

# Utah Climate and Water Report

August 2015



West Fork of Blacks Fork, Utah July 2015

This is the 6<sup>th</sup> consecutive year where July precipitation has been above average, keeping the High Uintas green well into the summer.

Photo by Beau Uriona

# Utah Climate and Water Report

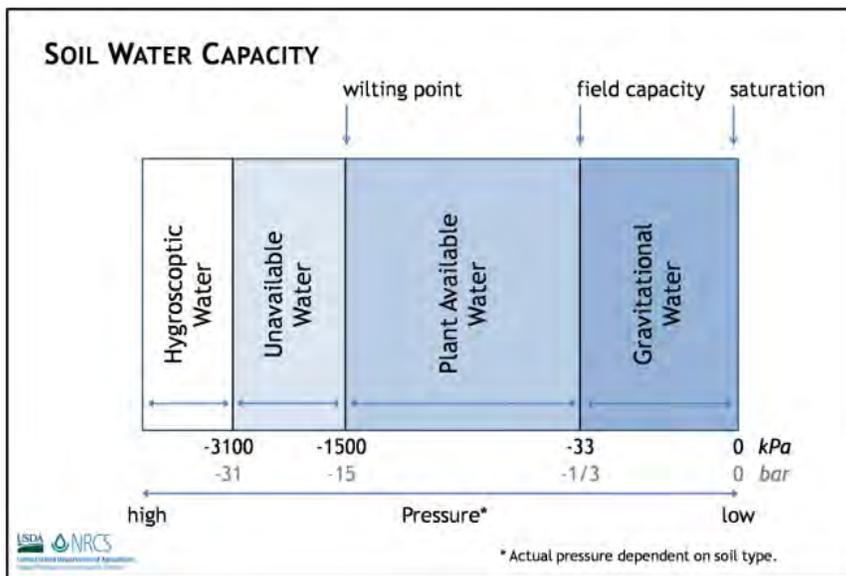
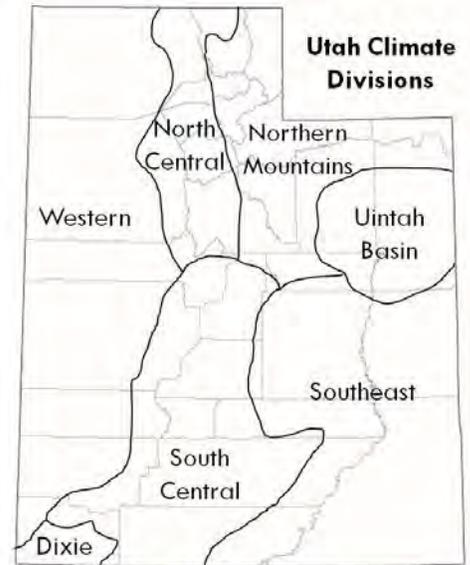
The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from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

# Climate and Water Information

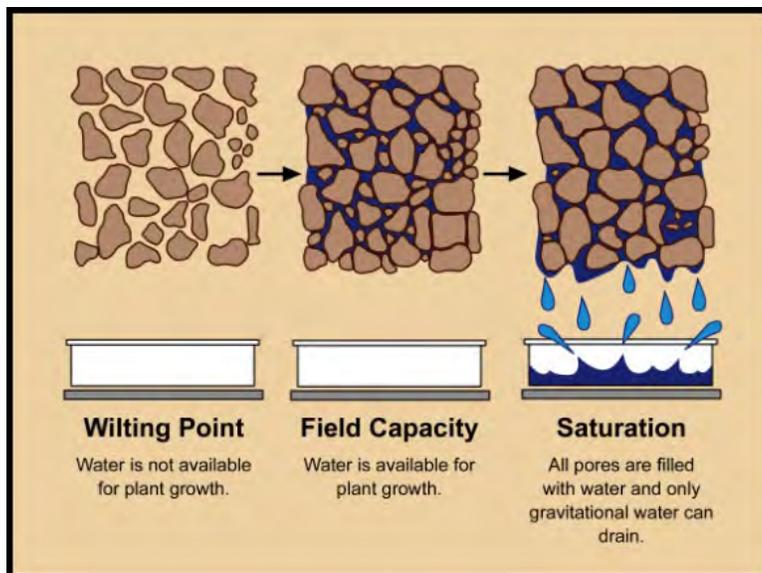
## Soil Climate Analysis Network

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.**

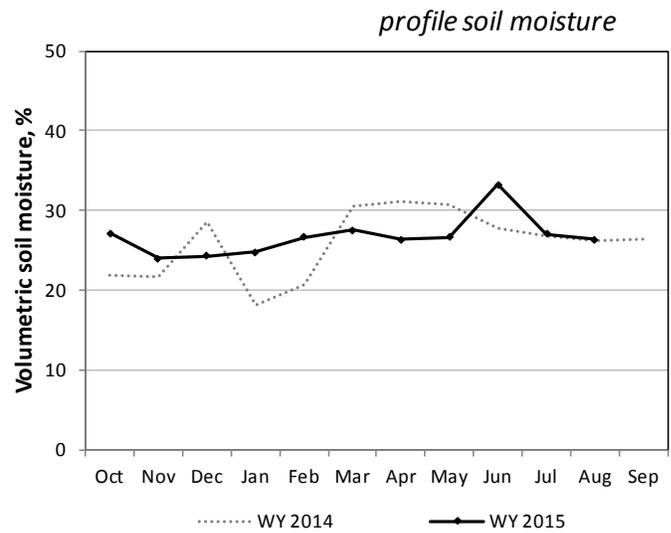
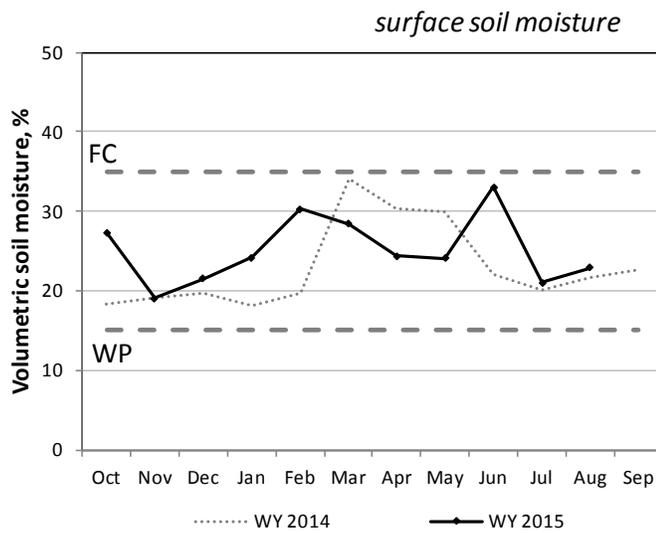
# North Central

## 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>				
<b>NORTH CENTRAL</b>												
Blue Creek	13.0	2.1	12		21	23	18	78	78	73	69	65
Cache Junction	17.9	1.7	31	29	40	32	39	67	68	66	63	62
Grantsville	9.5	0.9	0	10	25	-	-	85	79	77	72	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.

## 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.**

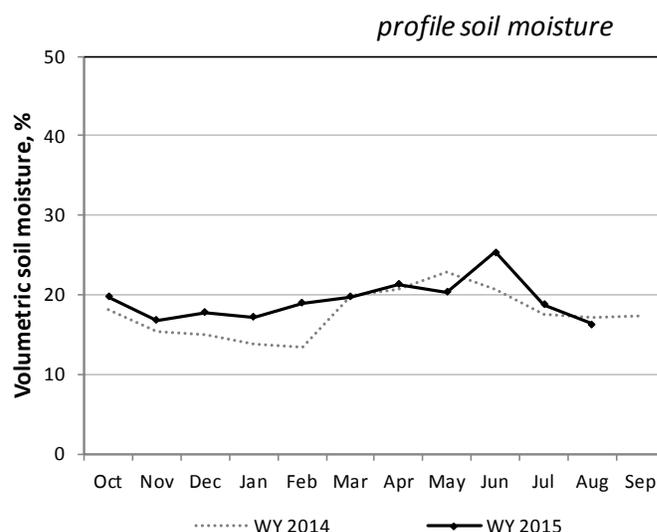
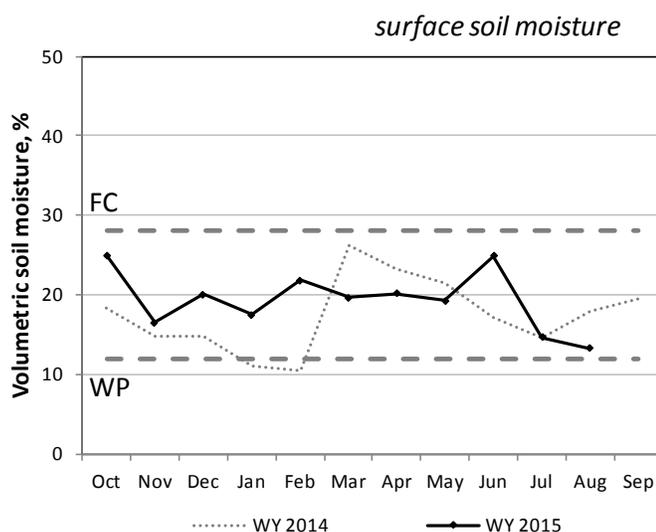
# Northern Mountains

## 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>				
<b>NORTHERN MOUNTAINS</b>												
Chicken Ridge	14.3	2.2	2	7	8	13	11	62	61	60	58	56
Buffalo Jump	11.5	1.7	8	11	10	10	-	65	66	65	61	-
Morgan	14.0	2.2	24	20	25	32	23	77	77	74	71	67

\* 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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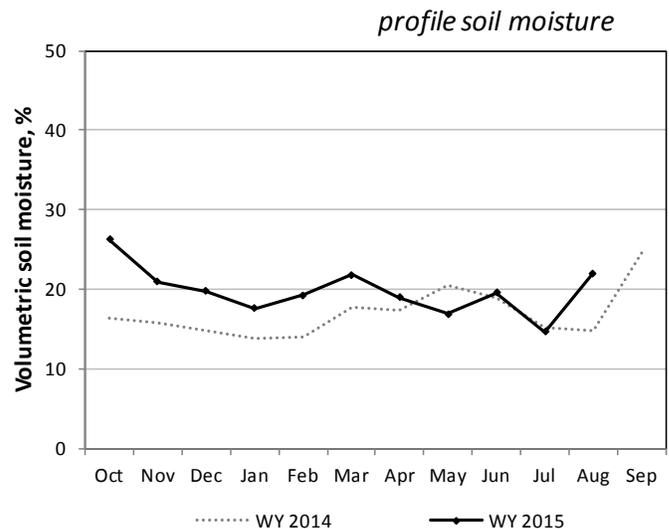
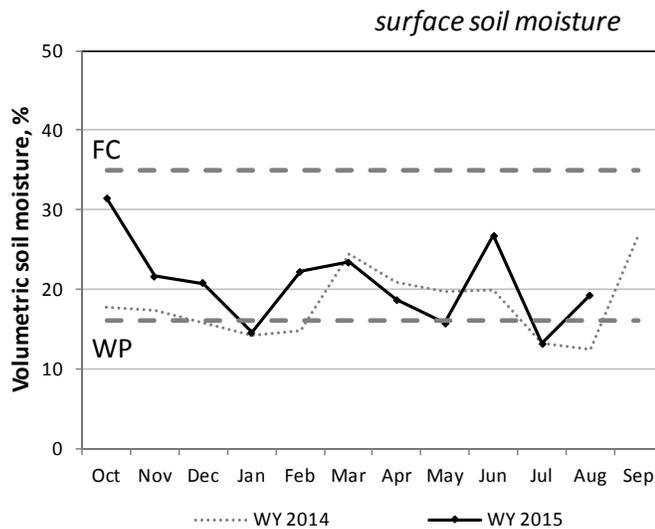
# Uintah Basin

## 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>				
<b>UINTAH BASIN</b>												
Mountain Home	9.9	1.9	8	12	14	12	7	82	74	71	66	66
Little Red Fox	8.4	2.3	9	28	35	34	40	76	73	72	68	64
Split Mountain	7.3	1.1						73	75	79	76	70

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

### Uintah Basin



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

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

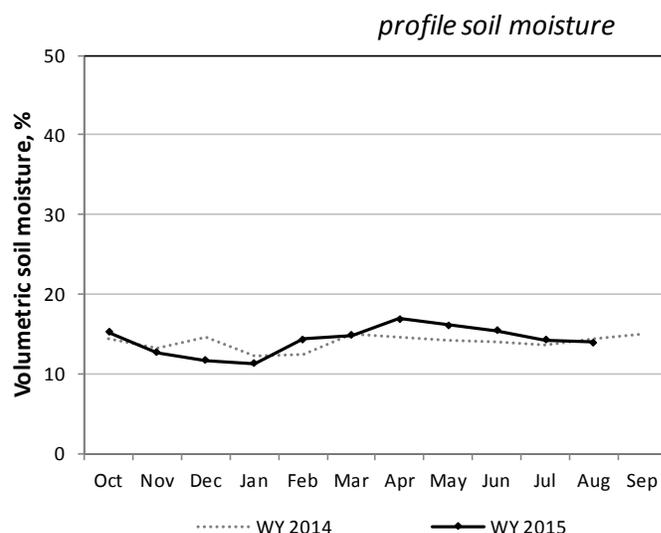
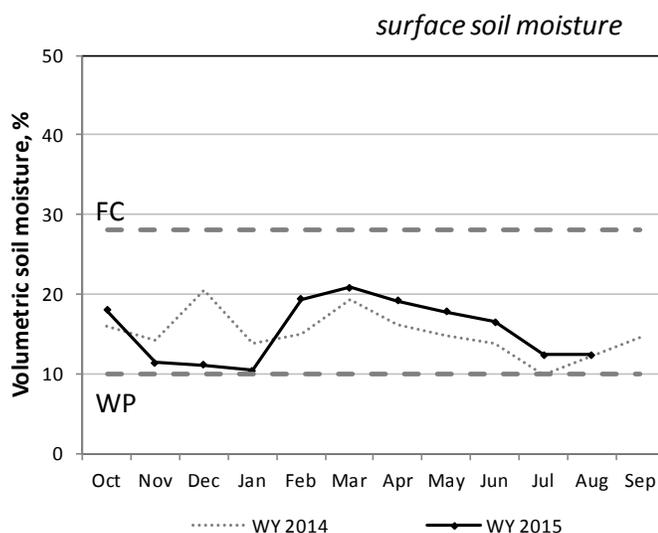
# Southeast

## Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
			in.					in.				
			volume %					° F				
<b>SOUTHEAST</b>												
Price	7.2	1.7	1	12	18	17	21	82	79	78	74	70
Green River	6.3	0.9	9	8	9	6	9	84	84	83	80	76
Harm's Way	12.4	2.3	5	12	14	15	6	77	75	74	71	66
West Summit	11.8	3.5	10	17	17	17	18	77	75	74	69	65
Eastland	15.1	4.1	10	12	12	24	22	72	72	72	68	64
Alkali Mesa	13.5	2.3	6	9	16	18	18	77	77	78	75	72
McCracken Mesa	11.6	2.2	10	17	17	18	14	81	80	80	75	72

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

## Southeast



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

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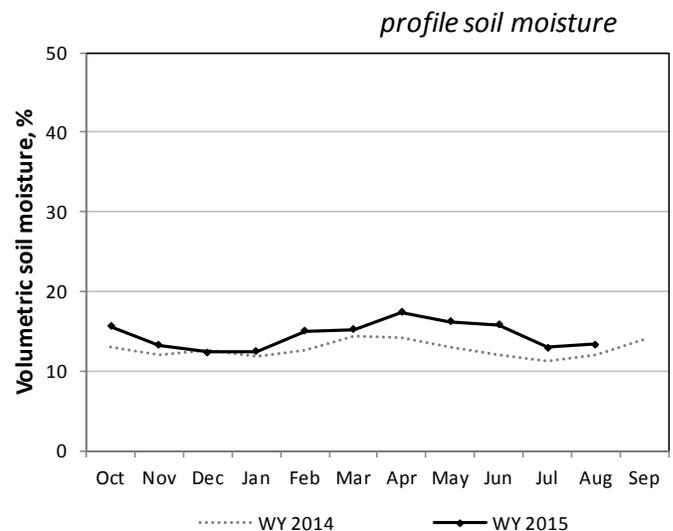
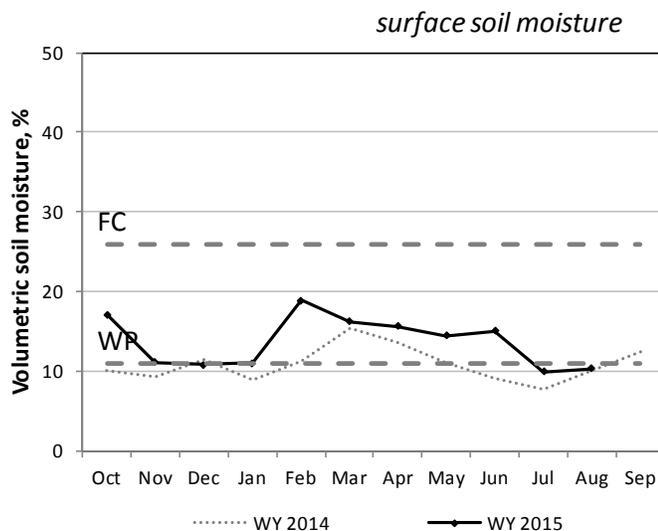
# South Central

## 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>				
<b>SOUTH CENTRAL</b>												
Nephi	9.3	0.5	7	13	14	7	6	80	78	77	74	69
Ephraim	9.2	0.5	13	27	32	35	35	76	72	72	70	65
Holden	6.3	1.1	5	6	10	13	14	81	82	81	77	73
Milford	7.2	0.3	6	15	17	28	19	81	78	75	71	67
Manderfield	8.8	0.8	14	12	13	12	5	79	76	73	70	64
Circleville	6.2	1.0	6	8	7	10	15	81	82	77	69	63
Panguitch	7.6	0.6	5	18	13	21	31	67	68	65	60	55
Cave Valley	13.0	1.2	0	0	1	0	0	74	75	74	73	69
Vermillion	10.8	1.3	0	1	3	4	8	80	75	73	68	64
Spooky	8.4	0.6						76	79	81	77	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.

## South Central



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

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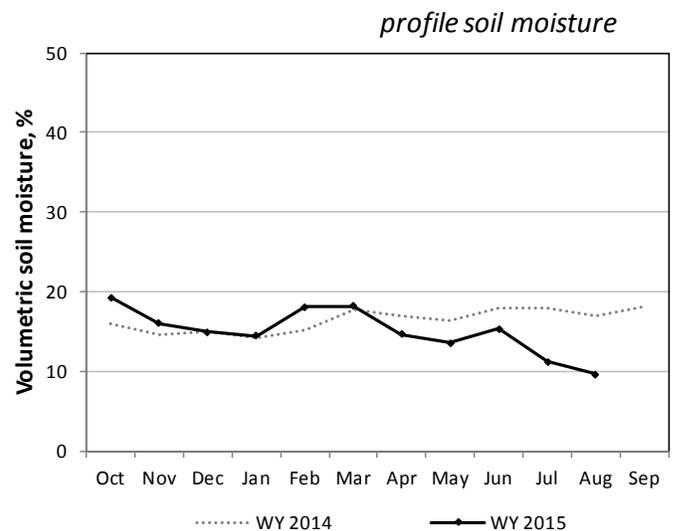
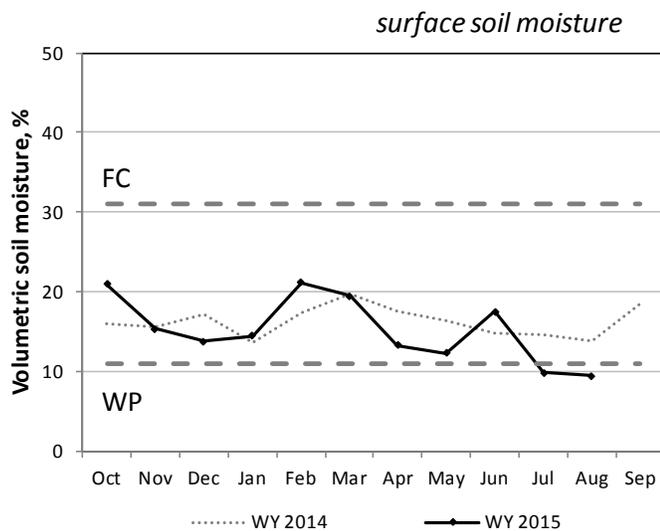
# Western and Dixie

## 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>				
<b>WESTERN</b>												
Grouse Creek												
Park Valley	9.1	1.3	1	4	14	-	-	83	80	75	73	68
Goshute	7.3	0.8	-	-	-	-	-	75	75	76	71	67
Dugway	7.7	0.5	-	-	-	-	-	83	82	81	78	73
Tule Valley	4.2	0.0	8	10	21	15	10	92	91	88	85	82
Hal's Canyon	5.2	0.4	1	1	9	12	10	90	87	83	77	71
Enterprise	9.7	0.6	5	22	22	14	15	80	78	78	74	68
<b>DIXIE</b>												
Sand Hollow	9.7	0.6	1	3	0	1	0	92	91	91	87	81

\* 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

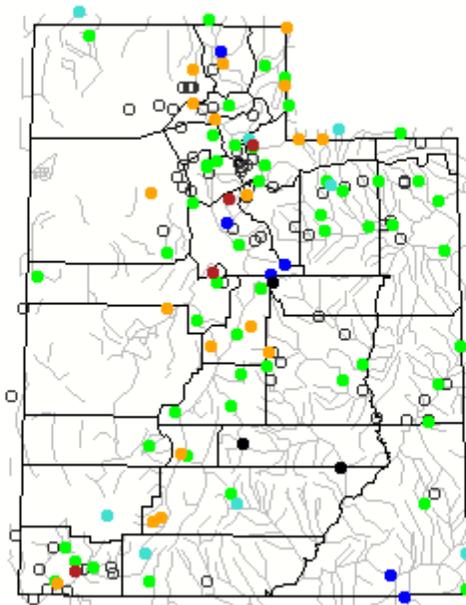
August 1, 2015

## Current Conditions

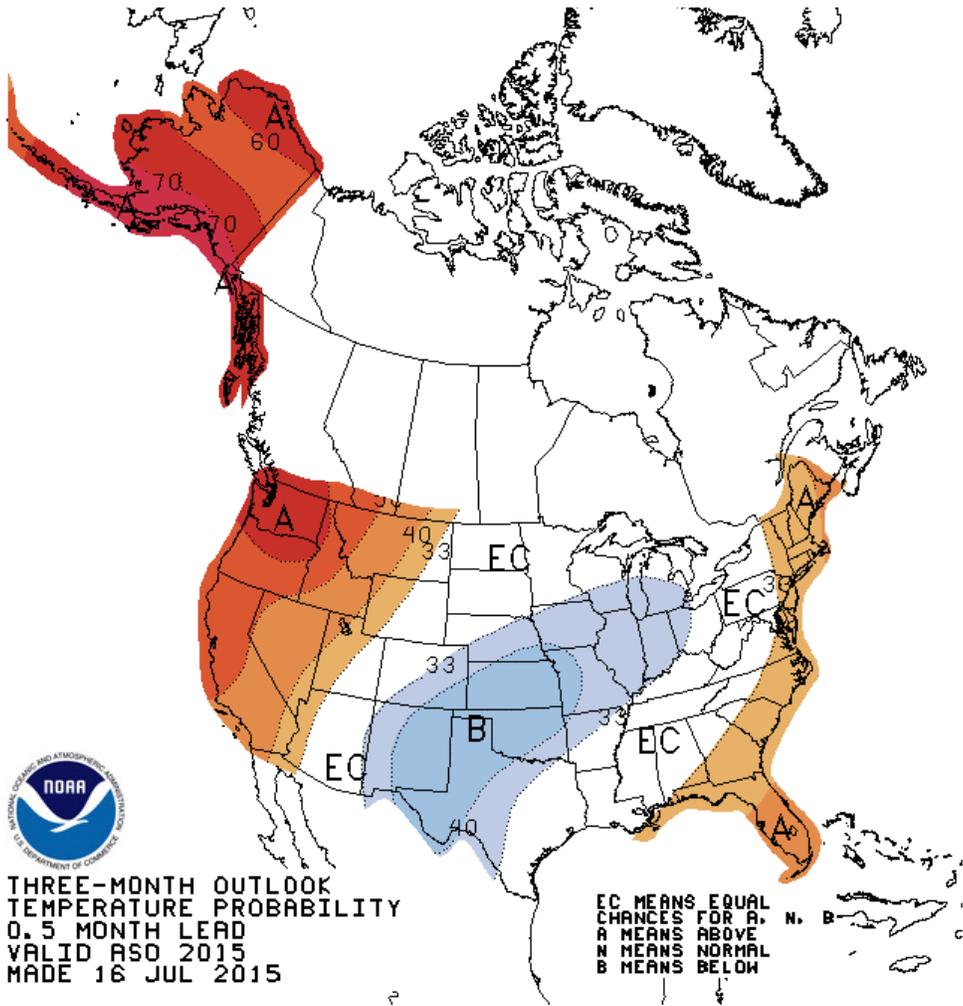
Current runoff, as shown in the USGS graphic below, remains relatively good across the state – better than expected. Recent storms in southern Utah have brought flows up temporarily. That said, many of the points that are near normal are due to reservoir releases with those points of natural flow still below normal, especially in the south, central and Uinta Basin portions of the state. Runoff from summertime precipitation is generally short lived and stream flow declines back to base flow conditions soon after the precipitation ends. July precipitation ranged from 103% to 224% of average across the state with northern and southeastern Utah receiving the most. Looking back – this is the 6<sup>th</sup> consecutive year where July precipitation has been above average – since 2010. This has provided a much needed boost to forage production and agriculture in general. July precipitation has brought soil moisture values up substantially across the state. Looking forward, the Climate Prediction Center forecasts above normal temperatures and precipitation for the remainder of summer (see graphs below). Reservoir storage is 56% of capacity statewide, down 9% from last month and similar to last year.

### Current Utah Streamflow - Courtesy US Geological Survey

Monday, August 03, 2015 10:30ET

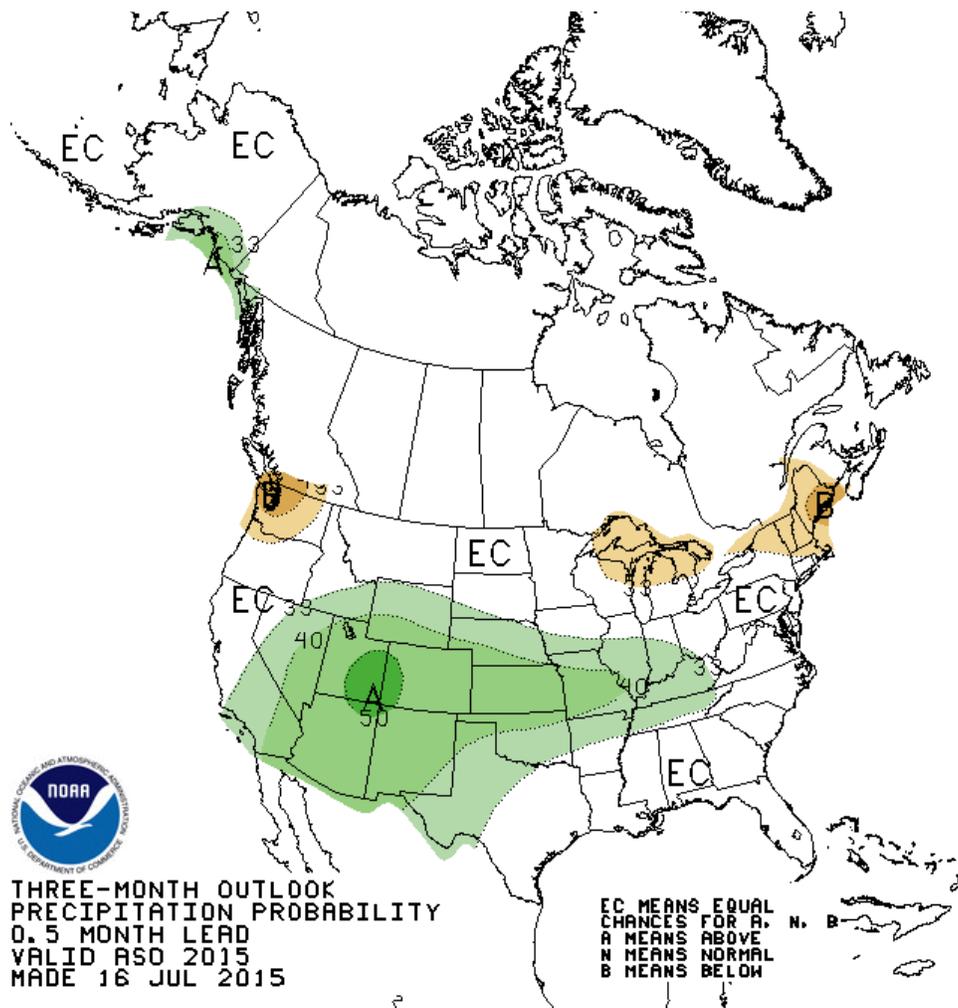


Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not ranked



NOAA  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 U.S. DEPARTMENT OF COMMERCE

**THREE-MONTH OUTLOOK  
 TEMPERATURE PROBABILITY  
 0.5 MONTH LEAD  
 VALID ASO 2015  
 MADE 16 JUL 2015**



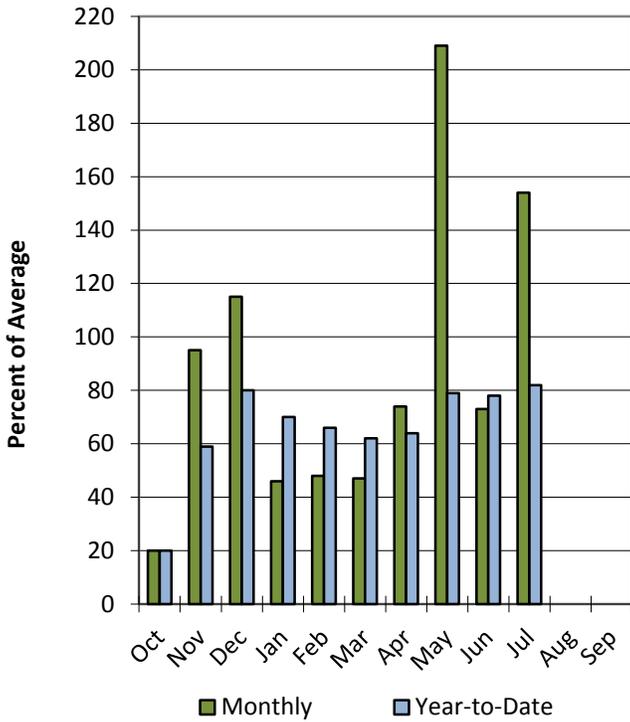
THREE-MONTH OUTLOOK  
 PRECIPITATION PROBABILITY  
 0.5 MONTH LEAD  
 VALID ASO 2015  
 MADE 16 JUL 2015

# Statewide Utah

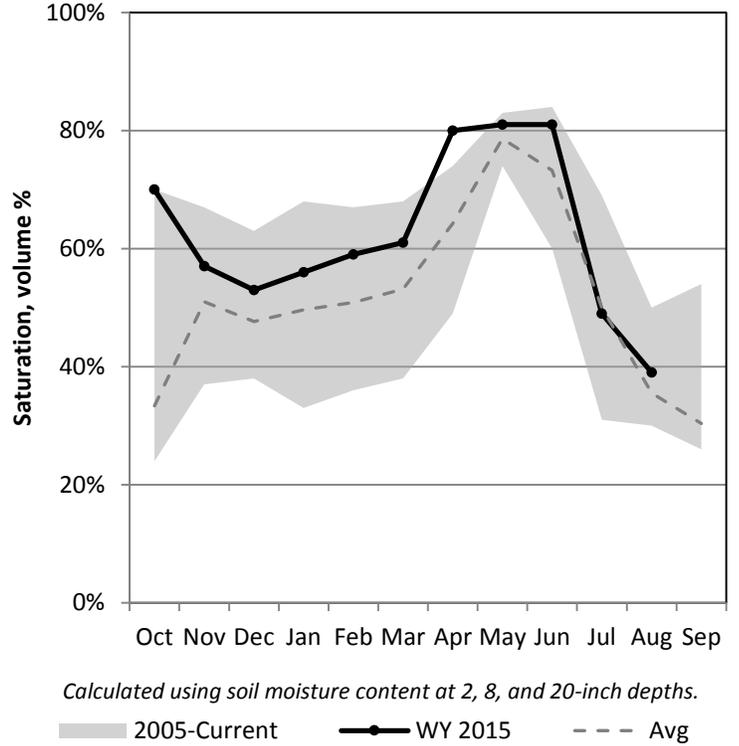
8/1/2015

Precipitation in July was much above average at 154%, which brings the seasonal accumulation (Oct-Jul) to 82% of average. Soil moisture is at 39% compared to 40% last year. Reservoir storage is at 60% of capacity, compared to 60% last year.

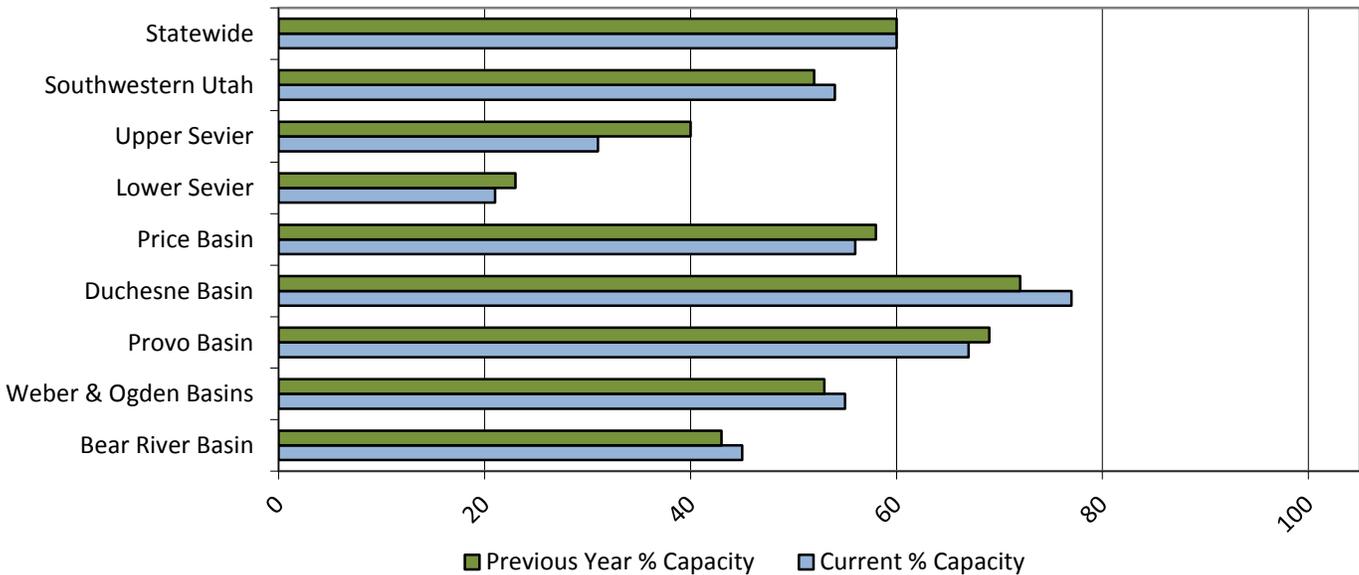
## Precipitation



## Soil Moisture



## Reservoir Storage

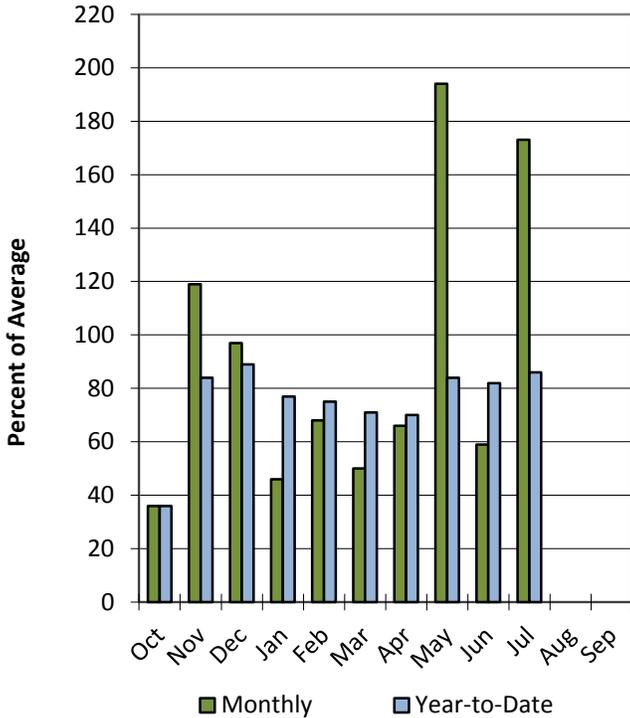


# Bear River Basin

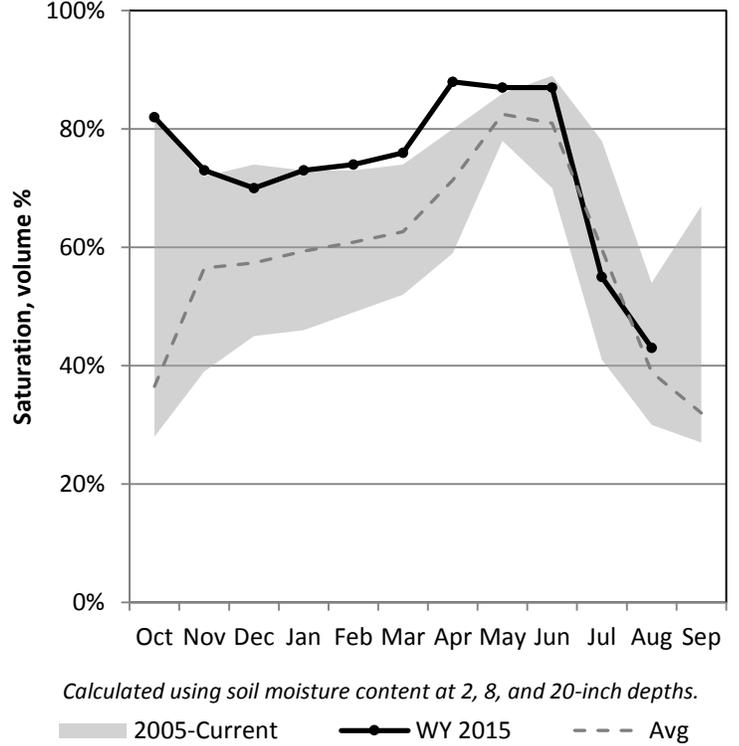
8/1/2015

Precipitation in July was much above average at 173%, which brings the seasonal accumulation (Oct-Jul) to 86% of average. Soil moisture is at 43% compared to 48% last year. Reservoir storage is at 45% of capacity, compared to 43% last year. The water availability index for the Bear River is 42%, 56% for Woodruff Narrows and 46% for the Little Bear.

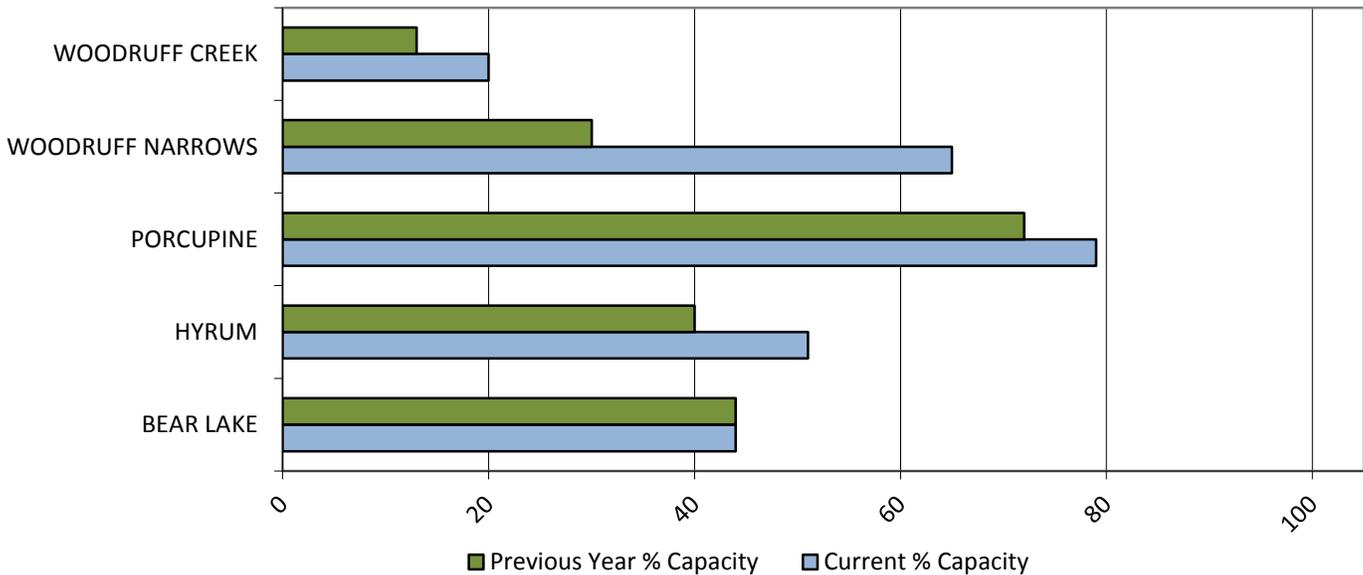
## Precipitation



## Soil Moisture



## Reservoir Storage

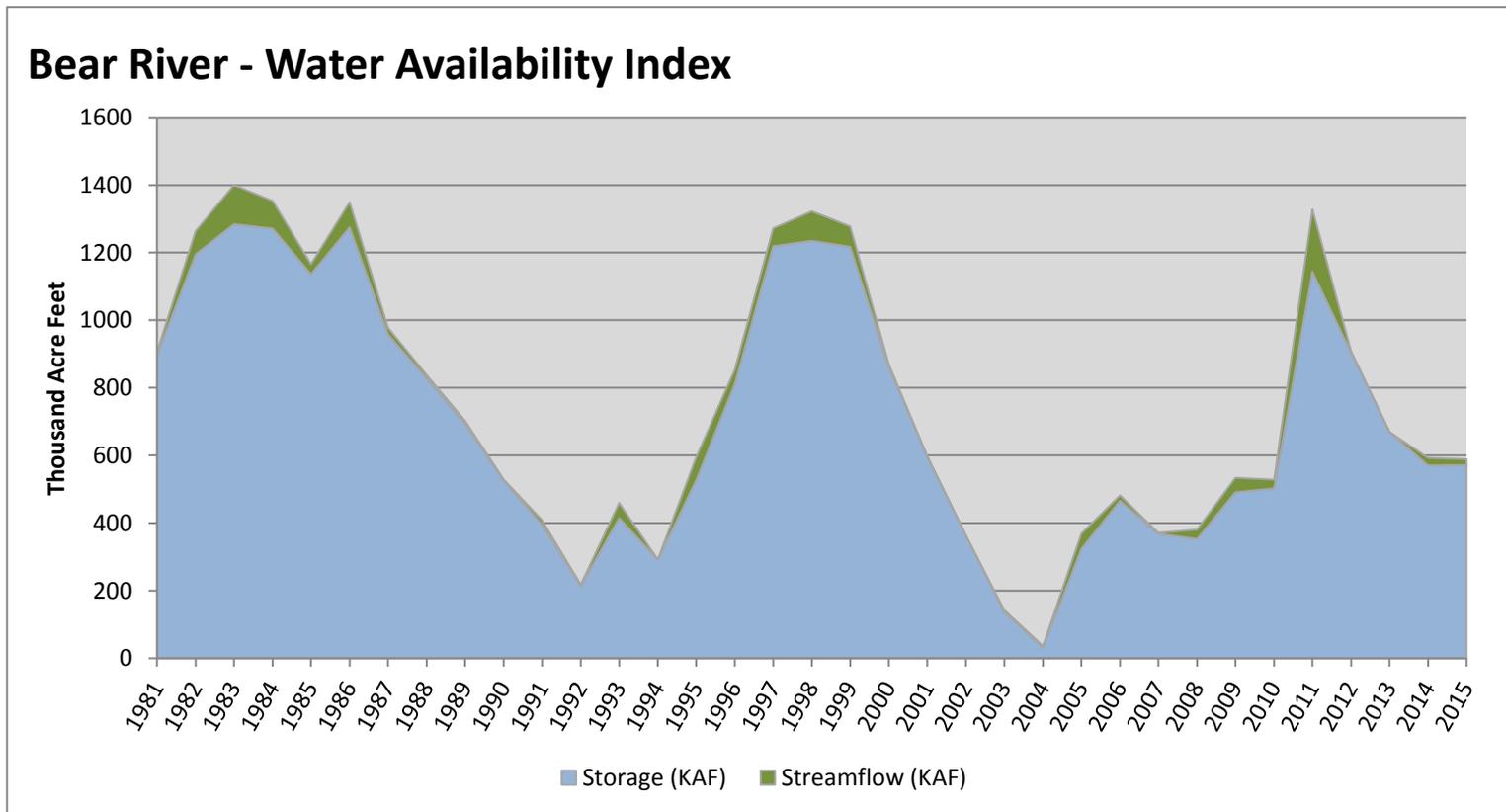


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Bear River</b>	<b>571.12</b>	<b>18.20</b>	<b>589.32</b>	<b>42</b>	<b>-0.69</b>	<b>10, 09, 14, 95</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

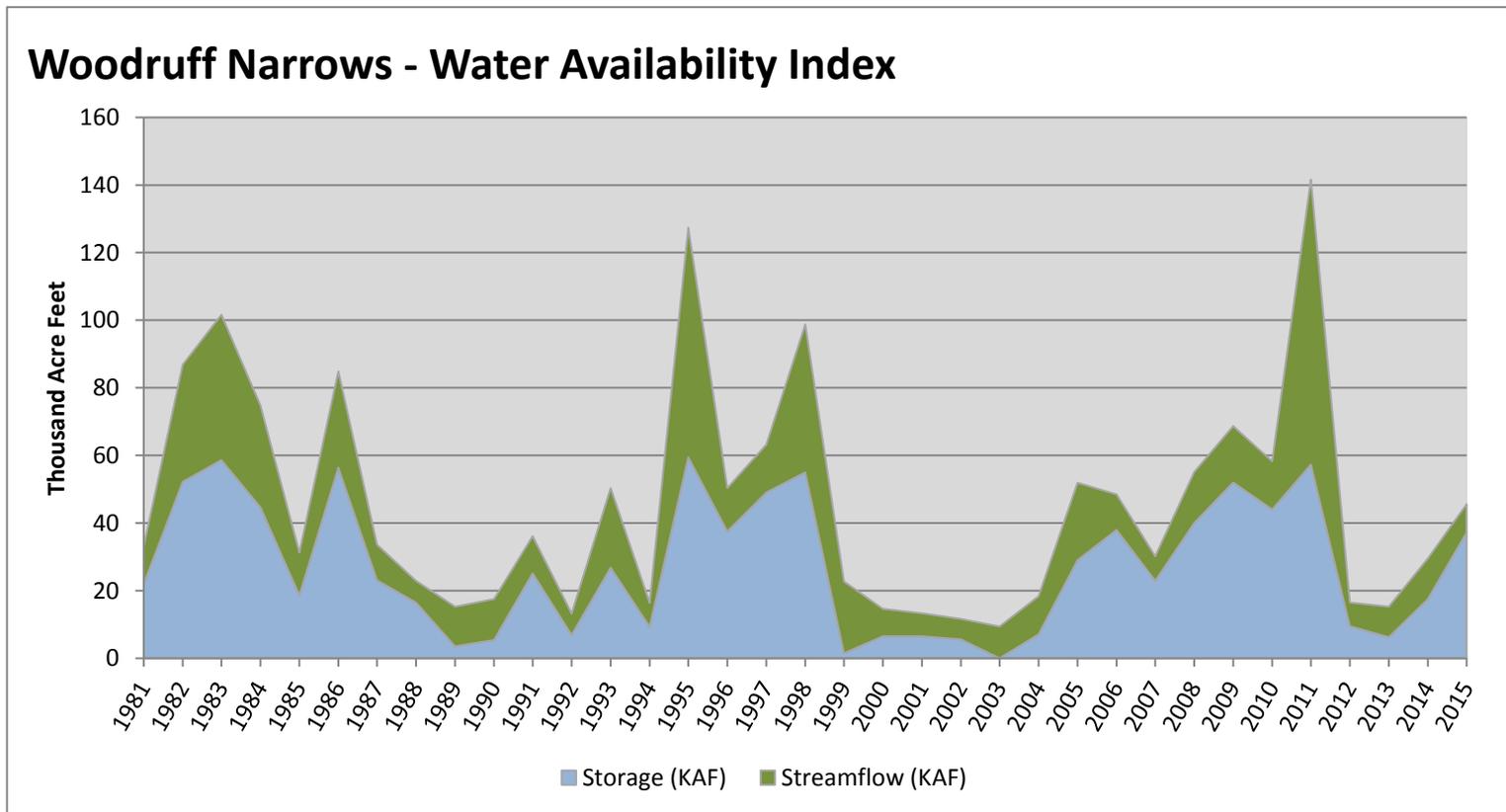


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Woodruff Narrows</b>	<b>37.22</b>	<b>8.39</b>	<b>45.61</b>	<b>56</b>	<b>0.46</b>	<b>87, 91, 06, 96</b>

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

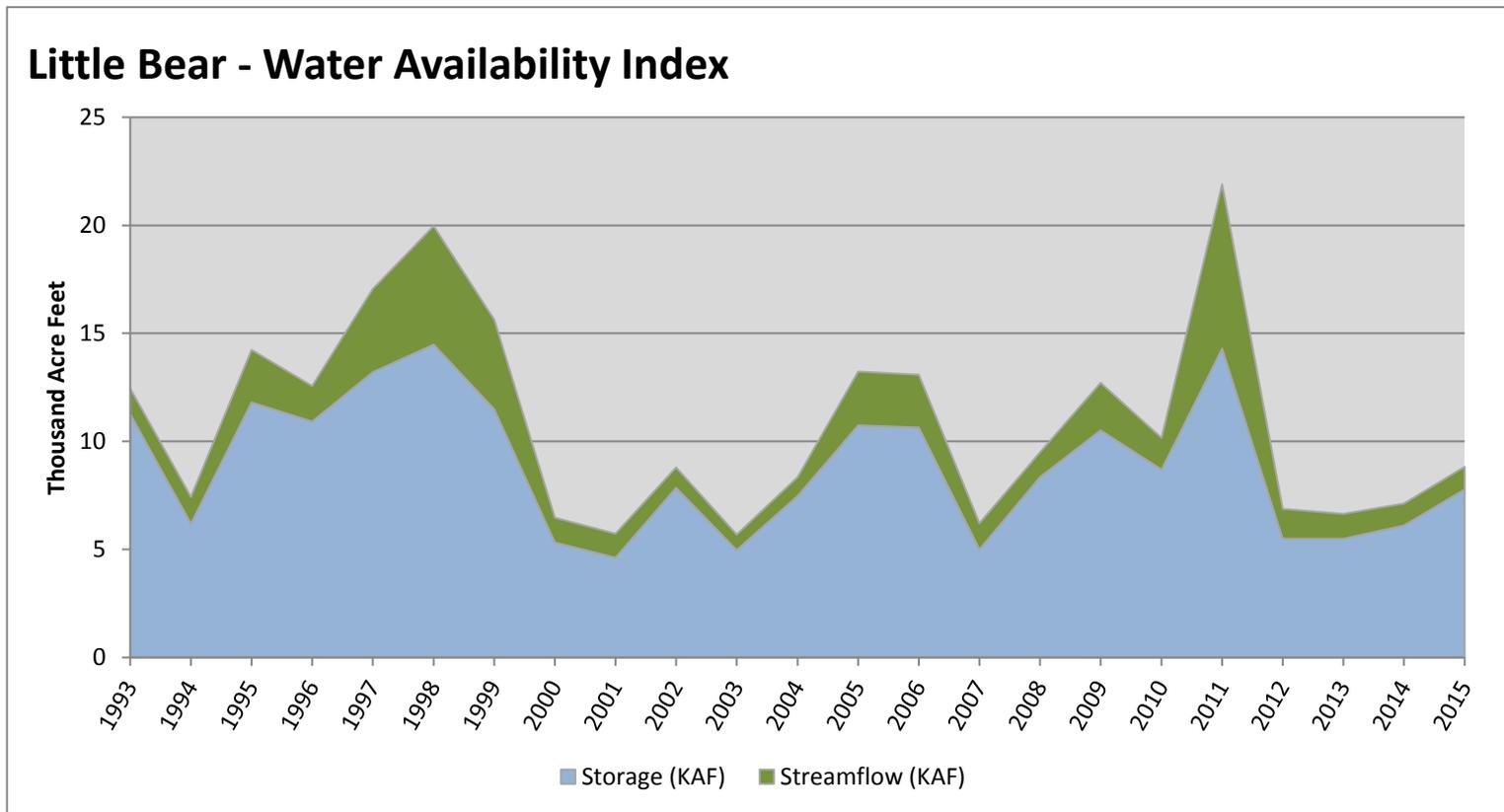


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Little Bear</b>	<b>7.78</b>	<b>1.05</b>	<b>8.83</b>	<b>46</b>	<b>-0.35</b>	<b>04, 02, 08, 10</b>

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

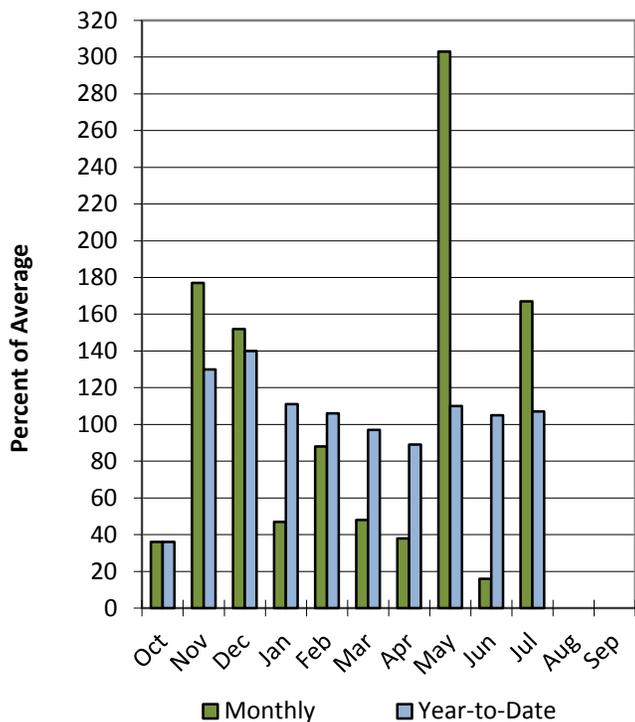


# Raft River Basin

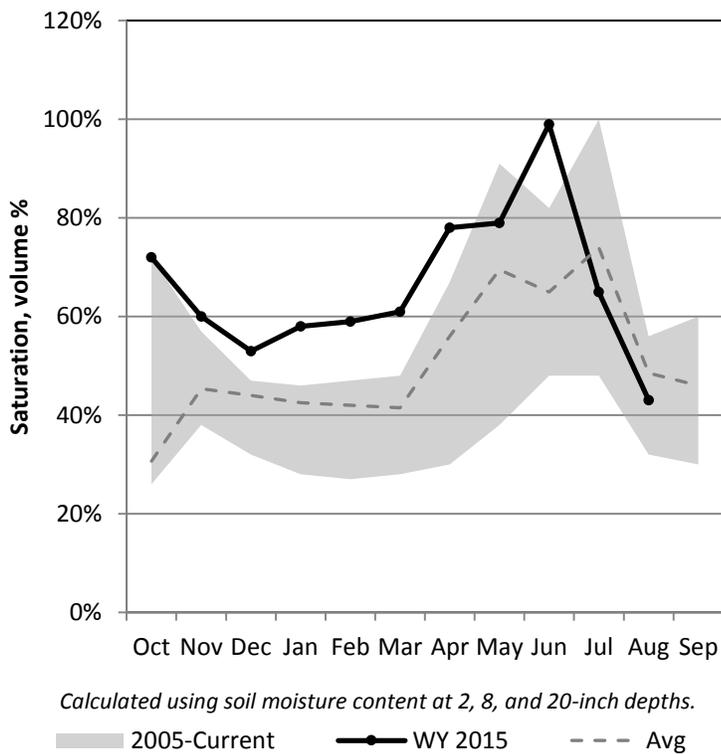
8/1/2015

Precipitation in July was much above average at 167%, which brings the seasonal accumulation (Oct-Jul) to 107% of average. Soil moisture is at 43% compared to 38% last year.

## Precipitation



## Soil Moisture

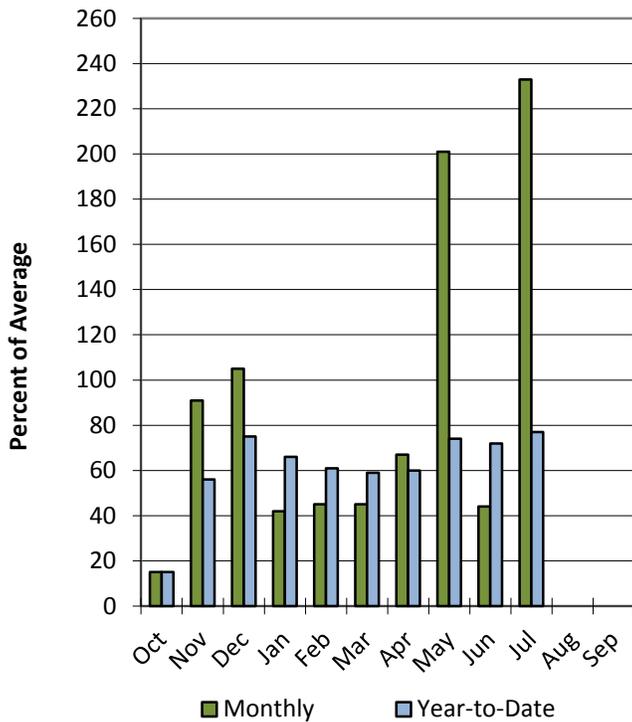


# Weber & Ogden River Basins

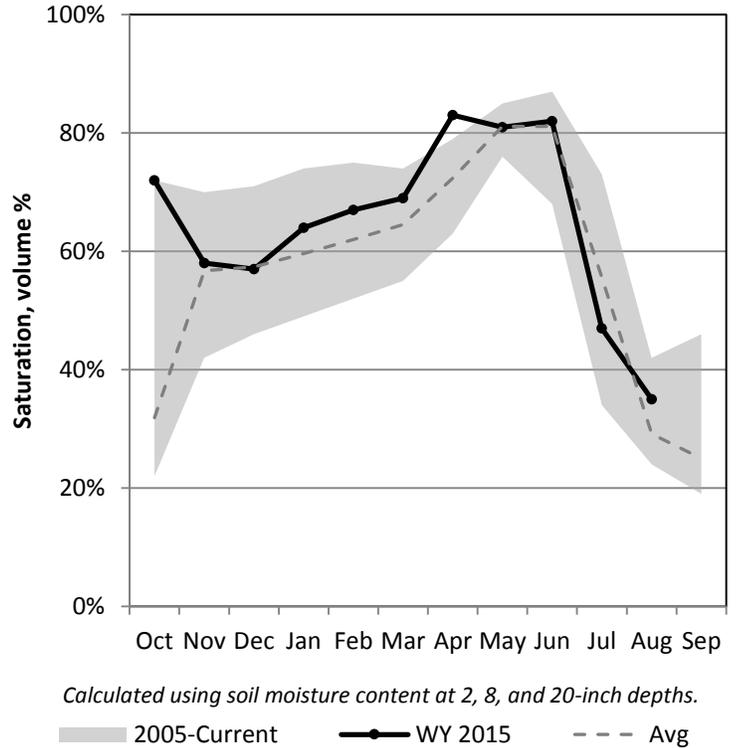
8/1/2015

Precipitation in July was much above average at 233%, which brings the seasonal accumulation (Oct-Jul) to 77% of average. Soil moisture is at 35% compared to 39% last year. Reservoir storage is at 55% of capacity, compared to 53% last year. The water availability index for the Ogden River is 42% and 38% for the Weber River.

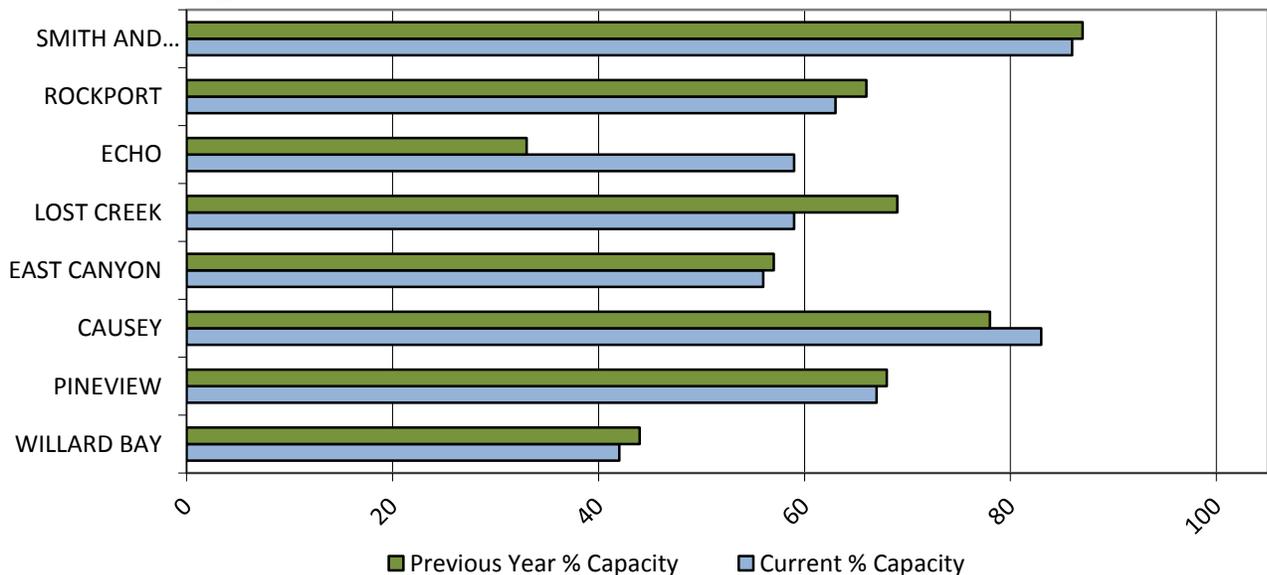
## Precipitation



## Soil Moisture



## Reservoir Storage

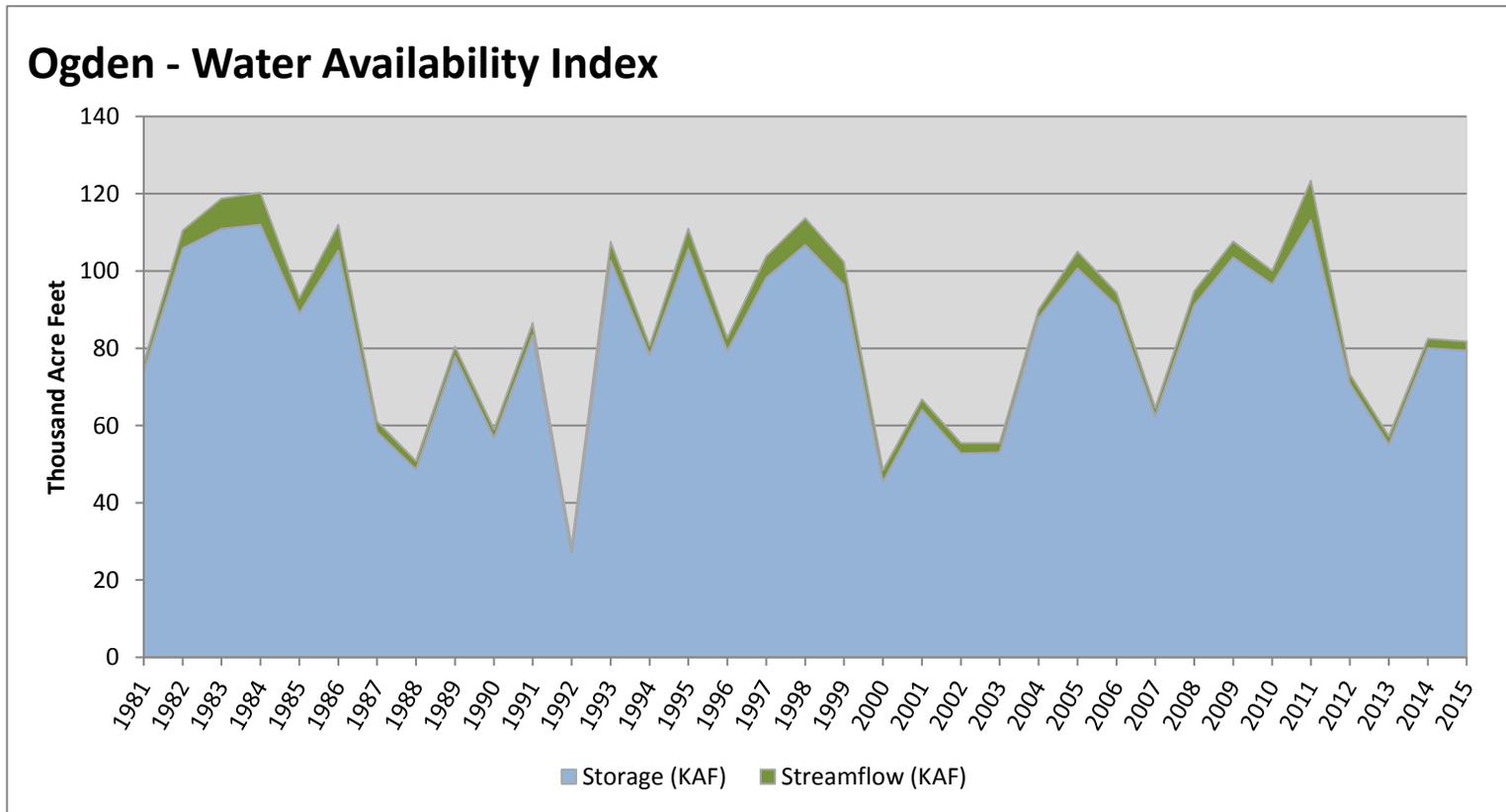


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Ogden</b>	<b>79.43</b>	<b>2.36</b>	<b>81.79</b>	<b>42</b>	<b>-0.69</b>	<b>89, 94, 14, 96</b>

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

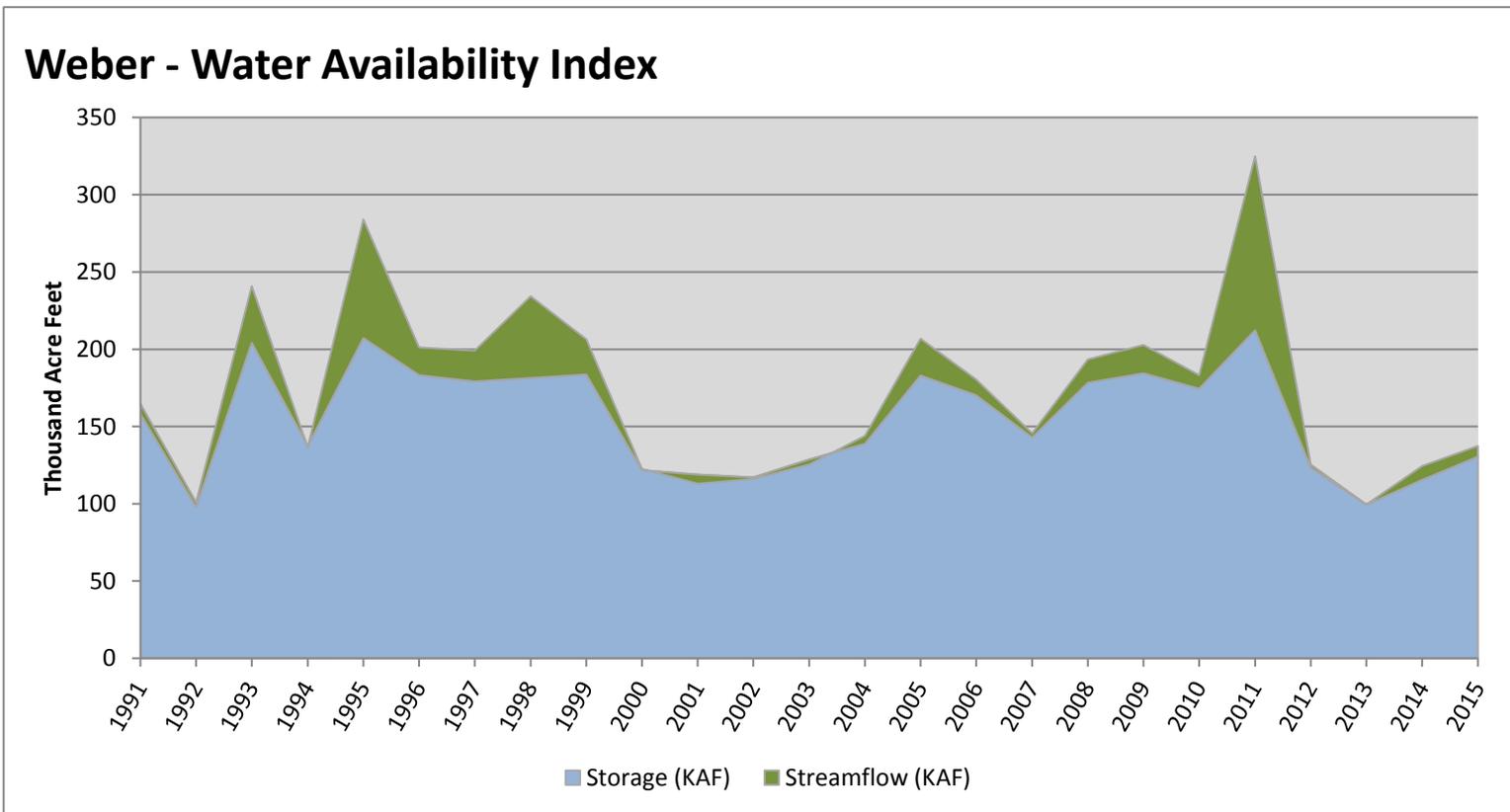


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Weber</b>	<b>130.41</b>	<b>7.01</b>	<b>137.42</b>	<b>38</b>	<b>-0.96</b>	<b>12, 94, 04, 07</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

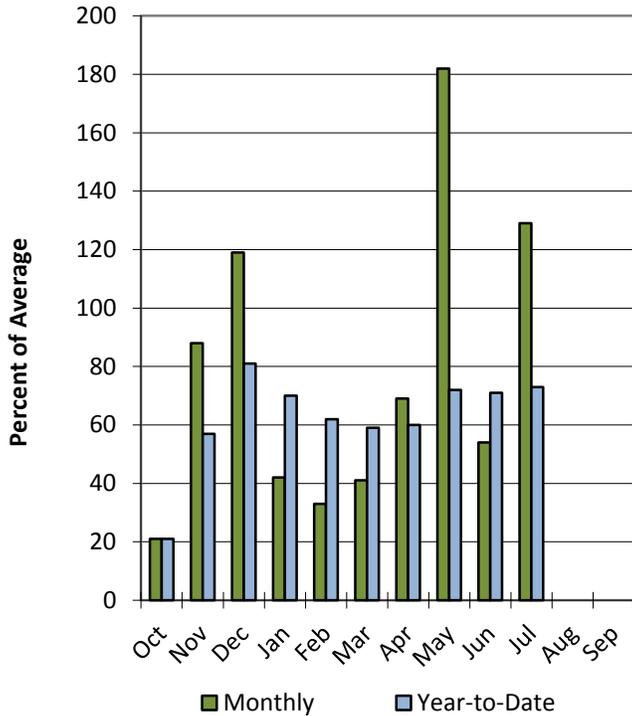


# Provo & Jordan River Basins

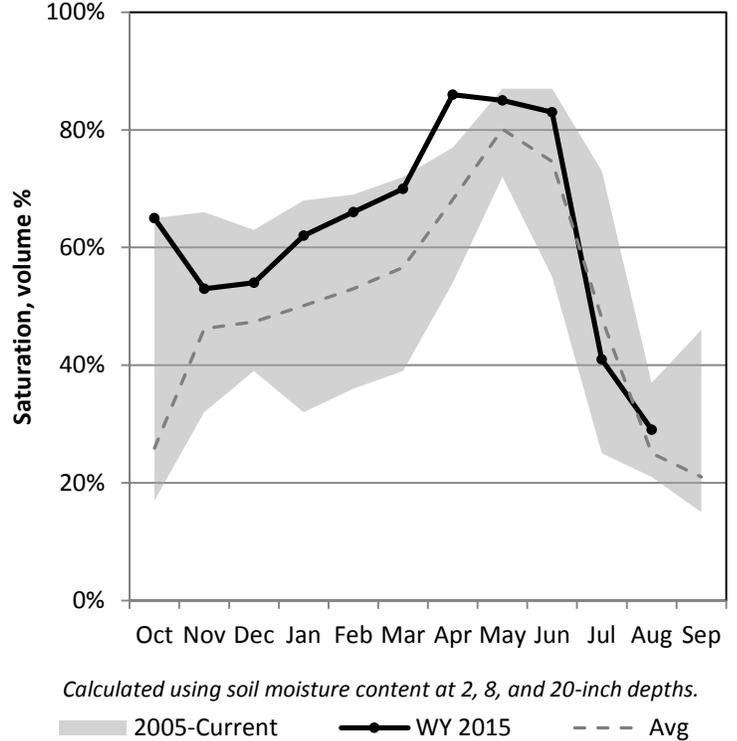
8/1/2015

Precipitation in July was above average at 129%, which brings the seasonal accumulation (Oct-Jul) to 73% of average. Soil moisture is at 29% compared to 31% last year. Reservoir storage is at 67% of capacity, compared to 69% last year. The water availability index for the Provo River is 38%.

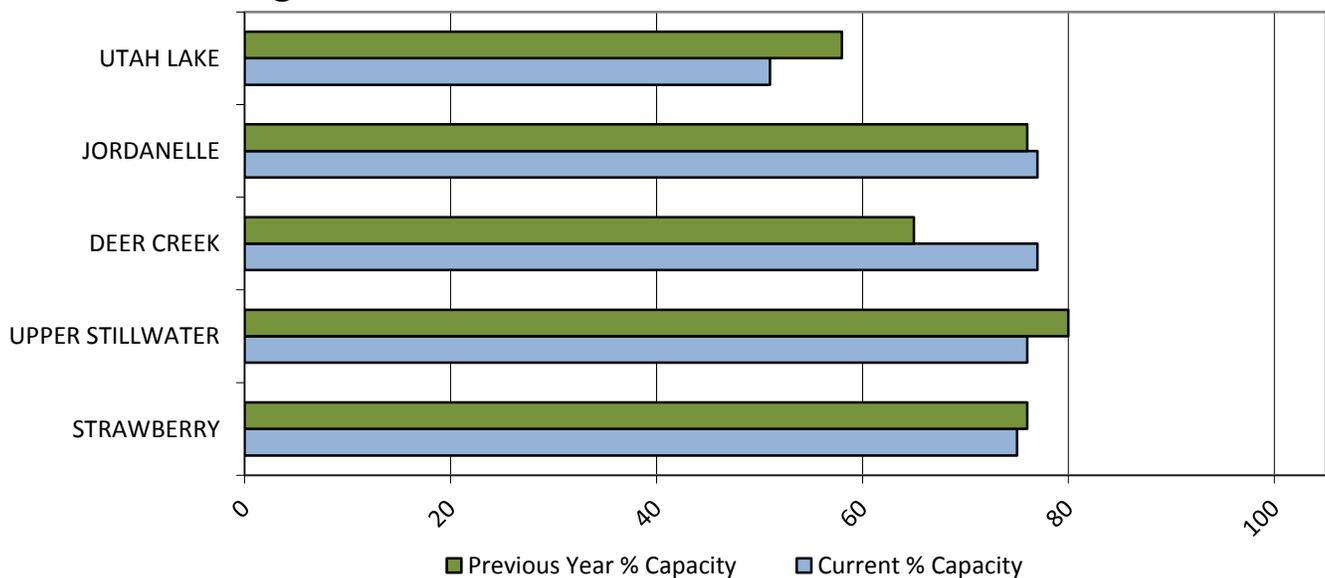
## Precipitation



## Soil Moisture



## Reservoir Storage

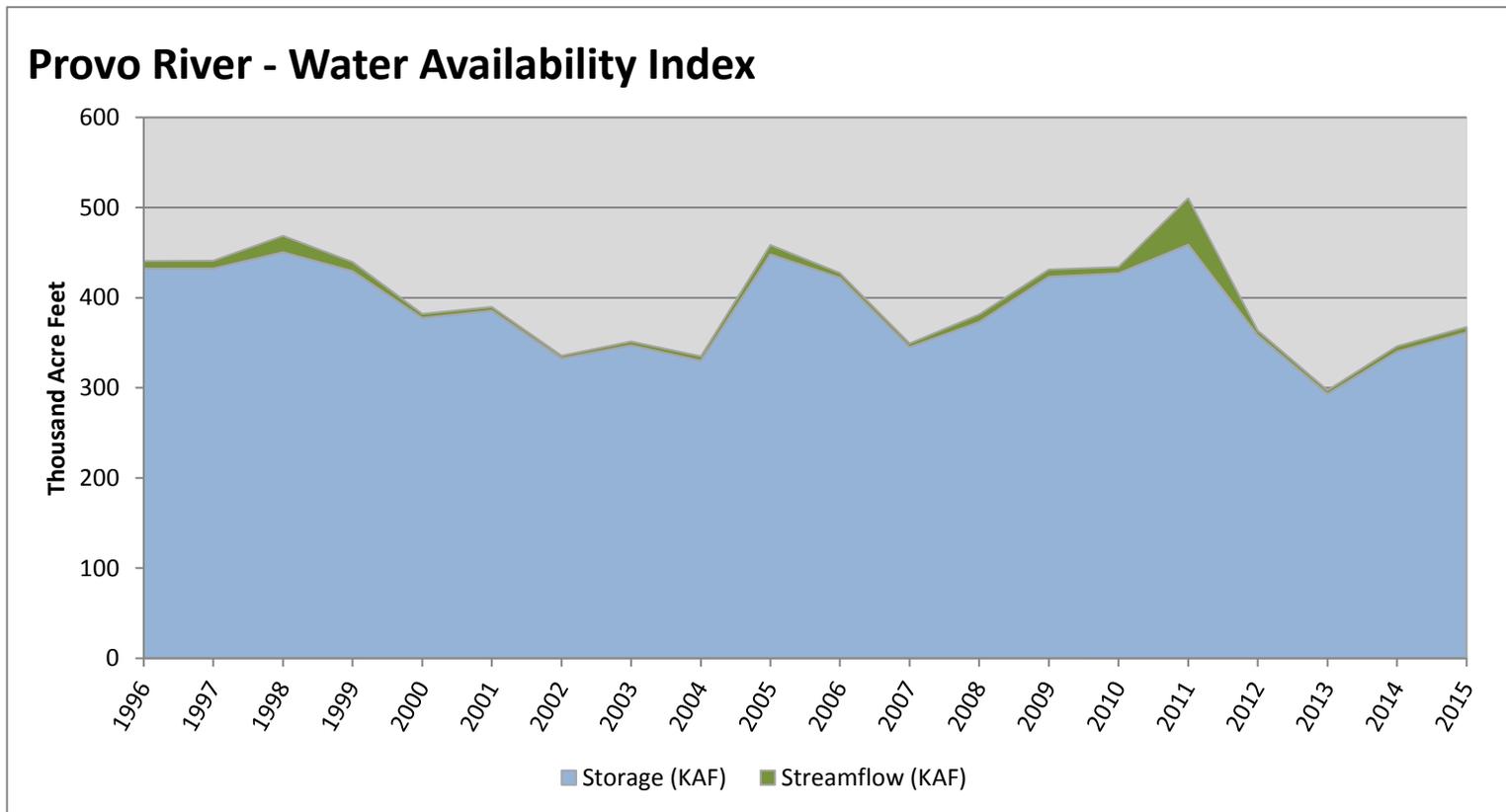


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Provo River</b>	<b>361.40</b>	<b>6.00</b>	<b>367.40</b>	<b>38</b>	<b>-0.99</b>	<b>03, 12, 08, 00</b>

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

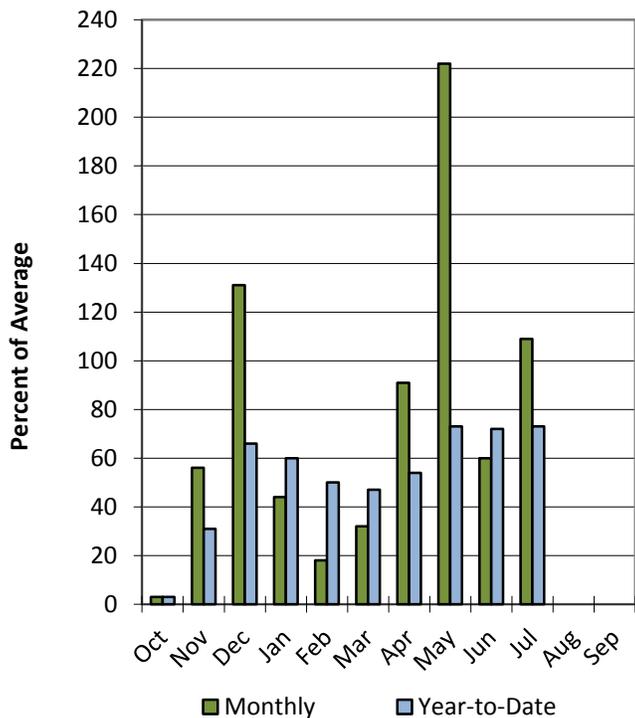


# Tooele & Vernon Creek Basins

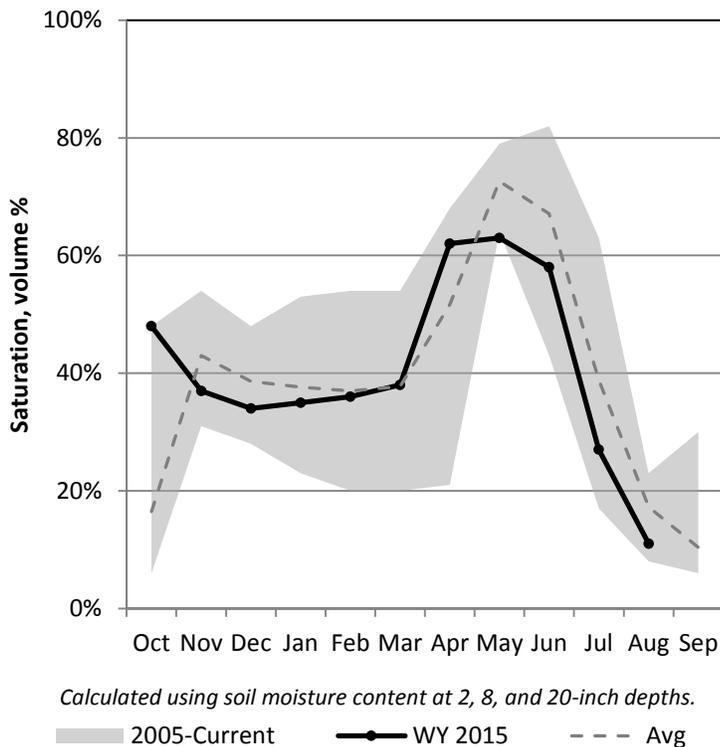
8/1/2015

Precipitation in July was near average at 109%, which brings the seasonal accumulation (Oct-Jul) to 73% of average. Soil moisture is at 11% compared to 14% last year. Reservoir storage is at 55% of capacity, compared to 38% last year.

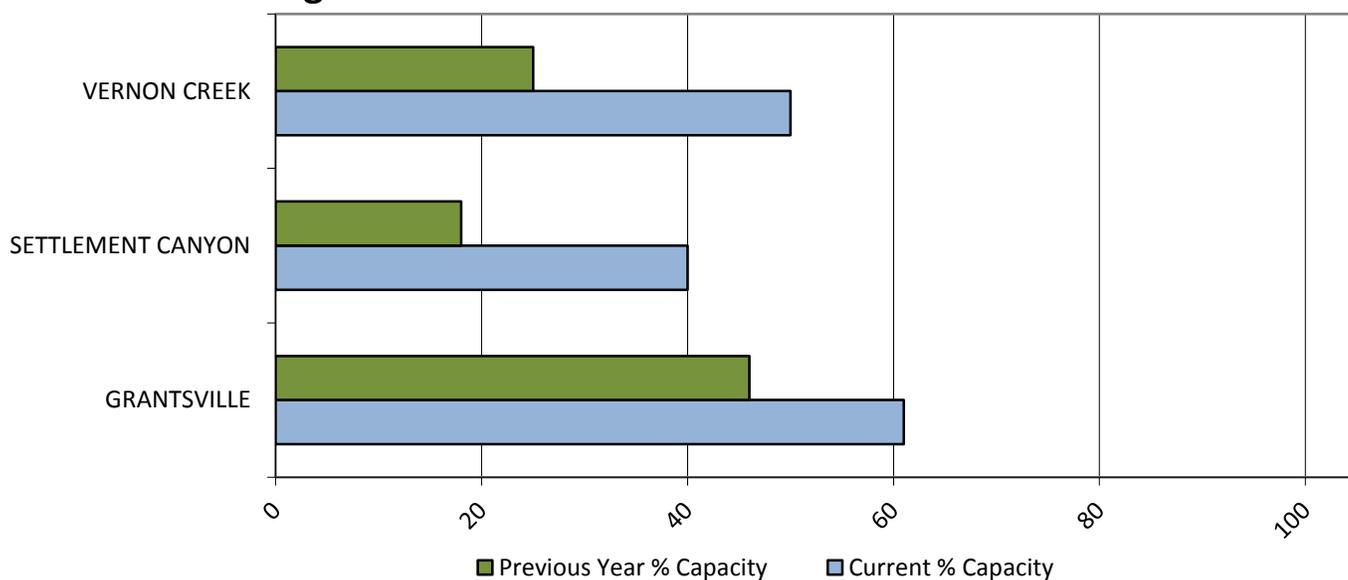
## Precipitation



## Soil Moisture



## Reservoir Storage

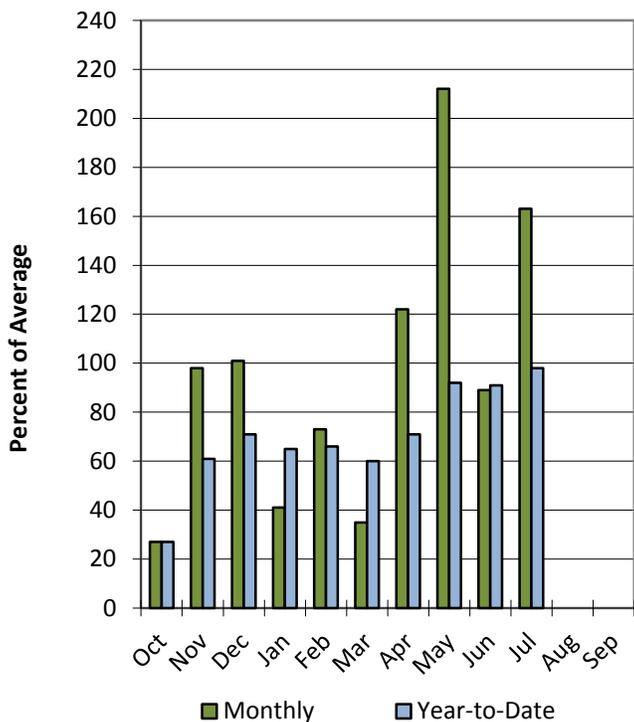


# Northeastern Uintah Basin

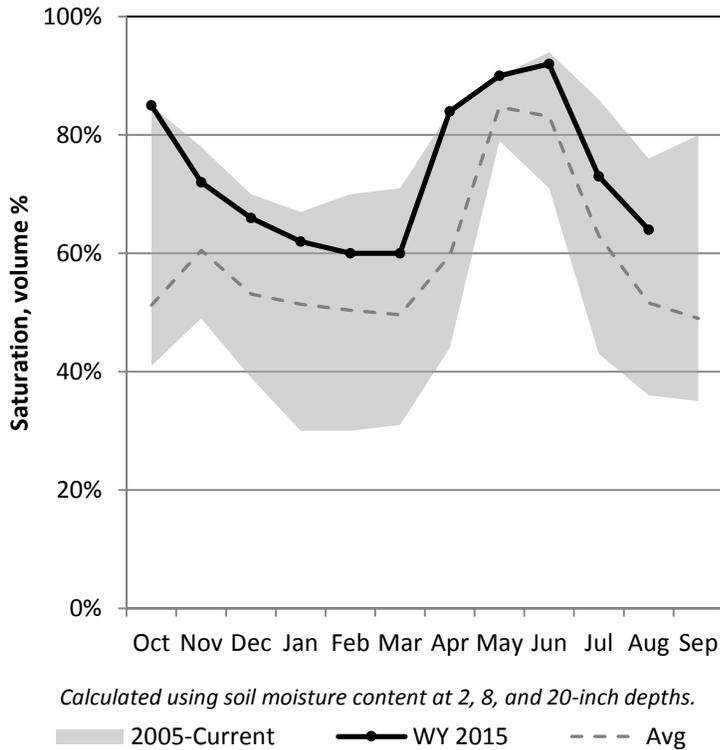
8/1/2015

Precipitation in July was much above average at 163%, which brings the seasonal accumulation (Oct-Jul) to 98% of average. Soil moisture is at 64% compared to 66% last year. Reservoir storage is at 94% of capacity, compared to 87% last year. The Water Availability Index for Blacks Fork is 55% and 66% for Smiths Creek.

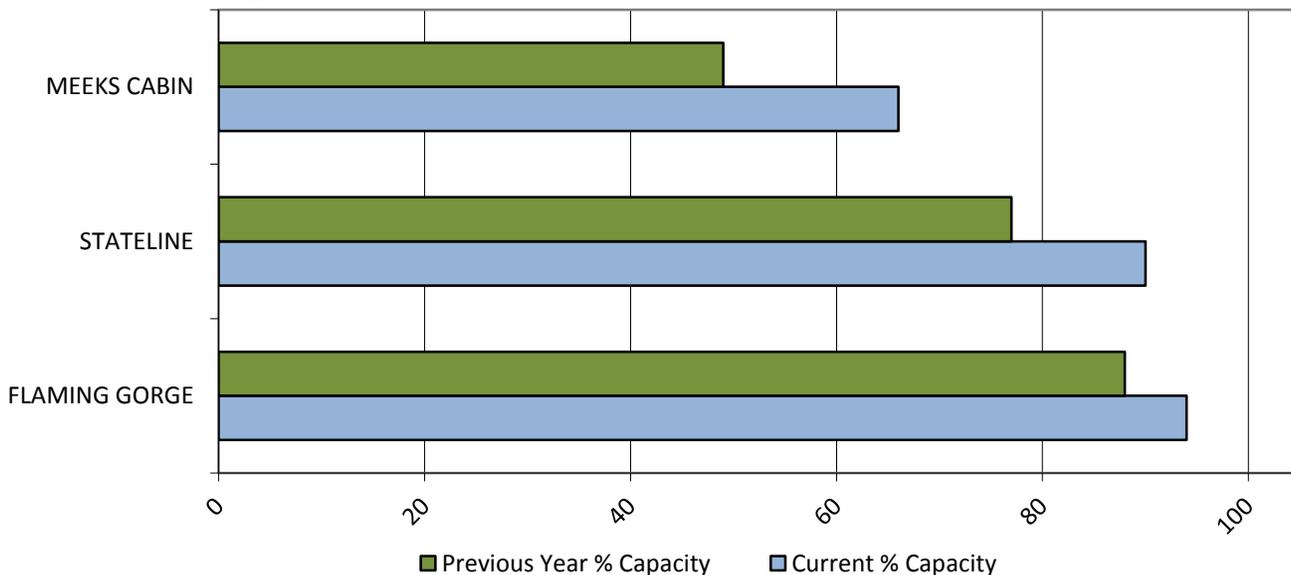
## Precipitation



## Soil Moisture



## Reservoir Storage

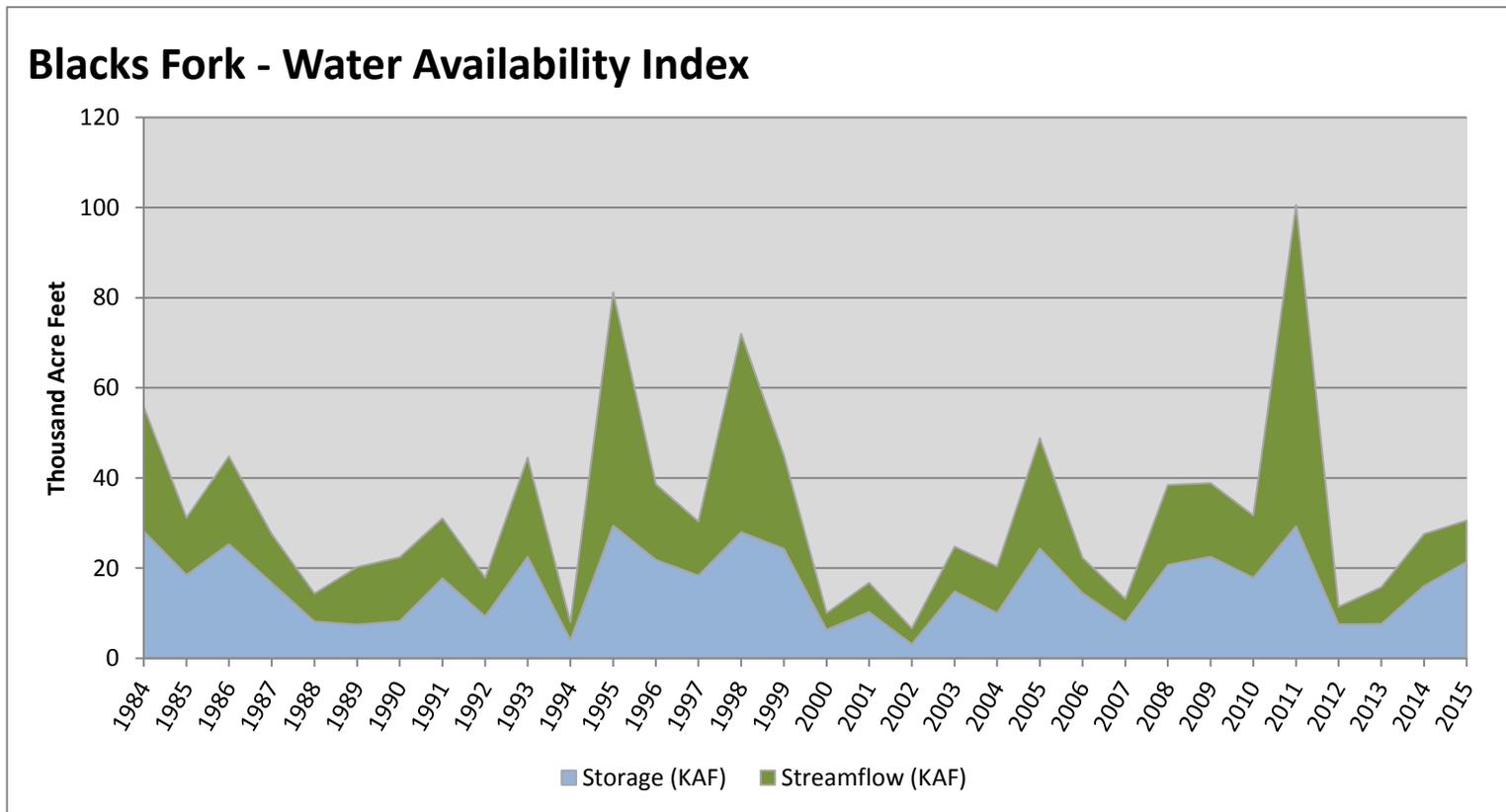


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Blacks Fork</b>	<b>21.36</b>	<b>9.21</b>	<b>30.57</b>	<b>55</b>	<b>0.38</b>	<b>87, 97, 91, 85</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

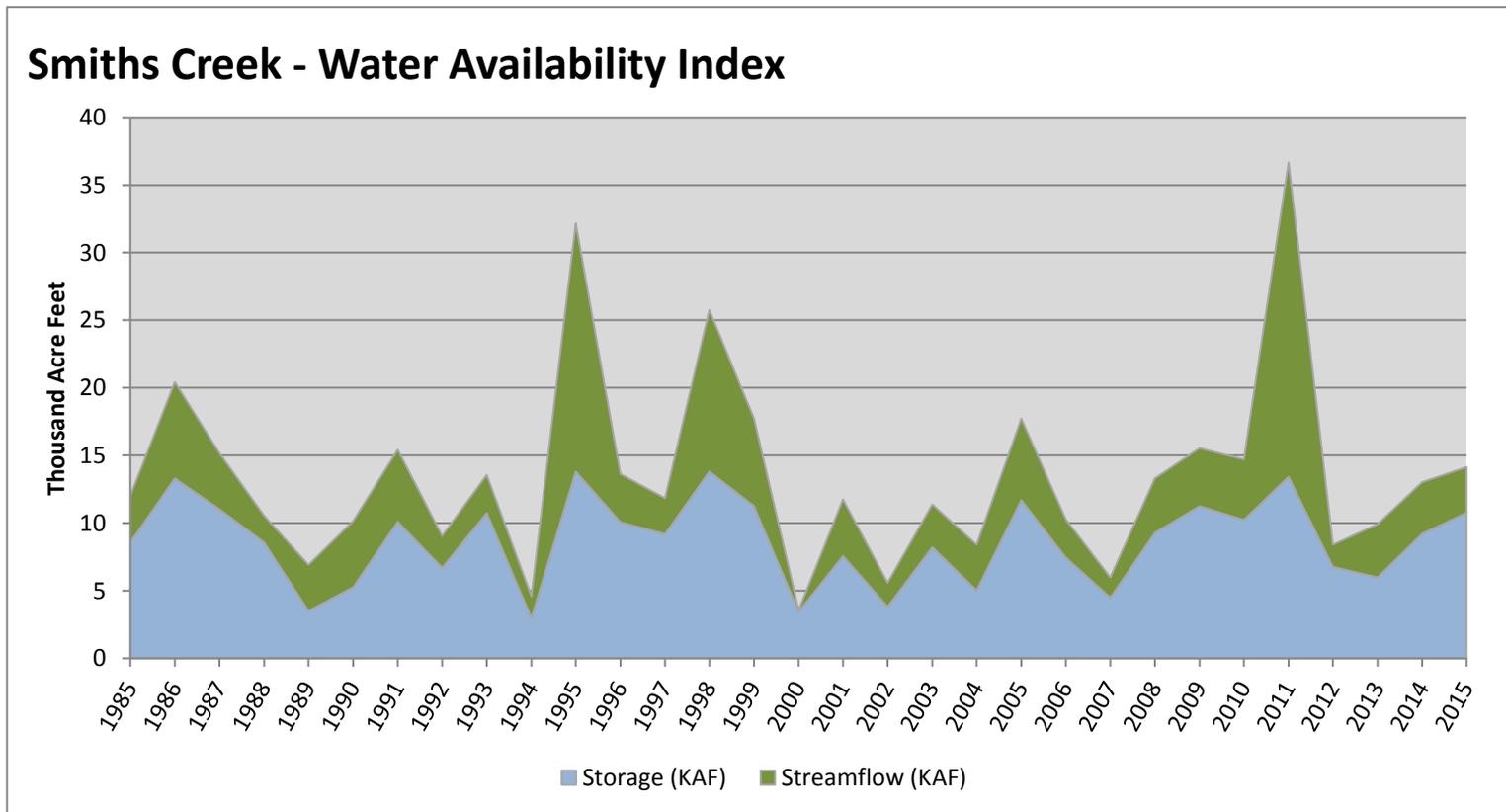


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Smiths Creek</b>	<b>10.78</b>	<b>3.36</b>	<b>14.14</b>	<b>66</b>	<b>1.3</b>	<b>93, 96, 10, 87</b>

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

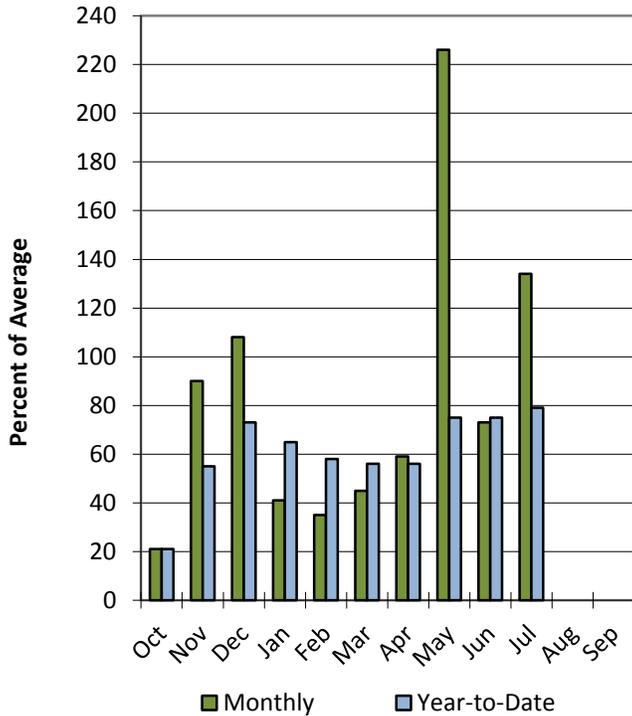


# Duchesne River Basin

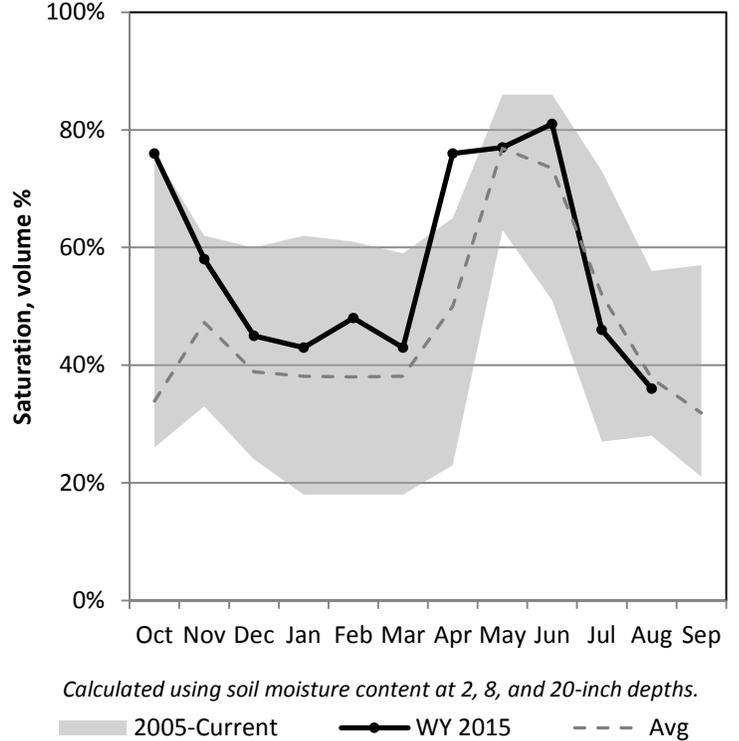
8/1/2015

Precipitation in July was much above average at 134%, which brings the seasonal accumulation (Oct-Jul) to 79% of average. Soil moisture is at 36% compared to 42% last year. Reservoir storage is at 77% of capacity, compared to 72% last year. The water availability index for the Western Uintahs is 62% and 47% for the Eastern Uintahs.

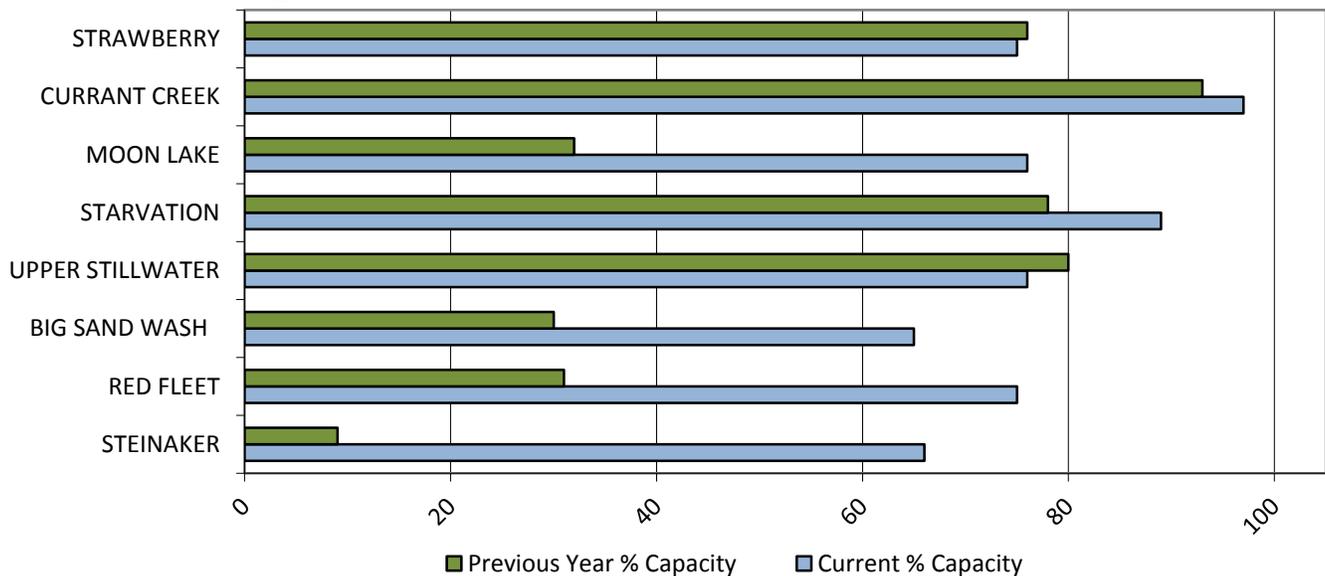
## Precipitation



## Soil Moisture



## Reservoir Storage

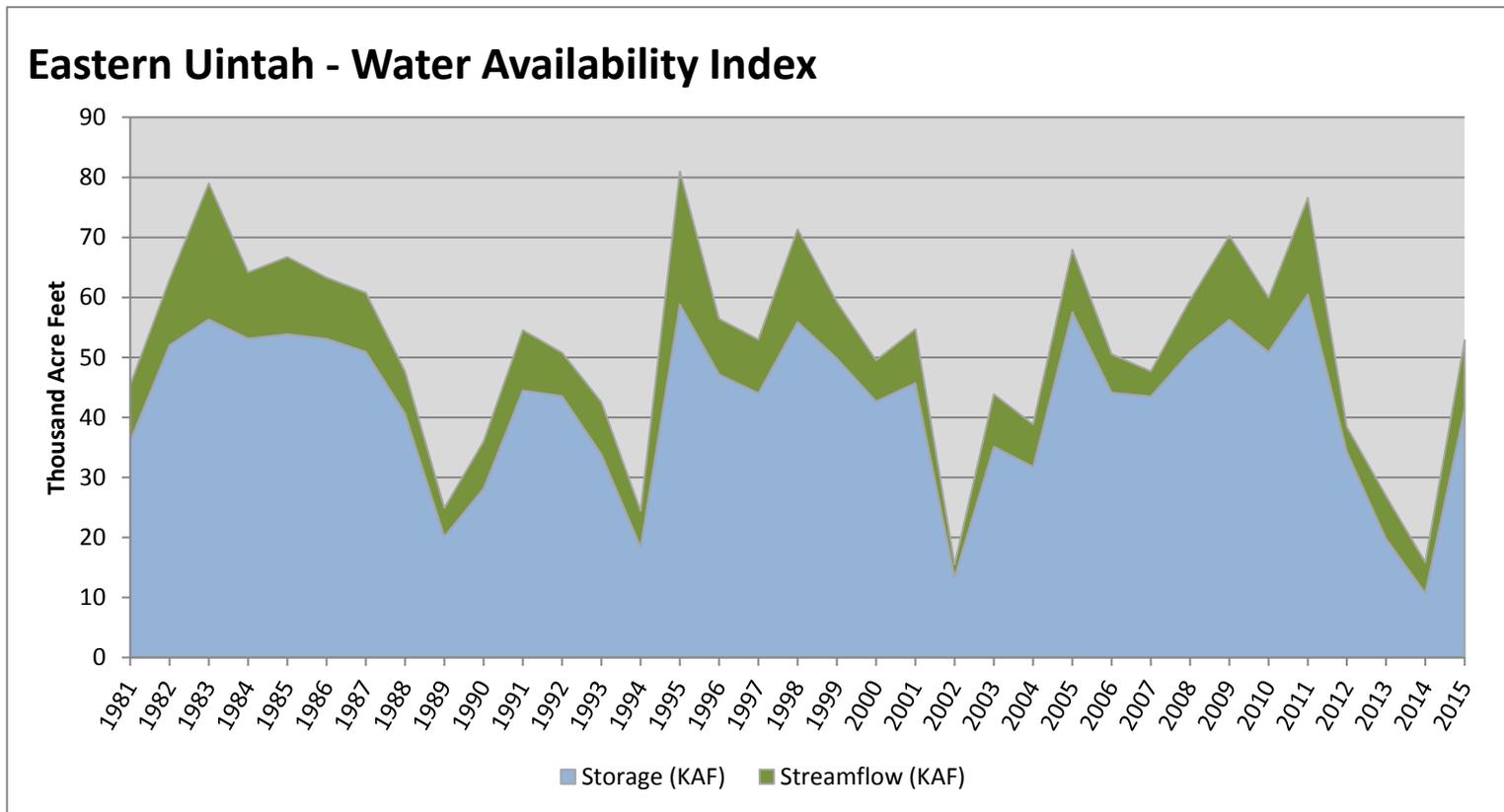


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Eastern Uintah</b>	<b>41.45</b>	<b>11.42</b>	<b>52.87</b>	<b>47</b>	<b>-0.23</b>	<b>06, 92, 97, 91</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

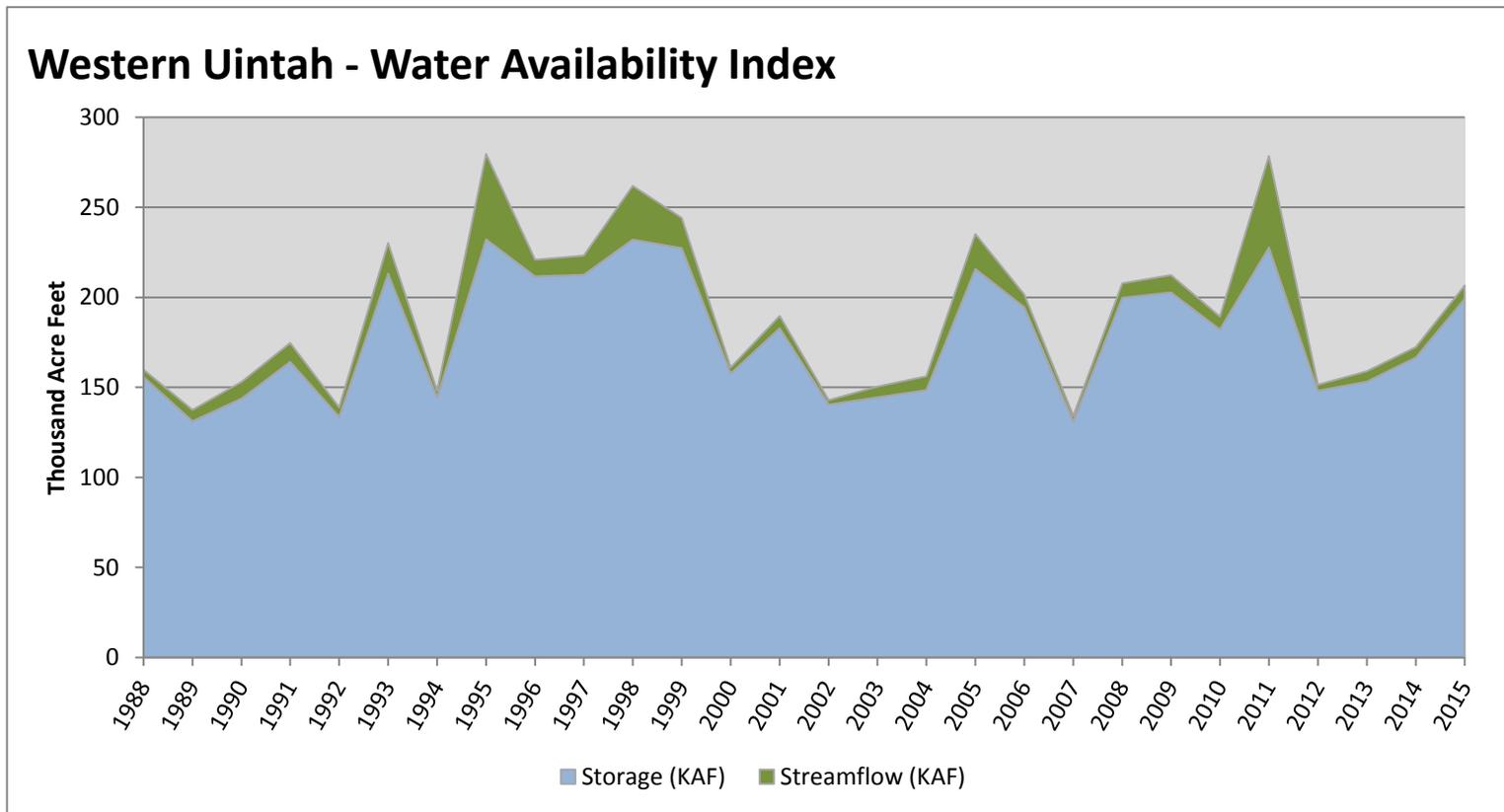


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Western Uintah</b>	<b>199.31</b>	<b>7.28</b>	<b>206.59</b>	<b>62</b>	<b>1.01</b>	<b>01, 06, 08, 09</b>

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

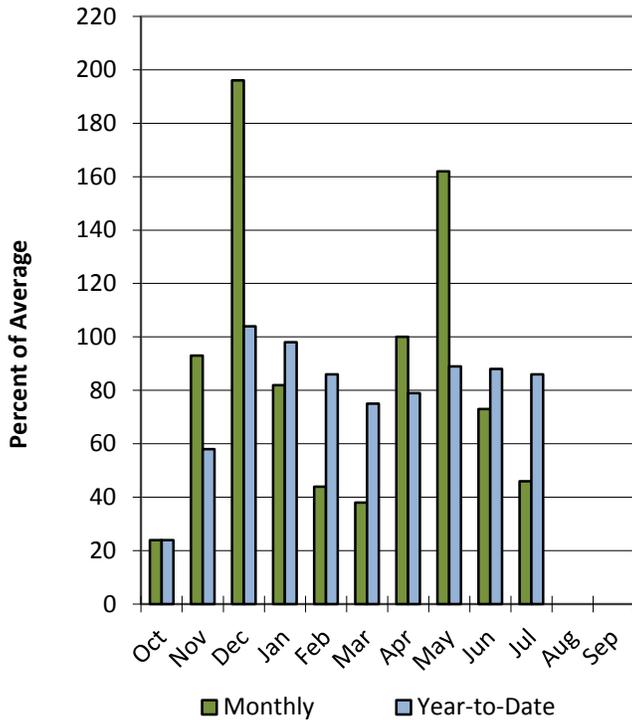


# Lower Sevier River Basin

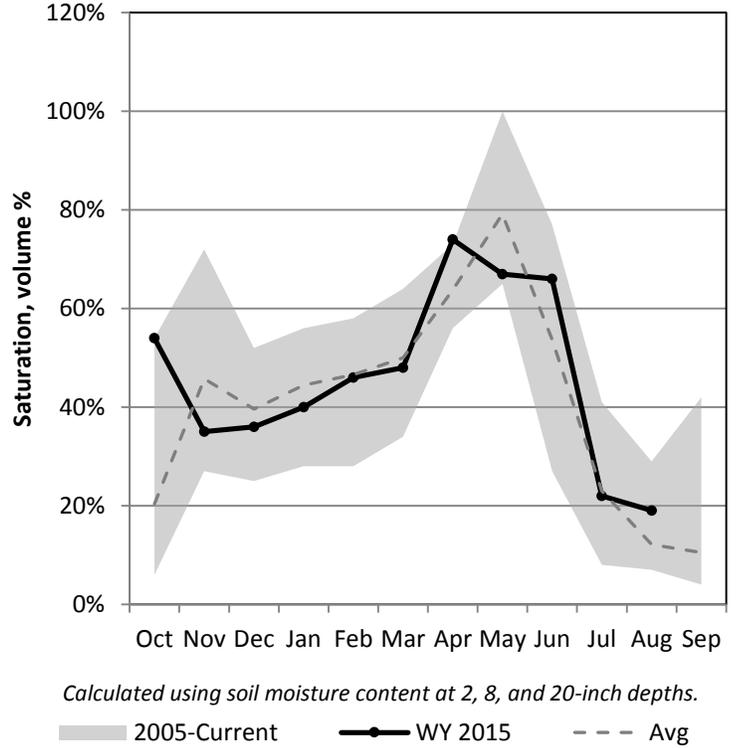
8/1/2015

Precipitation in July was much below average at 46%, which brings the seasonal accumulation (Oct-Jul) to 86% of average. Soil moisture is at 19% compared to 29% last year. Reservoir storage is at 21% of capacity, compared to 23% last year. The water availability index for the Lower Sevier is 14%.

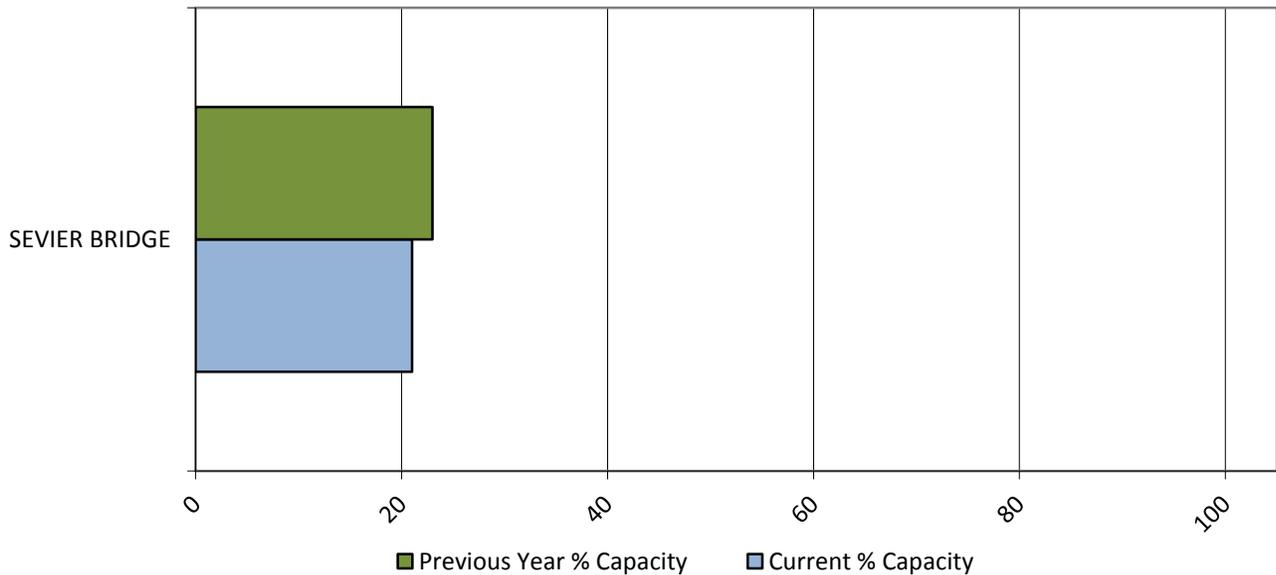
## Precipitation



## Soil Moisture



## Reservoir Storage

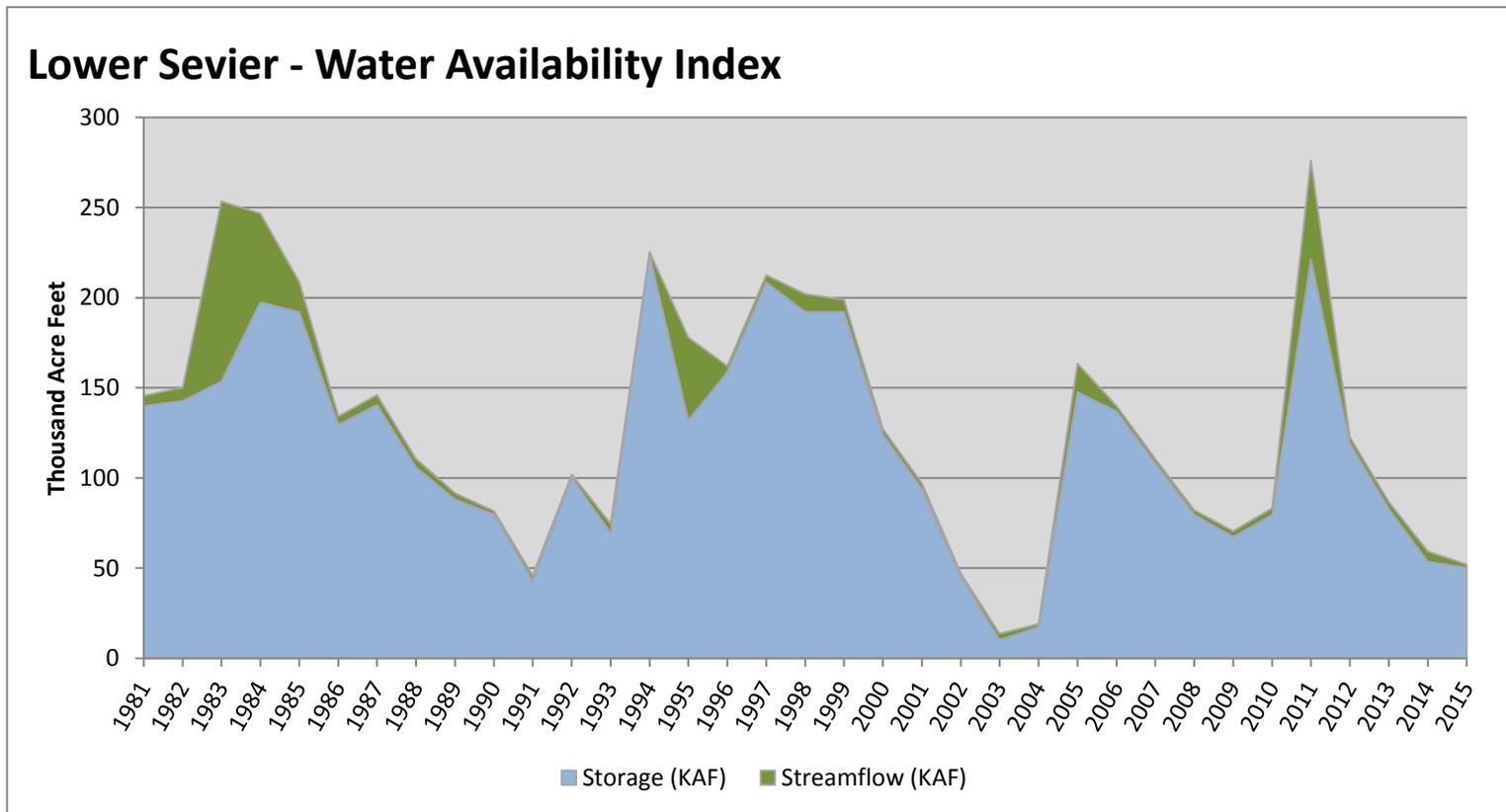


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Lower Sevier</b>	<b>50.26</b>	<b>1.79</b>	<b>52.05</b>	<b>14</b>	<b>-3.01</b>	<b>91, 02, 14, 09</b>

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

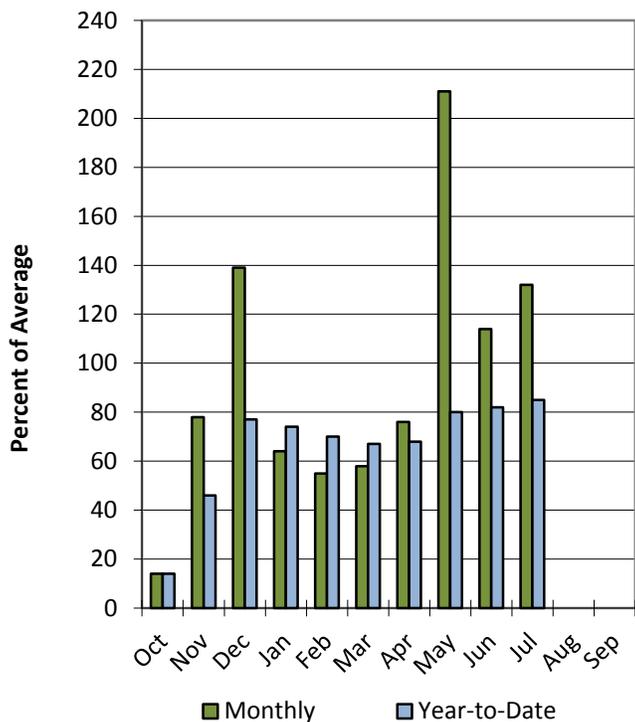


# Upper Sevier River Basin

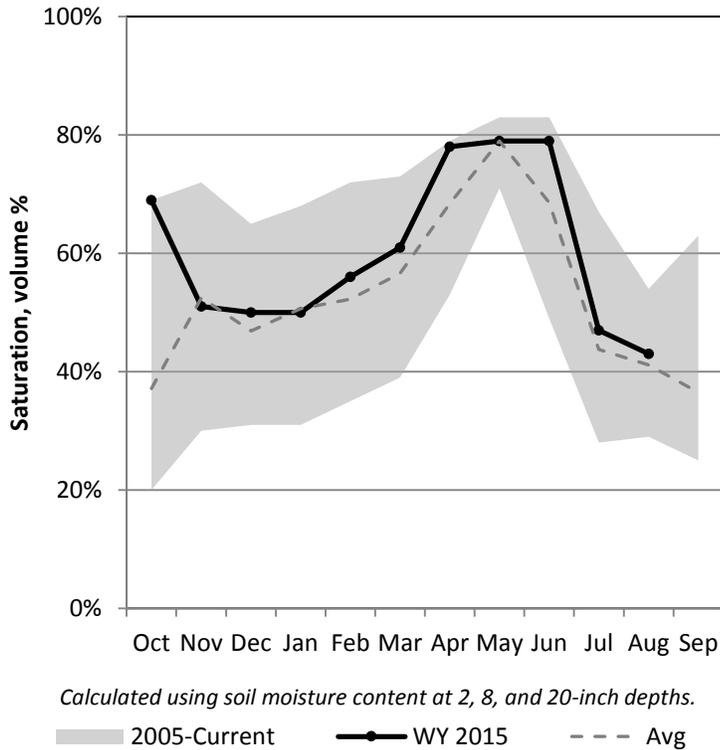
8/1/2015

Precipitation in July was much above average at 132%, which brings the seasonal accumulation (Oct-Jul) to 85% of average. Soil moisture is at 43% compared to 42% last year. Reservoir storage is at 31% of capacity, compared to 40% last year. The water availability index for the Upper Sevier is 19%.

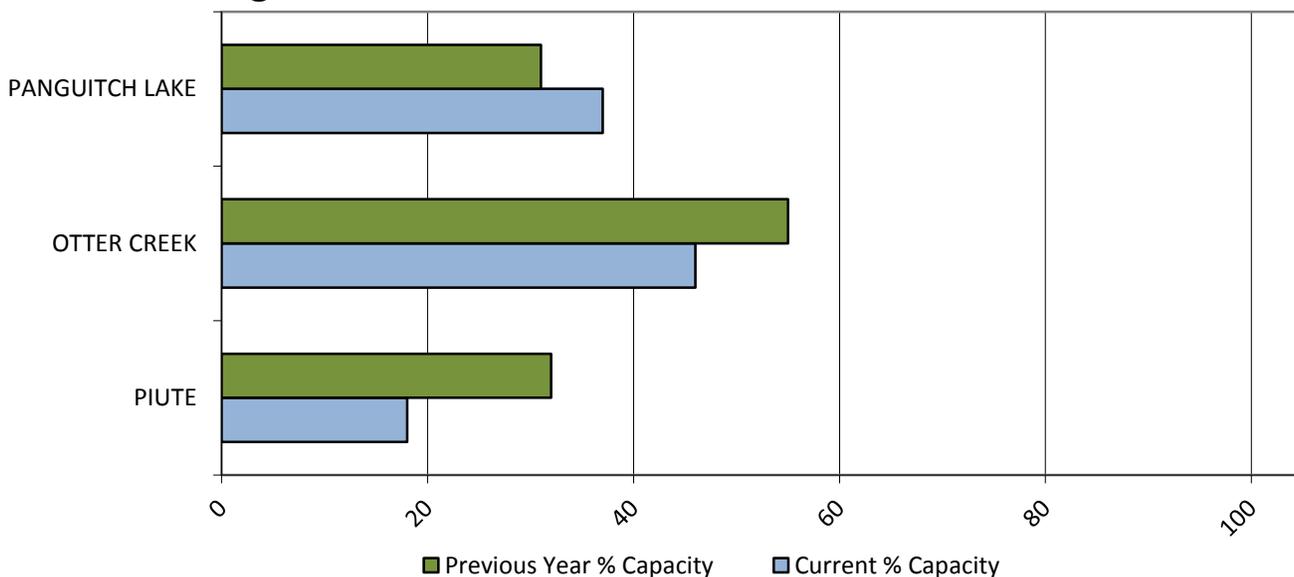
## Precipitation



## Soil Moisture



## Reservoir Storage

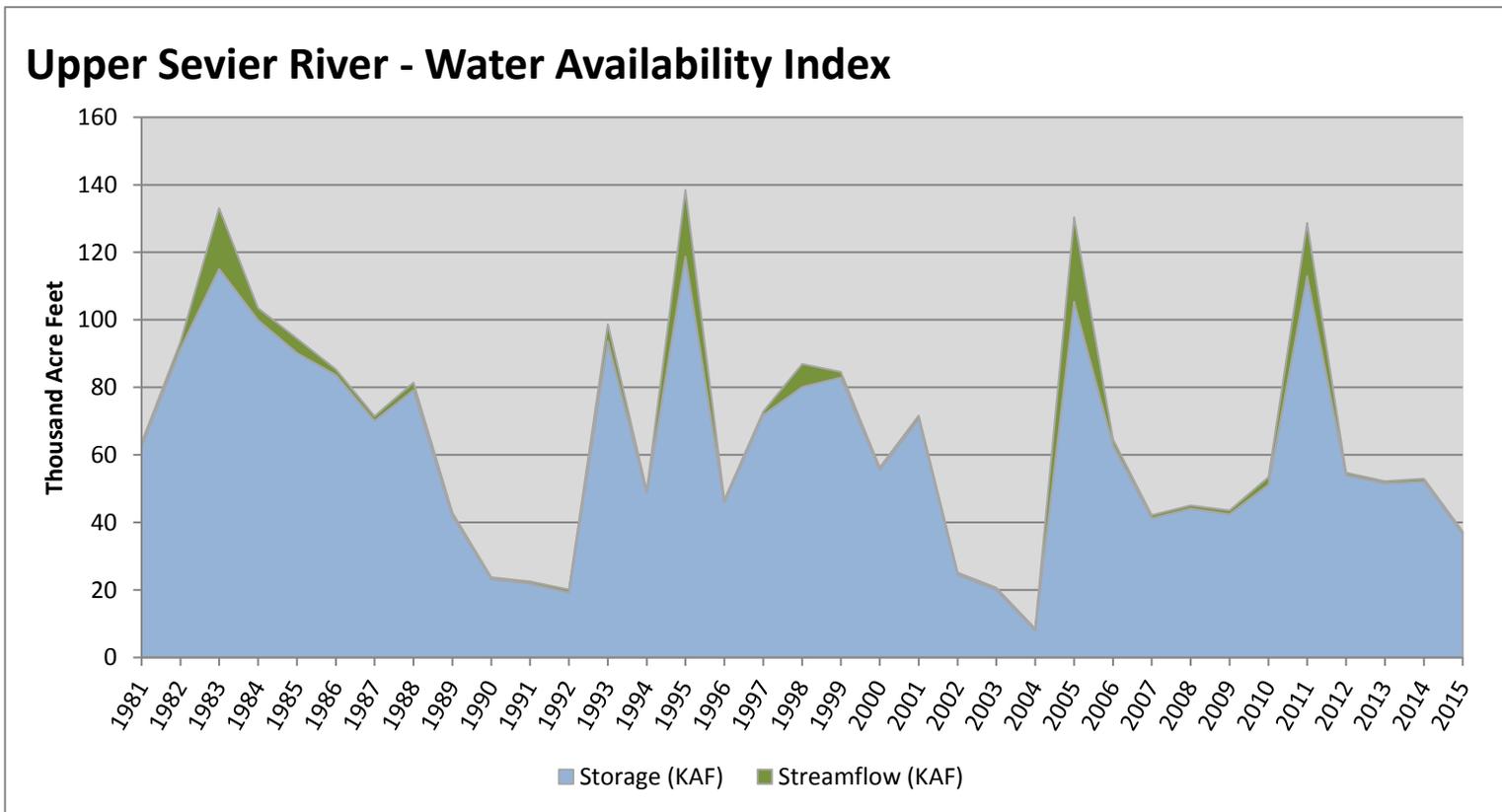


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Upper Sevier River</b>	<b>36.61</b>	<b>0.74</b>	<b>37.35</b>	<b>19</b>	<b>-2.55</b>	<b>90, 02, 07, 89</b>

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

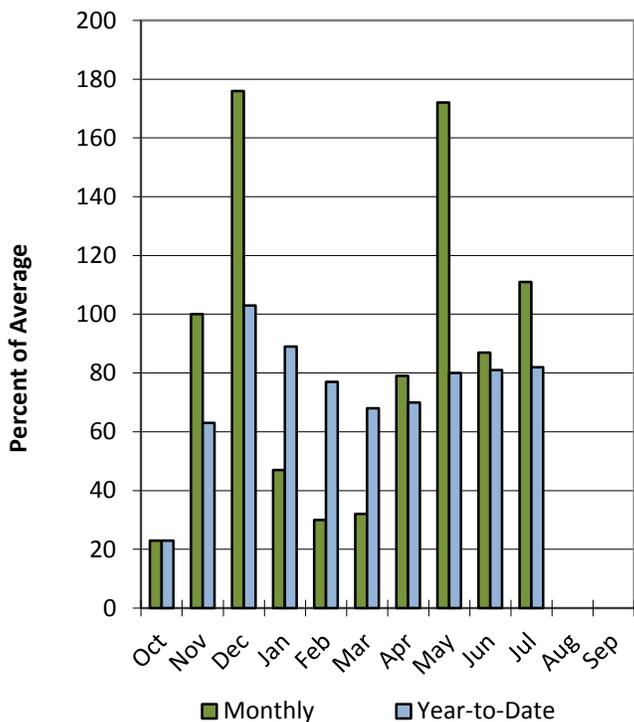


# San Pitch River Basin

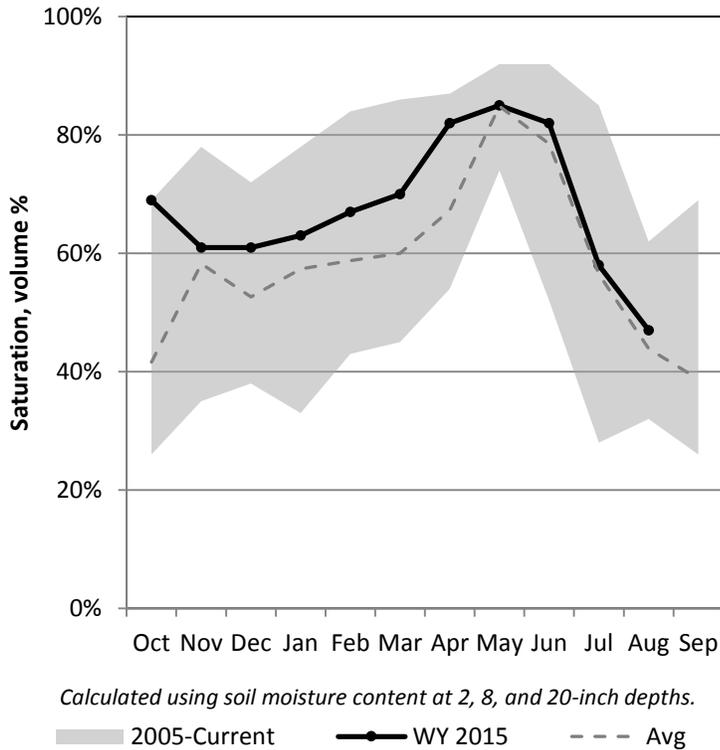
8/1/2015

Precipitation in July was above average at 111%, which brings the seasonal accumulation (Oct-Jul) to 82% of average. Soil Moisture is at 47% compared to 49% last year. Reservoir storage is at 0% of capacity, compared to 0% last year. The water availability index for the San Pitch is 11%.

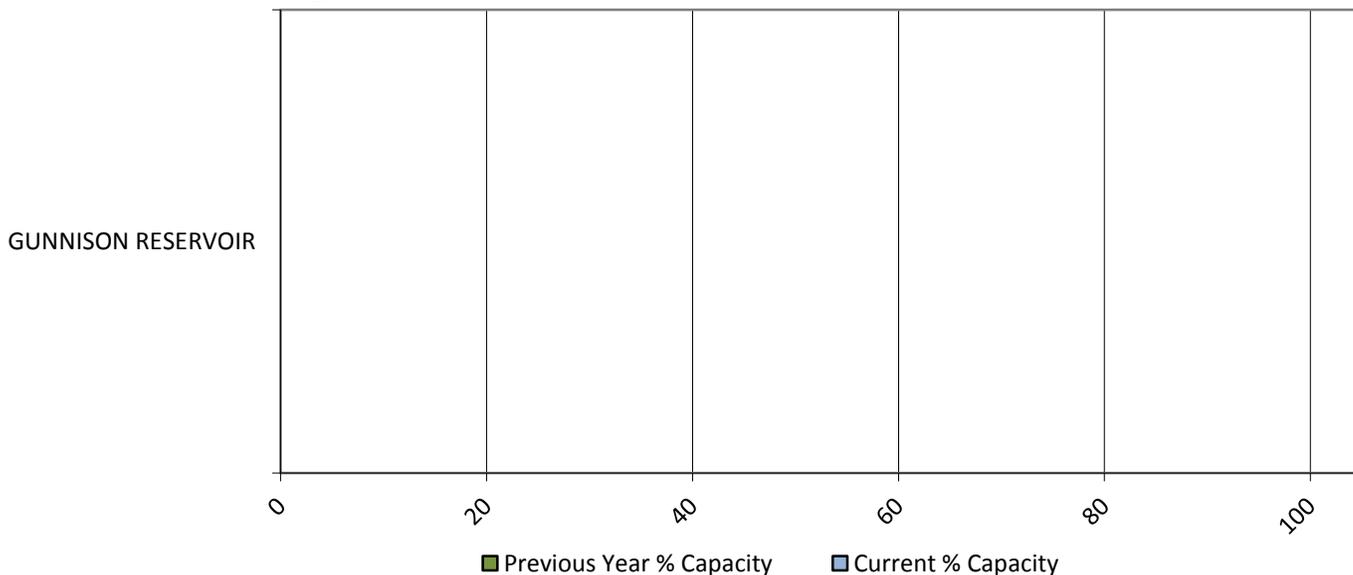
## Precipitation



## Soil Moisture



## Reservoir Storage

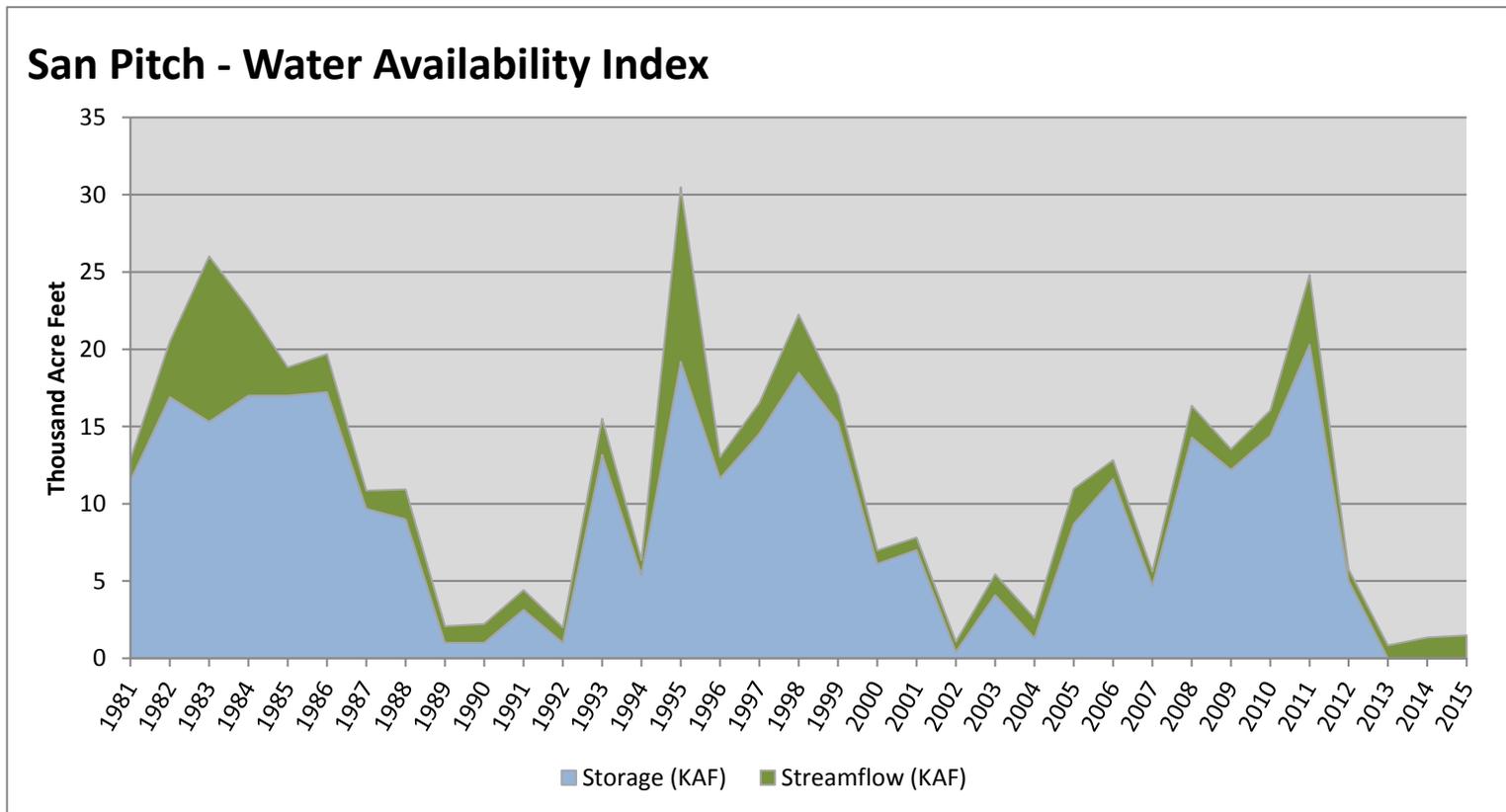


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>San Pitch</b>	<b>0.00</b>	<b>1.48</b>	<b>1.48</b>	<b>11</b>	<b>-3.24</b>	<b>02, 14, 92, 89</b>

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

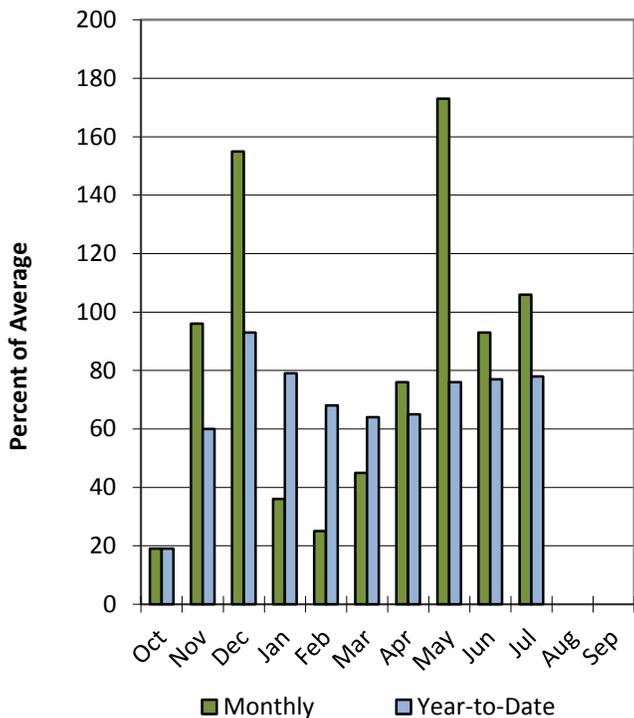


# Price & San Rafael Basins

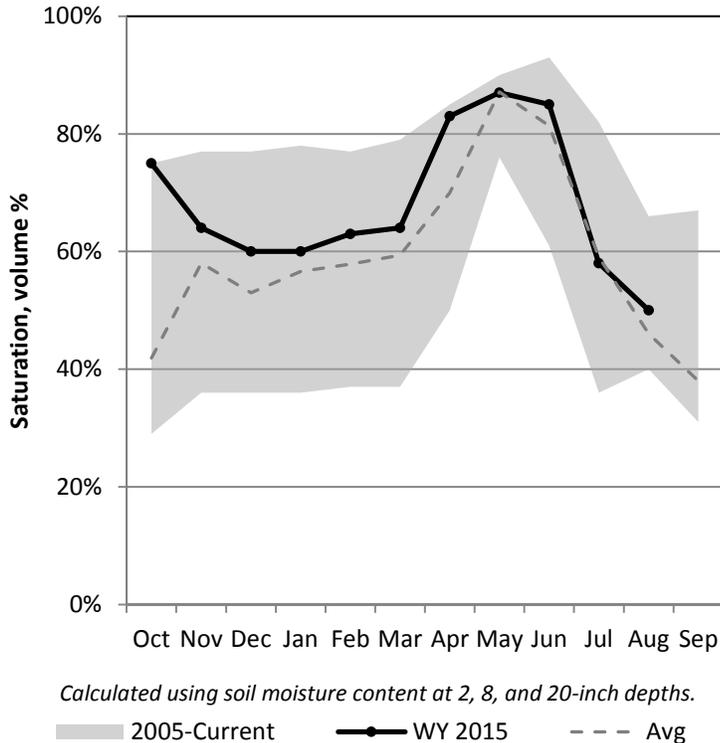
8/1/2015

Precipitation in July was near average at 106%, which brings the seasonal accumulation (Oct-Jul) to 78% of average. Soil moisture is at 50% compared to 47% last year. Reservoir storage is at 56% of capacity, compared to 58% last year. The water availability index for the Price River is 11%, and 39% for Joe's Valley.

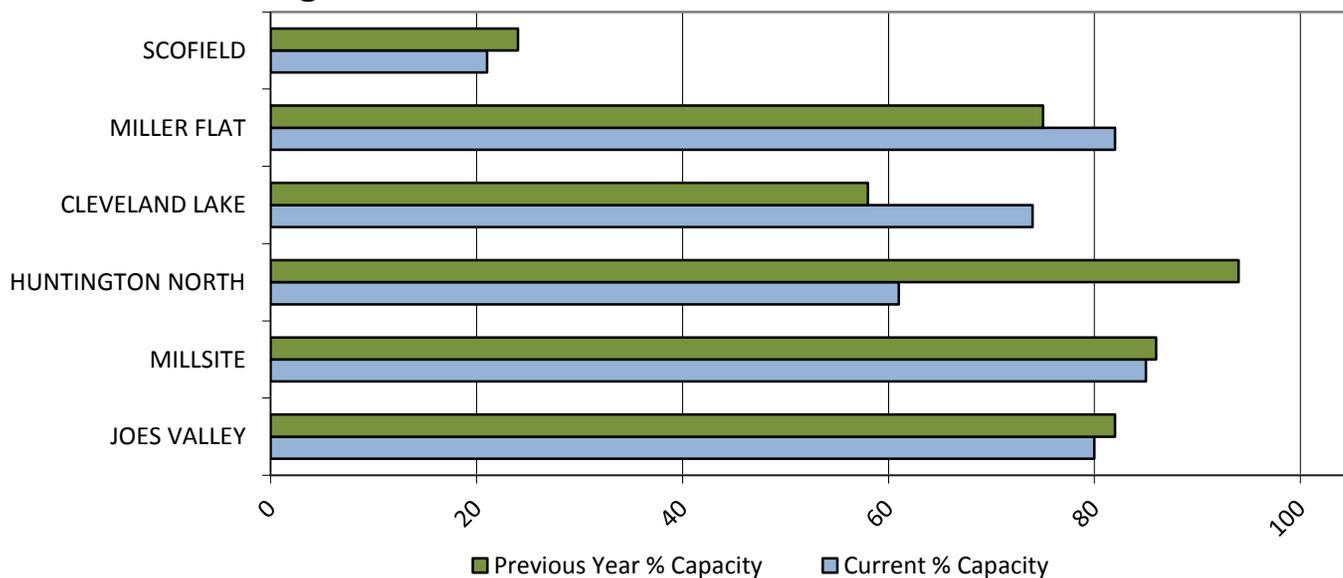
## Precipitation



## Soil Moisture



## Reservoir Storage

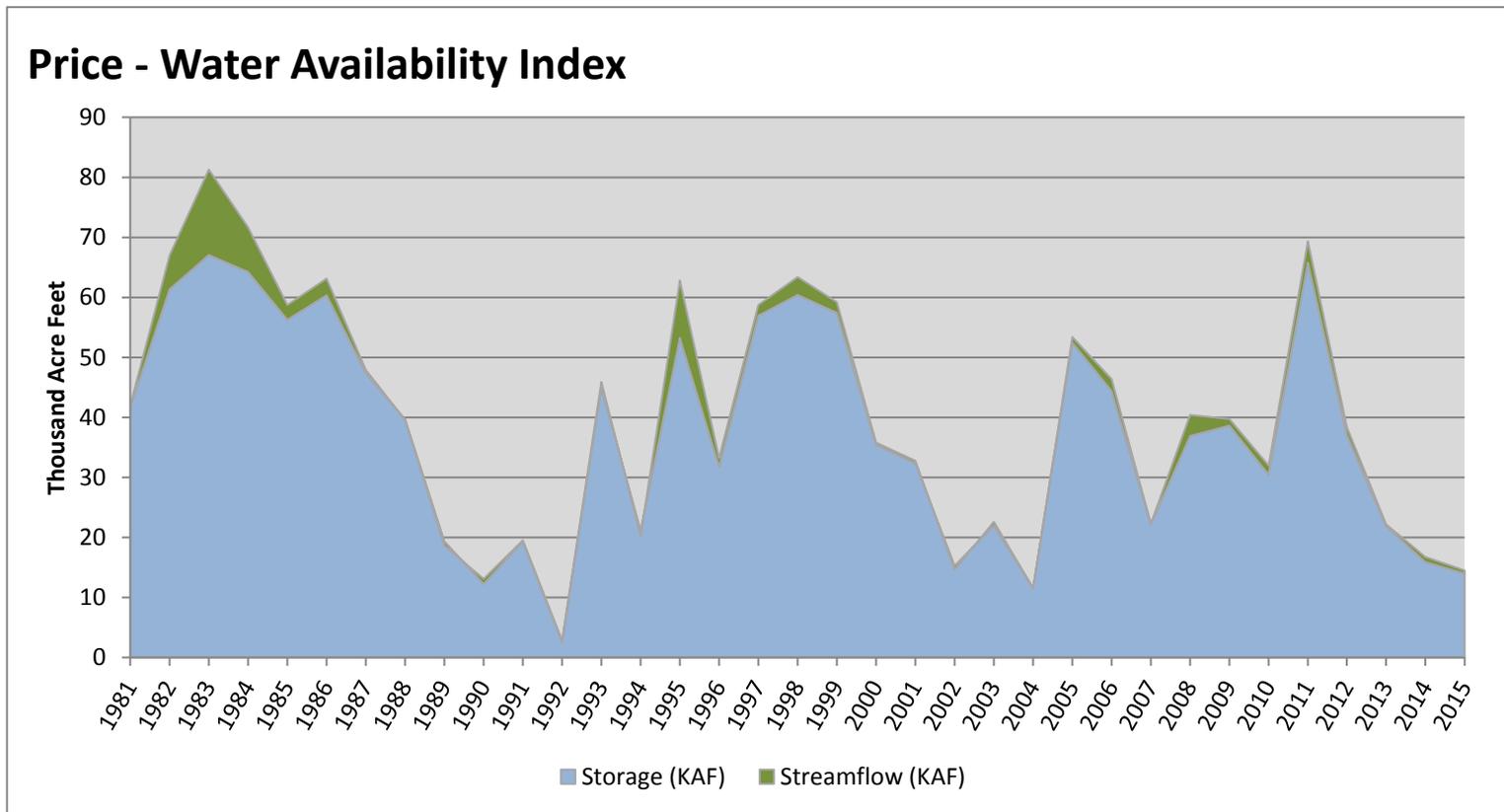


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Price</b>	<b>13.96</b>	<b>0.52</b>	<b>14.48</b>	<b>11</b>	<b>-3.24</b>	<b>04, 90, 02, 14</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

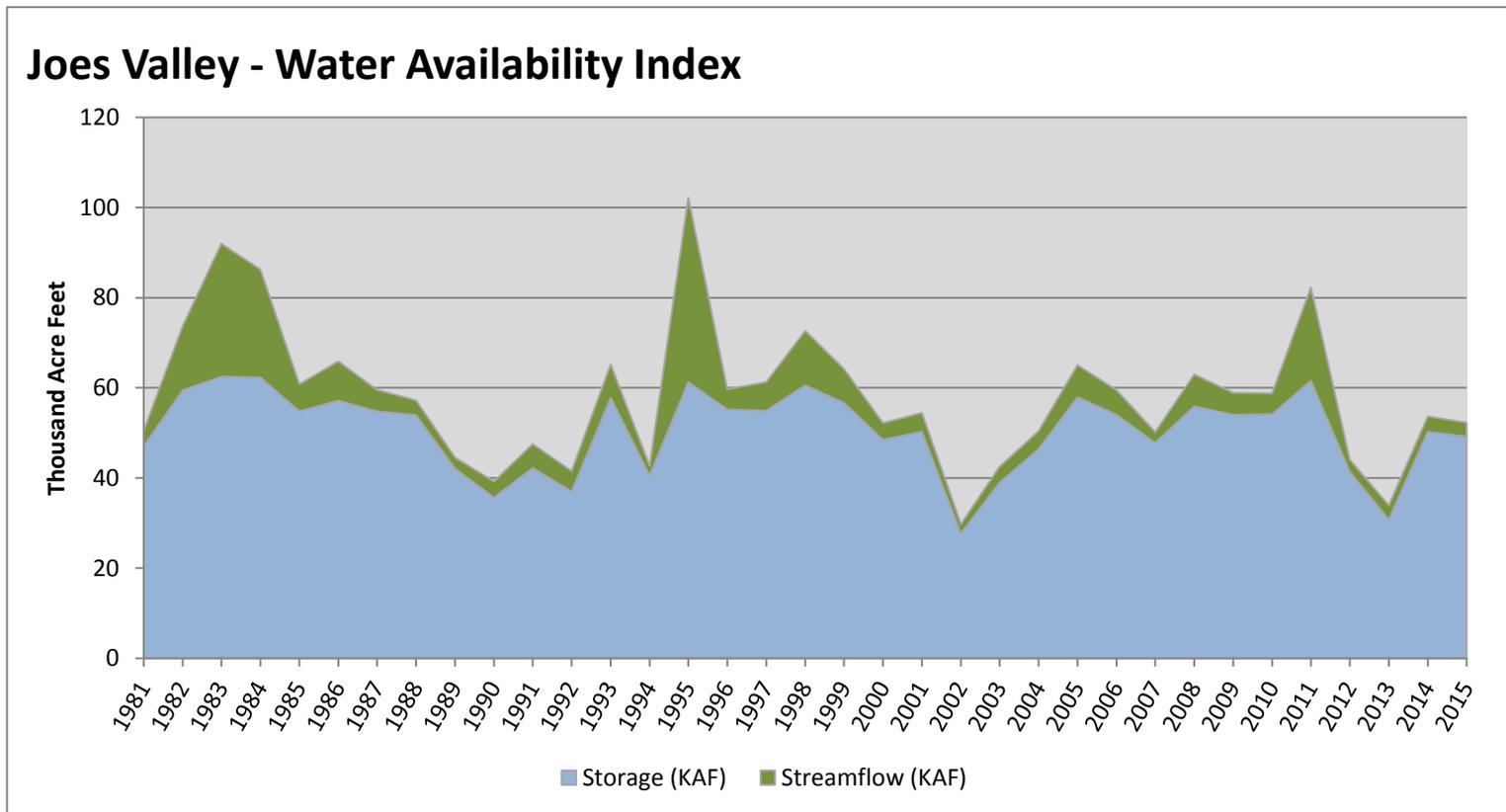


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Joese Valley</b>	<b>49.20</b>	<b>3.06</b>	<b>52.26</b>	<b>39</b>	<b>-0.93</b>	<b>81, 00, 14, 01</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

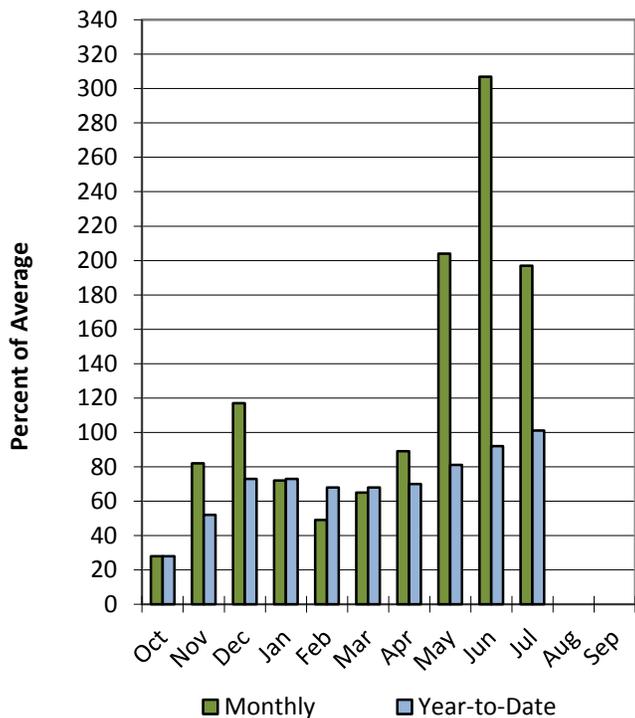


# Southeastern Utah Basin

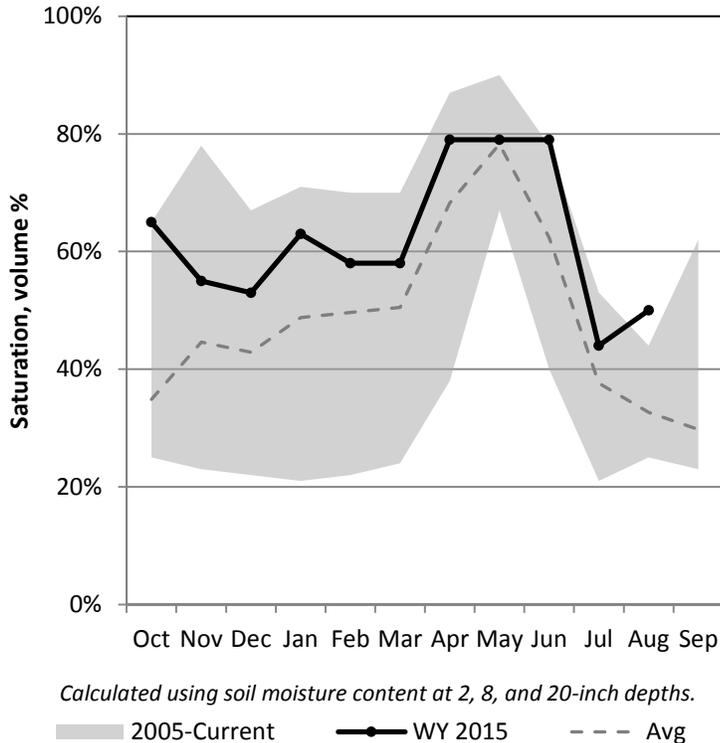
8/1/2015

Precipitation in July was much above average at 197%, which brings the seasonal accumulation (Oct-Jul) to 101% of average. Soil moisture is at 50% compared to 30% last year. Reservoir storage is at 84% of capacity, compared to 60% last year. The water availability index for Moab is 76%.

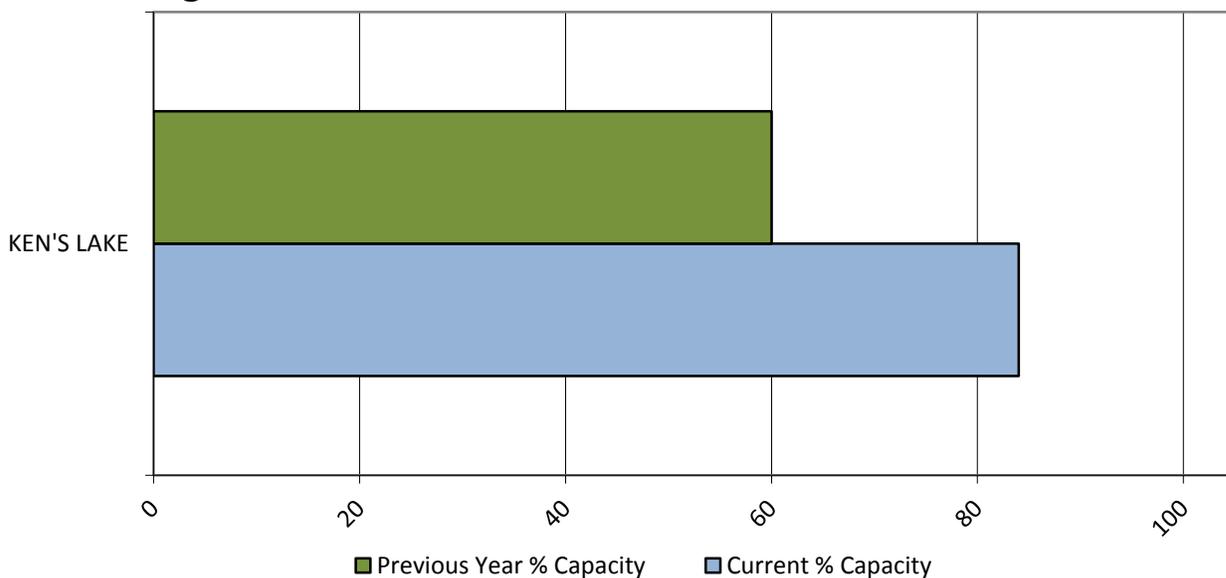
## Precipitation



## Soil Moisture



## Reservoir Storage

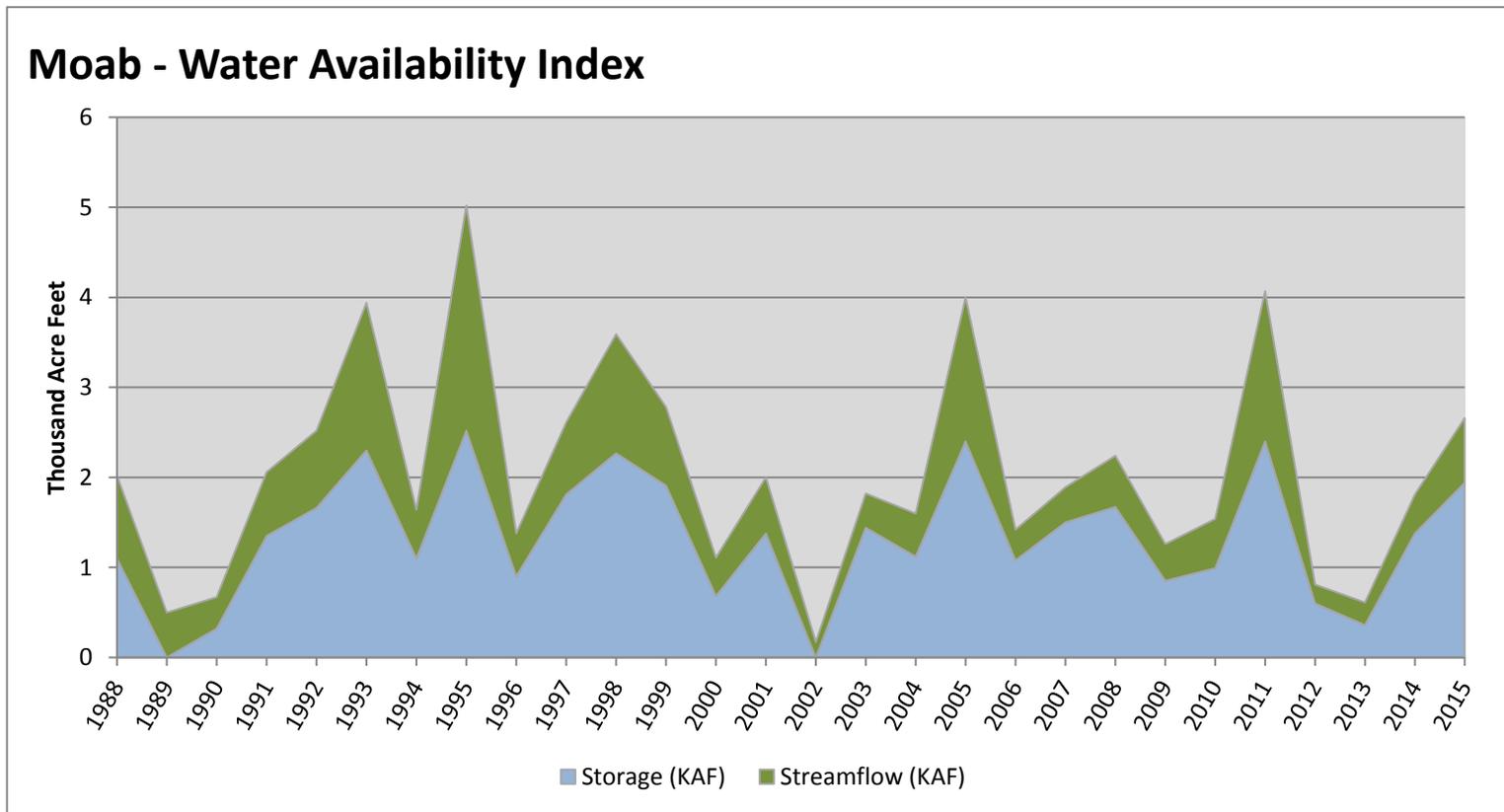


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Moab</b>	<b>1.94</b>	<b>0.72</b>	<b>2.66</b>	<b>76</b>	<b>2.16</b>	<b>92, 97, 99, 98</b>

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

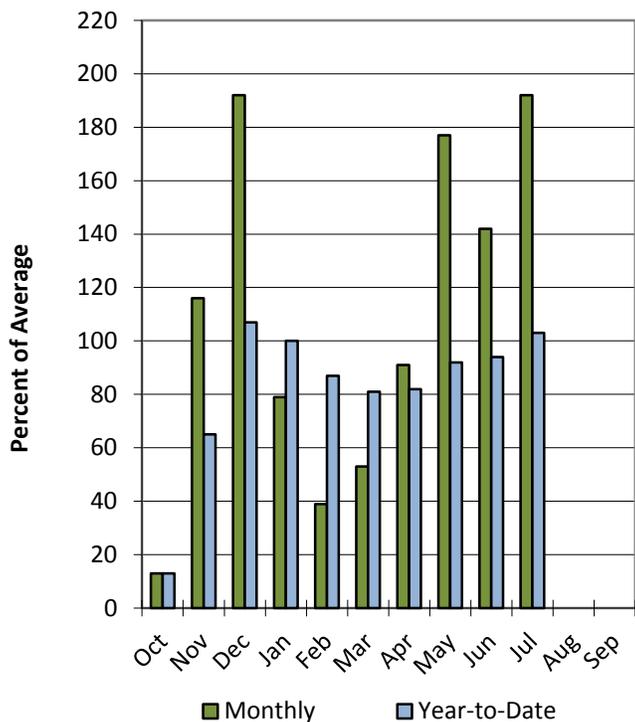


# Dirty Devil Basin

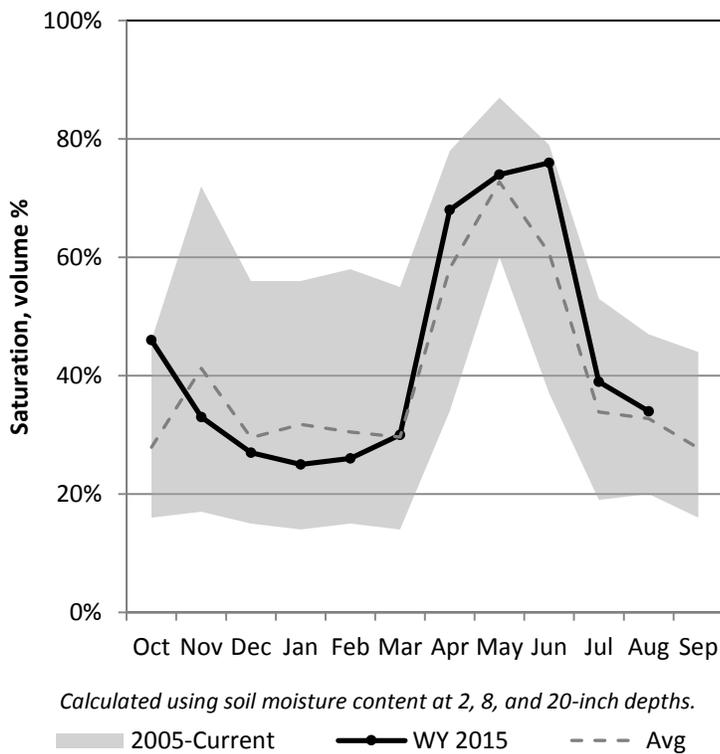
8/1/2015

Precipitation in July was much above average at 192%, which brings the seasonal accumulation (Oct-Jul) to 103% of average. Soil moisture is at 34% compared to 36% last year.

## Precipitation



## Soil Moisture

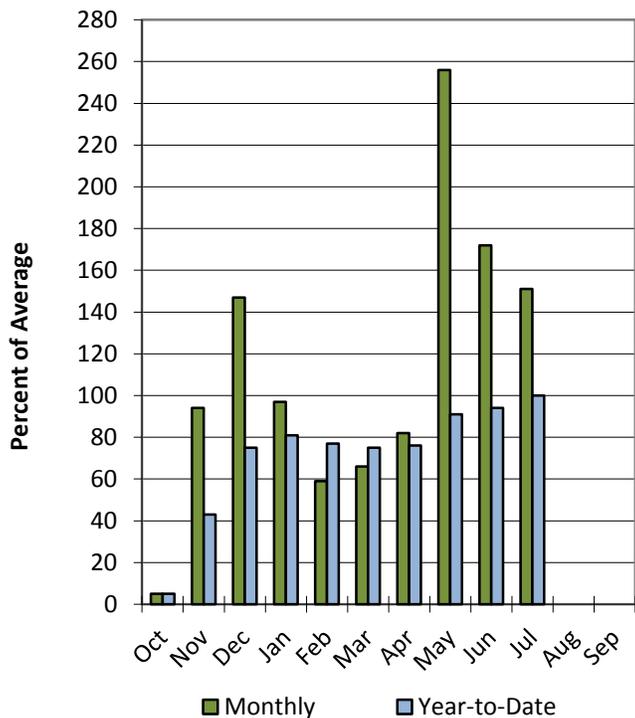


# Escalante River Basin

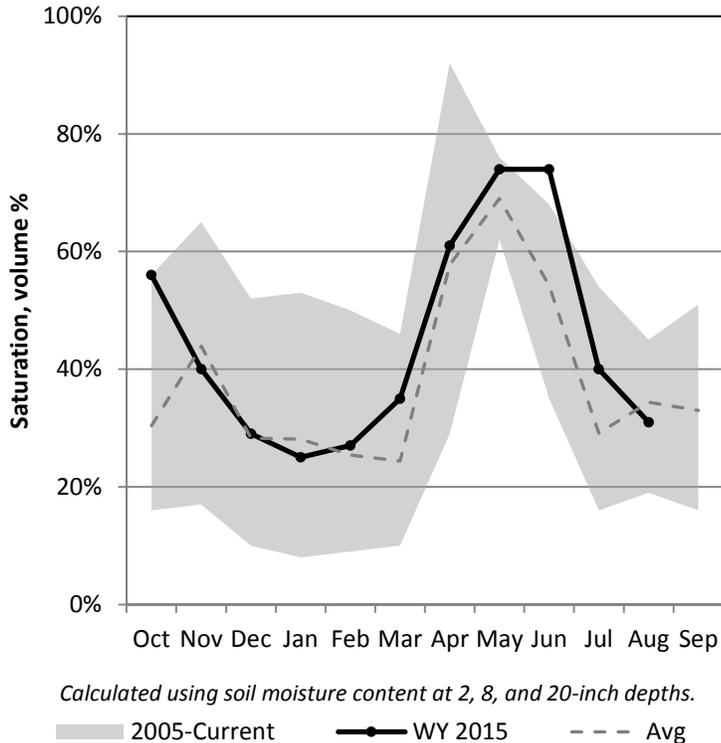
8/1/2015

Precipitation in July was much above average at 151%, which brings the seasonal accumulation (Oct-Jul) to 100% of average. Soil moisture is at 31% compared to 38% last year.

## Precipitation



## Soil Moisture

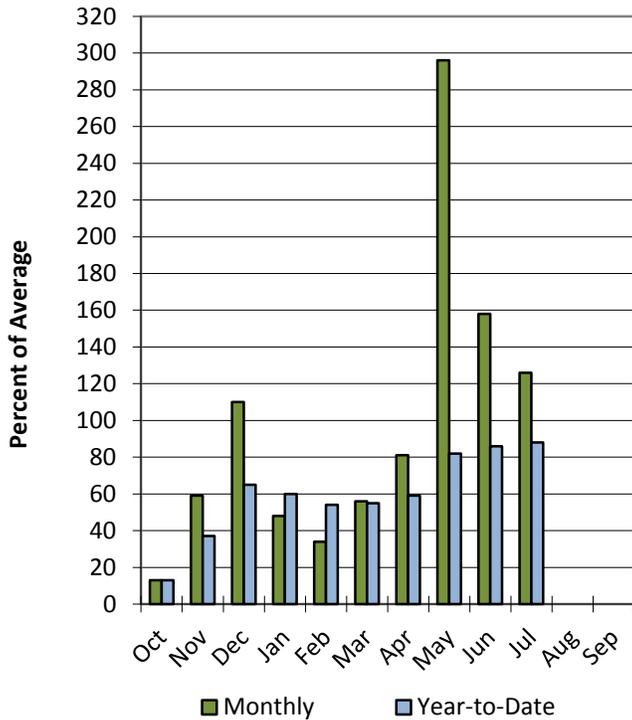


# Beaver River Basin

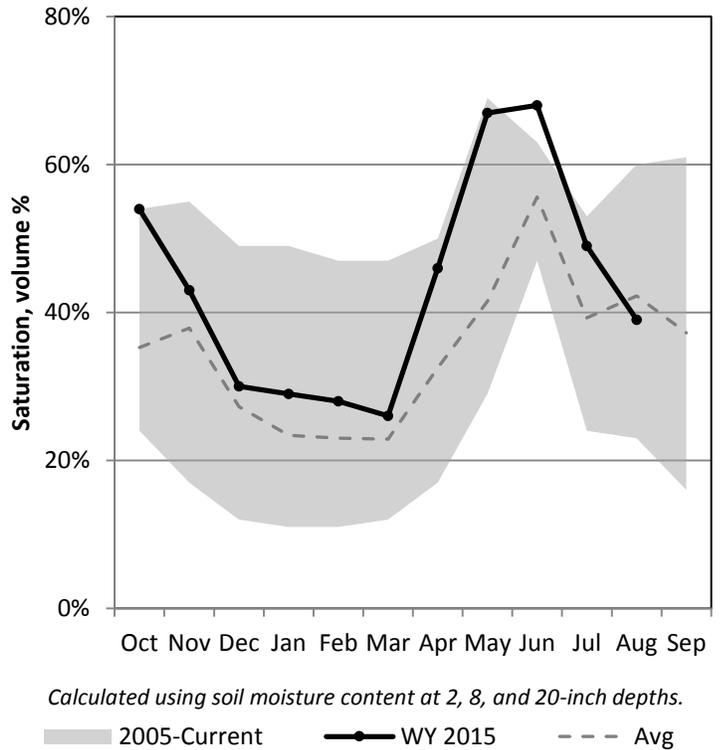
8/1/2015

Precipitation in July was above average at 126%, which brings the seasonal accumulation (Oct-Jul) to 88% of average. Soil moisture is at 39% compared to 33% last year. Reservoir storage is at 24% of capacity, compared to 22% last year. The water availability index for the Beaver River is 14%.

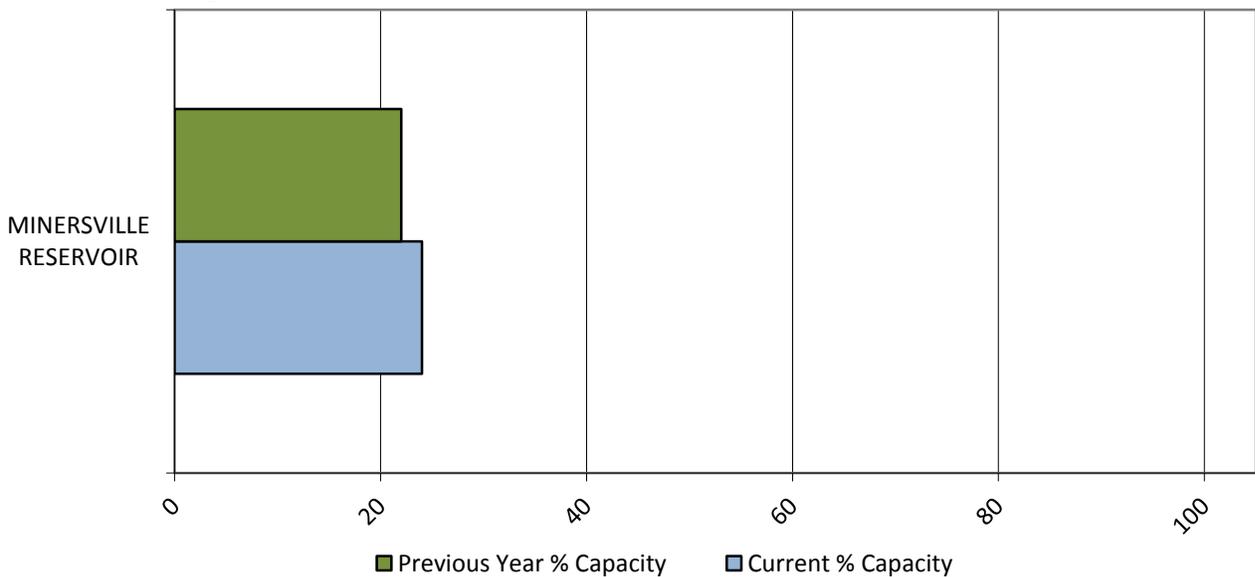
## Precipitation



## Soil Moisture



## Reservoir Storage

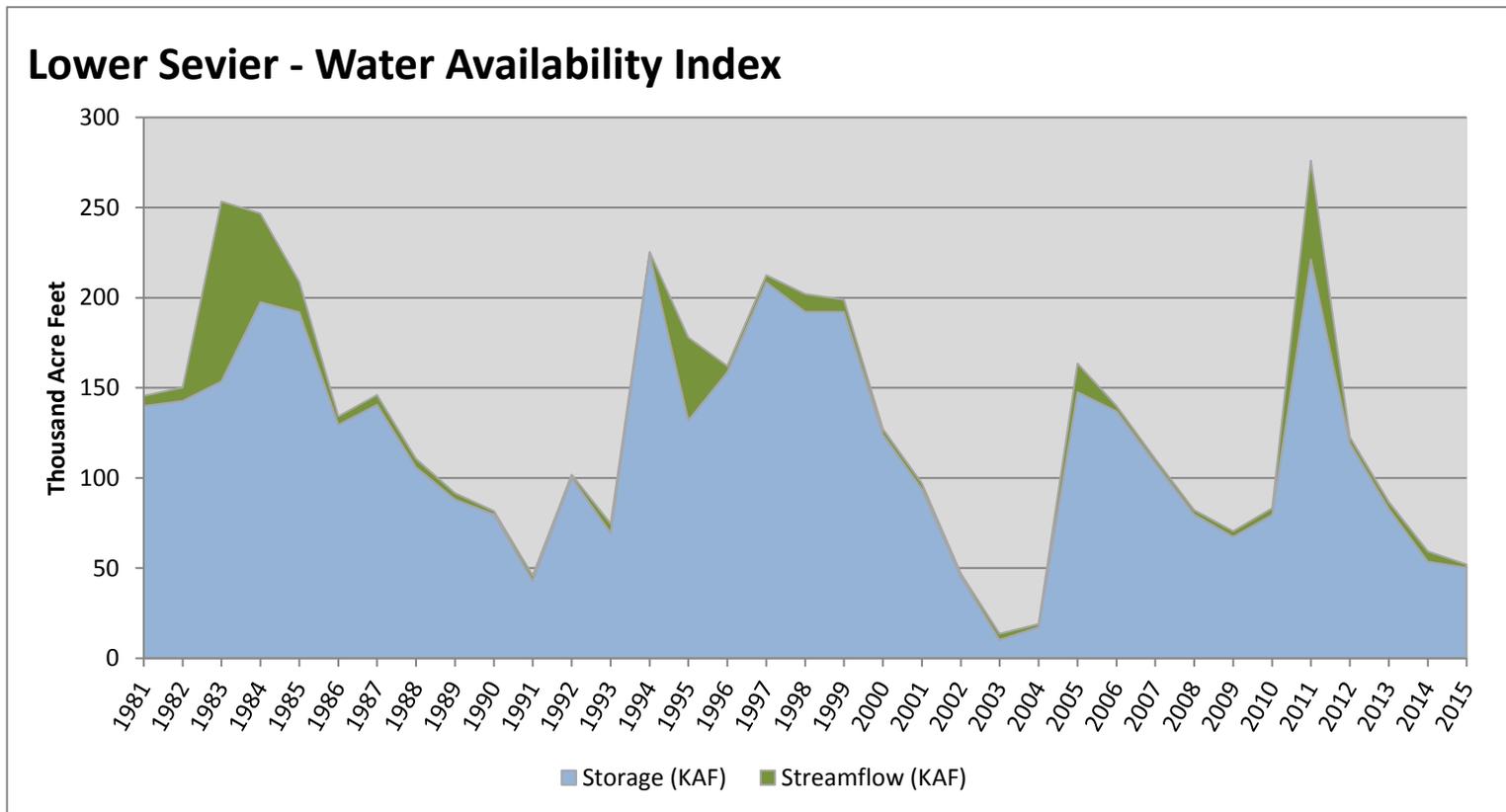


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Lower Sevier</b>	<b>50.26</b>	<b>1.79</b>	<b>52.05</b>	<b>14</b>	<b>-3.01</b>	<b>91, 02, 14, 09</b>

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

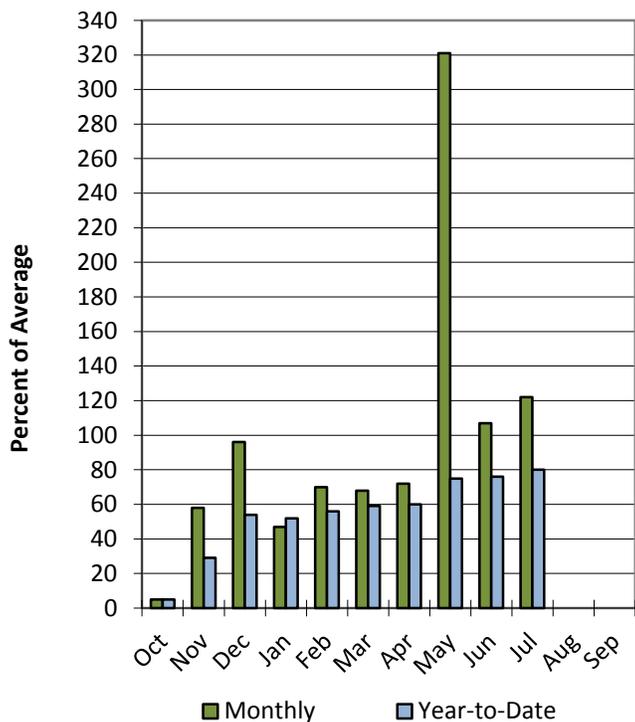


# Southwestern Utah Basin

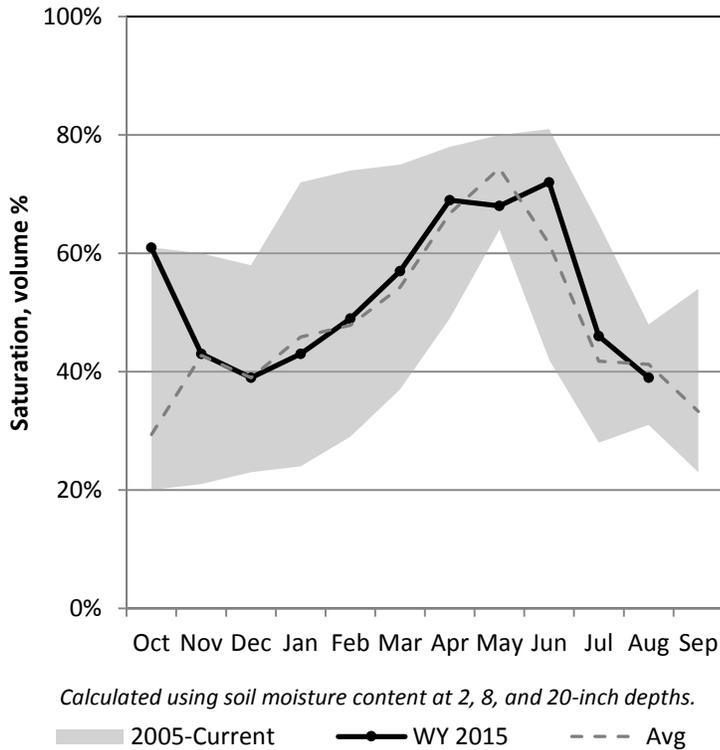
8/1/2015

Precipitation in July was above average at 122%, which brings the seasonal accumulation (Oct-Jul) to 80% of average. Soil moisture is at 39% compared to 36% last year. Reservoir storage is at 54% of capacity, compared to 52% last year. The water availability index for the Virgin River is 53%.

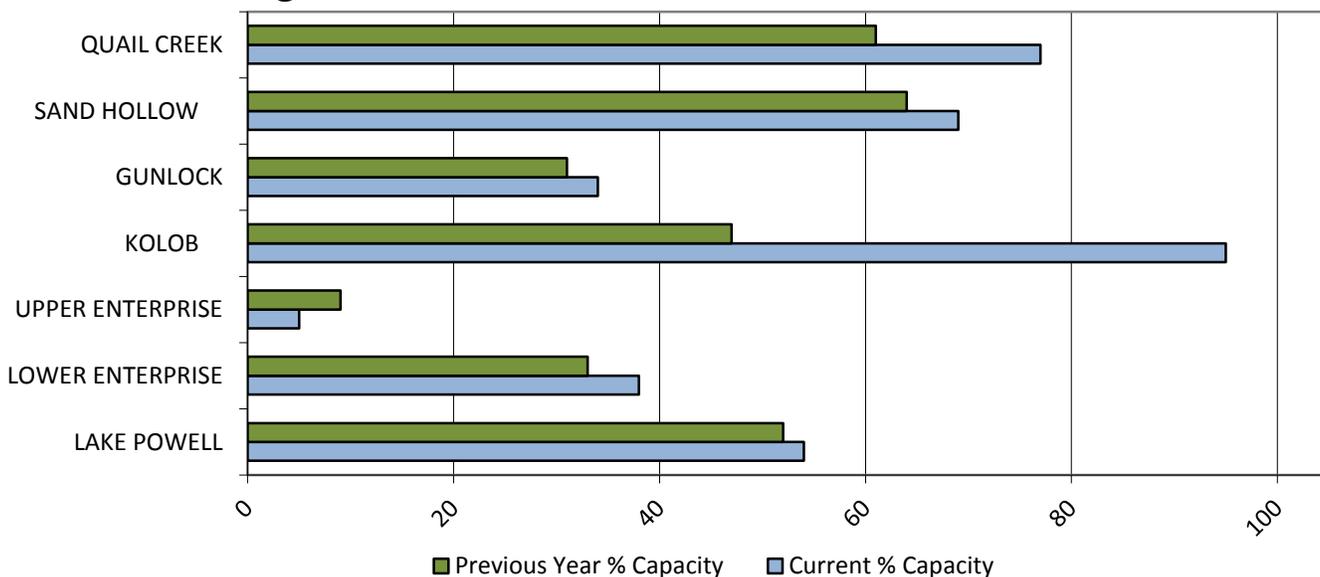
## Precipitation



## Soil Moisture



## Reservoir Storage

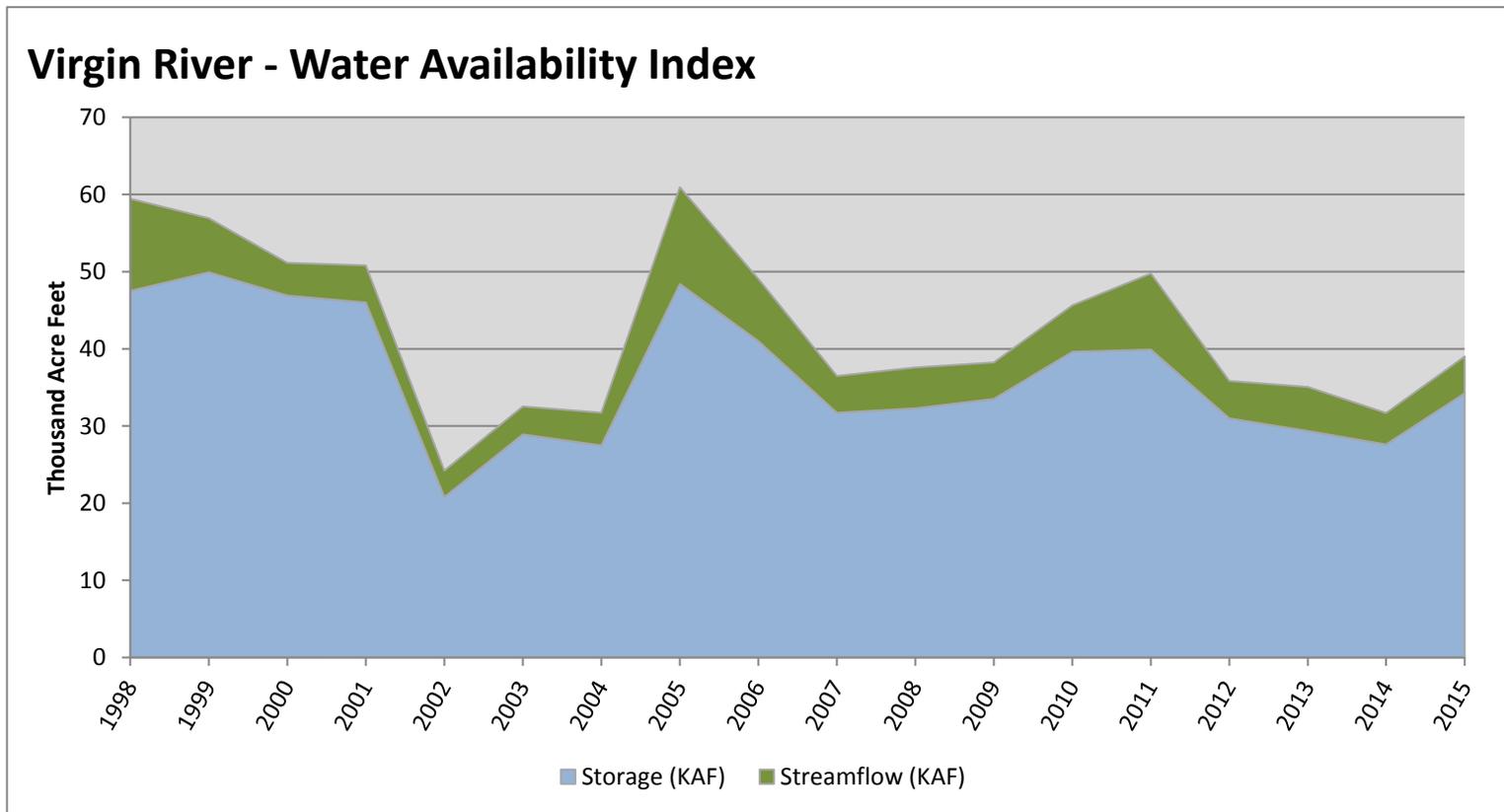


August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Virgin River</b>	<b>34.24</b>	<b>4.78</b>	<b>39.02</b>	<b>53</b>	<b>0.22</b>	<b>08, 09, 10, 06</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



August 1, 2015

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Bear River</b>	<b>571</b>	<b>18.2</b>	<b>589</b>	<b>42</b>	<b>-0.7</b>	<b>10, 09, 14, 95</b>
<b>Woodruff Narrows</b>	<b>37.2</b>	<b>8.4</b>	<b>45.6</b>	<b>56</b>	<b>0.5</b>	<b>87, 91, 06, 96</b>
<b>Little Bear</b>	<b>7.8</b>	<b>1.1</b>	<b>8.8</b>	<b>46</b>	<b>-0.4</b>	<b>04, 02, 08, 10</b>
<b>Ogden</b>	<b>79.4</b>	<b>2.4</b>	<b>81.8</b>	<b>42</b>	<b>-0.7</b>	<b>89, 94, 14, 96</b>
<b>Weber</b>	<b>130.4</b>	<b>7.0</b>	<b>137.4</b>	<b>38</b>	<b>-1.0</b>	<b>12, 94, 04, 07</b>
<b>Provo River</b>	<b>361.4</b>	<b>6.0</b>	<b>367.4</b>	<b>38</b>	<b>-1.0</b>	<b>03, 12, 08, 00</b>
<b>Western Uintah</b>	<b>199.3</b>	<b>7.3</b>	<b>206.6</b>	<b>62</b>	<b>1.0</b>	<b>01, 06, 08, 09</b>
<b>Eastern Uintah</b>	<b>41.5</b>	<b>11.4</b>	<b>52.9</b>	<b>47</b>	<b>-0.2</b>	<b>06, 92, 97, 91</b>
<b>Blacks Fork</b>	<b>21.4</b>	<b>9.2</b>	<b>30.6</b>	<b>55</b>	<b>0.4</b>	<b>87, 97, 91, 85</b>
<b>Price</b>	<b>14.0</b>	<b>0.5</b>	<b>14.5</b>	<b>11</b>	<b>-3.2</b>	<b>04, 90, 02, 14</b>
<b>Smiths Creek</b>	<b>10.8</b>	<b>3.4</b>	<b>14.1</b>	<b>66</b>	<b>1.3</b>	<b>93, 96, 10, 87</b>
<b>Joes Valley</b>	<b>49.2</b>	<b>3.1</b>	<b>52.3</b>	<b>39</b>	<b>-0.9</b>	<b>81, 00, 14, 01</b>
<b>Moab</b>	<b>1.9</b>	<b>0.7</b>	<b>2.7</b>	<b>76</b>	<b>2.2</b>	<b>92, 97, 99, 98</b>
<b>Upper Sevier River</b>	<b>36.6</b>	<b>0.7</b>	<b>37.4</b>	<b>19</b>	<b>-2.6</b>	<b>90, 02, 07, 89</b>
<b>San Pitch</b>	<b>0.0</b>	<b>1.5</b>	<b>1.5</b>	<b>11</b>	<b>-3.2</b>	<b>02, 14, 92, 89</b>
<b>Lower Sevier</b>	<b>50.3</b>	<b>1.8</b>	<b>52.1</b>	<b>14</b>	<b>-3.0</b>	<b>91, 02, 14, 09</b>
<b>Lower Sevier</b>	<b>50.3</b>	<b>1.8</b>	<b>52.1</b>	<b>14</b>	<b>-3.0</b>	<b>91, 02, 14, 09</b>
<b>Virgin River</b>	<b>34.2</b>	<b>4.8</b>	<b>39.0</b>	<b>53</b>	<b>0.2</b>	<b>08, 09, 10, 06</b>

\*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/](http://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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