



Nevada Water Supply Outlook Report

March, 2014



**Skiers enjoyed fresh snow near the Mt. Rose SNOTEL site.
March 4, 2014**

Photo by Beau Uriona, NRCS

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

March 1, 2014

SUMMARY

February 2014 brought above average precipitation to most of Nevada; some western Nevada basins reported precipitation over 150% of average. Unfortunately in western Nevada, much of it fell as rain rather than snow. Warm temperatures across the Sierras during precipitation events prevented the snowpack from benefiting from what would normally be considered a great month, precipitation wise. Many high elevation western Nevada SNOTEL sites made significant gains over the past month. However, the poor gains/losses at lower elevations led to an overall negligible gain as a basin-wide average. Eastern Nevada, though it saw less overall precipitation, made modest gains due to comparatively colder temperatures. Some areas may see a slight benefit due to an increase in overall runoff efficiency from the marked increase in soil moisture. It is important to keep in mind however, that this benefit is only a silver lining in an overall bad situation. Runoff typically benefits more from deeper snowpack than from wet soils. Overall, the snow which did accumulate managed to just out pace a normal year, basin averages seeing a slight increase during the previous month. Most western Nevada basins would need an unprecedented amount of snowfall during the remainder of the season to reach an average condition. Reservoirs across Nevada increased storage slightly over the past month - though the gains were likely due to conservative dam operations rather than from precipitation events. As the snow accumulation season winds down across the Sierras, with peak snowpack typically occurring mid-march to early April, it seems that a combination of low snow pack and poor reservoir carryover is leading to a summer of significant water supply shortages. Eastern Nevada is looking considerably better with many basins near normal conditions, though none broke the 100% of normal mark.

SNOWPACK

March first snowpack as measured by the NRCS SNOTEL system ranges from 32-56% of normal in western Nevada/Sierras, roughly a 10% increase from last month's numbers. Eastern Nevada ranges from 44%-90% of normal. Small disturbances in the short term weather forecast may add slightly to the snowpack, though not likely to significantly change the overall outlook. See the following page for a map displaying the most up to date conditions at publication time.

PRECIPITATION

Mountain precipitation during February was 104% to 150% of average in western Nevada and 89% to 160% of average in eastern Nevada which brings the seasonal accumulation (Oct-Dec) to 51-63% in the west and 68% to 86% in the east. See page five for a map displaying the most up conditions at publication time.

SOIL MOISTURE

Soil Moisture though by and large low statewide, saw significant positive gains in February. Sadly these gains were at the cost of precipitation events in the form of rain rather than snow.

RESERVOIRS

Storage in Nevada's key irrigation reservoirs are very low ranging from 4% to 32% of capacity. Stampede reservoir stands out currently with 49% of storage capacity.

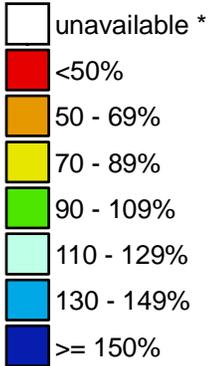
STREAMFLOW

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

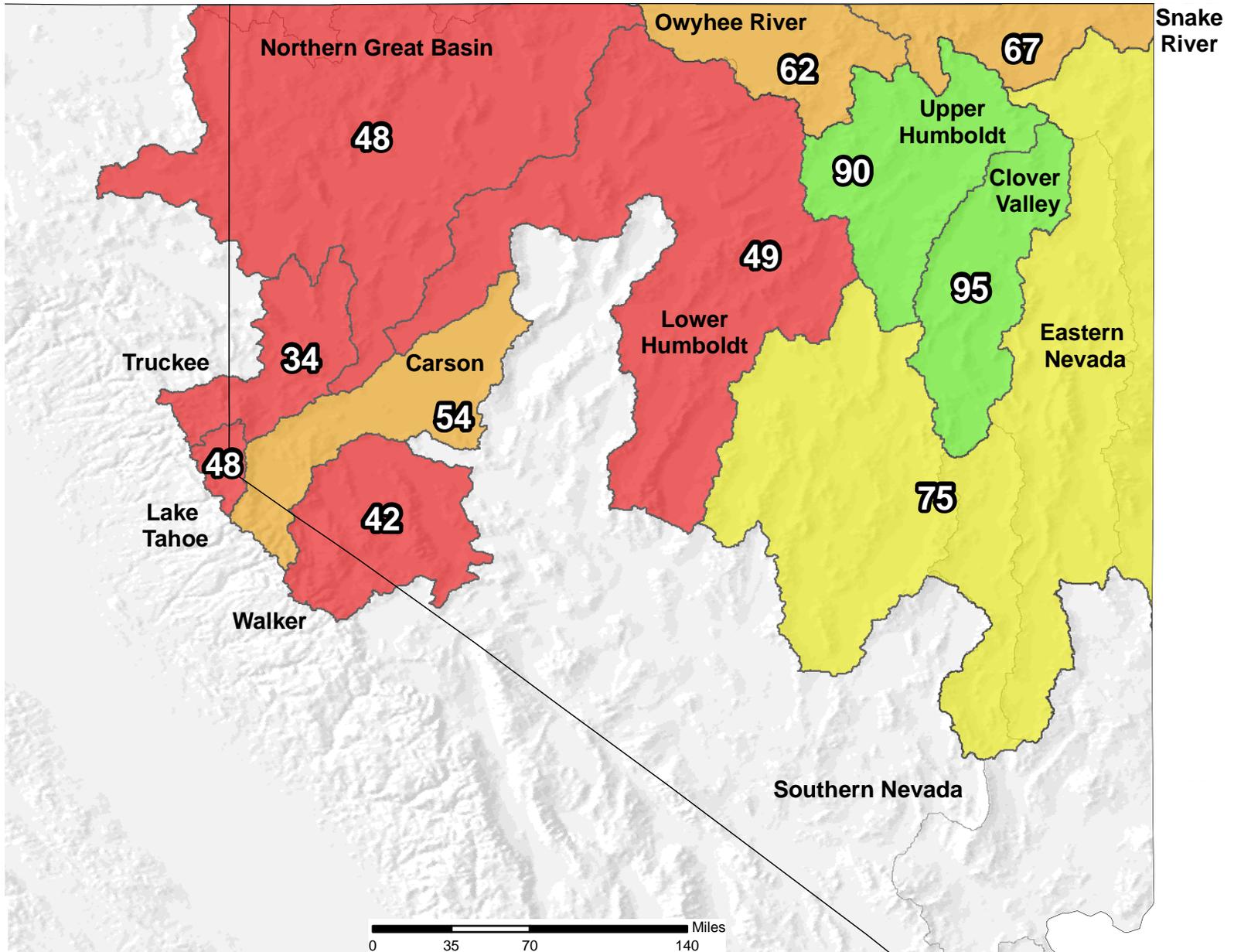
Mar 06, 2014

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



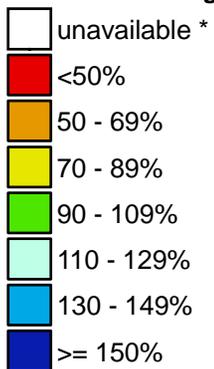
The current snow water equivalent percent of normal represents the snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

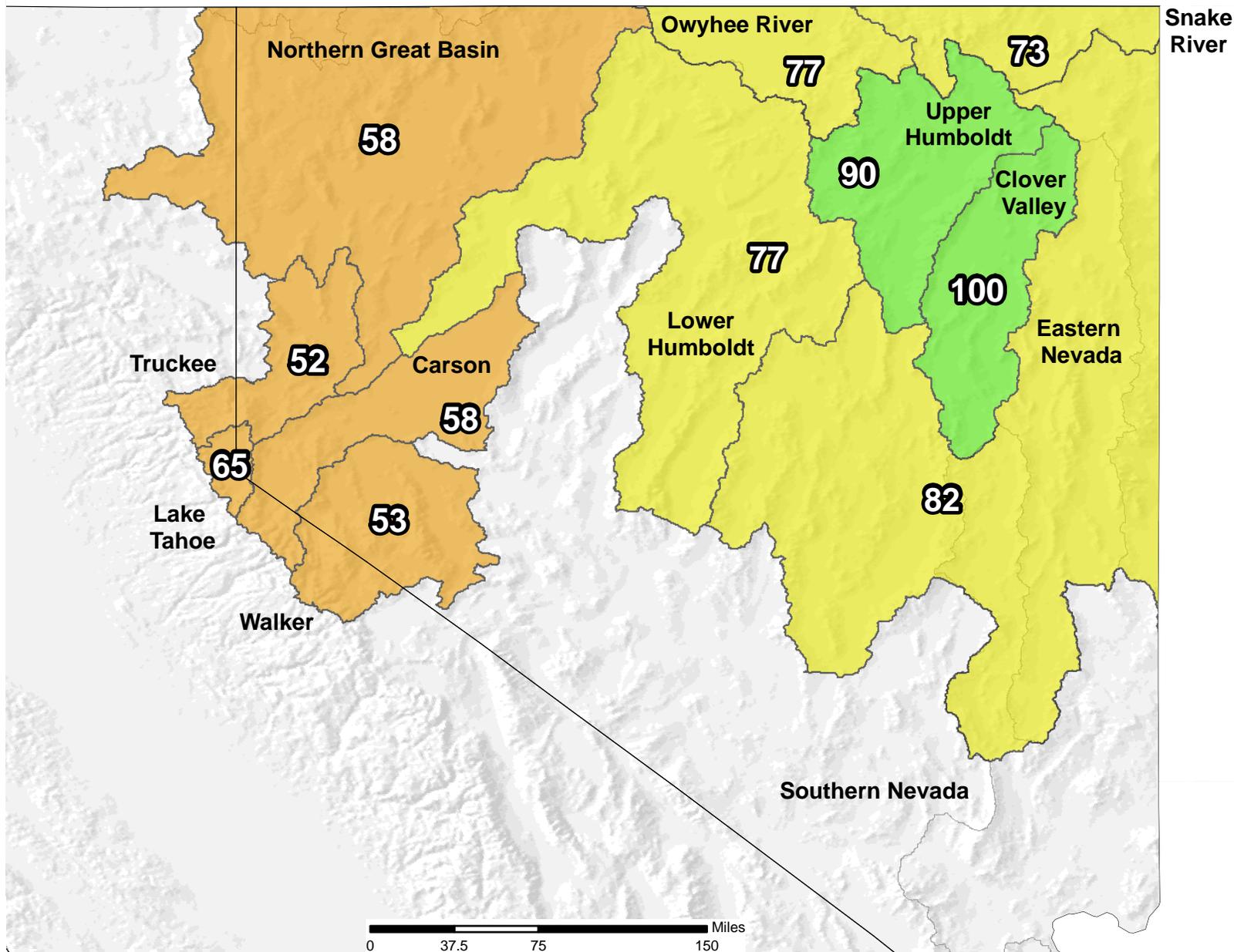
Mar 06, 2014

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).

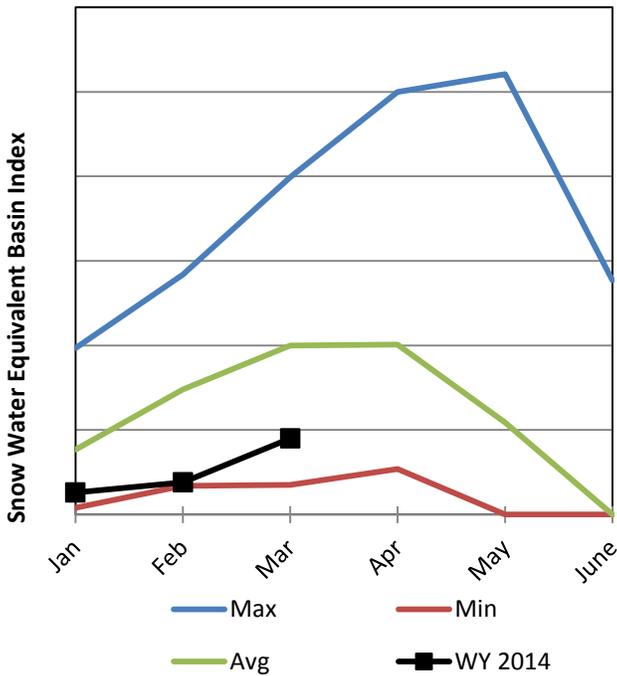
Prepared by the USDA/NRCS National Water and Climate Center Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Lake Tahoe Basin

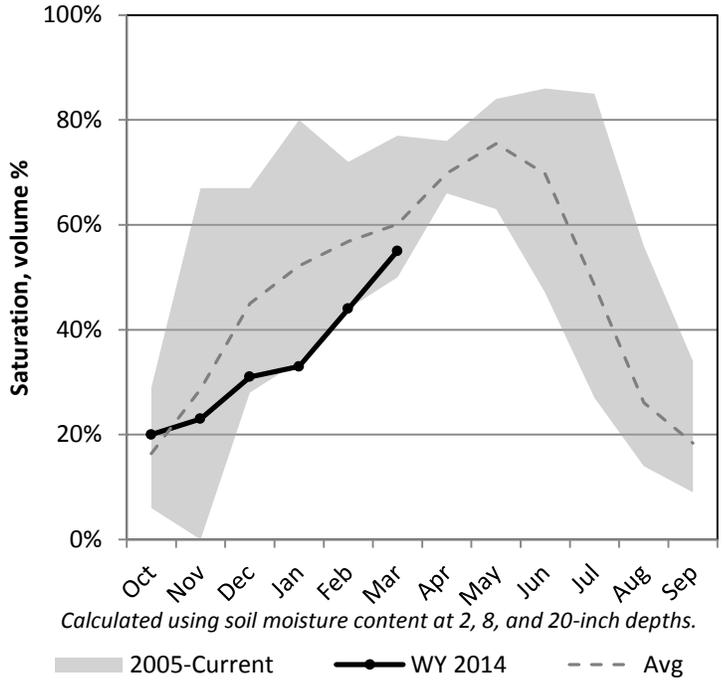
3/1/2014

Snowpack in the Lake Tahoe Basin is much below average at 45% of normal, compared to 67% last year. Precipitation in February was much above average at 150%, which brings the seasonal accumulation (Oct-Feb) to 63% of average. Soil moisture is at 55% compared to 60% last year. Reservoir storage is at 10% of capacity, compared to 52% last year. Forecast streamflow volumes range from 17% to 31% of average.

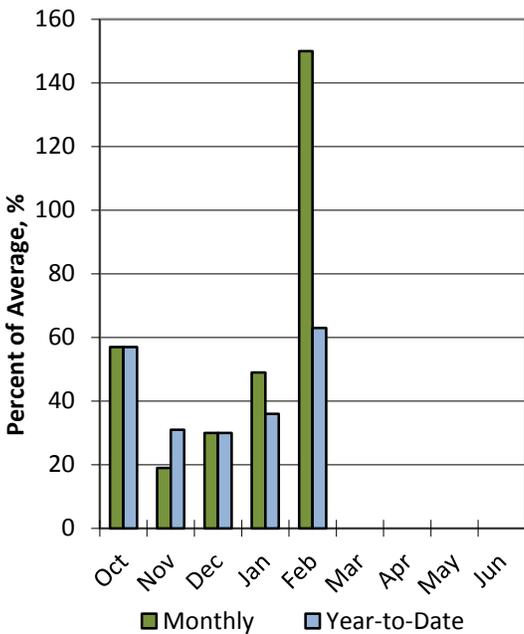
Snowpack



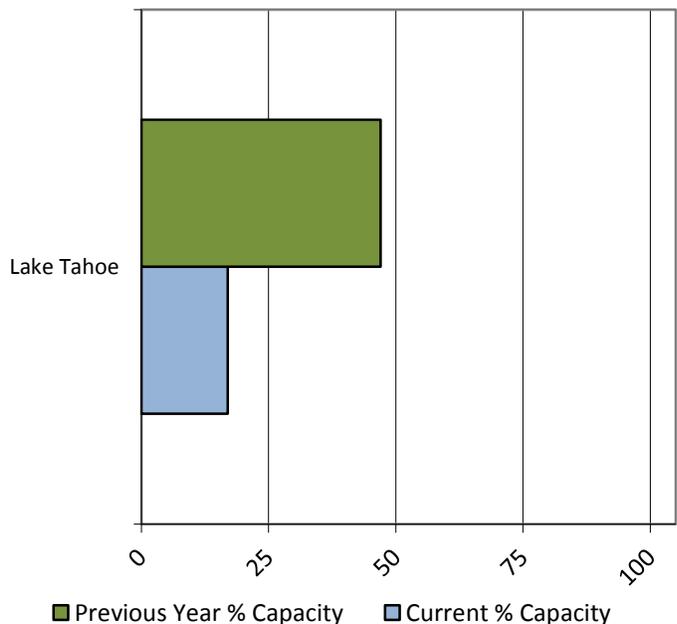
Soil Moisture



Precipitation



Reservoir Storage



**Lake Tahoe
Streamflow Forecasts - March 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	12.1	97	360	30%	730	1274	1213
	APR-JUL	-618	-157	156	17%	469	930	911
Lake Tahoe Rise Gates Closed¹								
	MAR-HIGH	0.035	0.18	0.5	29%	0.82	1.54	1.73
	APR-HIGH	0.03	0.14	0.4	31%	0.66	1.25	1.31
	OCT-HIGH	0.045	0.17	0.7	31%	1.24	2.4	2.2

- 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

Reservoir Storage End of February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAKE TAHOE	129.9	346.5	296.7	744.6
Basin-wide Total	129.9	346.5	296.7	744.6
# of reservoirs	1	1	1	1

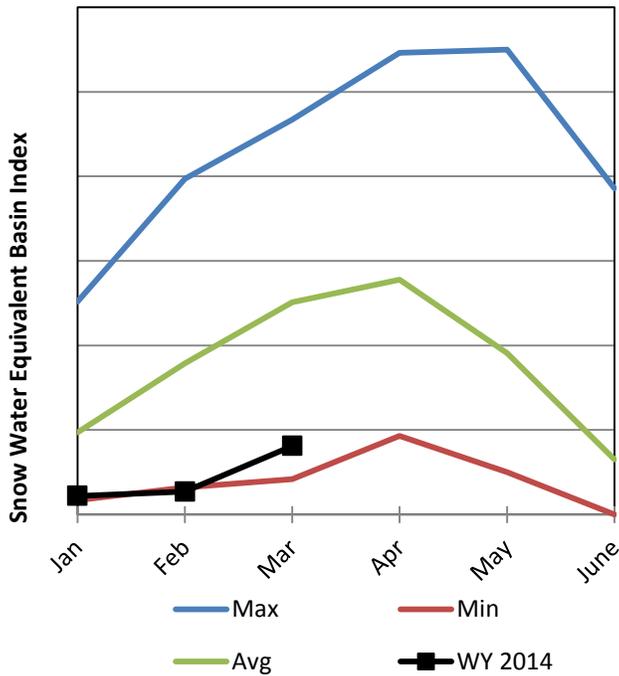
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Lake Tahoe Basin	14	41%	65%

Truckee River Basin

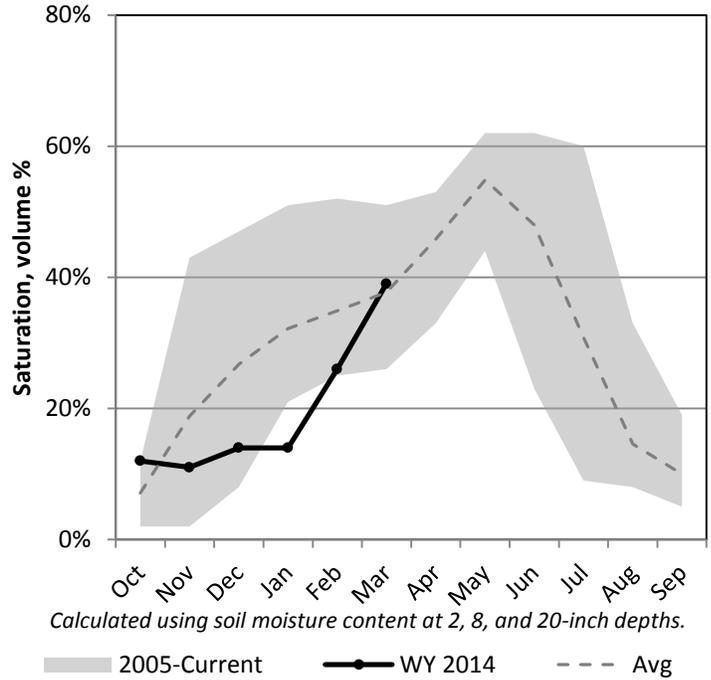
3/1/2014

Snowpack in the Truckee River Basin is much below average at 32% of normal, compared to 78% last year. Precipitation in February was above average at 123%, which brings the seasonal accumulation (Oct-Feb) to 51% of average. Soil moisture is at 39% compared to 40% last year. Reservoir storage is at 43% of capacity, compared to 65% last year. Forecast streamflow volumes range from 10% to 30% of average.

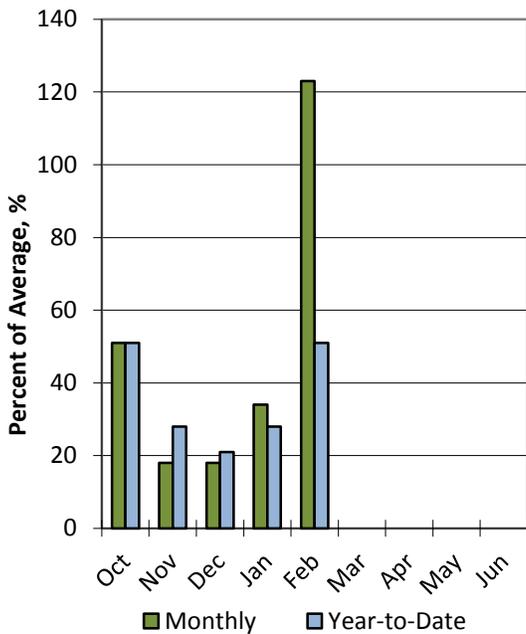
Snowpack



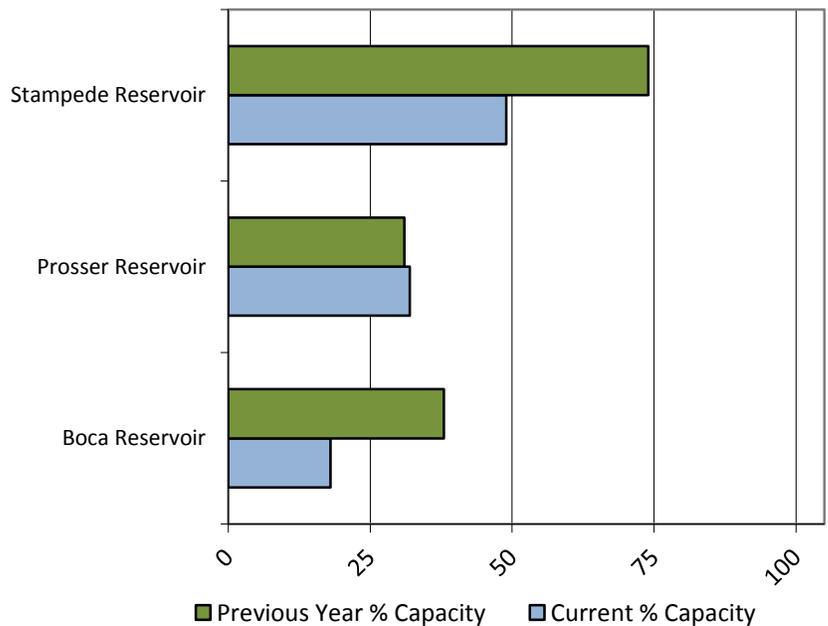
Soil Moisture



Precipitation



Reservoir Storage



Truckee River Streamflow Forecasts - March 1, 2014

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	MAR-JUL	0.89	1.21	1.5	23%	1.85	2.5	6.4
	APR-JUL	0.67	0.95	1.2	21%	1.52	2.2	5.6
L Truckee R ab Boca Reservoir	MAR-JUL	0.9	8.1	32	36%	65	115	90
	APR-JUL	0.8	2.4	30	38%	62	109	80
Truckee R at Farad	MAR-JUL	9.2	51	130	42%	209	326	306
	APR-JUL	7.8	33	100	38%	167	266	260
Steamboat Ck at Steamboat	APR-JUL	0.04	0.33	0.8	10%	1.58	3.4	7.7
Galena Ck at Galena Ck State Pk	MAR-JUL	0.9	1.97	2.7	56%	3.4	4.5	4.8
	APR-JUL	0.42	1.48	2.2	50%	2.9	4	4.4
Pyramid Lake Elevation Change ¹	LOW-HIGH	-4.9	-2.2	-1	-59%	0.21	2.9	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 February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BOCA RESERVOIR,CA	7.5	15.4	18.1	40.9
PROSSER RESERVOIR,CA	9.3	8.9	9.9	28.6
STAMPEDE RESERVOIR,CA	110.6	168.5	148.4	226.5
Basin-wide Total	127.4	192.8	176.4	296.0
# of reservoirs	3	3	3	3

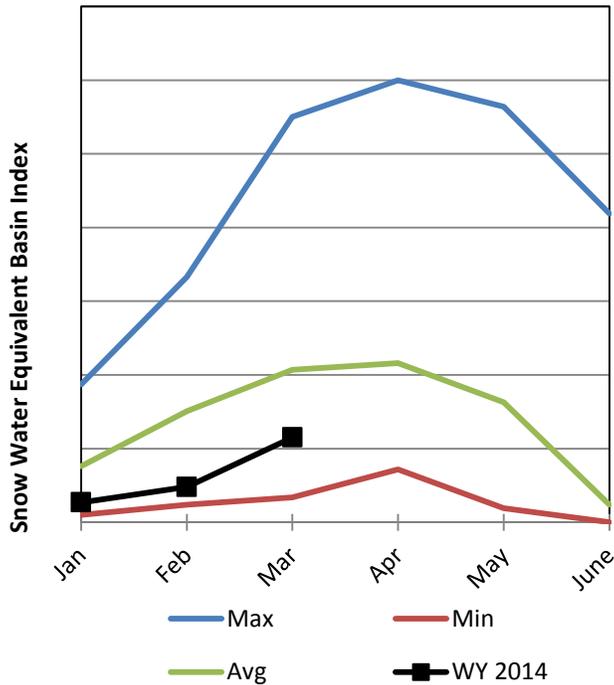
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Truckee River Basin	14	27%	74%
Little Truckee River	5	28%	77%
Sage Hen Creek	3	27%	75%
Galena Creek	1	40%	91%
Steamboat Drainage	1	40%	91%
Pyramid Lake	28	33%	71%

Carson River Basin

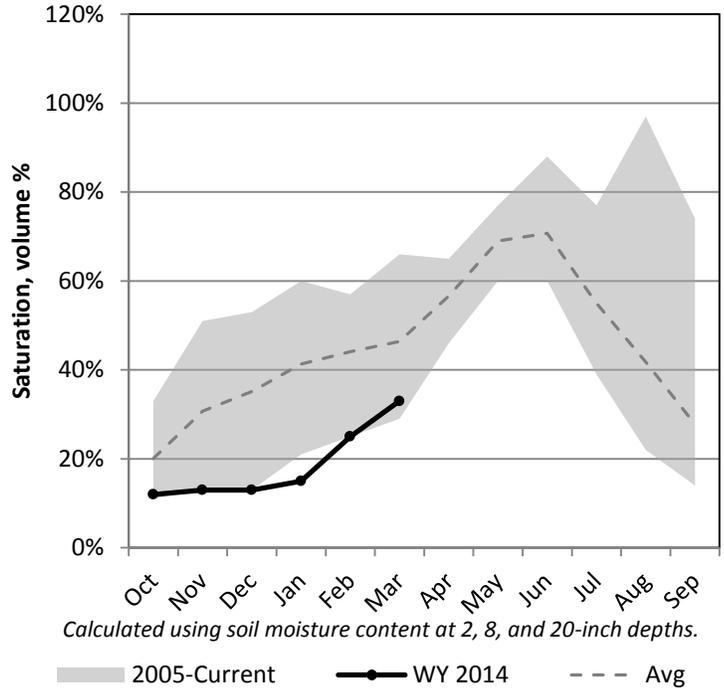
3/1/2014

Snowpack in the Carson River Basin is much below average at 56% of normal, compared to 80% last year. Precipitation in February was much above average at 136%, which brings the seasonal accumulation (Oct-Feb) to 58% of average. Soil moisture is at 33% compared to 45% last year. Reservoir storage is at 25% of capacity, compared to 33% last year. Forecast streamflow volumes range from 19% to 50% of average.

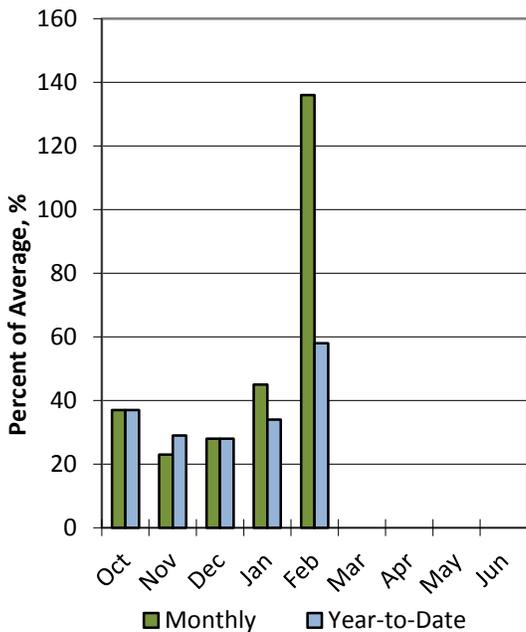
Snowpack



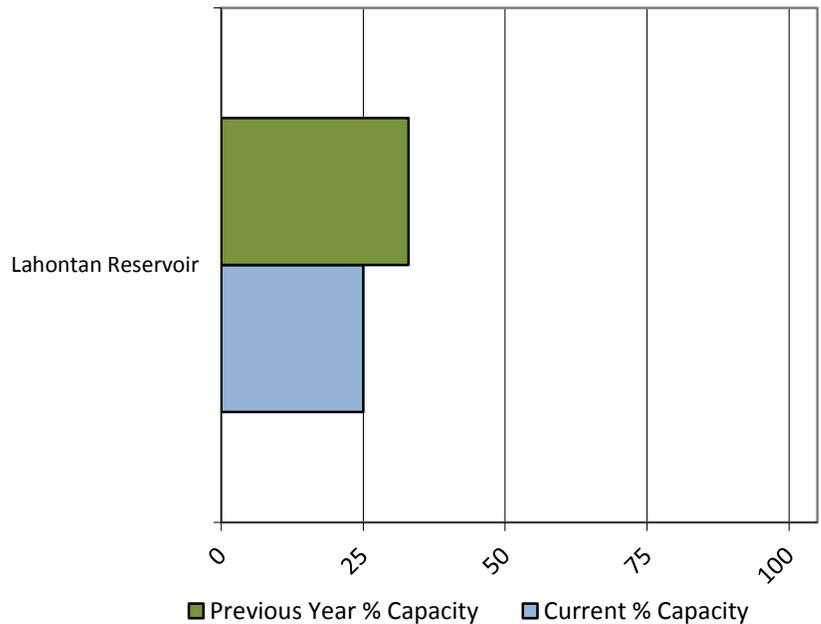
Soil Moisture



Precipitation



Reservoir Storage



Carson River Streamflow Forecasts - March 1, 2014

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	MAR-JUL	6.2	34	72	35%	110	166	205
	APR-JUL	5.6	22	60	32%	98	154	186
	200cfs	19-May	5-Jun	17-Jun		29-Jun	16-Jul	25-Jul
	500cfs	2-May	18-May	30-May		7-Jun	23-Jun	1-Jul
WF Carson R nr Woodfords	MAR-JUL	3.1	19.1	30	51%	41	57	59
	APR-JUL	1.08	15.9	27	50%	38	54	54
Carson R nr Carson City	MAR-JUL	23	54	82	39%	116	177	210
	APR-JUL	7.2	28	50	28%	78	131	179
Marlette Lake Inflow	MAR-JUL	12.1	97	360	30%	730	1274	1213
	APR-JUL	-618	-157	156	17%	469	930	911
King Canyon Ck nr Carson City	MAR-JUL	0.004	0.019	0.15	39%	0.34	0.63	0.38
	APR-JUL	0.004	0.011	0.09	31%	0.26	0.51	0.29
Carson R at Ft Churchill	MAR-JUL	23	43	62	31%	86	130	200
	APR-JUL	10.6	25	39	23%	58	96	171
Ash Canyon Ck nr Carson City	MAR-JUL	0.21	0.53	0.75	53%	0.97	1.29	1.41
	APR-JUL	0.07	0.35	0.55	47%	0.75	1.03	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 February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAHONTAN RESERVOIR, NV	73.7	98.8	171.0	295.1
Basin-wide Total	73.7	98.8	171.0	295.1
# of reservoirs	1	1	1	1

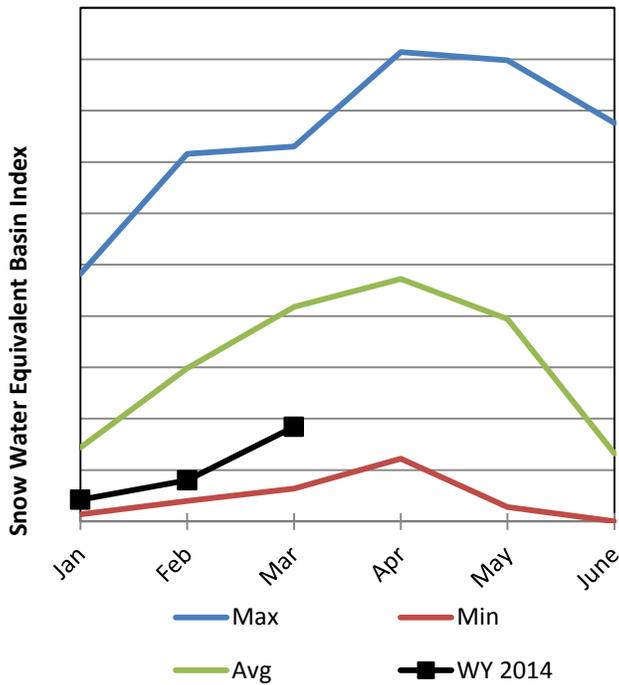
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Carson River Basin	9	54%	82%
E.F. Carson River	4	50%	79%
W.F. Carson River	9	54%	82%

Walker River Basin

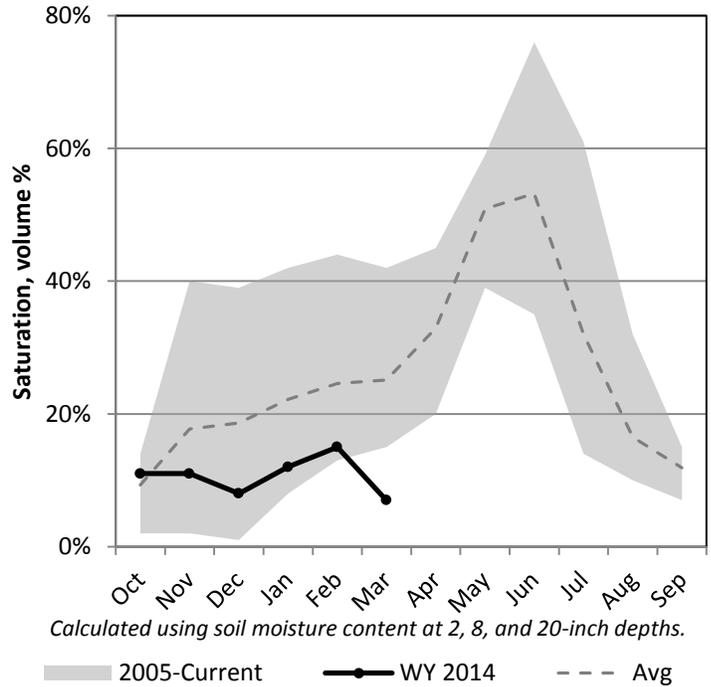
3/1/2014

Snowpack in the Walker River Basin is much below average at 44% of normal, compared to 80% last year. Precipitation in February was near average at 104%, which brings the seasonal accumulation (Oct-Feb) to 53% of average. Soil moisture is at 7% compared to 27% last year. Reservoir storage is at 12% of capacity, compared to 22% last year. Forecast streamflow volumes range from 29% to 37% of average.

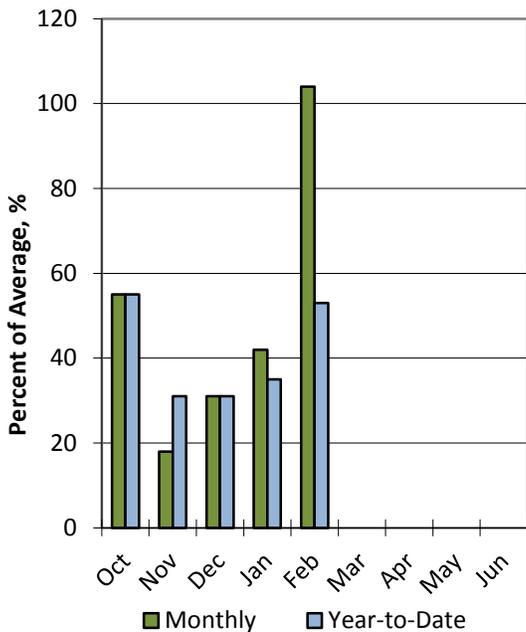
Snowpack



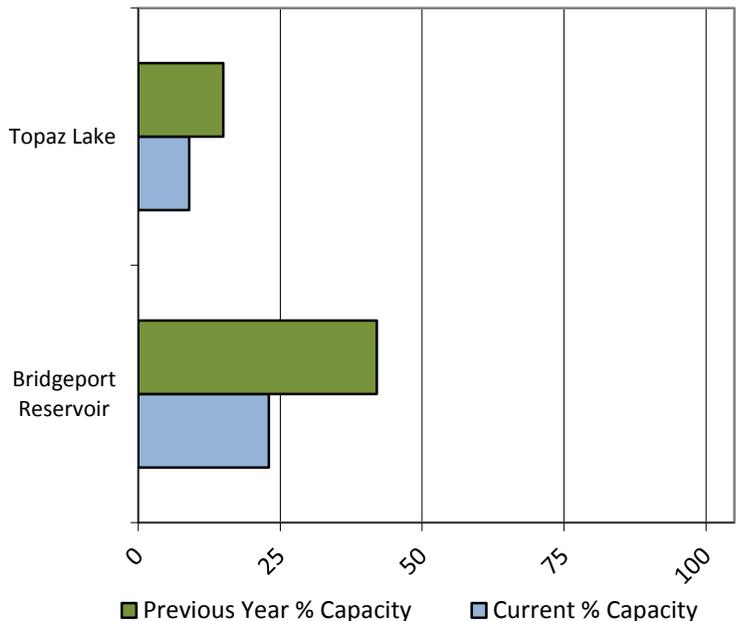
Soil Moisture



Precipitation



Reservoir Storage



Walker River Streamflow Forecasts - March 1, 2014

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	MAR-AUG	2.3	9.8	27	35%	44	70	78
	APR-AUG	1.34	8.3	20	29%	38	60	68
W Walker R bl L Walker nr Coalville	MAR-JUL	3.4	38	63	37%	88	124	170
	APR-JUL	3.2	36	60	37%	84	120	162
W Walker R nr Coalville	MAR-JUL	55	61	64	37%	67	73	172
	APR-JUL	52	57	60	37%	63	68	163
Walker Lake Elevation Change ¹	LOW-HIGH	-4.9	-2.1	-0.9	-64%	0.34	3.1	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 February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BRIDGEPORT RESERVOIR, CA	9.9	17.9	25.4	42.5
TOPAZ LK NR TOPAZ, CA	7.5	14.7	29.5	59.4
Basin-wide Total	17.4	32.6	54.9	101.9
# of reservoirs	2	2	2	2

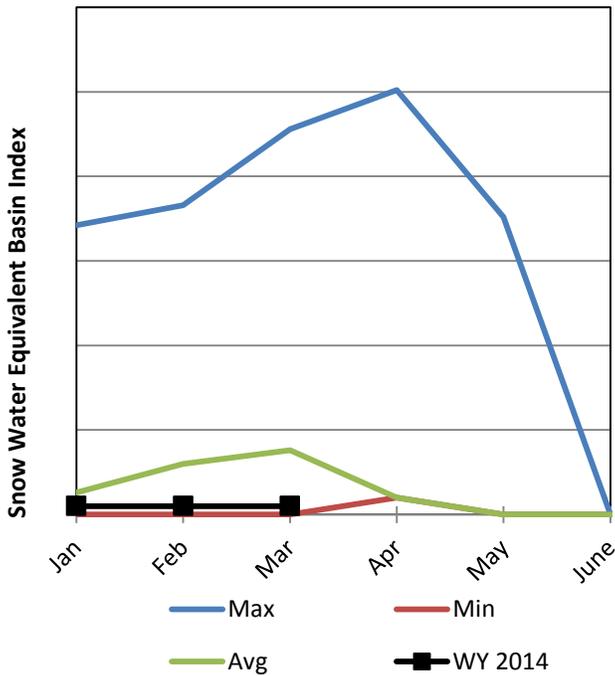
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Walker Lake Rise	6	45%	86%
E. Walker Rv. Nr Bridgeport	2	47%	78%
W. Walker Rv. Nr Coleville	5	44%	86%

Northern Great Basin

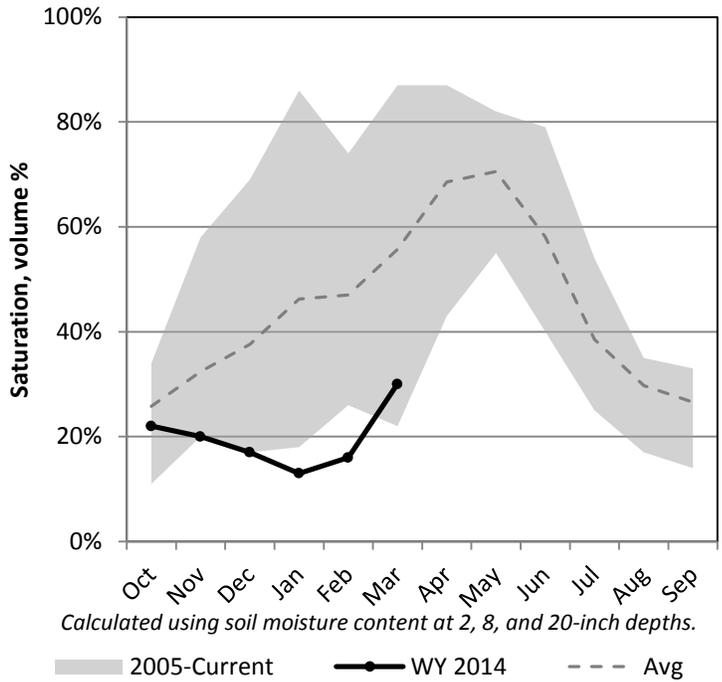
3/1/2014

Snowpack in the Northern Great Basin is much below average at 7% of normal, compared to 34% last year. Precipitation in February was above average at 117%, which brings the seasonal accumulation (Oct-Feb) to 53% of average. Soil moisture is at 30% compared to 40% last year. Forecast streamflow volumes range from 9% to 33% of average.

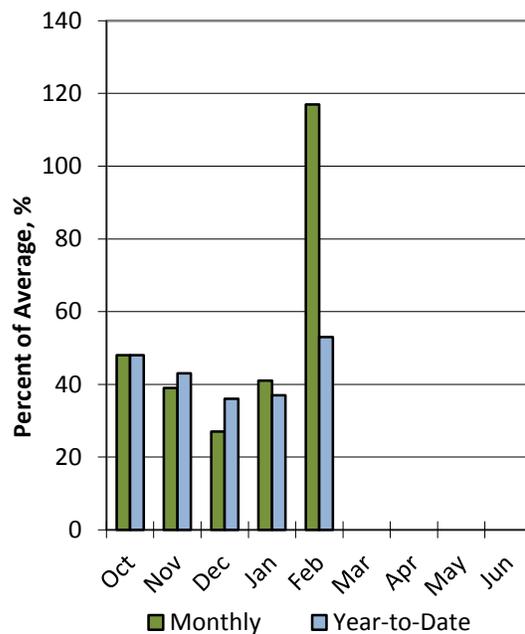
Snowpack



Soil Moisture



Precipitation



Northern Great Basin Streamflow Forecasts - March 1, 2014

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	0.129	1.41	1.5	35%	3.8	5.6	4.3
Bidwell Ck nr Fort Bidwell	APR-JUL	0.24	1.86	3.8	32%	5.7	8.6	12
McDermitt Ck nr McDermitt	MAR-JUN	0.175	1.05	5.2	30%	10	17	17.5
	APR-JUL	0.14	0.56	4.1	33%	7.9	13.6	12.6
Davis Ck (ac-ft)	APR-JUL	1465	2066	2610	36%	3297	4651	7233
	APR-SEP	1799	2492	3110	39%	3881	5377	7991

- 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

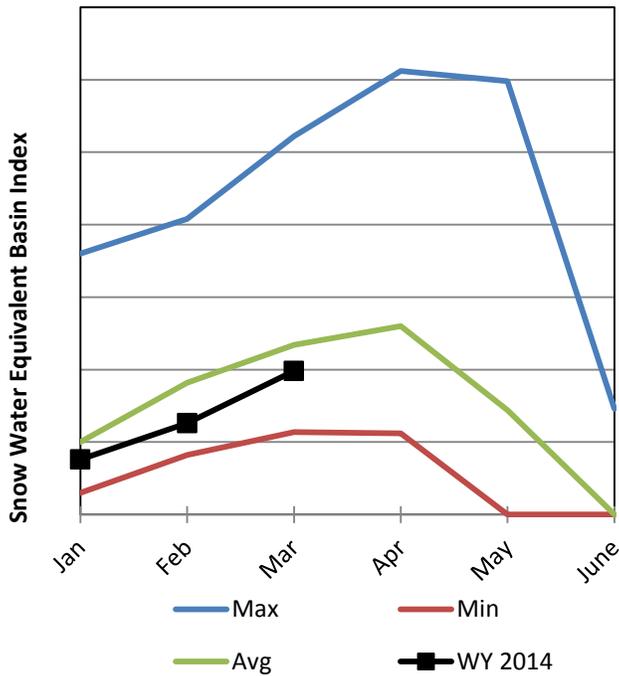
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
N Great Basin	1	7%	34%
Quinn River	1	7%	34%
McDermitt Creek	1	7%	34%

Upper Humboldt River Basin

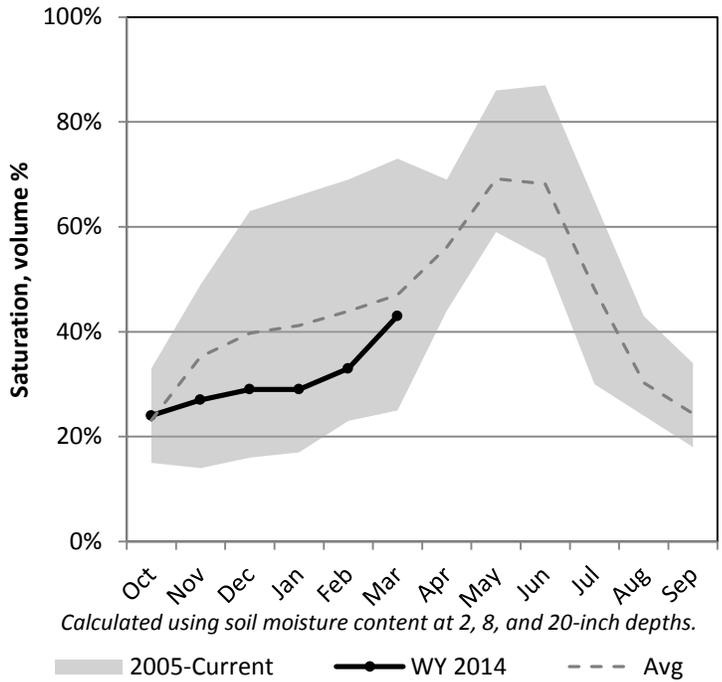
3/1/2014

Snowpack in the Upper Humboldt River Basin is below average at 85% of normal, compared to 88% last year. Precipitation in February was much above average at 160%, which brings the seasonal accumulation (Oct-Feb) to 86% of average. Soil moisture is at 43% compared to 38% last year. Forecast streamflow volumes range from 23% to 76% of average.

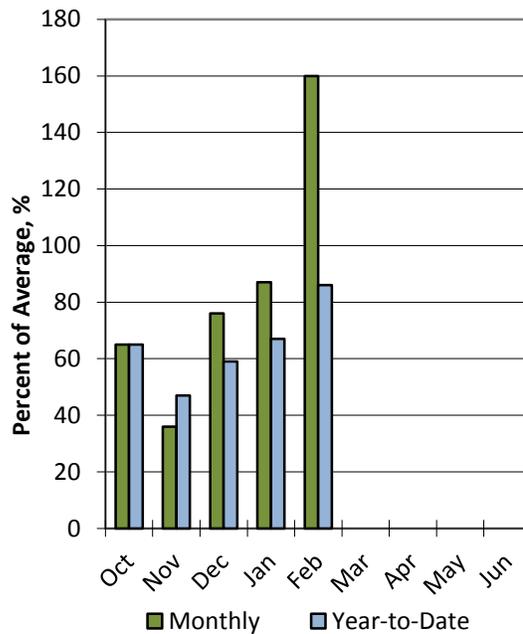
Snowpack



Soil Moisture



Precipitation



Upper Humboldt River Streamflow Forecasts - March 1, 2014

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	MAR-JUL	0.82	5.9	12	29%	18.2	27	41
	APR-JUL	0.36	3.1	10	28%	16.9	27	36
Lamoille Ck nr Lamoille	MAR-JUL	12.2	19.2	24	80%	29	36	30
	APR-JUL	10.4	17.3	22	76%	27	34	29
NF Humboldt R at Devils Gate	MAR-JUL	0.88	5.2	14	36%	23	36	39
	APR-JUL	0.34	1.02	10	31%	19.9	35	32
Humboldt R nr Elko	MAR-JUL	13.8	68	1.5	58%	142	196	159
	APR-JUL	3.1	28	65	42%	102	156	133
SF Humboldt R at Dixie	MAR-JUL	2.4	32	52	72%	72	102	72
	APR-JUL	1.19	29	48	73%	67	95	66
Humboldt R nr Carlin	MAR-JUL	59	113	150	63%	187	241	240
	APR-JUL	24	81	120	59%	159	216	205
Humboldt R at Palisades	MAR-JUL	12.6	77	120	44%	163	227	270
	APR-JUL	4.5	32	75	33%	118	182	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

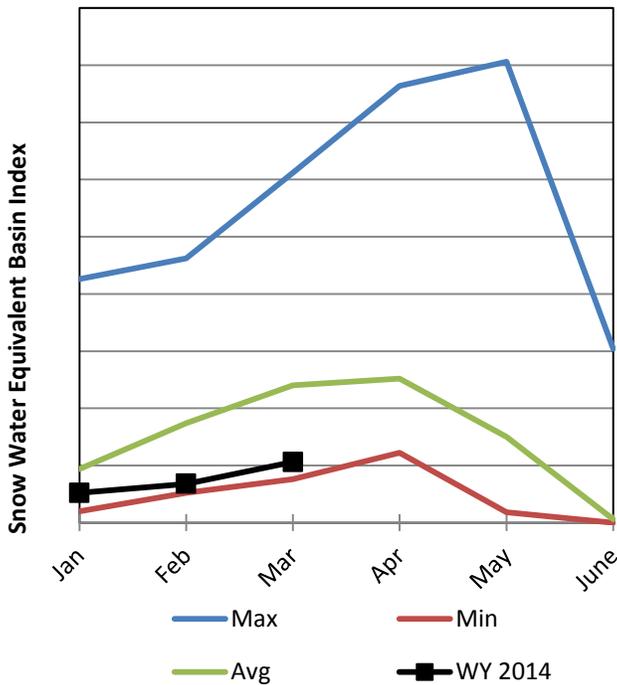
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Humboldt Rv. At Palisades	17	71%	90%
Lamoille Creek	3	81%	74%
S. Fork Humboldt	5	91%	106%
Mary's River	1	59%	67%
N. Fork Humboldt	2	29%	77%

Lower Humboldt River Basin

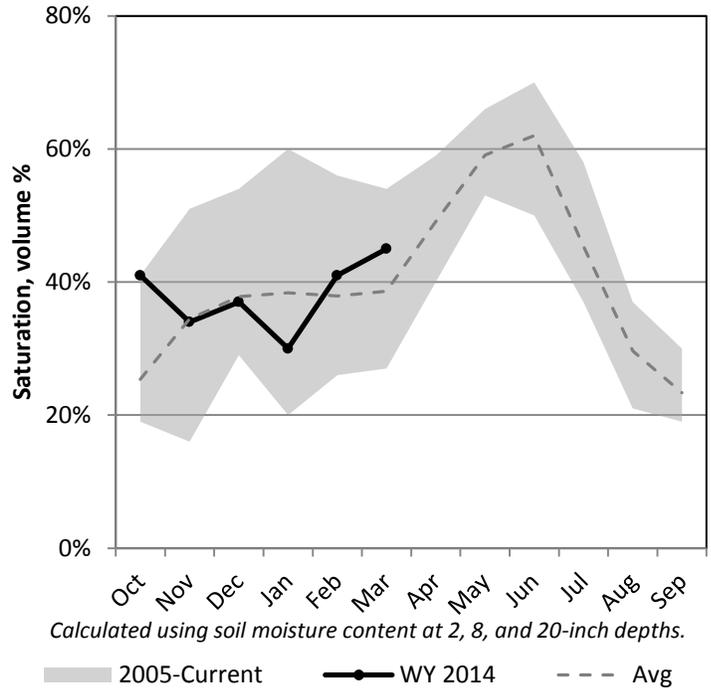
3/1/2014

Snowpack in the Lower Humboldt River Basin is much below average at 44% of normal, compared to 88% last year. Precipitation in February was much above average at 140%, which brings the seasonal accumulation (Oct-Feb) to 70% of average. Soil moisture is at 45% compared to 47% last year. Reservoir storage is at 4% of capacity, compared to 10% last year. Forecast streamflow volumes range from 11% to 29% of average.

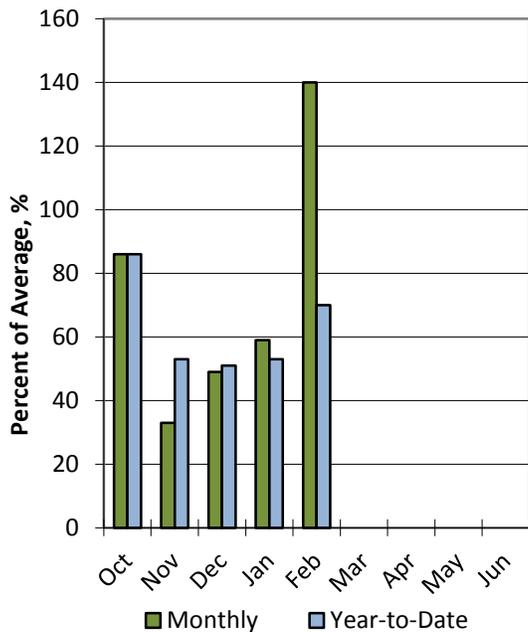
Snowpack



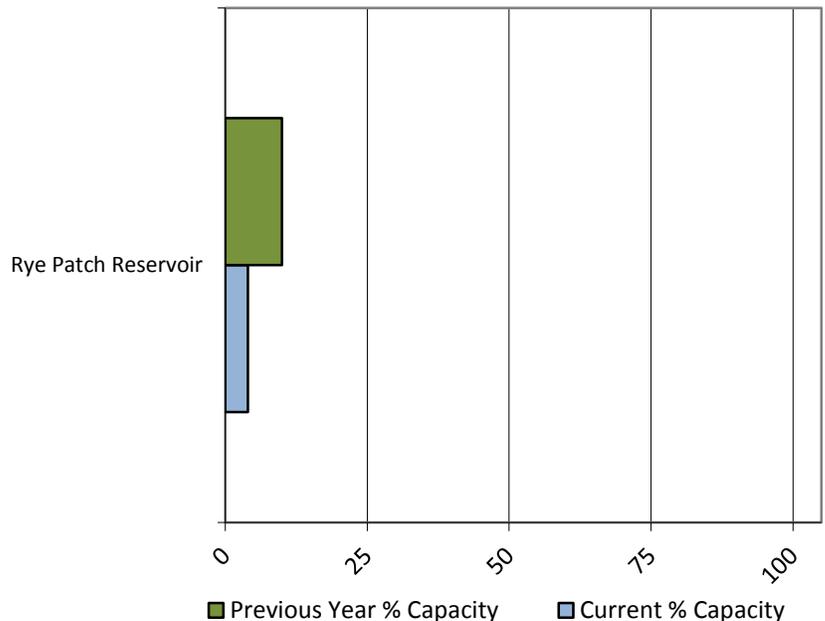
Soil Moisture



Precipitation



Reservoir Storage



Lower Humboldt River Streamflow Forecasts - March 1, 2014

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	MAR-JUL	0.27	0.54	2.7	10%	6.6	12.3	27
	APR-JUL	0.182	0.36	1.9	10%	4.5	8.3	18.2
Humboldt R at Comus	MAR-JUL	2.6	10.2	59	23%	114	196	255
	APR-JUL	2.2	12.9	35	16%	83	154	215
L Humboldt R nr Paradise	MAR-JUL	0.105	0.74	1.7	16%	6.1	12.6	10.5
	APR-JUL	0.097	0.58	1.2	12%	5.4	11.7	9.7
Martin Ck nr Paradise	MAR-JUL	0.22	1.32	6.2	28%	12.3	21	22
	APR-JUL	0.175	1.05	5	29%	10.9	19.7	17.5
Humboldt R nr Imlay	MAR-JUL	2.2	6.7	24	11%	98	206	210
	APR-JUL	1.88	5.6	20	11%	89	189	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 February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
RYE PATCH RE NR RYE PATCH, NV	8.5	19.0	87.1	194.3
Basin-wide Total	8.5	19.0	87.1	194.3
# of reservoirs	1	1	1	1

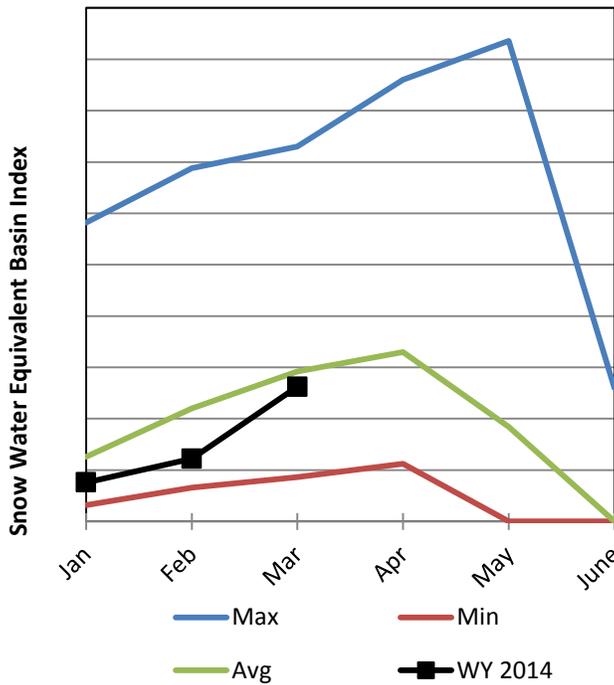
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Lower Humboldt River Basin	6	43%	86%
Little Humboldt River	4	45%	76%
Martin Creek	3	33%	78%
Reese River	2	61%	103%
Rock Creek	2	88%	131%

Clover Valley & Franklin River Basin

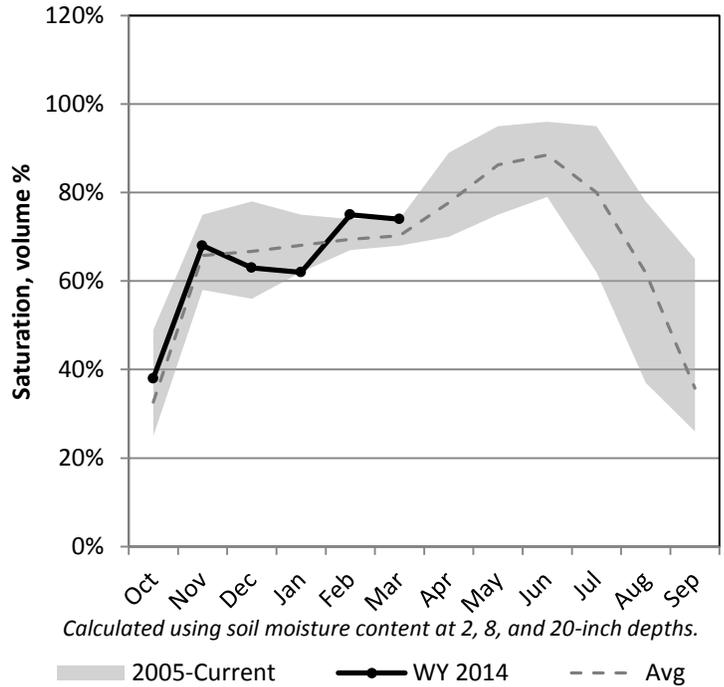
3/1/2014

Snowpack in the Clover Valley & Franklin River Basin is near average at 90% of normal, compared to 47% last year. Precipitation in February was much above average at 262%, which brings the seasonal accumulation (Oct-Feb) to 97% of average. Soil moisture is at 74% compared to 71% last year. The forecast streamflow volume for the Franklin River is 29% of average.

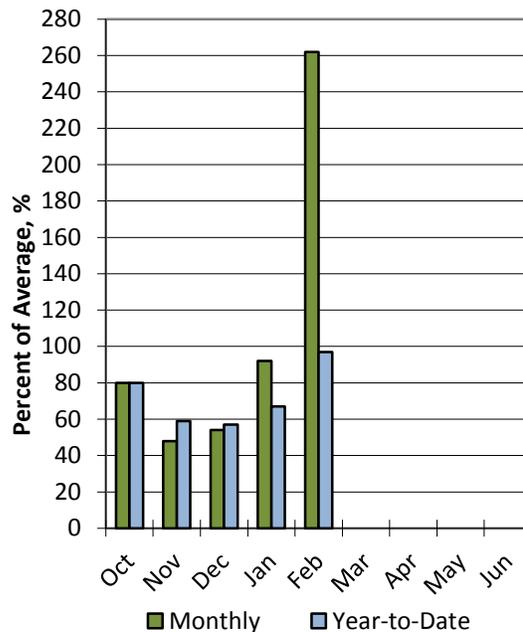
Snowpack



Soil Moisture



Precipitation



Clover Valley & Franklin River Streamflow Forecasts - March 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	0.52	1.7	2.5	36%	3.3	4.5	6.9

- 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

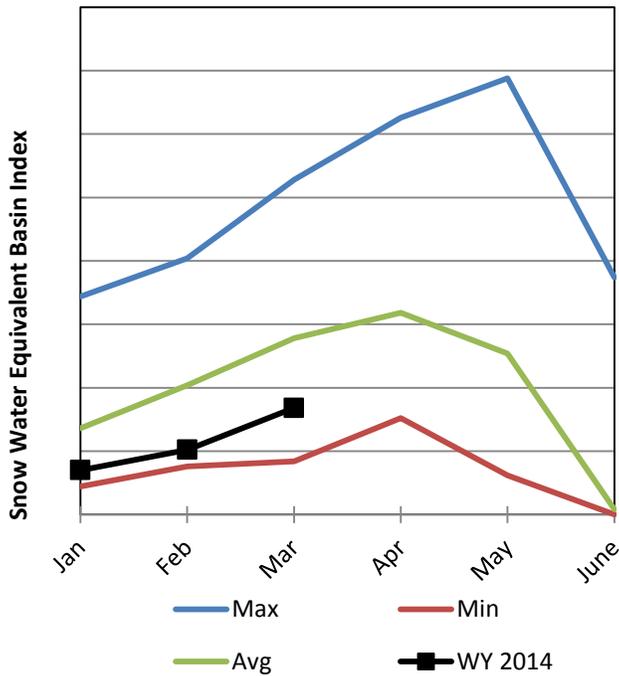
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Clover Valley & Franklin River	1	90%	47%
Franklin River	1	90%	47%
Clover Valley	1	90%	47%

Snake River Basin

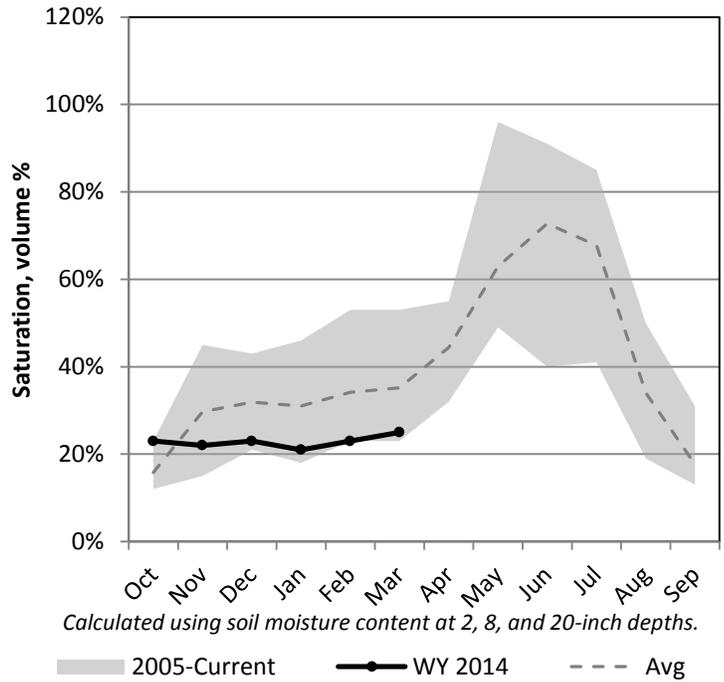
3/1/2014

Snowpack in the Snake River Basin is much below average at 60% of normal, compared to 97% last year. Precipitation in February was much above average at 135%, which brings the seasonal accumulation (Oct-Feb) to 67% of average. Soil moisture is at 25% compared to 38% last year. The forecast streamflow volume for Salmon Falls is 46% of average.

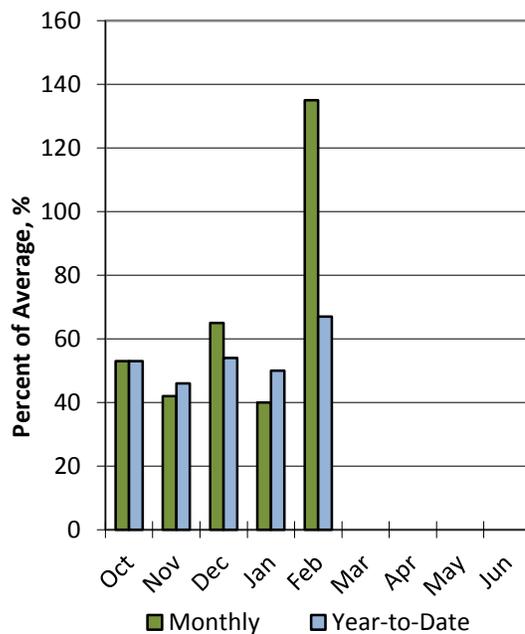
Snowpack



Soil Moisture



Precipitation



Snake River Basin Streamflow Forecasts - March 1, 2014

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	MAR-JUL	14.3	24	32	40%	41	57	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

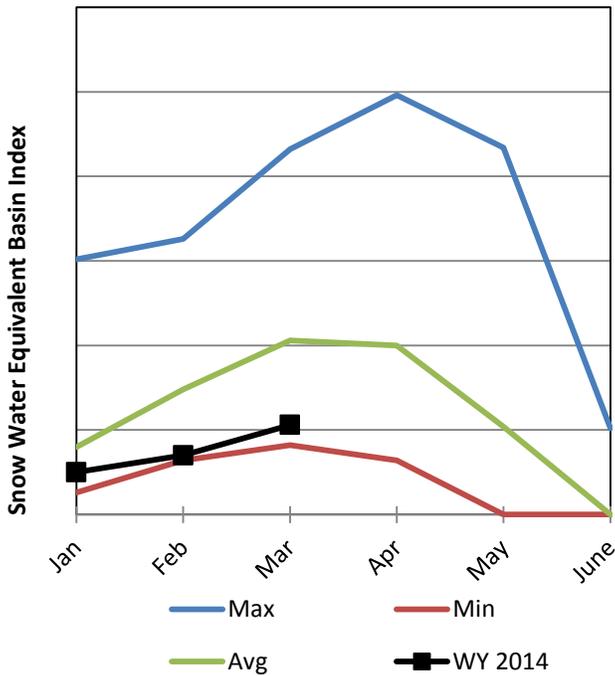
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Snake River Basin	3	60%	97%
Salmon Falls Creek	8	67%	101%

Owyhee River Basin

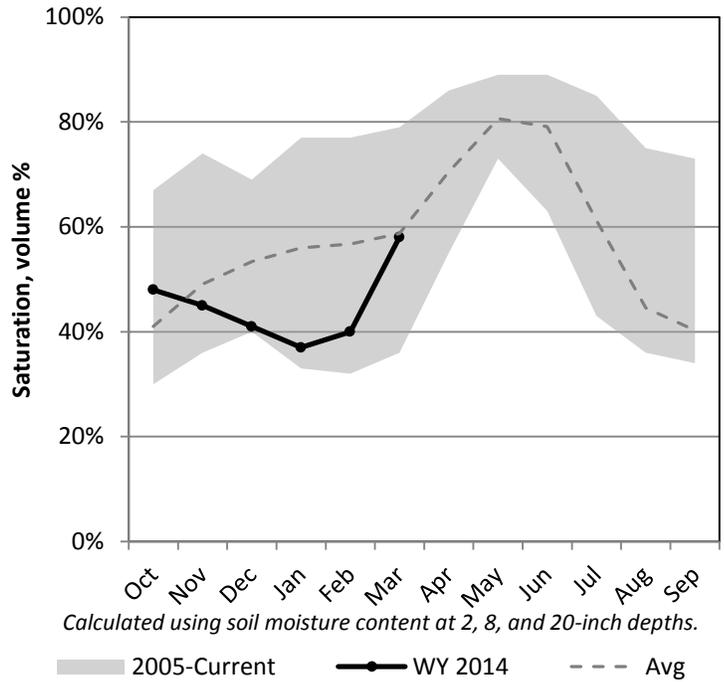
3/1/2014

Snowpack in the Owyhee River Basin is much below average at 51% of normal, compared to 76% last year. Precipitation in February was much above average at 142%, which brings the seasonal accumulation (Oct-Feb) to 68% of average. Soil moisture is at 58% compared to 55% last year. Reservoir storage is at 20% of capacity, compared to 36% last year. The forecast streamflow volume for the Owyhee River near Gold Creek is 19% of average.

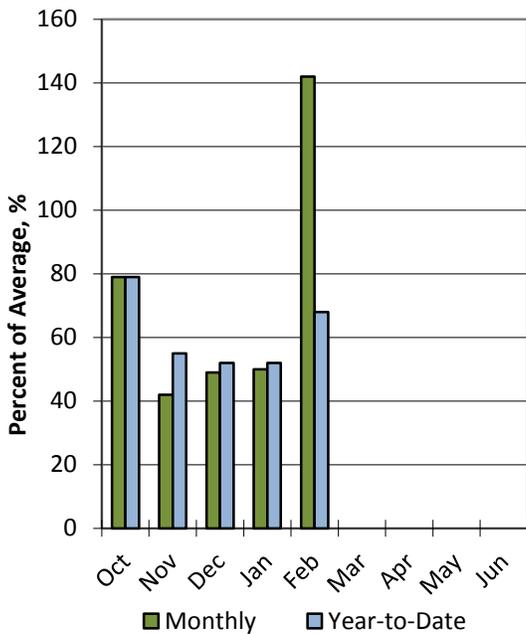
Snowpack



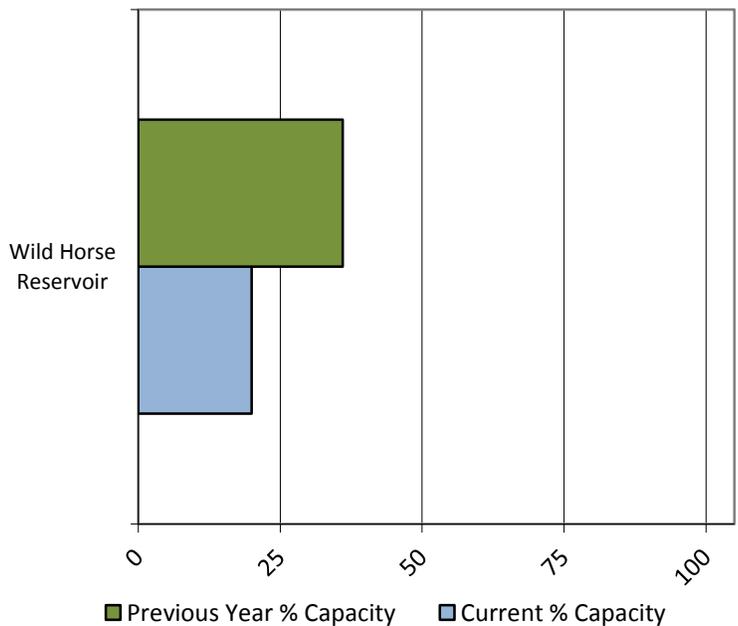
Soil Moisture



Precipitation



Reservoir Storage



Owyhee River Basin Streamflow Forecasts - March 1, 2014

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

Owyhee River Basin	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Owyhee R nr Gold Ck ²	MAR-JUL	3.1	5.5	7.8	28%	10.6	15.9	28
	APR-JUL	0.5	2.1	4.1	19%	7.2	13.9	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 February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
WILD HORSE RE NR GOLD CREEK, NV	14.5	25.7	34.5	71.5
Basin-wide Total	14.5	25.7	34.5	71.5
# of reservoirs	1	1	1	1

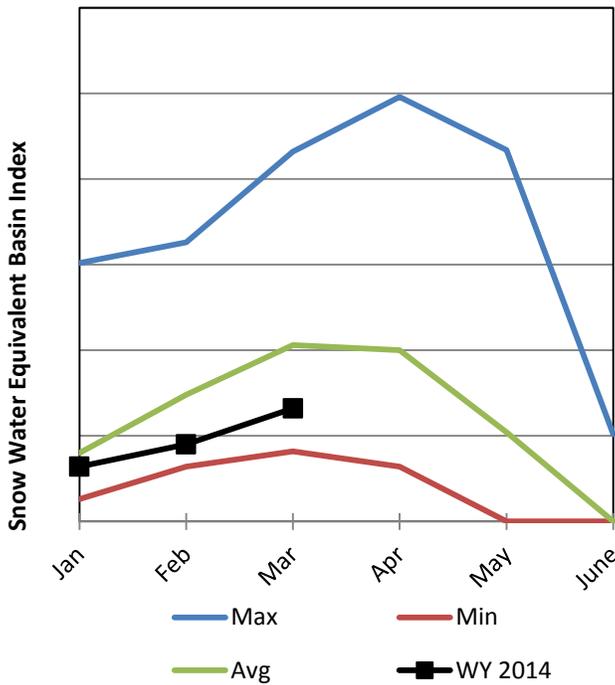
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Owyhee River Basin	5	51%	76%
Owyhee River nr Owyhee	4	52%	77%
Owyhee R. nr Gold Creek	2	52%	80%
S. Fork Owyhee River	2	44%	71%

Eastern Nevada Basin

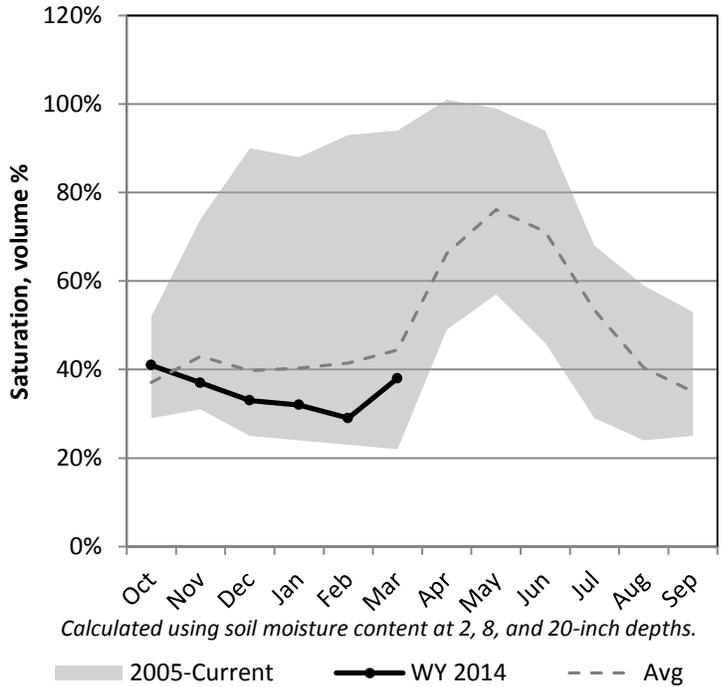
3/1/2014

Snowpack in the Eastern Nevada Basin is below average at 71% of normal, compared to 86% last year. Precipitation in February was below average at 89%, which brings the seasonal accumulation (Oct-Feb) to 82% of average. Soil moisture is at 38% compared to 28% last year. Forecast streamflow volumes range from 42% to 71% of average.

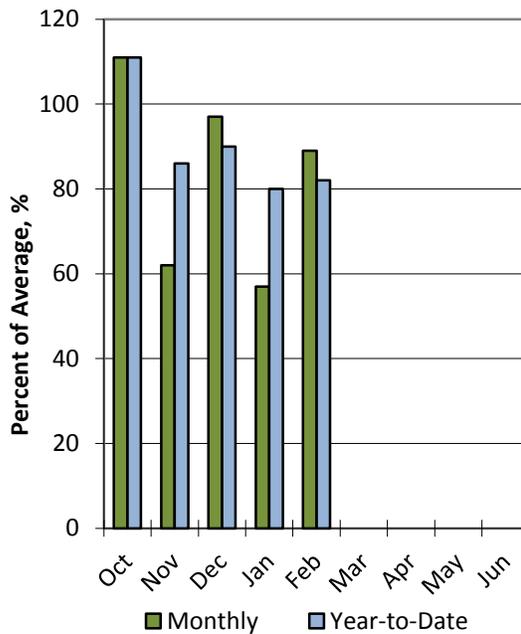
Snowpack



Soil Moisture



Precipitation



**Eastern Nevada
Streamflow Forecasts - March 1, 2014**

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	0.22	1.5	42%	3.2	5.8	3.6
Lehman Ck nr Baker	APR-JUL	0.082	1.17	2	74%	2.8	4	2.7
Cleve Ck nr Ely	APR-JUL	0.42	2	3.1	70%	4.2	5.8	4.4
Steptoe Ck nr Ely	APR-JUL	0.41	1.18	1.7	71%	2.2	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

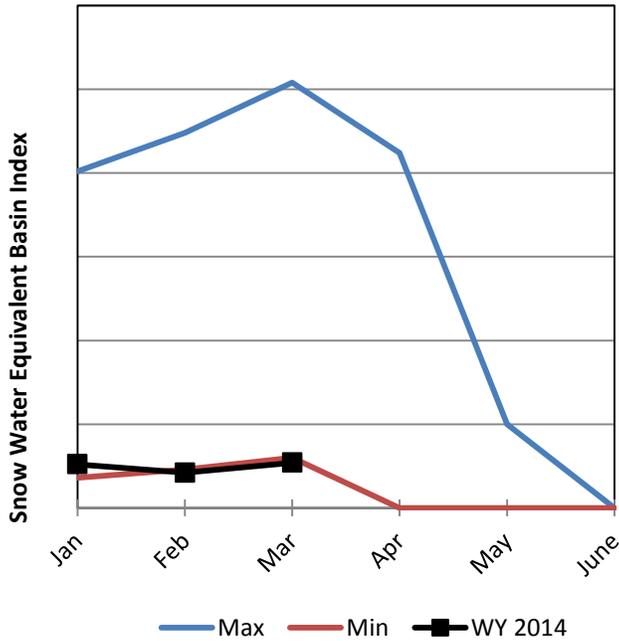
Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Eastern Nevada	3	71%	86%
Kingston Creek	1	77%	106%
Steptoe Valley	3	58%	84%

Lower Colorado River Basin

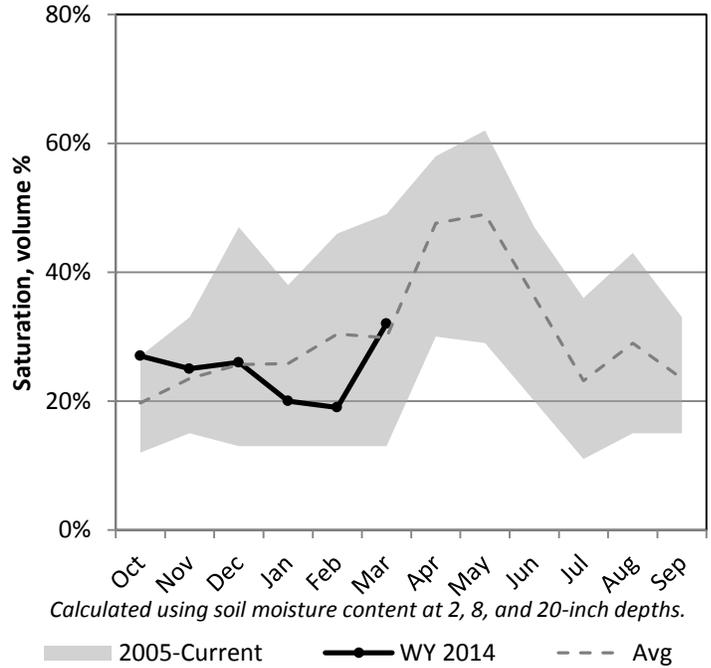
3/1/2014

Precipitation at SNOTEL stations within the Lower Colorado River Basin in February averaged 3.1 inches, which brings the average SNOTEL seasonal accumulation within the basin (Oct-Feb) to 8.1 inches. Soil moisture is at 32% compared to 13% last year. Reservoir storage is at 51% of capacity, compared to 55% last year. Forecast streamflow volumes range from 23% to 109% of average.

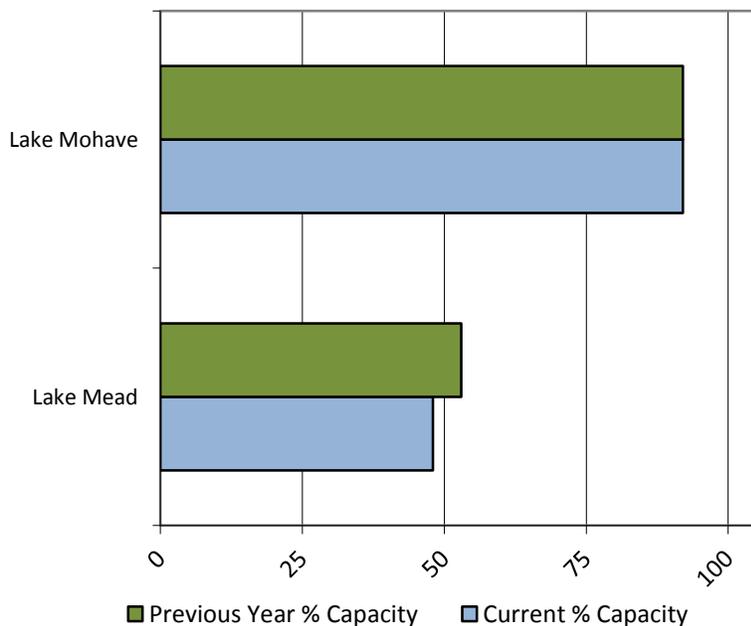
Snowpack



Soil Moisture



Reservoir Storage



Lower Colorado River Basin Streamflow Forecasts - March 1, 2014

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	8.4	9	14.9	23%	26	49	65
Lake Powell Inflow ²	APR-JUL	5000	6590	7800	109%	9110	11200	7160
Virgin R nr Hurricane	APR-JUL	6.6	7.7	15.4	24%	26	46	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 February, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAKE MEAD	12501.0	13810.0	20575.0	26159.0
LAKE MOHAVE	1670.5	1665.5	1673.0	1810.0
Basin-wide Total	14171.5	15475.5	22248.0	27969.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis March 1, 2014	# of Sites	% Median	Last Year % Median
Lower Colorado River Basin	0		
Spring Mountains	2	59%	66%

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

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

