

Utah Climate and Water Report

October, 2015



Near Smith and Morehouse

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

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

2) General Hydrological Conditions

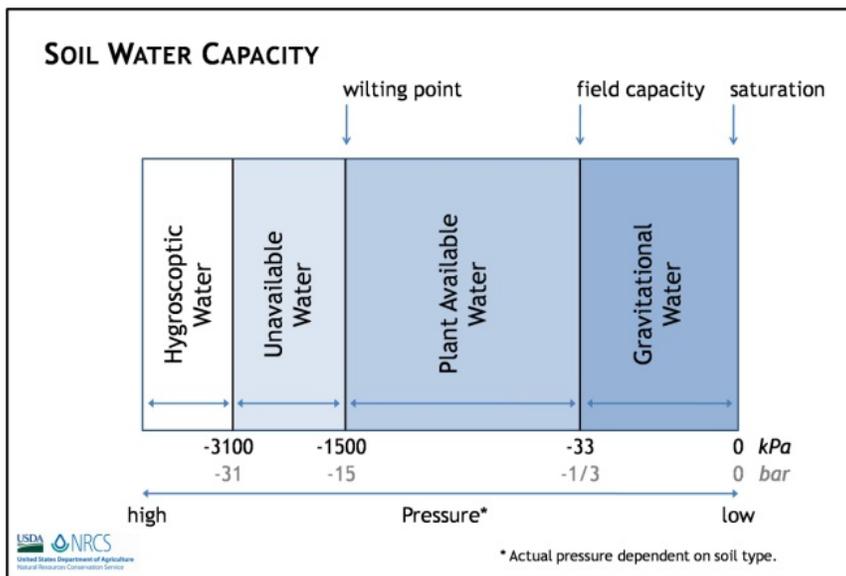
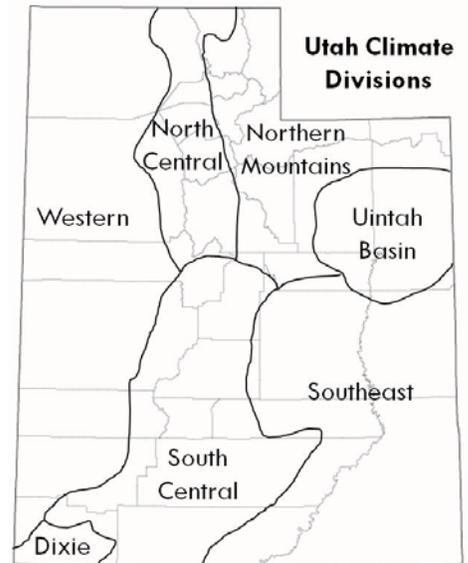
- a) SNOTEL Current Snow Water Equivalent (SWE) % of Normal
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 - Water Availability Index

Climate and Water Information

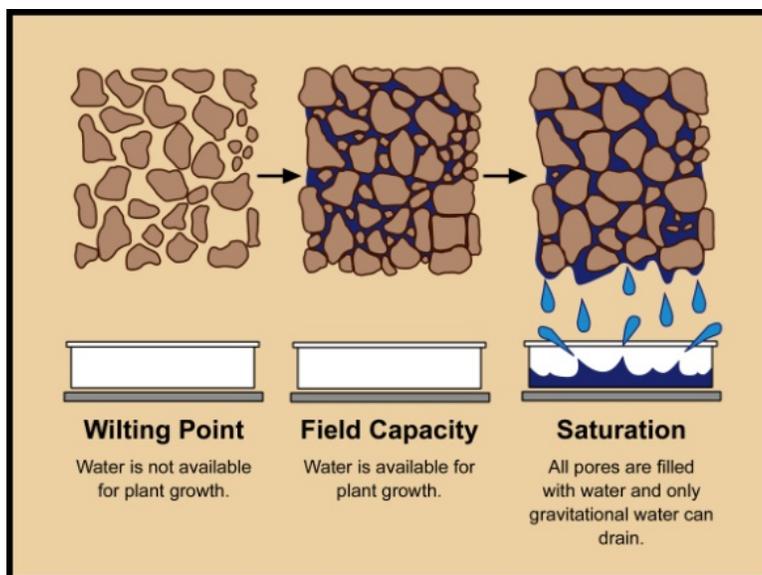
Soil Climate Analysis Network

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.

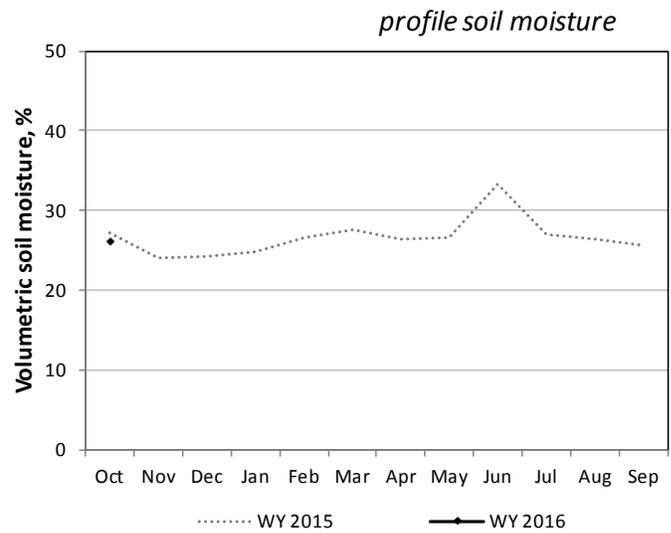
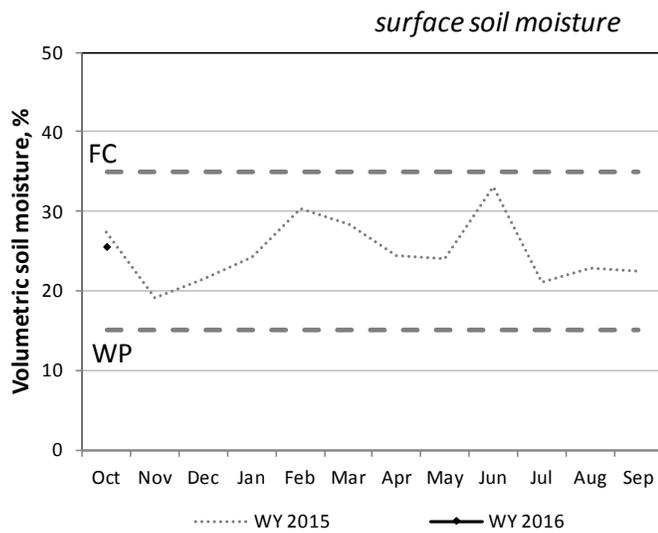
North Central

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	16.0	2.3	16	11	28	21	17	64	65	66	65	63
Cache Junction	21.3	2.6	36	31	42	30	38	60	62	61	60	60
Grantsville	11.5	1.3	2	17	26	-	-	67	69	70	68	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.

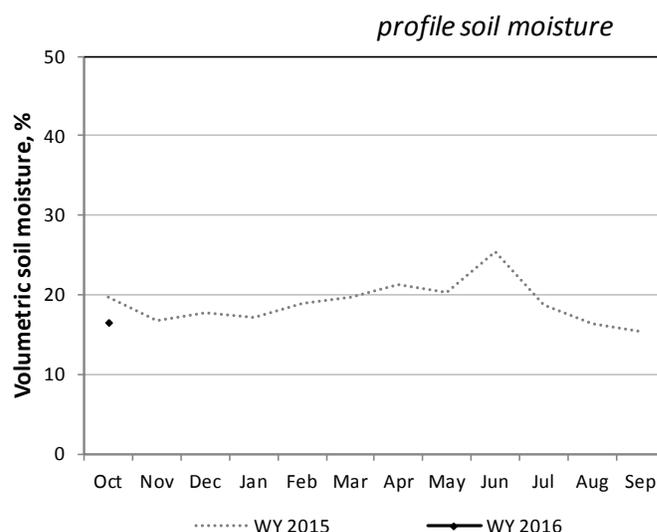
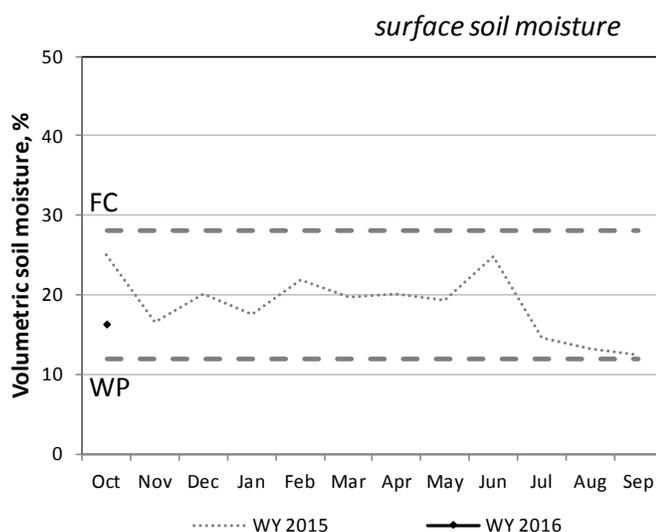
Northern Mountains

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	17.6	2.1	11	14	16	12	11	57	58	58	57	55
Buffalo Jump	13.7	1.3	10	10	8	8	-	32	32	32	-	-
Morgan	18.3	2.4	25	21	27	32	21	65	65	66	64	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



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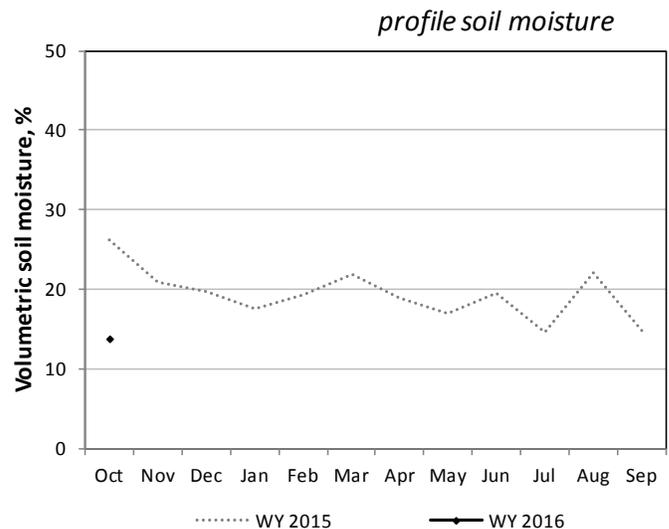
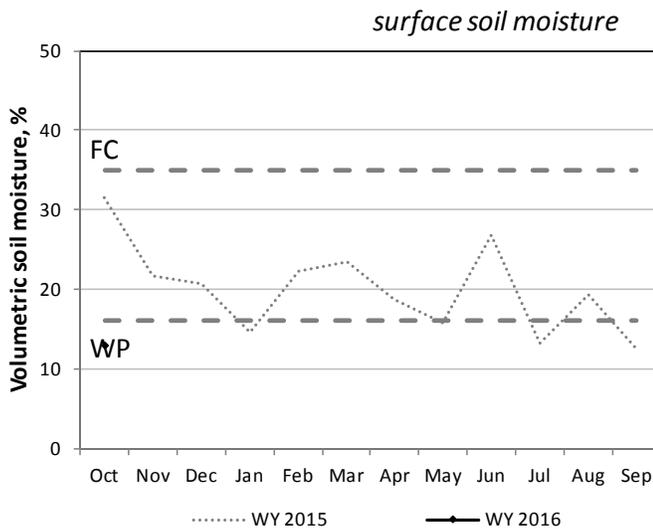
Uintah Basin

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	13.3	1.6	6	12	13	10	7	60	62	62	59	63
Little Red Fox	10.1	0.5	7	17	21	24	18	56	63	64	63	61
Split Mountain	8.5	1.0	8	18	11	13	12	65	69	70	68	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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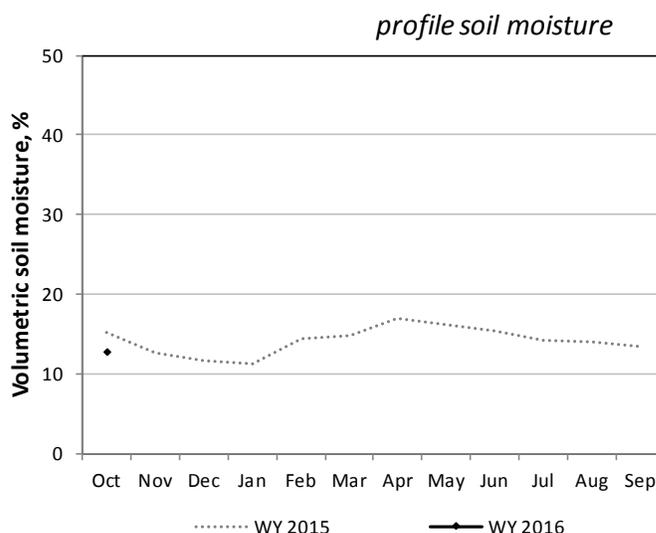
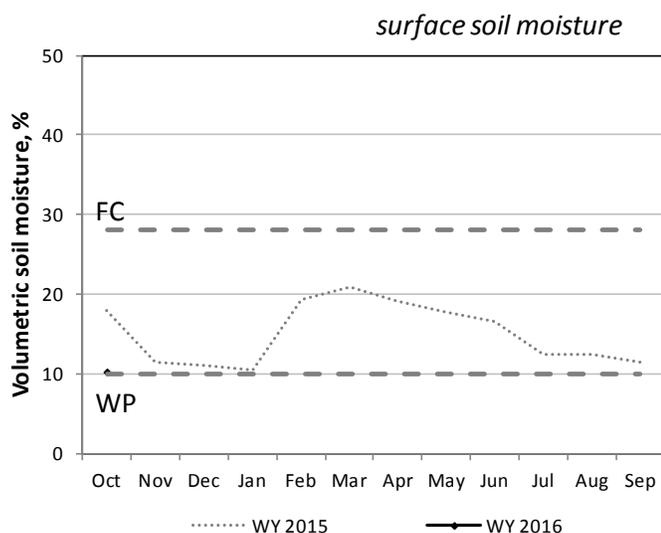
Southeast

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	8.9	0.1	0	8	15	17	20	70	72	73	70	68
Green River	7.0	0.3	8	6	8	6	8	73	75	75	71	71
Harm's Way	14.7	1.0	6	12	14	14	6	64	67	69	66	63
West Summit	13.3	0.5	7	12	14	16	17	60	63	66	63	62
Eastland	17.0	0.9	6	10	9	23	21	65	67	68	65	64
Alkali Mesa	15.0	0.5	3	6	15	16	17	69	69	72	71	70
McCracken Mesa	12.4	0.1	6	10	14	17	13	71	75	76	72	71

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Southeast



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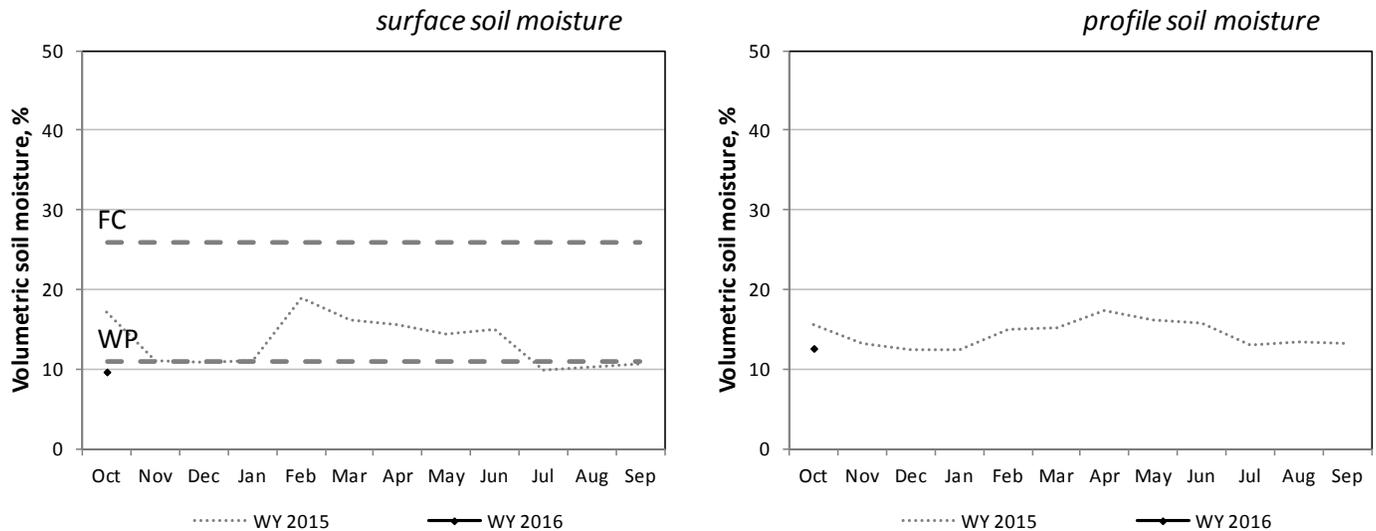
South Central

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTH CENTRAL												
Nephi	11.3	0.2	9	14	14	8	7	69	71	71	69	66
Ephraim	10.3	0.2	12	22	30	34	36	65	67	67	65	63
Holden	6.5	0.0	3	4	6	12	12	74	76	76	73	72
Milford	8.2	0.3	5	13	15	27	18	72	72	70	68	67
Manderfield	10.1	0.5	15	12	12	11	5	63	68	67	65	63
Circleville	8.0	0.8	10	12	6	9	15	64	69	69	65	63
Panguitch	10.5	1.0	7	23	14	21	36	56	56	56	55	55
Cave Valley	16.0	1.6	1	3	5	4	1	60	65	67	68	66
Vermillion	16.1	1.7	0	1	3	4	9	57	61	65	63	61
Spooky	10.5	0.5	1	2	2	5	2	71	74	76	73	71

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

South Central



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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.

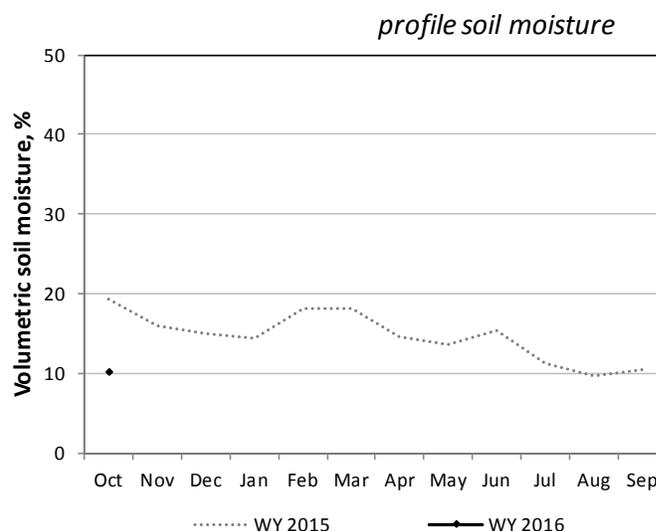
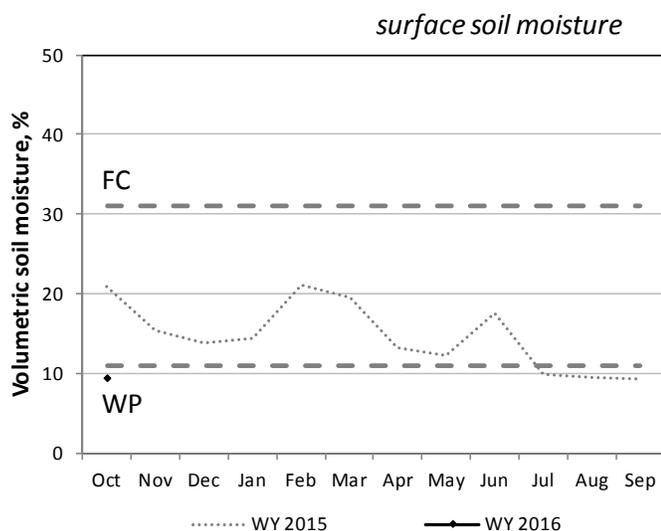
Western and Dixie

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	14.1	1.0	2	10	11	16	16	60	63	64	62	62
Park Valley	11.2	1.4	5	7	14	-	-	63	64	67	66	65
Goshute	8.9	0.9	-	-	-	-	-	63	65	67	65	65
Dugway	8.5	0.6	-	-	-	-	-	76	76	76	73	71
Tule Valley	5.4	0.3	10	12	21	15	9	69	77	80	78	86
Hal's Canyon	5.7	0.0	0	0	9	11	10	67	71	75	71	70
Enterprise	10.6	0.5	4	20	20	13	15	65	72	72	70	68
DIXIE												
Sand Hollow	7.0	0.7	0	3	1	1	0	77	81	83	80	78

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

Western & Dixie



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

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

Utah Hydrologic Summary

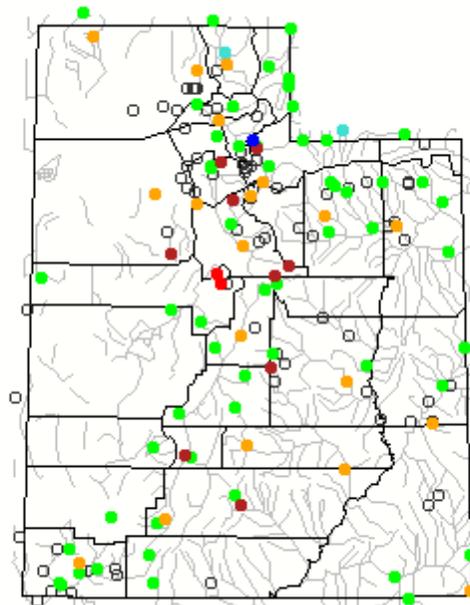
October 1, 2015

Current Conditions

Stream flow across the state is a mixed bag with many sites near normal (25%-75%) but there is a substantial number of sites (close to 30) that are below or much below normal. It has been an interesting summer: beginning with May and exceptional precipitation that allowed a much delayed start to reservoir water use, June was dry, July was again exceptionally wet and in the nick of time reducing water drain on reservoir storage and the rest of summer was more or less ho hum. September precipitation statewide was 97% of average bringing the seasonal accumulation to 85% of average. Irrigation for the season is winding down and many reservoirs are beginning to bank water for next year. Soil moisture is slightly above average at 39% compared to 70% last year. Considering what might have been if it had been a scorcher dry summer, reservoir storage statewide is in decent shape at 52% of capacity compared to 55% last year. Without the fortuitous rains in May and July, reservoir storage would have been much less. Looking forward to the new water year it is probable that southern Utah will have an above average precipitation year due to the strong El Nino conditions. The remainder of the state, according to the Climate Prediction Center calls for equal chances in central Utah and potentially below normal precipitation in the far north.

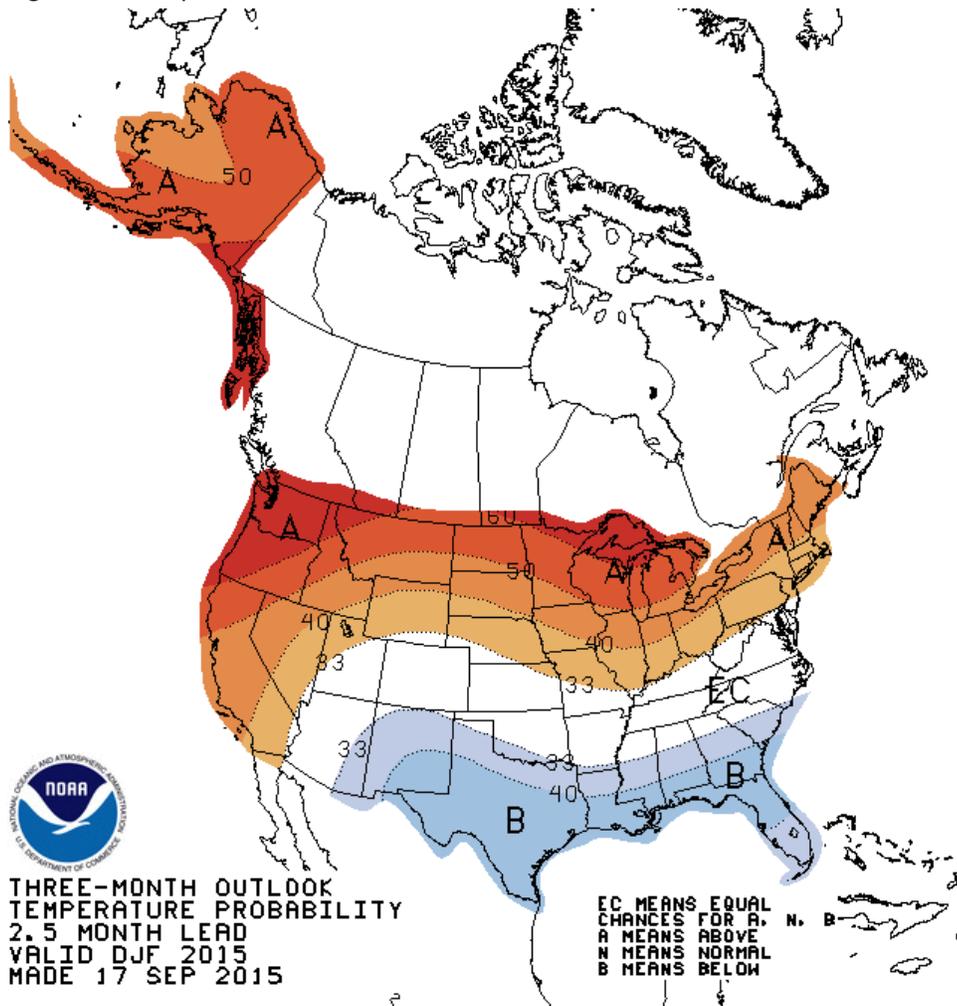
Current Utah Stream Flow - Courtesy US Geological Survey

Hednesday, September 30, 2015 09:00ET



Explanation - Percentile classes							
<10	10-24	25-75	76-90	>90			
Low	Much below normal	Below normal	Normal	Above normal	Much above normal	High	Not ranked

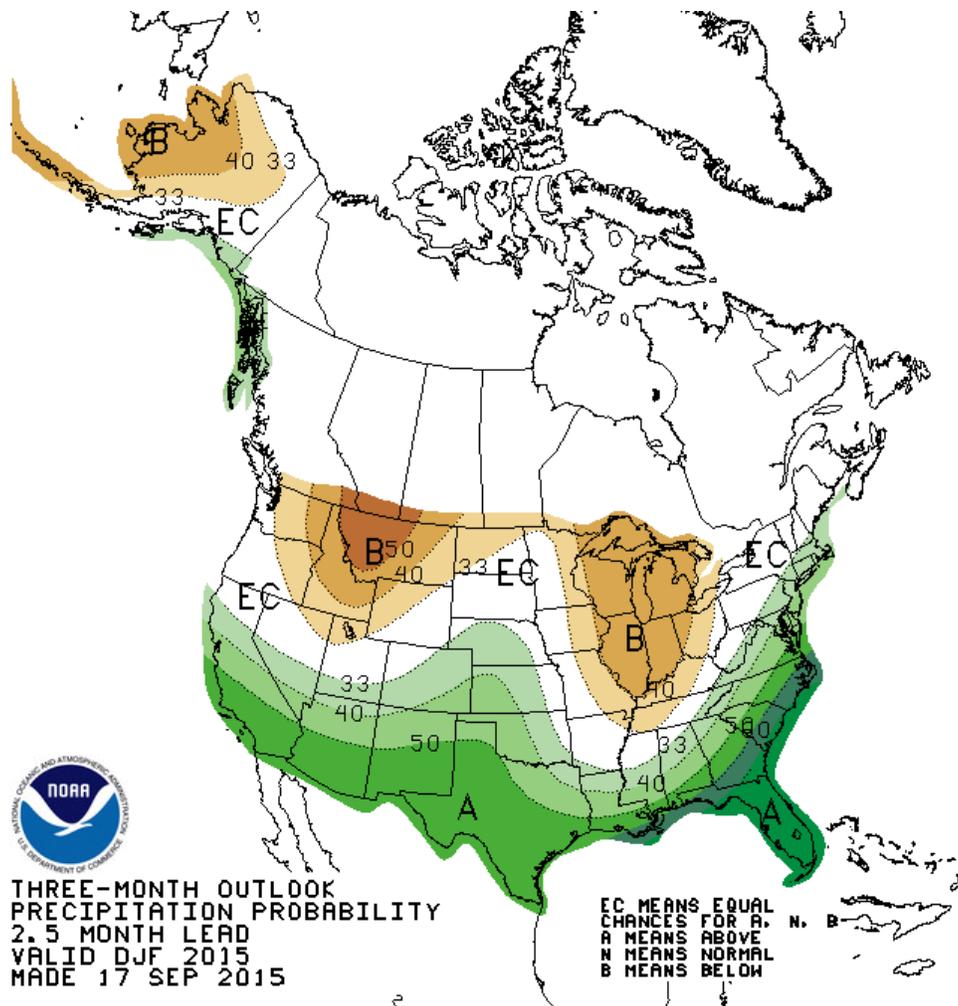
Looking forward to potential climate conditions for this winter.



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

This graphic from the National Climate Prediction Center shows expected temperatures for December through February of water 2015 year with northern Utah in the A category meaning the possibility of a warmer winter and the remainder of the state in the EC category meaning equal chances of above, below and near normal.

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



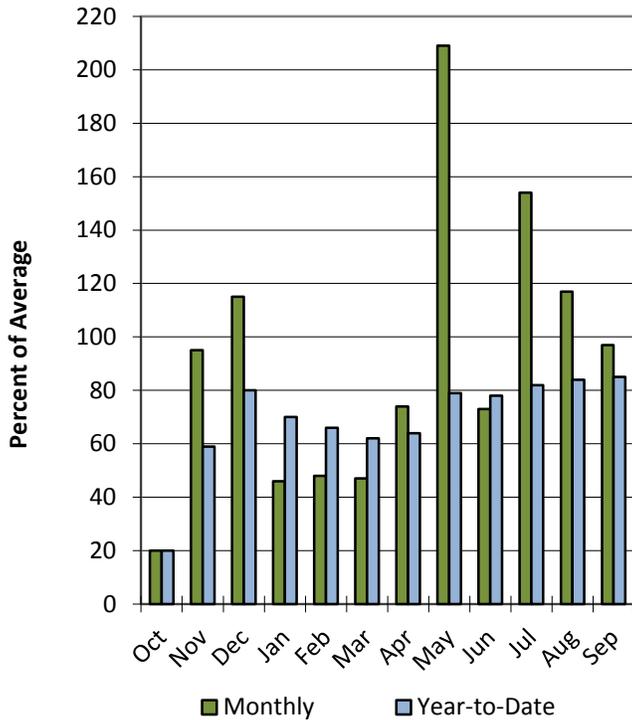
This graphic from the Climate Prediction Center shows expected precipitation for December through February of this new water year with northern Utah in the below normal category, central Utah in the EC (equal chances) category meaning any outcome is likely and a small segment of southern/southeastern Utah in the A category, a higher probability of above normal precipitation. These predictions are very similar to those of last year.

Statewide Utah

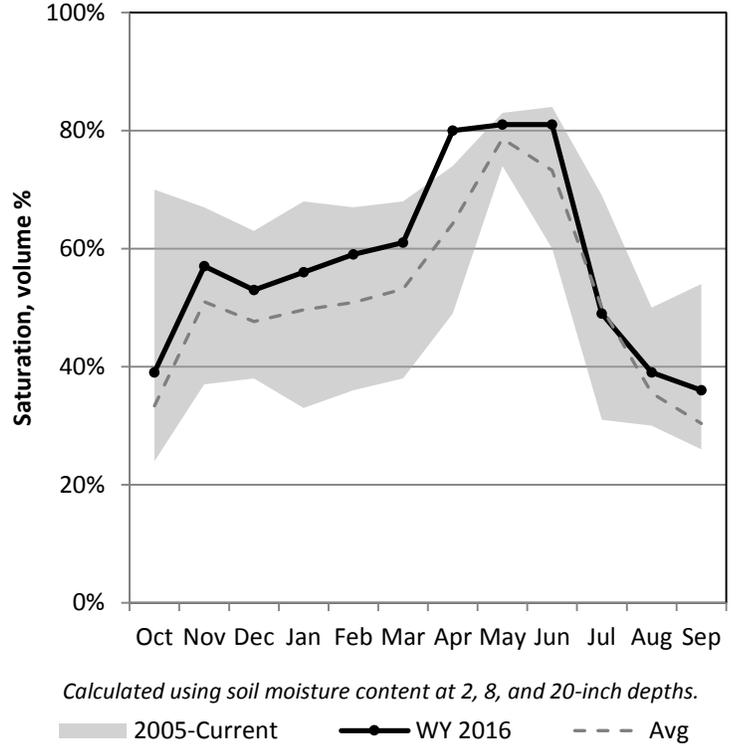
10/1/2015

Precipitation in September was near average at 97%, which brings the seasonal accumulation (Oct-Sep) to 85% of average. Soil moisture is at 39% compared to 70% last year. Reservoir storage is at 52% of capacity, compared to 55% last year.

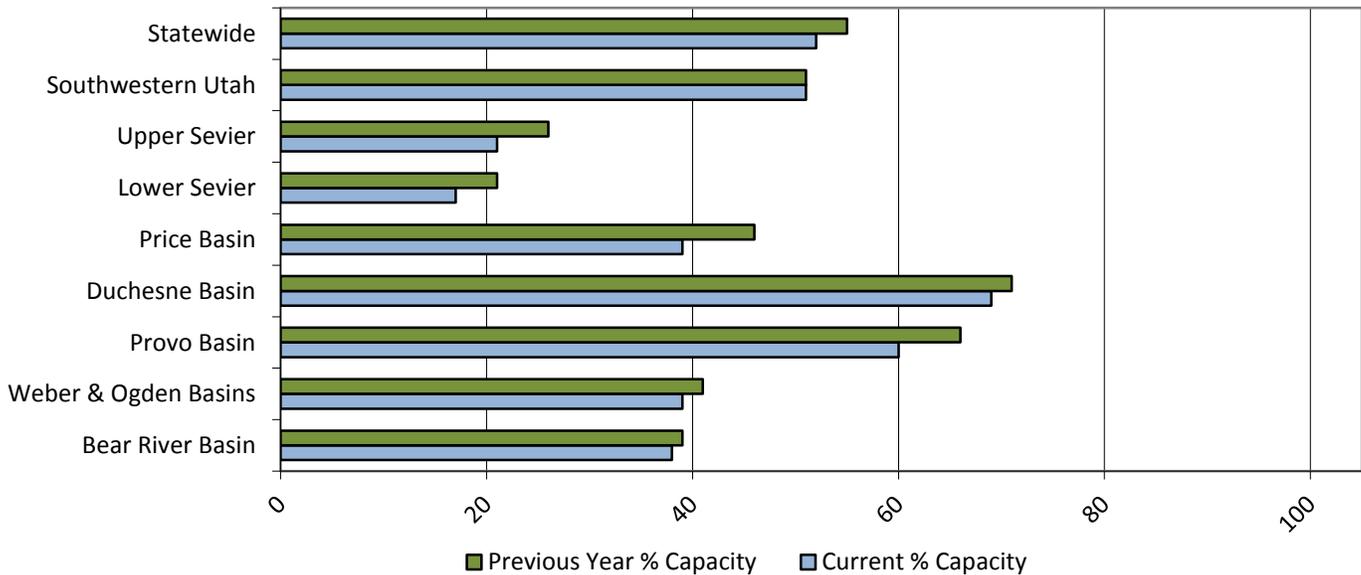
Precipitation



Soil Moisture



Reservoir Storage

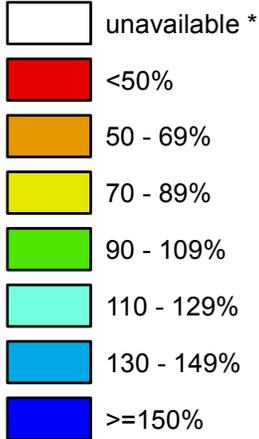


Utah

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

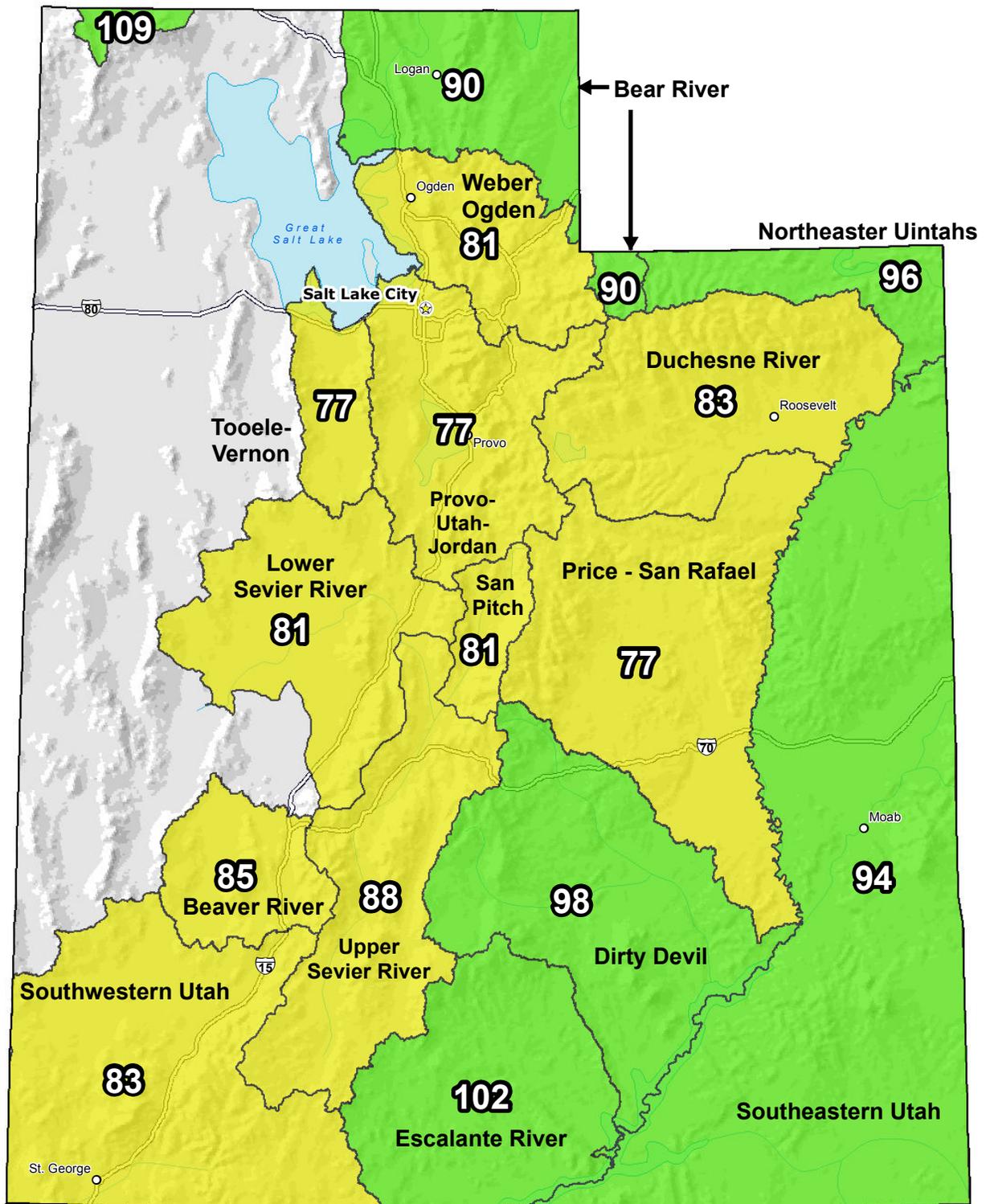
Oct 01, 2015

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



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

**Provisional Data
Subject to Revision**



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

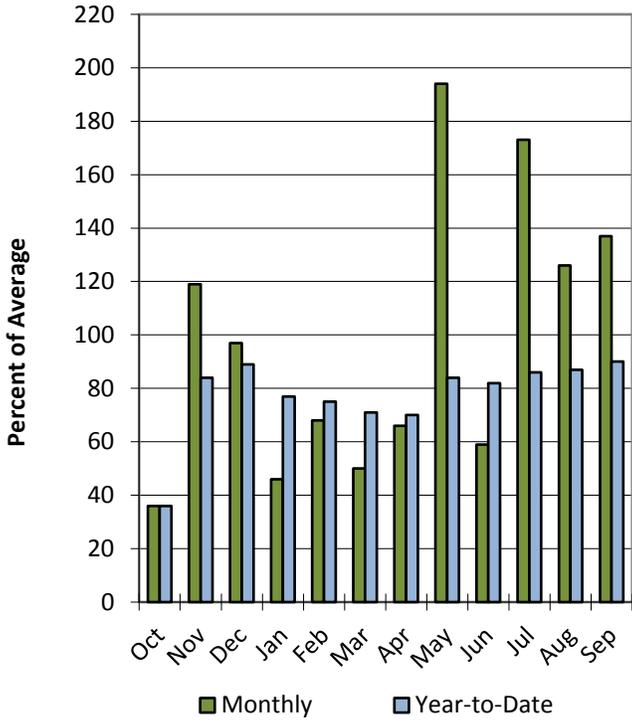
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Bear River Basin

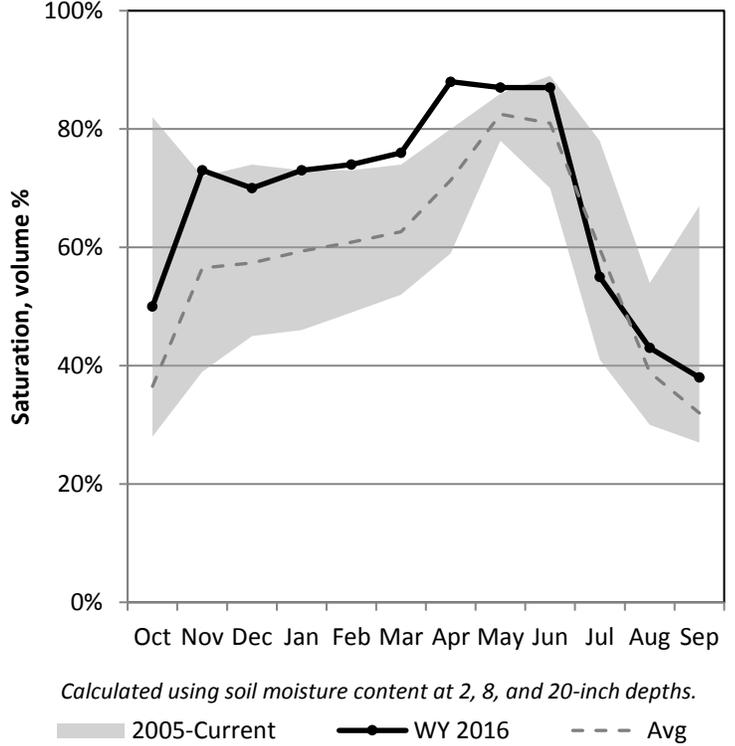
10/1/2015

Precipitation in September was much above average at 137%, which brings the seasonal accumulation (Oct-Sep) to 90% of average. Soil moisture is at 50% compared to 82% last year. Reservoir storage is at 38% of capacity, compared to 39% last year. The water availability index for the Bear River is 47%, 64% for Woodruff Narrows and 17% for the Little Bear.

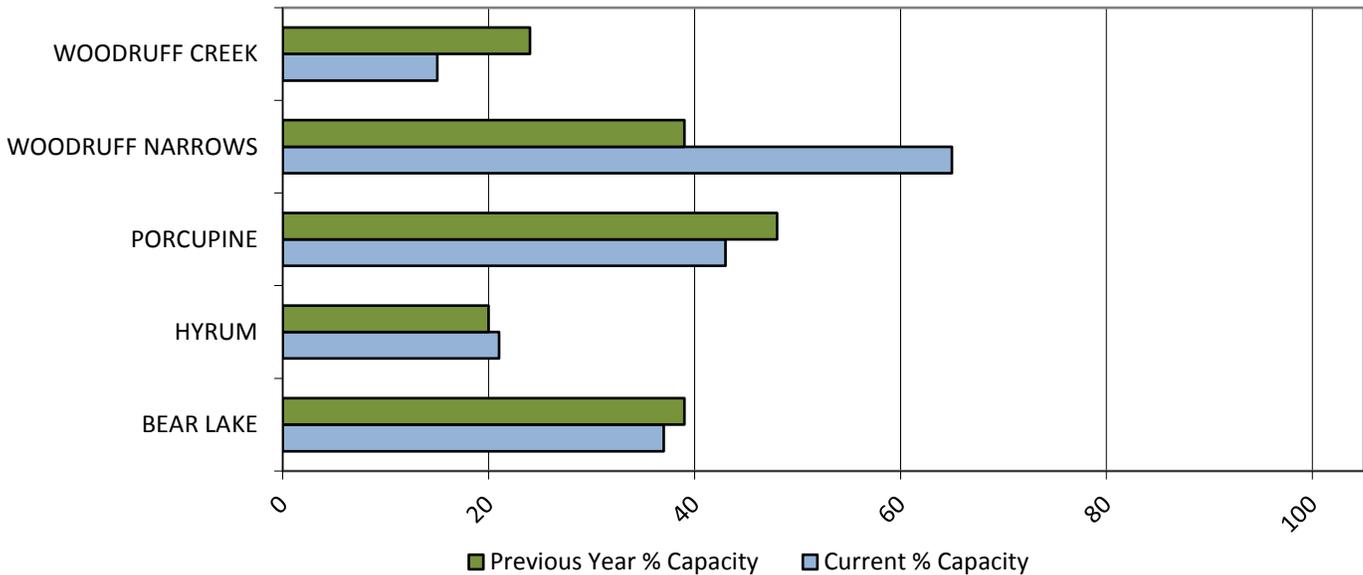
Precipitation



Soil Moisture



Reservoir Storage

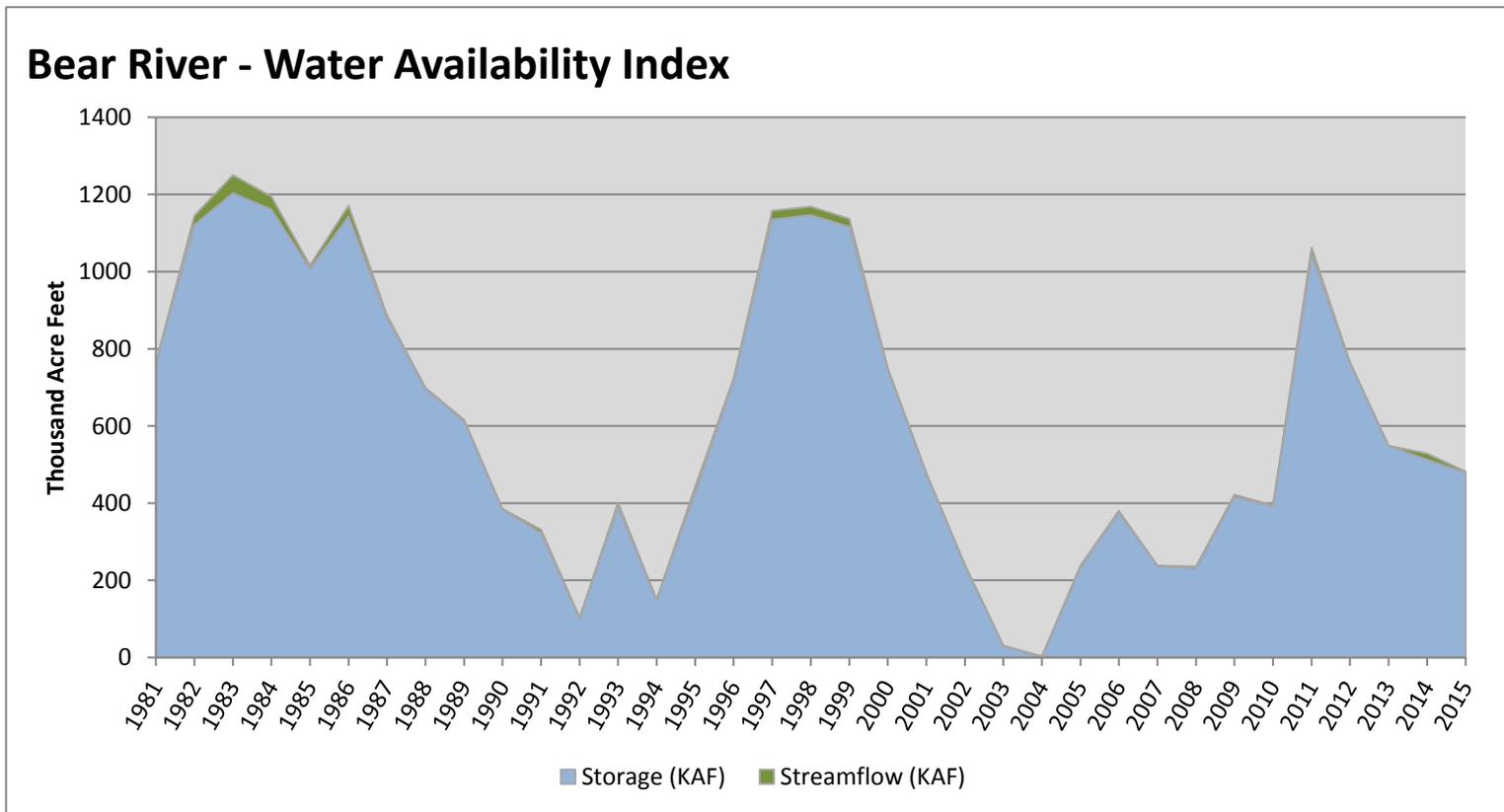


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	478.03	4.26	482.29	47	-0.23	95, 01, 14, 13

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

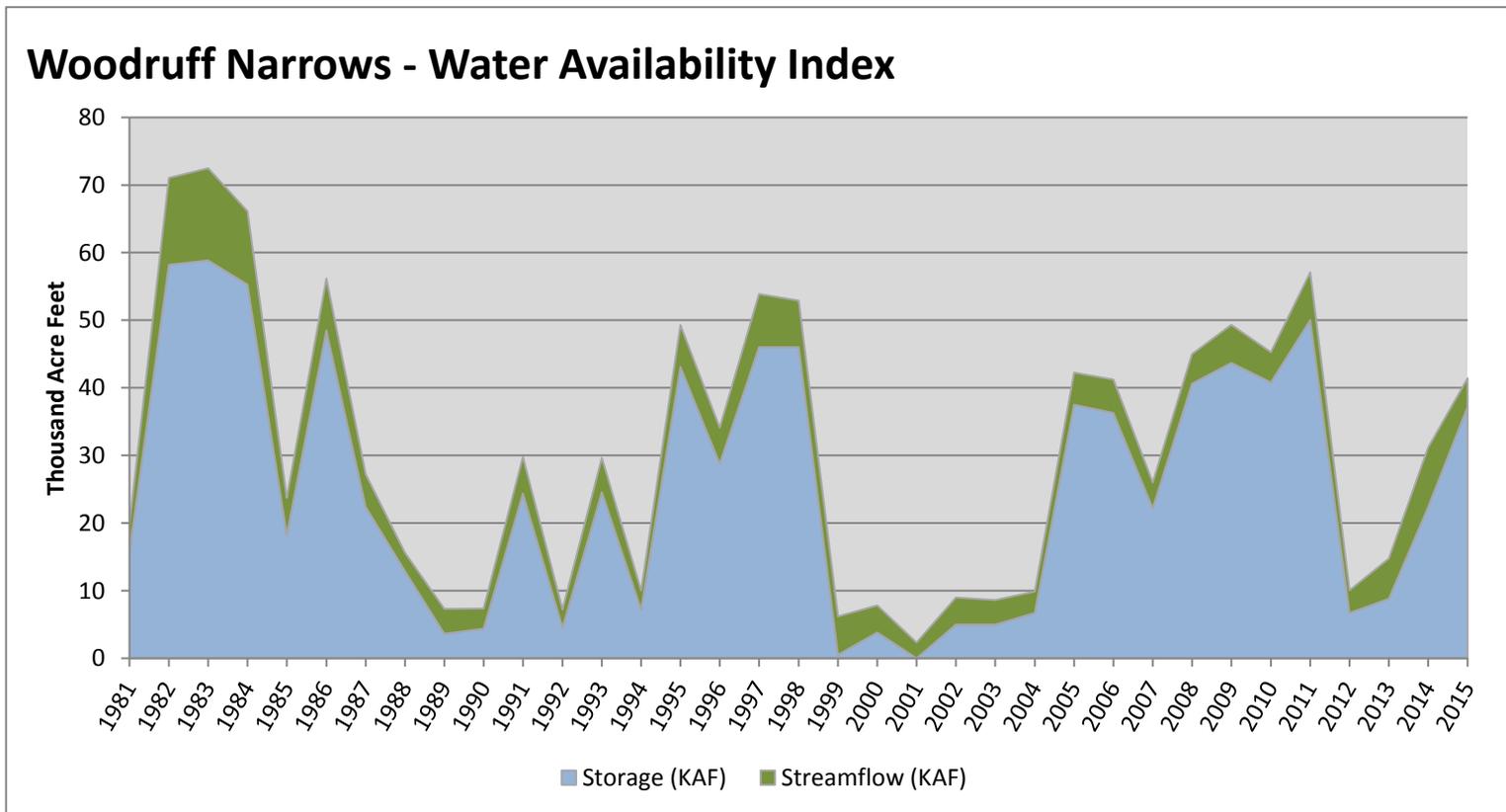


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	37.22	4.19	41.41	64	1.16	96, 06, 05, 08

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

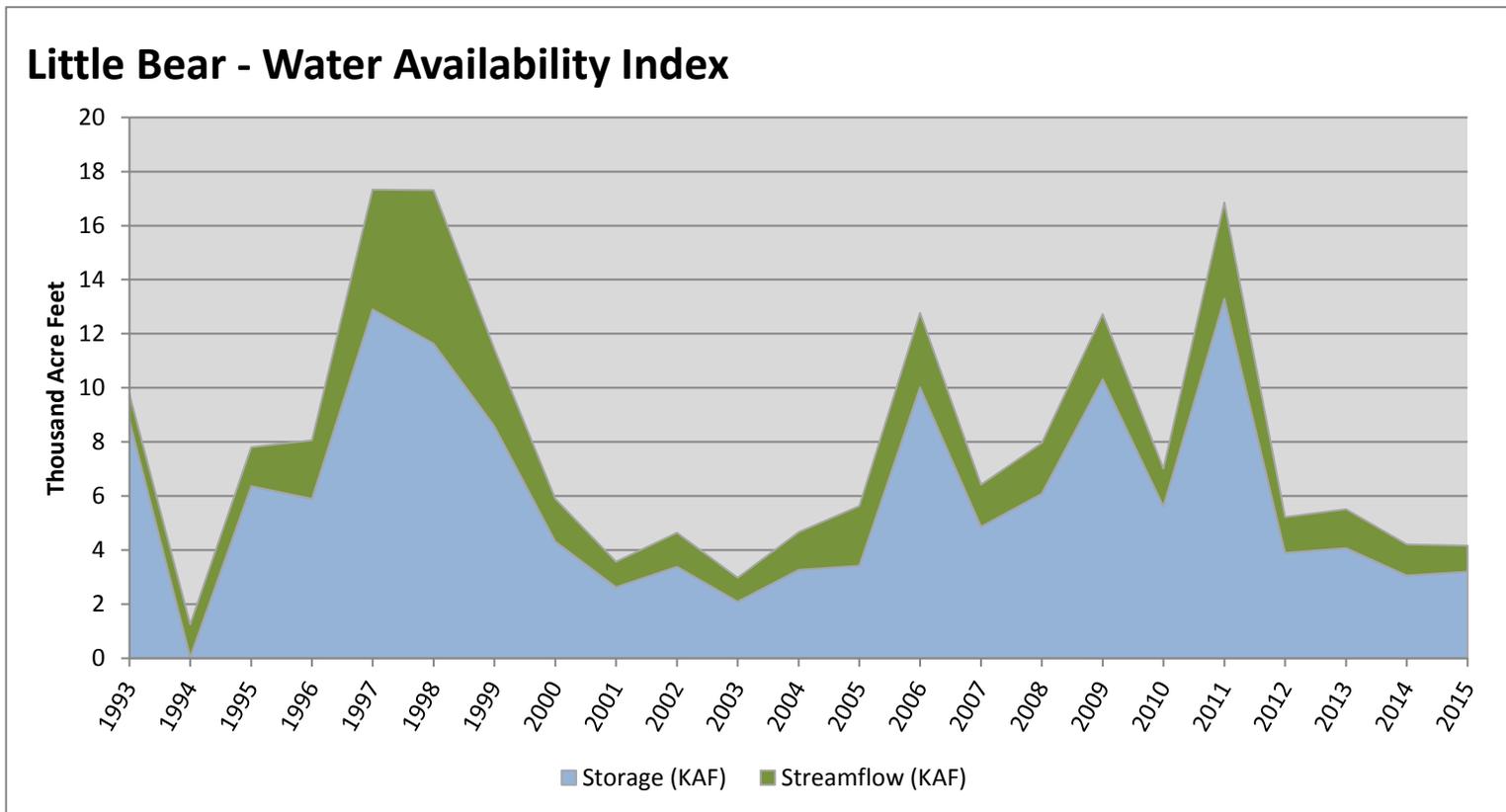


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	3.20	0.97	4.17	17	-2.78	03, 01, 14, 02

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

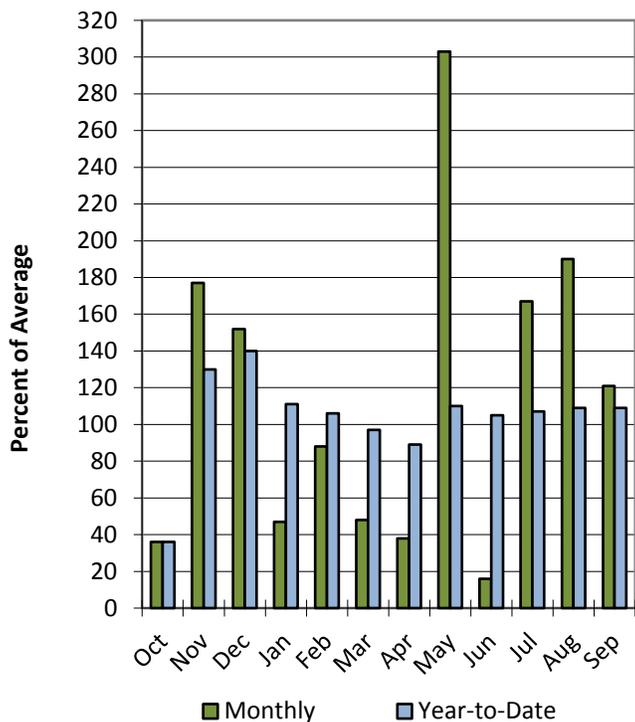


Raft River Basin

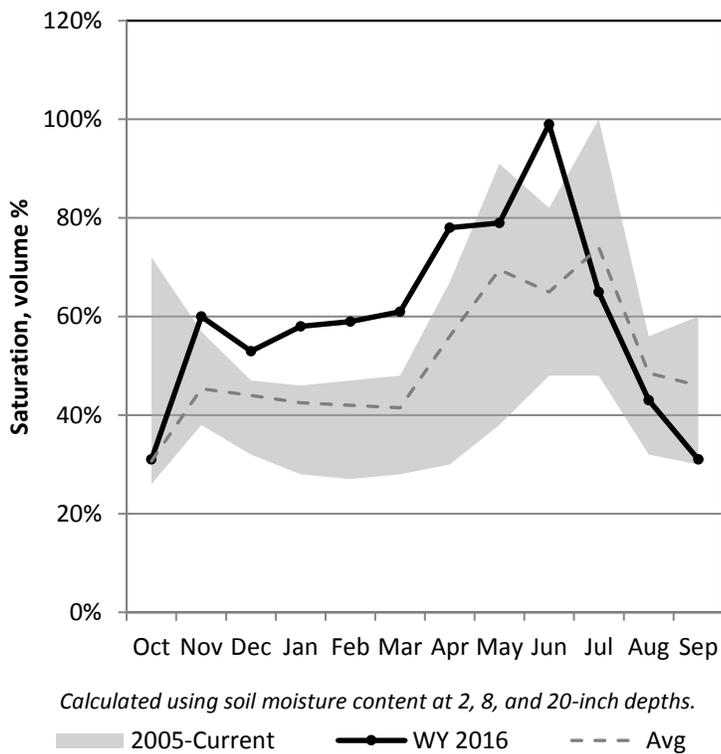
10/1/2015

Precipitation in September was above average at 121%, which brings the seasonal accumulation (Oct-Sep) to 109% of average. Soil moisture is at 31% compared to 72% last year.

Precipitation



Soil Moisture

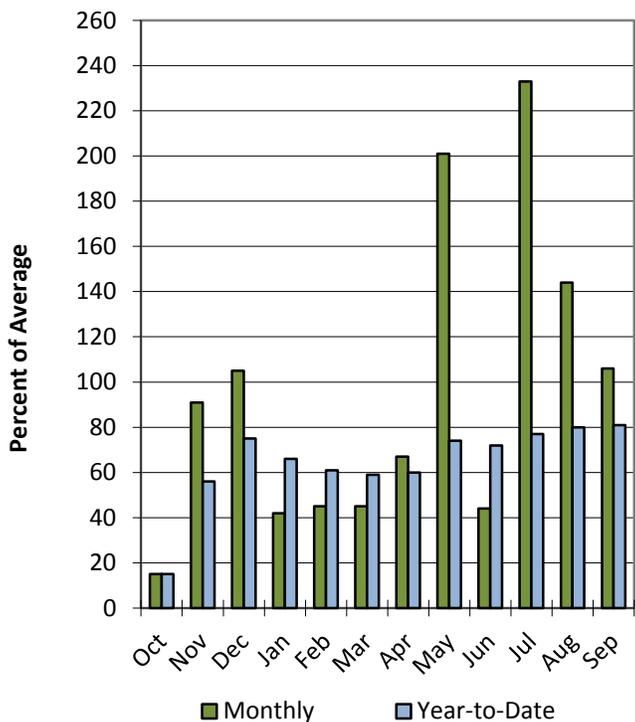


Weber & Ogden River Basins

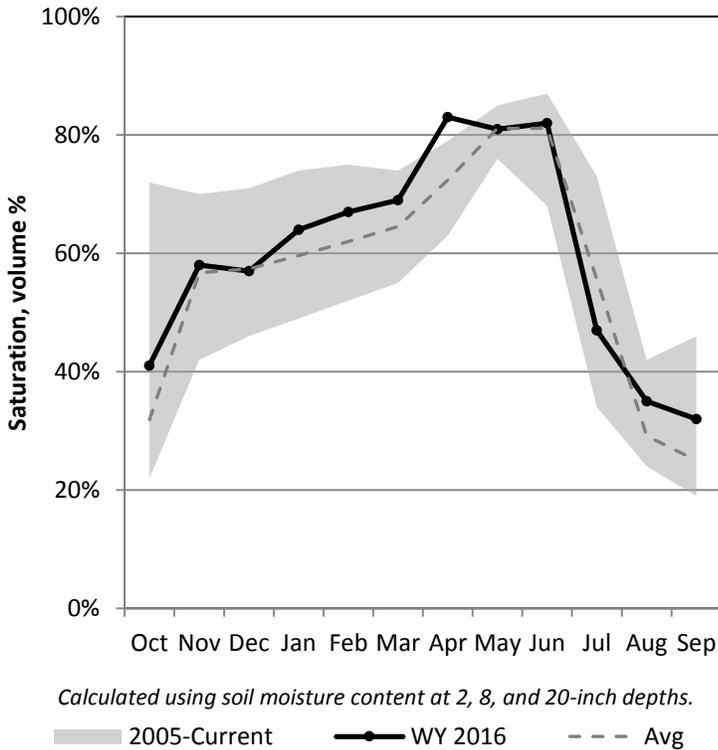
10/1/2015

Precipitation in September was near average at 106%, which brings the seasonal accumulation (Oct-Sep) to 81% of average. Soil moisture is at 41% compared to 72% last year. Reservoir storage is at 39% of capacity, compared to 41% last year. The water availability index for the Ogden River is 42% and 31% for the Weber River.

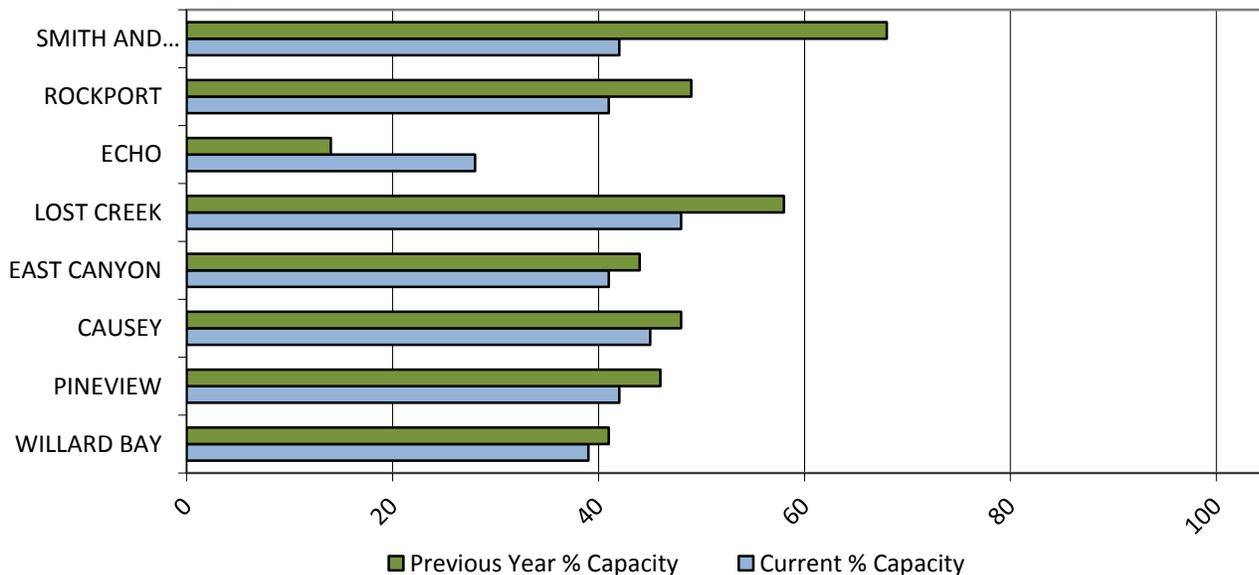
Precipitation



Soil Moisture



Reservoir Storage

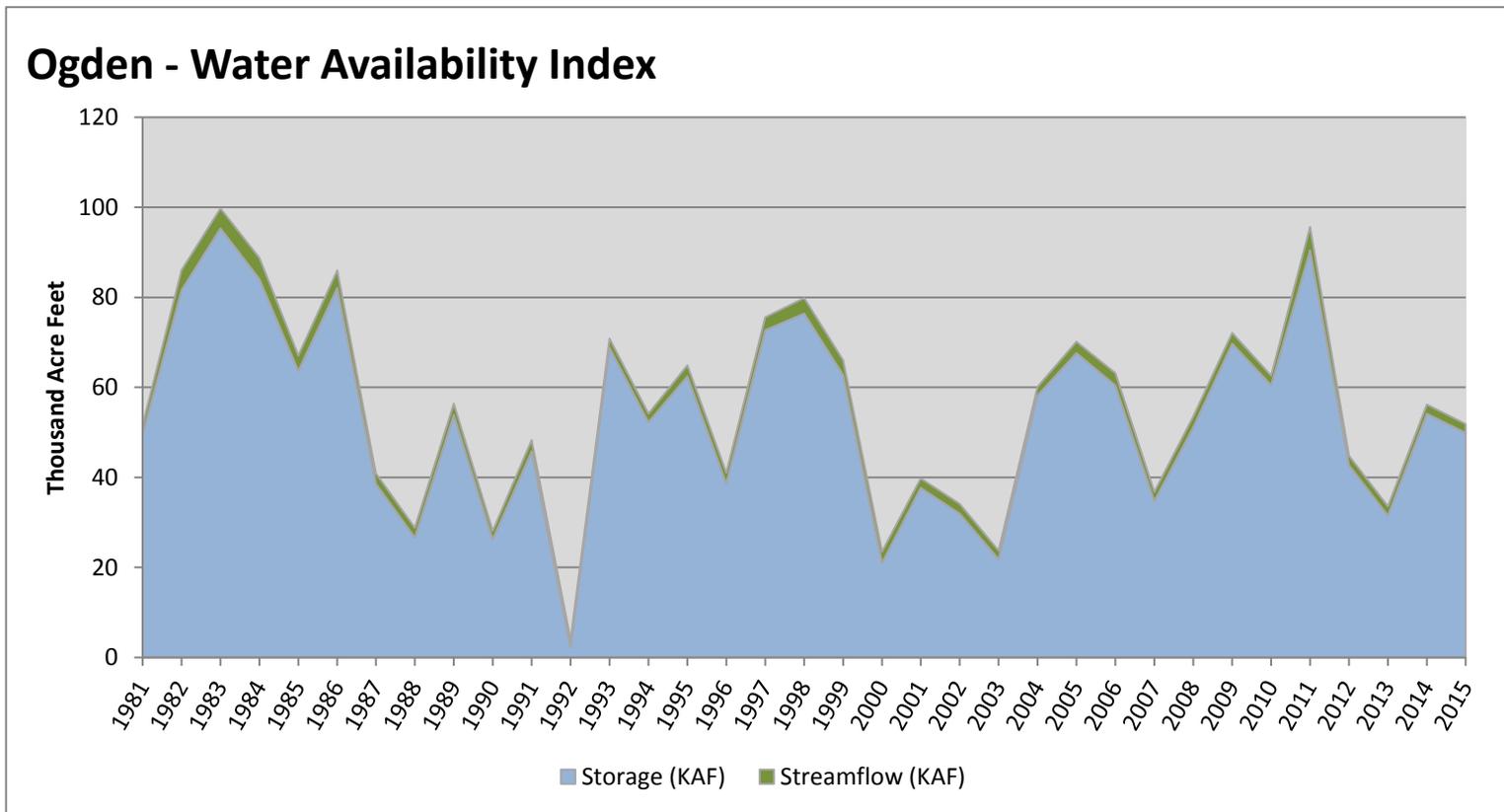


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	49.93	1.94	51.87	42	-0.69	91, 81, 08, 94

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

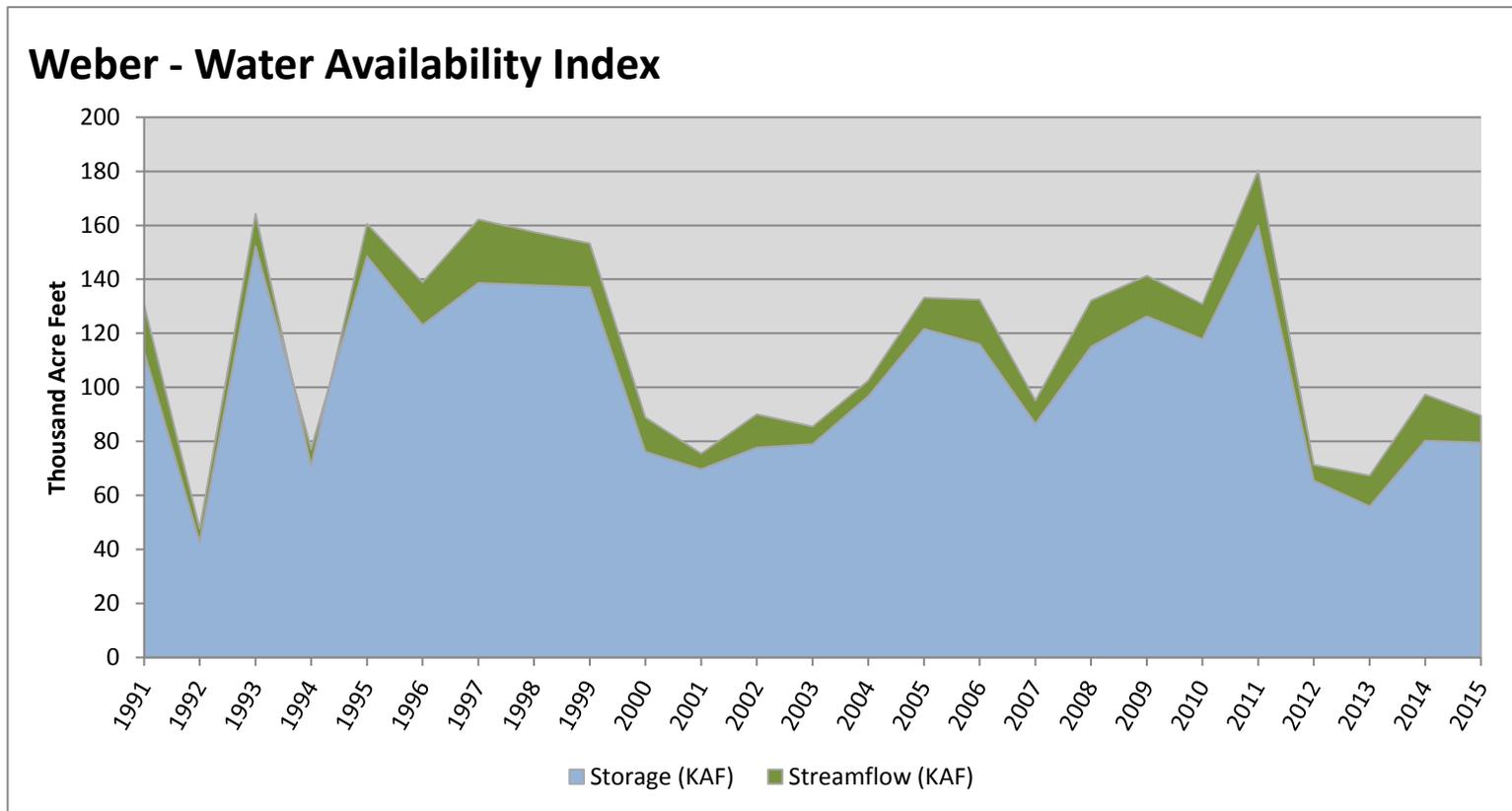


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	79.54	9.98	89.52	31	-1.6	03, 00, 02, 07

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

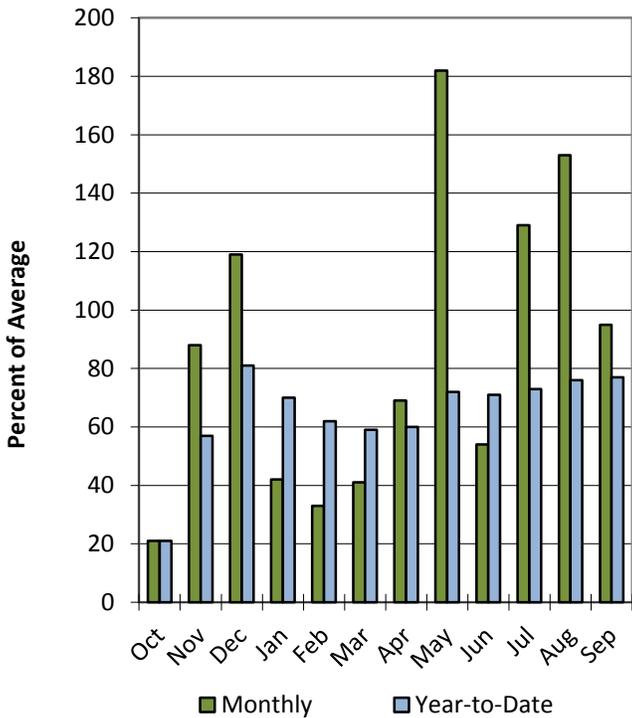


Provo & Jordan River Basins

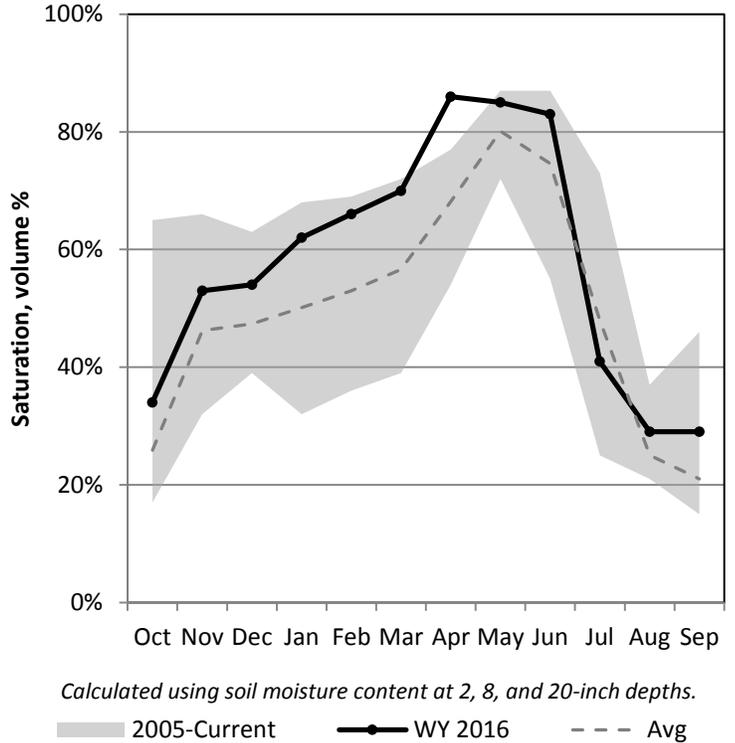
10/1/2015

Precipitation in September was near average at 95%, which brings the seasonal accumulation (Oct-Sep) to 77% of average. Soil moisture is at 34% compared to 65% last year. Reservoir storage is at 60% of capacity, compared to 66% last year. The water availability index for the Provo River is 24%.

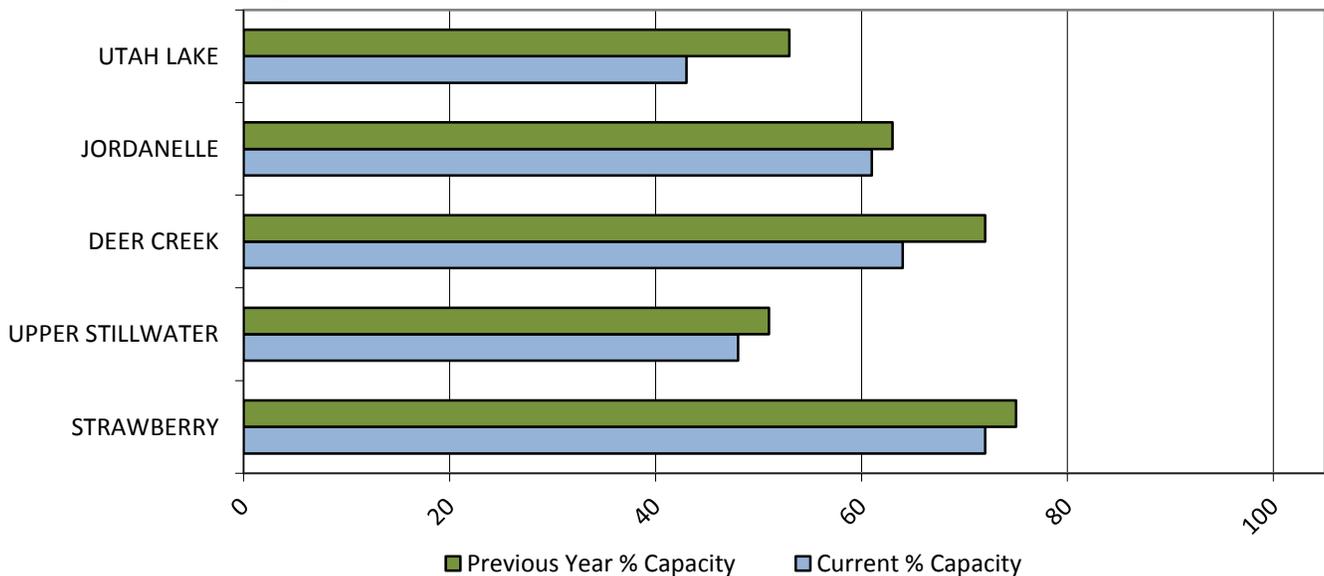
Precipitation



Soil Moisture



Reservoir Storage

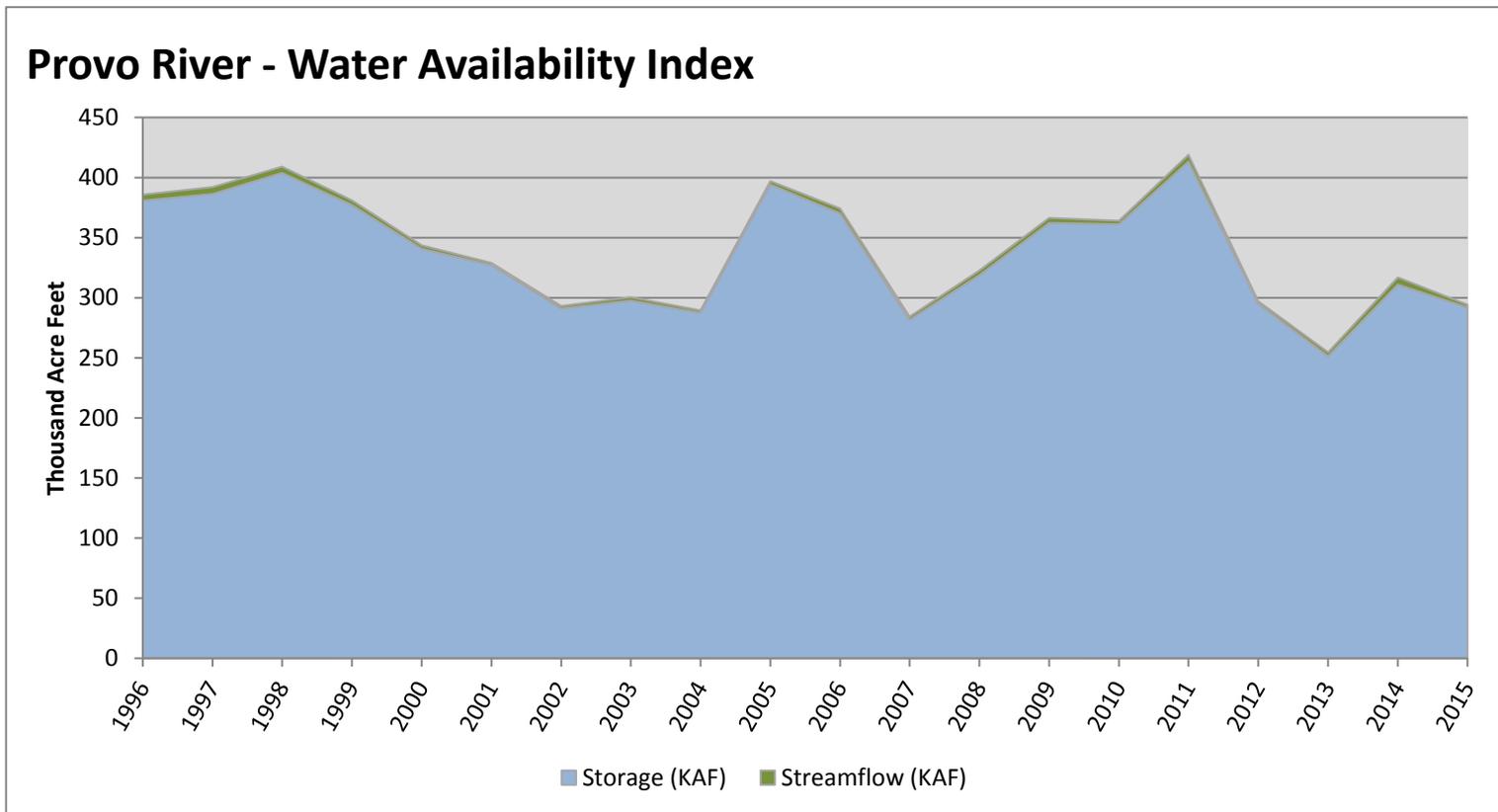


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	291.74	2.54	294.28	24	-2.18	04, 02, 12, 03

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

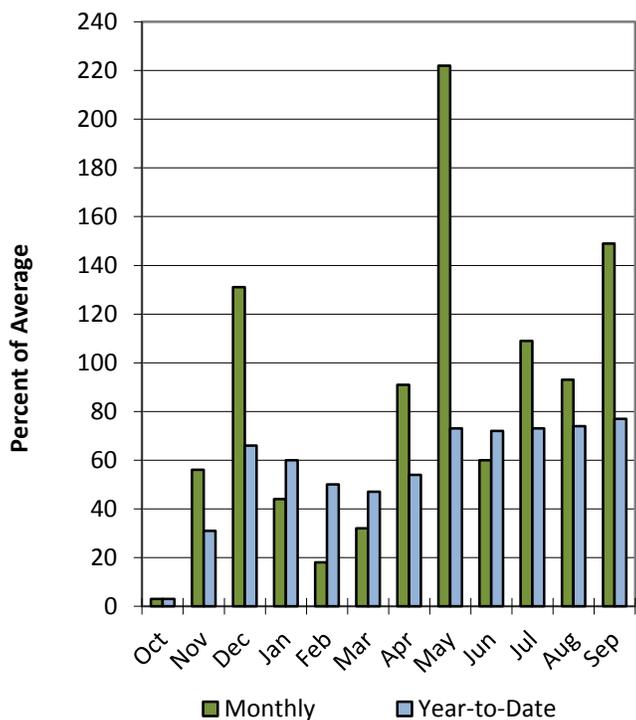


Tooele & Vernon Creek Basins

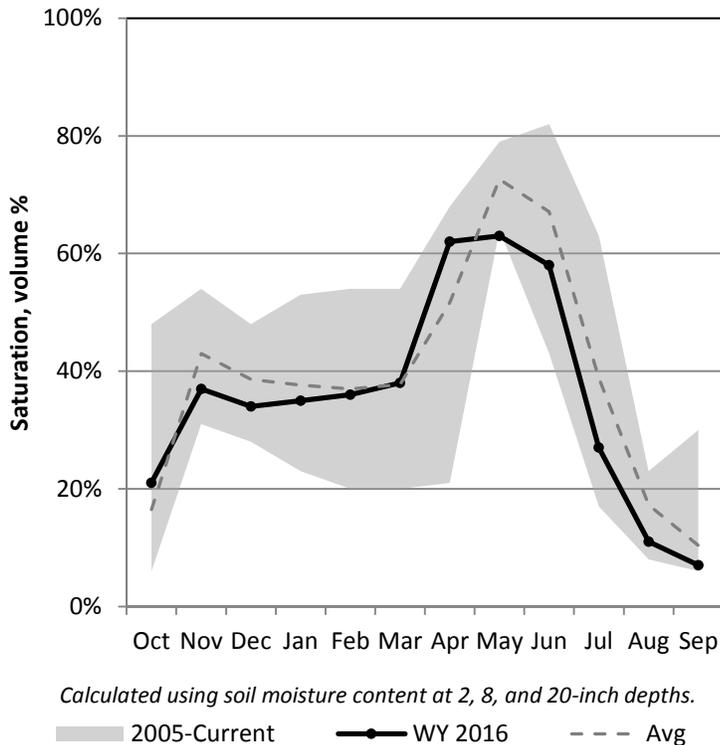
10/1/2015

Precipitation in September was much above average at 149%, which brings the seasonal accumulation (Oct-Sep) to 77% of average. Soil moisture is at 21% compared to 48% last year. Reservoir storage is at 30% of capacity, compared to 20% last year.

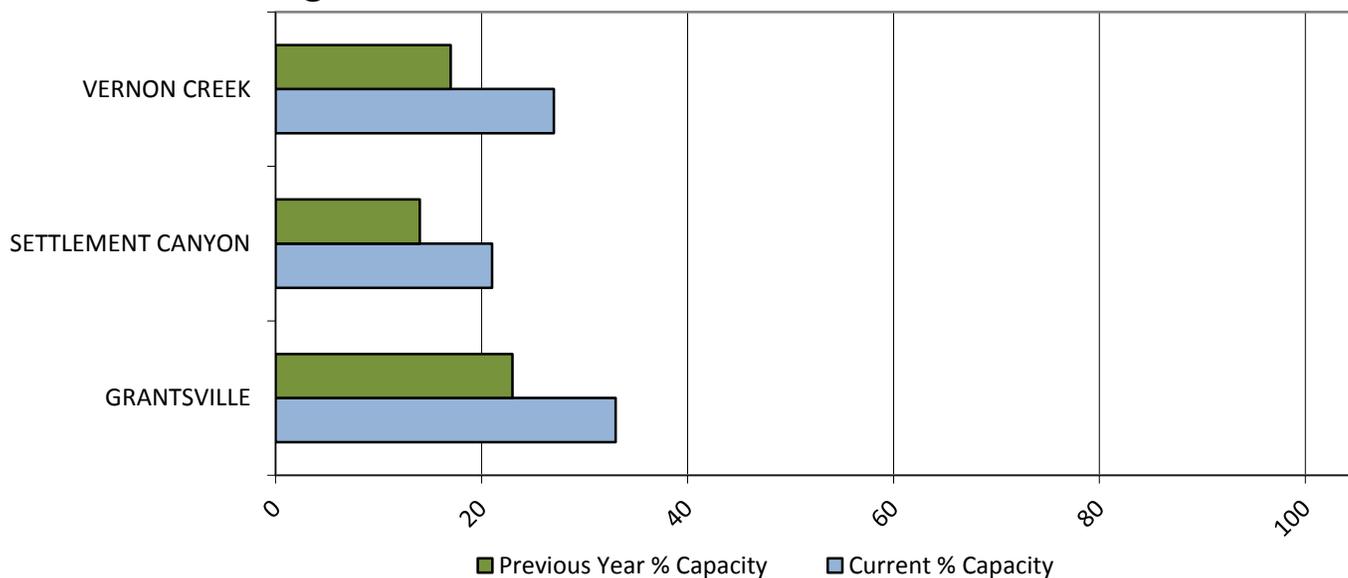
Precipitation



Soil Moisture



Reservoir Storage

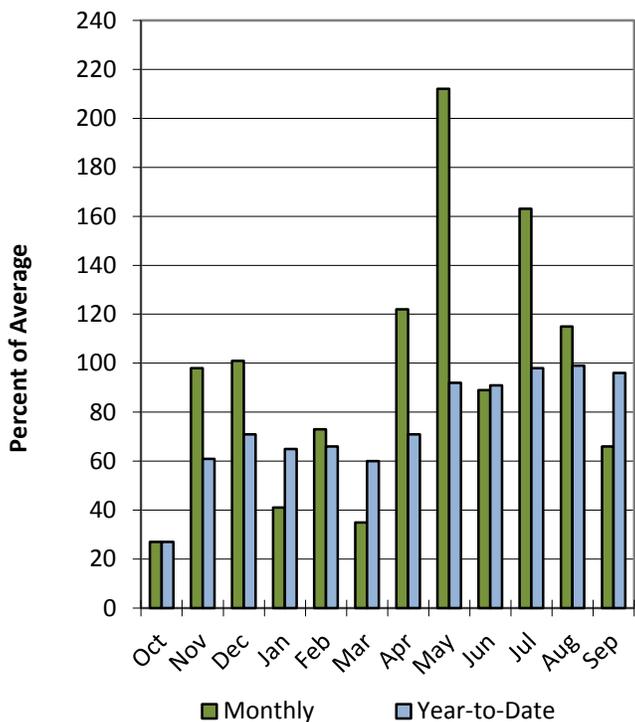


Northeastern Uintah Basin

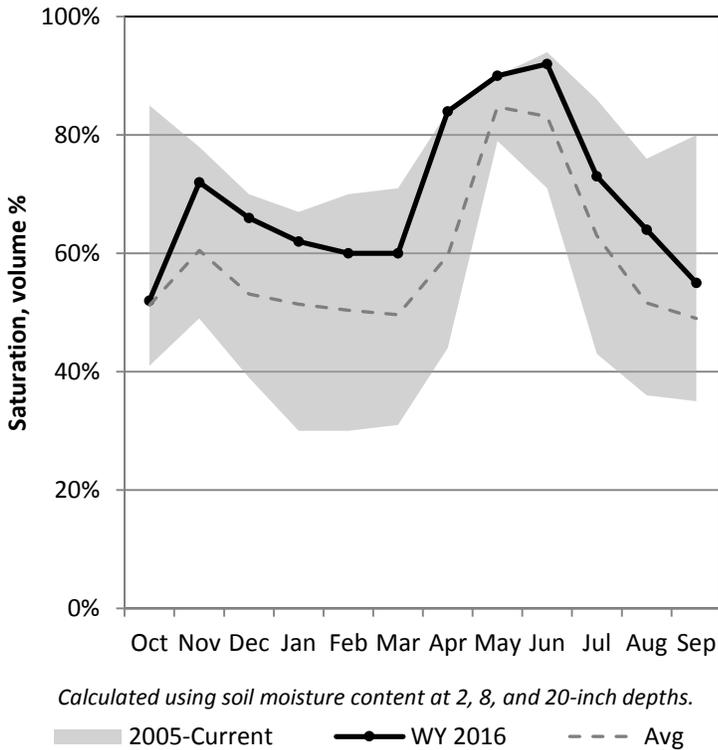
10/1/2015

Precipitation in September was much below average at 66%, which brings the seasonal accumulation (Oct-Sep) to 96% of average. Soil moisture is at 52% compared to 85% last year. Reservoir storage is at 91% of capacity, compared to 87% last year. The Water Availability Index for Blacks Fork is 45% and 53% for Smiths Creek.

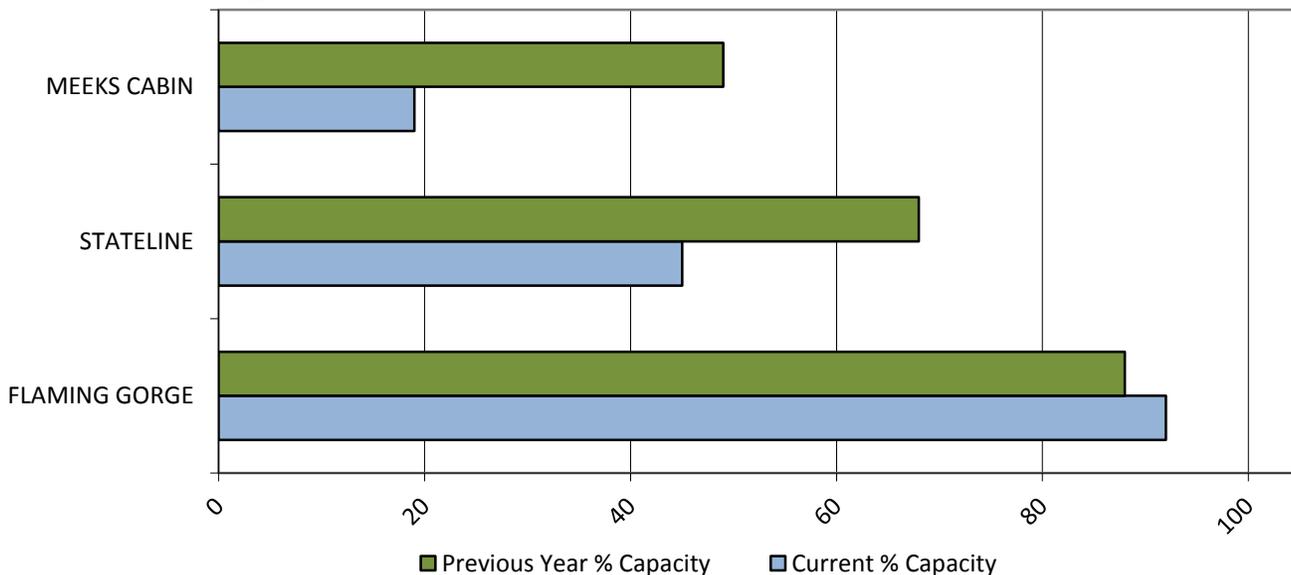
Precipitation



Soil Moisture



Reservoir Storage

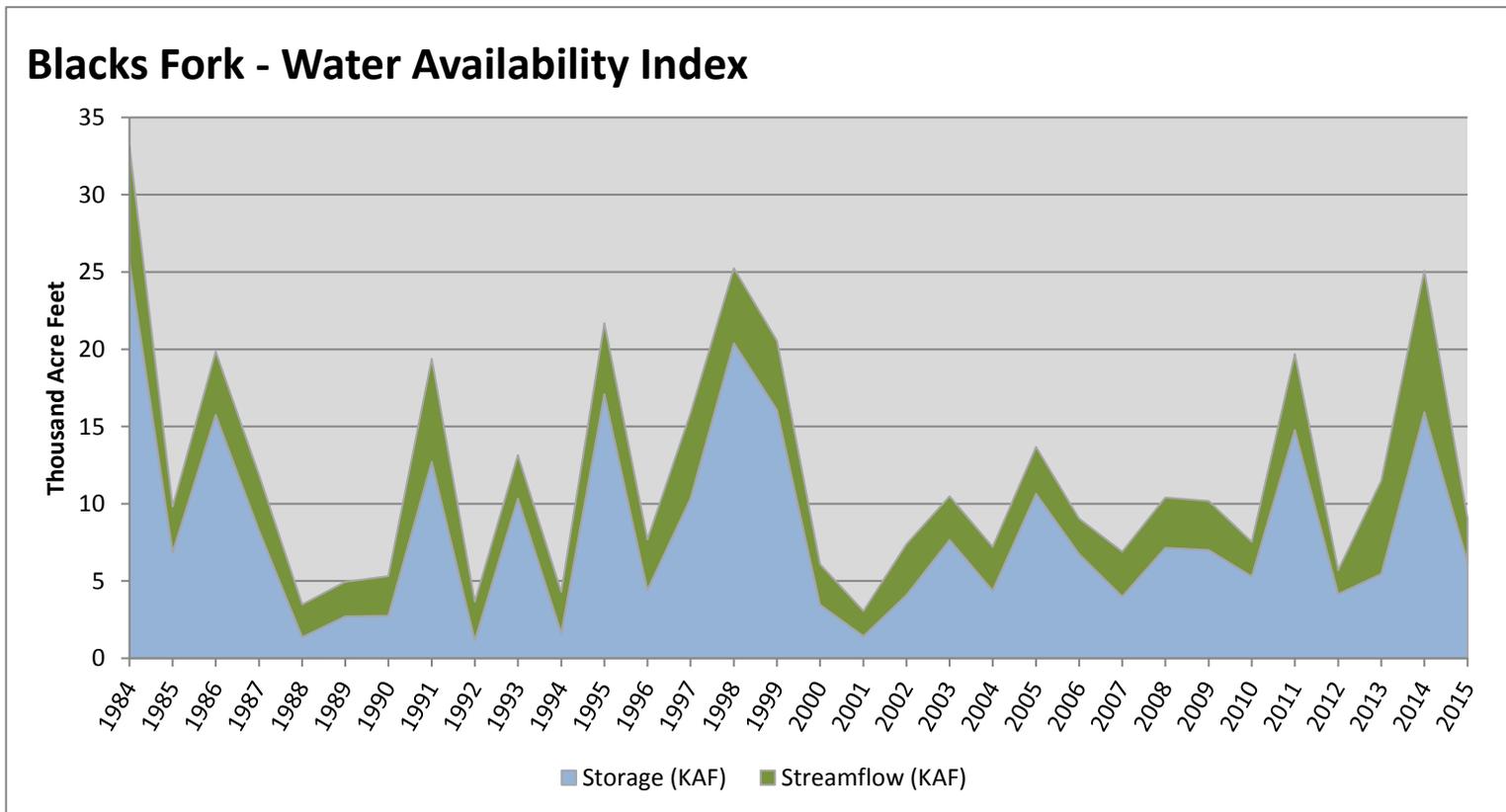


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	6.20	2.84	9.04	45	-0.38	96, 06, 85, 09

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

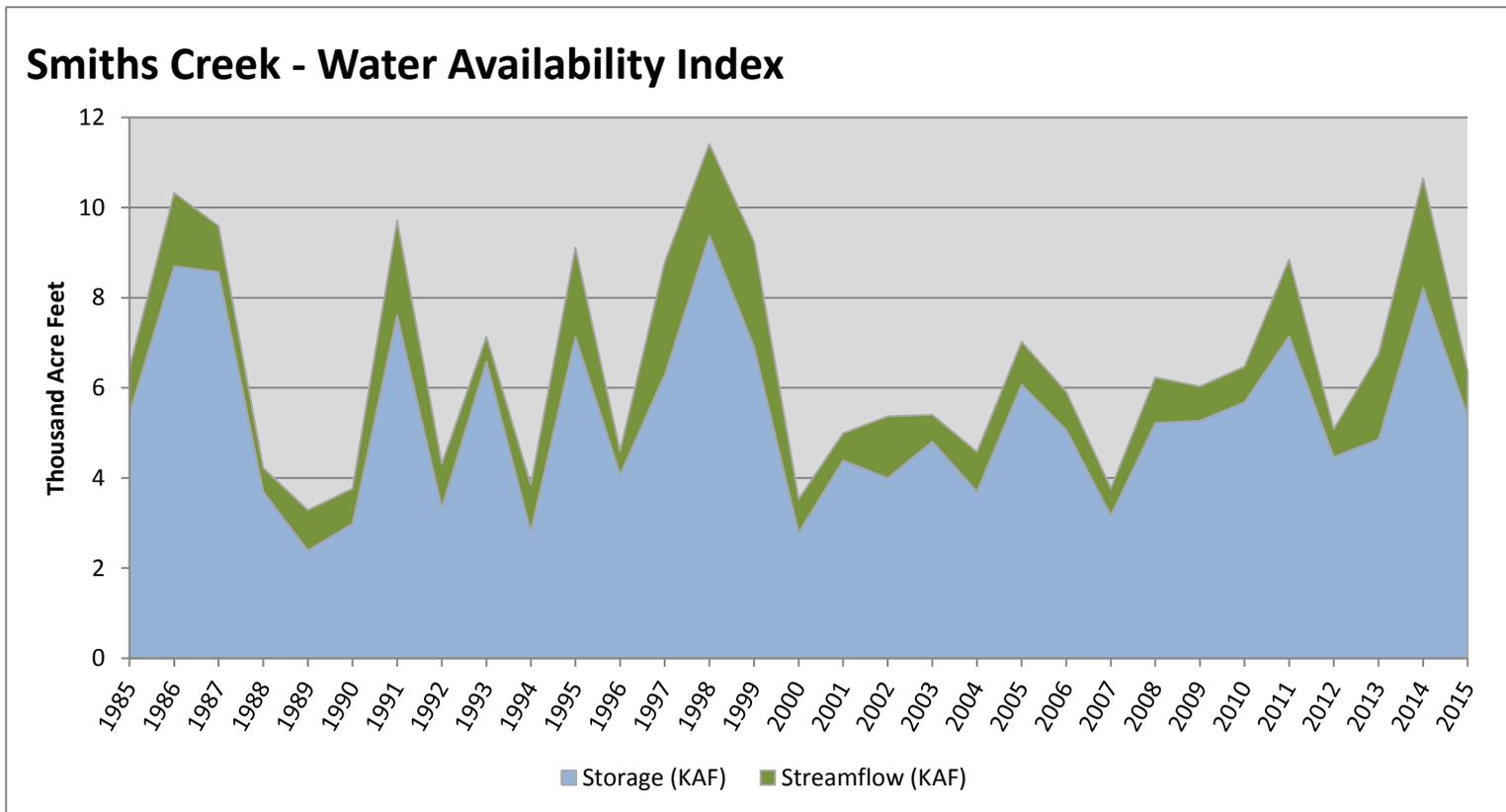


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	5.38	1.00	6.38	53	0.26	09, 08, 85, 10

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

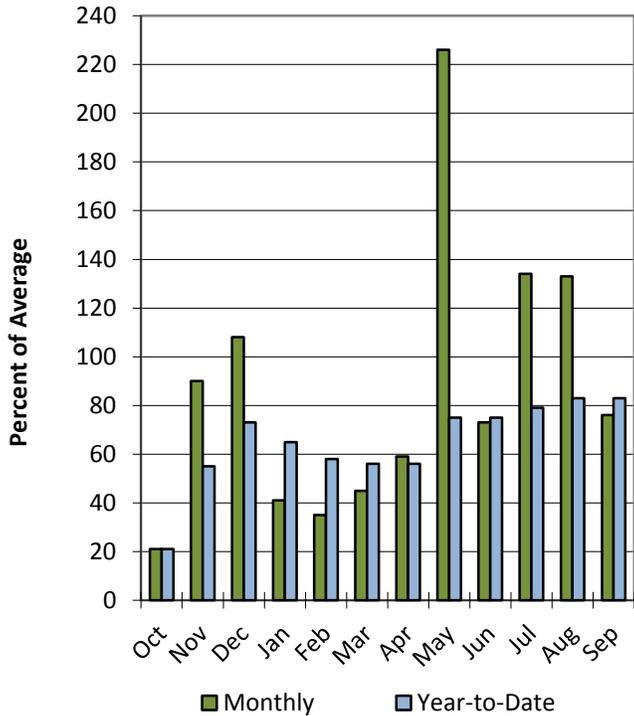


Duchesne River Basin

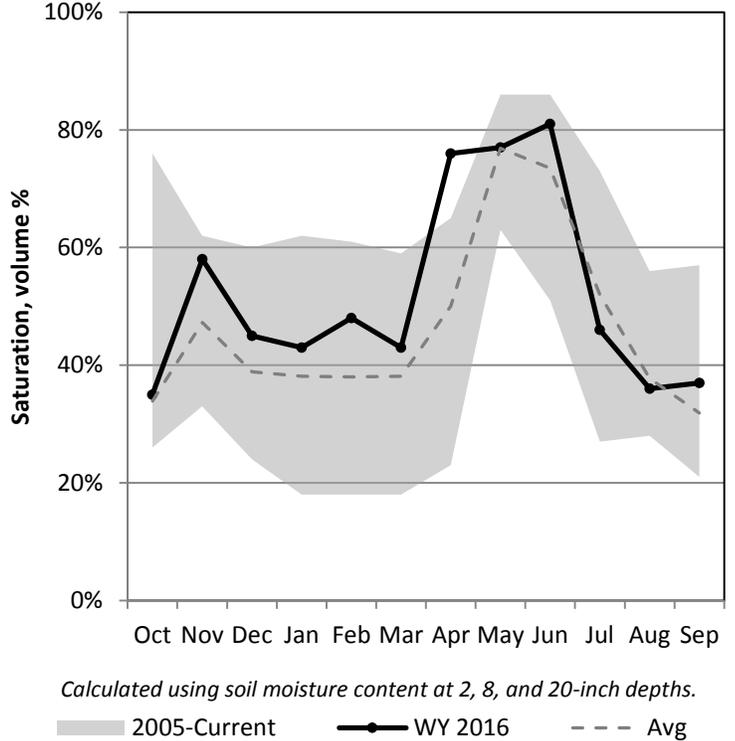
10/1/2015

Precipitation in September was below average at 76%, which brings the seasonal accumulation (Oct-Sep) to 83% of average. Soil moisture is at 35% compared to 76% last year. Reservoir storage is at 69% of capacity, compared to 71% last year. The water availability index for the Western Uintahs is 69% and 42% for the Eastern Uintahs.

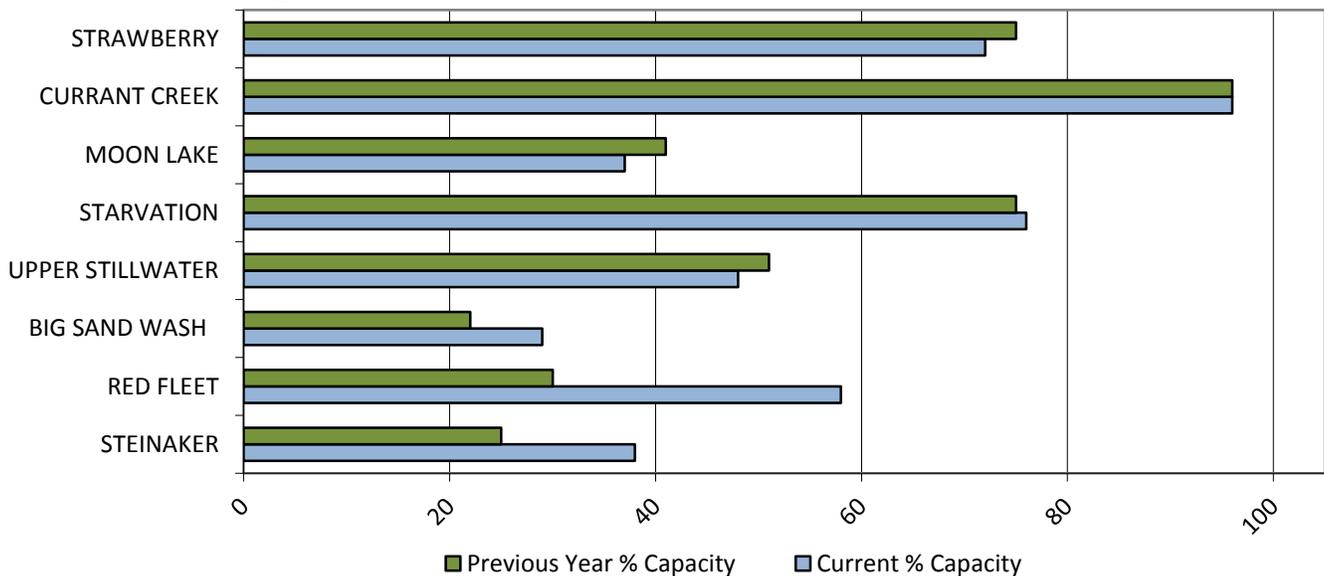
Precipitation



Soil Moisture



Reservoir Storage

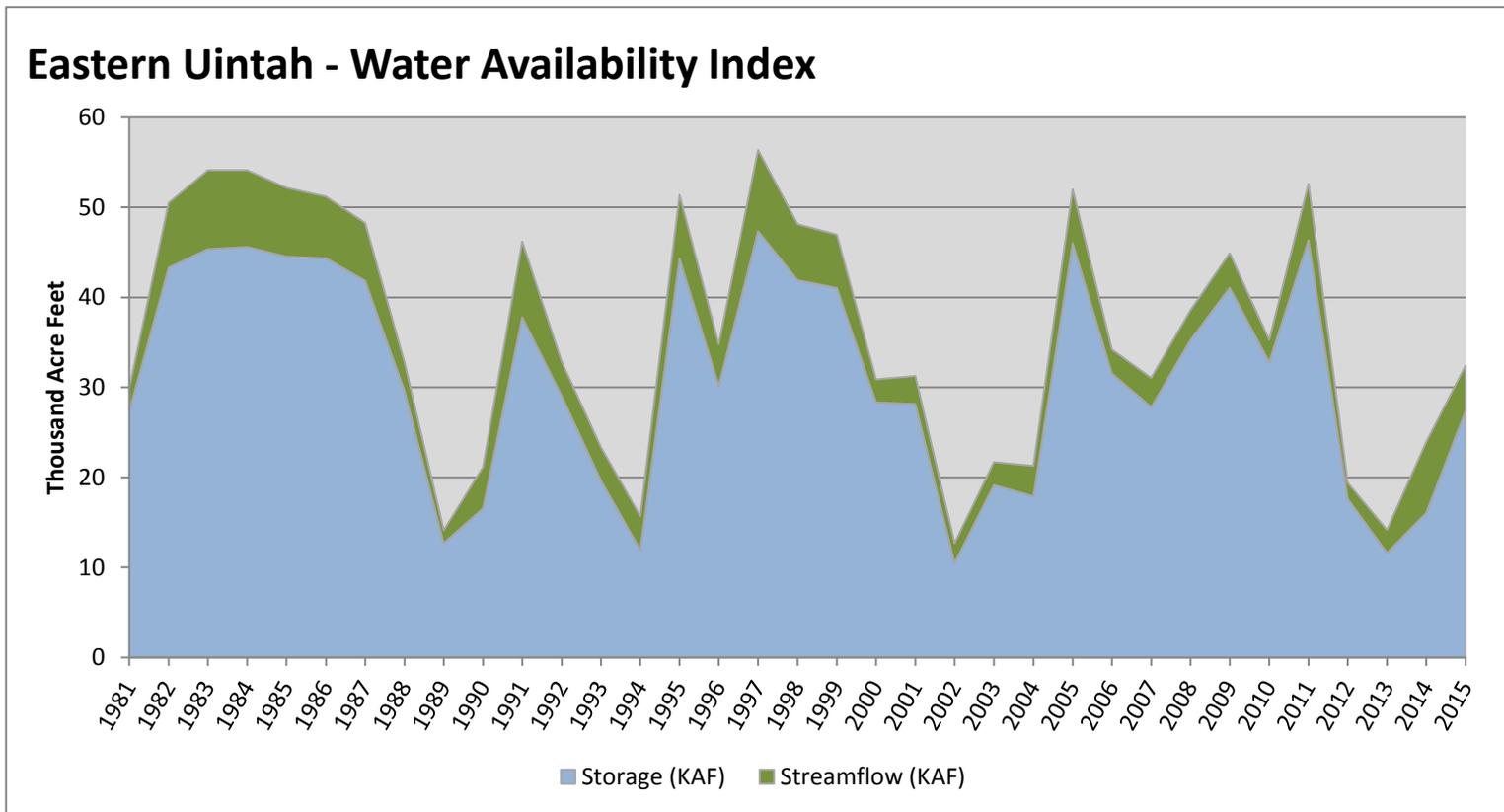


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uintah	27.43	5.01	32.44	42	-0.69	07, 01, 88, 92

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

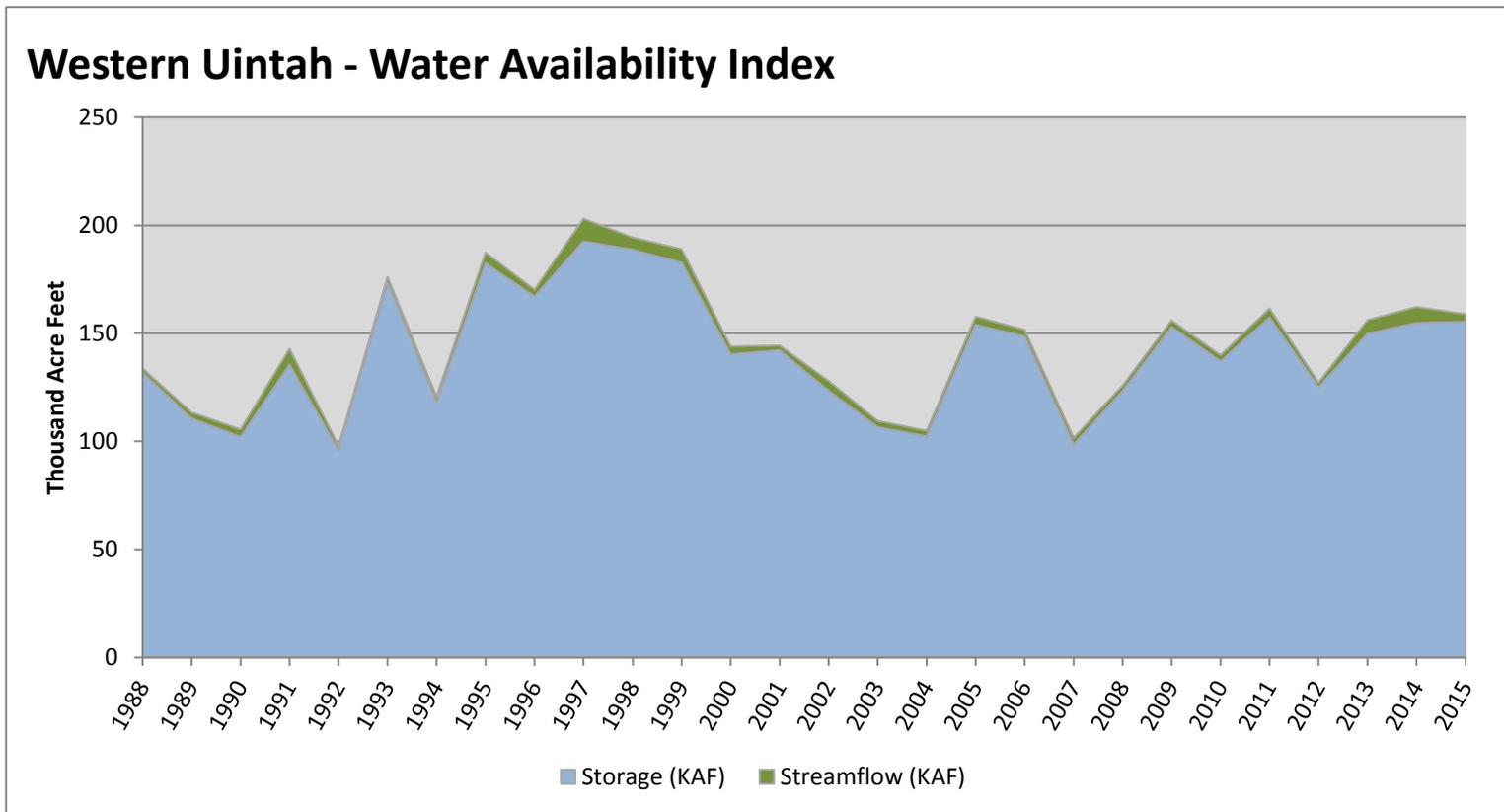


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uintah	155.43	3.46	158.89	69	1.58	13, 05, 11, 14

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

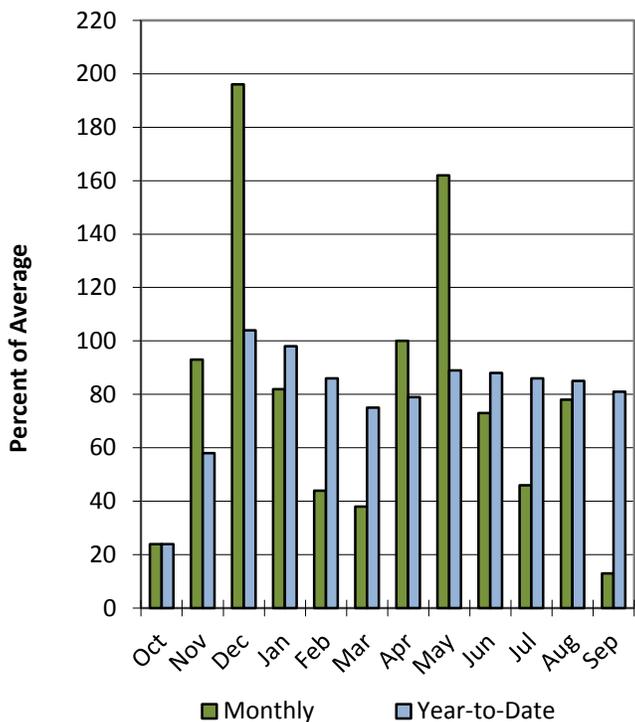


Lower Sevier River Basin

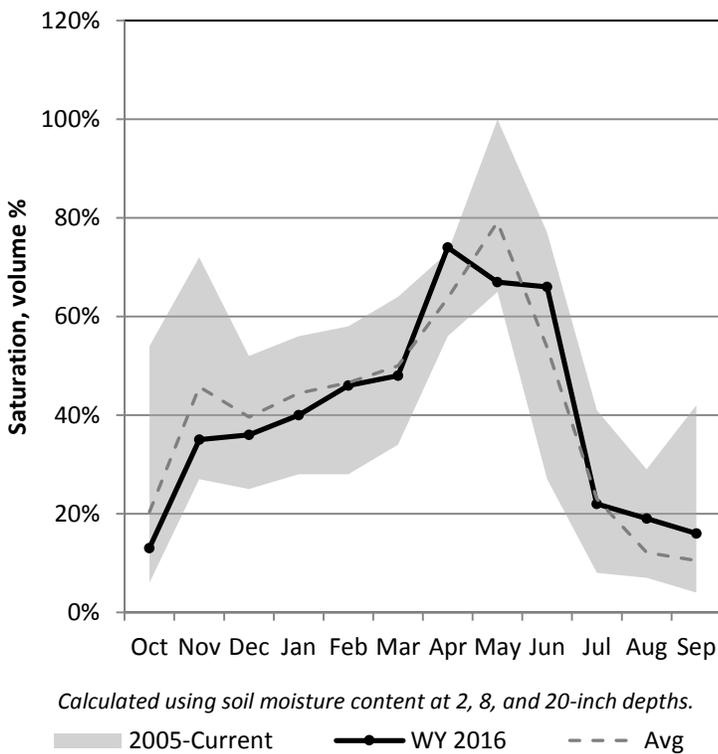
10/1/2015

Precipitation in September was much below average at 13%, which brings the seasonal accumulation (Oct-Sep) to 81% of average. Soil moisture is at 13% compared to 54% last year. Reservoir storage is at 17% of capacity, compared to 21% last year. The water availability index for the Lower Sevier is 14%.

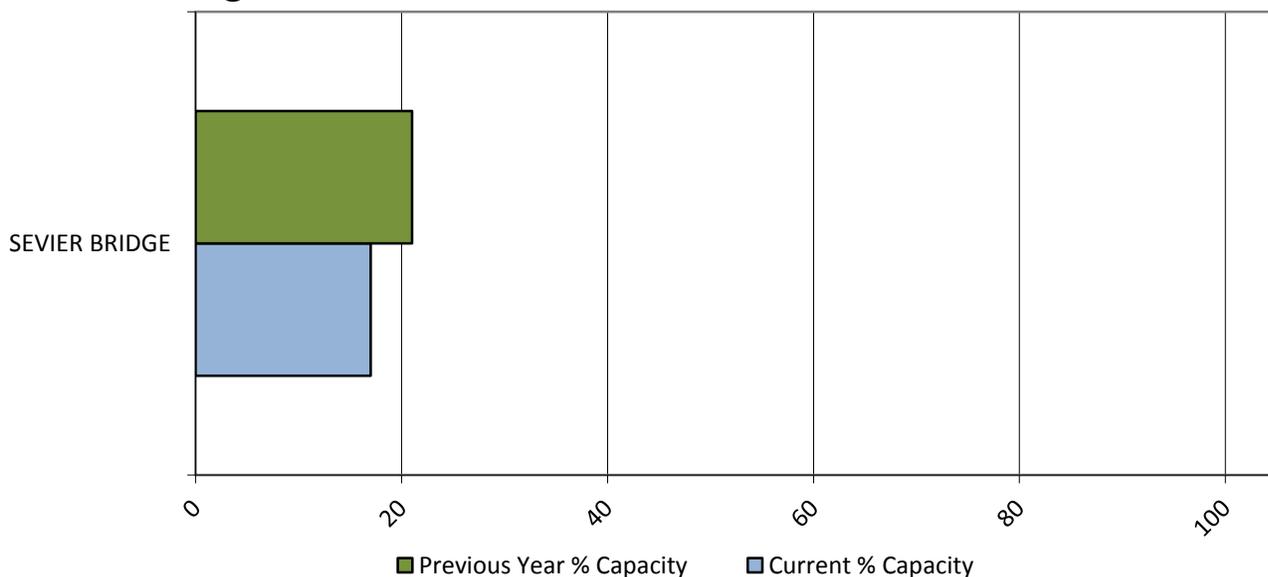
Precipitation



Soil Moisture



Reservoir Storage

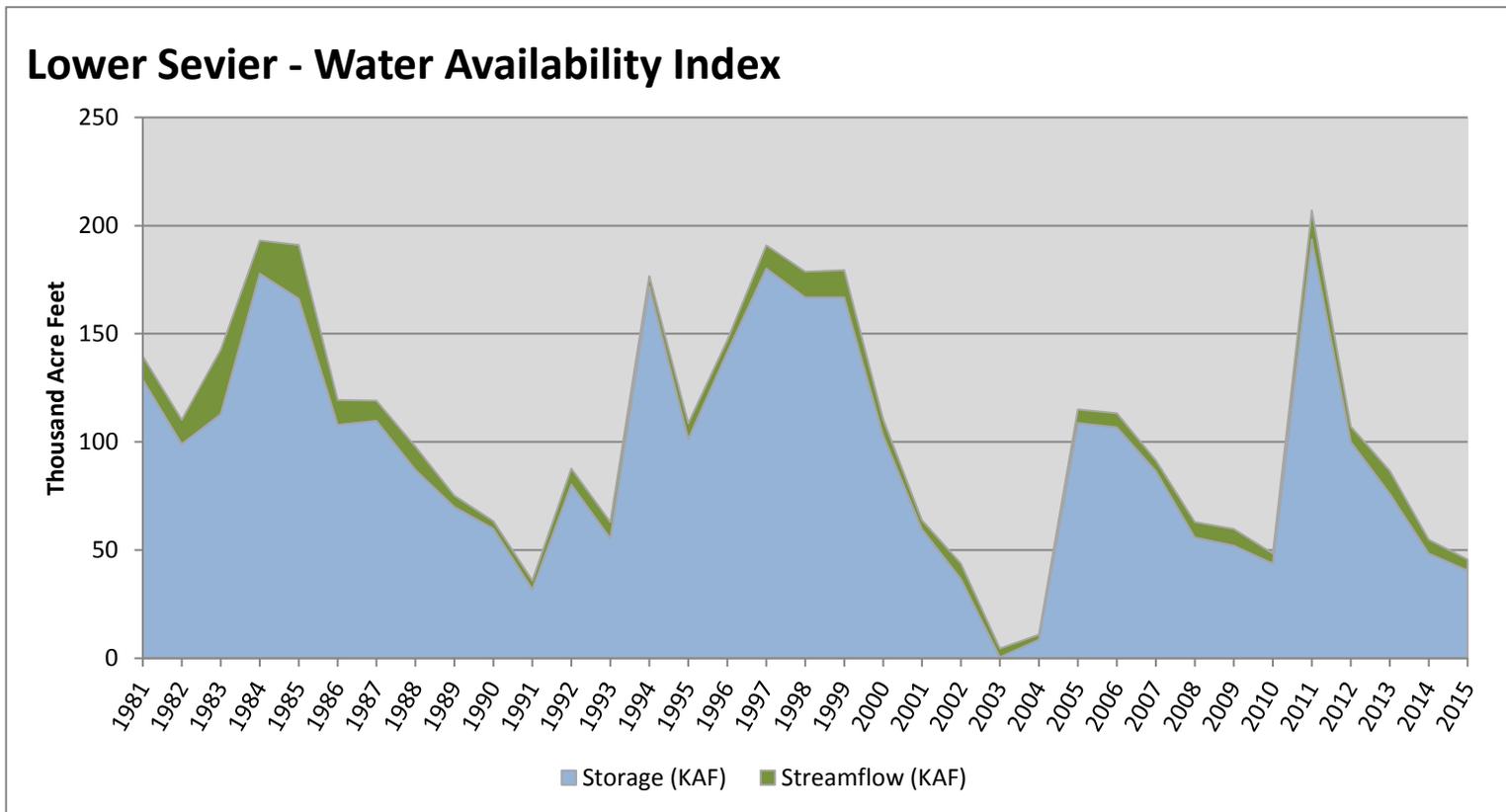


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	40.52	5.13	45.65	14	-3.01	91, 02, 10, 14

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

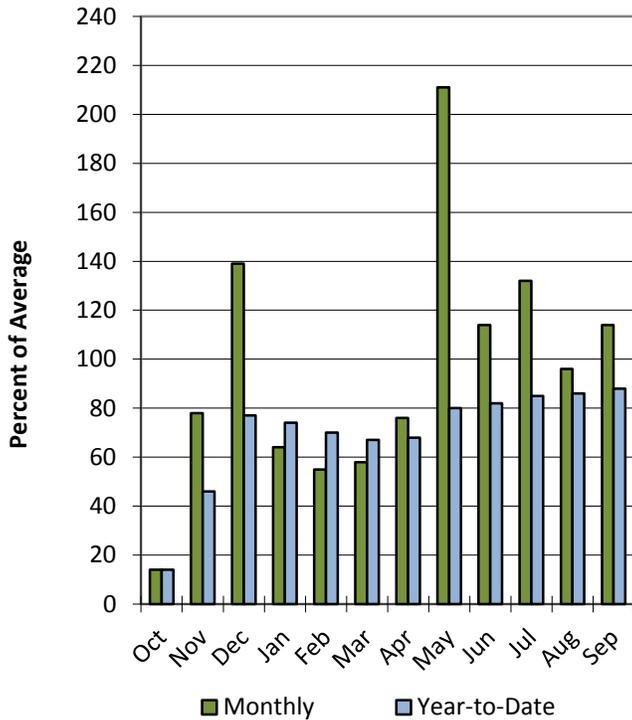


Upper Sevier River Basin

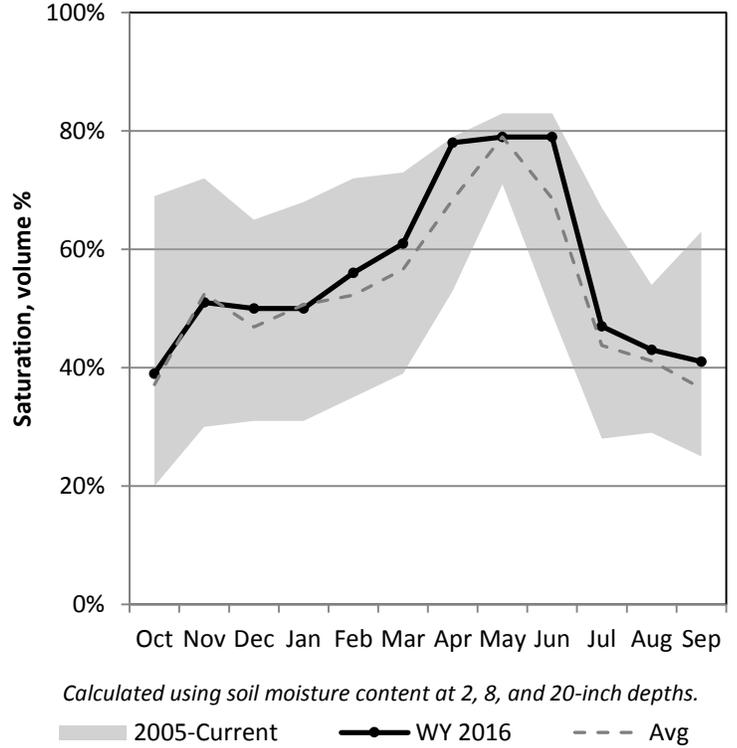
10/1/2015

Precipitation in September was above average at 114%, which brings the seasonal accumulation (Oct-Sep) to 88% of average. Soil moisture is at 39% compared to 69% last year. Reservoir storage is at 21% of capacity, compared to 26% last year. The water availability index for the Upper Sevier is 22%.

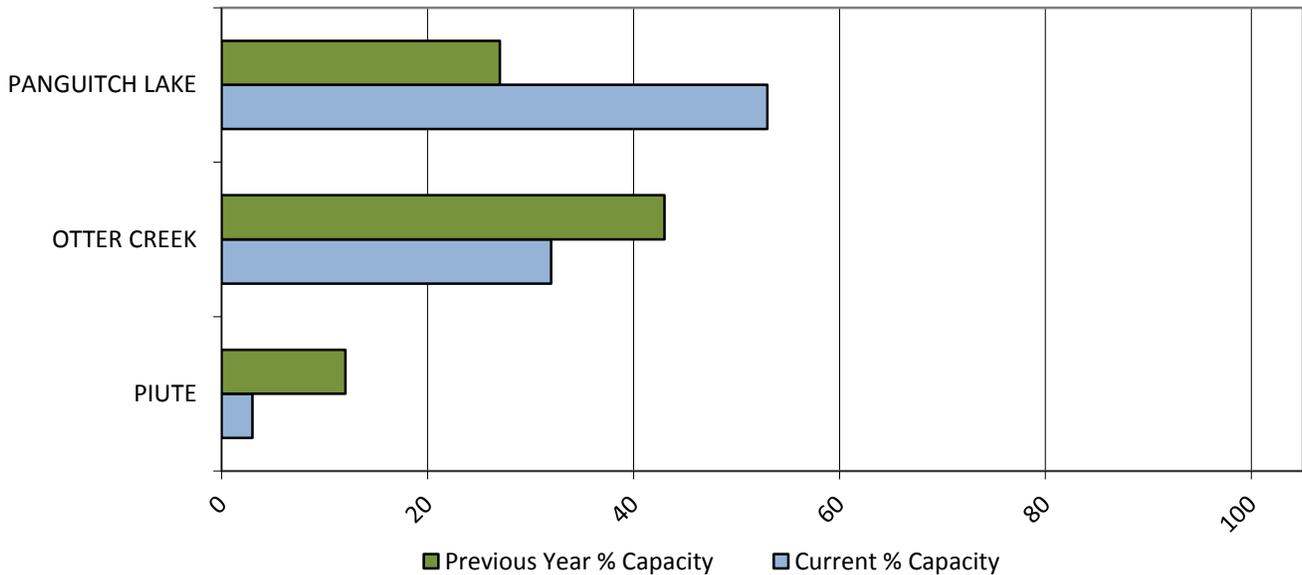
Precipitation



Soil Moisture



Reservoir Storage

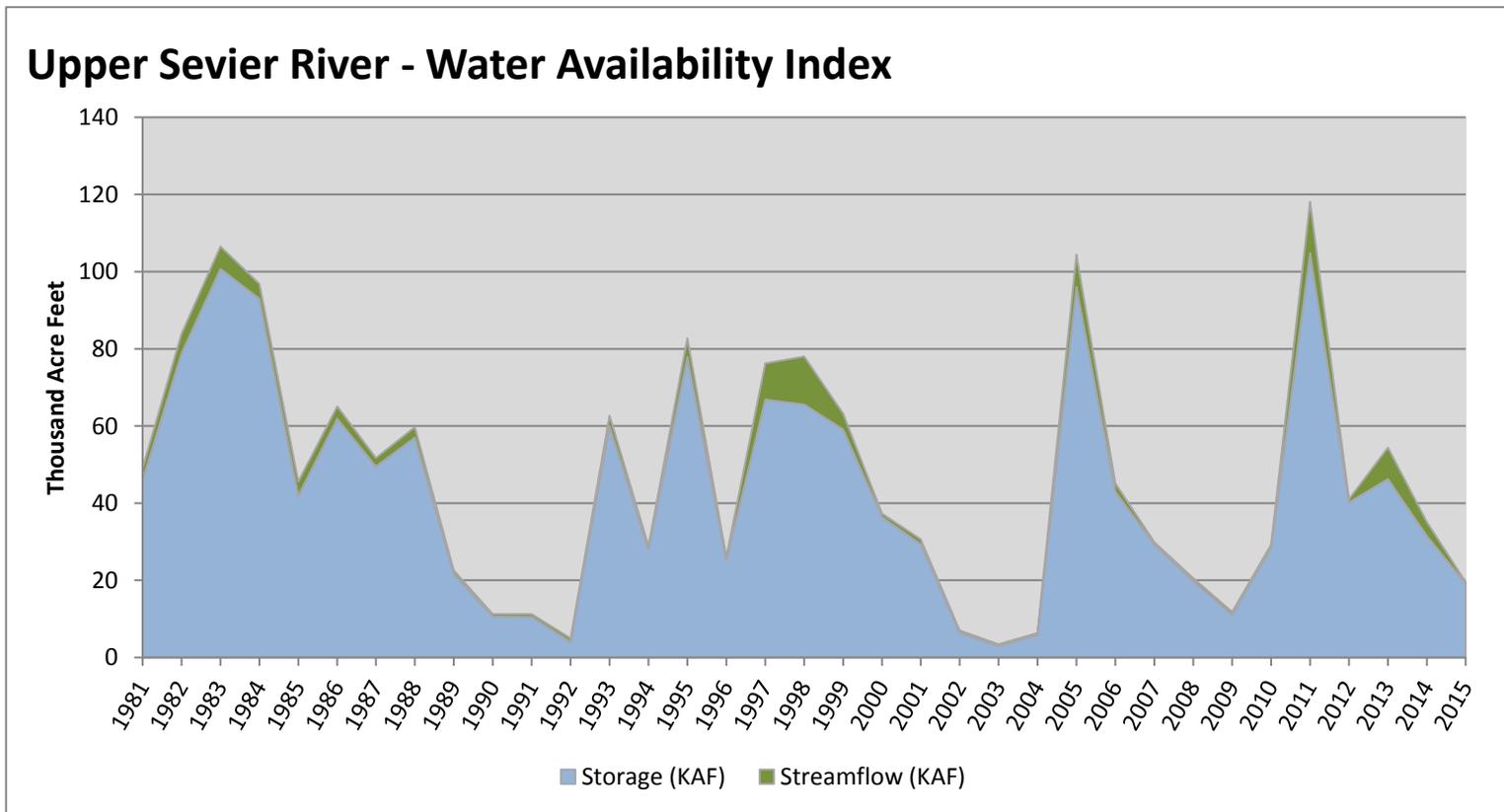


October 1, 2015

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	19.10	0.46	19.56	22	-2.31	90, 09, 08, 89

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

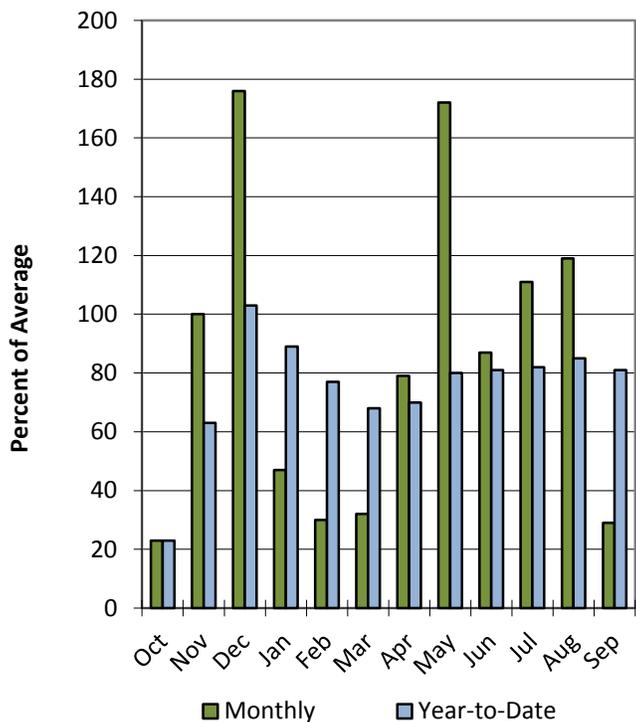


San Pitch River Basin

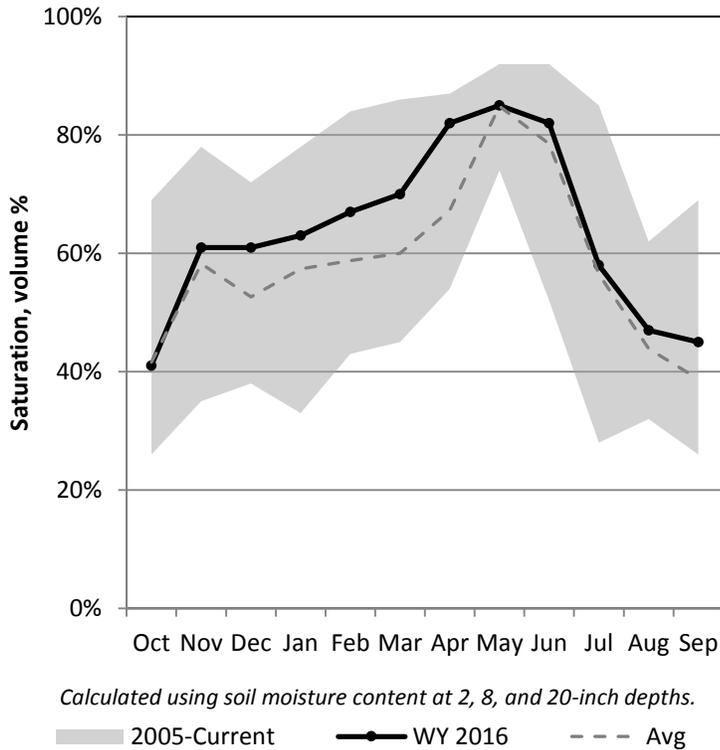
10/1/2015

Precipitation in September was much below average at 29%, which brings the seasonal accumulation (Oct-Sep) to 81% of average. Soil Moisture is at 41% compared to 69% last year. Reservoir storage is at 0% of capacity, compared to 0% last year. The water availability index for the San Pitch is 8%.

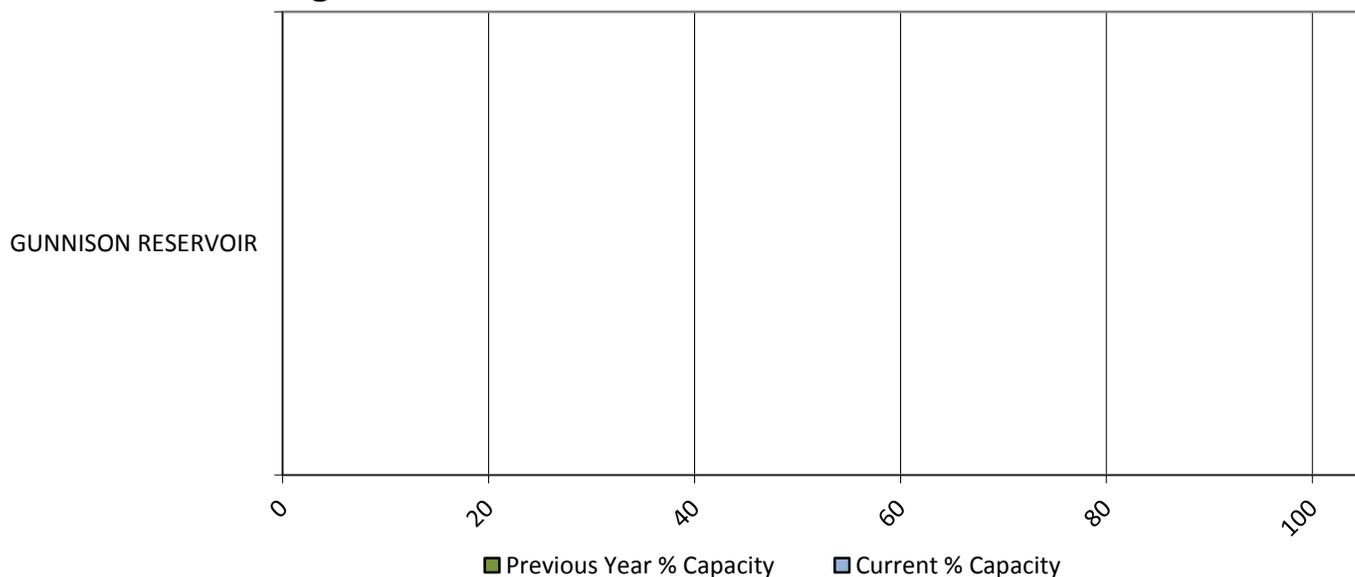
Precipitation



Soil Moisture



Reservoir Storage

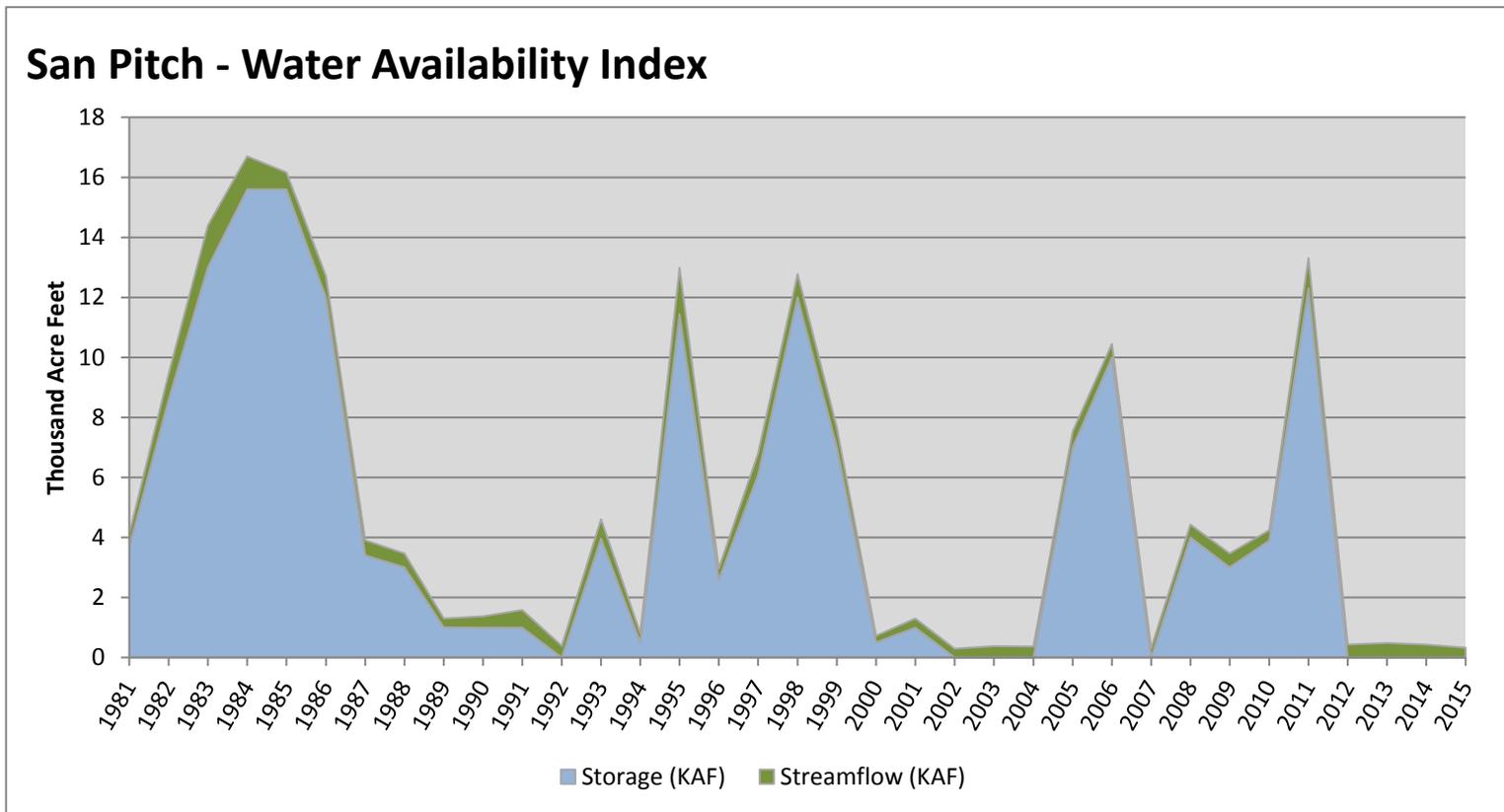


October 1, 2015

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	0.33	0.33	8	-3.47	02, 07, 04, 03

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

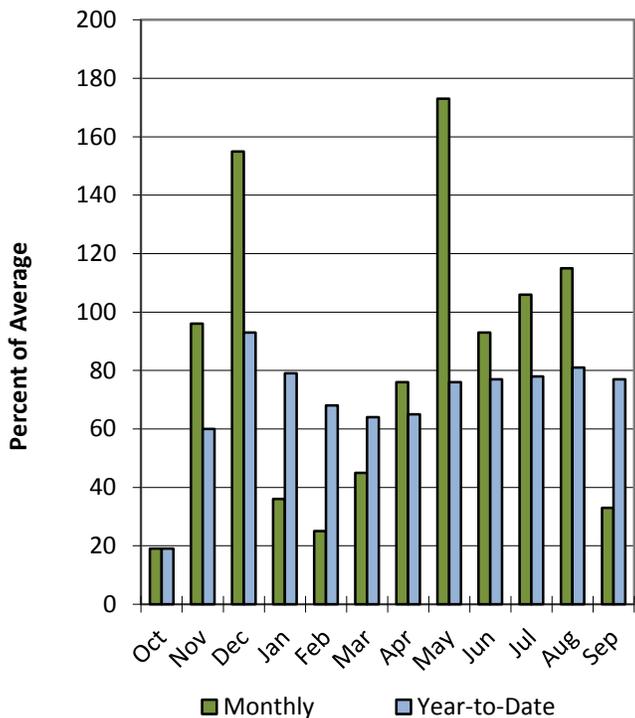


Price & San Rafael Basins

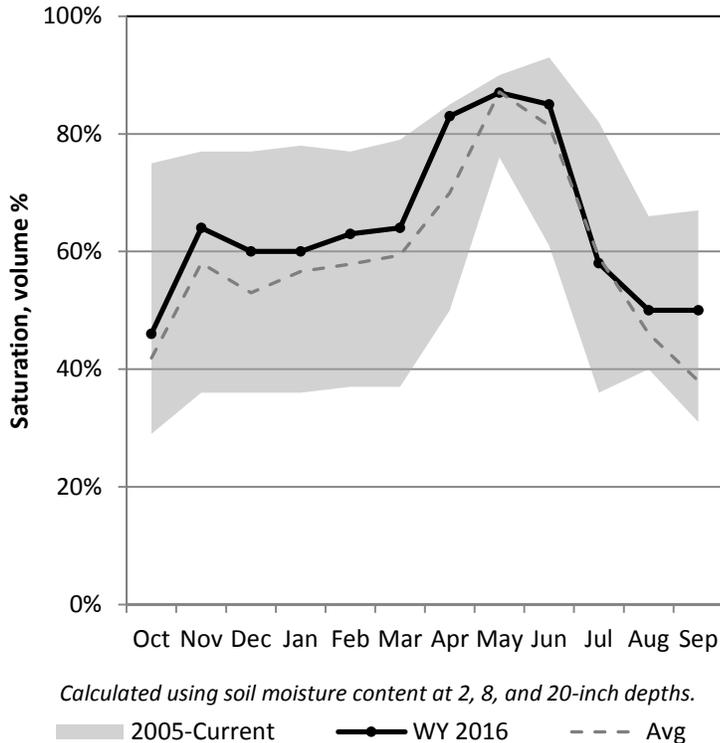
10/1/2015

Precipitation in September was much below average at 33%, which brings the seasonal accumulation (Oct-Sep) to 77% of average. Soil moisture is at 46% compared to 75% last year. Reservoir storage is at 39% of capacity, compared to 46% last year. The water availability index for the Price River is 11%, and 31% for Joe's Valley.

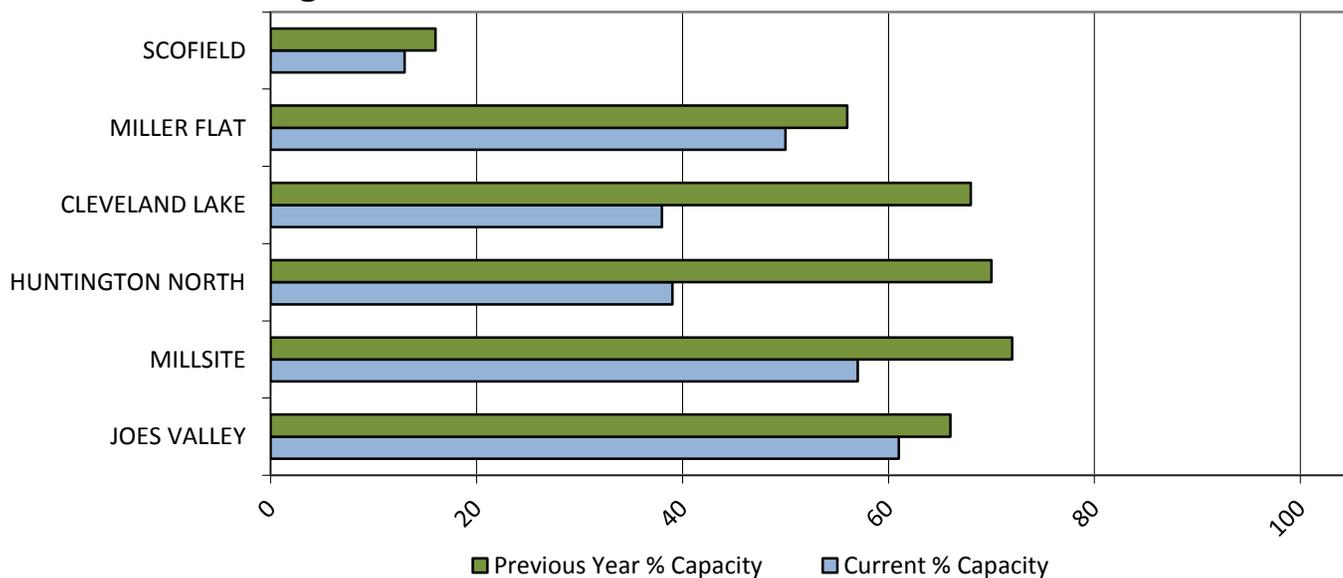
Precipitation



Soil Moisture



Reservoir Storage

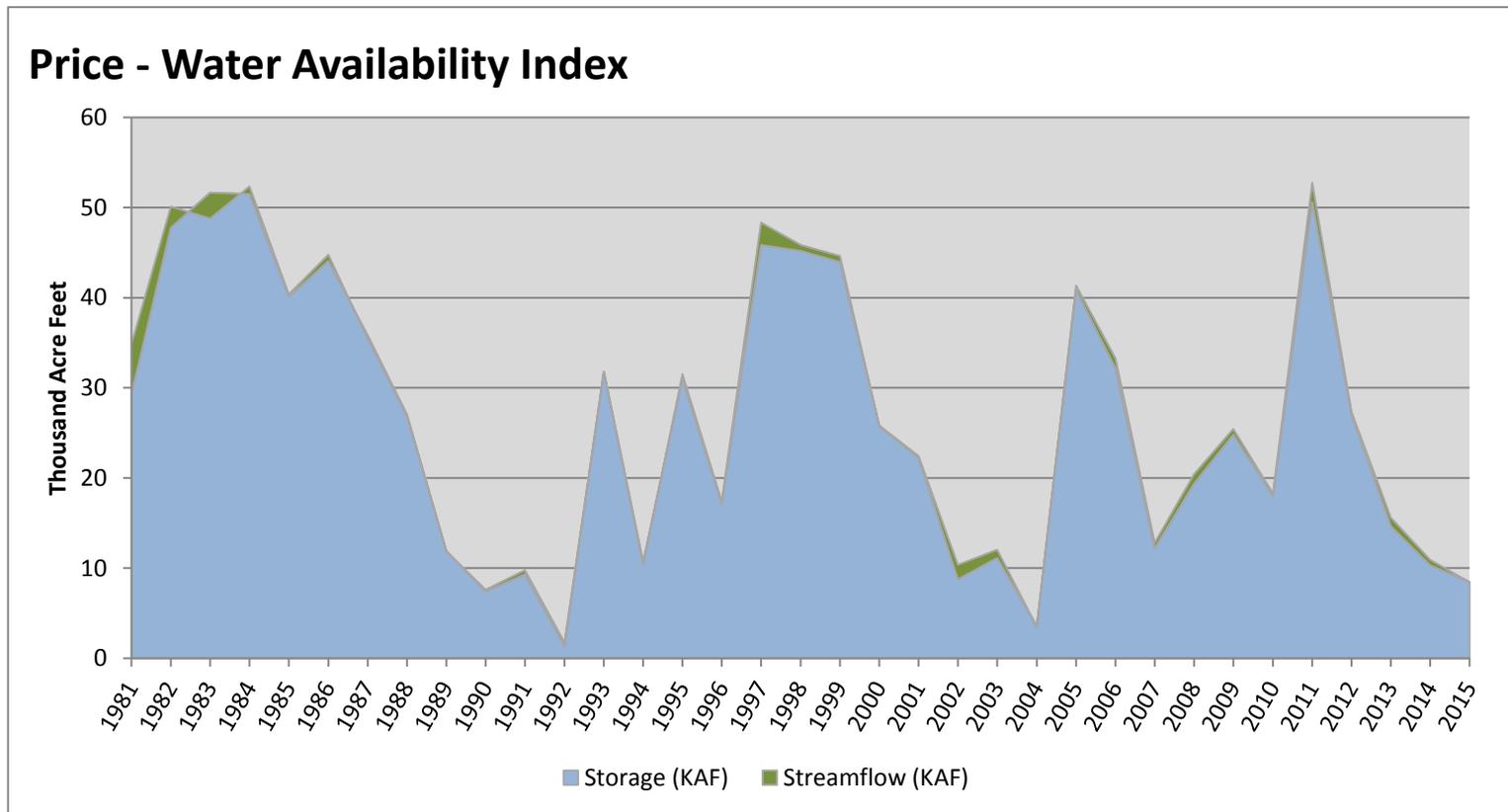


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	8.44	0.00	8.44	11	-3.24	04, 90, 91, 02

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

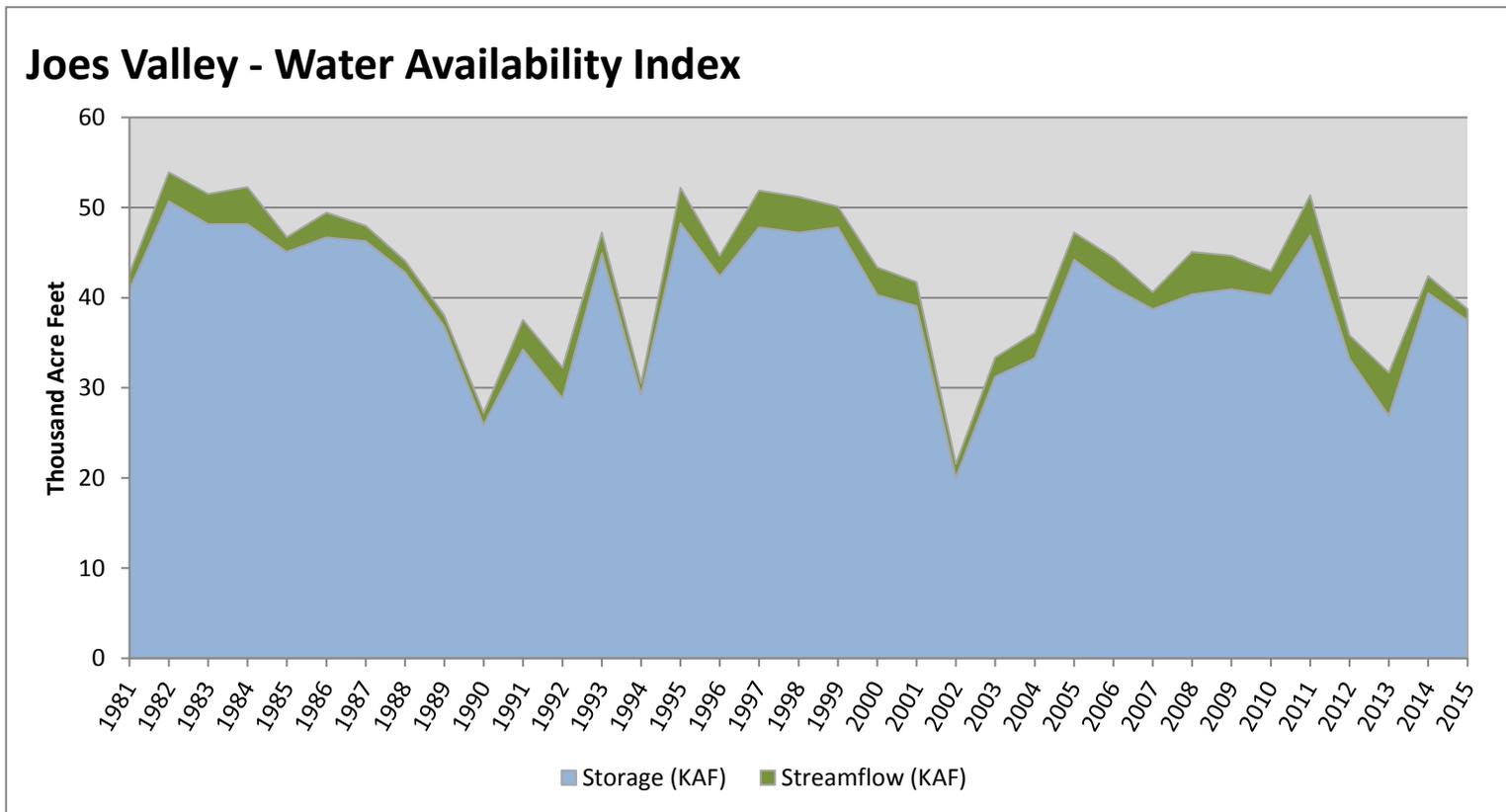


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joese Valley	37.48	1.24	38.72	31	-1.62	91, 89, 07, 01

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

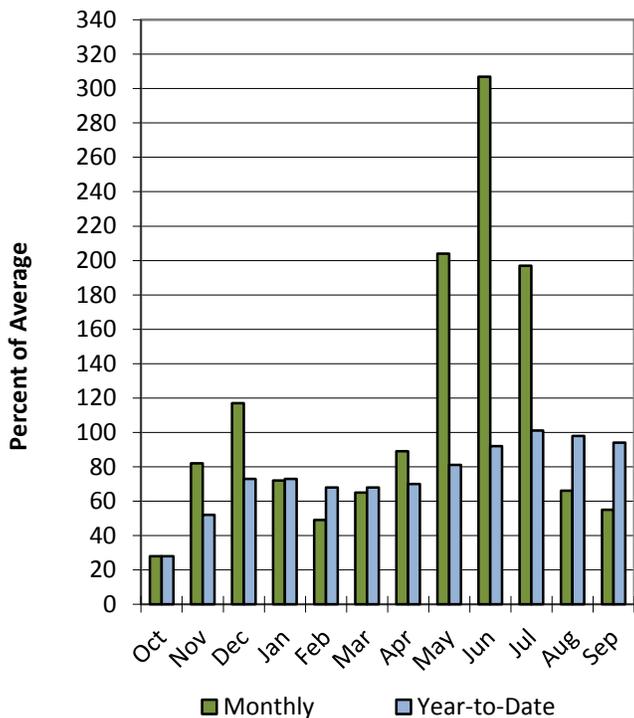


Southeastern Utah Basin

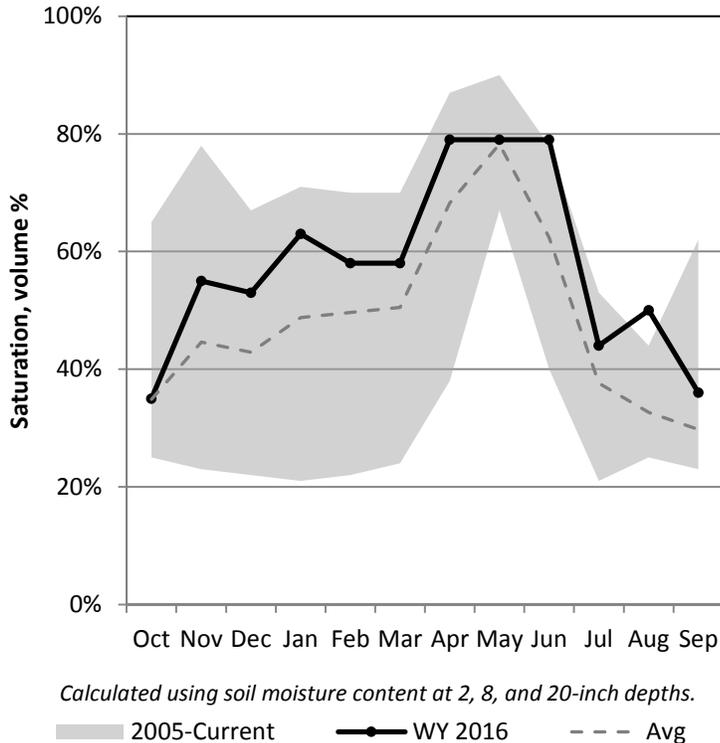
10/1/2015

Precipitation in September was much below average at 55%, which brings the seasonal accumulation (Oct-Sep) to 94% of average. Soil moisture is at 35% compared to 65% last year. Reservoir storage is at 61% of capacity, compared to 49% last year. The water availability index for Moab is 76%.

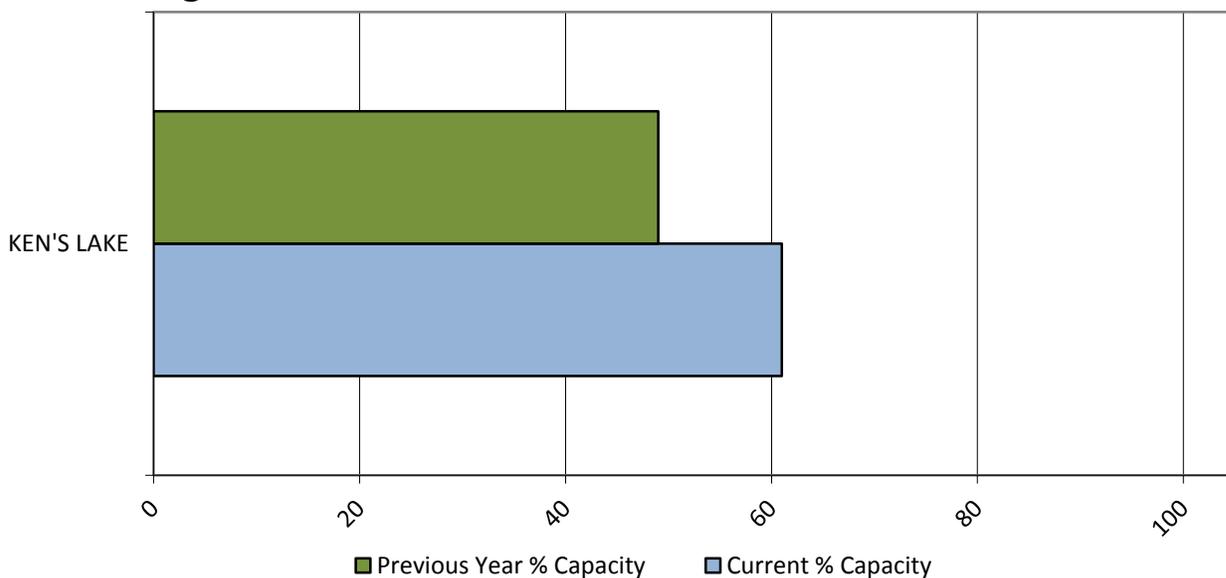
Precipitation



Soil Moisture



Reservoir Storage

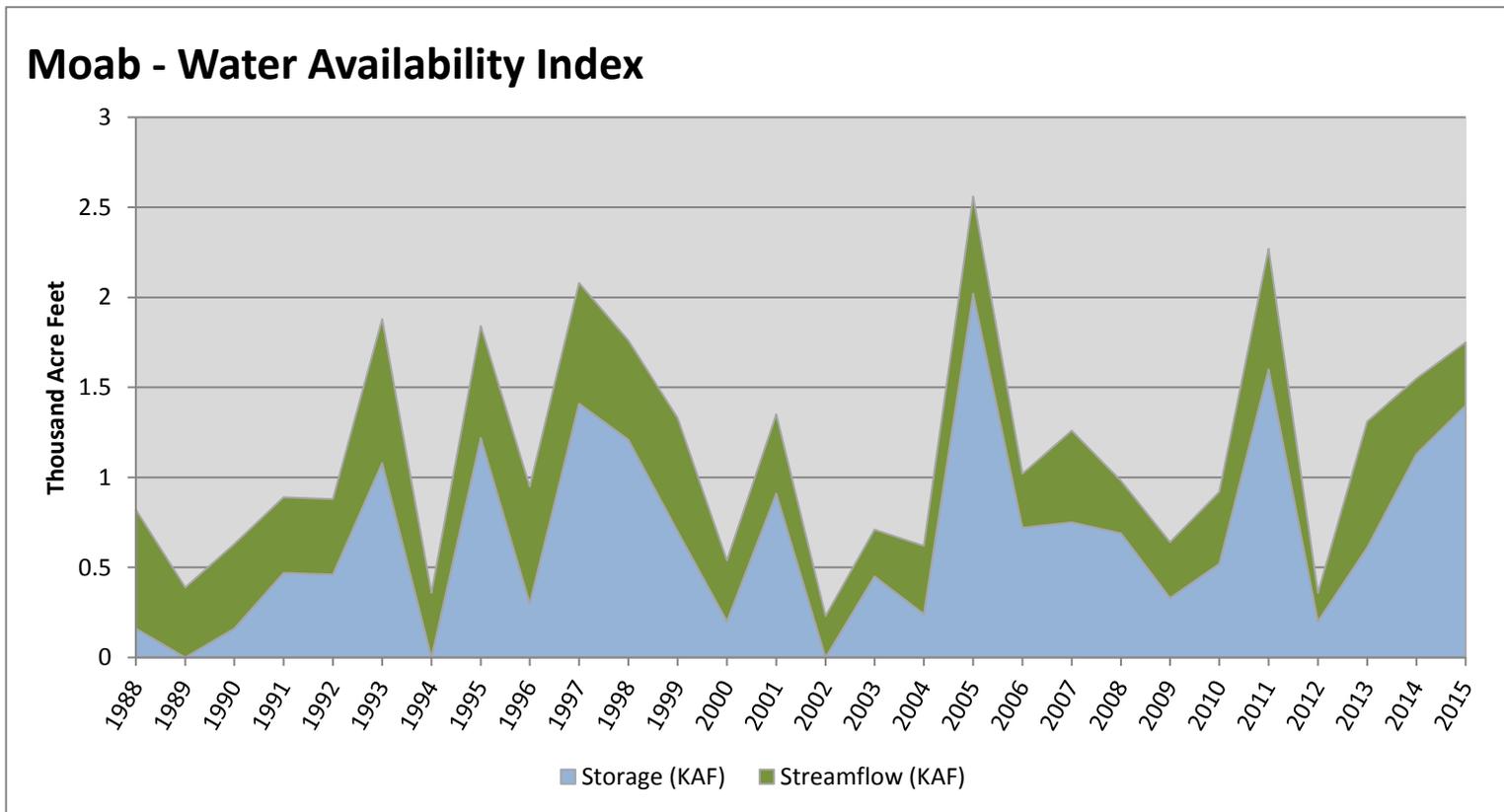


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	1.40	0.35	1.75	76	2.16	01, 14, 98, 95

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

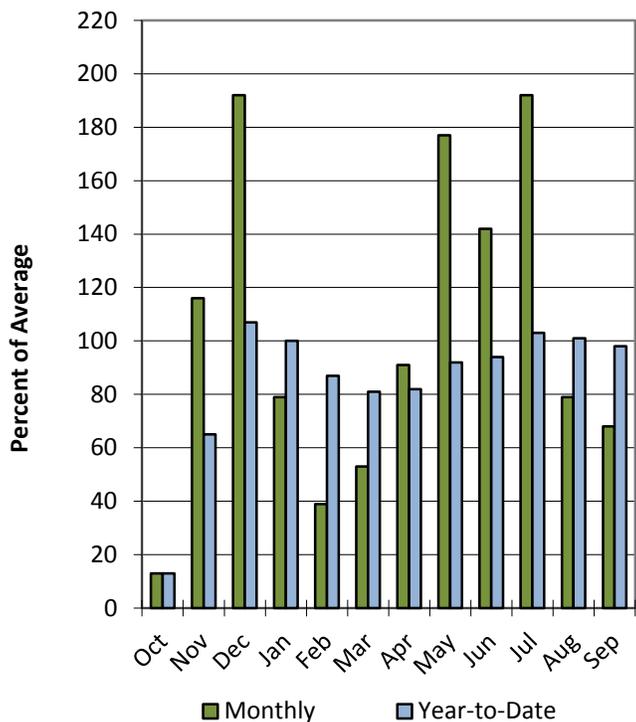


Dirty Devil Basin

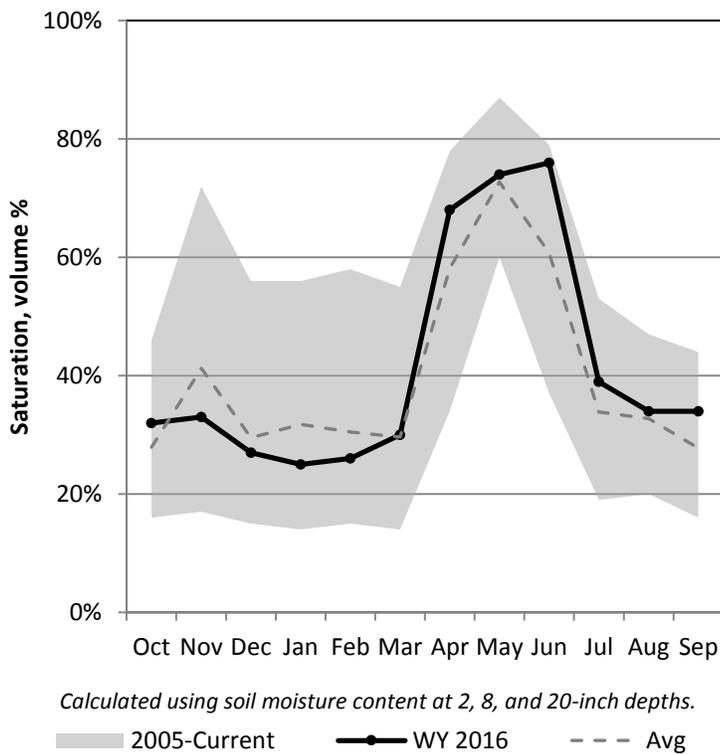
10/1/2015

Precipitation in September was much below average at 68%, which brings the seasonal accumulation (Oct-Sep) to 98% of average. Soil moisture is at 32% compared to 46% last year.

Precipitation



Soil Moisture

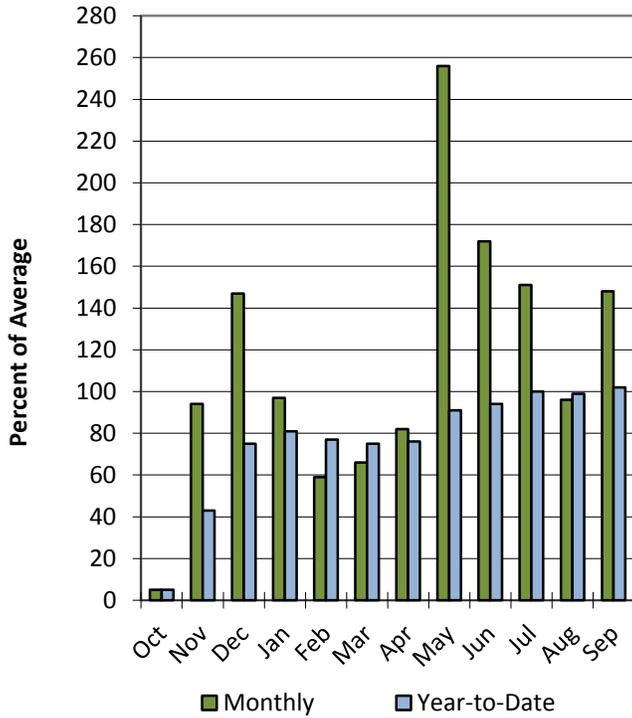


Escalante River Basin

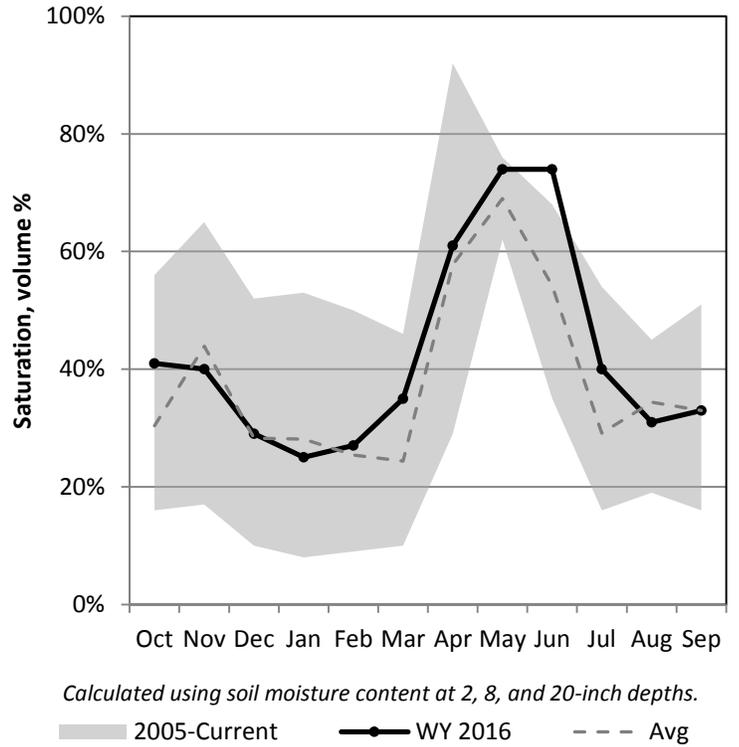
10/1/2015

Precipitation in September was much above average at 148%, which brings the seasonal accumulation (Oct-Sep) to 102% of average. Soil moisture is at 41% compared to 56% last year.

Precipitation



Soil Moisture

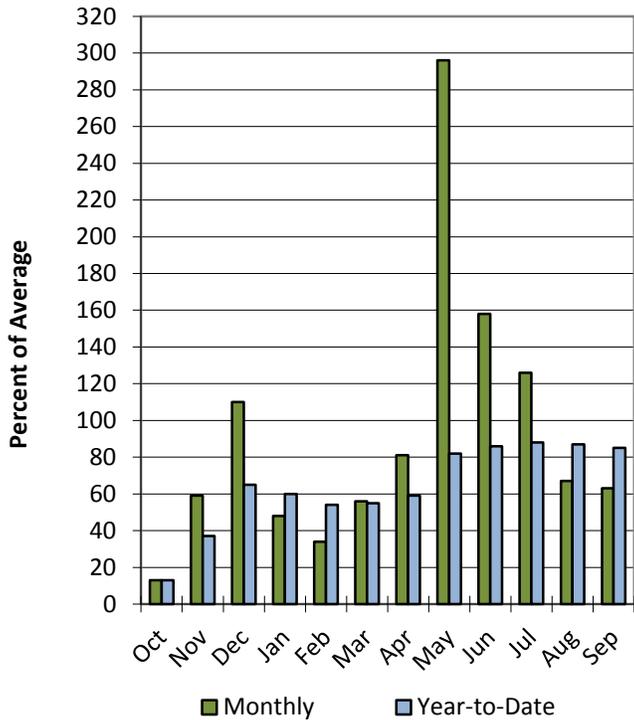


Beaver River Basin

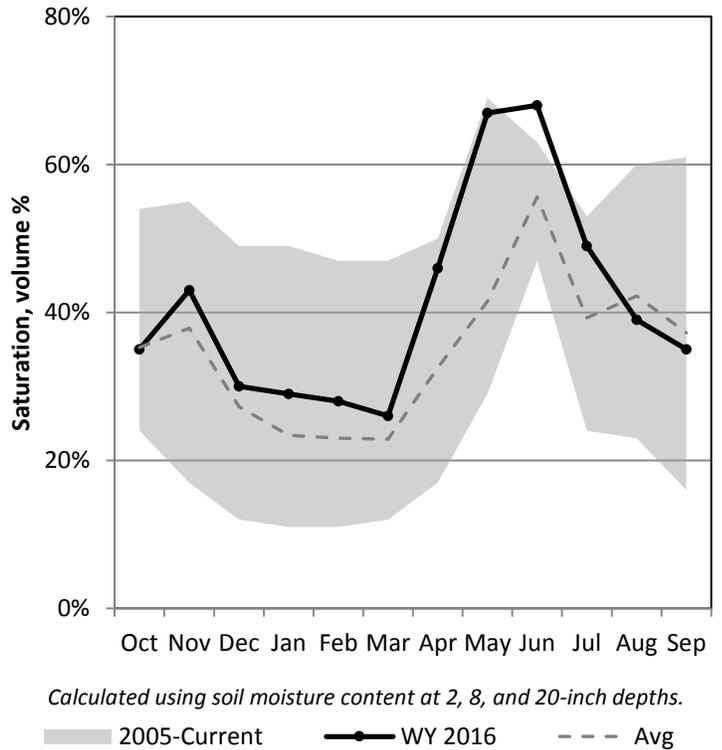
10/1/2015

Precipitation in September was much below average at 63%, which brings the seasonal accumulation (Oct-Sep) to 85% of average. Soil moisture is at 35% compared to 54% last year. Reservoir storage is at 12% of capacity, compared to 16% last year. The water availability index for the Beaver River is 36%.

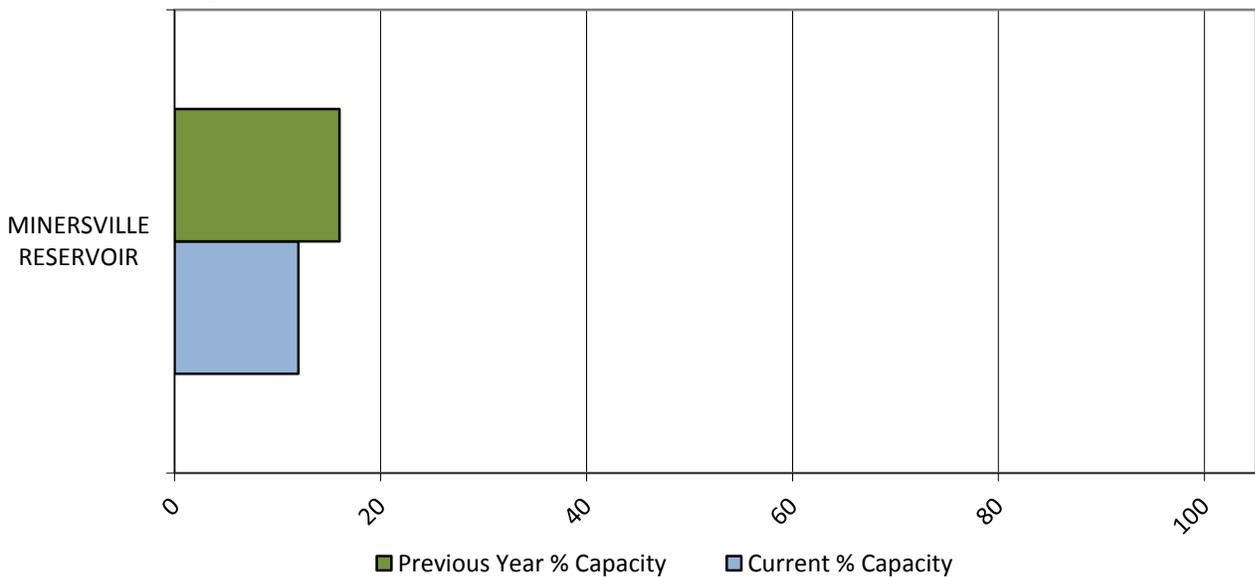
Precipitation



Soil Moisture



Reservoir Storage

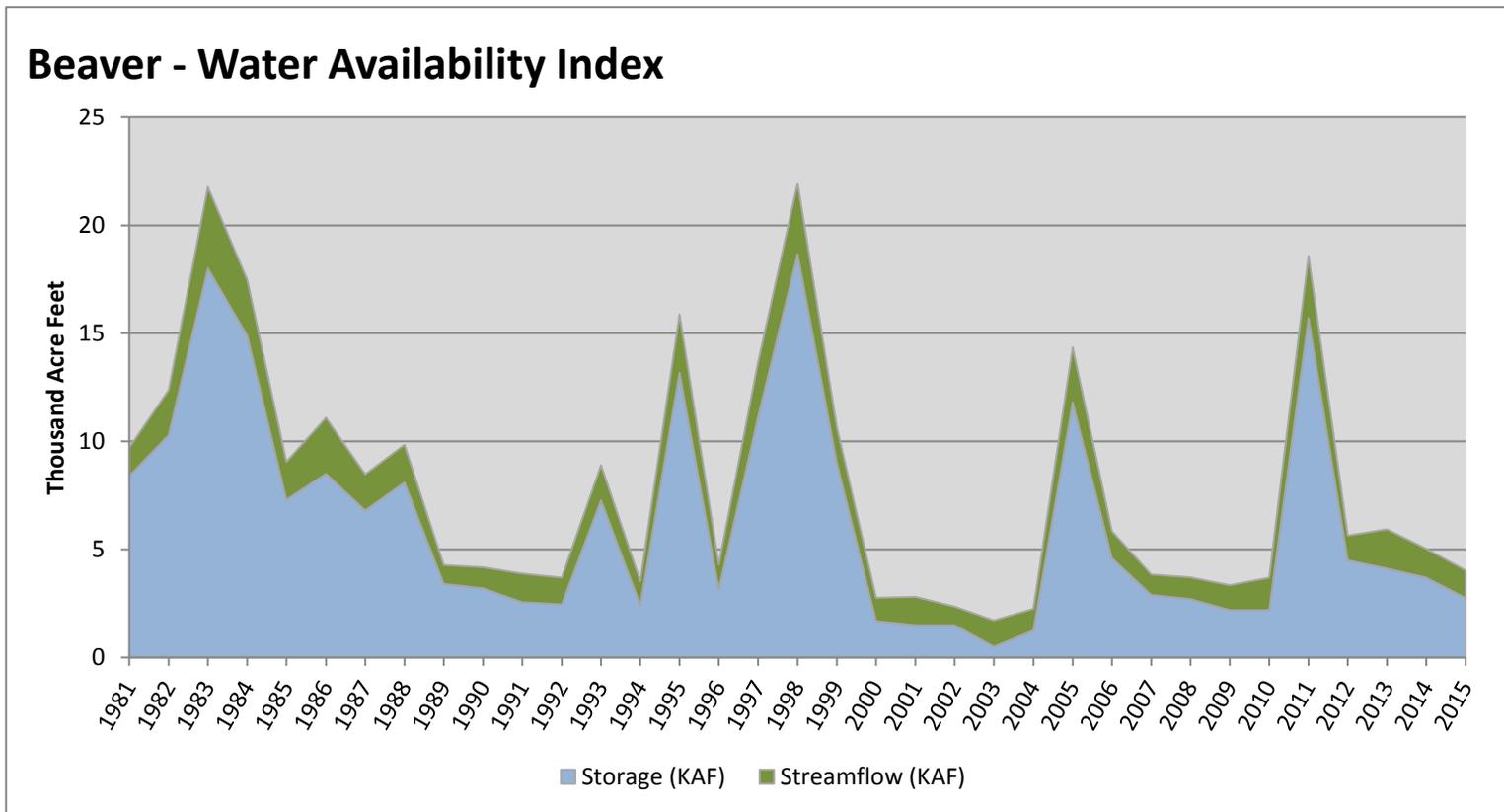


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	2.75	1.28	4.03	36	-1.16	07, 91, 90, 89

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

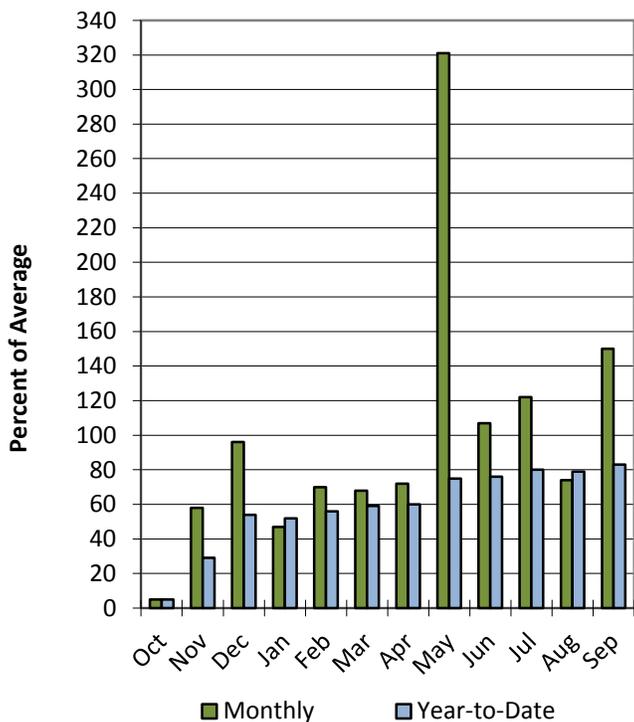


Southwestern Utah Basin

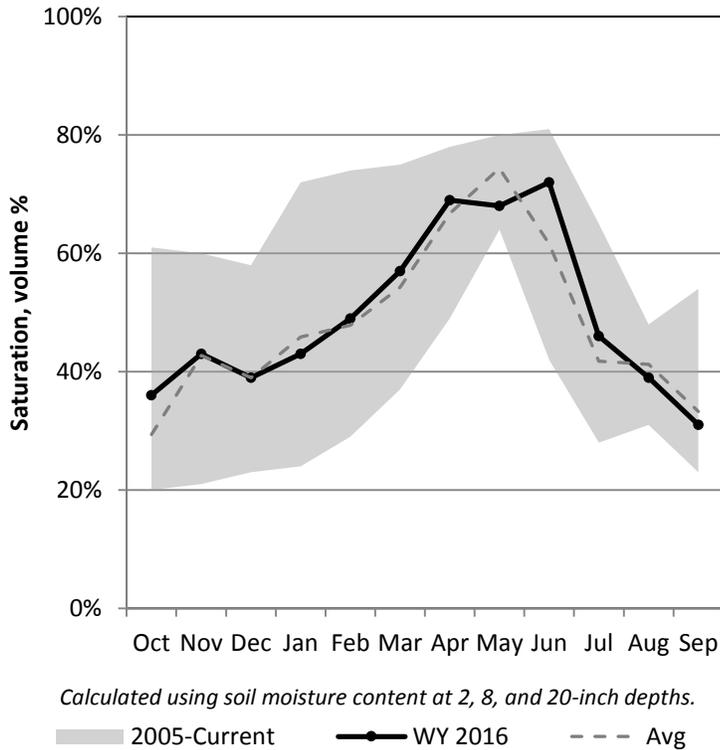
10/1/2015

Precipitation in September was much above average at 150%, which brings the seasonal accumulation (Oct-Sep) to 83% of average. Soil moisture is at 36% compared to 61% last year. Reservoir storage is at 51% of capacity, compared to 51% last year. The water availability index for the Virgin River is 47%.

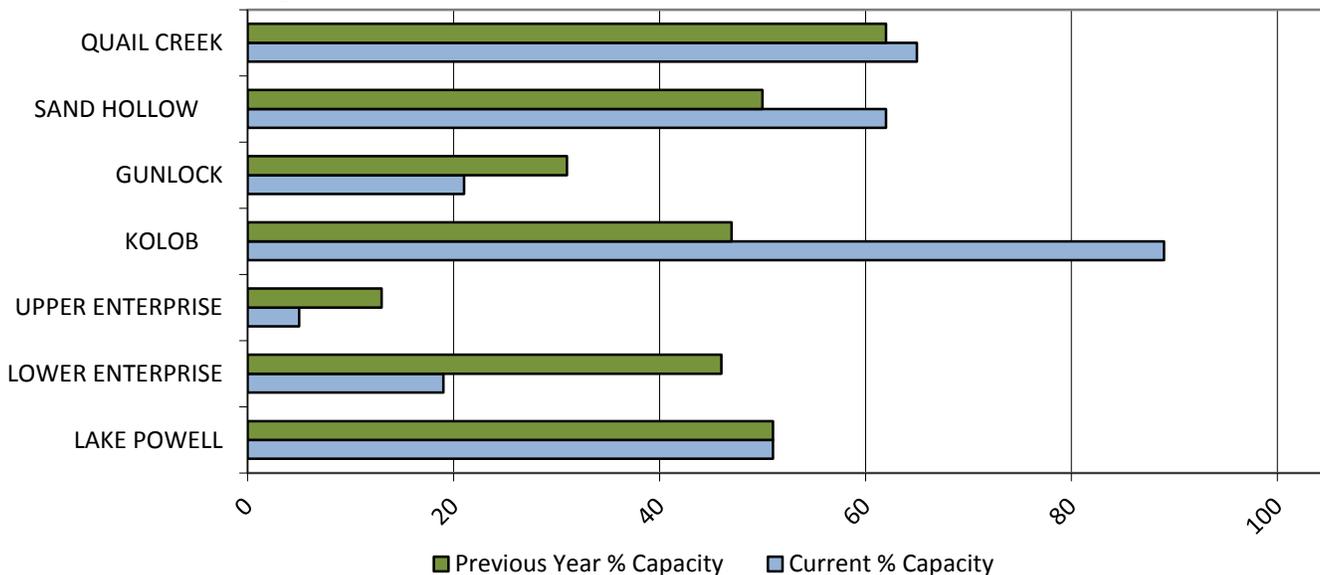
Precipitation



Soil Moisture



Reservoir Storage

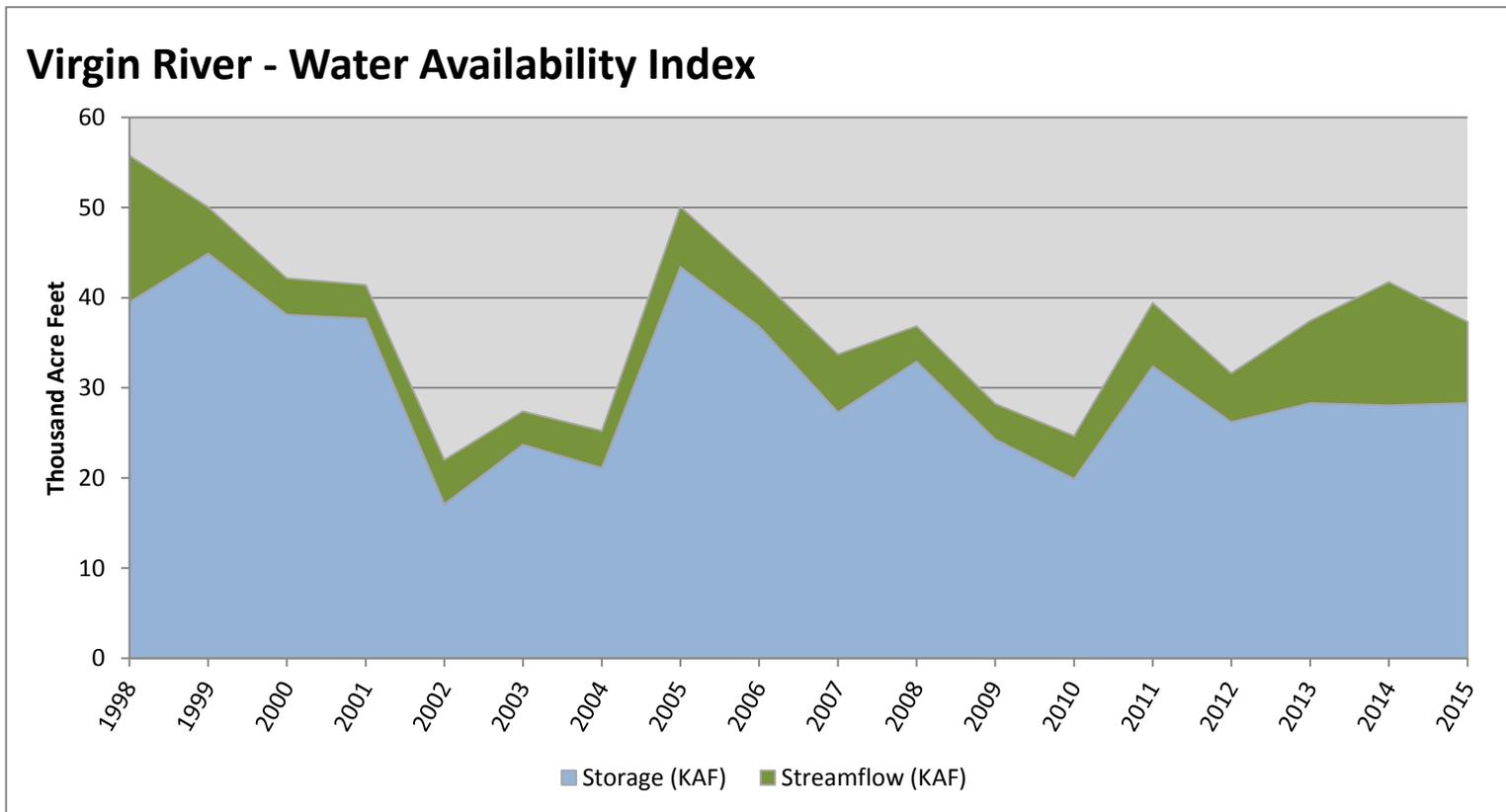


October 1, 2015

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	28.30	8.99	37.29	47	-0.22	07, 08, 13, 11

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



October 1, 2015

Water Availability Index

Basin or Region	Sep EOM* Storage	September Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	478	4.3	482	47	-0.2	95, 01, 14, 13
Woodruff Narrows	37.2	4.2	41.4	64	1.2	96, 06, 05, 08
Little Bear	3.2	1.0	4.2	17	-2.8	03, 01, 14, 02
Ogden	49.9	1.9	51.9	42	-0.7	91, 81, 08, 94
Weber	79.5	10.0	89.5	31	-1.6	03, 00, 02, 07
Provo River	291.7	2.5	294.3	24	-2.2	04, 02, 12, 03
Western Uintah	155.4	3.5	158.9	69	1.6	13, 05, 11, 14
Eastern Uintah	27.4	5.0	32.4	42	-0.7	07, 01, 88, 92
Blacks Fork	6.2	2.8	9.0	45	-0.4	96, 06, 85, 09
Price	8.4	0.0	8.4	11	-3.2	04, 90, 91, 02
Smiths Creek	5.4	1.0	6.4	53	0.3	09, 08, 85, 10
Joes Valley	37.5	1.2	38.7	31	-1.6	91, 89, 07, 01
Moab	1.4	0.4	1.8	76	2.2	01, 14, 98, 95
Upper Sevier River	19.1	0.5	19.6	22	-2.3	90, 09, 08, 89
San Pitch	0.0	0.3	0.3	8	-3.5	02, 07, 04, 03
Lower Sevier	40.5	5.1	45.7	14	-3.0	91, 02, 10, 14
Beaver	2.8	1.3	4.0	36	-1.2	07, 91, 90, 89
Virgin River	28.3	9.0	37.3	47	-0.2	07, 08, 13, 11

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

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Water Report**
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