

# Utah Climate and Water Report

January, 2016



**Gooseberry Creek – December 2016**

**Photo by Troy Brosten**

# Utah Climate and Water Report

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

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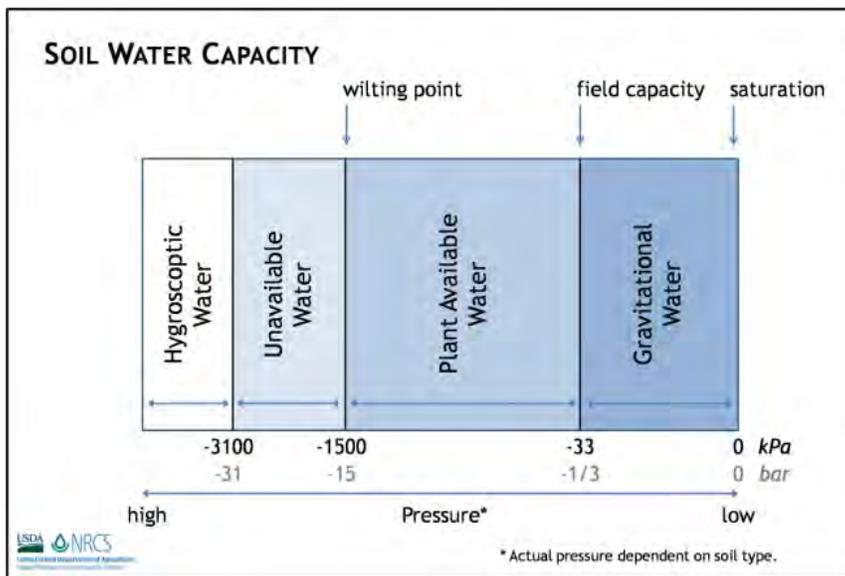
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# Climate and Water Information

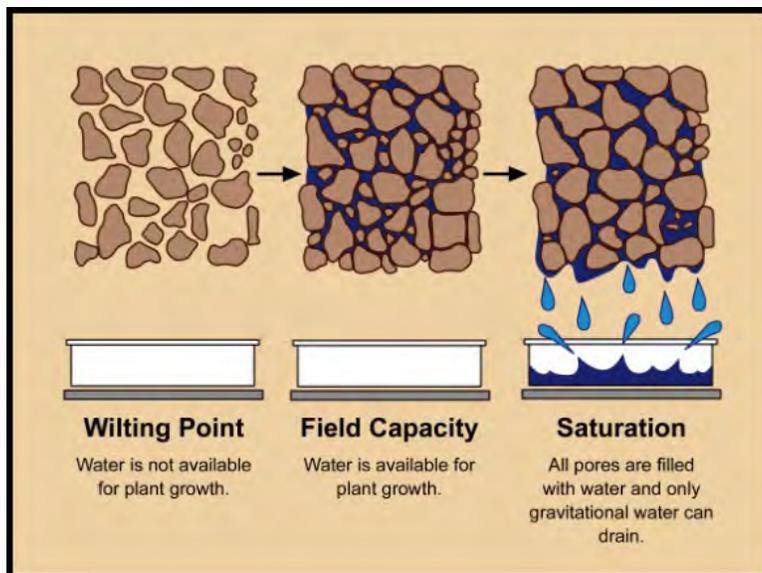
## Soil Climate Analysis Network

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.**

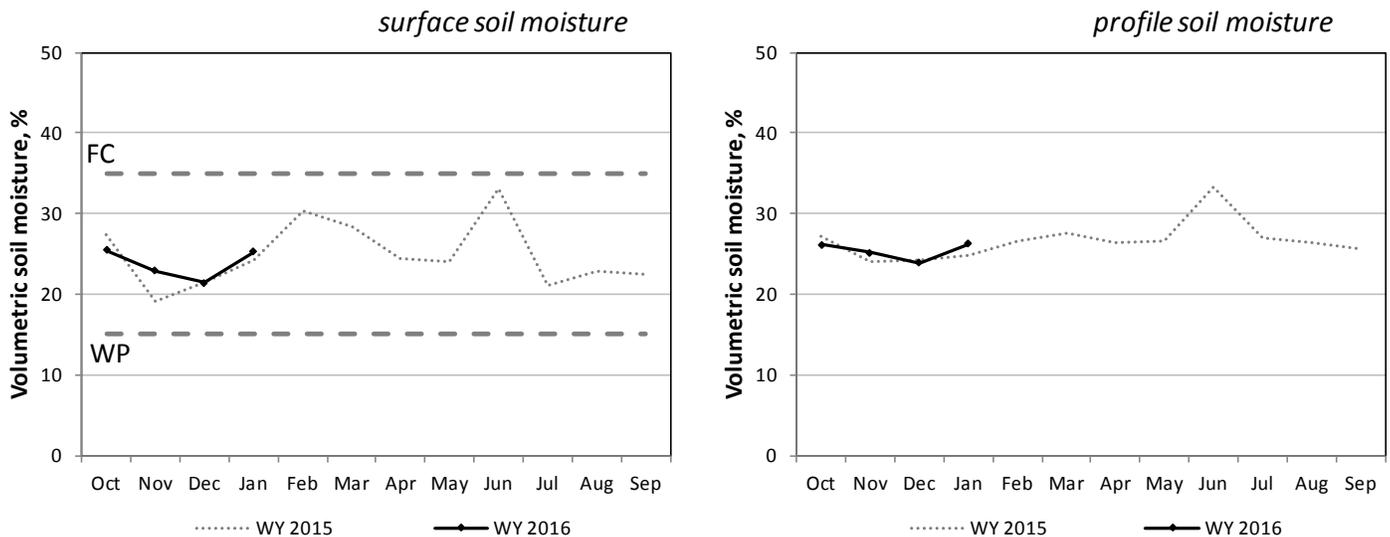
# North Central

## 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	3.7	0.9	24	26	19	19	15	32	32	34	37	42
Cache Junction	3.3	1.2	34	32	39	35	38	32	33	35	39	44
Grantsville	2.8	1.2	6	16	24	-	-	31	33	36	44	49

\* 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.**

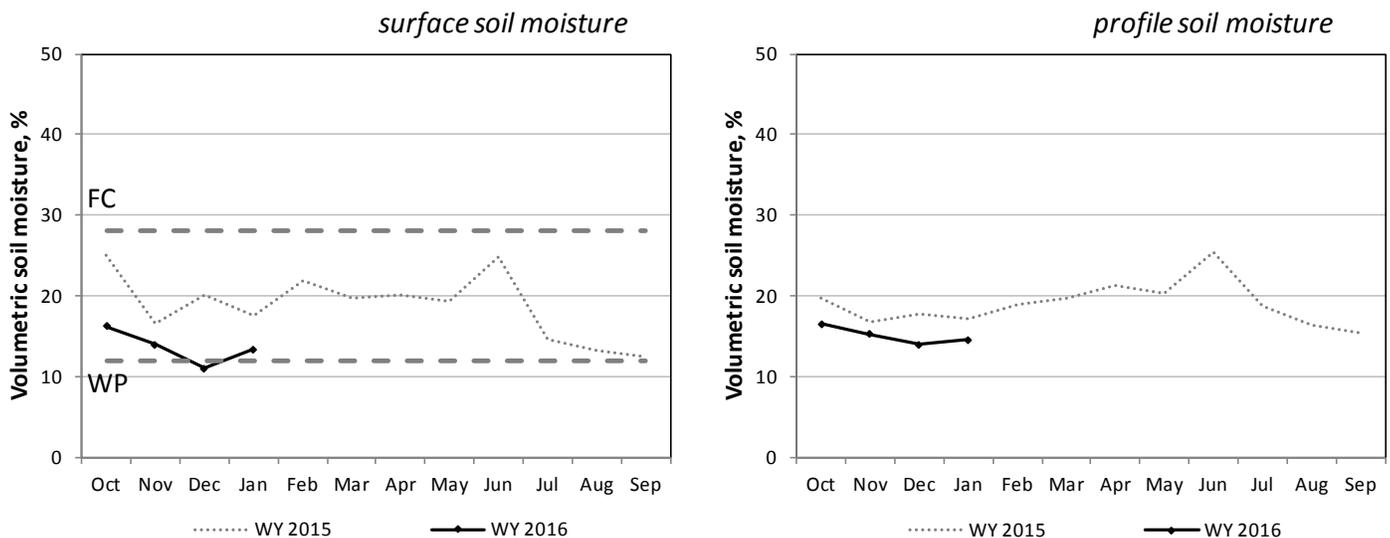
# Northern Mountains

## 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	2.1	0.6	6	8	10	11	11	31	31	32	34	38
Buffalo Jump	2.3	0.9	6	9	8	7	-		32	32	32	-
Morgan	4.1	2.5	24	20	26	30	17	32	32	32	33	35

\* 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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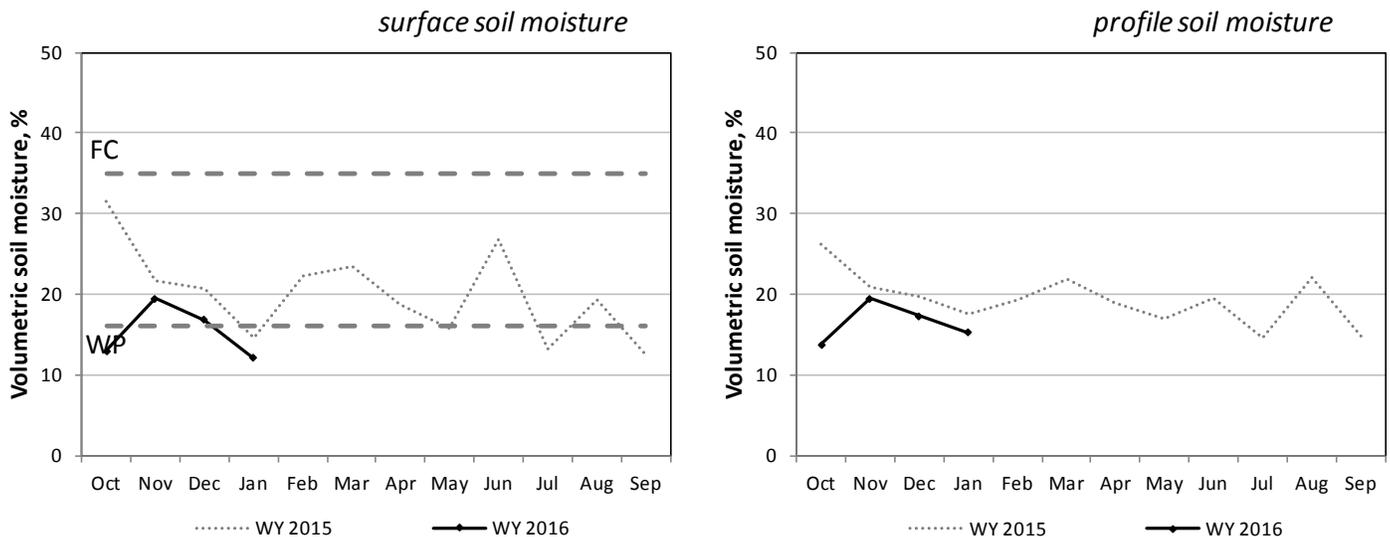
# Uintah Basin

## 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	2.8	0.7	6	10	11	9	3	28	29	30	34	46
Little Red Fox	2.7	0.4	10	15	21	32	35	21	24	26	32	37
Split Mountain	2.5	0.7	10	14	8	10	10	25	25	28	33	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.

## 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.**

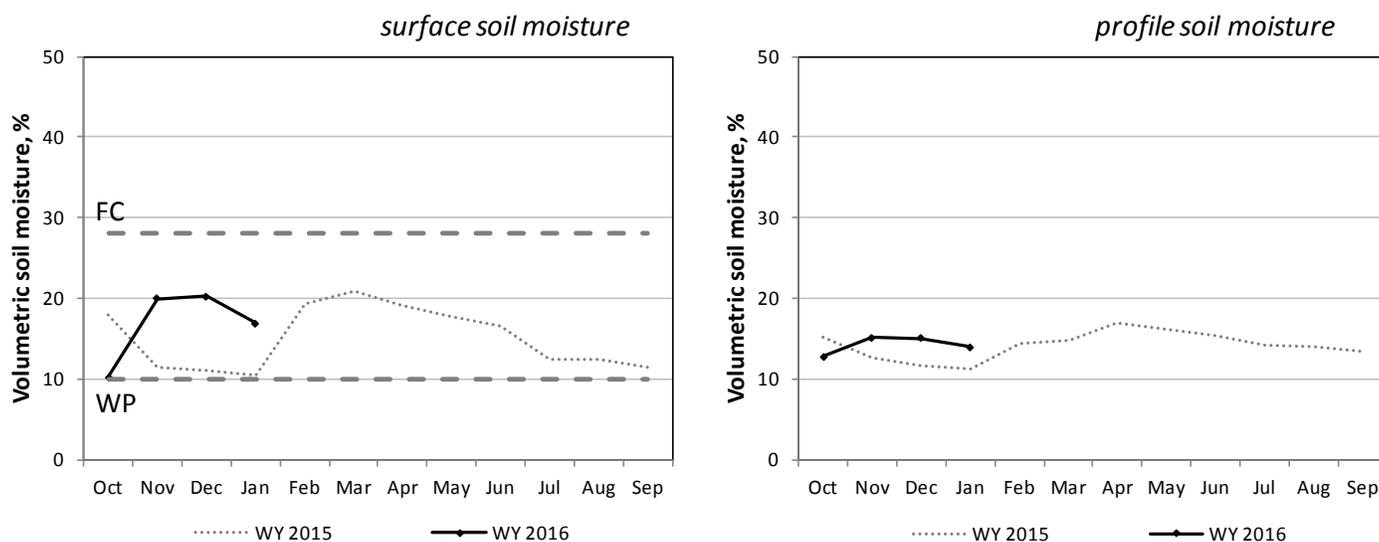
# Southeast

## 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	3.4	0.5	4	12	17	12	15	26	27	28	33	38
Green River	3.0	0.3	14	8	8	4	6	26	25	26	32	39
Harm's Way	7.2	0.6	21	23	23	12	5	32	32	33	35	40
West Summit	4.6	0.2	16	20	23	21	15	32	32	33	33	38
Eastland	4.7	0.0	25	25	23	26	18	33	34	34	37	40
Alkali Mesa	5.1	0.5	10	16	19	14	14	31	31	33	36	37
McCracken Mesa	5.4	0.7	15	21	24	21	12	30	32	33	37	43

\* 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.

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.

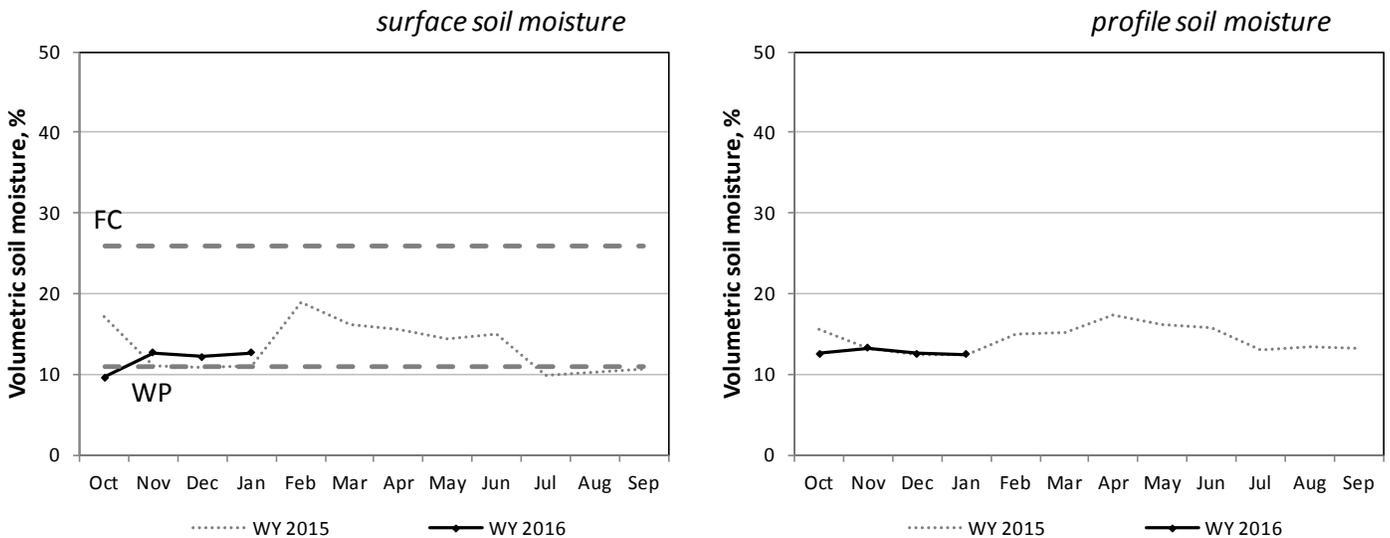
# South Central

## 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	3.3	1.0	28	29	24	6	0	33	33	34	38	43
Ephraim	2.9	1.3	16	24	28	32	33	30	31	32	36	41
Holden	2.7	0.6	6	8	12	10	9	30	30	33	37	45
Milford	2.1	0.4	14	22	12	23	15	30	32	34	40	46
Manderfield	2.3	0.4	27	21	22	9	4	32	33	34	38	42
Circleville	2.3	0.6	10	11	5	7	14	20	22	24	35	44
Panguitch	3.0	0.5	5	16	11	19	32	26	27	28	34	41
Cave Valley	4.7	1.1	6	2	2	0	7	32	30	32	35	37
Vermillion	5.8	1.0	1	7	7	12	8	30	32	33	35	38
Spooky	4.1	0.4	1	2	1	7	1	28	29	30	34	40

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### 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.

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

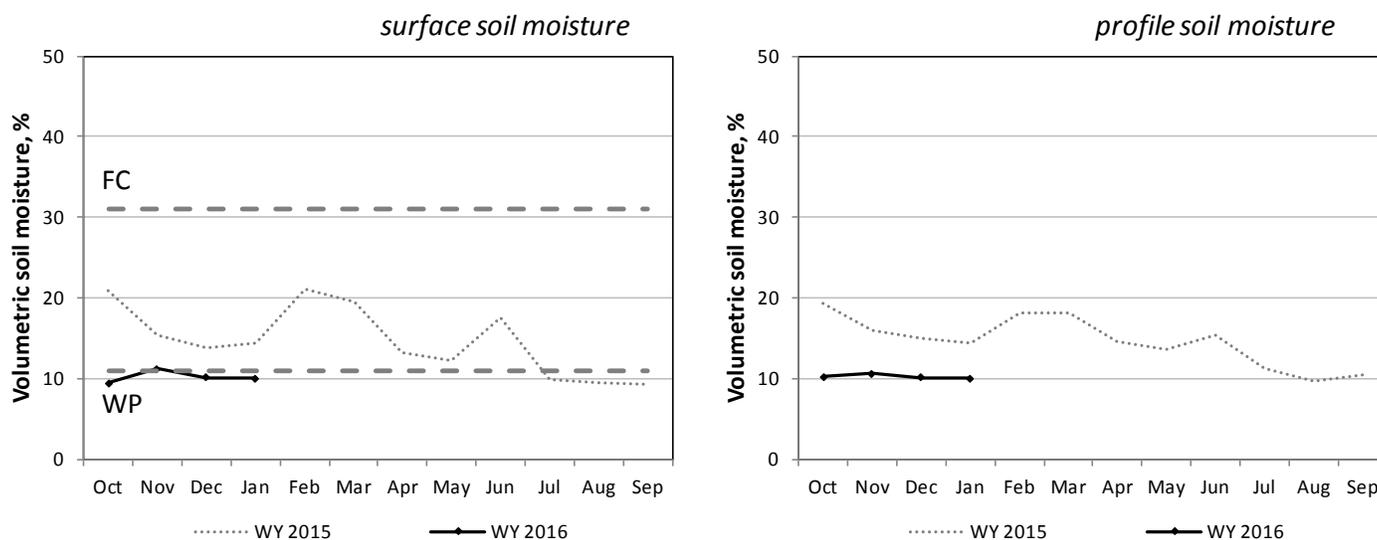
# Western and Dixie

## Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
<b>WESTERN</b>												
Grouse Creek	3.4	1.3	12	13	10	14	14	32	33	35	37	41
Park Valley	2.3	0.5	4	6	13	-	-	31	31	32	36	42
Goshute	2.4	0.5	-	-	-	-	-	24	26	28	32	40
Dugway			-	-	-	-	-					
Tule Valley	3.3	0.7	18	14	19	16	11	30	31	33	35	42
Hal's Canyon	2.6	0.1	3	6	9	12	8	29	29	30	35	42
Enterprise	2.3	0.6	6	19	18	12	13	26	28	29	35	44
<b>DIXIE</b>												
Sand Hollow	2.1	0.5	2	0	0	0	0	31	31	33	39	48

\* 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

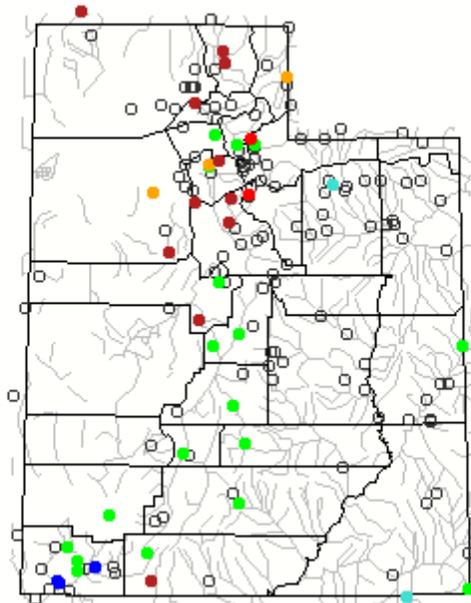
January 1, 2016

## Current Conditions

Soil moisture values on the Weber and Provo are very low, near average on the Bear and mostly above average across the remainder of the state. December precipitation was above average for all of the state which brings seasonal precipitation (Oct-Dec) to about 99% of average. Snowpacks across the state are near normal in the north (95%-105%), and near to much above normal in southern Utah (100%-190%). Reservoir storage is similar to last year at 54% of capacity. Overall, water supply conditions are near normal in northern Utah and near to much above normal in the south.

## Current Utah Streamflow - Courtesy US Geological Survey

Thursday, January 07, 2016 13:30ET

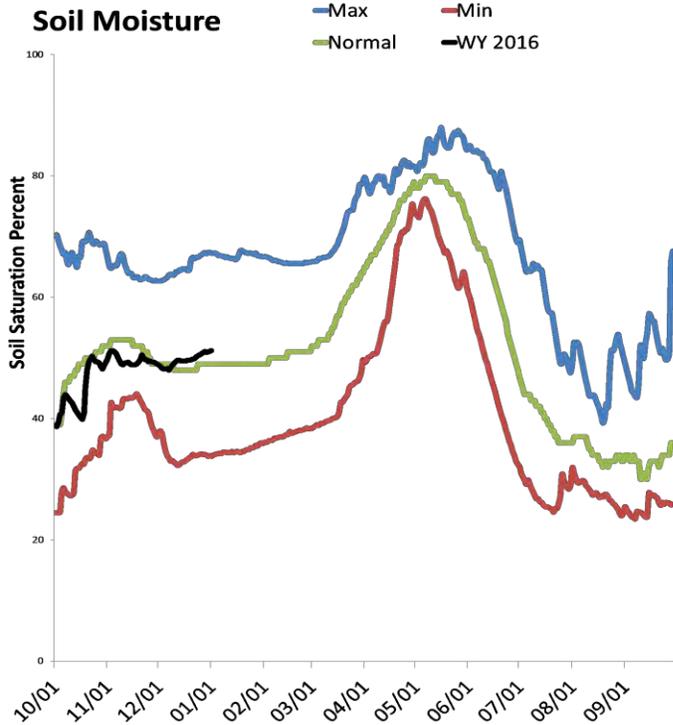
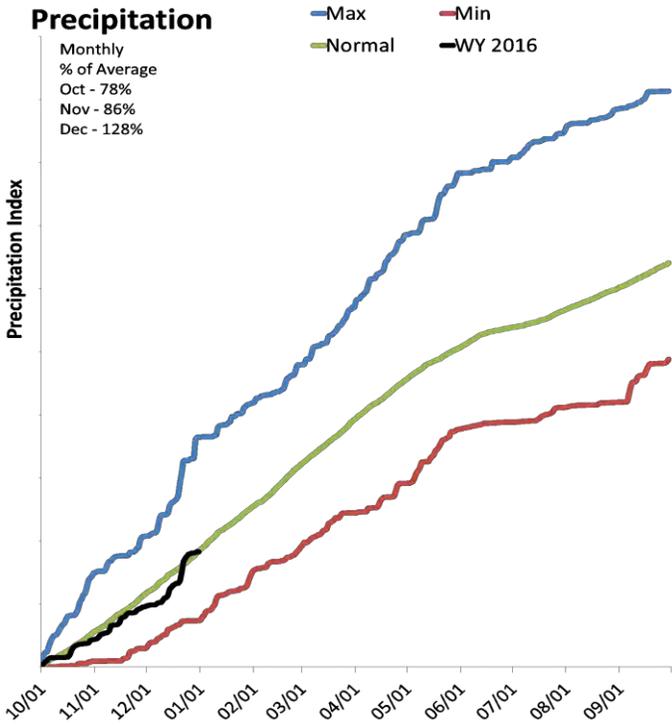


Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not ranked

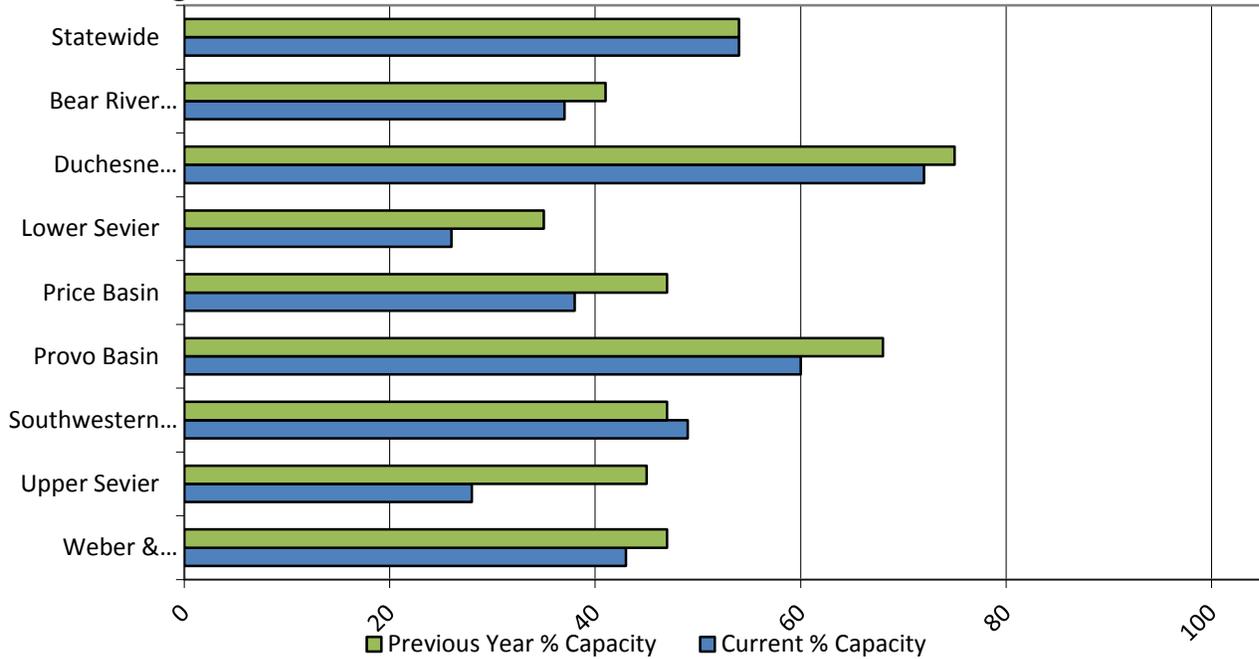
# Statewide Utah

1/1/2016

Precipitation in December was above average at 128%, which brings the seasonal accumulation (Oct-Dec) to 99% of average. Soil moisture is at 49% compared to 54% last year. Reservoir storage is at 54% of capacity, compared to 54% last year.



### Reservoir Storage

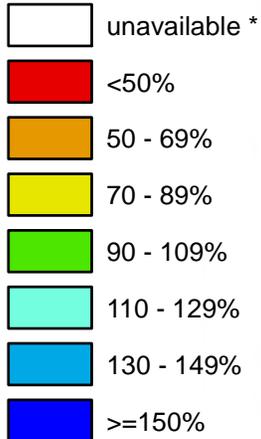


# Utah

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

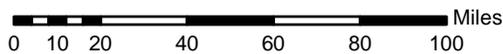
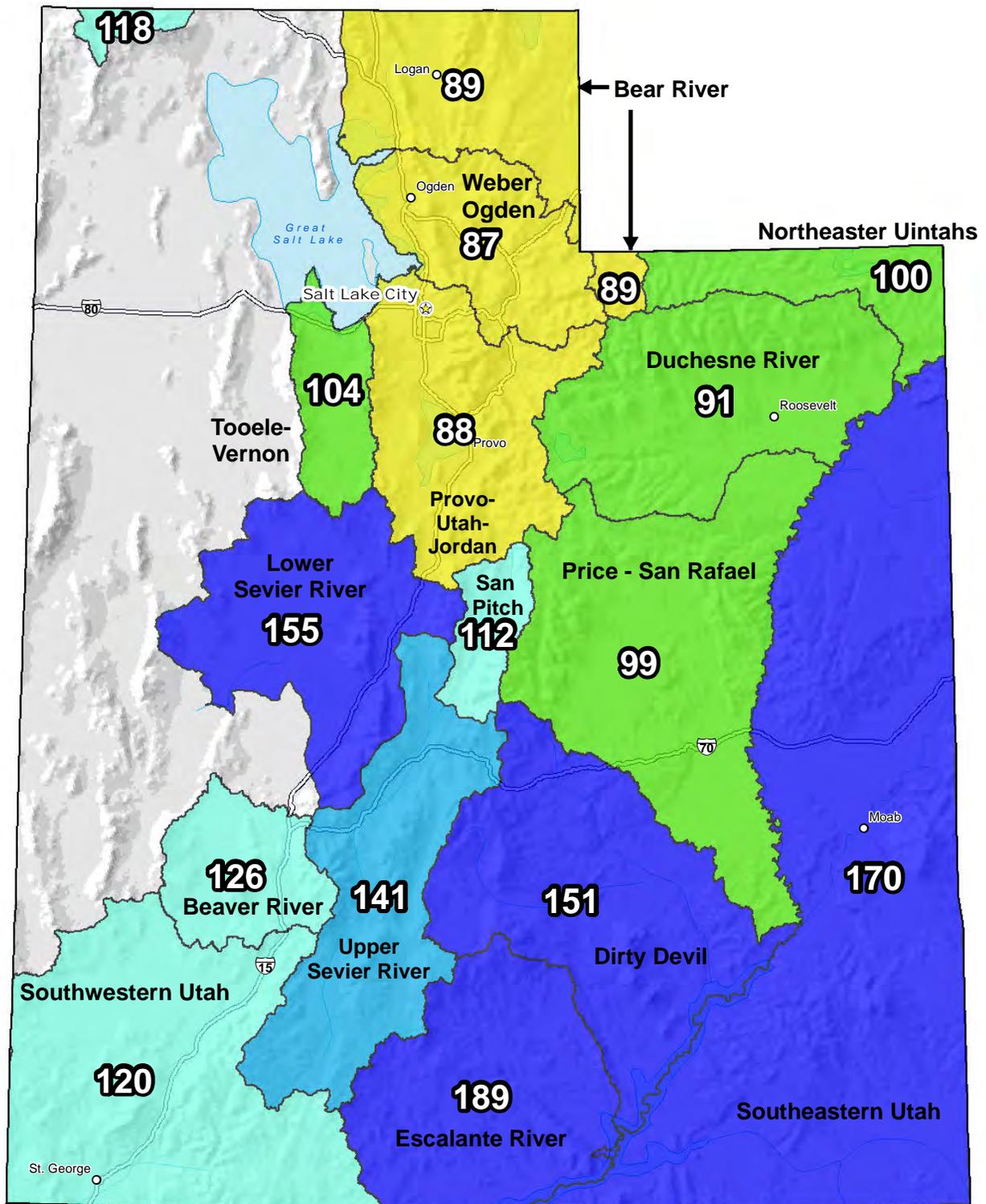
Jan 01, 2016

**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).

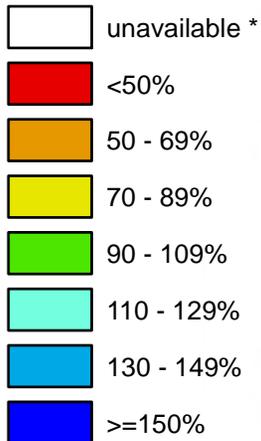
Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

# Utah

## SNOTEL Current Snow Water Equivalent (SWE) % of Normal

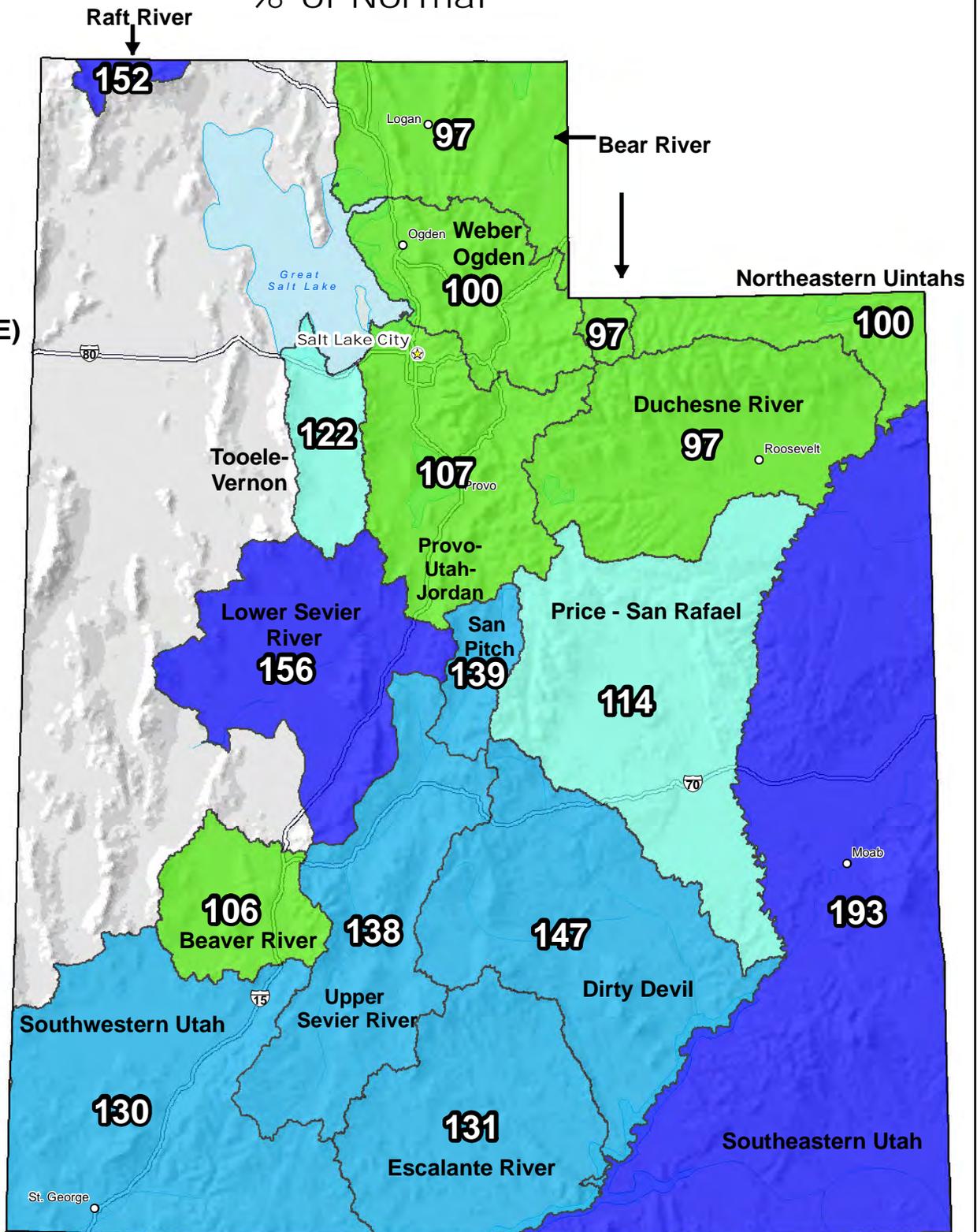
Jan 01, 2016

**Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median**



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

**Provisional Data  
Subject to Revision**



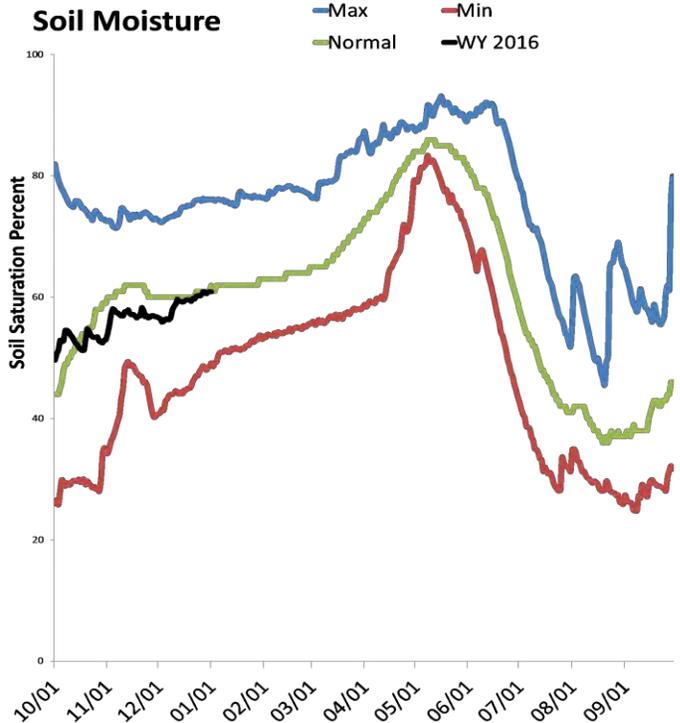
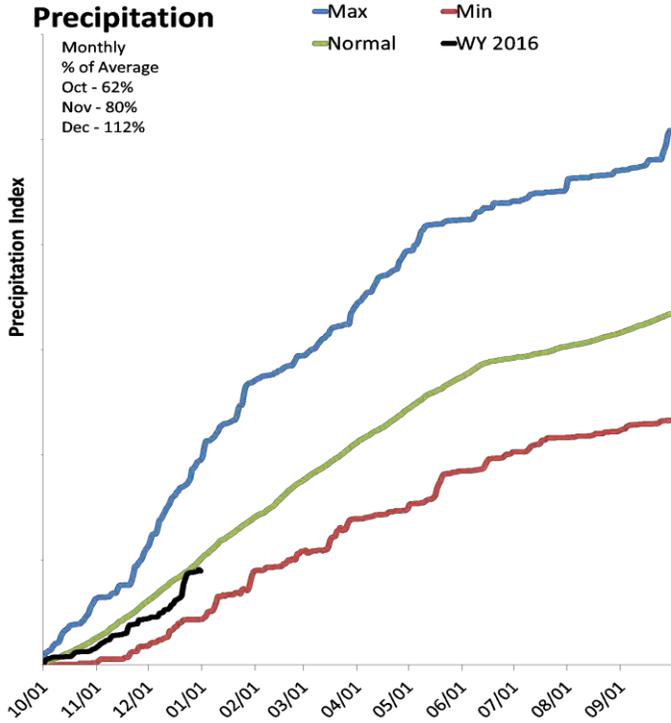
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

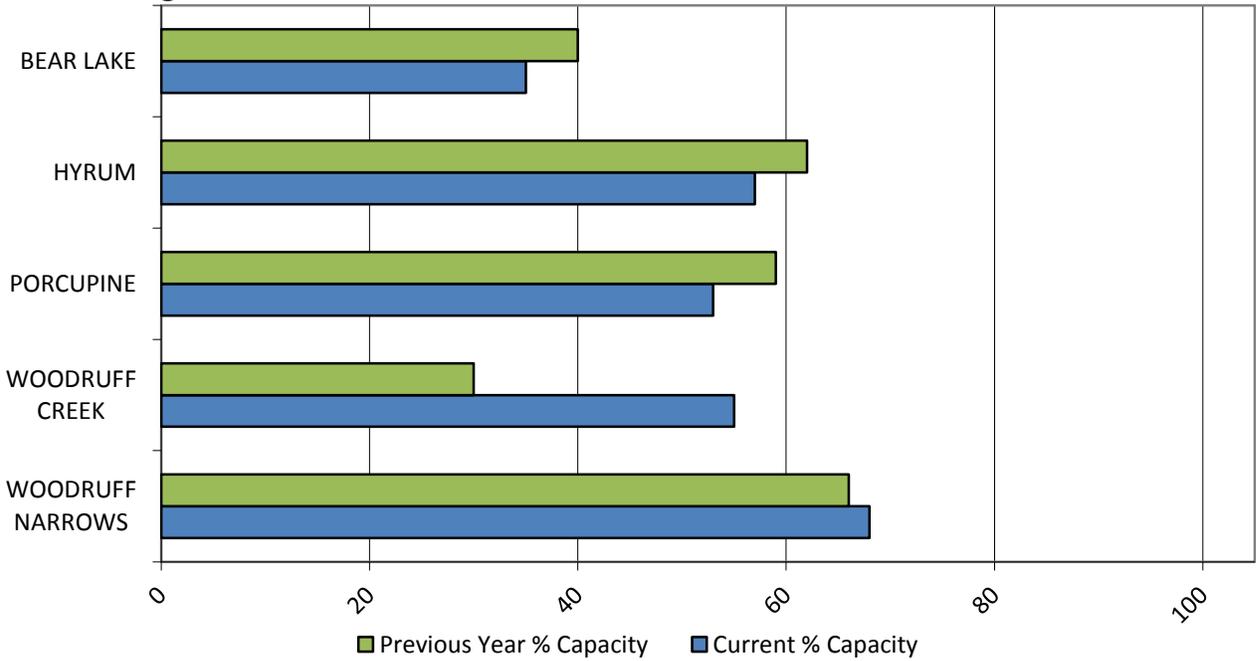
# Bear River Basin

1/1/2016

Precipitation in December was above average at 113%, which brings the seasonal accumulation (Oct-Dec) to 89% of average. Soil moisture is at 59% compared to 57% last year. Reservoir storage is at 37% of capacity, compared to 41% last year. The water availability index for the Bear River is 43%, 68% for Woodruff Narrows and 12% for the Little Bear.



### Reservoir Storage

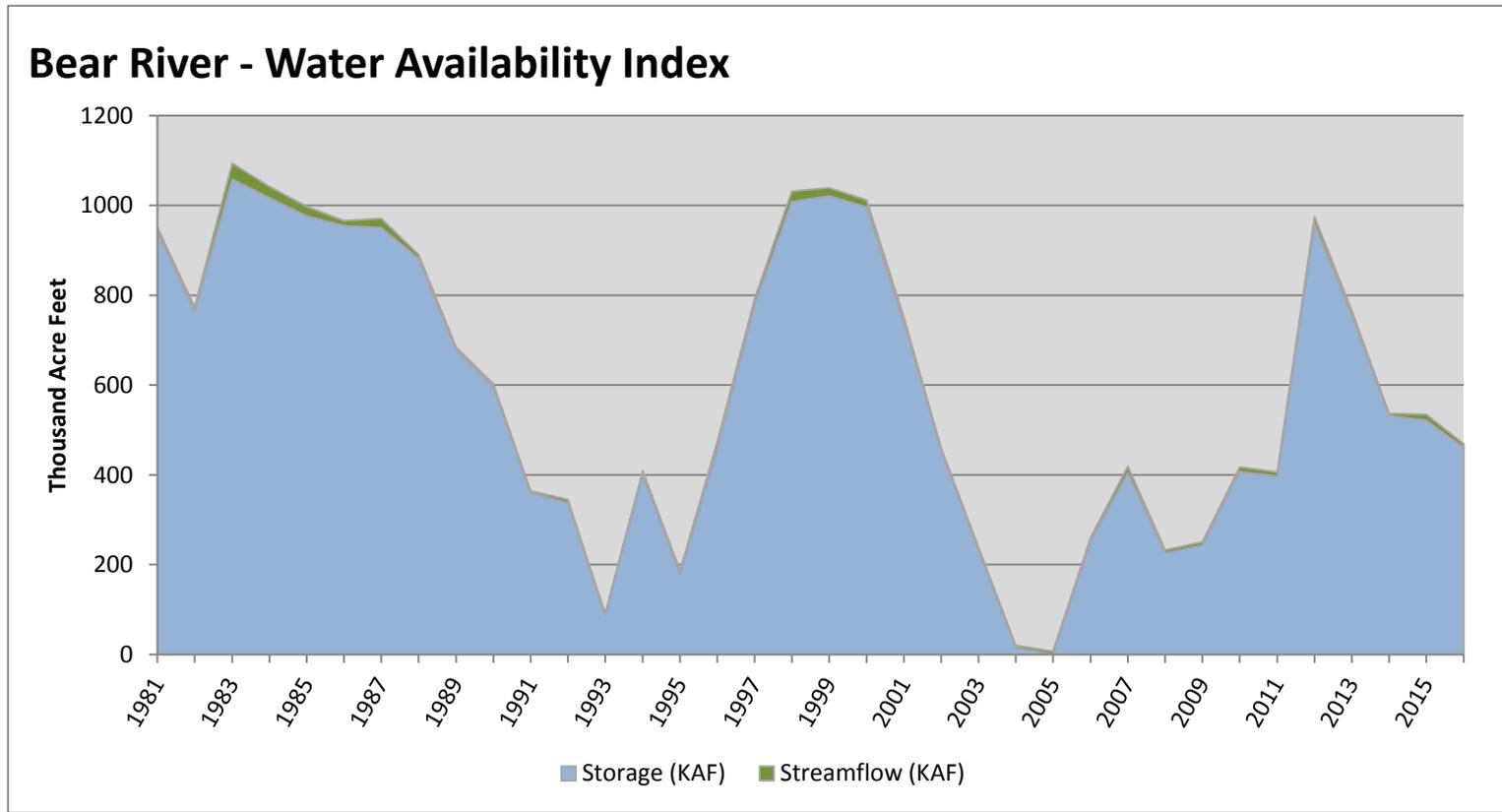


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>460.40</b>	<b>8.76</b>	<b>469.16</b>	<b>43</b>	<b>-0.56</b>	<b>07, 02, 96, 15</b>

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

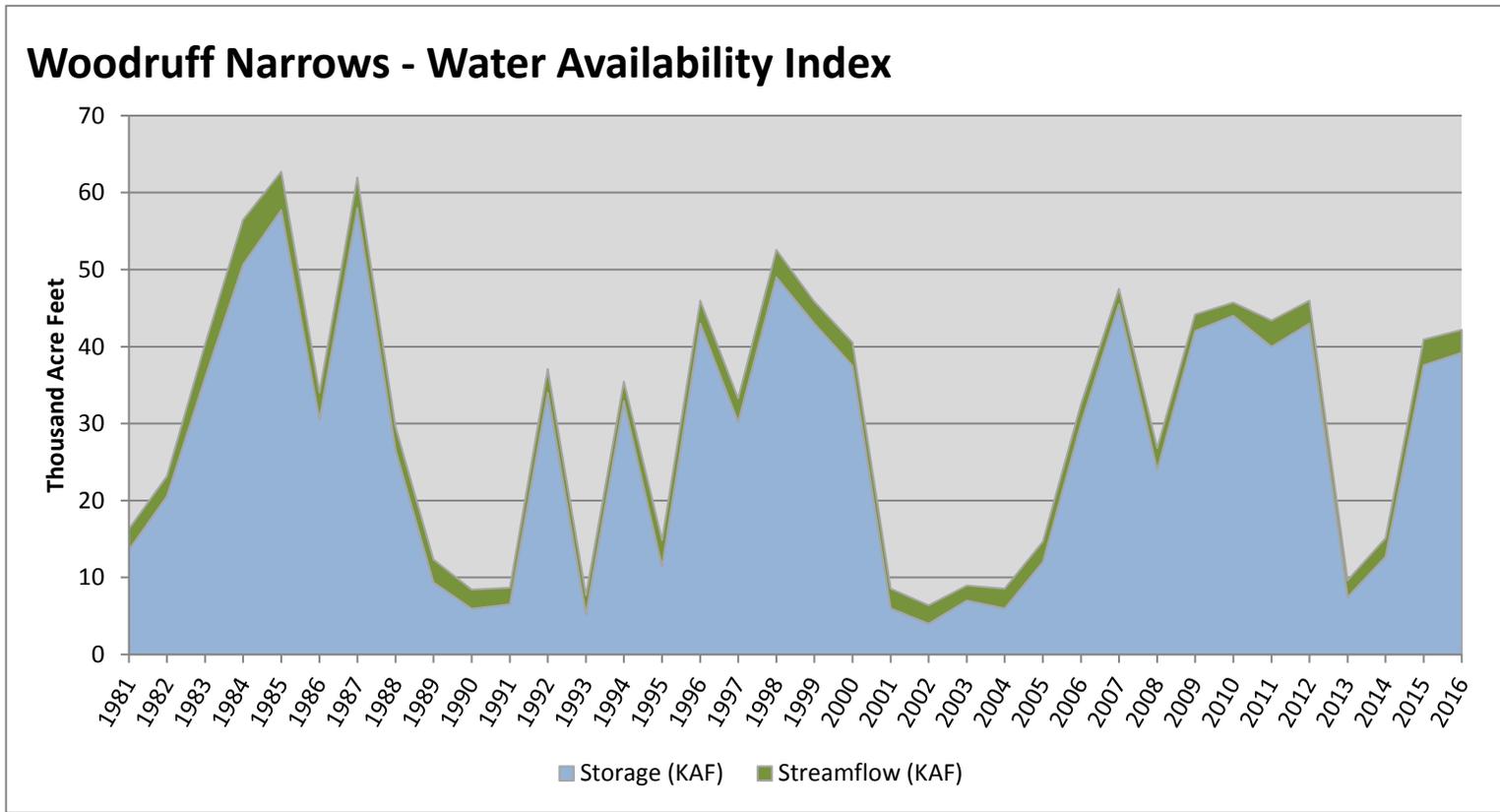


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>39.21</b>	<b>2.95</b>	<b>42.16</b>	<b>68</b>	<b>1.46</b>	<b>00, 15, 11, 09</b>

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

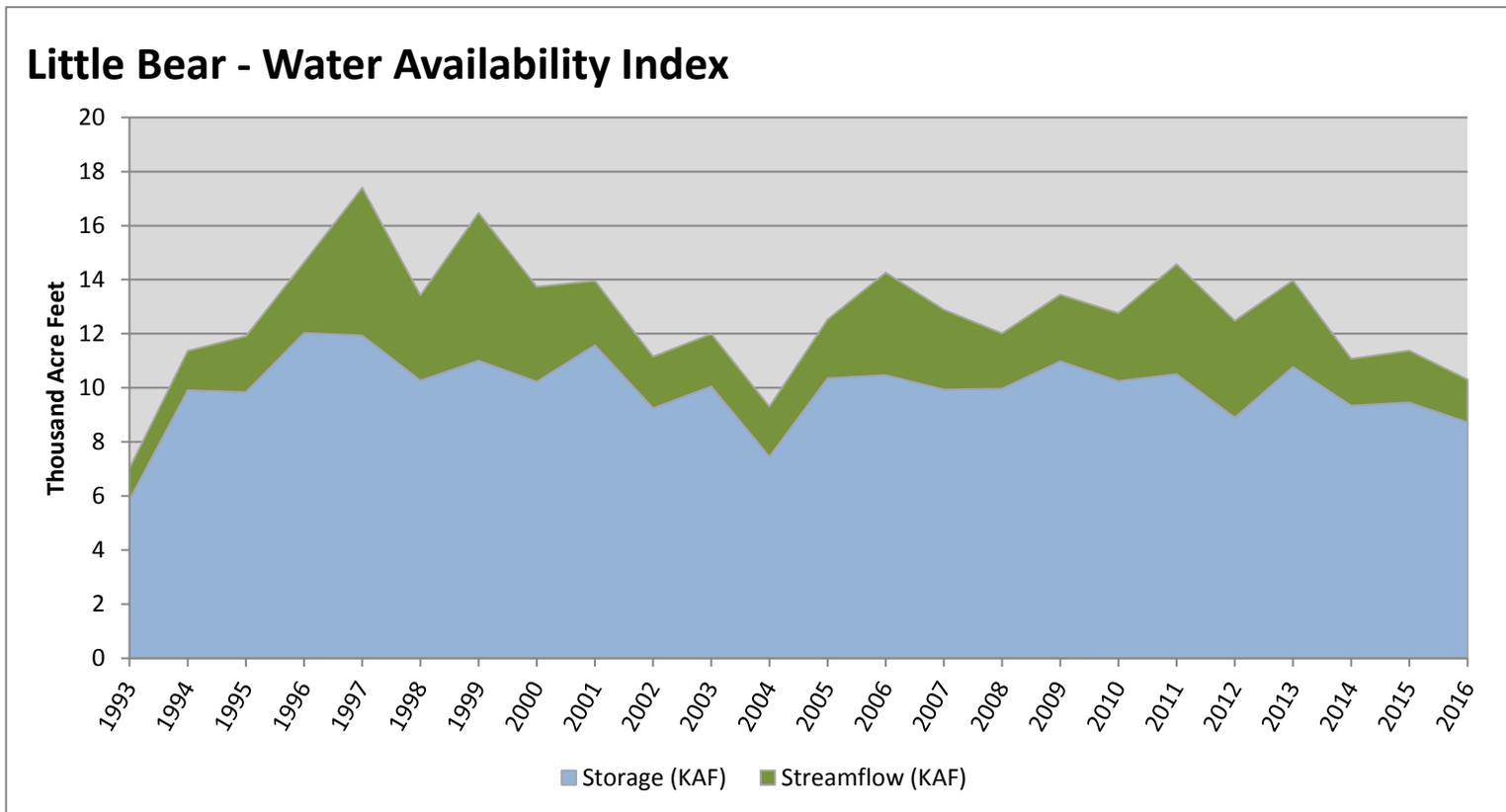


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>8.72</b>	<b>1.59</b>	<b>10.31</b>	<b>12</b>	<b>-3.17</b>	<b>93, 04, 14, 02</b>

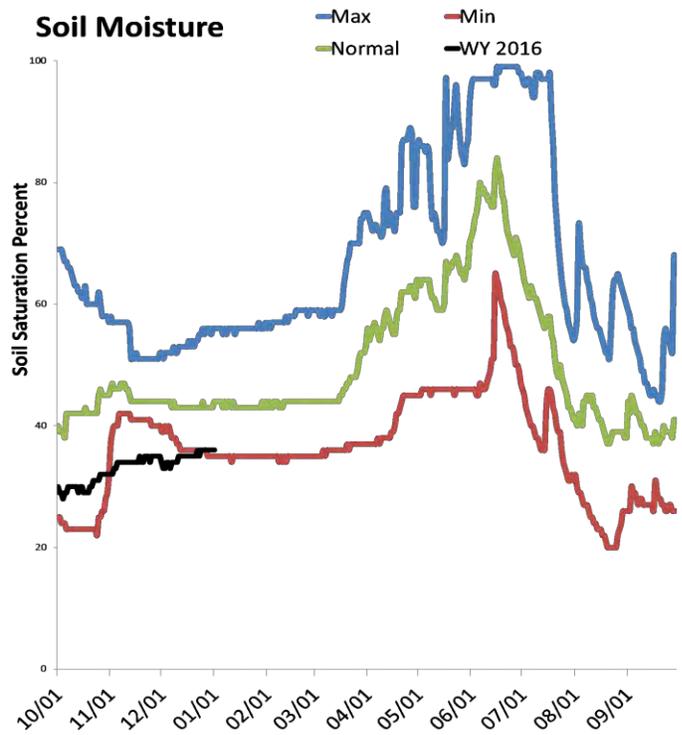
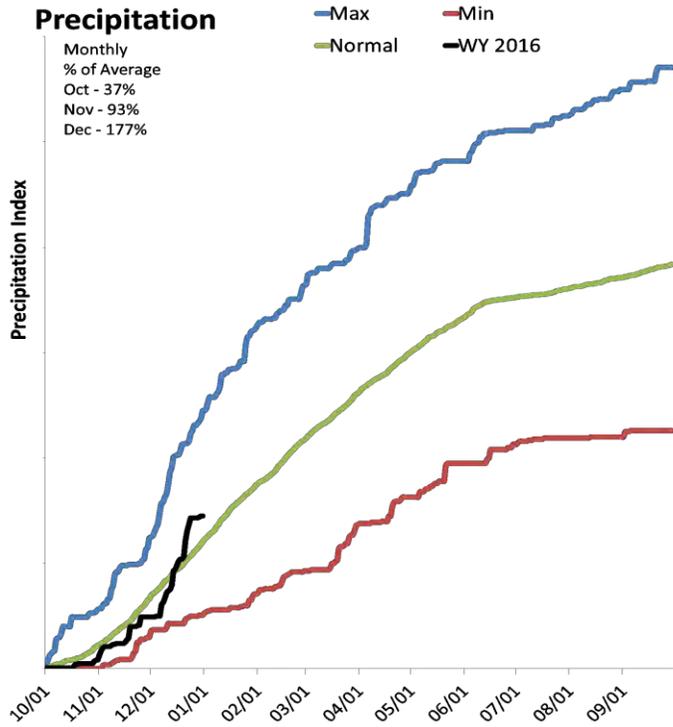
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Raft River Basin

1/1/2016

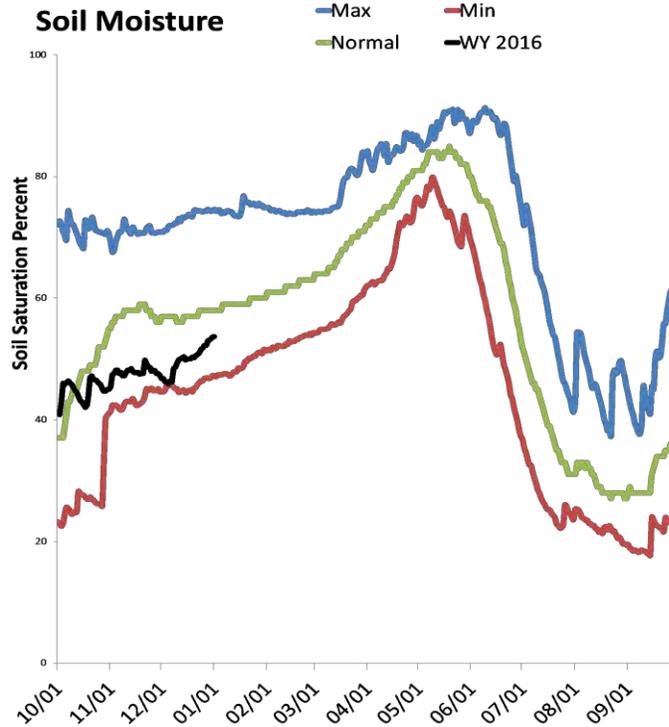
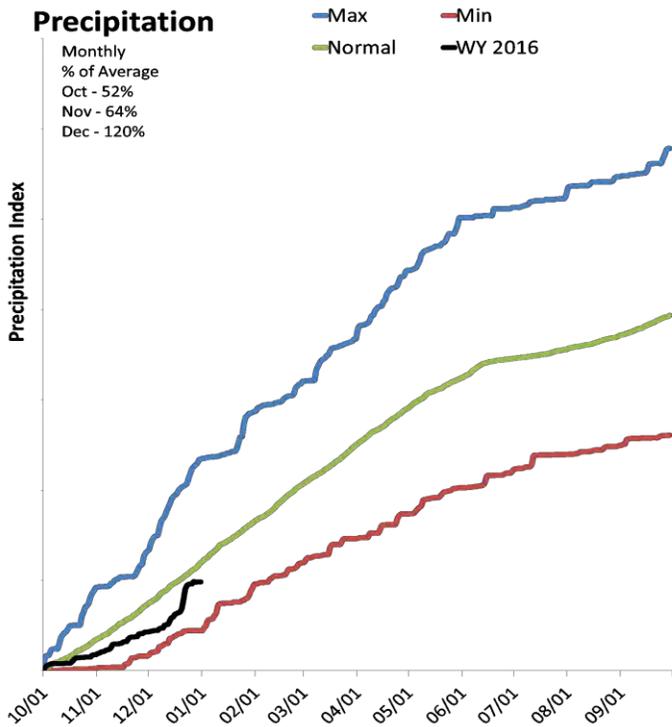
Precipitation in December was much above average at 178%, which brings the seasonal accumulation (Oct-Dec) to 121% of average. Soil moisture is at 37% compared to 28% last year.



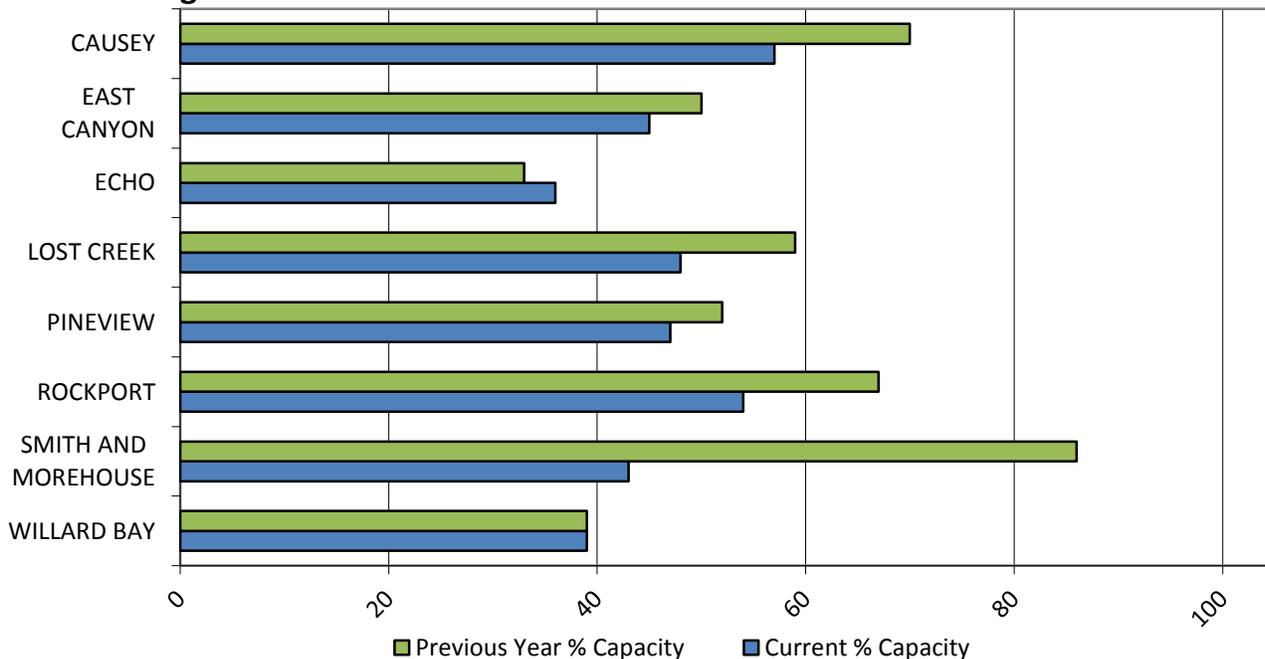
# Weber & Ogden River Basins

1/1/2016

Precipitation in December was above average at 121%, which brings the seasonal accumulation (Oct-Dec) to 82% of average. Soil moisture is at 49% compared to 49% last year. Reservoir storage is at 43% of capacity, compared to 47% last year. The water availability index for the Ogden River is 43% and 22% for the Weber River.



### Reservoir Storage

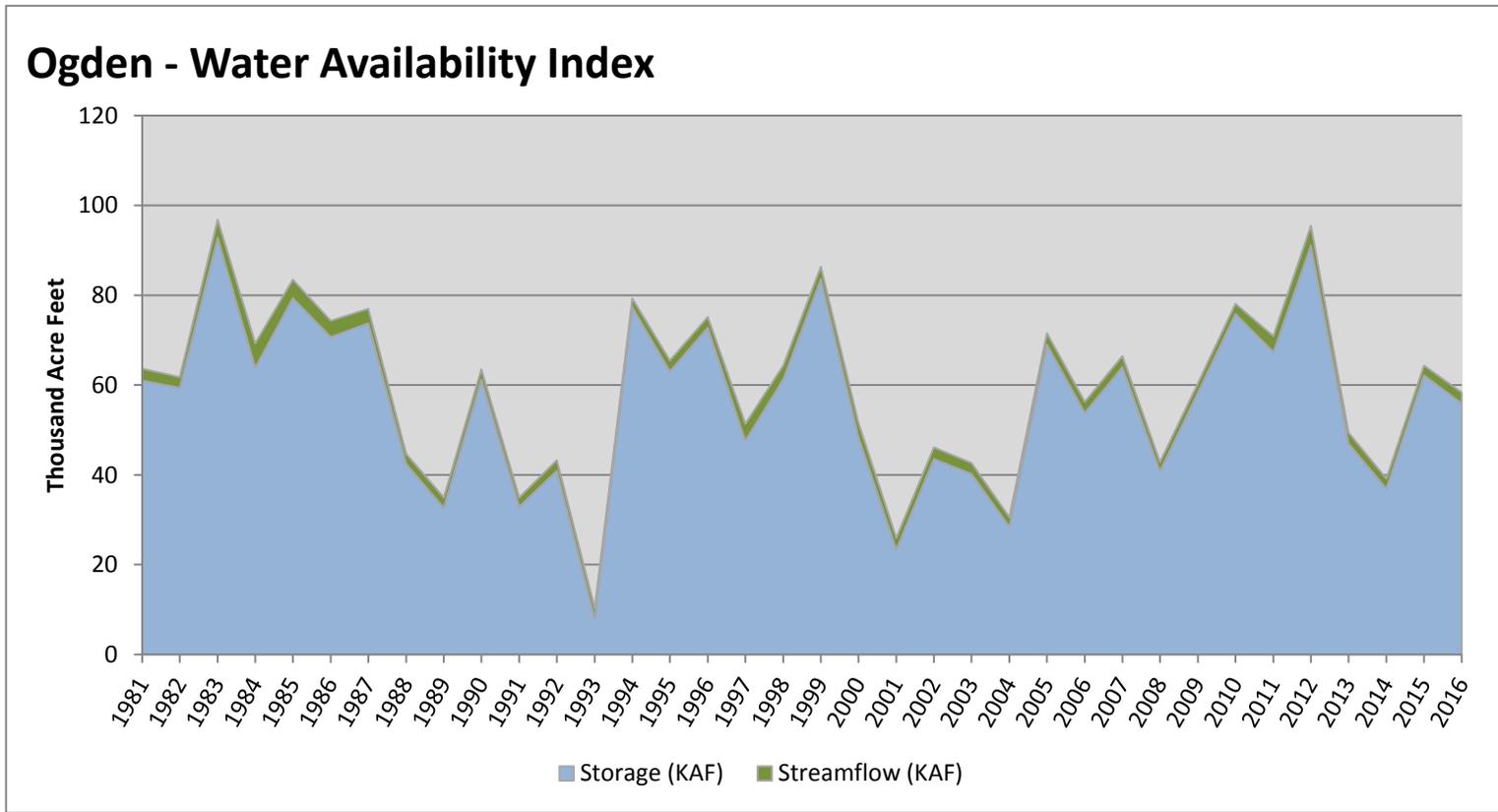


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Ogden</b>	<b>55.94</b>	<b>2.38</b>	<b>58.32</b>	<b>43</b>	<b>-0.56</b>	<b>00, 06, 09, 82</b>

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

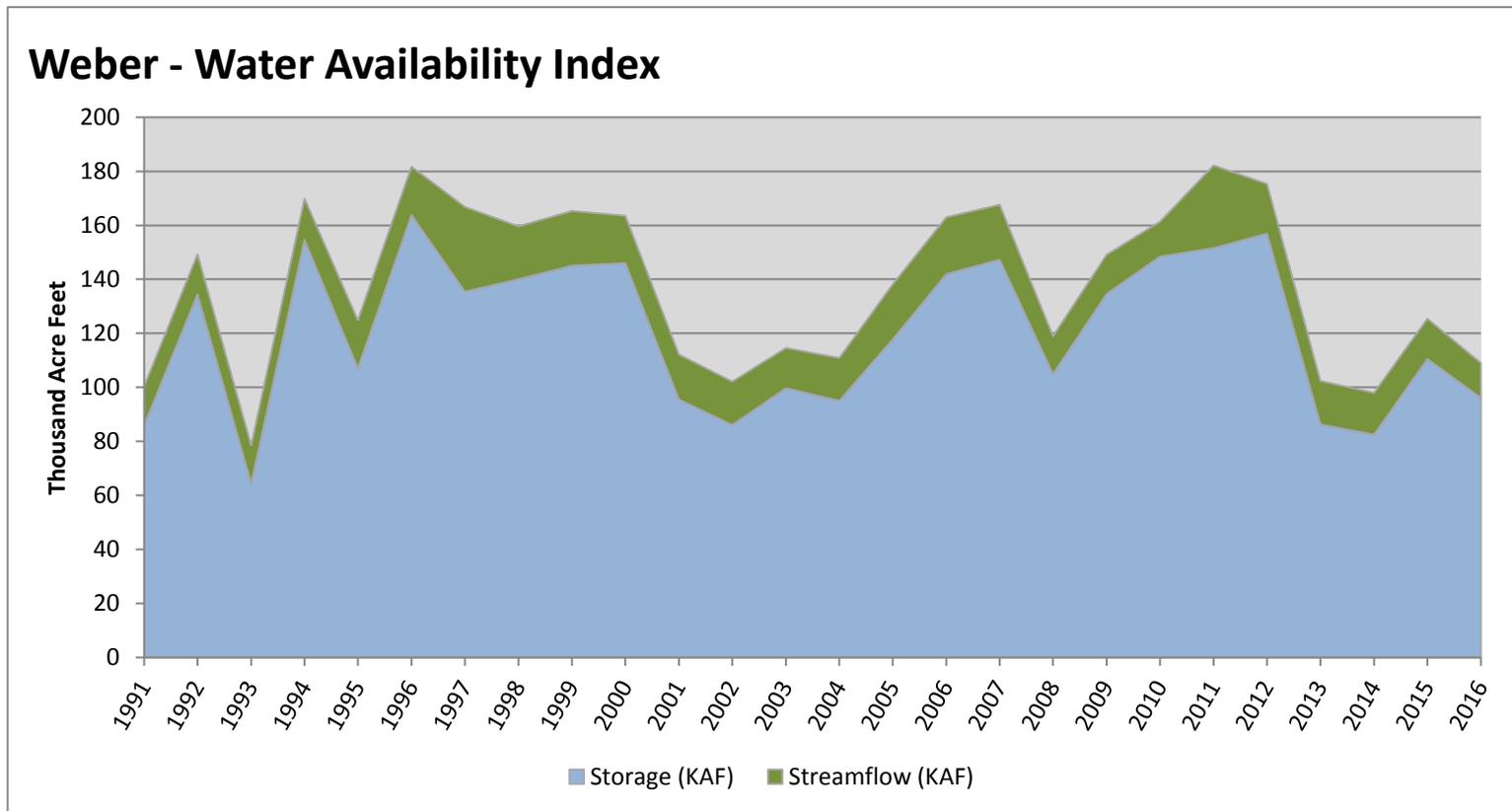


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Weber</b>	<b>96.13</b>	<b>12.81</b>	<b>108.94</b>	<b>22</b>	<b>-2.31</b>	<b>02, 13, 04, 01</b>

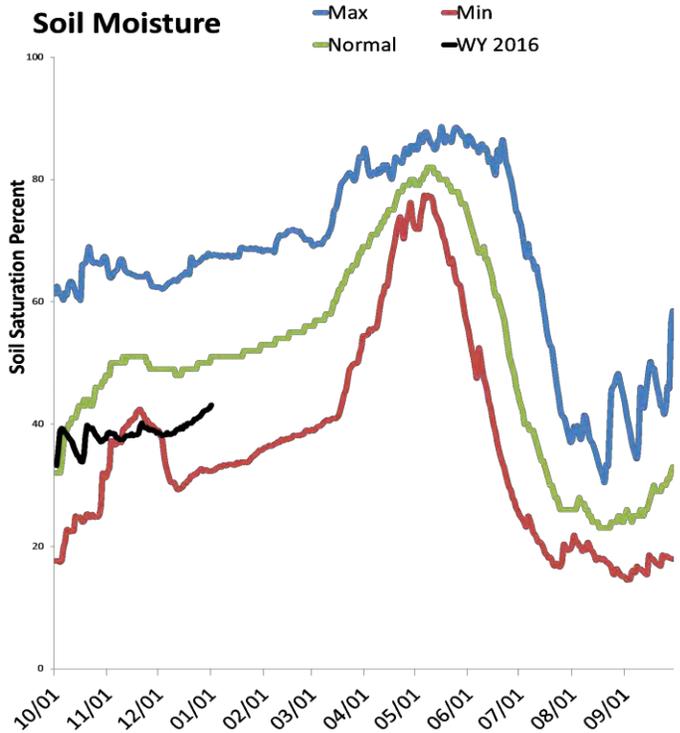
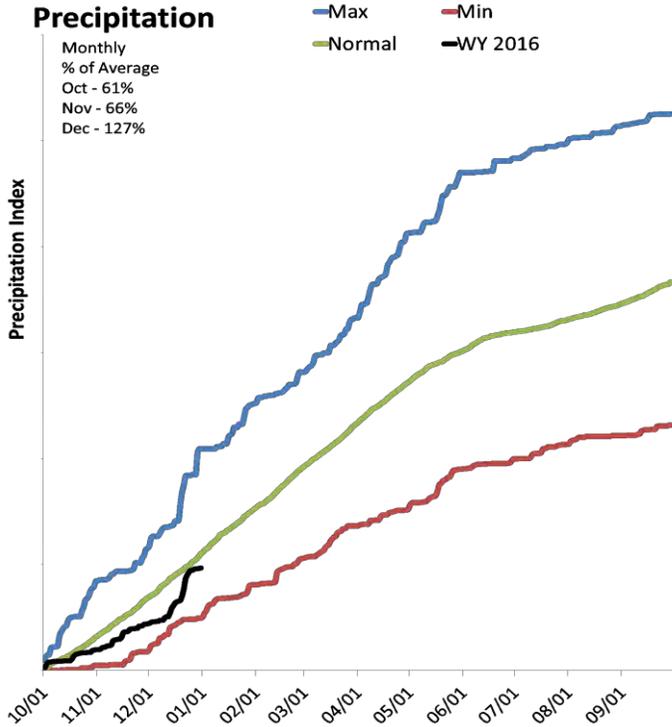
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



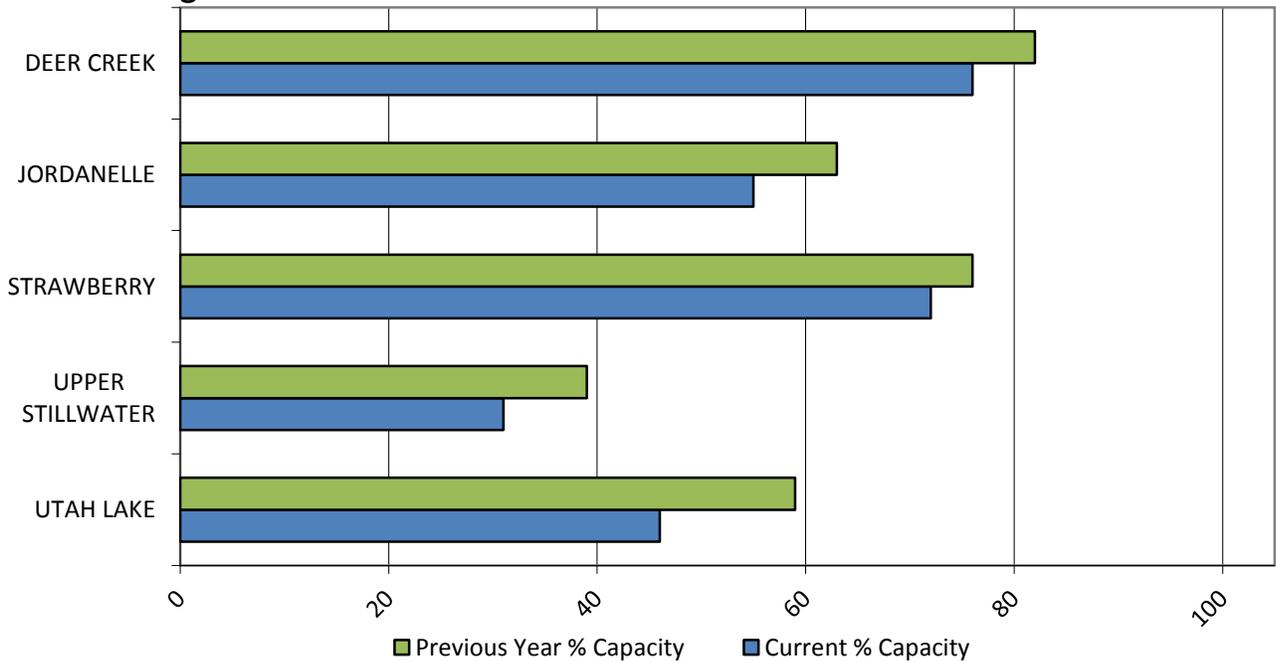
# Provo & Jordan River Basins

1/1/2016

Precipitation in December was above average at 127%, which brings the seasonal accumulation (Oct-Dec) to 88% of average. Soil moisture is at 39% compared to 54% last year. Reservoir storage is at 60% of capacity, compared to 68% last year. The water availability index for the Provo River is 9%.



### Reservoir Storage

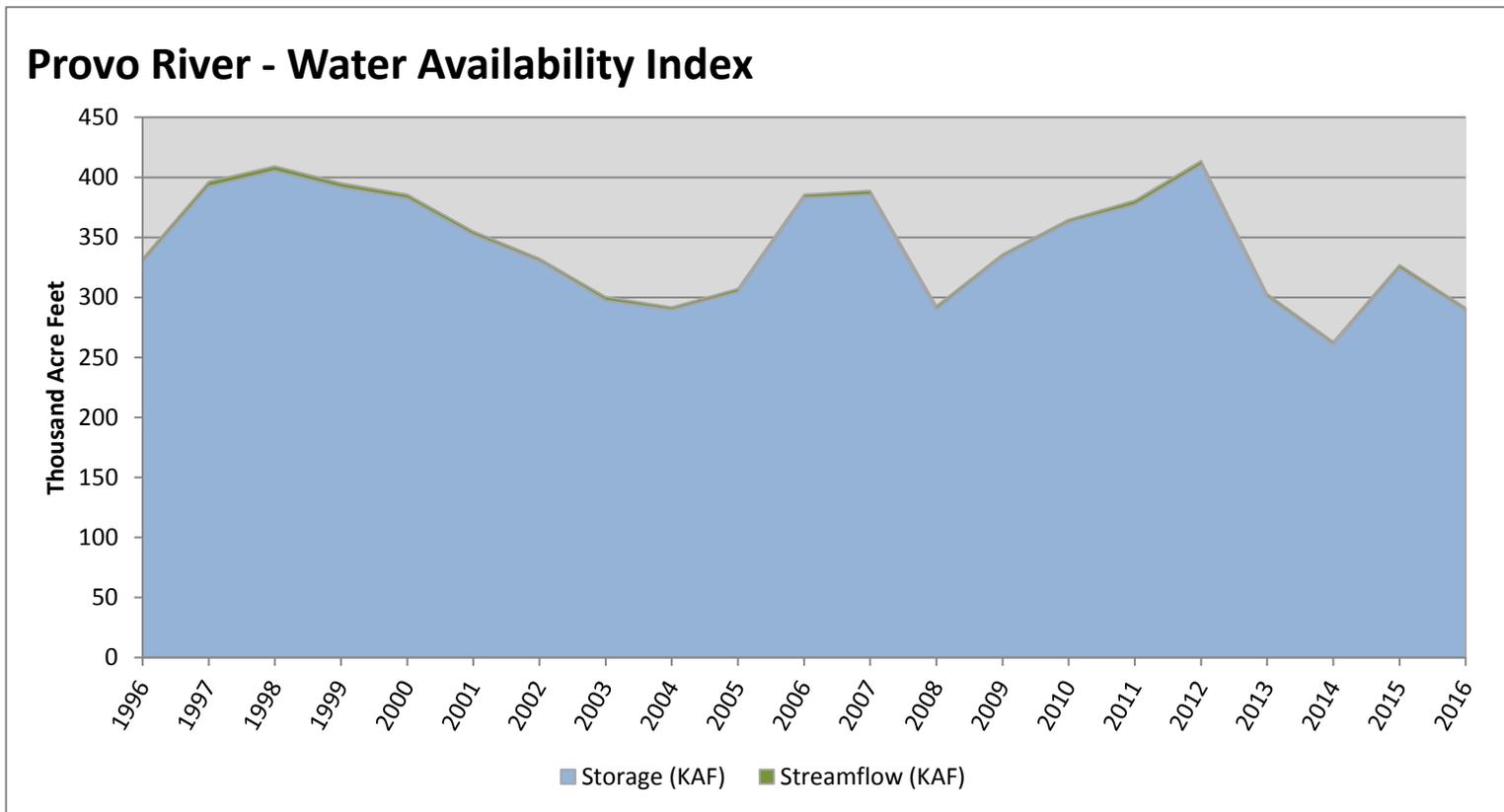


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>289.07</b>	<b>2.21</b>	<b>291.28</b>	<b>9</b>	<b>-3.41</b>	<b>14, 04, 08, 03</b>

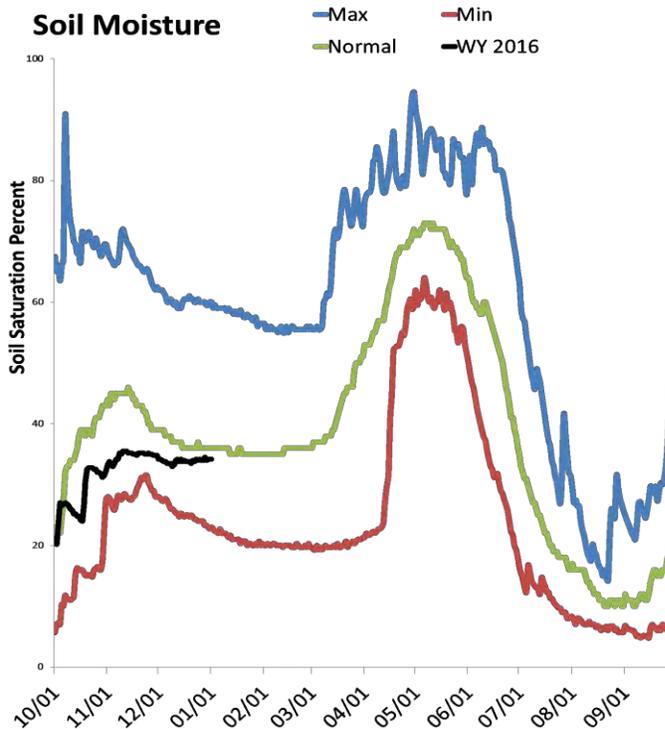
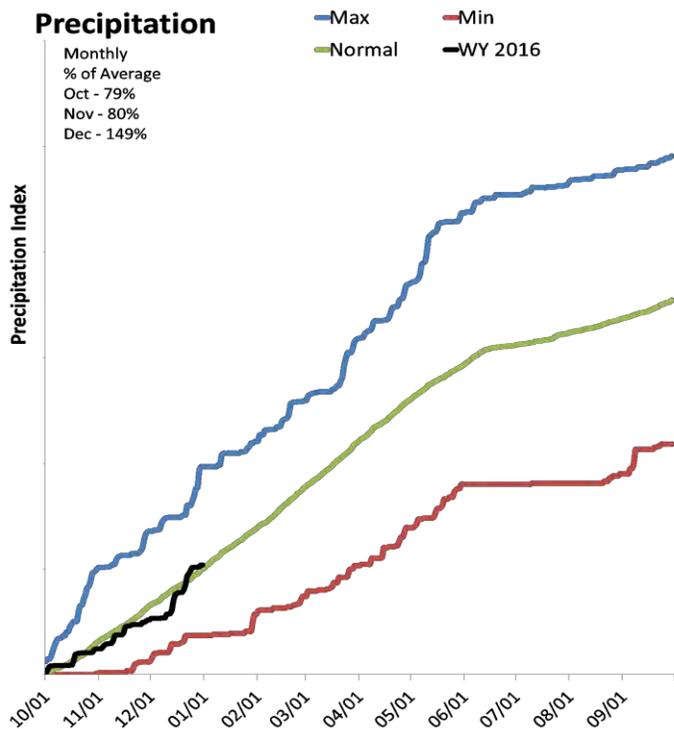
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



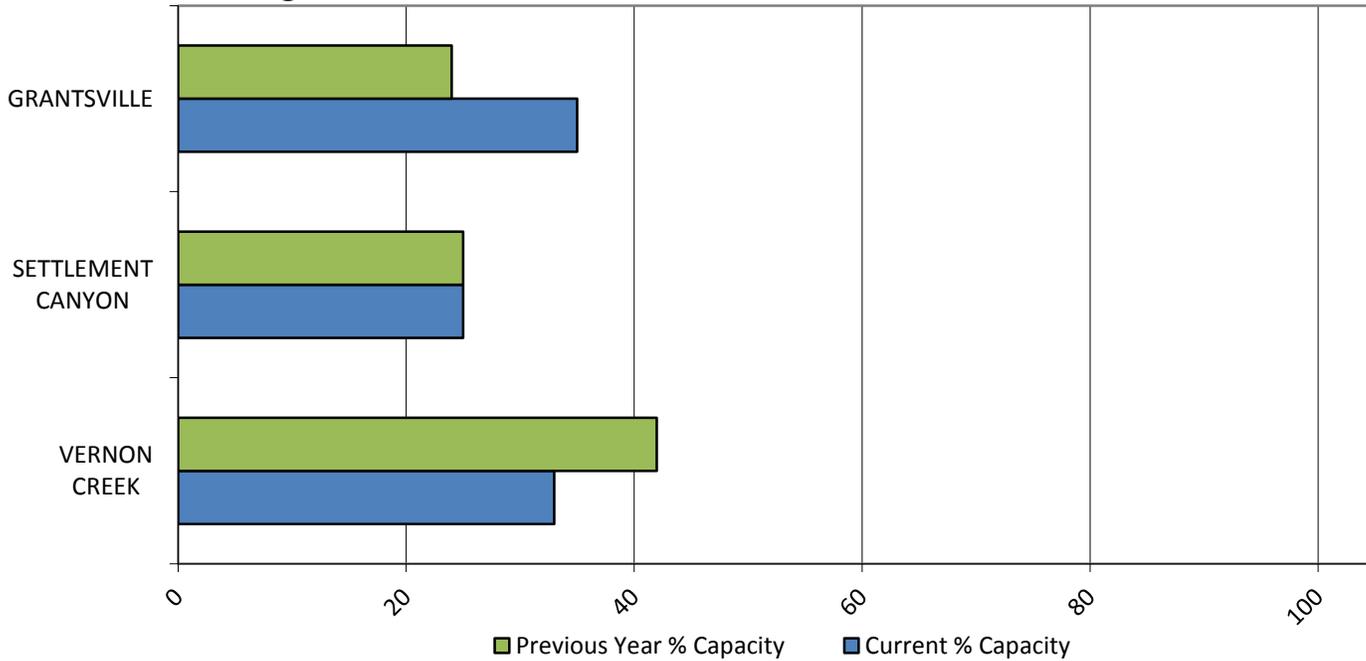
# Tooele & Vernon Creek Basins

1/1/2016

Precipitation in December was much above average at 150%, which brings the seasonal accumulation (Oct-Dec) to 104% of average. Soil moisture is at 30% compared to 31% last year. Reservoir storage is at 33% of capacity, compared to 27% last year.



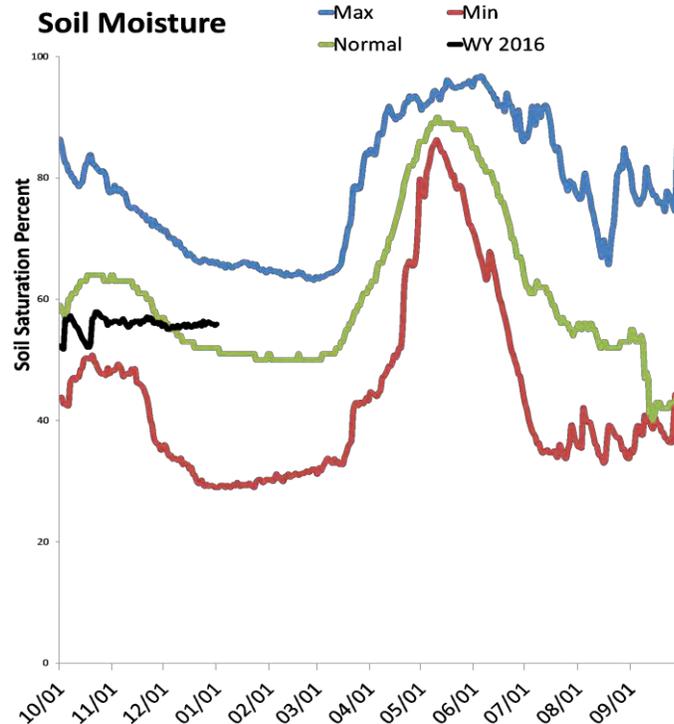
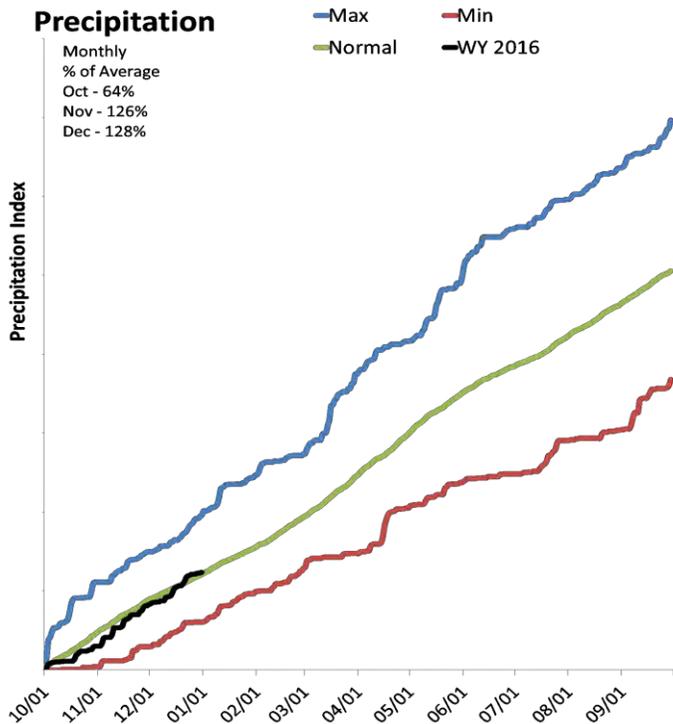
### Reservoir Storage



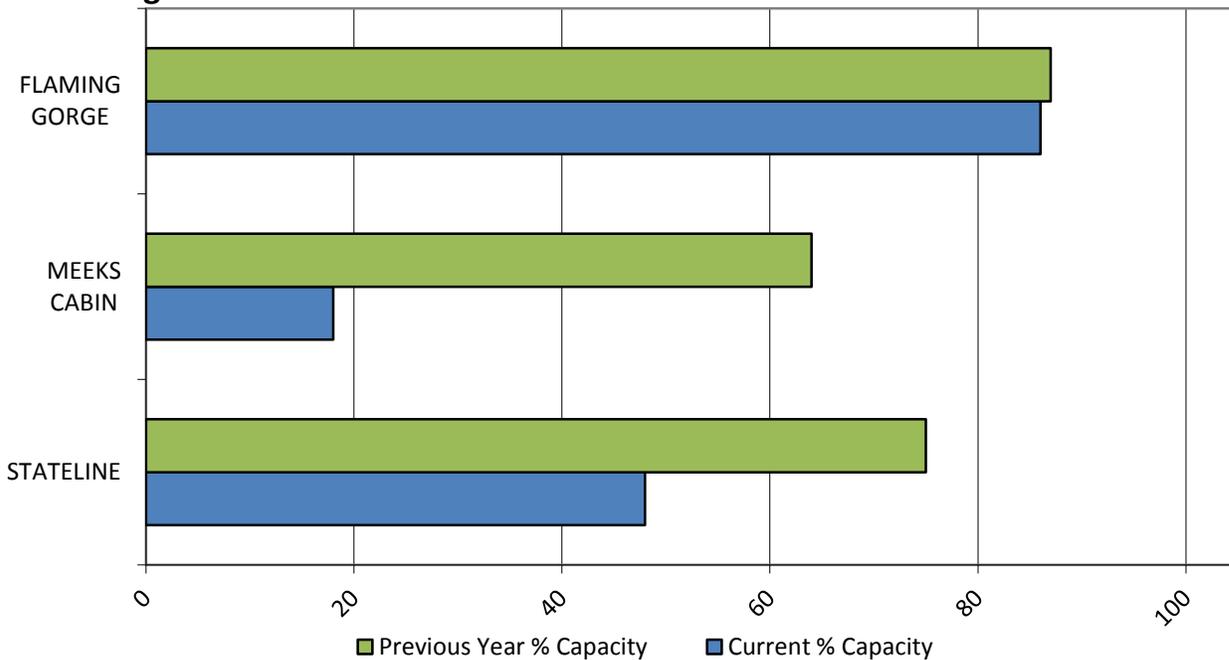
# Northeastern Uintah Basin

1/1/2016

Precipitation in December was above average at 129%, which brings the seasonal accumulation (Oct-Dec) to 102% of average. Soil moisture is at 55% compared to 63% last year. Reservoir storage is at 85% of capacity, compared to 87% last year. The Water Availability Index for Blacks Fork is 26% and 61% for Smiths Creek.



### Reservoir Storage

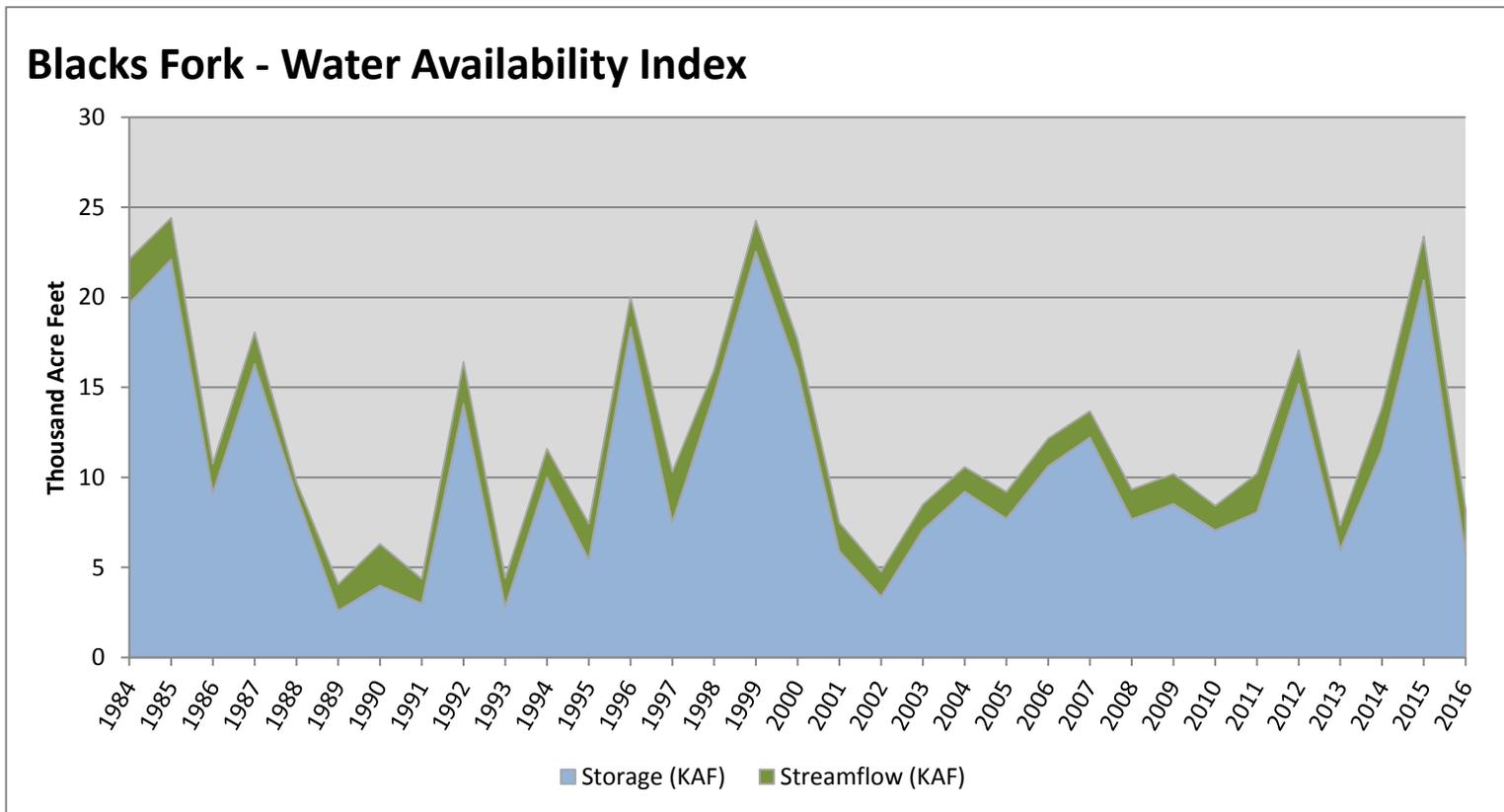


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>5.73</b>	<b>2.46</b>	<b>8.19</b>	<b>26</b>	<b>-1.96</b>	<b>95, 01, 10, 03</b>

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

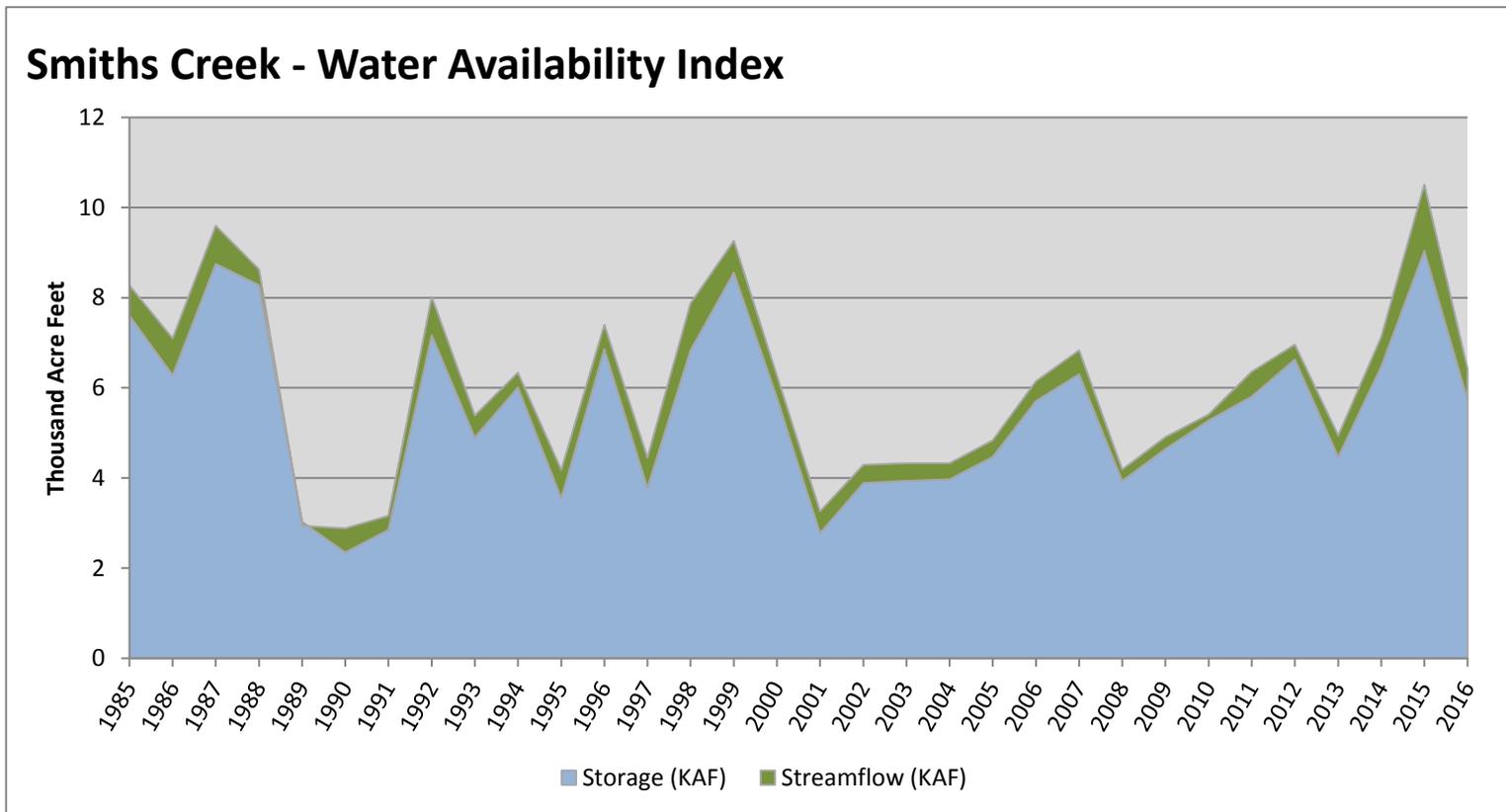


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>5.73</b>	<b>0.69</b>	<b>6.42</b>	<b>61</b>	<b>0.88</b>	<b>94, 11, 07, 12</b>

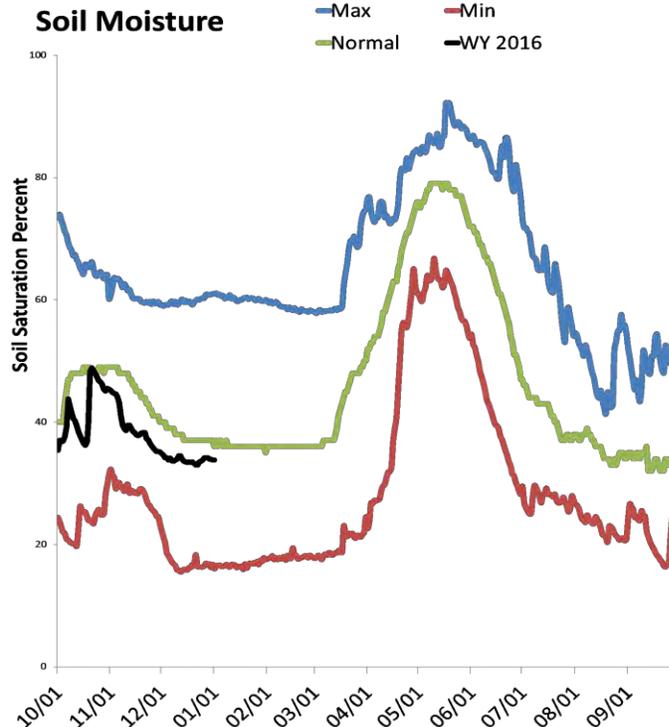
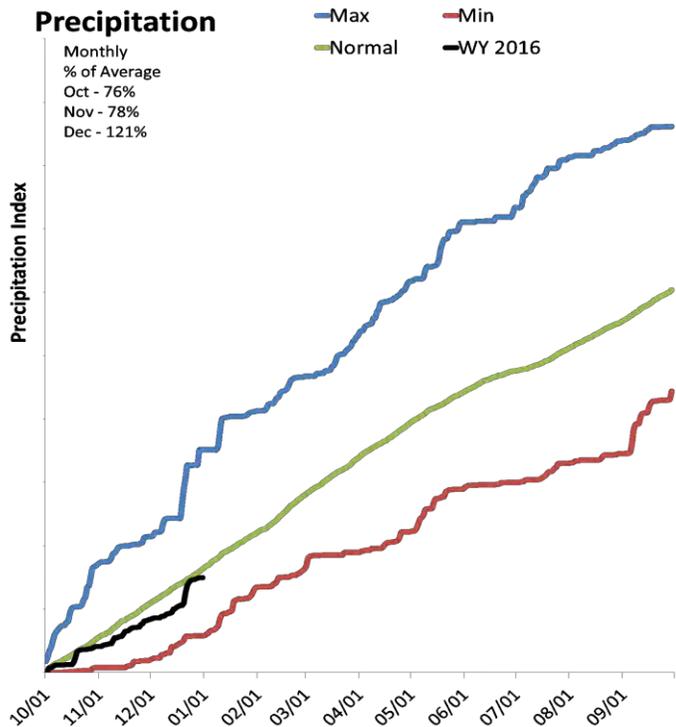
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



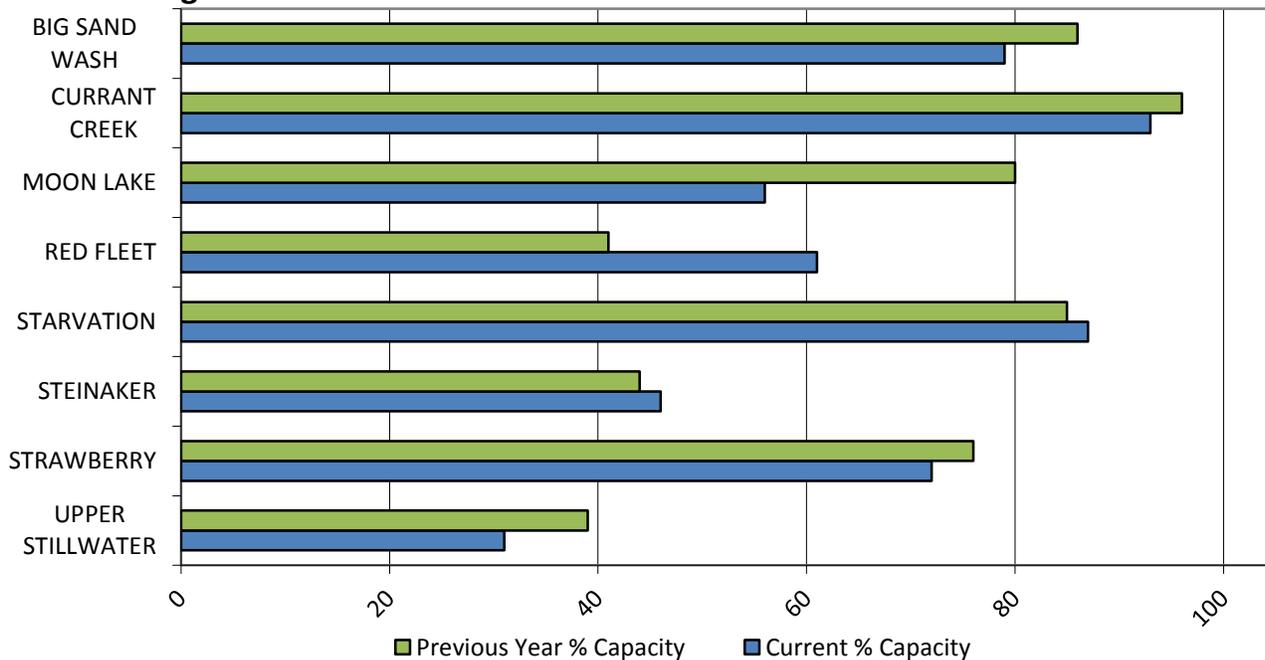
# Duchesne River Basin

1/1/2016

Precipitation in December was above average at 121%, which brings the seasonal accumulation (Oct-Dec) to 91% of average. Soil moisture is at 34% compared to 42% last year. Reservoir storage is at 72% of capacity, compared to 75% last year. The water availability index for the Western Uintahs is 80% and 30% for the Eastern Uintahs.



### Reservoir Storage

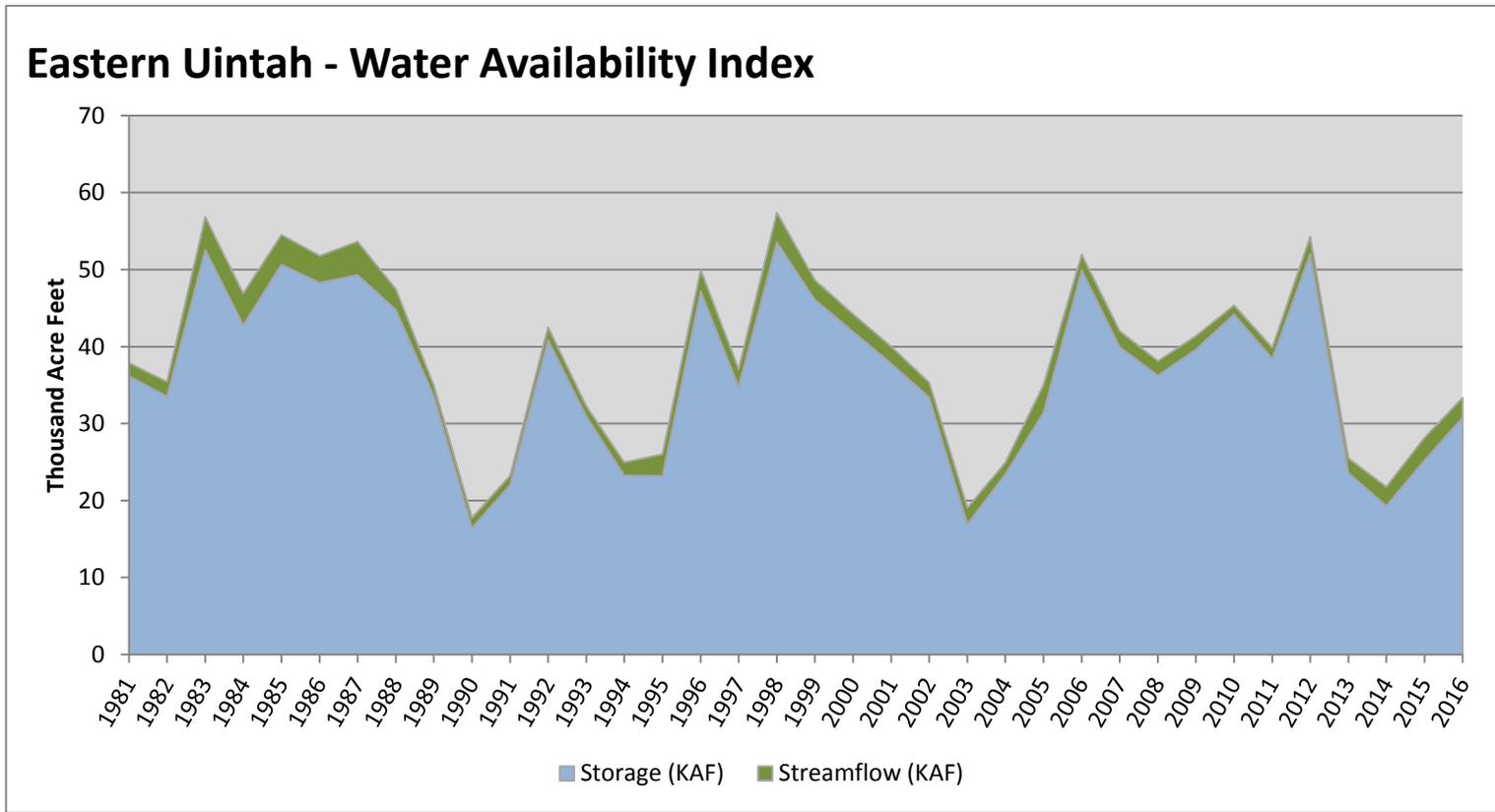


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>30.80</b>	<b>2.54</b>	<b>33.34</b>	<b>30</b>	<b>-1.69</b>	<b>15, 93, 89, 05</b>

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

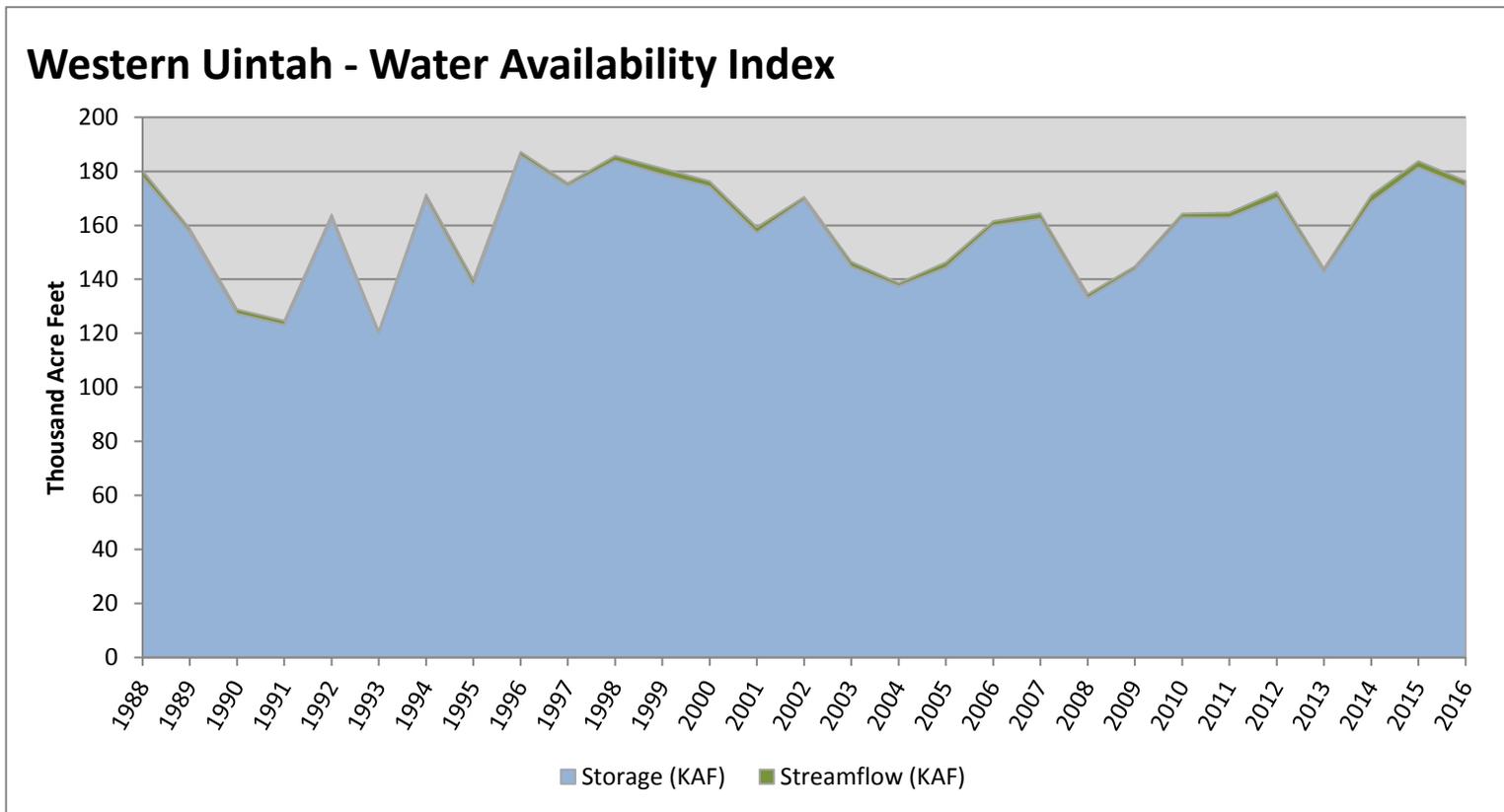


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>174.24</b>	<b>2.21</b>	<b>176.45</b>	<b>80</b>	<b>2.5</b>	<b>97, 00, 88, 99</b>

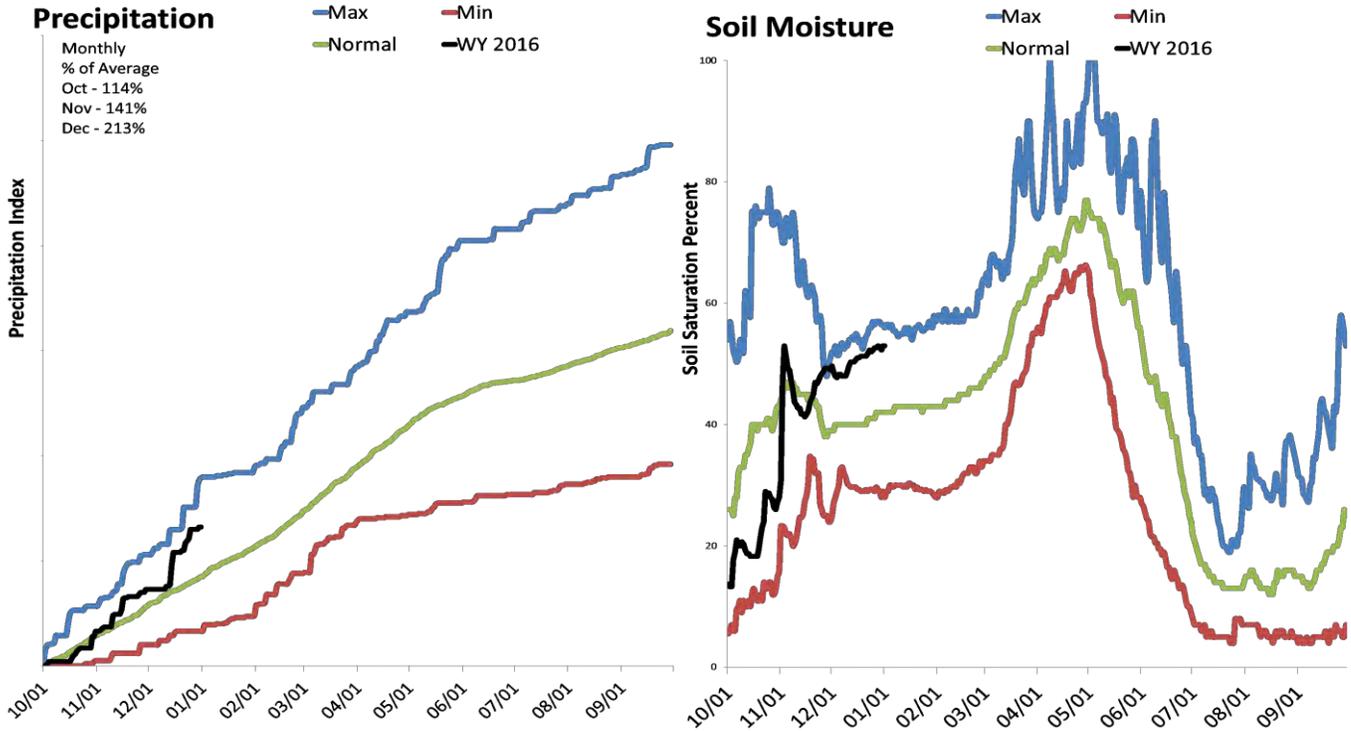
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



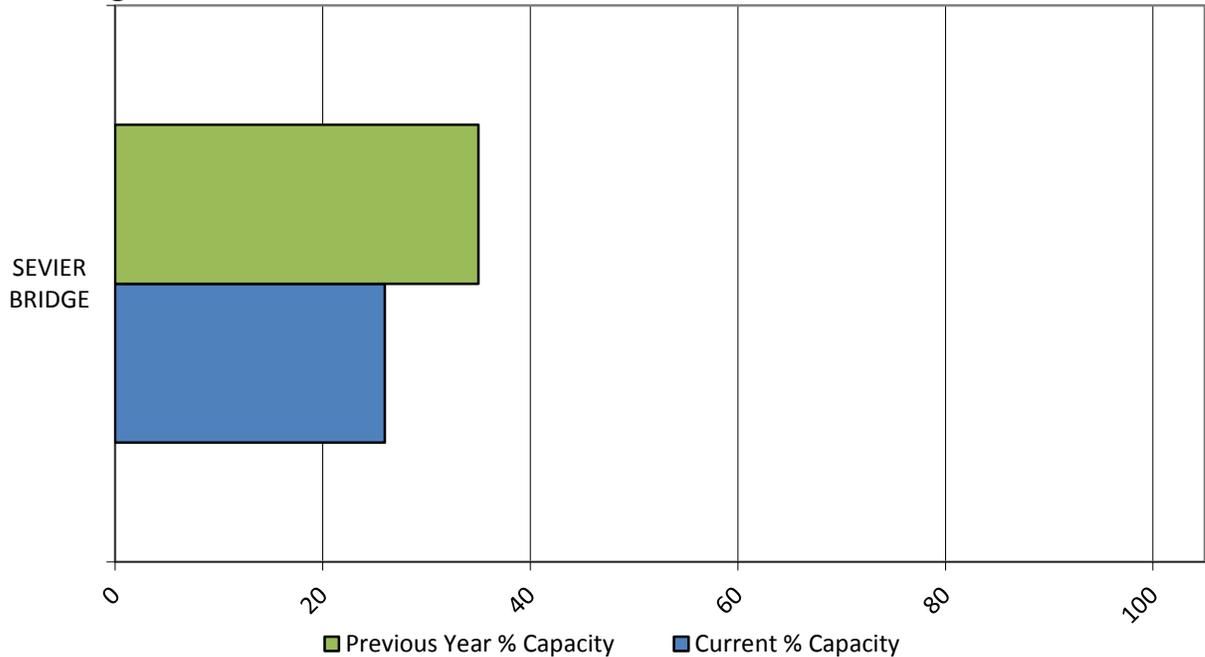
# Lower Sevier River Basin

1/1/2016

Precipitation in December was much above average at 211%, which brings the seasonal accumulation (Oct-Dec) to 155% of average. Soil moisture is at 37% compared to 35% last year. Reservoir storage is at 26% of capacity, compared to 35% last year. The water availability index for the Lower Sevier is 14%.



## Reservoir Storage

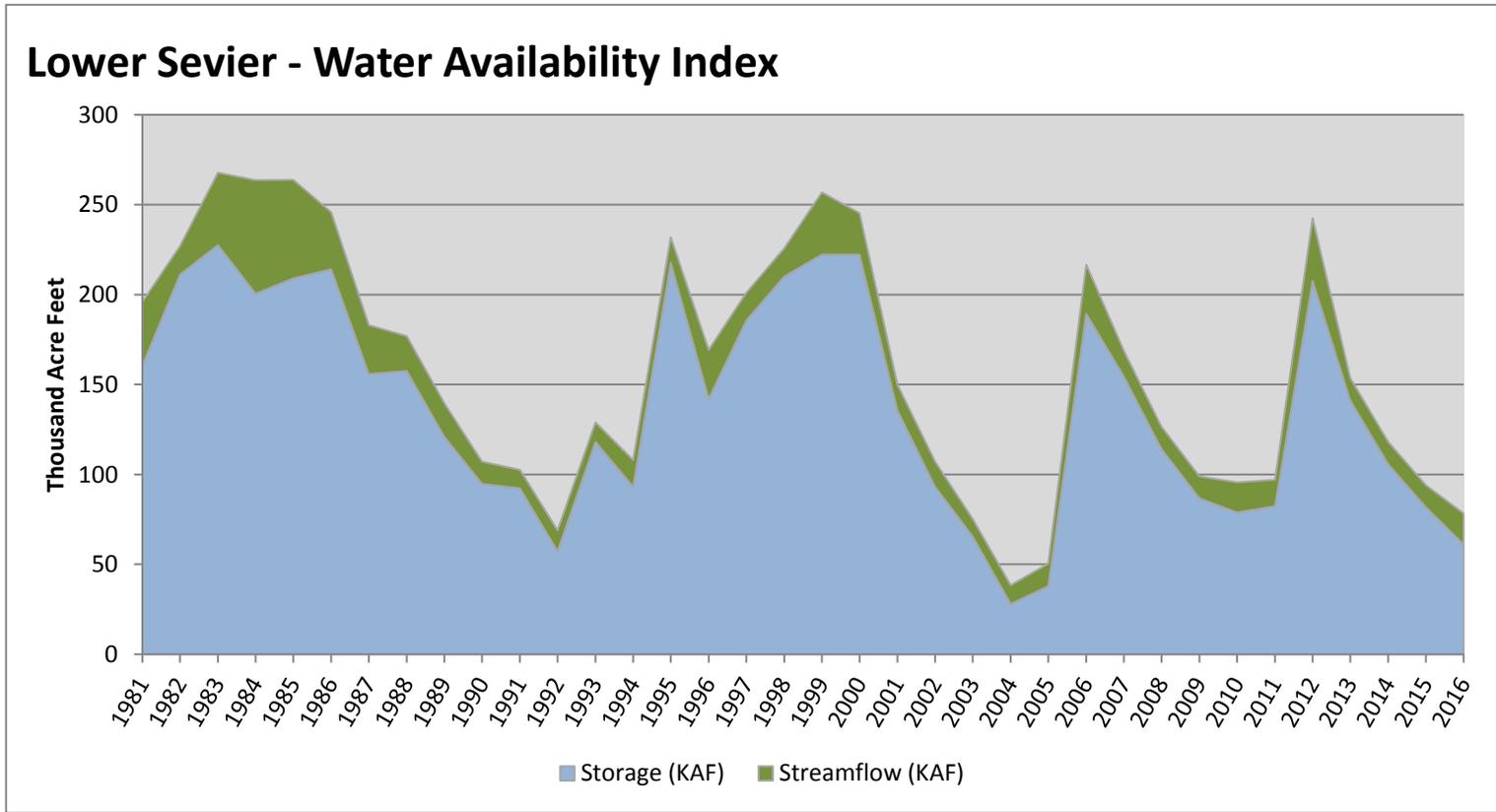


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Lower Sevier</b>	<b>61.01</b>	<b>17.40</b>	<b>78.41</b>	<b>14</b>	<b>-3.04</b>	<b>92, 03, 15, 10</b>

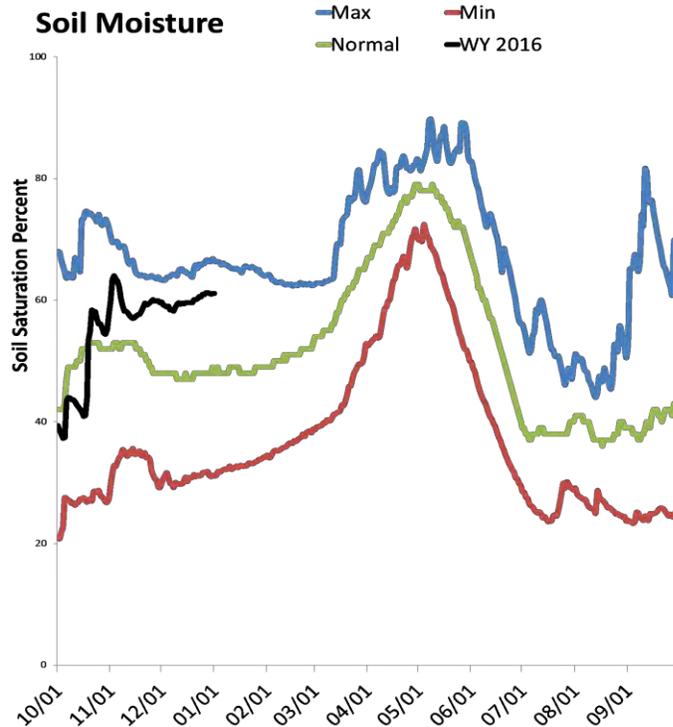
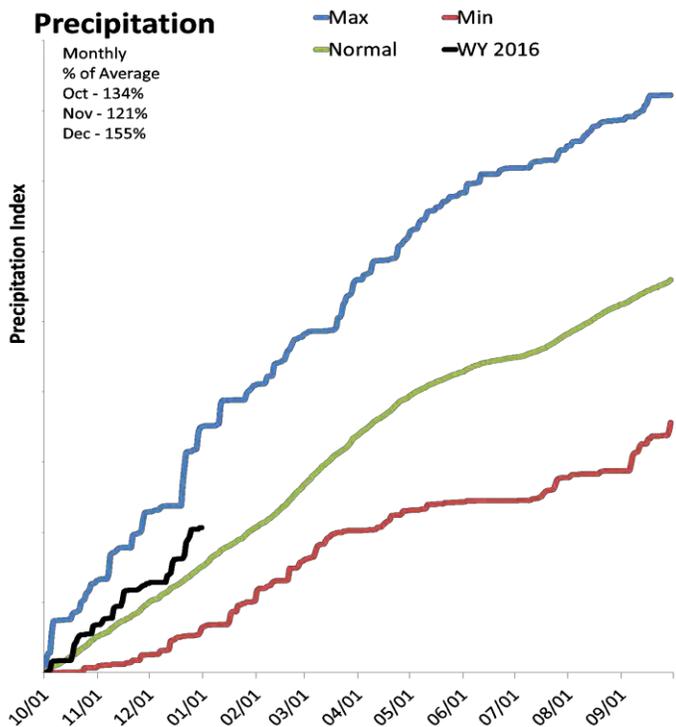
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



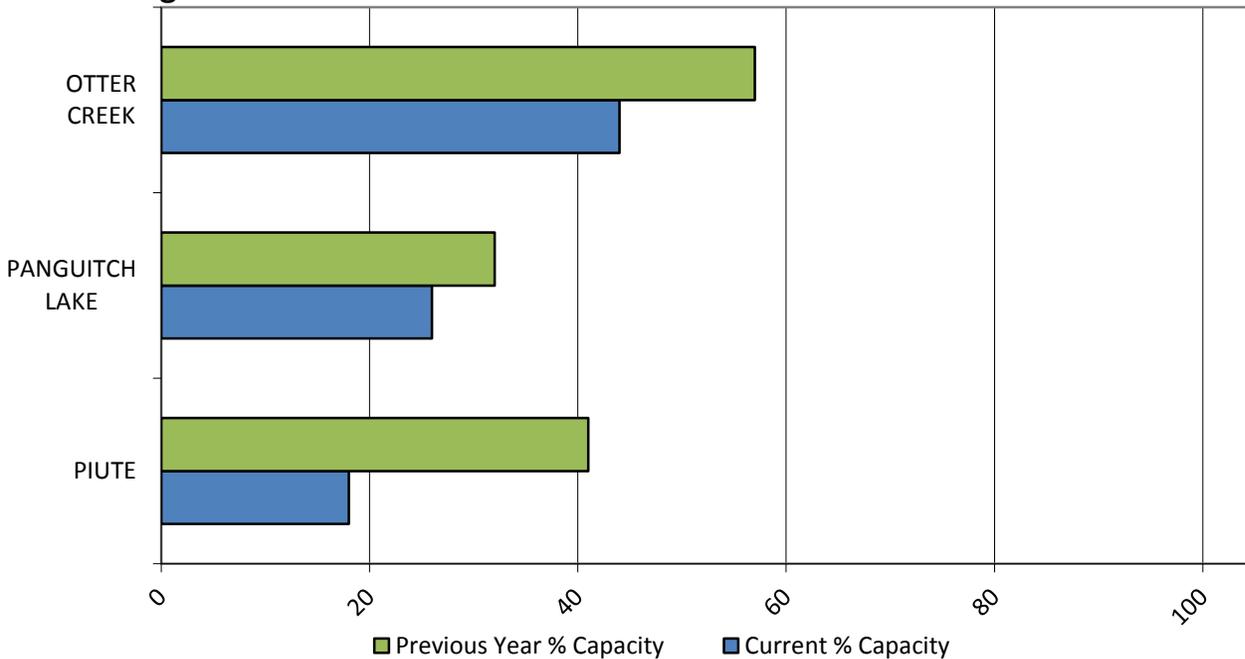
# Upper Sevier River Basin

1/1/2016

Precipitation in December was much above average at 155%, which brings the seasonal accumulation (Oct-Dec) to 137% of average. Soil moisture is at 56% compared to 62% last year. Reservoir storage is at 28% of capacity, compared to 45% last year. The water availability index for the Upper Sevier is 16%.



### Reservoir Storage

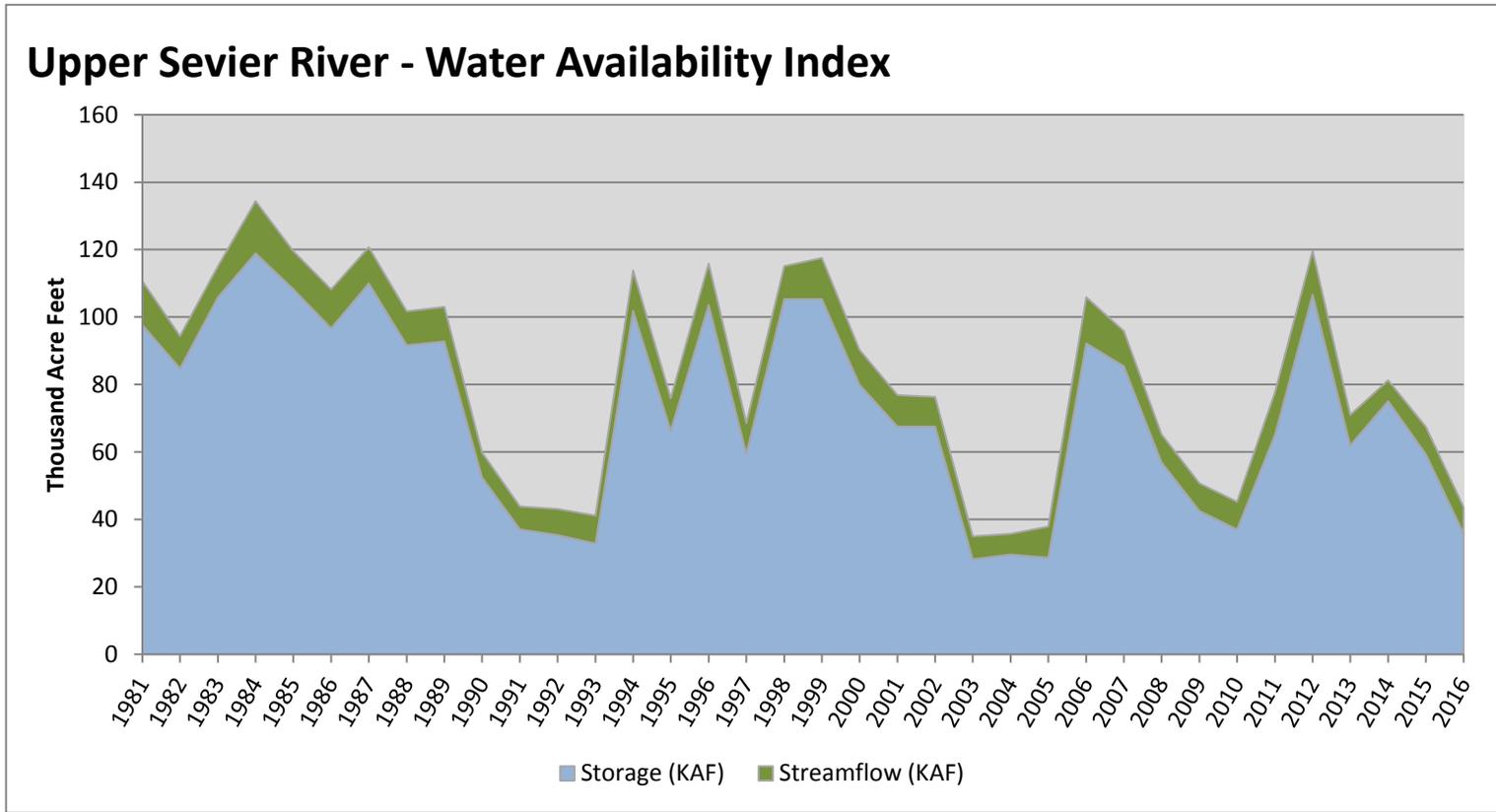


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>35.86</b>	<b>7.80</b>	<b>43.66</b>	<b>16</b>	<b>-2.82</b>	<b>93, 92, 91, 10</b>

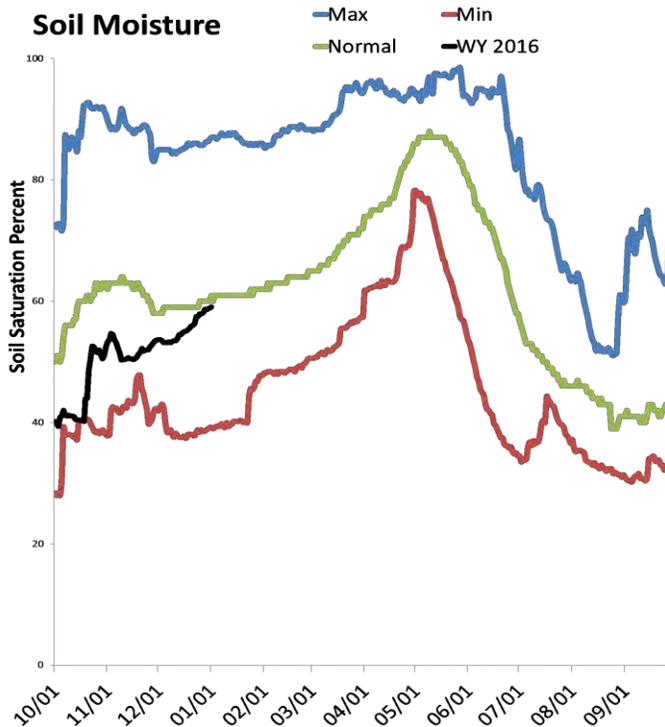
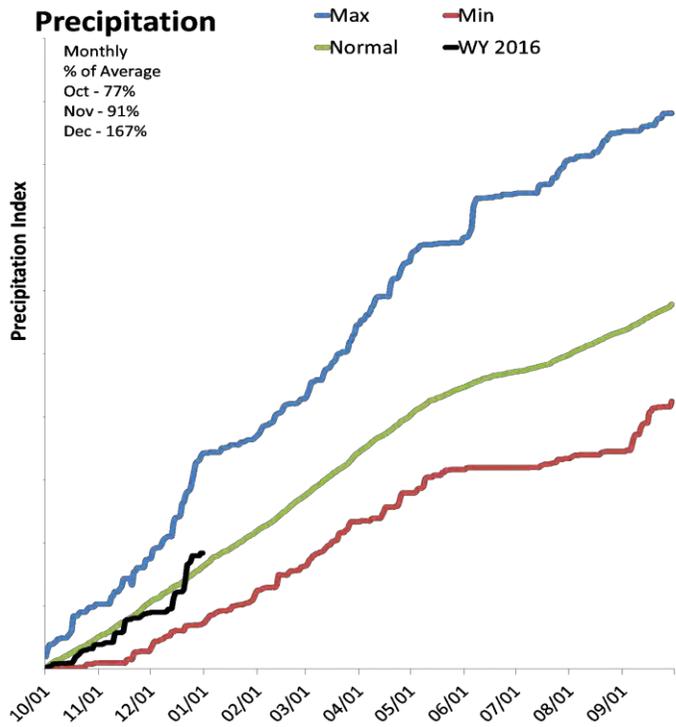
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



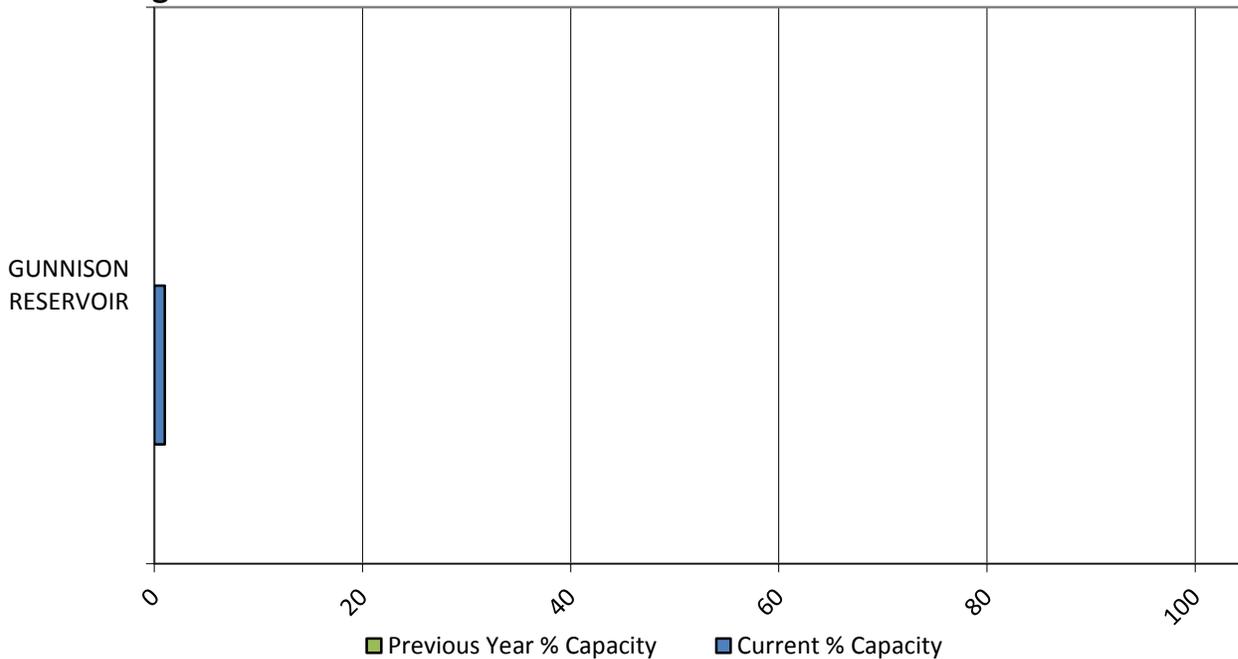
# San Pitch River Basin

1/1/2016

Precipitation in December was much above average at 166%, which brings the seasonal accumulation (Oct-Dec) to 113% of average. Soil Moisture is at 59% compared to 64% last year. Reservoir storage is at 1% of capacity, compared to 0% last year. The water availability index for the San Pitch is 11%.



### Reservoir Storage

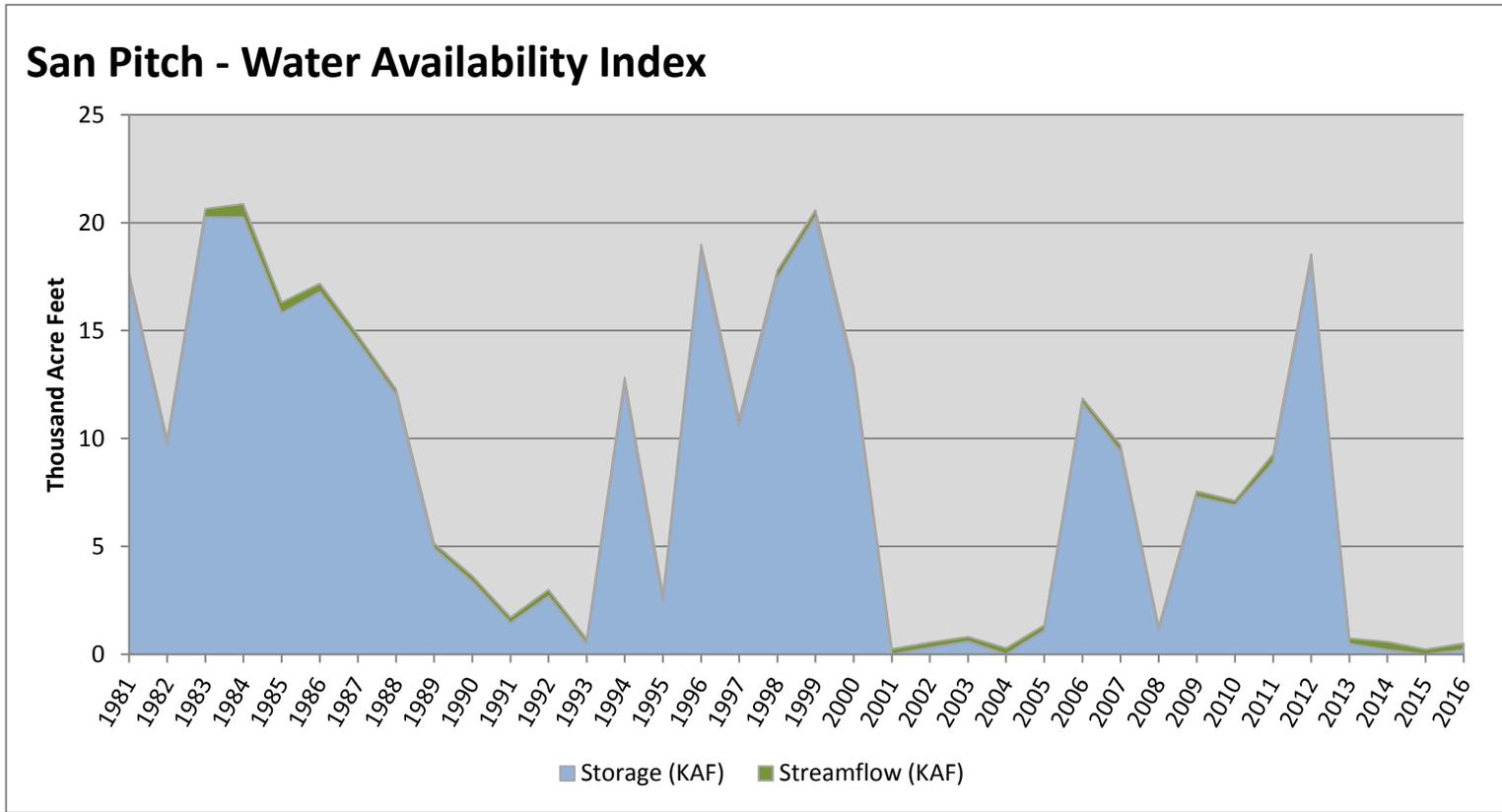


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>0.20</b>	<b>0.31</b>	<b>0.51</b>	<b>11</b>	<b>-3.27</b>	<b>01, 04, 02, 14</b>

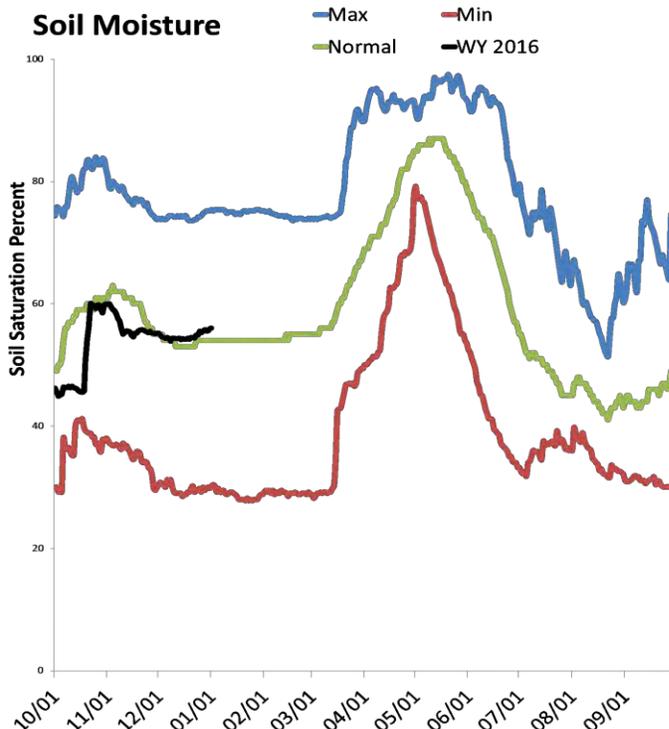
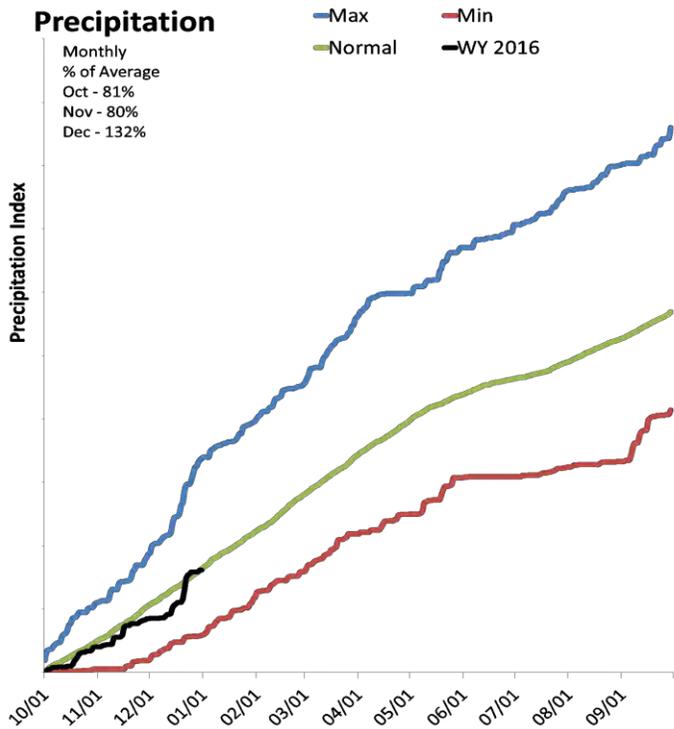
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



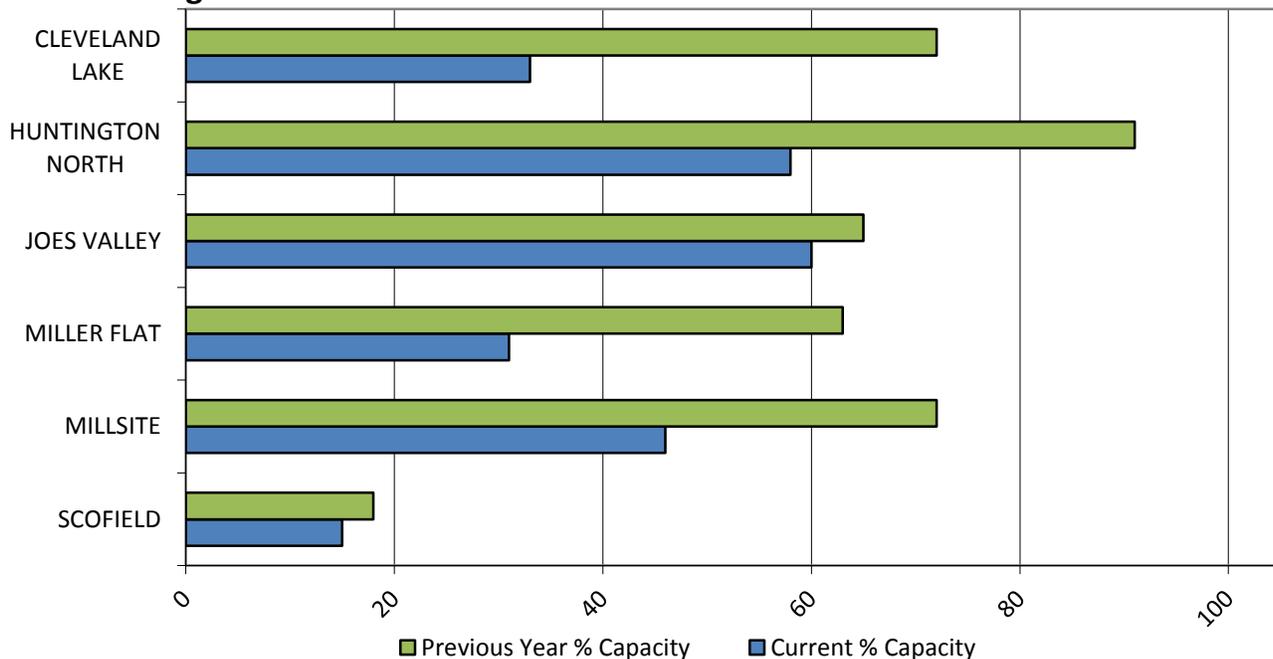
# Price & San Rafael Basins

1/1/2016

Precipitation in December was much above average at 133%, which brings the seasonal accumulation (Oct-Dec) to 99% of average. Soil moisture is at 55% compared to 62% last year. Reservoir storage is at 38% of capacity, compared to 47% last year. The water availability index for the Price River is 14%, and 30% for Joe's Valley.



### Reservoir Storage

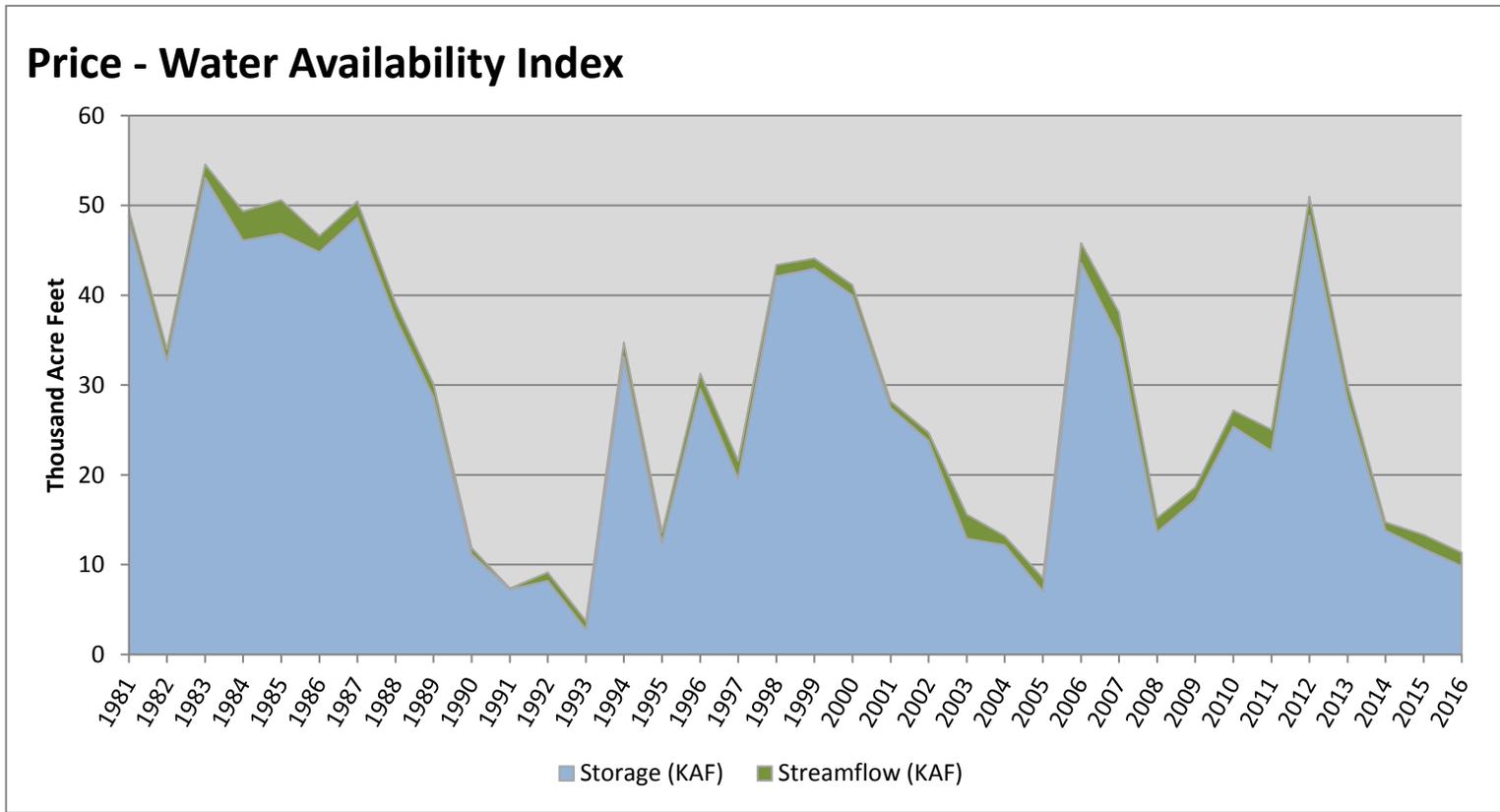


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Price</b>	<b>9.83</b>	<b>1.52</b>	<b>11.35</b>	<b>14</b>	<b>-3.04</b>	<b>05, 92, 90, 04</b>

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

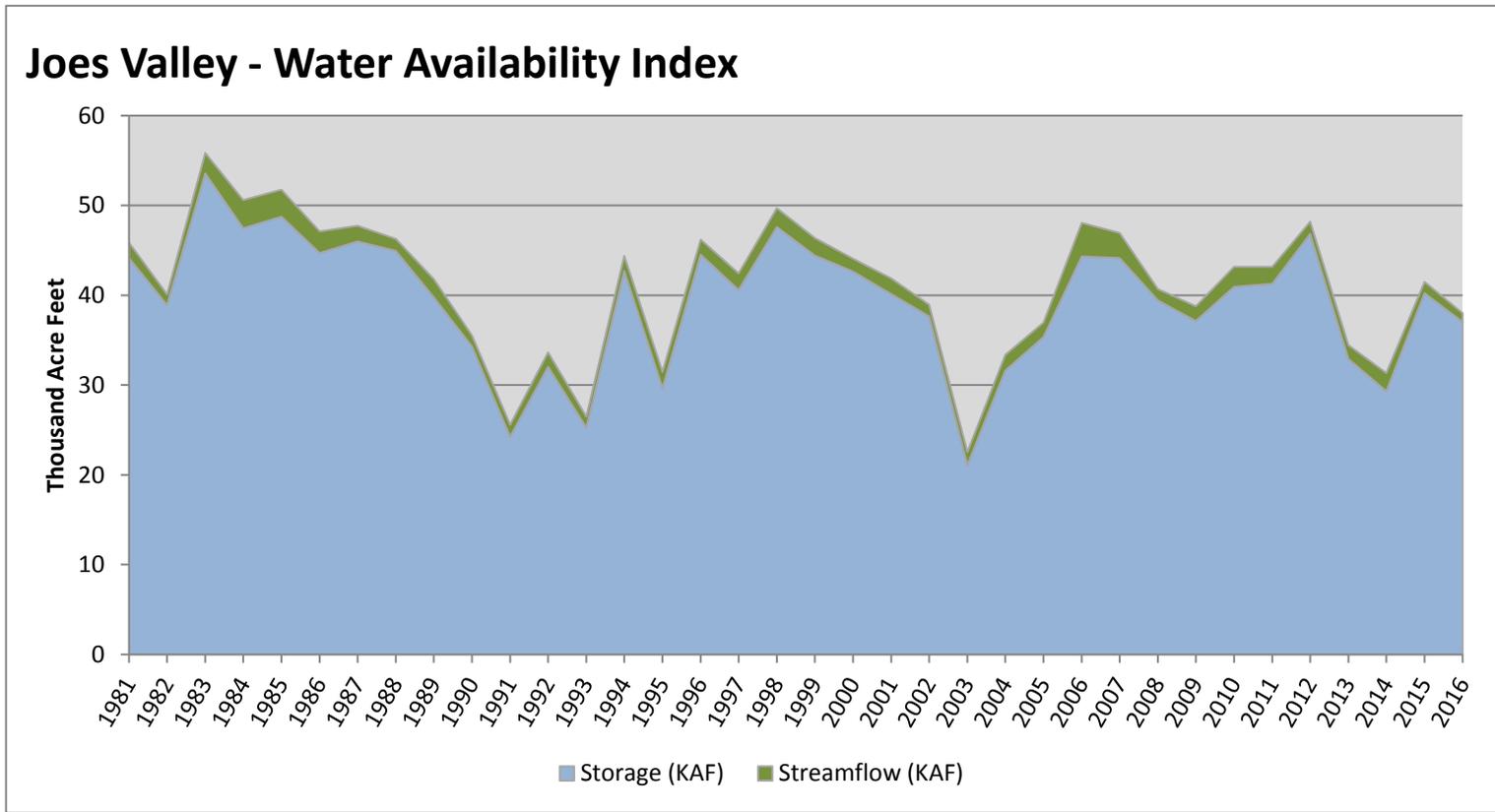


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>37.03</b>	<b>0.96</b>	<b>37.99</b>	<b>30</b>	<b>-1.69</b>	<b>90, 05, 09, 02</b>

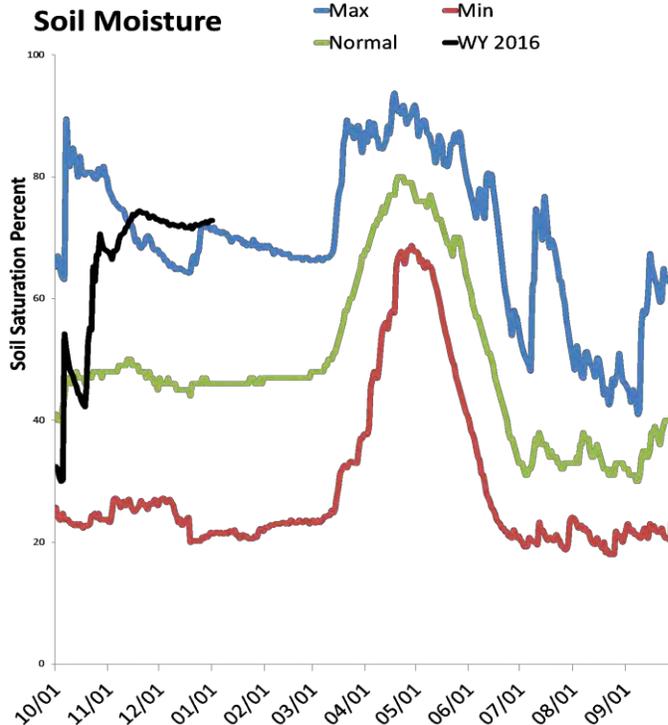
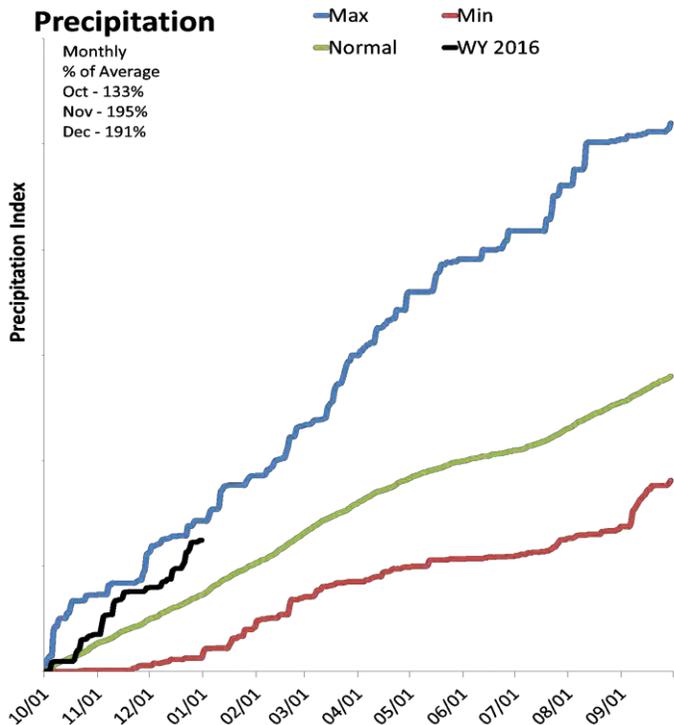
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



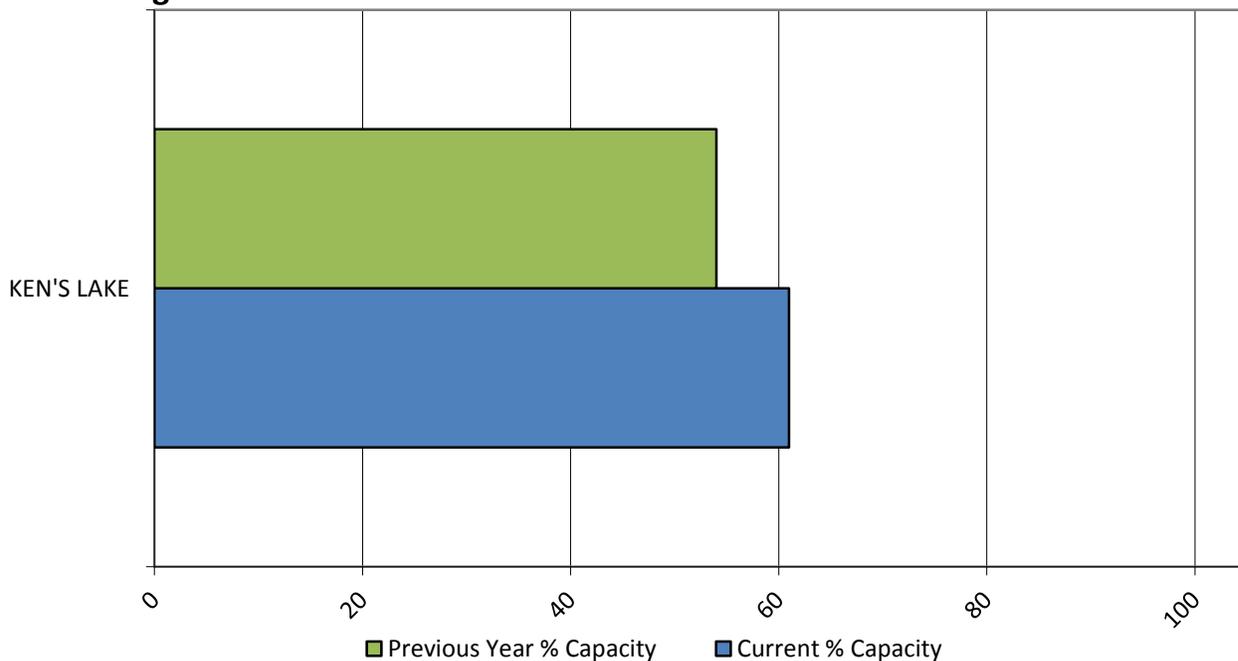
# Southeastern Utah Basin

1/1/2016

Precipitation in December was much above average at 190%, which brings the seasonal accumulation (Oct-Dec) to 171% of average. Soil moisture is at 72% compared to 63% last year. Reservoir storage is at 61% of capacity, compared to 54% last year. The water availability index for Moab is 73%.



### Reservoir Storage

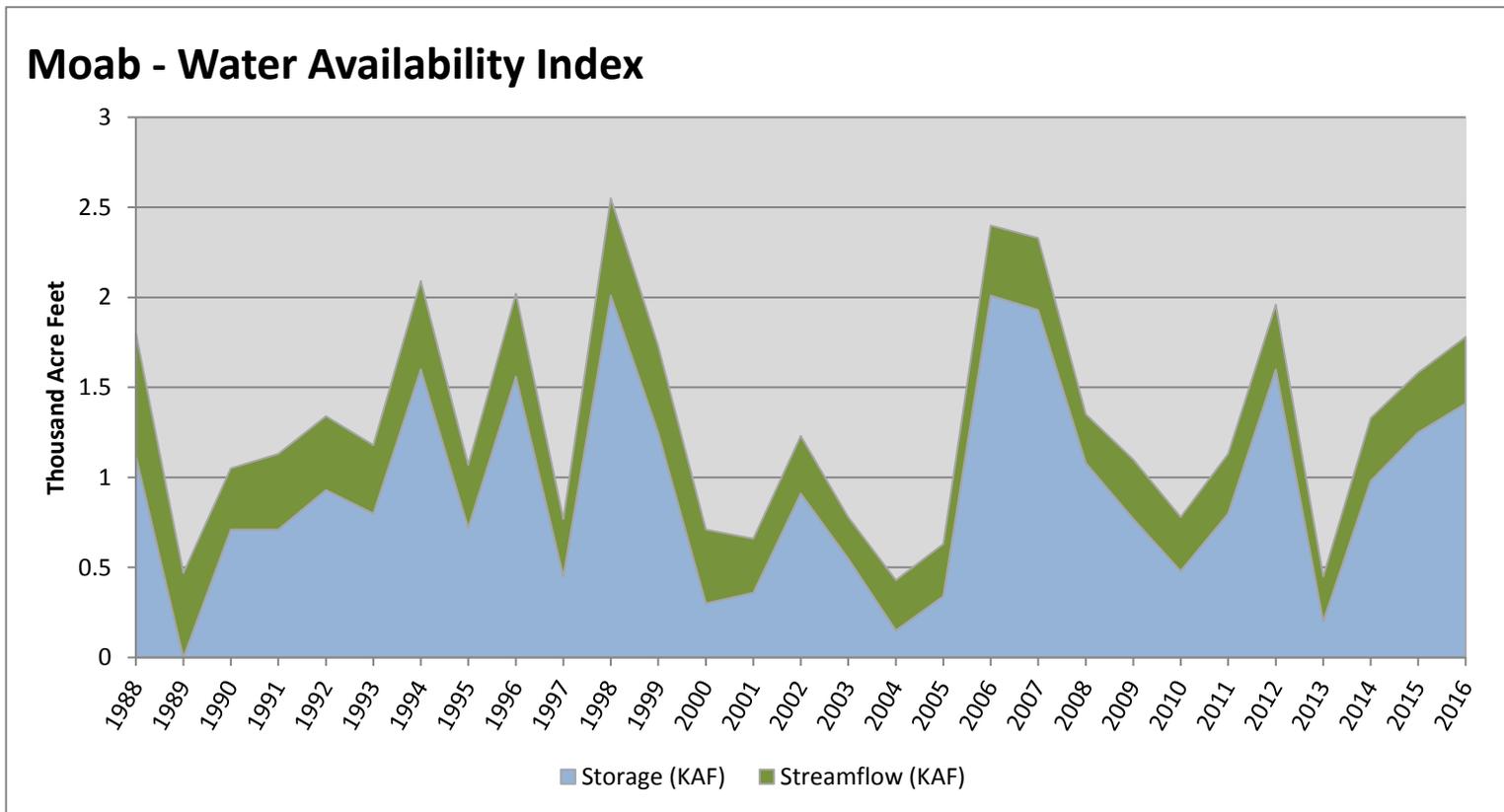


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Moab</b>	<b>1.41</b>	<b>0.37</b>	<b>1.78</b>	<b>73</b>	<b>1.94</b>	<b>15, 99, 88, 12</b>

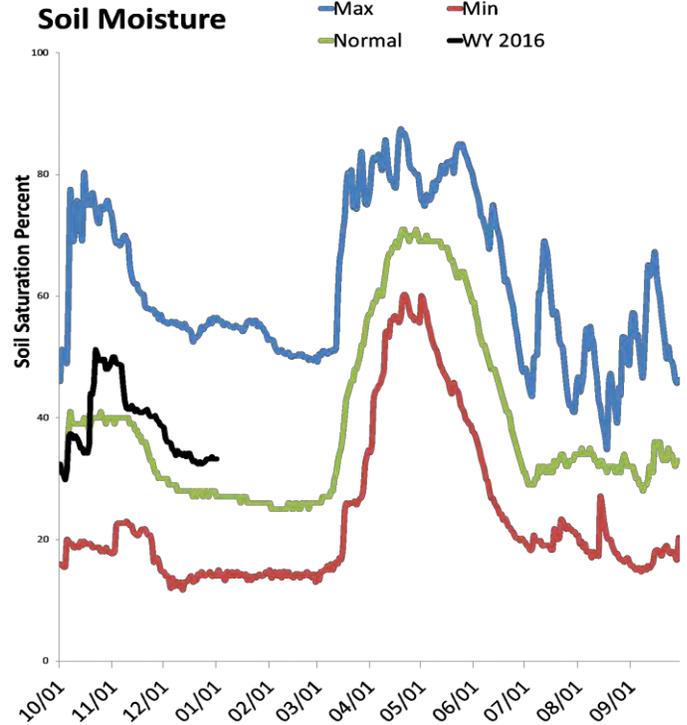
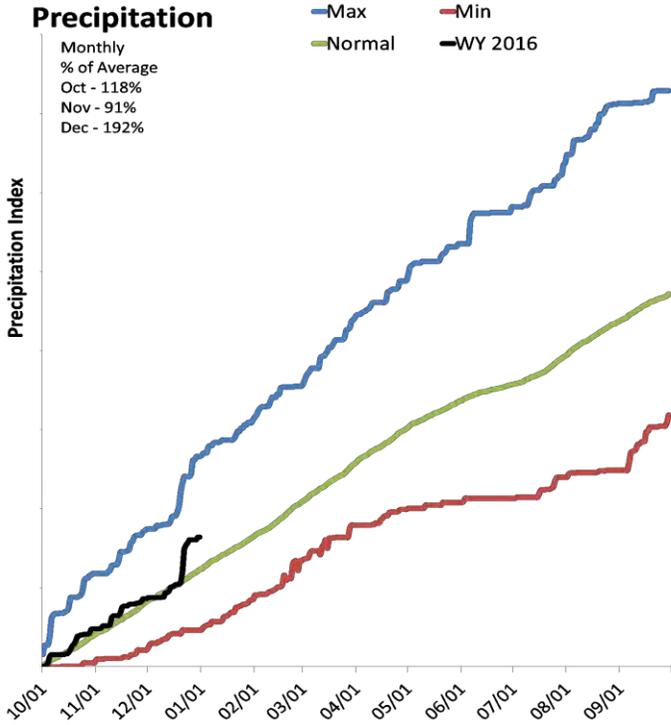
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Dirty Devil Basin

1/1/2016

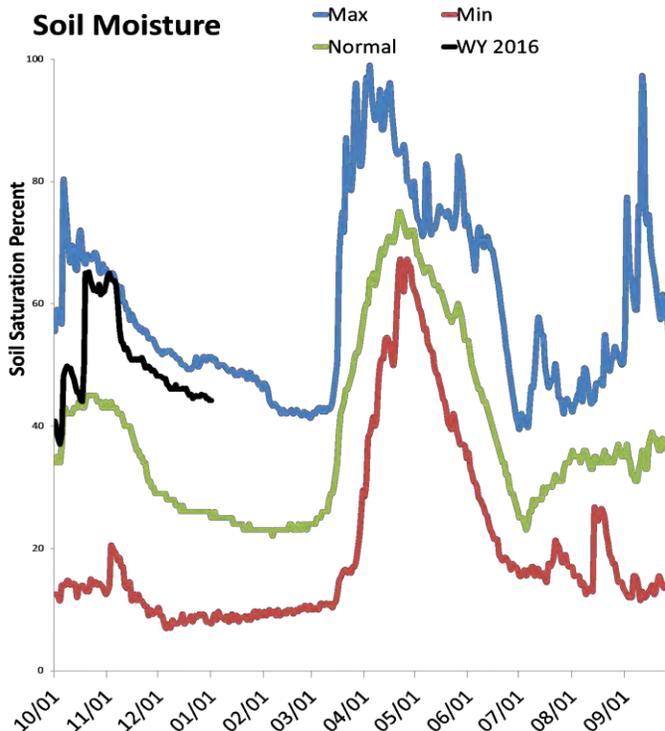
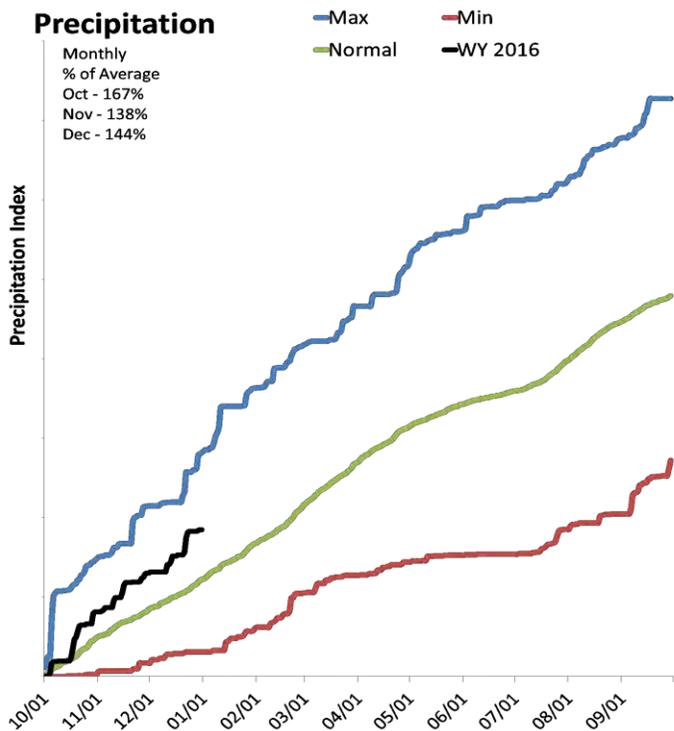
Precipitation in December was much above average at 195%, which brings the seasonal accumulation (Oct-Dec) to 134% of average. Soil moisture is at 33% compared to 33% last year.



# Escalante River Basin

1/1/2016

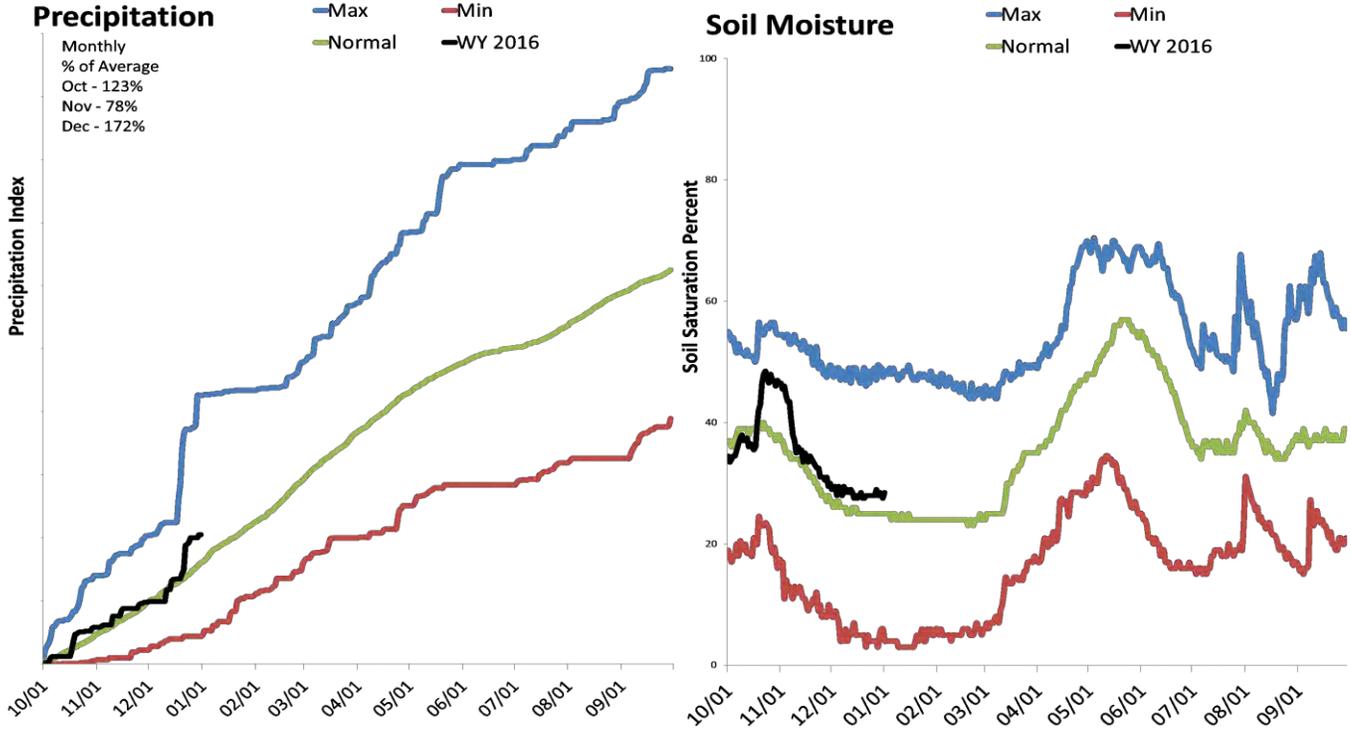
Precipitation in December was much above average at 144%, which brings the seasonal accumulation (Oct-Dec) to 151% of average. Soil moisture is at 42% compared to 40% last year.



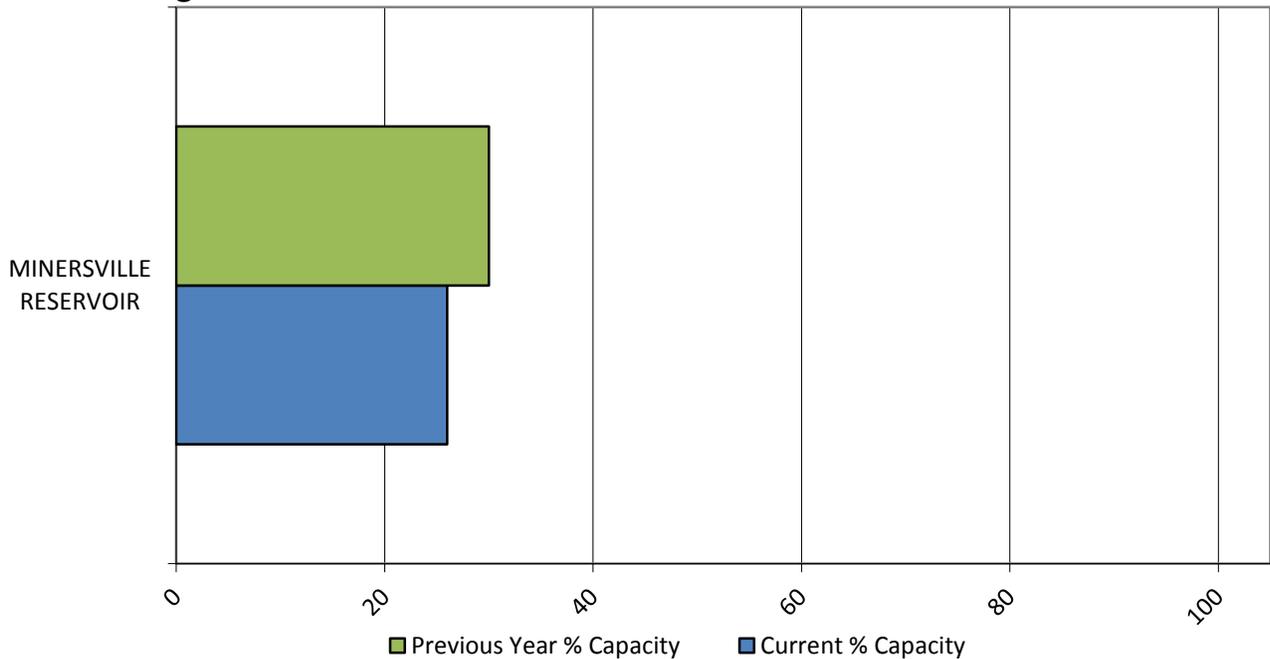
# Beaver River Basin

1/1/2016

Precipitation in December was much above average at 170%, which brings the seasonal accumulation (Oct-Dec) to 127% of average. Soil moisture is at 25% compared to 42% last year. Reservoir storage is at 26% of capacity, compared to 30% last year. The water availability index for the Beaver River is 27%.



## Reservoir Storage

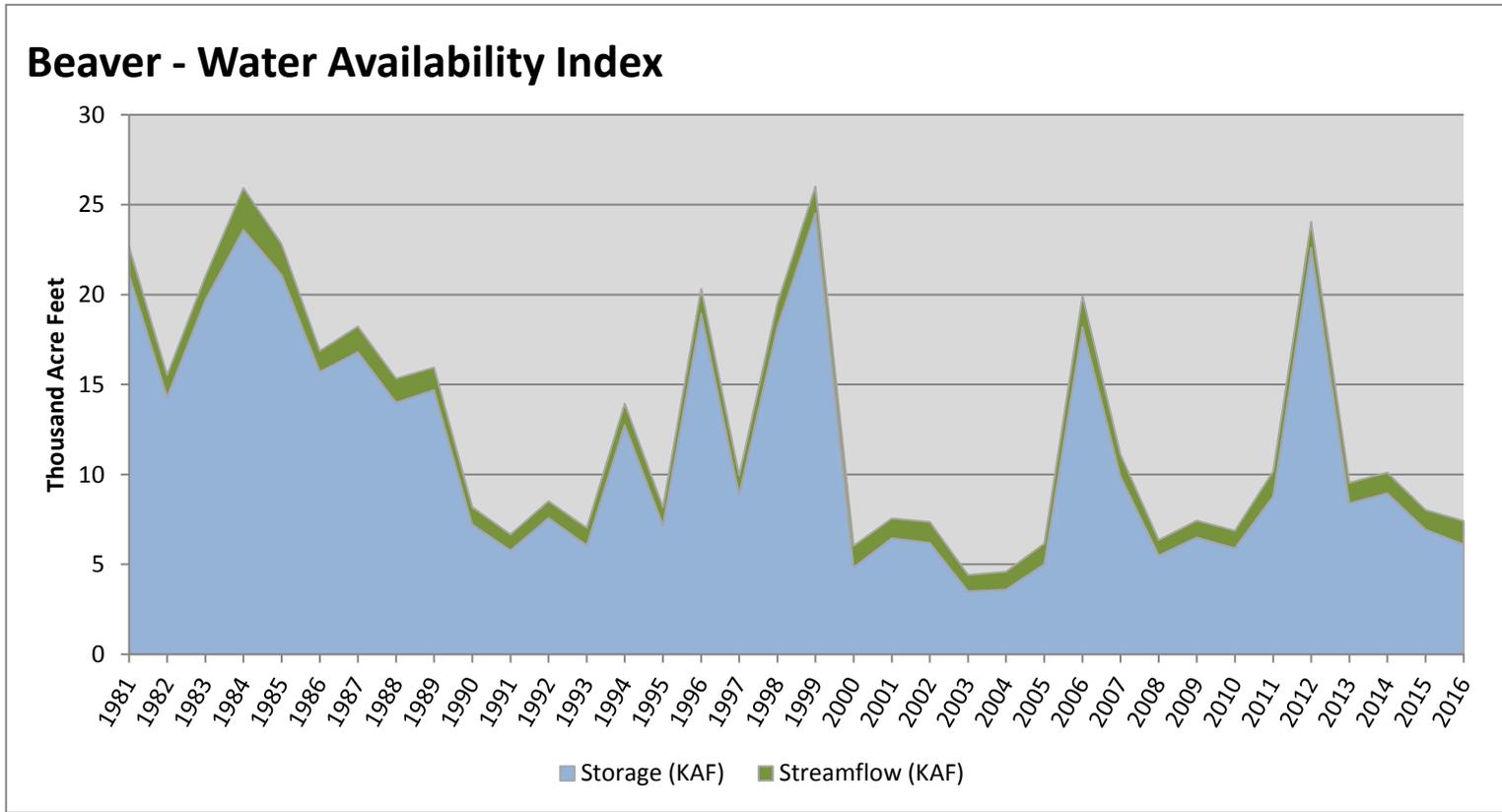


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Beaver</b>	<b>6.10</b>	<b>1.32</b>	<b>7.42</b>	<b>27</b>	<b>-1.91</b>	<b>93, 02, 09, 01</b>

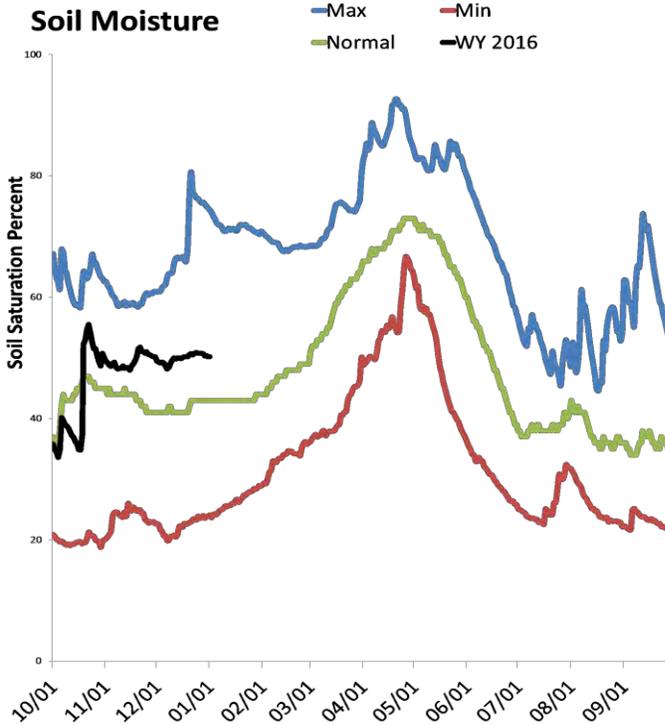
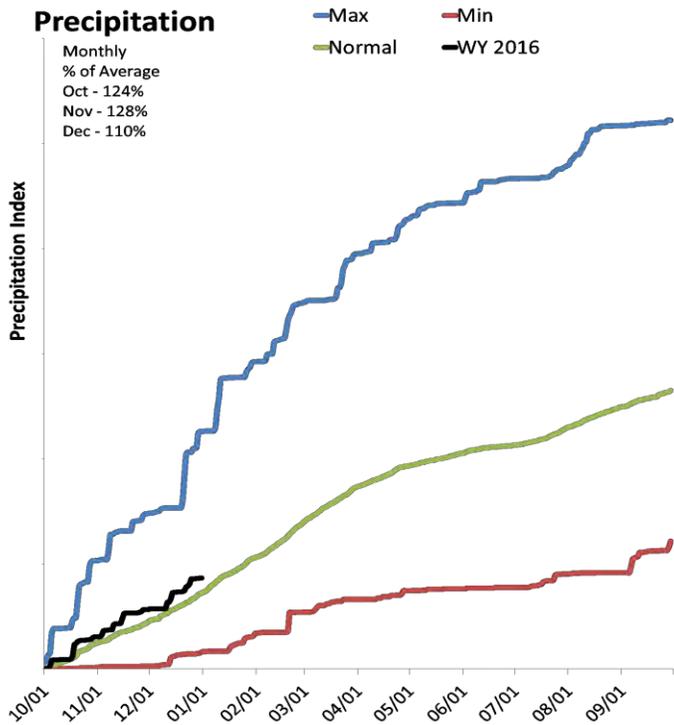
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



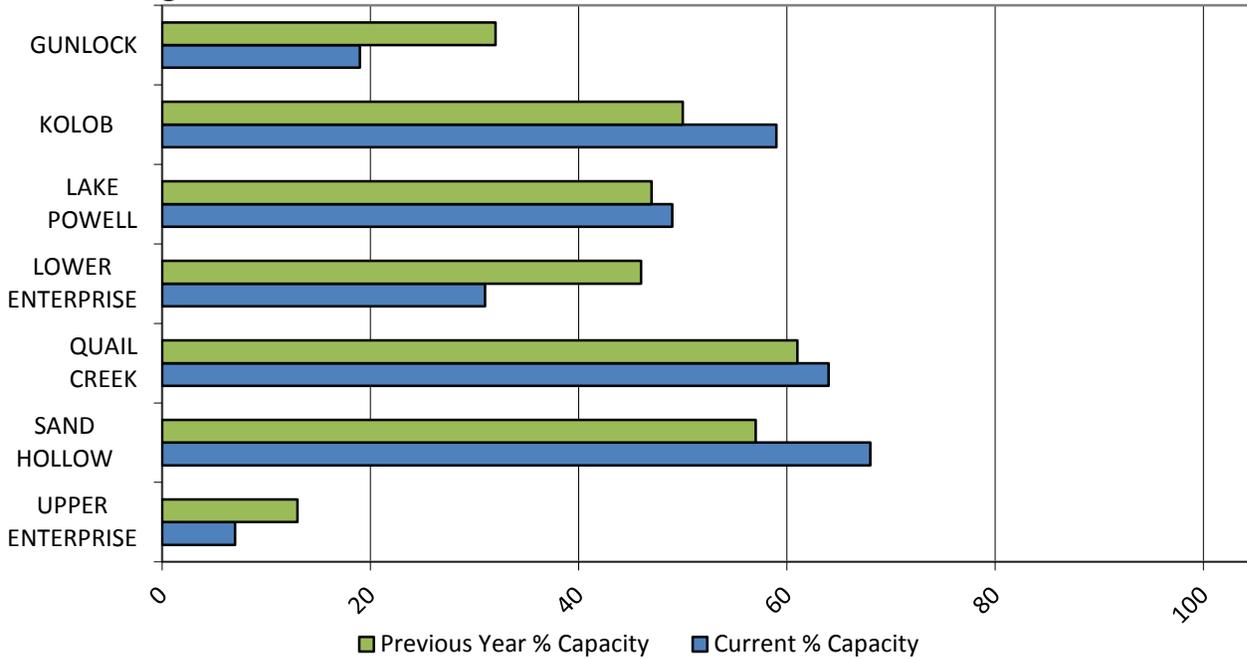
# Southwestern Utah Basin

1/1/2016

Precipitation in December was above average at 110%, which brings the seasonal accumulation (Oct-Dec) to 120% of average. Soil moisture is at 51% compared to 53% last year. Reservoir storage is at 49% of capacity, compared to 47% last year. The water availability index for the Virgin River is 25%.



### Reservoir Storage

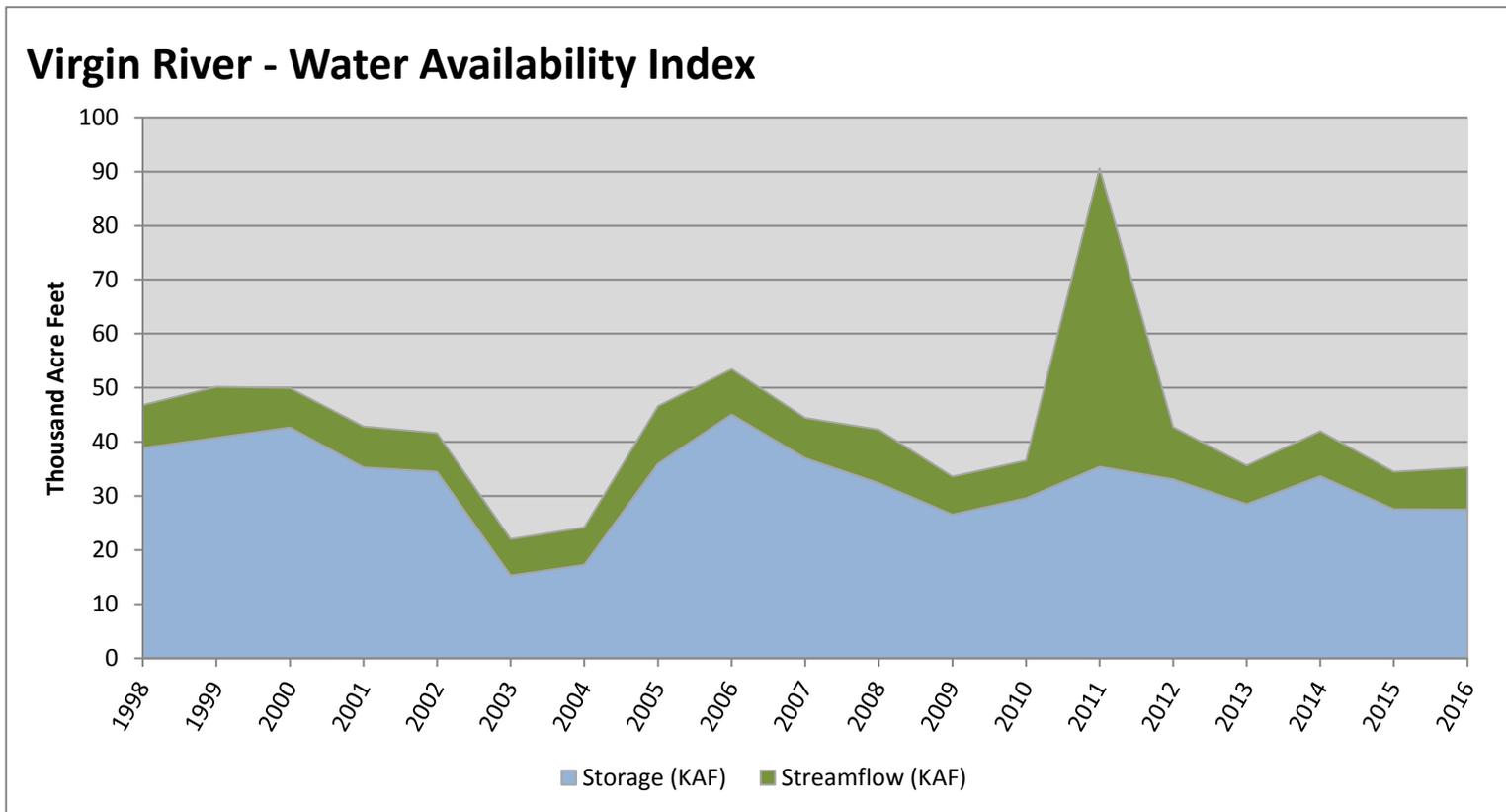


January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM <sup>*</sup> Storage	December 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>27.54</b>	<b>7.77</b>	<b>35.31</b>	<b>25</b>	<b>-2.08</b>	<b>09, 15, 13, 10</b>

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



January 1, 2016

## Water Availability Index

Basin or Region	Dec EOM* Storage	December Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Bear River</b>	<b>460</b>	<b>8.8</b>	<b>469</b>	<b>43</b>	<b>-0.6</b>	<b>07, 02, 96, 15</b>
<b>Woodruff Narrows</b>	<b>39.2</b>	<b>3.0</b>	<b>42.2</b>	<b>68</b>	<b>1.5</b>	<b>00, 15, 11, 09</b>
<b>Little Bear</b>	<b>8.7</b>	<b>1.6</b>	<b>10.3</b>	<b>12</b>	<b>-3.2</b>	<b>93, 04, 14, 02</b>
<b>Ogden</b>	<b>55.9</b>	<b>2.4</b>	<b>58.3</b>	<b>43</b>	<b>-0.6</b>	<b>00, 06, 09, 82</b>
<b>Weber</b>	<b>96.1</b>	<b>12.8</b>	<b>108.9</b>	<b>22</b>	<b>-2.3</b>	<b>02, 13, 04, 01</b>
<b>Provo River</b>	<b>289.1</b>	<b>2.2</b>	<b>291.3</b>	<b>9</b>	<b>-3.4</b>	<b>14, 04, 08, 03</b>
<b>Western Uintah</b>	<b>174.2</b>	<b>2.2</b>	<b>176.5</b>	<b>80</b>	<b>2.5</b>	<b>97, 00, 88, 99</b>
<b>Eastern Uintah</b>	<b>30.8</b>	<b>2.5</b>	<b>33.3</b>	<b>30</b>	<b>-1.7</b>	<b>15, 93, 89, 05</b>
<b>Blacks Fork</b>	<b>5.7</b>	<b>2.5</b>	<b>8.2</b>	<b>26</b>	<b>-2.0</b>	<b>95, 01, 10, 03</b>
<b>Price</b>	<b>9.8</b>	<b>1.5</b>	<b>11.4</b>	<b>14</b>	<b>-3.0</b>	<b>05, 92, 90, 04</b>
<b>Smiths Creek</b>	<b>5.7</b>	<b>0.7</b>	<b>6.4</b>	<b>61</b>	<b>0.9</b>	<b>94, 11, 07, 12</b>
<b>Joes Valley</b>	<b>37.0</b>	<b>1.0</b>	<b>38.0</b>	<b>30</b>	<b>-1.7</b>	<b>90, 05, 09, 02</b>
<b>Moab</b>	<b>1.4</b>	<b>0.4</b>	<b>1.8</b>	<b>73</b>	<b>1.9</b>	<b>15, 99, 88, 12</b>
<b>Upper Sevier River</b>	<b>35.9</b>	<b>7.8</b>	<b>43.7</b>	<b>16</b>	<b>-2.8</b>	<b>93, 92, 91, 10</b>
<b>San Pitch</b>	<b>0.2</b>	<b>0.3</b>	<b>0.5</b>	<b>11</b>	<b>-3.3</b>	<b>01, 04, 02, 14</b>
<b>Lower Sevier</b>	<b>61.0</b>	<b>17.4</b>	<b>78.4</b>	<b>14</b>	<b>-3.0</b>	<b>92, 03, 15, 10</b>
<b>Beaver</b>	<b>6.1</b>	<b>1.3</b>	<b>7.4</b>	<b>27</b>	<b>-1.9</b>	<b>93, 02, 09, 01</b>
<b>Virgin River</b>	<b>27.5</b>	<b>7.8</b>	<b>35.3</b>	<b>25</b>	<b>-2.1</b>	<b>09, 15, 13, 10</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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YOU MAY OBTAIN THIS PRODUCT AS WELL AS CURENT SNOW, PRECIPITATION, TEMPERATURE AND SOIL MOISTURE, RESERVOIR, SURFACE WATER SUPPLY INDEX, AND OTHER DATA BY VISITING OUR WEB SITE @: <http://www.ut.nracs.usda.gov/snow/>

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**Utah Climate and  
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