

Utah Climate and Water Report

September 2013



Cedar Breaks National Monument

August 27, 2013. Photo by Beau Uriona

Utah Climate and Water Report

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

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1) Climate and Water Information – Soil Climate Analysis Network

- a) Utah SCAN Water Year Precipitation
- b) North Central
- c) Northern Mountains
- d) Uintah Basin
- e) Southeast
- f) South Central
- g) Western and Dixie

2) General Hydrological Conditions

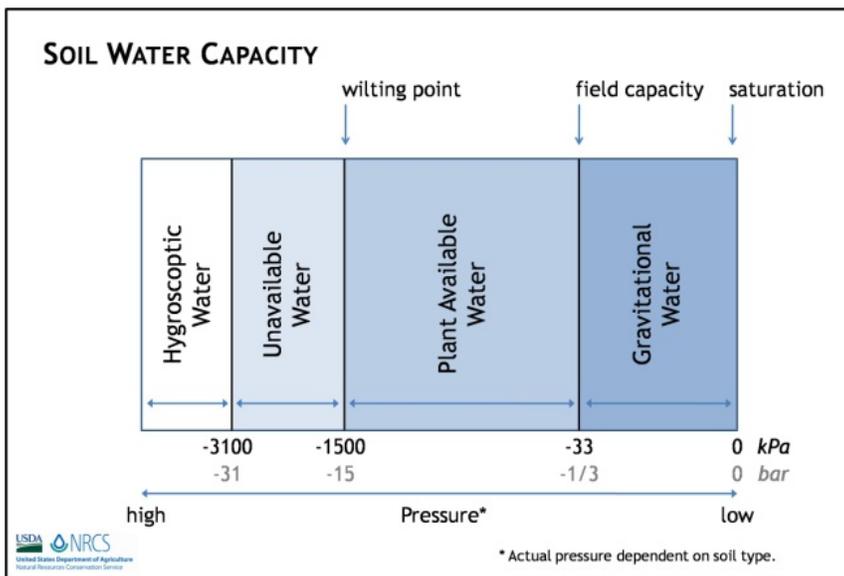
- a) SNOTEL Water Year to Date Precipitation
- b) Bear River Basin
 - Water Availability Index
- c) Weber and Ogden River Basins
 - Water Availability Index
- d) Utah Lake, Jordan River, and Tooele Valley Basins
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 - Water Availability Index

Climate and Water Information

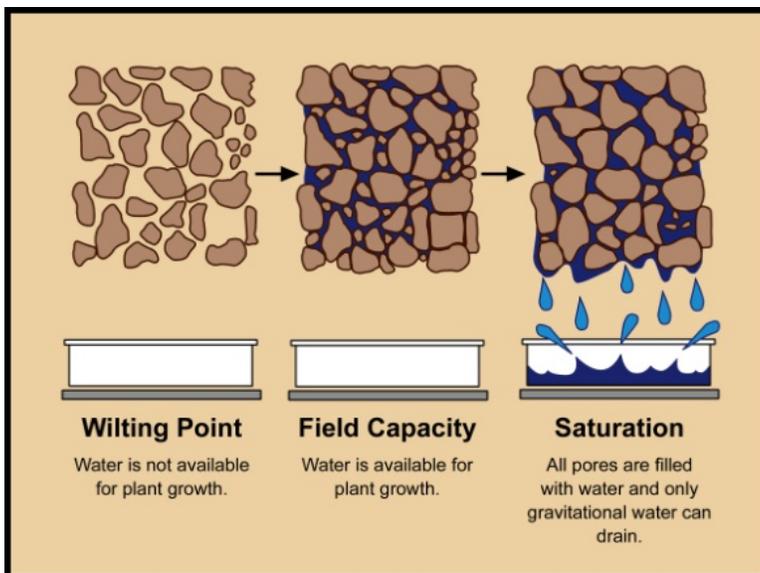
Soil Climate Analysis Network

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.

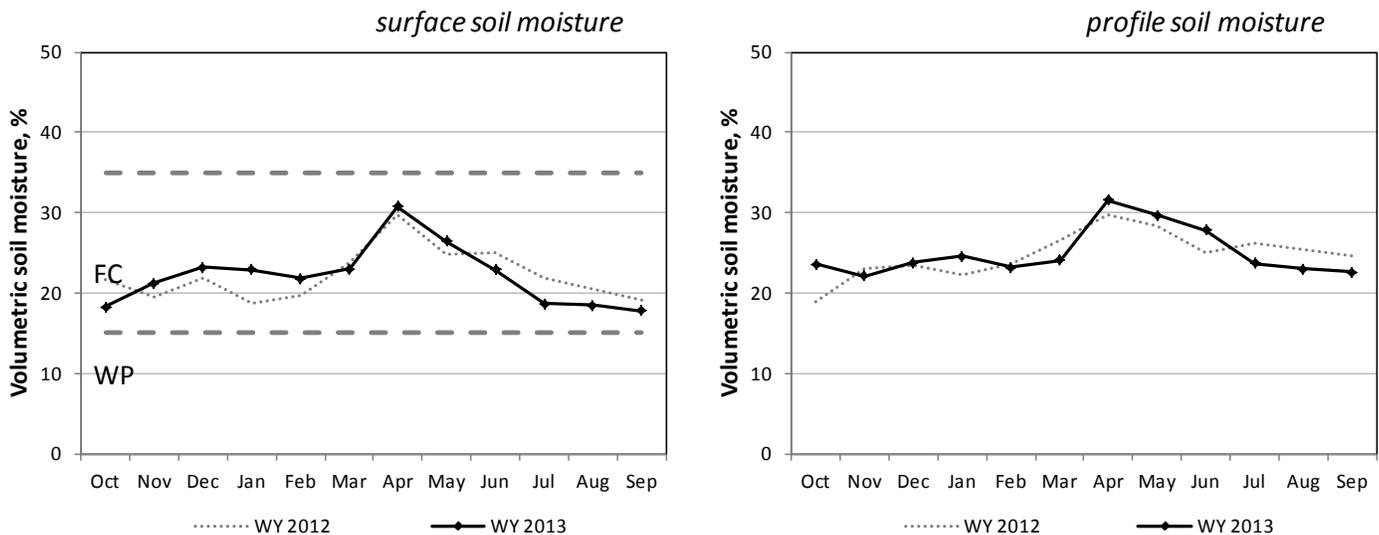
North Central

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	8.1	0.0	7	12	20	24	18	78	81	79	75	70
Cache Junction	10.7	0.0	12	14	26	28	26	71	71	69	67	62
Grantsville	8.8	0.4	2	18	28	29		77	77	77	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.

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.

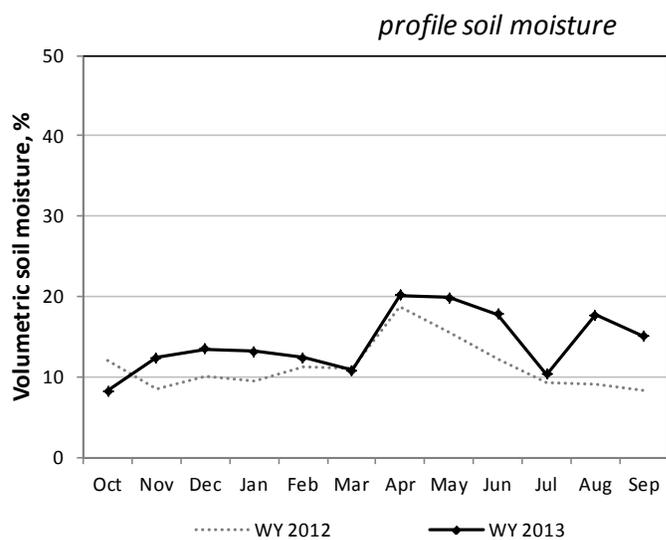
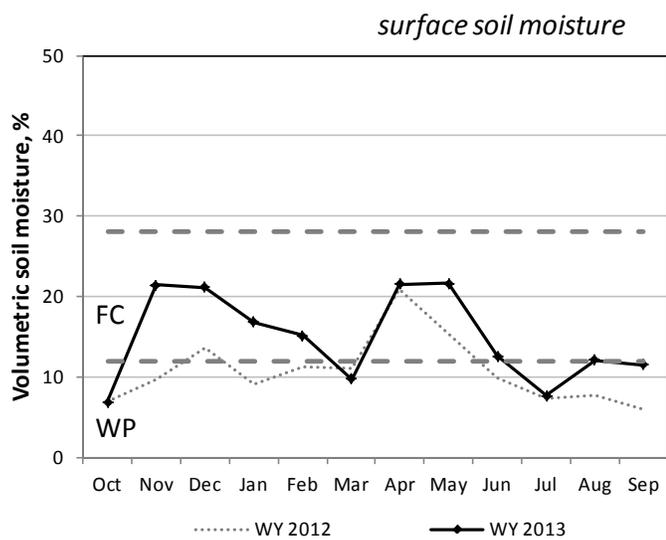
Northern Mountains

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	9.3	1.2	2	5	7	11	10	61	63	62	60	58
Buffalo Jump	7.5	0.4	4	7	8	8	-	69	70	68	63	-
Morgan	13.9	0.2	20	21	24	34	21	75	74	73	69	64

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Northern Mountains



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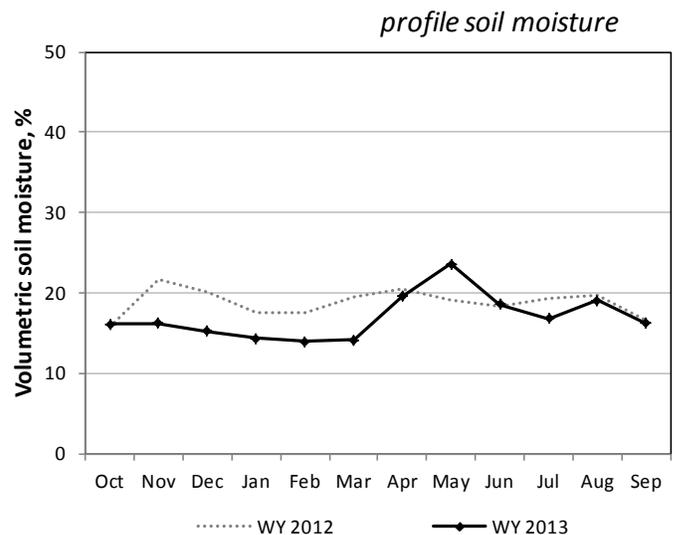
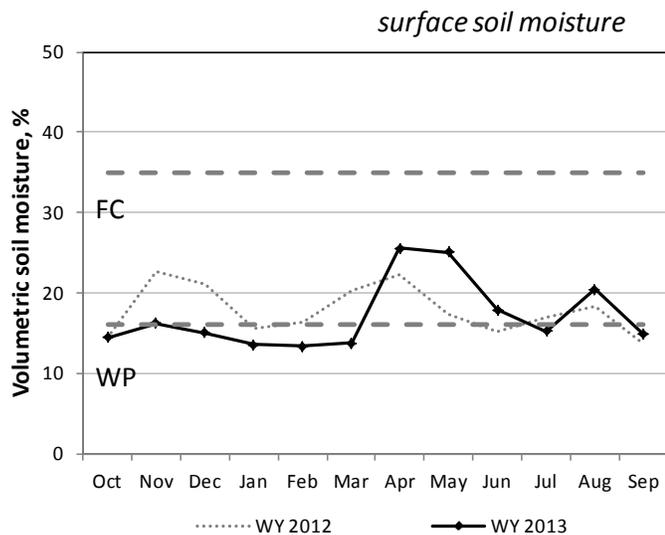
Uintah Basin

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>°F</i>				
UINTAH BASIN												
Mountain Home	7.0	0.0	13	20	23	19	11	65	65	64	62	60
Little Red Fox	7.0	0.9	7	14	19	22	20	71	74	74	70	66
Split Mountain	5.5	0.6	3	16	11	15	14	80	82	81	76	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.

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.

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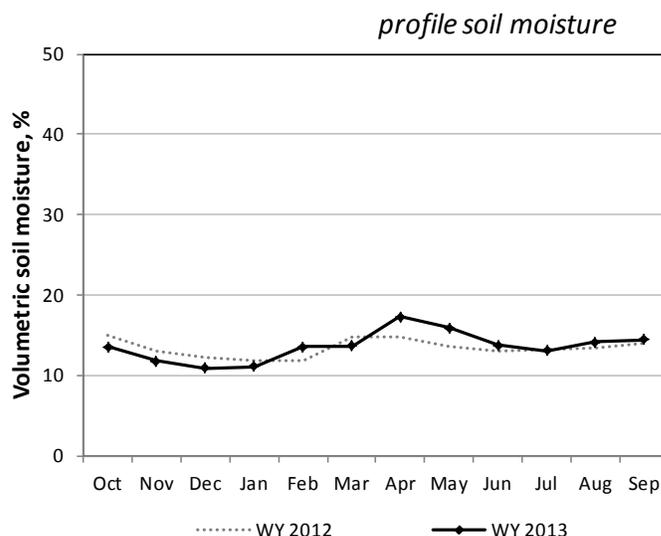
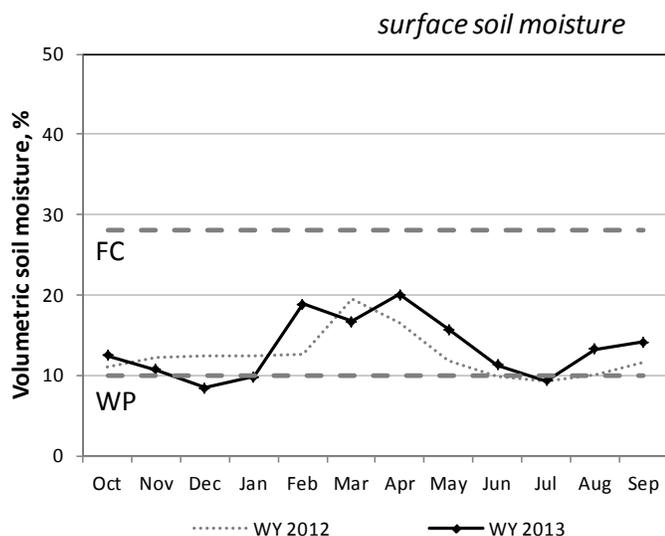
Southeast

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"
		<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTHEAST												
Price	6.8	1.3	2	10	14	17	22	75	77	78	73	71
Green River	3.7	0.7	10	8	8	6	9	79	80	81	79	77
Harm's Way	9.4	2.6	16	2	25	15	7	75	72	74	69	66
West Summit	7.5	1.9	14	17	14	16	18	64	67	71	67	65
Eastland	7.2	1.6	11	12	10	24	22	70	72	73	69	67
Alkali Mesa	8.2	1.2	14	15	18	20	15	73	73	75	72	70
McCracken Mesa	7.0	1.3	19	25	15	17	14	78	82	82	76	74

* 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



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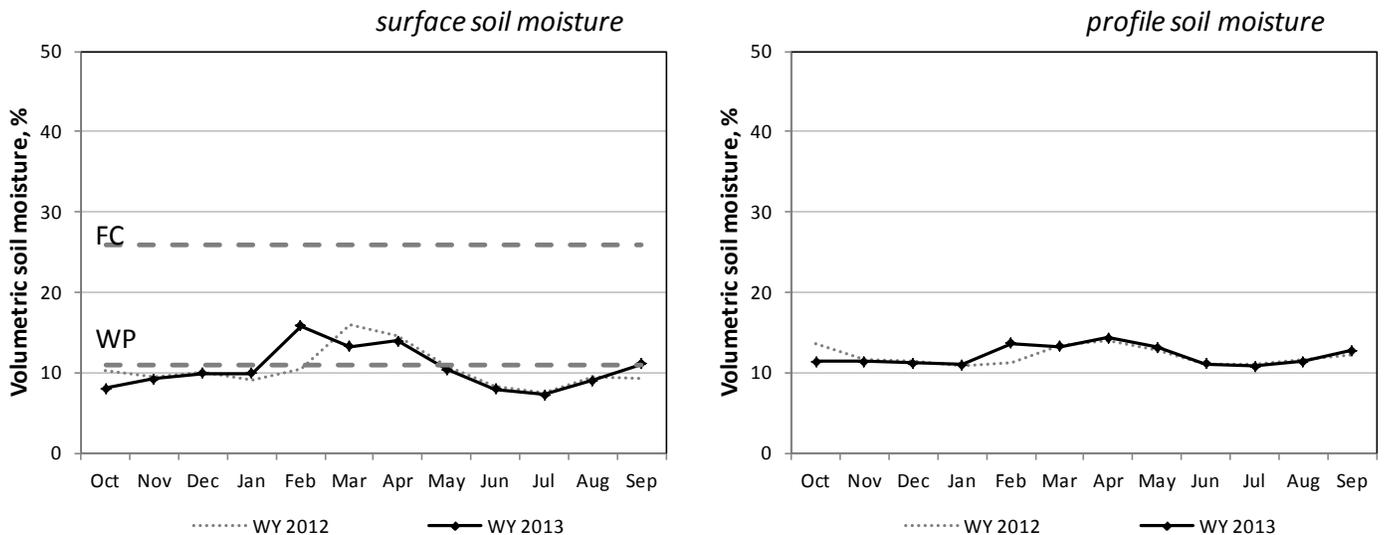
South Central

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"
		<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTH CENTRAL												
Nephi	8.2	0.3	11	15	15	8	6	72	73	73	71	68
Ephraim	8.8	1.4	12	13	16	16	35	66	66	67	63	62
Holden	7.2	0.5	3	4	3	13	15	73	76	77	75	73
Milford	6.7	1.1	6	13	16	31	19	77	78	76	73	70
Manderfield	11.1	2.6	22	28	13	12	5	66	69	69	66	64
Circleville	5.7	1.7		6	5	10		86	72	96	68	
Panguitch	7.5	2.4	16	32	20	21	27	64	65	64	61	58
Cave Valley	15.6	4.4	6	9	8	7	9	64	66	69	70	68
Vermillion	8.2	1.6	0	8	7	4	8	65	66	70	68	64
Spooky	5.9	2.1	9	9	4	12	2	77	77	78	74	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.

South Central



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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.

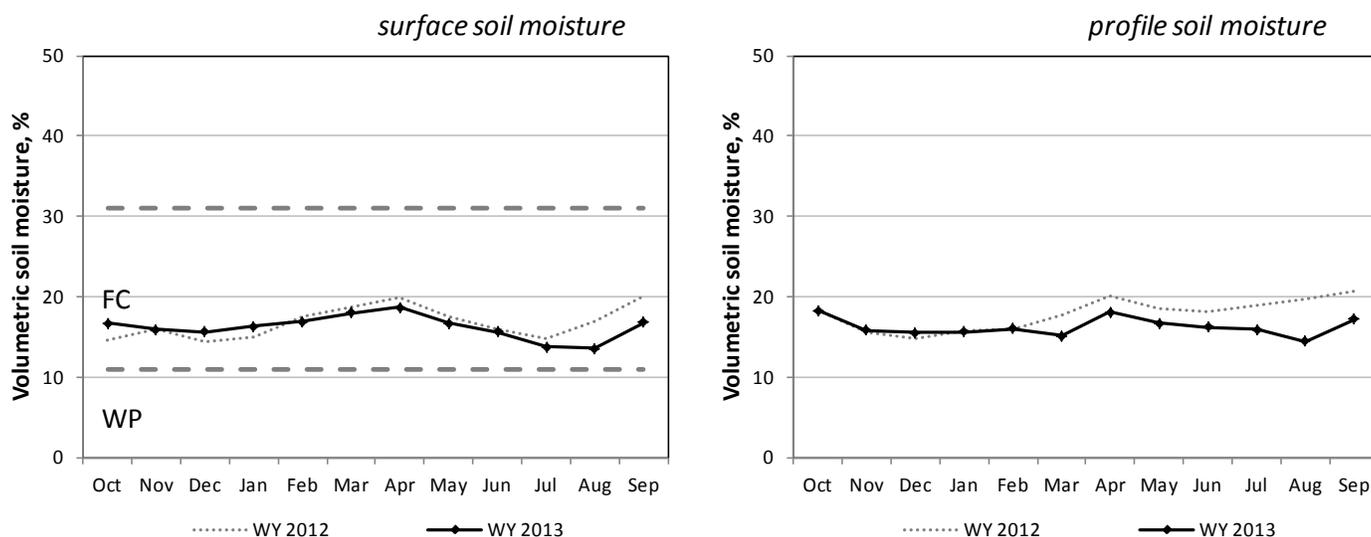
Western and Dixie

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	7.7	0.4	1	6	12	16	16	69	73	74	69	67
Park Valley	8.4	0.1	1	0	12	27	27	72	77	77	74	70
Goshute	6.6	0.3	12	0	50	42	33	62	68	71	70	69
Dugway	7.5	1.4	23	31	40		14	70	73	74	73	72
Tule Valley	5.5	0.5	15	10	25	14	12	70	76	82	82	80
Hal's Canyon	4.4	0.4					9	69	75	78	72	70
Enterprise	8.2	1.3	14	22	22	14	16	66	72	73	72	69
DIXIE												
Sand Hollow	8.2	1.2	8	6	1	0	0	77	80	84	84	80

* 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

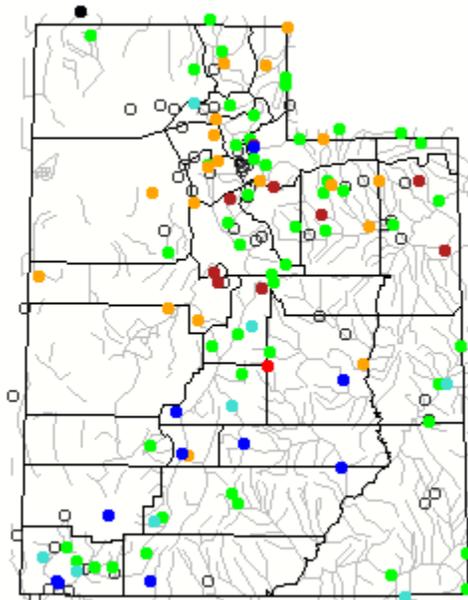
September 1, 2013

Current Conditions

Stream flow in southern Utah has improved substantially in response to impressive precipitation in the past few weeks – very similar to last year. Substantial rainfall in the past few weeks has soaked southern Utah with amounts ranging from 2 to 6 inches. Soil moisture values have rebounded significantly in southern Utah which is very welcome- should they go into winter in this above normal condition, it would be better for potential runoff next spring. Northern Utah received far less precipitation and as a result, soil moisture values are drier. August precipitation across the state ranged from 45% on the Weber to 164% over southwest Utah bringing the Oct-Aug period to 81% statewide. Reservoir storage for the entire state is at 52% of capacity – down 7% from last month and a drop of 12% from last year. Irrigation season will be ending soon and projected statewide reservoir capacity will likely be near the 48% of capacity as carryover for next year. There are currently 19 reservoirs that are below 25% of capacity.

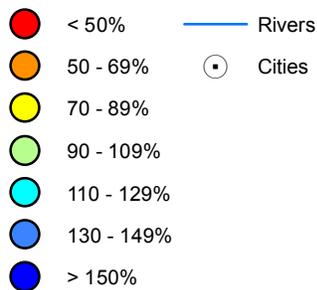
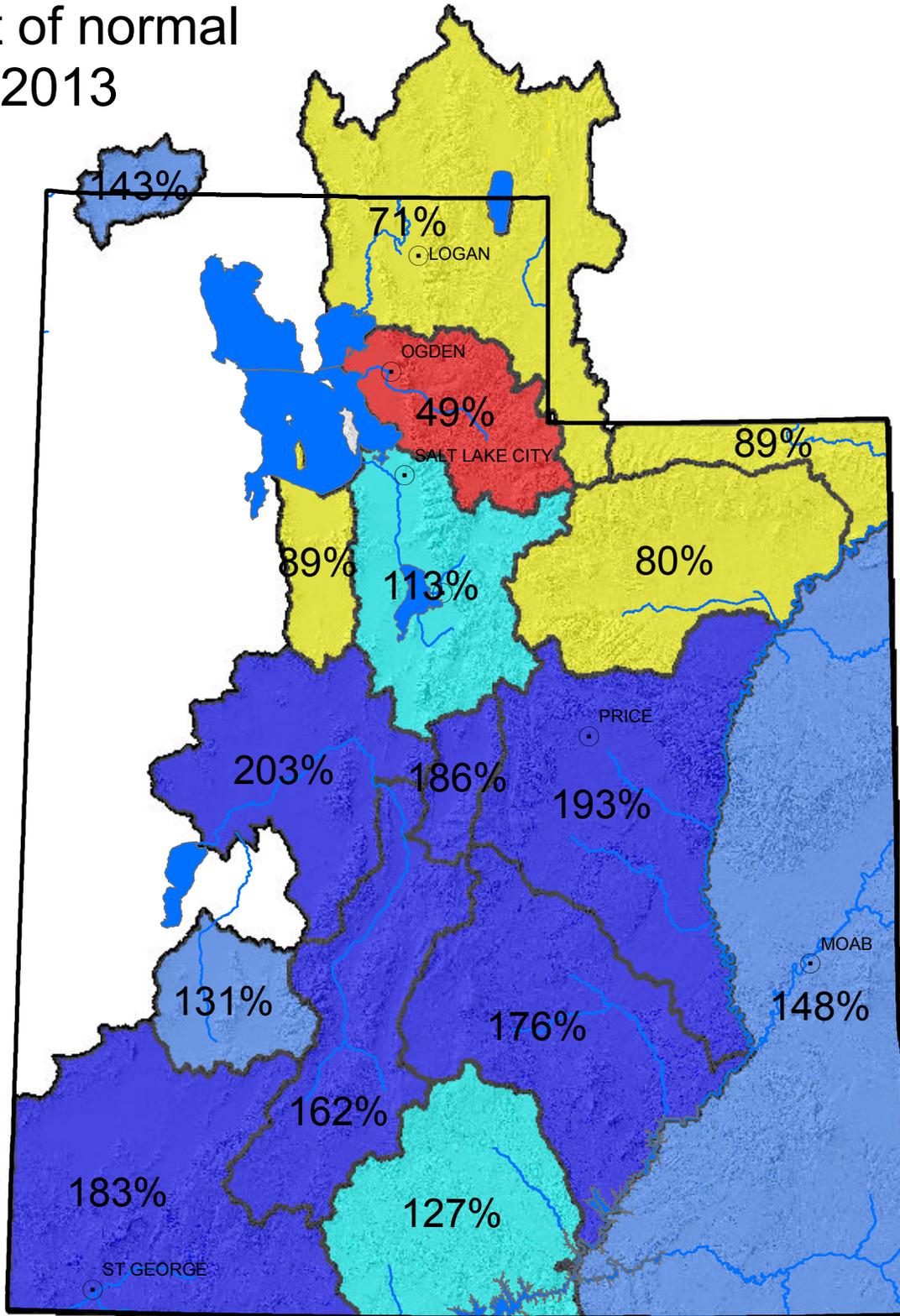
Current Utah Streamflow - Courtesy US Geological Survey

Tuesday, September 03, 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

Monthly basin-wide precipitation Percent of normal August 2013



United States Department of Agriculture
 Natural Resources Conservation Service

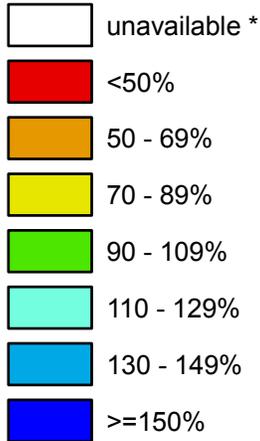


Utah

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

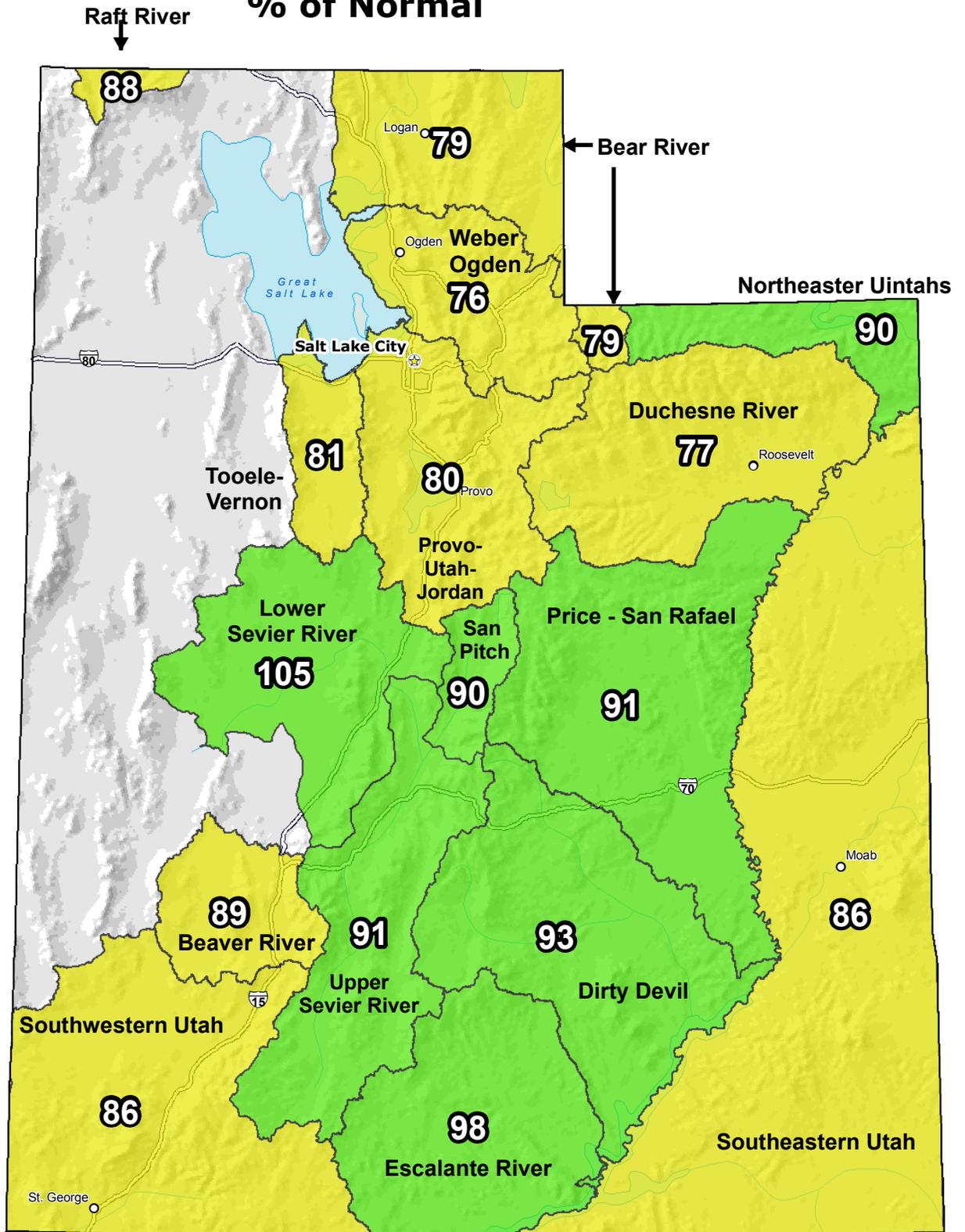
Sep 01, 2013

**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).

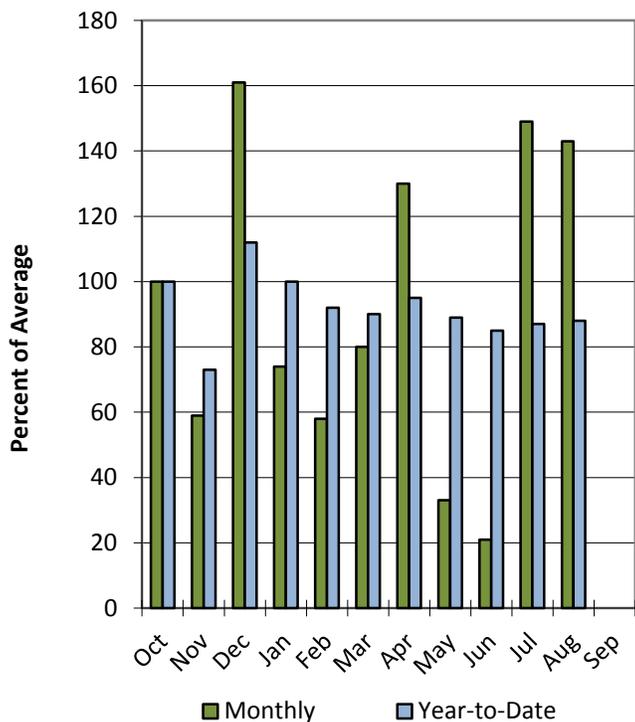
Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Raft River Basin

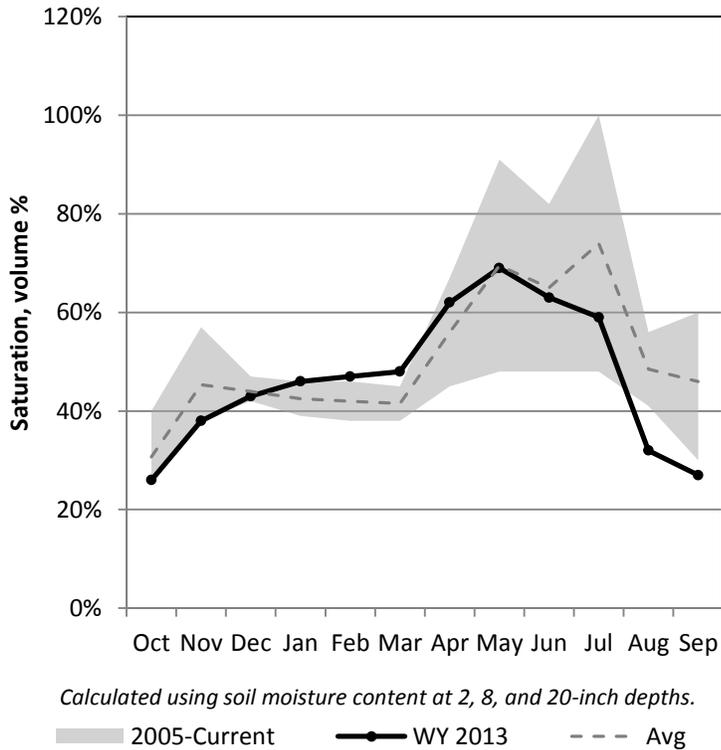
9/1/2013

Precipitation in August was much above average at 143%, which brings the seasonal accumulation (Oct-Aug) to 88% of average. Soil moisture is at 27% compared to 60% last year.

Precipitation



Soil Moisture

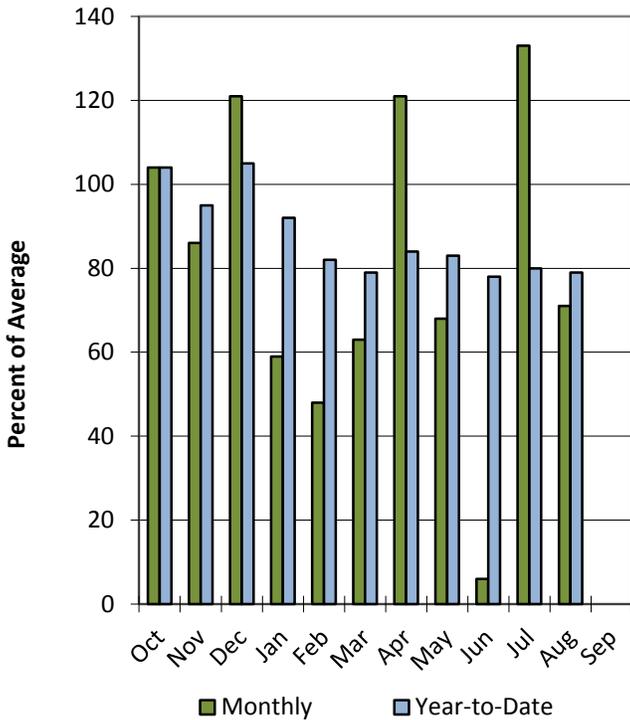


Bear River Basin

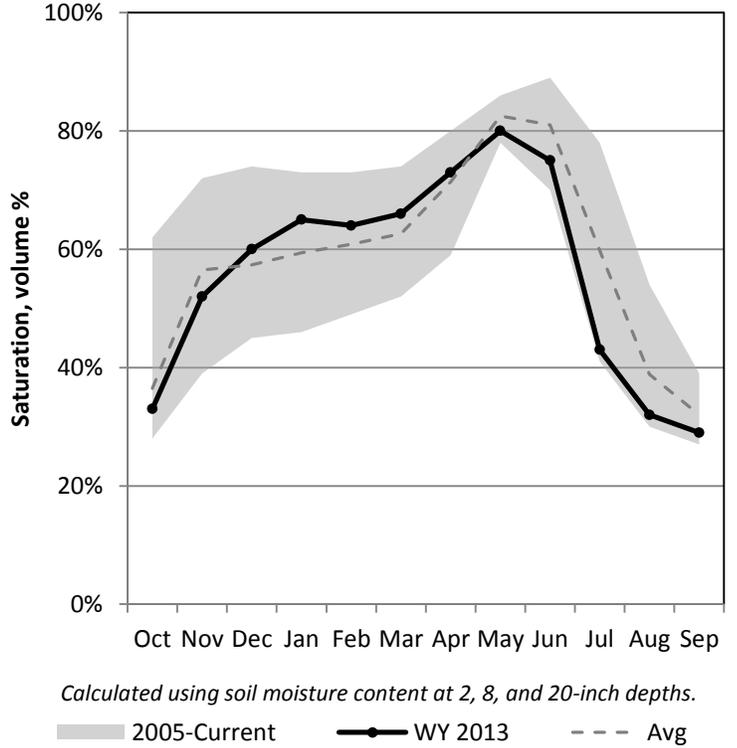
9/1/2013

Precipitation in August was below average at 71%, which brings the seasonal accumulation (Oct-Aug) to 79% of average. Soil moisture is at 29% compared to 27% last year. Reservoir storage is at 51% of capacity, compared to 68% last year. The water availability index for the Bear River is 36%.

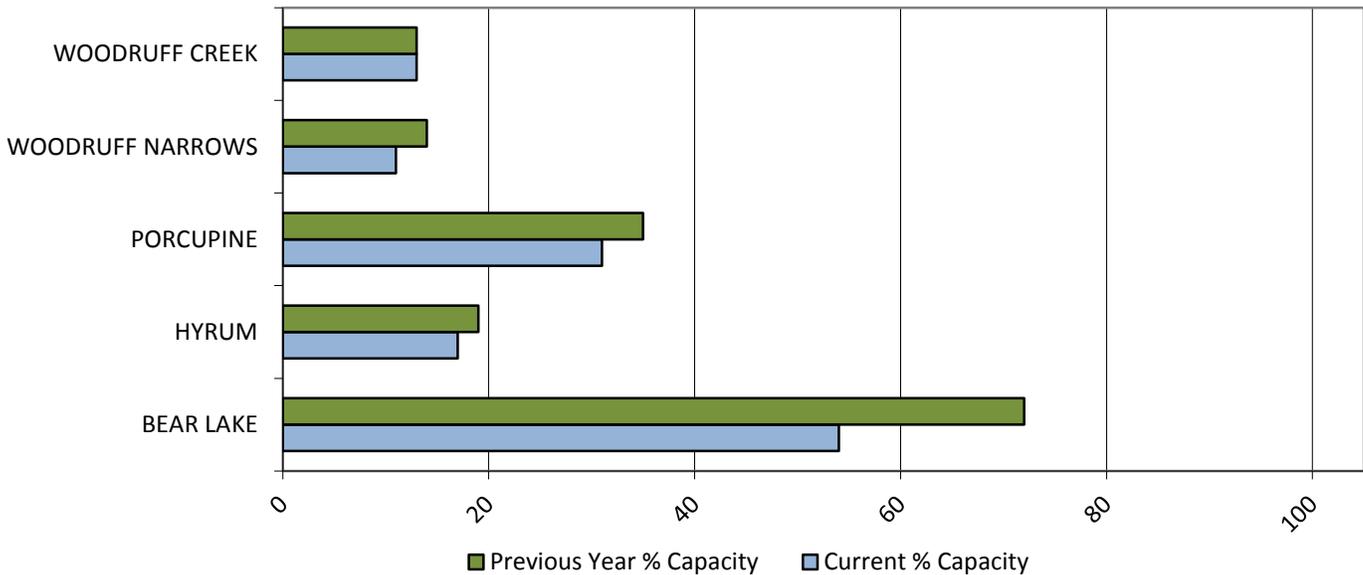
Precipitation



Soil Moisture



Reservoir Storage



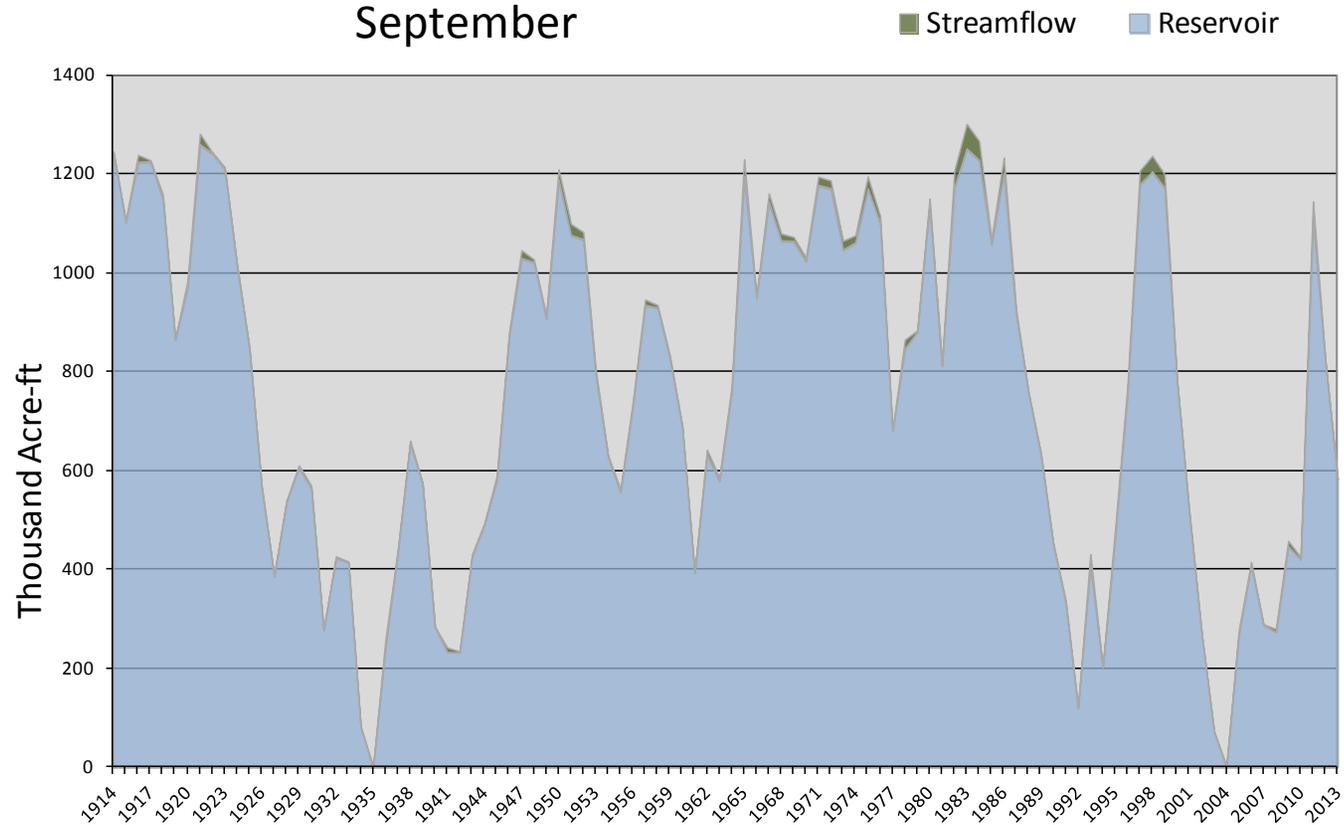
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Bear Lake	August accumulated inflow to Bear Lake (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Bear River	582	0	582	-1.20	36	30, 39, 63, 45

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

Bear Lake - Water Availability Index September



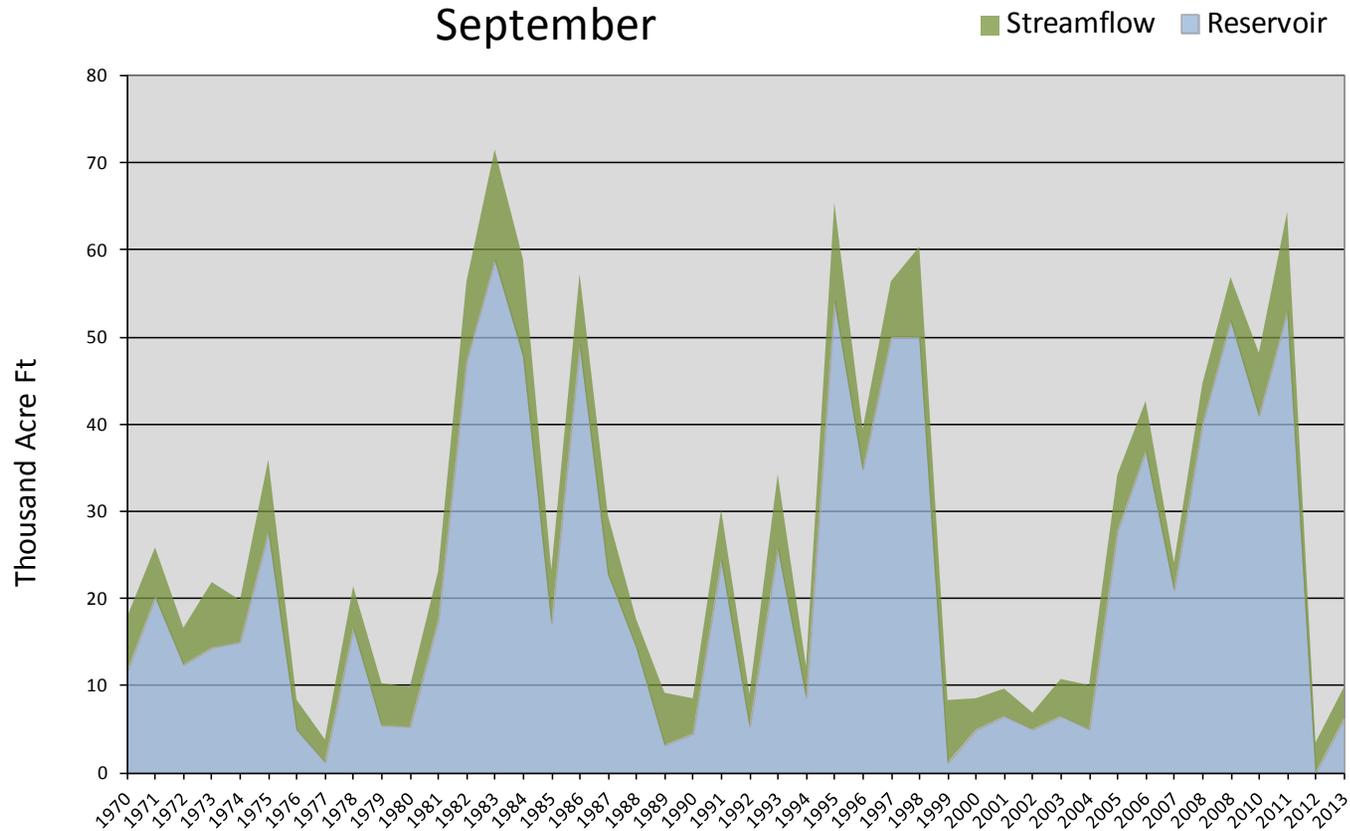
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Woodruff Narrows Reservoir	August Observed Streamflow Bear at Stateline	Reservoir + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Woodruff Narrows	6.2	3.6	9.8	-2.13	24	89, 01, 80, 04

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

Woodruff Narrows - Water Availability Index September



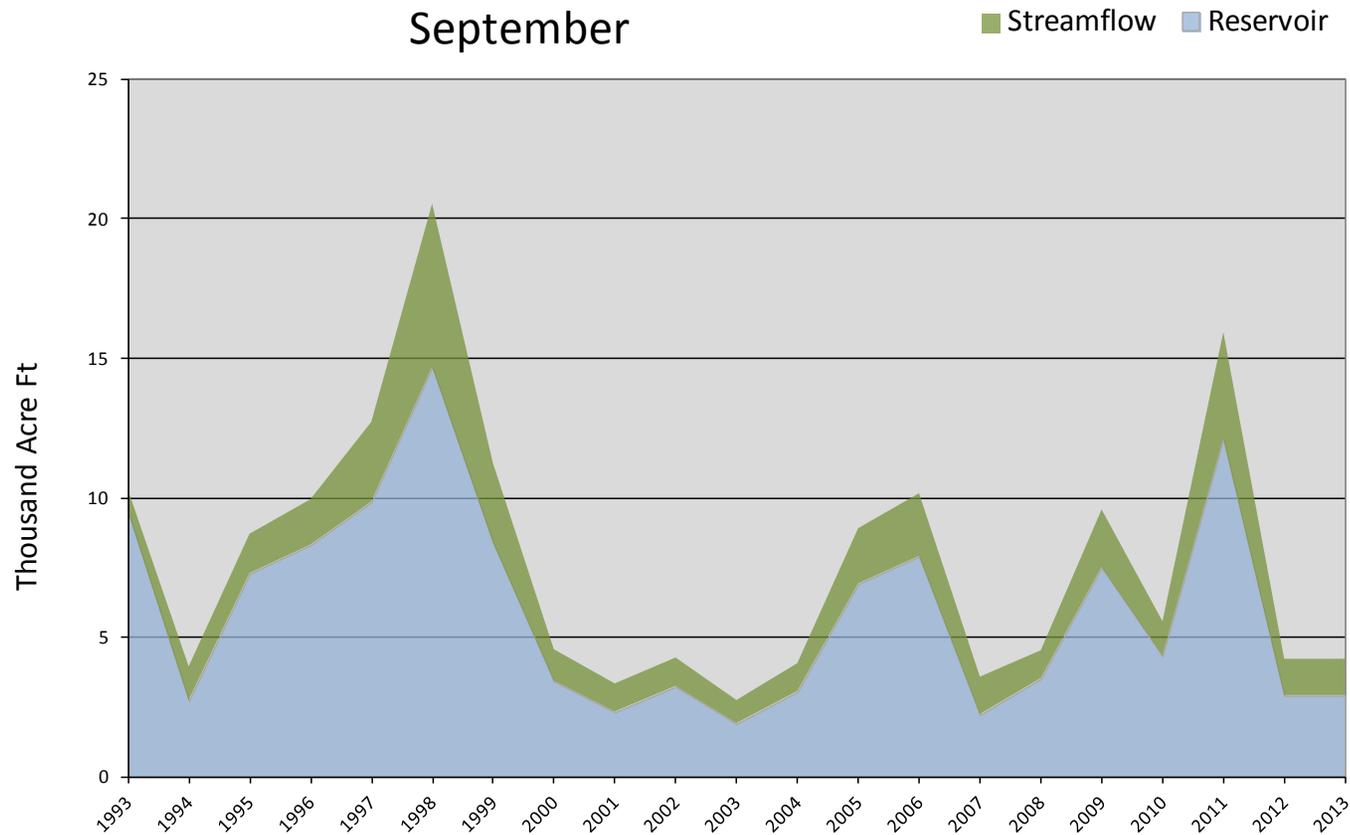
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Hyrum Reservoir	August Observed Streamflow Little Bear nr Paradise	Reservoir + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Little Bear	2.9	1.3	4.2	-1.89	27	94, 04, 12, 02

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

Little Bear River - Water Availability Index September

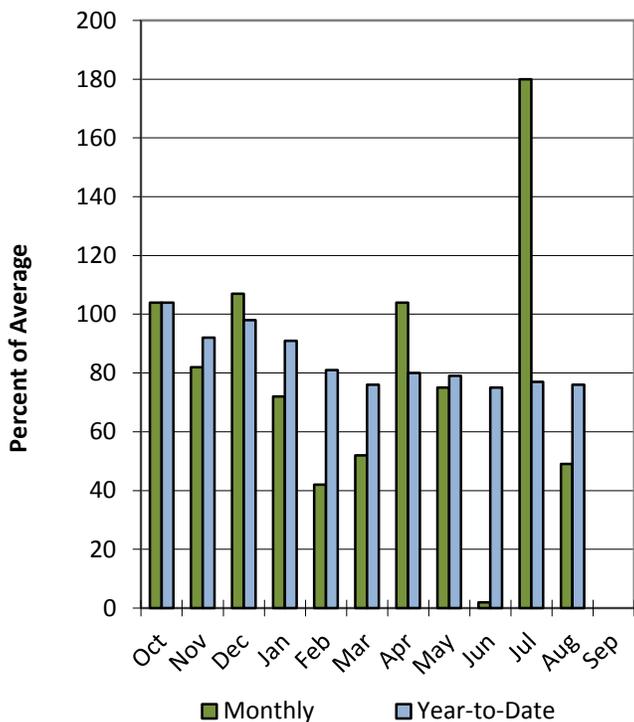


Weber & Ogden River Basins

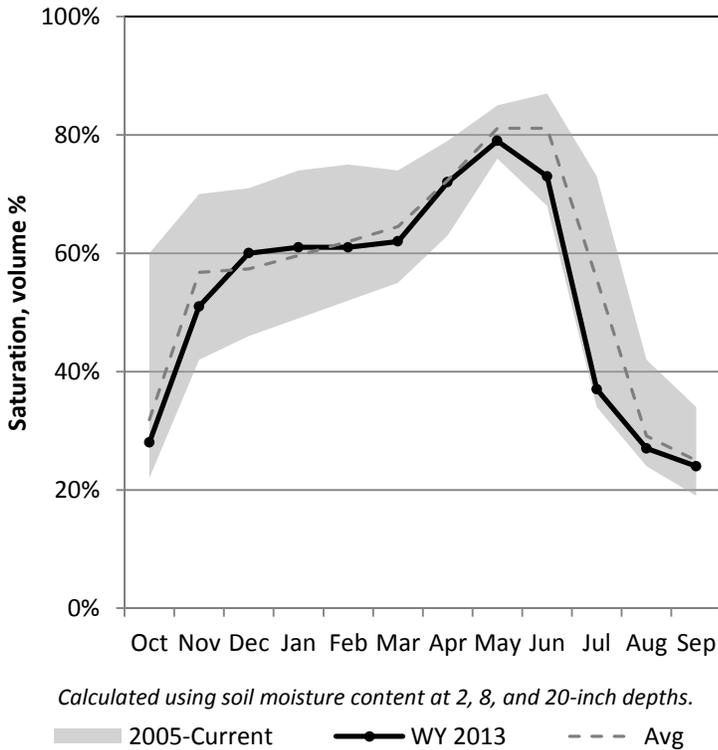
9/1/2013

Precipitation in August was much below average at 49%, which brings the seasonal accumulation (Oct-Aug) to 76% of average. Soil moisture is at 24% compared to 21% last year. Reservoir storage is at 35% of capacity, compared to 52% last year. The water availability index for the Ogden River is 24% and 27% for the Weber River.

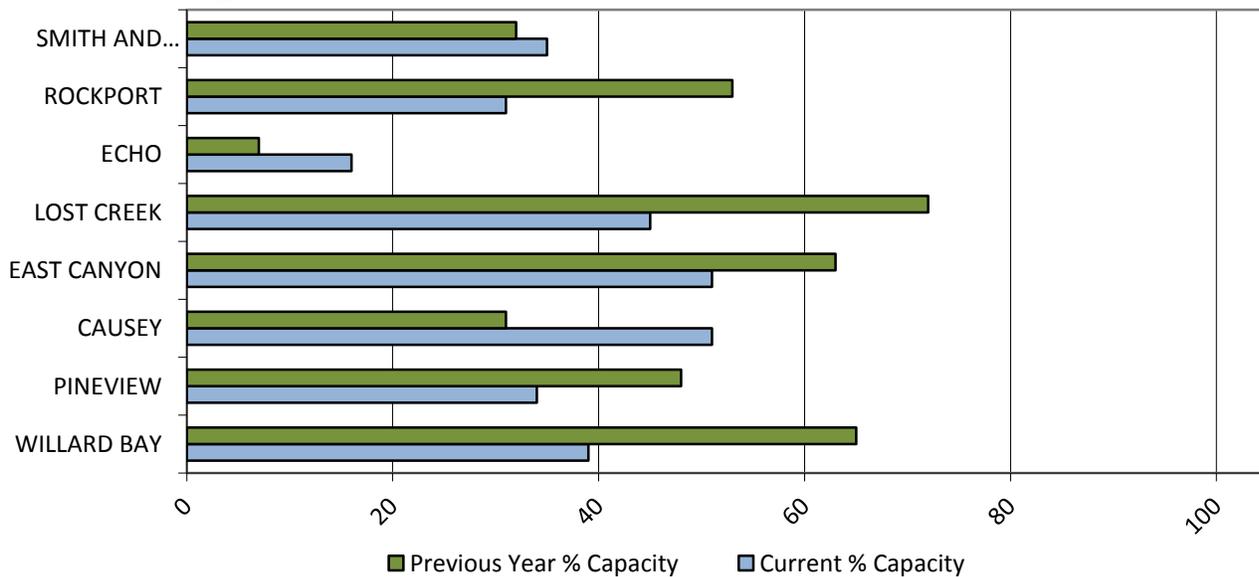
Precipitation



Soil Moisture



Reservoir Storage



September 1, 2013

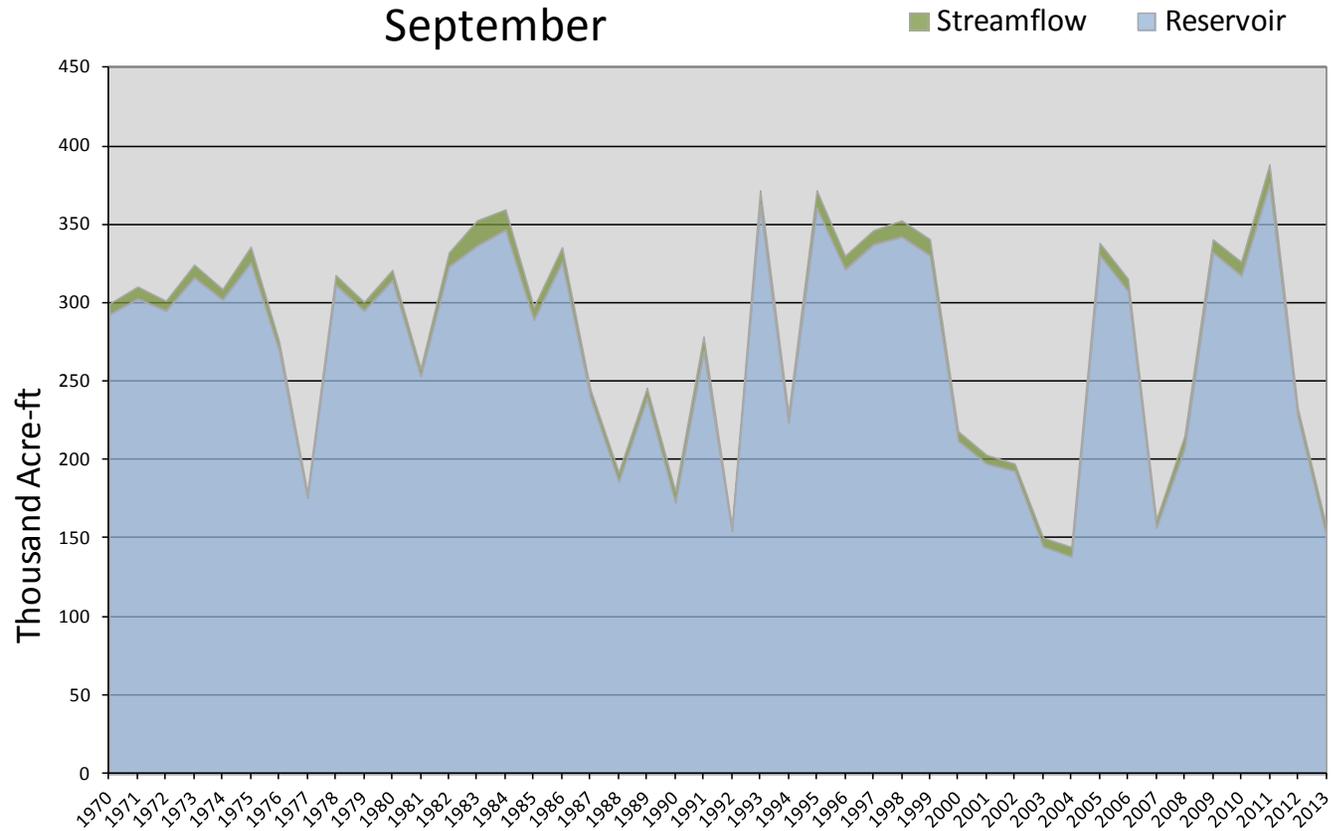
Water Availability Index

Basin or Region	August EOM* Reservoirs	August accumulated flow at Weber near Oakley (observed)	Reservoirs + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Weber River	152	6	158	-3.43	9	03, 92, 07, 77

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

Weber River - Water Availability Index

September



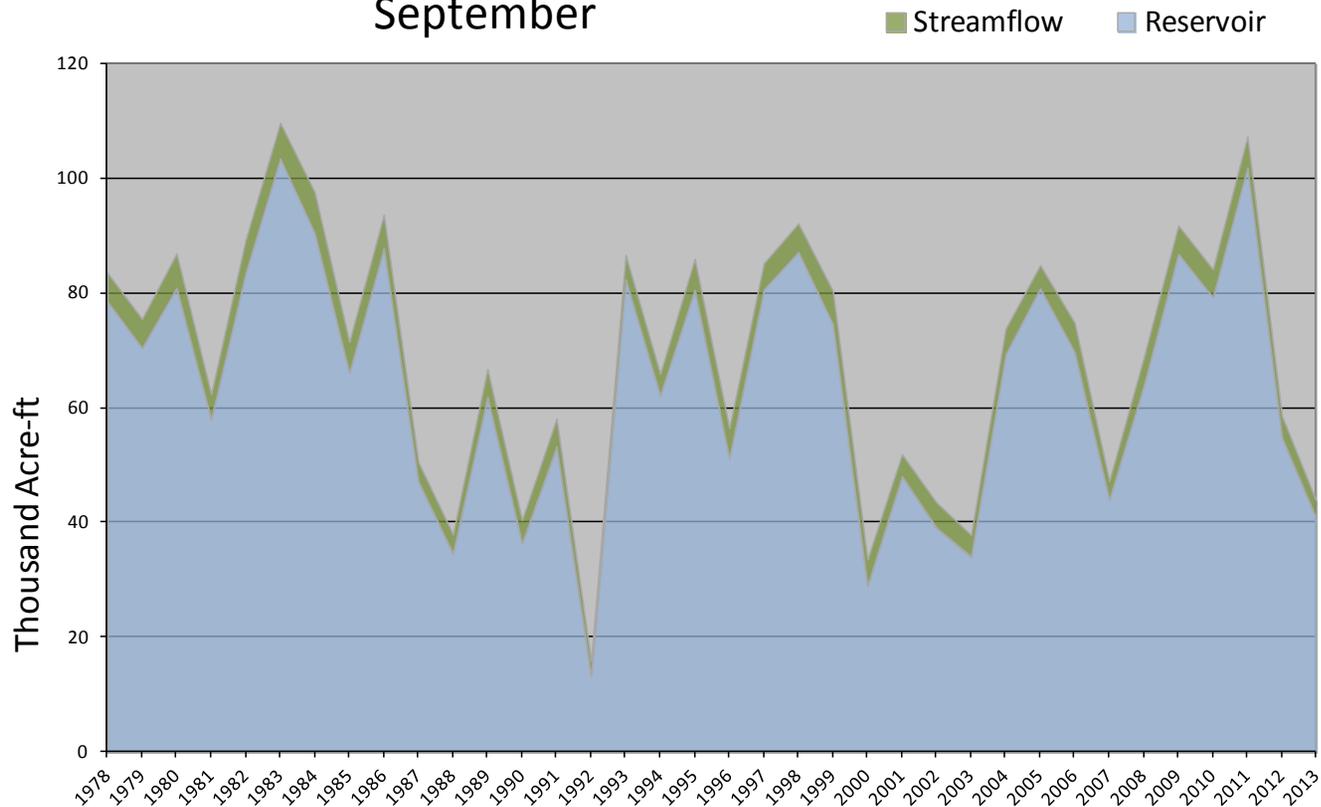
September 1, 2013

Water Availability Index

Basin or Region	August EOM*	August accumulated flow	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	Pine View & Causey	at South Fork Ogden (observed)				
	KAF [^]	KAF	KAF		%	
Ogden River	41	3	44	-2.59	19	90 ,02, 07, 87

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

Ogden River - Water Availability Index September

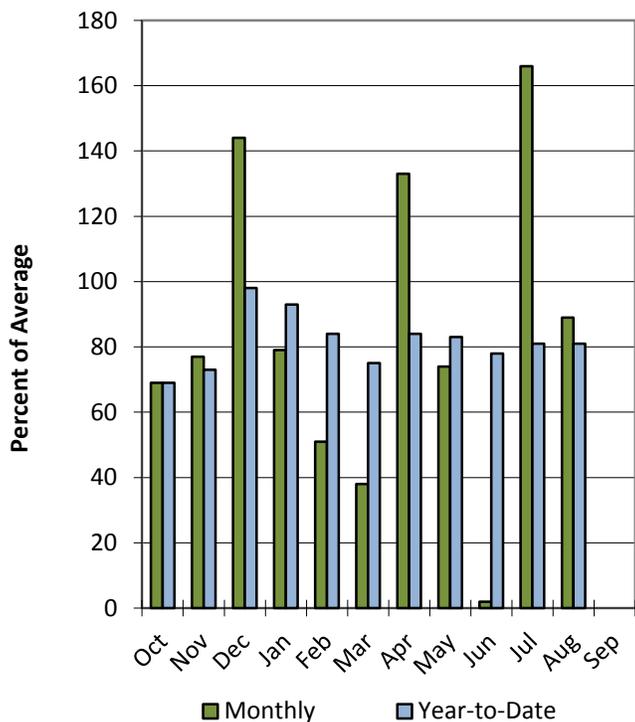


Tooele & Vernon Creek Basins

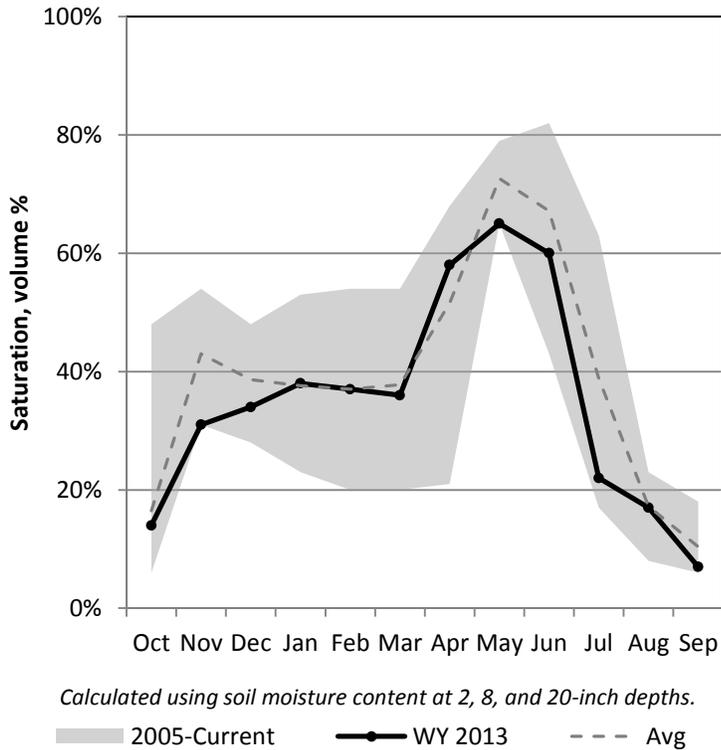
9/1/2013

Precipitation in August was below average at 89%, which brings the seasonal accumulation (Oct-Aug) to 81% of average. Soil moisture is at 7% compared to 11% last year. Reservoir storage is at 19% of capacity, compared to 18% last year.

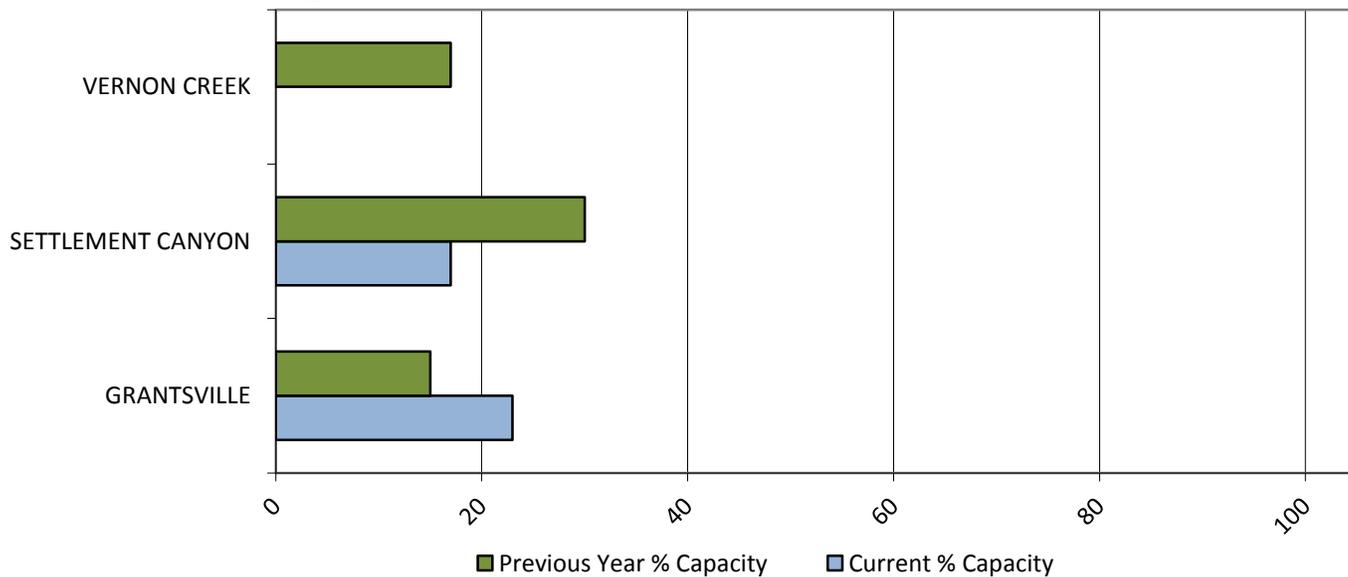
Precipitation



Soil Moisture



Reservoir Storage

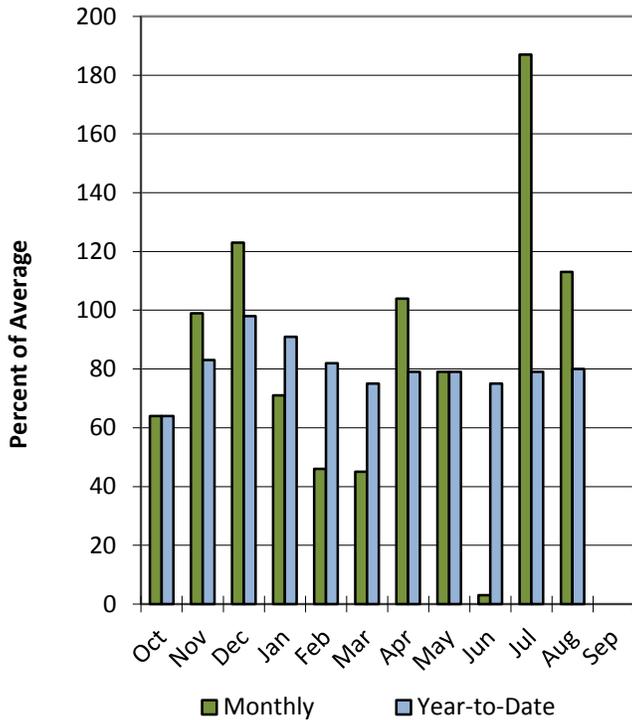


Provo & Jordan River Basins

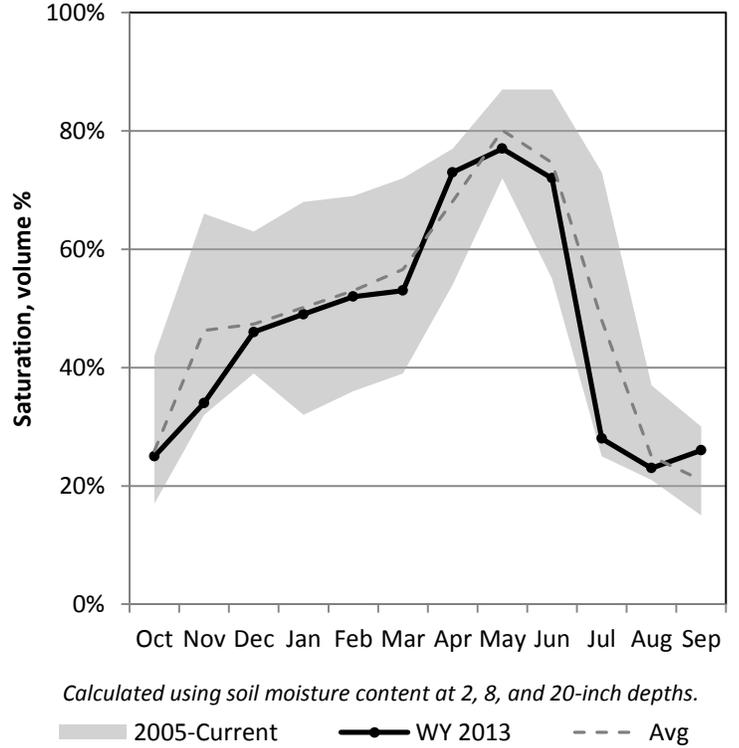
9/1/2013

Precipitation in August was above average at 113%, which brings the seasonal accumulation (Oct-Aug) to 80% of average. Soil moisture is at 26% compared to 21% last year. Reservoir storage is at 68% of capacity, compared to 76% last year. The water availability index for the Provo River is 19%.

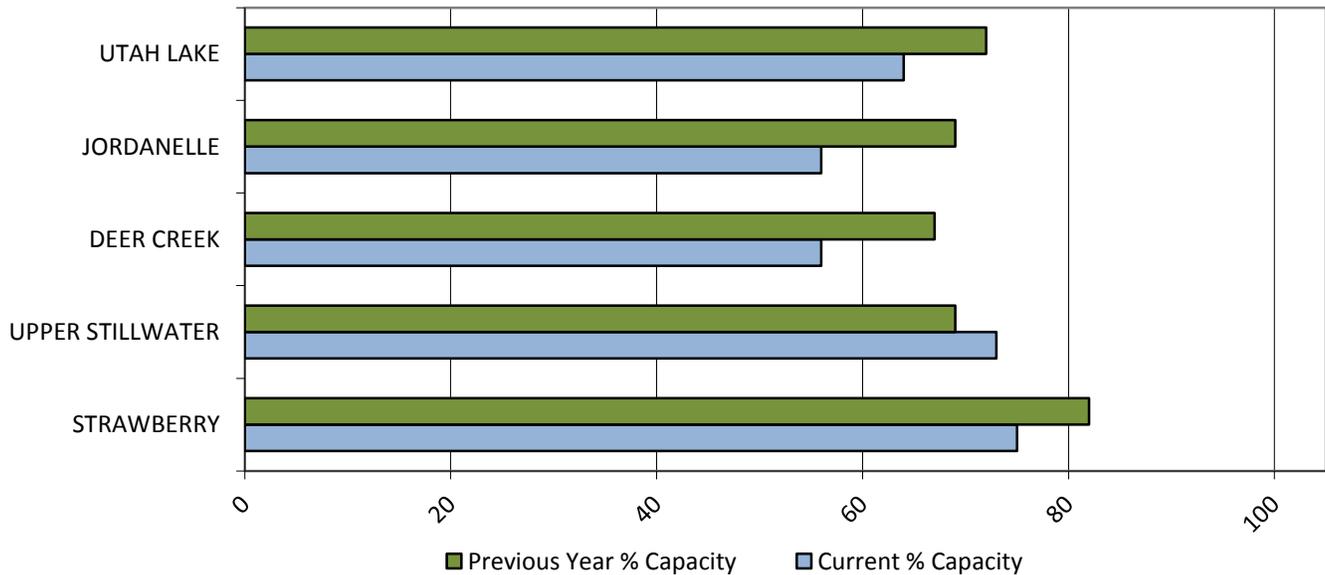
Precipitation



Soil Moisture



Reservoir Storage



September 1, 2013

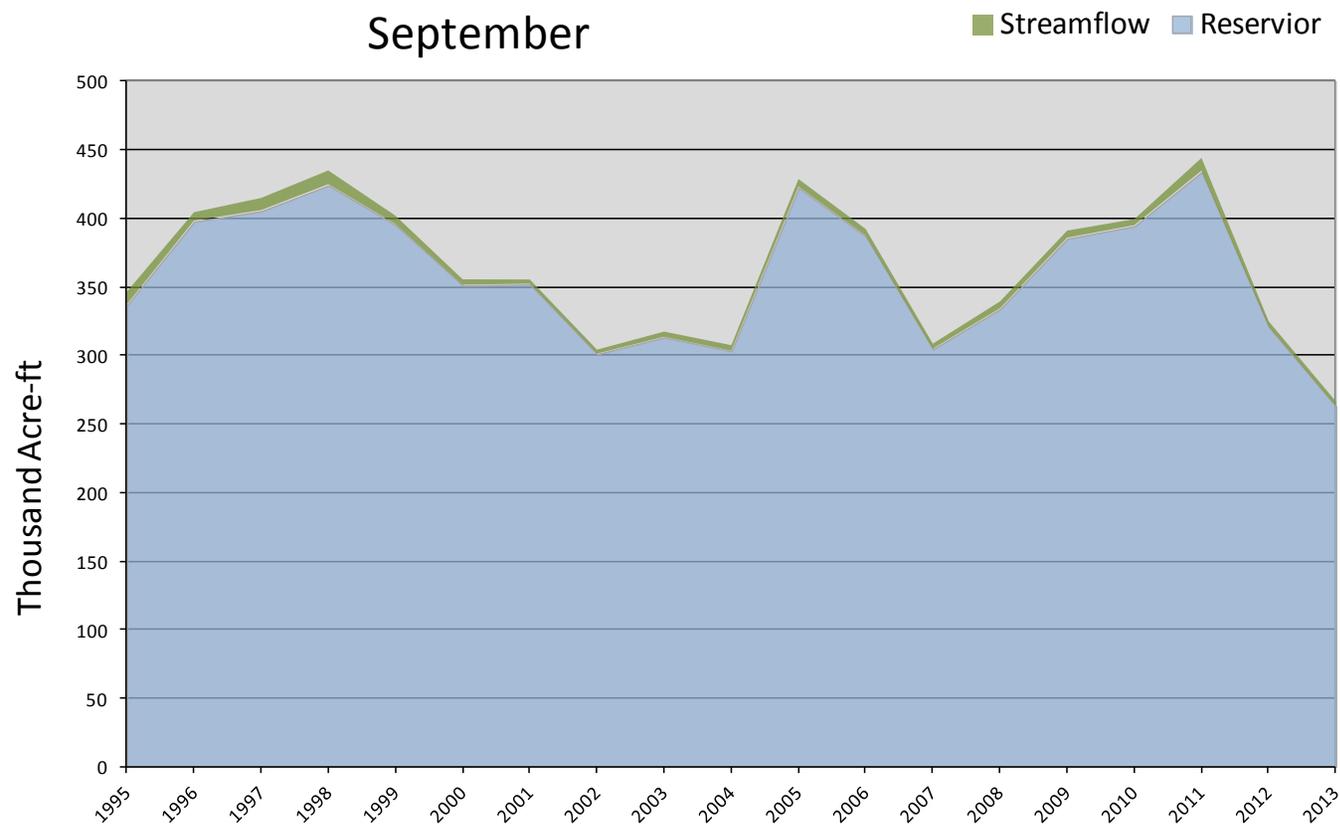
Water Availability Index

Basin or Region	August EOM* Deer Creek, Jordanelle	August accumulated flow Provo River at Woodland (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Provo	263	3.7	267	-3.75	5	04, 02

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

Provo River - Water Availability Index

September

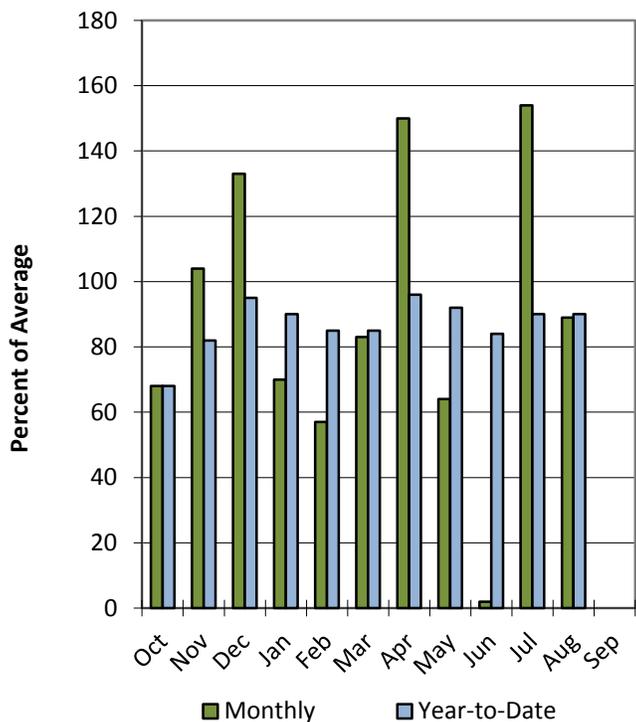


Northeastern Uintah Basin

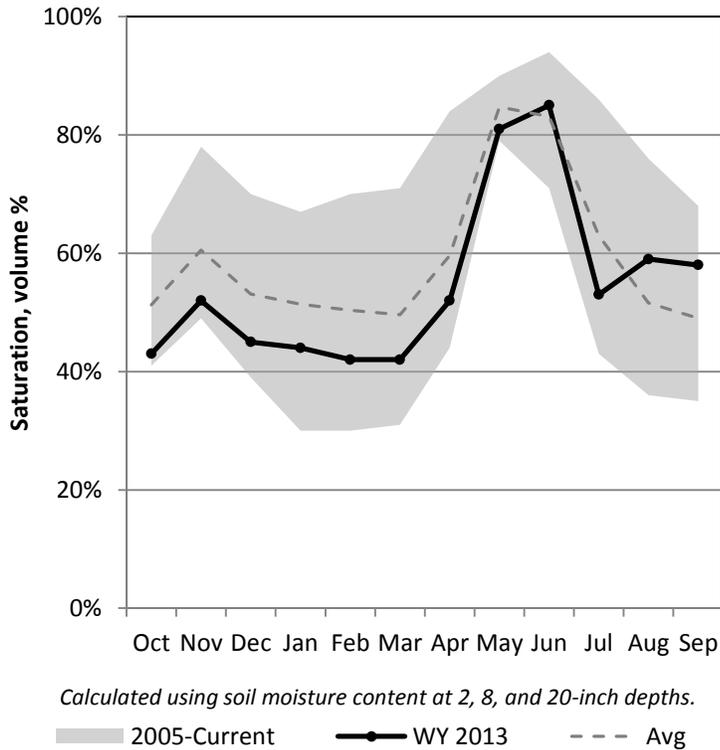
9/1/2013

Precipitation in August was below average at 89%, which brings the seasonal accumulation (Oct-Aug) to 90% of average. Soil moisture is at 58% compared to 41% last year. Reservoir storage is at 75% of capacity, compared to 81% last year.

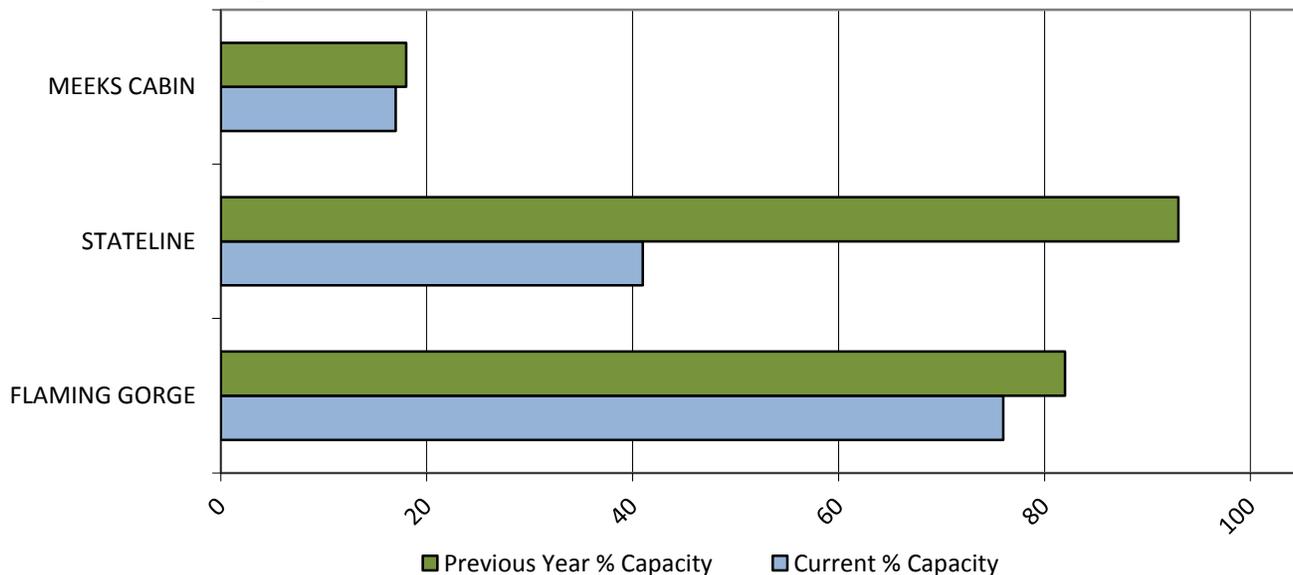
Precipitation



Soil Moisture



Reservoir Storage



September 1, 2013

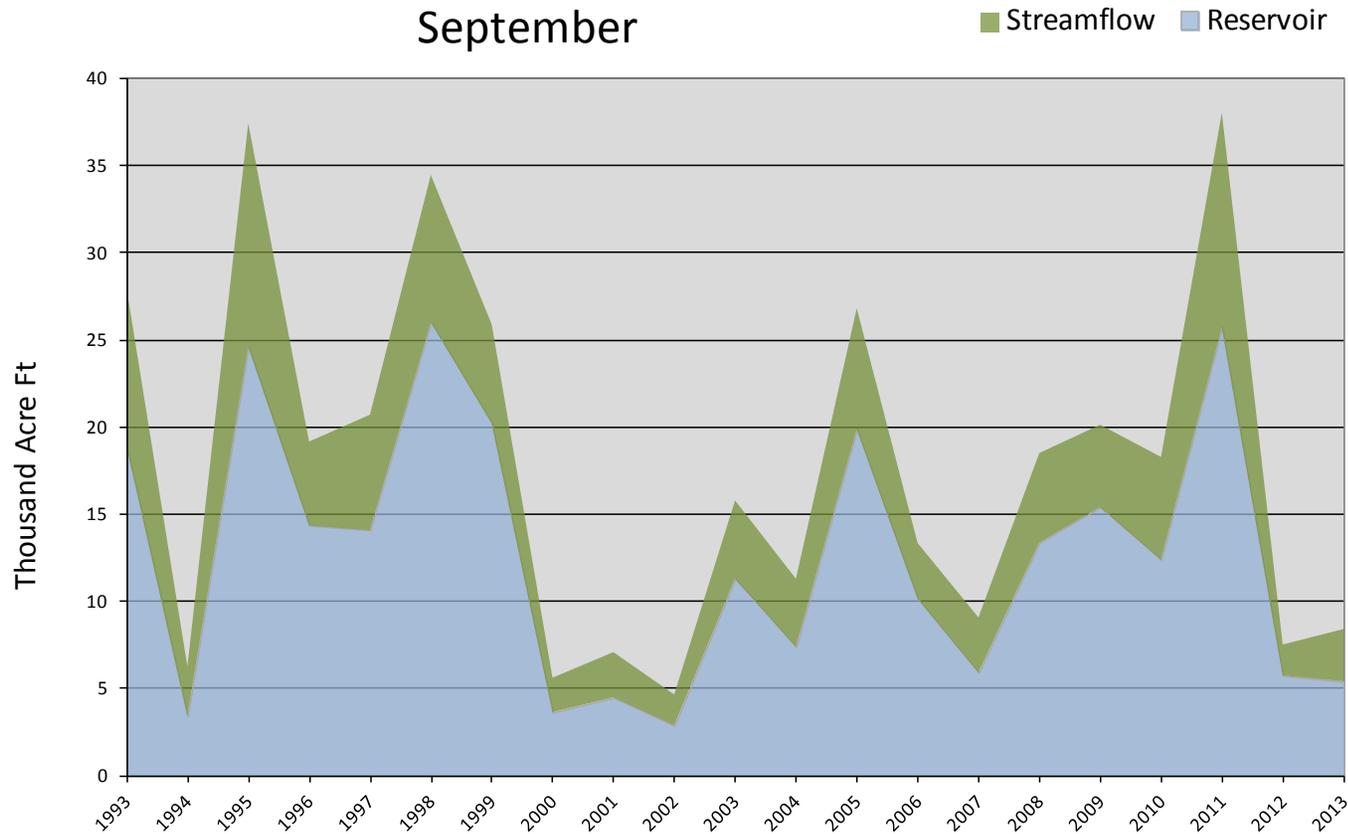
Water Availability Index

Basin or Region	August EOM* Meeks Cabin Reservoir	August Observed Streamflow Blacks Fork nr Robertson	Reservoir + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	KAF [^]	KAF	KAF		%	
Blacks Fork	5.4	3.0	8.4	-1.89	27	01, 12, 07, 04

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

Blacks Fork River - Water Availability Index

September



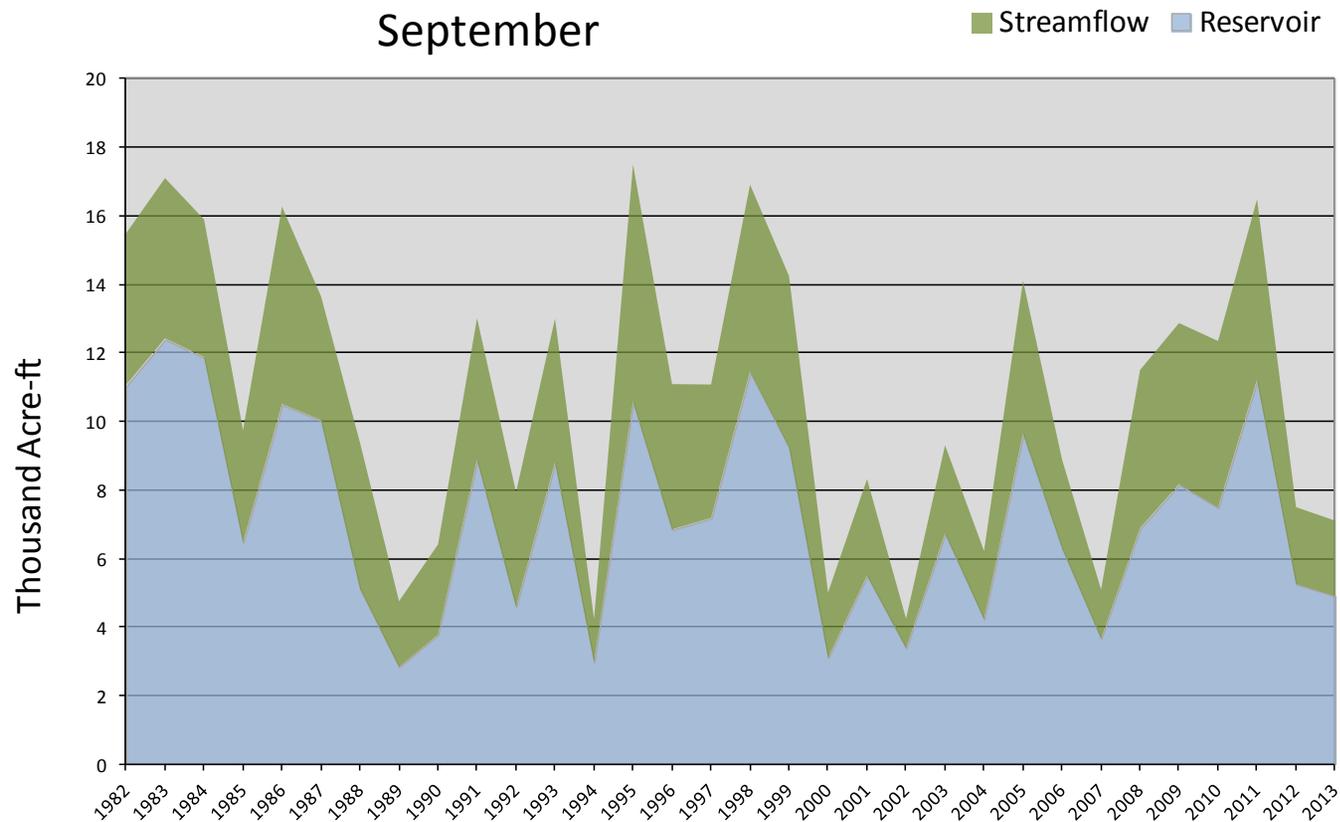
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Stateline Reservoir	August Observed Flow EF Smiths Creek	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Smiths Creek	4.9	2.2	7.1	-2.15	24	04, 90, 12, 92

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

Smiths Creek - Water Availability Index September

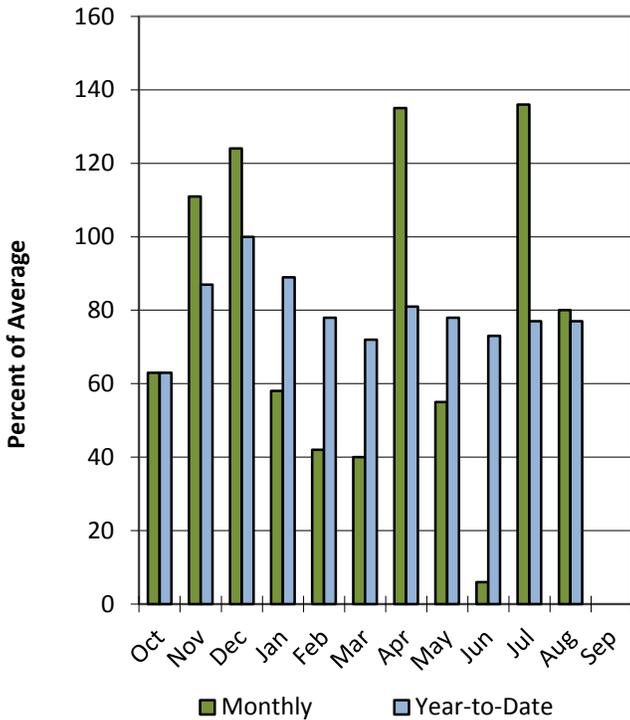


Duchesne River Basin

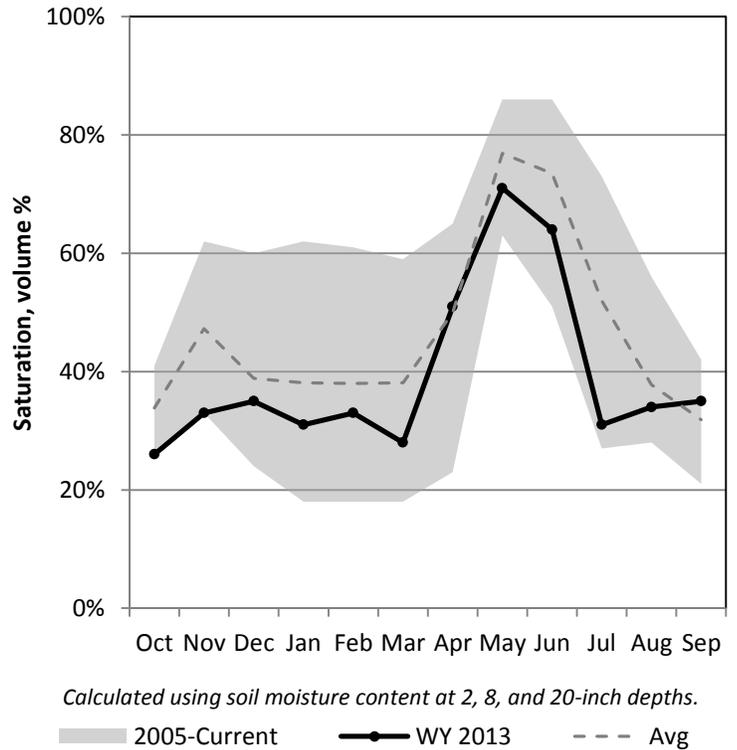
9/1/2013

Precipitation in August was below average at 80%, which brings the seasonal accumulation (Oct-Aug) to 77% of average. Soil moisture is at 35% compared to 26% last year. Reservoir storage is at 69% of capacity, compared to 75% last year. The water availability index for the Western Uintahs is 9% and 5% for the Eastern Uintahs.

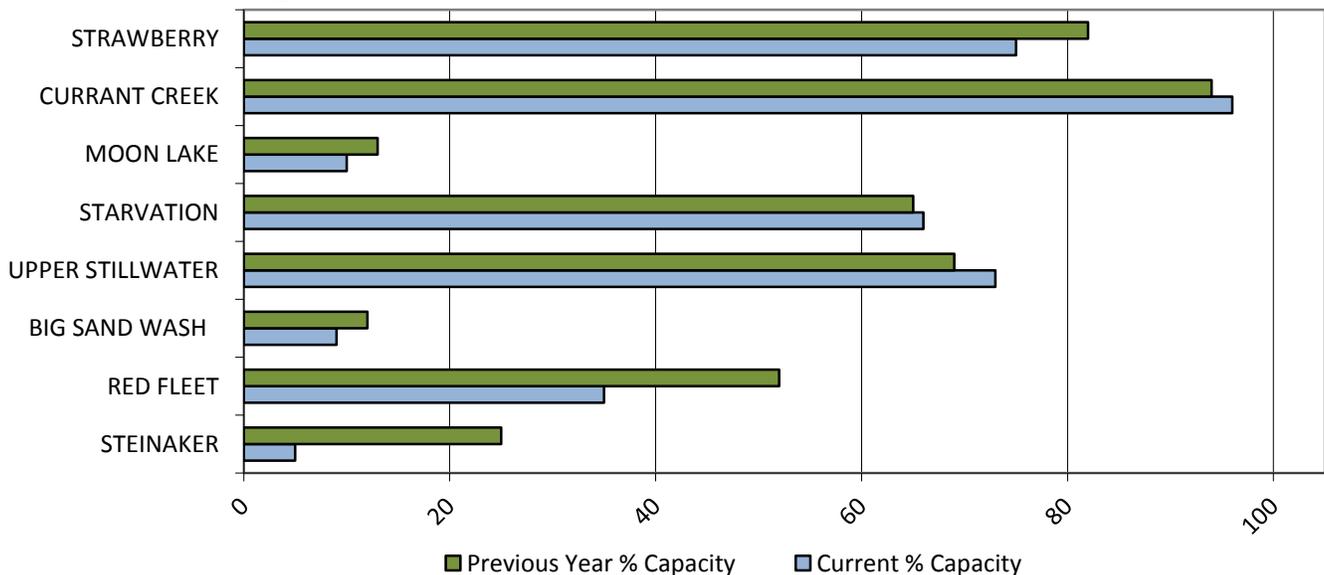
Precipitation



Soil Moisture



Reservoir Storage



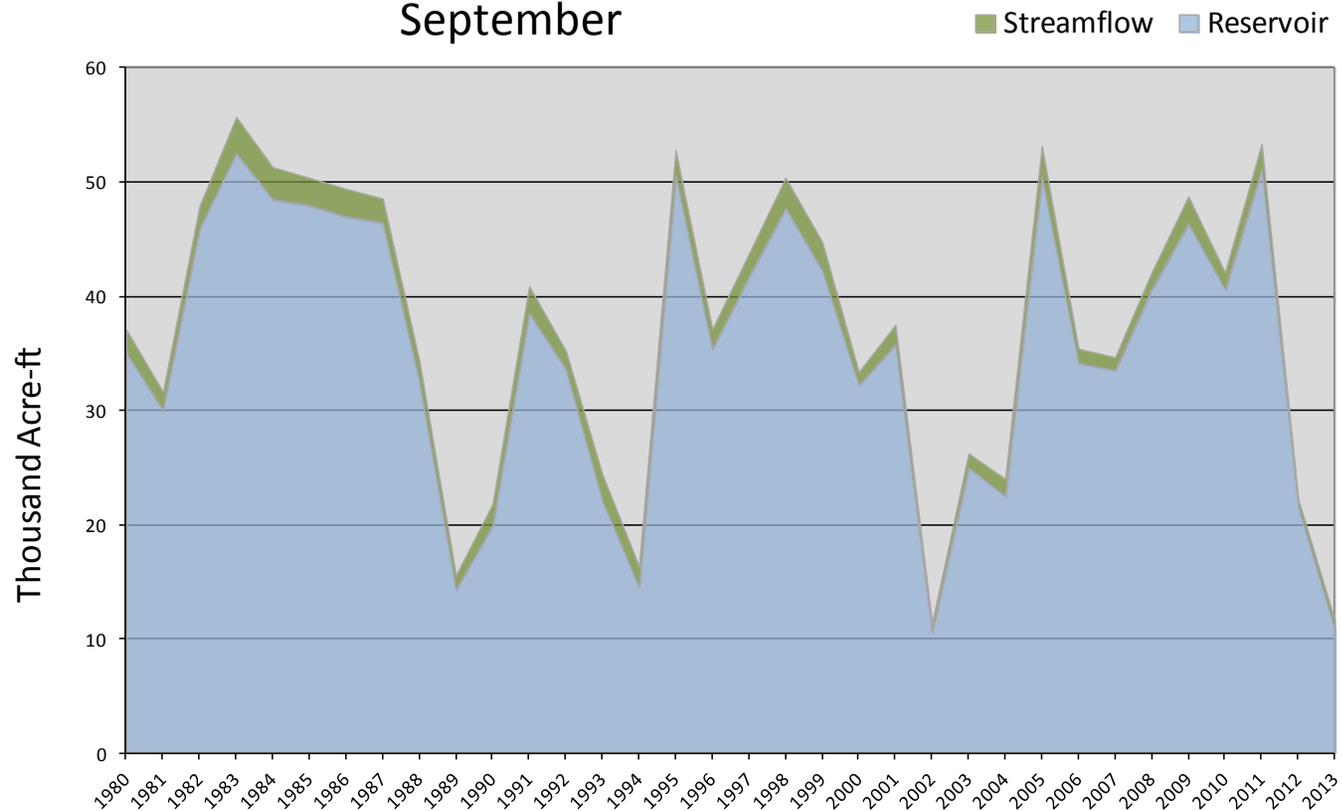
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Red Fleet and Steinaker	August accumulated flow Big Brush Creek (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Eastern Uintah	10.8	0.8	11.6	-3.69	6	02, 89, 04

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

Eastern Uintah - Water Availability Index September



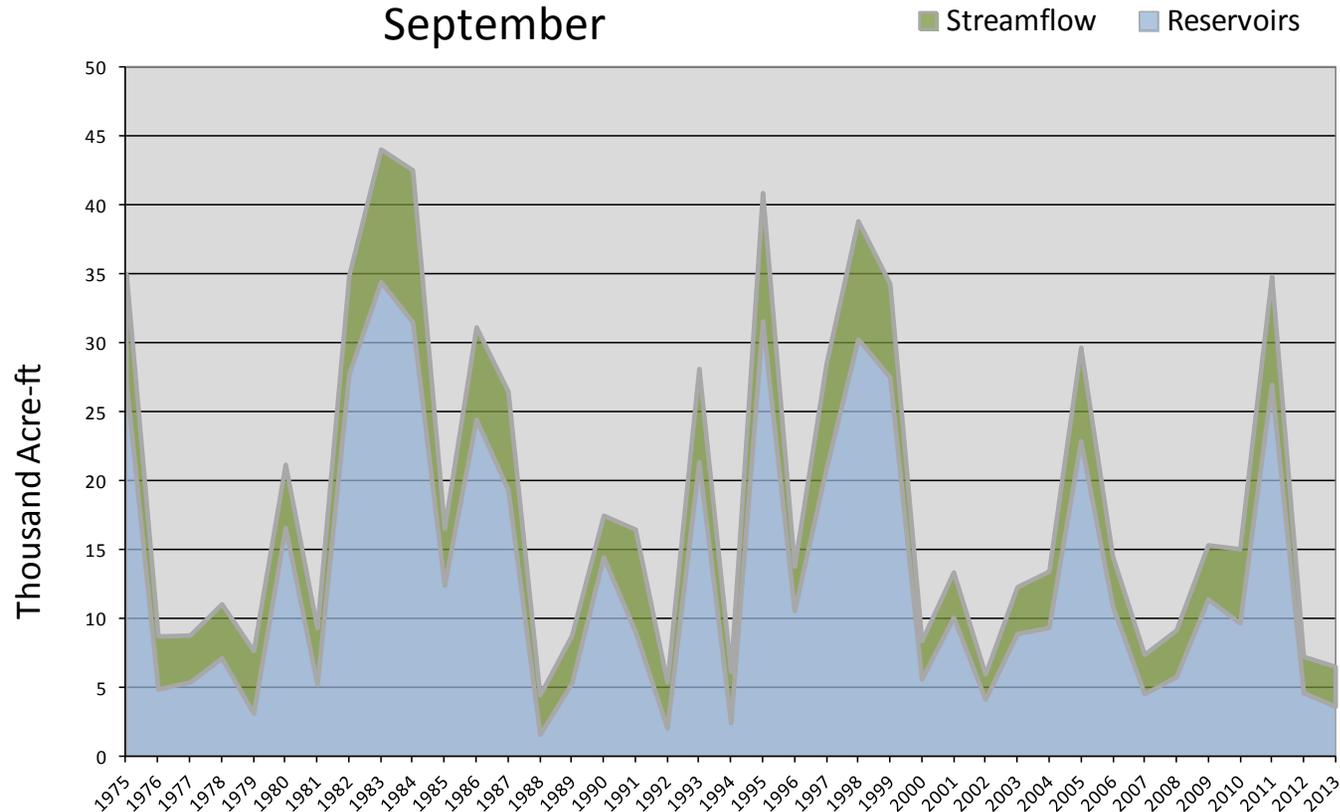
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Moon Lake	August accumulated flow Lake Fork Creek above Moon Lake (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Moon Lake	3.6	2.9	6.5	-3.13	13	02, 94, 12, 07

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

Moon Lake - Water Availability Index September

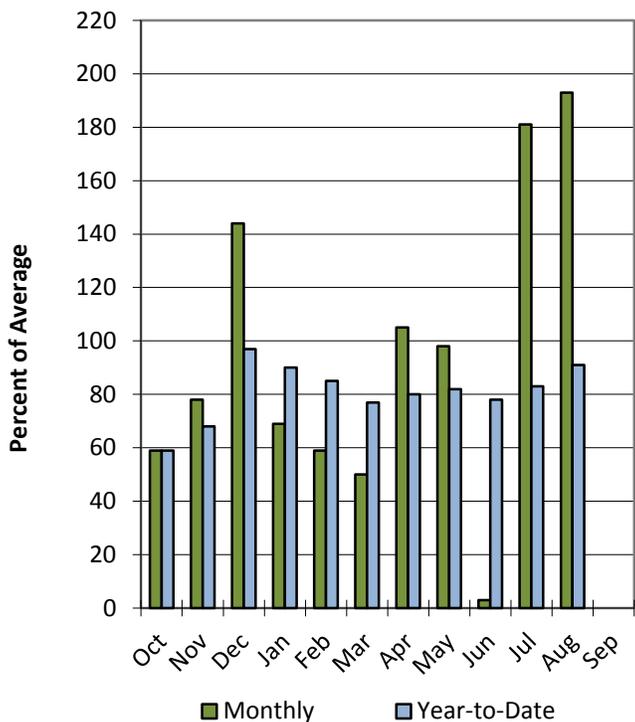


Price & San Rafael Basins

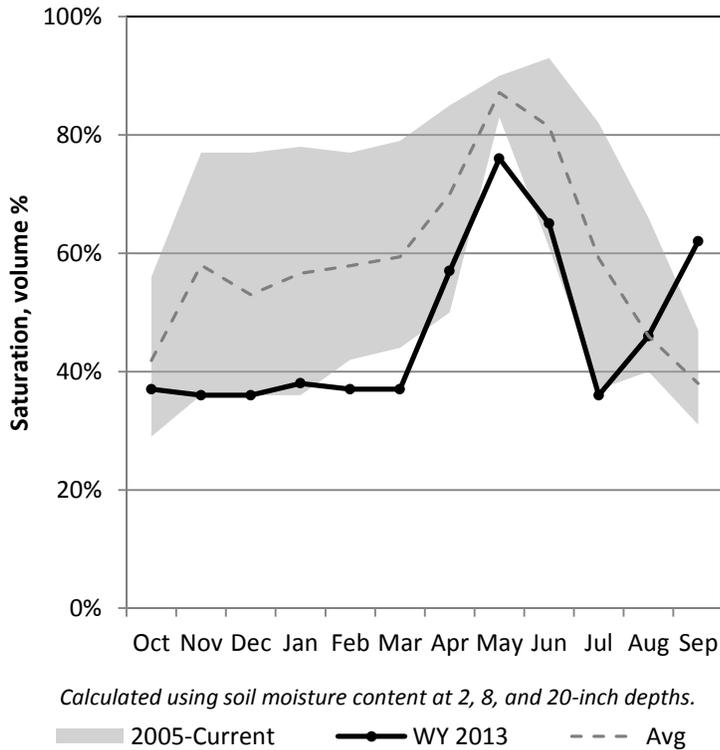
9/1/2013

Precipitation in August was much above average at 193%, which brings the seasonal accumulation (Oct-Aug) to 91% of average. Soil moisture is at 62% compared to 38% last year. Reservoir storage is at 37% of capacity, compared to 52% last year. The water availability index for the Price River is 13%, and 6% for Joe's Valley.

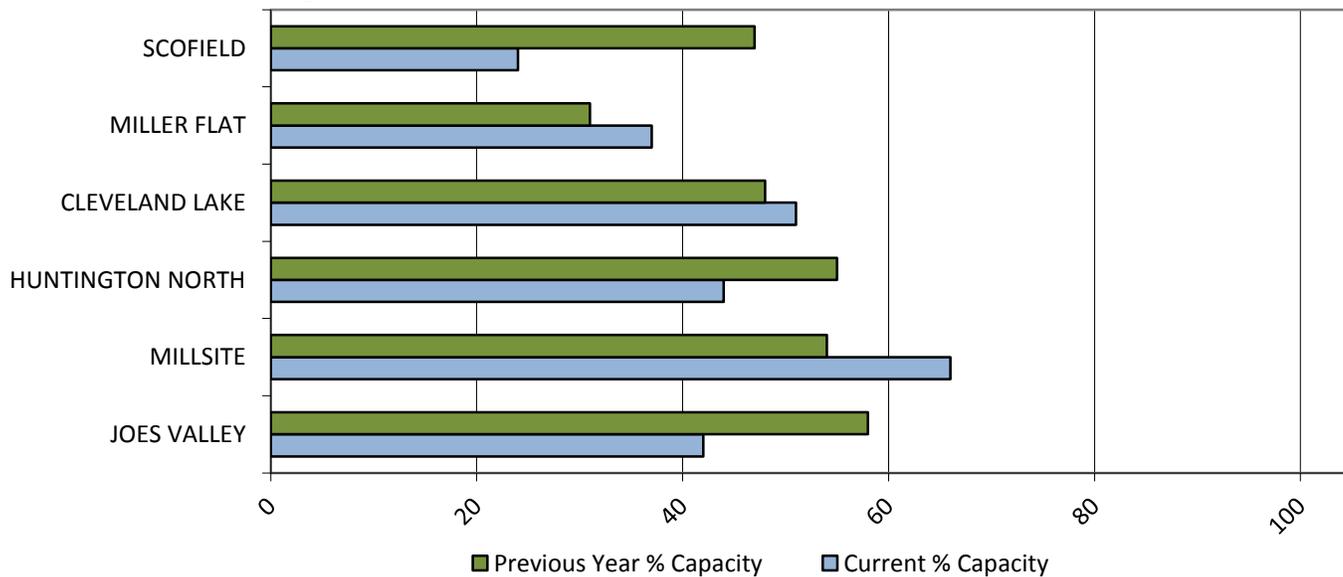
Precipitation



Soil Moisture



Reservoir Storage



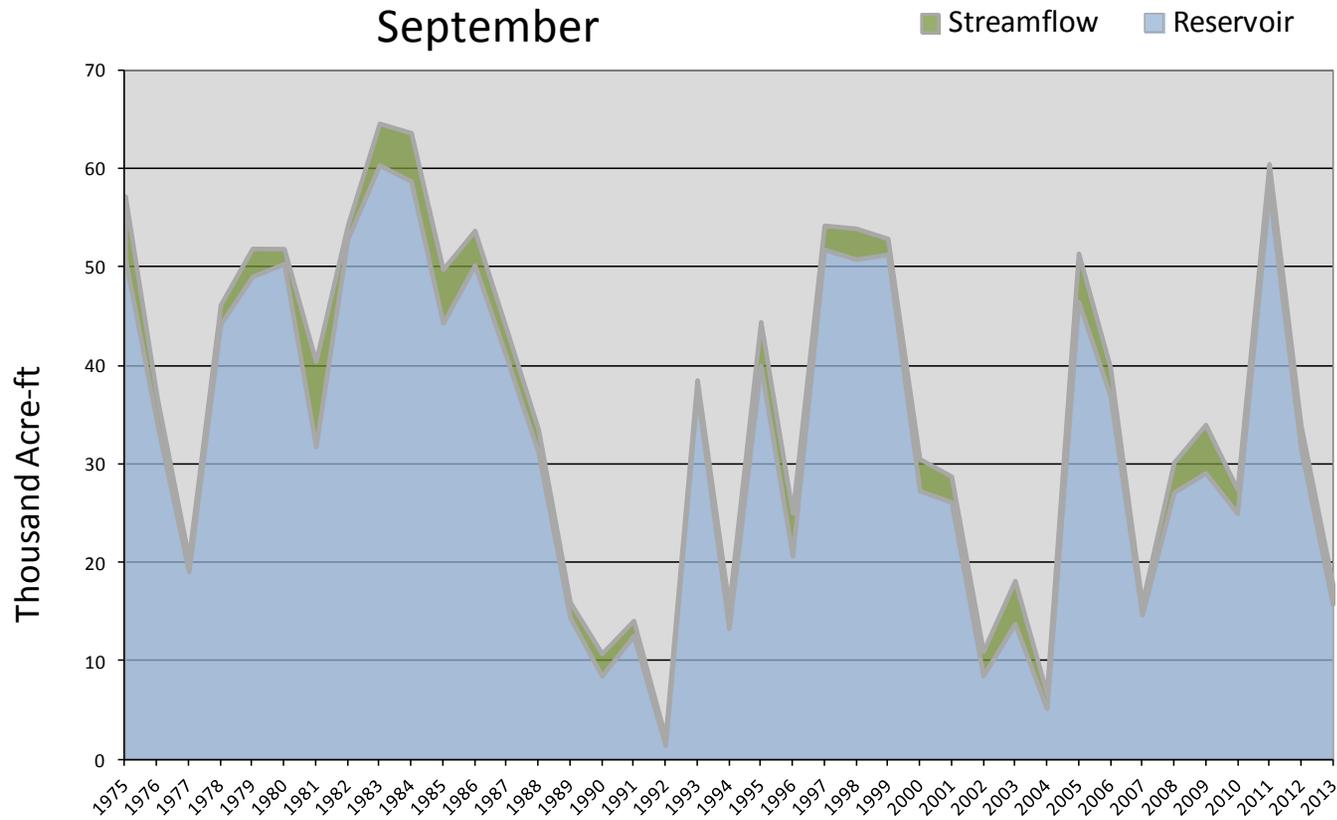
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Scofield	August accumulated inflow to Scofield (<i>calculated</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Price River	15.8	2.0	17.8	-2.29	23	07, 89, 03, 77

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

Price River - Water Availability Index
September



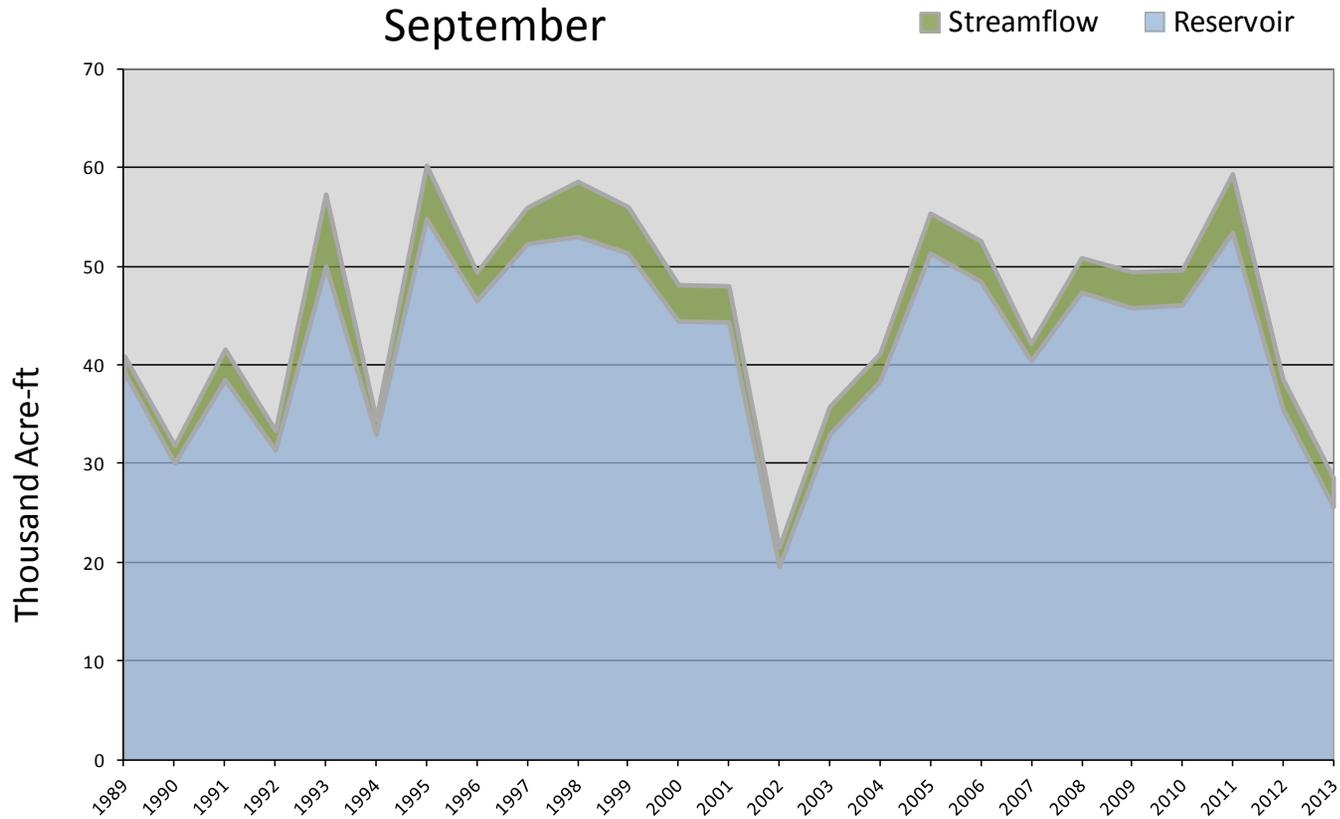
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Joe's Valley	August accumulated inflow to Joe's Valley (calculated)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Joe's Valley	25.7	2.9	28.6	-3.53	8	02, 90, 92

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

Joe's Valley - Water Availability Index September

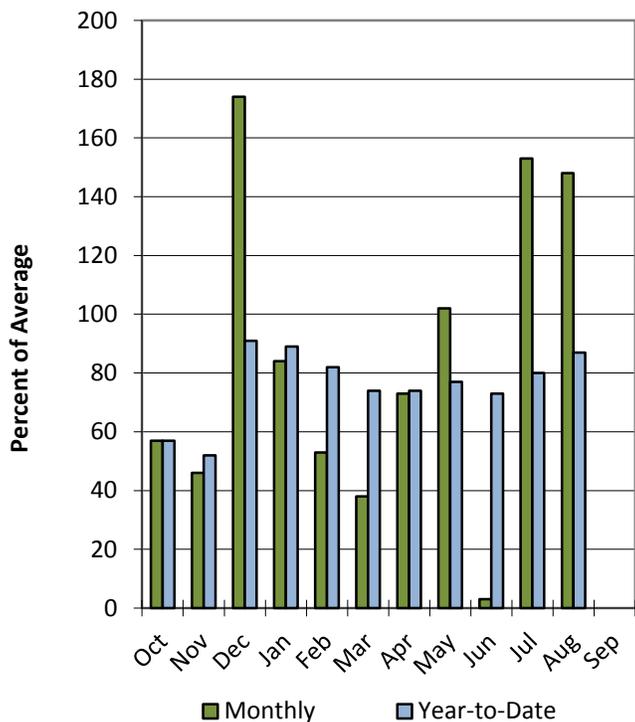


Southeastern Utah Basin

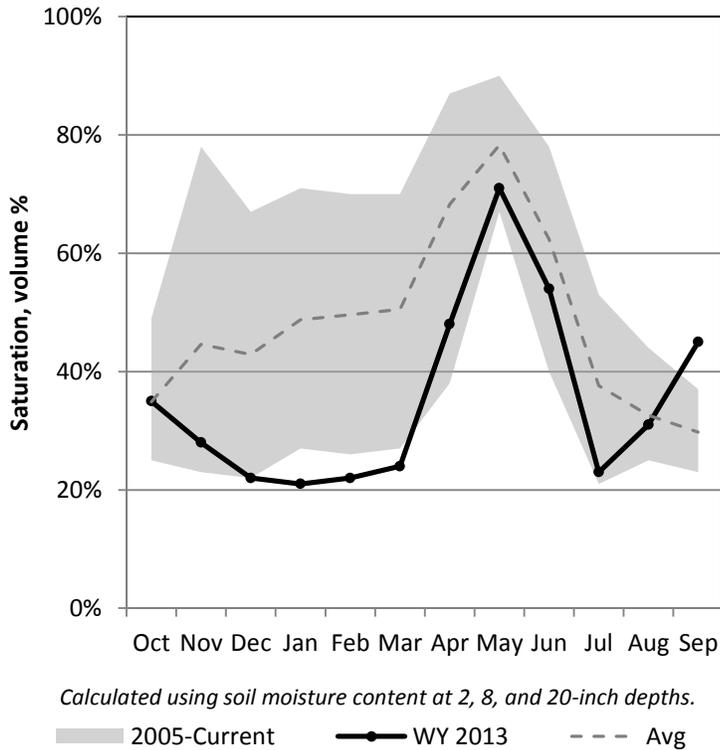
9/1/2013

Precipitation in August was much above average at 148%, which brings the seasonal accumulation (Oct-Aug) to 87% of average. Soil moisture is at 45% compared to 32% last year. Reservoir storage is at 11% of capacity, compared to 13% last year. The water availability index for Moab is 24%.

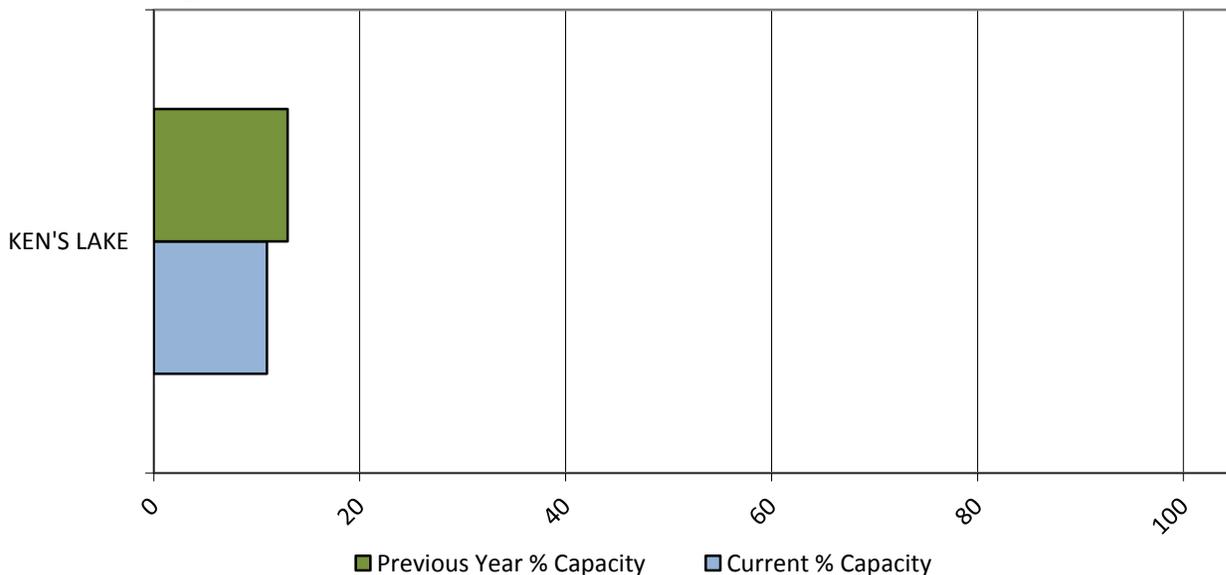
Precipitation



Soil Moisture



Reservoir Storage



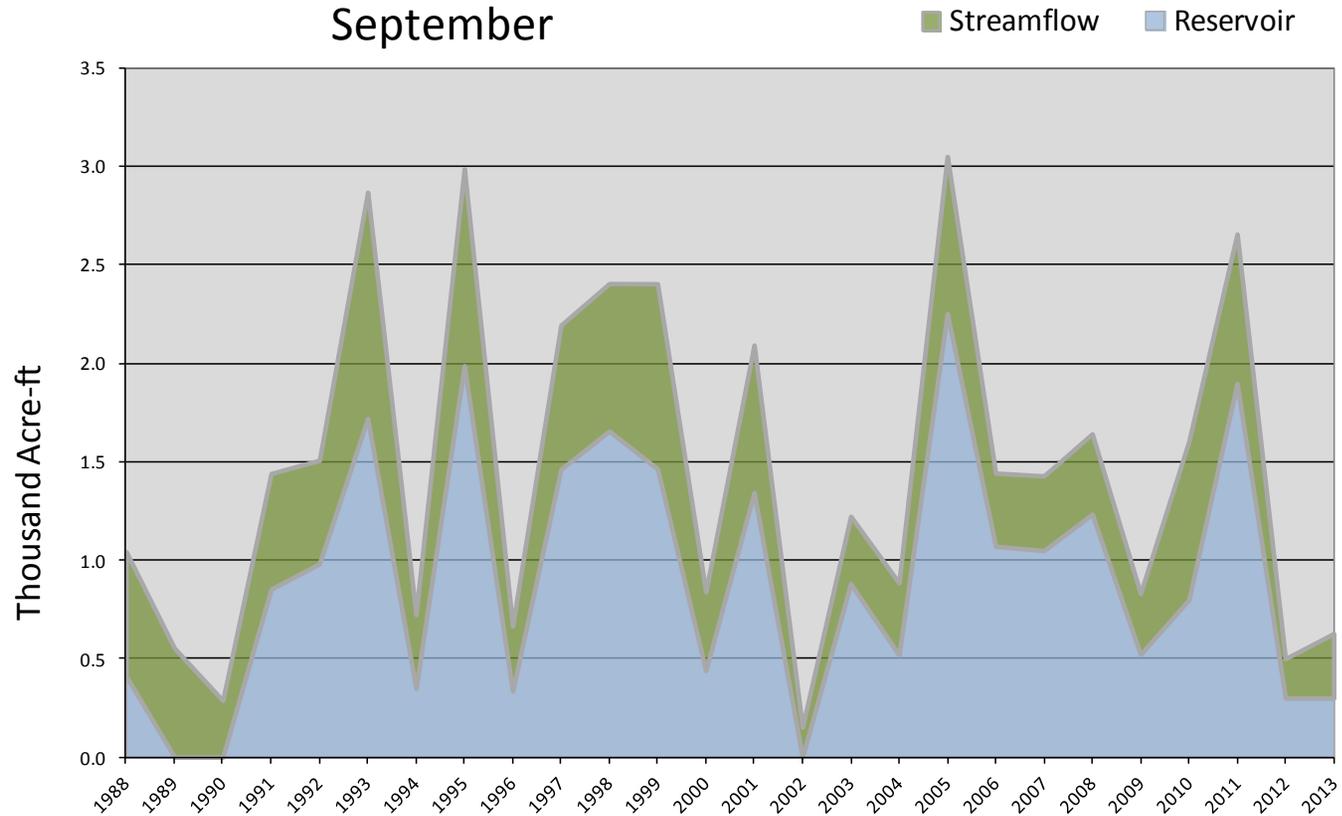
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Ken's Lake Reservoir	August accumulated flow Mill Creek at Sheley (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Moab	0.3	0.3	0.6	-2.62	19	12, 89, 96, 94

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

Moab - Water Availability Index September

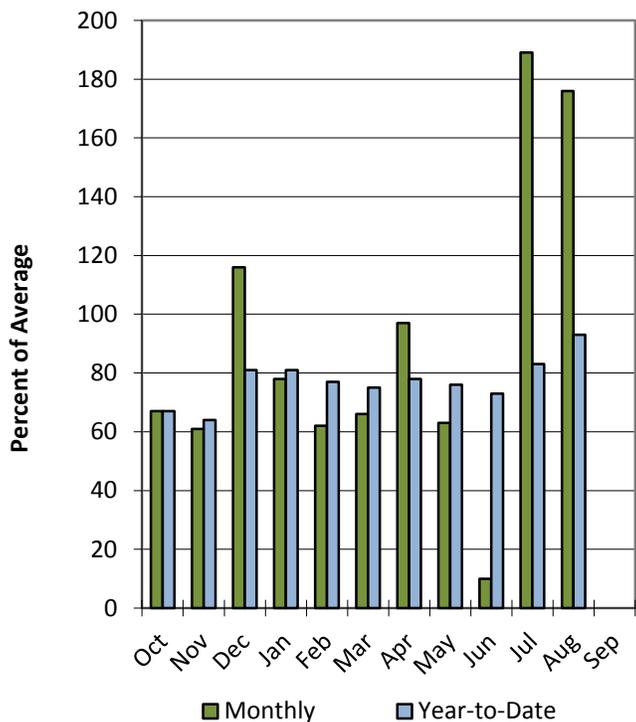


Dirty Devil Basin

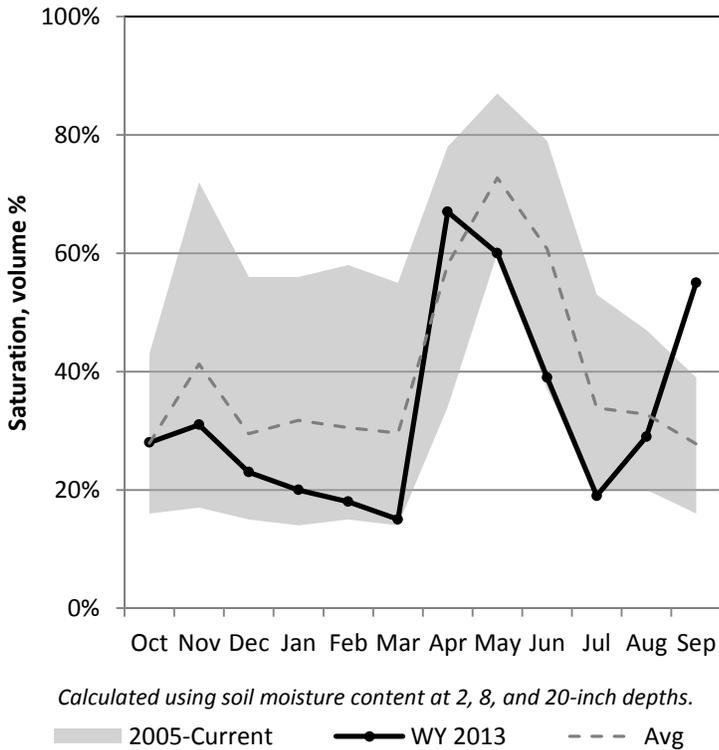
9/1/2013

Precipitation in August was much above average at 176%, which brings the seasonal accumulation (Oct-Aug) to 93% of average. Soil moisture is at 55% compared to 35% last year.

Precipitation



Soil Moisture

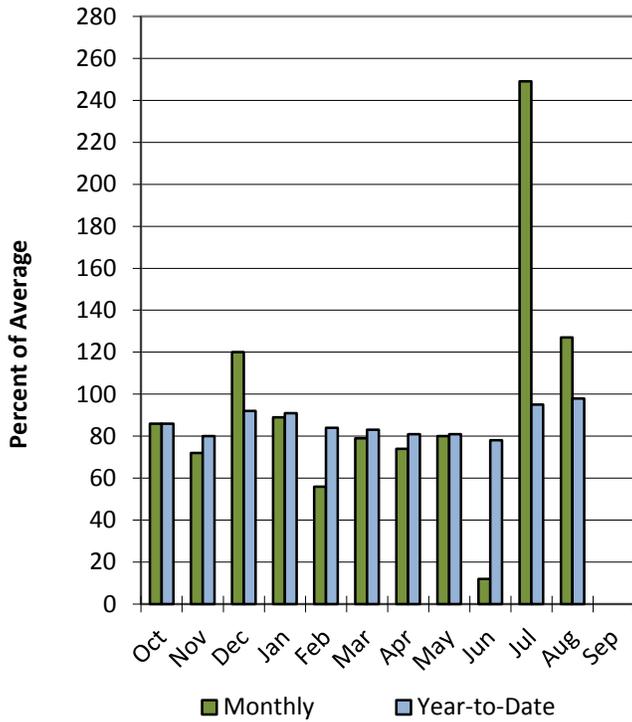


Escalante River Basin

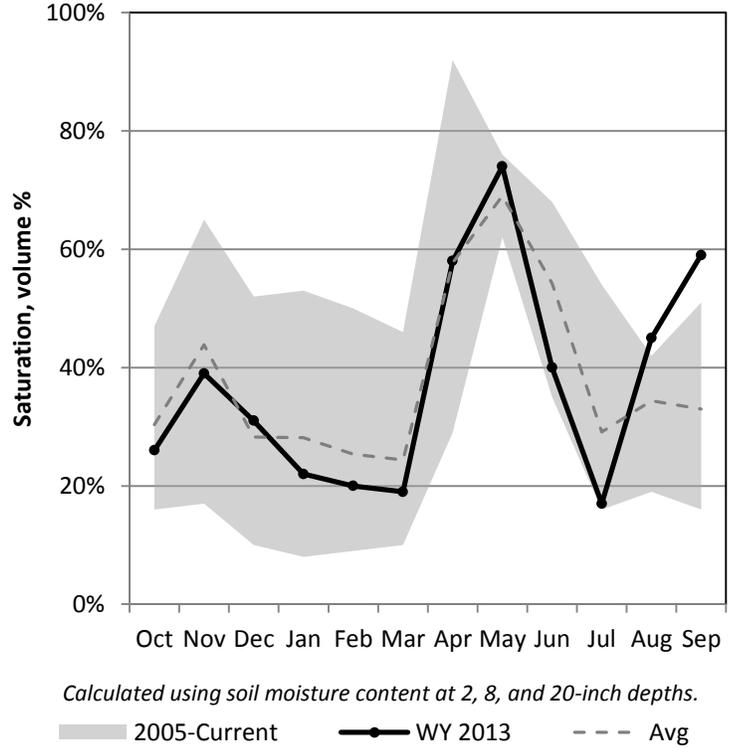
9/1/2013

Precipitation in August was above average at 127%, which brings the seasonal accumulation (Oct-Aug) to 98% of average. Soil moisture is at 59% compared to 51% last year.

Precipitation



Soil Moisture

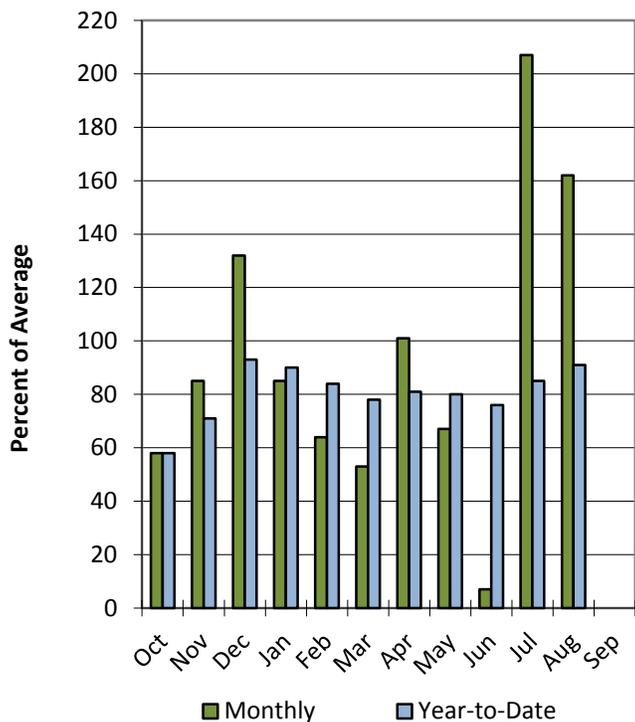


Upper Sevier River Basin

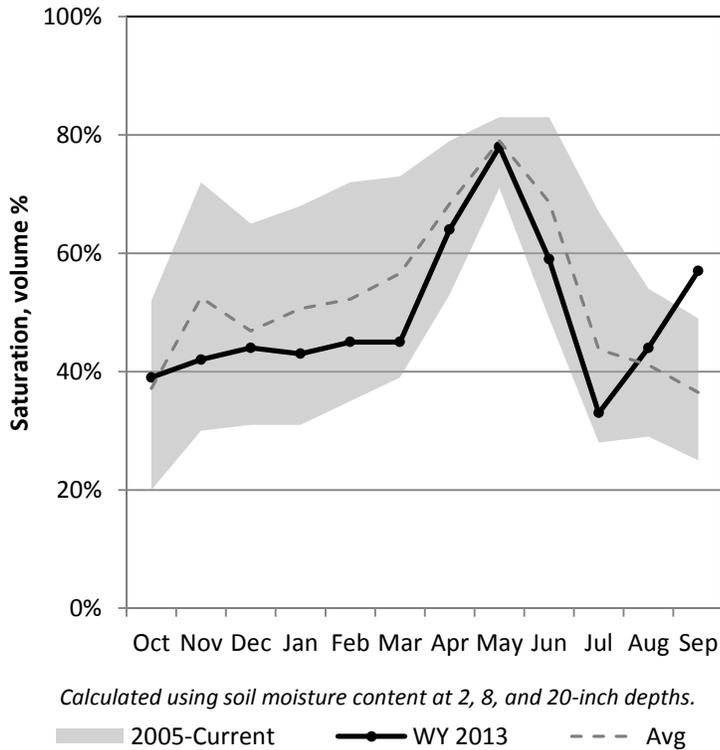
9/1/2013

Precipitation in August was much above average at 162%, which brings the seasonal accumulation (Oct-Aug) to 91% of average. Soil moisture is at 57% compared to 49% last year. Reservoir storage is at 15% of capacity, compared to 33% last year. The water availability index for the Upper Sevier is 23%.

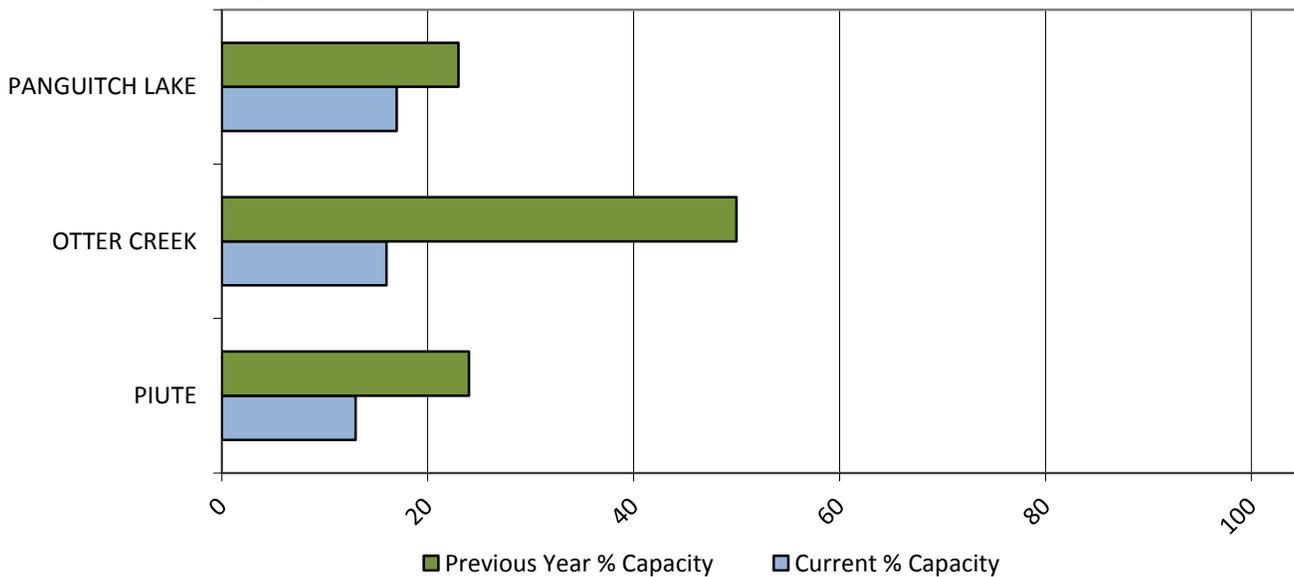
Precipitation



Soil Moisture



Reservoir Storage



September 1, 2013

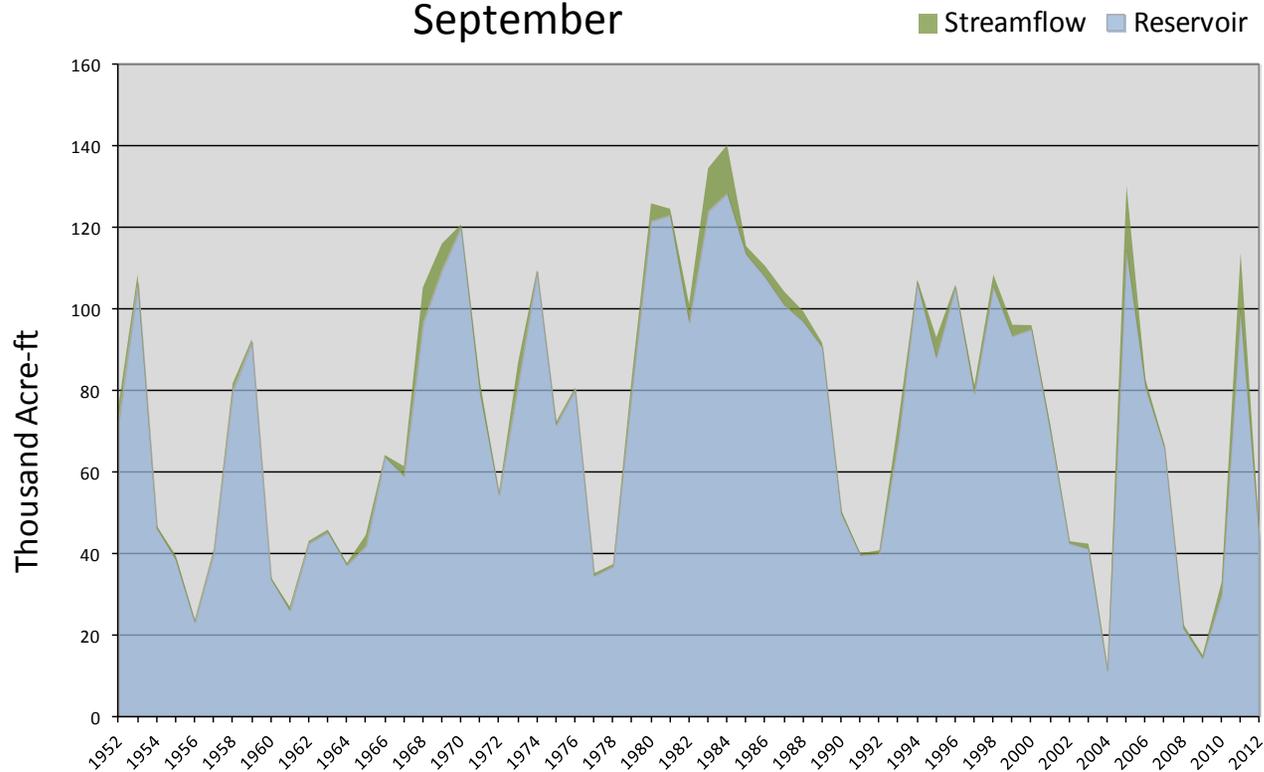
Water Availability Index

Basin or Region	August EOM* Otter Creek and Piute	August accumulated flow at Kingston (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Upper Sevier River	17.5	1.0	18.5	-3.77	5	04, 09, 08, 56

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

Upper Sevier River - Water Availability Index

September

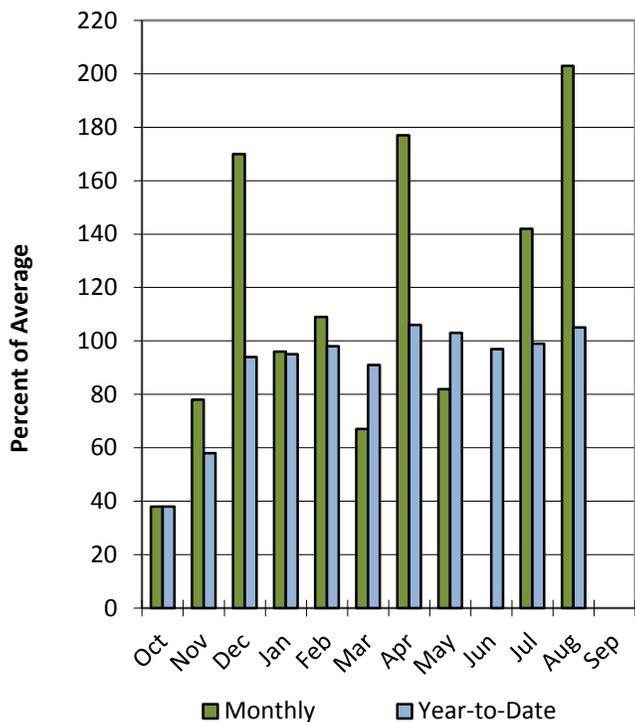


Lower Sevier River Basin

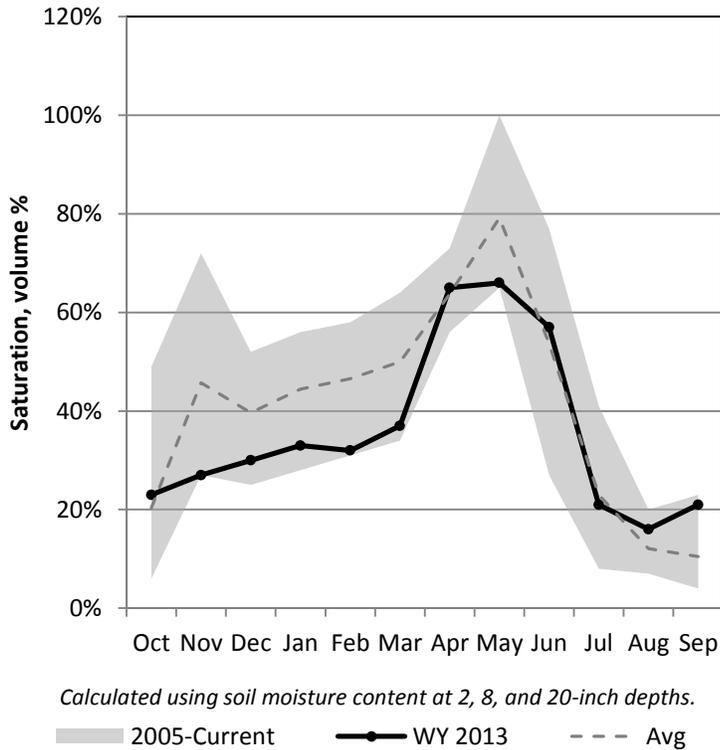
9/1/2013

Precipitation in August was much above average at 203%, which brings the seasonal accumulation (Oct-Aug) to 105% of average. Soil moisture is at 21% compared to 23% last year. Reservoir storage is at 27% of capacity, compared to 40% last year. The water availability index for the Lower Sevier is 8%.

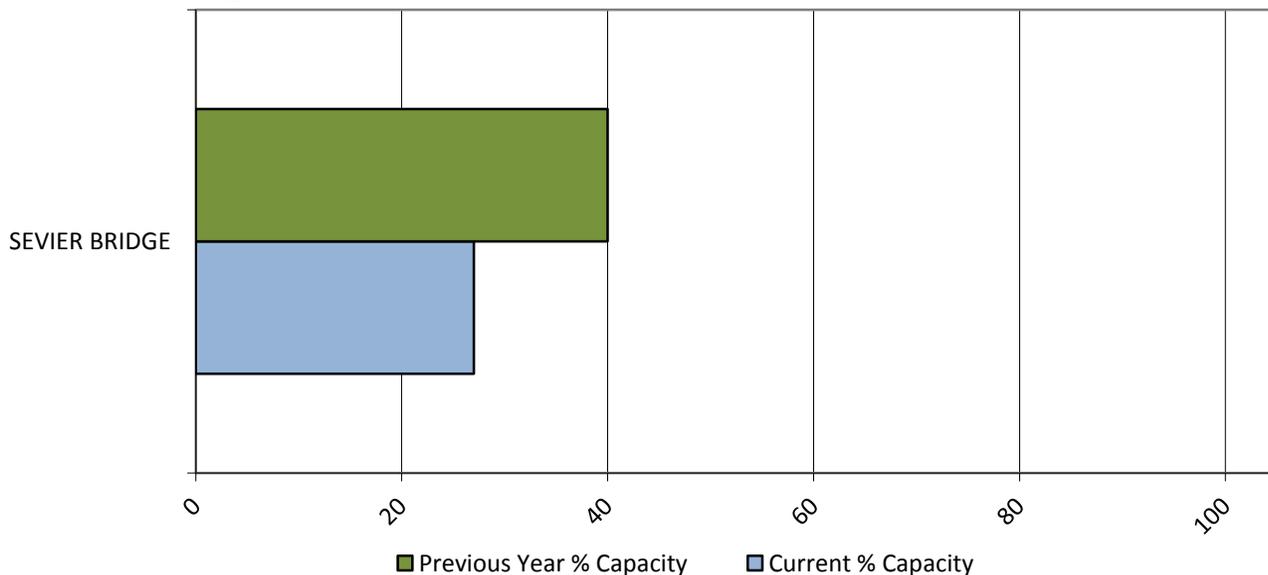
Precipitation



Soil Moisture



Reservoir Storage



September 1, 2013

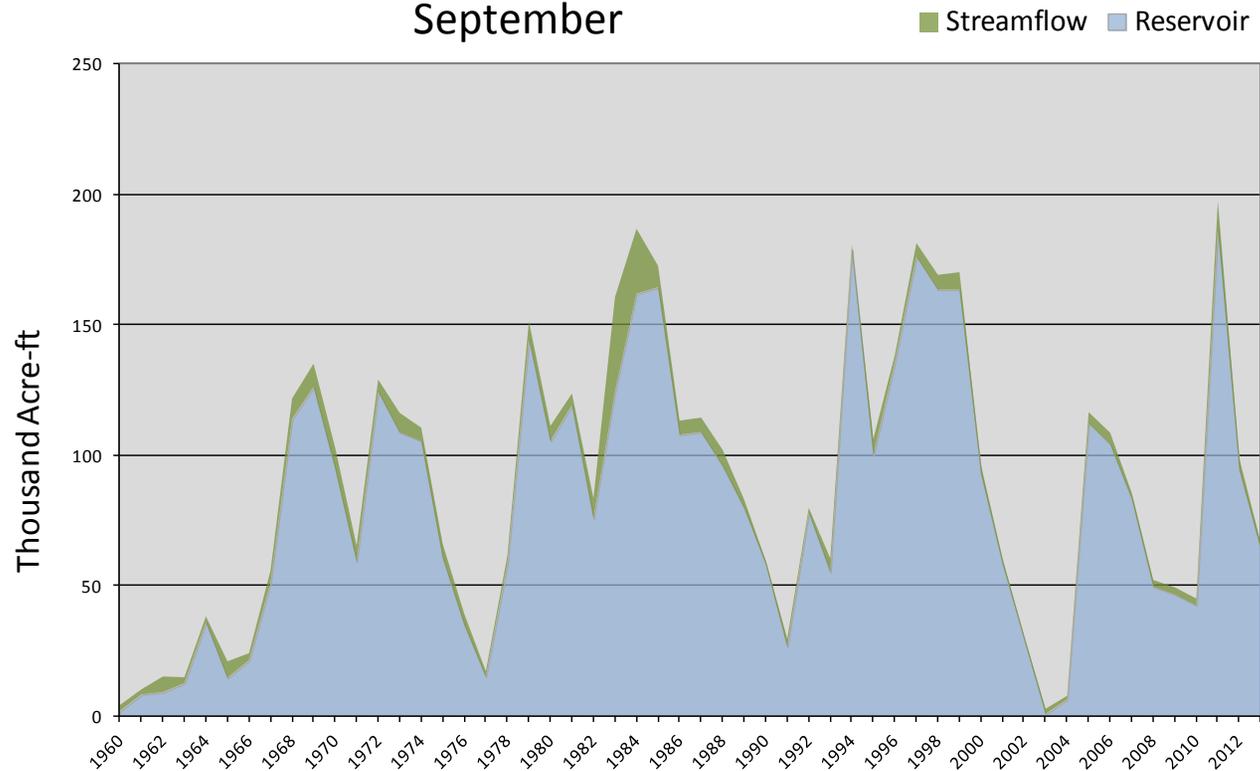
Water Availability Index

Basin or Region	August EOM* Sevier Bridge	August accumulated flow Sevier at Gunnison (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Lower Sevier River	63.8	2.5	66.3	-0.53	44	71, 75, 92, 89

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

Lower Sevier River - Water Availability Index

September

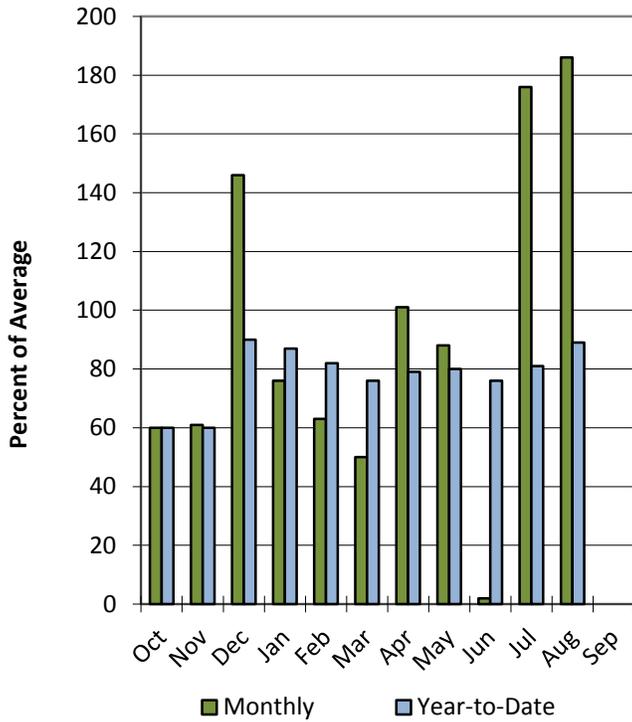


San Pitch River Basin

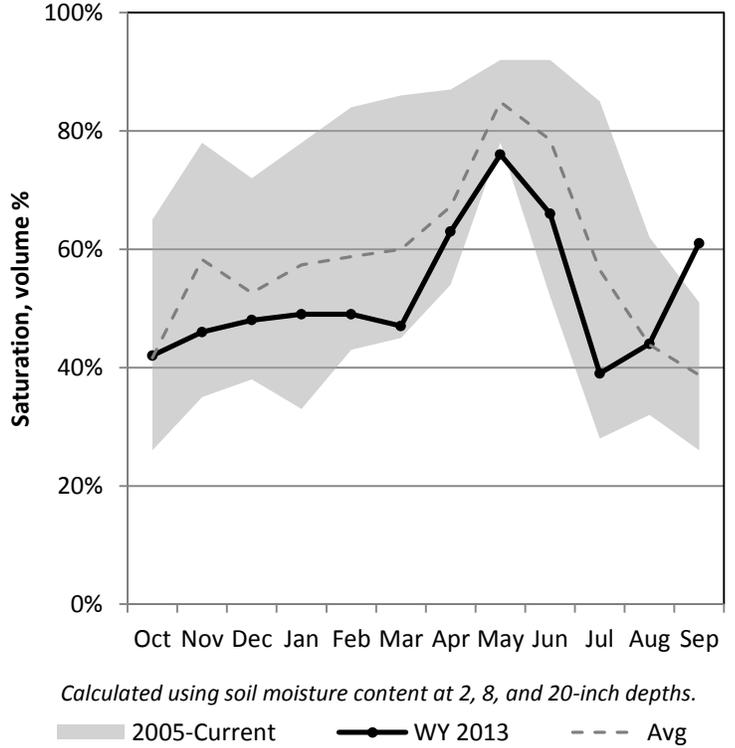
9/1/2013

Precipitation in August was much above average at 186%, which brings the seasonal accumulation (Oct-Aug) to 89% of average. Soil Moisture is at 61% compared to 42% last year. Reservoir storage is at 0% of capacity, compared to 10% last year.

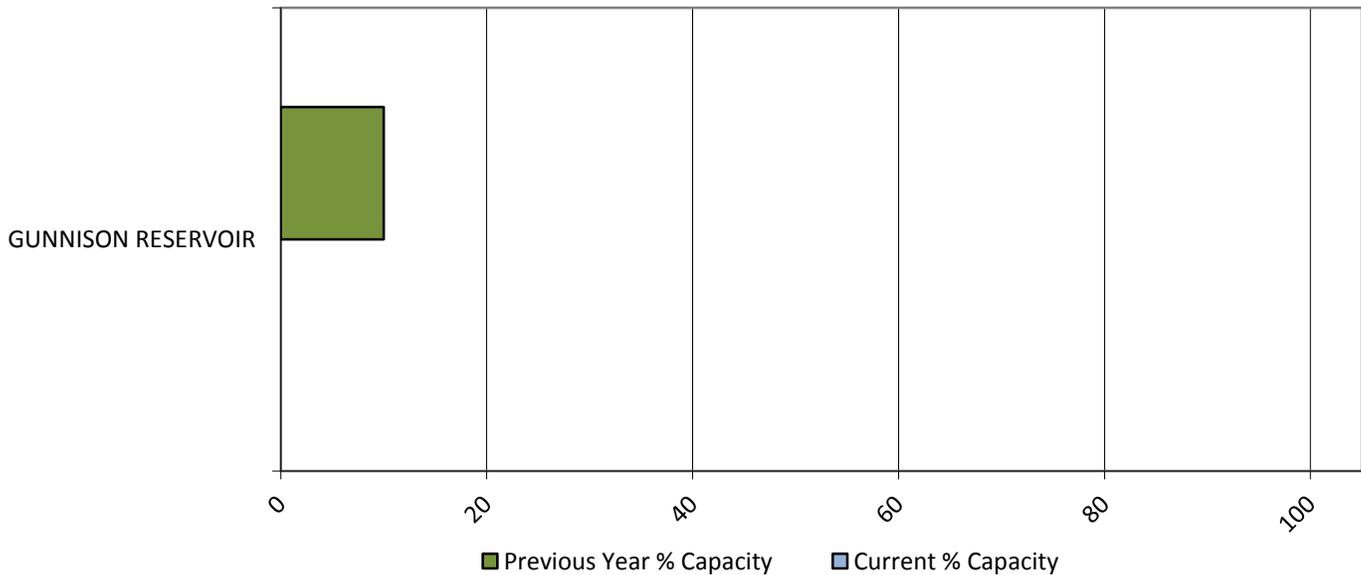
Precipitation



Soil Moisture



Reservoir Storage



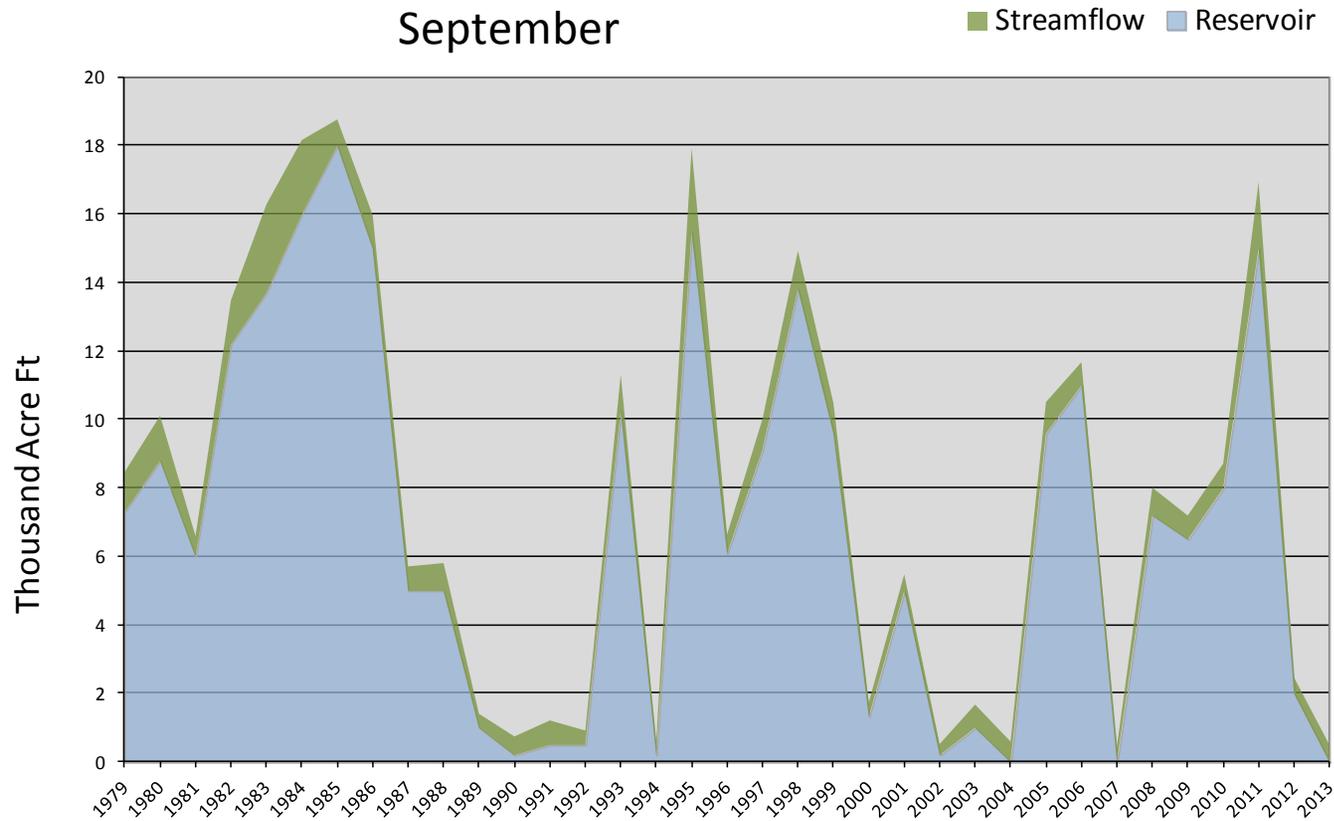
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Gunnison Reservoir	August accumulated flow Manti Creek (observed)	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Manti Creek	0.0	0.5	0.5	-3.70	6	07, 02, 94

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

San Pitch River - Water Availability Index September

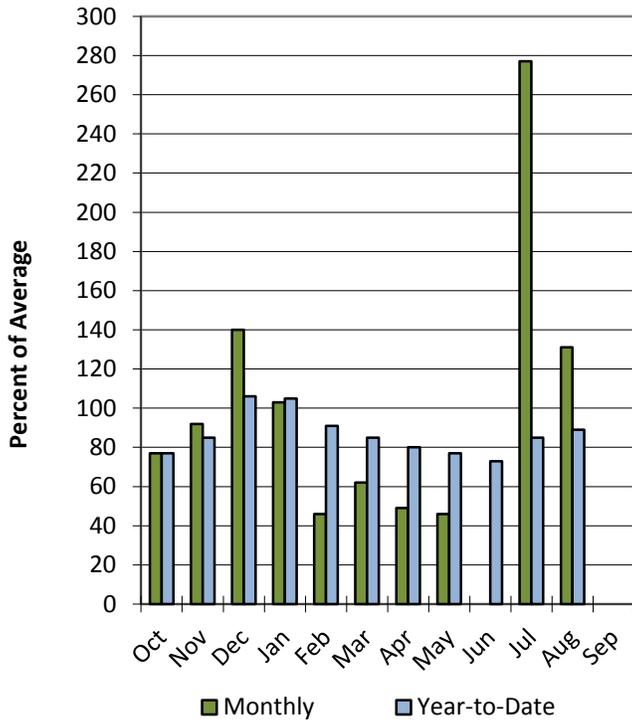


Beaver River Basin

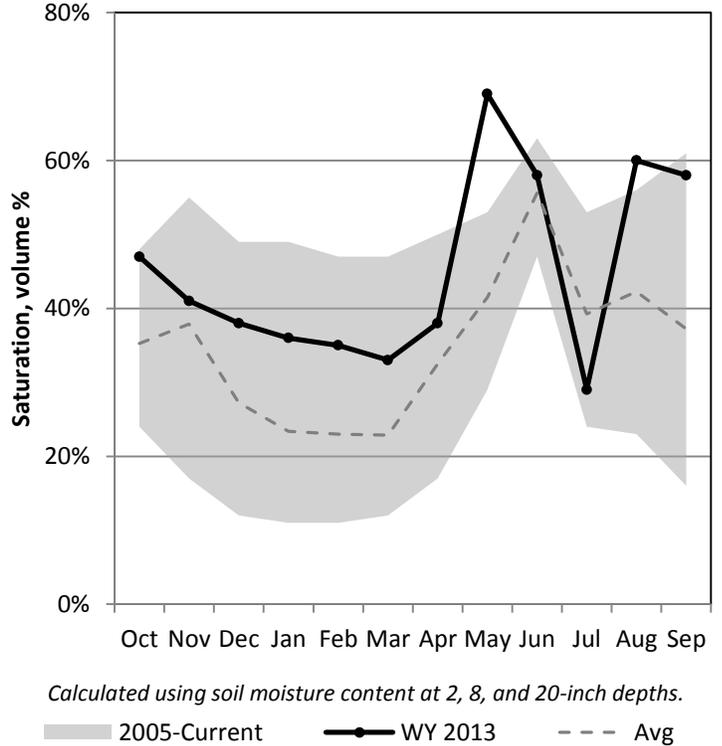
9/1/2013

Precipitation in August was much above average at 131%, which brings the seasonal accumulation (Oct-Aug) to 89% of average. Soil moisture is at 58% compared to 61% last year. Reservoir storage is at 15% of capacity, compared to 30% last year. The water availability index for the Beaver River is 19%.

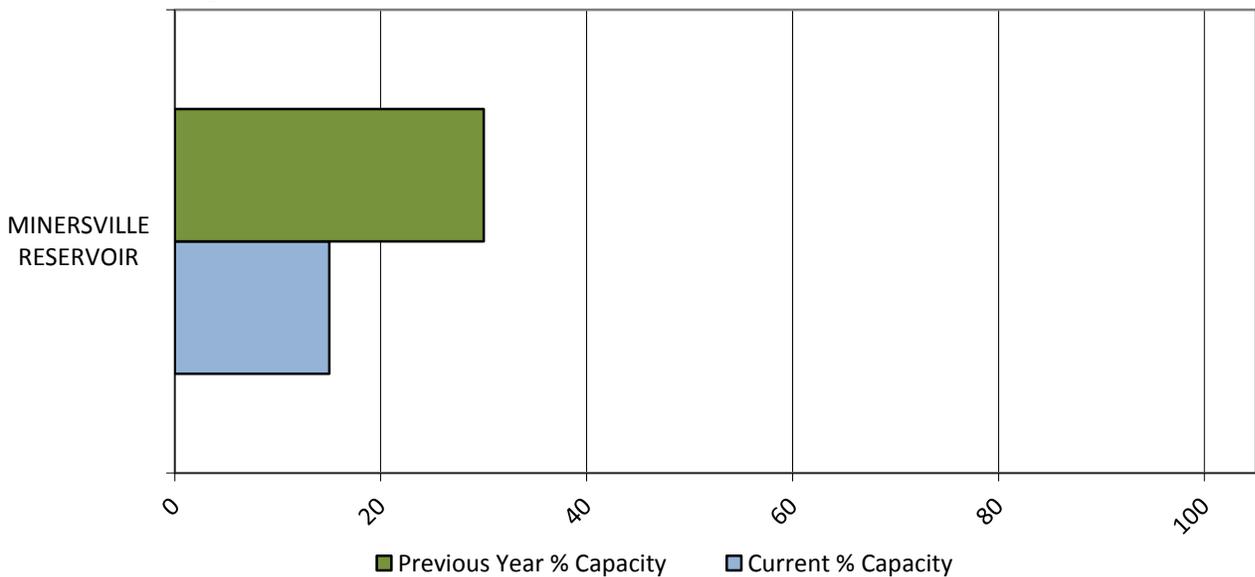
Precipitation



Soil Moisture



Reservoir Storage



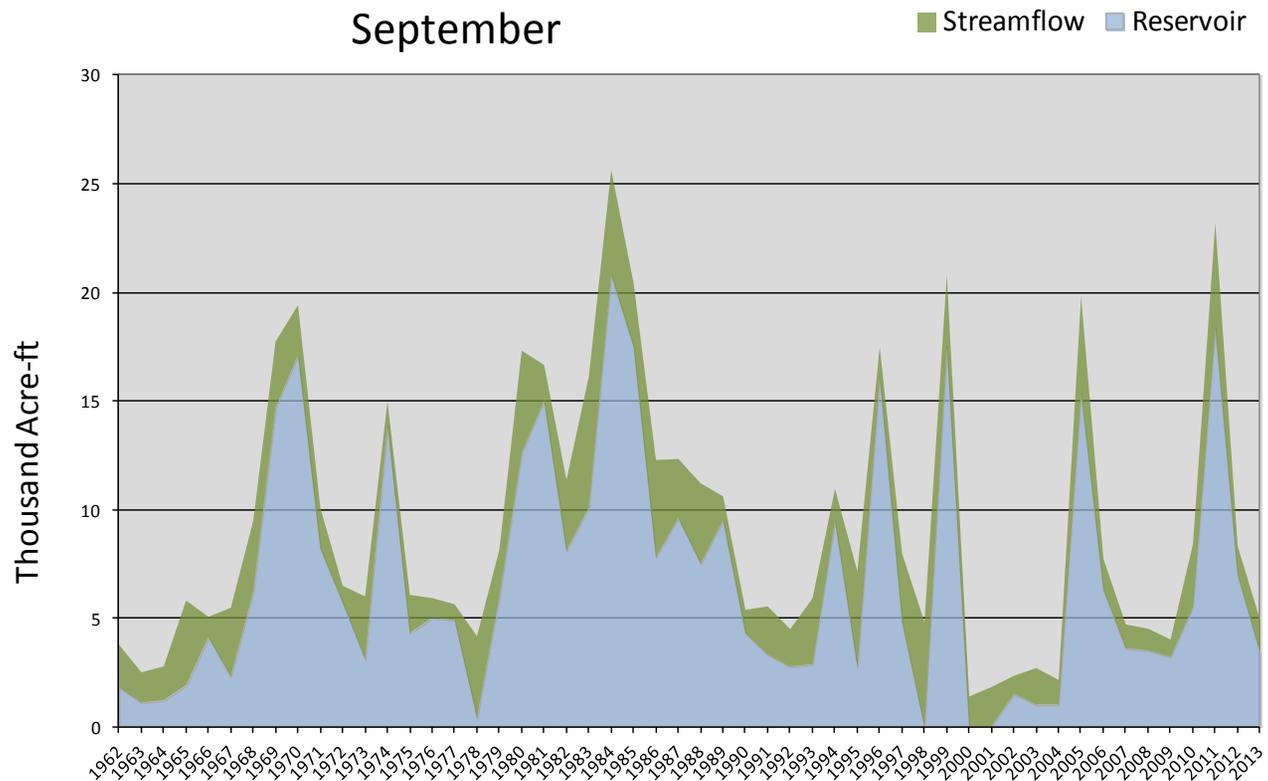
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Minersville Reservoir	August accumulated flow Beaver River at Beaver (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Beaver	3.4	1.5	4.9	-1.81	28	98, 07, 66, 90

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

Beaver River - Water Availability Index September

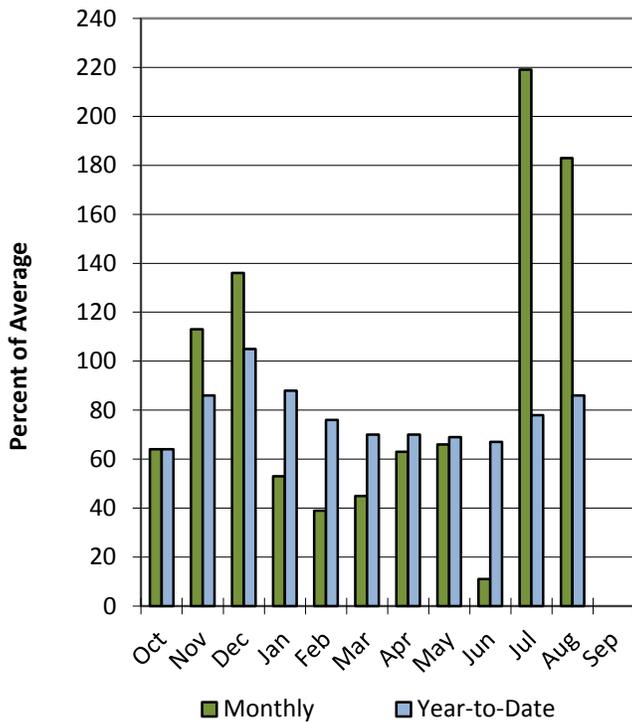


Southwestern Utah Basin

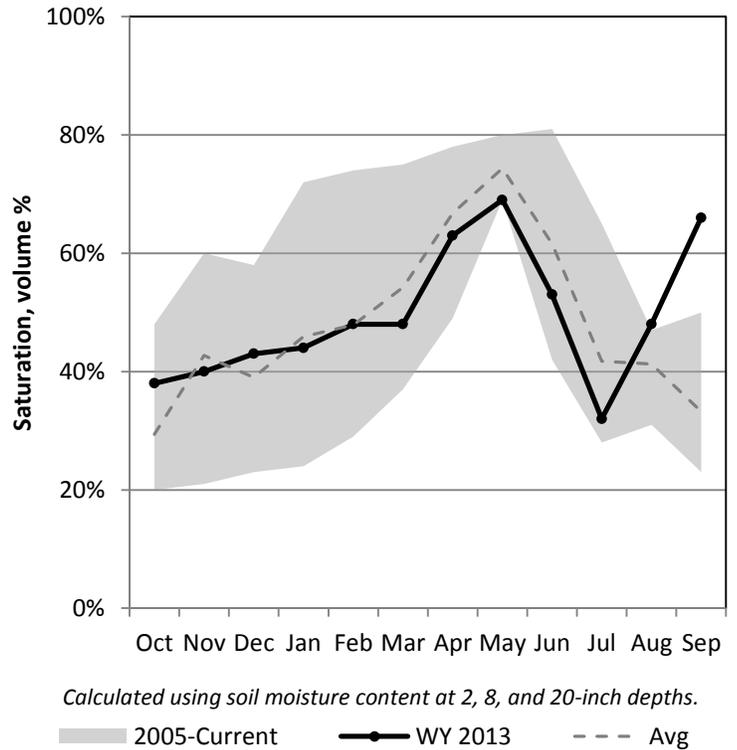
9/1/2013

Precipitation in August was much above average at 183%, which brings the seasonal accumulation (Oct-Aug) to 86% of average. Soil moisture is at 66% compared to 50% last year. Reservoir storage is at 45% of capacity, compared to 58% last year. The water availability index for the Virgin River is 5%.

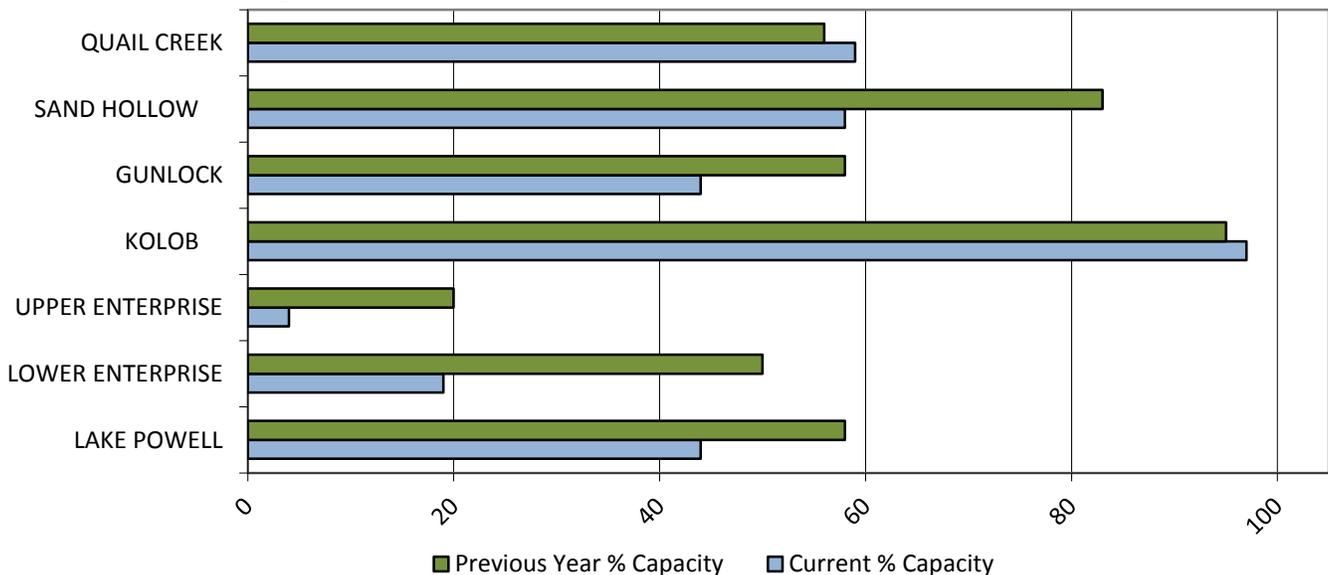
Precipitation



Soil Moisture



Reservoir Storage



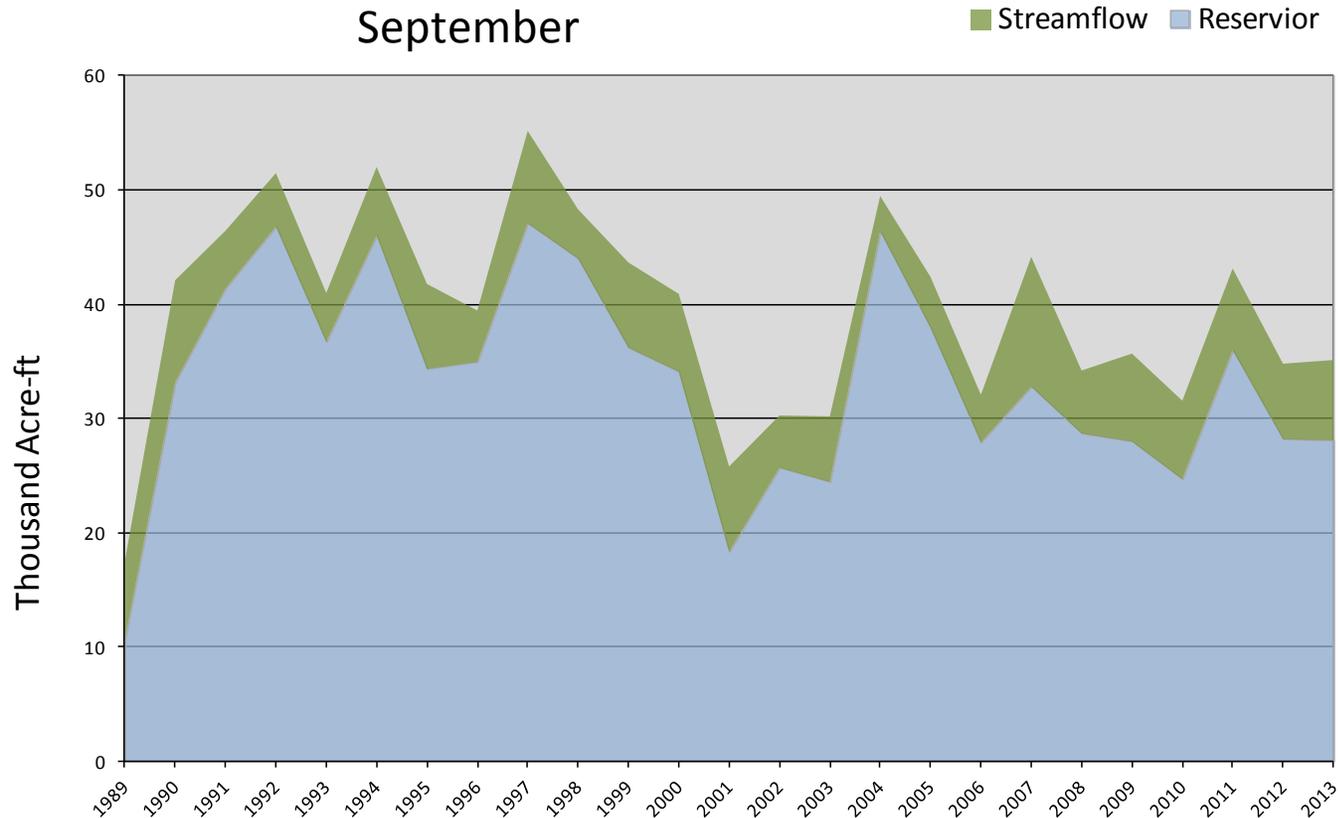
September 1, 2013

Water Availability Index

Basin or Region	August EOM* Reservoir	August accumulated flow Virgin and Santa Clara Rivers (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Southwest	28.1	7.0	35.1	-1.28	35	96, 09, 12, 08

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

Southwest - Water Availability Index September



9/1/2013

Water Availability Index

Basin or Region	August EOM* Reservoirs	Observed August stream flow	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Bear River	582	0	582	-1.20	36	30, 39, 63, 45
Woodruff Narrows	6	4	10	-2.13	24	89, 01, 80, 04
Little Bear	3	1	4	-1.89	27	94, 04, 12, 02
Ogden River	41	3	44	-2.59	19	90, 02, 07, 87
Weber River	152	6	158	-3.43	9	03, 92, 07, 77
Provo	263	4	267	-3.75	5	04, 02
West Uintah Basin	4	3	6	-3.13	13	02, 94, 12, 07
Eastern Uintah	10.8	0.8	12	-3.69	6	02, 89, 04
Blacks Fork	5.4	3.0	8	-1.89	27	01, 12, 07, 04
Smiths Creek	4.9	2.2	7	-2.15	24	04, 90, 12, 92
Price River	15.8	2.0	17.8	-2.29	23	07, 89, 03, 77
Joe's Valley	25.7	2.9	28.6	-3.53	8	02, 90, 92
Moab	0.3	0.3	0.6	-2.62	19	12, 89, 96, 94
Upper Sevier River	18	1	19	-3.77	5	04, 09, 08, 56
San Pitch	0	1	1	-3.70	6	07, 02, 94
Lower Sevier River	64	3	66	-0.53	44	71, 75, 92, 89
Beaver River	3.4	1.5	4.9	-1.81	28	98, 07, 66, 90
Virgin River	28.1	7.0	35.1	-1.28	35	96, 09, 12, 08

*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



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Salt Lake City, UT

