

Utah Climate and Water Report

June 2013



Spooky SCAN Site, Kane County with Fifty-Mile Mountain in background;
April 2013

Photo by Kent Sutcliffe

Utah Climate and Water Report

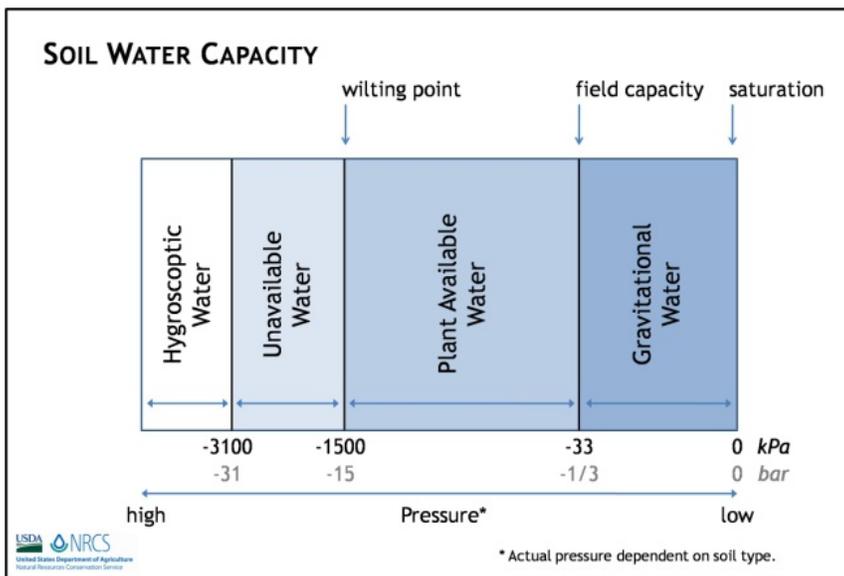
The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from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

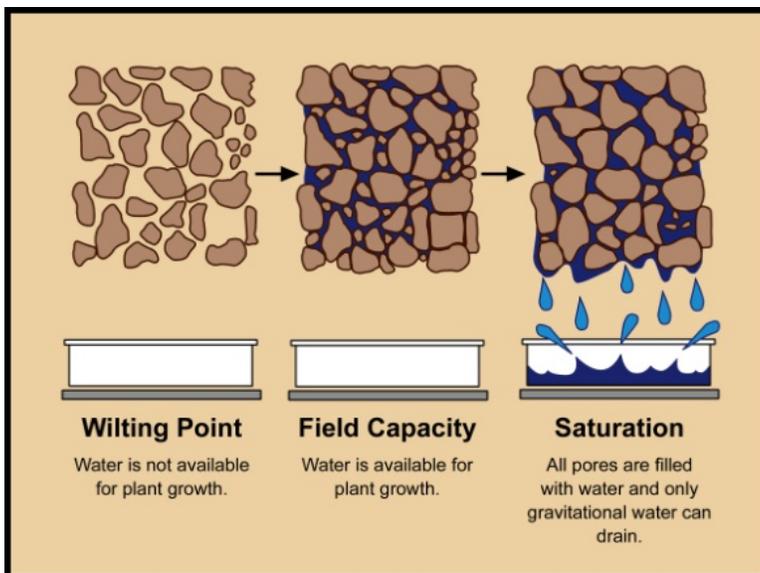
Soil Climate Analysis Network

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.

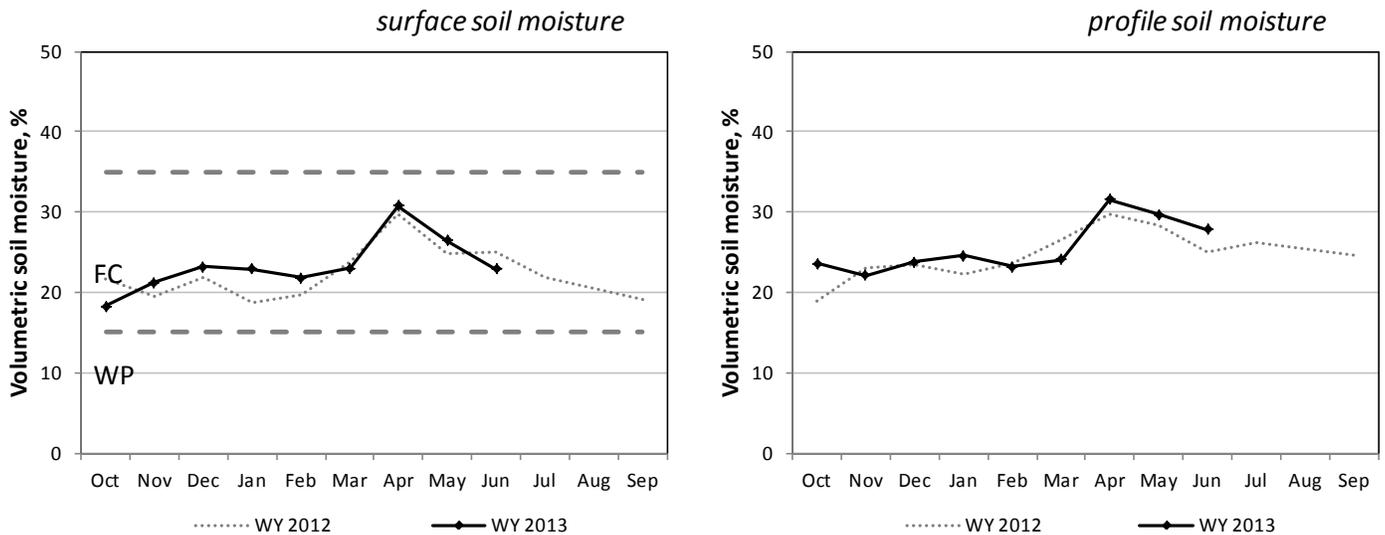
North Central

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	7.0	2.3	25	23	25	31	20	57	60	60	56	54
Cache Junction	10.4	2.0	24	21	33	34	39	52	54	53	52	50
Grantsville	7.1	1.3	6	13	23	27		61	64	64	59	

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

North Central



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

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

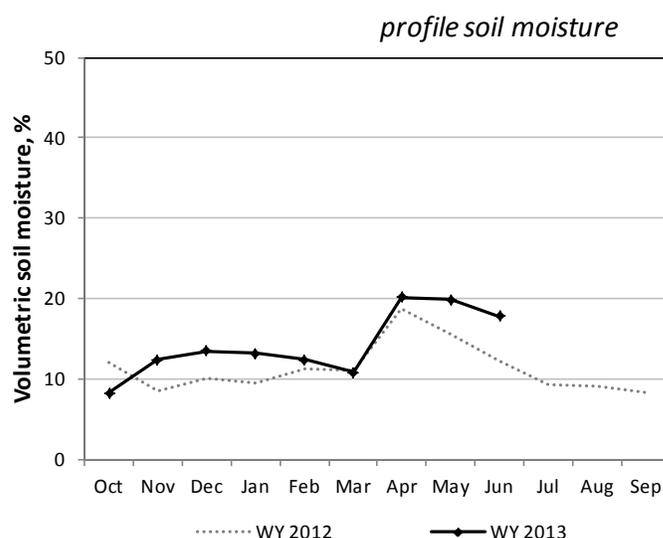
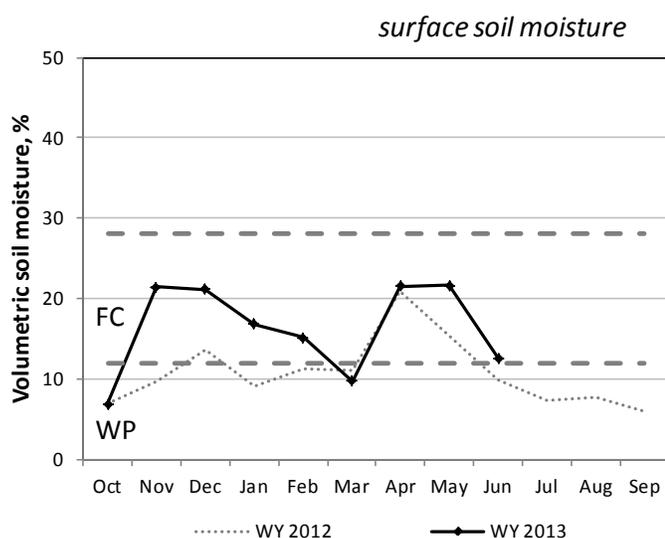
Northern Mountains

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>°F</i>				
NORTHERN MOUNTAINS												
Chicken Ridge	7.5	0.9	8	12	14	22	22	47	49	50	48	47
Buffalo Jump	6.2	0.5	9	13	15	15	-	55	56	55	51	-
Morgan	13.3	1.6						48	46	47	48	48

* 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.

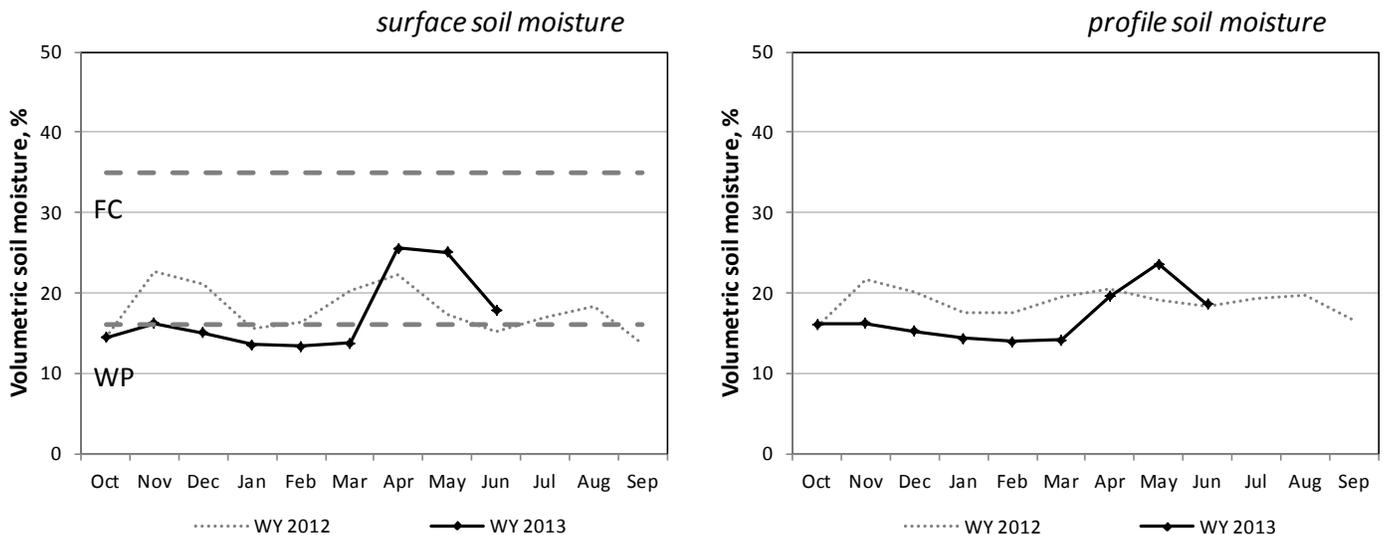
Uintah Basin

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	5.7	0.8	15	22	25	24	14	55	56	55	53	51
Little Red Fox	5.0	0.7	4	20	25	26	24	59	65	65	60	56
Split Mountain	4.5	1.0	7	17	14	14	12	63	66	68	64	59

* 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.

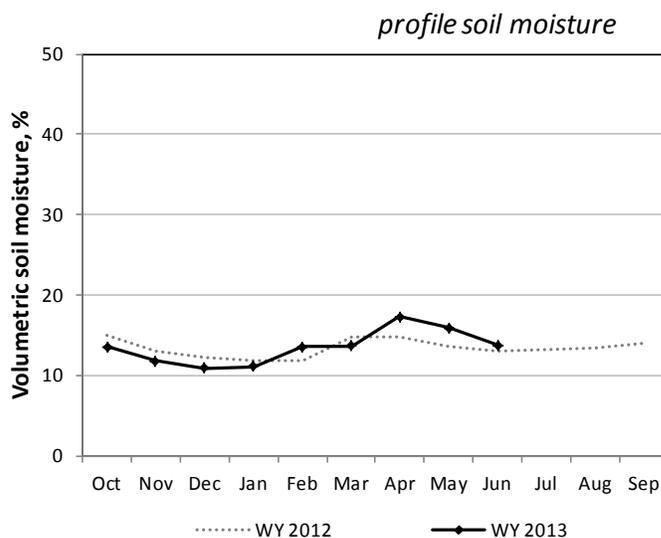
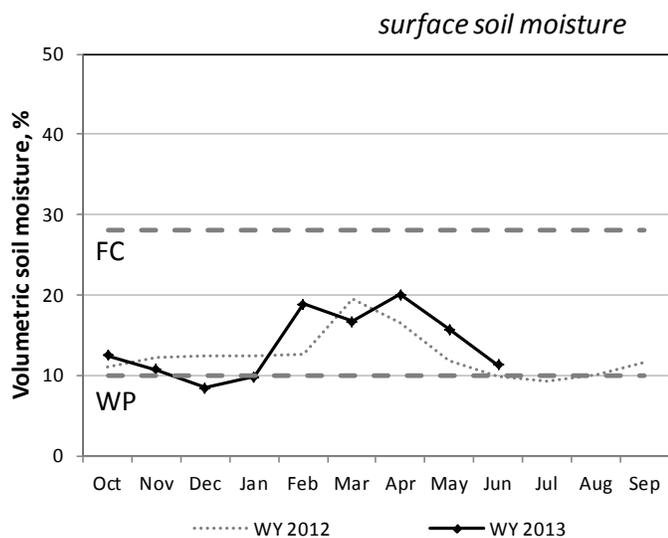
Southeast

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	4.7	0.4	1	11	18	17	20	60	66	67	63	60
Green River	2.8	1.0	6	9	10	6	9	68	71	73	70	66
Harm's Way	4.1	1.0	8	0	16	17	8	65	59	65	60	56
West Summit	3.0	0.3	6	11	15	17	18	60	64	65	59	55
Eastland	3.5	0.5	9	12	12	30	33	58	60	62	57	55
Alkali Mesa	4.5	0.3	6	7	16	19	14	64	64	66	62	59
McCracken Mesa	5.0	0.3	7	13	18	20	14	65	71	73	66	63

* 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.

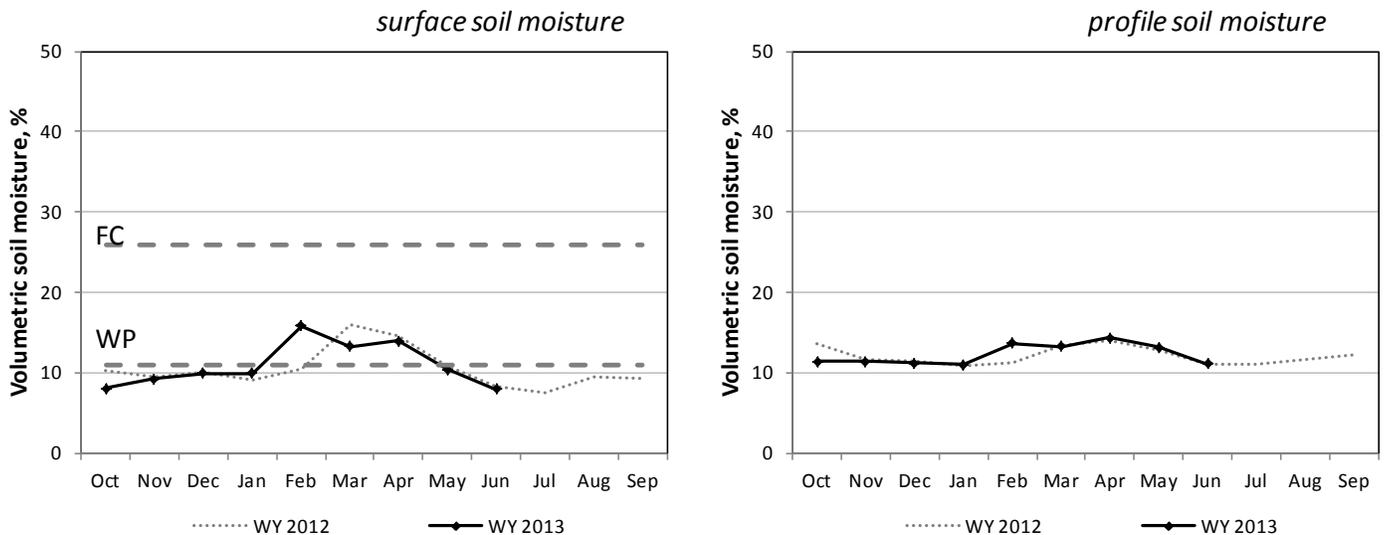
South Central

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"
			in.					in.				
			volume %					° F				
SOUTH CENTRAL												
Nephi	6.3	0.9	14	17	15	8	5	61	62	63	59	55
Ephraim	6.1	1.0	6	10	15	16	35	51	53	53	50	49
Holden	5.7	0.5	4	6	4	14	16	62	65	66	62	59
Milford	4.9	0.3	7	18	18	28	16	70	71	67	61	57
Manderfield	6.1	0.9	1	13	13	12	6	55	62	61	56	52
Circleville	2.7	0.4	8	4	7	9	8	62	65	65	58	
Panguitch	2.6	0.3	3	18	13	21	27	59	60	58	54	50
Cave Valley	9.9	0.6	0	0	0	2	2	64	67	69	62	59
Vermillion	4.9	0.3	0	1	3	4	8	60	66	67	60	56
Spooky	3.4	0.6	2	1	4	12	2	77	77	74	67	65

* 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.

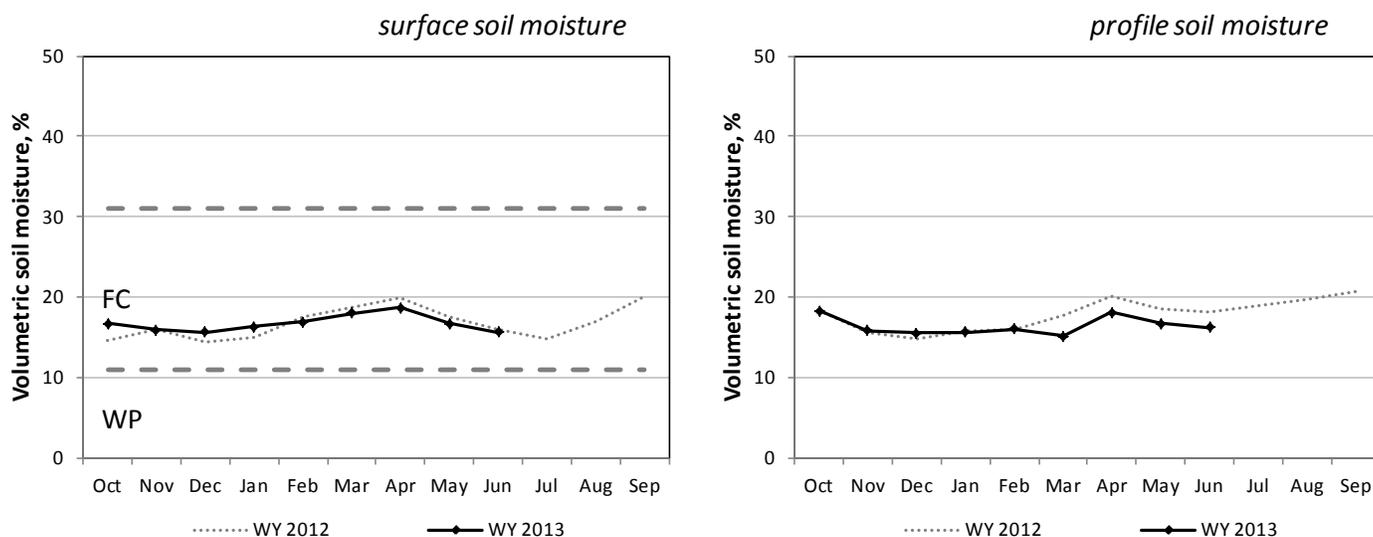
Western and Dixie

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	6.2	1.5	8	15	16	20	22	53	57	58	53	52
Park Valley	7.1	1.6	5	7	14	30	27	55	58	60	57	55
Goshute	5.7	1.1	20	1	41	19	40	53	58	63	57	55
Dugway	4.8	1.1	24	30	38		12	58	62	64	60	59
Tule Valley	4.9	0.2	12	14	23	19	11	63	73	77	73	68
Hal's Canyon	3.1	0.5	1	5	9	11	9	64	72	75	65	60
Enterprise	5.0	0.3	4	24	23	15	14	63	69	68	63	58
DIXIE												
Sand Hollow	5.0	0.1	0	0	2	0	0	82	86	84	76	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.

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

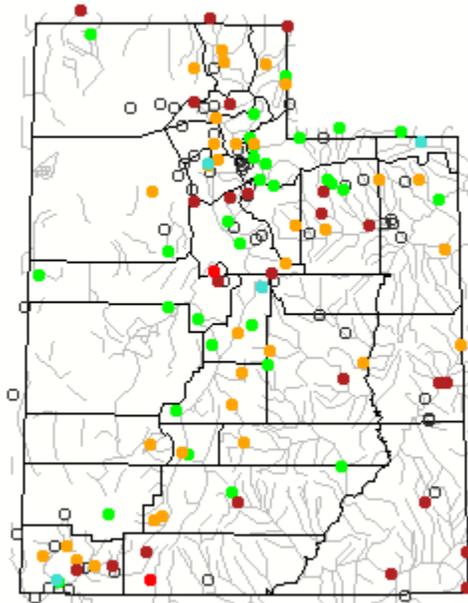
June 1, 2013

Current Conditions

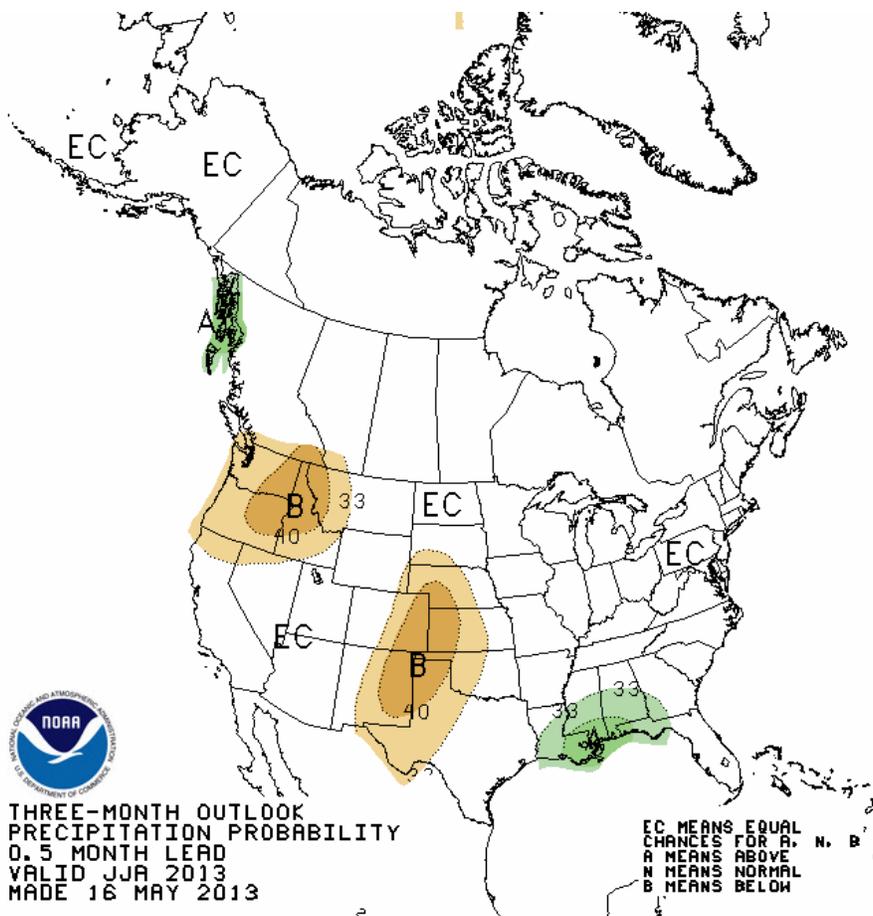
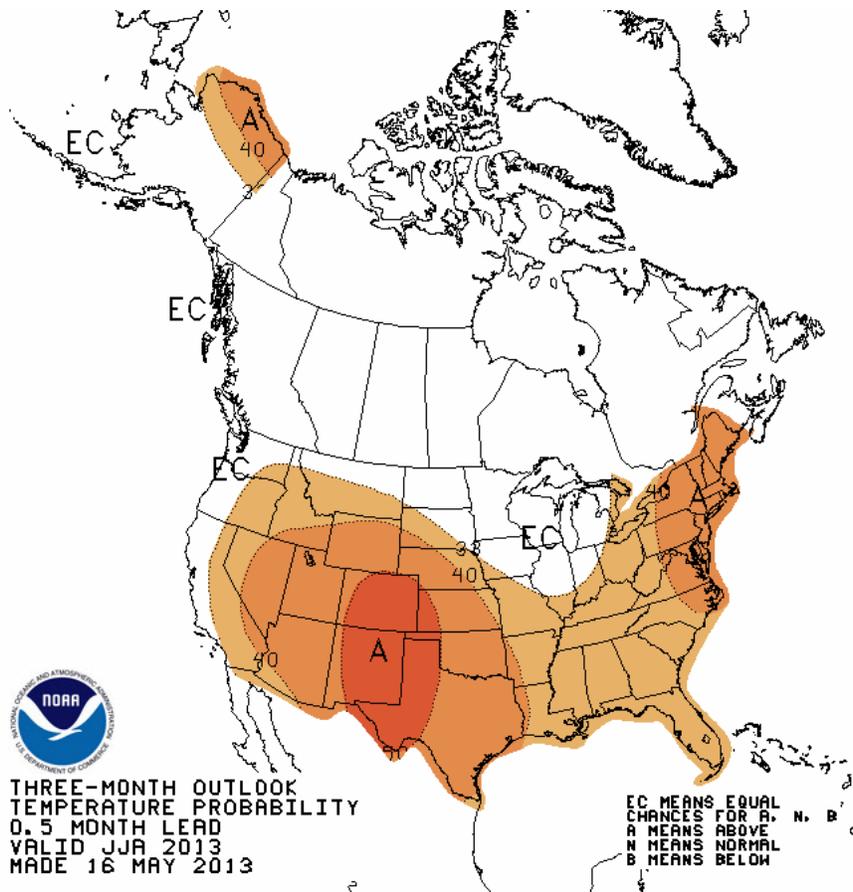
Current runoff, as shown in the USGS graphic below, is mostly below to much below average for non-regulated stream flow across many areas of Utah. Most rivers are in recession and flows will be at summer base flows quickly. Snow packs have melted out over the entire state at this point. Much of this year's snowmelt has gone to recharge soil moisture which is currently average in the north and dry in the south. Southeastern Utah is exceptionally dry and this is reflected in the observed streamflows. May precipitation was below average statewide, in the north (60%-80%) and in the south (70%-90%). Reservoir storage is 15% less than last year, near 73% of capacity across the state. This is up just 1% from May's figure of 72% of capacity **indicating that we have used much of this year's runoff as it came into the reservoirs**. Reservoir storage in some areas such as the San Pitch (0%), Southeast Utah (56%), and the Enterprise area (24%) are very low. Poor runoff conditions will and already have had impacts on agriculture across the state with water allocation cuts. The National Climate Prediction Center forecasts for the area suggest warmer conditions for the next 3 months. Based on all available water supply data, (reservoir storage, observed streamflow, climate forecasts, etc) agriculture producers and others will have to determine how best to manage current water supplies in order to minimize risk and maximize production in what is now back to back water limited years.

Current Utah Stream Flow - Courtesy US Geological Survey

Wednesday, June 05, 2013 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

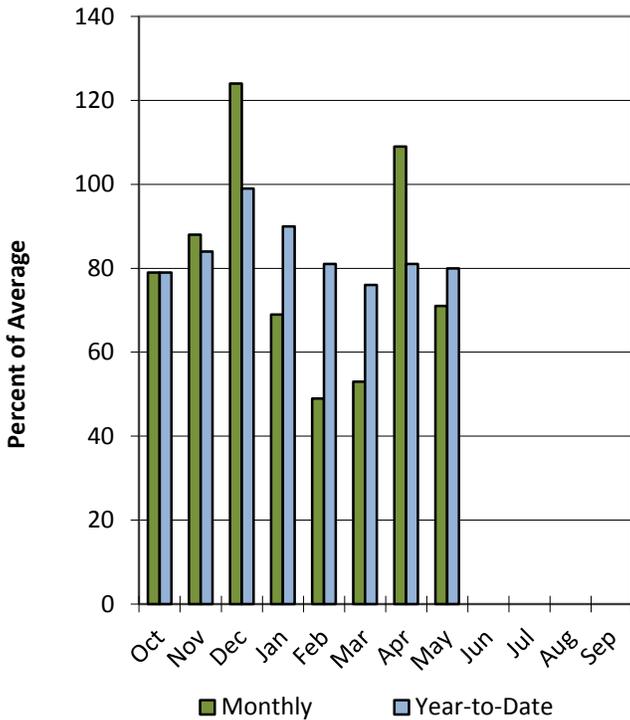


Statewide Utah

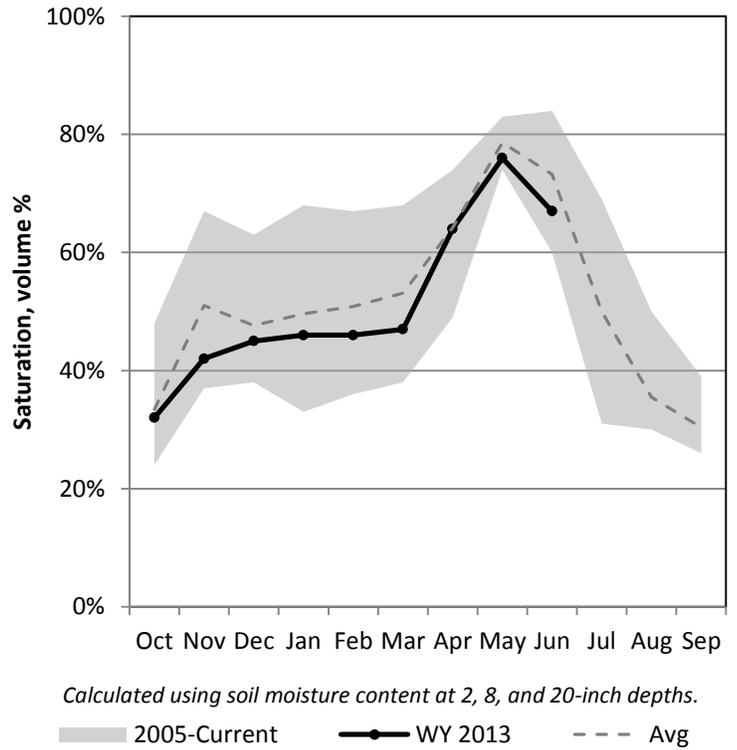
6/1/2013

Precipitation in May was below average at 71%, which brings the seasonal accumulation (Oct-May) to 80% of average. Soil moisture is at 67% compared to 60% last year. Reservoir storage is at 65% of capacity, compared to 86% last year.

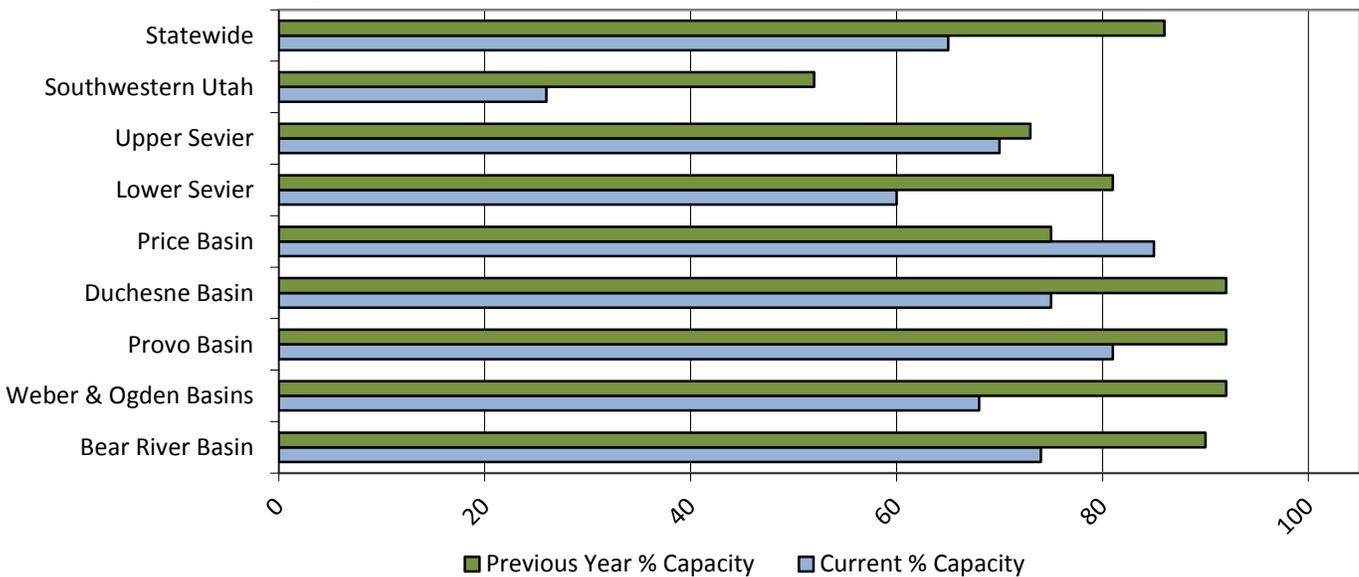
Precipitation



Soil Moisture



Reservoir Storage



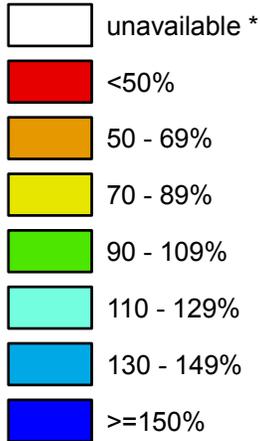
Utah

SNOTEL Water Year (Oct 1) to Date Precipitation

% of Normal

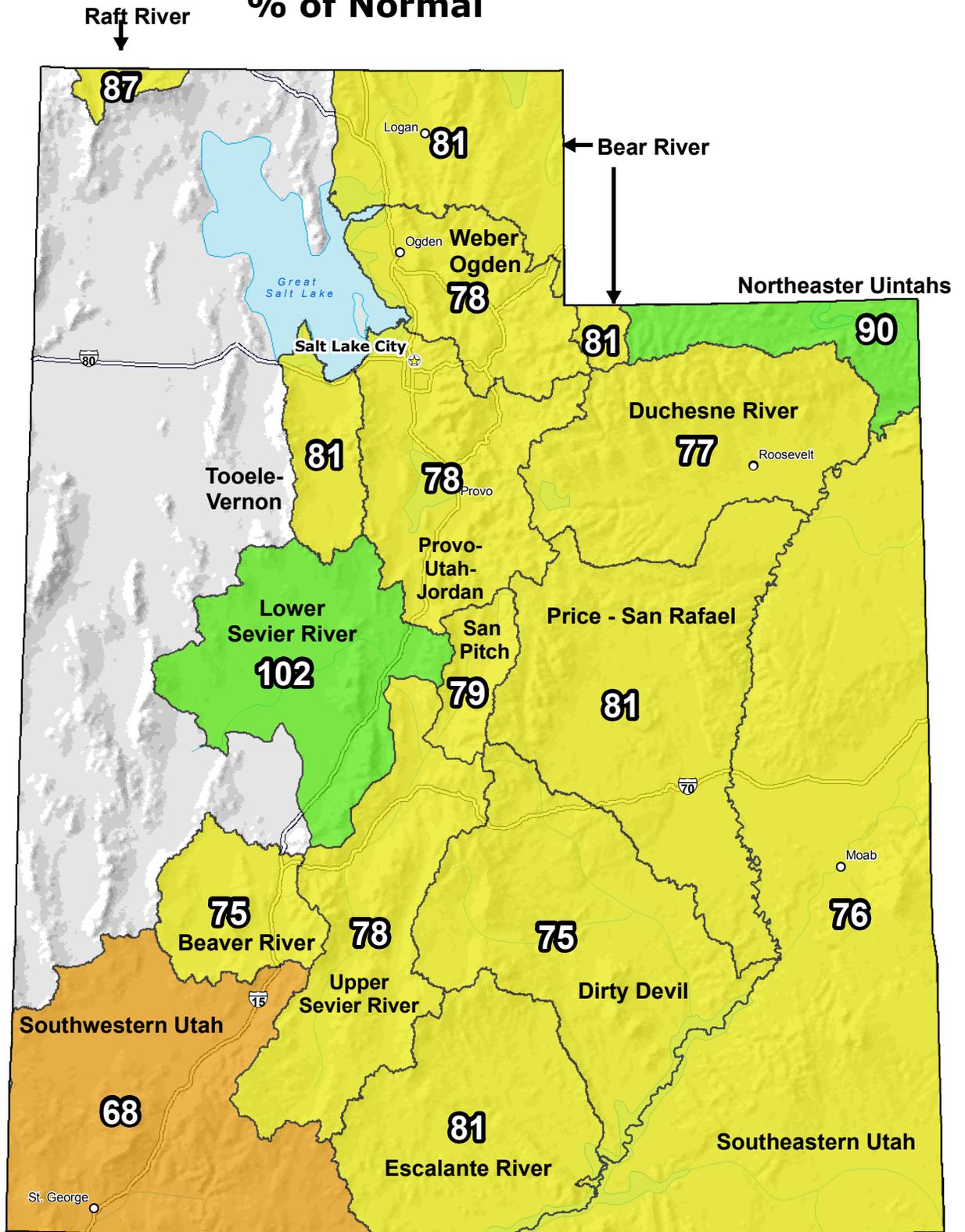
Jun 06, 2013

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



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

**Provisional Data
Subject to Revision**



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

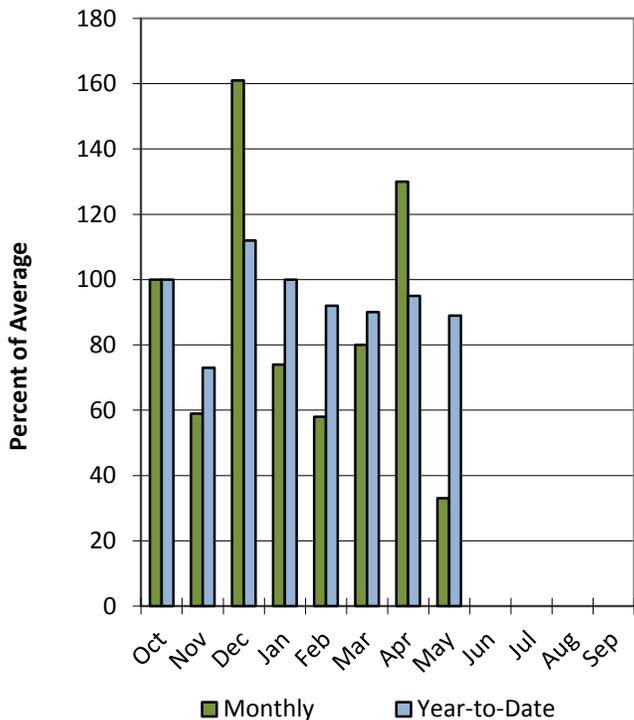
Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Raft River Basin

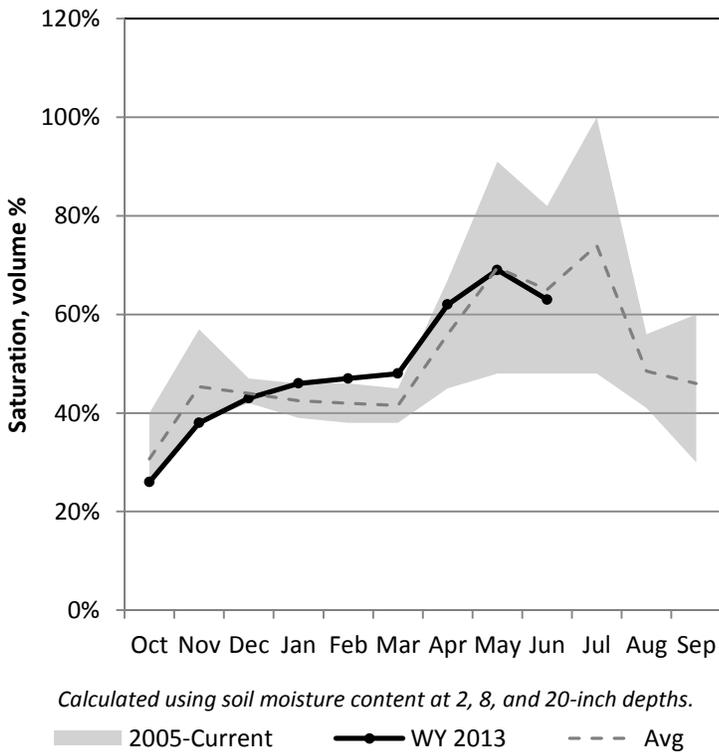
6/1/2013

Precipitation in May was much below average at 33%, which brings the seasonal accumulation (Oct-May) to 89% of average. Soil moisture is at 63% compared to 82% last year.

Precipitation



Soil Moisture

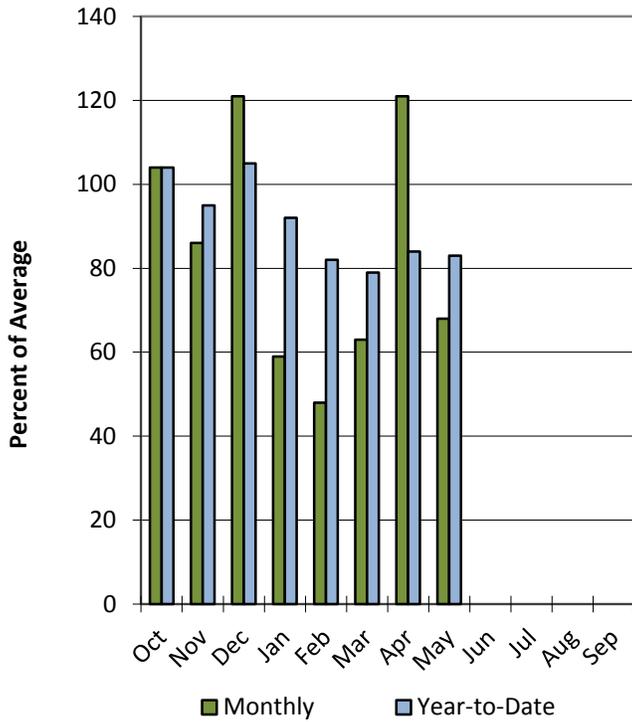


Bear River Basin

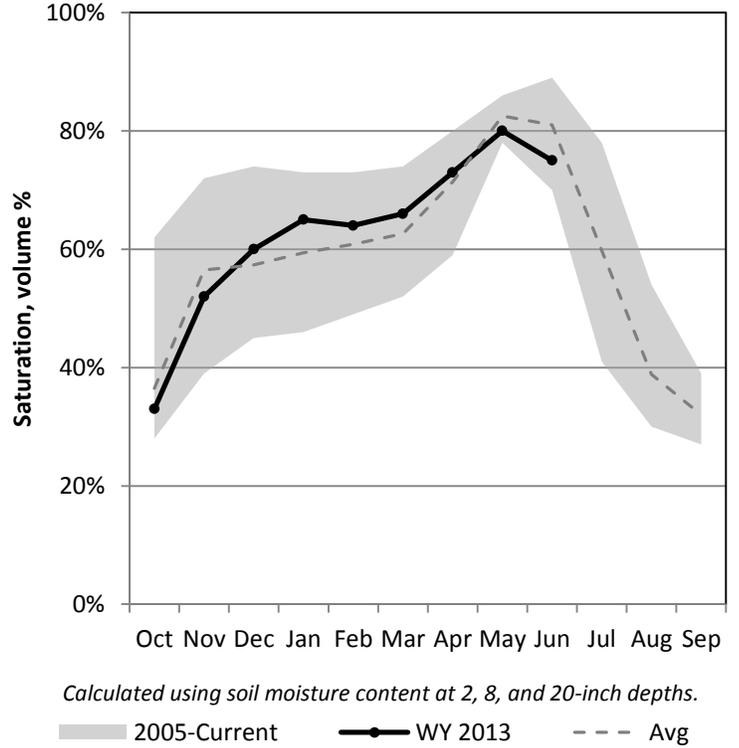
6/1/2013

Precipitation in May was much below average at 68%, which brings the seasonal accumulation (Oct-May) to 83% of average. Soil moisture is at 75% compared to 76% last year. Reservoir storage is at 74% of capacity, compared to 90% last year. The water availability index for the Bear River is 45%.

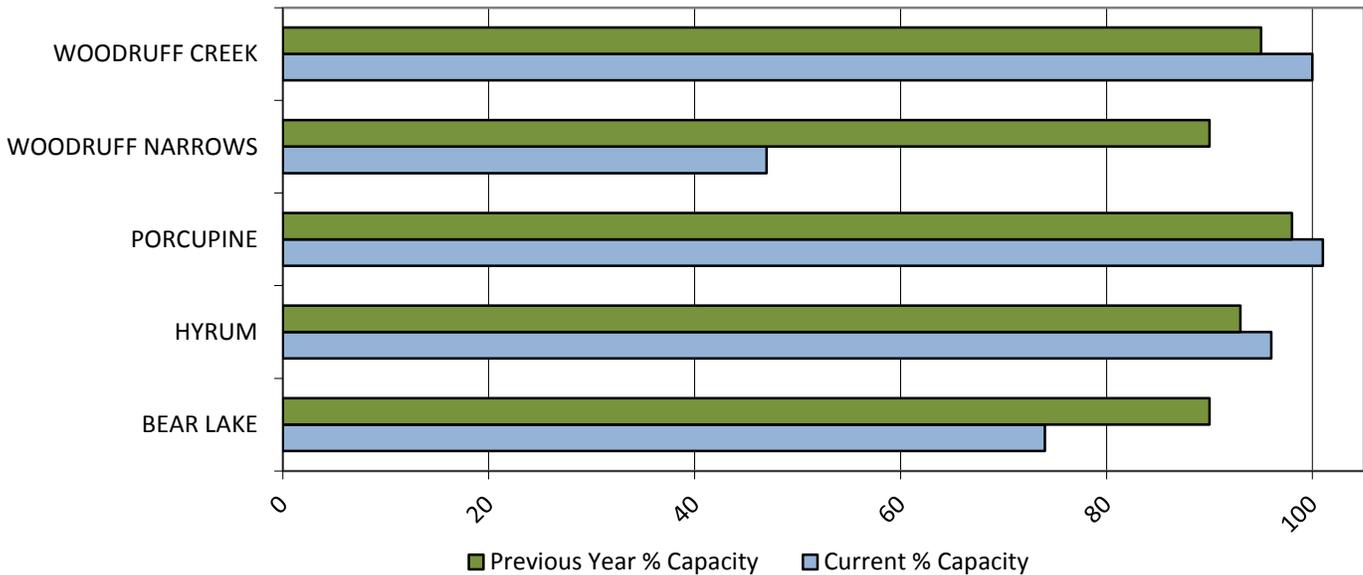
Precipitation



Soil Moisture



Reservoir Storage

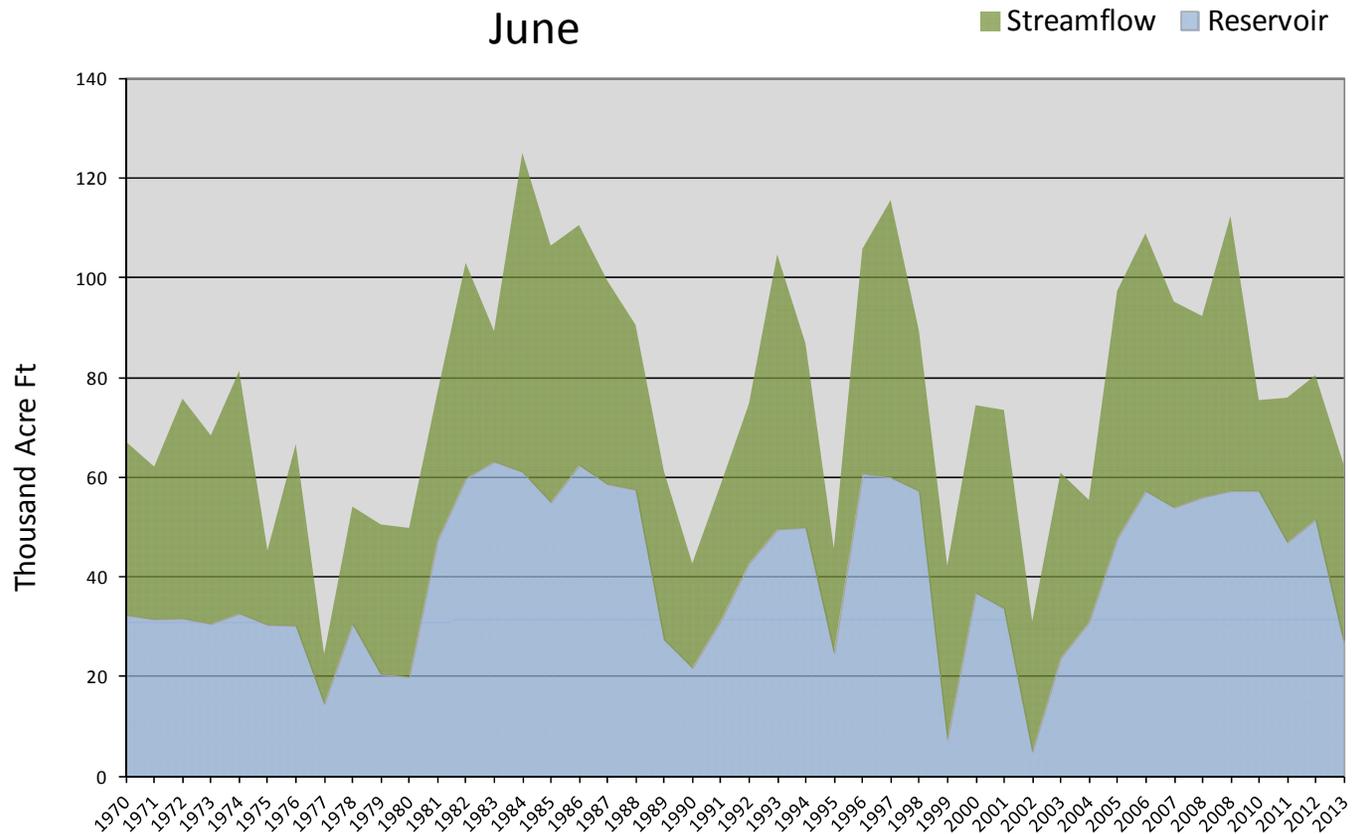


June 1, 2013						
Woodruff Narrows Water Availability Index						
Basin or Region	May EOM* Woodruff Narrows Reservoir	May Observed Streamflow Bear at Stateline	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Woodruff Narrows	26.9	35.7	63.0	-1.39	33	89,71,76,70

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

Woodruff Narrows Water Availability Index

June



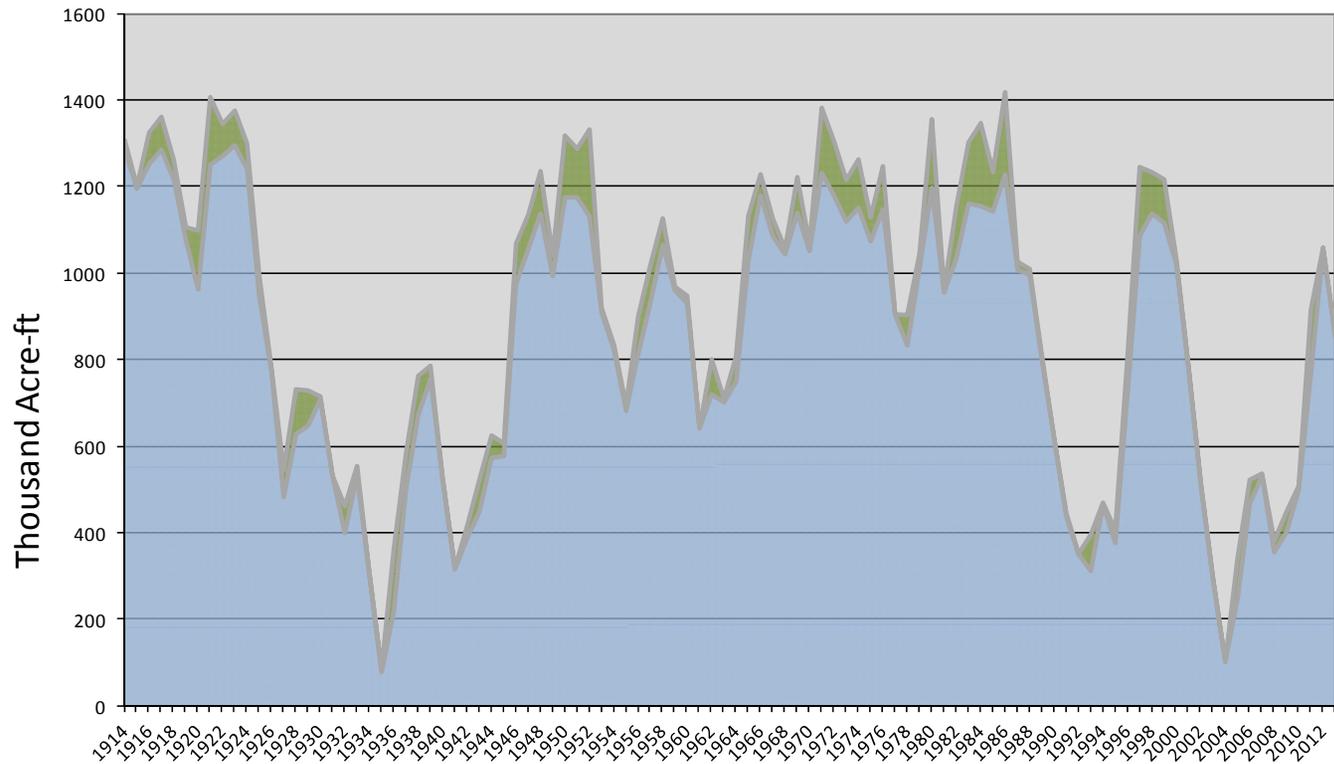
June 1, 2013		Water Availability Index				
Basin or Region	May EOM* Bear Lake	May accumulated inflow to Bear Lake (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Bear River	852	3	855	-0.45	45	64, 54, 56, 78

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

Bear Lake - Surface Water Supply Index

June

■ Streamflow ■ Reservoir

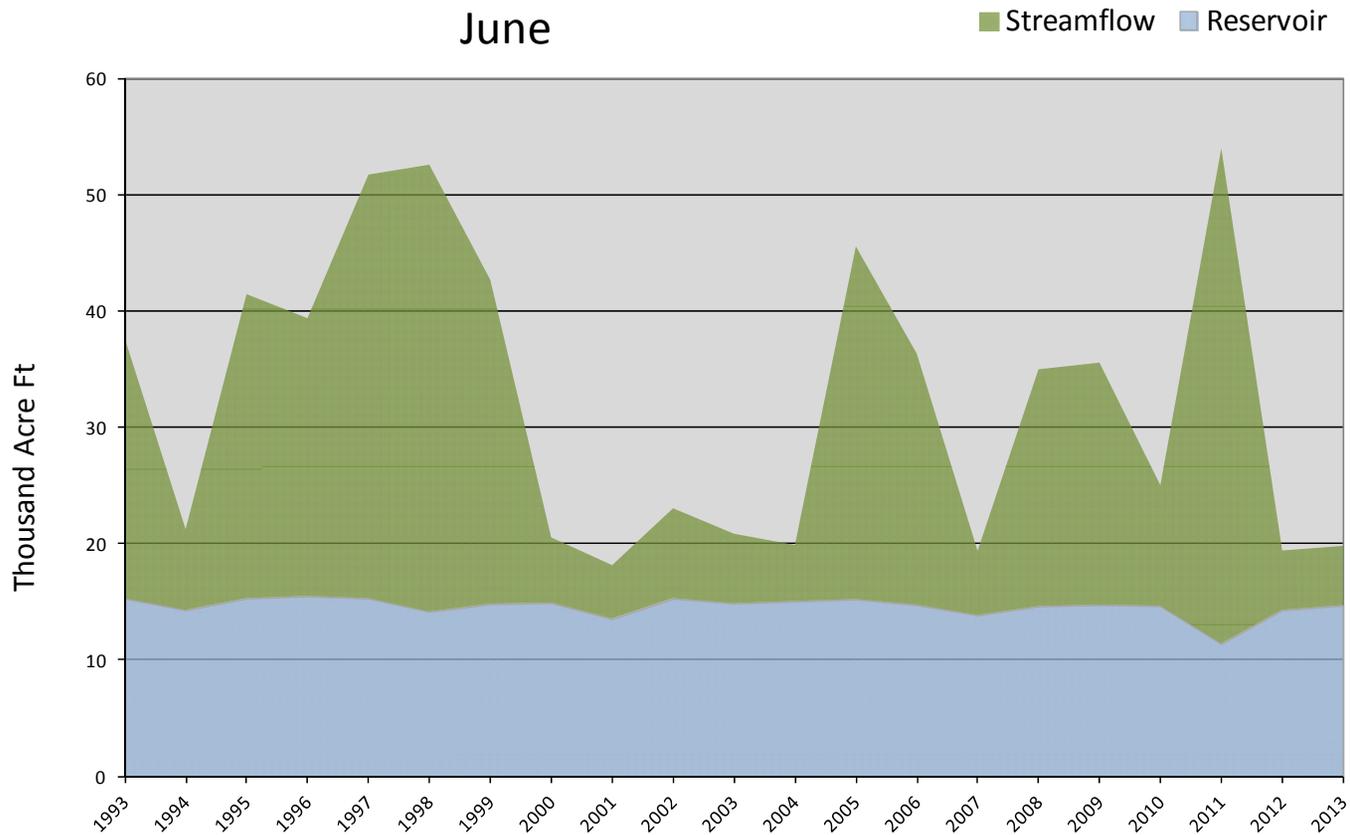


June 1, 2013						
Little Bear Water Availability Index						
Basin or Region	May EOM* Hyrum Reservoir	May Observed Streamflow Little Bear nr Paradise	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Little Bear	14.7	5.1	19.8	-2.65	18	07,12,04,00

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

Little Bear River Water Availability Index

June

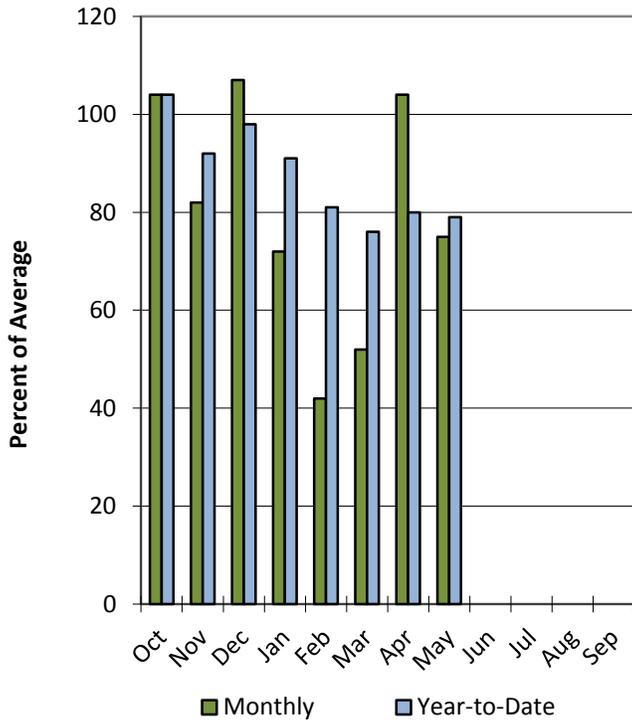


Weber & Ogden River Basins

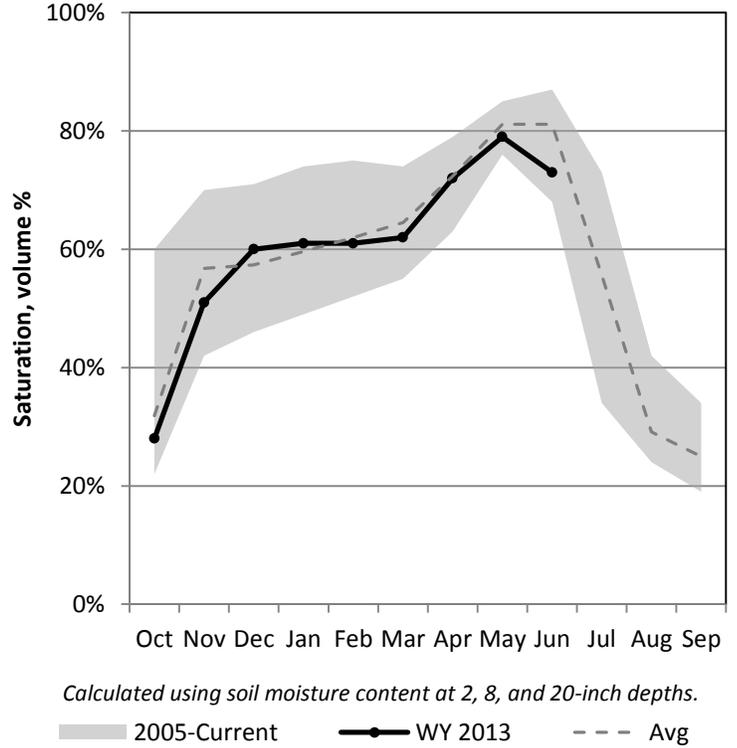
6/1/2013

Precipitation in May was below average at 75%, which brings the seasonal accumulation (Oct-May) to 79% of average. Soil moisture is at 73% compared to 71% last year. Reservoir storage is at 68% of capacity, compared to 92% last year. The water availability index for the Ogden River is 11% and 11% for the Weber River.

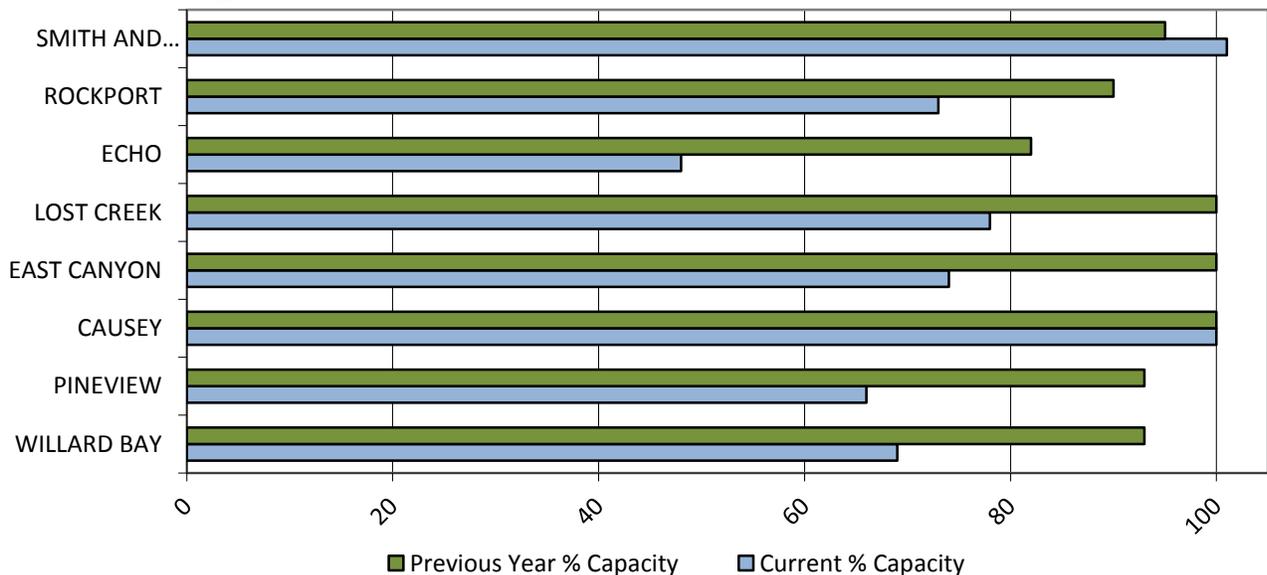
Precipitation



Soil Moisture



Reservoir Storage



June 1, 2013

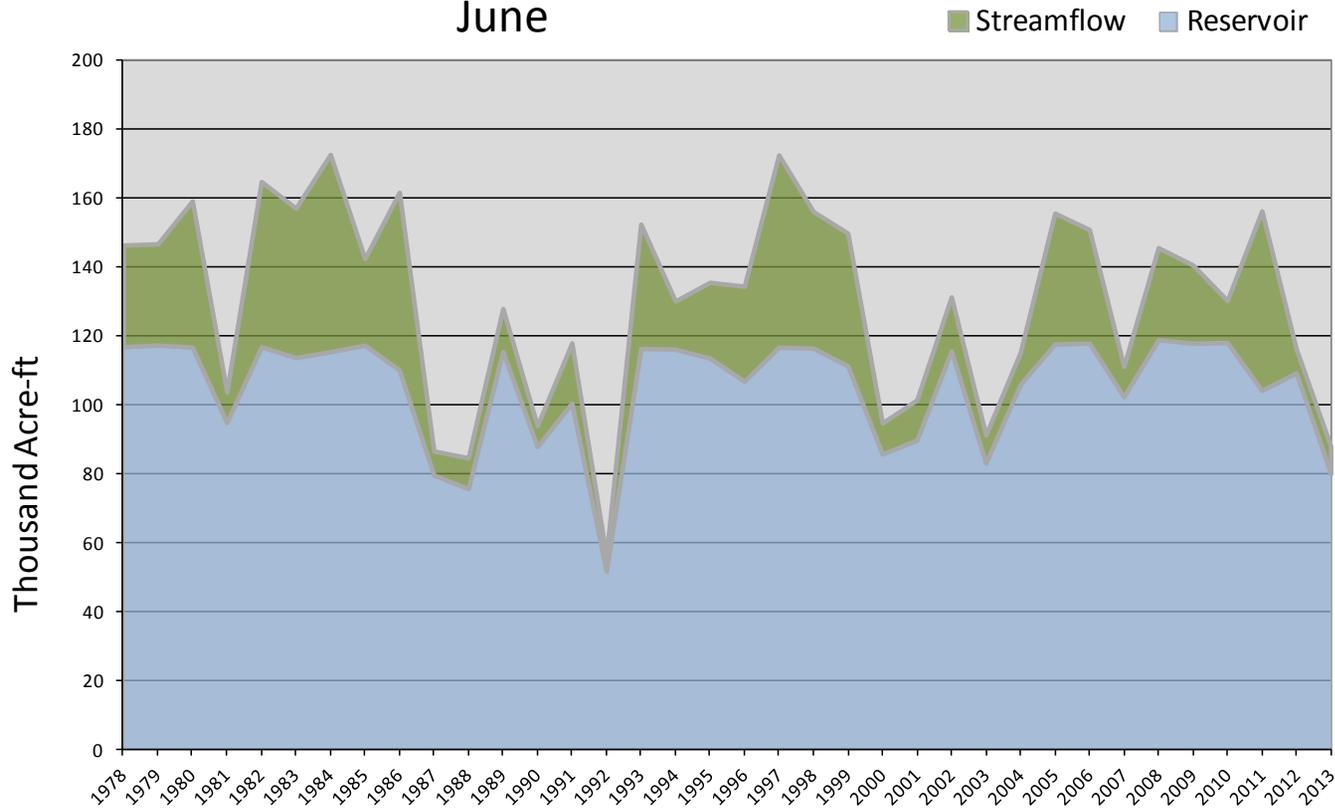
Water Availability Index

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	80	8	88	-3.27	11	88, 87, 03, 90

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

Ogden River - Water Availability Index

June



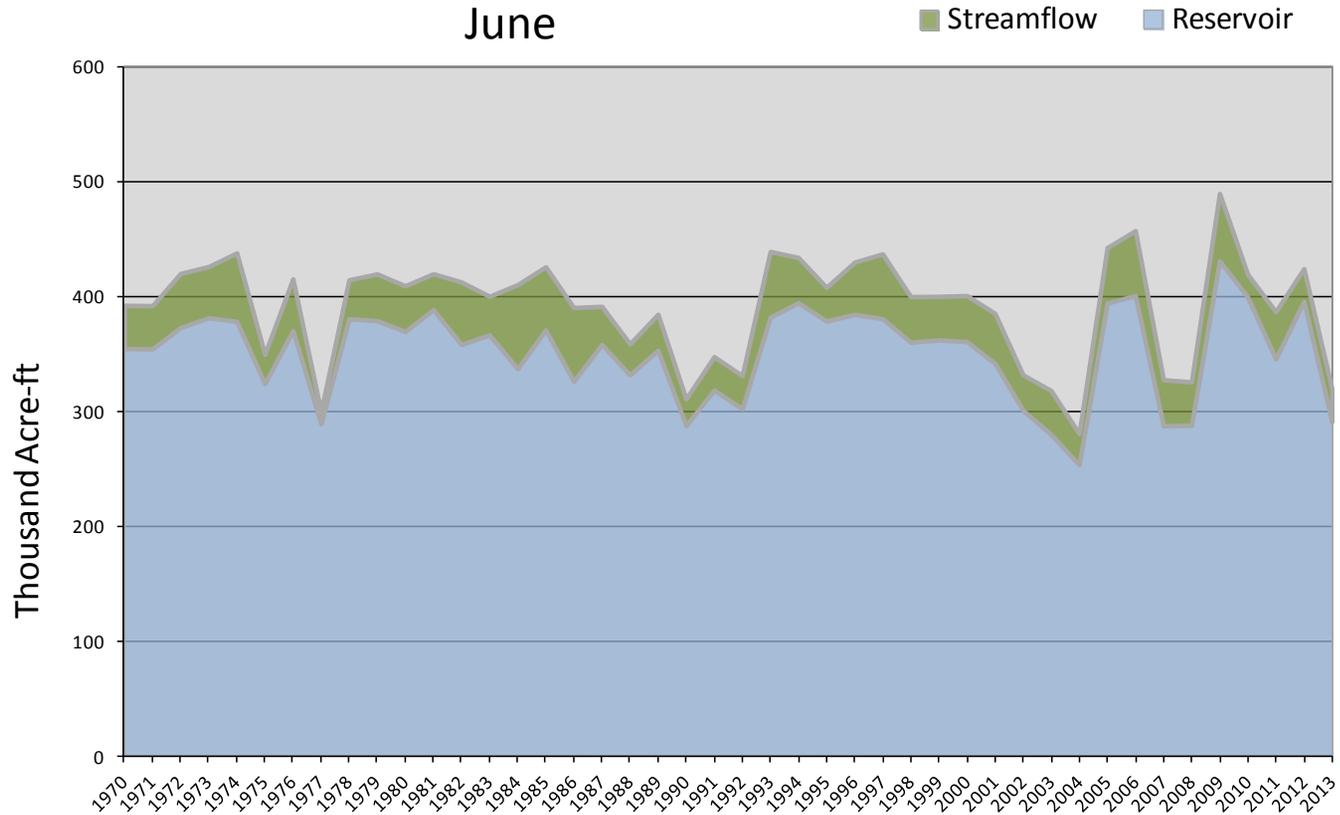
June 1, 2013

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	291	29	319	-3.24	11	90, 03, 08, 07

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

Weber River - Water Availability Index

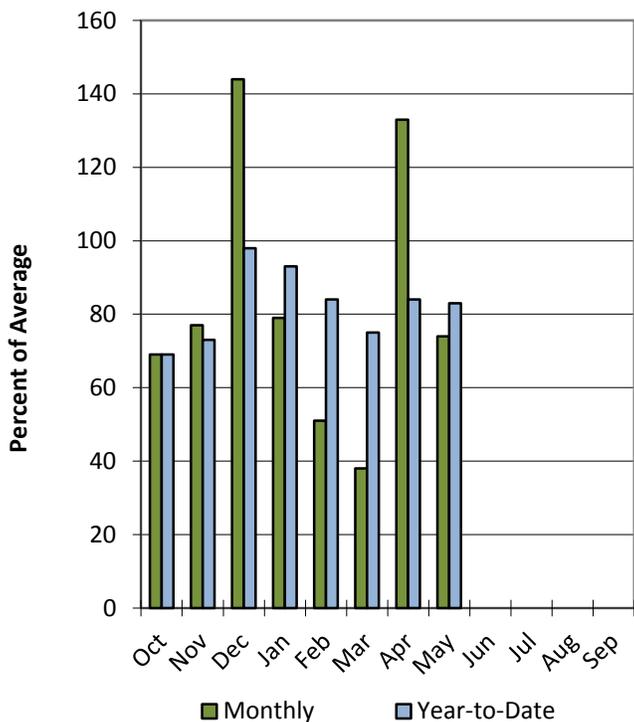


Tooele & Vernon Creek Basins

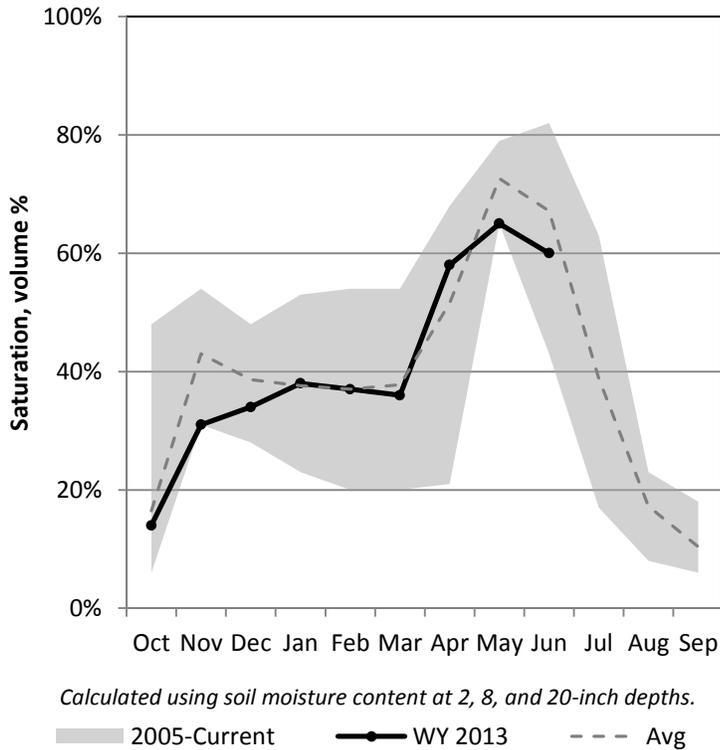
6/1/2013

Precipitation in May was below average at 74%, which brings the seasonal accumulation (Oct-May) to 83% of average. Soil moisture is at 60% compared to 48% last year. Reservoir storage is at 73% of capacity, compared to 73% last year.

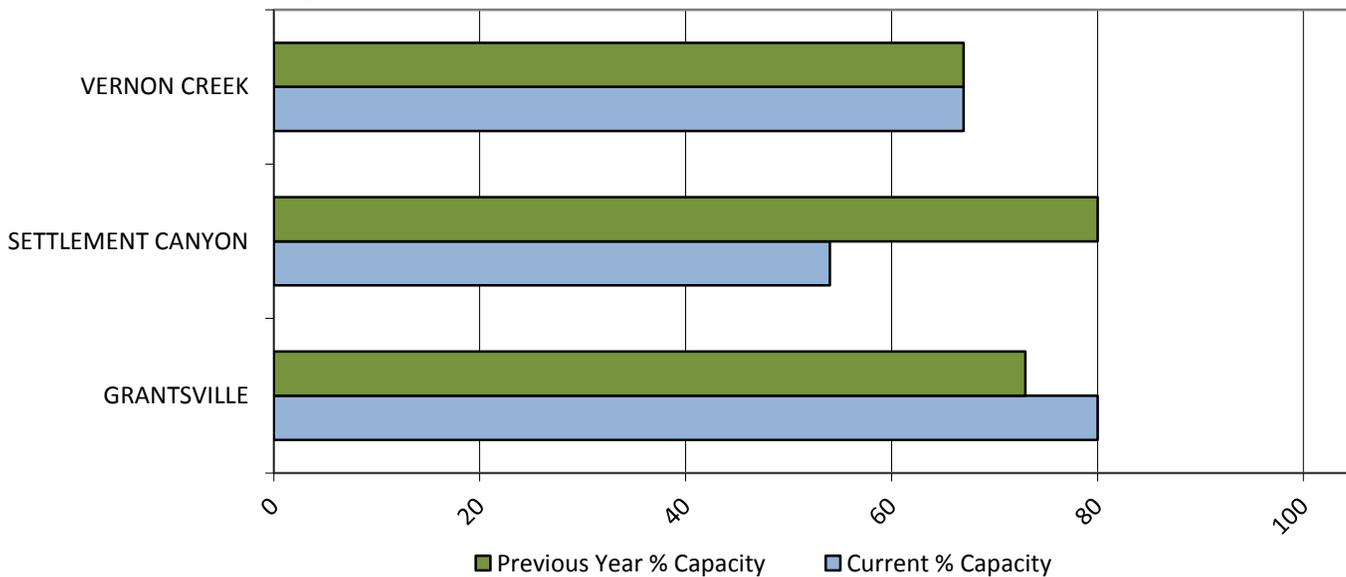
Precipitation



Soil Moisture



Reservoir Storage

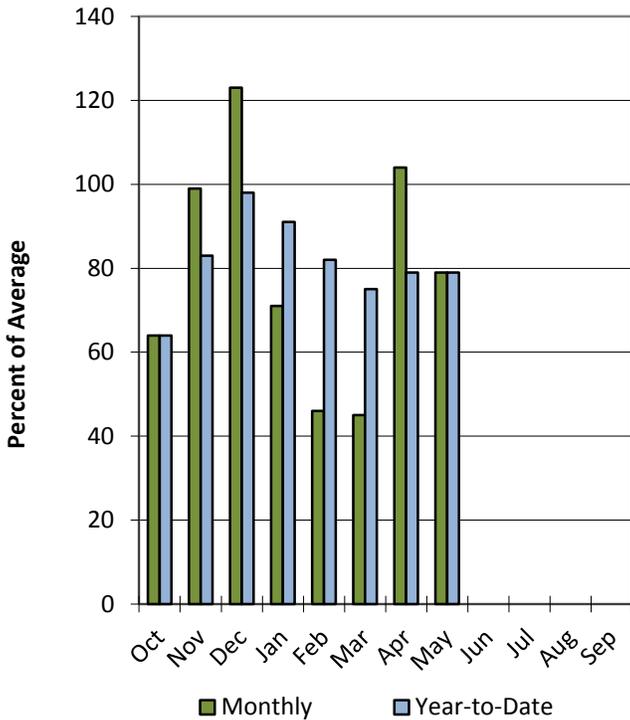


Provo & Jordan River Basins

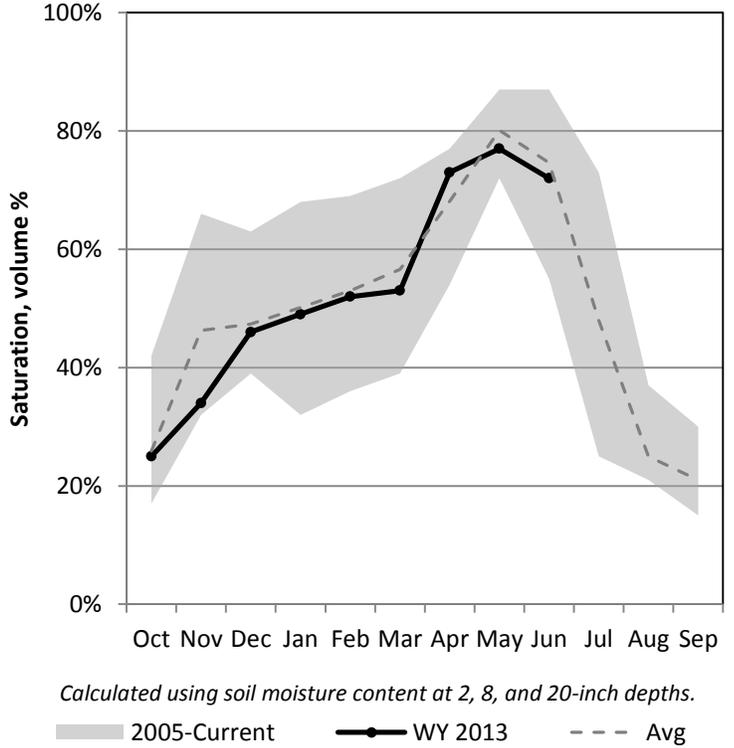
6/1/2013

Precipitation in May was below average at 79%, which brings the seasonal accumulation (Oct-May) to 79% of average. Soil moisture is at 72% compared to 63% last year. Reservoir storage is at 81% of capacity, compared to 92% last year. The water availability index for the Provo River is 5%.

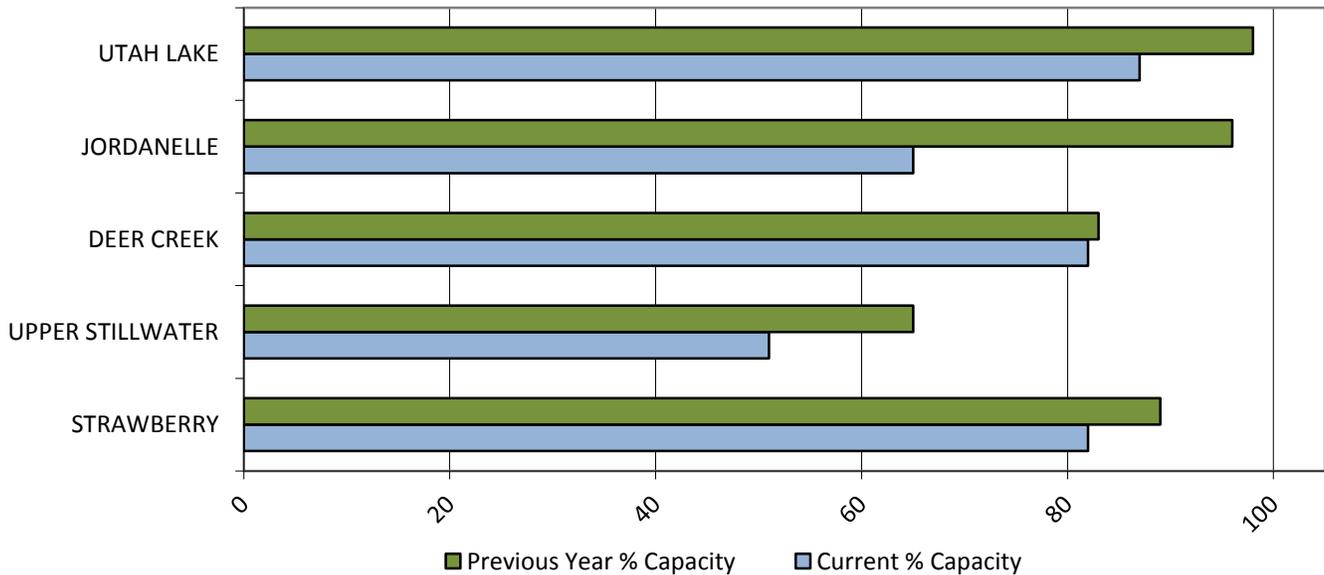
Precipitation



Soil Moisture



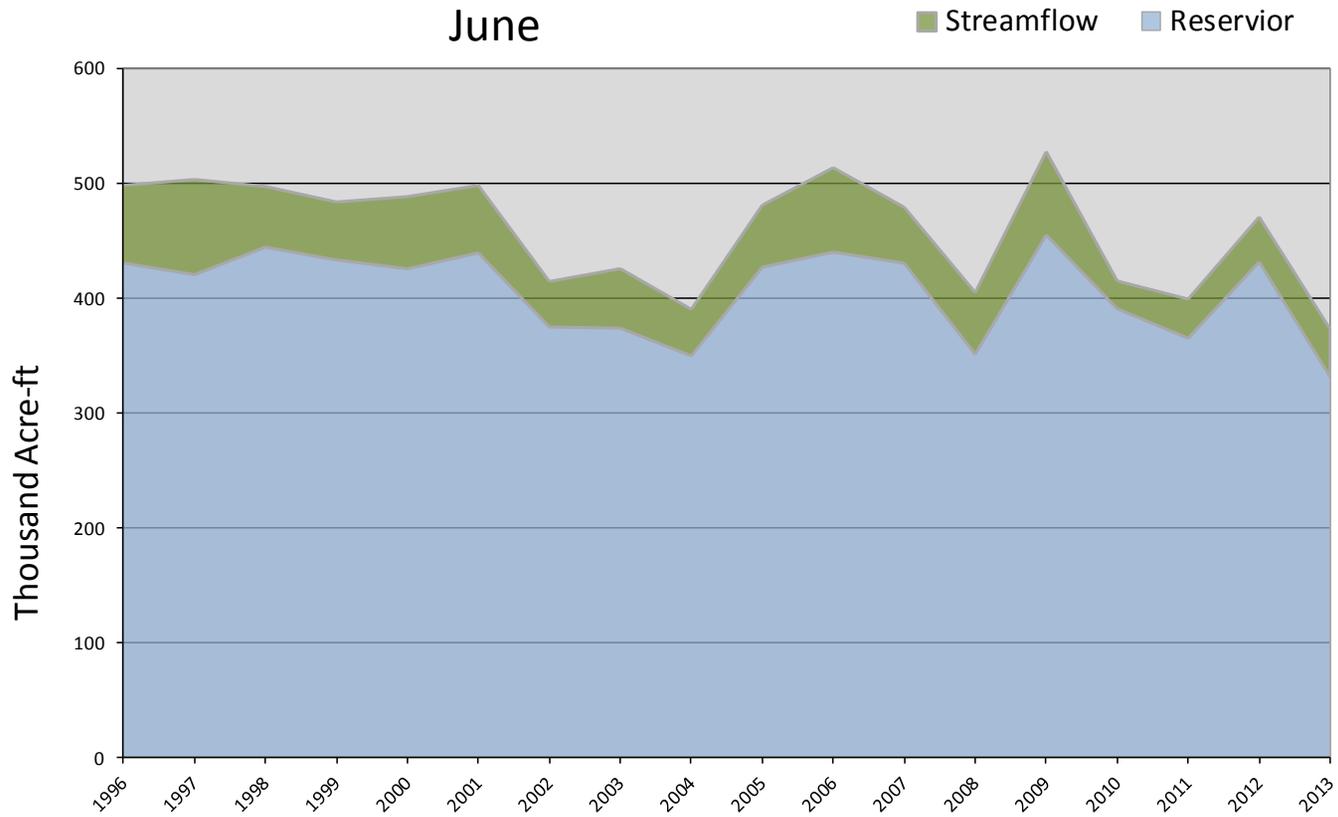
Reservoir Storage



June 1, 2013		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	331	41.4	373	-3.73	5%	02,08,11,04

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

Provo River - Water Availability Index



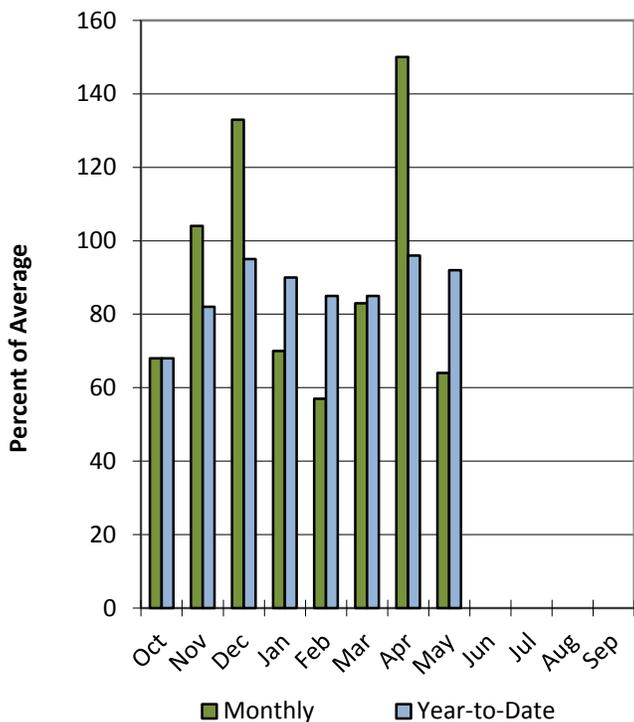
Utah Lake, Jordan River, and Tooele Valley Basins

Northeastern Uintah Basin

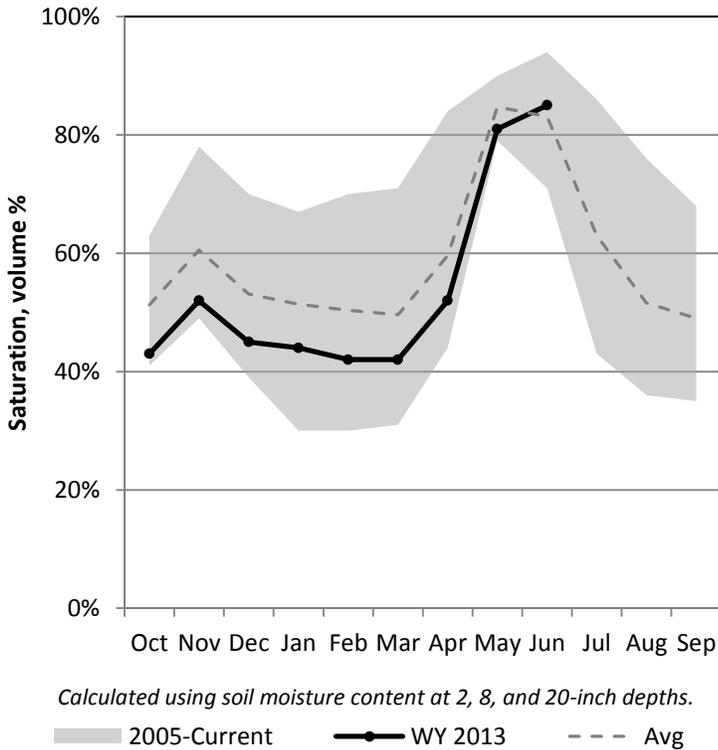
6/1/2013

Precipitation in May was much below average at 64%, which brings the seasonal accumulation (Oct-May) to 92% of average. Soil moisture is at 85% compared to 74% last year. Reservoir storage is at 80% of capacity, compared to 83% last year.

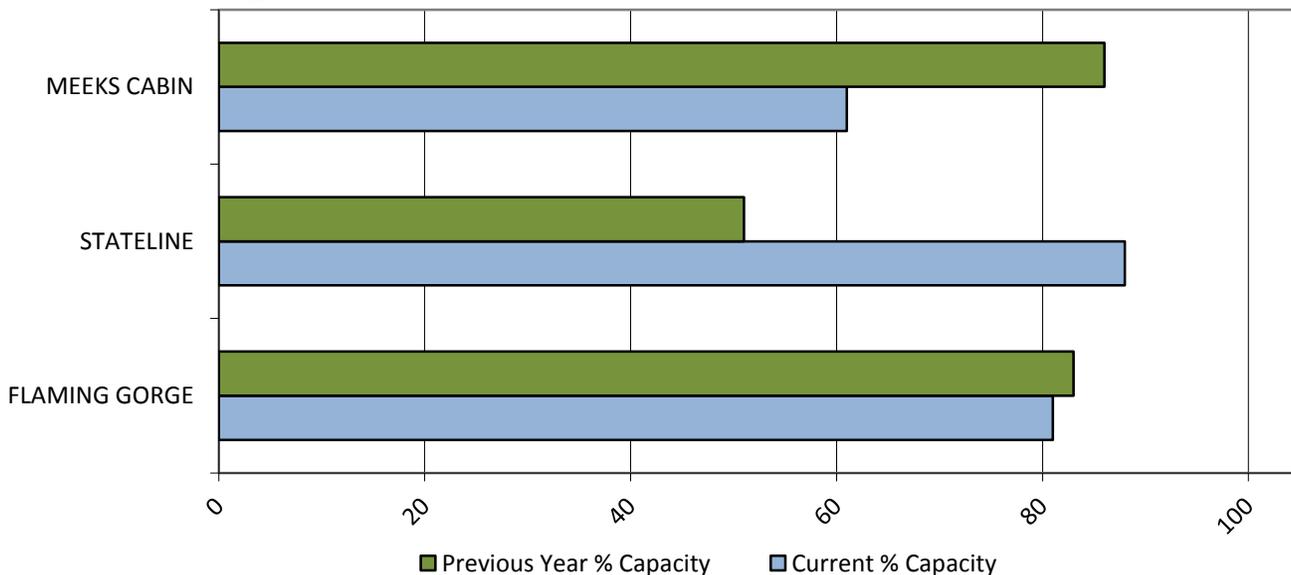
Precipitation



Soil Moisture



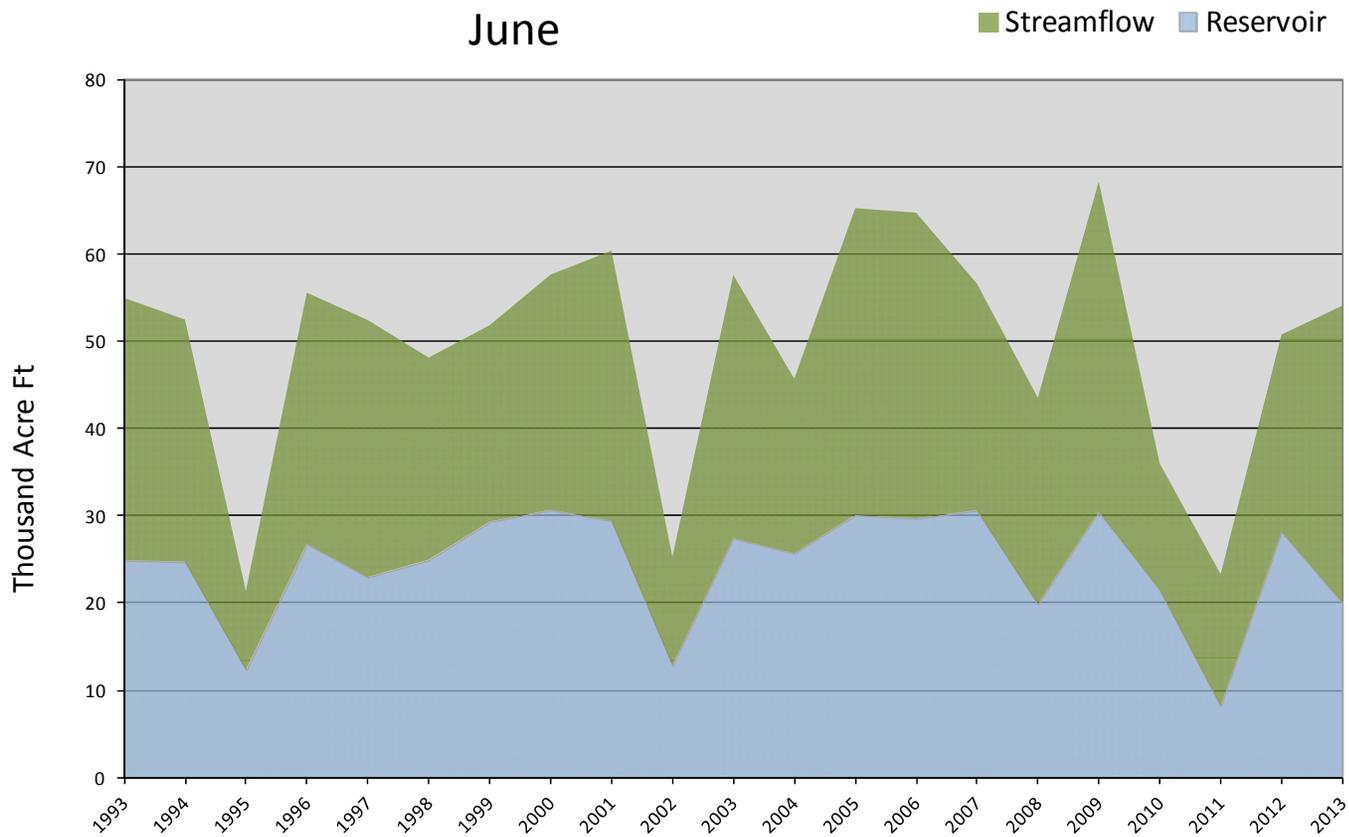
Reservoir Storage



Blacks Fork 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
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Blacks Fork	20.0	34.0	54.0	0.38	55	97,94,93,96

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

Blacks Fork River Water Availability Index June



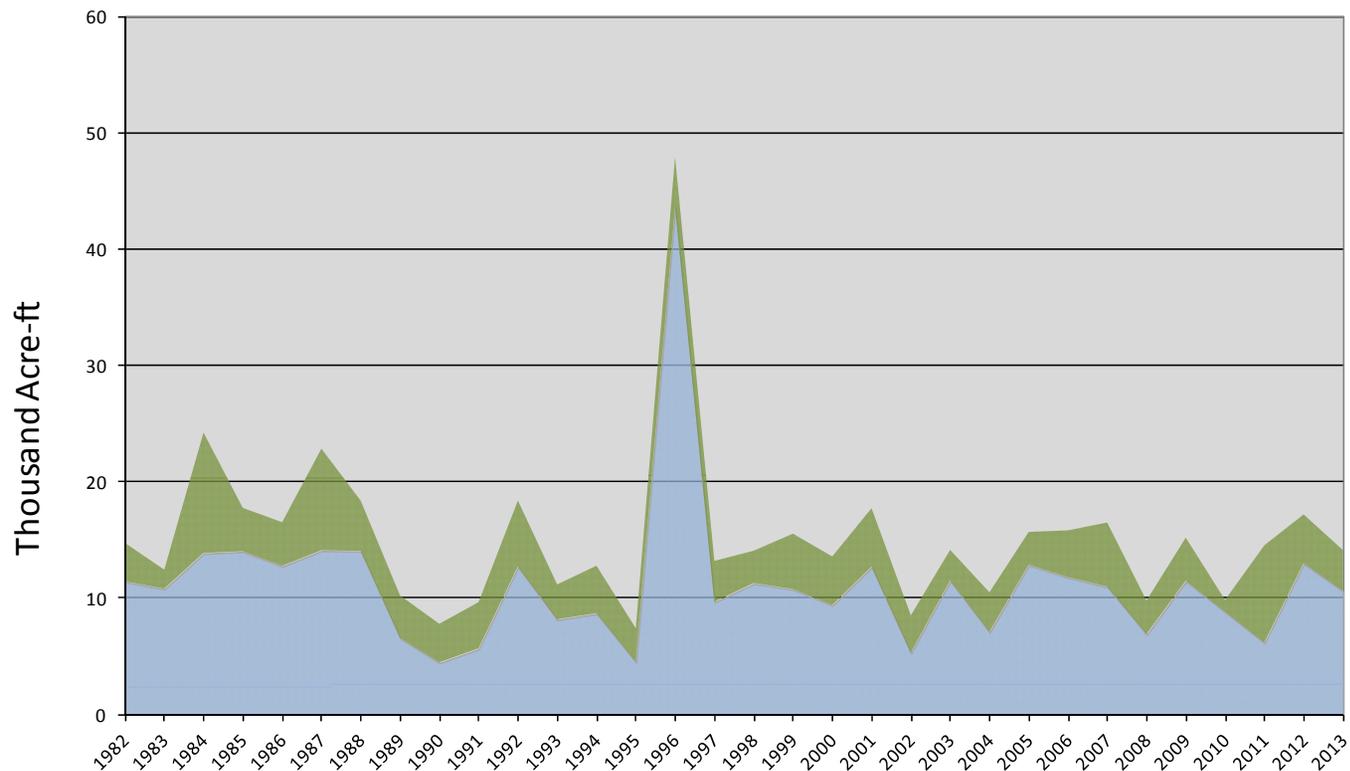
June 1, 2013		Water Availability Index				
Basin or Region	May EOM* Stateline Reservoir	May Observed Flow EF Smiths Creek	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Smiths Creek	10.6	3.5	14.1	-0.38	45	00,98,03,11

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

Smiths Creek - Water Availability Index

June

■ Streamflow ■ Reservoir

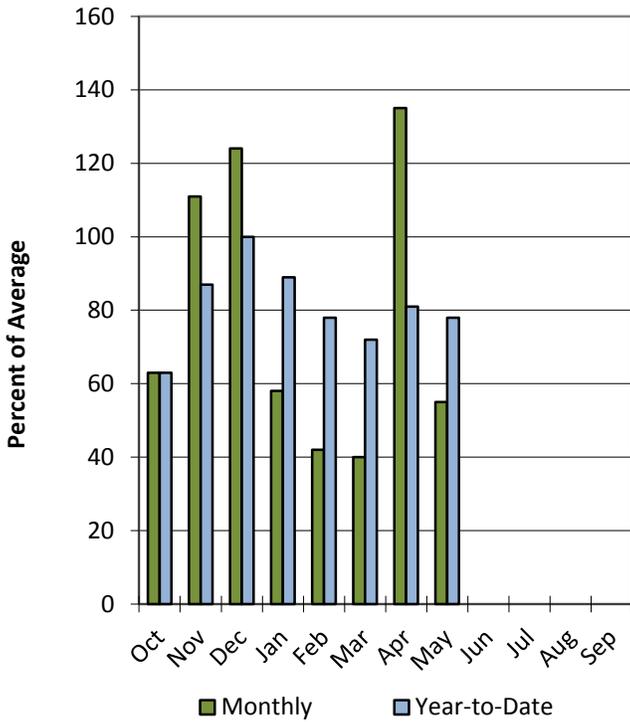


Duchesne River Basin

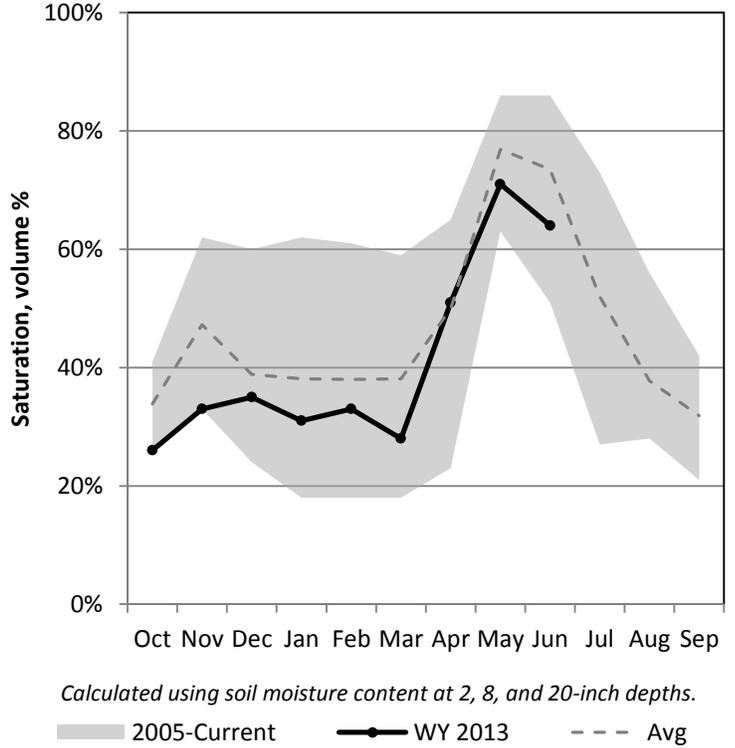
6/1/2013

Precipitation in May was much below average at 55%, which brings the seasonal accumulation (Oct-May) to 78% of average. Soil moisture is at 64% compared to 51% last year. Reservoir storage is at 82% of capacity, compared to 88% last year. The water availability index for the Western Uintahs is 48% and 11% for the Eastern Uintahs.

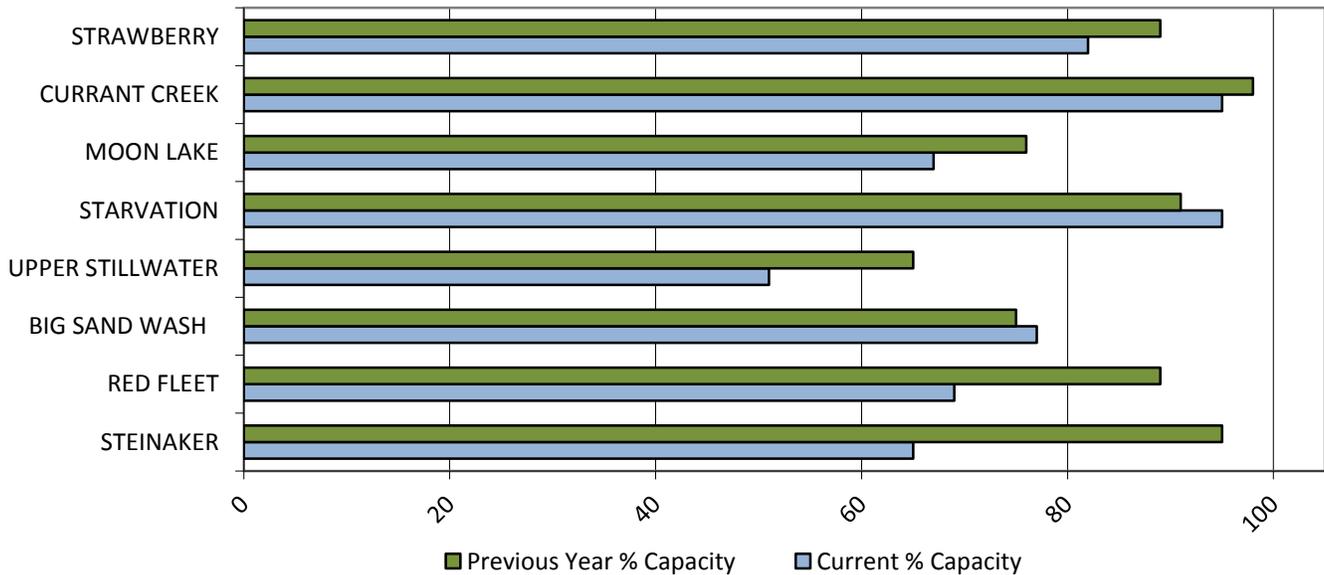
Precipitation



Soil Moisture



Reservoir Storage



June 1, 2013

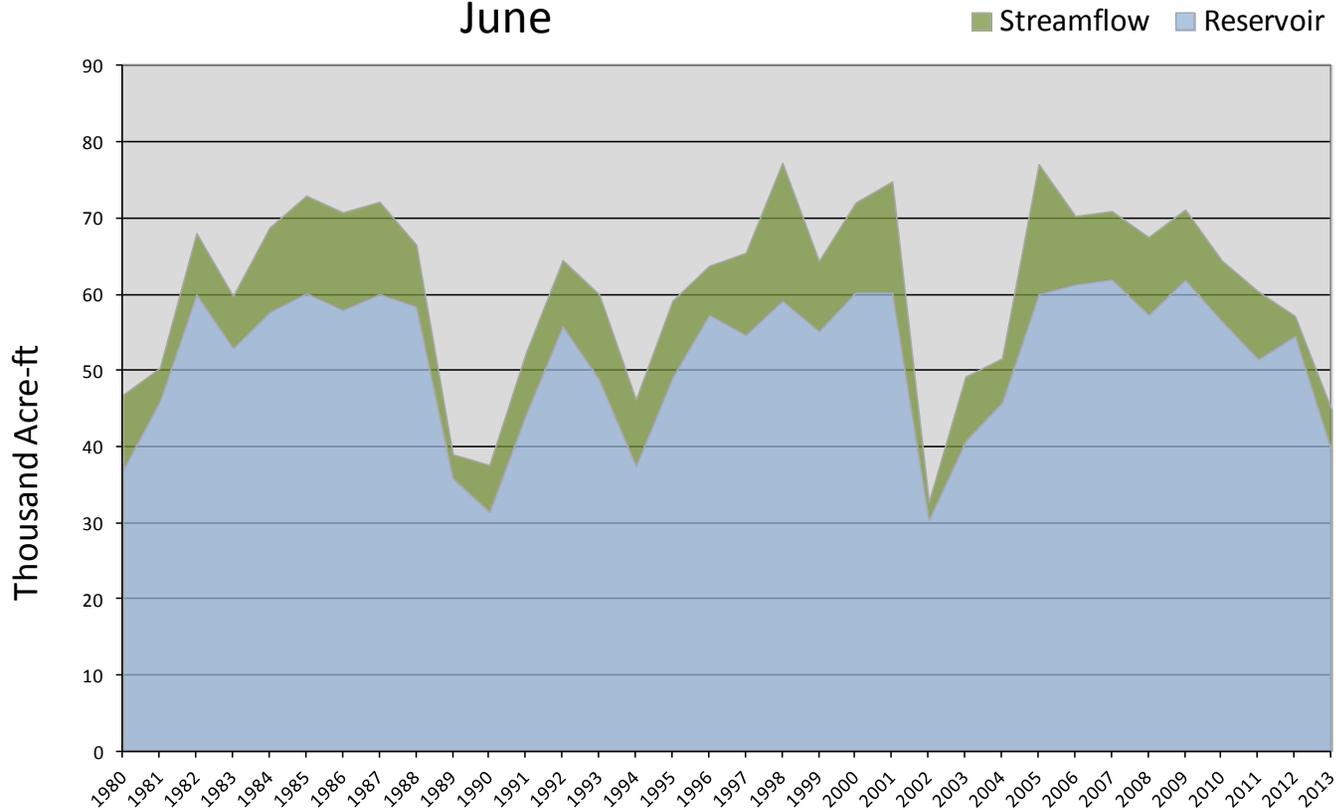
Water Availability Index

Basin or Region	May EOM* Red Fleet and Steinaker	May accumulated flow Big Brush Creek (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Eastern Uintah	39.4	5.4	44.8	-3.21	11	90, 89, 94, 80

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

Eastern Uintah - Water Availability Index

June



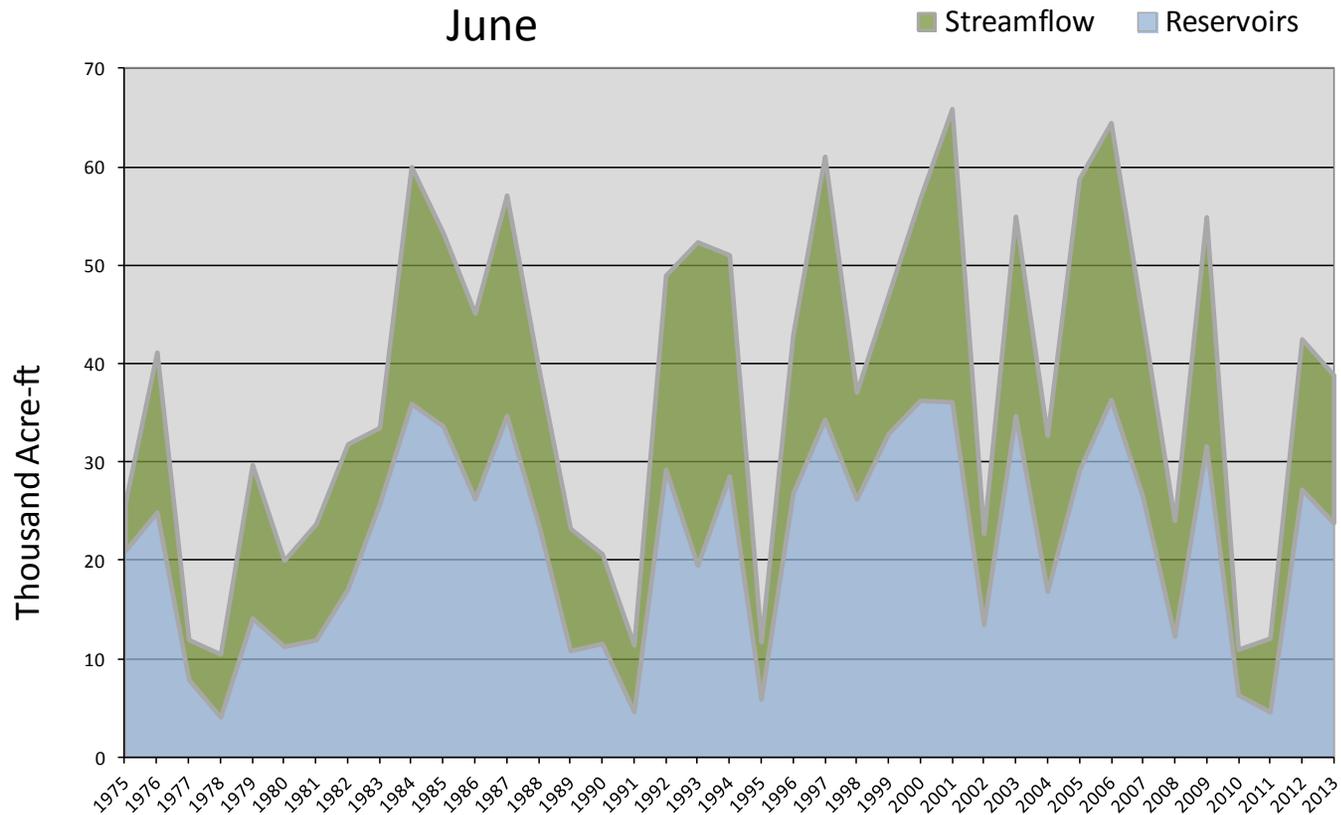
June 1, 2013

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	23.9	15.0	38.9	-0.21	48	83, 98, 88, 76

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

Moon Lake - Water Availability Index

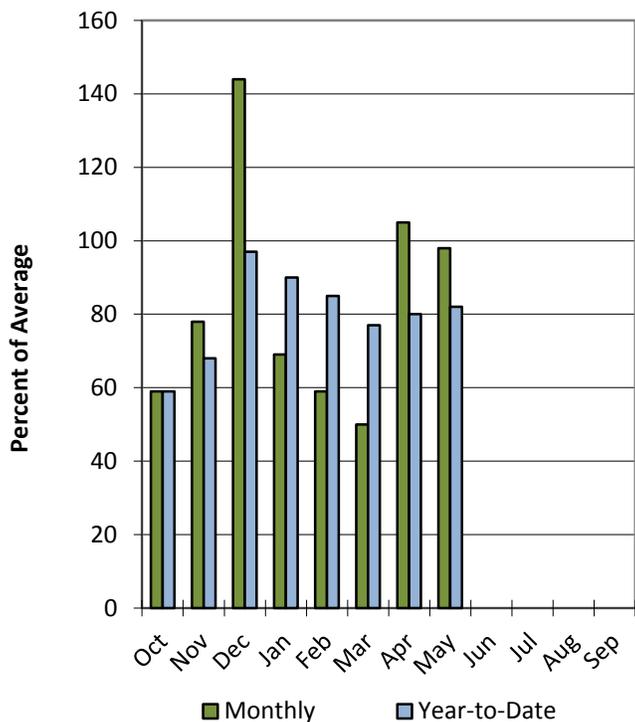


Price & San Rafael Basins

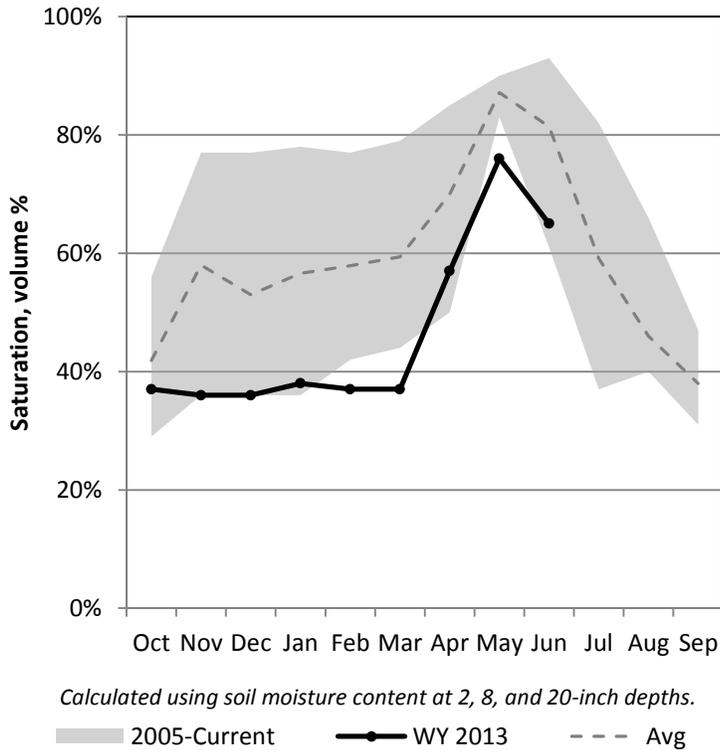
6/1/2013

Precipitation in May was near average at 98%, which brings the seasonal accumulation (Oct-May) to 82% of average. Soil moisture is at 65% compared to 61% last year. Reservoir storage is at 56% of capacity, compared to 85% last year. The water availability index for the Price River is 20%, and 19% for Joe's Valley.

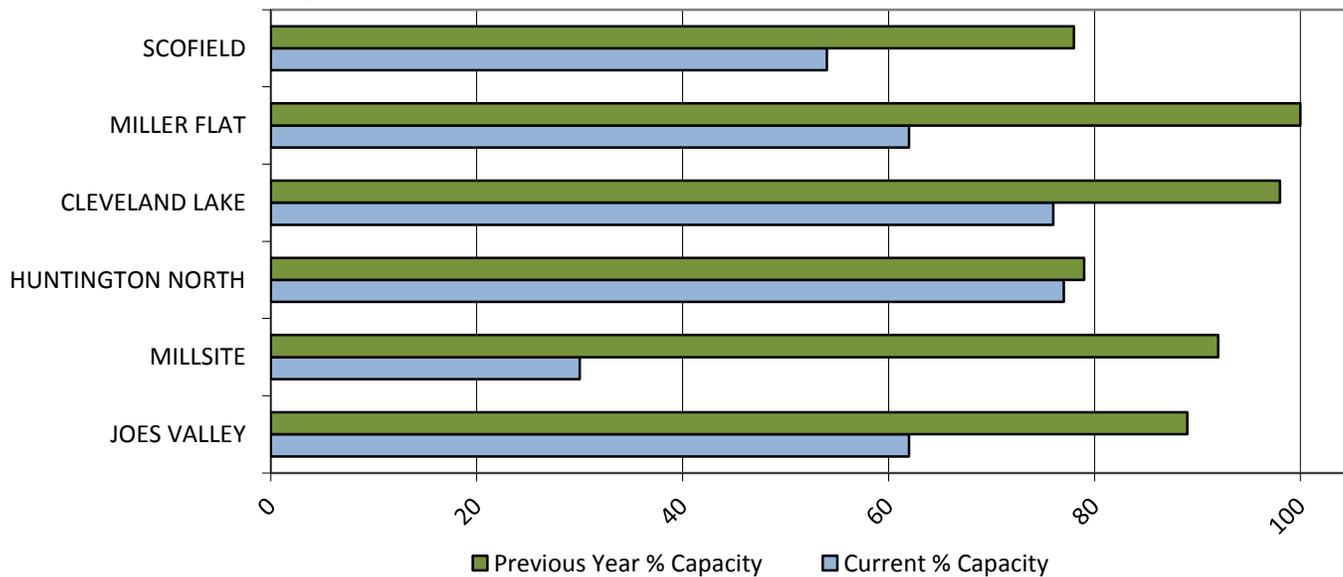
Precipitation



Soil Moisture



Reservoir Storage



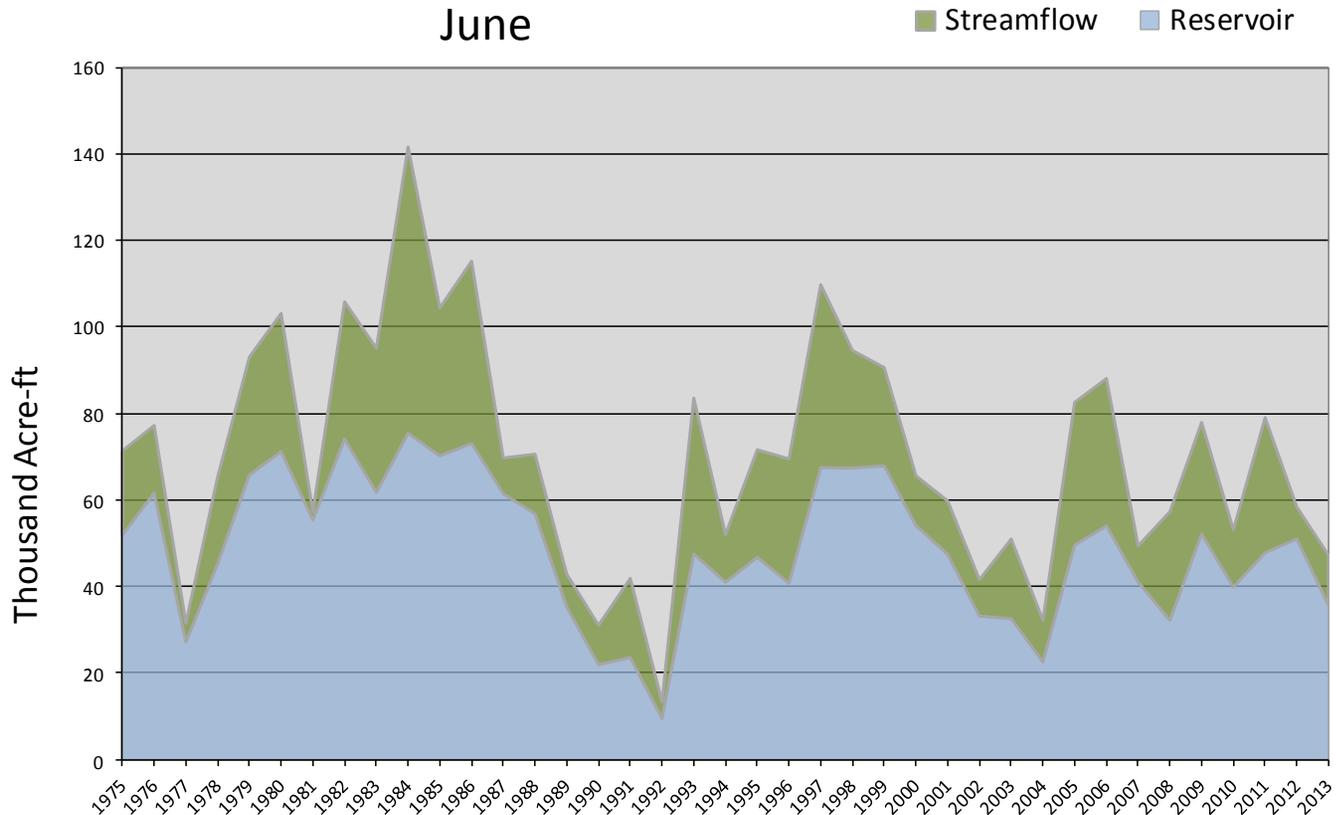
June 1, 2013

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	35.6	11.6	47.2	-2.50	20	91, 89, 07, 03

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

Price River - Water Availability Index



June 1, 2013

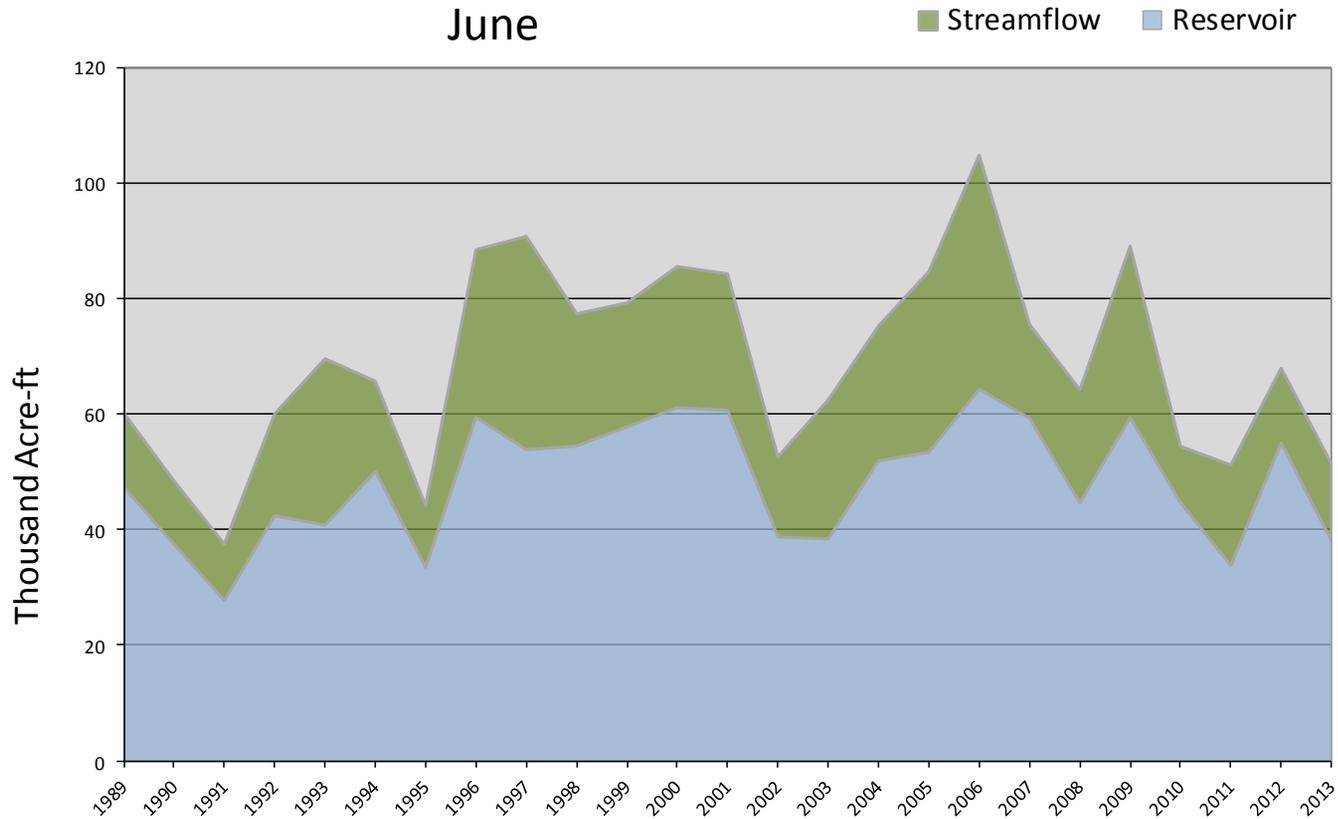
Water Availability Index

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	38.1	13.3	51.4	-2.56	19	90, 11, 02, 10

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

Joe's Valley - Water Availability Index

June

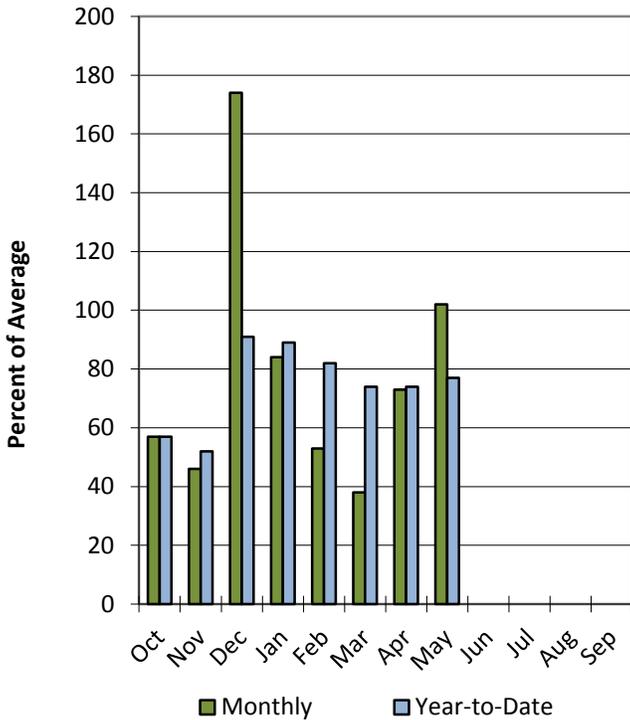


Southeastern Utah Basin

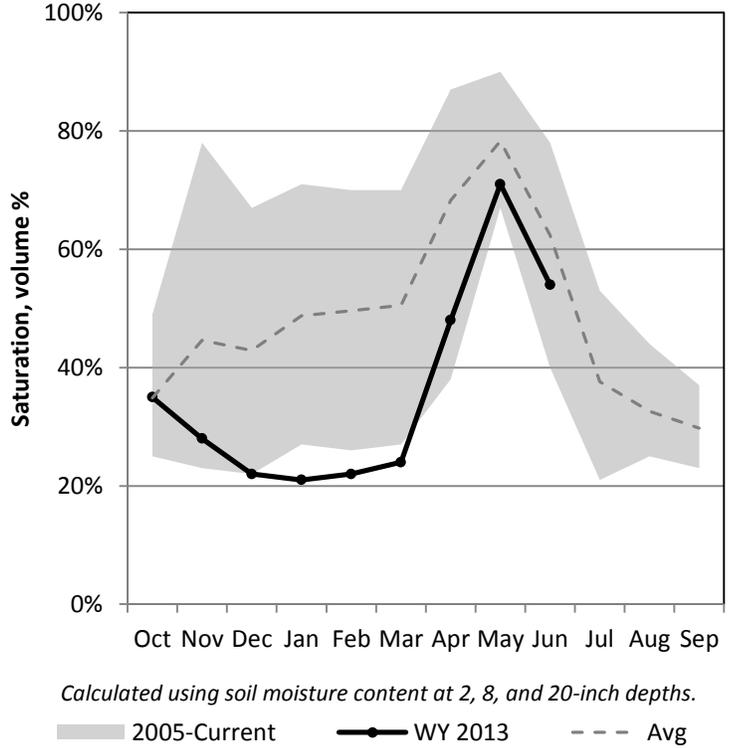
6/1/2013

Precipitation in May was near average at 102%, which brings the seasonal accumulation (Oct-May) to 77% of average. Soil moisture is at 54% compared to 41% last year. Reservoir storage is at 26% of capacity, compared to 52% last year. The water availability index for Moab is 4%.

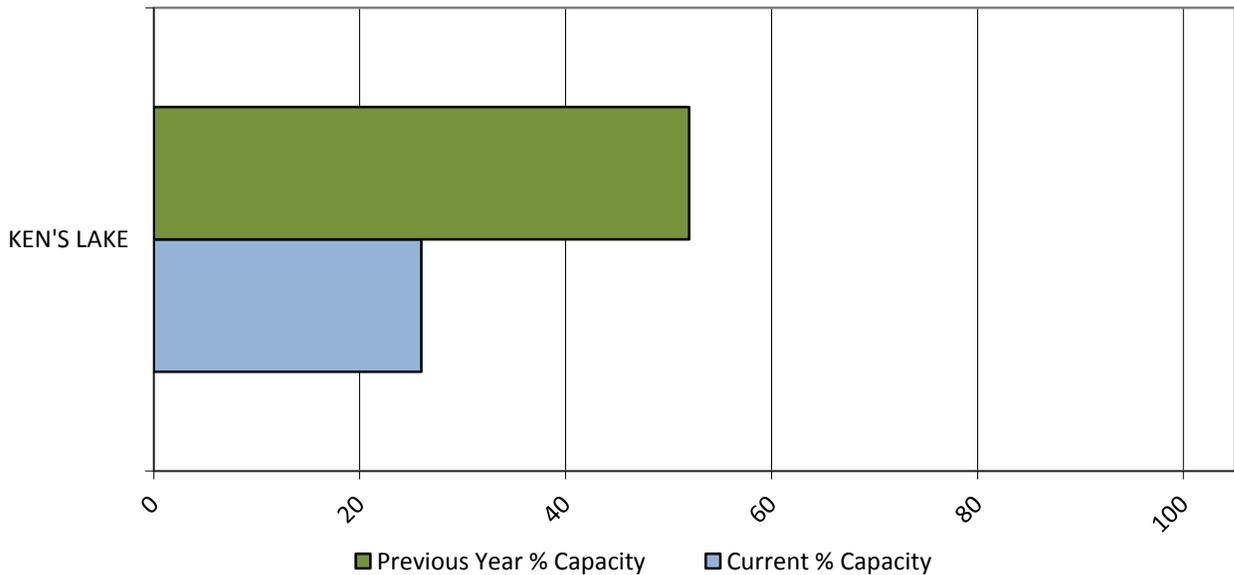
Precipitation



Soil Moisture



Reservoir Storage



June 1, 2013

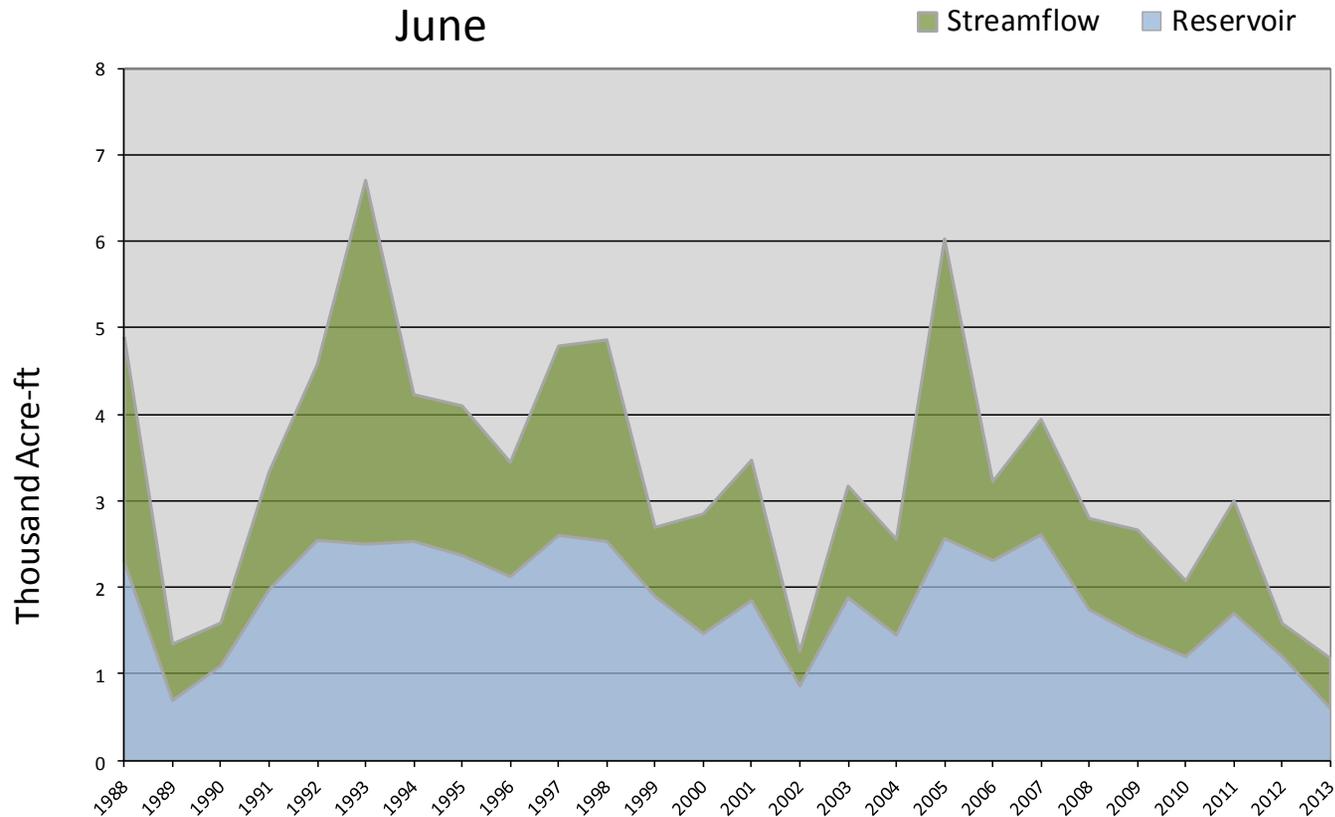
Water Availability Index

Basin or Region	May EOM* Ken's Lake Reservoir	May accumulated flow Mill Creek at Sheley (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Moab	0.6	0.6	1.2	-3.86	4	02, 89

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

Moab - Water Availability Index

June

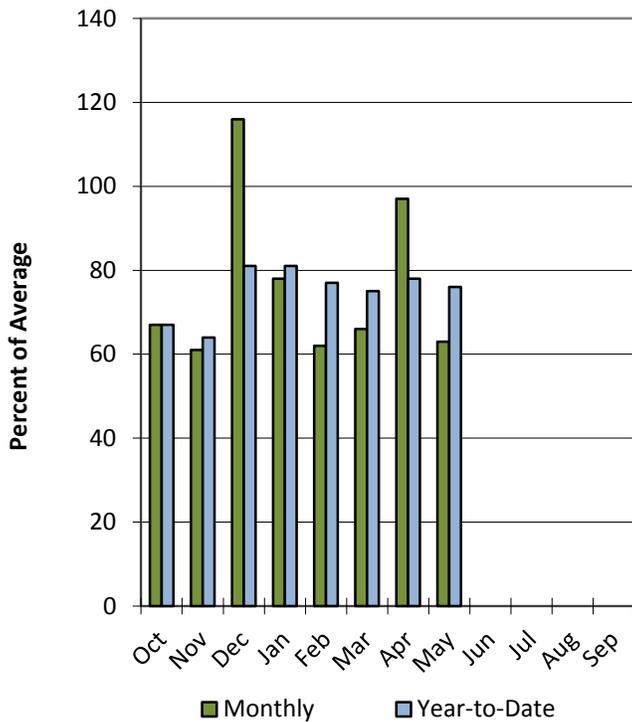


Dirty Devil Basin

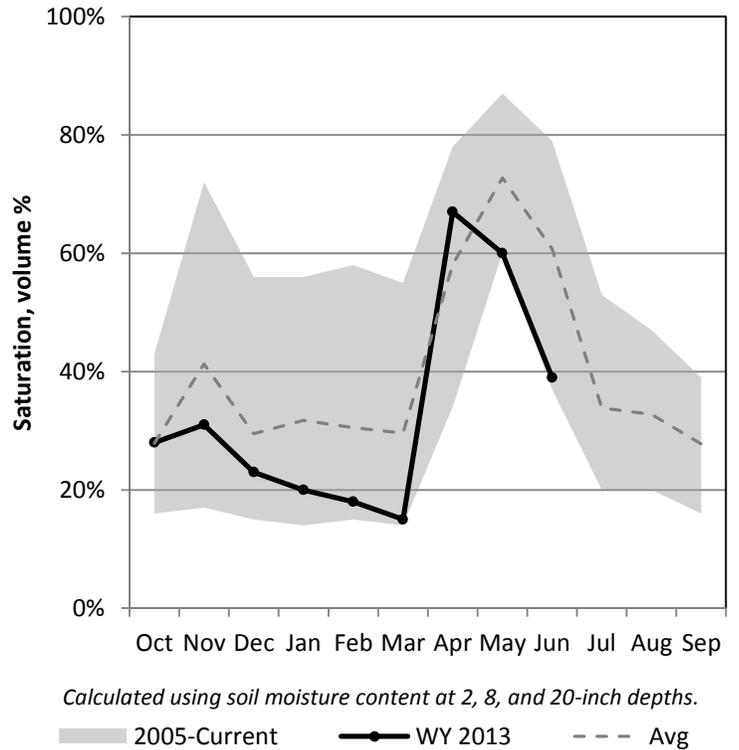
6/1/2013

Precipitation in May was much below average at 63%, which brings the seasonal accumulation (Oct-May) to 76% of average. Soil moisture is at 39% compared to 37% last year.

Precipitation



Soil Moisture

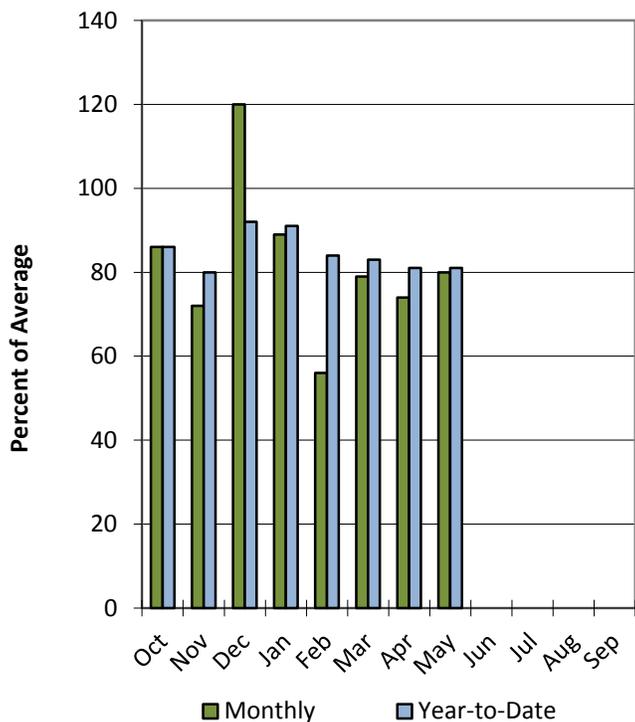


Escalante River Basin

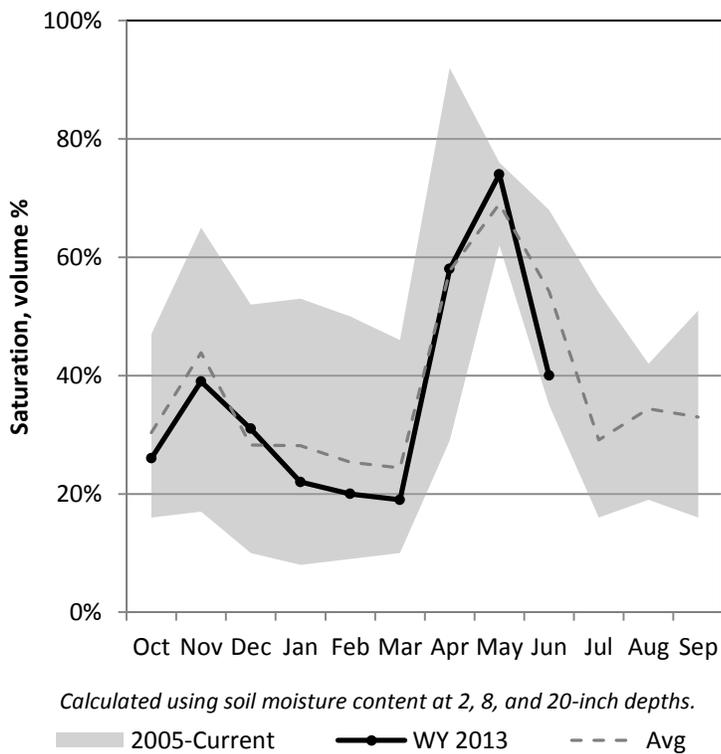
6/1/2013

Precipitation in May was below average at 80%, which brings the seasonal accumulation (Oct-May) to 81% of average. Soil moisture is at 40% compared to 35% last year.

Precipitation



Soil Moisture

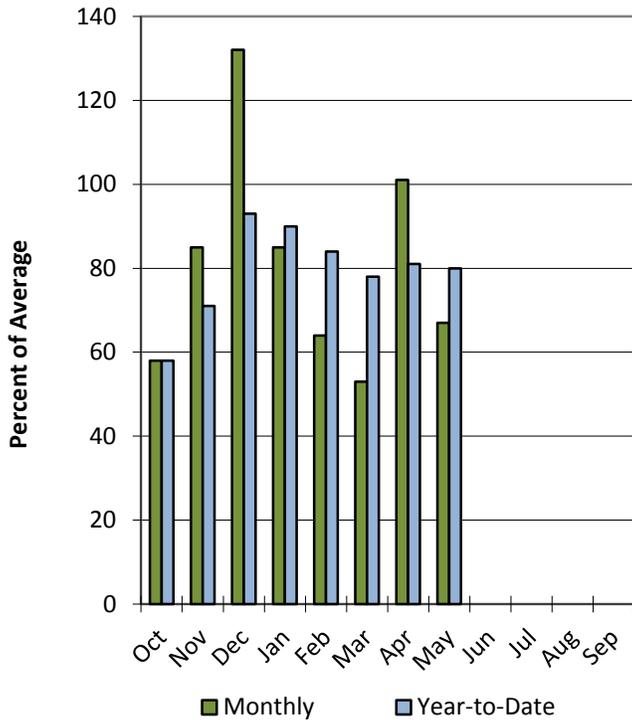


Upper Sevier River Basin

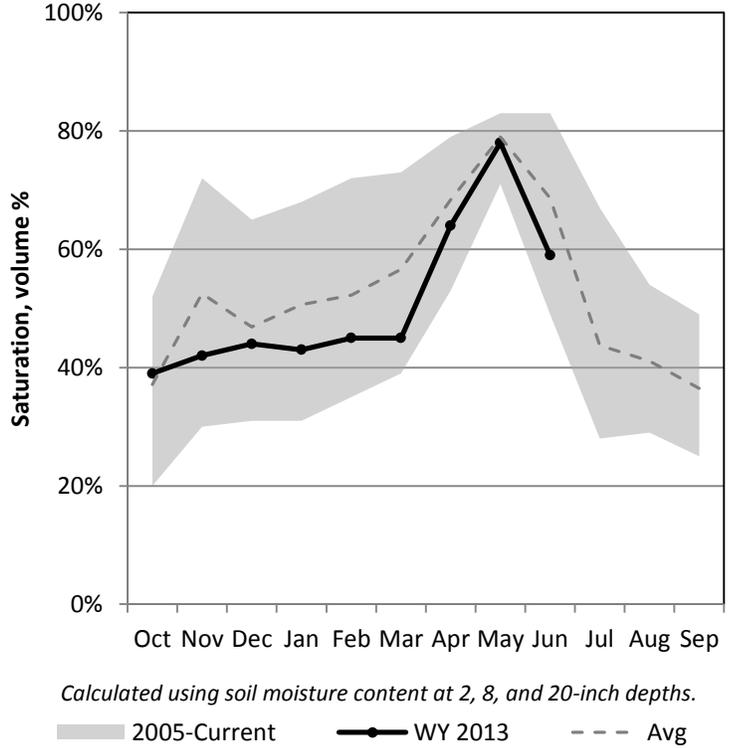
6/1/2013

Precipitation in May was much below average at 67%, which brings the seasonal accumulation (Oct-May) to 80% of average. Soil moisture is at 59% compared to 49% last year. Reservoir storage is at 70% of capacity, compared to 73% last year. The water availability index for the Upper Sevier is 41%.

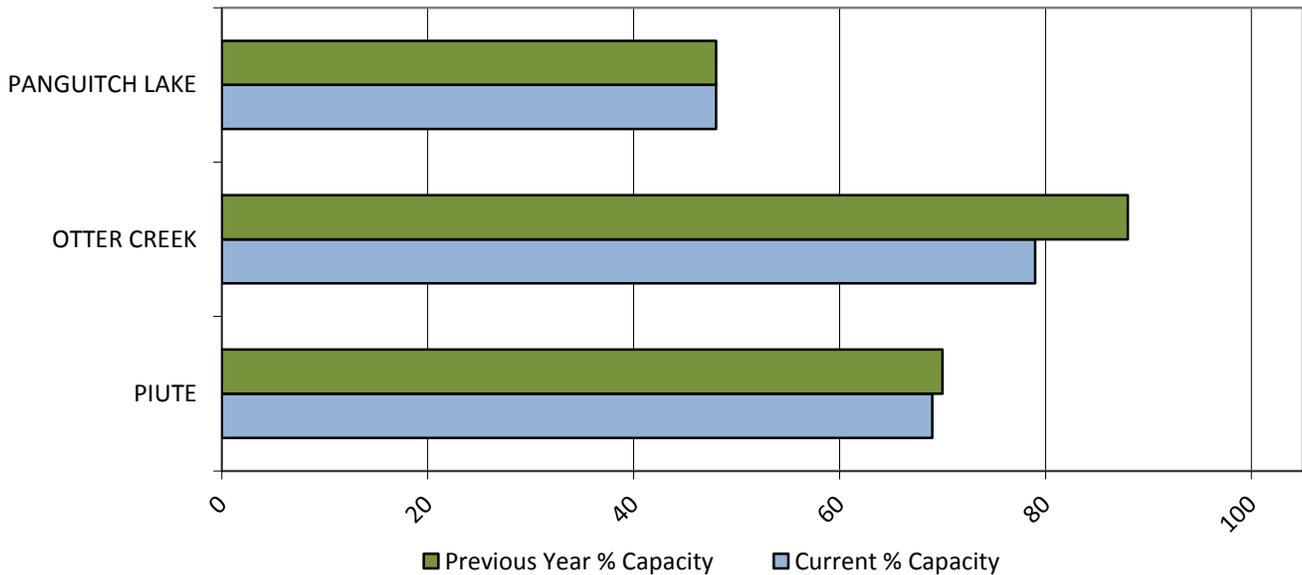
Precipitation



Soil Moisture



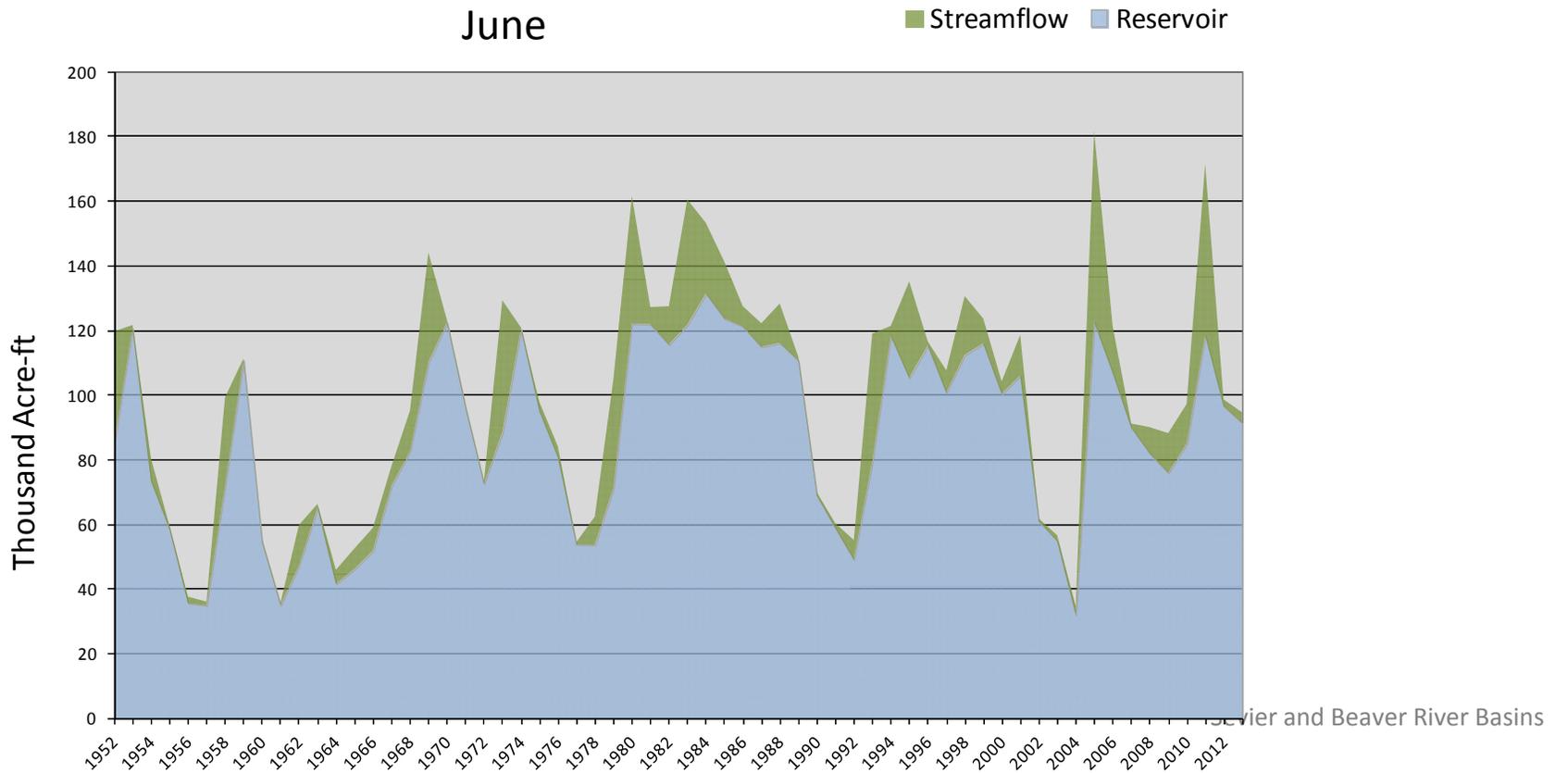
Reservoir Storage



June 1, 2013		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	91	3.3	95	-0.73	41	08,07,68,71

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

Upper Sevier River - Water Availability Index
June

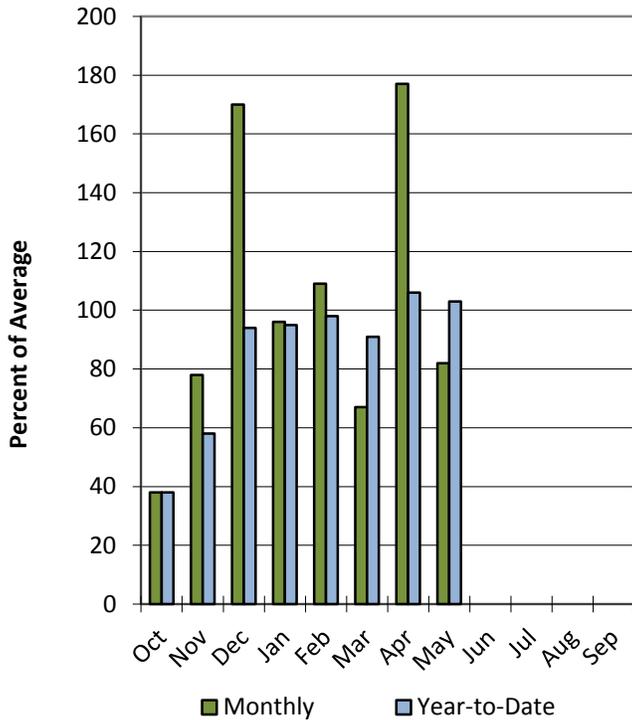


Lower Sevier River Basin

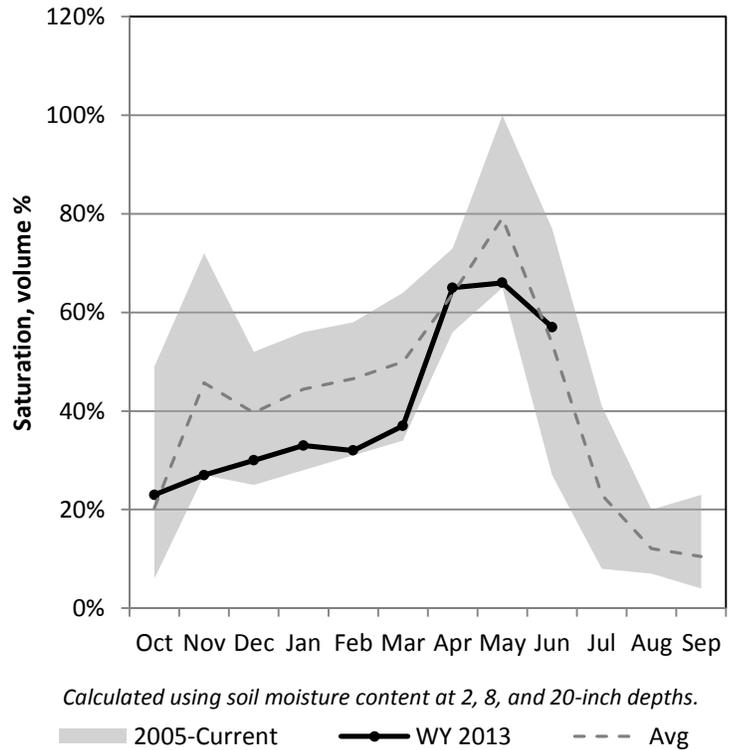
6/1/2013

Precipitation in May was below average at 82%, which brings the seasonal accumulation (Oct-May) to 103% of average. Soil moisture is at 57% compared to 27% last year. Reservoir storage is at 60% of capacity, compared to 81% last year. The water availability index for the Lower Sevier is 45%.

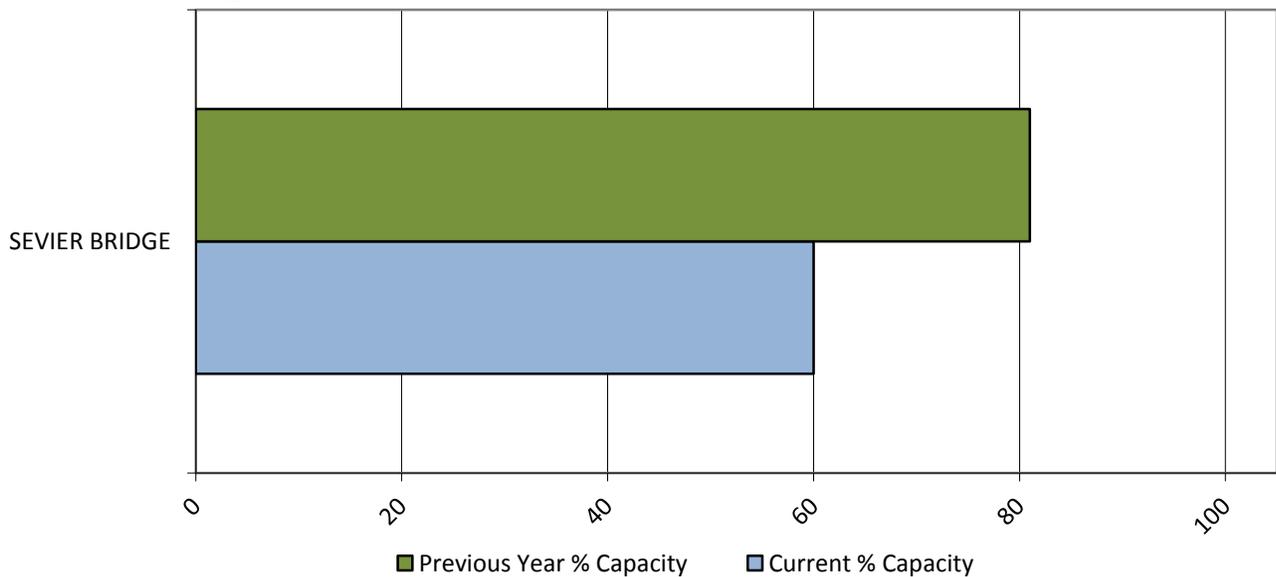
Precipitation



Soil Moisture



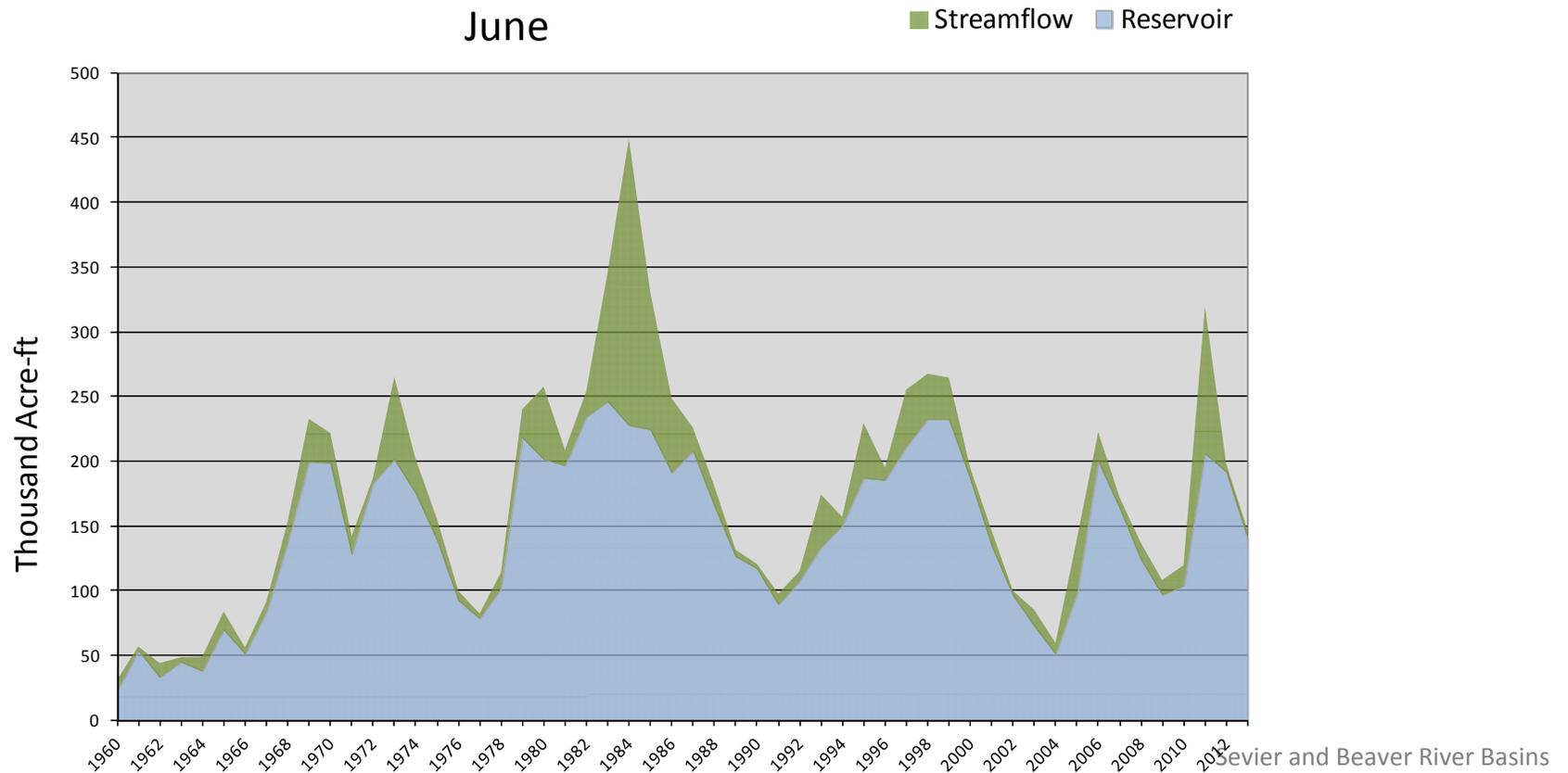
Reservoir Storage



June 1, 2013		Water Availability Index				
Basin or Region	May EOM* Sevier Bridge	May accumulated flow Sevier at Gunnison (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Lower Sevier River	141	6	147	-0.38	45	2000,96,74,81

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

Lower Sevier River - Water Availability Index
June

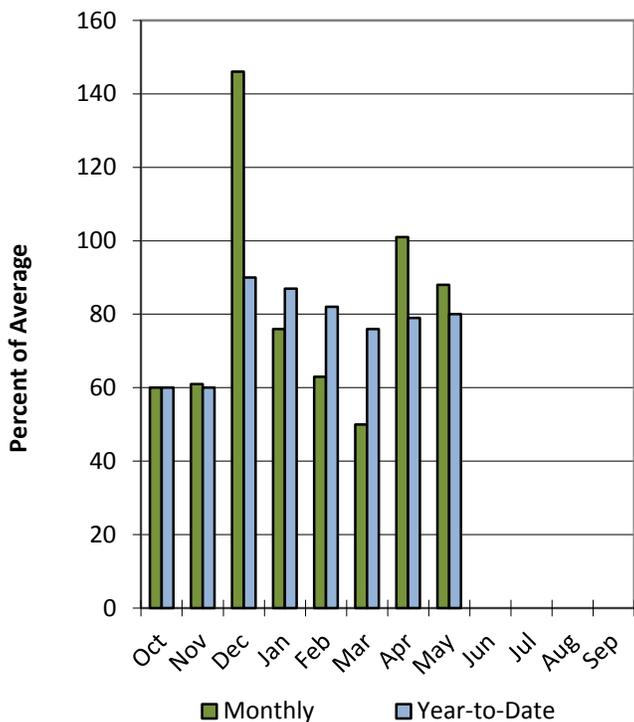


San Pitch River Basin

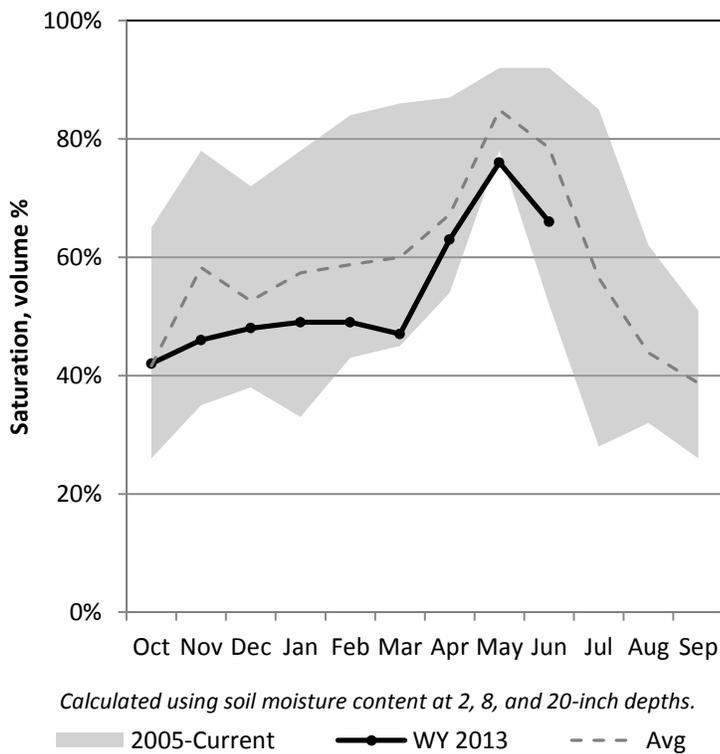
6/1/2013

Precipitation in May was below average at 88%, which brings the seasonal accumulation (Oct-May) to 80% of average. Soil Moisture is at 66% compared to 52% last year. Reservoir storage is at 0% of capacity, compared to 89% last year.

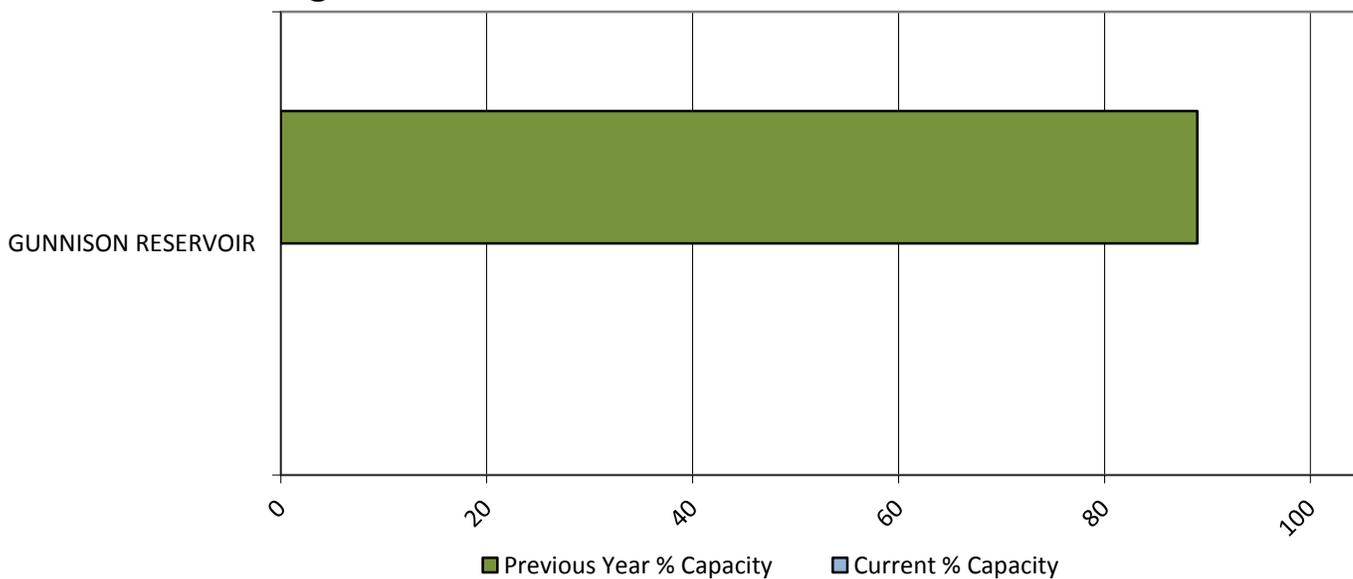
Precipitation



Soil Moisture



Reservoir Storage



June 1, 2013

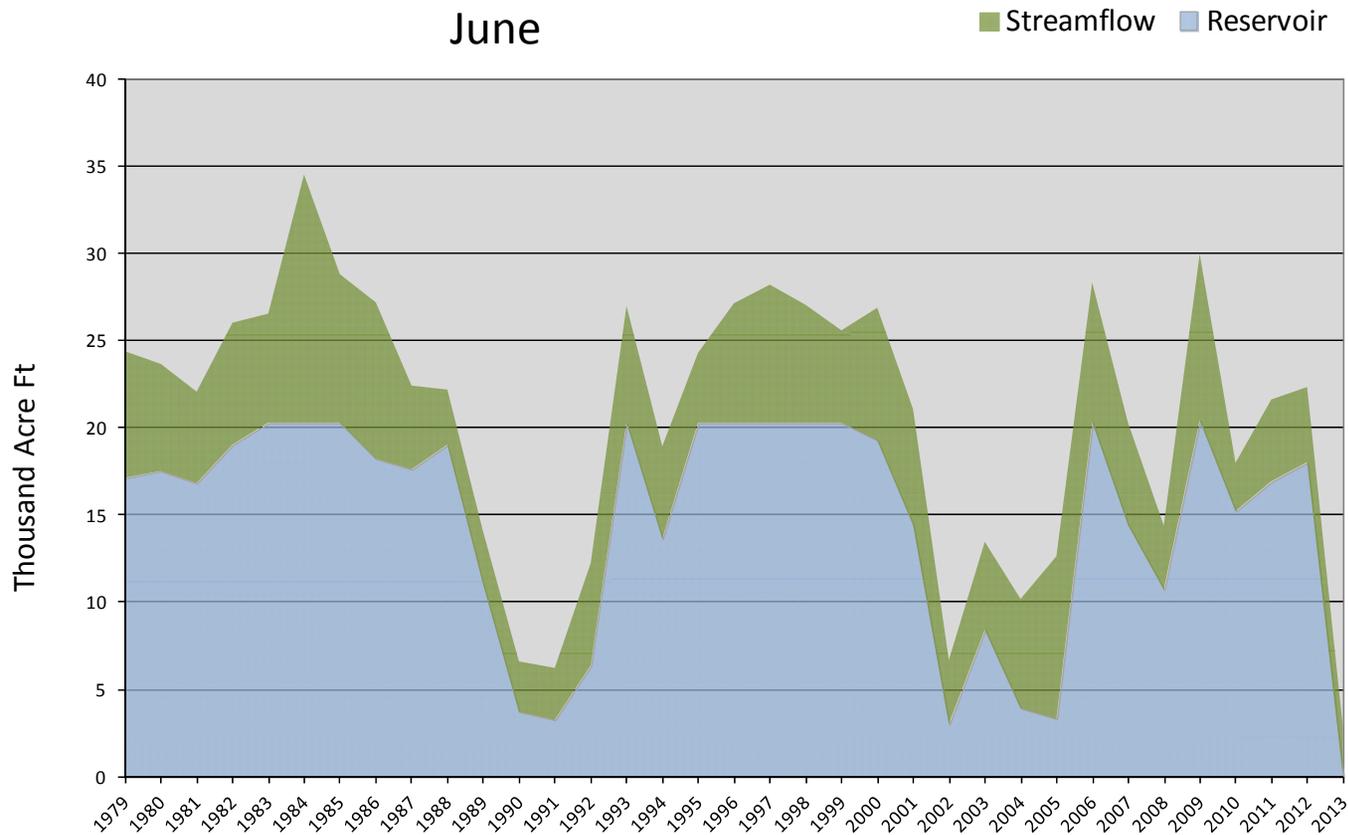
Manti Creek Water Availability Index

Basin or Region	May EOM* Gunnison Reservoir	May Observed Streamflow Manti Creek nr Robertson	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Manti Creek	0.0	2.8	2.8	-3.94	3	91,90

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

San Pitch River Water Availability Index

June



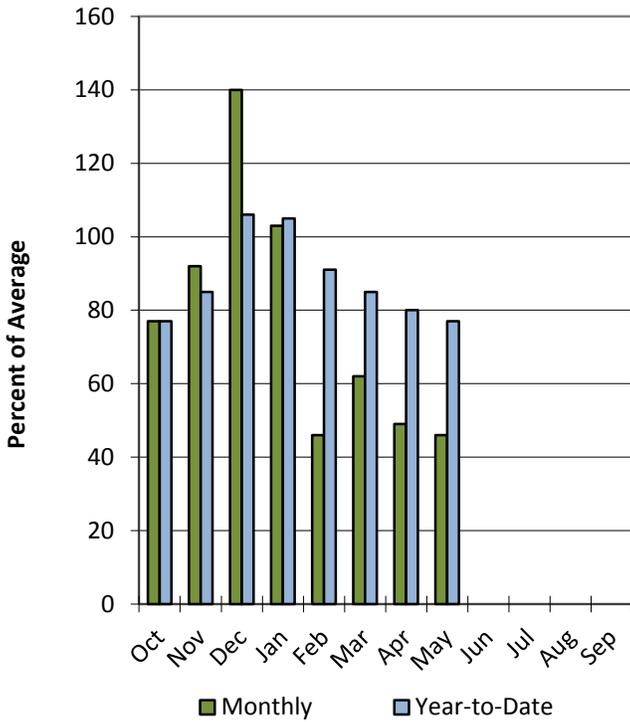
Sevier and Beaver River Basins

Beaver River Basin

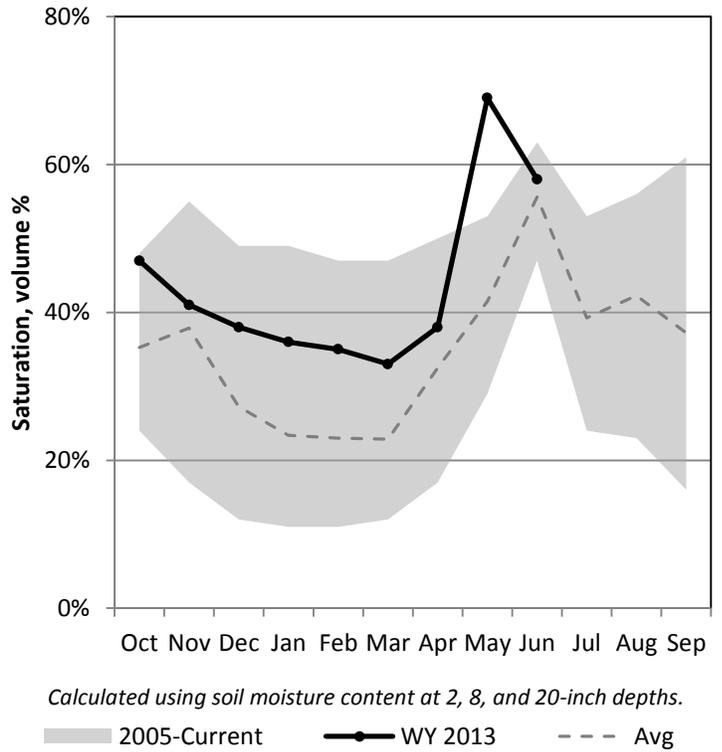
6/1/2013

Precipitation in May was much below average at 46%, which brings the seasonal accumulation (Oct-May) to 77% of average. Soil moisture is at 58% compared to 50% last year. Reservoir storage is at 45% of capacity, compared to 82% last year. The water availability index for the Beaver River is 34%.

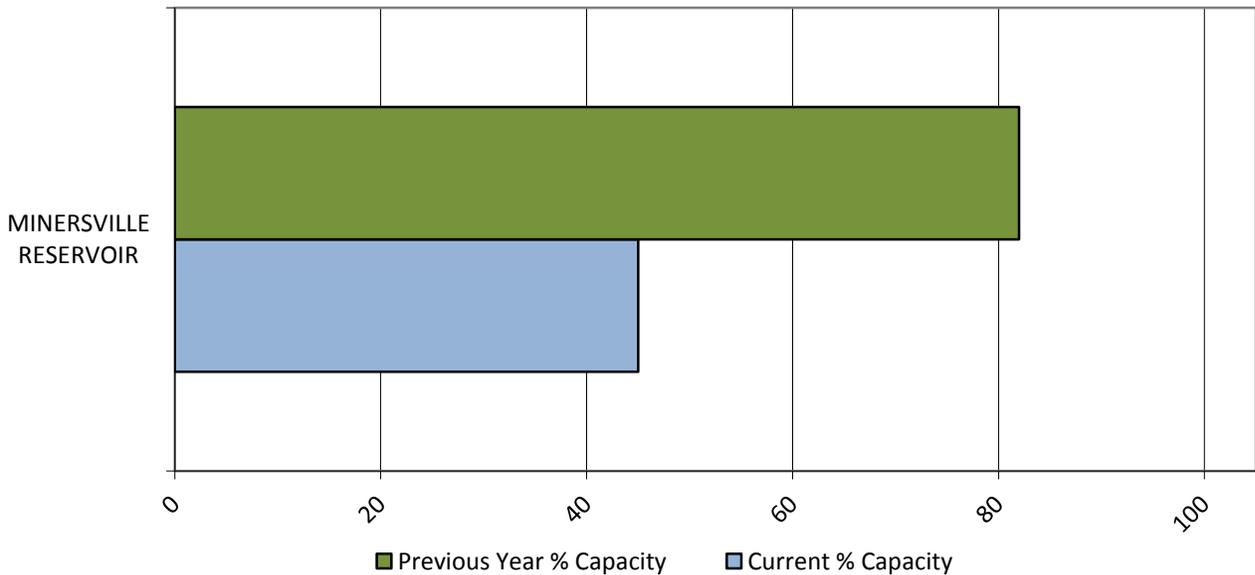
Precipitation



Soil Moisture



Reservoir Storage



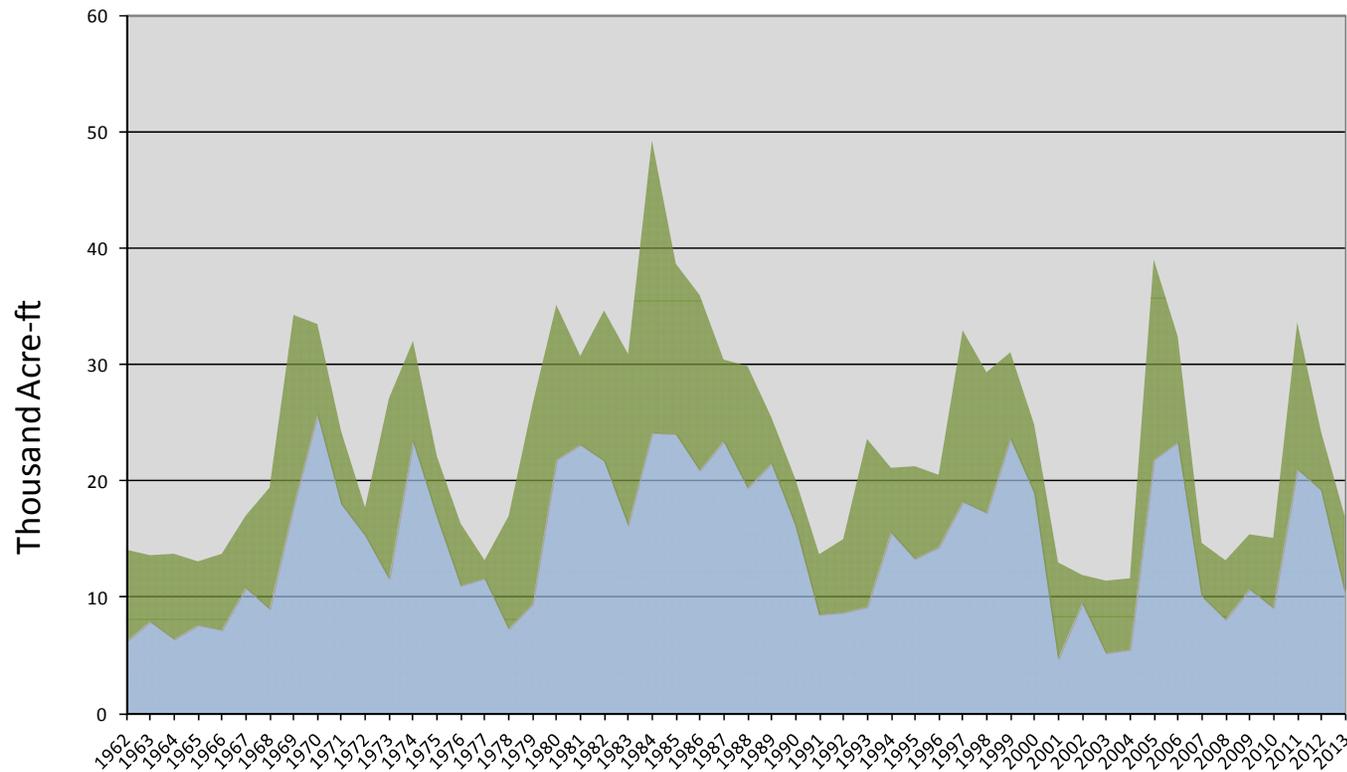
June 1, 2013		Water Availability Index				
Basin or Region	May EOM* Minersville Reservoir	May accumulated flow Beaver River at Beaver (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Beaver	10.4	6.5	16.9	-1.34	34	09,76,78,67

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

Beaver River - Water Availability Index

June

■ Streamflow ■ Reservoir

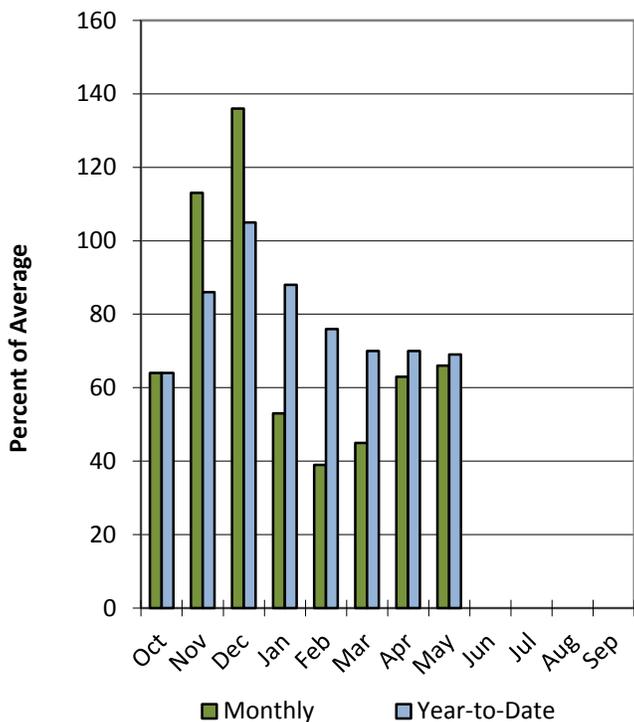


Southwestern Utah Basin

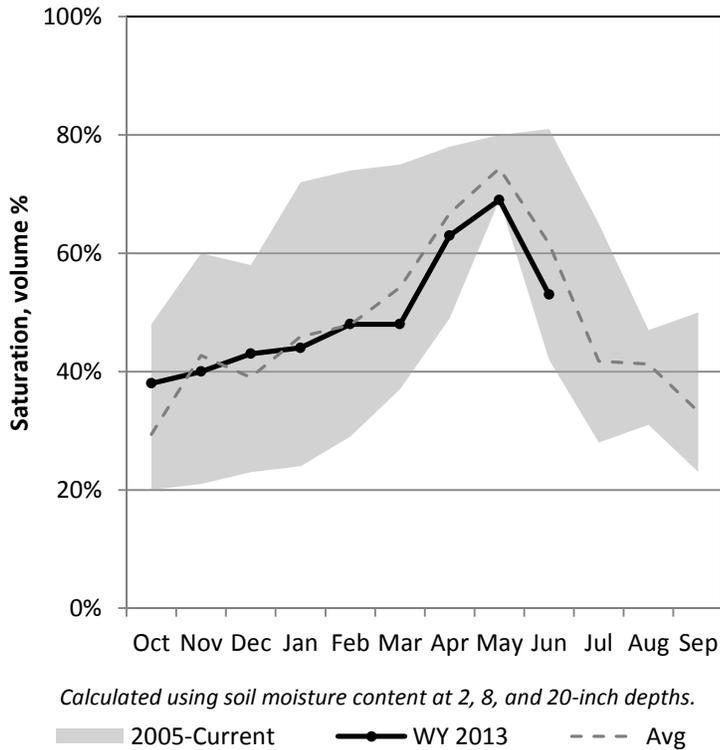
6/1/2013

Precipitation in May was much below average at 66%, which brings the seasonal accumulation (Oct-May) to 69% of average. Soil moisture is at 53% compared to 49% last year. Reservoir storage is at 48% of capacity, compared to 64% last year. The water availability index for the Virgin River is 8%.

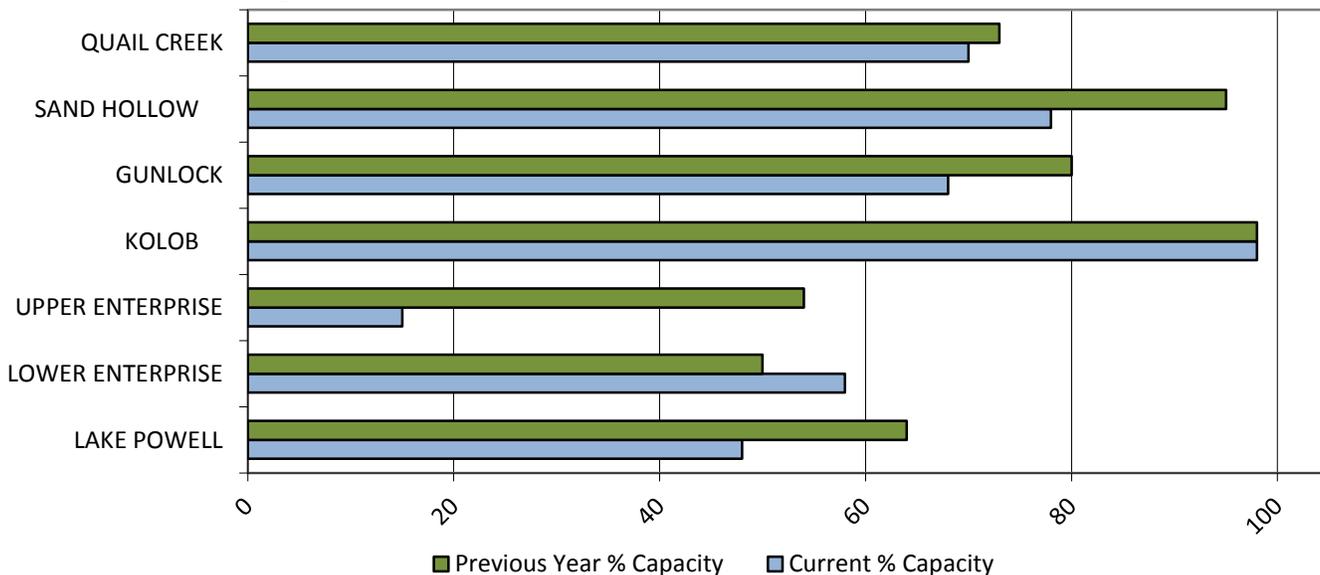
Precipitation



Soil Moisture



Reservoir Storage

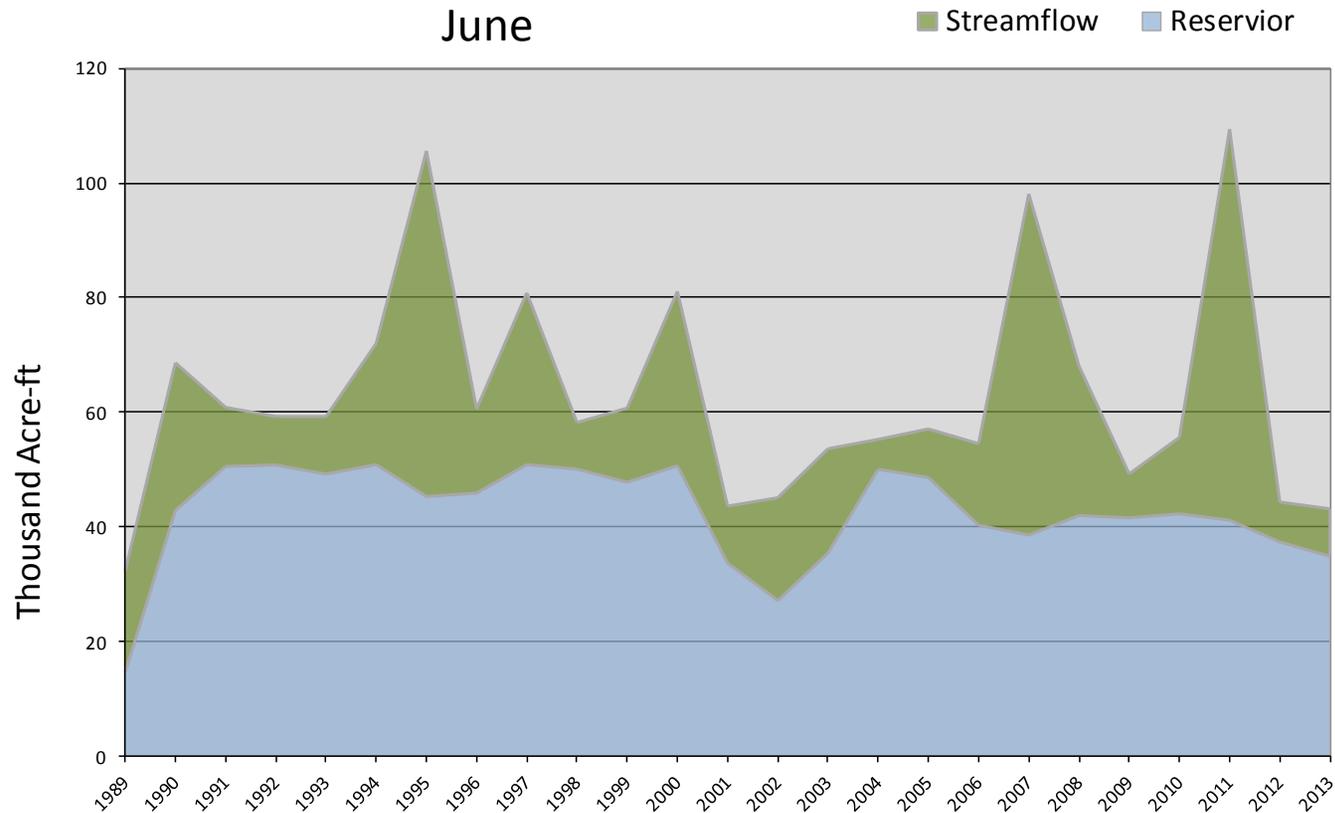


6/1/2013	Water Availability Index					
Basin or Region	May EOM* Reservoir	May accumulated flow Virgin and Santa Clara Rivers (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Southwest	34.9	8.3	43.2	-3.53	8	02,12,01,89

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

Southwest - Water Availability Index

June



6/1/2013

Water Availability Index

Basin or Region	April EOM* Reservoirs	Observed April stream flow	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Bear River	852	3	855	-0.45	45	64, 54, 56, 78
Ogden River	80	8	88	-3.27	11	88, 87, 03, 90
Weber River	291	29	319	-3.24	11	90, 03, 08, 07
Provo	331	41	373	-3.73	5	02,08,11,04
West Uintah Basin	24	15	39	-0.21	48	83, 98, 88, 76
Eastern Uintah	39.4	5.4	45	-3.21	11	90, 89, 94, 80
Price River	35.6	11.6	47.2	-2.50	20	91, 89, 07, 03
Joe's Valley	38.1	13.3	51.4	-2.56	19	90, 11, 02, 10
Moab	0.6	0.6	1.2	-3.86	4	02, 89
Upper Sevier River	91	3	95	-0.73	41	08,07,68,71
Lower Sevier River	141	6	147	-0.38	45	71,01,68,75
Beaver River	10.4	6.5	16.9	-1.34	34	09,76,78,67
Virgin River	34.9	8.3	43.2	-3.53	8	02,12,01,89

*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
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.nrcs.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

