

Utah Climate and Water Report

July 2014



Raft River Mountains, June 2014

Photo by Kent Sutcliffe

Utah Climate and Water Report

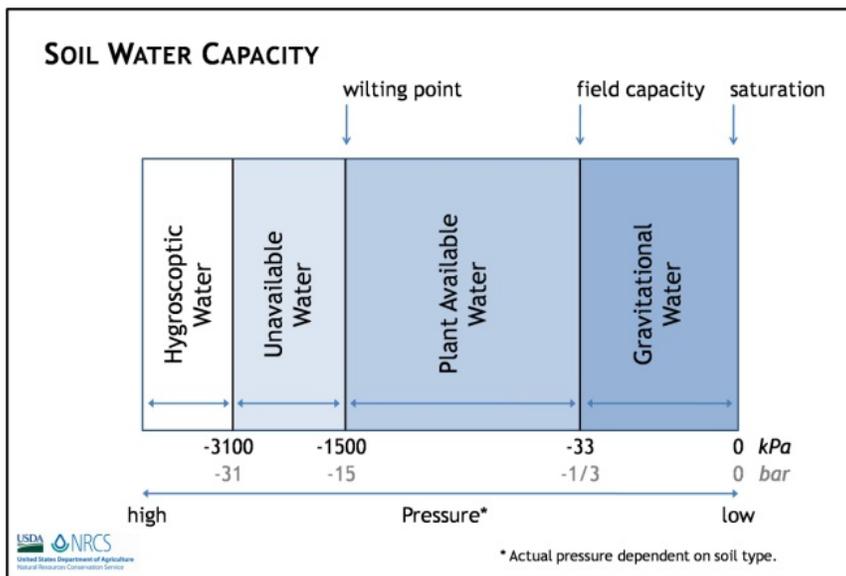
The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from 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.

Climate and Water Information

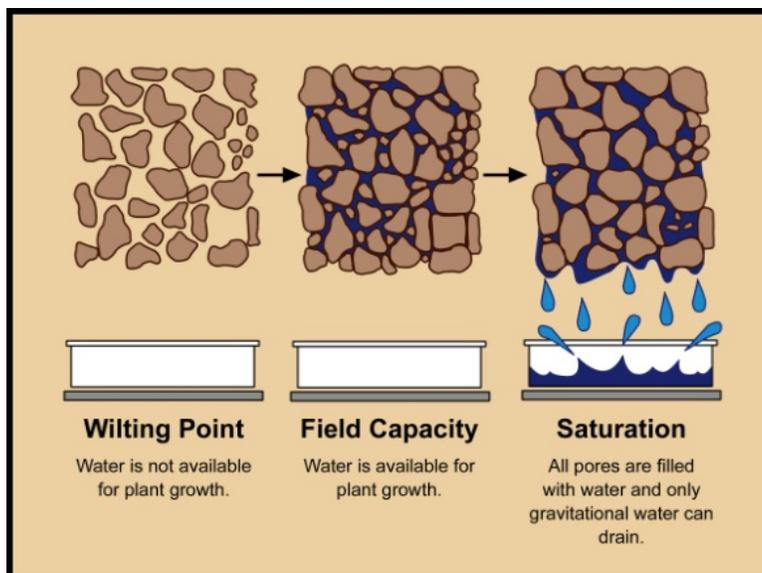
Soil Climate Analysis Network

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.



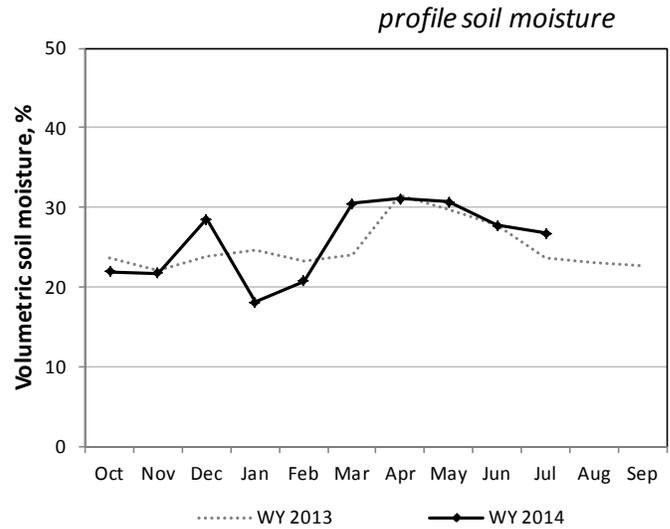
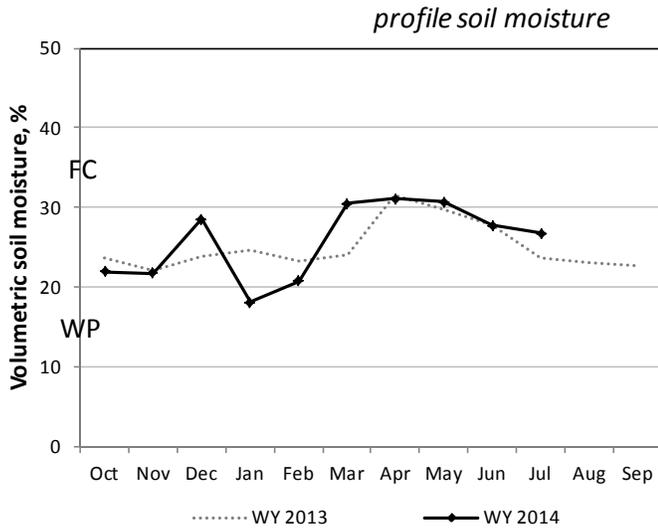
Visual explanation of soil water capacity definitions.

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>in.</i>	<i>volume %</i>					<i>° F</i>				
NORTH CENTRAL												
Blue Creek	9.5	0.7	14	18	24	31	21	70	73	71	65	60
Cache Junction	12.9	1.3	21	19	29	28	38	63	65	63	60	56
Grantsville	7.4	0.6	0	15	24	30	76	79	77	68	64	64

* 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.



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.

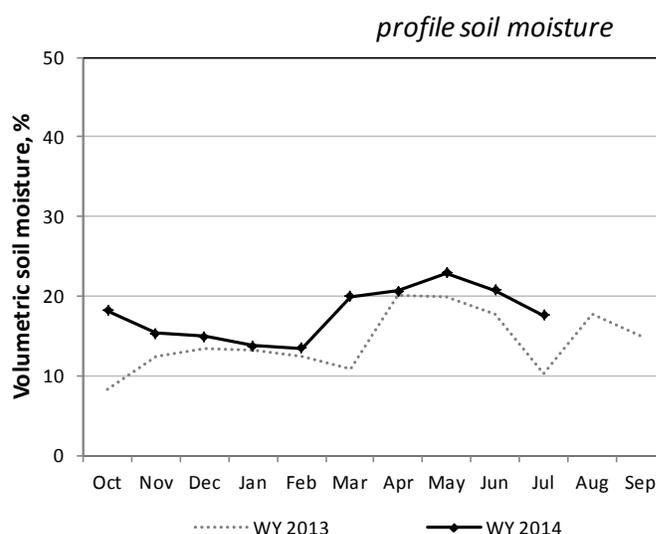
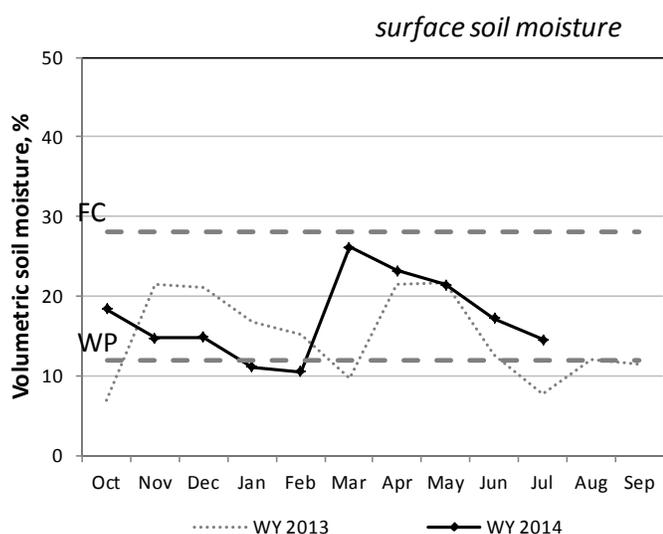
Northern Mountains

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	6.4	1.0	3	8	10	16	15	56	57	57	54	51
Buffalo Jump	7.1	1.3	10	11	10	10	-	64	66	64	58	-
Morgan	13.2	1.4	25	23	27	33	22	70	70	71	64	60

* 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.

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.

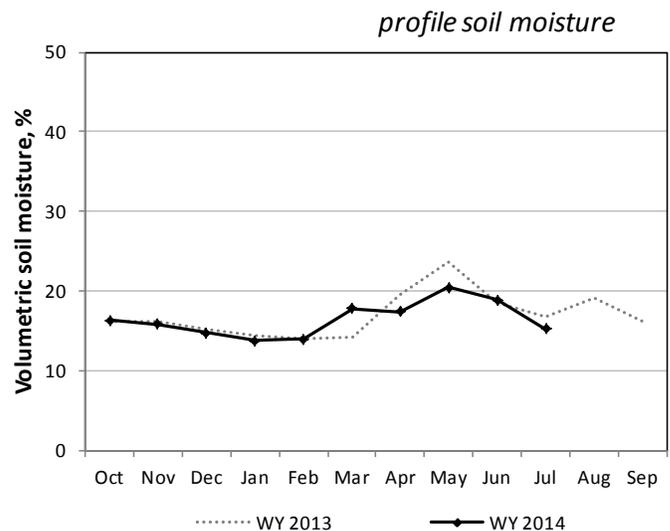
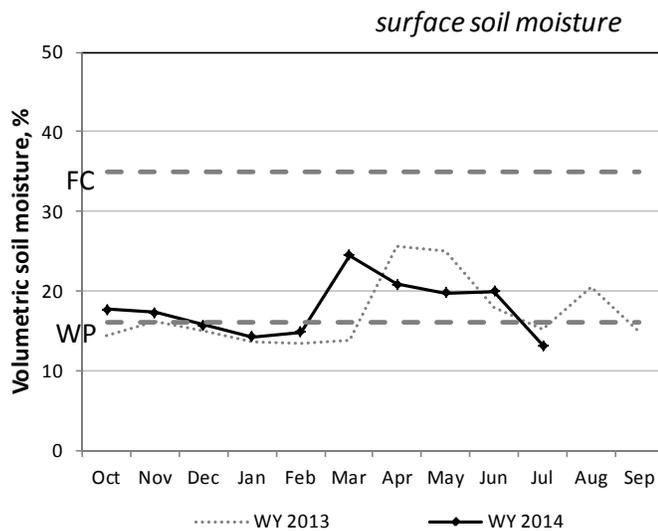
Uintah Basin

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	4.1	0.0	5	16	21	17	9	74	71	70	63	62
Little Red Fox	2.6	0.0	2	13	20	24	19	69	79	77	69	63
Split Mountain	5.0	0.0	1	12	13	15	13	83	85	85	76	68

* 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.

Uintah Basin



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.

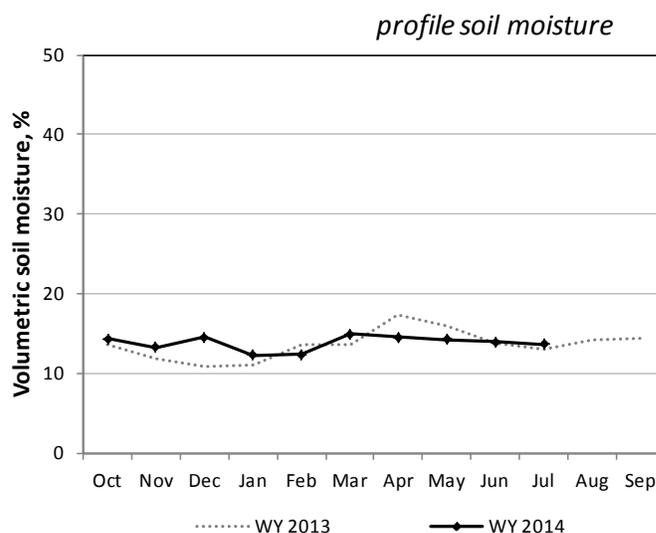
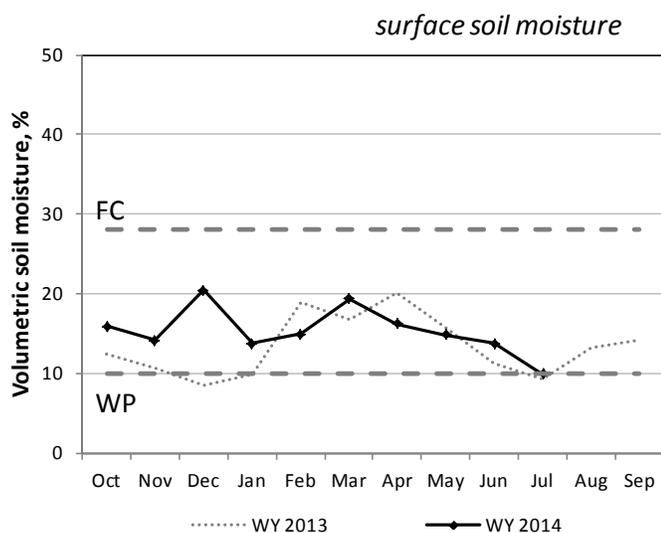
Southeast

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	3.9	0.0	0	8	15	17	21	76	83	82	72	67
Green River	3.6	0.0	4	7	9		9	85	86	86	82	73
Harm's Way	7.0	0.0	4	0	14	15	6	80	75	79	71	63
West Summit	6.1	0.0	6	11	14	16	18	75	78	77	67	61
Eastland	6.0	0.0	7	11	10	24	23	74	75	75	67	62
Alkali Mesa	5.1	0.0	6	7	16	19	14	77	78	76	70	66
McCracken Mesa	5.7	0.0	7	11	15	18	14	80	84	84	74	70

* 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.

Southeast



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.

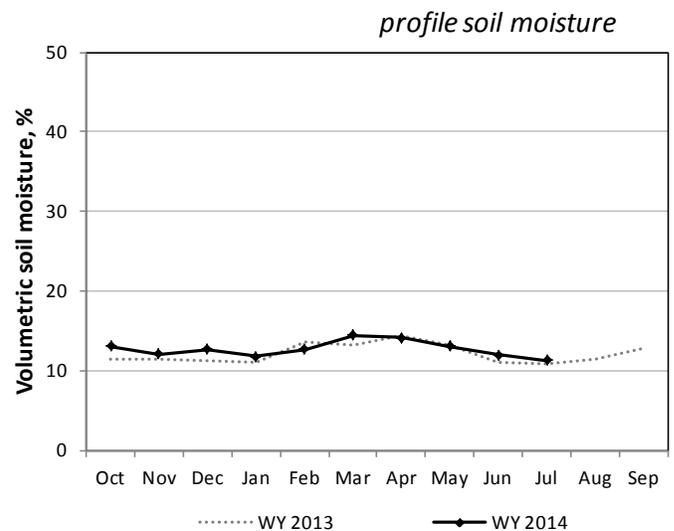
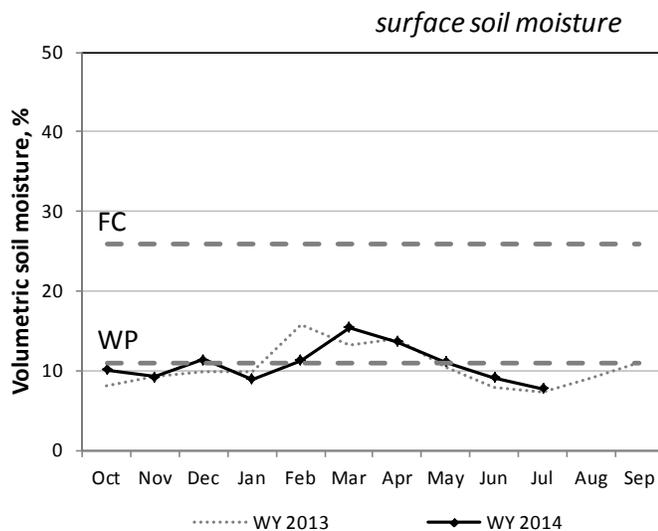
South Central

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	7.6	0.3	10	14	15	8	6	75	78	76	69	63
Ephraim	7.0	0.2	3	9	16	16	35	65	65	64	58	55
Holden	5.8	0.2	3	4	1	13	14	80	82	79	73	68
Milford	3.9	0.0	8	24	22	30	18	80	80	77	70	64
Manderfield	5.9	0.0	1	12	13	11	5	80	80	75	69	62
Cirleville	2.9	0.0	7	7	7	9	16	82	84	79	67	60
Panguitch	4.1	0.0	4	17	13	21	28	66	66	63	57	52
Cave Valley	7.7	0.0	1	0	0	0	0	73	78	80	70	64
Vermillion	6.7	0.0	0	1	2	4	8	75	80	77	68	61
Spooky	4.5	0.0	3	1	4	14	2	87	87	82	75	71

* 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.

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.

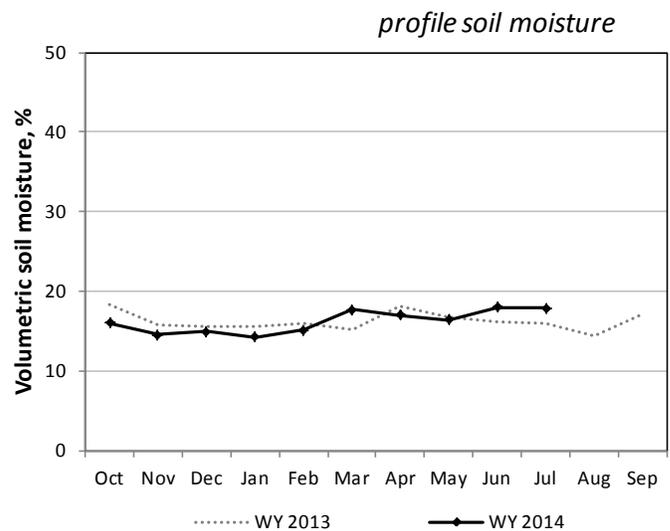
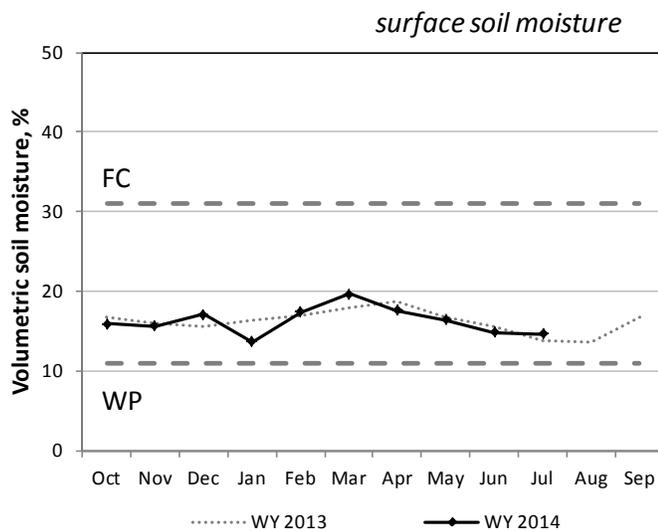
Western and Dixie

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	8.7	0.1	1	7	13	17	17	67	73	71	64	60
Park Valley	6.3	0.2	1	0	13	46	24	73	78	77	70	64
Goshute	6.4	0.3	13	1	61	52	38	73	77	76	68	62
Dugway	4.4	0.2	13	26	38		16	73	77	77	70	67
Tule Valley	3.8	0.2	9	11	23	17	11	76	88	90	85	78
Hal's Canyon	3.0	0.1	1	0	9	12	10	81	85	86	73	67
Enterprise	4.1	0.0	4	21	22	14	15	79	81	80	73	66
DIXIE												
Sand Hollow	4.1	0.0	0	0	1	1	0	98	101	96	85	78

* 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

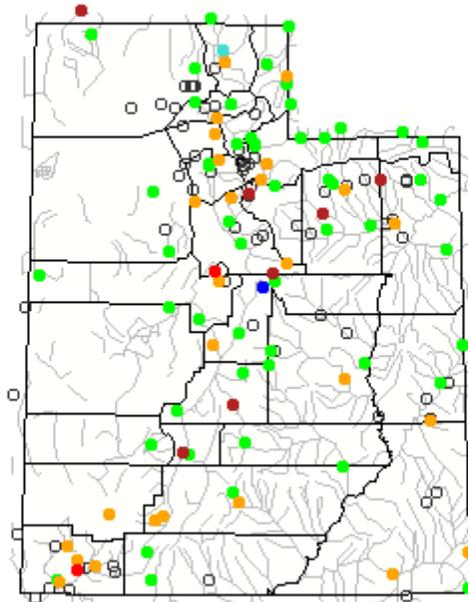
July 1, 2014

Current Conditions

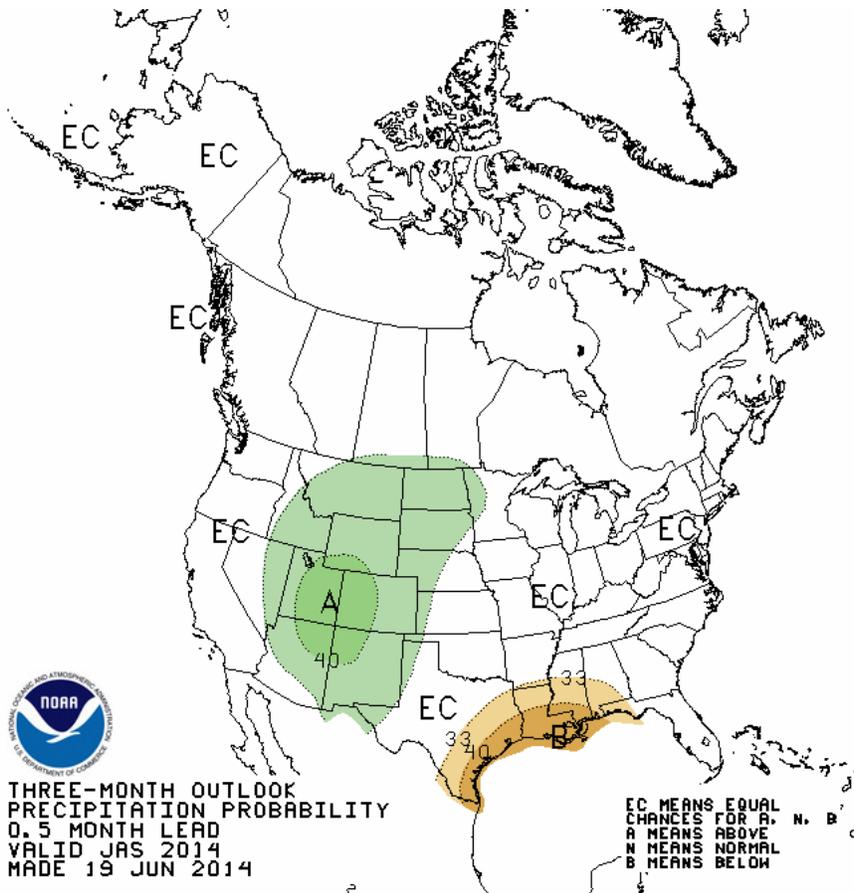
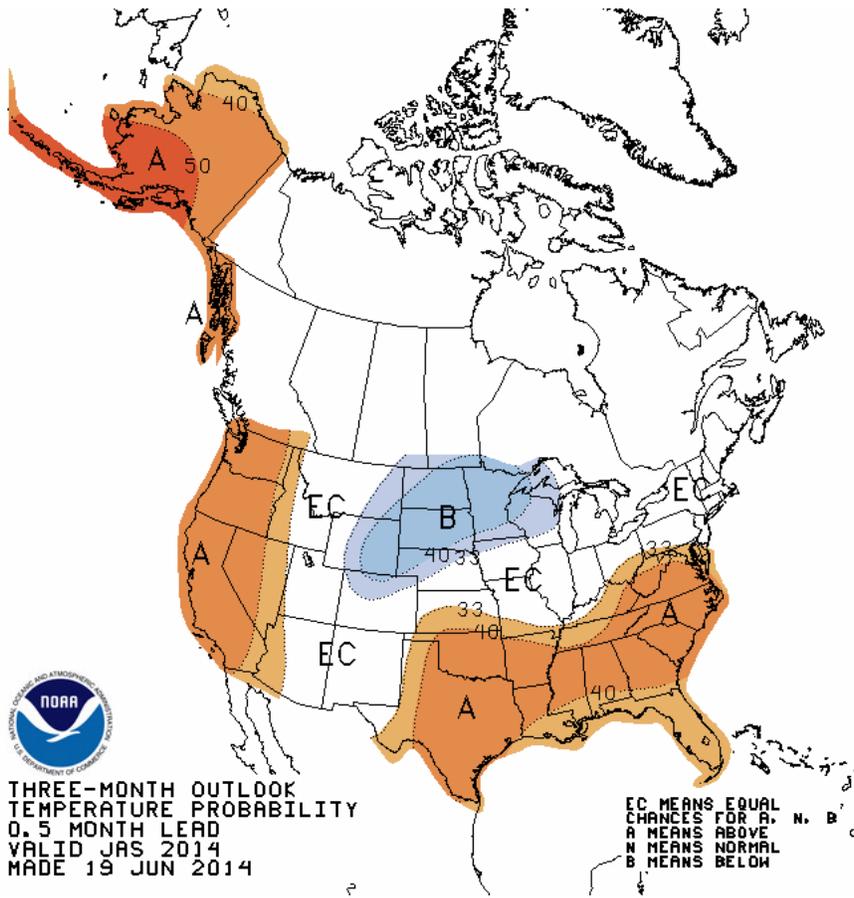
Current runoff for points with unregulated flow remains well below average for most of central and all of southern Utah. In northern Utah, flow is near normal. Points shown in green (near normal conditions) are primarily where reservoir releases keep stream flows higher. June precipitation ranged from 1% for southwest Utah (10 of 11 sites had zero precipitation) to 68% on the Weber Basin. The statewide average was 48% compared to 8% of normal last year. 48% of average is bad but at least it's not 8%. Soil moisture is currently near normal in the north and very dry in the south. Reservoir storage is declining, currently at 66% of capacity across the state, down 5% from last month and 4% less than last year. Climate Prediction Center forecast for July-September indicate near normal temperatures and above normal precipitation.

Current Utah Streamflow - Courtesy US Geological Survey

Tuesday, July 01, 2014 12:30ET



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

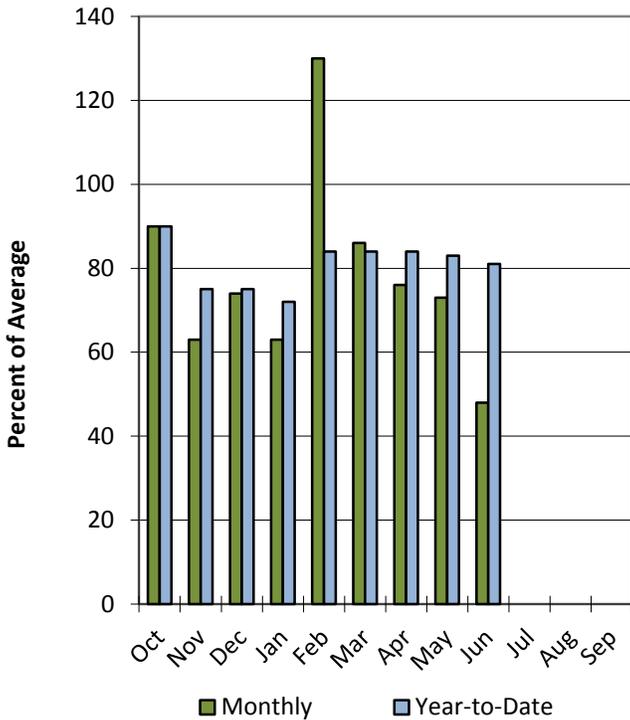


Statewide Utah

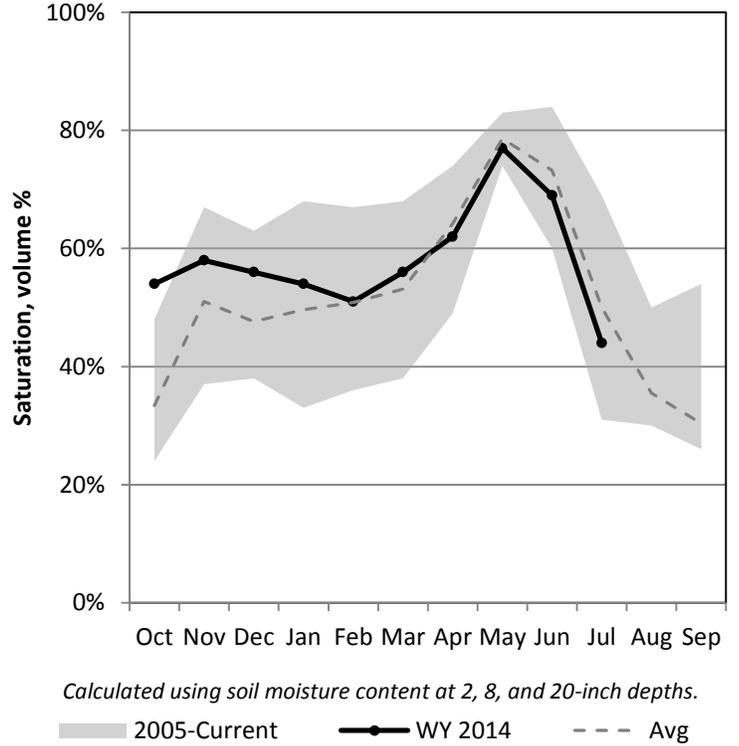
7/1/2014

Precipitation in June was much below average at 48%, which brings the seasonal accumulation (Oct-Jun) to 81% of average. Soil moisture is at 44% compared to 35% last year. Reservoir storage is at 66% of capacity, compared to 70% last year.

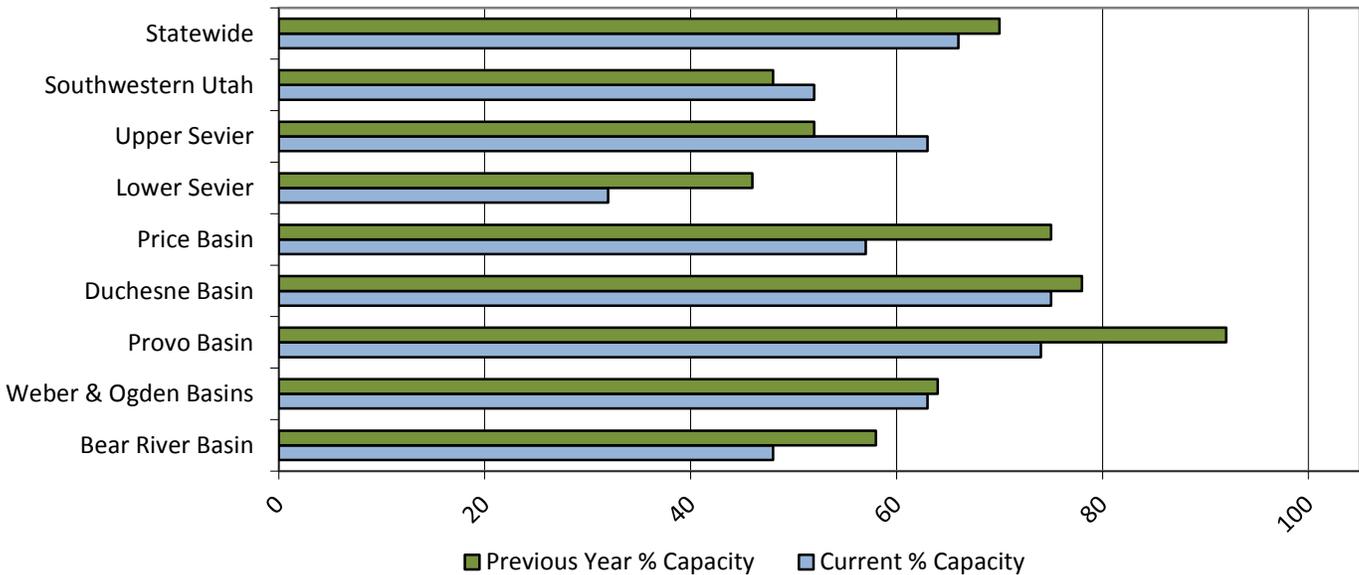
Precipitation



Soil Moisture



Reservoir Storage



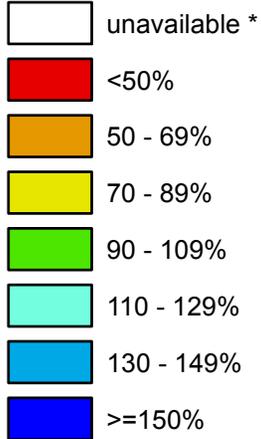
Utah

SNOTEL Water Year (Oct 1) to Date Precipitation

% of Normal

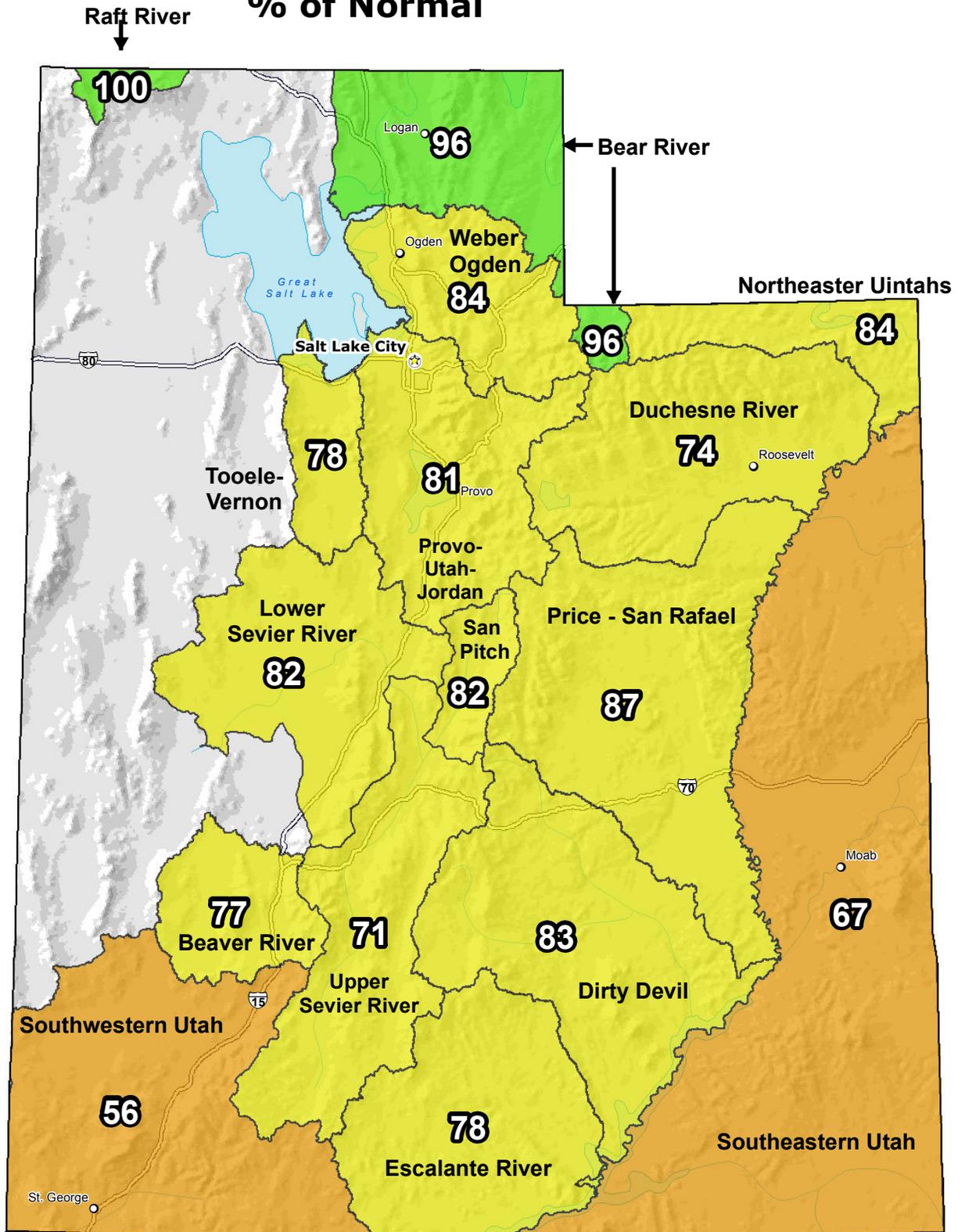
Jul 01, 2014

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).

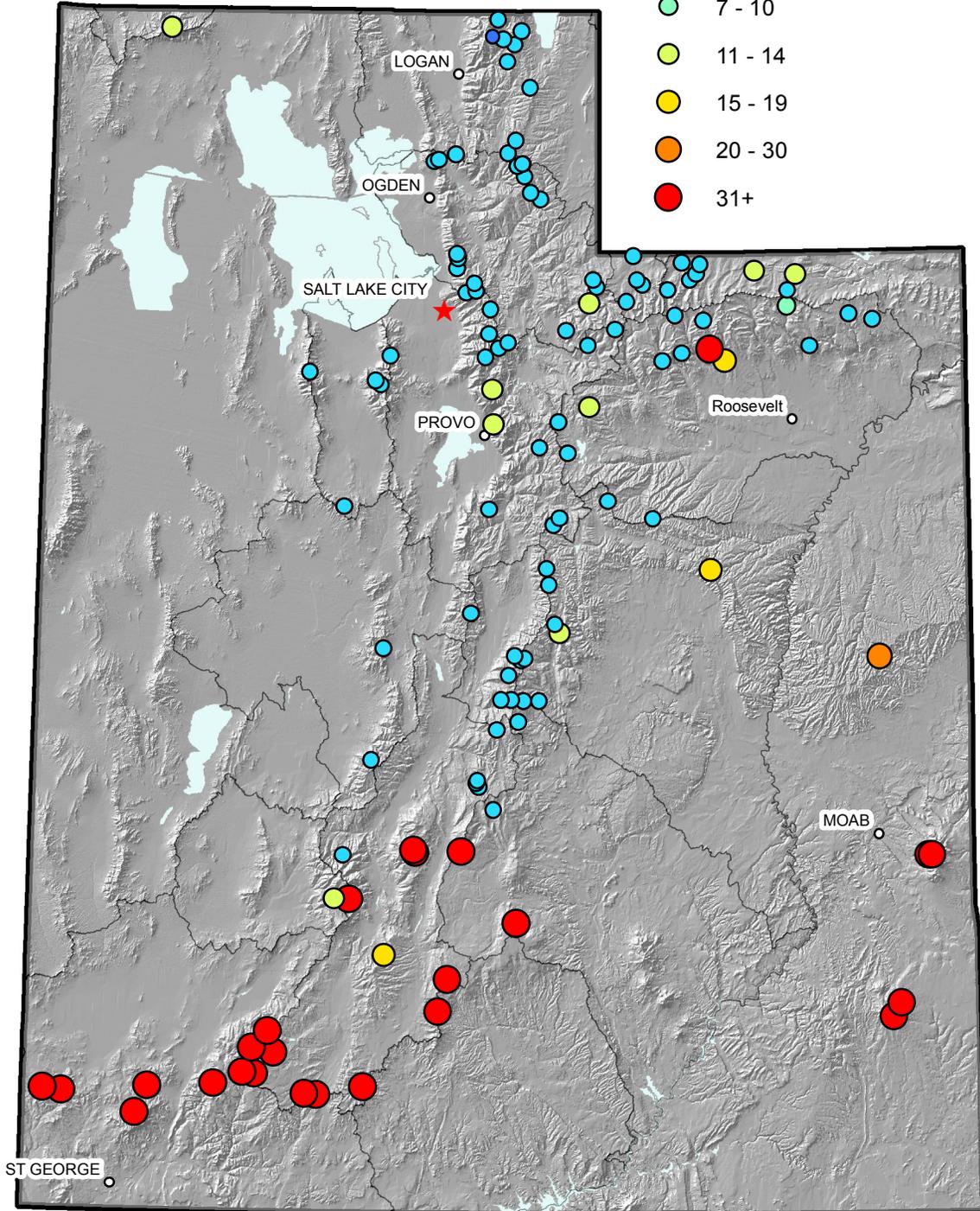
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Utah SNOTEL Precipitation

7/1/2014

Days Since 0.1"
Accumulated Precipitation

- 1
- 2 - 3
- 4 - 6
- 7 - 10
- 11 - 14
- 15 - 19
- 20 - 30
- 31+



United States Department of Agriculture
Natural Resources Conservation Service



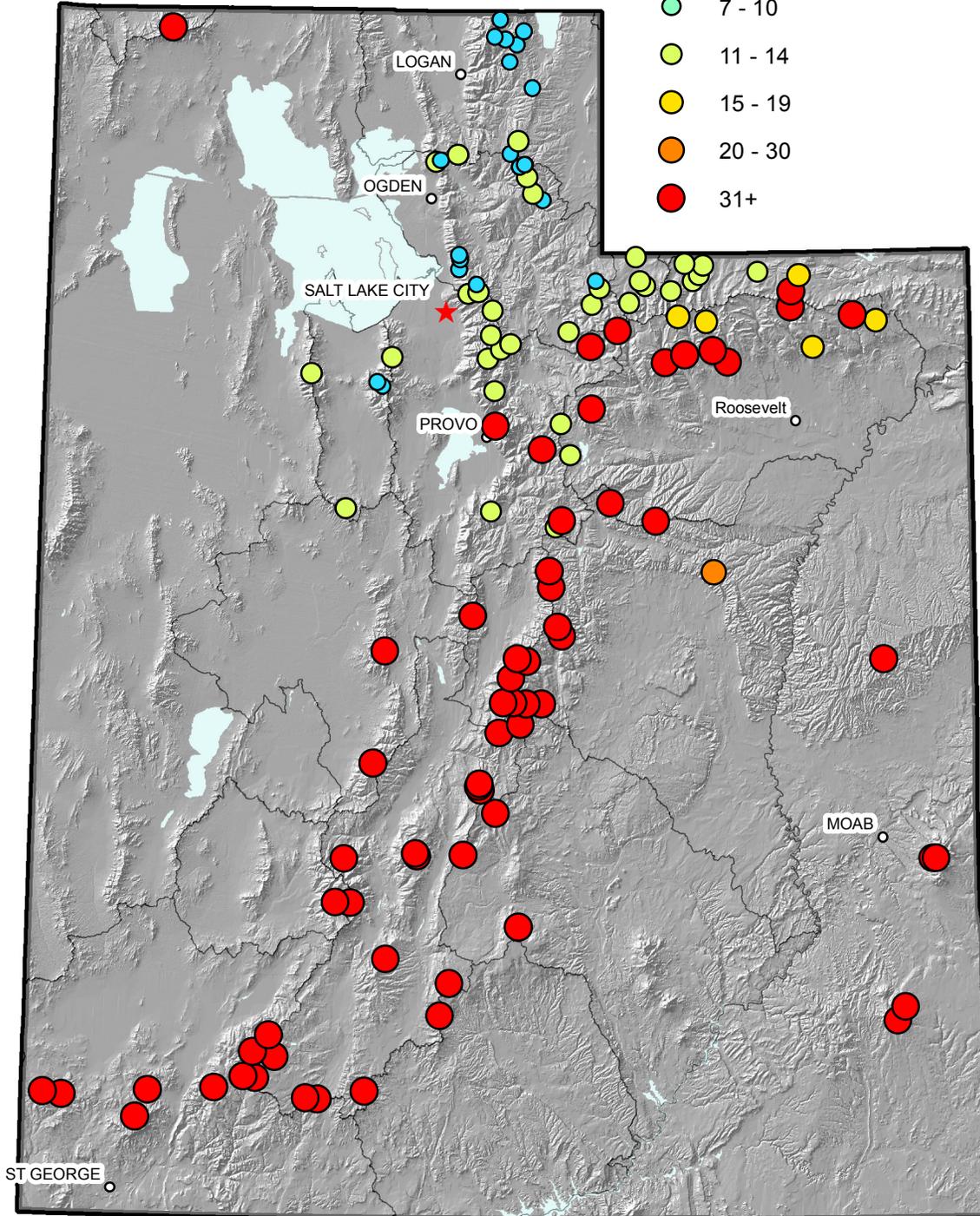
*Provisional Data
Subject to Revision

Utah SNOTEL Precipitation

7/1/2014

Days Since 0.5"
Accumulated Precipitation

- 1
- 2 - 3
- 4 - 6
- 7 - 10
- 11 - 14
- 15 - 19
- 20 - 30
- 31+



United States Department of Agriculture
Natural Resources Conservation Service



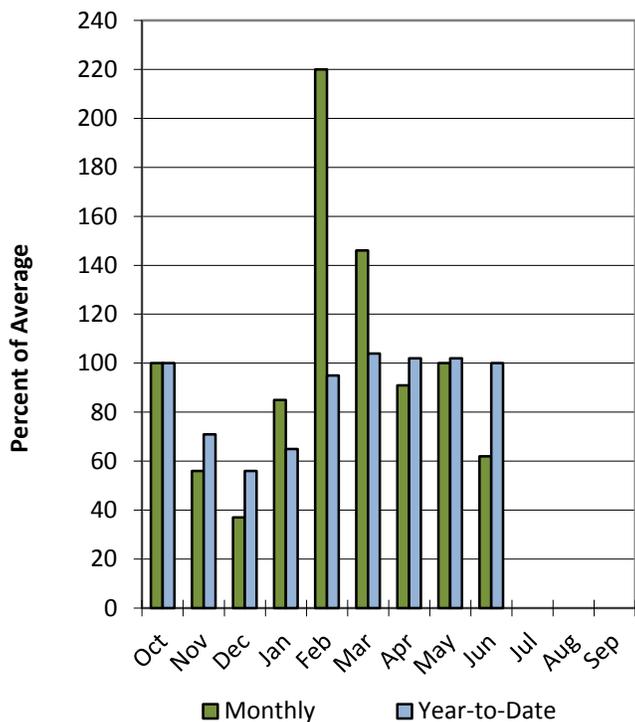
*Provisional Data
Subject to Revision

Raft River Basin

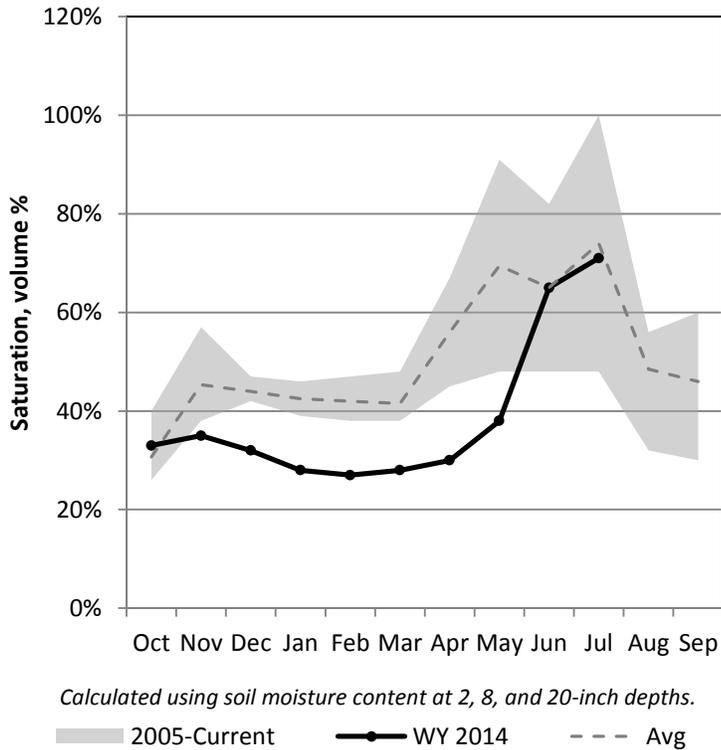
7/1/2014

Precipitation in June was much below average at 62%, which brings the seasonal accumulation (Oct-Jun) to 100% of average. Soil moisture is at 71% compared to 59% last year.

Precipitation



Soil Moisture

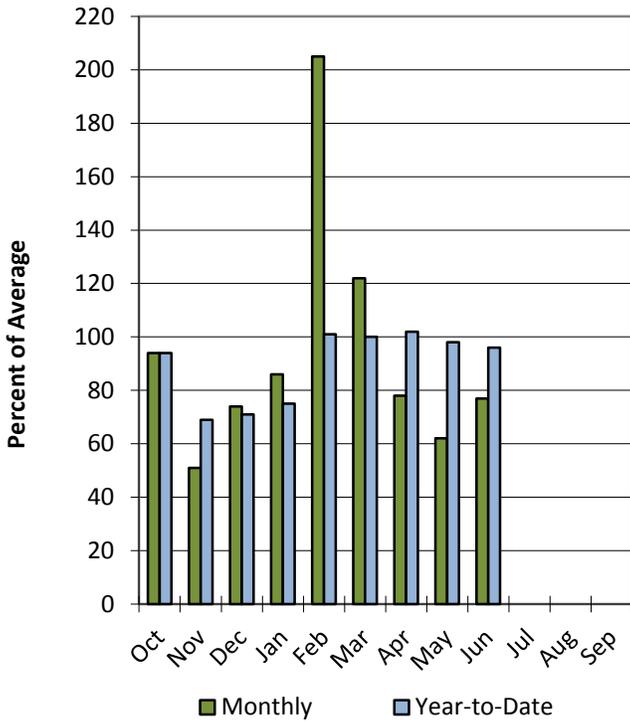


Bear River Basin

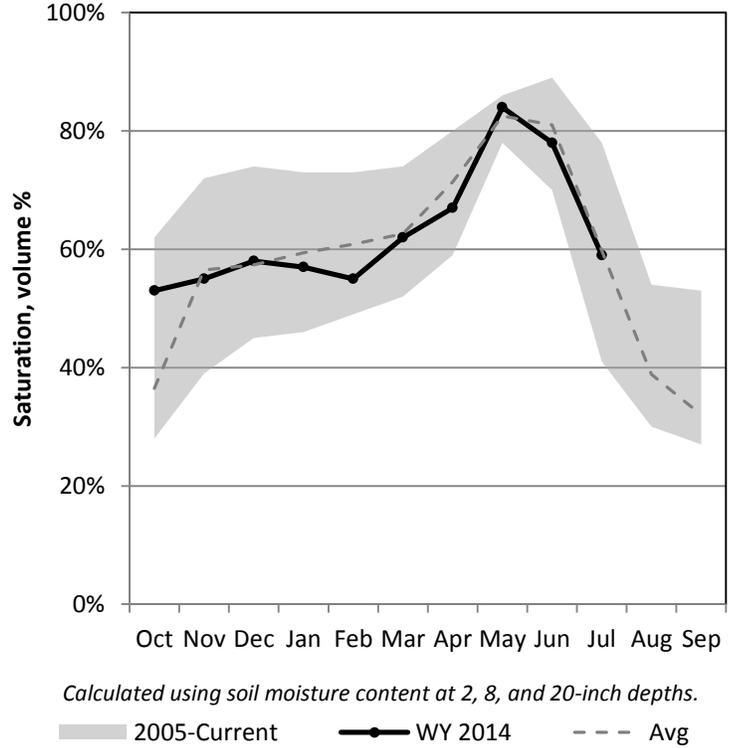
7/1/2014

Precipitation in June was below average at 77%, which brings the seasonal accumulation (Oct-Jun) to 96% of average. Soil moisture is at 59% compared to 43% last year. Reservoir storage is at 48% of capacity, compared to 58% last year. The water availability index for the Bear River is 28%.

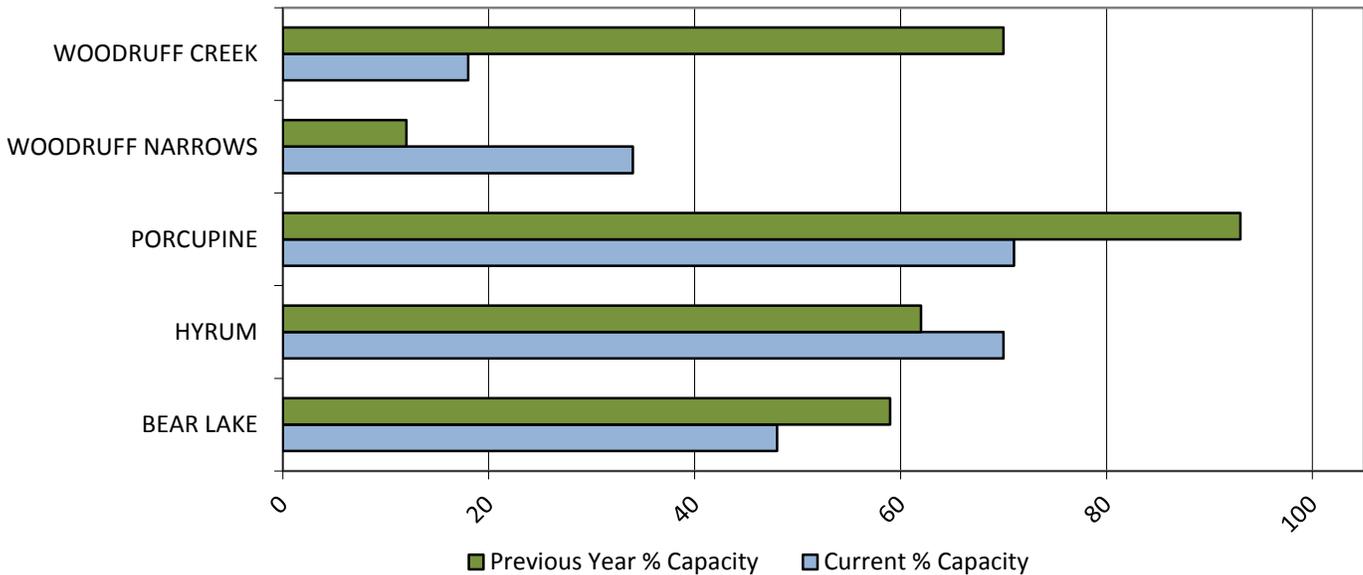
Precipitation



Soil Moisture



Reservoir Storage



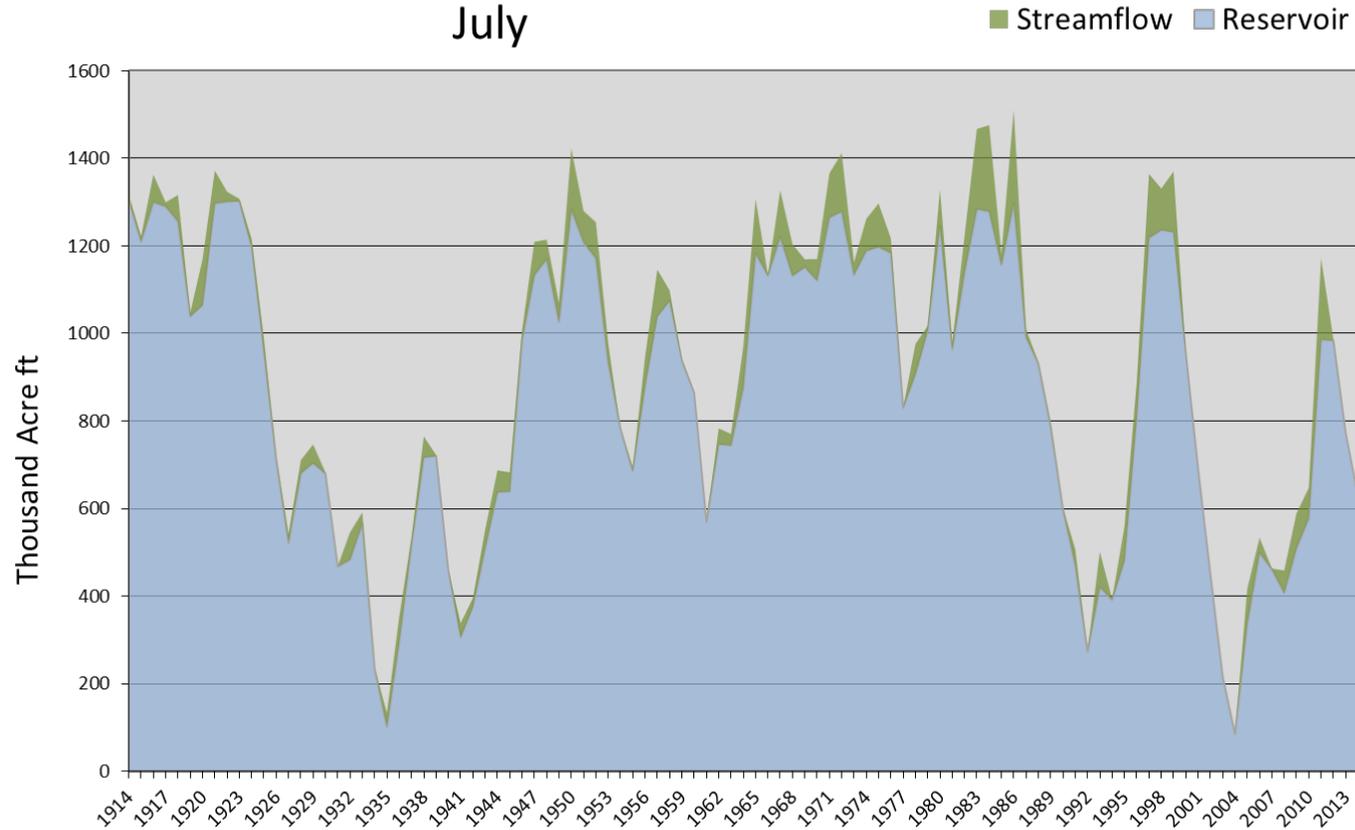
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Bear Lake	June accumulated inflow to Bear Lake (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Bear River	628	32	660	-1.80	28	90, 10, 30, 45

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

Bear Lake - Water Availability Index
July



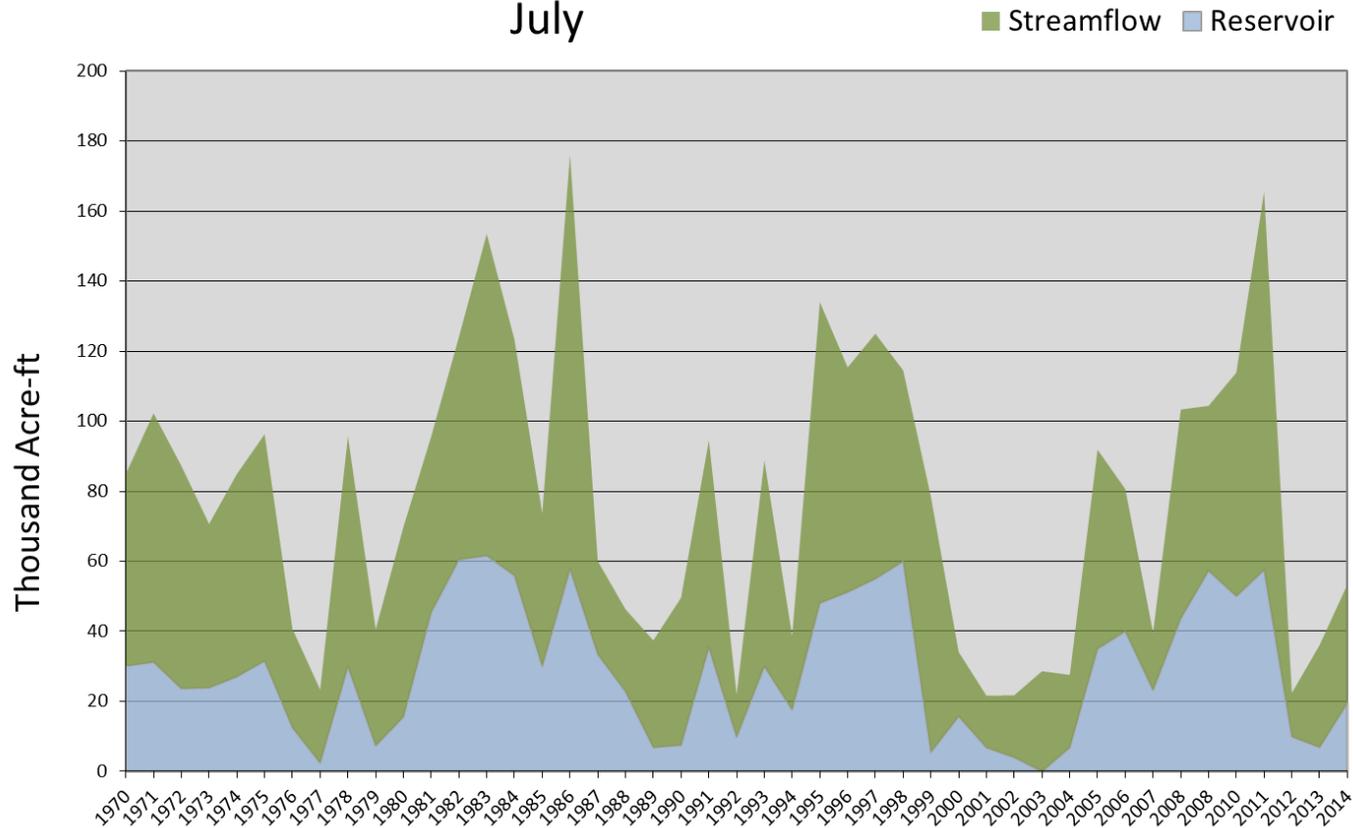
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Woodruff Narrows Reservoir	June Observed Streamflow Bear at Stateline	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Woodruff Narrows	19.5	33.9	53.4	-1.09	37	88, 90, 87, 80

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

Woodruff Narrows - Water Availability Index July



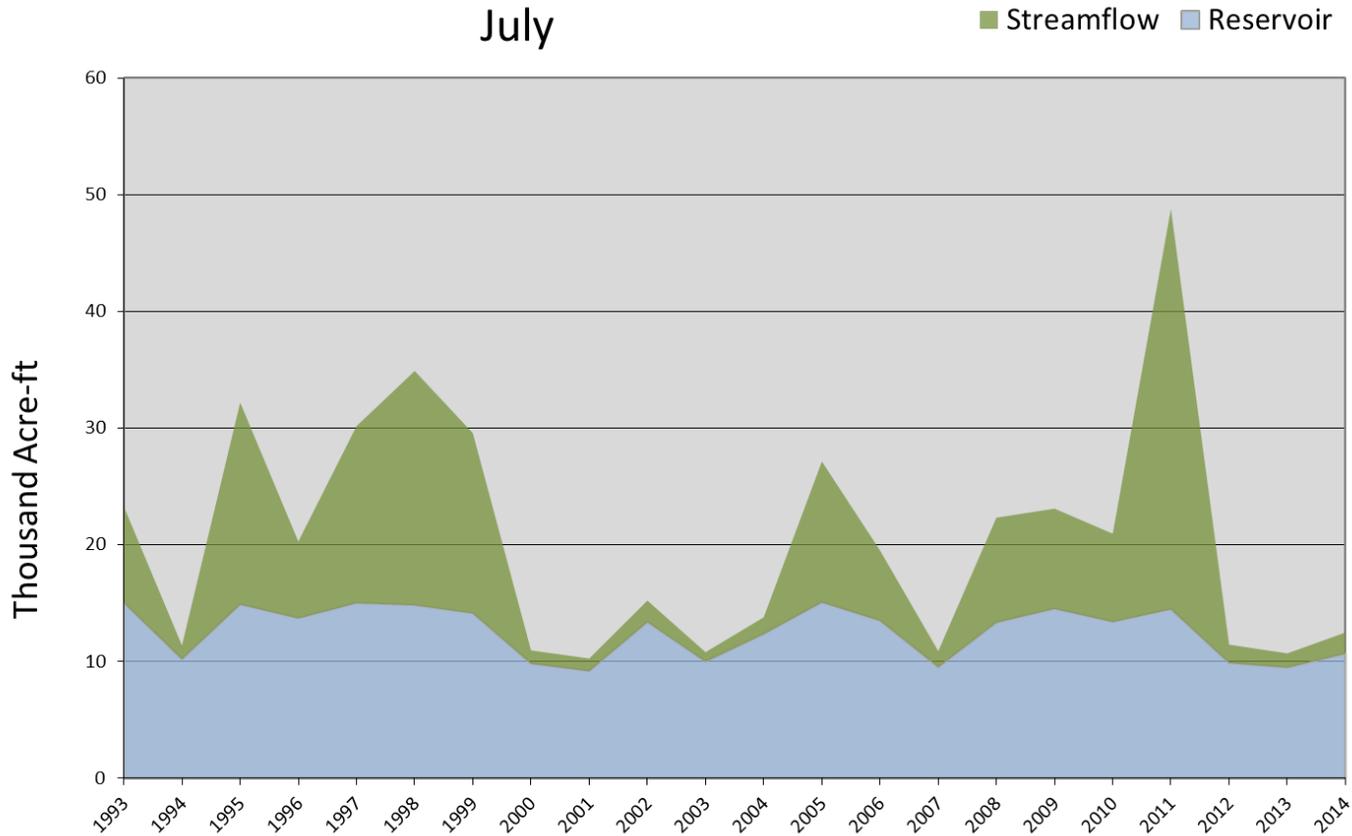
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Hyrum Reservoir	June Observed Streamflow Little Bear at Paradise	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Little Bear	10.7	1.8	12.5	-1.27	35	94, 12, 04, 02

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

Little Bear River - Water Availability Index July

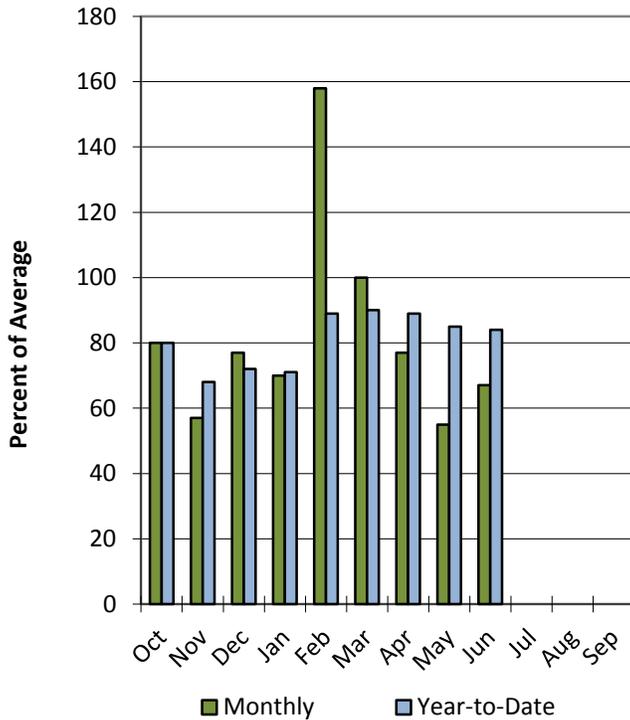


Weber & Ogden River Basins

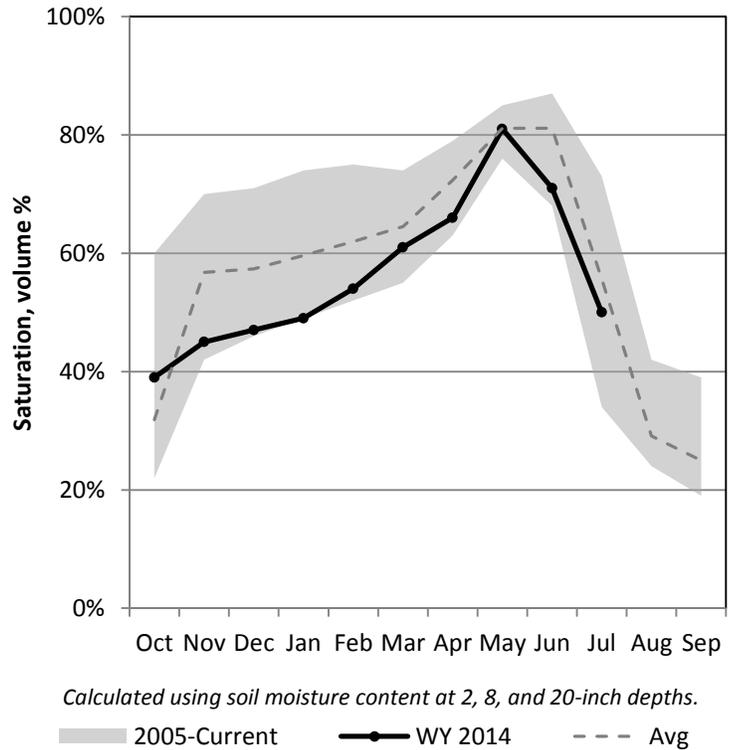
7/1/2014

Precipitation in June was much below average at 67%, which brings the seasonal accumulation (Oct-Jun) to 84% of average. Soil moisture is at 50% compared to 37% last year. Reservoir storage is at 63% of capacity, compared to 64% last year. The water availability index for the Ogden River is 39% and 13% for the Weber River.

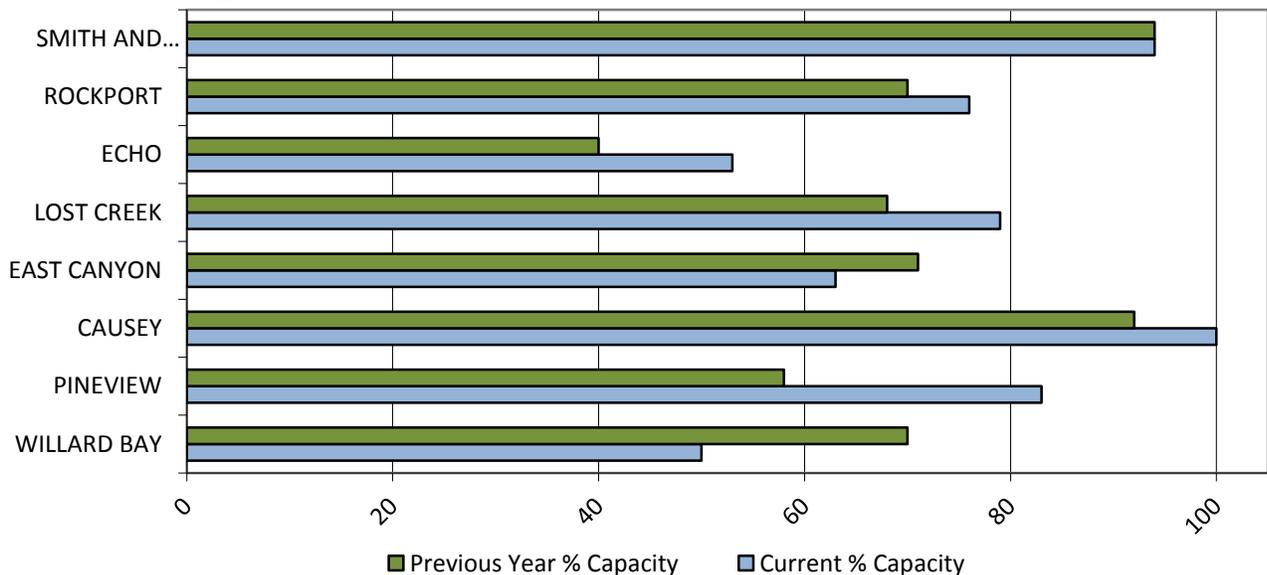
Precipitation



Soil Moisture



Reservoir Storage



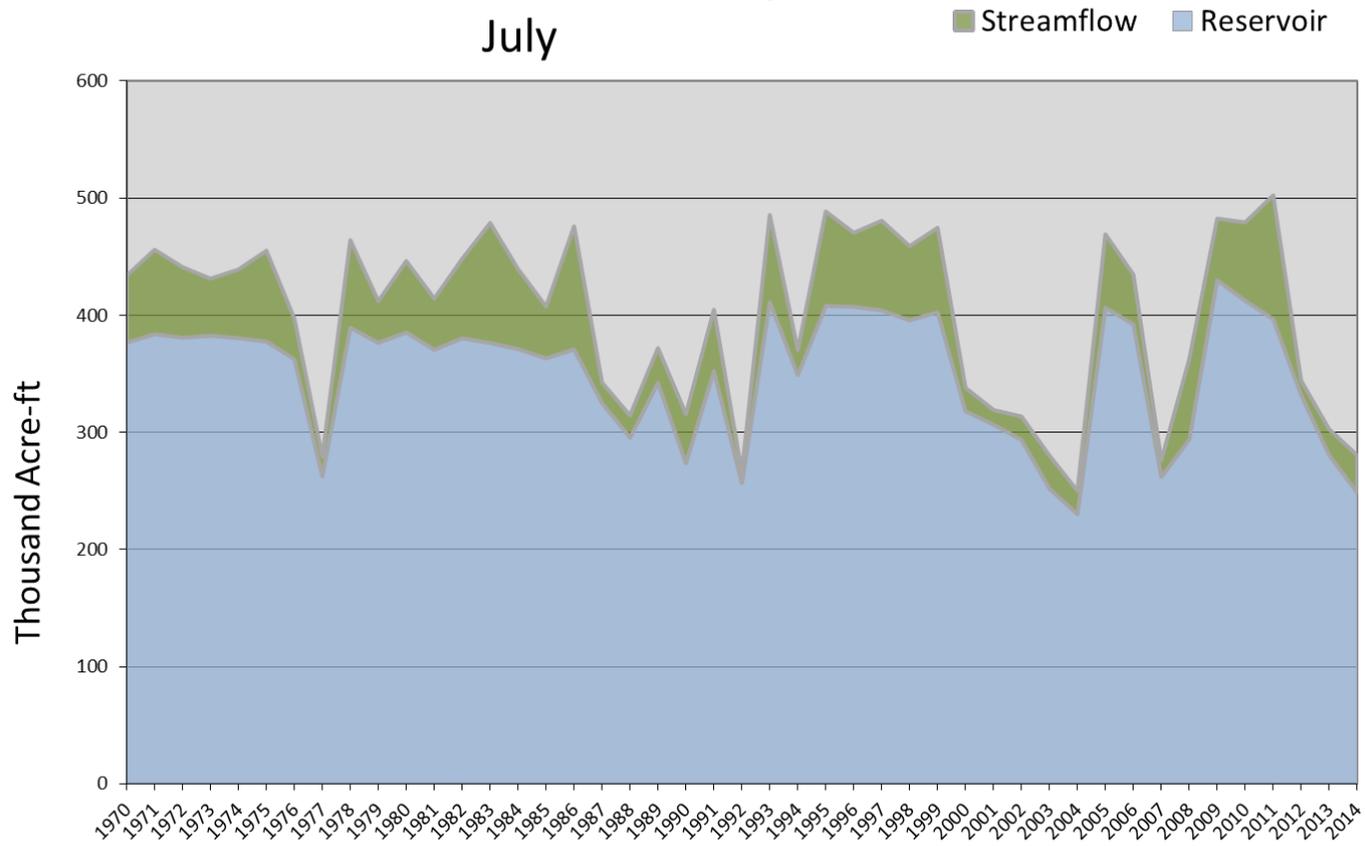
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Reservoirs	June accumulated flow at Weber near Oakley (observed)	Reservoirs + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Weber River	249	32	280	-3.08	13	77, 03, 13, 02

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

Weber River - Water Availability Index July



July 1, 2014

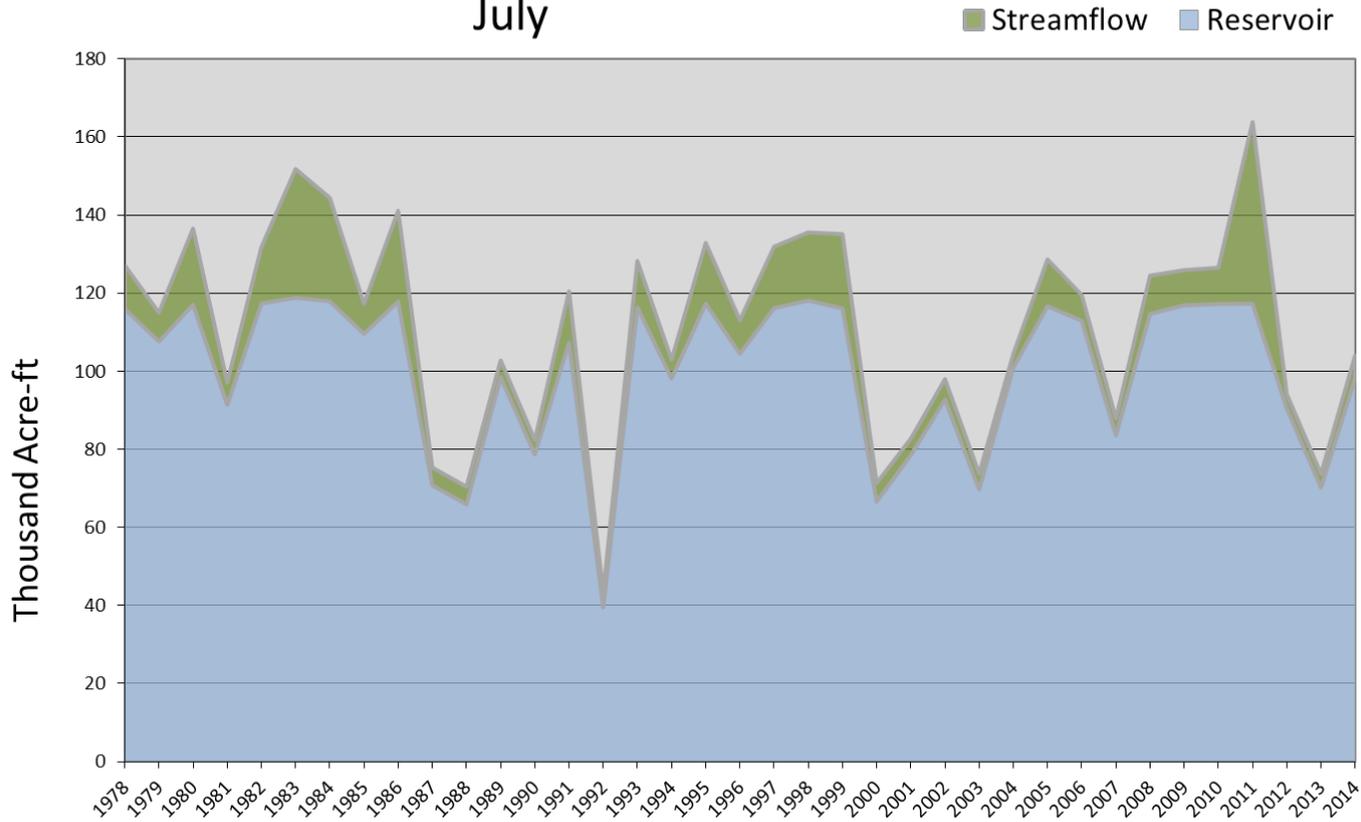
Water Availability Index

Basin or Region	June EOM* Pine View & Causey	June accumulated flow at South Fork Ogden (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF			
Ogden River	98	6	104	-0.88	39	89, 94, 04, 96

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

Ogden River - Water Availability Index

July

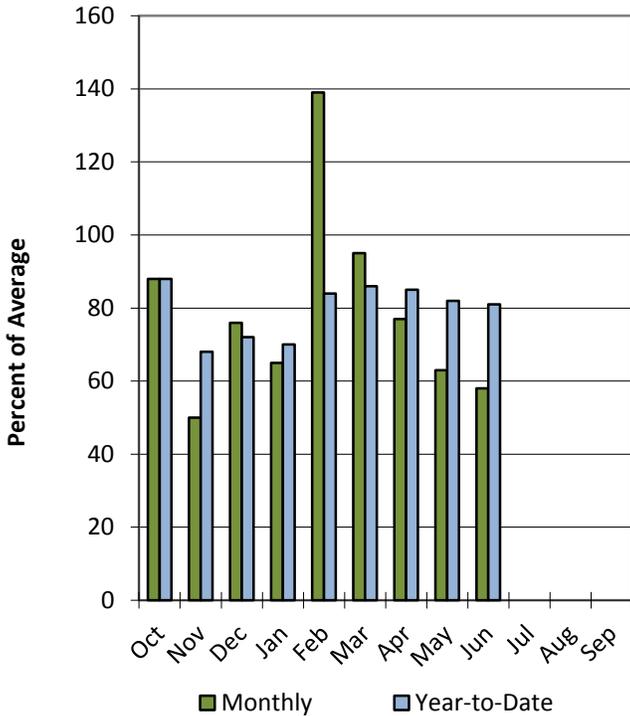


Provo & Jordan River Basins

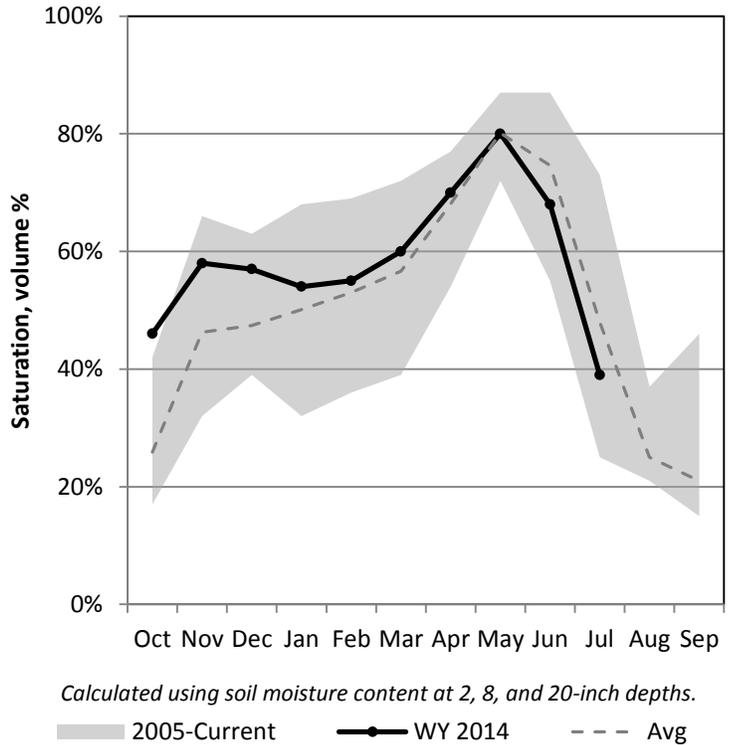
7/1/2014

Precipitation in June was much below average at 58%, which brings the seasonal accumulation (Oct-Jun) to 81% of average. Soil moisture is at 39% compared to 28% last year. Reservoir storage is at 74% of capacity, compared to 78% last year. The water availability index for the Provo River is 33%.

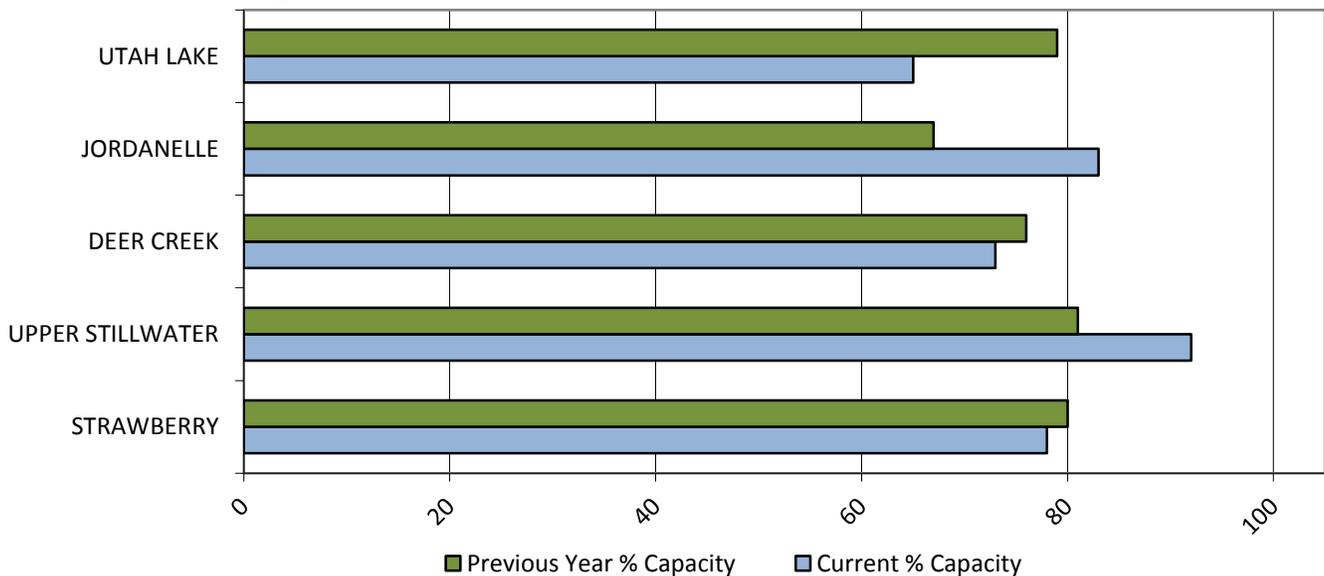
Precipitation



Soil Moisture



Reservoir Storage



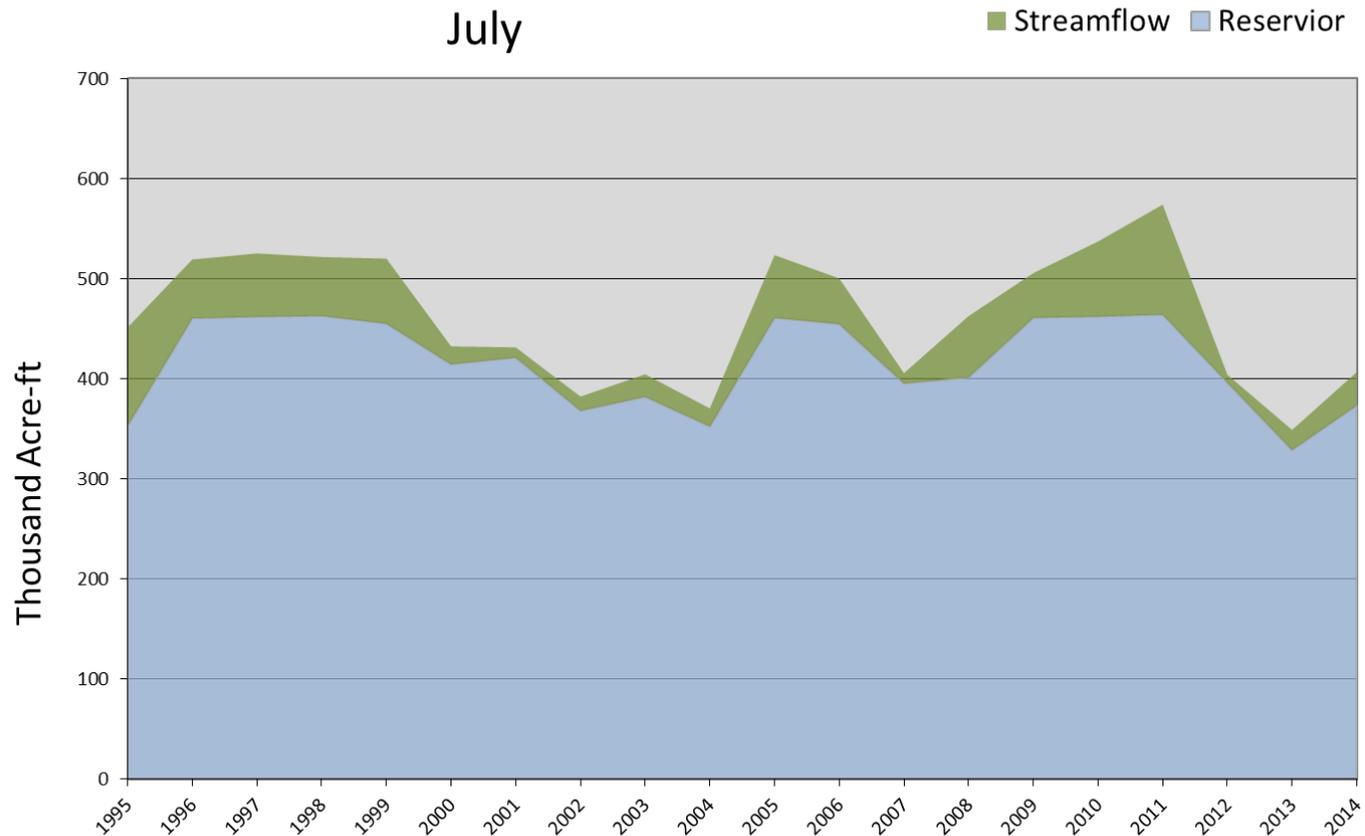
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Deer Creek, Jordanelle	June accumulated flow Provo River at Woodland (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Provo	374	33.2	407	-1.39	33	03, 07, 01, 00

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

Provo River - Water Availability Index July

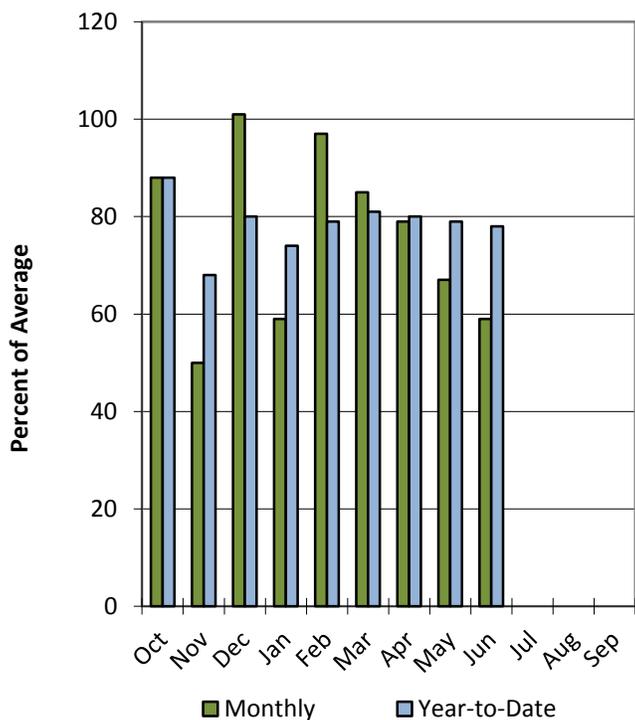


Tooele & Vernon Creek Basins

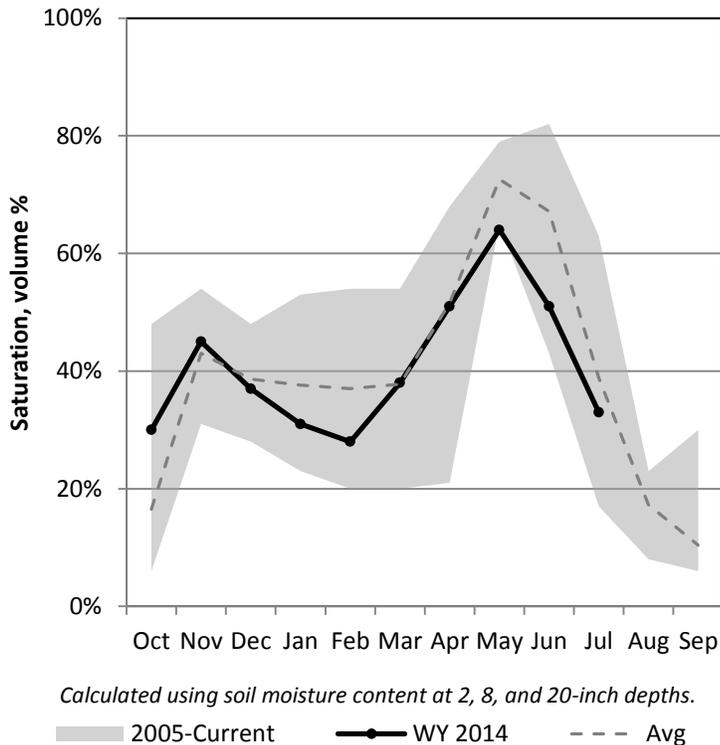
7/1/2014

Precipitation in June was much below average at 59%, which brings the seasonal accumulation (Oct-Jun) to 78% of average. Soil moisture is at 33% compared to 22% last year. Reservoir storage is at 60% of capacity, compared to 61% last year.

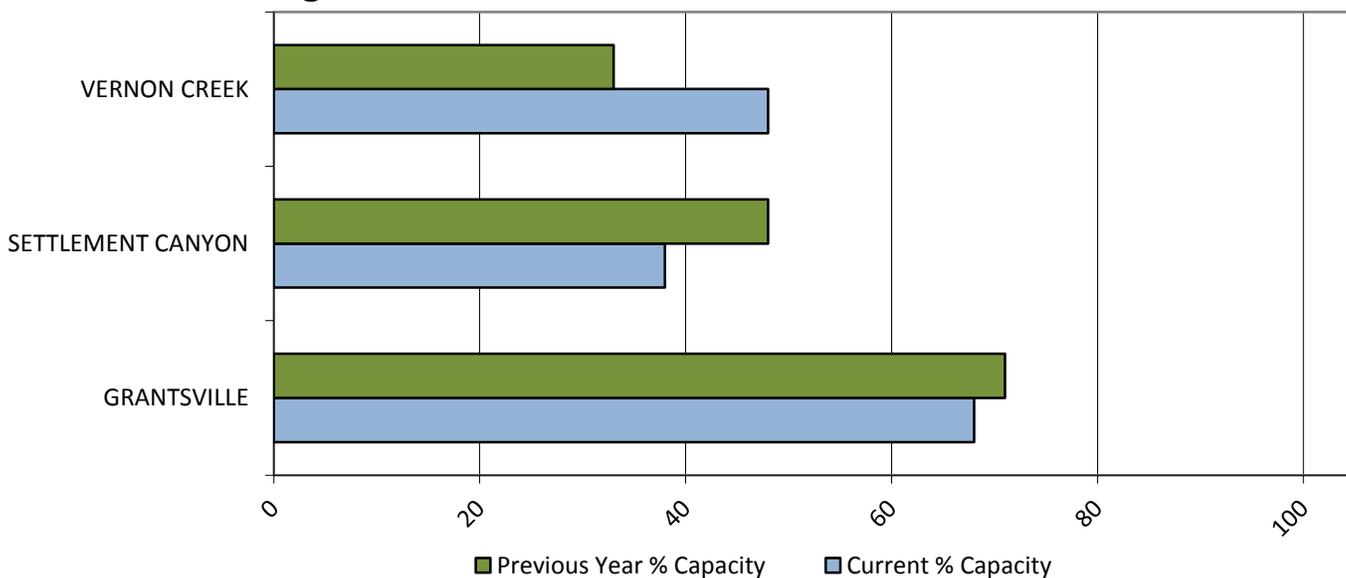
Precipitation



Soil Moisture



Reservoir Storage

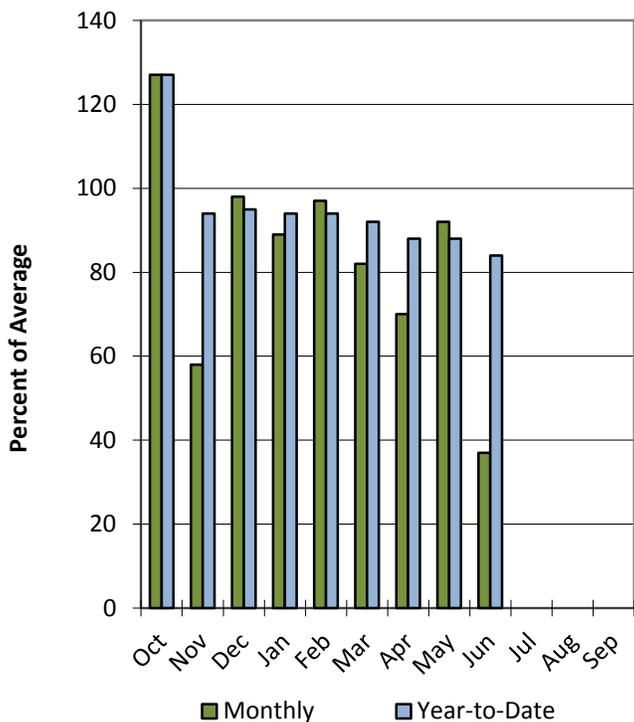


Northeastern Uintah Basin

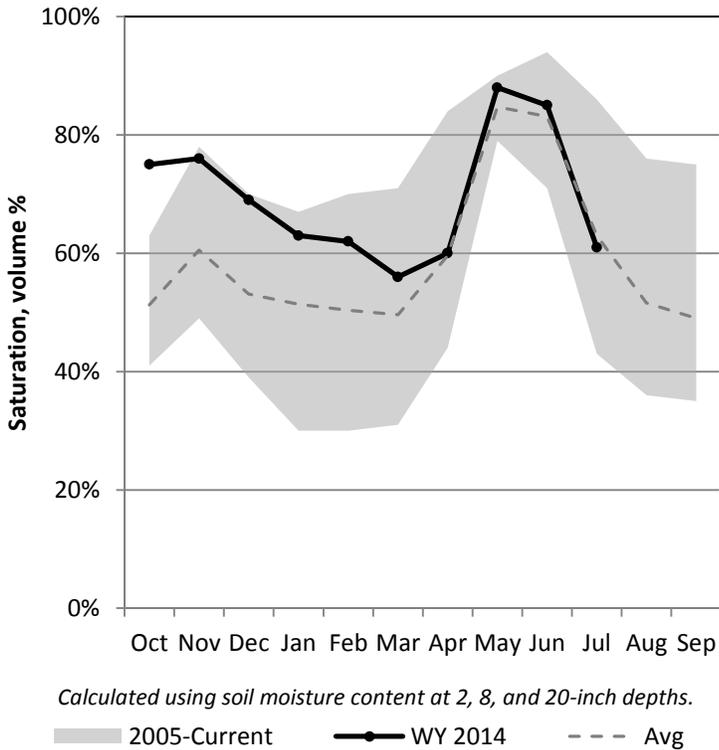
7/1/2014

Precipitation in June was much below average at 37%, which brings the seasonal accumulation (Oct-Jun) to 84% of average. Soil moisture is at 61% compared to 53% last year. Reservoir storage is at 87% of capacity, compared to 78% last year.

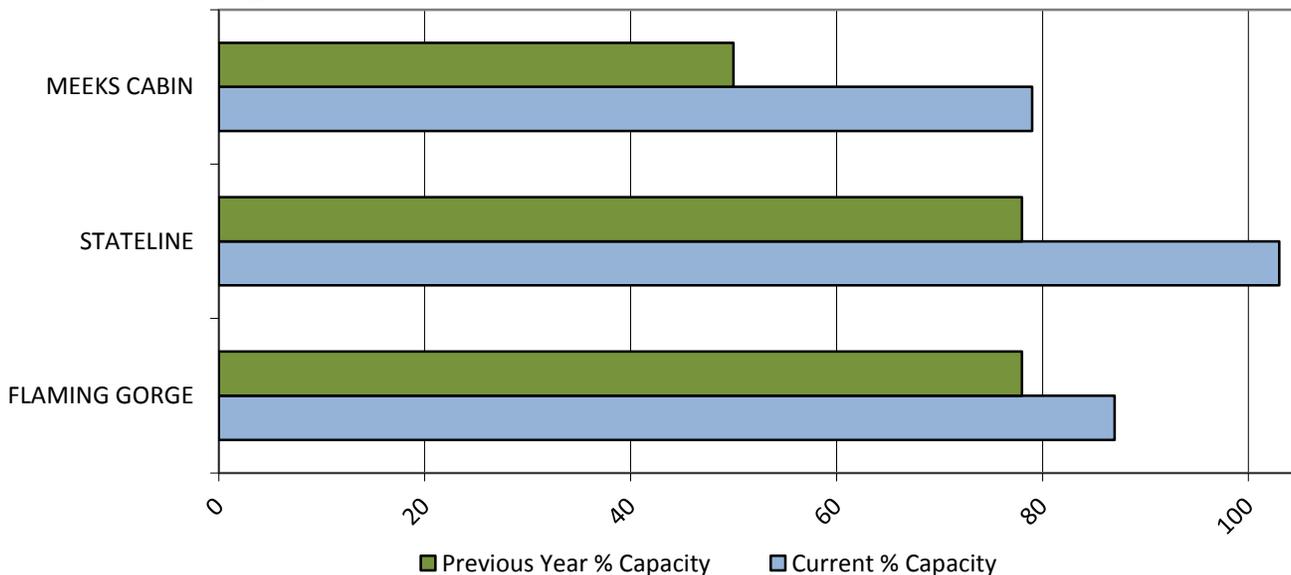
Precipitation



Soil Moisture



Reservoir Storage



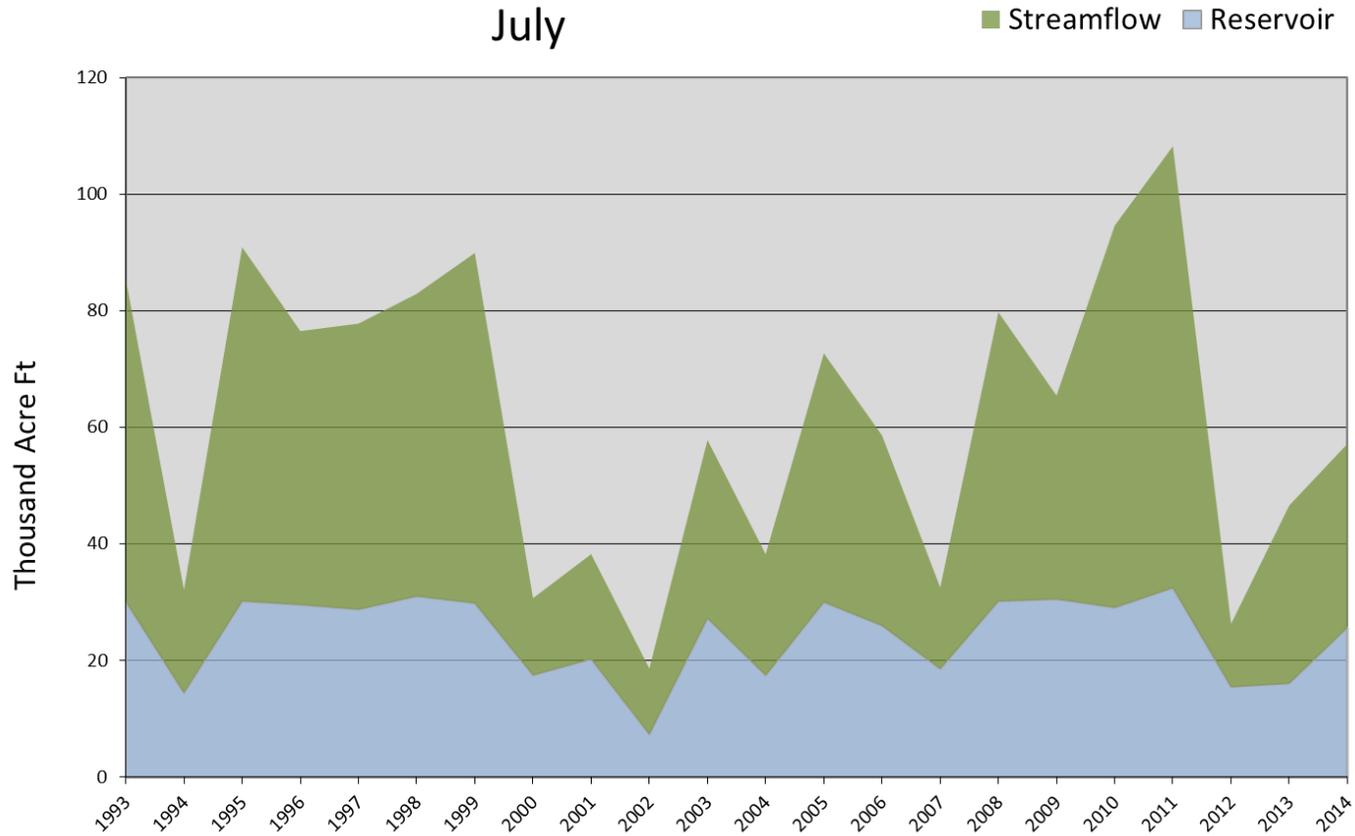
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Meeks Cabin Reservoir	June 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	25.7	31.5	57.2	-0.76	41	01, 13, 03, 06

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

Blacks Fork River - Water Availability Index
July



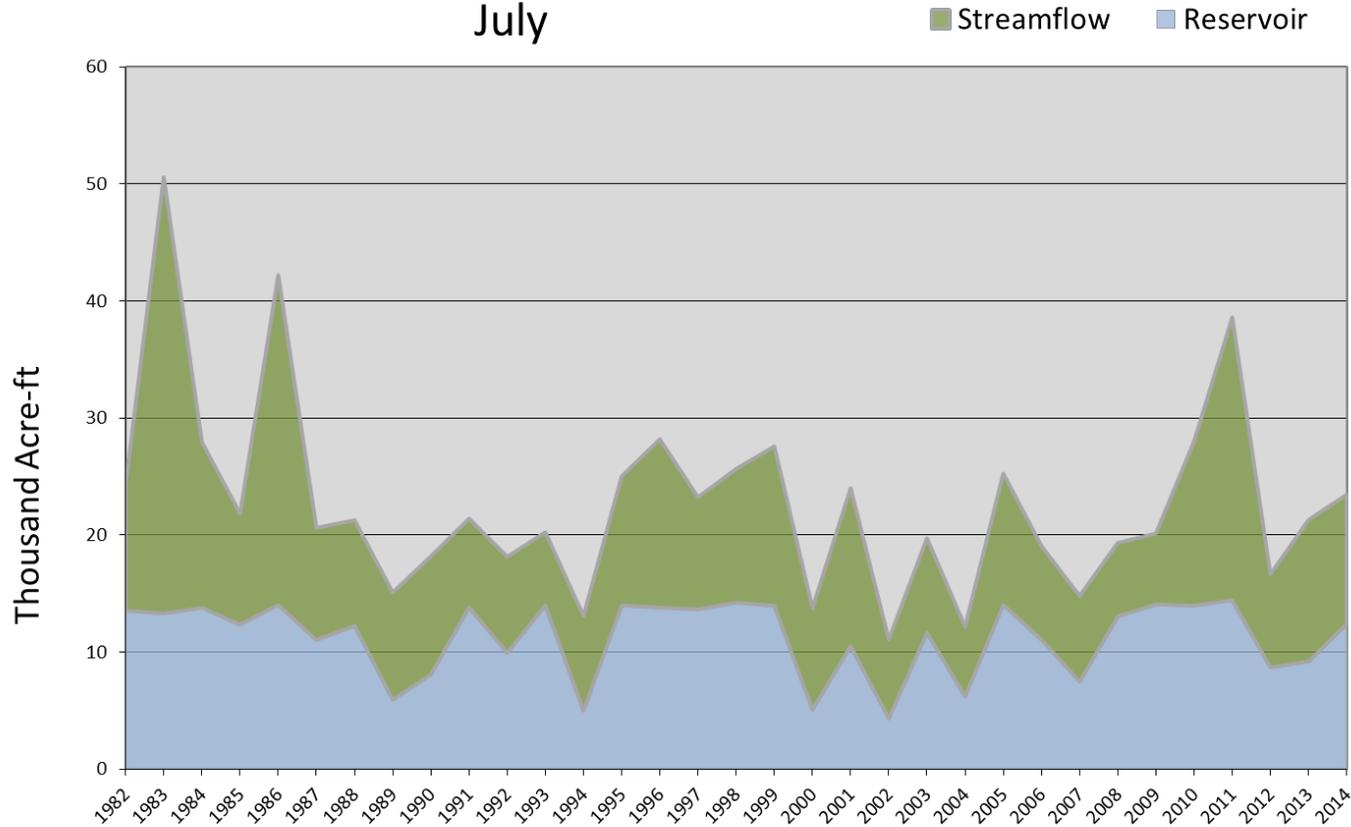
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Stateline Reservoir	June Observed Flow EF Smiths Creek	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Smiths Creek	12.4	11.1	23.5	0.98	62	85, 97, 01, 82

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

Smiths Creek - Water Availability Index July

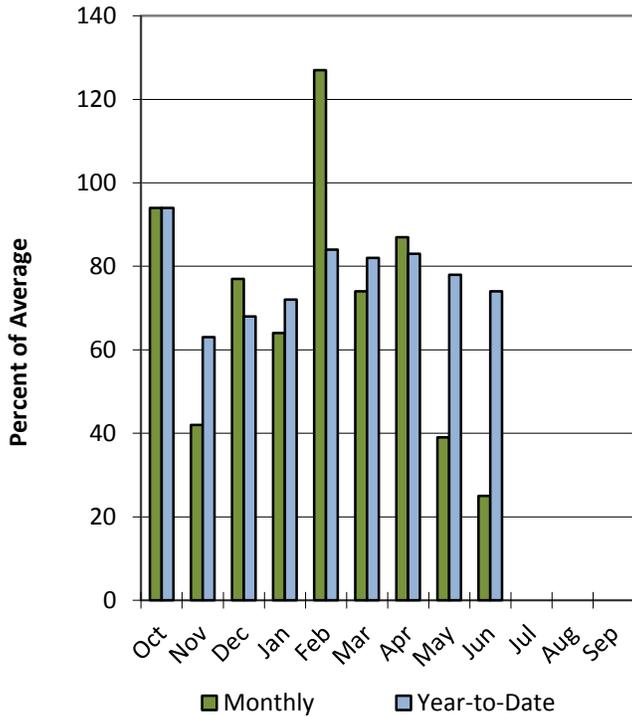


Duchesne River Basin

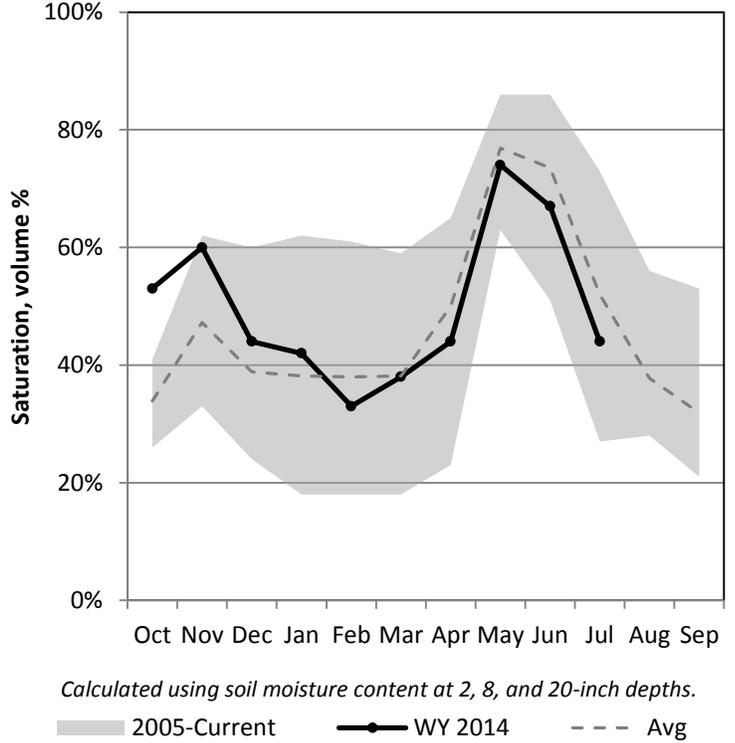
7/1/2014

Precipitation in June was much below average at 25%, which brings the seasonal accumulation (Oct-Jun) to 74% of average. Soil moisture is at 44% compared to 31% last year. Reservoir storage is at 77% of capacity, compared to 79% last year. The water availability index for the Western Uintahs is 29% and 6% for the Eastern Uintahs.

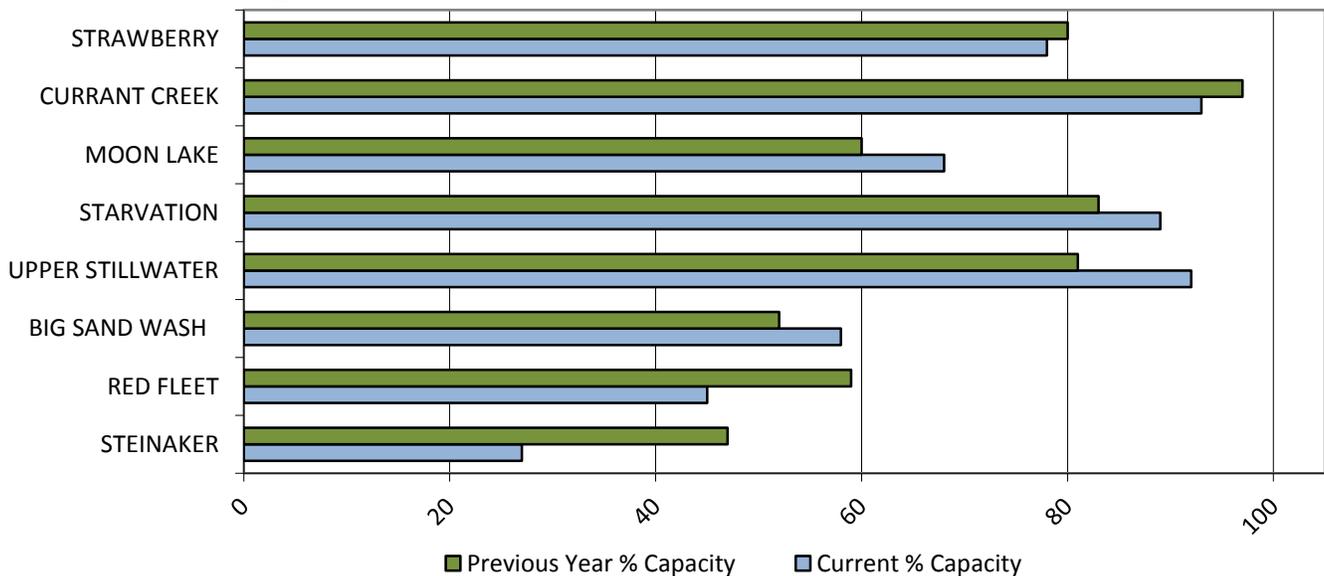
Precipitation



Soil Moisture



Reservoir Storage



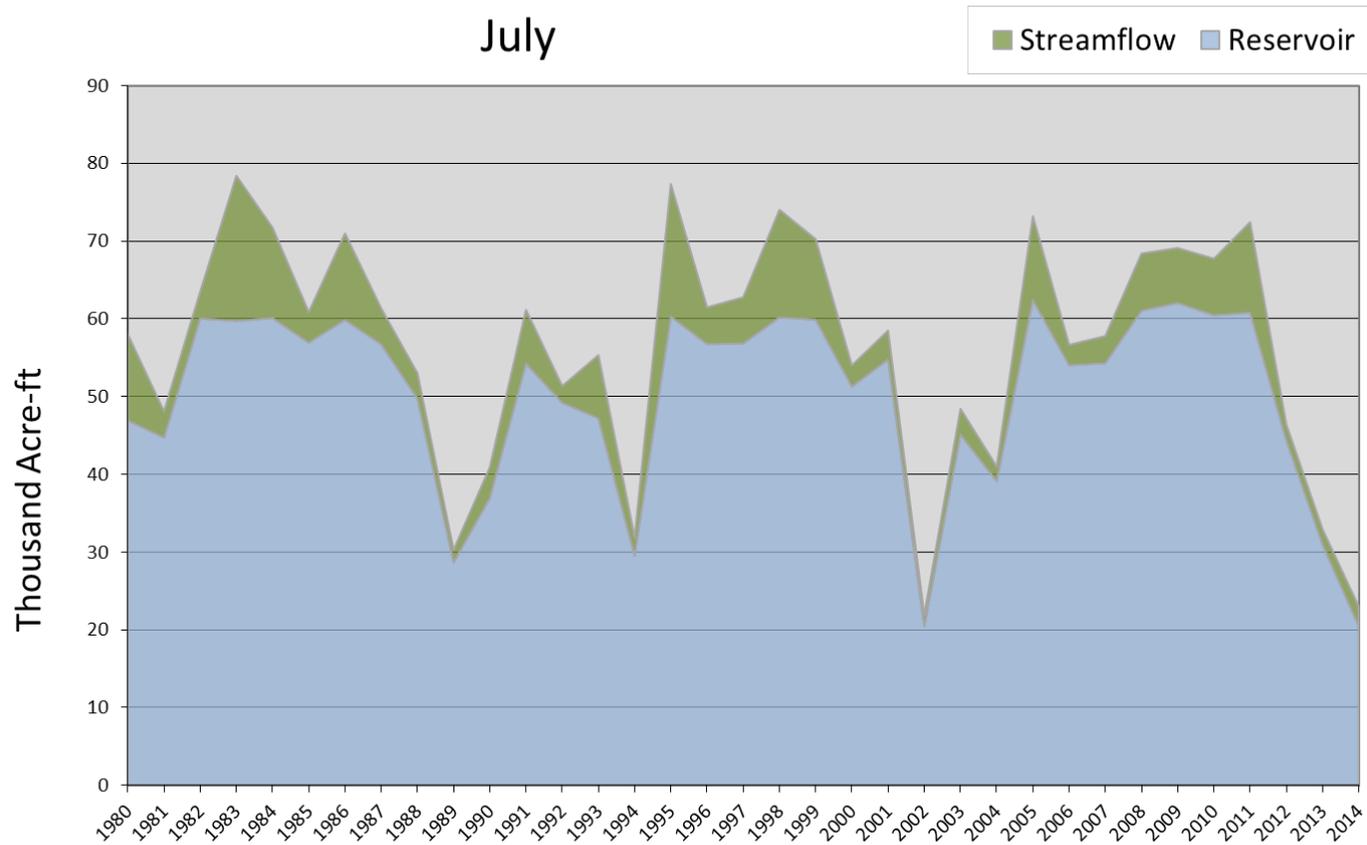
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Red Fleet and Steinaker	June 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	20.5	2.5	23.0	-3.70	6	02, 89, 94

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

Eastern Uintah - Water Availability Index
July



July 1, 2014

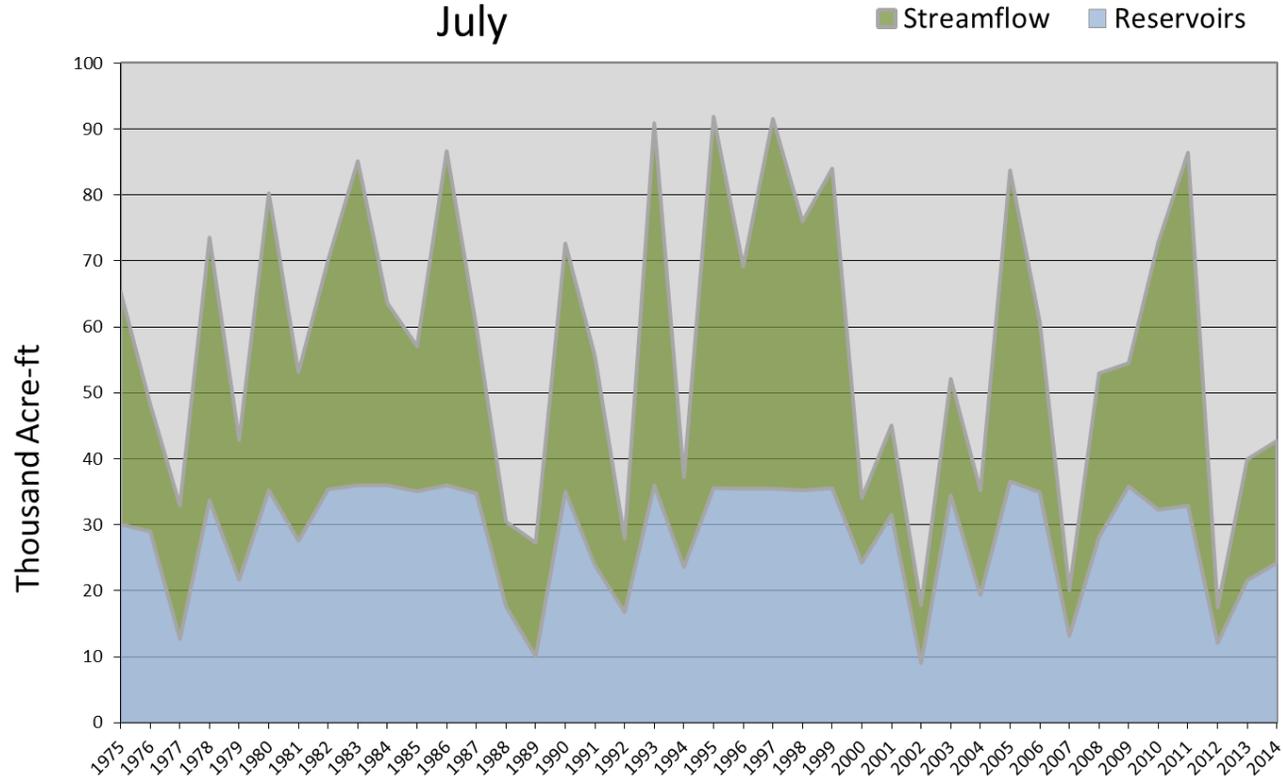
Water Availability Index

Basin or Region	June EOM* Moon Lake	June accumulated flow Lake Fork Creek above Moon Lake (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Moon Lake	24.2	18.5	42.7	-1.73	29	94, 13, 79, 01

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

Moon Lake - Water Availability Index

July

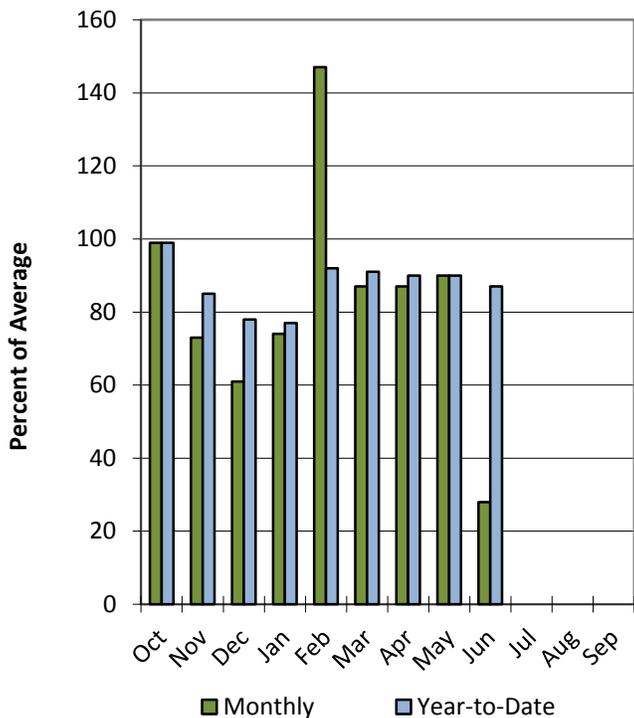


Price & San Rafael Basins

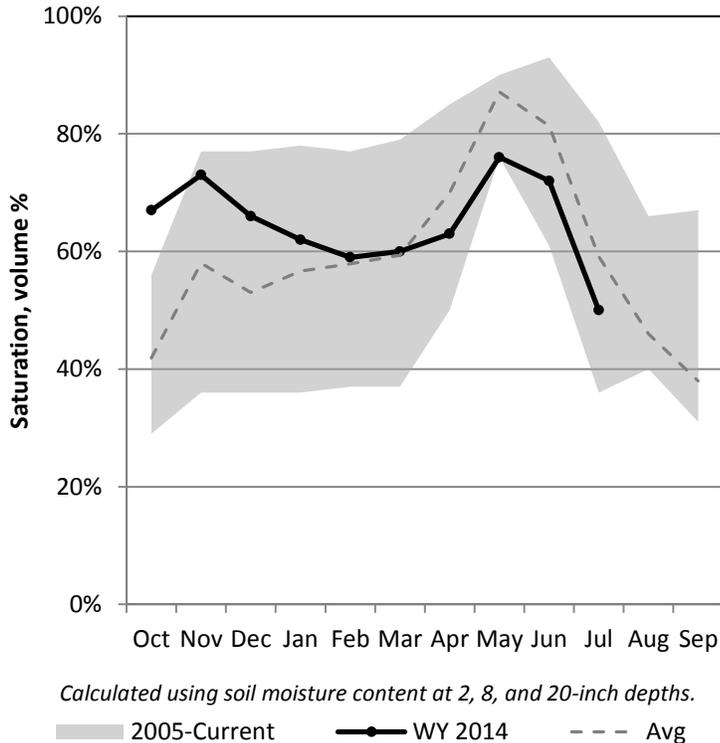
7/1/2014

Precipitation in June was much below average at 28%, which brings the seasonal accumulation (Oct-Jun) to 87% of average. Soil moisture is at 50% compared to 36% last year. Reservoir storage is at 70% of capacity, compared to 57% last year. The water availability index for the Price River is 12%, and 52% for Joe's Valley.

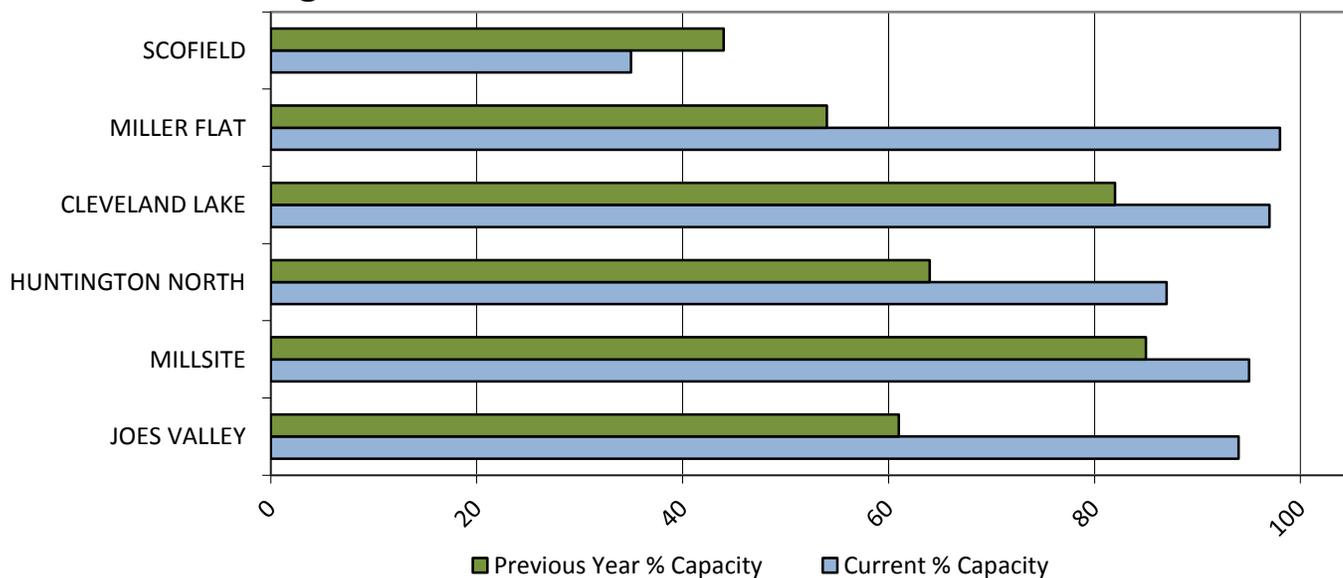
Precipitation



Soil Moisture



Reservoir Storage



July 1, 2014

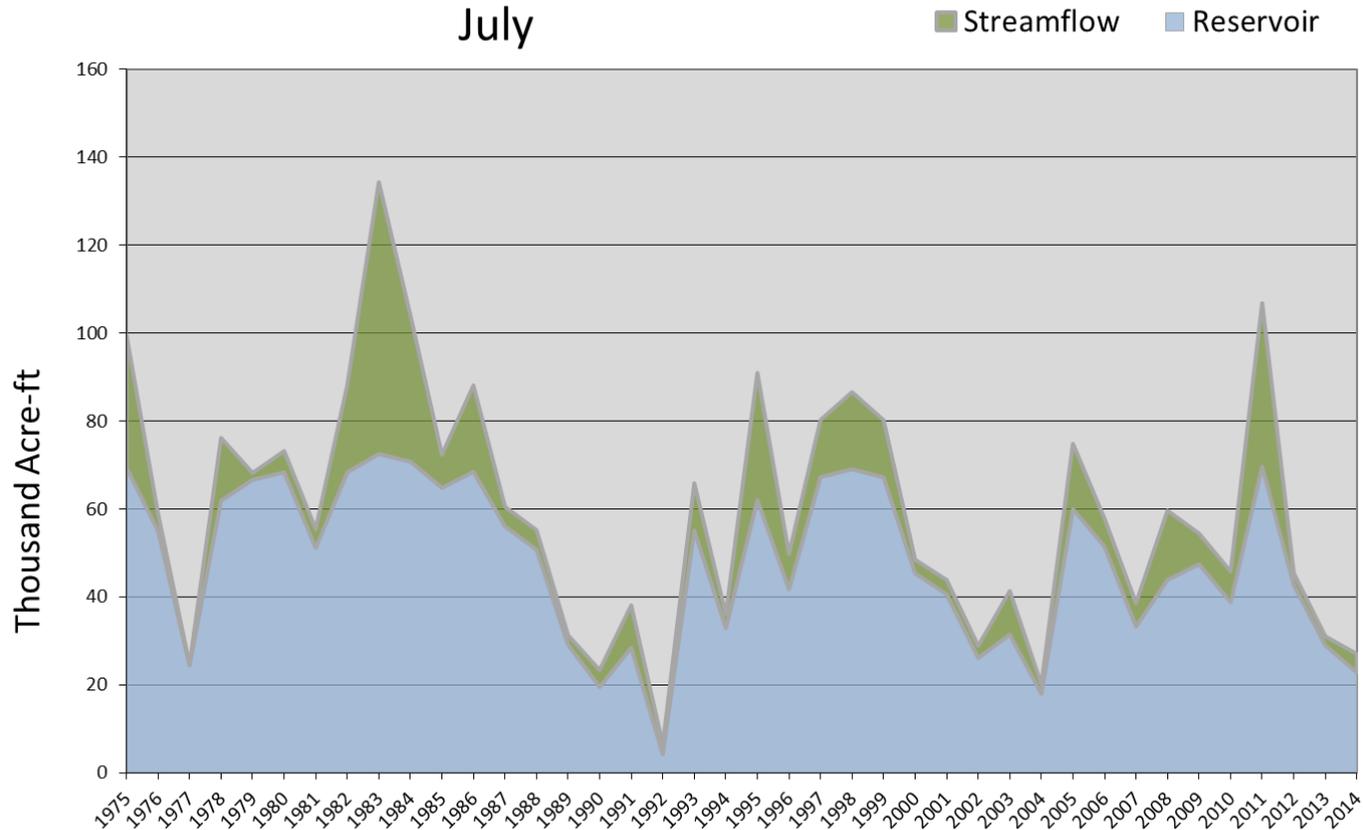
Water Availability Index

Basin or Region	June EOM* Scofield	June accumulated inflow to Scofield (calculated)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Price River	22.8	4.2	27.0	-3.15	12	90, 77, 02, 13

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

Price River - Water Availability Index

July



July 1, 2014

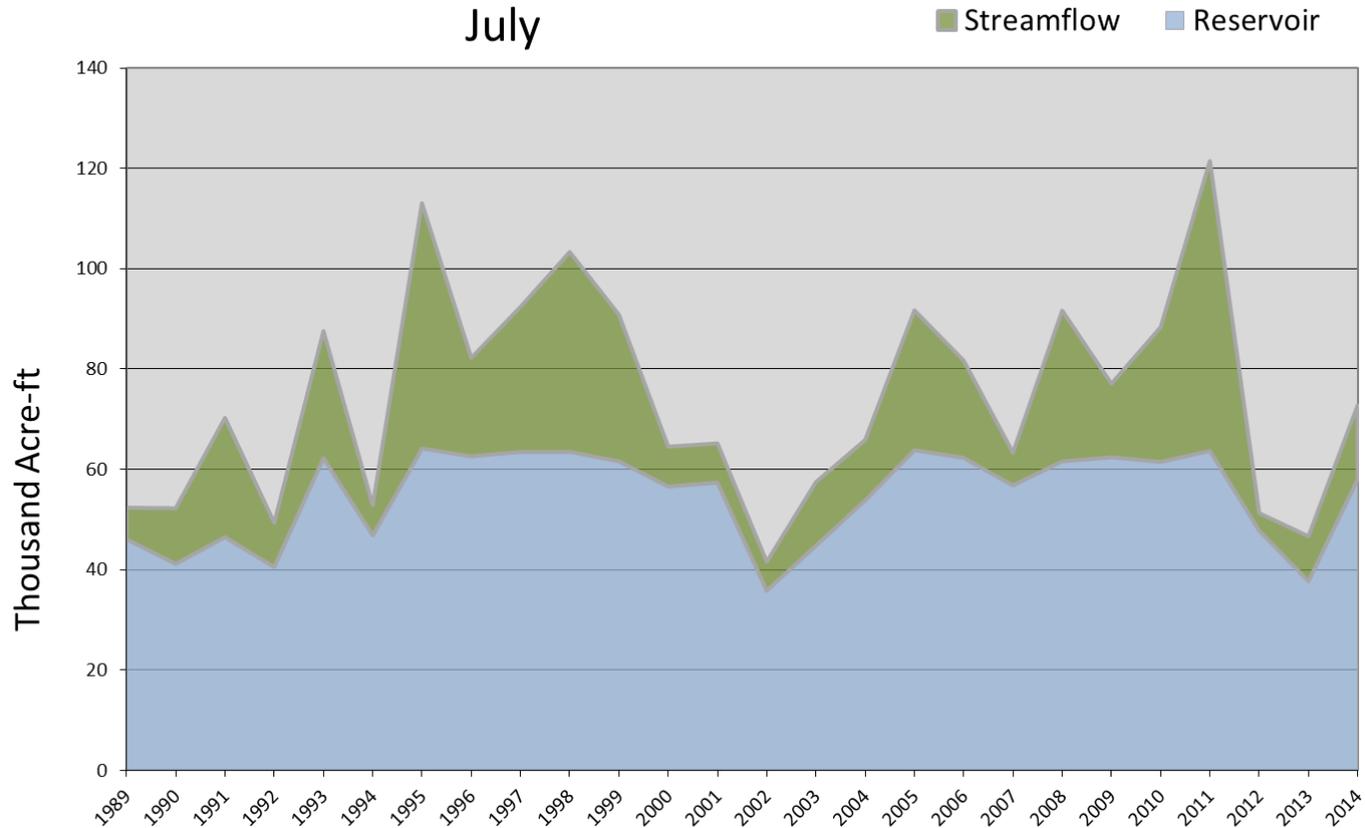
Water Availability Index

Basin or Region	June EOM* Joe's Valley	June accumulated inflow to Joe's Valley (calculated)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF			
Joe's Valley	58.0	14.7	72.8	0.15	52	04, 91, 09, 06

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

Joe's Valley - Water Availability Index

July

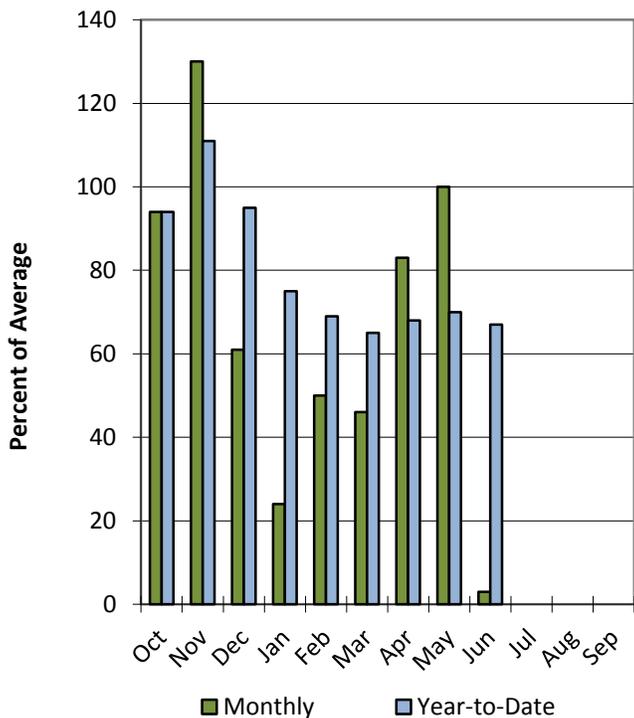


Southeastern Utah Basin

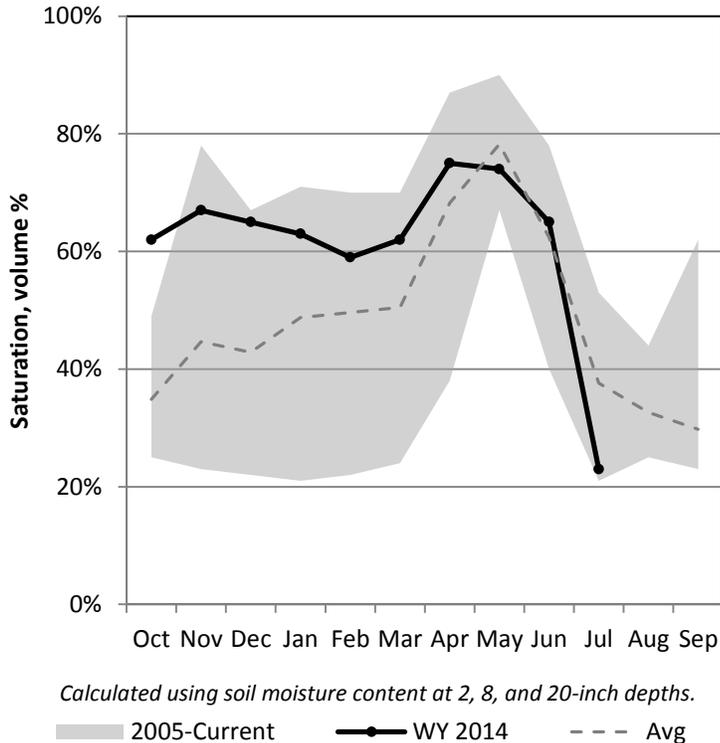
7/1/2014

Precipitation in June was much below average at 3%, which brings the seasonal accumulation (Oct-Jun) to 67% of average. Soil moisture is at 23% compared to 23% last year. Reservoir storage is at 77% of capacity, compared to 25% last year. The water availability index for Moab is 46%.

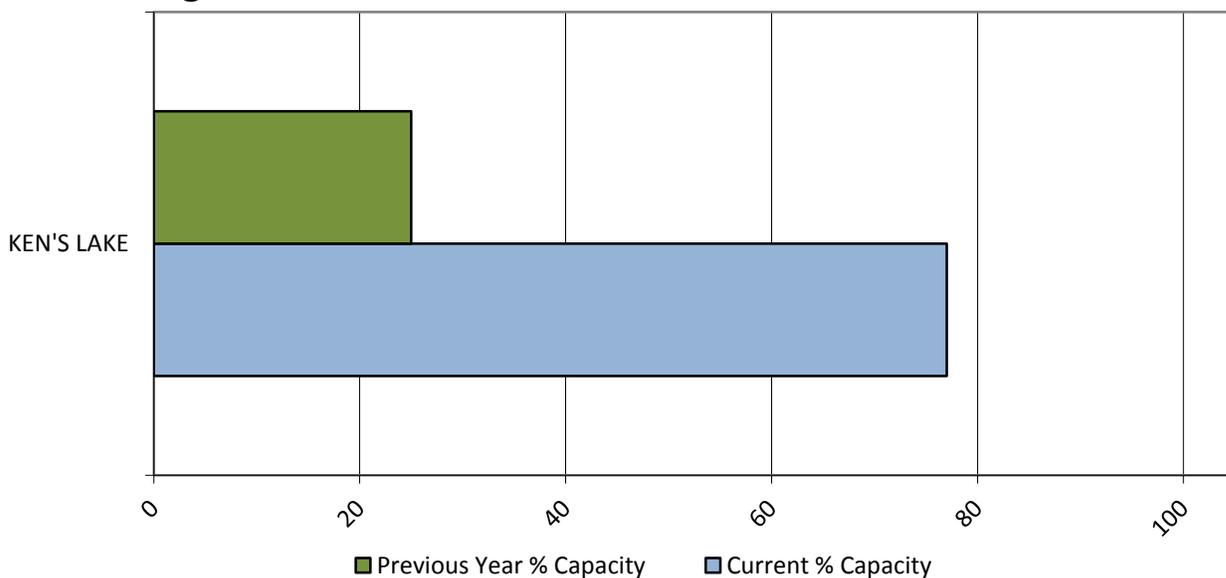
Precipitation



Soil Moisture



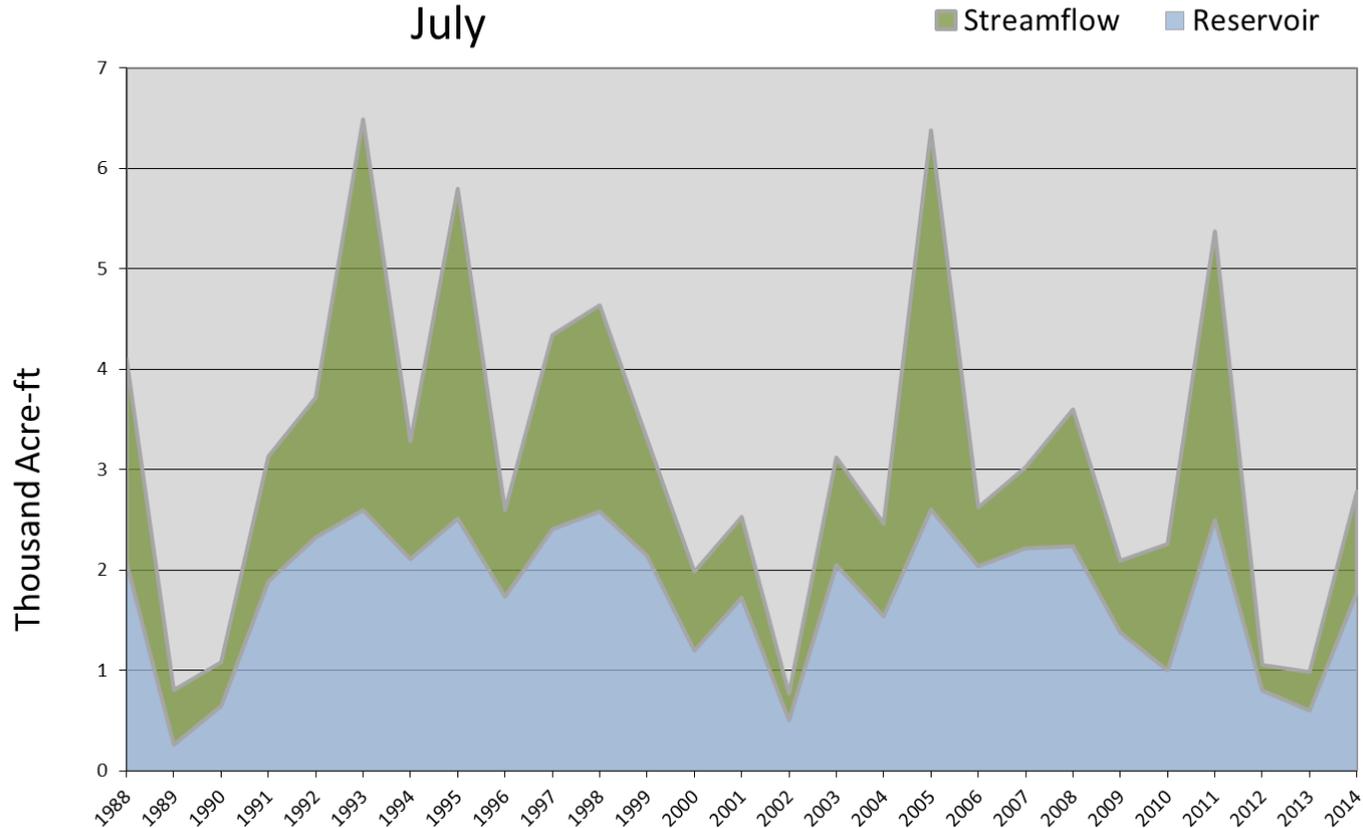
Reservoir Storage



July 1, 2014		Water Availability Index				
Basin or Region	June EOM* Ken's Lake Reservoir	June accumulated flow Mill Creek at Sheley (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Moab	1.8	1.0	2.8	-0.30	46	96, 06, 07, 03

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

Moab - Water Availability Index
July

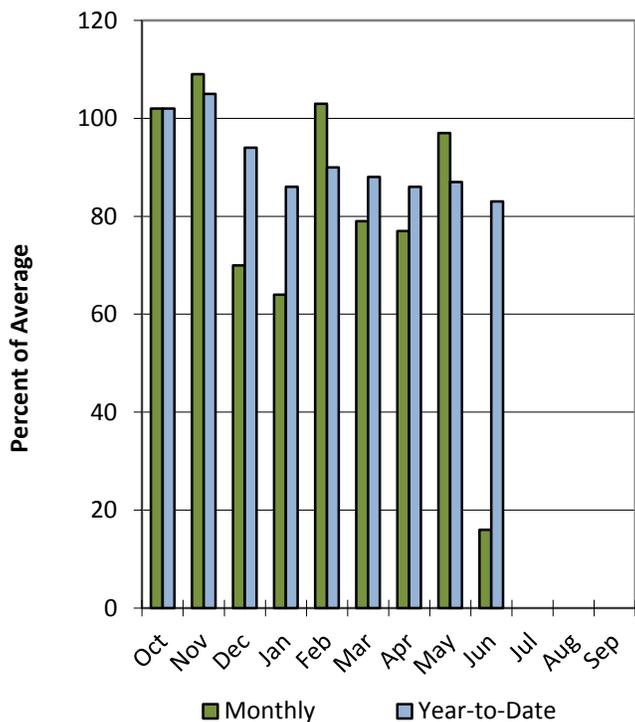


Dirty Devil Basin

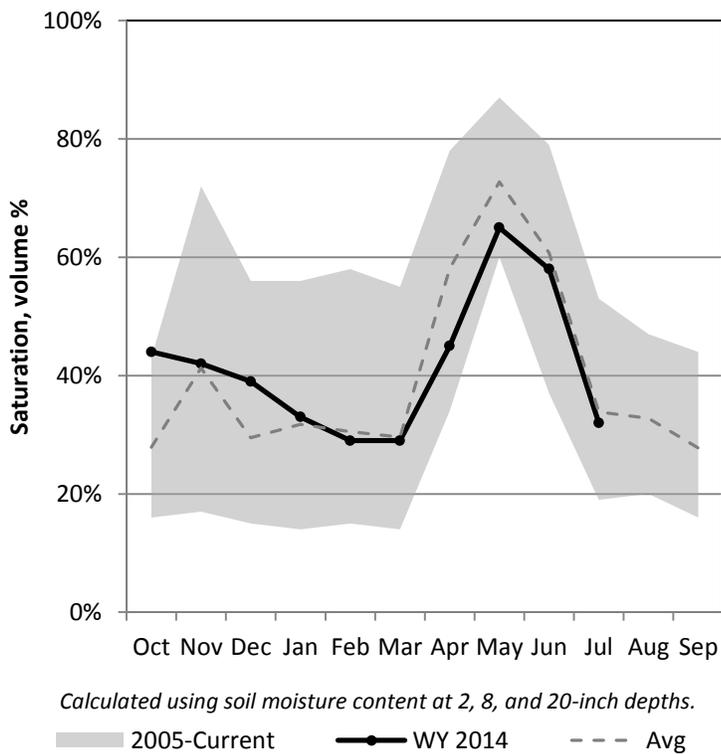
7/1/2014

Precipitation in June was much below average at 16%, which brings the seasonal accumulation (Oct-Jun) to 83% of average. Soil moisture is at 32% compared to 19% last year.

Precipitation



Soil Moisture

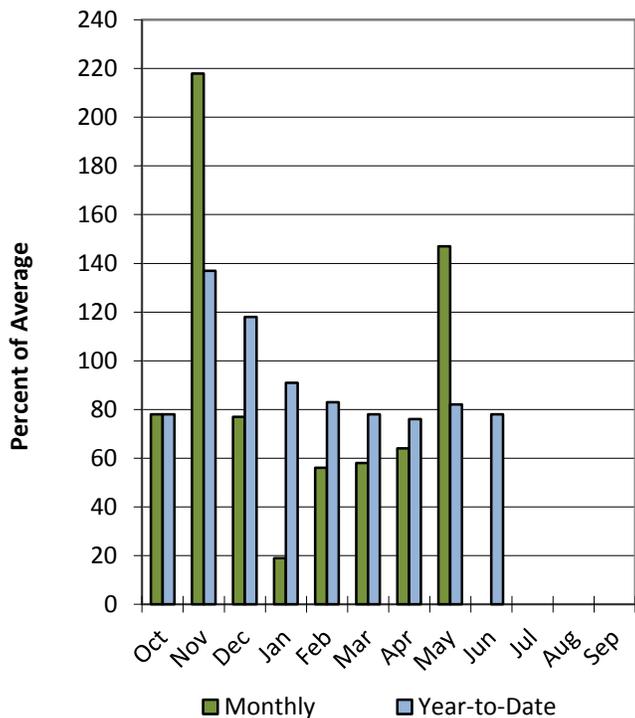


Escalante River Basin

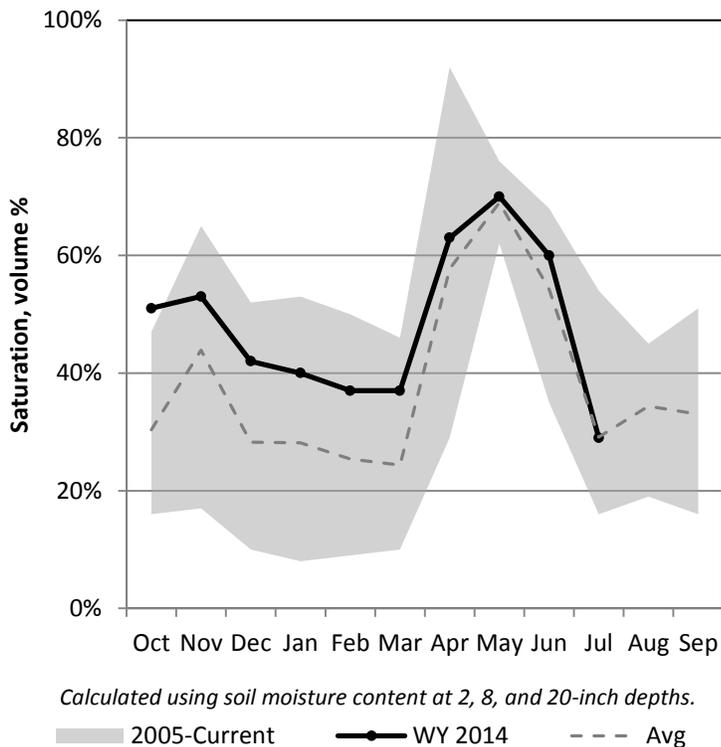
7/1/2014

Precipitation in June was much below average at 0%, which brings the seasonal accumulation (Oct-Jun) to 78% of average. Soil moisture is at 29% compared to 17% last year.

Precipitation



Soil Moisture

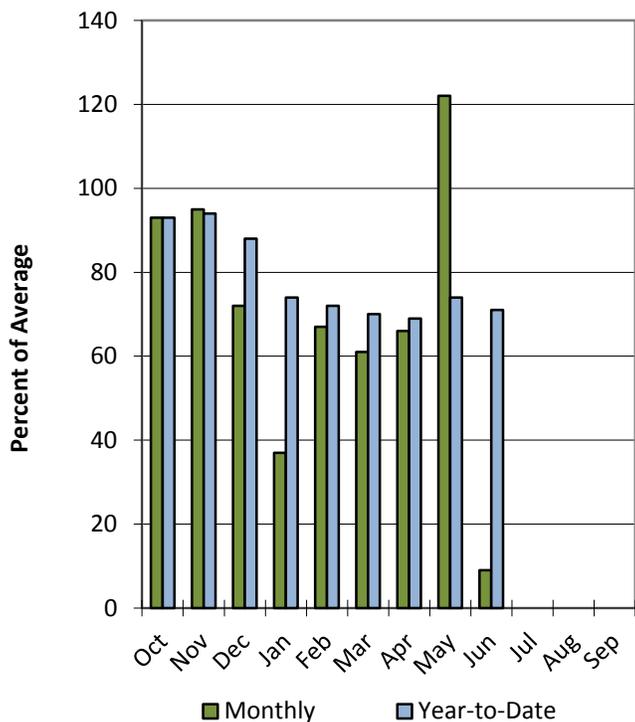


Upper Sevier River Basin

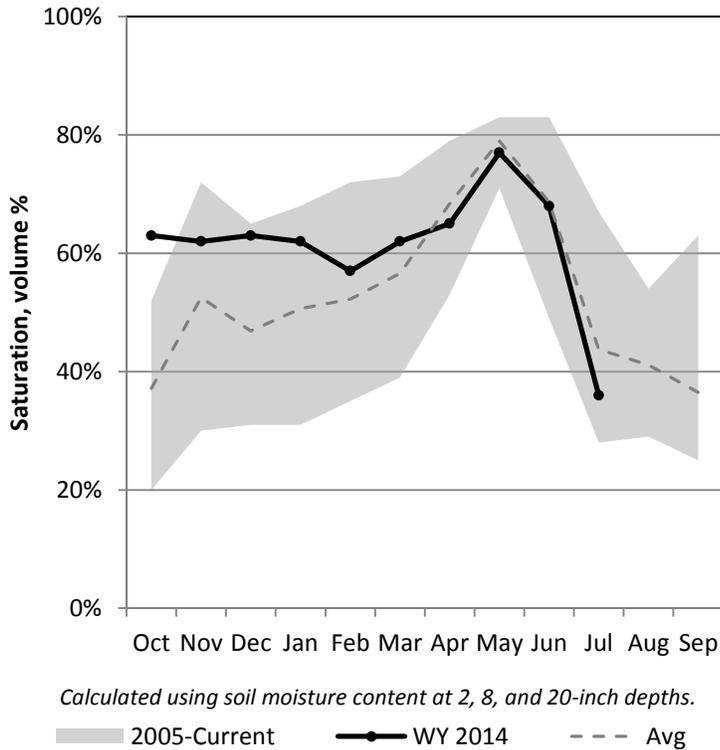
7/1/2014

Precipitation in June was much below average at 9%, which brings the seasonal accumulation (Oct-Jun) to 71% of average. Soil moisture is at 36% compared to 33% last year. Reservoir storage is at 63% of capacity, compared to 52% last year. The water availability index for the Upper Sevier is 53%.

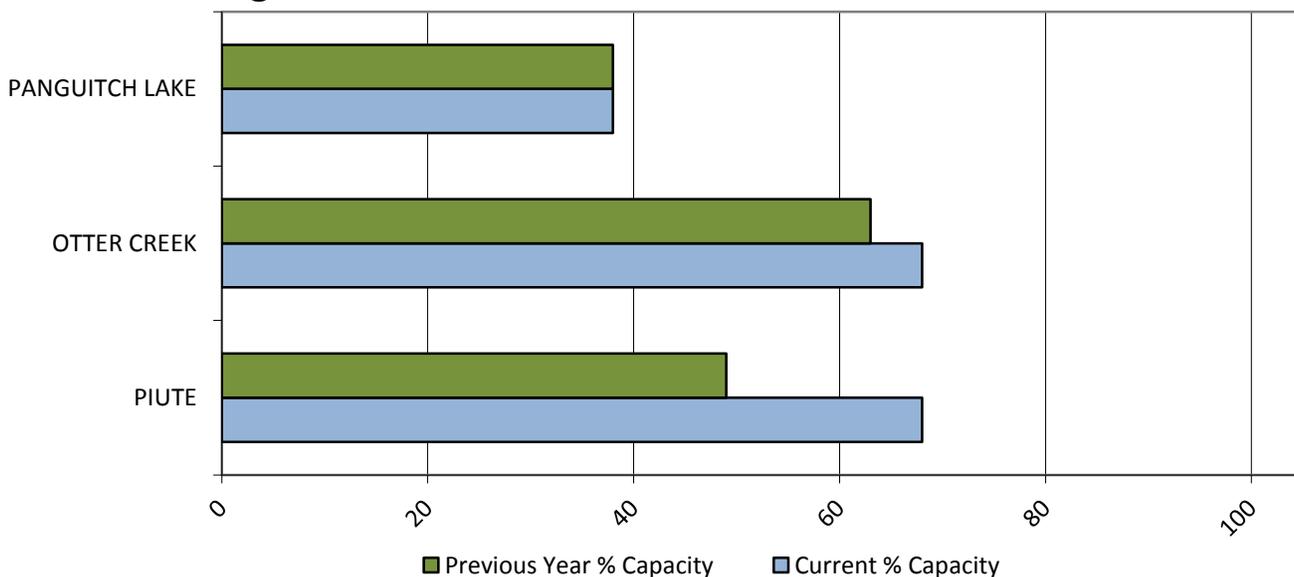
Precipitation



Soil Moisture



Reservoir Storage



July 1, 2014

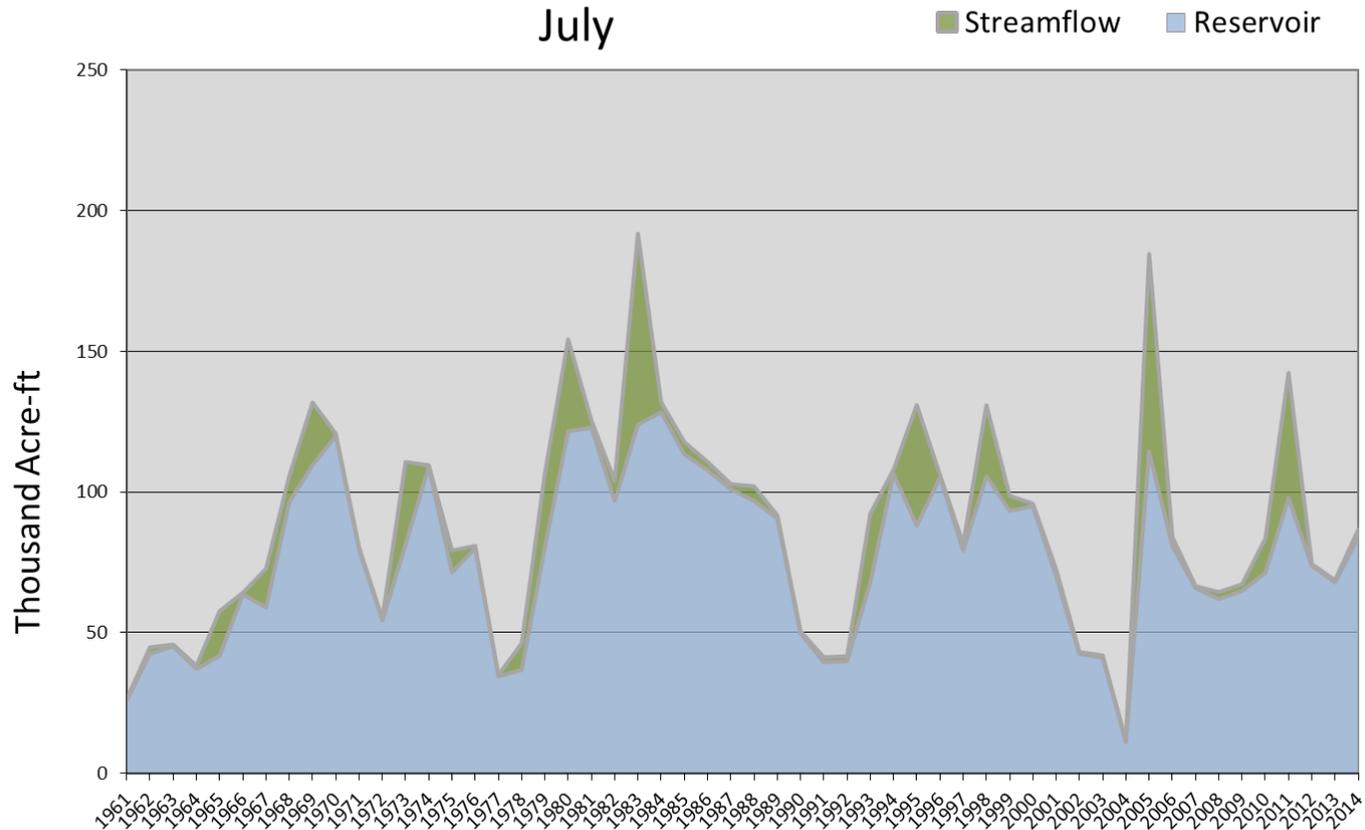
Water Availability Index

Basin or Region	June EOM* Otter Creek and Piute	June accumulated flow at Kingston (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Upper Sevier River	84.0	2.7	86.7	0.26	53	10, 06, 52, 89

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

Upper Sevier River - Water Availability Index

July

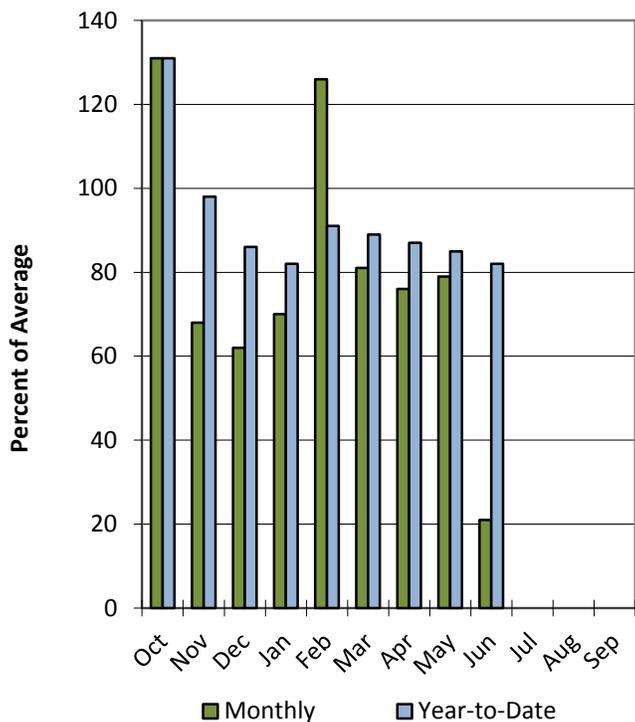


San Pitch River Basin

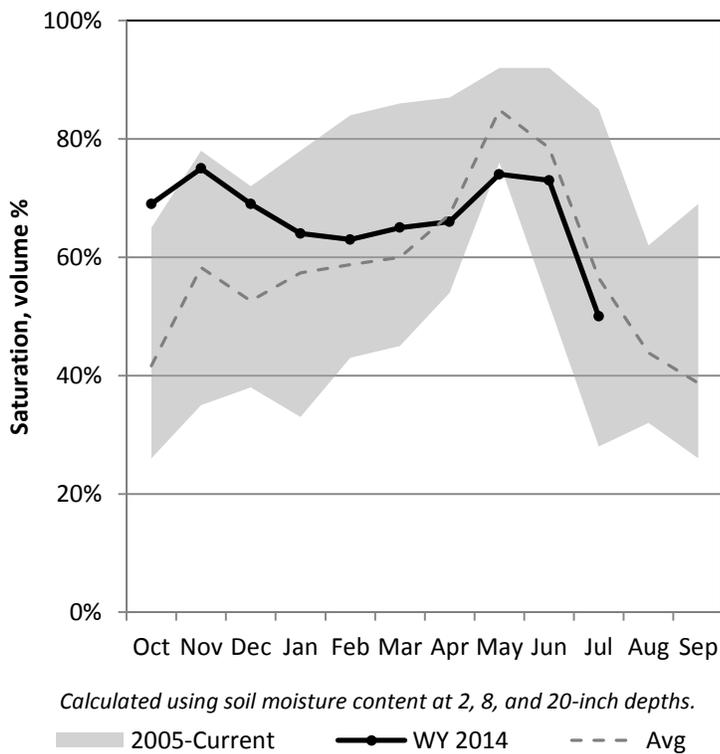
7/1/2014

Precipitation in June was much below average at 21%, which brings the seasonal accumulation (Oct-Jun) to 82% of average. Soil Moisture is at 50% compared to 39% last year. Reservoir storage is at 5% of capacity, compared to 0% last year. The water availability index for the San Pitch is 11%.

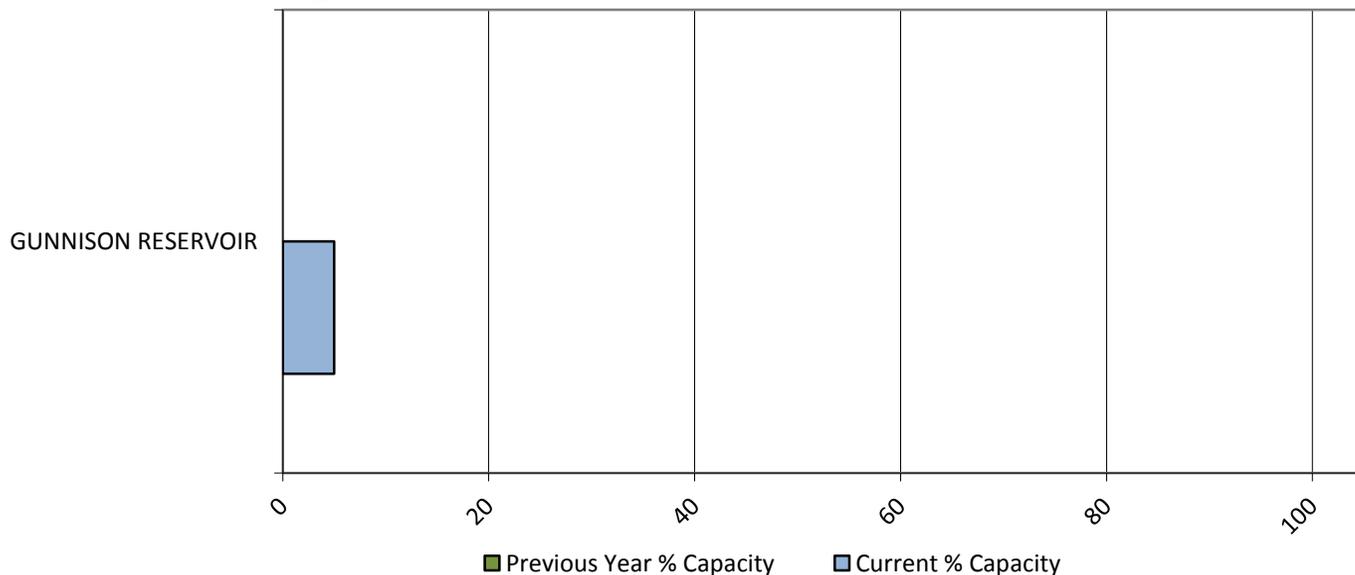
Precipitation



Soil Moisture



Reservoir Storage



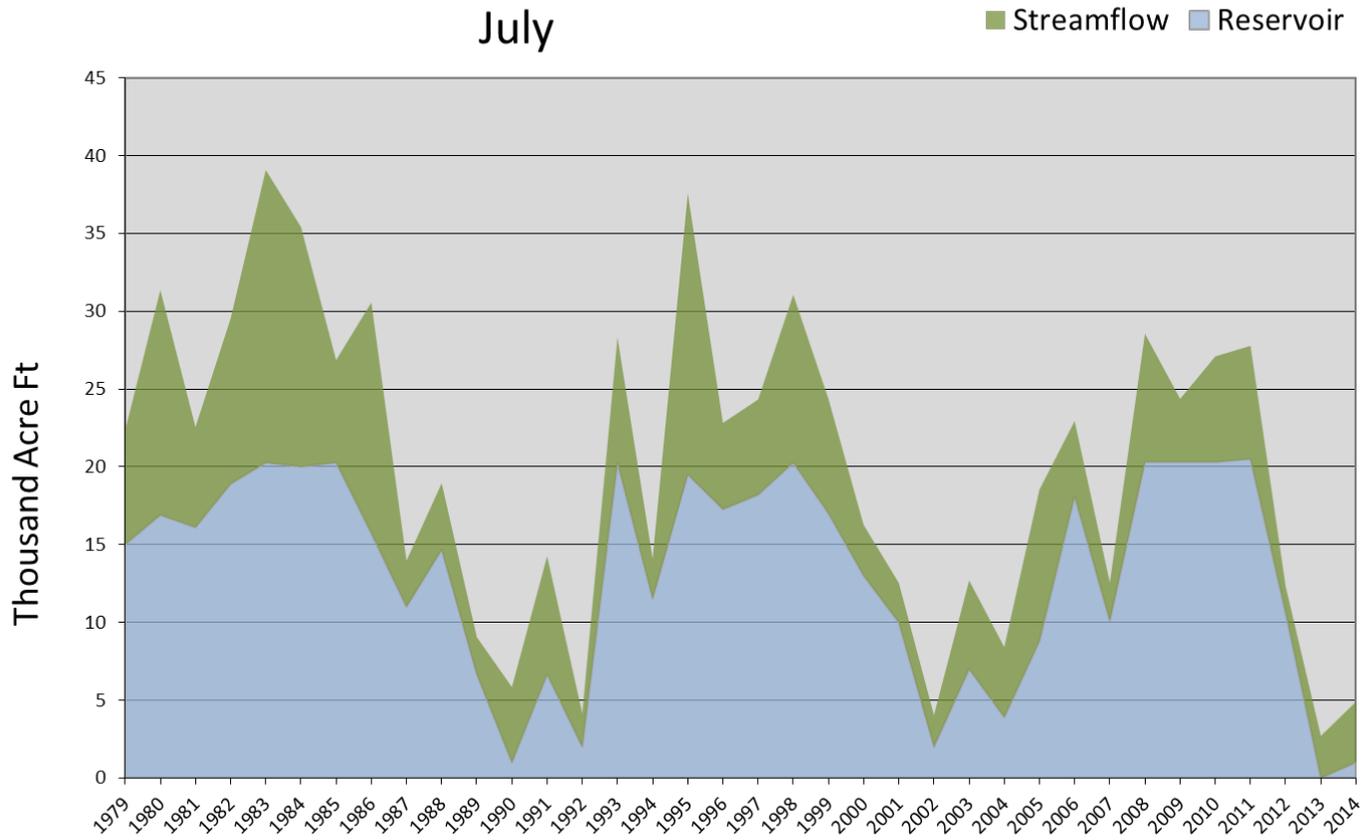
July 1, 2014

Water Availability Index

Basin or Region	June EOM* Gunnison Reservoir	June accumulated flow Manti Creek (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Manti Creek	1.0	3.9	4.9	-3.27	11	02, 92, 90, 04

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

San Pitch River - Water Availability Index July

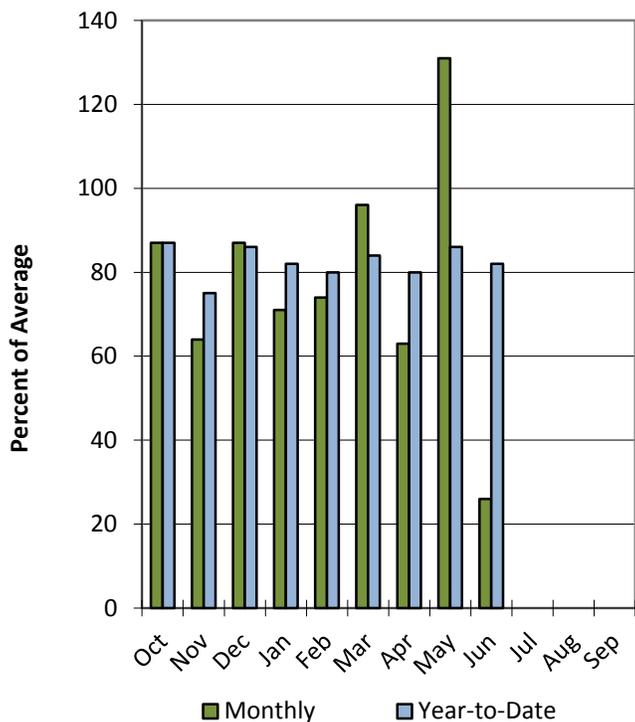


Lower Sevier River Basin

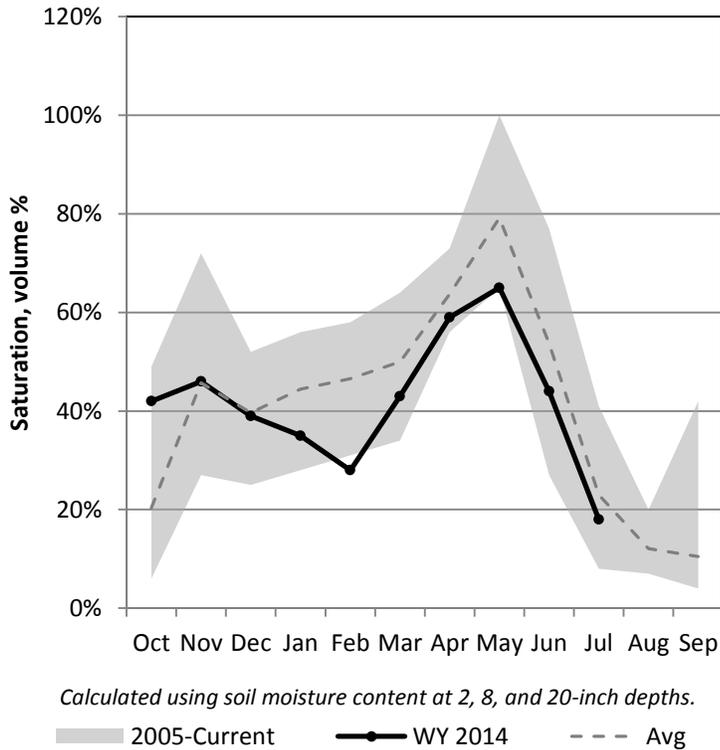
7/1/2014

Precipitation in June was much below average at 26%, which brings the seasonal accumulation (Oct-Jun) to 82% of average. Soil moisture is at 18% compared to 21% last year. Reservoir storage is at 32% of capacity, compared to 46% last year. The water availability index for the Lower Sevier is 25%.

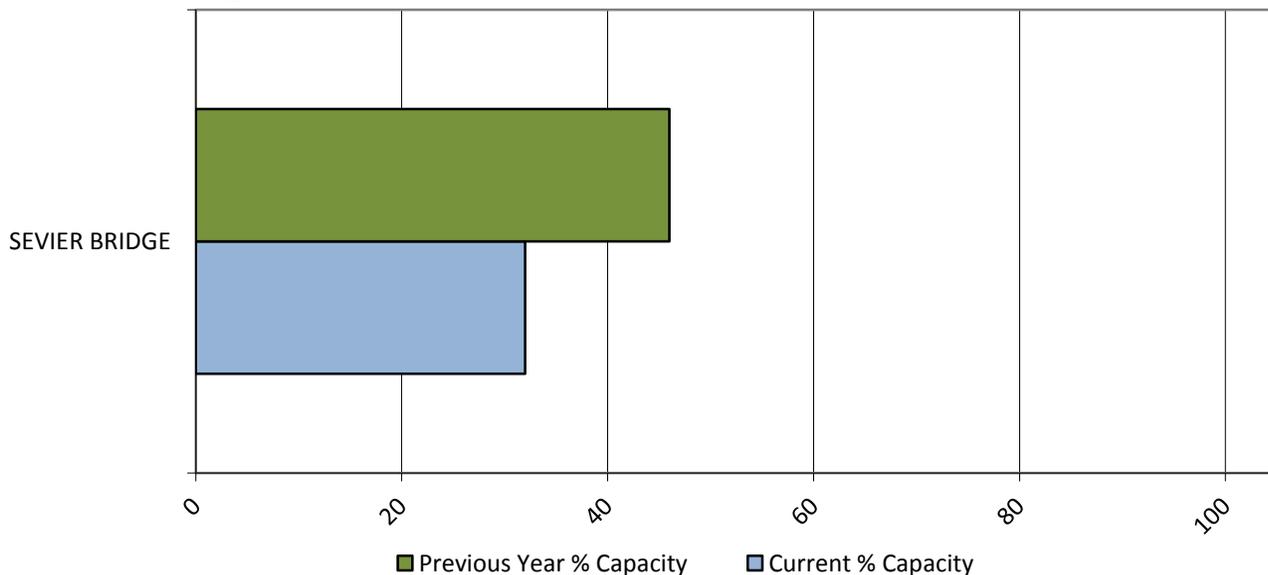
Precipitation



Soil Moisture



Reservoir Storage



July 1, 2014

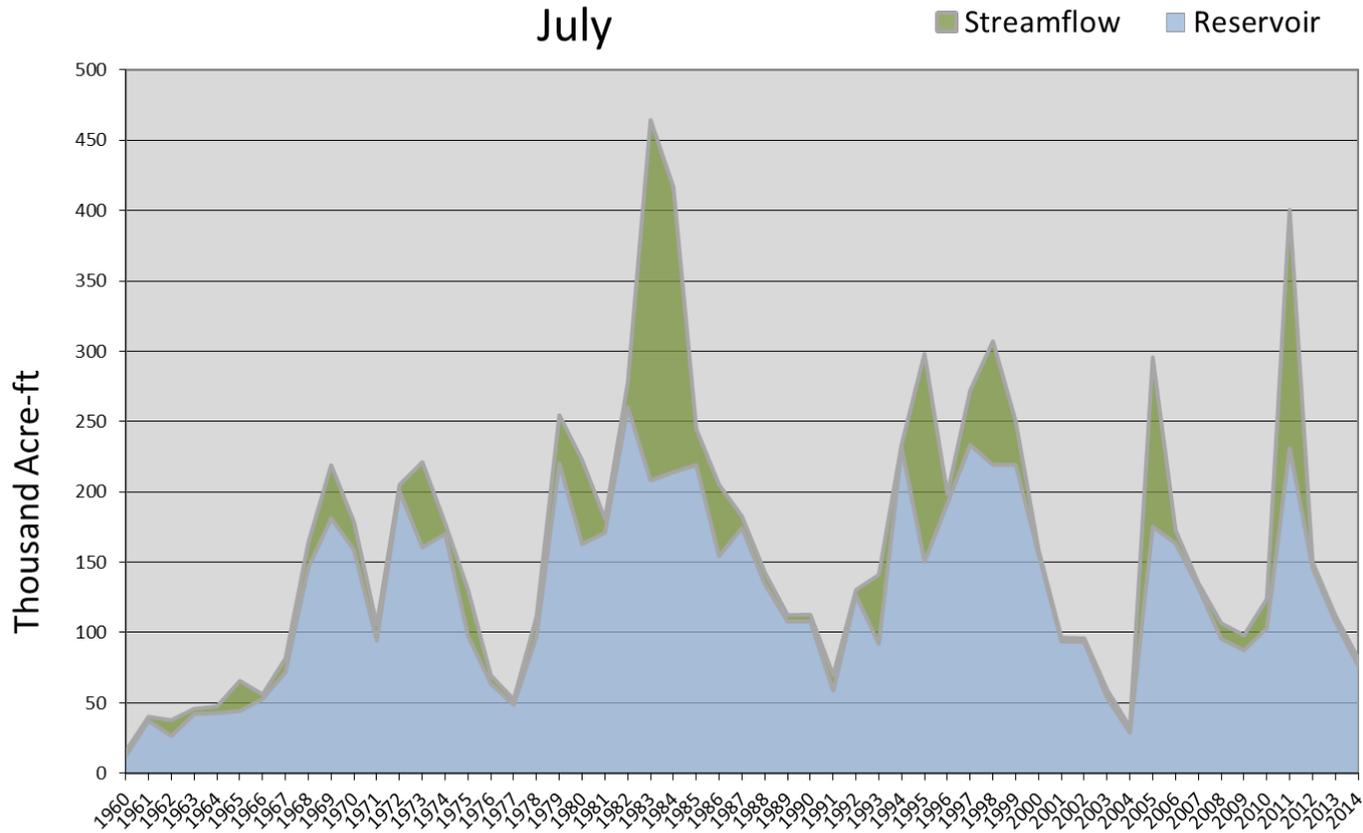
Water Availability Index

Basin or Region	June EOM*	June accumulated	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	Sevier Bridge	flow Sevier at Gunnison (<i>observed</i>)				
	KAF^	KAF	KAF		%	
Lower Sevier River	76.6	5.1	81.7	-2.05	25	91, 67, 02, 01

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

Lower Sevier River - Water Availability Index

July

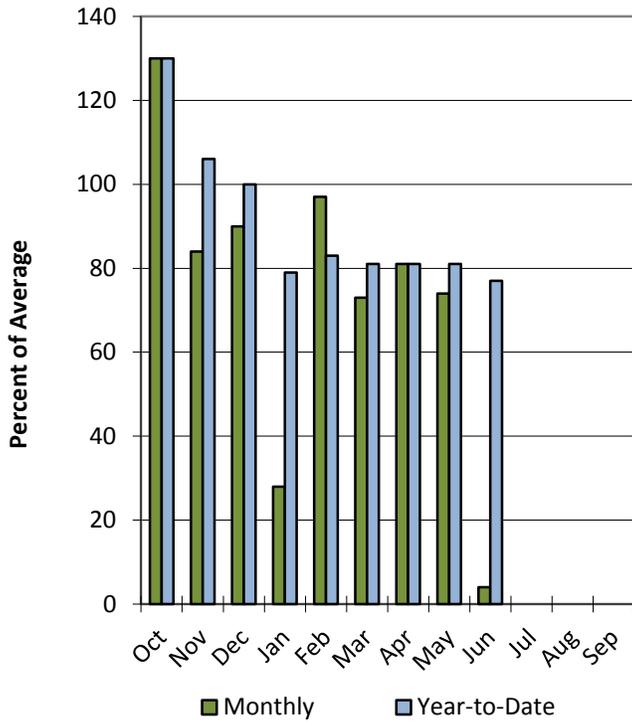


Beaver River Basin

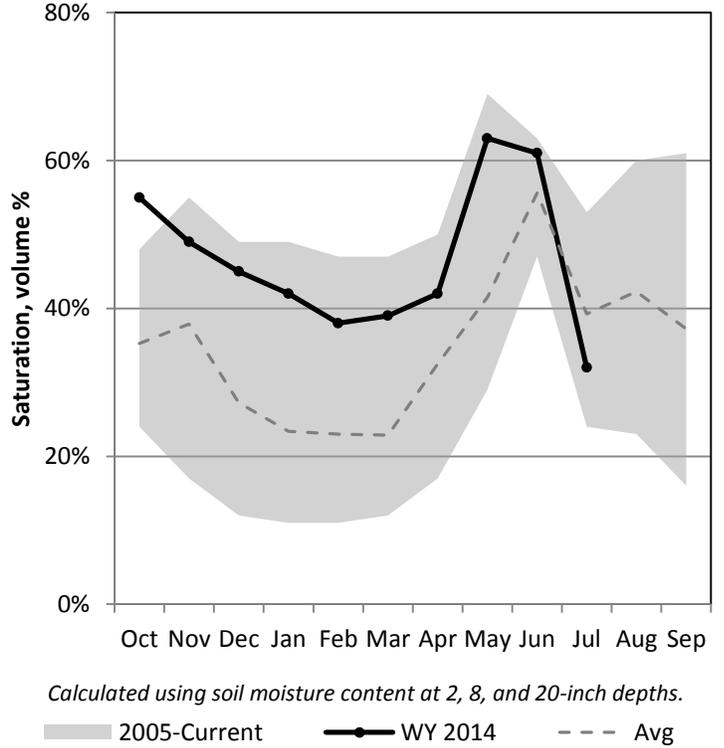
7/1/2014

Precipitation in June was much below average at 4%, which brings the seasonal accumulation (Oct-Jun) to 77% of average. Soil moisture is at 32% compared to 29% last year. Reservoir storage is at 28% of capacity, compared to 31% last year. The water availability index for the Beaver River is 24%.

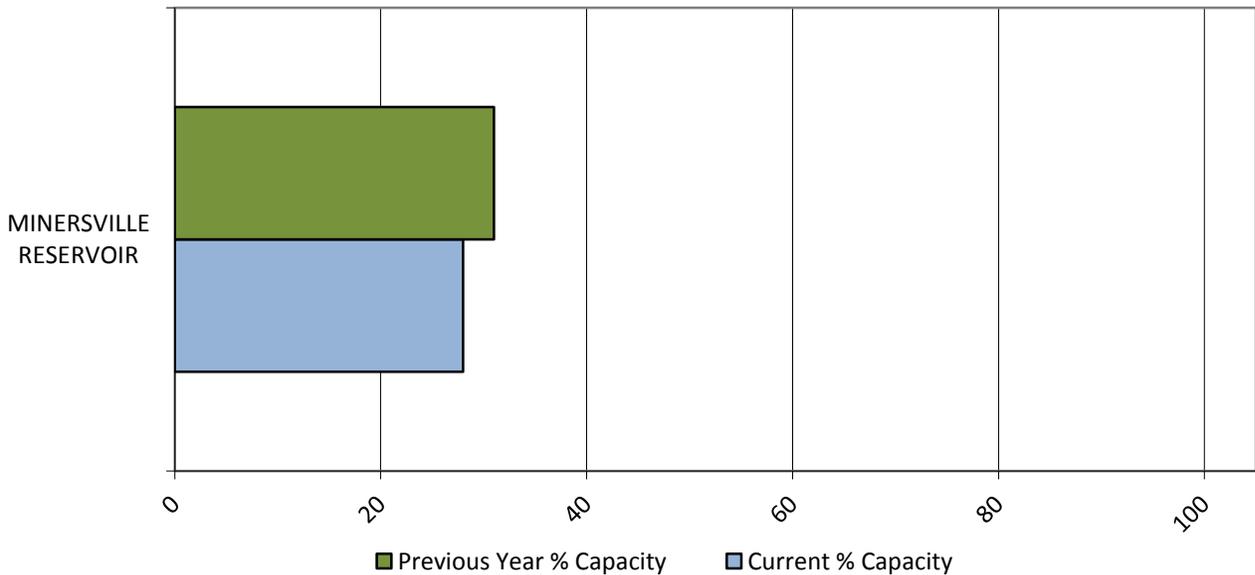
Precipitation



Soil Moisture



Reservoir Storage



July 1, 2014

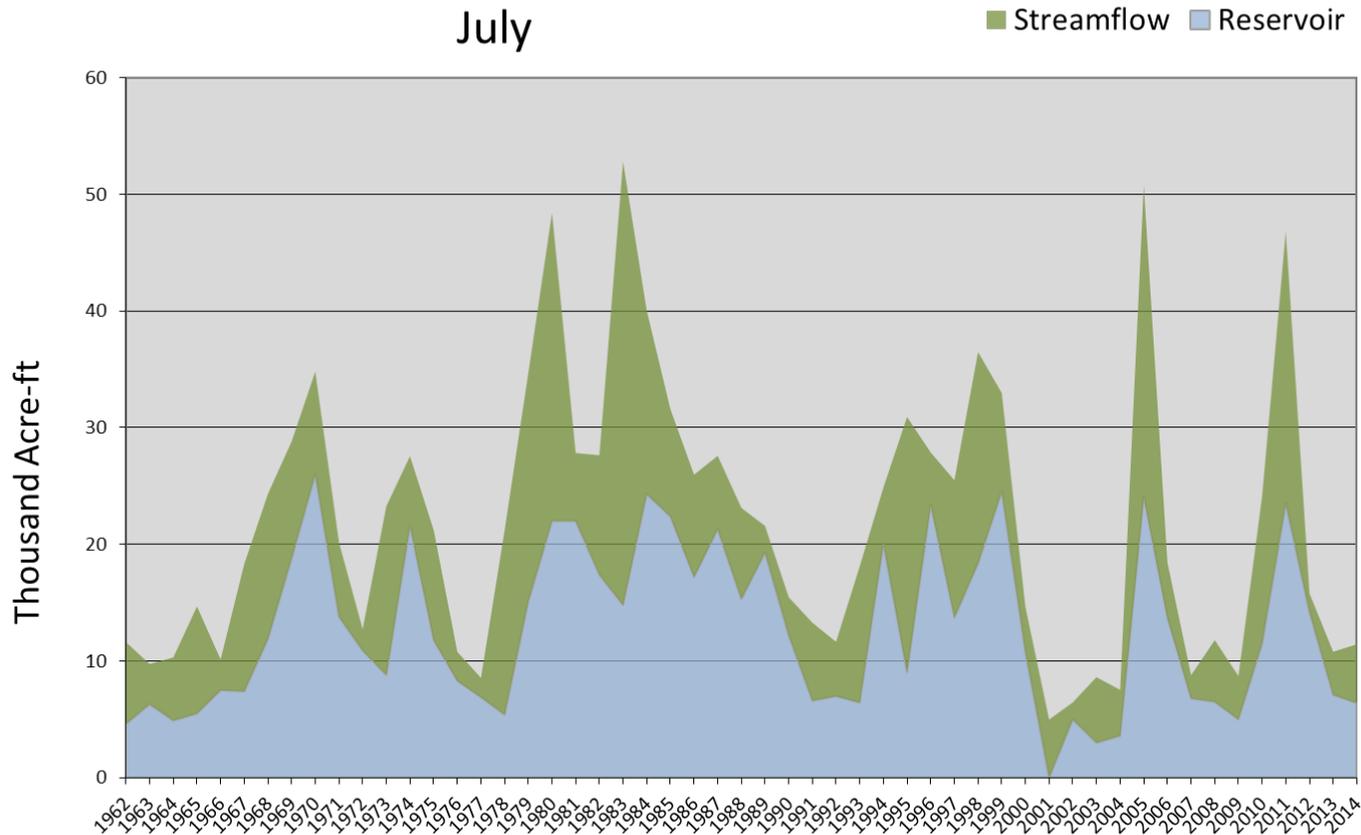
Water Availability Index

Basin or Region	June EOM* Minersville Reservoir	June 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	6.4	5.0	11.4	-2.16	24	76, 13, 62, 92

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

Beaver River - Water Availability Index

July

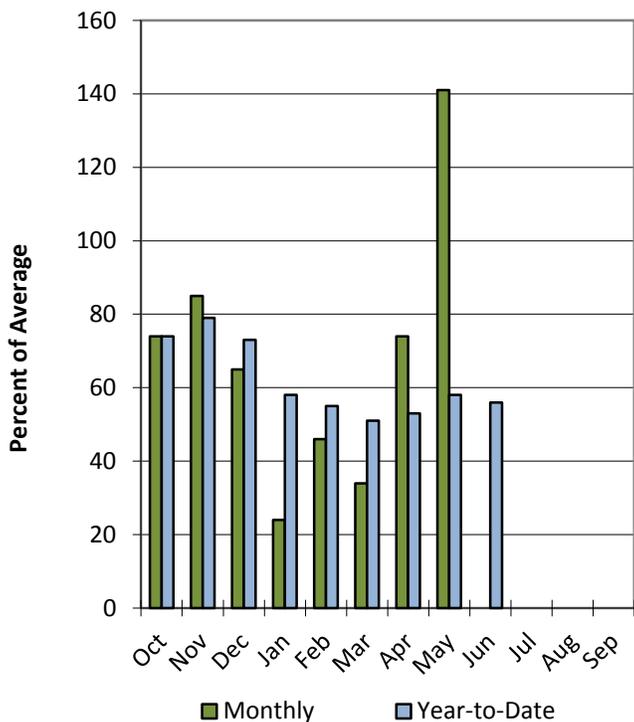


Southwestern Utah Basin

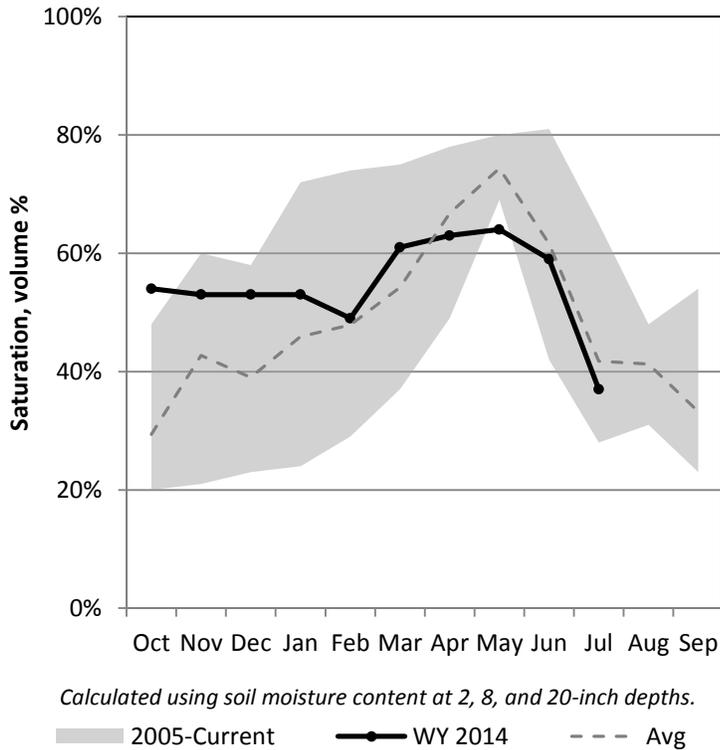
7/1/2014

Precipitation in June was much below average at 0%, which brings the seasonal accumulation (Oct-Jun) to 56% of average. Soil moisture is at 37% compared to 32% last year. Reservoir storage is at 52% of capacity, compared to 48% last year. The water availability index for the Virgin River is 7%.

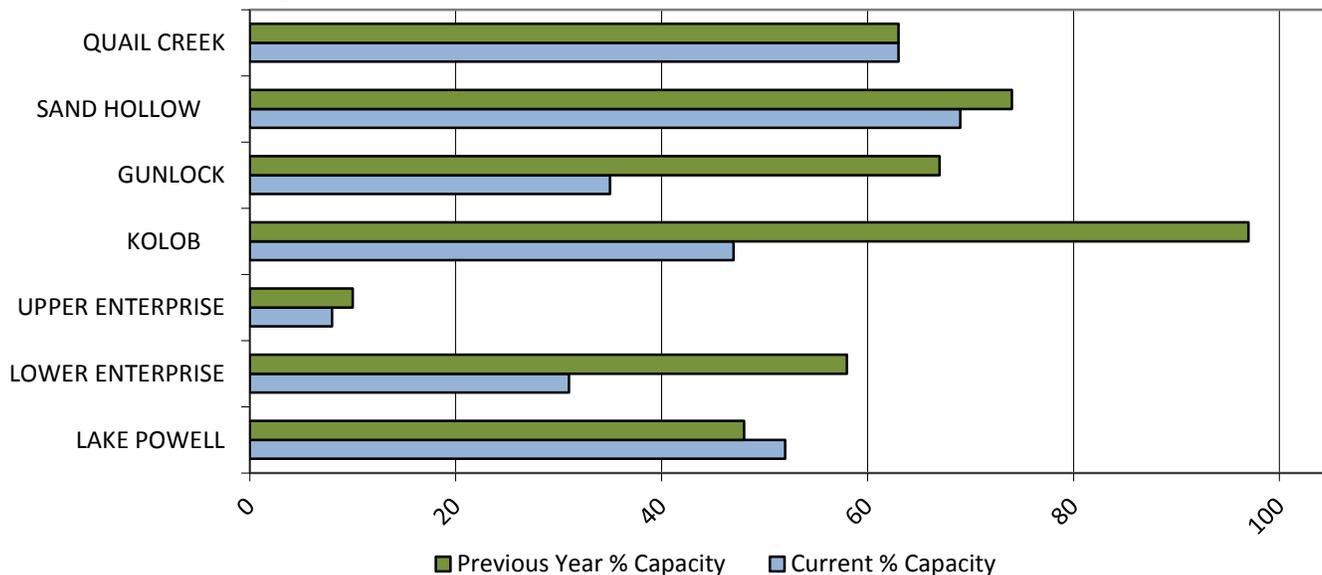
Precipitation



Soil Moisture



Reservoir Storage



July 1, 2014

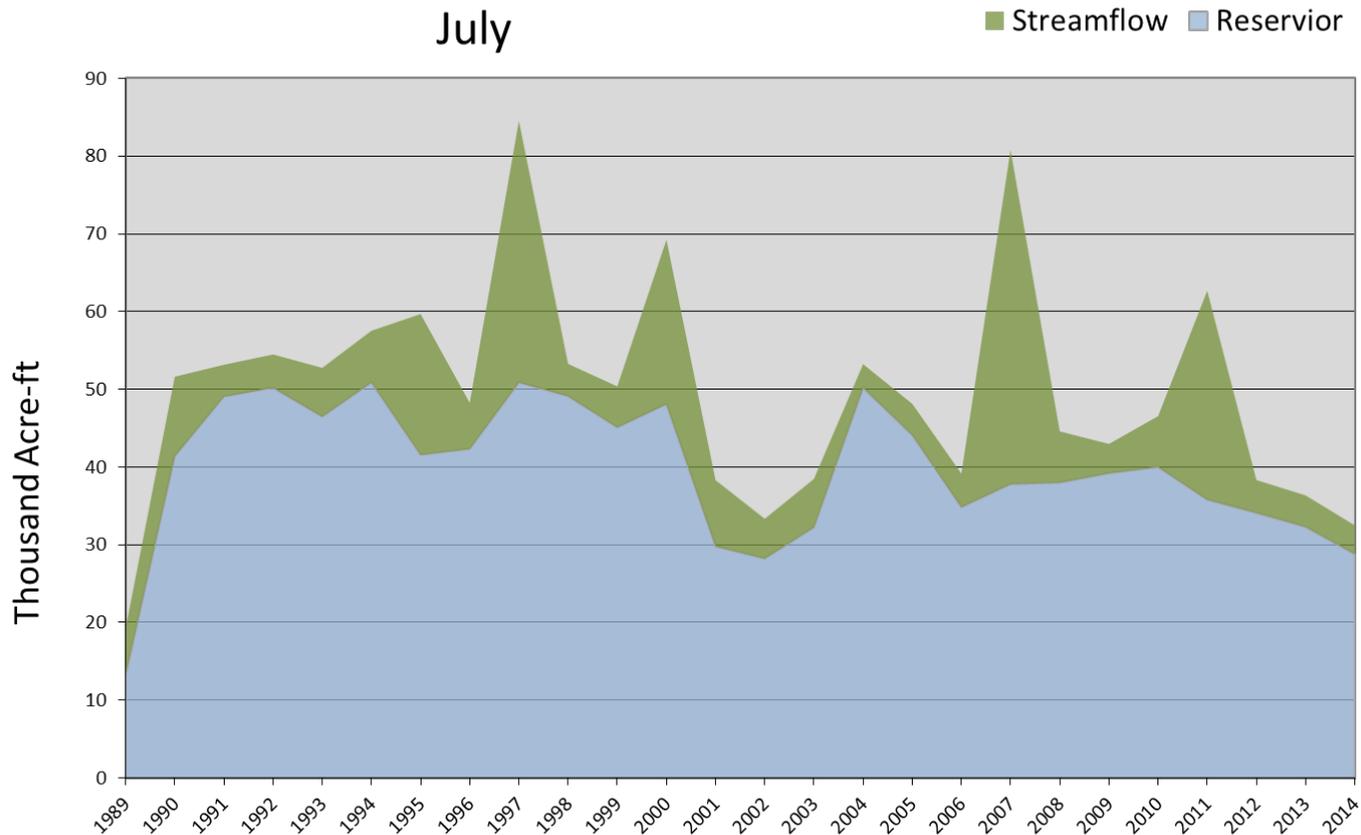
Water Availability Index

Basin or Region	June EOM* Reservoir	June accumulated flow Virgin and Santa Clara Rivers (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Southwest	28.8	3.7	32.5	-3.55	7	89, 02, 13

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

Southwest - Water Availability Index

July



7/1/2014

Water Availability Index

Basin or Region	June EOM* Reservoirs	Observed June Streamflow	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Bear River	628	32.4	660	-1.80	28	90, 10, 30, 45
Woodruff Narrows	19.5	33.9	53.4	-1.09	37	88, 90, 87, 80
Little Bear	10.7	1.8	12.5	-1.27	35	94, 12, 04, 02
Ogden River	98	6.0	104.0	-0.88	39	89, 94, 04, 96
Weber River	249	32.0	280	-3.08	13	77, 03, 13, 02
Provo	374	33.2	407	-1.39	33	03, 07, 01, 00
West Uintah Basin	24	18.5	43	-1.73	29	94, 13, 79, 01
Eastern Uintah	21	2.5	23	-3.70	6	02, 89, 94
Blacks Fork	25.7	31.5	57.2	-0.76	41	01, 13, 03, 06
Smiths Creek	12.4	11.1	23.5	0.98	62	85, 97, 01, 82
Price River	22.8	4.2	27.0	-3.15	12	90, 77, 02, 13
Joe's Valley	58.0	14.7	72.8	0.15	52	04, 91, 09, 06
Moab	1.8	1.0	2.8	-0.30	46	96, 06, 07, 03
Upper Sevier River	84	2.7	87	0.26	53	10, 06, 52, 89
San Pitch	1.0	3.9	4.9	-3.27	11	02, 92, 90, 04
Lower Sevier	77	5.1	82	-2.05	25	91, 67, 02, 01
Beaver	6.4	5.0	11.4	-2.16	24	76, 13, 62, 92
Virgin River	28.8	3.7	32.5	-3.55	7	89, 02, 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.

Issued by

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

Released by

David Brown
State Conservationist
Natural Resources Conservation Service
Salt Lake City, Utah

Prepared by

Snow Survey Staff
Randall Julander, Supervisor
Troy Brosten, Assistant Supervisor
Beau Uriona, Hydrologist
Jordan Clayton, Hydrologist
Jeffrey O'Connell, Hydrologist
Bob Nault, Electronics Technician
Kent Sutcliffe, Soil Scientist



YOU MAY OBTAIN THIS PRODUCT AS WELL AS CURENT SNOW, PRECIPITATION, TEMPERATURE AND SOIL MOISTURE, RESERVOIR, SURFACE WATER SUPPLY INDEX, AND OTHER DATA BY VISITING OUR WEB SITE @: <http://www.ut.nracs.usda.gov/snow/>

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



**Utah Climate and
Water Report**
Natural Resources Conservation Service
Salt Lake City, UT

