

Utah Climate and Water Report

October 2014



Near Chalk Creek #1 SNOTEL

Photo by Randall Julander, NRCS

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.

Report Content

1) Climate and Water Information – Soil Climate Analysis Network

- a) North Central
- b) Northern Mountains
- c) Uintah Basin
- d) Southeast
- e) South Central
- f) Western and Dixie

2) General Hydrological Conditions

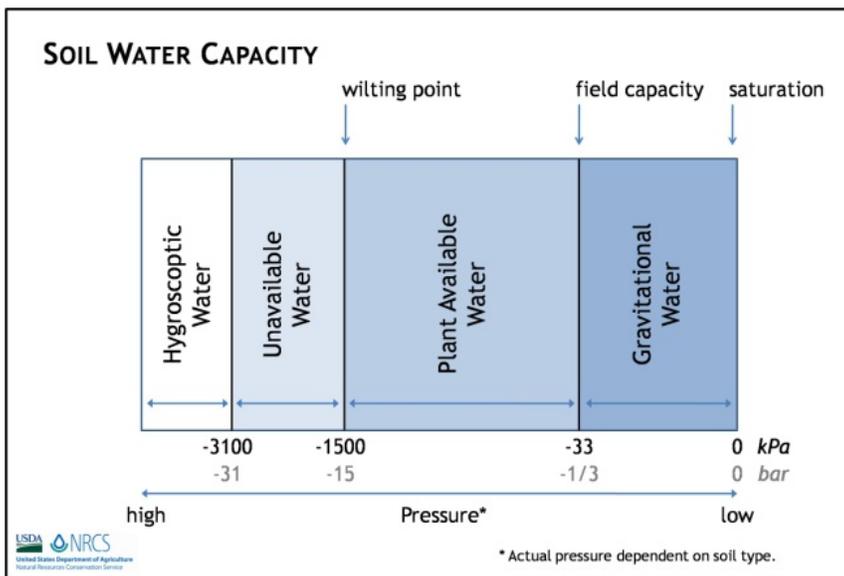
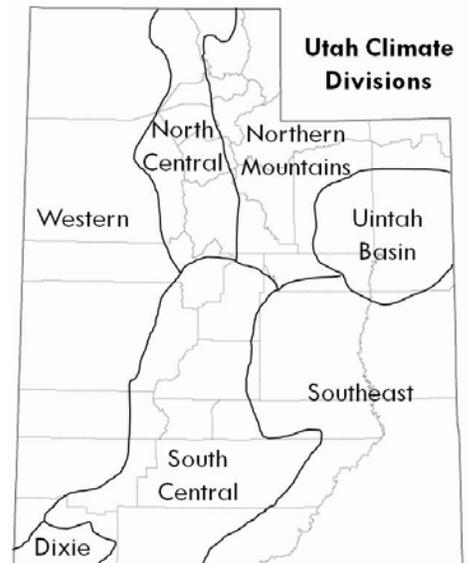
- a) SNOTEL Current Snow Water Equivalent (SWE) % of Normal
- b) SNOTEL Water Year to Date Precipitation
- c) Bear River Basin
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- d) Weber and Ogden River Basins
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 - Water Availability Index

Climate and Water Information

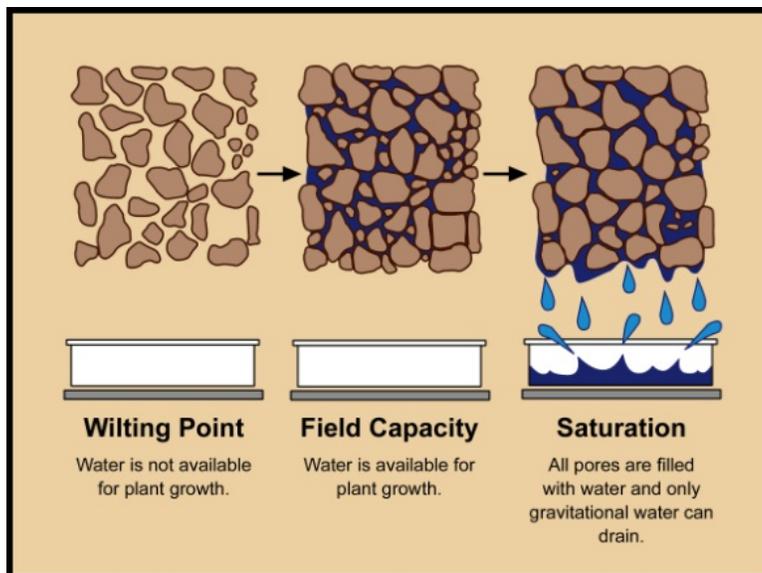
Soil Climate Analysis Network

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.

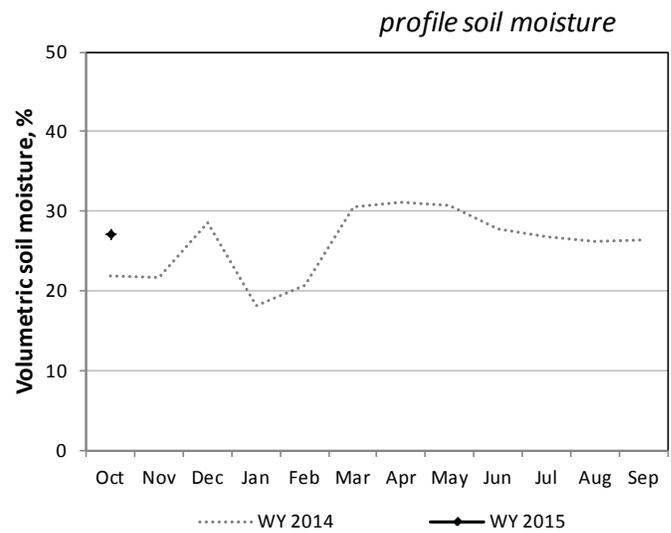
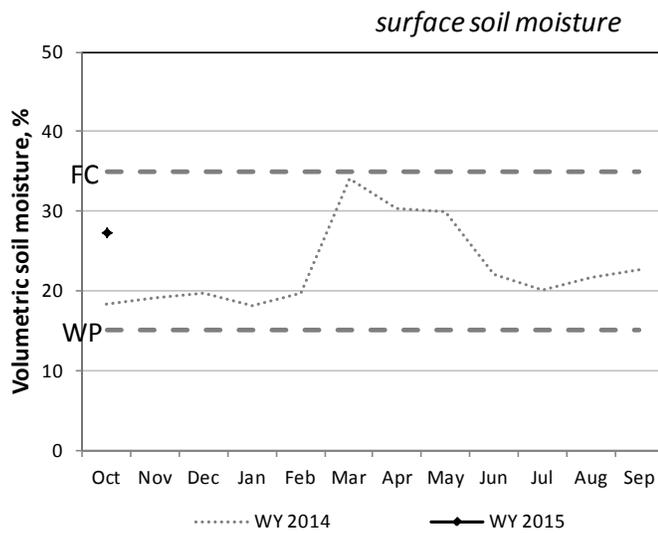
North Central

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	14.5	2.0	34	26	20	22	19	52	56	59	61	63
Cache Junction	20.0	3.5	40	36	32	30	37	57	59	60	60	60
Grantsville	11.4	1.1	16	18	26	27		58	62	65	67	68

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

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.

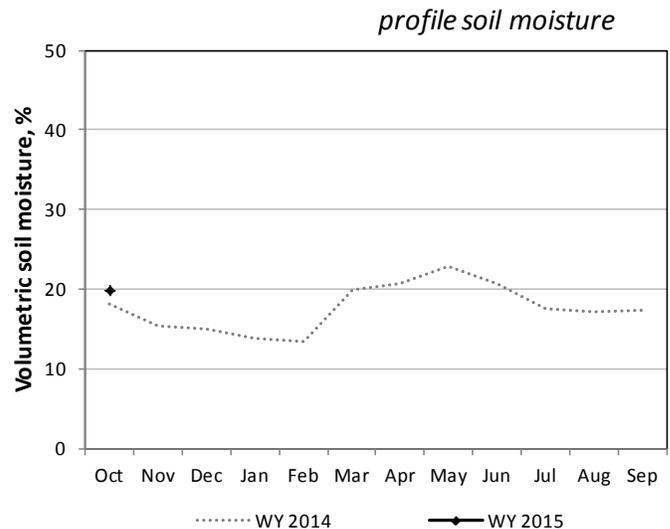
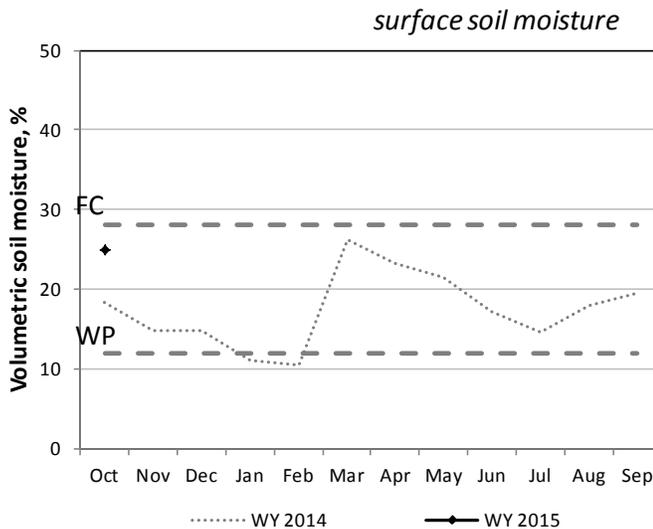
Northern Mountains

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	15.1	4.0	20	22	26	14	11	45	47	48	51	53
Buffalo Jump	13.8	3.3	19	23	21	8	-	49	51	52	56	-
Morgan	19.8	3.2	29	27	32	36	20	53	54	58	60	61

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

Northern Mountains



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

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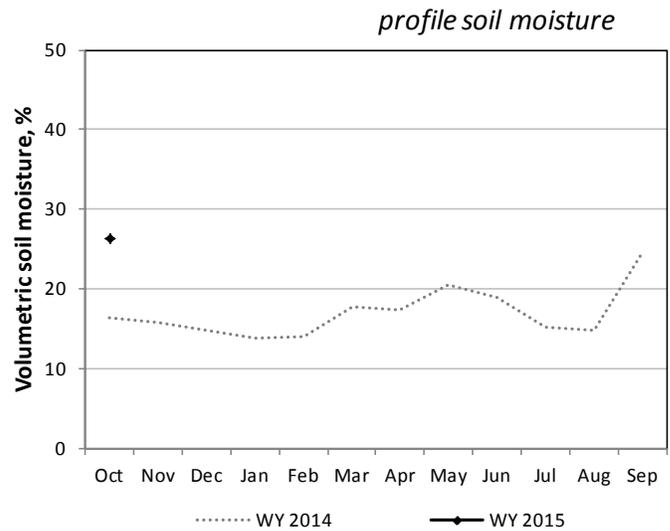
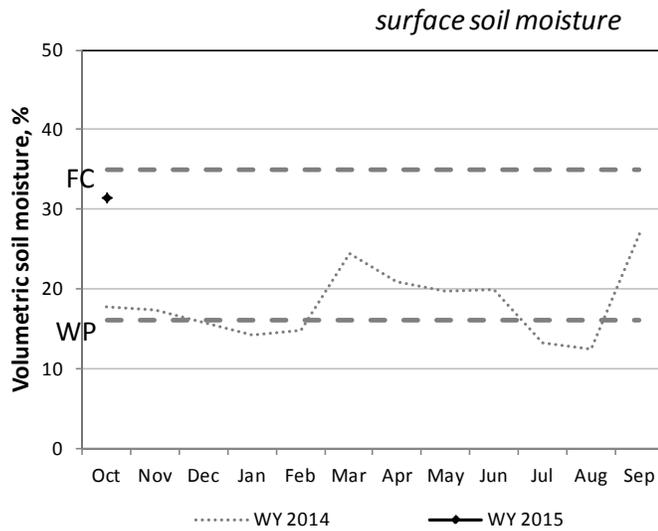
Uintah Basin

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
UINTAH BASIN												
Mountain Home	11.2	3.2	28	26	22	13	7	50	49	51	55	63
Little Red Fox	9.7	3.1	38	36	46	43	43	47	52	53	55	57
Split Mountain	10.4	2.3	20	33	30	24	14	54	56	61	64	66

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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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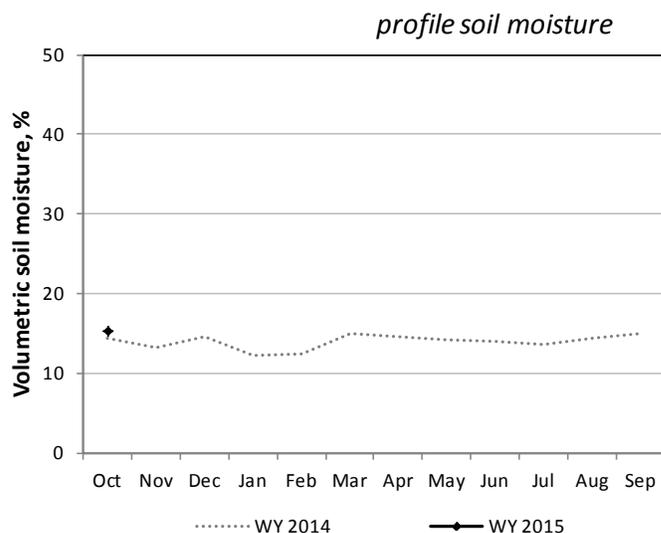
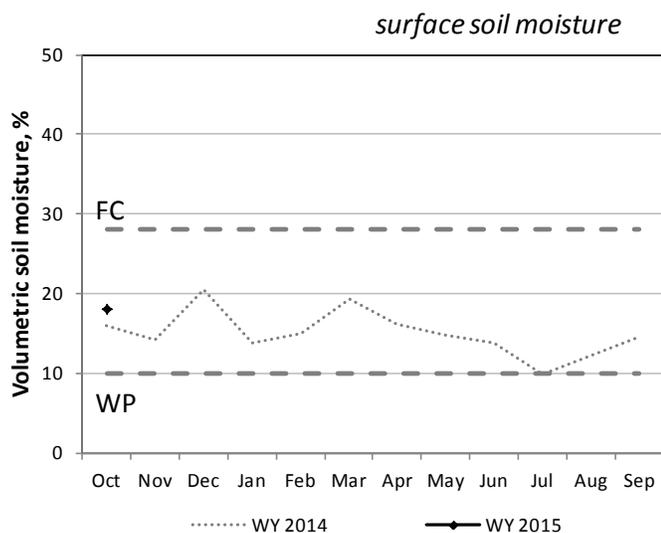
Southeast

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"
			in.					in.				
			volume %					° F				
SOUTHEAST												
Price	9.0	2.1	10	19	16	16	20	55	58	61	64	66
Green River	7.5	1.7	14	12	8	7	9	59	59	63	67	70
Harm's Way	13.5	2.2	15	15	23	14	6	53	50	57	61	63
West Summit	13.0	2.6	22	28	22	15	17	50	52	56	57	60
Eastland	12.5	4.0	25	23	20	23	21	55	57	58	61	63
Alkali Mesa	12.8	3.3	17	10		17	20	54	57	62	64	66
McCracken Mesa	10.2	2.3	23	26	24	16	14	56	62	64	67	70

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Southeast



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

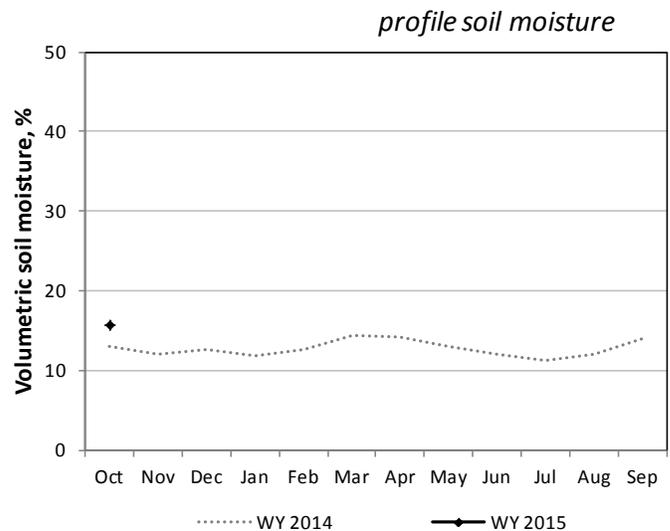
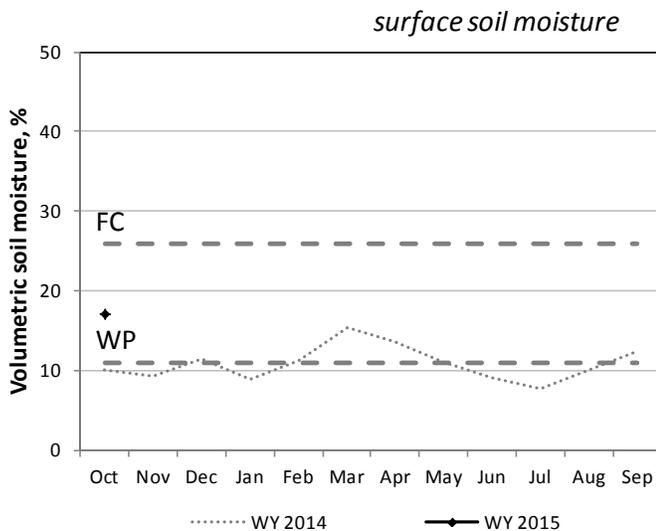
South Central

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTH CENTRAL												
Nephi	13.2	2.5	25	25	16	7	6	59	60	61	63	64
Ephraim	11.3	2.1	30	37	33	40	38	53	56	58	62	63
Holden	10.2	2.3	11	12	4	12	14	60	61	62	65	68
Milford	9.9	3.0	26	31	27	29	18	57	60	60	63	66
Manderfield	13.6	3.2	26	26	12	12	5	57	58	58	60	61
Cirleville	10.6	4.6	10	30	18	9	16	51	54	57	60	62
Panguitch	11.9	4.1	21	32	25	20	33	51	51	52	54	54
Cave Valley	15.4	4.1	5	7	8	6	8	55	56	59	61	61
Vermillion	15.7	3.4	2	10	10	8	8	46	48	53	56	60
Spooky	7.0	1.0	3	2	3	12	2	63	62	64	68	69

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

South Central



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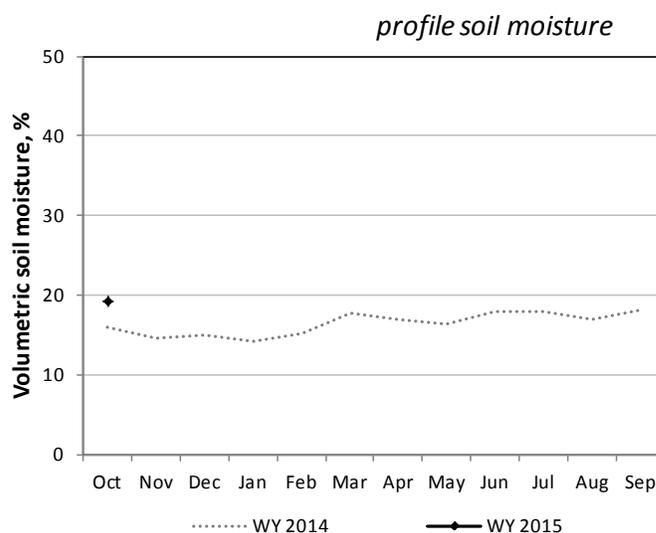
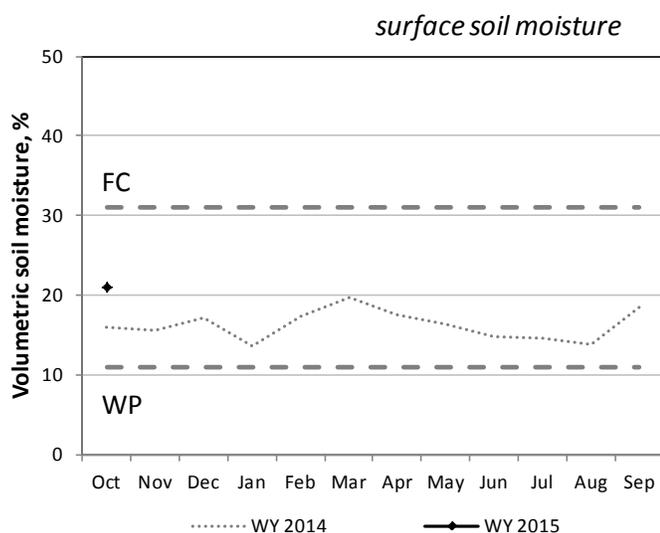
Western and Dixie

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
WESTERN												
Grouse Creek	15.1	2.2	14	21	13	16	17	47	51	55	58	60
Park Valley	9.8	1.7	10	14	20	44	24	52	56	60	62	64
Goshute	12.0	1.5	18	1	50	50	36	51	54	58	60	64
Dugway	7.7	1.7	29	34	38		14	55	59	62	66	66
Tule Valley	6.6	1.6	20	18	24	13	10	58	63	67	68	72
Hal's Canyon	7.7	1.8	10	13	18	11	10	57	59	62	63	67
Enterprise	11.4	3.0	14	40	34	14	16	55	62	62	64	67
DIXIE												
Sand Hollow	11.4	1.8	6	6	6	1	1	65	68	71	71	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.

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

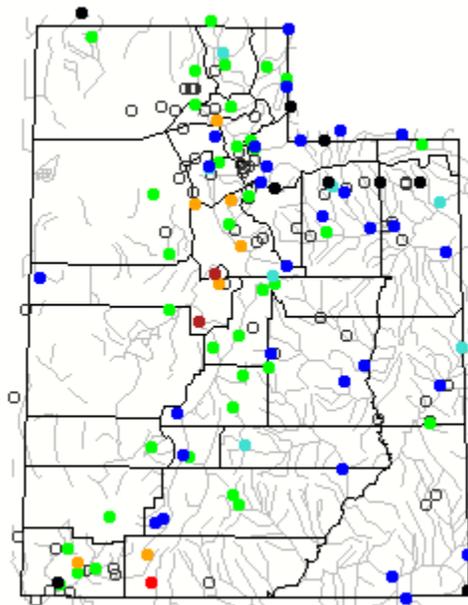
October 1, 2014

Current Conditions

Stream flow in across the state is above average with few exceptions – due to consistent above average precipitation from July through the end of September. Summer recap – June was hot and miserably dry: what we expect and normally get here in Utah, July through September – 150% to 350% of average... or wow! Where did that come from? It's been an exceptional summer for precipitation, soil moisture and runoff. So good in fact that some farmers are praying the rain will stop long enough to cut, dry and bale some hay. Currently many reservoirs have inflows exceeding outflow and are slowly banking some water for next year. Soil moisture at both the valley and the mountain areas is exceptionally high for this time of year – at many sites, the upper foot of soil moisture is similar in magnitude of snowmelt periods, near saturation. Evapotranspiration is rapidly declining as the trees and vegetation lose leaves and die back for the winter season and it is highly probable that much of this current soil moisture will prep the soils for runoff next spring.

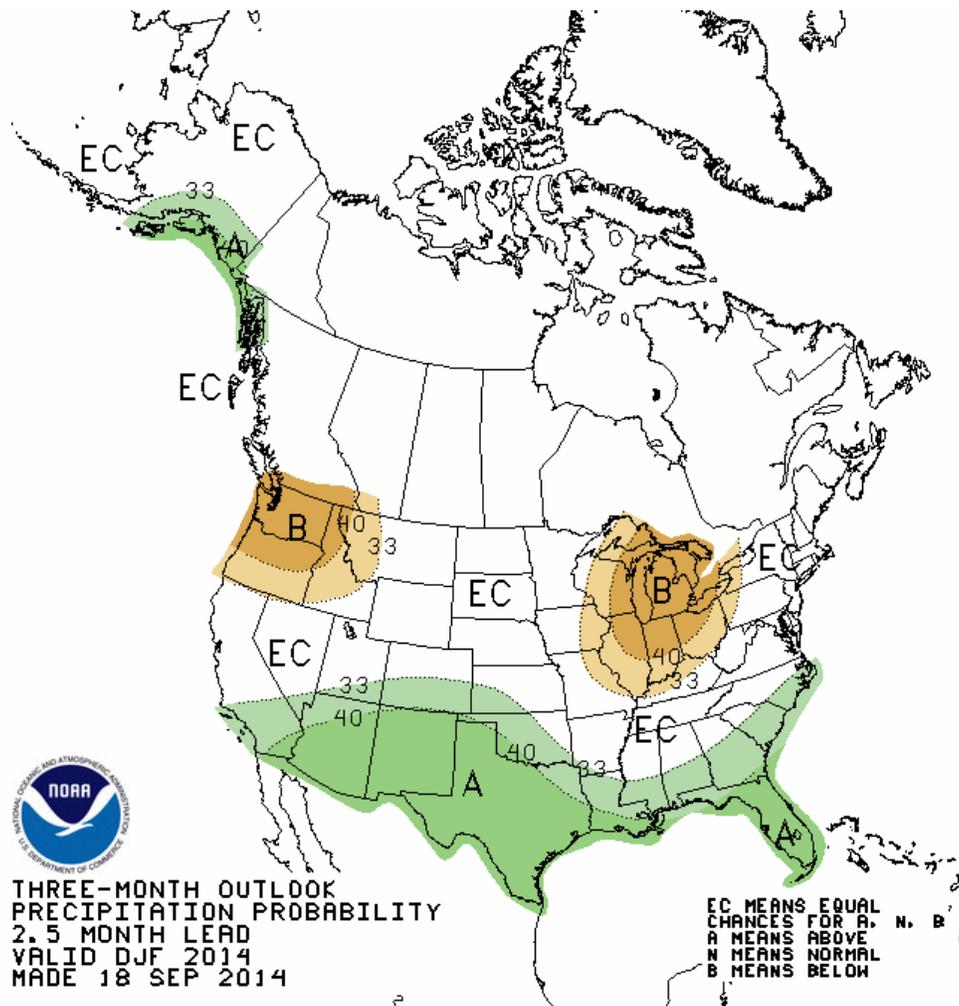
Current Utah Stream flow - Courtesy US Geological Survey

Tuesday, September 30, 2014 13:30ET



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

Precipitation probabilities for Dec-Feb – Courtesy of the Climate Prediction Center, NOAA



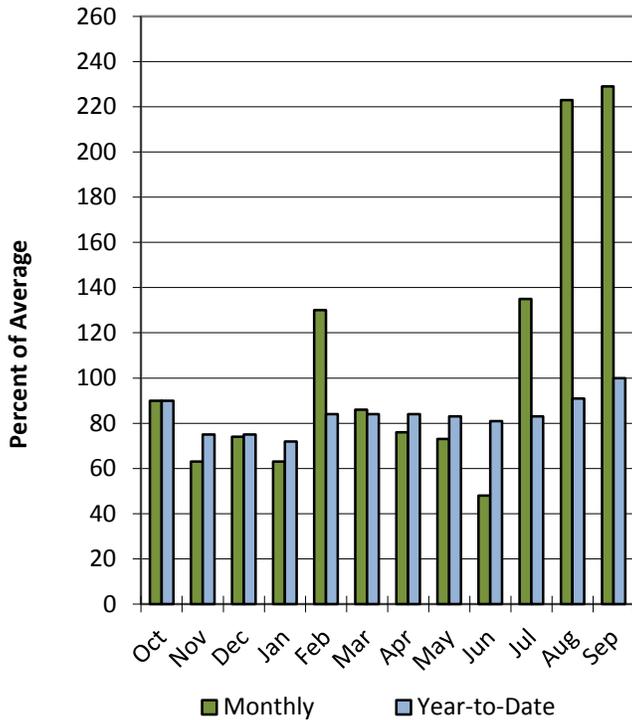
This graphic from the Climate Prediction Center shows expected precipitation for December through February of this new water year with much of Utah in the EC (equal chances) category meaning any outcome is likely and a small segment of southern/southeastern Utah in the A category, a higher probability of above normal precipitation.

Statewide Utah

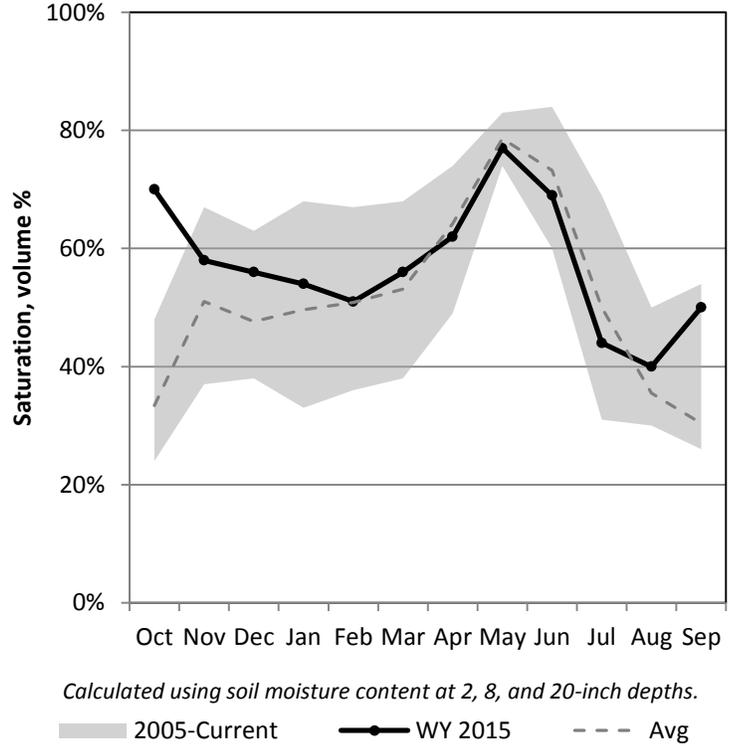
10/1/2014

Precipitation in September was much above average at 229%, which brings the seasonal accumulation (Oct-Sep) to 100% of average. Soil moisture is at 70% compared to 32% last year. Reservoir storage is at 55% of capacity, compared to 55% last year.

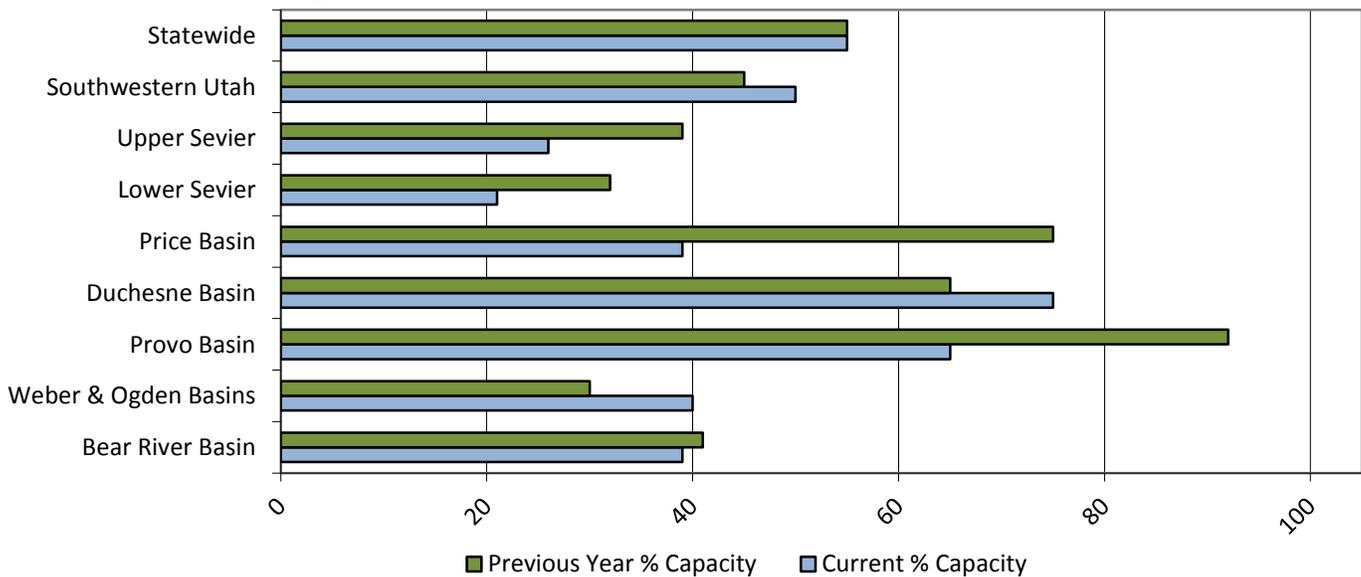
Precipitation



Soil Moisture



Reservoir Storage

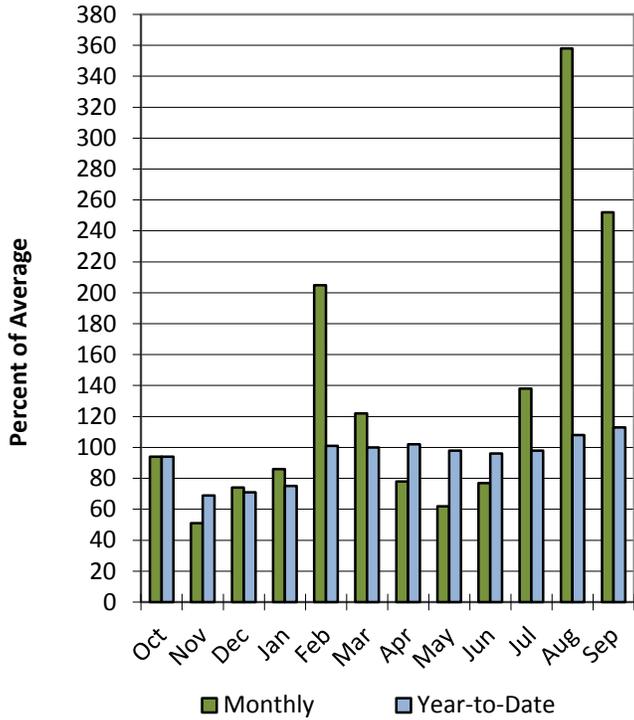


Bear River Basin

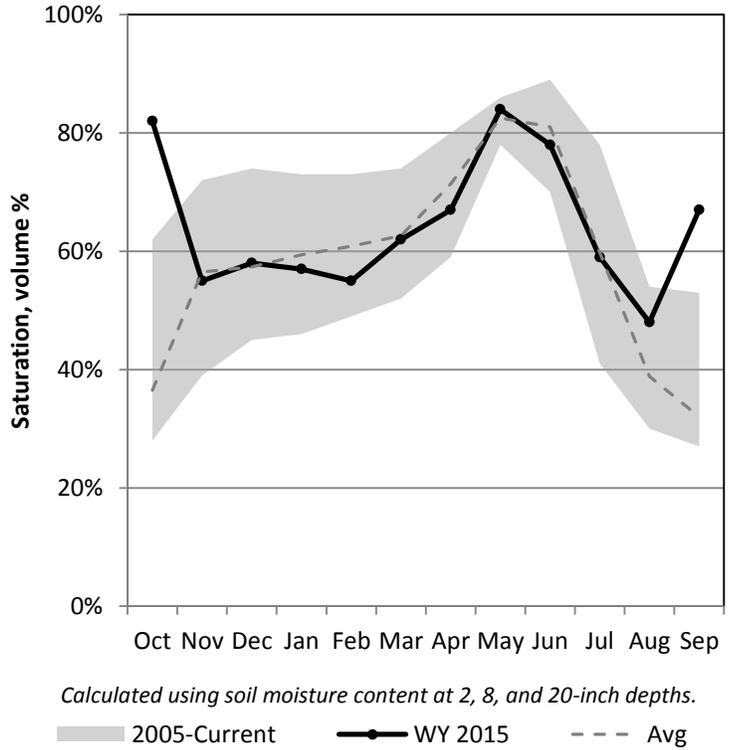
10/1/2014

Precipitation in September was much above average at 252%, which brings the seasonal accumulation (Oct-Sep) to 113% of average. Soil moisture is at 82% compared to 33% last year. Reservoir storage is at 39% of capacity, compared to 41% last year. The water availability index for the Bear River is 49%.

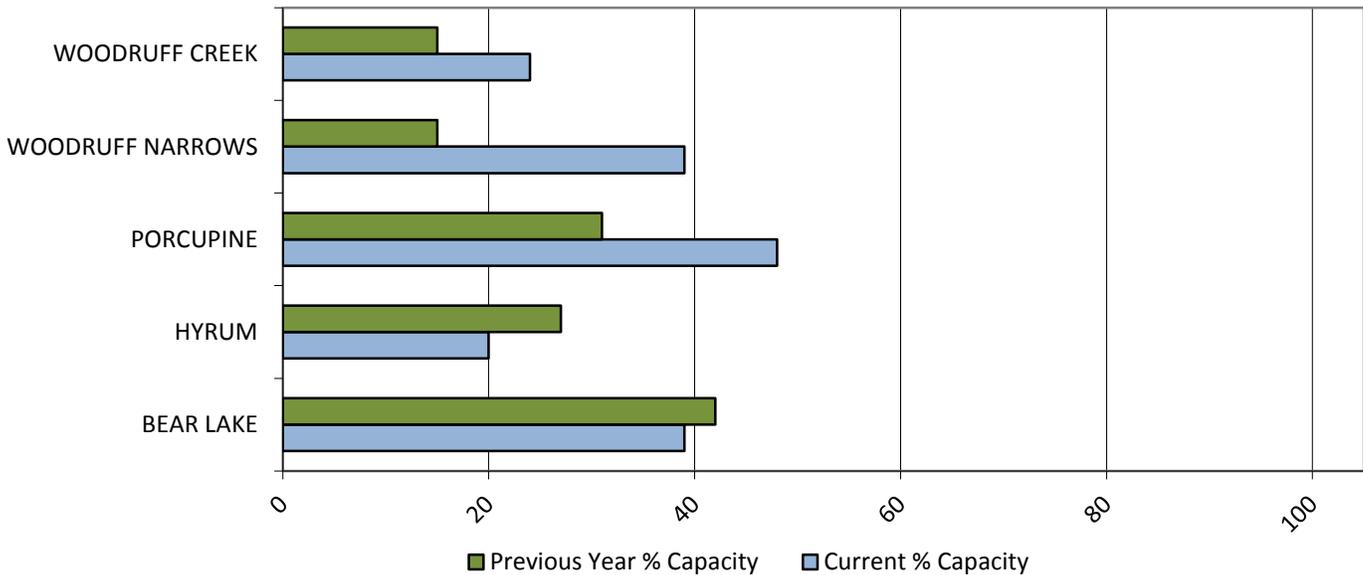
Precipitation



Soil Moisture



Reservoir Storage

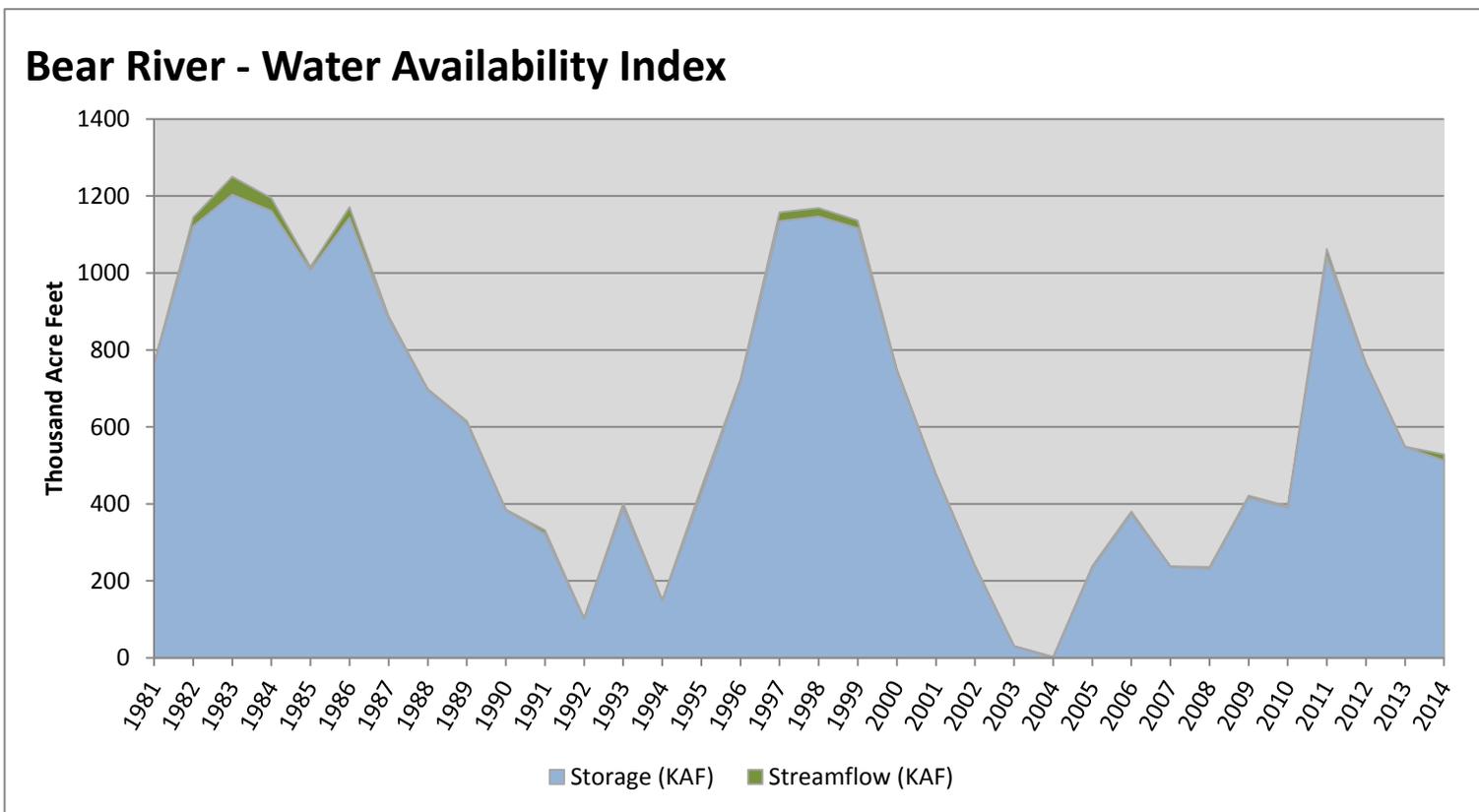


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	512.64	16.05	528.69	49	-0.12	95, 01, 13, 89

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

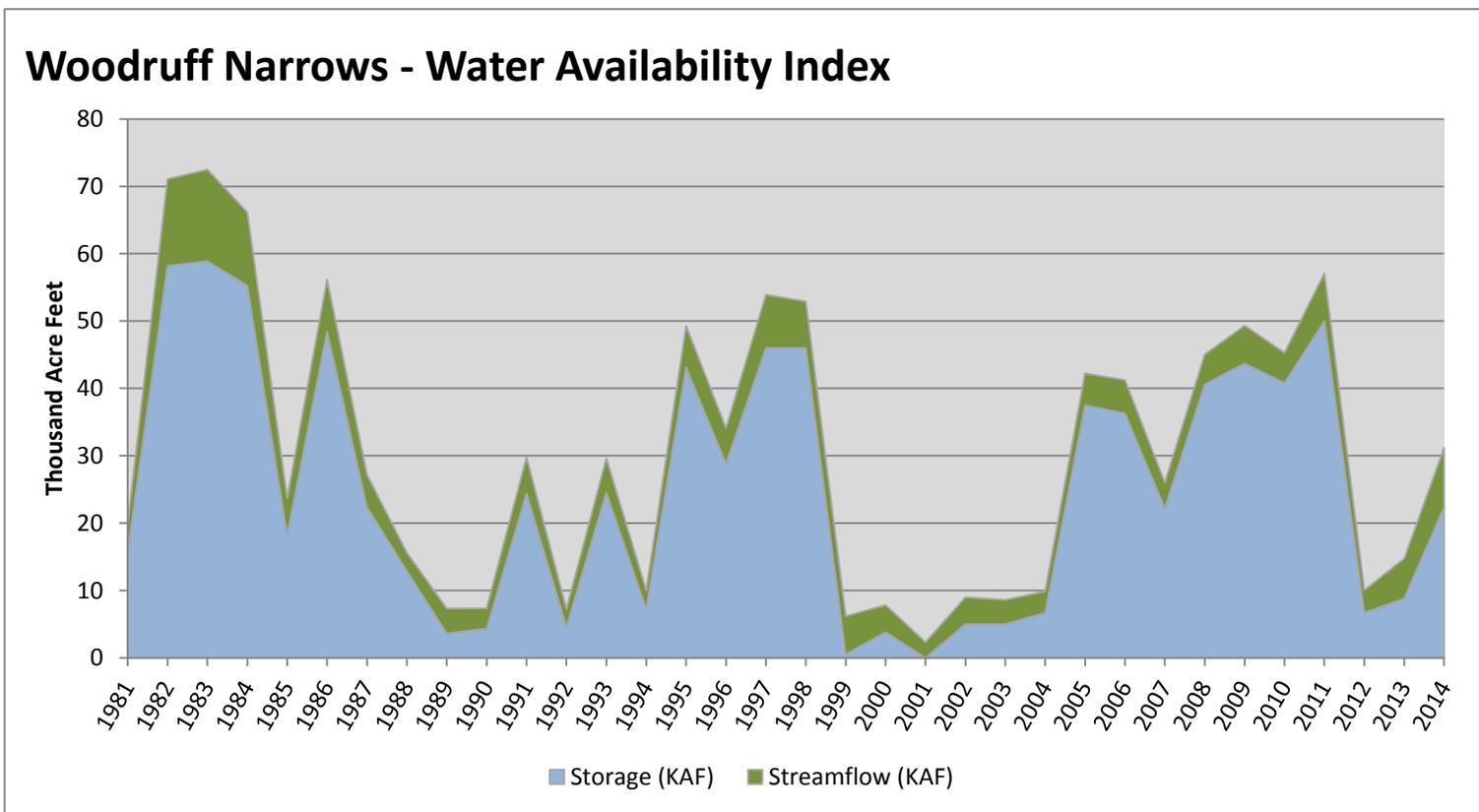


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	22.38	8.79	31.17	57	0.6	93, 91, 96, 06

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

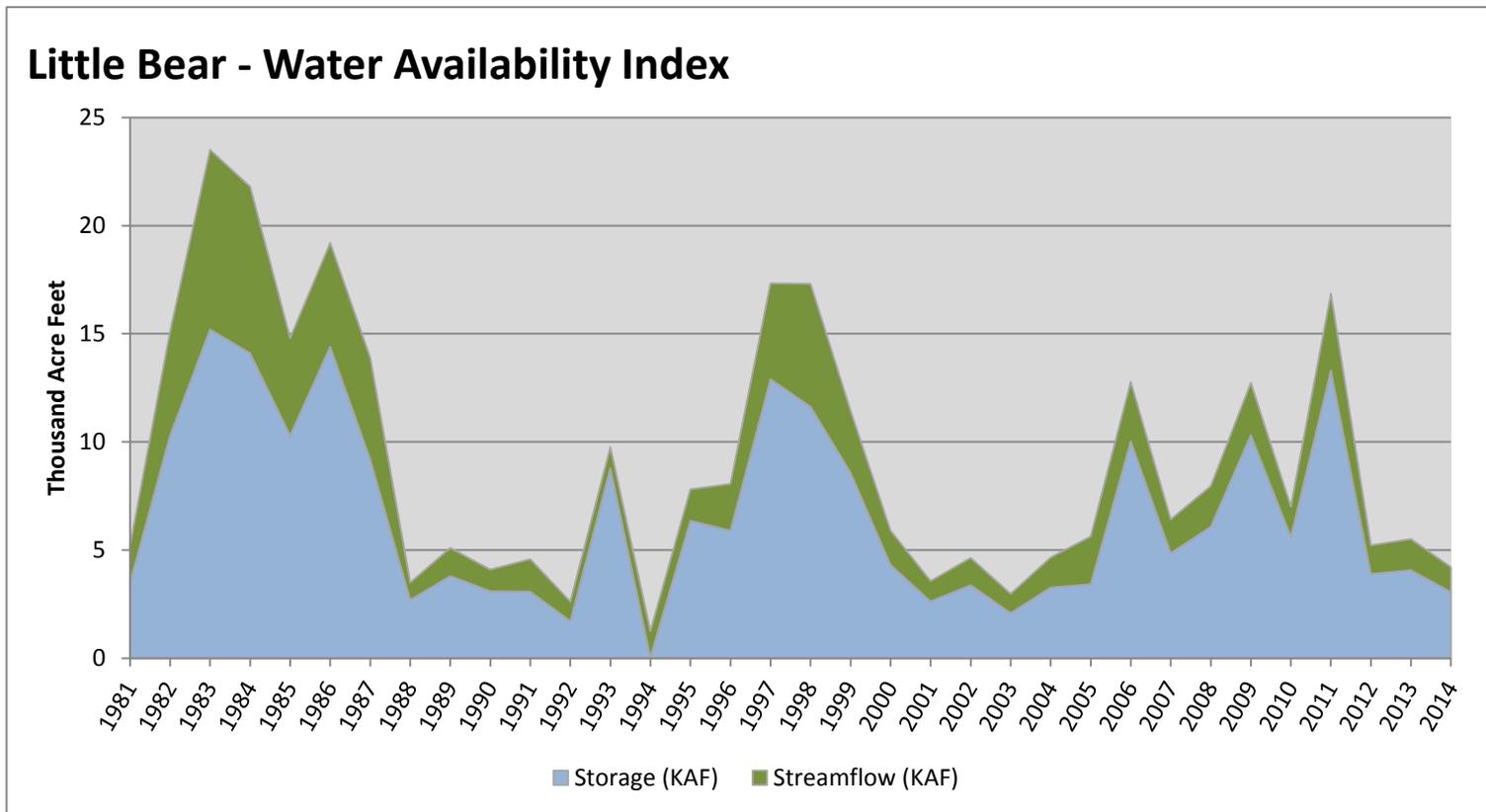


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	3.06	1.15	4.21	20	-2.5	01, 90, 91, 02

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

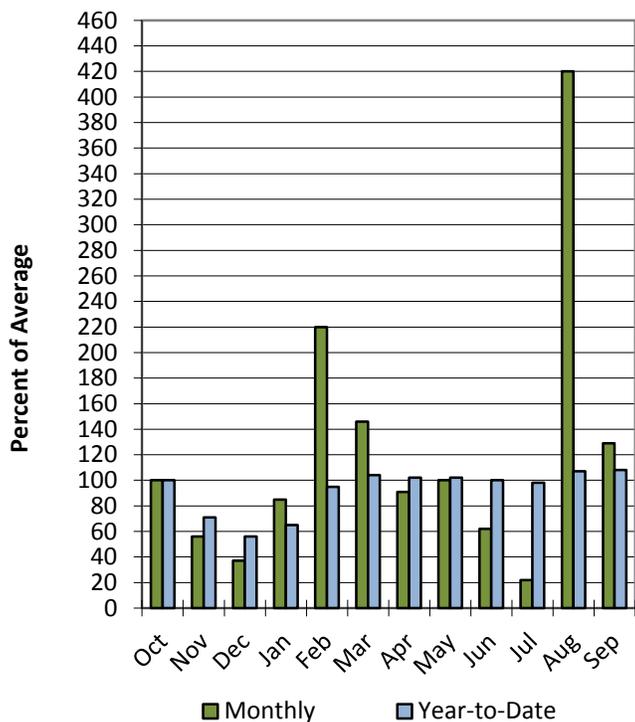


Raft River Basin

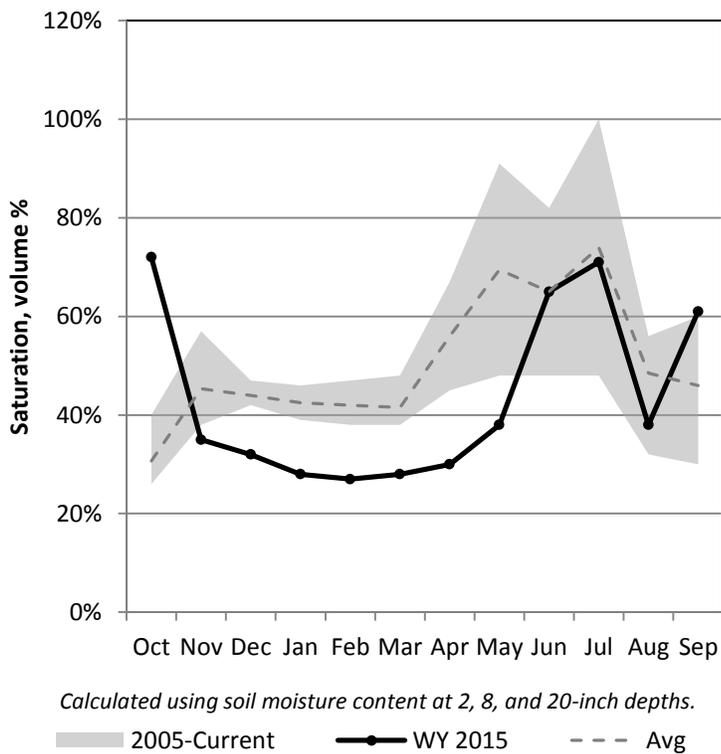
10/1/2014

Precipitation in September was above average at 129%, which brings the seasonal accumulation (Oct-Sep) to 108% of average. Soil moisture is at 72% compared to 26% last year.

Precipitation



Soil Moisture

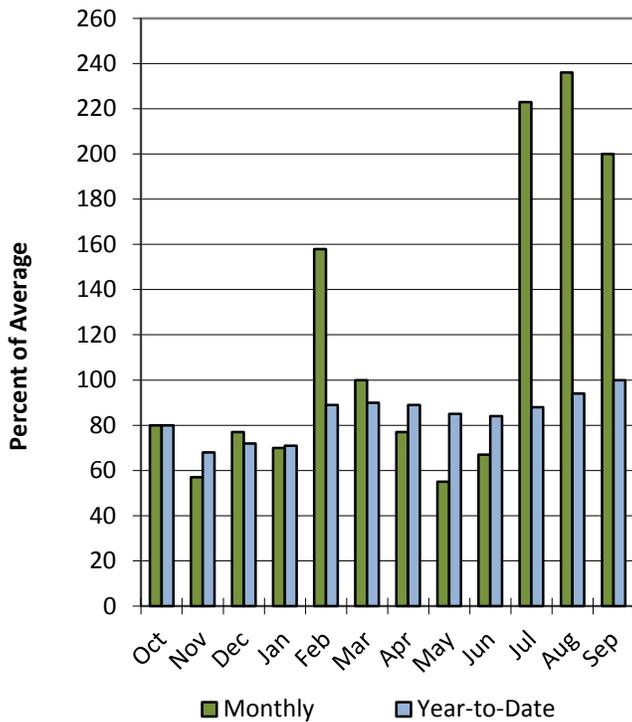


Weber & Ogden River Basins

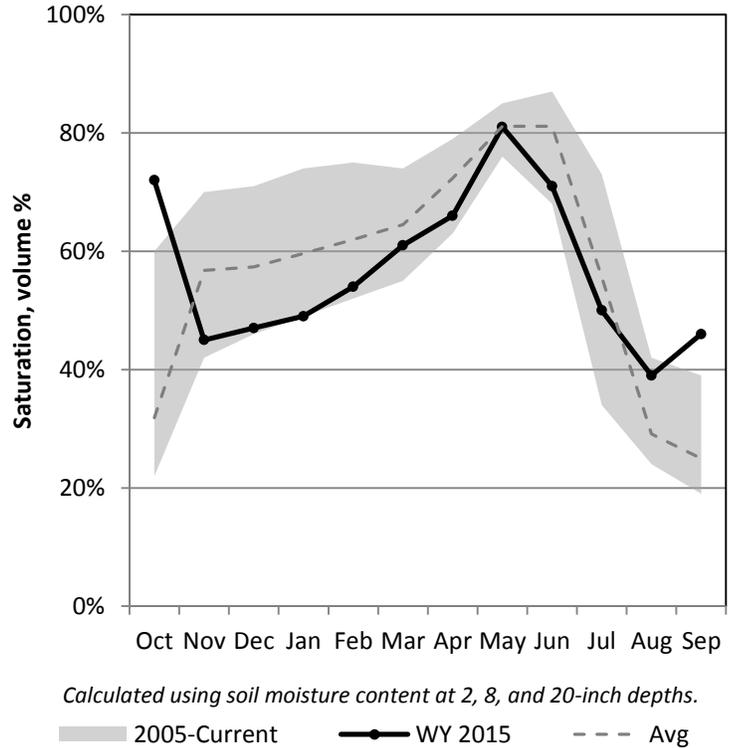
10/1/2014

Precipitation in September was much above average at 200%, which brings the seasonal accumulation (Oct-Sep) to 100% of average. Soil moisture is at 72% compared to 28% last year. Reservoir storage is at 40% of capacity, compared to 30% last year. The water availability index for the Ogden River is 49% and 42% for the Weber River.

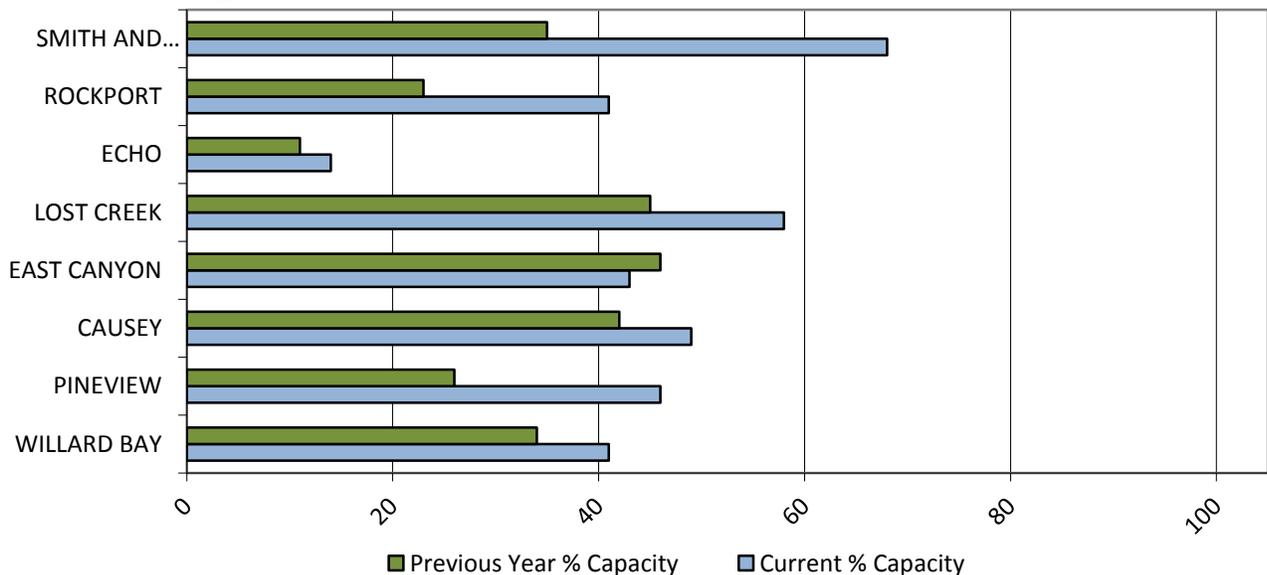
Precipitation



Soil Moisture



Reservoir Storage

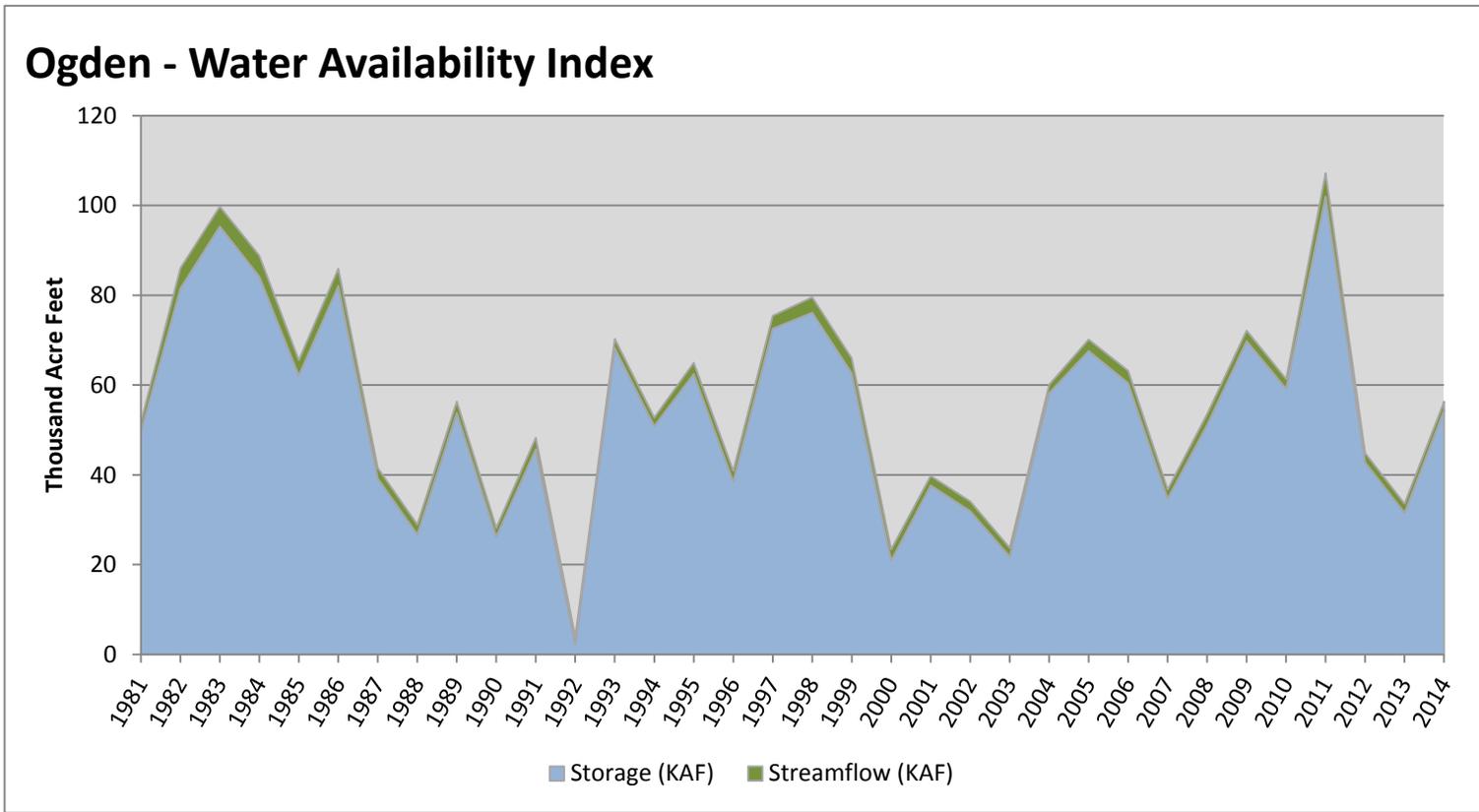


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM* Storage	September Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Ogden	54.40	1.92	56.32	49	-0.12	94, 08, 89, 04

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

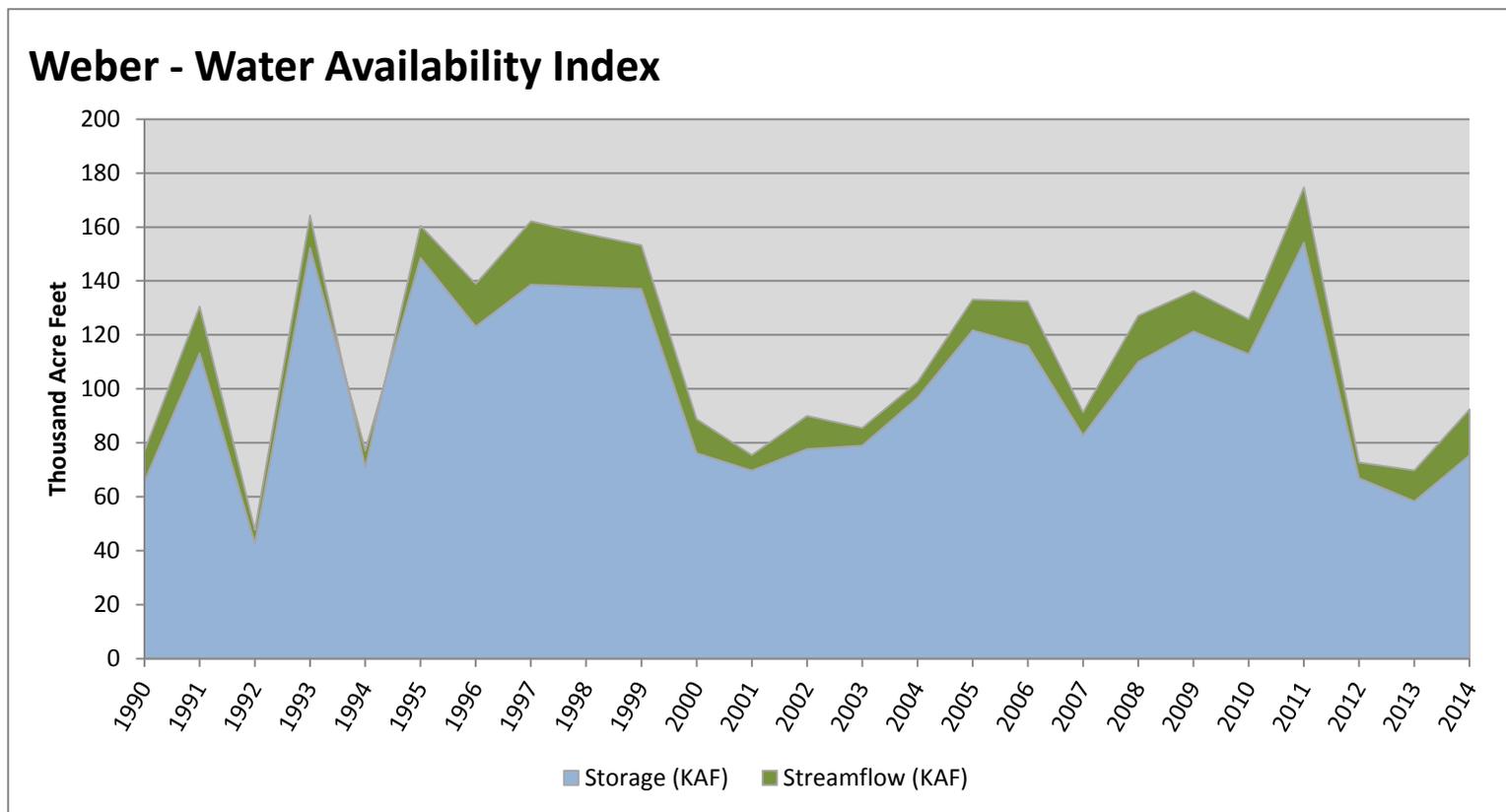


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [^] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	75.38	17.03	92.41	42	-0.64	02, 07, 04, 10

[^]EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

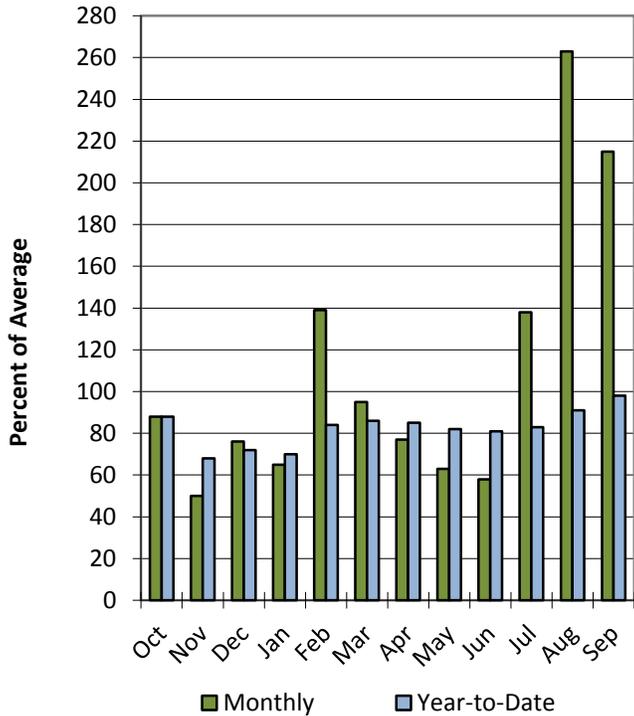


Provo & Jordan River Basins

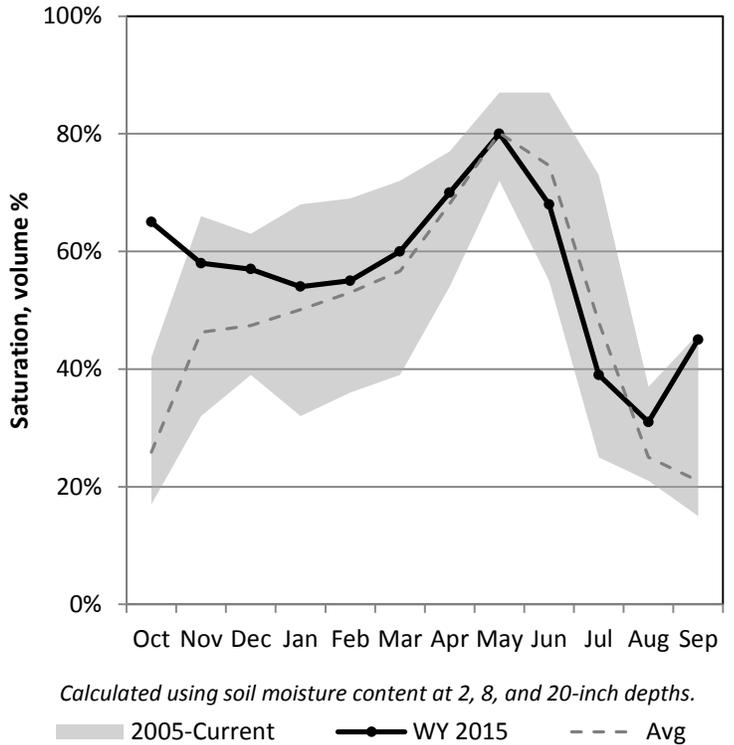
10/1/2014

Precipitation in September was much above average at 215%, which brings the seasonal accumulation (Oct-Sep) to 98% of average. Soil moisture is at 65% compared to 25% last year. Reservoir storage is at 65% of capacity, compared to 65% last year. The water availability index for the Provo River is 35%.

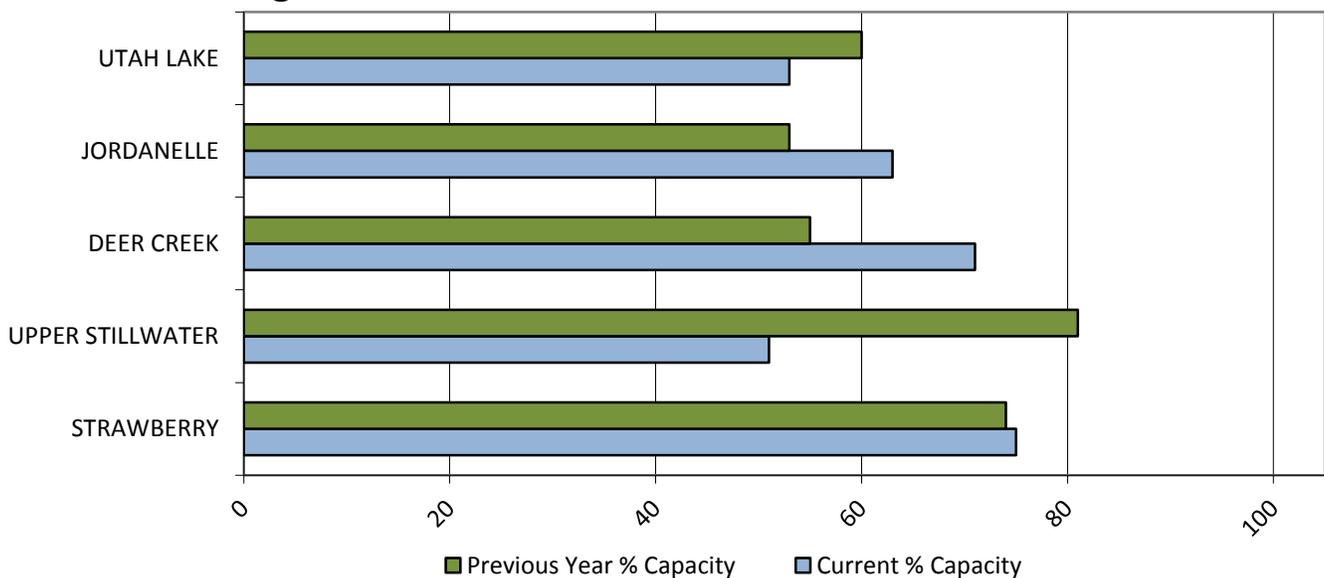
Precipitation



Soil Moisture



Reservoir Storage

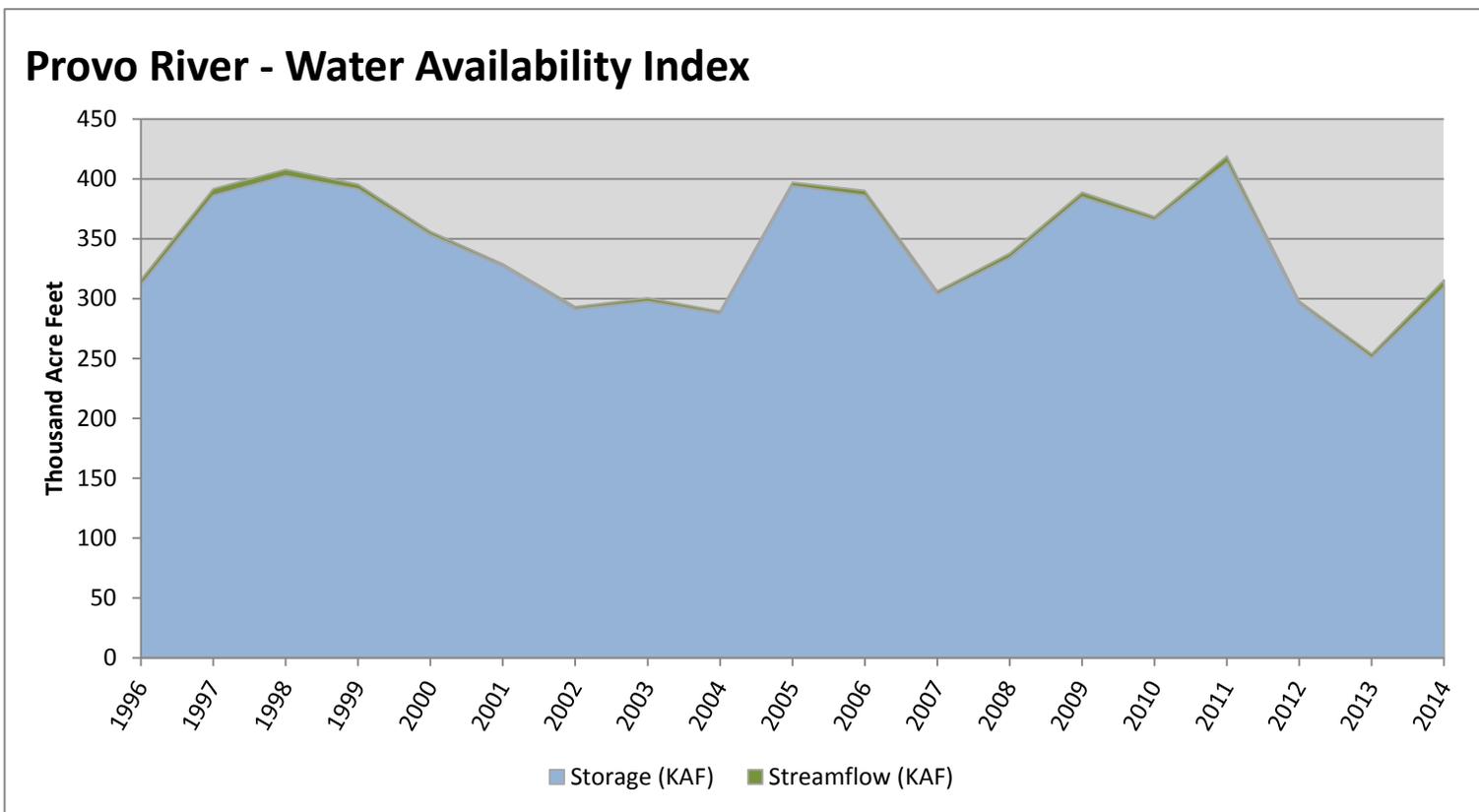


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	309.49	6.09	315.58	35	-1.25	03, 07, 96, 01

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

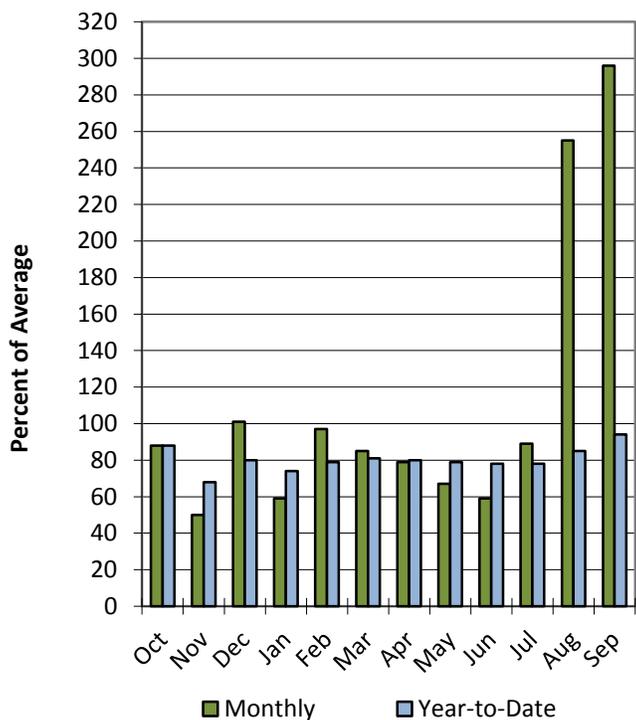


Tooele & Vernon Creek Basins

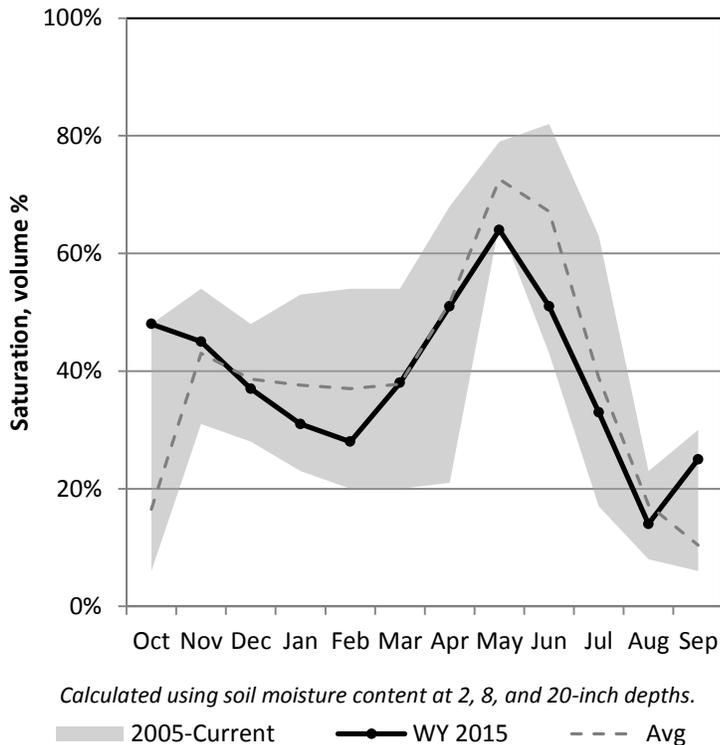
10/1/2014

Precipitation in September was much above average at 296%, which brings the seasonal accumulation (Oct-Sep) to 94% of average. Soil moisture is at 48% compared to 14% last year. Reservoir storage is at 20% of capacity, compared to 22% last year.

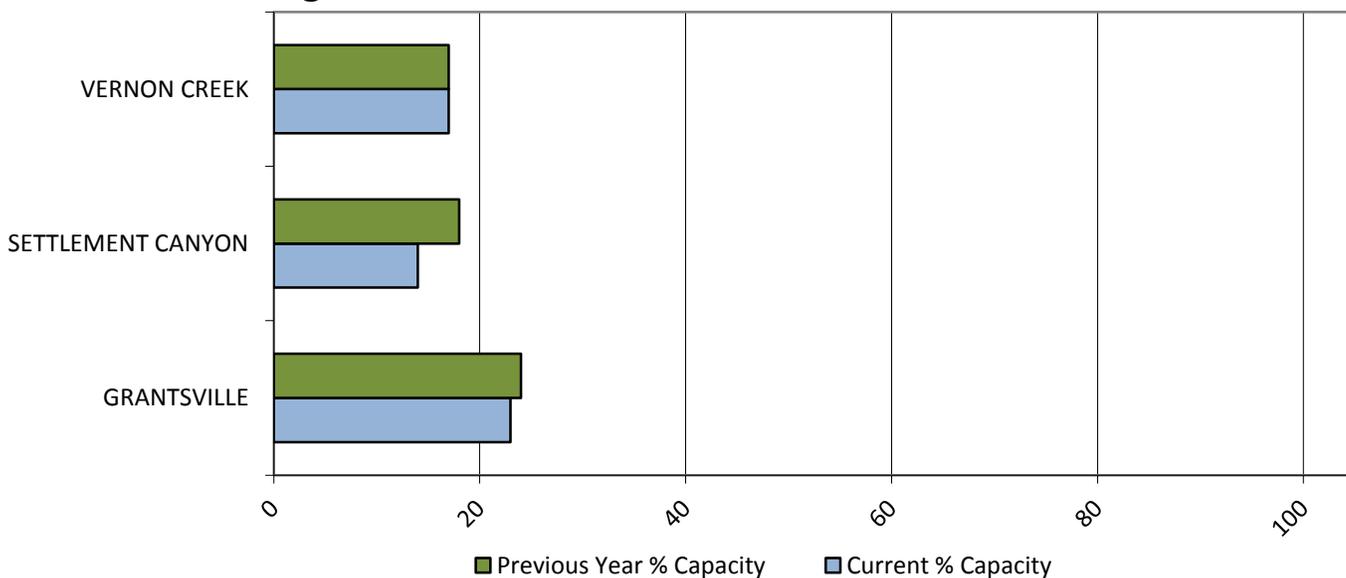
Precipitation



Soil Moisture



Reservoir Storage

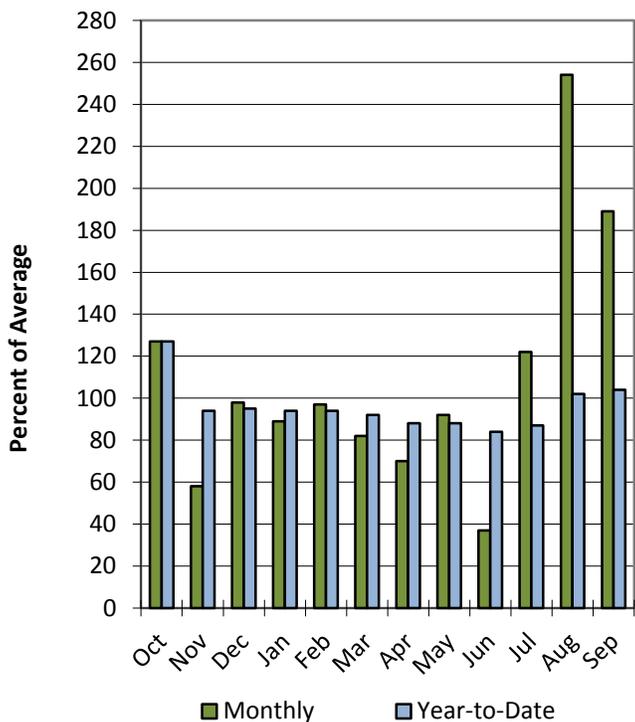


Northeastern Uintah Basin

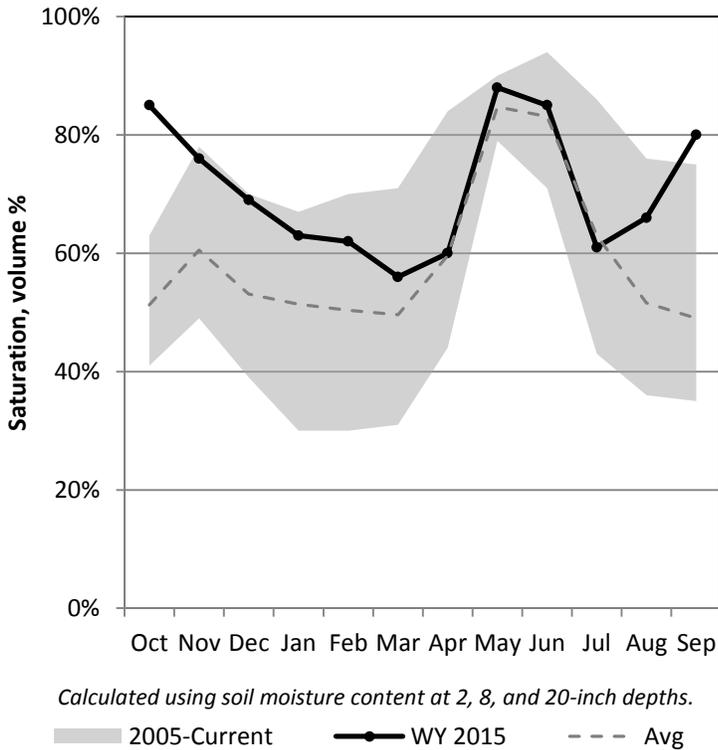
10/1/2014

Precipitation in September was much above average at 189%, which brings the seasonal accumulation (Oct-Sep) to 104% of average. Soil moisture is at 85% compared to 43% last year. Reservoir storage is at 87% of capacity, compared to 75% last year.

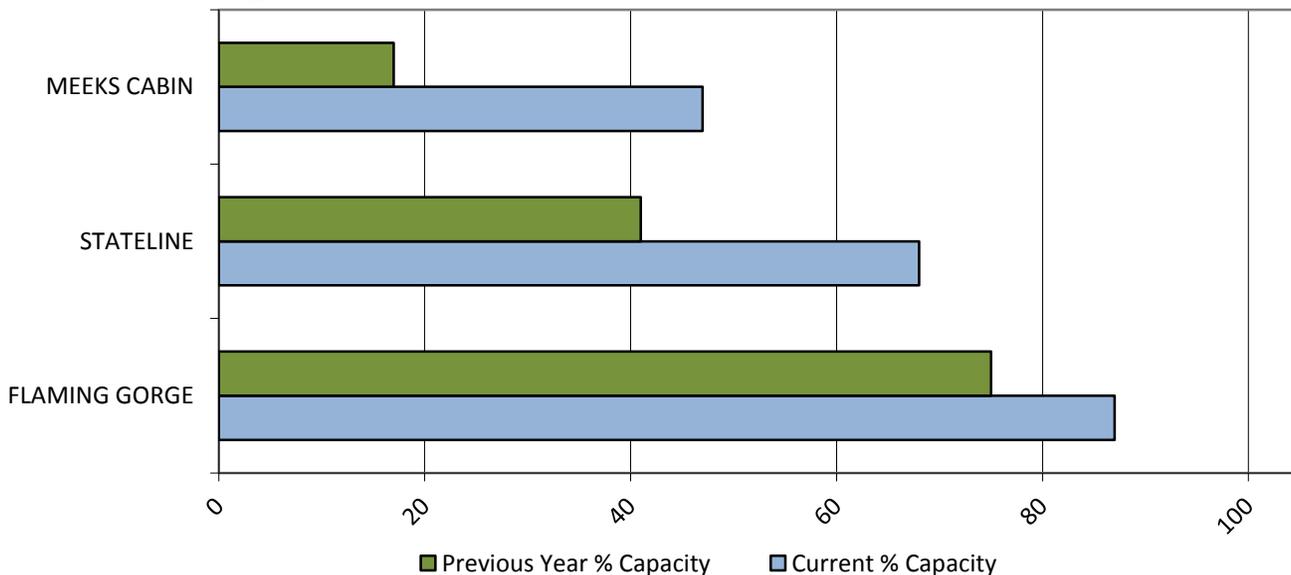
Precipitation



Soil Moisture



Reservoir Storage

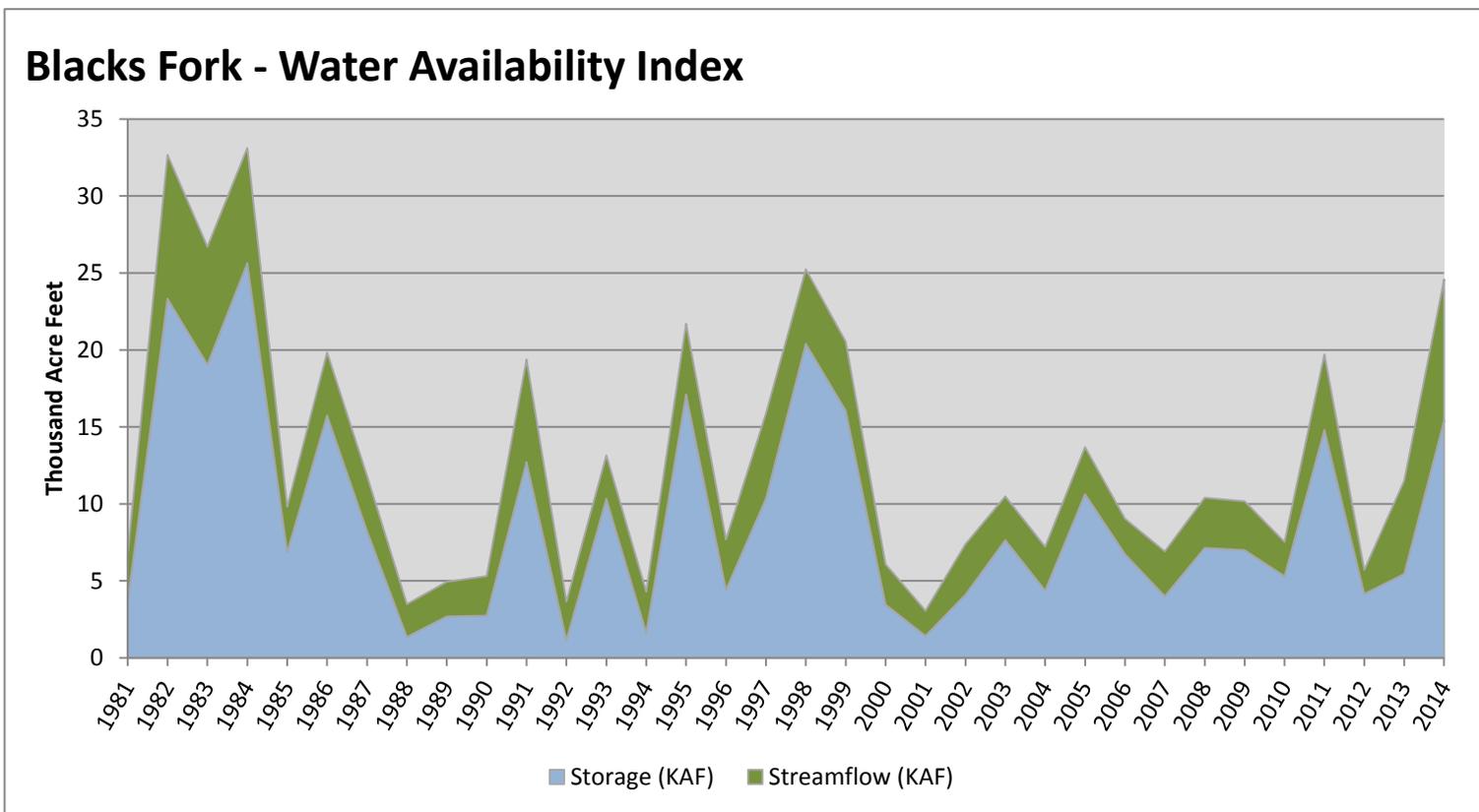


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	15.42	9.17	24.59	86	2.98	99, 95, 98, 83

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

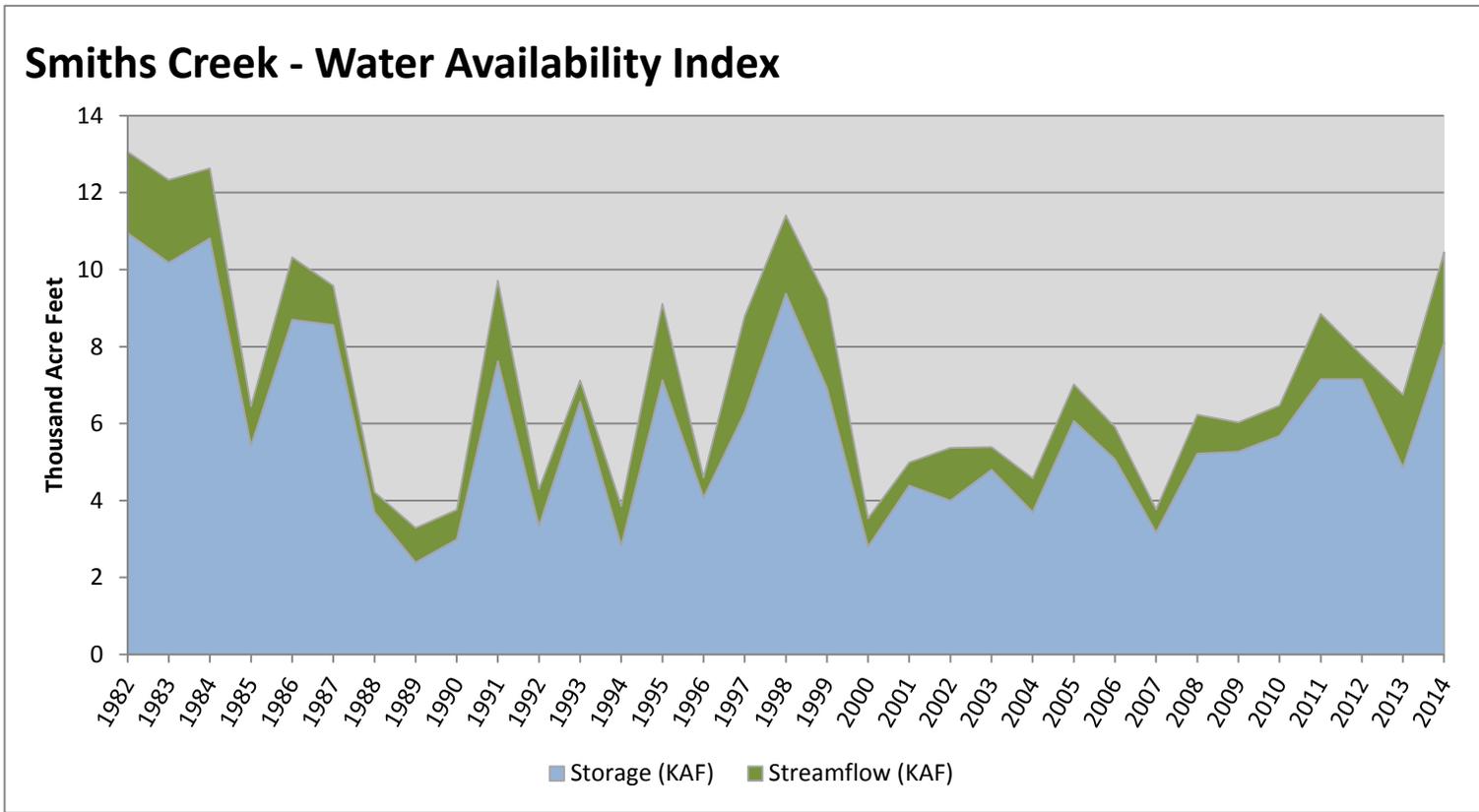


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	8.10	2.35	10.45	85	2.94	91, 86, 98, 83

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

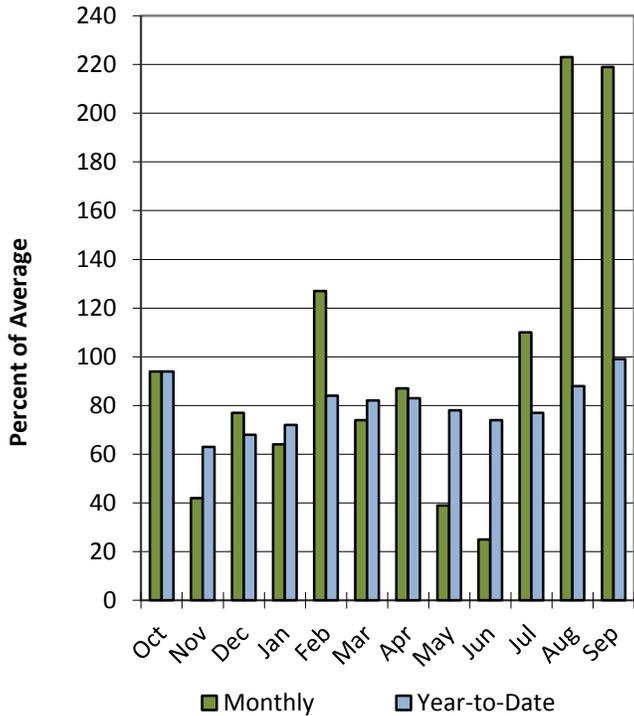


Duchesne River Basin

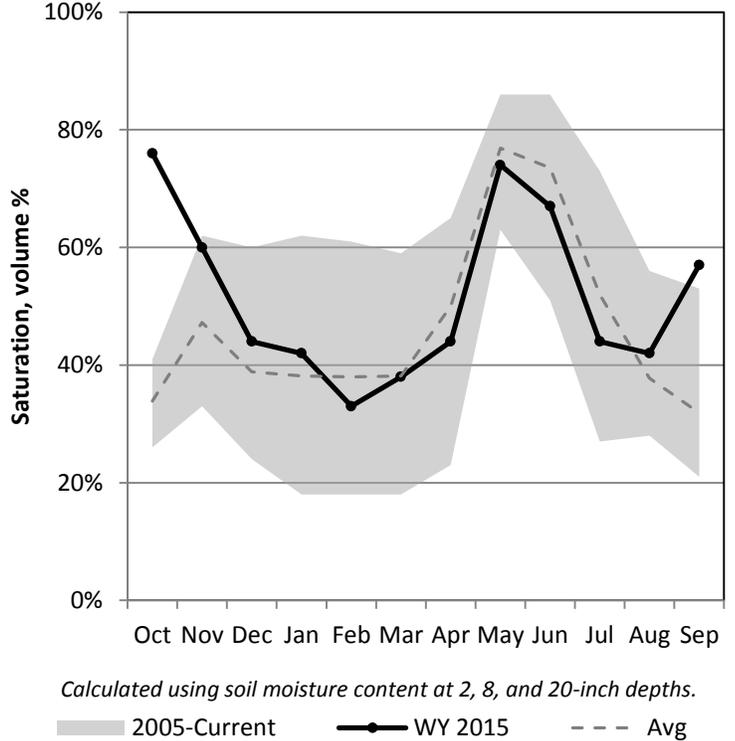
10/1/2014

Precipitation in September was much above average at 219%, which brings the seasonal accumulation (Oct-Sep) to 99% of average. Soil moisture is at 76% compared to 26% last year. Reservoir storage is at 71% of capacity, compared to 70% last year. The water availability index for the Western Uintahs is 68% and 17% for the Eastern Uintahs.

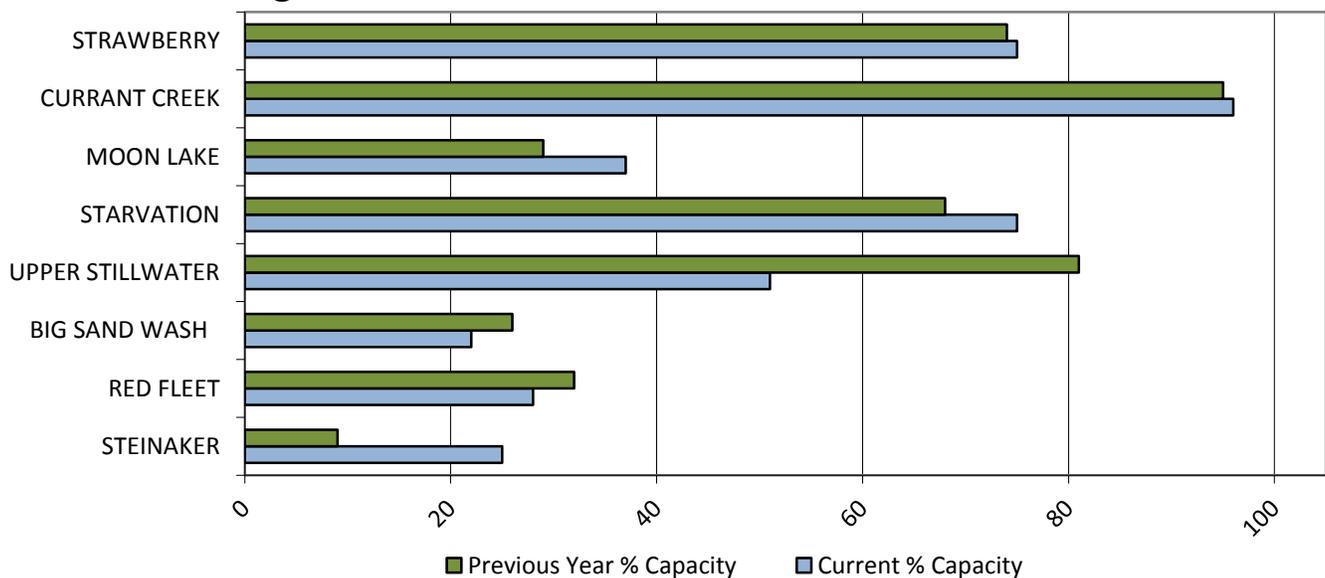
Precipitation



Soil Moisture



Reservoir Storage

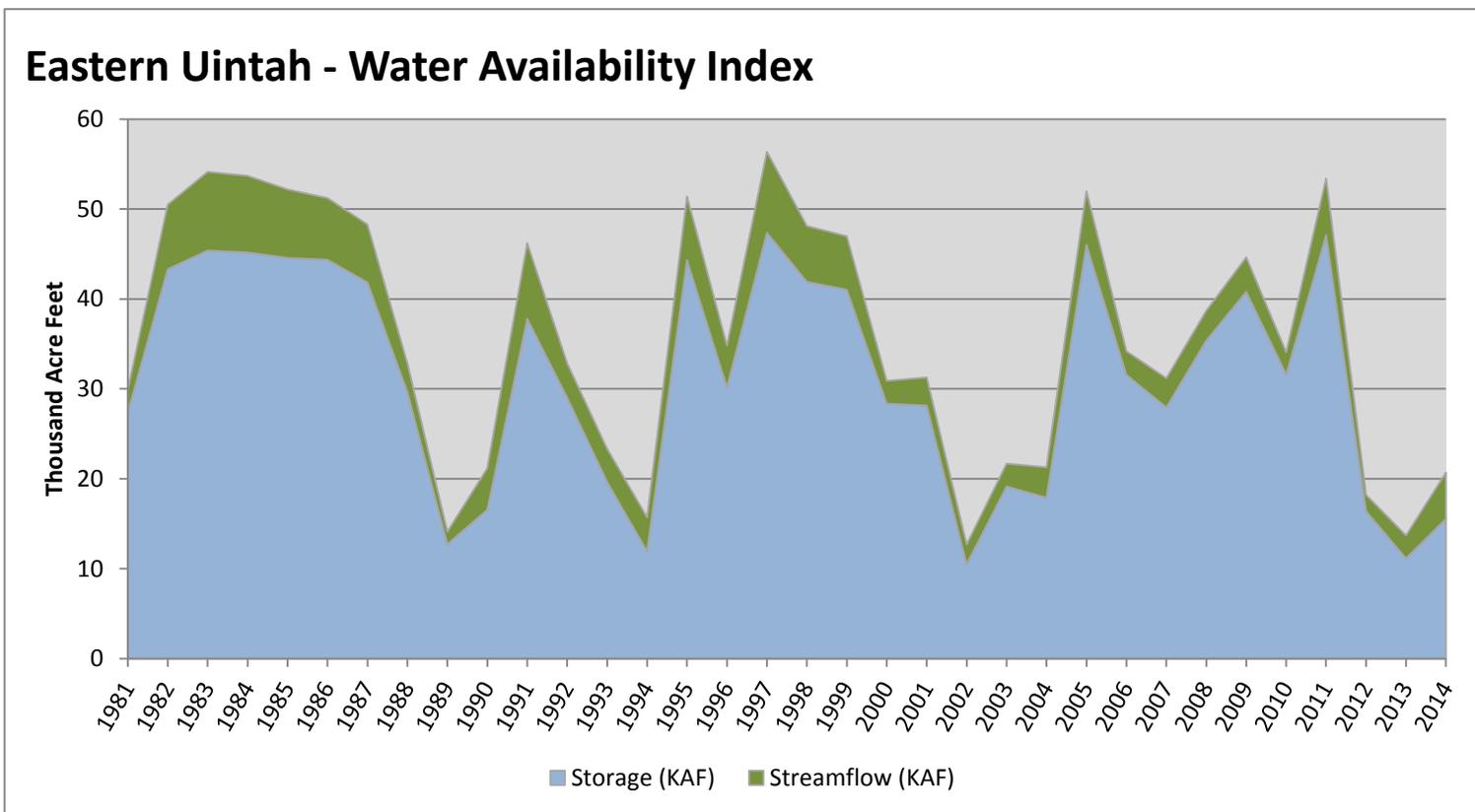


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uintah	15.55	5.15	20.70	17	-2.74	94, 12, 90, 04

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

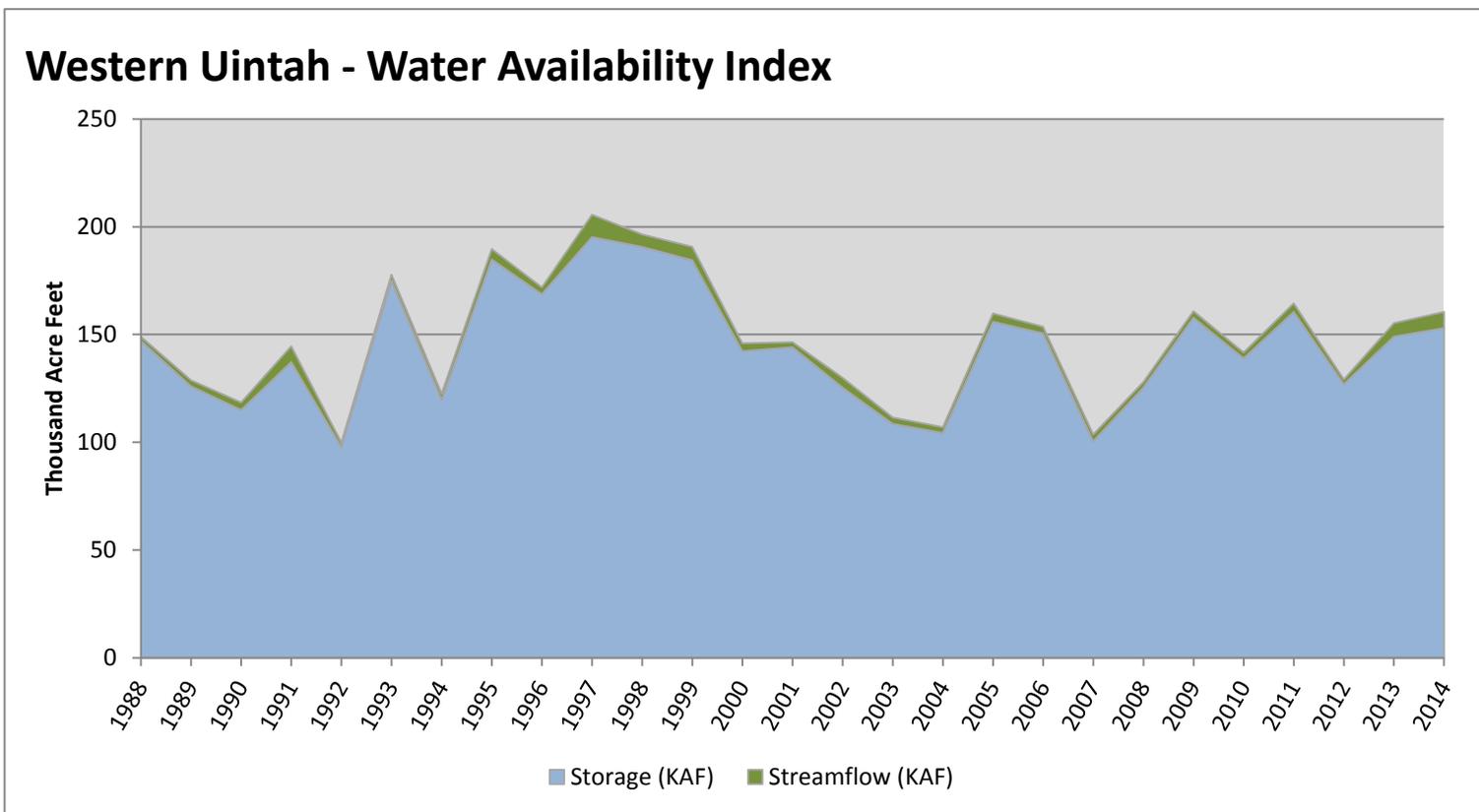


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uintah	152.99	7.53	160.52	68	1.49	13, 05, 09, 11

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

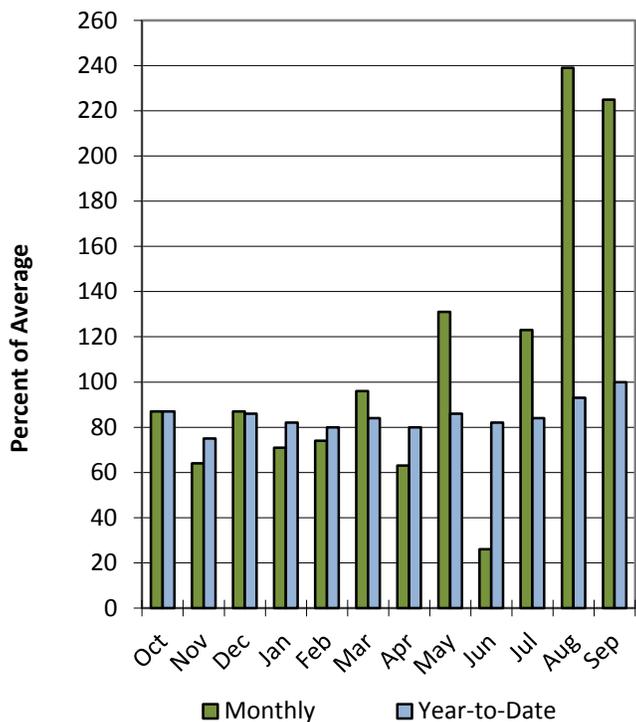


Lower Sevier River Basin

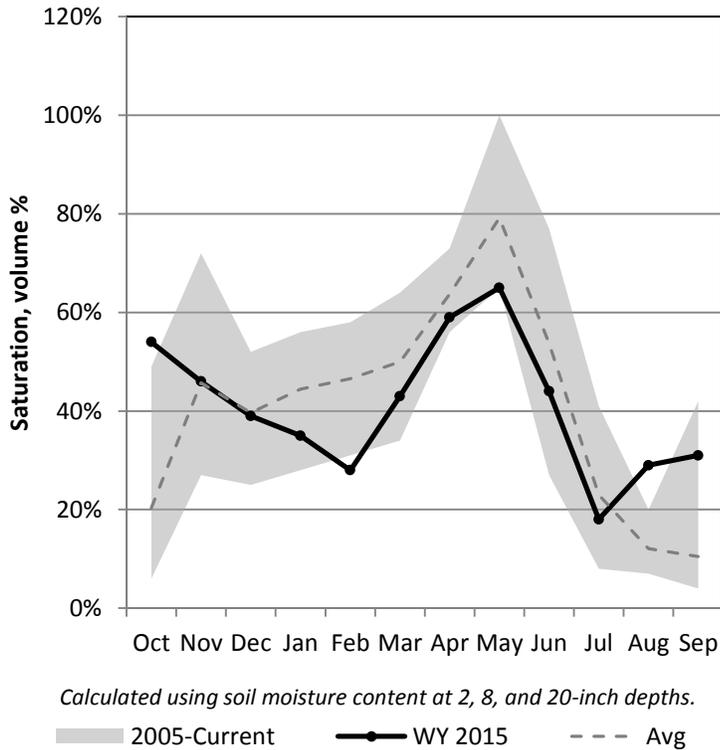
10/1/2014

Precipitation in September was much above average at 225%, which brings the seasonal accumulation (Oct-Sep) to 100% of average. Soil moisture is at 54% compared to 23% last year. Reservoir storage is at 21% of capacity, compared to 32% last year. The water availability index for the Lower Sevier is 17%.

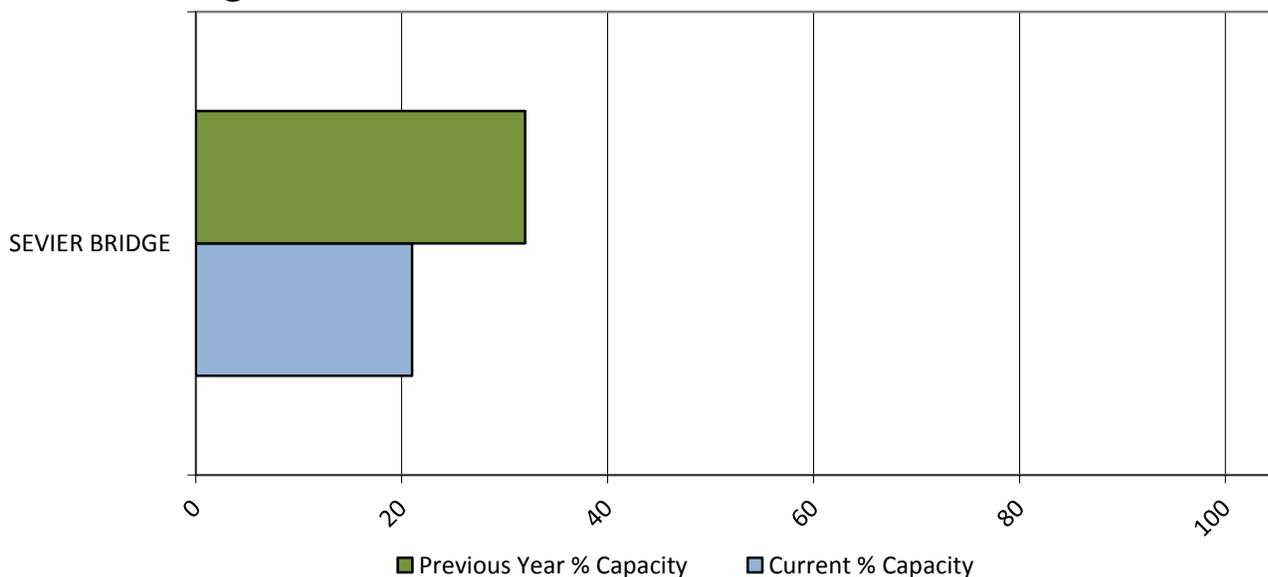
Precipitation



Soil Moisture



Reservoir Storage

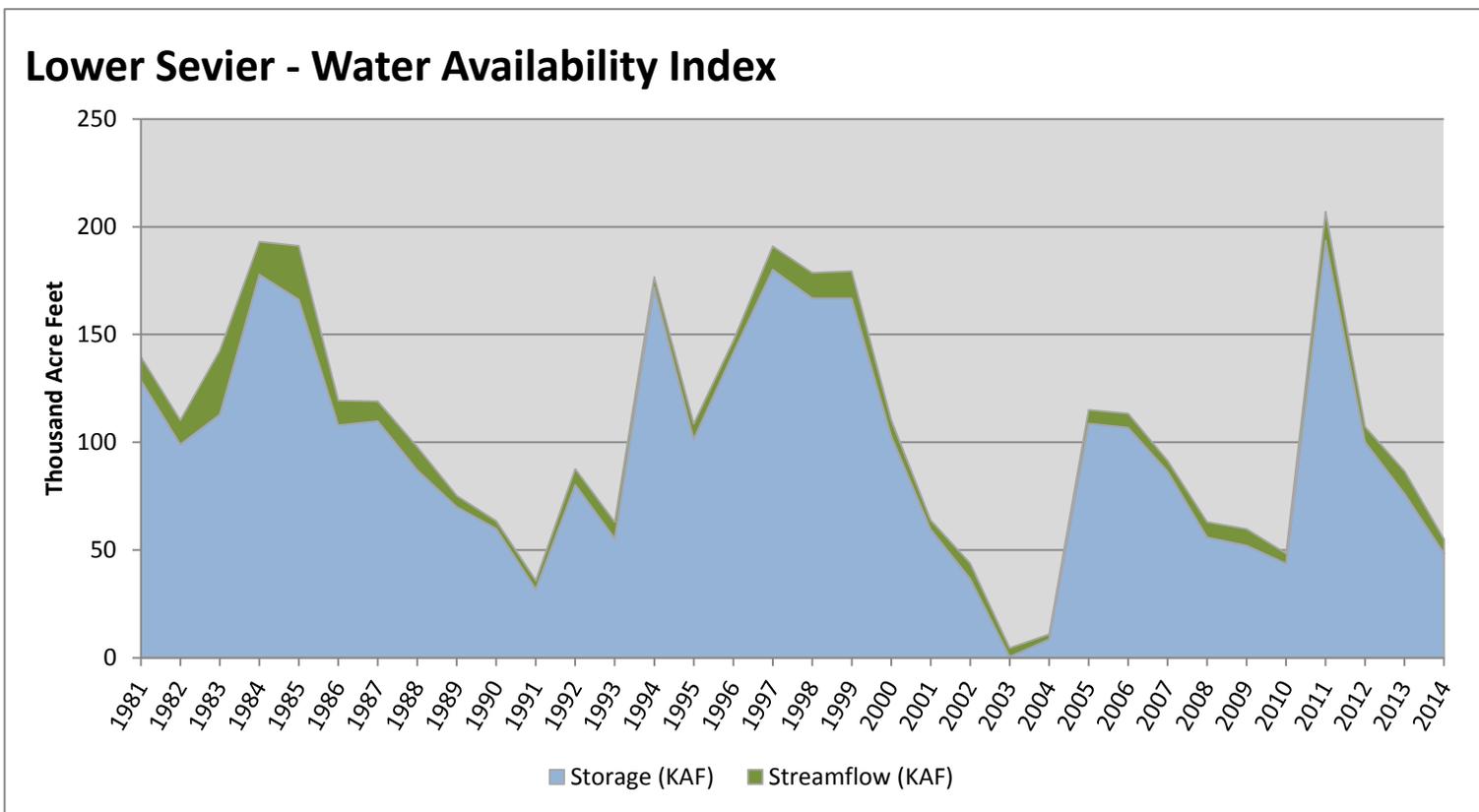


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	48.39	6.57	54.96	17	-2.74	02, 10, 09, 93

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

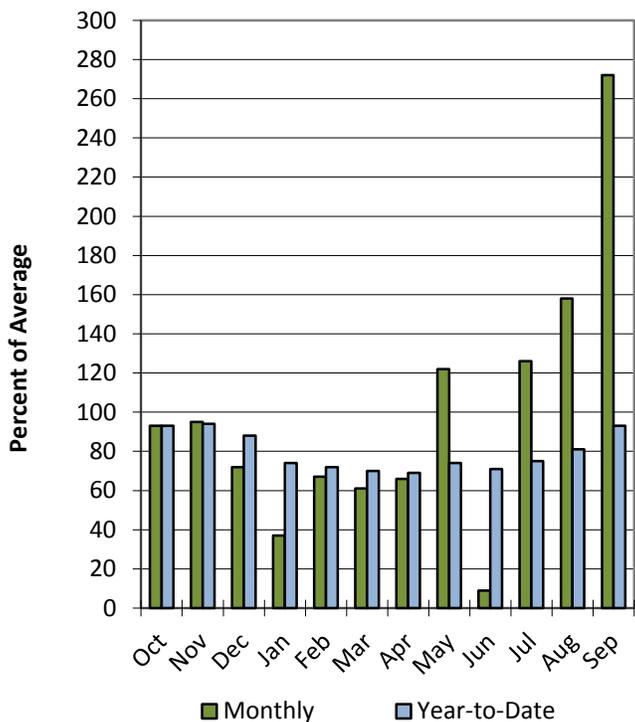


Upper Sevier River Basin

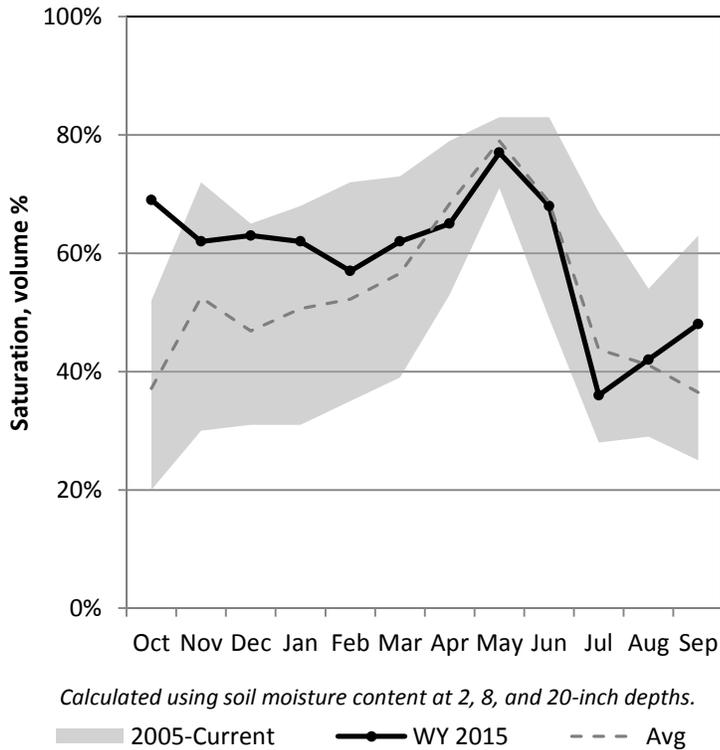
10/1/2014

Precipitation in September was much above average at 272%, which brings the seasonal accumulation (Oct-Sep) to 93% of average. Soil moisture is at 69% compared to 39% last year. Reservoir storage is at 26% of capacity, compared to 39% last year. The water availability index for the Upper Sevier is 43%.

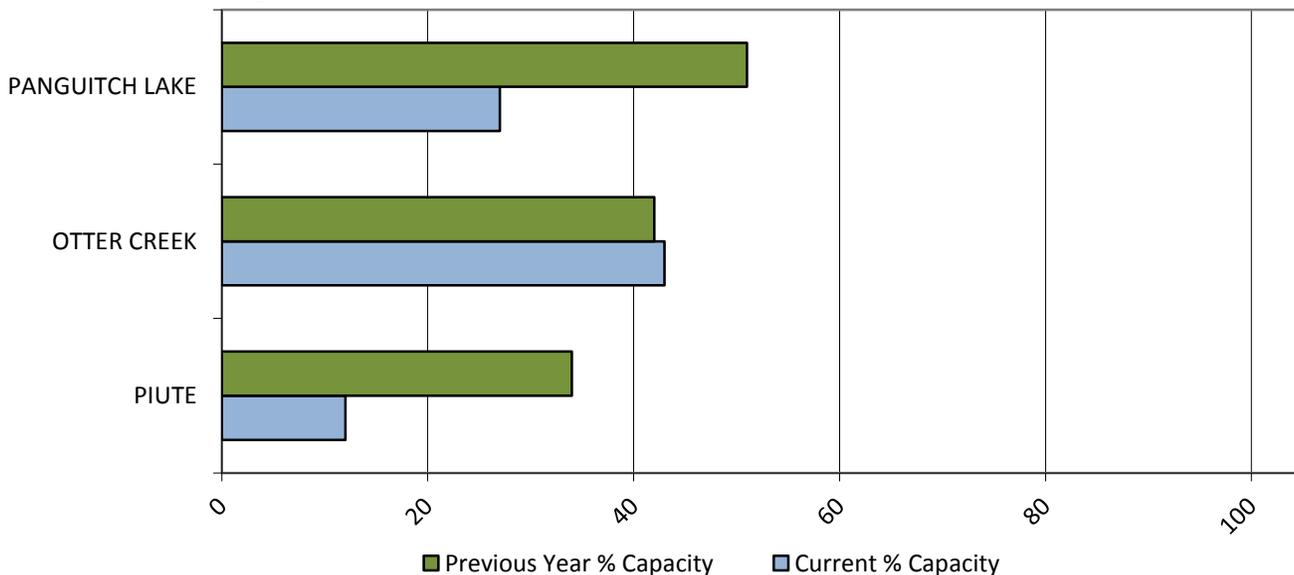
Precipitation



Soil Moisture



Reservoir Storage

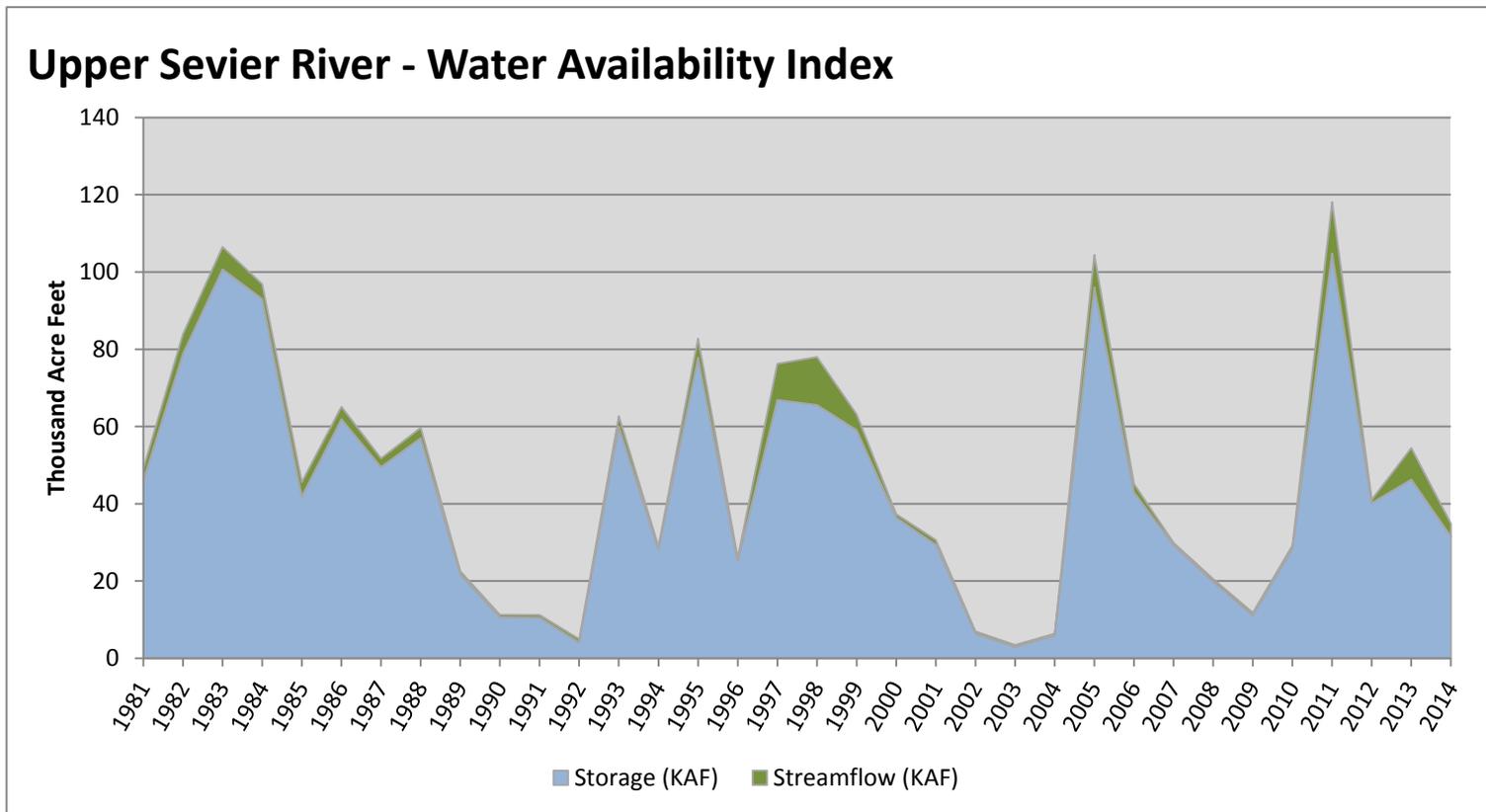


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	31.51	3.33	34.84	43	-0.6	07, 01, 00, 12

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

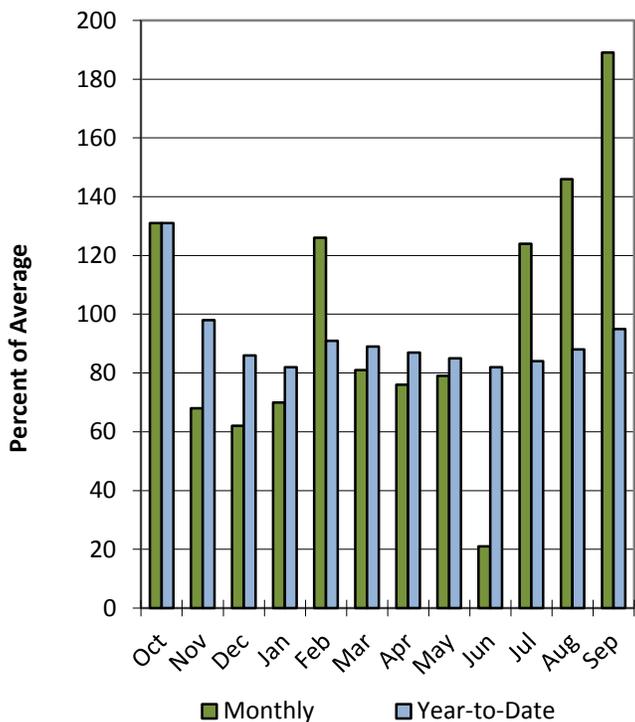


San Pitch River Basin

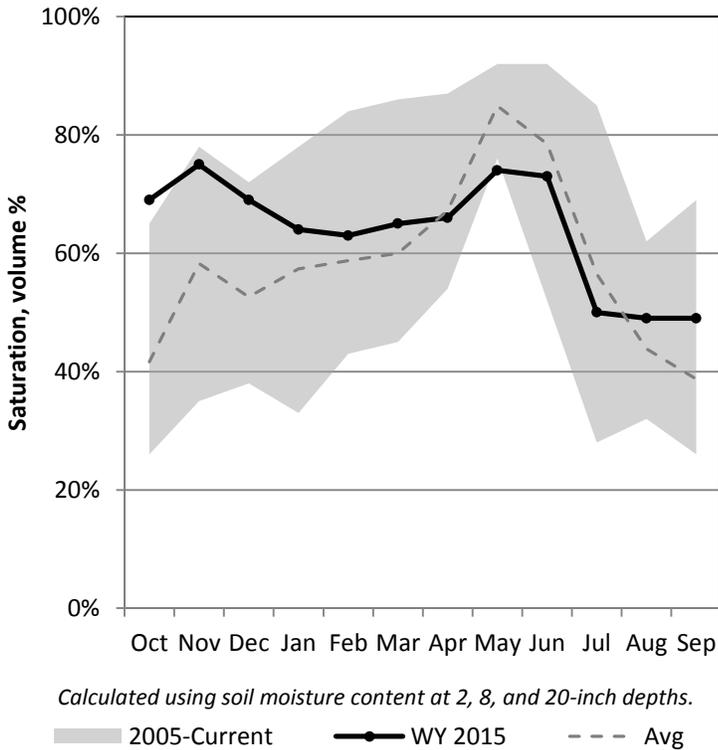
10/1/2014

Precipitation in September was much above average at 189%, which brings the seasonal accumulation (Oct-Sep) to 95% of average. Soil Moisture is at 69% compared to 42% last year. Reservoir storage is at 0% of capacity, compared to 0% last year. The water availability index for the San Pitch is 17%.

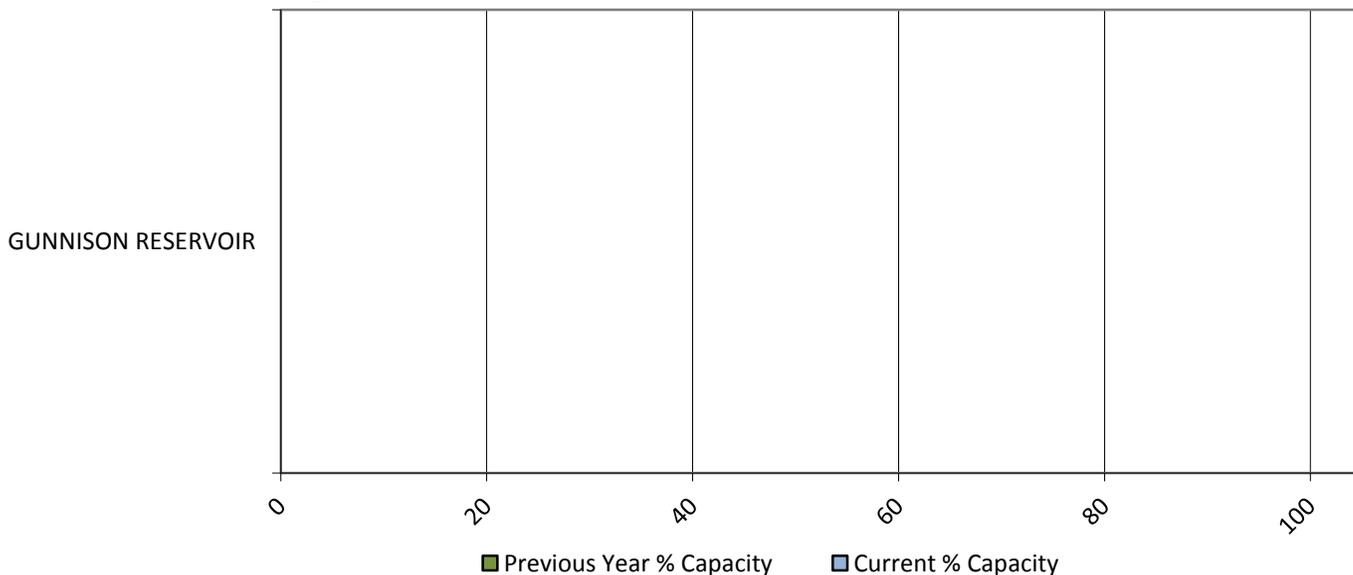
Precipitation



Soil Moisture



Reservoir Storage

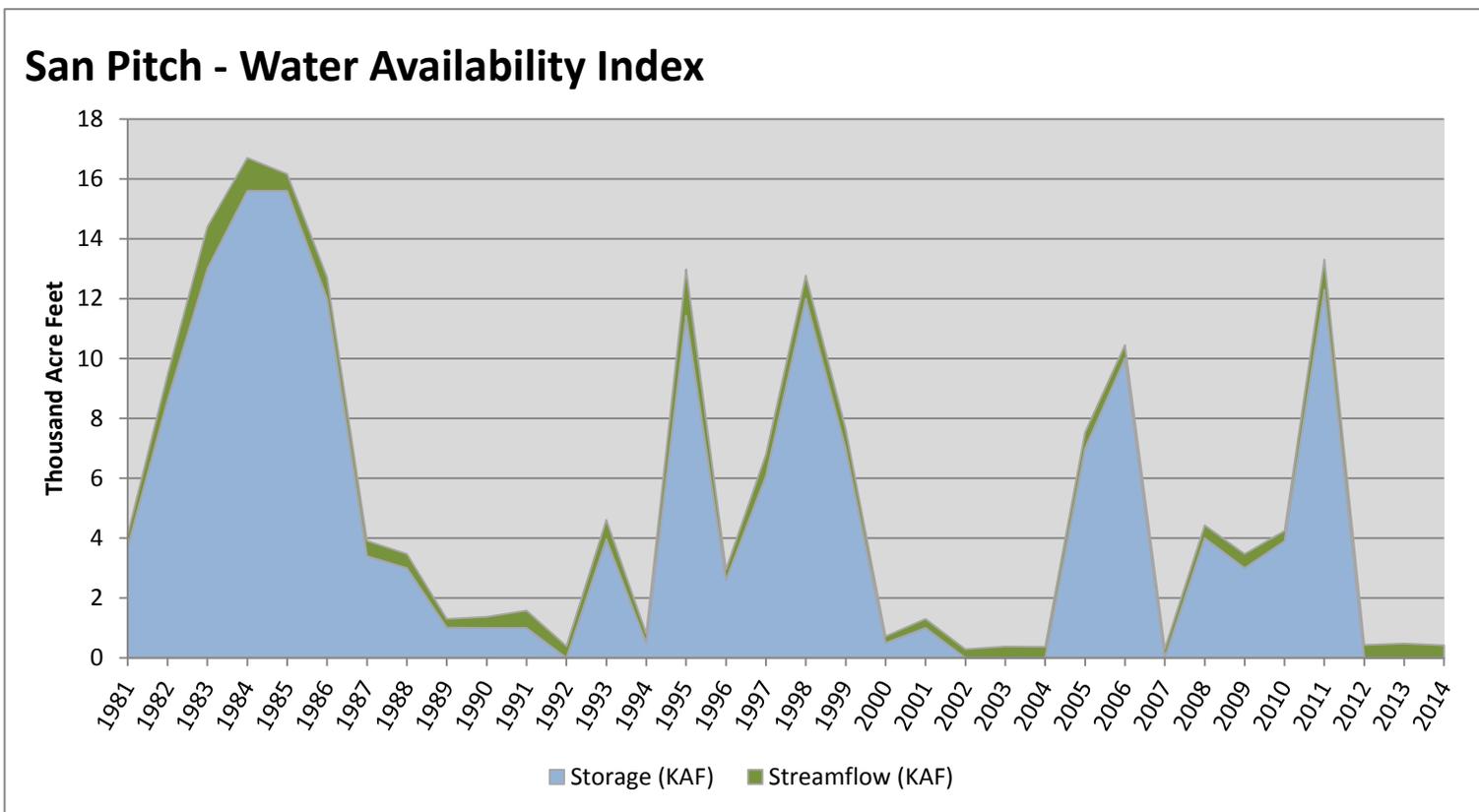


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	0.00	0.42	0.42	17	-2.74	03, 92, 12, 13

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

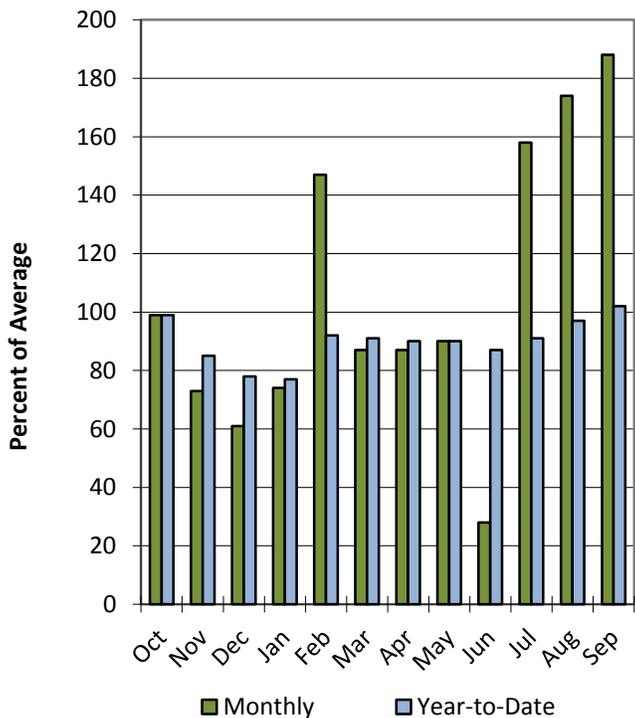


Price & San Rafael Basins

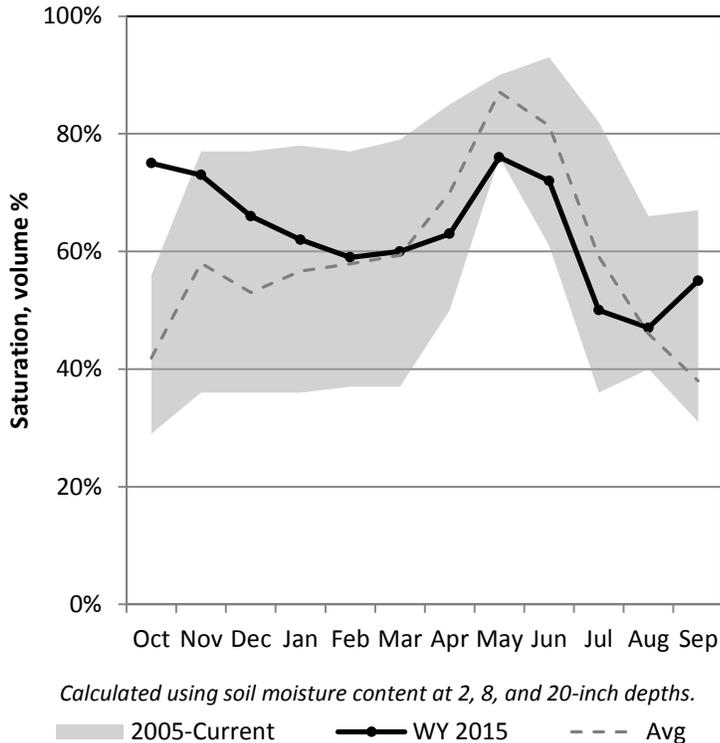
10/1/2014

Precipitation in September was much above average at 188%, which brings the seasonal accumulation (Oct-Sep) to 102% of average. Soil moisture is at 75% compared to 37% last year. Reservoir storage is at 46% of capacity, compared to 39% last year. The water availability index for the Price River is 85%, and 37% for Joe's Valley.

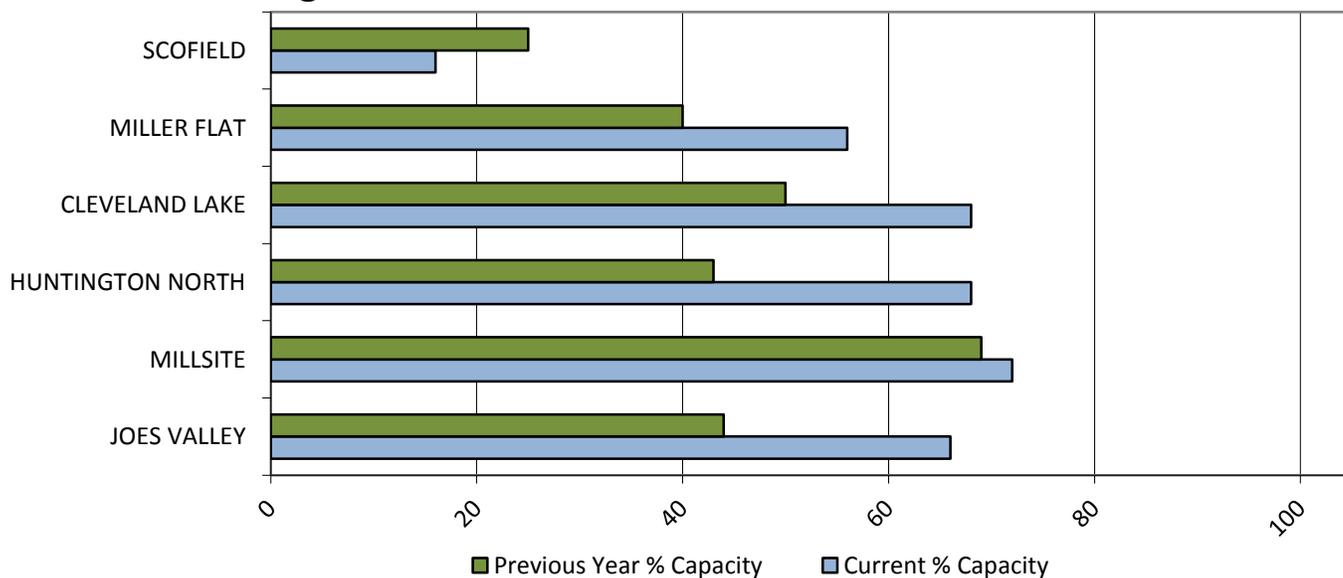
Precipitation



Soil Moisture



Reservoir Storage

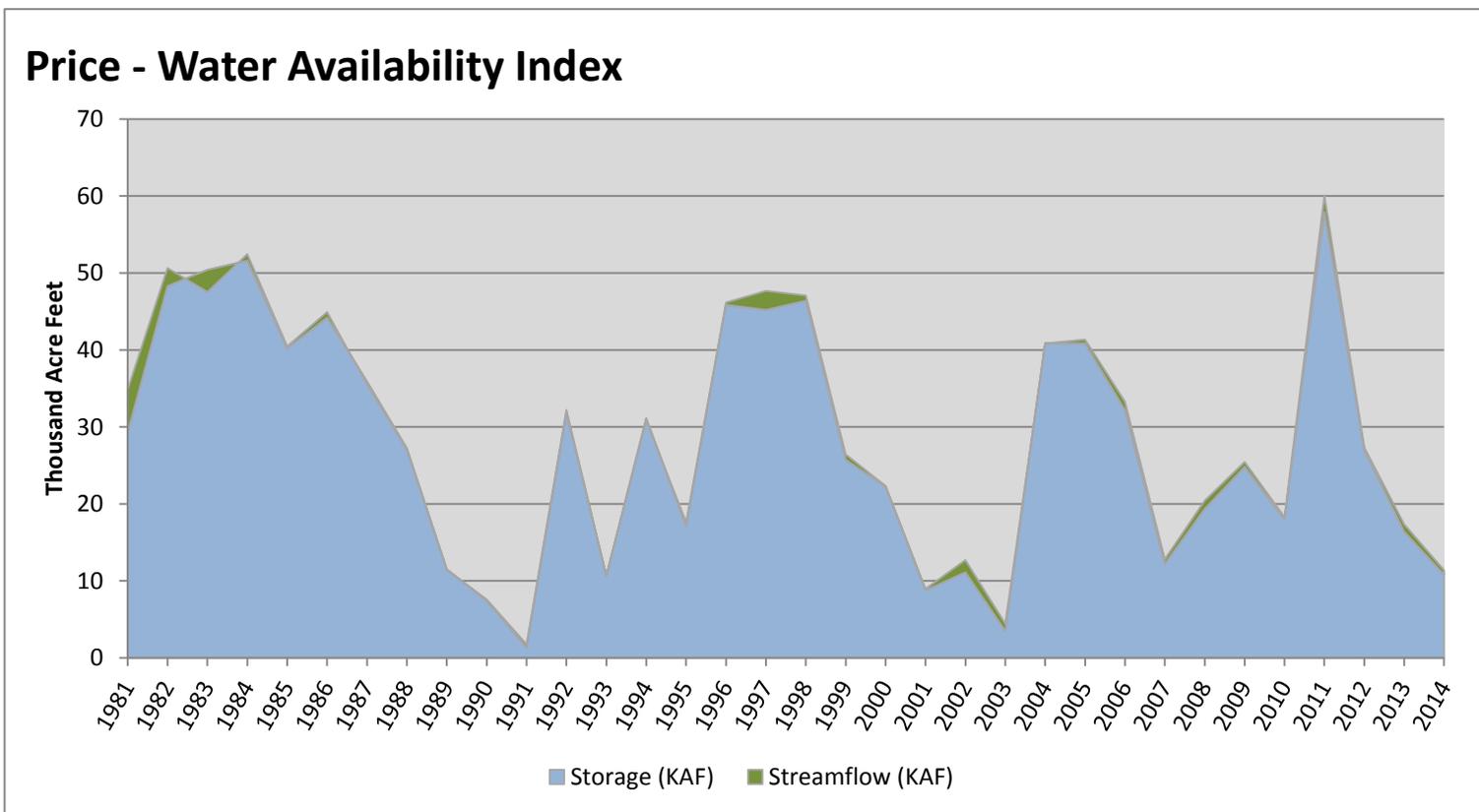


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	10.80	0.58	11.38	17	-2.74	01, 93, 89, 02

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

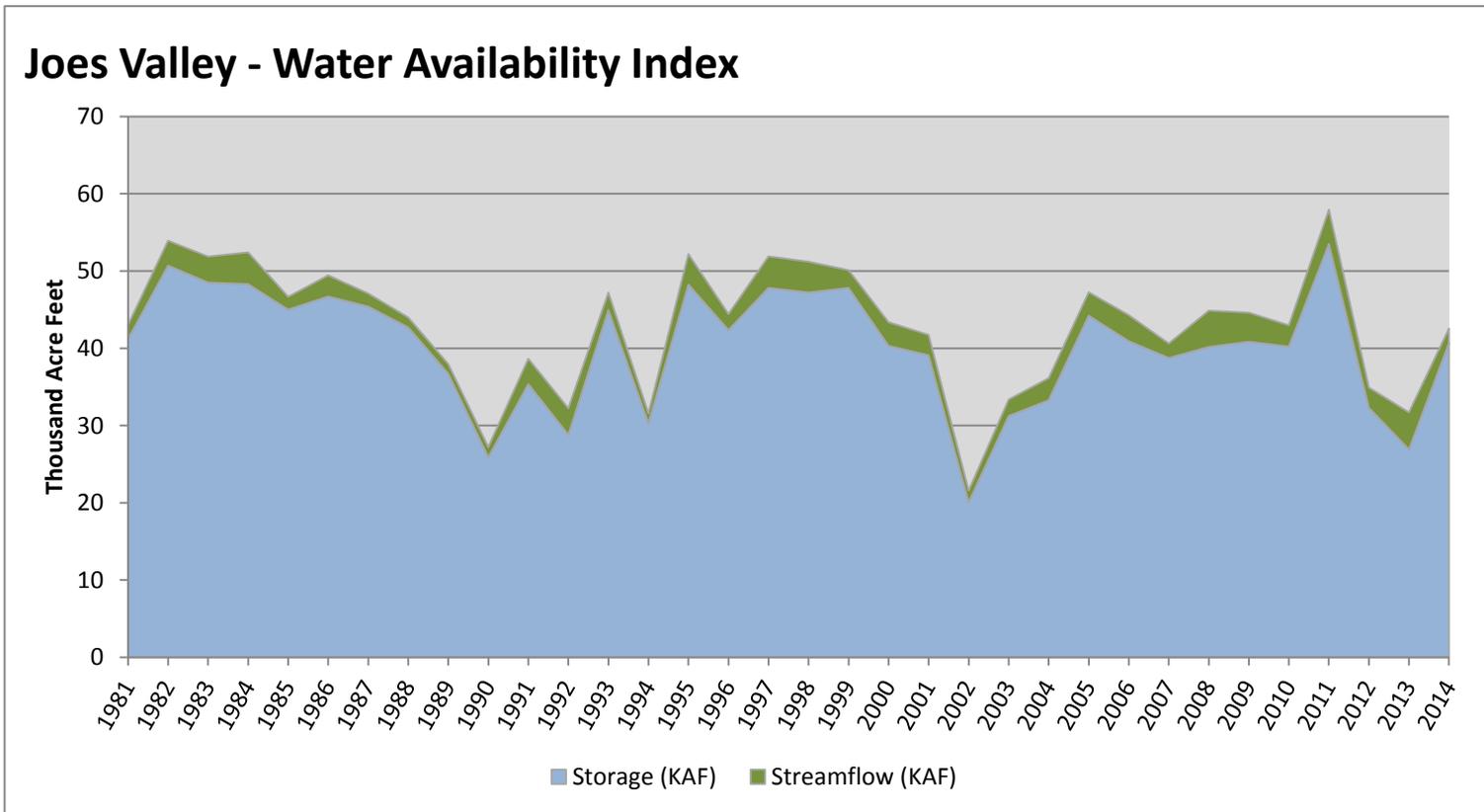


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joese Valley	40.67	1.88	42.55	37	-1.07	07, 01, 10, 81

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

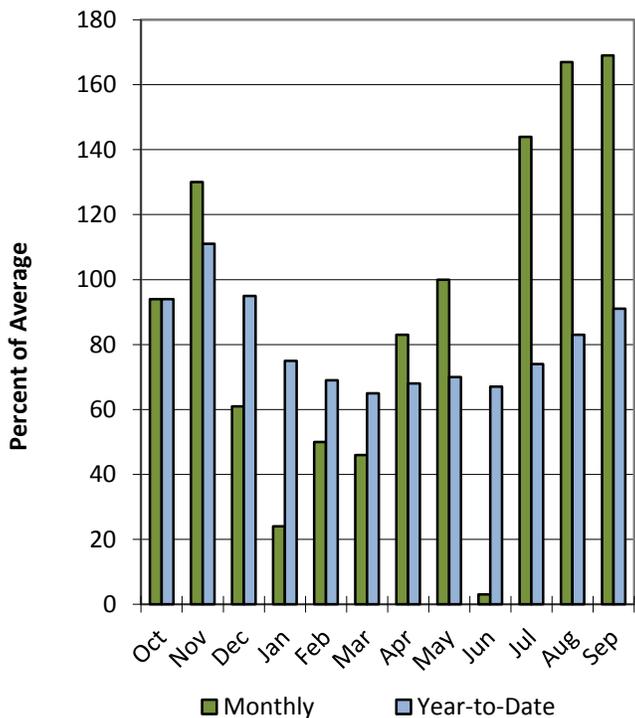


Southeastern Utah Basin

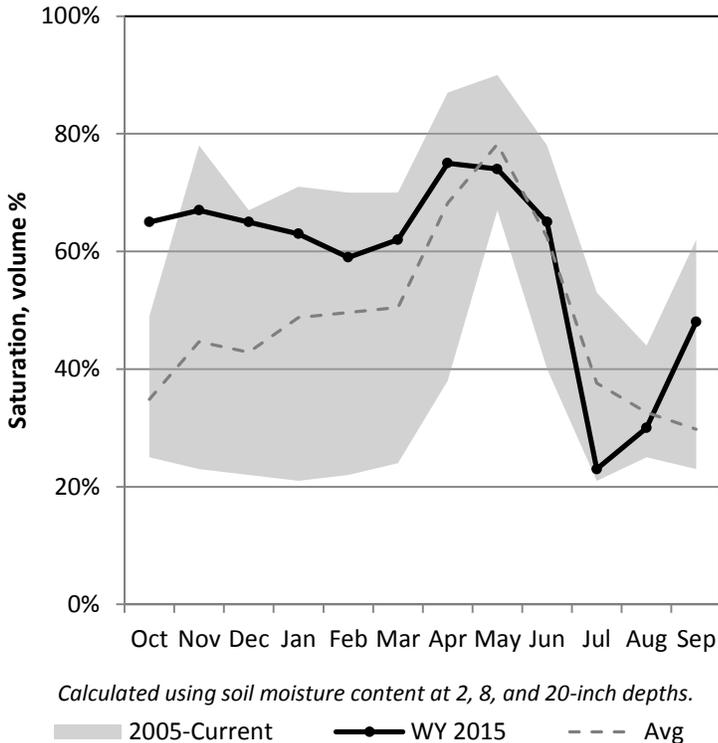
10/1/2014

Precipitation in September was much above average at 169%, which brings the seasonal accumulation (Oct-Sep) to 91% of average. Soil moisture is at 65% compared to 35% last year. Reservoir storage is at 49% of capacity, compared to 26% last year. The water availability index for Moab is 75%.

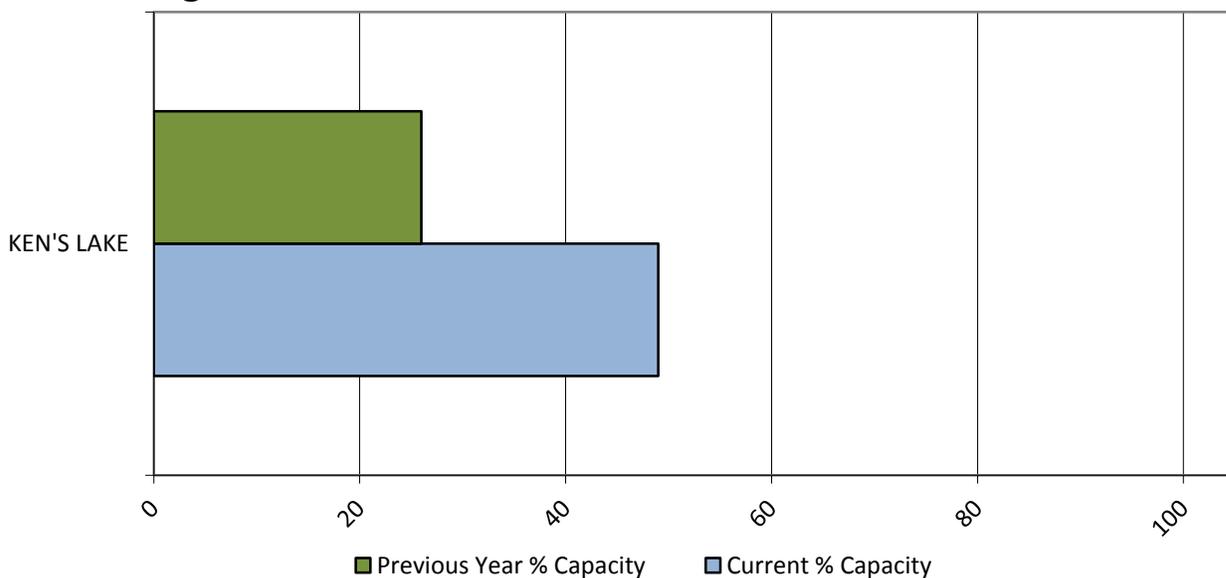
Precipitation



Soil Moisture



Reservoir Storage

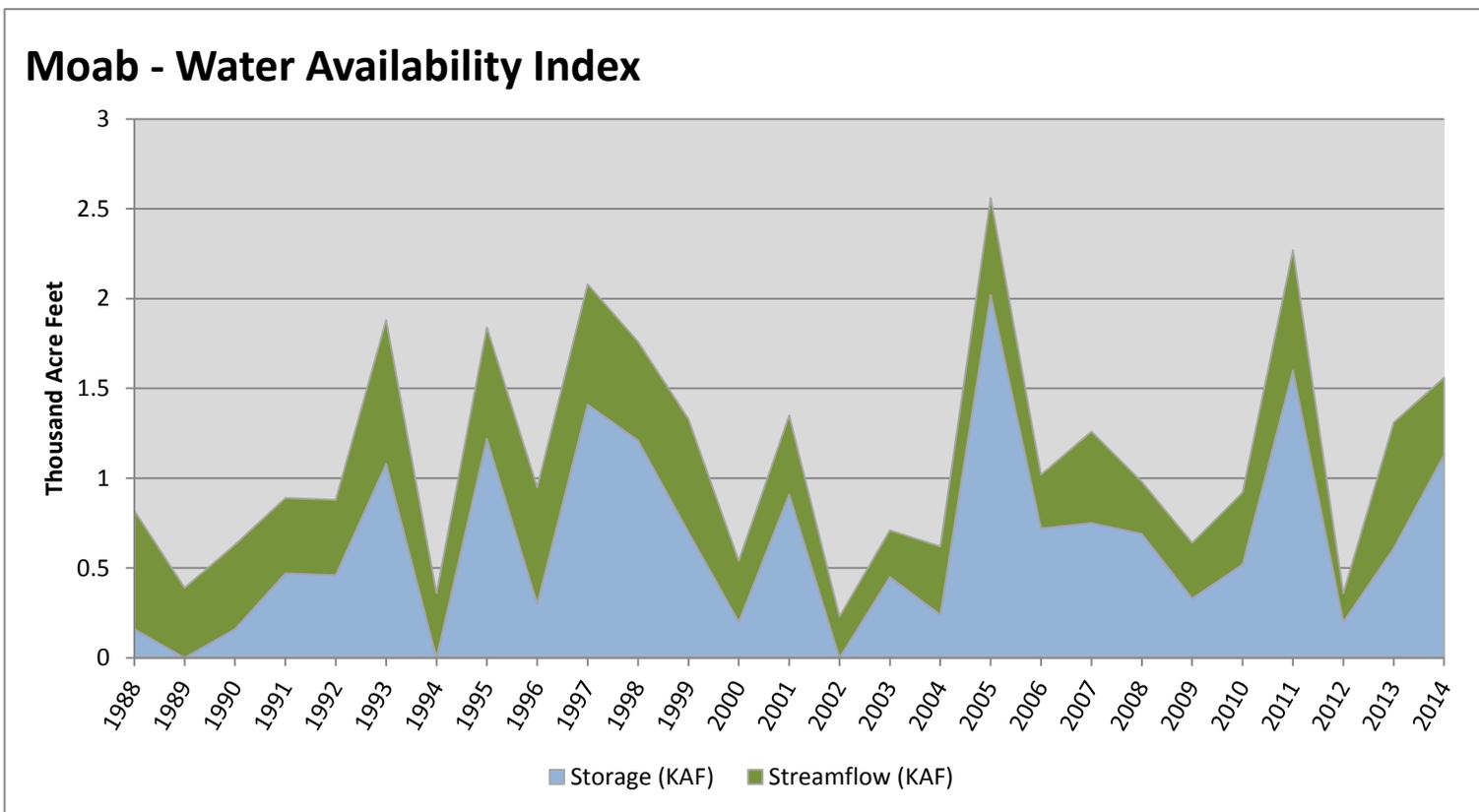


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	1.13	0.43	1.56	75	2.08	99, 01, 98, 95

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

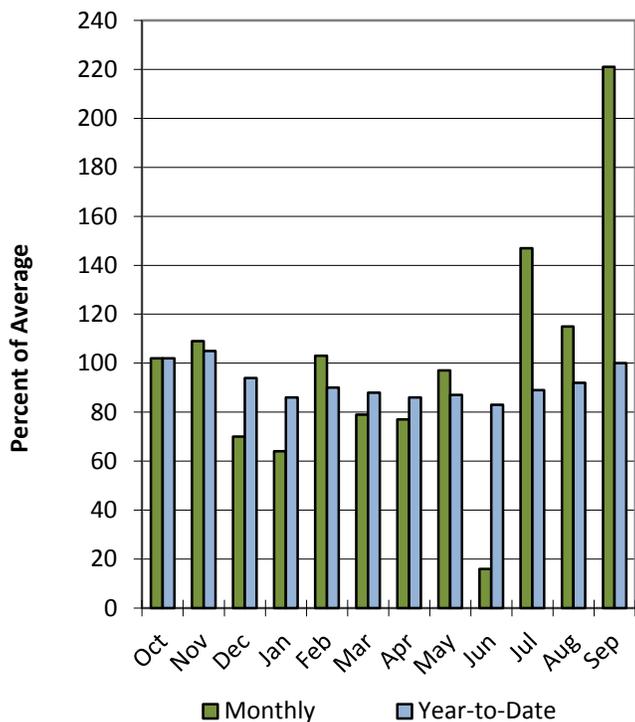


Dirty Devil Basin

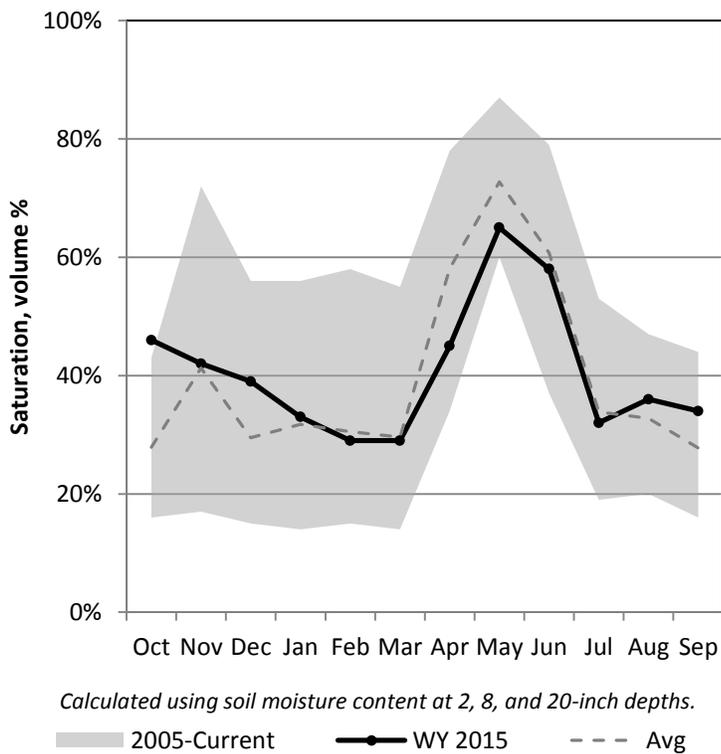
10/1/2014

Precipitation in September was much above average at 221%, which brings the seasonal accumulation (Oct-Sep) to 100% of average. Soil moisture is at 46% compared to 28% last year.

Precipitation



Soil Moisture

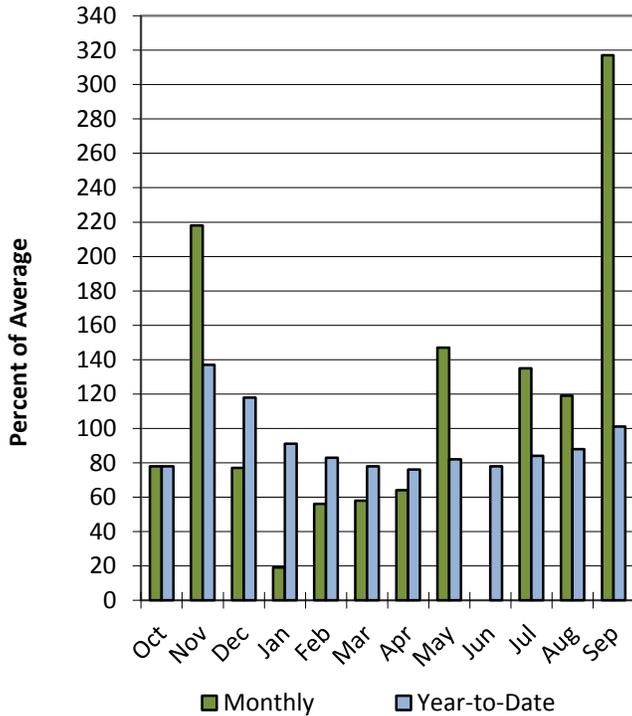


Escalante River Basin

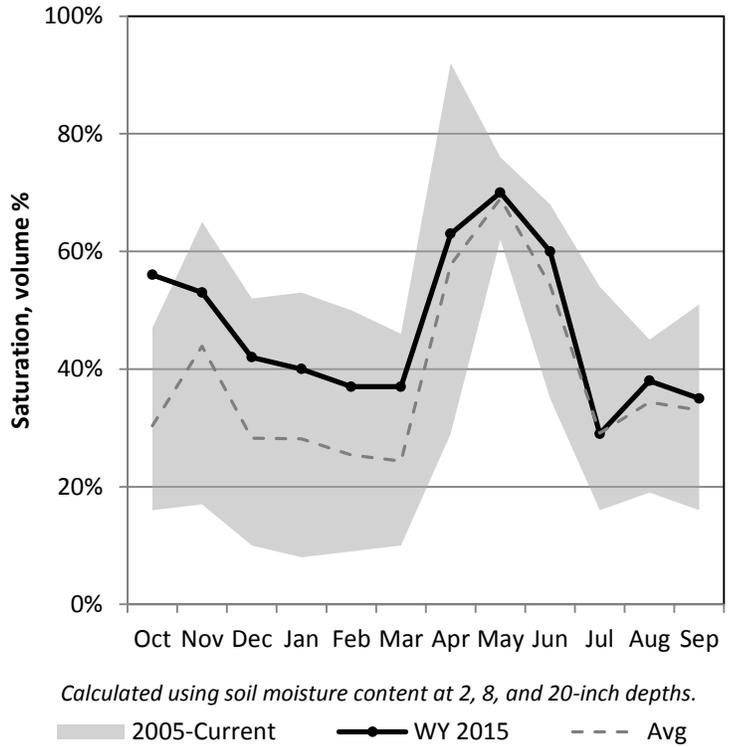
10/1/2014

Precipitation in September was much above average at 317%, which brings the seasonal accumulation (Oct-Sep) to 101% of average. Soil moisture is at 56% compared to 26% last year.

Precipitation



Soil Moisture

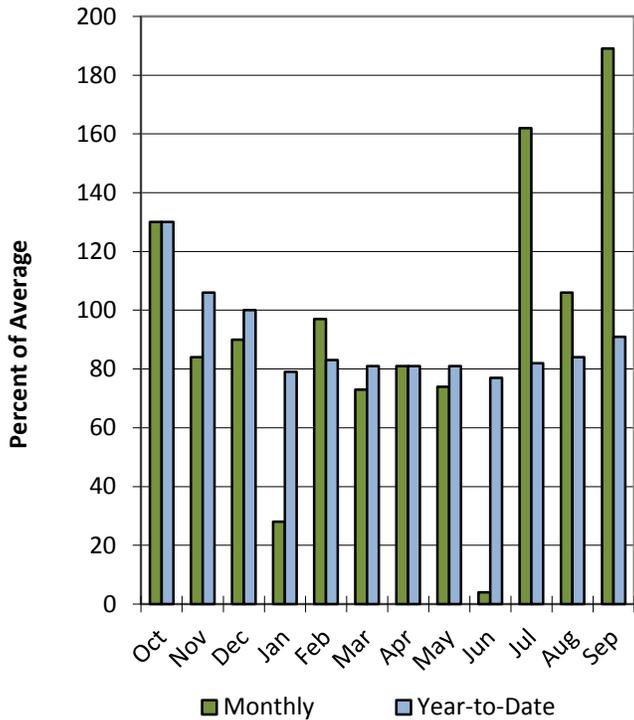


Beaver River Basin

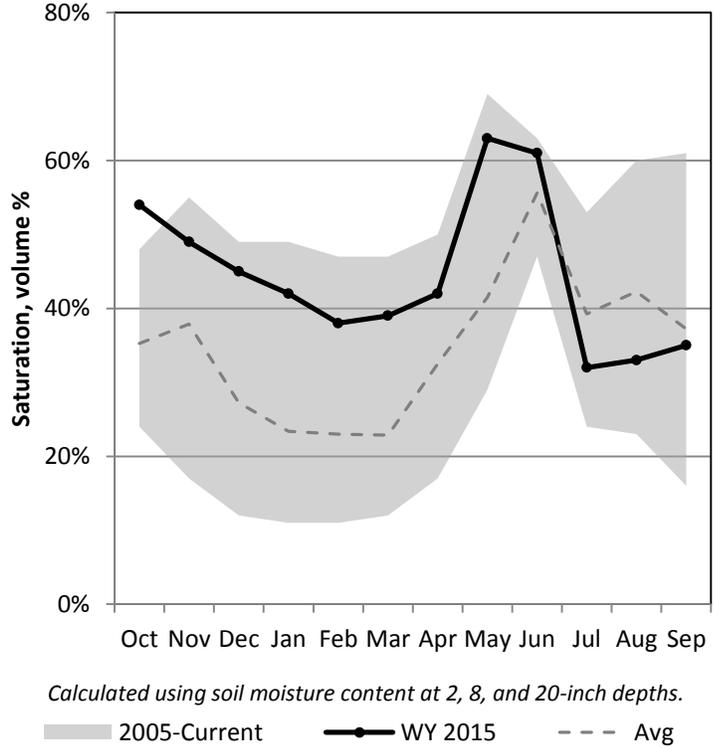
10/1/2014

Precipitation in September was much above average at 189%, which brings the seasonal accumulation (Oct-Sep) to 91% of average. Soil moisture is at 54% compared to 47% last year. Reservoir storage is at 16% of capacity, compared to 18% last year. The water availability index for the Beaver River is 46%.

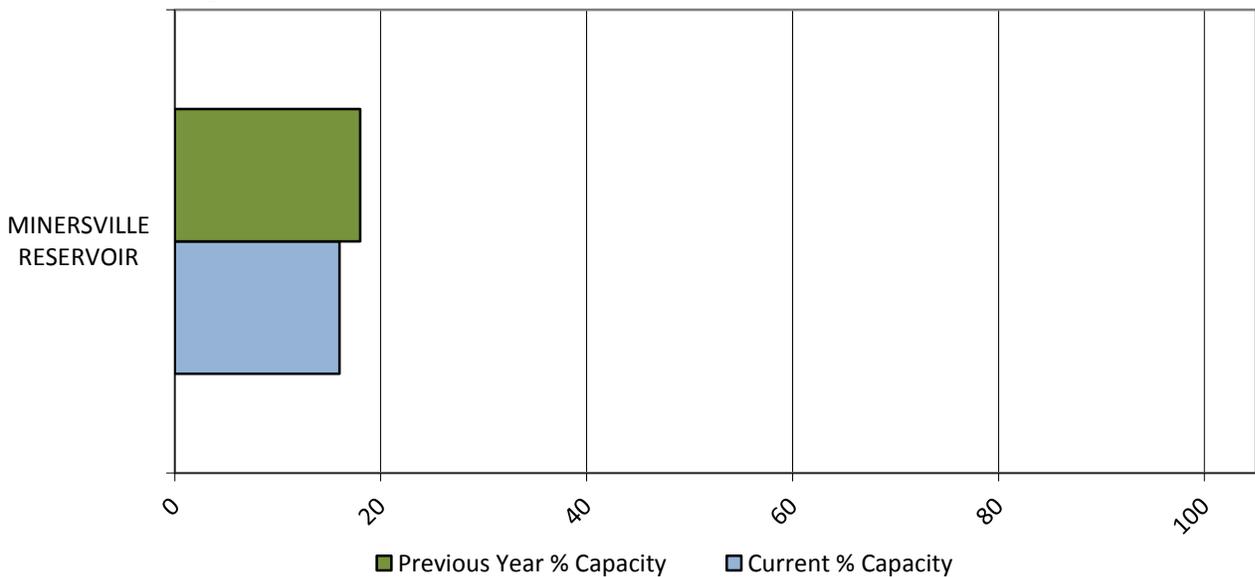
Precipitation



Soil Moisture



Reservoir Storage

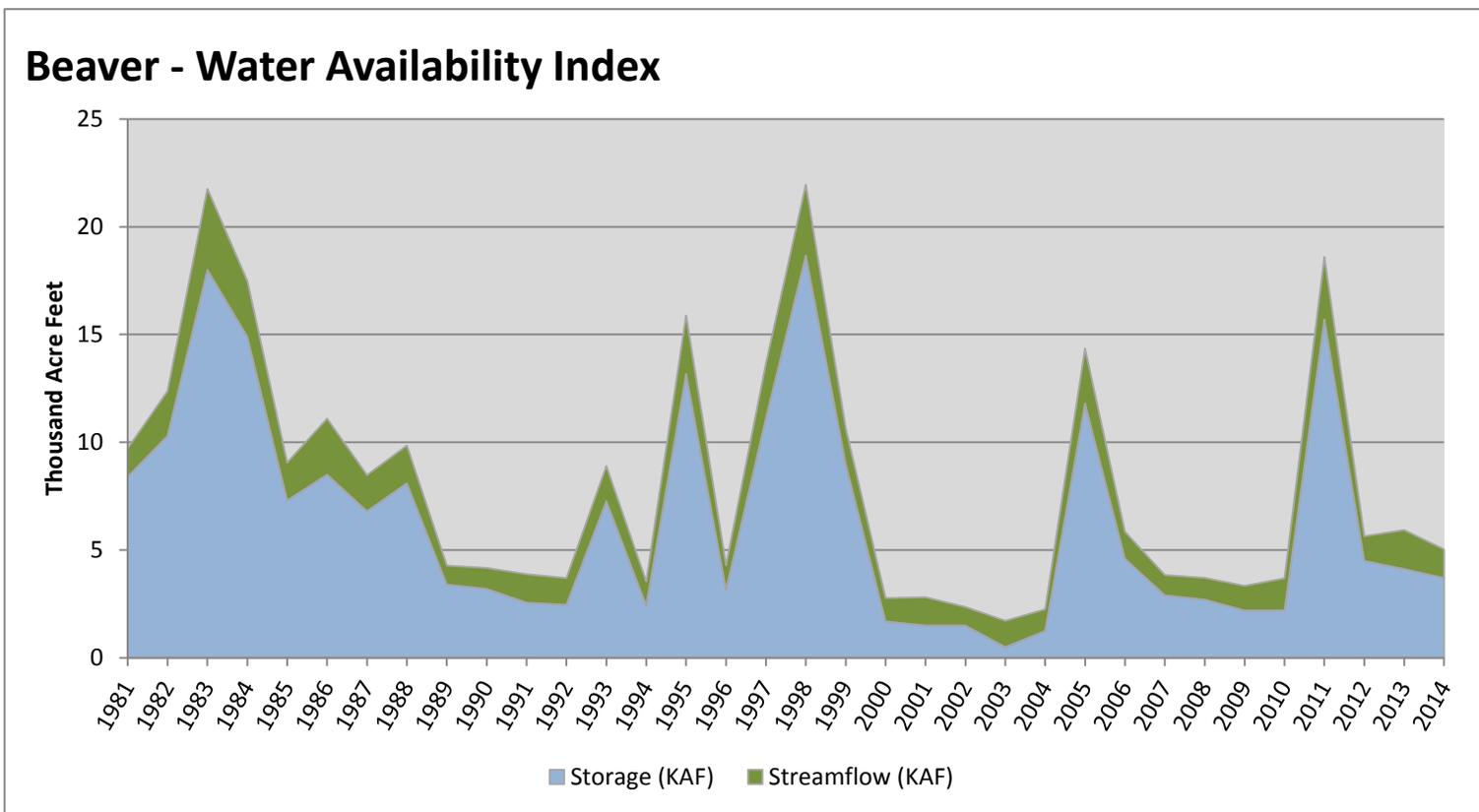


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	3.70	1.33	5.03	46	-0.36	89, 96, 12, 06

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.

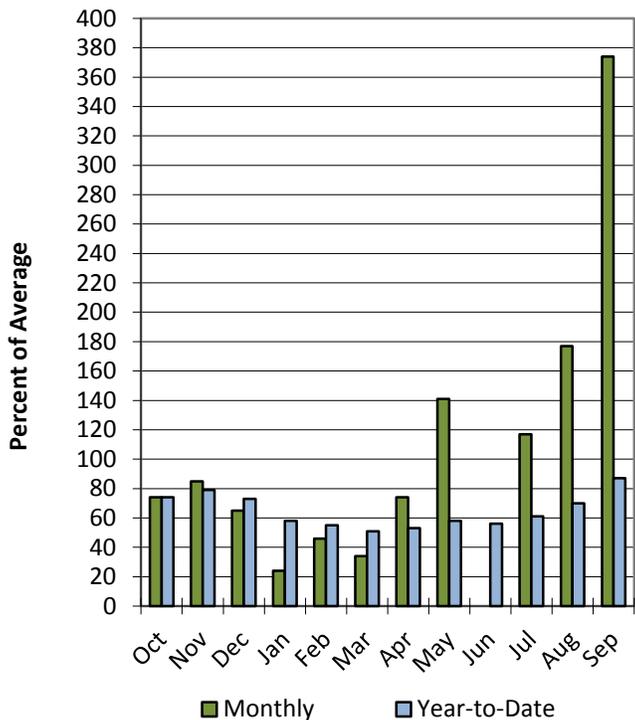


Southwestern Utah Basin

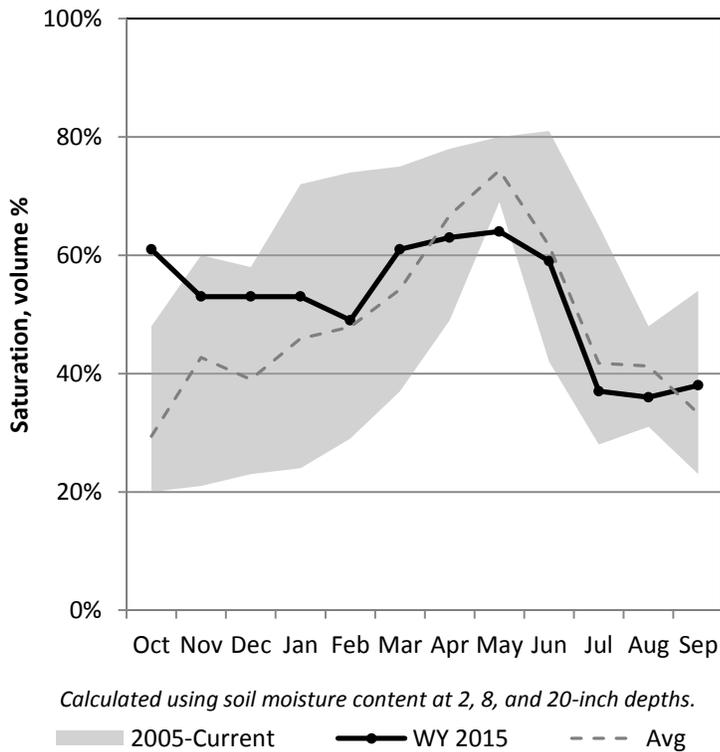
10/1/2014

Precipitation in September was much above average at 374%, which brings the seasonal accumulation (Oct-Sep) to 87% of average. Soil moisture is at 61% compared to 38% last year. Reservoir storage is at 50% of capacity, compared to 45% last year. The water availability index for the Virgin River is 61%.

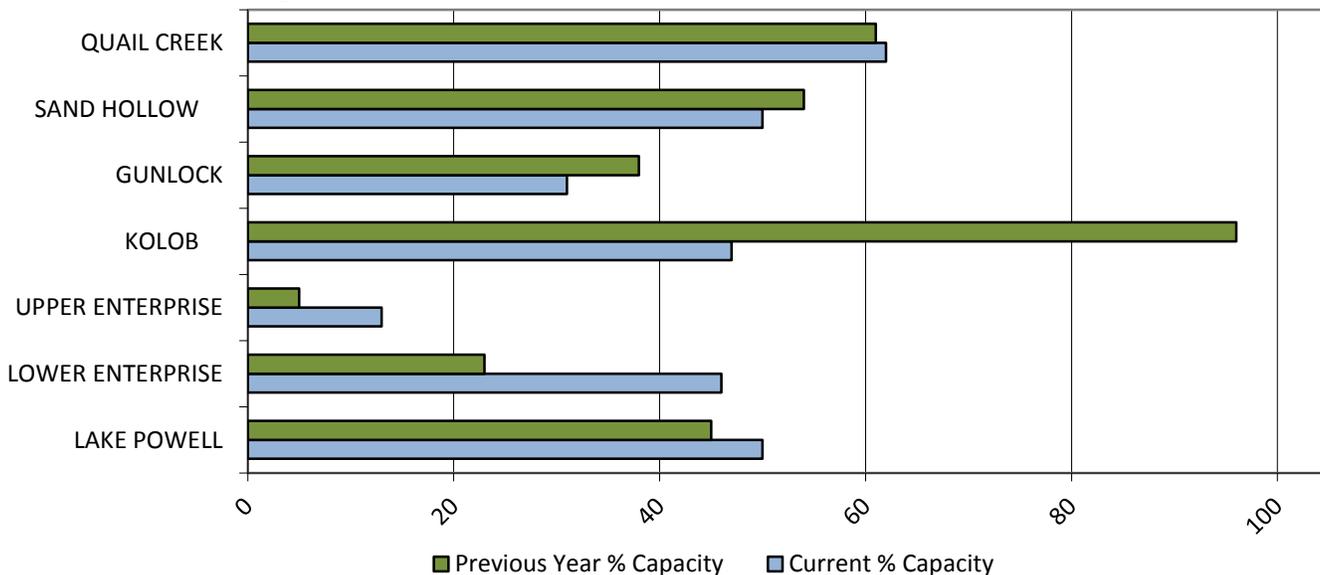
Precipitation



Soil Moisture



Reservoir Storage

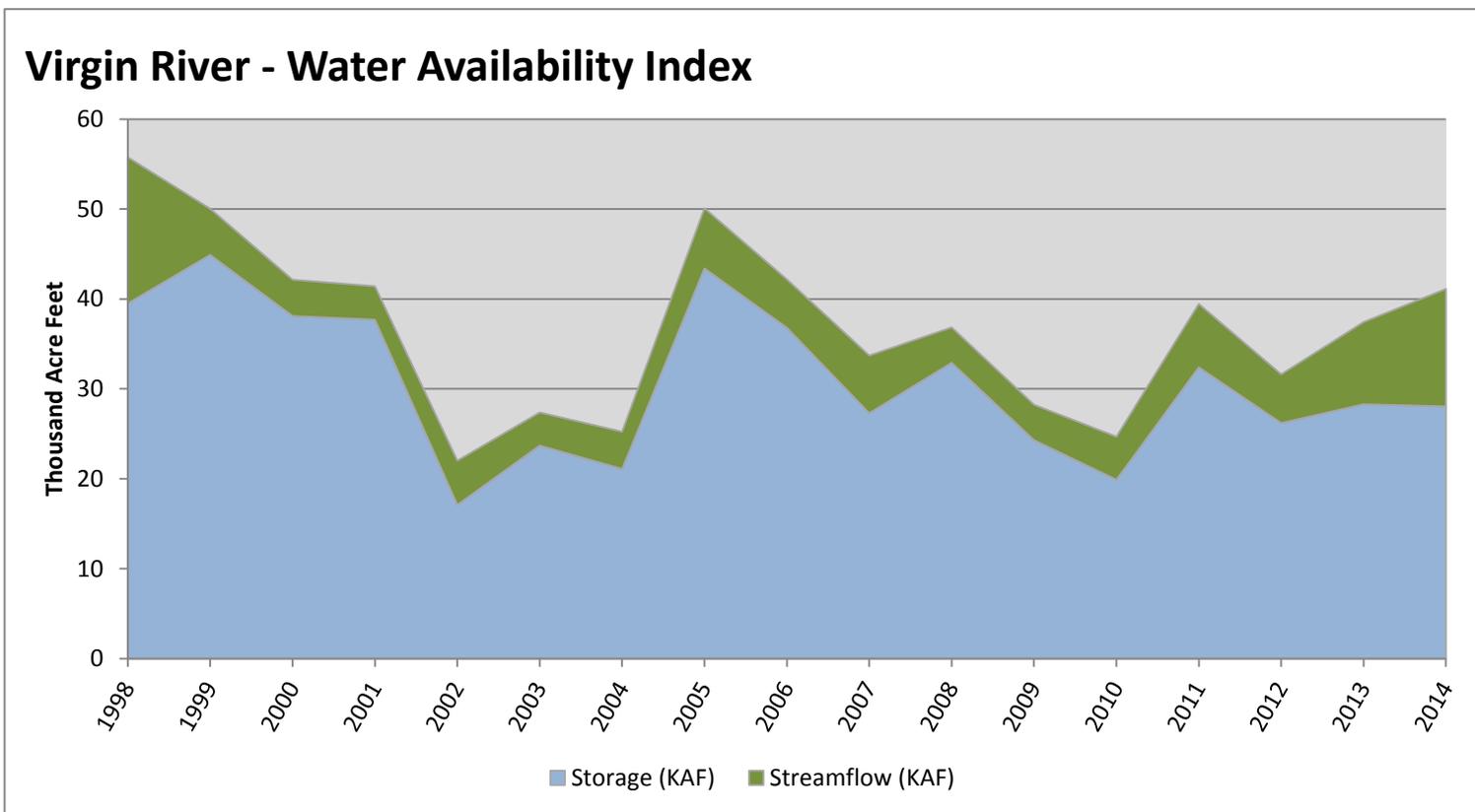


October 1, 2014

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	28.05	13.07	41.12	61	0.93	13, 11, 01, 00

^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



October 1, 2014

Water Availability Index

Basin or Region	Sep EOM* Storage	September Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	513	16.1	529	49.00	-0.1	95, 01, 13, 89
Woodruff Narrows	22.4	8.8	31.2	57.0	0.6	93, 91, 96, 06
Little Bear	3.1	1.2	4.2	20.0	-2.5	01, 90, 91, 02
Ogden	54.4	1.9	56.3	49.0	-0.1	94, 08, 89, 04
Weber	75.4	17.0	92.4	42.0	-0.6	02, 07, 04, 10
Provo River	309.5	6.1	315.6	35.0	-1.3	03, 07, 96, 01
Western Uintah	153.0	7.5	160.5	68.0	1.5	13, 05, 09, 11
Eastern Uintah	15.6	5.2	20.7	17.0	-2.7	94, 12, 90, 04
Blacks Fork	15.4	9.2	24.6	86.0	3.0	99, 95, 98, 83
Price	10.8	0.6	11.4	17.0	-2.7	01, 93, 89, 02
Smiths Creek	8.1	2.4	10.5	85.0	2.9	91, 86, 98, 83
Joes Valley	40.7	1.9	42.6	37.0	-1.1	07, 01, 10, 81
Moab	1.1	0.4	1.6	75.0	2.1	99, 01, 98, 95
Upper Sevier River	31.5	3.3	34.8	43.0	-0.6	07, 01, 00, 12
San Pitch	0.0	0.4	0.4	17.0	-2.7	03, 92, 12, 13
Lower Sevier	48.4	6.6	55.0	17.0	-2.7	02, 10, 09, 93
Beaver	3.7	1.3	5.0	46.0	-0.4	89, 96, 12, 06
Virgin River	28.1	13.1	41.1	61.0	0.9	13, 11, 01, 00

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

What is a Water Availability Index?

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

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

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

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

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