

Utah Climate and Water Report

March, 2014



**Heavily drifted snow at the Chicken Ridge SCAN, Utah,
January 2014**

Photo by Kent Sutcliffe

Utah Climate and Water Report

The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from the United States Geological Survey, reservoir data from the Bureau of Reclamation, and other sources), geography including high elevation United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Snowpack Telemetry (SNOTEL) data, and agriculturally important data from the USDA-NRCS Soil Climate Analysis Network (SCAN). Data on precipitation, soil moisture, soil temperature, reservoir storage, and streamflow are analyzed and presented. These data analyses can be used to increase irrigation efficiency and agricultural production. As with all data and analyses, there are limitations due to data quality, quantity, and spatial application.

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- b) Northern Mountains
- c) Uintah Basin
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2) General Hydrological Conditions

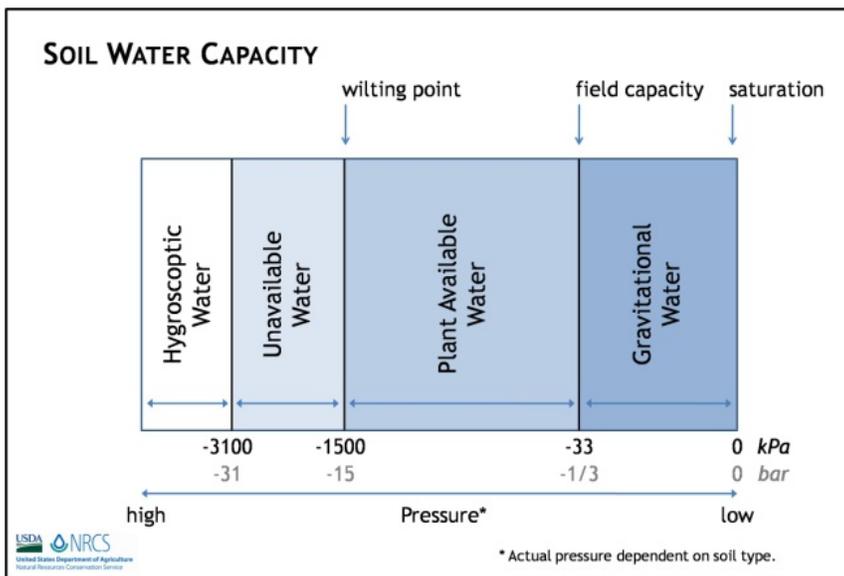
- a) SNOTEL Current Snow Water Equivalent (SWE) % of Normal
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Climate and Water Information

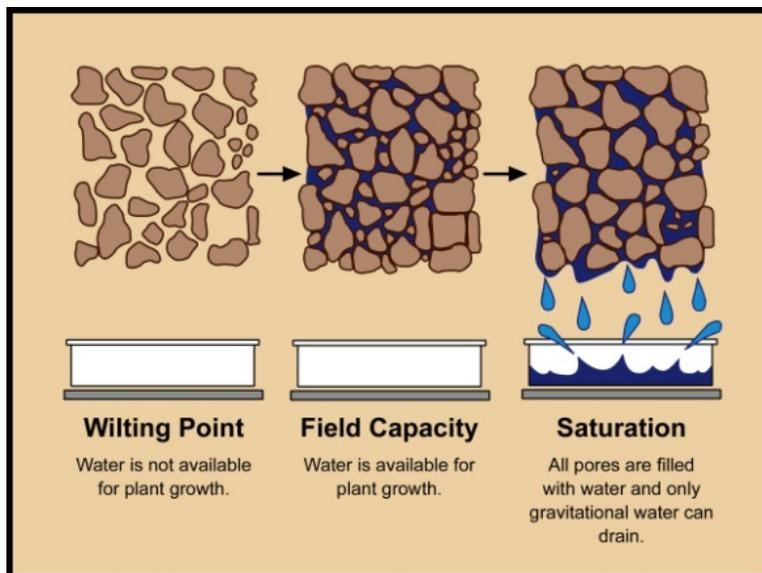
Soil Climate Analysis Network

Soil Climate Analysis Network (SCAN) stations are primarily located on low-to mid-elevation, agriculturally important landscapes that maintain representative soils. Elevations range from 3,000 to 7,000 ft. The SCAN network provides real-time soil moisture and temperature data coupled with additional climate information for use in natural resource planning, drought assessment, water resource management, and resource inventory. Stations are situated on non-irrigated, native soils, are remotely located, and collect hourly atmospheric and soils data that are available to the public online.

In order to summarize SCAN data, the 35 sites in Utah are grouped by climate divisions (North Central, Northern Mountains, Uintah Basin, Southeast, South Central, Dixie, and Western).



Explanation of soil water capacity definitions. Field capacity (FC) and wilting point (WP) are calculated in the laboratory for each soil horizon. The amount of water held between field capacity and wilting point is plant available.



Visual explanation of soil water capacity definitions.

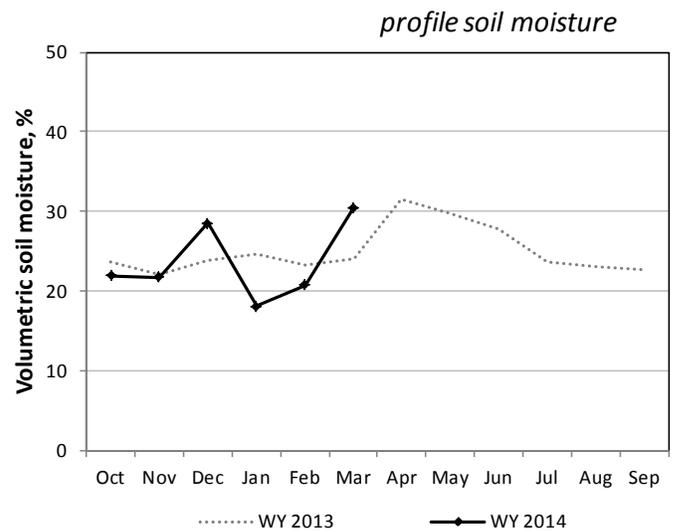
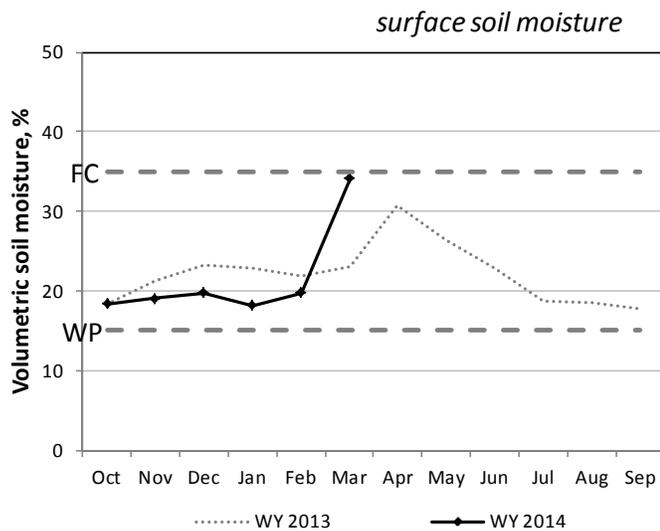
North Central

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>volume %</i>					<i>° F</i>				
NORTH CENTRAL												
Blue Creek	4.6	2.1	38	36	42	36	16	34	35	35	36	39
Cache Junction	5.2	2.3	39	35	42	37	27	39	39	37	37	38
Grantsville	4.2	1.1	23	21	25	35		42	43	43	43	45

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

North Central



Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

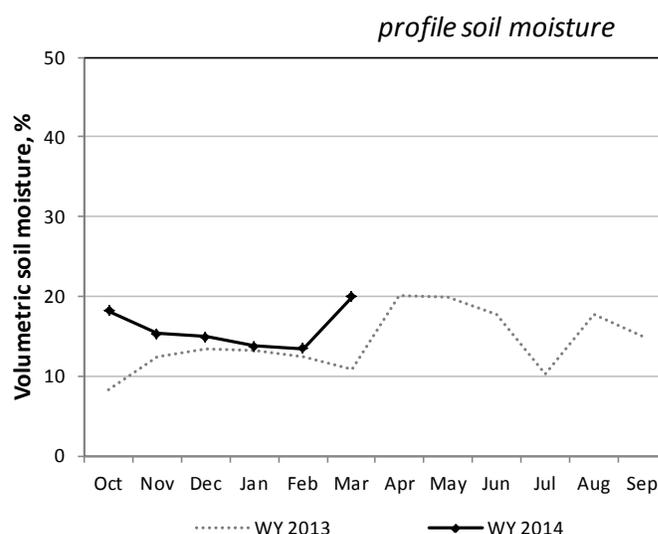
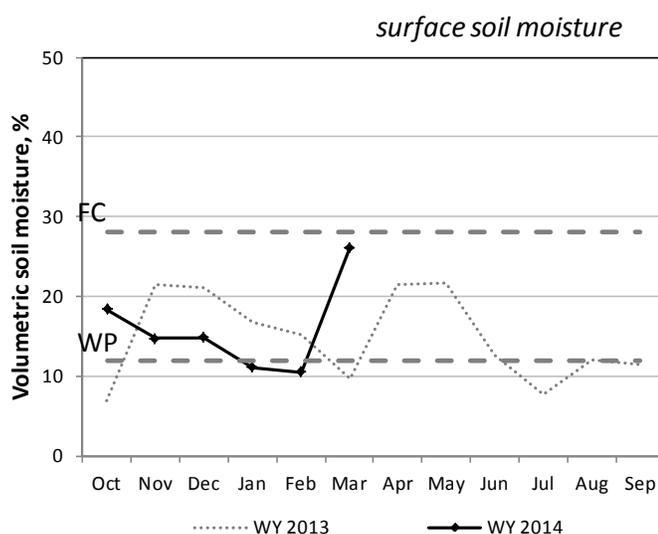
Northern Mountains

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
NORTHERN MOUNTAINS												
Chicken Ridge	2.0	0.6	19	19	23	17	11	32	32	32	33	36
Buffalo Jump	2.7	0.8	20	27	25	7	-	32	32	32	34	-
Morgan	7.1	2.6	34	32	34	35	19	39	39	38	35	34

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

Northern Mountains



Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

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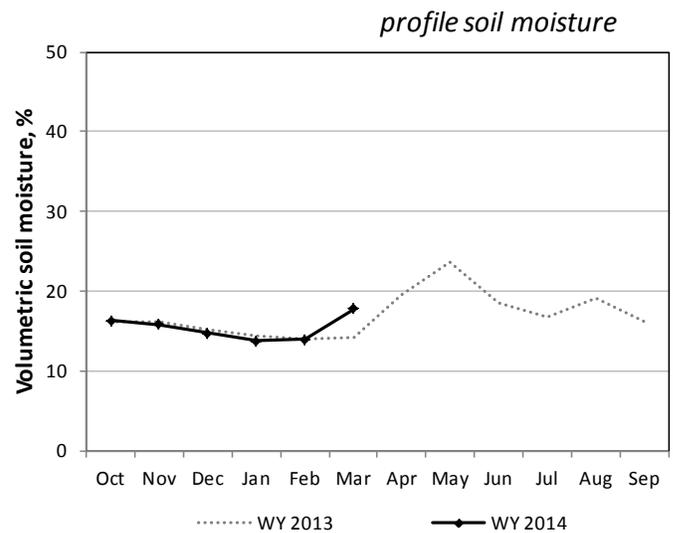
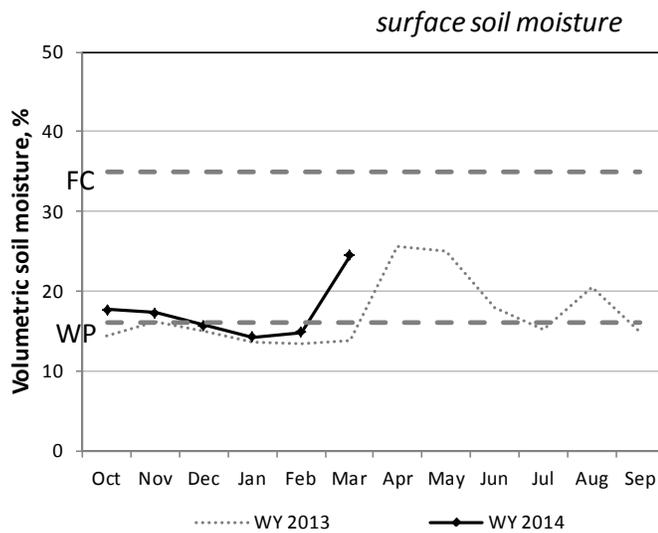
Uintah Basin

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
UINTAH BASIN												
Mountain Home	2.0	0.5	27	35	38	21	9	35	35	35	36	37
Little Red Fox	1.3	0.2	5	16	18	19	17	39	41	40	39	39
Split Mountain	2.7	0.1	19	30	25	12	11	39	41	39	38	38

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Uintah Basin



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Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

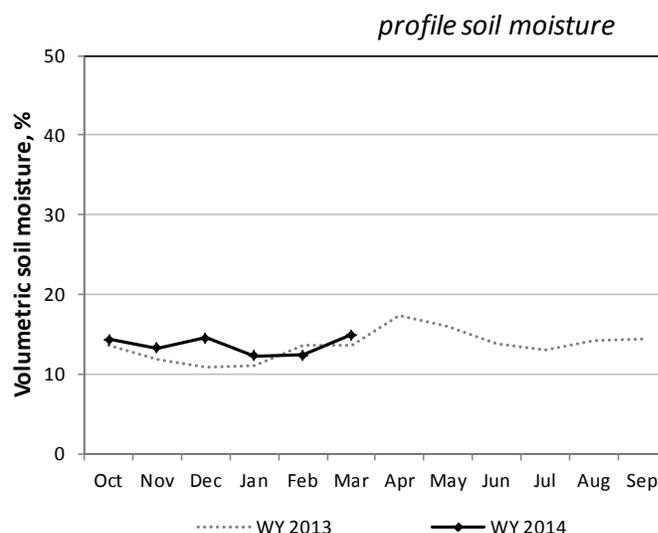
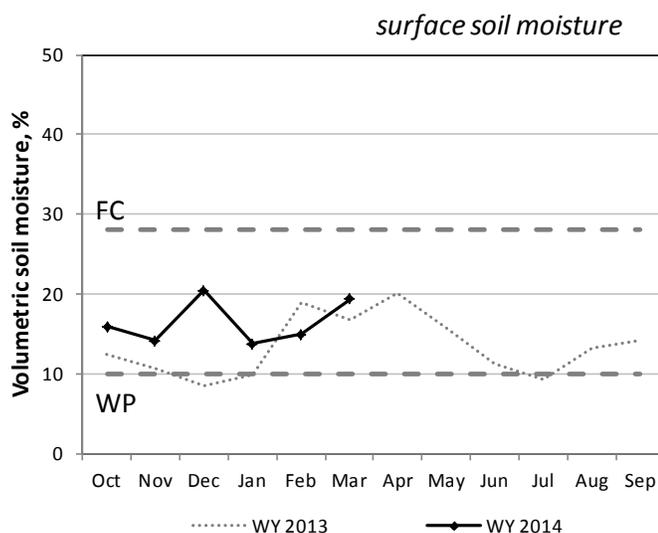
Southeast

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
			in.					in.				
			volume %					° F				
SOUTHEAST												
Price	2.8	0.8	11	18	22	13	16	36	39	40	40	40
Green River	1.8	0.5	12	12	8	4	7	42	42	42	41	41
Harm's Way	3.9	0.6	18	9	24	15	6	36	35	38	38	39
West Summit	3.5	0.4	25	30	31	25	16	33	34	35	34	36
Eastland	3.6	0.3	26	22	25	32	29	35	36	37	38	39
Alkali Mesa	3.4	0.3	17	19	23	17	12	38	37	40	39	39
McCracken Mesa	3.2	0.3	13	23	22	15	12	40	42	43	43	45

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Southeast



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Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, solar radiation, soil temperature, and soil moisture.

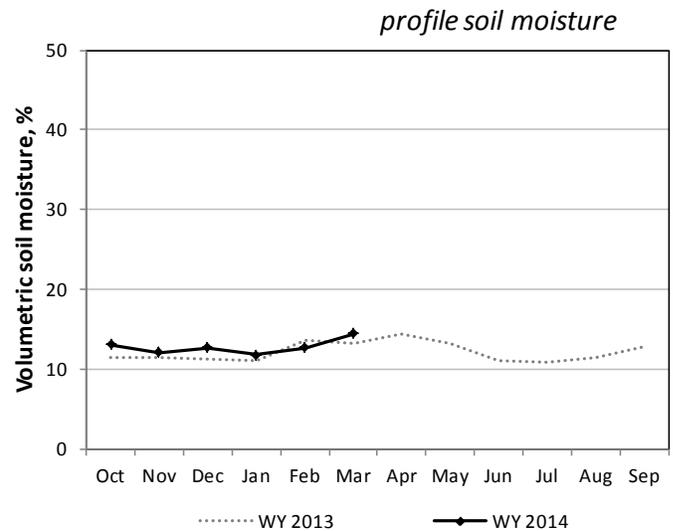
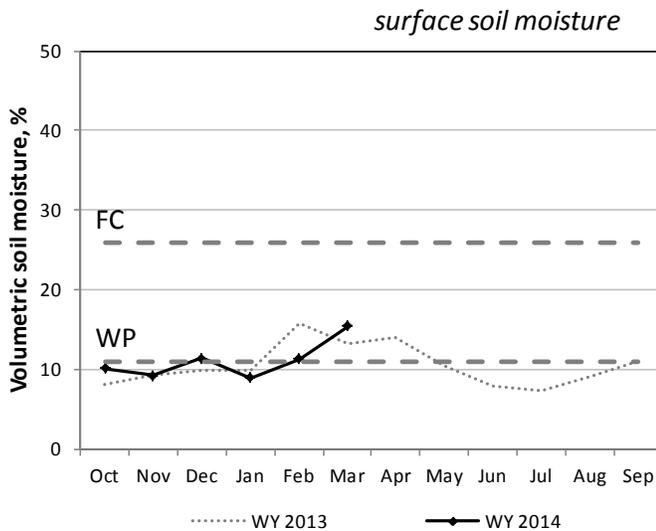
South Central

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTH CENTRAL												
Nephi	3.8	1.4	26	30	29	14	0	40	40	40	40	40
Ephraim	4.4	1.0	18	21	29	26	32	38	38	38	37	39
Holden	2.6	0.6	7	10	4	11	11	43	43	42	42	43
Milford	1.3	0.3	17	22	14	24	15	43	43	42	43	44
Manderfield	2.4	0.6	13	18	11	10	5	39	39	39	40	40
Cirleville	1.7	0.6	27	25	14	8	15	39	41	40	40	40
Panguitch	2.0	0.5	17	23	20	19	30	31	32	32	35	38
Cave Valley	5.1	1.0	10	11	10	5	8	39	40	40	40	41
Vermillion	5.4	1.2	6	12	9	12	7	37	37	37	37	39
Spooky	3.3	0.5	8	7	8	25	2	44	43	44	45	46

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

South Central



Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

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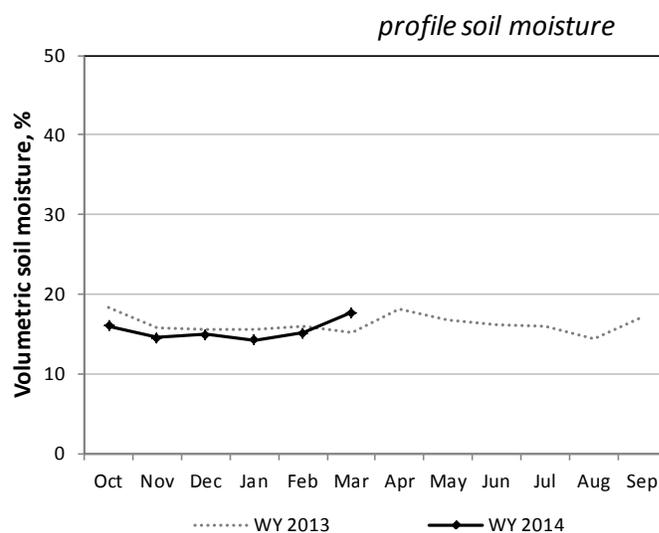
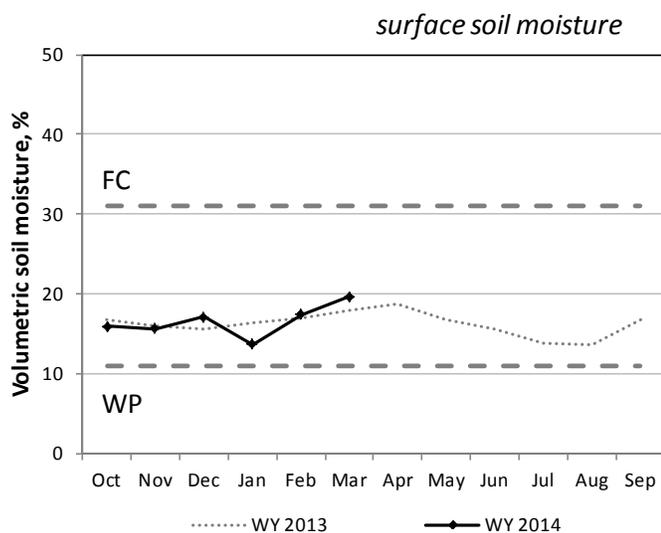
Western and Dixie

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
WESTERN												
Grouse Creek	4.3	2.1	17	26	26	29	15	36	36	37	38	39
Park Valley	3.5	1.4	12	17	24	26	24	40	40	40	40	41
Goshute	3.4	1.1	26	2	33	33	28	39	40	39	39	41
Dugway	3.4	1.4	23	31	36		12	42	42	42	42	42
Tule Valley	2.3	0.4	23	15	21	23	9	45	46	48	46	45
Hal's Canyon	2.0	0.3	14	12	16	11	8	41	42	43	42	42
Enterprise	1.8	0.7	21	25	22	13	14	42	43	43	44	44
DIXIE												
Sand Hollow	1.8	0.3	3	4	4	5	0	48	49	50	51	52

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

Western & Dixie



Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

Utah Hydrologic Summary

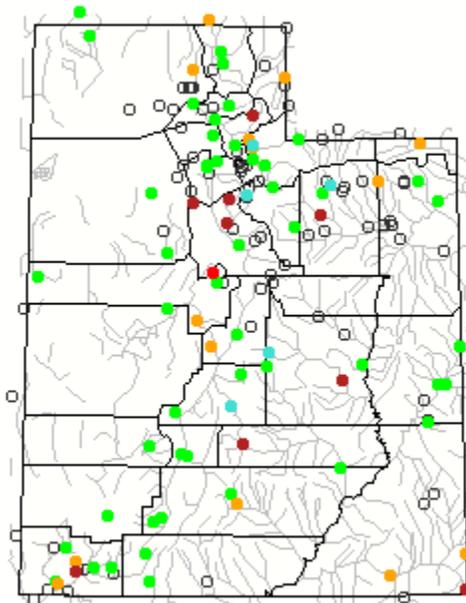
March 1, 2014

Current Conditions

Substantial improvement since February in northern Utah with a substantial decline in water supply conditions in southern Utah. Snowpacks show signs of early melt which is already occurring in the south and getting close in the north. Soil moisture values are above average in the southern and eastern portions of the state and near to above in the north. February precipitation was 149% of average in the north and 84% in the south which brings seasonal precipitation (Oct-Feb) to 84%. Snowpacks in the north range from 112% to 85% and in the south from 97% to 46% percent of median. Reservoir storage is much lower than last year at 48% of capacity compared to 56%. Overall, water supply conditions are much below normal in south and near to below normal in northern Utah.

Current Utah Streamflow - Courtesy US Geological Survey

Friday, February 28, 2014 16:00ET



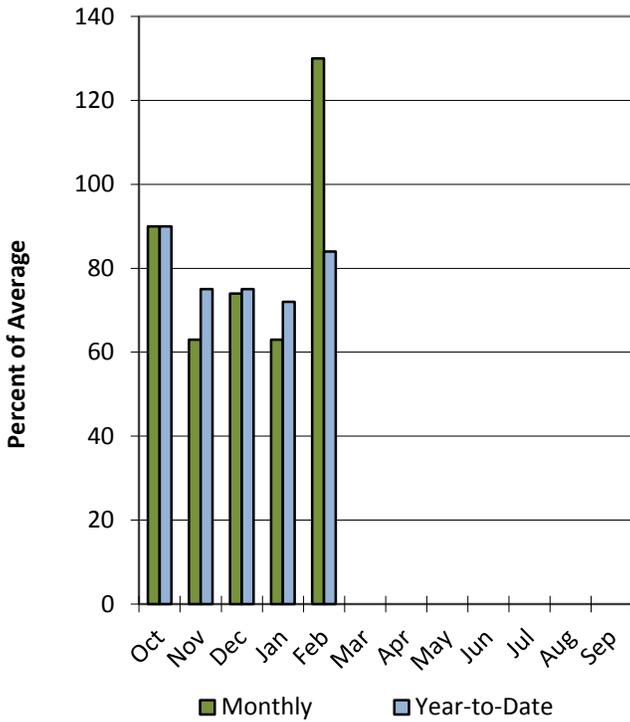
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not ranked

Statewide Utah

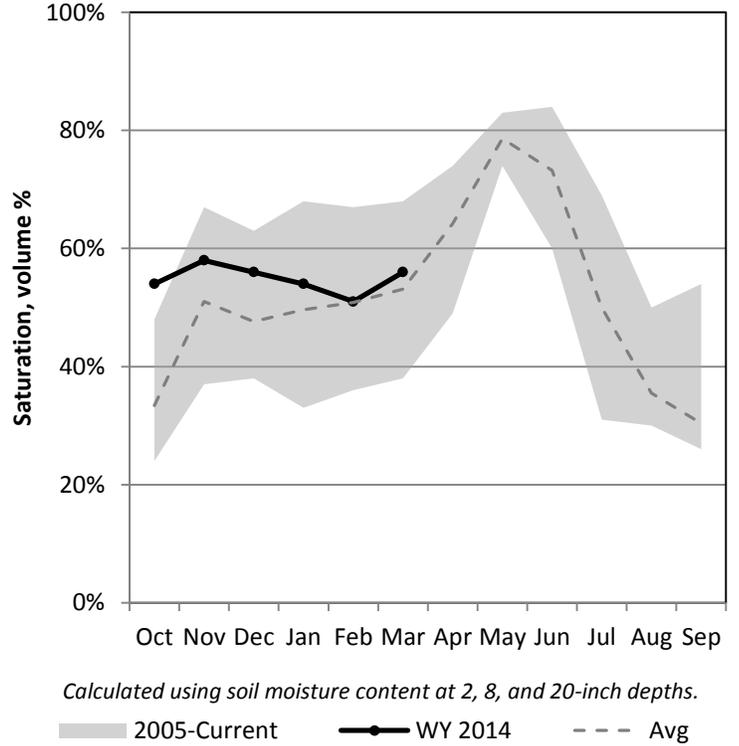
3/1/2014

Precipitation in February was above average at 130%, which brings the seasonal accumulation (Oct-Feb) to 84% of average. Soil moisture is at 56% compared to 47% last year. Reservoir storage is at 48% of capacity, compared to 56% last year.

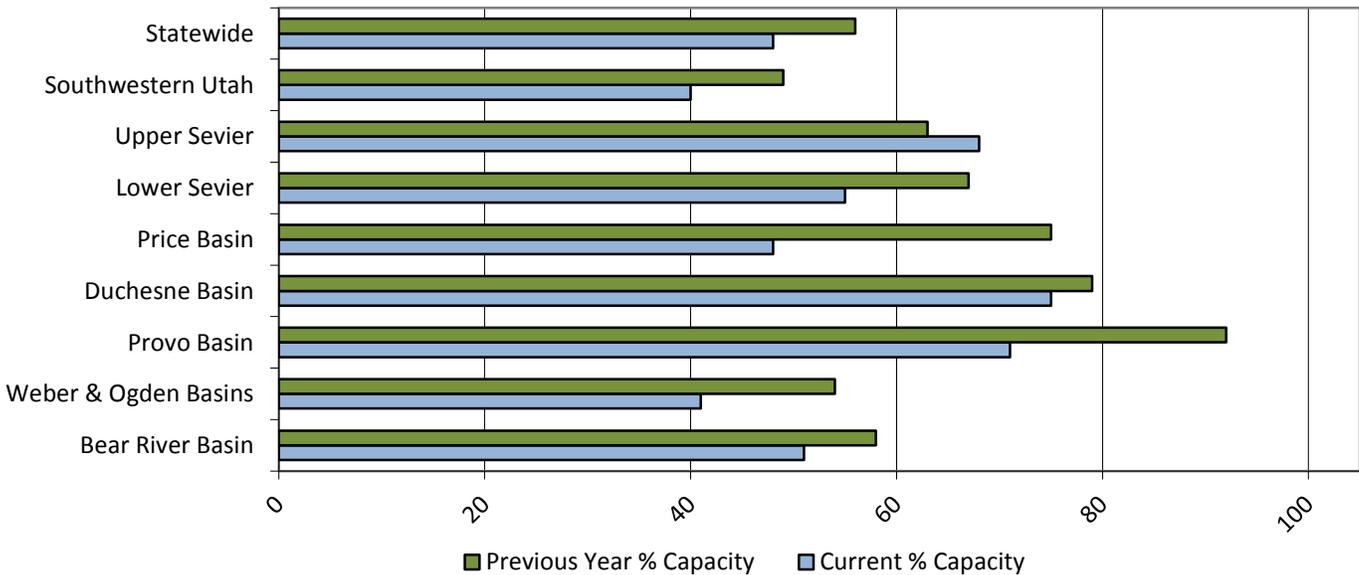
Precipitation



Soil Moisture



Reservoir Storage

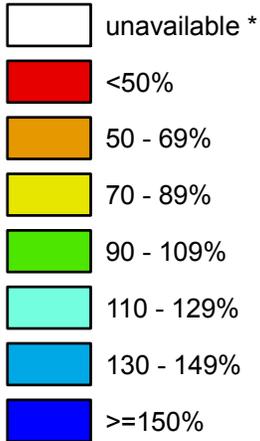


Utah

SNOTEL Current Snow Water Equivalent (SWE) % of Normal

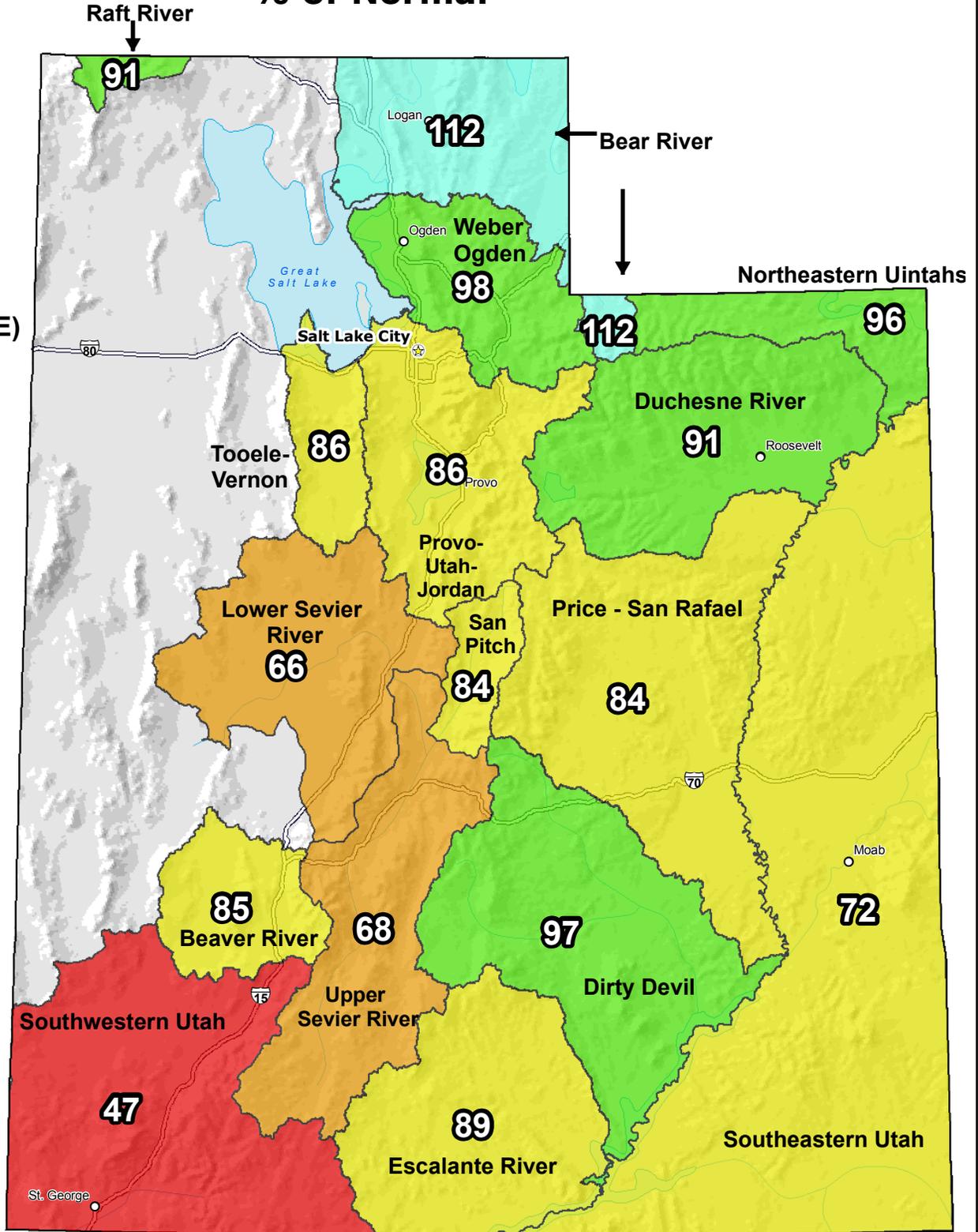
Mar 01, 2014

**Snow Water Equivalent (SWE)
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 snow water equivalent percent of normal represents the current 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).

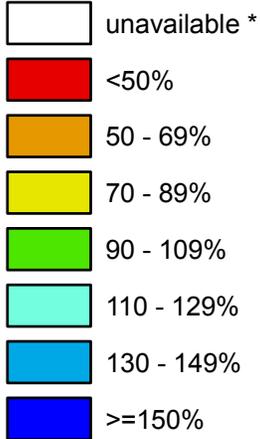
Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Utah

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

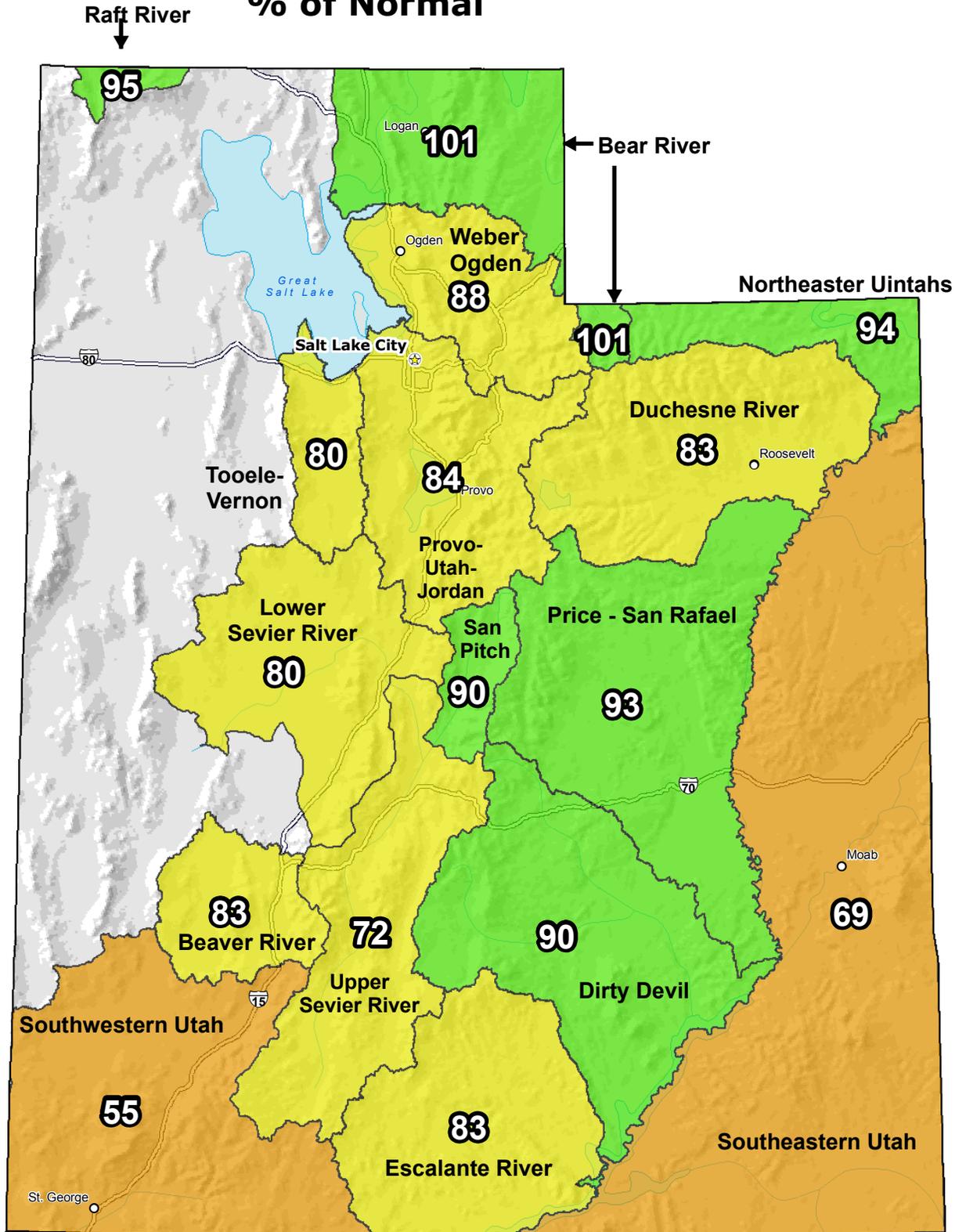
Mar 01, 2014

**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).

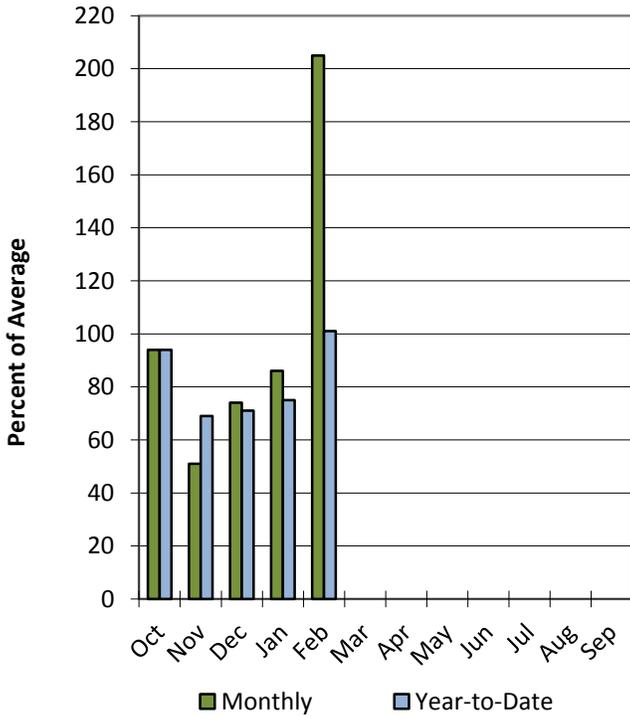
Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Bear River Basin

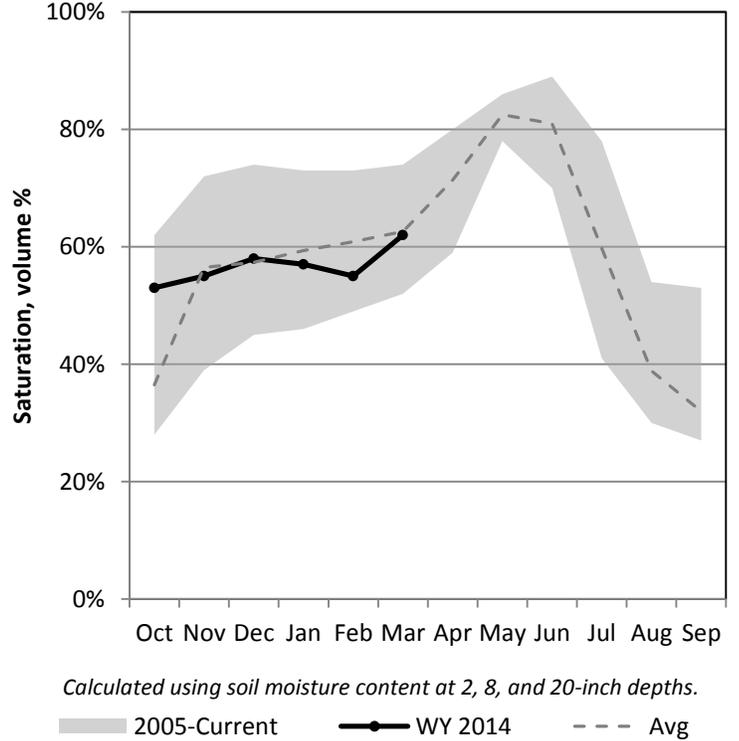
3/1/2014

Precipitation in February was much above average at 205%, which brings the seasonal accumulation (Oct-Feb) to 101% of average. Soil moisture is at 62% compared to 66% last year. Reservoir storage is at 51% of capacity, compared to 58% last year. The water availability index for the Bear River is 34%.

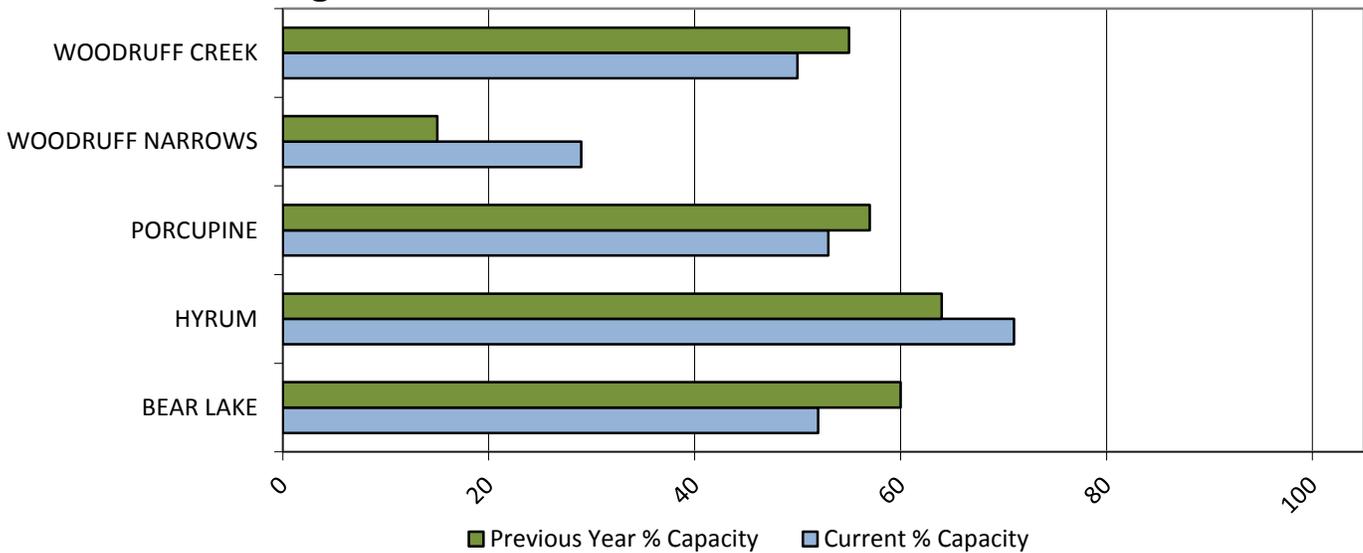
Precipitation



Soil Moisture



Reservoir Storage



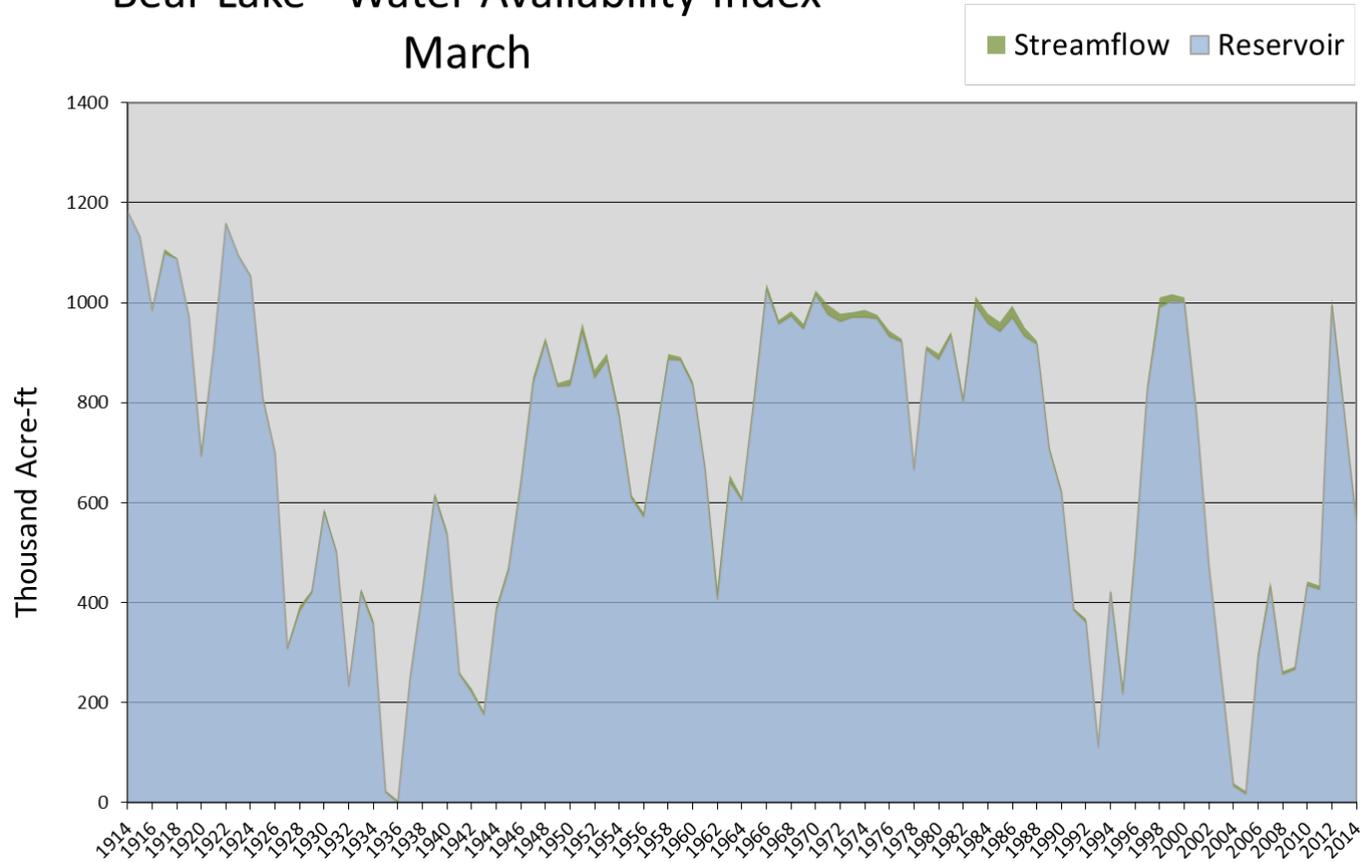
March 1, 2014

Water Availability Index

Basin or Region	February EOM*	February	Reservoir +	WAI [#]	Percentile	Years with similar WAI
	Bear Lake	accumulated	Streamflow			
		inflow to Bear				
		Lake (<i>observed</i>)				
	KAF [^]	KAF	KAF		%	
Bear River	559	5	563	-1.31	34	96, 40, 56, 30

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Bear Lake - Water Availability Index
March



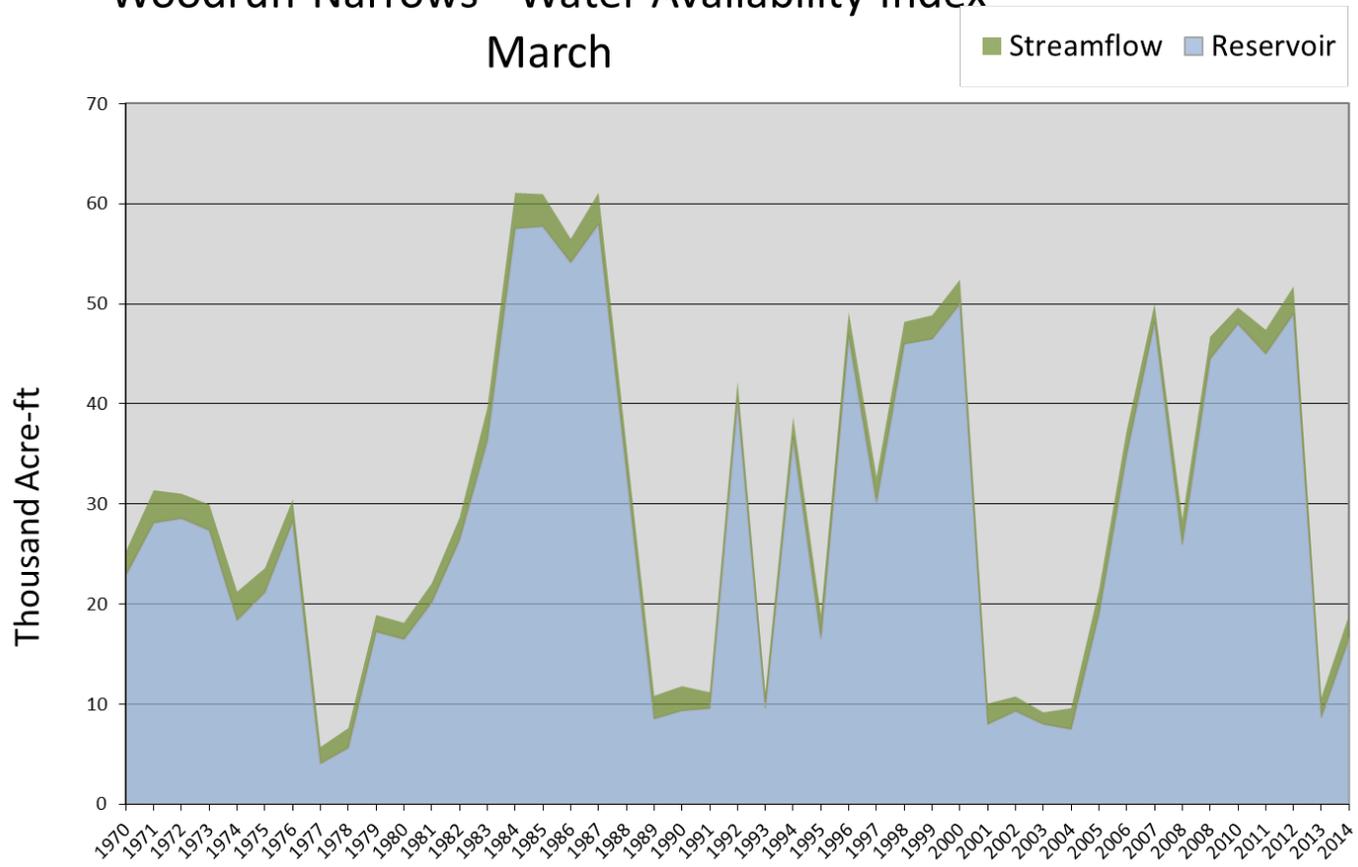
March 1, 2014

Water Availability Index

Basin or Region	February EOM*	February	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	Woodruff Narrows Reservoir	Observed Streamflow Bear at Stateline				
	KAF^	KAF	KAF		%	
Woodruff Narrows	16.6	2.3	18.9	-1.63	30	80, 79, 95, 74

*EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.

Woodruff Narrows - Water Availability Index
March

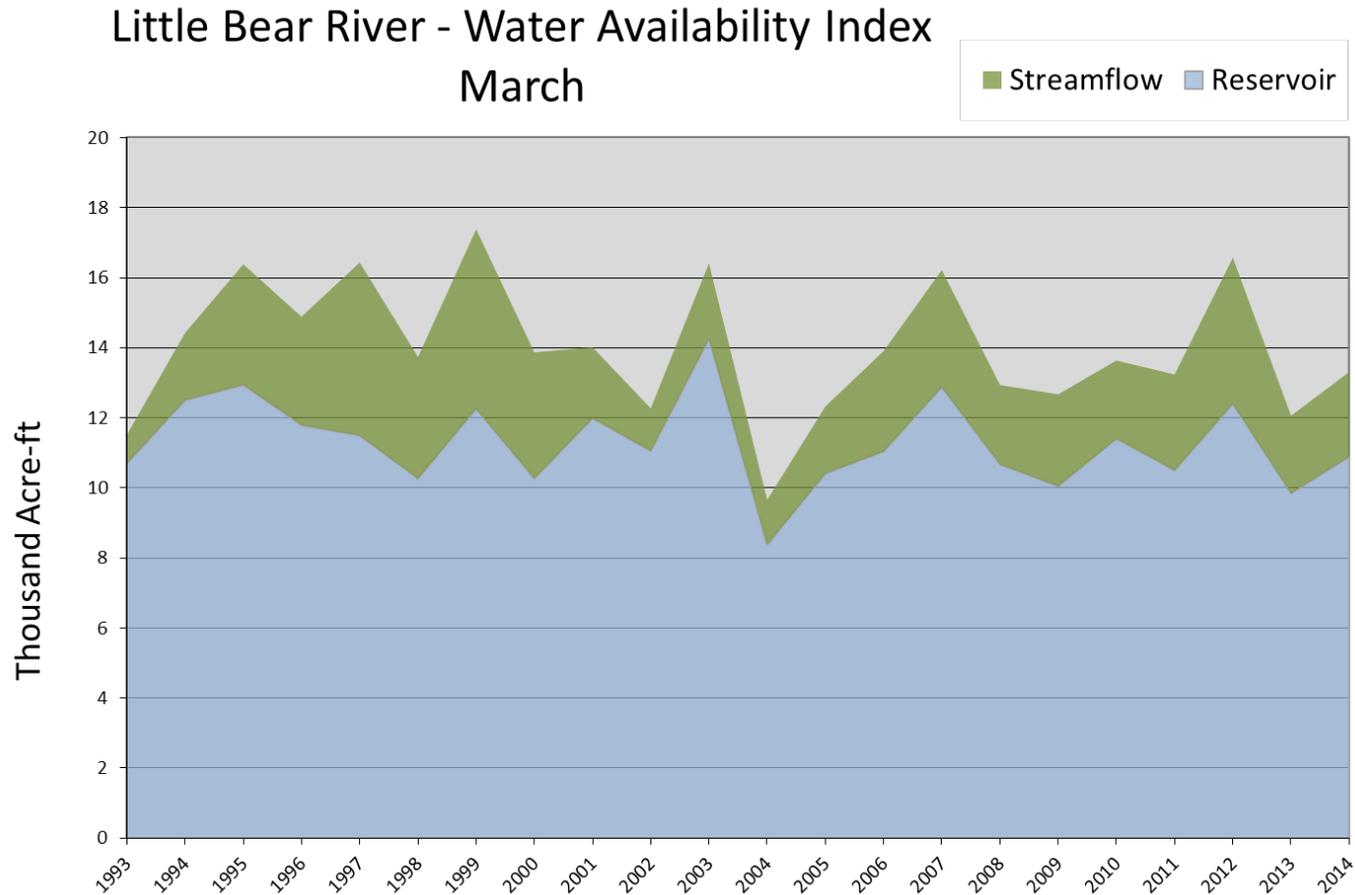


March 1, 2014

Water Availability Index

Basin or Region	February EOM* Hyrum Reservoir	February Observed Streamflow Little Bear nr Paradise	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Little Bear	10.9	2.4	13.3	-0.91	39	08, 11, 10, 98

*EOM, end of month; [#] SWSI, Surface Water Supply Index; [^]KAF, thousand acre-feet.

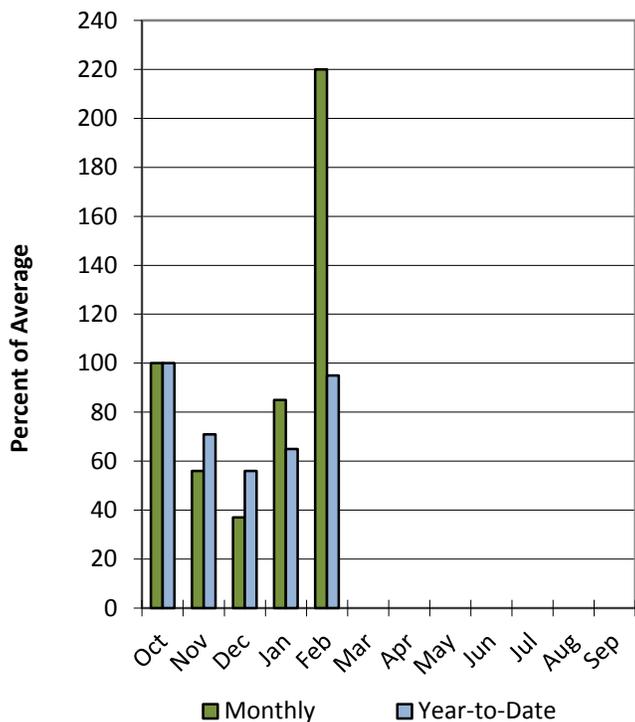


Raft River Basin

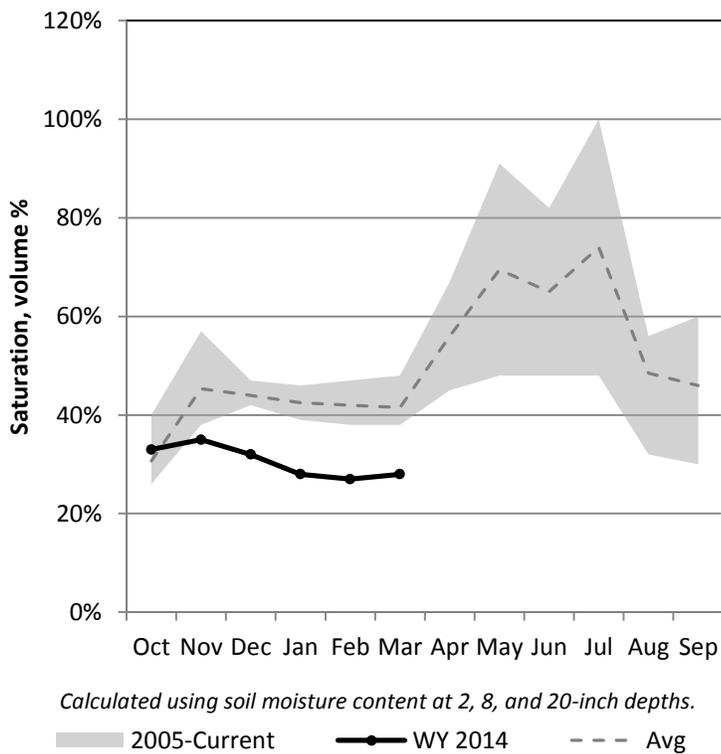
3/1/2014

Precipitation in February was much above average at 220%, which brings the seasonal accumulation (Oct-Feb) to 95% of average. Soil moisture is at 28% compared to 48% last year.

Precipitation



Soil Moisture

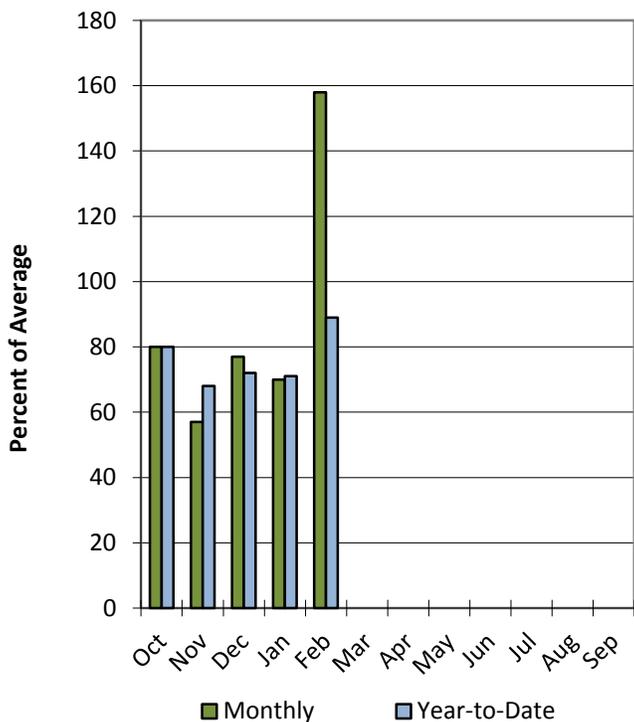


Weber & Ogden River Basins

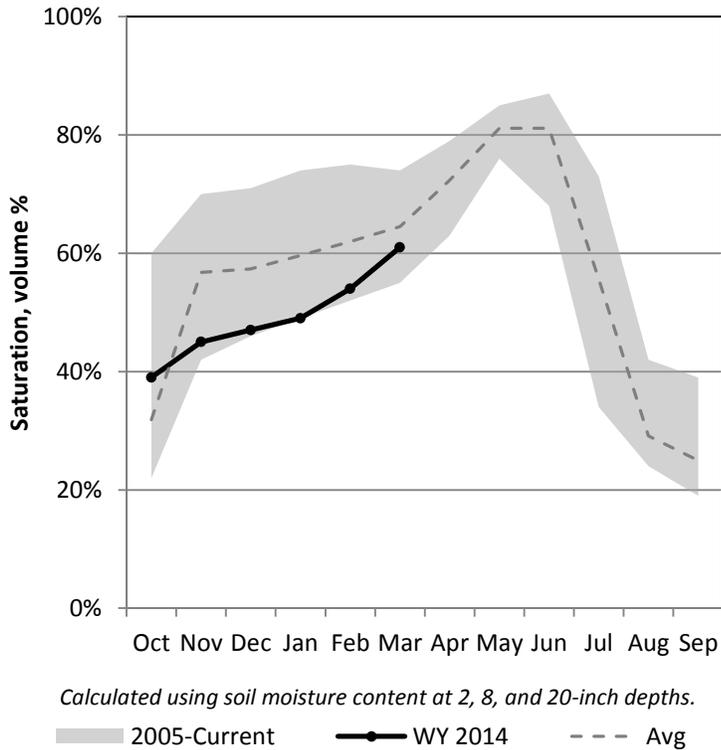
3/1/2014

Precipitation in February was much above average at 158%, which brings the seasonal accumulation (Oct-Feb) to 89% of average. Soil moisture is at 61% compared to 62% last year. Reservoir storage is at 41% of capacity, compared to 54% last year. The water availability index for the Ogden River is 24% and 4% for the Weber River.

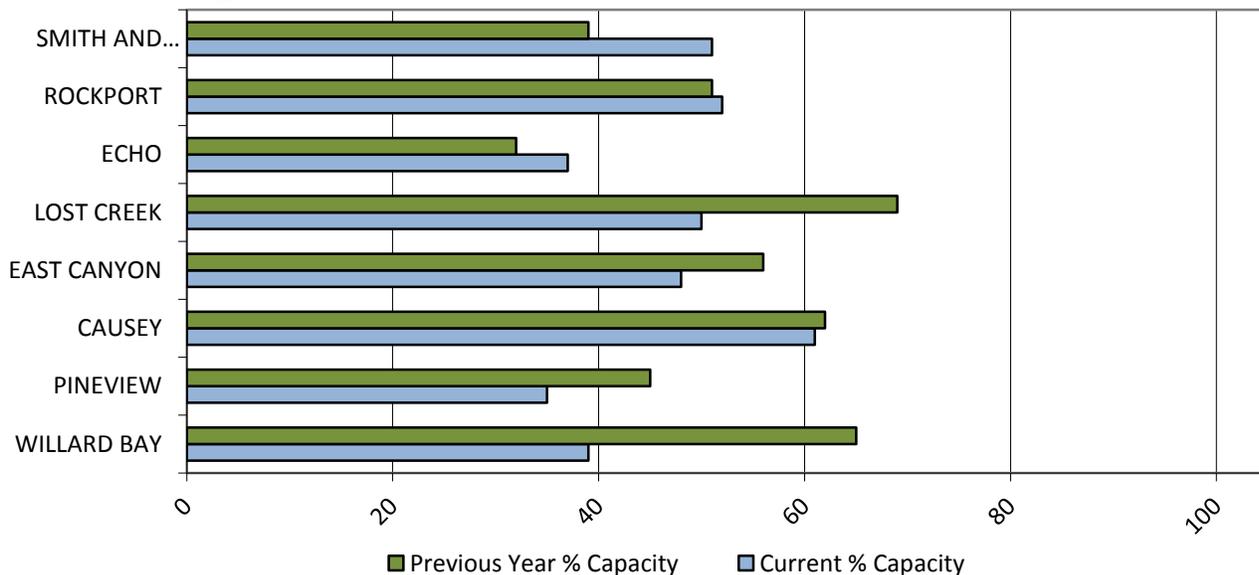
Precipitation



Soil Moisture



Reservoir Storage



March 1, 2014

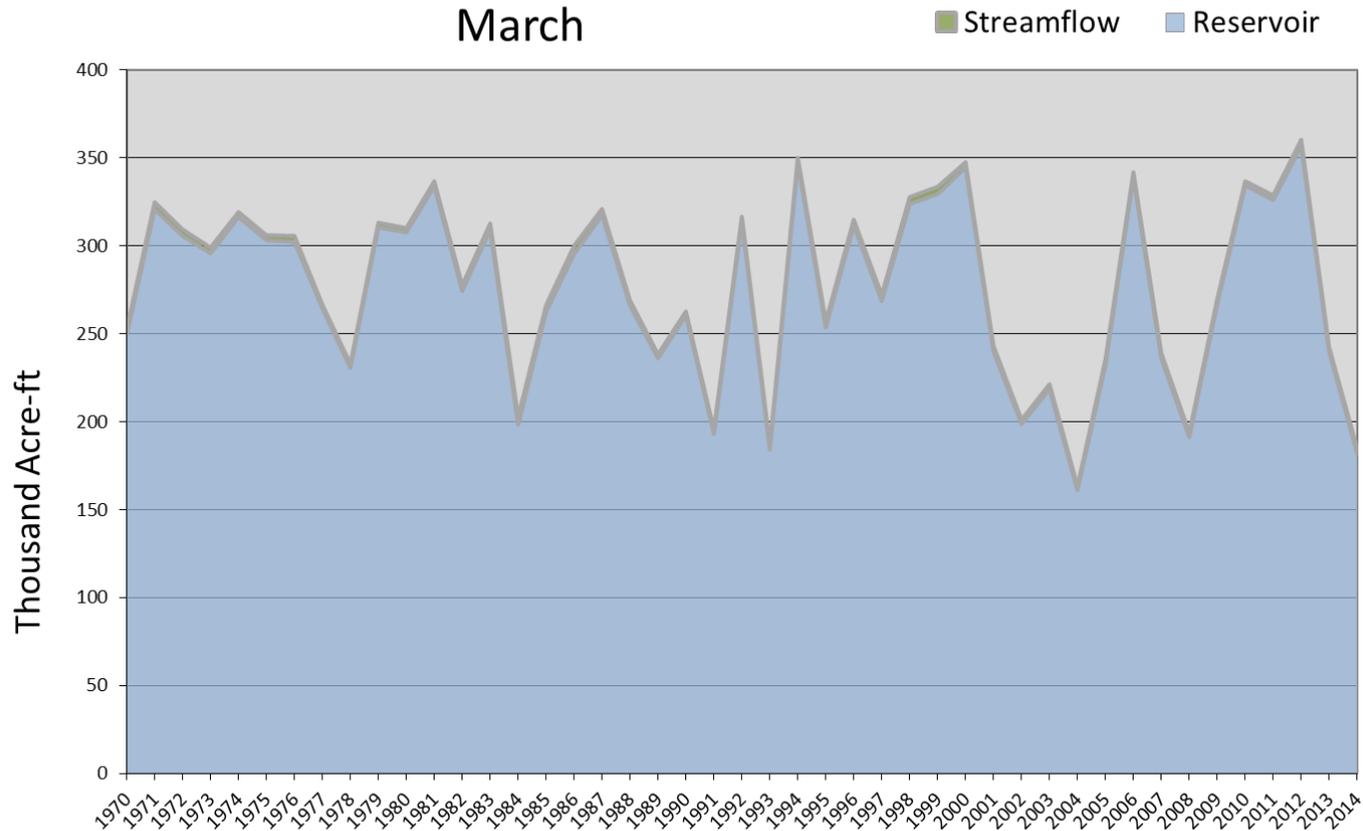
Water Availability Index

Basin or Region	February EOM* Reservoirs	February accumulated flow at Weber near Oakley (observed)	Reservoirs + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Weber River	182	3	185	-3.80	4	04, 93, 08

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Weber River - Water Availability Index

March



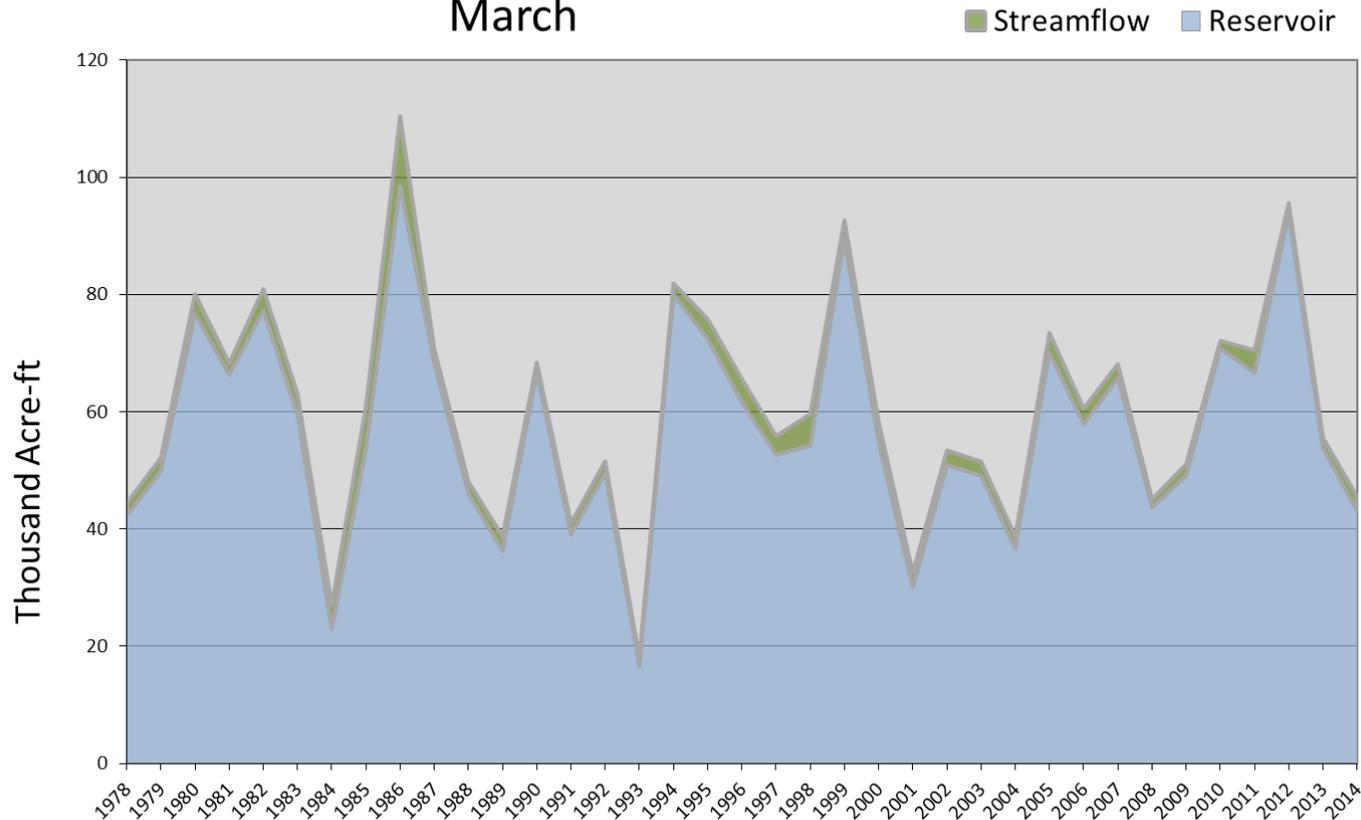
March 1, 2014

Water Availability Index

Basin or Region	February EOM* Pine View & Causey	February accumulated flow at South Fork Ogden (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Ogden River	43.1	2.4	45.5	-2.19	24	78, 08, 88, 09

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Ogden River - Water Availability Index
March

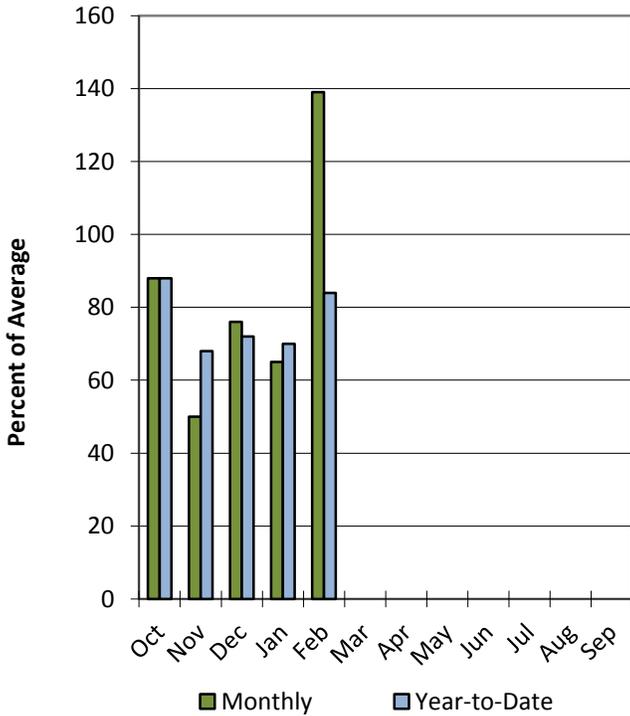


Provo & Jordan River Basins

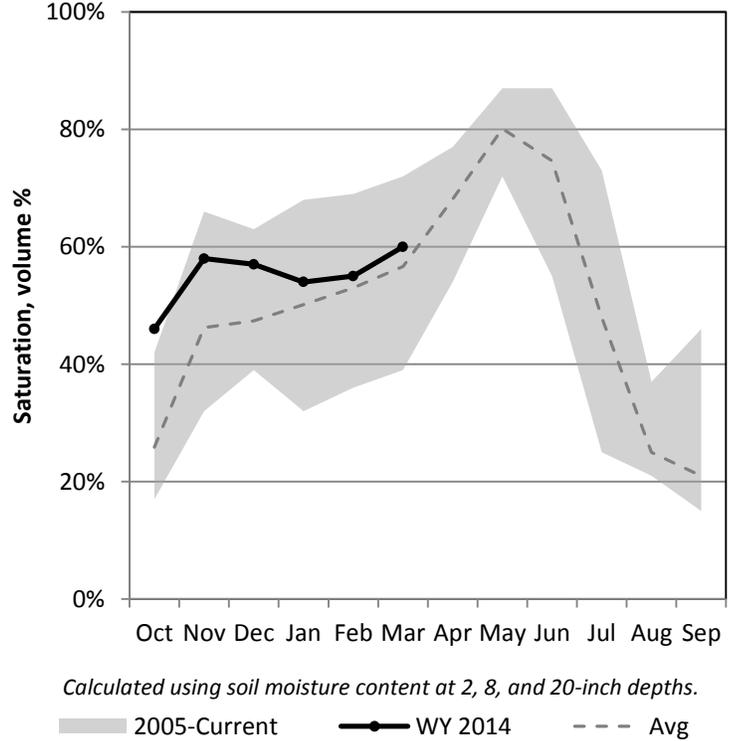
3/1/2014

Precipitation in February was much above average at 139%, which brings the seasonal accumulation (Oct-Feb) to 84% of average. Soil moisture is at 60% compared to 53% last year. Reservoir storage is at 71% of capacity, compared to 79% last year. The water availability index for the Provo River is 5%.

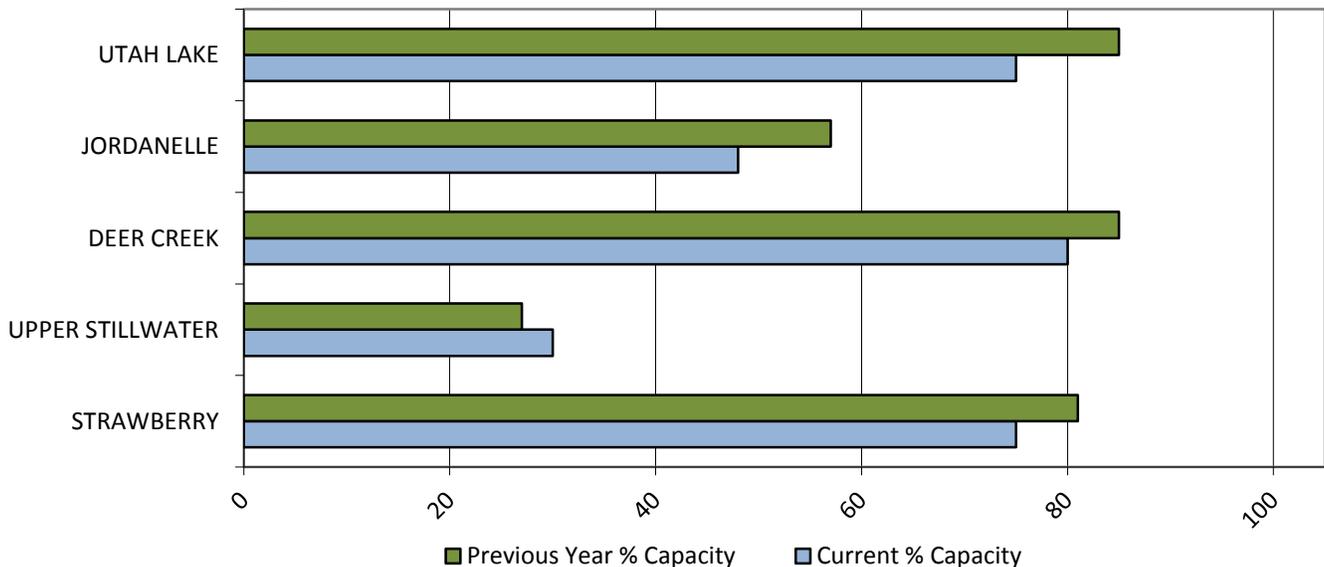
Precipitation



Soil Moisture



Reservoir Storage



March 1, 2014

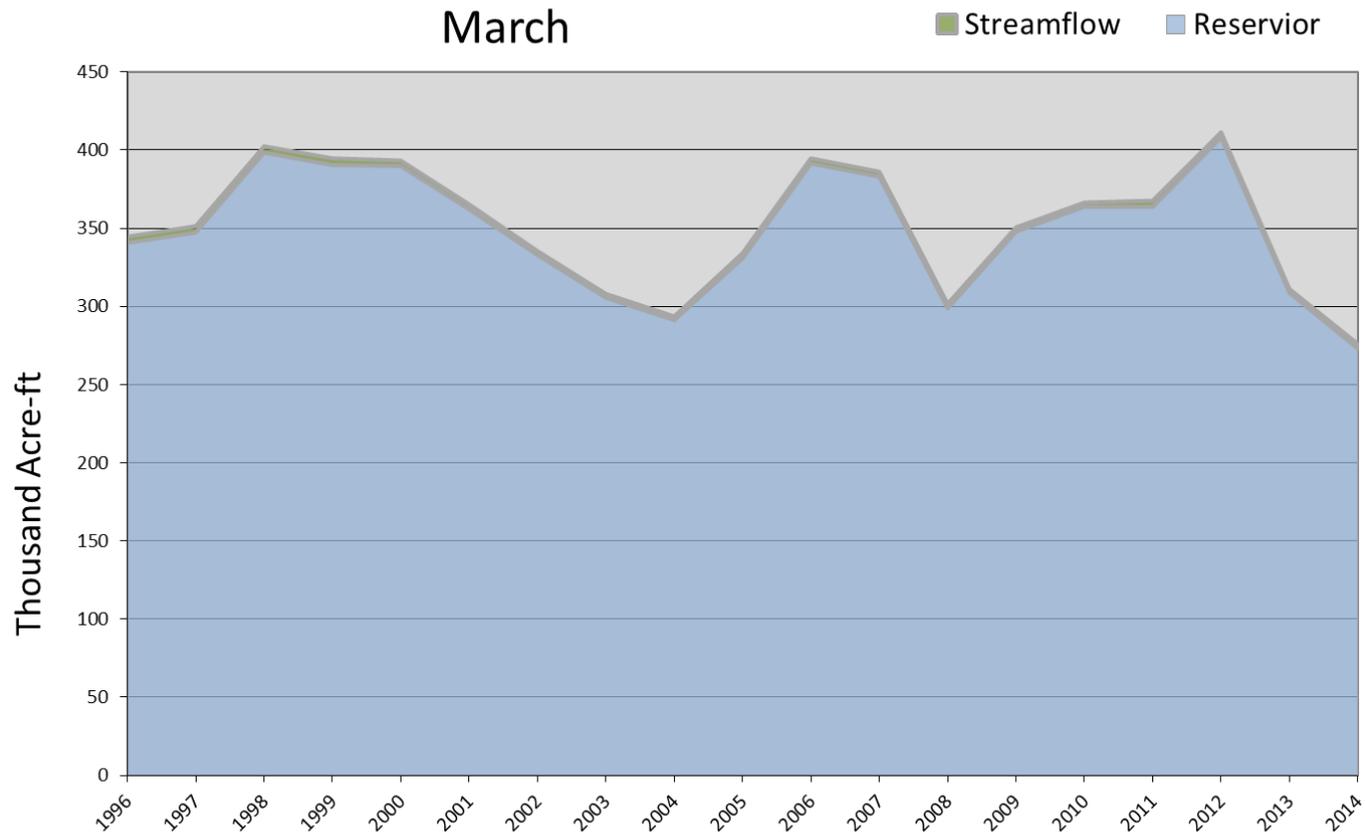
Water Availability Index

Basin or Region	February EOM*	February accumulated flow	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	Deer Creek, Jordanelle	Provo River at Woodland (observed)				
	KAF^	KAF	KAF		%	
Provo	273	3.0	276	-3.75	5	04, 08

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

Provo River - Water Availability Index

March

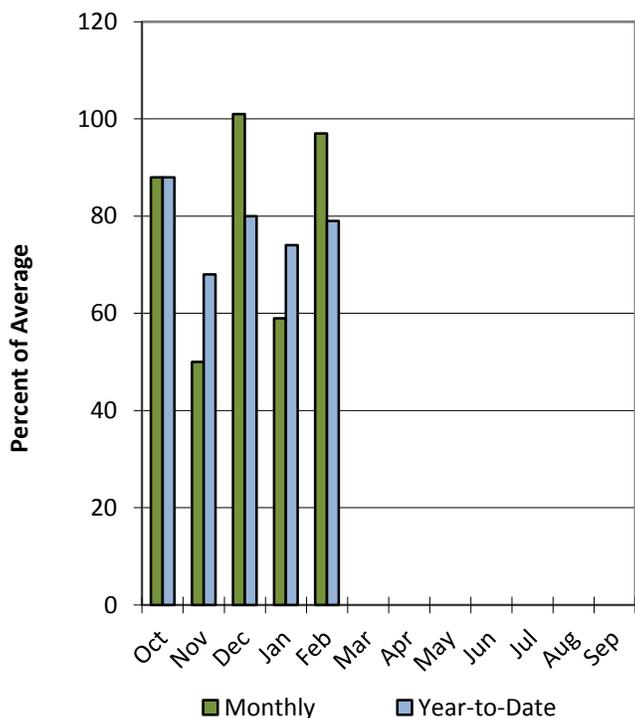


Tooele & Vernon Creek Basins

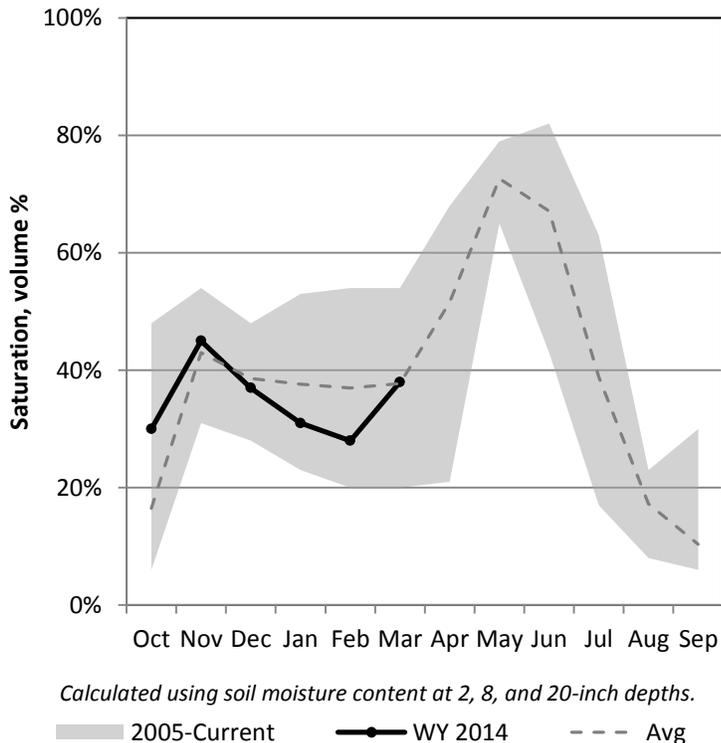
3/1/2014

Precipitation in February was near average at 97%, which brings the seasonal accumulation (Oct-Feb) to 79% of average. Soil moisture is at 38% compared to 36% last year. Reservoir storage is at 57% of capacity, compared to 37% last year.

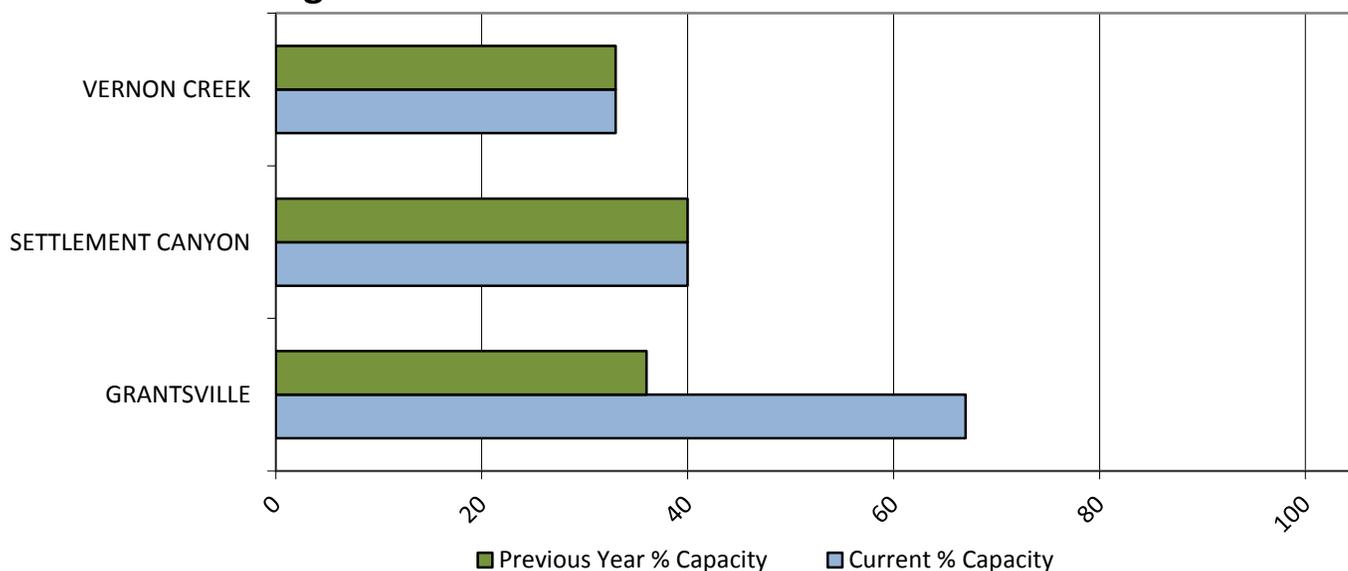
Precipitation



Soil Moisture



Reservoir Storage

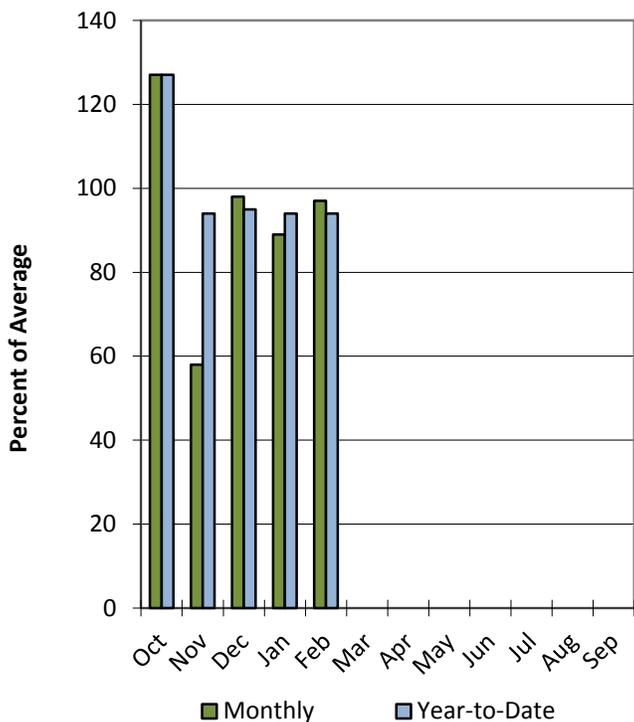


Northeastern Uintah Basin

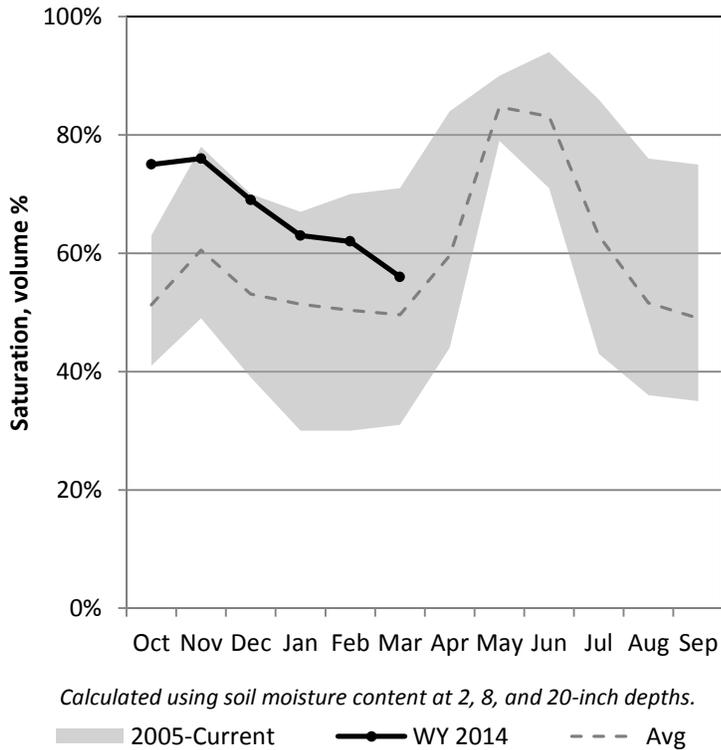
3/1/2014

Precipitation in February was near average at 97%, which brings the seasonal accumulation (Oct-Feb) to 94% of average. Soil moisture is at 56% compared to 42% last year. Reservoir storage is at 76% of capacity, compared to 79% last year.

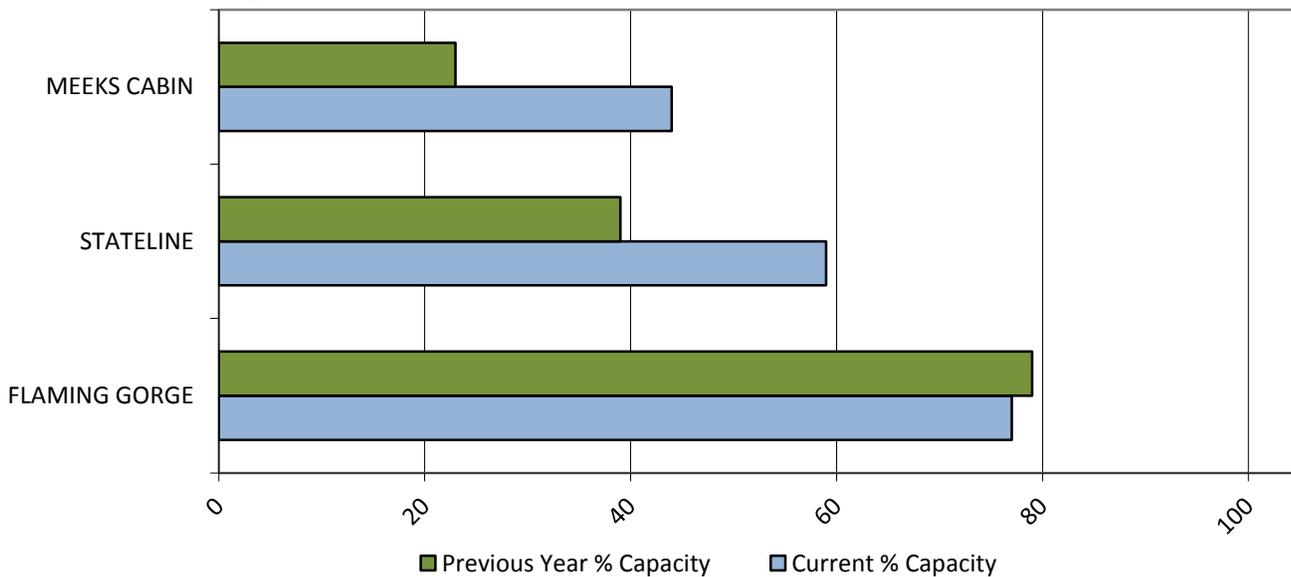
Precipitation



Soil Moisture



Reservoir Storage



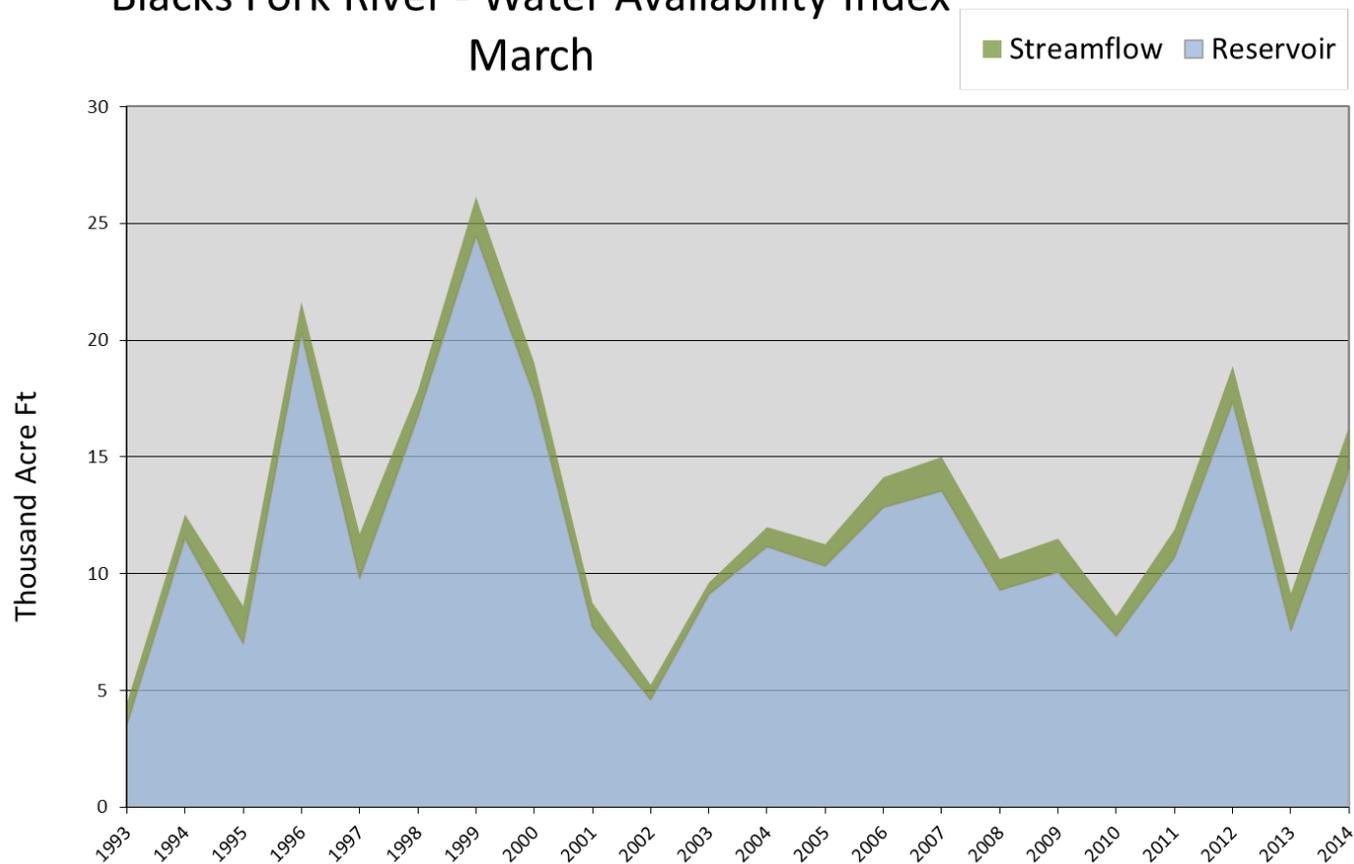
March 1, 2014

Water Availability Index

Basin or Region	February EOM* Meeks Cabin Reservoir	February Observed Streamflow Blacks Fork nr Robertson	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Blacks Fork	14.4	1.9	16.3	1.99	74	06, 07, 98, 12

*EOM, end of month; [#] SWSI, Surface Water Supply Index; [^]KAF, thousand acre-feet.

Blacks Fork River - Water Availability Index March



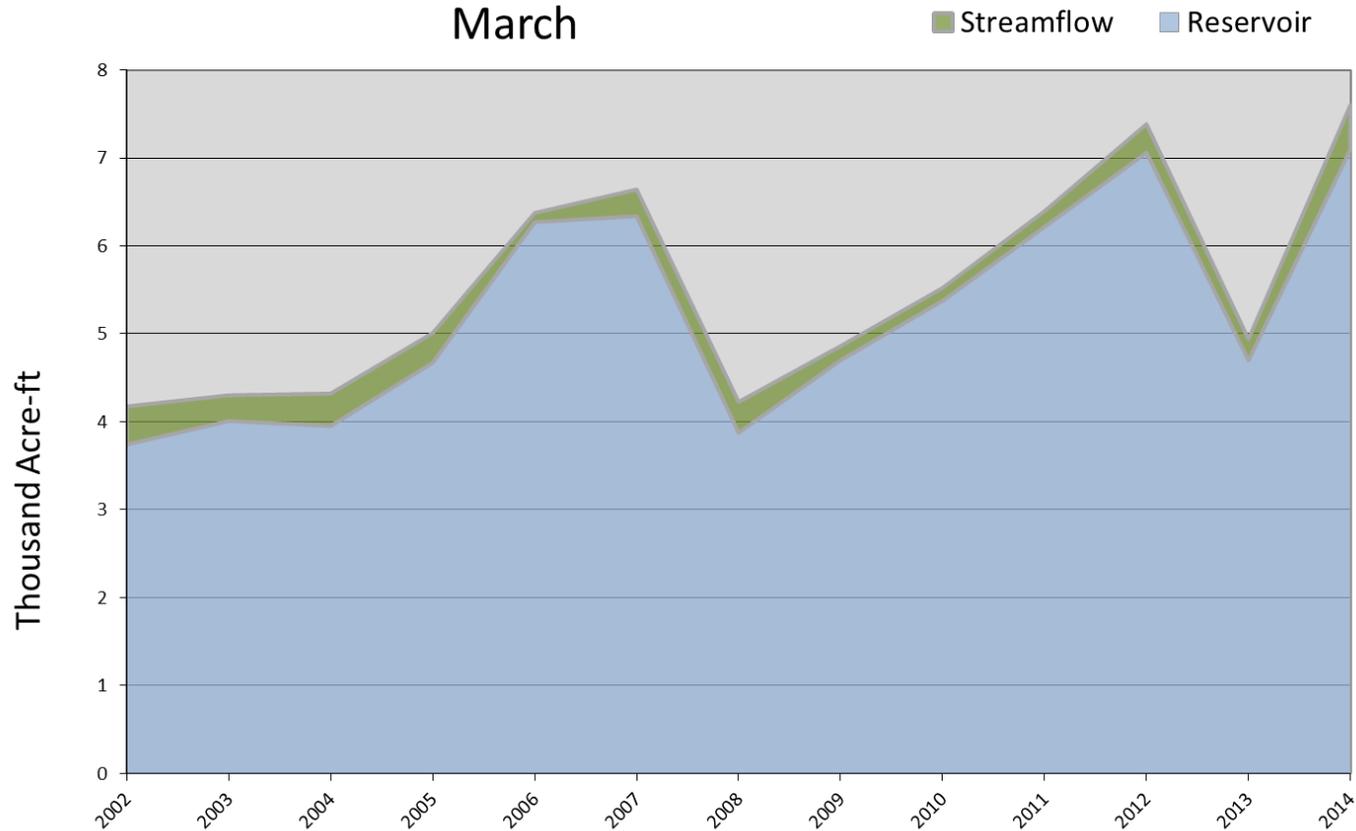
March 1, 2014

Water Availability Index

Basin or Region	February EOM* Stateline Reservoir	February Observed Flow EF Smiths Creek	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF^</i>	<i>KAF</i>	<i>KAF</i>		%	
Smiths Creek	7.1	0.5	7.6	3.57	93	07, 12

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

Smiths Creek - Water Availability Index
March

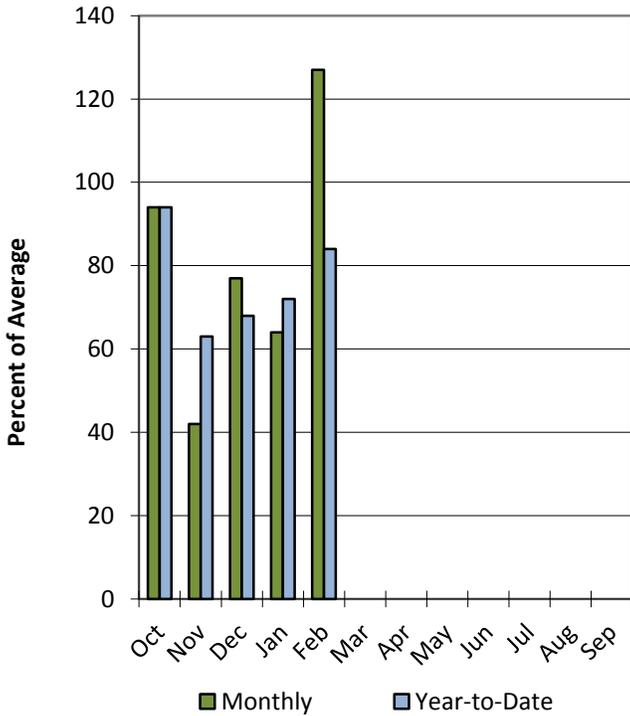


Duchesne River Basin

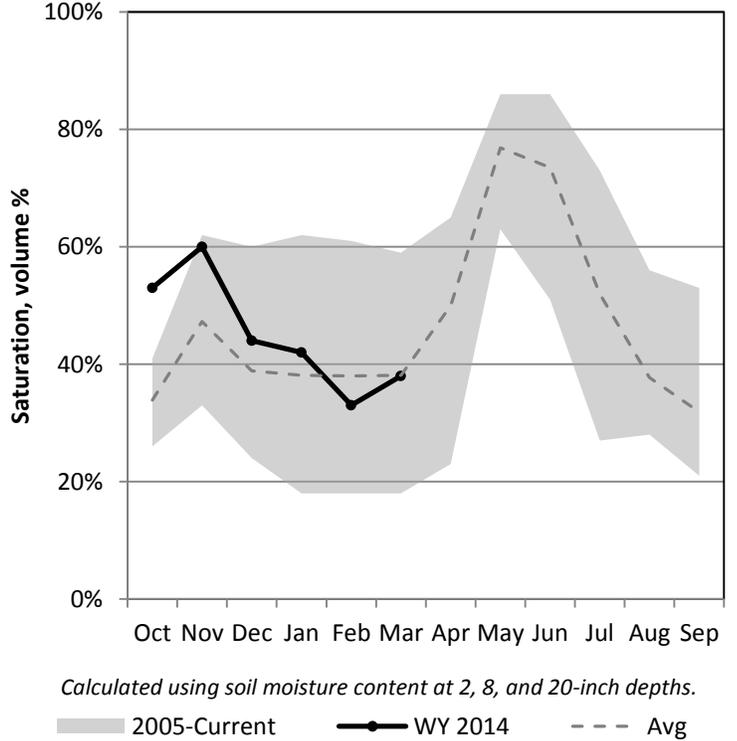
3/1/2014

Precipitation in February was above average at 127%, which brings the seasonal accumulation (Oct-Feb) to 84% of average. Soil moisture is at 38% compared to 28% last year. Reservoir storage is at 75% of capacity, compared to 78% last year. The water availability index for the Western Uintahs is 78% and 11% for the Eastern Uintahs.

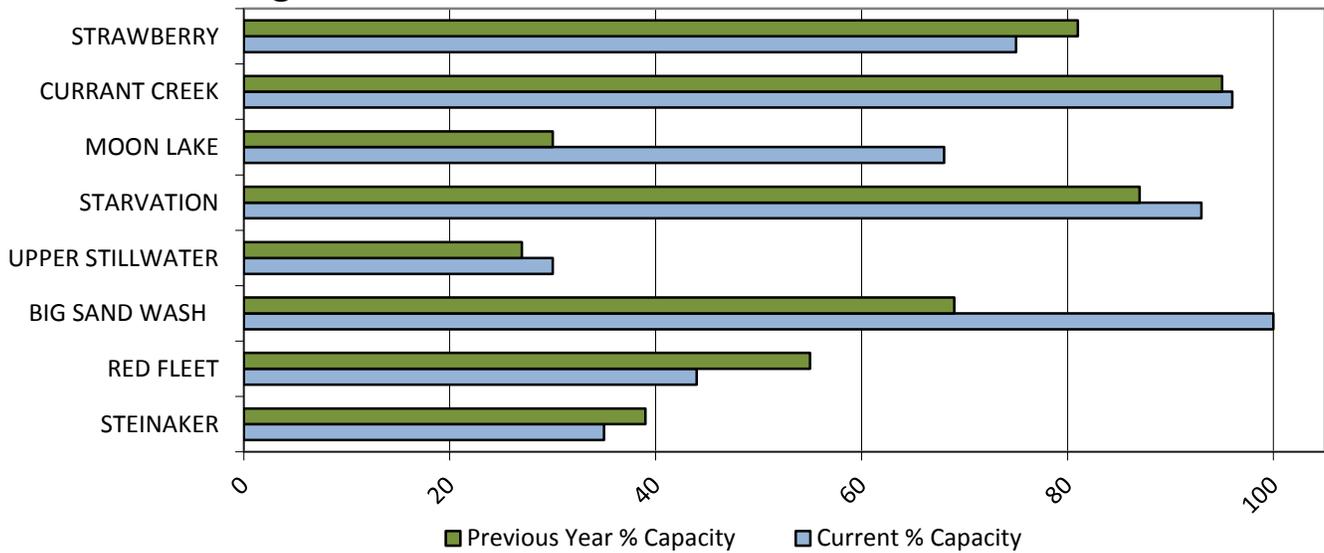
Precipitation



Soil Moisture



Reservoir Storage



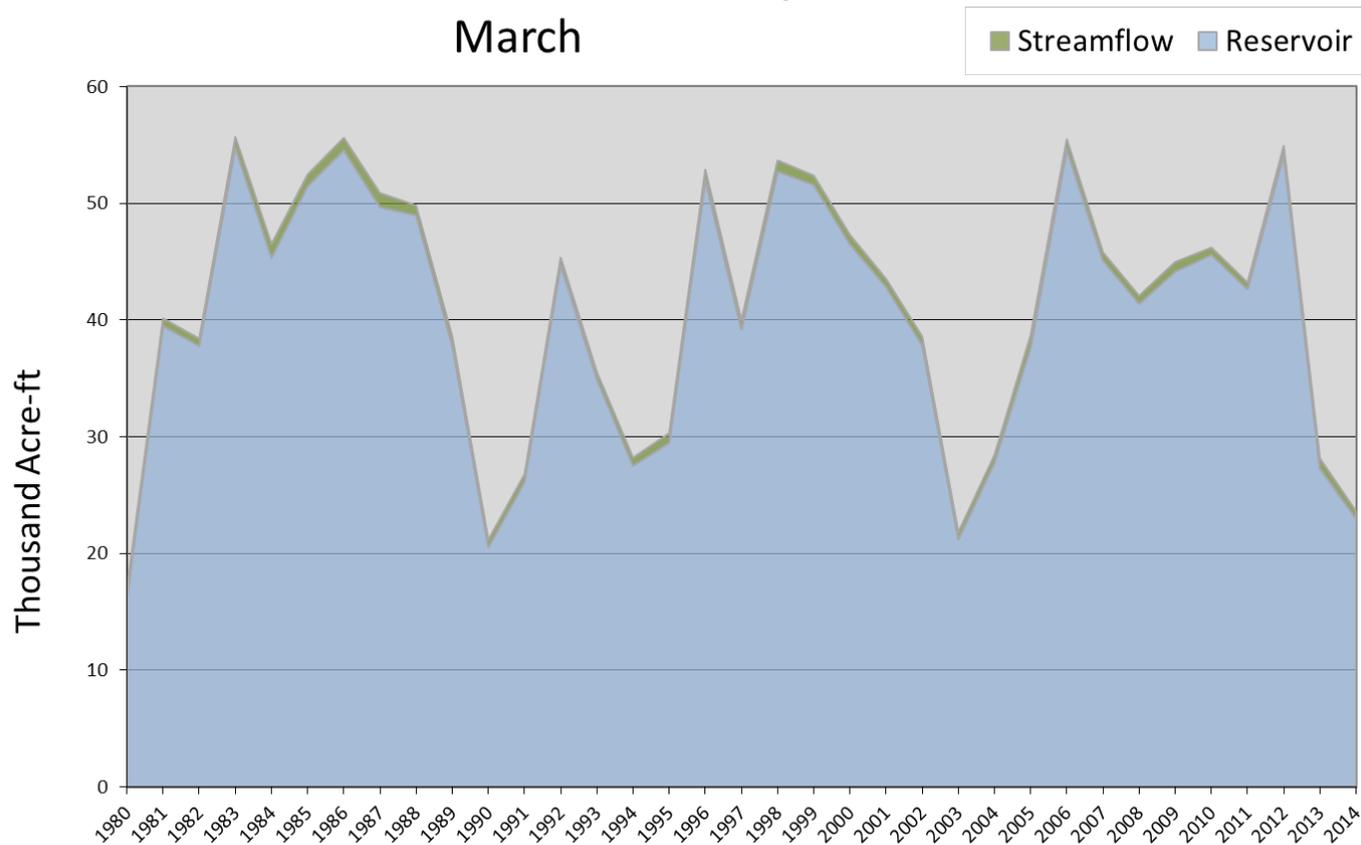
March 1, 2014

Water Availability Index

Basin or Region	February EOM* Red Fleet and Steinaker	February accumulated flow Big Brush Creek (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Eastern Uintah	23.0	0.6	23.6	-3.24	11	90, 03, 91, 13

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

Eastern Uintah - Water Availability Index
March

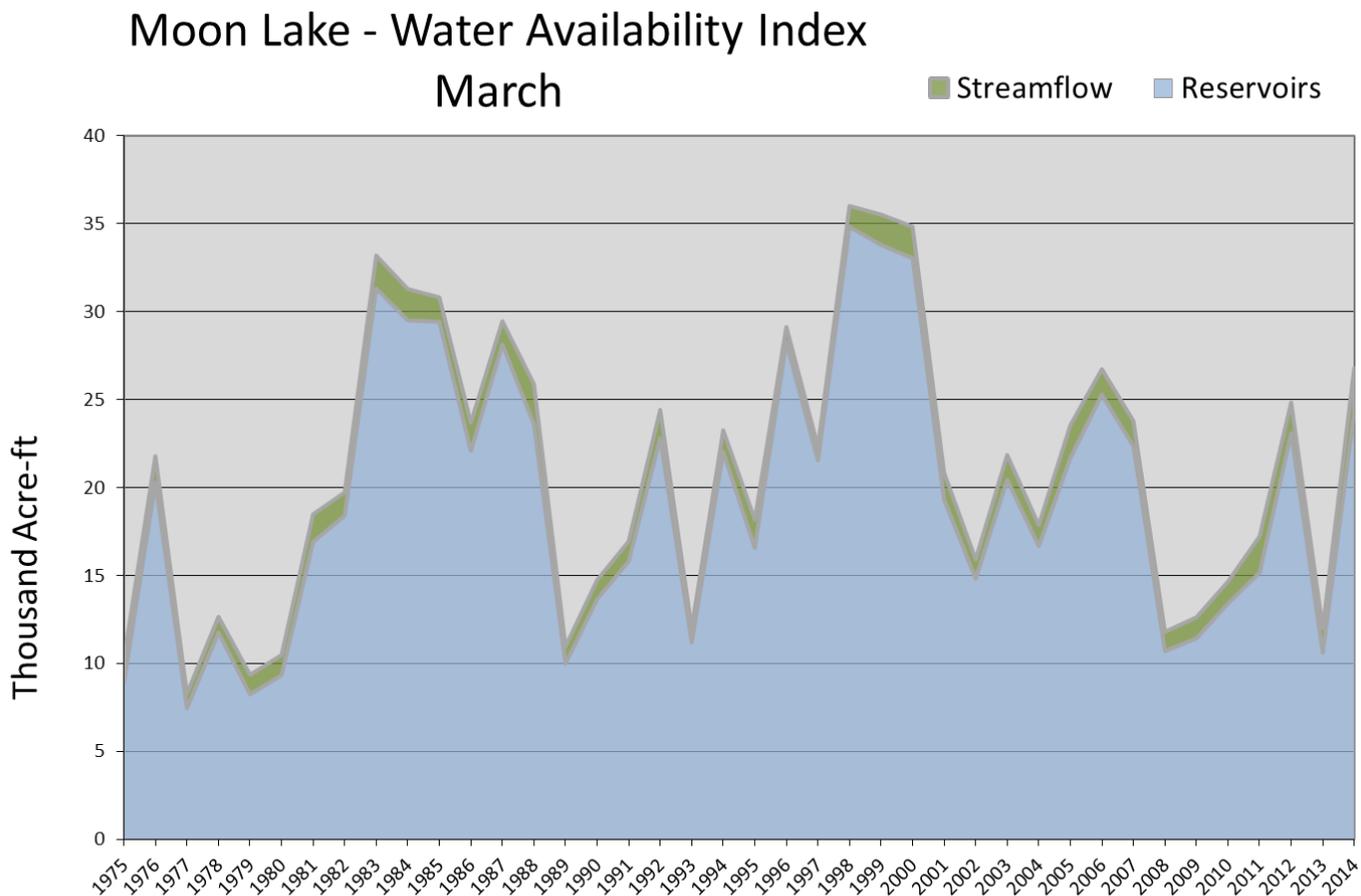


March 1, 2014

Water Availability Index

Basin or Region	February EOM* Moon Lake	February accumulated flow Lake Fork Creek above Moon Lake (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Moon Lake	24.3	2.5	26.8	2.34	78	88, 06, 96, 87

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

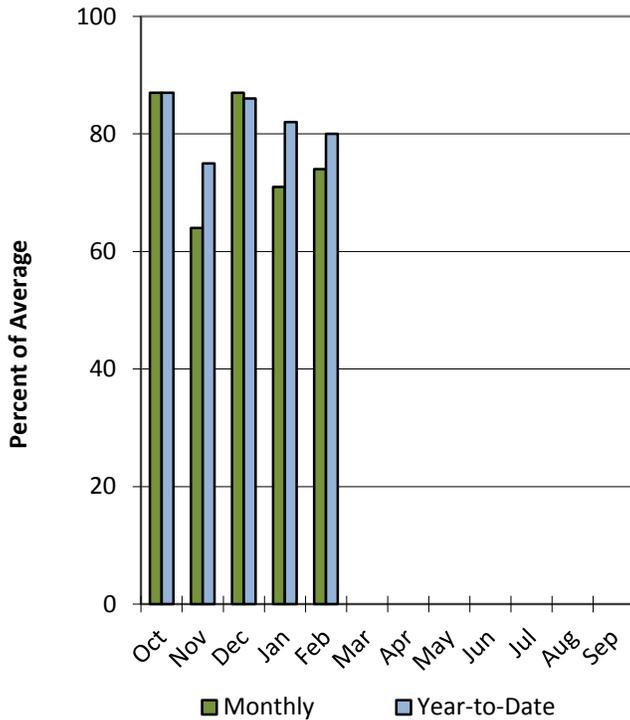


Lower Sevier River Basin

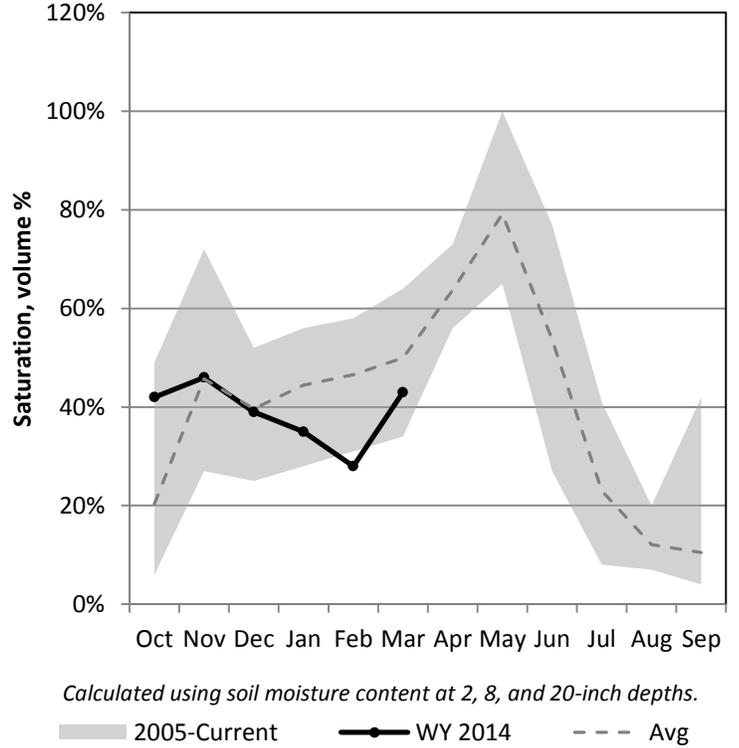
3/1/2014

Precipitation in February was below average at 74%, which brings the seasonal accumulation (Oct-Feb) to 80% of average. Soil moisture is at 43% compared to 37% last year. Reservoir storage is at 55% of capacity, compared to 67% last year. The water availability index for the Lower Sevier is 41%.

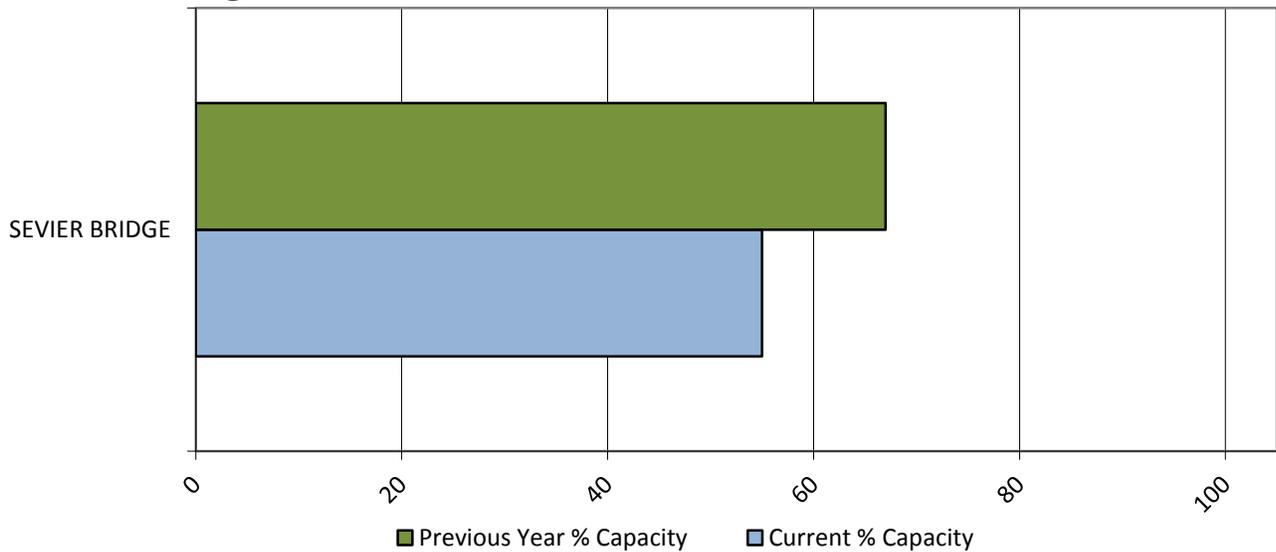
Precipitation



Soil Moisture



Reservoir Storage



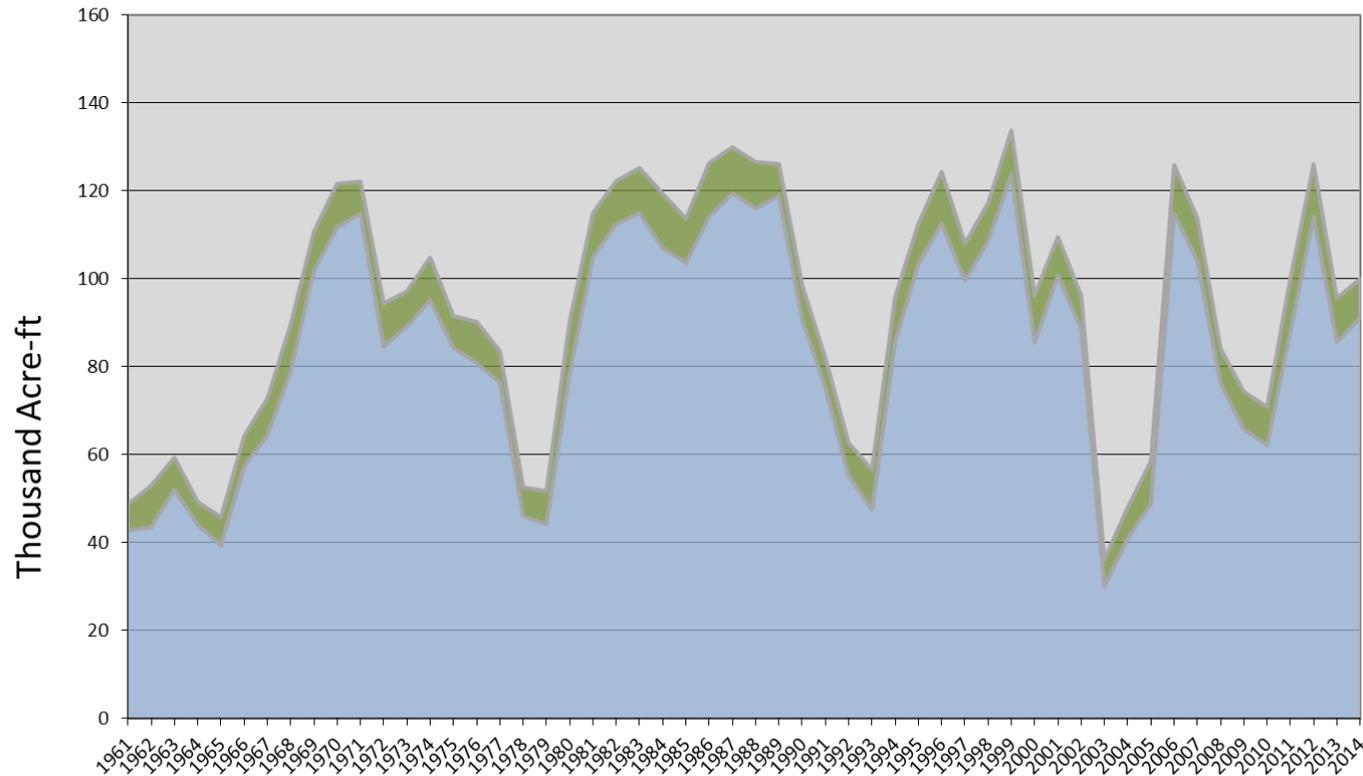
March 1, 2014						
Water Availability Index						
Basin or Region	February EOM* Otter Creek and Piute	February accumulated flow at Kingston (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Upper Sevier River	91.1	8.9	100.0	1.04	63	73,90,11,74

**EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.*

Upper Sevier River - Water Availability Index

March

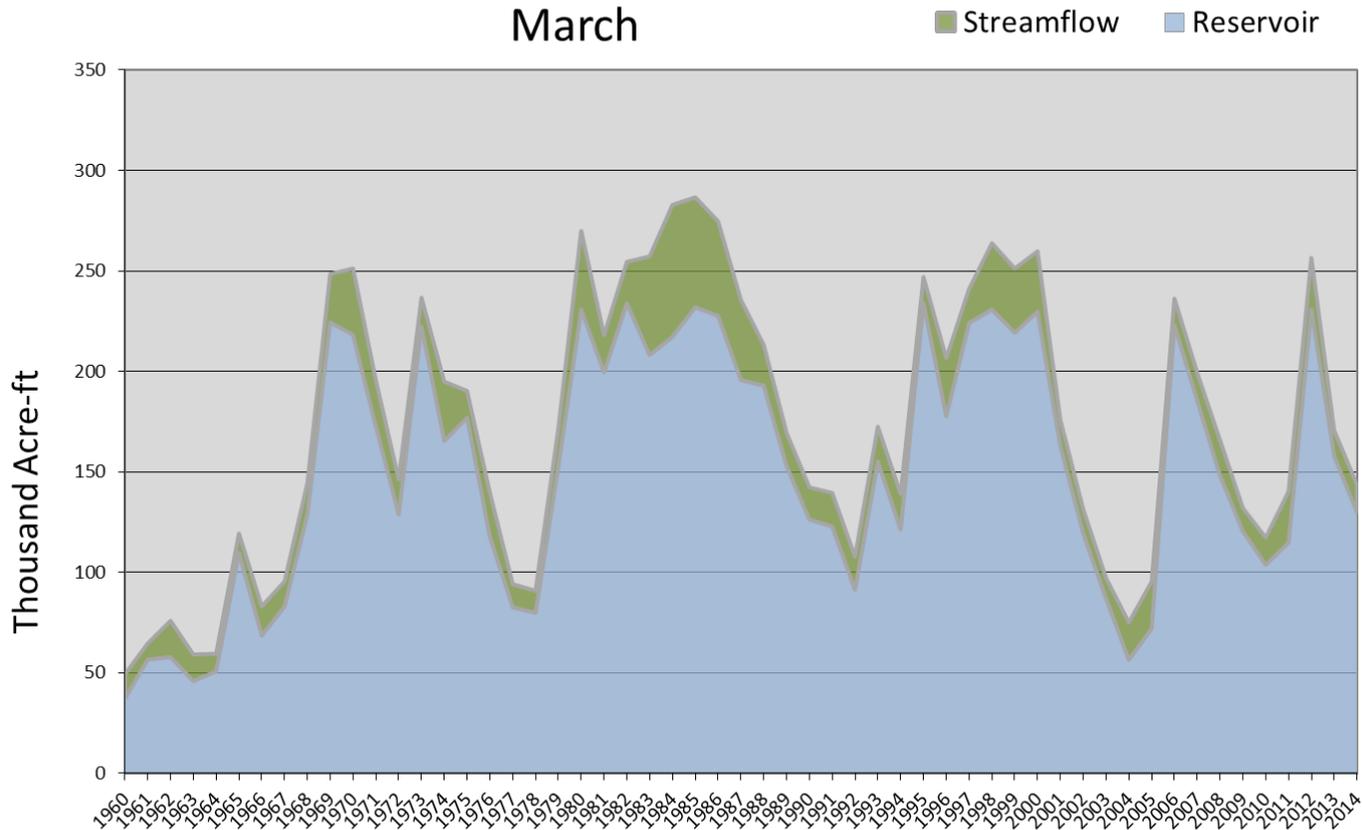
■ Streamflow ■ Reservoir



March 1, 2014		Water Availability Index				
Basin or Region	February EOM* Sevier Bridge	February accumulated flow Sevier at Gunnsion (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Lower Sevier River	129.9	13.6	143.5	-0.74	41	11,90,68,72

**EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.*

Lower Sevier River - Water Availability Index
March



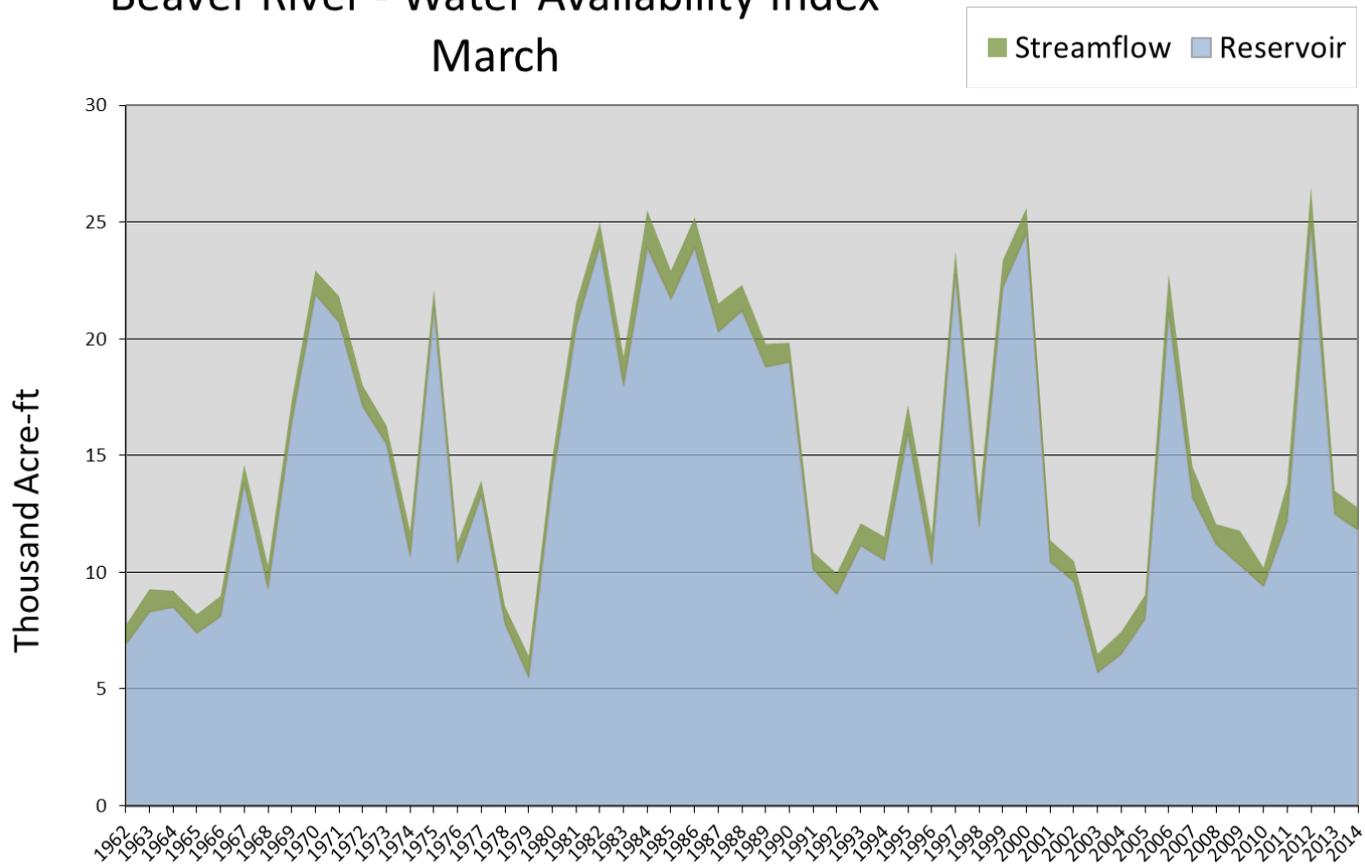
March 1, 2014

Water Availability Index

Basin or Region	February EOM* Minersville Reservoir	February accumulated flow Beaver River at Beaver <i>(observed)</i>	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF^</i>	<i>KAF</i>	<i>KAF</i>		%	
Beaver	11.8	1.0	12.8	-0.46	44	08, 93, 98, 13

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

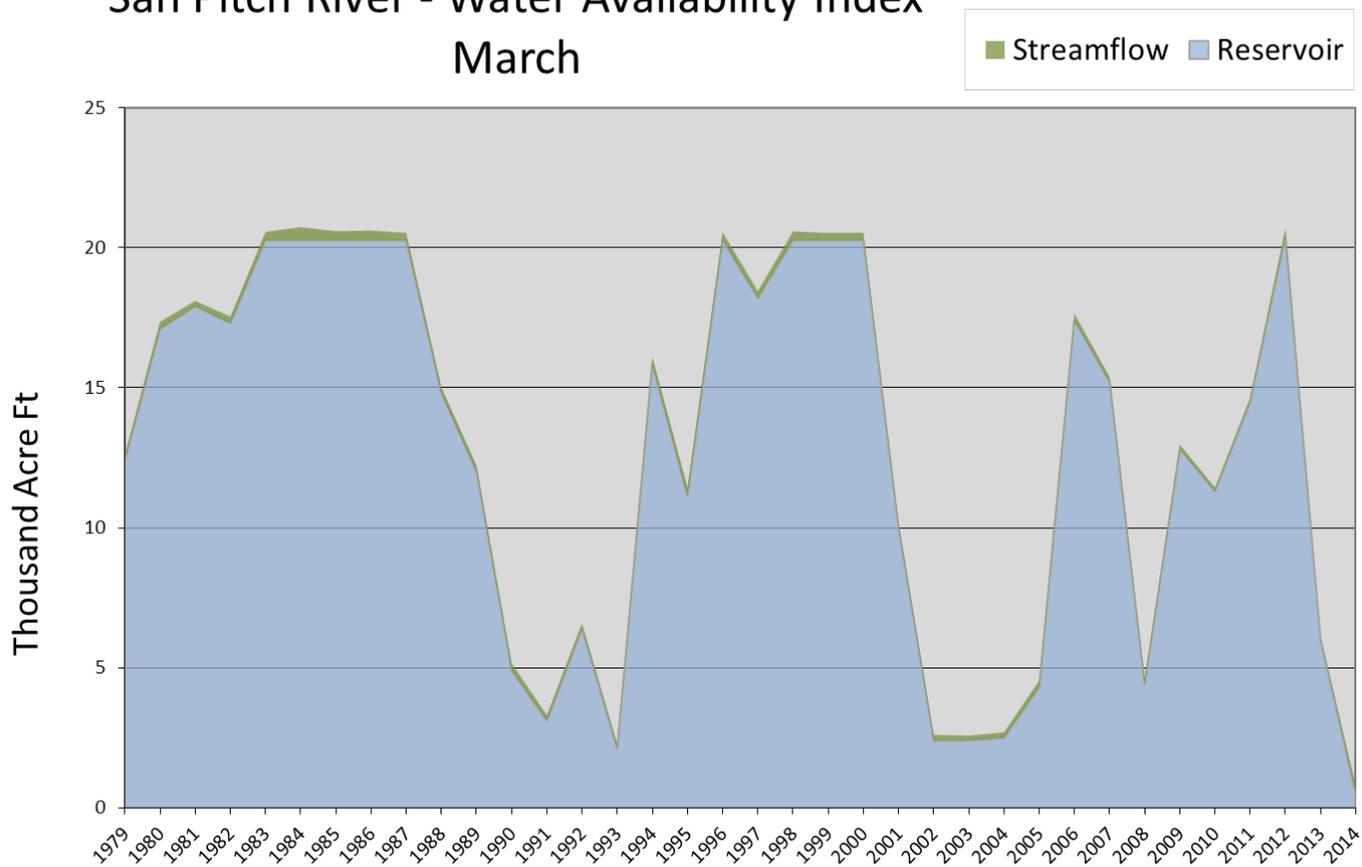
Beaver River - Water Availability Index March



March 1, 2014		Water Availability Index				
Basin or Region	February EOM* Gunnison Reservoir	February accumulated flow Manti Creek (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Manti Creek	0.5	0.3	0.8	-3.94	3	93, 03

**EOM, end of month; #SWSI, Water Availability Index; ^KAF, thousand acre-feet.*

San Pitch River - Water Availability Index
March

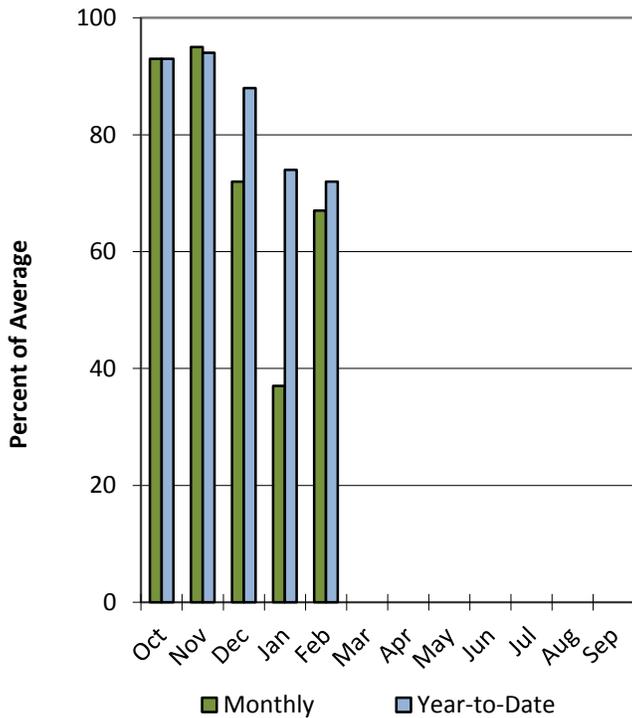


Upper Sevier River Basin

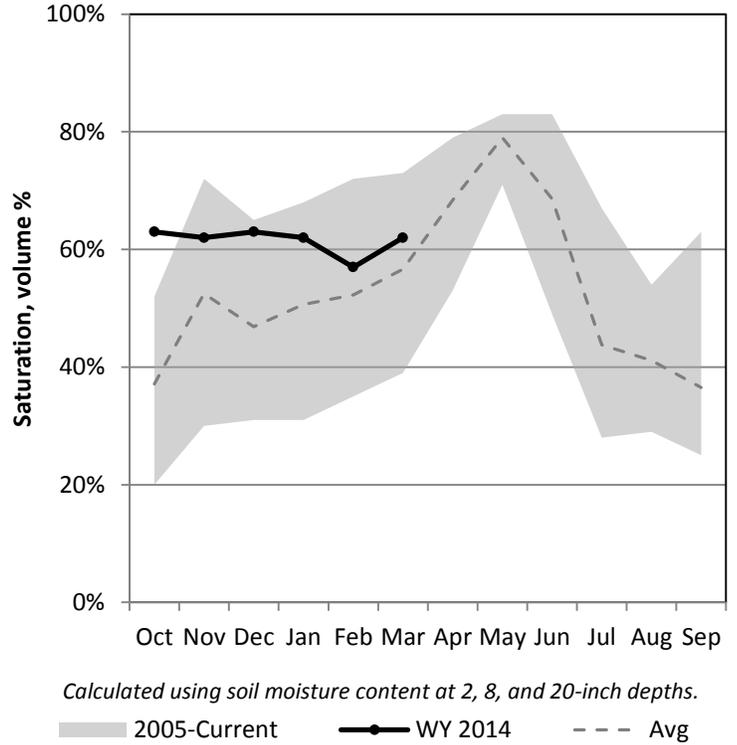
3/1/2014

Precipitation in February was much below average at 67%, which brings the seasonal accumulation (Oct-Feb) to 72% of average. Soil moisture is at 62% compared to 45% last year. Reservoir storage is at 68% of capacity, compared to 63% last year. The water availability index for the Upper Sevier is 63%.

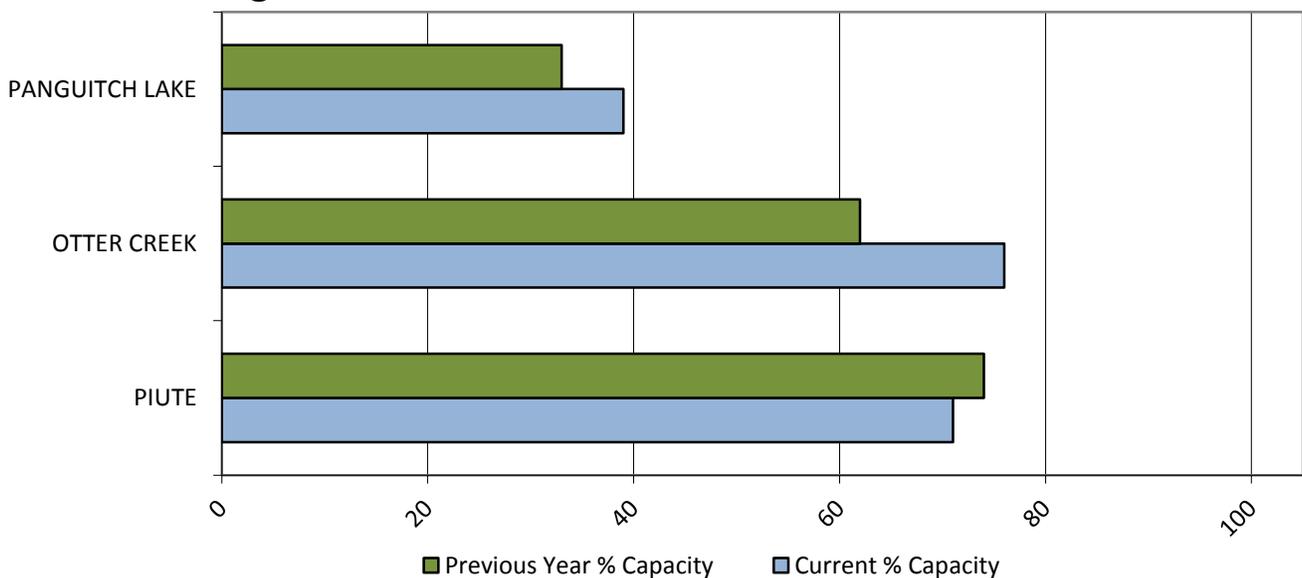
Precipitation



Soil Moisture



Reservoir Storage

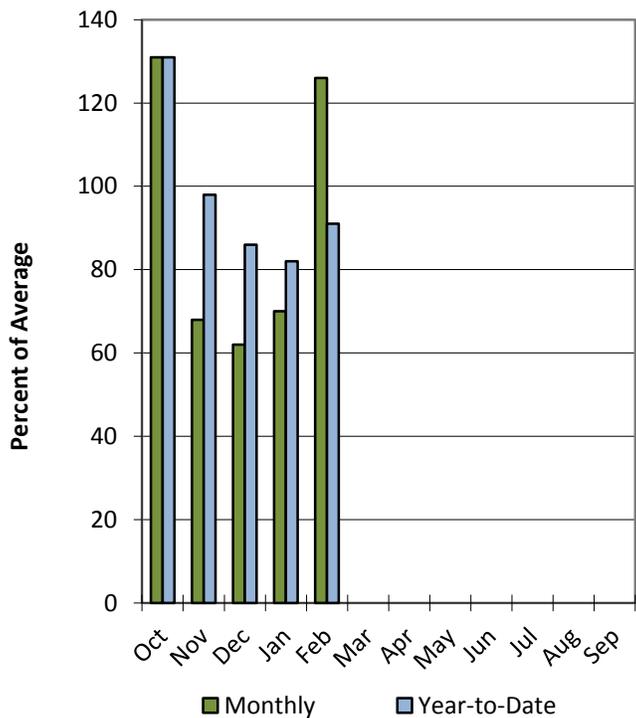


San Pitch River Basin

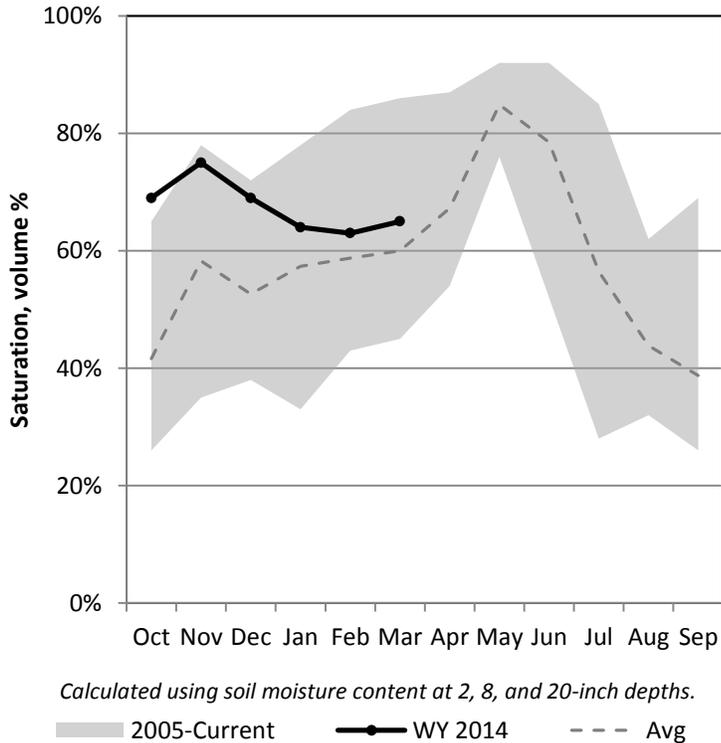
3/1/2014

Precipitation in February was above average at 126%, which brings the seasonal accumulation (Oct-Feb) to 91% of average. Soil Moisture is at 65% compared to 47% last year. Reservoir storage is at 5% of capacity, compared to 30% last year.

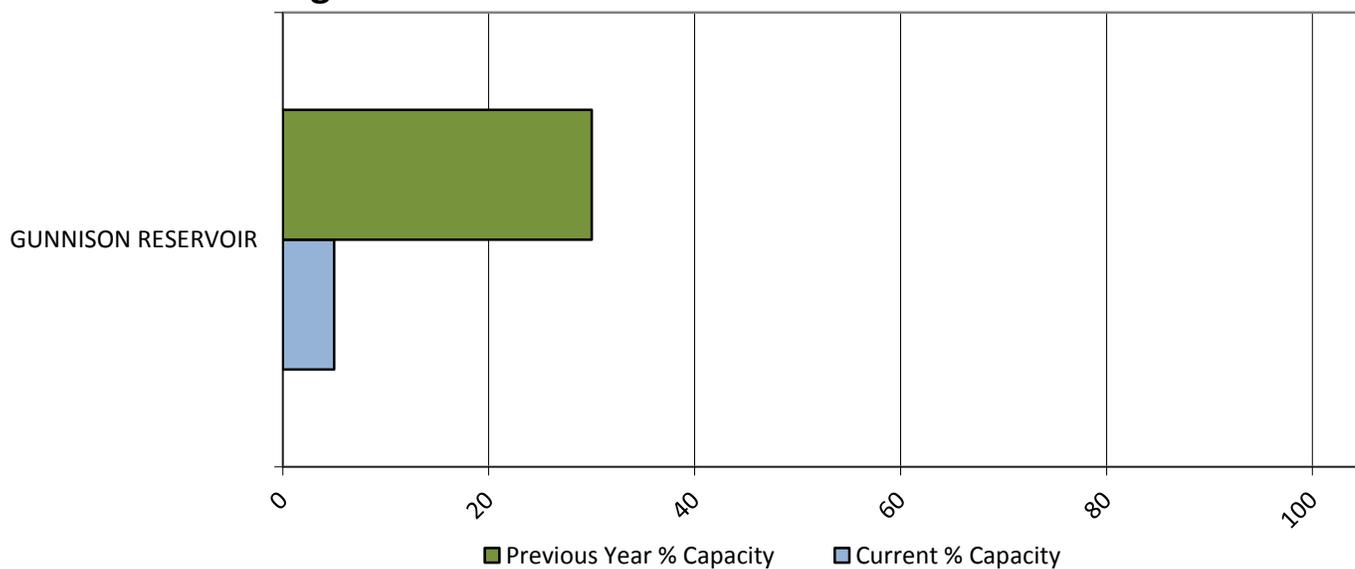
Precipitation



Soil Moisture



Reservoir Storage

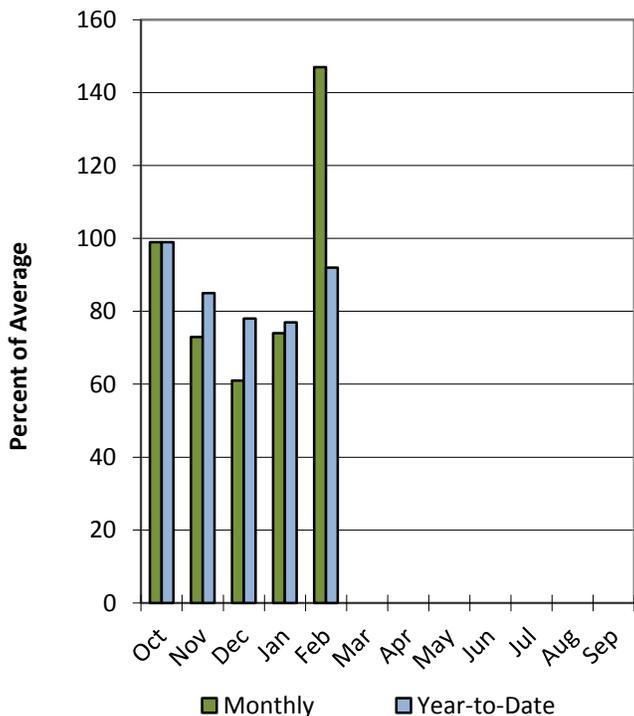


Price & San Rafael Basins

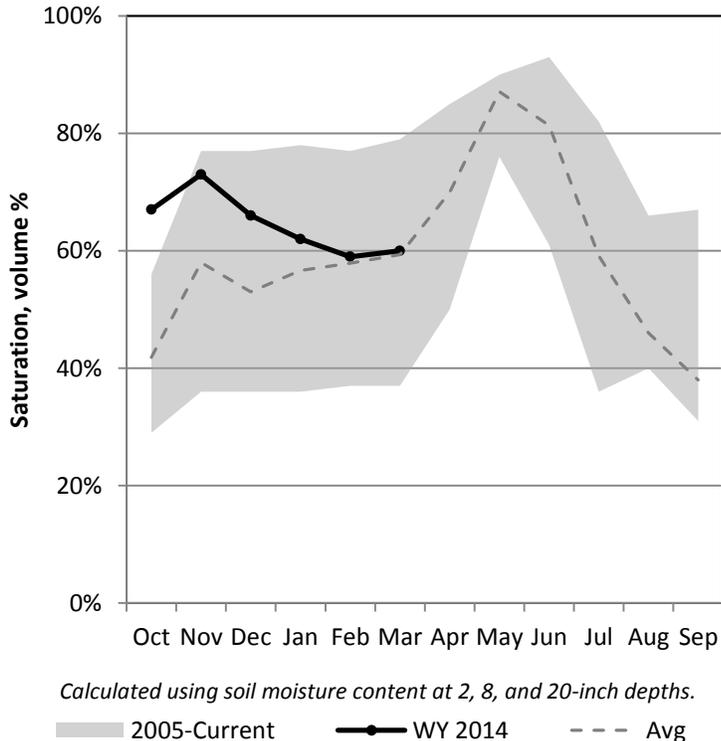
3/1/2014

Precipitation in February was much above average at 147%, which brings the seasonal accumulation (Oct-Feb) to 92% of average. Soil moisture is at 60% compared to 37% last year. Reservoir storage is at 43% of capacity, compared to 48% last year. The water availability index for the Price River is 22%, and 22% for Joe's Valley.

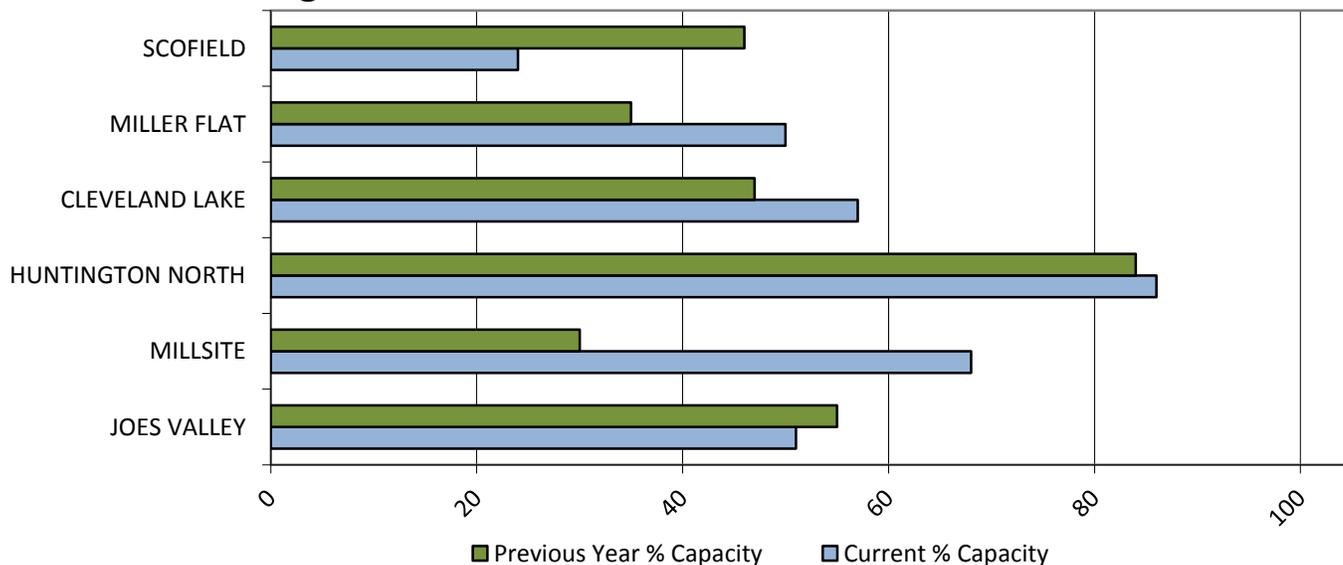
Precipitation



Soil Moisture



Reservoir Storage

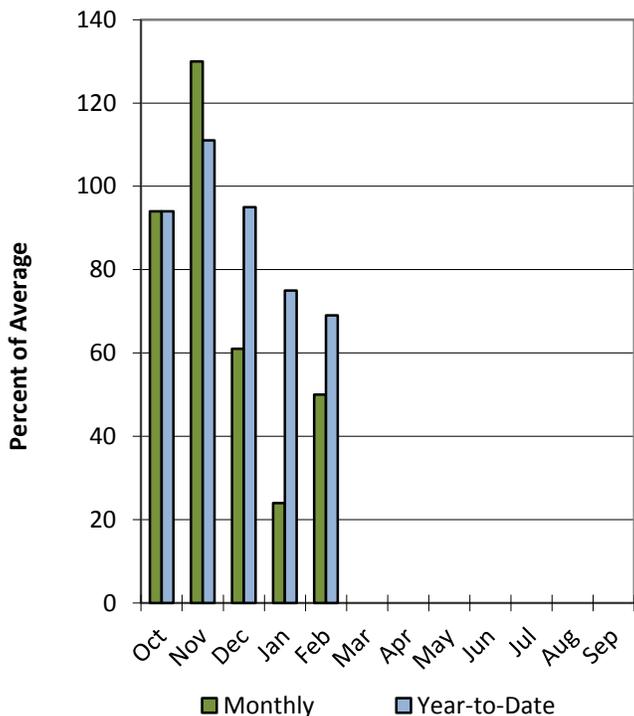


Southeastern Utah Basin

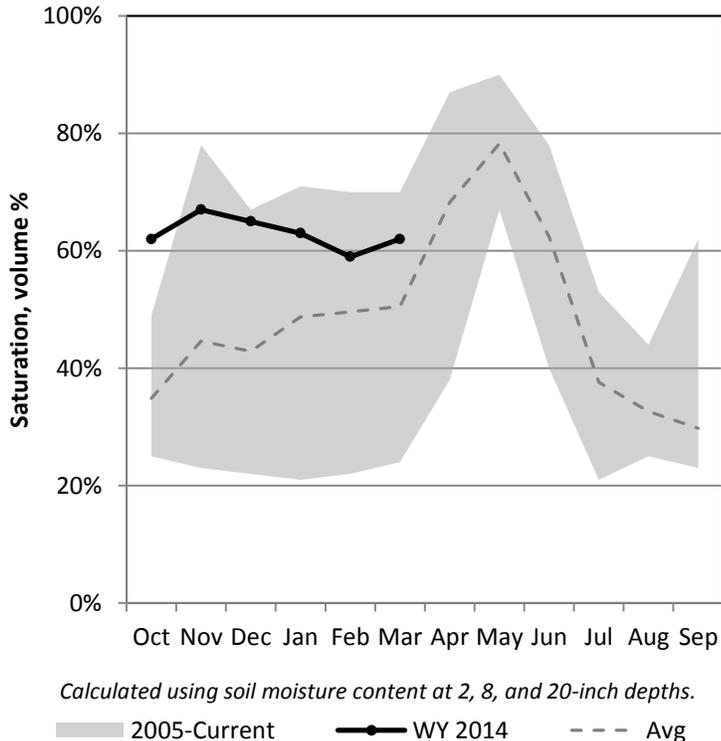
3/1/2014

Precipitation in February was much below average at 50%, which brings the seasonal accumulation (Oct-Feb) to 69% of average. Soil moisture is at 62% compared to 24% last year. Reservoir storage is at 49% of capacity, compared to 15% last year. The water availability index for Moab is 46%.

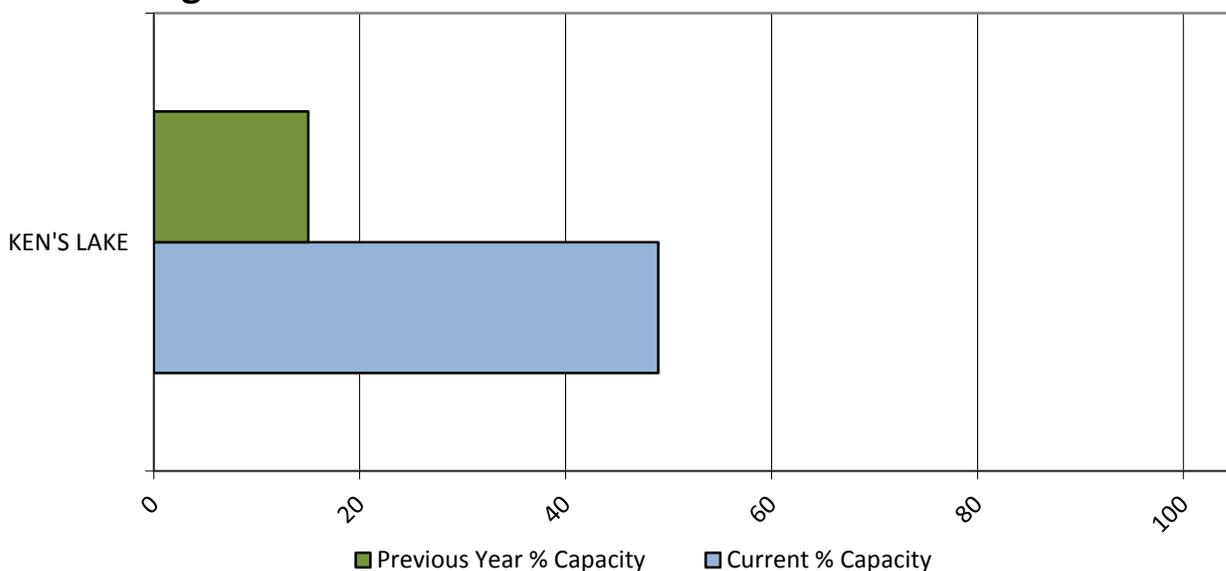
Precipitation



Soil Moisture



Reservoir Storage



March 1, 2014

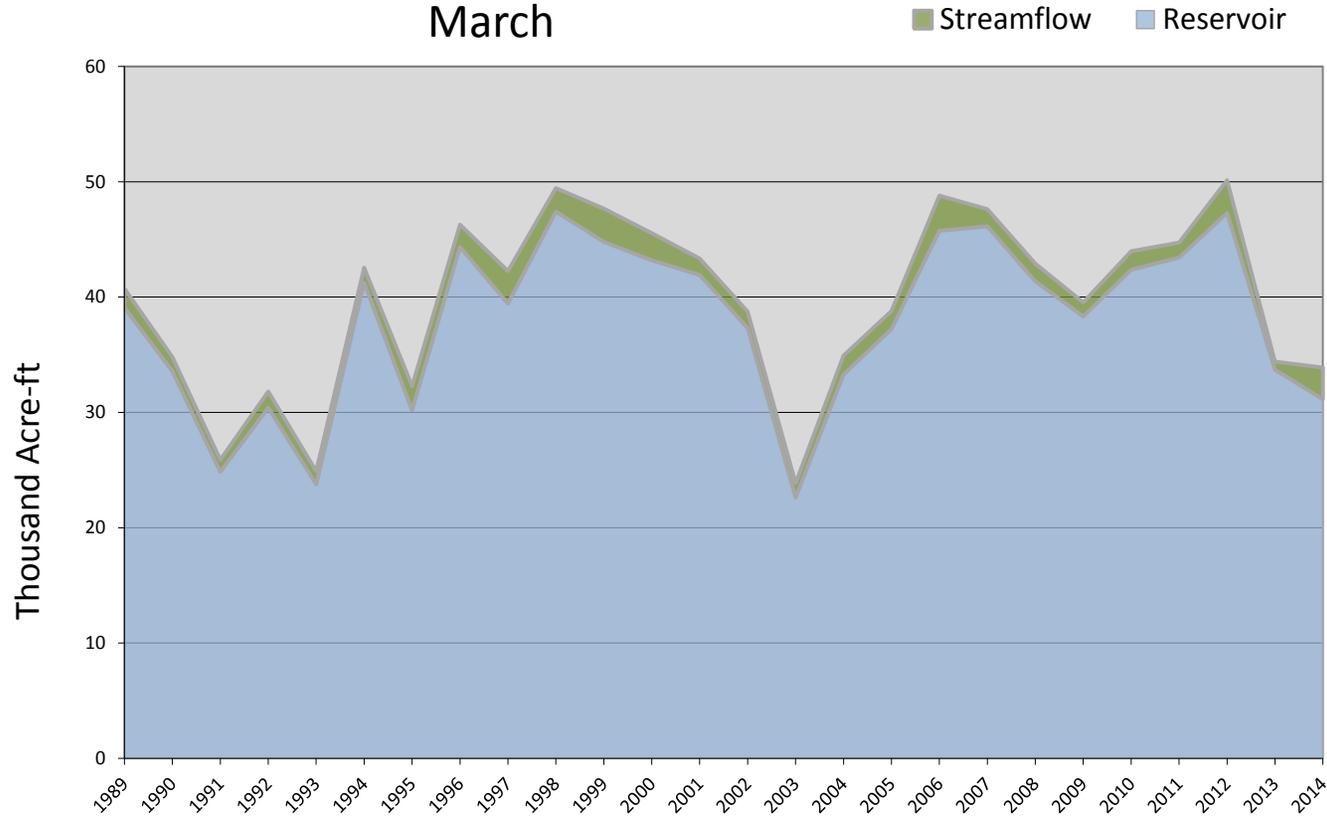
Water Availability Index

Basin or Region	February EOM* Joe's Valley	February accumulated inflow to Joe's Valley (calculated)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Joe's Valley	31.1	2.8	33.9	-2.31	22	92, 95, 13, 90

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

Joe's Valley - Water Availability Index

March



March 1, 2014

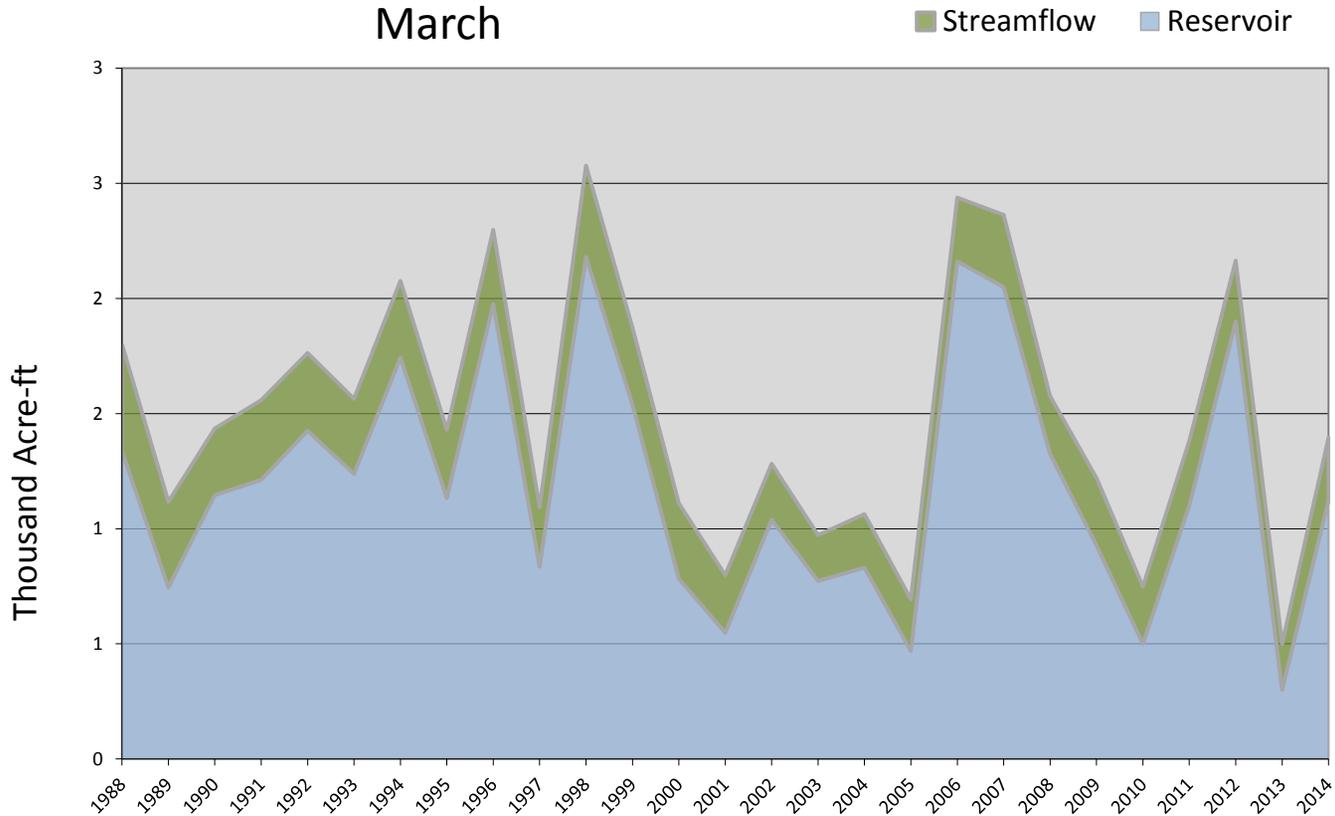
Water Availability Index

Basin or Region	February EOM* Ken's Lake Reservoir	February accumulated flow Mill Creek at Sheley (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Moab	1.1	0.3	1.4	-0.30	46	02, 11, 95, 90

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Moab - Water Availability Index

March



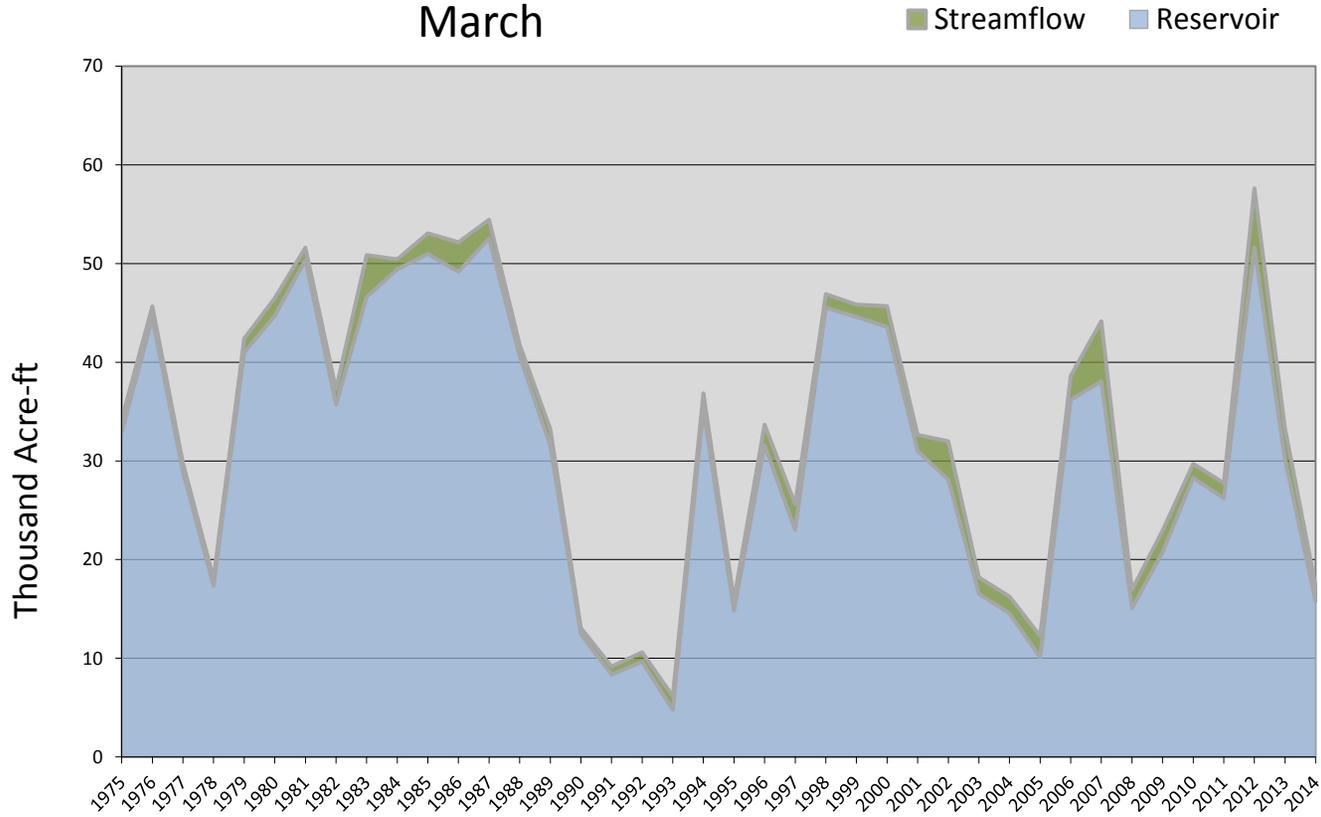
March 1, 2014

Water Availability Index

Basin or Region	February EOM*	February accumulated	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	Scofield	inflow to Scofield (calculated)				
	KAF^	KAF	KAF		%	
Price River	15.8	1.5	17.3	-2.34	22	04, 08, 78, 03

*EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.

Price River - Water Availability Index
March

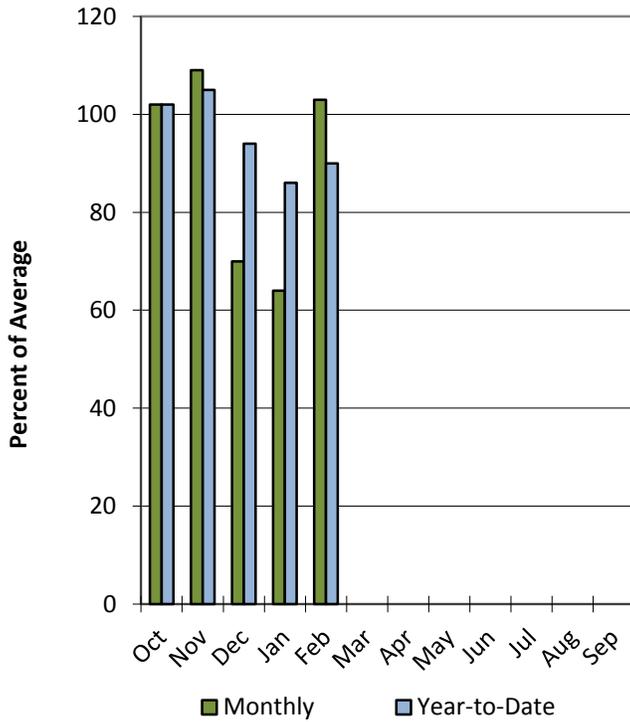


Dirty Devil Basin

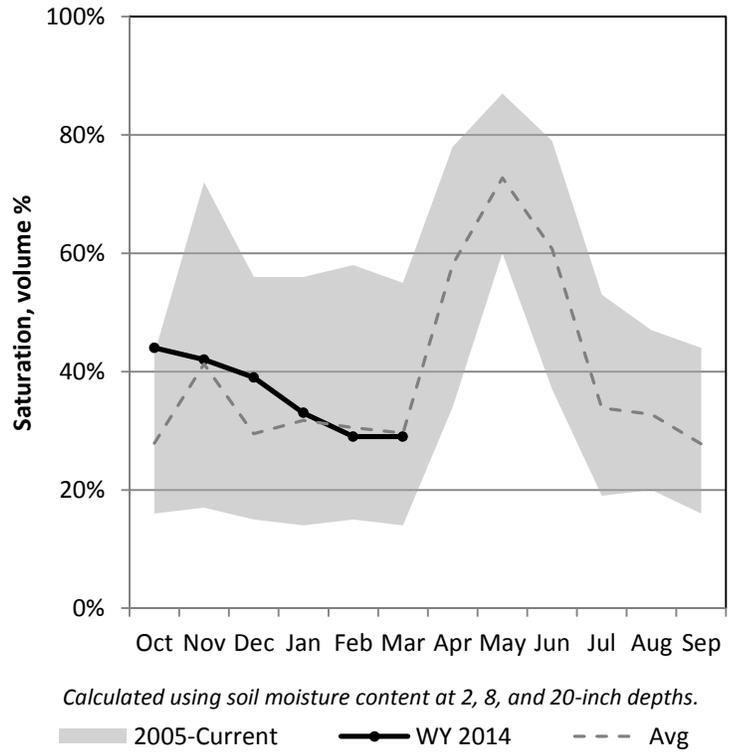
3/1/2014

Precipitation in February was near average at 103%, which brings the seasonal accumulation (Oct-Feb) to 90% of average. Soil moisture is at 29% compared to 15% last year.

Precipitation



Soil Moisture

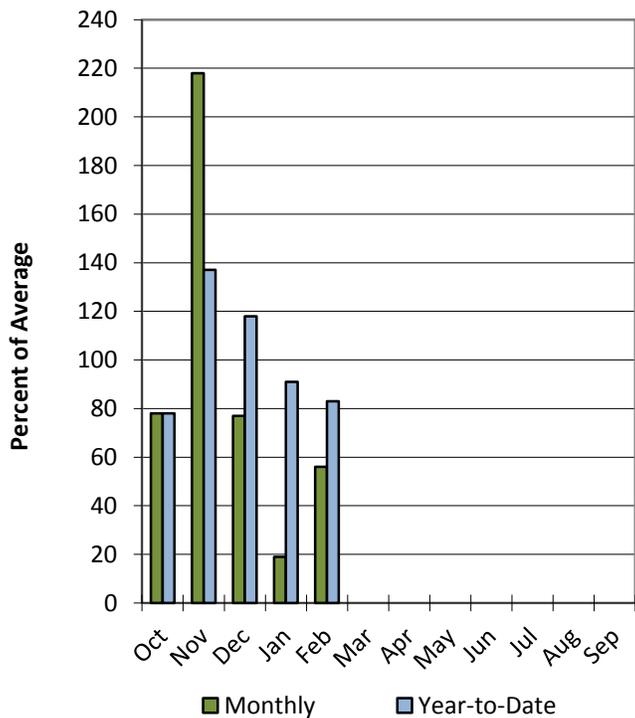


Escalante River Basin

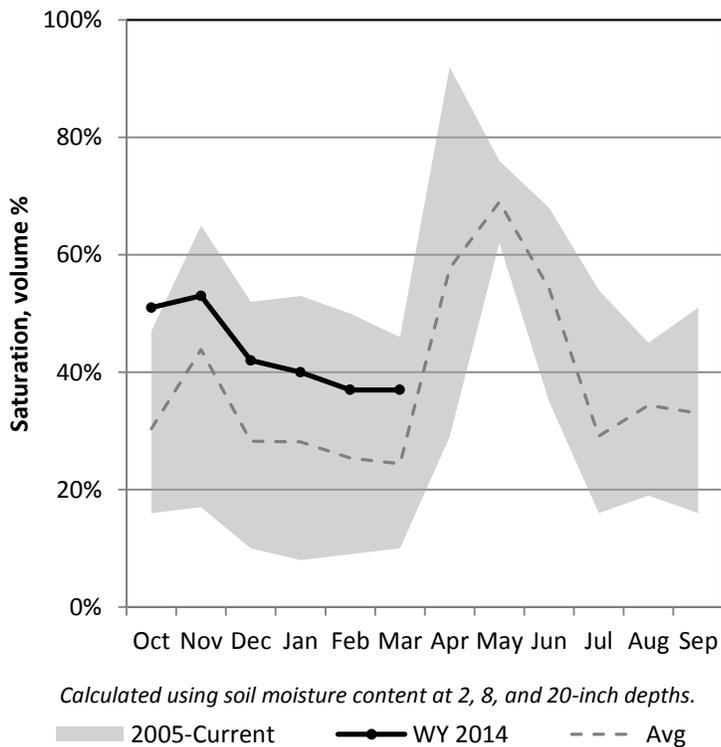
3/1/2014

Precipitation in February was much below average at 56%, which brings the seasonal accumulation (Oct-Feb) to 83% of average. Soil moisture is at 37% compared to 19% last year.

Precipitation



Soil Moisture

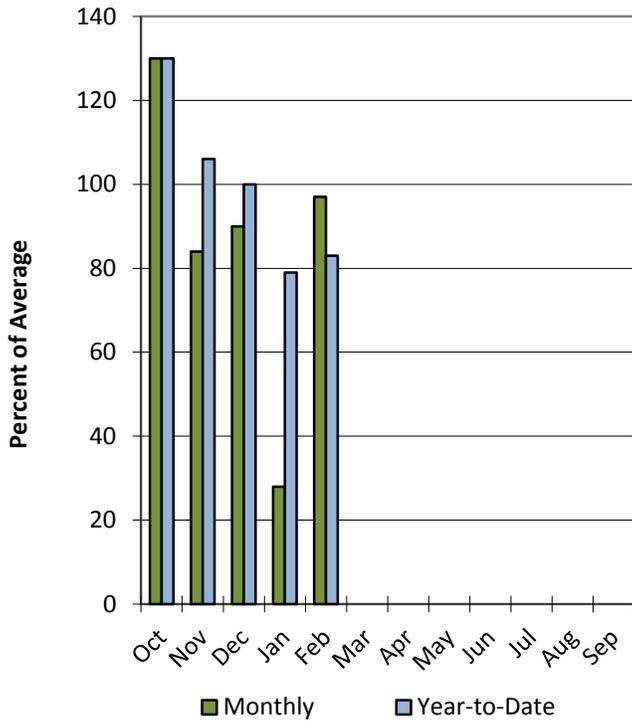


Beaver River Basin

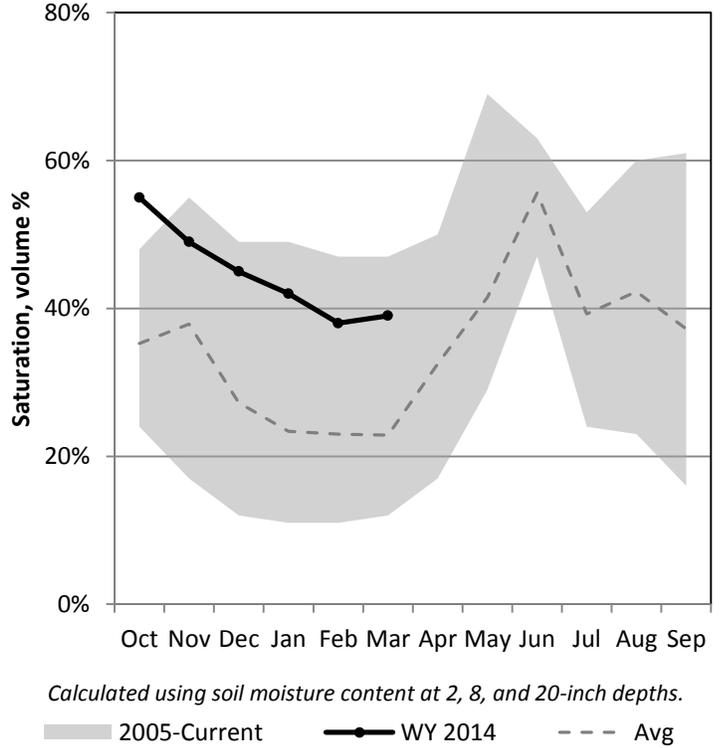
3/1/2014

Precipitation in February was near average at 97%, which brings the seasonal accumulation (Oct-Feb) to 83% of average. Soil moisture is at 39% compared to 33% last year. Reservoir storage is at 51% of capacity, compared to 54% last year. The water availability index for the Beaver River is 44%.

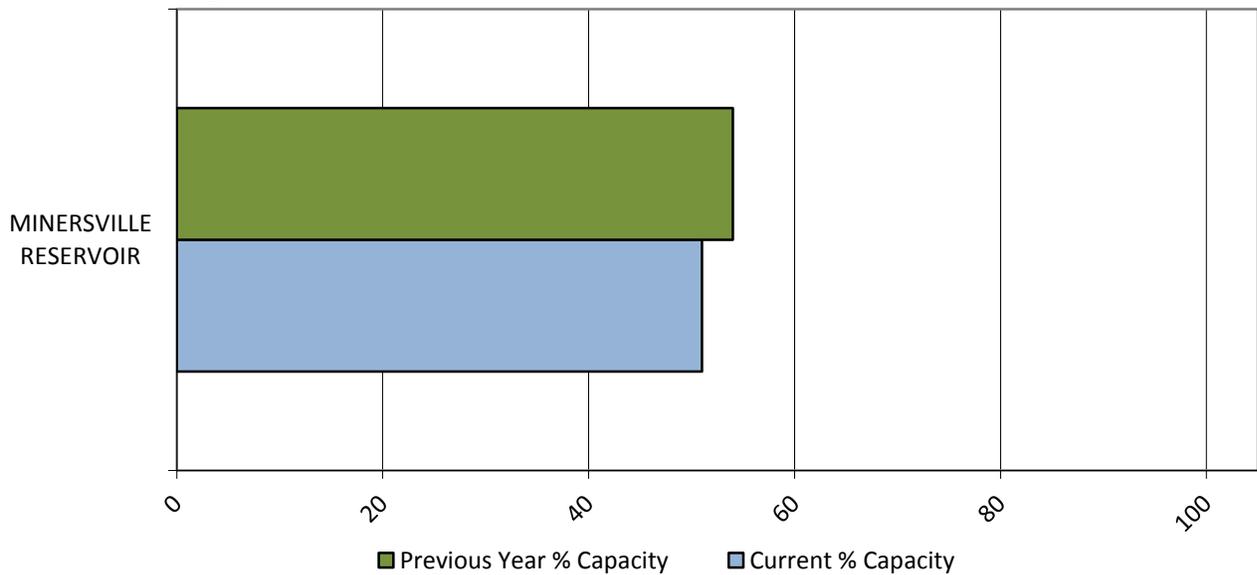
Precipitation



Soil Moisture



Reservoir Storage

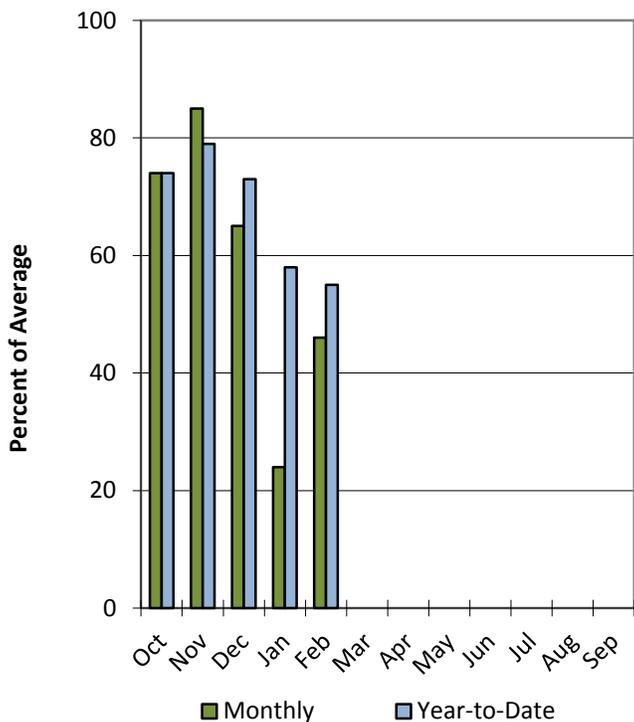


Southwestern Utah Basin

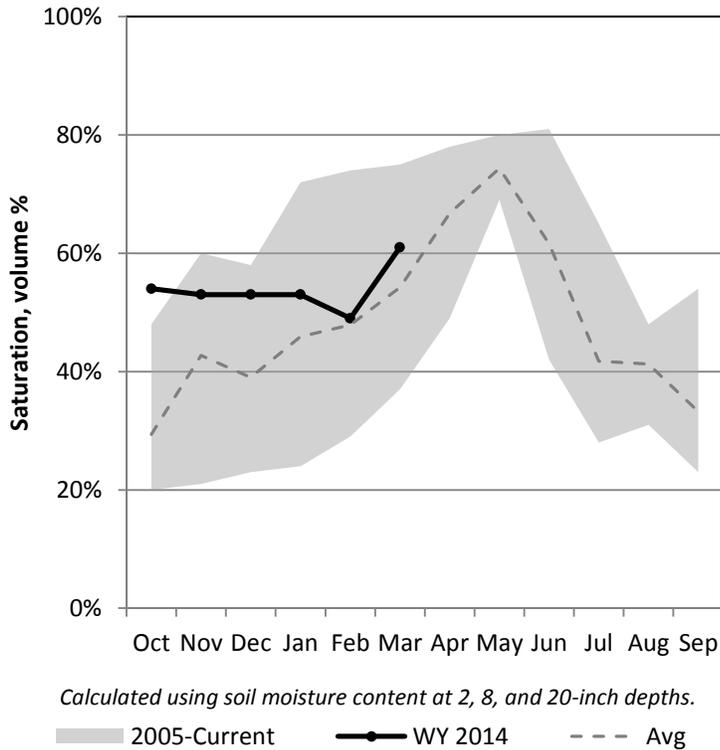
3/1/2014

Precipitation in February was much below average at 46%, which brings the seasonal accumulation (Oct-Feb) to 55% of average. Soil moisture is at 61% compared to 48% last year. Reservoir storage is at 40% of capacity, compared to 49% last year. The water availability index for the Virgin River is 15%.

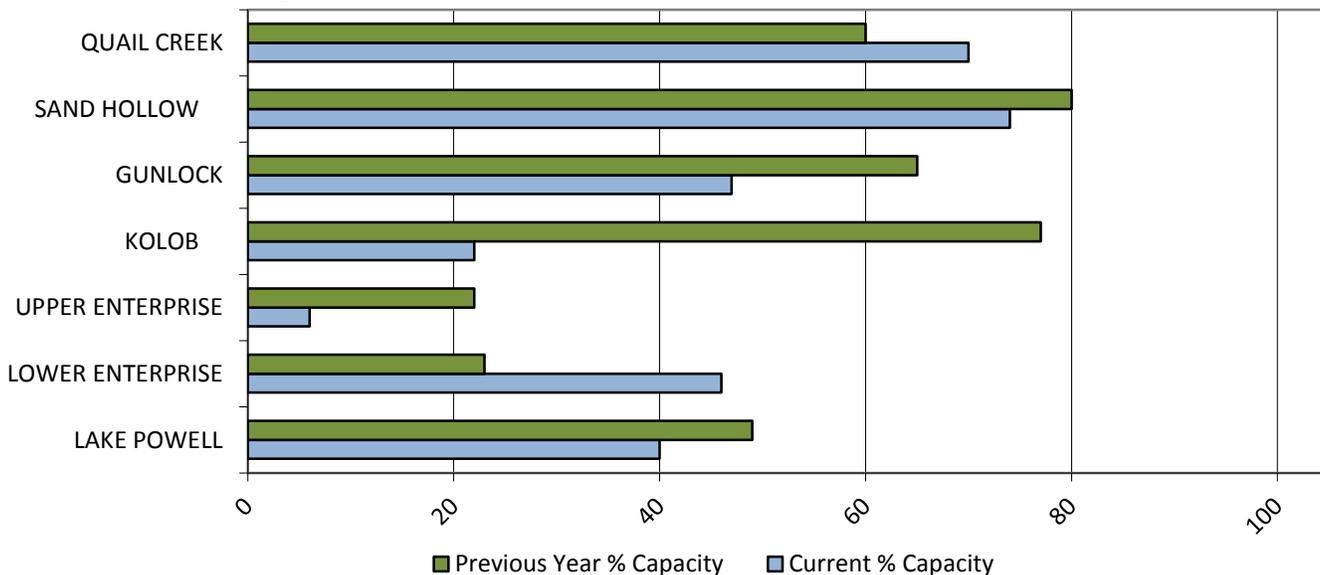
Precipitation



Soil Moisture



Reservoir Storage



March 1, 2014

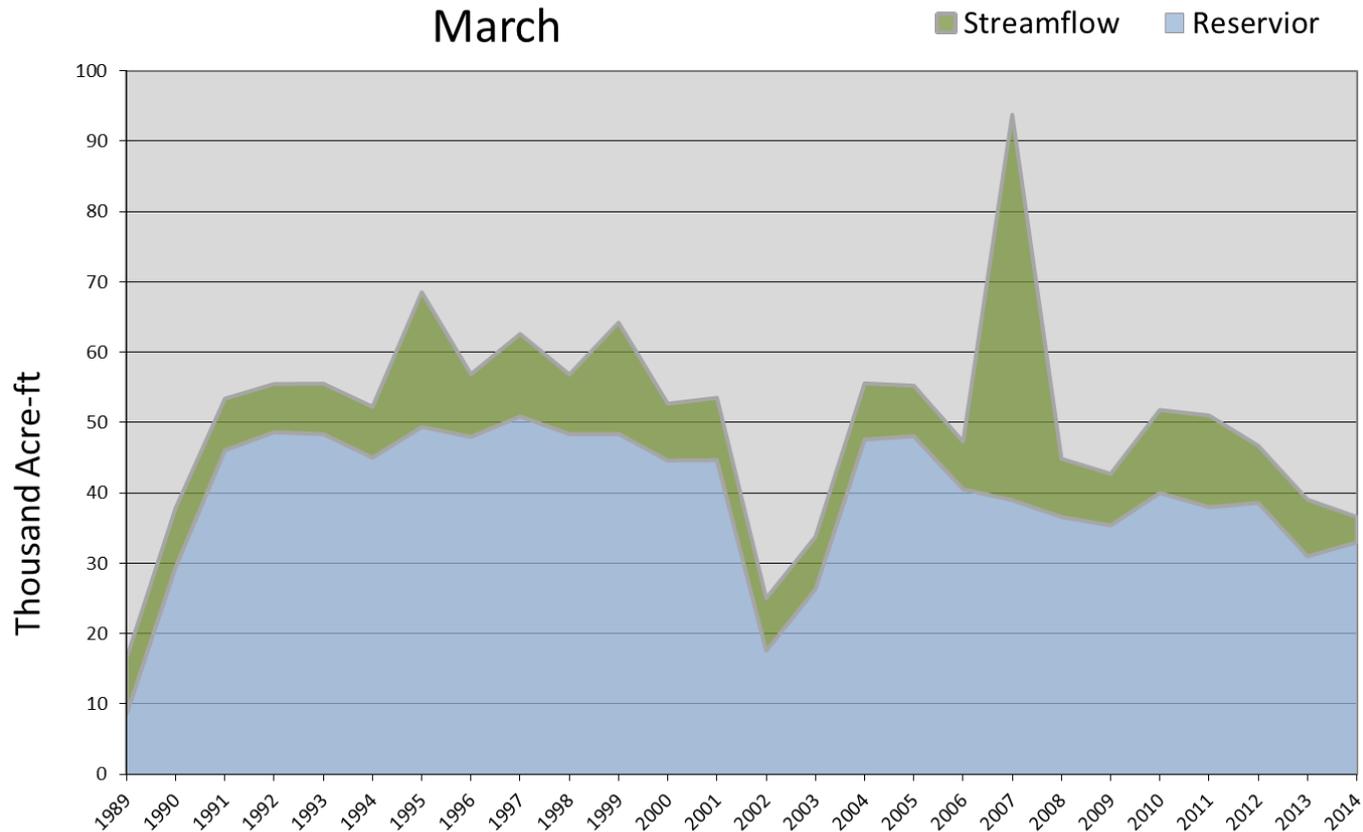
Water Availability Index

Basin or Region	February EOM* Reservoir	February accumulated flow Virgin and Santa Clara Rivers (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Southwest	33.0	3.6	36.6	-2.93	15	02, 03, 90, 13

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Southwest - Water Availability Index

March



3/1/2014

Water Availability Index

Basin or Region	February EOM*	Observed	Reservoir +	WAI [#]	Percentile	Years with similar WAI
	Reservoirs	February stream flow	Streamflow			
	KAF [^]	KAF	KAF		%	
Bear River	559	4.8	563	-1.31	34	96, 40, 56, 30
Woodruff Narrows	16.6	2.3	18.9	-1.63	30	80, 79, 95, 74
Little Bear	10.9	2.4	13.3	-0.91	39	08, 11, 10, 98
Ogden River	43	2.4	45.5	-2.19	24	78, 08, 88, 09
Weber River	182	2.8	185	-3.80	4	04, 93, 08
Provo	273	3.0	276	-3.75	5	04, 08
West Uintah Basin	24	2.5	27	2.34	78	88, 06, 96, 87
Eastern Uintah	23.0	0.6	24	-3.24	11	90, 03, 91, 13
Blacks Fork	14.4	1.9	16.3	1.99	74	06, 07, 98, 12
Smiths Creek	7.1	0.5	7.6	3.57	93	07, 12
Price River	15.8	1.5	17.3	-2.34	22	04, 08, 78, 03
Joe's Valley	31.1	2.8	33.9	-2.31	22	92, 95, 13, 90
Moab	1.1	0.3	1.4	-0.30	46	02, 11, 95, 90
Upper Sevier River	91	8.9	100	1.04	63	73, 90, 11, 74
San Pitch	0.5	0.3	0.8	-3.94	3	93, 03
Lower Sevier River	130	13.6	144	-0.74	41	11, 90, 68, 72
Beaver	12.6	1.0	13.6	-0.15	48	98, 13, 11, 77
Virgin River	33.0	3.6	36.6	-2.93	15	02, 03, 90, 13

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

What is a Water Availability Index?

The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero (0) indicating median water supply as compared to historical analysis. WAI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index.

Utah Snow Surveys has also chosen to display the WAI value as well as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has the simplest application. It can be best thought of as a scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and a value of 50 representing average conditions. This rating scale is a percentile rating as well, for example a WAI of 75% means that this years water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a WAI of 10% means that 90% of historical events have been greater than this one and that only 10% have had less total water supply. This scale is comparable between basins: a SWSI of 50% means the same relative ranking on watershed A as it does on watershed B, which may not be strictly true of the +4 to -4 scale.

For more information on the WAI go to: www.ut.nrcs.usda.gov/snow/ on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.

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<http://www.ut.nrcs.usda.gov/snow/>

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