

Nevada Water Supply Outlook Report

April, 2014



Fresh snow is measured during the April 1st snow survey at Rubicon #2

Photo by Evan Smith

Water Supply Outlook Reports

Federal - State - Private Cooperative Snow Surveys

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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 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.

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STATE OF NEVADA GENERAL OUTLOOK

April 1, 2014

SUMMARY

March 2014 was another exceptionally dry month for western Nevada with observed precipitation accumulation in the 5% to 35% of average range. Eastern Nevada was only slightly better with monthly totals in the 50% to 60% range. This brings the seasonal accumulation to a range of 55% to about 85% statewide; not enough to improve snowpack conditions in any area of the state. Western Nevada snowpacks range from 35% to 61% of normal and are not likely to improve from this point on as April 1 is the normal peak. Below normal snowpacks tend to melt earlier and faster, producing lower peak flows and much lower than normal stream flow. Snowpacks in eastern Nevada are in only marginally better condition ranging from 55% to near 85% of normal with the exception of the upper Humboldt which is near average. In summary dry and warm conditions are likely to persist, snowpacks are likely to melt early producing much lower than average stream flow and water shortages may be common. 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.

SNOWPACK

March first snowpack as measured by the NRCS SNOTEL system ranges from 35% to 61% of normal in western Nevada/Sierras, essentially unchanged from last month's numbers. Eastern Nevada ranges from 55% to 85% of normal – a small improvement over last month. At this point in the snow season, melt will likely dominate all processes and improvement in snowpack conditions is unlikely. See the following page for a map displaying the most up to date conditions at publication time.

PRECIPITATION

Mountain precipitation during March was a paltry 5% to 35% of average in western Nevada and 50% to 60% of average in eastern Nevada which brings the seasonal accumulation (Oct-Mar) to 55% to 85% across the state. See page five for a map displaying the most up conditions at publication time.

SOIL MOISTURE

Soil Moisture continues to climb as early snowmelt begins to saturate the soil. Most basins throughout Nevada remain below or near average conditions, with exceptionally dry conditions within the Walker Basin as well as the Eastern Nevada Basin. Soil moisture will likely reach its maximum within the next month.

RESERVOIRS

Storage in Nevada's key irrigation reservoirs is very low ranging from 13% to 45% of capacity, with Lake Mohave near capacity at 92%. Reservoir operators will likely begin to hold as much water back as possible in an attempt to catch runoff from the paltry snowpack. Reservoirs should begin to make some gains throughout the next month or two.

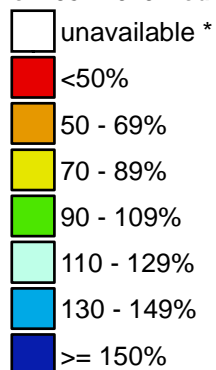
STREAMFLOW

Snowmelt stream flows are forecast to be much below normal in western Nevada and below normal in eastern Nevada. Refer to the basin forecast tables for specific numbers.

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

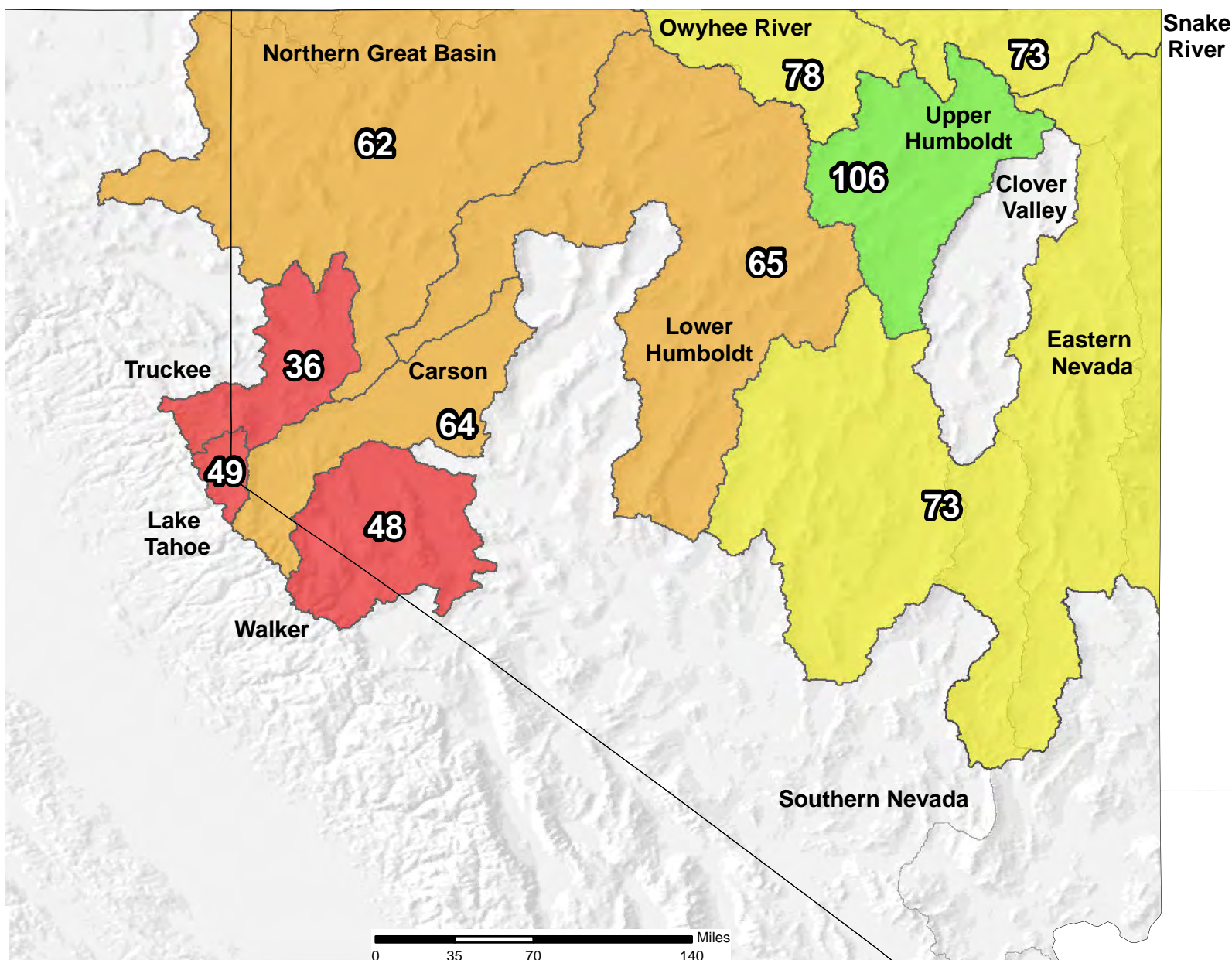
Apr 05, 2014

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



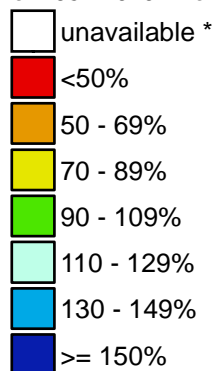
The current snow water equivalent percent of normal represents the snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

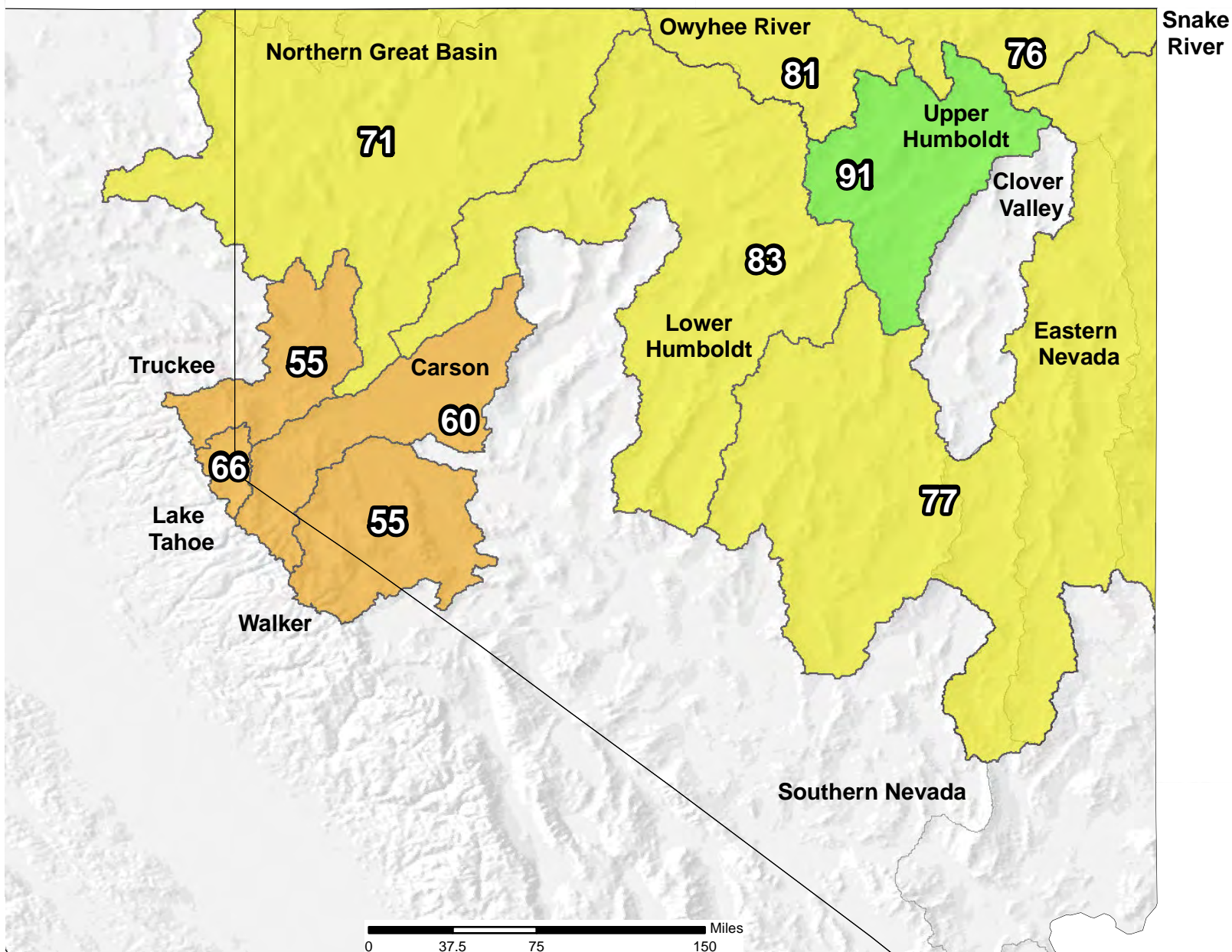
Apr 05, 2014

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).

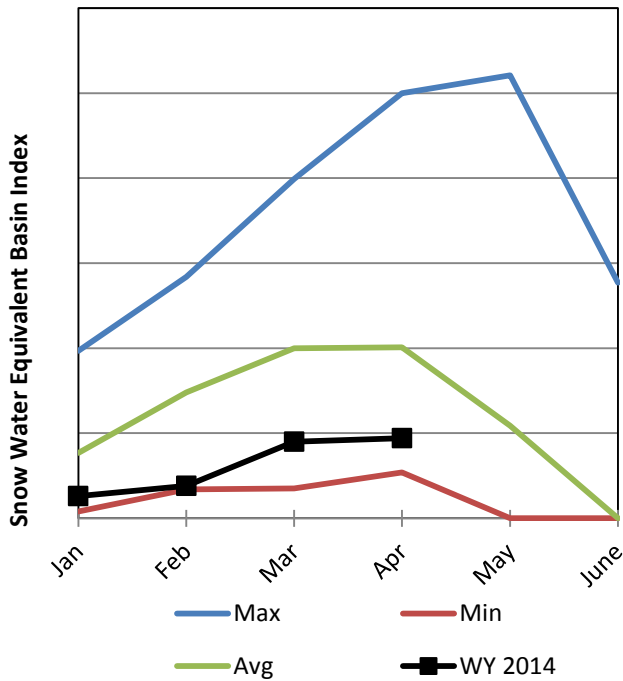
Prepared by the USDA/NRCS National Water and Climate Center
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Lake Tahoe Basin

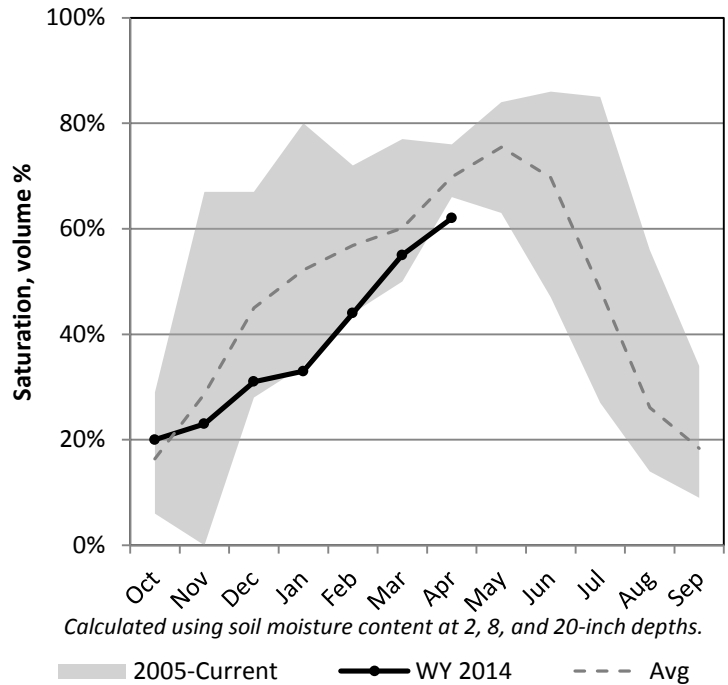
4/1/2014

Snowpack in the Lake Tahoe Basin is much below average at 47% of normal, compared to 52% last year. Precipitation in March was below average at 76%, which brings the seasonal accumulation (Oct-Mar) to 66% of average. Soil moisture is at 62% compared to 71% last year. Reservoir storage is at 10% of capacity, compared to 52% last year. Forecast streamflow volumes range from 13% to 31% of average.

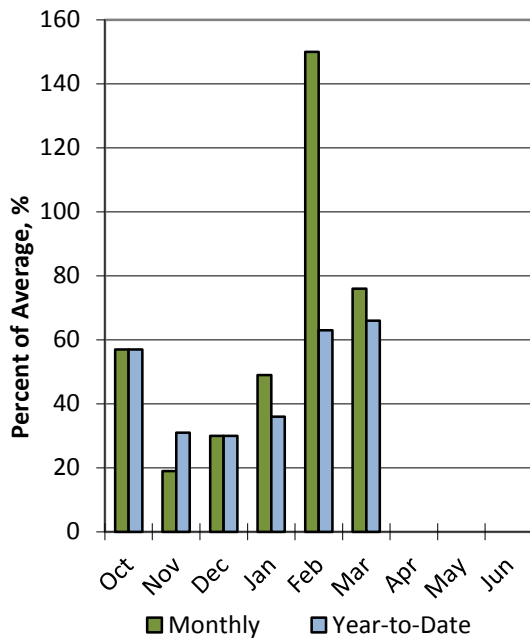
Snowpack



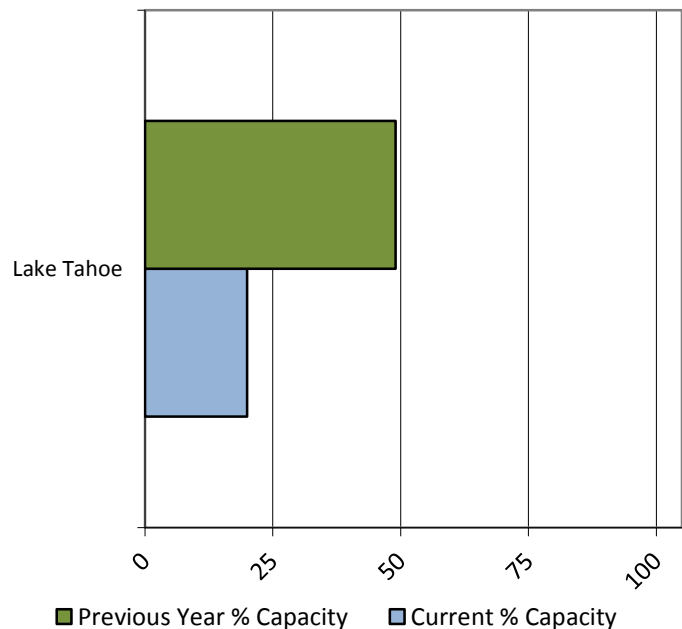
Soil Moisture



Precipitation



Reservoir Storage



Lake Tahoe
Streamflow Forecasts - April 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 (ac-ft)	APR-JUL	-513	-152	120	13%	338	699	911
	MAY-JUL	-541	-189	50	8%	289	641	630
Lake Tahoe Rise Gates Closed ¹	APR-HIGH	0.01	0.22	0.4	31%	0.58	0.98	1.31
	MAY-HIGH	0.011	0.054	0.15	14%	0.33	0.73	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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAKE TAHOE	146.9	362.4	312.8	744.6
Basin-wide Total	146.9	362.4	312.8	744.6
# of reservoirs	1	1	1	1

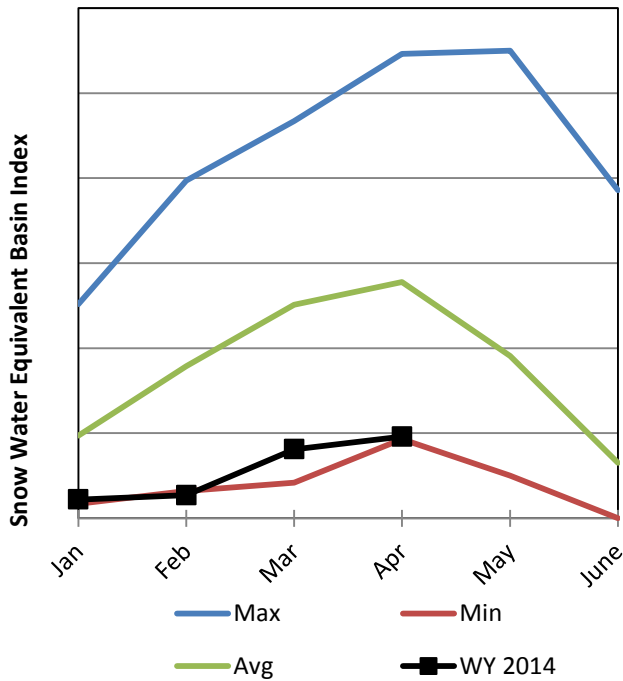
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Lake Tahoe Basin	15	43%	52%

Truckee River Basin

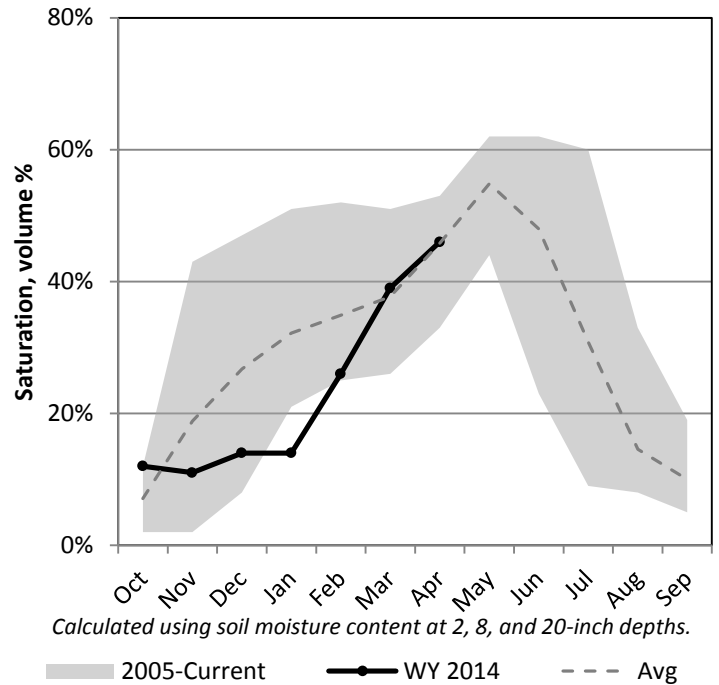
4/1/2014

Snowpack in the Truckee River Basin is much below average at 35% of normal, compared to 60% last year. Precipitation in March was below average at 74%, which brings the seasonal accumulation (Oct-Mar) to 55% of average. Soil moisture is at 46% compared to 50% last year. Reservoir storage is at 42% of capacity, compared to 67% last year. Forecast streamflow volumes range from 4% to 48% of average.

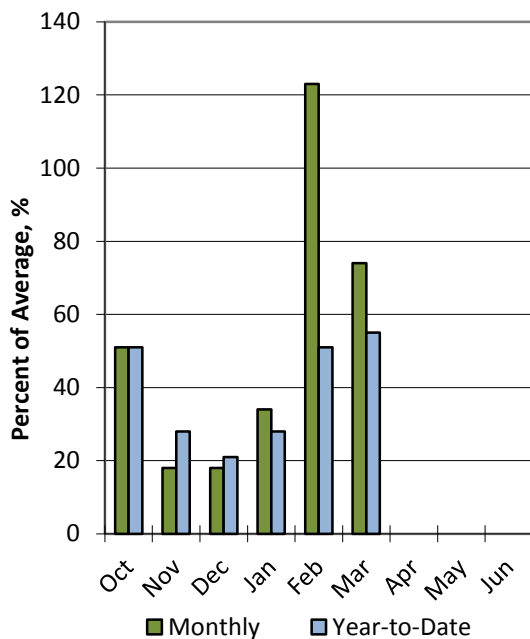
Snowpack



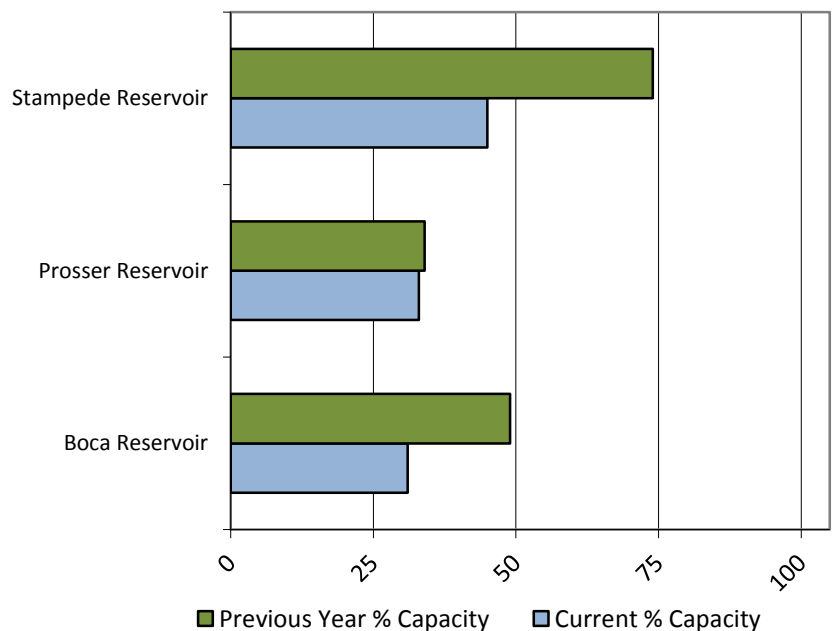
Soil Moisture



Precipitation



Reservoir Storage



Data Current as of: 4/5/2014 9:23:40 AM

Truckee River Streamflow Forecasts - April 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	APR-JUL	0.94	1.09	1.2	21%	1.32	1.53	5.6
	MAY-JUL	0.4	0.46	0.5	12%	0.55	0.63	4.2
L Truckee R ab Boca Reservoir	APR-JUL	1.6	5.1	27	34%	67	112	80
	MAY-JUL	0.63	2.5	14	22%	46	77	63
Truckee R at Farad	APR-JUL	15.6	44	95	37%	136	203	260
	MAY-JUL	0.96	7.7	39	20%	84	145	193
Steamboat Ck at Steamboat	APR-JUL	0	0.07	0.3	4%	0.64	1.68	7.9
	MAY-JUL	0	0.07	0.21	3%	0.47	1.14	6.1
Galena Ck at Galena Ck State Pk	APR-JUL	0.92	1.62	2.1	48%	2.6	3.3	4.37
	MAY-JUL	0.3	1.08	1.6	44%	2.1	2.9	3.65
Pyramid Lake Elevation Change ¹	LOW-HIGH	-2.2	-1.22	-0.84	-49%	0.05	1.67	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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BOCA RESERVOIR,CA	12.6	20.2	23.4	40.9
PROSSER RESERVOIR,CA	9.5	9.8	10.3	28.6
STAMPEDE RESERVOIR,CA	102.2	167.1	153.0	226.5
Basin-wide Total	124.3	197.1	186.7	296.0
# of reservoirs	3	3	3	3

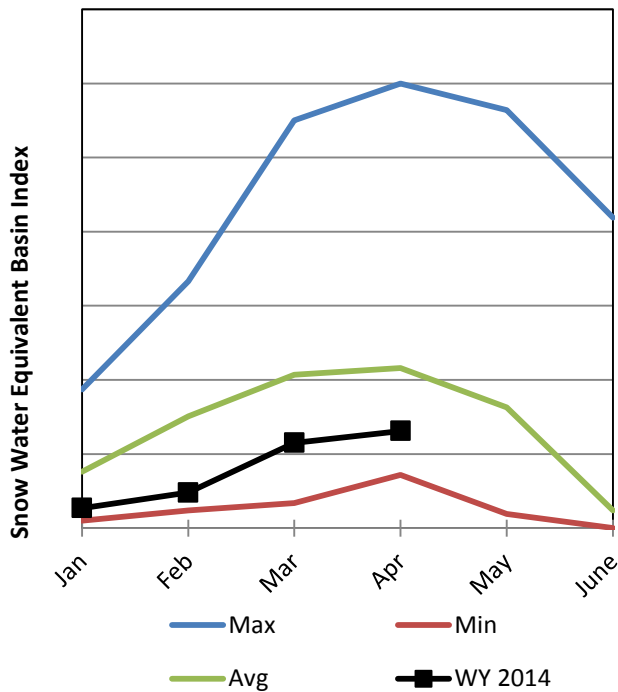
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Truckee River Basin	15	31%	60%
Little Truckee River	3	33%	61%
Sage Hen Creek	3	33%	61%
Galena Creek	2	47%	83%
Steamboat Drainage	3	45%	80%
Pyramid Lake	30	36%	57%

Carson River Basin

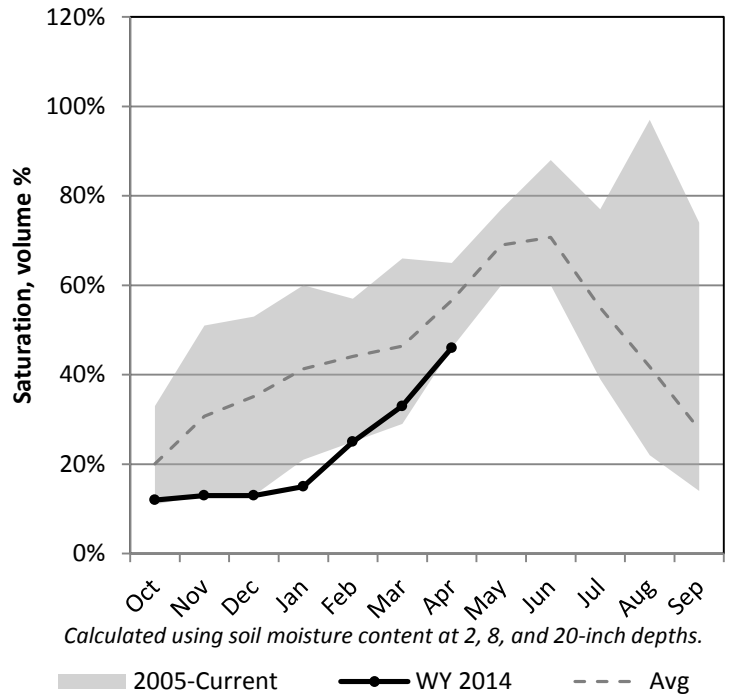
4/1/2014

Snowpack in the Carson River Basin is much below average at 61% of normal, compared to 67% last year. Precipitation in March was much below average at 65%, which brings the seasonal accumulation (Oct-Mar) to 60% of average. Soil moisture is at 46% compared to 60% last year. Reservoir storage is at 32% of capacity, compared to 42% last year. Forecast streamflow volumes range from 13% to 44% of average.

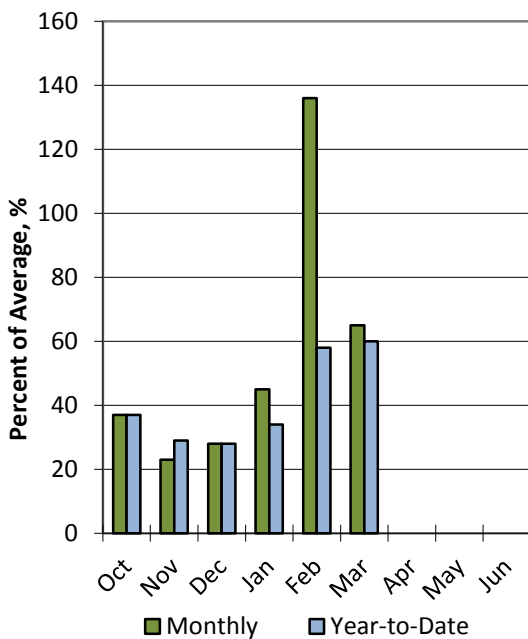
Snowpack



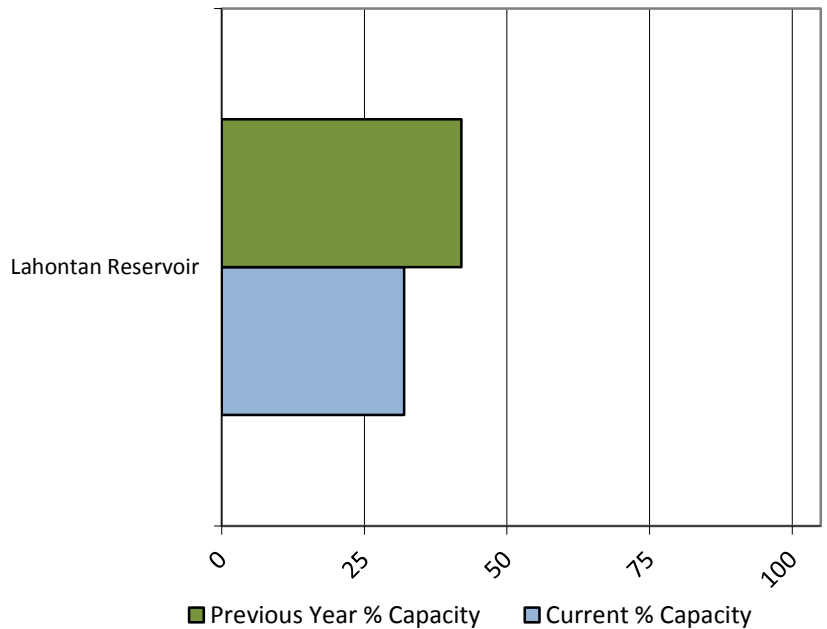
Soil Moisture



Precipitation



Reservoir Storage



Carson River Streamflow Forecasts - April 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	APR-JUL	10.5	40	60	32%	80	109	186
	MAY-JUL	2.4	31	50	33%	69	98	151
	200 cfs	01 Jun	11 Jun	18 Jun		25 Jun	05 Jul	24 Jul
	500 cfs	14 May	24 May	30 May		05 Jun	15 Jun	30 Jun
WF Carson R nr Woodfords	APR-JUL	4.1	14.1	21	39%	28	38	54
	MAY-JUL	0.84	2.7	11	26%	19.3	32	42
Carson R nr Carson City	APR-JUL	31	42	45	25%	62	80	179
	MAY-JUL	17.2	27	36	25%	45	63	144
Marlette Lake Inflow	APR-JUL	-513	-152	120	13%	338	699	911
	MAY-JUL	-541	-189	50	8%	289	641	630
King Canyon Ck nr Carson City	APR-JUL	0.004	0.011	0.05	13%	0.182	0.36	0.38
	MAY-JUL	0.003	0.008	0.02	7%	0.16	0.3	0.27
Carson R at Ft Churchill	APR-JUL	17.2	28	35	20%	50	71	171
	MAY-JUL	9.3	17.9	26	19%	36	56	138
Ash Canyon Ck nr Carson City	APR-JUL	0.011	0.28	0.49	44%	0.7	1	1.12
	MAY-JUL	0.018	0.16	0.32	35%	0.48	0.72	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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAHONTAN RESERVOIR, NV	95.5	123.8	198.8	295.1
Basin-wide Total	95.5	123.8	198.8	295.1
# of reservoirs	1	1	1	1

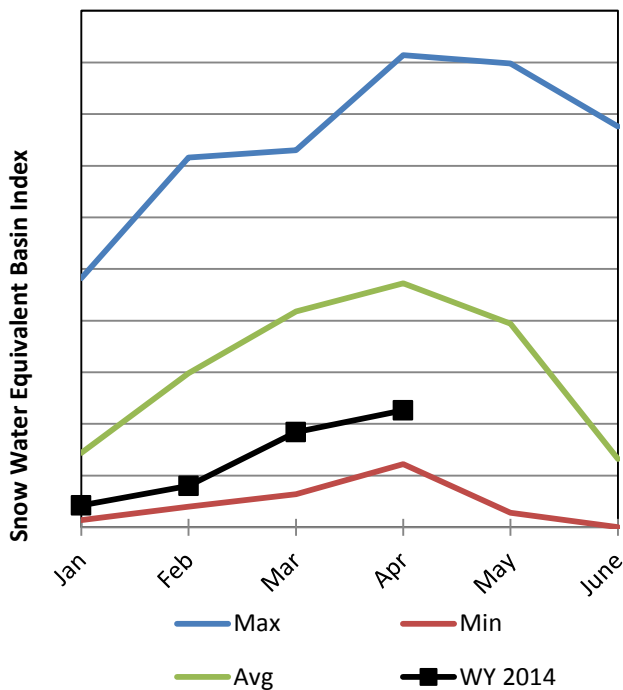
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Carson River Basin	9	56%	65%
E.F. Carson River	4	54%	65%
W.F. Carson River	9	56%	65%

Walker River Basin

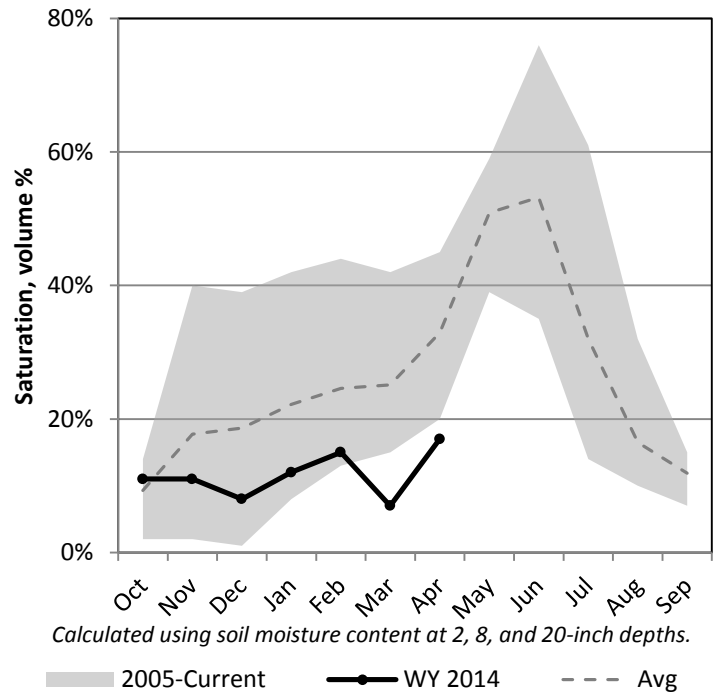
4/1/2014

Snowpack in the Walker River Basin is much below average at 48% of normal, compared to 71% last year. Precipitation in March was much below average at 64%, which brings the seasonal accumulation (Oct-Mar) to 55% of average. Soil moisture is at 17% compared to 39% last year. Reservoir storage is at 12% of capacity, compared to 22% last year. Forecast streamflow volumes range from 28% to 36% of average.

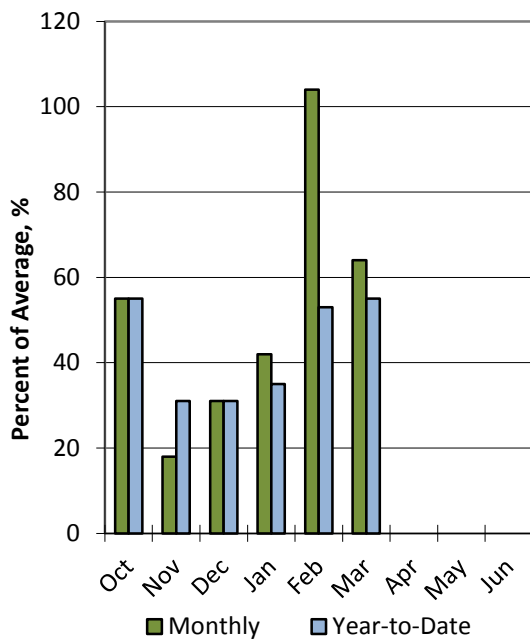
Snowpack



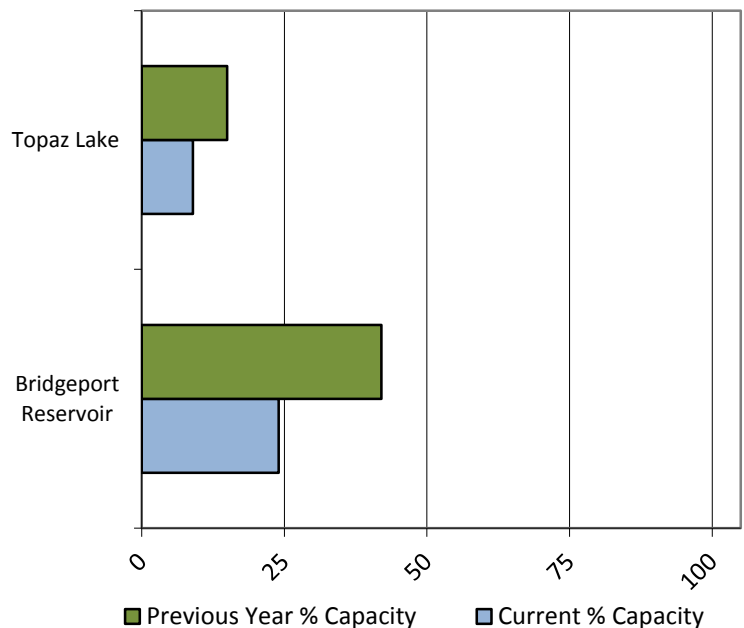
Soil Moisture



Precipitation



Reservoir Storage



Walker River Streamflow Forecasts - April 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	APR-AUG	0.67	3.5	19	28%	35	57	67
	MAY-AUG	0.59	3	14	24%	26	45	59
W Walker R bl L Walker nr Coalville	APR-JUL	17.3	42	58	36%	74	99	162
	MAY-JUL	4.5	29	45	32%	61	85	142
W Walker R nr Coalville	APR-JUL	51	56	59	36%	62	67	163
	MAY-JUL	4.3	8.2	46	32%	84	139	143
Walker Lake Elevation Change ¹	LOW-HIGH	-4.4	-1.96	-0.86	-61%	0.24	2.7	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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
BRIDGEPORT RESERVOIR, CA	10.1	17.7	27.7	42.5
TOPAZ LK NR TOPAZ, CA	8.0	15.1	33.1	59.4
Basin-wide Total	18.1	32.8	60.8	101.9
# of reservoirs	2	2	2	2

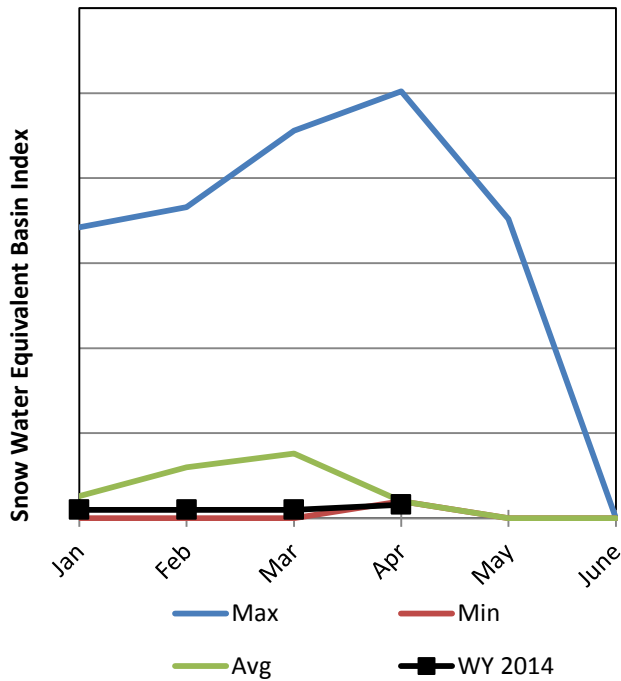
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Walker Lake Rise	8	45%	72%
E. Walker Rv. Nr Bridgeport	4	37%	62%
W. Walker Rv. Nr Coleville	5	49%	76%

Northern Great Basin

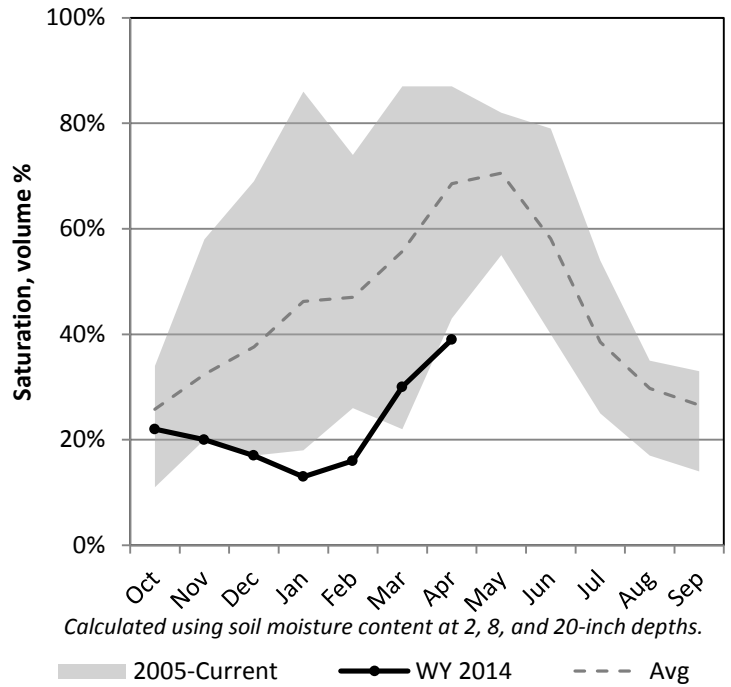
4/1/2014

Snowpack in the Northern Great Basin is much below average at 42% of normal, compared to 0% last year. Precipitation in March was near average at 106%, which brings the seasonal accumulation (Oct-Mar) to 62% of average. Soil moisture is at 39% compared to 50% last year. Forecast streamflow volumes range from 32% to 58% of average.

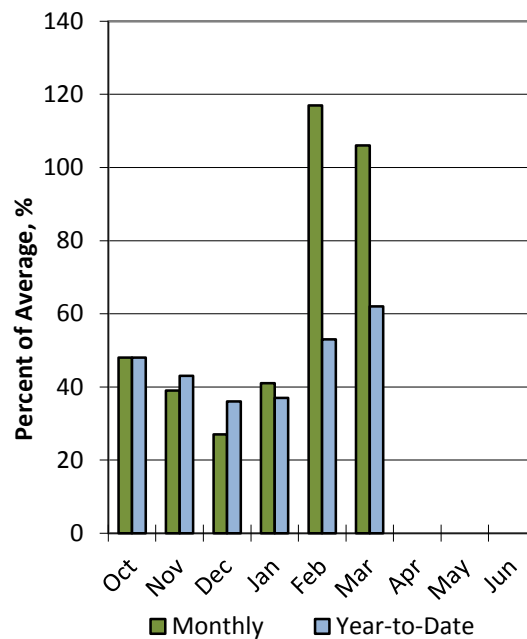
Snowpack



Soil Moisture



Precipitation



Northern Great Basin
Streamflow Forecasts - April 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	1.14	2.5	2.5	58%	4.4	5.8	4.3
Bidwell Ck nr Fort Bidwell	APR-JUL	1.46	3.6	5	42%	6.4	8.5	12
McDermitt Ck nr McDermitt	MAR-JUN	0.52	1.86	6	34%	10.1	16.2	17.5
	APR-JUL	0.14	0.85	4.5	32%	8.2	13.5	14
Davis Ck	APR-JUL	1574	2091	2536	35%	3075	4085	7233
	APR-SEP	1930	2518	3017	38%	3614	4715	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

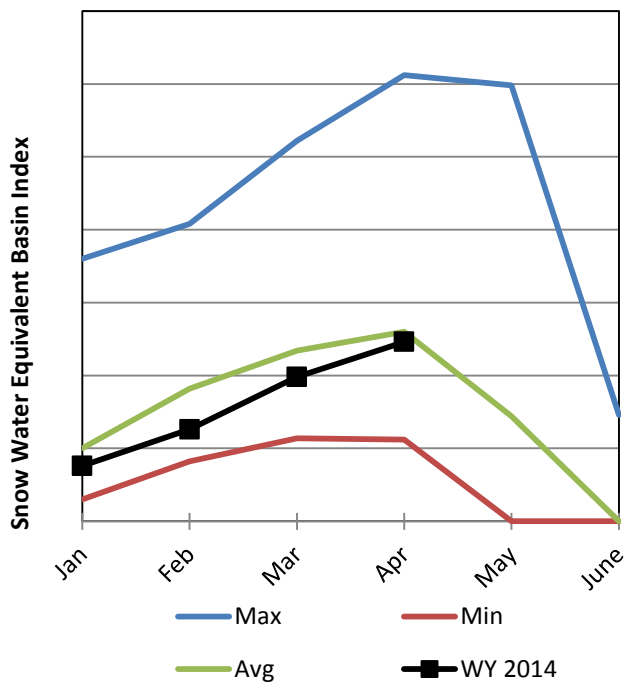
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
N Great Basin	2	42%	0%
Quinn River	1	42%	0%
McDermitt Creek	1	42%	0%

Upper Humboldt River Basin

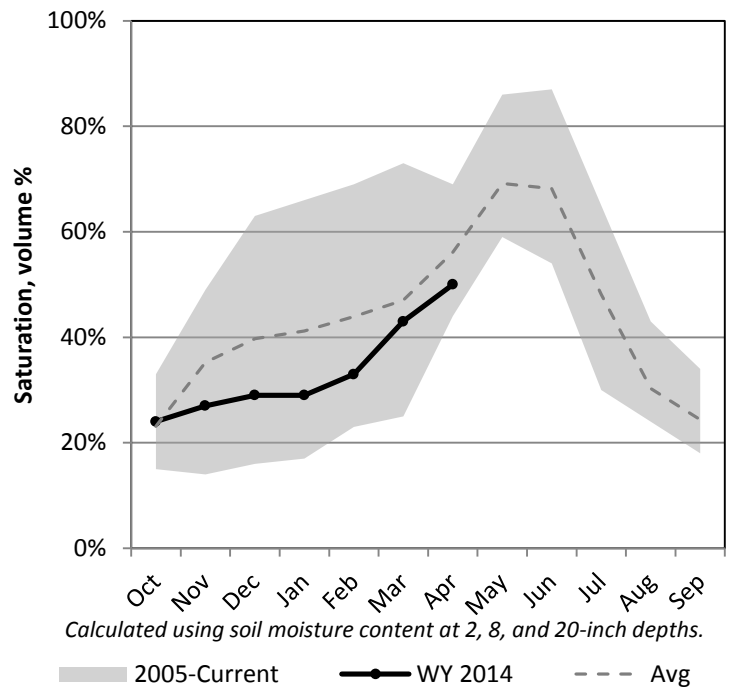
4/1/2014

Snowpack in the Upper Humboldt River Basin is near average at 95% of normal, compared to 59% last year. Precipitation in March was near average at 106%, which brings the seasonal accumulation (Oct-Mar) to 90% of average. Soil moisture is at 50% compared to 53% last year. Forecast streamflow volumes range from 24% to 83% of average.

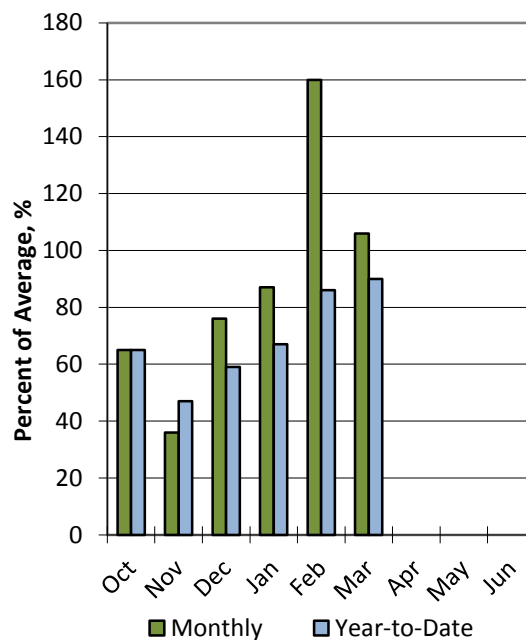
Snowpack



Soil Moisture



Precipitation



Upper Humboldt River Streamflow Forecasts - April 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	APR-JUL	0.72	9.4	16	44%	23	32	36
	MAY-JUL	0.78	3.8	11	42%	18.3	29	26
Lamoille Ck nr Lamoille	APR-JUL	16.8	24	23	79%	34	42	29
	MAY-JUL	8.3	15.9	21	78%	26	34	27
NF Humboldt R at Devils Gate	APR-JUL	0.68	2.6	8.2	24%	13.8	22	34
	MAY-JUL	0.22	1.32	4.4	20%	10.2	18.8	22
Humboldt R nr Elko	APR-JUL	3.1	24	60	39%	96	148	154
	MAY-JUL	1.19	10	43	36%	76	125	119
SF Humboldt R at Dixie	APR-JUL	15.1	39	55	83%	71	95	66
	MAY-JUL	4.1	27	43	75%	59	82	57
Humboldt R nr Carlin	APR-JUL	13.3	62	95	40%	128	177	238
	MAY-JUL	3.8	18.8	50	26%	81	127	189
Humboldt R at Palisades	APR-JUL	4.9	65	105	47%	145	205	225
	MAY-JUL	3.4	27	65	38%	103	159	171

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

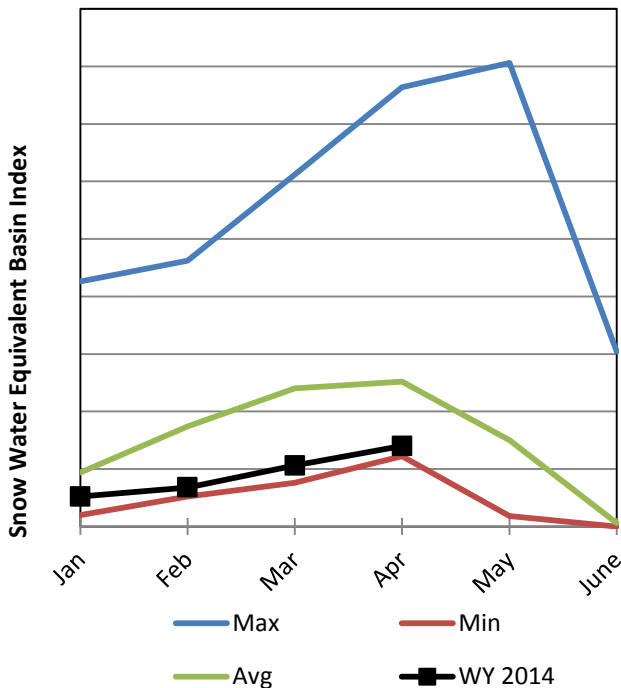
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Humboldt Rv. At Palisades	18	95%	66%
Lamoille Creek	3	102%	61%
S. Fork Humboldt	5	107%	67%
Mary's River	1	67%	58%
N. Fork Humboldt	2	15%	73%

Lower Humboldt River Basin

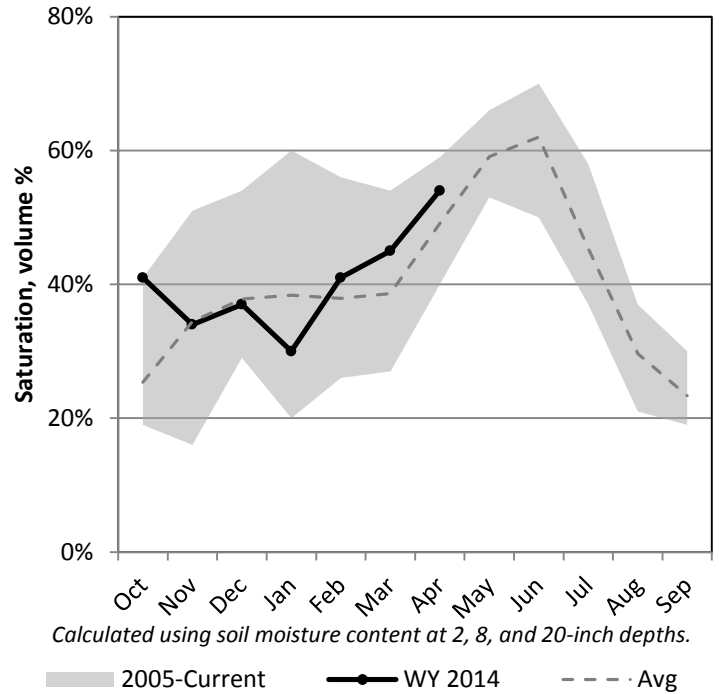
4/1/2014

Snowpack in the Lower Humboldt River Basin is much below average at 56% of normal, compared to 65% last year. Precipitation in March was above average at 124%, which brings the seasonal accumulation (Oct-Mar) to 81% of average. Soil moisture is at 54% compared to 59% last year. Reservoir storage is at 4.5% of capacity, compared to 11% last year. Forecast streamflow volumes range from 14% to 40% of average.

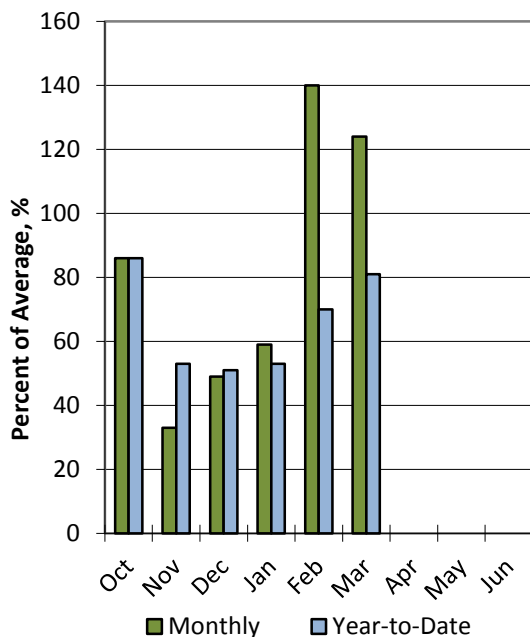
Snowpack



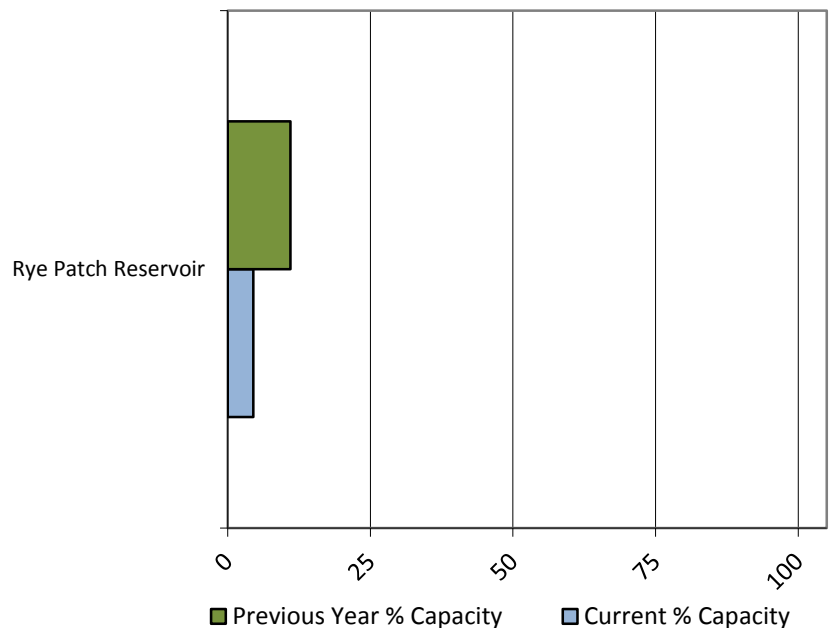
Soil Moisture



Precipitation



Reservoir Storage



Lower Humboldt River Streamflow Forecasts - April 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	APR-JUL	0.36	0.75	3.6	20%	6.5	10.6	18.2
	MAY-JUL	0.098	0.59	1.8	18%	4.2	7.7	9.8
Humboldt R at Comus	APR-JUL	2.2	6.4	45	21%	92	161	215
	MAY-JUL	1.56	10.9	27	17%	64	117	156
L Humboldt R nr Paradise	APR-JUL	0.097	0.39	1.9	20%	5.6	8.9	9.7
	MAY-JUL	0.076	0.23	1.3	17%	3.8	7.5	7.6
Martin Ck nr Paradise	APR-JUL	0.18	1.97	7	40%	12	19.4	17.5
	MAY-JUL	0.122	0.61	4.3	35%	9.2	16.5	12.2
Humboldt R nr Imlay	APR-JUL	1.88	5.6	25	13%	95	197	188
	MAY-JUL	1.41	4.2	8.5	6%	51	120	141

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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
RYE PATCH RE NR RYE PATCH, NV	9.0	22.0	97.0	194.3
Basin-wide Total	9.0	22.0	97.0	194.3
# of reservoirs	1	1	1	1

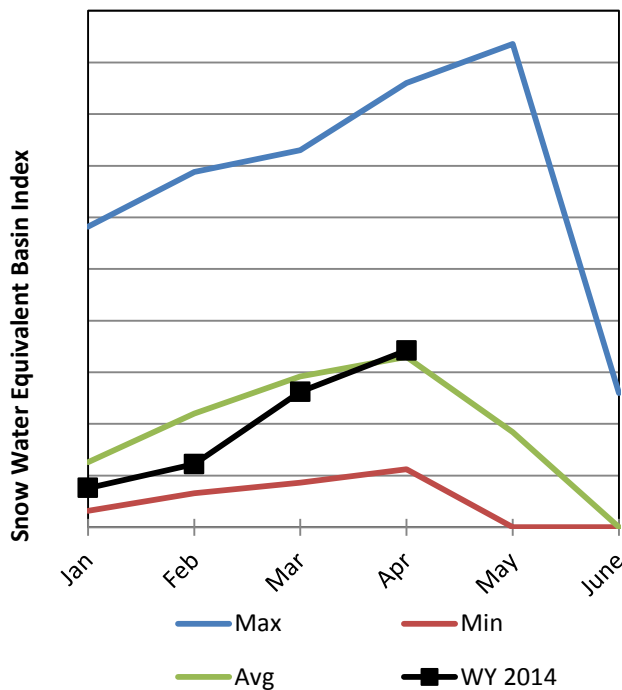
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Lower Humboldt River Basin	6	56%	65%
Little Humboldt River	4	52%	55%
Martin Creek	3	51%	57%
Reese River	3	54%	87%
Rock Creek	1		

Clover Valley & Franklin River Basin

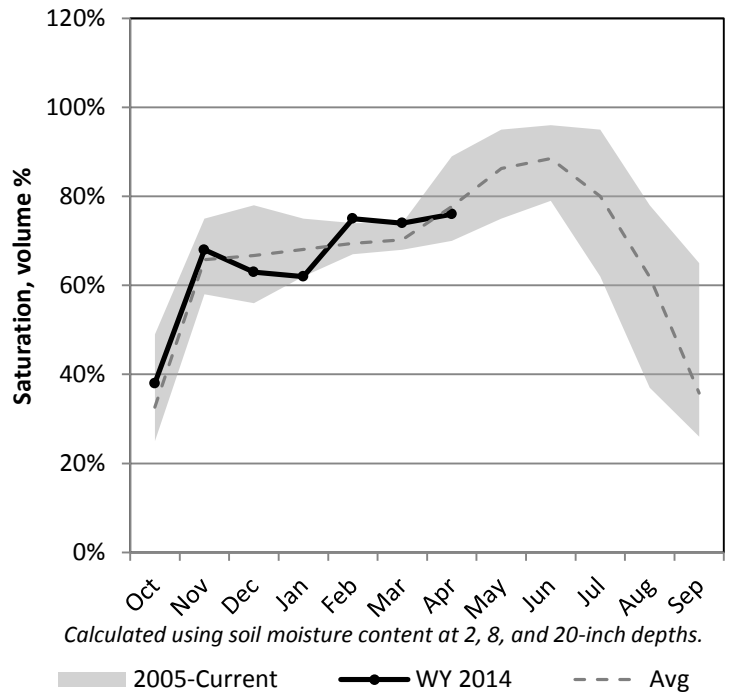
4/1/2014

Snowpack in the Clover Valley & Franklin River Basin is near average at 104% of normal, compared to 35% last year. Precipitation in March was much above average at 143%, which brings the seasonal accumulation (Oct-Mar) to 105% of average. Soil moisture is at 76% compared to 85% last year. The forecast streamflow volume for the Franklin River is 58% of average.

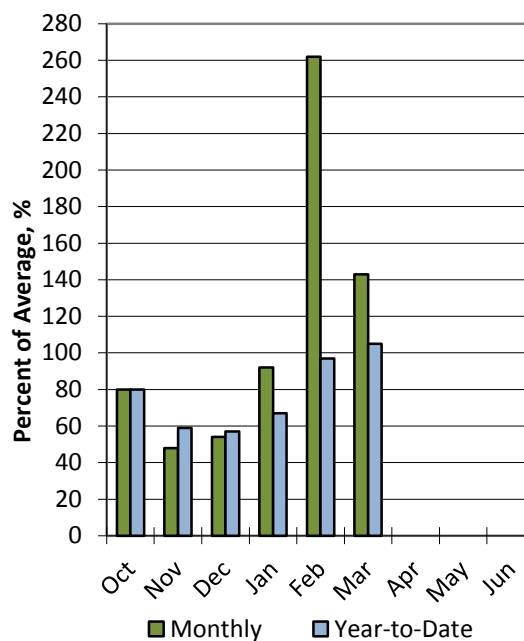
Snowpack



Soil Moisture



Precipitation



Clover Valley & Franklin River
Streamflow Forecasts - April 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	2.4	3.4	4	58%	4.9	5.9	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

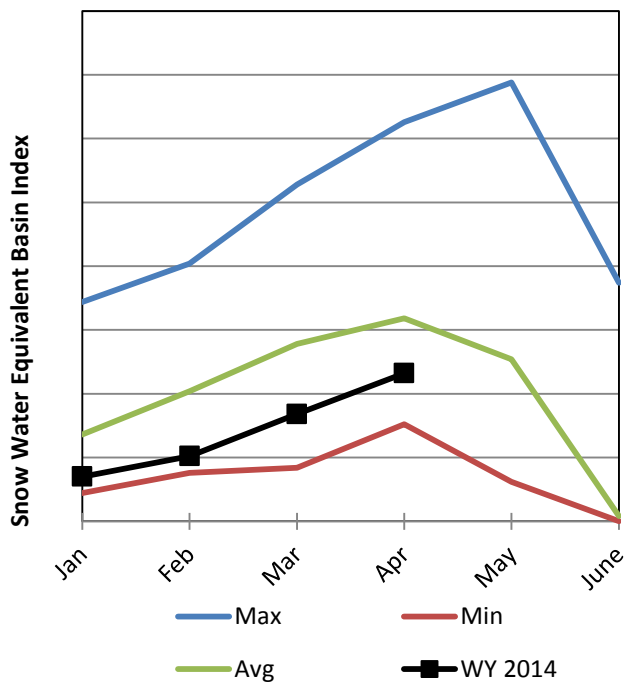
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Clover Valley & Franklin River	1	104%	35%
Franklin River	1	104%	35%
Clover Valley	1	104%	35%

Snake River Basin

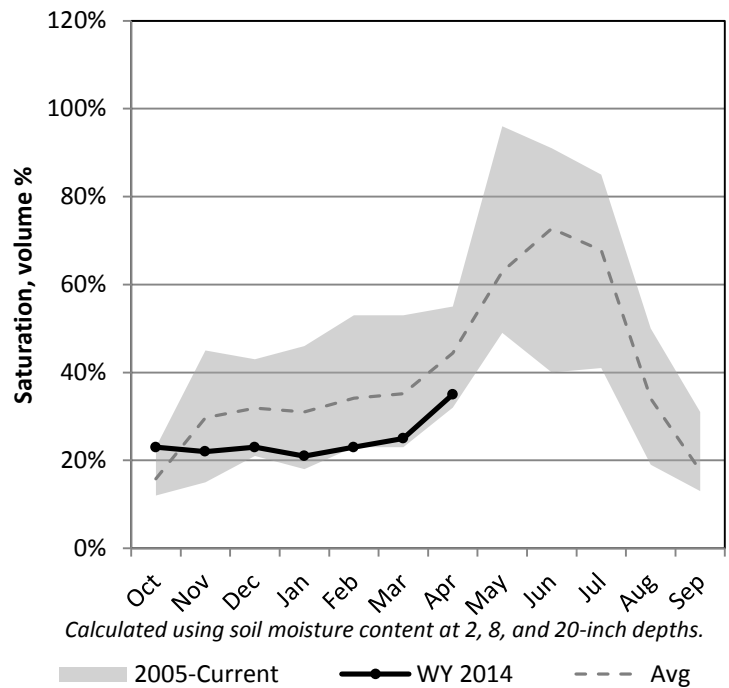
4/1/2014

Snowpack in the Snake River Basin is below average at 73% of normal, compared to 89% last year. Precipitation in March was above average at 116%, which brings the seasonal accumulation (Oct-Mar) to 76% of average. Soil moisture is at 35% compared to 52% last year. The forecast streamflow volume for Salmon Falls is 46% of average.

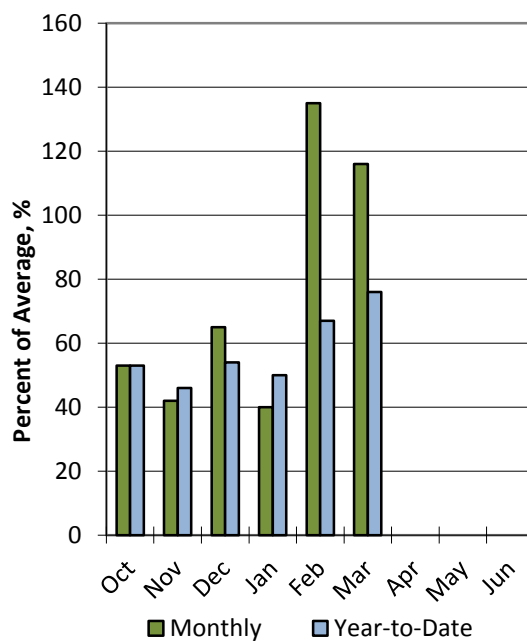
Snowpack



Soil Moisture



Precipitation



Snake River Basin
Streamflow Forecasts - April 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	APR-JUN	15	23	30	45%	38	50	66
	APR-JUL	15.6	25	32	46%	40	54	70
	APR-SEP	17.5	27	35	47%	44	58	74

- 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

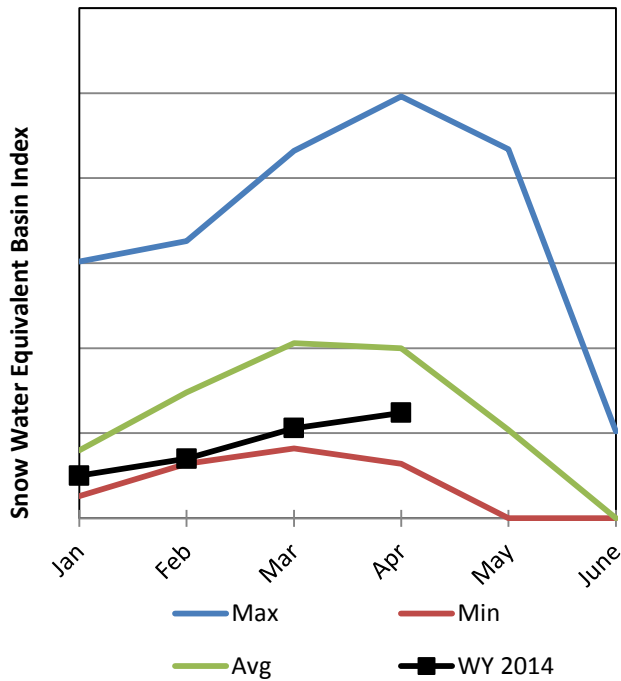
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Snake River Basin	3	73%	89%
Salmon Falls Creek	8	78%	86%

Owyhee River Basin

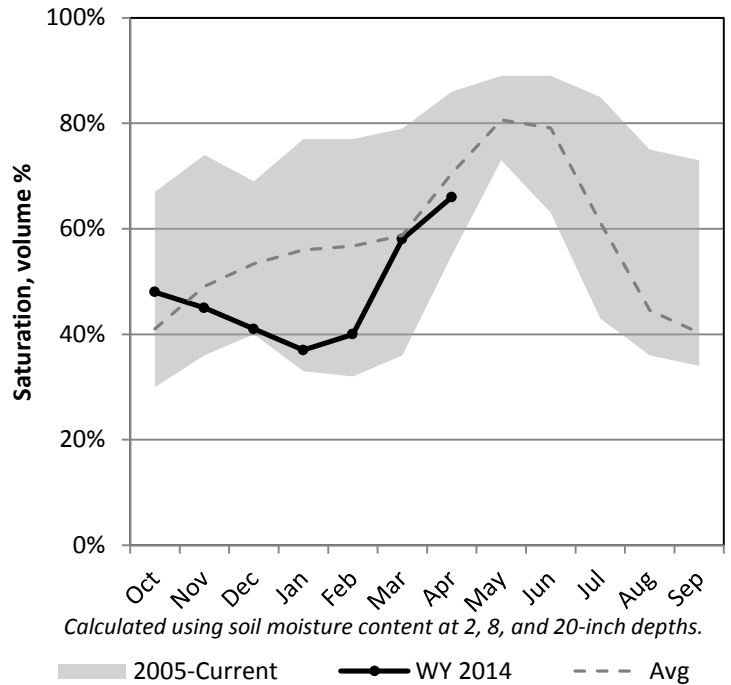
4/1/2014

Snowpack in the Owyhee River Basin is much below average at 62% of normal, compared to 52% last year. Precipitation in March was much above average at 134%, which brings the seasonal accumulation (Oct-Mar) to 80% of average. Soil moisture is at 66% compared to 78% last year. Reservoir storage is at 22% of capacity, compared to 40% last year. The forecast streamflow volume for the Owyhee River near Gold Creek is 17% of average.

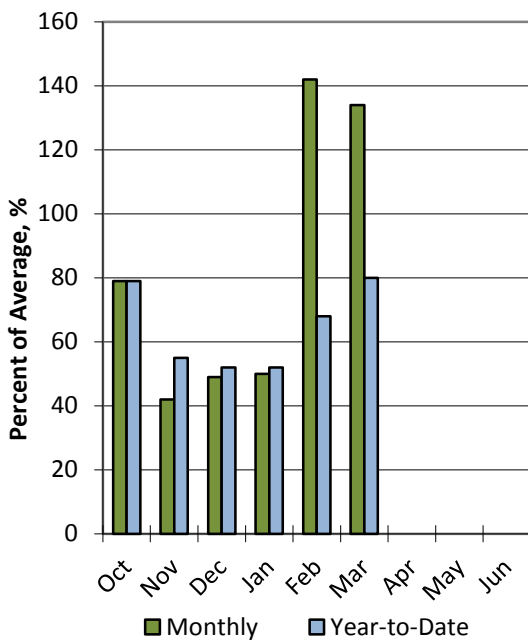
Snowpack



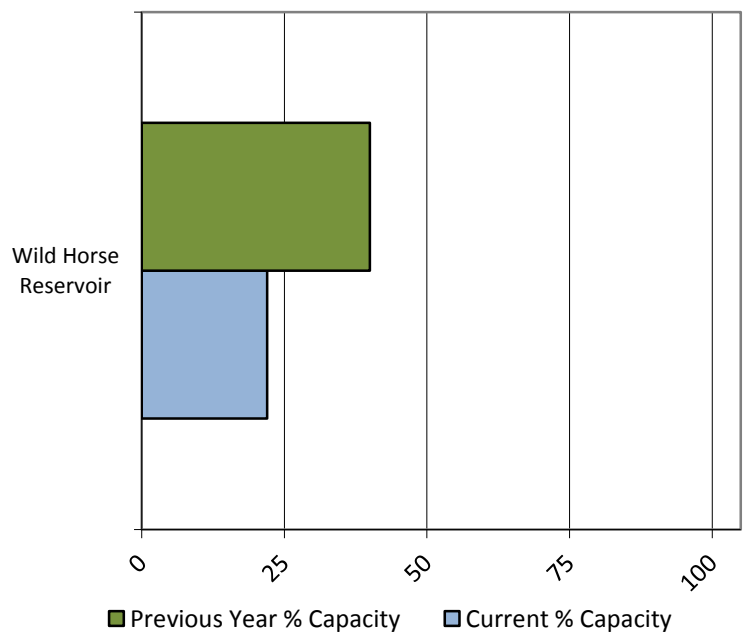
Soil Moisture



Precipitation



Reservoir Storage



Owyhee River Basin
Streamflow Forecasts - April 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	APR-JUL	0.16	1.49	3.7	17%	7.4	16.5	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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
WILD HORSE RE NR GOLD CREEK, NV	15.8	28.6	39.2	71.5
Basin-wide Total	15.8	28.6	39.2	71.5
# of reservoirs	1	1	1	1

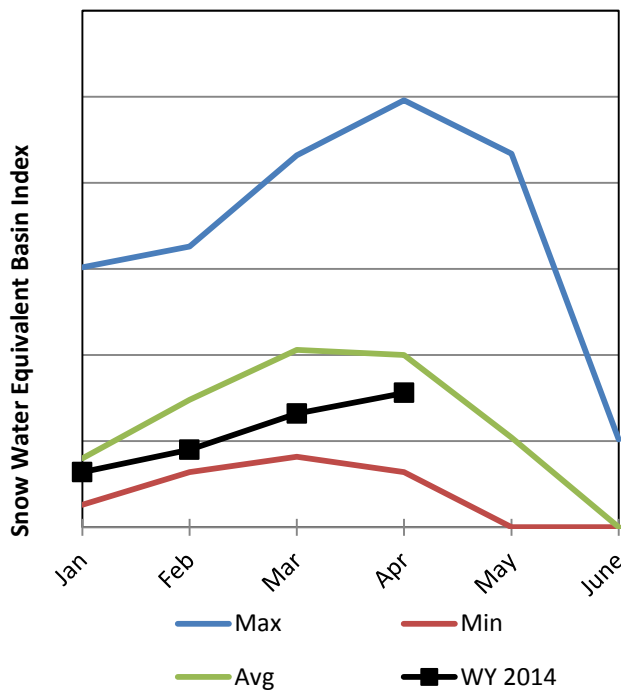
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Owyhee River Basin	5	62%	52%
Owyhee River nr Owyhee	4	56%	53%
Owyhee R. nr Gold Creek	2	27%	47%
S. Fork Owyhee River	3	52%	47%

Eastern Nevada Basin

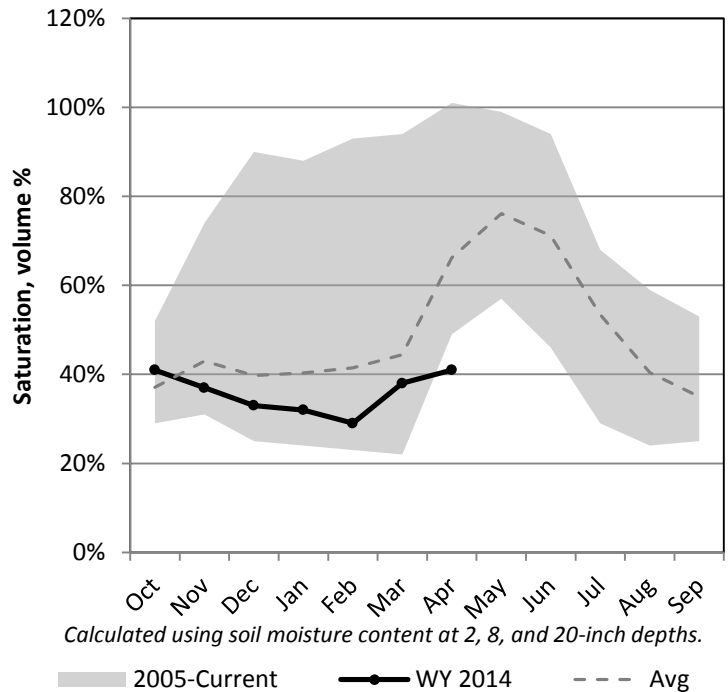
4/1/2014

Snowpack in the Eastern Nevada Basin is much below average at 50% of normal, compared to 51% last year. Precipitation in March was much below average at 44%, which brings the seasonal accumulation (Oct-Mar) to 55% of average. Soil moisture is at 41% compared to 50% last year. Forecast streamflow volumes range from 41% to 61% of average.

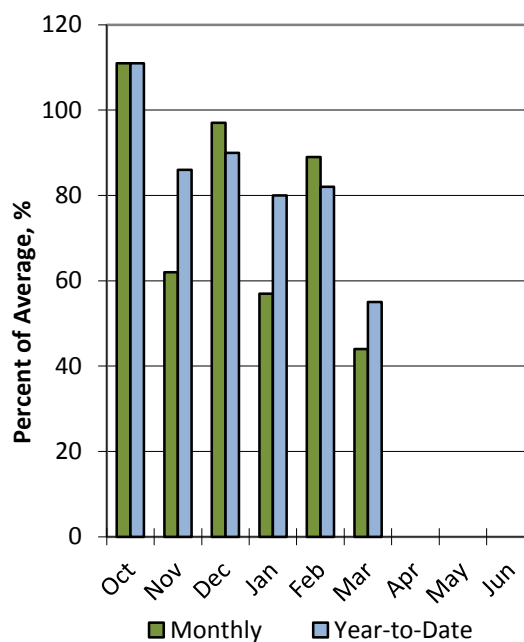
Snowpack



Soil Moisture



Precipitation



Data Current as of: 4/5/2014 9:29:07 AM

Eastern Nevada Streamflow Forecasts - April 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	0.072	0.95	2.2	61%	3.8	6	3.6
Lehman Ck nr Baker	APR-JUL	0.04	0.91	1.5	55%	2.1	3	2.72
Cleve Ck nr Ely	APR-JUL	0.09	1.47	2.4	54%	3.3	4.7	4.41
Steptoe Ck nr Ely	APR-JUL	0.05	0.68	1.11	41%	1.54	2.2	2.7

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

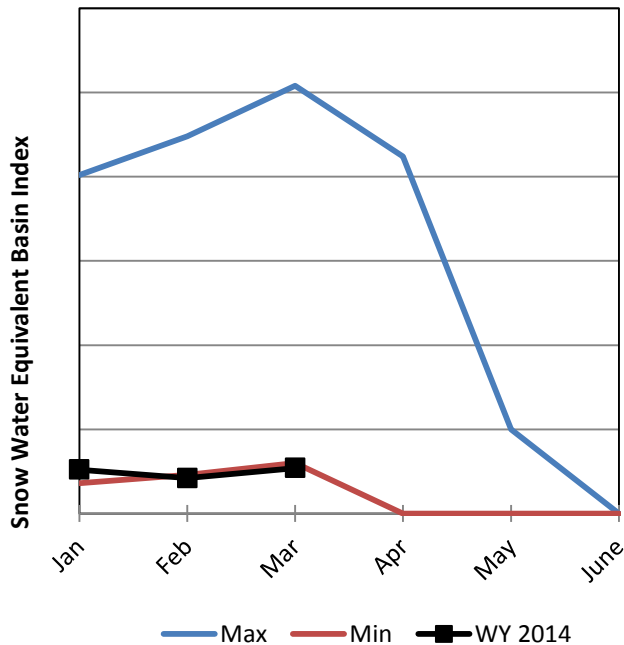
Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Eastern Nevada	3	68%	51%
Kingston Creek	1	76%	86%
Steptoe Valley	3	61%	49%

Lower Colorado River Basin

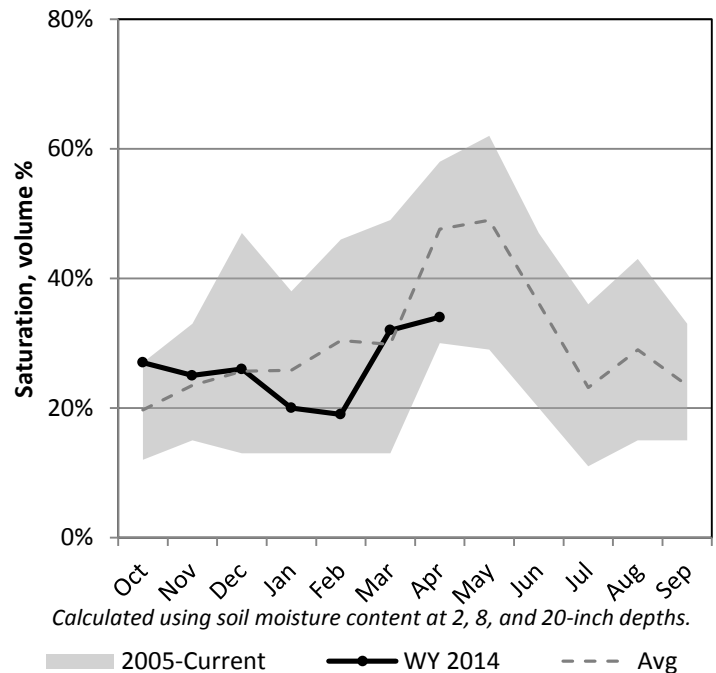
4/1/2014

Precipitation at SNOTEL stations within the Lower Colorado River Basin in March averaged $\frac{1}{8}$ inches, which brings the average SNOTEL seasonal accumulation within the basin (Oct-Mar) to $\frac{1}{4}$ inches. Soil moisture is at 34% compared to 42% last year. Reservoir storage is at 48% of capacity, compared to 54% last year. Forecast streamflow volumes range from 15% to 110% of average.

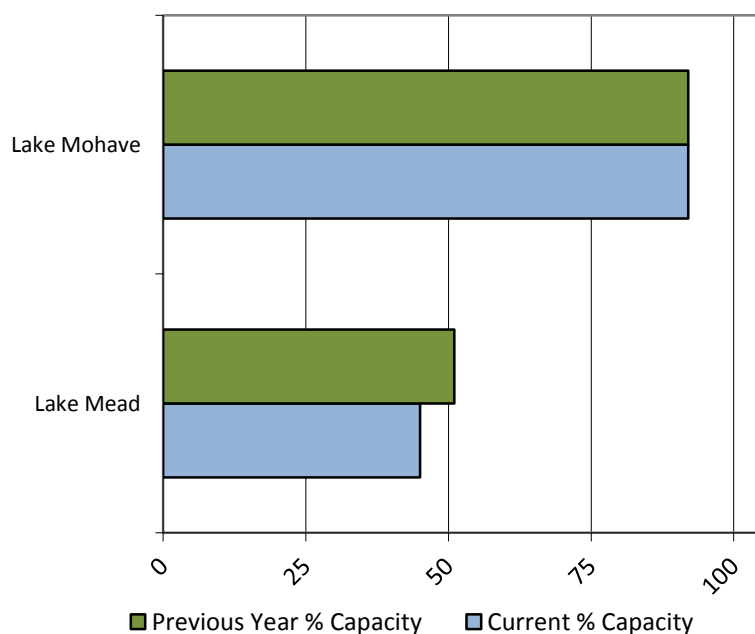
Snowpack



Soil Moisture



Reservoir Storage



Data Current as of: 4/5/2014 9:29:09 AM

Lower Colorado River Basin Streamflow Forecasts - April 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	0.72	5	10	15%	16.8	30	65
Lake Powell Inflow ²	APR-JUL	5530	6890	7900	110%	8980	10700	7160
Virgin R nr Hurricane	APR-JUL	1.55	6.1	11	17%	17.3	29	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 March, 2014	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
LAKE MEAD	11888.0	13465.0	20450.0	26159.0
LAKE MOHAVE	1660.8	1673.1	1687.0	1810.0
Basin-wide Total	13548.8	15138.1	22137.0	27969.0
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2014	# of Sites	% Median	Last Year % Median
Lower Colorado River Basin	0		
Spring Mountains	2	75%	51%

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Nevada Water Supply Outlook Report

Natural Resources Conservation Service
Reno, NV

