United States
Department of
Agriculture

Natural Resources
Conservation
Service

Oregon
Basin Outlook Report

May 1, 2017

Gerber Dam spills water over its spillway for the first time since 2006
Photo courtesy of Tony Kittner CPG (Hydrologist, US Bureau of Reclamation, Klamath Falls OR)

Water year 2017 has provided yet another month of above normal precipitation. Low and mid elevation snow monitoring sites are well into their spring snowmelt period, but many higher elevation sites continue to build their snowpacks, leaving all basins in the state with above normal snowpacks as of May 1st. Copious amounts of rain, paired with pulses of snowmelt during warmer storms this winter have filled most reservoirs to above normal levels. Many are spilling water over spillways for the first time in recent years as shown above at Gerber Reservoir in the Klamath Basin. Summer streamflows are forecast to be above normal to well above normal for the entire state.

Contents

General Outlook

May 1st, 2017

SUMMARY

For the first time in six years, Oregon experienced an above normal snowpack throughout the entire winter. Storm systems continued to pummel the state during April, which marked the 5th month in a row with above average precipitation. Temperatures remained cold enough in the mountains for precipitation to mostly fall as snow all season and as of May 1st, the remaining snowpack continues to be well above normal. The ample moisture received this season not only provided the mountains with deep snow and valleys with unusual amounts, but also contributed to above average streamflows and reservoir levels for this time of year. These conditions have also boosted confidence that summer streamflows will be above average for most streams and rivers in Oregon, which would be a welcome change for water users who will likely benefit from adequate water supplies this year. During March, the drought monitor removed all drought status from Oregon for the first time since 2011: http://droughtmonitor.unl.edu/.

SNOWPACK

The one consistent theme for Oregon's snowpack this year is that the mountains were flush with snow. Almost every site in the state accumulated more snowpack than normal at the peak of the season. In general, sites across Oregon reached 110% to 160% of normal peak snowpack levels this winter and the remaining mountain snowpack is still well above normal as of May 1st. During many past snow seasons, one side of the state has often had a normal snow season while the other part has had a deficit. The last time a snow season was consistently above normal throughout the state was in 2011. While the snowpack peaked well above normal at most sites this winter, March brought significant snowmelt that was triggered by unseasonably warm temperatures and heavy rain, which resulted in earlier than normal seasonal snowpack peaks at many sites. April's cooler temperatures slowed snowmelt to more normal rates while continuing to build the snowpack at the higher elevations.

As of May 1st, basin snowpack levels range from 126% of normal in the Owyhee and Malheur basins to 226% of normal in the John Day basin. Most of the significant snow left in the state is confined to the highest elevations, which is typical for this time of year, however the higher than normal quantity of snowpack remaining certainly stands out. The surplus of water stored in the currently high elevation snowpacks is demonstrated well by a snow course near Crater Lake, which has 94 inches of water in 14.5 feet of snow, 154% of normal, the deepest in the state! Most snow monitoring sites are actively experiencing snowmelt at normal rates, but higher elevation sites, such as this one, have continued to accumulate snow during April and haven't reached their seasonal peak yet. The amount of snow left in May is important, but snowmelt dynamics driven by temperatures and precipitation becomes equally important in shaping the coming water supply season. The well above normal amount of snow levels achieved at the peak this season and the fact that the remaining snow is above normal, allows for some breathing room in the event there are episodes of rapid snowmelt or dry spells. As for now, the seasonal snowpack conditions have led to very promising, above normal streamflow forecast results throughout the state.

PRECIPITATION

Since the water year began on October 1st, weather patterns have repeatedly brought unusual amounts of precipitation, first with the tail end of a typhoon coming ashore in October and again with several moisture laden atmospheric river events over the last few months. For the water year so far, record amounts of mountain precipitation were measured at 10 SNOTEL sites throughout the state, and many more recorded second highest amounts. The Rogue and Umpqua basin received the most water year to date precipitation at 149% of average but all basins have experienced well above average amounts of moisture this year.

The month of April was no different, adding another month with above average precipitation measured throughout the state. Overall, the Owyhee and Malheur basins received the most April precipitation at 149% of average and the lowest amounts fell in the Klamath basin, at still an impressive 124% of average.

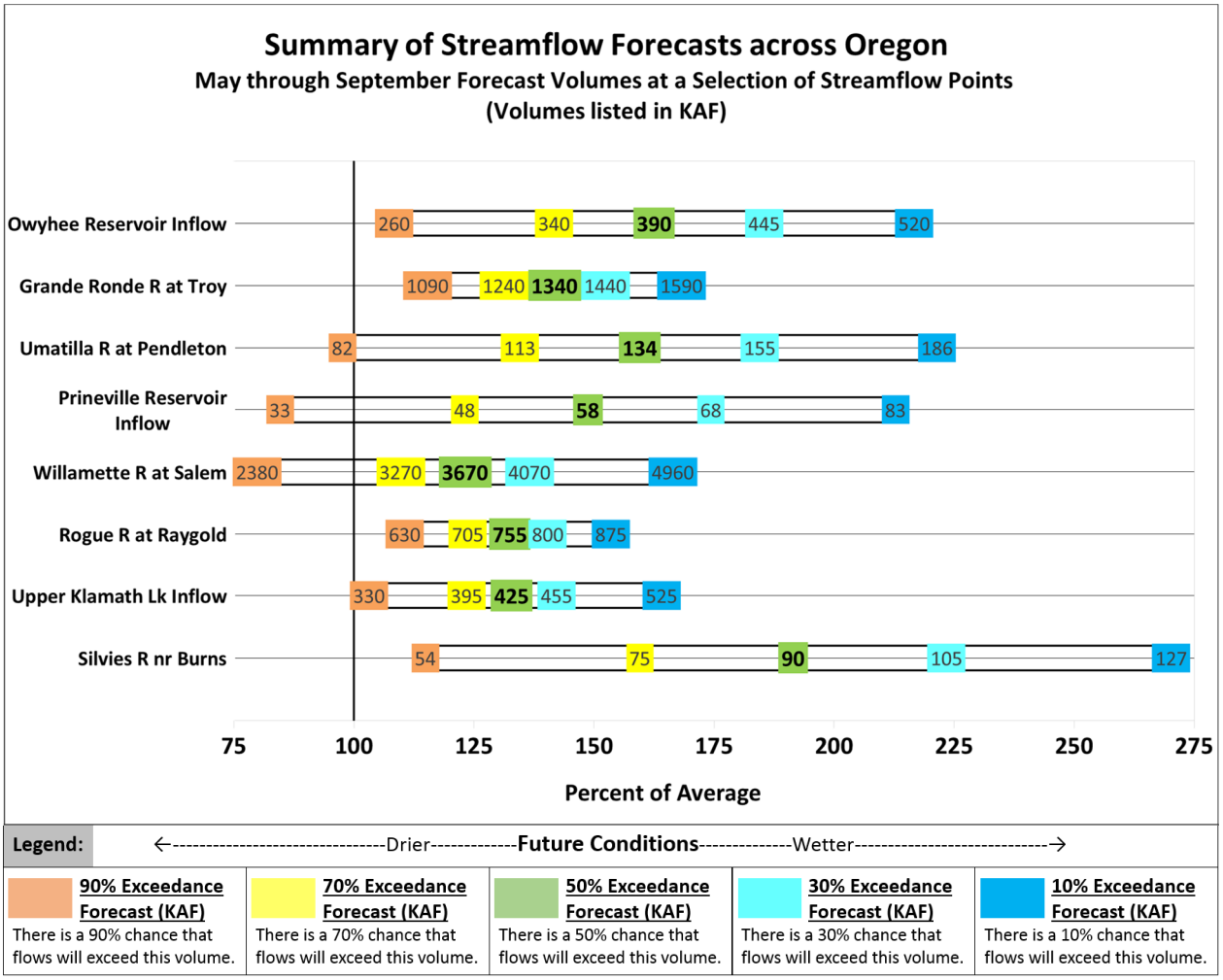
RESERVOIRS

After 5 consecutive months with above normal precipitation statewide, in addition to several pulses of low elevation snowmelt throughout the winter, reservoir storage is near normal to above normal with some reservoirs releasing water through spillways for the first time in years. Drews and Cottonwood reservoirs in the Lake County and Goose Lake region are currently storing the highest percent of average at 138%. Both of these reservoirs are at capacity and currently releasing water. Reservoirs showing the most recovery since the beginning of the water year are in the Owyhee and Malheur basins, where reservoirs have rebounded from only 53% of average on October 1st to 130% of average on May 1st. Basins currently storing the lowest percent of average reservoir storage (103%) are the Upper Deschutes and Crooked River basins as well as the Rogue basin, which shows that the reservoirs across Oregon are in a good position for both recreation and water supply this summer.

STREAMFLOW

Streams and rivers have been flowing above average throughout the state since February. Above average amounts of precipitation this entire season combined with recent snowmelt have fed streams a continual source of water. The higher streamflow volumes have kept reservoir operators busy with balancing flood control and water supply needs. All green lights in the precipitation and snowpack department yields forecasts that are calling for well above average flows for the spring and summer water supply season. 2011 was the last time all of Oregon experienced above average streamflow volumes during the May through September period.

To accompany the new forecast summary graphic on the following page, here are some helpful reminders about interpreting streamflow forecasts published in this document. For each forecast point, 5 possible streamflow volumes are predicted. Where the observed streamflow occurs within this spectrum depends on the range of future weather conditions. If water users wish to plan conservatively, they may lean toward using the 70% chance of exceedance forecast, or the drier forecast (which may be below average depending on the region). Conversely, if a water user believes future conditions will provide more water to the system, they could choose to use the 30% chance of exceedance forecast (the wetter forecast). These arrays of forecasts are shown in the chart on the following page and explained in more detail on page 36.



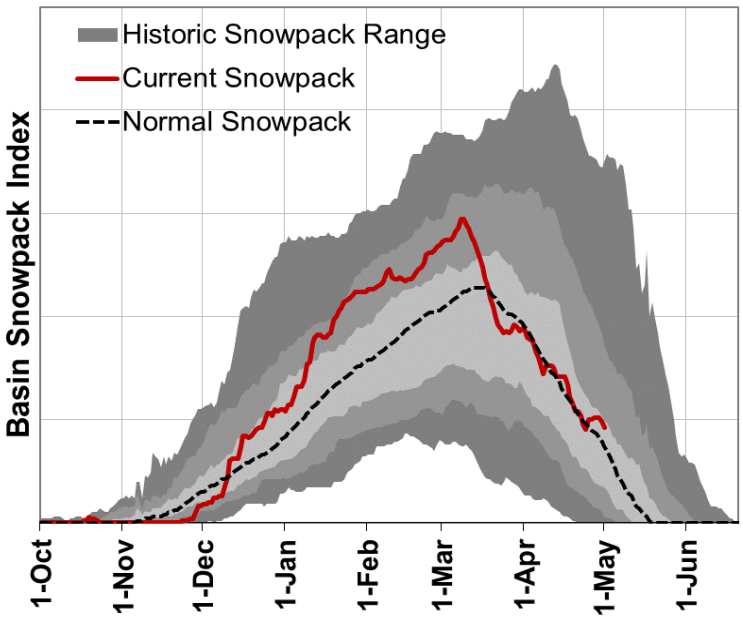
All forecasts are listed with units of 1000 acre-feet (KAF). This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators. This report will be updated monthly, January through June.

Note: A select set of streamflow forecasts have been discontinued in the Rogue, Grande Ronde and Willamette basins. Please contact us for more information.

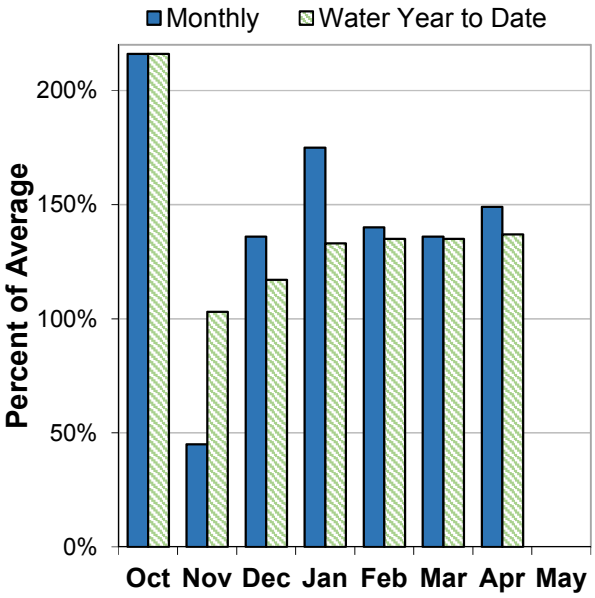
Owyhee and Malheur Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, many snow measurement sites in the basin are snow-free, which is typical for this time of year. However, the remaining snowpack at the higher elevation sites (above 7000 ft) is currently 126% of normal. In general, SNOTEL sites in the basin peaked around 100% to 150% of normal peak snowpack levels this winter. While the timing of the snowpack peak was near normal for most sites, several peaked up to 4 weeks earlier than normal.

PRECIPITATION

April precipitation was 149% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 137% of average. Two SNOTEL sites in the Nevada part of the basin set new records for the most October through April precipitation since measurements began at least 37 years ago: Laurel Draw (29.6"; 143% of average) and Big Bend (19.4"; 158% of average).

RESERVOIR

As of May 1, storage at major reservoirs in the basin ranges from 93% of average at Bully Creek Reservoir to 134% of average at Lake Owyhee. After several years of well below normal volumes, Lake Owyhee is reporting 100% of capacity as of May 1, which is the first time the lake has been full since the summer of 2011.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 163% to 203% of average. Water managers in the basin should expect well above normal streamflows this summer.

Owyhee And Malheur Basins Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
Owyhee R nr Rome	MAY-JUL	210	280	335	178%	385	460	188
	MAY-SEP	230	305	355	173%	410	485	205
Owyhee R bl Owyhee Dam[2]	MAY-JUL	230	305	360	171%	410	485	210
	MAY-SEP	260	340	390	163%	445	520	240
Malheur R nr Drewsey	MAY-JUL	45	57	66	200%	74	87	33
	MAY-SEP	47	60	69	203%	78	91	34
NF Malheur R at Beulah[2]	MAY-JUL	46	55	61	179%	67	75	34

* 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)**	**% of Average**	**Useable Capacity (KAF)**
Beulah	59.1	54.6	49.0	121%	59.2
Bully Creek	23.6	23.0	25.3	93%	23.7
Lake Owyhee	713.5	435.0	533.1	134%	715.0
Warm Springs	160.9	104.3	126.8	127%	169.6

Snowpack Summary by Basin		**Basin Snowpack % of Median**	
	# of Sites	**Current Yr**	**Last Yr**
East Little Owyhee Basin	2	192%	84%
South Fork Owyhee Basin	4	129%	66%
Upper Malheur Basin	3	163%	0%
Upper Owyhee Basin	5	129%	66%

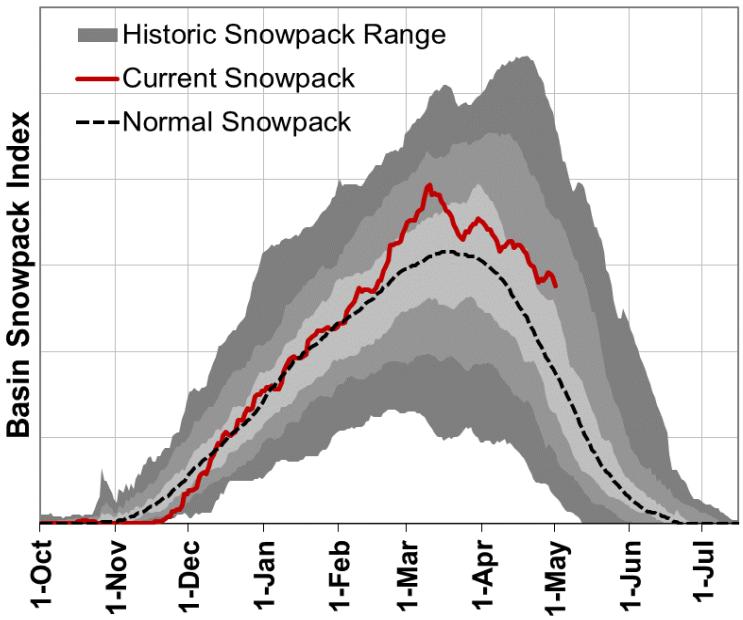
Owyhee And Malheur Basins Summary for May 1, 2017

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in)			
				Current SWE	Last Yr SWE	Median	% of Median
Granite Peak SNOTEL	8543	1-May	84	36.3	16.6	19.5	186%
Trout Creek AM	7890	1-May	30	13.8	0.5		
Toe Jam SNOTEL	7700	1-May	60	30.1	8.7		
Govt Corrals AM	7400	1-May	45	20.7	0.0		
Jack Creek Upper SNOTEL	7250	1-May	42	16.8	12.0	14.4	117%
Dobson Creek Snow Course	7084	2-May	74	32.6	23.8	27.1	120%
Reynolds-Dobson Divide Snow Course	7064	2-May	57	27.7	11.0	19.8	140%
Fawn Creek SNOTEL	7000	1-May	39	16.4	5.0	11.4	144%
Buckskin Lower SNOTEL	6915	1-May	3	1.6	0.0	0.2	800%
Reynolds West Fork #2 Snow Course	6798	2-May	56	25.8	10.1	18.4	140%
Big Bend SNOTEL	6700	1-May	0	0.0	0.0	0.0	
Fry Canyon SNOTEL	6700	1-May	0	0.0	0.0		
Laurel Draw SNOTEL	6697	1-May	0	0.0	0.0	0.0	
South Mtn. SNOTEL	6500	1-May	10	4.1	0.0	5.6	73%
Taylor Canyon SNOTEL	6200	1-May	0	0.0	0.0	0.0	
Blue Mountain Spring SNOTEL	5870	1-May	19	9.3	0.0	5.7	163%
Mud Flat SNOTEL	5730	1-May	0	0.0	0.0	0.0	
Democrat Creek Snow Course	5686	2-May	0	0.0	0.0	0.0	
Reynolds Creek SNOTEL	5600	1-May	0	0.0	0.0	0.0	
Rock Springs SNOTEL	5290	1-May	0	0.0	0.0	0.0	
Lake Creek R.S. SNOTEL	5240	1-May	0	0.0	0.0	0.0	

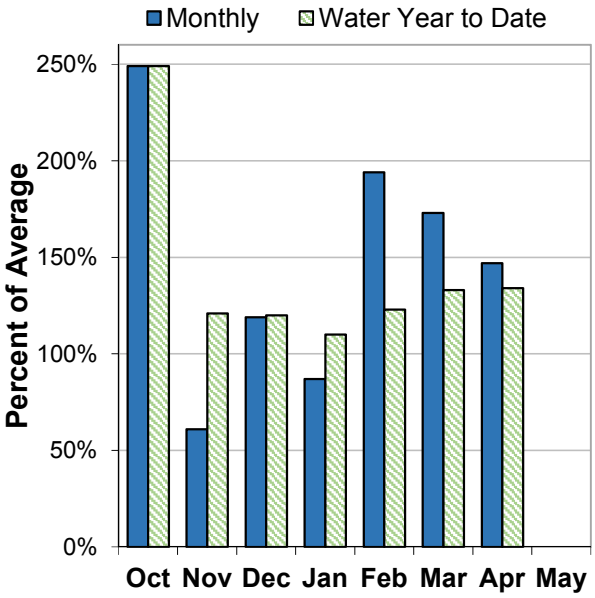
Grande Ronde, Powder, Burnt and Imnaha Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 150% of normal and most sites in the basin are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 100% to 140% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 147% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 134% of average. Out of 37 years of measurement, two SNOTEL site set new records for the highest April precipitation: Eilertson Meadows (4.3”; 191% of average) and Mt. Howard (8.5"; 183% of average). Both of these sites as well as two other long-term sites in the basin also set records for the most precipitation received October through April.

RESERVOIR

As of May 1, storage at major reservoirs in the basin ranges from 96% of average at Phillips Lake and Unity to 130% of average at Wallowa Lake.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 127% to 202% of average. Water managers in the basin should expect well above normal streamflows this summer.

Grande Ronde, Powder, Burnt And Imnaha Basins Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
Burnt R nr Hereford[2]	MAY-JUL	21	27	31	212%	35	41	14.6
	MAY-SEP	23	29	33	202%	38	44	16.3
Powder R nr Sumpter[2]	MAY-JUL	52	59	63	175%	68	75	36
	MAY-SEP	53	60	65	176%	70	77	37
Pine Ck nr Oxbow	MAY-JUL	126	147	161	144%	176	197	112
	MAY-SEP	133	154	169	143%	183	205	118
Imnaha R at Imnaha	MAY-JUL	250	280	305	153%	325	355	200
	MAY-SEP	280	310	330	150%	355	385	220
Catherine Ck nr Union	MAY-JUL	46	54	59	128%	64	72	46
	MAY-SEP	50	58	64	128%	69	77	50
Lostine R nr Lostine	MAY-JUL	117	124	129	132%	134	140	98
	MAY-SEP	128	136	141	133%	146	154	106
Bear Ck nr Wallowa	MAY-JUL	59	65	68	128%	72	77	53
	MAY-SEP	62	67	71	127%	75	80	56
Grande Ronde R at Troy	MAY-JUL	980	1130	1220	142%	1320	1470	860
	MAY-SEP	1090	1240	1340	142%	1440	1590	945

* 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)**	**% of Average**	**Useable Capacity (KAF)**
Phillips Lake	50.2	33.3	52.6	96%	73.5
Thief Valley	14.2	13.9	13.7	104%	13.3
Unity	23.2	24.8	24.1	96%	25.5
Wallowa Lake	26.3	26.7	20.2	130%	37.5
Wolf Creek	11.1	10.7	8.7	128%	11.1

Snowpack Summary by Basin		**Basin Snowpack % of Median**	
	# of Sites	**Current Yr**	**Last Yr**
Burnt Basin	2	445%	0%
Imnaha Basin	4	146%	92%
Lower Grande Ronde Basin	4	119%	50%
Powder Basin	8	150%	59%
Upper Grande Ronde Basin	8	150%	70%
Wallowa Basin	5	127%	73%

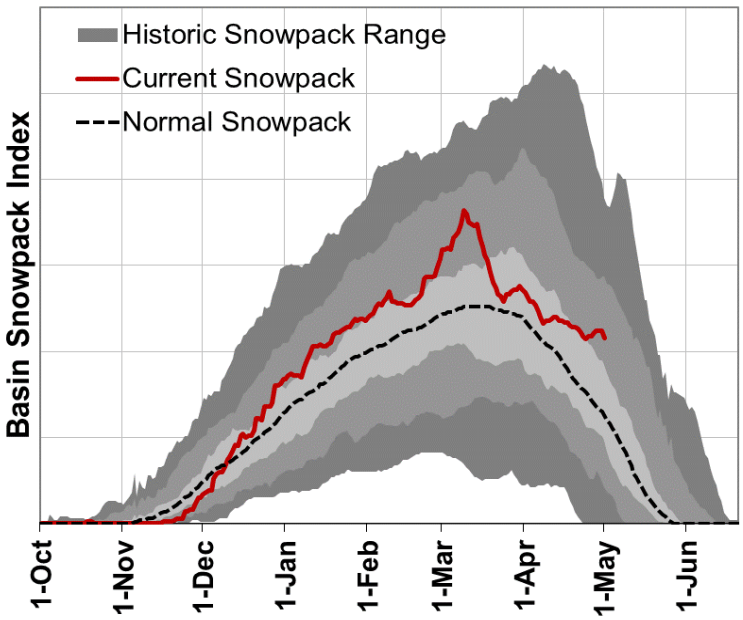
Grande Ronde, Powder, Burnt And Imnaha Basins Summary for May 1, 2017

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in)			
				Current SWE	Last Yr SWE	Median	% of Median
Mt. Howard SNOTEL	7910	1-May	66	26.2	14.1	16.8	156%
Aneroid Lake #2 SNOTEL	7400	1-May	75	32.5	26.6	25.2	129%
Anthony Lake (Rev) Snow Course	7160	3-May	69	34.0	23.0	26.9	126%
TV Ridge AM	7050	1-May	43	17.2	8.0	19.5	88%
Big Sheep AM	6230	1-May	67	28.8	17.6	19.2	150%
Bear Saddle SNOTEL	6180	1-May	54	20.4	10.0	10.3	198%
Bourne SNOTEL	5850	1-May	25	12.1	0.0	4.7	257%
Moss Springs SNOTEL	5760	1-May	61	25.9	17.1	18.5	140%
Taylor Green SNOTEL	5740	1-May	27	12.9	0.0	10.0	129%
Spruce Springs SNOTEL	5700	1-May	14	5.9	0.0	5.1	116%
Wolf Creek SNOTEL	5630	1-May	28	11.0	1.6	6.9	159%
West Branch SNOTEL	5560	1-May	37	15.1	2.2	8.9	170%
Touchet SNOTEL	5530	1-May	64	32.3	15.0	21.8	148%
Eilertson Meadows SNOTEL	5510	1-May	0	0.0	0.0	0.0	
Gold Center SNOTEL	5410	1-May	3	1.4	0.0	0.0	
Schneider Meadows SNOTEL	5400	1-May	57	27.0	14.0	17.3	156%
Beaver Reservoir SNOTEL	5150	1-May	0	0.0	0.0	0.0	
Tipton SNOTEL	5150	1-May	15	7.5	0.0	2.0	375%
High Ridge SNOTEL	4920	1-May	52	25.9	9.8	11.0	235%
County Line SNOTEL	4830	1-May	0	0.0	0.0	0.0	
Bowman Springs SNOTEL	4530	1-May	0	0.0	0.0	0.0	
Sourdough Gulch SNOTEL	4000	1-May	0	0.0	0.0	0.0	

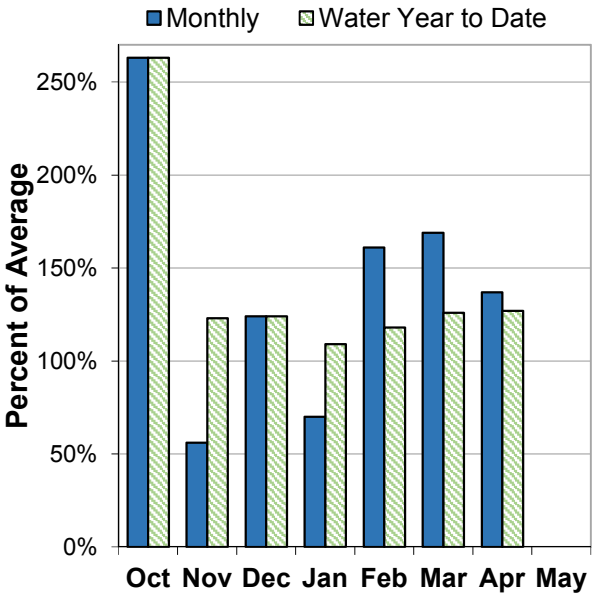
Umatilla, Walla Walla and Willow Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, about half of snow measurement sites in the basin are snow-free, which is typical for this time of year. However, the remaining snowpack at the higher elevation sites is currently 172% of normal. In general, SNOTEL sites in the basin peaked around 110% to 160% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 137% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 127% of average.

RESERVOIR

As of May 1, storage at major reservoirs in the basin ranges from 90% of average at Cold Springs Reservoir to 123% of average at Mckay Reservoir.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 133% to 164% of average. Water managers in the basin should expect well above normal streamflows this summer.

Umatilla, Walla Walla And Willow Basins Summary for May 1, 2017

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts May 1, 2017	Forecast Period	←--------Drier----------Future Conditions--------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	Average (KAF)
SF Walla Walla R nr Milton-Freewater	MAY-JUL	42	47	51	138%	55	61	37
	MAY-SEP	55	61	65	133%	69	75	49
Umatilla R ab Meacham nr Gibbon	MAY-JUL	43	57	67	160%	76	90	42
	MAY-SEP	49	63	72	150%	82	96	48
Umatilla R at Pendleton	MAY-JUL	77	108	129	163%	149	180	79
	MAY-SEP	82	113	134	160%	155	186	84
McKay Ck nr Pilot Rock	MAY-SEP	6.0	15.2	21	147%	28	37	14.3
Butter Ck nr Pine City	MAY-JUL	4.7	7.0	8.5	167%	10.0	12.3	5.1
	MAY-SEP	5.4	7.6	9.2	164%	10.7	13.0	5.6
Willow Ck ab Willow Lk nr Heppner	MAY-JUL	3.7	6.1	7.7	188%	9.3	11.7	4.1
Rhea Ck nr Heppner	MAY-JUL	3.6	5.7	7.2	176%	8.6	10.7	4.1

* 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)	% of Average	Useable Capacity (KAF)
Cold Springs	28.7	22.7	31.9	90%	38.6
Mckay	65.5	57.3	53.3	123%	71.5
Willow Creek	6.1	5.9	5.8	106%	9.8

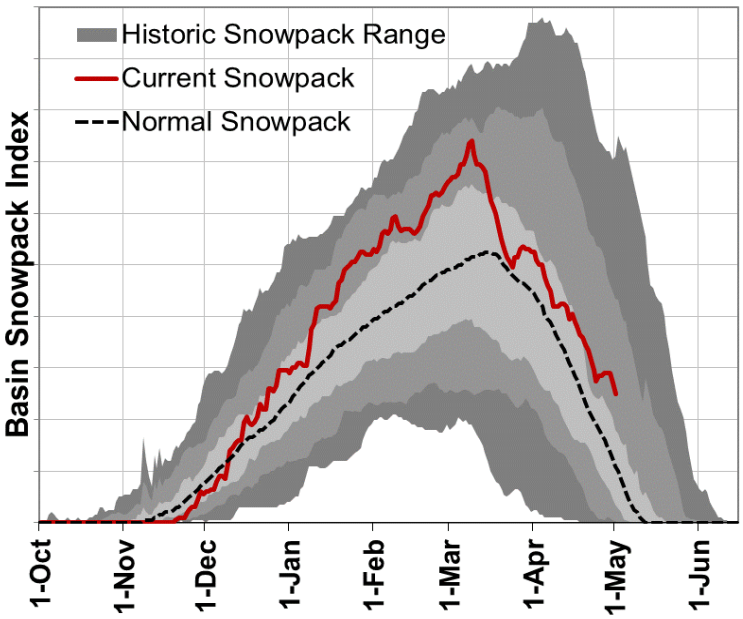
Snowpack Summary by Basin		Basin Snowpack % of Median	
	# of Sites	Current Yr	Last Yr
Umatilla Basin	5	195%	45%
Walla Walla Basin	7	172%	57%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Arbuckle Mtn SNOTEL	5770	1-May	38	17.1	0.0	11.0	155%
Spruce Springs SNOTEL	5700	1-May	14	5.9	0.0	5.1	116%
Touchet SNOTEL	5530	1-May	64	32.3	15.0	21.8	148%
Madison Butte SNOTEL	5150	1-May	0	0.0	0.0	0.0	
Lucky Strike SNOTEL	4970	1-May	0	0.0	0.0	0.0	
High Ridge SNOTEL	4920	1-May	52	25.9	9.8	11.0	235%
Bowman Springs SNOTEL	4530	1-May	0	0.0	0.0	0.0	
Emigrant Springs SNOTEL	3800	1-May	0	0.0	0.0	0.0	

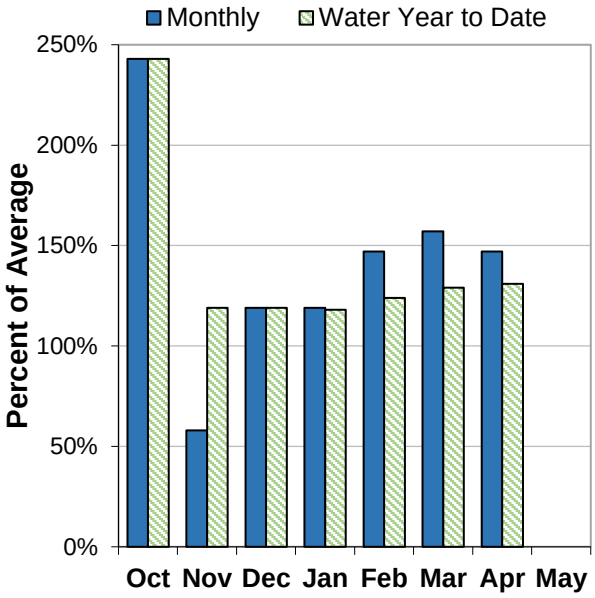
John Day Basin

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, about half of the measurement sites in the basin are snow-free, which is typical for this time of year. However, the remaining snowpack at the higher elevation sites is currently 226% of normal. In general, SNOTEL sites in the basin peaked around 100% to 160% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 147% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 131% of average. Two SNOTEL sites set new records for the most October through April precipitation recorded since measurements began in 1980: Gold Center (30.6"; 158% of average) and Tipton (26.2"; 138% of average).

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 132% to 145% of average. Water managers in the basin should expect well above normal streamflows this summer.

John Day Basin Summary for May 1, 2017

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts May 1, 2017	Forecast Period	←--------Drier----------Future Conditions--------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	Average (KAF)
Strawberry Ck nr Prairie City	MAY-JUL	7.6	8.9	9.8	134%	10.8	12.1	7.3
	MAY-SEP	8.5	9.9	10.8	137%	11.8	13.2	7.9
Mountain Ck nr Mitchell	MAY-JUL	2.7	3.5	4.0	143%	4.6	5.4	2.8
	MAY-SEP	2.8	3.6	4.2	145%	4.7	5.5	2.9
Camas Ck nr Ukiah	MAY-JUL	10.4	18.0	23	131%	28	36	17.5
	MAY-SEP	11.2	18.9	24	132%	29	37	18.2
MF John Day R at Ritter	MAY-JUL	79	97	109	145%	121	139	75
	MAY-SEP	85	103	115	144%	128	146	80
NF John Day R at Monument	MAY-JUL	355	435	490	138%	550	630	355
	MAY-SEP	375	460	515	137%	570	655	375

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

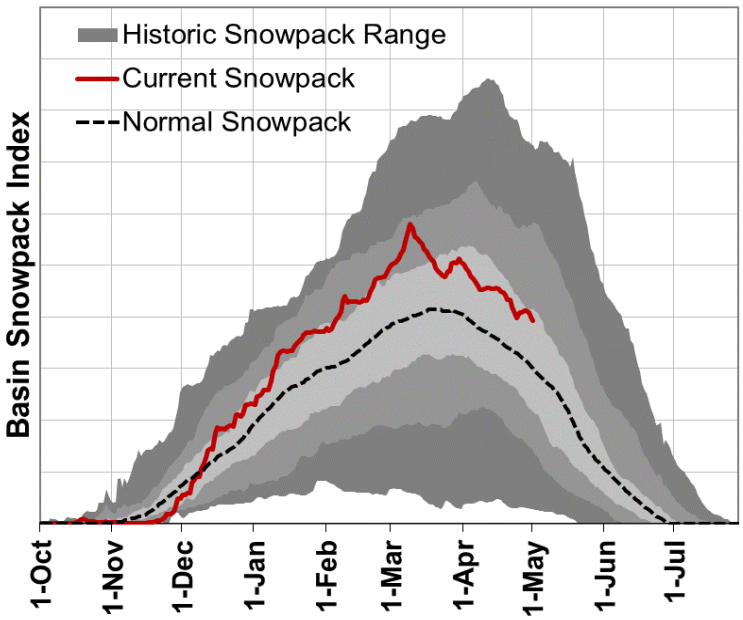
Snowpack Summary by Basin	# of Sites	Basin Snowpack % of Median Current Yr	Last Yr
Lower John Day Basin	4	707%	0%
North Fork John Day Basin	8	162%	52%
Upper John Day Basin	5	243%	0%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Anthony Lake (Rev) Snow Course	7160	3-May	69	34.0	23.0	26.9	126%
Snow Mountain SNOTEL	6230	1-May	17	7.8	0.0	4.2	186%
Blue Mountain Spring SNOTEL	5870	1-May	19	9.3	0.0	5.7	163%
Bourne SNOTEL	5850	1-May	25	12.1	0.0	4.7	257%
Derr. SNOTEL	5850	1-May	24	10.6	0.0	1.5	707%
Arbuckle Mtn SNOTEL	5770	1-May	38	17.1	0.0	11.0	155%
Ochoco Meadows SNOTEL	5430	1-May	0	0.0	0.0	0.0	
Gold Center SNOTEL	5410	1-May	3	1.4	0.0	0.0	
Starr Ridge SNOTEL	5250	1-May	0	0.0	0.0	0.0	
Lake Creek R.S. SNOTEL	5240	1-May	0	0.0	0.0	0.0	
Madison Butte SNOTEL	5150	1-May	0	0.0	0.0	0.0	
Tipton SNOTEL	5150	1-May	15	7.5	0.0	2.0	375%
Lucky Strike SNOTEL	4970	1-May	0	0.0	0.0	0.0	
County Line SNOTEL	4830	1-May	0	0.0	0.0	0.0	
Marks Creek Snow Course	4580	1-May	0	0.0	0.0	0.0	

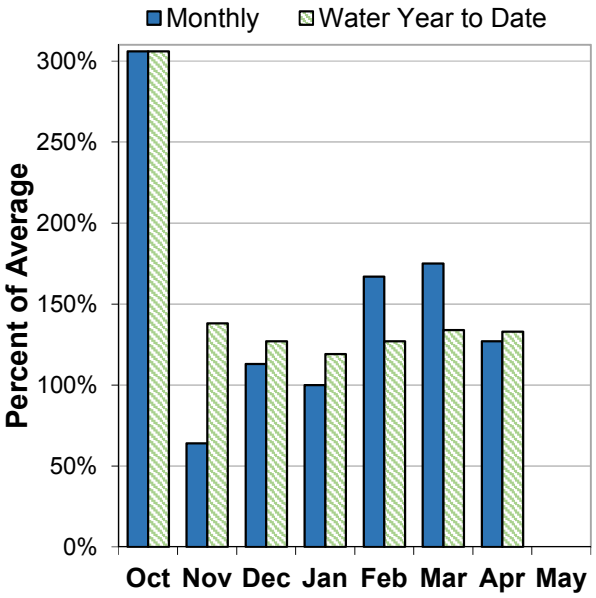
Upper Deschutes and Crooked Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 133% of normal and most sites in the basin are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 120% to 170% of normal peak snowpack levels this winter. While the timing of the snowpack peak was near normal for most sites, several peaked up to 4 weeks earlier than normal.

PRECIPITATION

April precipitation was 127% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 133% of average.

RESERVOIR

As of May 1, storage at major reservoirs in the basin ranges from 92% of average at Wickiup Reservoir to 126% of average at Crescent Lake.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 117% to 201% of average. Water managers in the basin should expect above normal to well above normal streamflows this summer.

Upper Deschutes And Crooked Basins Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
Deschutes R bl Snow Ck	MAY-JUL	31	35	37	154%	39	43	24
	MAY-SEP	62	68	72	153%	76	82	47
Crane Prairie Reservoir Inflow[2]	MAY-JUL	59	65	69	150%	73	79	46
	MAY-SEP	98	109	116	151%	123	134	77
Crescent Lake Inflow[2]	MAY-JUL	18.3	21	22	183%	24	26	12.0
	MAY-SEP	24	27	29	201%	31	33	14.4
Little Deschutes R nr La Pine[2]	MAY-JUL	67	78	86	191%	93	105	45
	MAY-SEP	78	91	99	194%	108	121	51
Deschutes R at Benham Falls[2]	MAY-JUL	280	295	305	122%	320	335	250
	MAY-SEP	460	485	500	120%	515	535	415
Wychus Ck nr Sisters	MAY-JUL	31	34	36	120%	37	40	30
	MAY-SEP	44	47	49	117%	51	55	42
Prineville Reservoir Inflow[2]	MAY-JUL	33	48	58	149%	68	82	39
	MAY-SEP	33	48	58	149%	68	83	39
Ochoco Reservoir Inflow[2]	MAY-JUL	8.1	12.0	14.7	153%	17.3	21	9.6
	MAY-SEP	7.6	11.6	14.3	157%	17.0	21	9.1

* 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)**	**% of Average**	**Useable Capacity (KAF)**
Crane Prairie	47.3	44.4	44.1	107%	55.3
Crescent Lake	63.6	56.7	50.5	126%	86.9
Ochoco	41.9	42.3	34.5	121%	44.2
Prineville	148.7	148.3	142.9	104%	148.6
Wickiup	170.4	164.3	184.5	92%	200.0

Snowpack Summary by Basin	**Basin Snowpack % of Median**		
	# of Sites	**Current Yr**	**Last Yr**
Little Deschutes Basin	4	139%	91%
Upper Crooked Basin	3	707%	0%
Upper Deschutes Basin	9	127%	71%

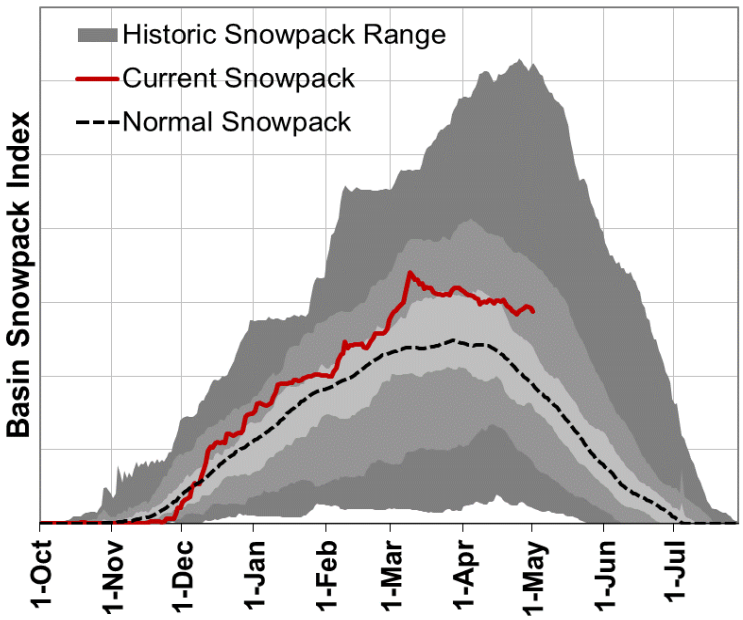
Upper Deschutes And Crooked Basins Summary for May 1, 2017

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in)			
				Current SWE	Last Yr SWE	Median	% of Median
Snow Mountain SNOTEL	6230	1-May	17	7.8	0.0	4.2	186%
Derr. SNOTEL	5850	1-May	24	10.6	0.0	1.5	707%
Three Creeks Meadow SNOTEL	5690	1-May	17	8.7	0.0	13.4	65%
Summit Lake SNOTEL	5610	1-May	111	55.7	44.1	40.8	137%
Irish Taylor SNOTEL	5540	1-May	94	41.2	33.2	39.8	104%
Ochoco Meadows SNOTEL	5430	1-May	0	0.0	0.0	0.0	
Cascade Summit SNOTEL	5100	1-May	77	35.6	15.7	24.9	143%
Roaring River SNOTEL	4950	1-May	68	34.4	14.2	20.9	165%
New Crescent Lake SNOTEL	4910	1-May	19	0.3	0.0	0.0	
Chemult Alternate SNOTEL	4850	1-May	0	0.0	0.0	0.0	
Hogg Pass SNOTEL	4790	1-May	46	21.0	0.0	19.3	109%
McKenzie SNOTEL	4770	1-May	84	37.4	20.4	35.1	107%
Marks Creek Snow Course	4580	1-May	0	0.0	0.0	0.0	
Salt Creek Falls SNOTEL	4220	1-May	42	21.3	3.5	10.1	211%
Santiam Jct. SNOTEL	3740	1-May	0	0.0	0.0	0.0	

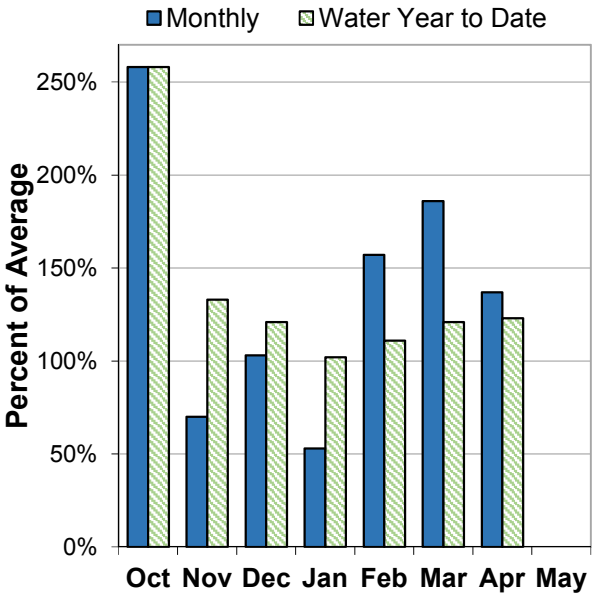
Hood, Sandy and Lower Deschutes Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 153% of normal and most sites in the basin are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 120% to 150% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 137% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 123% of average. South Fork Bull Run SNOTEL set a new record for the most October through April precipitation since measurements began in 1997. Since October 1, the site has received 122.2 inches of precipitation (133% of average).

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 120% to 124% of average. Water managers in the basin should expect above normal to well above normal streamflows this summer.

Hood, Sandy And Lower Deschutes Basins Summary for May 1, 2017

Forecast Exceedance Probabilities for Risk Assessment *

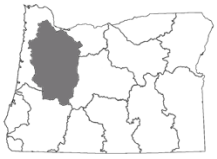
Streamflow Forecasts May 1, 2017	Forecast Period	←--------Drier----------Future Conditions--------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	Average (KAF)
WF Hood R nr Dee	MAY-JUL	71	86	95	122%	105	119	78
	MAY-SEP	90	105	115	120%	126	141	96
Hood R at Tucker Bridge	MAY-JUL	155	175	188	125%	200	220	151
	MAY-SEP	195	220	235	124%	250	270	190
Sandy R nr Marmot	MAY-JUL	192	230	255	121%	280	320	210
	MAY-SEP	240	280	310	122%	335	380	255

* 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)	% of Average	Useable Capacity (KAF)
Clear Lake	4.6	5.1	5.4	85%	13.1

Snowpack Summary by Basin		Basin Snowpack % of Median	
	# of Sites	Current Yr	Last Yr
Lower Columbia - Sandy Basin	7	147%	58%
Lower Deschutes Basin	4	120%	57%
Middle Columbia - Hood Basin	6	148%	70%

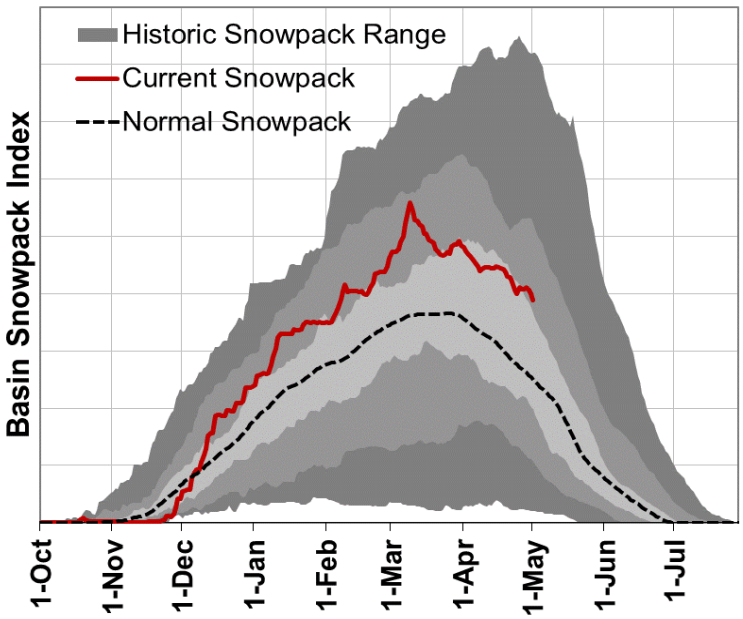
Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Mt Hood Test Site SNOTEL	5370	1-May	136	59.4	41.8	62.0	96%
Red Hill SNOTEL	4410	1-May	105	62.0	33.9	39.8	156%
Surprise Lakes SNOTEL	4290	1-May	121	65.4	39.1	42.6	154%
Mud Ridge SNOTEL	4070	1-May	60	28.8	4.2	17.8	162%
Clear Lake SNOTEL	3810	1-May	21	9.4	0.0	1.6	588%
Blazed Alder SNOTEL	3650	1-May	83	39.3	6.4	20.4	193%
Clackamas Lake SNOTEL	3400	1-May	1	0.1	0.0	0.0	
Greenpoint SNOTEL	3310	1-May	25	11.1	0.0	1.2	925%
North Fork SNOTEL	3060	1-May	42	19.5	0.0	7.3	267%
South Fork Bull Run SNOTEL	2690	1-May	0	0.0	0.0	0.0	



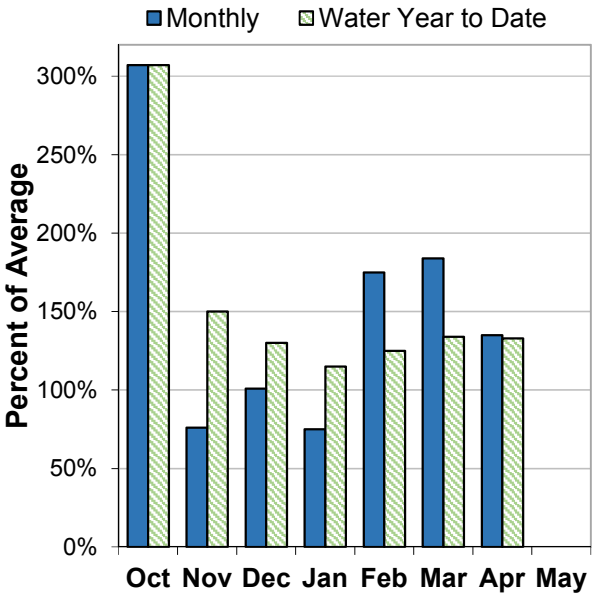
Willamette Basin

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 159% of normal and most sites in the basin are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 110% to 160% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 135% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 133% of average.

RESERVOIR

As of May 1, storage at major reservoirs in the basin ranges from 99% of average at Fall Creek Reservoir to 179% of average at Foster Reservoir.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 102% to 134% of average. Water managers in the basin should expect near normal to well above normal streamflows this summer.

Willamette Basin Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
Hills Creek Reservoir Inflow[1,2]	MAY-JUN	145	187	205	135%	225	270	152
	MAY-SEP	225	275	295	134%	315	360	220
Lookout Point Reservoir Inflow[1,2]	MAY-JUN	365	480	530	133%	580	695	400
	MAY-SEP	575	695	745	131%	800	920	570
McKenzie R bl Trail Bridge	MAY-JUN	139	152	160	117%	169	182	137
	MAY-SEP	275	295	310	115%	325	345	270
Cougar Lake Inflow[1,2]	MAY-JUN	94	126	140	125%	155	186	112
	MAY-SEP	140	177	194	121%	210	245	160
Blue Lake Inflow[1,2]	MAY-JUN	15.7	35	43	105%	52	71	41
	MAY-SEP	18.3	39	48	102%	58	79	47
McKenzie R nr Vida[1,2]	MAY-JUN	420	535	585	115%	635	745	510
	MAY-SEP	765	905	970	111%	1030	1170	870
Detroit Lake Inflow[1,2]	MAY-JUN	235	310	345	121%	380	455	285
	MAY-SEP	385	475	515	120%	555	640	430
North Santiam R at Mehama[1,2]	MAY-JUN	300	425	485	123%	540	665	395
	MAY-SEP	480	625	690	121%	760	905	570
Green Peter Lake Inflow[1,2]	MAY-JUN	110	179	210	145%	240	310	145
	MAY-SEP	133	205	235	133%	270	340	177
Foster Lake Inflow[1,2]	MAY-JUN	205	330	390	142%	445	570	275
	MAY-SEP	245	380	440	131%	500	630	335
South Santiam R at Waterloo[2]	MAY-JUN	255	345	405	142%	470	555	285
	MAY-SEP	300	395	460	131%	525	620	350
Willamette R at Salem[1,2]	MAY-JUN	1630	2410	2770	126%	3130	3910	2200
	MAY-SEP	2380	3270	3670	123%	4070	4960	2980
Oak Grove Fk ab Powerplant	MAY-JUL	79	89	96	120%	103	114	80
	MAY-SEP	117	131	140	117%	149	163	120
Clackamas R ab Three Lynx	MAY-JUL	260	305	340	117%	370	420	290
	MAY-SEP	350	400	430	113%	465	515	380
Clackamas R at Estacada	MAY-JUL	335	415	470	116%	525	605	405
	MAY-SEP	440	525	580	114%	640	725	510

* 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

Willamette Basin Summary for May 1, 2017

Reservoir Storage	Current (KAF)	Last Year (KAF)	Average (KAF)	% of Average	Useable Capacity (KAF)
Blue River	77.3	76.1	73.5	105%	82.3
Cottage Grove	27.6	27.5	26.7	103%	31.8
Cougar	167.4	47.7	151.9	110%	174.9
Detroit	426.1	399.2	408.5	104%	426.8
Dorena	62.8	60.8	61.5	102%	72.1
Fall Creek	107.4	101.9	108.0	99%	116.0
Fern Ridge	96.8	97.9	89.1	109%	97.3
Foster	44.1	44.9	24.6	179%	46.2
Green Peter	391.2	354.0	378.4	103%	402.8
Hills Creek	261.6	240.1	247.3	106%	279.2
Lookout Point	420.3	367.8	373.8	112%	433.2
Timothy Lake	58.8	60.9	59.0	100%	63.6
Henry Hagg Lake	53.2	53.0	52.6	101%	53.3

Snowpack Summary by Basin		Basin Snowpack % of Median	
	# of Sites	Current Yr	Last Yr
Clackamas Basin	9	153%	57%
McKenzie Basin	14	133%	69%
Middle Fork Willamette Basin	7	144%	76%
North Santiam Basin	4	329%	47%
South Santiam Basin	4	334%	47%

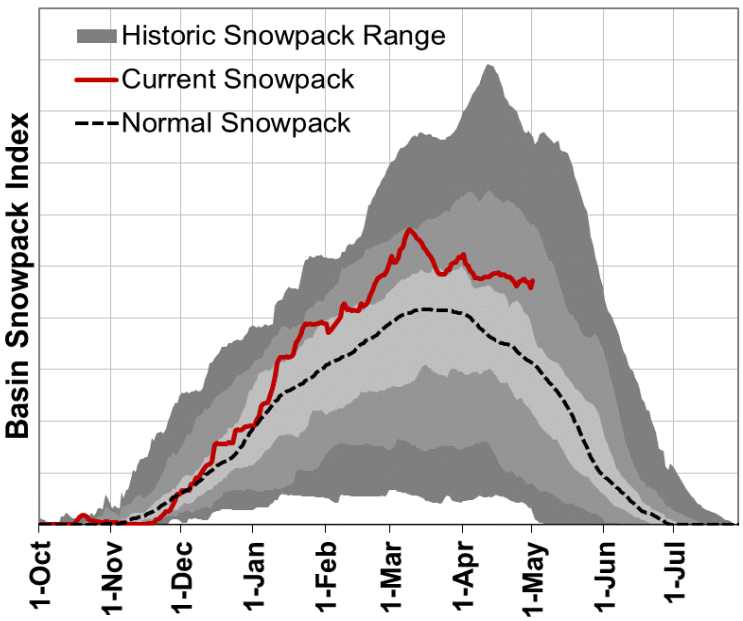
Willamette Basin Summary for May 1, 2017

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Summit Lake SNOTEL	5610	1-May	111	55.7	44.1	40.8	137%
Irish Taylor SNOTEL	5540	1-May	94	41.2	33.2	39.8	104%
Cascade Summit SNOTEL	5100	1-May	77	35.6	15.7	24.9	143%
Roaring River SNOTEL	4950	1-May	68	34.4	14.2	20.9	165%
Holland Meadows SNOTEL	4930	1-May	48	23.6	1.3	10.7	221%
McKenzie SNOTEL	4770	1-May	84	37.4	20.4	35.1	107%
Bear Grass SNOTEL	4720	1-May	125	69.9	31.2		
Salt Creek Falls SNOTEL	4220	1-May	42	21.3	3.5	10.1	211%
Mud Ridge SNOTEL	4070	1-May	60	28.8	4.2	17.8	162%
Little Meadows SNOTEL	4020	1-May	83	41.5	7.6	16.0	259%
Clear Lake SNOTEL	3810	1-May	21	9.4	0.0	1.6	588%
Santiam Jct. SNOTEL	3740	1-May	0	0.0	0.0	0.0	
Daly Lake SNOTEL	3690	1-May	18	8.9	0.0	0.3	2967%
Jump Off Joe SNOTEL	3520	1-May	4	0.9	0.0	0.0	
Peavine Ridge SNOTEL	3420	1-May	11	5.4	0.0	0.0	
Clackamas Lake SNOTEL	3400	1-May	1	0.1	0.0	0.0	
Smith Ridge SNOTEL	3270	1-May	0	0.0	0.0		
Saddle Mountain SNOTEL	3110	1-May	0	0.0	0.0		
Railroad Overpass SNOTEL	2680	1-May	0	0.0	0.0	0.0	
Marion Forks SNOTEL	2590	1-May	8	3.2	0.0	0.0	
Seine Creek SNOTEL	2060	1-May	0	0.0	0.0	0.0	
Miller Woods SNOTEL	420	1-May	0	0.0	0.0		

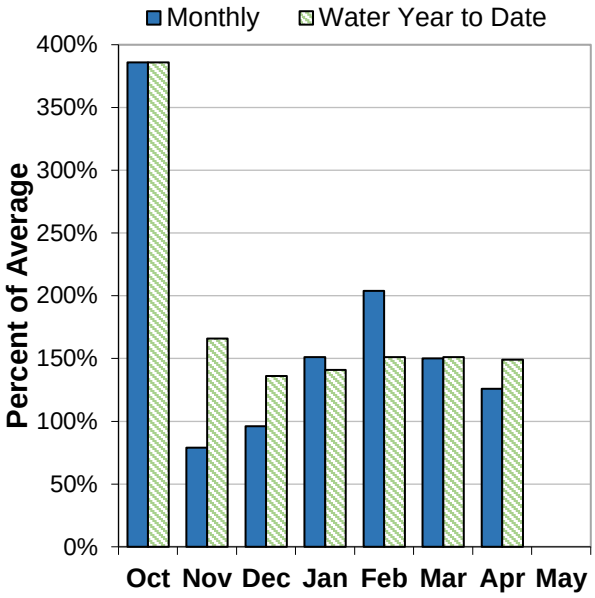
Rogue and Umpqua Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 157% of normal and most sites in the basin are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 100% to 150% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 126% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 149% of average. Three SNOTEL sites set new records for the most October through April precipitation recorded since measurements began in 1980: Bigelow Camp (107.2"; 182% of average), Big Red (80.4"; 169% of average), and King Mountain (83.1"; 153% of average).

RESERVOIR

As of May 1, storage at major reservoirs in the basin ranges from 79% of average at Hyatt Prairie Reservoir to 130% of average at Howard Prairie Reservoir.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 123% to 175% of average. Water managers in the basin should expect well above normal streamflows this summer.

Rogue And Umpqua Basins Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
South Umpqua R at Tiller	MAY-JUL	88	119	139	131%	160	191	106
	MAY-SEP	96	127	149	130%	170	200	115
Cow Ck ab Galesville Reservoir	MAY-JUL	9.1	11.8	13.6	181%	15.4	18.0	7.5
	MAY-SEP	10.6	13.4	15.2	175%	17.0	19.8	8.7
South Umpqua R nr Brockway	MAY-JUL	199	265	310	160%	355	420	194
	MAY-SEP	220	290	335	156%	380	450	215
North Umpqua R at Winchester	MAY-JUL	565	650	705	148%	765	845	475
	MAY-SEP	705	790	850	144%	910	995	590
Lost Creek Lk Inflow[2]	MAY-JUL	395	435	460	124%	480	520	370
	MAY-SEP	540	585	610	123%	640	685	495
Rogue R at Raygold[2]	MAY-JUL	470	535	580	132%	625	695	440
	MAY-SEP	630	705	755	132%	800	875	570
Rogue R at Grants Pass[2]	MAY-JUL	480	560	610	134%	665	740	455
	MAY-SEP	640	725	780	134%	835	915	580
Applegate Lake Inflow[2]	MAY-JUL	89	102	110	159%	119	131	69
	MAY-SEP	101	113	122	163%	130	143	75
Sucker Ck bl Ltl Grayback nr Holland	MAY-JUL	37	43	47	142%	52	58	33
	MAY-SEP	41	48	52	144%	57	63	36
Illinois R nr Kerby	MAY-JUL	86	112	130	144%	148	174	90
	MAY-SEP	92	119	138	144%	156	183	96

* 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)	% of Average	Useable Capacity (KAF)
Applegate	66.4	66.4	62.1	107%	75.2
Emigrant Lake	38.9	38.3	36.0	108%	39.0
Fish Lake	5.4	5.2	5.8	94%	7.9
Fourmile Lake	7.0	7.0	8.7	81%	15.6
Howard Prairie	60.9	42.4	46.7	130%	62.1
Hyatt Prairie	10.4	11.9	13.2	79%	16.2
Lost Creek	297.6	298.8	301.1	99%	315.0

Rogue And Umpqua Basins Summary for May 1, 2017

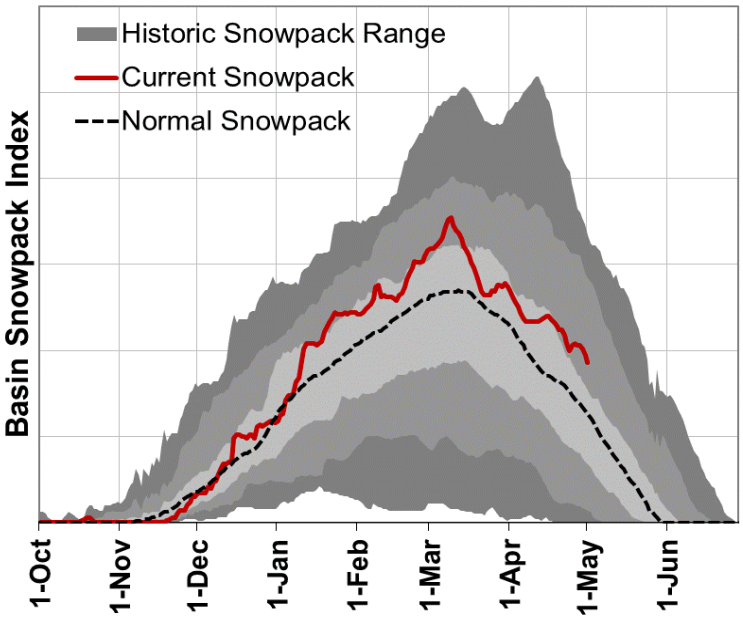
Snowpack Summary by Basin		Basin Snowpack % of Median	
	# of Sites	Current Yr	Last Yr
Applegate Basin	5	163%	82%
Middle Rogue Basin	7	154%	77%
North Umpqua Basin	7	186%	101%
South Umpqua Basin	10	879%	0%
Upper Rogue Basin	11	145%	87%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Park H.Q. Rev Snow Course	6570	1-May	173	94.0	63.6	61.0	154%
Caliban (Alt.) Snow Course	6500	1-May	104	47.0	27.7	29.2	161%
Mt. Ashland Switchback Snow Course	6430	1-May	99	44.3	22.9	30.6	145%
Ski Bowl Road Snow Course	6070	1-May	62	28.7	11.6	21.5	133%
Big Red Mountain SNOTEL	6050	1-May	83	39.0	24.1	23.5	166%
Annie Springs SNOTEL	6010	1-May	122	61.2	39.5	43.6	140%
Fourmile Lake SNOTEL	5970	1-May	62	25.5	21.9	22.5	113%
Cold Springs Camp SNOTEL	5940	1-May	56	26.2	8.2	21.1	124%
Sevenmile Marsh SNOTEL	5700	1-May	80	38.2	18.7	24.3	157%
Summit Lake SNOTEL	5610	1-May	111	55.7	44.1	40.8	137%
Billie Creek Divide SNOTEL	5280	1-May	29	14.7	7.5	10.8	136%
Diamond Lake SNOTEL	5280	1-May	22	10.8	0.0	0.0	
Bigelow Camp SNOTEL	5130	1-May	25	11.5	0.0	0.0	
Beaver Dam Creek Snow Course	5120	1-May	3	1.4	0.0	0.0	
King Mountain 1 Snow Course	4760	2-May	11	5.2	0.0	0.0	
Deadwood Junction Snow Course	4660	1-May	0	0.0	0.0	0.0	
Fish Lk. SNOTEL	4660	1-May	0	0.0	0.0	0.0	
Howard Prairie SNOTEL	4580	1-May	0	0.0	0.0		
Howard Prairie Snow Course	4580	1-May	0	0.0	0.0	0.0	
Red Butte 1 Snow Course	4460	1-May	31	14.8	0.0	2.8	529%
King Mountain SNOTEL	4340	1-May	0	0.0	0.0	0.0	
Red Butte 2 Snow Course	4050	1-May	0	0.0	0.0	0.0	
Silver Burn Snow Course	3680	1-May	11	4.6	0.0	0.0	
King Mountain 3 Snow Course	3680	2-May	0	0.0	0.0	0.0	
Red Butte 3 Snow Course	3500	1-May	0	0.0	0.0	0.0	
Toketee Airstrip SNOTEL	3240	1-May	0	0.0	0.0	0.0	
King Mountain 4 Snow Course	3050	2-May	0	0.0	0.0	0.0	
Red Butte 4 Snow Course	3000	1-May	0	0.0	0.0	0.0	

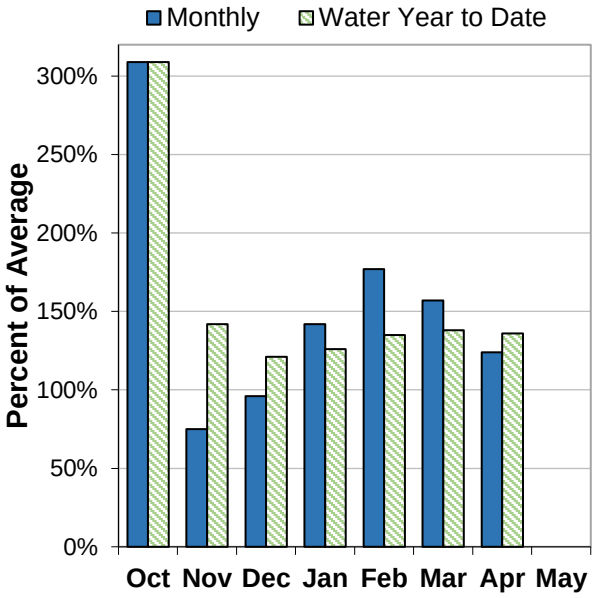
Klamath Basin

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 149% of normal and many sites in the basin are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 100% to 150% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 124% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 136% of average. Two SNOTEL sites set new records for the most October through April precipitation recorded since measurements began at least 16 years ago: Annie Springs (85.6"; 138% of average) and Crazyman Flat (46.0"; 149% of average).

RESERVOIR

Reservoir storage across the basin is currently above average. As of May 1, storage at major reservoirs in the basin ranges from 107% of average at Upper Klamath Lake to 140% of average at Gerber Reservoir. After several years of well below normal volumes, Gerber Reservoir is reporting 100% of capacity as of May 1, which is the first time the lake has been full since the summer of 2006.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 131% to 172% of average. Water managers in the basin should expect well above normal streamflows this summer.

Klamath Basin Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
Gerber Reservoir Inflow[2]	MAY-JUL	0.10	5.5	9.4	174%	13.3	19.1	5.4
	MAY-SEP	0.28	6.0	10.0	172%	13.9	19.7	5.8
Sprague R nr Chiloquin	MAY-JUL	125	149	165	140%	181	205	118
	MAY-SEP	153	178	195	138%	210	235	141
Williamson R bl Sprague nr Chiloquin	MAY-JUL	205	230	250	134%	270	295	187
	MAY-SEP	270	300	320	131%	340	370	245
Upper Klamath Lake Inflow[1,2]	MAY-JUL	240	300	325	135%	350	410	240
	MAY-SEP	330	395	425	133%	455	525	320

* 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)**	**% of Average**	**Useable Capacity (KAF)**
Clear Lake	331.0	125.5	254.1	130%	513.3
Gerber	95.7	48.9	68.2	140%	94.3
Upper Klamath Lake	480.6	496.4	448.0	107%	523.7

Snowpack Summary by Basin		**Basin Snowpack % of Median**	
	# of Sites	**Current Yr**	**Last Yr**
Lost Basin	3		
Sprague Basin	5	141%	2%
Upper Klamath Lake Basin	8	142%	87%
Williamson River Basin	5	159%	99%

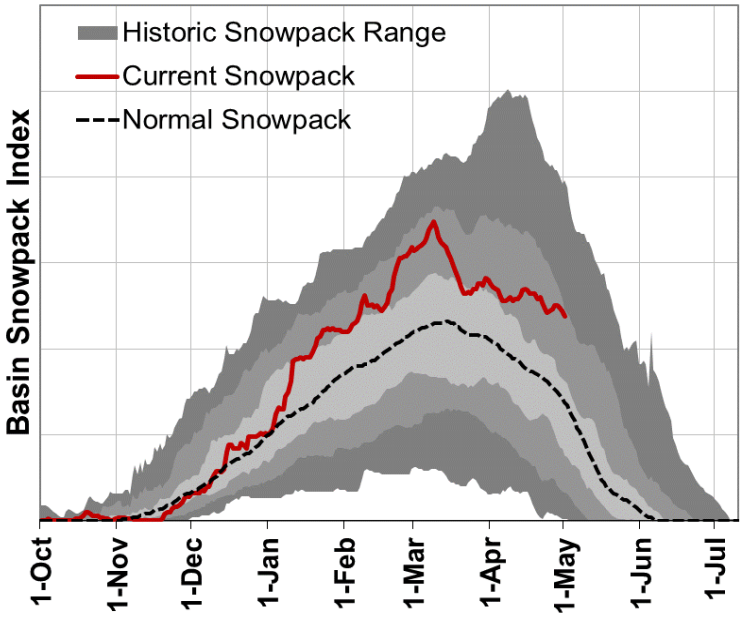
Klamath Basin Summary for May 1, 2017

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in)			
				Current SWE	Last Yr SWE	Median	% of Median
Summer Rim SNOTEL	7080	1-May	34	13.2	0.4	11.7	113%
Swan Lake Mtn SNOTEL	6830	1-May	64	32.0	12.6		
Park H.Q. Rev Snow Course	6570	1-May	173	94.0	63.6	61.0	154%
Crazyman Flat SNOTEL	6180	1-May	23	12.0	0.0	4.6	261%
Ski Bowl Road Snow Course	6070	1-May	62	28.7	11.6	21.5	133%
Annie Springs SNOTEL	6010	1-May	122	61.2	39.5	43.6	140%
Finley Corrals AM	6000	1-May	9	4.2	0.0	4.6	91%
Fourmile Lake SNOTEL	5970	1-May	62	25.5	21.9	22.5	113%
Cold Springs Camp SNOTEL	5940	1-May	56	26.2	8.2	21.1	124%
Strawberry SNOTEL	5770	1-May	0	0.0	0.0	0.0	
Cox Flat AM	5750	1-May	0	0.0	0.0		
Silver Creek SNOTEL	5740	1-May	0	0.0	0.0	0.0	
Quartz Mountain SNOTEL	5720	1-May	0	0.0	0.0	0.0	
Sevenmile Marsh SNOTEL	5700	1-May	80	38.2	18.7	24.3	157%
Sun Pass SNOTEL	5400	1-May	29	12.3	1.2		
Billie Creek Divide SNOTEL	5280	1-May	29	14.7	7.5	10.8	136%
Diamond Lake SNOTEL	5280	1-May	22	10.8	0.0	0.0	
Beaver Dam Creek Snow Course	5120	1-May	3	1.4	0.0	0.0	
Taylor Butte SNOTEL	5030	1-May	0	0.0	0.0	0.0	
Gerber Reservoir SNOTEL	4890	1-May	0	0.0	0.0	0.0	
Chemult Alternate SNOTEL	4850	1-May	0	0.0	0.0	0.0	
Deadwood Junction Snow Course	4660	1-May	0	0.0	0.0	0.0	
Fish Lk. SNOTEL	4660	1-May	0	0.0	0.0	0.0	
Howard Prairie SNOTEL	4580	1-May	0	0.0	0.0		
Howard Prairie Snow Course	4580	1-May	0	0.0	0.0	0.0	

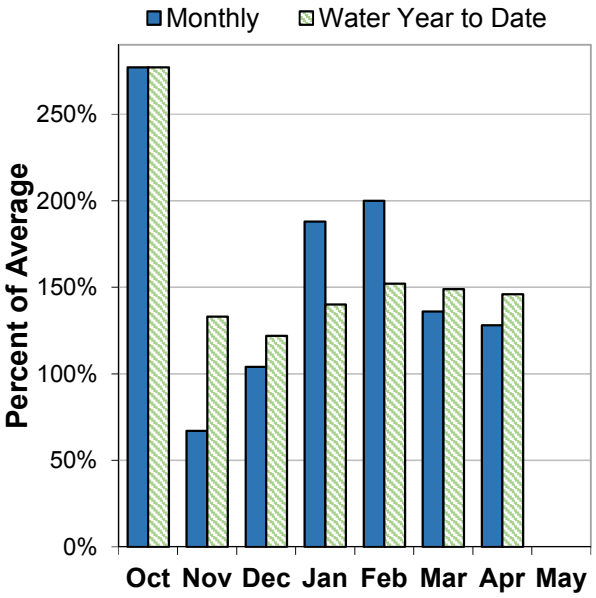
Lake County and Goose Lake Basins

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 164% of normal and most sites above 6500 ft elevation are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 110% to 160% of normal peak snowpack levels this winter. Dismal Swamp SNOTEL set a new record for the highest May 1 snowpack since measurements began in 1980 (50.9" of snow water, 196% of normal)

PRECIPITATION

April precipitation was 128% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 146% of average. Dismal Swamp SNOTEL (CA) set a new record for the most October through April precipitation (62.7”; 151% of average). This site has been measured continuously since 1980.

RESERVOIR

Reservoir storage across the basin is currently well above average. As of May 1, storage at major reservoirs in the basin ranges from 131% of average at Cottonwood Reservoir to 139% of average at Drews Reservoir. Both Drews and Cottonwood Reservoirs are reporting 100% of capacity as of May 1.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 178% to 206% of average. Water managers in the basin should expect well above normal streamflows this summer.

Lake County And Goose Lake Basins Summary for May 1, 2017

		Forecast Exceedance Probabilities for Risk Assessment *						
		←--------Drier----------Future Conditions--------Wetter--------→						
Streamflow Forecasts May 1, 2017	**Forecast Period**	**90% (KAF)**	**70% (KAF)**	**50% (KAF)**	**50% % Avg**	**30% (KAF)**	**10% (KAF)**	**Average (KAF)**
Twentymile Ck nr Adel	MAY-JUL	12.2	17.4	21	194%	25	30	10.8
	MAY-SEP	12.8	18.1	22	196%	25	31	11.2
Deep Ck ab Adel	MAY-JUL	63	75	84	205%	92	104	41
	MAY-SEP	66	78	87	202%	95	108	43
Honey Ck nr Plush	MAY-JUL	12.7	16.4	18.9	205%	21	25	9.2
	MAY-SEP	12.9	16.6	19.2	206%	22	25	9.3
Chewaucan R nr Paisley	MAY-JUL	73	83	90	180%	97	107	50
	MAY-SEP	78	89	96	178%	103	113	54

* 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)	% of Average	Useable Capacity (KAF)
Cottonwood	9.3	9.3	7.1	131%	9.3
Drews	63.5	47.7	45.7	139%	63.5

Snowpack Summary by Basin		Basin Snowpack % of Median	
	# of Sites	Current Yr	Last Yr
Goose Lake Basin	3	175%	78%
Lake Abert Basin	2	107%	2%
Summer Lake Basin	9	164%	48%
Upper Pit Basin	3	195%	17%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Summer Rim SNOTEL	7080	1-May	34	13.2	0.4	11.7	113%
Patton Meadows AM	6800	1-May	31	14.6	0.0	11.5	127%
Sherman Valley AM	6640	1-May	57	26.8	0.0		
Hart Mountain AM	6430	1-May	0	0.0	0.0		
Crazyman Flat SNOTEL	6180	1-May	23	12.0	0.0	4.6	261%
Finley Corrals AM	6000	1-May	9	4.2	0.0	4.6	91%
Sheldon SCAN	5860	1-May	0	0.0	0.0	0.0	
Strawberry SNOTEL	5770	1-May	0	0.0	0.0	0.0	
Cox Flat AM	5750	1-May	0	0.0	0.0		
Silver Creek SNOTEL	5740	1-May	0	0.0	0.0	0.0	

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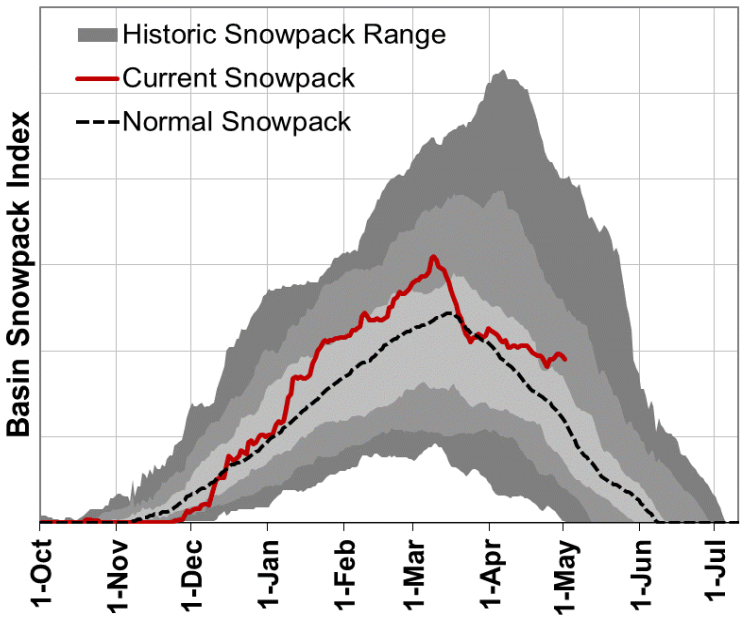
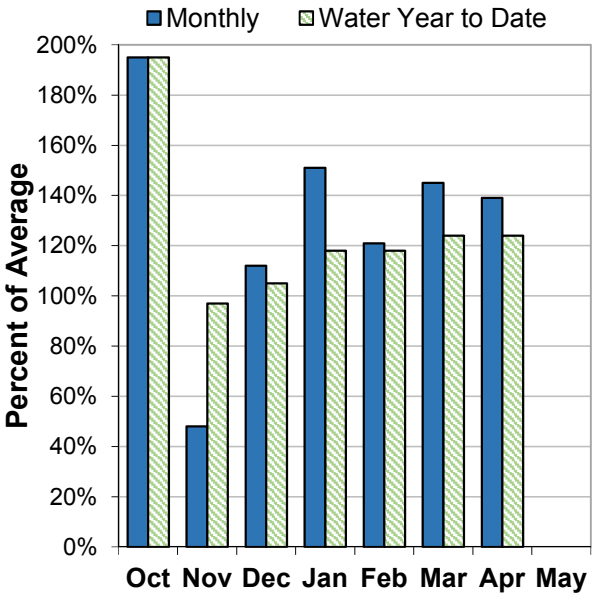
Harney Basin

May 1, 2017

Mountain Snowpack



Basin Precipitation



Summary of Water Supply Conditions

SNOWPACK

As of May 1, the basin snowpack was 162% of normal and most sites above 6900 ft elevation are still measuring significant snowpack. In general, SNOTEL sites in the basin peaked around 110% to 160% of normal peak snowpack levels this winter.

PRECIPITATION

April precipitation was 139% of average. Precipitation since the beginning of the water year (October 1 - May 1) has been 124% of average.

STREAMFLOW FORECAST

The May through September streamflow forecasts in the basin range from 135% to 191% of average. Water managers in the basin should expect well above normal streamflows this summer.

Harney Basin Summary for May 1, 2017

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts May 1, 2017	Forecast Period	←--------Drier----------Future Conditions--------Wetter--------→ 90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	Average (KAF)
Silvies R nr Burns	MAY-JUL	50	72	86	191%	101	122	45
	MAY-SEP	54	75	90	191%	105	127	47
Donner Und Blitzen R nr Frenchglen	MAY-JUL	45	57	66	135%	74	87	49
	MAY-SEP	51	64	73	135%	82	95	54
Trout Ck nr Denio	MAY-JUL	6.5	8.7	10.1	180%	11.6	13.7	5.6
	MAY-SEP	7.1	9.3	10.8	180%	12.3	14.5	6.0

* 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 Median Current Yr	Last Yr
Alvord Lake Basin	1	172%	98%
Donner und Blitzen River Basin	2	159%	70%
Silvies River Basin	4	186%	0%
Upper Quinn Basin	3	192%	84%

Basin Snowpack Measurement Sites	Elevation (ft)	Date Measured	Depth (in)	Snow Water Equivalent (in) Current SWE	Last Yr SWE	Median	% of Median
Granite Peak SNOTEL	8543	1-May	84	36.3	16.6	19.5	186%
Trout Creek AM	7890	1-May	30	13.8	0.5		
Fish Creek SNOTEL	7660	1-May	81	45.7	26.0	26.6	172%
Govt Corrals AM	7400	1-May	45	20.7	0.0		
Silvies SNOTEL	6990	1-May	28	13.0	0.0	10.3	126%
Buckskin Lower SNOTEL	6915	1-May	3	1.6	0.0	0.2	800%
V Lake AM	6600	1-May	0	0.0	0.0		
Disaster Peak SNOTEL	6500	1-May	0	0.0	0.0	0.0	
Hart Mountain AM	6430	1-May	0	0.0	0.0		
Snow Mountain SNOTEL	6230	1-May	17	7.8	0.0	4.2	186%
Lamance Creek SNOTEL	6000	1-May	0	0.0	0.0	0.0	
Blue Mountain Spring SNOTEL	5870	1-May	19	9.3	0.0	5.7	163%
Sheldon SCAN	5860	1-May	0	0.0	0.0	0.0	
Rock Springs SNOTEL	5290	1-May	0	0.0	0.0	0.0	
Starr Ridge SNOTEL	5250	1-May	0	0.0	0.0	0.0	
Lake Creek R.S. SNOTEL	5240	1-May	0	0.0	0.0	0.0	

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	May 1	May 15	Jun 1	**May 6**
Owyhee R nr Rome	1000 cfs	May 6	May 24	Jun 15	**May 18**
Owyhee R nr Rome	500 cfs	May 17	Jun 11	Jul 6	**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	425	545	665	**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 11	May 25	Jun 8	**May 25**
Crane Prairie Inflow	Peak Flow	390	520	645	**403**
Crane Prairie Inflow	Average Daily Flow on Oct. 1st	325	360	390	**269**
Prineville Reservoir Inflow	150 cfs	May 31	Jun 20	Jul 10	**May 30**
Prineville Reservoir Inflow	80 cfs	Jun 6	Jun 26	Jul 16	**June 7**
Whychus Creek nr Sisters	100 cfs	Aug 12	Sep 6	Sep 26	**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	Aug 07	Aug 27	Sep 11	**August 8**
South Umpqua R at Tiller	140 cfs	Jul 10	Jul 28	Aug 17	**July 11**
South Umpqua R at Tiller	90 cfs	Aug 2	Aug 17	Sep 6	**August 1**
South Umpqua R at Tiller	60 cfs	Aug 22	Sep 16	Oct 11	**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	Jun 26	Jul 11	Jul 28	**June 17**
Honey Ck nr Plush	100 cfs	May 24	Jun 18	Jul 13	**May 16**
Honey Ck nr Plush	50 cfs	Jun 14	Jul 7	Jul 28	**June 4**
Twentymile Ck nr Adel	50 cfs	Jun 19	Jul 15	Aug 12	**May 30**
Twentymile Ck nr Adel	10 cfs	Jul 23	Aug 7	Aug 27	**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	May 5	May 19	Jun 3	**May 21**
Silvies R nr Burns	200 cfs	May 14	Jun 4	Jun 25	**June 2**
Silvies R nr Burns	100 cfs	May 31	Jun 22	Jul 14	**June 13**
Silvies R nr Burns	50 cfs	Jun 23	Jul 16	Aug 7	**July 3**
Donner Und Blitzen R nr Frenchglen	200 cfs	Jun 12	Jun 27	Jul 12	**June 20**
Donner Und Blitzen R nr Frenchglen	100 cfs	Jul 2	Jul 17	Aug 2	**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.or.nrcs.usda.gov/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. Streamflow forecasts help users make risk-based decisions. Water 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. 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. AF stands for acre-feet. Forecasted volumes of water are typically in thousands of acre-feet.

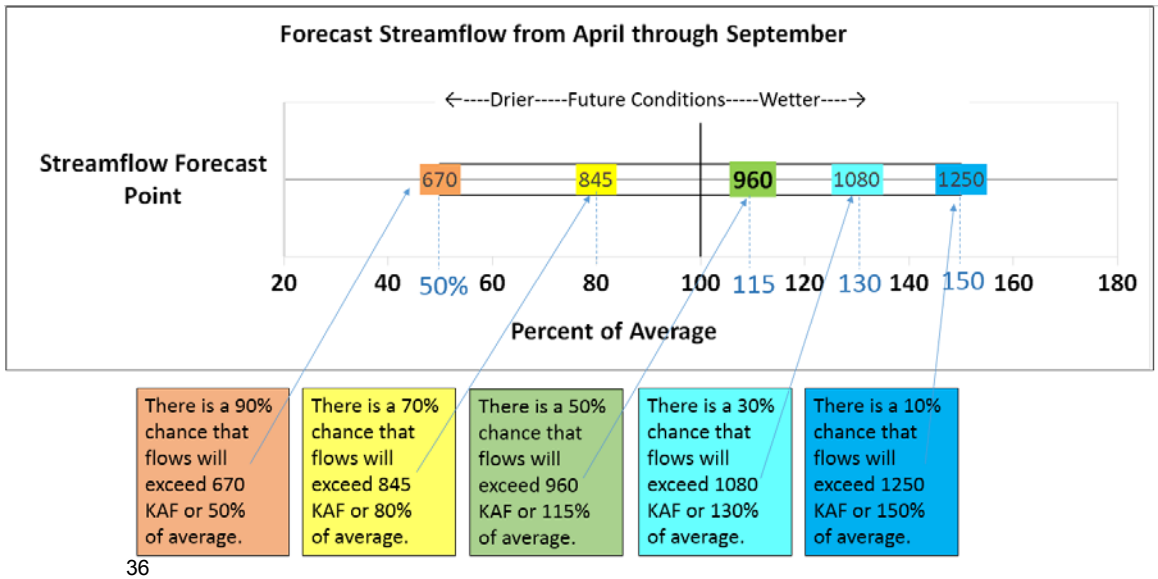
30-Year Average. The 30-year average streamflow for each forecast period is provided for comparison. The average is based on data from 1981-2010. The % AVG. column compares the 50% chance of exceedance forecast to the 30-year average streamflow; values above 100% denote when the 50% chance of exceedance forecast would be greater than the 30-year average streamflow.

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.

<u>Graphical Representation of Streamflow Forecast Range:</u>

This type of graphic is used in the state-wide streamflow forecast summary



Using the Forecasts - an Example

Using the 50 Percent Exceedance Forecast. Using the example forecasts shown here, there is a 50% chance that actual streamflow volume at Burnt R nr Hereford will be less than 41 KAF between April 1 and Sept 30. There is also a 50% chance that actual streamflow volume will be greater than 41 KAF.

Grande Ronde, Powder, Burnt And Imnaha Basins Summary for January 1, 2017

Forecast Exceedance Probabilities for Risk Assessment *

Streamflow Forecasts January 1, 2017	Forecast Period	←Drier		Future Conditions		Wetter→		Average
		90% (KAF)	70% (KAF)	50% (KAF)	50% % Avg	30% (KAF)	10% (KAF)	(KAF)
Burnt R nr Hereford	FEB-JUL	32	48	59	116%	70	86	51
	APR-SEP	17.4	31	41	117%	50	64	35

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 31 KAF (from the 70 percent exceedance forecast). There is a 30% chance of receiving *less* than 31 KAF.

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 17.4 KAF (from the 90 percent exceedance forecast). There is 10% chance of receiving less than 17.4 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 50 KAF (from the 30 percent exceedance forecast). There is a 30% chance of receiving *more* than 50 KAF.

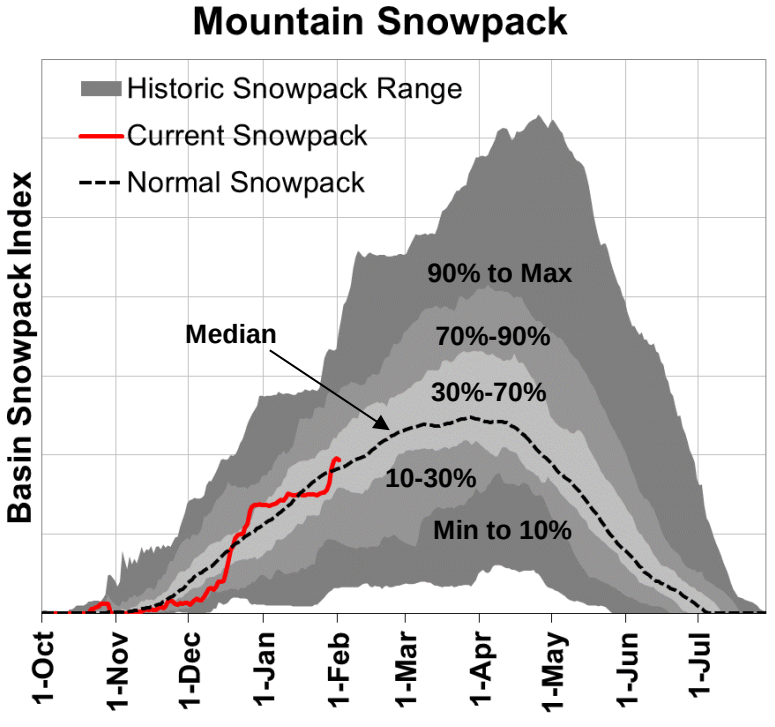
Alternatively, if users determine the risk of using the 30 percent exceedance forecast is too great, then they might plan on receiving 64 KAF (from the 10 percent exceedance forecast). There is a 10% chance of receiving more than 64 KAF.

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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