Utah Climate and Water Report

November, 2016

Santaquin Meadows SNOTEL – installing a new site on the Wasatch east of Santaquin.

Photo by Kent Sutcliffe, NRCS

Utah Climate and Water Report

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

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   - Water Availability Index
e) Utah Lake, Jordan River, and Tooele Valley Basins
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Utah General Summary
November 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)

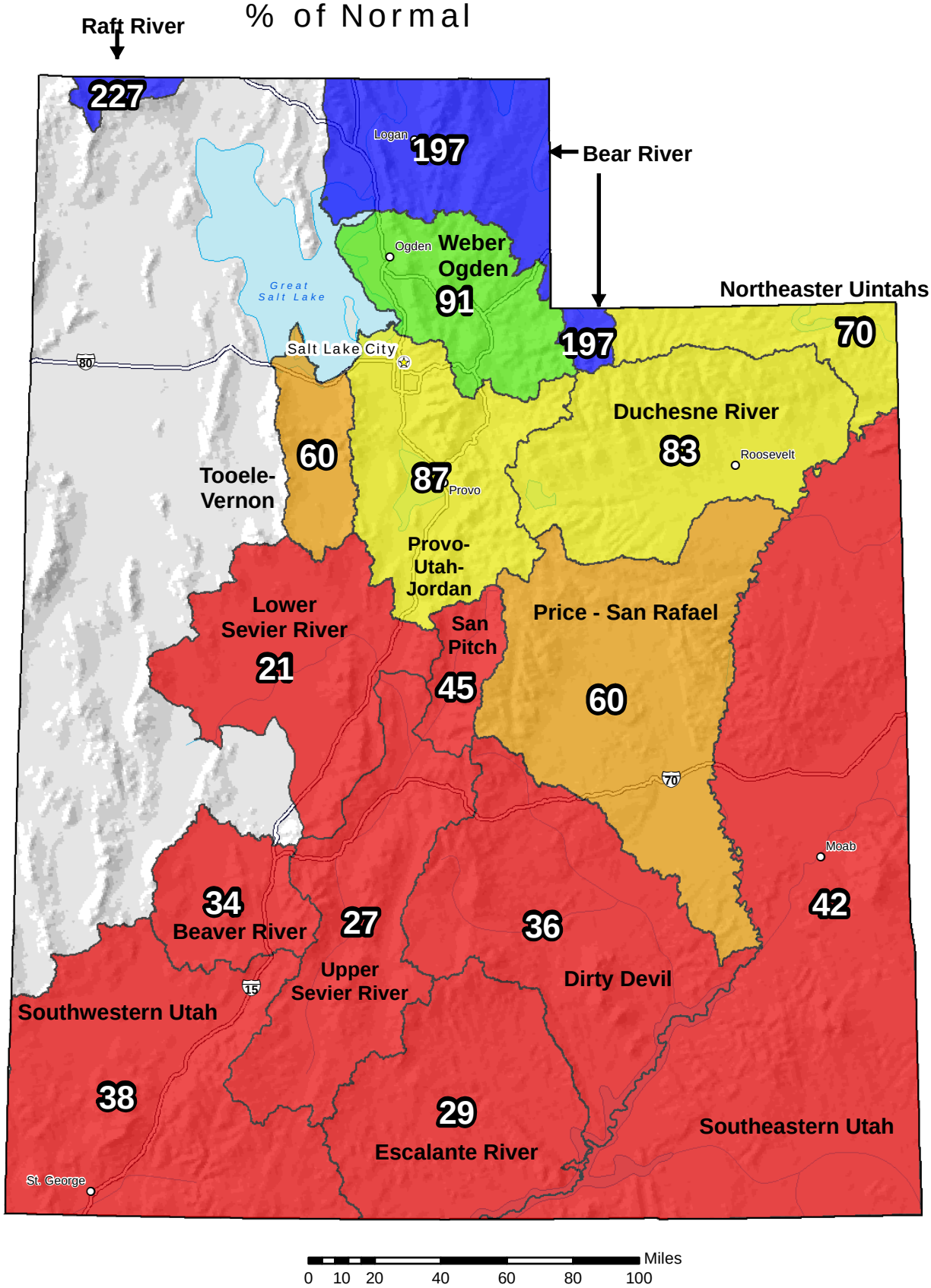
October precipitation across Utah at the valley elevations was wetter in the north and dryer in the south – from 0.3 inches in the southeast to 2.5 inches in the north. The state average was 0.8 inches of precipitation. Soil moisture data have improved substantially in northern Utah and are well ahead of last year's numbers. In southern Utah, soil moisture is about the same as last year. Air temperatures have been well above normal for this time of year dropping to seasonal norms only when storms have passed through. Not surprisingly, soil temperatures exhibited a similar pattern and are now beginning to quickly cool.

Current Mountain Conditions (SNOTEL)

October precipitation spanned the spectrum from 20% - 30% across southern Utah to 200% on the Bear and Raft River mountains. There wasn't a smooth transition between the haves and the have nots in this case, everything south of the Provo/Duchesne was high and dry while north of that demarcation it was near average to well above. This has translated into some above average streamflow in the northern areas as well. Temperatures have been well above normal and this has led to a later start of the snow accumulation season. We have flirted with some snow in the higher elevations but on every occasion, these have subsequently melted off. On the positive side, recent storms have continued to improve soil moisture conditions across the state. Reservoir storage is down about 2% from last year, at 46% 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 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 precentiles.

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

Nov 01, 2016



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

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >=150%

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

Provisional Data Subject to Revision

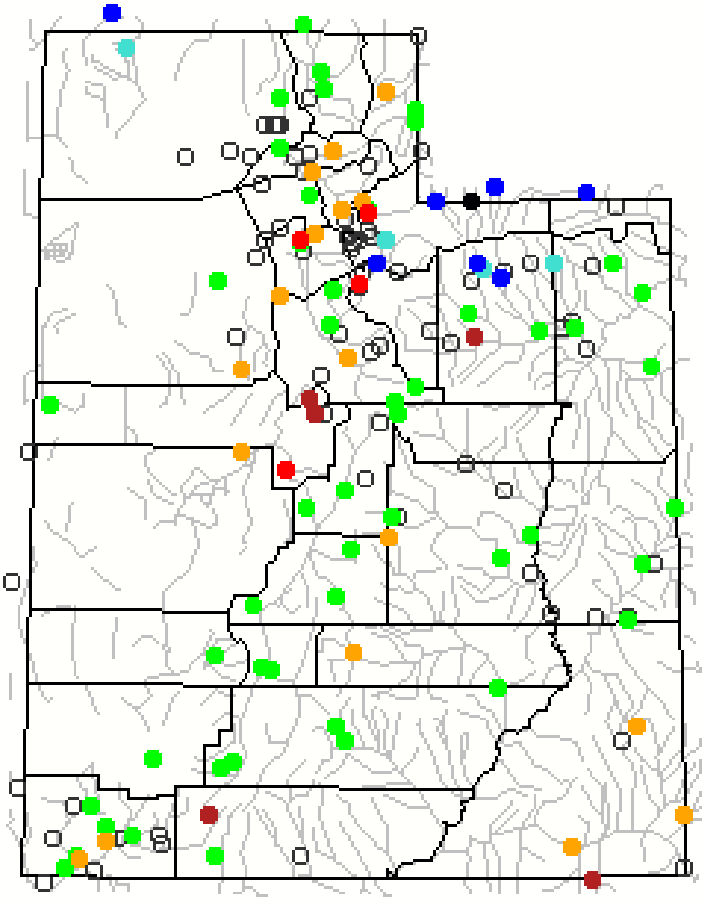
USDA NRCS

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

Current Utah Stream Flow - Courtesy US Geological Survey

Wednesday, November 02, 2016 09:30ET

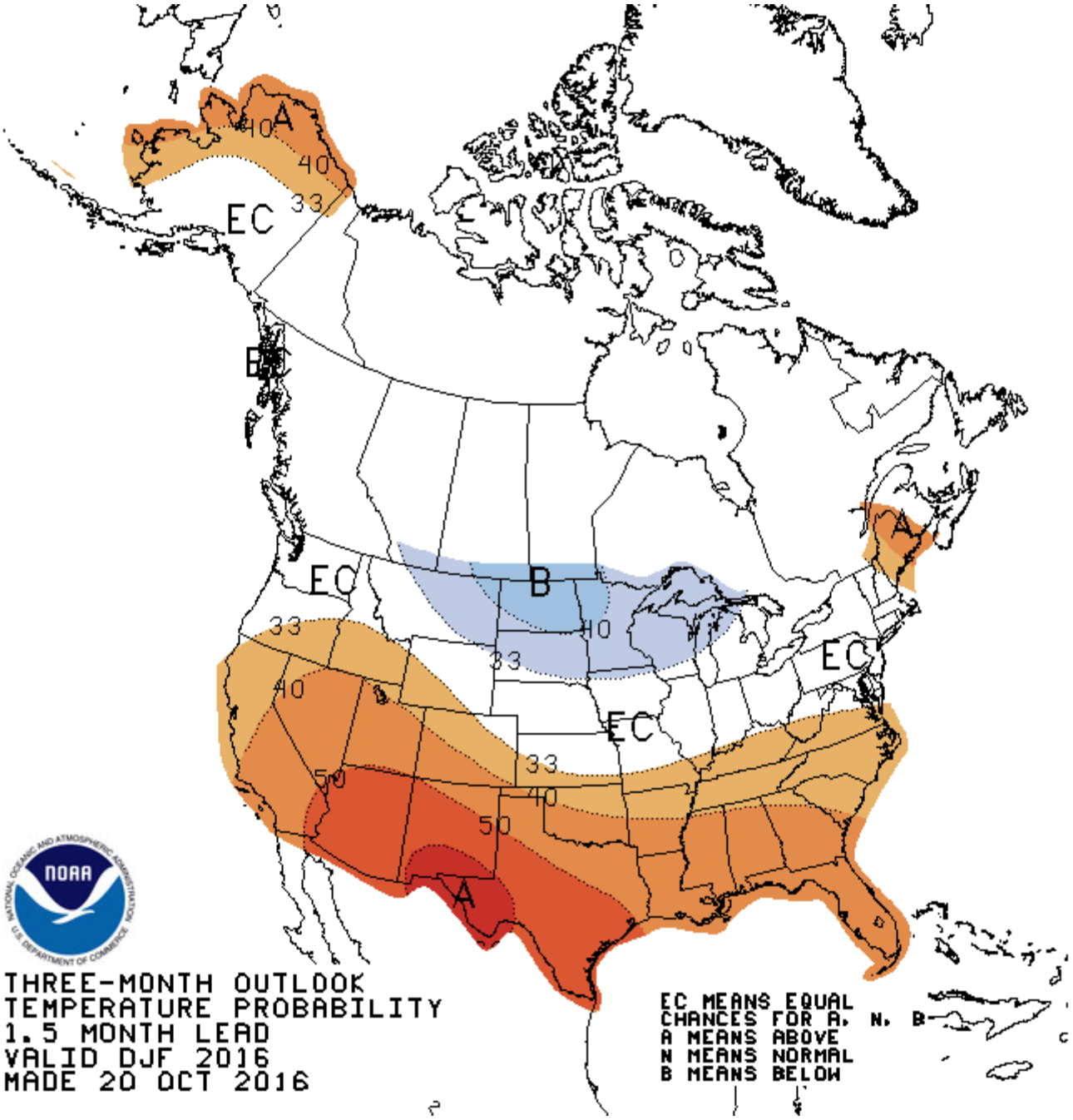


USGS

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

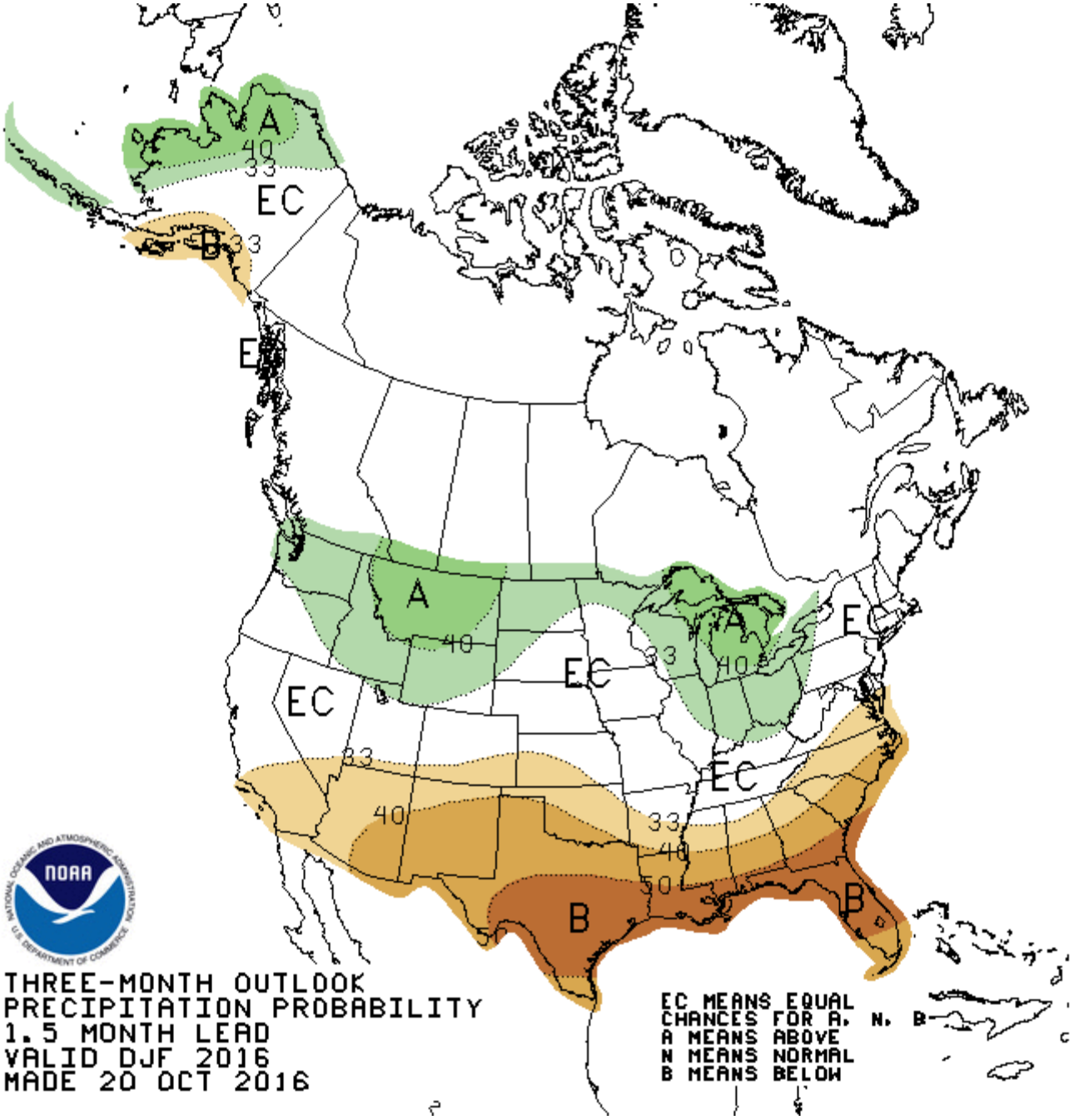
Looking forward to potential climate conditions for this winter.

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



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

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

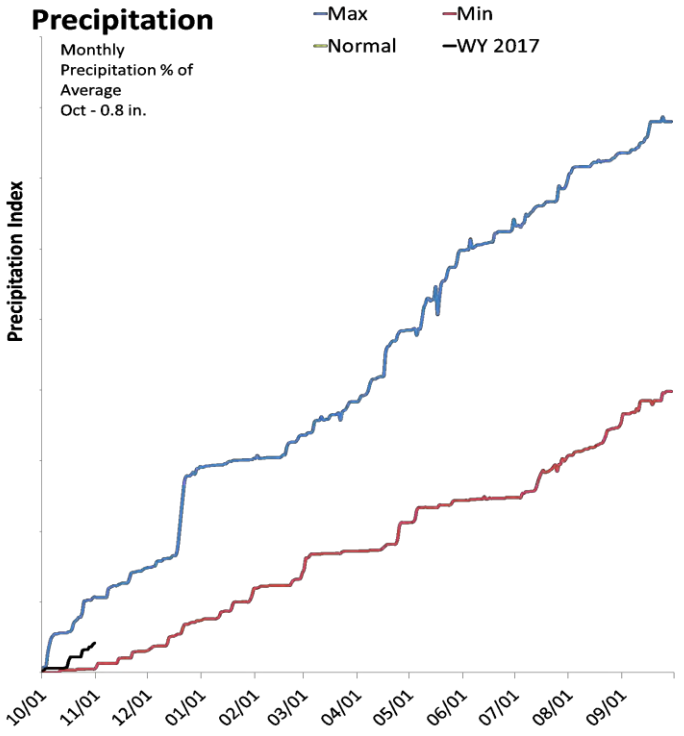


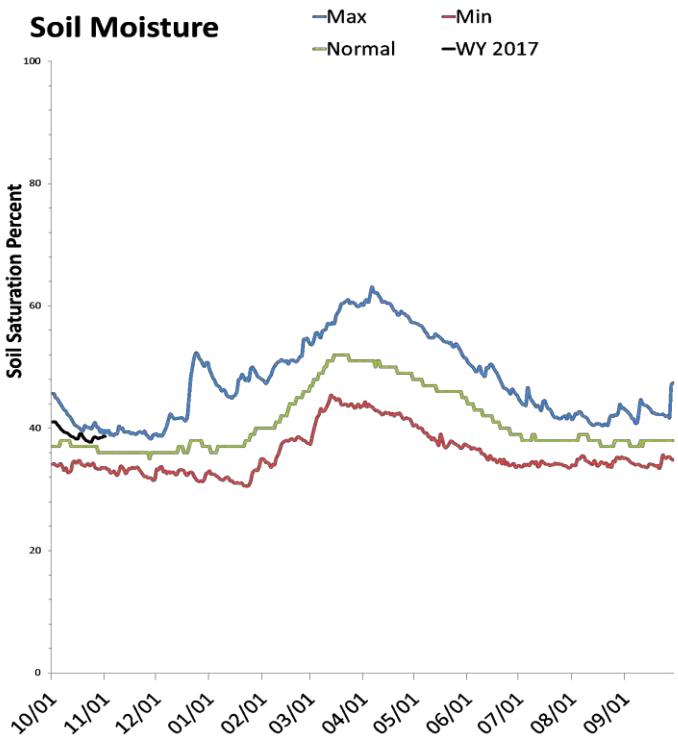
This graphic from the Climate Prediction Center shows expected precipitation for December through February of this new water year with Utah in the EC (equal chances) category meaning any outcome is likely.

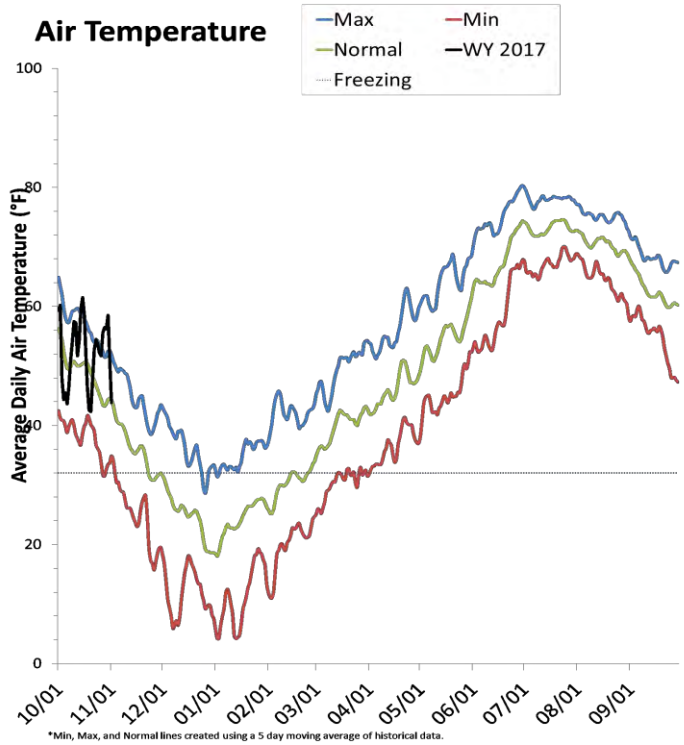
Statewide SCAN

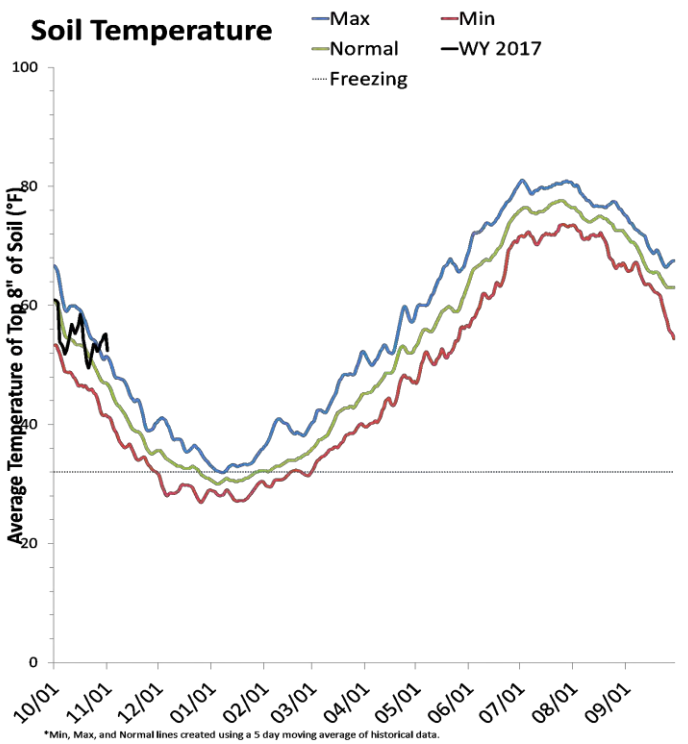
11/1/2016

The average precipitation at SCAN sites within Utah was 0.8 inches in October, which brings the seasonal accumulation (Oct-Oct) to 0.8 inches. Soil moisture is at 38% compared to 33% last year.





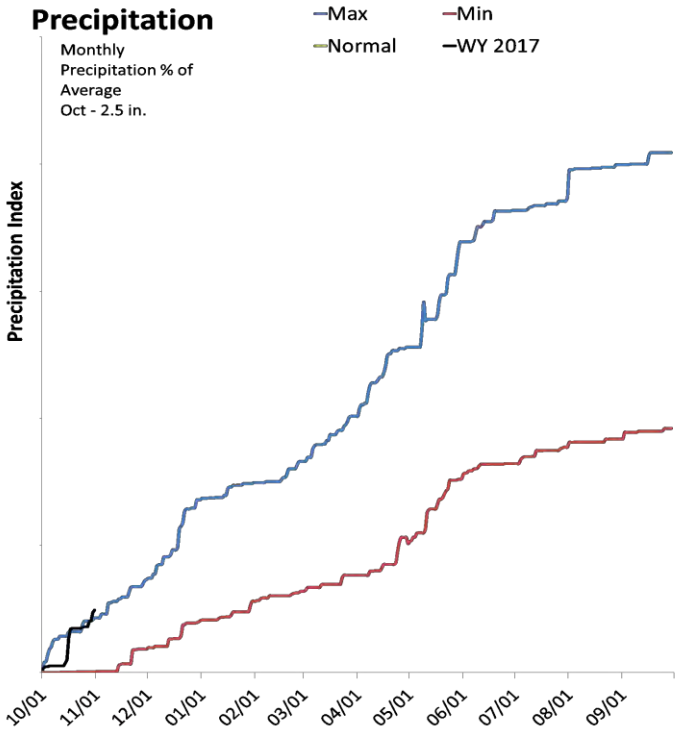


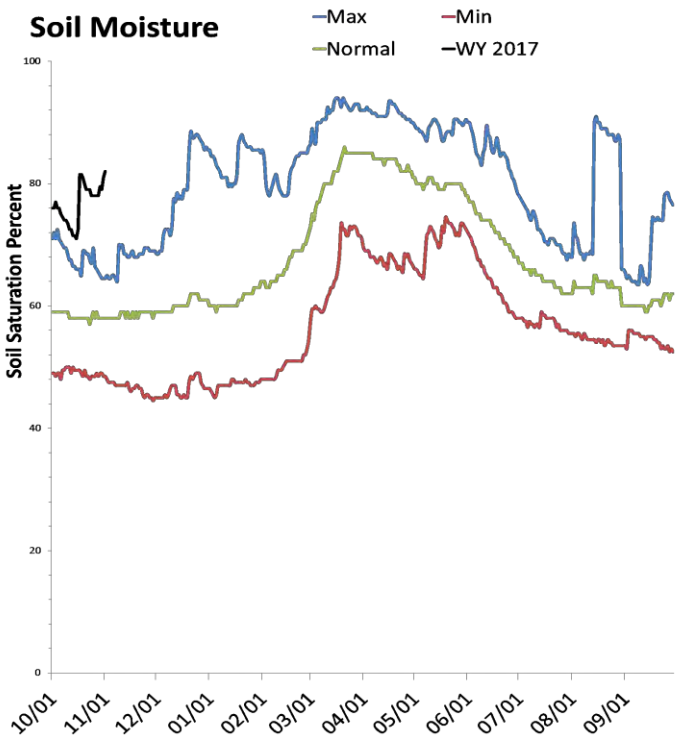


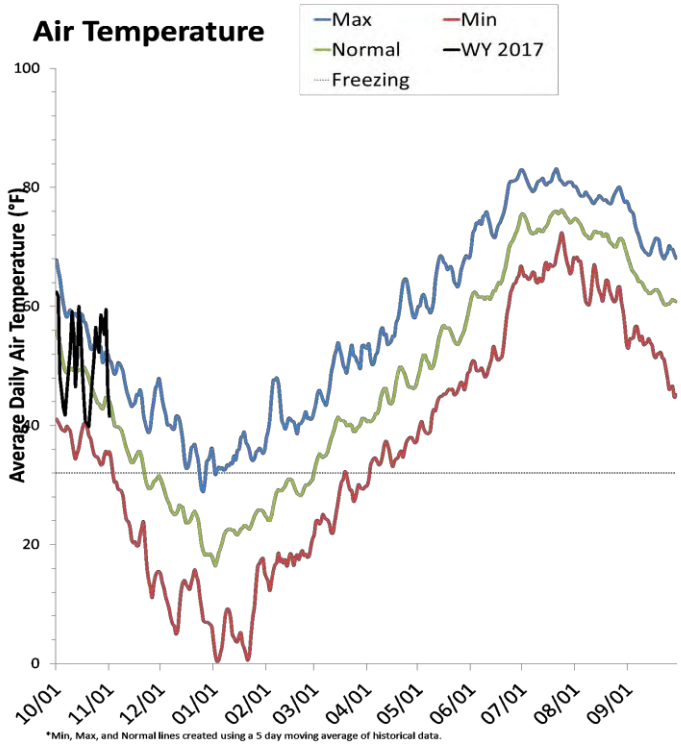
North Central

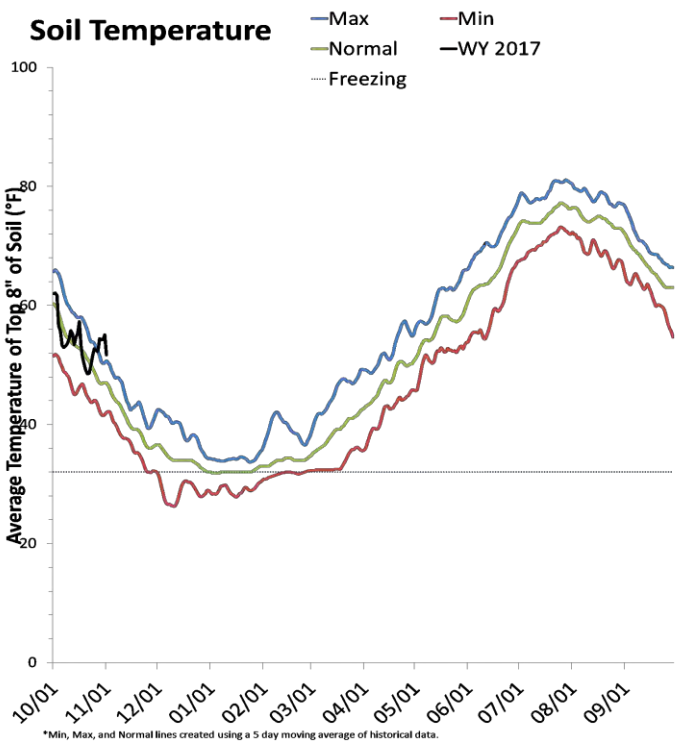
11/1/2016

The average precipitation in October at SCAN sites within the basin was 2.5 inches, which brings the seasonal accumulation (Oct-Oct) to 2.5 inches. Soil moisture is at 81% compared to 33% last year.





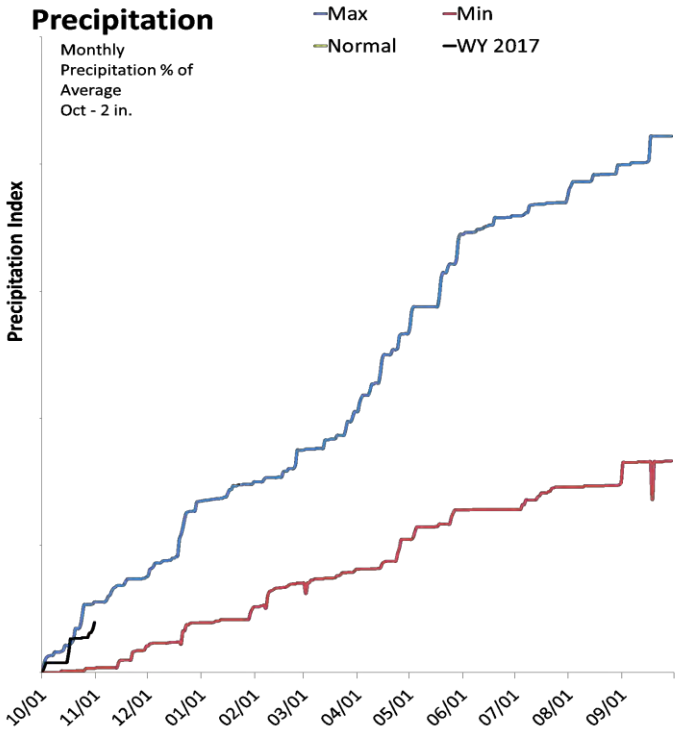


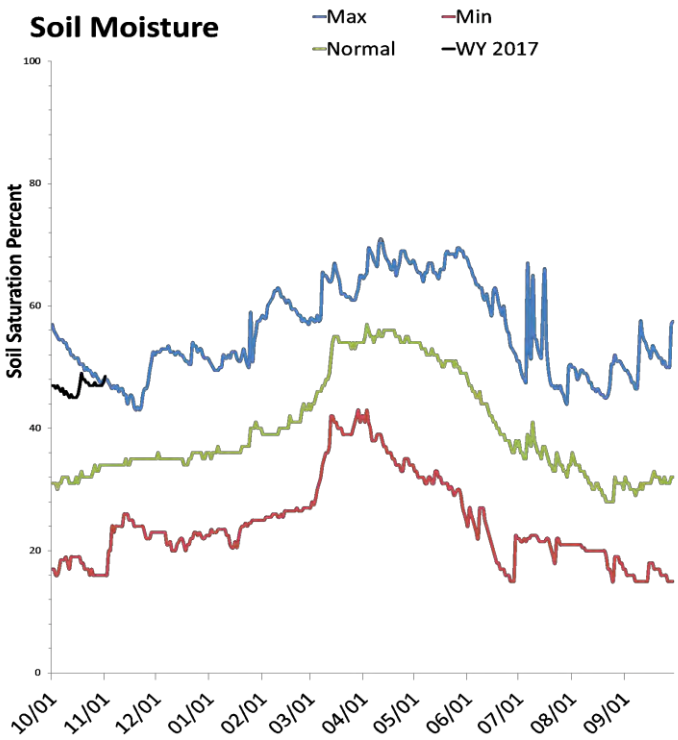


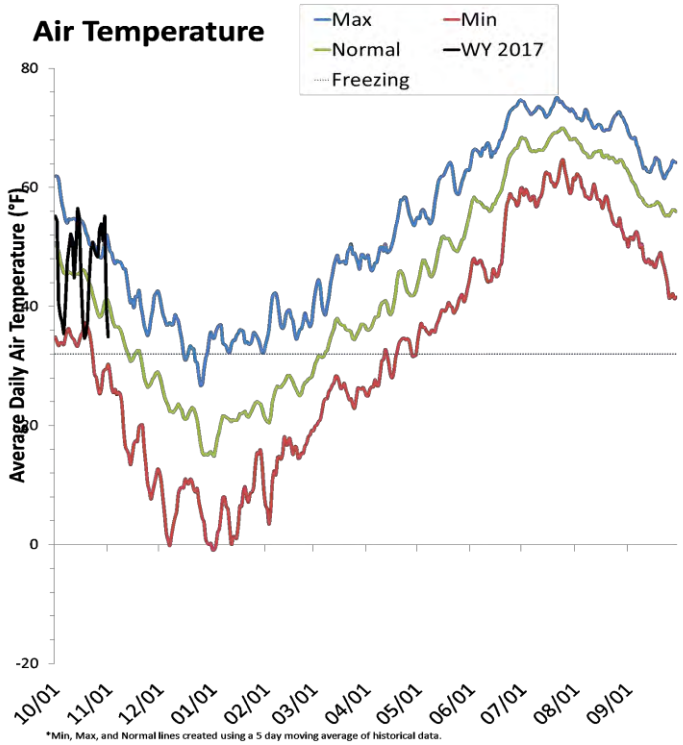
Northern Mountains

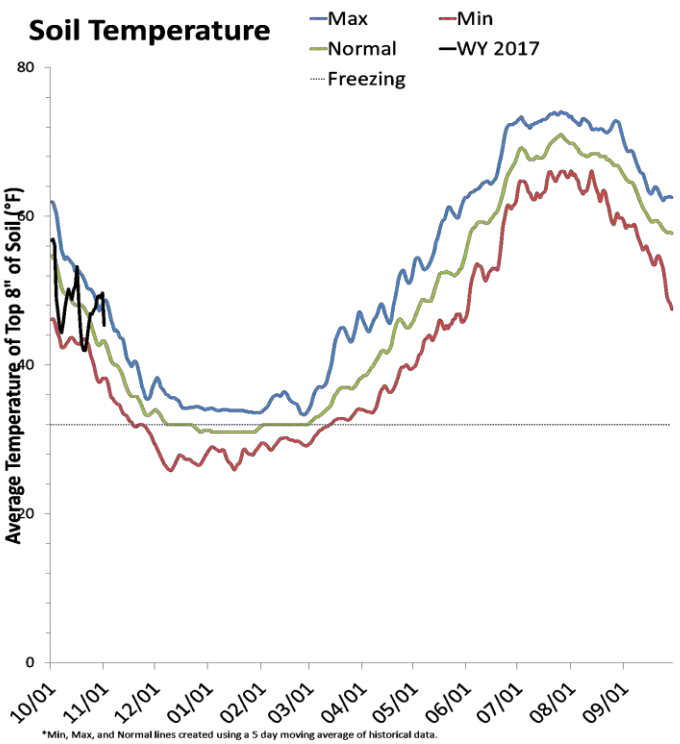
11/1/2016

The average precipitation in October at SCAN sites within the basin was 2 inches, which brings the seasonal accumulation (Oct-Oct) to 2 inches. Soil moisture is at 42% compared to 33% last year.





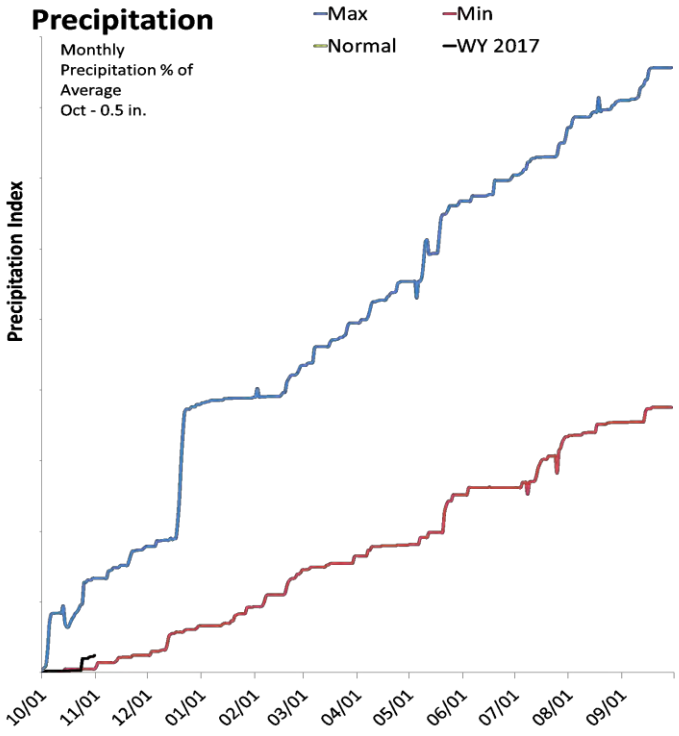


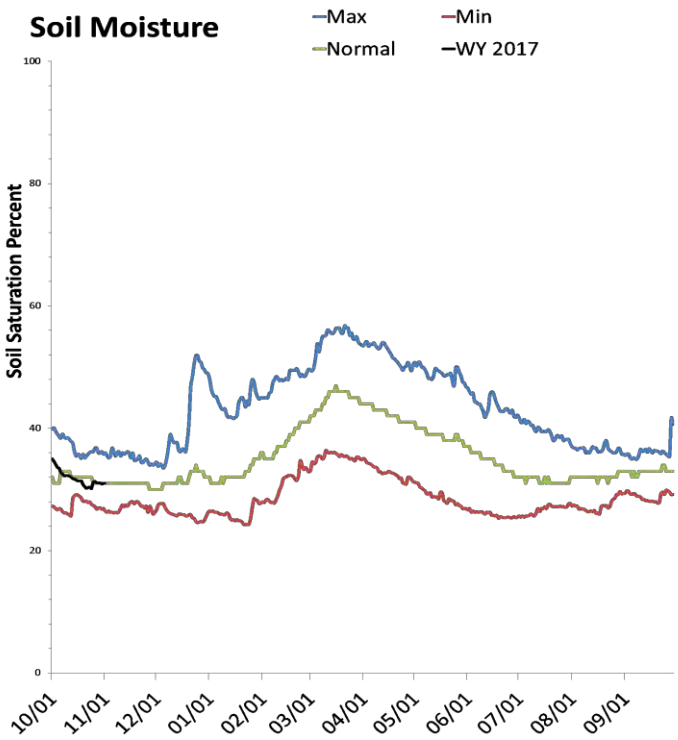


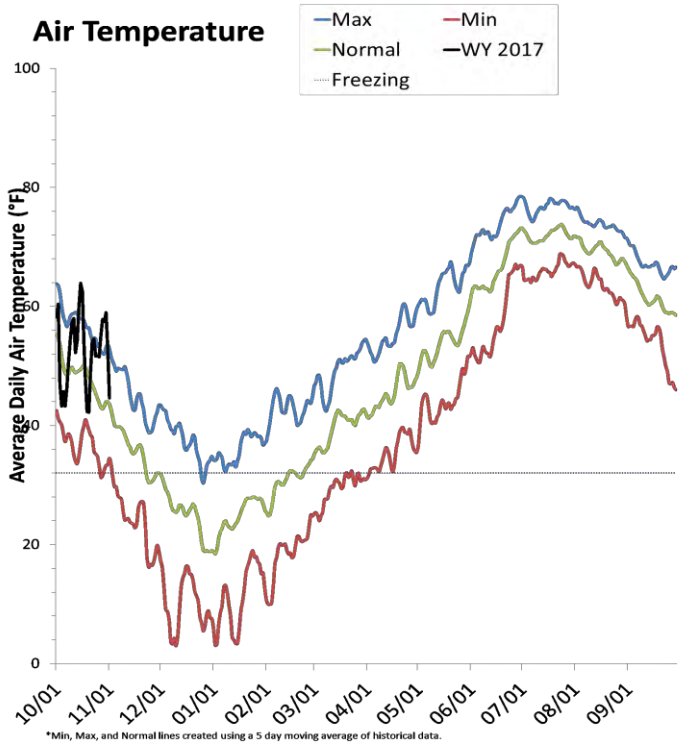
South Central

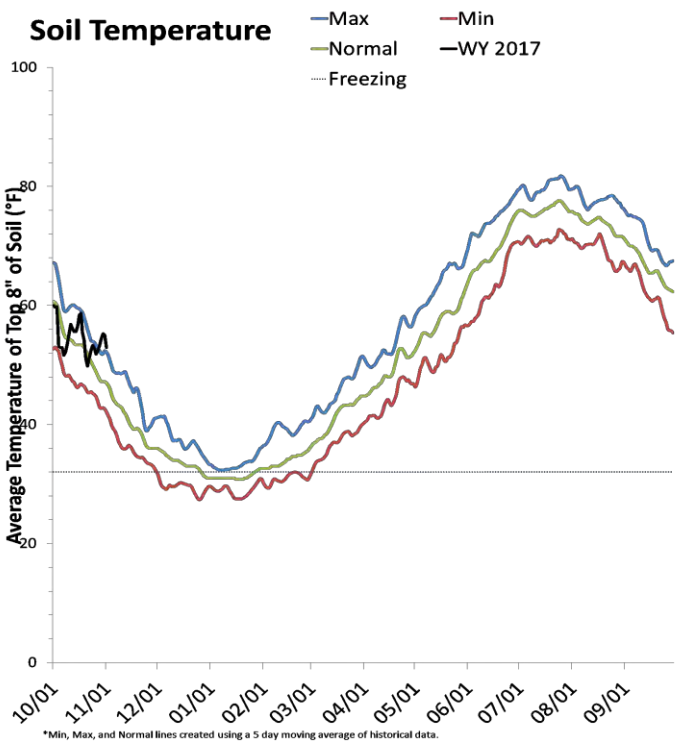
11/1/2016

The average precipitation in October at SCAN sites within the basin was 0.5 inches, which brings the seasonal accumulation (Oct-Oct) to 0.5 inches. Soil moisture is at 31% compared to 33% last year.





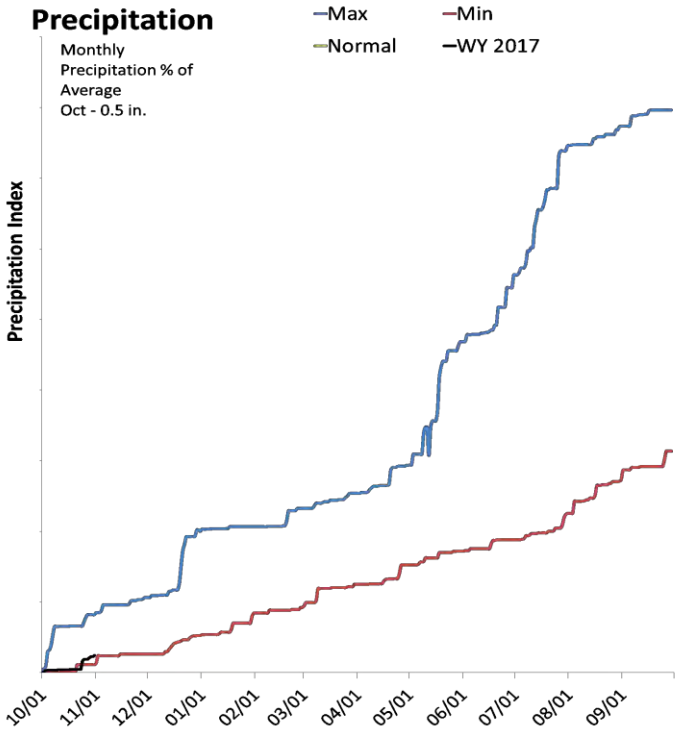


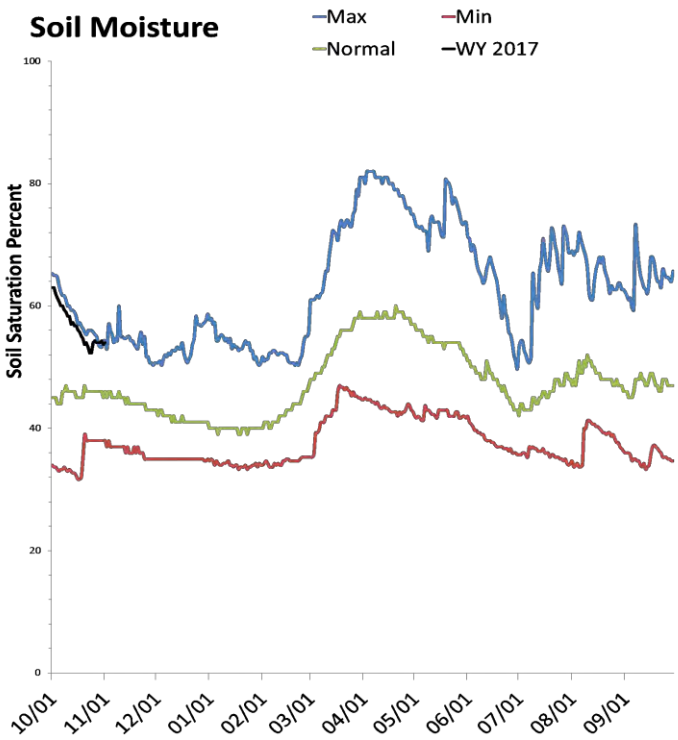


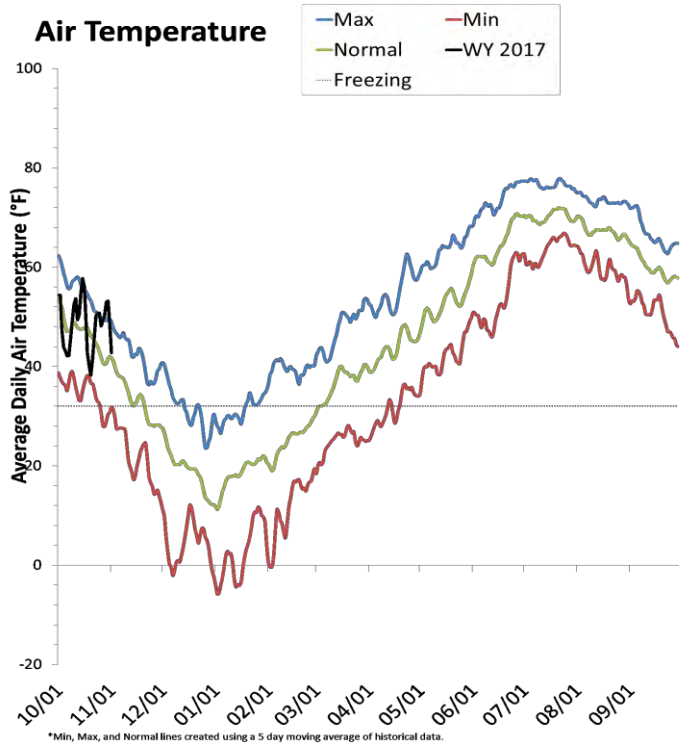
Uintah Basin

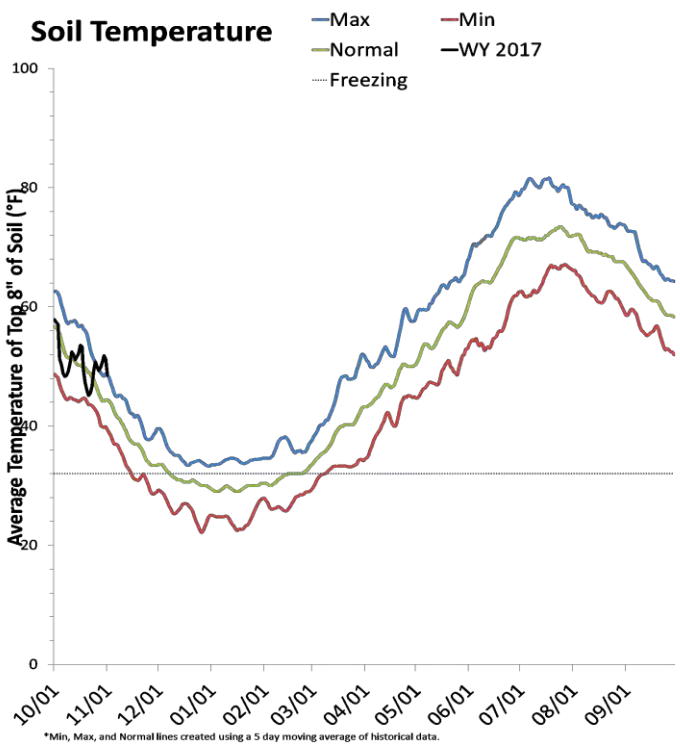
11/1/2016

The average precipitation in October at SCAN sites within the basin was 0.5 inches, which brings the seasonal accumulation (Oct-Oct) to 0.5 inches. Soil moisture is at 54% compared to 33% last year.





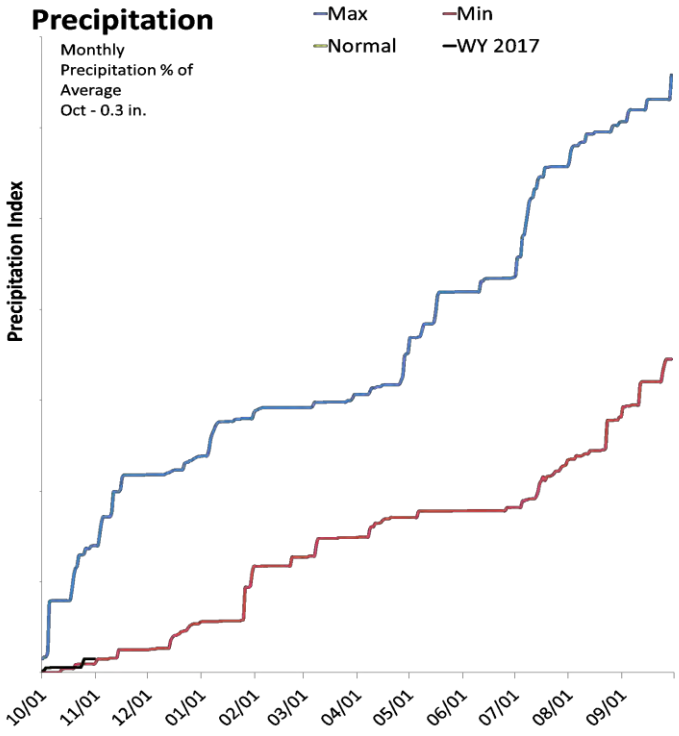


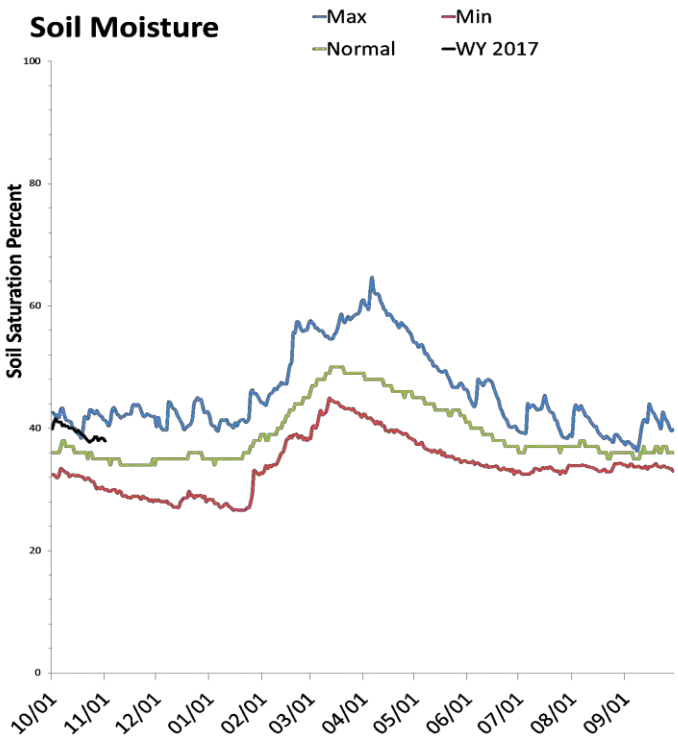


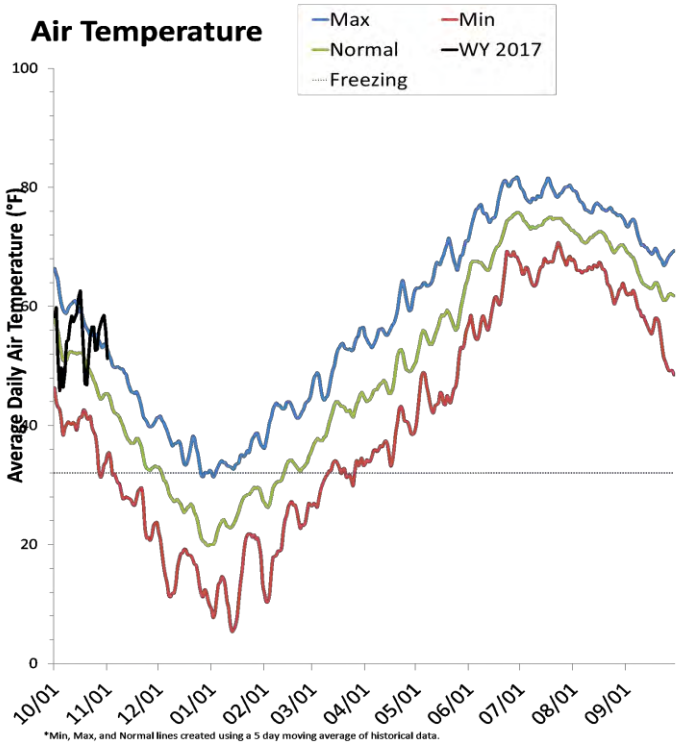
Southeast

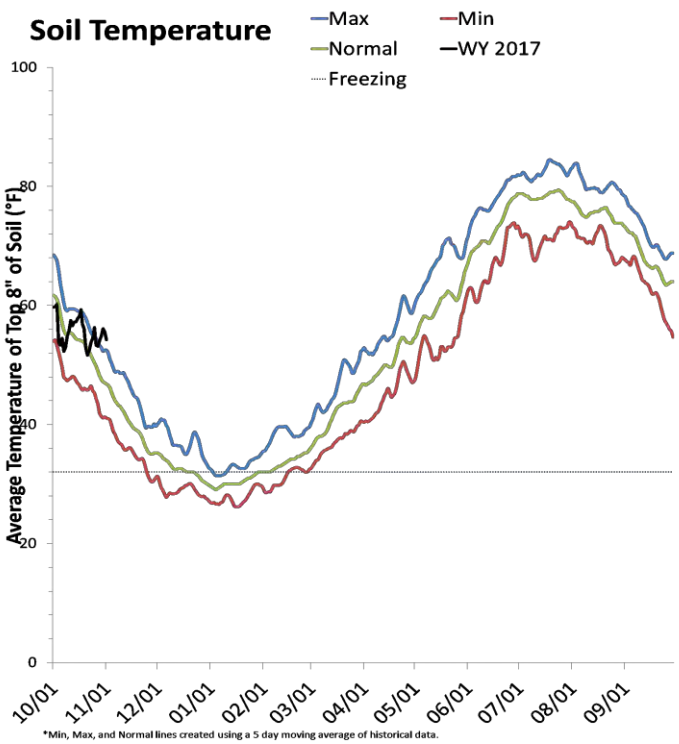
11/1/2016

The average precipitation in October at SCAN sites within the basin was 0.3 inches, which brings the seasonal accumulation (Oct-Oct) to 0.3 inches. Soil moisture is at 38% compared to 33% last year.





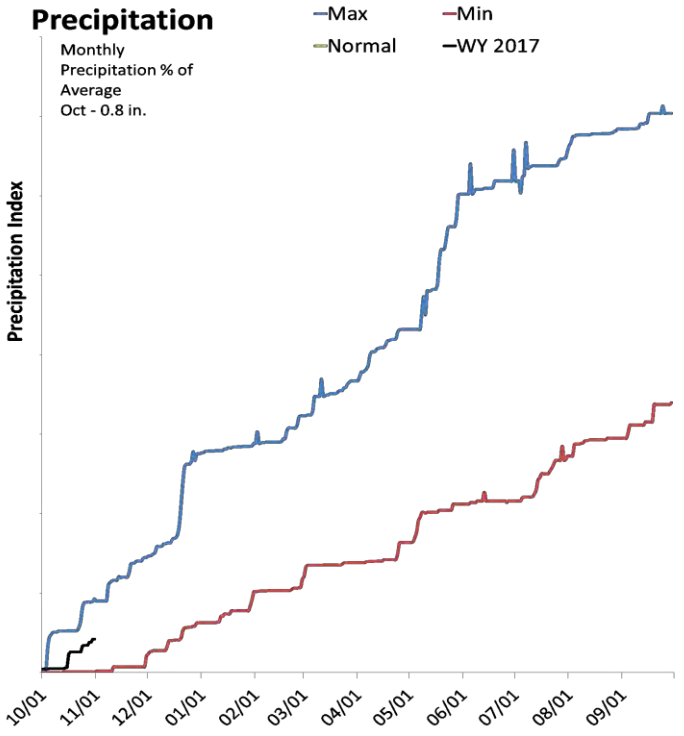


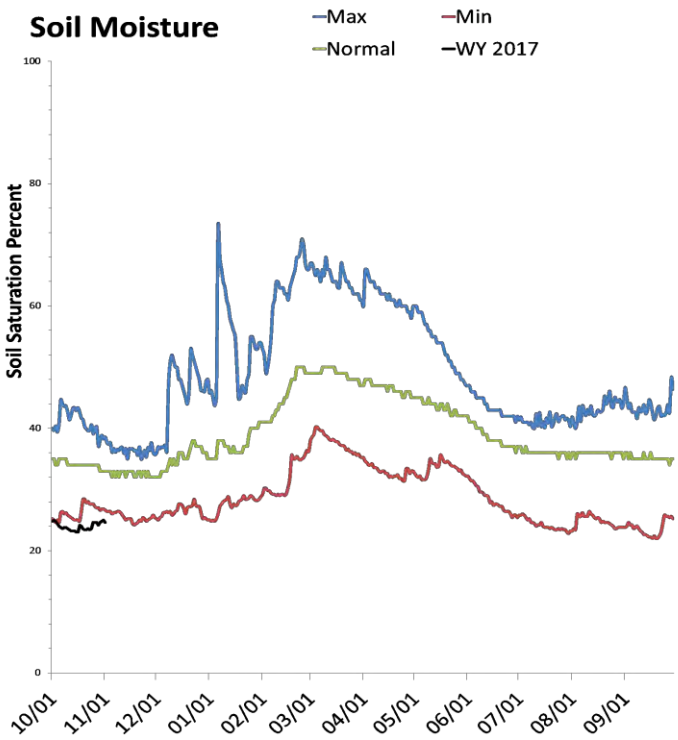


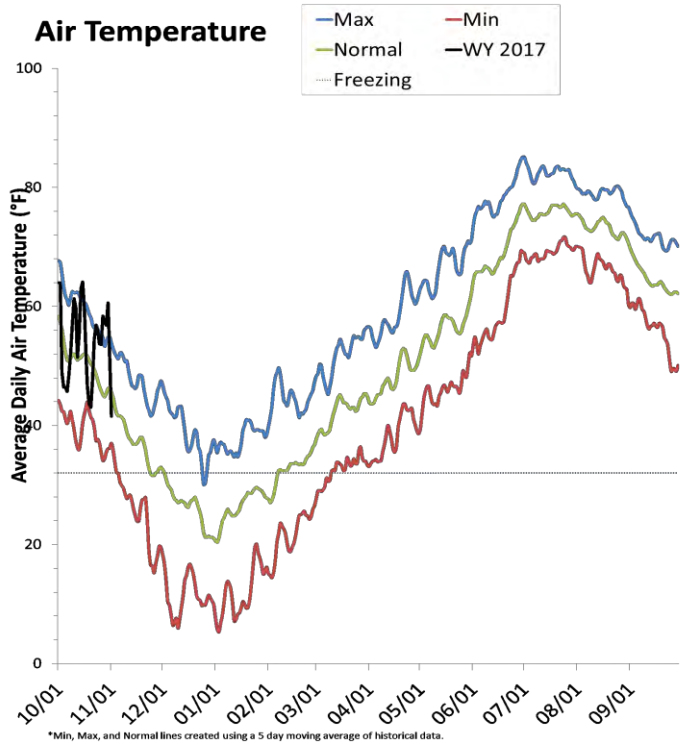
Western and Dixie

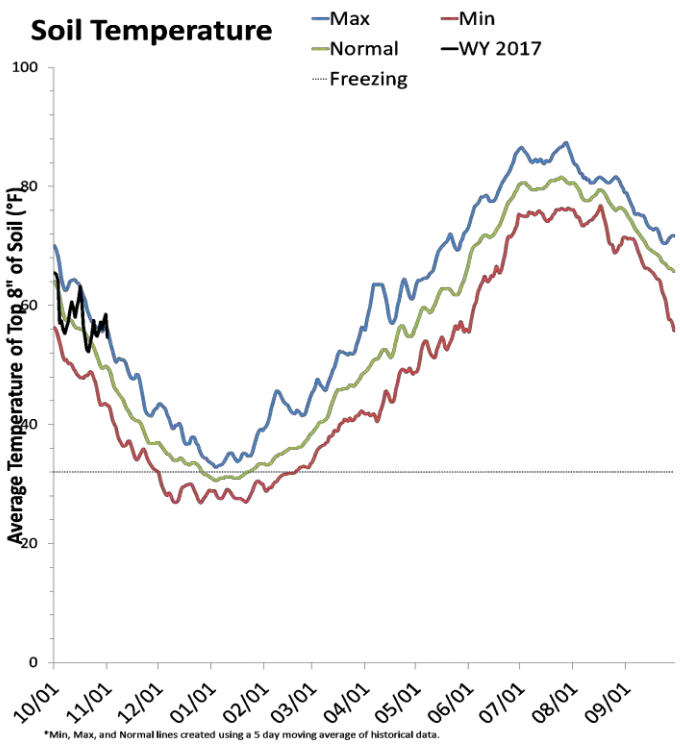
11/1/2016

The average precipitation in October at SCAN sites within the basin was 0.8 inches, which brings the seasonal accumulation (Oct-Oct) to 0.8 inches. Soil moisture is at 25% compared to 33% last year.





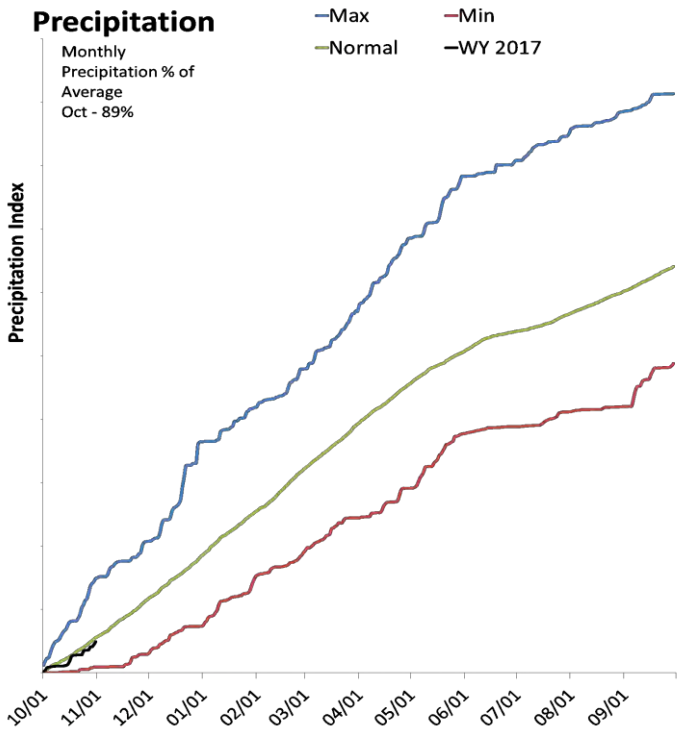


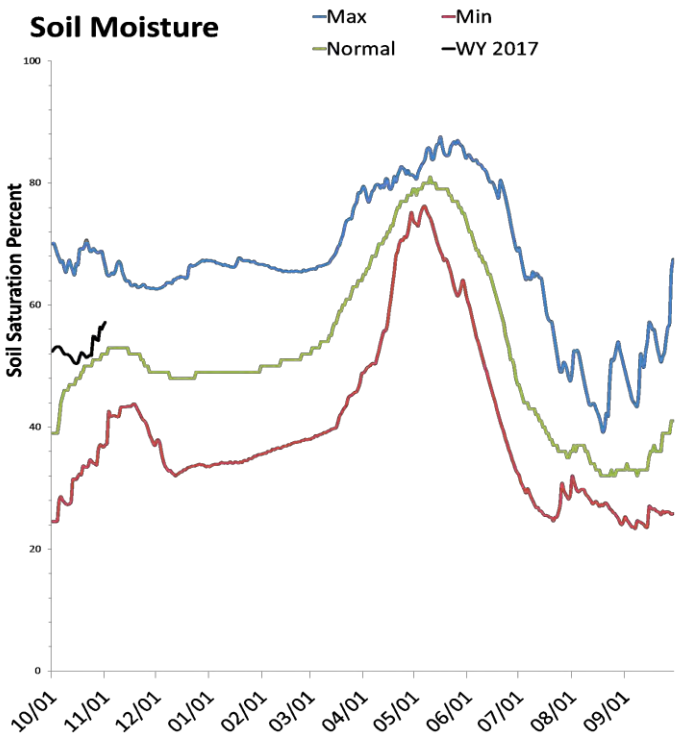


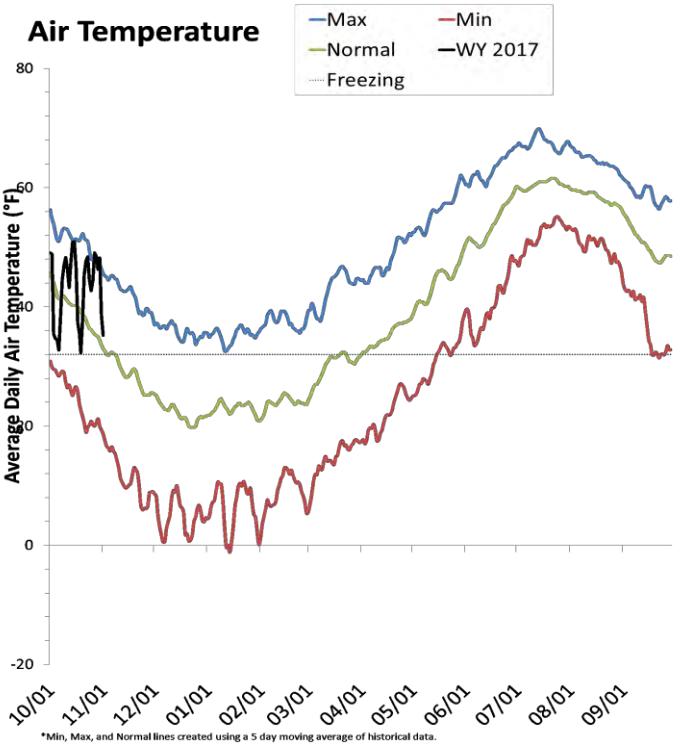
Statewide SNOTEL

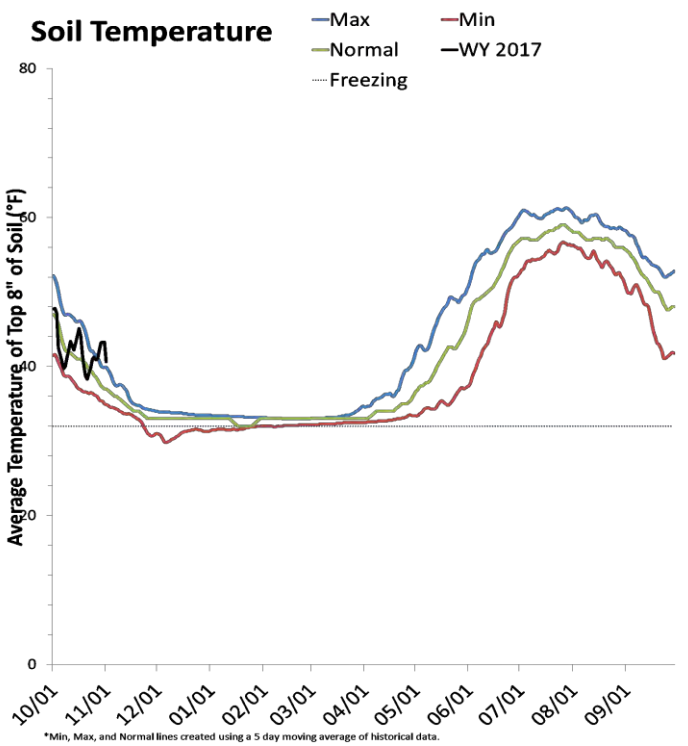
11/1/2016

Precipitation at SNOTEL sites during October was below average at 89%, which brings the seasonal accumulation (Oct-Oct) to 89% of average. Soil moisture is at 59% compared to 49% last year. Reservoir storage is at 46% of capacity, compared to 48% last year.





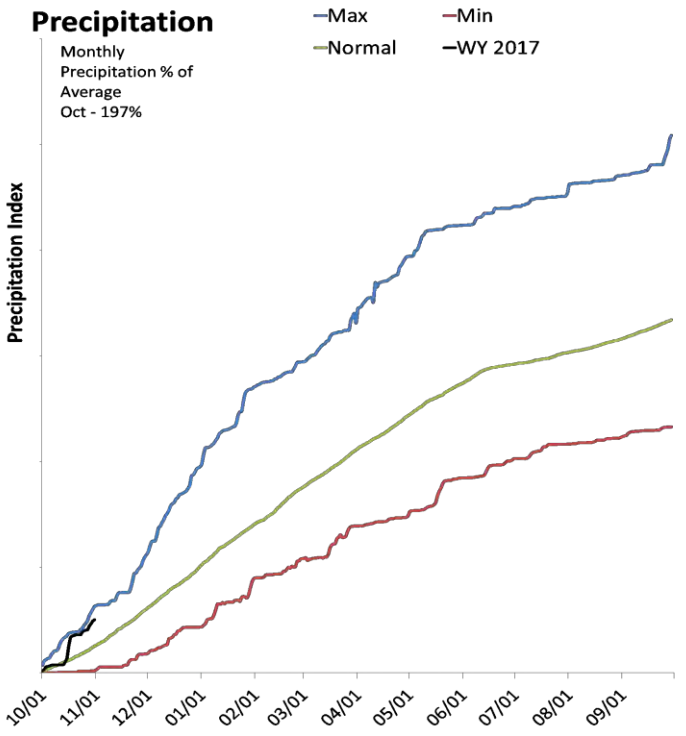


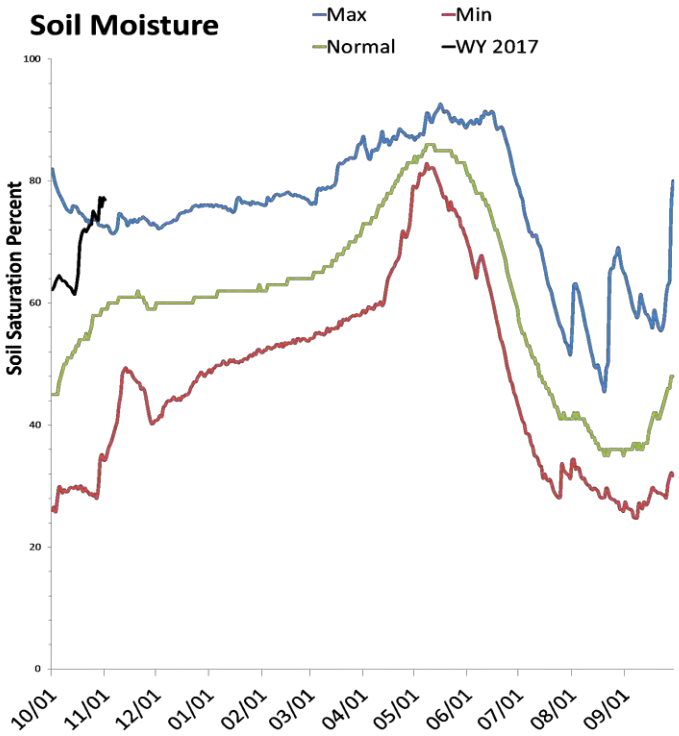


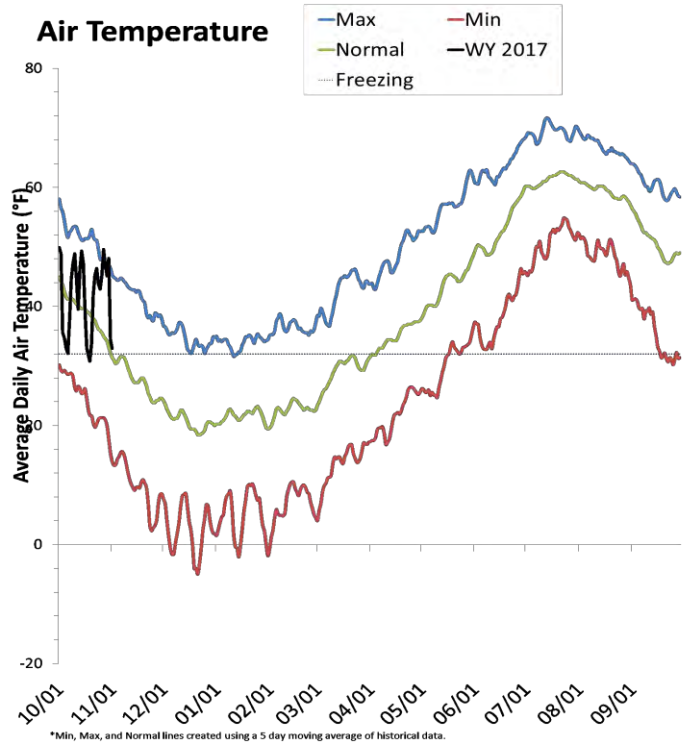
Bear River Basin

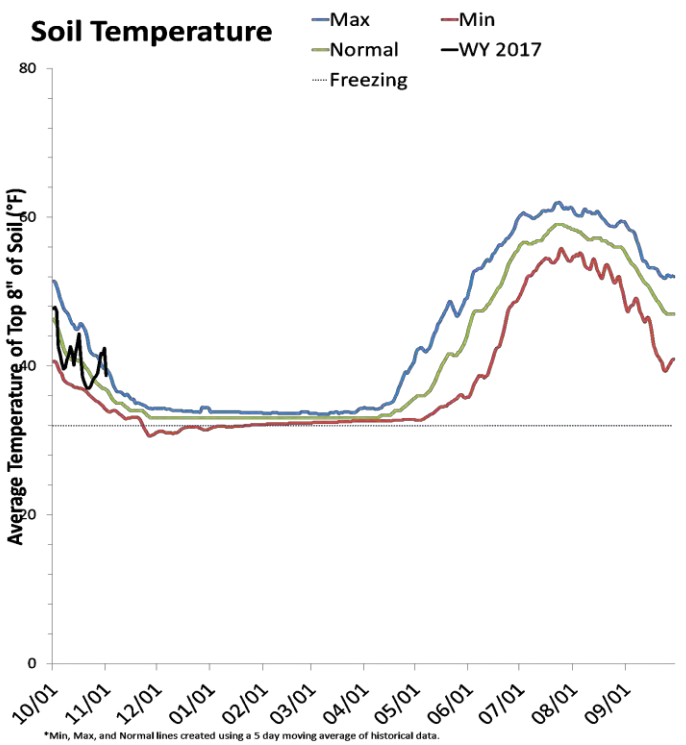
11/1/2016

Precipitation in October was much above average at 197%, which brings the seasonal accumulation (Oct-Oct) to 197% of average. Soil moisture is at 77% compared to 54% last year. Reservoir storage is at 36% of capacity, compared to 37% last year. The water availability index for the Bear River is 43%, 78% for Woodruff Narrows and 44% for the Little Bear.









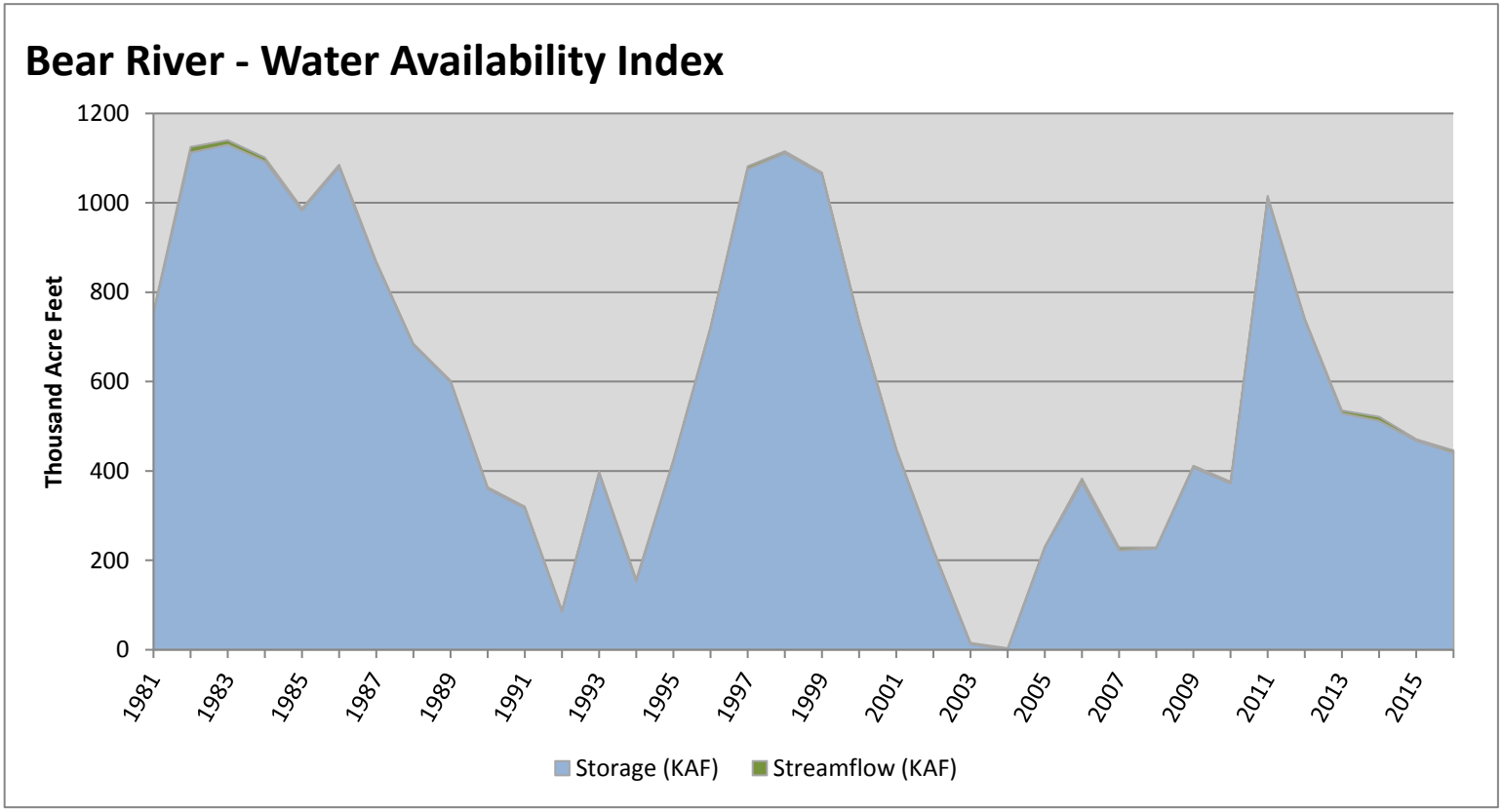
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	**440.37**	**5.55**	**445.92**	**43**	**-0.56**	**09, 95, 01, 15**

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

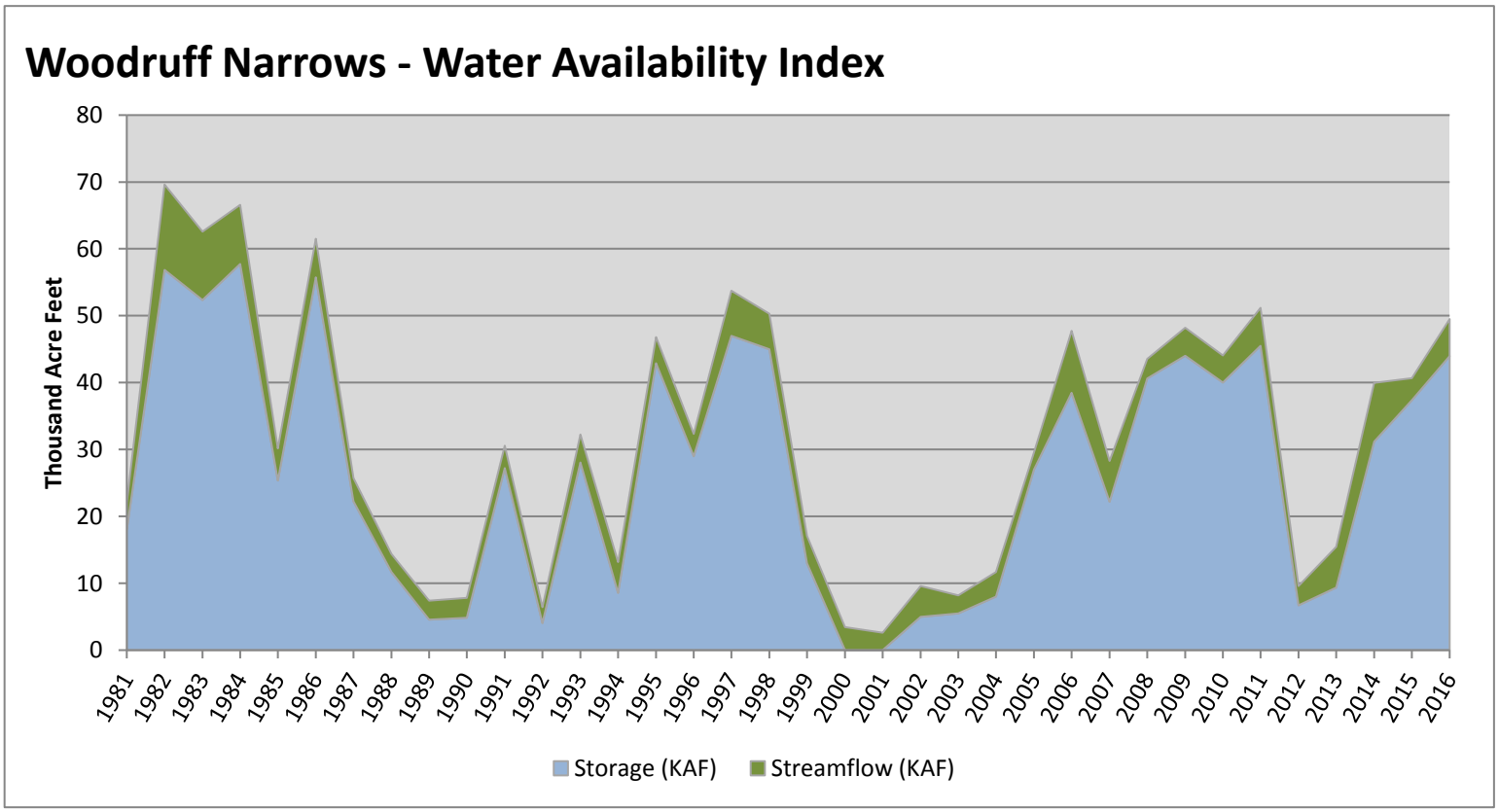


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Woodruff Narrows	**43.95**	**5.55**	**49.50**	**78**	**2.36**	**06, 09, 98, 11**

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

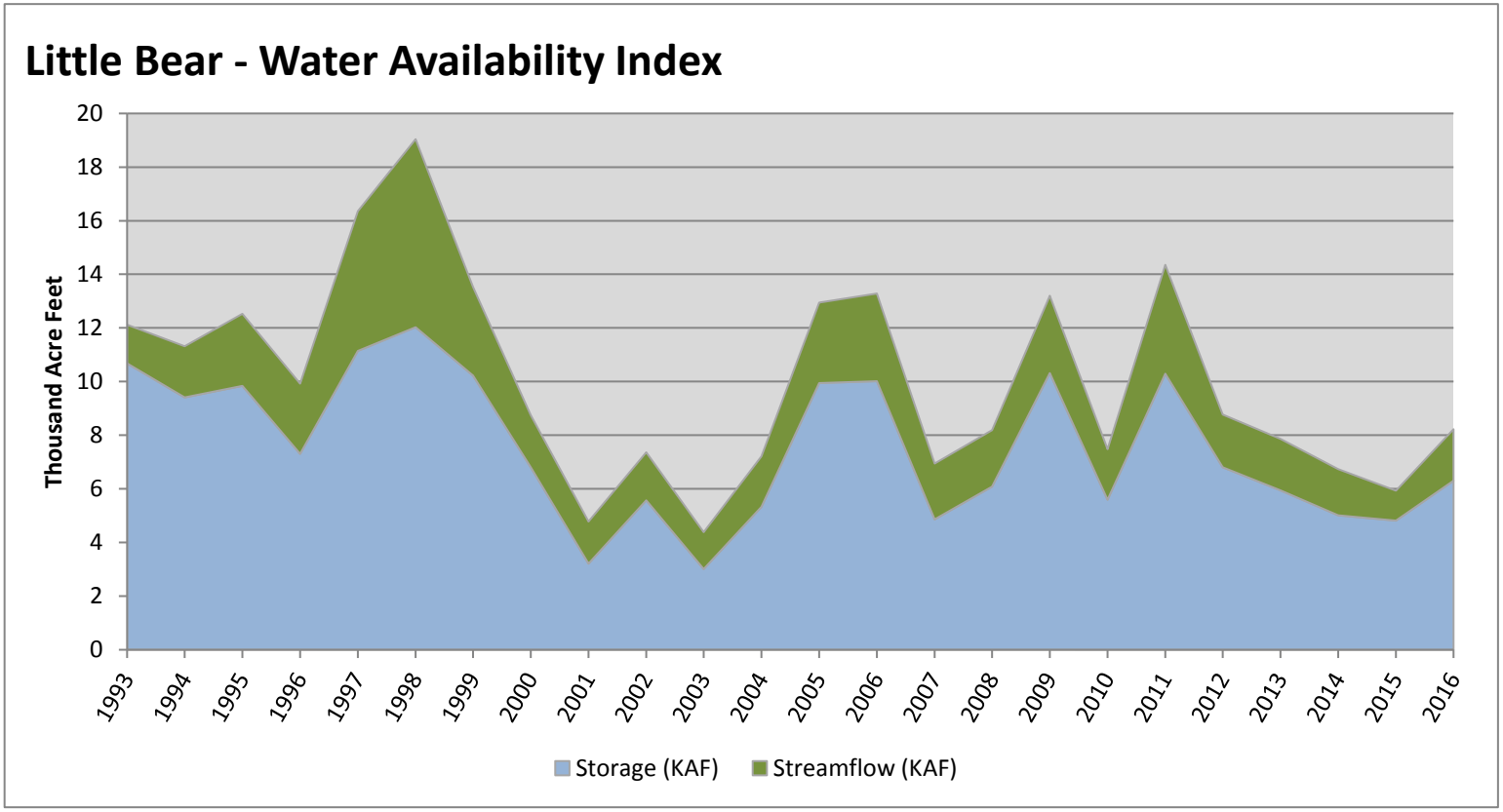


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Little Bear	**6.30**	**1.93**	**8.23**	**44**	**-0.5**	**13, 08, 00, 12**

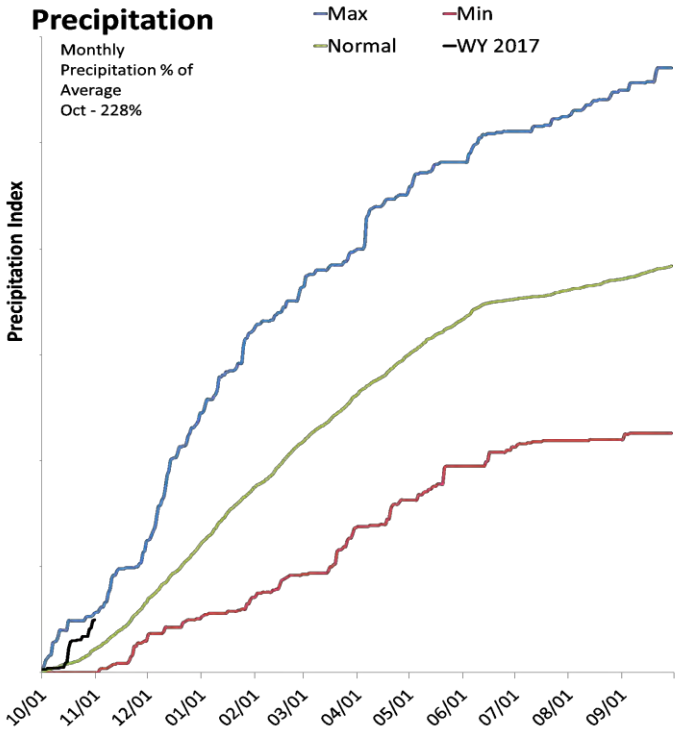
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

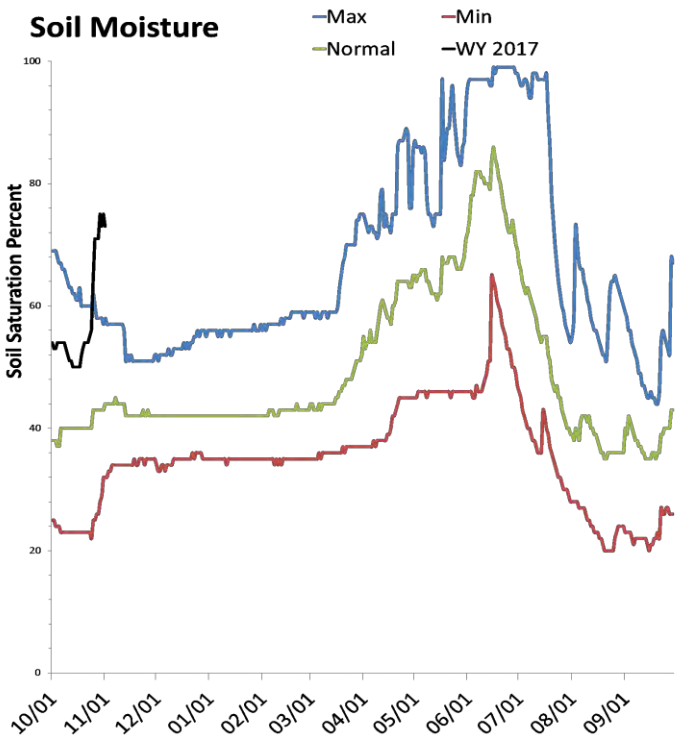


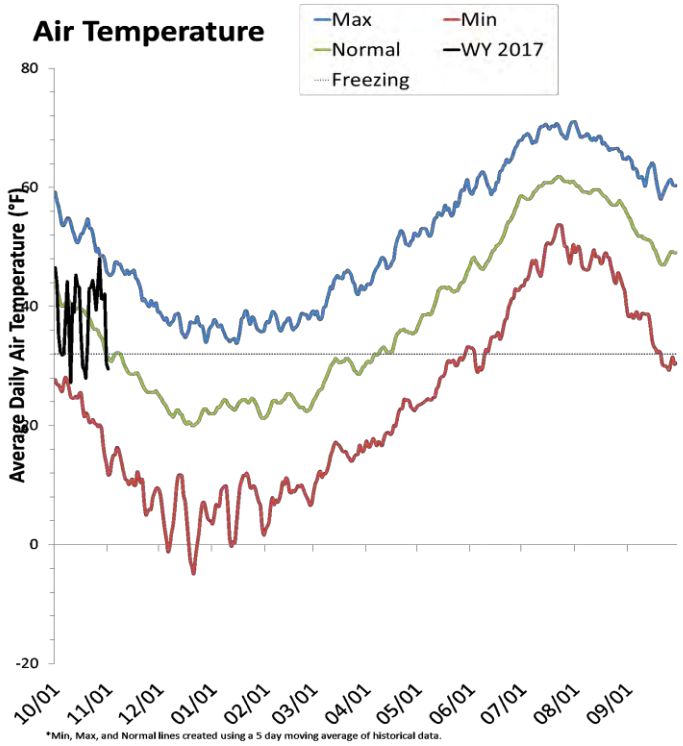
Raft River Basin

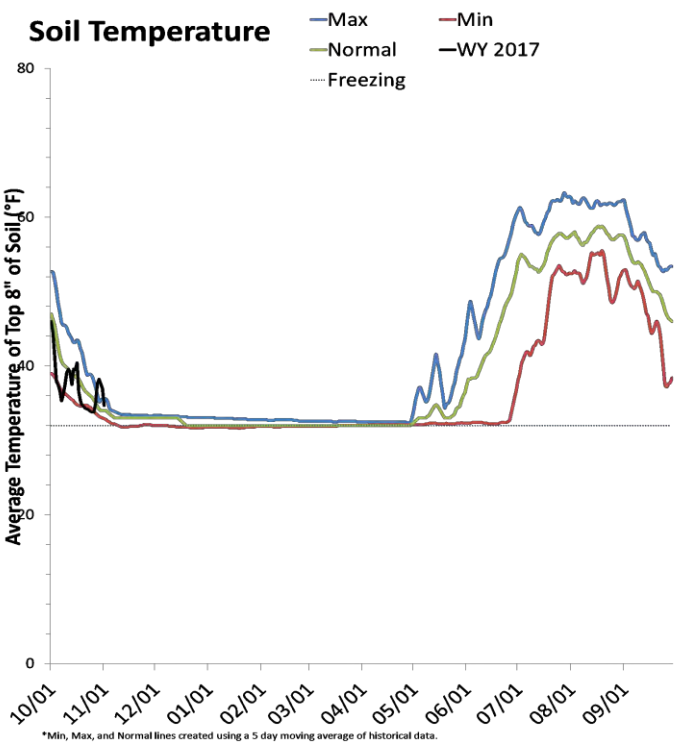
11/1/2016

Precipitation in October was much above average at 227%, which brings the seasonal accumulation (Oct-Oct) to 227% of average. Soil moisture is at 74% compared to 33% last year.







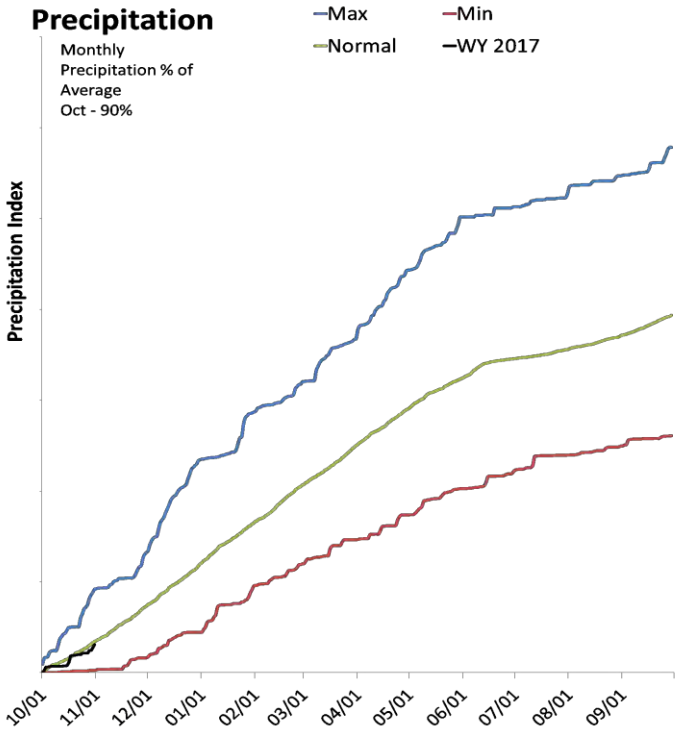


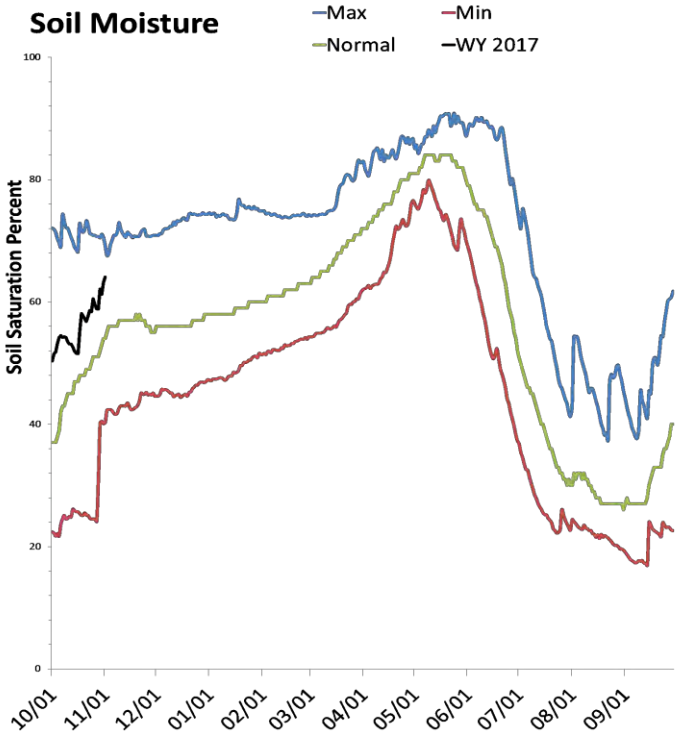
SNOTEL Data

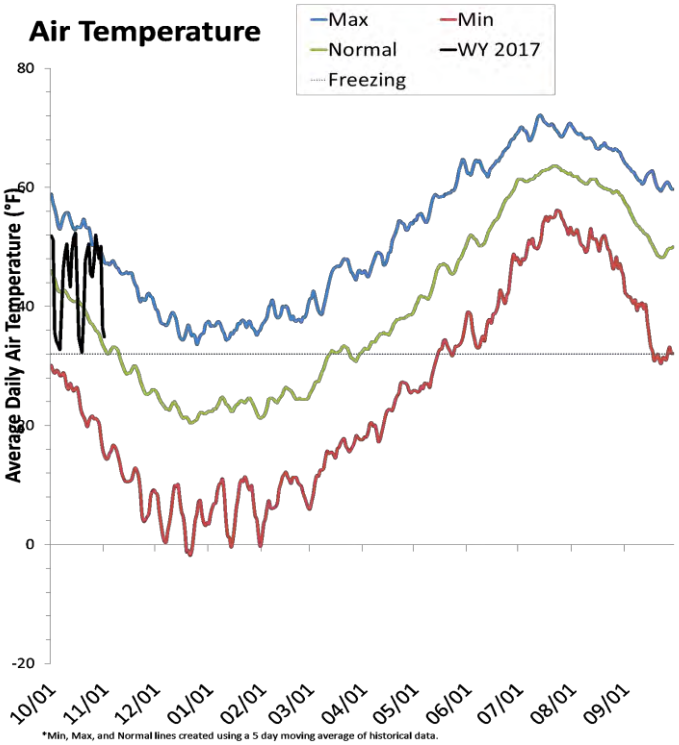
Weber & Ogden River Basins

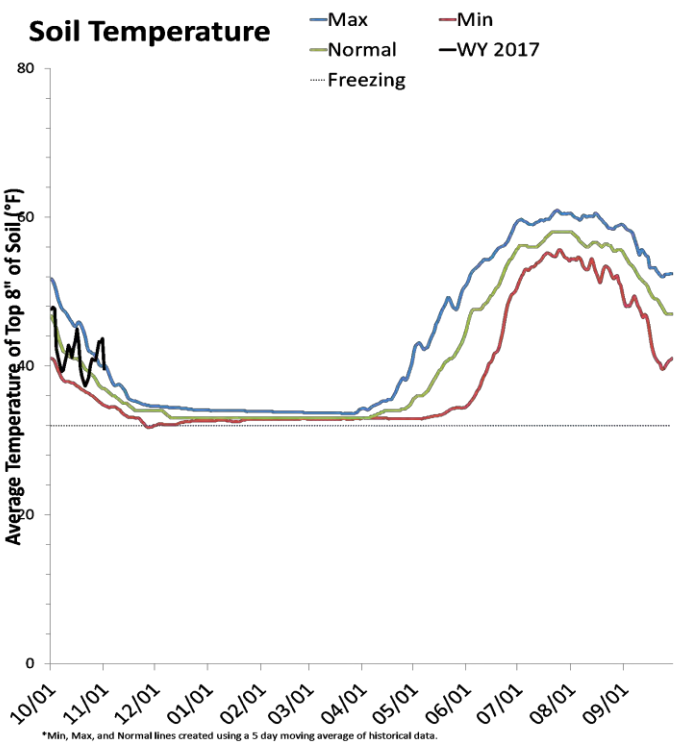
11/1/2016

Precipitation in October was near average at 91%, which brings the seasonal accumulation (Oct-Oct) to 91% of average. Soil moisture is at 64% compared to 45% last year. Reservoir storage is at 51% of capacity, compared to 39% last year. The water availability index for the Ogden River is 62% and 26% for the Weber River.









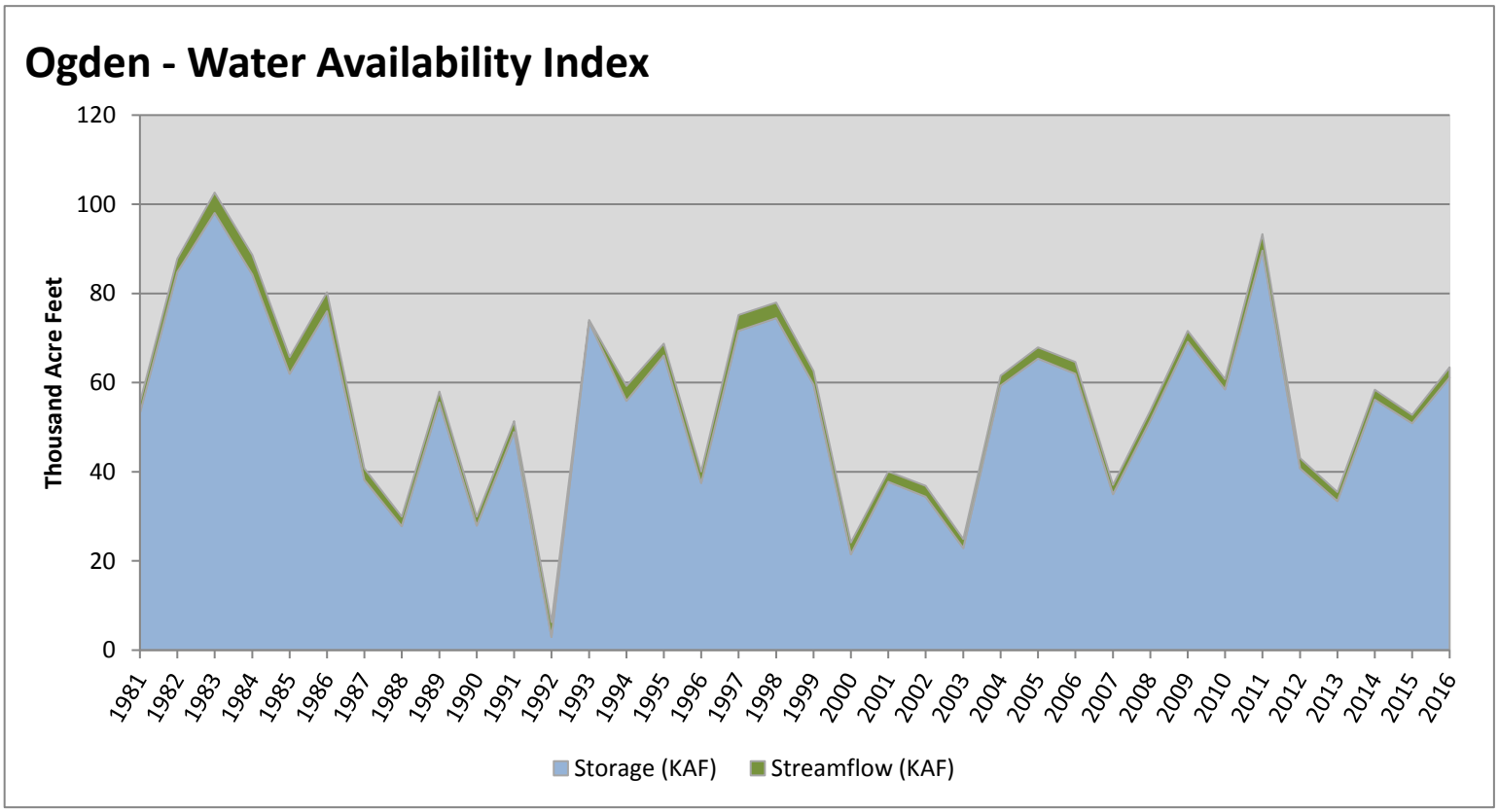
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Ogden	**61.12**	**2.34**	**63.46**	**62**	**1.01**	**04, 99, 06, 85**

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

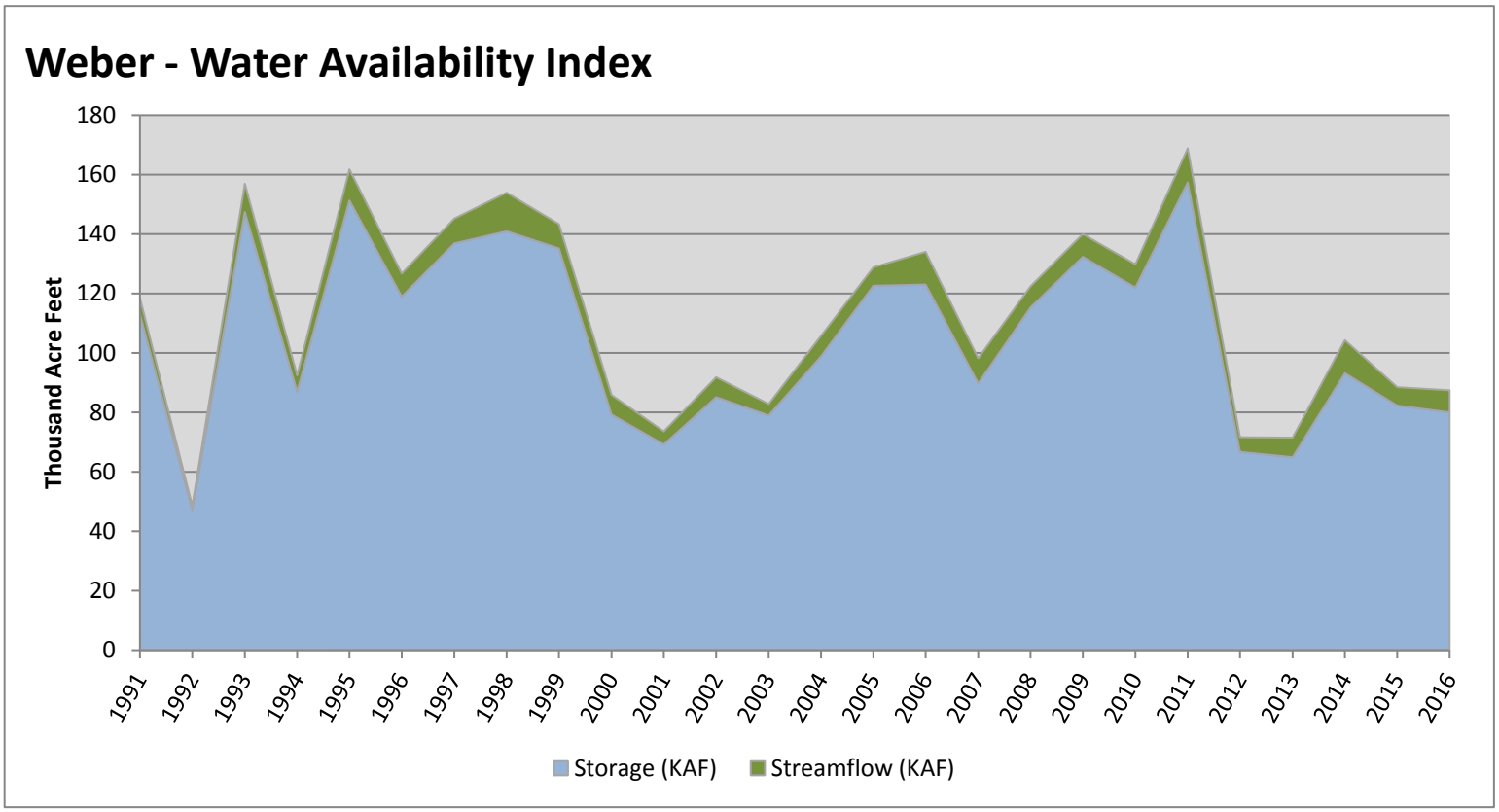


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Weber	**79.97**	**7.40**	**87.37**	**26**	**-2.01**	**03, 00, 15, 02**

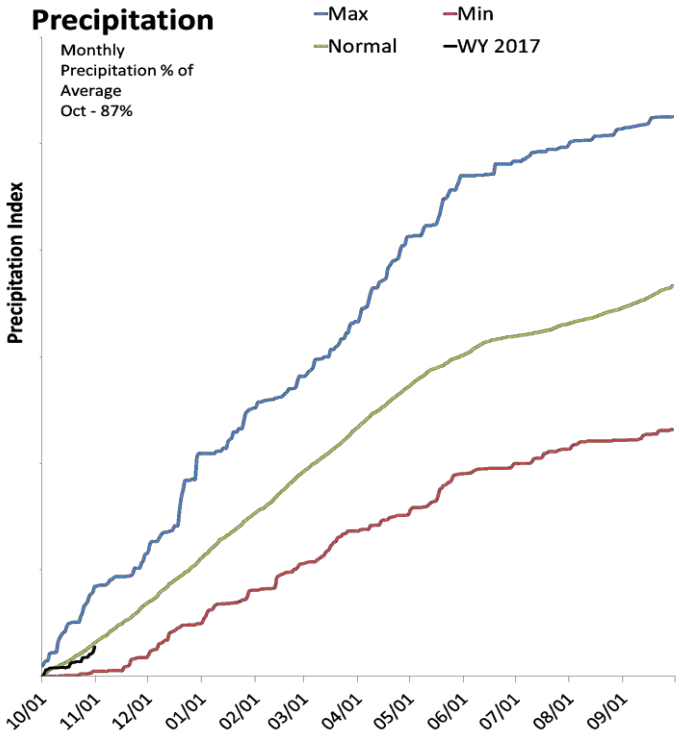
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

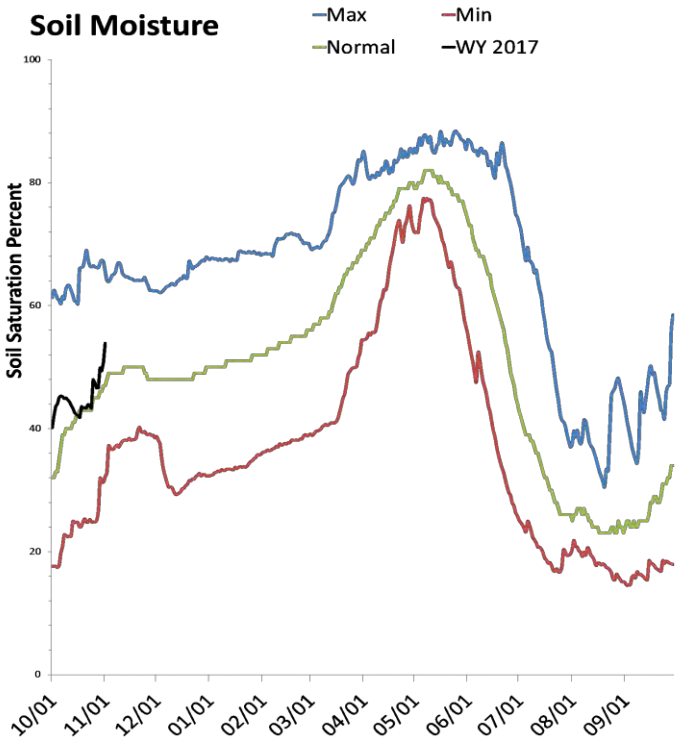


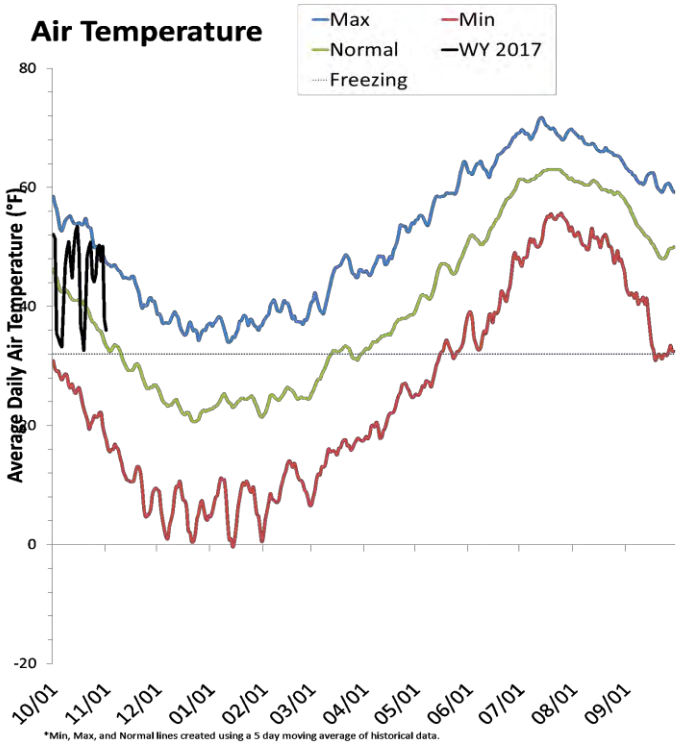
Provo & Jordan River Basins

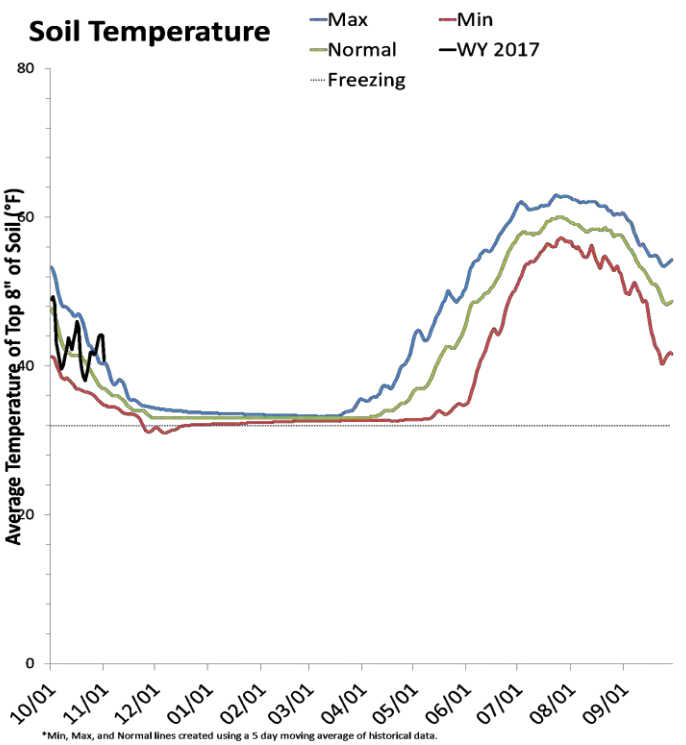
11/1/2016

Precipitation in October was below average at 87%, which brings the seasonal accumulation (Oct-Oct) to 87% of average. Soil moisture is at 54% compared to 38% last year. Reservoir storage is at 56% of capacity, compared to 59% last year. The water availability index for the Provo River is 36%.







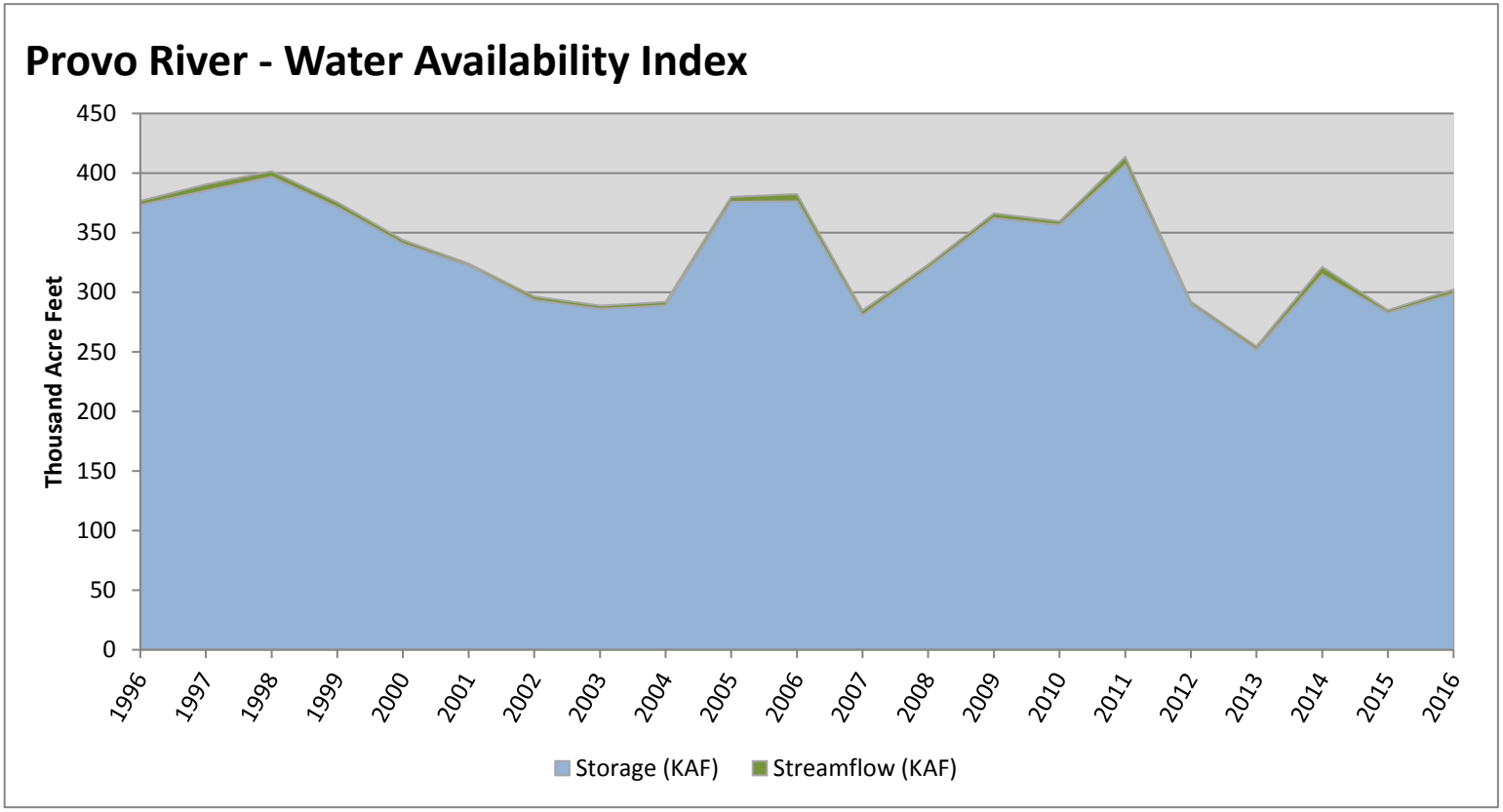


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Provo River	**298.80**	**3.43**	**302.23**	**36**	**-1.14**	**12, 02, 14, 08**

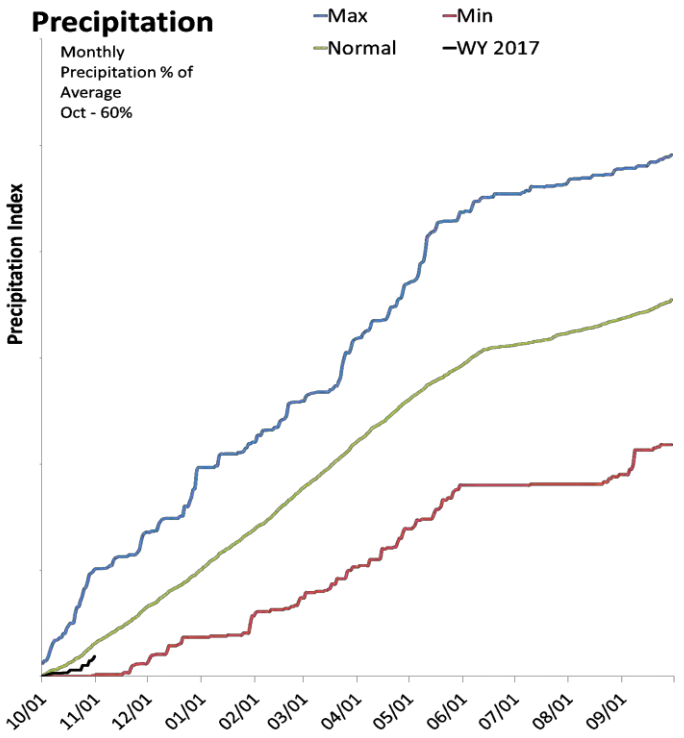
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

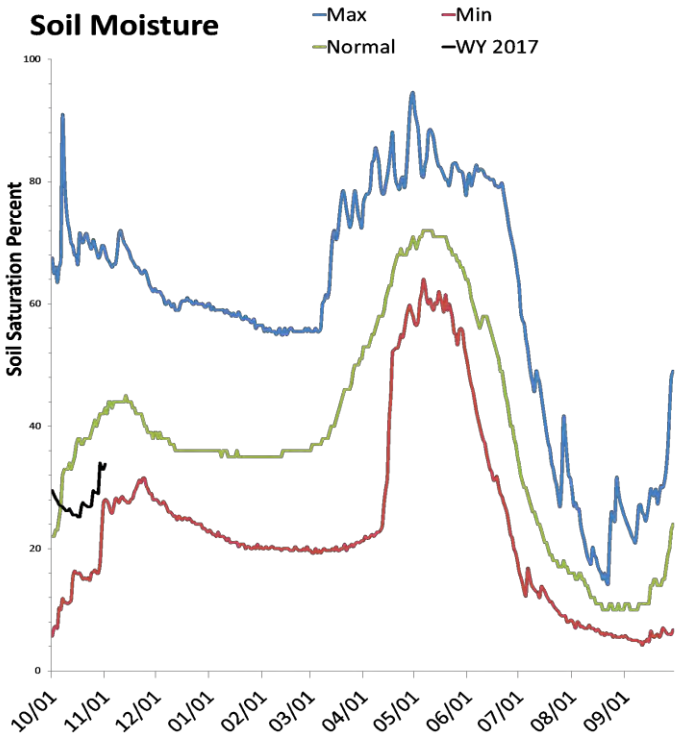


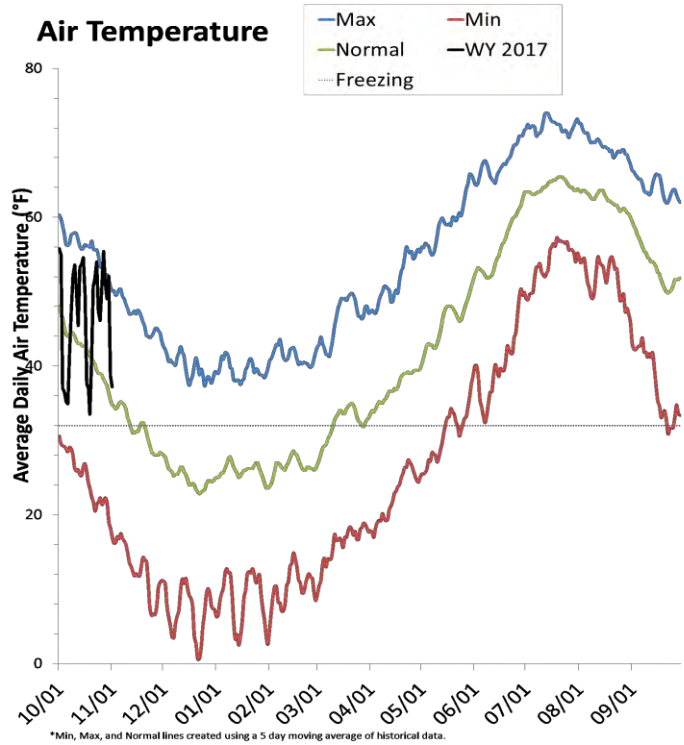
Tooele & Vernon Creek Basins

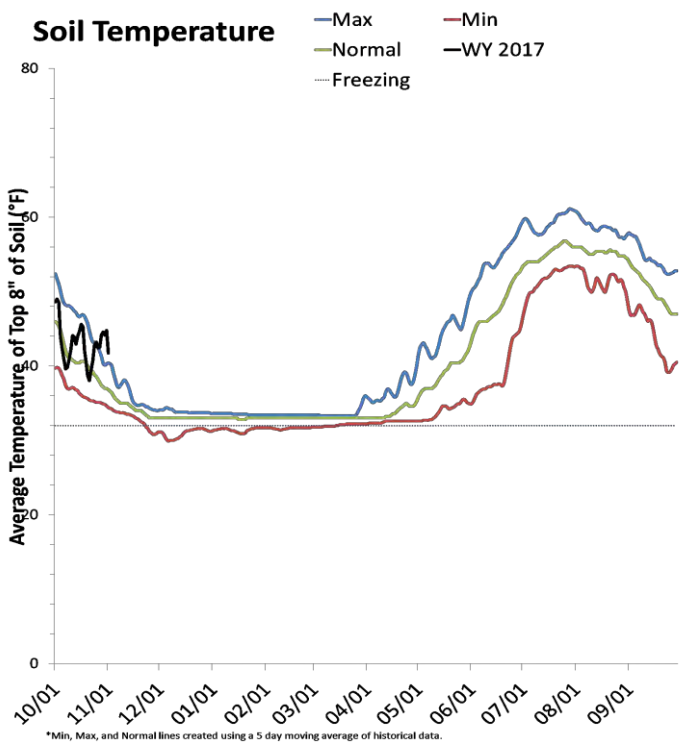
11/1/2016

Precipitation in October was much below average at 60%, which brings the seasonal accumulation (Oct-Oct) to 60% of average. Soil moisture is at 34% compared to 33% last year. Reservoir storage is at 19% of capacity, compared to 27% last year.







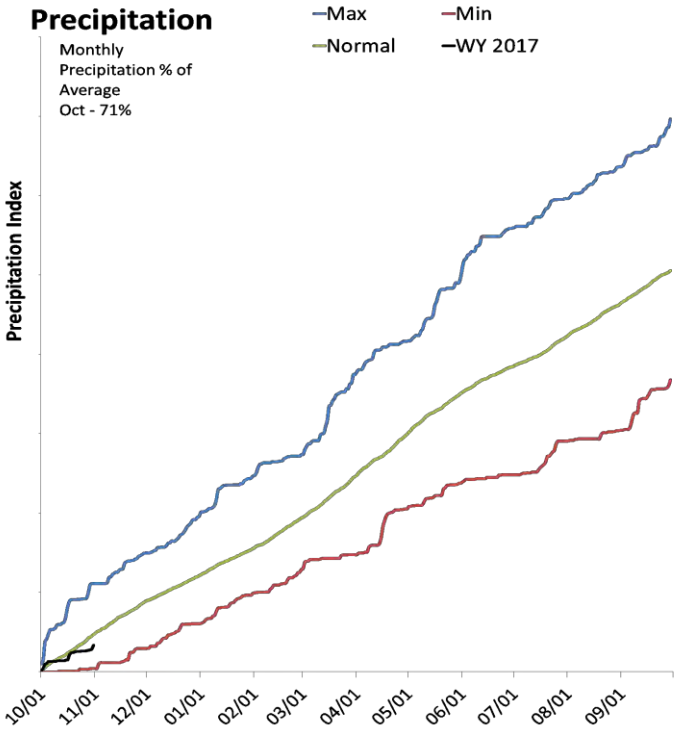


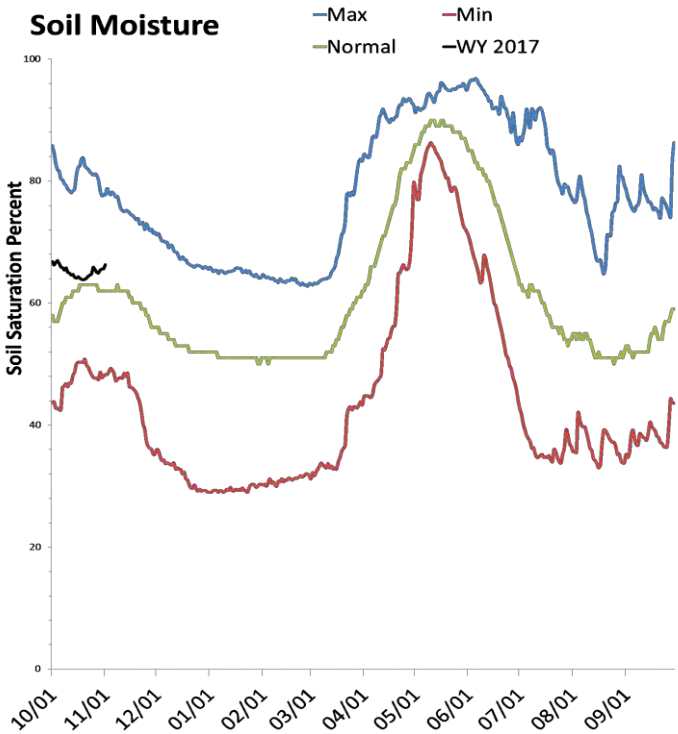
SNOTEL Data

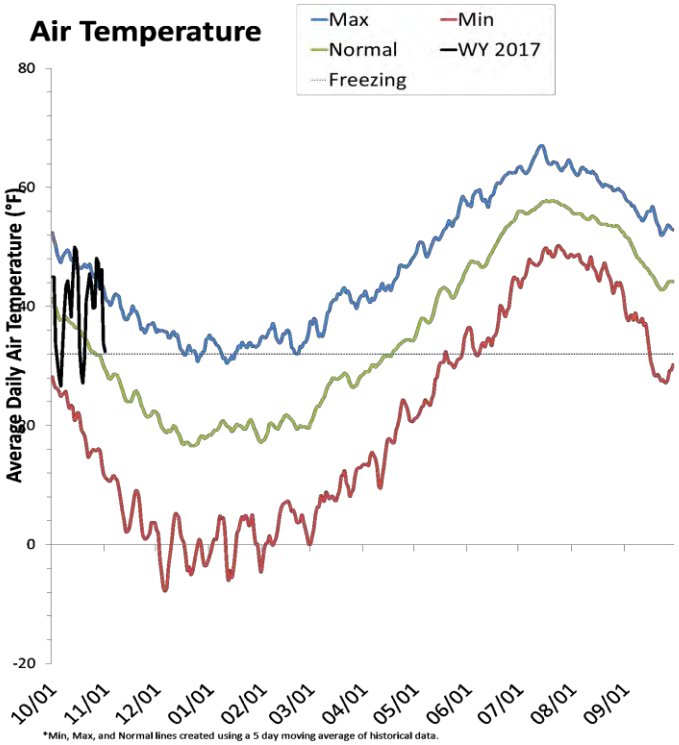
Northeastern Uintah Basin

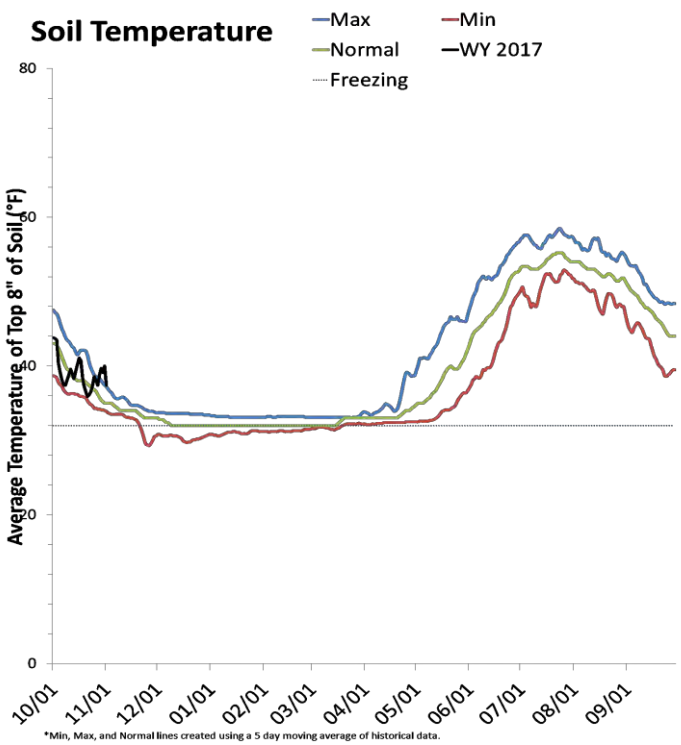
11/1/2016

Precipitation in October was below average at 70%, which brings the seasonal accumulation (Oct-Oct) to 70% of average. Soil moisture is at 71% compared to 56% last year. Reservoir storage is at 84% of capacity, compared to 89% last year. The Water availability Index for Blacks Fork is 65% and 64% for Smiths Creek.









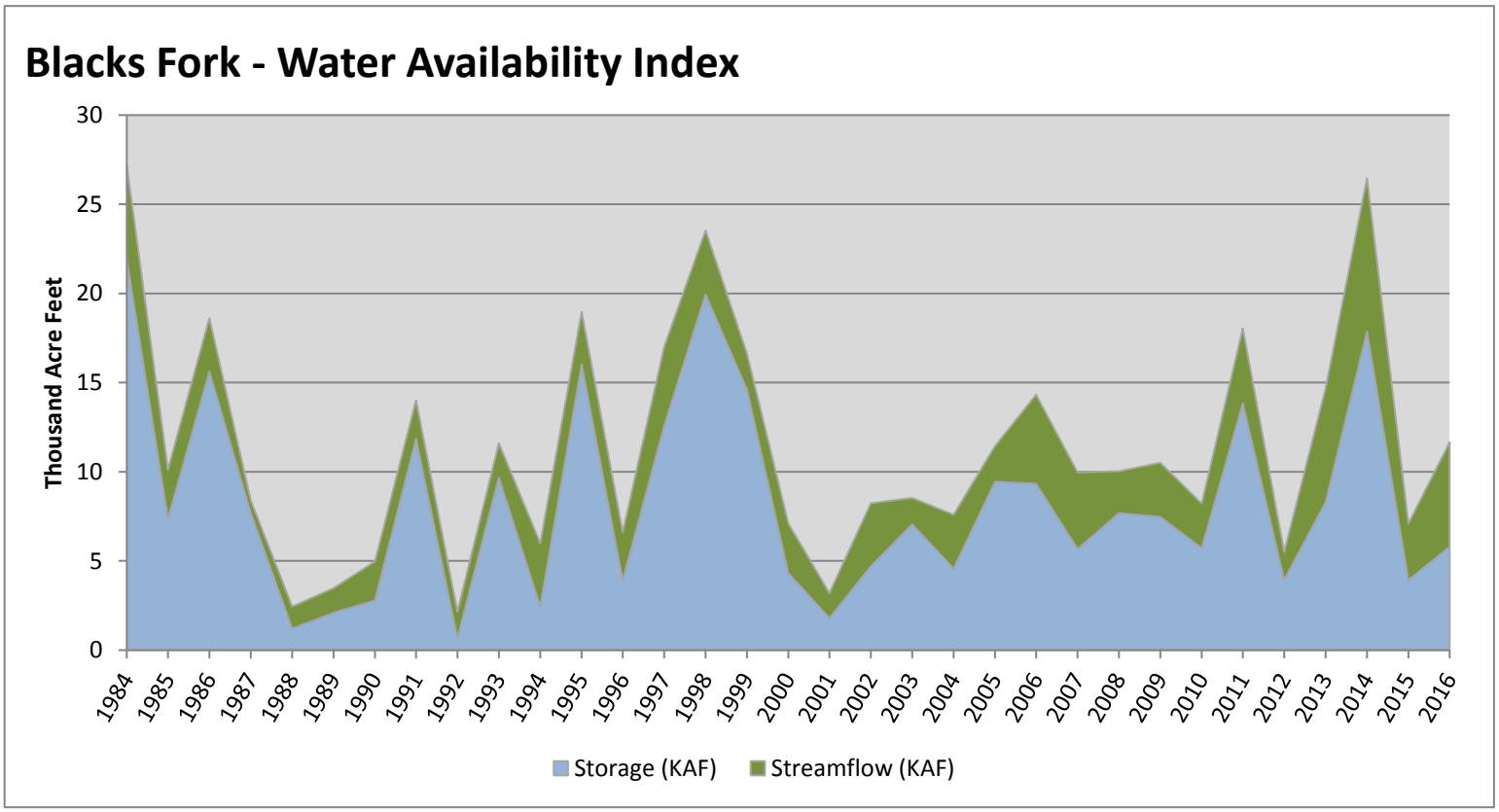
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Blacks Fork	**5.80**	**5.86**	**11.66**	**65**	**1.23**	**05, 93, 91, 06**

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

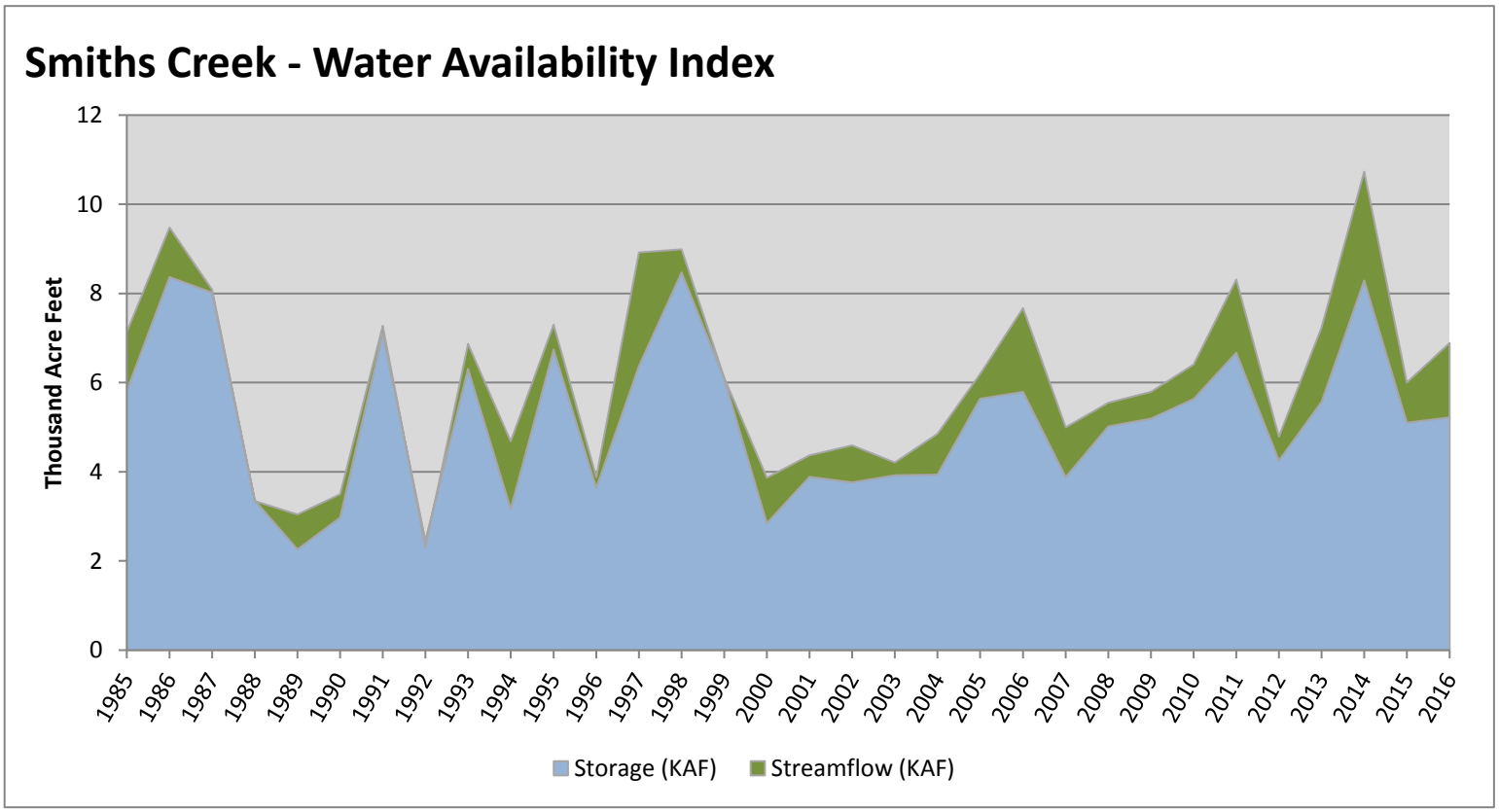


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Smiths Creek	**5.22**	**1.67**	**6.89**	**64**	**1.14**	**10, 93, 85, 13**

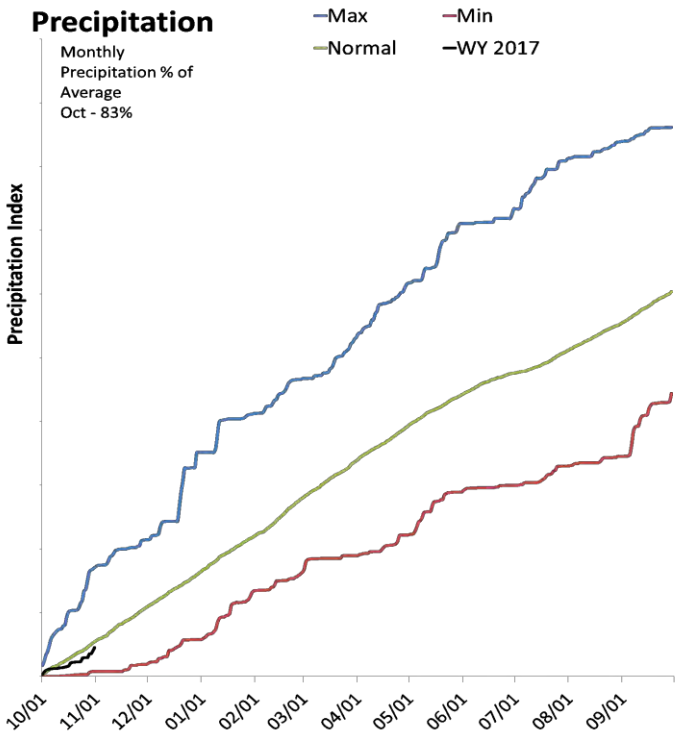
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

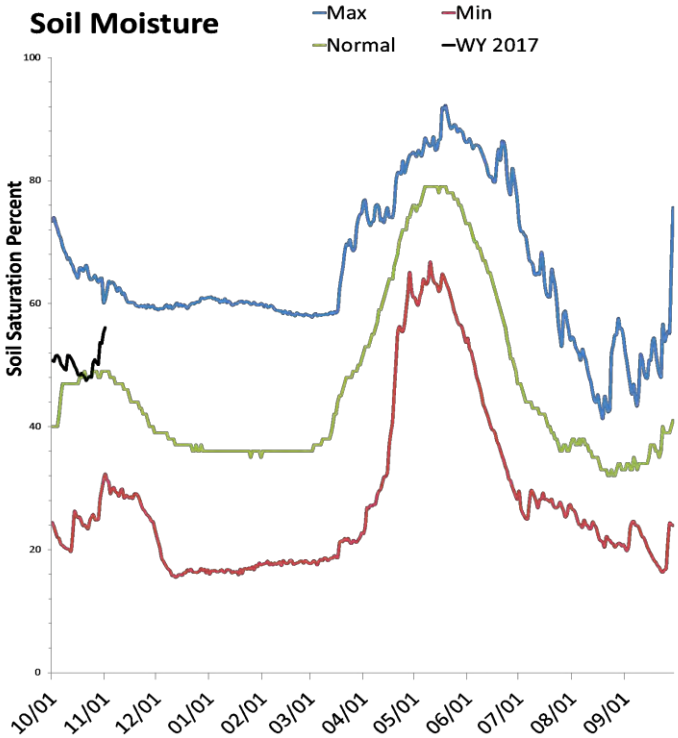


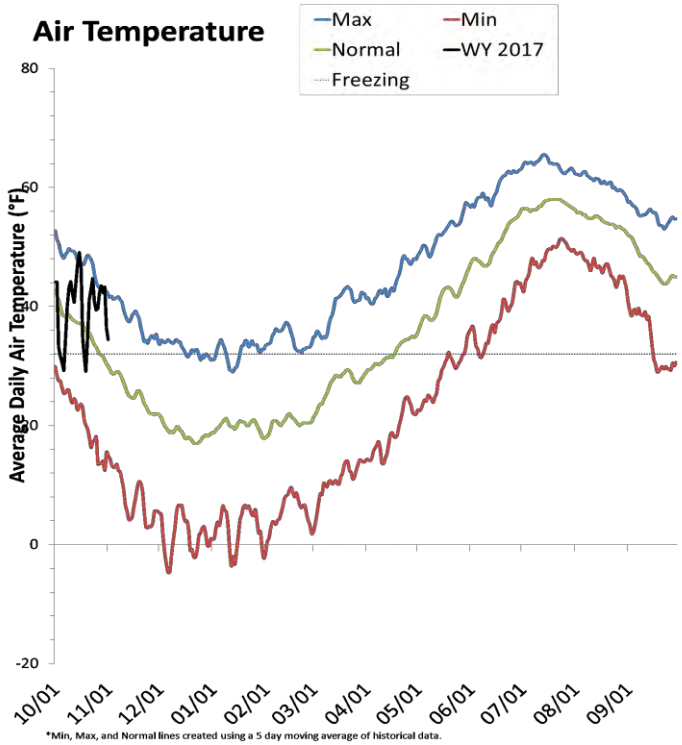
Duchesne River Basin

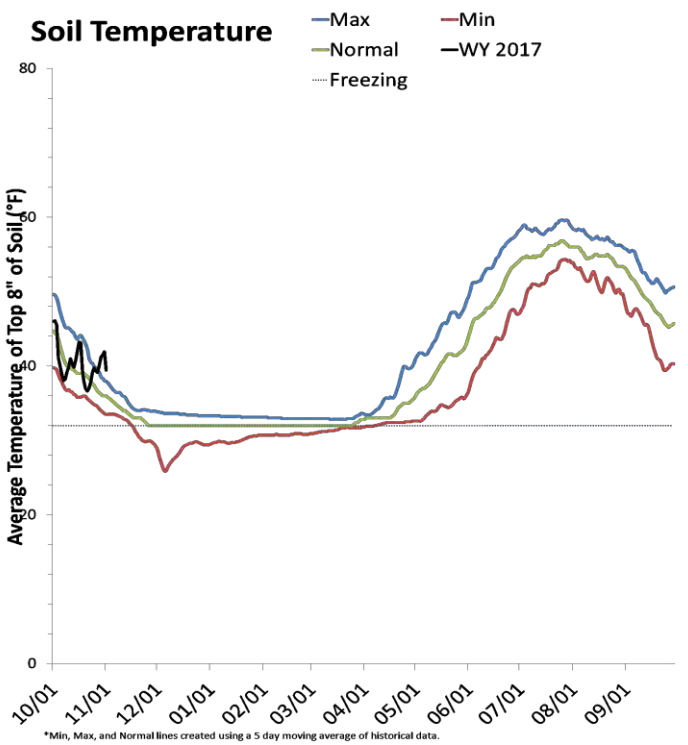
11/1/2016

Precipitation in October was below average at 83%, which brings the seasonal accumulation (Oct-Oct) to 83% of average. Soil moisture is at 62% compared to 43% last year. Reservoir storage is at 69% of capacity, compared to 70% last year. The water availability index for the Western Uintahs is 67% and 59% for the Eastern Uintahs.









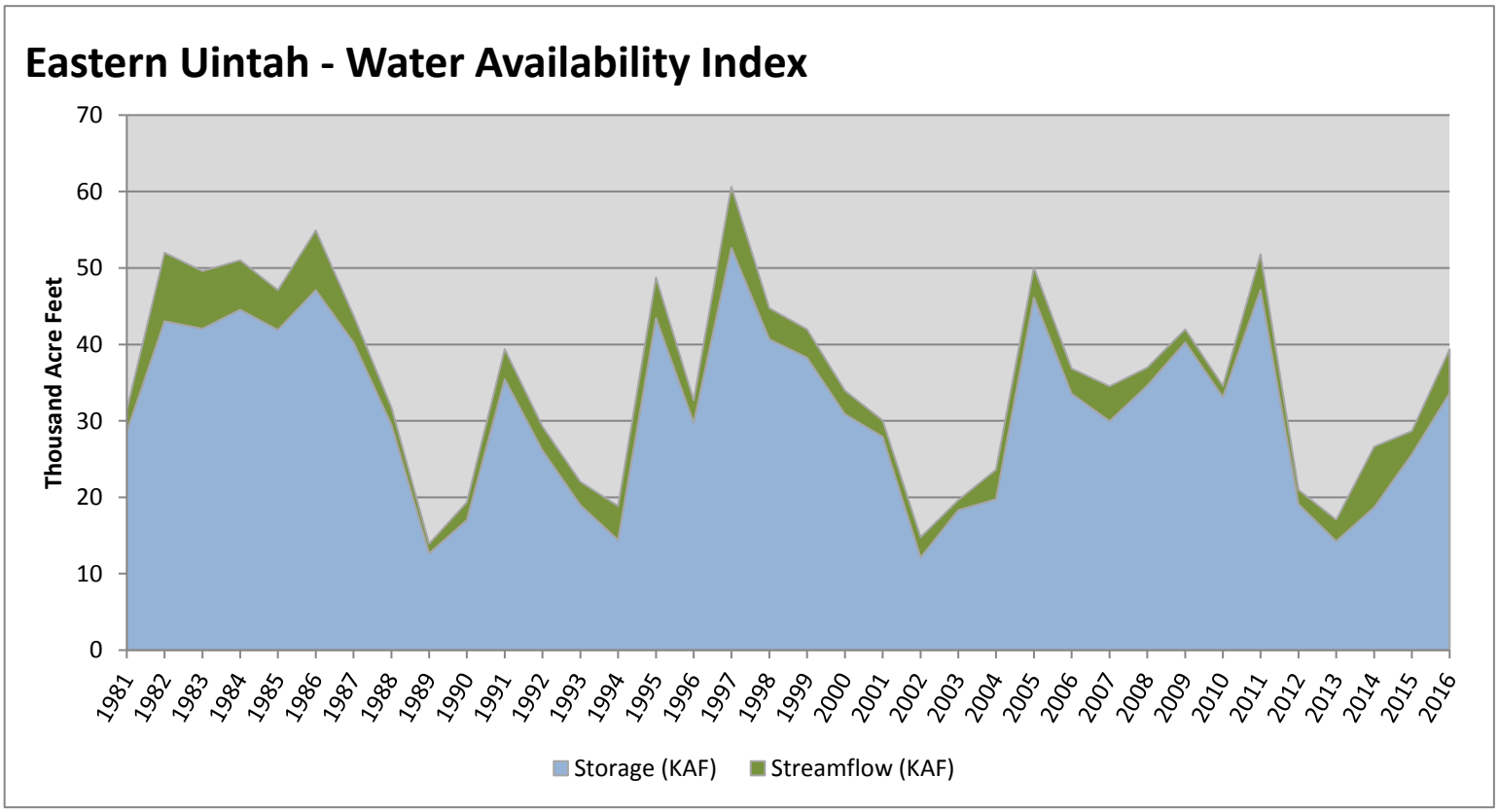
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Eastern Uintah	**33.63**	**5.73**	**39.36**	**59**	**0.79**	**06, 08, 91, 99**

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

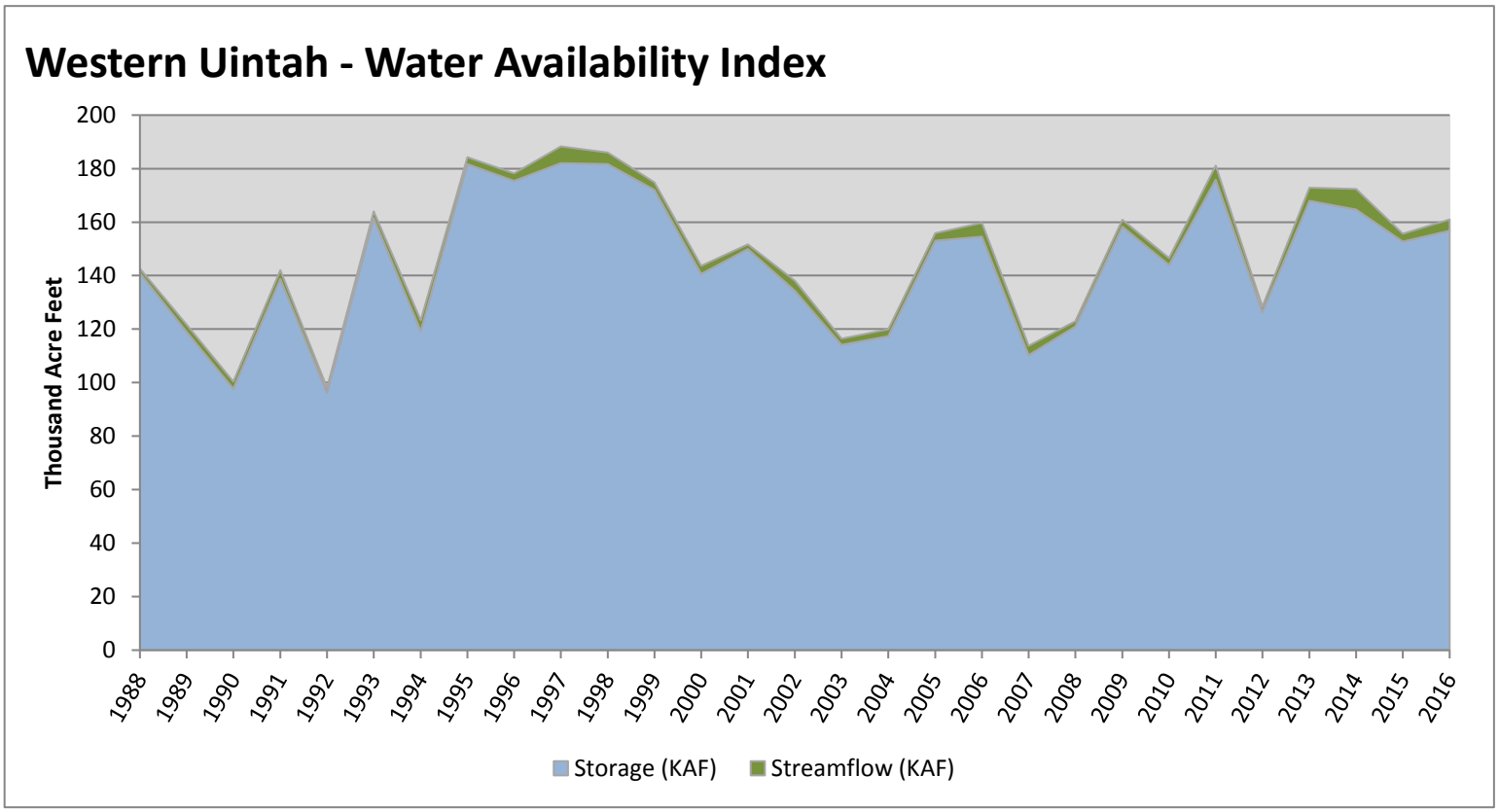


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Western Uintah	**156.83**	**4.14**	**160.97**	**67**	**1.39**	**06, 09, 93, 14**

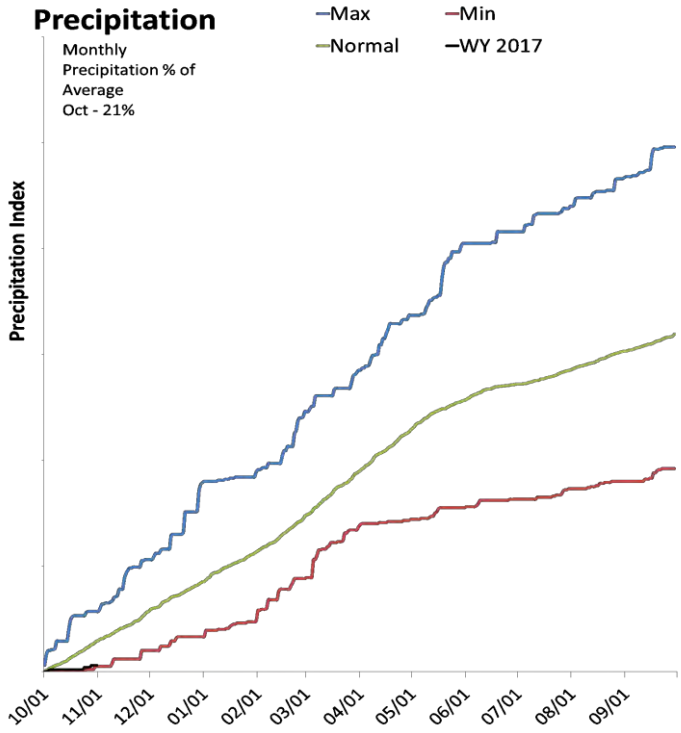
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

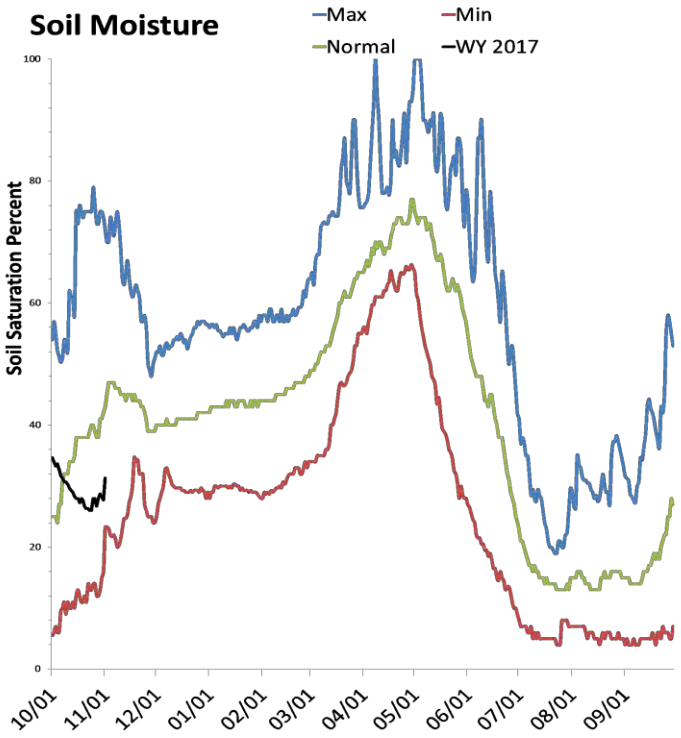


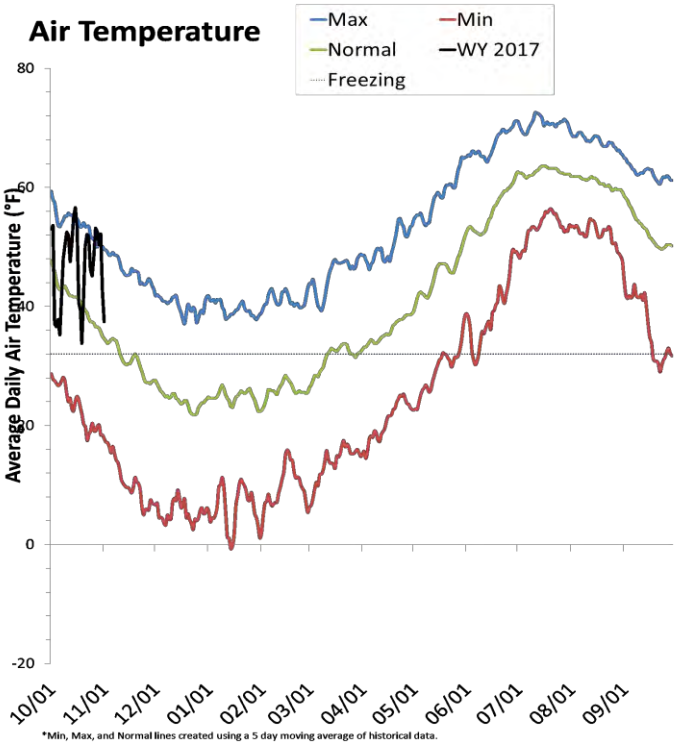
Lower Sevier River Basin

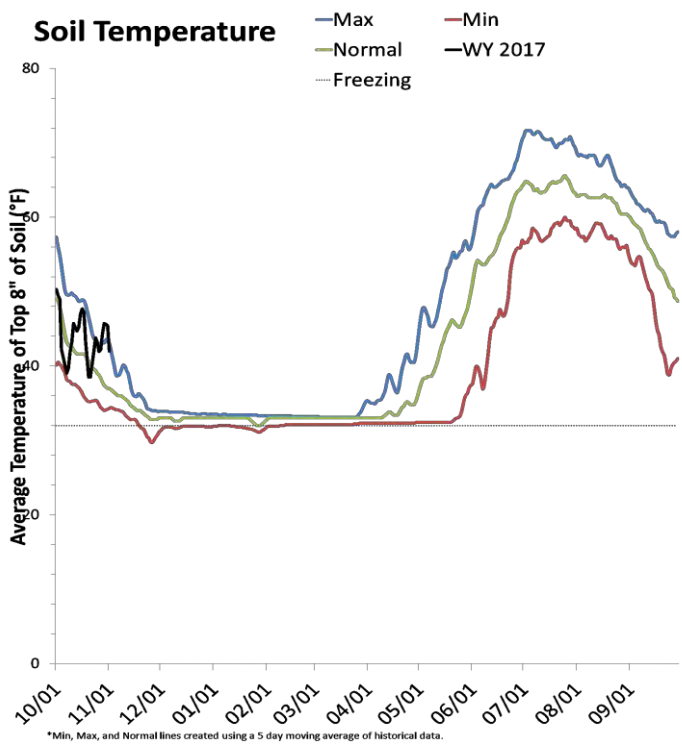
11/1/2016

Precipitation in October was much below average at 21%, which brings the seasonal accumulation (Oct-Oct) to 21% of average. Soil moisture is at 30% compared to 29% last year. Reservoir storage is at 4% of capacity, compared to 20% last year. The water availability index for the Lower Sevier is 5%.







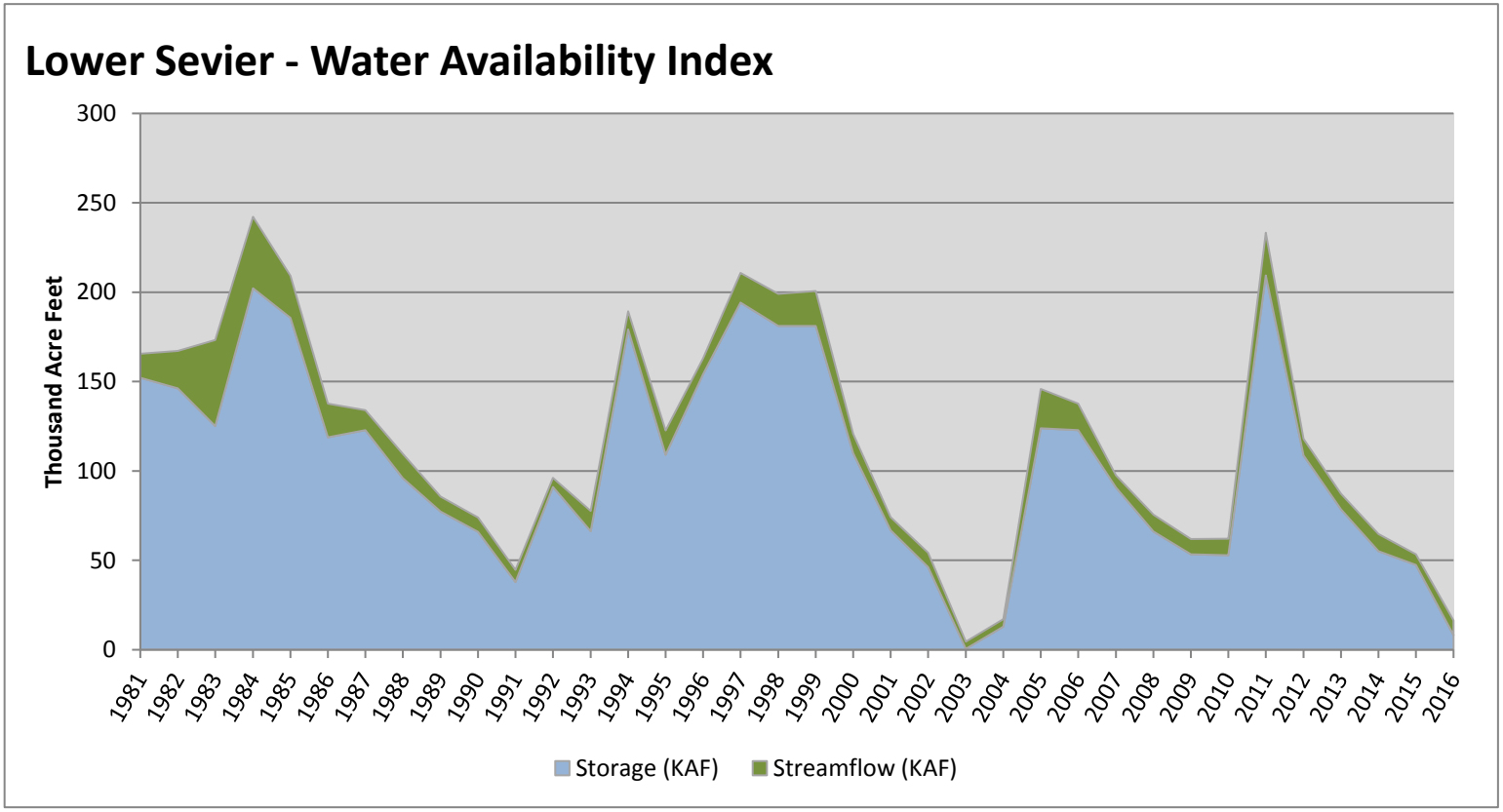


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Lower Sevier	**8.29**	**8.18**	**16.47**	**5**	**-3.72**	**03, 04, 91, 15**

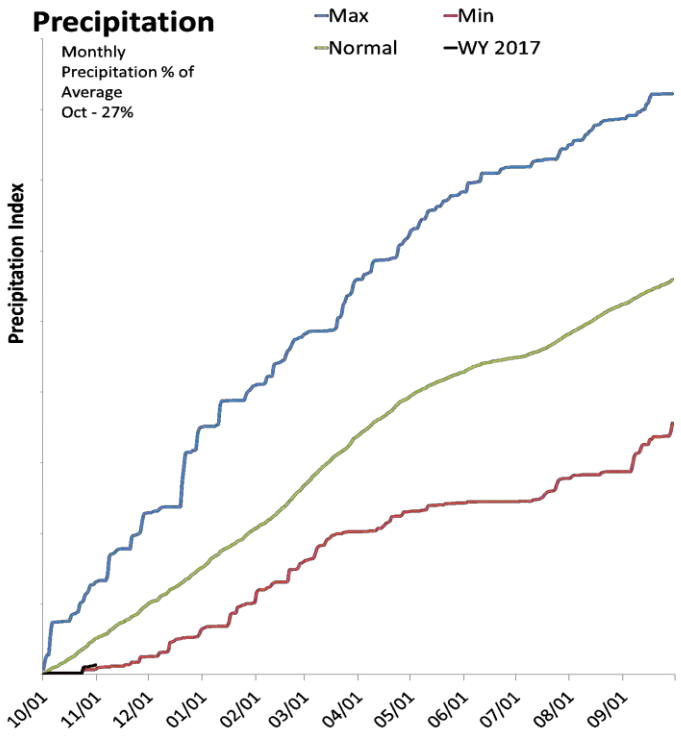
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

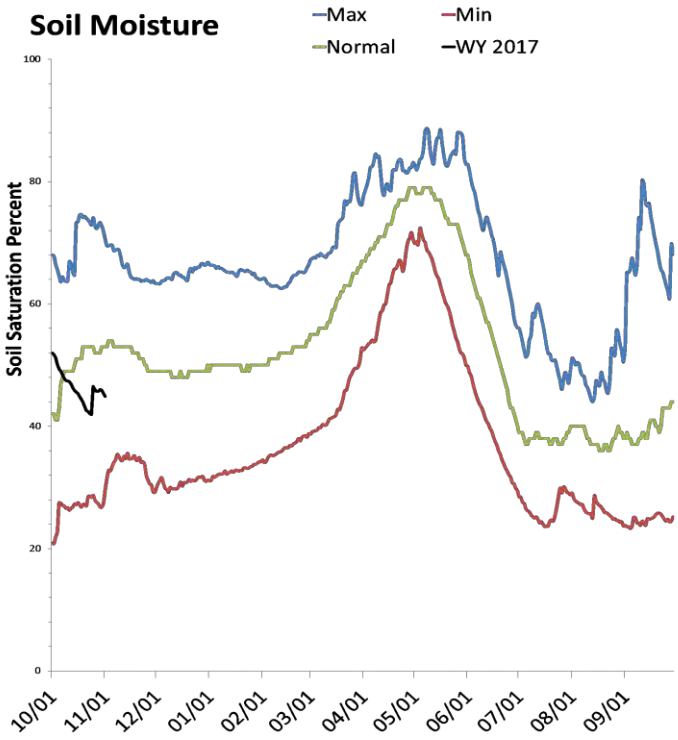


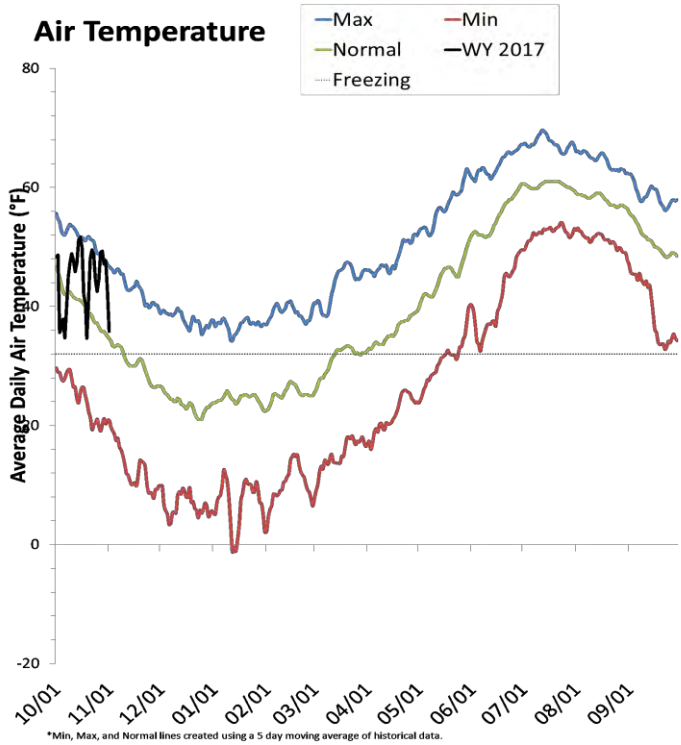
Upper Sevier River Basin

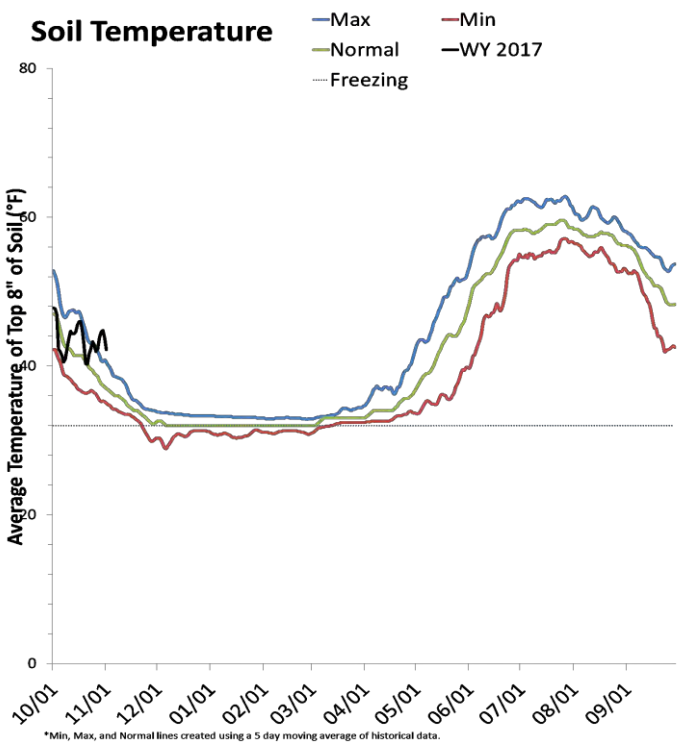
11/1/2016

Precipitation in October was much below average at 27%, which brings the seasonal accumulation (Oct-Oct) to 27% of average. Soil moisture is at 46% compared to 59% last year. Reservoir storage is at 20% of capacity, compared to 18% last year. The water availability index for the Upper Sevier is 22%.









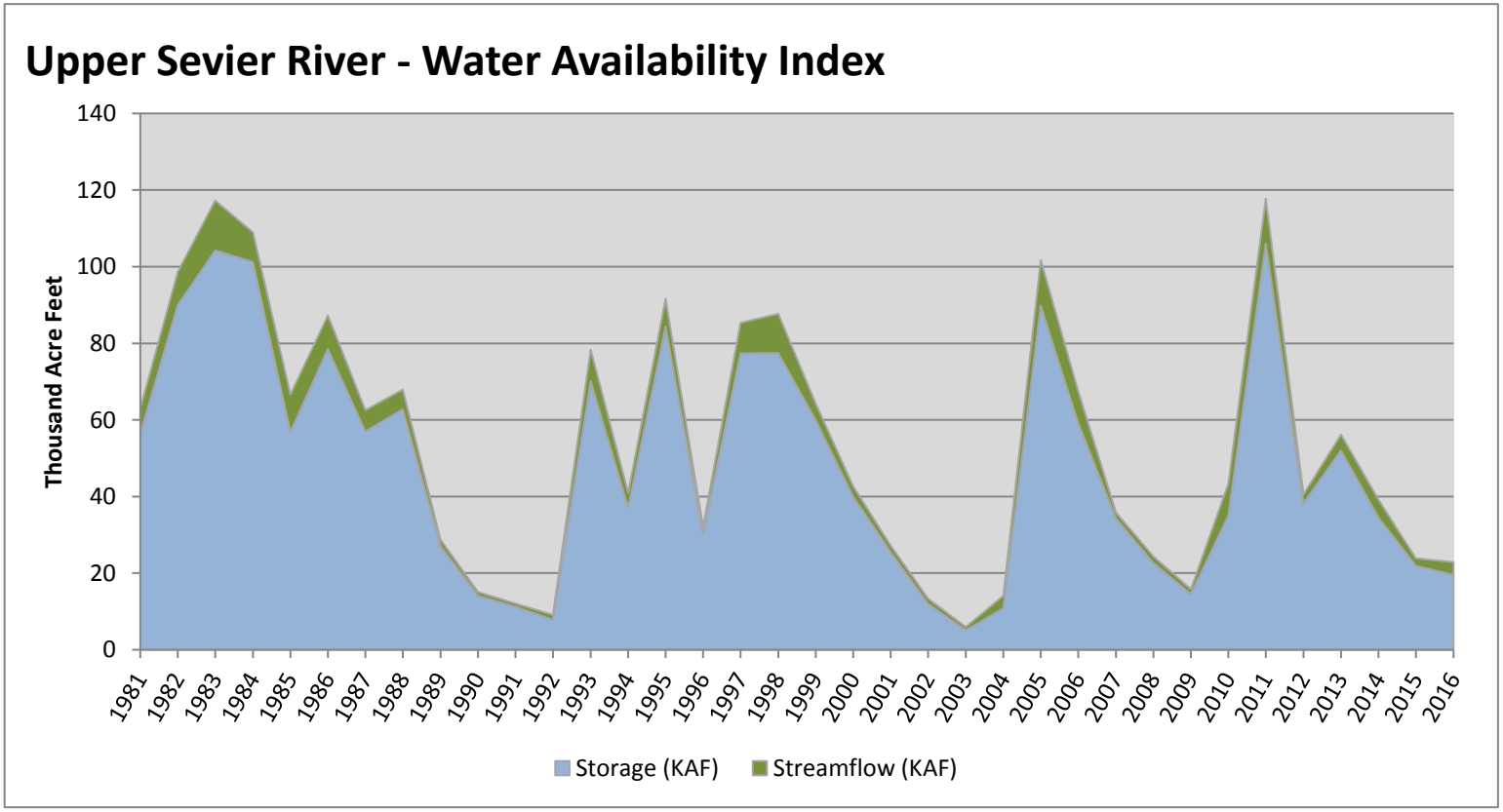
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Upper Sevier River	**19.57**	**3.31**	**22.88**	**22**	**-2.36**	**90, 09, 15, 08**

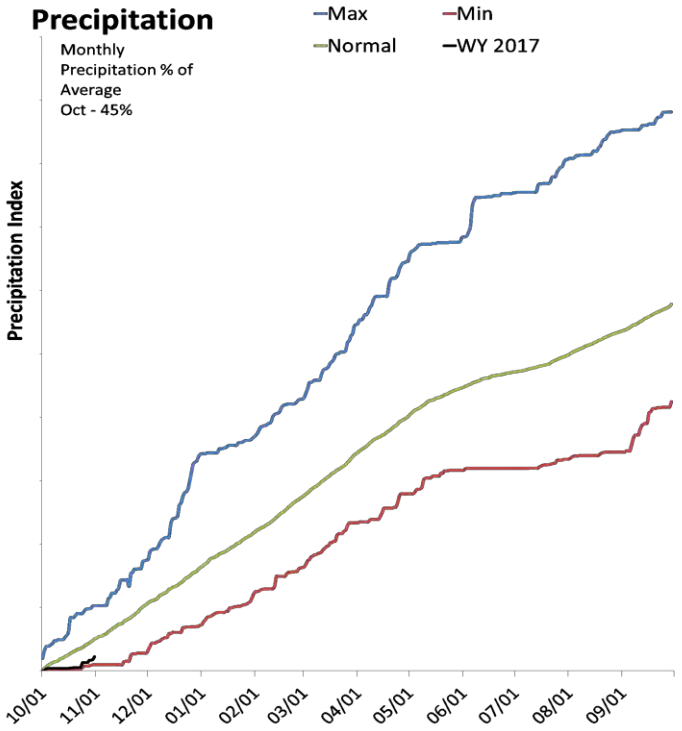
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

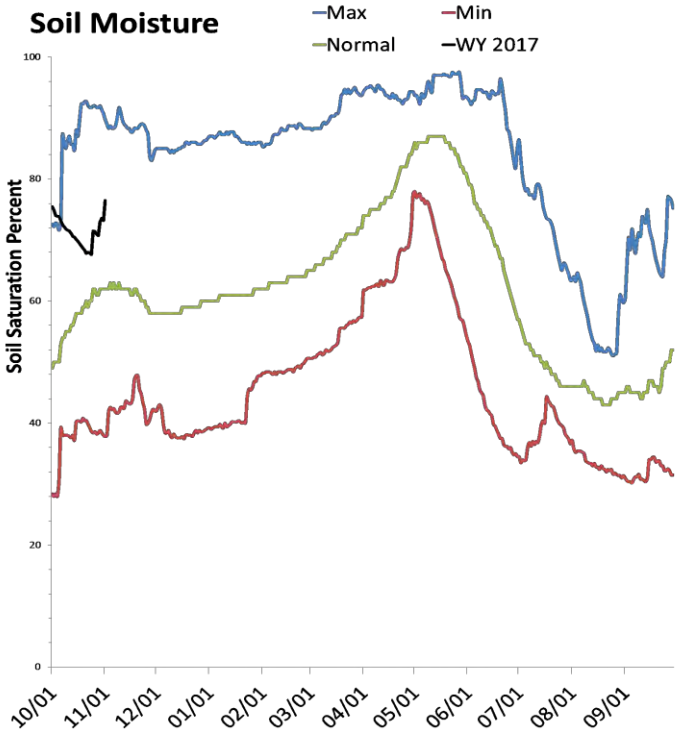


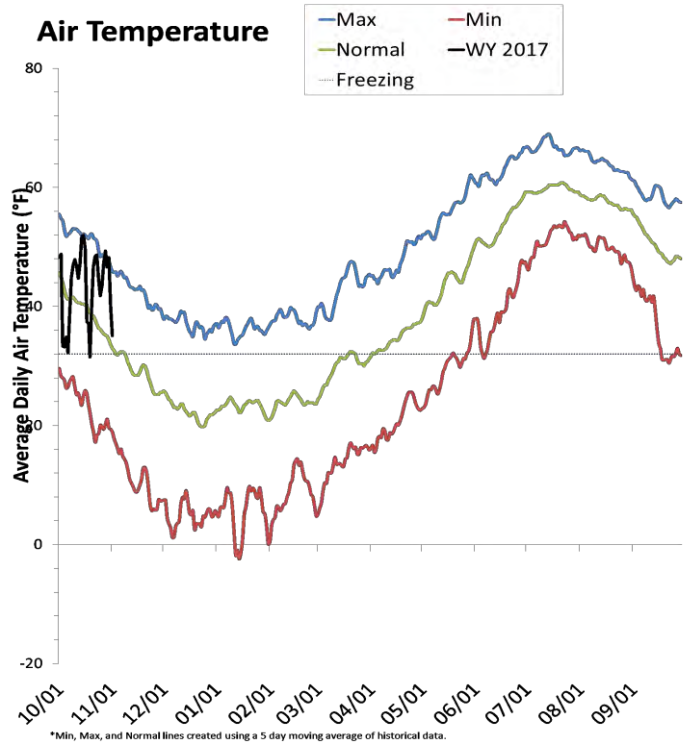
San Pitch River Basin

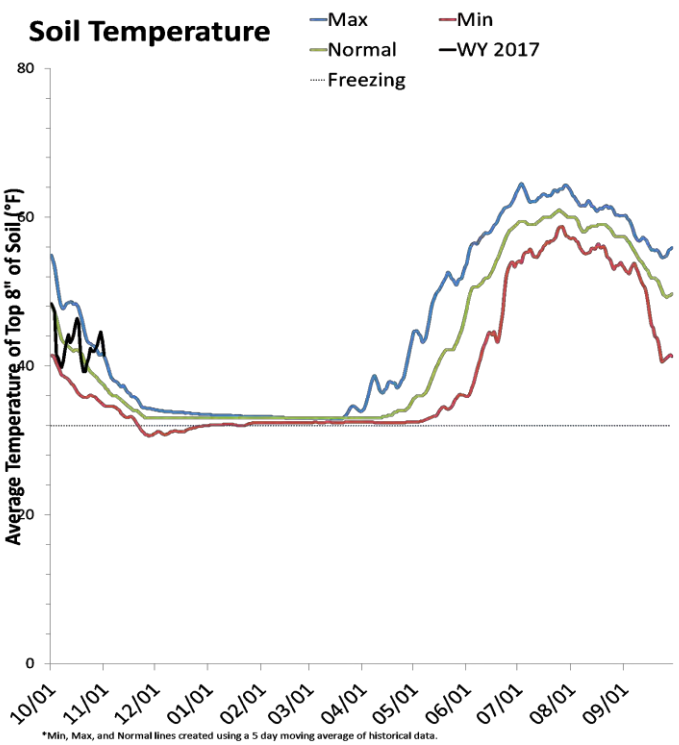
11/1/2016

Precipitation in October was much below average at 45%, which brings the seasonal accumulation (Oct-Oct) to 45% of average. Soil Moisture is at 75% compared to 53% last year. Reservoir storage is at 0% of capacity, compared to 0% last year.The water availability index for the San Pitch is 24%.









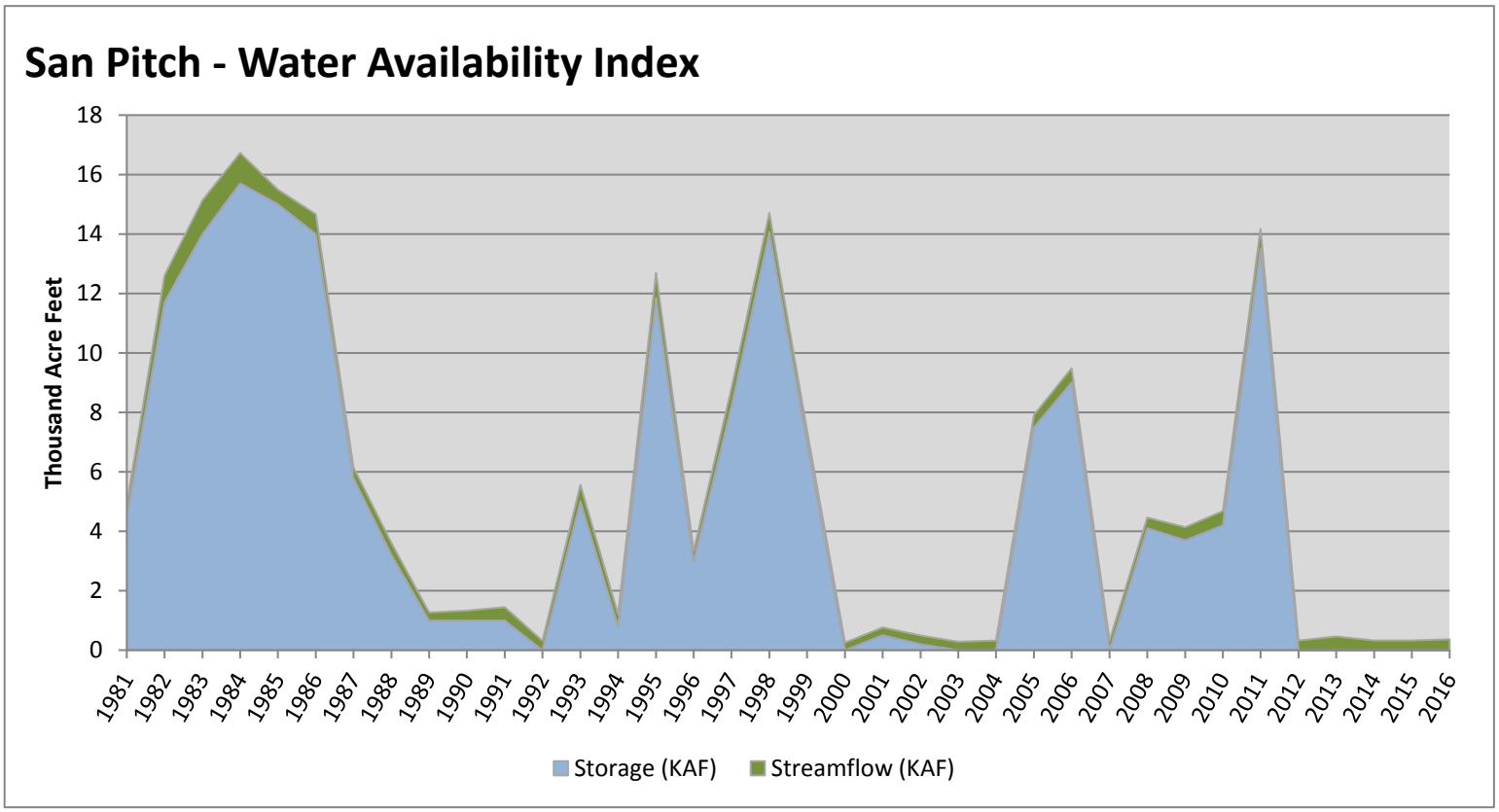
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
San Pitch	**0.00**	**0.37**	**0.37**	**24**	**-2.14**	**12, 14, 13, 02**

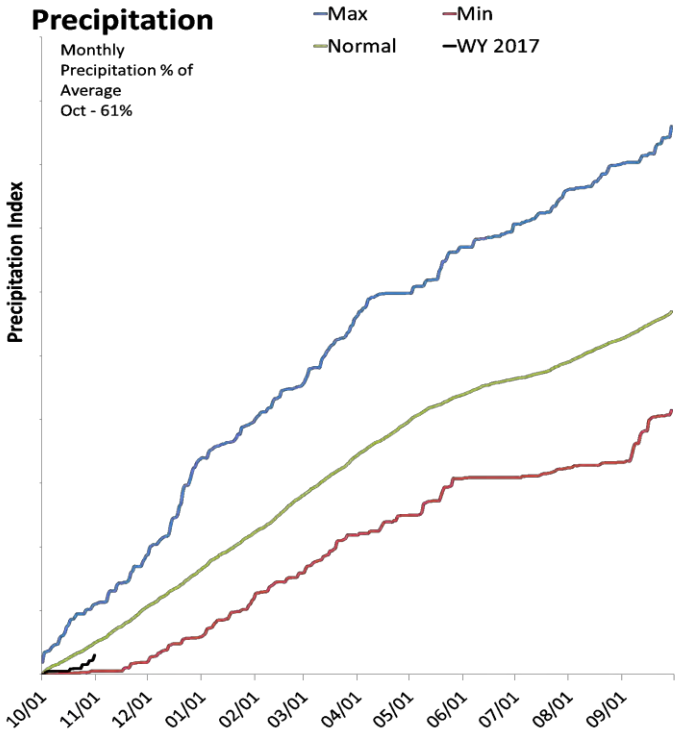
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

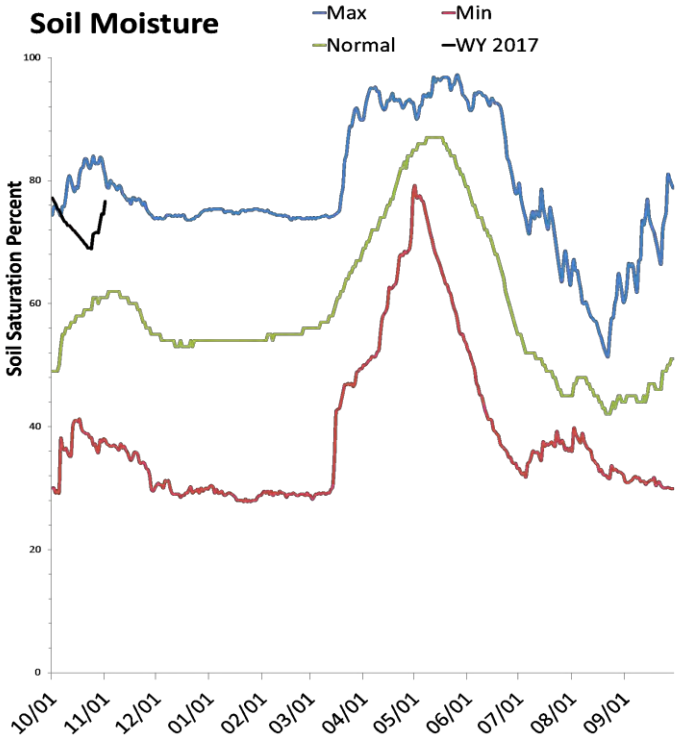


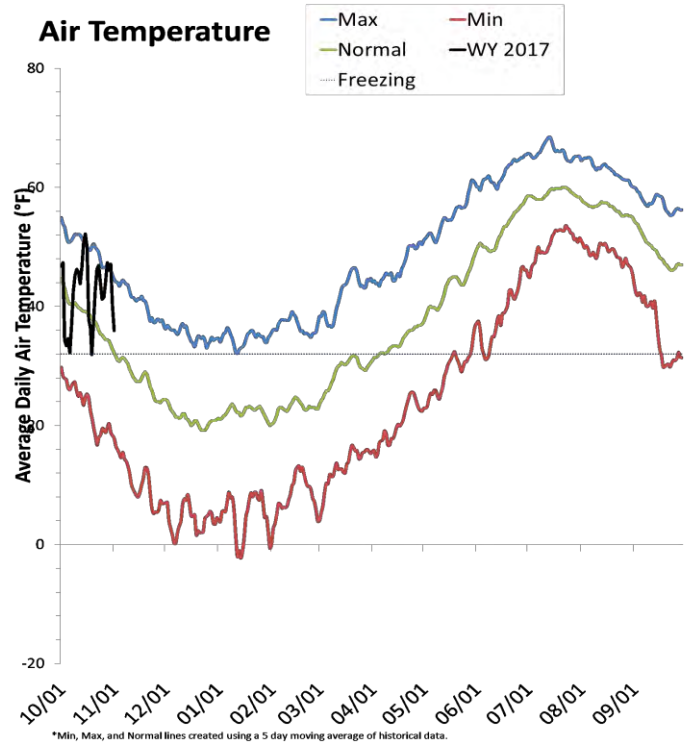
Price & San Rafael Basins

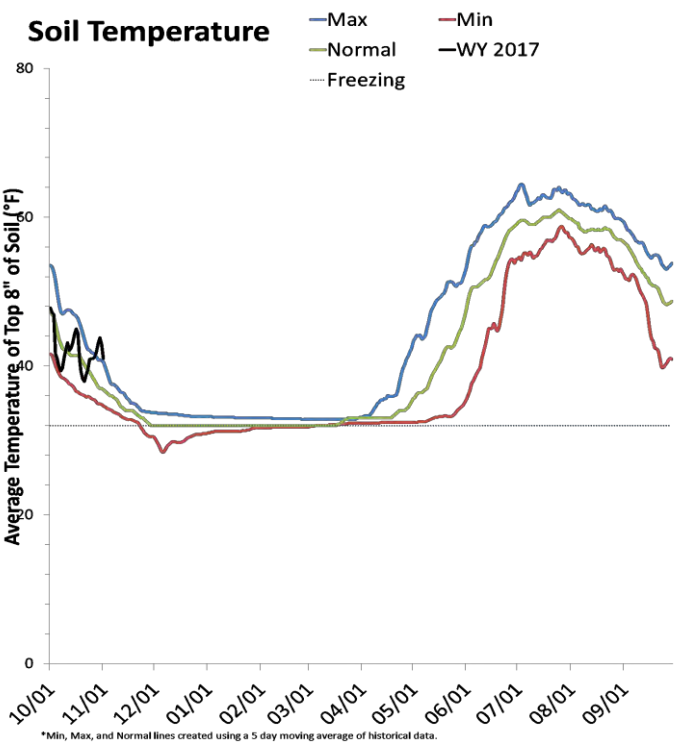
11/1/2016

Precipitation in October was much below average at 60%, which brings the seasonal accumulation (Oct-Oct) to 60% of average. Soil moisture is at 77% compared to 60% 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 16% for Joe's Valley.







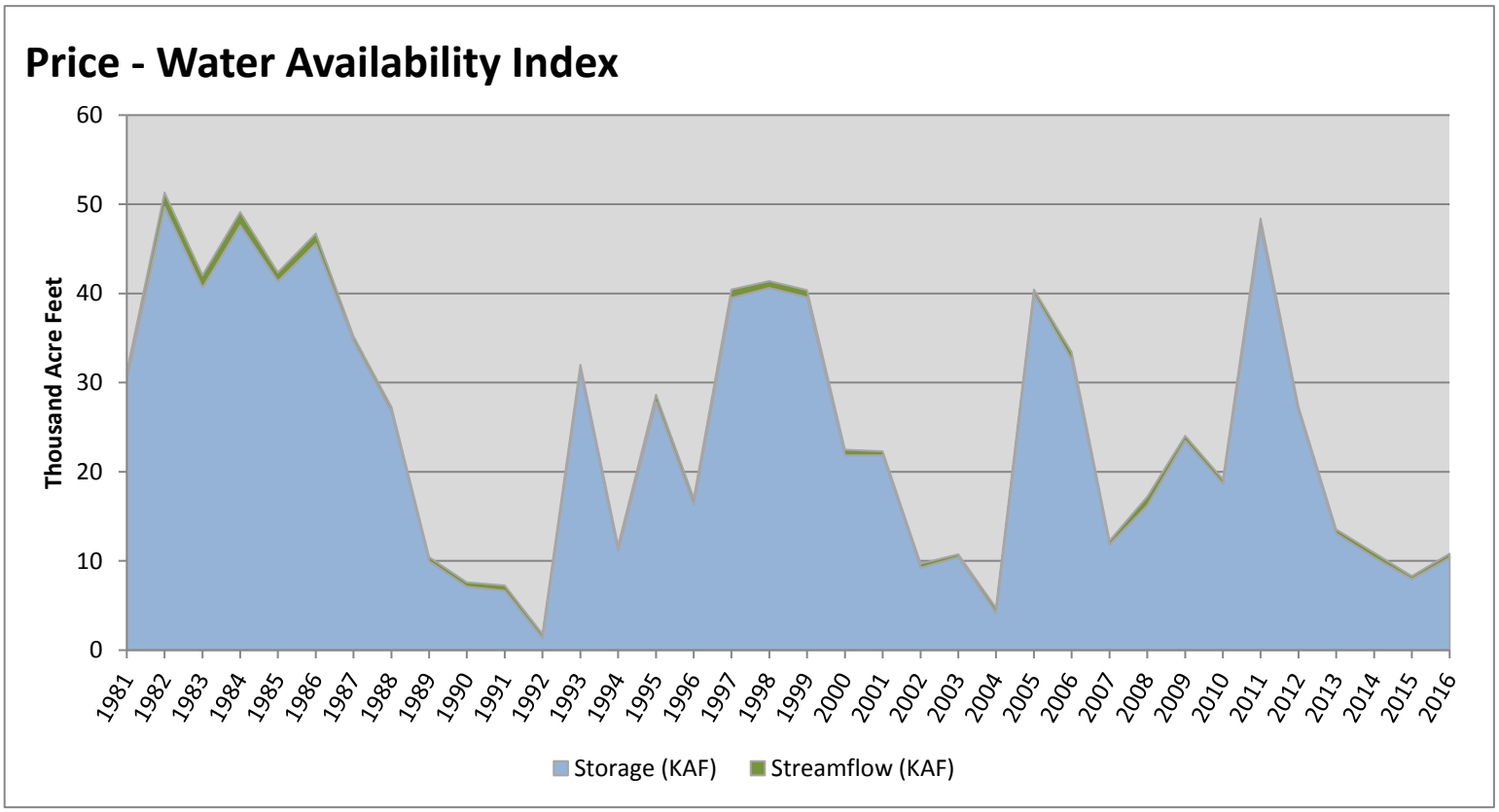


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Price	**10.38**	**0.43**	**10.81**	**24**	**-2.14**	**89, 03, 14, 94**

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

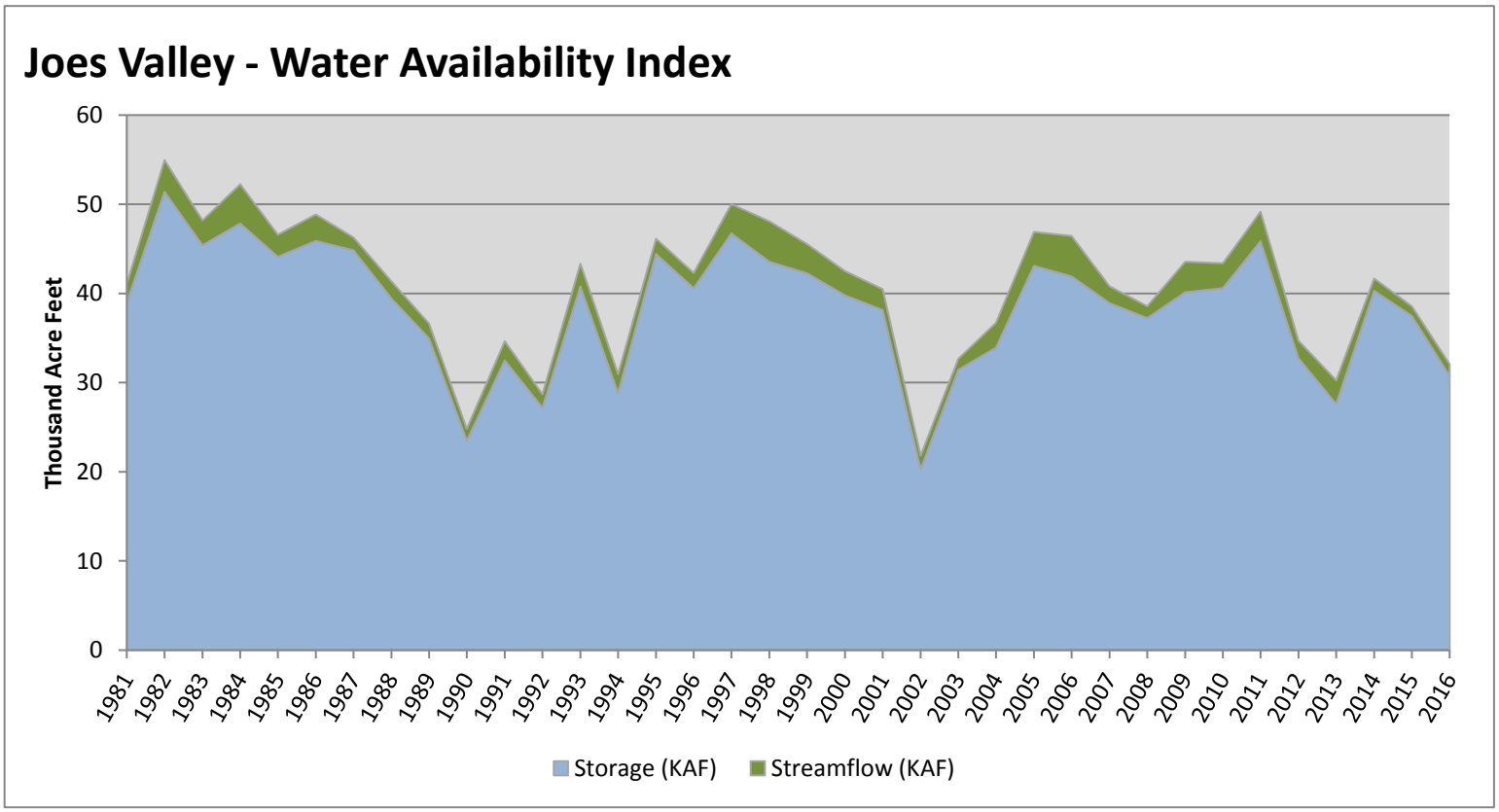


November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Joes Valley	**30.74**	**1.32**	**32.06**	**16**	**-2.82**	**13, 94, 03, 91**

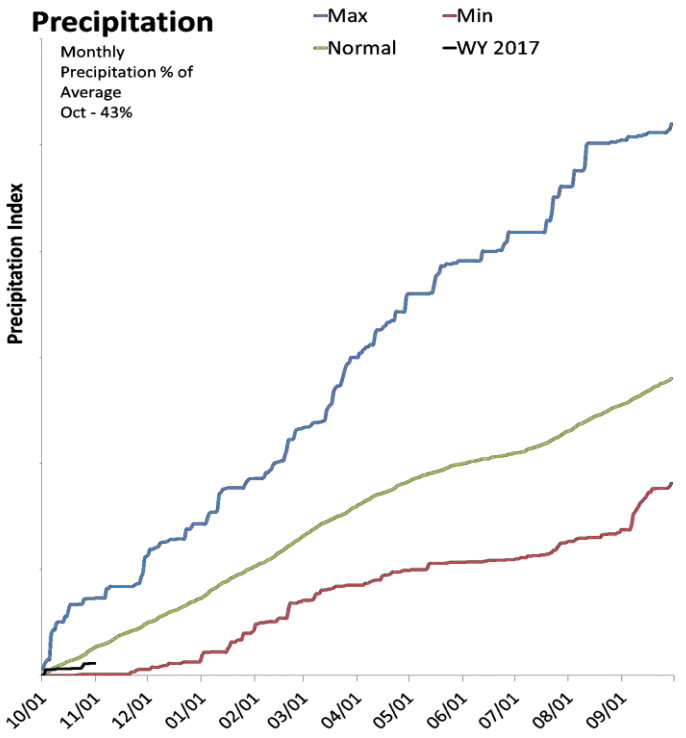
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

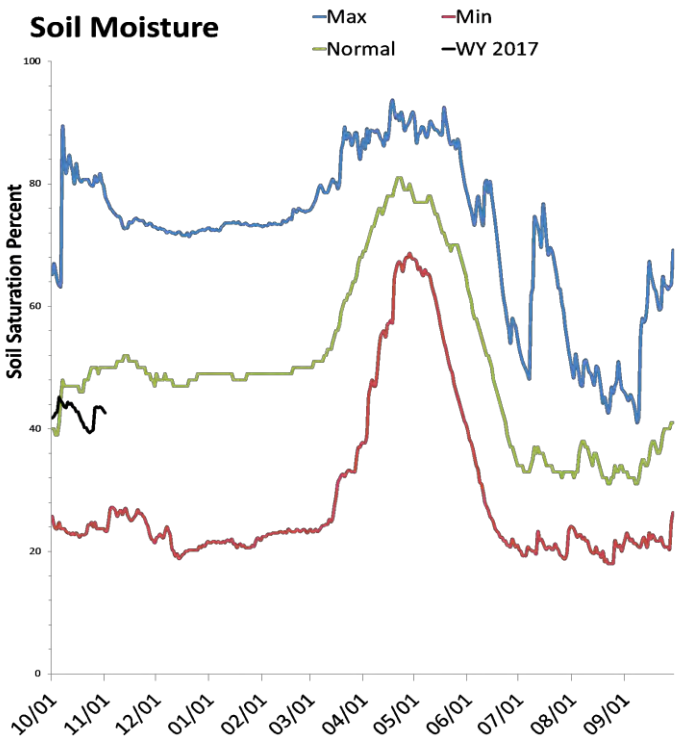


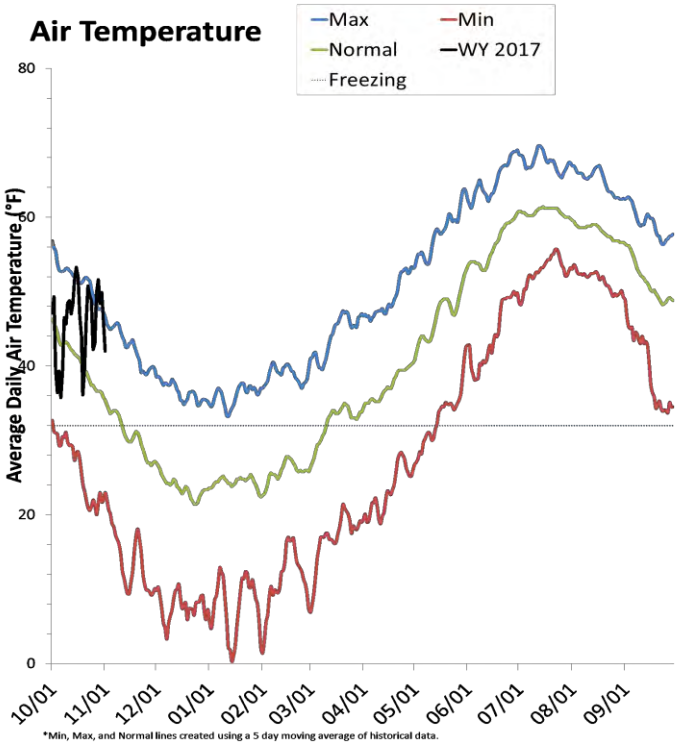
Southeastern Utah Basin

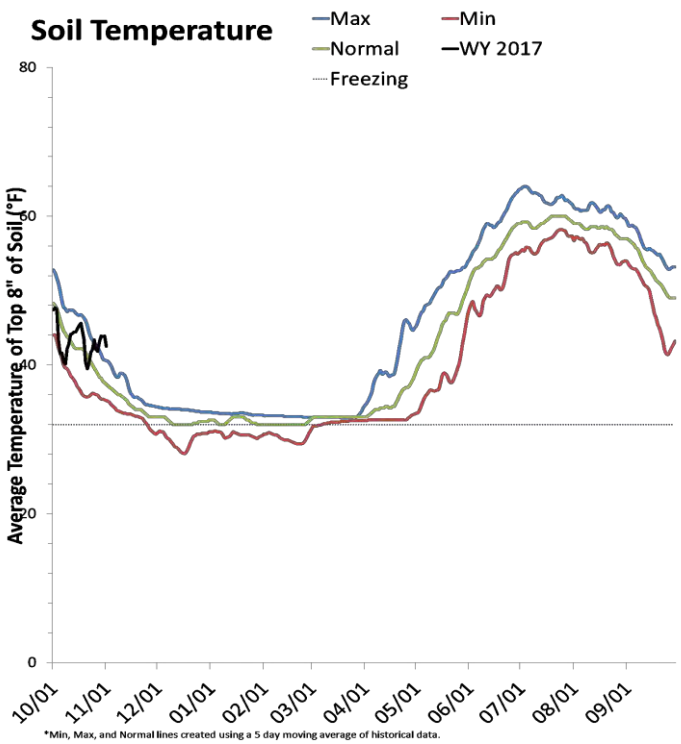
11/1/2016

Precipitation in October was much below average at 43%, which brings the seasonal accumulation (Oct-Oct) to 43% of average. Soil moisture is at 48% compared to 68% last year. Reservoir storage is at 70% of capacity, compared to 50% last year. The water availability index for Moab is 90%.









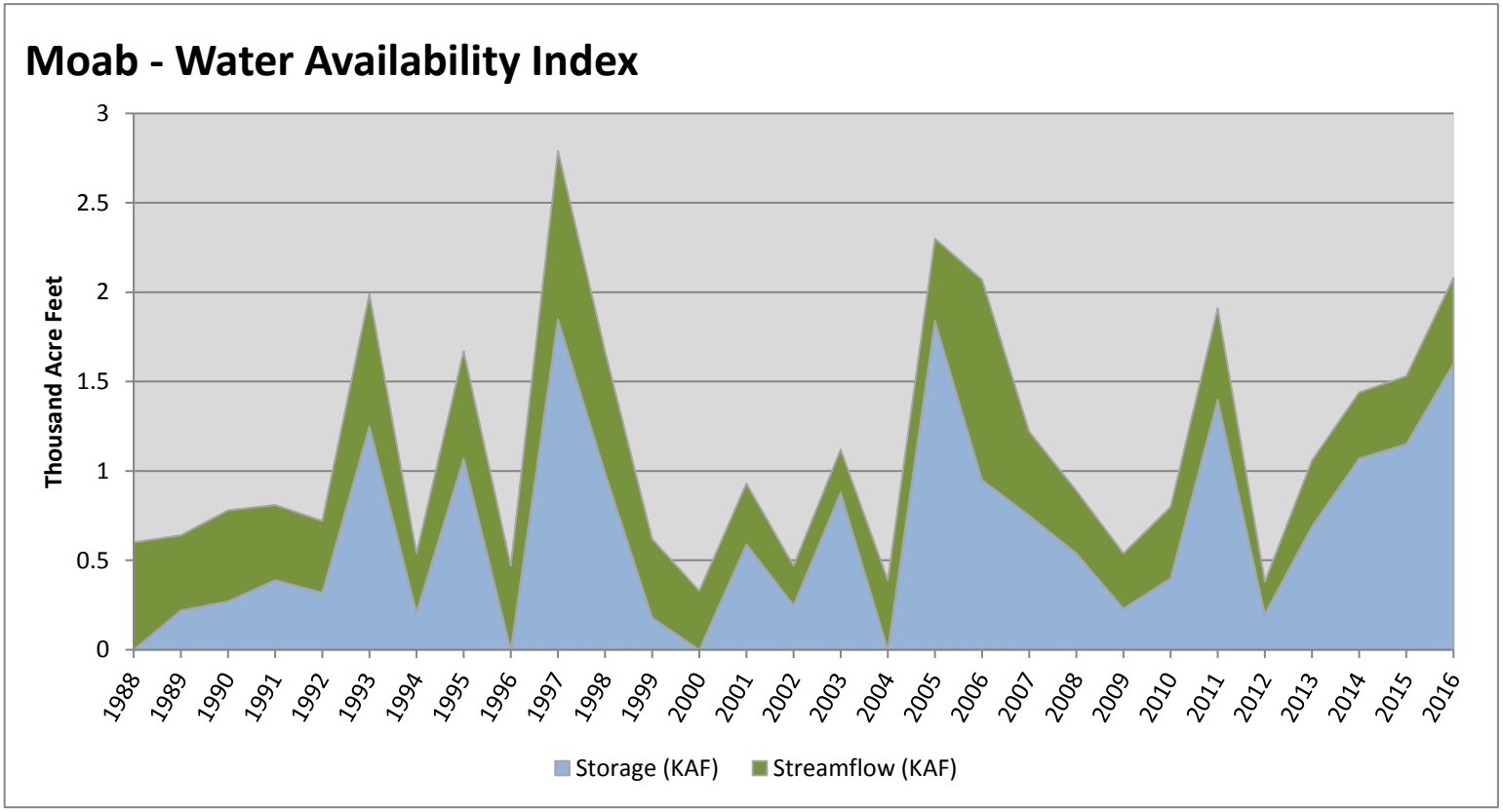
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Moab	**1.60**	**0.48**	**2.08**	**90**	**3.33**	**93, 06, 05, 97**

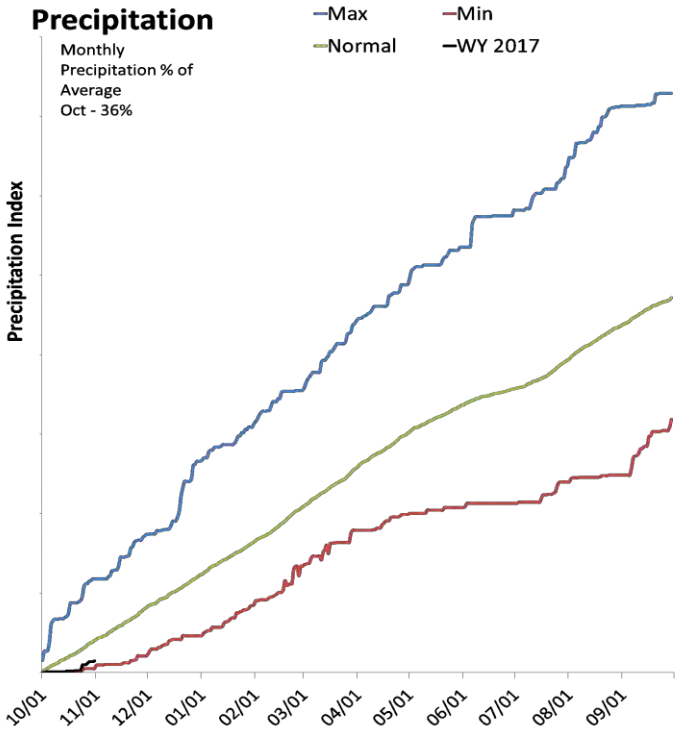
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

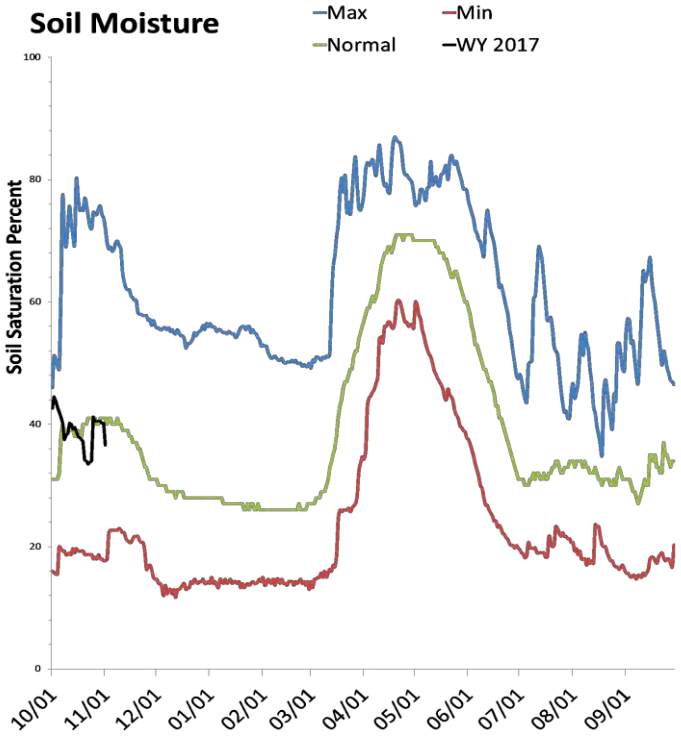


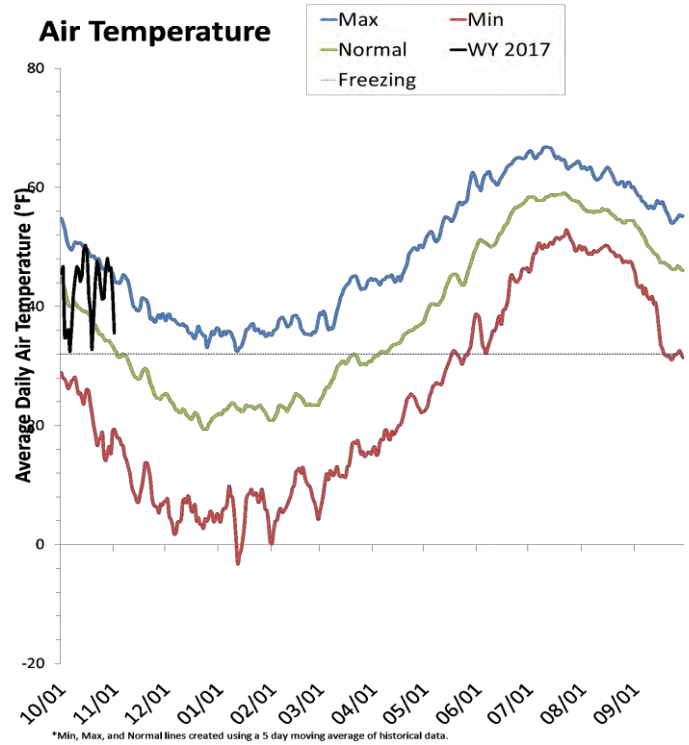
Dirty Devil Basin

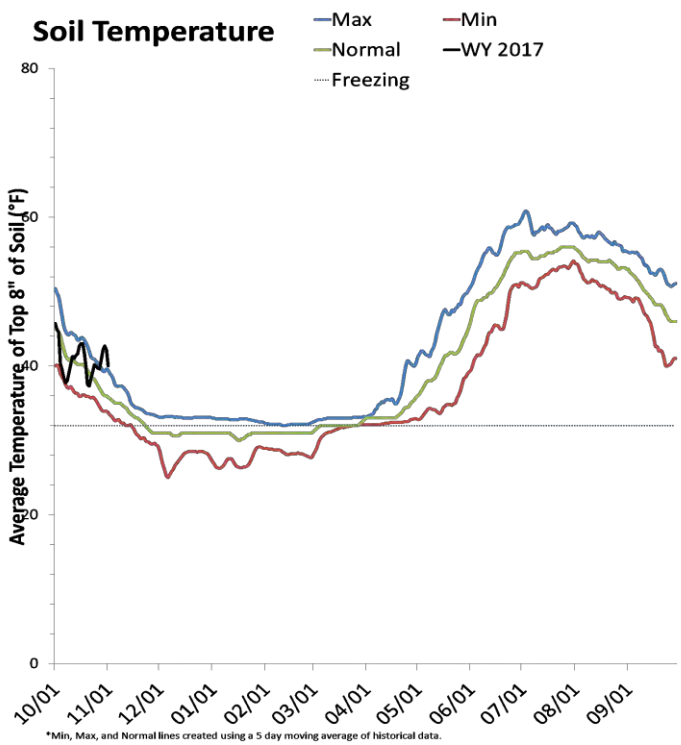
11/1/2016

Precipitation in October was much below average at 36%, which brings the seasonal accumulation (Oct-Oct) to 36% of average. Soil moisture is at 42% compared to 50% last year.





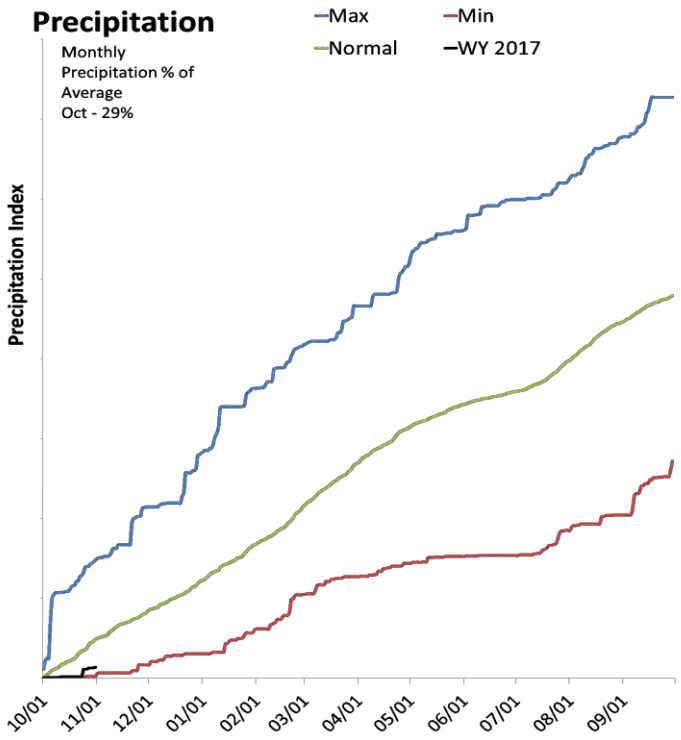


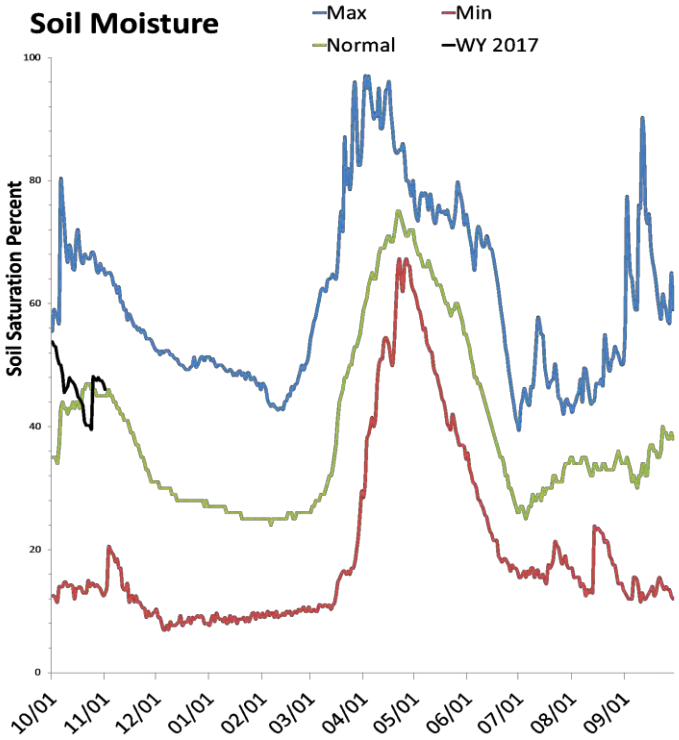


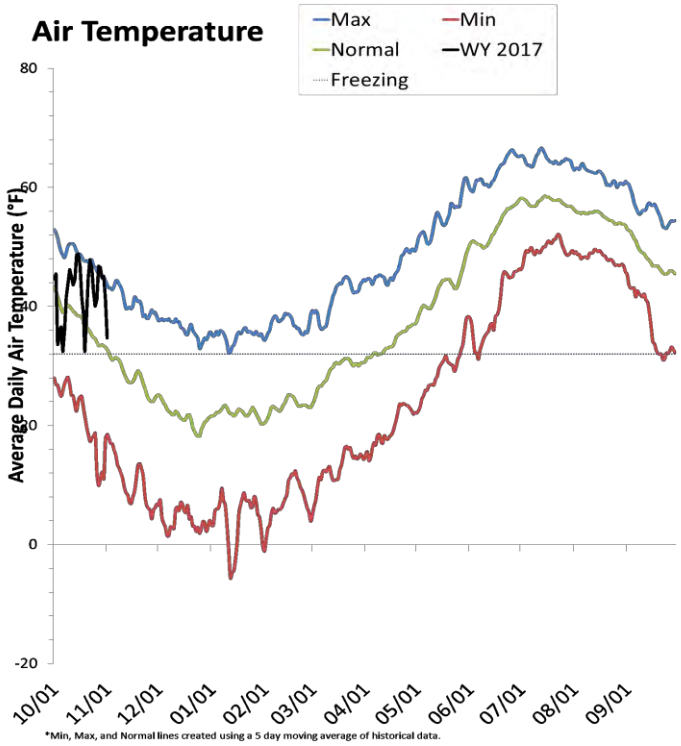
Escalante River Basin

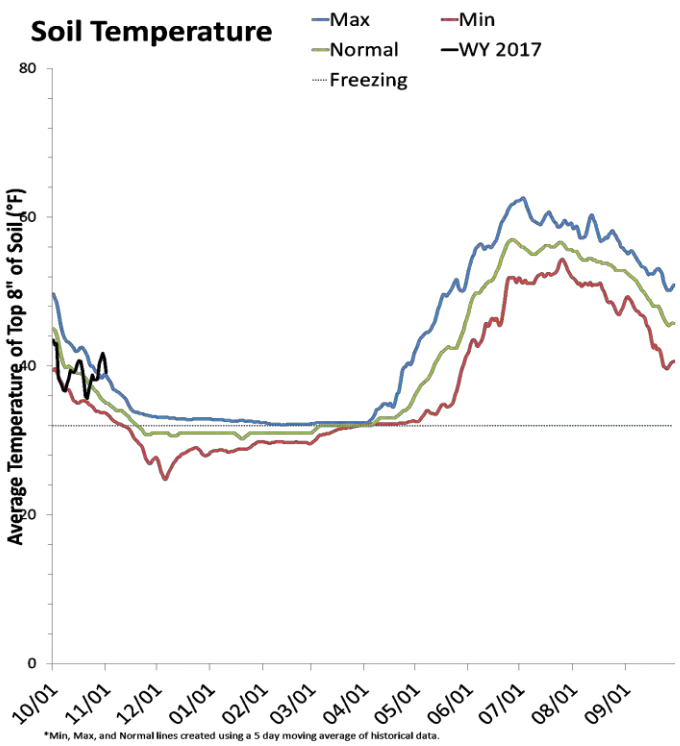
11/1/2016

Precipitation in October was much below average at 29%, which brings the seasonal accumulation (Oct-Oct) to 29% of average. Soil moisture is at 48% compared to 64% last year.







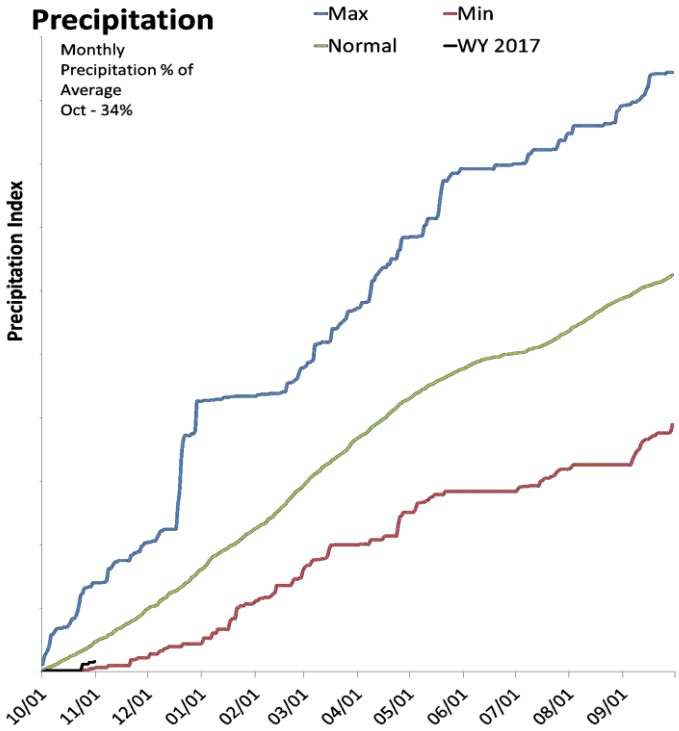


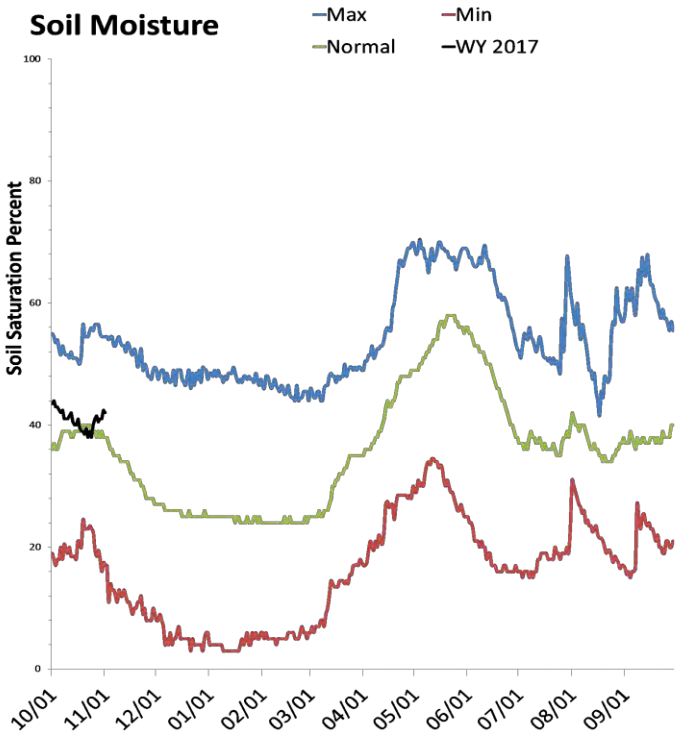
SNOTEL Data

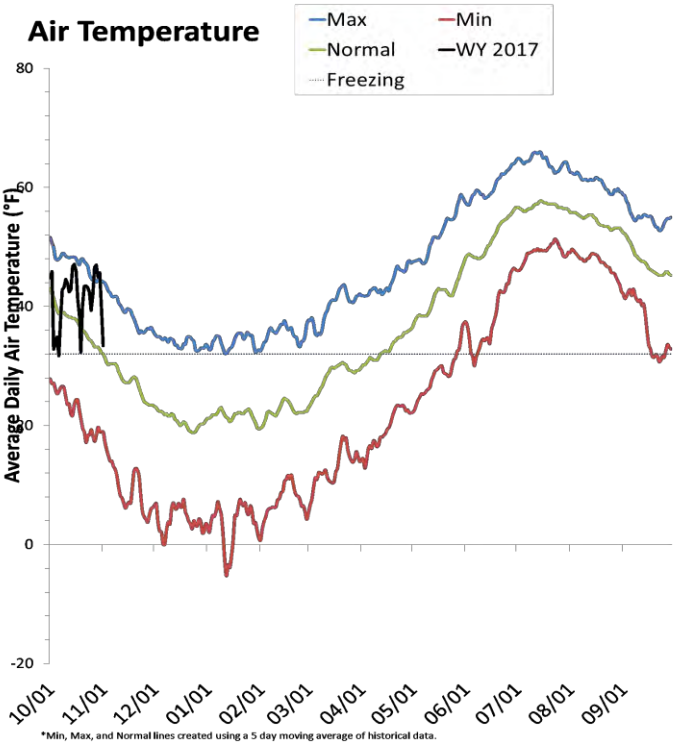
Beaver River Basin

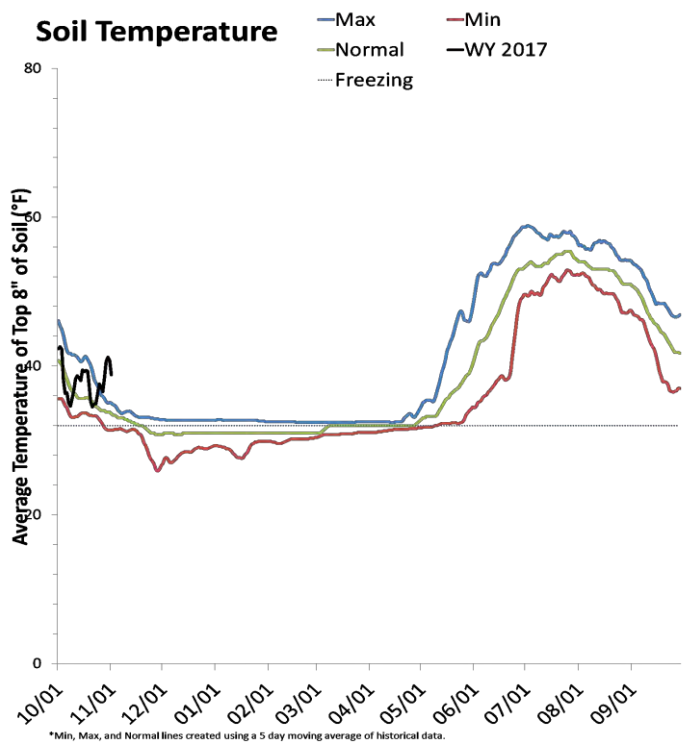
11/1/2016

Precipitation in October was much below average at 34%, which brings the seasonal accumulation (Oct-Oct) to 34% of average. Soil moisture is at 42% compared to 46% last year. Reservoir storage is at 20% of capacity, compared to 20% last year. The water availability index for the Beaver River is 19%.









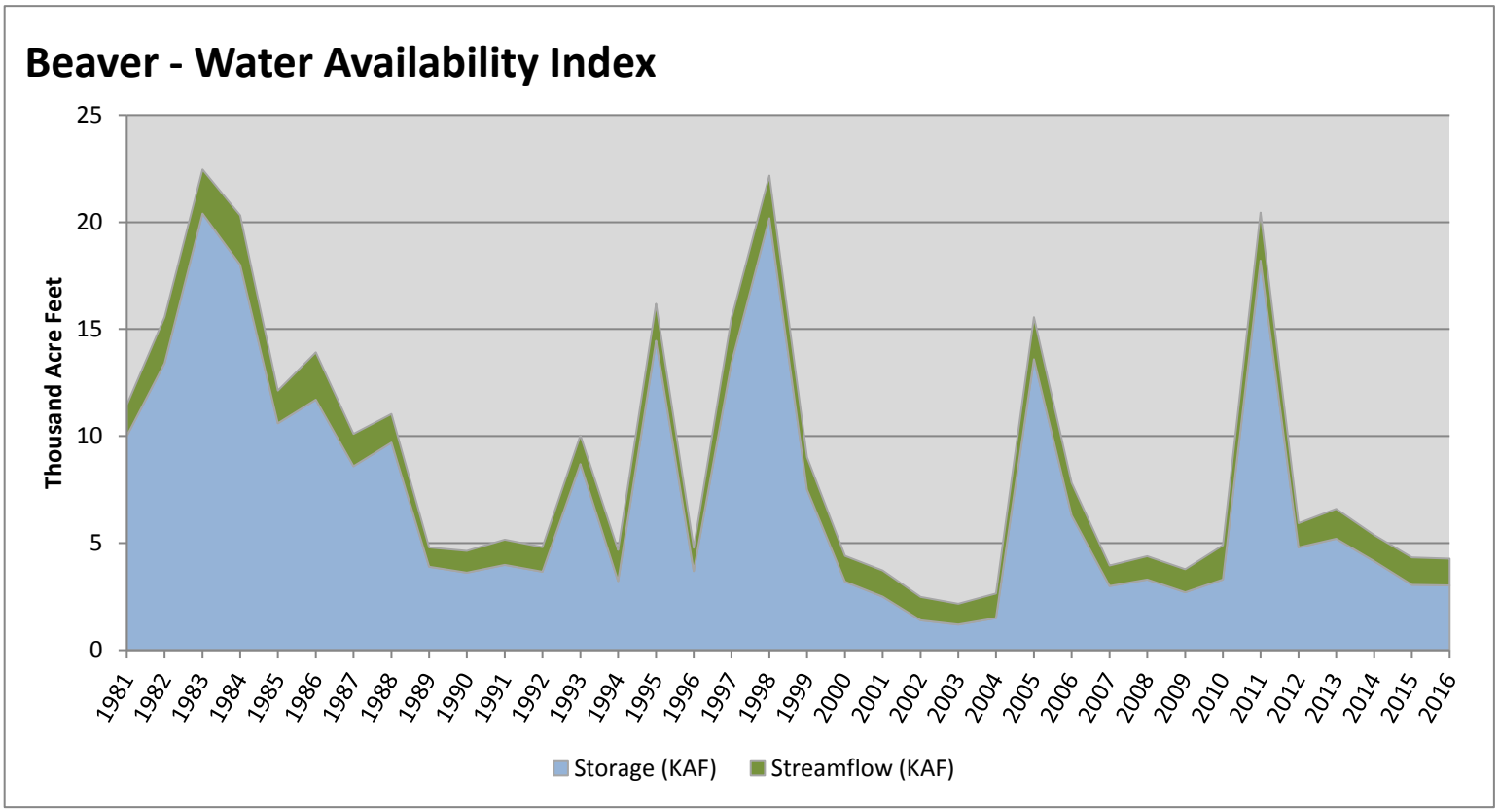
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Beaver	**3.03**	**1.25**	**4.28**	**19**	**-2.59**	**09, 07, 15, 08**

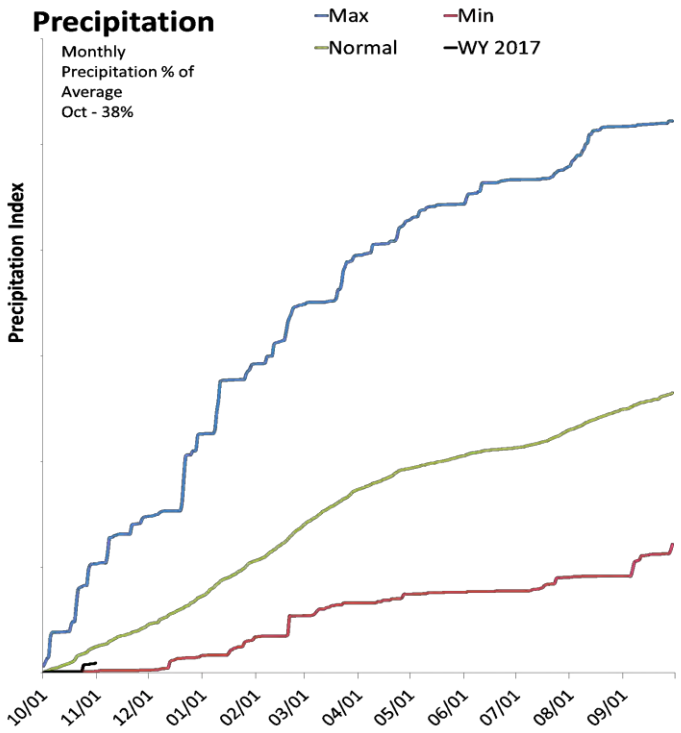
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

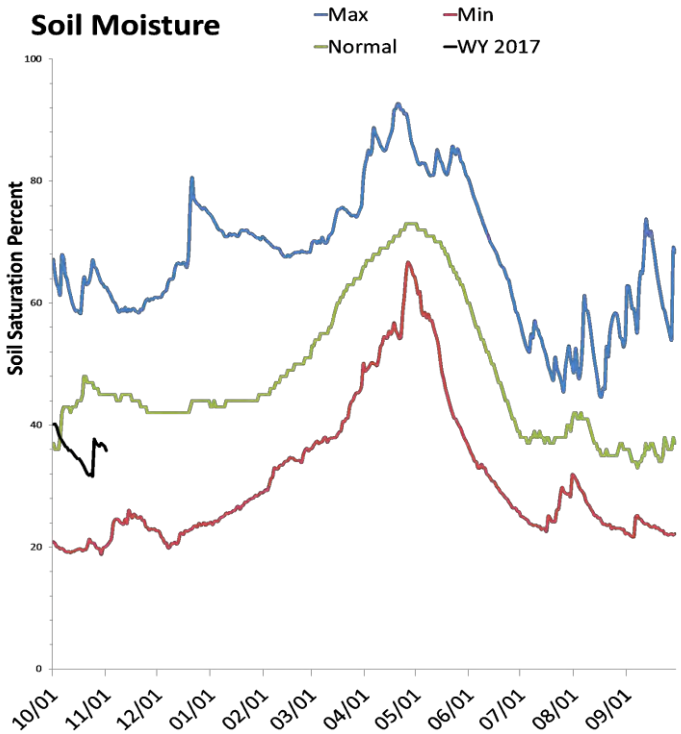


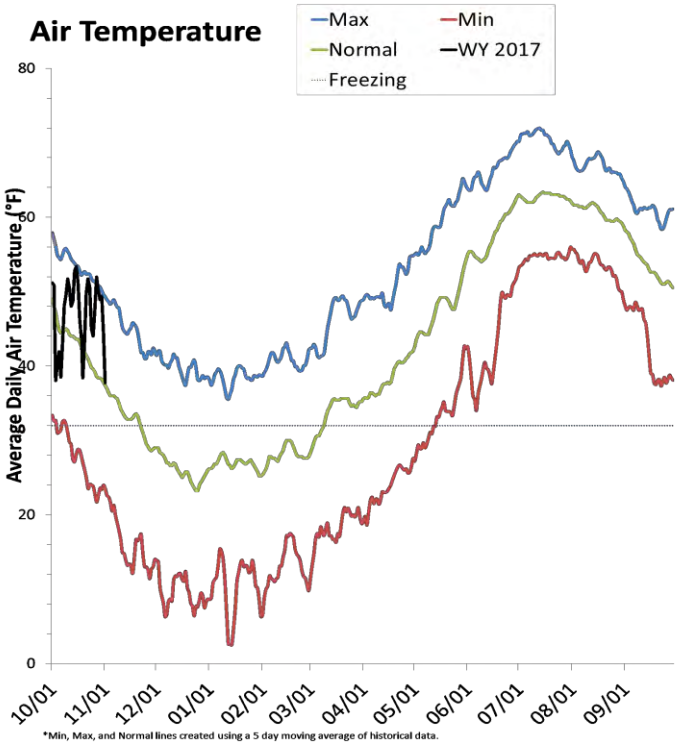
Southwestern Utah Basin

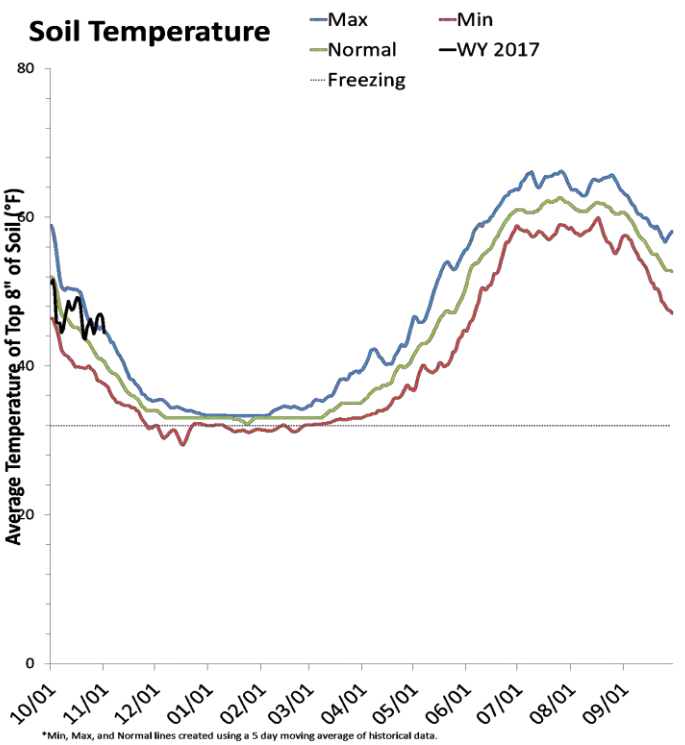
11/1/2016

Precipitation in October was much below average at 38%, which brings the seasonal accumulation (Oct-Oct) to 38% of average. Soil moisture is at 39% compared to 50% last year. Reservoir storage is at 53% of capacity, compared to 51% last year. The water availability index for the Virgin River is 40%.









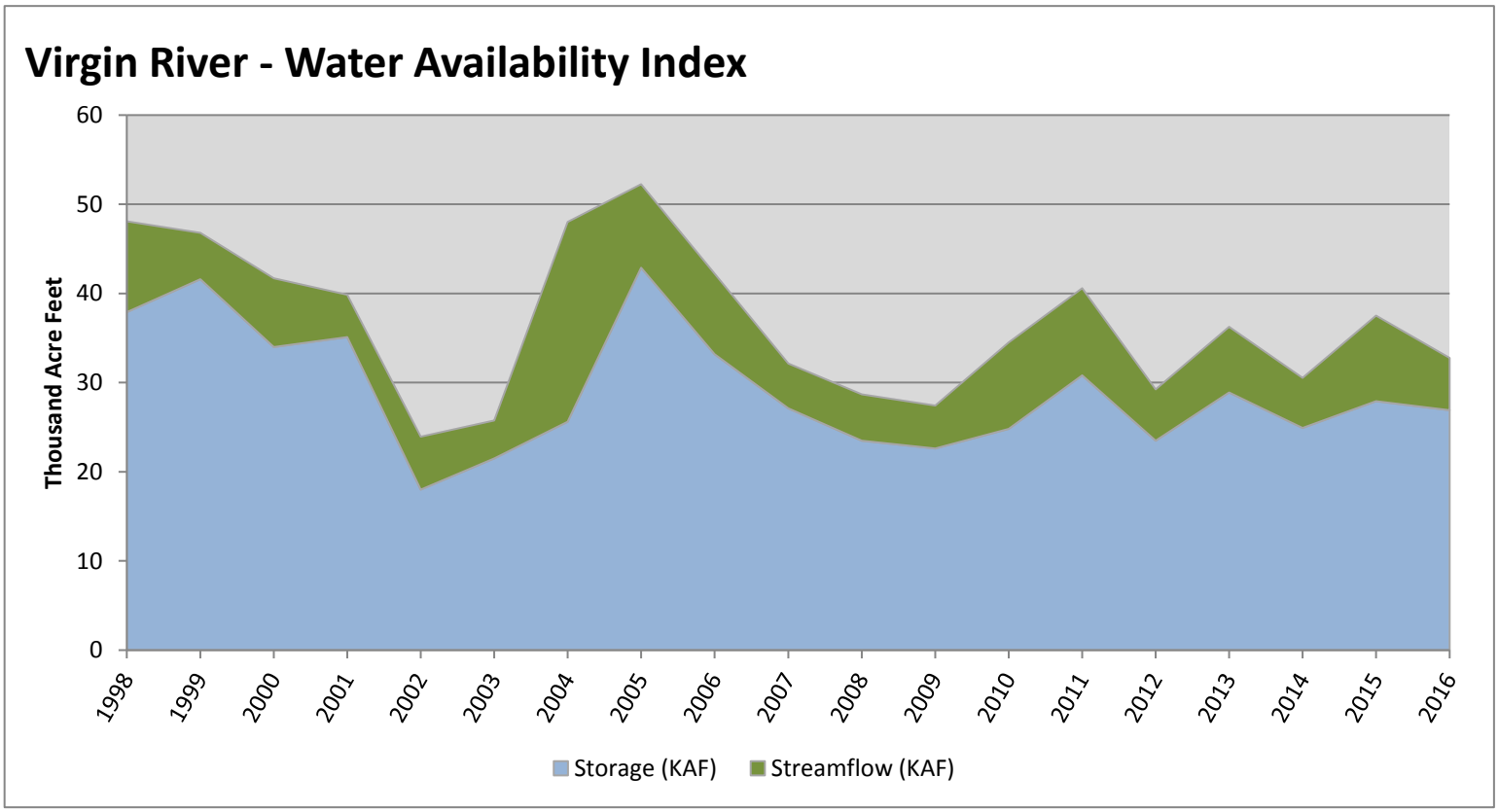
SNOTEL Data

November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Virgin River	**26.92**	**5.86**	**32.78**	**40**	**-0.83**	**14, 07, 10, 13**

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



November 1, 2016

Water Availability Index

Basin or Region	Oct EOM* Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	*KAF^*	*KAF^*	*KAF^*	*%*		
Bear River	**440**	**5.6**	**446**	**43**	**-0.6**	**09, 95, 01, 15**
Woodruff Narrows	**44.0**	**5.6**	**49.5**	**78**	**2.4**	**06, 09, 98, 11**
Little Bear	**6.3**	**1.9**	**8.2**	**44**	**-0.5**	**13, 08, 00, 12**
Ogden	**61.1**	**2.3**	**63.5**	**62**	**1.0**	**04, 99, 06, 85**
Weber	**80.0**	**7.4**	**87.4**	**26**	**-2.0**	**03, 00, 15, 02**
Provo River	**298.8**	**3.4**	**302.2**	**36**	**-1.1**	**12, 02, 14, 08**
Western Uintah	**156.8**	**4.1**	**161.0**	**67**	**1.4**	**06, 09, 93, 14**
Eastern Uintah	**33.6**	**5.7**	**39.4**	**59**	**0.8**	**06, 08, 91, 99**
Blacks Fork	**5.8**	**5.9**	**11.7**	**65**	**1.2**	**05, 93, 91, 06**
Price	**10.4**	**0.4**	**10.8**	**24**	**-2.1**	**89, 03, 14, 94**
Smiths Creek	**5.2**	**1.7**	**6.9**	**64**	**1.1**	**10, 93, 85, 13**
Joes Valley	**30.7**	**1.3**	**32.1**	**16**	**-2.8**	**13, 94, 03, 91**
Moab	**1.6**	**0.5**	**2.1**	**90**	**3.3**	**93, 06, 05, 97**
Upper Sevier River	**19.6**	**3.3**	**22.9**	**22**	**-2.4**	**90, 09, 15, 08**
San Pitch	**0.0**	**0.4**	**0.4**	**24**	**-2.1**	**12, 14, 13, 02**
Lower Sevier	**8.3**	**8.2**	**16.5**	**5**	**-3.7**	**03, 04, 91, 15**
Beaver	**3.0**	**1.3**	**4.3**	**19**	**-2.6**	**09, 07, 15, 08**
Virgin River	**26.9**	**5.9**	**32.8**	**40**	**-0.8**	**14, 07, 10, 13**

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

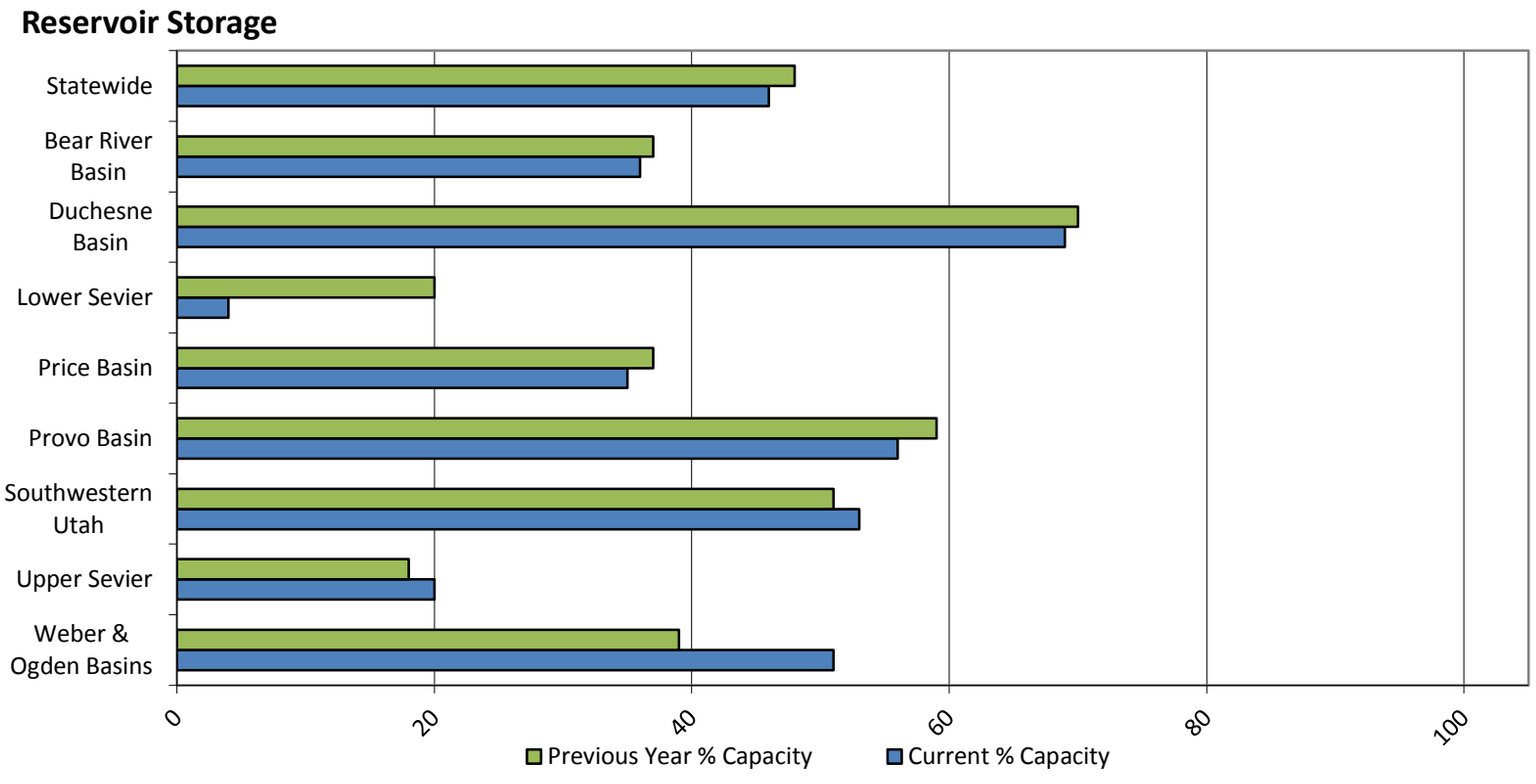
What is a Water Availability Index?

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	11.1	9.8		25.7	43%	38%			
Causey Reservoir	2.9	3.5	2.6	7.1	40%	49%	37%	110%	134%
Cleveland Lake	1.2	1.5		5.4	22%	28%			
Currant Creek Reservoir	14.9	14.8	14.7	15.5	96%	96%	95%	101%	101%
Deer Creek Reservoir	107.4	98.7	93.3	149.7	72%	66%	62%	115%	106%
East Canyon Reservoir	20.9	20.5	32.0	49.5	42%	41%	65%	65%	64%
Echo Reservoir	18.1	19.9	29.7	73.9	24%	27%	40%	61%	67%
Grantsville Reservoir	0.5	1.0	0.8	3.3	16%	30%	25%	64%	118%
Gunlock	1.7	1.8	5.2	10.4	17%	18%	50%	33%	35%
Gunnison Reservoir	0.0	0.0	6.0	20.3	0%	0%	30%	0%	0%
Huntington North Reservoir	1.3	1.1	1.4	4.2	31%	26%	33%	93%	78%
Hyrum Reservoir	6.3	4.8	8.0	15.3	41%	32%	52%	79%	60%
Joes Valley Reservoir	30.7	37.5	39.2	61.6	50%	61%	64%	78%	96%
Jordanelle Reservoir	191.4	184.0	248.3	320.0	60%	58%	78%	77%	74%
Ken's Lake	1.6	1.1	0.7	2.3	70%	50%	30%	235%	169%
Kolob Reservoir	5.2	5.0		5.6	94%	88%			
Lost Creek Reservoir	14.1	10.6	12.5	22.5	63%	47%	56%	113%	85%
Lower Enterprise	0.3	0.5	0.4	2.6	12%	20%	14%	81%	138%
Miller Flat Reservoir	1.5	1.4		5.2	29%	27%			
Millsite	9.4	8.0	9.4	16.7	56%	48%	56%	100%	85%
Minersville Reservoir		3.1	8.6	23.3		13%	37%		36%
Moon Lake Reservoir	16.3	16.1	18.2	35.8	45%	45%	51%	89%	89%
Otter Creek Reservoir	19.5	17.4	25.0	52.5	37%	33%	48%	78%	70%
Panguitch Lake	9.9	4.9	11.4	22.3	44%	22%	51%	86%	43%
Pineview Reservoir	58.3	47.4	51.3	110.1	53%	43%	47%	114%	92%
Piute Reservoir	0.1	4.5	25.3	71.8	0%	6%	35%	0%	18%
Porcupine Reservoir	5.2	5.0	3.9	11.3	46%	44%	35%	133%	128%
Quail Creek	25.2	26.1	22.3	40.0	63%	65%	56%	113%	117%
Red Fleet Reservoir	19.2	14.3	16.8	25.7	75%	56%	65%	114%	85%
Rockport Reservoir	22.3	27.7	37.8	60.9	37%	46%	62%	59%	73%
Sand Hollow Reservoir	39.4	31.8		50.0	79%	64%			
Scofield Reservoir	10.4	7.9	26.3	65.8	16%	12%	40%	39%	30%
Settlement Canyon Reservoir	0.3	0.2	0.5	1.0	30%	20%	46%	65%	43%
Sevier Bridge Reservoir	8.3	47.4	110.2	236.0	4%	20%	47%	8%	43%
Smith And Morehouse Reservoir	4.5	3.5	3.6	8.1	55%	43%	44%	124%	96%
Starvation Reservoir	130.7	127.5	126.3	165.3	79%	77%	76%	103%	101%
Stateline Reservoir	5.2	5.1	5.7	12.0	43%	43%	48%	92%	89%
Steinaker Reservoir	14.4	11.3	15.6	33.4	43%	34%	47%	92%	72%
Strawberry Reservoir	768.2	797.0	656.2	1105.9	69%	72%	59%	117%	121%
Upper Enterprise	0.3	0.5	1.9	10.0	3%	5%	19%	16%	27%
Upper Stillwater Reservoir	9.8	9.0	14.4	32.5	30%	28%	44%	68%	63%
Utah Lake	296.2	374.4	683.2	870.9	34%	43%	78%	43%	55%
Vernon Creek Reservoir	0.1	0.1	0.2	0.6	20%	24%	30%	66%	81%
Willard Bay	139.1	82.0	131.1	215.0	65%	38%	61%	106%	63%
Woodruff Creek	1.8	2.0	1.1	4.0	46%	50%	28%	165%	178%
Woodruff Narrows Reservoir	43.9	37.4	23.3	57.3	77%	65%	41%	189%	160%
Meeks Cabin Reservoir	5.8	3.9	9.1	32.5	18%	12%	28%	64%	43%
Bear Lake	440.4	467.7	595.7	1302.0	34%	36%	46%	74%	79%
Basin-wide Total	2477.1	2548.4	3120.5	5357.6	46%	48%	58%	79%	82%
# of reservoirs	42	42	42	42	42	42	42	42	42



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Utah Climate and Water Report

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