United States
Department of
Agriculture

Natural Resources
Conservation
Service

Oregon
Basin Outlook Report

January 1, 2015

New Year's Day 2014 and 2015 comparison of the snowpack on Mt. Hood.

For the 2nd year in a row, New Year's Day on Mt. Hood was notable for its clear blue skies and well below normal snowpack. As of January 1, the snowpack in the Mt. Hood area was only 38% of normal, which was significantly better than last year on Jan 1, when snowpack levels were 22% of normal. The region received much-needed snow accumulation during the holidays this year. Had it not been for the late December storm, many locations in western Oregon (including Mt. Hood) would have had record low snowpacks on January 1.

Oregon's mountains have received above average precipitation since the water year began in October—also an improvement over last year. However, temperatures have been unseasonably warm. Because of this, the snowpack in western and central Oregon is well below normal for this time of year. Eastern Oregon, where temperatures have been cold enough for snow instead of rain, has near normal snowpack levels as of January 1.

Contents

General Outlook

January 1, 2015

SUMMARY

Last winter, southern Oregon's mountains experienced one of the lowest seasonal snowpacks in history. A few locations in northern Oregon recovered to near normal snow levels prior to the runoff season, but no location in Oregon escaped the heat of summer. By June 1, nine Oregon counties had drought declarations. A dry and hot summer placed a high demand on water resources, leaving reservoirs and streams with low water by summer's end. Starting the new water year with such a water supply deficit increases the amount of snow and precipitation necessary to reach normal water supply levels by next summer.

Oregon has been wet and unseasonably warm since the water year began on October 1. All basins have received above average precipitation. Snowpack measurements on January 1 show a wide range of conditions across the state. In broad-brushed terms, western and central Oregon, where temperatures have been the warmest, have well below normal snowpack levels. The eastern side of the state has near normal or above normal snowpack levels, because temperatures there were cool enough to produce snow instead of rain. Most of Oregon's major reservoirs were able to capture some of the recent moisture and are storing more water than this time last year.

Given the wet start to the water year and the varied snowpack, the outcome for Oregon's summer water supplies remains uncertain. There have been years in the past where Oregon has had low January 1 snowpacks but recovered to near normal snow levels by the peak of the snow season (2012) or received spring rainfall that offset the impacts of a low snow year (2005). Since there are a wide range of outcomes for the future snowpack and precipitation this season, the streamflow forecasts may appear higher than expected in areas with a low January 1 snowpack. Simply put, there is roughly a 50% chance that many of Oregon's rivers will flow at near normal levels this summer; there is also a 50% chance that we will end up with below normal runoff. NOAA's Climate Prediction Center is calling for above average temperatures for the next three months and equal chances of above, below or normal precipitation amounts for most of Oregon: http://www.cpc.ncep.noaa.gov/

SNOWPACK

As of January 1, the mountain snowpack in Oregon was above last year's levels on this date. However, the snowpack conditions vary greatly throughout the state. Many (but not all) of Oregon's eastern mountains remained cold enough during December's moisture laden storm events to accumulate snow, while the more temperate western and central Oregon Cascades received mostly rain. Some areas received over 10 inches of rainfall in three days during the mid-December pineapple express event, melting the low elevation snow. At the 11th hour, a late December cold snap combined with ample moisture rescued western Oregon from setting new record low snowpacks on January 1 and improved the snowpack elsewhere in the state.

As of January 1, the Harney basin snowpack is highest in the state at 121% of normal. The lowest snowpack levels are in the Rogue, Umpqua & Klamath basins, where snowpack is 37% of normal—a year ago, snowpacks were less than 20% of normal in these basins.

There is concern that the snowpack will end up below normal for the season as it did in most of Oregon last year. Even the areas that are holding near normal or above normal snow are not guaranteed to continue the trend for the season. On the other hand, there is still time for much improvement in the snowpack – approximately 60% of Oregon's snow accumulation season is yet to come. Even if the next few months remain dry, a few potent and cold storms can make a big difference, as illustrated by the recent late December storm. Using history as a guide, there are a wide range of possibilities in how Oregon's snowpack story will end this year.

PRECIPITATION

All of Oregon's mountains have received above average amounts of precipitation since the water year began on October 1. Western Oregon's more moderate temperatures led to most of the precipitation falling as rain, while eastern Oregon's temperatures remained cold enough for more snow to accumulate. Last year leading up to January 1, precipitation was below normal throughout the state. The region with the highest percent of normal precipitation so far this season (but not the snowiest) is the Lake County and Goose Lake area, receiving 123% of average water year-to-date precipitation. Last year, this region had the lowest precipitation in the state at 28% of average.

RESERVOIRS

Last summer's hot and dry conditions created a high demand for limited reservoir storage. By late September, the rain began falling, which boosted reservoir levels, but was not enough to bring recovery to normal storage in most areas. By the end of December, most reservoirs in the state were storing more water than this time last year, but many are still well below normal. The upper Deschutes and Crooked basins are storing above average amounts for this time of year, the best in the state. The lowest reservoir storage in the state is in the Owyhee and Malheur basins at 26% of average and 10% of capacity; last year the major reservoirs in these basins were at 22% of average.

The January 1 storage at 26 major Oregon reservoirs analyzed in this publication was 66% of average. As of January 1, water storage at these reservoirs totaled 990 thousand acre feet (kaf), representing 31% of useable capacity. Last year at this time these same reservoirs stored 894 kaf of water, or 28% of useable capacity.

STREAMFLOW

Lately, Oregon's streams and rivers have been flowing at above average levels. Above average precipitation and unusual amounts of winter rain led to rapidly rising and fast flowing rivers. In many cases, reservoir operators were able to capture the rainfall that will add some security in case the winter snowpack peaks below normal.

The January 1 forecasts support the notion that it may still be too early to make a definitive plan for water supplies. As the season moves along, the forecasts become more accurate and we'll have a better idea of how much water will be available during the coming summer. Upon first glance, the forecasts may seem too high in western Oregon, given the low snowpack conditions. However, the historical relationships our forecasts are based on show that in the past, years with low January 1 snowpacks have sometimes achieved normal summertime streamflows. As discussed earlier, this can happen because the seasonal snowpack recovered to normal levels or spring rainfall offset a low snow year. When looking at the 50% chance of exceedance forecast, the message is that there is a 50% chance that the streamflow volumes will be higher than that predicted volume and there is a 50% chance that the streamflow will be lower than predicted.

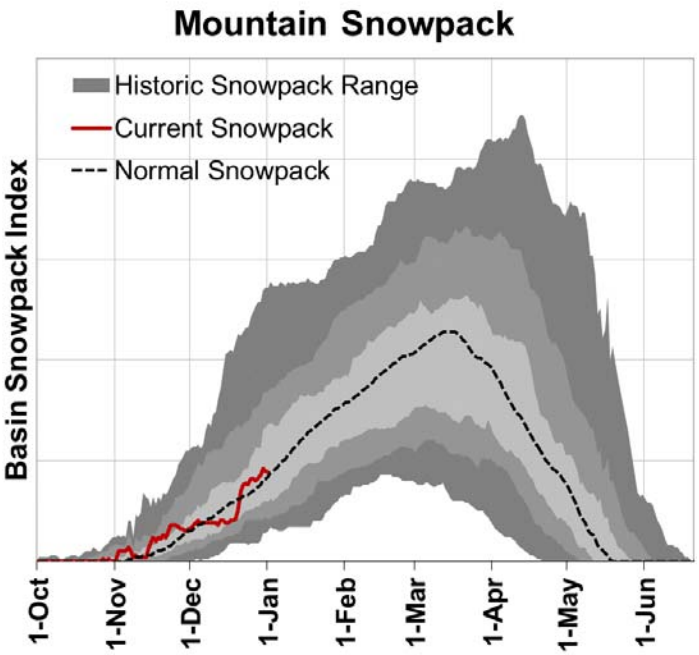
A summary of streamflow forecasts for Oregon follows:

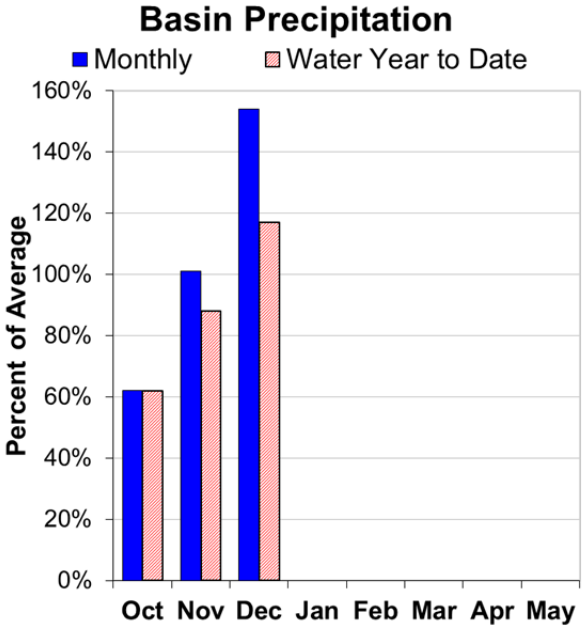
STREAMFLOW FORECAST	Median Forecast (April through September)	
	Volume (Acre-Feet)	Percent of Average
Owyhee Reservoir Inflow	415,000	102
Grande Ronde R at Troy	1,400,000	107
Umatilla R at Pendleton	179,000	117
Deschutes R at Benham Falls	440,000	91
Willamette R at Salem	4,520,000	96
Rogue R at Raygold	725,000	90
Upper Klamath Lake Inflow	250,000	52
Silvies R nr Burns	73,000	79

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

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 103% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 53% of normal.

PRECIPITATION

December precipitation was 154% of average—the highest in the state. Precipitation since the beginning of the water year (October 1 - January 1) has been 117% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of January 1, storage at published reservoirs was 26% of average and 10% percent of capacity.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 96% to 105% of average.

Owyhee and Malheur Basins Summary for January 1, 2015

Streamflow Forecasts January 1, 2015	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment * ←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Owyhee R nr Rome	FEB-JUL	230	460	615	106%	775	1000	580
	FEB-SEP	240	475	635	107%	795	1030	595
	APR-SEP	110	275	385	105%	495	660	365
Owyhee R bl Owyhee Dam[2]	FEB-JUL	305	500	660	104%	840	1150	635
	FEB-SEP	330	530	690	104%	870	1180	665
	APR-SEP	182	310	415	102%	540	750	405
Malheur R nr Drewsey	FEB-JUL	59	91	118	92%	147	196	128
	APR-JUL	26	49	70	93%	94	136	75
	APR-SEP	33	54	71	96%	91	125	74
NF Malheur R at Beulah	FEB-JUL	42	70	92	108%	118	162	85

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Beulah	12.8	12.1	21.0	60.0
Bully Creek	3.4	4.4	10.8	30.0
Lake Owyhee	75.3	60.5	312.7	715.0
Warm Springs	12.6	10.7	60.4	191.0

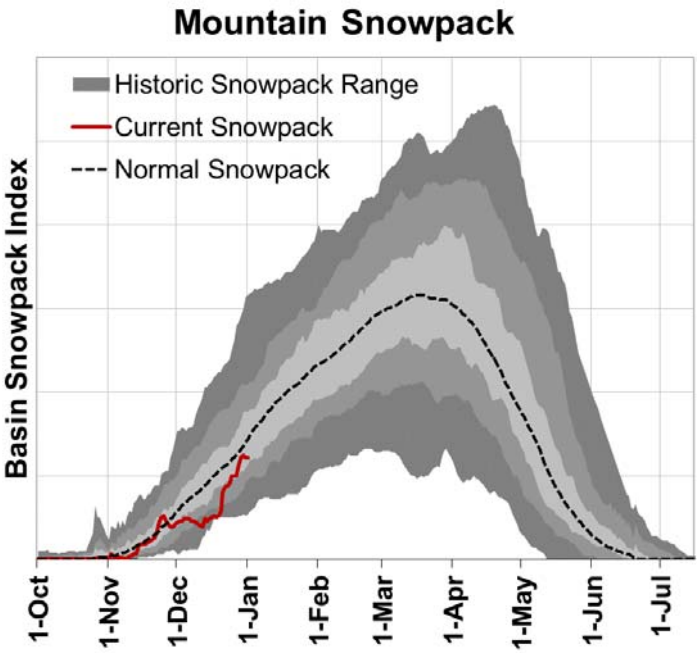
Snowpack Summary by Basin	Basin Snowpack # of Sites	Current Yr	Last Yr
East Little Owyhee Basin	2	89%	44%
South Fork Owyhee Basin	4	122%	64%
Upper Malheur Basin	3	103%	47%
Upper Owyhee Basin	5	118%	58%

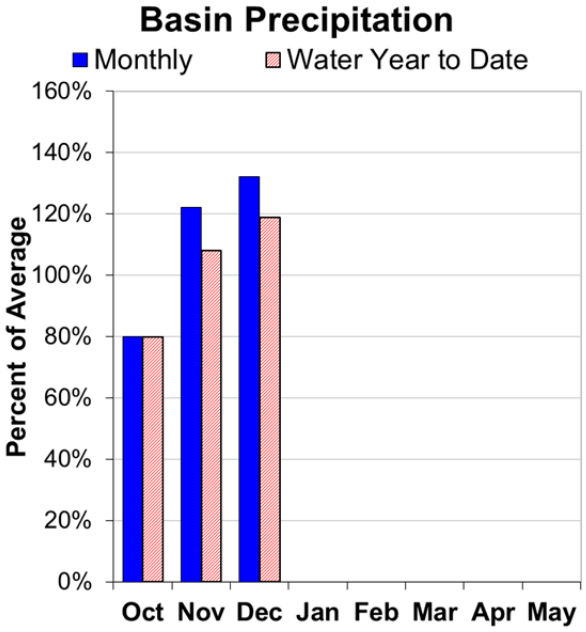
Owyhee and Malheur Basins Summary for January 1, 2015

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Granite Peak SNOTEL	8543	1-Jan	36	7.5	2.6	7.0	107%
Trout Creek AM	7890	1-Jan	32	7.4	1.8		
Toe Jam SNOTEL	7700	1-Jan	29	7.2	3.9		
Govt Corrals AM	7400	1-Jan	21	4.8	2.1		
Jack Creek Upper SNOTEL	7250	1-Jan	35	8.2	3.9	5.4	152%
Dobson Creek Snow Course	7084	30-Dec	17	3.8	5.5	11.1	34%
Reynolds-Dobson Snow Course	7064	30-Dec	19	4.2	4.8	9.8	43%
Fawn Creek SNOTEL	7000	1-Jan	32	8.1	3.3	5.9	137%
Buckskin Lower SNOTEL	6915	1-Jan	11	1.7	1.9	3.3	52%
Reynolds W Fork #2 Snow Course	6798	30-Dec	20	3.5	5.8	9.1	38%
Big Bend SNOTEL	6700	1-Jan	12	3.6	1.8	3.0	120%
Fry Canyon SNOTEL	6700	1-Jan	6	0.6			
Laurel Draw SNOTEL	6697	1-Jan	18	4.0	2.3	4.1	98%
South Mtn. SNOTEL	6500	1-Jan	22	5.5	2.3	6.2	89%
Taylor Canyon SNOTEL	6200	1-Jan	4	0.3	1.3	1.5	20%
Blue Mountain Spring SNOTEL	5870	1-Jan	34	7.4	4.4	6.9	107%
Mud Flat SNOTEL	5730	1-Jan	6	0.8	0.9	2.6	31%
Democrat Creek Snow Course	5686	30-Dec	0	0.0	1.0	4.1	0%
Reynolds Creek SNOTEL	5600	1-Jan	5	1.3	1.5	2.0	65%
Rock Springs SNOTEL	5290	1-Jan	9	0.7	0.6	1.9	37%
Lake Creek R.S. SNOTEL	5240	1-Jan	22	5.9	1.4	4.8	123%
Taylor Butte SNOTEL	5030	1-Jan	1	0.4	0.4	3.6	11%

Grande Ronde, Powder, Burnt and Imnaha Basins

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 85% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 70% of normal.

PRECIPITATION

December precipitation was 132% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 119% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of January 1, storage at published reservoirs was 59% of average and 26% percent of capacity.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 94% to 111% of average.

Grande Ronde, Powder, Burnt & Imnaha Basins Summary for January 1, 2015

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions----------Wetter--------→						
Streamflow Forecasts January 1, 2015	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**30-Yr Avg (KAF)**
Burnt R nr Hereford	FEB-JUL	30	46	56	110%	67	82	51
	APR-SEP	16.2	30	39	111%	49	63	35
Deer Ck nr Sumpter	FEB-JUL	12.2	16.4	19.2	97%	22	26	19.7
Powder R nr Sumpter	FEB-JUL	43	60	72	107%	84	101	67
	APR-JUL	32	47	57	108%	67	82	53
	APR-SEP	32	48	58	107%	69	84	54
Wolf Ck Reservoir Inflow[2]	MAR-JUN	9.9	14.6	17.7	98%	21	26	18.1
Pine Ck nr Oxbow	FEB-JUL	124	176	210	95%	245	300	220
	APR-JUL	85	123	149	95%	174	210	157
	APR-SEP	89	128	154	94%	181	220	163
Imnaha R at Imnaha	APR-JUL	171	230	265	104%	305	365	255
	APR-SEP	187	250	290	104%	330	390	280
Catherine Ck nr Union	APR-JUL	43	53	61	102%	68	78	60
	APR-SEP	46	57	65	102%	72	83	64
Lostine R nr Lostine	APR-JUL	94	105	112	106%	119	130	106
	APR-SEP	101	113	121	105%	129	141	115
Bear Ck nr Wallowa	APR-SEP	50	59	64	98%	70	79	65
Grande Ronde R at Troy[1]	MAR-JUL	1080	1450	1620	107%	1790	2160	1510
	APR-SEP	880	1240	1400	107%	1560	1910	1310

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Phillips Lake	13.9	10.5	30.2	73.5
Thief Valley	9.5	8.7	12.3	17.4
Unity	7.1	4.0	9.5	25.2
Wallowa Lake	23.5	16.7	14.7	37.5
Wolf Creek	2.7	2.3	2.6	10.4

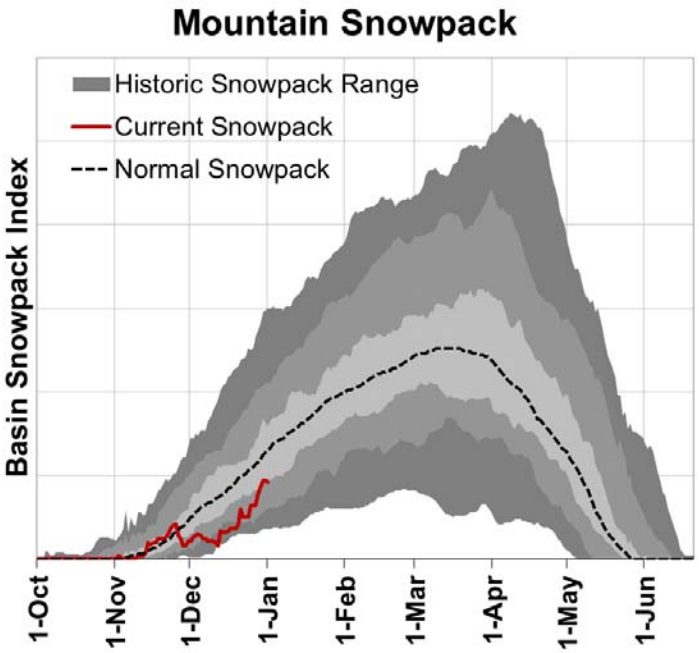
Grande Ronde, Powder, Burnt & Imnaha Basins Summary for January 1, 2015

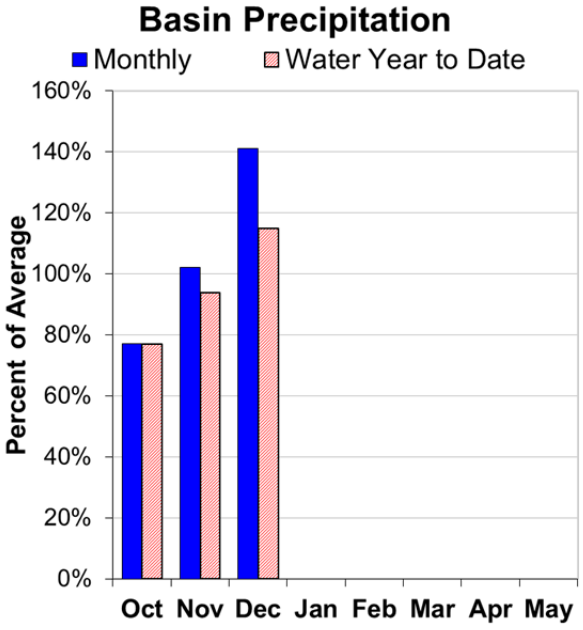
Snowpack Summary by Basin		Basin Snowpack % of 30-Year Median	
	# of Sites	Current Yr	Last Yr
Burnt Basin	2	103%	42%
Imnaha Basin	4	98%	73%
Lower Grande Ronde Basin	3	63%	60%
Powder Basin	8	89%	49%
Upper Grande Ronde Basin	7	83%	76%
Wallowa Basin	4	104%	99%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Mt. Howard SNOTEL	7910	1-Jan	32	8.6	11.4	7.5	115%
Aneroid Lake #2 SNOTEL	7400	1-Jan	32	9.0	9.0	9.1	99%
TV Ridge AM	7050	1-Jan	18	4.9	4.0		
Big Sheep AM	6230	1-Jan	32	8.6	5.4		
Bear Saddle SNOTEL	6180	1-Jan	35	9.2	3.3	9.4	98%
Bourne SNOTEL	5850	1-Jan	29	6.6	4.1	6.8	97%
Moss Springs SNOTEL	5760	1-Jan	37	10.1	10.6	10.2	99%
Taylor Green SNOTEL	5740	1-Jan	31	8.2	3.2	7.7	106%
Spruce Springs SNOTEL	5700	1-Jan	21	4.5	3.6	7.1	63%
Wolf Creek SNOTEL	5630	1-Jan	23	4.6	4.1	6.0	77%
Milk Shakes SNOTEL	5580	1-Jan	40	10.6	10.6		
West Branch SNOTEL	5560	1-Jan	33	7.7	4.8	9.2	84%
Touchet SNOTEL	5530	1-Jan	28	7.7	8.2	12.9	60%
Eilertson Meadows SNOTEL	5510	1-Jan	13	3.2	1.2	4.8	67%
Gold Center SNOTEL	5410	1-Jan	24	4.9	3.0	4.7	104%
Schneider Meadows SNOTEL	5400	1-Jan	46	11.5	4.8	12.3	94%
Beaver Reservoir SNOTEL	5150	1-Jan	10	2.4	4.0	4.2	57%
Tipton SNOTEL	5150	1-Jan	23	5.2	1.1	5.1	102%
High Ridge SNOTEL	4920	1-Jan	38	8.3	6.0	11.0	75%
County Line SNOTEL	4830	1-Jan	10	1.5	2.0	2.4	63%
Bowman Springs SNOTEL	4530	1-Jan	14	2.2	4.6	3.7	59%
East Eagle Snow Course	4400	29-Dec	38	7.6	2.4	8.7	87%
Sourdough Gulch SNOTEL	4000	1-Jan	3	0.7	0.5	0.6	117%

Umatilla, Walla Walla, and Willow Basins

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 71% of normal. This is slightly higher than last year on Jan 1, when the basin snowpack was 65% of normal.

PRECIPITATION

December precipitation was 141% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 115% of average.

RESERVOIR

Reservoir storage across the basin is currently below average. As of January 1, storage at published reservoirs was 92% of average and 22% percent of capacity.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 98% to 117% of average.

Umatilla, Walla Walla and Willow Basins Summary for January 1, 2015

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts January 1, 2015	Forecast Period	←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
SF Walla Walla R nr Milton-Freewater	MAR-SEP	65	73	79	99%	84	92	80
	APR-JUL	42	48	52	96%	56	62	54
	APR-SEP	53	60	65	98%	69	76	66
Umatilla R ab Meacham Ck nr Gibbon	MAR-SEP	92	108	119	112%	130	147	106
	APR-JUL	60	74	83	112%	92	106	74
	APR-SEP	66	79	89	111%	98	112	80
Umatilla R at Pendleton	MAR-SEP	195	235	265	118%	290	335	225
	APR-JUL	117	150	172	117%	194	225	147
	APR-SEP	124	157	179	117%	200	235	153
McKay Ck nr Pilot Rock	APR-SEP	15.6	27	35	113%	43	55	31
Butter Ck nr Pine City	MAR-JUL	8.4	12.8	15.8	106%	18.8	23	14.9
	APR-SEP	5.2	8.1	10.0	102%	12.0	14.9	9.8
Willow Ck ab Willow Lk nr Heppner	FEB-JUL	5.8	9.8	12.5	106%	15.2	19.2	11.8
	APR-JUL	2.4	5.2	7.0	100%	8.9	11.7	7.0
Rhea Ck nr Heppner	FEB-JUL	7.1	11.7	14.8	109%	17.9	22	13.6

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

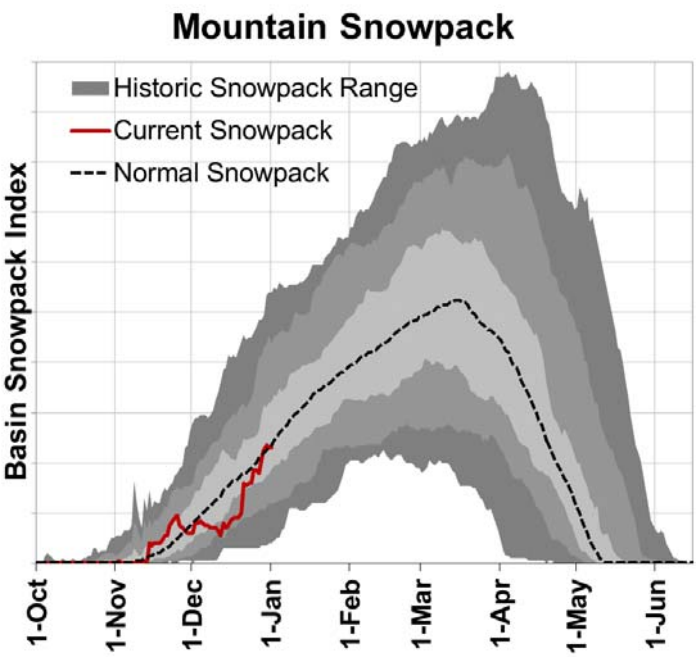
Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Cold Springs	7.4	5.6	9.5	50.0
Mckay	19.6	17.5	20.0	73.8
Willow Creek	2.9	3.6	4.2	13.9

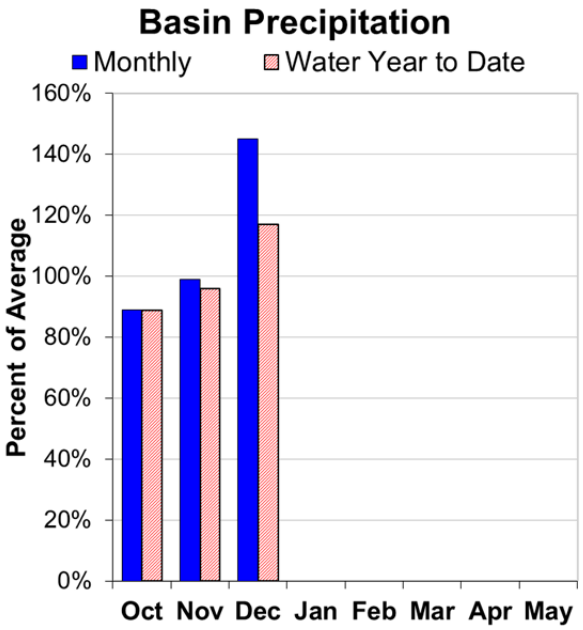
Snowpack Summary by Basin	Basin Snowpack % of 30-Year Median		
	# of Sites	Current Yr	Last Yr
Umatilla Basin	5	76%	66%
Walla Walla Basin	7	71%	65%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Arbuckle Mtn SNOTEL	5770	1-Jan	28	6.4	4.5	8.1	79%
Spruce Springs SNOTEL	5700	1-Jan	21	4.5	3.6	7.1	63%
Milk Shakes SNOTEL	5580	1-Jan	40	10.6	10.6		
Touchet SNOTEL	5530	1-Jan	28	7.7	8.2	12.9	60%
Madison Butte SNOTEL	5150	1-Jan	12	1.9	1.5	2.7	70%
Lucky Strike SNOTEL	4970	1-Jan	18	3.7	3.0	3.9	95%
High Ridge SNOTEL	4920	1-Jan	38	8.3	6.0	11.0	75%
Bowman Springs SNOTEL	4530	1-Jan	14	2.2	4.6	3.7	59%
Emigrant Springs SNOTEL	3800	1-Jan	12	2.3	1.8	3.3	70%

John Day Basin

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 95% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 49% of normal.

PRECIPITATION

December precipitation was 145% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 117% of average.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 86% to 110% of average.

John Day Basin Summary for January 1, 2015

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts January 1, 2015	Forecast Period	←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Strawberry Ck nr Prairie City	MAR-JUL	6.2	8.0	9.3	109%	10.6	12.5	8.5
	APR-SEP	6.5	8.4	9.7	110%	11.0	13.0	8.8
Mountain Ck nr Mitchell	FEB-JUL	2.0	4.7	6.5	93%	8.3	10.9	7.0
	APR-SEP	1.17	3.0	4.2	86%	5.4	7.2	4.9
Camas Ck nr Ukiah	MAR-JUL	35	45	52	106%	59	69	49
	APR-SEP	21	30	37	106%	43	52	35
MF John Day R at Ritter	MAR-JUL	99	137	162	104%	188	225	156
	APR-SEP	76	108	130	103%	152	184	126
NF John Day R at Monument	MAR-JUL	505	680	800	105%	915	1090	765
	APR-SEP	375	520	615	103%	710	855	600

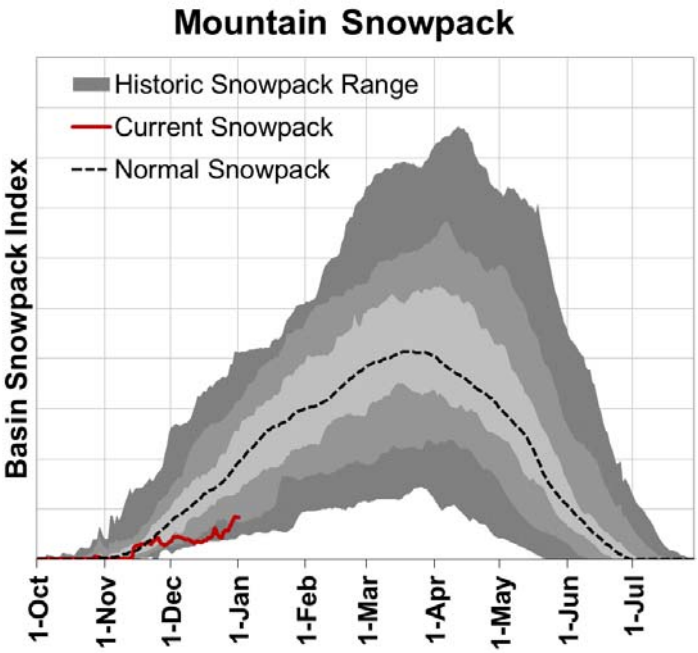
* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

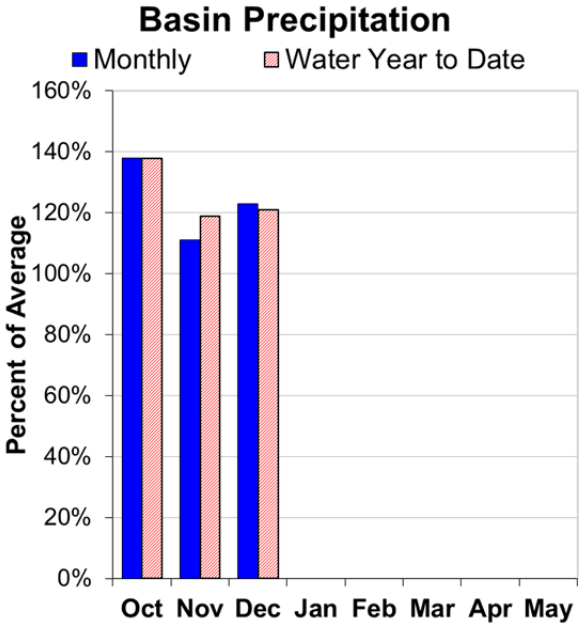
Snowpack Summary by Basin	# of Sites	Basin Snowpack % of 30-Year Median Current Yr	Last Yr
Lower John Day Basin	4	69%	34%
North Fork John Day Basin	7	90%	57%
Upper John Day Basin	5	120%	44%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Snow Mountain SNOTEL	6230	1-Jan	20	5.8	1.5	3.3	176%
Blue Mountain Spring SNOTEL	5870	1-Jan	34	7.4	4.4	6.9	107%
Bourne SNOTEL	5850	1-Jan	29	6.6	4.1	6.8	97%
Derr. SNOTEL	5850	1-Jan	25	6.1	1.7	5.7	107%
Arbuckle Mtn SNOTEL	5770	1-Jan	28	6.4	4.5	8.1	79%
Ochoco Meadows SNOTEL	5430	1-Jan	10	1.9	1.9	4.4	43%
Gold Center SNOTEL	5410	1-Jan	24	4.9	3.0	4.7	104%
Starr Ridge SNOTEL	5250	1-Jan	13	2.9	1.4	2.8	104%
Lake Creek R.S. SNOTEL	5240	1-Jan	22	5.9	1.4	4.8	123%
Ochoco Meadows Snow Course	5190	2-Jan	10	3.1		3.9	79%
Madison Butte SNOTEL	5150	1-Jan	12	1.9	1.5	2.7	70%
Tipton SNOTEL	5150	1-Jan	23	5.2	1.1	5.1	102%
Lucky Strike SNOTEL	4970	1-Jan	18	3.7	3.0	3.9	95%
County Line SNOTEL	4830	1-Jan	10	1.5	2.0	2.4	63%
Marks Creek Snow Course	4580	2-Jan	5	0.6	0.0	2.4	25%

Upper Deschutes and Crooked Basins

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 45% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 27% of normal.

PRECIPITATION

December precipitation was 123% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 121% of average.

RESERVOIR

Reservoir storage across the basin is currently above average. As of January 1, storage at published reservoirs was 115% of average and 68% percent of capacity.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 88% to 110% of average.

Upper Deschutes and Crooked Basins Summary for January 1, 2015

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions----------Wetter--------→						
Streamflow Forecasts January 1, 2015	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**30-Yr Avg (KAF)**
Deschutes R bl Snow Ck	FEB-JUL	29	38	44	107%	50	59	41
	FEB-SEP	50	61	69	110%	77	88	63
	APR-JUL	22	28	33	110%	38	44	30
	APR-SEP	41	51	57	110%	63	73	52
Crane Prairie Reservoir Inflow[2]	FEB-JUL	58	72	82	108%	92	106	76
	FEB-SEP	86	104	116	108%	128	146	107
	APR-JUL	42	53	61	109%	69	80	56
	APR-SEP	68	84	95	108%	106	122	88
Crescent Lake Inflow[2]	FEB-JUL	11.1	17.0	21	107%	25	31	19.6
	FEB-SEP	13.0	19.5	24	109%	28	35	22
	APR-JUL	8.4	13.1	16.2	108%	19.3	24	15.0
	APR-SEP	10.2	15.3	18.8	108%	22	27	17.4
Little Deschutes R nr La Pine	FEB-JUL	44	67	83	93%	99	122	89
	FEB-SEP	45	71	88	94%	105	130	94
	APR-JUL	32	48	58	92%	68	84	63
	APR-SEP	34	51	63	91%	75	92	69
Deschutes R at Benham Falls[2]	FEB-JUL	355	395	425	92%	455	495	460
	FEB-SEP	485	535	570	91%	605	655	625
	APR-JUL	245	275	295	92%	315	345	320
	APR-SEP	375	415	440	91%	465	505	485
Wychus Ck nr Sisters	FEB-JUL	29	36	40	93%	45	51	43
	FEB-SEP	38	45	51	93%	56	64	55
	APR-JUL	25	29	32	91%	35	39	35
	APR-SEP	33	39	43	91%	47	52	47
Prineville Reservoir Inflow[2]	FEB-JUL	79	147	194	95%	240	310	205
	FEB-SEP	77	146	193	94%	240	310	205
	APR-JUL	34	68	90	88%	113	146	102
	APR-SEP	33	67	90	88%	113	147	102
Ochoco Reservoir Inflow[2]	FEB-JUL	17.1	30	39	98%	47	60	40
	FEB-SEP	16.1	29	38	95%	47	61	40
	APR-JUL	9.0	15.4	19.7	94%	24	30	21
	APR-SEP	8.3	15.0	19.5	98%	24	31	20

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Upper Deschutes and Crooked Basins Summary for January 1, 2015

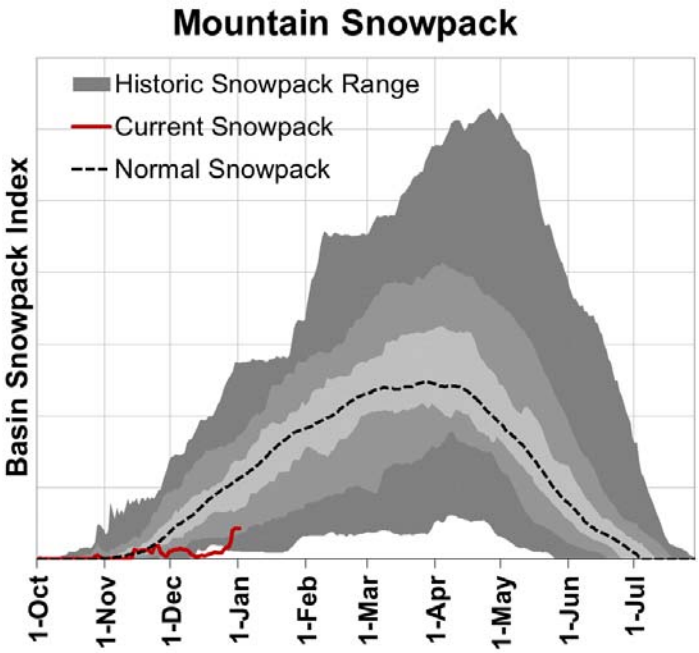
Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Crane Prairie	45.9	35.2	35.6	55.3
Crescent Lake	69.2	59.7	44.0	86.9
Ochoco	20.9	10.0	17.1	47.5
Prineville	93.5	79.3	82.6	153.0
Wickiup	139.7	143.2	140.8	200.0

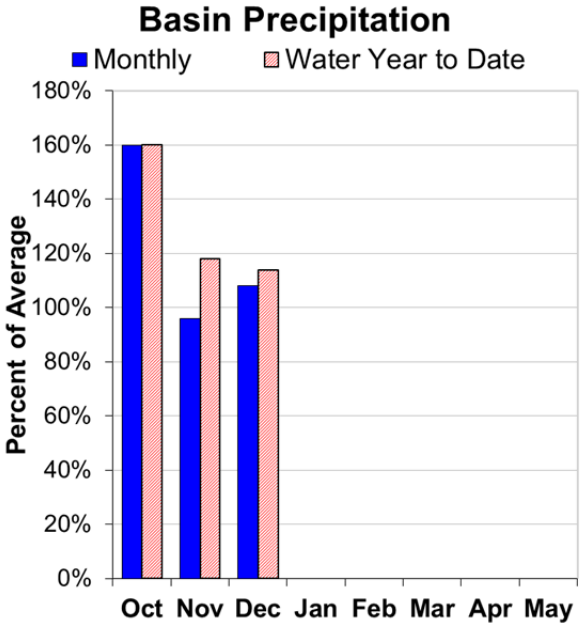
Snowpack Summary by Basin		Basin Snowpack % of 30-Year Median	
	# of Sites	Current Yr	Last Yr
Little Deschutes Basin	4	37%	28%
Upper Crooked Basin	3	69%	29%
Upper Deschutes Basin	12	37%	23%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Snow Mountain SNOTEL	6230	1-Jan	20	5.8	1.5	3.3	176%
Derr. SNOTEL	5850	1-Jan	25	6.1	1.7	5.7	107%
Three Creeks Meadow SNOTEL	5690	1-Jan	19	4.2	1.7	6.9	61%
Summit Lake SNOTEL	5610	1-Jan	26	6.6	4.9	16.3	40%
Bald Peter Snow Course	5600	5-Jan	13	3.0	1.2	10.8	28%
Irish Taylor SNOTEL	5540	1-Jan	30	8.3	6.5	14.6	57%
Ochoco Meadows SNOTEL	5430	1-Jan	10	1.9	1.9	4.4	43%
Ochoco Meadows Snow Course	5190	2-Jan	10	3.1		3.9	79%
Racing Creek Snow Course	5160	5-Jan	8	1.6	0.0	6.0	27%
Cascade Summit SNOTEL	5100	1-Jan	26	6.5	4.2	14.1	46%
Roaring River SNOTEL	4950	1-Jan	17	2.9	2.5	12.6	23%
New Crescent Lake SNOTEL	4910	1-Jan	5	1.0	1.5	6.1	16%
Chemult Alternate SNOTEL	4850	1-Jan	4	1.0	0.8	4.6	22%
Hogg Pass SNOTEL	4790	1-Jan	15	2.7	1.8	11.6	23%
McKenzie SNOTEL	4770	1-Jan	26	6.5	5.7	18.5	35%
Marks Creek Snow Course	4580	2-Jan	5	0.6	0.0	2.4	25%
Salt Creek Falls SNOTEL	4220	1-Jan	21	4.3	1.5	8.6	50%
Santiam Jct. SNOTEL	3740	1-Jan	11	1.9	0.0	9.0	21%

Hood, Sandy, and Lower Deschutes Basins

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 38% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 22% of normal.

PRECIPITATION

December precipitation was 108% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 114% of average.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 87% to 92% of average.

Hood, Sandy and Lower Deschutes Basins Summary for January 1, 2015

Forecast Exceedance Probabilities for Risk Assessment *

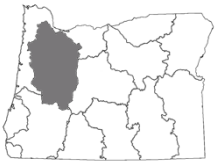
Streamflow Forecasts January 1, 2015	Forecast Period	←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
WF Hood River nr Dee	APR-JUL	71	95	111	93%	127	151	120
	APR-SEP	85	111	128	92%	145	171	139
Hood R at Tucker Bridge	APR-JUL	137	171	193	86%	215	250	225
	APR-SEP	167	205	230	87%	255	290	265
Sandy R nr Marmot	APR-JUL	210	255	285	92%	315	355	310
	APR-SEP	250	295	330	92%	360	405	360

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Clear Lake	3.7	3.3	2.8	11.9

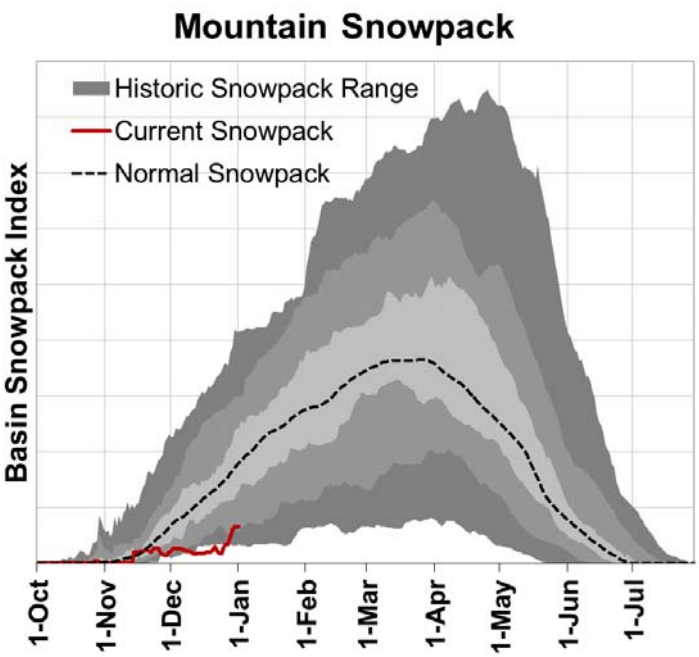
Snowpack Summary by Basin	# of Sites	Basin Snowpack % of 30-Year Median Current Yr	Last Yr
Lower Columbia - Sandy Basin	7	41%	26%
Lower Deschutes Basin	8	39%	20%
Middle Columbia - Hood Basin	6	38%	25%

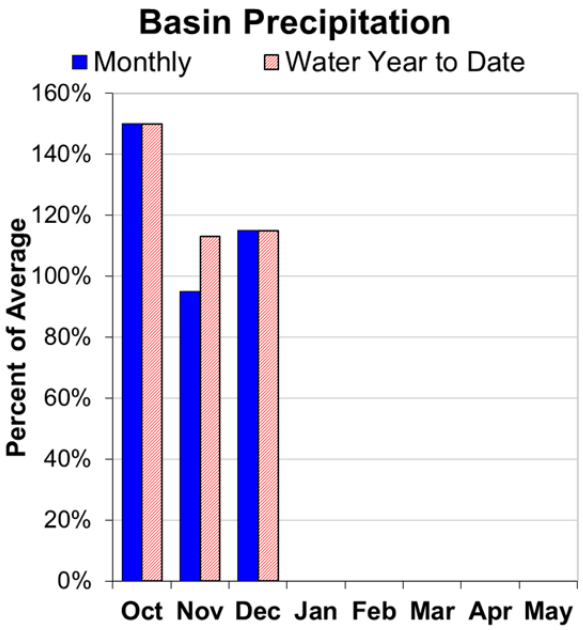
Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Bald Peter Snow Course	5600	5-Jan	13	3.0	1.2	10.8	28%
Mt Hood Test Site SNOTEL	5370	1-Jan	43	12.0	10.4	25.3	47%
Racing Creek Snow Course	5160	5-Jan	8	1.6	0.0	6.0	27%
Red Hill SNOTEL	4410	1-Jan	26	5.7	4.0	18.7	30%
Surprise Lakes SNOTEL	4290	1-Jan	27	8.3	5.2	19.9	42%
Beaver Creek #2 Snow Course	4220	2-Jan	11	2.0	0.0	4.6	43%
Beaver Creek #1 Snow Course	4210	2-Jan	14	3.0	0.0	5.9	51%
Mud Ridge SNOTEL	4070	1-Jan	23	4.0	2.9	11.0	36%
Clear Lake SNOTEL	3810	1-Jan	12	2.0	0.0	6.3	32%
Blazed Alder SNOTEL	3650	1-Jan	22	4.8	2.5	12.3	39%
Clackamas Lake SNOTEL	3400	1-Jan	10	1.7	0.2	5.4	31%
Greenpoint SNOTEL	3310	1-Jan	8	1.3	0.0	9.2	14%
North Fork SNOTEL	3060	1-Jan	14	3.0	1.2	6.8	44%
South Fork Bull Run SNOTEL	2690	1-Jan	9	1.7	0.0	0.5	340%



Willamette Basin

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 38% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 19% of normal.

PRECIPITATION

December precipitation was 115% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 115% of average.

RESERVOIR

Reservoir storage conditions vary widely across the basin. As of January 1, storage at published reservoirs ranged from 35% to 161% of average.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 87% to 104% of average.

Willamette Basin Summary for January 1, 2015

Streamflow Forecasts January 1, 2015	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment * ←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Hills Creek Reservoir Inflow[12]	FEB-MAY	200	315	370	97%	420	535	380
	APR-JUL	142	220	255	93%	290	370	275
	APR-SEP	178	260	295	94%	335	415	315
MF Willamette R bl NF nr Oakridge[12]	FEB-MAY	510	820	960	101%	1100	1410	950
	APR-JUL	360	570	665	96%	760	970	695
	APR-SEP	420	655	765	97%	875	1110	790
Lookout Point Reservoir Inflow[12]	FEB-MAY	550	835	965	97%	1090	1380	1000
	APR-JUL	400	600	690	95%	780	980	725
	APR-SEP	460	680	780	95%	880	1100	825
Fall Creek Reservoir Inflow[12]	FEB-MAY	125	180	205	108%	230	285	190
	APR-JUL	53	94	113	104%	132	173	109
	APR-SEP	57	99	118	104%	137	179	113
Cottage Grove Lake Inflow[12]	FEB-MAY	45	71	83	100%	94	120	83
	APR-JUL	13.8	31	39	95%	47	64	41
	APR-SEP	15.9	33	41	95%	49	67	43
Dorena Lake Inflow[12]	FEB-MAY	125	200	235	96%	270	345	245
	APR-JUL	55	104	126	93%	148	197	136
	APR-SEP	59	108	130	94%	153	200	139
McKenzie R bl Trail Bridge	FEB-MAY	240	270	290	102%	310	340	285
	APR-JUL	188	220	240	92%	260	290	260
	APR-SEP	255	290	315	91%	340	375	345
Cougar Lake Inflow[12]	FEB-MAY	174	245	275	98%	305	375	280
	APR-JUL	108	156	178	87%	200	250	205
	APR-SEP	133	182	205	87%	230	275	235
Blue Lake Inflow[12]	FEB-MAY	85	134	156	100%	179	230	156
	APR-JUL	34	61	73	87%	85	112	84
	APR-SEP	37	63	75	87%	86	112	86
McKenzie R nr Vida[1]	FEB-MAY	930	1200	1320	105%	1440	1710	1260
	APR-JUL	600	775	855	88%	935	1110	970
	APR-SEP	765	960	1050	88%	1140	1330	1190
Detroit Lake Inlfow[12]	FEB-MAY	540	685	750	103%	815	960	730
	APR-JUL	320	450	510	96%	570	700	530
	APR-SEP	385	525	585	96%	645	785	610
Little North Santiam R nr Mehama[1]	FEB-MAY	155	210	230	105%	255	310	220
	APR-JUL	73	112	129	97%	147	185	133
	APR-SEP	80	118	136	96%	153	192	141

Willamette Basin Summary for January 1, 2015

Streamflow Forecasts January 1, 2015	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment * ←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Green Peter Lake Inflow[1,2]	FEB-MAY	290	440	510	106%	580	730	480
	APR-JUL	137	230	275	98%	320	415	280
	APR-SEP	152	245	290	98%	335	430	295
Foster Lake Inflow[1,2]	FEB-MAY	610	815	915	100%	1010	1220	915
	APR-JUL	255	425	500	94%	580	745	530
	APR-SEP	295	460	535	95%	610	775	565
South Santiam R at Waterloo[2]	FEB-MAY	715	895	1020	103%	1140	1320	990
	APR-JUL	305	440	535	96%	625	760	555
	APR-SEP	340	470	560	95%	650	785	590
Willamette R at Salem[1,2]	FEB-MAY	4330	6550	7560	101%	8570	10800	7490
	APR-JUL	2150	3520	4140	96%	4760	6130	4310
	APR-SEP	2490	3890	4520	96%	5150	6550	4730
Scoggins Reservoir Inflow[2]	FEB-JUL	23	34	42	105%	49	61	40
Oak Grove Fk ab Powerplant	APR-JUL	82	102	115	100%	129	149	115
	APR-SEP	115	139	155	100%	171	195	155
Clackamas R above Three Lynx	APR-JUL	305	385	440	98%	495	575	450
	APR-SEP	380	465	525	98%	585	670	535
Clackamas R at Estacada	APR-JUL	405	520	600	96%	680	795	625
	APR-SEP	495	615	700	96%	780	905	730

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Blue River	4.0	3.5	9.6	85.5
Cottage Grove	4.3	3.5	4.8	29.8
Cougar	57.4	37.6	53.5	155.2
Detroit	163.8	147.7	174.7	300.7
Dorena	22.4	8.3	13.9	70.5
Fall Creek	15.0	1.2	15.0	115.5
Fern Ridge	5.0	3.2	14.4	109.6
Foster	21.9	23.9	22.3	29.7
Green Peter	173.2	162.0	182.3	268.2
Hills Creek	106.9	84.7	104.8	200.2
Lookout Point	213.9	117.5	144.2	337.0
Timothy Lake	54.6	49.9	50.3	61.7
Henry Hagg Lake	36.8	32.9	31.9	53.0

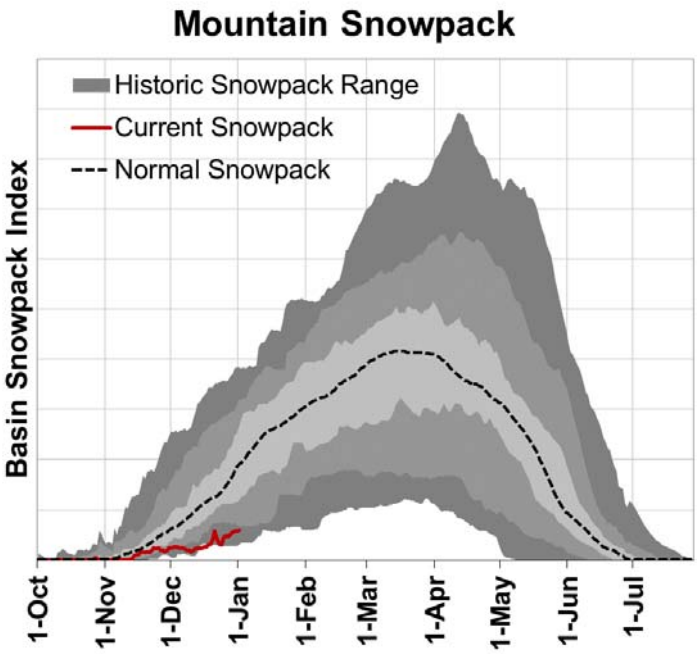
Willamette Basin Summary for January 1, 2015

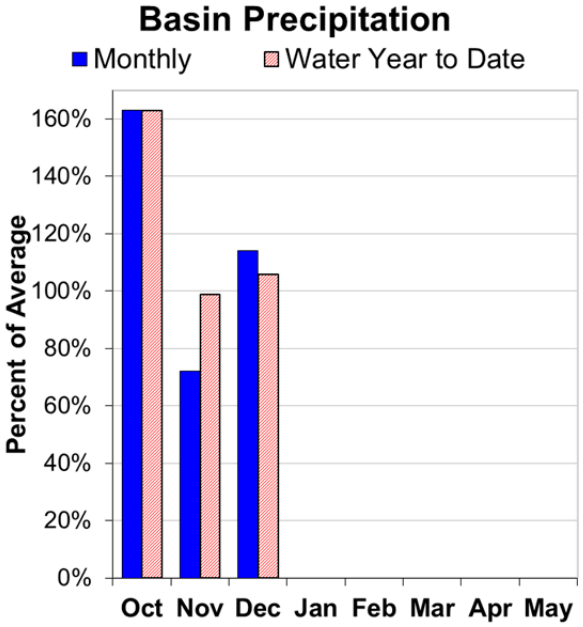
Snowpack Summary by Basin	Basin Snowpack % of 30-Year Median		
	# of Sites	Current Yr	Last Yr
Clackamas Basin	9	38%	22%
McKenzie Basin	7	36%	21%
Middle Fork Willamette Basin	7	41%	25%
North Santiam Basin	5	28%	8%
South Santiam Basin	4	38%	6%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Summit Lake SNOTEL	5610	1-Jan	26	6.6	4.9	16.3	40%
Irish Taylor SNOTEL	5540	1-Jan	30	8.3	6.5	14.6	57%
Cascade Summit SNOTEL	5100	1-Jan	26	6.5	4.2	14.1	46%
Roaring River SNOTEL	4950	1-Jan	17	2.9	2.5	12.6	23%
Holland Meadows SNOTEL	4930	1-Jan	13	2.8	0.0	10.8	26%
Hogg Pass SNOTEL	4790	1-Jan	15	2.7	1.8	11.6	23%
Mckenzie SNOTEL	4770	1-Jan	26	6.5	5.7	18.5	35%
Bear Grass SNOTEL	4720	1-Jan	27	5.3	4.4		
Beaver Creek #2 Snow Course	4220	2-Jan	11	2.0	0.0	4.6	43%
Salt Creek Falls SNOTEL	4220	1-Jan	21	4.3	1.5	8.6	50%
Beaver Creek #1 Snow Course	4210	2-Jan	14	3.0	0.0	5.9	51%
Mud Ridge SNOTEL	4070	1-Jan	23	4.0	2.9	11.0	36%
Little Meadows SNOTEL	4020	1-Jan	19	3.7	1.5	10.8	34%
Clear Lake SNOTEL	3810	1-Jan	12	2.0	0.0	6.3	32%
Santiam Jct. SNOTEL	3740	1-Jan	11	1.9	0.0	9.0	21%
Daly Lake SNOTEL	3690	1-Jan	16	3.0	0.0	6.8	44%
Jump Off Joe SNOTEL	3520	1-Jan	15	2.9	0.0	5.2	56%
Peavine Ridge SNOTEL	3420	1-Jan	11	2.6	0.0	6.3	41%
Clackamas Lake SNOTEL	3400	1-Jan	10	1.7	0.2	5.4	31%
Smith Ridge SNOTEL	3270	1-Jan	9	1.5	0.0		
Saddle Mountain SNOTEL	3110	1-Jan	4	0.5	0.0		
Railroad Overpass SNOTEL	2680	1-Jan	0	0.0	0.0	0.0	
Marion Forks SNOTEL	2590	1-Jan	2	0.5	0.0	3.8	13%
Seine Creek SNOTEL	2060	1-Jan	0	0.0	0.0	0.0	
Miller Woods SNOTEL	420	1-Jan	0	0.0	0.0		

Rogue and Umpqua Basins

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 37% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 19% of normal.

PRECIPITATION

December precipitation was 114% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 106% of average.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of January 1, storage at published reservoirs was 51% of average and 27% percent of capacity.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 80% to 96% of average.

Rogue and Umpqua Basins Summary for January 1, 2015

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions----------Wetter--------→						
Streamflow Forecasts January 1, 2015	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**30-Yr Avg (KAF)**
Hyatt Reservoir Inflow[2]	APR-JUL	0.50	0.73	1.85	51%	3.0	4.6	3.6
South Umpqua R at Tiller	APR-JUL	81	134	171	89%	205	260	193
	APR-SEP	88	143	179	90%	215	270	200
Cow Ck nr Azalea[2]	FEB-JUL	4.5	22	33	92%	45	62	36
	APR-JUL	1.70	8.7	13.4	91%	18.1	25	14.7
	APR-SEP	2.0	9.3	14.3	90%	19.3	27	15.9
South Umpqua R nr Brockway	APR-JUL	132	265	350	90%	440	570	390
	APR-SEP	143	275	370	90%	460	595	410
North Umpqua R at Winchester	APR-JUL	480	635	740	95%	845	1000	775
	APR-SEP	585	745	855	96%	965	1120	890
Lost Creek Lk Inflow[2]	FEB-JUL	505	635	725	91%	810	940	795
	FEB-SEP	600	745	840	91%	935	1080	920
	APR-JUL	330	415	470	90%	525	605	520
	APR-SEP	425	520	585	91%	650	745	645
Rogue R at Raygold[2]	APR-JUL	330	490	600	89%	710	875	675
	APR-SEP	435	610	725	90%	840	1010	805
Rogue R at Grants Pass[2]	APR-JUL	330	515	640	88%	765	950	725
	APR-SEP	425	620	755	89%	890	1090	845
Applegate Lake Inflow[2]	FEB-JUL	36	116	170	87%	225	305	195
	FEB-SEP	39	120	175	88%	230	310	200
	APR-JUL	21	62	90	83%	118	159	109
	APR-SEP	24	66	95	83%	124	166	115
Sucker Ck bl Little Grayback Ck	APR-JUL	11.1	30	43	78%	56	76	55
	APR-SEP	13.7	33	47	80%	60	80	59
Illinois R nr Kerby	APR-JUL	34	107	156	83%	205	280	188
	APR-SEP	38	111	161	83%	210	285	193

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Applegate	6.8	1.2	10.2	75.2
Emigrant Lake	9.3	8.7	17.2	39.0
Fish Lake	3.2	3.4	4.7	8.0
Fourmile Lake	4.4	2.6	6.7	16.1
Howard Prairie	18.1	34.9	35.5	60.0
Hyatt Prairie	2.8	9.4	9.6	16.1
Lost Creek	164.6	126.2	137.6	315.0

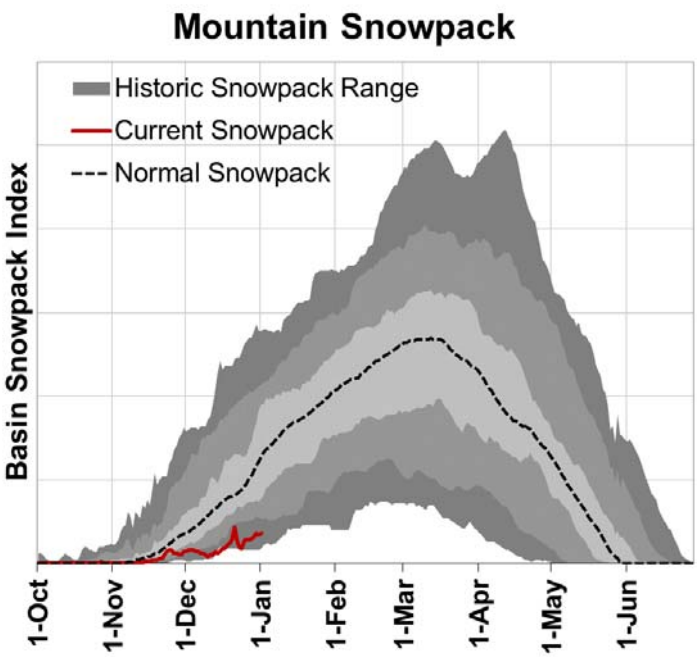
Rogue and Umpqua Basins Summary for January 1, 2015

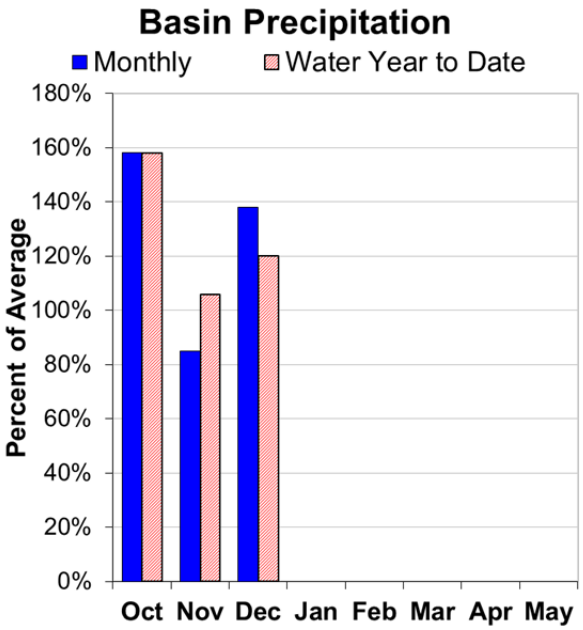
Snowpack Summary by Basin	Basin Snowpack % of 30-Year Median		
	# of Sites	Current Yr	Last Yr
Applegate Basin	2	31%	5%
Middle Rogue Basin	5	78%	0%
North Umpqua Basin	6	37%	27%
South Umpqua Basin	9	48%	18%
Upper Rogue Basin	11	37%	19%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Park H.Q. Rev Snow Course	6570	30-Dec	51	15.8	6.4	20.6	77%
Big Red Mountain SNOTEL	6050	1-Jan	15	4.0	0.7	10.0	40%
Annie Springs SNOTEL	6010	1-Jan	25	8.0	2.2	17.3	46%
Fourmile Lake SNOTEL	5970	1-Jan	19	4.7	2.5	13.4	35%
Cold Springs Camp SNOTEL	5940	1-Jan	9	2.1	1.9	14.0	15%
Sevenmile Marsh SNOTEL	5700	1-Jan	11	2.4	1.9	12.5	19%
Summit Lake SNOTEL	5610	1-Jan	26	6.6	4.9	16.3	40%
Billie Creek Divide SNOTEL	5280	1-Jan	11	2.4	1.5	10.4	23%
Diamond Lake SNOTEL	5280	1-Jan	8	1.5	1.5	6.6	23%
Bigelow Camp SNOTEL	5130	1-Jan	5	0.7	0.0	5.1	14%
Beaver Dam Creek Snow Course	5120	29-Dec	8	1.9	0.5	6.3	30%
King Mountain 1 Snow Course	4760	31-Dec	10	1.5	0.0	2.2	68%
Deadwood Junction Snow Course	4660	29-Dec	8	1.8	0.3	4.2	43%
Fish Lk. SNOTEL	4660	1-Jan	6	1.2	2.3	5.1	24%
Howard Prairie Snow Course	4580	29-Dec	2	0.4	0.1	3.1	13%
Howard Prairie SNOTEL	4580	1-Jan	3	0.6	0.6		
Siskiyou Summit Rev Snow Course	4560	29-Dec	6	0.8	0.0	2.3	35%
Red Butte 1 Snow Course	4460	30-Dec	13	2.0	0.3	4.6	43%
King Mountain SNOTEL	4340	1-Jan	4	1.5	0.0	1.5	100%
Red Butte 2 Snow Course	4050	30-Dec	5	0.5	0.0	1.1	45%
King Mountain 3 Snow Course	3680	31-Dec	5	0.7	0.0	0.0	
Silver Burn Snow Course	3680	30-Dec	6	0.7	1.3	5.3	13%
Red Butte 3 Snow Course	3500	30-Dec	4	0.3	0.0	0.4	75%
Toketee Airstrip SNOTEL	3240	1-Jan	1	0.4	1.4	1.3	31%
King Mountain 4 Snow Course	3050	31-Dec	1	0.2	0.0	0.0	

Klamath Basin

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 37% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 19% of normal.

PRECIPITATION

December precipitation was 138% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 120% of average.

RESERVOIR

Reservoir storage conditions vary widely across the basin. As of January 1, reservoir storage ranged from 15% of average at Clear Lake to 103% of average at Upper Klamath Lake.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 39% to 56% of average.

Klamath Basin Summary for January 1, 2015

Streamflow Forecasts January 1, 2015	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment * ←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Clear Lake Inflow[2]	FEB-JUL	1.86	26	42	45%	94	145	93
	APR-SEP	0.70	7.7	14.0	40%	34	54	35
Gerber Resvervoir Inflow[2]	FEB-JUL	1.23	11.8	19.0	46%	42	65	41
	APR-SEP	0.29	1.41	5.6	39%	15.6	26	14.4
Sprague R nr Chiloquin	JAN-SEP	89	191	260	73%	329	431	355
	FEB-JUL	19.7	115	180	61%	245	340	295
	FEB-SEP	29	128	195	61%	262	361	320
	APR-JUL	35	97	100	53%	181	243	188
Williamson R bl Sprague nr Chiloquin	JAN-SEP	247	378	400	67%	555	686	595
	FEB-JUL	140	260	290	61%	423	543	475
	APR-SEP	115	196	200	56%	305	385	355
Upper Klamath Lake Inflow[1,2]	JAN-SEP	176	488	630	67%	772	1084	940
	FEB-JUL	121	388	440	61%	632	899	720
	MAR-SEP	24	269	380	58%	491	736	655
	APR-SEP	62	240	250	52%	400	578	480

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Clear Lake, CA	28.6	45.7	187.7	513.3
Gerber	10.6	10.1	39.6	94.3
Upper Klamath Lake	283.2	223.5	275.4	523.7

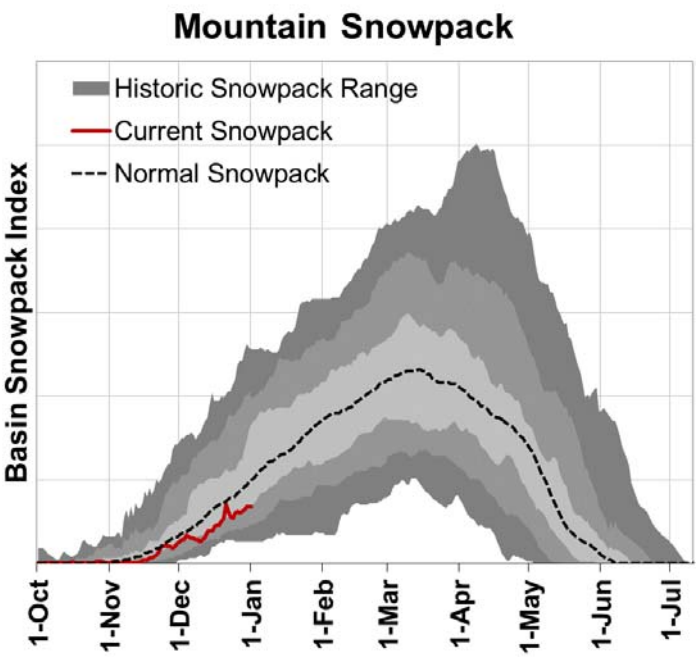
Snowpack Summary by Basin	# of Sites	Basin Snowpack % of 30-Year Median Current Yr	Last Yr
Lost Basin	3	10%	14%
Sprague Basin	4	49%	22%
Upper Klamath Lake Basin	8	39%	19%
Williamson River Basin	5	51%	21%

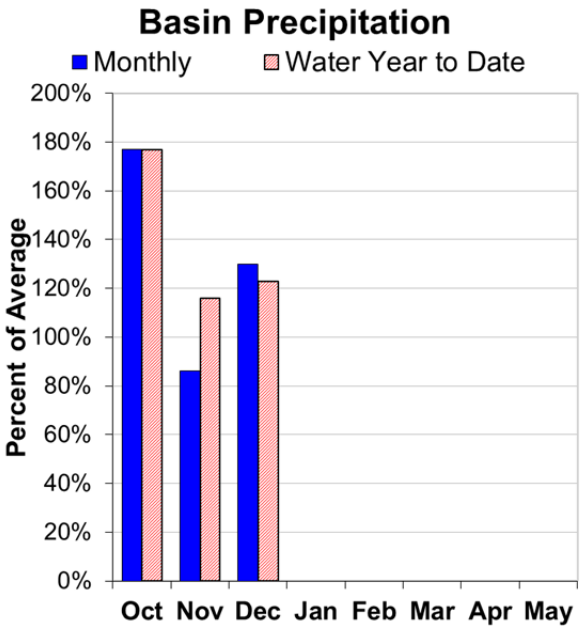
Klamath Basin Summary for January 1, 2015

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Summer Rim SNOTEL	7080	1-Jan	22	5.2	2.8	7.2	72%
Swan Lake Mtn SNOTEL	6830	1-Jan	25	7.4			
Park H.Q. Rev Snow Course	6570	30-Dec	51	15.8	6.4	20.6	77%
Crazyman Flat SNOTEL	6180	1-Jan	11	3.6	0.4	8.4	43%
Annie Springs SNOTEL	6010	1-Jan	25	8.0	2.2	17.3	46%
Fourmile Lake SNOTEL	5970	1-Jan	19	4.7	2.5	13.4	35%
Cold Springs Camp SNOTEL	5940	1-Jan	9	2.1	1.9	14.0	15%
Strawberry SNOTEL	5770	1-Jan	2	0.5	0.0	2.2	23%
Silver Creek SNOTEL	5740	1-Jan	8	2.1	1.6	4.0	53%
Quartz Mountain SNOTEL	5720	1-Jan	1	0.3	0.0	0.9	33%
Sevenmile Marsh SNOTEL	5700	1-Jan	11	2.4	1.9	12.5	19%
State Line SNOTEL	5680	1-Jan	0	0.0			
Sun Pass SNOTEL	5400	1-Jan	6	2.0	1.3		
Billie Creek Divide SNOTEL	5280	1-Jan	11	2.4	1.5	10.4	23%
Diamond Lake SNOTEL	5280	1-Jan	8	1.5	1.5	6.6	23%
Crowder Flat SNOTEL	5170	1-Jan	0	0.0	0.4	1.6	0%
Beaver Dam Creek Snow Course	5120	29-Dec	8	1.9	0.5	6.3	30%
Taylor Butte SNOTEL	5030	1-Jan	1	0.4	0.4	3.6	11%
Gerber Reservoir SNOTEL	4890	1-Jan	0	0.0	0.3	1.2	0%
Chemult Alternate SNOTEL	4850	1-Jan	4	1.0	0.8	4.6	22%
Deadwood Junction Snow Course	4660	29-Dec	8	1.8	0.3	4.2	43%
Fish Lk. SNOTEL	4660	1-Jan	6	1.2	2.3	5.1	24%
Howard Prairie SNOTEL	4580	1-Jan	3	0.6	0.6		
Howard Prairie Snow Course	4580	29-Dec	2	0.4	0.1	3.1	13%
Siskiyou Summit Rev Snow Course	4560	29-Dec	6	0.8	0.0	2.3	35%

Lake County and Goose Lake

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was 73% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 26% of normal.

PRECIPITATION

December precipitation was 130% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 123% of average—the highest in the state.

RESERVOIR

Reservoir storage across the basin is currently well below average. As of January 1, storage at published reservoirs was 28% of average and 11% percent of capacity.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 74% to 83% of average.

Lake County and Goose Lake Basins Summary for January 1, 2015

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions----------Wetter--------→						
Streamflow Forecasts January 1, 2015	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Twentymile Ck nr Adel	MAR-JUL	3.0	9.7	23	85%	36	56	27
	APR-SEP	2.0	5.0	14.5	83%	24	38	17.4
Deep Ck ab Adel	MAR-JUL	20	46	64	81%	82	108	79
	APR-SEP	16.8	37	51	78%	65	85	65
Honey Ck nr Plush	MAR-JUL	1.88	6.6	13.3	78%	20	30	17.1
	APR-SEP	1.50	5.0	10.5	74%	16.0	24	14.1
Chewaucan R nr Paisley	MAR-JUL	27	53	71	85%	88	114	84
	APR-SEP	24	46	61	81%	76	98	75

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

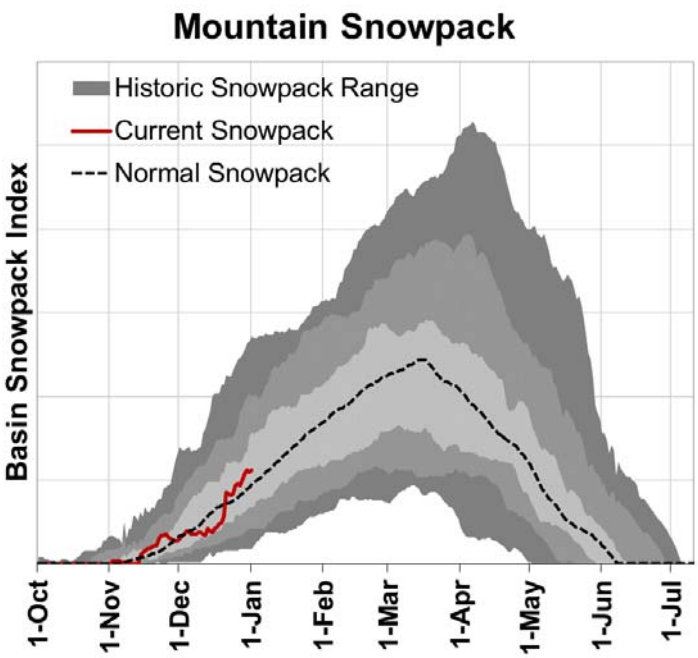
Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Cottonwood	2.1	0.4	3.3	8.7
Drews	6.2	11.2	25.6	63.0

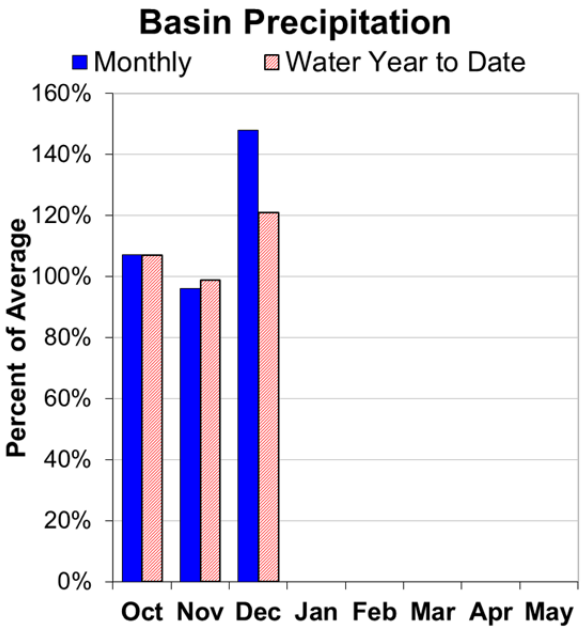
Snowpack Summary by Basin		Basin Snowpack % of 30-Year Median	
	# of Sites	Current Yr	Last Yr
Goose Lake Basin	4	94%	22%
Lake Abert Basin	2	80%	29%
Summer Lake Basin	10	73%	25%
Upper Pit Basin	3	53%	24%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Dismal Swamp SNOTEL	7360	1-Jan	40	10.9	3.2	9.3	117%
Summer Rim SNOTEL	7080	1-Jan	22	5.2	2.8	7.2	72%
Cedar Pass SNOTEL	7030	1-Jan	16	4.8	2.2	6.5	74%
Patton Meadows AM	6800	1-Jan	12	3.1	1.4		
Hart Mountain AM	6430	1-Jan	3	0.9	0.0		
Rogger Meadow AM	6360	1-Jan	7	1.8	1.4		
Adin Mtn SNOTEL	6190	1-Jan	6	2.0	0.5	4.7	43%
Crazyman Flat SNOTEL	6180	1-Jan	11	3.6	0.4	8.4	43%
Camas Creek #3 Snow Course	5860	2-Jan	11	3.7	0.4	3.9	95%
Sheldon SCAN	5860	1-Jan	3	0.8	0.0	0.0	
Strawberry SNOTEL	5770	1-Jan	2	0.5	0.0	2.2	23%
Silver Creek SNOTEL	5740	1-Jan	8	2.1	1.6	4.0	53%
Crowder Flat SNOTEL	5170	1-Jan	0	0.0	0.4	1.6	0%

Harney Basin

January 1, 2015





Summary of Water Supply Conditions

SNOWPACK

As of January 1, the basin snowpack was the highest in Oregon at 121% of normal. This is significantly higher than last year on Jan 1, when the basin snowpack was 44% of normal.

PRECIPITATION

December precipitation was 148% of average. Precipitation since the beginning of the water year (October 1 - January 1) has been 121% of average.

STREAMFLOW FORECAST

April through September streamflow forecasts in the basin range from 79% to 88% of average.

Harney Basin Summary for January 1, 2015

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts January 1, 2015	Forecast Period	←--------Drier----------Future Conditions----------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	30-Yr Avg (KAF)
Silvies R nr Burns	MAR-JUL	14.2	66	101	82%	135	187	123
	APR-SEP	14.1	49	73	79%	97	132	92
Donner Und Blitzen R nr Frenchglen	MAR-JUL	30	48	61	85%	73	91	72
	APR-SEP	28	46	58	85%	70	88	68
Trout Ck nr Denio	MAR-JUL	2.0	5.4	7.7	89%	10.0	13.4	8.7
	APR-SEP	1.59	4.8	7.0	88%	9.1	12.3	8.0

* 90%, 70%, 50%, 30% & 10% exceedance probabilities are the chance that observed streamflow volume will exceed the forecasted volume

Snowpack Summary by Basin	# of Sites	Basin Snowpack % of 30-Year Median Current Yr	Last Yr
Alvord Lake Basin	2	133%	37%
Donner und Blitzen River Basin	2	123%	41%
Silvies River Basin	4	120%	38%
Upper Quinn Basin	4	77%	41%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Snow Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	30-Yr Median	% of 30-Yr Median
Granite Peak SNOTEL	8543	1-Jan	36	7.5	2.6	7.0	107%
Trout Creek AM	7890	1-Jan	32	7.4	1.8		
Fish Creek SNOTEL	7660	1-Jan	45	15.1	3.9	10.5	144%
Govt Corrals AM	7400	1-Jan	21	4.8	2.1		
Silvies SNOTEL	6990	1-Jan	19	4.4	2.5	5.3	83%
Buckskin Lower SNOTEL	6915	1-Jan	11	1.7	1.9	3.3	52%
V Lake AM	6600	1-Jan	5	1.2	0.9		
Disaster Peak SNOTEL	6500	1-Jan	11	2.3	0.9	2.6	88%
Hart Mountain AM	6430	1-Jan	3	0.9	0.0		
Snow Mountain SNOTEL	6230	1-Jan	20	5.8	1.5	3.3	176%
Lamance Creek SNOTEL	6000	1-Jan	7	1.2	1.4	3.6	33%
Blue Mountain Spring SNOTEL	5870	1-Jan	34	7.4	4.4	6.9	107%
Sheldon SCAN	5860	1-Jan	3	0.8	0.0	0.0	
Rock Springs SNOTEL	5290	1-Jan	9	0.7	0.6	1.9	37%
Starr Ridge SNOTEL	5250	1-Jan	13	2.9	1.4	2.8	104%
Lake Creek R.S. SNOTEL	5240	1-Jan	22	5.9	1.4	4.8	123%

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	Mar 21	May 2	Jun 13	**May 6**
Owyhee R nr Rome	1000 cfs	Mar 25	May 11	Jun 27	**May 18**
Owyhee R nr Rome	500 cfs	Apr 12	May 28	Jul 13	**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	54	300	545	**271**

UPPER DESCHUTES AND CROOKED BASINS					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
Crane Prairie Inflow *	Date of Peak	May 9	May 25	Jun 10	**May 25**
Crane Prairie Inflow	Peak Flow	270	435	600	**403**
Crane Prairie Inflow	Average Daily Flow on Oct. 1st	200	280	360	**269**
Prineville Reservoir Inflow	113 cfs	May 7	Jun 3	Jun 30	**June 3**
Prineville Reservoir Inflow	75 cfs	May 12	Jun 9	Jul 7	**June 11**
Prineville Reservoir Inflow	50 cfs	May 20	Jun 17	Jul 15	**June 19**
Whychus Creek nr Sisters	100 cfs	Jul 28	Aug 30	Oct 1	**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 16	Aug 5	Aug 27	**August 8**
South Umpqua R at Tiller	140 cfs	Jun 15	Jul 8	Aug 2	**July 11**
South Umpqua R at Tiller	90 cfs	Jul 4	Jul 28	Aug 22	**August 1**
South Umpqua R at Tiller	60 cfs	Jul 28	Aug 26	Sep 26	**August 28**

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

LAKE COUNTY AND GOOSE LAKE BASINS					
FORECAST POINT	*FORECAST THRESHOLD*	*FORECAST VALUE ---------- CHANCE OF EXCEEDING ----------*			*LONG-TERM AVERAGE VALUE*
		90%	*50%*	*10%*	
Deep Ck ab Adel	100 cfs	May 21	Jun 13	Jul 6	**June 17**
Honey Ck nr Plush	100 cfs	Apr 2	May 8	Jun 13	**May 16**
Honey Ck nr Plush	50 cfs	Apr 19	May 21	Jun 22	**June 4**
Twentymile Ck nr Adel	50 cfs	Apr 19	May 23	Jun 26	**May 30**
Twentymile Ck nr Adel	10 cfs	Jun 7	Jul 5	Aug 2	**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	Apr 22	May 17	Jun 11	**May 21**
Silvies R nr Burns	200 cfs	May 5	Jun 1	Jun 28	**June 2**
Silvies R nr Burns	100 cfs	May 12	Jun 11	Jul 11	**June 13**
Silvies R nr Burns	50 cfs	May 24	Jul 1	Aug 8	**July 3**
Donner Und Blitzen R nr Frenchglen	200 cfs	May 25	Jun 16	Jul 8	**June 20**
Donner Und Blitzen R nr Frenchglen	100 cfs	Jun 15	Jul 6	Jul 28	**July 9**

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) 414-3271
Web site: *http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/*

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

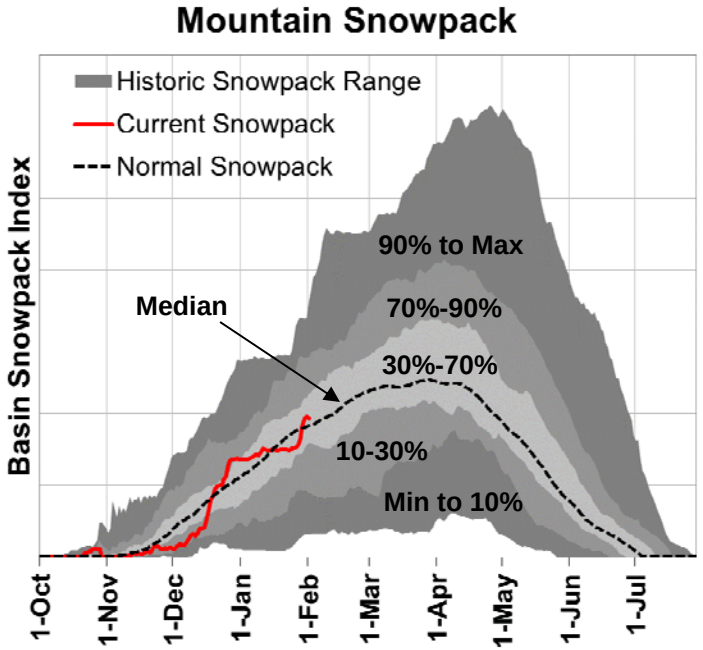
** 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.*

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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