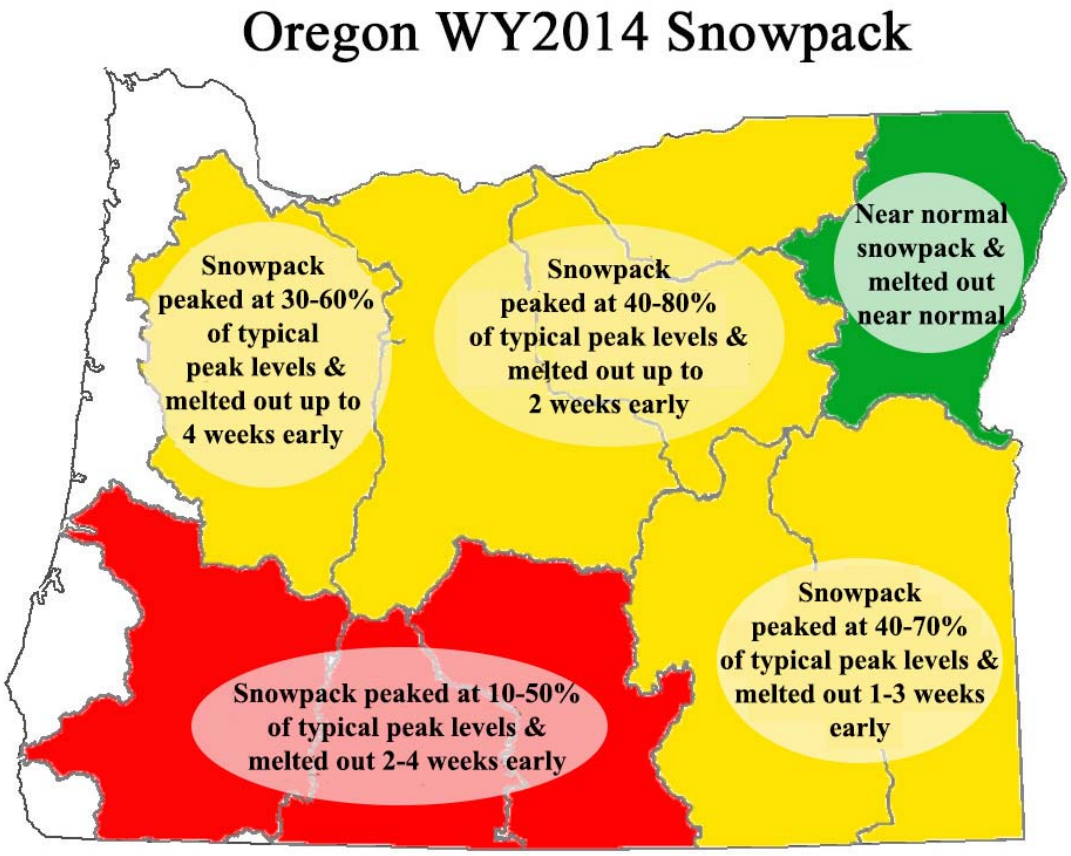
United States
Department of
Agriculture

Natural Resources
Conservation
Service

Oregon
Basin Outlook Report

June 1, 2014



The above map gives an overall summary of the 2013/2014 winter snowpack conditions in Oregon. Most of Oregon's mountains fell well below the normal snowpack peak levels this winter. As a result, most of Oregon's rivers will experience below normal summer streamflows this year, which will likely lead to water shortages in some regions of the state. As of June 1, Governor Kitzhaber has declared a state of emergency due to drought conditions in nine counties in southern and central Oregon.

Contents

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General Outlook

June 1, 2014

SUMMARY

The precipitation received during the month of May did not improve Oregon's limited water supply outlook for the coming summer. For most of the state, the mountain snowpack was well below normal this winter, which will cause well below normal summer streamflows for many basins. Many water users in the driest areas of Oregon will be faced with water shortages this summer. Most rivers and streams in the southern half of Oregon are expected to have significantly low summer streamflows, potentially rivaling those of drought years such as 1977, 1981, 1992 and 2001.

Most of Oregon is currently experiencing drought conditions, according to the US Drought Monitor. Notably, the southern half of the state is now predominately in the severe or extreme drought category in their latest report: http://droughtmonitor.unl.edu/. According to NOAA's Climate Prediction Center, the next three months are expected to be abnormally hot and dry across the state: http://www.cpc.ncep.noaa.gov/. In preparation for summer drought conditions, Governor Kitzhaber has declared a drought state of emergency for the following counties: Klamath, Harney, Lake, Malheur, Crook, Jackson, Wheeler, Grant and Josephine.

SNOWPACK

The winter of 2014 brought paltry snowpack conditions across the mountains of Oregon, with most of the snowfall squeezed into a 2-month period in February and March followed by early snowmelt. Southern Oregon's snowpack set new historic lows and remained almost non-existent in the mountains that border California. Only Oregon's northernmost mountain ranges (Wallowas, Blues and Mt. Hood) were able to reach normal to above normal snowpack levels prior to the snowmelt season. As of June 1, only nine of Oregon's highest elevation SNOTEL sites were still recording snow. Two southern Oregon SNOTEL sites, Annie Springs and Fish Creek, were snow-free as of June 1, while they normally still have significant snow at this point.

PRECIPITATION

The month of May brought near normal to above normal precipitation to the northern Oregon Cascades, but failed to deliver for the rest of the state. A sprinkling of snow, a bit of rain and a few scattered thunderstorms boosted the monthly totals in an otherwise dry month. May precipitation ranged from 50% of average in the Lake County and Goose Lake basins up to 115% of average in the Willamette basin.

Since the water year began on October 1, the yearly precipitation totals have been highest in northern half of Oregon where the totals range from 85% to 100% of average for Oct 1 - June 1. The lowest water year precipitation totals have accumulated in the regions of the state where the drought conditions are expected to be most taxing this summer. Water year precipitation totals received so far in the southern half of the state range from 67% of average in the Lake County and Goose Lake basin up to 79% of average in the Owyhee and Malheur basins.

RESERVOIRS

Most of Oregon's major reservoirs are storing below average amounts for this time of year. Lake Owyhee, Clear Lake (CA), Warmsprings, Gerber, Cottonwood and Drews Reservoirs are all storing less than 40% of average amounts of water for this time of year. The only basins where all major reservoirs are storing near average or better amounts are the Willamette, Deschutes and Crooked basins. While current reservoir storage is near average in the Crooked River basin, inflows to these reservoirs are expected to be extremely low for the rest of the summer.

June 1 storage at 26 major Oregon reservoirs analyzed in this publication was 61% percent of normal. As of June 1, water storage at these reservoirs totaled 1,469 thousand acre feet (kaf), representing 45% of useable capacity. Last year at this time these same reservoirs stored 1,800 kaf of water, or 56% of useable capacity.

STREAMFLOW

The locations in Oregon where the snowpack had mostly melted by late April were generally the areas where May brought scant amounts of precipitation. As these sources of moisture dropped off, so did May streamflows. Consequently, the residual streamflows are expected to be well below average throughout the summer for most of the state.

The highest streamflow forecasts are for Oregon's northernmost rivers and the Willamette basin where streams are expected to experience 80-115% of average volumes for the June through September period. Forecasts for rivers in the Klamath, Malheur, Harney, Applegate, Crooked and Lake county basins range from a low of 6% up to 55% of average amounts for the same period; elsewhere in the state, June through September stream volumes are expected to be 40 to 85% of average. Please note that the streamflow forecast periods listed in this report have changed from last month to reflect June-July and June-September streamflow forecast periods.

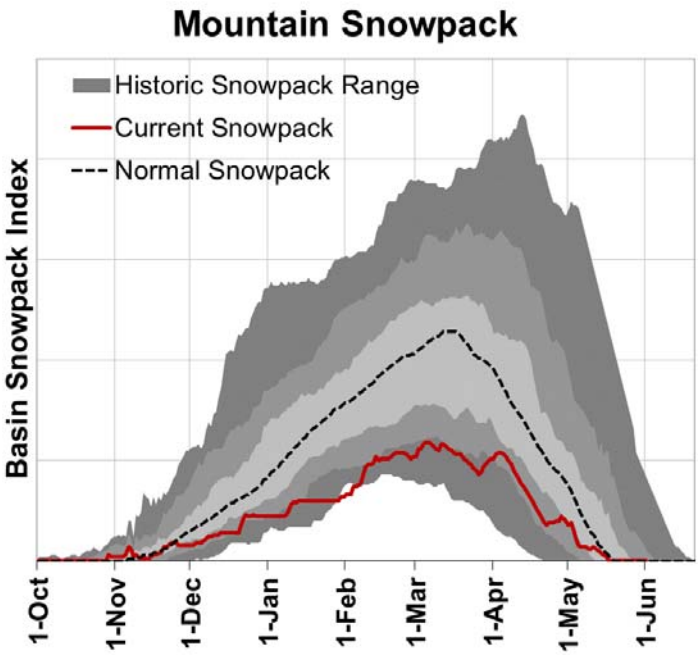
A summary of streamflow forecasts for Oregon follows:

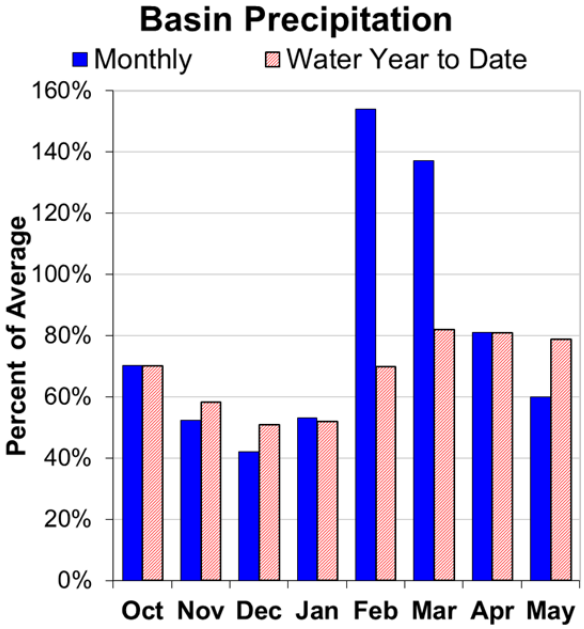
STREAM	Median Forecast (June through September)	
	Volume (Acre-Feet)	Percent of Average
Owyhee Reservoir Inflow	63,000	59
Grande Ronde R at Troy	490,000	94
Umatilla R at Pendleton	24,000	83
Deschutes R at Benham Falls	300,000	91
Willamette R at Salem	1,610,000	98
Rogue R at Raygold	230,000	66
Upper Klamath Lake Inflow	64,000	35
Silvies R nr Burns	9,100	57

Some of these forecasts assume that normal weather conditions will occur from now to the end of the forecast period. This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators. This report will be updated monthly, January through June.

Owyhee and Malheur Basins

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The mountain snowpack in this region peaked well below normal this winter. In general, SNOTEL sites in the basin only reached 40% to 70% of typical peak snowpack levels and melted out up to two weeks earlier than normal.

PRECIPITATION

May precipitation was 60% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 79% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of June 1, storage at published reservoirs was 29% of average and 21% percent of capacity. Of note, Owyhee Reservoir is only storing 24% of the normal June 1 storage volume.

STREAMFLOW FORECAST

Most of the Owyhee basin is currently designated by the US Drought Monitor to be in an extreme drought condition, while the Malheur basin is listed as in severe drought. Summer streamflow forecasts in the basins range from 40% to 59% of average for the June through September period. The combined streamflow forecasts and current reservoir storage levels indicate that water users in the region will likely experience water shortages this summer.

For more information contact your local Natural Resources Conservation Service office:
Ontario - (541) 889-7637
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

OWYHEE AND MALHEUR BASINS
Streamflow Forecasts - June 1, 2014

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	JUN-JUL	1.77	3.3	4.6	36	6.1	8.8	12.7
	JUN-SEP	2.7	4.5	6.1	40	7.9	10.9	15.4
NF Malheur R at Beulah (2)	JUN-JUL	5.6	7.6	9.1	66	10.7	13.4	13.7
	JUN-JUL	11.1	19.4	26	41	34	48	63
	JUN-SEP	19.8	30	39	49	48	64	80
Owyhee R bl Owyhee Dam (2)	JUN-JUL	21	30	38	50	47	61	76
	JUN-SEP	41	53	63	59	73	90	106

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Beulah Res (Agency Valley Dam)	60.0	31.9	29.3	46.7
Bully Creek	30.0	12.5	12.5	23.2
Lake Owyhee Near Nyssa	715.0	127.6	287.5	536.2
Warm Springs	191.0	38.7	66.5	122.4

OWYHEE AND MALHEUR BASINS
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Median

* 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 1981-2010 base period.

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

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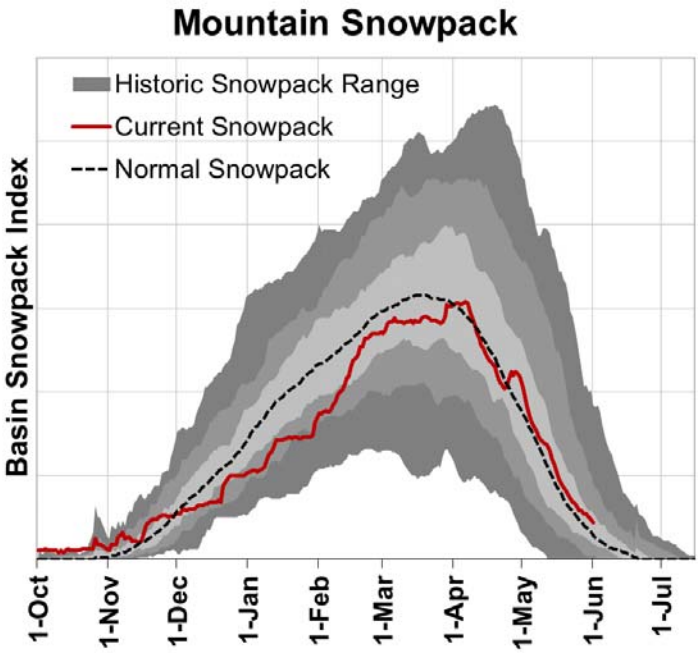
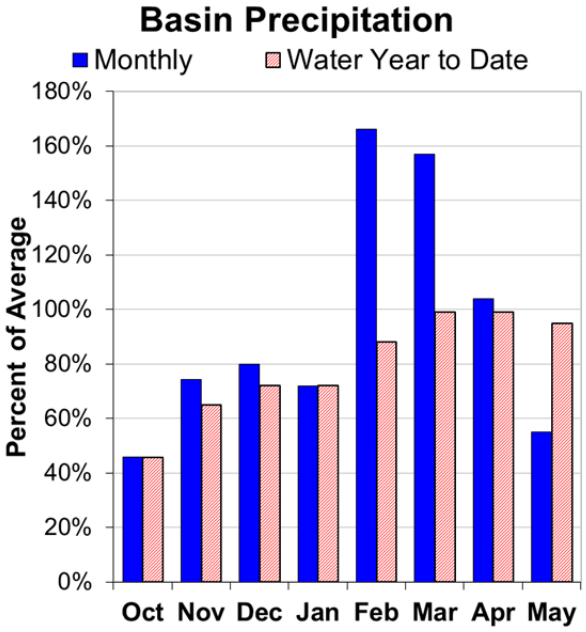
Grande Ronde, Powder, Burnt and Imnaha Basins

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

This was the only region of Oregon that reached near normal peak snowpack levels this winter. In general, SNOTEL sites in the basin reached 70% to 100% of typical peak snowpack levels. Most sites have melted out within a few days before or after their normal melt out date.

PRECIPITATION

May precipitation was 55% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 95% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of June 1, storage at published reservoirs was 75% of average and 62% percent of capacity.

STREAMFLOW FORECAST

Summer streamflow forecasts in the basin range from 62% to 100% of average for the June through September period. The southern river basins of this region are currently designated by the US Drought Monitor to be in a moderate to severe drought condition. Water users in the southern part of this region (Burnt/Powder/Pine Basins) should anticipate well below normal to below normal water supplies this summer, while those in the northern part of the region should expect near normal water supplies.

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.or.nrcs.usda.gov/snow/watersupply/

GRANDE RONDE, POWDER, BURNT AND IMNAHA BASINS
Streamflow Forecasts - June 1, 2014

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)
Burnt R nr Hereford (2)	JUN-JUL	1.34	2.0	2.5	58	3.0	3.7	4.3
	JUN-SEP	2.3	3.1	3.7	62	4.3	5.1	6.0
Deer Ck nr Sumpter	JUN-JUL	0.34	1.20	1.79	53	2.4	3.2	3.4
Powder R nr Sumpter	JUN-JUL	4.3	7.9	10.3	70	12.7	16.3	14.7
	JUN-SEP	3.9	8.0	10.7	69	13.4	17.5	15.6
Wolf Ck Reservoir Inflow (2)	JUN-JUL	0.26	0.73	1.19	40	1.75	2.8	3.0
Pine Ck nr Oxbow	JUN-JUL	27	34	39	75	44	51	52
	JUN-SEP	31	39	44	76	49	57	58
Imnaha R at Imnaha	JUN-JUL	78	89	97	89	105	116	109
	JUN-SEP	95	108	117	90	126	139	130
Lostine R nr Lostine	JUN-JUL	58	63	66	97	69	74	68
	JUN-SEP	65	70	74	97	78	83	76
Bear Ck nr Wallowa	JUN-SEP	24	28	31	94	34	38	33
Catherine Ck nr Union	JUN-JUL	17.0	20	22	100	24	27	22
	JUN-SEP	21	24	26	100	28	31	26
Grande Ronde R at Troy (1)	JUN-JUL	255	360	405	94	450	555	430
	JUN-SEP	335	440	490	94	540	645	520

GRANDE RONDE, POWDER, BURNT AND IMNAHA BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Phillips Lake	73.5	37.4	38.6	58.7
Thief Valley	17.4	13.5	11.3	15.0
Unity	25.2	21.4	16.4	22.4
Wallowa Lake	37.5	31.4	23.4	27.2
Wolf Creek	10.4	9.6	6.1	9.7

GRANDE RONDE, POWDER, BURNT AND IMNAHA BASINS
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	Median
Imnaha	2	135	142
Wallowa	2	135	142

* 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 1981-2010 base period.
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(2) - The value is natural volume - actual volume may be affected by upstream water management.

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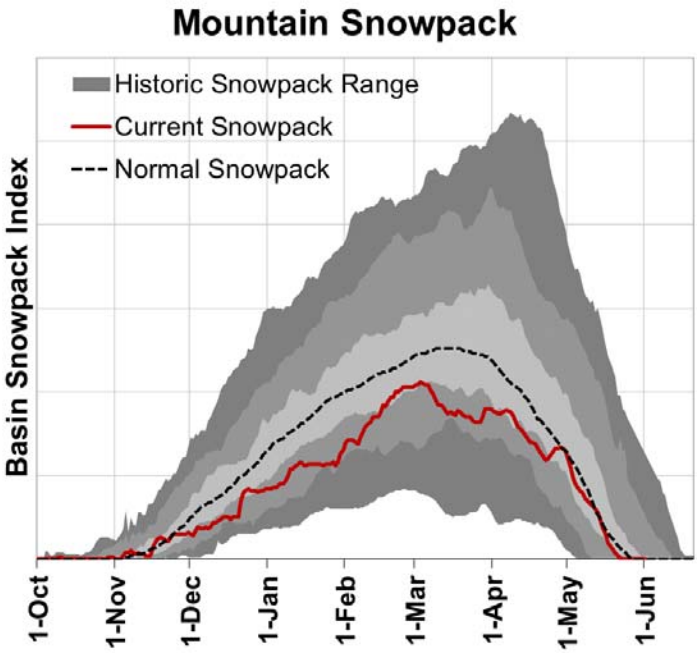
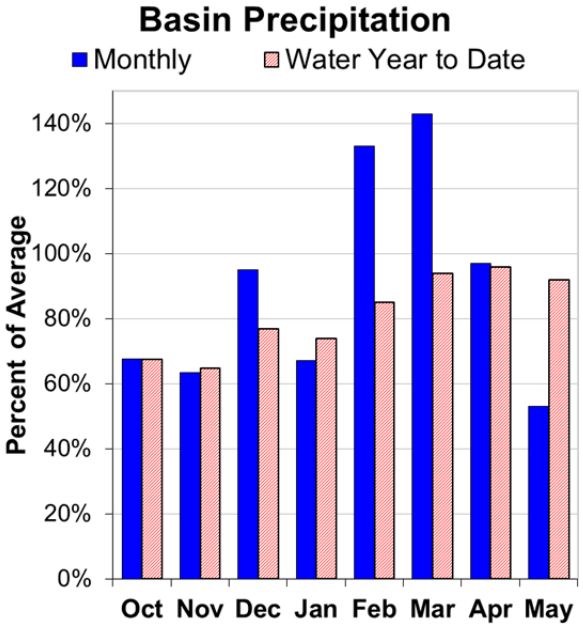
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

Umatilla, Walla Walla, and Willow Basins

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked below normal this winter. In general, SNOTEL sites in the basin only reached 60% to 80% of typical peak snowpack levels and melted out up to a week earlier than normal.

PRECIPITATION

May precipitation was 51% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 90% of average.

RESERVOIR

Reservoir storage across the basin is currently below average. As of June 1, storage at published reservoirs was 88% of average and 67% percent of capacity.

STREAMFLOW FORECAST

Summer streamflow forecasts in the basin range from 56% to 97% of average for the June through September period. Water users in the basin should expect well below normal to near normal water supplies this summer, depending on their location.

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.or.nrcs.usda.gov/snow/watersupply/

UMATILLA, WALLA WALLA AND WILLOW BASINS
Streamflow Forecasts - June 1, 2014

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	JUN-JUL	0.130	0.67	1.04	55	1.41	1.95	1.88
	JUN-SEP	0.29	0.92	1.35	59	1.78	2.4	2.3
McKay Ck nr Pilot Rock	JUN-SEP	0.58	1.35	2.5	56	3.7	5.5	4.5
Rhea Ck nr Heppner	JUN-JUL	0.170	0.42	0.87	51	1.32	1.99	1.69
Umatilla R ab Meacham Ck nr Gibbon	JUN-JUL	7.0	10.3	12.5	88	14.7	18.0	14.2
	JUN-SEP	11.4	14.9	17.2	88	19.5	23	19.6
Umatilla R at Pendleton	JUN-JUL	4.8	13.9	20	83	26	35	24
	JUN-SEP	8.4	17.7	24	83	30	40	29
SF Walla Walla R nr Milton-Freewater	JUN-JUL	12.5	15.5	17.5	96	19.5	22	18.2
	JUN-SEP	24	27	30	97	33	36	31
Willow Ck ab Willow Ck Lk nr Heppner	JUN-JUL	0.170	0.30	0.71	45	1.12	1.73	1.57

UMATILLA, WALLA WALLA AND WILLOW BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Cold Springs	50.0	16.0	18.1	32.9
Mckay	73.8	63.3	61.2	57.0
Willow Creek		5.9	5.9	5.9

UMATILLA, WALLA WALLA AND WILLOW BASINS
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	Median

* 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 1981-2010 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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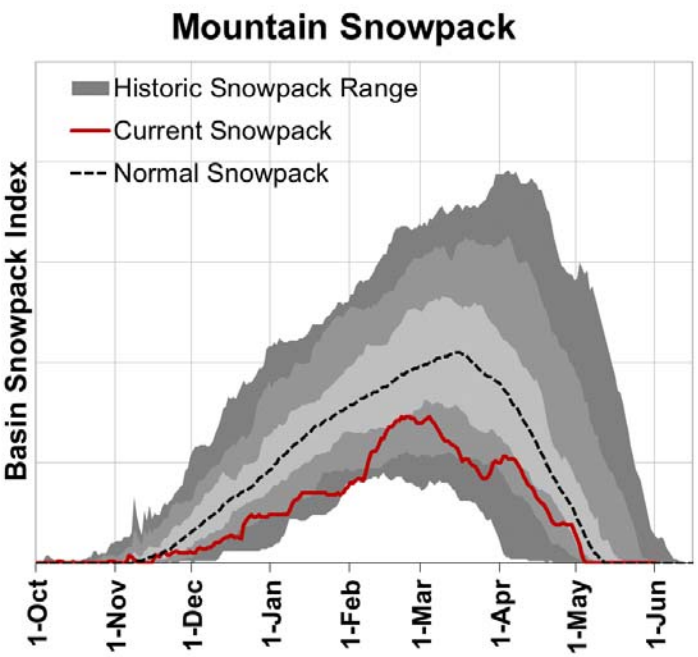
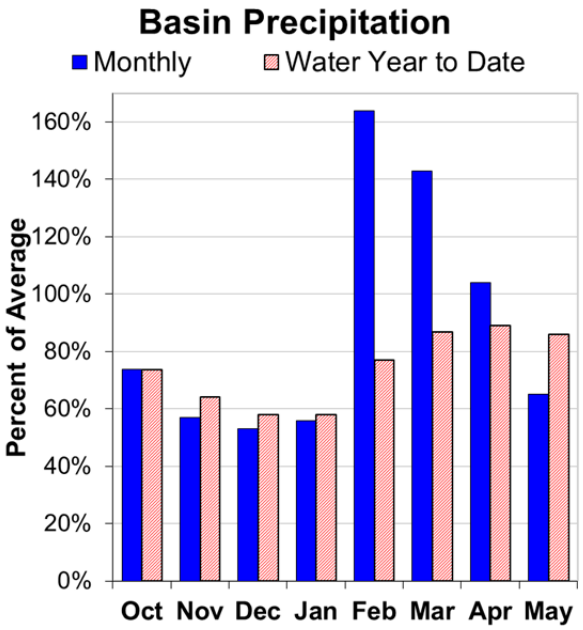
John Day Basin

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked below normal this winter. In general, SNOTEL sites in the basin only reached 50% to 80% of typical peak snowpack levels and melted out up to two weeks earlier than normal.

PRECIPITATION

May precipitation was 65% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 86% of average.

STREAMFLOW FORECAST

The John Day basin is currently designated by the US Drought Monitor to be in an abnormally dry to moderate drought condition. Summer streamflow forecasts in the basin range from 30% to 81% of average for the June through September period. Water users in the basin should anticipate greatly reduced water supplies this summer.

For more information contact your local Natural Resources Conservation Service office:
John Day - (541) 575-0135
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

JOHN DAY BASIN
Streamflow Forecasts - June 1, 2014

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)
Strawberry Ck nr Prairie City	JUN-JUL	1.99	3.0	3.7	80	4.4	5.4	4.6
	JUN-SEP	2.4	3.5	4.2	81	4.9	6.0	5.2
Mountain Ck nr Mitchell	JUN-JUL	0.090	0.160	0.26	29	0.47	0.77	0.90
	JUN-SEP	0.100	0.180	0.30	30	0.53	0.86	1.01
Camas Ck nr Ukiah	JUN-JUL	0.90	2.1	3.6	72	5.1	7.2	5.0
	JUN-SEP	1.14	2.7	4.2	74	5.7	7.9	5.7
MF John Day R at Ritter	JUN-JUL	1.02	9.3	15.0	54	21	29	28
	JUN-SEP	3.5	12.5	18.6	58	25	34	32
NF John Day R at Monument	JUN-JUL	13.9	49	73	58	97	132	126
	JUN-SEP	21	59	84	59	109	147	143

* 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 1981-2010 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:
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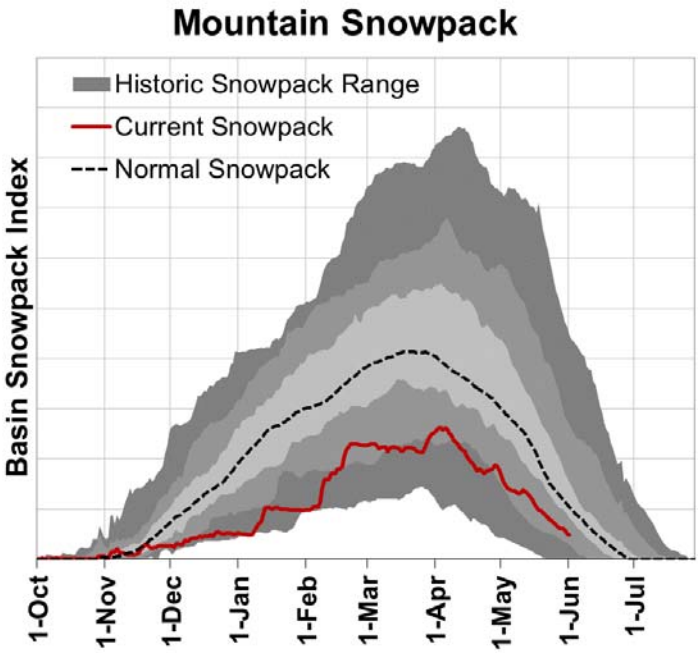
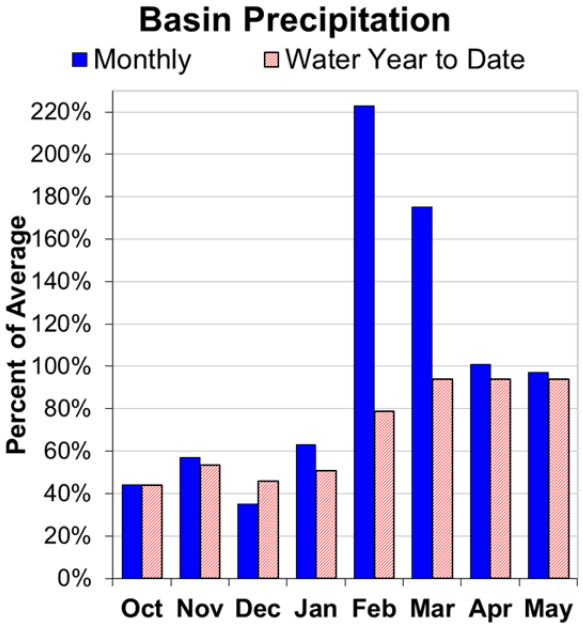
Upper Deschutes and Crooked Basins

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked significantly below normal this winter. In general, SNOTEL sites in the basin only reached 40% to 70% of typical peak snowpack levels and melted out up to two weeks earlier than normal.

PRECIPITATION

May precipitation was 97% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 94% of average.

RESERVOIR

Reservoir storage across the basin is currently above average. As of June 1, storage at published reservoirs was 107% of average and 85% percent of capacity.

STREAMFLOW FORECAST

Summer streamflow forecasts in the basin range from 8% to 91% of average for the June through September period. Streamflow forecasts in the Crooked and Little Deschutes River Basins are significantly below normal; most of this area is designated as in moderate to severe drought condition by the US Drought Monitor. Summer streamflows for the western drainages of the Deschutes Basin are expected to be slightly higher, but are still forecast to be below normal. Water shortages are likely this summer, depending on location.

For more information contact your local Natural Resources Conservation Service office:
Redmond (541) 923-4358
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

UPPER DESCHUTES AND CROOKED BASINS
Streamflow Forecasts - June 1, 2014

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)
Deschutes R bl Snow Ck nr La Pine	JUN-JUL	7.6	11.2	13.6	79	16.0	19.6	17.2
	JUN-SEP	21	27	31	78	35	41	40
Crane Prairie Reservoir Inflow (2)	JUN-JUL	17.6	21	24	80	27	30	30
	JUN-SEP	38	45	49	79	53	60	62
Crescent Ck nr Crescent (2)	JUN-JUL	0.73	1.22	2.6	43	4.1	6.3	6.1
	JUN-SEP	0.84	1.51	3.3	39	5.2	7.9	8.4
Little Deschutes R nr La Pine (2)	JUN-JUL	1.76	3.0	7.0	32	11.0	17.0	22
	JUN-SEP	1.62	2.8	7.6	28	12.4	19.5	27
Whychus Ck nr Sisters	JUN-JUL	12.4	14.2	15.4	70	16.6	18.4	22
	JUN-SEP	20	22	24	71	26	28	34
Prineville Reservoir Inflow (2)	JUN-JUL	0.33	0.58	0.80	10	5.2	11.7	8.3
	JUN-SEP	0.160	0.40	0.65	8	5.5	12.6	8.1
Ochoco Reservoir Inflow (2)	JUN-JUL	0.46	0.76	1.10	41	3.2	6.2	2.7
	JUN-SEP	0.27	0.44	0.70	33	3.0	6.3	2.1
Deschutes R at Benham Falls nr Bend 2	JUN-JUL	125	138	146	90	154	167	163
	JUN-SEP	265	285	300	91	315	335	330

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Crane Prairie	55.3	50.4	43.9	42.8
Crescent Lake	86.9	76.6	77.9	54.4
Ochoco	47.5	33.2	27.8	34.6
Prineville	153.0	142.8	136.8	140.5
Wickiup	200.0	158.3	153.1	159.7

UPPER DESCHUTES AND CROOKED BASINS
Watershed Snowpack Analysis - June 1, 2014

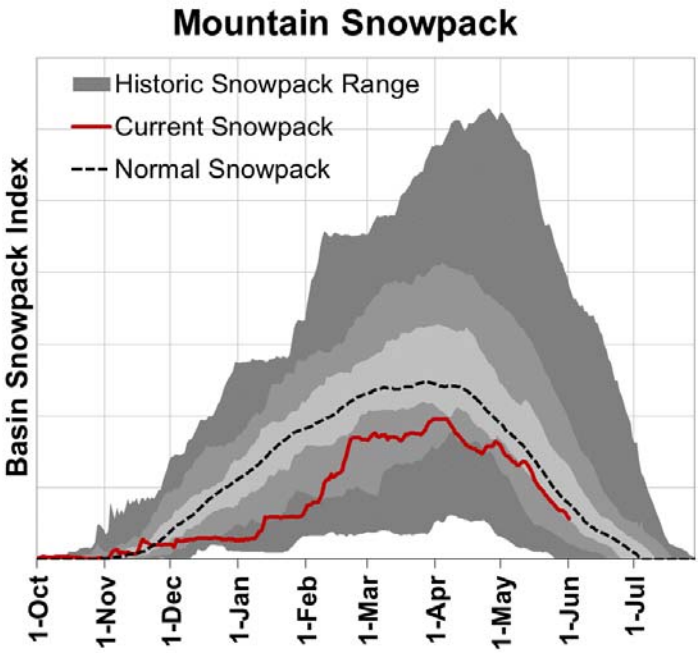
Watershed	Number of Data Sites	This Year as % of Last Yr	Median
Tumalo and Squaw Creeks	1	107	20
Little Deschutes	1	80	51
Deschutes above Wickiup	1	132	55

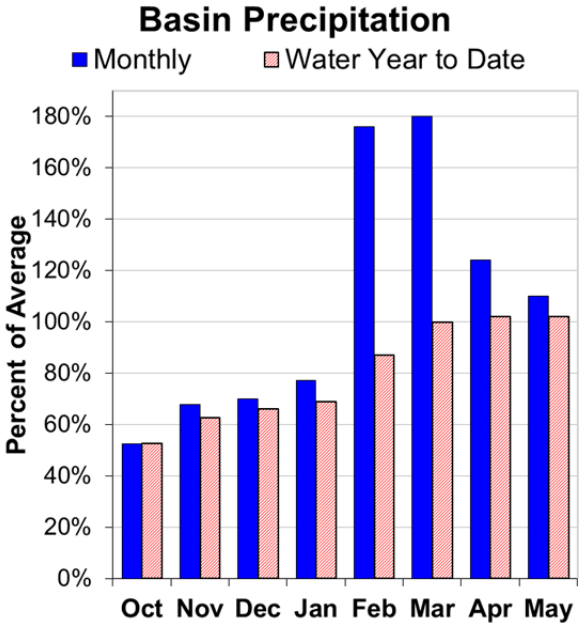
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1981-2010 base period.
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - 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:
Redmond (541) 923-4358
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

Hood, Sandy, and Lower Deschutes Basins

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked below normal this winter. In general, SNOTEL sites in the basin only reached 40% to 80% of typical peak snowpack levels and melted out up to two weeks earlier than normal.

PRECIPITATION

May precipitation was 110% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 102% of average, which is the highest in the state.

STREAMFLOW FORECAST

Summer streamflow forecasts in the basin range from 82% to 99% of average for the June through September period. Water users in the basin should anticipate slightly reduced water supplies this summer.

For more information contact your local Natural Resources Conservation Service office:
The Dalles (541) 296-6178
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

HOOD, SANDY AND LOWER DESCHUTES BASINS
Streamflow Forecasts - June 1, 2014

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)
WF Hood River nr Dee	JUN-JUL	22	30	35	88	40	48	40
	JUN-SEP	37	46	52	90	58	67	58
Hood R at Tucker Bridge	JUN-JUL	64	72	78	98	84	92	80
	JUN-SEP	96	110	119	99	128	142	120
Sandy R nr Marmot	JUN-JUL	69	82	90	82	98	111	110
	JUN-SEP	99	116	128	82	140	157	157

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Clear Lake	11.9	8.1	8.2	6.5

HOOD, SANDY AND LOWER DESCHUTES BASINS
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	Median
Hood River	2	115	73
White River	1	133	80

* 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 1981-2010 base period.

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

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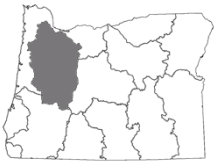
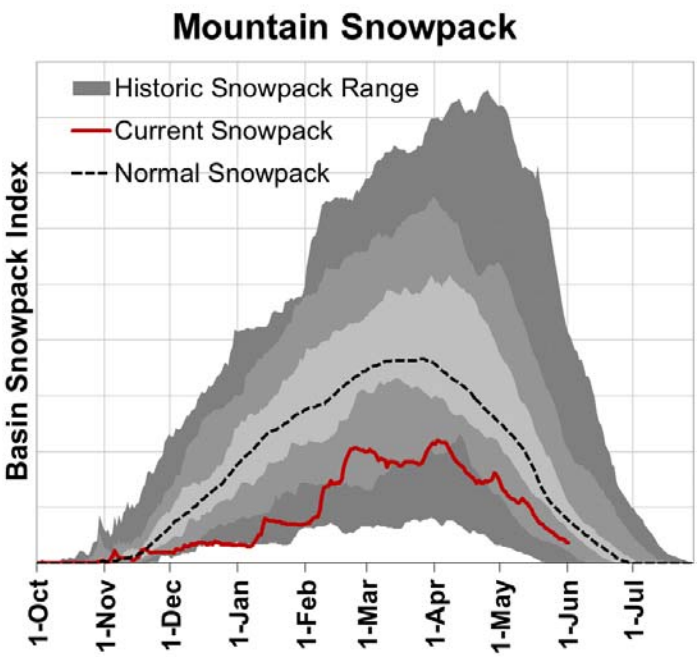
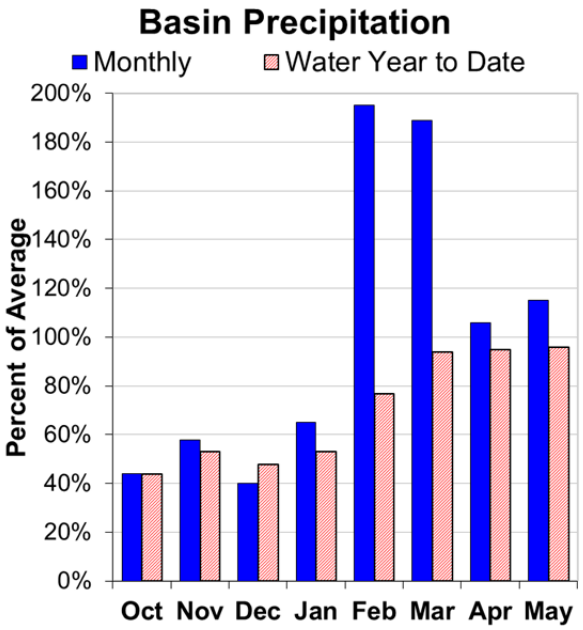
The Dalles (541) 296-6178
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/



Willamette Basin

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked significantly below normal this winter. In general, SNOTEL sites in the basin only reached 30% to 60% of typical peak snowpack levels. Melt-out timing varied greatly across the basin with some sites melting out near normal and others melting out up to 1 month earlier than normal.

PRECIPITATION

May precipitation was 115% of average – the highest in the state. Precipitation since the beginning of the water year (October 1 - June 1) has been 96% of average.

RESERVOIR

Reservoir storage across the basin is currently near average. As of June 1, storage at published reservoirs was 101% of average and 101% percent of capacity.

STREAMFLOW FORECAST

Summer streamflow forecasts in the basin range from 78% to 114% of average for the June through September period. Water users in the basin should anticipate below normal to near normal water supplies this 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.or.nrcs.usda.gov/snow/watersupply/

WILLAMETTE BASIN
Streamflow Forecasts - June 1, 2014

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)
Oak Grove Fork Of Clackamas	JUN-JUL	36	42	46	100	50	56	46
	JUN-SEP	69	79	85	100	91	101	85
Clackamas R ab Three Lynx	JUN-JUL	97	125	144	97	163	191	148
	JUN-SEP	178	210	230	98	250	280	235
Clackamas R at Estacada	JUN-JUL	111	160	193	94	225	275	205
	JUN-SEP	210	265	300	95	335	390	315
Detroit Lake Inflow (1,2)	JUN-JUL	98	148	170	97	192	240	176
	JUN-SEP	168	230	255	98	280	340	260
Little North Santiam R nr Mehama (1)	JUN-SEP	9.2	31	41	95	51	73	43
North Santiam R at Mehama (1,2)	JUN-SEP	175	270	315	94	360	455	335
Green Peter Lake Inflow (1,2)	JUN-SEP	33	77	97	114	117	161	85
Foster Lake Inflow (1,2)	JUN-SEP	121	151	164	100	177	205	164
South Santiam R at Waterloo (2)	JUN-JUL	130	142	150	109	158	170	138
	JUN-SEP	162	177	188	110	199	215	171
McKenzie R bl Trail Bridge (2)	JUN-JUL	90	100	107	96	114	124	112
	JUN-SEP	165	180	190	97	200	215	195
Cougar Lake Inflow (1,2)	JUN-SEP	57	73	80	89	87	103	90
Blue Lake Inflow (1,2)	JUN-SEP	3.4	13.3	17.8	90	22	32	19.8
McKenzie R nr Vida (1,2)	JUN-SEP	460	540	575	101	610	690	570
Hills Creek Reservoir Inflow (1,2)	JUN-SEP	79	102	112	87	122	145	129
MF Willamette R bl NF (1,2)	JUN-JUL	95	140	160	73	180	225	220
	JUN-SEP	164	220	245	78	270	325	315

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.or.nrcs.usda.gov/snow/watersupply/

WILLAMETTE BASIN
Streamflow Forecasts - June 1, 2014

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)	JUN-SEP	192	260	290	88	320	390	330
Fall Creek Lake Inflow (1,2)	JUN-SEP	9.5	21	26	84	31	43	31
Cottage Grove Lake Inflow (1,2)	JUN-SEP	2.2	6.5	8.5	82	10.5	14.8	10.4
Dorena Lake Inflow (1,2)	JUN-SEP	1.87	21	30	94	39	58	32
Scoggins Ck nr Gaston (2)	JUN-JUL	1.04	1.73	2.2	122	2.7	3.4	1.80
Willamette R at Salem (1,2)	JUN-SEP	990	1420	1610	98	1800	2230	1640

Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Blue River	85.5	82.1	77.3	78.6
Cottage Grove	29.8	31.7	27.3	30.3
Cougar	155.2	175.2	146.4	165.0
Detroit	300.7	427.1	436.7	423.4
Dorena	70.5	71.6	69.9	70.4
Fall Creek	115.5	115.4	115.8	115.5
Fern Ridge	109.6	98.1	66.2	91.5
Foster	29.7	44.4	43.9	46.3
Green Peter	268.2	398.7	380.4	381.2
Hills Creek	200.2	278.8	267.0	268.3
Lookout Point	337.0	378.7	344.0	396.8
Timothy Lake	61.7	62.8	62.8	62.3
Henry Hagg Lake (scoggins Dam)	53.0	53.3	51.6	52.5

Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Median
Middle Fork Willamette	2	99	53
McKenzie	2	127	43

* 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 1981-2010 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:
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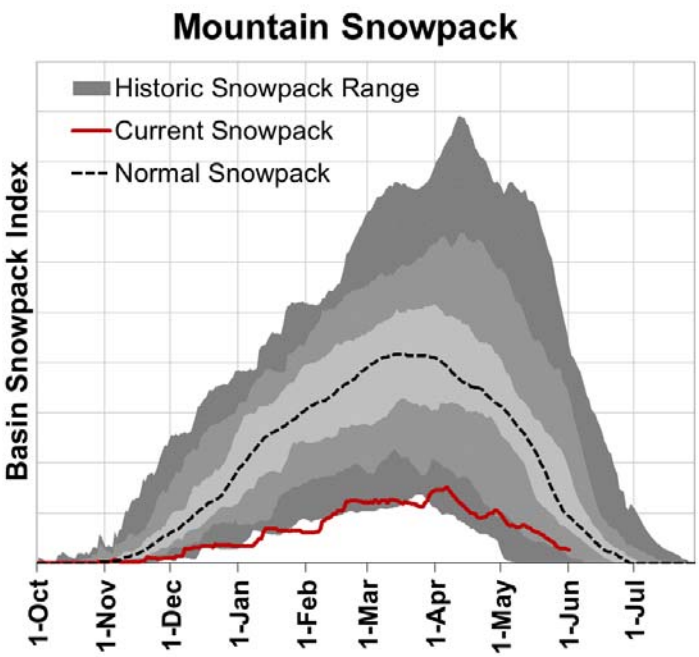
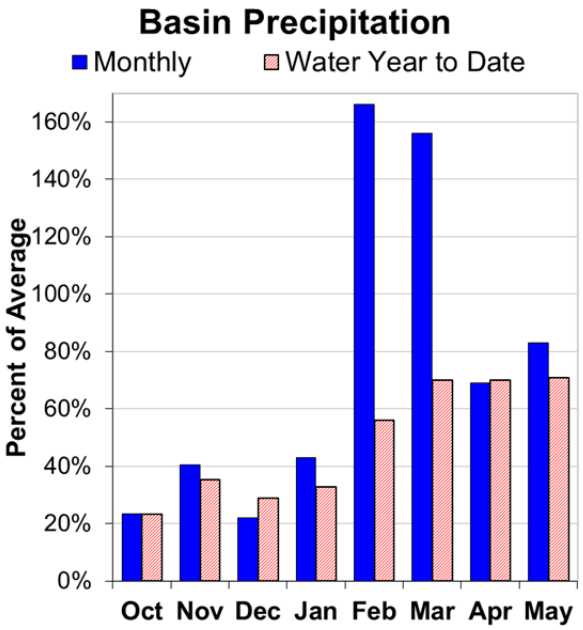
Salem - (503) 399-5746; Dallas - (503) 623-5534
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

Rogue and Umpqua Basins

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked significantly below normal this winter and set many record lows for snowpack levels at long term monitoring sites. In general, SNOTEL sites in the basin only reached 20% to 50% of typical peak snowpack levels and melted out about 2-4 weeks earlier than normal.

PRECIPITATION

May precipitation was 82% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 71% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of June 1, storage at published reservoirs was 68% of average and 56% percent of capacity.

STREAMFLOW FORECAST

Most parts of the Rogue and Umpqua basins are currently designated by the US Drought Monitor to be in a severe drought condition. Summer streamflow forecasts range from 20% to 86% of average for the June through September period. Water users relying on streams in the Siskiyou Mountains will likely face significant water shortages this summer. Summer streamflow forecasts in the rest of the Rogue and Umpqua Basins are slightly higher, but still well below normal.

For more information contact your local Natural Resources Conservation Service office:
Roseburg - (541) 673-8316; Medford - (541) 776-4267
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

ROGUE AND UMPQUA BASINS
Streamflow Forecasts - June 1, 2014

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)
Cow Ck nr Azalea (2)	JUN-JUL	1.00	1.95	2.6	84	3.2	4.2	3.1
	JUN-SEP	0.93	2.5	3.6	84	4.7	6.3	4.3
North Umpqua R at Winchester	JUN-JUL	133	173	200	85	225	265	235
	JUN-SEP	230	270	300	86	330	370	350
South Umpqua R at Tiller	JUN-JUL	9.3	22	31	78	40	53	40
	JUN-SEP	16.1	29	38	78	47	60	49
South Umpqua R nr Brockway	JUN-JUL	23	44	58	81	72	93	72
	JUN-SEP	35	57	72	80	87	109	90
Hyatt Prairie Reservoir Inflow (2)	JUN-JUL	0.140	0.22	0.30	81	0.61	1.08	0.37
Lost Creek Lake Inflow (2)	JUN-JUL	101	125	141	69	157	181	205
	JUN-SEP	191	225	245	74	265	300	330
Rogue R at Raygold (2)	JUN-JUL	69	110	138	63	166	205	220
	JUN-SEP	153	199	230	66	260	305	350
Rogue R at Grants Pass (2)	JUN-JUL	72	112	140	64	168	210	220
	JUN-SEP	147	196	230	68	265	315	340
Applegate Lake Inflow (2)	JUN-JUL	1.68	3.1	5.0	18	6.7	9.8	28
	JUN-SEP	2.9	5.3	6.8	20	9.6	13.5	34
Sucker Ck bl Ltl Grayback Ck nr Holla	JUN-JUL	1.34	4.4	6.4	47	8.4	11.5	13.6
	JUN-SEP	2.7	6.0	8.3	47	10.6	13.9	17.6
Illinois R at Kerby	JUN-JUL	3.5	6.4	14.4	45	23	36	32
	JUN-SEP	4.6	8.2	17.1	45	26	39	38

For more information contact your local Natural Resources Conservation Service office:
Roseburg - (541) 673-8316; Medford - (541) 776-4267
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Applegate	75.2	61.2	67.1	64.9
Emigrant Lake	39.0	28.0	35.7	35.5
Fish Lake	8.0	5.8	6.6	6.2
Fourmile Lake	16.1	5.8	10.3	10.7
Howard Prairie	60.0	31.7	50.1	48.3
Hyatt Prairie	16.1	6.7	14.6	13.2
Lost Creek	315.0	303.1	294.6	302.6

ROGUE AND UMPQUA BASINS
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	Median
North Umpqua	1	80	51

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

The average is computed for the 1981-2010 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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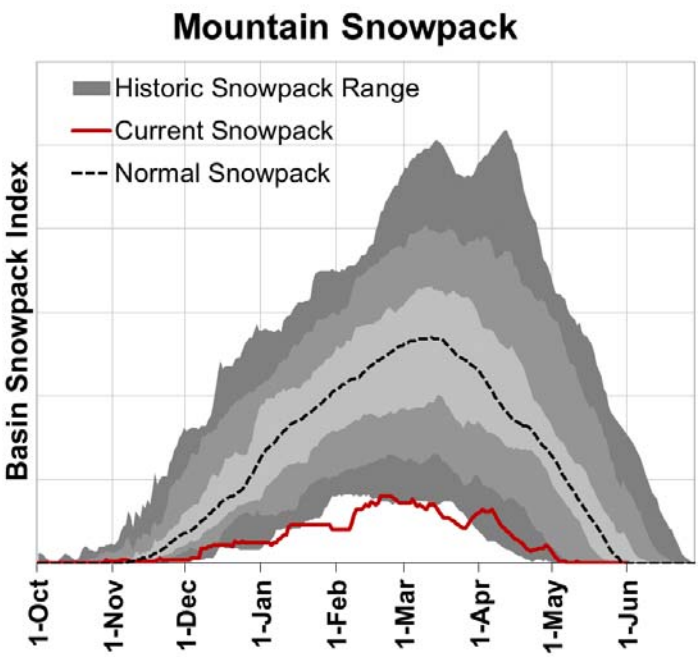
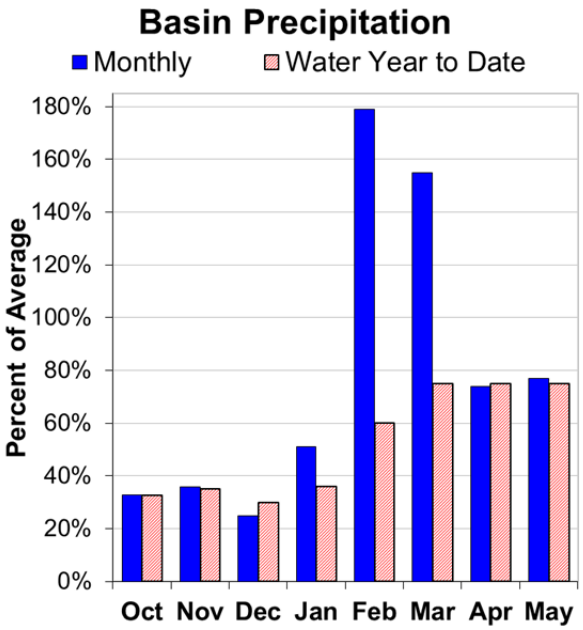
Klamath Basin

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked significantly below normal this winter. In general, SNOTEL sites in the basin only reached 10% to 40% of typical peak snowpack levels and melted out about 2-4 weeks earlier than normal. Of note, Annie Springs SNOTEL site was snow-free as of June 1, while the 30-year normal for that date is 24" of snow water equivalent.

PRECIPITATION

May precipitation was 77% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 75% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of June 1, storage at published reservoirs was 55% of average and 38% percent of capacity.

STREAMFLOW FORECAST

Most of the Klamath basin is currently designated by the US Drought Monitor to be in a severe drought condition. However, the southern part of the basin is listed as in an extreme drought condition. Summer streamflow forecasts in the basin range from 6% to 47% of average for the June through September period. Many water users in the Klamath Basin will likely experience significant water shortages this summer.

For more information contact your local Natural Resources Conservation Service office:
Klamath Falls - (541) 883-6932
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

KLAMATH BASIN
Streamflow Forecasts - June 1, 2014

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 Lk Inflow (2)	JUN-JUL	0.057	0.114	0.30	5	2.6	5.0	5.7
	JUN-SEP	0.086	0.172	0.50	6	3.0	6.3	8.6
Gerber Res Inflow (2)	JUN-JUL	0.014	0.029	0.100	7	0.73	1.13	1.43
	JUN-SEP	0.018	0.036	0.130	7	0.82	1.46	1.78
Sprague R nr Chiloquin	JUN-JUL	0.41	10.9	18.0	36	25	36	50
	JUN-SEP	6.7	19.4	28	38	37	49	73
Williamson R bl Sprague nr Chiloquin	JUN-JUL	18.8	31	40	44	49	61	90
	JUN-SEP	38	55	70	47	79	96	149
Upper Klamath Lk Inflow (1)	JUN-JUL	2.1	10.8	36	35	40	73	103
	JUN-SEP	5.4	42	64	35	86	134	181

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Clear Lake	527.0	46.7	89.2	247.4
Gerber	94.3	12.6	39.8	65.0
Upper Klamath Lake	523.7	371.3	408.4	468.1

KLAMATH BASIN
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	Median

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

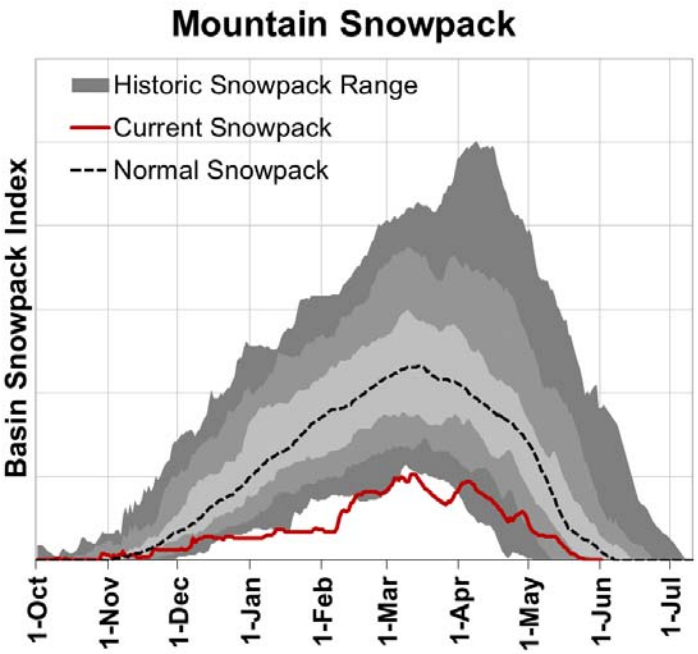
The average is computed for the 1981-2010 base period.

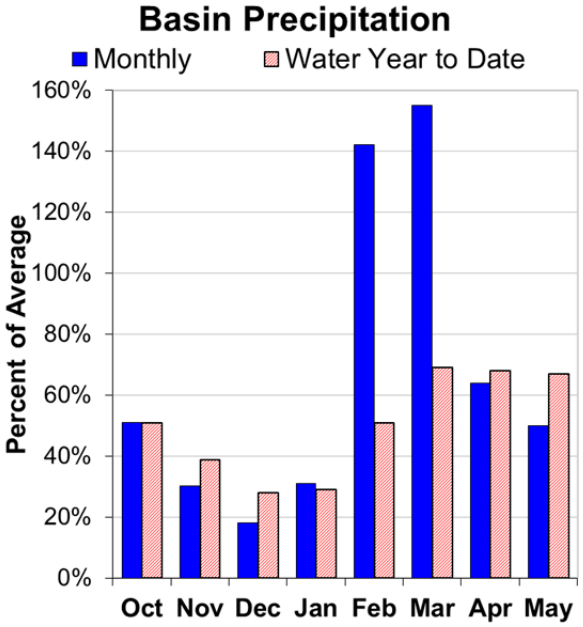
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

For more information contact your local Natural Resources Conservation Service office:
Klamath Falls - (541) 883-6932
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

Lake County and Goose Lake

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked significantly below normal this winter. In general, SNOTEL sites in the basin only reached 10% to 50% of typical peak snowpack levels and melted out about 2-4 weeks earlier than normal.

PRECIPITATION

This region has had the lowest precipitation in the state, both for the month of May and for the water year. May precipitation was 50% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 67% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of June 1, storage at published reservoirs was 39% of average and 29% percent of capacity.

STREAMFLOW FORECAST

The Lake County and Goose Lake basins are currently designated by the US Drought Monitor to be in a moderate to severe drought condition. Summer streamflow forecasts range from 24% to 29% of average for the June through September period. The combined streamflow forecasts and reservoir storage levels indicate that water users in the Lake County and Goose Lake basins will likely experience water shortages this summer.

For more information contact your local Natural Resources Conservation Service office:
Lakeview - (541) 947-2202
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

LAKE COUNTY AND GOOSE LAKE BASINS
Streamflow Forecasts - June 1, 2014

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)
Twentymile Ck nr Adel	JUN-JUL	0.20	0.60	0.93	24	1.40	2.2	3.8
	JUN-SEP	0.22	0.64	1.03	24	1.55	2.5	4.3
Deep Ck ab Adel	JUN-JUL	0.70	1.63	4.0	29	6.4	9.9	13.9
	JUN-SEP	0.95	2.1	4.6	29	7.1	10.8	15.8
Honey Ck nr Plush	JUN-JUL	0.160	0.34	0.65	25	1.27	2.2	2.6
	JUN-SEP	0.110	0.32	0.65	24	1.30	2.2	2.7
Chewaucan R nr Paisley	JUN-JUL	0.190	1.71	4.0	21	7.4	12.4	19.0
	JUN-SEP	0.46	2.3	5.9	26	9.5	14.8	23

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
Cottonwood	8.7	2.7	6.6	7.0
Drews	63.0	17.9	42.9	45.5

LAKE COUNTY AND GOOSE LAKE BASINS
Watershed Snowpack Analysis - June 1, 2014

Watershed	Number of Data Sites	This Year as % of Last Yr	Median

* 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 1981-2010 base period.

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

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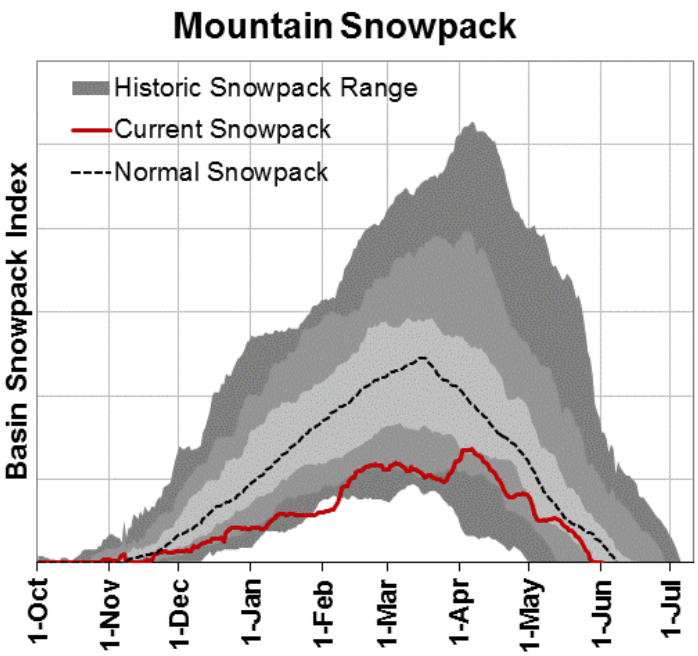
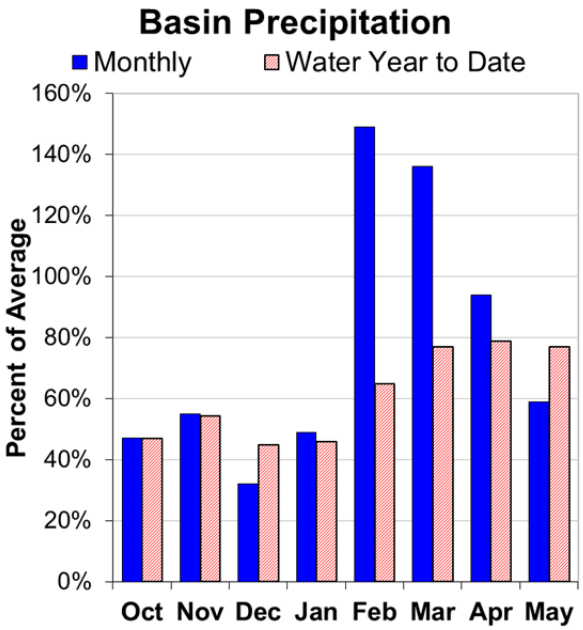
Harney Basin

June 1, 2014





Summary of Water Supply Conditions

SNOWPACK

The snowpack in this region peaked significantly below normal this winter. In general, SNOTEL sites in the basin only reached 40% to 70% of typical peak snowpack levels and melted out about 1-3 weeks earlier than normal.

PRECIPITATION

May precipitation was 59% of average. Precipitation since the beginning of the water year (October 1 - June 1) has been 77% of average.

STREAMFLOW FORECAST

Most of the Harney basin is currently designated by the US Drought Monitor to be in a severe drought condition. Summer streamflow forecasts in the basin range from 33% to 57% of average for the June through September period. Water users in the Harney basin will likely experience water shortages this summer.

For more information contact your local Natural Resources Conservation Service office:
Hines - (541) 573-6446
Or visit: http://www.or.nrcs.usda.gov/snow/watersupply/

HARNEY BASIN

Streamflow Forecasts - June 1, 2014

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)
Silvies R nr Burns	JUN-JUL	1.35	3.1	7.3	54	11.5	17.6	13.5
	JUN-SEP	1.76	4.3	9.1	57	13.9	21	16.0
Donner Und Blitzen R nr Frenchglen	JUN-JUL	1.39	5.7	8.7	36	11.7	16.0	24
	JUN-SEP	4.0	9.0	12.4	41	15.8	21	30
Trout Ck nr Denio	JUN-JUL	0.110	0.29	0.59	27	1.08	1.80	2.2
	JUN-SEP	0.110	0.33	0.90	33	1.47	2.3	2.7

* 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 1981-2010 base period.

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

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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					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
Owyhee R nr Rome	2000 cfs	**Observed	Feb 18	**	**May 6**
Owyhee R nr Rome	1000 cfs	**Observed	Feb 19	**	**May 18**
Owyhee R nr Rome	500 cfs	**Observed	Feb 22	**	**Jun 2**

UPPER JOHN DAY BASIN					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
John Day R at Service Creek	Average Daily Flow on Aug. 1st	10	100	280	**271**

UPPER DESCHUTES AND CROOKED BASINS					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
Crane Prairie Inflow *	Date of Peak	**Observed	May 9	**	**May 25**
Crane Prairie Inflow	Peak Flow	**Observed	343	**	**403**
Crane Prairie Inflow	Average Daily Flow on Oct. 1st	158	193	230	**269**
Prineville Reservoir Inflow	113 cfs	**Observed	May 15	**	**June 3**
Prineville Reservoir Inflow	75 cfs	**Observed	May 23	**	**June 11**
Prineville Reservoir Inflow	50 cfs	**Observed	May 25	**	**June 19**
Whychus Creek nr Sisters	100 cfs	Jul 12	Aug 3	Aug 25	**August 16**

*No prediction possible until April 1. Historic values are shown for reference prior to the April 1 report.

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	Jul 14	Jul 28	Aug 11	**August 8**
South Umpqua R at Tiller	140 cfs	Jun 28	Jul 11	Jul 24	**July 11**
South Umpqua R at Tiller	90 cfs	Jul 16	Aug 1	Aug 17	**August 1**
South Umpqua R at Tiller	60 cfs	Aug 10	Aug 31	Sep 21	**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	**Observed	May 14	**	**June 17**
Honey Ck nr Plush	100 cfs	** Flow did	not exceed	**	**May 16**
Honey Ck nr Plush	50 cfs	**Observed	Feb 16	**	**June 4**
Twentymile Ck nr Adel	50 cfs	** Flow did	not exceed	**	**May 30**
Twentymile Ck nr Adel	10 cfs	** Observed	Feb 16	**	**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	** Observed	Mar 15	**	**May 21**
Silvies R nr Burns	200 cfs	** Observed	May 2	**	**June 2**
Silvies R nr Burns	100 cfs	** Observed	May 23	**	**June 13**
Silvies R nr Burns	50 cfs	**	*Imminent*	**	**July 3**
Donner Und Blitzen R nr Frenchglen	200 cfs	**	*Imminent*	**	**June 20**
Donner Und Blitzen R nr Frenchglen	100 cfs	May 18	May 30	Jun 11	**July 9**

Summary of Snowpack Data

June 2014

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	MEDIAN 81-10
Oregon						
ANEROID LAKE SNOTEL	7400	6/01/14	48	20.2	17.8	16.8
ANNIE SPRING SNOTEL	6010	6/01/14	0	.0	.0	24.0
ARBUCKLE MTN SNOTEL	5770	6/01/14	0	.0	.0	.0
BEAR GRASS SNOTEL	4720	6/01/14	0	.0	6.7	--
BEAVER RES. SNOTEL	5150	6/01/14	0	.0	.0	.0
BIG RED MTN SNOTEL	6050	6/01/14	0	.0	.0	.2
BIG SHEEP AM	6200	6/01/14	0	.0	--	--
BIGELOW CAMP SNOTEL	5130	6/01/14	0	.0	.0	.0
BILLIE CK DVD SNOTEL	5280	6/01/14	0	.0	.0	.0
BLAZED ALDER SNOTEL	3650	6/01/14	0	.0	.0	.0
BLUE MTN SPGS SNOTEL	5870	6/01/14	0	.0	.0	.0
BOURNE SNOTEL	5850	6/01/14	0	.0	.0	.0
BOWMAN SPRNGS SNOTEL	4530	6/01/14	0	.0	.0	.0
CASCADE SUM. SNOTEL	5100	6/01/14	0	.0	.0	.2
CHEMULT ALT SNOTEL	4850	6/01/14	0	.0	.0	.0
CLACKAMAS LK. SNOTEL	3400	6/01/14	0	.0	.0	.0
CLEAR LAKE SNOTEL	3810	6/01/14	0	.0	.0	.0
COLD SPRINGS SNOTEL	5940	6/01/14	0	.0	.0	.0
COUNTY LINE SNOTEL	4830	6/01/14	0	.0	.0	.0
CRAZYMAN FLAT SNOTEL	6180	6/01/14	0	.0	.0	.0
DALY LAKE SNOTEL	3690	6/01/14	0	.0	.0	.0
DERR SNOTEL	5850	6/01/14	0	.0	.0	.0
DIAMOND LAKE SNOTEL	5280	6/01/14	0	.0	.0	.0
EILERTSON SNOTEL	5510	6/01/14	0	.0	.0	.0
EMIGRANT SPGS SNOTEL	3800	6/01/14	0	.0	.0	.0
FISH CREEK SNOTEL	7660	6/01/14	0	.0	.0	9.1
FISH LK. SNOTEL	4660	6/01/14	0	.0	.0	.0
FOURMILE LAKE SNOTEL	5970	6/01/14	0	.0	.0	.0
GERBER RES SNOTEL	4890	6/01/14	0	.0	.0	.0
GOLD CENTER SNOTEL	5410	6/01/14	0	.0	.0	.0
GOVT CORRALS AM	7450	6/01/14	0	.0	--	--
GREENPOINT SNOTEL	3310	6/01/14	0	.0	.0	.0
HART MOUNTAIN AM	6350	6/01/14	0	.0	--	--
HIGH RIDGE SNOTEL	4920	6/01/14	0	.0	.0	.0
HOGG PASS SNOTEL	4790	6/01/14	0	.0	.0	.0
HOLLAND MDWS SNOTEL	4930	6/01/14	0	.0	.0	.0
IRISH-TAYLOR SNOTEL	5540	6/01/14	33	14.8	11.2	26.7
JUMP OFF JOE SNOTEL	3520	6/01/14	0	.0	.0	.0
KING MTN #2 SNOTEL	4340	6/01/14	0	.0	.0	.0
LAKE CK R.S. SNOTEL	5240	6/01/14	0	.0	.0	.0
LITTLE MEADOW SNOTEL	4020	6/01/14	0	.0	.0	.0
LUCKY STRIKE SNOTEL	4970	6/01/14	0	.0	.0	.0
MADISON BUTTE SNOTEL	5150	6/01/14	0	.0	.0	.0
MARION FORKS SNOTEL	2590	6/01/14	0	.0	.0	.0
MCKENZIE SNOTEL	4770	6/01/14	6	3.1	2.9	15.2
MILKSHAKES SNOTEL	5580	6/01/14	29	12.7	11.8	--
MILLER WOODS SNOTEL	420	6/01/14	0	.0	.0	--
MOSS SPRINGS SNOTEL	5760	6/01/14	10	4.5	.0	.2
MT HOOD TEST SNOTEL	5370	6/01/14	75	38.7	29.1	48.1
MT HOWARD SNOTEL	7910	6/01/14	27	12.1	6.1	6.0
MUD RIDGE SNOTEL	4070	6/01/14	0	.0	.0	.0
NEW CRESCENT SNOTEL	4910	6/01/14	0	.0	.0	.0
NORTH FK RES SNOTEL	3060	6/01/14	0	.0	.0	.0
OCHOCO MEADOW SNOTEL	5430	6/01/14	0	.0	.0	.0
PATTON MEADOWS AM	6800	6/01/14	0	.0	--	--
PEAVINE RIDGE SNOTEL	3420	6/01/14	0	.0	.0	.0
QUARTZ MTN SNOTEL	5720	6/01/14	0	.0	.0	.0
R.R. OVERPASS SNOTEL	2680	6/01/14	0	.0	.0	.0

SNOW COURSE		ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	MEDIAN 81-10
Oregon (continued)							
RED HILL	SNOTEL	4410	6/01/14	8	6.5	10.1	13.5
ROARING RIVER	SNOTEL	4950	6/01/14	0	.0	.0	.0
ROCK SPRINGS	SNOTEL	5290	6/01/14	0	.0	.0	.0
SADDLE MTN	SNOTEL	3110	6/01/14	0	.0	.0	--
SALT CK FALLS	SNOTEL	4220	6/01/14	0	.0	.0	.0
SANTIAM JCT.	SNOTEL	3740	6/01/14	0	.0	.0	.0
SCHNEIDER MDW	SNOTEL	5400	6/01/14	0	.0	.0	.0
SEINE CREEK	SNOTEL	2060	6/01/14	0	.0	.0	.0
SEVENMILE MARSH	SNTL	5700	6/01/14	0	.0	.0	.0
SILVER CREEK	SNOTEL	5740	6/01/14	0	.0	.0	.0
SILVIES	SNOTEL	6990	6/01/14	0	.0	.0	.0
SMITH RIDGE	SNOTEL	3330	6/01/14	0	.0	.0	--
SNOW MTN	SNOTEL	6220	6/01/14	0	.0	.0	.0
SF BULL RUN	SNOTEL	2690	6/01/14	0	.0	.0	.0
STARR RIDGE	SNOTEL	5250	6/01/14	0	.0	.0	.0
STRAWBERRY	SNOTEL	5770	6/01/14	0	.0	.0	.0
SUMMER RIM	SNOTEL	7080	6/01/14	0	.0	.0	.0
SUMMIT LAKE	SNOTEL	5610	6/01/14	30	15.6	19.6	30.5
SUN PASS	SNOTEL	5400	6/01/14	0	.0	.0	--
SWAN LAKE MTN	SNOTEL	6830	6/01/14	0	.0	.0	--
TAYLOR BUTTE	SNOTEL	5030	6/01/14	0	.0	.0	.0
TAYLOR GREEN	SNOTEL	5740	6/01/14	0	.0	.0	.0
THREE CK MEAD	SNOTEL	5690	6/01/14	0	.0	.0	.0
TIPTON	SNOTEL	5150	6/01/14	0	.0	.0	.0
TOKETEE AIRSTRIP	SN	3240	6/01/14	0	.0	.0	.0
TROUT CREEK	AM	7800	6/01/14	0	.0	--	--
TV RIDGE #2	AM	7000	6/01/14	0	.0	--	--
V LAKE	AM	6600	6/01/14	0	.0	--	--
WOLF CREEK	SNOTEL	5630	6/01/14	0	.0	.0	.0
California							
ADIN MTN	SNOTEL	6190	6/01/14	0	.0	.0	.0
CEDAR PASS	SNOTEL	7030	6/01/14	0	.0	.0	.0
CROWDER FLAT	SNOTEL	5170	6/01/14	0	.0	.0	.0
DISMAL SWAMP	SNOTEL	7360	6/01/14	0	.0	.0	4.2
Idaho							
MUD FLAT	SNOTEL	5730	6/01/14	0	.0	.0	.0
SOUTH MTN	SNOTEL	6500	6/01/14	0	.0	.0	.0
Nevada							
BEAR CREEK	SNOTEL	7800	6/01/14	0	.0	.0	.1
BIG BEND	SNOTEL	6700	6/01/14	0	.0	.0	.0
BUCKSKIN,L	SNOTEL	6700	6/01/14	0	.0	.0	.0
DISASTER PEAK	SNOTEL	6500	6/01/14	0	.0	.0	.0
FAWN CREEK	SNOTEL	7050	6/01/14	0	.0	.0	.0
GRANITE PEAK	SNOTEL	7800	6/01/14	0	.0	.0	1.5
JACK CREEK, U	SNOTEL	7280	6/01/14	0	.0	.0	.0
LAMANCE CREEK	SNOTEL	6000	6/01/14	0	.0	.0	.0
LAUREL DRAW	SNOTEL	6700	6/01/14	0	.0	.0	.0
SEVENTYSIX CK	SNOTEL	7100	6/01/14	0	.0	.0	.0
TAYLOR CANYON	SNOTEL	6200	6/01/14	0	.0	.0	.0

Basin Outlook Reports: How Forecasts Are Made

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 snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. 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 uncertainty is in 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 1981-2010. 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 on the next page, there is a 50% chance that actual streamflow volume at the Mountain Creek near Mitchell will be less than 4.4 KAF between April 1 and Sept 30. There is also a 50% chance that actual streamflow volume will be greater than 4.4 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 3.3 KAF (from the 70 percent exceedance forecast). There is a 30% chance of receiving *less* than 3.3 KAF.

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 1.7 KAF (from the **90** percent exceedance forecast). There is 10% chance of receiving less than 1.7 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 5.5 KAF (from the 30 percent exceedance forecast). There is a 30% chance of receiving *more* than 5.5 KAF.

Alternatively, if users determine the risk of using the 30 percent exceedance forecast is too great, then they might plan on receiving 7.1 KAF (from the 10 percent exceedance forecast). There is a 10% chance of receiving more than 7.1 KAF.

JOHN DAY BASIN
Streamflow Forecasts - February 1, 2013

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)
Strawberry Ck nr Prairie City	MAR-JUL	5.0	6.6	7.6	89	8.6	10.2	8.5
	APR-SEP	5.2	6.8	7.9	90	9.0	10.6	8.8
Mountain Ck nr Mitchell	FEB-JUL	3.2	5.4	6.9	99	8.4	10.6	7.0
	APR-SEP	1.7	3.3	4.4	90	5.5	7.1	4.9

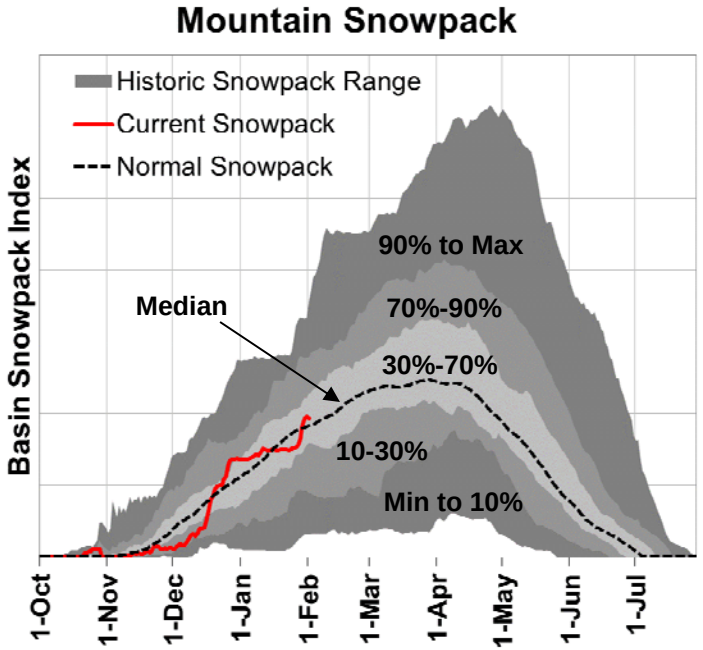
** 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.*

Interpreting Snowpack Plots

The basin snowpack plots display an index calculated using daily SNOTEL data for many sites in each basin. They show how the current year's snowpack data compares to historical data in the basin. The "Current Snowpack" line can be compared with the "Normal Snowpack" (median) line, as well as the historic range for the basin. This gives users important context about the current year and historic variability of snowpack in the basin.

The grey shaded areas represent different percentiles of the historical range of the snowpack index for each day. The dark grey shading indicates the extreme lows and highs in the SNOTEL record (minimum to the 10th percentile and the 90th percentile to maximum). The medium grey shading indicates the range from the 10th to 30th percentiles and the 70th to 90th percentiles. The light grey shading indicates the range between the 30th to 70th percentiles, while the median is the 50th percentile. A percentile is the value of the snowpack index below which the given percent of historical years fall. For instance, the 90th percentile line indicates that the snowpack index has been below this line for 90 percent of the years of record.

** Please note: These plots only use daily data from SNOTEL sites in the basin. Because snow course data is collected monthly, it cannot be included in these plots. The official snowpack percent of normal for the basin incorporates both SNOTEL and snow course data, so occasionally there might be slight discrepancies between the plot and official basin percent of normal (stated in basin summary below each plot).



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Official Business

This publication may be found online at:
http://www.or.nrcs.usda.gov/snow/watersupply/

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