



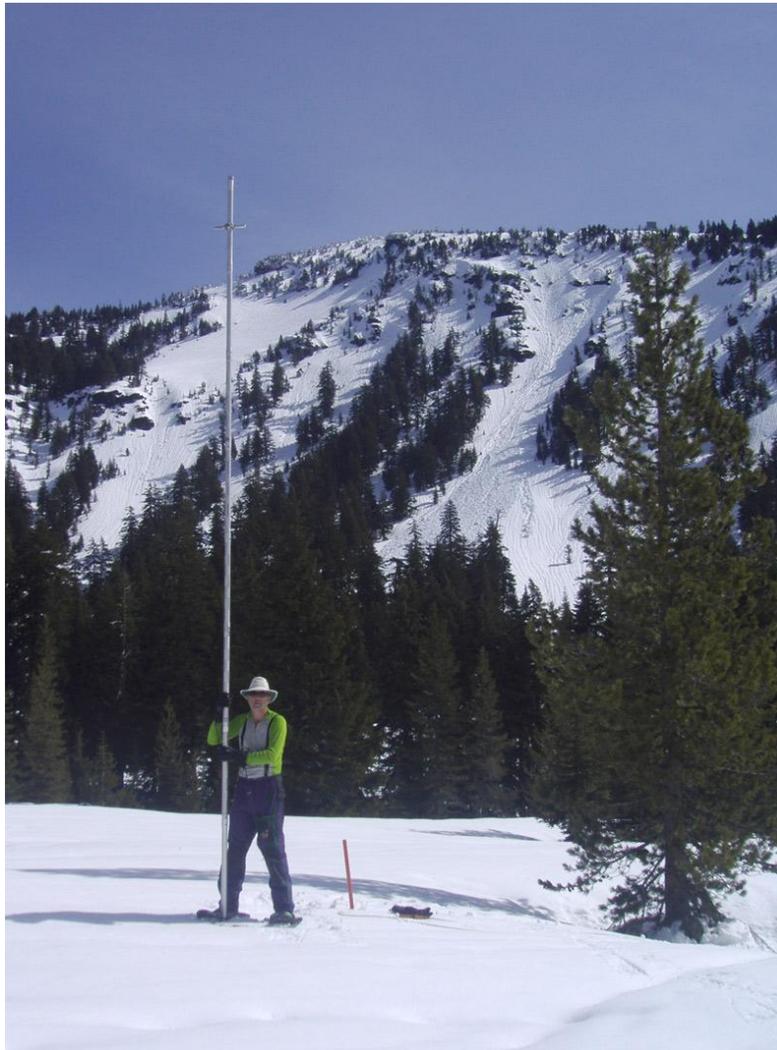
United States
Department of
Agriculture



Natural Resources
Conservation
Service

Oregon Basin Outlook Report

April 1, 2011



The above photo was taken on the April 1 snow survey at the Park Headquarters Revised snow course near Crater Lake in Klamath County. Jason Outlaw (pictured with snow tubes) and Ken Christensen measured 71.6" of snow water and 178" of snow depth on this course, which is 117% of average for April 1. This course has been continuously measured since 1943, and is one of the oldest measurement sites in Oregon. Across the state, above average snowpack and precipitation measurements indicate the likelihood of plentiful water supplies this coming summer.

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General Outlook

April 1, 2011

SUMMARY

There is good news this month for Oregon water users. During March, a series of winter storms delivered a steady supply of new snow to the mountains of Oregon, boosting the snowpack throughout the state. The summer water supply outlook has improved as a result. For stream systems that rely on snowmelt, forecasts have improved significantly since last month. Some stream systems rely more heavily on spring rains for filling reservoirs. Plentiful March precipitation has benefited these watersheds as well.

SNOWPACK

It is important to note that April 1 is a milestone in the winter season. April 1 is the point in the season that most strongly influences the water supplies in the months ahead. By April 1, it is expected that most snow measurement sites have reached their maximum snowpack for the year. This month, snow surveyors throughout the state measured snowpacks that met or exceeded the average annual maximum, indicating a healthy water supply for the summer ahead.

On April 1, the snowpack in Oregon basins ranged from a perfect 100 percent of average in the Hood, Mile Creeks and Lower Deschutes basin to 168 percent of average in the Owyhee and Malheur basin. The snowpack in all basins of the state has improved greatly from the March 1 condition. Snow measurements were taken at 77 SNOTEL sites, 38 snow courses and 29 aerial markers this month.

PRECIPITATION

Following a drier than normal January and February, winter returned during March with steady, stormy and wet weather. Dry days were rare in Oregon last month. Precipitation totals for March ranged from 131 percent of average for the Hood, Mile Creeks and Lower Deschutes basin to 201 percent of average for the Rogue and Umpqua basin.

Since the beginning of the water year precipitation totals range from 107 percent of average in the Hood, Mile Creeks and Lower Deschutes basin to 130 percent of average for the Owyhee and Malheur. With the exception of northwest Oregon, all basins in the state gained a significant share of their water year precipitation during March.

RESERVOIRS

March precipitation brought abundant runoff to many of the reservoirs in the state, boosting stored water supplies. The April 1 storage at 26 major Oregon reservoirs analyzed in this publication was 98 percent of average. A total of 2,423,800 acre feet of water were stored on April 1, representing 75 percent of useable capacity. Last year at this time, these same reservoirs stored 1,583,600 acre feet of water.

STREAMFLOW

Streamflow forecasts improved throughout the state as a result of the abundant March precipitation. Streams that receive a large contribution of their summer flows from snow melt, as well as those that are fed primarily by spring rains, have benefited from the March rain and snow. All water users in Oregon are expected to have average to well above average flows to draw from this coming summer. April and May temperatures will govern how quickly the snow melts - influencing the timing of runoff during the growing season.

Water supply forecasts remain similar to last month's Water Supply Outlook Report in many basins. February snowpack gains did not directly translate to improved water supply forecasts in many cases. Basin wide summer streamflow forecasts are summarized below.

A summary of streamflow forecasts for Oregon follows:

STREAM	PERIOD	PERCENT OF AVERAGE
Owyhee Reservoir Inflow	Apr-Sep	149
Grande Ronde R at La Grande	Apr-Sep	122
Umatilla R at Pendleton	Apr-Sep	115
Deschutes R at Benham Falls	Apr-Sep	110
MF Willamette R bl NF	Apr-Sep	120
Rogue R at Raygold	Apr-Sep	113
Upper Klamath Lake Inflow	Apr-Sep	122
Silvies R nr Burns	Apr-Sept	157

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

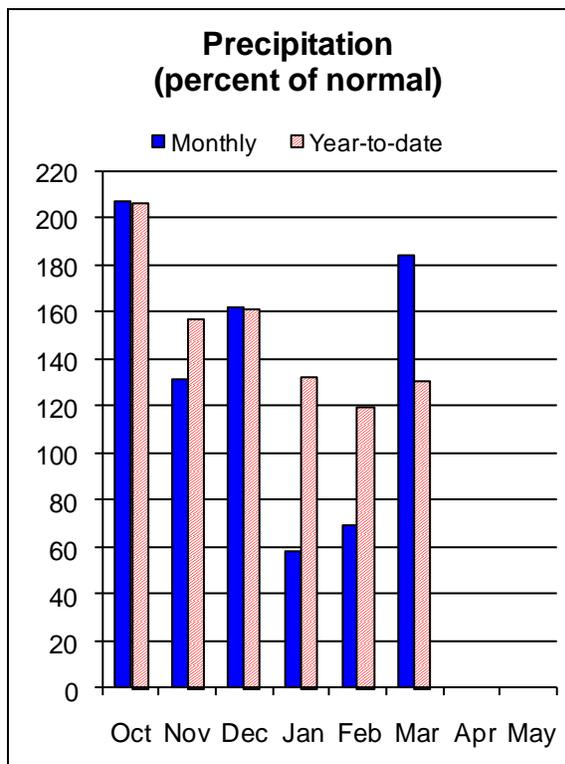
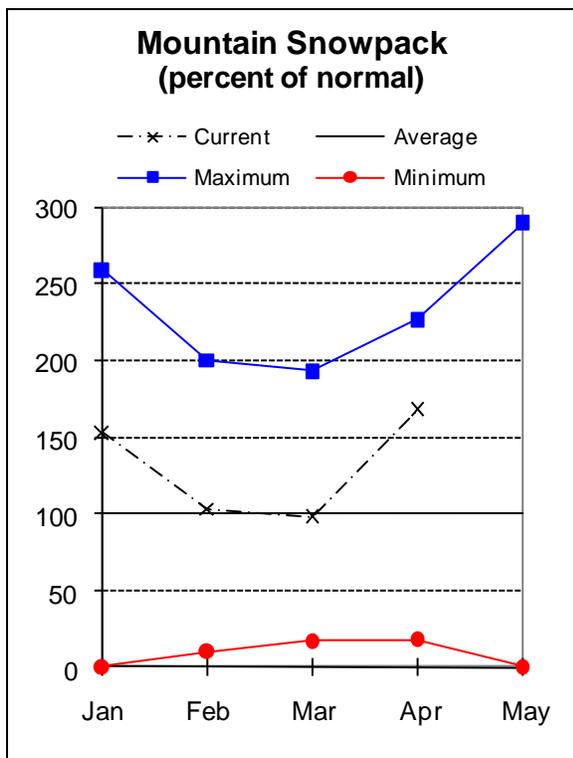
The forecasts in this bulletin are a result of coordinated activity between the Natural Resources Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

This report also 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

April 1, 2011



Water Supply Outlook

The water year in the Owyhee and Malheur basins started off very wet. Then, January and February were much drier than normal. The dry spell was broken in March boosting water supply conditions. March precipitation was a hearty 184 percent of average.

Considerable gains were made in the snowpack at most sites during March. On April 1, the snowpack in the Owyhee and Malheur was 168 percent of average. Snowpack measurements were collected this month at 10 SNOTEL sites, 5 snow courses and 18 aerial markers. Since the beginning of the water year, total precipitation in the Owyhee and Malheur basins has been 130 percent of average.

March runoff boosted reservoir storage in the basin. April 1 storage at the four irrigation reservoirs in the Owyhee and Malheur basins was 102 percent of average and 81 percent of capacity.

Streamflows in the Owyhee and Malheur are forecast to be well above normal for the summer of 2011. The April through September streamflow forecasts in the Owyhee and Malheur basins range from 149 percent of average for the Owyhee Reservoir Inflow to 155 percent of average for the Owyhee River near Rome. Elsewhere in the basin, the Malheur River near Drewsey is expected to be 151 percent of average for the April through September period. Water users in the Owyhee and Malheur can expect well above average supplies during the coming season.

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

Ontario - (541) 889-7637

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

OWYHEE AND MALHEUR BASINS
Streamflow Forecasts - April 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90%		70%		50%			30%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	
Malheur R nr Drewsey	APR-SEP	76	98	115	151	133	162	76		
NF Malheur R at Beulah (2)	APR-JUL	69	81	90	150	99	114	60		
Owyhee R bl Owyhee Dam (2)	APR-JUL	435	530	600	150	675	790	400		
	APR-SEP	475	570	640	149	715	830	430		
Owyhee R nr Rome	APR-JUL	440	530	590	155	650	740	380		
	APR-SEP	470	560	620	155	680	770	400		

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

OWYHEE AND MALHEUR BASINS
Watershed Snowpack Analysis - April 1, 2011

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	51.6	30.3	47.2	Owyhee	20	139	160
BULLY CREEK	30.0	20.6	24.0	24.1	Upper Malheur	8	147	178
OWYHEE	715.0	629.0	276.3	593.0	Jordan Creek	3	131	154
WARMSPRINGS	191.0	109.3	46.2	133.5	Bully Creek	3	136	444
					Willow Creek	4	172	288

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

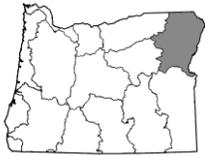
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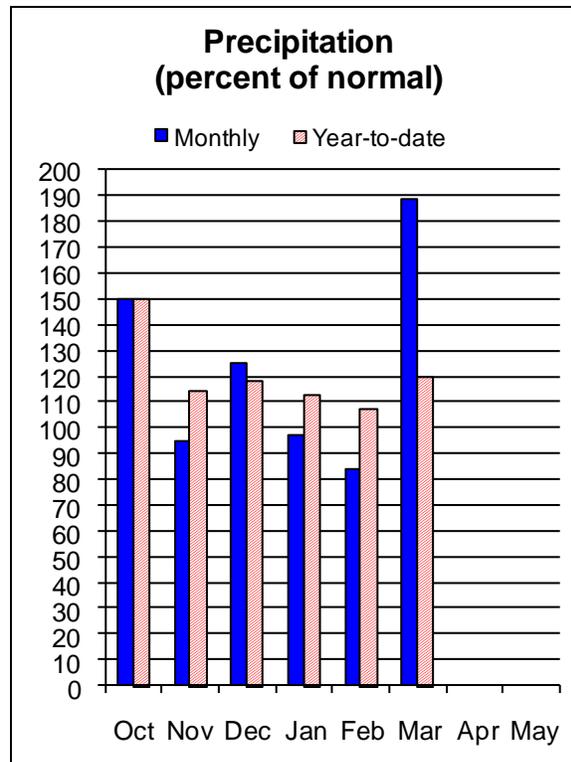
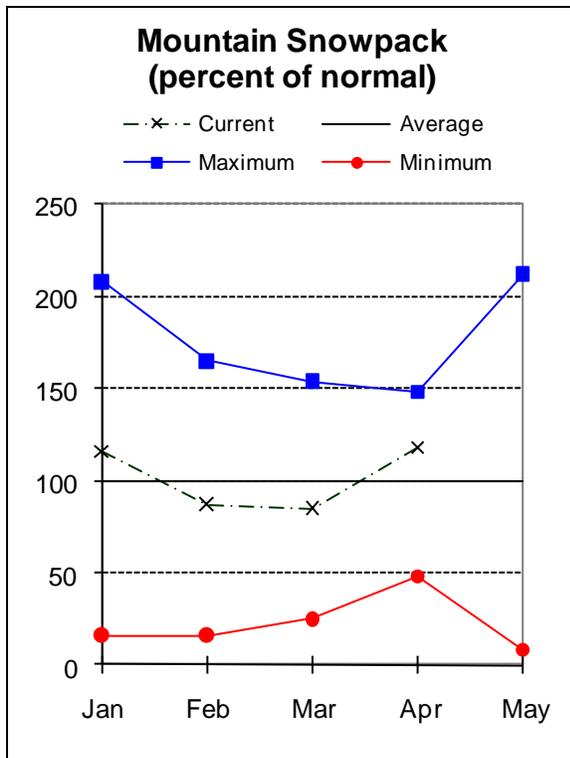
Ontario - (541) 889-7637

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



Burnt, Powder, Grand Ronde, and Imnaha Basins

April 1, 2011



Water Supply Outlook

The Burnt, Powder, Pine, Grande Ronde, and Imnaha basins have been enjoying near to above average precipitation this winter. For the month of March, precipitation was a wet 189 percent of average. Since the beginning of the water year, precipitation in the basin has been 120 percent of average.

Considerable gains were made in the snowpack at most sites during March. On April 1, the snowpack in the basin was 118 percent of average. Snow measurements were collected at 16 SNOTEL sites, 5 aerial markers and 7 snow courses on April 1.

March runoff boosted reservoir storage in the basin. April 1 storage at Phillips Lake, Thief Valley and Unity reservoirs was 100 percent of average and 77 percent of capacity.

The April through September streamflow forecasts range from 103 percent of average for the Bear Creek near Wallowa to 144 percent of average for the Burnt River near Hereford. Water users in the basin can expect near to well above average streamflows for the summer of 2011.

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 - April 1, 2011

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)	(1000AF)	(1000AF)
Bear Ck nr Wallowa	APR-SEP	56	63	67	103	71	78	65				
Burnt nr Hereford (2)	APR-SEP	44	51	56	144	61	68	39				
Catherine Ck nr Union	APR-JUL	65	73	78	126	83	91	62				
	APR-SEP	70	78	83	126	88	96	66				
Deer Ck nr Sumpster	APR-JUL	15.4	18.1	20	130	22	25	15.4				
Grande Ronde R at La Grande	APR-SEP	170	205	230	122	255	290	188				
Grande Ronde R at Troy (1)	APR-SEP	1320	1600	1720	126	1840	2120	1370				
Imnaha R at Imnaha	APR-JUL	275	315	340	126	365	405	270				
	APR-SEP	295	335	365	124	395	435	295				
Lostine R nr Lostine	APR-JUL	112	120	125	112	130	138	112				
	APR-SEP	121	130	136	112	142	151	121				
Pine Ck nr Oxbow	APR-JUL	148	173	190	128	205	230	148				
	APR-SEP	155	180	197	128	215	240	154				
Powder R nr Sumpster	APR-JUL	67	75	81	140	87	95	58				
	APR-SEP	67	76	82	139	88	97	59				
Wolf Ck Reservoir Inflow (2)	APR-JUN	16.7	19.9	22	149	24	27	14.8				

For more information contact your local Natural Resources Conservation Service Office:
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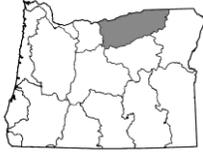
BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Reservoir Storage (1000 AF) - End of March					BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS Watershed Snowpack Analysis - April 1, 2011			
Reservoir	Usable Capacity	*** This Year	Usable Storage Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
PHILLIPS LAKE	73.5	53.1	44.9	50.8	Upper Grande Ronde	11	151	129
THIEF VALLEY	17.4	14.2	13.7	17.9	Wallowa	8	128	110
UNITY	25.2	22.5	14.9	21.1	Imnaha	4	127	109
WALLOWA LAKE	37.5	16.9	13.9	19.6	Powder	11	154	127
WOLF CREEK	10.4	7.7	4.6	5.8	Burnt	5	169	164

* 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.

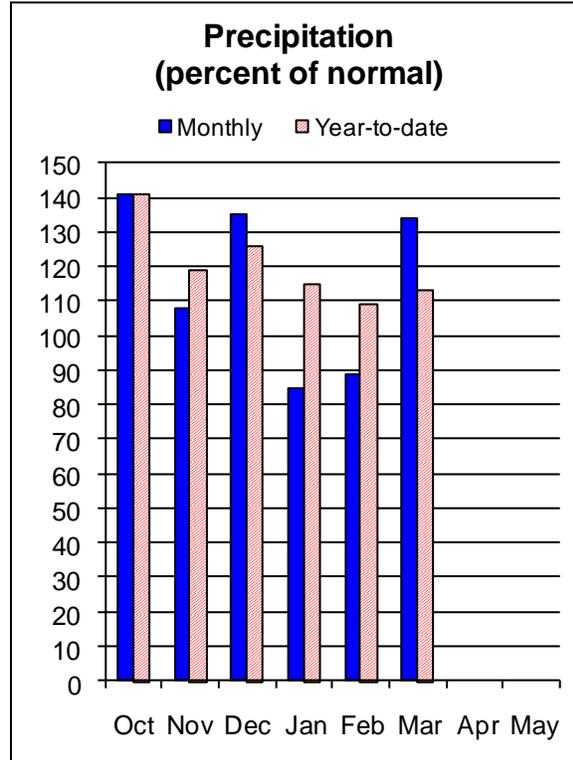
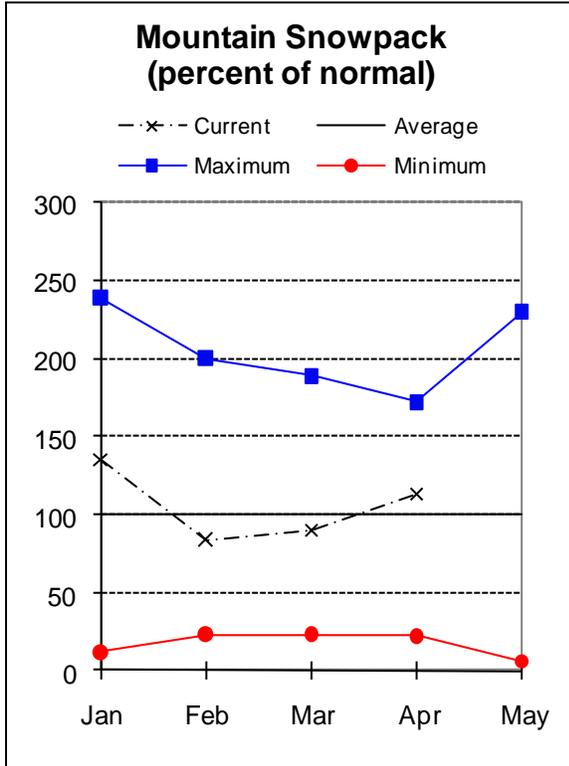
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Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins

April 1, 2011



Water Supply Outlook

Water year 2011 started out wet in the Umatilla, Walla Walla, Willow, Rock and Lower John Day basins and then turned dry in January and February. Wet conditions returned in March, bringing 134 percent of average precipitation. Since the beginning of the water year, precipitation in the basin has been 113 percent of average. The snowpack increased at nearly all sites during March. On April 1, the snowpack in the basin was 113 percent of average. Snow measurements were collected at 7 SNOTEL sites and 2 snow courses in the basin on April 1.

Reservoir storage increased during March. April 1 storage at Cold Springs and McKay reservoirs was 100 percent of average and 78 percent of capacity.

The April through September streamflow forecasts range from 106 percent of average for South Fork Walla Walla River near Milton-Freewater to 148 percent of average for McKay Creek near Pilot Rock. Elsewhere in the basin, the Umatilla River near Pendleton is forecast to be 115 percent of average for the same period. Water users in the Umatilla, Walla Walla, Willow, Rock and Lower John Day basins can expect near to above average streamflow conditions for the summer of 2011.

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 - April 1, 2011

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	APR-JUL	9.2	11.6	13.2	140	14.8	17.2	9.4
	APR-SEP	10.3	12.7	14.3	140	15.9	18.3	10.2
McKay Ck nr Pilot Rock	APR-SEP	23	33	40	148	47	57	27
Rhea Ck nr Heppner	APR-JUL	5.6	8.2	10.0	164	11.8	14.4	6.1
Umatilla R ab Meacham Ck nr Gibbon	APR-JUL	61	74	83	114	92	105	73
	APR-SEP	68	81	90	114	99	112	79
Umatilla R at Pendleton	APR-JUL	122	152	172	115	192	220	149
	APR-SEP	127	157	178	115	199	230	155
SF Walla Walla R nr Milton-Freewater	APR-JUL	47	53	57	106	61	67	54
	APR-SEP	59	66	71	106	76	83	67
Willow Ck ab Willow Ck Lake nr Heppn	APR-JUL	6.1	8.4	10.0	135	11.6	13.9	7.4

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS
Reservoir Storage (1000 AF) - End of March

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS
Watershed Snowpack Analysis - April 1, 2011

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	32.9	18.4	40.1	Walla Walla	4	159	102
MCKAY	73.8	63.5	24.7	56.6	Umatilla	7	177	118
WILLOW CREEK	1.8	2.2	1.9	---	McKay Creek	4	278	139

* 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.

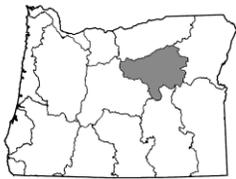
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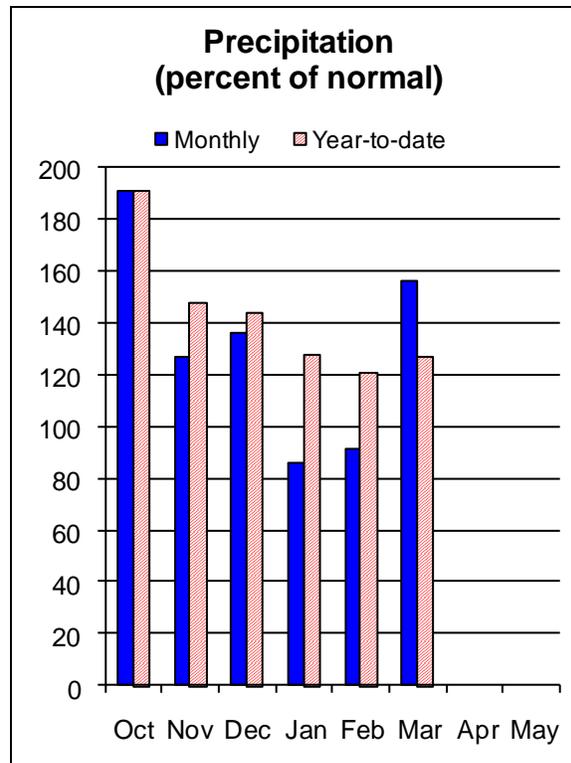
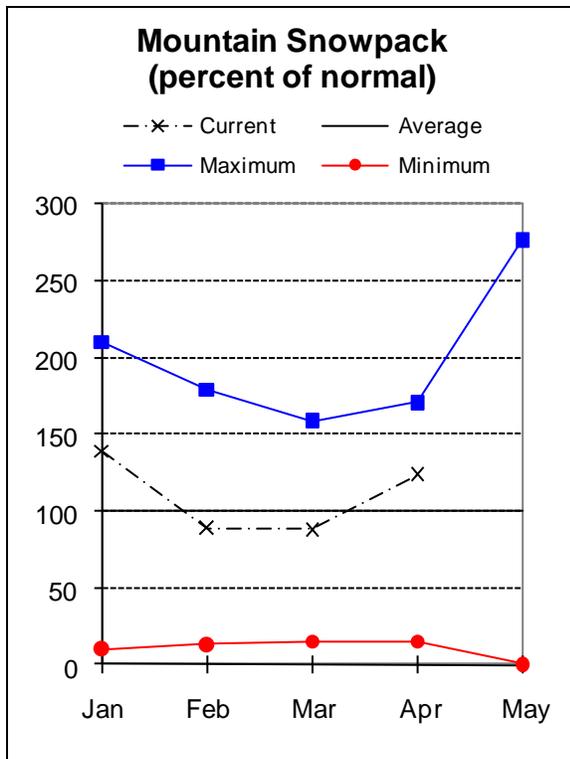
Pendleton - (541) 278-8049; Heppner - (541) 676-5021; Condon - (541) 384-2671

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



Upper John Day Basin

April 1, 2011



Water Supply Outlook

Water year 2011 started out wet in the Upper John Day basins and then turned dry in January and February. Wet conditions returned in March. March precipitation was 156 percent of average. Since the beginning of the water year, precipitation in the basin has been 127 percent of average.

The snowpack in the Upper John Day Basin has improved significantly since the March 1 measurements. On April 1, the snowpack in the basin was 124 percent of average as measured at 13 SNOTEL sites and 4 snow courses.

The boost to the snowpack has led to an improvement in water supply conditions since the March Basin Outlook Report. The April through September streamflow forecasts range from 108 percent of average for Camas Creek near Ukiah to 139 percent of average for Mountain Creek near Mitchell. Elsewhere in the basin, the Middle Fork John Day at Monument is forecast to be 131 percent of average for the April through September period. Water users in the John Day basin can expect near to well above average streamflows for the summer of 2011.

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 - April 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90%		70%		50%			30%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	
Camas Ck nr Ukiah	APR-JUL	28	35	40	108	45	52	37		
	APR-SEP	29	36	41	108	46	53	38		
MF John Day R at Ritter	APR-JUL	122	146	162	132	178	200	123		
	APR-SEP	128	152	169	132	186	210	128		
NF John Day R at Monument	APR-JUL	610	710	780	131	850	950	595		
	APR-SEP	630	735	805	131	875	980	615		
Mountain Ck nr Mitchell	APR-JUL	4.4	5.5	6.3	140	7.1	8.2	4.5		
	APR-SEP	4.4	5.6	6.4	139	7.2	8.4	4.6		
Strawberry Ck nr Prairie City	APR-JUL	7.0	8.5	9.5	134	10.5	12.0	7.1		
	APR-SEP	7.8	9.4	10.4	133	11.4	13.0	7.8		

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

UPPER JOHN DAY BASIN
Watershed Snowpack Analysis - April 1, 2011

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	173	114
					John Day above Kimberly	5	164	125

* 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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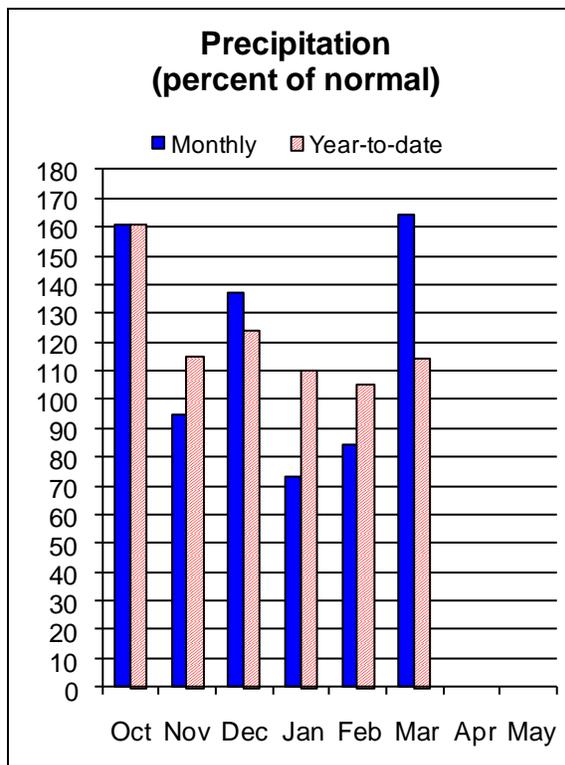
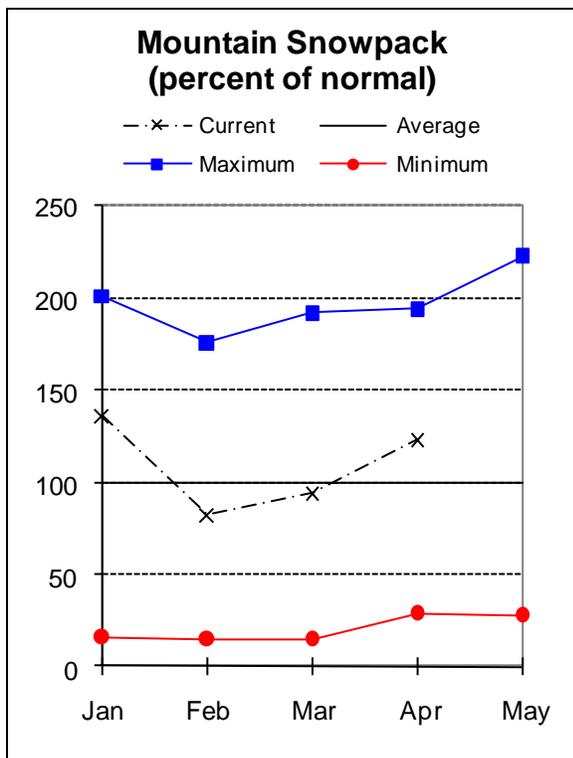
John Day - (541) 575-0135

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



Upper Deschutes and Crooked Basins

April 1, 2011



Water Supply Outlook

Water year 2011 started out wet in the Upper Deschutes and Crooked basins and then turned dry in January and February. Wet conditions returned in March. March precipitation was 164 percent of average. Since the beginning of the water year, precipitation in the basin has been 114 percent of average.

The snowpack recorded considerable gains at several measurement sites during the month of March. As of April 1, the snowpack in the Upper Deschutes and Crooked basins was 123 percent of average as measured at 14 SNOTEL sites and 6 snow courses.

Modest gains in reservoir storage were made during March. The April 1 storage at five irrigation reservoirs in the Upper Deschutes and Crooked River basins was 106 percent of average or 88 percent of capacity.

The boost to the snowpack has led to an improvement in water supply conditions since the March Basin Outlook Report. The April through September streamflow forecasts range from 106 percent of average for Whychus Creek near Sisters to 145 percent of average for Ochoco Reservoir Inflow. Elsewhere in the basin, the Deschutes River at Benham Falls near Bend is forecast to be 110 percent of average for the April through September period. Water users in the Upper Deschutes and Crooked River basins can expect near to well above average 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 - April 1, 2011

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)	
Crane Prairie Reservoir Inflow (2)	APR-JUL	59	67	73	124	79	87	59
	APR-SEP	97	107	114	123	121	131	93
Crescent Ck nr Crescent (2)	APR-JUL	13.3	17.3	20	116	23	27	17.2
	APR-SEP	18.5	22	25	119	28	31	21
Deschutes R at Benham Falls nr Bend	APR-JUL	360	370	380	109	390	400	350
	APR-SEP	550	565	575	110	585	600	525
Deschutes R bl Snow Ck nr La Pine	APR-JUL	26	33	37	112	41	48	33
	APR-SEP	53	61	66	112	71	79	59
Little Deschutes R nr La Pine (2)	APR-JUL	76	84	89	125	94	102	71
	APR-SEP	86	94	100	125	106	114	80
Ochoco Reservoir Inflow (2)	APR-JUL	21	28	32	146	36	43	22
	APR-SEP	21	28	32	146	36	43	22
Prineville Reservoir Inflow (2)	APR-JUL	99	132	154	143	176	210	108
	APR-SEP	100	133	156	143	179	210	109
Whychus Ck nr Sisters	APR-JUL	34	36	38	106	40	42	36
	APR-SEP	47	50	52	106	54	57	49

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

UPPER DESCHUTES AND CROOKED BASINS
Watershed Snowpack Analysis - April 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CRANE PRAIRIE	55.3	47.2	45.4	43.9	Crooked	4	159	130
CRESCENT LAKE	86.9	73.0	67.5	53.5	Little Deschutes	4	189	140
OCHOCO	47.5	35.5	28.1	32.6	Deschutes above Wickiup R	4	208	139

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>

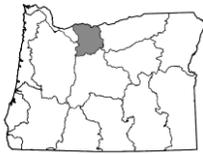
UPPER DESCHUTES AND CROOKED BASINS Reservoir Storage (1000 AF) - End of March					UPPER DESCHUTES AND CROOKED BASINS Watershed Snowpack Analysis - April 1, 2011			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
PRINEVILLE	153.0	122.1	136.9	132.9	Tumalo and Squaw Creeks	5	160	117
WICKIUP	200.0	200.7	200.5	189.7				

* 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.

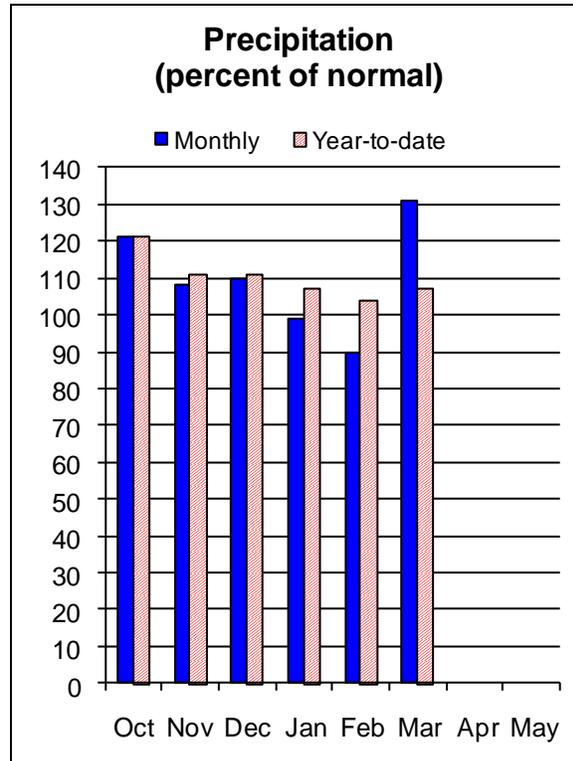
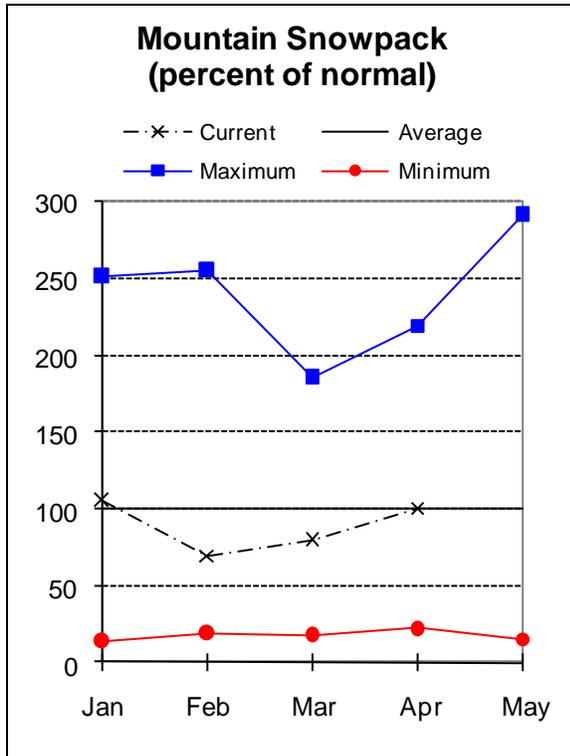
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Hood, Mile Creeks, and Lower Deschutes Basins

April 1, 2011



Water Supply Outlook

March was the wettest month since the start of water year 2011 in the Hood, Mile Creeks and Lower Deschutes basin. March precipitation was 131 percent of average. As of April 1, total precipitation for water year 2011 has been 107 percent of average.

March precipitation delivered lots of new snow to the mountains of the basin. On April 1, the snowpack in the Hood, Mile Creeks and Lower Deschutes basins was 100 percent of average. This is substantial improvement over 80 percent of average on March 1. Snow measurements were collected at 8 SNOTEL sites and 3 snow courses in the basin for the April 1 survey.

In contrast to the wetter than average conditions in the rest of the state, the Hood, Mile Creeks and Lower Deschutes basin has experienced average water supply conditions so far this water year. This month, the basin earned the distinction of having the lowest snowpack, lowest March precipitation and lowest total water year precipitation in the state.

April through September streamflow for Hood River at Tucker Bridge is forecast to be 103 percent of average. For the April through July period, the West Fork Hood River near Dee is forecast to be 104 percent of average. Water users in the Hood, Mile Creeks and Lower Deschutes basin can expect near normal streamflows during the summer of 2011.

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

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

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS
Streamflow Forecasts - April 1, 2011

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)	
WF Hood River nr Dee	APR-JUL	93	113	126	104	139	159	121
Hood R At Tucker Bridge	APR-JUL	190	215	235	103	255	280	228
	APR-SEP	230	260	280	103	300	330	271

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

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS
Watershed Snowpack Analysis - April 1, 2011

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (WASCO)	11.9	5.2	4.0	4.5	Hood River	7	140	101
					Mile Creeks	2	96	78
					White River	5	128	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.

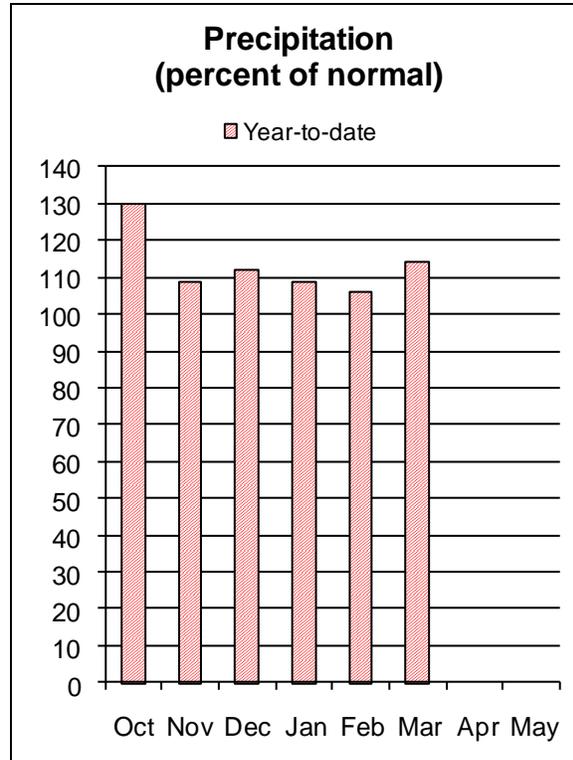
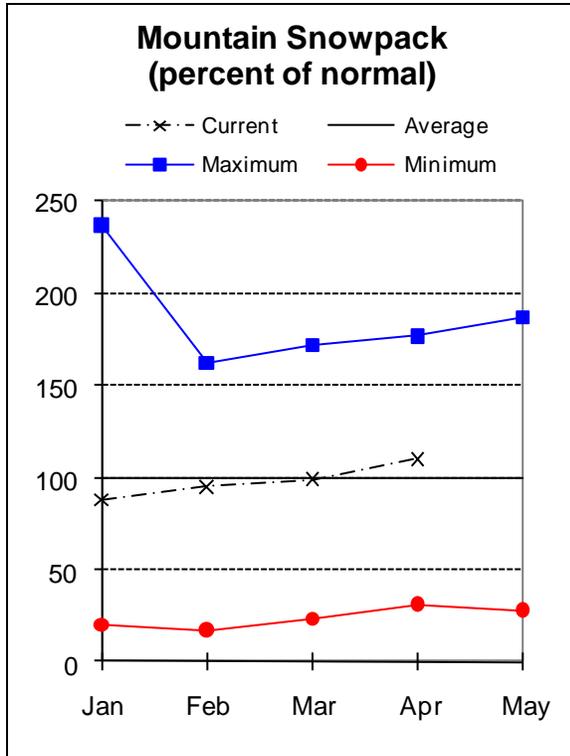
For more information contact your local Natural Resources Conservation Service Office:
The Dalles (541) 296-6178

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Lower Columbia Basin

April 1, 2011



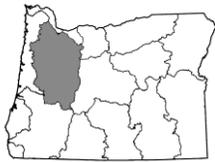
Water Supply Outlook

The Columbia basin snowpack increased measurably during March due to a wet month throughout the basin. Above average precipitation for the month was observed at weather stations from the Canadian headwaters to The Dalles. Since the beginning of the water year, precipitation in the Columbia basin has been 114 percent of average. Locally, March precipitation in the Sandy basin was 136 percent of average. On April 1, the snowpack in the Columbia Basin above The Dalles measured 110 percent of average.

The April through September streamflow forecast for the Columbia at The Dalles is 108 percent of average. For the Sandy near Marmot, the April through September streamflow forecast is 107 percent of average. Water users in the Lower Columbia basin can expect near average conditions for the coming summer.

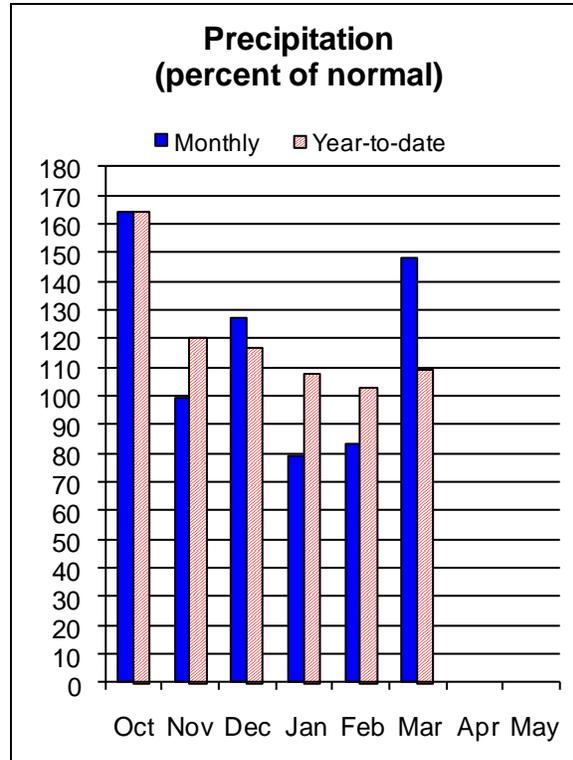
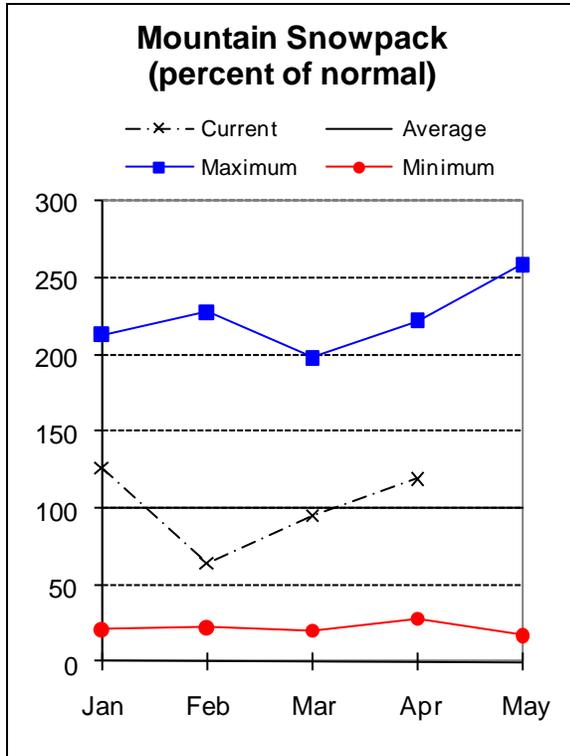
For more information contact your local Natural Resources Conservation Service Office:
Oregon City - (503) 656-3499

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



Willamette Basin

April 1, 2011



Water Supply Outlook

Water year 2011 started out wet in the Willamette basin and then turned dry in January and February. A wet March delivered valley rain and mountain snow, reviving water supply conditions. March precipitation was 148 percent of average. As of April 1, total precipitation for water year 2011 has been 109 percent of average. March precipitation delivered lots of new snow to the mountains of the basin. On April 1, the snowpack in the Willamette basin was 119 percent of average, up from 95 percent of average on March 1. Snow measurements were collected at 19 SNOTEL sites and 3 snow courses in the basin for the April 1 survey.

March runoff boosted reservoir storage throughout the basin. The April 1 storage at Timothy Lake and Henry Hagg reservoirs was 102 percent of average and 90 percent of capacity.

There have been modest increases to streamflow forecasts since last month. The April through September streamflow forecasts for the Willamette basin range from 100 percent of average for the Clackamas River at Estacada to 121 percent of average for Cottage Grove Lake Inflow. Elsewhere in the basin, the McKenzie near Vida is forecast to be 112 percent of average and the Willamette River at Salem is forecast to be 110 percent of average for the April through September period. Some of the Willamette basin forecast points are more dependent on spring rains than summer snowmelt. Water users throughout the Willamette basin can anticipate near to above average streamflows during the summer season.

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/cgi-bin/bor.pl>

WILLAMETTE BASIN
Streamflow Forecasts - April 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90%		70%		50%			30%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)
Blue Lake Inflow (1,2)	APR-JUN	52	76	87	107	98	122	81		
	APR-JUL	56	81	92	107	103	128	86		
	APR-SEP	57	81	92	107	103	127	86		
Clackamas R at Estacada	APR-JUL	505	585	640	100	695	775	640		
	APR-SEP	610	690	750	100	810	890	748		
Clackamas R ab Three Lynx (2)	APR-JUL	400	455	490	103	525	580	474		
	APR-SEP	485	540	580	103	620	675	562		
Cottage Grove Lake Inflow (1,2)	APR-JUN	18.2	37	46	121	55	74	38		
	APR-JUL	23	41	49	121	57	75	41		
	APR-SEP	23	43	52	121	61	81	43		
Cougar Lake Inflow (1,2)	APR-JUN	160	194	210	114	225	260	184		
	APR-JUL	183	220	235	115	250	285	204		
	APR-SEP	215	250	265	115	280	315	230		
Detroit Lake Inflow (1,2)	APR-JUN	395	490	530	115	570	665	460		
	APR-JUL	455	555	600	114	645	745	528		
	APR-SEP	550	650	700	114	750	850	616		
Dorena Lake Inflow (1,2)	APR-JUN	72	126	150	118	174	230	127		
	APR-JUL	76	130	155	118	180	235	131		
	APR-SEP	84	138	162	118	186	240	137		
Fall Creek Lake Inflow (1,2)	APR-JUN	63	95	109	115	123	155	95		
	APR-JUL	73	107	122	115	137	171	106		
	APR-SEP	70	110	129	115	148	188	112		
Fern Ridge Lake Inflow (1,2)	APR-JUN	18.2	41	52	113	63	86	46		
	APR-JUL	20	44	55	112	66	90	49		
	APR-SEP	21	45	56	112	67	91	50		

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 - April 1, 2011

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>		Chance Of Exceeding *				30-Yr Avg. (1000AF)
		90%	70%	50%		30%	10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Foster Lake Inflow (1,2)	APR-JUN	400	465	495	105	525	590	470
	APR-JUL	415	485	515	105	545	615	490
	APR-SEP	455	525	555	105	585	655	527
Green Peter Lake Inflow (1,2)	APR-JUN	194	280	320	105	360	445	305
	APR-JUL	210	300	340	104	380	470	327
	APR-SEP	240	330	370	105	410	500	354
Hills Creek Reservoir Inflow (1,2)	APR-JUN	205	270	295	120	320	385	245
	APR-JUL	240	305	335	121	365	430	277
	APR-SEP	290	355	385	120	415	480	320
Little North Santiam R nr Mehama (1)	APR-JUL	89	131	150	113	169	210	133
	APR-SEP	101	143	162	113	181	225	143
Lookout Point Lake Inflow (1,2)	APR-JUN	520	685	760	119	835	1000	640
	APR-JUL	600	775	855	118	935	1110	726
	APR-SEP	705	890	975	118	1060	1250	828
MF Willamette R bl NF (1,2)	APR-JUN	500	650	720	120	790	940	600
	APR-JUL	605	765	840	120	915	1070	698
	APR-SEP	625	855	960	120	1060	1300	798
McKenzie R bl Trail Bridge (2)	APR-JUL	245	270	285	107	300	325	266
	APR-SEP	385	410	430	106	450	475	404
McKenzie R nr Vida (1,2)	APR-JUN	725	865	930	112	995	1140	832
	APR-JUL	870	1020	1090	112	1160	1310	977
	APR-SEP	1110	1280	1350	112	1420	1590	1201
Mohawk R nr Springfield	APR-JUL	64	78	87	110	96	110	79
Oak Grove Fork Of Clackamas	APR-JUL	114	127	136	105	145	158	130
	APR-SEP	149	164	175	105	186	200	167

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WILLAMETTE BASIN
Streamflow Forecasts - April 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)	
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)
North Santiam R at Mehama (1,2)	APR-JUN	510	630	685	112	740	860	610	
	APR-JUL	635	760	820	112	880	1010	732	
	APR-SEP	735	870	930	112	990	1120	834	
South Santiam R at Waterloo (2)	APR-JUL	400	510	580	106	650	760	549	
	APR-SEP	450	555	625	107	695	800	587	
Scoggins Ck nr Gaston (2)	APR-JUL	5.4	10.2	13.5	105	16.8	22	12.9	
Thomas Ck nr Scio	APR-JUL	55	72	83	111	94	111	75	
Willamette R at Salem (1,2)	APR-JUL	3200	4290	4780	110	5270	6360	4347	
	APR-SEP	3800	4820	5280	110	5740	6760	4804	

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WILLAMETTE BASIN Reservoir Storage (1000 AF) - End of March					WILLAMETTE BASIN Watershed Snowpack Analysis - April 1, 2011			
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	57.2	52.2	52.6	Clackamas	5	271	93
COTTAGE GROVE	29.8	16.3	21.0	18.5	McKenzie	8	214	112
COUGAR	155.2	75.1	38.8	150.5	Row River	1	320	104
DETROIT	300.7	166.9	154.9	222.0	Santiam	6	288	116
DORENA	70.5	41.9	50.7	45.3	Middle Fork Willamette	7	189	125
FALL CREEK	115.5	82.3	58.9	71.1				
FERN RIDGE	109.6	77.7	92.1	77.1				
FOSTER	29.7	7.1	15.6	12.4				
GREEN PETER	268.2	204.3	186.2	236.2				
HILLS CREEK	200.2	140.8	75.6	169.1				

WILLAMETTE BASIN Reservoir Storage (1000 AF) - End of March					WILLAMETTE BASIN Watershed Snowpack Analysis - April 1, 2011			
Reservoir	Usable Capacity	*** Usable Storage This Year	Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
LOOKOUT POINT	337.0	241.7	83.9	188.7				
TIMOTHY LAKE	61.7	52.3	59.2	51.6				
HENRY HAGG LAKE	53.0	51.3	51.7	49.8				

* 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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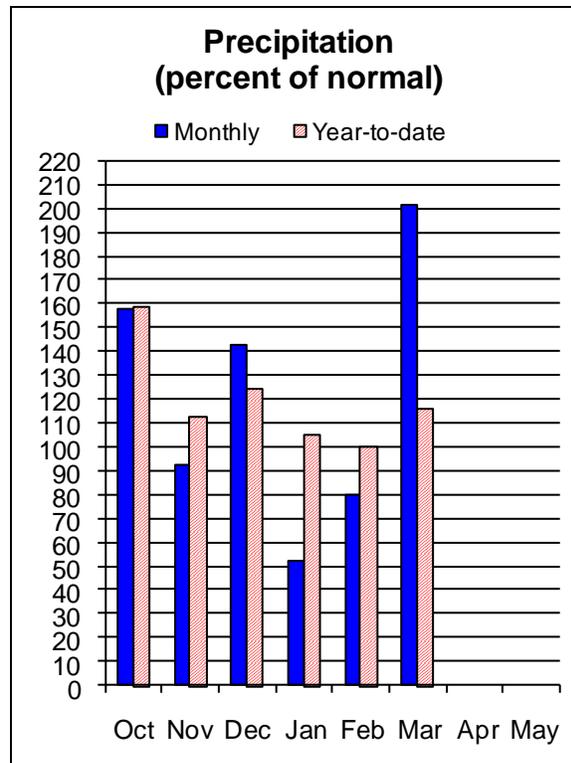
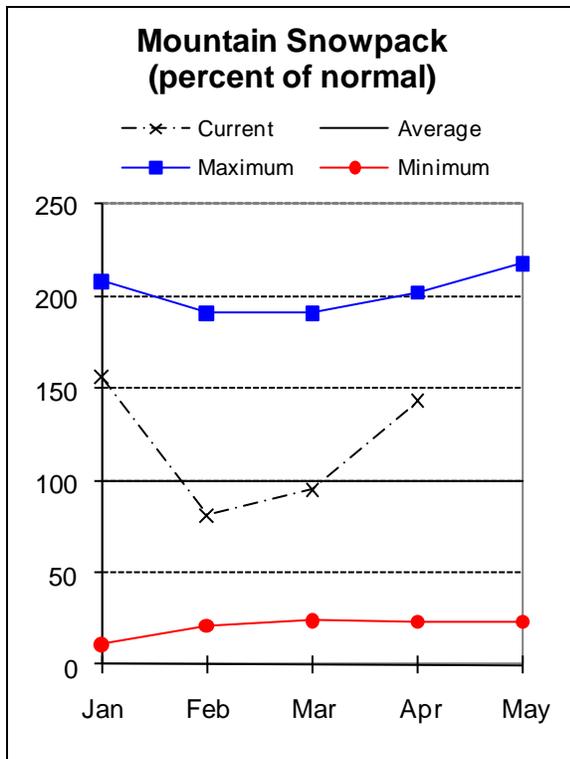
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Salem - (503) 399-5746; Dallas - (503) 623-5534

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Rogue and Umpqua Basins

April 1, 2011



Water Supply Outlook

Water year 2011 started out wet in the Rogue and Umpqua basin, and then turned dry in January and February. A wet March delivered valley rain and mountain snow, reviving water supply conditions. March precipitation in the Rogue and Umpqua basin was 201 percent of average, the wettest in the state. Since the beginning of the water year, precipitation in the Rogue and Umpqua has been 116 percent of average.

The snowpack gained considerably during the month of March. On April 1, the snowpack in the basin was 143 percent of average. Snow measurements were collected at 12 SNOTEL sites and 16 snow courses.

Some reservoirs in the basin made significant gains in stored water during March. The April 1 storage at 5 irrigation reservoirs in the Rogue and Umpqua basins was 105 percent of average and 81 percent of capacity.

The wet weather in March and the above average April 1 snowpack have led to marked improvements to all streamflow forecast points in the basin. The April through September streamflow forecasts for the Rogue and Umpqua basin range from 113 percent of average for the Rogue River at Raygold to 144 percent of average for the South Umpqua at near Brockway. Elsewhere in the basin, Applegate Lake Inflow is forecast to be 134 percent of average for the April through September period.

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 - April 1, 2011

Forecast Point	Forecast Period	<<==== Drier =====		Future Conditions		==== Wetter =====>>		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	Chance Of Exceeding * (% AVG.)	30% (1000AF)	10% (1000AF)	
Applegate Lake Inflow (2)	APR-JUL	119	137	150	134	163	181	112
	APR-SEP	127	146	159	134	172	191	119
SF Big Butte Ck nr Butte Falls	APR-JUL	30	37	41	121	45	52	34
	APR-SEP	41	48	53	122	58	65	44
Cow Ck nr Azalea (2)	APR-JUL	12.9	18.9	23	139	27	33	16.5
	APR-SEP	14.6	21	25	141	29	35	17.7
Hyatt Prairie Reservoir Inflow (2)	APR-JUL	3.8	5.2	6.2	129	7.2	8.6	4.8
Illinois R at Kerby	APR-JUL	127	188	230	129	270	335	179
	APR-SEP	137	198	240	129	280	345	186
NF Little Butte Ck nr Lakecreek (2)	APR-JUL	29	34	37	116	40	45	32
	APR-SEP	45	50	54	117	58	63	46
Lost Creek Lake Inflow (2)	APR-JUL	535	590	625	118	660	715	530
	APR-SEP	680	745	785	118	825	890	665
Rogue R at Raygold (2)	APR-JUL	630	750	830	114	910	1030	730
	APR-SEP	800	925	1010	114	1090	1220	890
Rogue R at Grants Pass (2)	APR-JUL	670	805	900	122	995	1130	740
	APR-SEP	830	980	1080	122	1180	1330	885
Sucker Ck bl Ltl Grayback Ck nr Holl	APR-JUL	43	58	68	131	78	93	52
	APR-SEP	48	63	73	130	83	98	56
North Umpqua R at Winchester	APR-JUL	700	840	935	118	1030	1170	795
	APR-SEP	850	995	1090	119	1190	1330	920
South Umpqua R nr Brockway	APR-JUL	370	495	575	144	655	780	400
	APR-SEP	400	520	605	144	690	810	420
South Umpqua R at Tiller	APR-JUL	172	220	255	132	290	340	193
	APR-SEP	186	235	270	132	305	355	205

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/cgi-bin/bor.pl>

ROGUE AND UMPQUA BASINS Reservoir Storage (1000 AF) - End of March					ROGUE AND UMPQUA BASINS Watershed Snowpack Analysis - April 1, 2011			
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	40.8	32.3	46.9	Applegate	5	169	131
EMIGRANT LAKE	39.0	35.7	27.8	34.4	Bear Creek	5	160	128
FISH LAKE	8.0	4.6	5.0	5.8	Little Butte Creek	6	217	129
FOURMILE LAKE	16.1	9.3	9.0	10.2	Illinois	3	463	231
HOWARD PRAIRIE	60.0	47.7	39.0	44.9	North Umpqua	8	313	159
HYATT PRAIRIE	16.1	15.4	12.3	12.3	Rogue River above Grants	20	197	138
LOST CREEK	315.0	127.3	85.2	263.2				

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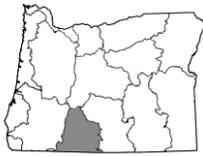
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(2) - The value is natural volume - actual volume may be affected by upstream water management.

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

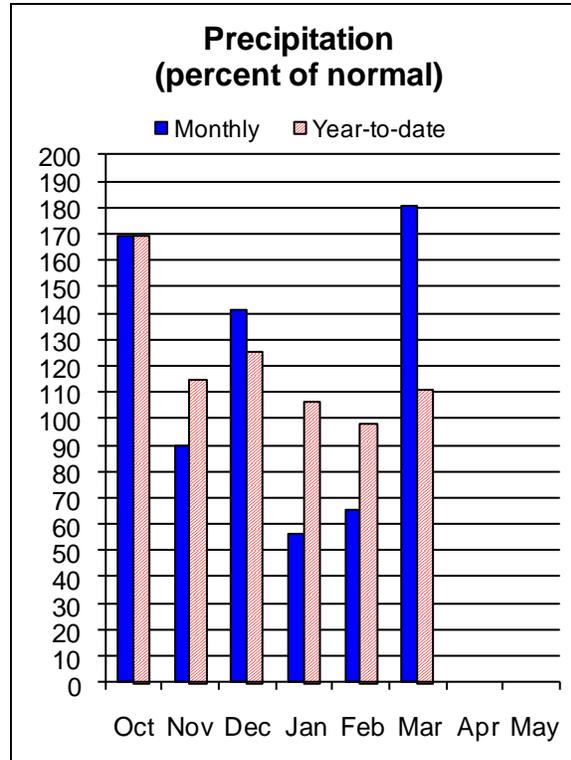
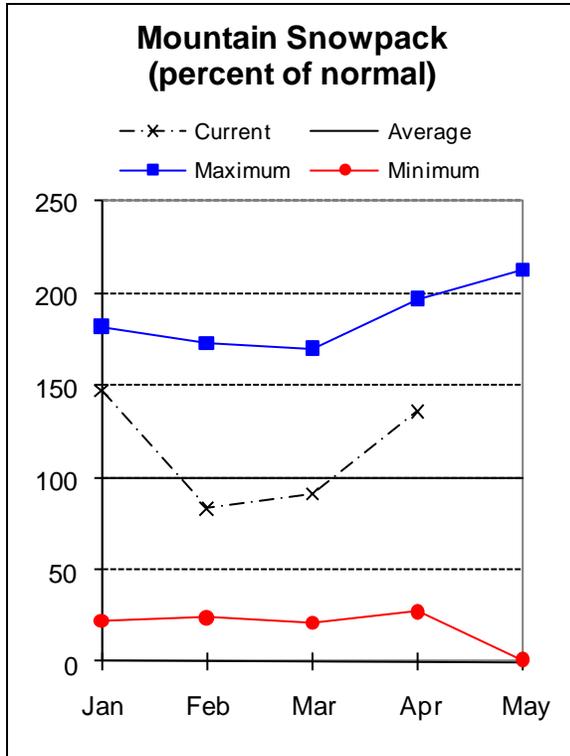
Roseburg - (541) 673-8316; Medford - (541) 776-4267

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



Klamath Basin

April 1, 2011



Water Supply Outlook

Water supply conditions in the Klamath basin have improved considerably since the February and March Basin Outlook Reports. March precipitation was 181 percent of average, delivering lots of new mountain snow. Since the beginning of the water year, precipitation in the Klamath basin has been 111 percent of average.

On April 1, the snowpack in the Klamath basin measured 136 percent of average, a considerable improvement over March 1 measurements. This month, 15 SNOTEL sites, 5 snow courses and 7 aerial markers were surveyed.

March runoff benefited Klamath basin reservoir storage. On April 1, storage at Clear Lake (CA), Gerber Reservoir and Upper Klamath Lake was 88 percent of average and 60 percent of capacity.

Klamath basin summer streamflow forecasts have improved due to the March snow and precipitation increases. The April through September streamflow forecasts for the Klamath basin range from 122 percent of average for Upper Klamath Lake inflow 140 percent of average for Gerber Reservoir inflow. Elsewhere in the basin, the Williamson River below Sprague River near Chiloquin is forecast to be 123 percent of average for the April through September period. Water users in the Klamath basin can anticipate above average to well above average streamflows 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/cgi-bin/bor.pl>

KLAMATH BASIN
Streamflow Forecasts - April 1, 2011

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)	APR-JUL	28	45	56	137	67	84	41
	APR-SEP	39	54	65	135	76	91	48
Gerber Reservoir Inflow (2)	APR-JUL	11.9	19.1	24	142	29	36	16.9
	APR-SEP	13.1	20	25	140	30	37	17.8
Sprague R nr Chiloquin	APR-JUL	225	255	275	134	295	325	205
	APR-SEP	260	290	310	135	330	360	230
Upper Klamath Lake Inflow (1,2)	APR-JUL	420	490	520	122	550	620	425
	APR-SEP	525	595	630	122	665	735	515
Williamson R bl Sprague R nr Chiloqu	APR-JUL	340	375	395	123	415	450	320
	APR-SEP	415	450	475	123	500	535	385

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

KLAMATH BASIN
Watershed Snowpack Analysis - April 1, 2011

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	129.1	72.9	248.9	Lost	3	192	195
GERBER	94.3	51.0	31.6	66.6	Sprague	9	180	153
UPPER KLAMATH LAKE	523.7	498.9	289.1	457.8	Upper Klamath Lake	7	166	123
					Williamson River	5	175	131

* 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:

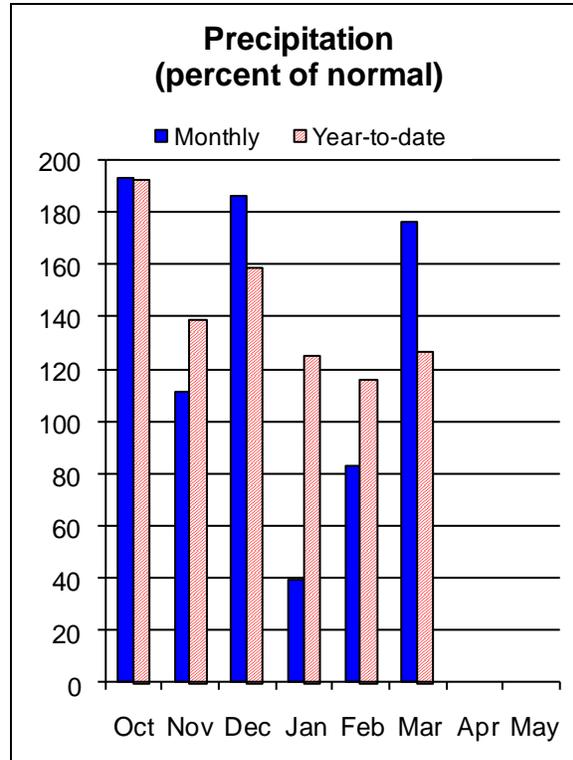
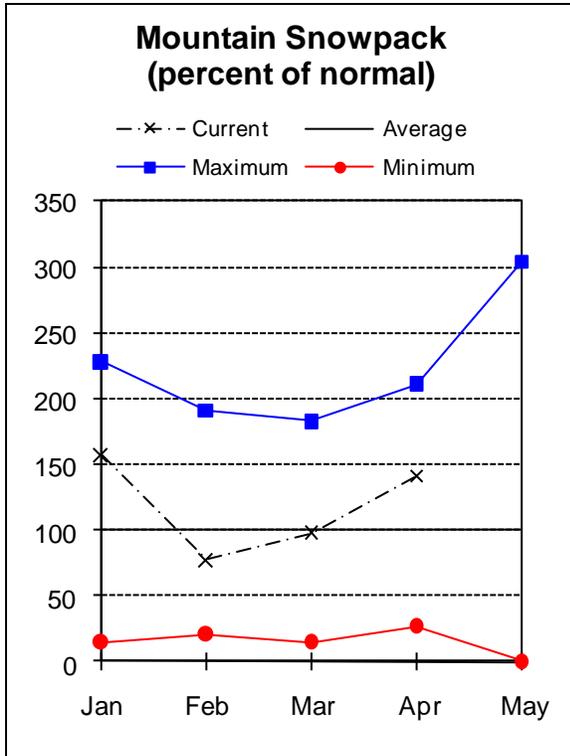
Klamath Falls - (541) 883-6932

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



Lake County and Goose Lake

April 1, 2011



Water Supply Outlook

The Lake County and Goose Lake basins started the water year with three very wet months, followed by a very dry January and February. March storms brought rain and snow to the basin, improving water supply conditions. March precipitation was 176 percent of average. Since the beginning of the water year, precipitation in Lake County and Goose Lake basin has been 127 percent of average.

On April 1, the snowpack in the Lake County and Goose Lake basins was 141 percent of average. Snow measurements were collected at 9 SNOTEL sites, 15 aerial markers and 2 snow courses in the basin this month. Cottonwood reservoir reached maximum capacity and Drews reservoir storage gained considerably during the month of March. The combined storage at Cottonwood and Drews reservoirs was 99 percent of average and 74 percent of capacity on April 1.

The April through September forecasts in the basin have improved considerably since the March Basin Outlook Report. April through September forecasts range from 127 percent of average for the Chewaucan River near Paisley to 170 percent of average for Silver Creek near Silver Lake. Elsewhere in the basin, Deep Creek above Adel is forecast to be 143 percent of average. Water users in the Lake County and Goose Lake basin may anticipate well above average water supplies during the summer of 2011.

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 - April 1, 2011

Forecast Point	Forecast Period	<<===== Drier =====>>		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		Chance Of Exceeding *		Chance Of Exceeding *		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Chewaucan R nr Paisley	APR-JUL	77	87	94	127	101	111	74
	APR-SEP	82	92	99	127	106	116	78
Deep Ck ab Adel	APR-JUL	79	89	96	143	103	113	67
	APR-SEP	81	92	99	144	106	117	69
Honey Ck nr Plush	APR-JUL	19.9	24	26	159	28	32	16.4
	APR-SEP	19.9	24	26	157	28	32	16.6
Silver Ck nr Silver Lake (2)	APR-JUL	14.4	16.7	18.2	170	19.7	22	10.7
	APR-SEP	14.7	17.2	19.0	170	21	23	11.2
Twentymile Ck nr Adel	APR-JUL	13.3	21	27	160	33	41	16.9
	APR-SEP	14.2	22	28	161	34	42	17.4

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

LAKE COUNTY AND GOOSE LAKE BASINS
Watershed Snowpack Analysis - April 1, 2011

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	5.0	5.7	Chewaucan River	6	167	136
DREWS	63.0	44.0	9.2	47.9	Deep Creek	3	158	143
					Drew Creek	4	644	151
					Honey Creek	3	158	134
					Silver Creek (Lake Co.)	5	181	154
					Twentymile Creek	5	158	126

* 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:

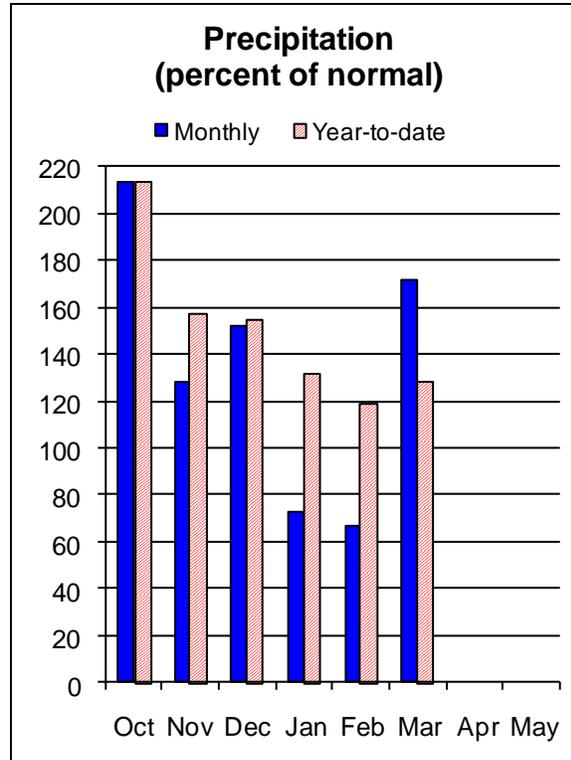
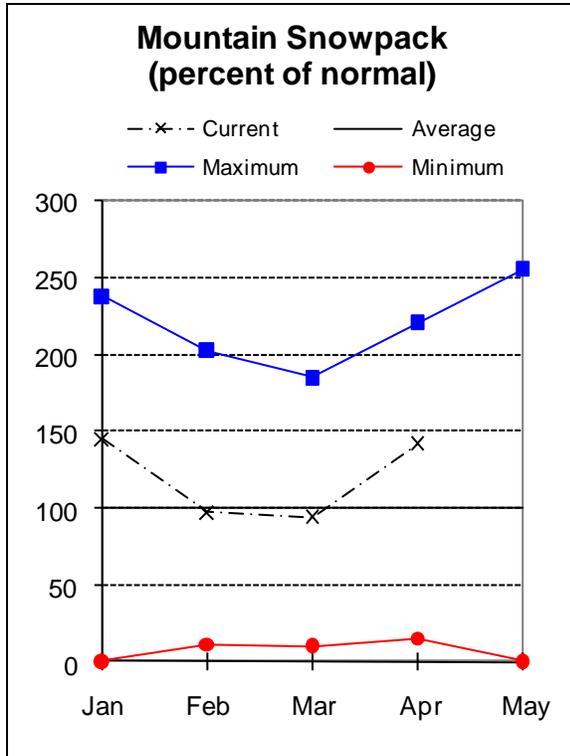
Lakeview - (541) 947-2202

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



Harney Basin

April 1, 2011



Water Supply Outlook

The Harney basin started the water year with three very wet months followed by a very dry January and February. March storms brought rain and snow to the basin, improving water supply conditions. March precipitation was 172 percent of average. Since the beginning of the water year, precipitation in the Harney basin has been 128 percent of average.

On April 1, the snowpack in the Harney basin was 142 percent of average. Snow measurements were collected at 9 SNOTEL sites and 7 aerial markers in the basin this month.

Summer streamflow forecasts for all points in the basin have benefited from the wet water year. The April through September forecasts in the Harney basin range from 131 percent of average for the Donner Und Blitzen River near Frenchglen to 161 percent of average for Trout Creek near Denio. Elsewhere in the basin, Silvies River near Burns is expected to be 157 percent of average for the same period. Water users in the Harney basin can anticipate well above average water supplies during the summer of 2011.

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

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

HARNEY BASIN
Streamflow Forecasts - April 1, 2011

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90%		70%		50%			30%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)
Donner Und Blitzen R nr Frenchglen	APR-JUL	61	75	84	131	93	107	64		
	APR-SEP	68	82	92	131	102	116	70		
Silvies R nr Burns	APR-JUL	107	133	151	157	169	195	96		
	APR-SEP	110	137	155	157	173	200	99		
Trout Ck nr Denio	APR-JUL	11.2	13.8	15.5	162	17.2	19.8	9.6		
	APR-SEP	12.2	14.8	16.6	161	18.4	21	10.3		

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

HARNEY BASIN
Watershed Snowpack Analysis - April 1, 2011

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	5	120	132
					Silver Creek (Harney Co.)	2	212	145
					Silvies River	6	163	144
					Trout Creek	5	144	151

* 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

Recession flow forecasts are presented below for key streamflow sites where reliable daily streamflow data are available. The recession flow forecasts use exceedance probabilities in a format similar to the standard water supply forecasts presented in this document. Each forecast provides a range of possible outcomes representing the uncertainty of forecasting models.

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

OWYHEE AND MALHEUR BASINS					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE</i> ----- <i>CHANCE OF EXCEEDING</i> ----- -----			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
Owyhee R nr Rome	2000 cfs	Apr 19	May 15	Jul 02	May 6
Owyhee R nr Rome	1000 cfs	May 08	Jun 13	Jul 28	May 18
Owyhee R nr Rome	500 cfs	May 28	Jul 01	Aug 02	Jun 2

UPPER JOHN DAY BASIN					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE</i> ----- <i>CHANCE OF EXCEEDING</i> ----- -----			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
John Day R at Service Creek	Average Daily Flow on Aug. 1st	200	410	620	271

UPPER DESCHUTES AND CROOKED BASINS					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE</i> ----- <i>CHANCE OF EXCEEDING</i> ----- -----			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
Crane Prairie Inflow *	Date of Peak	May 13	May 29	Jun 14	May 25
Crane Prairie Inflow	Peak Flow	260	390	520	403
Crane Prairie Inflow	Average Daily Flow on Oct. 1st	245	280	315	269
Prineville Reservoir Inflow	113 cfs	May 27	Jun 17	Jun 08	June 3
Prineville Reservoir Inflow	75 cfs	Jun 02	Jun 23	Jul 14	June 11
Prineville Reservoir Inflow	50 cfs	Jun 06	Jun 29	Jul 23	June 19
Whychus Creek nr Sisters	100 cfs	Aug 02	Aug 24	Sep 16	August 16

ROGUE AND UMPQUA BASINS					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE</i> ----- <i>CHANCE OF EXCEEDING</i> ----- -----			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
South Umpqua R nr Brockway *	90 cfs	Aug 02	Aug 20	Aug 27	August 8
South Umpqua R at Tiller	140 cfs	Jul 02	Jul 22	Aug 12	July 11
South Umpqua R at Tiller	90 cfs	Jul 23	Aug 12	Sep 01	August 1
South Umpqua R at Tiller	60 cfs	Aug 11	Sept 05	Sep 30	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					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE</i> ----- <i>CHANCE OF EXCEEDING</i> ----- -----			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
Deep Ck ab Adel	100 cfs	Jun 10	Jun 27	Jul 14	June 17
Honey Ck nr Plush	100 cfs	May 05	Jun 05	Jul 06	May 16
Honey Ck nr Plush	50 cfs	May 30	Jun 26	Jul 23	June 4
Twentymile Ck nr Adel	50 cfs	May 17	Jun 14	Jul 12	May 30
Twentymile Ck nr Adel	10 cfs	Jun 29	Jul 19	Aug 07	July 20

HARNEY BASIN					
<i>FORECAST POINT</i>	<i>FORECAST THRESHOLD</i>	<i>FORECAST VALUE</i> ----- <i>CHANCE OF EXCEEDING</i> ----- -----			<i>LONG-TERM AVERAGE VALUE</i>
		90%	50%	10%	
Silvies R nr Burns	400 cfs	May 15	Jun 05	Jun 26	May 21
	200 cfs	Jun 03	Jun 26	Jul 18	June 2
	100 cfs	Jun 23	Jul 17	Aug 12	June 13
	50 cfs	Jul 17	Aug 12	Sep 06	July 3
Donner Und Blitzen R nr Frenchglen	200 cfs	Jun 07	Jun 26	Jul 15	June 20
Donner Und Blitzen R nr Frenchglen	100 cfs	Jul 01	Jul 17	Aug 02	July 9

Summary of Snow Course Data

April 2011

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon						
ALTHOUSE #2	4530	3/31/11	46	17.8	.0	4.1
ALTHOUSE #3	5000	3/31/11	67	23.2	7.8	12.8
ANEROID LAKE SNOTEL	7400	4/01/11	82	22.2	16.7	25.7
ANNIE SPRING SNOTEL	6010	4/01/11	138	50.1	35.3	42.8
ANTHONY LAKE (REV)	7130	4/04/11	76	27.7	17.2	--
ARBUCKLE MTN SNOTEL	5770	4/01/11	62	18.5	14.9	22.3
BALD MTN, OR AM	6720	4/01/11	116	41.8	31.6	25.7
BARLEY CAMP AM	6900	4/01/11	65	24.7	--	16.3
BARNEY CREEK (NEW)	5840	4/01/11	37	11.6	9.0	--
BEAR FLAT MEADOW AM	5900	4/01/11	42	15.1	--	11.2
BEAVER DAM CREEK	5100	4/01/11	42	16.6	5.3	10.0
BEAVER RES. SNOTEL	5150	4/01/11	35	19.0	9.2	9.2
BIG RED MTN SNOTEL	6050	4/01/11	109	39.1	24.2	28.4
BIG SHEEP AM	6200	4/01/11	99	35.6	28.7	26.6
BIGELOW CAMP SNOTEL	5130	4/01/11	63	24.8	6.4	11.6
BILLIE CK DVD SNOTEL	5280	4/01/11	66	26.9	14.1	21.5
BLAZED ALDER SNOTEL	3650	4/01/11	83	35.1	14.4	32.1
BLUE MTN SPGS SNOTEL	5870	4/01/11	58	19.8	13.2	17.3
BOULDER CREEK AM	5690	3/31/11	17	6.6	4.0	1.1
BOURNE SNOTEL	5850	4/01/11	51	18.2	11.8	17.9
BOWMAN SPRNGS SNOTEL	4530	4/01/11	27	10.9	2.5	8.6
BUCK PASTURE AM	5700	3/31/11	14	5.5	5.0	1.2
BUCKSKIN LAKE AM	5200	3/31/11	0	.0	.0	.3
BULLY CREEK AM	5300	3/31/11	10	3.9	3.0	.5
CALIBAN ALT	6500	3/30/11	122	38.6	25.2	30.9
CALL MEADOWS AM	5340	3/31/11	16	5.8	4.1	2.1
CAMAS CREEK #3	5850	3/30/11	49	17.4	11.0	13.1
CASCADE SUM. SNOTEL	5100	4/01/11	110	44.0	24.3	31.3
CHEMULT ALT SNOTEL	4850	4/01/11	27	11.2	2.5	5.3
CLACKAMAS LK. SNOTEL	3400	4/01/11	27	11.0	1.2	11.3
CLEAR LAKE SNOTEL	3810	4/01/11	30	11.0	2.8	14.1
COLD SPRINGS SNOTEL	5940	4/01/11	90	39.5	20.7	28.2
COLVIN CREEK AM	6550	4/01/11	12	4.2	--	2.6
COUNTY LINE SNOTEL	4830	4/01/11	3	1.7	1.0	2.2
COX FLAT AM	5750	4/01/11	17	7.1	--	4.3
CRAZYMAN FLAT AM	6100	4/01/11	39	13.6	--	9.1
CRAZYMAN FLAT SNOTEL	6180	4/01/11	62	21.9	12.3	15.7
DALY LAKE SNOTEL	3690	4/01/11	38	15.8	3.2	12.7
DEADHORSE GRADE	3700	4/04/11	18	7.0	.0	9.0
DEADWOOD JUNCTION	4600	4/01/11	20	7.7	1.5	4.8
DERR	5670	3/23/11	38	11.5	9.0	8.5
DERR SNOTEL	5850	4/01/11	55	18.6	10.5	16.4
DIAMOND LAKE SNOTEL	5280	4/01/11	55	24.5	7.0	14.8
DOG HOLLOW AM	4900	4/01/11	0	.0	--	.1
DOOLEY MOUNTAIN	5430	4/01/11	41	12.8	9.0	7.1
EILERTSON SNOTEL	5510	4/01/11	30	15.4	8.8	9.6
ELDORADO PASS	4600	4/01/11	11	4.3	.0	.9
EMIGRANT SPGS SNOTEL	3800	4/01/11	13	6.5	.4	3.3
FINLEY CORRALS AM	6000	4/01/11	53	18.6	--	14.6

SNOW COURSE		ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon (continued)							
FISH CREEK	SNOTEL	7660	4/01/11	105	40.8	29.9	30.5
FISH LK.	SNOTEL	4660	4/01/11	40	14.4	5.1	8.4
FLAG PRAIRIE	AM	4750	3/31/11	14	5.5	4.8	2.0
FOURMILE LAKE	SNOTEL	5970	4/01/11	81	30.8	20.1	30.7
GERBER RES	SNOTEL	4890	4/01/11	0	.0	.0	.1
GOLD CENTER	SNOTEL	5410	4/01/11	36	12.3	6.1	8.3
GOVT CORRALS	AM	7450	3/31/11	60	22.8	13.5	--
GREENPOINT	SNOTEL	3310	4/01/11	36	14.1	10.2	17.5
HART MOUNTAIN	AM	6350	4/01/11	0	.0	--	.9
HIGH PRAIRIE		6100	3/31/11	97	34.1	40.1	47.6
HIGH RIDGE	SNOTEL	4920	4/01/11	75	27.4	16.3	23.1
HOGG PASS	SNOTEL	4790	4/01/11	74	27.2	21.7	39.0
HOLLAND MDWS	SNOTEL	4930	4/01/11	65	24.0	7.5	23.1
HOWARD PRAIRIE		4500	4/01/11	24	8.3	2.1	5.6
HUNGRY FLAT		4400	4/01/11	1	.2	.2	1.4
IRISH-TAYLOR	SNOTEL	5540	4/01/11	107	37.6	27.1	36.6
JUMP OFF JOE	SNOTEL	3520	4/01/11	48	18.3	1.1	10.3
KING MTN #1		4500	3/31/11	50	19.5	2.5	5.2
KING MTN #2	SNOTEL	4340	4/01/11	31	11.6	.8	2.9
KING MTN #3		3650	3/31/11	4	1.3	.5	.6
LAKE CK R.S.	SNOTEL	5240	4/01/11	39	13.1	11.3	10.5
LITTLE ALPS		6200	4/04/11	46	13.5	8.1	13.2
LITTLE ANTONE (ALT)		5000	4/04/11	26	8.8	6.4	7.2
LITTLE MEADOW	SNOTEL	4020	4/01/11	94	39.4	17.2	25.7
LOOKOUT BUTTE	AM	5650	3/31/11	0	.0	.0	.1
LOUSE CANYON	AM	6440	3/31/11	31	11.8	7.6	5.1
LUCKY STRIKE	SNOTEL	4970	4/01/11	31	13.5	4.8	9.3
MADISON BUTTE	SNOTEL	5150	4/01/11	18	7.3	.2	2.7
MARION FORKS	SNOTEL	2590	4/01/11	19	7.8	.8	10.2
MARKS CREEK		4540	4/01/11	9	3.6	.0	.9
MARY'S PEAK REV		3620	4/04/11	41	17.4	3.8	6.3
MCKENZIE	SNOTEL	4770	4/01/11	112	50.8	27.2	42.9
MEACHAM		4300	4/04/11	19	7.8	6.2	6.6
MILL CREEK MDW		4400	3/31/11	30	10.4	6.3	9.1
MILLER WOODS	SNOTEL	420	4/01/11	0	.0	.0	--
MOSS SPRINGS	SNOTEL	5760	4/01/11	83	30.0	20.8	26.0
MT ASHLAND SWBK.		6400	3/30/11	122	39.3	24.7	33.4
MT HOOD		5370	3/31/11	147	60.9	43.8	62.5
MT HOOD TEST	SNOTEL	5370	4/01/11	136	51.6	42.0	59.1
MT HOWARD	SNOTEL	7910	4/01/11	45	15.2	15.6	16.5
MUD RIDGE	SNOTEL	4070	4/01/11	61	24.5	17.1	24.3
NEW CRESCENT	SNOTEL	4910	4/01/11	52	16.9	4.3	8.4
NEW DUTCHMAN #3		6320	4/04/11	148	57.3	38.8	51.9
NORTH FK RES	SNOTEL	3060	4/01/11	69	28.9	8.3	15.7
OCHOCO MEADOWS		5200	4/01/11	40	13.9	11.3	8.9
OCHOCO MEADOW	SNOTEL	5430	4/01/11	39	14.1	12.0	8.7
OREGON CANYON	AM	6950	3/31/11	30	11.4	6.1	4.9
PARK H.Q. REV		6550	4/01/11	178	71.6	44.6	61.3
PATTON MEADOWS	AM	6800	4/01/11	58	20.9	--	17.5
PEAVINE RIDGE	SNOTEL	3420	4/01/11	33	16.2	2.0	13.0
PUEBLO SUMMIT	AM	6800	3/31/11	14	5.3	6.5	--
QUARTZ MTN	SNOTEL	5720	4/01/11	7	3.2	.3	.4
R.R. OVERPASS	SNOTEL	2680	4/01/11	0	.0	.0	.1
RED BUTTE #1		4560	3/30/11	82	28.8	1.1	10.4
RED BUTTE #2		4000	3/30/11	21	7.3	.0	5.0
RED BUTTE #3		3500	3/30/11	11	3.7	.0	1.1

SNOW COURSE		ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Oregon (continued)							
RED HILL	SNOTEL	4410	4/01/11	102	57.4	36.1	46.1
ROARING RIVER	SNOTEL	4950	4/01/11	79	37.8	19.6	28.9
ROCK SPRINGS	SNOTEL	5290	4/01/11	22	7.9	3.5	2.5
ROGGER MEADOWS	AM	6500	4/01/11	45	16.2	--	11.3
SADDLE MTN	SNOTEL	3110	4/01/11	25	6.8	2.2	--
SALT CK FALLS	SNOTEL	4220	4/01/11	70	32.8	7.4	18.4
SANTIAM JCT.	SNOTEL	3740	4/01/11	52	23.5	1.9	16.0
SCHNEIDER MDW	SNOTEL	5400	4/01/11	94	34.6	23.6	29.6
SEINE CREEK	SNOTEL	2060	4/01/11	0	.0	.0	1.3
SEVENMILE MARSH	SNTL	5700	4/01/11	100	41.7	23.3	30.5
SHERMAN VALLEY	AM	6600	4/01/11	43	15.5	--	12.0
SILVER BURN		3720	4/01/11	46	19.2	1.7	8.2
SILVER CREEK	SNOTEL	5740	4/01/11	39	15.3	7.8	7.8
SILVIES	SNOTEL	6990	4/01/11	57	17.0	17.7	19.3
SISKIYOU SUMMIT REV		4630	3/30/11	30	10.4	3.4	3.3
SKI BOWL ROAD		6000	3/30/11	99	29.7	20.7	26.7
SNOW MTN	SNOTEL	6220	4/01/11	45	15.5	10.0	14.0
SF BULL RUN	SNOTEL	2690	4/01/11	21	9.4	1.3	2.1
STANDLEY	AM	7400	4/01/11	98	34.3	--	33.3
STARR RIDGE	SNOTEL	5250	4/01/11	26	9.7	1.9	3.4
STRAWBERRY	SNOTEL	5770	4/01/11	20	8.4	1.5	4.1
SUMMER RIM	SNOTEL	7080	4/01/11	68	22.5	15.9	19.0
SUMMIT LAKE	SNOTEL	5610	4/01/11	121	44.1	30.4	38.1
SUN PASS	SNOTEL	5400	4/01/11	66	24.2	17.5	--
SWAN LAKE MTN	SNOTEL	6830	4/01/11	87	32.7	19.9	--
SYCAN FLAT	AM	5500	4/01/11	16	6.2	--	3.2
TANGENT		5400	4/01/11	60	23.0	15.4	19.6
TAYLOR BUTTE	SNOTEL	5030	4/01/11	28	8.7	1.8	2.8
TAYLOR GREEN	SNOTEL	5740	4/01/11	76	26.8	18.6	21.7
THREE CK MEAD	SNOTEL	5690	4/01/11	72	27.9	18.1	19.7
TIMOTHY LAKE		3300	4/01/11	16	5.9	--	11.3
TIPTON	SNOTEL	5150	4/01/11	42	16.1	11.8	14.3
TOKETEE AIRSTRIP	SN	3240	4/01/11	0	.7	.5	2.7
TOLLGATE		5070	4/04/11	89	33.2	21.6	26.8
TROUT CREEK	AM	7800	3/31/11	49	18.6	12.3	12.1
TV RIDGE #2	AM	7000	4/01/11	40	14.0	13.3	20.2
V LAKE	AM	6600	3/31/11	39	15.2	13.0	8.0
WEST EAGLE MEADOWS		5500	4/01/11	96	33.6	27.0	28.1
WOLF CREEK	SNOTEL	5630	4/01/11	62	19.5	11.8	16.7
California							
ADIN MOUNTAIN		6350	3/31/11	54	19.8	13.1	12.5
ADIN MTN	SNOTEL	6190	4/01/11	49	18.0	13.3	13.2
BLUE LAKE RANCH		6800	3/29/11	42	13.1	7.5	10.4
CEDAR PASS		7100	3/30/11	60	20.5	12.4	17.6
CEDAR PASS	SNOTEL	7030	4/01/11	67	24.9	16.2	19.3
CROWDER FLAT	AM	5200	4/01/11	0	.0	--	.4
CROWDER FLAT	SNOTEL	5170	4/01/11	11	4.9	.3	2.4
DISMAL SWAMP	SNOTEL	7360	4/01/11	112	43.1	24.7	28.9
STATE LINE	AM	5750	4/01/11	10	4.2	1.8	3.4
Idaho							
BATTLE CREEK	AM	5720	3/31/11	12	4.6	4.2	1.0
BULL BASIN	AM	5460	3/31/11	0	.0	1.9	.3
MUD FLAT	SNOTEL	5730	4/01/11	29	10.7	8.0	4.4
RED CANYON	AM	6650	3/31/11	40	15.2	9.1	5.1
SOUTH MTN	SNOTEL	6500	4/01/11	58	22.5	16.5	19.2
SUCCOR CREEK	AM	6100	3/31/11	40	15.2	12.5	7.8
VAUGHT RANCH	AM	5830	3/31/11	11	4.2	3.0	1.1
Nevada							
BALD MOUNTAIN	AM	6720	4/01/11	0	.0	--	2.5

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
Nevada (continued)						
BEAR CREEK SNOTEL	7800	4/01/11	73	26.0	12.8	21.6
BIG BEND SNOTEL	6700	4/01/11	35	13.8	8.4	8.3
BUCKSKIN,L SNOTEL	6700	4/01/11	46	17.6	9.2	8.5
COLUMBIA BASIN AM	6650	3/30/11	35	11.2	7.7	6.8
DISASTER PEAK SNOTEL	6500	4/01/11	24	9.1	4.0	7.4
FAWN CREEK SNOTEL	7050	4/01/11	65	21.4	15.5	18.7
FRY CANYON	6700	3/29/11	31	10.0	8.5	5.7
GOLD CREEK	6600	3/29/11	27	8.6	5.6	3.9
GRANITE PEAK SNOTEL	7800	4/01/11	100	32.5	14.2	25.1
JACK CREEK, LOWER(d)	6800	3/30/11	20	6.0	3.3	2.3
JACK CREEK, U SNOTEL	7280	4/01/11	67	19.4	13.9	19.9
LAMANCE CREEK SNOTEL	6000	4/01/11	33	13.5	8.2	10.1
LAUREL DRAW SNOTEL	6700	4/01/11	39	13.5	11.1	8.8
LITTLE BALLY MTN. AM	6000	4/01/11	0	.0	--	2.9
MERRIT MOUNTAIN AM	7000	3/30/11	37	11.8	7.7	5.8
MIDAS (d)	7200	3/30/11	27	8.6	.0	1.7
QUINN RIDGE AM	6300	3/31/11	0	.0	.0	.8
SEVENTYSIX CREEK (d)	7100	3/31/11	69	29.8	--	--
SEVENTYSIX CK SNOTEL	7100	4/01/11	35	11.2	8.3	10.7
STAG MOUNTAIN AM	7700	3/30/11	27	8.6	5.8	5.7
TAYLOR CANYON SNOTEL	6200	4/01/11	13	5.3	2.6	2.9
TOE JAM AM	7700	3/30/11	48	15.4	16.3	9.4
TREMEWAN RANCH	5700	3/29/11	0	.0	.0	.1

(d) denotes discontinued site.

Basin Outlook Reports; How Forecasts Are Made

And Federal – State – Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

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

Phone: (503) 414-3270

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

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

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

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

Interpreting Water Supply Forecasts

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

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

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

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

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

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

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

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

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

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

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

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

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

Using the forecasts - an Example

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

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

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 443 KAF (from the **90**

percent exceedance forecast). There is 10% chance of receiving less than 443 KAF.

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

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

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

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OWYHEE AND MALHEUR BASINS
Streamflow Forecasts - February 1, 2006

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50% (Most Probable)			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)		(1000AF)	(1000AF)	(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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Official Business



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<http://www.or.nrcs.usda.gov/snow/watersupply/>

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