

Natural Resources Conservation Service

Nevada Water Supply Outlook Report

May 1, 2015



Lahontan Reservoir
April 30, 2015

Lahontan Reservoir's water level is below the bottom of the boat ramp at North Shore Marina and far below the dam's spillway. At 61,300 acre-feet this is the lowest end of April storage on record going back to 1917 when the dam was new. Without additional rain there is only enough water in storage for one alfalfa harvest compared to four in a normal year.

Water Supply Outlook Reports

Federal - State – Private Cooperative Snow Surveys

For more water supply and resource management information:

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How forecasts are made

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 the snow 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 produce 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.

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Nevada Water Supply Outlook Report

May 1, 2015

SUMMARY

Record low snow is producing record low streamflow this spring and summer. Couple this with extremely low reservoir storage and severe agricultural surface water shortages will occur in Northern Nevada this summer. Irrigators in the Fallon area who depend on Lahontan Reservoir expect a 15-20% allotment this season. That is enough water for one alfalfa harvest compared to four in a normal season. Conditions are even drier in Lovelock where no water will be delivered from Rye Patch reservoir for the second growing season in a row. For the Walker River irrigators Bridgeport Reservoir storage is expected to be depleted by May 9 and Topaz Lake between May 15-22. The Walker River Water Master reports “tremendous river shrink as much as four times the released water” which is “taking up storage very fast”. There is at least one water-related bright spot reported recently: Lake Tahoe’s clarity in 2014 was the deepest since 2002, averaging 77.8 feet, which is 7.5 feet deeper than in 2013. Improvements are attributed to reduced inflows and restoration efforts.

SNOWPACK

May 1 snow percentages range from 0% to 36% of median across Nevada and the eastern Sierra. Basins with 0% of median snow include the Carson, Lake Tahoe, Owyhee, Clover Valley and Franklin River basins. A 0% snowpack indicates that all measuring sites in that basin are snow-free, not necessarily that all the snow in a basin is gone. Snow can linger above the measuring stations but basin percentages do not adjust for this. Elsewhere snow is 2% of median in the Upper and Lower Humboldt Basin, 8% in Eastern Nevada, as well as in the Truckee Basin, 12% in the Northern Great Basin, 19% in the Walker Basin and 36% in the Snake River Basin. On May 1 only 16 out of 88 automated stations across Nevada and the eastern Sierra had snow and the rest were bare. Last year’s May 1 snowpack was similar to this year’s April 1 snowpack. Melt-out this year has also been about a month sooner than last year.

PRECIPITATION

April precipitation ranged from 50% to 101% of average and totaled 1.5 to 3 inches of water at most SNOTEL stations for the month. Snow levels were low, giving the mountains the appearance of a normal snowpack but only for a few days. The Walker, Lake Tahoe and Owyhee basins received near average precipitation in April while the Carson, Truckee, Snake, and Upper and Lower Humboldt basins received 70-80% of average for the month. The Northern Great Basin, Eastern Nevada and Clover Valley and Franklin River basin received the least with 50-60% of average. Water year to date precipitation since October 1 is 50-56% of average in the Sierra and Eastern Nevada and ranks [lowest or second lowest on record](#) (see top figure on page 5) at SNOTEL sites from the Pacific crest out to Ely. Water year precipitation improves slightly to near 70-80% of average moving north into the Humboldt, Northern Great Basin, Owyhee and Snake basins. Almost all [SNOTEL stations statewide are in the bottom 25th percentile](#) of historic years since 1981 (bottom figure on page 5). Same is true of National Weather Service [valley precipitation](#) stations; these typically have a longer data record extending back 60 or more years in many cases. Water year to date precipitation in Ely is the lowest on record based on measurements back to 1949.

SOIL MOISTURE

Soil moisture is near average in most areas thanks to early snowmelt and April precipitation. This is not true in the Northern Great Basin and Eastern Nevada where April precipitation was 50-60% of average and May 1 soil moisture is the lowest in the last decade. Last year well-timed precipitation helped rangelands stay green longer than was anticipated. This spring, vegetation conditions at lower elevations in western

Nevada are about a month ahead of normal and recent rains have added moisture to sustain growth for a longer period. There is abundant growth of the non-native cheatgrass (*Bromus tectorum*), as well as the native annual and perennial wildflowers and bunchgrasses. The shrubs, which require deep moisture from melting snow, are exhibiting some die-off of branches, but are still flowering, fruiting and producing leader growth on the remaining living branches.

RESERVOIRS

Statewide most reservoirs are less than 25% of capacity. After three years of drought and the lowest snowpack on record, irrigation storage is extremely low so crops will need supplemental groundwater to grow. Near average April precipitation raised Lake Tahoe's water level to its highest level this spring, but without another good injection of precipitation, it will not reach its natural rim. Statewide the best storage is in Lake Mohave and Independence Lake which are both 95% full. Independence Lake is important for Reno and Sparks' municipal water supply as it is one of Truckee Meadows Water Authority's key drought reserves. Those drought reserves will come into play earlier this year than last year and the water authority is already asking for a 10% reduction in water use from customers. Las Vegas' water supply depends on water in Lake Mead. Lake Mead's water surface elevation dropped to 1079.03 feet on April 30th which equates to 38% of its capacity. This is Lake Mead's lowest level since May 1937 after the Hoover Dam was constructed and the reservoir was filling for the first time.

STREAMFLOW FORECASTS

Forecast percentages are slightly lower than last month for the April-July period. Low streamflow in April and dismal snow water amounts were the main reasons for the drop. More than half the forecasts are for less than 10% average flow. The May-July forecasts range from 1% of average for the Humboldt River near Imlay, and the Carson River near Fort Churchill, to 29% for Lamoille Creek. The Truckee River at Farad May-July natural flow forecast is 8% of average or 15 KAF; less than half the natural flow for that period in 1992.

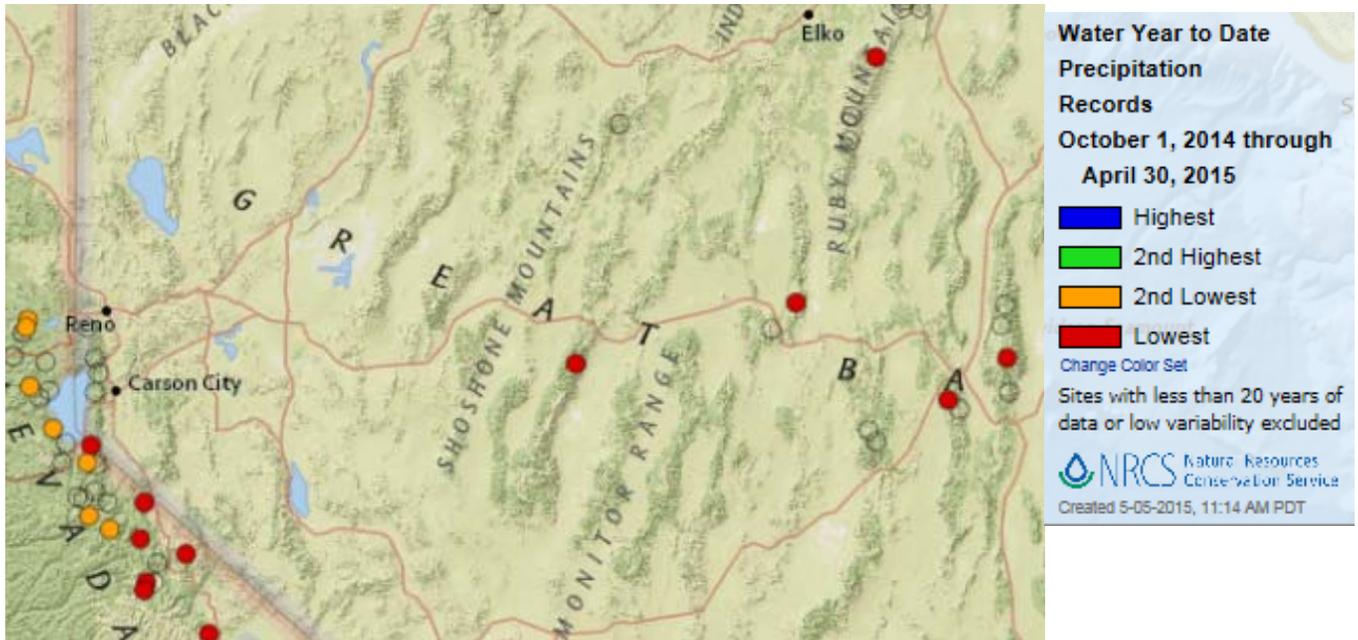
DROUGHT ASSISTANCE

Producers in Nevada are eligible to apply for 2015 Livestock Forage Disaster Program (LFP) benefits on grazing losses. LFP provides compensation to eligible livestock producers who suffer grazing losses for covered livestock due to drought on privately owned or cash leased land or fire on federally managed land. County committees can only accept LFP applications after notification is received by the National Office of qualifying drought or if a federal agency prohibits producers from grazing normal permitted livestock on federally managed lands due to qualifying fire. For 2015 and subsequent years, eligible livestock producers must complete a CCC-853 and the required supporting documentation no later than 30 calendar days after the end of the calendar year in which the grazing losses occurred. Losses must occur in the calendar year the application is being filed. Additional information about LFP, including eligible livestock and fire criteria, is available at your local Farm Service Agency office or online at: www.fsa.usda.gov.

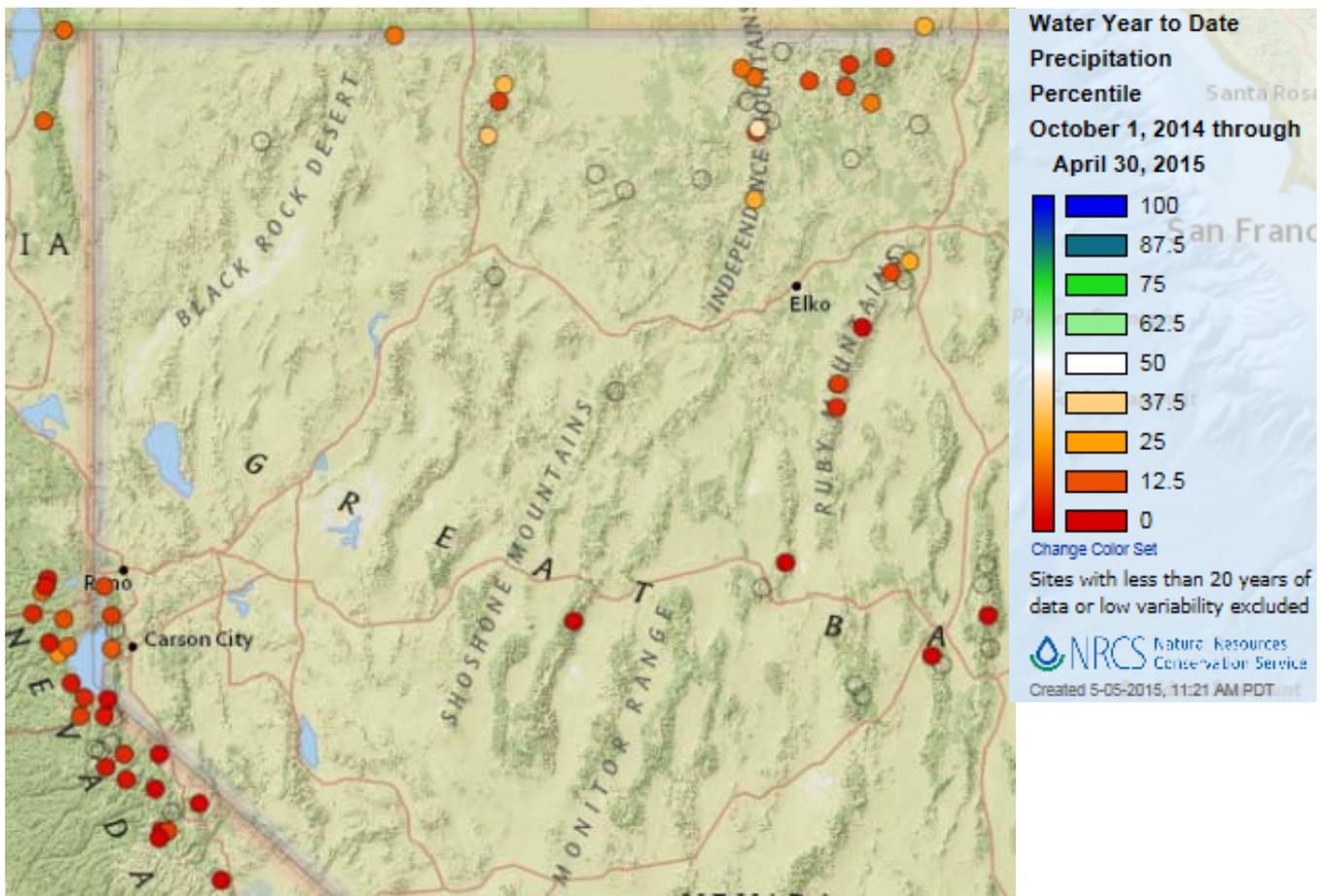
SNOW SURVEY PRODUCTS

This section highlights products linked from the Nevada Snow website: www.nv.nrcs.usda.gov/snow/. This month announces the Interactive Map version 2.0 release which means the "conditions" visualizer is available to the public. The map now displays current and historical conditions for snow water equivalent, snow depth, precipitation, streamflow, and reservoir storage. The next page gives a few screenshots to demonstrate the visualizer's capabilities. Also check out the "[Interactive Map Conditions Links](#)" page which has been added to the Nevada Snow website to help you get started. More information about how to use the tool is available at the [Interactive Map Help Center](#) or by calling Jeff Anderson at 775-857-8500x152.

SNOW SURVEY PRODUCTS (continued)



Above is a screen shot of an Interactive Map 2.0 conditions report showing SNOTEL stations with record low water year to date precipitation. [Click here to access this map.](#)

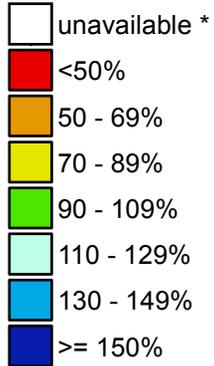


Above is a screen shot of an Interactive Map 2.0 conditions report showing that nearly all SNOTEL stations are in the bottom 25th percentile of their historic data. [Click here to access this map.](#) For a similar map displaying National Weather Service co-op valley precipitation stations [click here.](#)

Nevada/California SNOTEL Current Snow Water Equivalent (SWE) % of Normal

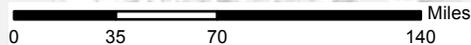
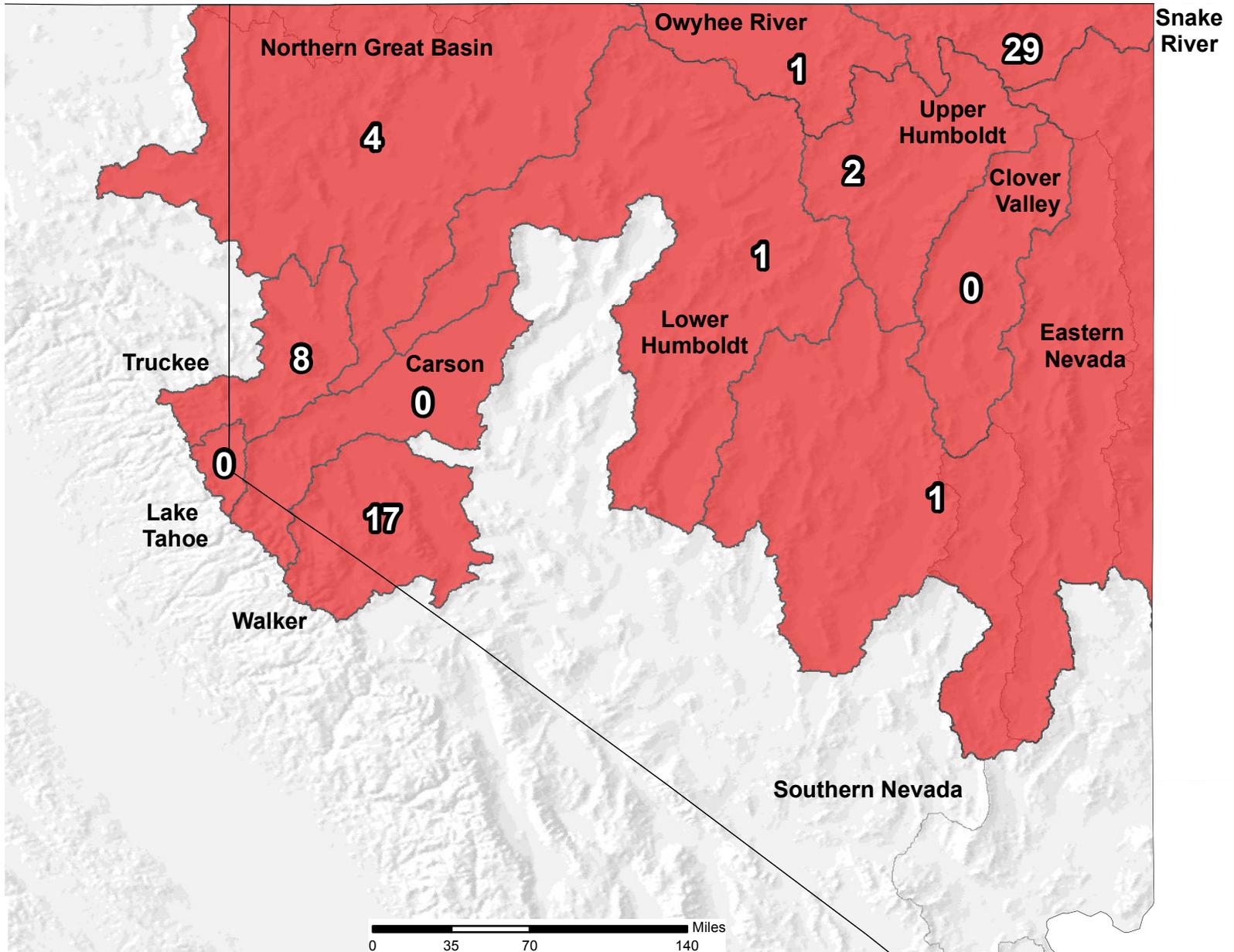
May 05, 2015

Current Snow Water Equivalent Basin-wide Percent of 1981-2010 Median



* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional data subject to revision



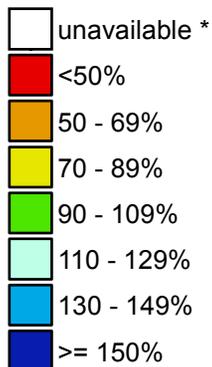
The current snow water equivalent percent of normal represents the snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00). Page 6

Prepared by:
 USDA/NRCS National Water and Climate Center
 Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Nevada/California SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

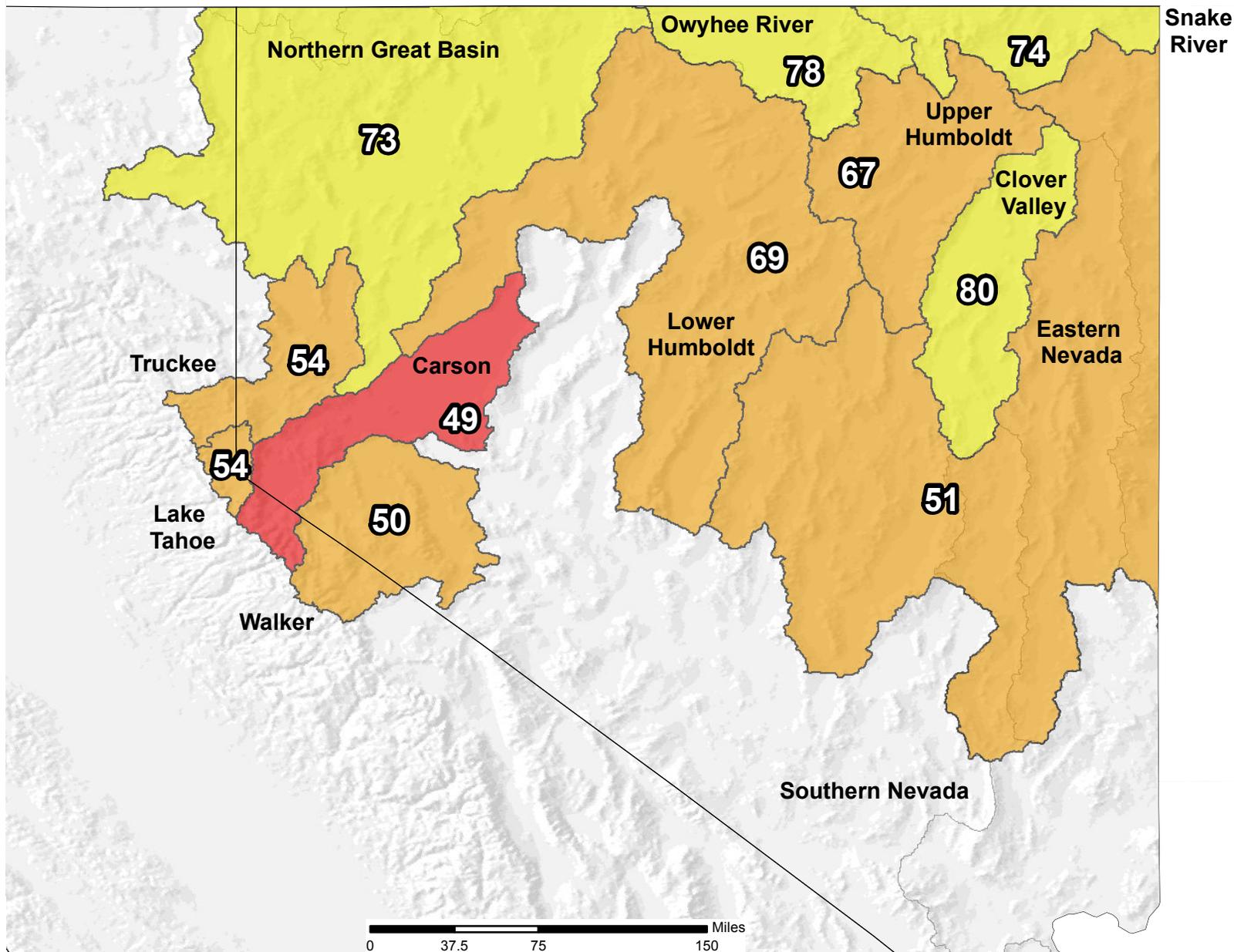
May 05, 2015

Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average



* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional data subject to revision



The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00). Page 7

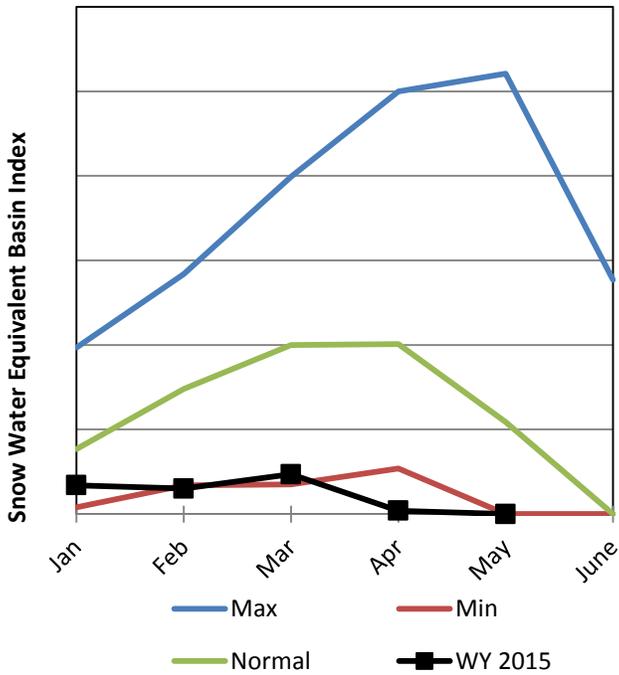
Prepared by:
 USDA/NRCS National Water and Climate Center
 Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Lake Tahoe Basin

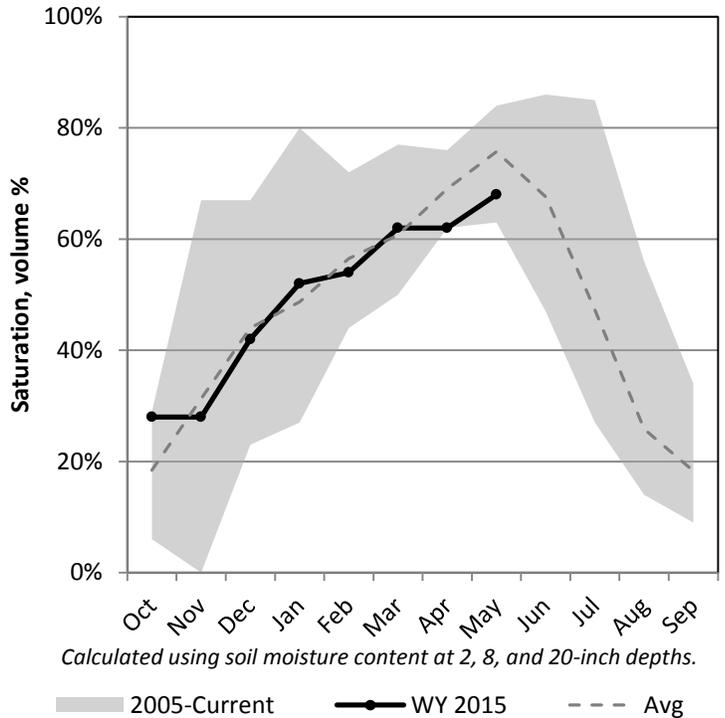
5/1/2015

Snowpack in the Lake Tahoe Basin is much below average at 0% of normal, compared to 21% last year. Precipitation in April was near average at 95%, which brings the seasonal accumulation (Oct-Apr) to 56% of average. Soil moisture is at 68% compared to 67% last year. Lake Tahoe's water elevation is 6222.86 ft, which is 0.14 feet below the lake's natural rim and equals a storage deficit of 18,190 acre-feet. Last year the elevation was 6224.33 ft and the useable storage equaled 161,500 acre-feet. Lake Tahoe is forecast to rise 0.080 feet from April to its high elevation.

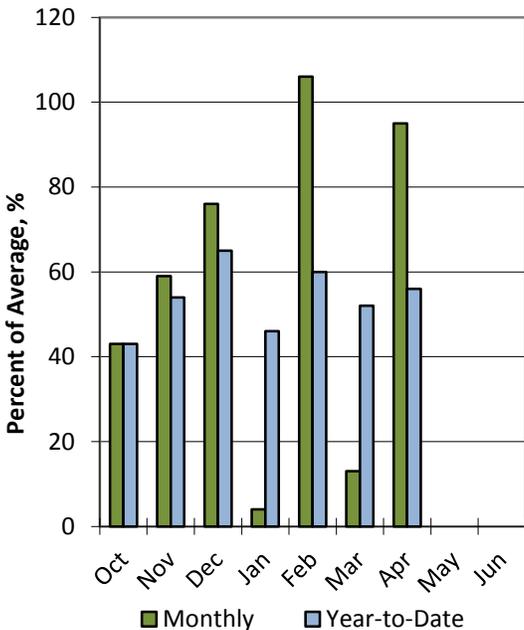
Snowpack



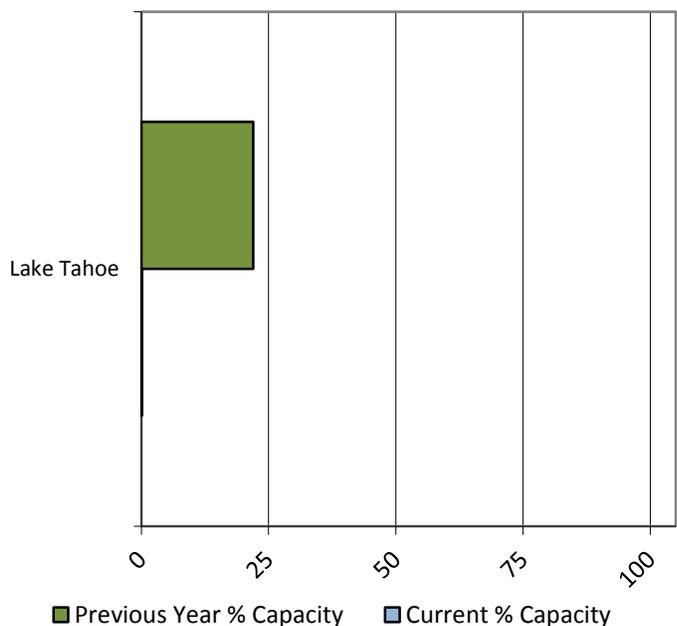
Soil Moisture



Precipitation



Reservoir Storage



**Lake Tahoe
Streamflow Forecasts - May 1, 2015**

Lake Tahoe	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						30yr Avg (KAF)
		90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	
Marlette Lake Inflow	APR-JUL	-734	-438	-237	-26%	-36	260	911
	MAY-JUL	-856	-575	-385	-61%	-195	86	630
Lake Tahoe Rise Gates Closed ¹	APR-HIGH	0.03	0.05	0.08	6%	0.15	0.3	1.31
	MAY-HIGH	0.011	0.022	0.06	6%	0.15	0.35	1.08

- 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
- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lake Tahoe	0.0	161.5	334.7	744.6
Basin-wide Total		161.5	334.7	744.6
# of reservoirs	1	1	1	1

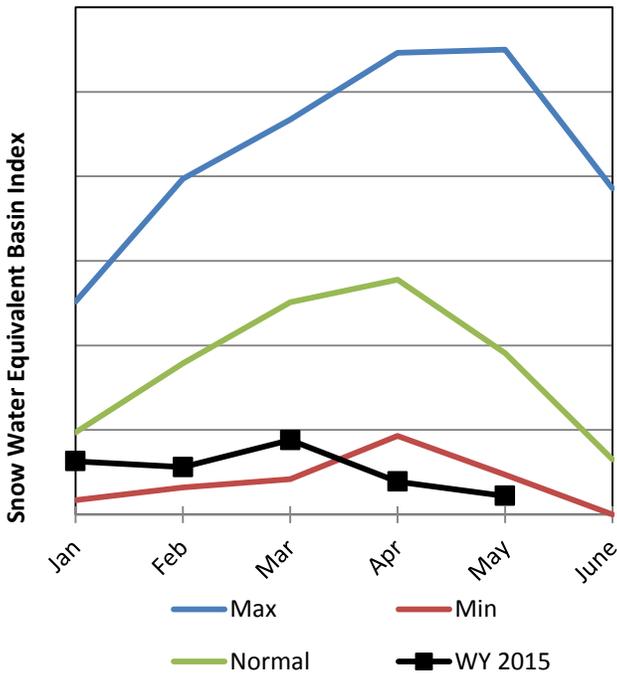
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Lake Tahoe Basin	9	0%	21%

Truckee River Basin

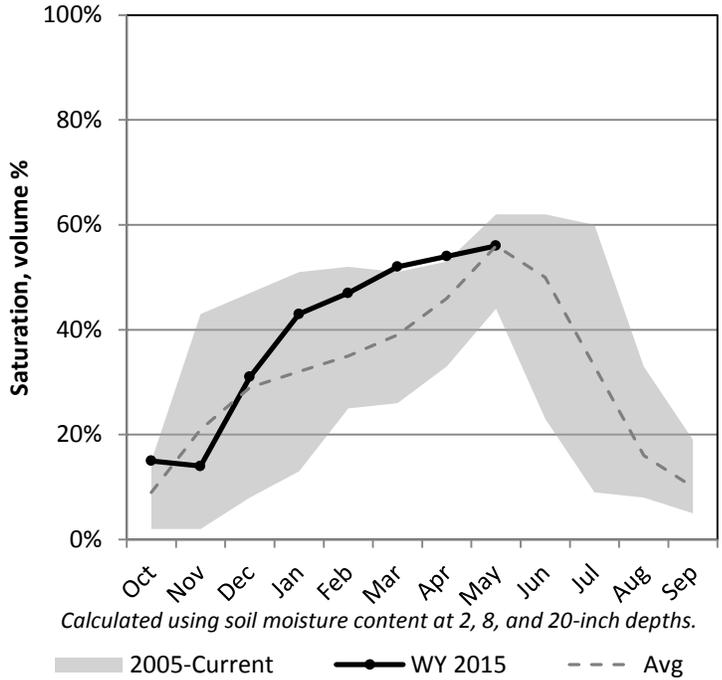
5/1/2015

Snowpack in the Truckee River Basin is much below average at 8% of normal, compared to 20% last year. Precipitation in April was below average at 71%, which brings the seasonal accumulation (Oct-Apr) to 54% of average. Soil moisture is at 56% compared to 53% last year. Reservoir storage is at 25% of capacity, compared to 44% last year. Forecast streamflow volumes range from 5% to 16% of average.

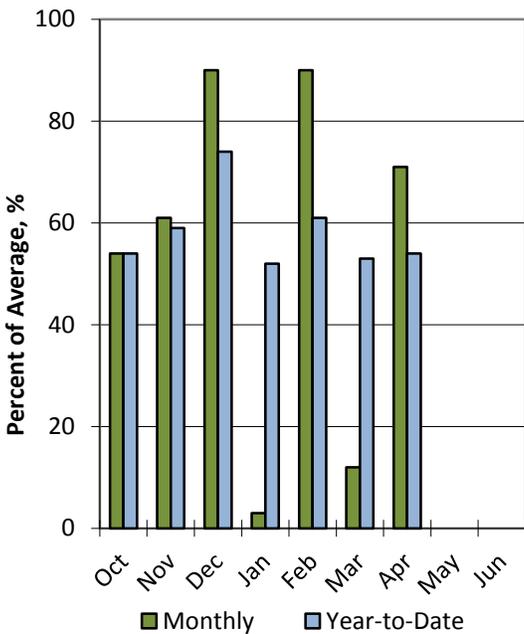
Snowpack



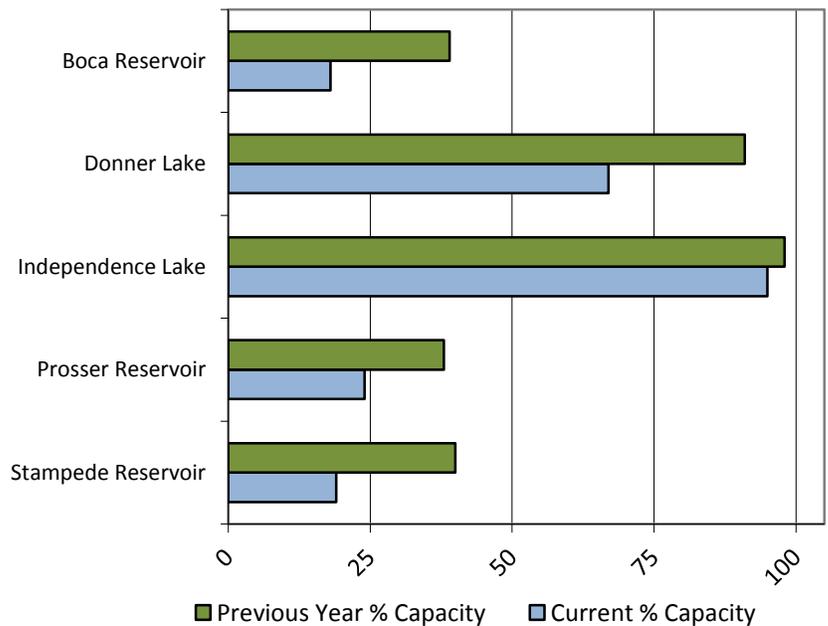
Soil Moisture



Precipitation



Reservoir Storage



Truckee River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Truckee River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Sagehen Ck nr Truckee	APR-JUL	0.59	0.65	0.7	13%	0.75	0.82	5.6
	MAY-JUL	0.24	0.27	0.29	7%	0.32	0.36	4.2
L Truckee R ab Boca Reservoir	APR-JUL	4	6	8	10%	12	16	84
	MAY-JUL	0.63	1.26	6.5	10%	16.2	30	63
Truckee R at Farad	APR-JUL	31	35	41	16%	48	63	255
	MAY-JUL	1.83	3.7	15	8%	31	54	183
Steamboat Ck at Steamboat	APR-JUL	0.07	0.17	0.36	5%	0.71	1.59	7.9
	MAY-JUL	0.01	0.11	0.3	5%	0.65	1.53	6.1
Galena Ck at Galena Ck State Pk	APR-JUL	0.04	0.18	0.7	16%	1.18	2.3	4.37
	MAY-JUL	0.04	0.07	0.5	14%	0.93	1.56	3.65
Pyramid Lake Elevation Change ¹	LOW-HIGH	-3.8	-2.1	-1.37	-81%	-0.61	1.08	1.7

- 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
- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Boca Reservoir	7.3	16.0	26.7	40.9
Prosser Reservoir	6.8	11.0	14.1	28.6
Basin-wide Total	14.1	27.0	40.8	69.5
# of reservoirs	2	2	2	2

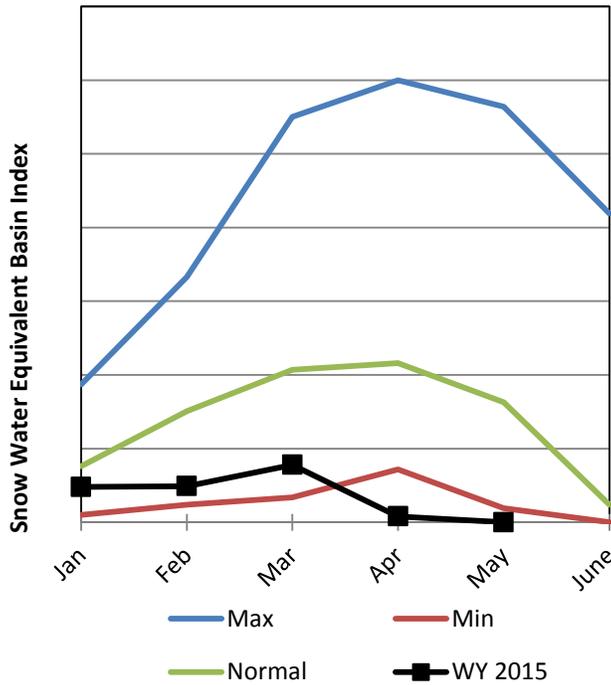
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Truckee River Basin	11	8%	20%
Little Truckee River	3	29%	39%
Sage Hen Creek	3	29%	39%
Galena Creek	1	12%	22%
Steamboat Drainage	1	12%	22%
Pyramid Lake	20	5%	20%

Carson River Basin

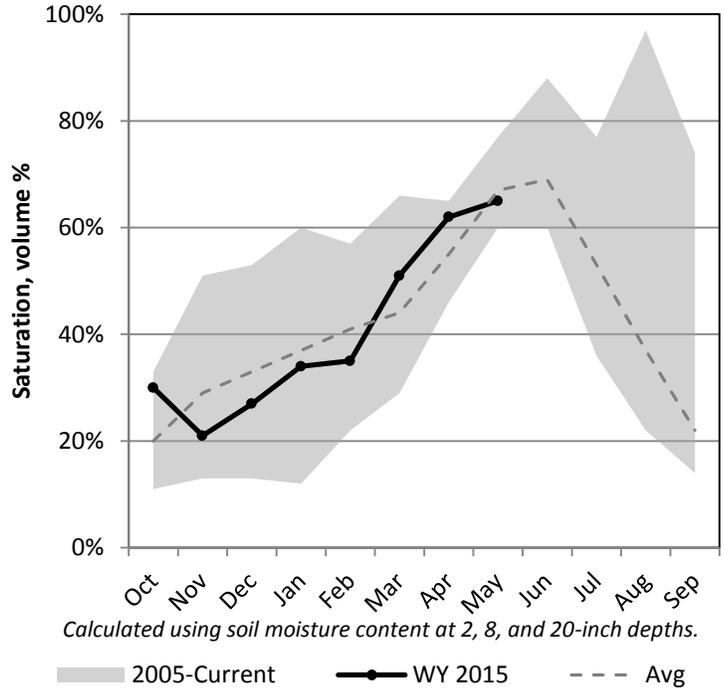
5/1/2015

Snowpack in the Carson River Basin is much below average at 0% of normal, compared to 34% last year. Precipitation in April was below average at 79%, which brings the seasonal accumulation (Oct-Apr) to 50% of average. Soil moisture is at 65% compared to 62% last year. Storage in Lahontan Reservoir is 21% of capacity, compared to 28% last year. Forecast streamflow volumes range from -26% to 15% of average.

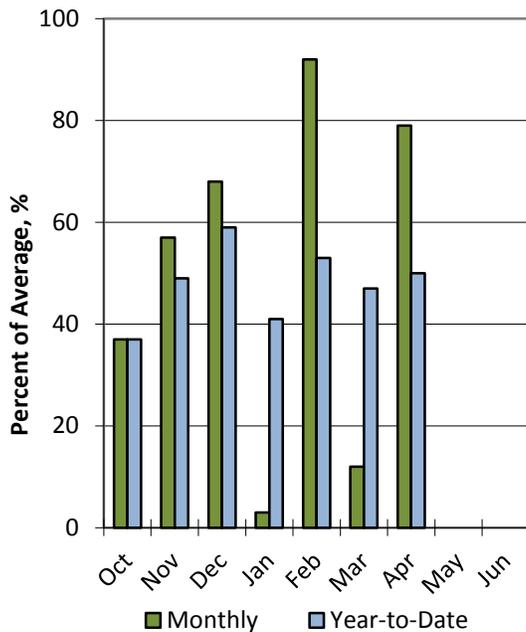
Snowpack



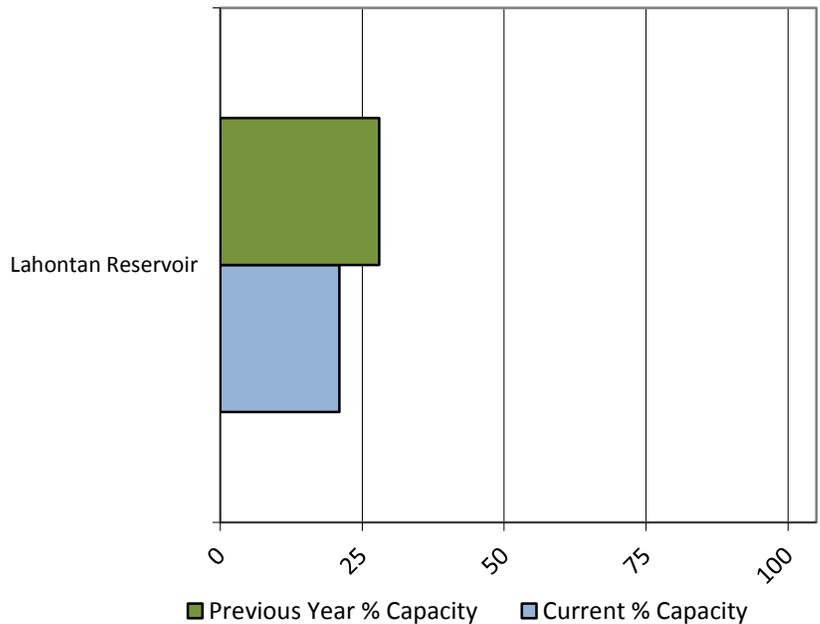
Soil Moisture



Precipitation



Reservoir Storage



Carson River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Carson River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
EF Carson R nr Gardnerville	APR-JUL	1.86	5.6	27	15%	51	87	186
	MAY-JUL	1.51	2.9	18	12%	33	55	151
	200 cfs	25 May	02 Jun	07 Jun		12 Jun	20 Jun	25 Jul
	500 cfs	06 May	10 May	16 May		25 May	06 Jun	01 Jul
WF Carson R nr Woodfords	APR-JUL	0.54	2.4	8	15%	13.6	22	54
	MAY-JUL	0.42	0.84	5	12%	10.8	19.3	42
Carson R nr Carson City	APR-JUL	1.91	3.5	5	3%	6.9	10.3	179
	MAY-JUL	0.72	0.86	3.3	2%	7.3	16.1	144
Marlette Lake Inflow	APR-JUL	-734	-438	-237	-26%	-36	260	911
	MAY-JUL	-856	-575	-385	-61%	-195	86	630
King Canyon Ck nr Carson City	APR-JUL	0	0	0.02	5%	0.12	0.31	0.38
	MAY-JUL	0	0	0.01	4%	0.11	0.22	0.27
Carson R at Ft Churchill	APR-JUL	1	1.5	2	1%	3	7	171
	MAY-JUL	0.06	0.54	1.35	1%	2.7	6.1	138
Ash Canyon Ck nr Carson City	APR-JUL	0.01	0.02	0.12	11%	0.31	0.59	1.12
	MAY-JUL	0.005	0.009	0.04	4%	0.2	0.43	0.91

- 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
- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lahontan Reservoir	61.3	83.2	204.2	295.1
Basin-wide Total	61.3	83.2	204.2	295.1
# of reservoirs	1	1	1	1

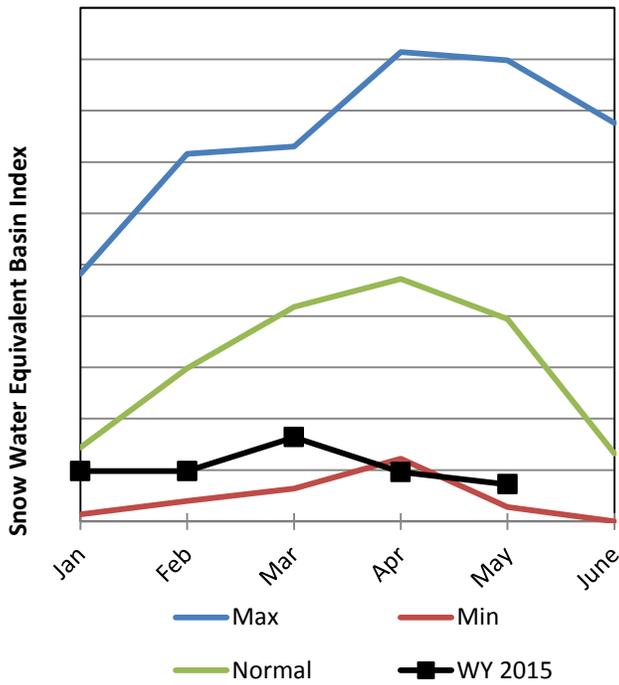
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Carson River Basin	8	0%	34%
E.F. Carson River	4	0%	31%
W.F. Carson River	8	0%	34%

Walker River Basin

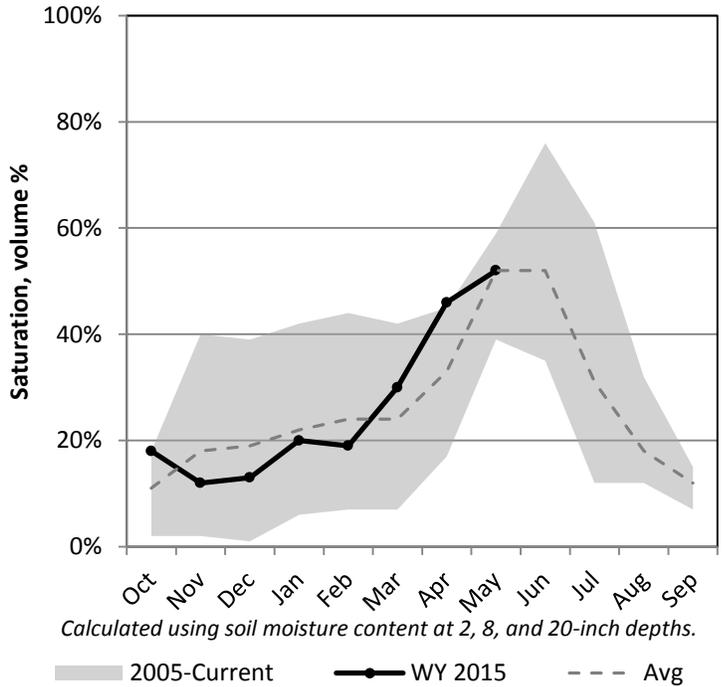
5/1/2015

Snowpack in the Walker River Basin is much below average at 19% of normal, compared to 33% last year. Precipitation in April was near average at 101%, which brings the seasonal accumulation (Oct-Apr) to 50% of average. Soil moisture is at 52% compared to 46% last year. Combined reservoir storage is at 15% of capacity, compared to 17% last year. Forecast streamflow volumes range from 6% to 12% of average.

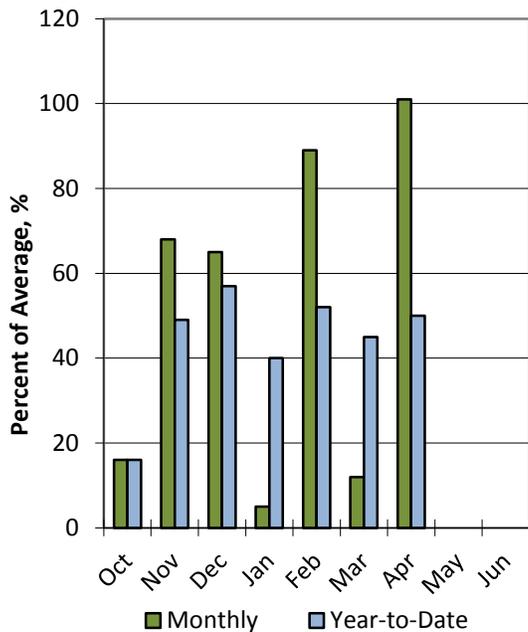
Snowpack



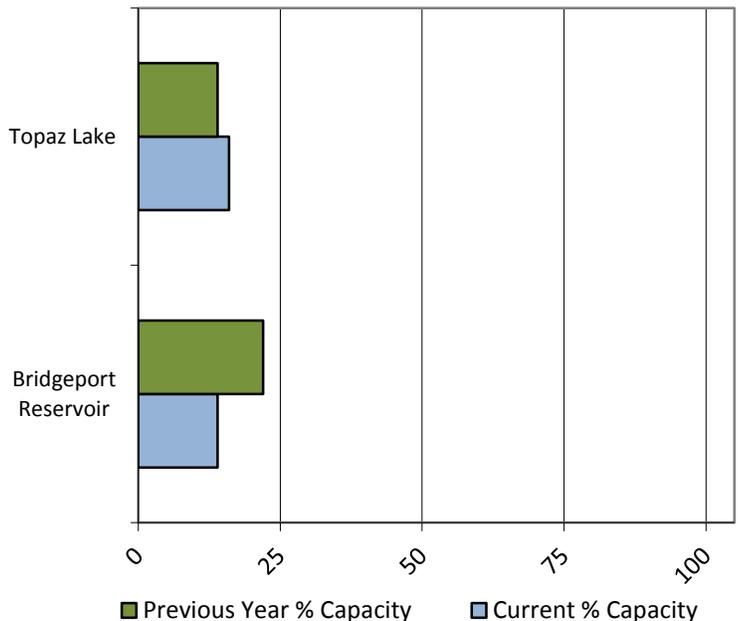
Soil Moisture



Precipitation



Reservoir Storage



Walker River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Walker River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
E Walker R nr Bridgeport	APR-AUG	0.67	1.34	4.2	6%	25	55	67
	MAY-AUG	0.59	1.18	3	5%	20	46	59
W Walker R bl L Walker nr Coalville	APR-JUL	3.2	7.9	20	12%	32	50	162
	MAY-JUL	1.42	2.8	11.8	8%	25	46	142
W Walker R nr Coalville	APR-JUL	11.3	16.3	19.6	12%	23	28	163
	MAY-JUL	1.43	2.9	11.4	8%	49	105	143
Walker Lake Elevation Change ¹	LOW-HIGH	-4.8	-2.7	-1.7	-121%	-0.73	1.41	1.41

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- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bridgeport Reservoir	6.0	9.3	23.9	42.5
Topaz Lake	9.6	8.0	29.3	59.4
Basin-wide Total	15.6	17.3	53.2	101.9
# of reservoirs	2	2	2	2

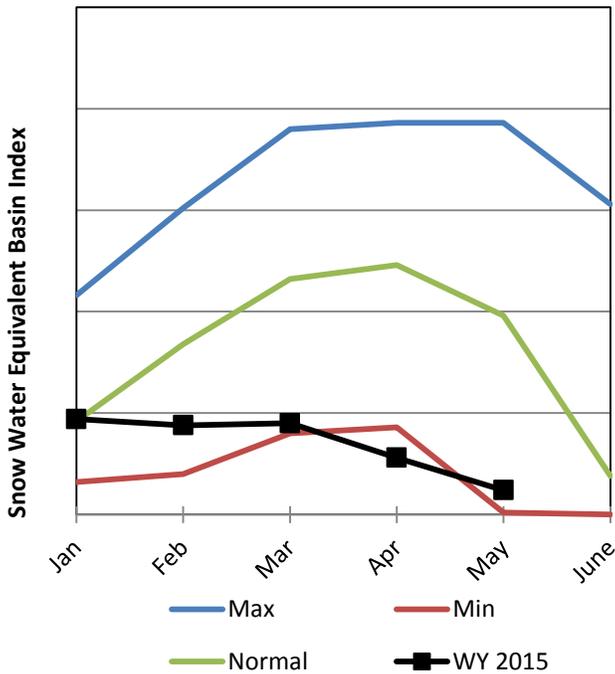
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Walker River Basin	6	19%	33%
E. Walker Rv. Nr Bridgeport	2	0%	22%
W. Walker Rv. Nr Coleville	5	22%	33%

Northern Great Basin

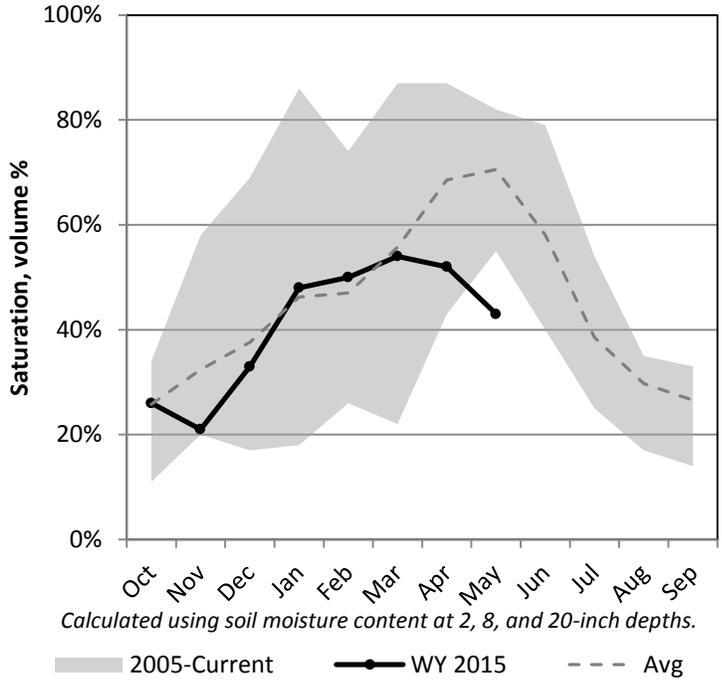
5/1/2015

Snowpack in the Northern Great Basin is much below average at 12% of normal, compared to 39% last year. Precipitation in April was much below average at 50%, which brings the seasonal accumulation (Oct-Apr) to 74% of average. Soil moisture is at 43% compared to 44% last year. Forecast streamflow volumes range from 8% to 26% of average.

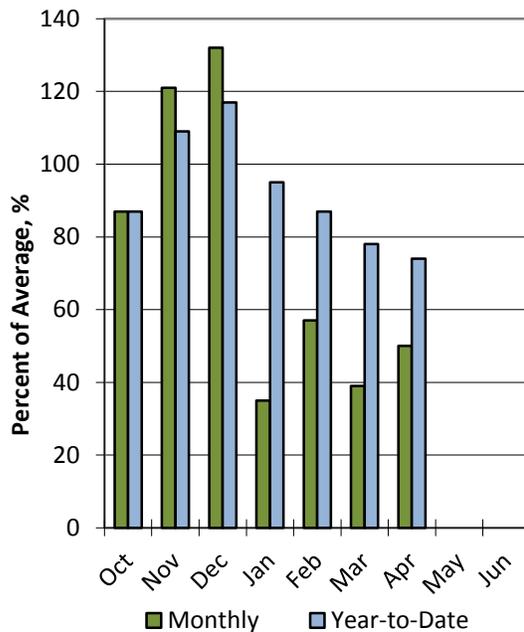
Snowpack



Soil Moisture



Precipitation



Northern Great Basin Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Northern Great Basin	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Eagle Ck nr Eagleville	APR-JUL	0.043	0.086	0.7	16%	1.43	2.5	4.3
Bidwell Ck nr Fort Bidwell	APR-JUL	0.12	0.24	1	8%	2.3	4.2	12
McDermitt Ck nr McDermitt	MAR-JUN	0.175	0.35	1.4	8%	4.6	9.4	17.5
	APR-JUL	0.14	0.28	1	7%	3.8	8	14
Davis Ck	APR-JUL	1248	1603	1900	26%	2252	2893	7233
	APR-SEP	1555	1963	2300	29%	2695	3403	7991

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- 3) Median value used in place of average

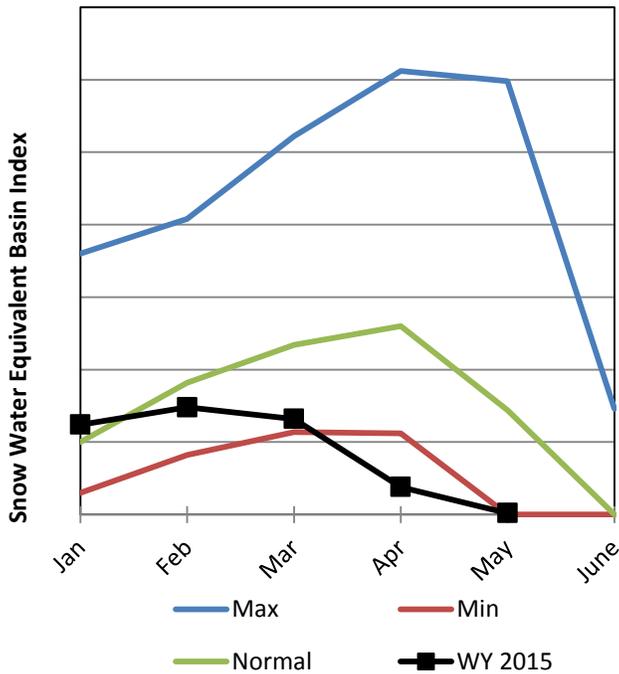
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
N Great Basin	4	12%	39%
Quinn River	1		
McDermitt Creek	1		

Upper Humboldt River Basin

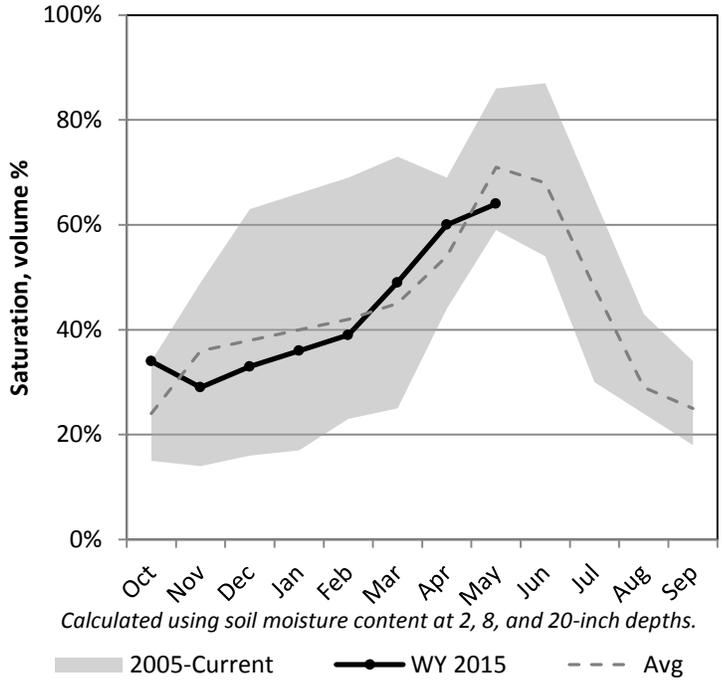
5/1/2015

Snowpack in the Upper Humboldt River Basin is much below average at 2% of normal, compared to 62% last year. Precipitation in April was below average at 80%, which brings the seasonal accumulation (Oct-Apr) to 68% of average. Soil moisture is at 64% compared to 70% last year. Forecast streamflow volumes range from 4% to 33% of average.

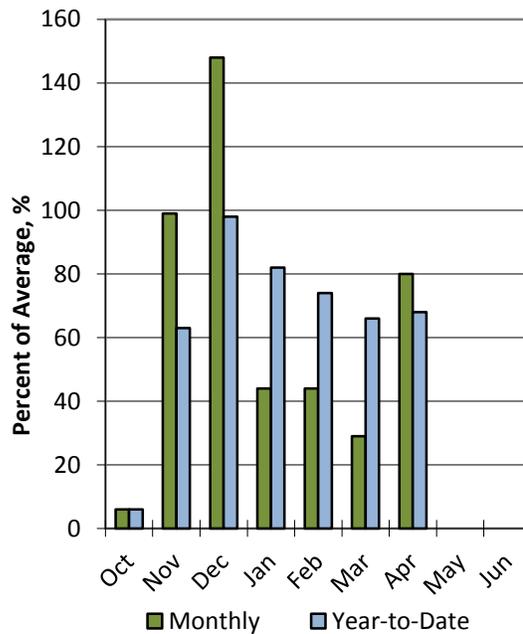
Snowpack



Soil Moisture



Precipitation



Upper Humboldt River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Upper Humboldt River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Marys R nr Deeth	APR-JUL	0.36	0.72	8	22%	16.7	30	36
	MAY-JUL	0.26	0.52	4	15%	9.9	18.5	26
Lamoille Ck nr Lamoille	APR-JUL	0.58	4.6	9.5	33%	14.4	22	29
	MAY-JUL	0.27	2.8	7.8	29%	12.8	20	27
NF Humboldt R at Devils Gate	APR-JUL	1.64	2.6	3.5	10%	4.8	7.5	34
	MAY-JUL	0.74	1.22	1.7	8%	2.4	3.9	22
Humboldt R nr Elko	APR-JUL	1.54	3.1	6	4%	30	64	154
	MAY-JUL	0.6	1.19	2.3	2%	23	53	119
SF Humboldt R at Dixie	APR-JUL	0.66	1.32	5.8	9%	15.5	30	66
	MAY-JUL	0.57	1.14	2	4%	12.3	27	57
Humboldt R nr Carlin	APR-JUL	2.4	4.8	18	8%	38	67	238
	MAY-JUL	1.89	3.8	12	6%	32	62	189
Humboldt R at Palisades	APR-JUL	2.2	4.5	30	13%	66	118	225
	MAY-JUL	1.71	5.1	22	13%	55	104	171

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- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

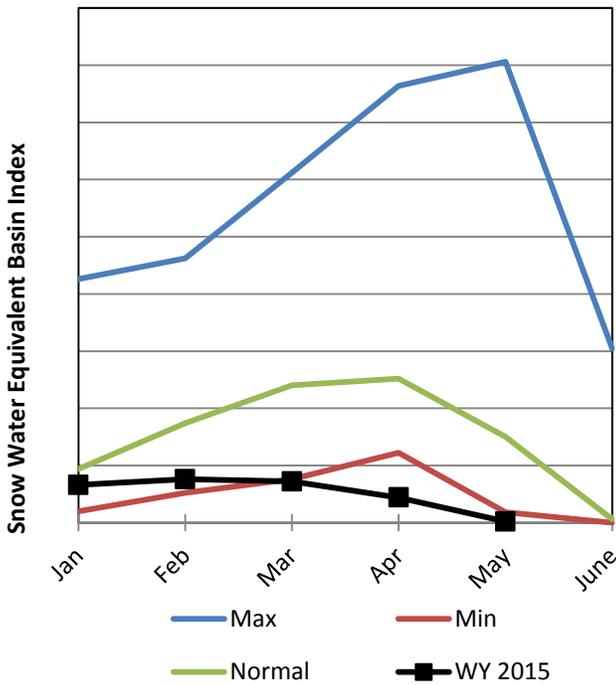
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Upper Humboldt R ab Palisades	5	2%	62%
Lamoille Creek	1	0%	3%
S. Fork Humboldt	2	3%	81%
Mary's River	1	0%	0%
N. Fork Humboldt	0		

Lower Humboldt River Basin

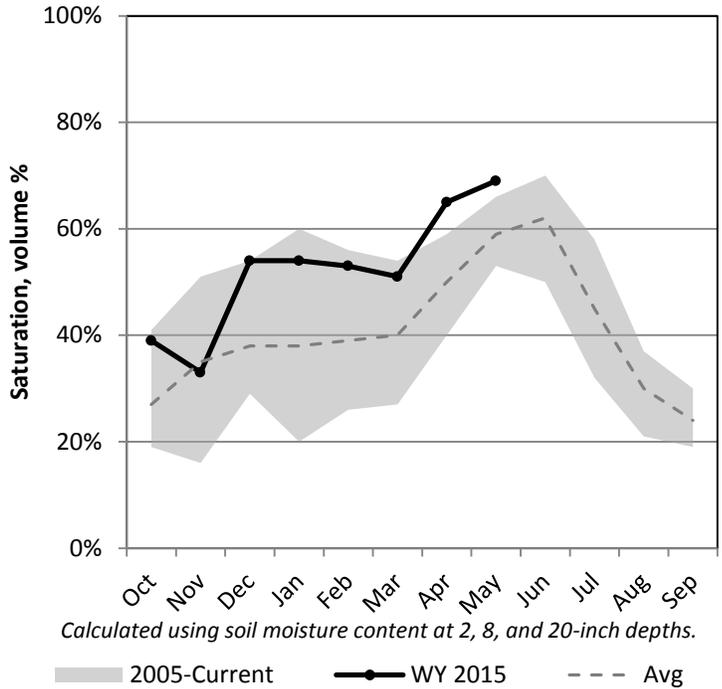
5/1/2015

Snowpack in the Lower Humboldt River Basin is much below average at 1% of normal, compared to 50% last year. Precipitation in April was below average at 74%, which brings the seasonal accumulation (Oct-Apr) to 70% of average. Soil moisture is at 69% compared to 60% last year. Storage in Rye Patch Reservoir is 5% of capacity, compared to 5% last year. Forecast streamflow volumes range from 1% to 16% of average.

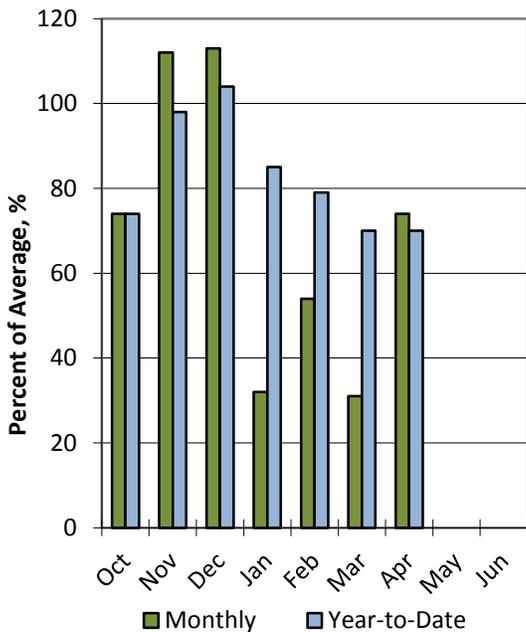
Snowpack



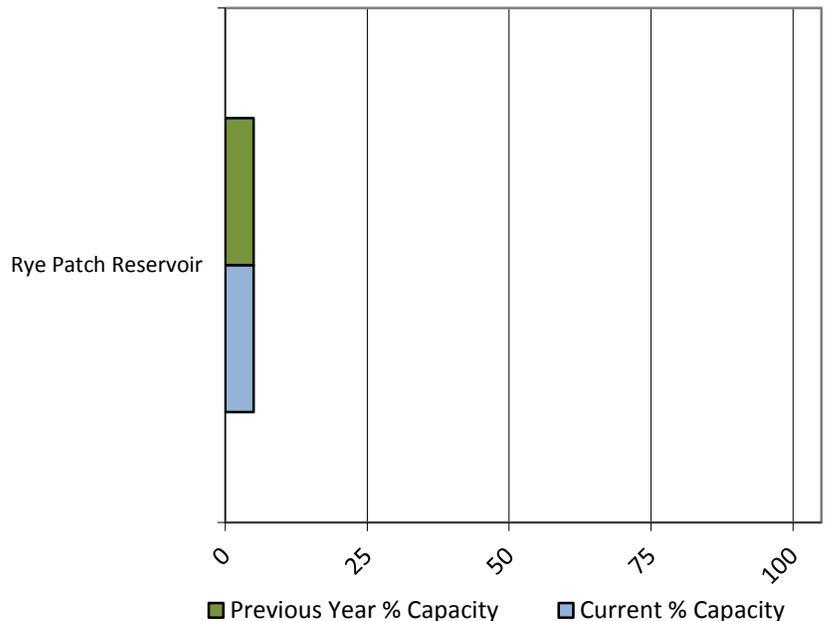
Soil Moisture



Precipitation



Reservoir Storage



Lower Humboldt River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Lower Humboldt River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rock Ck nr Battle Mtn	APR-JUL	0.18	0.36	0.6	3%	2.69	5.79	18.2
	MAY-JUL	0.09	0.27	0.51	5%	2.6	5.7	9.8
Humboldt R at Comus	APR-JUL	2.2	4.3	5	2%	41	93	215
	MAY-JUL	0.31	1.56	2.5	2%	32	74	156
L Humboldt R nr Paradise	APR-JUL	0.92	0.99	1.54	16%	2.8	4.7	9.7
	MAY-JUL	0.08	0.15	0.7	9%	1.96	3.86	7.6
Martin Ck nr Paradise	APR-JUL	1.302	1.42	2.8	16%	6.08	10.98	17.5
	MAY-JUL	0.122	0.24	1.62	13%	4.9	9.8	12.2
Humboldt R nr Imlay	APR-JUL	0.38	1.5	2	1%	53	127	188
	MAY-JUL	0.28	0.56	1	1%	34	89	141

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- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Rye Patch Reservoir	9.6	9.5	93.1	194.3
Basin-wide Total	9.6	9.5	93.1	194.3
# of reservoirs	1	1	1	1

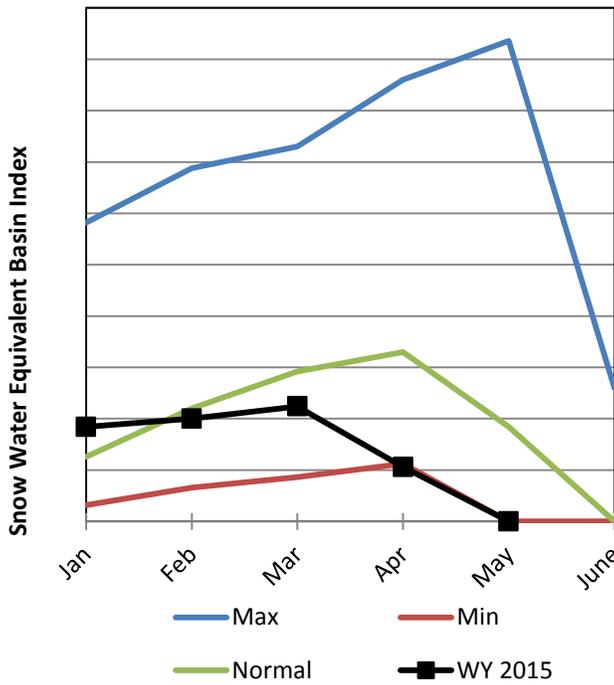
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Lower Humboldt River Basin	5	1%	50%
Little Humboldt River	3	0%	41%
Martin Creek	3	0%	41%
Reese River	2	2%	59%
Rock Creek	0		

Clover Valley & Franklin River Basin

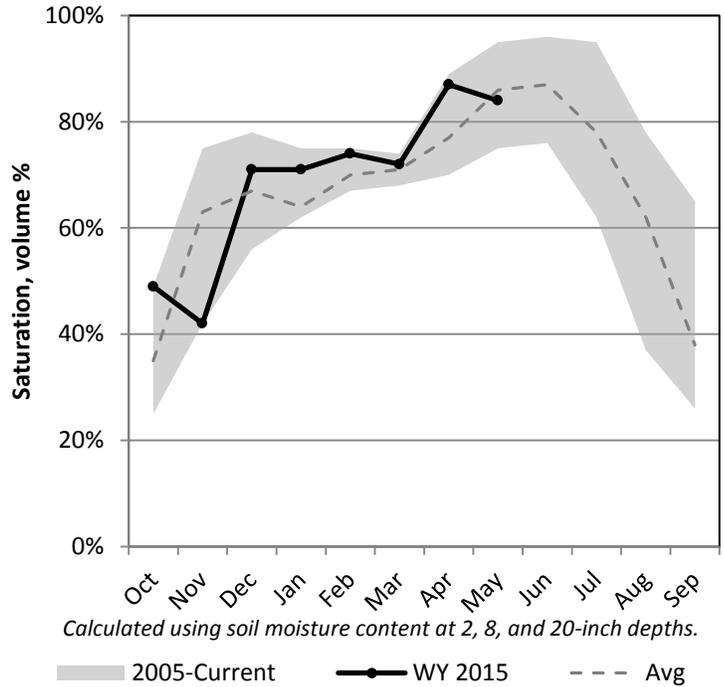
5/1/2015

Snowpack in the Clover Valley & Franklin River Basin is much below average at 0% of normal, compared to 107% last year. Precipitation in April was much below average at 61%, which brings the seasonal accumulation (Oct-Apr) to 81% of average. Soil moisture is at 84% compared to 85% last year. The forecast streamflow volume for the Franklin River is 23% of average.

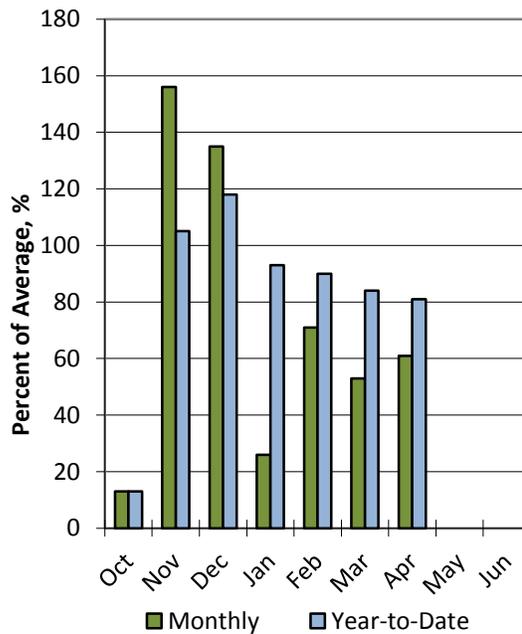
Snowpack



Soil Moisture



Precipitation



Clover Valley & Franklin River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Clover Valley & Franklin River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Franklin Ck nr Arthur	APR-JUL	0.069	0.93	1.6	23%	2.3	3.2	6.9

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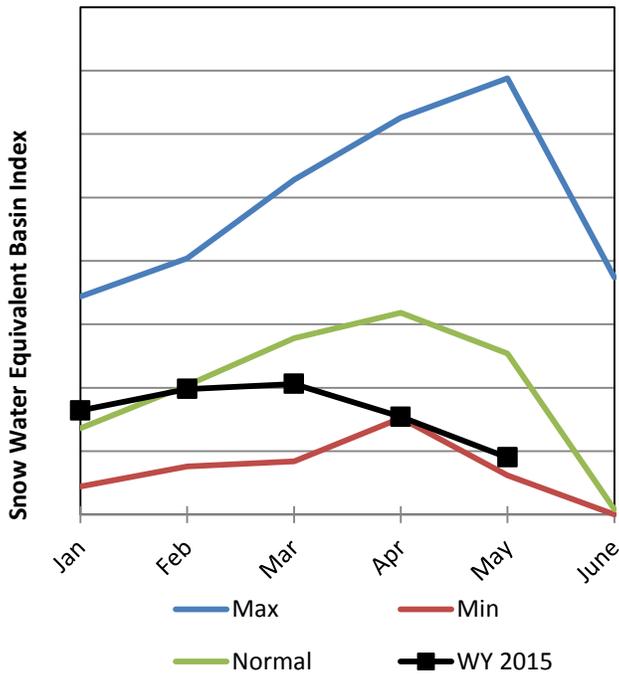
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Clover Valley and Franklin River	1	0%	107%
Franklin River	1	0%	107%
Clover Valley	1	0%	107%

Snake River Basin

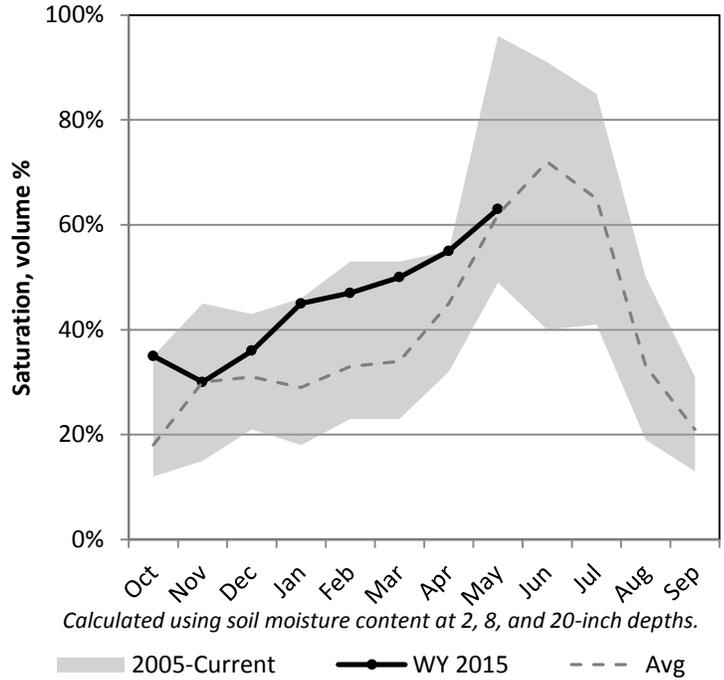
5/1/2015

Snowpack in the Snake River Basin is much below average at 36% of normal, compared to 61% last year. Precipitation in April was below average at 72%, which brings the seasonal accumulation (Oct-Apr) to 75% of average. Soil moisture is at 63% compared to 55% last year. The forecast streamflow volume for Salmon Falls Creek is 10% of average.

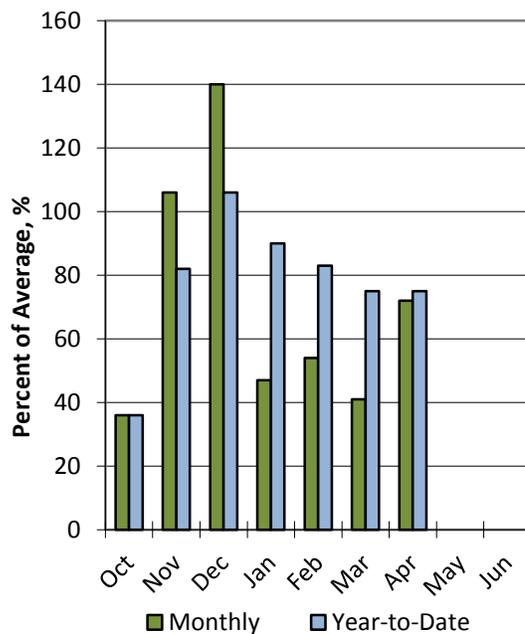
Snowpack



Soil Moisture



Precipitation



Snake River Basin Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Snake River Basin	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Salmon Falls Ck nr San Jacinto	MAY-JUL	0.79	2.9	5.1	10%	7.8	13	49
	MAY-SEP	1.65	4.3	6.9	13%	10	15.7	53

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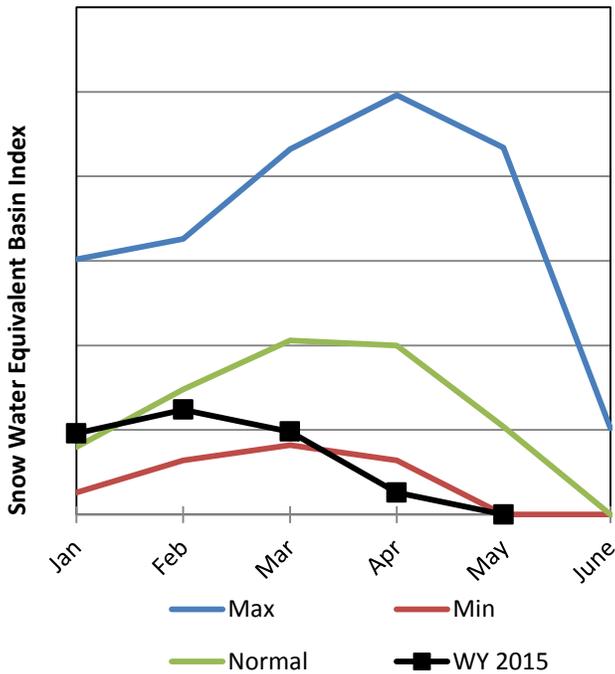
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Snake River Basin	3	36%	61%
Salmon Falls Creek	5	21%	62%

Owyhee River Basin

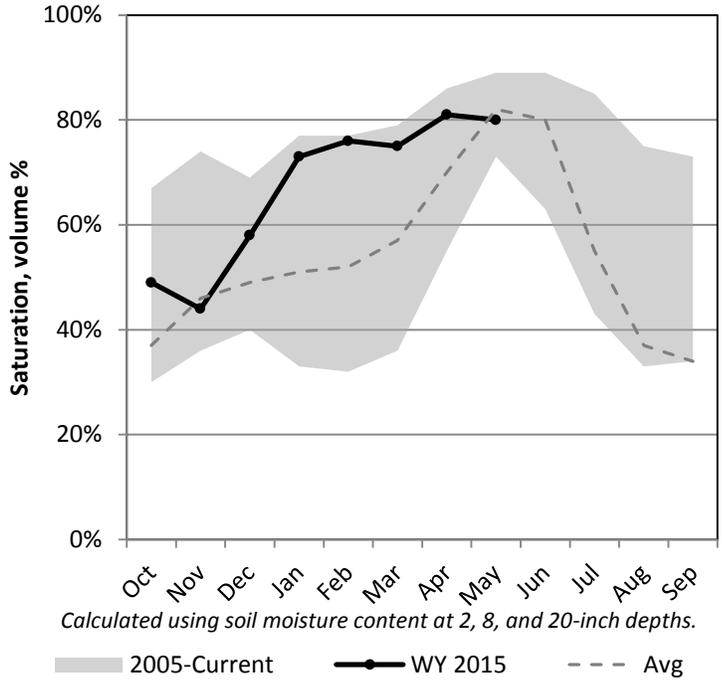
5/1/2015

Snowpack in the Owyhee River Basin is much below average at 0% of normal, compared to 57% last year. Precipitation in April was below average at 89%, which brings the seasonal accumulation (Oct-Apr) to 80% of average. Soil moisture is at 80% compared to 76% last year. Storage in Wildhorse Reservoir is 21% of capacity, compared to 24% last year. The forecast streamflow volume for the Owyhee River near Gold Creek is 16% of average.

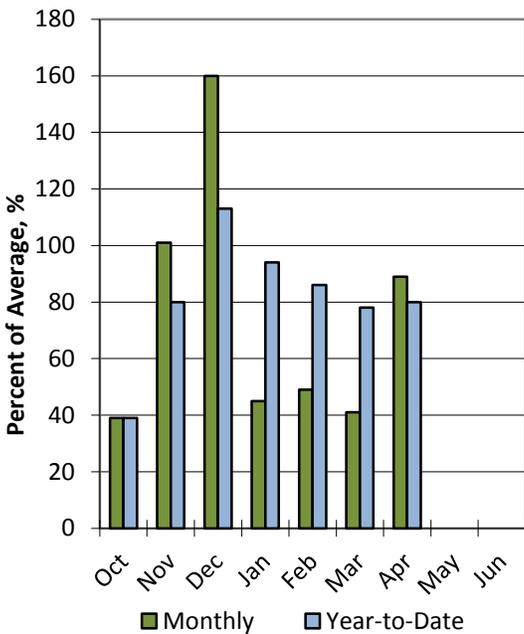
Snowpack



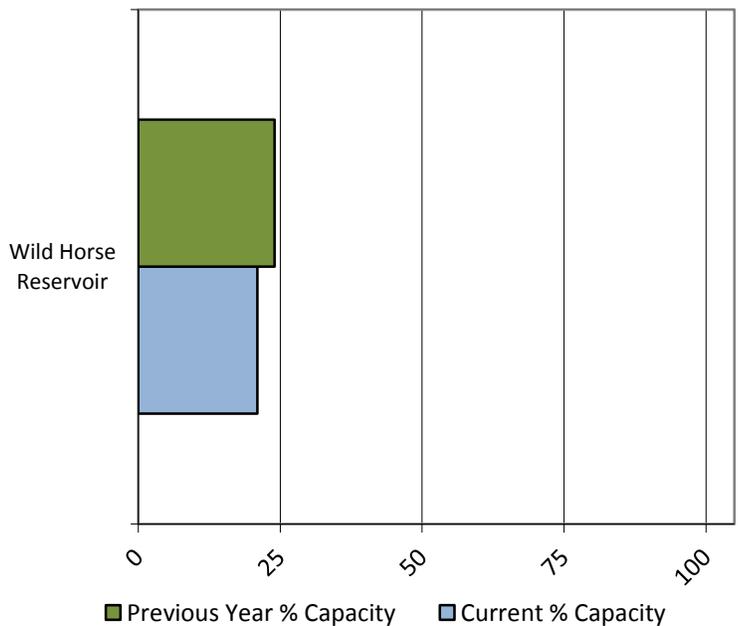
Soil Moisture



Precipitation



Reservoir Storage



Owyhee River Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Owyhee River	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Owyhee R nr Gold Ck ²	MAY-JUL	0.01103	0.47359	1.5	16%	3.10221	6.52547	9.6
	MAY-SEP	0.04	0.32515	1.2	14%	2.6	5.8	8.3

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- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Wild Horse Reservoir	14.7	16.9	49.4	71.5
Basin-wide Total	14.7	16.9	49.4	71.5
# of reservoirs	1	1	1	1

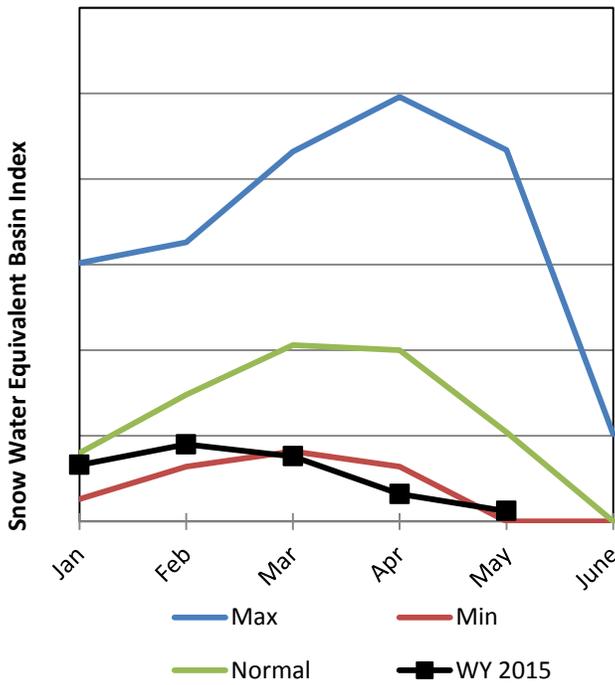
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Owyhee River Basin	5	0%	57%
Owyhee River nr Owyhee	3	0%	52%
Owyhee R. nr Gold Creek	1		
S. Fork Owyhee River	2	0%	61%

Eastern Nevada

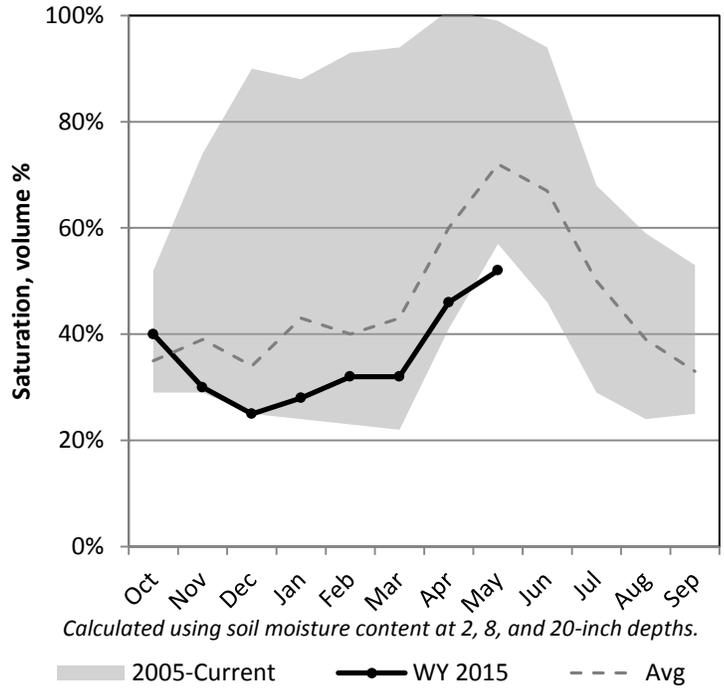
5/1/2015

Snowpack in the Eastern Nevada is much below average at 8% of normal, compared to 43% last year. Precipitation in April was much below average at 59%, which brings the seasonal accumulation (Oct-Apr) to 52% of average. Soil moisture is at 52% compared to 57% last year. Forecast streamflow volumes range from 7% to 11% of average.

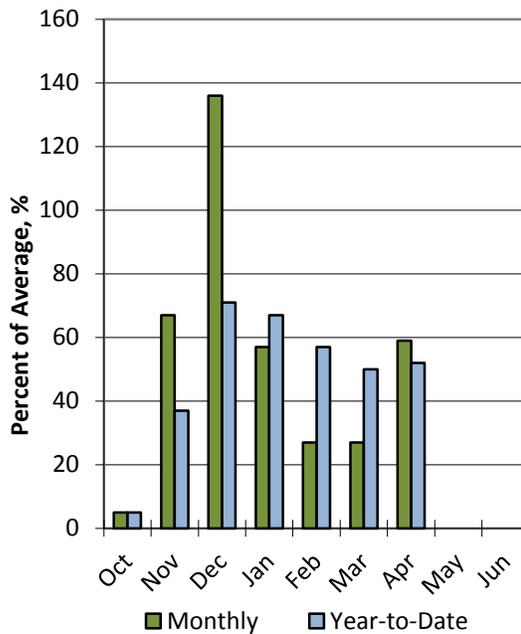
Snowpack



Soil Moisture



Precipitation



Eastern Nevada Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Eastern Nevada	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Kingston Ck nr Austin	APR-JUL	0.036	0.072	0.4	11%	1.67	3.5	3.6
Lehman Ck nr Baker	APR-JUL	0.014	0.027	0.2	7%	0.71	1.36	2.72
	MAY-JUL	0.013	0.026	0.16	6%	0.59	1.22	2.61
Cleve Ck nr Ely	APR-JUL	0.044	0.088	0.4	9%	1.06	2.2	4.41
	MAY-JUL	0.018	0.037	0.2	5%	1.01	2.2	3.66
Steptoe Ck nr Ely	APR-JUL	0.15	0.161	0.2	7%	0.56	1.1	2.7
	MAY-JUL	0.01	0.021	0.06	3%	0.42	0.96	2.1

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- 3) Median value used in place of average

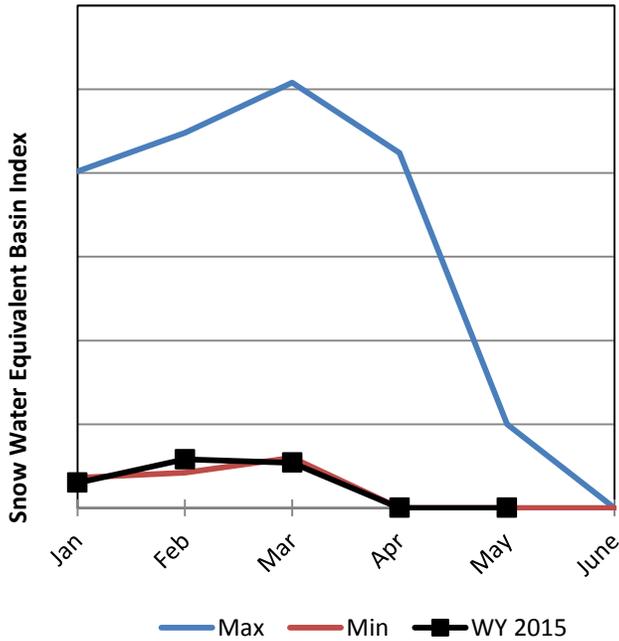
Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Eastern Nevada	3	8%	43%
Kingston Creek	1	2%	65%
Steptoe Valley	2	8%	39%

Lower Colorado River Basin

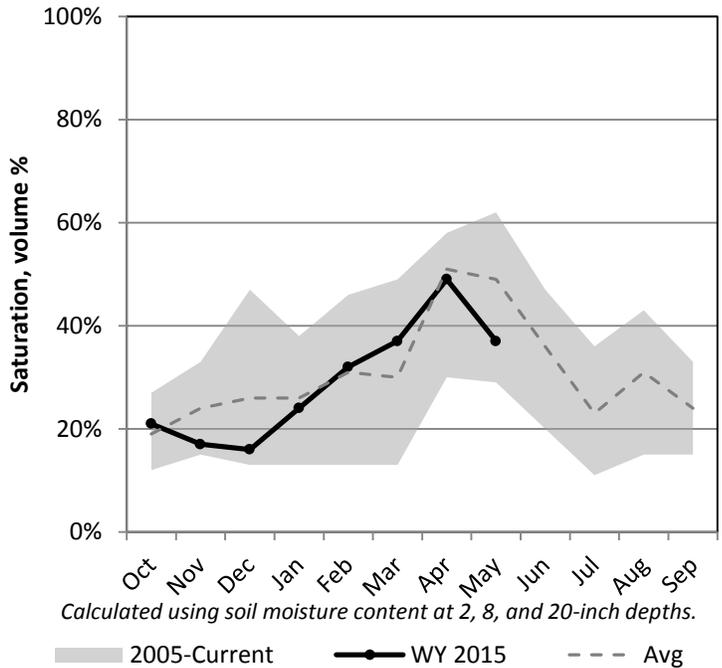
5/1/2015

Precipitation at SNOTEL stations within the Lower Colorado River Basin in April averaged 0.5 inches, which brings the average SNOTEL seasonal accumulation within the basin (Oct-Apr) to 9.1 inches. Soil moisture is at 37% compared to 36% last year. Combined reservoir storage is at 42% of capacity, compared to 46% last year. Forecast streamflow volumes range from 22% to 38% of average.

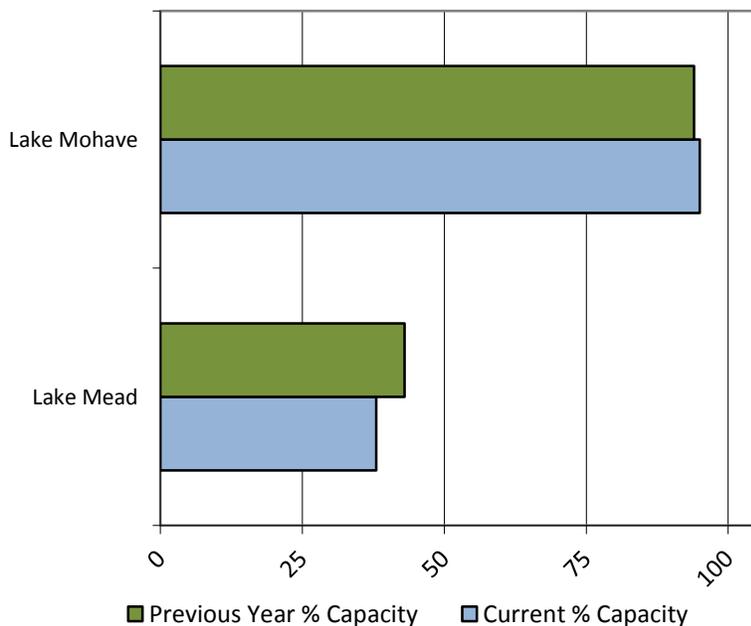
Snowpack



Soil Moisture



Reservoir Storage



Lower Colorado River Basin Streamflow Forecasts - May 1, 2015

Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

Lower Colorado River Basin	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Virgin R at Littlefield	APR-JUL	10.2	12.7	14.6	22%	16.8	20	65
	MAY-JUL	4.7	7.2	9.1	21%	11.3	14.9	43
Lake Powell Inflow ²	APR-JUL	1850	2330	2700	38%	3100	3760	7160
	MAY-JUL	1210	1690	2060	34%	2460	3120	6100
Virgin R nr Hurricane	APR-JUL	7.5	11	14	22%	17.5	23	63
	MAY-JUL	4.2	7.7	10.7	26%	14.2	20	41

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- 3) Median value used in place of average

Reservoir Storage End of April, 2015	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lake Mead	9917.0	11240.0	20158.0	26159.0
Lake Mohave	1722.6	1695.8	1678.0	1810.0
Basin-wide Total	11639.6	12935.8	21836.0	27969.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis May 1, 2015	# of Sites	% Median	Last Year % Median
Lower Colorado River Basin	0		
Spring Mountains	0		



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