

# Utah Climate and Water Report

December 2015



Nephi SCAN site looking towards Mt. Nebo, November, 2015

Photo by Kent Sutcliffe

# Utah Climate and Water Report

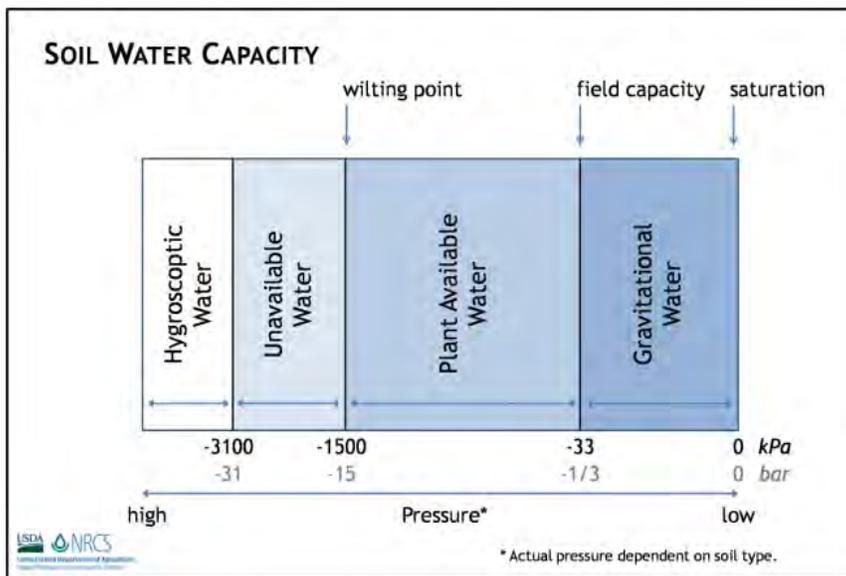
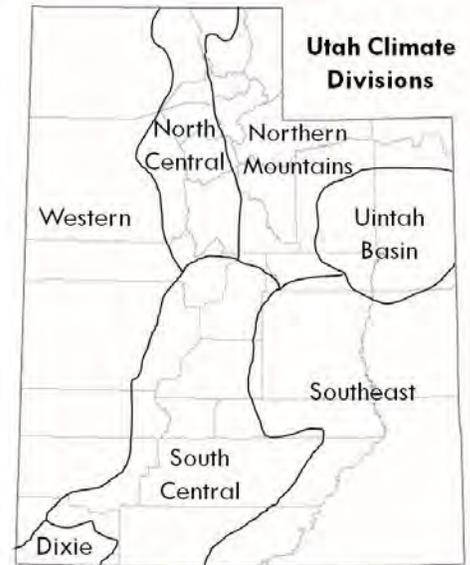
The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from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

# Climate and Water Information

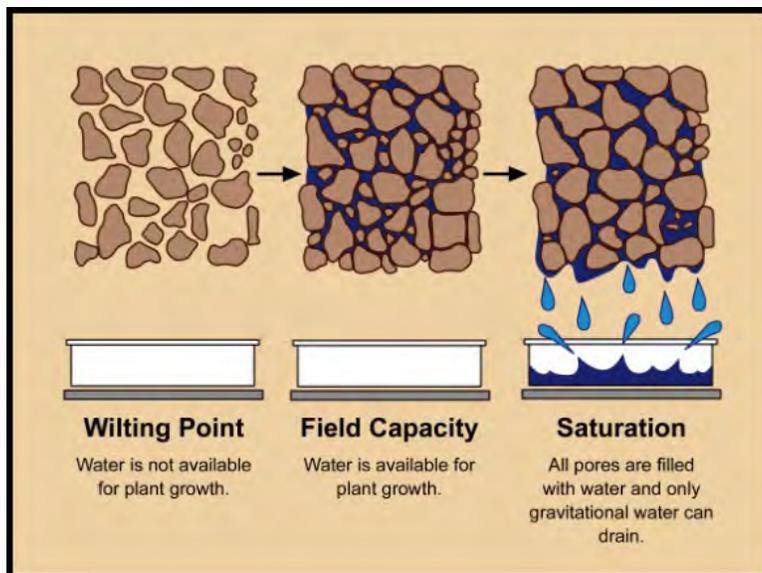
## Soil Climate Analysis Network

Soil Climate Analysis Network (SCAN) stations are primarily located on low- to mid-elevation, agriculturally important landscapes that maintain representative soils. Elevations range from 3,000 to 7,000 ft. The SCAN network provides real-time soil moisture and temperature data coupled with additional climate information for use in natural resource planning, drought assessment, water resource management, and resource inventory. Stations are situated on non-irrigated, native soils, are remotely located, and collect hourly atmospheric and soils data that are available to the public online.

In order to summarize SCAN data, the 35 sites in Utah are grouped by climate divisions (North Central, Northern Mountains, Uintah Basin, Southeast, South Central, Dixie, and Western).



**Explanation of soil water capacity definitions.** Field capacity (FC) and wilting point (WP) are calculated in the laboratory for each soil horizon. The amount of water held between field capacity and wilting point is plant available.



**Visual explanation of soil water capacity definitions.**

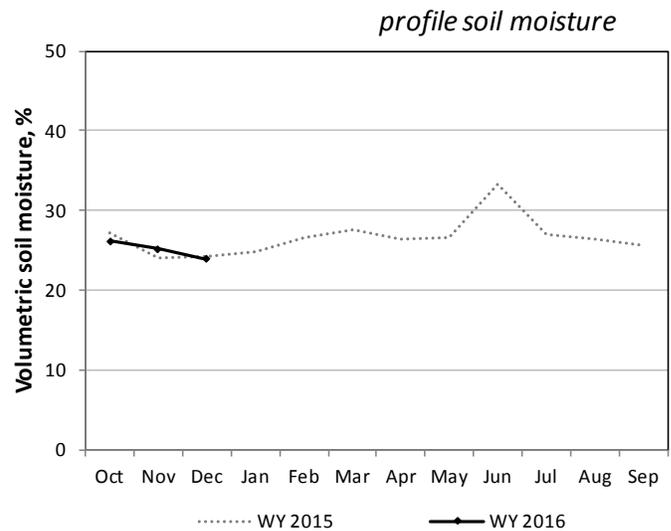
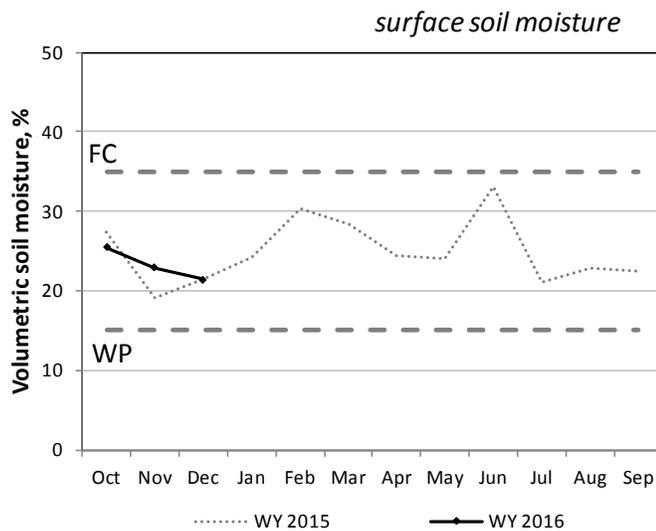
# North Central

## Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
<b>NORTH CENTRAL</b>												
Blue Creek	2.8	0.9	14	18	19	19	15	30	31	34	39	46
Cache Junction	2.1	1.3	32	23	33	29	37	35	36	38	43	49
Grantsville	1.7	0.8	7	15	22	-	-	31	34	39	48	55

\* 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.**

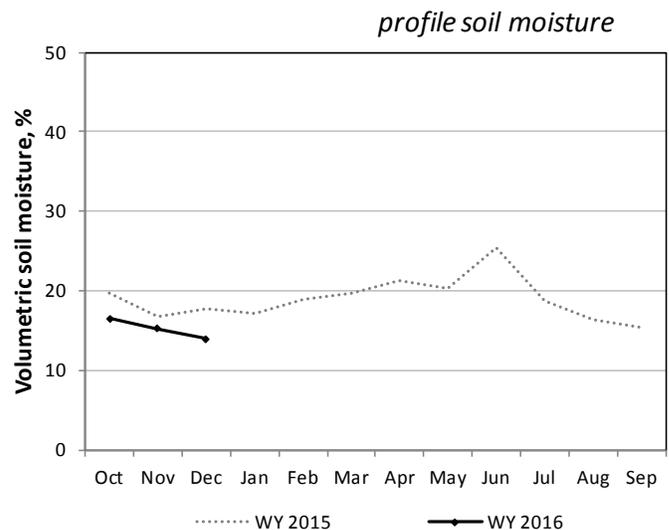
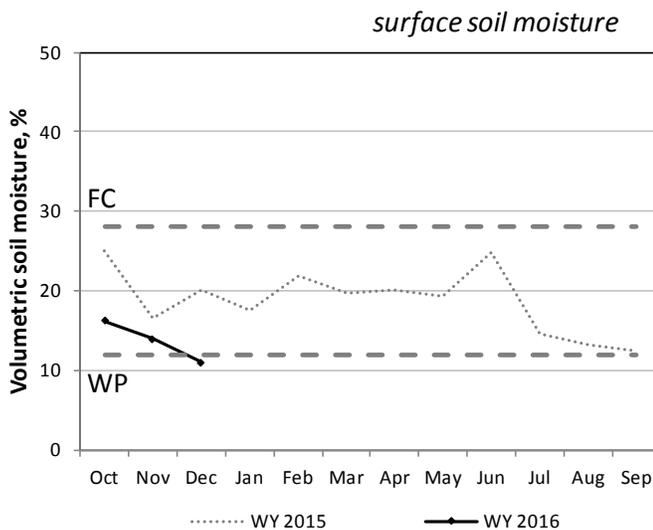
# Northern Mountains

## 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"
			volume %					°F				
<b>NORTHERN MOUNTAINS</b>												
Chicken Ridge	1.5	0.5	4	7	10	12	11	27	30	31	35	40
Buffalo Jump	1.4	0.6	6	9	8	7	-	27	27	30	38	-
Morgan	1.6	0.8	14	12	22	30	18	29	29	32	35	40

\* 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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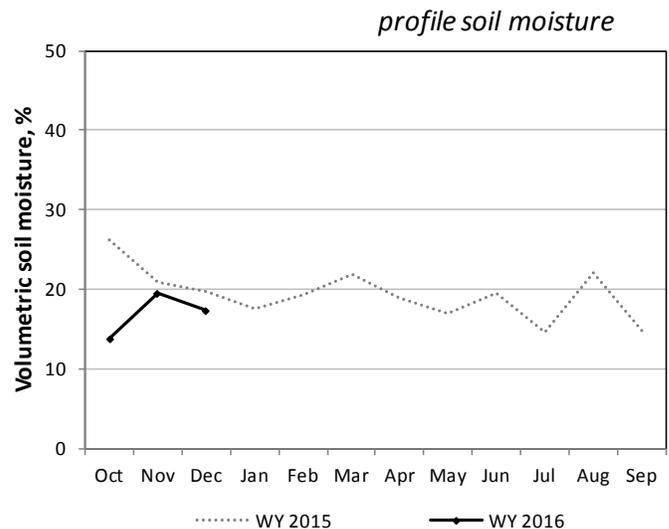
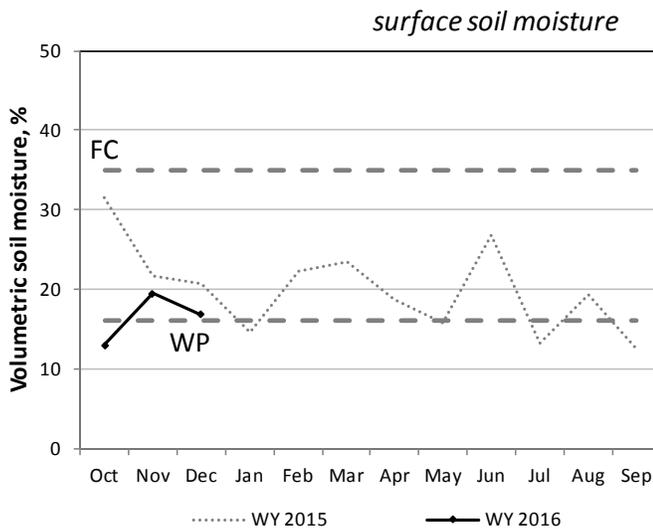
# Uintah Basin

## 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	2.2	0.5	6	10	11	9	3	27	29	31	36	49
Little Red Fox	2.4	1.0	12	26	37	35	37	28	32	34	39	43
Split Mountain	1.9	1.0	12	23	9	10	11	31	32	34	40	47

\* 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.**

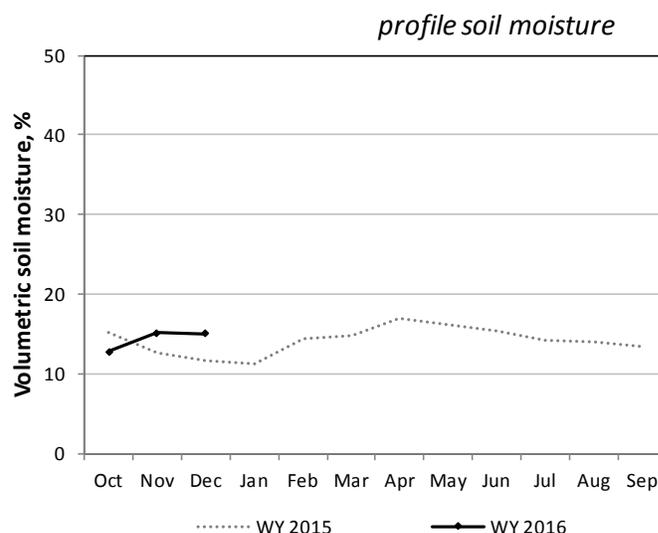
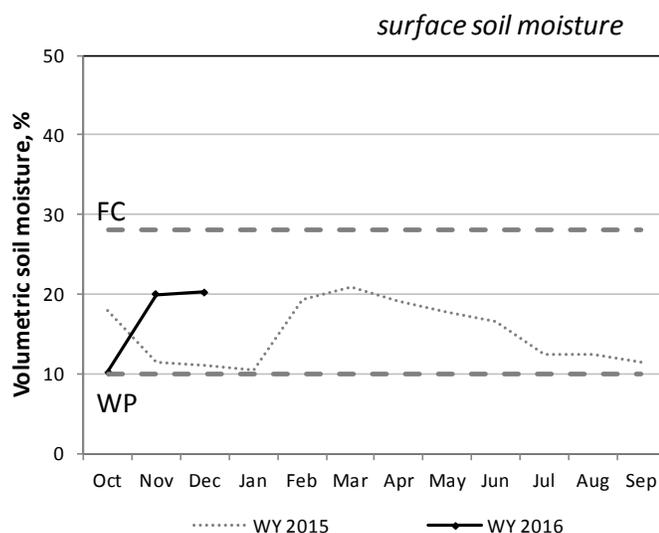
# Southeast

## 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	2.9	0.8	5	19	26	13	16	31	31	33	39	44
Green River	2.7	0.6	21	14	9	4	6	31	32	33	40	47
Harm's Way	6.6	3.7	20	25	25	12	5	32	33	35	38	44
West Summit	4.3	1.2	16	26	26	18	16	32	32	34	36	42
Eastland	4.7	1.5	22	22	23	20	18	32	33	34	39	44
Alkali Mesa	4.6	1.7	16	18	21	14	15	32	31	35	40	42
McCracken Mesa	4.7	1.6	20	25	25	22	13	33	36	37	43	50

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## Southeast



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

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

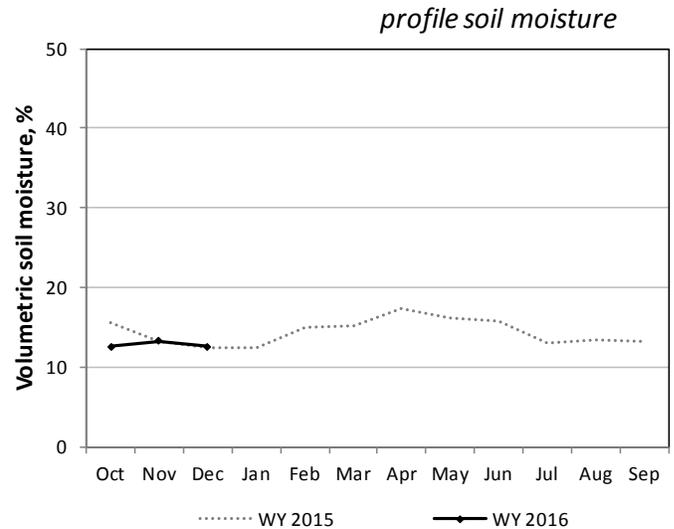
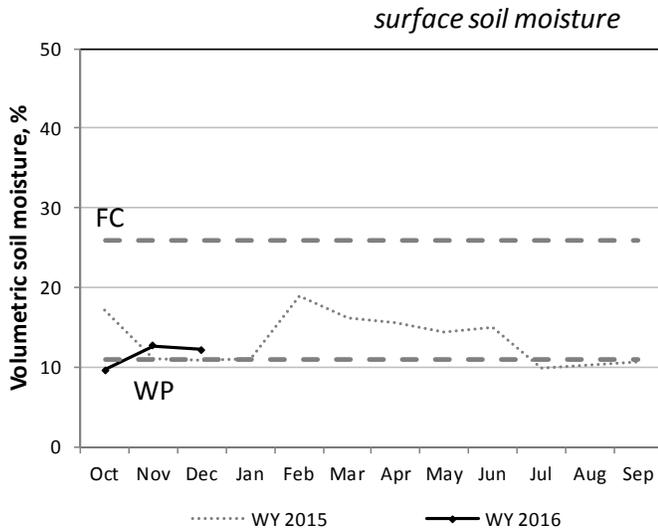
# South Central

## Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
<b>SOUTH CENTRAL</b>												
Nephi	2.3	1.3	24	25	20	6	0	32	32	34	41	48
Ephraim	1.7	0.9	25	23	26	32	33	32	33	35	40	46
Holden	2.1	0.8	10	11	10	10	10	33	33	36	42	51
Milford	1.7	0.5	18	23	12	23	16	32	34	37	44	51
Manderfield	1.9	0.5	20	23	15	10	4	31	34	39	41	46
Circleville	1.7	0.1	11	14	5	7	14	26	29	33	42	49
Panguitch	2.5	0.2	6	18	15	19	33	29	30	32	38	45
Cave Valley	3.6	1.1	2	3	1	0	8	27	30	31	36	40
Vermillion	4.8	0.8	0	0	6	13	8	26	29	32	36	42
Spooky	3.8	0.5	2	8	5	7	1	31	32	34	39	46

\* 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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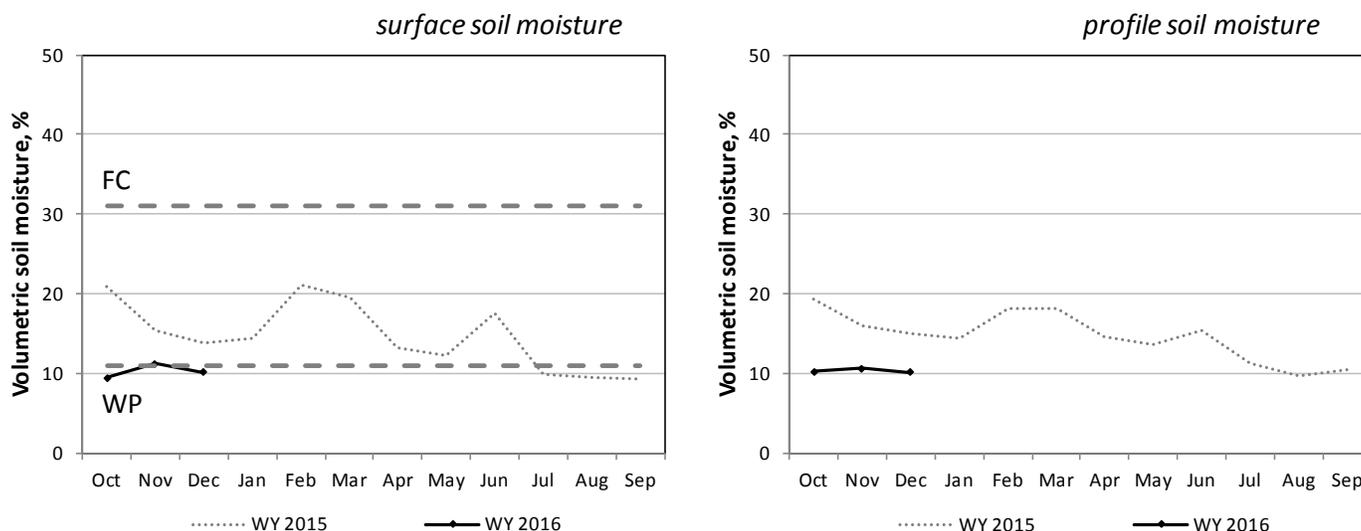
# Western and Dixie

## 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	2.1	1.0	3	8	10	14	14	27	30	35	39	44
Park Valley	1.8	0.5	2	4	12	-	-	29	29	33	39	47
Goshute	1.9	0.8	-	-	-	-	-	30	32	34	37	46
Dugway	0.9	0.4	-	-	-	-	-	35	37	40	48	57
Tule Valley	2.5	1.2	13	13	20	18	11	27	31	34	38	48
Hal's Canyon	2.5	1.1	9	8	16	10	8	29	30	33	39	48
Enterprise	1.8	0.8	7	20	17	12	14	28	31	33	41	50
<b>DIXIE</b>												
Sand Hollow	1.6	0.6	2	2	1	0	0	32	33	36	44	55

\* 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.

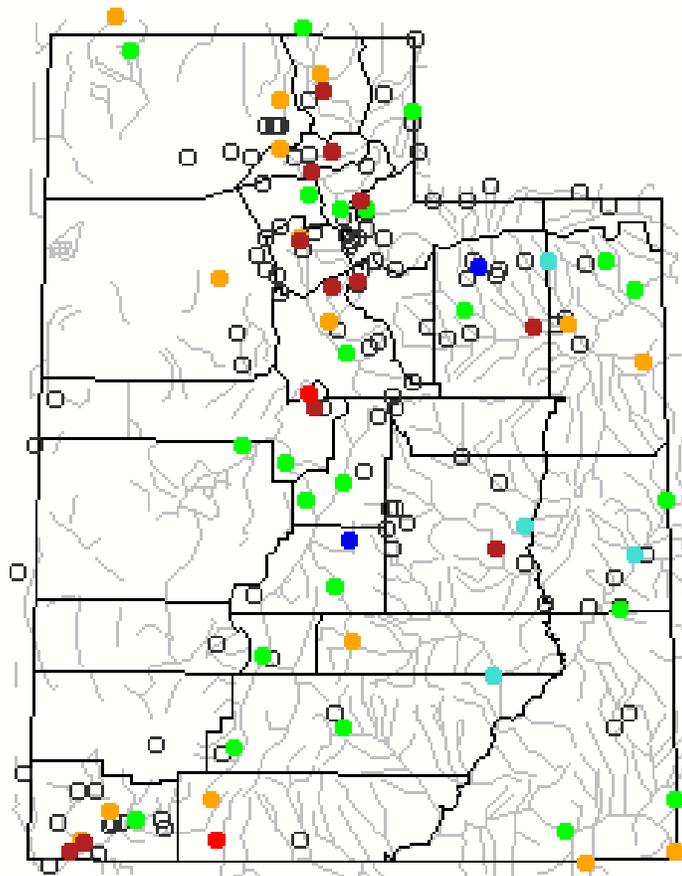
# Utah Hydrologic Summary

December 1, 2015

## Current Conditions

Current runoff, as shown in the USGS graphic below, is mostly below to near average for non-regulated stream flow across many areas of Utah. Monthly precipitation across the state improved substantially from the previous month with a November average of 86% bringing the seasonal accumulation (Oct-Nov) to 82% of average. Soil moisture has remained near average across the state. Reservoir storage is lower than last year, near 52% of capacity across the state compared to 58% last year.

Current Utah Stream Flow - Courtesy US Geological Survey



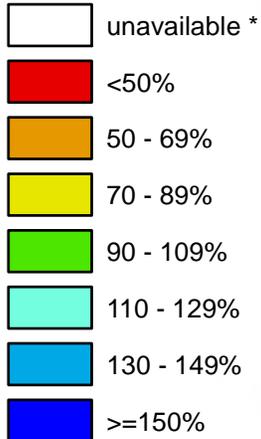
Explanation - Percentile classes						
●	●	●	●	●	●	○
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High Not ranked

# Utah

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

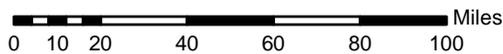
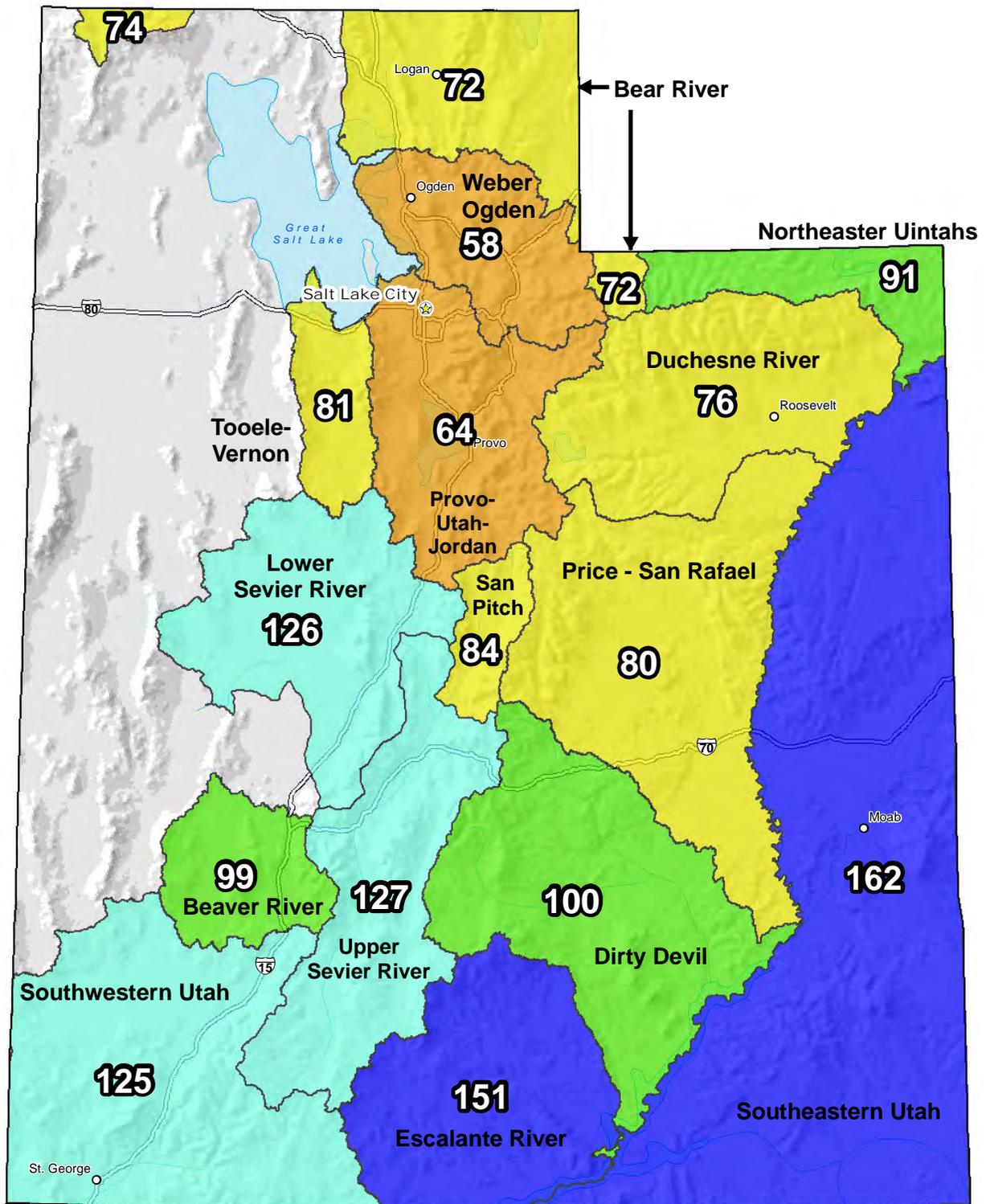
Dec 01, 2015

### 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>

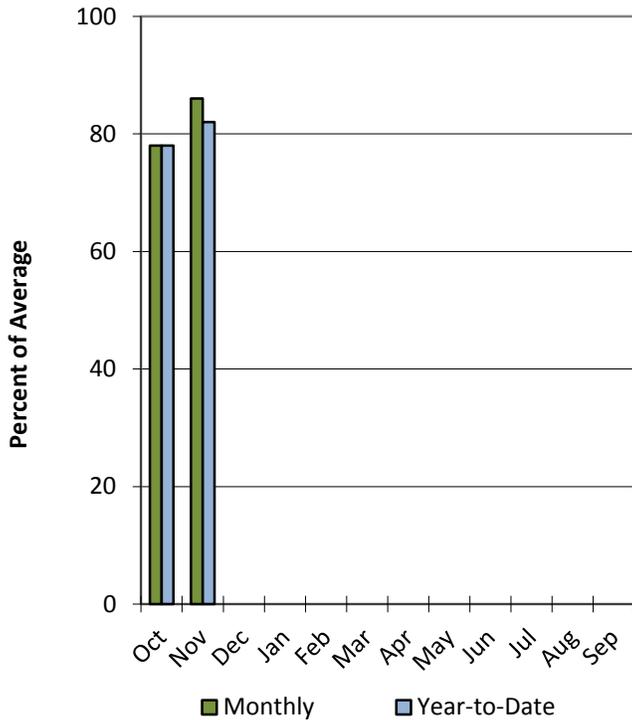


# Statewide Utah

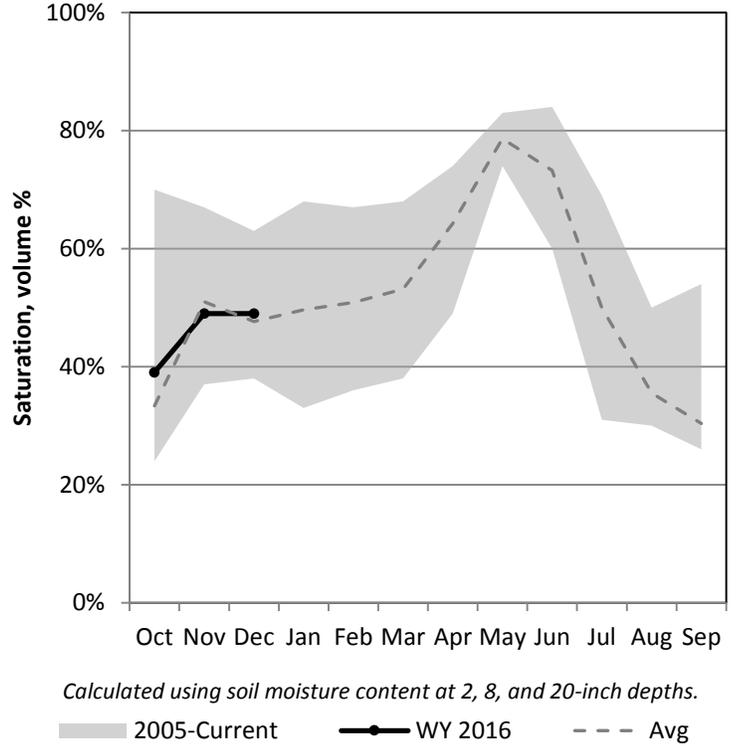
12/1/2015

Precipitation in November was below average at 86%, which brings the seasonal accumulation (Oct-Nov) to 82% of average. Soil moisture is at 49% compared to 56% last year. Reservoir storage is at 50% of capacity, compared to 58% last year.

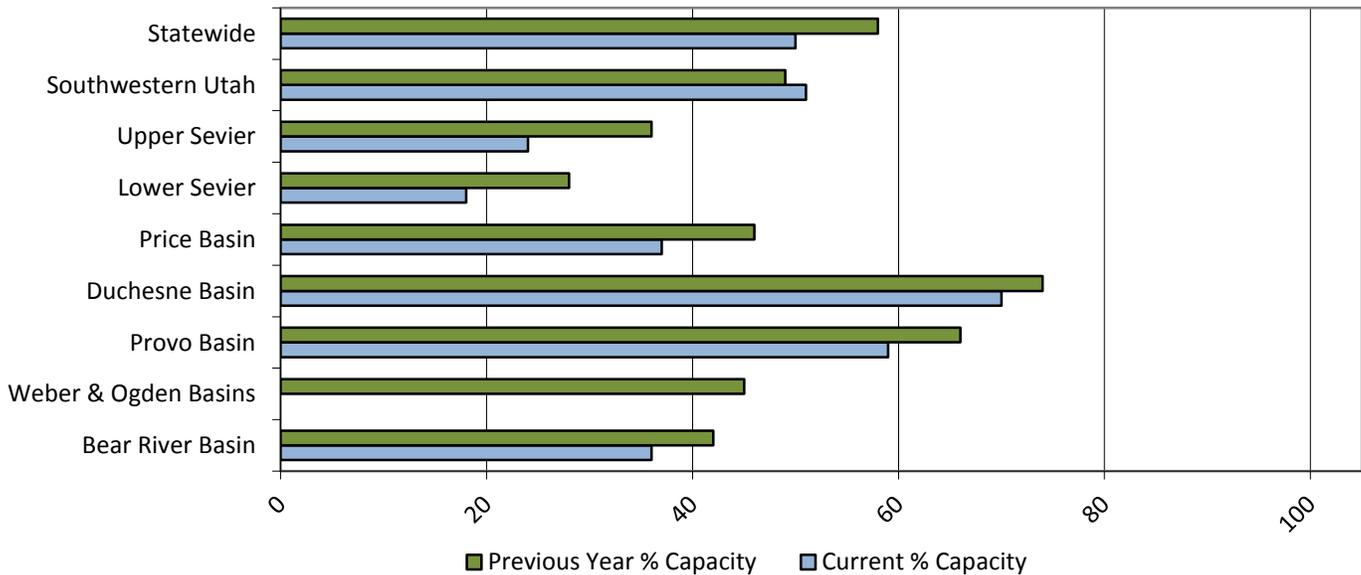
## Precipitation



## Soil Moisture



## Reservoir Storage

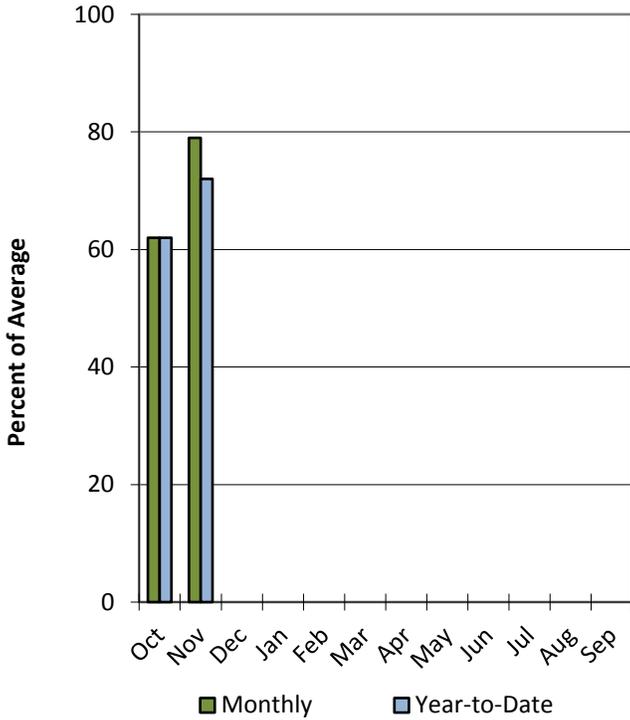


# Bear River Basin

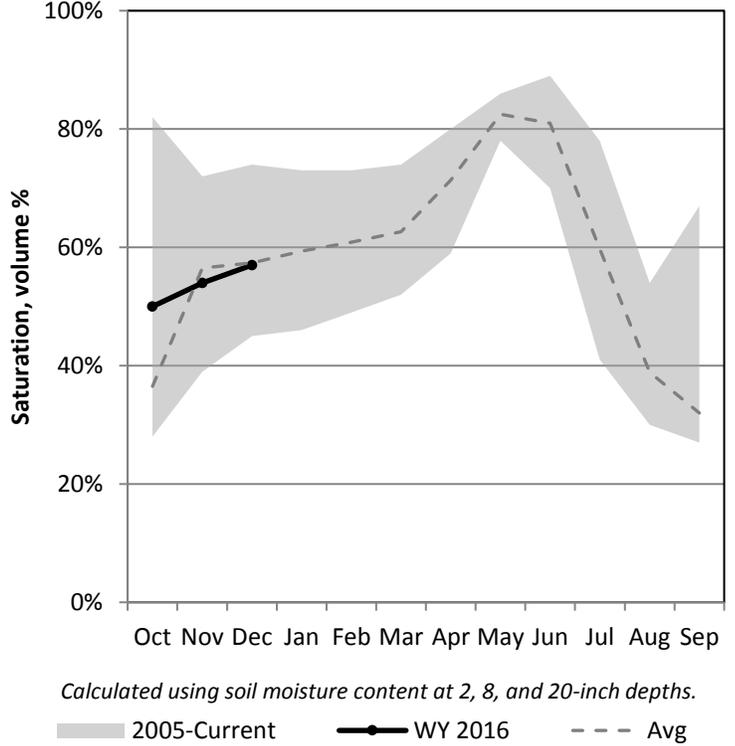
12/1/2015

Precipitation in November was below average at 79%, which brings the seasonal accumulation (Oct-Nov) to 72% of average. Soil moisture is at 57% compared to 58% last year. Reservoir storage is at 36% of capacity, compared to 42% last year. The water availability index for the Bear River is 47%, 64% for Woodruff Narrows and 8% for the Little Bear.

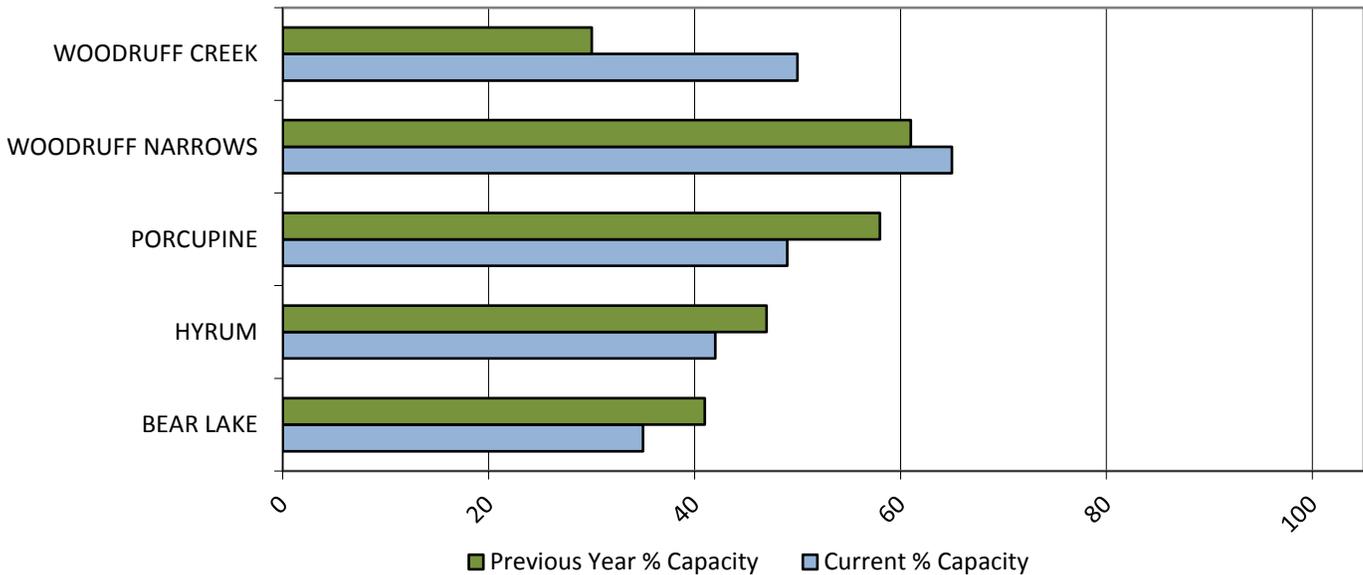
## Precipitation



## Soil Moisture



## Reservoir Storage

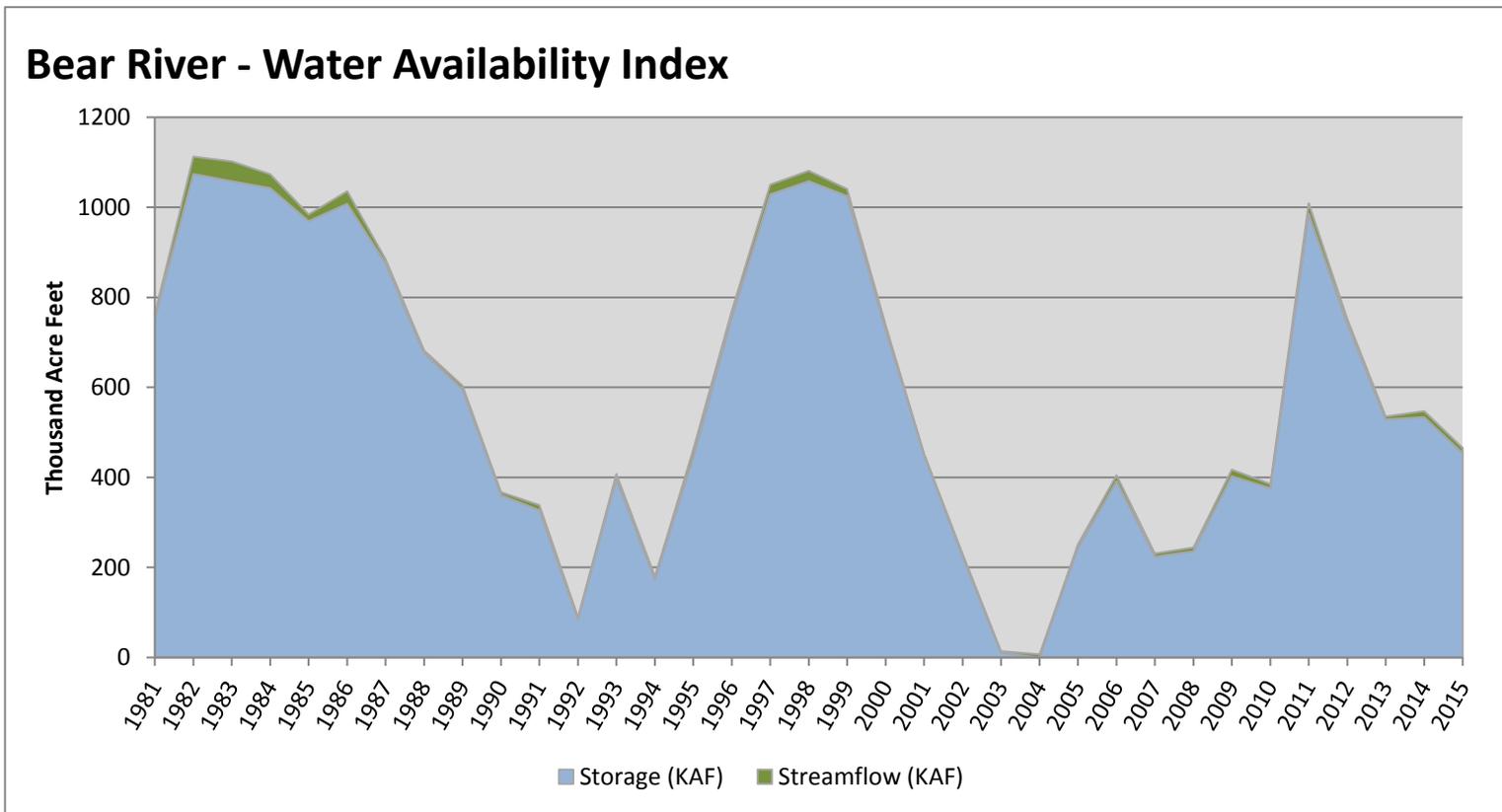


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November 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>453.34</b>	<b>12.00</b>	<b>465.34</b>	<b>47</b>	<b>-0.23</b>	<b>01, 95, 13, 14</b>

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

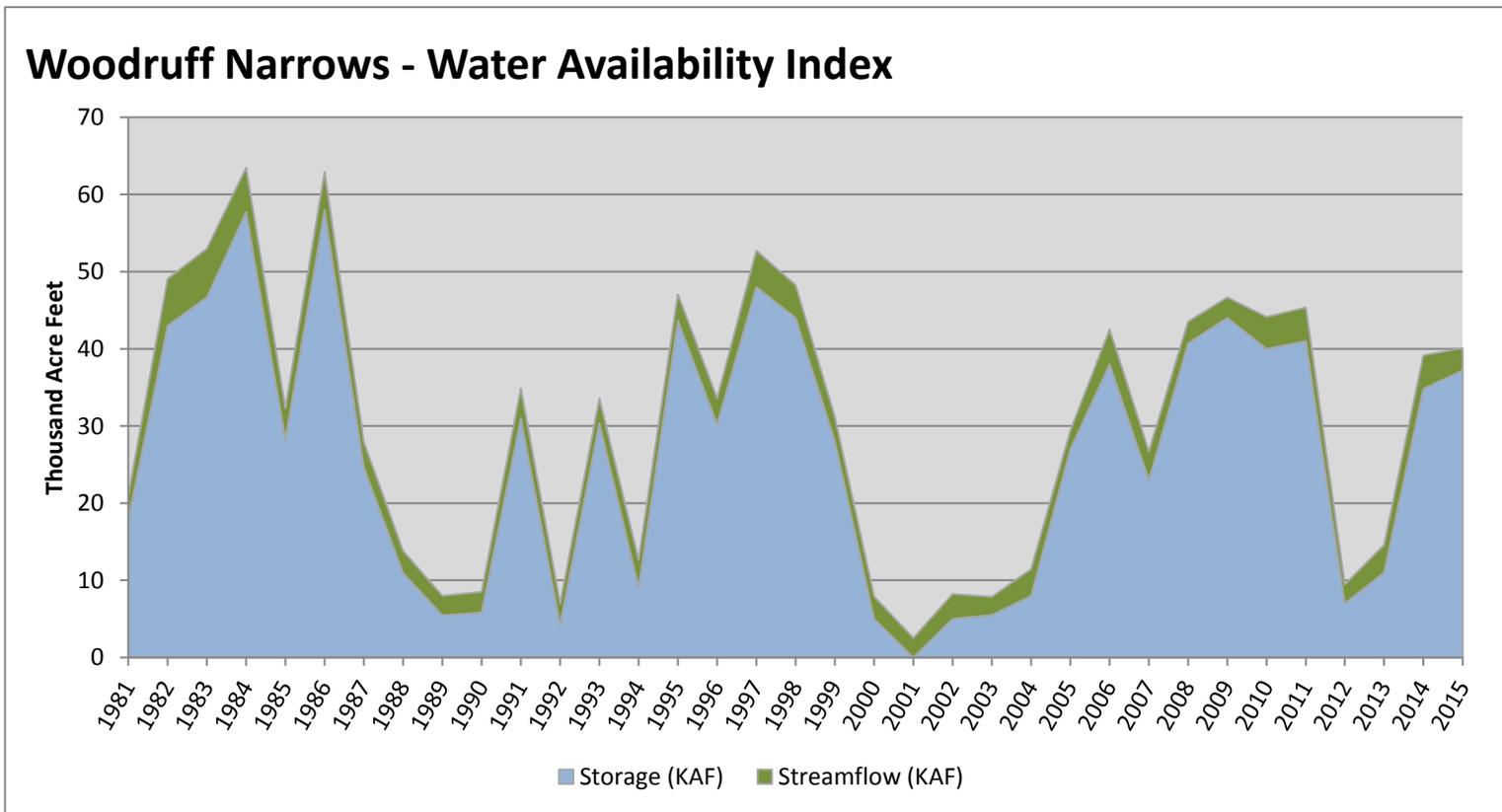


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Woodruff Narrows</b>	<b>37.20</b>	<b>2.89</b>	<b>40.09</b>	<b>64</b>	<b>1.16</b>	<b>91, 14, 06, 08</b>

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

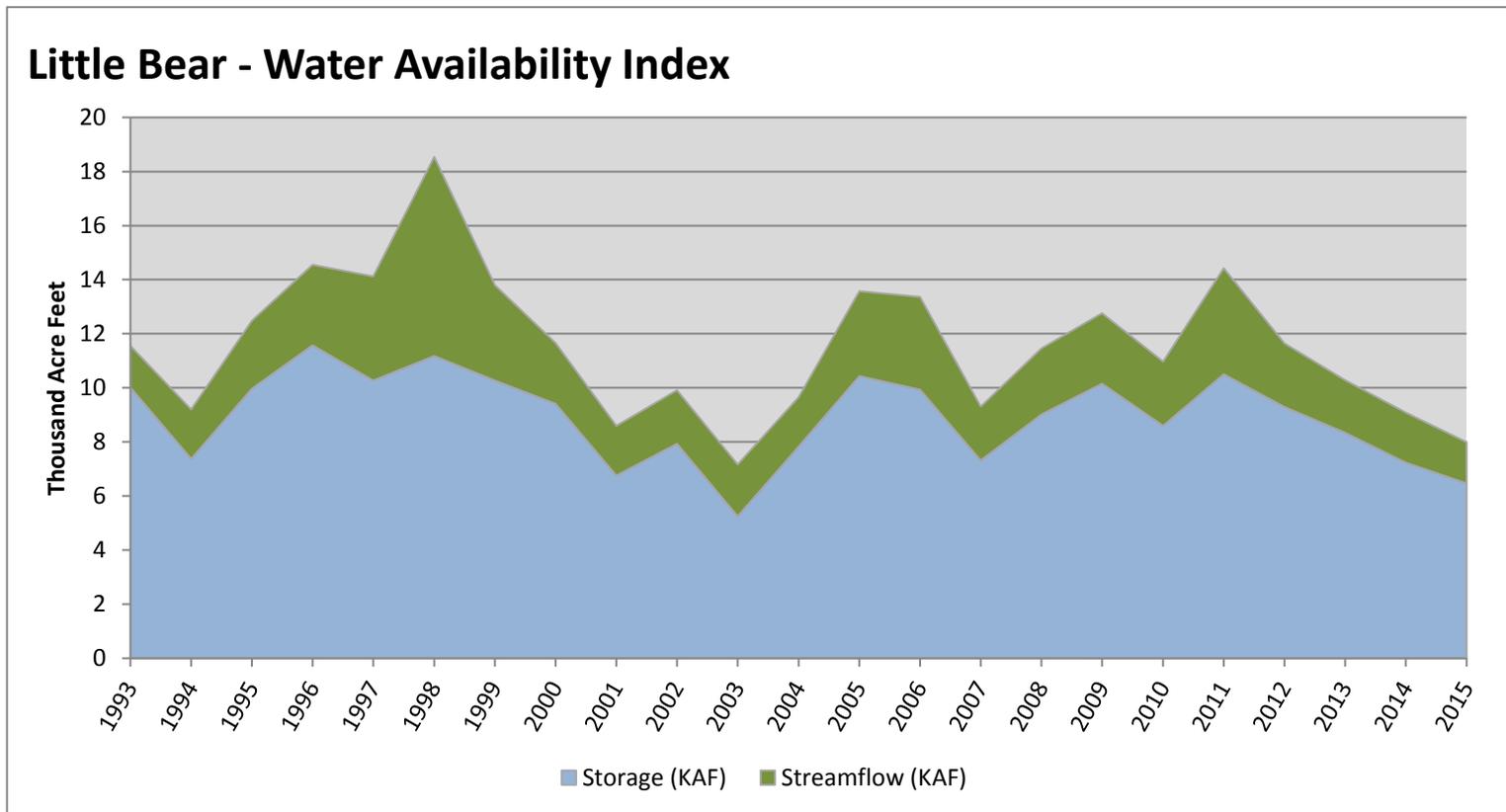


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Little Bear</b>	<b>6.47</b>	<b>1.52</b>	<b>7.99</b>	<b>8</b>	<b>-3.47</b>	<b>03, 01, 14, 94</b>

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

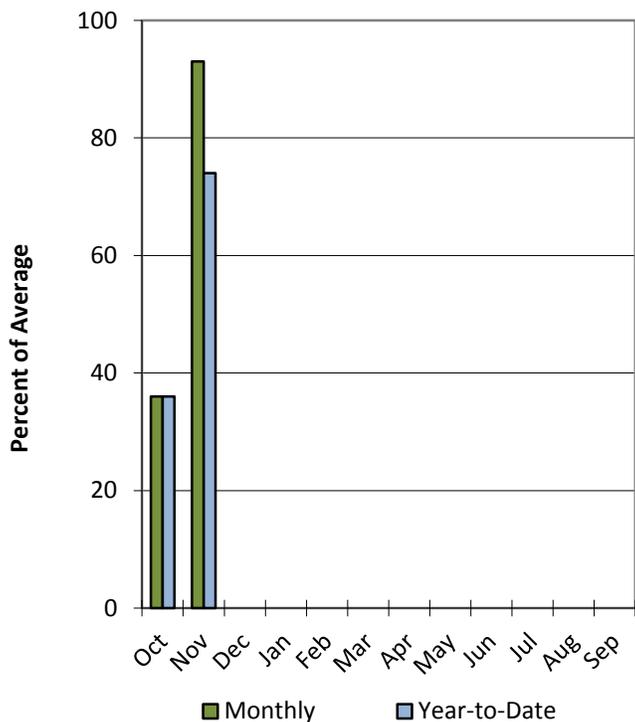


# Raft River Basin

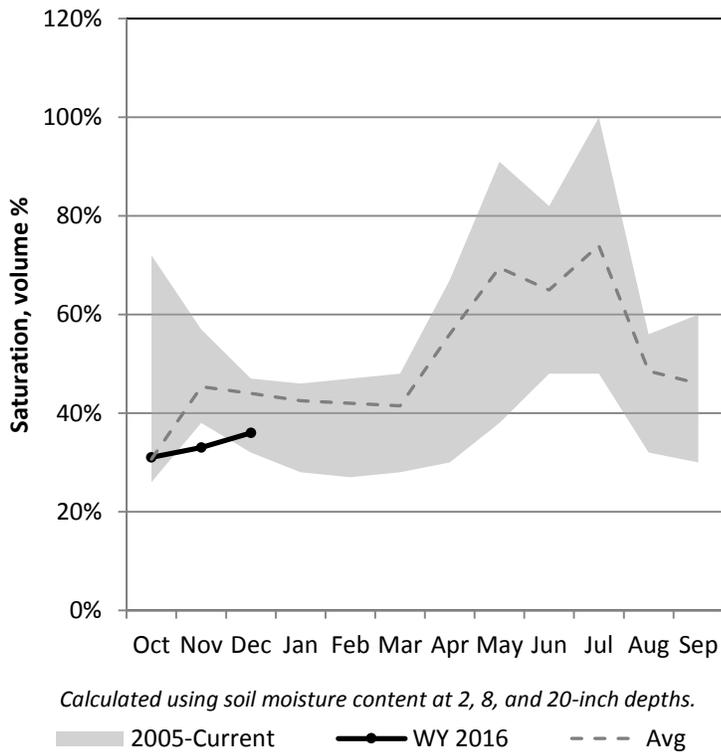
12/1/2015

Precipitation in November was near average at 93%, which brings the seasonal accumulation (Oct-Nov) to 74% of average. Soil moisture is at 36% compared to 32% last year.

## Precipitation



## Soil Moisture

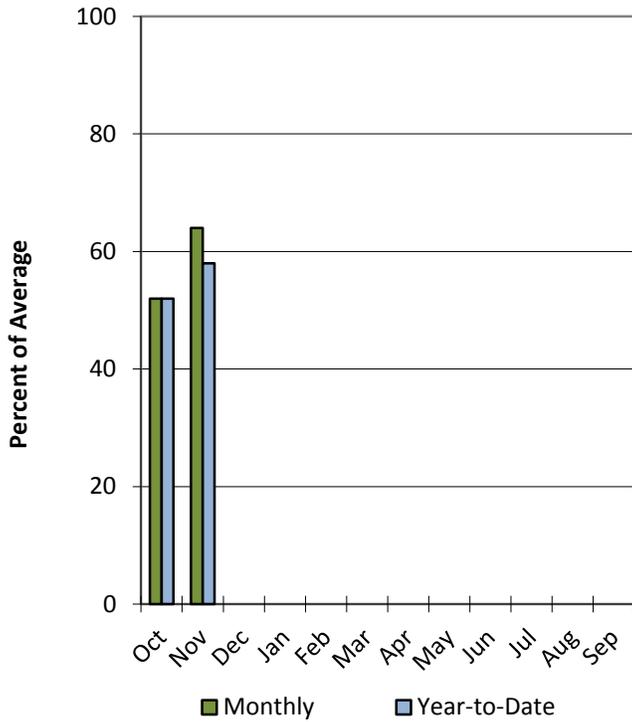


# Weber & Ogden River Basins

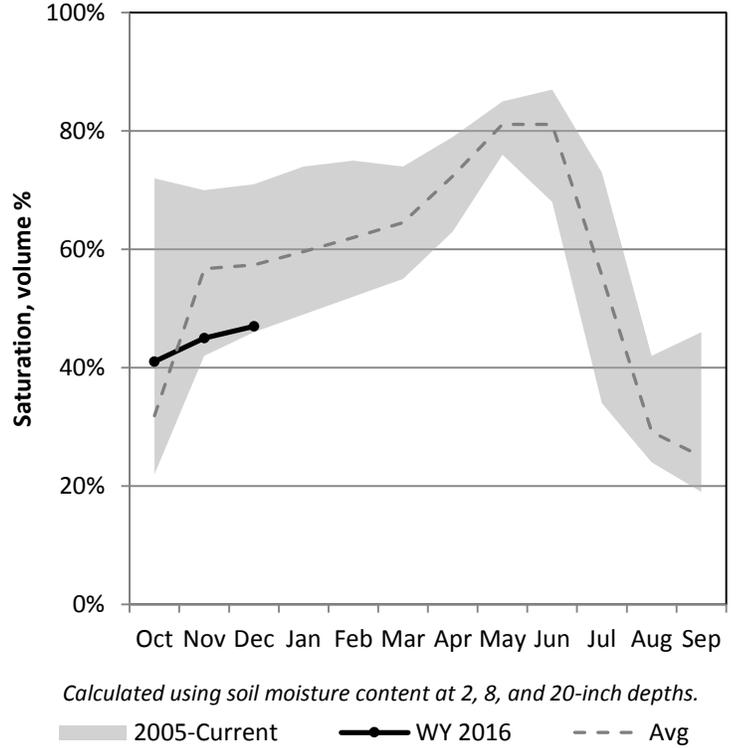
12/1/2015

Precipitation in November was much below average at 64%, which brings the seasonal accumulation (Oct-Nov) to 58% of average. Soil moisture is at 47% compared to 47% last year. Reservoir storage is at % of capacity, compared to 45% last year. The water availability index for the Ogden River is 36% and 19% for the Weber River.

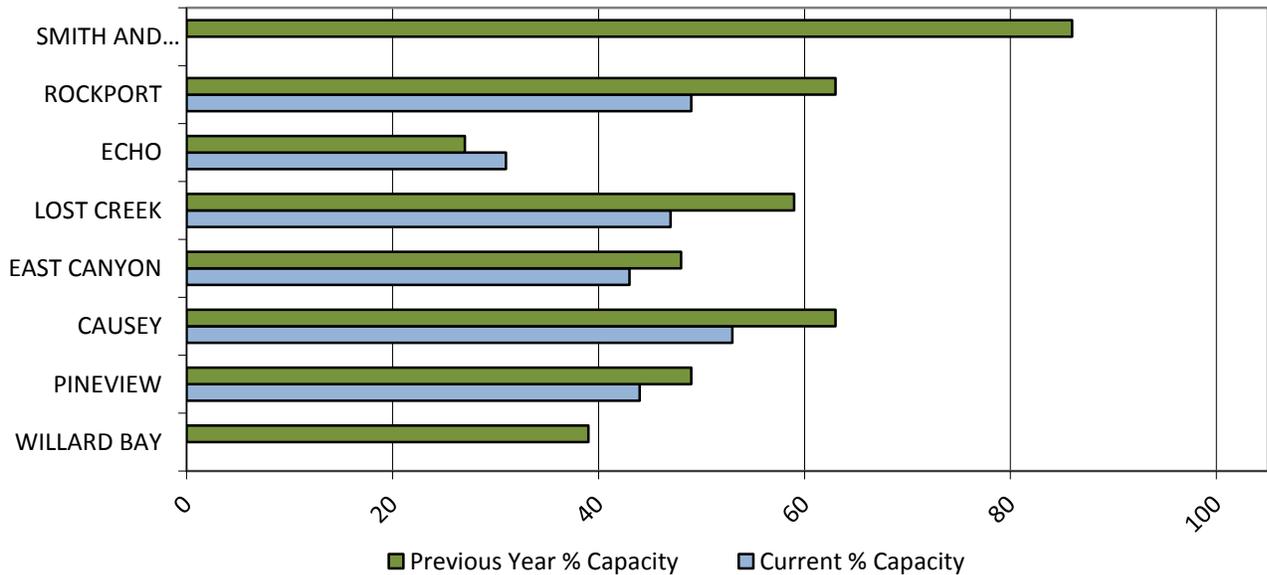
## Precipitation



## Soil Moisture



## Reservoir Storage

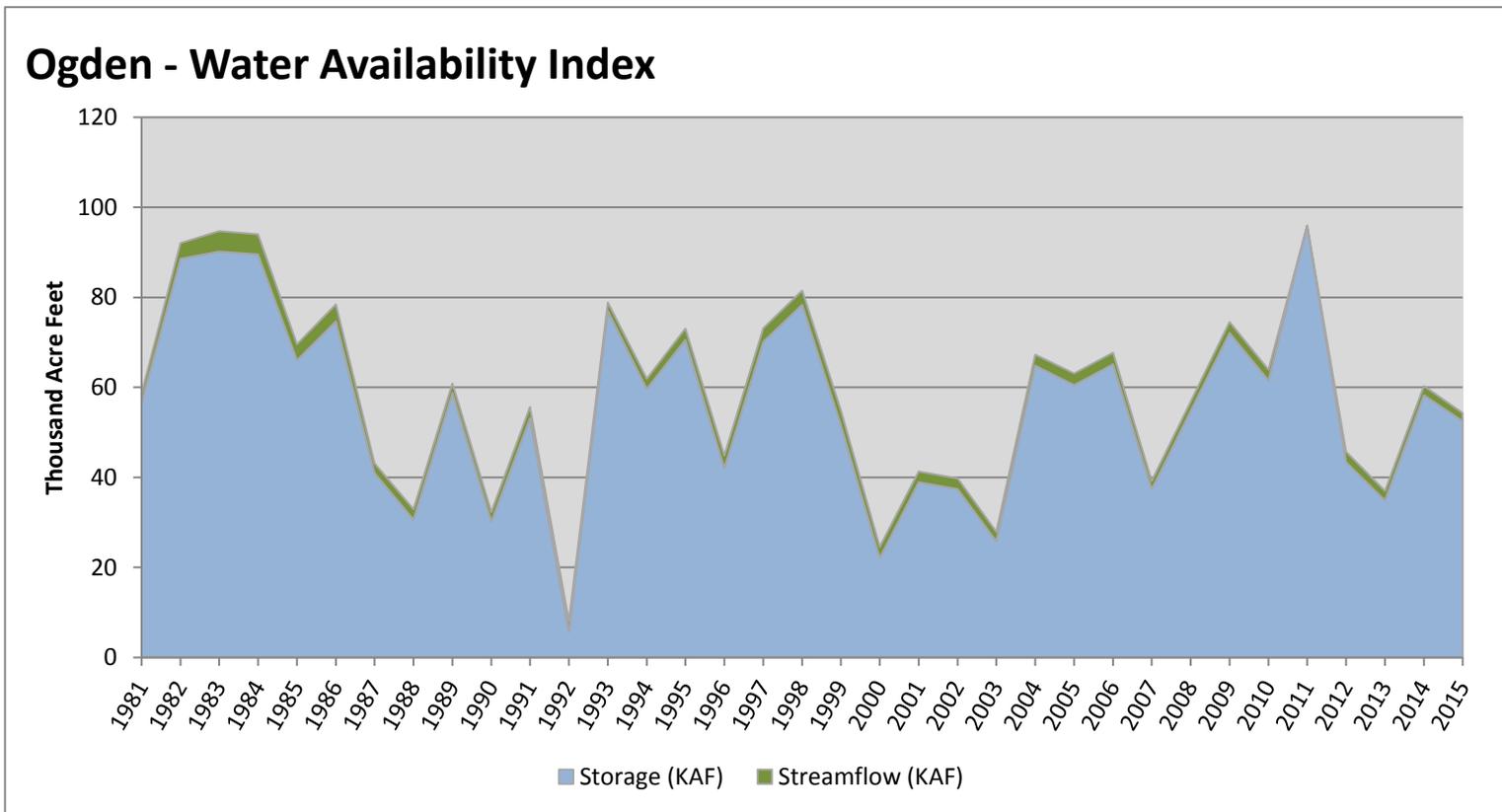


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Ogden</b>	<b>52.46</b>	<b>1.83</b>	<b>54.29</b>	<b>36</b>	<b>-1.16</b>	<b>96, 12, 99, 91</b>

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

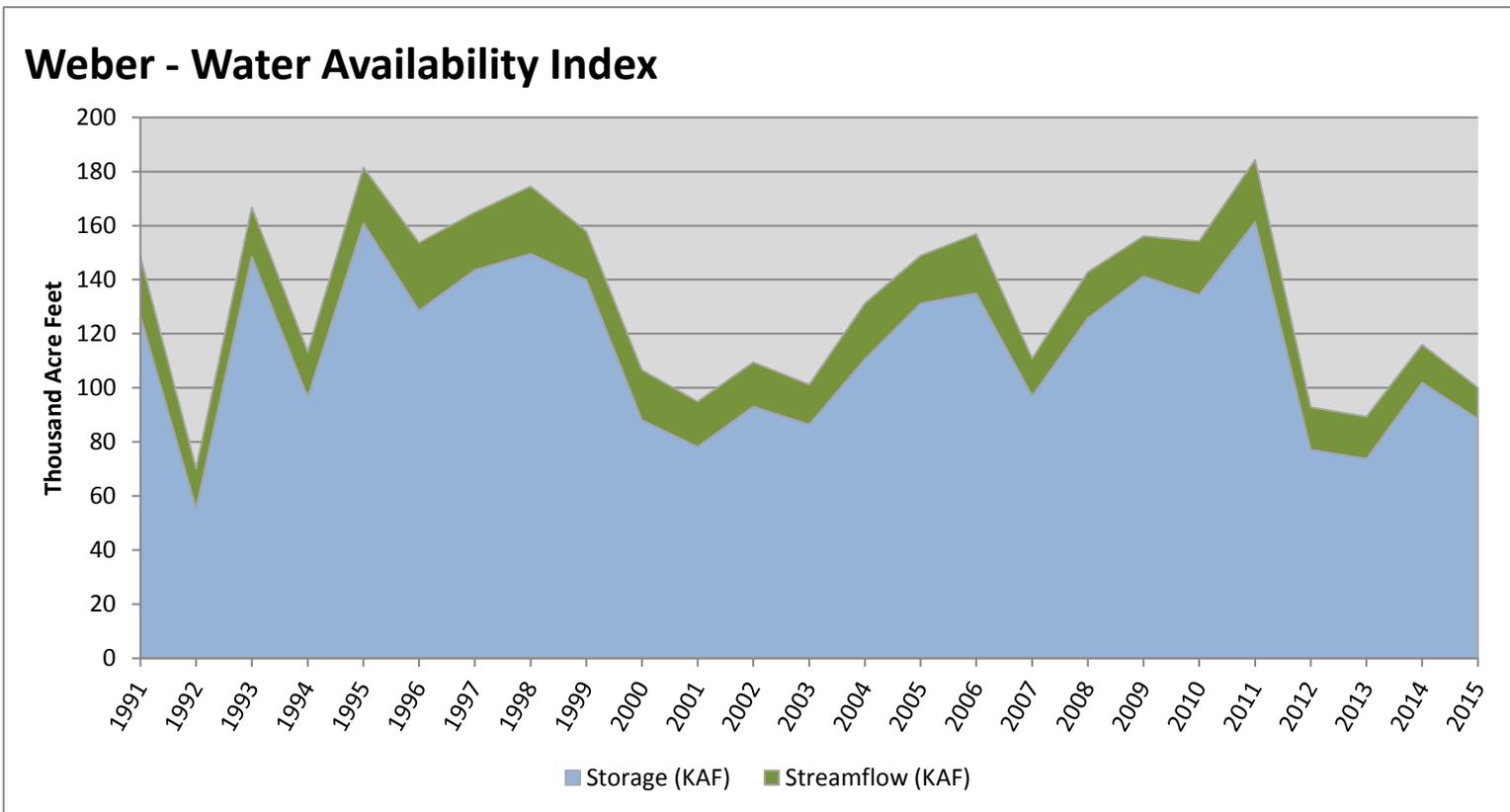


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Weber</b>	<b>88.53</b>	<b>11.50</b>	<b>100.03</b>	<b>19</b>	<b>-2.56</b>	<b>12, 01, 03, 00</b>

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

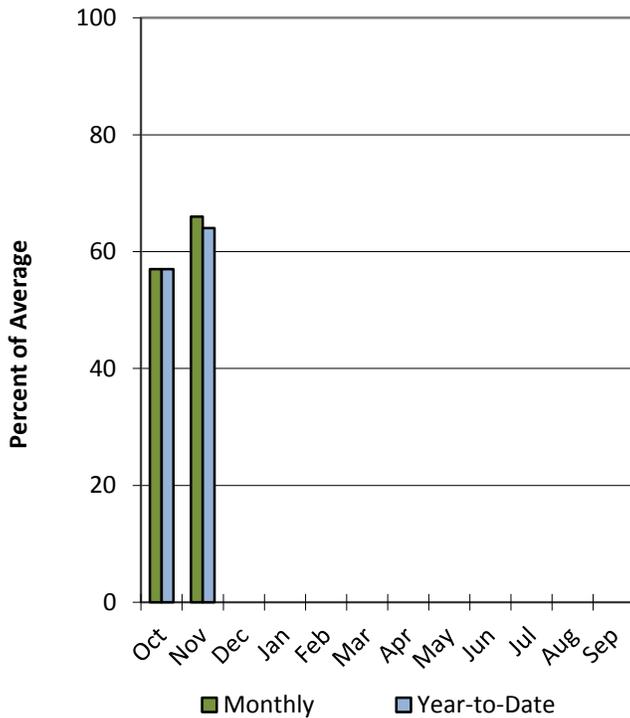


# Provo & Jordan River Basins

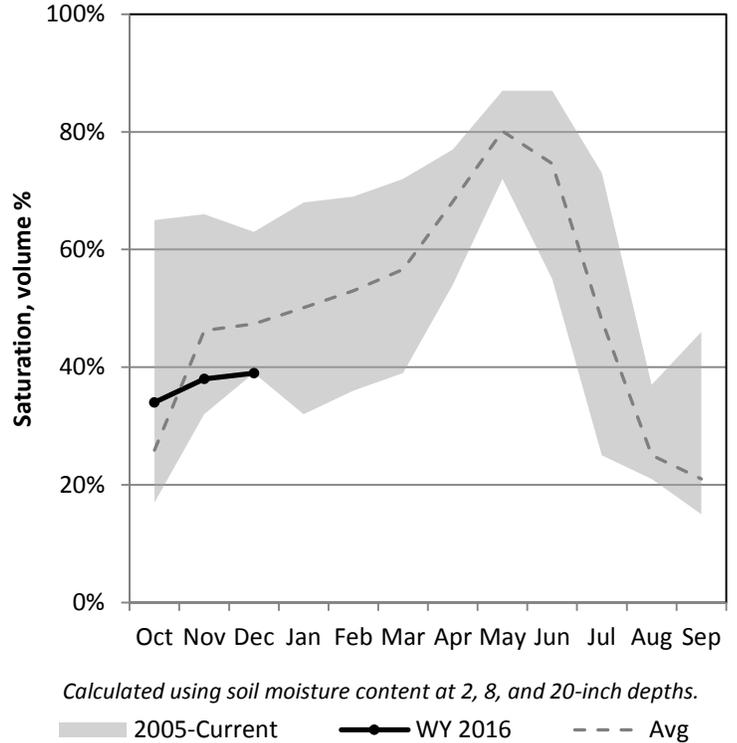
12/1/2015

Precipitation in November was much below average at 66%, which brings the seasonal accumulation (Oct-Nov) to 64% of average. Soil moisture is at 39% compared to 57% last year. Reservoir storage is at 59% of capacity, compared to 66% last year. The water availability index for the Provo River is 14%.

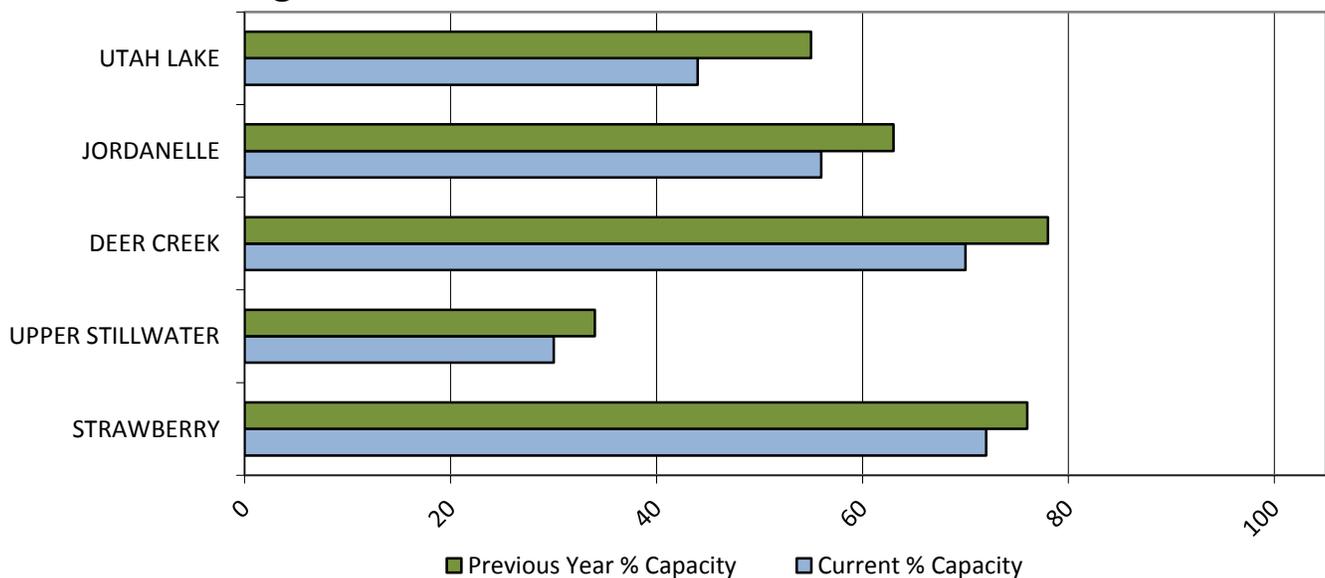
## Precipitation



## Soil Moisture



## Reservoir Storage

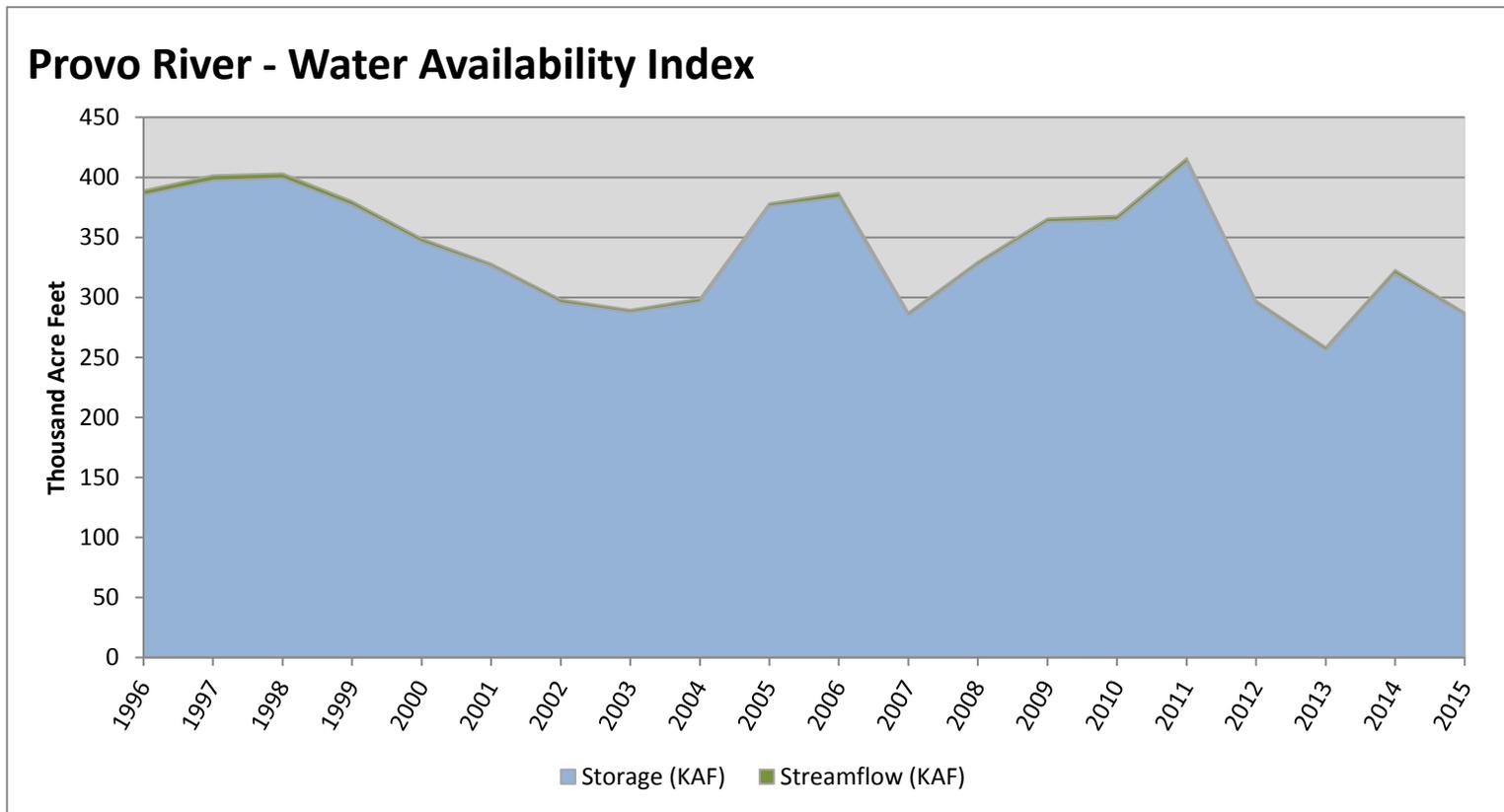


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Provo River</b>	<b>285.16</b>	<b>2.19</b>	<b>287.35</b>	<b>14</b>	<b>-2.98</b>	<b>13, 07, 03, 12</b>

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

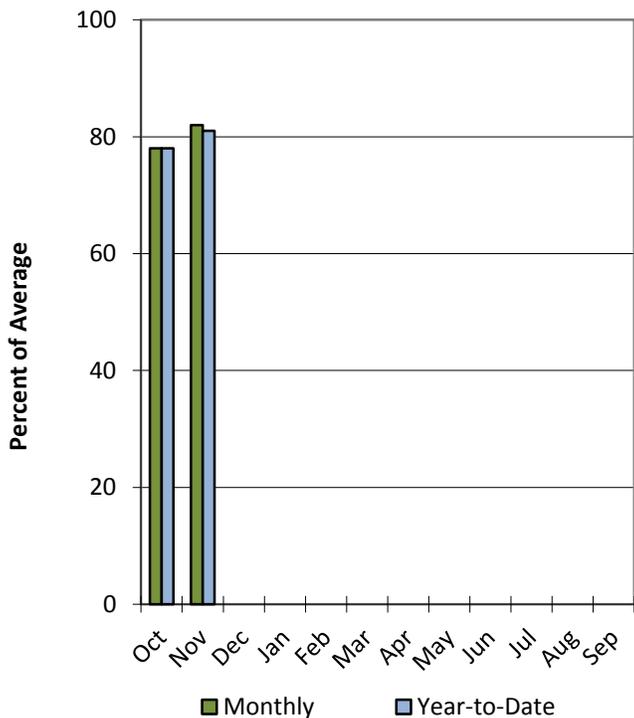


# Tooele & Vernon Creek Basins

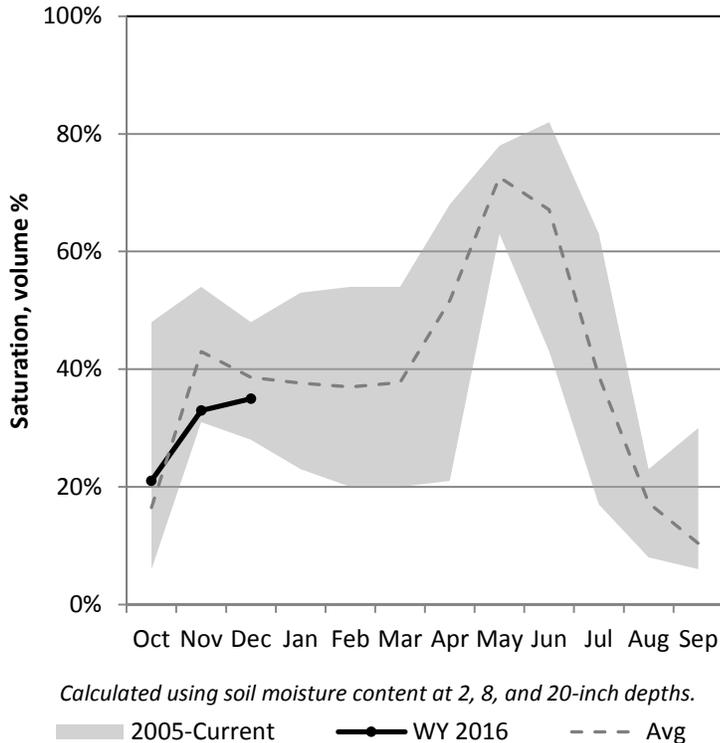
12/1/2015

Precipitation in November was below average at 82%, which brings the seasonal accumulation (Oct-Nov) to 81% of average. Soil moisture is at 35% compared to 37% last year. Reservoir storage is at 29% of capacity, compared to 23% last year.

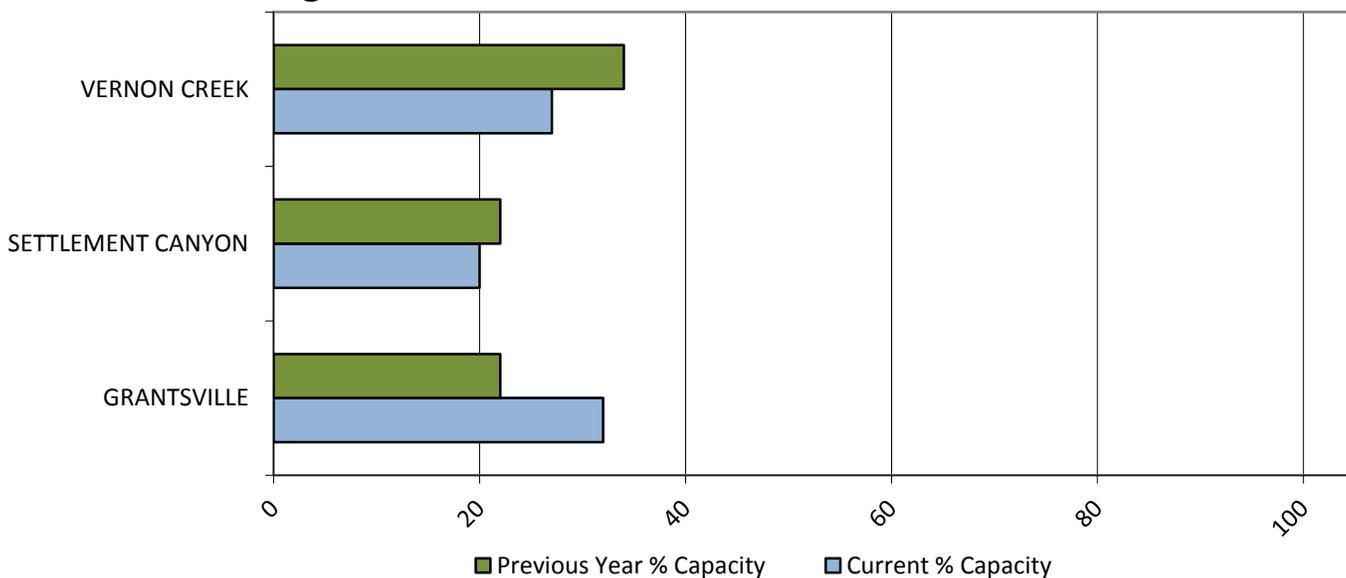
## Precipitation



## Soil Moisture



## Reservoir Storage

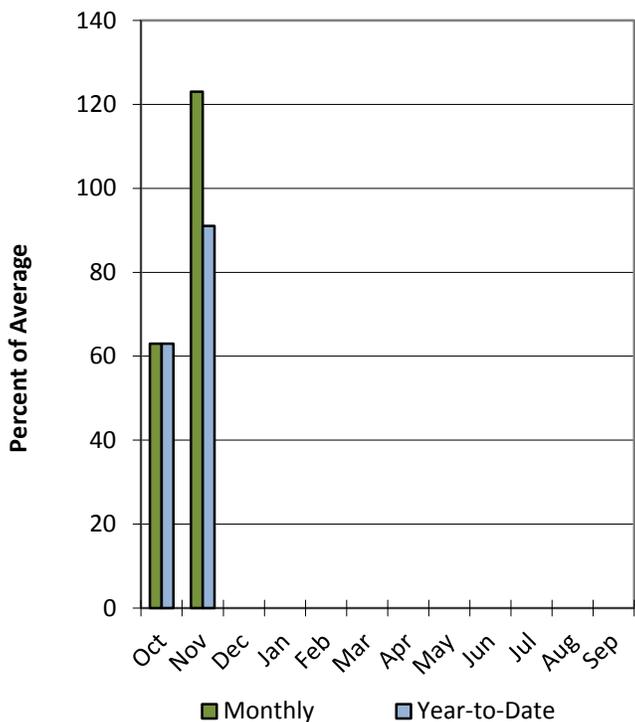


# Northeastern Uintah Basin

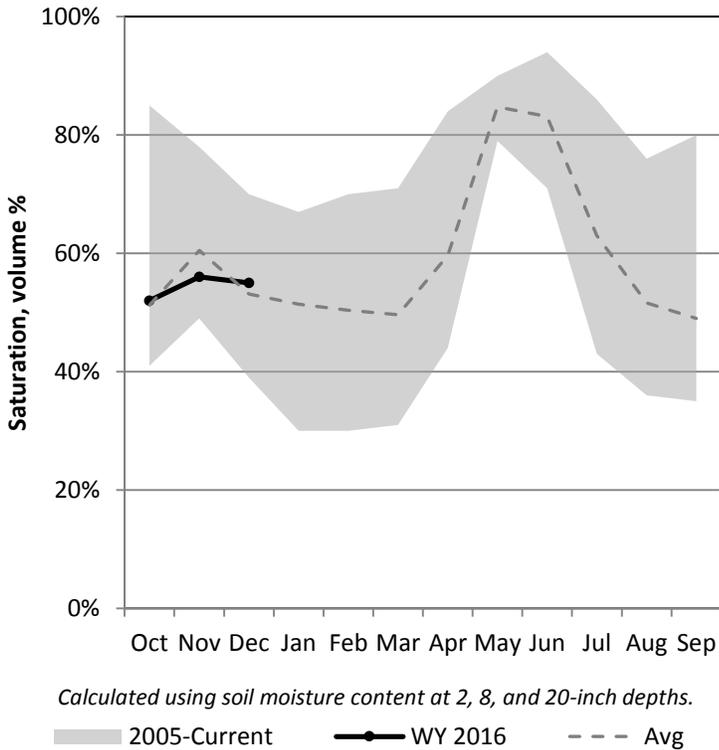
12/1/2015

Precipitation in November was above average at 123%, which brings the seasonal accumulation (Oct-Nov) to 91% of average. Soil moisture is at 55% compared to 69% last year. Reservoir storage is at 87% of capacity, compared to 88% last year. The Water Availability Index for Blacks Fork is 24% and 53% for Smiths Creek.

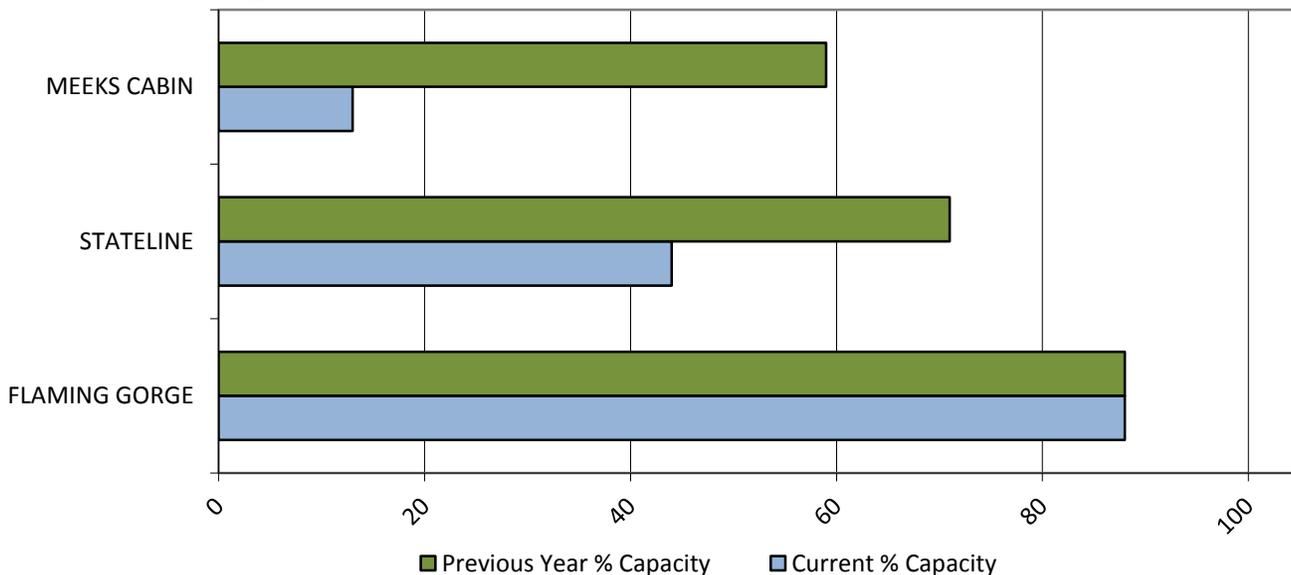
## Precipitation



## Soil Moisture



## Reservoir Storage

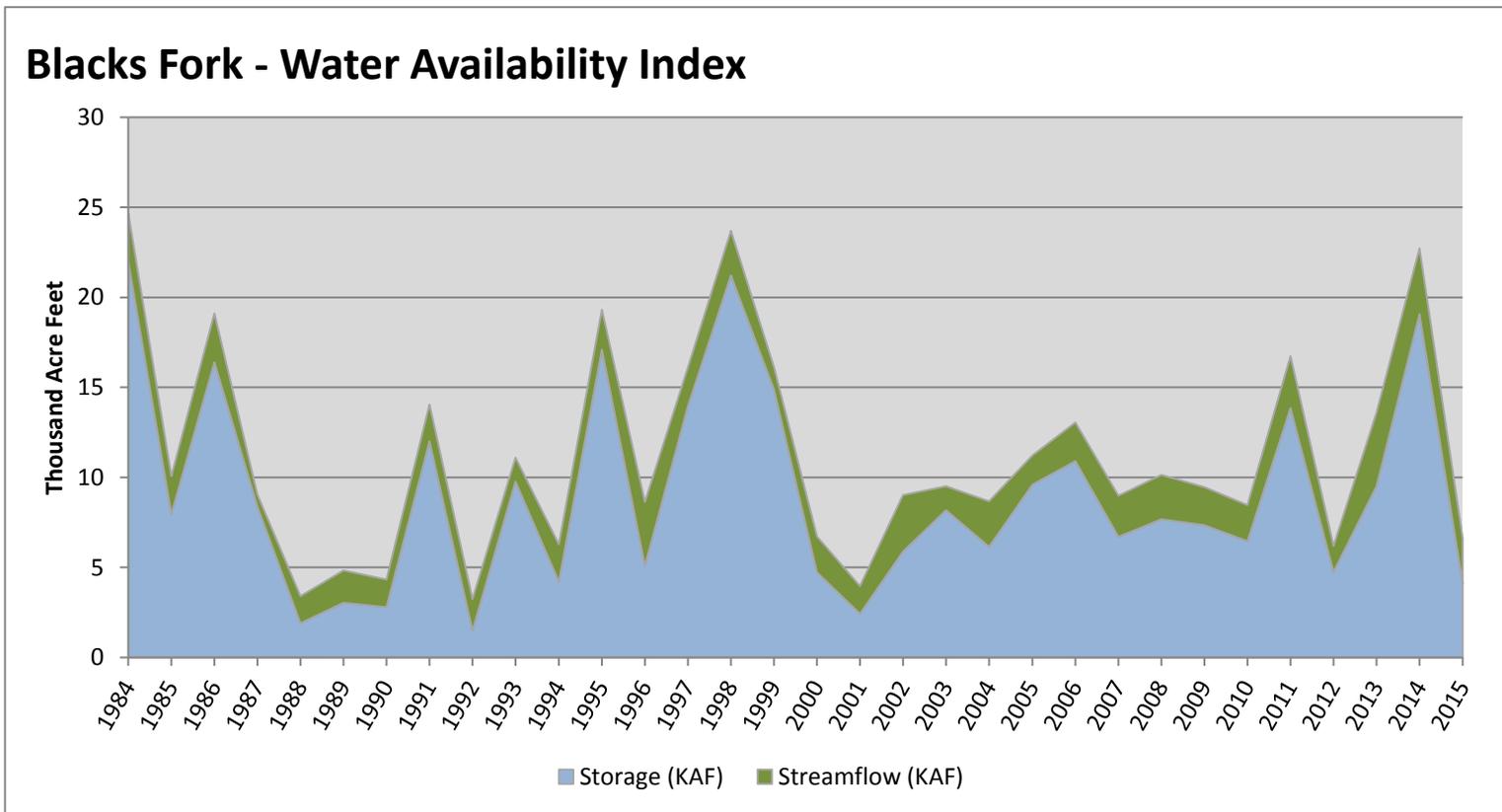


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November 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>4.09</b>	<b>2.52</b>	<b>6.61</b>	<b>24</b>	<b>-2.15</b>	<b>12, 94, 00, 10</b>

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

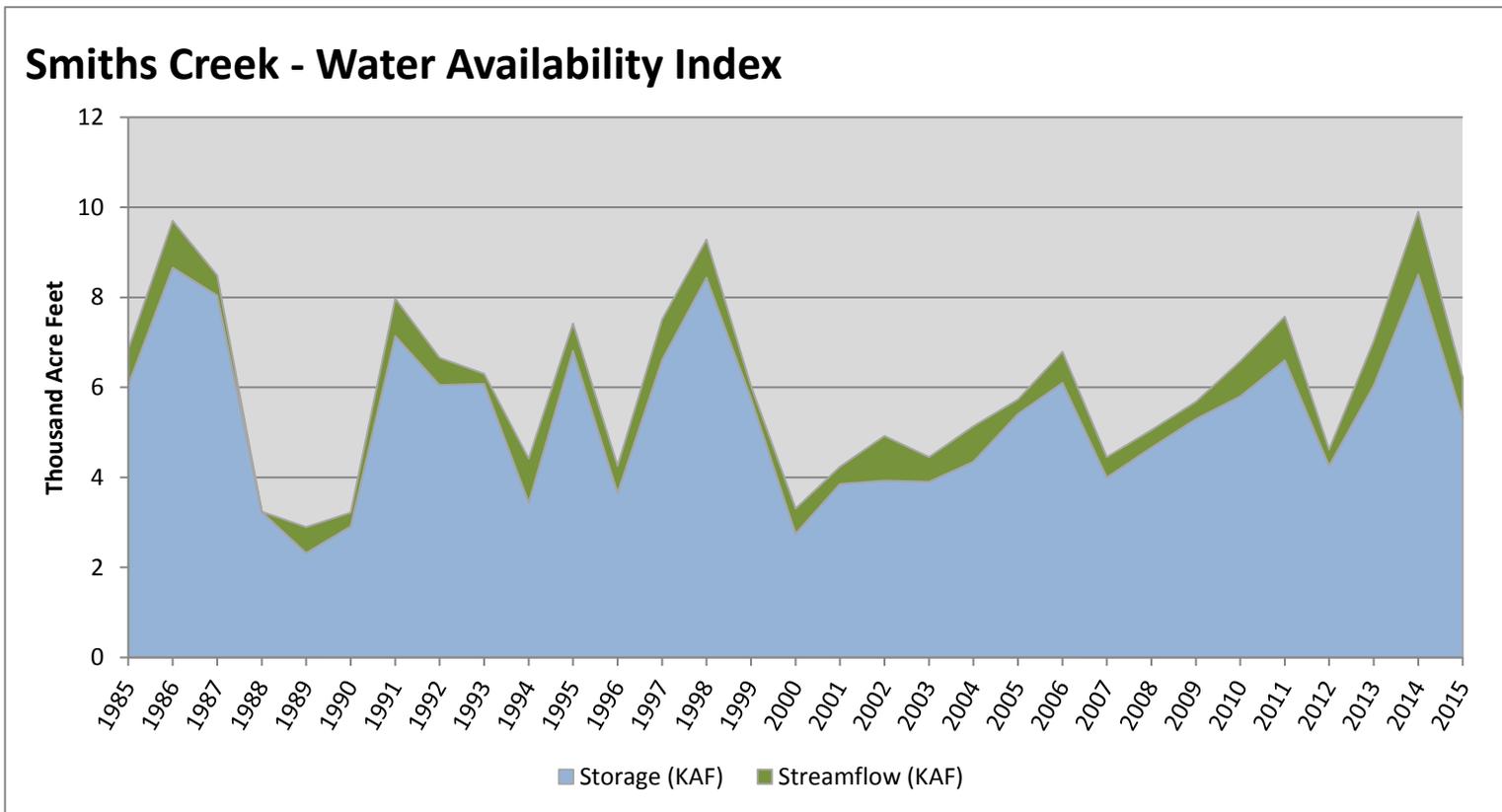


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Smiths Creek</b>	<b>5.32</b>	<b>0.90</b>	<b>6.22</b>	<b>53</b>	<b>0.26</b>	<b>05, 99, 93, 10</b>

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

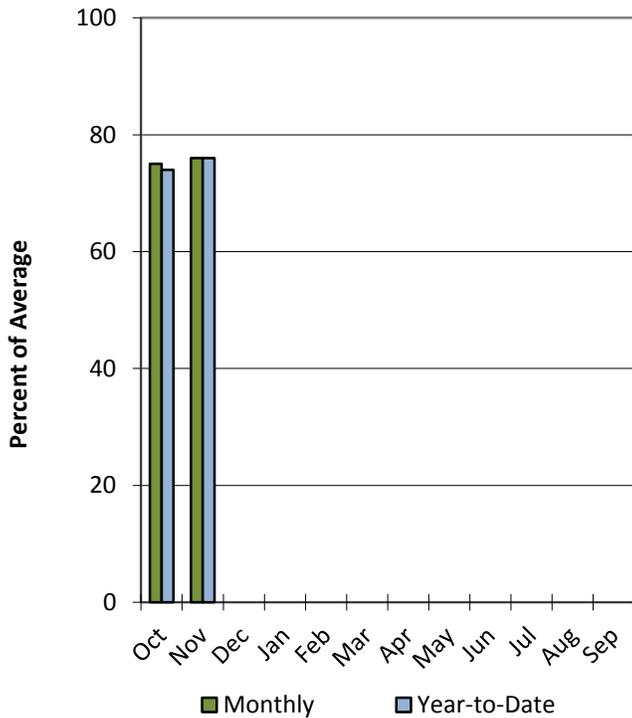


# Duchesne River Basin

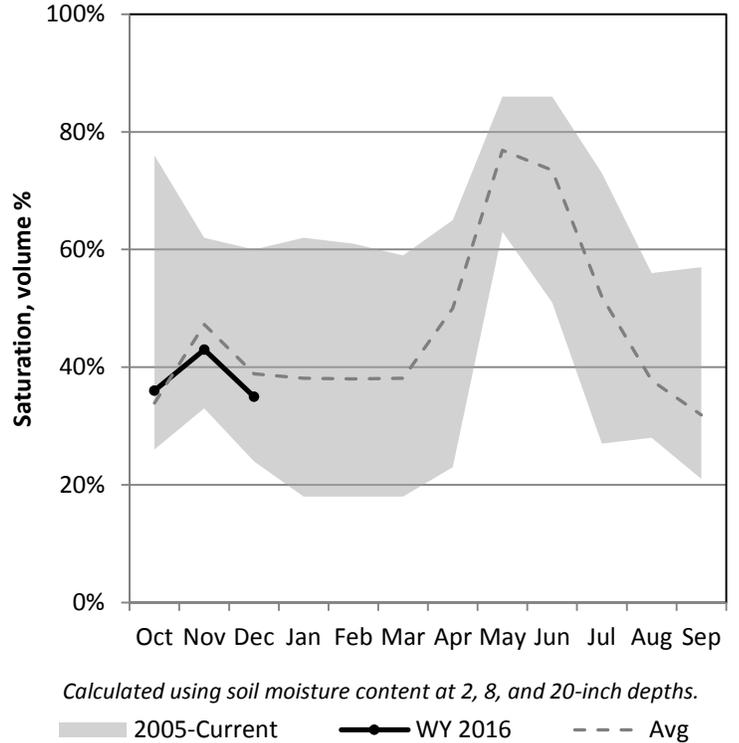
12/1/2015

Precipitation in November was below average at 76%, which brings the seasonal accumulation (Oct-Nov) to 76% of average. Soil moisture is at 35% compared to 44% last year. Reservoir storage is at 70% of capacity, compared to 74% last year. The water availability index for the Western Uintahs is 66% and 31% for the Eastern Uintahs.

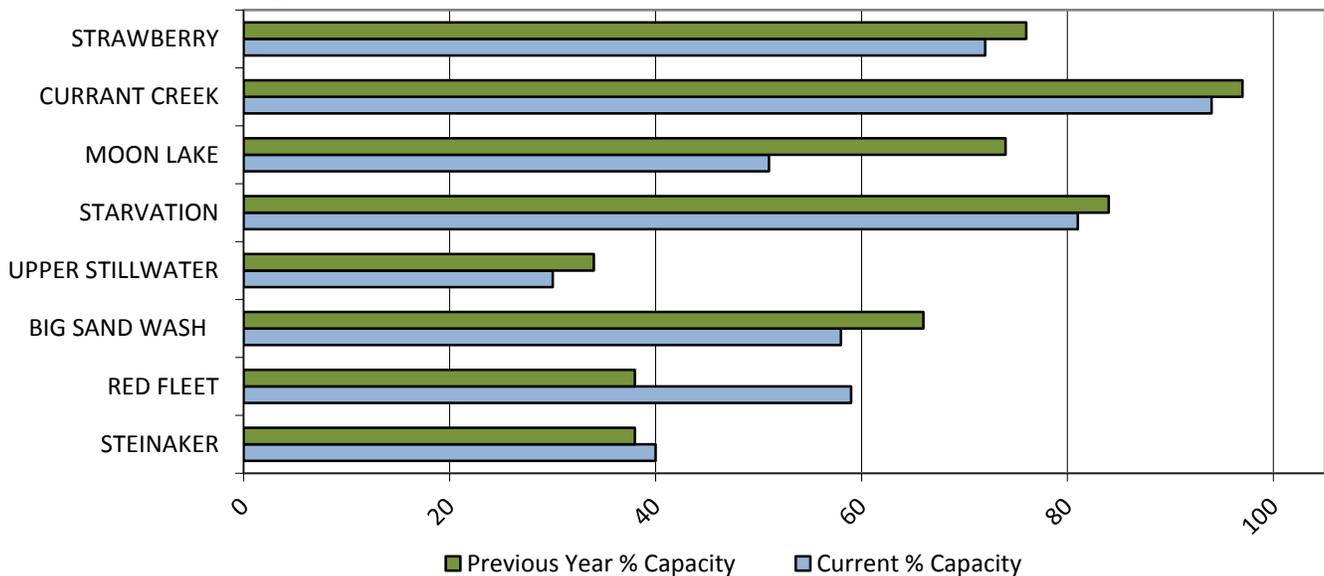
## Precipitation



## Soil Moisture



## Reservoir Storage

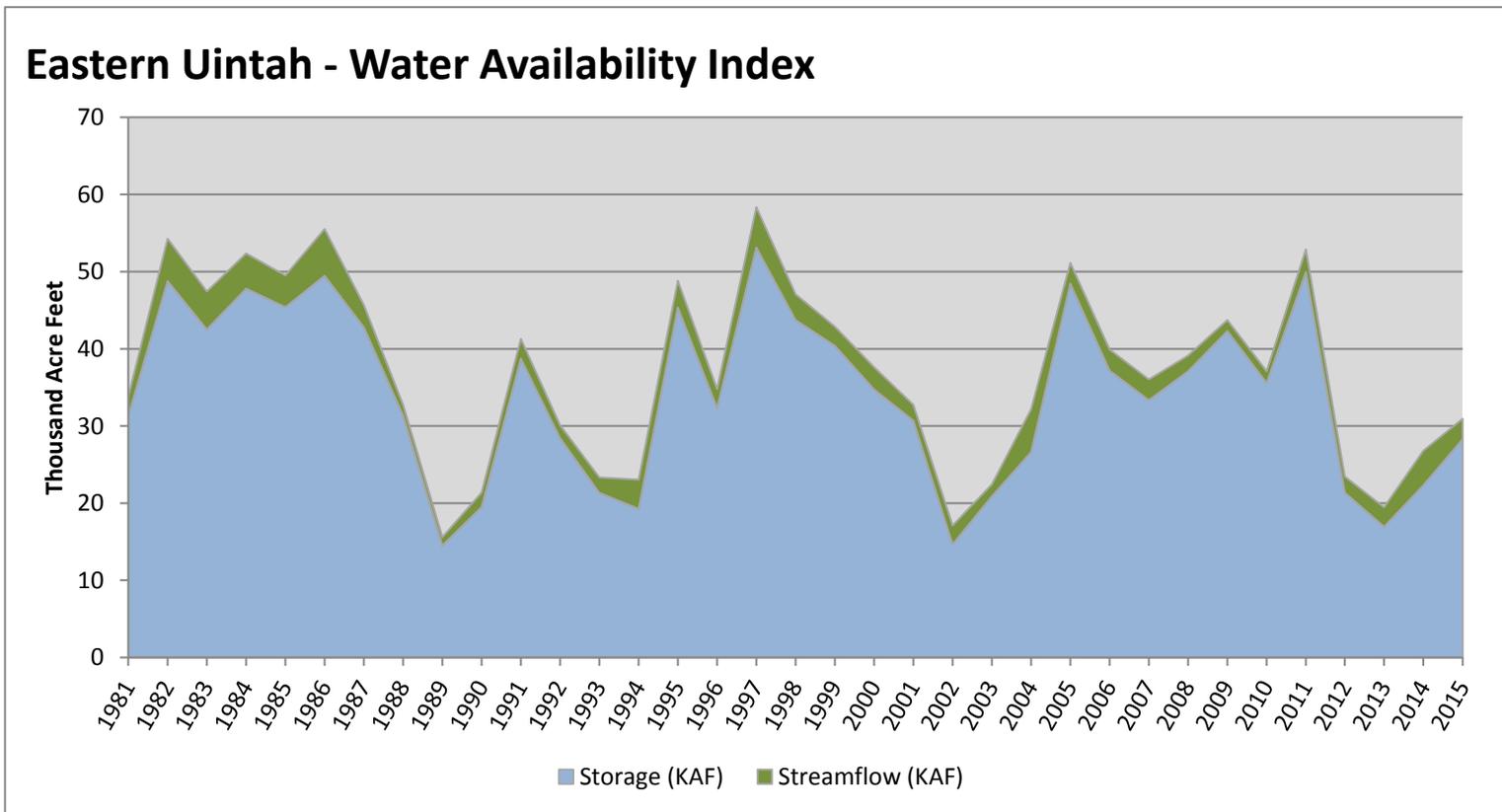


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November 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>28.30</b>	<b>2.64</b>	<b>30.94</b>	<b>31</b>	<b>-1.62</b>	<b>14, 92, 04, 88</b>

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

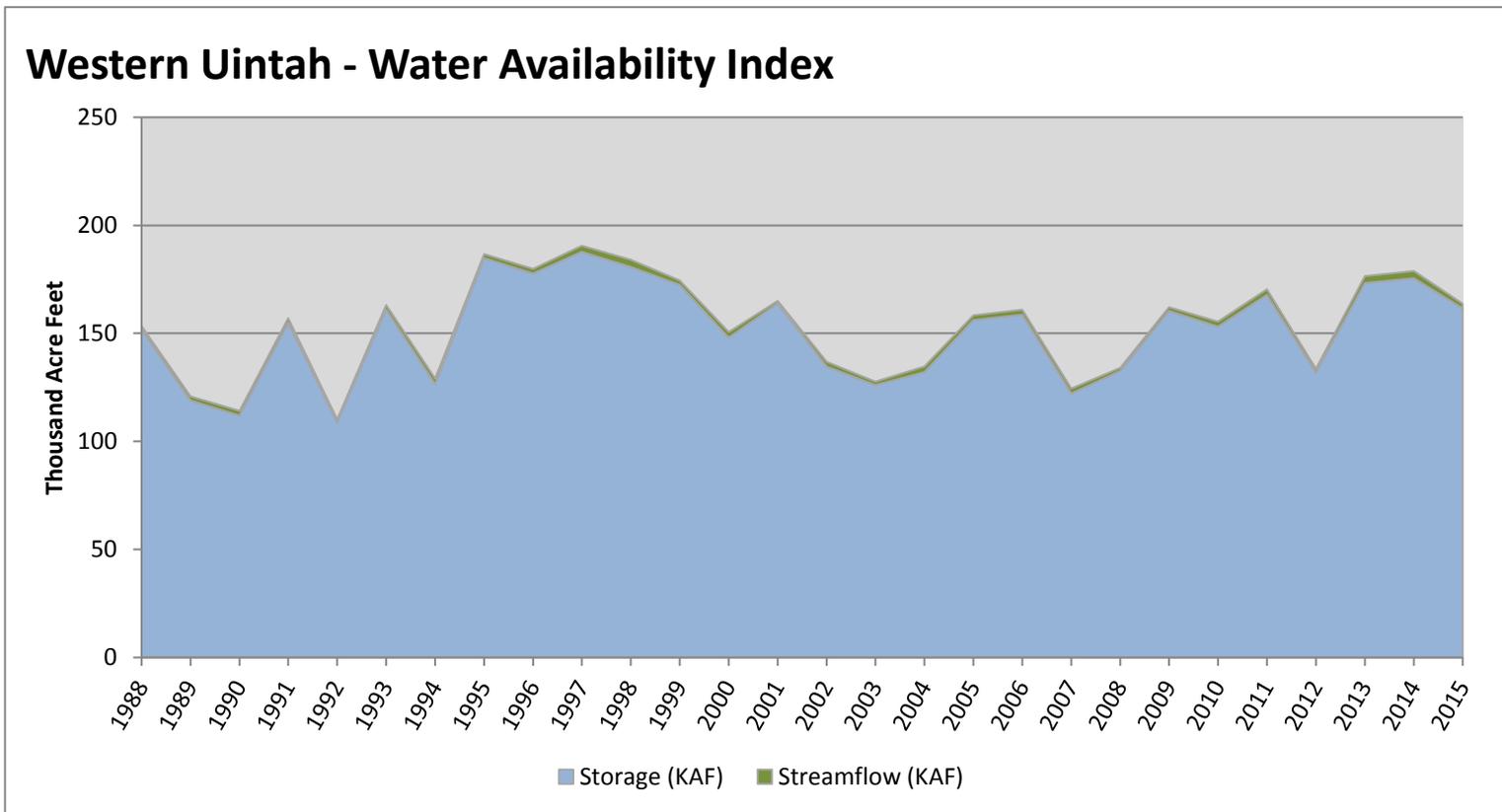


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Western Uintah</b>	<b>161.51</b>	<b>2.25</b>	<b>163.76</b>	<b>66</b>	<b>1.29</b>	<b>09, 93, 01, 11</b>

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

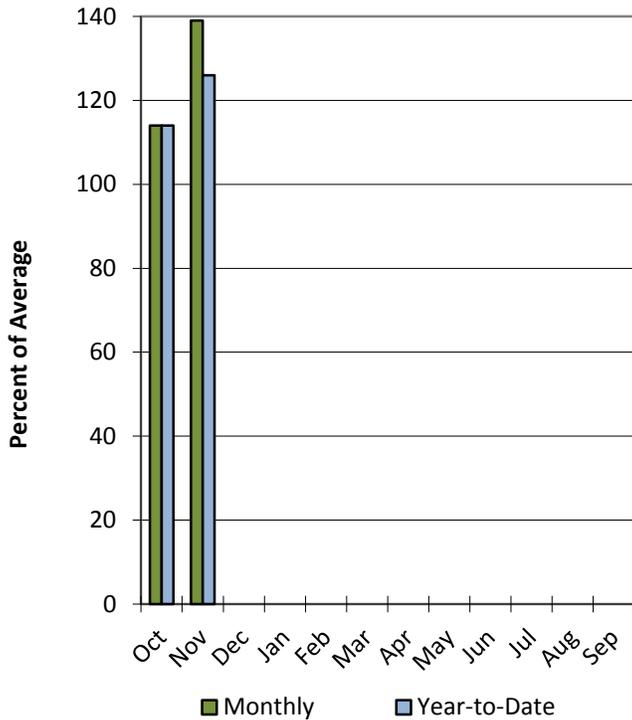


# Lower Sevier River Basin

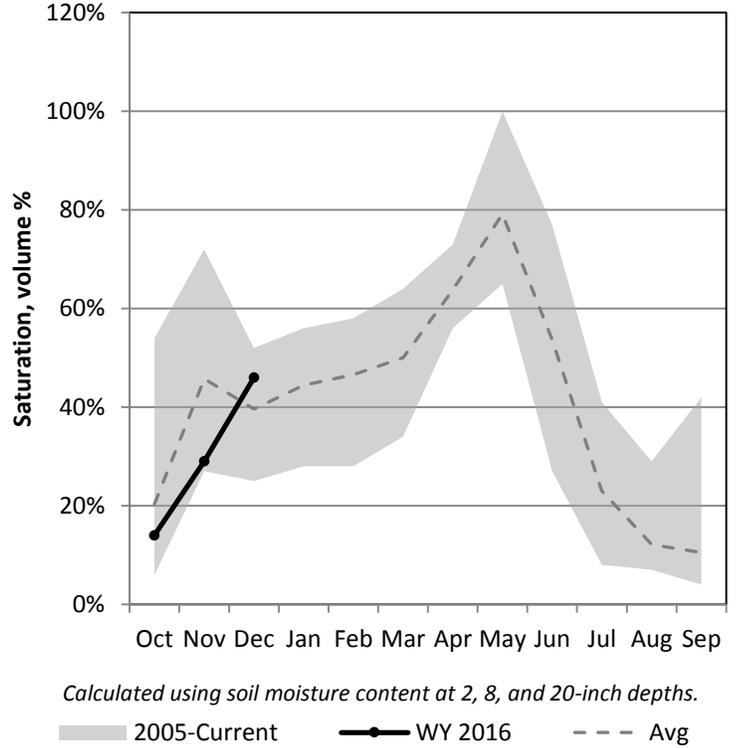
12/1/2015

Precipitation in November was much above average at 139%, which brings the seasonal accumulation (Oct-Nov) to 126% of average. Soil moisture is at 46% compared to 39% last year. Reservoir storage is at 18% of capacity, compared to 28% last year. The water availability index for the Lower Sevier is 11%.

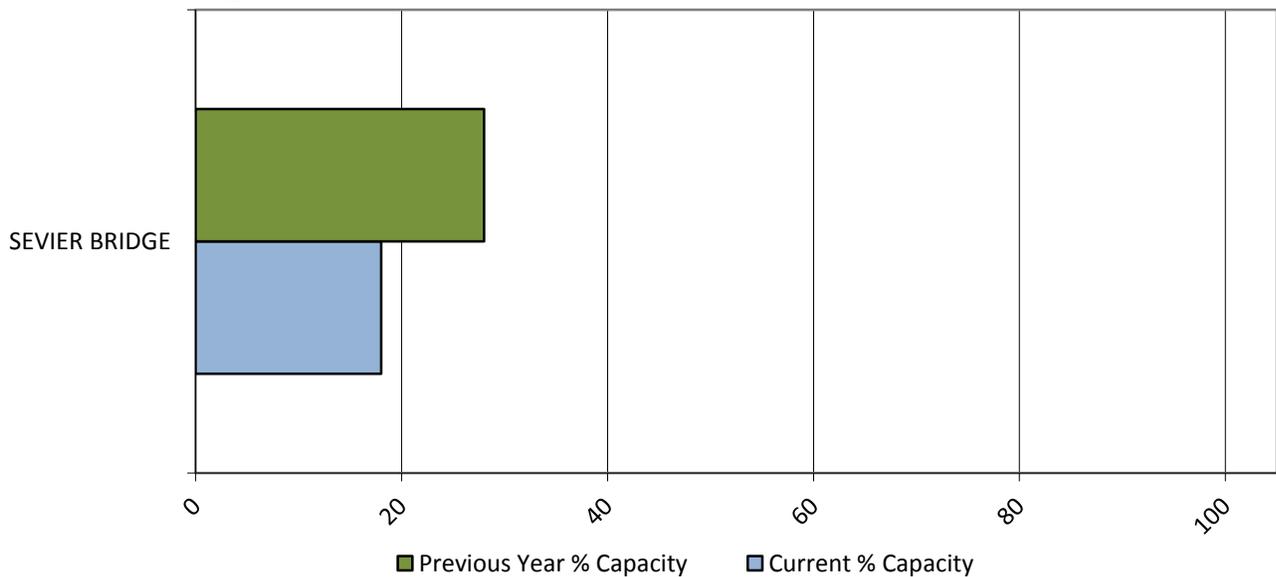
## Precipitation



## Soil Moisture



## Reservoir Storage

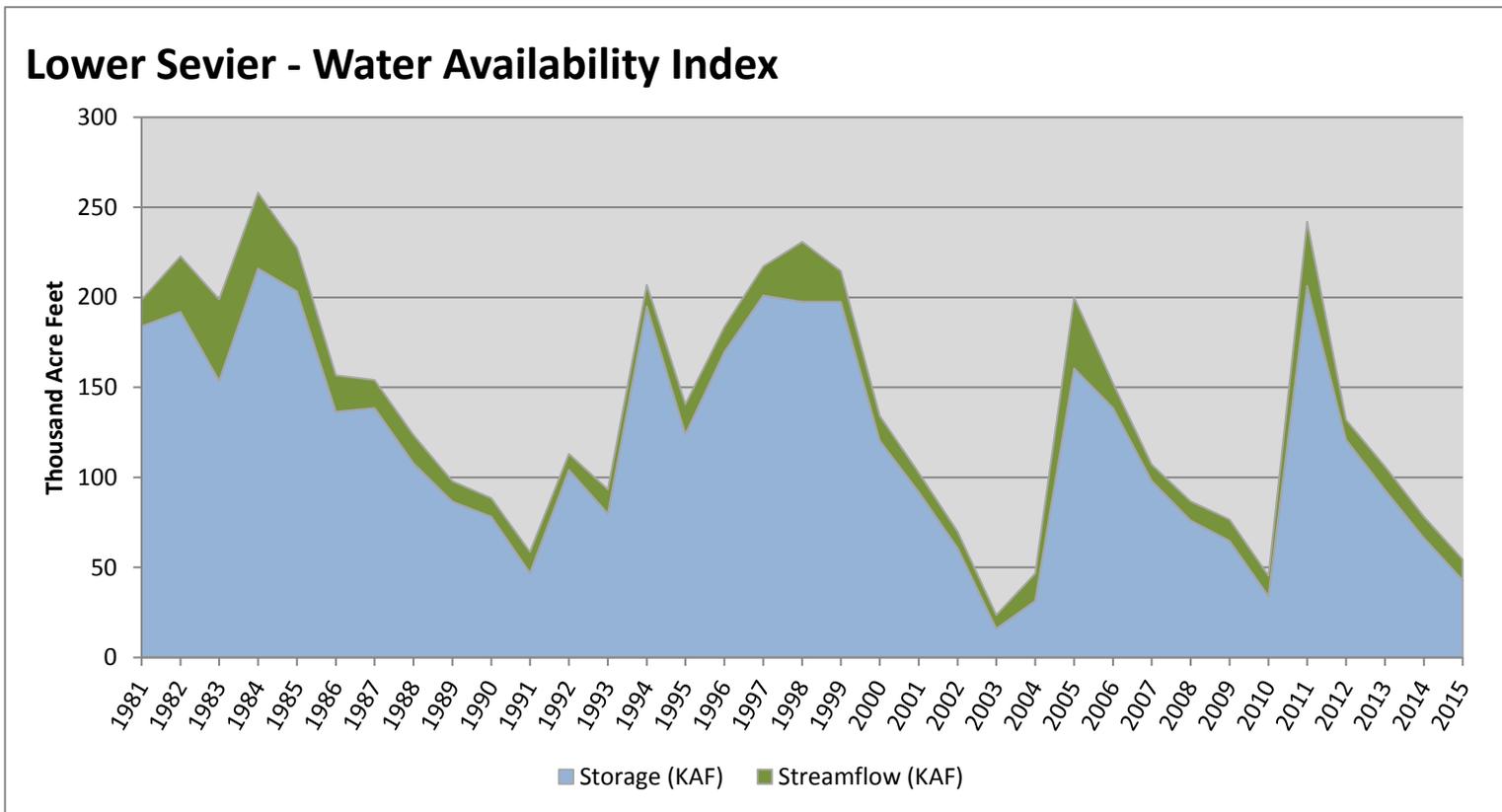


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Lower Sevier</b>	<b>42.91</b>	<b>11.51</b>	<b>54.42</b>	<b>11</b>	<b>-3.24</b>	<b>10, 04, 91, 02</b>

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

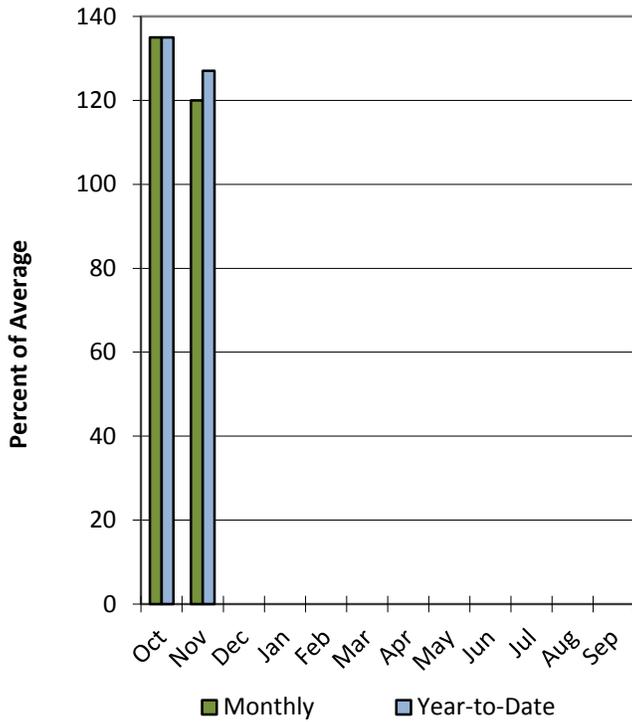


# Upper Sevier River Basin

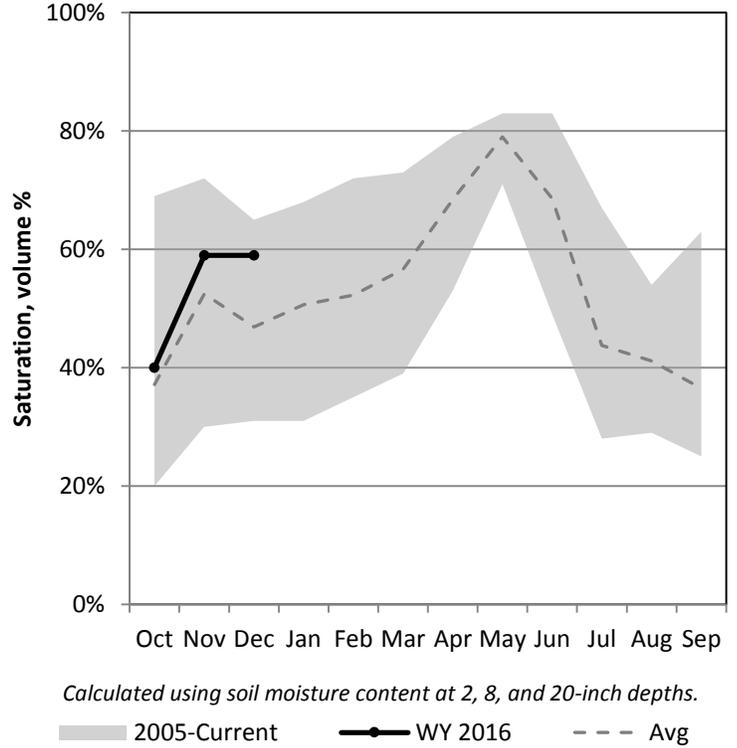
12/1/2015

Precipitation in November was above average at 120%, which brings the seasonal accumulation (Oct-Nov) to 127% of average. Soil moisture is at 59% compared to 63% last year. Reservoir storage is at 24% of capacity, compared to 36% last year. The water availability index for the Upper Sevier is 22%.

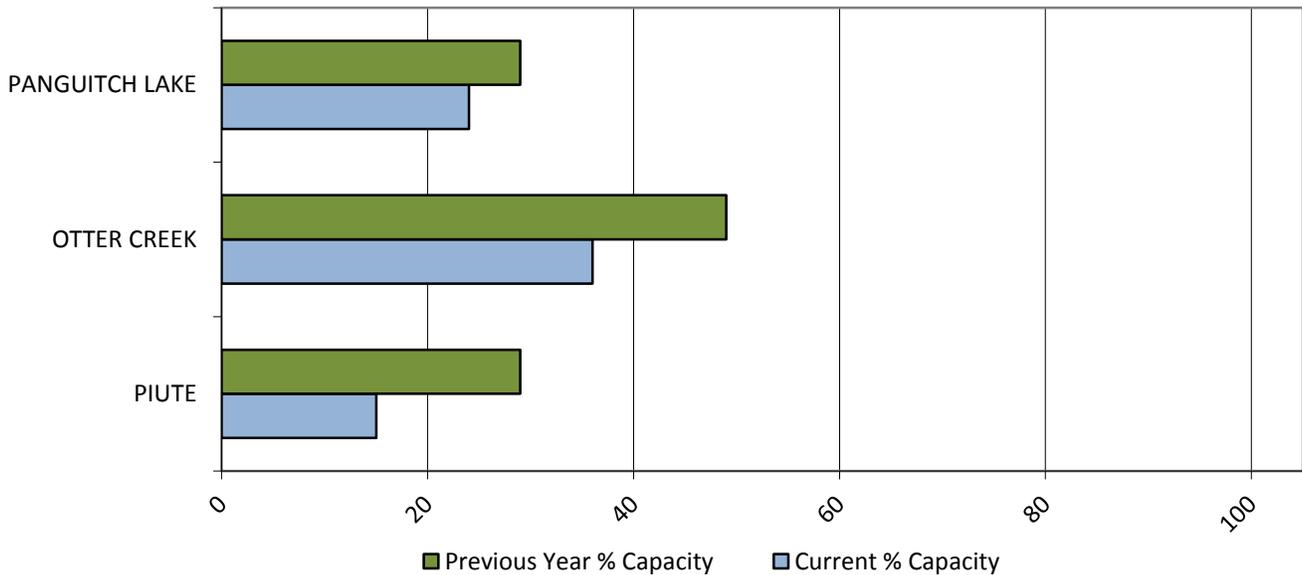
## Precipitation



## Soil Moisture



## Reservoir Storage

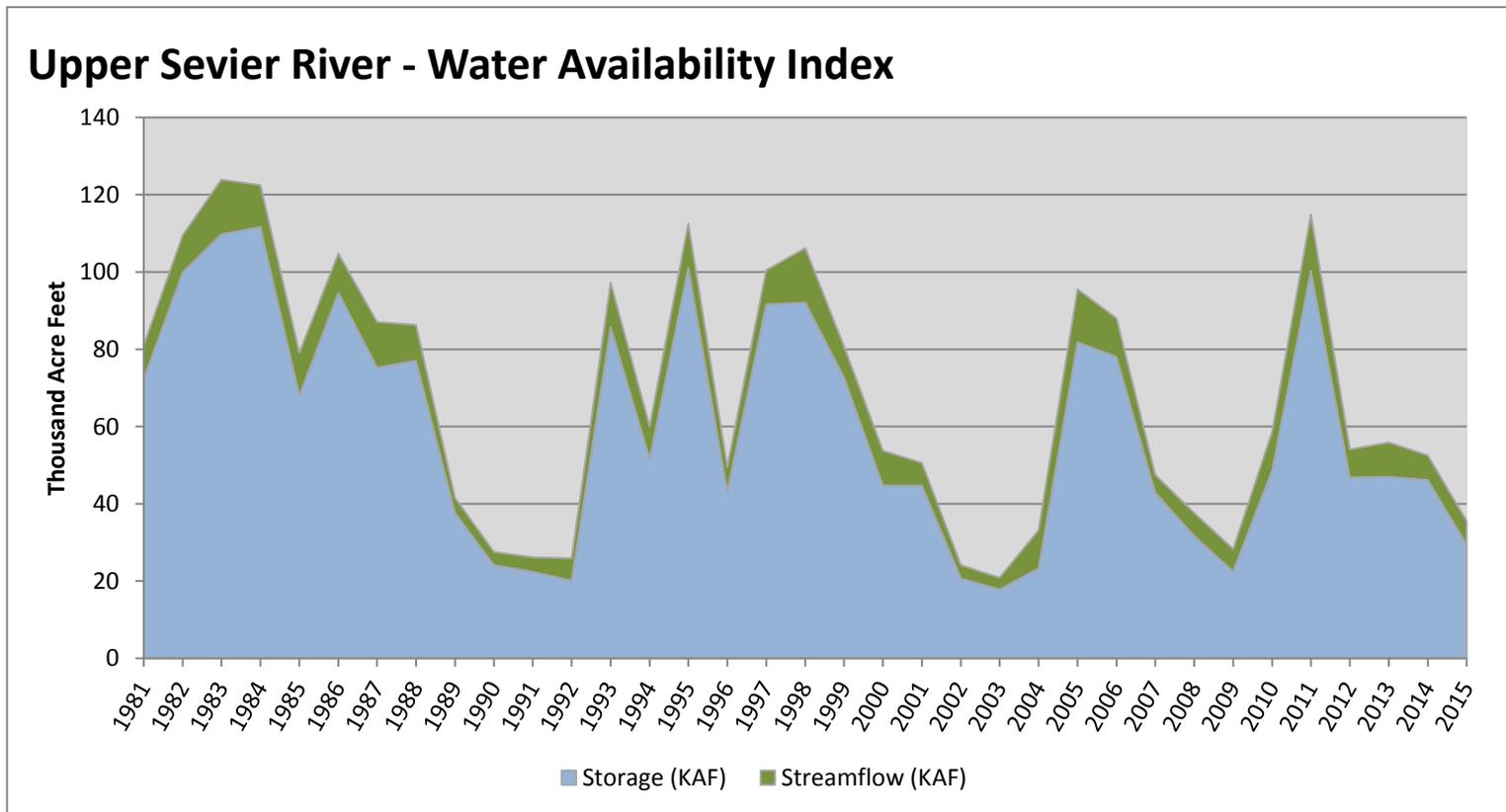


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Upper Sevier River</b>	<b>29.36</b>	<b>6.18</b>	<b>35.54</b>	<b>22</b>	<b>-2.31</b>	<b>09, 04, 08, 89</b>

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

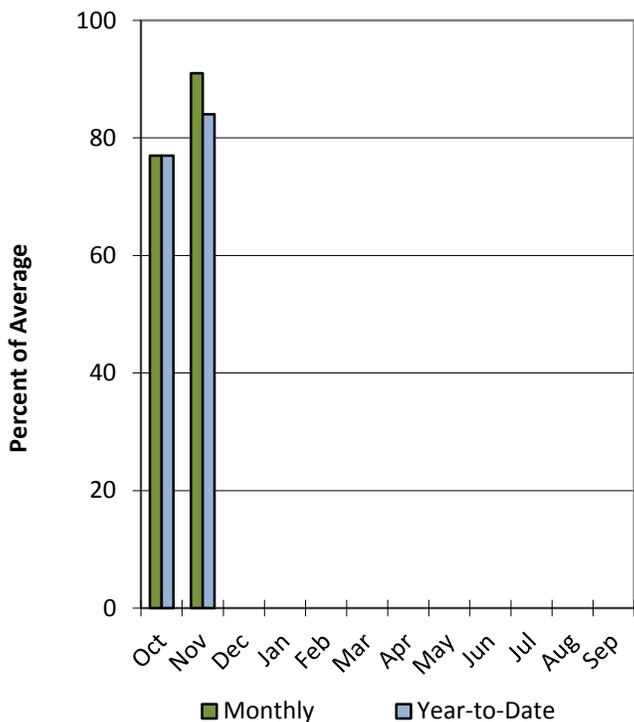


# San Pitch River Basin

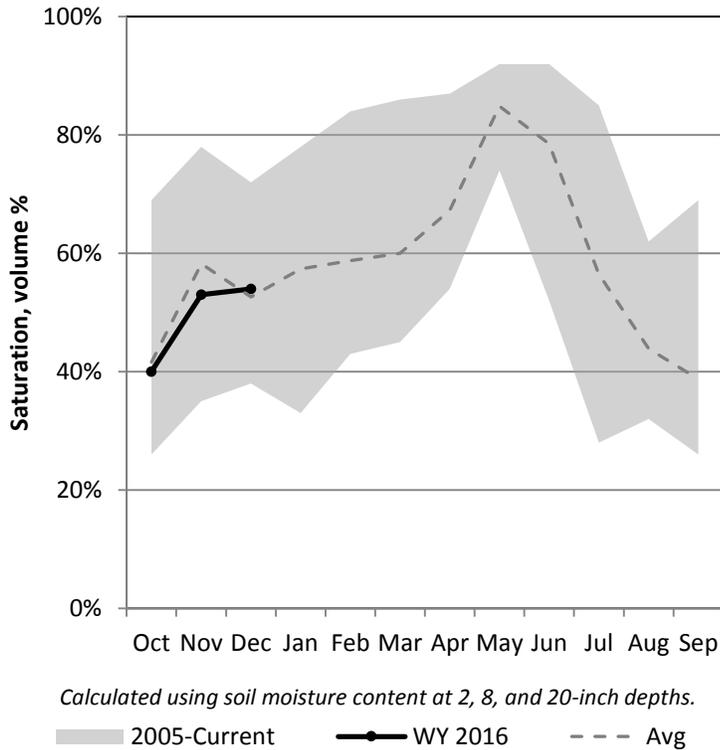
12/1/2015

Precipitation in November was near average at 91%, which brings the seasonal accumulation (Oct-Nov) to 84% of average. Soil Moisture is at 54% 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 17%.

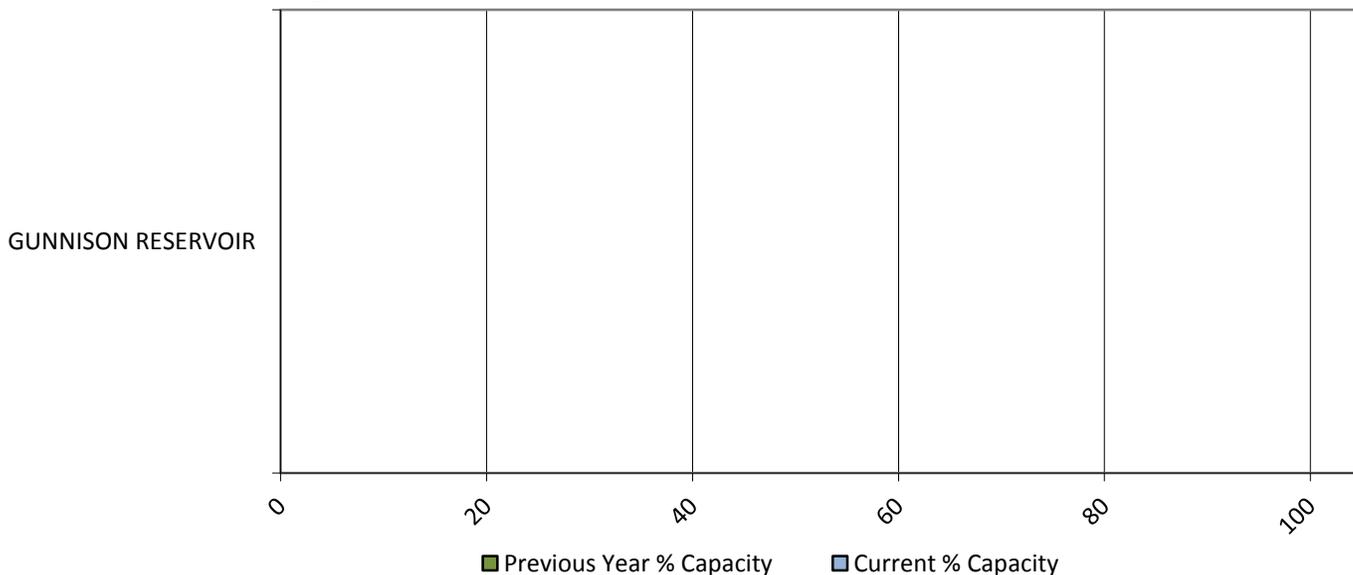
## Precipitation



## Soil Moisture



## Reservoir Storage

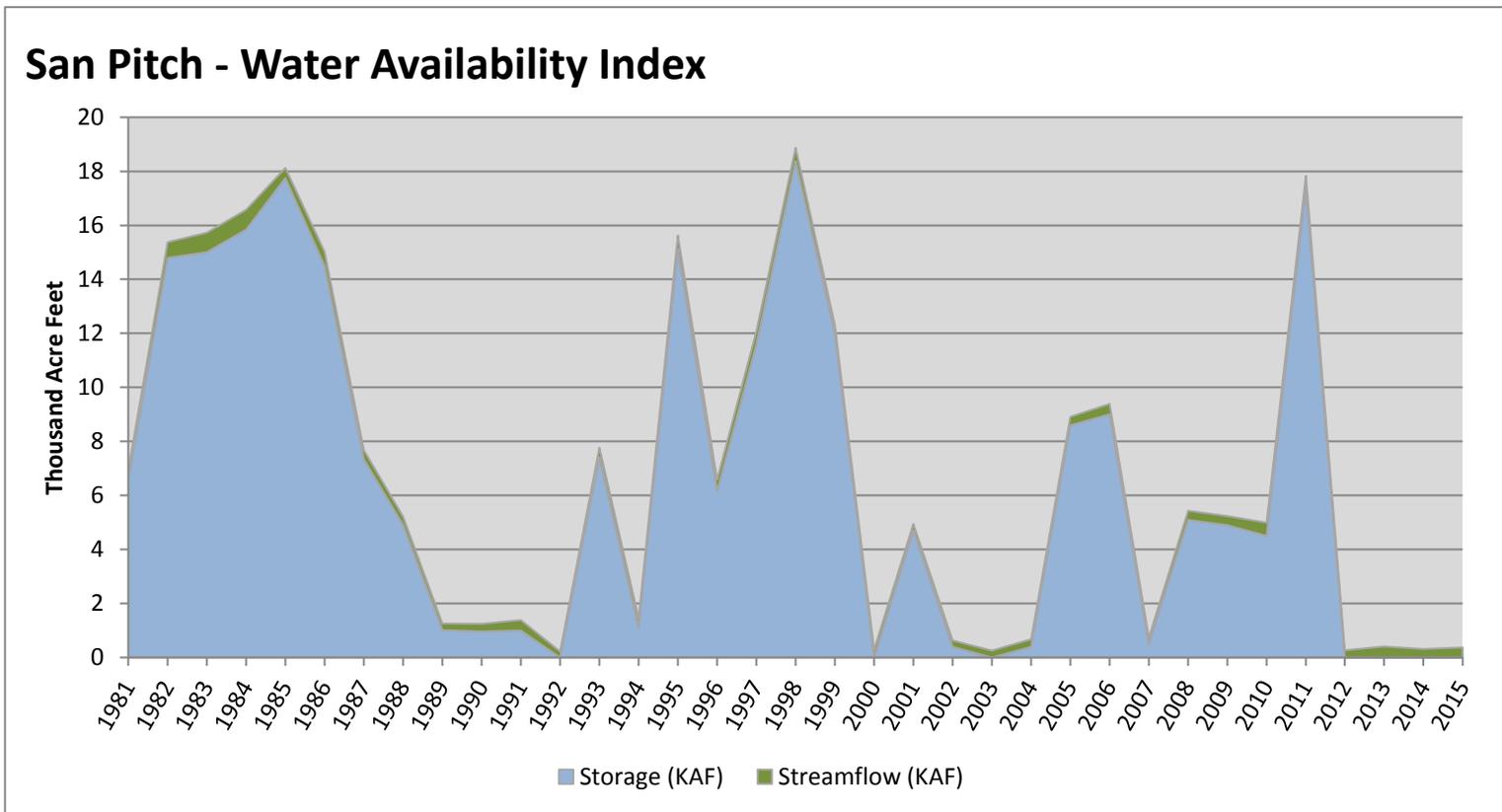


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>San Pitch</b>	<b>0.00</b>	<b>0.37</b>	<b>0.37</b>	<b>17</b>	<b>-2.78</b>	<b>00, 14, 13, 02</b>

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

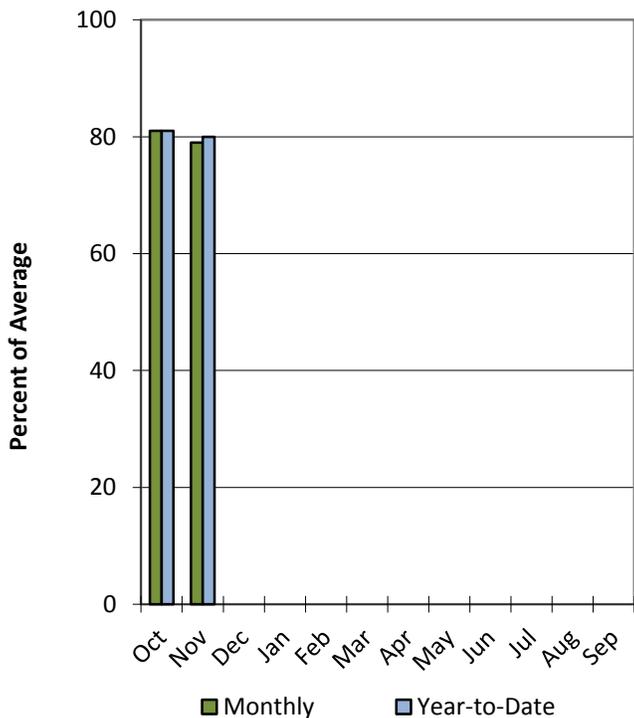


# Price & San Rafael Basins

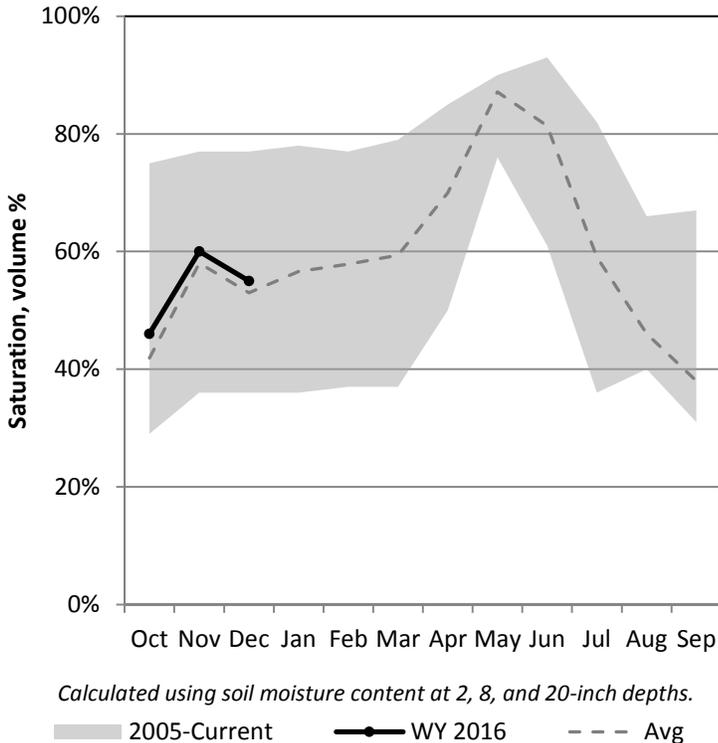
12/1/2015

Precipitation in November was below average at 79%, which brings the seasonal accumulation (Oct-Nov) to 80% of average. Soil moisture is at 55% compared to 66% last year. Reservoir storage is at 37% of capacity, compared to 46% last year. The water availability index for the Price River is 14%, and 31% for Joe's Valley.

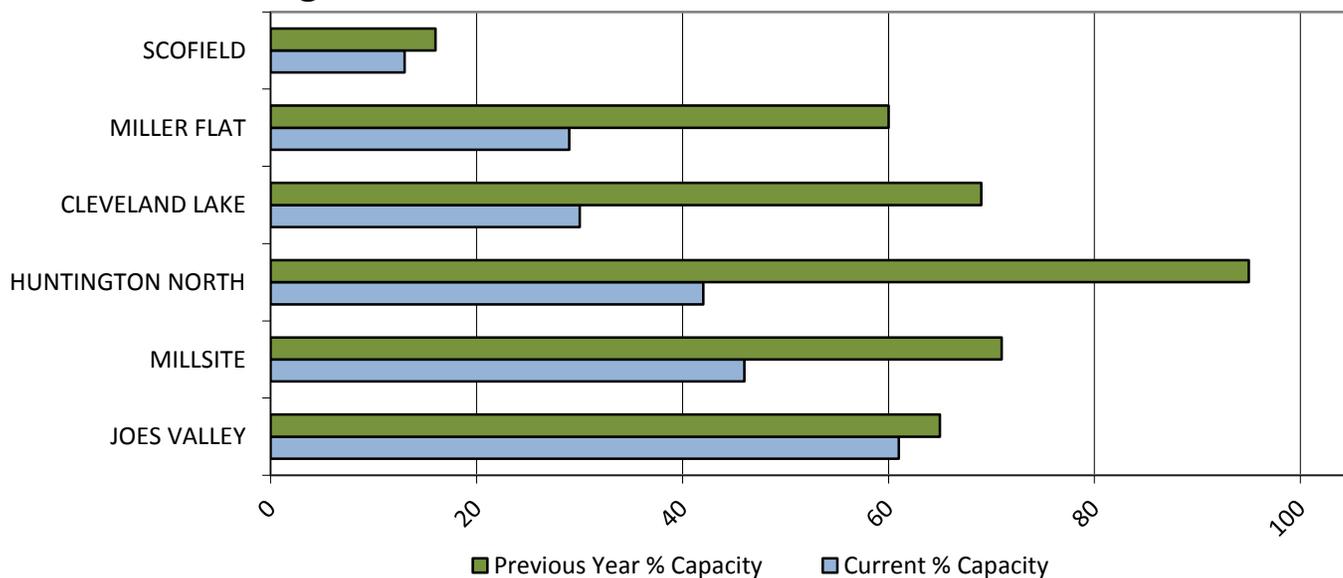
## Precipitation



## Soil Moisture



## Reservoir Storage

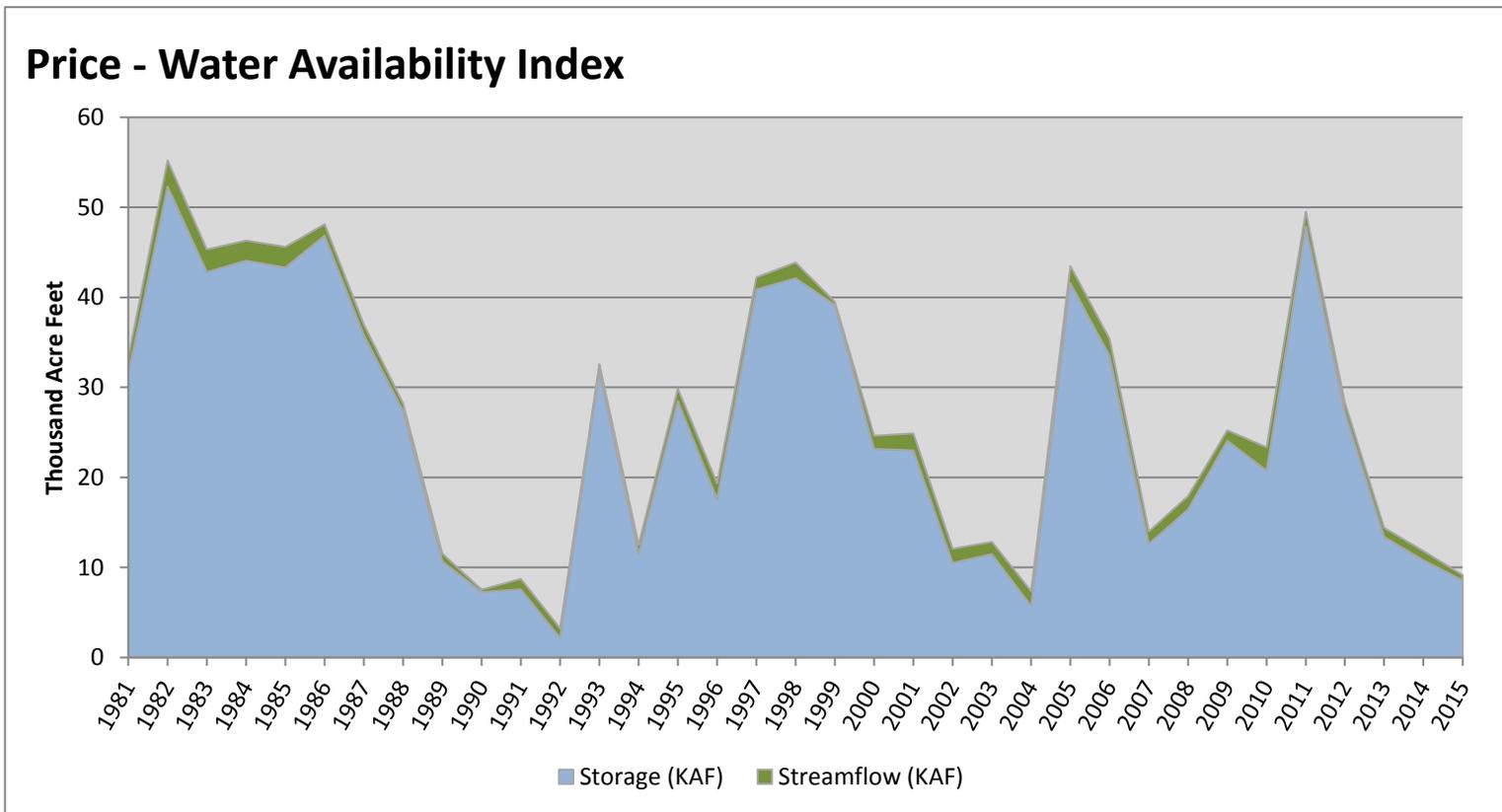


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Price</b>	<b>8.55</b>	<b>0.60</b>	<b>9.15</b>	<b>14</b>	<b>-3.01</b>	<b>90, 91, 89, 14</b>

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

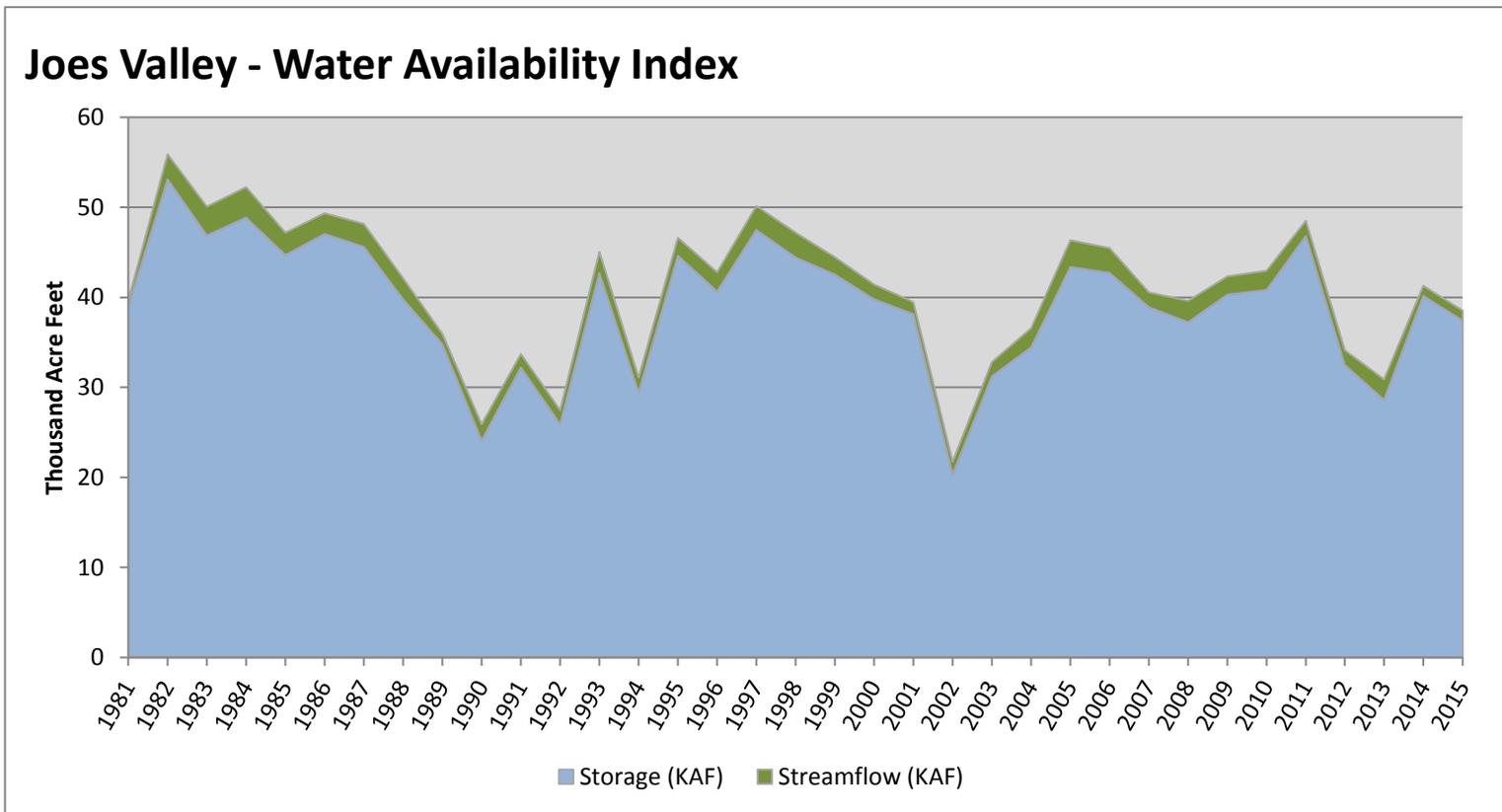


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Joos Valley</b>	<b>37.42</b>	<b>1.10</b>	<b>38.52</b>	<b>31</b>	<b>-1.62</b>	<b>89, 04, 01, 08</b>

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

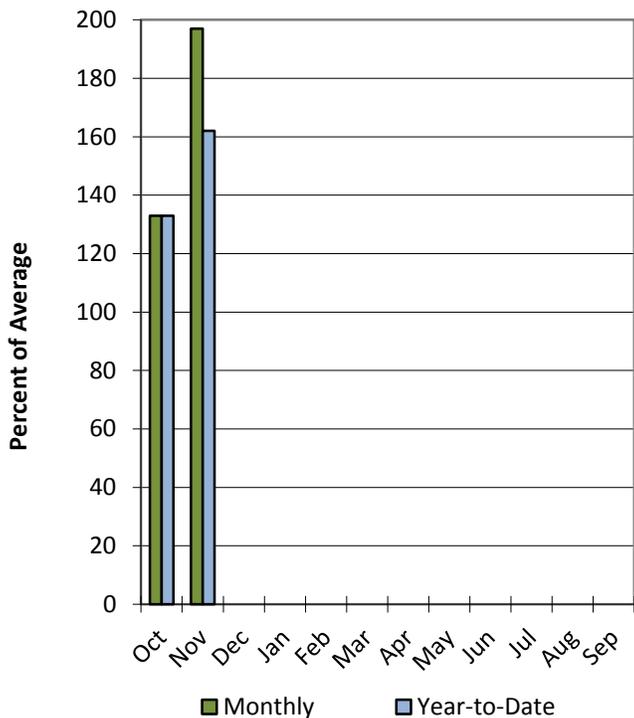


# Southeastern Utah Basin

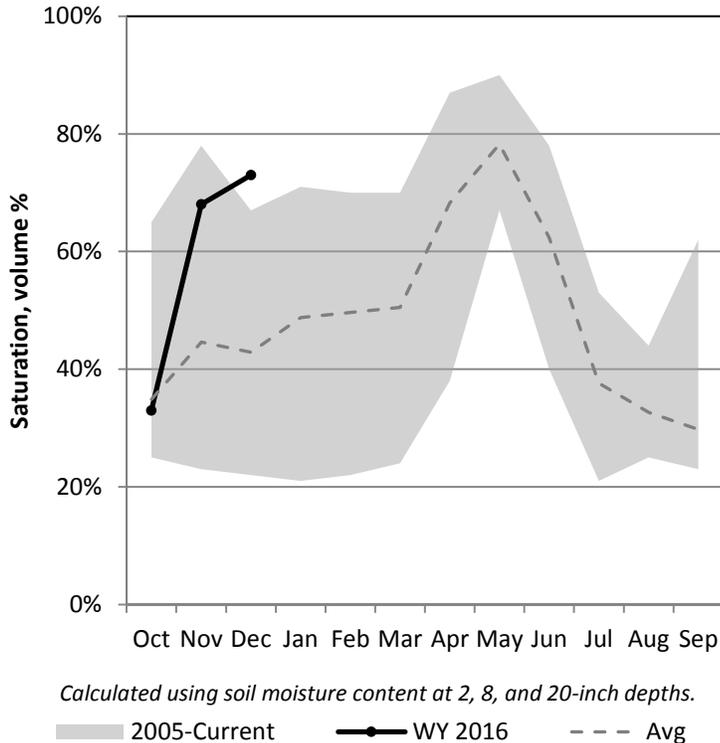
12/1/2015

Precipitation in November was much above average at 197%, which brings the seasonal accumulation (Oct-Nov) to 162% of average. Soil moisture is at 73% compared to 65% last year. Reservoir storage is at 52% of capacity, compared to 50% last year. The water availability index for Moab is 79%.

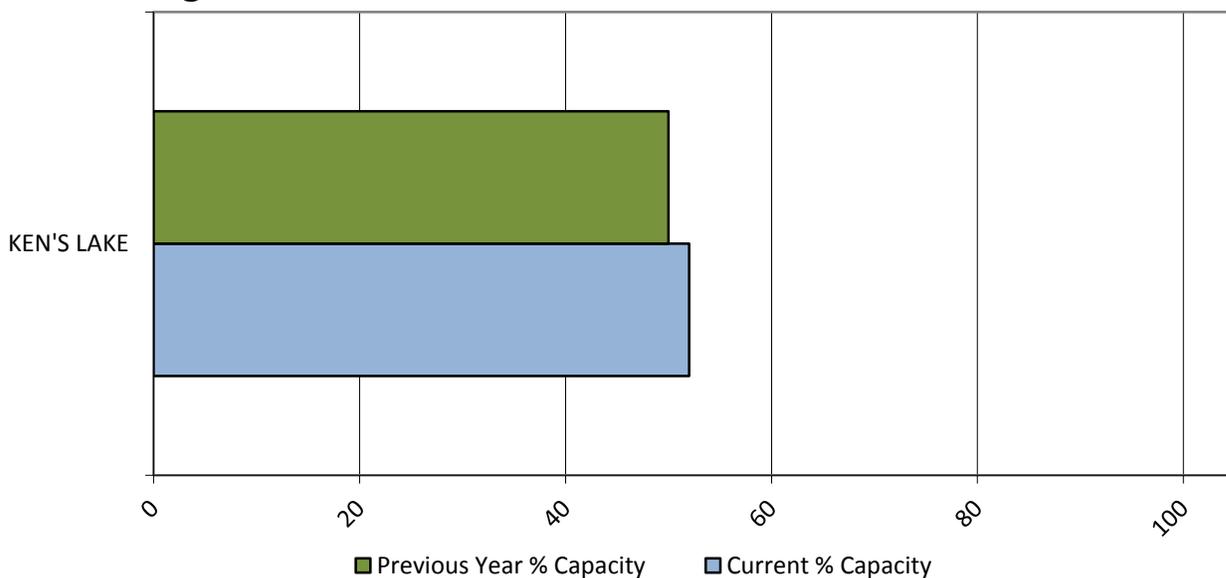
## Precipitation



## Soil Moisture



## Reservoir Storage

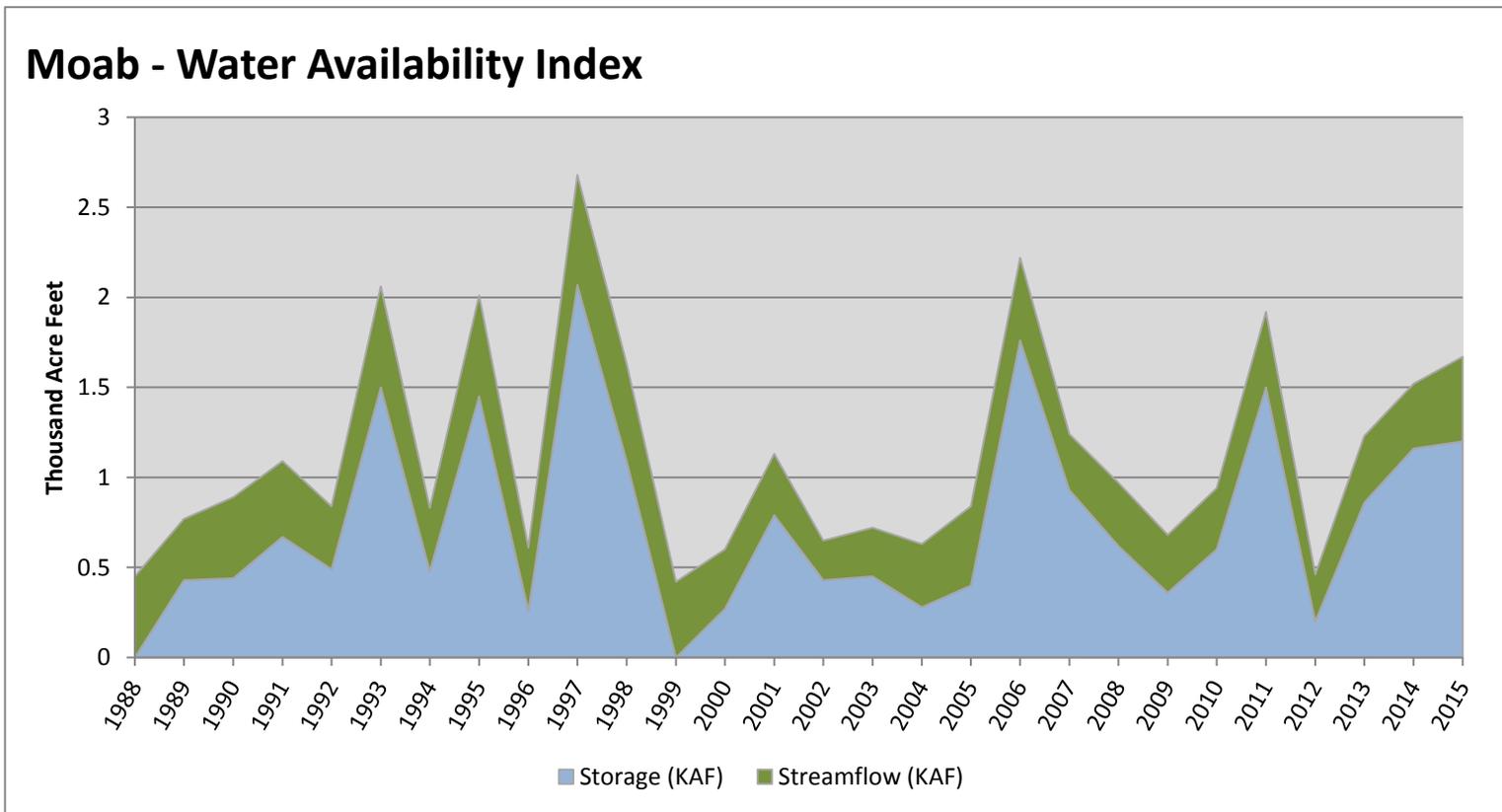


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Moab</b>	<b>1.20</b>	<b>0.47</b>	<b>1.67</b>	<b>79</b>	<b>2.44</b>	<b>14, 98, 11, 95</b>

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

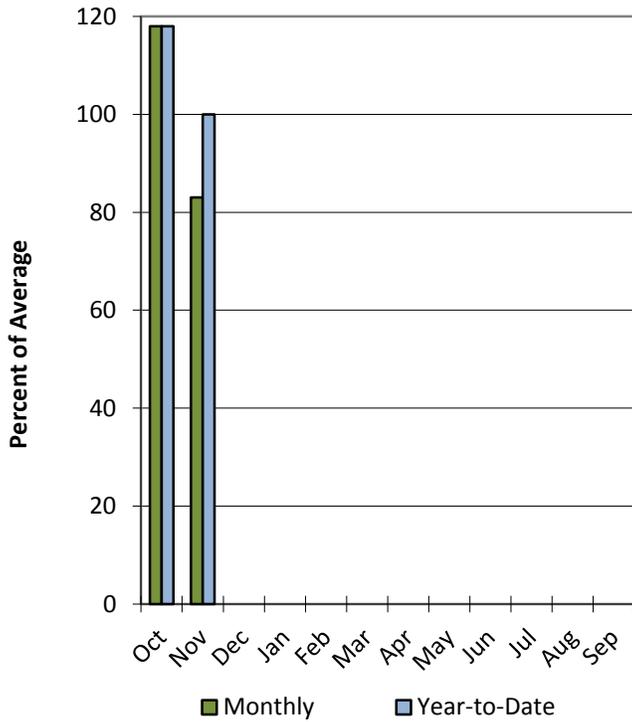


# Dirty Devil Basin

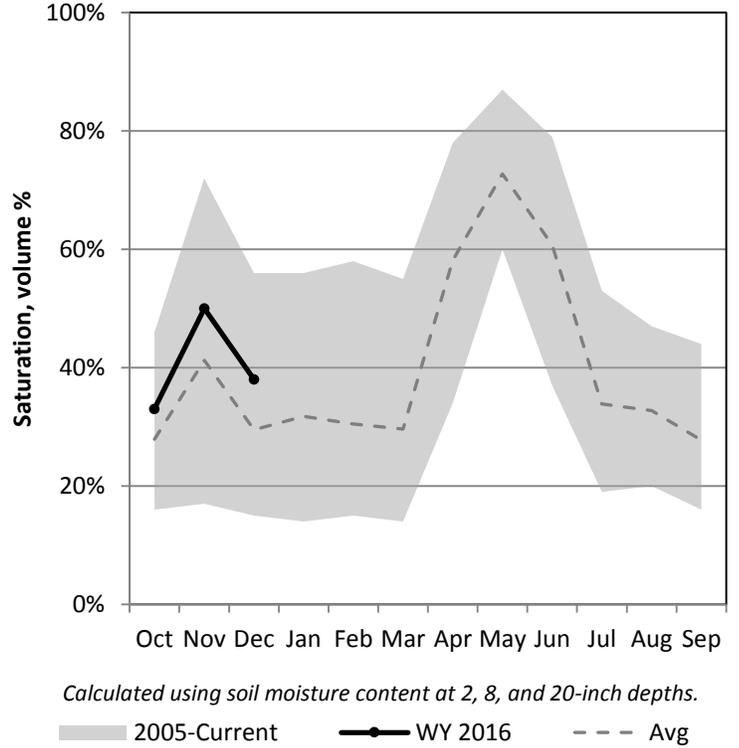
12/1/2015

Precipitation in November was below average at 83%, which brings the seasonal accumulation (Oct-Nov) to 100% of average. Soil moisture is at 38% compared to 39% last year.

## Precipitation



## Soil Moisture

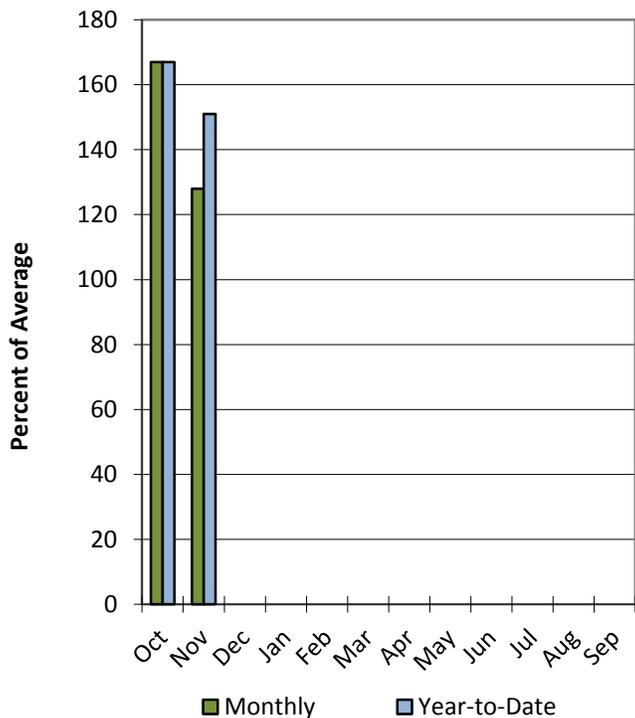


# Escalante River Basin

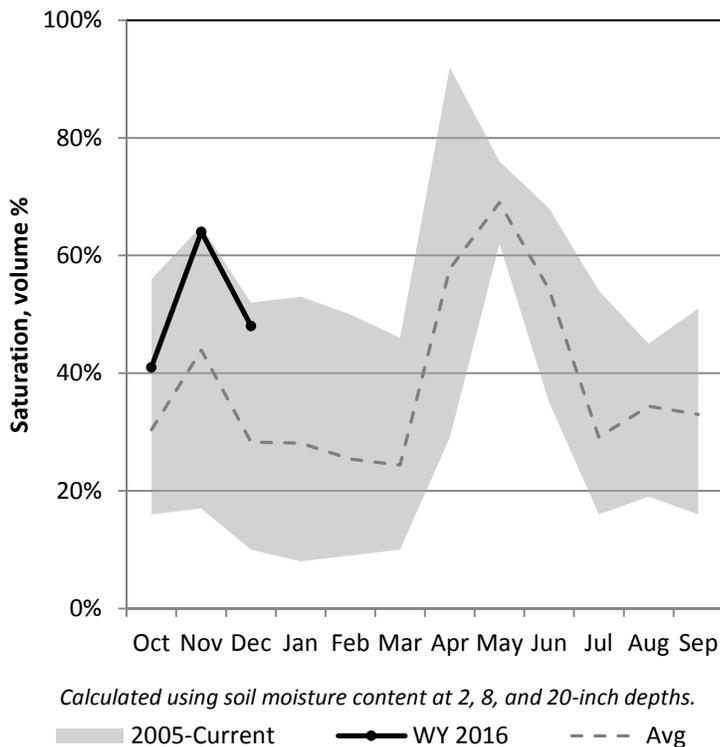
12/1/2015

Precipitation in November was above average at 128%, which brings the seasonal accumulation (Oct-Nov) to 151% of average. Soil moisture is at 48% compared to 42% last year.

## Precipitation



## Soil Moisture

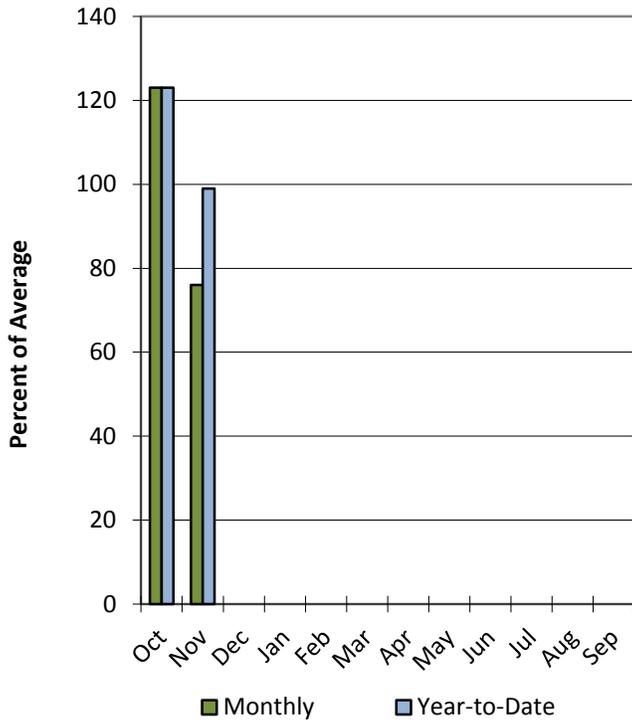


# Beaver River Basin

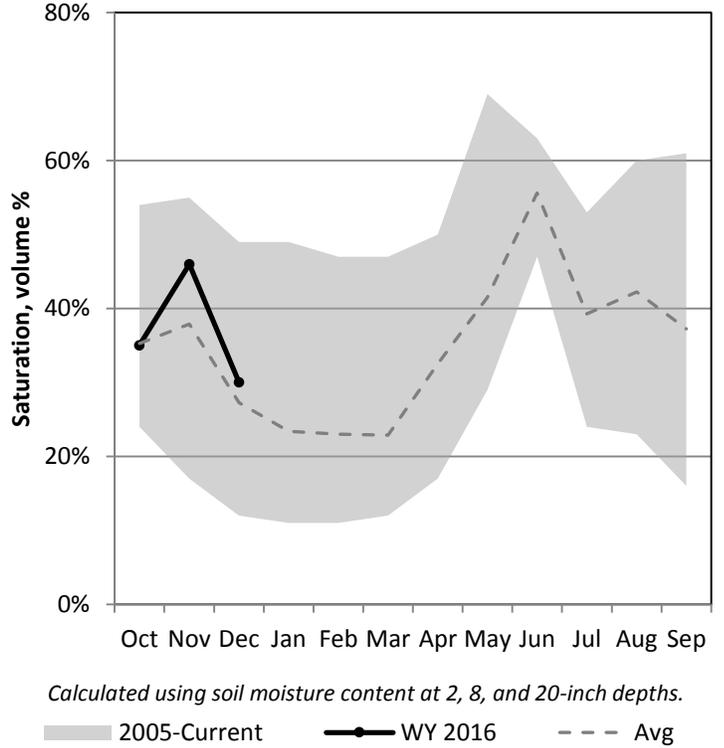
12/1/2015

Precipitation in November was below average at 76%, which brings the seasonal accumulation (Oct-Nov) to 99% of average. Soil moisture is at 30% compared to 45% last year. Reservoir storage is at 19% of capacity, compared to 24% last year. The water availability index for the Beaver River is 28%.

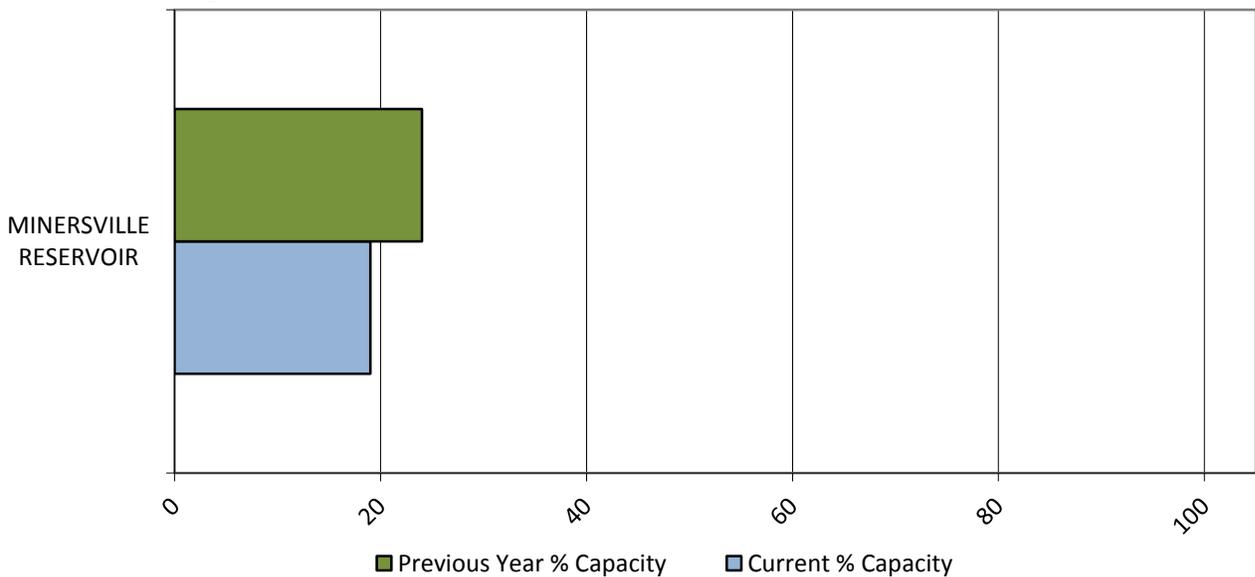
## Precipitation



## Soil Moisture



## Reservoir Storage

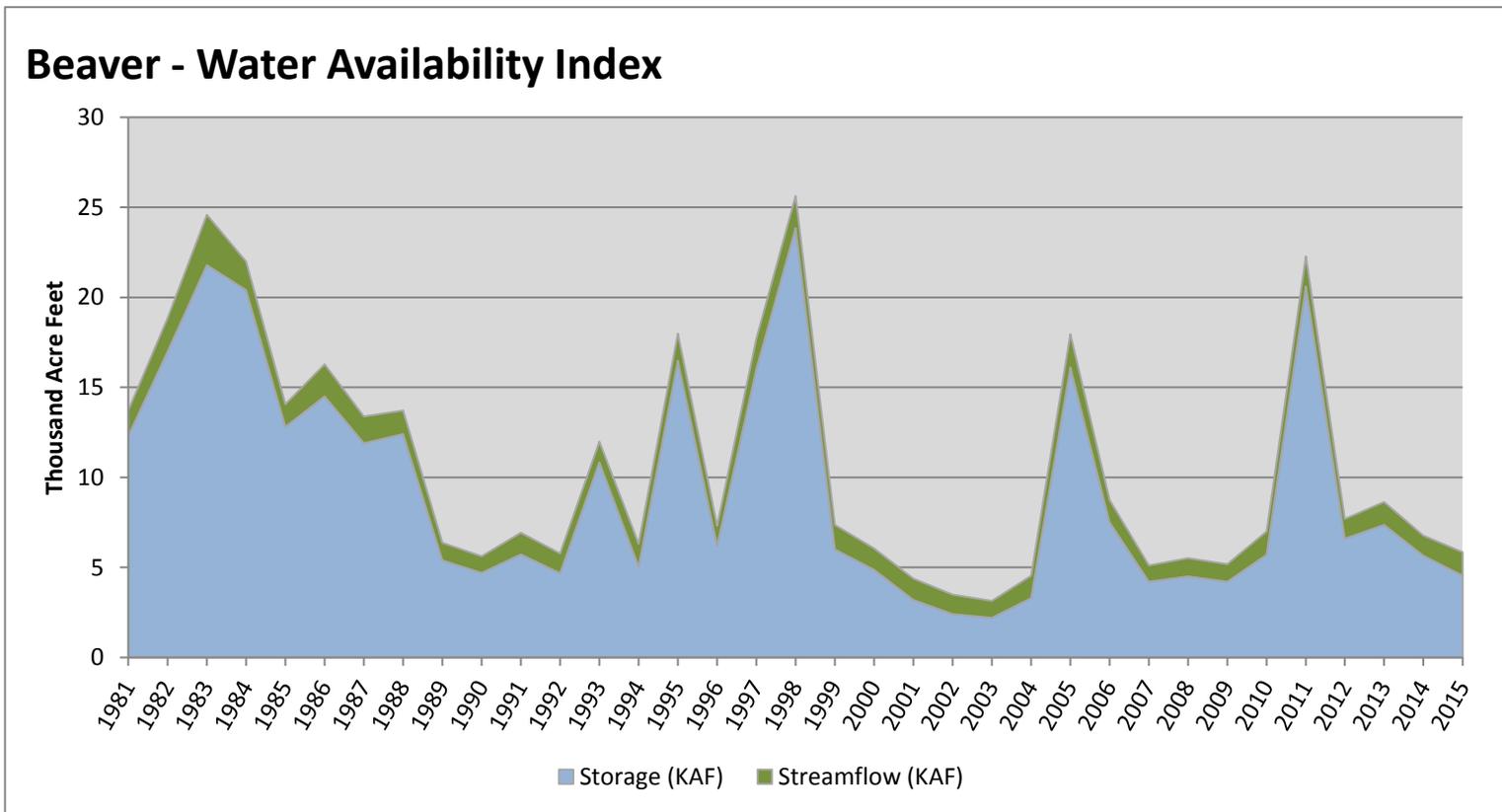


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Beaver</b>	<b>4.54</b>	<b>1.31</b>	<b>5.85</b>	<b>28</b>	<b>-1.85</b>	<b>90, 92, 00, 94</b>

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

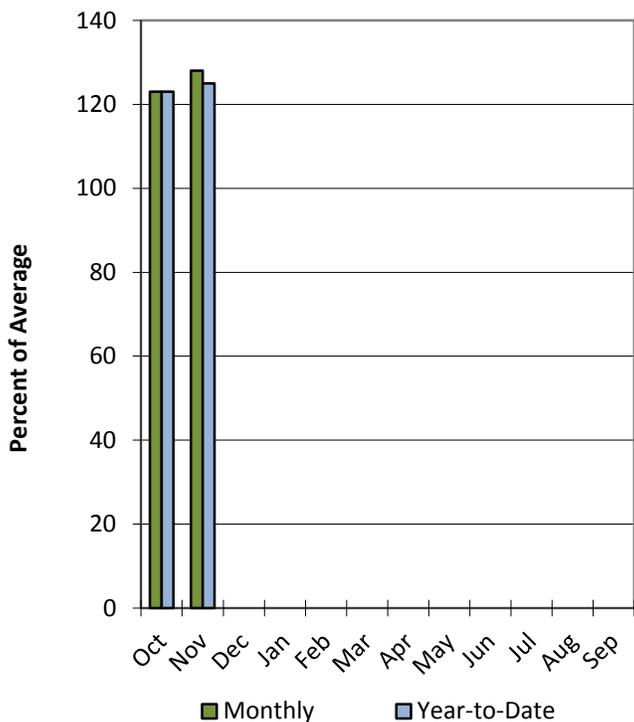


# Southwestern Utah Basin

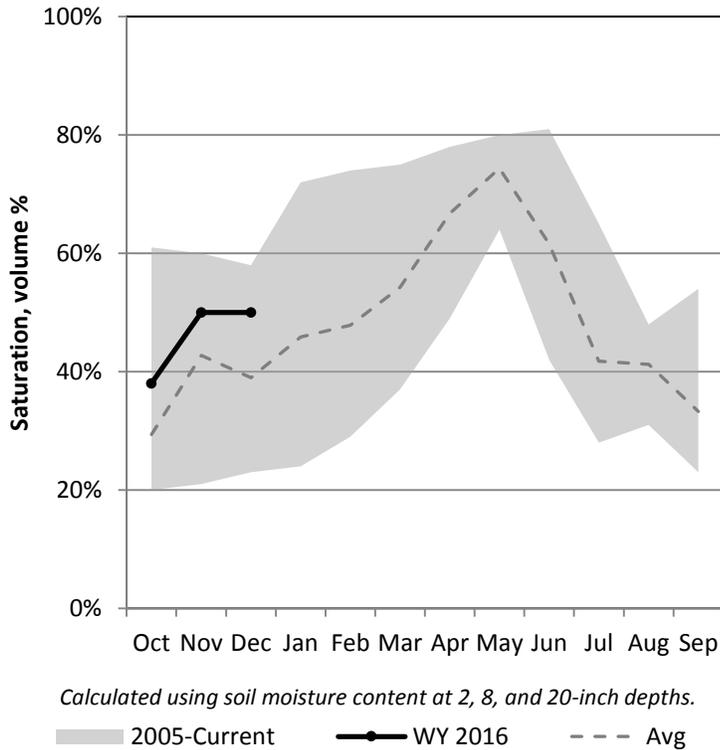
12/1/2015

Precipitation in November was above average at 128%, which brings the seasonal accumulation (Oct-Nov) to 125% of average. Soil moisture is at 50% compared to 53% last year. Reservoir storage is at 51% of capacity, compared to 49% last year. The water availability index for the Virgin River is 42%.

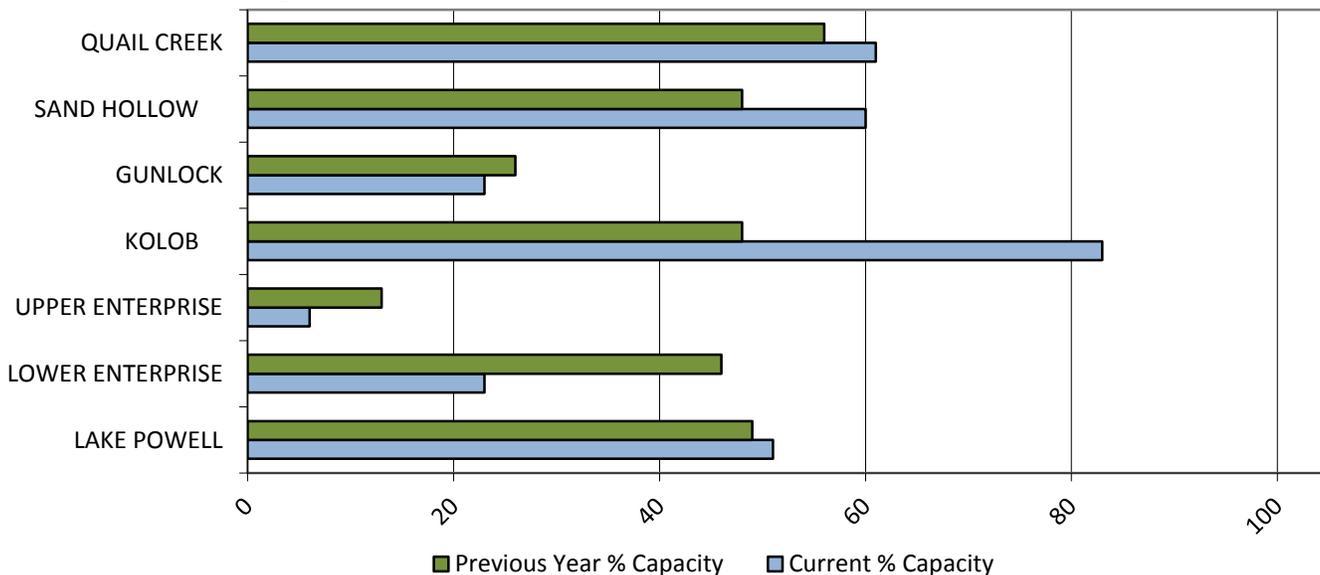
## Precipitation



## Soil Moisture



## Reservoir Storage

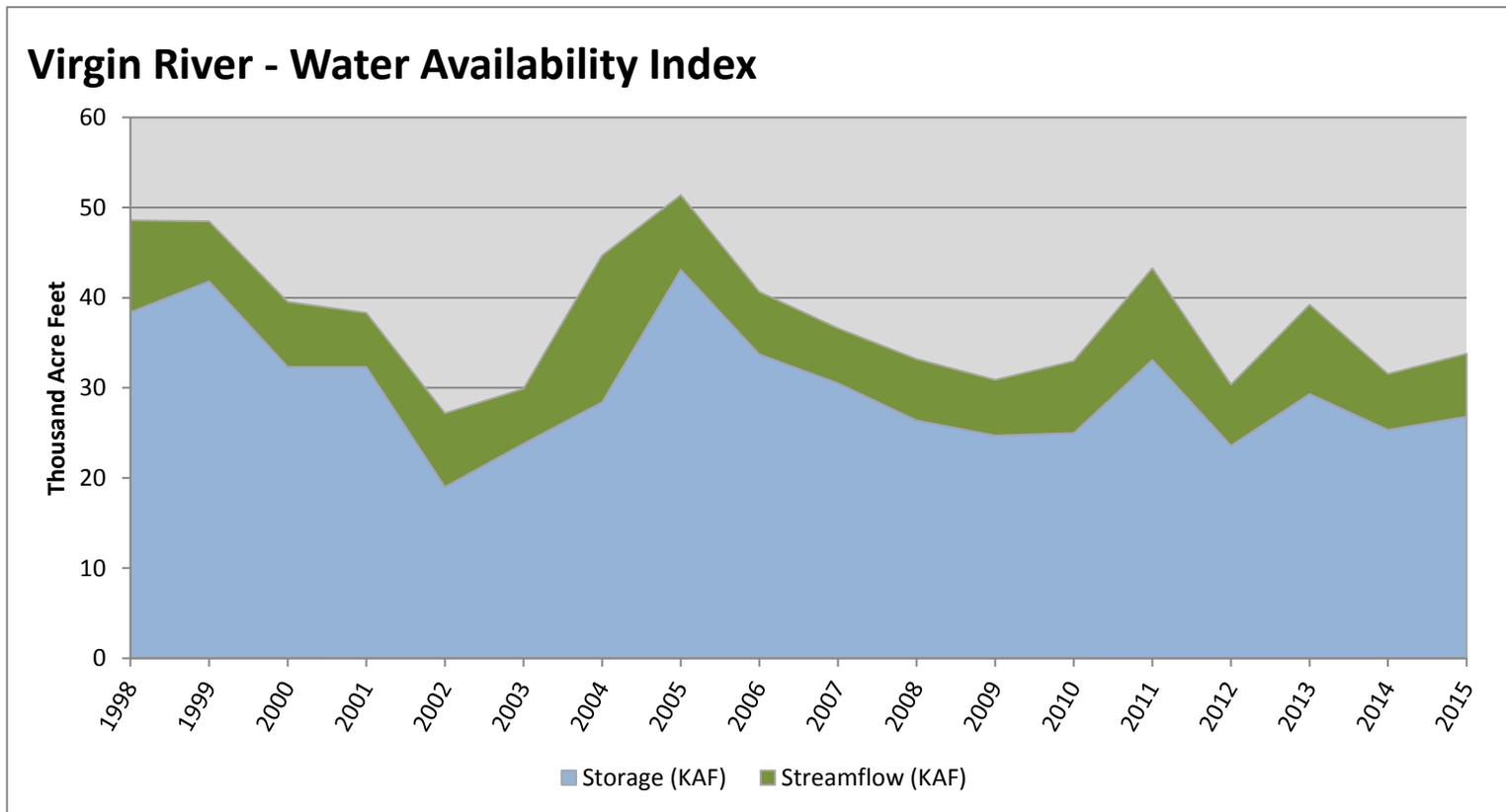


December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM <sup>*</sup> Storage	November 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>26.79</b>	<b>6.98</b>	<b>33.77</b>	<b>42</b>	<b>-0.66</b>	<b>10, 08, 07, 01</b>

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



December 1, 2015

## Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similar WAI
	KAF^	KAF^	KAF^	%		
<b>Bear River</b>	<b>453</b>	<b>12.0</b>	<b>465</b>	<b>47</b>	<b>-0.2</b>	<b>01, 95, 13, 14</b>
<b>Woodruff Narrows</b>	<b>37.2</b>	<b>2.9</b>	<b>40.1</b>	<b>64</b>	<b>1.2</b>	<b>91, 14, 06, 08</b>
<b>Little Bear</b>	<b>6.5</b>	<b>1.5</b>	<b>8.0</b>	<b>8</b>	<b>-3.5</b>	<b>03, 01, 14, 94</b>
<b>Ogden</b>	<b>52.5</b>	<b>1.8</b>	<b>54.3</b>	<b>36</b>	<b>-1.2</b>	<b>96, 12, 99, 91</b>
<b>Weber</b>	<b>88.5</b>	<b>11.5</b>	<b>100.0</b>	<b>19</b>	<b>-2.6</b>	<b>12, 01, 03, 00</b>
<b>Provo River</b>	<b>285.2</b>	<b>2.2</b>	<b>287.4</b>	<b>14</b>	<b>-3.0</b>	<b>13, 07, 03, 12</b>
<b>Western Uintah</b>	<b>161.5</b>	<b>2.3</b>	<b>163.8</b>	<b>66</b>	<b>1.3</b>	<b>09, 93, 01, 11</b>
<b>Eastern Uintah</b>	<b>28.3</b>	<b>2.6</b>	<b>30.9</b>	<b>31</b>	<b>-1.6</b>	<b>14, 92, 04, 88</b>
<b>Blacks Fork</b>	<b>4.1</b>	<b>2.5</b>	<b>6.6</b>	<b>24</b>	<b>-2.2</b>	<b>12, 94, 00, 10</b>
<b>Price</b>	<b>8.6</b>	<b>0.6</b>	<b>9.2</b>	<b>14</b>	<b>-3.0</b>	<b>90, 91, 89, 14</b>
<b>Smiths Creek</b>	<b>5.3</b>	<b>0.9</b>	<b>6.2</b>	<b>53</b>	<b>0.3</b>	<b>05, 99, 93, 10</b>
<b>Joes Valley</b>	<b>37.4</b>	<b>1.1</b>	<b>38.5</b>	<b>31</b>	<b>-1.6</b>	<b>89, 04, 01, 08</b>
<b>Moab</b>	<b>1.2</b>	<b>0.5</b>	<b>1.7</b>	<b>79</b>	<b>2.4</b>	<b>14, 98, 11, 95</b>
<b>Upper Sevier River</b>	<b>29.4</b>	<b>6.2</b>	<b>35.5</b>	<b>22</b>	<b>-2.3</b>	<b>09, 04, 08, 89</b>
<b>San Pitch</b>	<b>0.0</b>	<b>0.4</b>	<b>0.4</b>	<b>17</b>	<b>-2.8</b>	<b>00, 14, 13, 02</b>
<b>Lower Sevier</b>	<b>42.9</b>	<b>11.5</b>	<b>54.4</b>	<b>11</b>	<b>-3.2</b>	<b>10, 04, 91, 02</b>
<b>Beaver</b>	<b>4.5</b>	<b>1.3</b>	<b>5.9</b>	<b>28</b>	<b>-1.9</b>	<b>90, 92, 00, 94</b>
<b>Virgin River</b>	<b>26.8</b>	<b>7.0</b>	<b>33.8</b>	<b>42</b>	<b>-0.7</b>	<b>10, 08, 07, 01</b>

\*EOM, end of month; # WAI, water availibility 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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YOU MAY OBTAIN THIS PRODUCT AS WELL AS CURENT SNOW, PRECIPITATION, TEMPERATURE AND SOIL MOISTURE, RESERVOIR, SURFACE WATER SUPPLY INDEX, AND OTHER DATA BY VISITING OUR WEB SITE @: <http://www.ut.nrcs.usda.gov/snow/>

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