NRCS
Natural Resources Conservation Service

Utah Climate and Water Report

June 2014

Settlement Reservoir, June 2014

Photo by Jordan Clayton

Utah Climate and Water Report

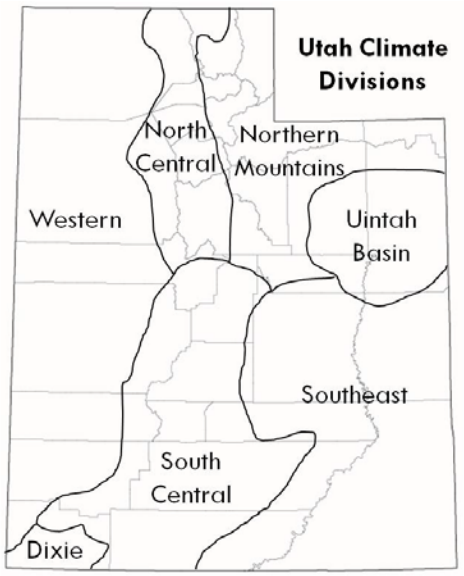
The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from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

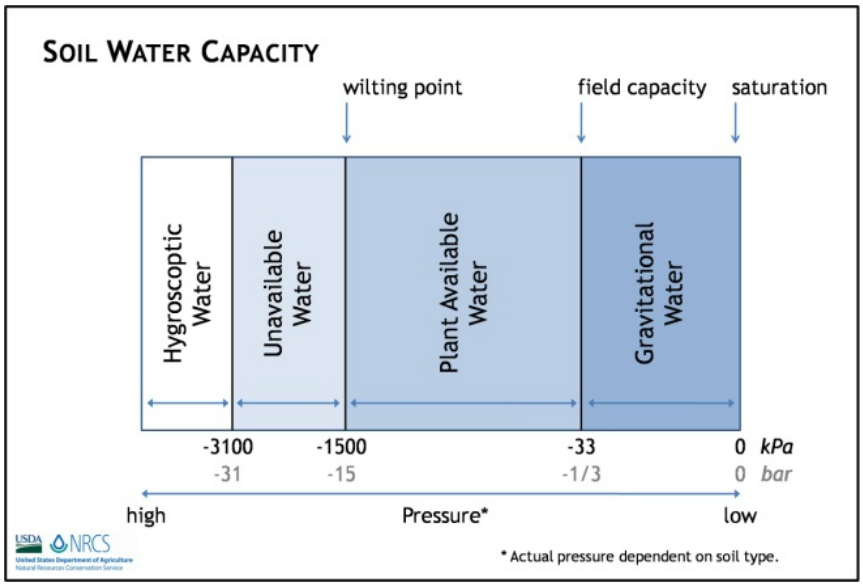
Climate and Water Information

Soil Climate Analysis Network

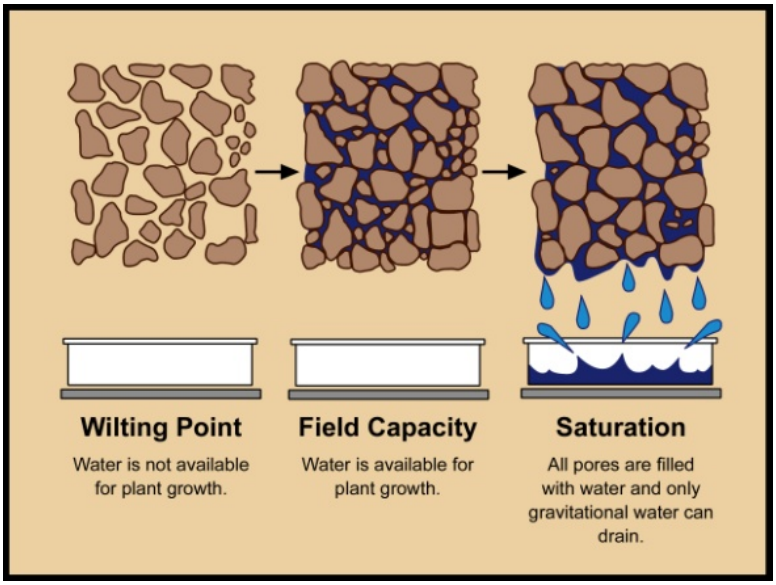
Soil Climate Analysis Network (SCAN) stations are primarily located on low- to mid-elevation, agriculturally important landscapes that maintain representative soils. Elevations range from 3,000 to 7,000 ft. The SCAN network provides real-time soil moisture and temperature data coupled with additional 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.

http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

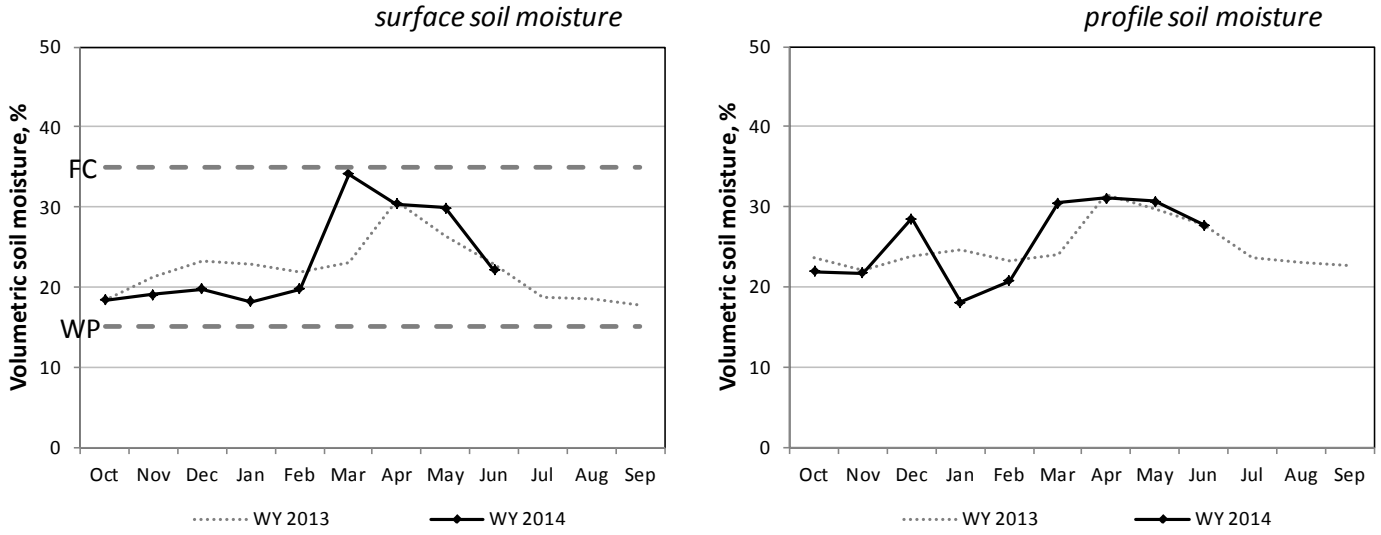
North Central

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"
	in.	*in.*	*volume %*					*°F*				
NORTH CENTRAL												
Blue Creek	8.8	0.9	20	23	33	34	20	65	67	66	61	55
Cache Junction	11.6	1.4	21	18	30	31	38	59	61	58	56	51
Grantsville	6.8	0.8	0	13	23	28		73	73	71	62	58

* 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.

http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

Northern Mountains

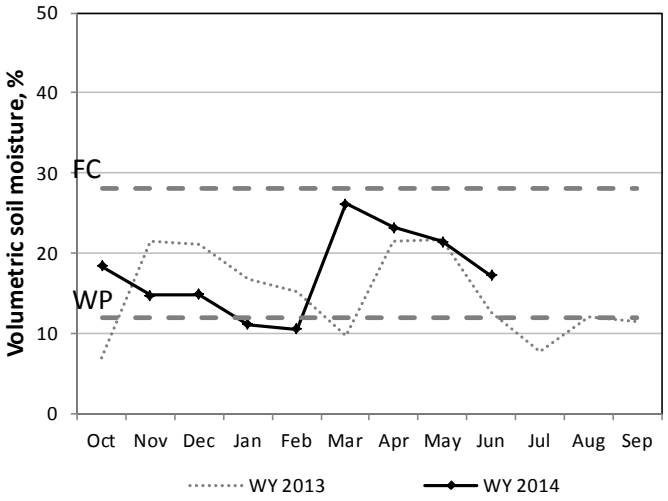
Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	in.	*in.*	*volume %*					*^{o}F*				
NORTHERN MOUNTAINS												
Chicken Ridge	5.3	1.5	10	14	18	23	23	53	55	54	52	48
Buffalo Jump	5.8	1.1	9	12	13	14	-	61	62	61	55	-
Morgan	11.8	1.3	25	22	27	34	19	68	68	67	62	56

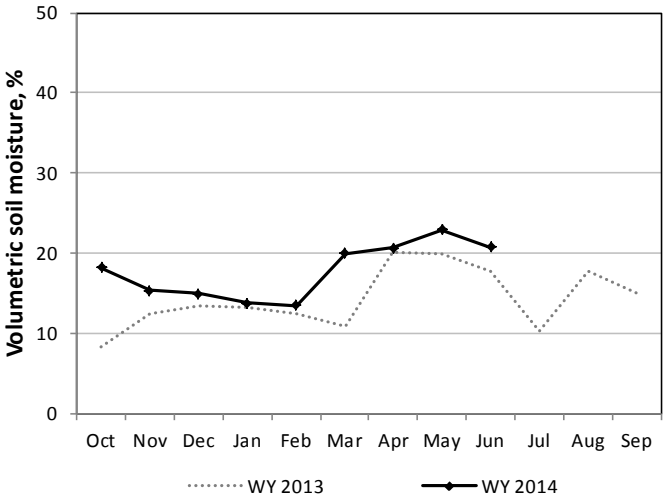
* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect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

Northern Mountains

surface soil moisture



profile soil moisture



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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.

http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

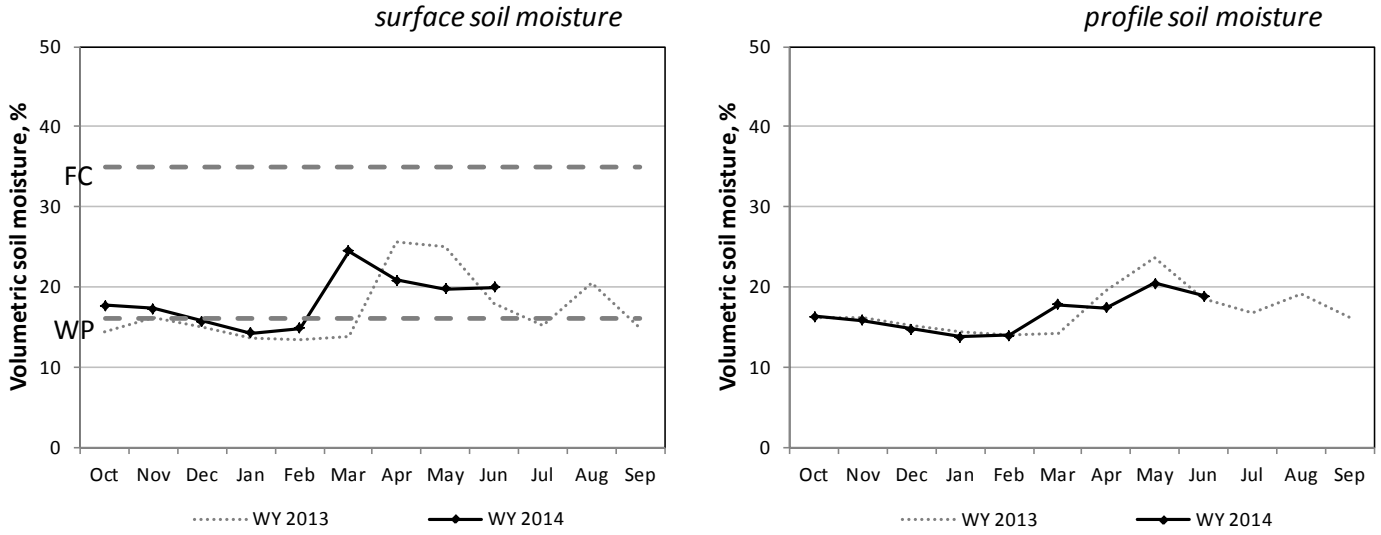
Uintah Basin

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"
	in.	*in.*	*volume %*					*°F*				
UINTAH BASIN												
Mountain Home	4.1	1.1	24	33	26	21	12	56	57	57	55	53
Little Red Fox	2.6	0.7	5	19	28	26	26	58	68	68	63	57
Split Mountain	4.9	0.6	5	18	14	13	12	71	74	75	67	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.

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.

http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

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	0.3	1	9	18	16	19	64	69	71	65	60
Green River	3.6	1.1	8	11	10	6	9	73	75	75	70	64
Harm's Way	6.9	1.2	9	1	16	15	6	69	66	68	60	54
West Summit	6.1	1.3	14	19	17	18	17	66	67	66	58	53
Eastland	6.0	1.2	16	12	14	29	31	63	64	64	58	55
Alkali Mesa	5.1	1.0	10	14	17	19	14	66	68	67	62	57
McCracken Mesa	5.7	1.5	16	25	19	17	14	72	76	76	66	62

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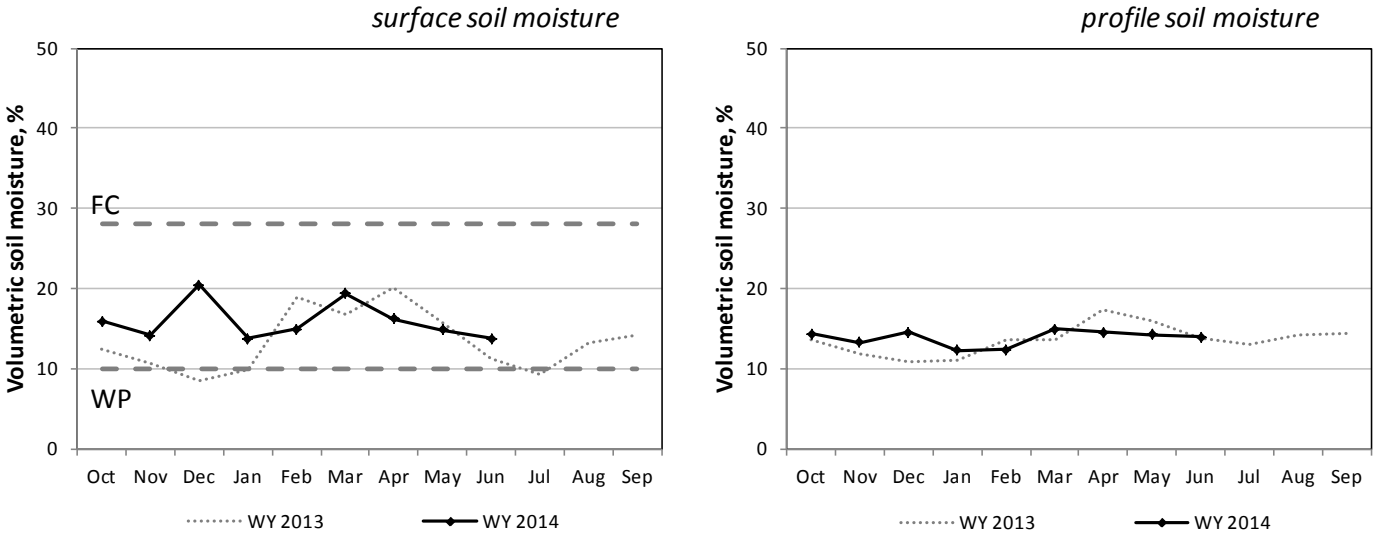
Southeast



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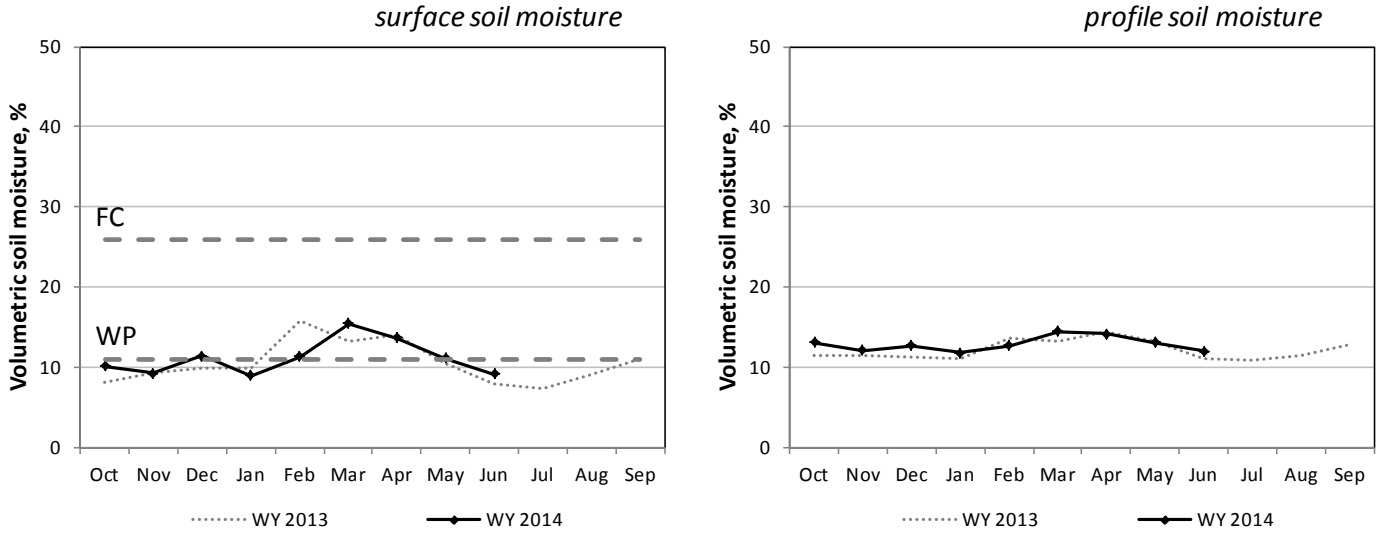
South Central

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"
	in.	*in.*	*volume %*					*°F*				
SOUTH CENTRAL												
Nephi	7.3	0.9	13	16	15	8	3	68	69	69	62	56
Ephraim	6.8	0.9	5	10	16	17	33	57	57	57	52	50
Holden	5.7	1.2	5	7	1	14	14	70	72	71	66	60
Milford	3.9	1.2	17	27	21	28	18	69	70	68	62	57
Manderfield	5.9	1.3	3	13	13	12	5	64	66	63	58	53
Circleville	2.9	0.4	12	12	9	10	15	67	70	69	60	53
Panguitch	4.1	0.7	7	18	13	20	29	56	56	54	50	46
Cave Valley	7.7	0.6	1	0	2	4	5	59	66	69	64	59
Vermillion	6.7	0.3	0	1	3	5	8	61	66	66	59	55
Spooky	4.5	0.4	3	2	4	16	1	79	79	74	66	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.

South Central



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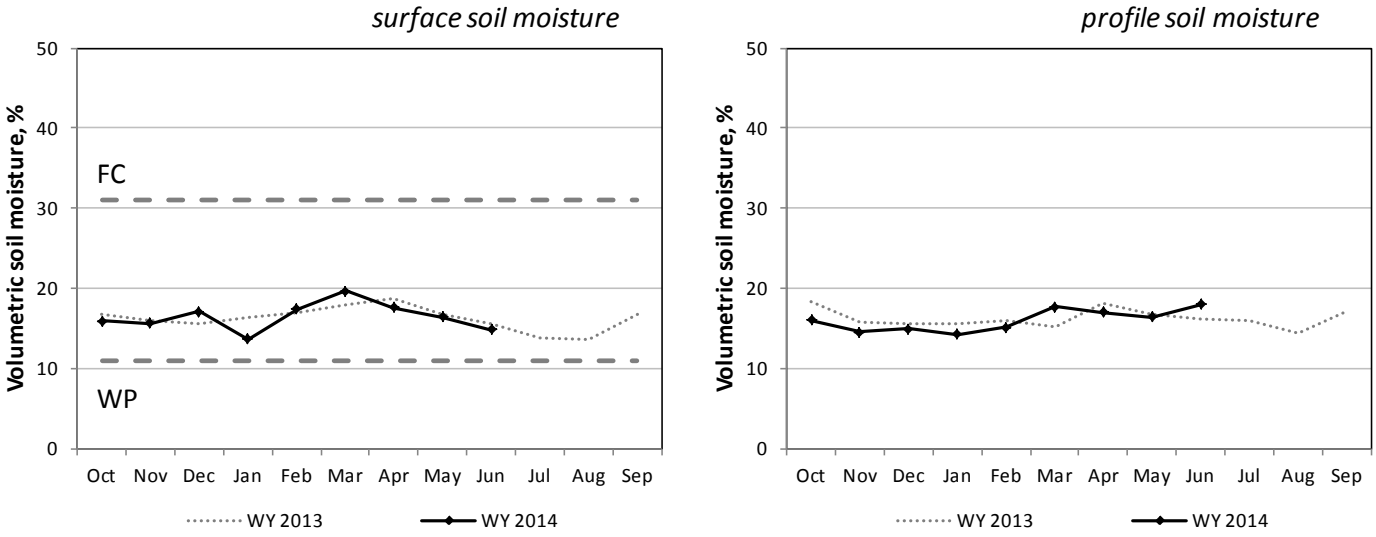
Western and Dixie

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"
	in.	*in.*	*volume %*					*°F*				
WESTERN												
Grouse Creek	8.5	1.9	2	12	18	20	19	59	62	61	57	55
Park Valley	6.1	1.0	0	3	12	46	25	65	68	68	64	58
Goshute	6.1	1.1	8	0	54	52	32	61	66	69	63	57
Dugway	4.2	0.1	14	25	37		11	70	71	71	64	62
Tule Valley	3.7	0.5	10	14	24	19	11	71	80	82	78	71
Hal's Canyon	2.9	0.3	0	0	10	12	9	70	72	77	66	61
Enterprise	4.1	1.2	5	26	23	15	15	65	71	70	65	59
DIXIE												
Sand Hollow	4.1	1.2	0	0	0	1	0	84	89	87	78	72

* 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



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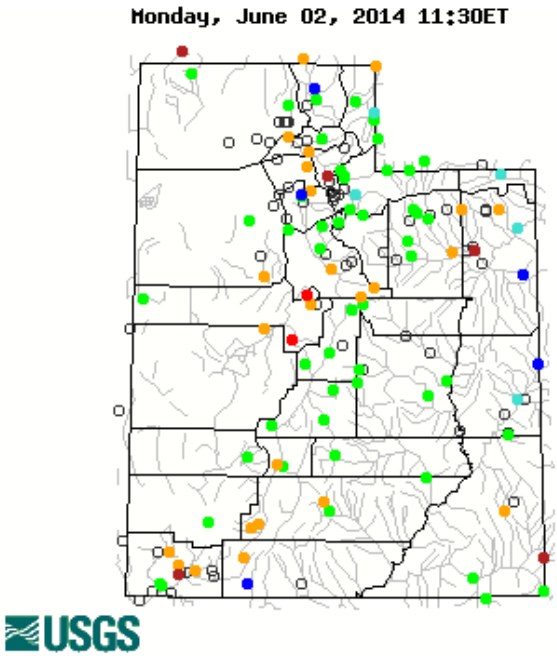
http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html

Utah Hydrologic Summary

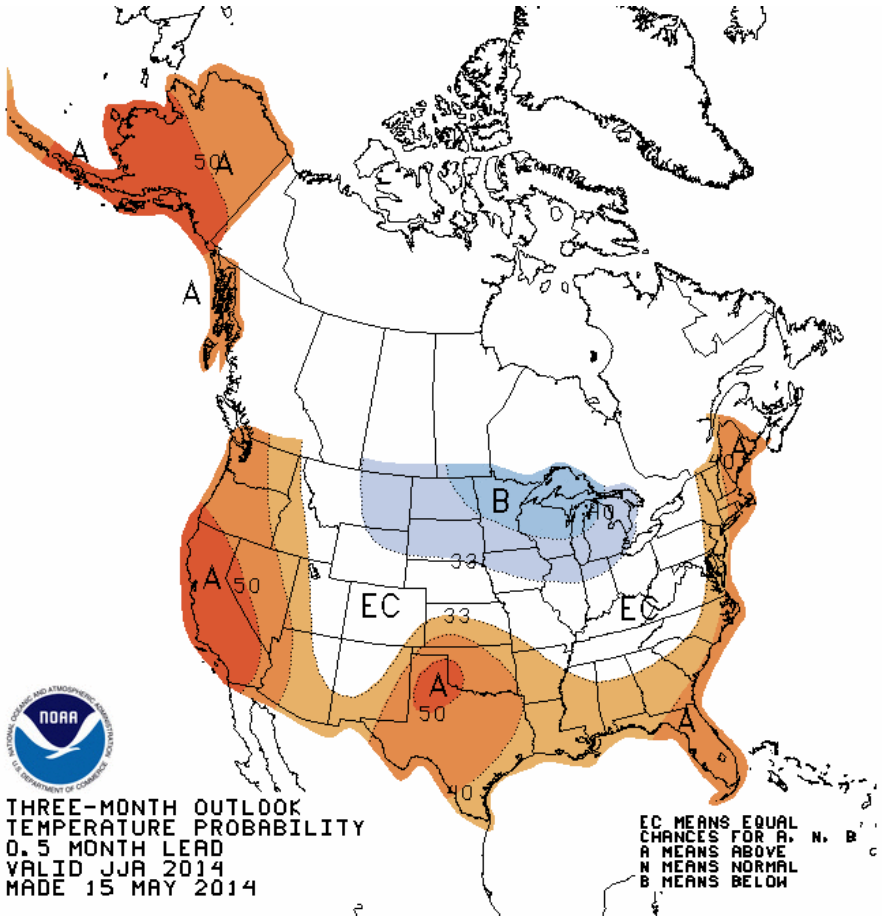
June 1, 2014

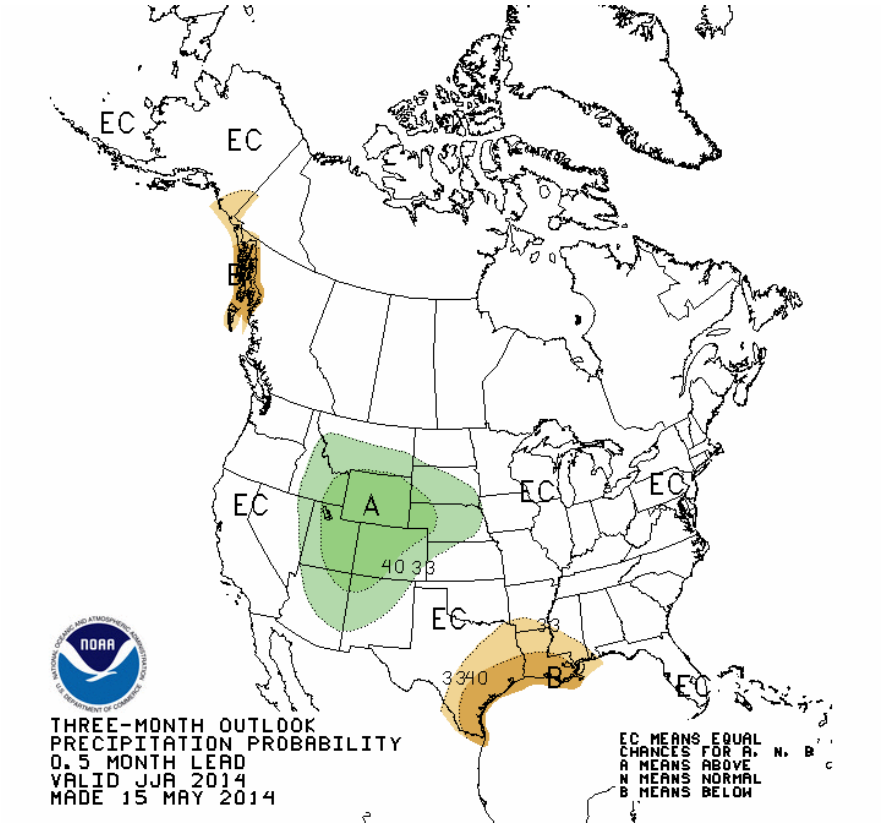
Current runoff at unregulated stream flow points, shows a strong north south gradient reflective of general snow patterns – dry in the south and closer to normal in the north. (most regulated stream flow is near normal reflecting reservoir releases.) Rivers in northern Utah are still flowing strong but are starting to recede. In southern Utah – some flow points showed little if any snowmelt runoff for the year. Most had short duration, low volumes, low peak flows and are fast approaching or are already at base flow conditions for the summer and fall. Snow packs are mostly melted out with only a few scattered remnants in isolated spots (mostly in northern Utah) left. Without substantial snow cover, stream flows will recede quickly. May precipitation was below average statewide with many sites in the 50% to 80% range. Reservoir storage is 4% less than last year, near 71% of capacity across the state. Reservoir storage in some areas such as the San Pitch (22% of capacity), and the Enterprise area (10%) are very low. The National Climate Prediction Center forecasts for Utah suggest warmer conditions for western Utah over the summer months and near normal in the rest of the state. They also forecast above normal summer precipitation over the entire state (see figures on next page). Based on all available water supply data, (reservoir storage, observed stream flow, climate forecasts, etc.) agriculture producers in northern Utah will have close to average conditions whereas in southern Utah the drought continues.

Current Utah Stream Flow - Courtesy US Geological Survey



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


A
50
A
A
B
40
33
A
50
EC
33
EC
A
50
A
40
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID JJA 2014
MADE 15 MAY 2014
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

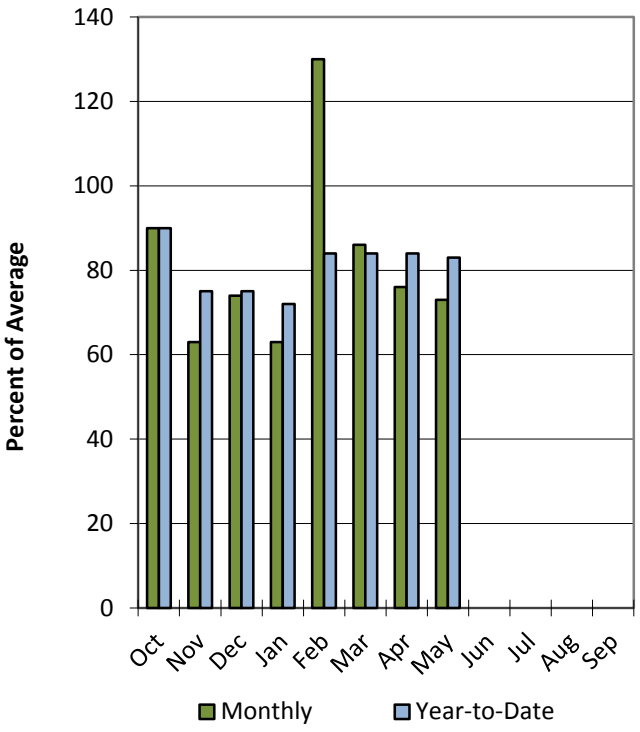

EC
EC
B
EC
A
40 33
EC
33
EC
EC
33 40
B
EC
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID JJA 2014
MADE 15 MAY 2014
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

Statewide Utah

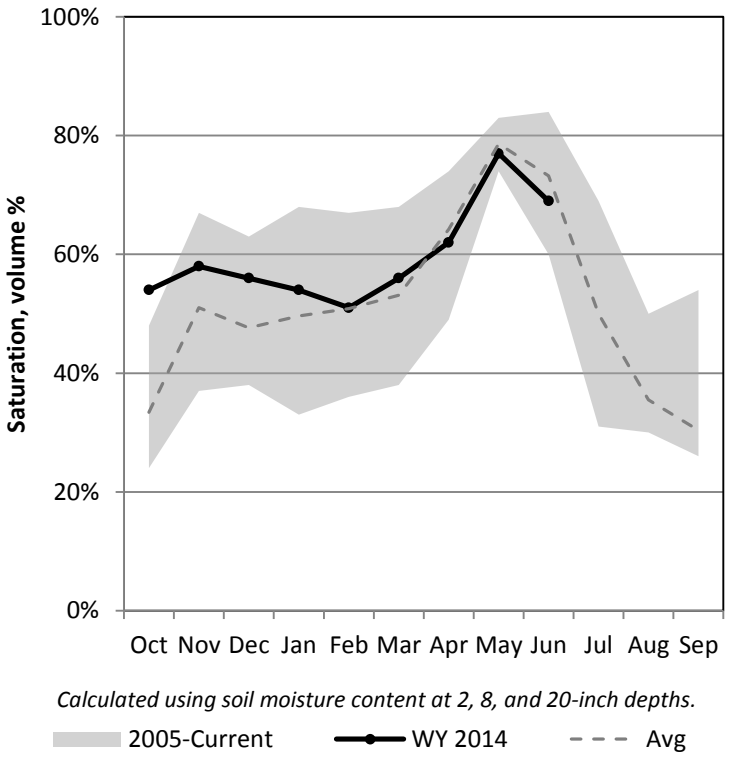
6/1/2014

Precipitation in May was below average at 73%, which brings the seasonal accumulation (Oct-May) to 83% of average. Soil moisture is at 69% compared to 67% last year. Reservoir storage is at 71% of capacity, compared to 75% last year.

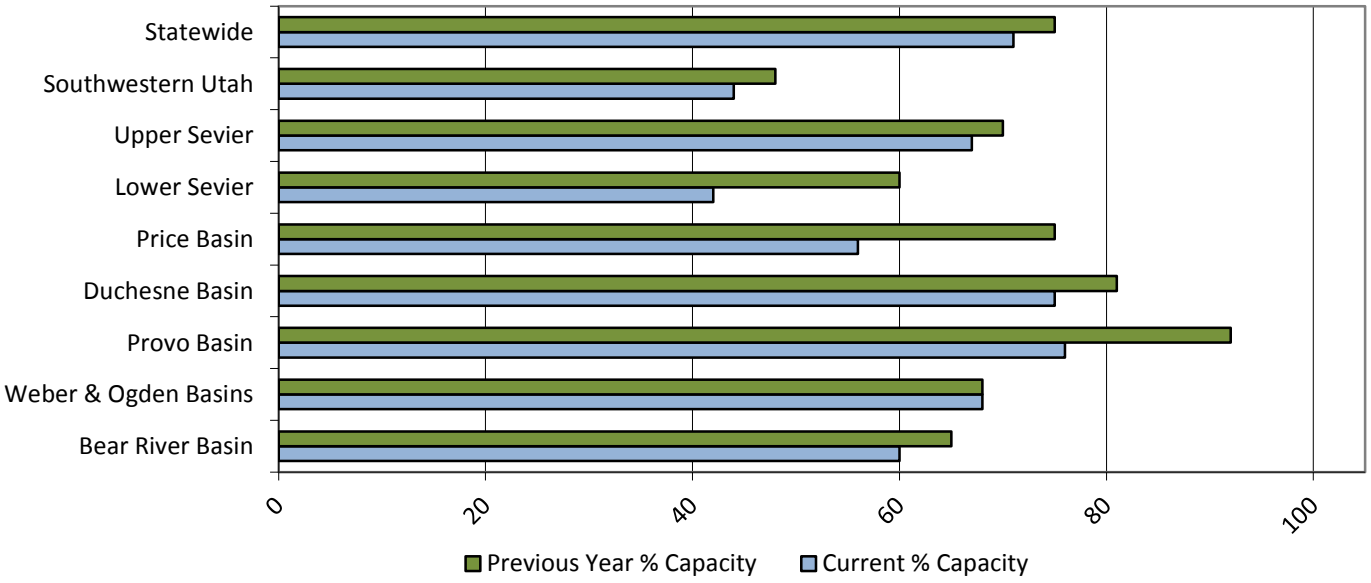
Precipitation



Soil Moisture

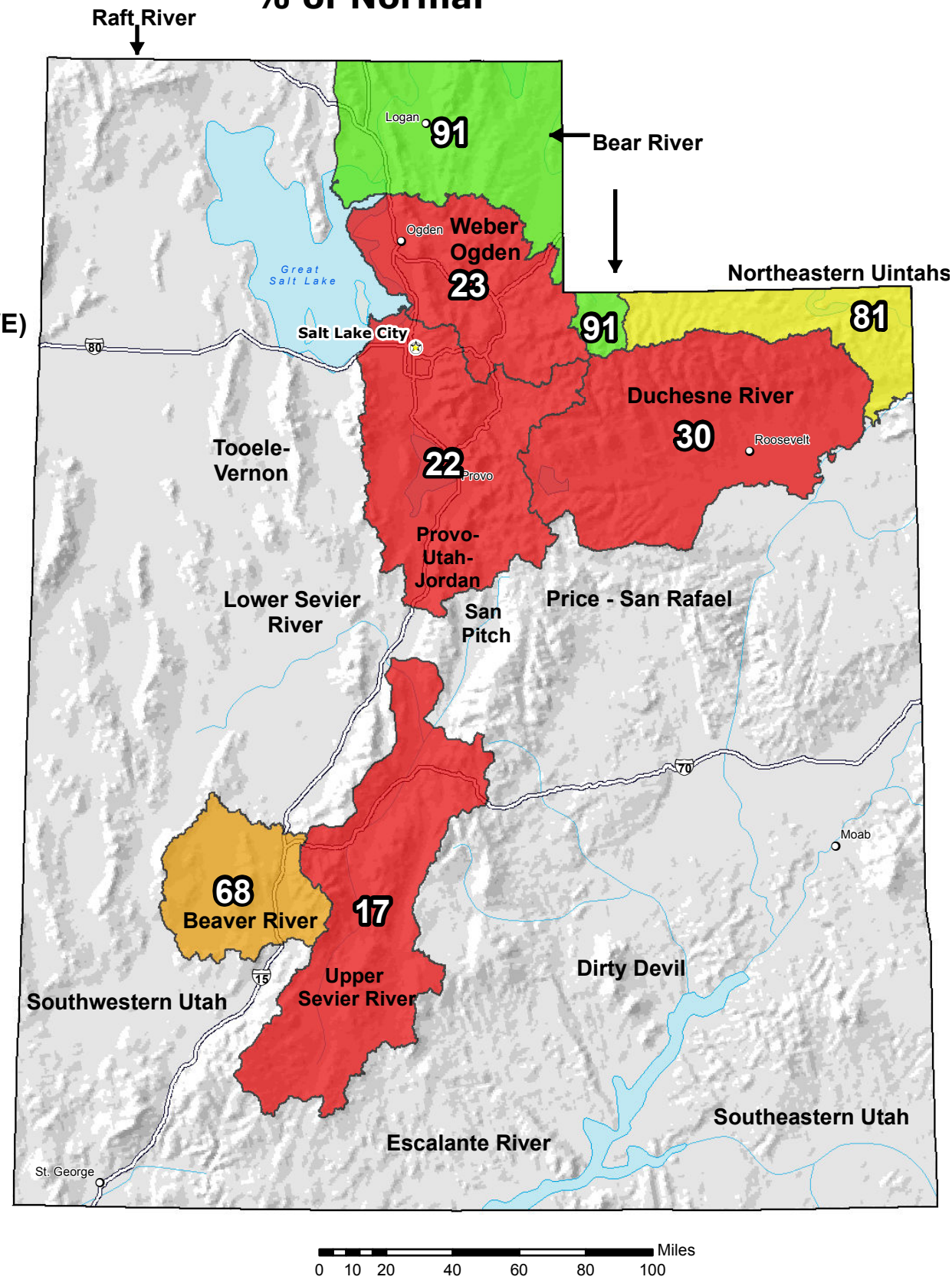


Reservoir Storage



Utah
SNOTEL Current Snow Water Equivalent (SWE)
% of Normal

Jun 01, 2014



Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >=150%

* *Data unavailable at time of posting or measurement is not representative at this time of year*

Provisional Data Subject to Revision

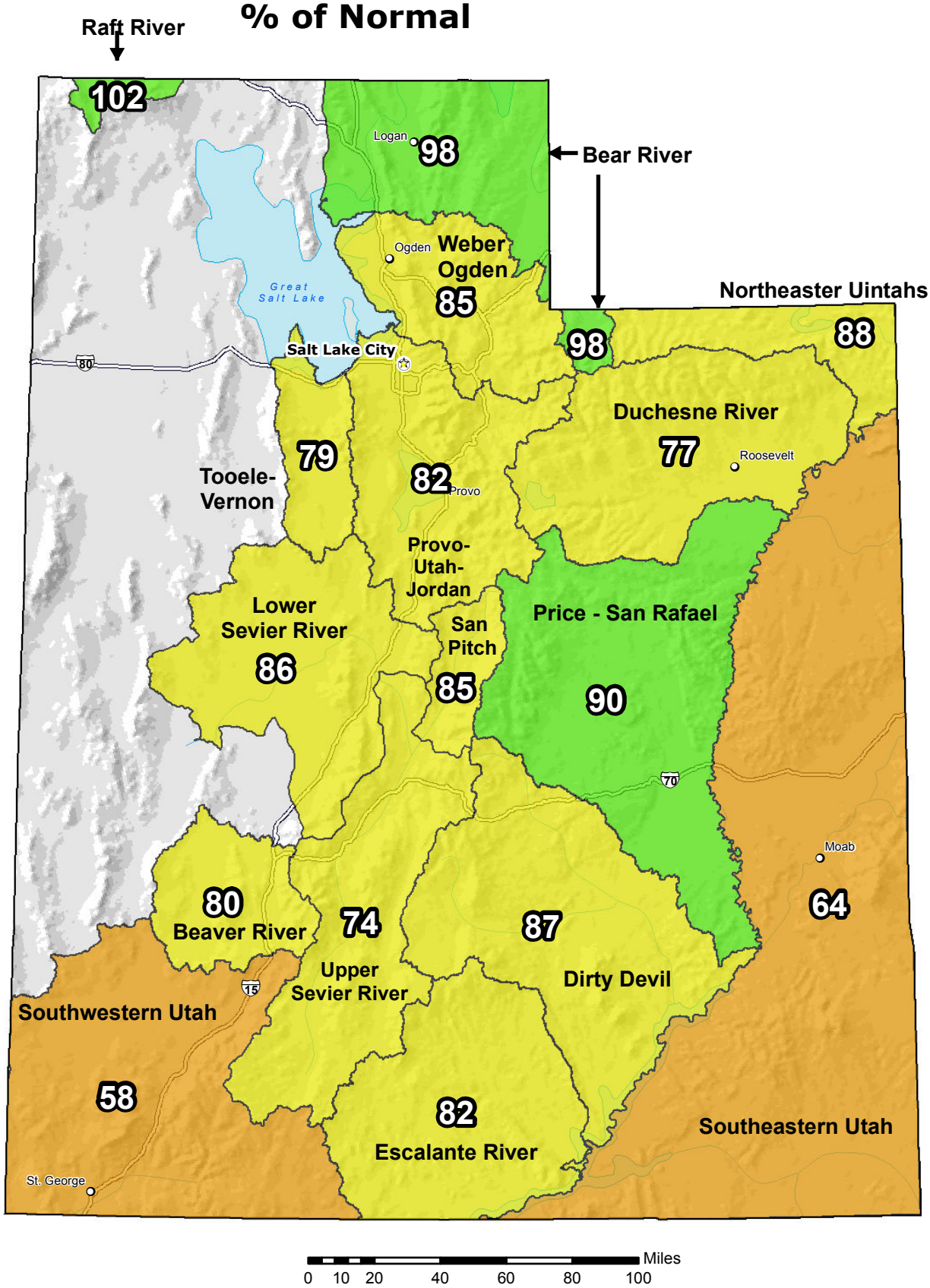
USDA NRCS

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

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

Jun 01, 2014



Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >=150%

* *Data unavailable at time of posting or measurement is not representative at this time of year*

Provisional Data Subject to Revision

USDA NRCS

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).

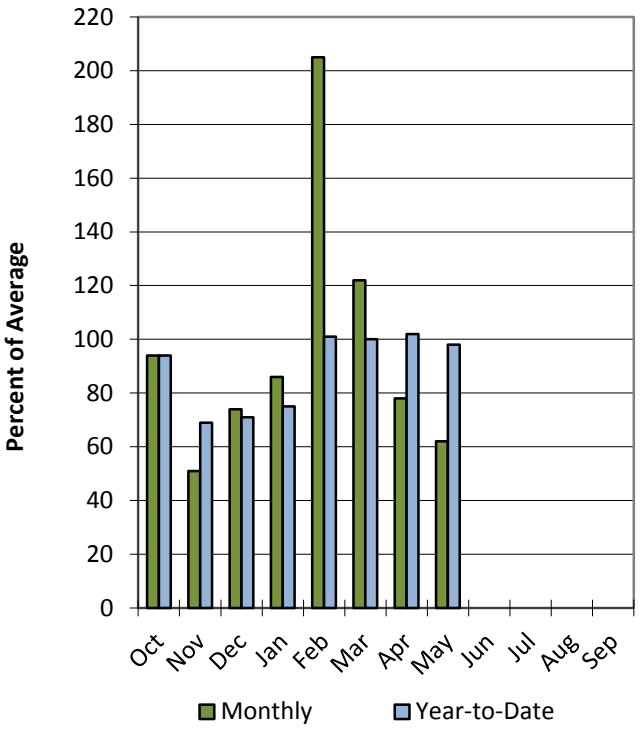
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov

Bear River Basin

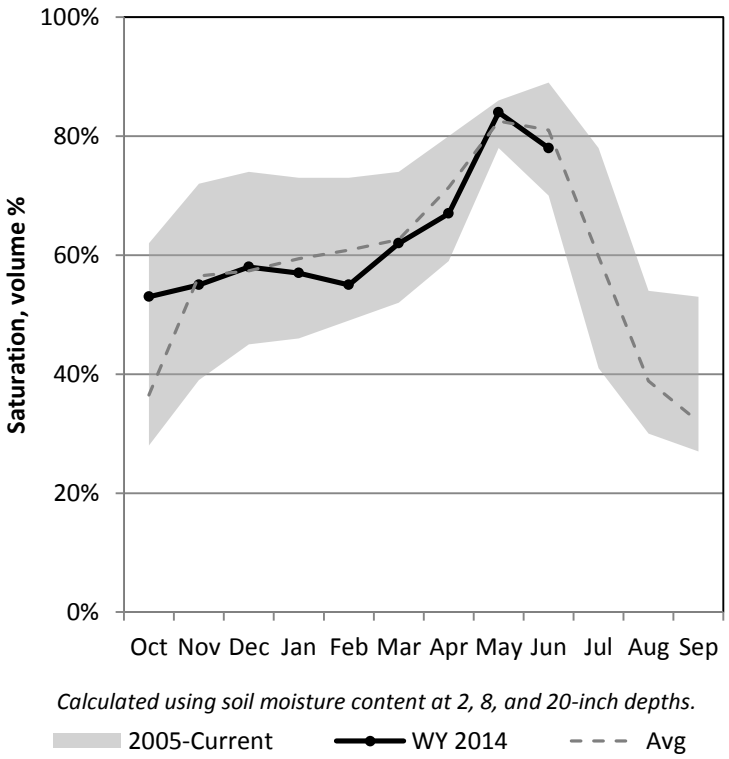
6/1/2014

Precipitation in May was much below average at 62%, which brings the seasonal accumulation (Oct-May) to 98% of average. Soil moisture is at 78% compared to 75% last year. Reservoir storage is at 60% of capacity, compared to 65% last year. The water availibility index for the Bear River is 30%.

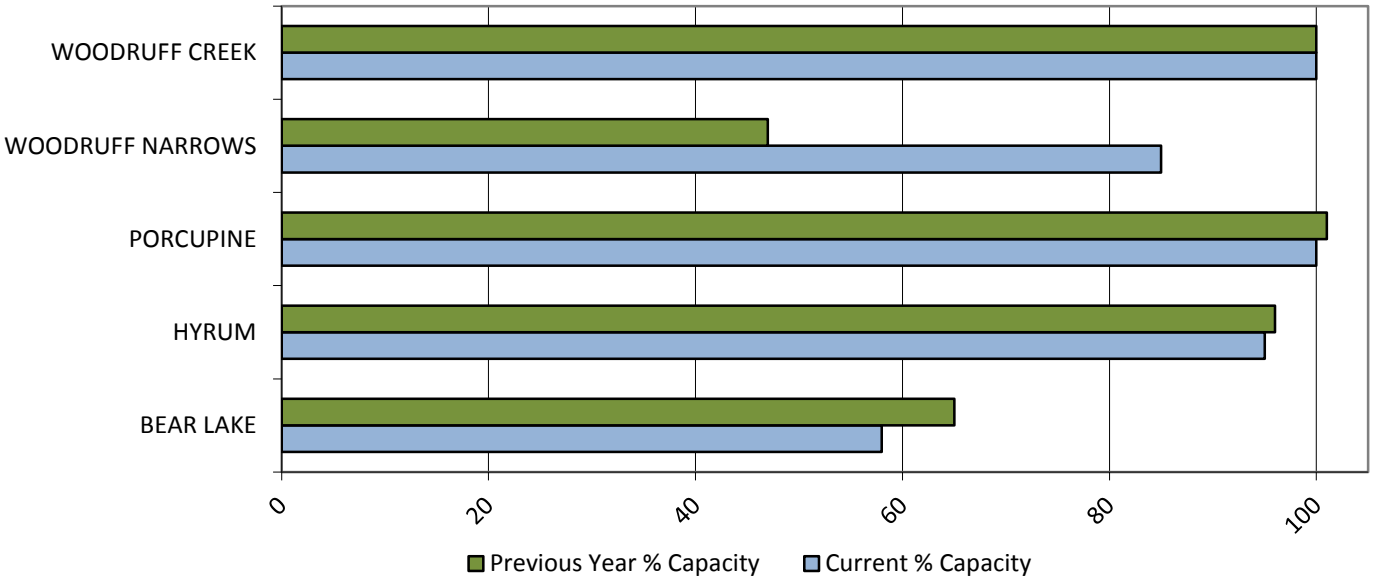
Precipitation



Soil Moisture



Reservoir Storage

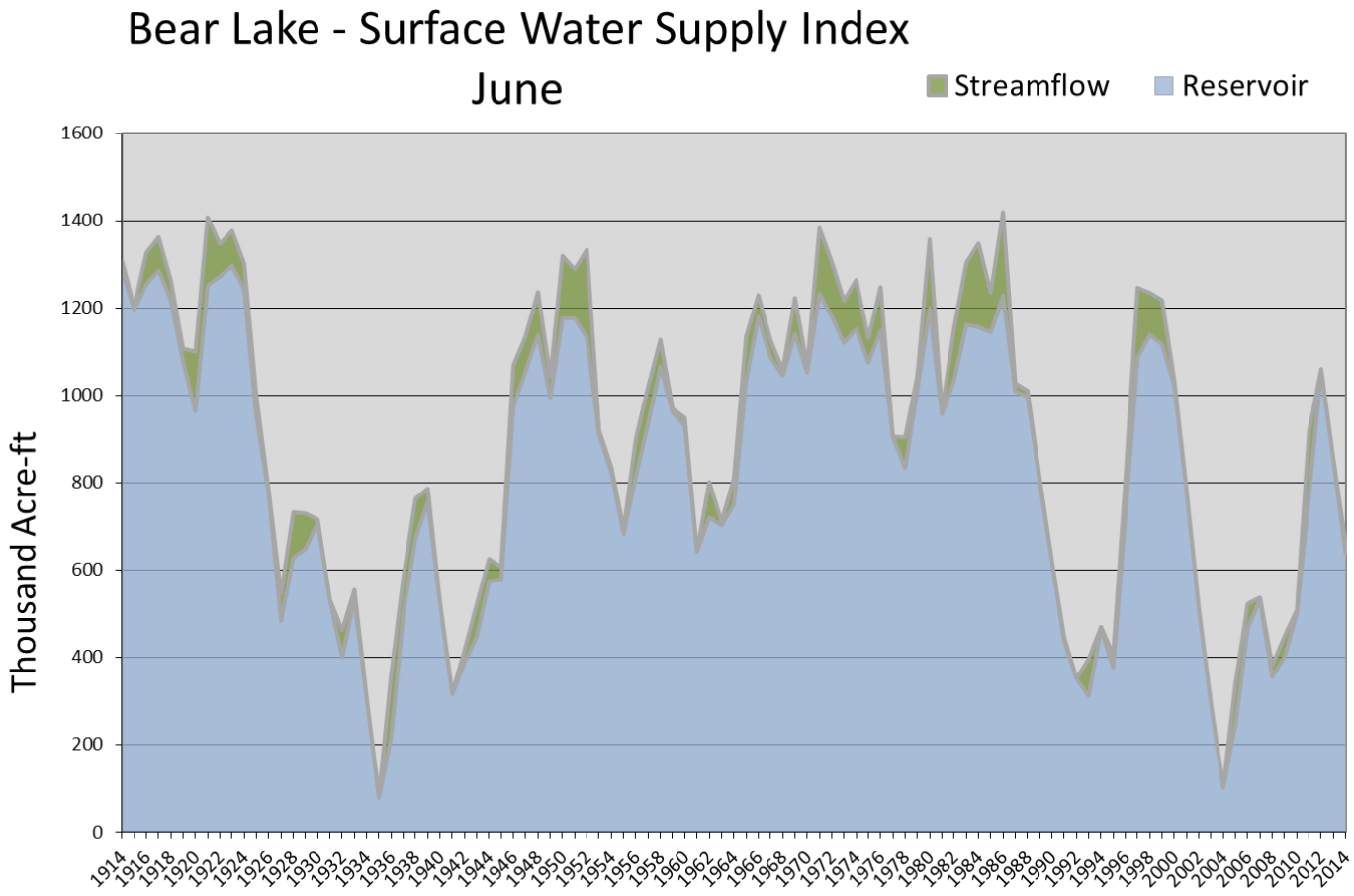


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Bear Lake	May accumulated inflow to Bear Lake (*observed*)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Bear River	**638**	**20**	**658**	**-1.63**	**30**	**44, 61, 55, 63**

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

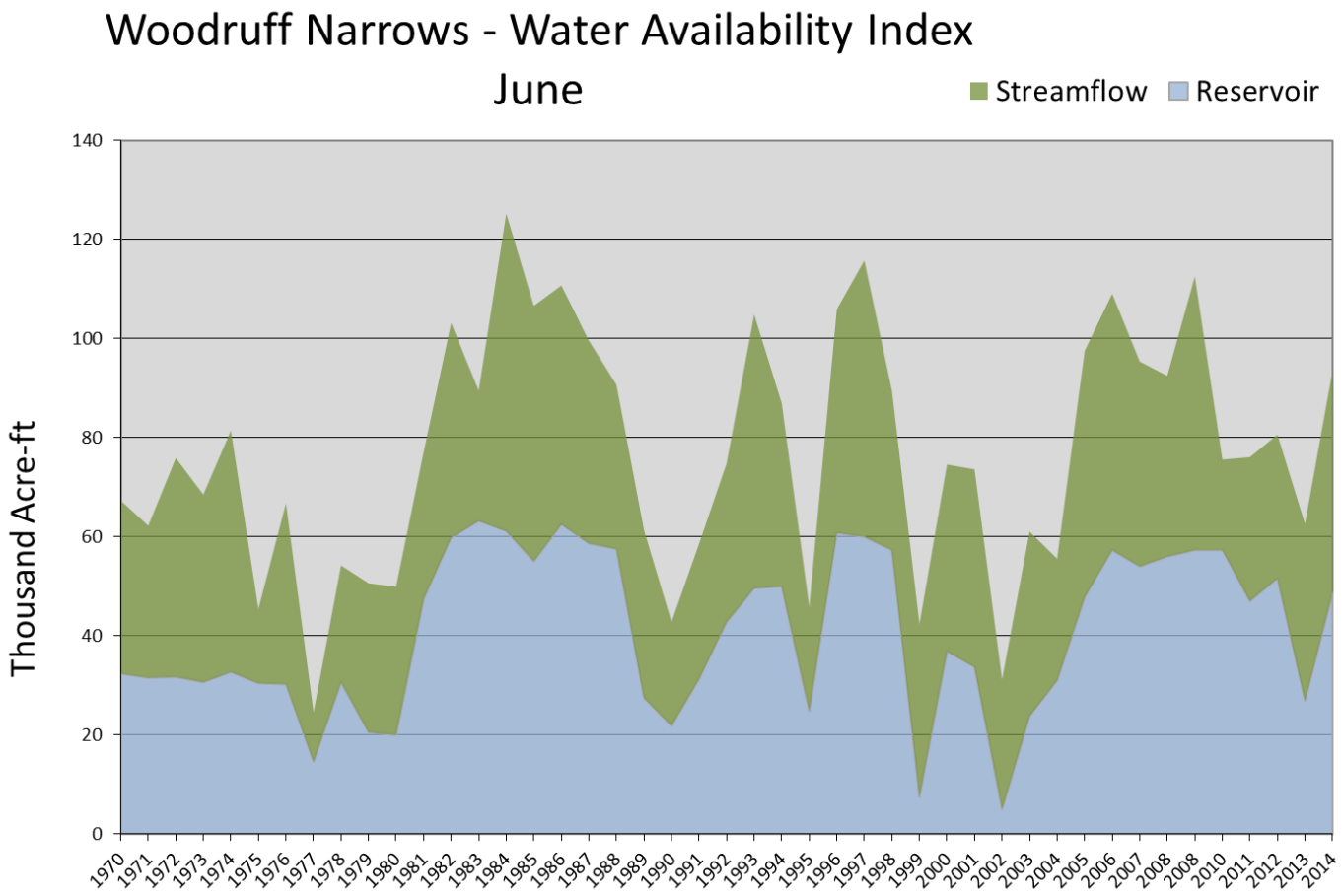


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Woodruff Narrows Reservoir	May Observed Streamflow Bear at Stateline	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Woodruff Narrows	**48.7**	**44.8**	**93.5**	**1.81**	**72**	**88, 08, 07, 05**

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

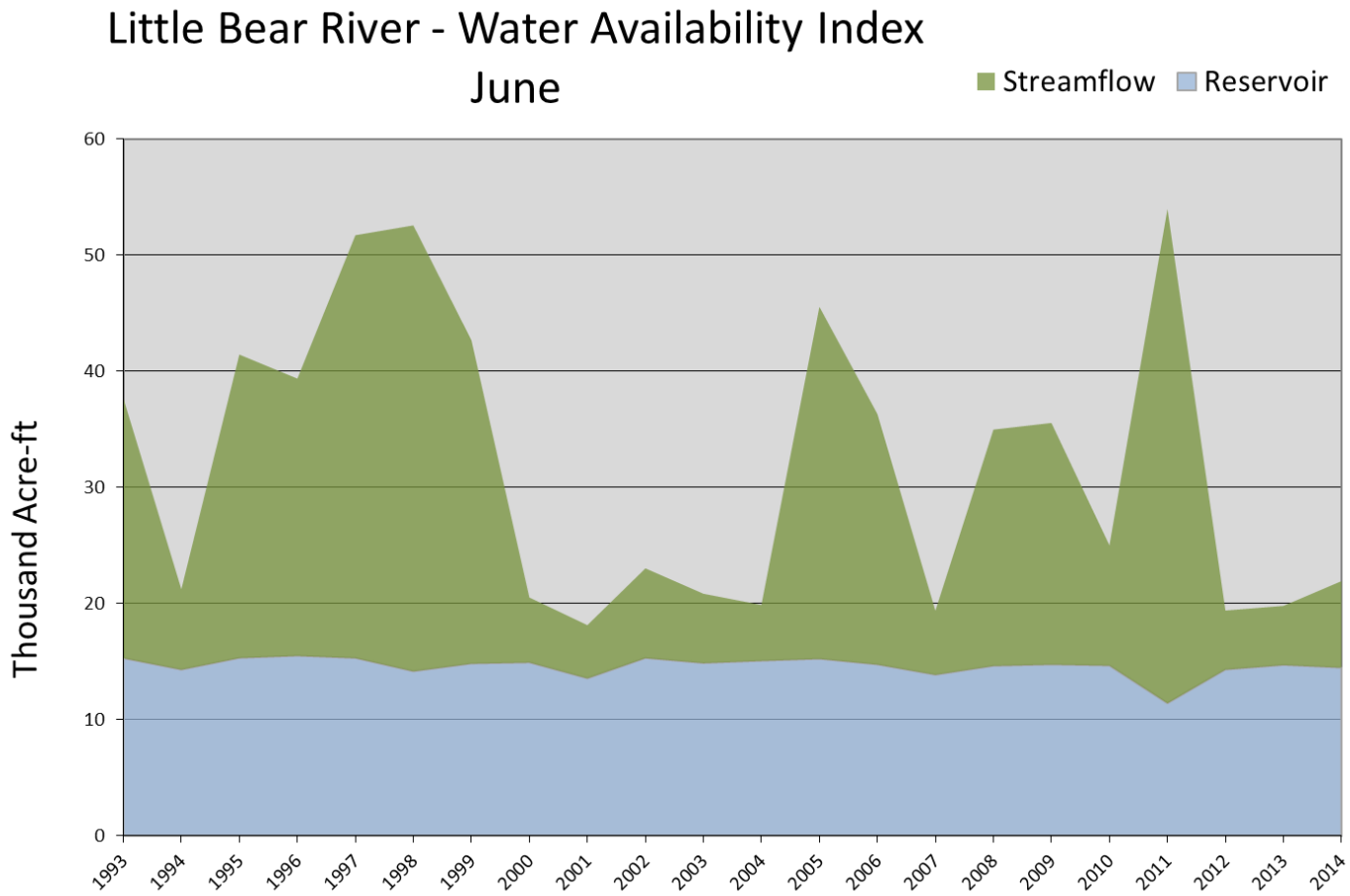


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Hyrum Reservoir	May Observed Streamflow Little Bear at Paradise	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Little Bear	**14.5**	**7.5**	**21.9**	**-0.91**	**39**	**03, 94, 02, 10**

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

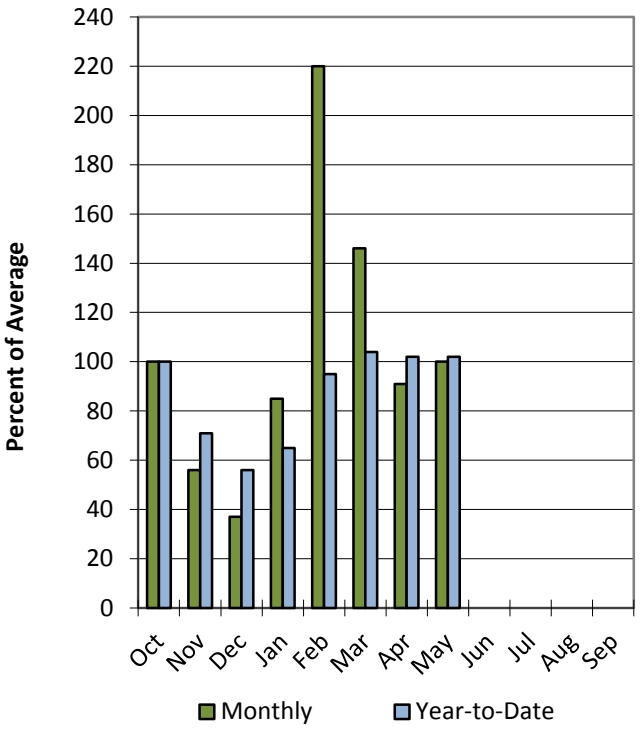


Raft River Basin

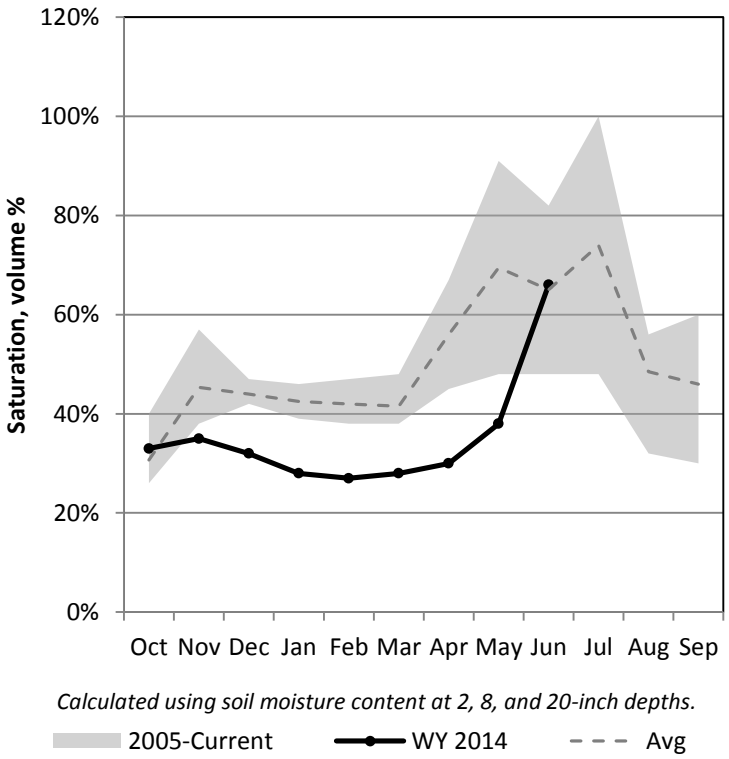
6/1/2014

Precipitation in May was near average at 100%, which brings the seasonal accumulation (Oct-May) to 102% of average. Soil moisture is at 66% compared to 63% last year.

Precipitation



Soil Moisture

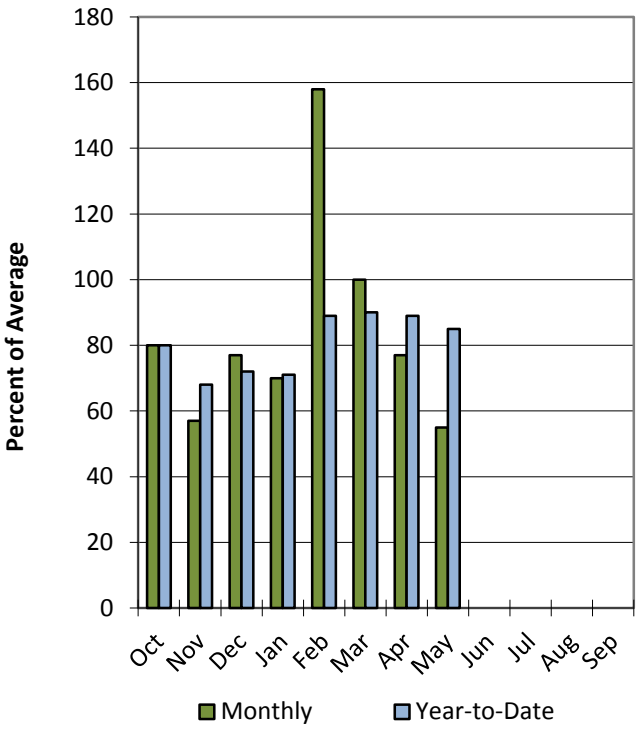


Weber & Ogden River Basins

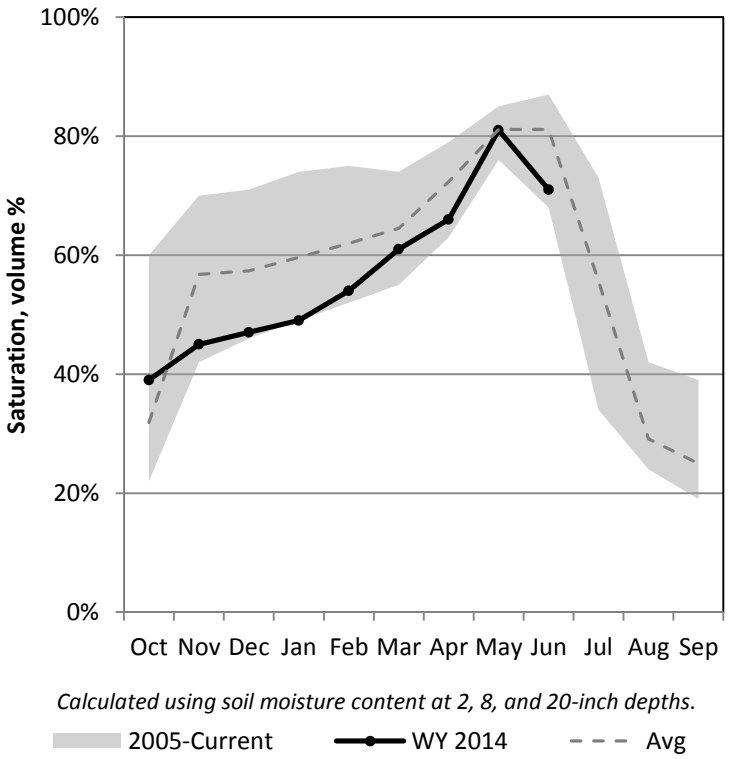
6/1/2014

Precipitation in May was much below average at 55%, which brings the seasonal accumulation (Oct-May) to 85% of average. Soil moisture is at 71% compared to 73% last year. Reservoir storage is at 68% of capacity, compared to 68% last year. The water availibility index for the Ogden River is 39% and 7% for the Weber River.

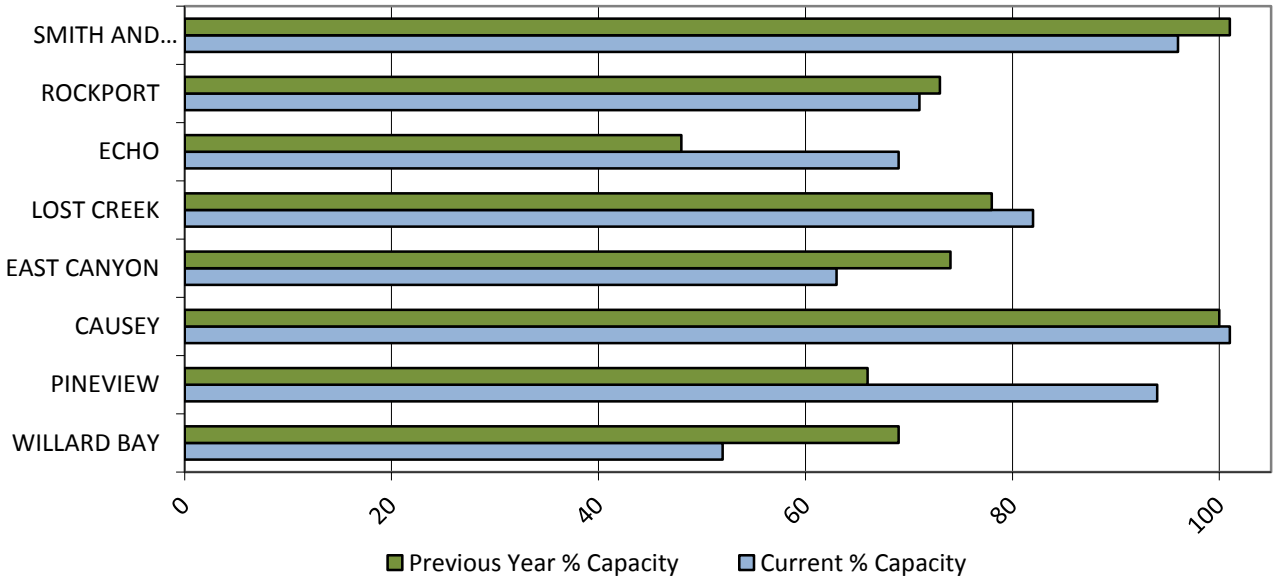
Precipitation



Soil Moisture



Reservoir Storage

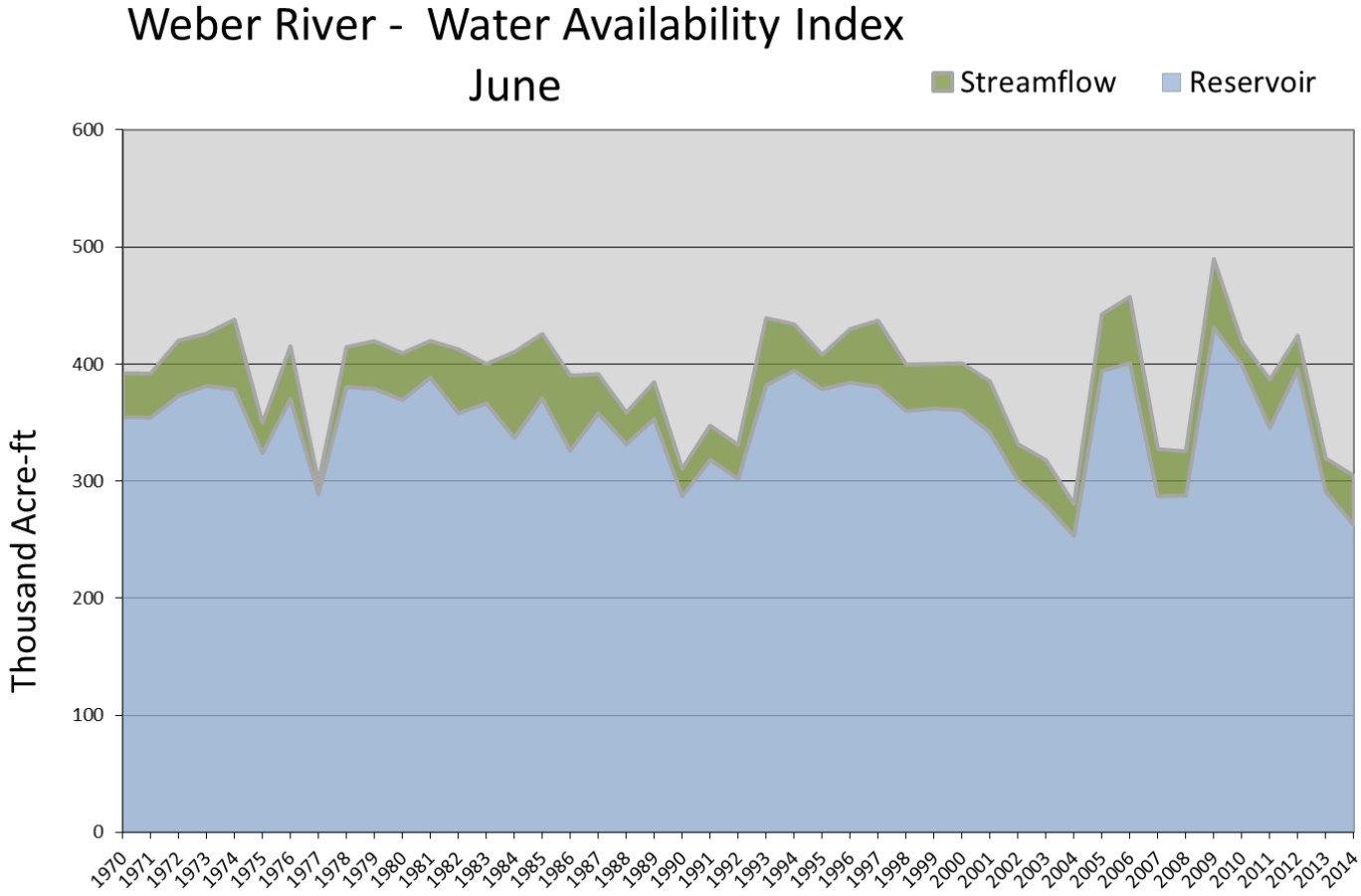


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Reservoirs	May accumulated flow at Weber near Oakley (*observed*)	Reservoirs + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Weber River	**263**	**42**	**304**	**-3.62**	**7**	**04, 77, 90, 03**

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

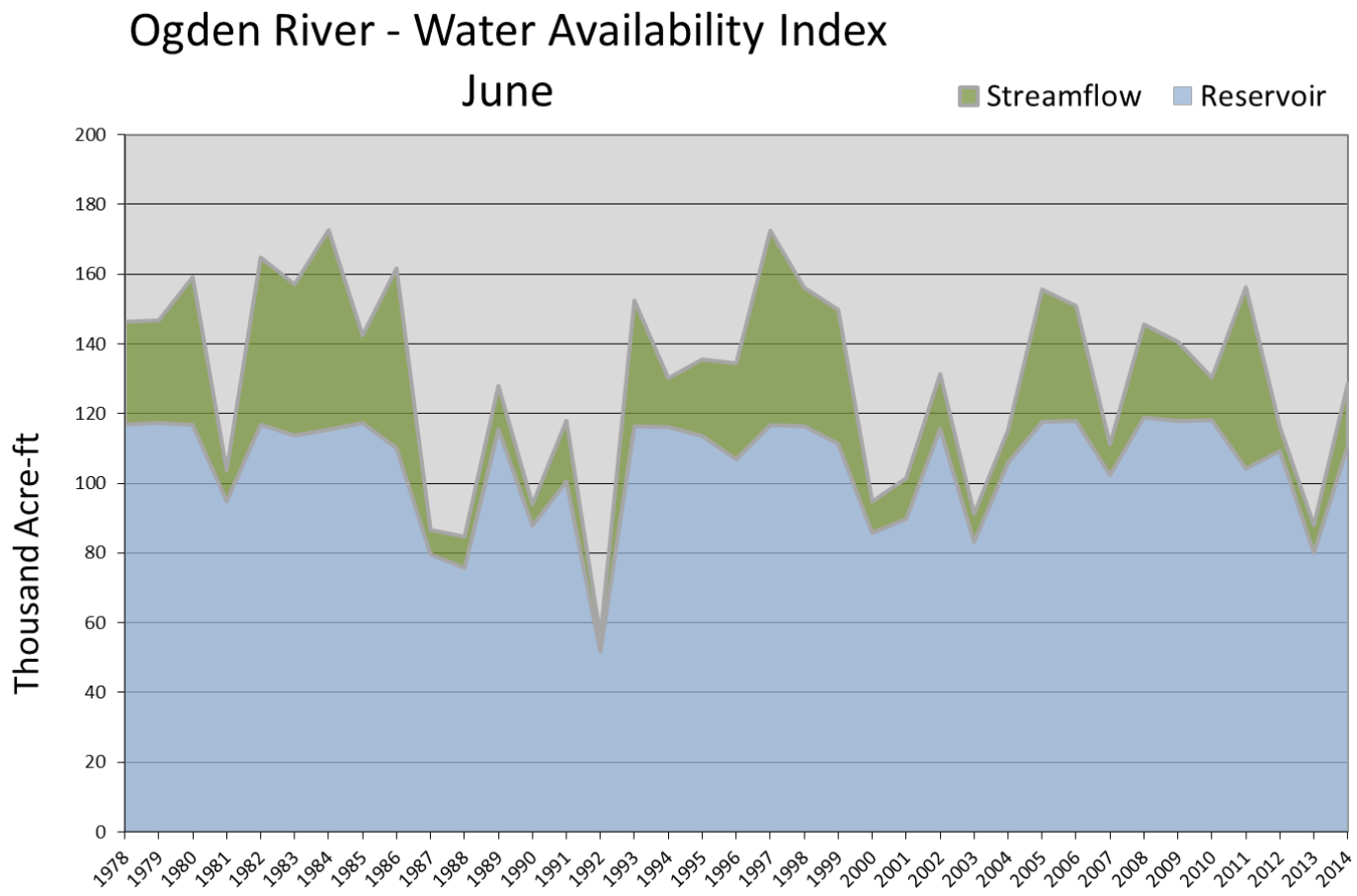


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Pine View & Causey	May accumulated flow at South Fork Ogden (*observed*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Ogden River	**111**	**18**	**129**	**-0.88**	**39**	**91, 89, 14, 94**

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

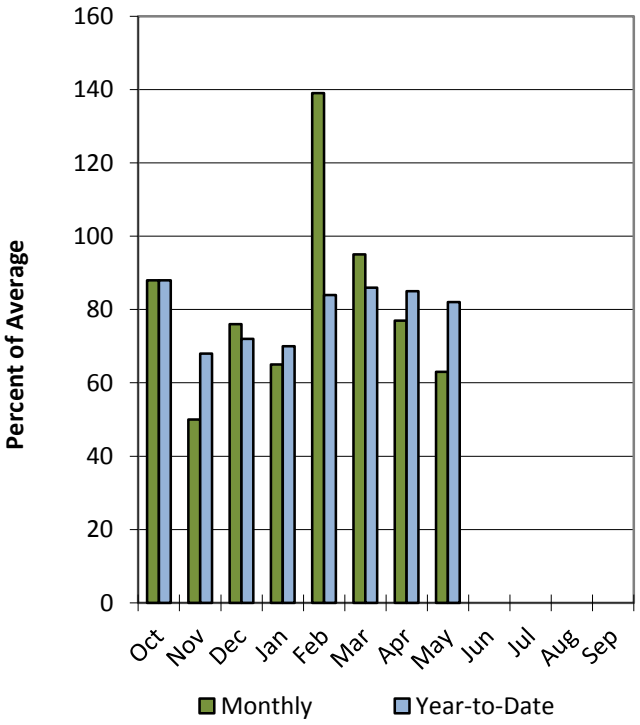


Provo & Jordan River Basins

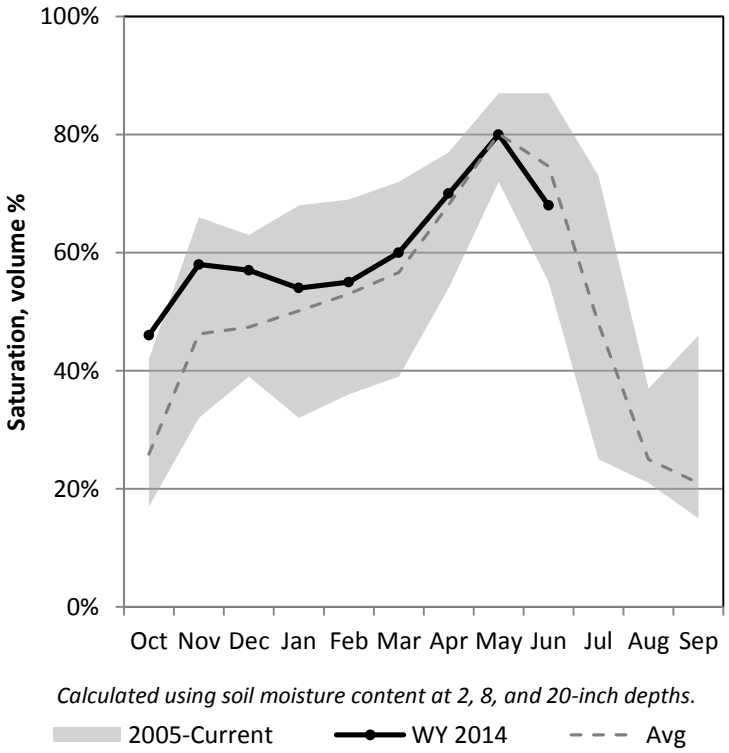
6/1/2014

Precipitation in May was much below average at 63%, which brings the seasonal accumulation (Oct-May) to 82% of average. Soil moisture is at 68% compared to 72% last year. Reservoir storage is at 76% of capacity, compared to 81% last year. The water availibility index for the Provo River is 24.9999999%.

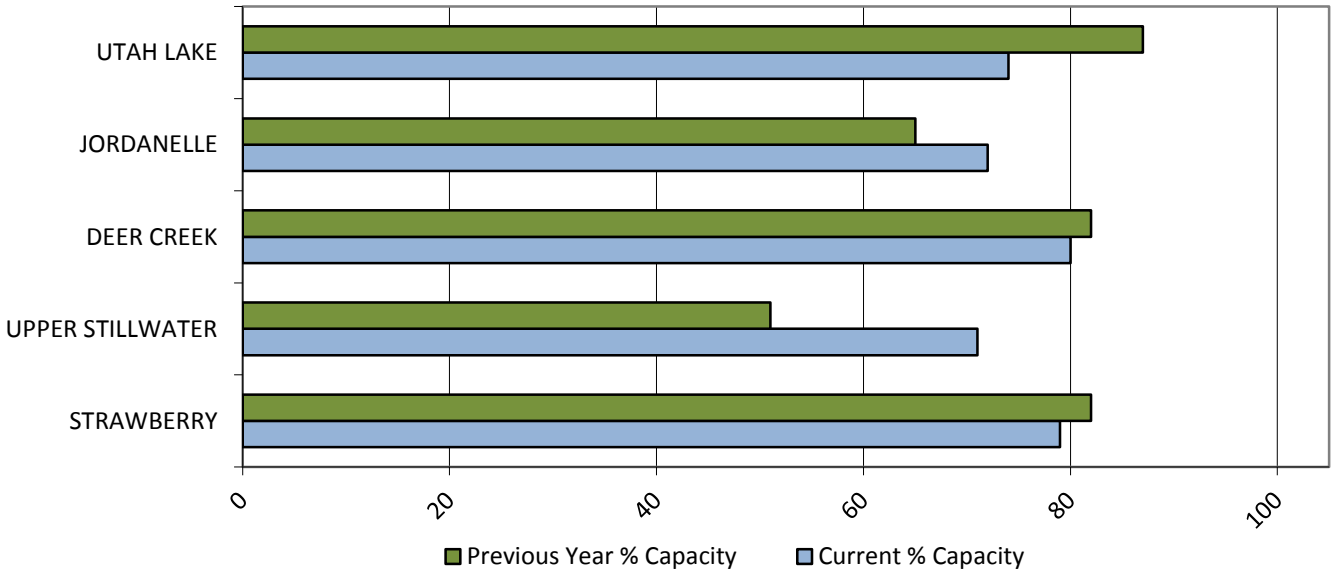
Precipitation



Soil Moisture



Reservoir Storage

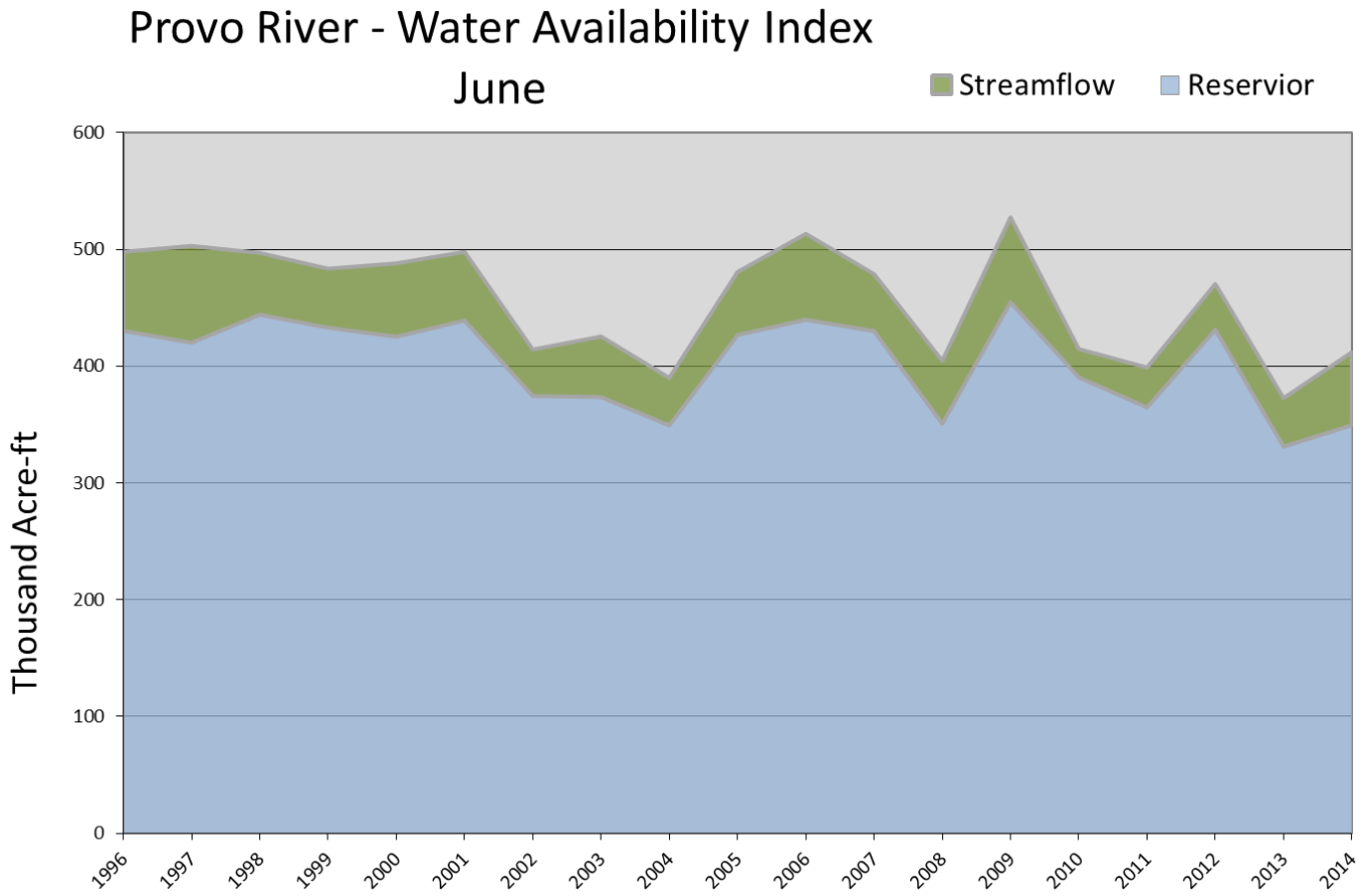


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Deer Creek, Jordanelle	May accumulated flow Provo River at Woodland (*observed*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Provo	**349**	**62.4**	**412**	**-2.08**	**25**	**11, 08, 02, 10**

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

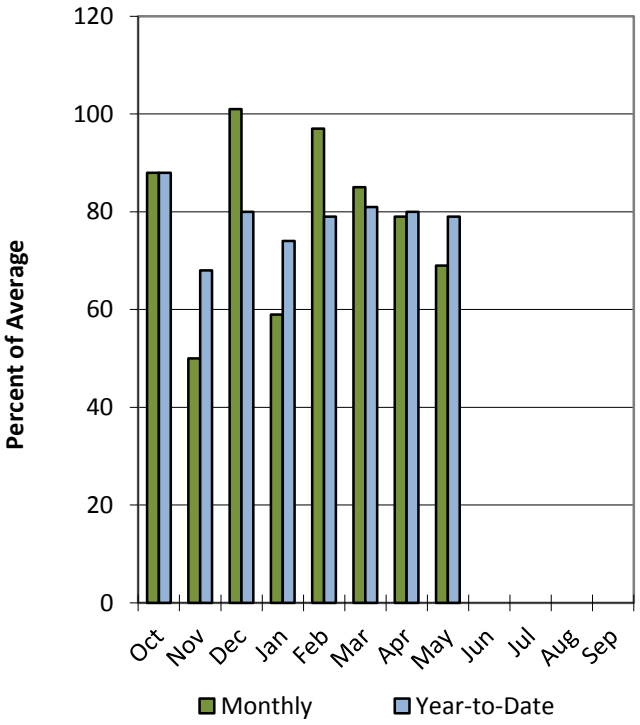


Tooele & Vernon Creek Basins

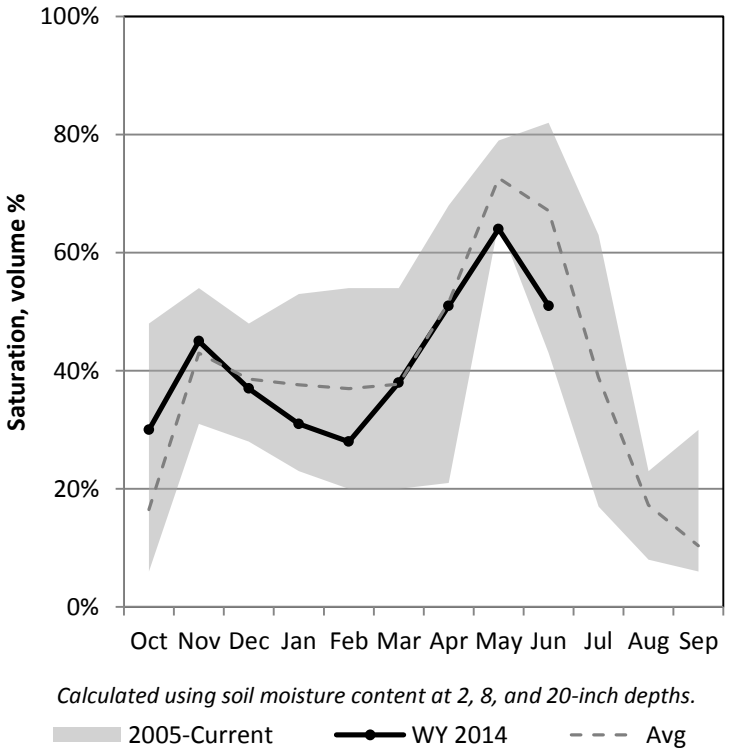
6/1/2014

Precipitation in May was much below average at 69%, which brings the seasonal accumulation (Oct-May) to 79% of average. Soil moisture is at 51% compared to 60% last year. Reservoir storage is at 76% of capacity, compared to 73% last year.

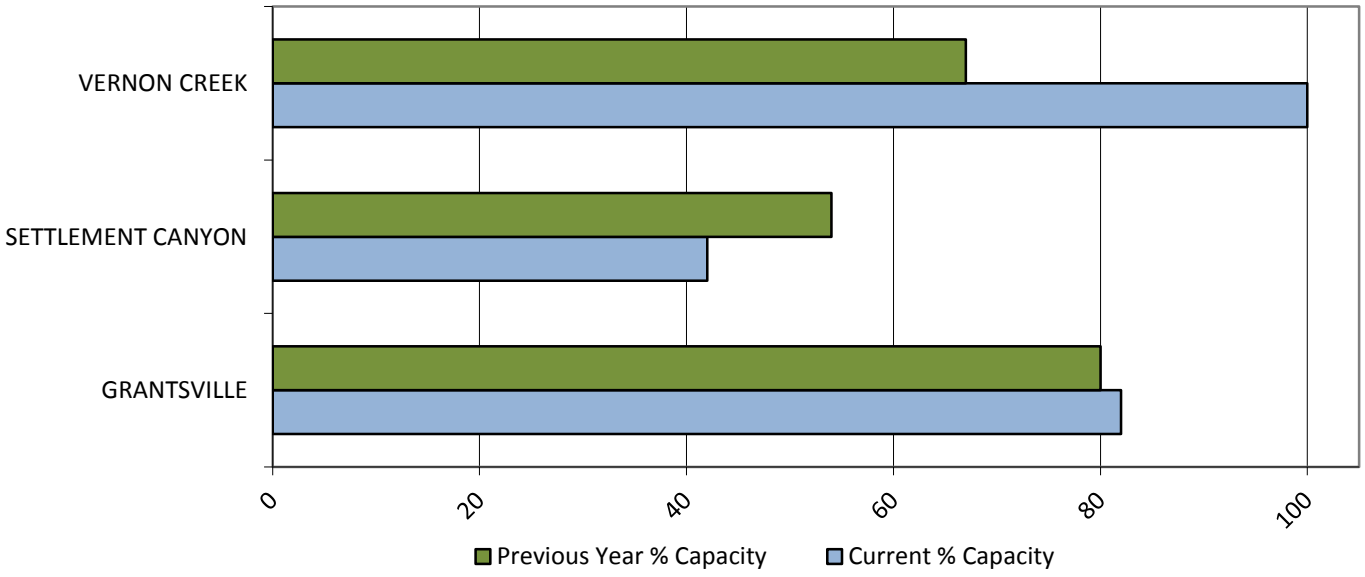
Precipitation



Soil Moisture



Reservoir Storage

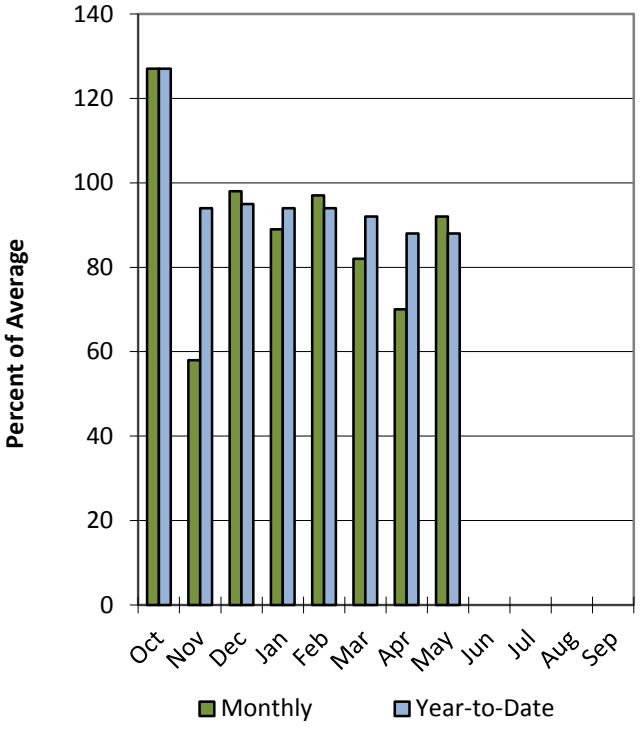


Northeastern Uintah Basin

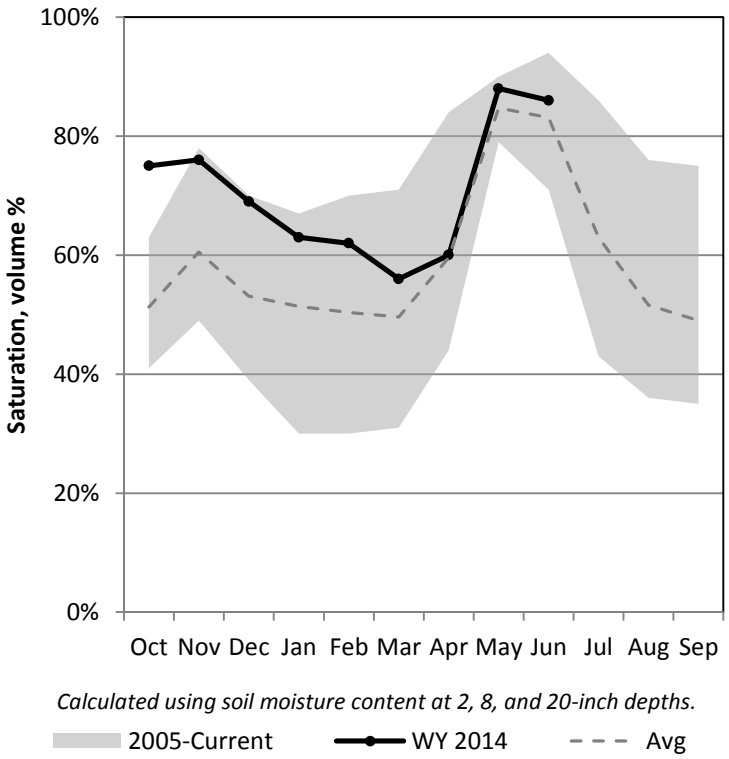
6/1/2014

Precipitation in May was near average at 92%, which brings the seasonal accumulation (Oct-May) to 88% of average. Soil moisture is at 86% compared to 85% last year. Reservoir storage is at 85% of capacity, compared to 80% last year.

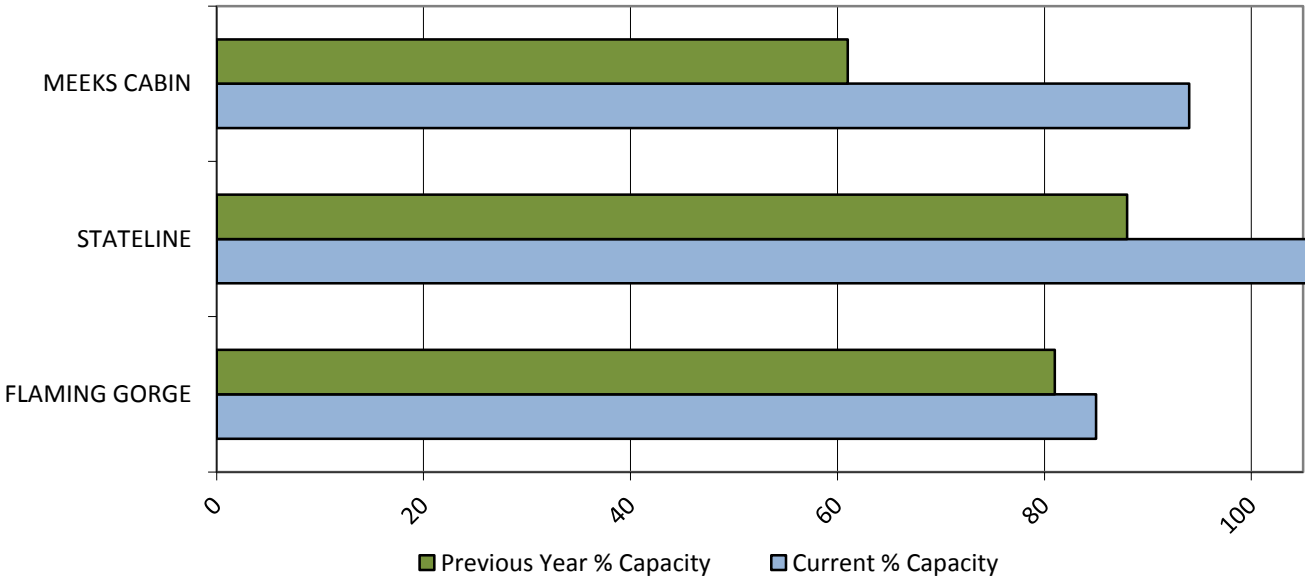
Precipitation



Soil Moisture



Reservoir Storage

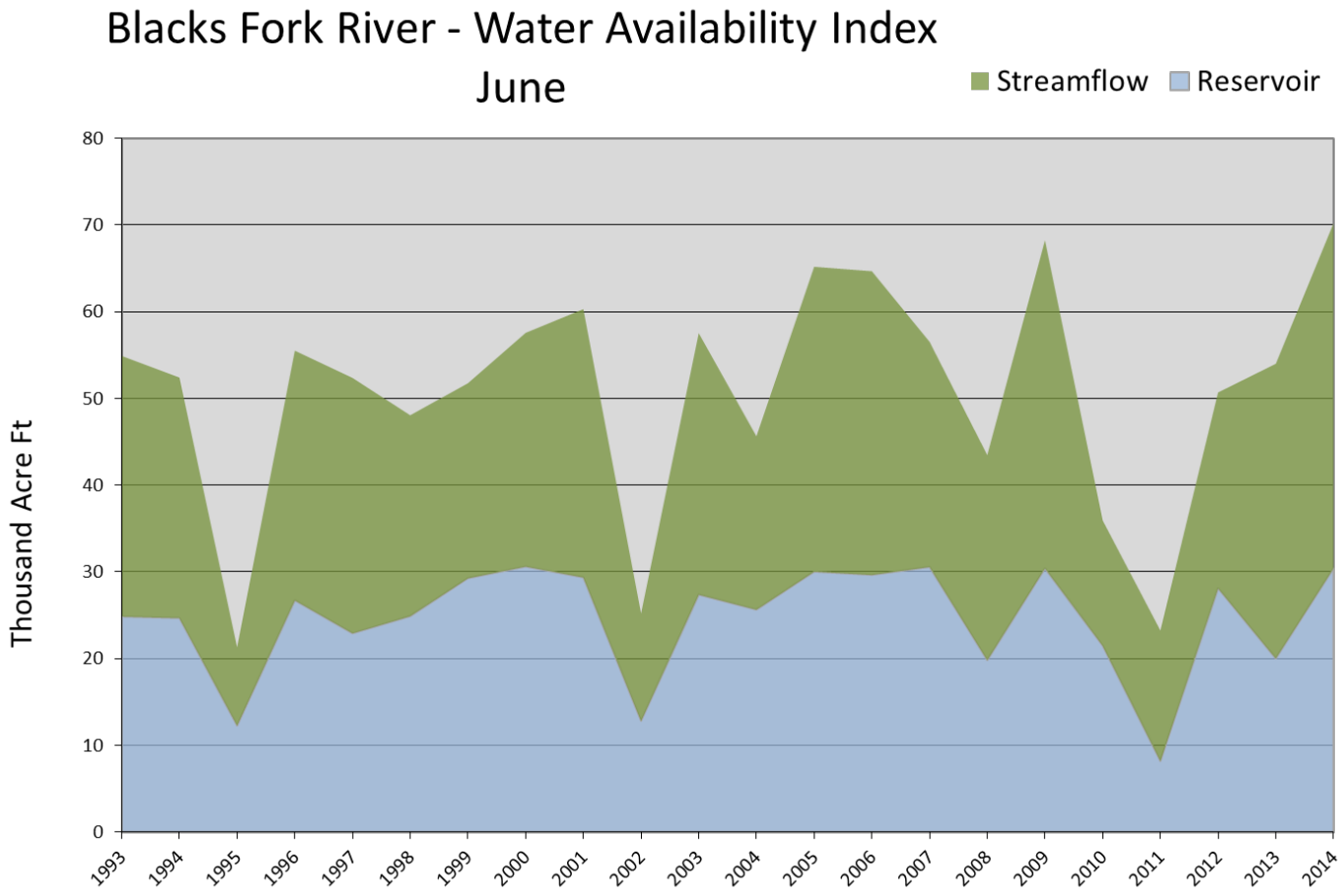


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Meeks Cabin Reservoir	May Observed Streamflow Blacks Fork nr Robertson	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Blacks Fork	**30.4**	**39.8**	**70.0**	**3.80**	**96**	**05, 09**

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

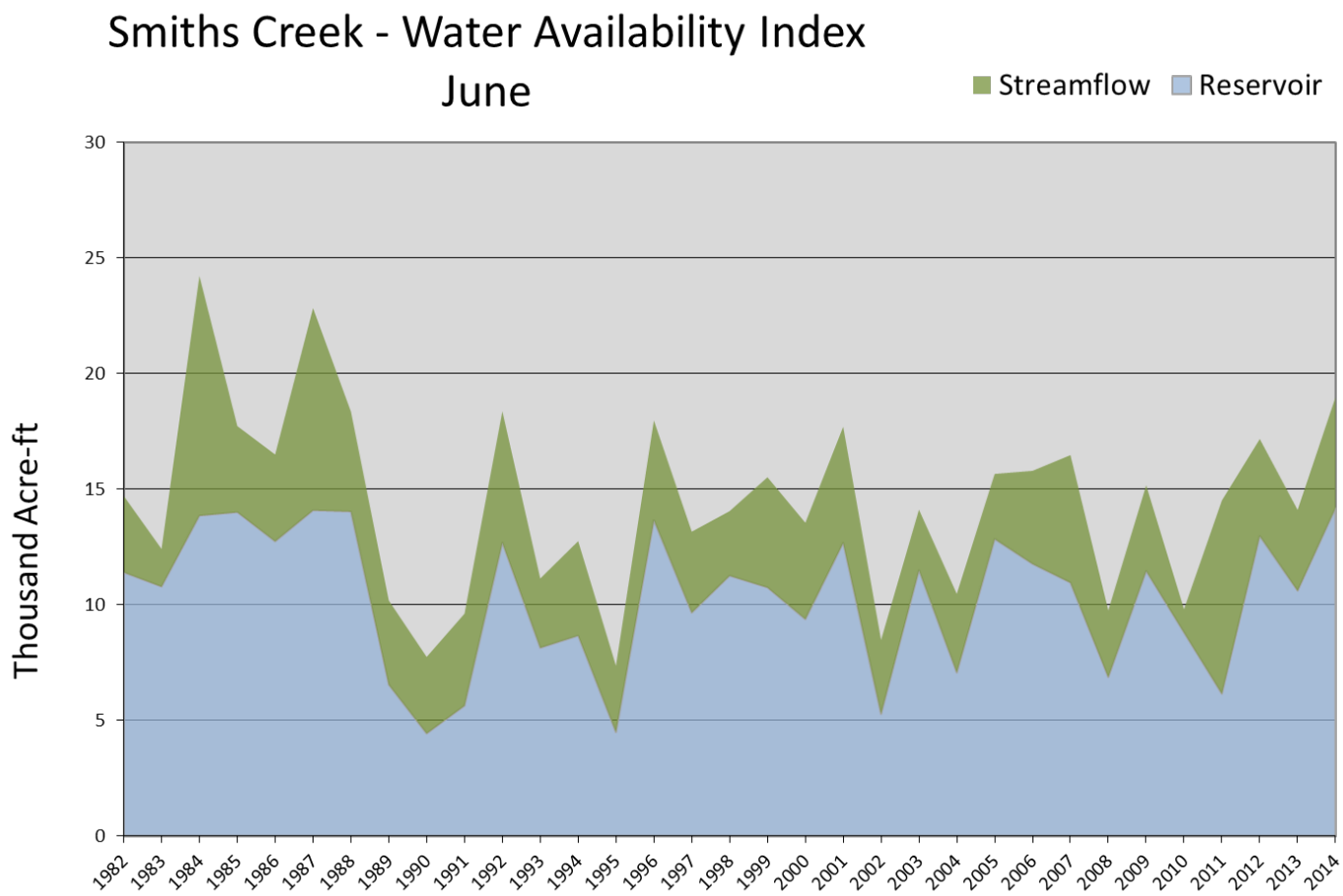


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Stateline Reservoir	May Observed Flow EF Smiths Creek	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Smiths Creek	**14.2**	**4.8**	**19.0**	**3.43**	**91**	**88, 92, 87, 84**

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

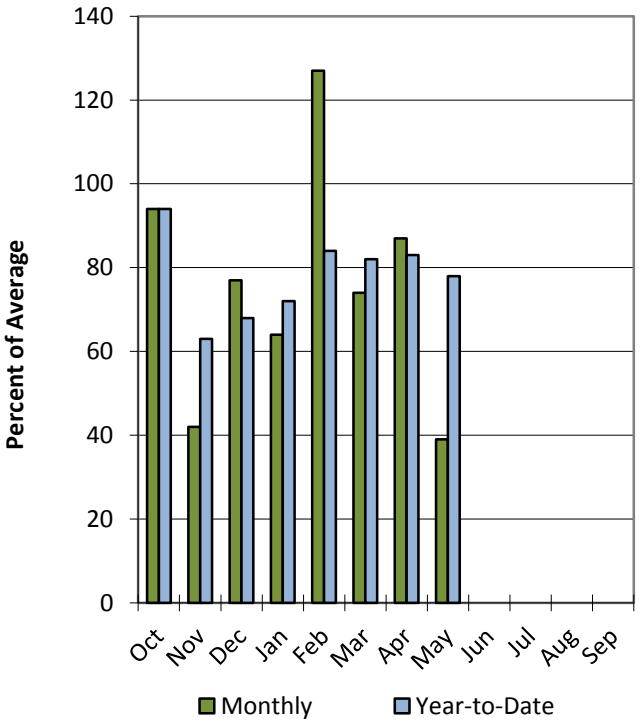


Duchesne River Basin

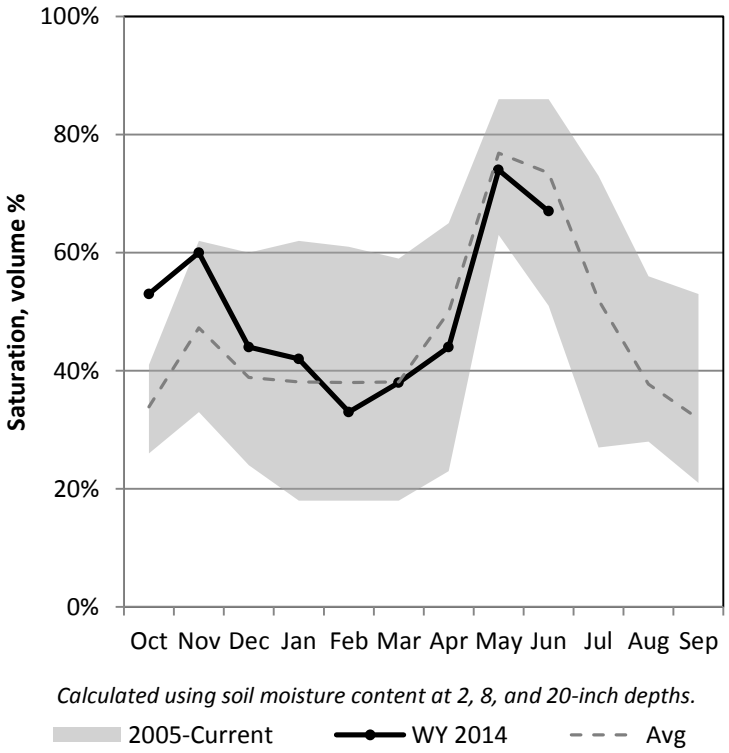
6/1/2014

Precipitation in May was much below average at 39%, which brings the seasonal accumulation (Oct-May) to 78% of average. Soil moisture is at 67% compared to 64% last year. Reservoir storage is at 79% of capacity, compared to 82% last year. The water availibility index for the Western Uintahs is 71% and 6% for the Eastern Uintahs.

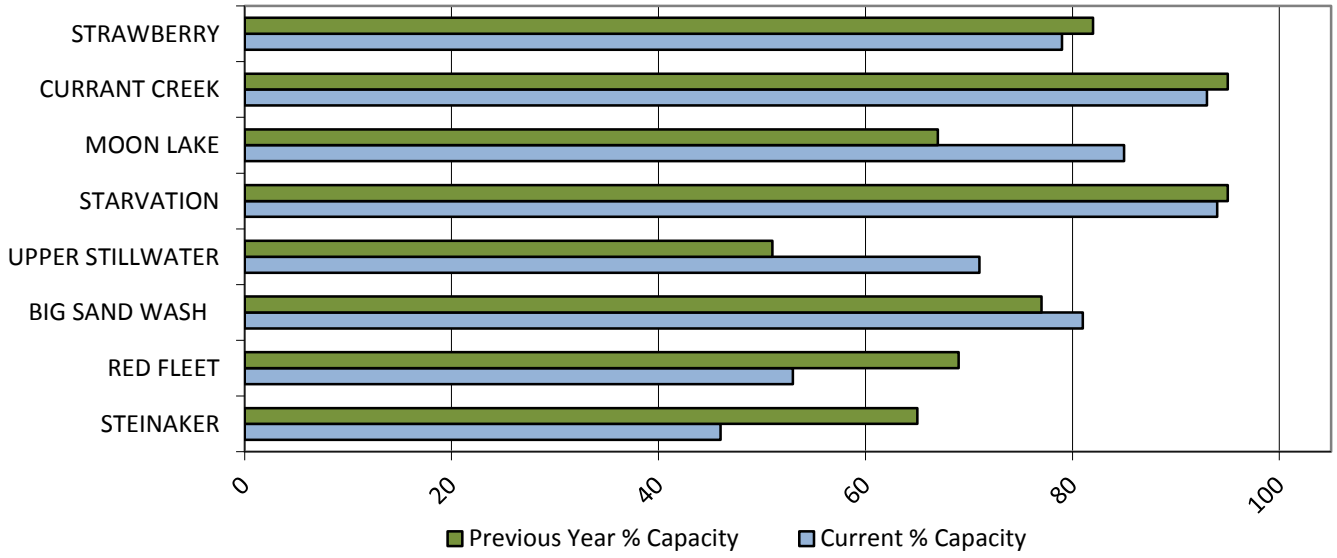
Precipitation



Soil Moisture

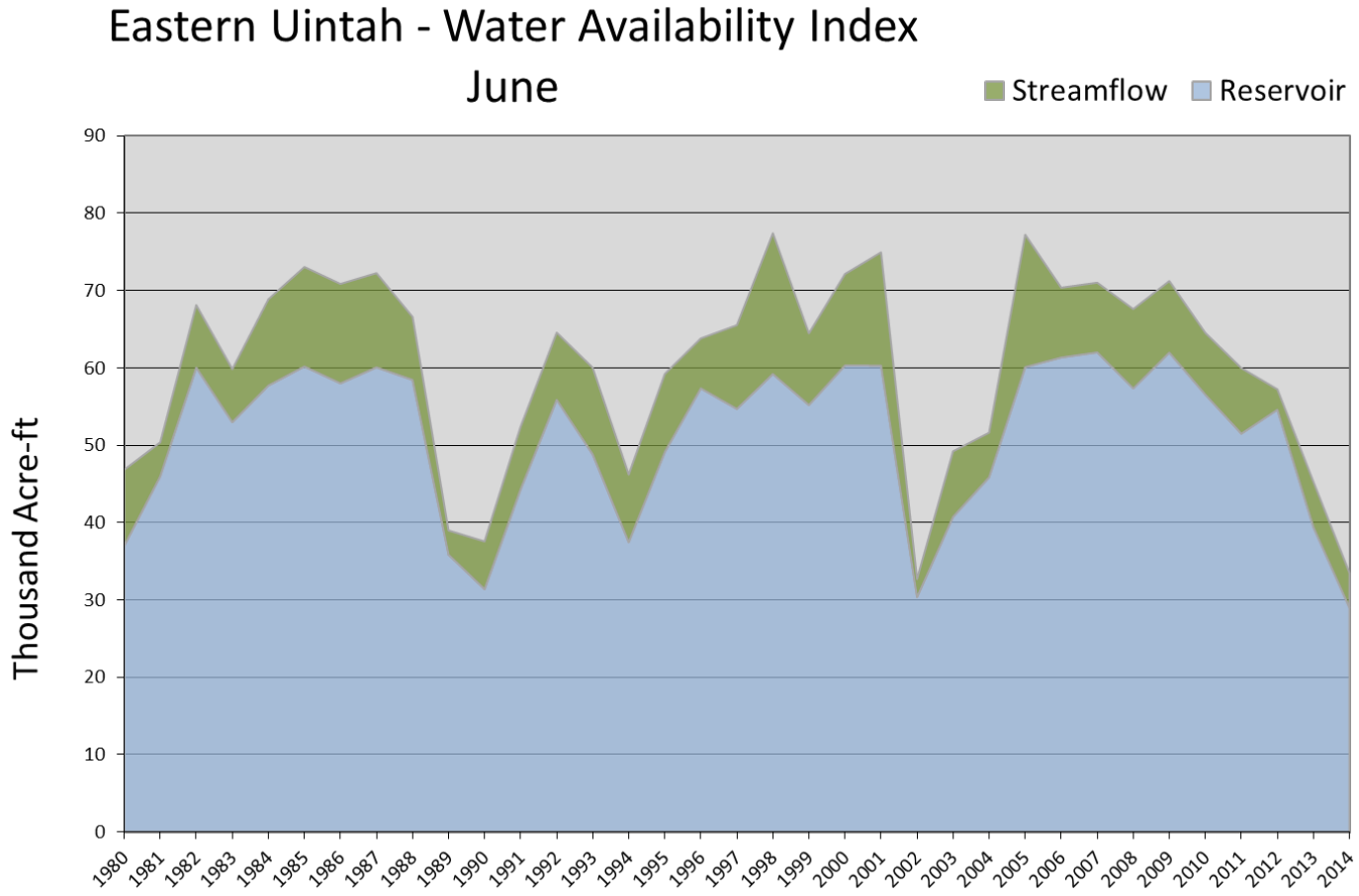


Reservoir Storage



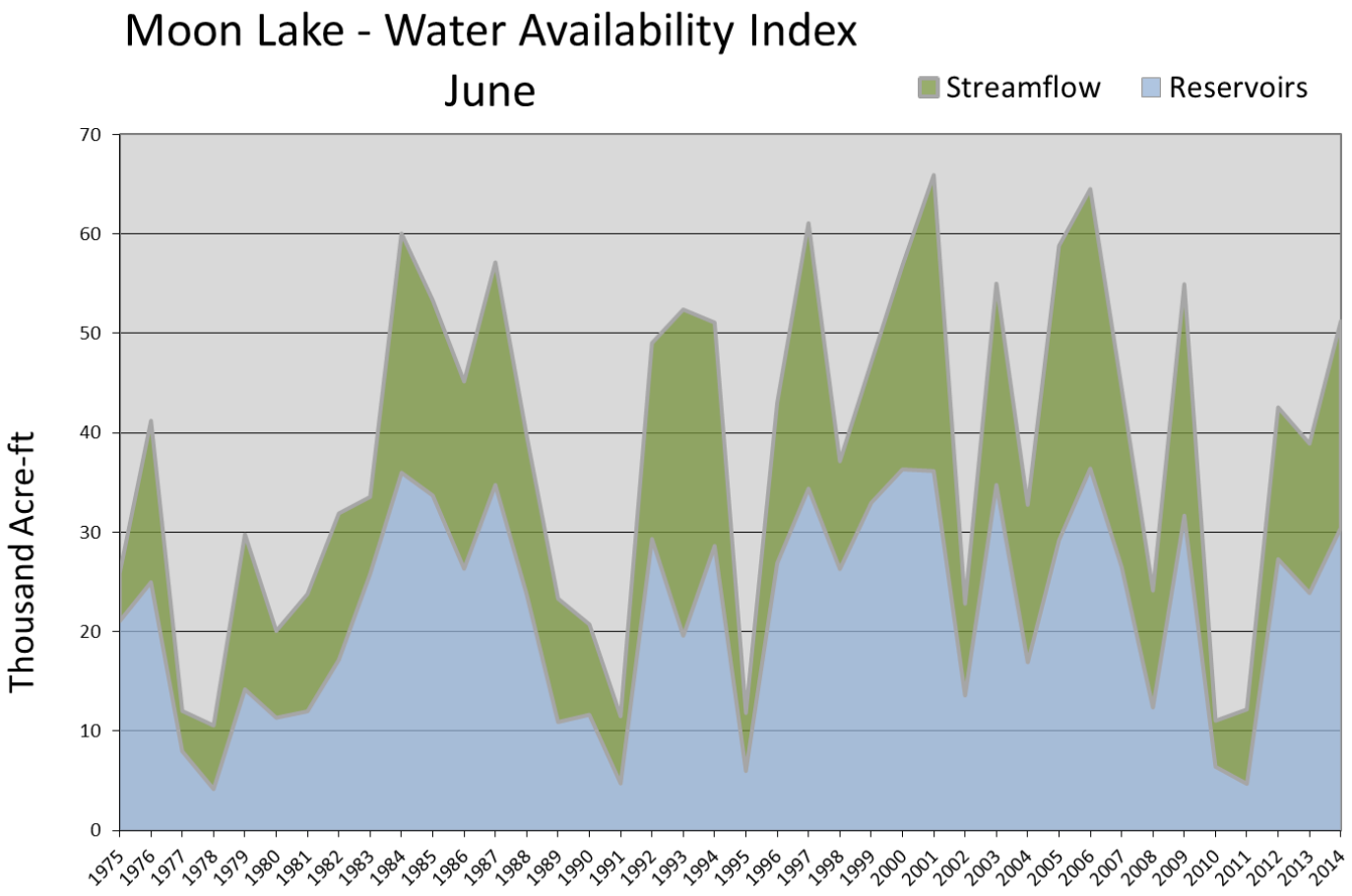
June 1, 2014	**Water Availability Index**					
Basin or Region	May EOM* Red Fleet and Steinaker	May accumulated flow Big Brush Creek (*observed*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Eastern Uintah	**29.0**	**4.5**	**33.5**	**-3.70**	**6**	**02, 90, 89**

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



June 1, 2014	**Water Availability Index**					
Basin or Region	May EOM* Moon Lake	May accumulated flow Lake Fork Creek above Moon Lake (*observed*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Moon Lake	**30.5**	**20.8**	**51.2**	**1.73**	**71**	**92, 94, 93, 85**

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

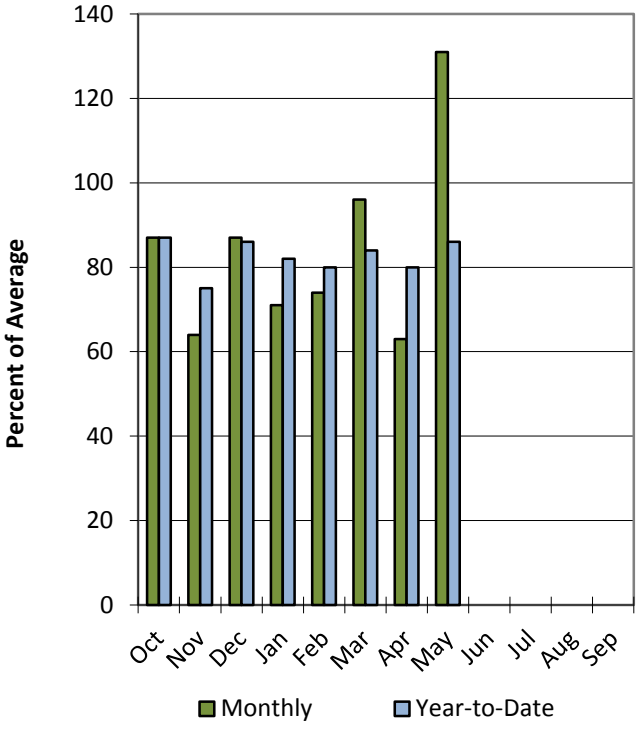


Lower Sevier River Basin

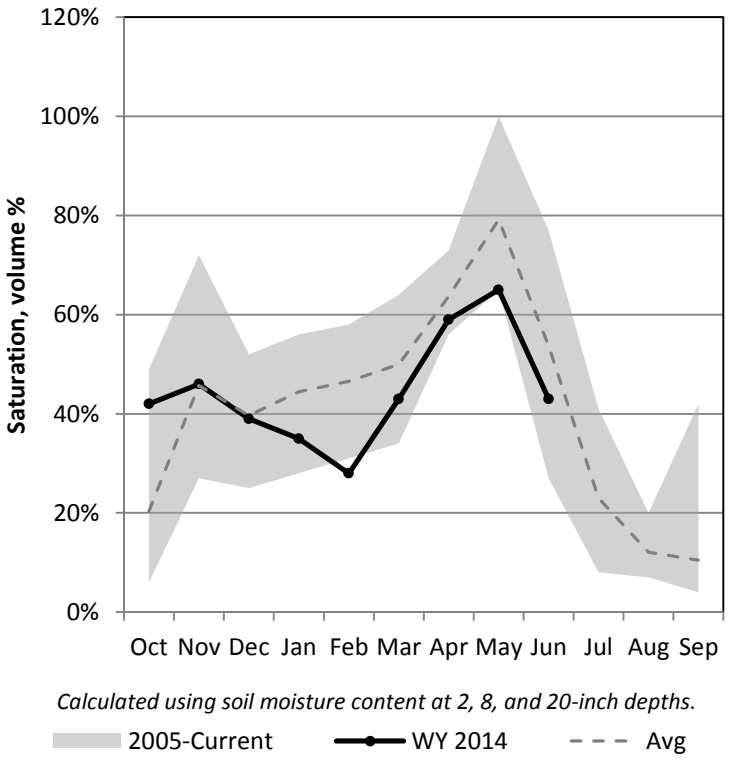
6/1/2014

Precipitation in May was much above average at 131%, which brings the seasonal accumulation (Oct-May) to 86% of average. Soil moisture is at 43% compared to 57% last year. Reservoir storage is at 42% of capacity, compared to 60% last year. The water availibility index for the Lower Sevier is 29%.

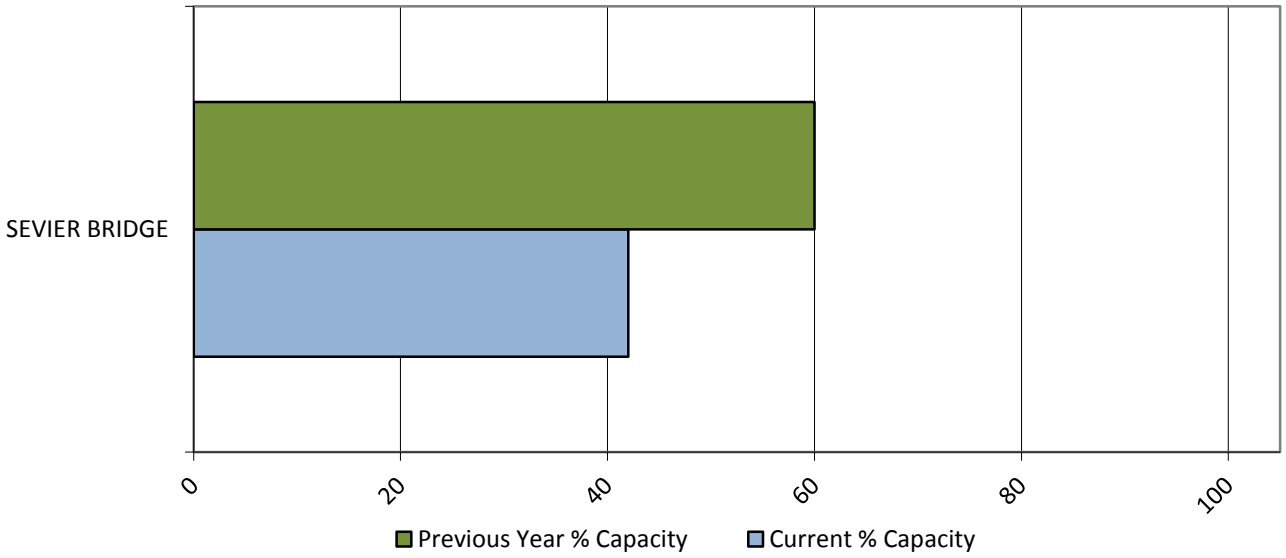
Precipitation



Soil Moisture



Reservoir Storage

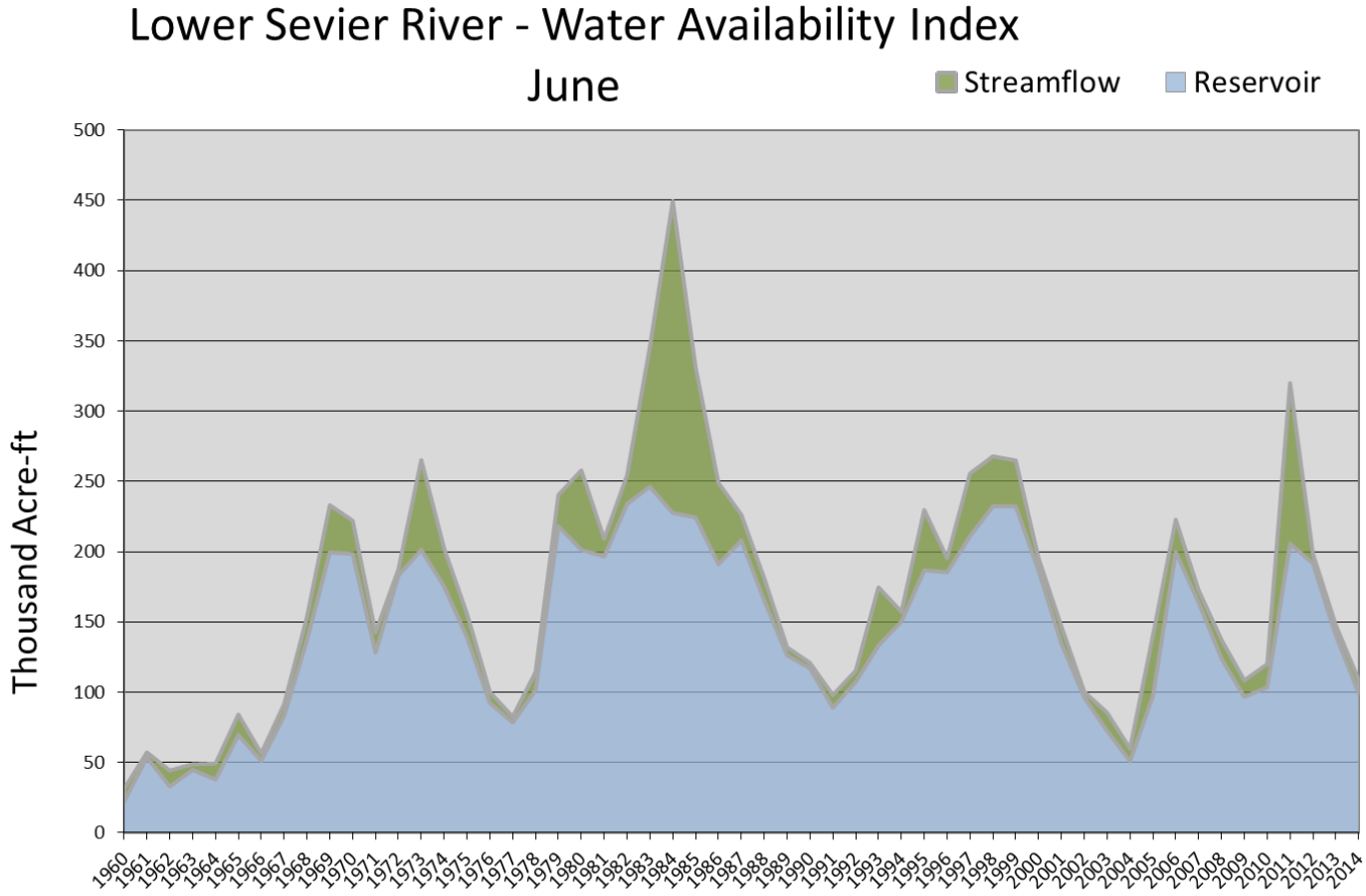


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Sevier Bridge	May accumulated flow Sevier at Gunnsion (*observed*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Lower Sevier River	**99**	**10**	**109**	**-1.79**	**29**	**02,09,78,92**

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

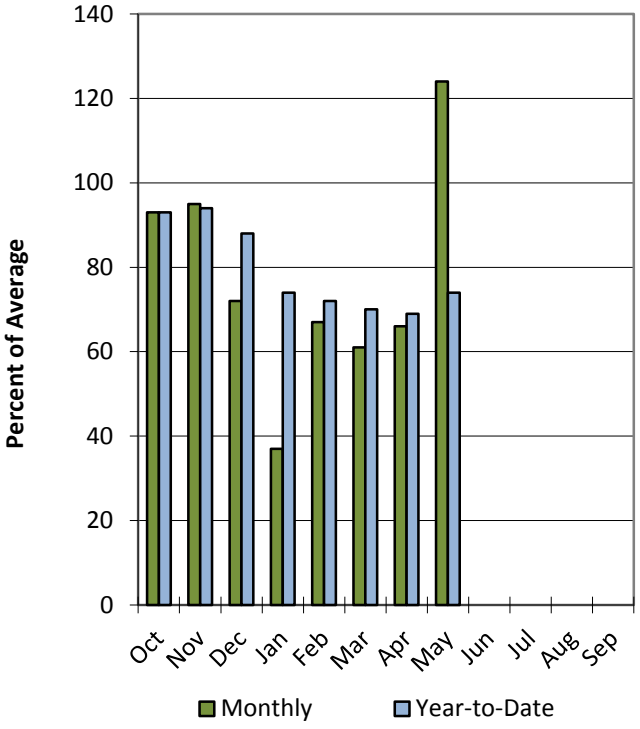


Upper Sevier River Basin

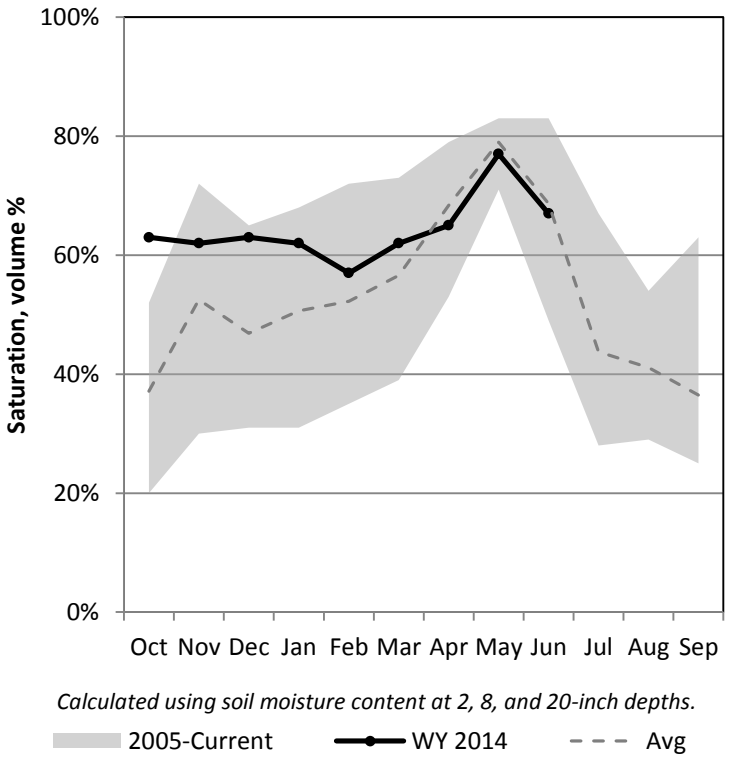
6/1/2014

Precipitation in May was above average at 124%, which brings the seasonal accumulation (Oct-May) to 74% of average. Soil moisture is at 67% compared to 59% last year. Reservoir storage is at 67% of capacity, compared to 70% last year. The water availibility index for the Upper Sevier is 38%.

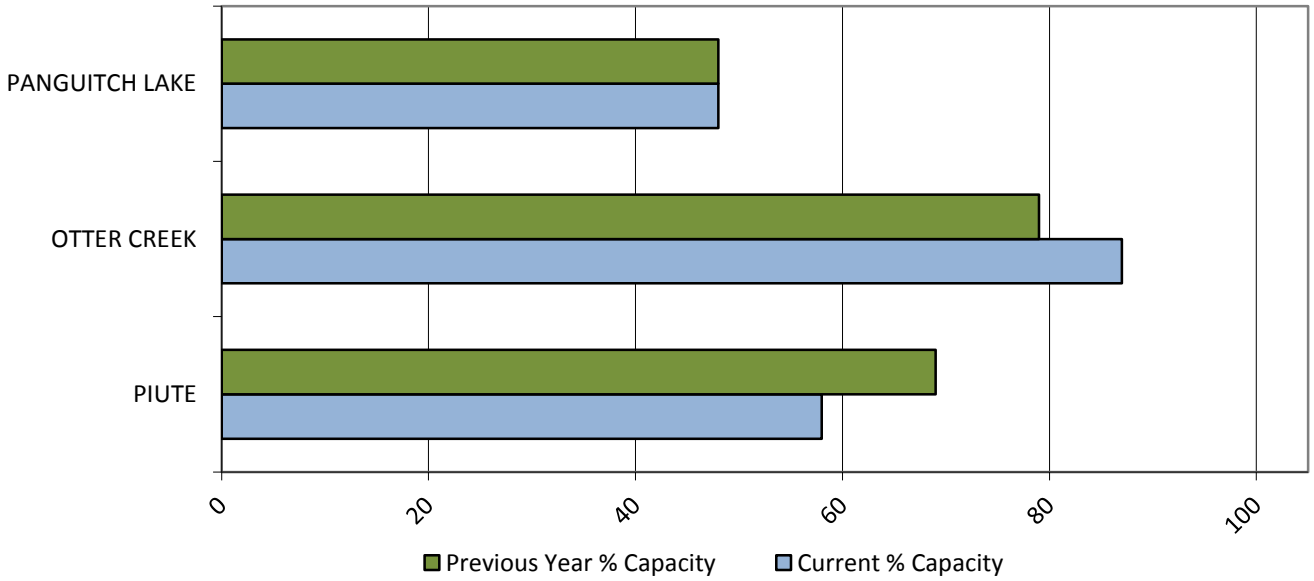
Precipitation



Soil Moisture



Reservoir Storage

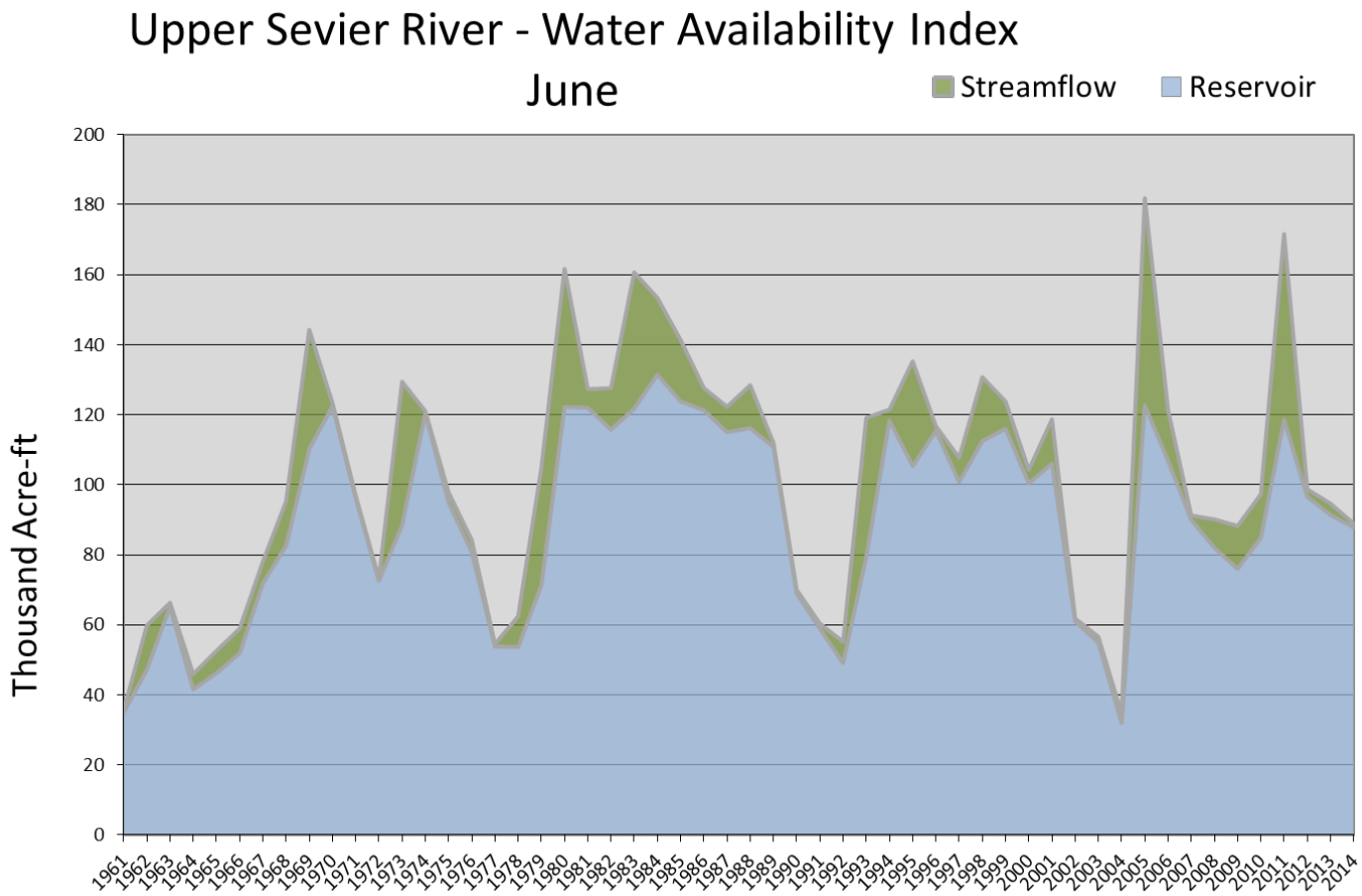


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Otter Creek and Piute	May accumulated flow at Kingston (*observed*)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Upper Sevier River	**88**	**1.1**	**89**	**-1.04**	**38**	**76,09,08,07**

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

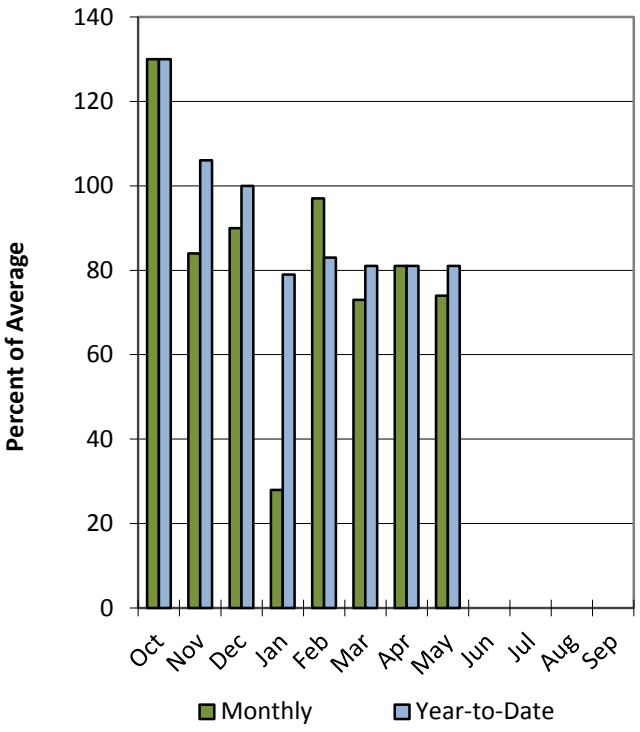


Beaver River Basin

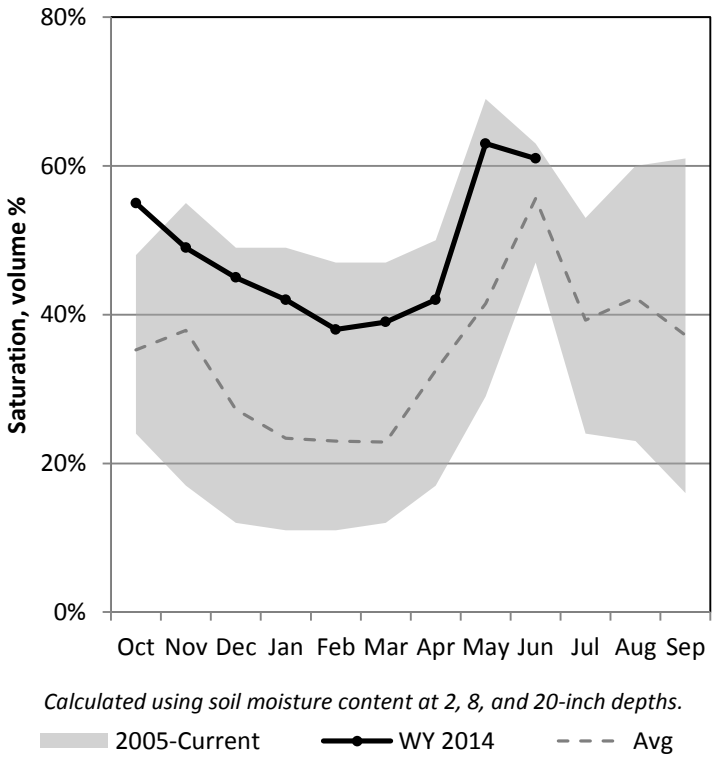
6/1/2014

Precipitation in May was below average at 74%, which brings the seasonal accumulation (Oct-May) to 81% of average. Soil moisture is at 61% compared to 58% last year. Reservoir storage is at 35% of capacity, compared to 45% last year. The water availibility index for the Beaver River is 30%.

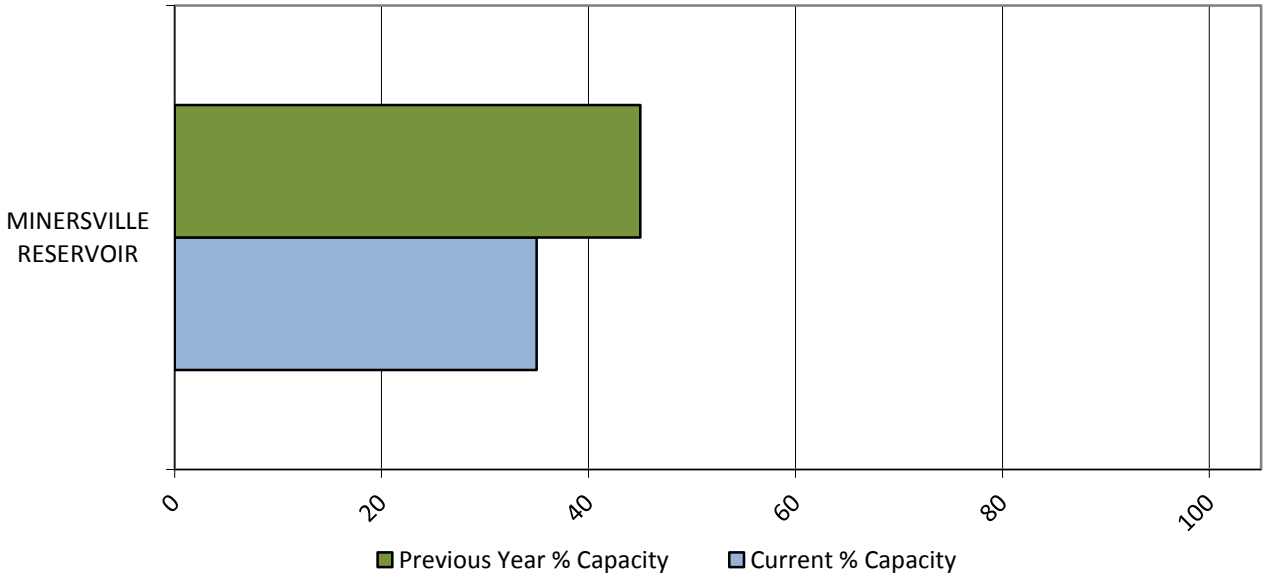
Precipitation



Soil Moisture



Reservoir Storage

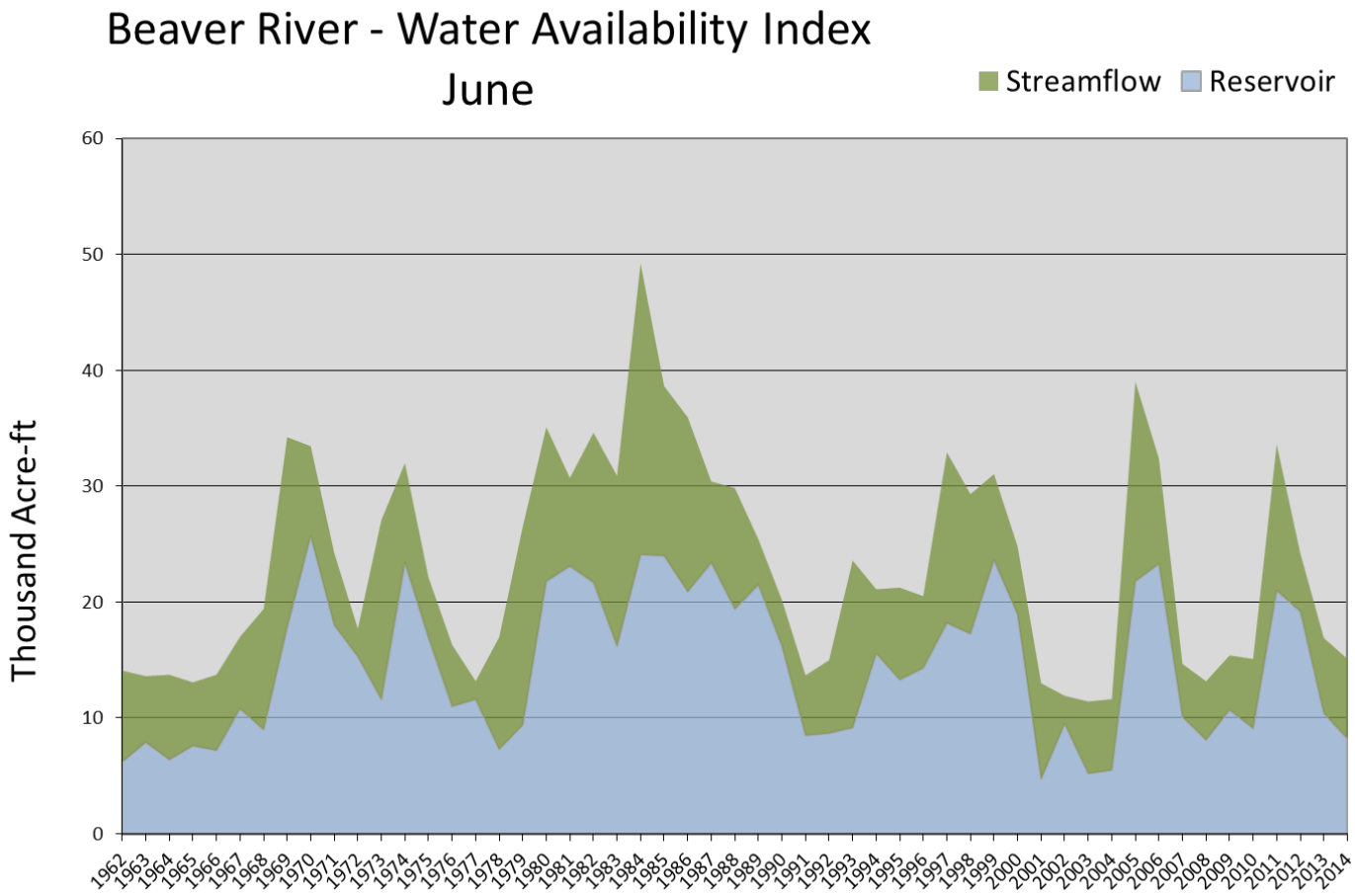


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Minersville Reservoir	May accumulated flow Beaver River at Beaver (*observed*)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Beaver	**8.2**	**6.9**	**15.1**	**-1.70**	**30**	**92,10,09,76**

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

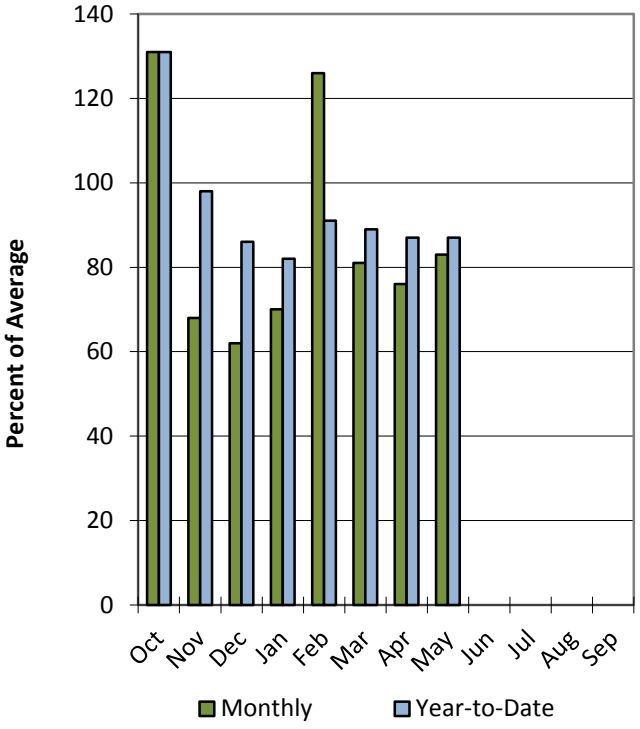


San Pitch River Basin

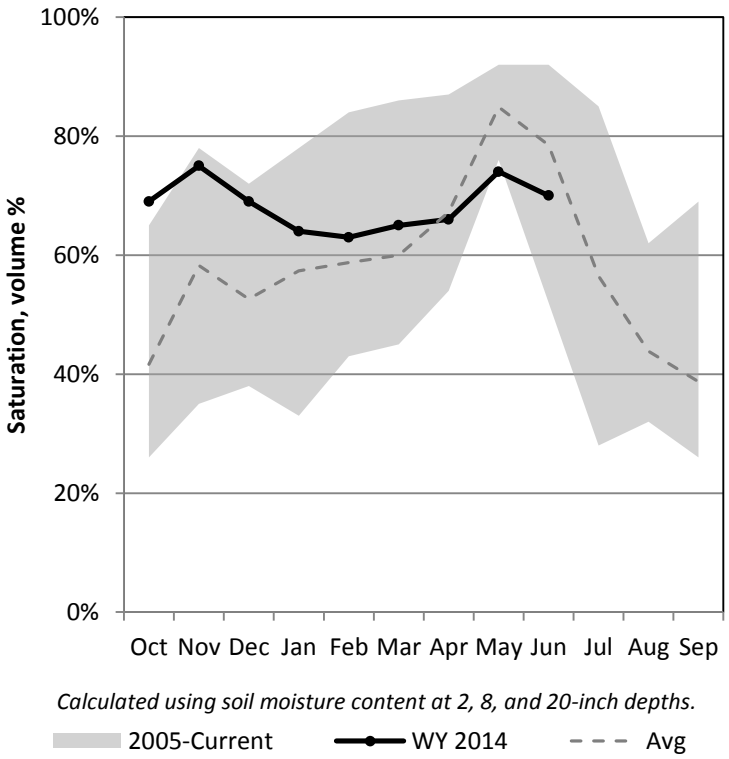
6/1/2014

Precipitation in May was below average at 83%, which brings the seasonal accumulation (Oct-May) to 87% of average. Soil Moisture is at 70% compared to 66% last year. Reservoir storage is at 22% of capacity, compared to 0% last year.The water availabilty index for the San Pitch is 14%.

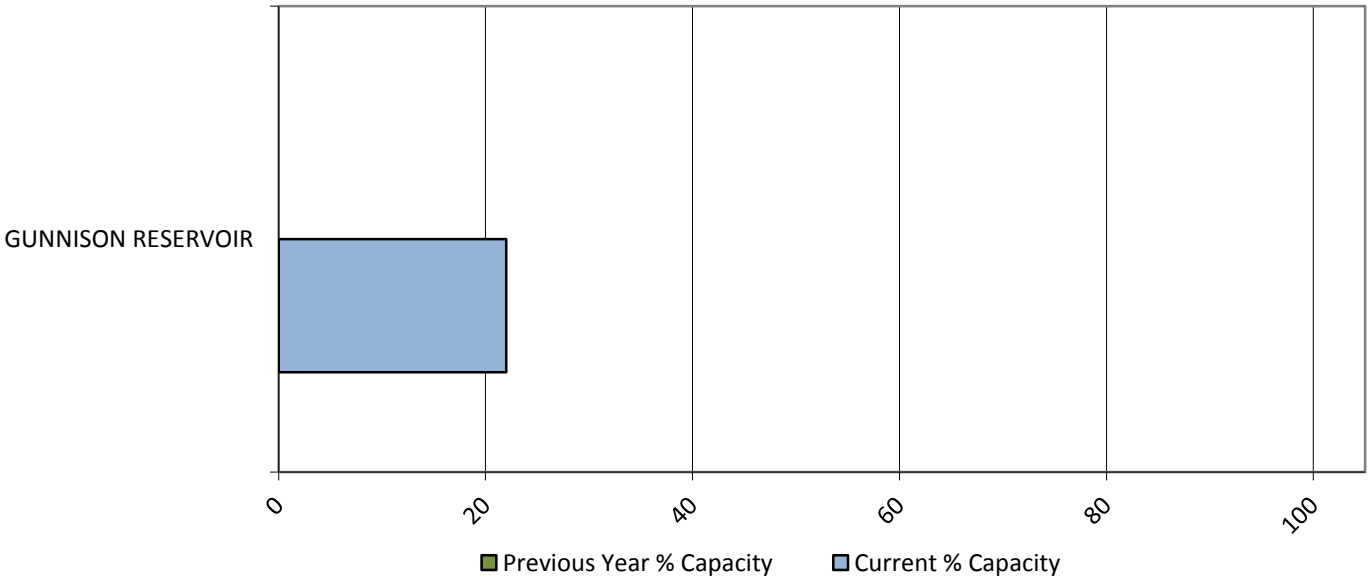
Precipitation



Soil Moisture



Reservoir Storage

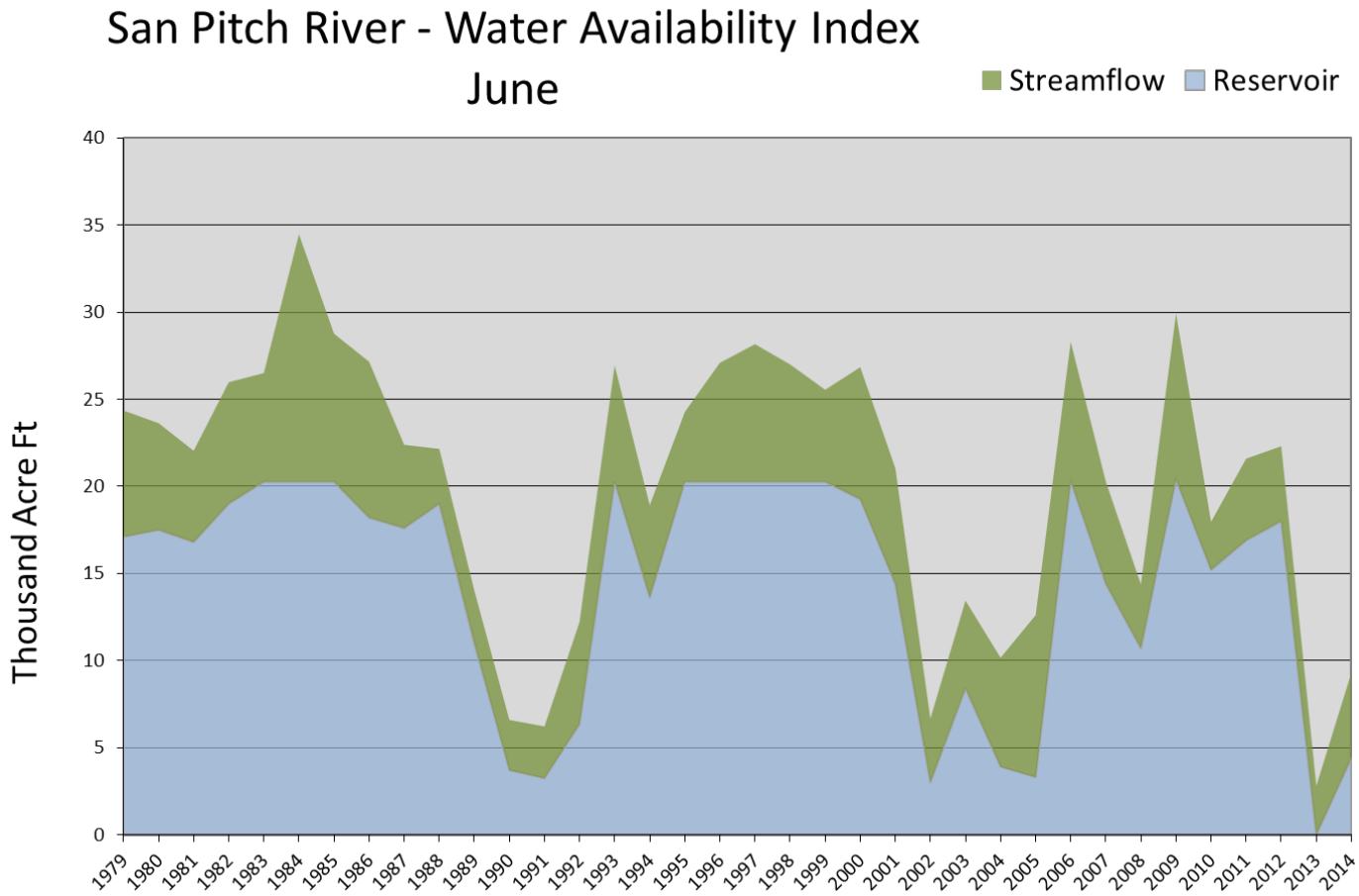


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Gunnison Reservoir	May accumulated flow Manti Creek (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Manti Creek	**4.4**	**4.9**	**9.3**	**-3.04**	**14**	**90,02,04,92**

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

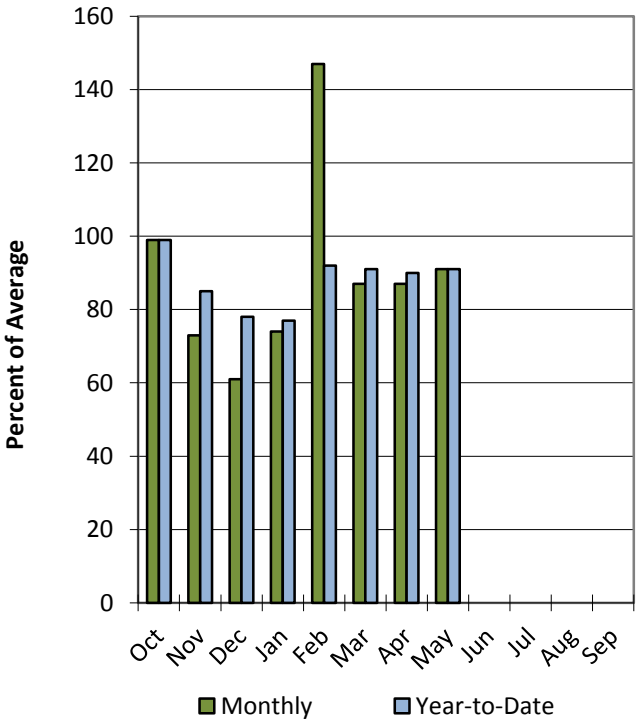


Price & San Rafael Basins

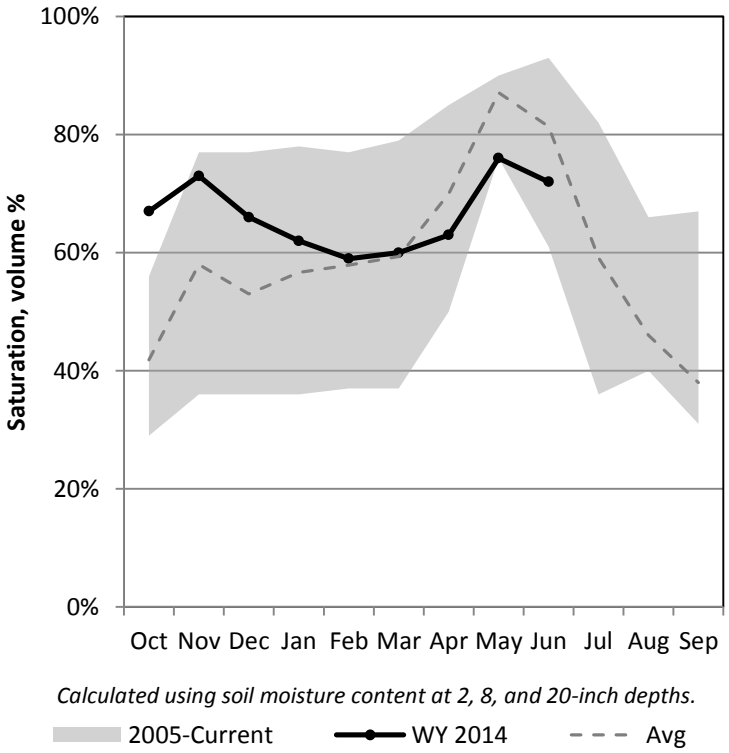
6/1/2014

Precipitation in May was near average at 91%, which brings the seasonal accumulation (Oct-May) to 91% of average. Soil moisture is at 72% compared to 65% last year. Reservoir storage is at 68% of capacity, compared to 56% last year. The water availibility index for the Price River is 12%, and 56% for Joe's Valley.

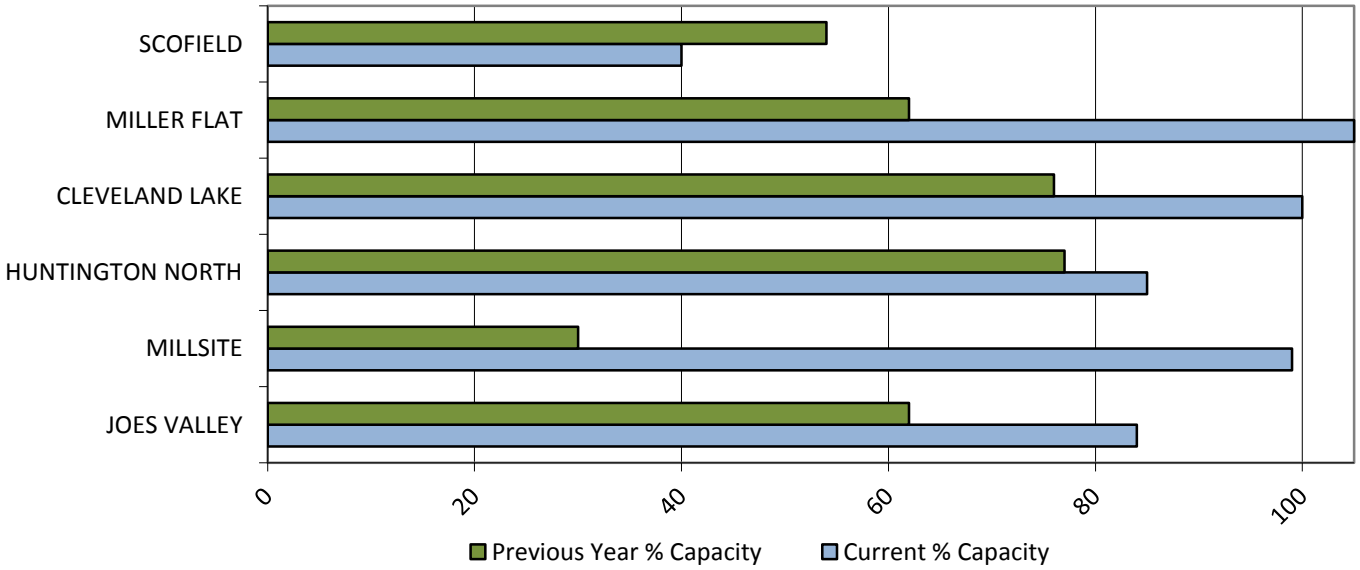
Precipitation



Soil Moisture



Reservoir Storage

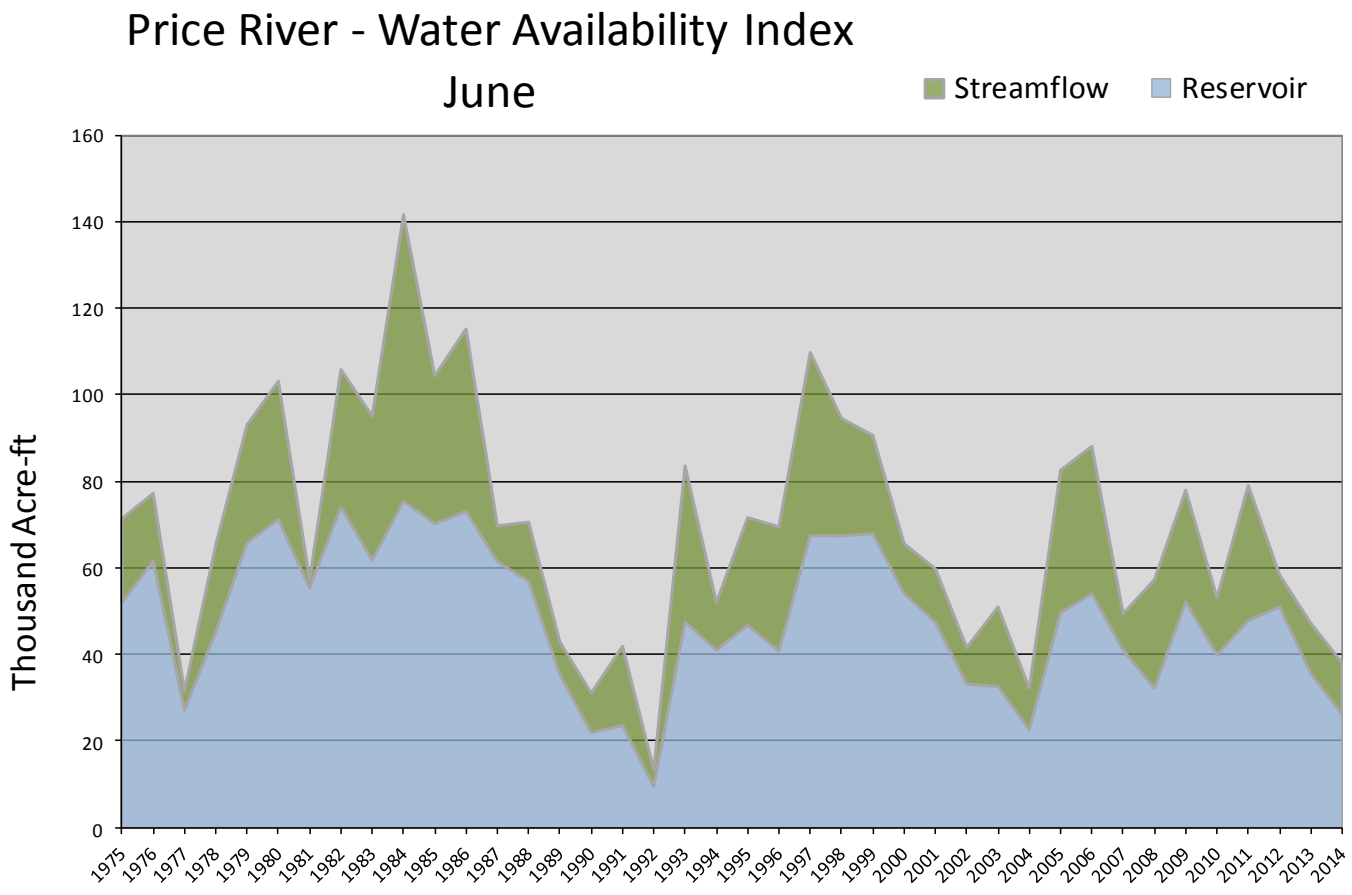


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Scofield	May accumulated inflow to Scofield (*calculated*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Price River	**26.1**	**11.9**	**38.0**	**-3.15**	**12**	**77, 04, 02, 91**

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

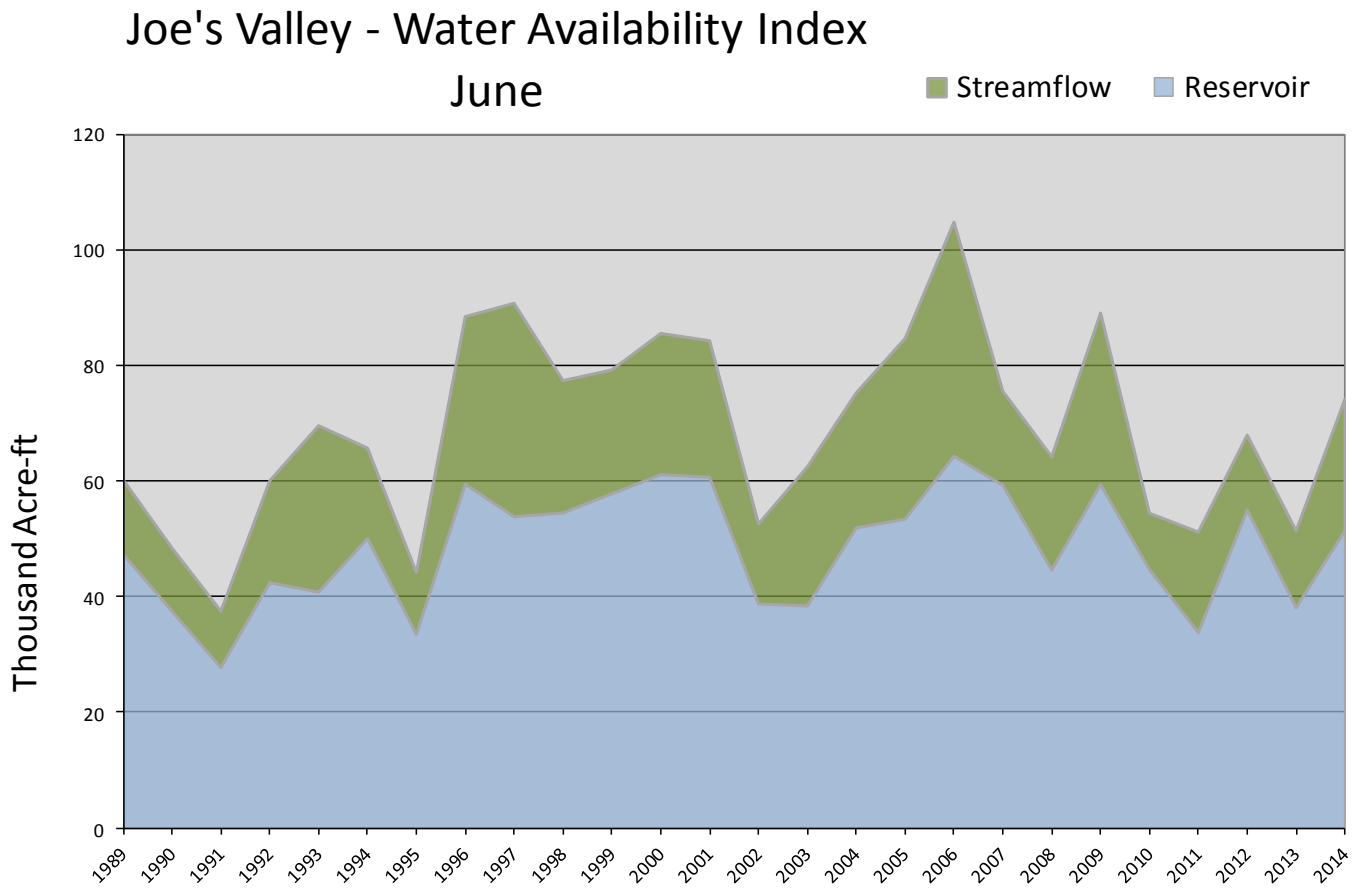


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Joe's Valley	May accumulated inflow to Joe's Valley (*calculated*)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Joe's Valley	**51.4**	**22.8**	**74.2**	**0.46**	**56**	**12, 93, 04, 07**

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

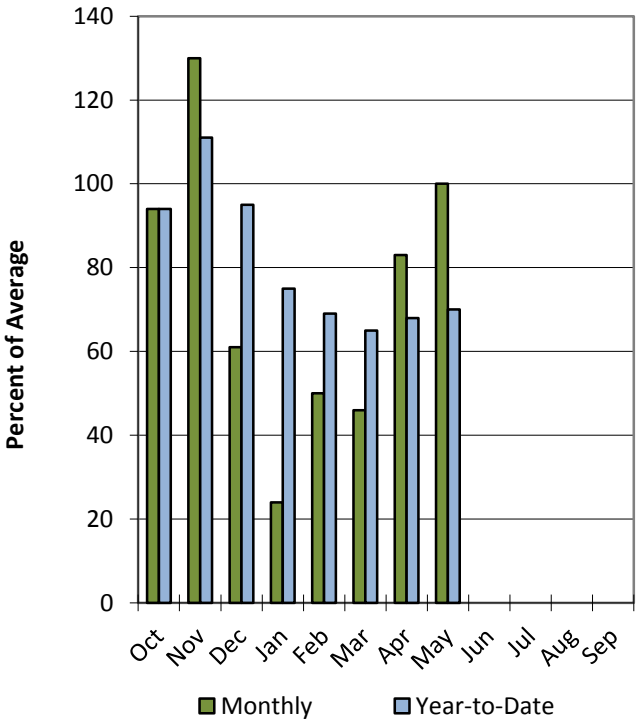


Southeastern Utah Basin

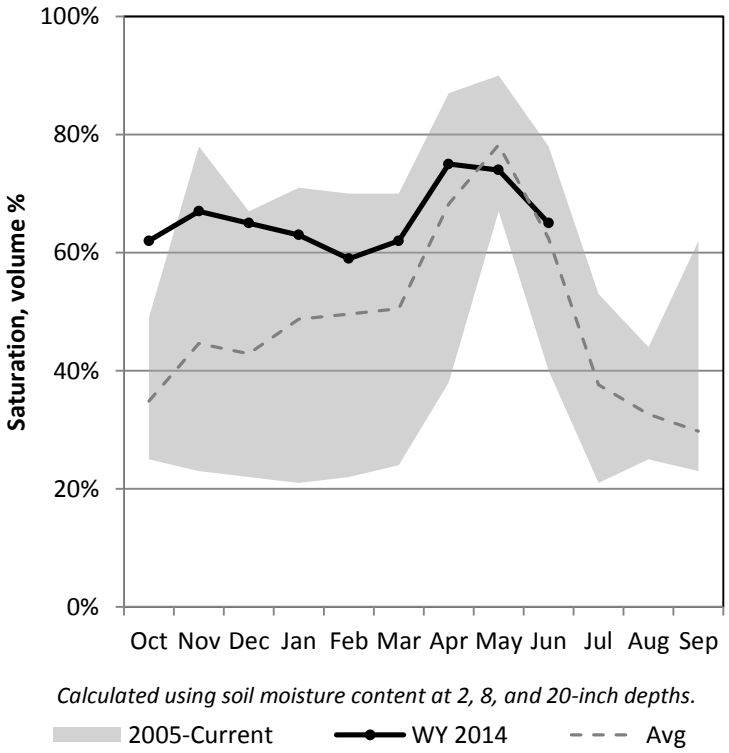
6/1/2014

Precipitation in May was near average at 100%, which brings the seasonal accumulation (Oct-May) to 70% of average. Soil moisture is at 65% compared to 54% last year. Reservoir storage is at 74% of capacity, compared to 26% last year. The water availibility index for Moab is 29%.

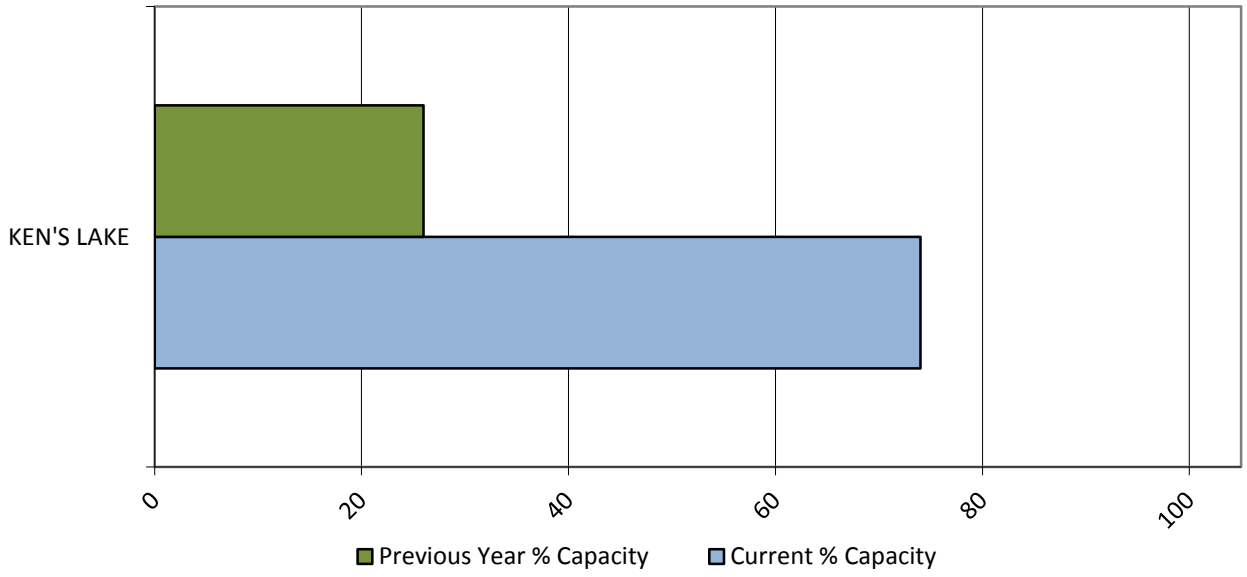
Precipitation



Soil Moisture



Reservoir Storage

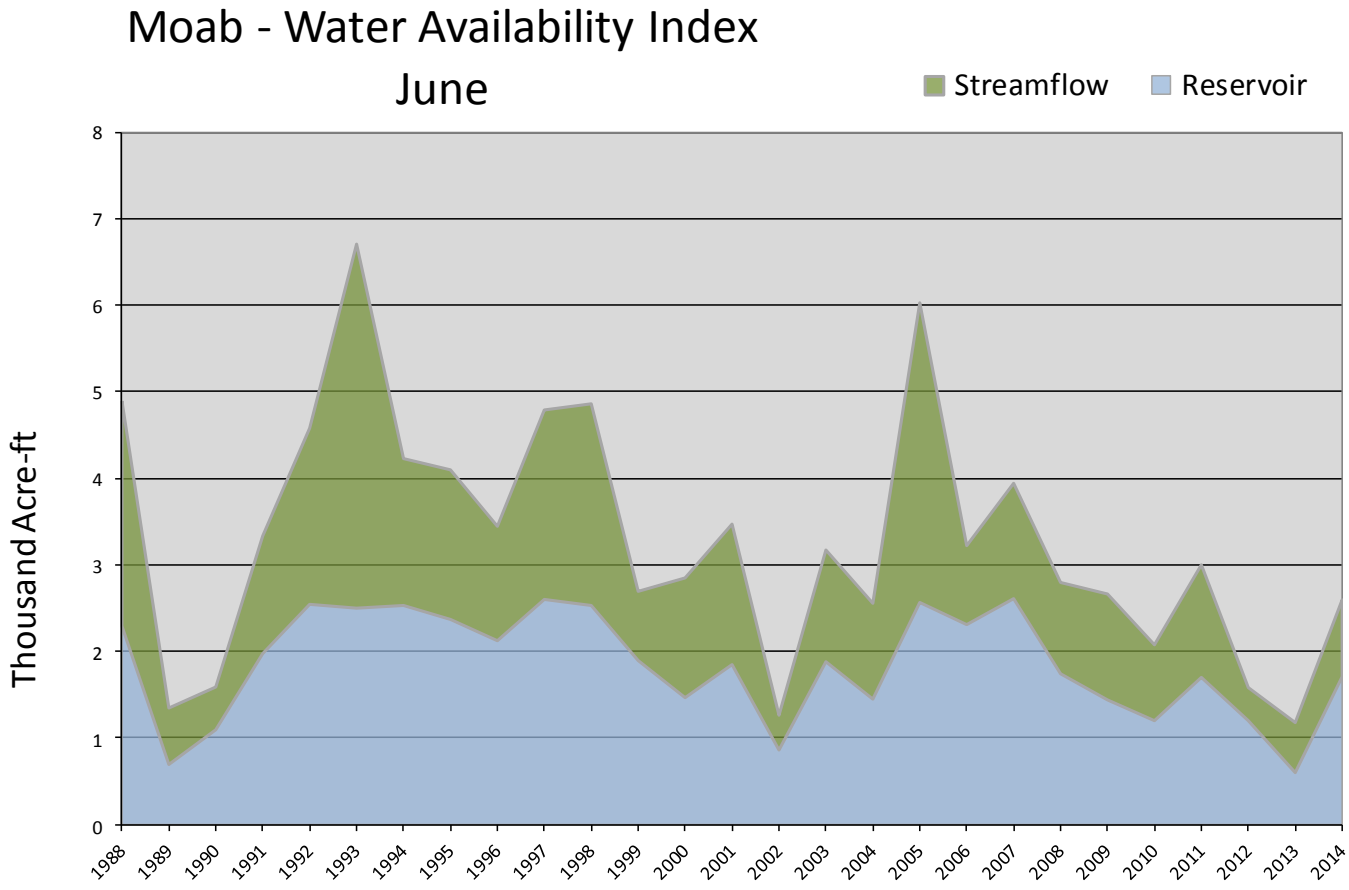


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Ken's Lake Reservoir	May accumulated flow Mill Creek at Sheley (*observed*)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Moab	**1.7**	**0.9**	**2.6**	**-1.79**	**29**	**10, 04, 09, 99**

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

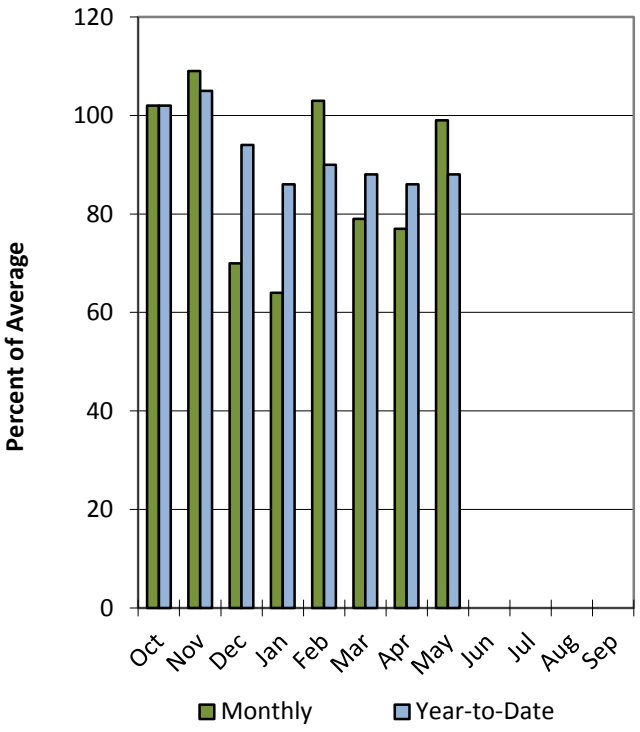


Dirty Devil Basin

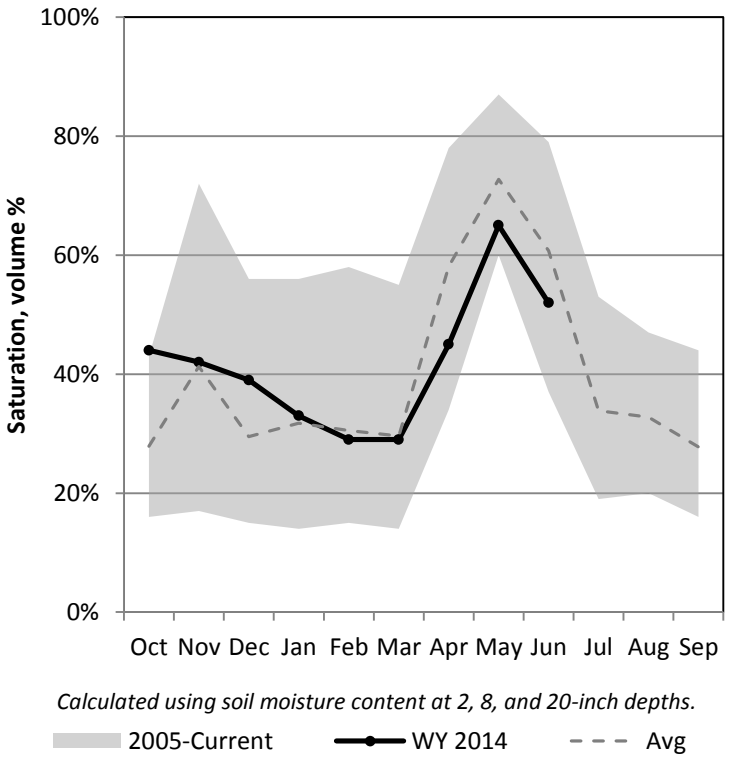
6/1/2014

Precipitation in May was near average at 99%, which brings the seasonal accumulation (Oct-May) to 88% of average. Soil moisture is at 52% compared to 39% last year.

Precipitation



Soil Moisture

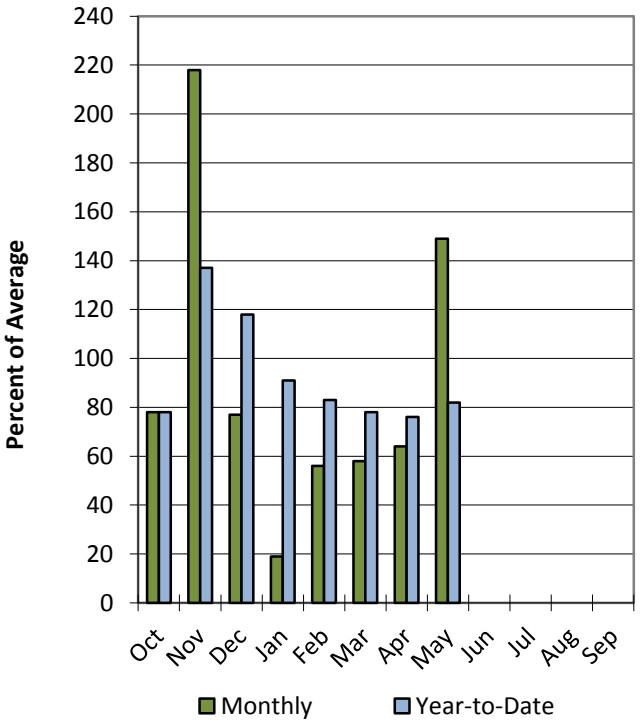


Escalante River Basin

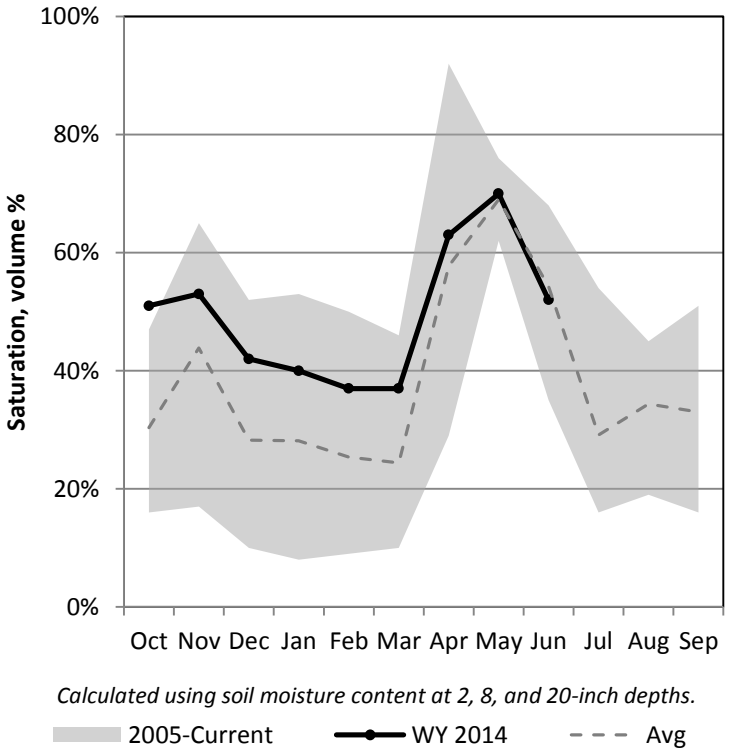
6/1/2014

Precipitation in May was much above average at 149%, which brings the seasonal accumulation (Oct-May) to 82% of average. Soil moisture is at 52% compared to 40% last year.

Precipitation



Soil Moisture

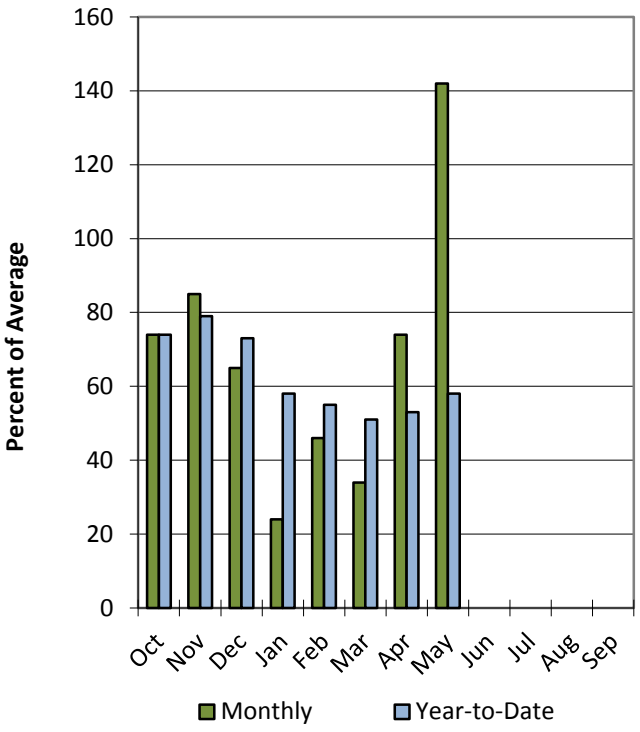


Southwestern Utah Basin

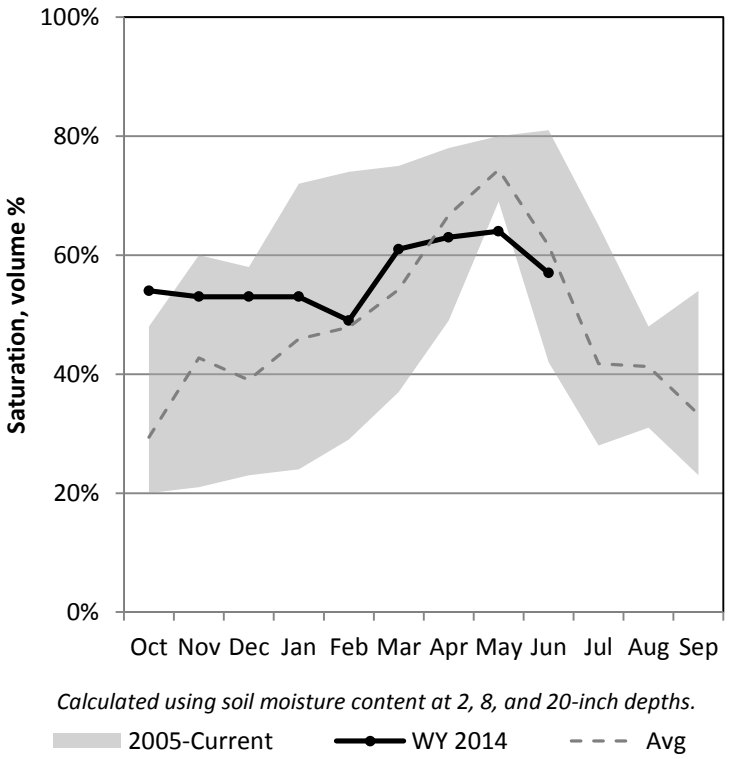
6/1/2014

Precipitation in May was much above average at 142%, which brings the seasonal accumulation (Oct-May) to 58% of average. Soil moisture is at 57% compared to 53% last year. Reservoir storage is at 44% of capacity, compared to 48% last year. The water availibility index for the Virgin River is 7%.

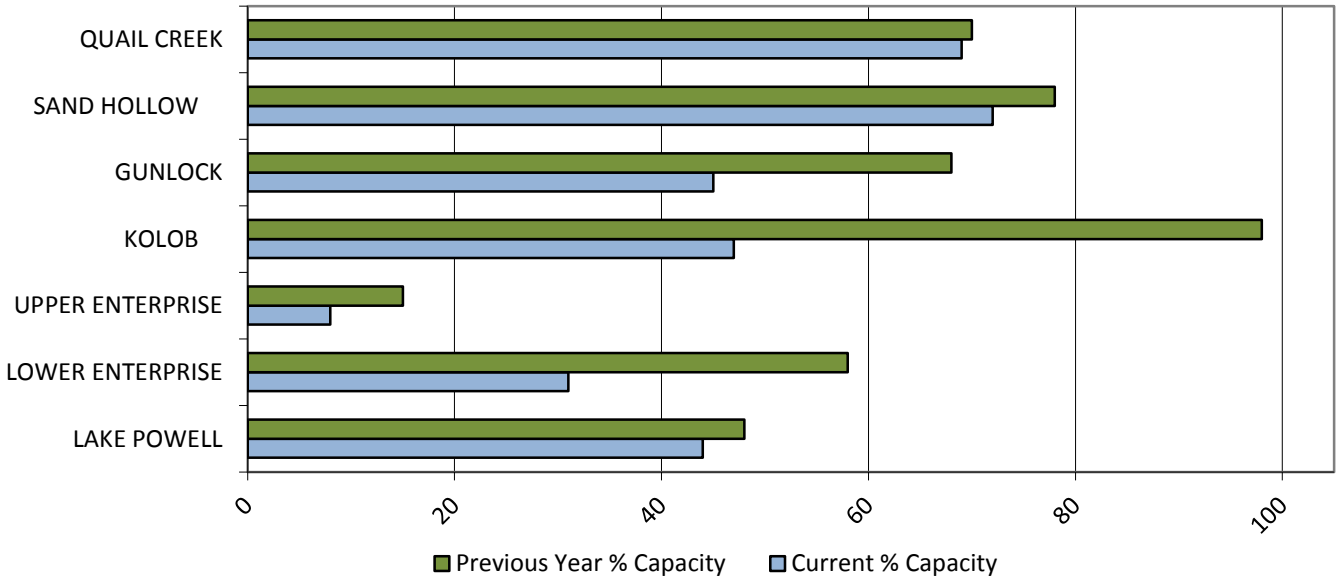
Precipitation



Soil Moisture



Reservoir Storage

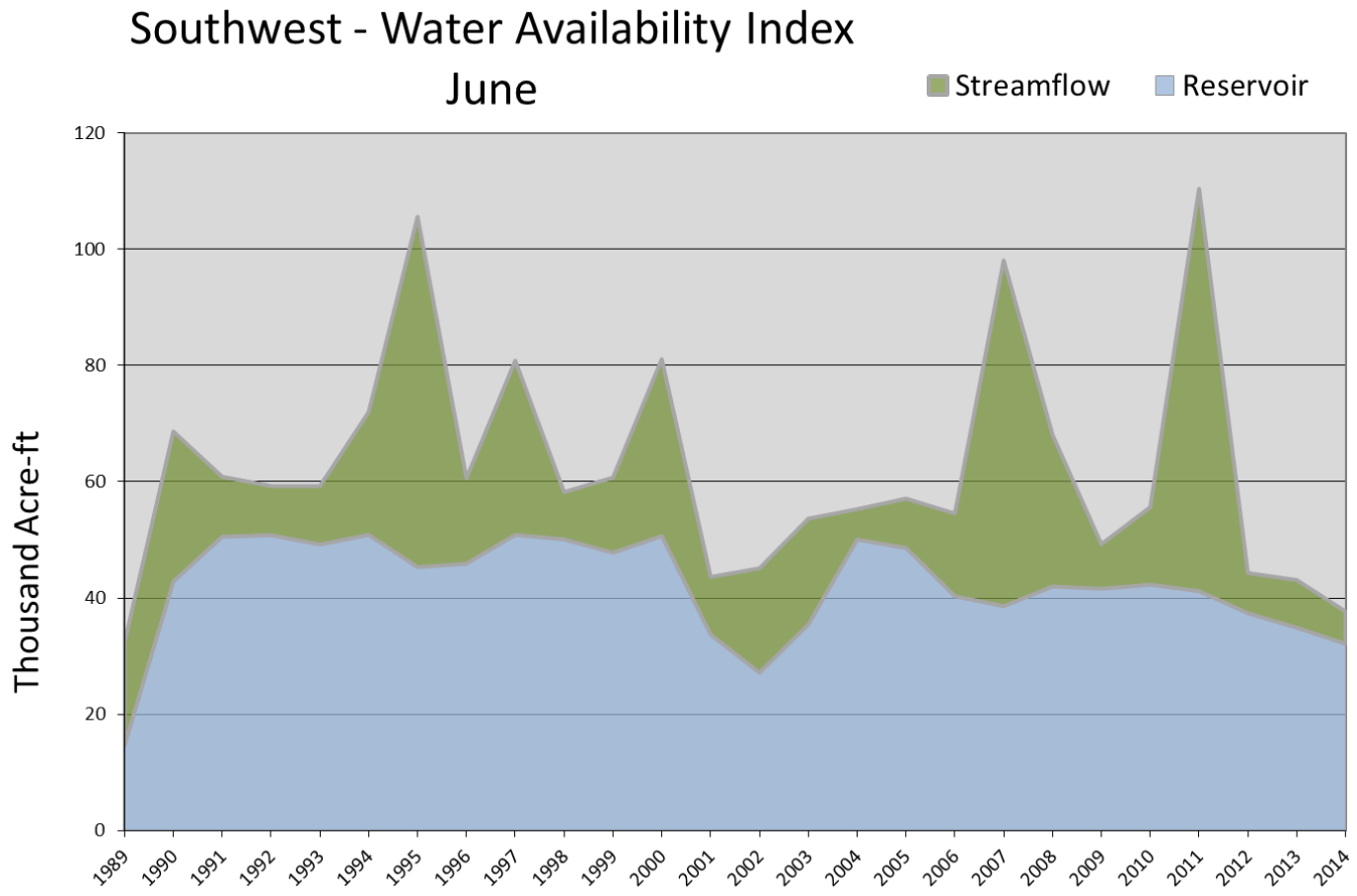


June 1, 2014

Water Availability Index

Basin or Region	May EOM* Reservoir	May accumulated flow Virgin and Santa Clara Rivers (*observed*)	Reservoir + Streamflow	WAI[#]	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Southwest	**32.1**	**5.5**	**37.7**	**-3.55**	**7**	**89, 13, 01**

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



6/1/2014

Water Availability Index

Basin or Region	May EOM* Reservoirs	Observed May Streamflow	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	*KAF^*	*KAF*	*KAF*		*%*	
Bear River	**638**	**20.2**	**658**	**-1.63**	**30**	**44, 61, 55, 63**
Woodruff Narrows	**48.7**	**44.8**	**93.5**	**1.81**	**72**	**88, 08, 07, 05**
Little Bear	**14.5**	**7.5**	**21.9**	**-0.91**	**39**	**03, 94, 02, 10**
Ogden River	**111**	**17.8**	**128.6**	**-0.88**	**39**	**91, 89, 14, 94**
Weber River	**263**	**41.7**	**304**	**-3.62**	**7**	**04, 77, 90, 03**
Provo	**349**	**62.4**	**412**	**-2.08**	**25**	**11, 08, 02, 10**
West Uintah Basin	**31**	**20.8**	**51**	**1.73**	**71**	**92, 94, 93, 85**
Eastern Uintah	**29**	**4.5**	**34**	**-3.70**	**6**	**02, 90, 89**
Blacks Fork	**30.4**	**39.8**	**70.0**	**3.80**	**96**	**05, 09**
Smiths Creek	**14.2**	**4.8**	**19.0**	**3.43**	**91**	**88, 92, 87, 84**
Price River	**26.1**	**11.9**	**38.0**	**-3.15**	**12**	**77, 04, 02, 91**
Joe's Valley	**51.4**	**22.8**	**74.2**	**0.46**	**56**	**12, 93, 04, 07**
Moab	**1.7**	**0.9**	**2.6**	**-1.79**	**29**	**10, 04, 09, 99**
Upper Sevier River	**88**	**1.1**	**89**	**-1.04**	**38**	**76, 09, 08, 07**
San Pitch	**4.4**	**4.9**	**9.3**	**-3.04**	**14**	**90, 02, 04, 92**
Lower Sevier	**99**	**10.0**	**109**	**-1.79**	**29**	**02, 09, 78, 92**
Beaver	**8.2**	**6.9**	**15.1**	**-1.70**	**30**	**92, 10, 09, 76**
Virgin River	**32.1**	**5.5**	**37.7**	**-3.55**	**7**	**89, 13, 01**

**EOM, end of month; # WAI, water availibilty 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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Utah Climate and Water Report

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