



Nevada Water Supply Outlook Report

January, 2014



**Dismal snowpack outside USFS Lake Tahoe Mgmt. Unit Office, ~6,300' elev.
January 8, 2014**

Photo by Brian Hansen, USFS

Water Supply Outlook Reports

Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Snow Survey Staff, 245 N Jimmy Doolittle Rd, SLC Utah, 84116 - Phone: (801)524-5213 x116
NRCS Nevada, 1365 Corporate Blvd., Reno, NV 89502 – Phone: (775)857-8500 x152
Internet Address: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/nv/snow/>

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 it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

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

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

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers. If you believe you experienced discrimination when obtaining services from USDA, participating in a USDA program, or participating in a program that receives financial assistance from USDA, you may file a complaint with USDA. Information about how to file a discrimination complaint is available from the Office of the Assistant Secretary for Civil Rights. USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, complete, sign, and mail a program discrimination complaint form, available at any USDA office location or online at www.ascr.usda.gov, or write to: USDA Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW, Washington, DC 20250-9410 Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender. Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

STATE OF NEVADA GENERAL OUTLOOK

January 1, 2014

SUMMARY

The 2014 snow accumulation season may not be the season we all want and have hoped for. Nevada thus far this snow accumulation season has had few storms and only one that was noteworthy. Because of the paucity of storm events and the long duration between said storms, snow that has accumulated at times has also melted leaving even less for future runoff. The bottom line is that current snowpacks in western Nevada are near historic low levels. This on the heels of several dry years means that agricultural interests and water users need to be very proactive in managing water resources this year. It is not likely, given current conditions, that water supply conditions will recuperate to near normal conditions by April, the normal peak of snowpack. It is possible – just not very likely. To make matters worse, soil moisture conditions across the state are extremely dry, in many cases at the bottom end of historically observed values. Dry soils have to reach a saturated state in order to produce runoff – the dryer the soils are, the more melt is consumed to bring them to saturation. Wet soils produce greater runoff and dry soils produce less – the combination of low snowpacks and dry soils reduces the expected runoff later this year. As if this were not enough bad news – reservoir storage is also low. So, we have little water in the bank and expect little to come in and replenish the small existing supplies. Water users need to prepare for potentially exceptionally dry conditions. Small snowpacks tend to melt early, generate far less streamflow and lower peak flows. They tend to lengthen the summer period of dry conditions, fire season, etc. Not particularly promising at this point. While this narrative is excessive on the gloom and doom – it is only January and we have 3 more accumulation months left. Bases loaded home runs can be hit in the ninth inning. One more bit of bad/good news – the Climate Prediction Centers precipitation forecast for the remainder of this winter is for dryer than normal conditions in southern Nevada but equal chances for northern Nevada. That is to say, chances are equal for below, near normal or above normal precipitation which is just a small step above and better than a forecast of below normal precipitation.

SNOWPACK

January first snowpacks as measured by the NRCS SNOTEL system range from 30% of normal in western Nevada/Sierras to 50%-75% in eastern Nevada. In addition the dry weather through the beginning of January only reduces these low normals, as evident in the January 10th snowpack map on the following page.

PRECIPITATION

Mountain precipitation during December was 20% to 30% in western Nevada and 50% to 80% of average in eastern Nevada which brings the seasonal accumulation (Oct-Dec) to about 30% in the west and 50% to 90% in the east. See page five for a map displaying the most up to date precipitation map.

SOIL MOISTURE

Soil Moisture is near record lows throughout much of the state (~10 years on record for most Nevada SNOTEL stations). This is typical of a year with historically low, late fall precipitation.

RESERVOIRS

Storage in Nevada's key irrigation reservoirs are very low ranging from 5% to 50% of capacity and in general, about half of last year's carryover.

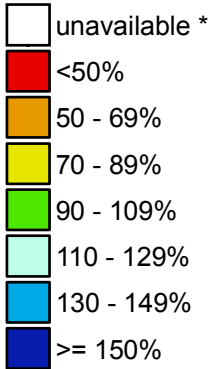
STREAMFLOW

Snowmelt stream flows are forecast to be much below normal in western Nevada and below normal in eastern Nevada.

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

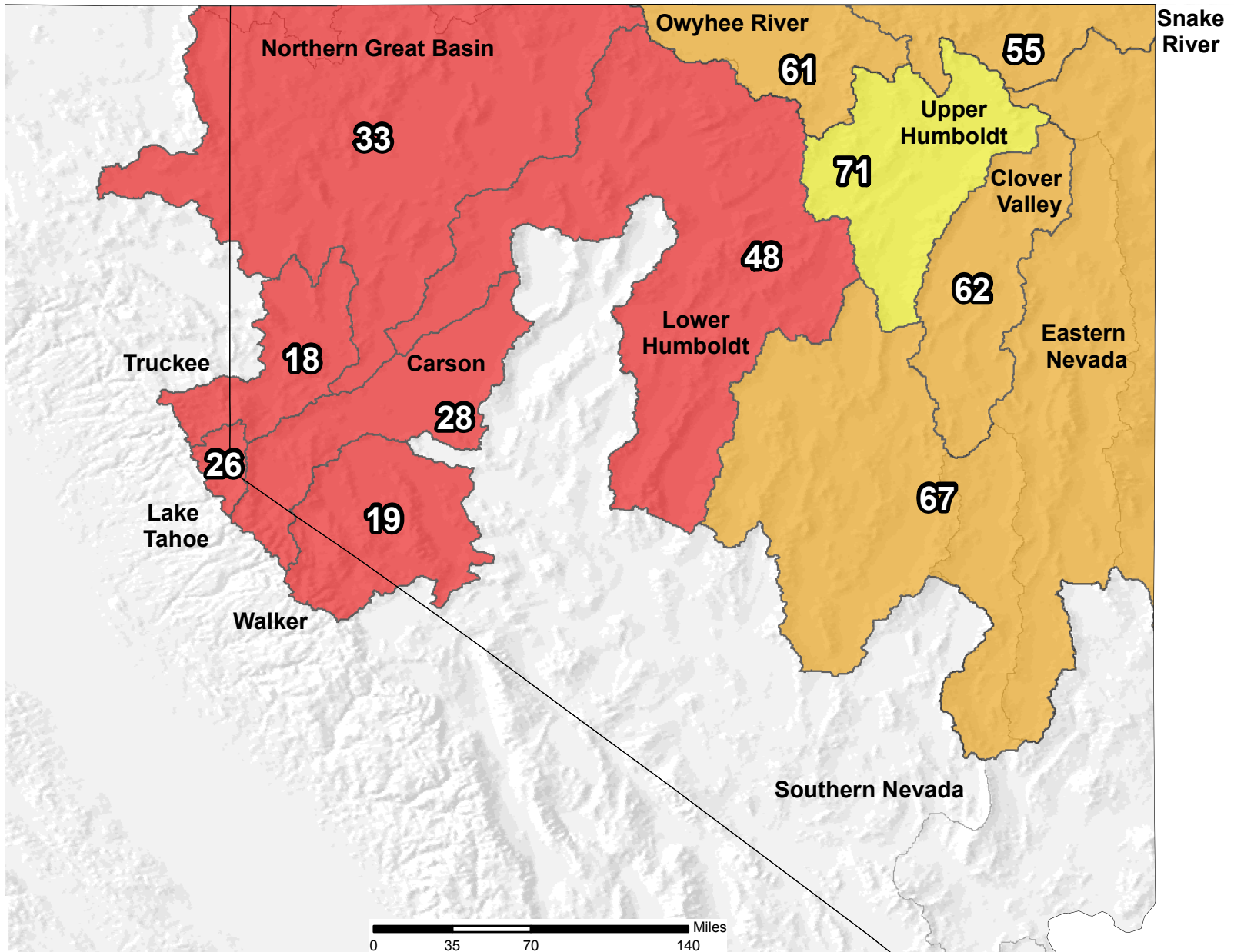
Jan 10, 2014

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



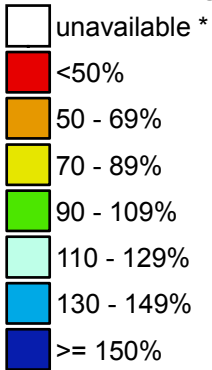
The current snow water equivalent percent of normal represents the snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by the USDA/NRCS National Water and Climate Center Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

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

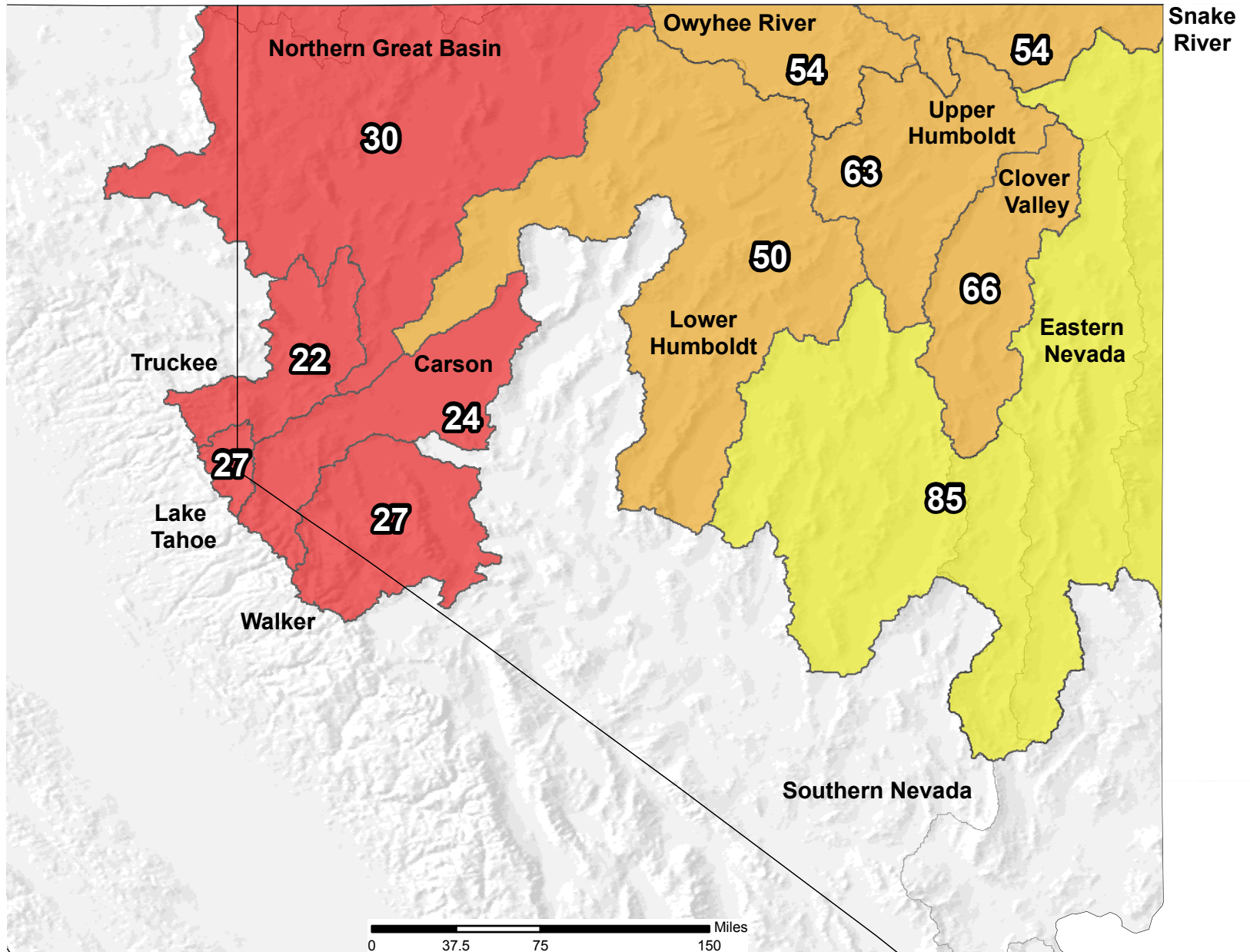
Jan 10, 2014

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).

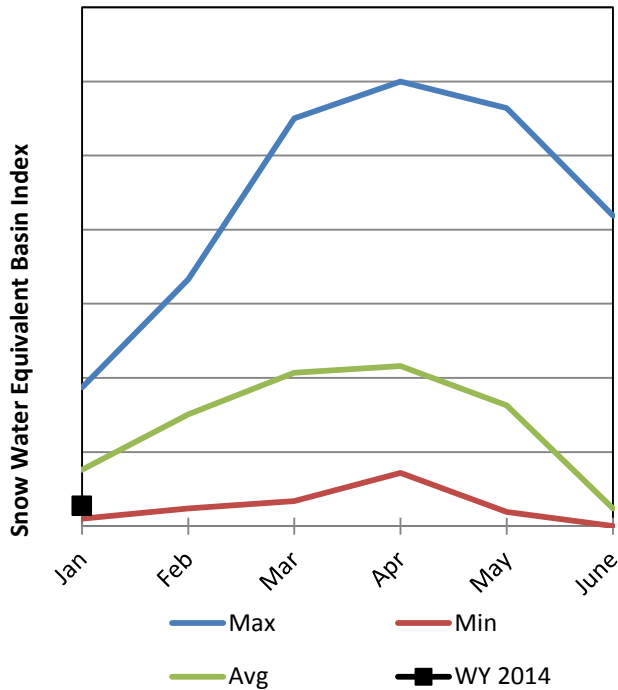
Prepared by the USDA/NRCS National Water and Climate Center Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Carson River Basin

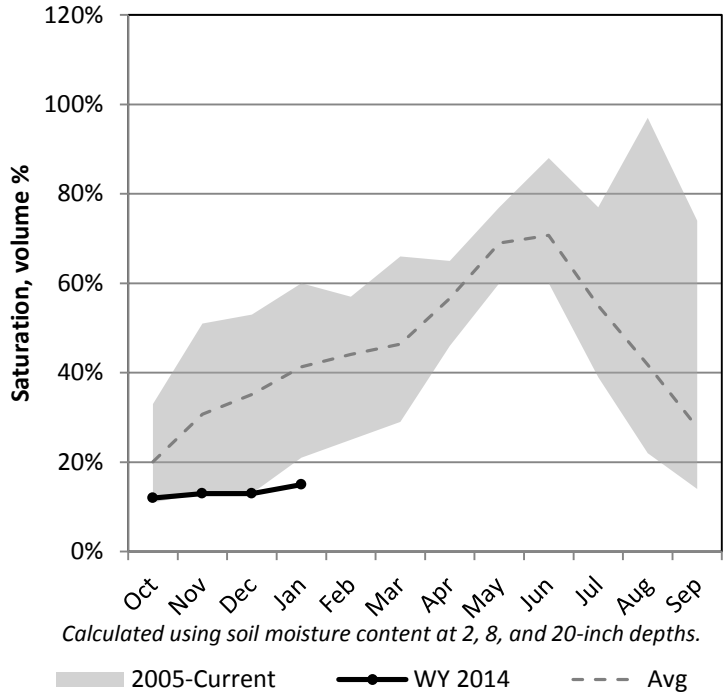
1/1/2014

Snowpack in the Carson River Basin is much below average at 36% of normal, compared to 192% last year. Precipitation in December was much below average at 28%, which brings the seasonal accumulation (Oct-Dec) to 28% of average. Soil moisture is at 15% compared to 53% last year. Reservoir storage is at 14% of capacity, compared to 22% last year. Forecast streamflow volumes range from 15% to 31% of average.

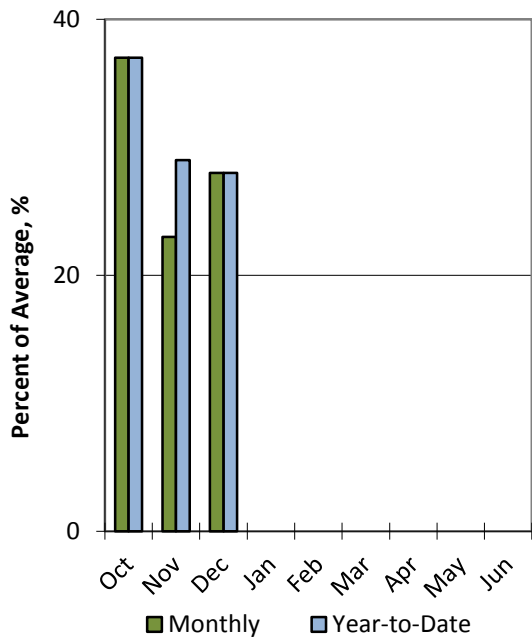
Snowpack



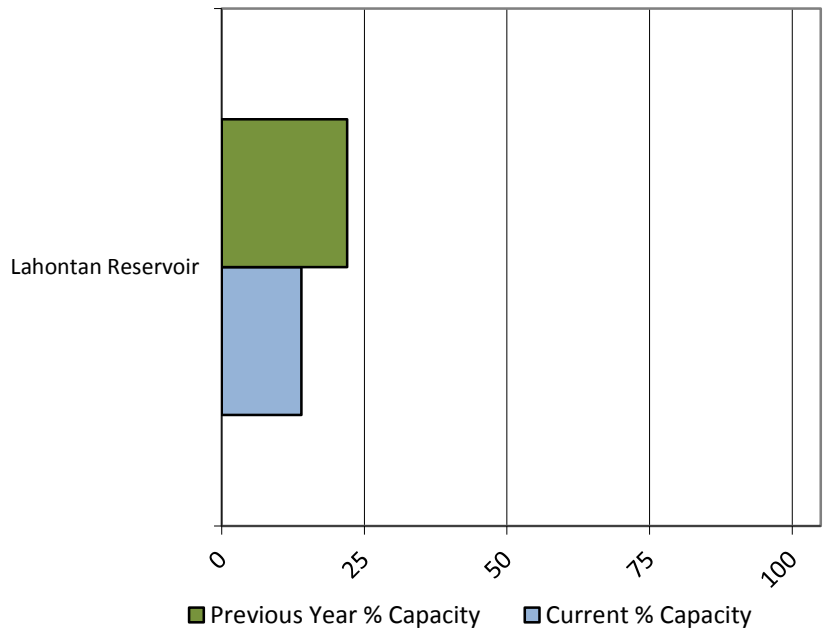
Soil Moisture



Precipitation



Reservoir Storage



Carson River Streamflow Forecasts - January 1, 2014

Carson River	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)	
EF Carlson R nr Gardnerville	MAR-JUL	6.2	18.4	60	29%	114	194	205
	APR-JUL	5.2	32	50	27%	68	95	186
WF Casrson R nr Woodfords	MAR-JUL	0.59	4.7	20	34%	36	61	59
	APR-JUL	0.54	5.9	16	30%	33	52	54
Carson R nr Carson City	MAR-JUL	2.1	12.6	60	29%	137	231	210
	APR-JUL	1.79	12.5	50	28%	116	175	179
Marlette Lake Inflow	MAR-JUL	-892	-176	311	28%	798	1514	1110
	APR-JUL	-938	-303	128	15%	559	1194	830
King Canyon Ck nr Carson City	MAR-JUL	0.004	0.023	0.1	26%	0.22	0.36	0.38
	APR-JUL	0.004	0.019	0.09	31%	0.182	0.37	0.29
Carson R at Ft Churchill	MAR-JUL	3.6	20	50	25%	82	169	200
	APR-JUL	3.1	18.2	40	23%	75	155	171
Ash Canyon Ck nr Carson City	MAR-JUL	0.014	0.056	0.3	21%	0.66	1.18	1.41
	APR-JUL	0.01	0.05	0.2	17%	0.51	0.97	1.17

- 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 December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAHONTAN RESERVOIR, NV	40.7	64.6	123.4	295.1
Basin-wide Total	40.7	64.6	123.4	295.1
# of reservoirs	1	1	1	1

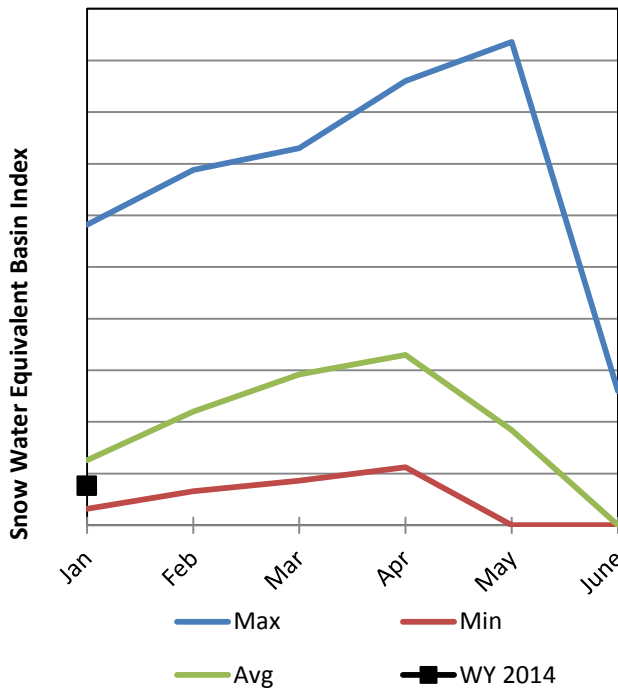
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Carson River	9	36%	192%
E.F. Carson River	4	32%	175%
W.F. Carson River	7	36%	188%

Clover Valley & Franklin River Basin

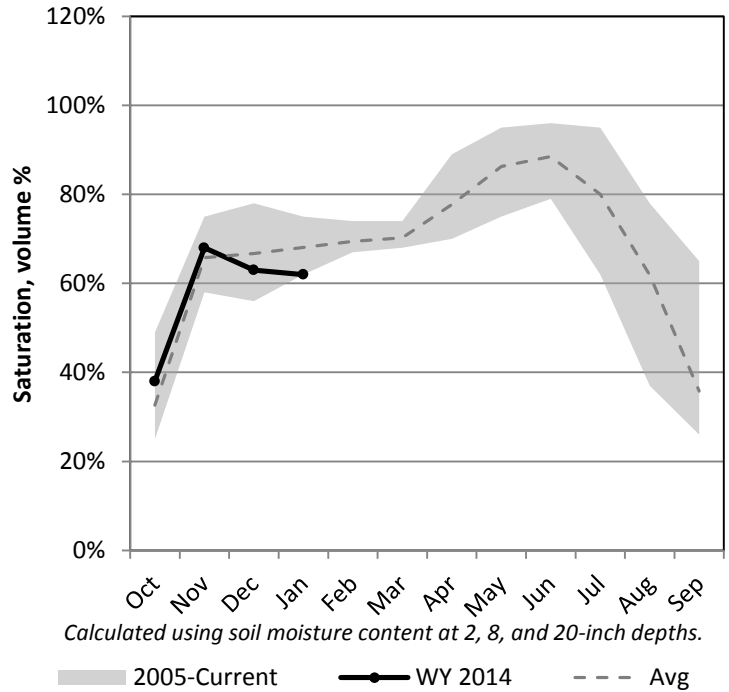
1/1/2014

Snowpack in the Clover Valley & Franklin River Basin is much below average at 60% of normal, compared to 70% last year. Precipitation in December was much below average at 54%, which brings the seasonal accumulation (Oct-Dec) to 57% of average. Soil moisture is at 62% compared to 55% last year. The forecast streamflow volume for the Franklin River is 29% of average.

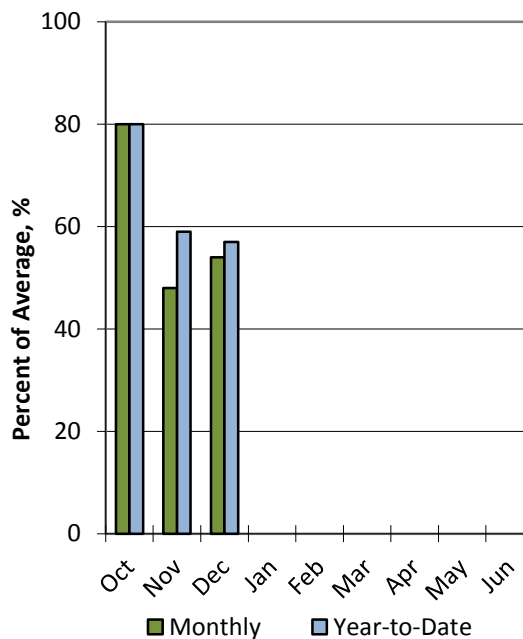
Snowpack



Soil Moisture



Precipitation



Clover Valley & Franklin River Streamflow Forecasts - January 1, 2014

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	1.29	3	2		4.8	6.2	

- 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

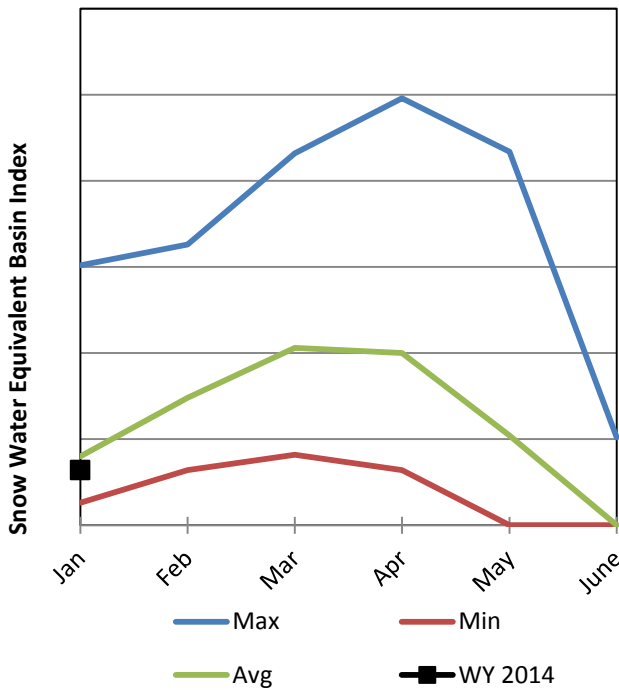
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Clover Valley & Franklin River	1	60%	70%
Franklin River	1	60%	70%
Clover Valley	1	60%	70%

Eastern Nevada Basin

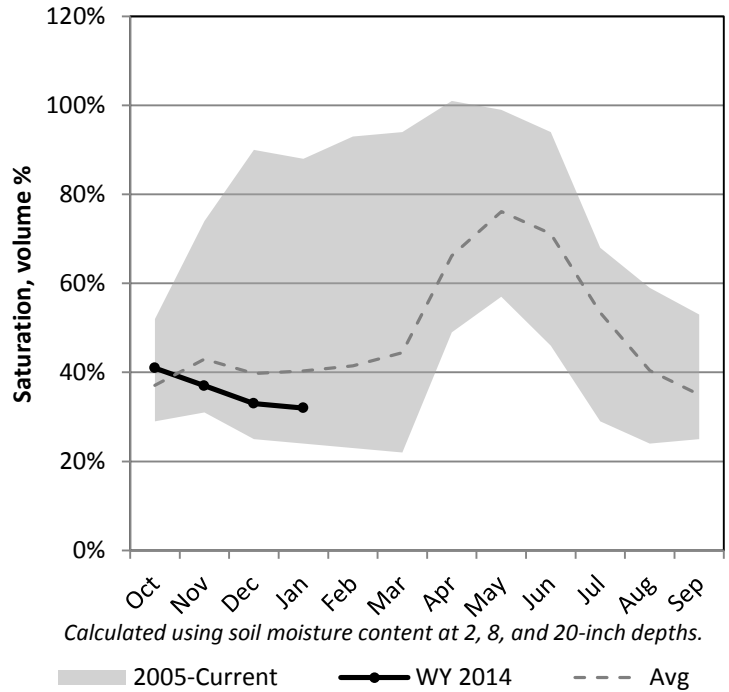
1/1/2014

Snowpack in the Eastern Nevada Basin is below average at 78% of normal, compared to 87% last year. Precipitation in December was near average at 97%, which brings the seasonal accumulation (Oct-Dec) to 90% of average. Soil moisture is at 32% compared to 54% last year. Forecast streamflow volumes range from 61% to 68% of average.

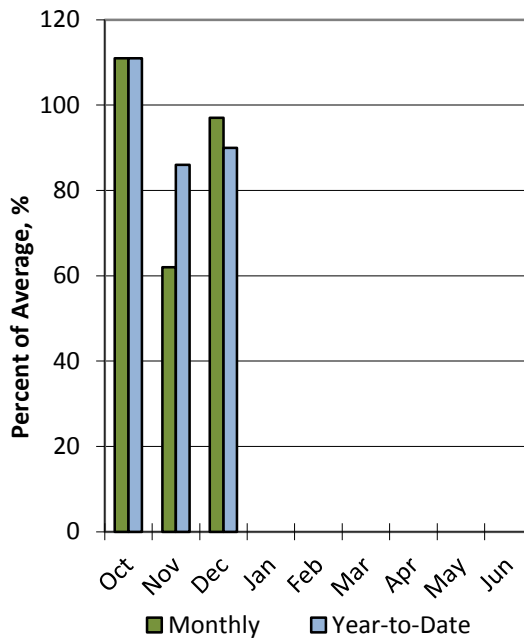
Snowpack



Soil Moisture



Precipitation



Eastern Nevada Streamflow Forecasts - January 1, 2014

Eastern Nevada	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	10% (KAF)		
Kingston Ck nr Austin	APR-JUL	0.036	0.17	2.2	61%	4.2	7.2	3.6
Lehman Ck nr Baker	APR-JUL	0.07	1.22	1.7		2.8	3.9	
Cleve Ck nr Ely	APR-JUL	0.13	1.52	2.8		4.1	6	
Steptoe Ck nr Ely	APR-JUL	0.054	0.96	1.62	68%	2.3	3.3	2.4

- 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

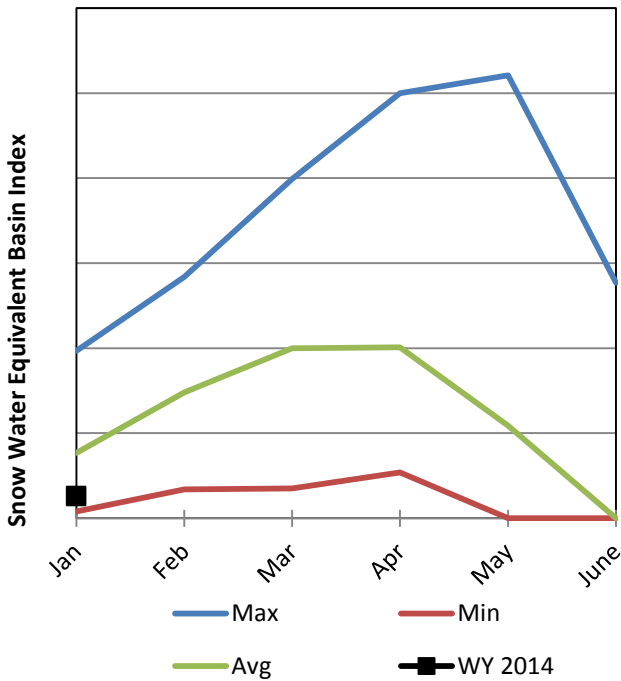
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Eastern Nevada	3	78%	87%
Kingston Creek	1	91%	88%
Steptoe Valley	2	69%	85%

Lake Tahoe Basin

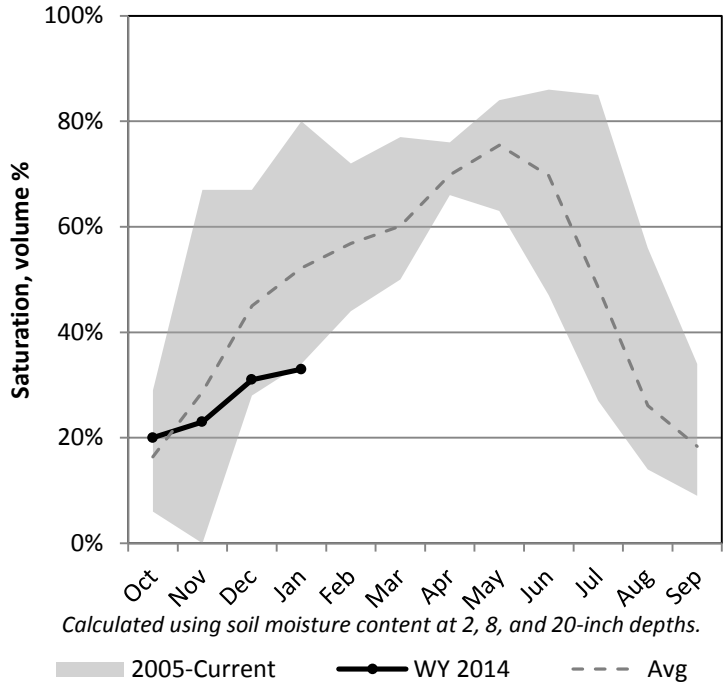
1/1/2014

Snowpack in the Lake Tahoe Basin is much below average at 34% of normal, compared to 162% last year. Precipitation in December was much below average at 30%, which brings the seasonal accumulation (Oct-Dec) to 30% of average. Soil moisture is at 33% compared to 52% last year. Reservoir storage is at 10% of capacity, compared to 52% last year. Forecast streamflow volumes range from 15% to 20% of average.

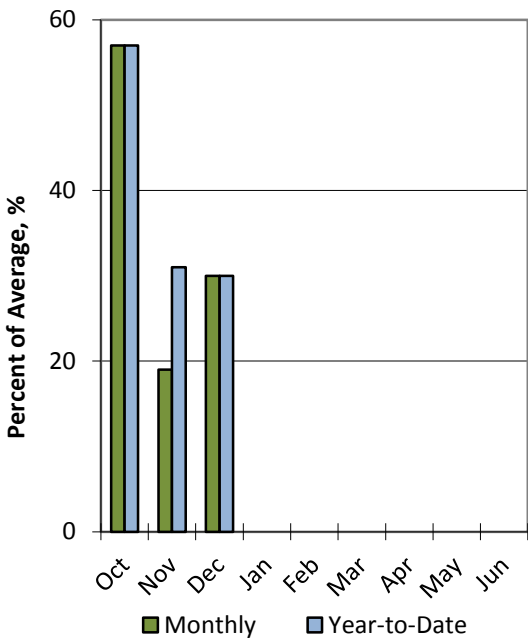
Snowpack



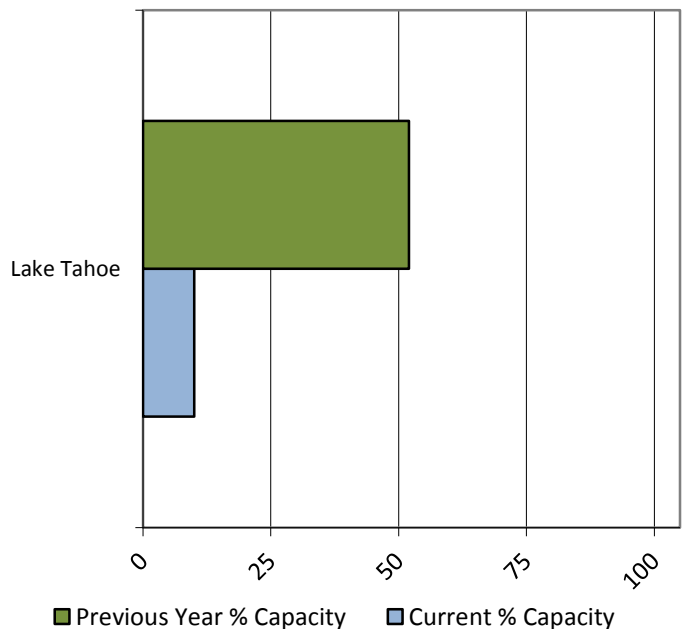
Soil Moisture



Precipitation



Reservoir Storage



Lake Tahoe Streamflow Forecasts - January 1, 2014

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	MAR-JUL	-892	-176	311	28%	798	1514	1110
	APR-JUL	-938	-303	128	15%	559	1194	830
Lake Tahoe Rise (Gates Closed) ¹	MAR-HIG	0.02	0.07	0.35	20%	0.71	1.49	1.73
	APR-HIG	0.01	0.07	0.3	23%	0.66	1.44	1.31
	OCT-HIG	0.05	0.18	0.4	18%	1.21	2.3	2.24

- 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 December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAKE TAHOE CONTENTS	75.2	386.8		744.6
Basin-wide Total	75.2	386.8		0.0
# of reservoirs	1	1	0	0

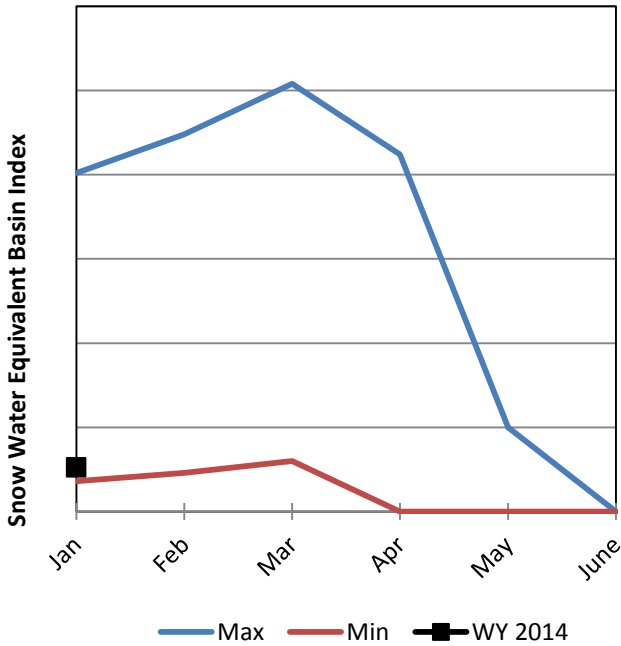
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Lake Tahoe	8	34%	162%

Lower Colorado River Basin

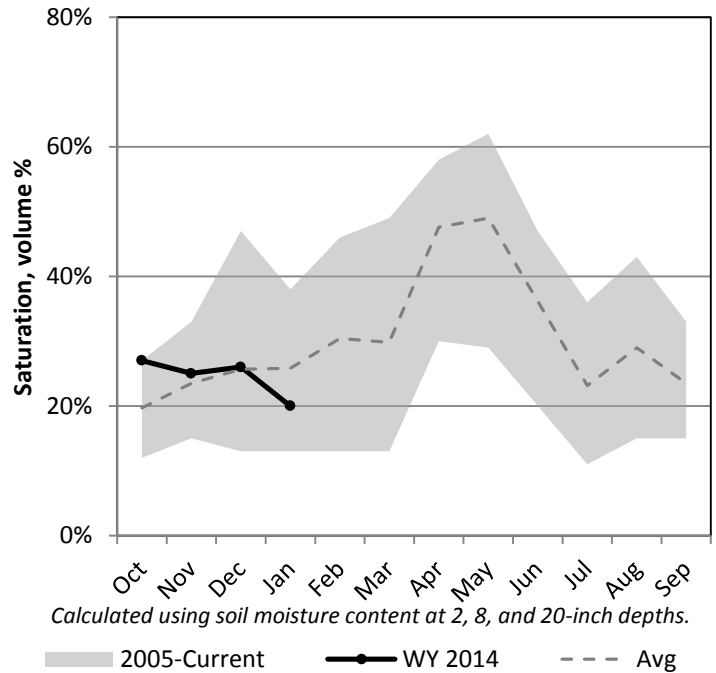
1/1/2014

Precipitation at SNOTEL stations within the Lower Colorado River Basin in December averaged 0.08 inches, which brings the average SNOTEL seasonal accumulation within the basin (Oct-Dec) to 1.4 inches. Soil moisture is at 20% compared to 57% last year. Reservoir storage is at 50% of capacity, compared to 54% last year. Forecast streamflow volumes range from 60% to 91% of average.

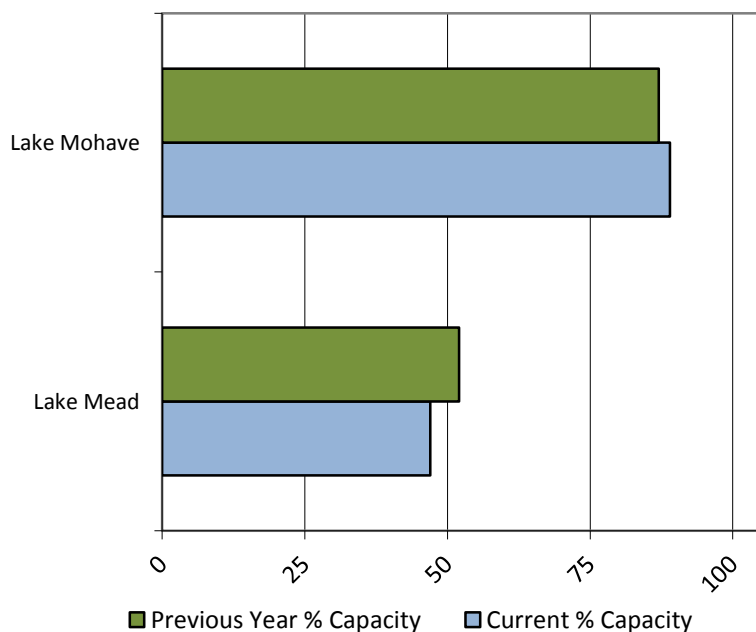
Snowpack



Soil Moisture



Reservoir Storage



Lower Colorado River Basin Streamflow Forecasts - January 1, 2014

Lower Colorado River Basin	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	10% (KAF)	
Virgin R at Littlefield	APR-JUL	6.5	23	40	62%	62	65
Lake Powell Inflow	APR-JUL	3200	5030	6500	91%	8160	7160
Virgin R nr Hurricane	APR-JUL	6.7	22	38	60%	58	63

- 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

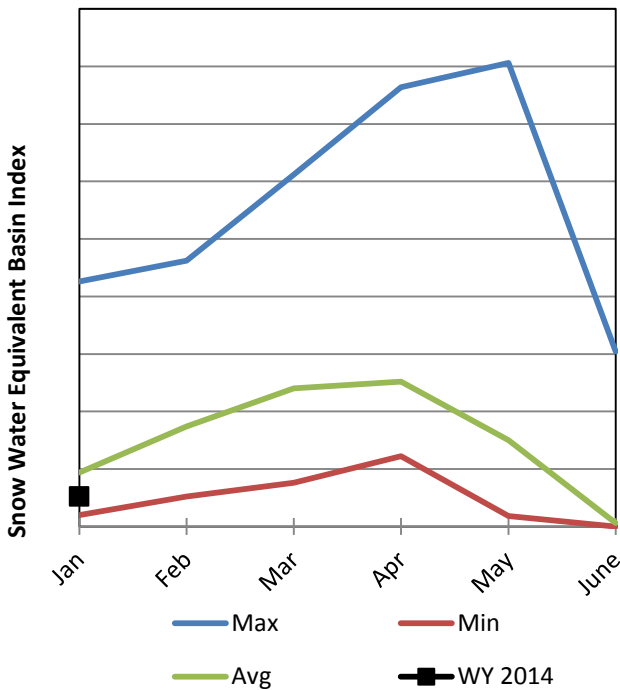
Reservoir Storage End of December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAKE MEAD AT HOOVER DAM, AZ-NV	12349.0	13647.0	20297.0	26159.0
LAKE MOHAVE AT DAVIS DAM, AZ-NV	1604.9	1570.0	1602.0	1810.0
Basin-wide Total	13953.9	15217.0	21899.0	27969.0
# of reservoirs	2	2	2	2

Lower Humboldt River Basin

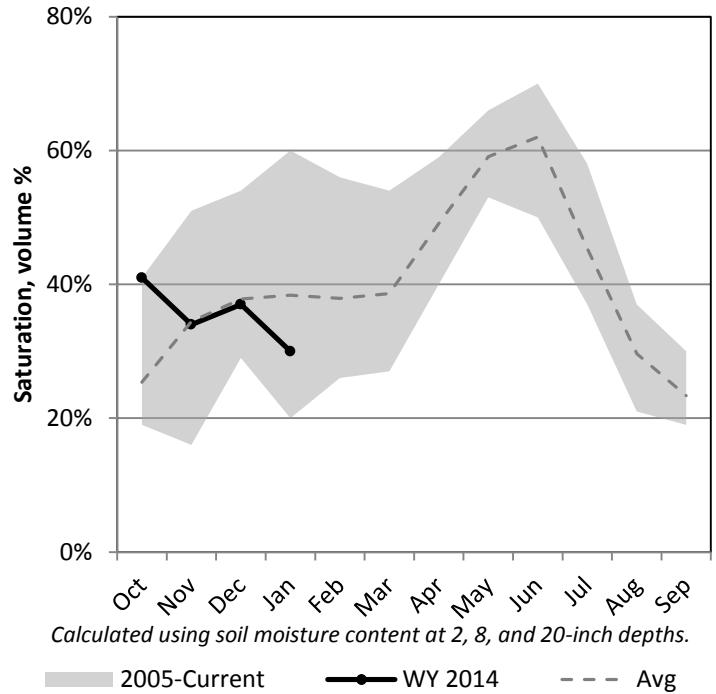
1/1/2014

Snowpack in the Lower Humboldt River Basin is much below average at 54% of normal, compared to 102% last year. Precipitation in December was much below average at 49%, which brings the seasonal accumulation (Oct-Dec) to 51% of average. Soil moisture is at 30% compared to 34% last year. Reservoir storage is at 3% of capacity, compared to 9% last year. Forecast streamflow volumes range from 8% to 29% of average.

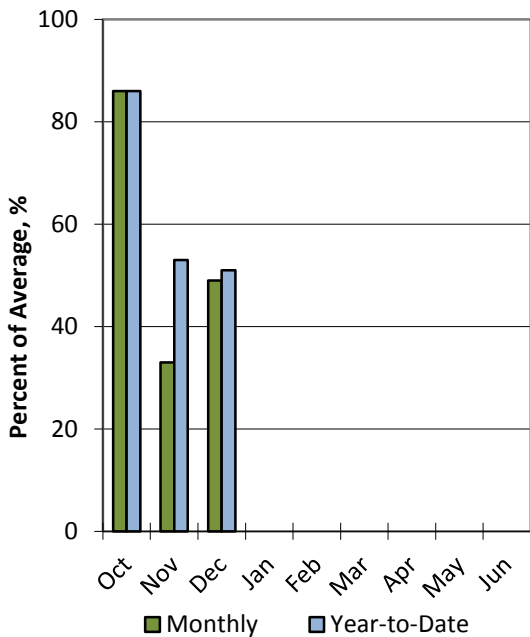
Snowpack



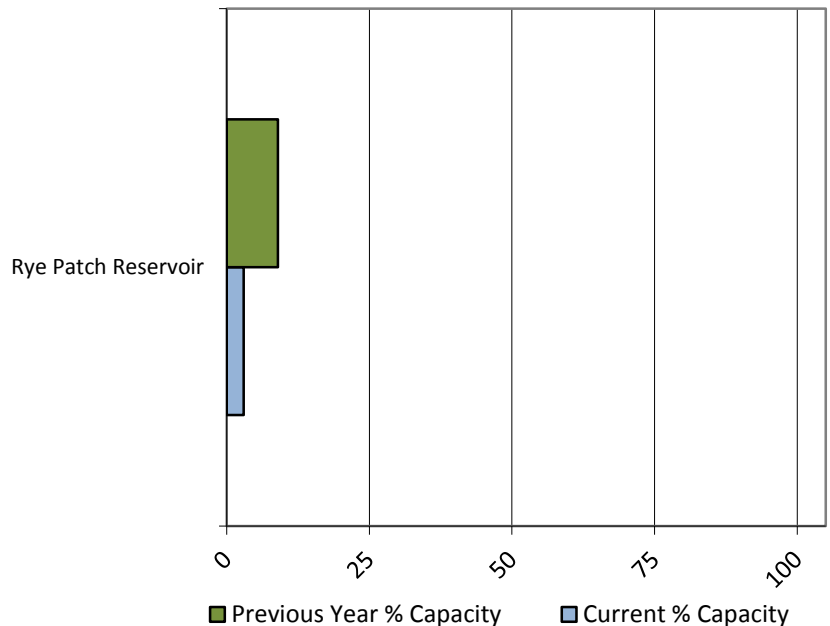
Soil Moisture



Precipitation



Reservoir Storage



Lower Humboldt River Streamflow Forecasts - January 1, 2014

Lower Humboldt River	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)	
Rock Ck nr Battle Mtn	MAR-JUL	0.27	0.81	3.5	13%	8.3	15.3	27
	APR-JUL	0.182	0.73	2.1	12%	4.7	8.5	18.2
Humboldt R at Comus	MAR-JUL	2.6	7.6	48	19%	98	173	255
	APR-JUL	2.2	6.4	34	16%	84	158	215
L Humboldt R nr Paradise	MAR-JUL	0.11	0.21	1	10%	3.3	7.1	10.5
	APR-JUL	0.097	0.29	0.8	8%	4.1	8.9	9.7
Martin Ck nr Paradise	MAR-JUL	0.22	0.66	6.4	29%	9.9	19.4	22
	APR-JUL	0.175	0.7	5	29%	8.2	15	17.5
Humboldt R nr Imlay	MAR-JUL	2.2	6.7	20	10%	76	135	210
	APR-JUL	1.88	3.8	15	8%	64	141	178

- 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 December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
RYE PATCH RE NR RYE PATCH, NV	6.7	17.8	81.2	194.3
Basin-wide Total	6.7	17.8	81.2	194.3
# of reservoirs	1	1	1	1

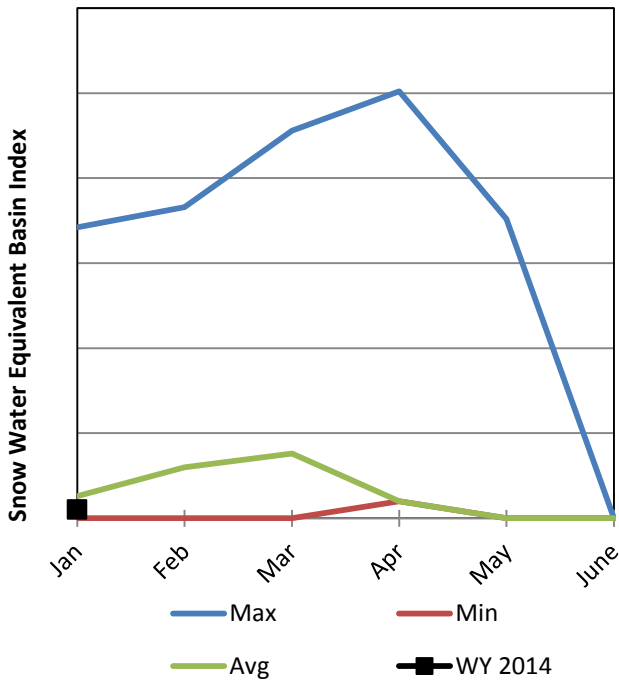
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Lower Humboldt River	5	54%	102%
Little Humboldt River	3	42%	106%
Martin Creek	3	42%	106%
Reese River	2	71%	96%
Rock Creek	0		

Northern Great Basin

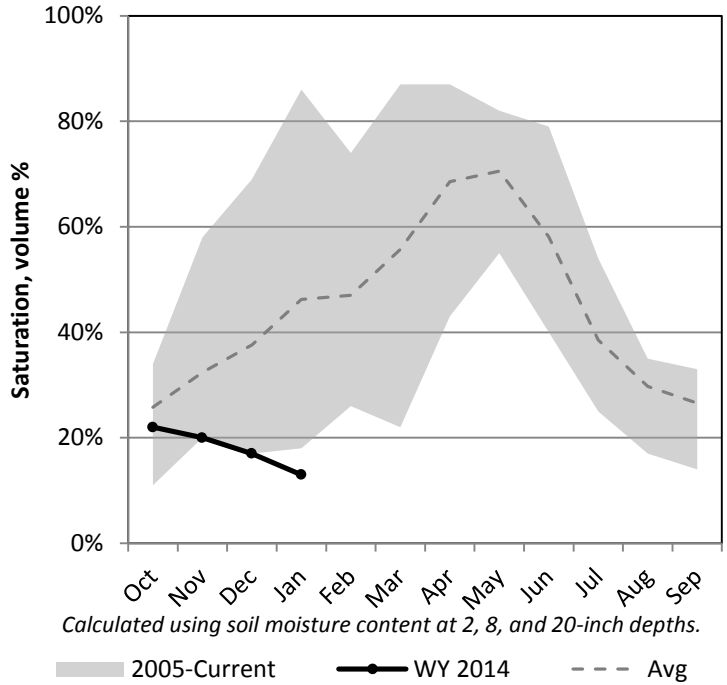
1/1/2014

Snowpack in the Northern Great Basin is much below average at 35% of normal, compared to 169% last year. Precipitation in December was much below average at 27%, which brings the seasonal accumulation (Oct-Dec) to 36% of average. Soil moisture is at 13% compared to 32% last year. Forecast streamflow volumes range from 9% to 41% of average.

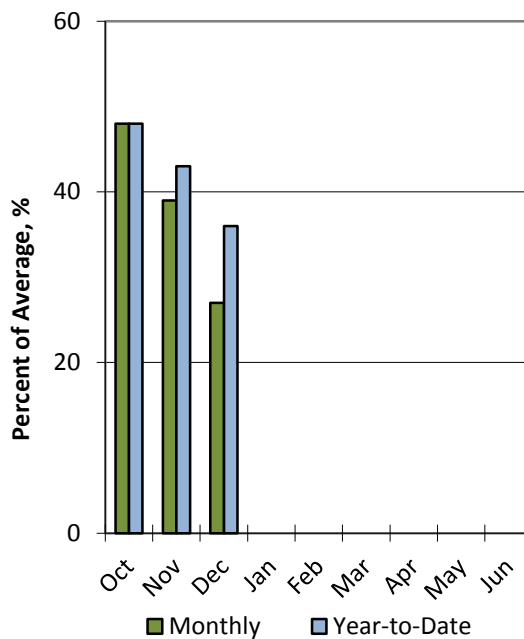
Snowpack



Soil Moisture



Precipitation



Northern Great Basin Streamflow Forecasts - January 1, 2014

Northern Great Basin	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)	
Eagle Ck nr Eagleville	APR-JUL	0.043	0.129	0.4		2.2	4.3	
Bidwell Ck nr Fort Bidwell	APR-JUL	0.12	0.36	1.8		3	5.9	
McDermitt Ck nr McDermitt	MAR-JUN	0.175	0.7	3.2	18%	9.5	15.4	17.5
	APR-JUL	0.14	0.56	2.4	19%	7.1	12.6	12.6
Davis Ck	APR-JUL	779	1283	1800		2526	4157	
	APR-SEP	952	1516	2080		2854	4547	

- 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

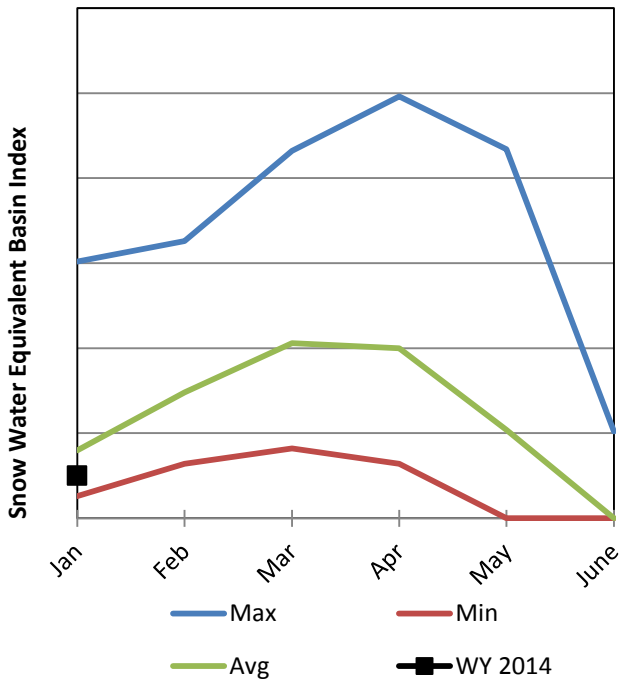
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Northern Great Basin	2	35%	169%
Quinn River	1	35%	138%
McDermitt Creek	1	35%	138%

Owyhee River Basin

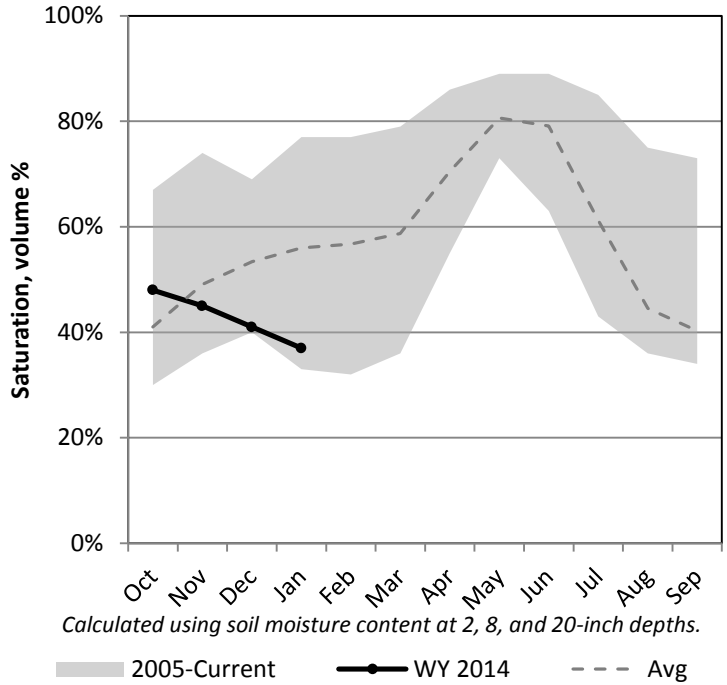
1/1/2014

Snowpack in the Owyhee River Basin is much below average at 63% of normal, compared to 81% last year. Precipitation in December was much below average at 49%, which brings the seasonal accumulation (Oct-Dec) to 52% of average. Soil moisture is at 37% compared to 56% last year. Reservoir storage is at 18% of capacity, compared to 35% last year. The forecast streamflow volume for the Owyhee River near Gold Creek is 27% of average.

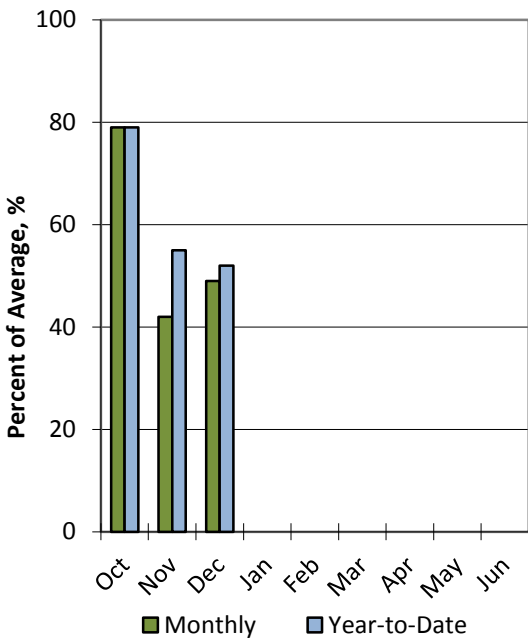
Snowpack



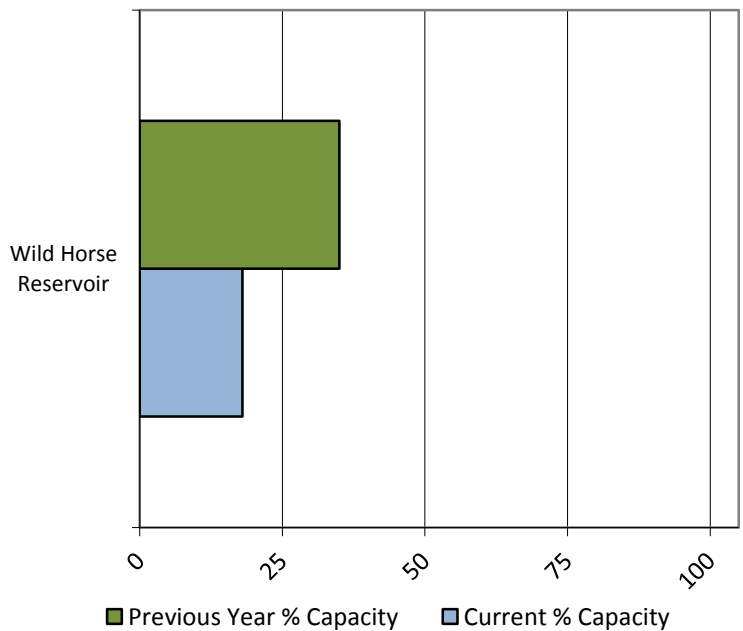
Soil Moisture



Precipitation



Reservoir Storage



Owyhee River Basin Streamflow Forecasts - January 1, 2014

Owyhee River Basin	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)	
Owyhee R nr Gold Ck	MAR-JUL	2.6	6.3	10.1	36%	15.2	25	28
	APR-JUL	0.59	2.9	6	27%	10.8	22	22

- 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 December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
WILD HORSE RE NR GOLD CREEK, NV	12.9	24.8	32.4	71.5
Basin-wide Total	12.9	24.8	32.4	71.5
# of reservoirs	1	1	1	1

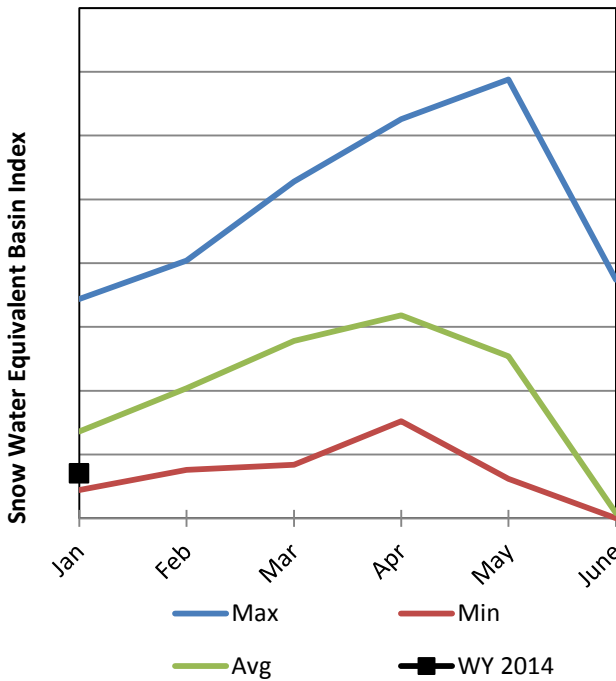
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Owyhee River Basin	5	63%	81%
Owyhee River nr Owyhee	3	57%	85%
Owyhee R. nr Gold Creek	1	60%	107%
S. Fork Owyhee River	1	72%	57%

Snake River Basin

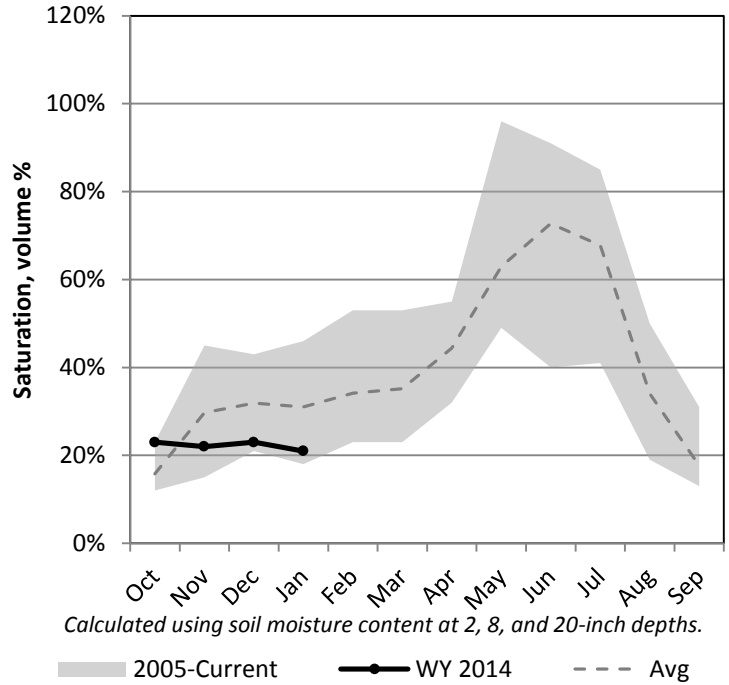
1/1/2014

Snowpack in the Snake River Basin is much below average at 52% of normal, compared to 79% last year. Precipitation in December was much below average at 65%, which brings the seasonal accumulation (Oct-Dec) to 54% of average. Soil moisture is at 21% compared to 26% last year. The forecast streamflow volume for Salmon Falls is 46% of average.

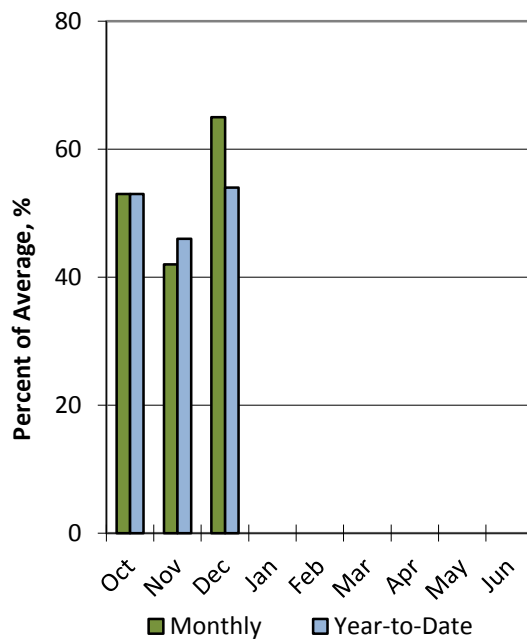
Snowpack



Soil Moisture



Precipitation



Snake River Basin Streamflow Forecasts - January 1, 2014

Snake River Basin	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)	
Salmon Falls Ck nr San Jacinto	MAR-JUL	12.5	26	37	46%	51	74	81

- 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

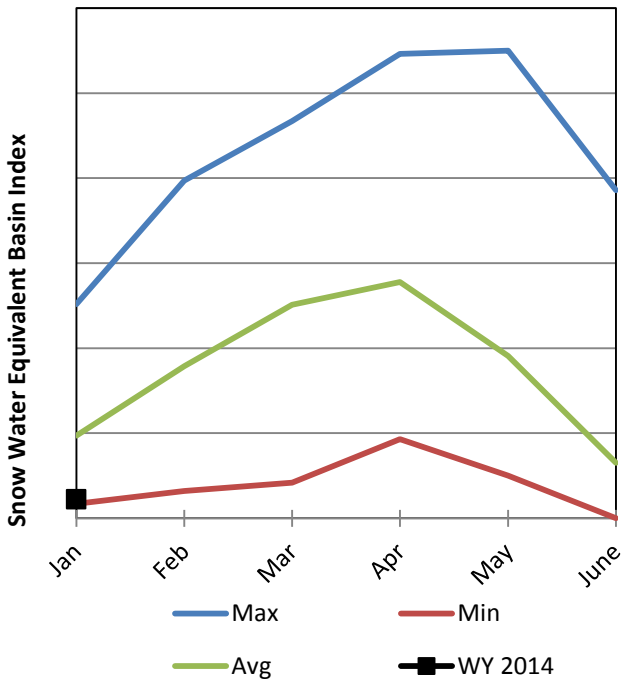
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Snake River Basin	3	52%	79%
Salmon Falls Creek	6	54%	86%

Truckee River Basin

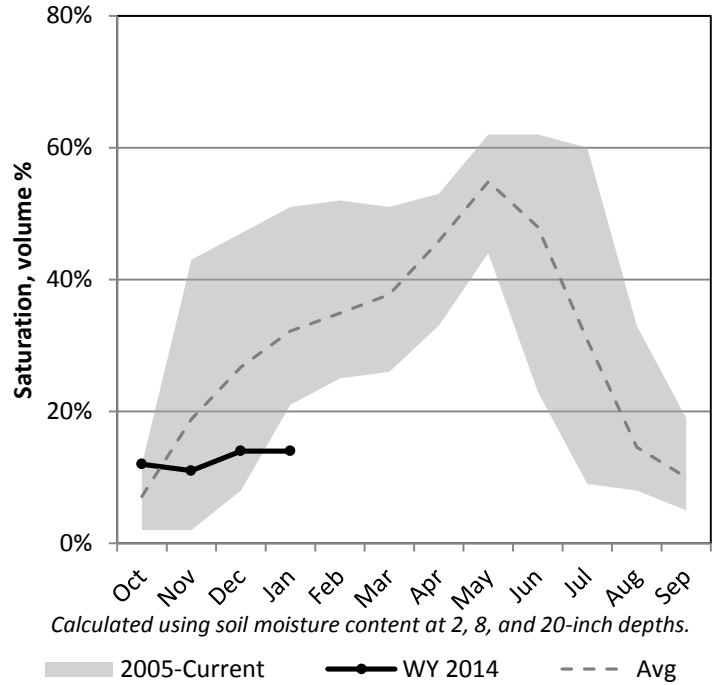
1/1/2014

Snowpack in the Truckee River Basin is much below average at 20% of normal, compared to 191% last year. Precipitation in December was much below average at 18%, which brings the seasonal accumulation (Oct-Dec) to 21% of average. Soil moisture is at 14% compared to 52% last year. Reservoir storage is at 44% of capacity, compared to 69% last year. Forecast streamflow volumes range from 13% to 30% of average.

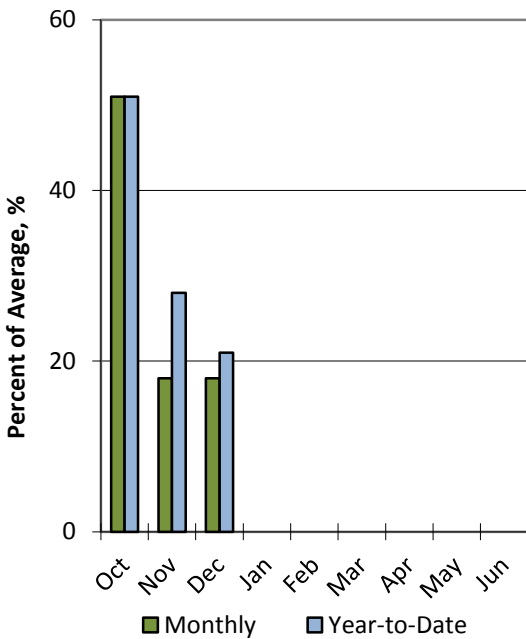
Snowpack



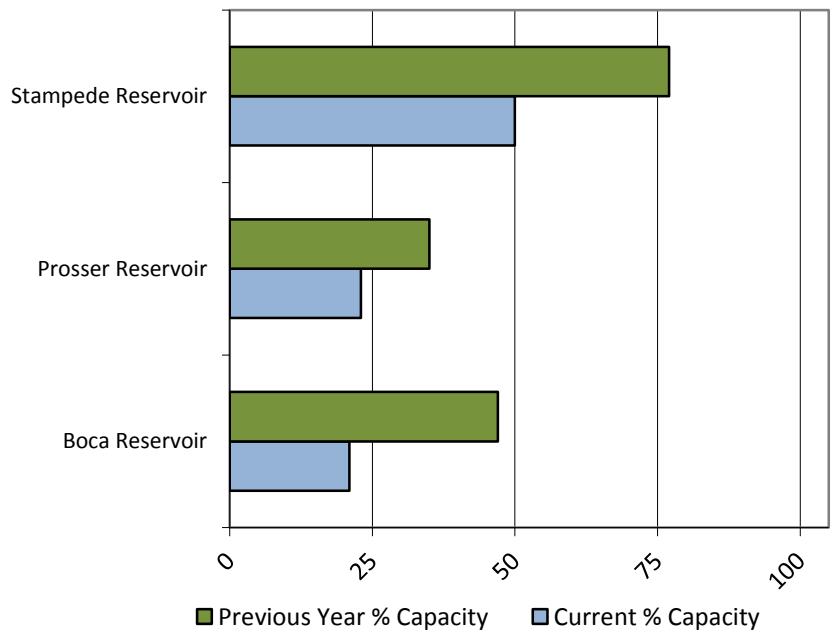
Soil Moisture



Precipitation



Reservoir Storage



Truckee River Streamflow Forecasts - January 1, 2014

Truckee River	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)	
Sagehen Ck nr Truckee	MAR-JUL	0.68	1.05	1.4	22%	1.87	2.9	6.4
	APR-JUL	0.53	0.83	1.12	20%	1.52	2.4	5.6
L Truckee R ab Boca Reservoir	MAR-JUL	1.8	7.2	25	28%	51	94	90
	APR-JUL	0.8	4.8	20	25%	45	86	80
Truckee R at Farad	MAR-JUL	6.1	37	98	32%	196	379	306
	APR-JUL	2.6	15.6	78	30%	159	289	260
Steamboat Ck at Steamboat	APR-JUL	0.079	0.24	1	13%	2.9	7.1	7.7
Galena Ck at Galena Ck State Pk	MAR-JUL	0.048	0.39	1.2	25%	2.2	3.7	4.8
	APR-JUL	0.04	0.22	1	23%	2.2	3.6	4.4
Pyramid Lake Elevation Change ¹	LOW-HIG	-1.9	-1.5	-0.5	-29%	0.83	2.4	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 December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BOCA RESERVOIR,CA	8.4	19.1	16.3	40.9
PROSSER RESERVOIR,CA	6.6	9.9	9.9	28.6
STAMPEDE RESERVOIR,CA	114.3	175.4	145.3	226.5
Basin-wide Total	129.3	204.4	171.5	296.0
# of reservoirs	3	3	3	3

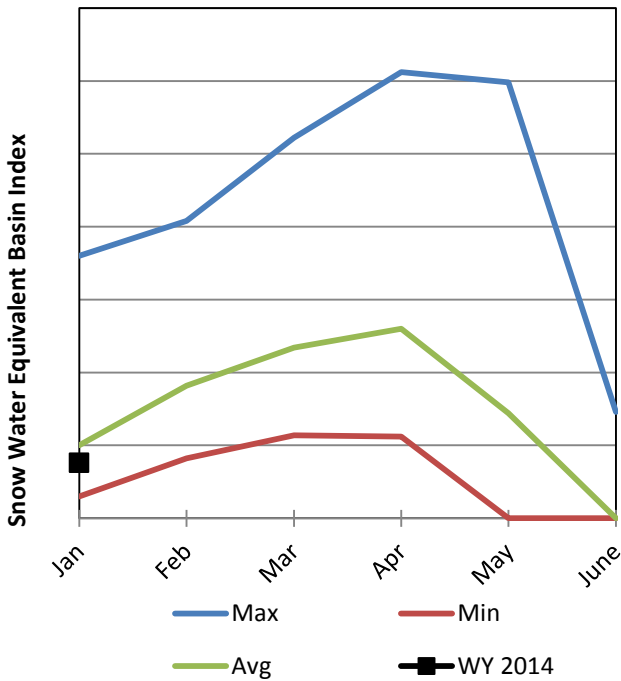
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Truckee River	8	24%	191%
Little Truckee River	3	24%	202%
Sage Hen Creek	3	24%	202%
Galena Creek	1	17%	202%
Steamboat Drainage	1	17%	202%
Pyramid Lake	16	28%	178%

Upper Humboldt River Basin

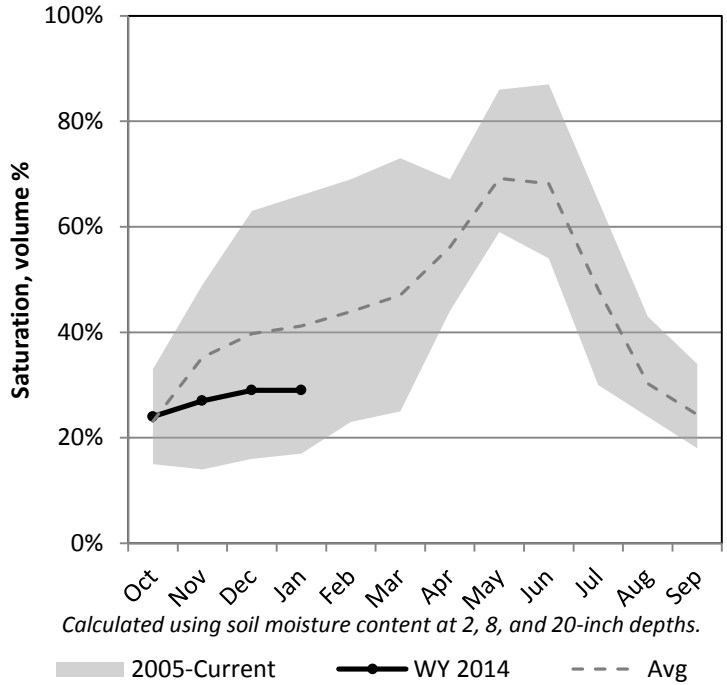
1/1/2014

Snowpack in the Upper Humboldt River Basin is below average at 75% of normal, compared to 88% last year. Precipitation in December was below average at 76%, which brings the seasonal accumulation (Oct-Dec) to 59% of average. Soil moisture is at 29% compared to 64% last year. Forecast streamflow volumes range from 22% to 39% of average.

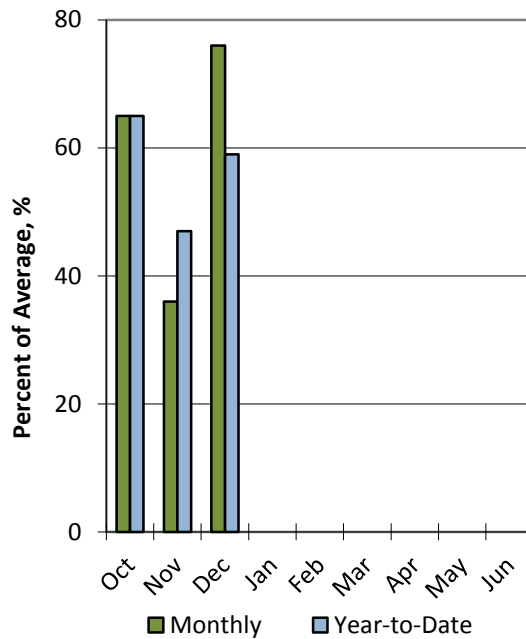
Snowpack



Soil Moisture



Precipitation



Upper Humboldt River Streamflow Forecasts - January 1, 2014

Upper Humboldt River	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)	
Marys R nr Deeth	MAR-JUL	0.82	9.9	15	37%	28	42	41
	APR-JUL	0.36	2.8	12	33%	21	35	36
Lamoille Ck nr Lamoille	MAR-JUL	0.3	2.8	9	30%	15.2	24	30
	APR-JUL	0.58	1.85	8	28%	14.1	23	29
NF Humboldt R at Devils Gate	MAR-JUL	0.44	3.1	14	36%	25	41	39
	APR-JUL	0.34	1.36	10	31%	17.7	31	32
Humboldt R nr Elko	MAR-JUL							159
SF Humboldt R at Dixie	MAR-JUL	0.72	6.5	30	42%	51	85	72
	APR-JUL	0.66	6.1	26	39%	46	75	66
Humboldt R nr Carlin	MAR-JUL	5.5	23	63	26%	103	162	240
	APR-JUL	2.4	18.1	48	23%	98	157	205
Humboldt R at Palisades	MAR-JUL	2.7	24	65	24%	106	166	270
	APR-JUL	2.2	7.6	50	22%	92	155	225

- 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

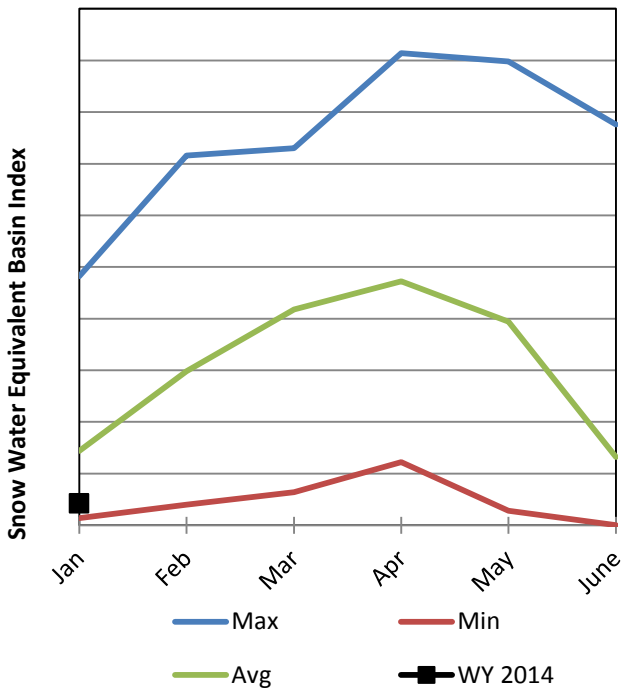
Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Humboldt Rv. At Palisades	5	75%	88%
Lamoille Creek	1	63%	54%
S. Fork Humboldt	2	86%	93%
Mary's River	1	53%	72%
N. Fork Humboldt	0		

Walker River Basin

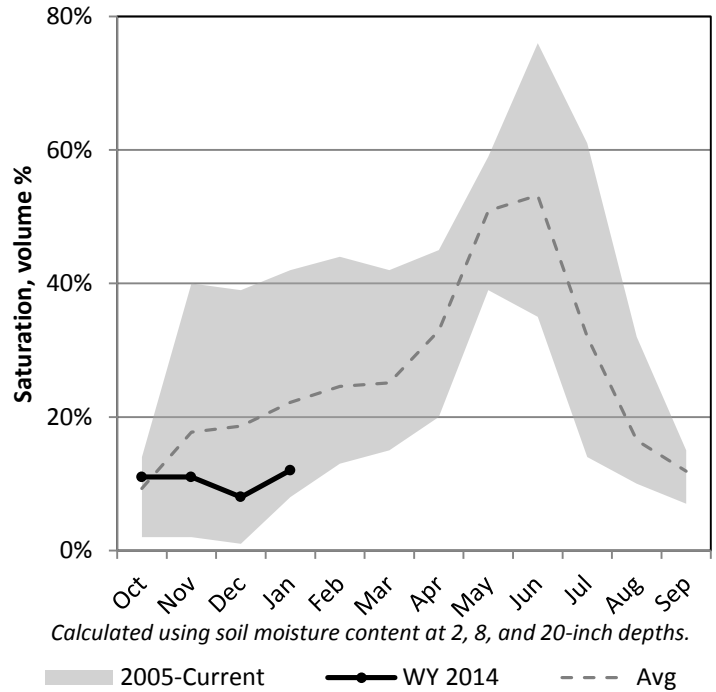
1/1/2014

Snowpack in the Walker River Basin is much below average at 30% of normal, compared to 207% last year. Precipitation in December was much below average at 31%, which brings the seasonal accumulation (Oct-Dec) to 31% of average. Soil moisture is at 12% compared to 39% last year. Reservoir storage is at 12% of capacity, compared to 22% last year. Forecast streamflow volumes range from 24% to 31% of average.

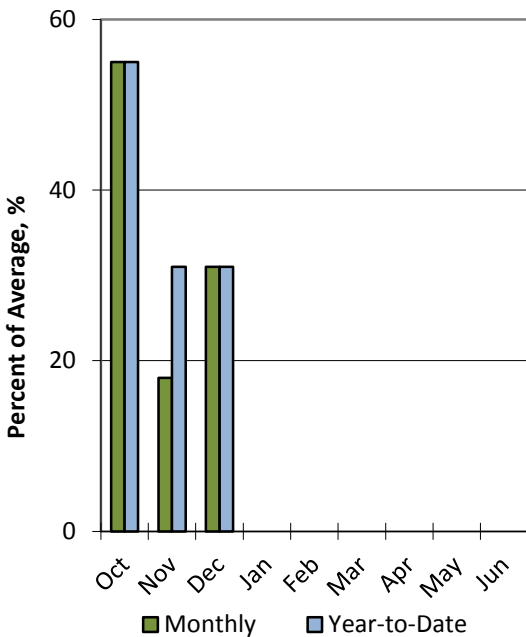
Snowpack



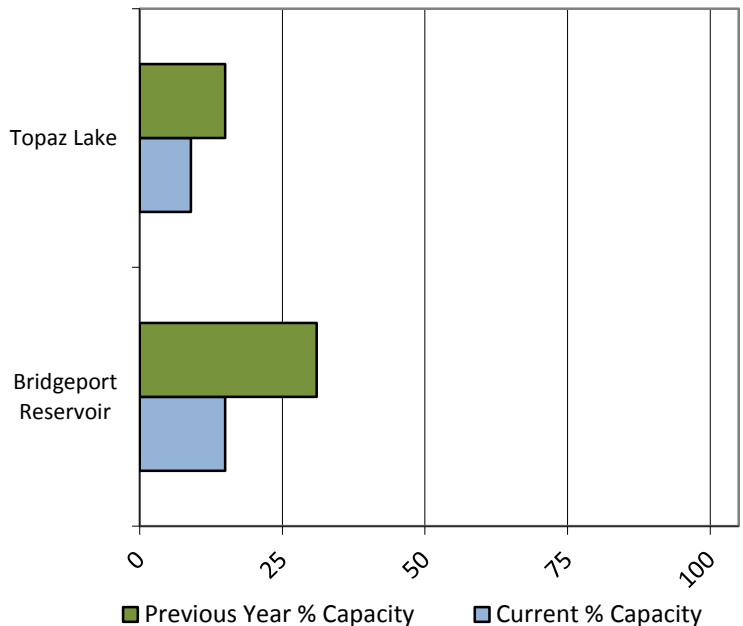
Soil Moisture



Precipitation



Reservoir Storage



Walker River Streamflow Forecasts - January 1, 2014

Walker River	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)	
E Walker R nr Bridgeport	MAR-AUG	0.76	4.6	20	26%	36	71	78
	APR-AUG	0.67	4.7	16	24%	34	61	68
W Walker R bl L Walker nr Coalville	MAR-JUL	3.4	10.9	54	32%	97	161	170
	APR-JUL	1.62	7.9	50	31%	92	154	162
W Walker R nr Coalville	MAR-JUL	46	52	55	32%	58	64	172
	APR-JUL	41	46	51	31%	52	57	163
Walker Lake Elevation Change ¹	LOW-HIG	-0.87	-0.27	-0.05	-4%	0.73	1.2	1.41

- 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 December, 2013	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BRIDGEPORT RESERVOIR, CA	6.5	13.0	18.0	42.5
TOPAZ LK NR TOPAZ, CA	5.4	9.1	19.8	59.4
Basin-wide Total	11.9	22.1	37.8	42.5
# of reservoirs	2	2	2	1

Watershed Snowpack Analysis January 1, 2014	# of Sites	% Median	Last Year % Median
Walker Lake Rise	5	29%	213%
E. Walker Rv. Nr Bridgeport	2	19%	199%
W. Walker Rv. Nr Coleville	4	30%	211%

Issued by

Jason Weller
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

Bruce Petersen
State Conservationist
Natural Resources Conservation Service
Reno, Nevada

Prepared by

Beau Uriona, Hydrologist
Randy Julander, Data Collection Officer
Jeff O'Connell, Hydrologist

YOU MAY OBTAIN THIS PRODUCT AS WELL AS CURRENT SNOW, PRECIPITATION, TEMPERATURE AND SOIL MOISTURE, RESERVOIR, SURFACE WATER SUPPLY INDEX, AND OTHER DATA BY VISITING OUR WEB SITE @:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/nv/snow/>



Snow Survey, NRCS, USDA
245 North Jimmy Doolittle Road
Salt Lake City, UT 84116
(801) 524-5213 x116



Nevada Water Supply Outlook Report

**Natural Resources Conservation Service
Reno, NV**

