Waterloo (2)	APR-JUL	340	465	550	100	635	760	549
	APR-SEP	375	500	585	100	670	795	587
Scoggins Ck nr Gaston (2)	FEB-JUL	34	44	50	116	56	66	43
Thomas Ck nr Scio	JAN-JUL	186	225	255	109	285	325	233
MF Willamette R bl NF (1,2)	FEB-MAY	710	955	1070	110	1180	1430	973
	APR-JUL	510	665	735	105	805	960	698
	APR-SEP	605	765	840	105	915	1070	798
	JUN-OCT	220	325	370	95	415	520	391
Willamette R at Salem (1,2)	FEB-MAY	4840	7060	8070	103	9080	11300	7837
	APR-JUL	2900	3900	4350	100	4800	5800	4347
	APR-SEP	3280	4330	4800	100	5270	6320	4804

* 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.

WILLAMETTE BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BLUE RIVER	85.5	16.0	0.2	4.5
COTTAGE GROVE	29.8	7.7	0.6	2.8
COUGAR	155.2	20.8	4.3	72.6
DETROIT	300.7	25.9	5.6	66.2
DORENA	70.5	30.4	2.4	10.3
FALL CREEK	115.5	25.7	0.0	4.3
FERN RIDGE	109.6	4.0	0.0	11.6
FOSTER	29.7	0.0	1.8	4.1
GREEN PETER	268.2	50.9	6.5	92.5
HILLS CREEK	200.2	37.8	12.0	63.5
LOOKOUT POINT	337.0	69.3	9.2	38.2
TIMOTHY LAKE	61.7	49.1	49.1	49.2
HENRY HAGG LAKE	53.0	25.1	36.1	29.8

WILLAMETTE BASIN
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Clackamas	4	78	117
McKenzie	7	99	116
Row River	1	95	106
Santiam	6	86	121
Middle Fork Willamette	7	105	124

* 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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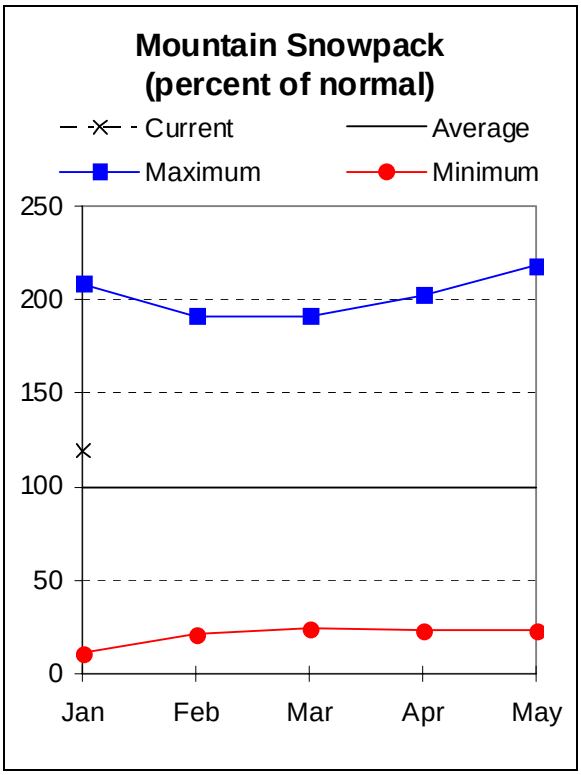
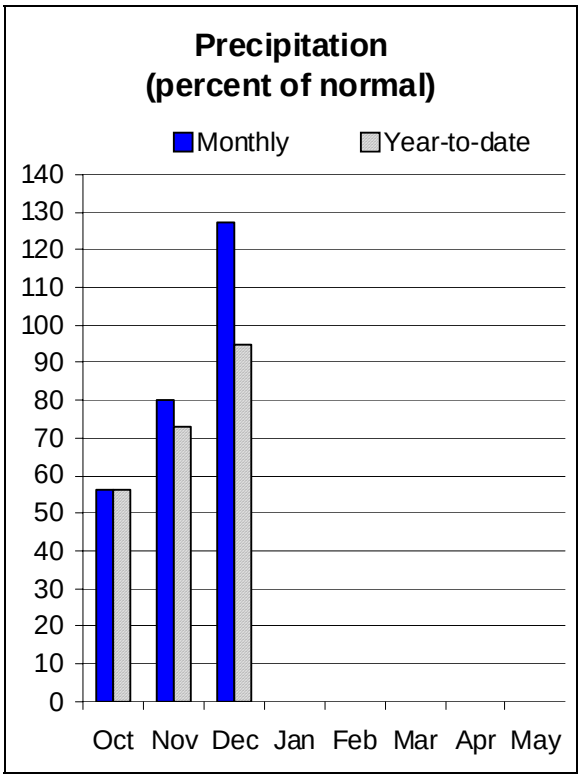
Rogue and Umpqua Basins

January 1, 2009





Water Supply Outlook

The Rogue and Umpqua River basins ended water year 2008 with near normal precipitation. Water year 2009 began with a dry October and November. December precipitation was above average in the Rogue and Umpqua basins. As of January 1, total precipitation for water year 2009 was 95 percent of average. On January 1, the snowpack in the Rogue and Umpqua basins was 119 percent of average.

The January 1 storage at 5 irrigation reservoirs in the Rogue and Umpqua basin was 56 percent of average or 117 percent of capacity.

The April through September streamflow forecasts for the Rogue and Umpqua basin range from 84 percent of average for the Applegate Lake inflow to 108 percent of average for North Fork Little Butte Creek near Lakecreek. Elsewhere in the basin, the Rogue River at Grants Pass is forecast to be 101 percent of average. Currently, water users in the Rogue and Umpqua basins can anticipate near average streamflow conditions in the summer ahead.

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
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Applegate Lake Inflow (2)	FEB-JUL	43	123	177	86	230	310	205
	APR-JUL	25	66	94	84	122	163	112
	FEB-SEP	46	127	182	85	235	320	215
	APR-SEP	29	71	100	84	129	171	119
SF Big Butte Ck nr Butte Falls	APR-JUL	22	29	34	100	39	46	34
	APR-SEP	29	37	43	99	49	57	44
Cow Ck nr Azalea (2)	FEB-JUL	10.3	27	39	93	51	68	42
	APR-JUL	3.9	10.9	15.6	95	20	27	16.5
	APR-SEP	3.7	11.0	16.0	90	21	28	17.7
Hyatt Prairie Reservoir Inflow (2)	APR-JUL	1.6	3.3	4.4	92	5.5	7.2	4.8
Illinois R at Kerby	APR-JUL	40	113	163	91	215	285	179
	APR-SEP	44	118	168	90	220	290	186
NF Little Butte Ck nr Lakecreek (2)	APR-JUL	23	30	34	107	38	45	32
	APR-SEP	35	44	50	108	56	65	46
Lost Creek Lake Inflow (2)	FEB-JUL	595	720	810	98	900	1030	825
	APR-JUL	385	470	525	99	580	665	530
	FEB-SEP	695	840	935	97	1030	1170	960
	APR-SEP	495	590	655	99	720	815	665
Rogue R at Raygold (2)	APR-JUL	465	625	735	101	845	1010	730
	APR-SEP	610	785	900	101	1020	1190	890
Rogue R at Grants Pass (2)	APR-JUL	435	620	745	101	870	1050	740
	APR-SEP	565	760	895	101	1030	1230	885

* 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.

ROGUE AND UMPQUA BASINS
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Sucker Ck bl Ltl Grayback Ck nr Holl	APR-JUL	13.8	33	46	89	59	78	52
	APR-SEP	15.8	36	49	88	62	82	56
North Umpqua R at Winchester	APR-JUL	565	720	825	104	930	1080	795
	APR-SEP	675	835	945	103	1050	1220	920
South Umpqua R nr Brockway	APR-JUL	185	315	405	101	495	625	400
	APR-SEP	199	335	425	101	515	650	420
South Umpqua R at Tiller	APR-JUL	106	160	196	102	230	285	193
	APR-SEP	114	168	205	100	240	295	205

ROGUE AND UMPQUA BASINS
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
APPLEGATE	75.2	0.6	0.0	11.1
EMIGRANT LAKE	39.0	16.7	15.6	17.6
FISH LAKE	8.0	6.3	4.7	5.2
FOURMILE LAKE	16.1	10.2	8.8	8.0
HOWARD PRAIRIE	60.0	44.4	44.5	37.7
HYATT PRAIRIE	16.1	13.6	13.2	9.4
LOST CREEK	315.0	14.6	4.8	136.3

ROGUE AND UMPQUA BASINS
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Applegate	2	87	92
Bear Creek	2	85	92
Little Butte Creek	6	110	122
Illinois	1	112	157
North Umpqua	8	110	152
Rogue River above Grants	18	108	114

* 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.
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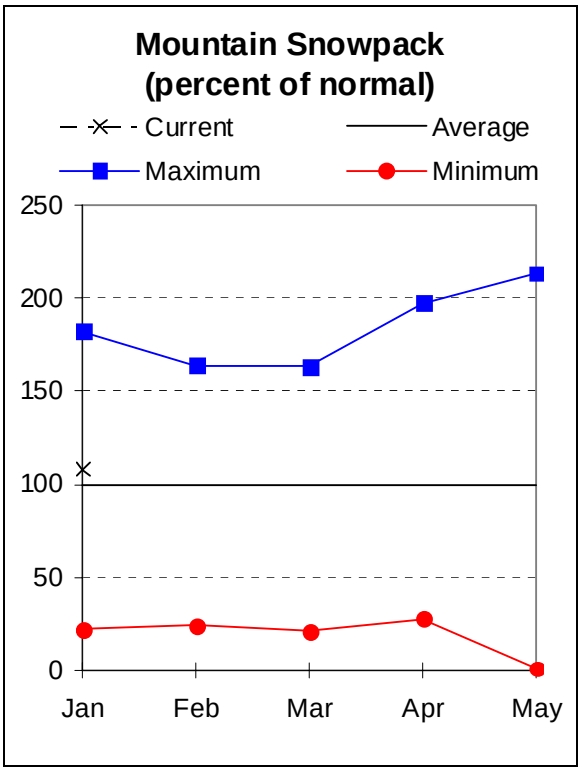
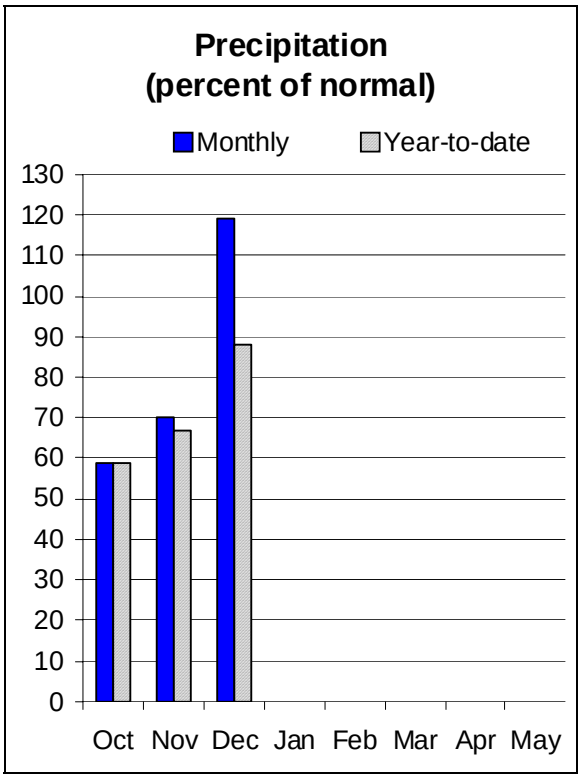
Klamath Basin

January 1, 2009





Water Supply Outlook

The Klamath basin ended water year 2008 with 100 percent of normal precipitation. Water year 2009 began with a dry October and November. December precipitation was above average. As of January 1, water year 2009 total precipitation has been only 88 percent of average. On January 1, the snowpack in the Klamath basin was 108 percent of average.

The January 1 storage at Upper Klamath Lake, Clear Lake (CA) and Gerber reservoirs was 65 percent of average or 31 percent of capacity.

The April through September streamflow forecasts for the Klamath basin range from 82 percent of average for the Sprague River near Chiloquin to 88 percent of average for the Williamson River below Sprague River near Chiloquin. Elsewhere in the basin, the Upper Klamath Lake inflow is forecast to be 85 percent of average. Currently, water users in the Klamath basin can anticipate below average streamflow conditions in the summer ahead.

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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Clear Lake Inflow (2)	FEB-JUL	5.0	56	90	86	124	175	105
	APR-SEP	7.2	27	40	83	53	73	48
Gerber Reservoir Inflow (2)	FEB-JUL	2.4	25	40	85	55	78	47
	APR-SEP	1.0	7.9	15.0	84	22	33	17.8
Sprague R nr Chiloquin	FEB-JUL	95	196	265	82	335	435	325
	JAN-SEP	143	250	325	83	400	505	390
	APR-SEP	76	143	188	82	235	300	230
Upper Klamath Lake Inflow (1,2)	FEB-JUL	285	550	670	86	790	1060	780
	JAN-SEP	430	740	880	85	1020	1330	1030
	APR-SEP	199	365	440	85	515	680	515
Williamson R bl Sprague R nr Chiloqu	FEB-JUL	255	380	460	89	540	665	520
	JAN-SEP	355	485	575	88	665	795	654
	APR-SEP	205	285	340	88	395	475	385

* 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.

KLAMATH BASIN
Reservoir Storage (1000 AF) - End of December

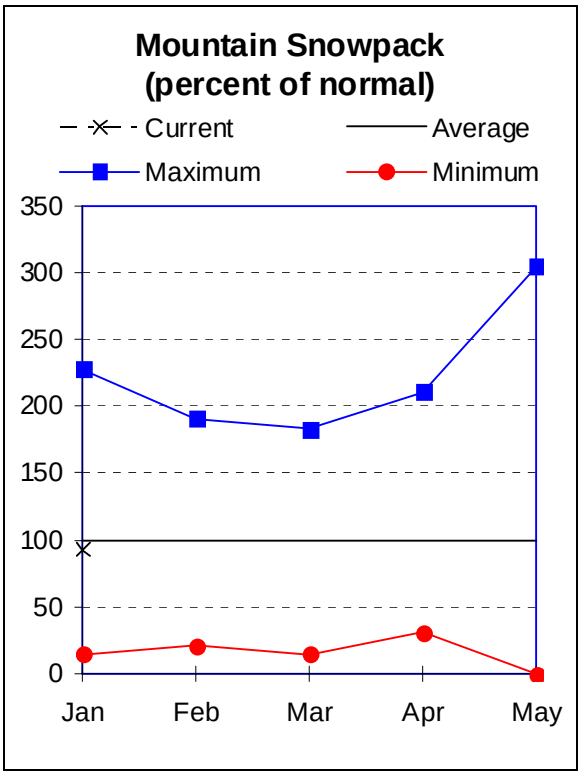
Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CLEAR LAKE (CALIF)	513.3	78.6	84.4	189.3
GERBER	94.3	44.9	42.2	41.8
UPPER KLAMATH LAKE	523.7	230.1	216.4	313.9

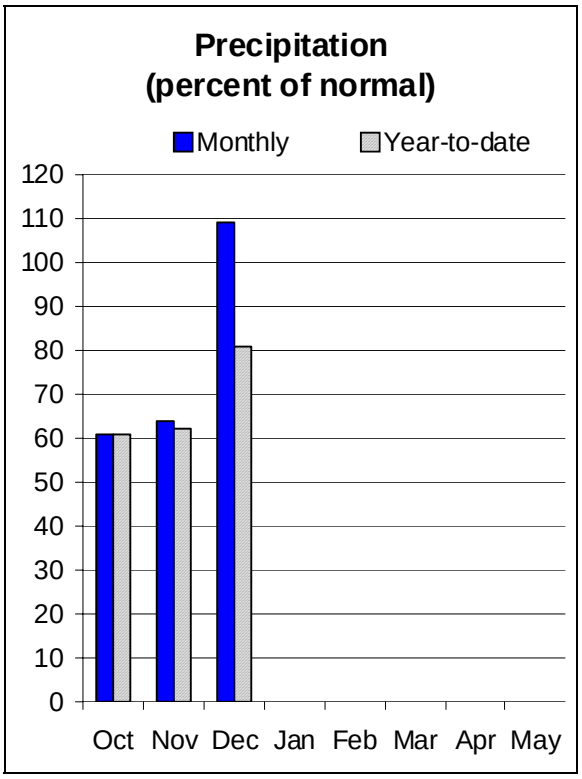
KLAMATH BASIN
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Lost	2	213	114
Sprague	5	148	96
Upper Klamath Lake	7	120	99
Williamson River	5	127	102

Lake County and Goose Lake

January 1, 2009





Water Supply Outlook

The Lake County and Goose Lake basins ended water year 2008 with below normal precipitation. Water year 2009 began with a dry October and November. December precipitation was near average. As of January 1, total precipitation for water year 2009 was 81 percent of average, the lowest in the state. On January 1, the snowpack in the Lake County and Goose Lake basins was 93 percent of average.

January 1 storage at Cottonwood and Drews reservoirs in these basins was 46 percent of average or 20 percent of capacity.

At this point in the season, the April through September streamflow forecasts for most points in the basin are near average. In particular, the April through September forecast for the Chewaucan River near Paisley and Honey Creek near Plush are expected to be 99 percent of average. Silver Creek near Silver Lake and Twentymile Creek near Adel are both expected to be 98 percent of average for the same period. Currently, most water users in the basin can look forward to normal streamflows this coming summer.

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 - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Chewaucan R nr Paisley	MAR-JUL	43	69	87	98	105	131	89
	APR-SEP	40	62	77	99	92	114	78
Deep Ck ab Adel	MAR-JUL	37	63	81	96	99	125	84
	APR-SEP	32	52	66	96	80	100	69
Honey Ck nr Plush	MAR-JUL	3.0	12.8	19.5	98	26	36	20
	APR-SEP	2.9	11.0	16.5	99	22	30	16.6
Silver Ck nr Silver Lake (2)	MAR-JUL	2.7	9.6	14.3	98	19.0	26	14.6
	APR-SEP	2.3	7.5	11.0	98	14.5	19.7	11.2
Twentymile Ck nr Adel	MAR-JUL	1.0	13.7	27	96	40	60	28
	APR-SEP	1.0	7.5	17.0	98	26	40	17.4

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
COTTONWOOD	8.7	6.3	5.3	2.3
DREWS	63.0	8.0	10.2	28.9

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

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Chewaucan River	3	143	80
Deep Creek	1	167	127
Drew Creek	2	204	123
Honey Creek	1	167	127
Silver Creek (Lake Co.)	4	144	93
Twentymile Creek	1	167	127

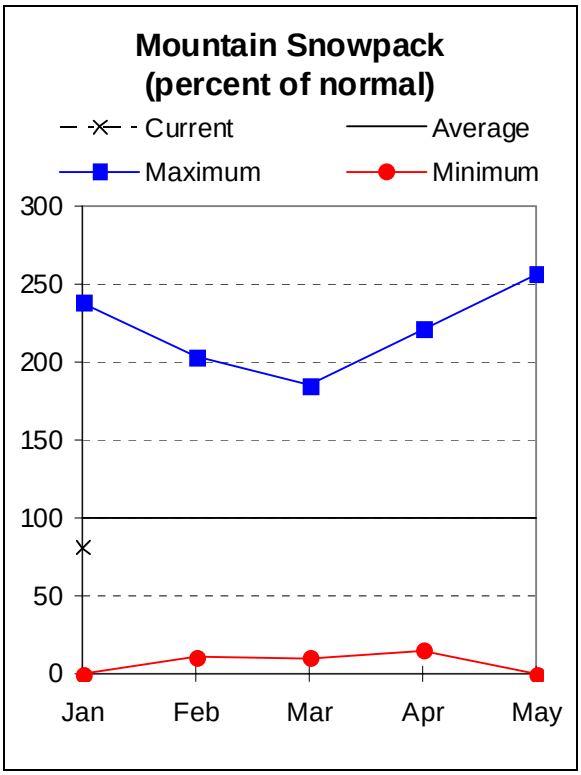
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

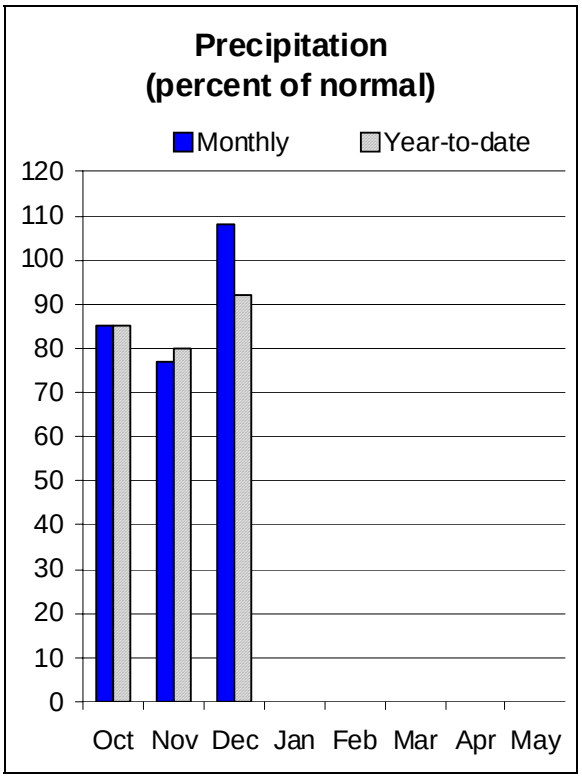
The average is computed for the 1971-2000 base period.

(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

January 1, 2009





Water Supply Outlook

The Harney basin ended water year 2008 with slightly below normal precipitation. Water year 2009 began with a dry October and November. December precipitation was near average. As of January 1, total precipitation for water year 2009 was 92 percent of average. On January 1, the snowpack in the Harney basin was 81 percent of average, the lowest in the state.

At this point in the season, the April through September streamflow forecasts for most points in the basin are near average. In particular, the April through September forecast for the Donner Und Blitzen River near Frenchglen is expected to be 99 percent of average. The Silvies River near Burns is expected to be 97 percent of average for the same period. The April through September forecast for Trout Creek near Denio is 89 percent of average. Currently, most water users in the basin can look forward to near normal streamflows this coming summer.

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

HARNEY BASIN
Streamflow Forecasts - January 1, 2009

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Donner Und Blitzen R nr Frenchglen	MAR-JUL	43	62	74	99	86	105	75
	APR-SEP	39	57	69	99	81	99	70
Silvies R nr Burns	MAR-JUL	39	90	125	97	160	210	129
	APR-SEP	37	72	96	97	120	155	99
Trout Ck nr Denio	MAR-JUL	4.3	7.7	10.0	90	12.3	15.7	11.1
	APR-SEP	3.8	7.0	9.2	89	11.4	14.6	10.3

HARNEY BASIN
Reservoir Storage (1000 AF) - End of December

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

HARNEY BASIN
Watershed Snowpack Analysis - January 1, 2009

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Donner und Blitzen River	2	140	80
Silver Creek (Harney Co.)	2	110	84
Silvies River	5	93	81
Trout Creek	2	147	85

* 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.

Recession Flow 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 ---------- 90%*	*50%*	*10%*	*LONG-TERM AVERAGE VALUE*
Owyhee R nr Rome	2000 cfs	March 20	April 30	June 10	**May 6**
Owyhee R nr Rome	1000 cfs	March 24	May 10	June 26	**May 18**
Owyhee R nr Rome	500 cfs	April 12	May 27	July 11	**June 2**

UPPER JOHN DAY BASIN					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ---------- 90%*	*50%*	*10%*	*LONG-TERM AVERAGE VALUE*
John Day R at Service Creek	Average Daily Flow Aug. 1st	60	270	480	**271**

UPPER DESCHUTES AND CROOKED BASINS					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ---------- 90%*	*50%*	*10%*	*LONG-TERM AVERAGE VALUE*
Crane Prairie Inflow	Date of Peak	May 8	May 25	June 11	**May 25**
Crane Prairie Inflow	Peak Flow	277	445	613	**403**
Crane Prairie Inflow	Average Daily Flow Oct. 1st	220	288	357	**269**
Prineville Reservoir Inflow	113 cfs	May 15	June 12	July 10	**June 3**
Prineville Reservoir Inflow	75 cfs	May 19	June 16	July 15	**June 11**
Prineville Reservoir Inflow	50 cfs	May 27	June 24	July 22	**June 19**
Whychus Creek nr Sisters	100 cfs	July 13	August 15	September 17	**August 16**

ROGUE AND UMPQUA BASINS					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
South Umpqua R nr Brockway *	90 cfs	July 17	August 6	August 26	**August 8**
South Umpqua R at Tiller	140 cfs	June 19	July 12	August 4	**July 11**
South Umpqua R at Tiller	90 cfs	July 8	August 1	August 25	**August 1**
South Umpqua R at Tiller	60 cfs	July 29	August 29	September 29	**August 28**

*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					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
Deep Ck ab Adel	100 cfs	May 22	June 14	July 7	**June 17**
Honey Ck nr Plush	100 cfs	April 11	May 17	June 22	**May 16**
Honey Ck nr Plush	50 cfs	May 1	June 2	July 4	**June 4**
Twentymile Ck nr Adel	50 cfs	April 17	May 21	June 24	**May 30**
Twentymile Ck nr Adel	10 cfs	June 6	July 4	August 1	**July 7**

HARNEY BASIN					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
Silvies R nr Burns	400 cfs	April 19	May 15	June 9	**May 21**
	200 cfs	April 28	May 28	June 27	**June 2**
	100 cfs	May 8	June 10	July 13	**June 13**
	50 cfs	May 26	July 3	August 11	**July 3**
Donner Und Blitzen R nr Frenchglen	200 cfs	May 24	June 15	July 7	**June 20**
Donner Und Blitzen R nr Frenchglen	100 cfs	June 14	July 5	July 26	**July 9**

How to Interpret the Recession Flow Forecast Table

Each recession flow forecast is comprised of three forecast values, corresponding to a 90%, 50%, and 10% chance of exceedance. These are to be interpreted as follows:

90% Chance of Exceedance Forecast:
For a date forecast, there is a 90% chance that the actual recession flow will occur after the given date, and there is a 10% chance that it will occur before this date. For a flow forecast, there is a 90% chance that the actual flow will be greater than the given value, and there is a 10% chance it will be less.

50% Chance of Exceedance Forecast:
For a date forecast, there is a 50% chance that the actual recession flow will occur after the given date, and there is a 50% chance that it will occur before this date. For a flow forecast, there is a 50% chance that the actual flow will be greater than the given value, and there is a 50% chance it will be less.

10% Chance of Exceedance Forecast:
For a date forecast, there is a 10% chance that the actual recession flow will occur after the given date, and there is a 90% chance that it will occur before this date. For a flow forecast, there is a 10% chance that the actual flow will be greater than the given value, and there is a 90% chance it will be less.

Date Forecast Example
Using the table below as an example, we can say:

- There is a 50% chance the flow in the Powder River will drop below 800 cfs after June 1. There is also a 50% chance the flow will drop below 800 cfs before June 1.
- There is a 90% chance the flow will drop below 800 cfs after May 18 and a 10% chance that the flow will drop below 800 cfs before May 18.
- There is a 10% chance the flow will drop below 800 cfs after June 14 and a 90% chance that the flow will drop below 800 cfs before June 14.

Flow Forecast Example
Using the table below as an example, we can say:

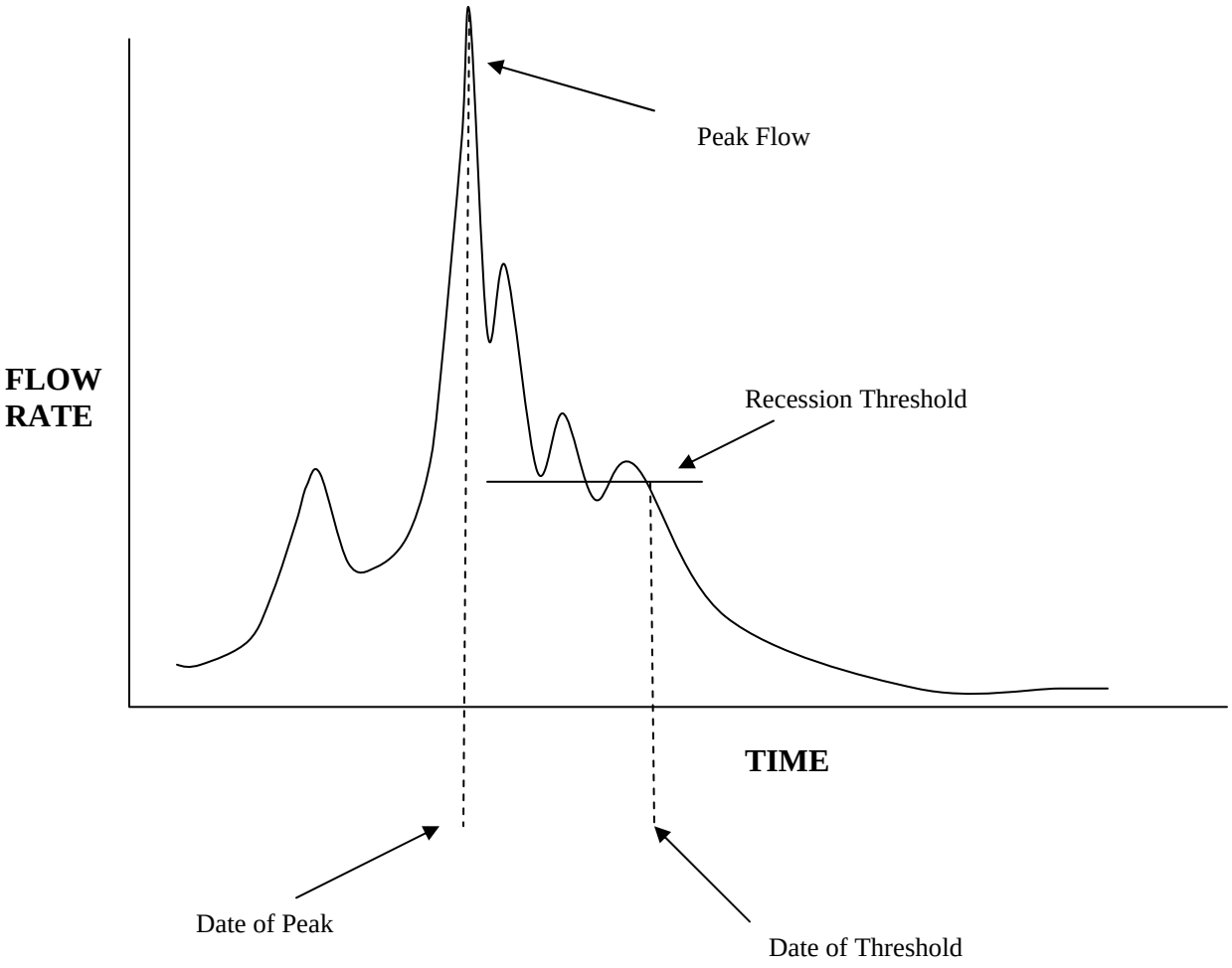
- There is a 50% chance that the average daily flow on September 1st in the Powder River will be greater than 85 cfs. There is also a 50% chance that the flow will be less than 85 cfs.
- There is a 90% chance that the flow will be greater than 50 cfs and a 10% chance that the flow will be less than 50 cfs.
- There is a 10% chance that the flow will be greater than 125 cfs and a 90% chance that the flow will be less than 125 cfs.

POWDER RIVER BASIN					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*AVERAGE THRESHOLD VALUE*
		90%	*50%*	*10%*	
Powder River	800 cfs	May 18	June 1	June 14	May 27
Powder River	Average Daily Flow on Sep. 1st	50	85	125	97

Selecting Threshold Crossing Dates

In developing the forecast models, threshold crossing dates had to be identified for each year in the historical data record. This was sometimes challenging because dynamic snowmelt and precipitation patterns can cause rivers to cross given thresholds more than once a year. To ensure accurate and robust forecasts, consistent objective procedures were developed that would help identify and select the most appropriate date whenever multiple threshold crossings within a year occurred.

The first step was to identify the recession limb of the hydrograph and limit the analysis to a time interval around this period. In general, the analysis covered the period from April 1 to November 1. Even with this more limited time interval, there were often multiple streamflow crossings of each threshold being examined. To eliminate the “noise” of minor fluctuations above and below a given threshold, the following rule was applied: “When there are multiple threshold crossings, select the first threshold crossing date where the flow is below the threshold for at least two consecutive days and the average flow for the 14 day future period (including the current day) is below the threshold". This rule was applied to all of the daily data sets used as part of forecast development.



Summary of Snow Course Data

January 2009

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon						
ANEROID LAKE SNOTEL	7410	1/01/09	33	5.6	9.3	11.0
ANNIE SPRING SNOTEL	6010	1/01/09	54	13.5	12.3	17.0
ANTHONY LAKE (REV)	7130	12/29/08	39	10.2	10.0	--
ARBUCKLE MTN SNOTEL	5770	1/01/09	35	8.4	8.6	8.9
BEAVER DAM CREEK	5100	1/02/09	27	8.7	10.3	6.3
BEAVER RES. SNOTEL	5150	1/01/09	17	2.9	6.0	4.1
BIG RED MTN SNOTEL	6050	1/01/09	26	6.9	10.3	11.6
BIGELOW CAMP SNOTEL	5120	1/01/09	31	9.1	8.1	5.8
BILLIE CK DVD SNOTEL	5300	1/01/09	---	9.8	10.9	9.8
BLAZED ALDER SNOTEL	3650	1/01/09	72	20.3	24.3	14.1
BLUE MTN SPGS SNOTEL	5900	1/01/09	29	7.0	7.6	7.8
BOURNE SNOTEL	5850	1/01/09	30	6.5	8.2	7.3
BOWMAN SPRNGS SNOTEL	4530	1/01/09	23	5.4	3.8	4.4
CAMAS CREEK #3	5850	12/31/08	27	6.5	3.9	5.1
CASCADE SUM. SNOTEL	5100	1/01/09	57	15.7	15.7	13.5
CHEMULT ALT SNOTEL	4850	1/01/09	16	4.9	3.8	4.6
CLACKAMAS LK. SNOTEL	3400	1/01/09	29	8.4	8.2	6.9
CLEAR LAKE SNOTEL	3810	1/01/09	31	6.1	10.0	5.9
COLD SPRINGS SNOTEL	5940	1/01/09	50	14.2	10.3	13.1
COUNTY LINE SNOTEL	4800	1/01/09	13	3.4	3.3	2.6
CRAZYMAN FLAT SNOTEL	6180	1/01/09	29	5.3	3.8	7.4
DALY LAKE SNOTEL	3690	1/01/09	43	11.6	13.3	8.1
DEADWOOD JUNCTION	4600	1/02/09	22	7.1	6.9	4.3
DERR SNOTEL	5850	1/01/09	25	5.0	5.6	6.1
DIAMOND LAKE SNOTEL	5320	1/01/09	36	11.3	6.0	7.3
DOOLEY MOUNTAIN	5430	12/30/08	17	3.6	6.7	3.5
EAST EAGLE	4400	12/28/08	40	5.5	8.7	11.0
EILERTSON SNOTEL	5510	1/01/09	17	5.0	4.7	4.7
ELDORADO PASS	4600	12/30/08	10	3.0	2.0	2.1
EMIGRANT SPGS SNOTEL	3800	1/01/09	18	4.8	5.0	4.1
FISH CREEK SNOTEL	7660	1/01/09	44	9.9	5.9	11.6
FISH LK. SNOTEL	4670	1/01/09	33	8.1	7.3	6.2
FOURMILE LAKE SNOTEL	6000	1/01/09	55	15.8	9.6	14.3
GERBER RES SNOTEL	4850	1/01/09	9	1.6	.7	1.4
GOLD CENTER SNOTEL	5410	1/01/09	19	4.8	7.0	5.1
GREENPOINT SNOTEL	3310	1/01/09	40	10.4	13.3	9.5
HIGH PRAIRIE	6100	12/30/08	64	17.1	18.8	20.0
HIGH RIDGE SNOTEL	4920	1/01/09	46	12.6	16.1	10.4
HOGG PASS SNOTEL	4760	1/01/09	51	12.3	14.0	17.0
HOLLAND MDWS SNOTEL	4900	1/01/09	45	14.5	15.3	13.7
HOWARD PRAIRIE	4500	1/02/09	20	5.1	4.8	3.7
HUNGRY FLAT	4400	12/30/08	13	3.4	3.0	2.1
IRISH-TAYLOR SNOTEL	5500	1/01/09	63	18.4	15.4	15.6
JUMP OFF JOE SNOTEL	3520	1/01/09	33	8.3	11.9	5.7
KING MTN #1	4500	12/30/08	22	5.6	8.2	3.7
KING MTN #2 SNOTEL	4340	1/01/09	10	3.8	7.4	2.5
KING MTN #3	3650	12/30/08	8	2.2	2.6	.9
KING MTN #4	3050	12/30/08	0	.0	.0	.3
LAKE CK R.S. SNOTEL	5200	1/01/09	19	3.7	5.2	5.7
LITTLE ALPS	6200	12/29/08	24	5.0	5.5	5.3
LITTLE ANTONE (ALT)	5000	12/29/08	20	5.0	6.9	3.9
LITTLE MEADOW SNOTEL	4000	1/01/09	56	15.3	19.1	11.9
LUCKY STRIKE SNOTEL	4970	1/01/09	19	4.9	4.5	4.5
MADISON BUTTE SNOTEL	5150	1/01/09	17	4.3	4.8	3.2
MARION FORKS SNOTEL	2600	1/01/09	30	9.1	8.7	4.6
MARKS CREEK	4540	12/28/08	13	3.8	3.4	2.1
MCKENZIE SNOTEL	4800	1/01/09	68	24.2	20.2	19.3
MEACHAM	4300	12/31/08	20	5.8	4.0	4.1
MILKSHAKES SNOTEL	5580	1/01/09	54	15.5	14.8	--
MILL CREEK MDW	4400	12/30/08	29	6.6	8.1	5.6
MILLER WOODS SNOTEL	420	1/01/09	3	1.1	.0	--

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon Continued						
MOSS SPRINGS SNOTEL	5760	1/01/09	42	10.1	10.4	11.6
MT HOOD TEST SNOTEL	5400	1/01/09	76	21.8	26.0	29.3
MT HOWARD SNOTEL	7910	1/01/09	21	7.6	9.0	7.7
MUD RIDGE SNOTEL	4070	1/01/09	56	12.0	14.9	12.2
NEW CRESCENT SNOTEL	4910	1/01/09	31	8.7	6.4	6.1
NEW DUTCHMAN #3	6400	12/31/08	89	23.0	18.7	23.5
NORTH FK RES SNOTEL	3060	1/01/09	60	18.6	20.0	6.8
NORTH UMPQUA	4220	1/06/09	35	5.4	7.1	5.1
OCHOCO MEADOW SNOTEL	5430	1/01/09	16	6.0	5.2	4.7
PARK H.Q. REV	6550	12/30/08	91	24.6	20.4	25.2
PEAVINE RIDGE SNOTEL	3420	1/01/09	32	9.3	12.8	5.5
QUARTZ MTN SNOTEL	5720	1/01/09	7	2.0	1.0	1.4
R.R. OVERPASS SNOTEL	2680	1/01/09	12	3.7	3.2	.5
RED BUTTE #1	4560	12/29/08	39	11.2	12.8	5.1
RED BUTTE #2	4000	12/29/08	16	4.2	3.9	2.6
RED BUTTE #3	3500	12/29/08	19	4.8	4.9	1.5
RED BUTTE #4	3000	12/29/08	14	4.2	2.4	.8
RED HILL SNOTEL	4400	1/01/09	73	23.4	22.3	20.1
ROARING RIVER SNOTEL	4950	1/01/09	50	13.8	14.6	11.8
ROCK SPRINGS SNOTEL	5290	1/01/09	12	1.9	1.9	2.3
SADDLE MTN SNOTEL	3110	1/01/09	53	20.1	11.1	3.2
SALT CK FALLS SNOTEL	4220	1/01/09	41	12.5	13.2	8.0
SANTIAM JCT. SNOTEL	3750	1/01/09	---	11.9	12.4	9.2
SCHNEIDER MDW SNOTEL	5400	1/01/09	49	9.4	12.8	14.7
SEINE CREEK SNOTEL	2060	1/01/09	18	5.0	2.2	1.5
SEVENMILE MARSH SNTL	5700	1/01/09	47	12.2	10.7	13.4
SILVER BURN	3720	12/30/08	35	7.5	7.6	5.4
SILVER CREEK SNOTEL	5740	1/01/09	28	6.1	3.2	4.7
SILVIES SNOTEL	6990	1/01/09	17	4.8	4.6	6.7
SISKIYOU SUMMIT REV	4630	12/29/08	26	6.4	5.3	2.9
SNOW MTN SNOTEL	6220	1/01/09	19	3.0	2.3	4.5
SF BULL RUN SNOTEL	2690	1/01/09	37	12.2	8.7	1.3
STARR RIDGE SNOTEL	5250	1/01/09	15	3.5	3.6	3.2
STRAWBERRY SNOTEL	5760	1/01/09	12	3.3	1.6	2.9
SUMMER RIM SNOTEL	7100	1/01/09	24	5.7	4.3	7.4
SUMMIT LAKE SNOTEL	5600	1/01/09	61	18.7	15.3	15.4
SUN PASS SNOTEL	5600	1/01/09	44	12.2	6.6	--
SWAN LAKE MTN SNOTEL	6830	1/01/09	31	8.7	6.1	--
TANGENT	5400	12/30/08	41	9.4	7.6	9.5
TAYLOR BUTTE SNOTEL	5030	1/01/09	17	4.1	3.4	3.3
TAYLOR GREEN SNOTEL	5740	1/01/09	35	7.5	9.6	8.9
THREE CK MEAD SNOTEL	5650	1/01/09	---	7.2	8.6	8.5
TIPTON SNOTEL	5150	1/01/09	22	5.4	5.9	6.4
TOKETTE AIRSTRIP SN	3240	1/01/09	14	5.7	4.5	--
TOLLGATE	5070	12/31/08	47	10.4	18.0	12.1
TRAP CREEK	3800	1/06/09	28	4.8	6.8	4.7
WOLF CREEK SNOTEL	5630	1/01/09	27	6.6	8.1	7.0
California						
ADIN MTN SNOTEL	6350	1/01/09	24	6.1	4.4	5.9
CEDAR PASS SNOTEL	7100	1/01/09	26	6.5	5.6	7.2
CROWDER FLAT SNOTEL	5200	1/01/09	10	2.2	1.7	--
DISMAL SWAMP SNOTEL	7000	1/01/09	37	8.9	6.3	11.5
Idaho						
MUD FLAT SNOTEL	5730	1/01/09	16	3.1	2.9	3.2
SILVER CITY	6400	12/29/08	40	9.4	6.4	7.2
SOUTH MTN SNOTEL	6500	1/01/09	25	6.7	4.9	7.7
Nevada						
BEAR CREEK SNOTEL	7800	1/01/09	43	9.9	4.8	8.0
BIG BEND SNOTEL	6700	1/01/09	22	5.1	2.7	3.9
BUCKSKIN,L SNOTEL	6700	1/01/09	20	3.2	3.4	3.9
DISASTER PEAK SNOTEL	6500	1/01/09	18	4.4	3.8	5.3
FAWN CREEK SNOTEL	7050	1/01/09	30	6.0	3.5	7.5
GRANITE PEAK SNOTEL	7800	1/01/09	22	5.4	4.0	8.5
JACK CREEK, U SNOTEL	7280	1/01/09	33	5.8	3.3	7.7
LAMANCE CREEK SNOTEL	6000	1/01/09	18	4.1	4.3	5.9
LAUREL DRAW SNOTEL	6700	1/01/09	26	5.8	3.7	4.9
SEVENTYSIX CK SNOTEL	7100	1/01/09	22	4.0	3.0	4.8
TAYLOR CANYON SNOTEL	6200	1/01/09	16	4.0	1.9	2.0

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) 414-3267 **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 Malheur R Nr Drewsey will be less than 210 KAF between February 1 and July 31. There is also a 50% chance that actual streamflow volume will be greater than 210 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 184 KAF (from the 70 percent exceedance forecast). There is a 30% chance of receiving *less* than 184 KAF.

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 148 KAF (from the **90** percent exceedance forecast). There is 10% chance of receiving less than 148 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 238 KAF (from the 30 percent exceedance forecast). There is a 30% chance of receiving *more* than 238 KAF.

Alternatively, if users determine the risk of using the 30 percent exceedance forecast is too great, then they might plan on receiving 282 KAF (from the 10 percent exceedance forecast). There is a 10% chance of receiving more than 282 KAF.

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

OWYHEE AND MALHEUR BASINS
Streamflow Forecasts - February 1, 2006

		<<====== Drier ====== Future Conditions ======= Wetter =====>>				
		Chance Of Exceeding *				
Forecast Point	Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Malheur R nr Drewsey	FEB-JUL	148	184	210	165	238	282	127
	APR-SEP	87	110	128	168	147	177	76
NF Malheur R at Beulah	FEB-JUL	108	127	141	157	156	178	90
Owyhee Reservoir 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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