NRCS
Natural Resources Conservation Service

Utah Climate and Water Report

December, 2016

Twin Lakes Reservoir, Big Cottonwood Canyon, Utah.

This picture was taken in early November, prior to the recent snowfall. What a difference a couple of weeks make!

Photo by Jordan Clayton.

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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Utah General Summary
December 1, 2016

*This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (**S**oil **C**limate **A**nalysis **N**etwork) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply is generated (**SNO**w**TEL**emetry). Most of the graphs have been updated to utilize daily data versus the old monthly bar charts so that the timing and distribution of precipitation and other events can be seen. The timing distribution of precipitation can be as important as the overall amount in an agricultural context. These graphs are hyperlinked so that the user can simply click on the graph and be taken to the most recent version on the Snow Survey web page. Questions, comments and suggestions are welcome and should be directed to Randy.Julander@ut.usda.gov.*

Current Valley Conditions (SCAN)

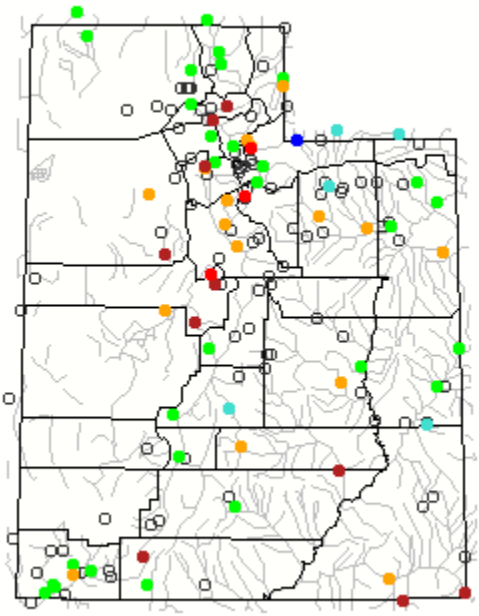
November precipitation across Utah at the valley elevations was, for the second month in a row, wetter in the north and drier in the south. Basin precipitation ranged from 0.4 inches in the Uinta Basin to 0.9 inches in the north. The statewide average was 0.7 inches. Soil moisture levels reflect this precipitation pattern; from a new high of 78 percent in the North Central area, to a new low of 25 percent in the Western and Dixie area. Statewide soil moisture is about the same as last year at 37 percent, much of which is hold-over moisture from September storms. Air and soil temperature dropped precipitously statewide during November, from near-record warmth to normal conditions.

Current Mountain Conditions (SNOTEL)

November was exceptionally mild and warm. November precipitation was near to above average in southern Utah (95%-140%) and below to near average in the north (60%-90%). Statewide, November came in at 92% of average which brings the seasonal accumulation to 90% of average. With temperatures in November much above average, snow accumulation didn't get started until late in the month but a couple of recent storms have kicked started the snow season with most areas having near average accumulation. November snowpack has no correlation with an eventual April 1 peak snow, there have been years with November snows much above average that have ended in drought and years with little accumulation that have turned out above average. So, from that perspective – the presence or absence of snow at this time period means little for the eventual outcome. Although science and statistics are nice (i.e. November snow has no predictive function on the seasons outcome), we really like our team (the Snowflakes) to score early and often and just pummel the drought into oblivion leaving no doubts on what kind of season we want. Soil moisture conditions have improved and are now to the point where they will remain or slowly dry over the winter months as precipitation has now turned to snow. Reservoir storage is down about the same as last year, at 47% of capacity, leaving a very big hole to fill for next year. Some reservoirs are in worse shape than others: Piute, Sevier Bridge, Scofield, Echo, Utah Lake and Gunnison are all drawn down very low. Stream flow across the state is variable with most sites near normal (25%-75%), a few in northern Utah are in the upper percentiles as well as a few in the lower percentiles. Southeast Utah streamflow is mostly in the lower percentiles.

Current Utah Stream Flow - Courtesy US Geological Survey

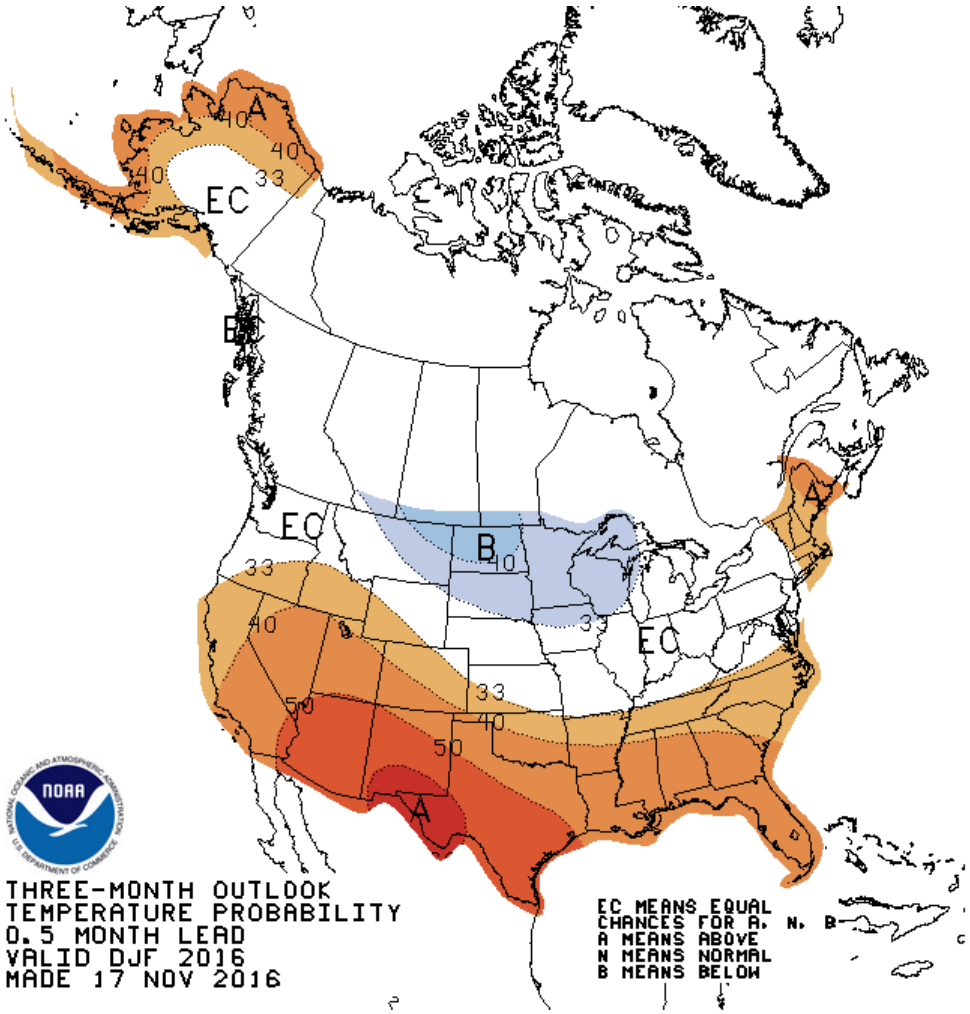
Friday, December 02, 2016 10:30ET



USGS

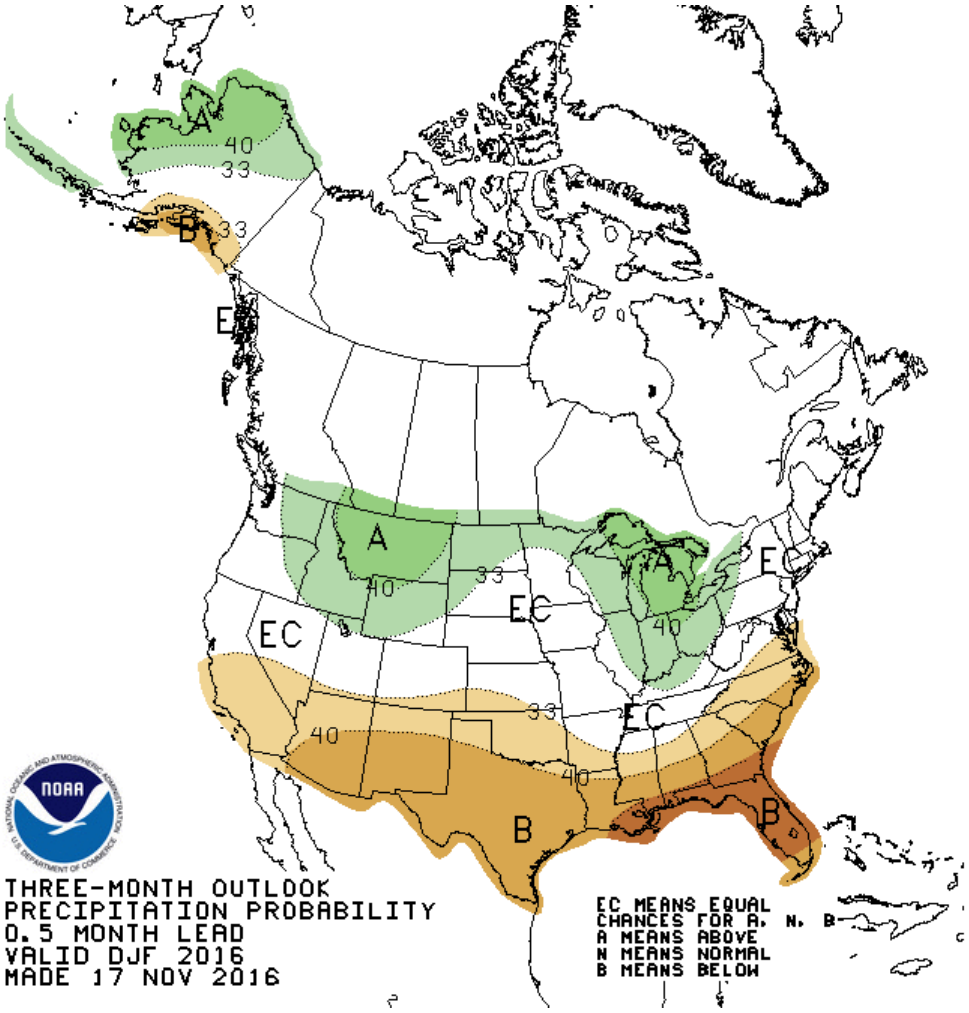
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not ranked

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



This graphic from the National Climate Prediction Center shows expected temperatures for December through February of water 2015 year with Utah in the A category meaning the possibility of a warmer winter.

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



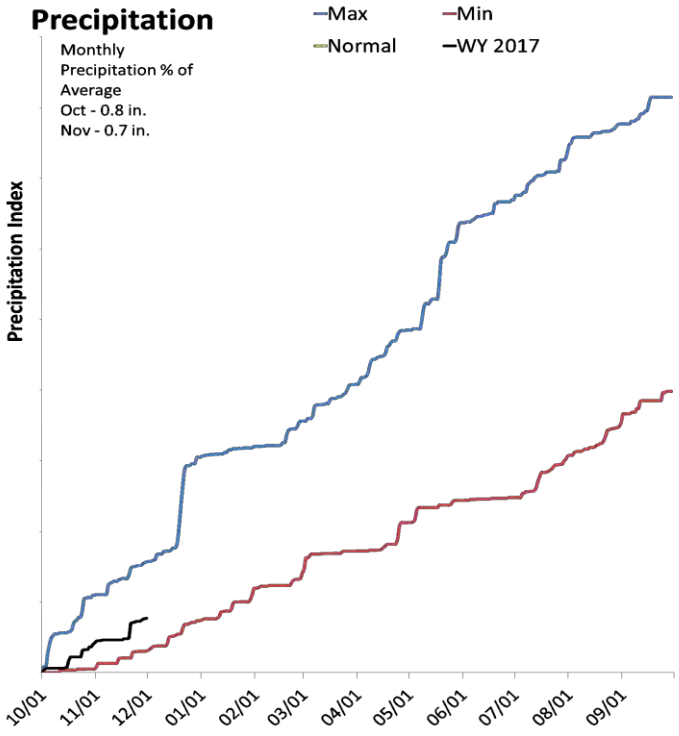
This graphic from the Climate Prediction Center shows expected precipitation for December through February of this new water year with Utah in the EC (equal chances) category meaning any outcome is likely.

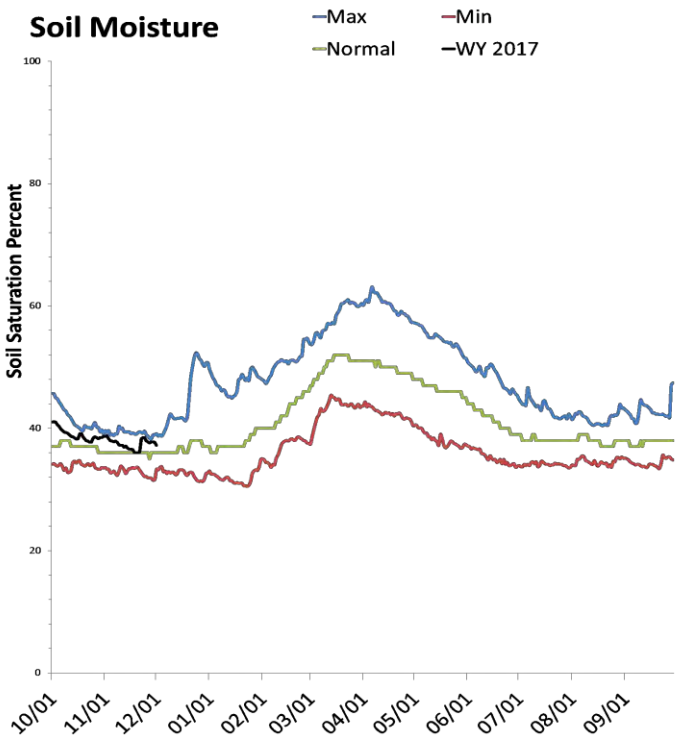
Precipitation probabilities for Dec-Feb – Courtesy of the Climate Prediction Center, NOAA

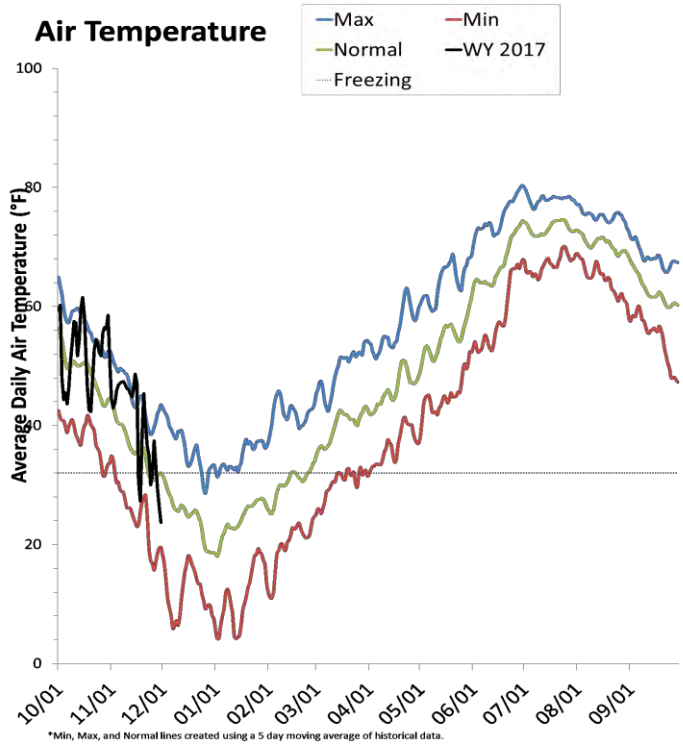
Statewide SCAN

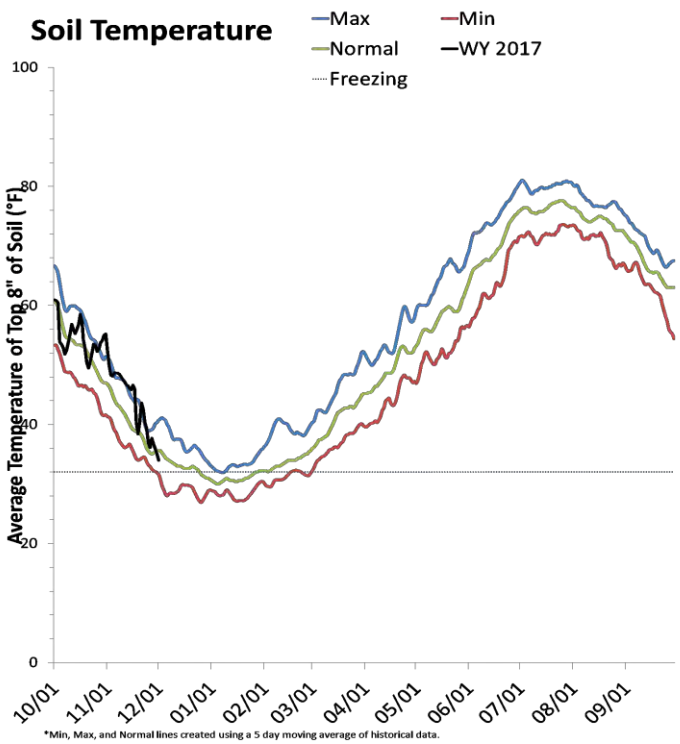
December 1, 2016

The average precipitation at SCAN sites within Utah was 0.7 inches in November, which brings the seasonal accumulation (Oct-Nov) to 1.5 inches. Soil moisture is at 37% compared to 36% last year.





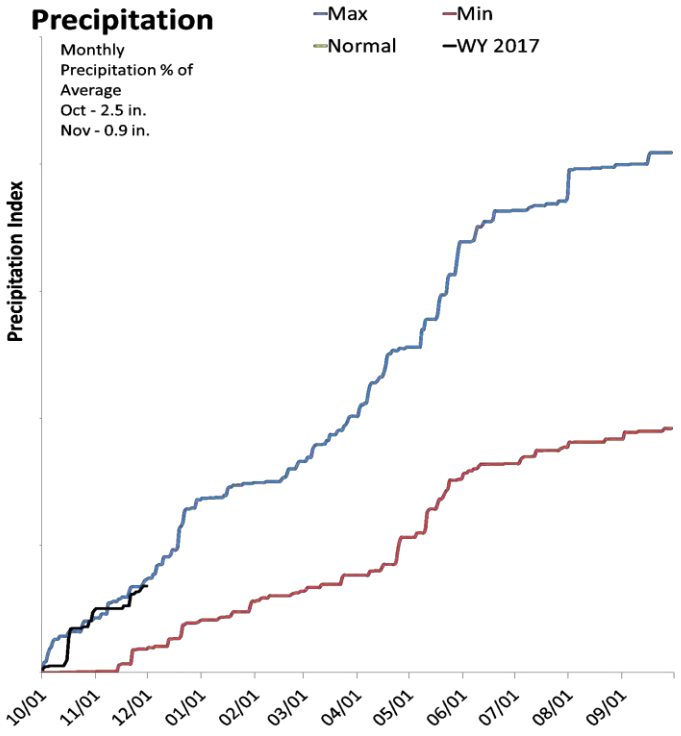


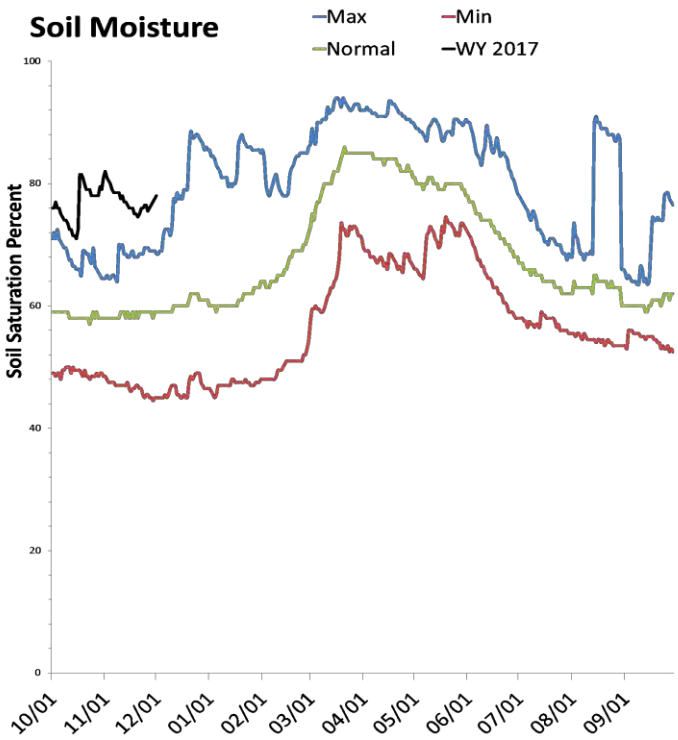


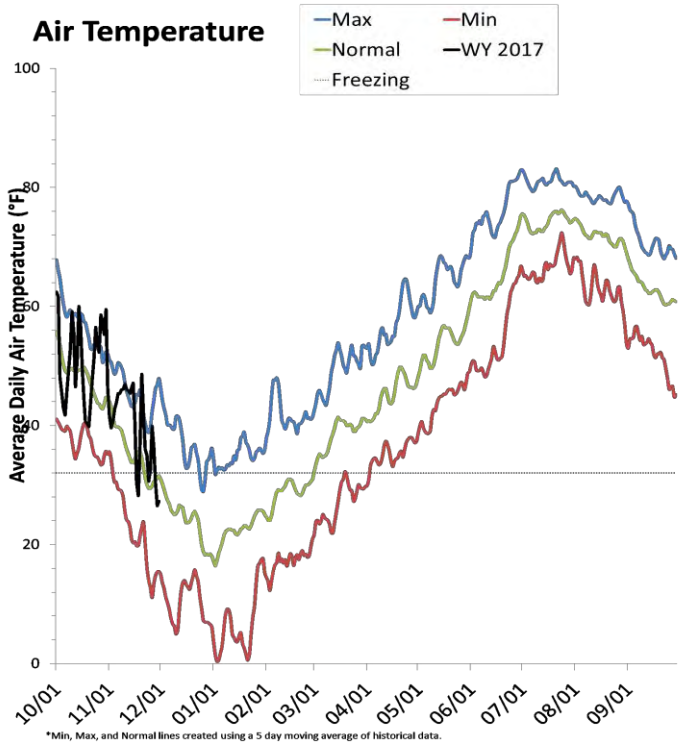
North Central

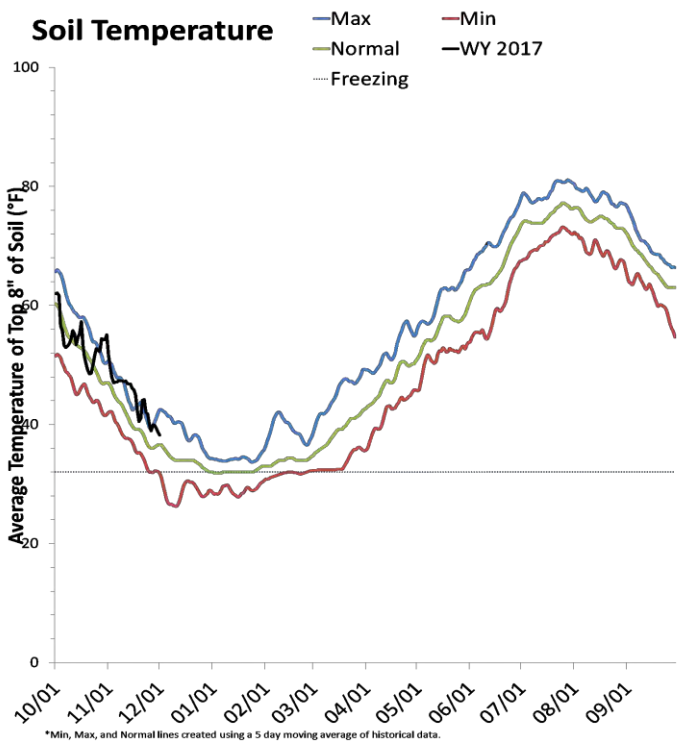
December 1, 2016

The average precipitation in November at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Nov) to 3.4 inches. Soil moisture is at 78% compared to 61% last year.





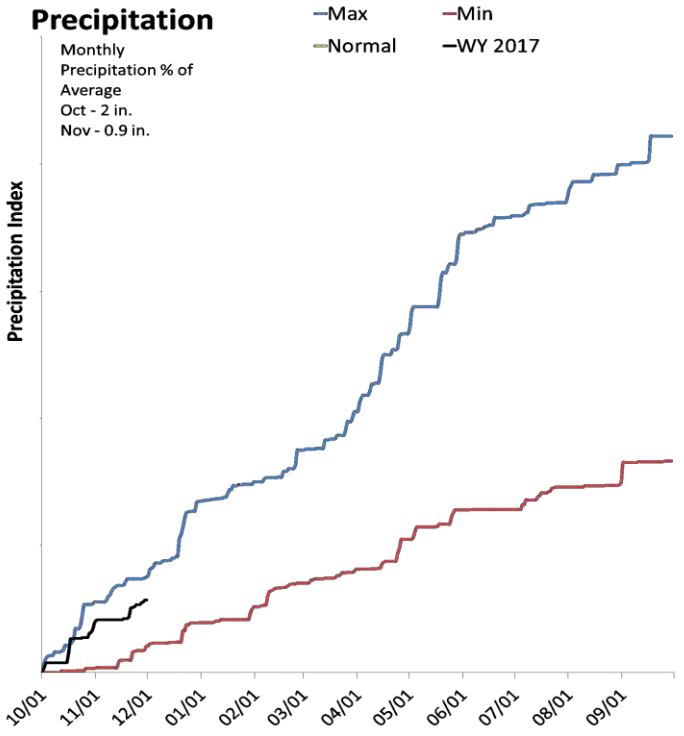


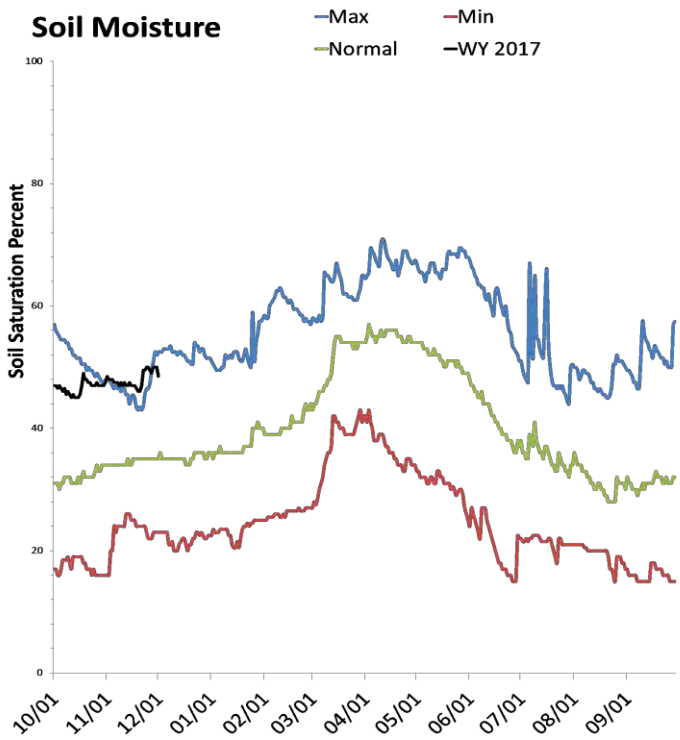


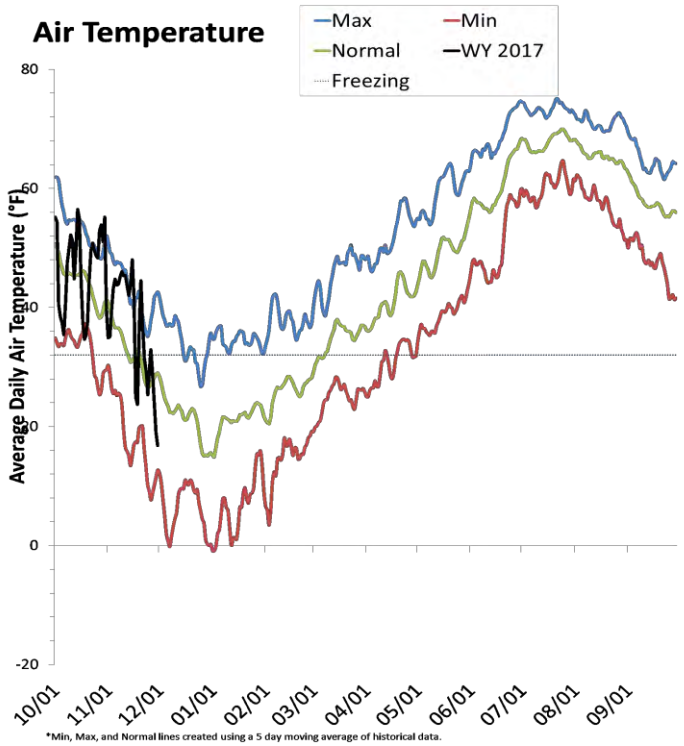
Northern Mountains

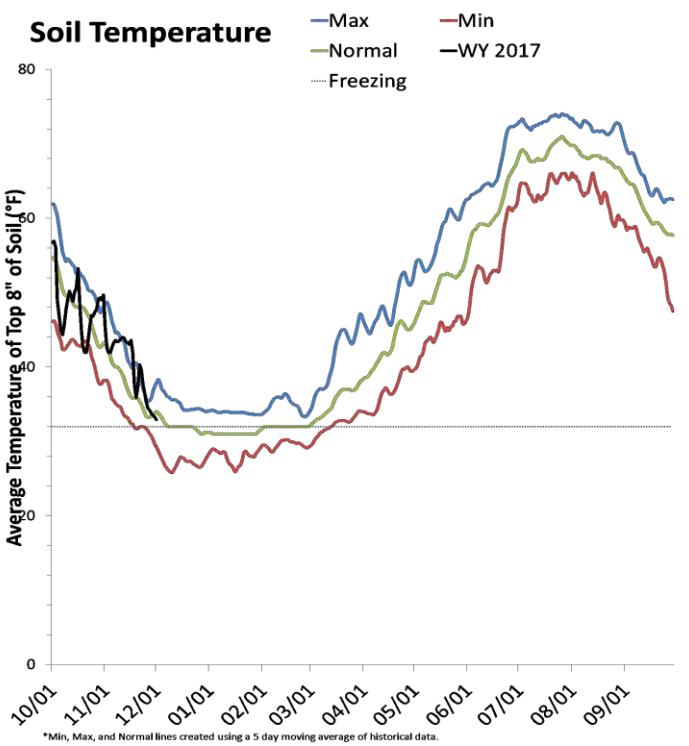
December 1, 2016

The average precipitation in November at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Nov) to 2.9 inches. Soil moisture is at 42% compared to 32% last year.





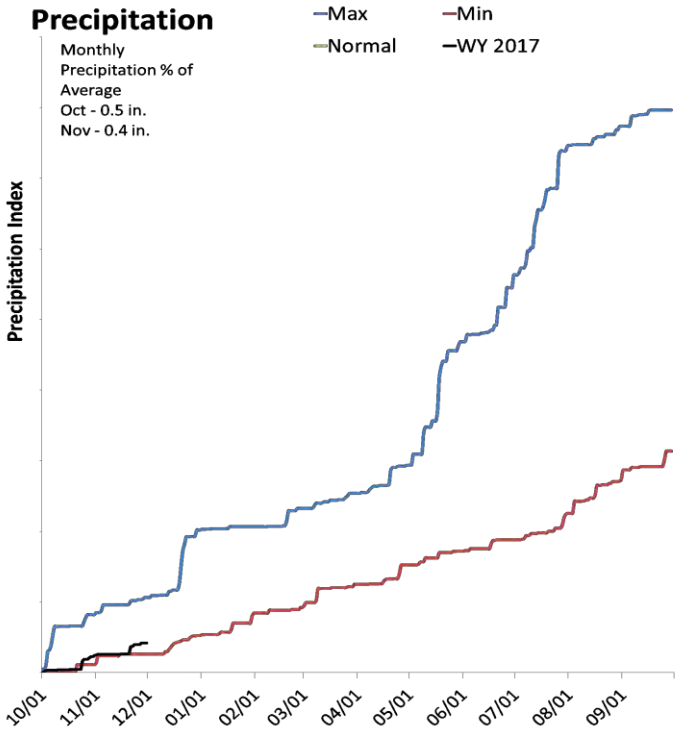


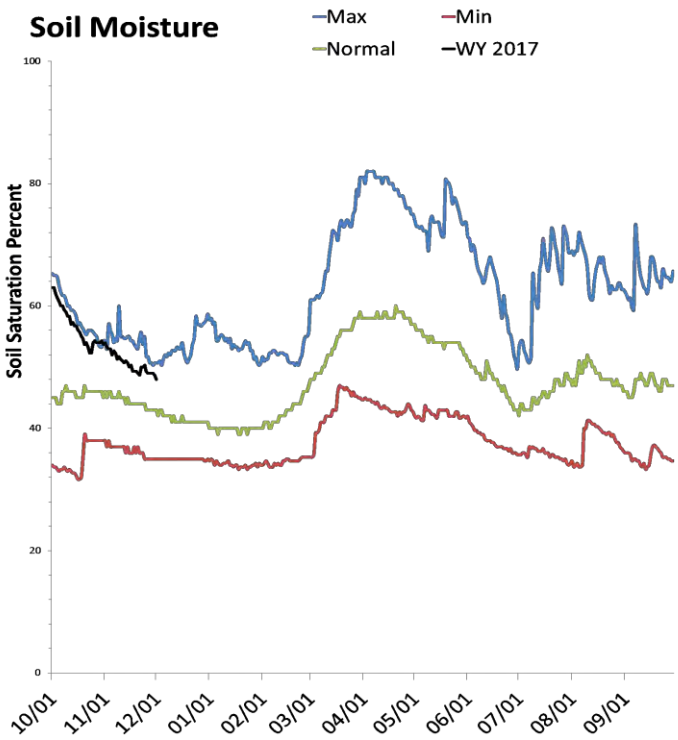


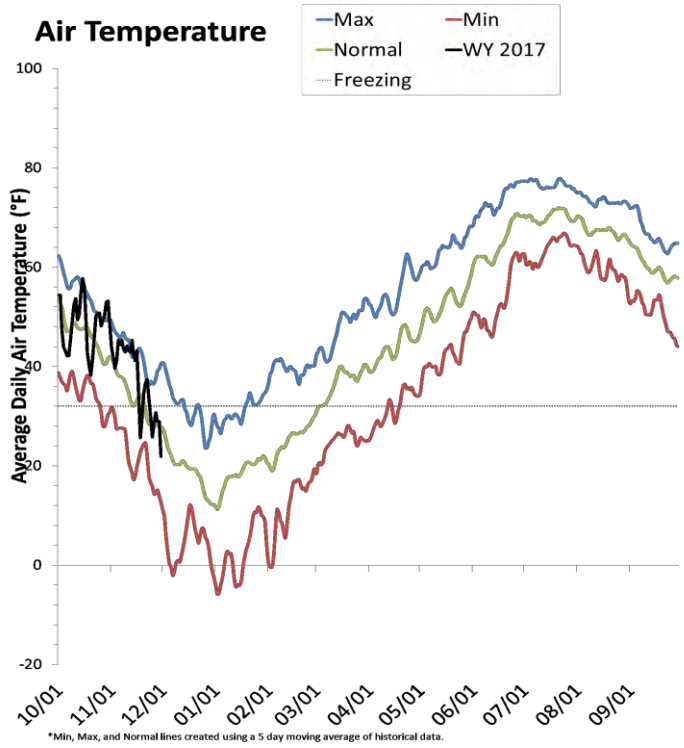
Uinta Basin

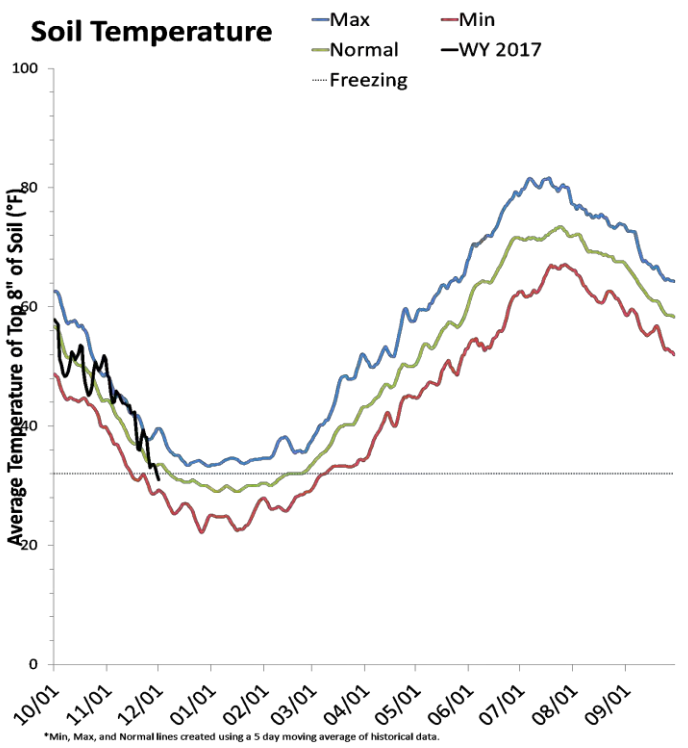
December 1, 2016

The average precipitation in November at SCAN sites within the basin was 0.4 inches, which brings the seasonal accumulation (Oct-Nov) to 0.8 inches. Soil moisture is at 49% compared to 43% last year.





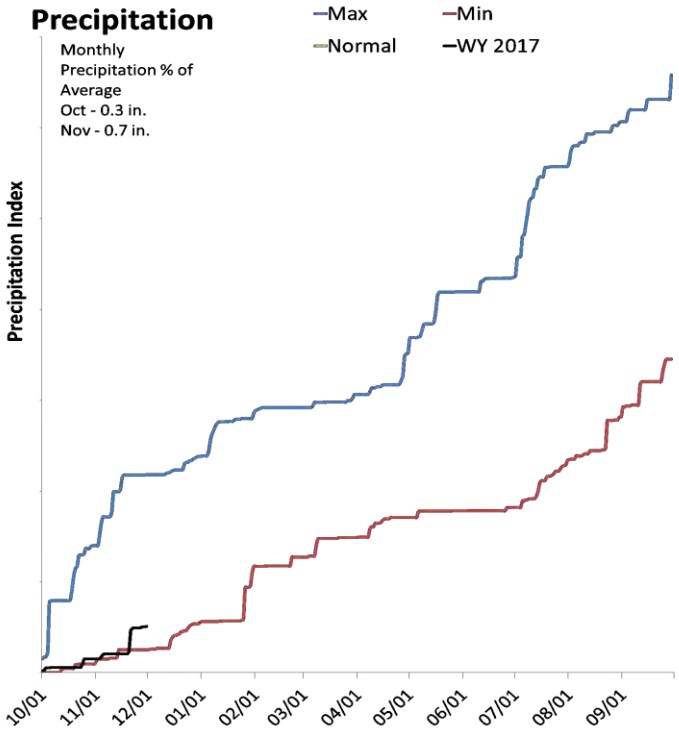


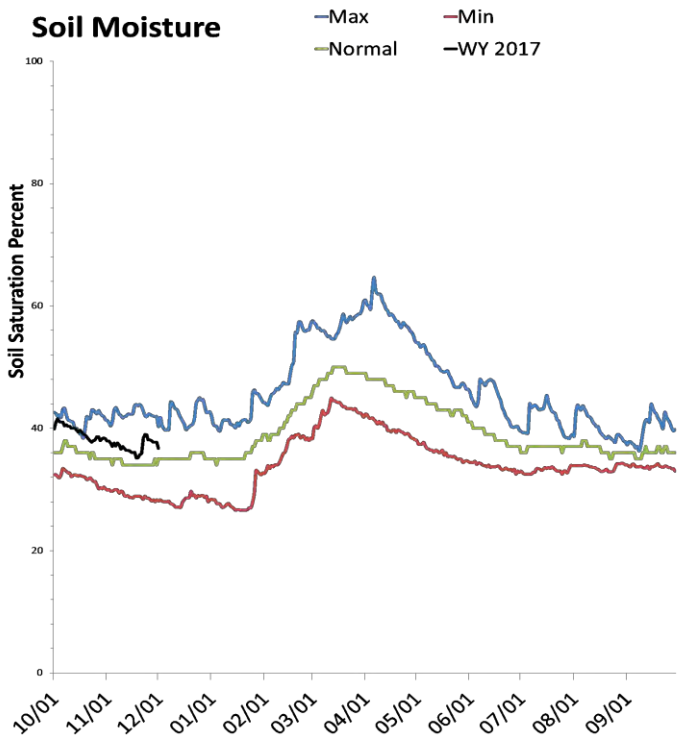


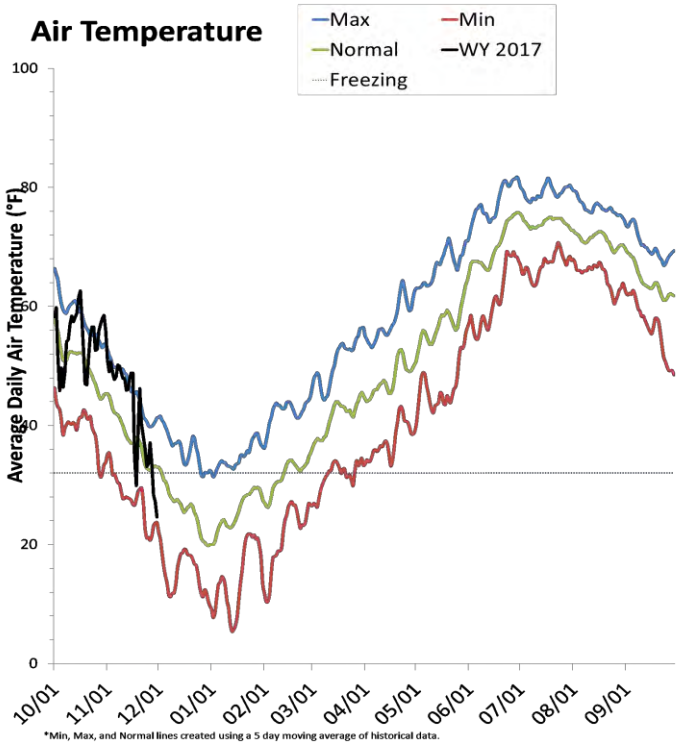
Southeast

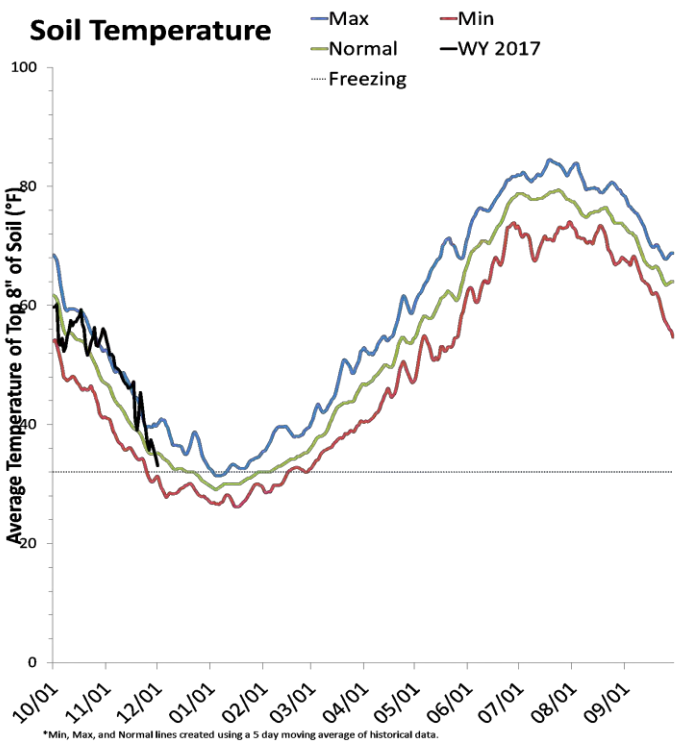
December 1, 2016

The average precipitation in November at SCAN sites within the basin was 0.7 inches, which brings the seasonal accumulation (Oct-Nov) to 1 inches. Soil moisture is at 37% compared to 41% last year.





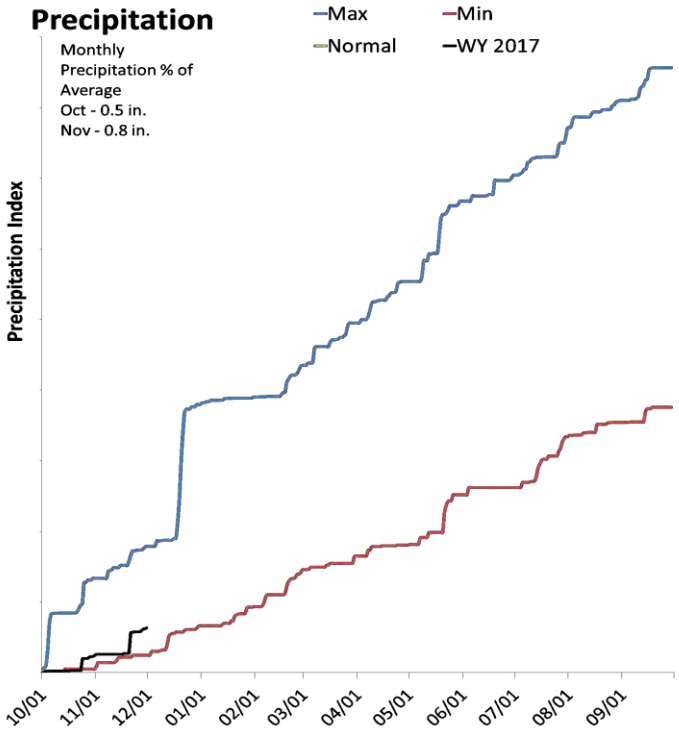


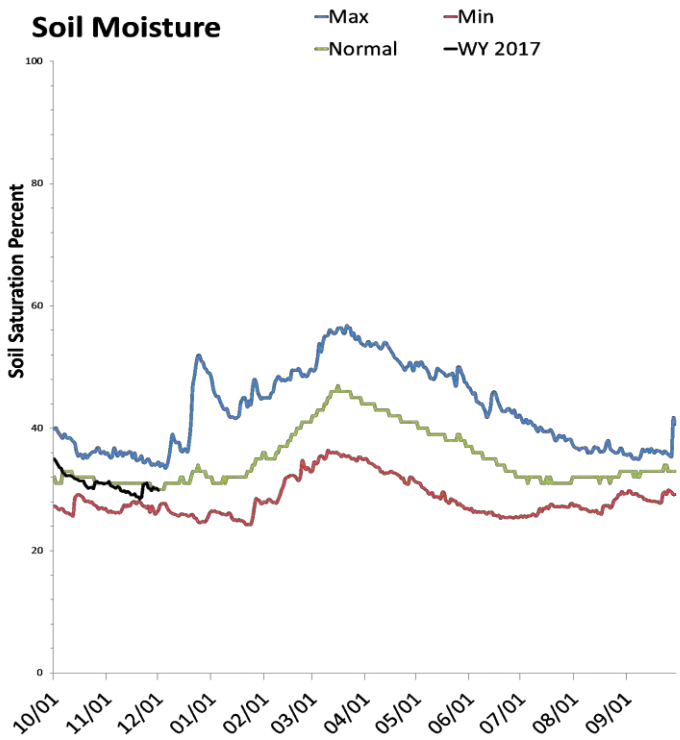


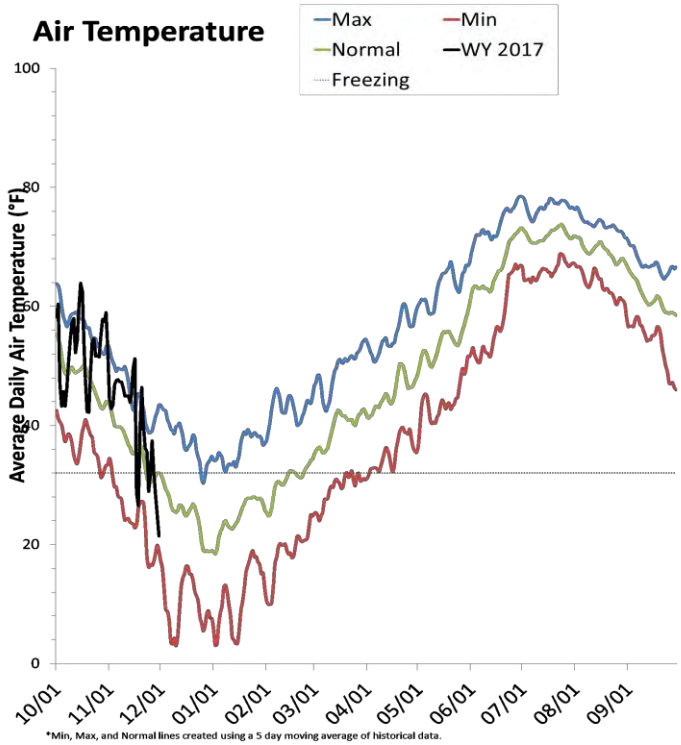
South Central

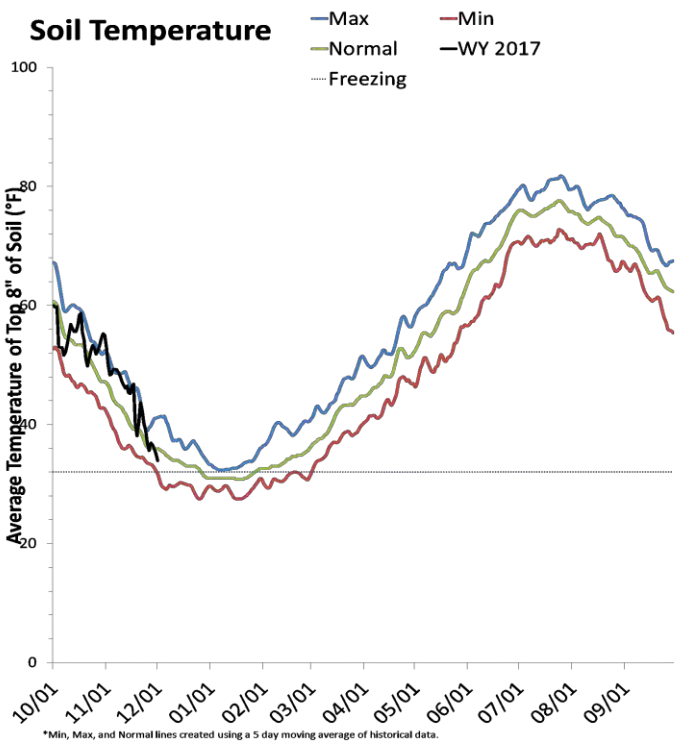
December 1, 2016

The average precipitation in November at SCAN sites within the basin was 0.8 inches, which brings the seasonal accumulation (Oct-Nov) to 1.3 inches. Soil moisture is at 30% compared to 32% last year.





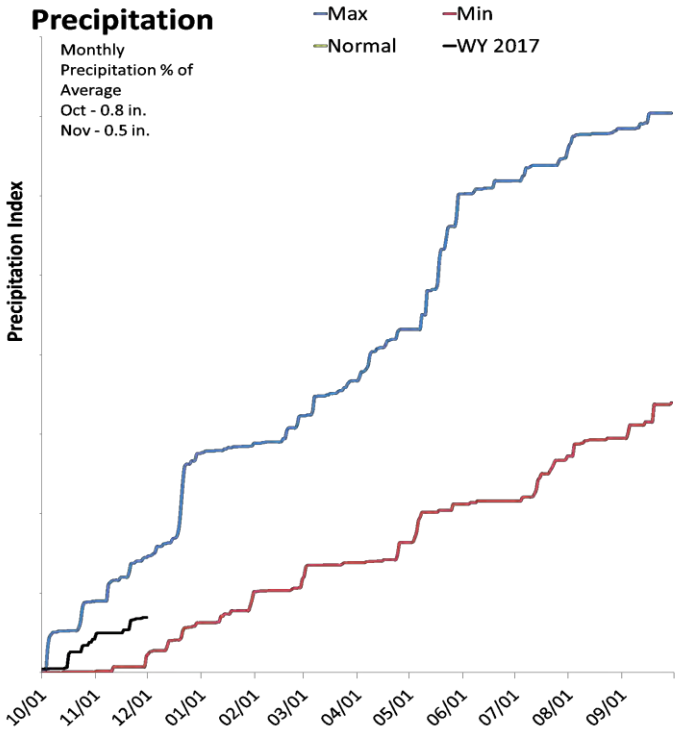


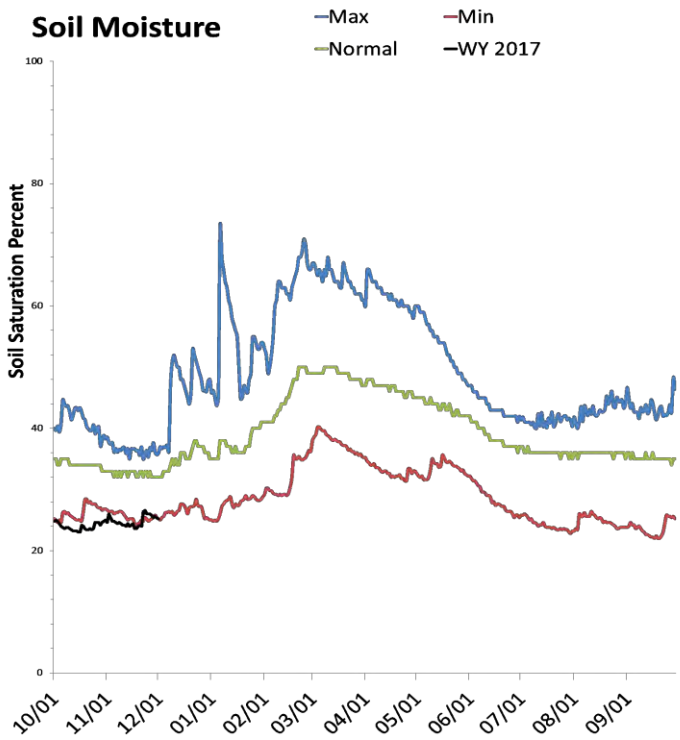


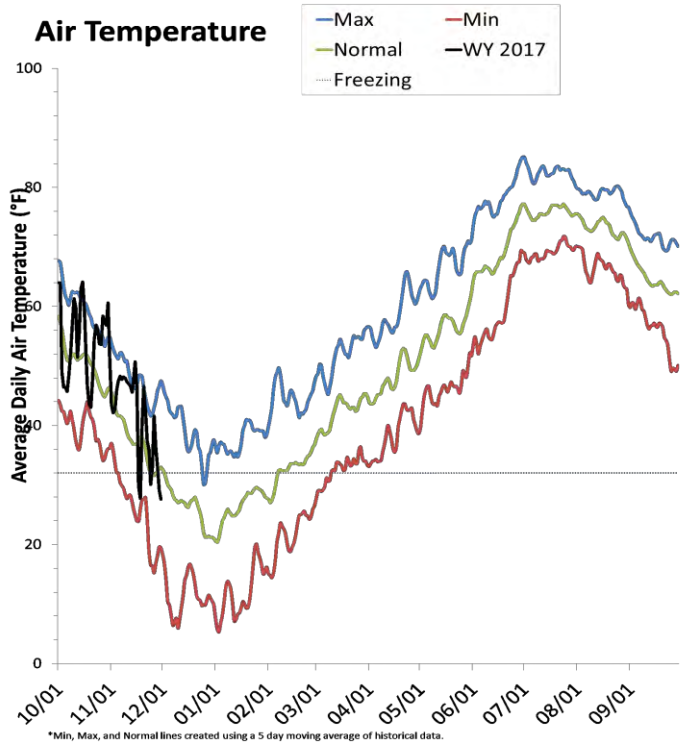
Western and Dixie

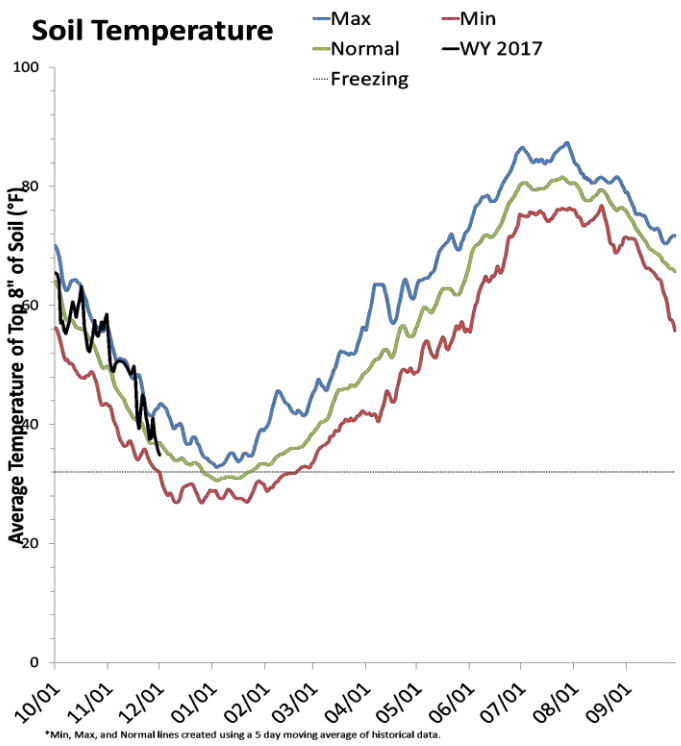
December 1, 2016

The average precipitation in November at SCAN sites within the basin was 0.5 inches, which brings the seasonal accumulation (Oct-Nov) to 1.4 inches. Soil moisture is at 25% compared to 26% last year.





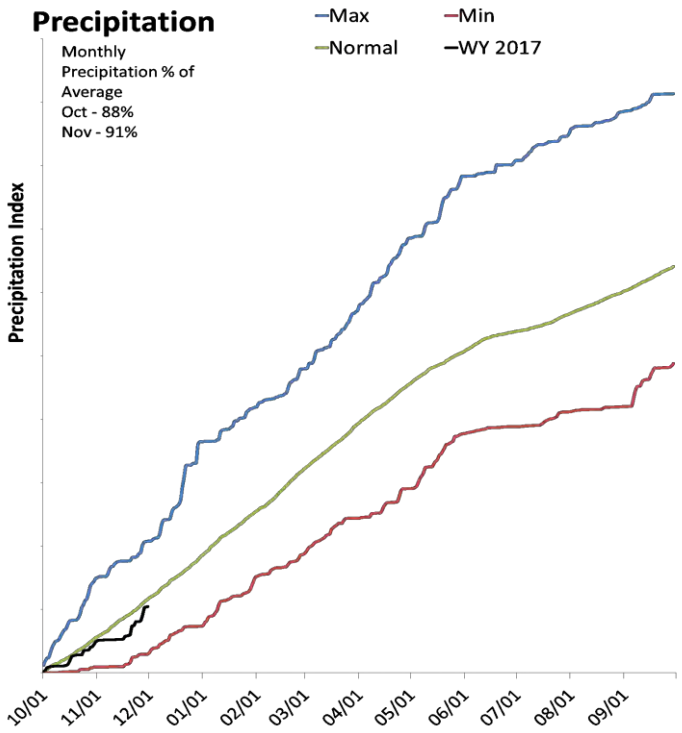


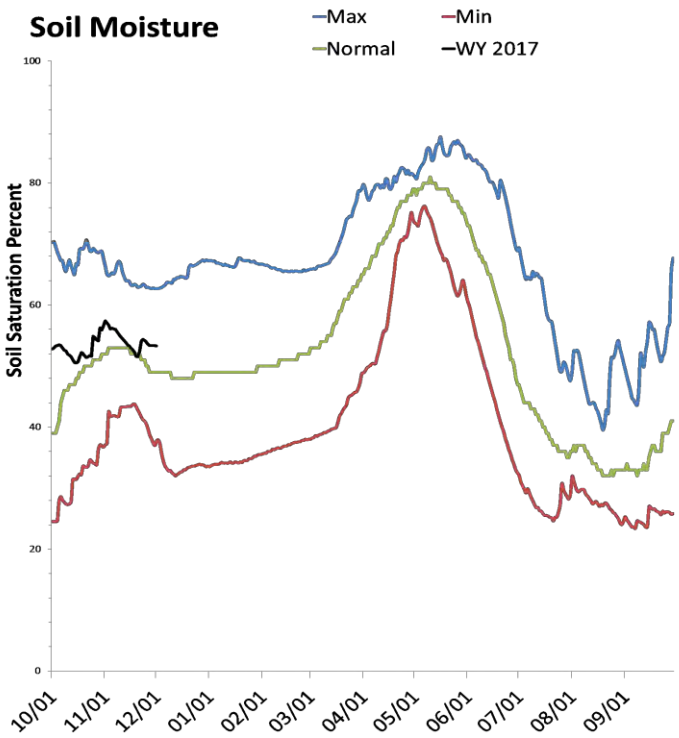


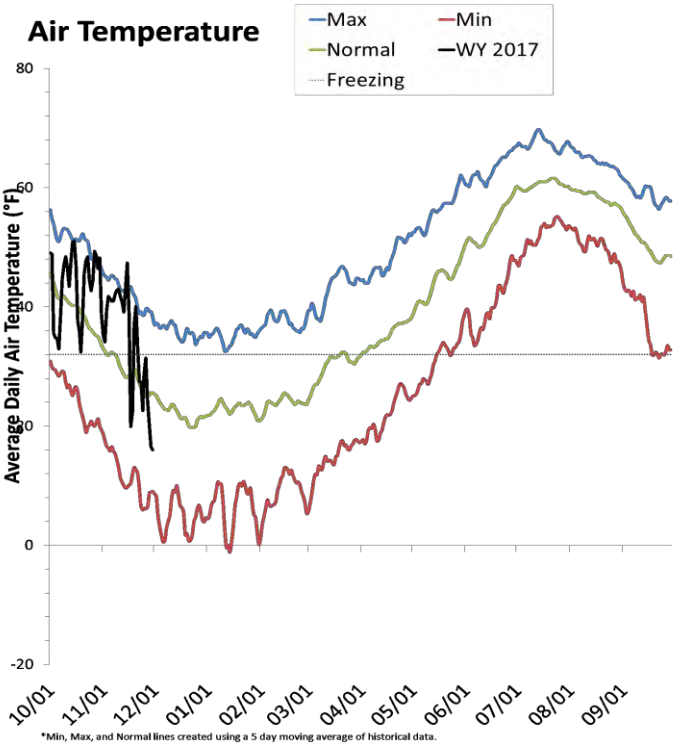
Statewide SNOTEL

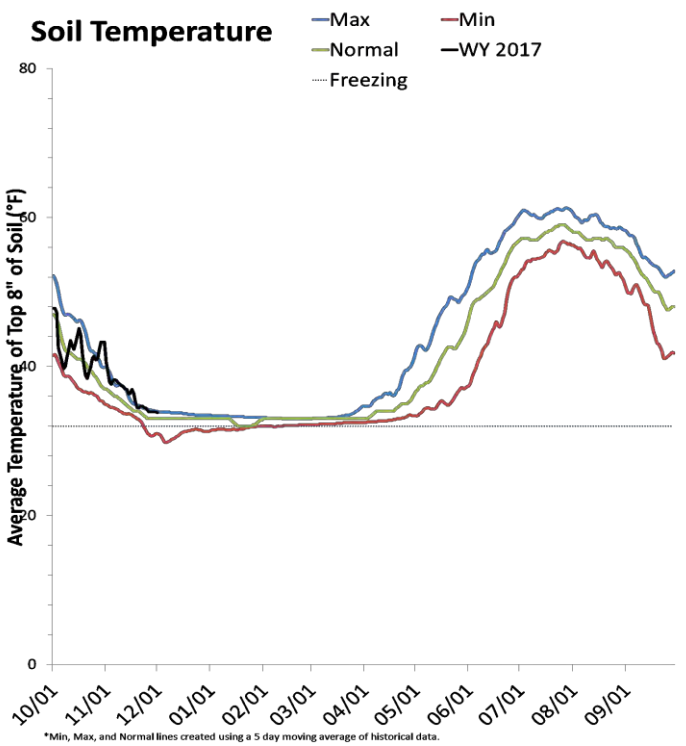
December 1, 2016

Precipitation at SNOTEL sites during November was near average at 92%, which brings the seasonal accumulation (Oct-Nov) to 90% of average. Soil moisture is at 55% compared to 47% last year. Reservoir storage is at 47% of capacity, compared to 48% last year.





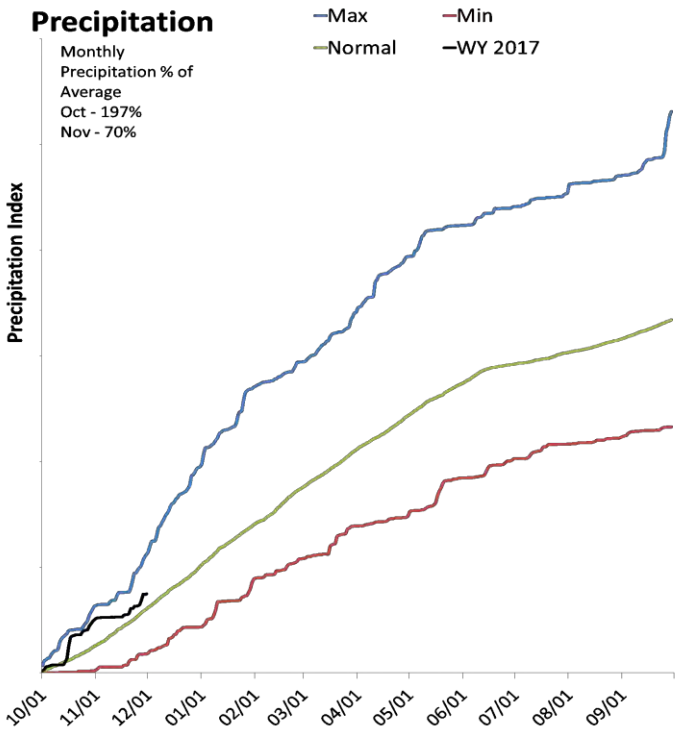


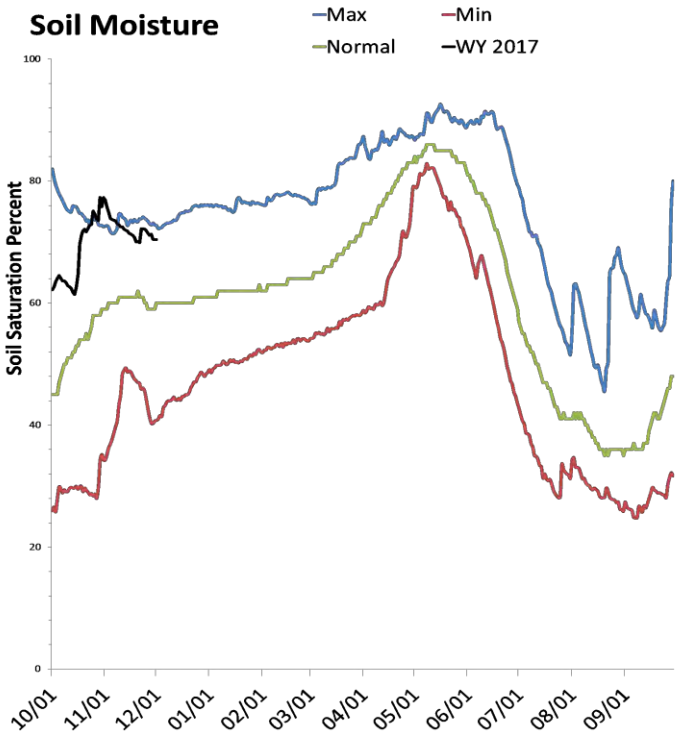


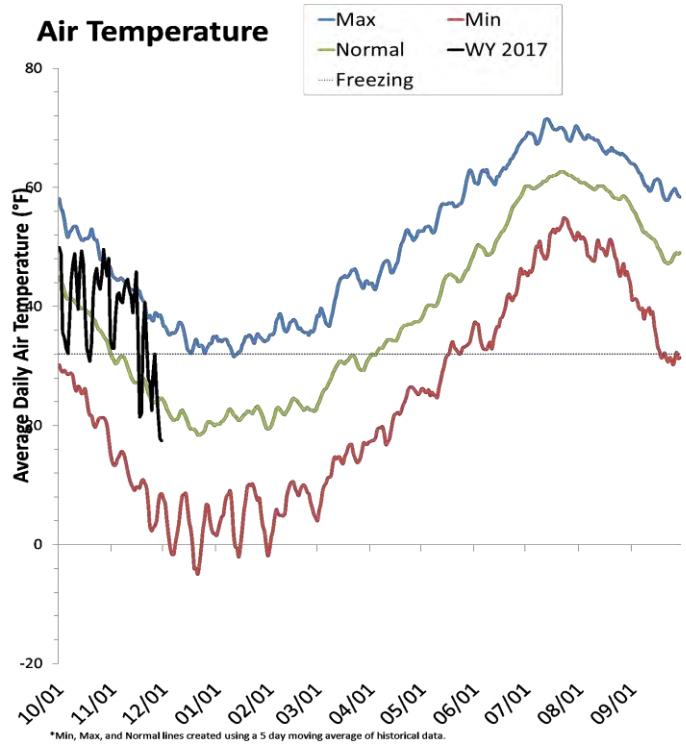
Bear River Basin

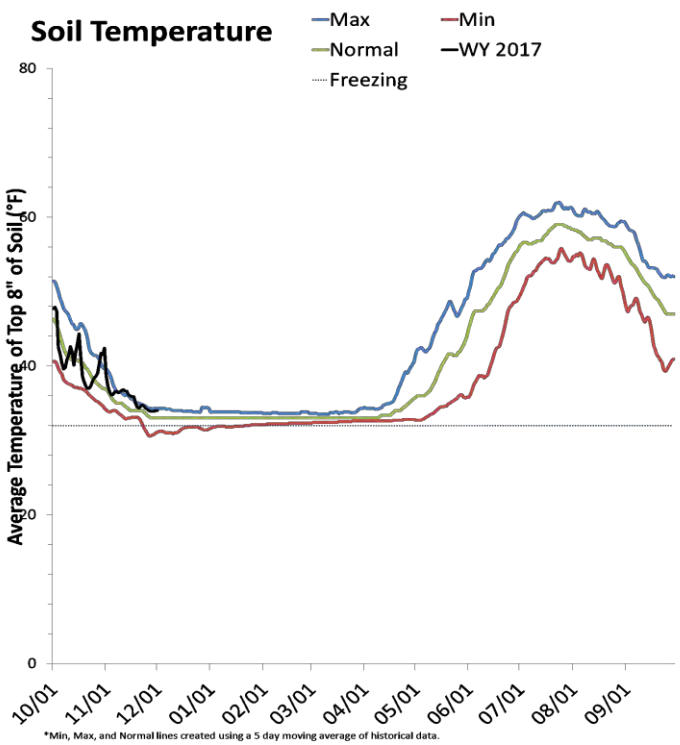
December 1, 2016

Precipitation in November was below average at 70%, which brings the seasonal accumulation (Oct-Nov) to 124% of average. Soil moisture is at 70% compared to 54% last year. Reservoir storage is at 37% of capacity, compared to 36% last year. The water availability index for the Bear River is 43%, 92% for Woodruff Narrows and 40% for the Little Bear.









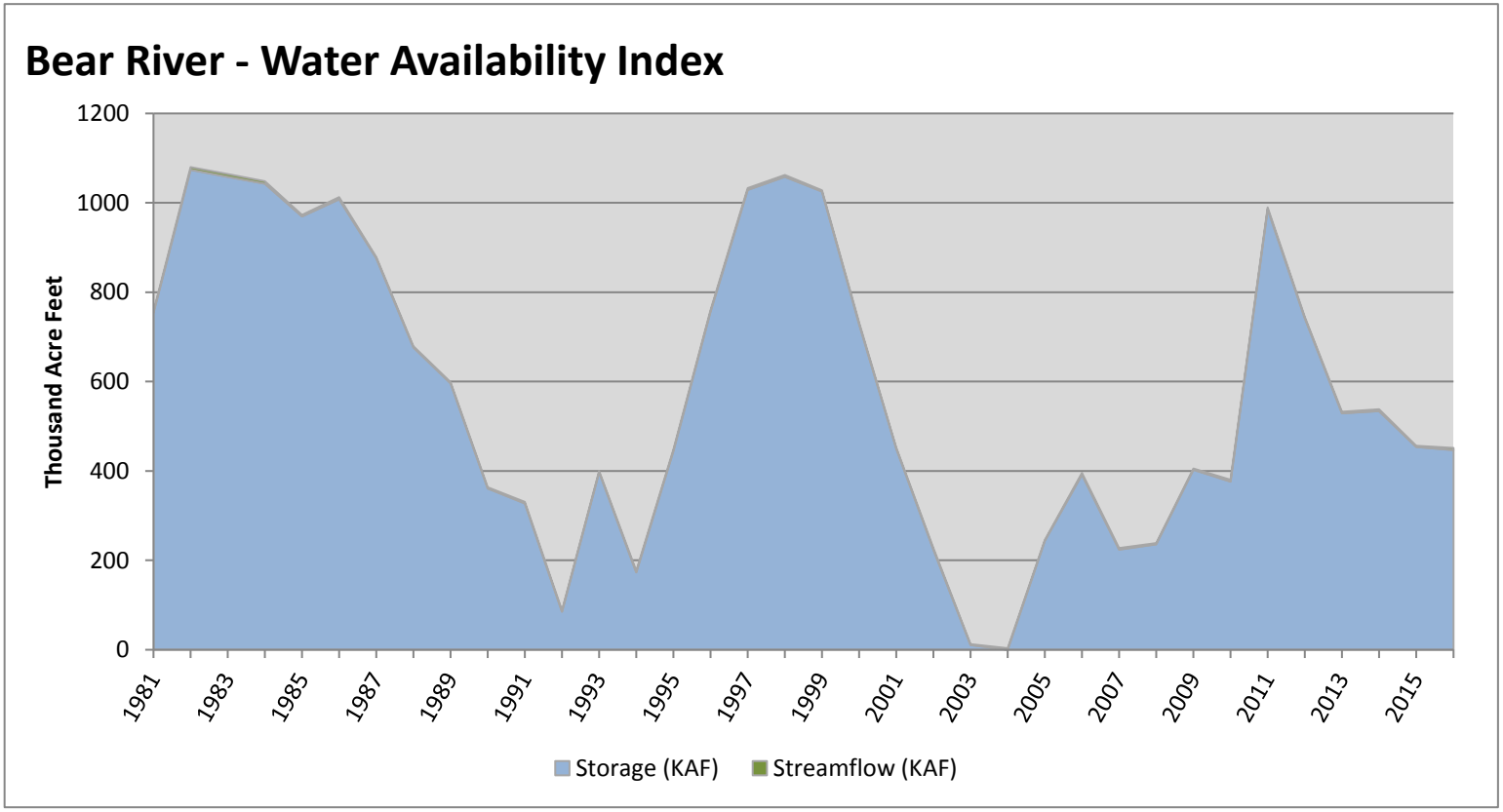
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	**446.85**	**4.39**	**451.24**	**43**	**-0.56**	**09, 95, 01, 15**

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

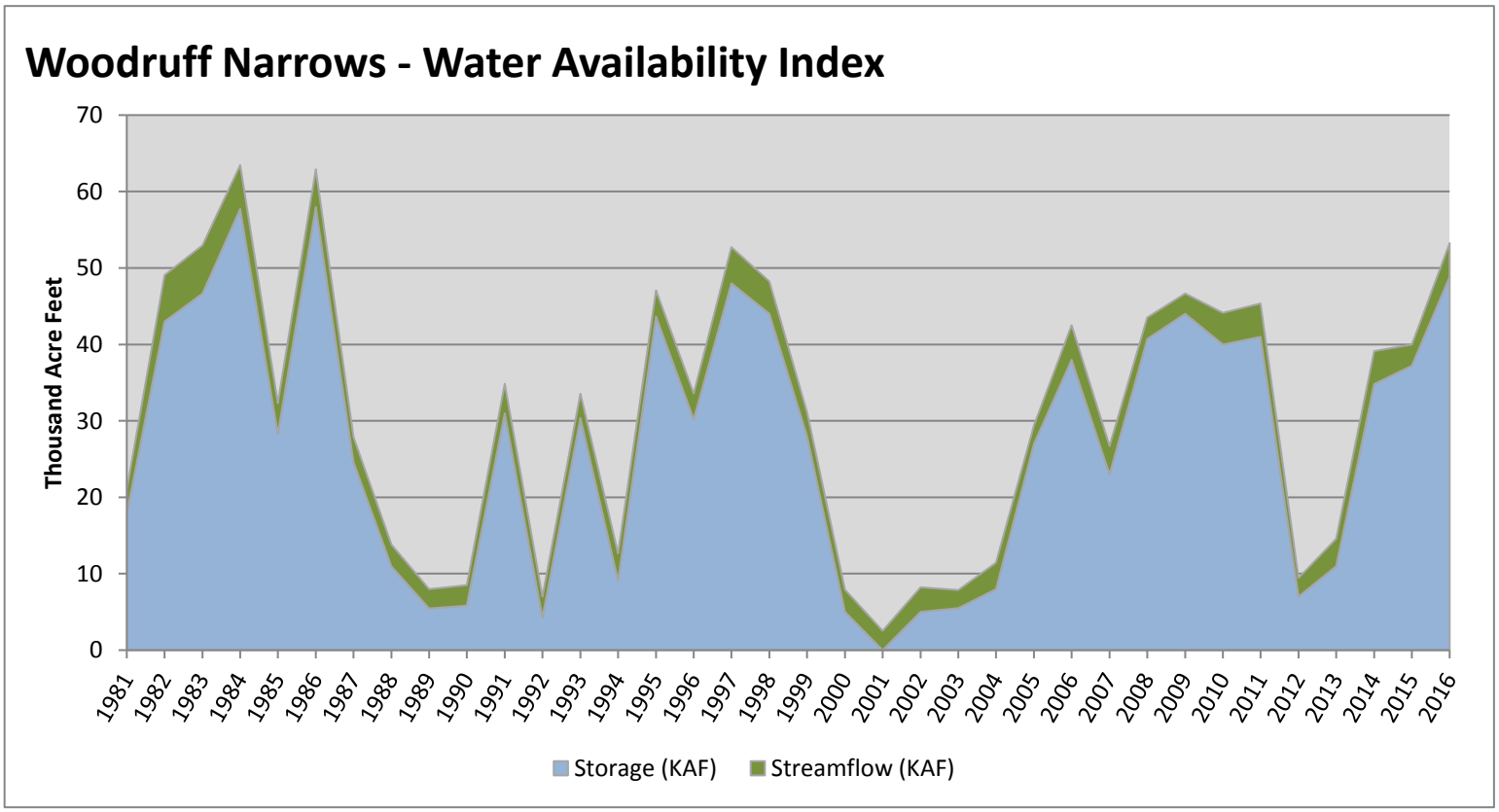


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Woodruff Narrows	**48.85**	**4.39**	**53.24**	**92**	**3.49**	**97, 83, 86, 84**

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

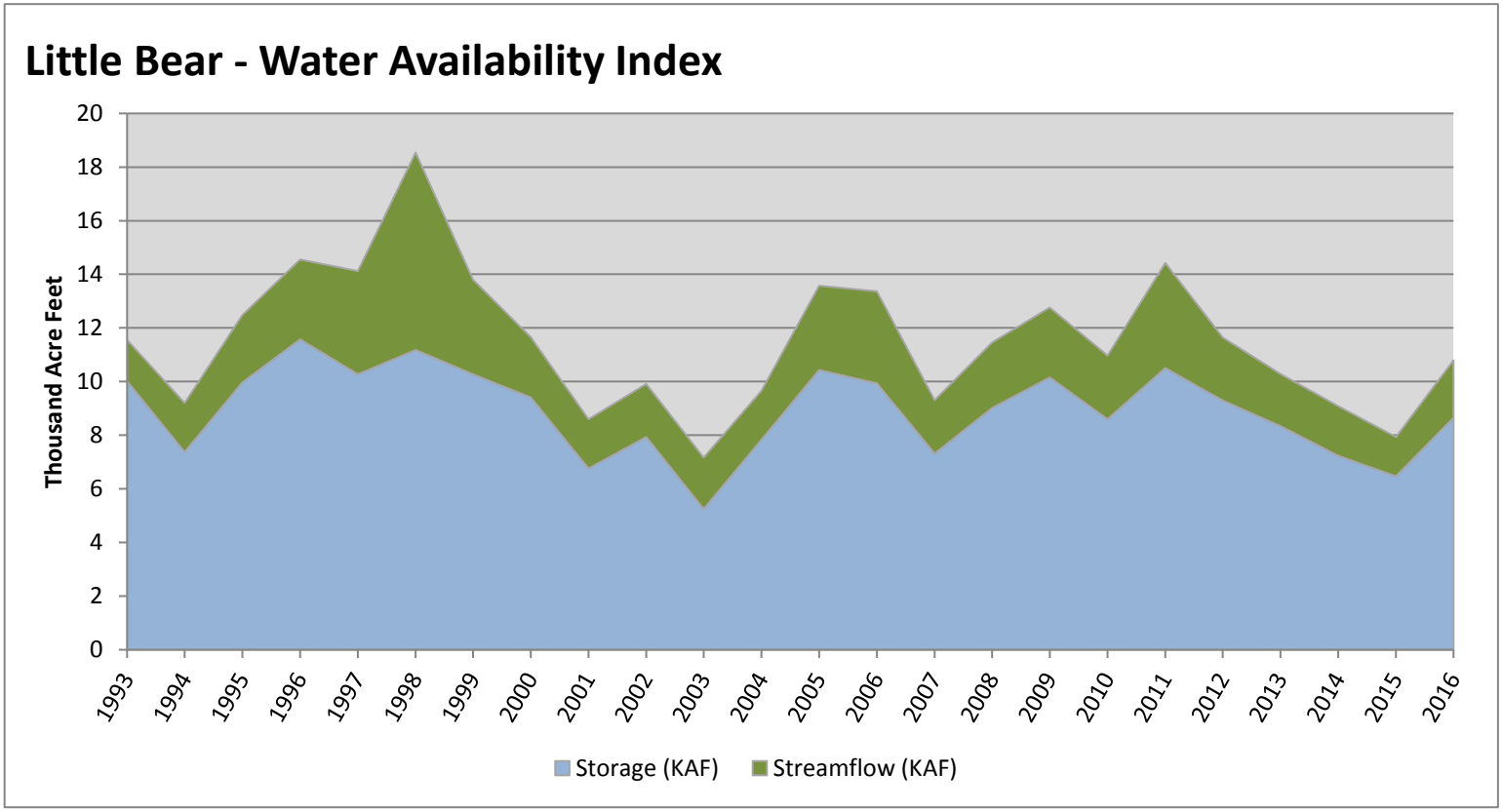


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Little Bear	**8.65**	**2.14**	**10.79**	**40**	**-0.83**	**02, 13, 10, 08**

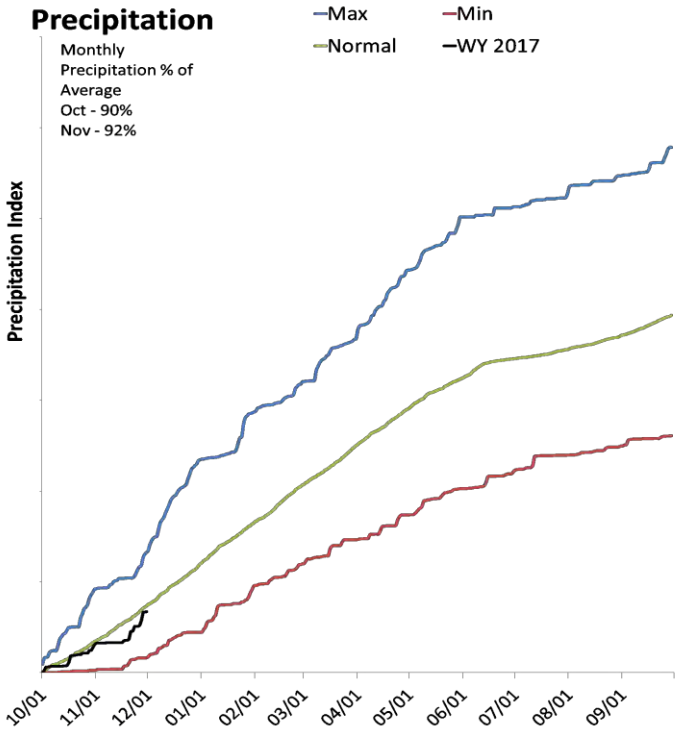
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

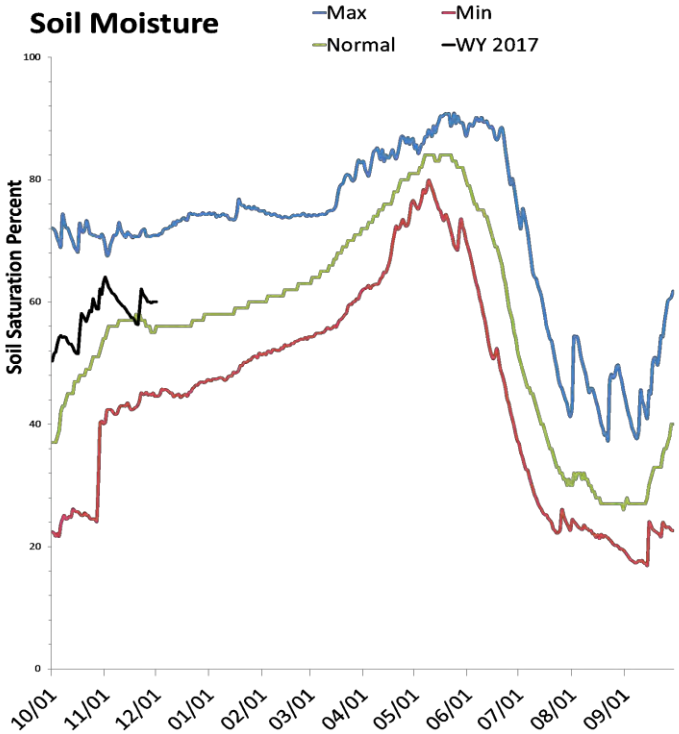


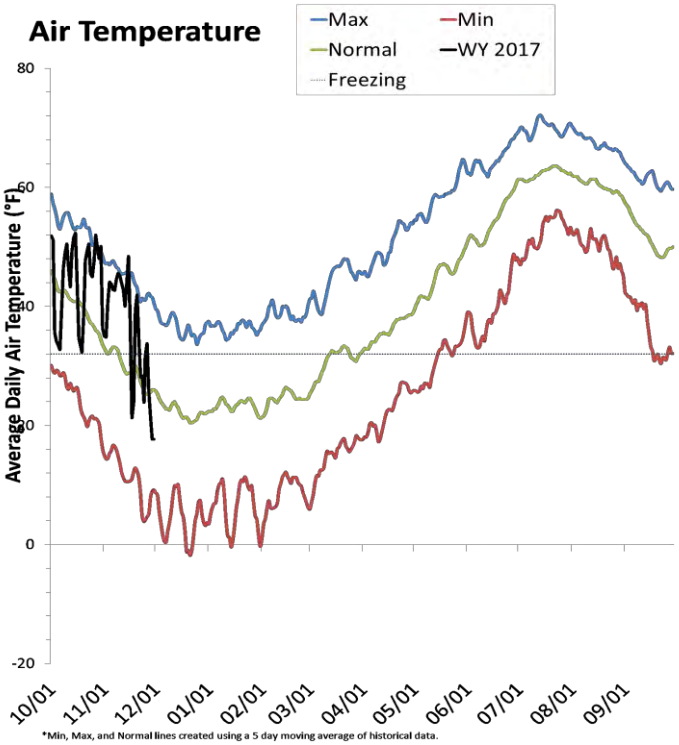
Weber & Ogden River Basins

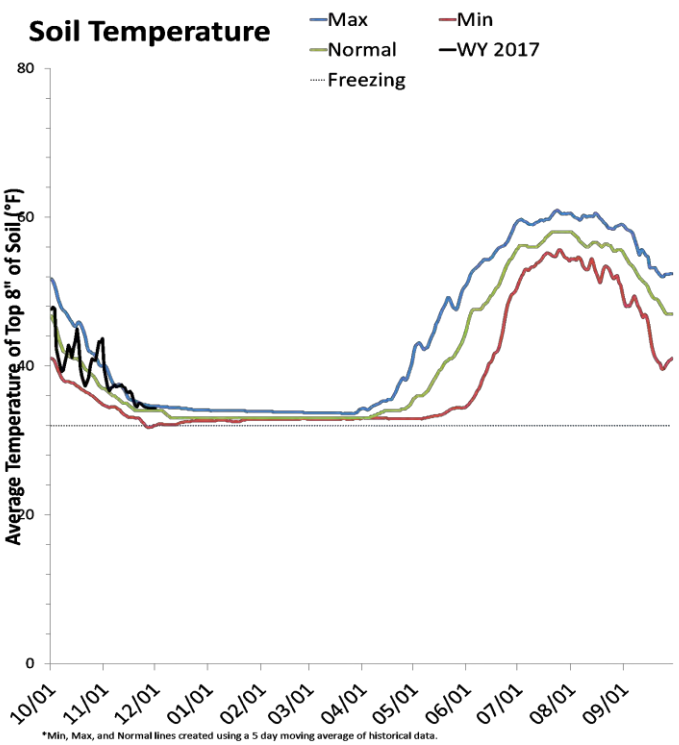
December 1, 2016

Precipitation in November was near average at 91%, which brings the seasonal accumulation (Oct-Nov) to 91% of average. Soil moisture is at 60% compared to 43% last year. Reservoir storage is at 53% of capacity, compared to 40% last year. The water availability index for the Ogden River is 62% and 30% for the Weber River.









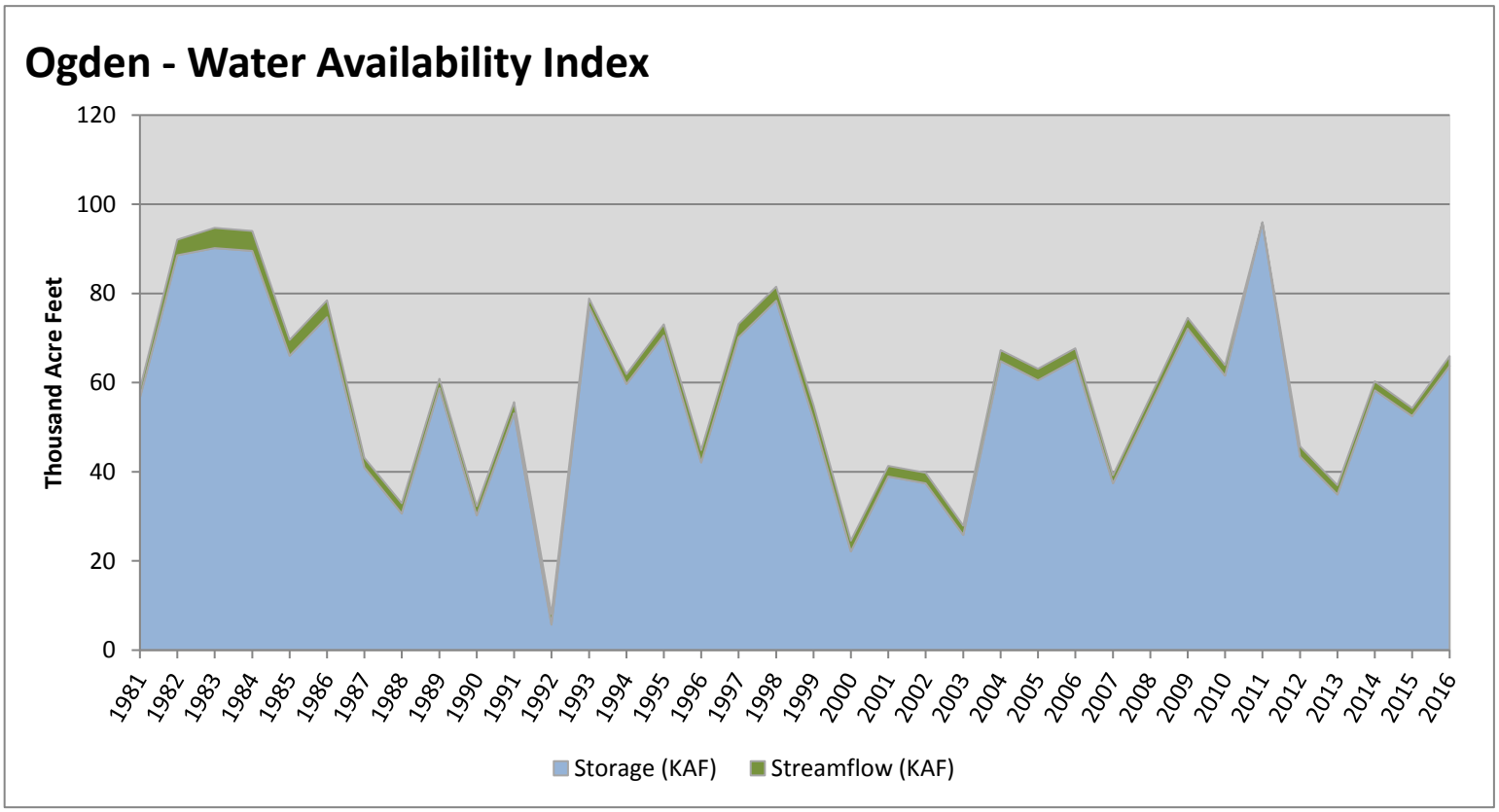
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Ogden	**63.75**	**2.23**	**65.98**	**62**	**1.01**	**05, 10, 04, 06**

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

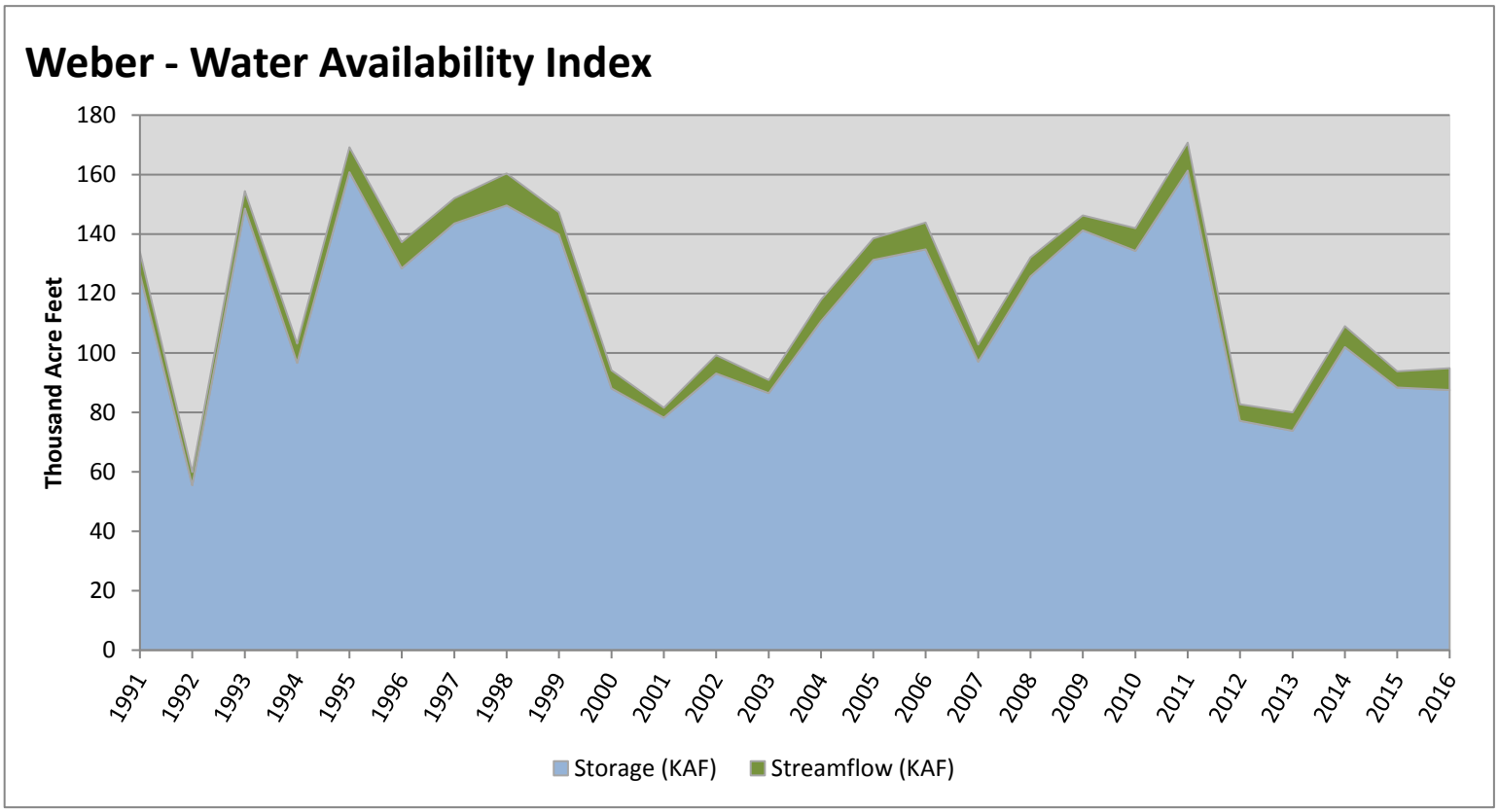


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Weber	**87.51**	**7.30**	**94.81**	**30**	**-1.7**	**15, 00, 02, 07**

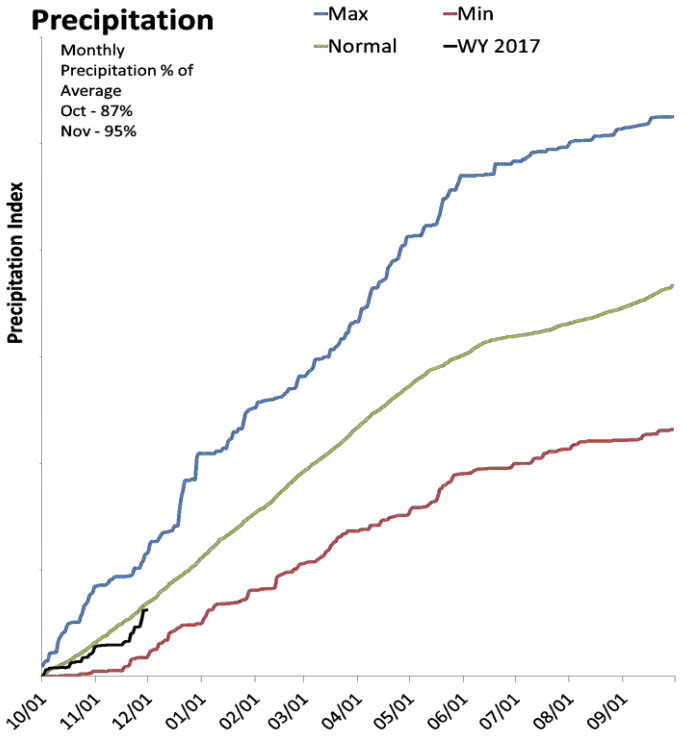
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

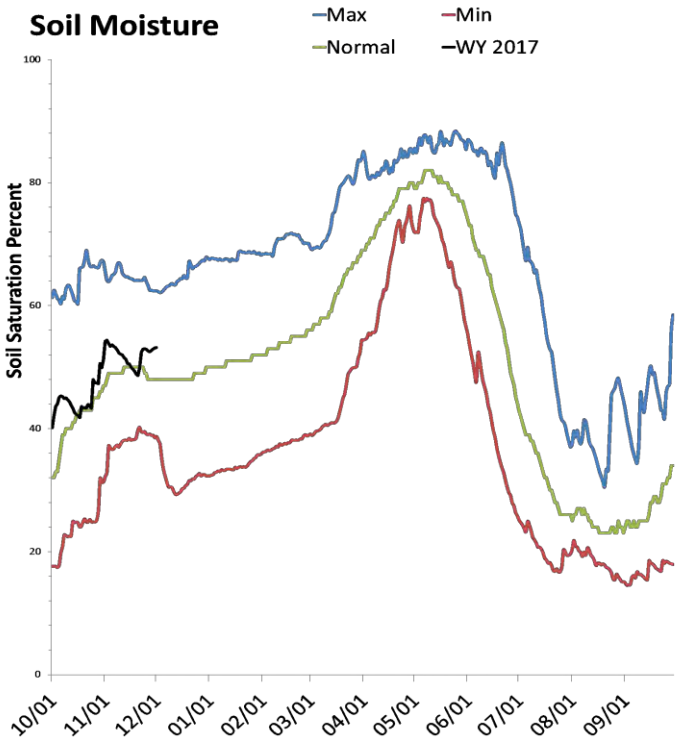


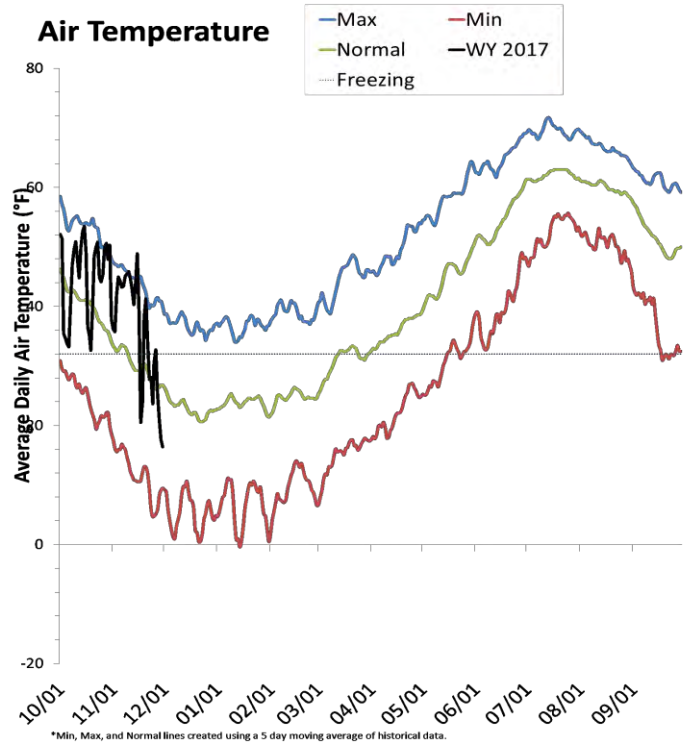
Provo & Jordan River Basins

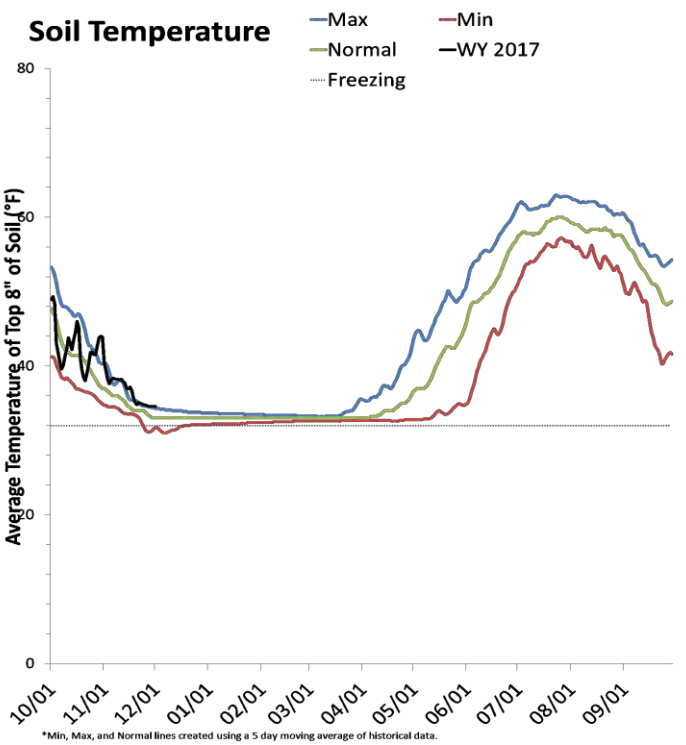
December 1, 2016

Precipitation in November was near average at 95%, which brings the seasonal accumulation (Oct-Nov) to 91% of average. Soil moisture is at 53% compared to 35% last year. Reservoir storage is at 57% of capacity, compared to 60% last year. The water availability index for the Provo River is 36%.









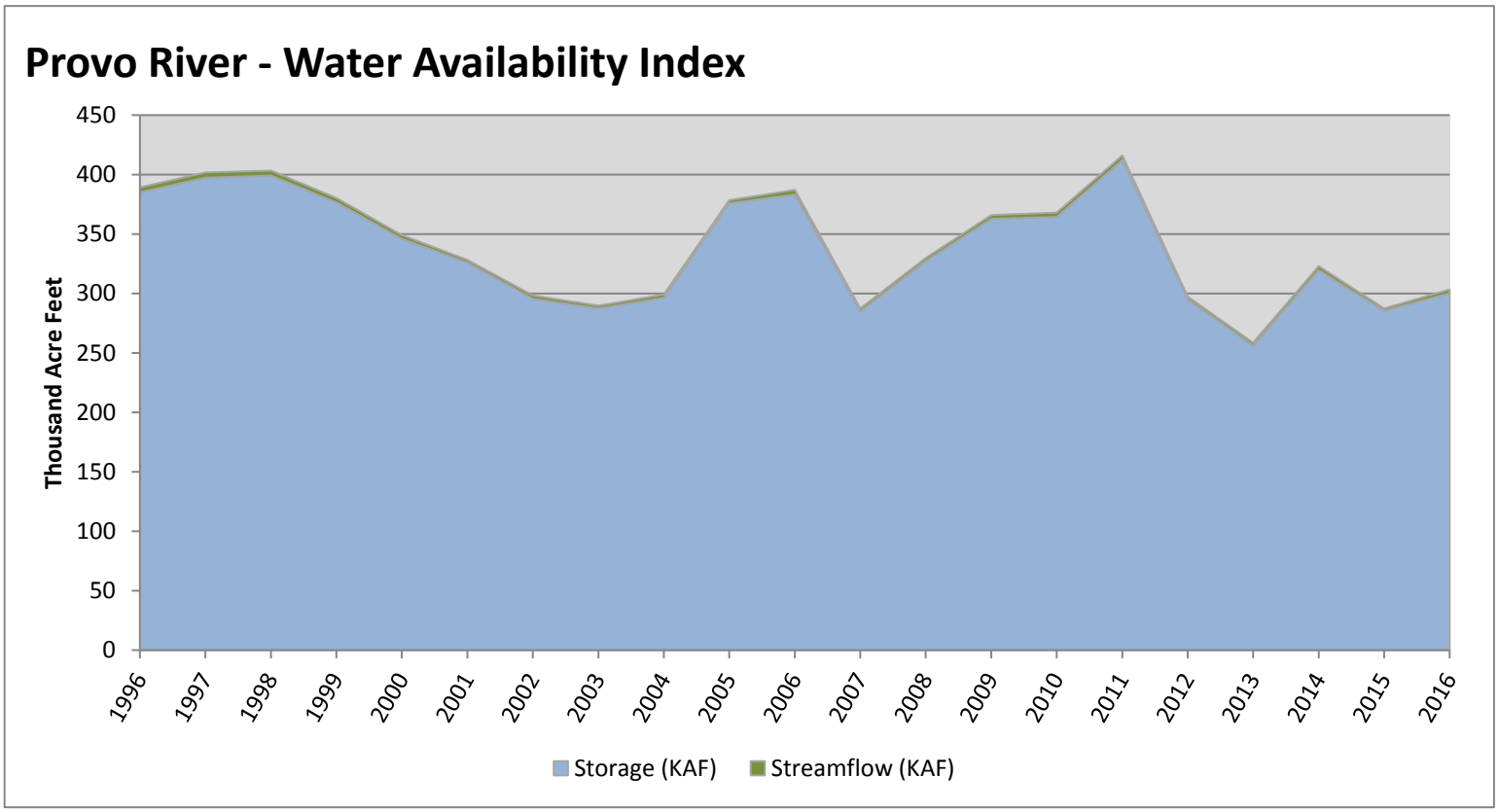
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Provo River	**300.25**	**2.98**	**303.23**	**36**	**-1.14**	**02, 04, 14, 01**

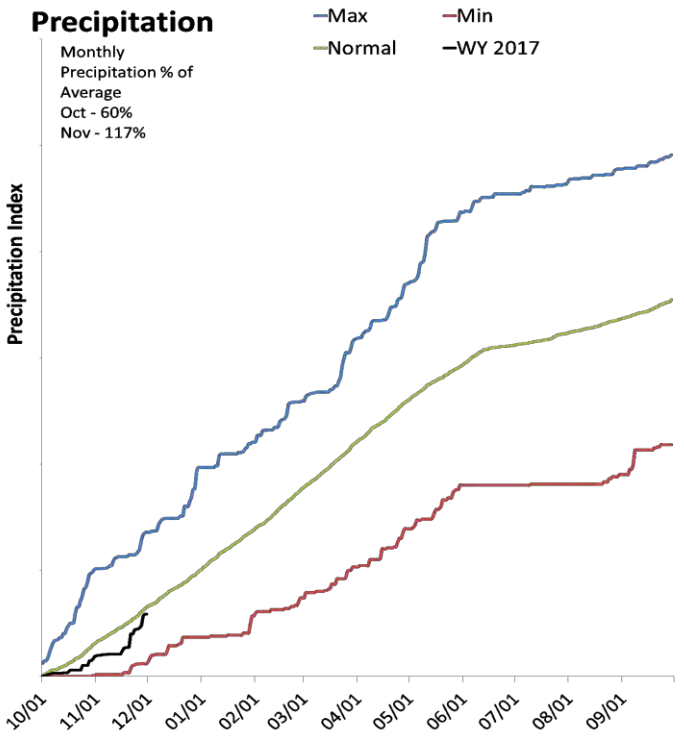
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

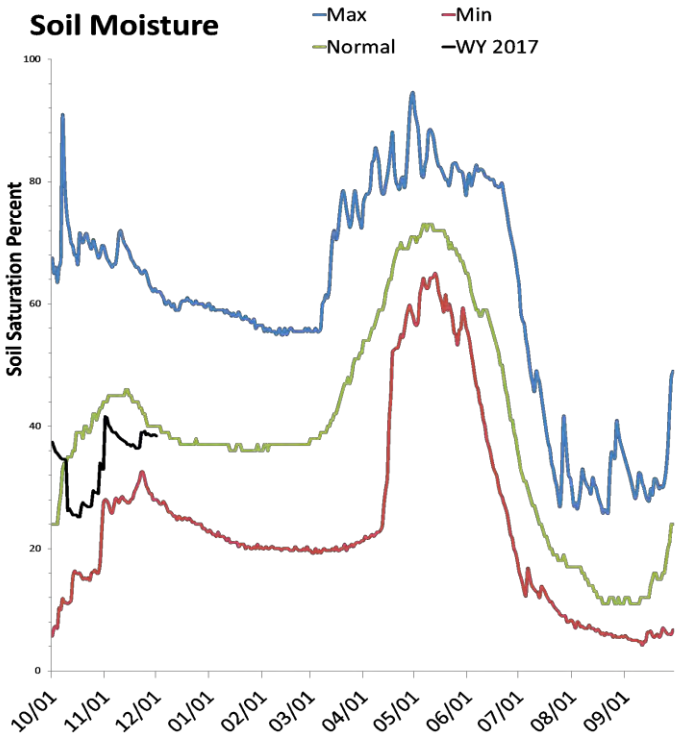


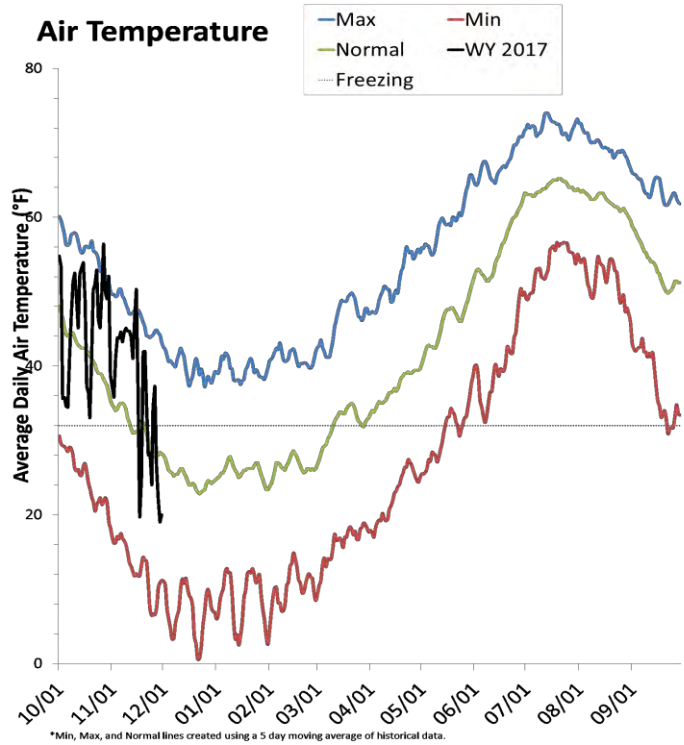
Tooele Valley & West Desert Basins

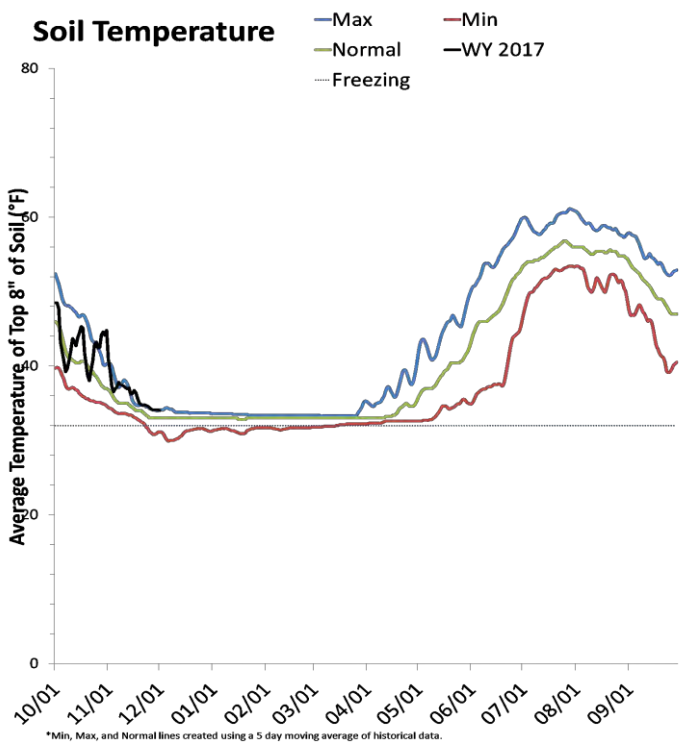
December 1, 2016

Precipitation in November was above average at 118%, which brings the seasonal accumulation (Oct-Nov) to 90% of average. Soil moisture is at 39% compared to 30% last year. Reservoir storage is at 20% of capacity, compared to 29% last year.







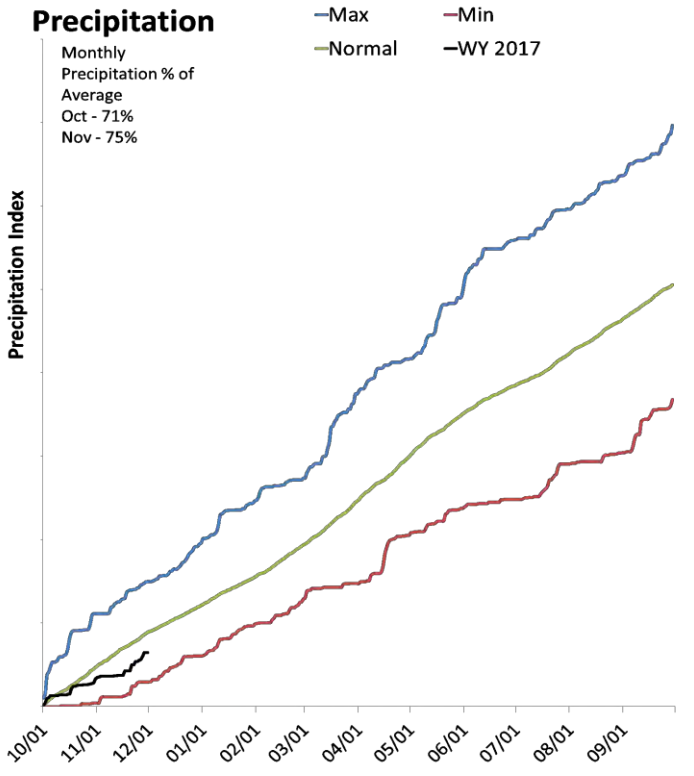


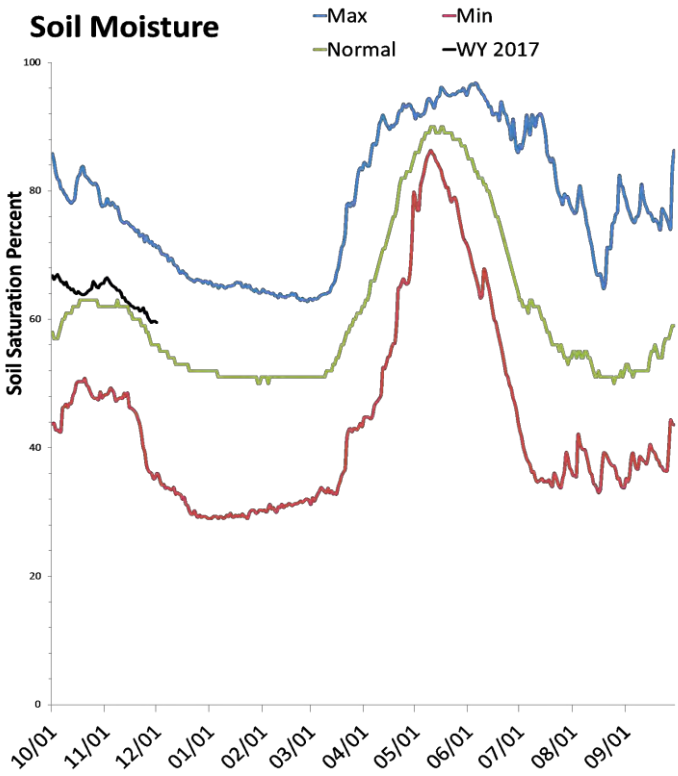
SNOTEL Data

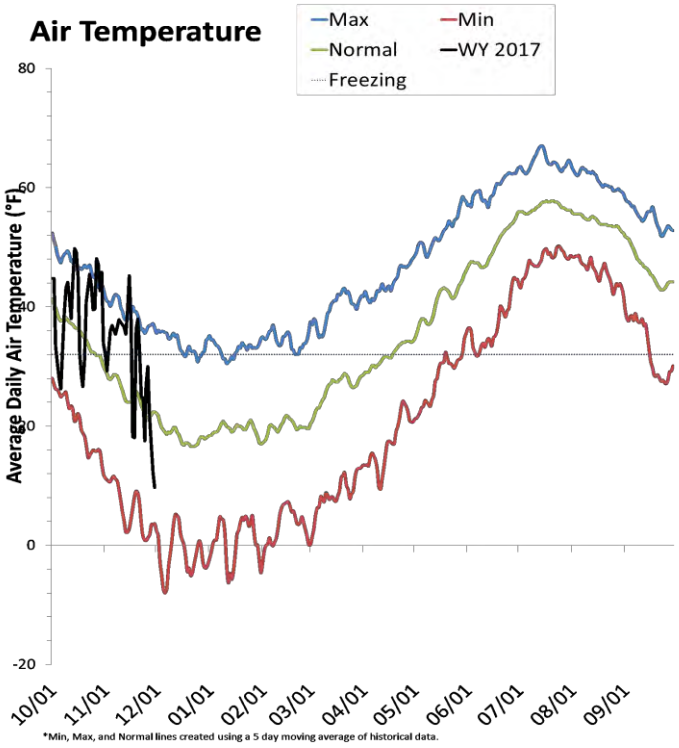
Northeastern Uinta Basin

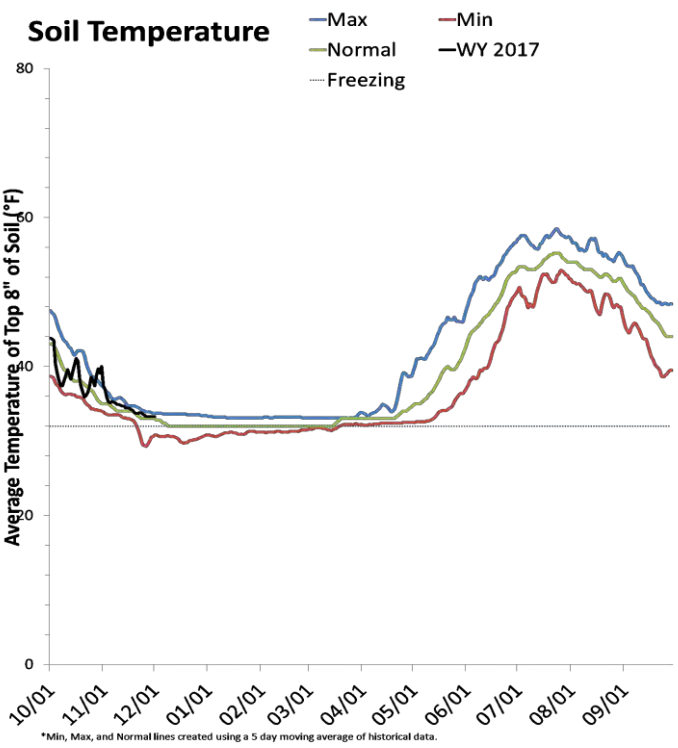
December 1, 2016

Precipitation in November was below average at 75%, which brings the seasonal accumulation (Oct-Nov) to 72% of average. Soil moisture is at 64% compared to 55% last year. Reservoir storage is at 84% of capacity, compared to 87% last year. The Water availability Index for Blacks Fork is 65% and 61% for Smiths Creek.









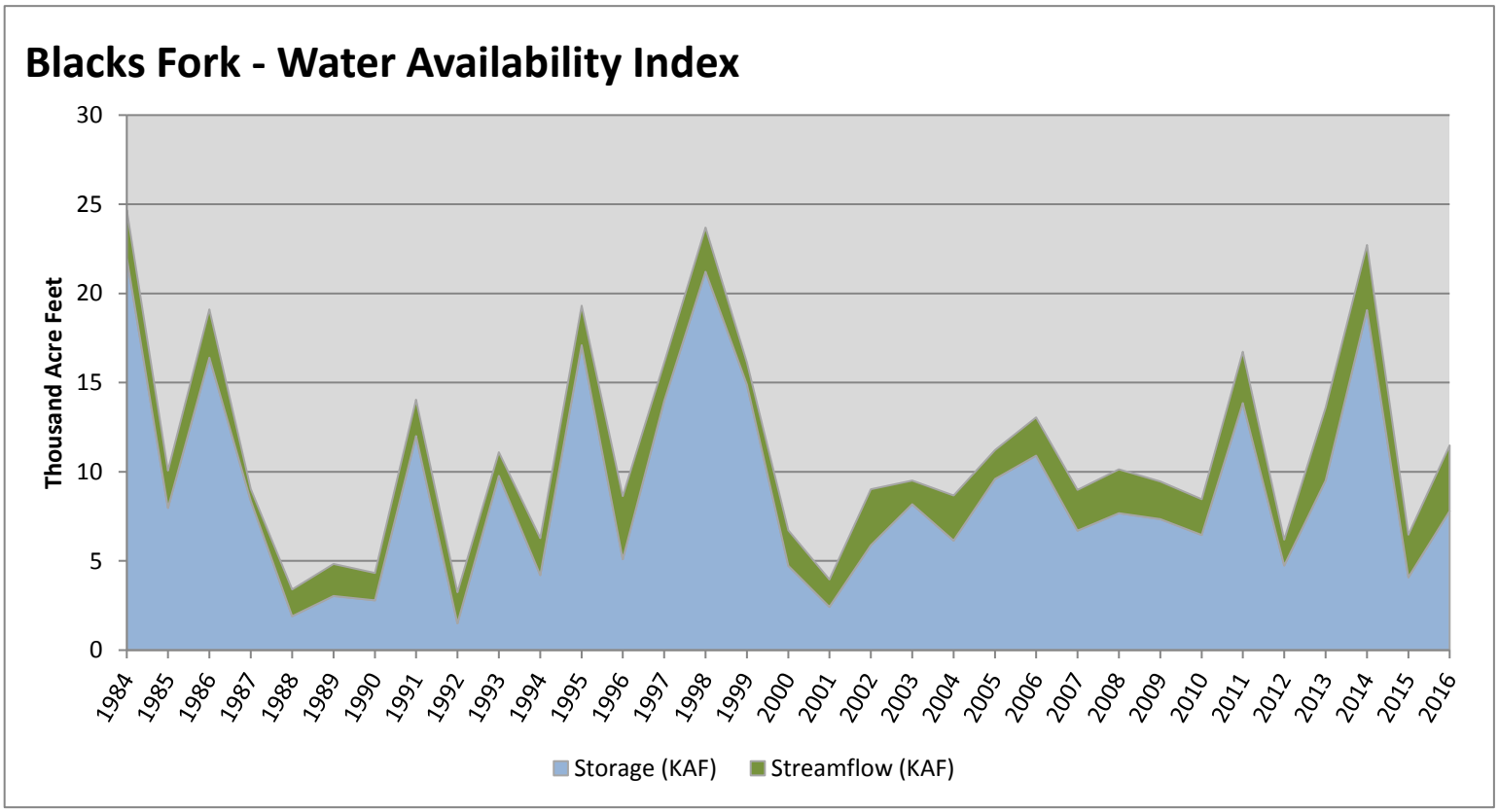
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Blacks Fork	**7.80**	**3.69**	**11.49**	**65**	**1.23**	**93, 05, 06, 13**

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

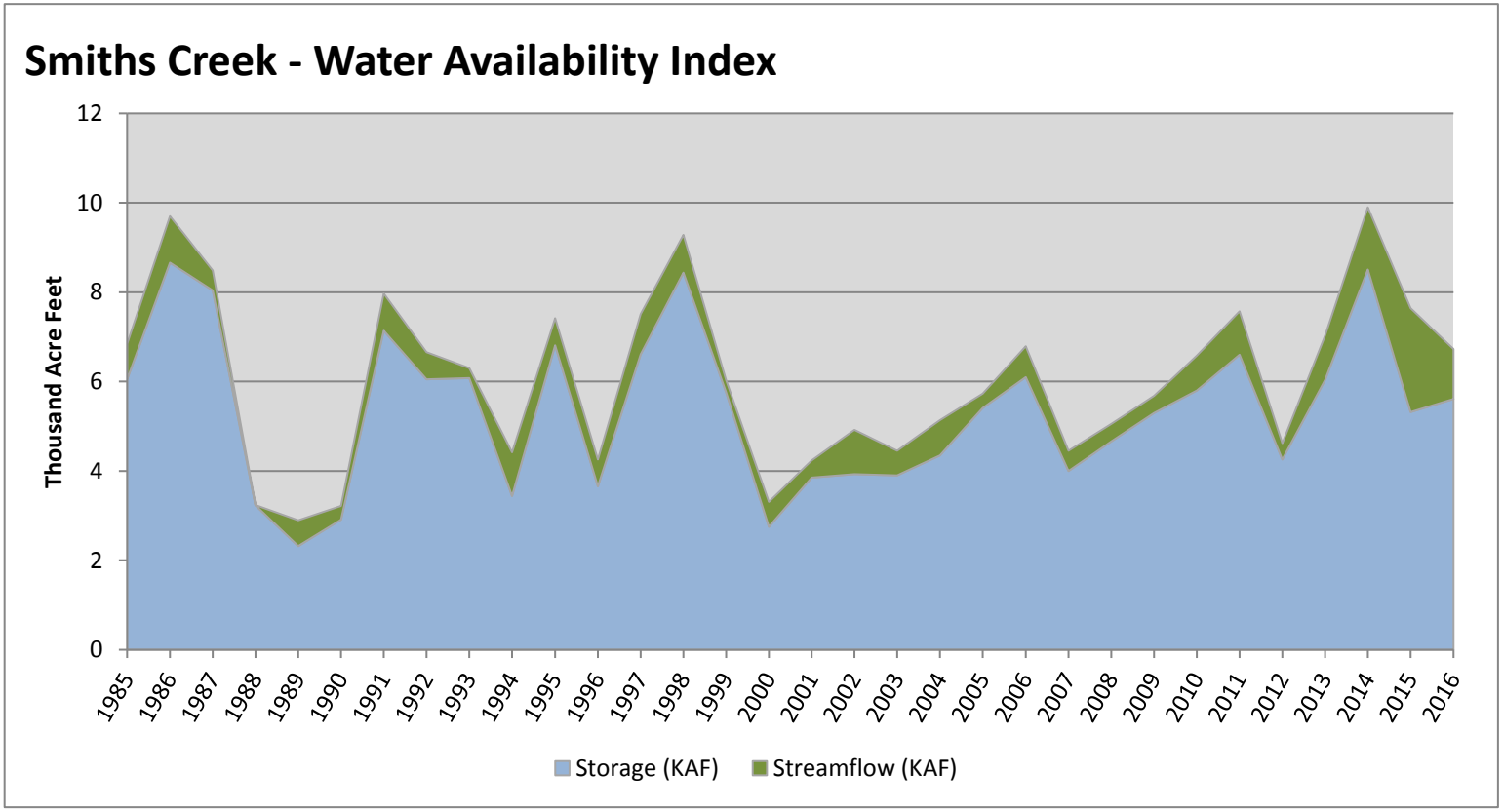


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Smiths Creek	**5.61**	**1.12**	**6.73**	**61**	**0.88**	**10, 92, 06, 85**

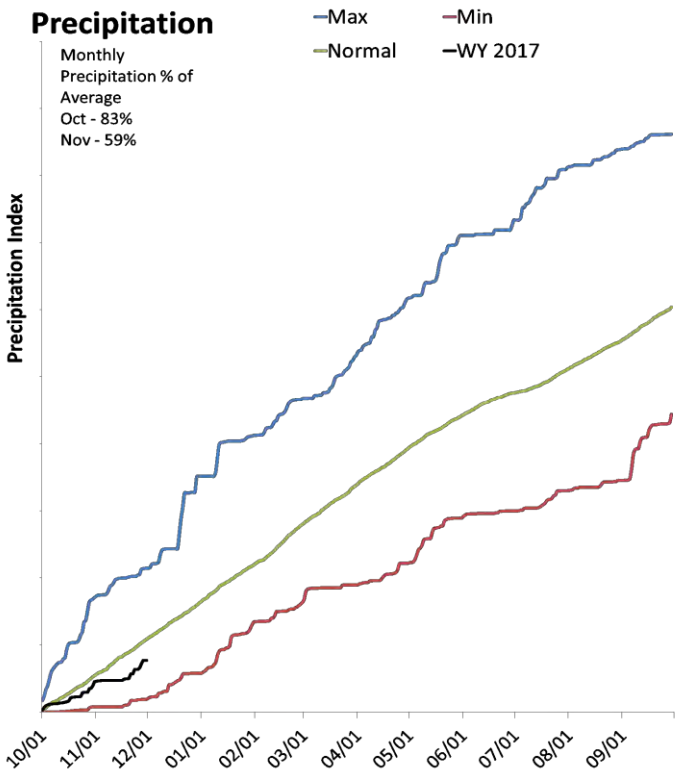
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

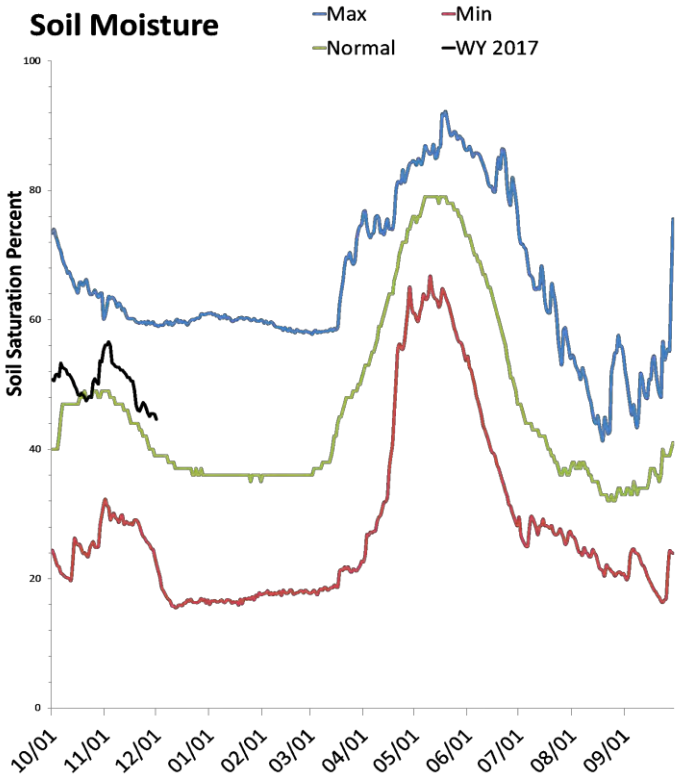


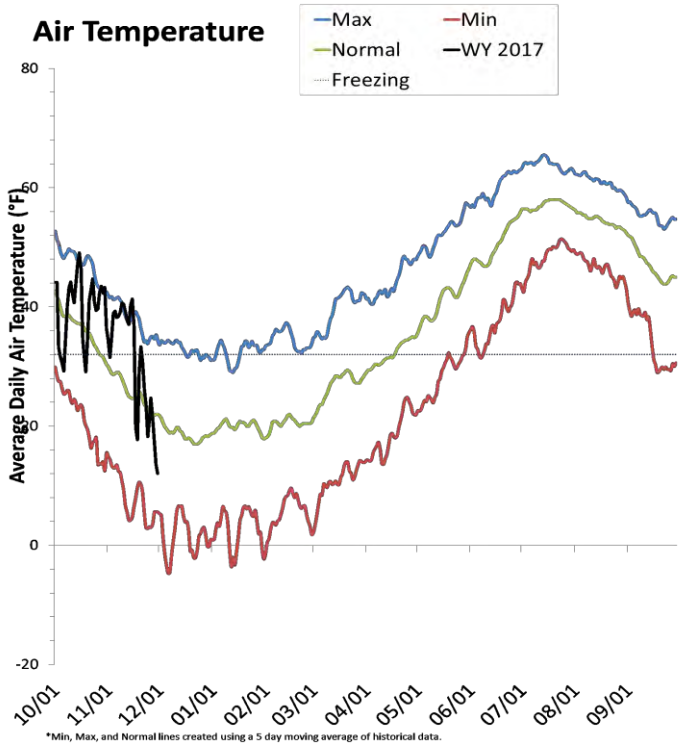
Duchesne River Basin

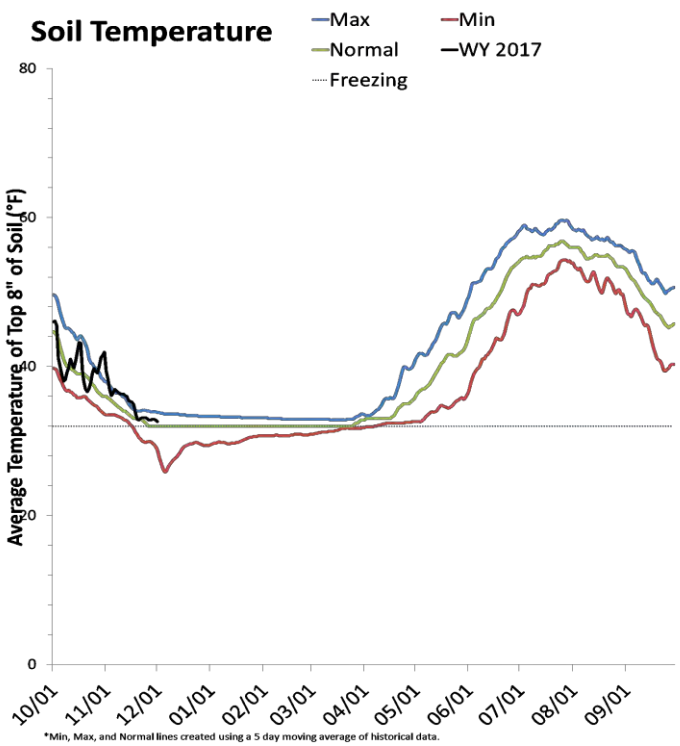
December 1, 2016

Precipitation in November was much below average at 59%, which brings the seasonal accumulation (Oct-Nov) to 71% of average. Soil moisture is at 50% compared to 35% last year. Reservoir storage is at 69% of capacity, compared to 70% last year. The water availability index for the Western UIntas is 70% and 62% for the Eastern UIntas.









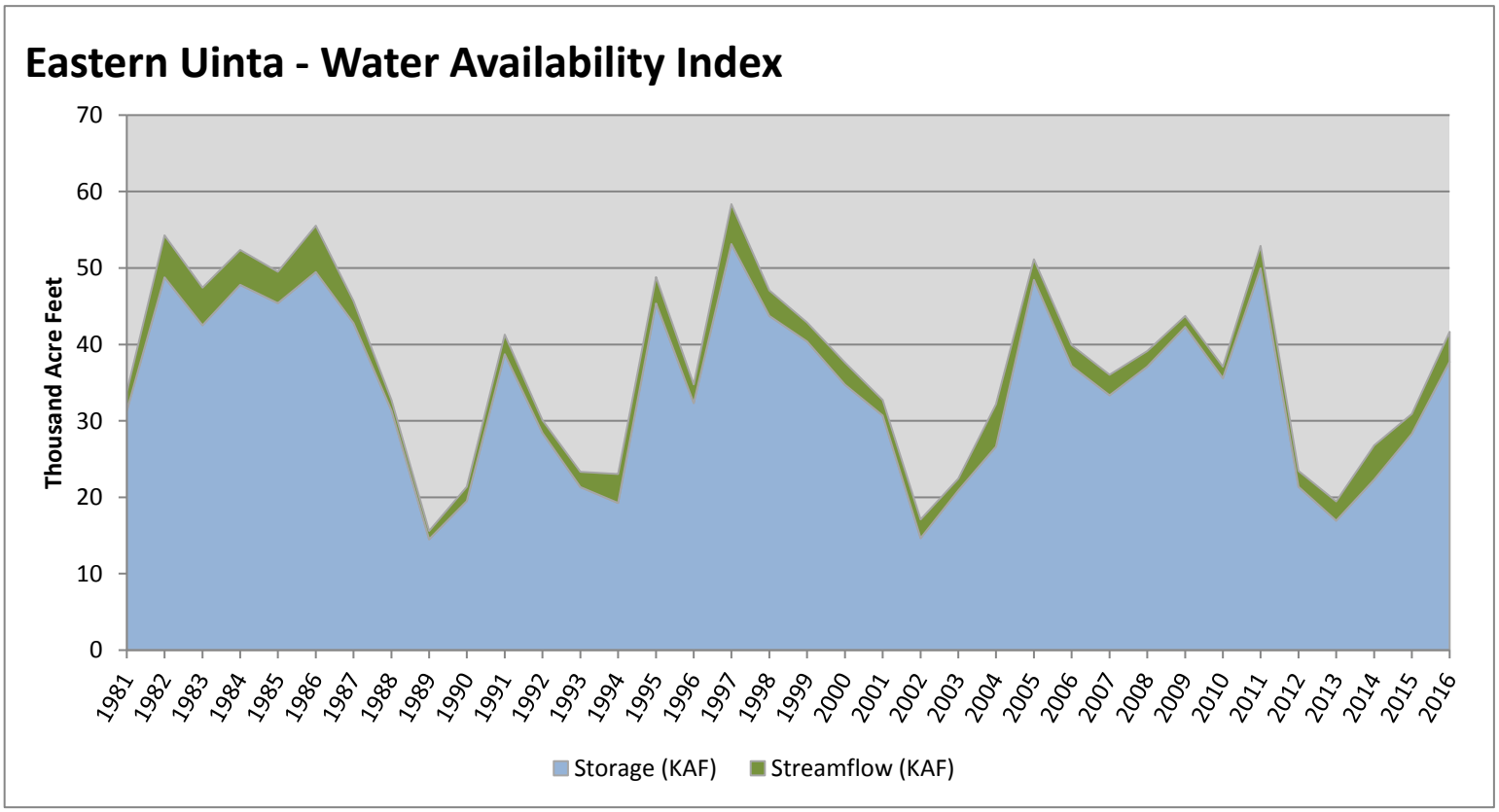
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Eastern Uinta	**37.75**	**3.91**	**41.66**	**62**	**1.01**	**06, 91, 99, 09**

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

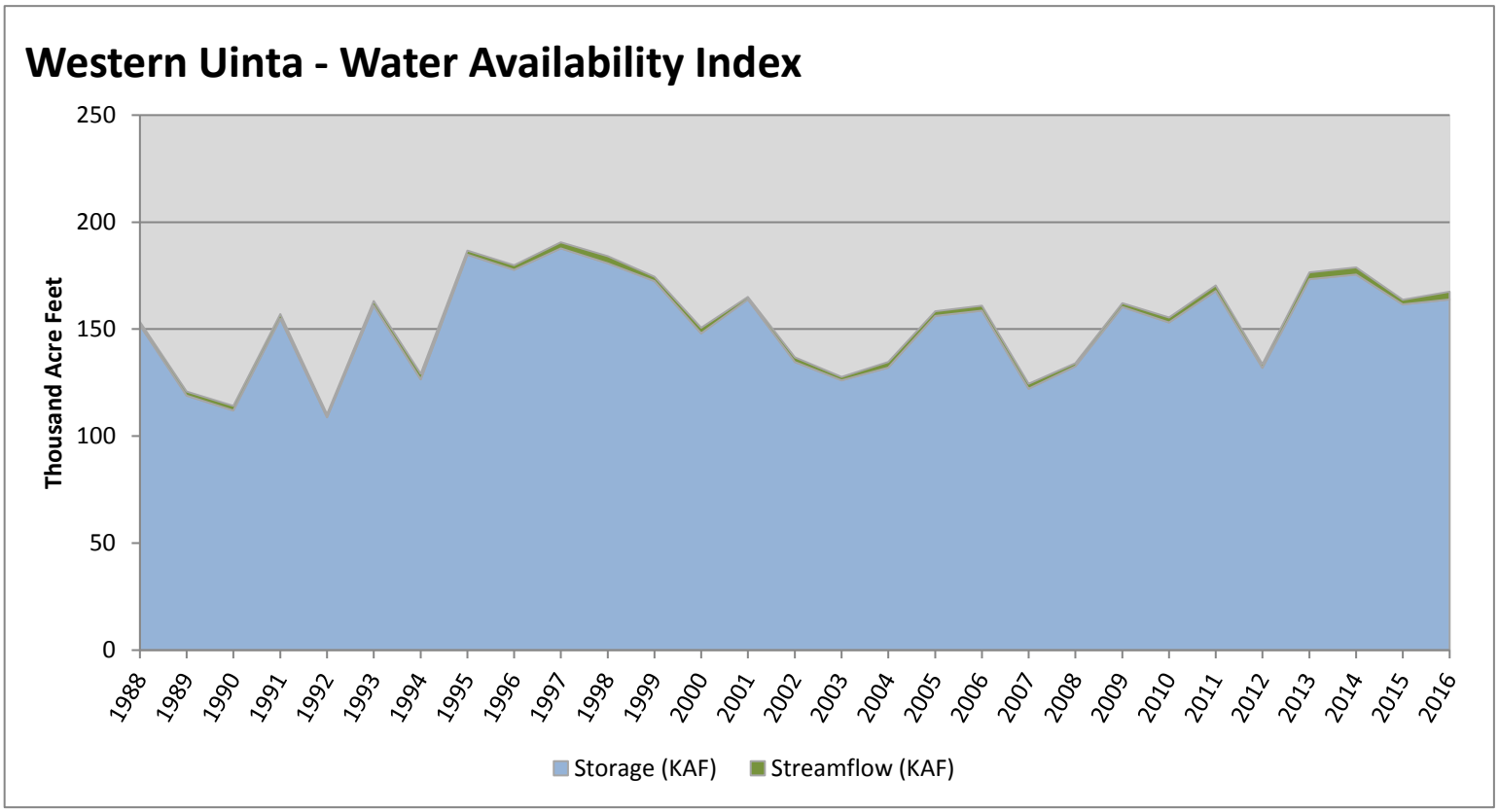


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Western Uinta	**163.93**	**3.62**	**167.55**	**70**	**1.67**	**15, 01, 11, 99**

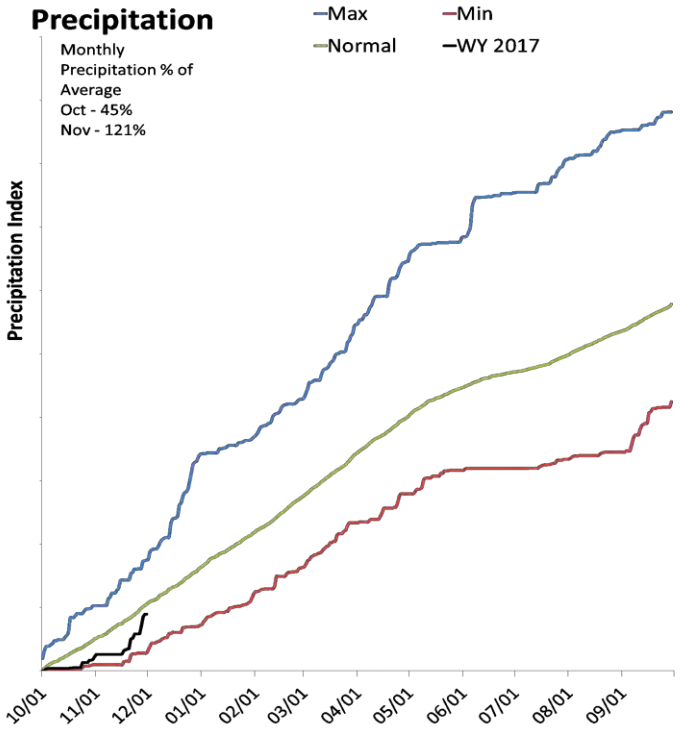
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

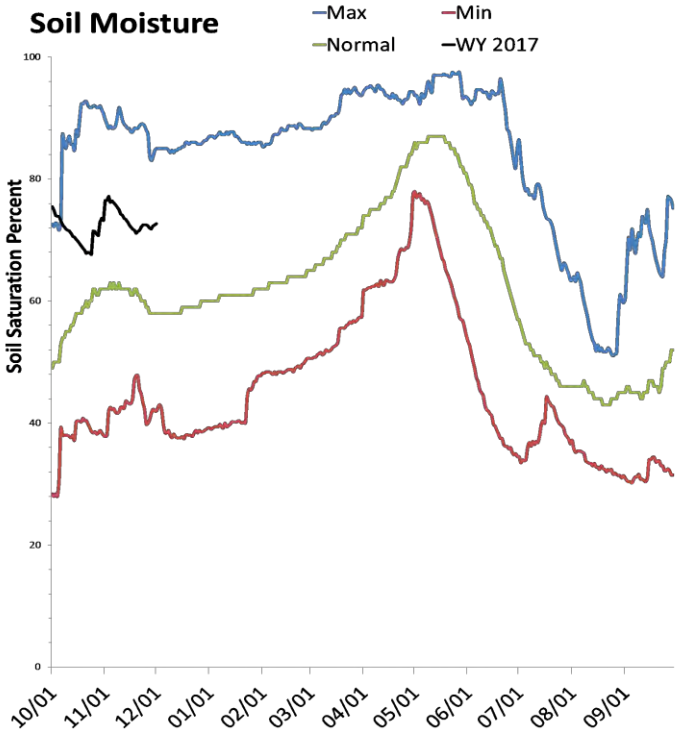


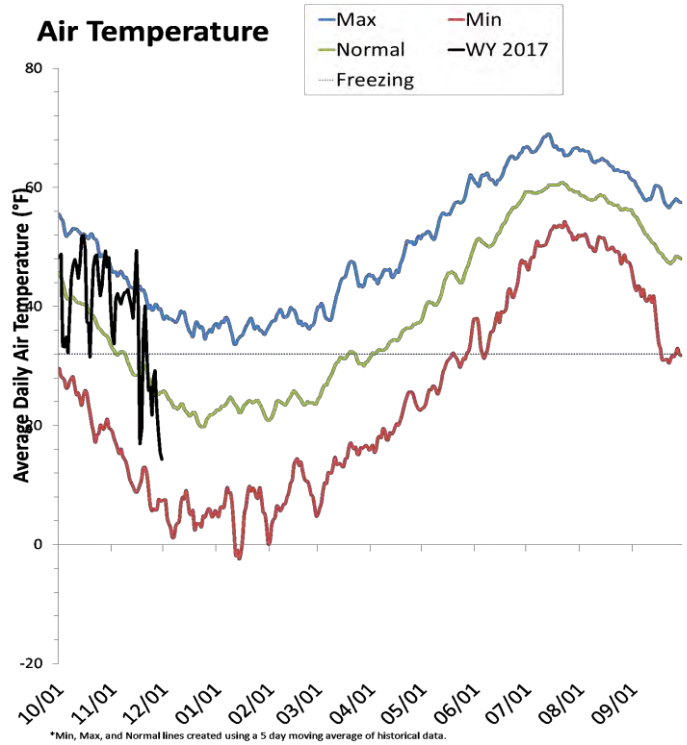
San Pitch River Basin

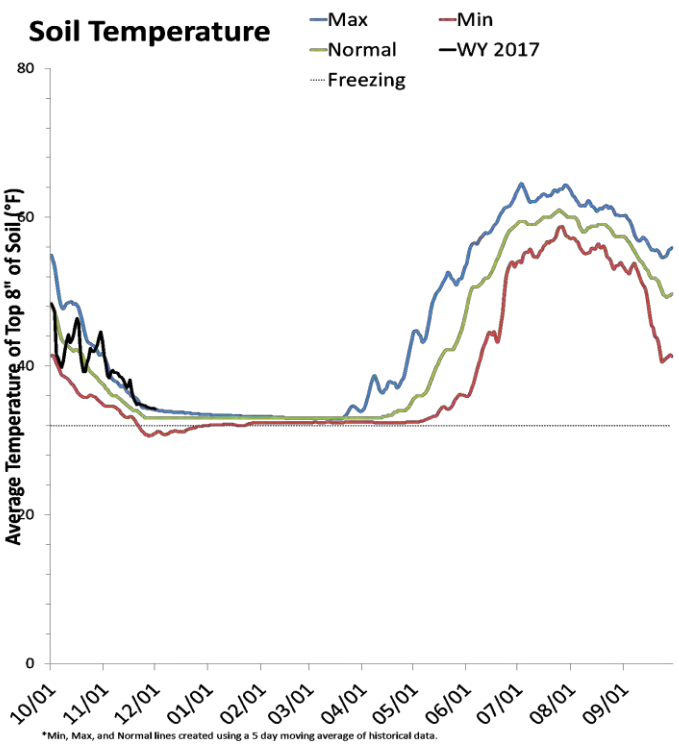
December 1, 2016

Precipitation in November was above average at 121%, which brings the seasonal accumulation (Oct-Nov) to 85% of average. Soil Moisture is at 72% compared to 54% last year. Reservoir storage is at 1% of capacity, compared to 0% last year.The water availability index for the San Pitch is 24%.









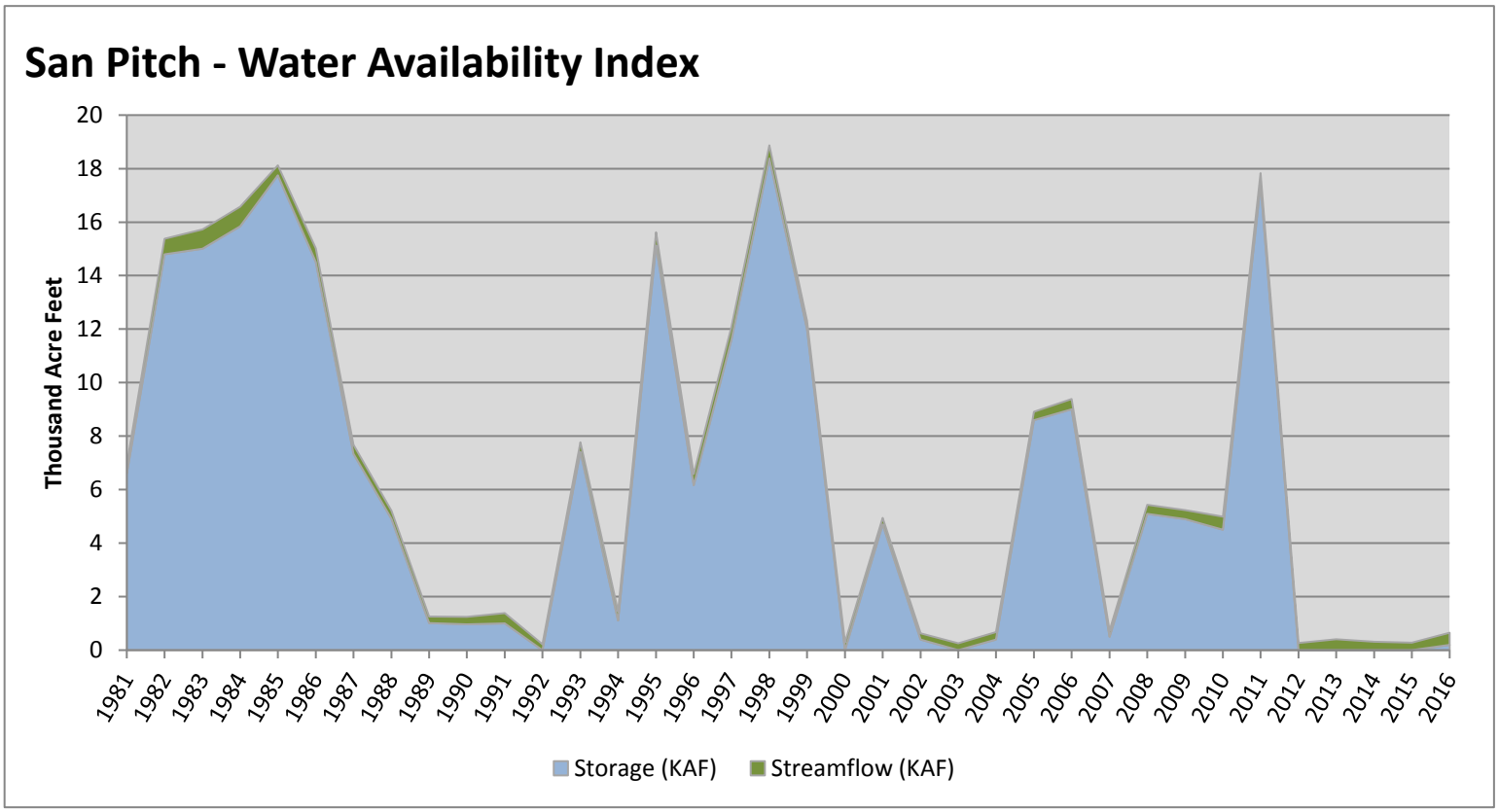
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
San Pitch	**0.20**	**0.45**	**0.65**	**24**	**-2.14**	**13, 02, 04, 07**

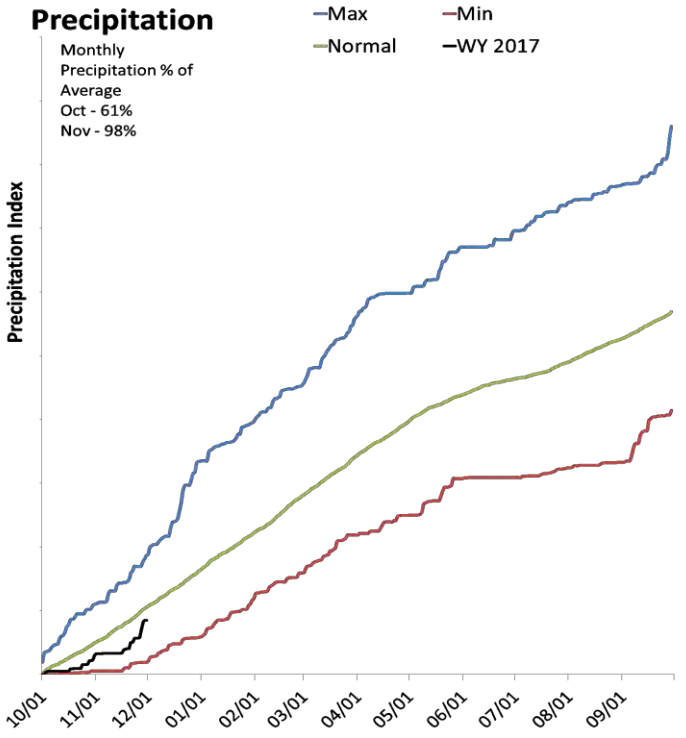
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

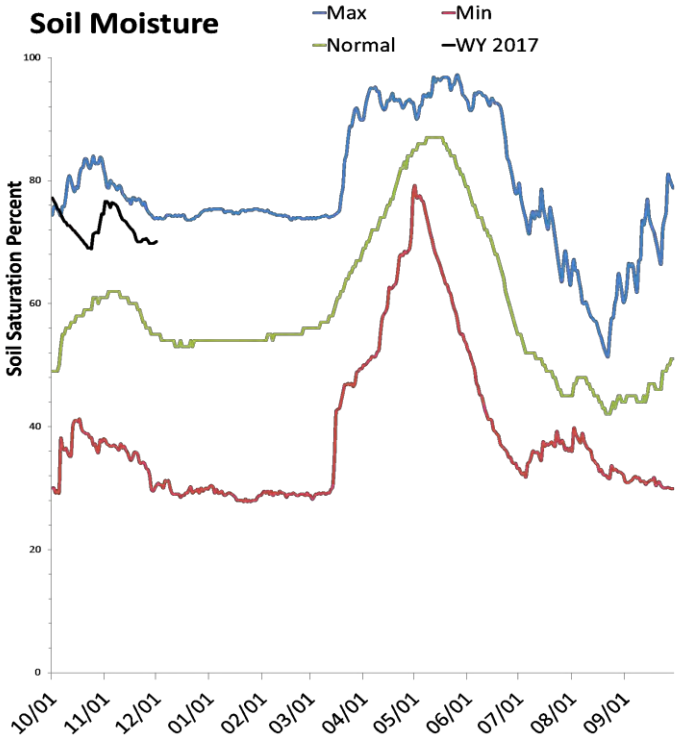


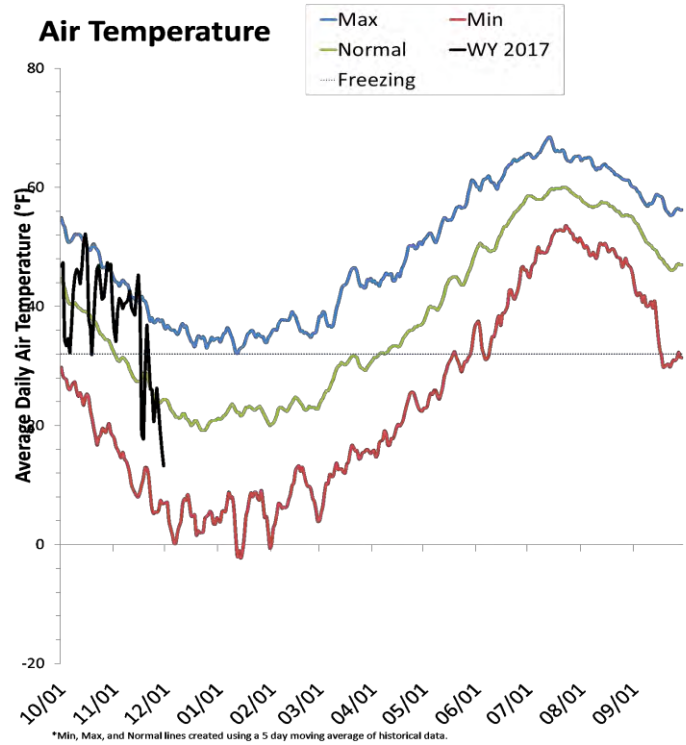
Price & San Rafael Basins

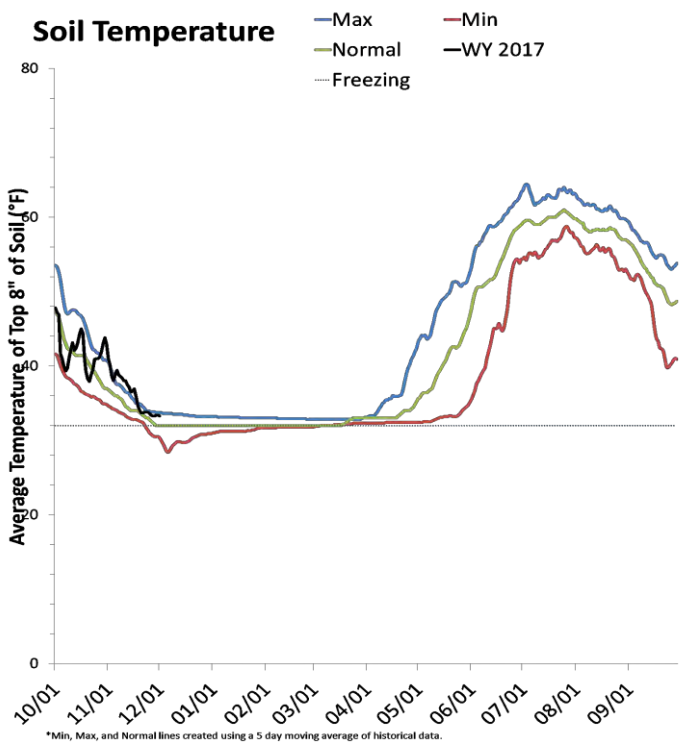
December 1, 2016

Precipitation in November was near average at 98%, which brings the seasonal accumulation (Oct-Nov) to 80% of average. Soil moisture is at 70% compared to 54% last year. Reservoir storage is at 35% of capacity, compared to 37% last year. The water availability index for the Price River is 24%, and 11% for Joe's Valley.









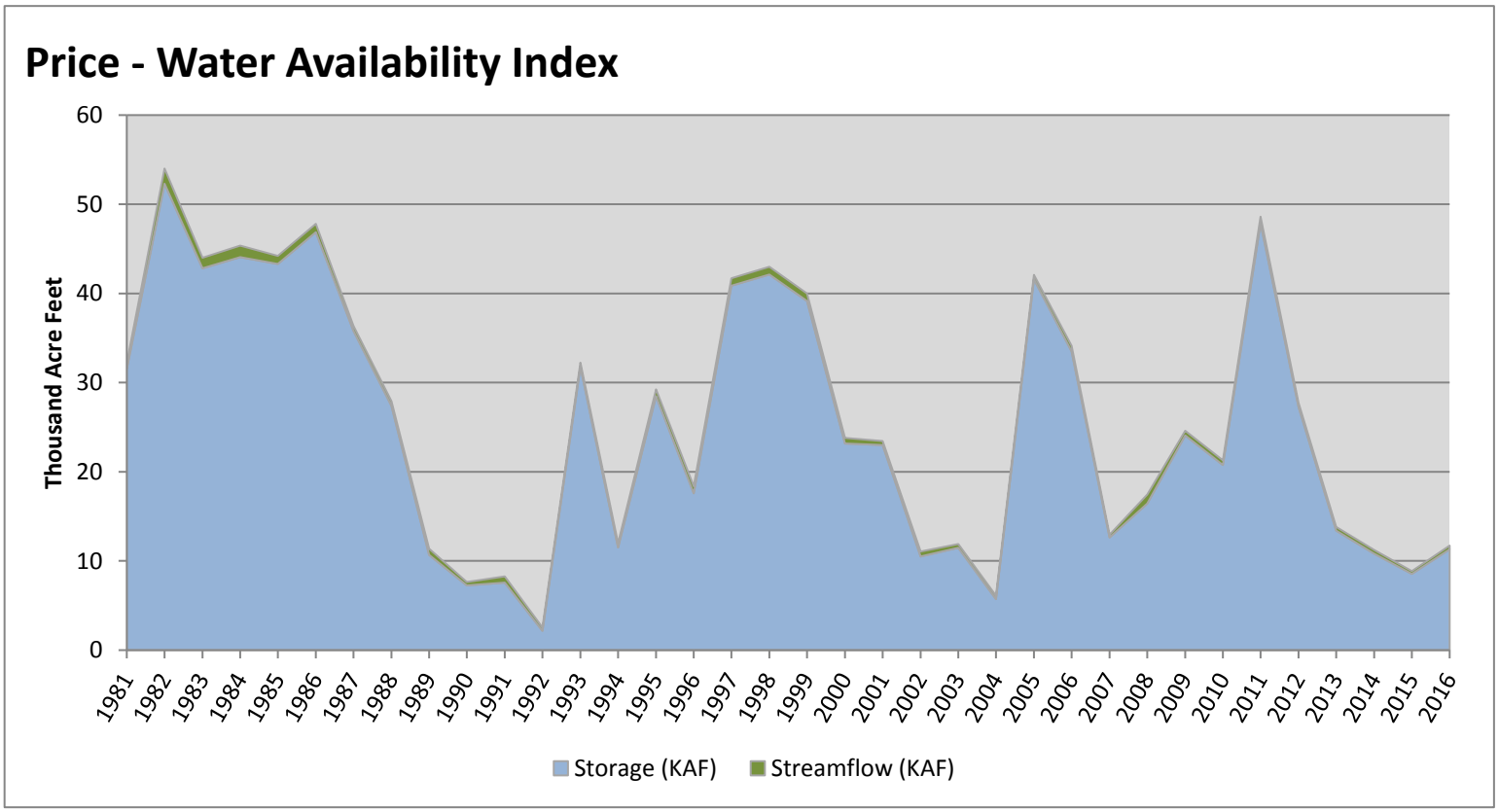
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Price	**11.31**	**0.40**	**11.71**	**24**	**-2.14**	**14, 89, 03, 94**

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

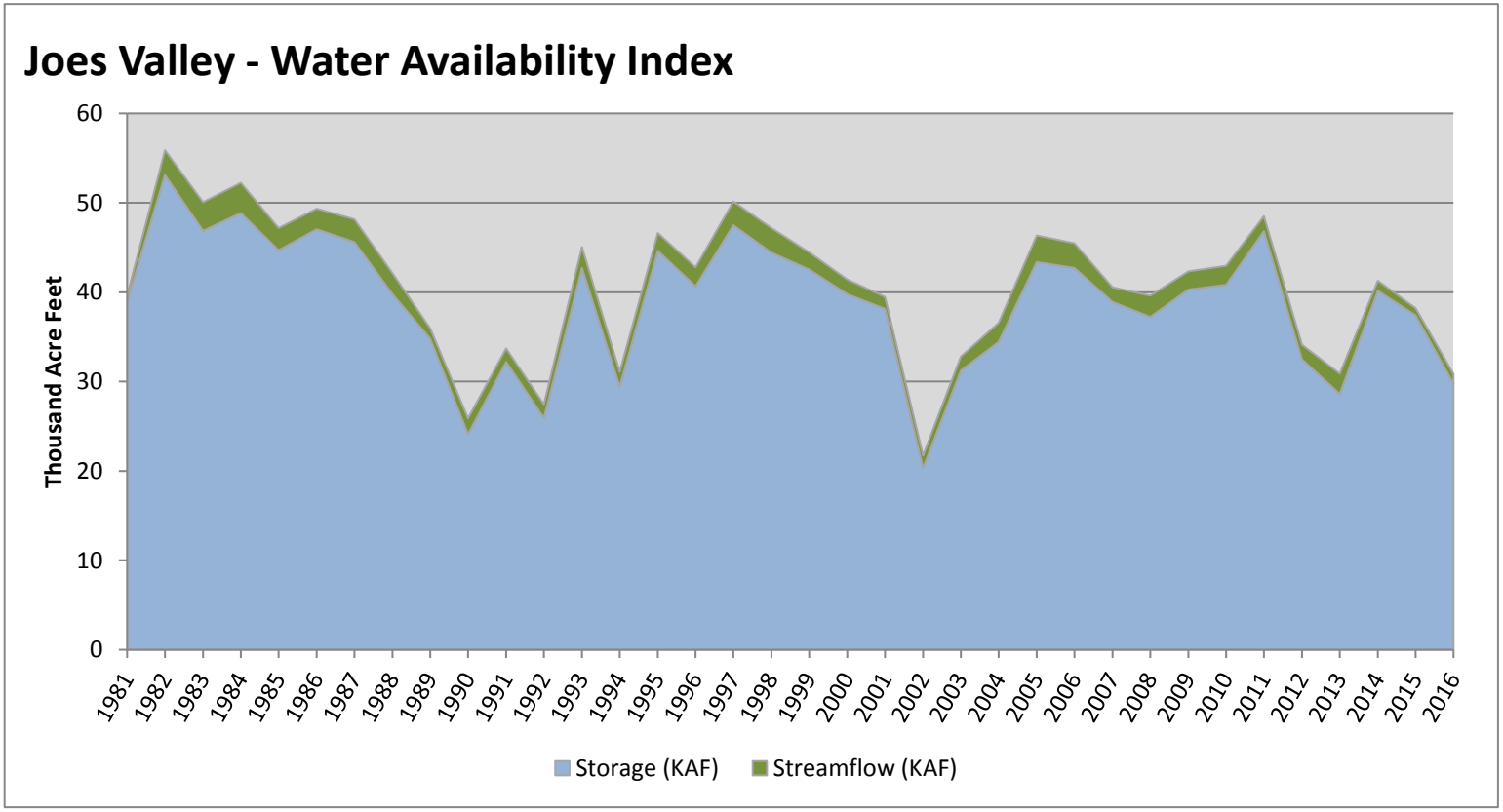


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Joes Valley	**29.76**	**1.08**	**30.84**	**11**	**-3.27**	**90, 92, 13, 94**

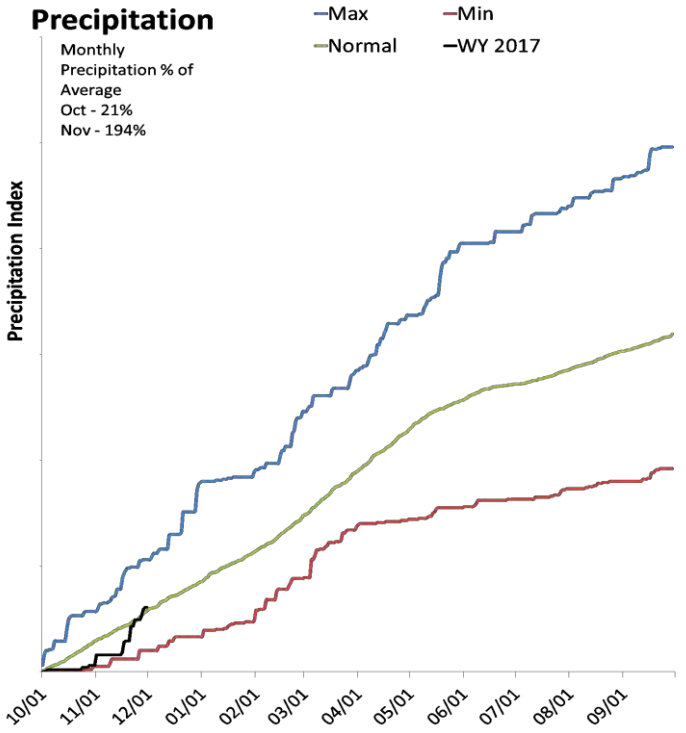
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

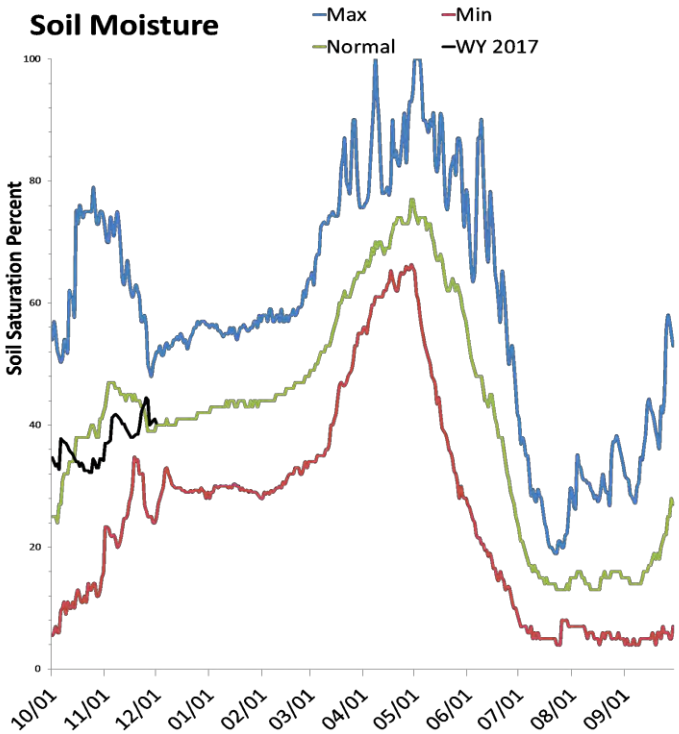


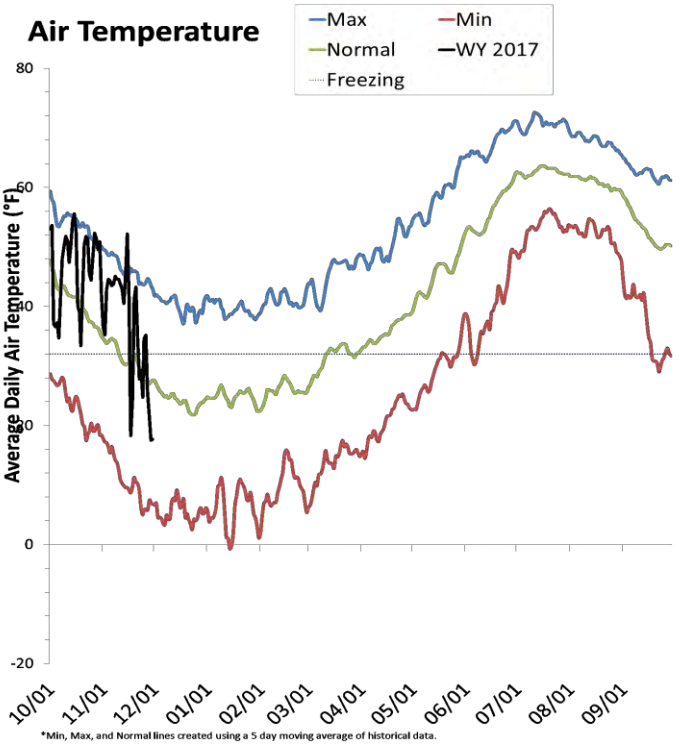
Lower Sevier Basin

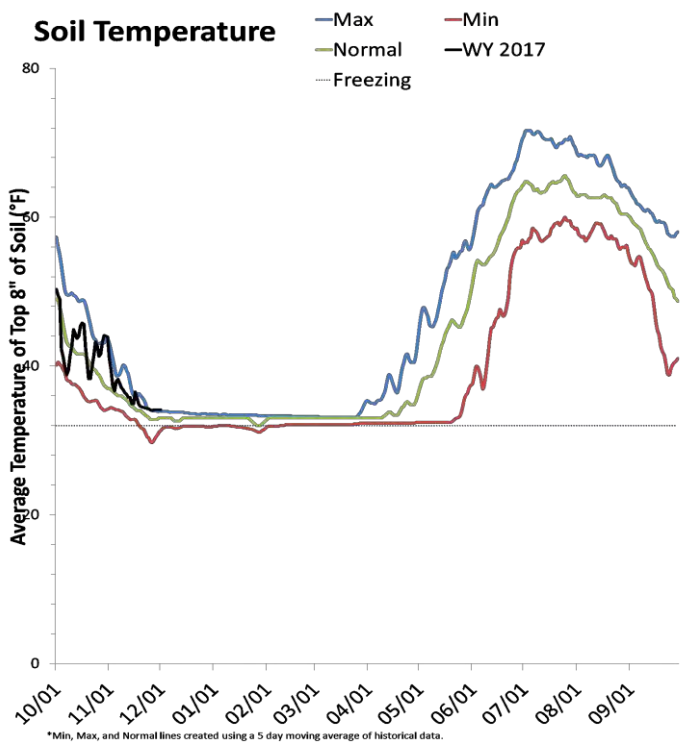
December 1, 2016

Precipitation in November was much above average at 196%, which brings the seasonal accumulation (Oct-Nov) to 107% of average. Soil moisture is at 45% compared to 35% last year. Reservoir storage is at 4% of capacity, compared to 18% last year. The water availability index for the Lower Sevier is 3%.







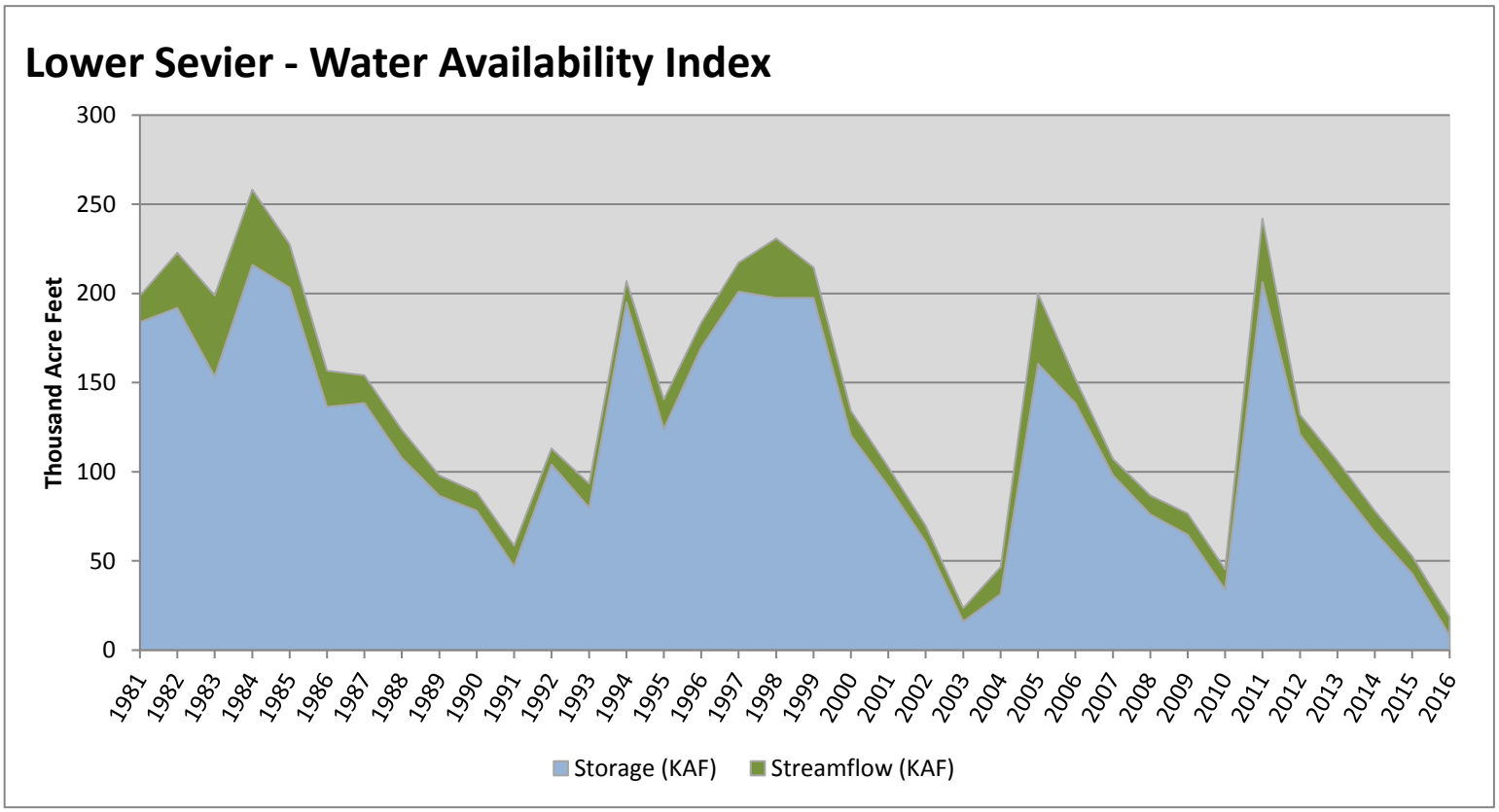


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Lower Sevier	**8.29**	**10.25**	**18.54**	**3**	**-3.94**	**03, 10, 04, 15**

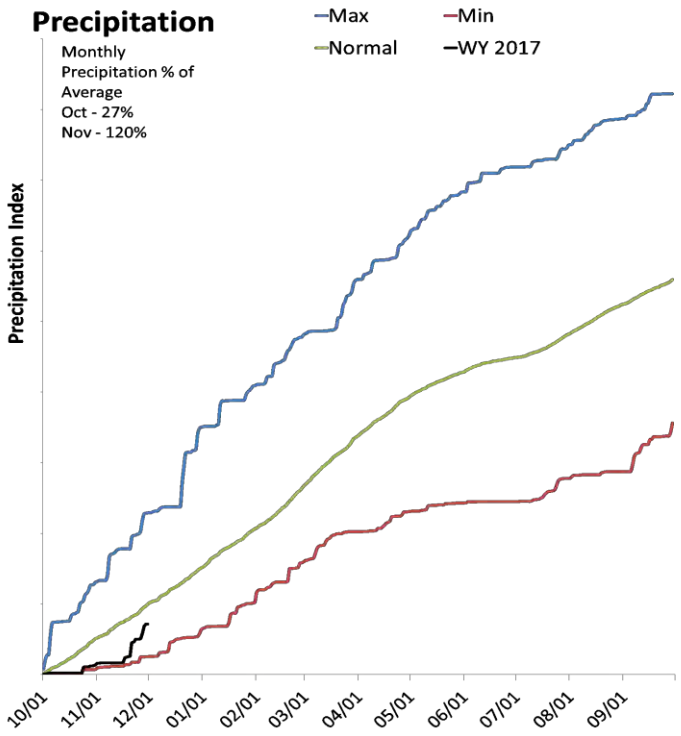
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

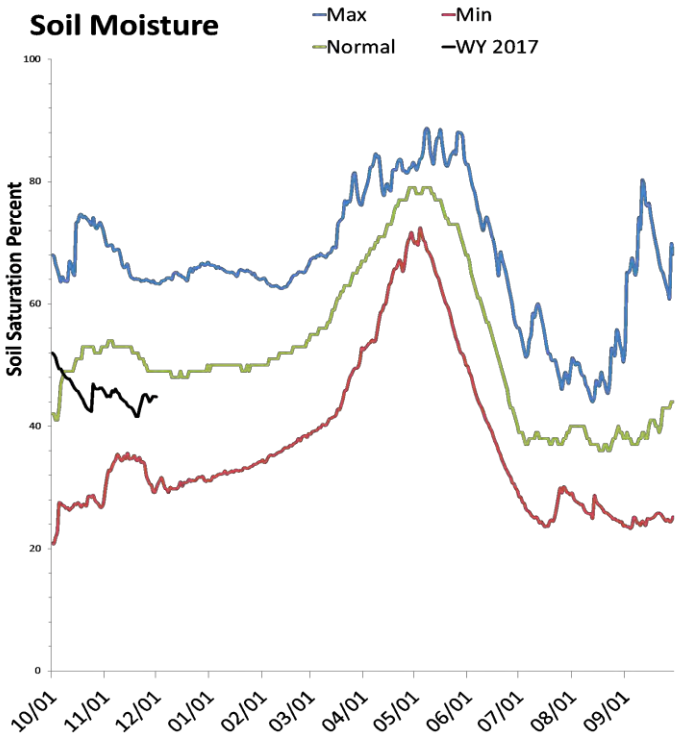


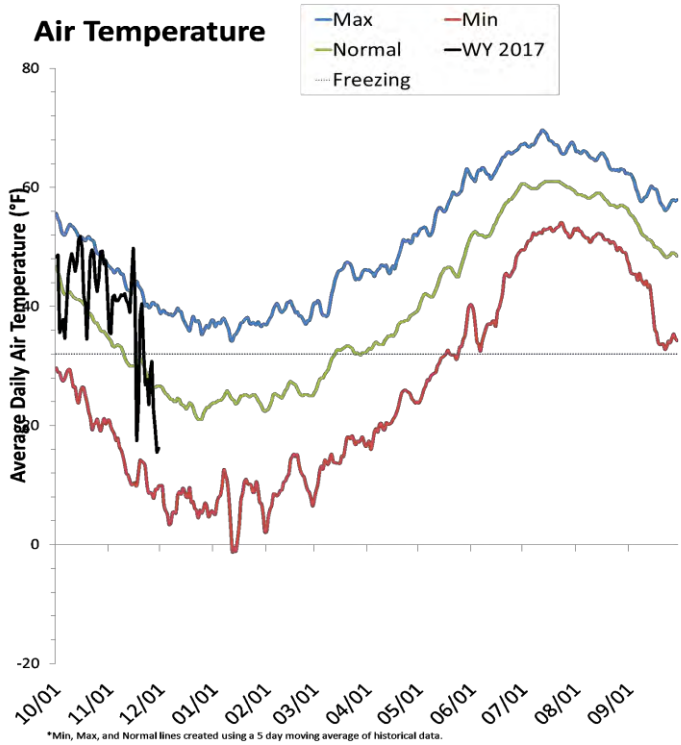
Upper Sevier Basin

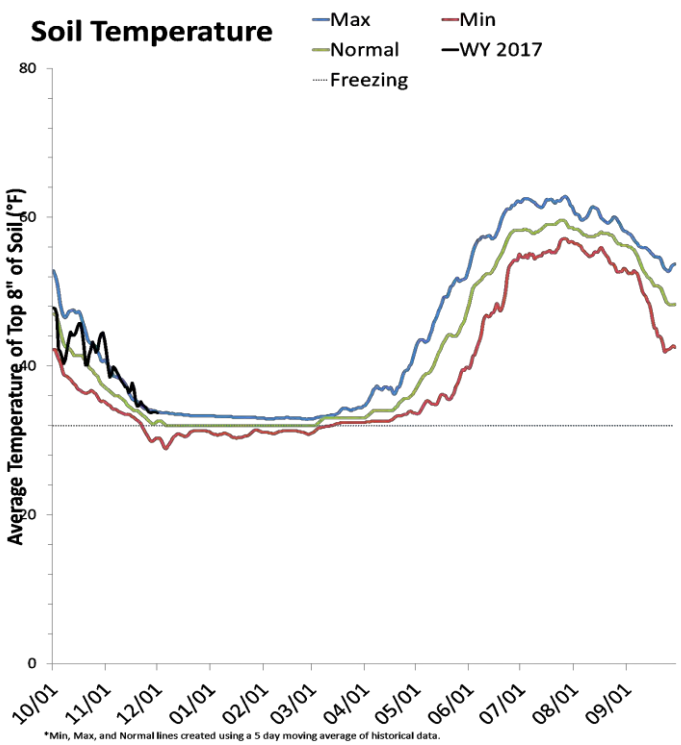
December 1, 2016

Precipitation in November was above average at 119%, which brings the seasonal accumulation (Oct-Nov) to 72% of average. Soil moisture is at 46% compared to 55% last year. Reservoir storage is at 22% of capacity, compared to 24% last year. The water availability index for the Upper Sevier is 19%.









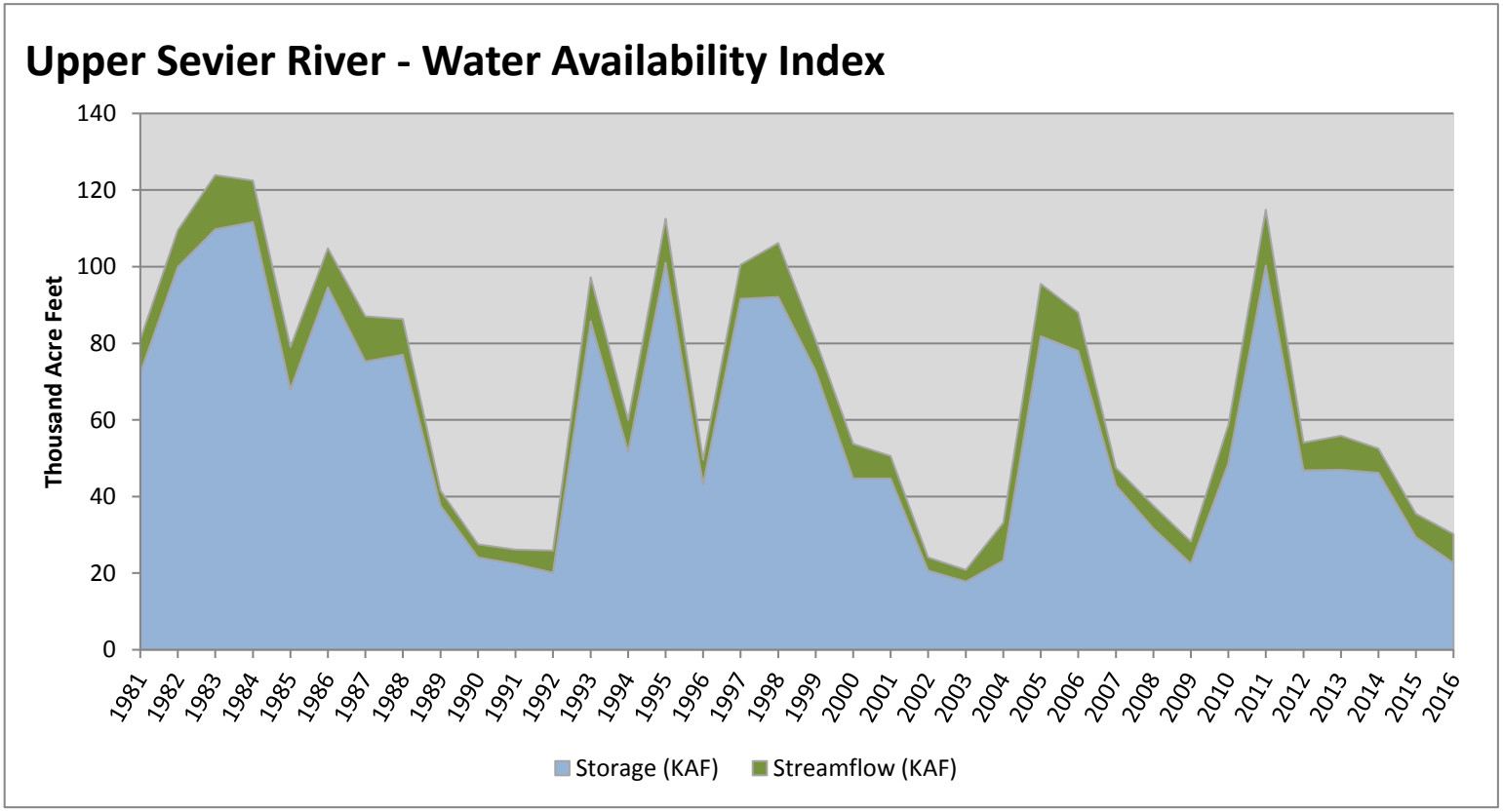
SNOTEL Data

December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Upper Sevier River	**22.64**	**7.54**	**30.18**	**19**	**-2.59**	**90, 09, 04, 15**

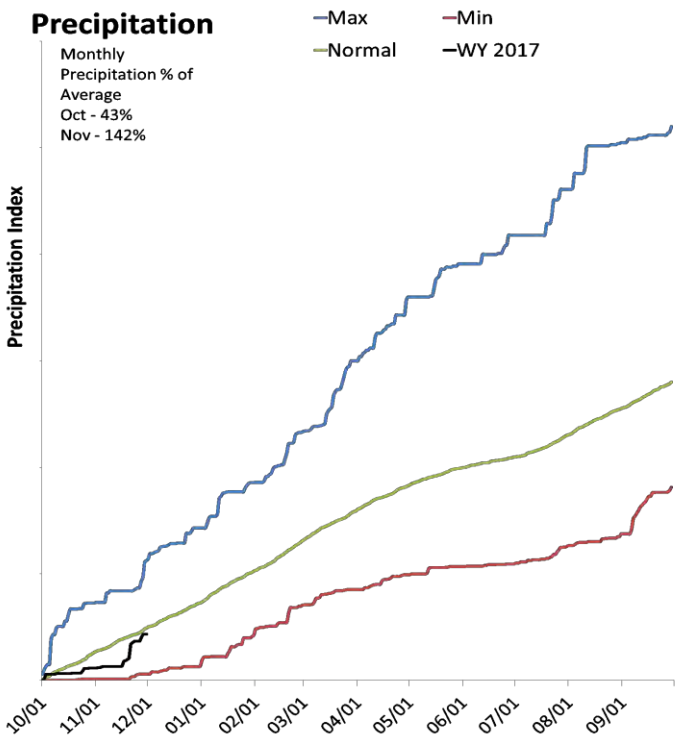
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

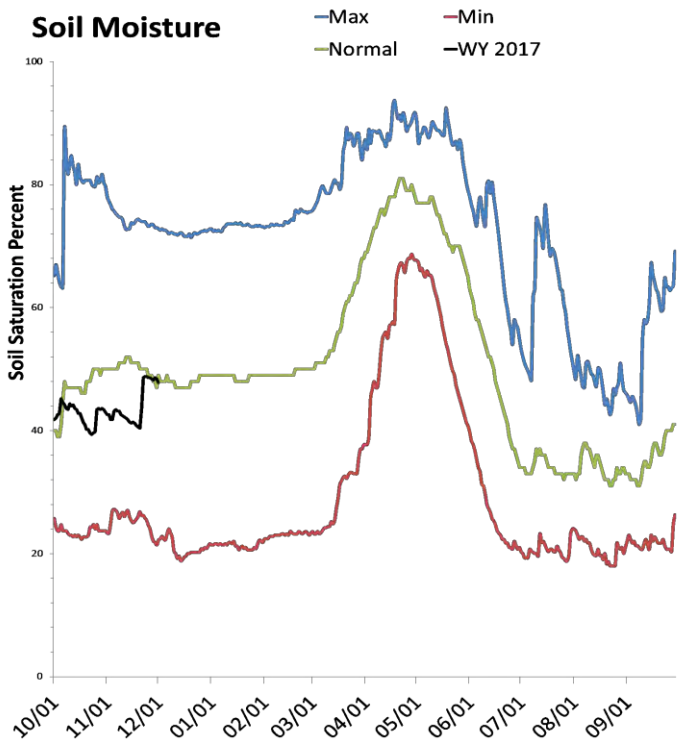


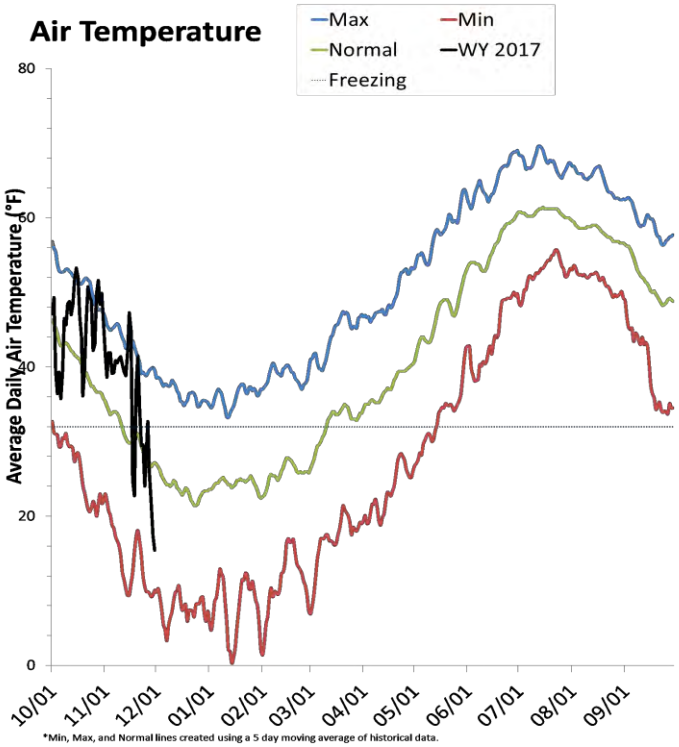
Southeastern Utah

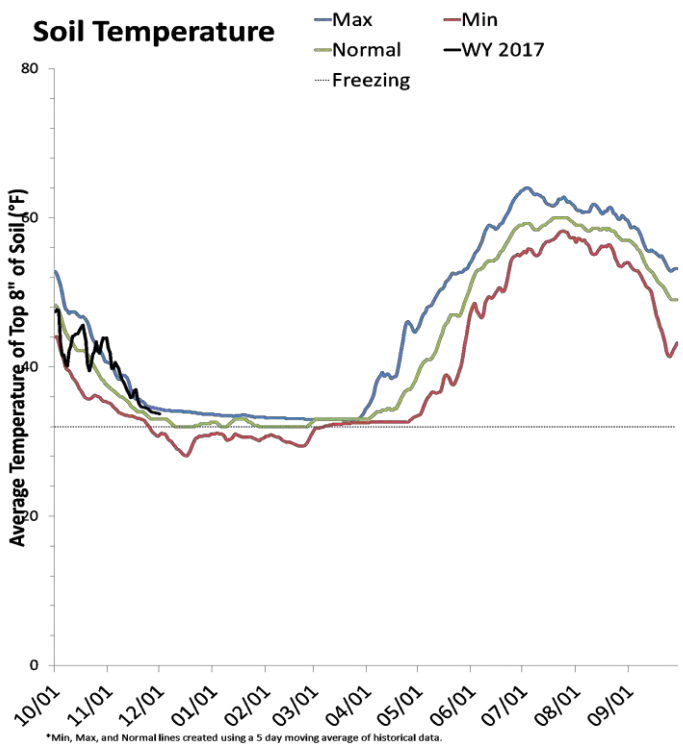
December 1, 2016

Precipitation in November was much above average at 143%, which brings the seasonal accumulation (Oct-Nov) to 88% of average. Soil moisture is at 54% compared to 73% last year. Reservoir storage is at 72% of capacity, compared to 52% last year. The water availability index for Moab is 90%.







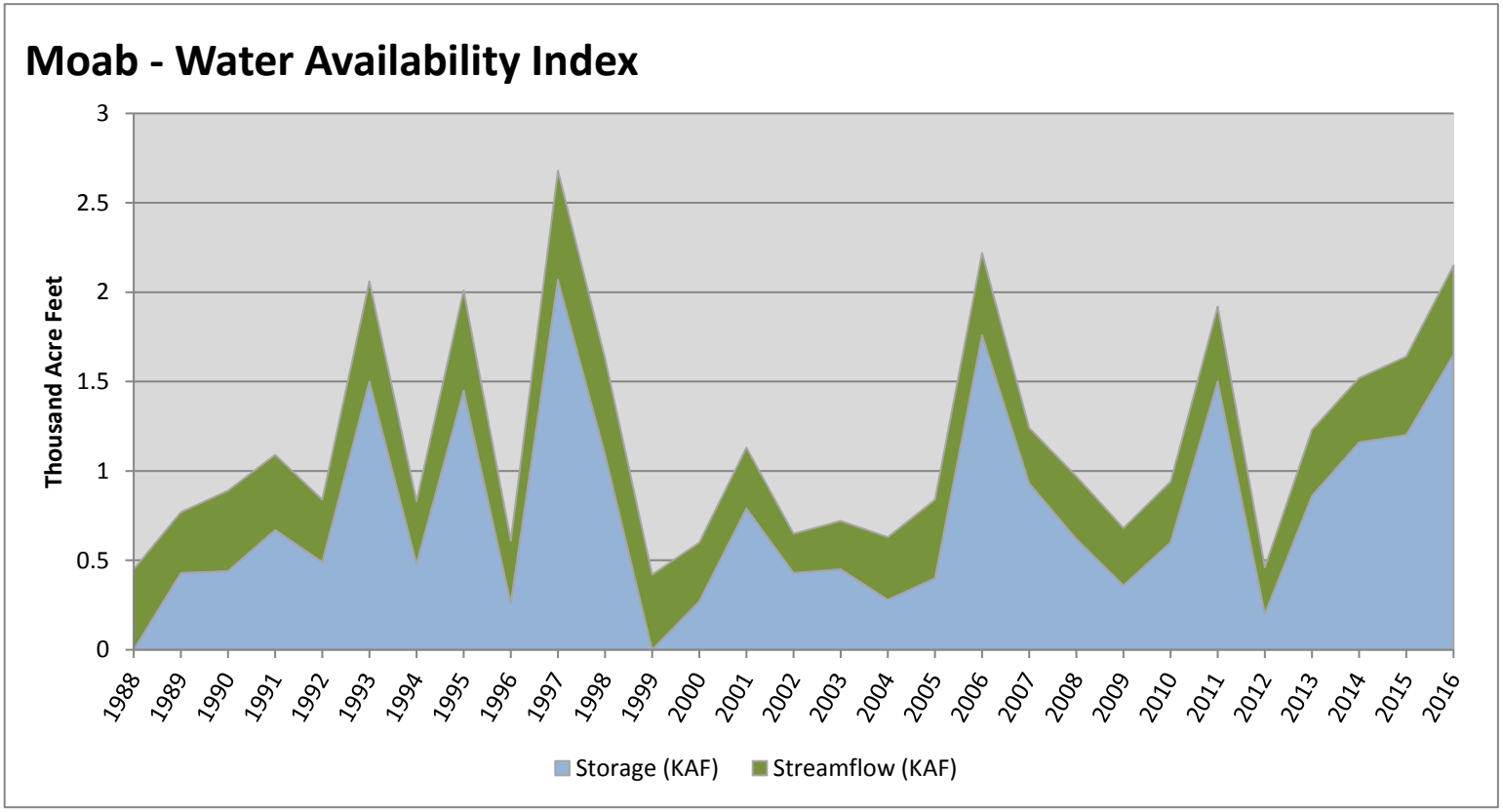


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Moab	**1.65**	**0.50**	**2.15**	**90**	**3.33**	**95, 93, 06, 97**

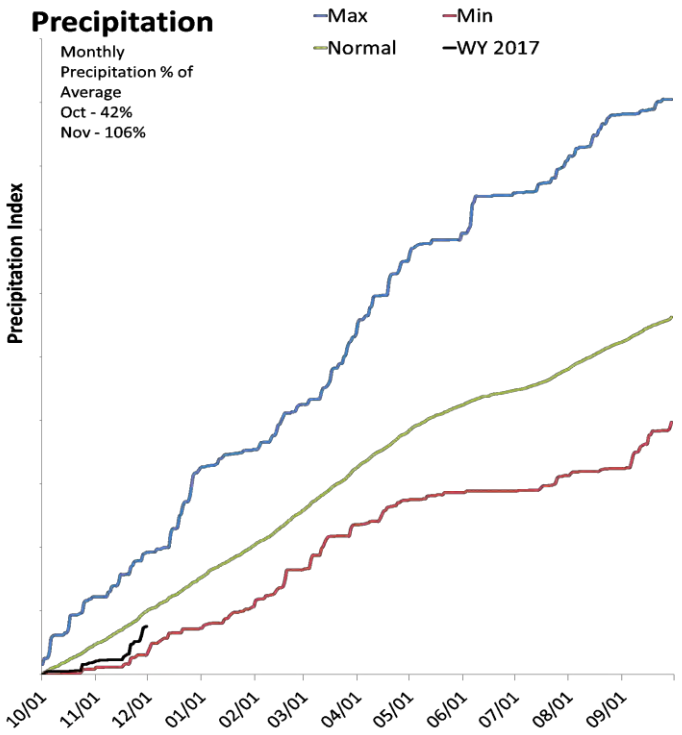
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

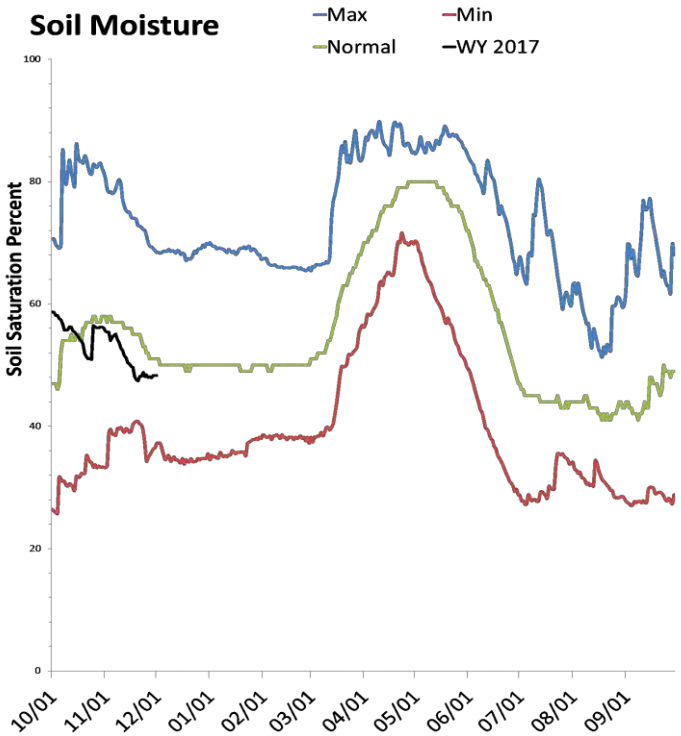


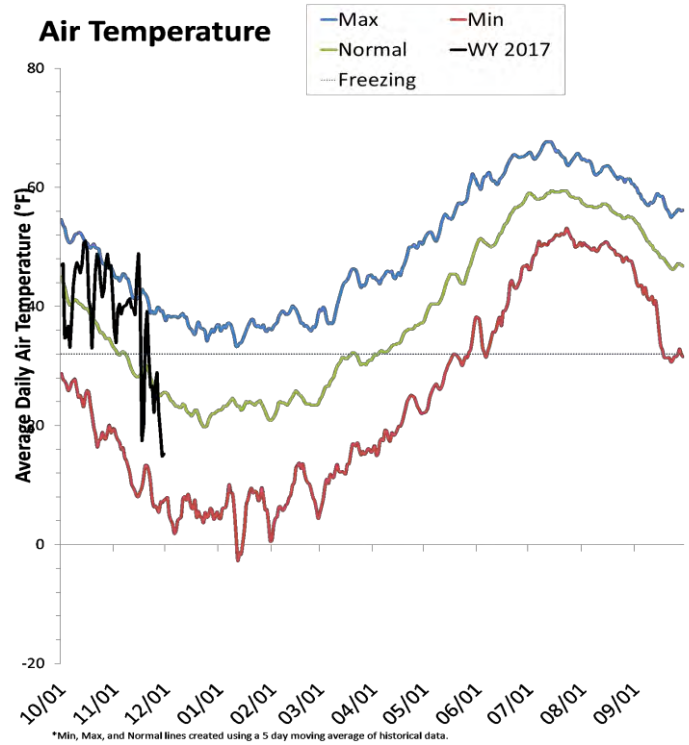
Dirty Devil Basin

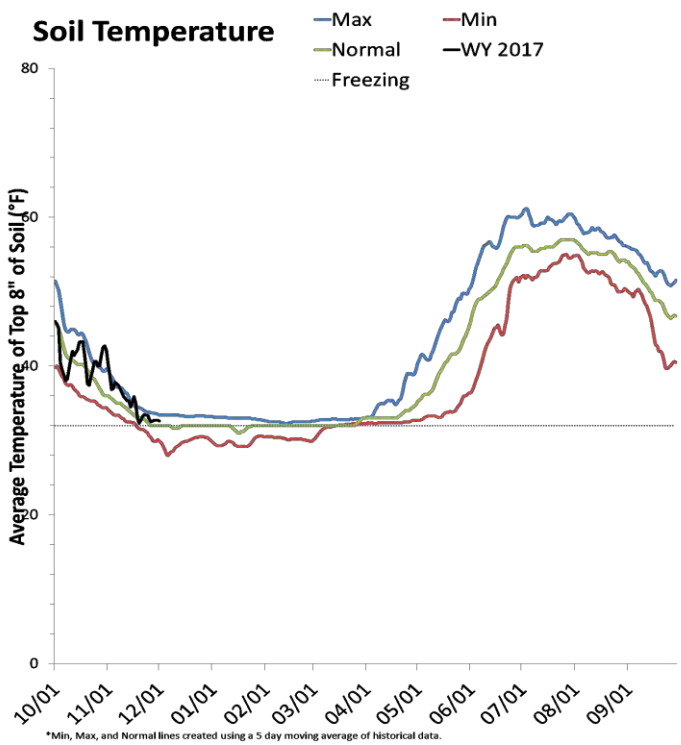
December 1, 2016

Precipitation in November was above average at 122%, which brings the seasonal accumulation (Oct-Nov) to 79% of average. Soil moisture is at 48% compared to 54% last year.







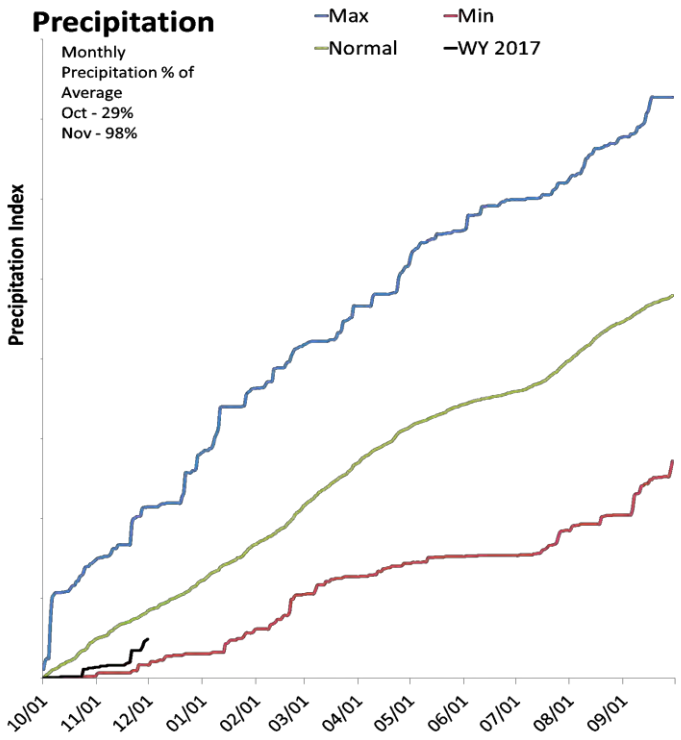


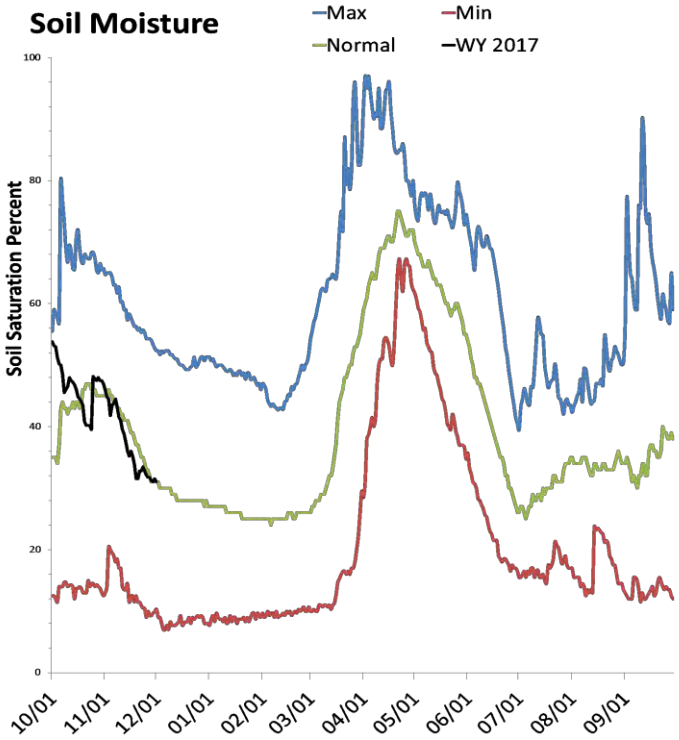
SNOTEL Data

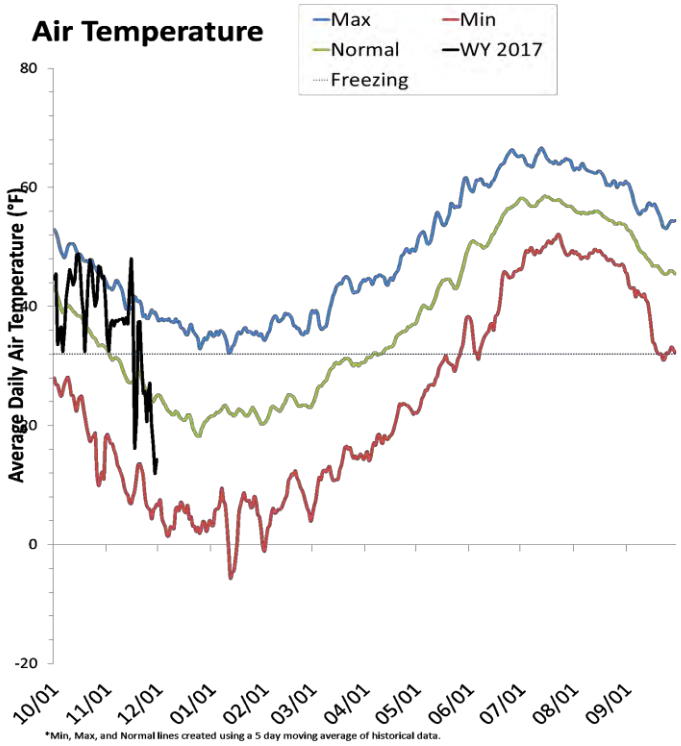
Escalante River Basin

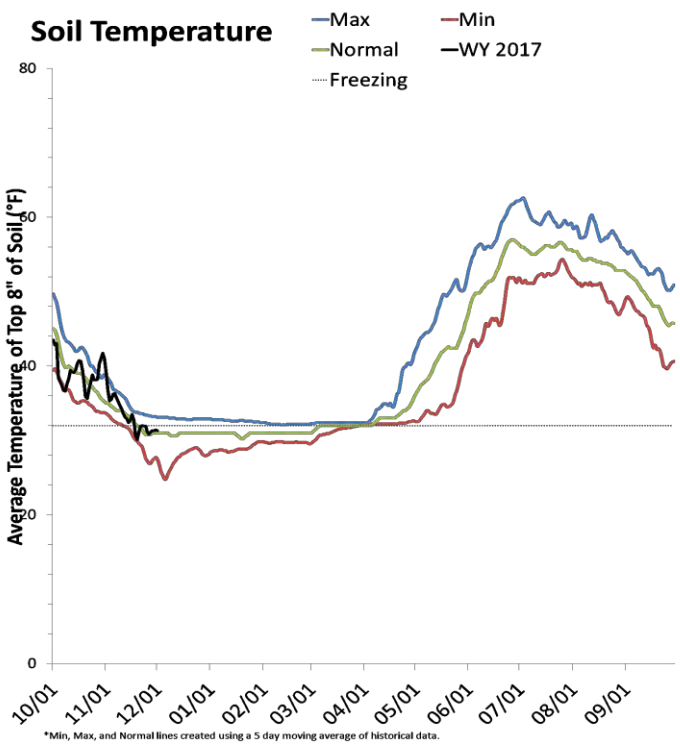
December 1, 2016

Precipitation in November was near average at 98%, which brings the seasonal accumulation (Oct-Nov) to 58% of average. Soil moisture is at 33% compared to 46% last year.







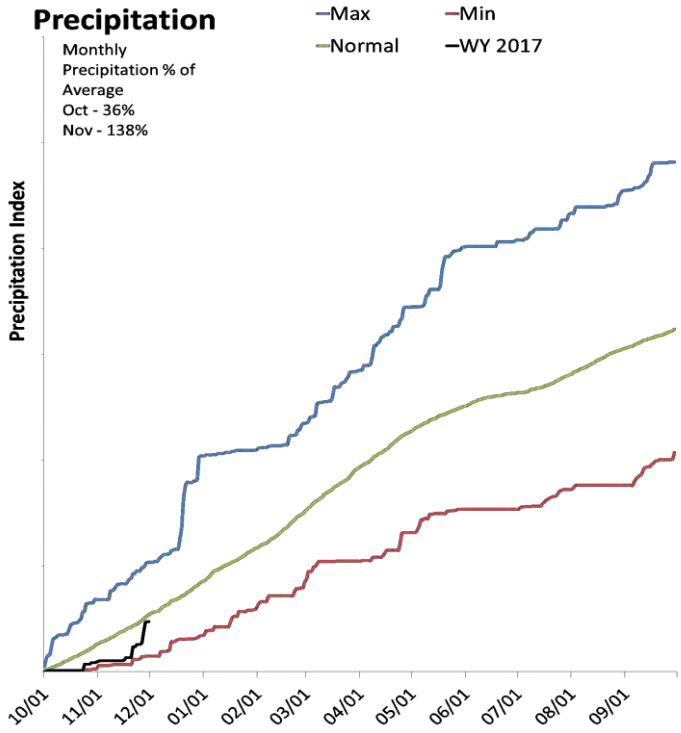


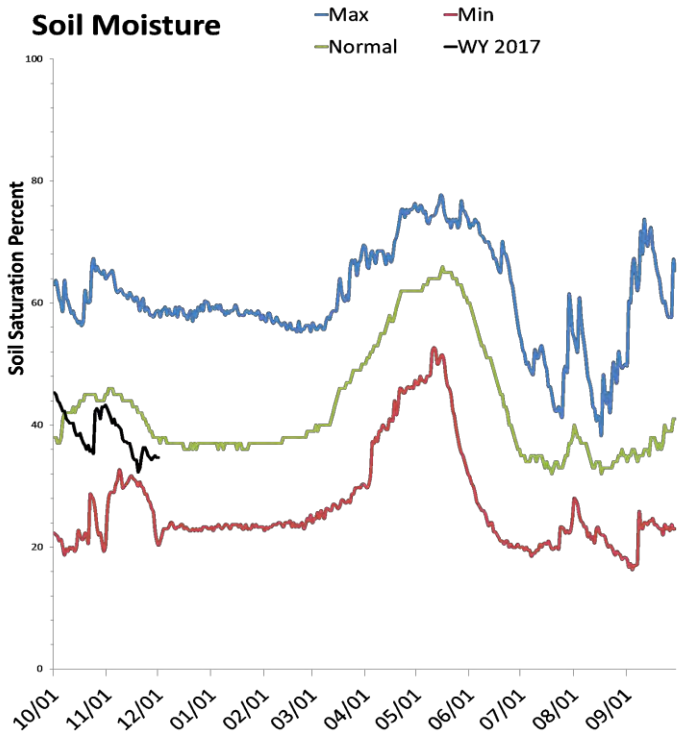
SNOTEL Data

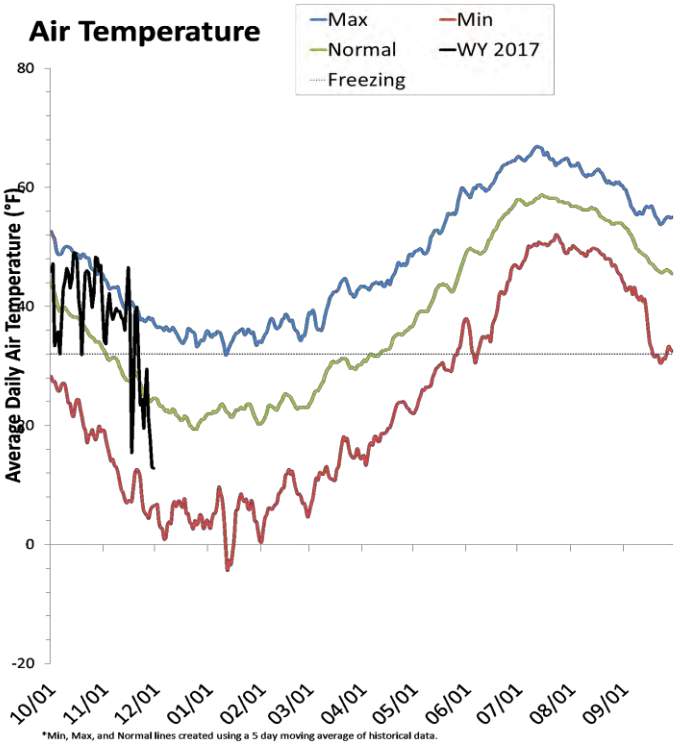
Beaver River Basin

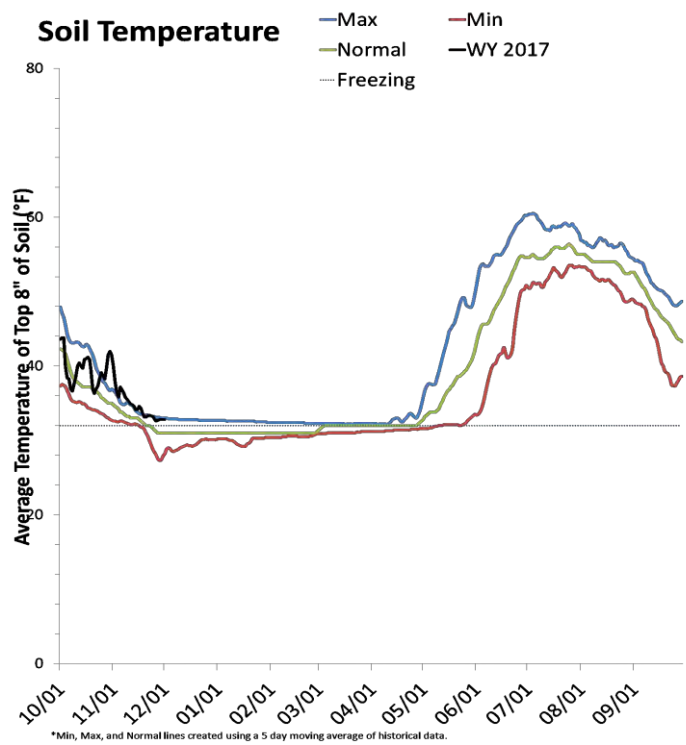
December 1, 2016

Precipitation in November was much above average at 137%, which brings the seasonal accumulation (Oct-Nov) to 88% of average. Soil moisture is at 35% compared to 31% last year. Reservoir storage is at 19% of capacity, compared to 19% last year. The water availability index for the Beaver River is 27%.







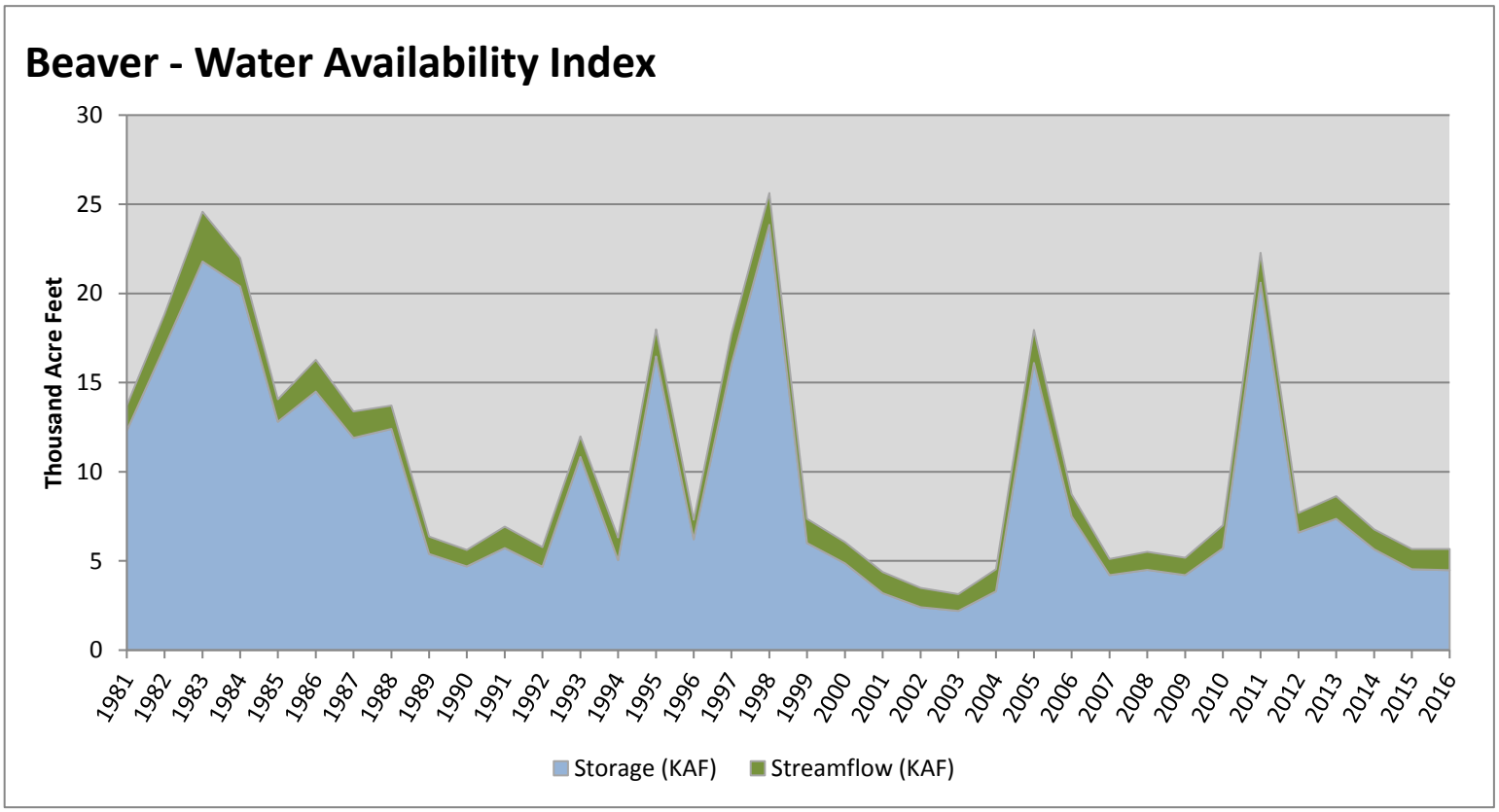


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Beaver	**4.49**	**1.19**	**5.68**	**27**	**-1.91**	**90, 15, 92, 00**

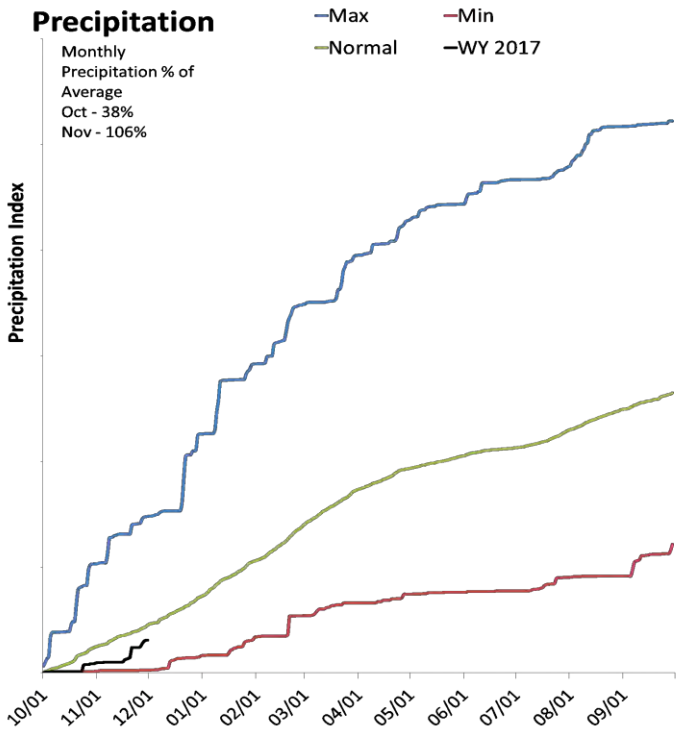
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

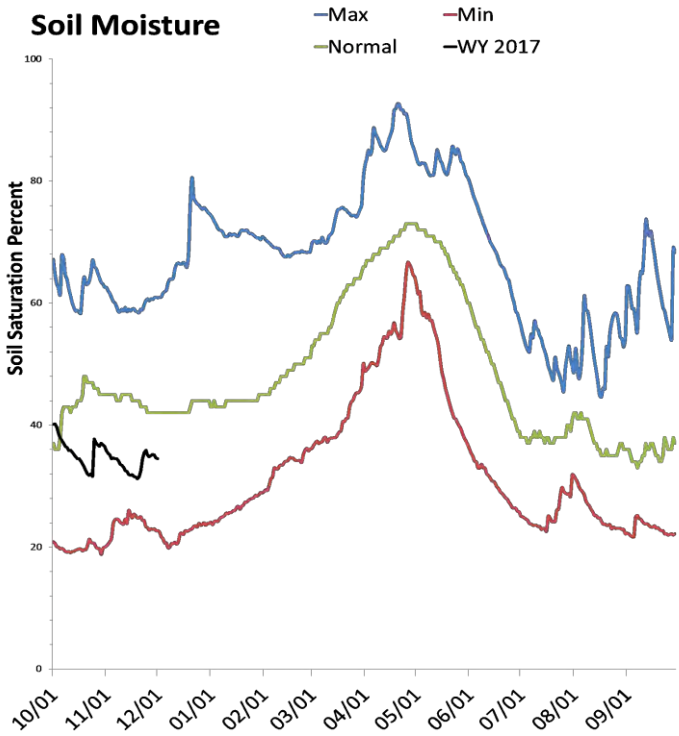


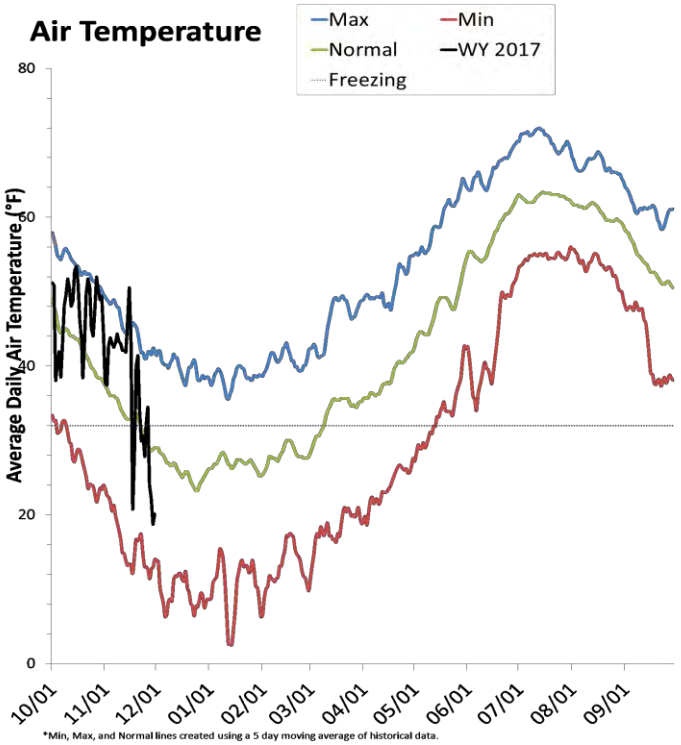
Southwestern Utah

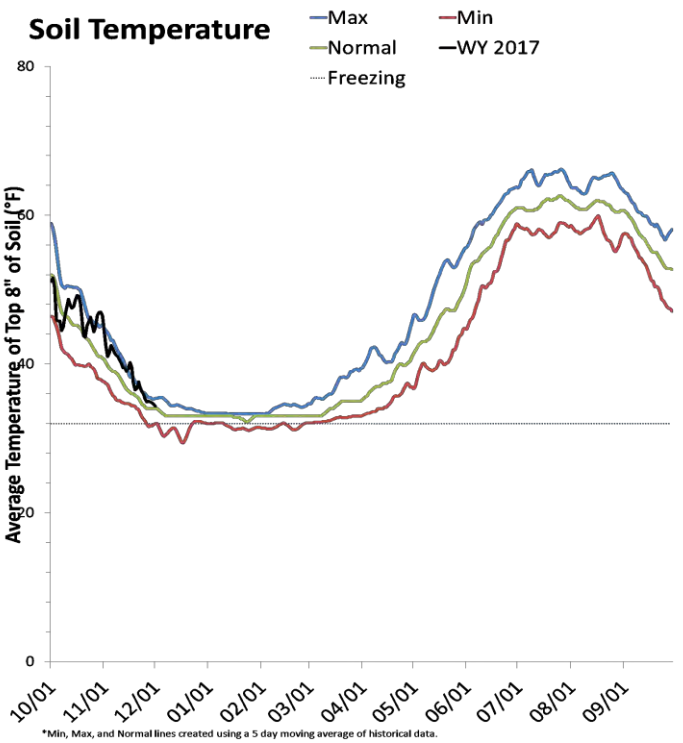
December 1, 2016

Precipitation in November was near average at 106%, which brings the seasonal accumulation (Oct-Nov) to 69% of average. Soil moisture is at 37% compared to 50% last year. Reservoir storage is at 51% of capacity, compared to 51% last year. The water availability index for the Virgin River is 70%.







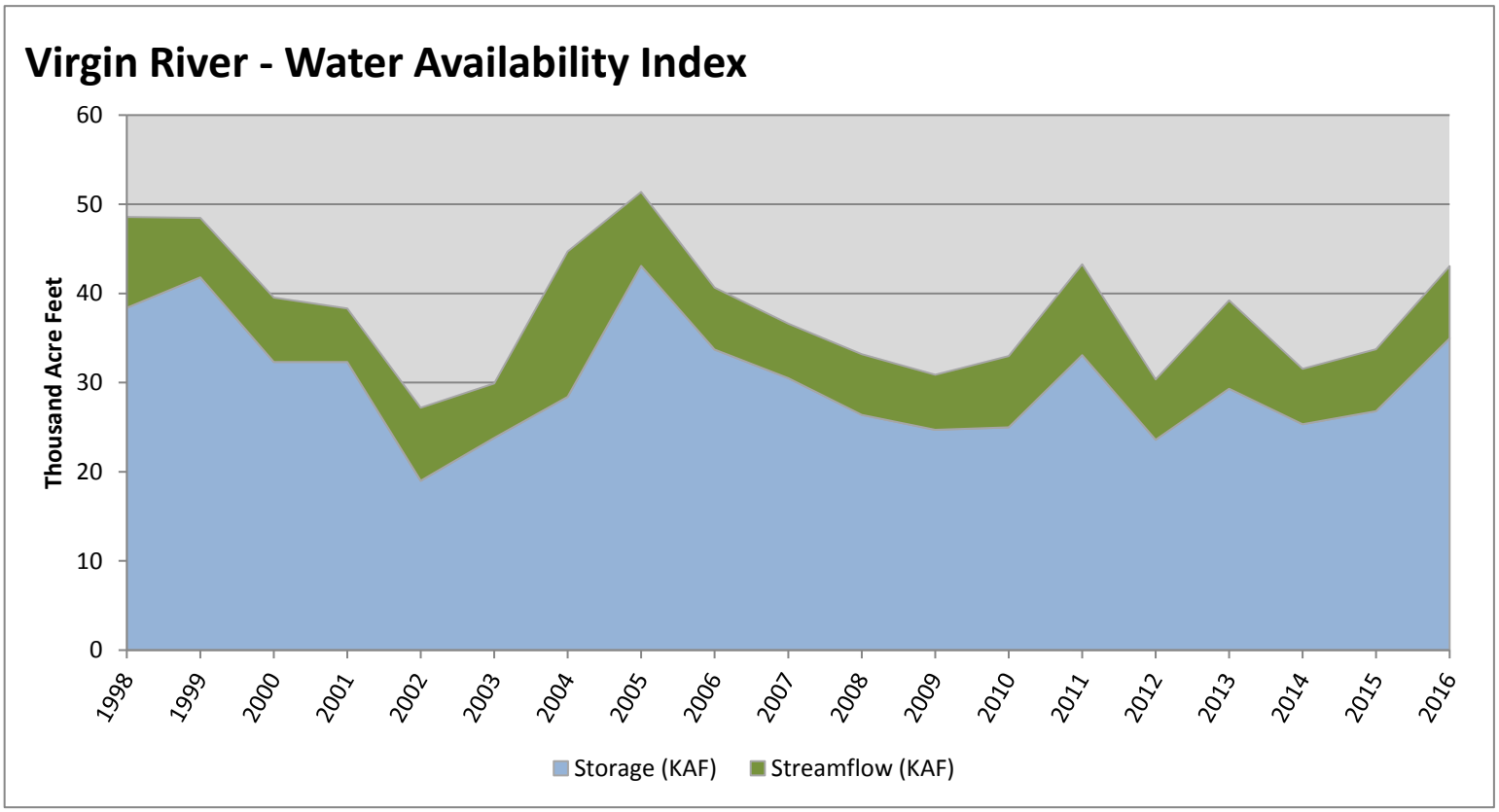


December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Virgin River	**34.98**	**8.07**	**43.05**	**70**	**1.67**	**00, 06, 11, 04**

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



December 1, 2016

Water Availability Index

Basin or Region	Nov EOM* Storage	November Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	*KAF^*	*KAF^*	*KAF^*	*%*		
Bear River	**447**	**4.4**	**451**	**43**	**-0.6**	**09, 95, 01, 15**
Woodruff Narrows	**48.9**	**4.4**	**53.2**	**92**	**3.5**	**97, 83, 86, 84**
Little Bear	**8.7**	**2.1**	**10.8**	**40**	**-0.8**	**02, 13, 10, 08**
Ogden	**63.8**	**2.2**	**66.0**	**62**	**1.0**	**05, 10, 04, 06**
Weber	**87.5**	**7.3**	**94.8**	**30**	**-1.7**	**15, 00, 02, 07**
Provo River	**300.3**	**3.0**	**303.2**	**36**	**-1.1**	**02, 04, 14, 01**
Western Uinta	**163.9**	**3.6**	**167.6**	**70**	**1.7**	**15, 01, 11, 99**
Eastern Uinta	**37.8**	**3.9**	**41.7**	**62**	**1.0**	**06, 91, 99, 09**
Blacks Fork	**7.8**	**3.7**	**11.5**	**65**	**1.2**	**93, 05, 06, 13**
Price	**11.3**	**0.4**	**11.7**	**24**	**-2.1**	**14, 89, 03, 94**
Smiths Creek	**5.6**	**1.1**	**6.7**	**61**	**0.9**	**10, 92, 06, 85**
Joes Valley	**29.8**	**1.1**	**30.8**	**11**	**-3.3**	**90, 92, 13, 94**
Moab	**1.7**	**0.5**	**2.2**	**90**	**3.3**	**95, 93, 06, 97**
Upper Sevier River	**22.6**	**7.5**	**30.2**	**19**	**-2.6**	**90, 09, 04, 15**
San Pitch	**0.2**	**0.5**	**0.7**	**24**	**-2.1**	**13, 02, 04, 07**
Lower Sevier	**8.3**	**10.3**	**18.5**	**3**	**-3.9**	**03, 10, 04, 15**
Beaver	**4.5**	**1.2**	**5.7**	**27**	**-1.9**	**90, 15, 92, 00**
Virgin River	**35.0**	**8.1**	**43.1**	**70**	**1.7**	**00, 06, 11, 04**

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

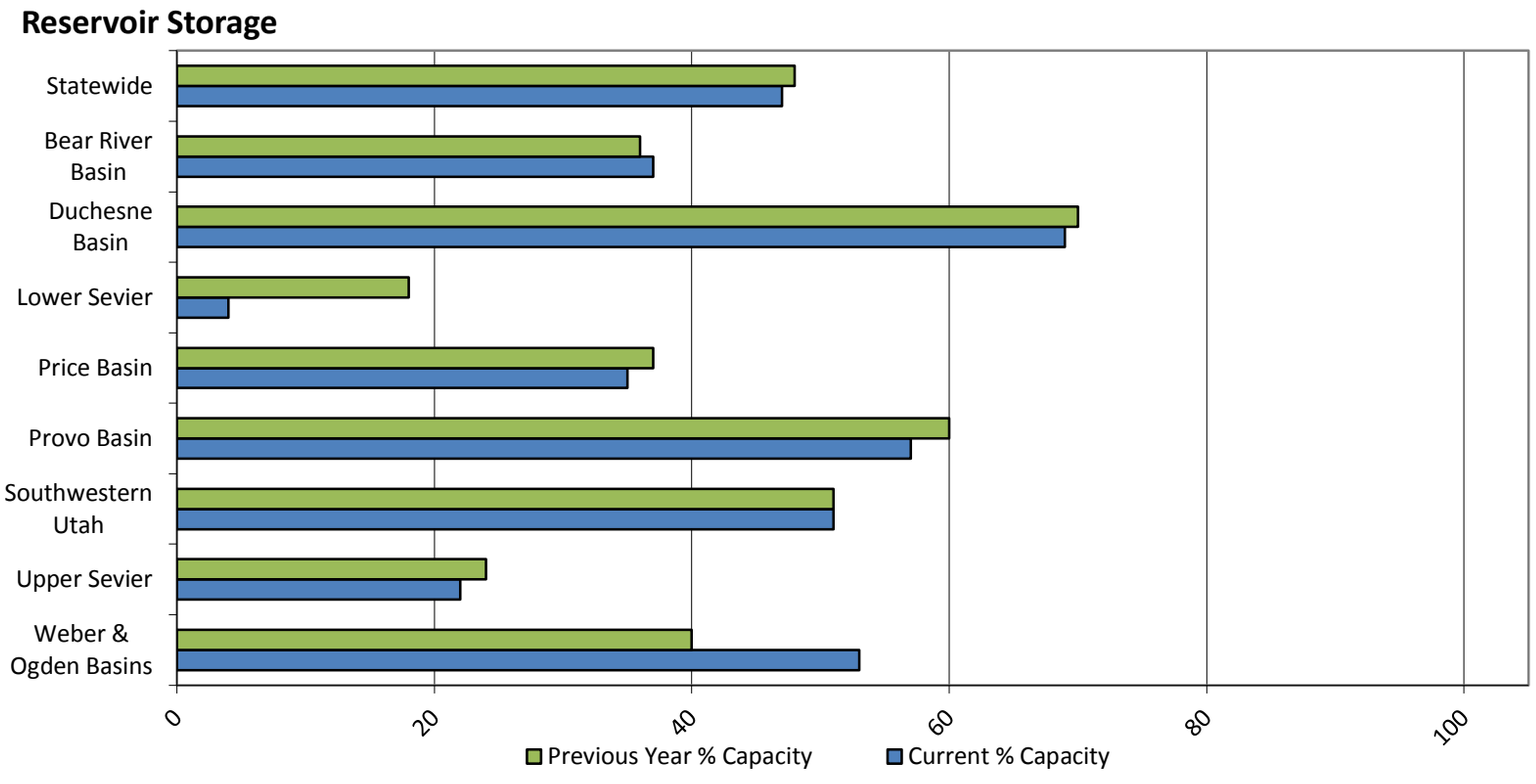
What is a Water Availability Index?

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

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

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

Reservoir Storage Summary for the end of November 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Big Sand Wash Reservoir	17.2	14.8		25.7	67%	58%			
Causey Reservoir	3.6	3.7	3.0	7.1	50%	53%	42%	119%	125%
Cleveland Lake	1.3	1.6		5.4	24%	30%			
Currant Creek Reservoir	14.4	14.6	14.8	15.5	93%	94%	95%	97%	99%
Deer Creek Reservoir	113.8	105.4	98.6	149.7	76%	70%	66%	115%	107%
East Canyon Reservoir	22.1	21.2	33.3	49.5	45%	43%	67%	66%	64%
Echo Reservoir	21.4	23.0	39.0	73.9	29%	31%	53%	55%	59%
Grantsville Reservoir	0.6	1.1	1.1	3.3	17%	32%	34%	49%	93%
Gunlock	4.6	2.4	5.8	10.4	44%	23%	56%	79%	41%
Gunnison Reservoir	0.2	0.0	7.5	20.3	1%	0%	37%	3%	0%
Huntington North Reservoir	1.7	1.8	1.9	4.2	41%	42%	45%	90%	94%
Hyrum Reservoir	8.6	6.5	9.0	15.3	57%	42%	59%	96%	72%
Joes Valley Reservoir	29.8	37.4	39.5	61.6	48%	61%	64%	75%	95%
Jordanelle Reservoir	186.4	179.8	246.3	320.0	58%	56%	77%	76%	73%
Ken's Lake	1.7	1.2	0.8	2.3	72%	52%	34%	209%	152%
Kolob Reservoir	5.4	4.6		5.6	97%	83%			
Lost Creek Reservoir	14.3	10.7	12.5	22.5	63%	47%	56%	114%	85%
Lower Enterprise	0.3	0.6	0.5	2.6	12%	23%	19%	61%	122%
Miller Flat Reservoir	1.6	1.5		5.2	31%	29%			
Millsite	9.8	7.6	8.7	16.7	59%	46%	52%	113%	88%
Minersville Reservoir	4.5	4.5	10.1	23.3	19%	19%	43%	44%	45%
Moon Lake Reservoir	19.5	18.1	20.4	35.8	54%	51%	57%	96%	89%
Otter Creek Reservoir	22.6	18.8	28.7	52.5	43%	36%	55%	79%	66%
Panguitch Lake	9.9	5.2	10.2	22.3	44%	24%	46%	97%	51%
Pineview Reservoir	60.2	48.7	52.9	110.1	55%	44%	48%	114%	92%
Piute Reservoir	0.0	10.5	33.1	71.8	0%	15%	46%	0%	32%
Porcupine Reservoir	5.3	5.5	5.8	11.3	47%	49%	51%	91%	95%
Quail Creek	30.4	24.4	23.4	40.0	76%	61%	59%	130%	104%
Red Fleet Reservoir	20.0	15.1	17.2	25.7	78%	59%	67%	116%	88%
Rockport Reservoir	25.0	30.0	36.3	60.9	41%	49%	60%	69%	83%
Sand Hollow Reservoir	45.5	30.0		50.0	91%	60%			
Scofield Reservoir	11.3	8.5	27.2	65.8	17%	13%	41%	42%	31%
Settlement Canyon Reservoir	0.3	0.2	0.6	1.0	30%	20%	56%	54%	36%
Sevier Bridge Reservoir	8.3	42.9	127.1	236.0	4%	18%	54%	7%	34%
Smith And Morehouse Reservoir	4.8	3.5	3.7	8.1	59%	43%	46%	129%	93%
Starvation Reservoir	132.2	133.8	130.6	165.3	80%	81%	79%	101%	102%
Stateline Reservoir	5.6	5.3	5.6	12.0	47%	44%	47%	100%	95%
Steinaker Reservoir	17.8	13.2	18.0	33.4	53%	40%	54%	99%	73%
Strawberry Reservoir	764.9	791.8	656.9	1105.9	69%	72%	59%	116%	121%
Upper Enterprise	0.4	0.6	2.1	10.0	4%	6%	21%	17%	26%
Upper Stillwater Reservoir	12.2	9.6	11.4	32.5	38%	30%	35%	107%	84%
Utah Lake	320.9	382.2	684.5	870.9	37%	44%	79%	47%	56%
Vernon Creek Reservoir	0.1	0.2	0.3	0.6	20%	27%	45%	44%	59%
Willard Bay	137.9	80.3	129.2	215.0	64%	37%	60%	107%	62%
Woodruff Creek	2.0	2.0	1.1	4.0	49%	50%	27%	182%	187%
Woodruff Narrows Reservoir	48.9	37.2	24.2	57.3	85%	65%	42%	202%	154%
Meeks Cabin Reservoir	7.8	4.1	10.0	32.5	24%	13%	31%	78%	41%
Bear Lake	446.9	453.3	586.4	1302.0	34%	35%	45%	76%	77%
Basin-wide Total	2552.6	2566.7	3179.2	5380.9	47%	48%	59%	80%	81%
# of reservoirs	43	43	43	43	43	43	43	43	43



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Utah Climate and Water Report

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