Utah Climate and Water Report

May 1, 2018

City Creek near Salt Lake City

Photo by Jordan Clayton

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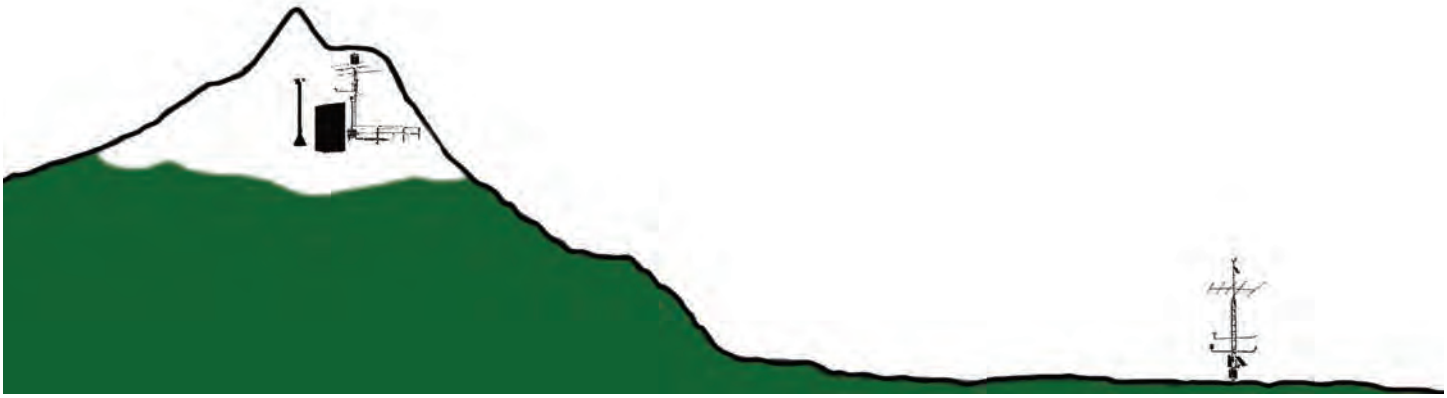
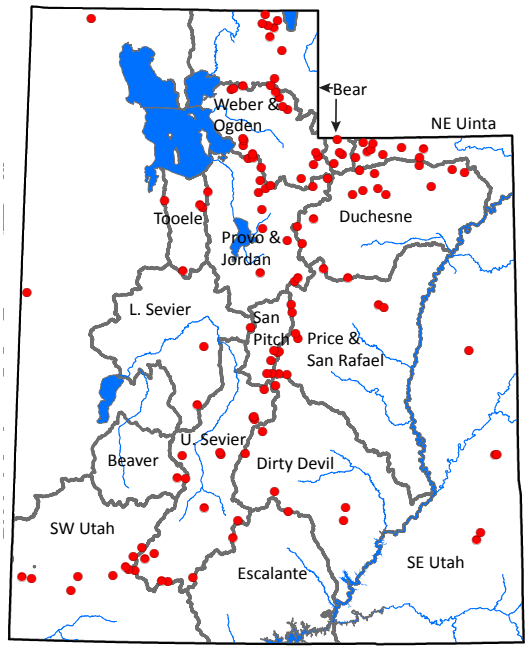
Utah Climate and Water Report

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.



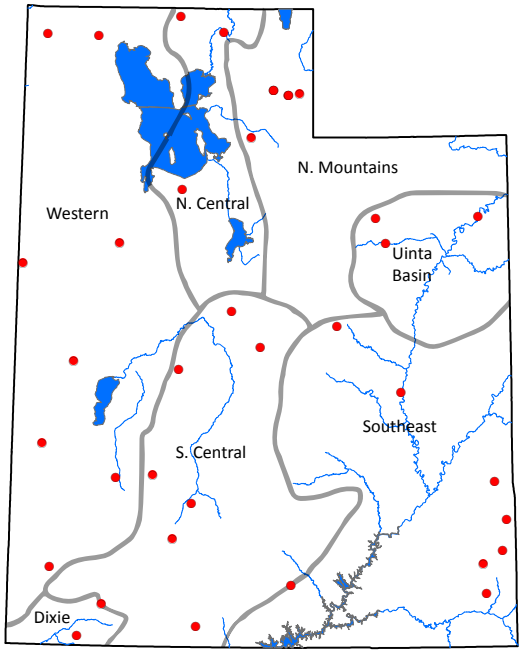
SNOTEL

- Mountainous areas
- High elevation (>6,000 ft)
- Water supply forecasting
- Installed where snow pack represents the water supply



SCAN

- Agricultural and range lands
- Mid elevation (3 – 7,000 ft).
- Irrigation efficiency and rangeland productivity
- Installed on spatially representative soils



Utah General Summary
May 1, 2018

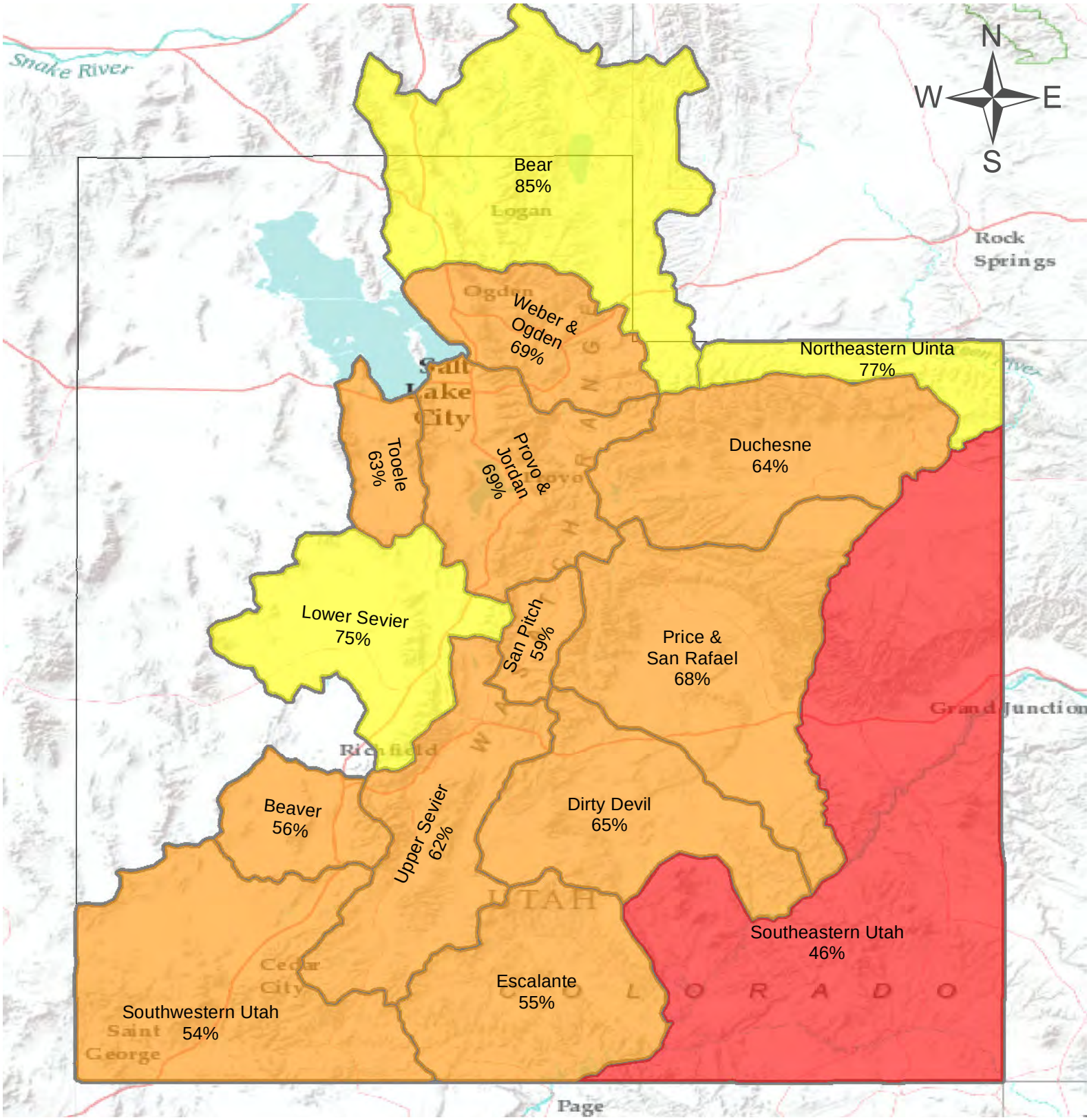
*This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (**S**oil **C**limate **A**nalysis **N**etwork) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply 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 Troy.Brosten@ut.usda.gov.*

Current Valley Conditions (SCAN)

April was another dry month in Utah's valley locations, with an average of 0.7 inches precipitation falling. Unfortunately, the eastern part of the state came up short again; the Southeast region received a scant 0.3 inches of precipitation during the month, which was a repeat of March. Overall, soil moisture conditions are low and soil temperatures are warm. For dryland producers in Southern and Eastern Utah, this is a rough start to the growing season. As is the case in Utah's mountain locations, this very dry water year persists. May has brought some good news, however, with infiltrating precipitation almost statewide. Details on that will be in Monday's Utah Soil Moisture Report.

Current Mountain Conditions (SNOTEL)

Over the past month snow packs have been melting FAST and streamflow response has been poor. Excluding a few streamflows in the Uintas and Bear River Basin, most of the observed flow at the end of April ranged in the 20-60% of average. Add to that the amount of snowpack left in our mountains and the likelihood for improved streamflow is pretty bleak. Relative to the maximum observed snow water equivalent (SWE) for this winter, as of May 1st the percent total snowpack that has been lost per basin is: Bear – 44%, NE Uinta – 74%, Weber & Ogden – 63%, Duchesne – 45%, and Provo & Jordan 64%. Tooele Valley and all of the basins south of Provo & Jordan have lost 70 to over 90% of this year's snowpack. In the southern portion of the state current percent of SWE normal ranges from 0 to 20%. Given these snowpack conditions expect lower peak flows occurring earlier in the season and substantially lower accumulated flow. Most April-July streamflow will likely be in the 30 to 50% range. Precipitation for April was 79% bringing our total mountain cumulative precipitation across the state to 68% of average. Mountain soil moistures have increased to peak saturation across the state due to early snowpack melt and we're already starting to see soils drying out in the most southern basins. Given current conditions, southern basins will finish melting out by mid-May and most northern basins will follow one to two weeks later.



Statewide Precipitation

As of May 1, 2018:

68% of Normal Precipitation

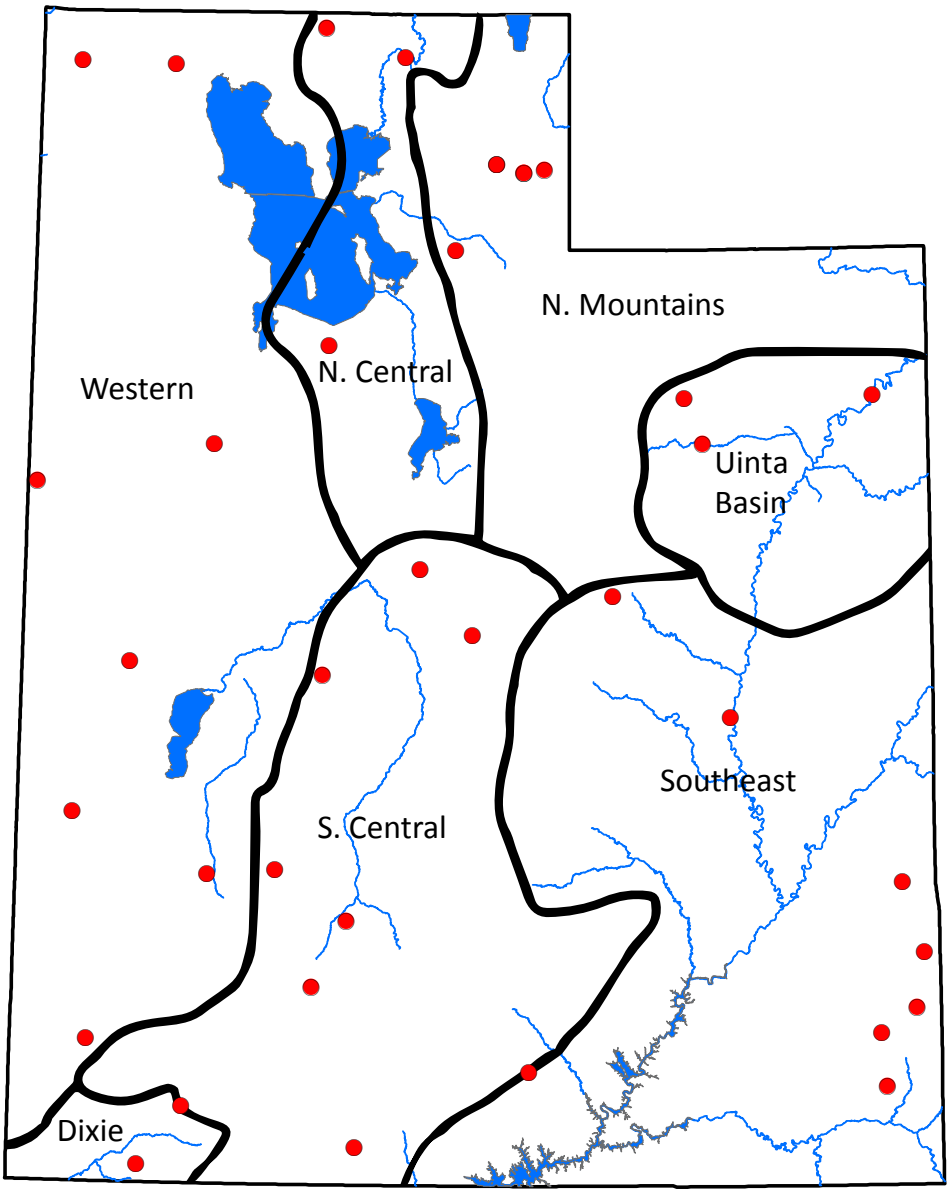
79% of Normal Precipitation Last Month

0 10 20 40 60 80 100
Miles

% of Normal

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

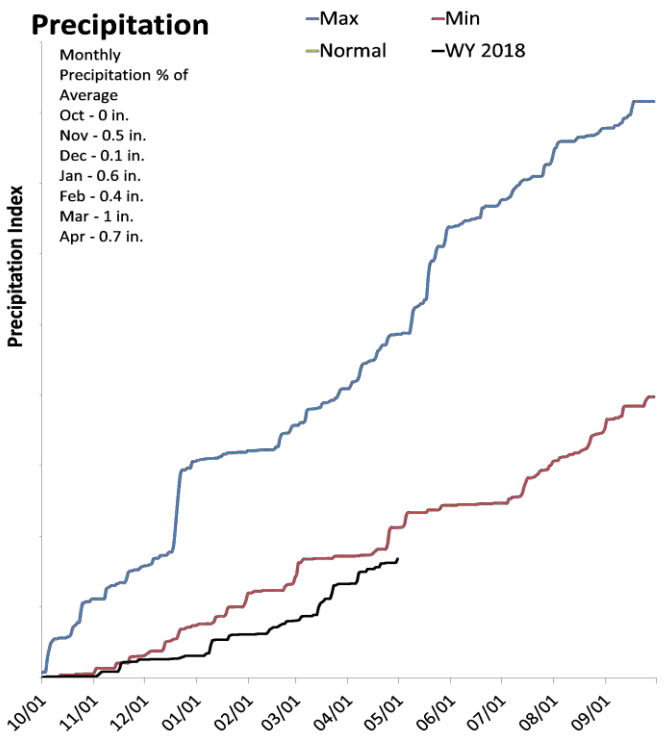
SCAN portion of report

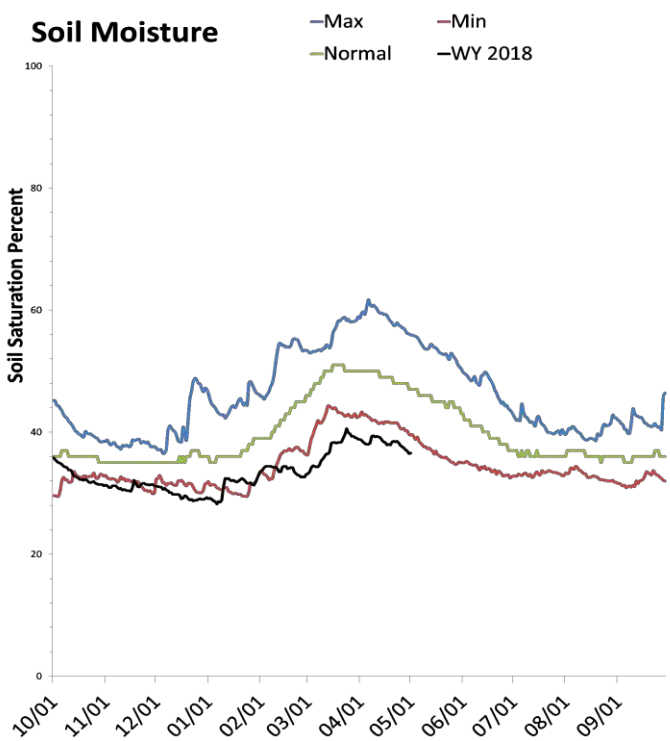


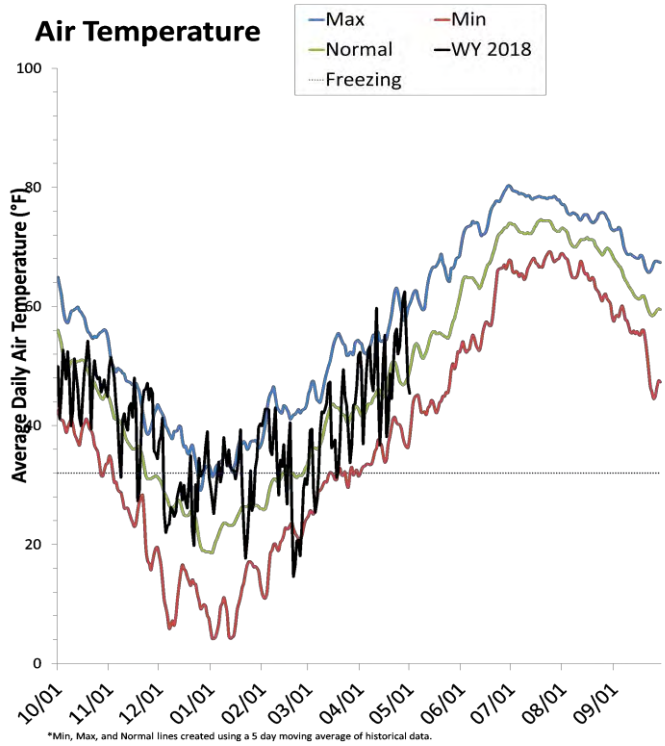
Statewide SCAN

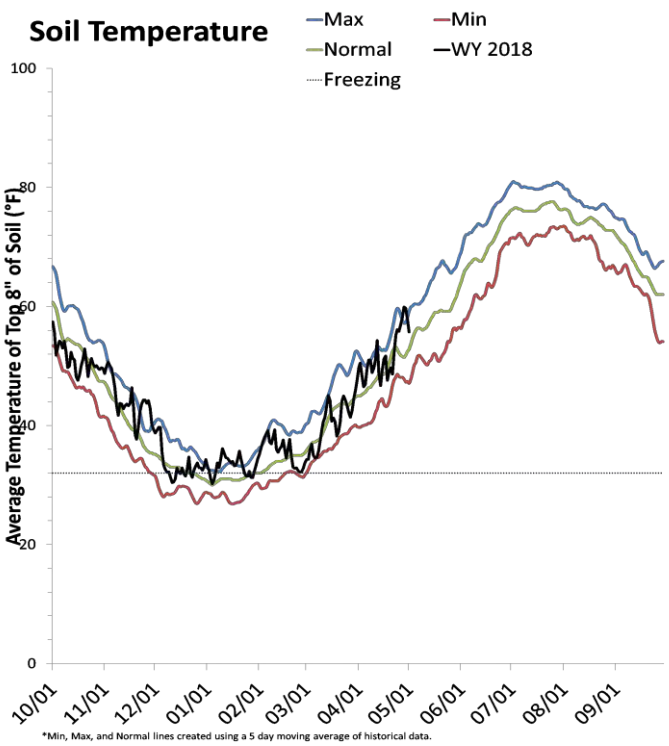
May 1, 2018

The average precipitation at SCAN sites within Utah was 0.7 inches in April, which brings the seasonal accumulation (Oct-Apr) to 3.4 inches. Soil moisture is at 36% compared to 49% last year.





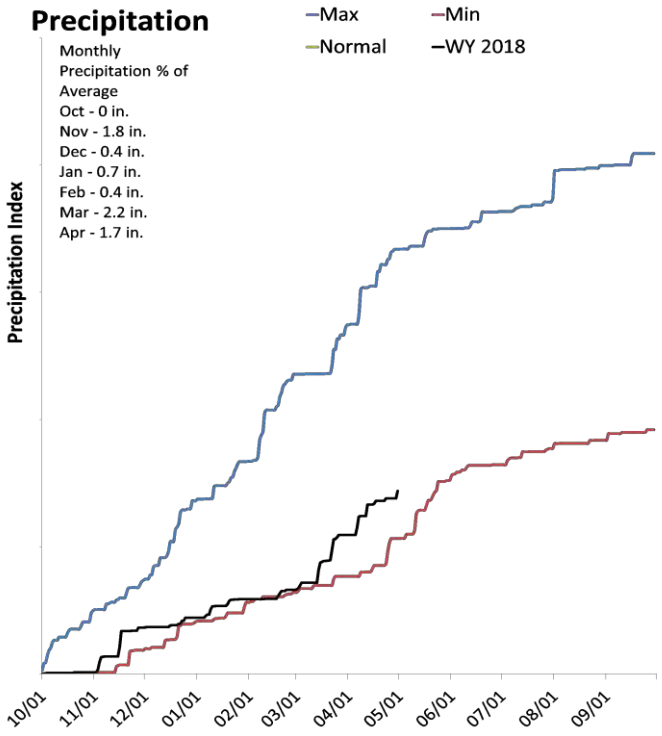


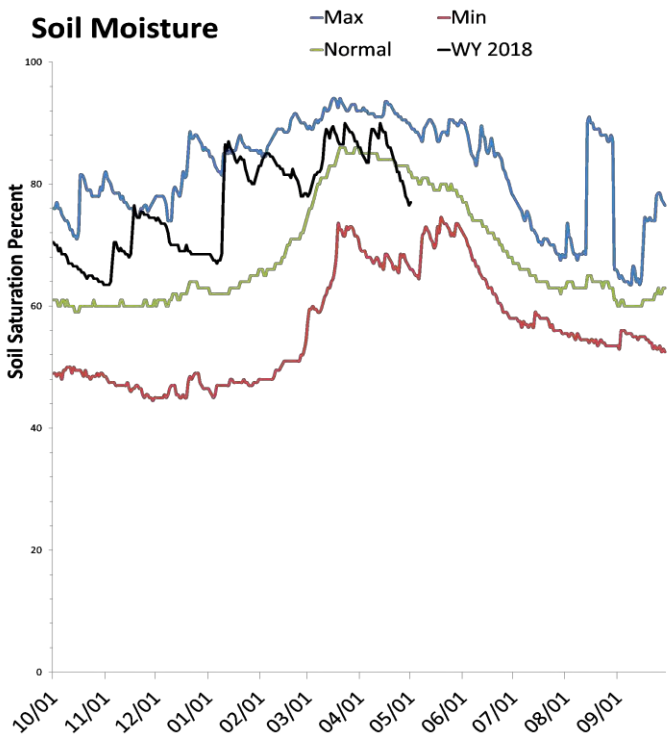


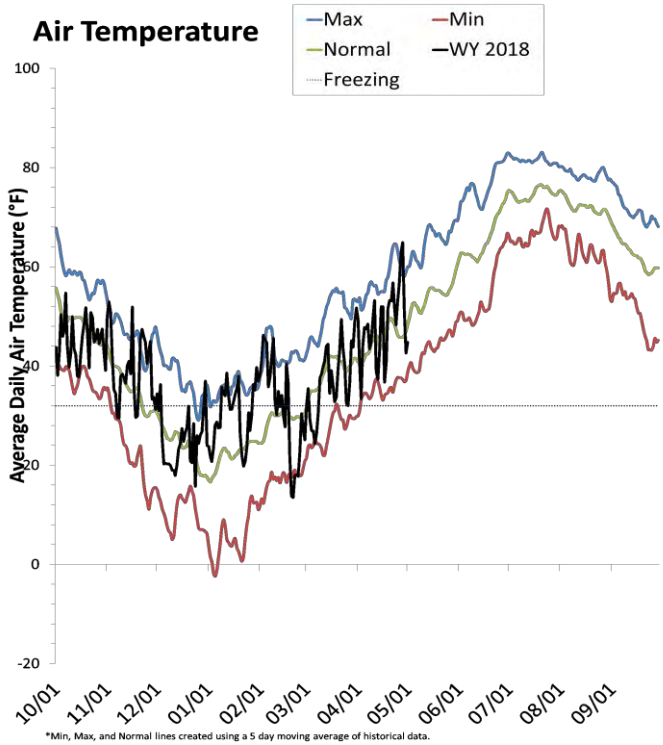
North Central

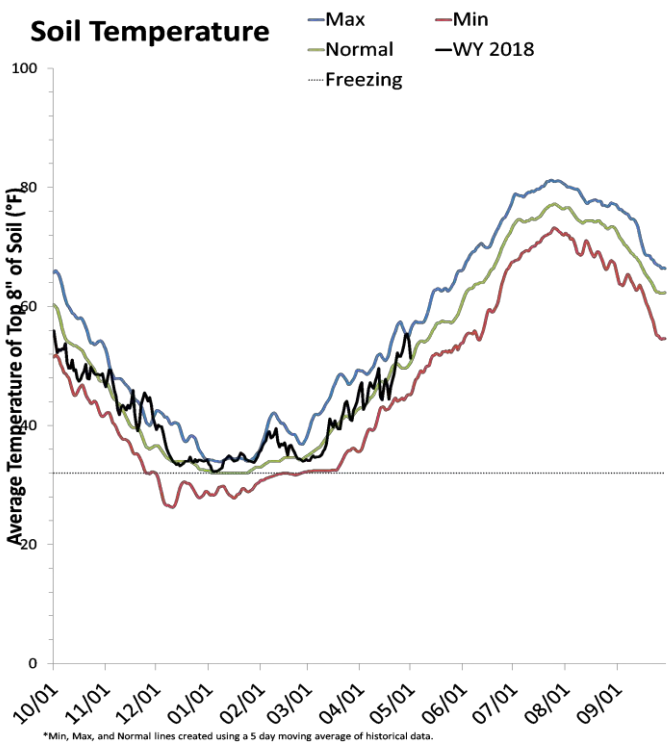
May 1, 2018

The average precipitation in April at SCAN sites within the basin was 1.7 inches, which brings the seasonal accumulation (Oct-Apr) to 7.2 inches. Soil moisture is at 77% compared to 89% last year.





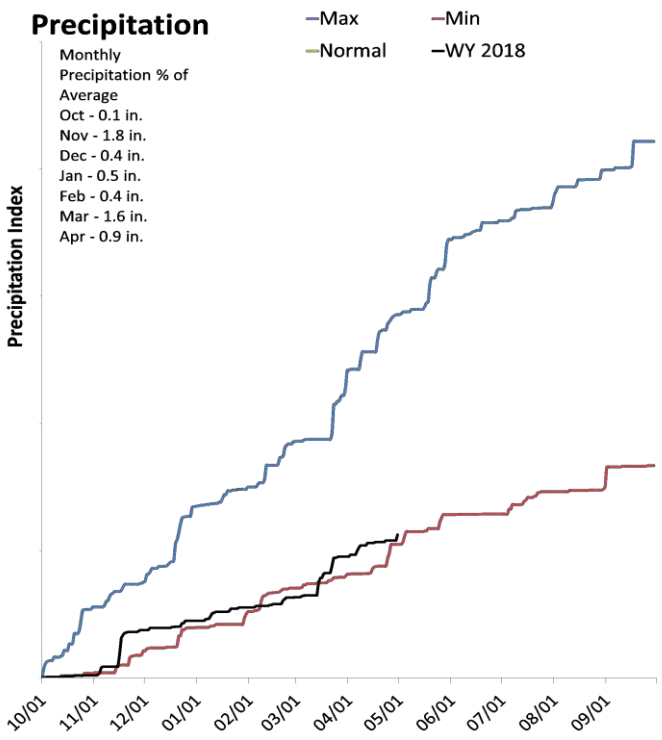


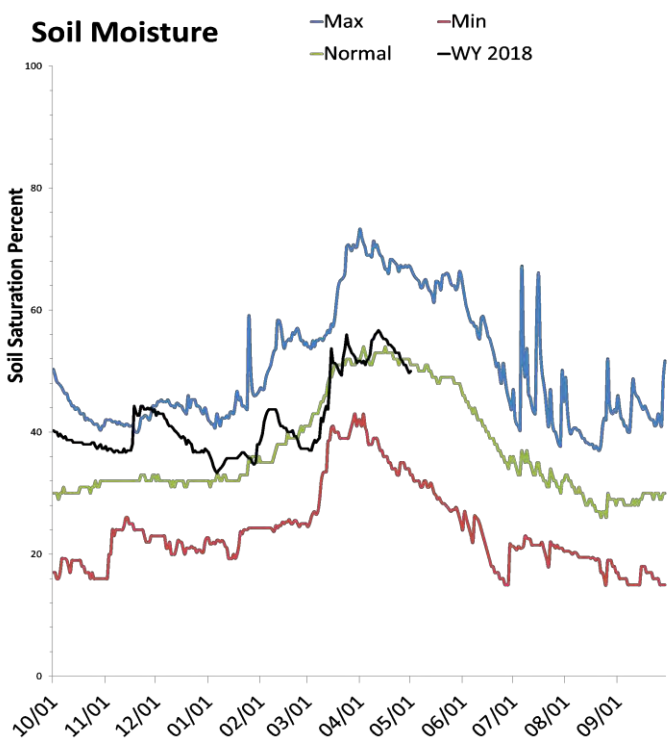


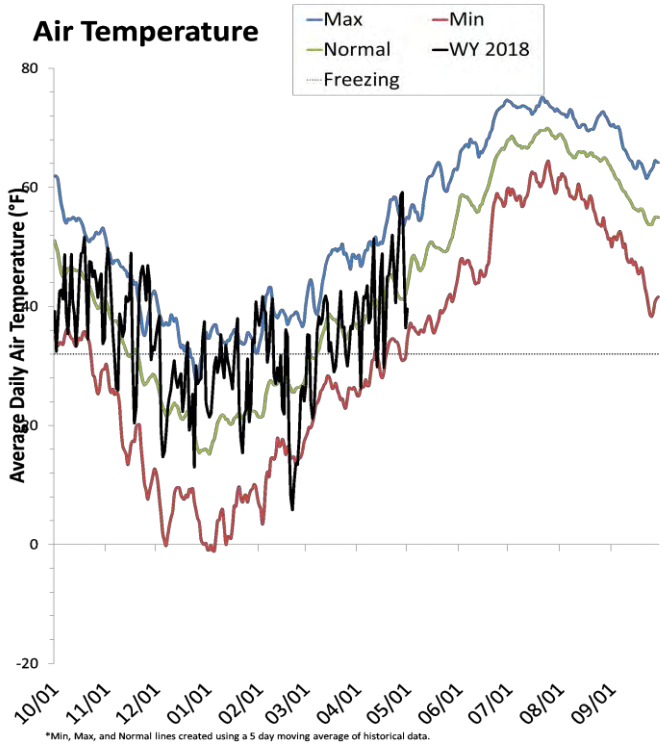
Northern Mountains

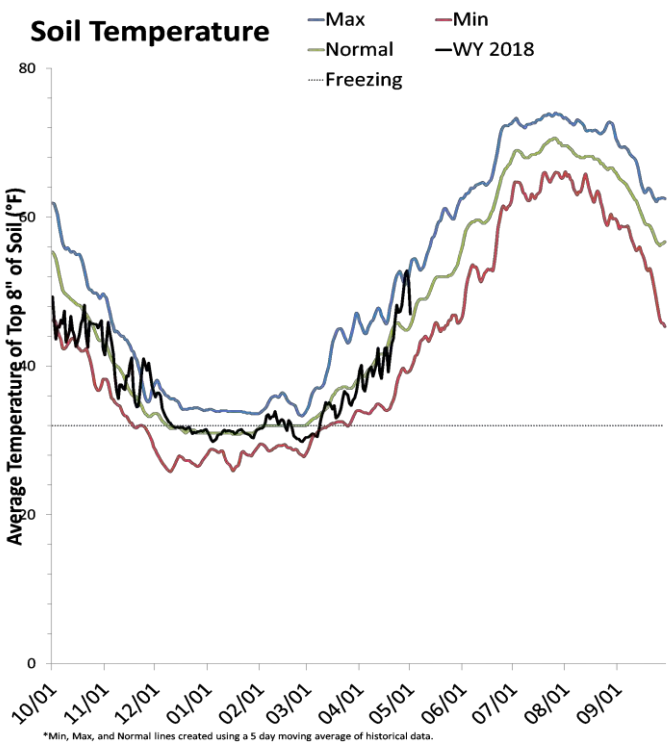
May 1, 2018

The average precipitation in April at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Apr) to 5.6 inches. Soil moisture is at 50% compared to 67% last year.





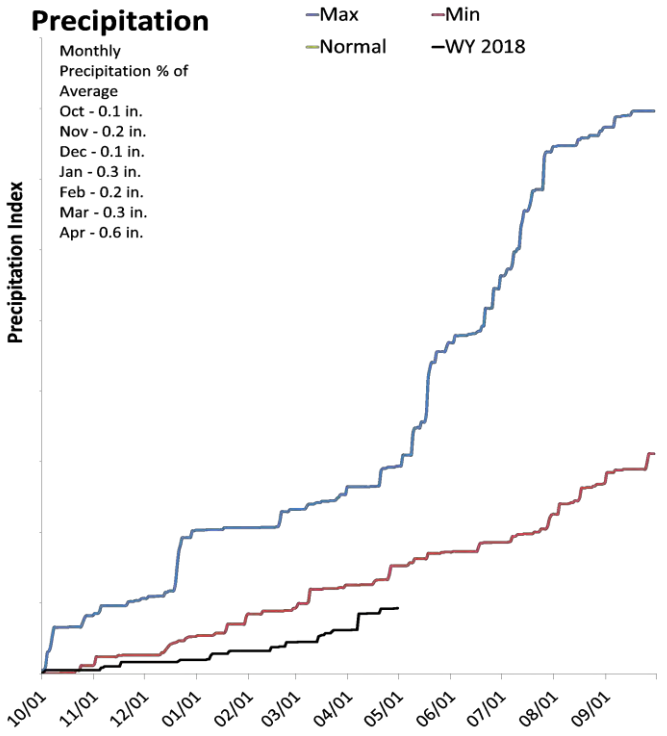


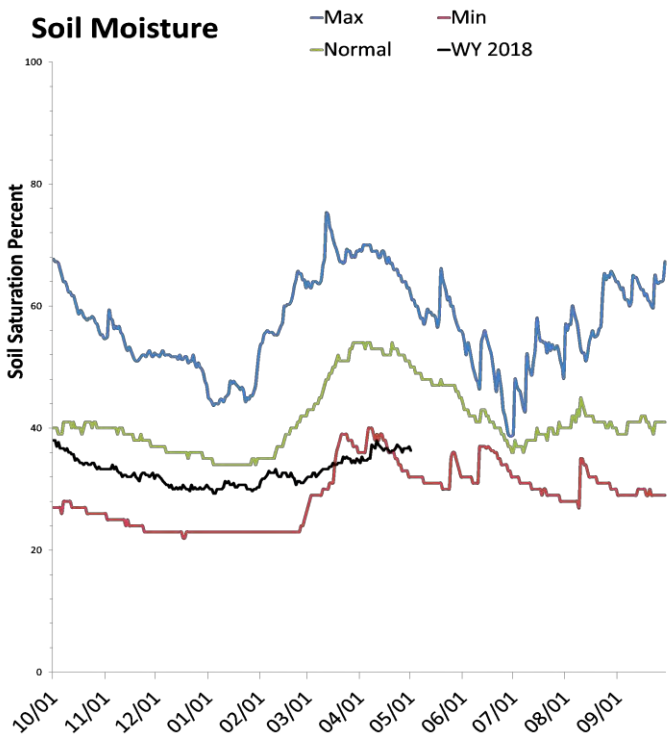


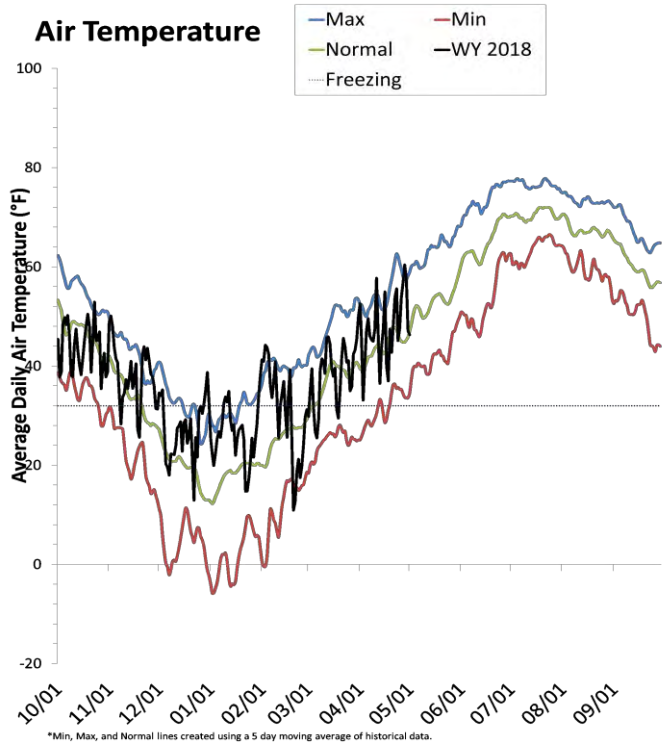
Uinta Basin

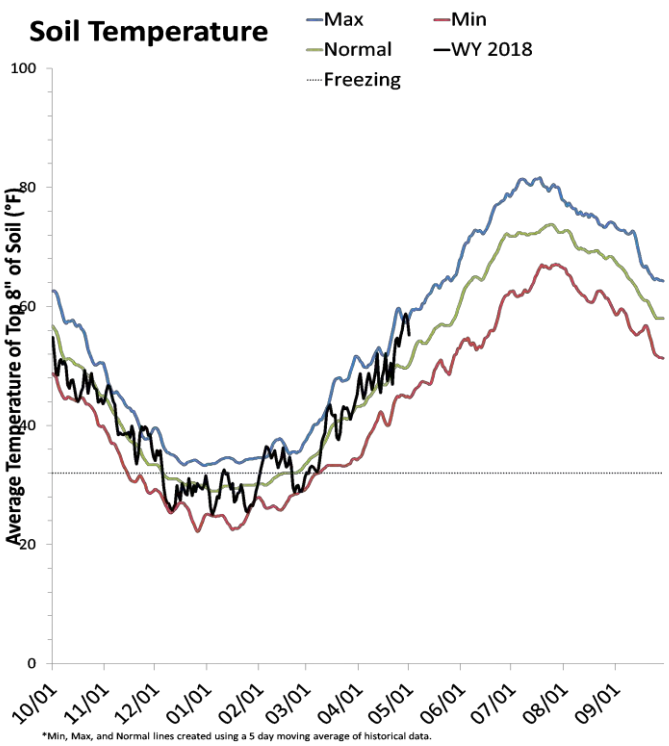
May 1, 2018

The average precipitation in April at SCAN sites within the basin was 0.6 inches, which brings the seasonal accumulation (Oct-Apr) to 1.9 inches. Soil moisture is at 37% compared to 54% last year.





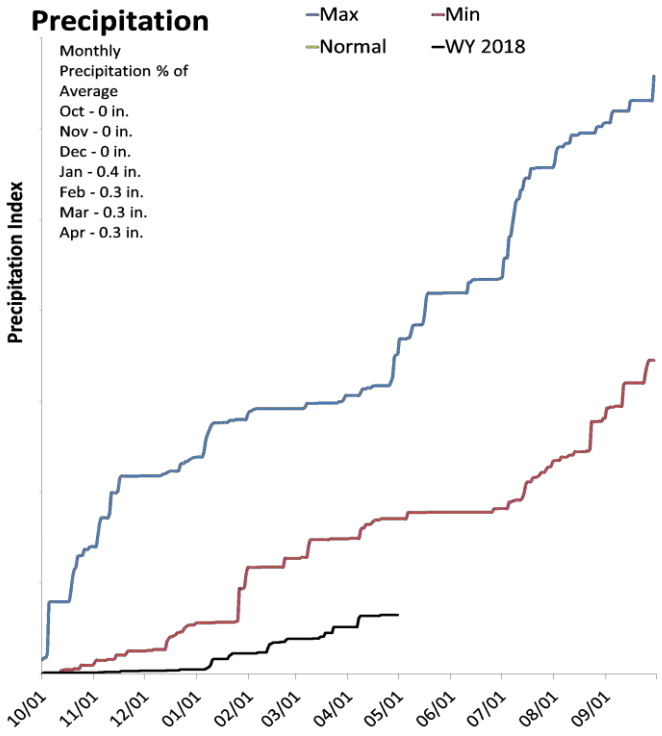


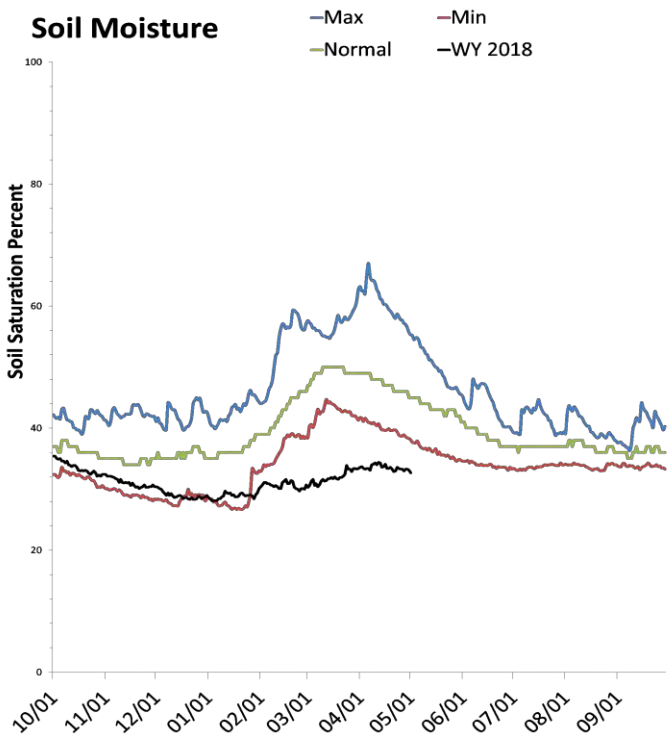


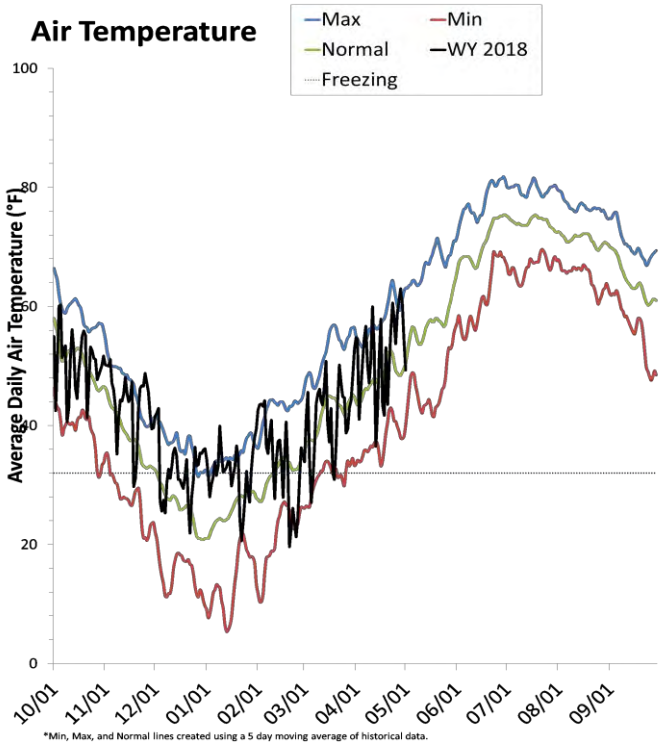
Southeast

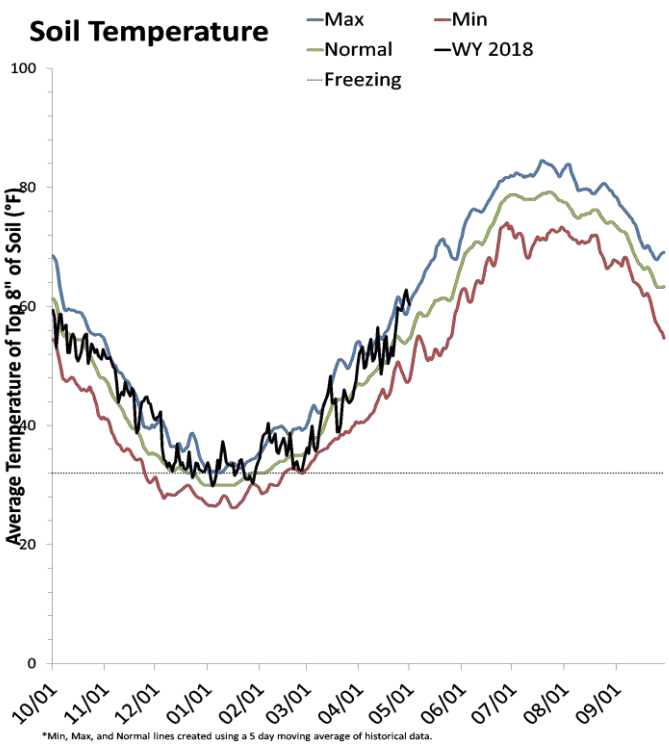
May 1, 2018

The average precipitation in April at SCAN sites within the basin was 0.3 inches, which brings the seasonal accumulation (Oct-Apr) to 1.3 inches. Soil moisture is at 33% compared to 46% last year.





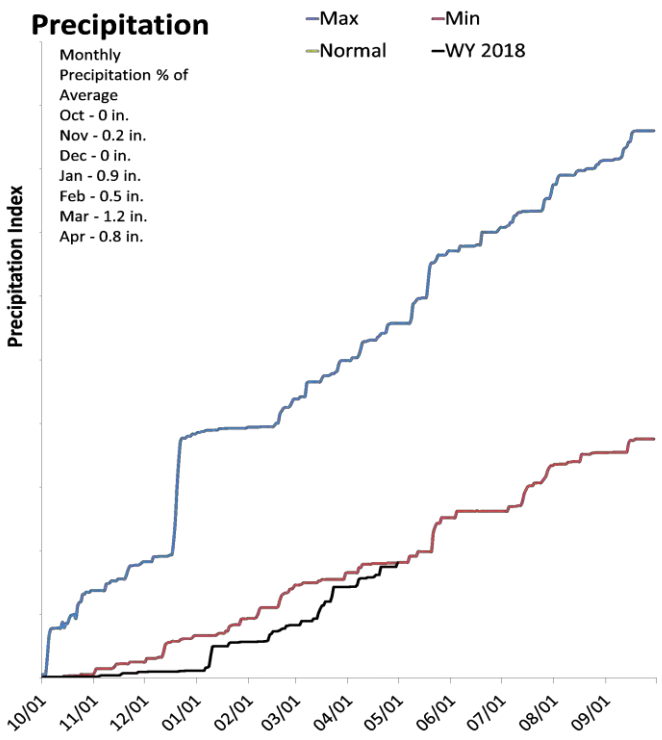


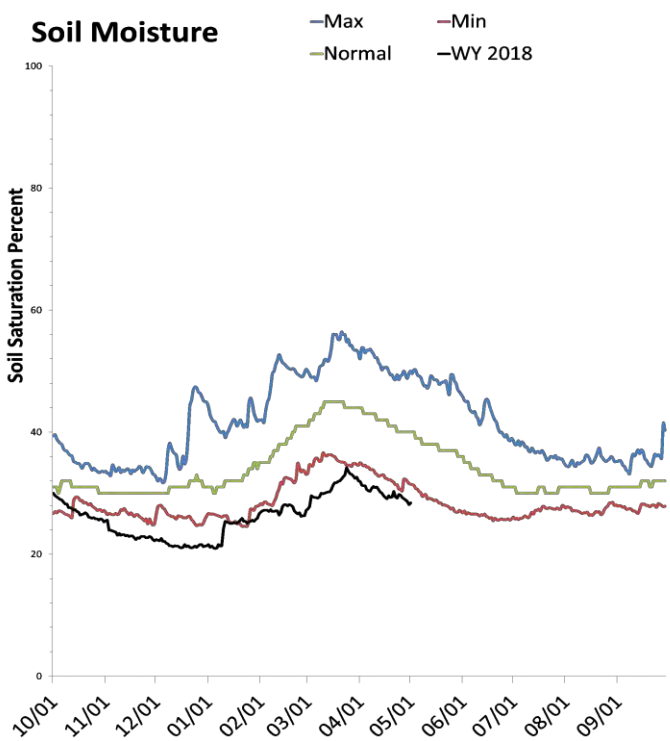


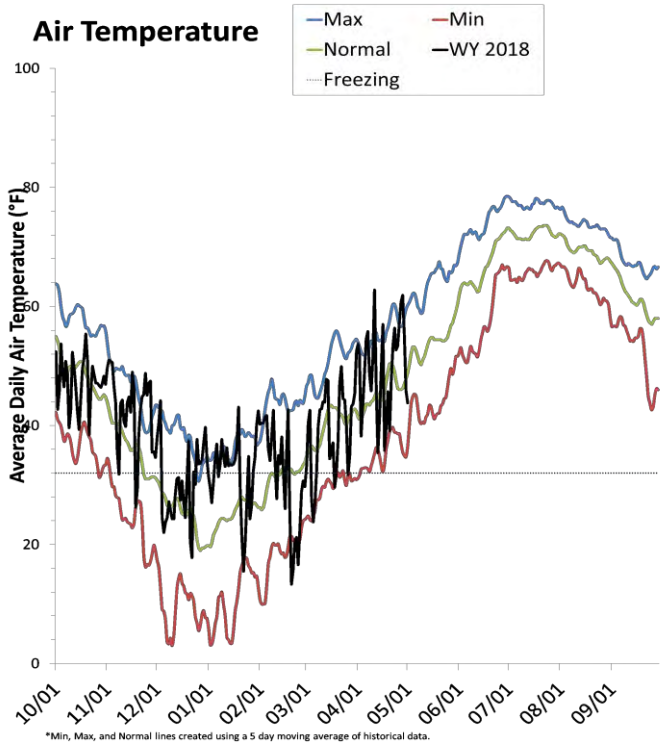
South Central

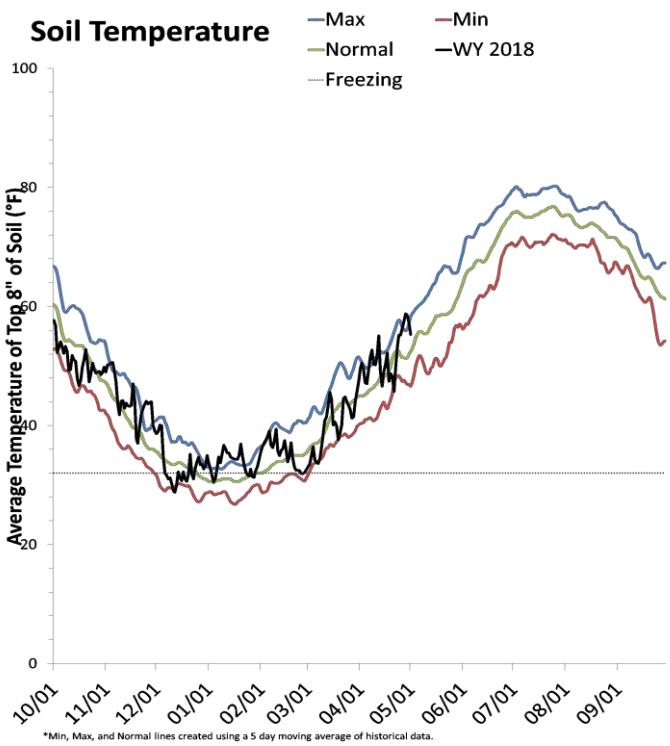
May 1, 2018

The average precipitation in April at SCAN sites within the basin was 0.8 inches, which brings the seasonal accumulation (Oct-Apr) to 3.6 inches. Soil moisture is at 28% compared to 41% last year.





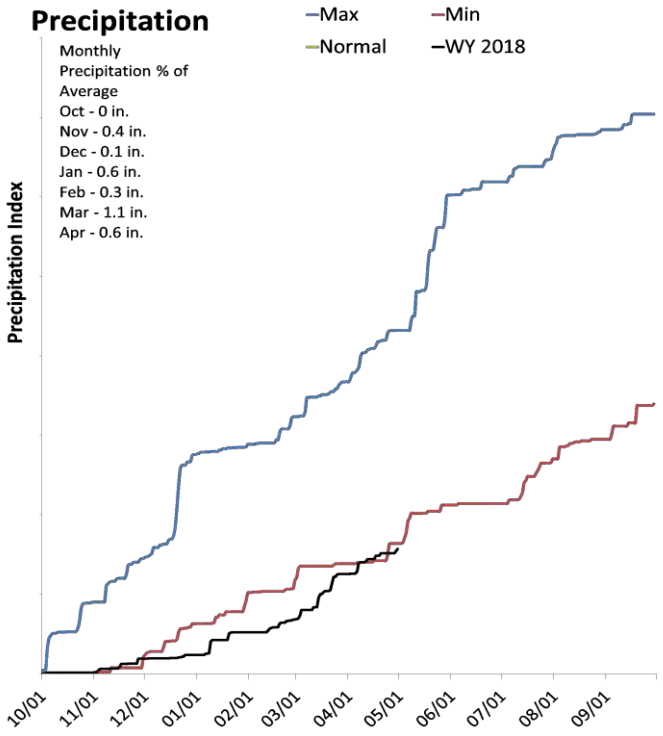


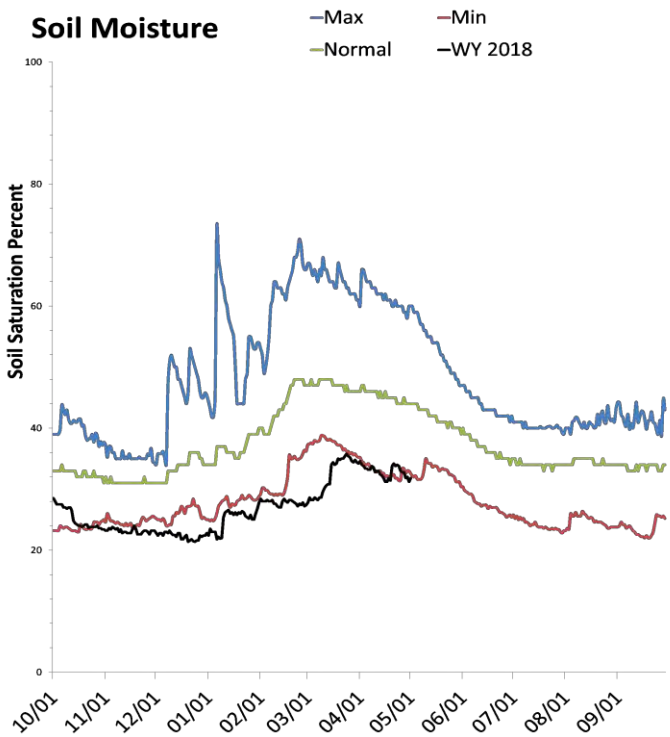


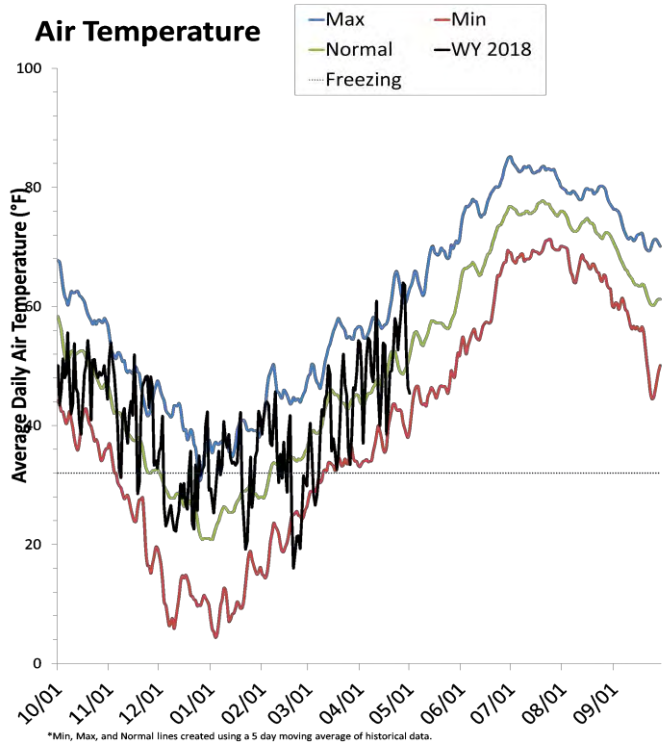
Western and Dixie

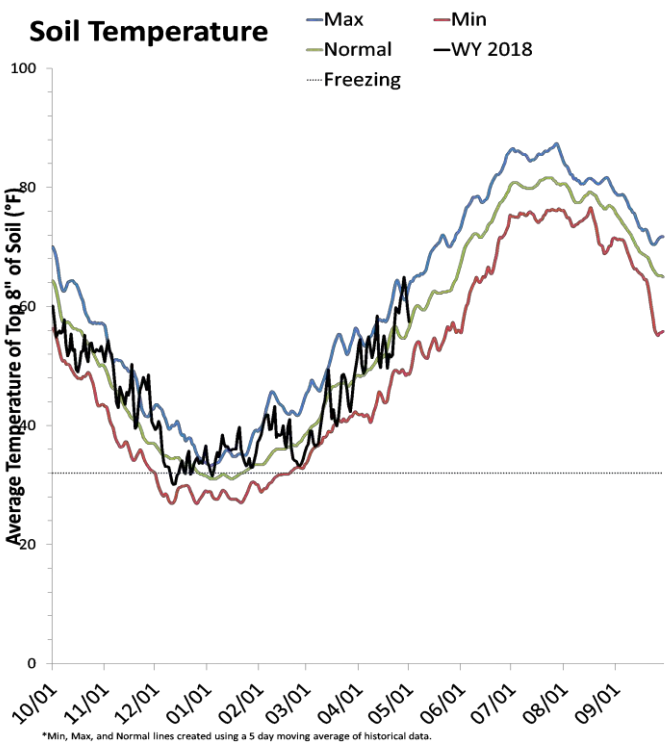
May 1, 2018

The average precipitation in April at SCAN sites within the basin was 0.6 inches, which brings the seasonal accumulation (Oct-Apr) to 3.1 inches. Soil moisture is at 30% compared to 37% last year.

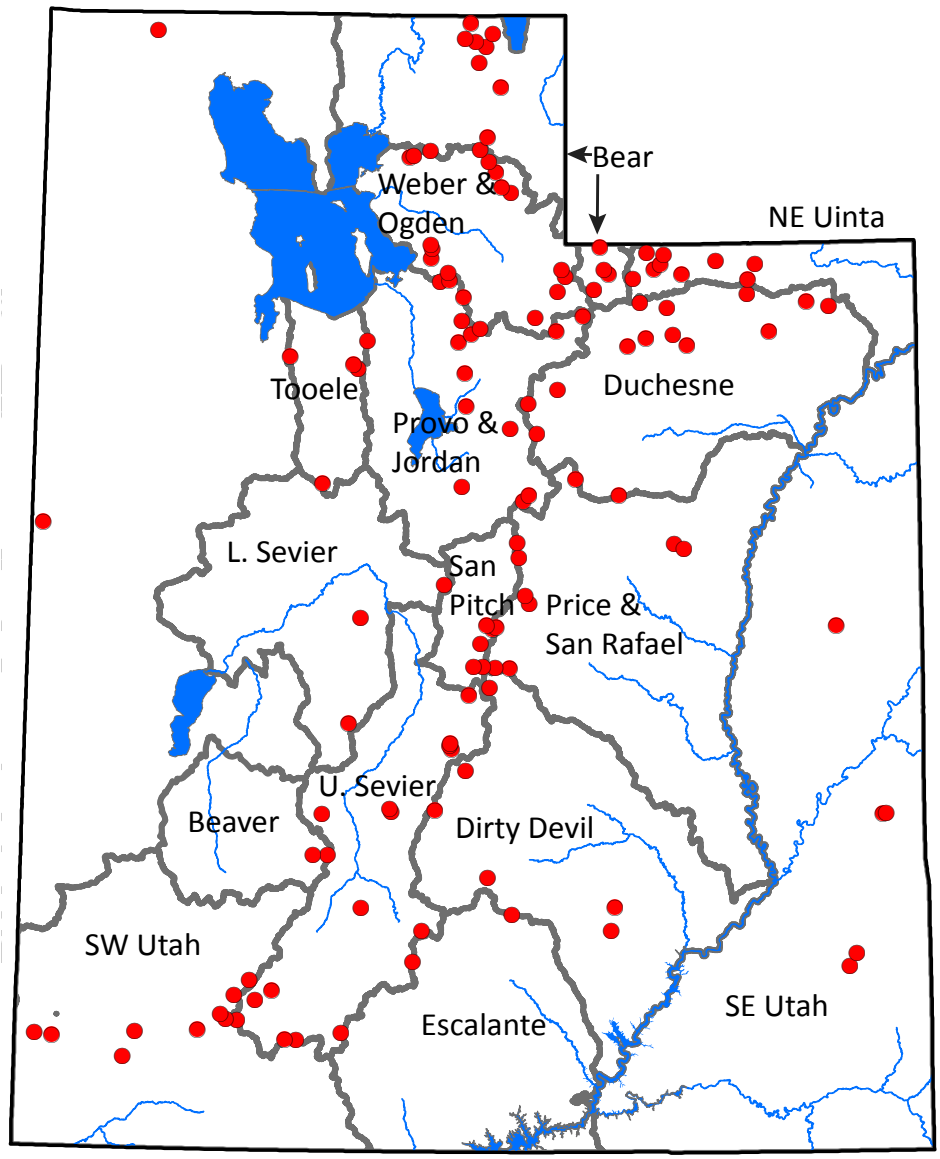








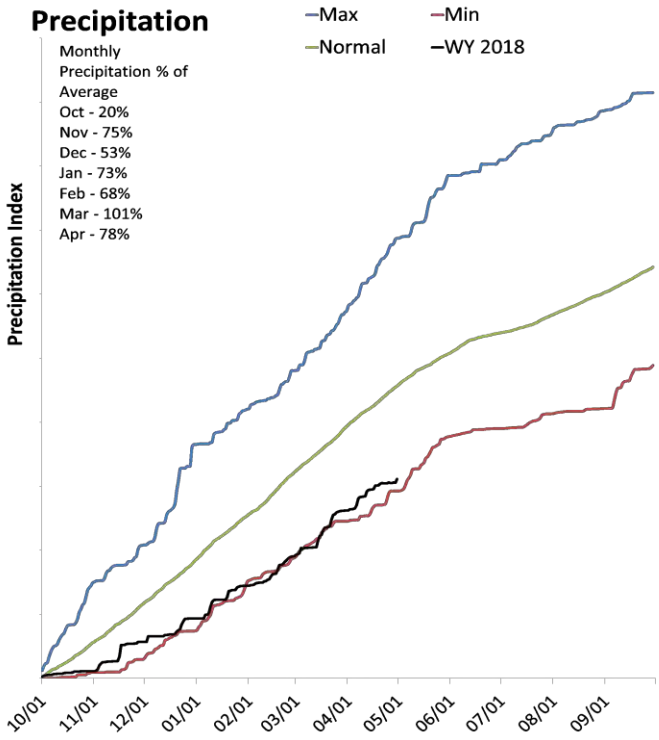
SNOTEL portion of report

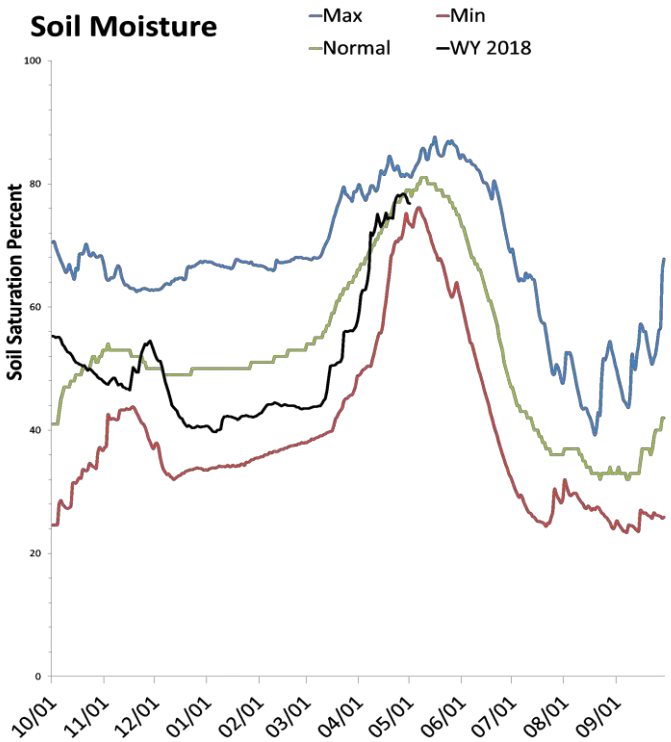


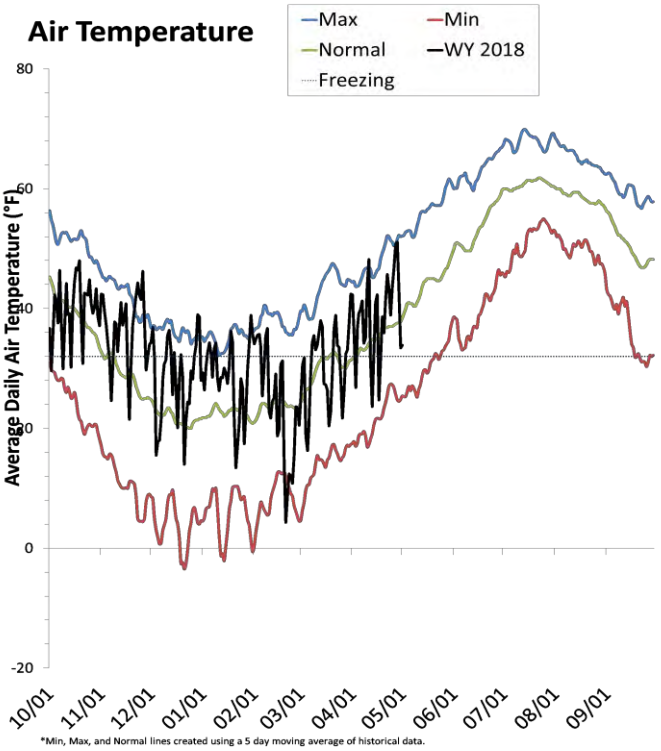
Statewide SNOTEL

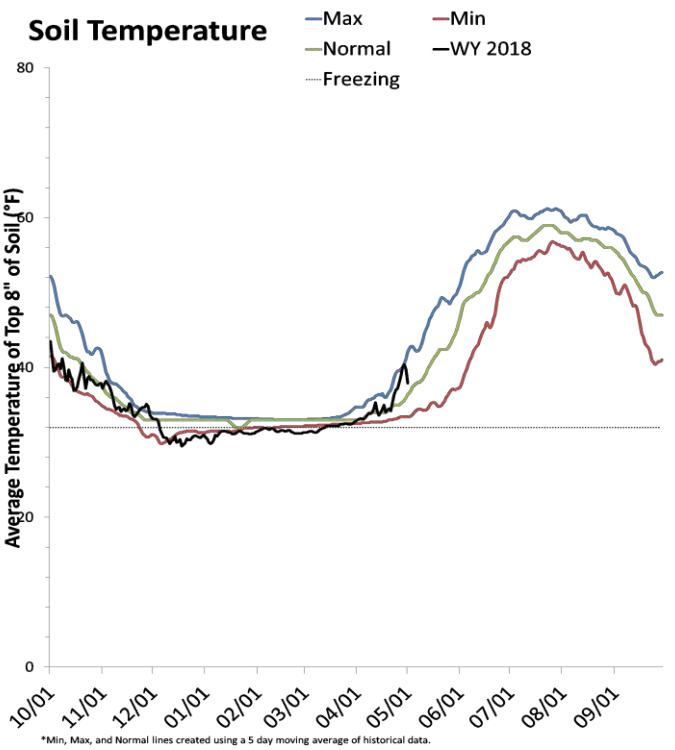
May 1, 2018

Precipitation at SNOTEL sites during April was below average at 79%, which brings the seasonal accumulation (Oct-Apr) to 68% of average. Soil moisture is at 77% compared to 80% last year. Reservoir storage is at 79% of capacity, compared to 71% last year.





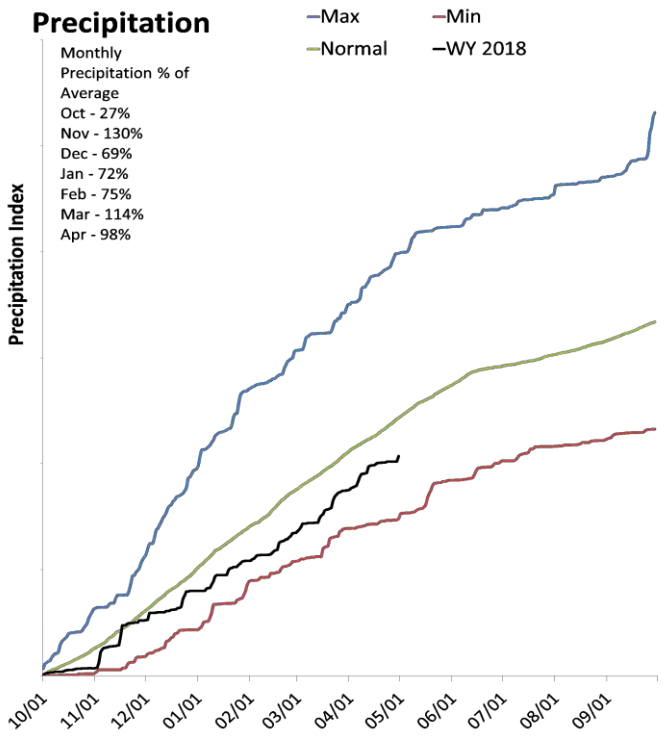


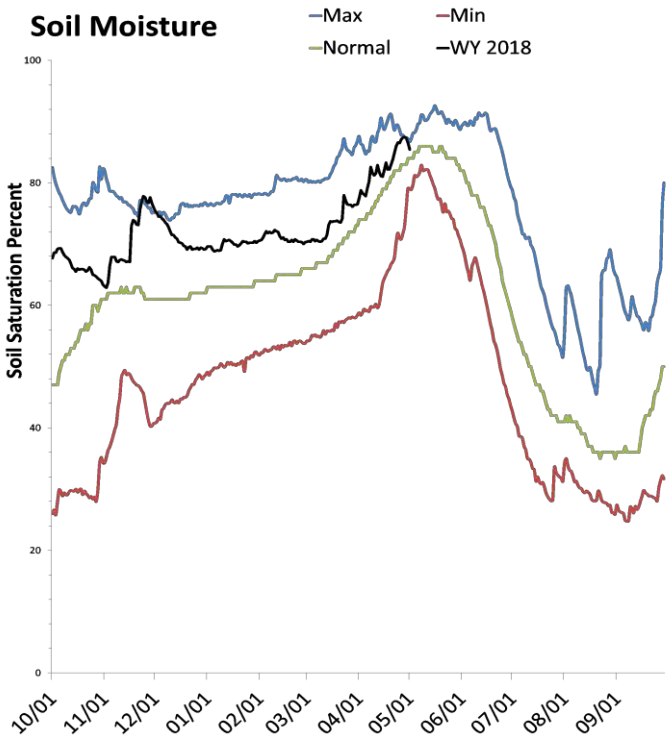


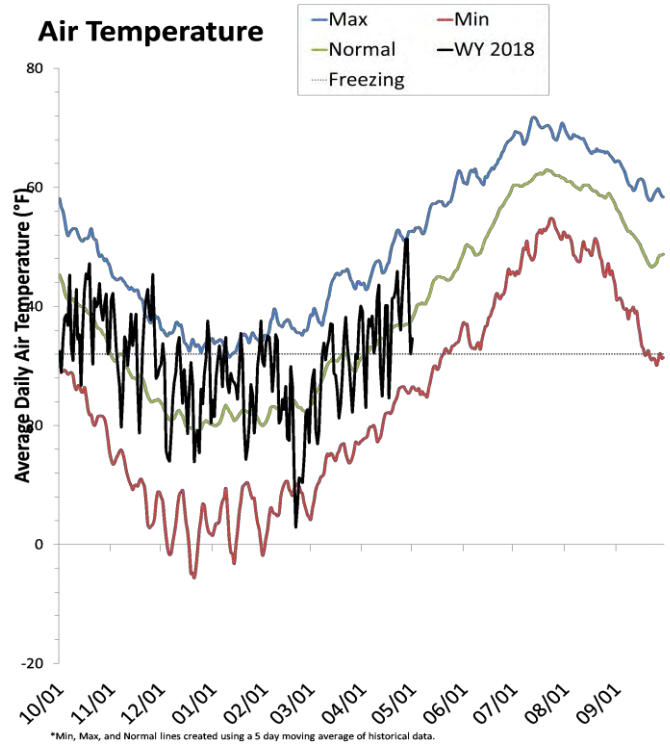
Bear River Basin

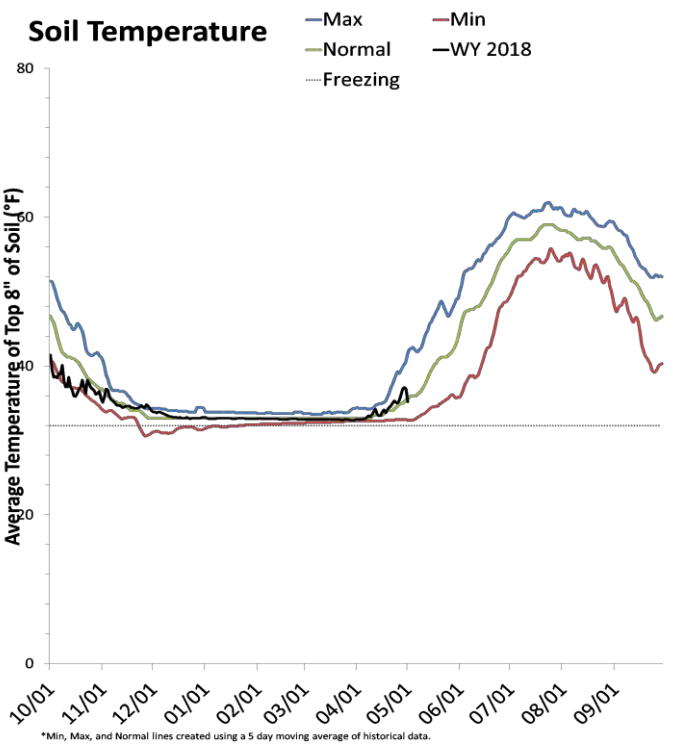
May 1, 2018

Precipitation in April was near average at 97%, which brings the seasonal accumulation (Oct-Apr) to 85% of average. Soil moisture is at 85% compared to 85% last year. Reservoir storage is at 80% of capacity, compared to 69% last year. The water availability index for the Bear River is 92%, 87% for Woodruff Narrows and 56% for the Little Bear.









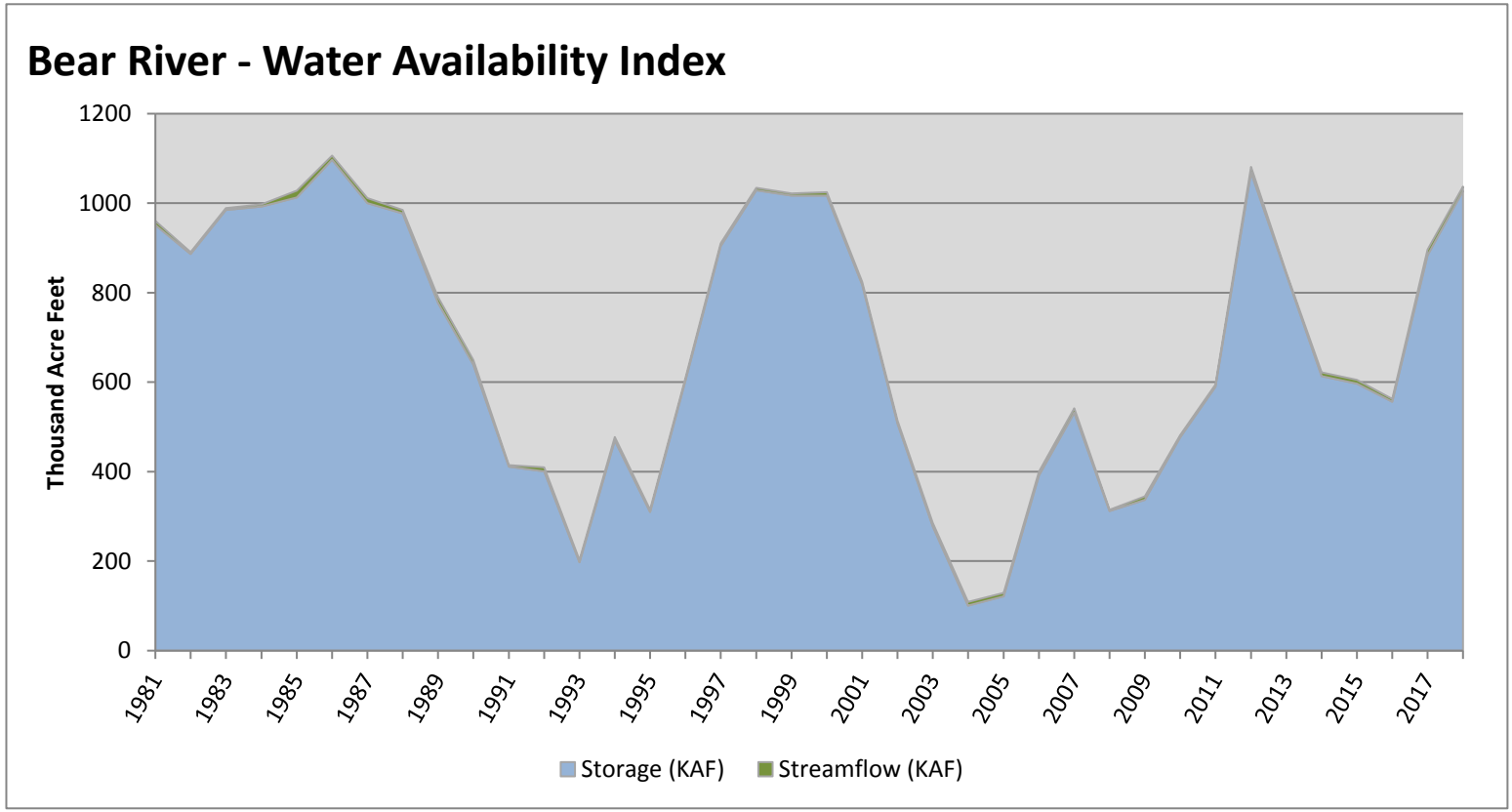
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	**1027.07**	**9.98**	**1037.05**	**92**	**3.53**	**85, 98, 12, 86**

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

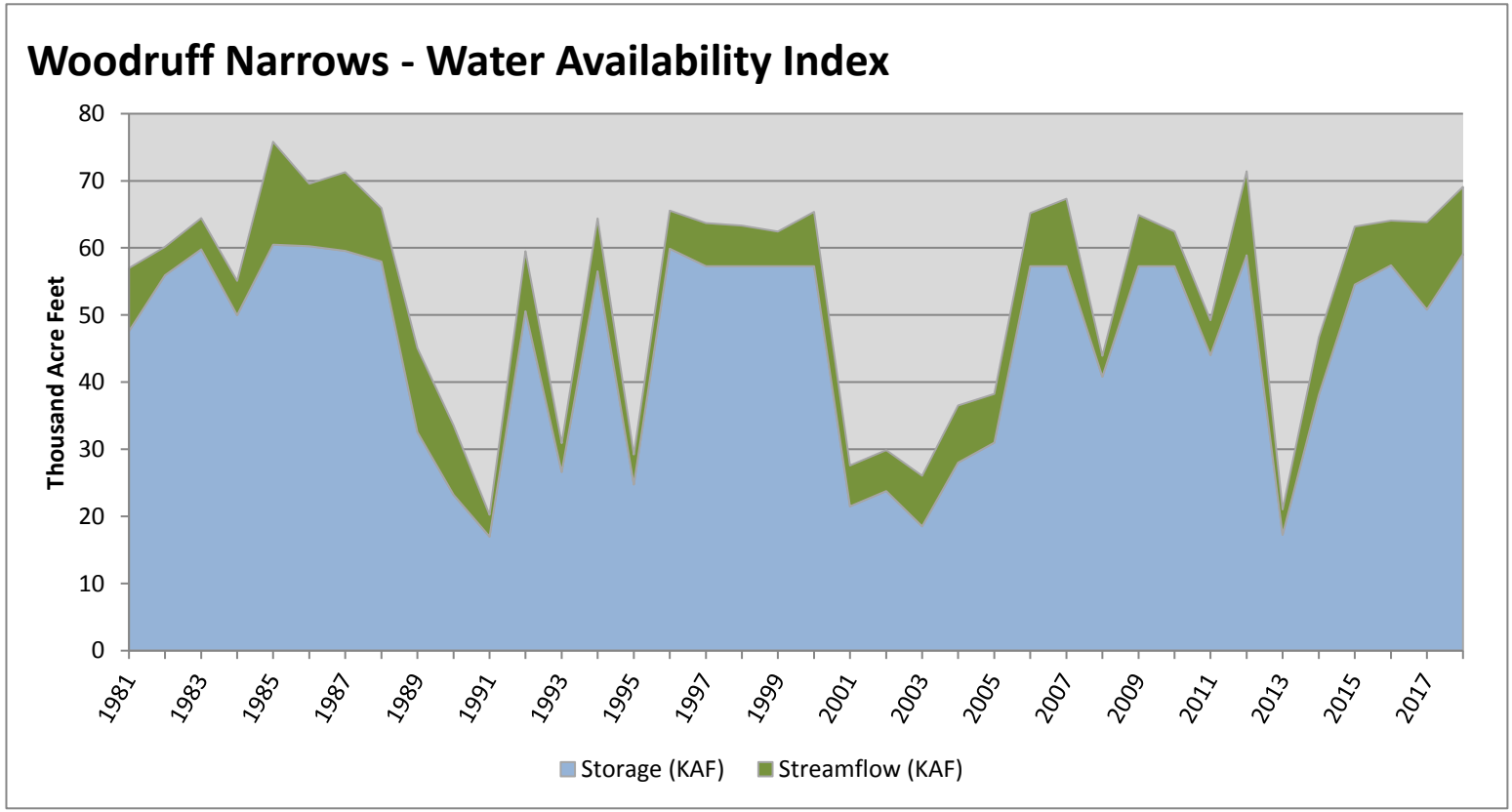


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Woodruff Narrows	**59.11**	**9.98**	**69.09**	**87**	**3.1**	**88, 07, 86, 87**

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

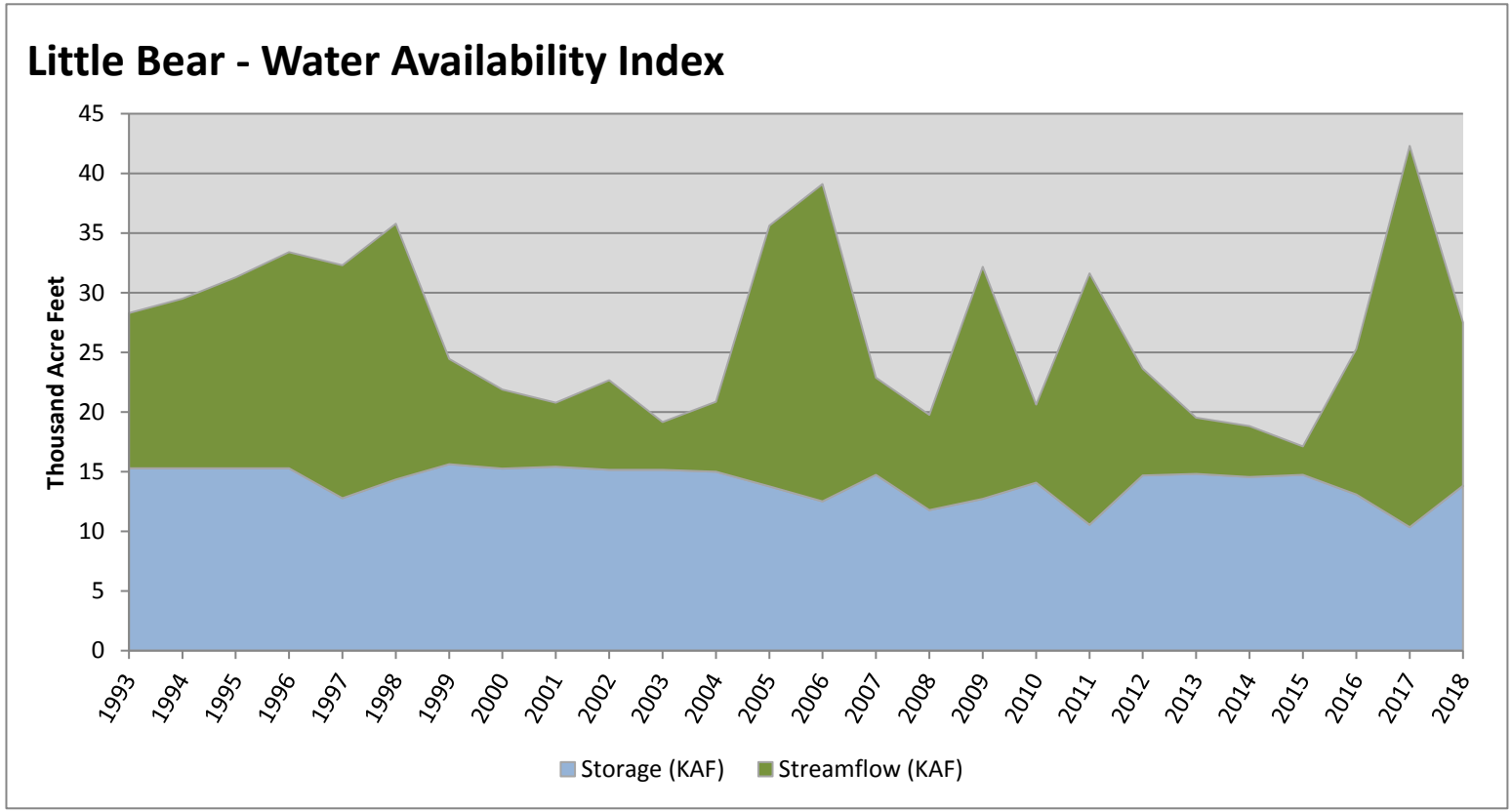


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Little Bear	**13.81**	**13.70**	**27.51**	**56**	**0.46**	**99, 16, 93, 94**

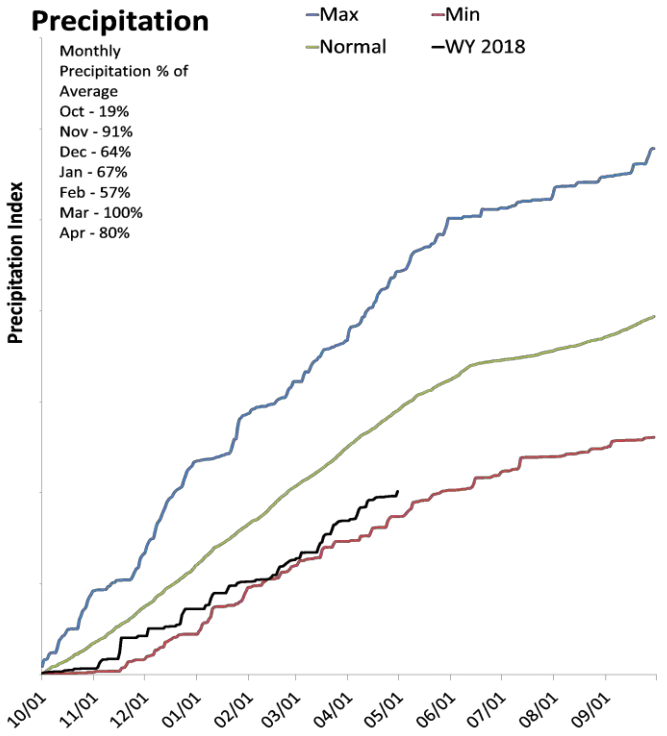
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

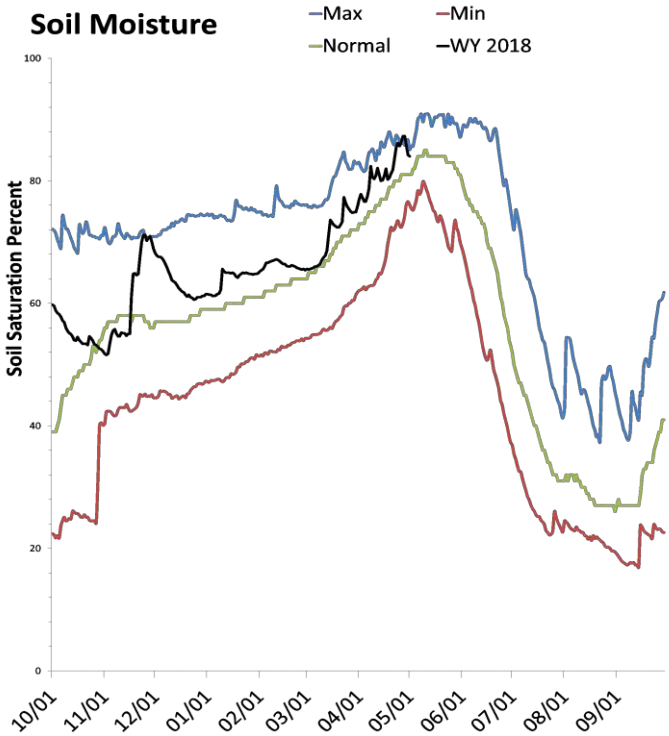


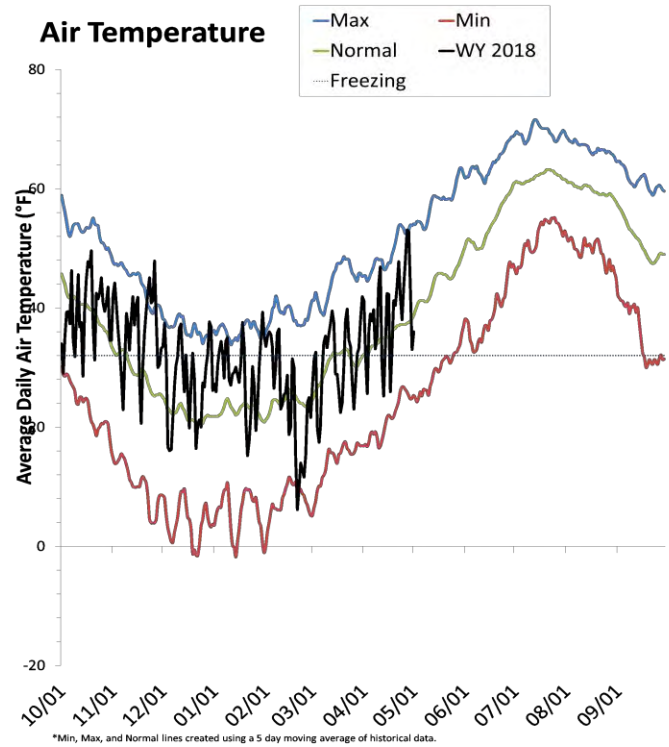
Weber & Ogden River Basins

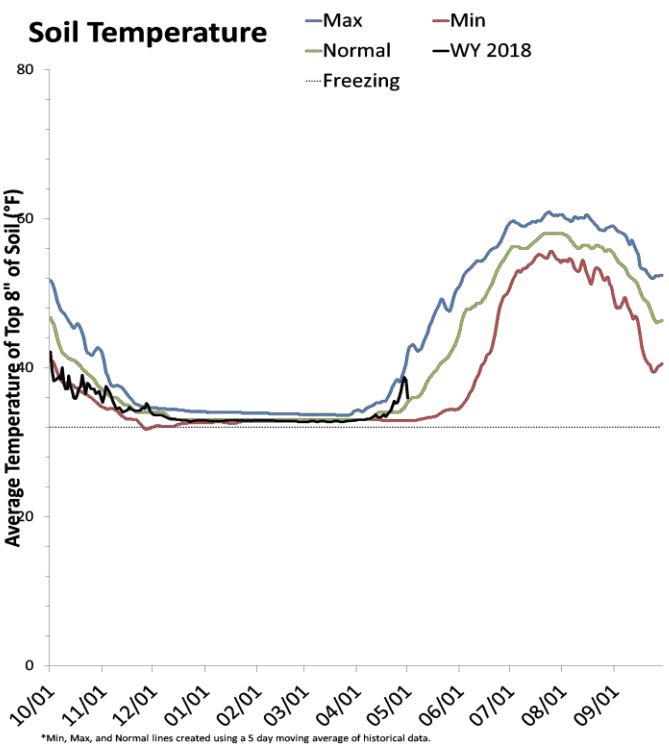
May 1, 2018

Precipitation in April was below average at 79%, which brings the seasonal accumulation (Oct-Apr) to 69% of average. Soil moisture is at 84% compared to 82% last year. Reservoir storage is at 93% of capacity, compared to 78% last year. The water availability index for the Ogden River is 85% and 90% for the Weber River.









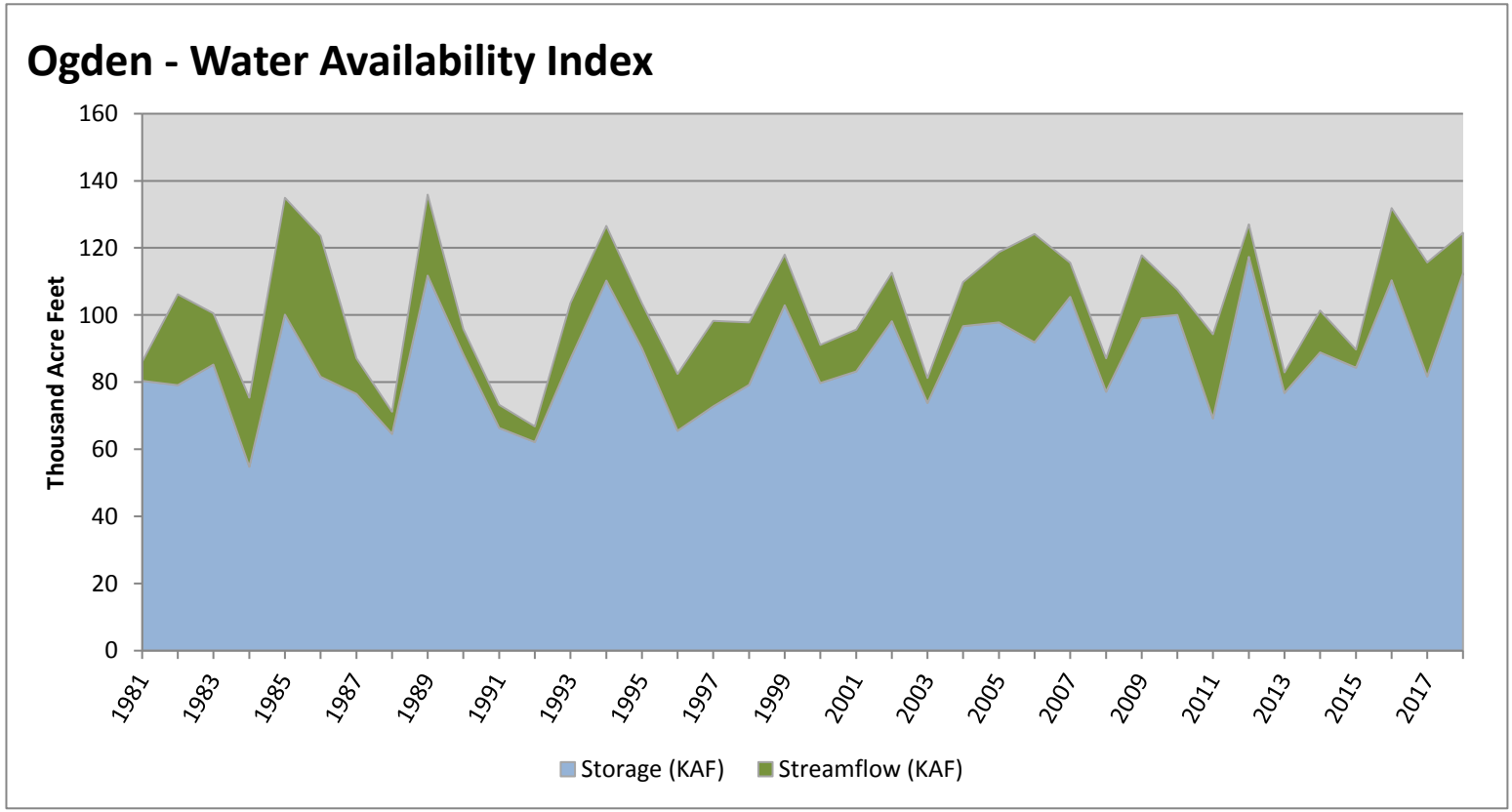
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Ogden	**112.45**	**12.05**	**124.50**	**85**	**2.88**	**86, 06, 94, 12**

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

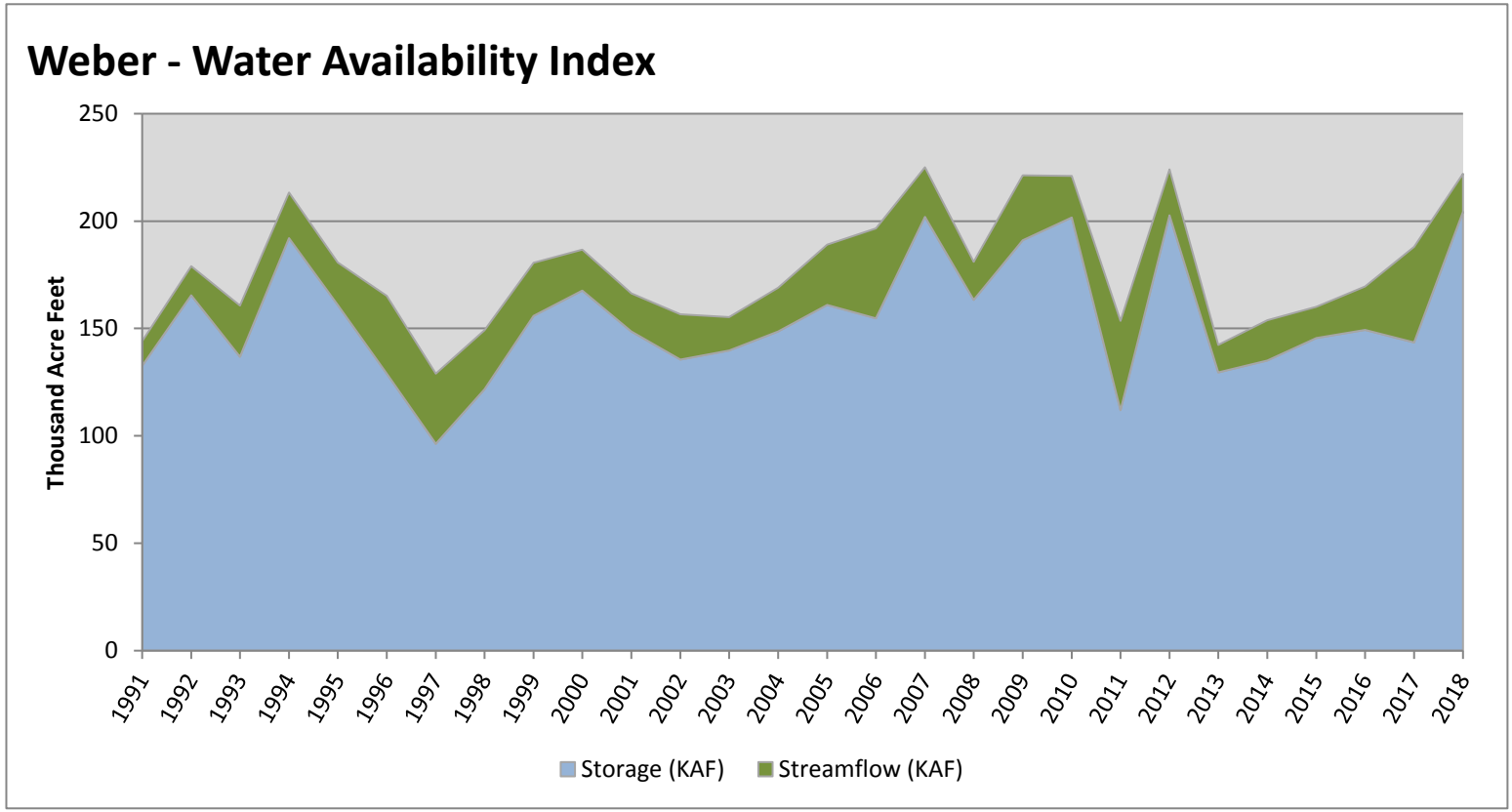


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Weber	**204.36**	**17.68**	**222.04**	**90**	**3.3**	**10, 09, 12, 07**

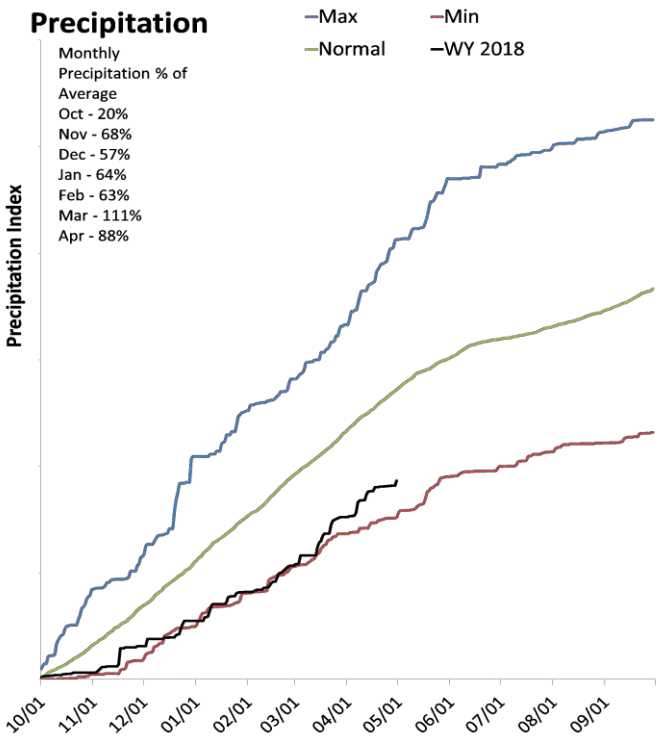
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

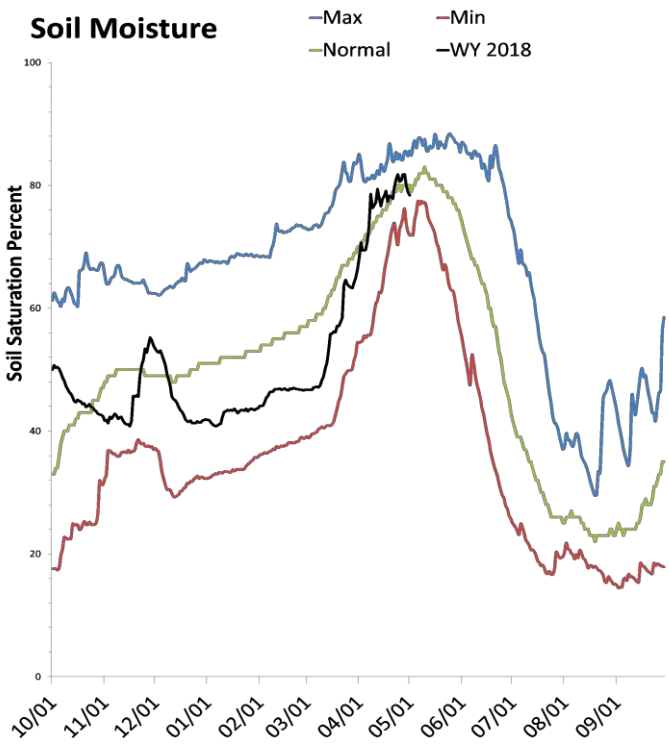


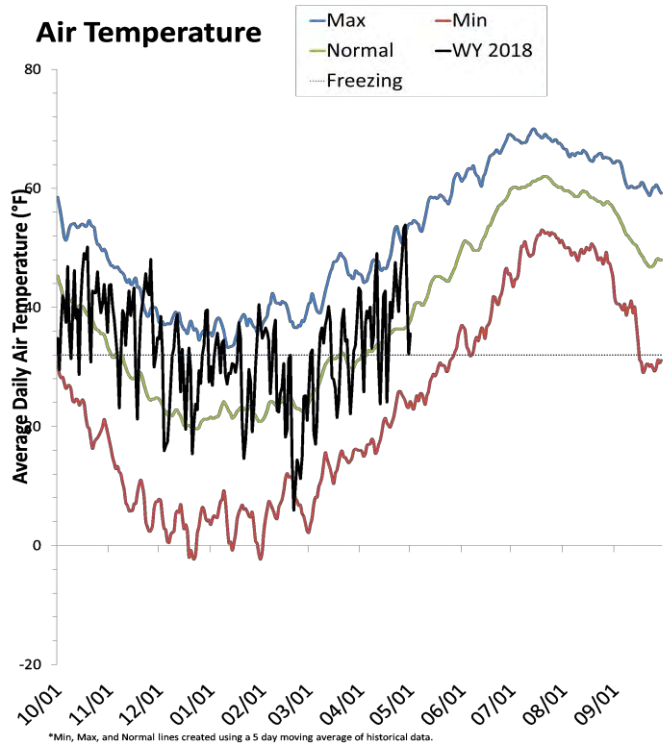
Provo & Jordan River Basins

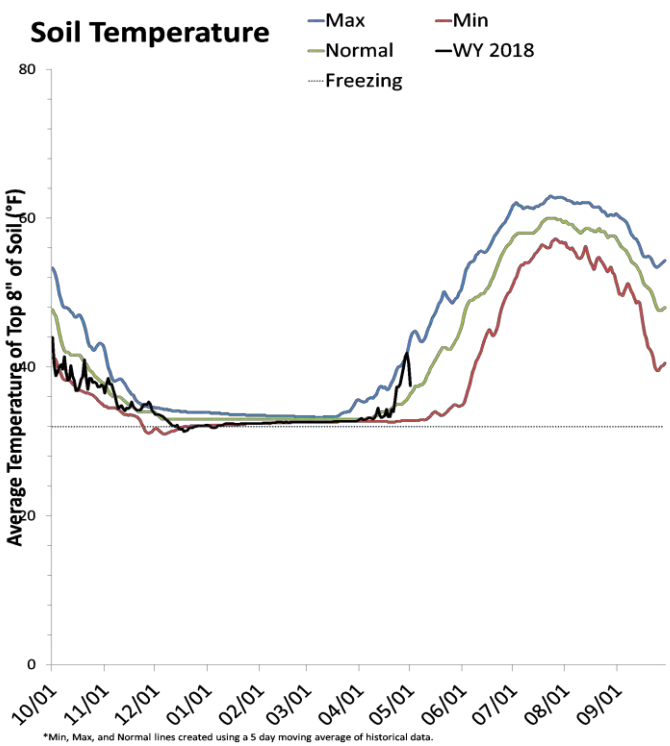
May 1, 2018

Precipitation in April was below average at 88%, which brings the seasonal accumulation (Oct-Apr) to 69% of average. Soil moisture is at 79% compared to 83% last year. Reservoir storage is at 81% of capacity, compared to 75% last year. The water availability index for the Provo River is 92%.









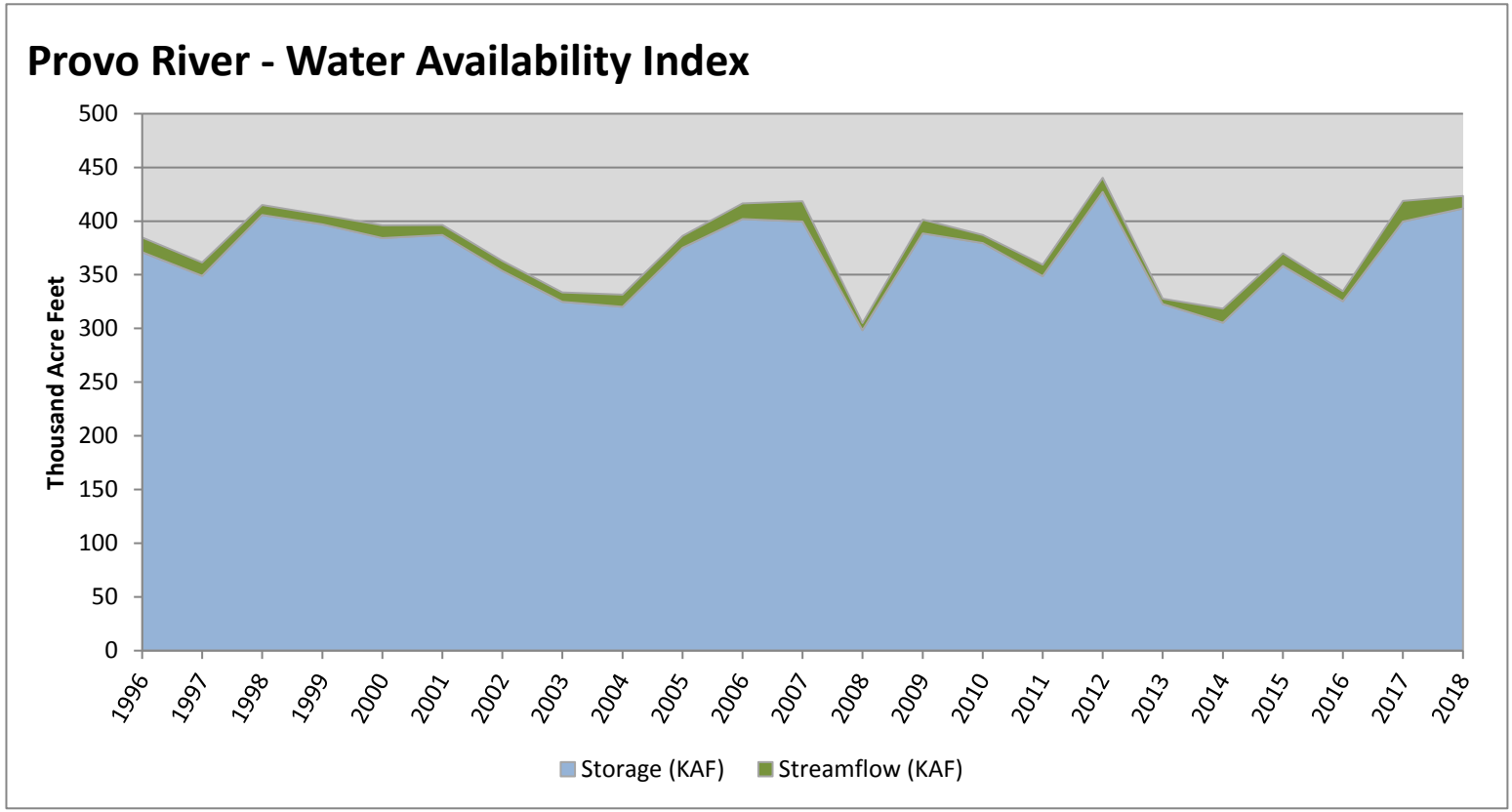
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Provo River	**411.92**	**11.58**	**423.50**	**92**	**3.47**	**12, 17, 07, 06**

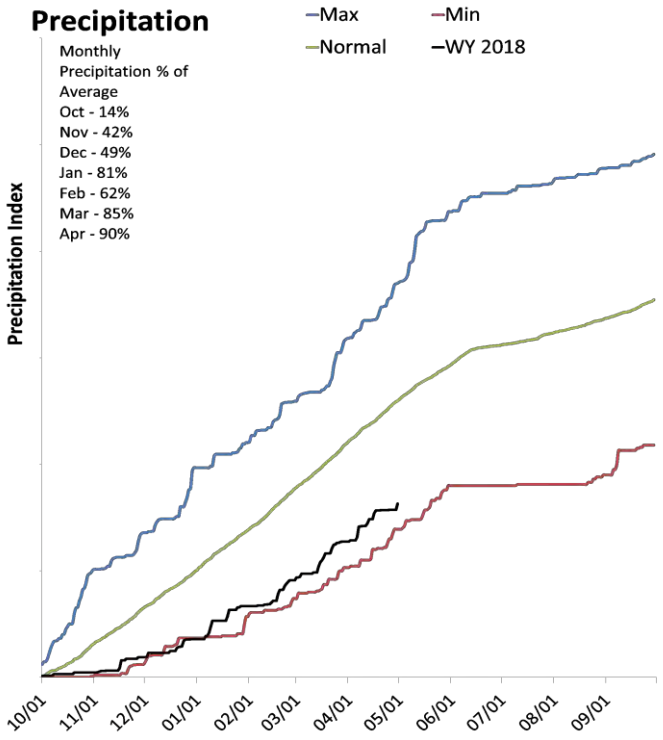
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

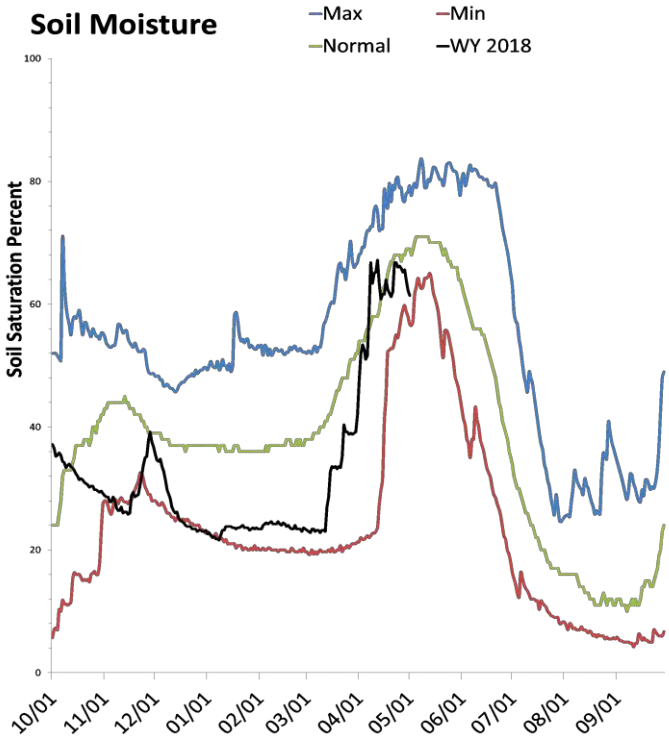


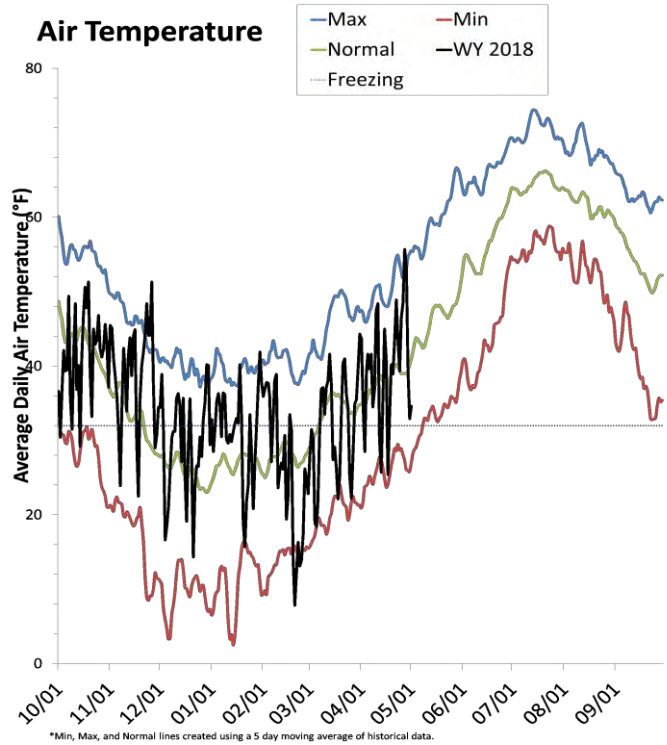
Tooele Valley & West Desert Basins

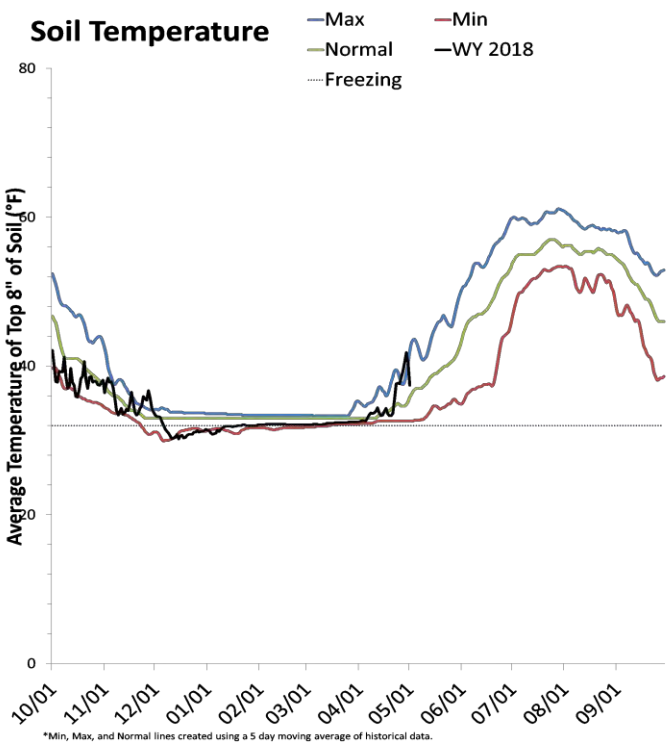
May 1, 2018

Precipitation in April was below average at 89%, which brings the seasonal accumulation (Oct-Apr) to 63% of average. Soil moisture is at 62% compared to 62% last year. Reservoir storage is at 84% of capacity, compared to 96% last year.







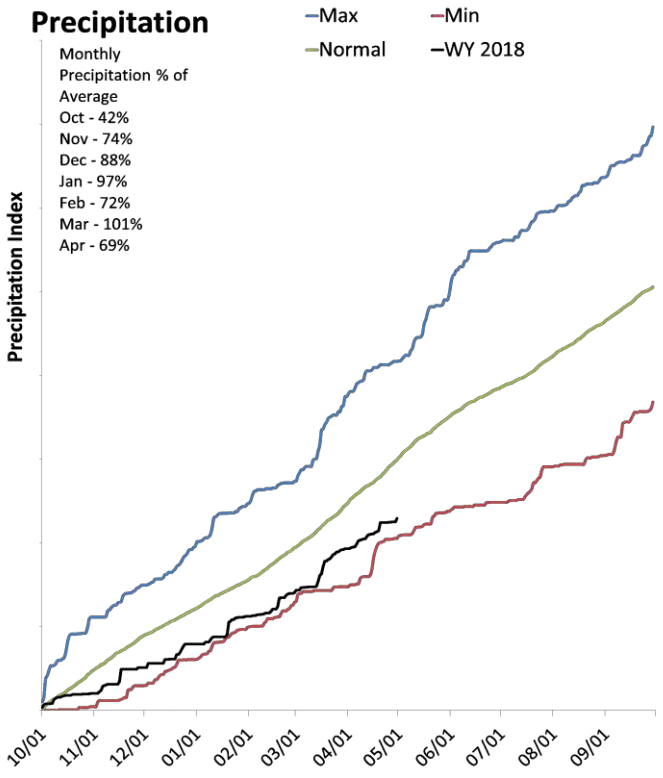


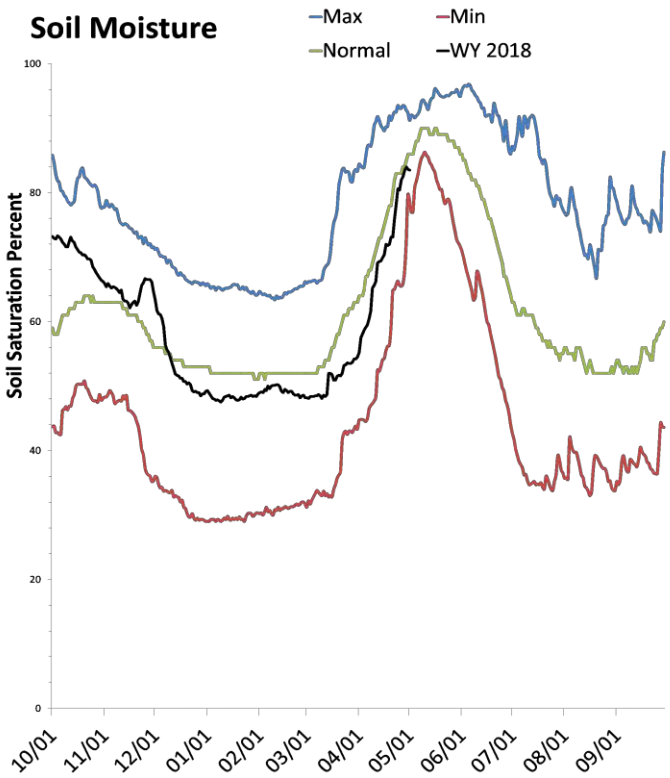
SNOTEL Data

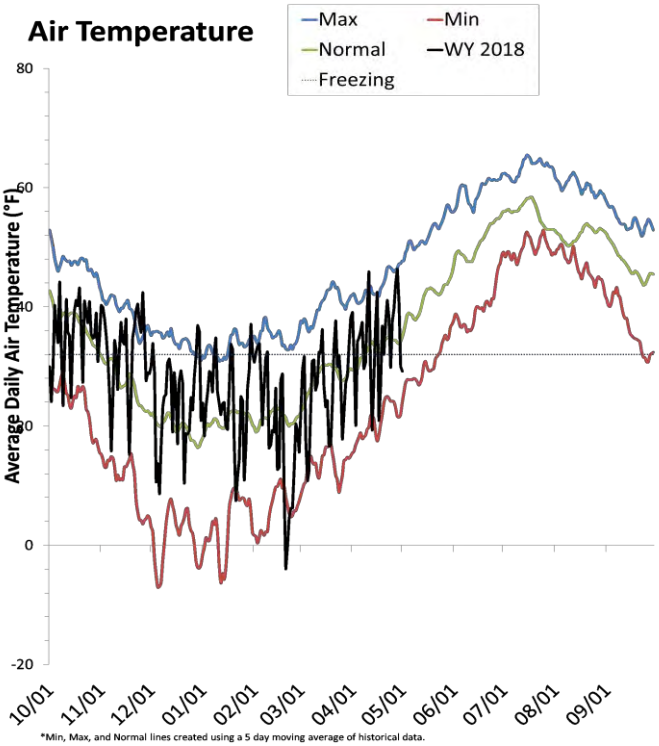
Northeastern Uinta Basin

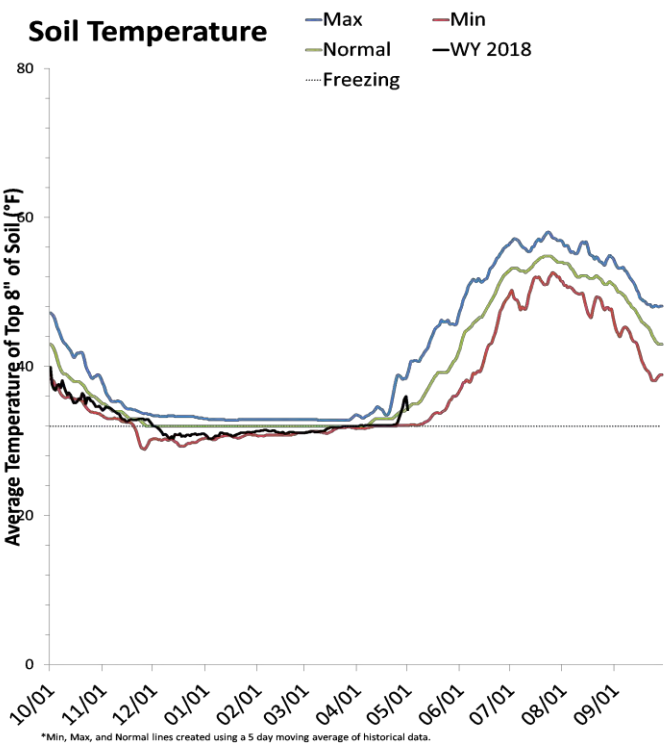
May 1, 2018

Precipitation in April was much below average at 69%, which brings the seasonal accumulation (Oct-Apr) to 77% of average. Soil moisture is at 82% compared to 89% last year. Reservoir storage is at 85% of capacity, compared to 82% last year. The water availability index for Blacks Fork is 78% and 69% for Smiths Creek.









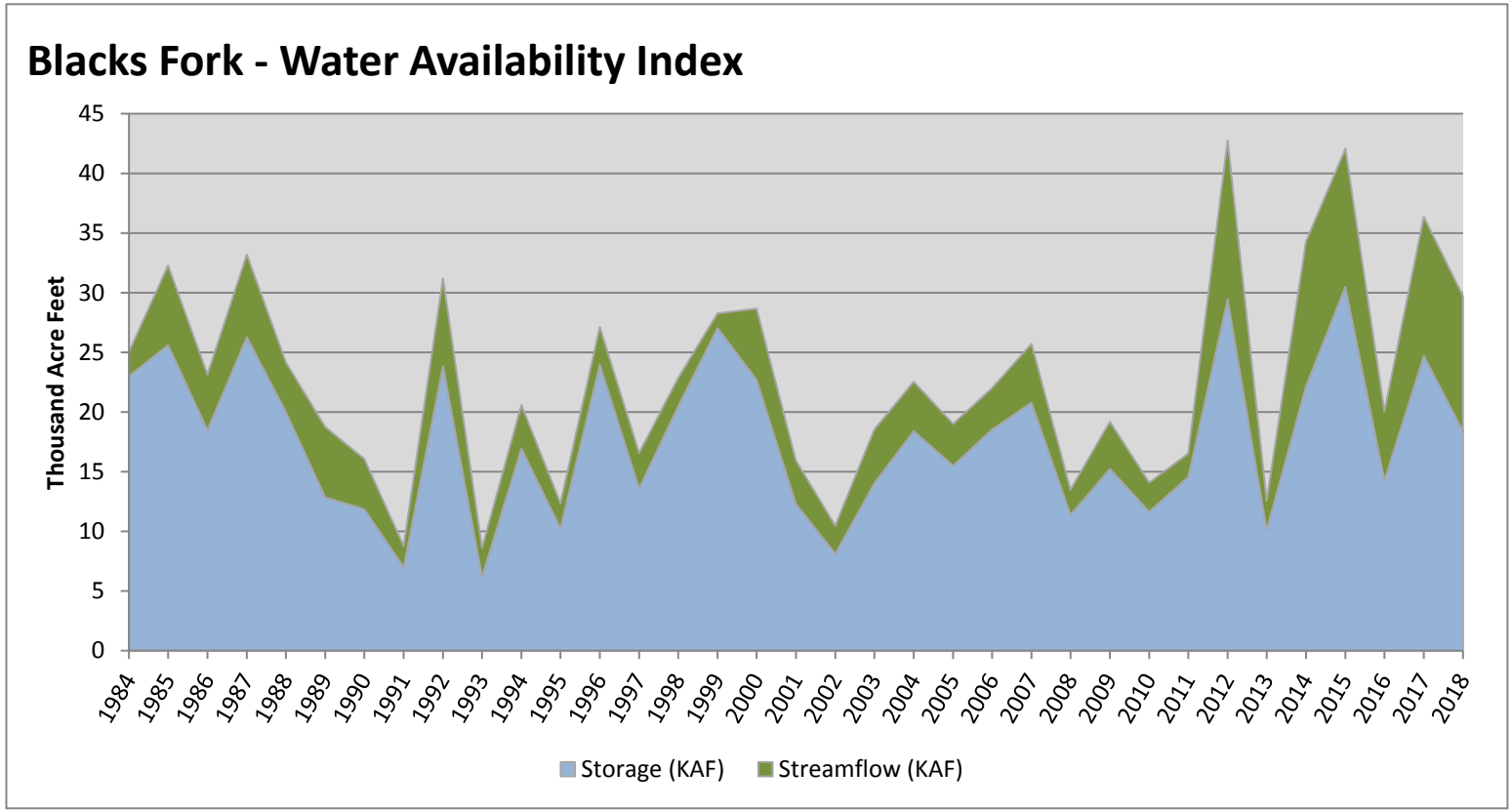
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Blacks Fork	**18.38**	**11.32**	**29.70**	**78**	**2.31**	**99, 00, 92, 85**

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

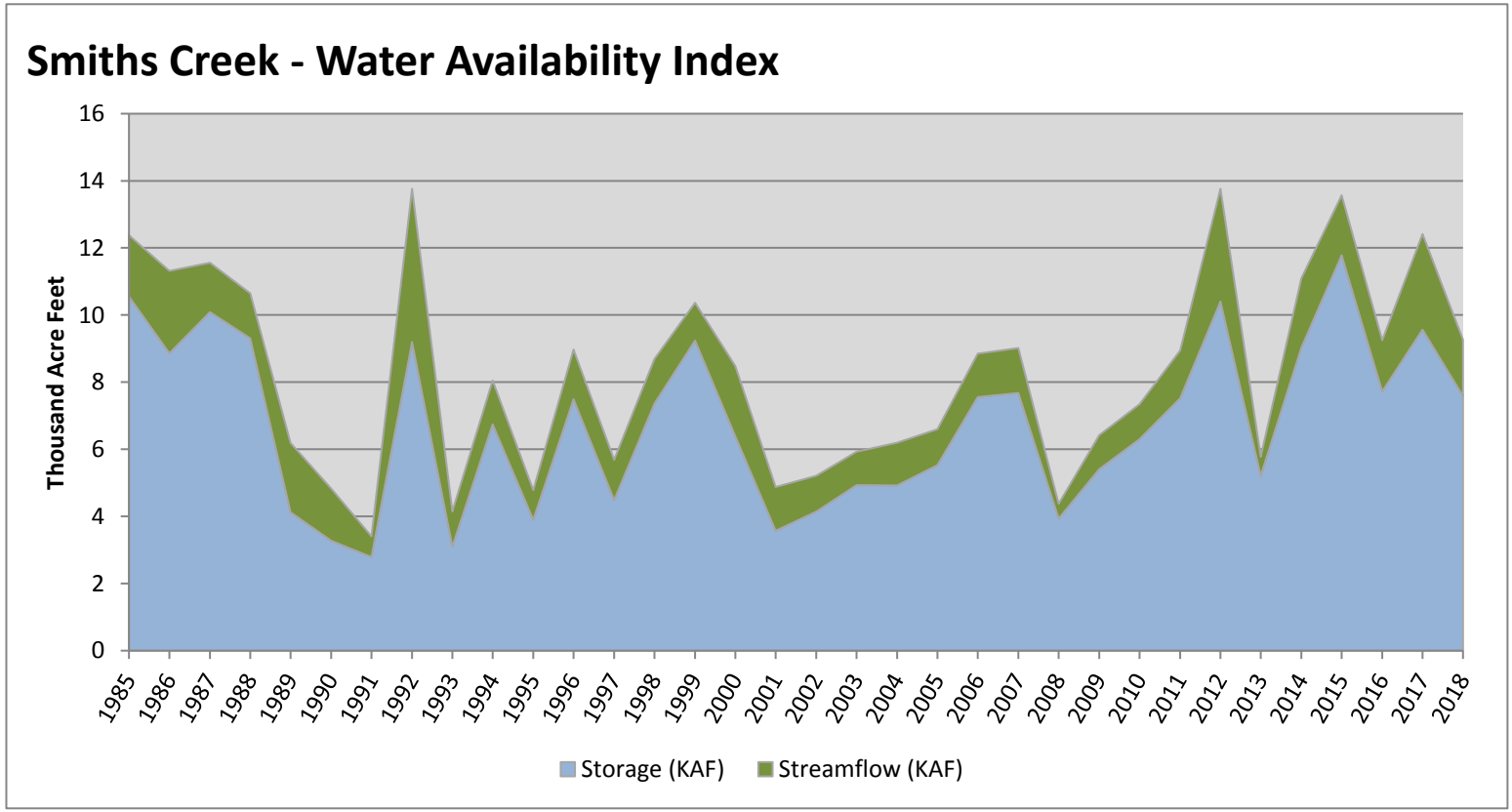


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Smiths Creek	**7.58**	**1.69**	**9.27**	**69**	**1.55**	**07, 16, 99, 88**

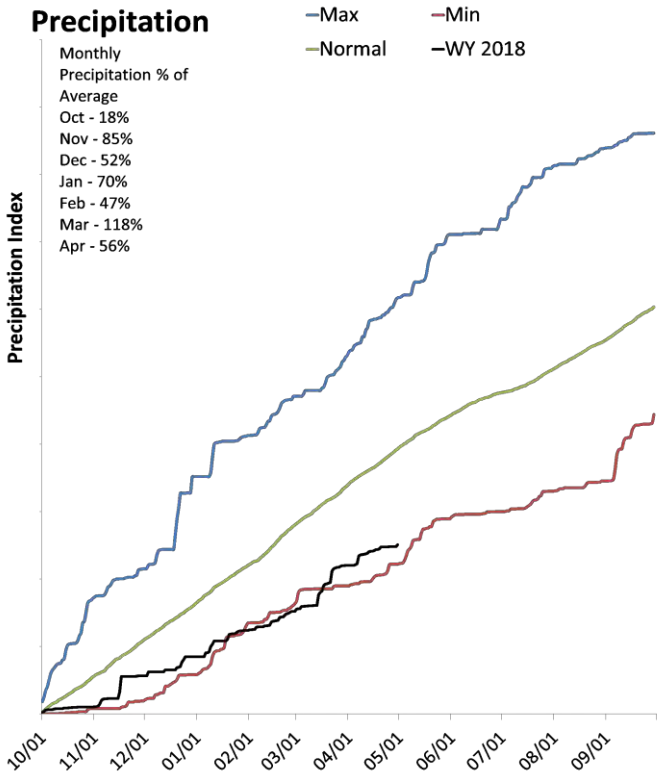
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

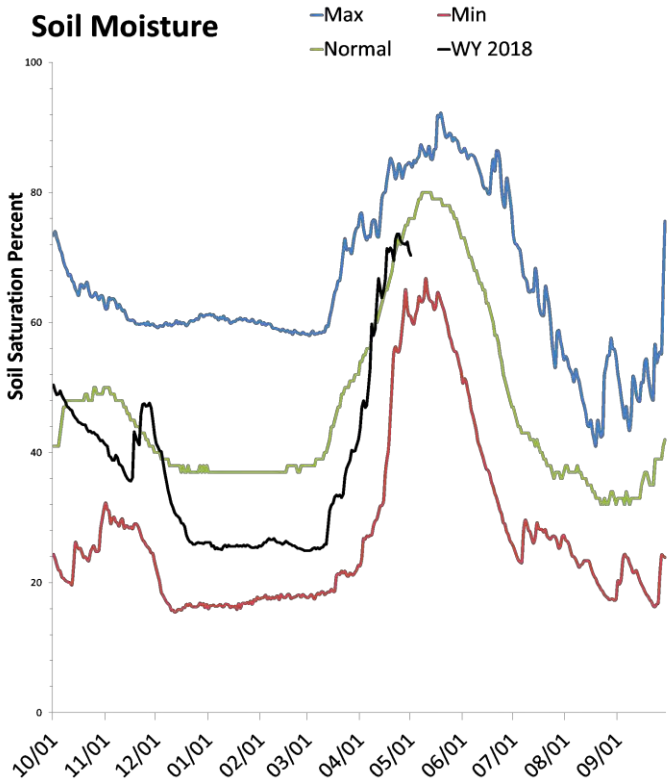


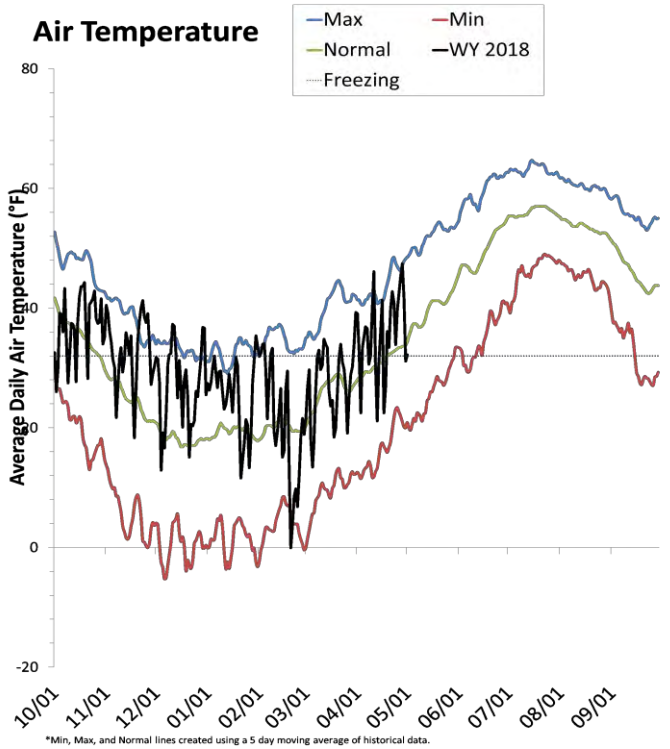
Duchesne River Basin

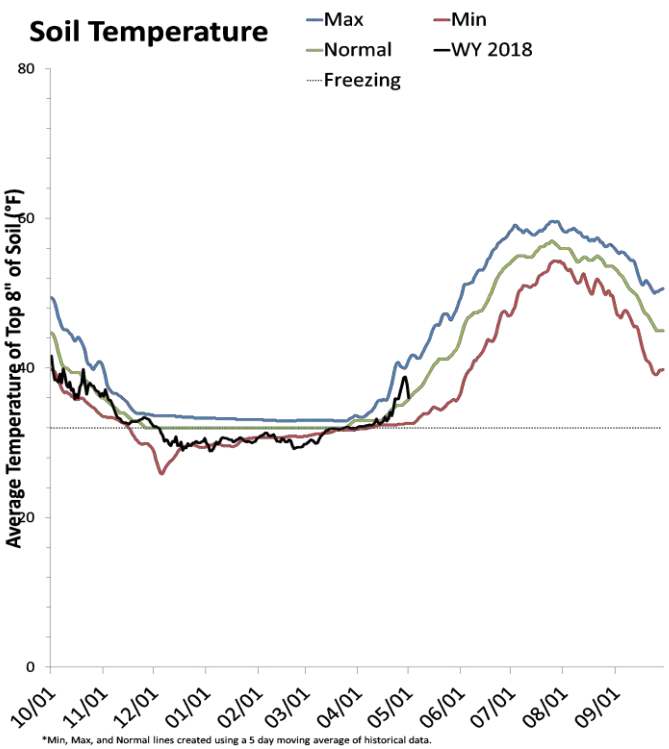
May 1, 2018

Precipitation in April was much below average at 56%, which brings the seasonal accumulation (Oct-Apr) to 64% of average. Soil moisture is at 71% compared to 82% last year. Reservoir storage is at 85% of capacity, compared to 76% last year. The water availability index for the Western Uintas is 94% and 31% for the Eastern Uintas.









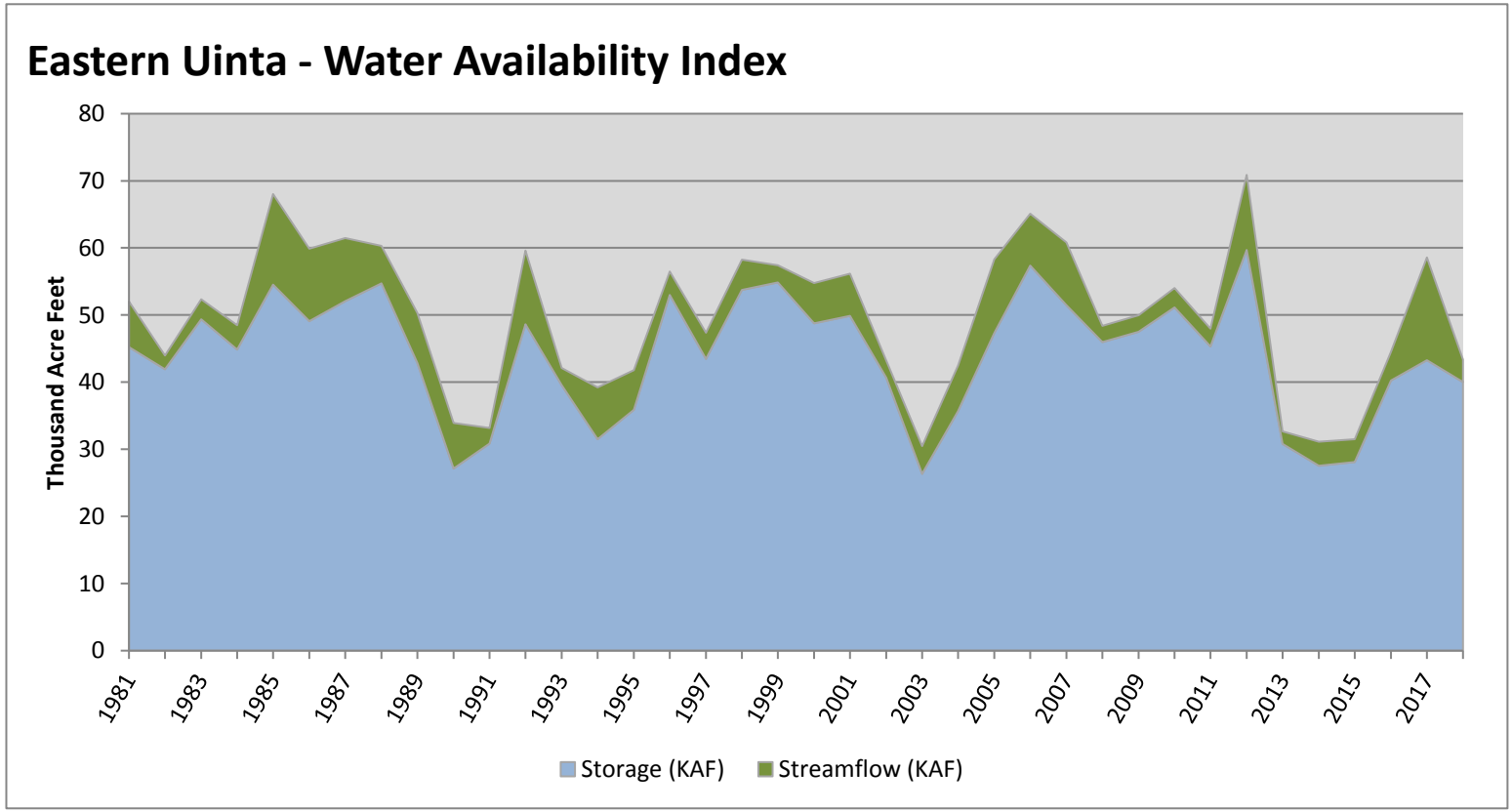
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Eastern Uinta	**40.01**	**3.34**	**43.35**	**31**	**-1.6**	**04, 02, 82, 16**

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

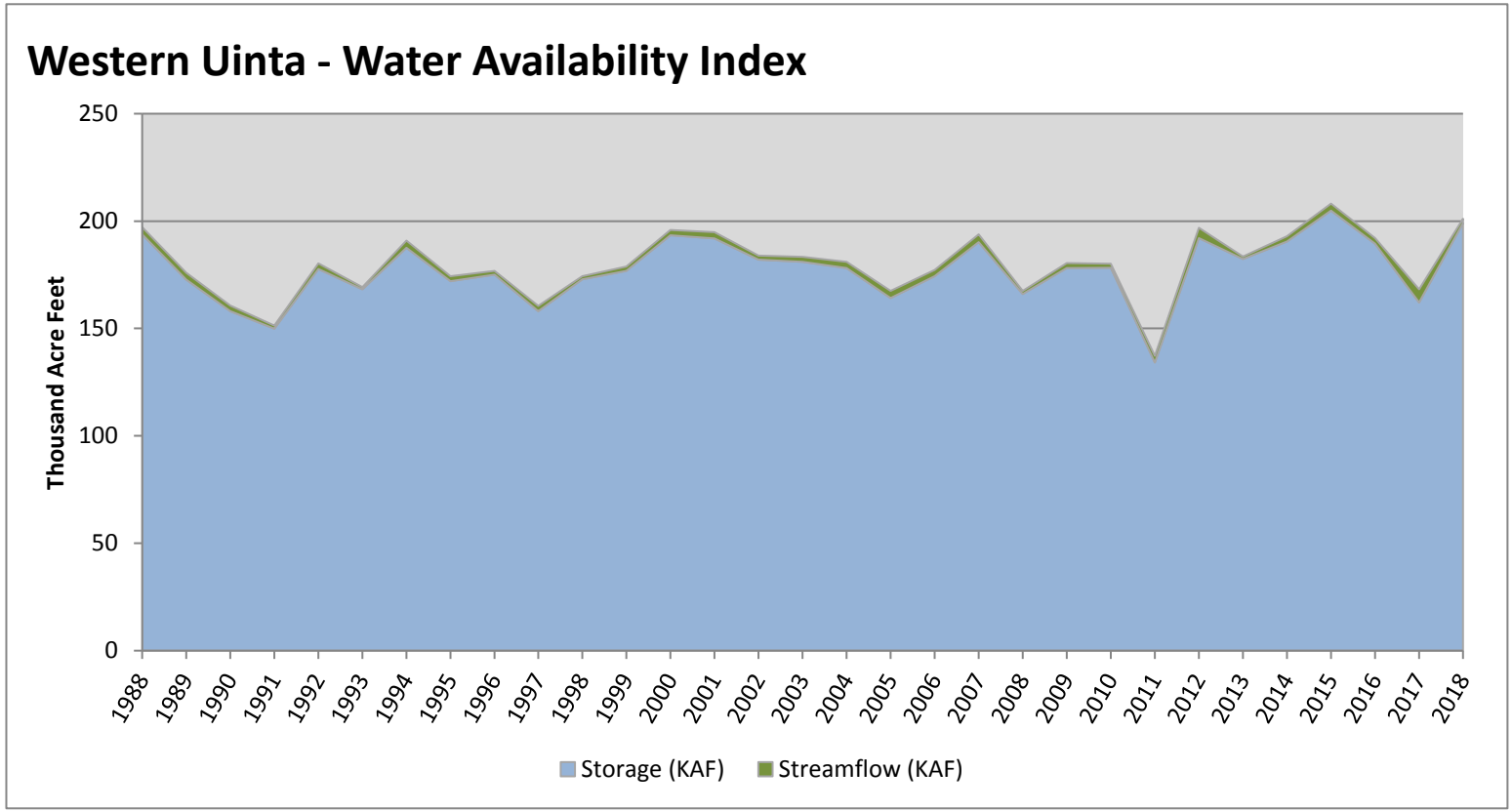


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Western Uinta	**199.05**	**2.03**	**201.08**	**94**	**3.65**	**15, 88, 12, 00**

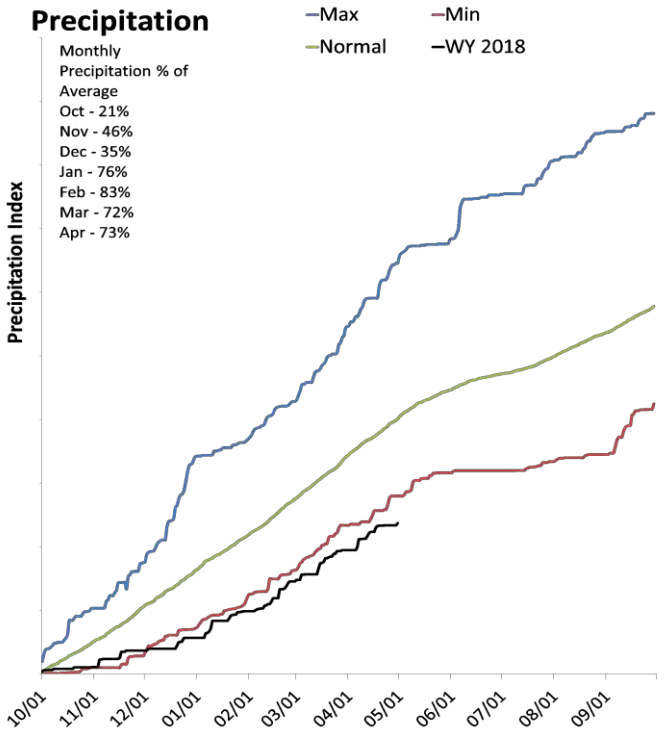
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

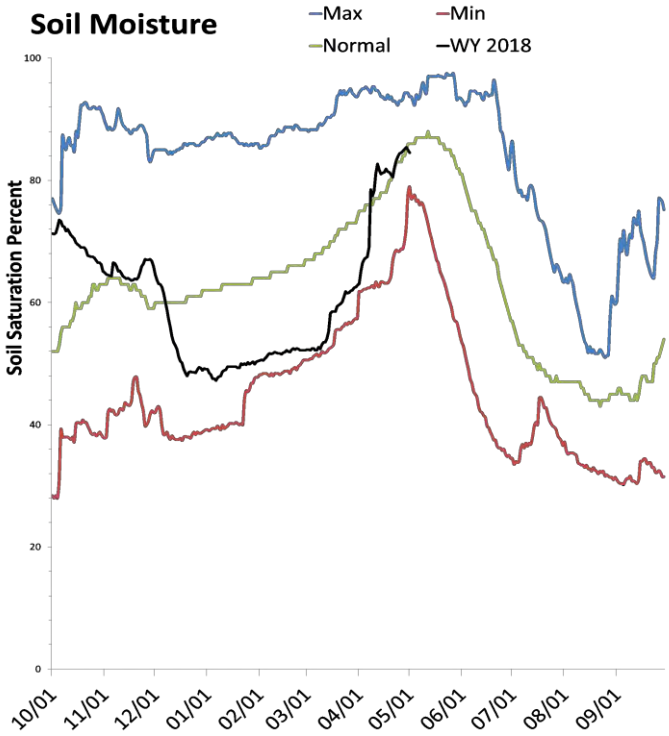


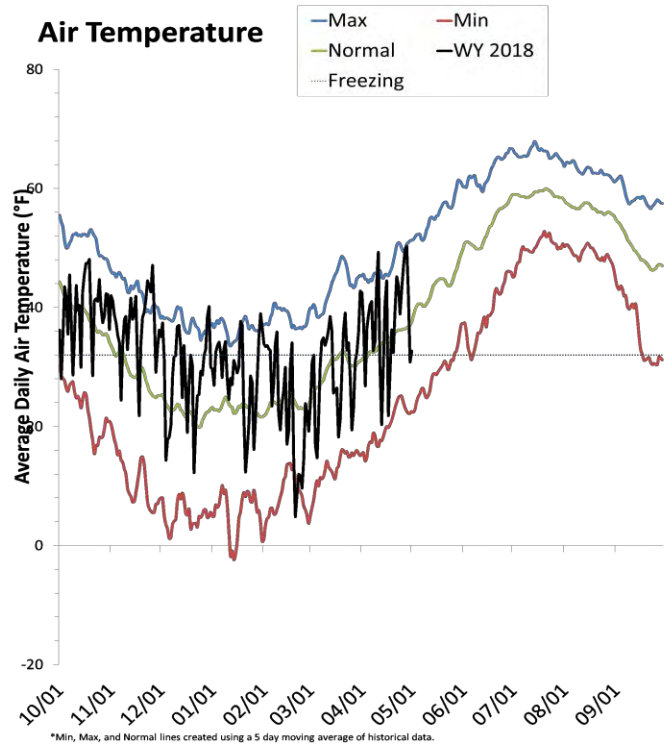
San Pitch River Basin

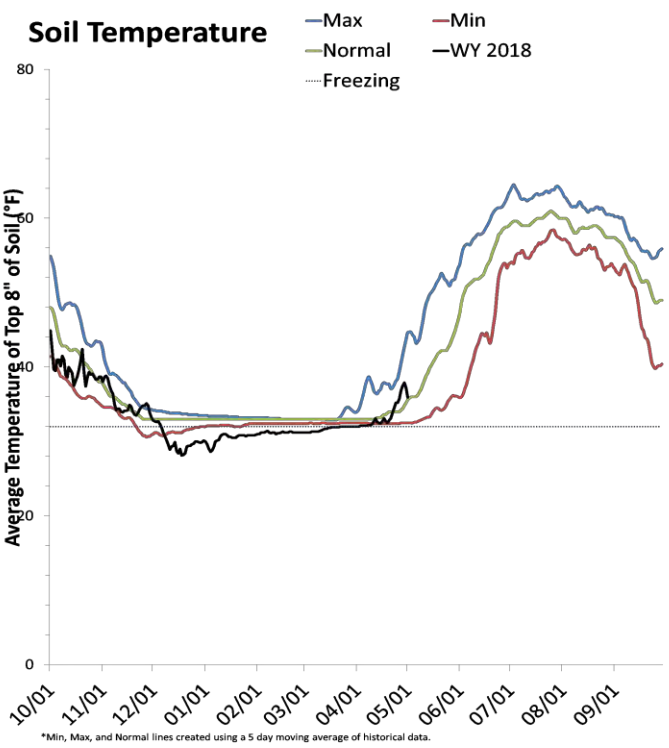
May 1, 2018

Precipitation in April was below average at 74%, which brings the seasonal accumulation (Oct-Apr) to 59% of average. Soil Moisture is at 84% compared to 86% last year. Reservoir storage is at 9% of capacity, compared to 22% last year.The water availability index for the San Pitch is 8%.







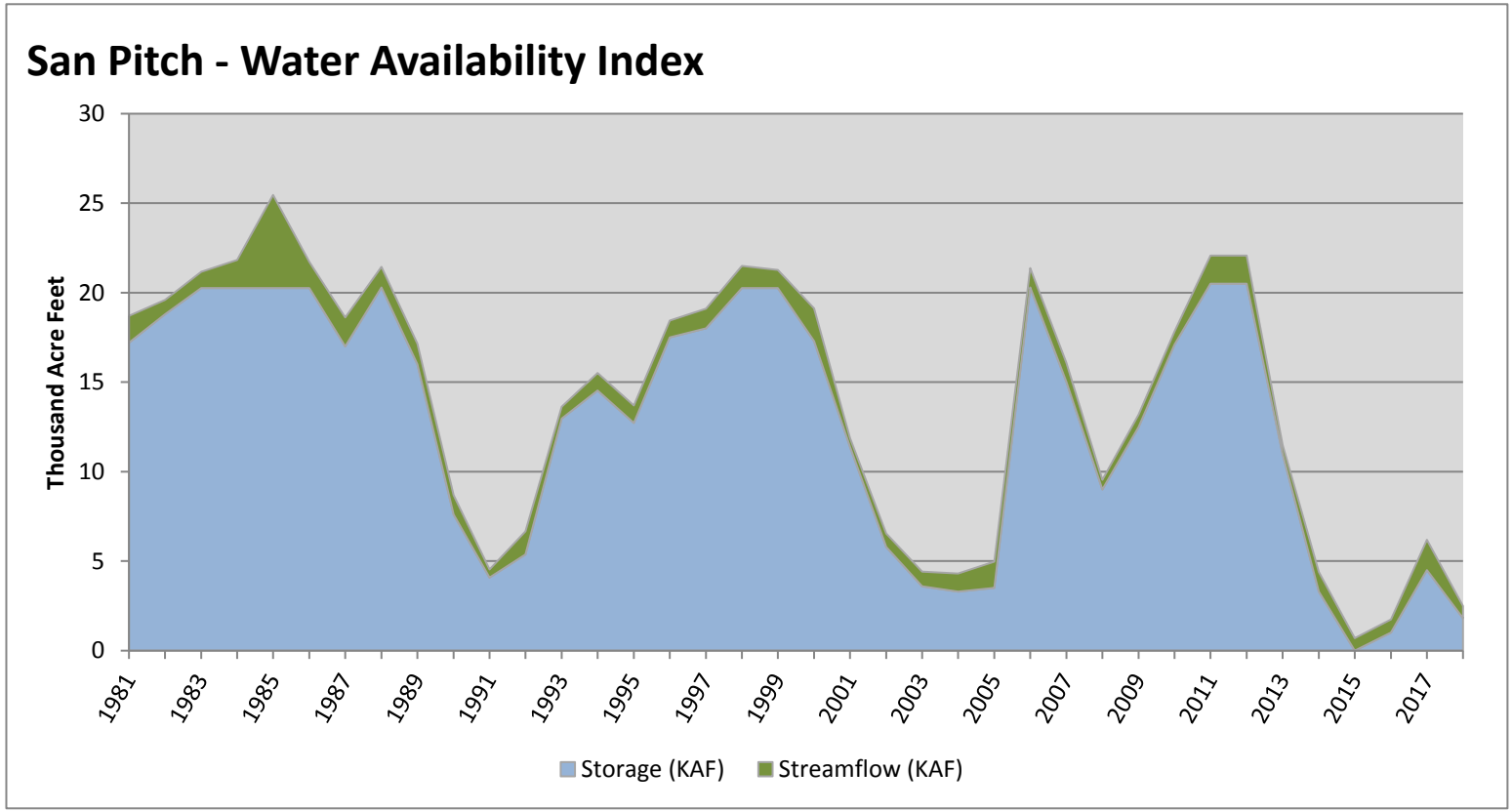


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
San Pitch	**1.81**	**0.69**	**2.50**	**8**	**-3.53**	**15, 16, 04, 14**

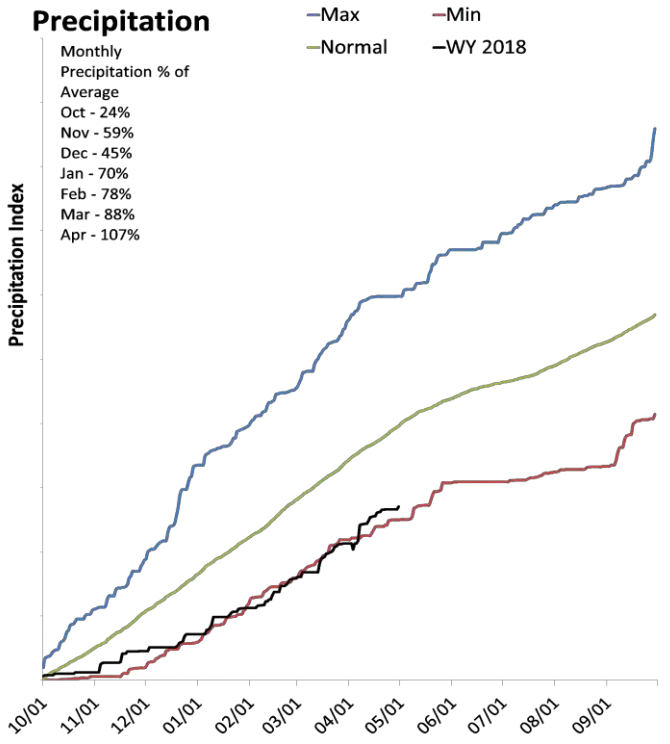
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

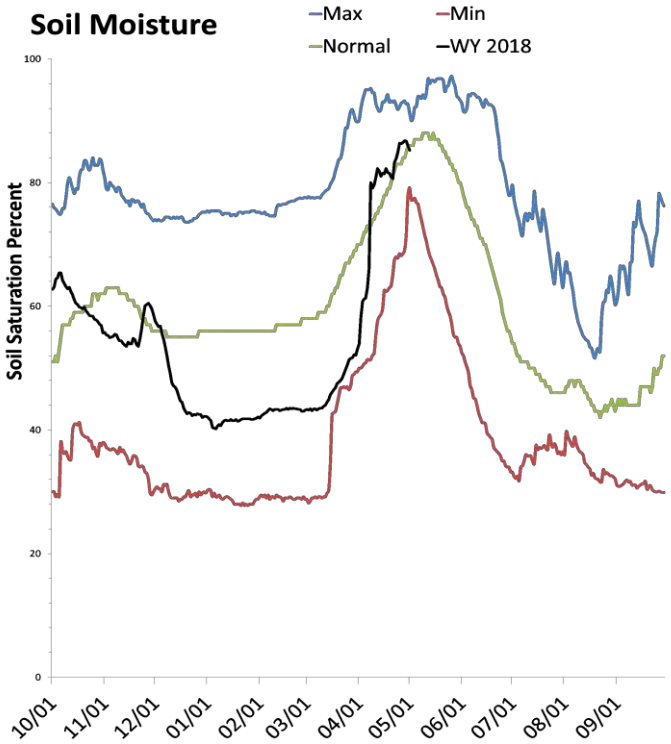


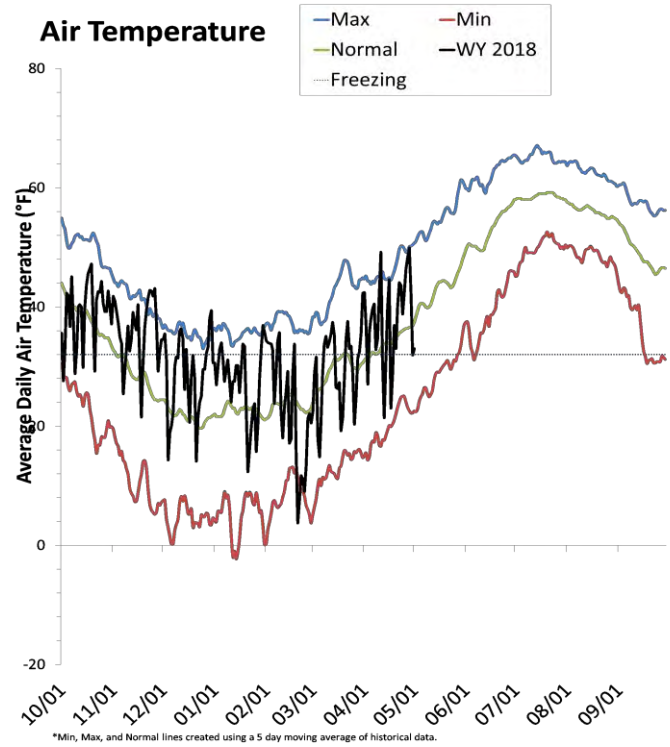
Price & San Rafael Basins

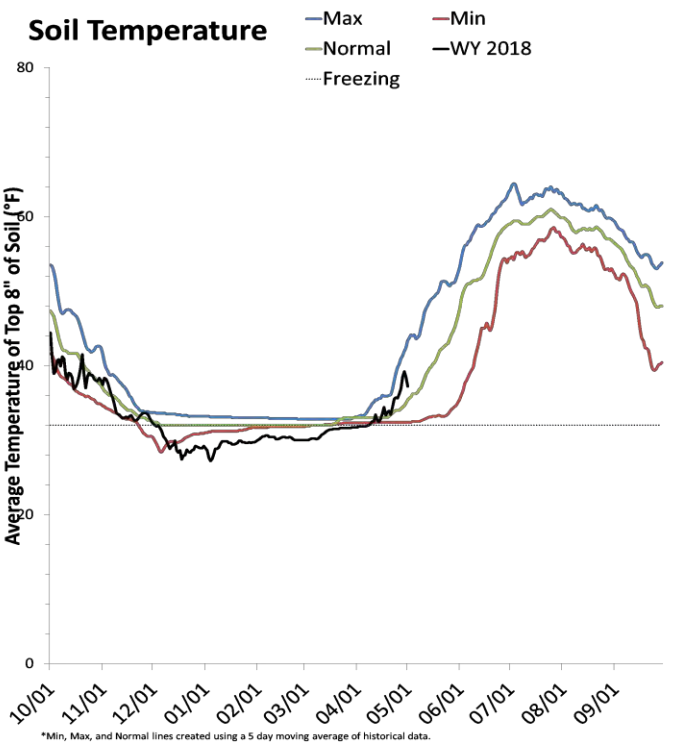
May 1, 2018

Precipitation in April was near average at 107%, which brings the seasonal accumulation (Oct-Apr) to 68% of average. Soil moisture is at 85% compared to 88% last year. Reservoir storage is at 71% of capacity, compared to 54% last year. The water availability index for the Price River is 85%, and 74% for Joe's Valley.







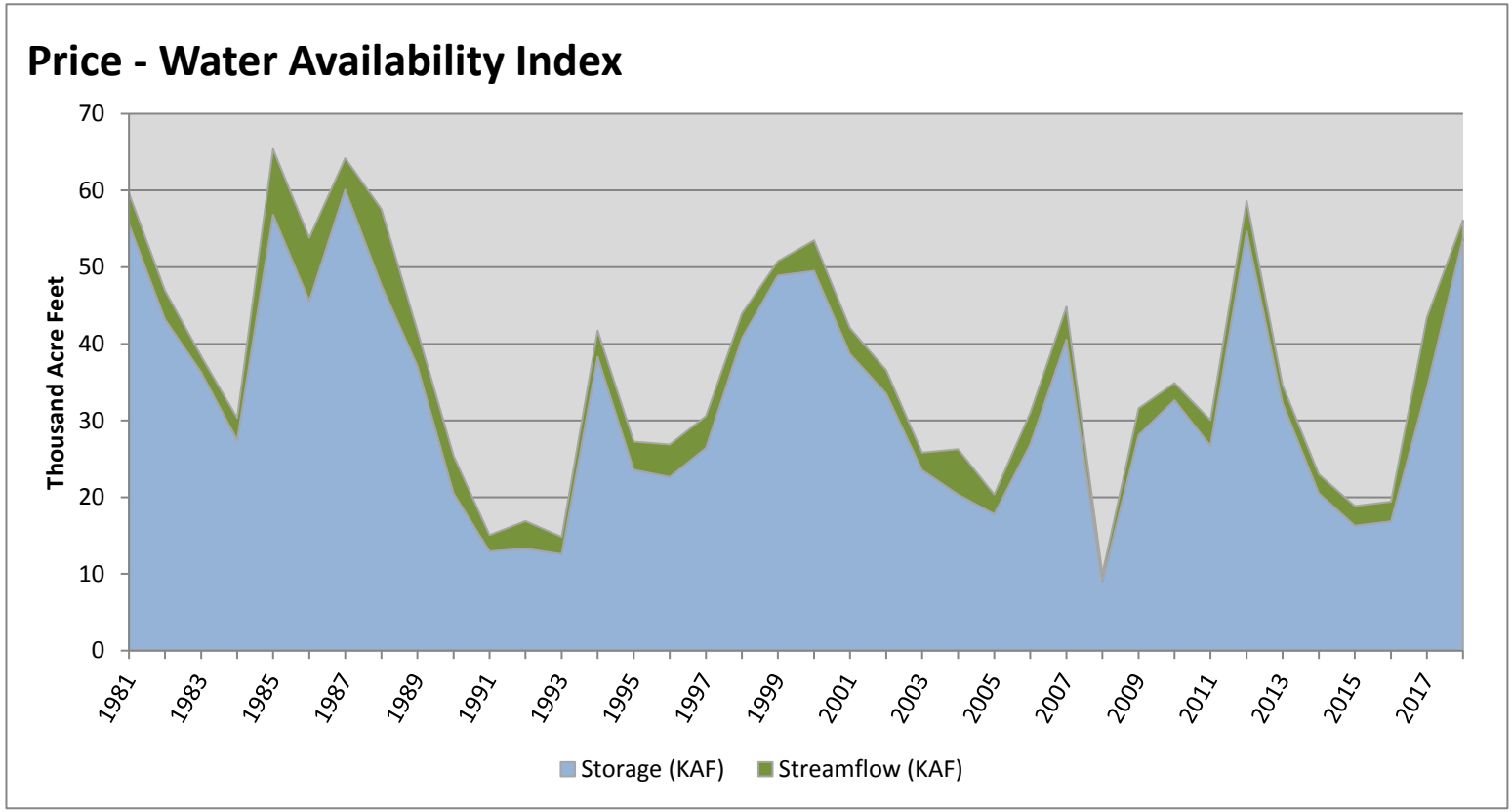


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Price	**53.80**	**2.31**	**56.11**	**85**	**2.88**	**00, 86, 88, 12**

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

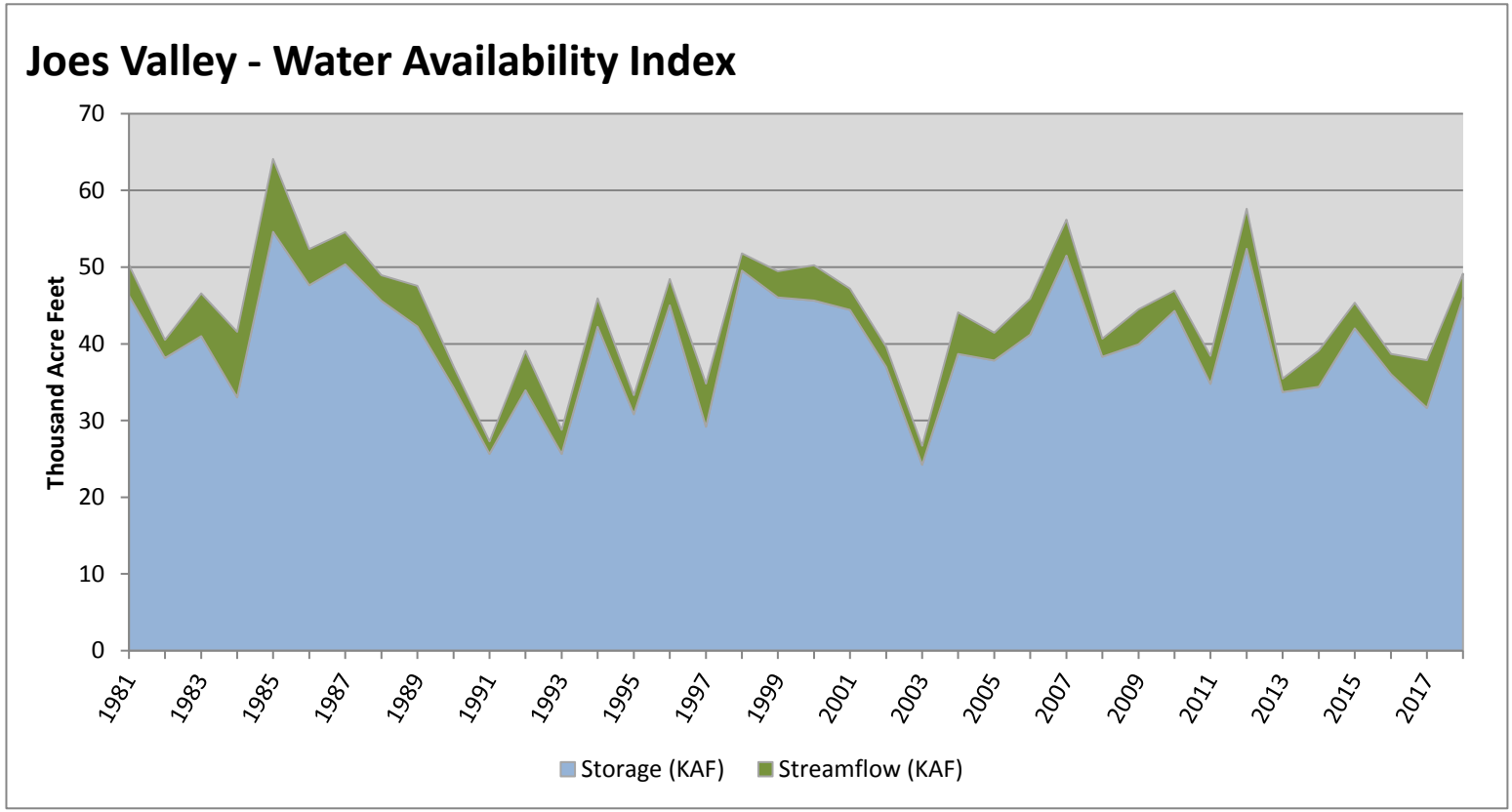


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Joes Valley	**46.06**	**3.09**	**49.15**	**74**	**2.03**	**96, 88, 99, 00**

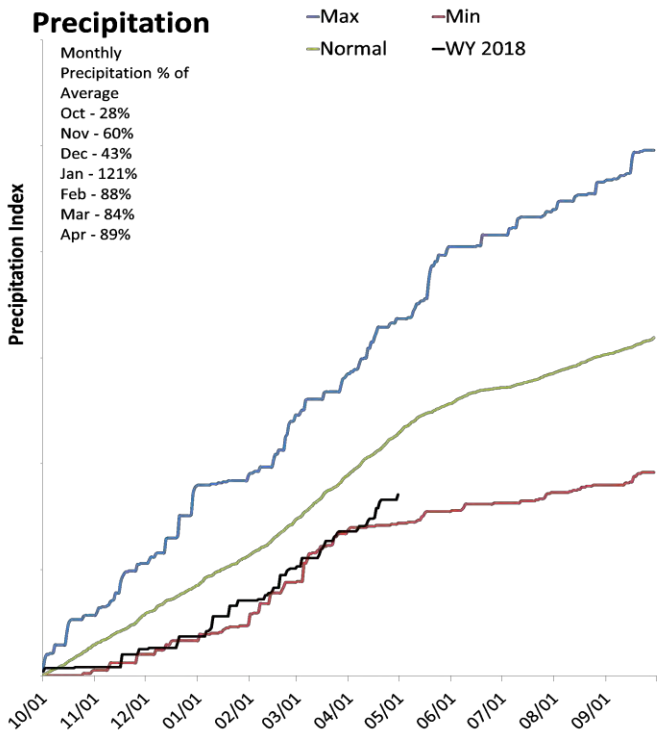
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

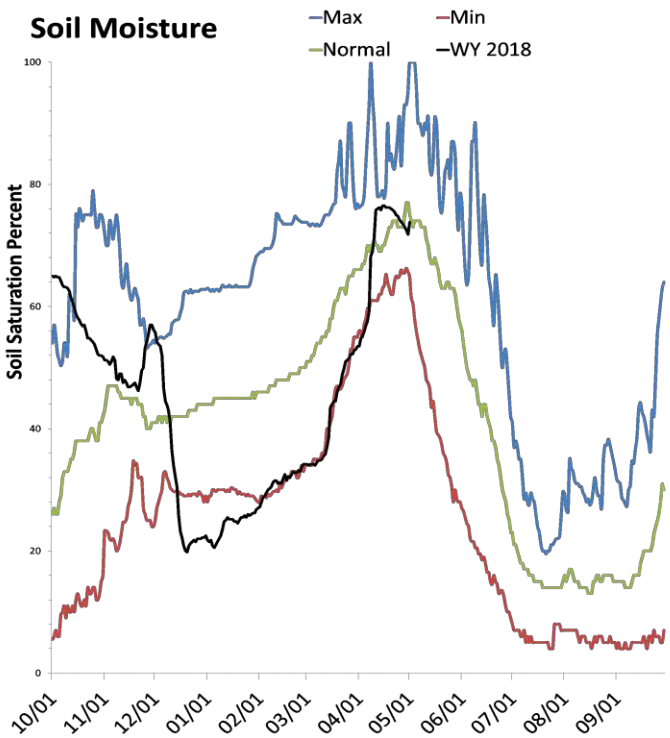


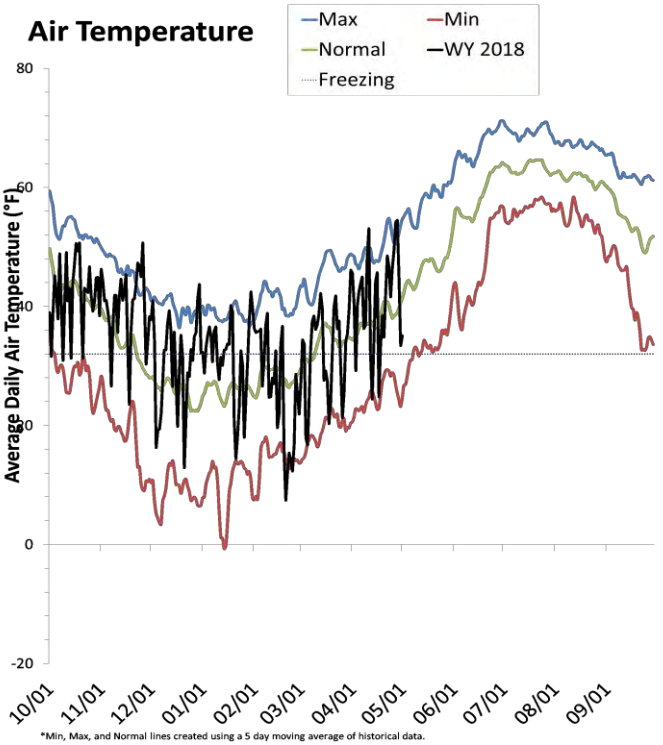
Lower Sevier Basin

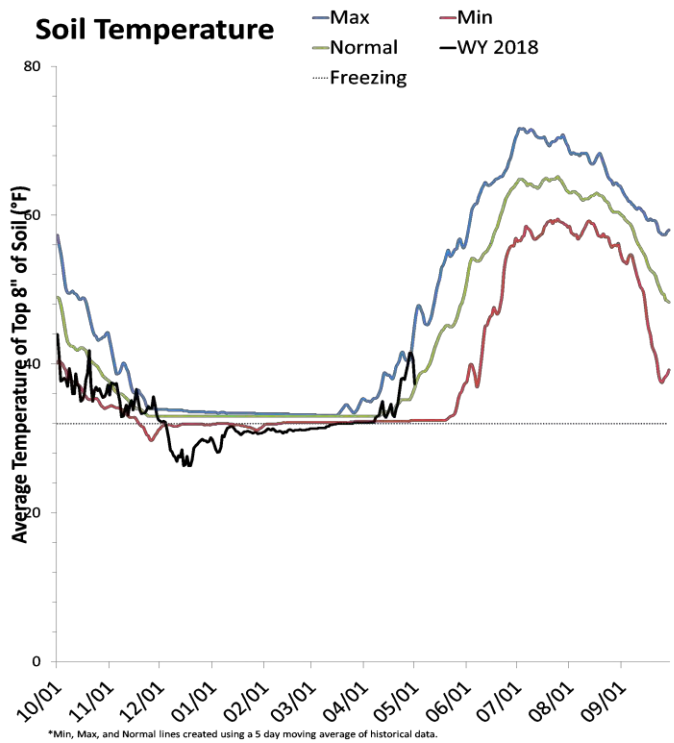
May 1, 2018

Precipitation in April was near average at 90%, which brings the seasonal accumulation (Oct-Apr) to 75% of average. Soil moisture is at 71% compared to 74% last year. Reservoir storage is at 31% of capacity, compared to 40% last year. The water availability index for the Lower Sevier is 3%.







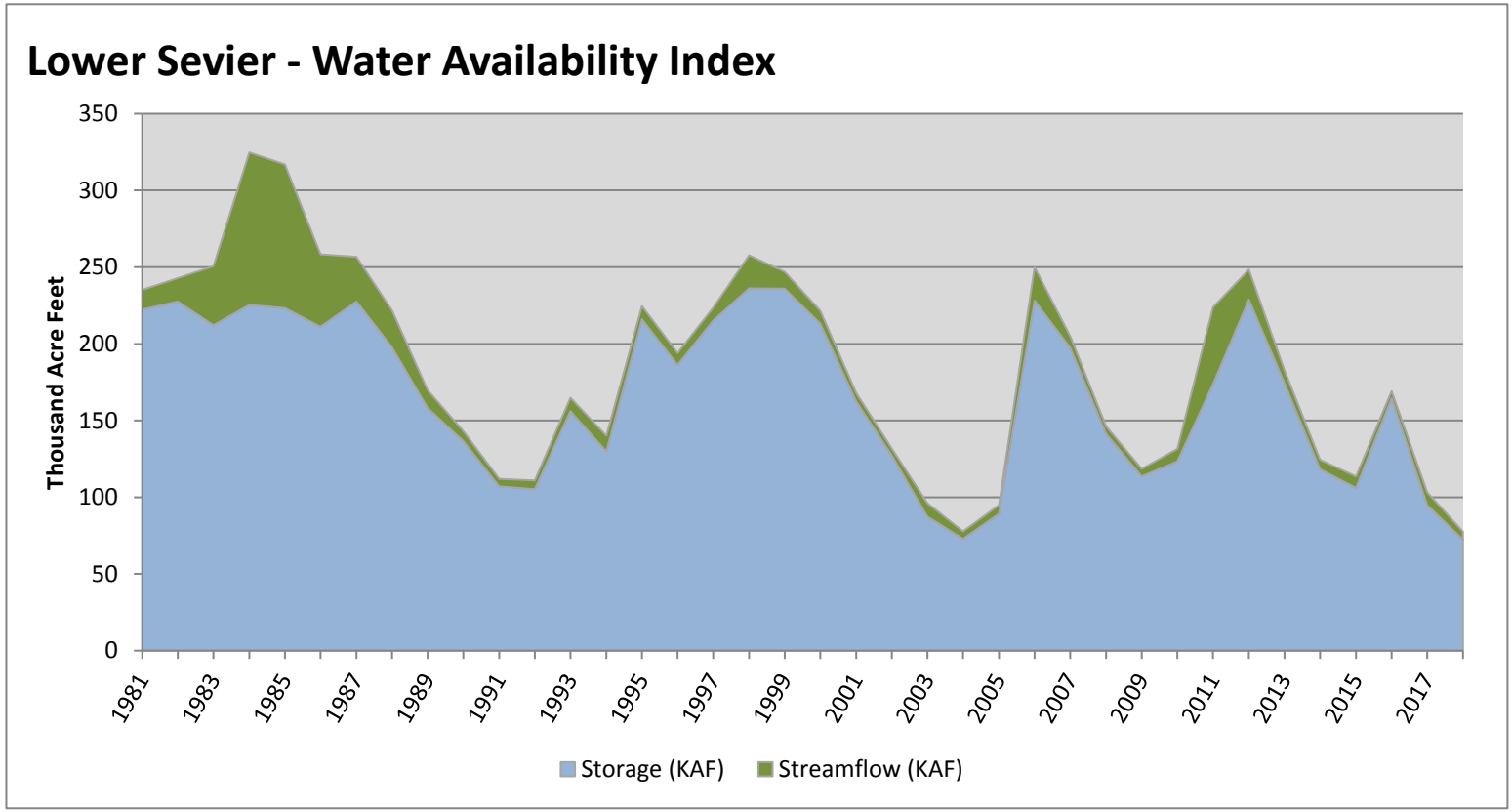


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Lower Sevier	**72.30**	**5.35**	**77.65**	**3**	**-3.95**	**04, 05, 03, 17**

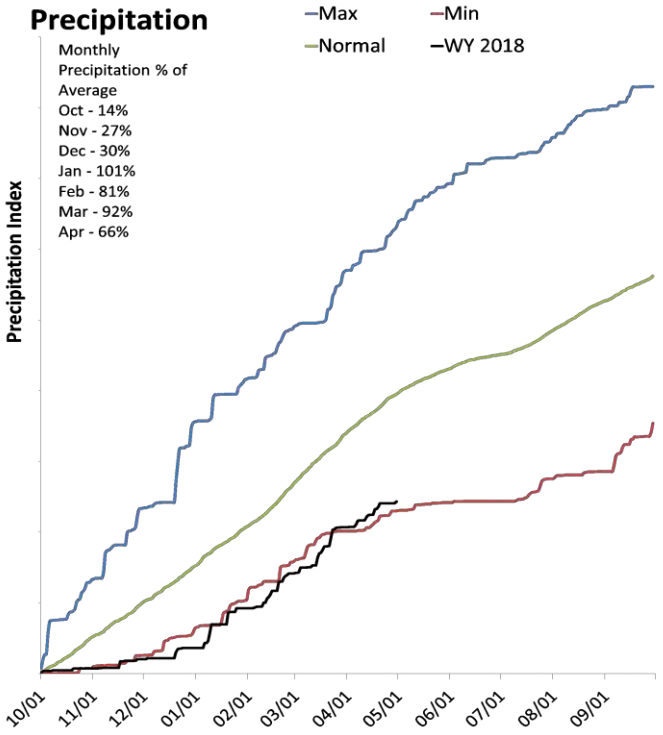
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

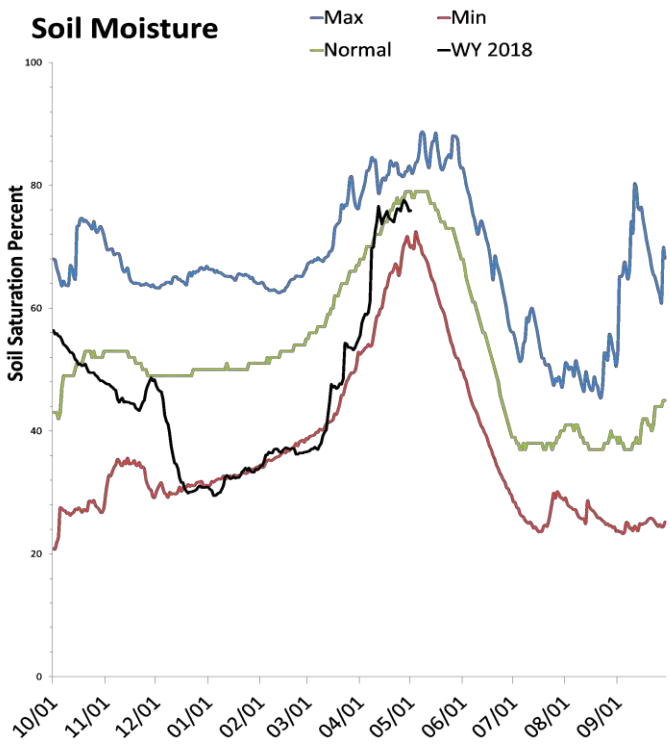


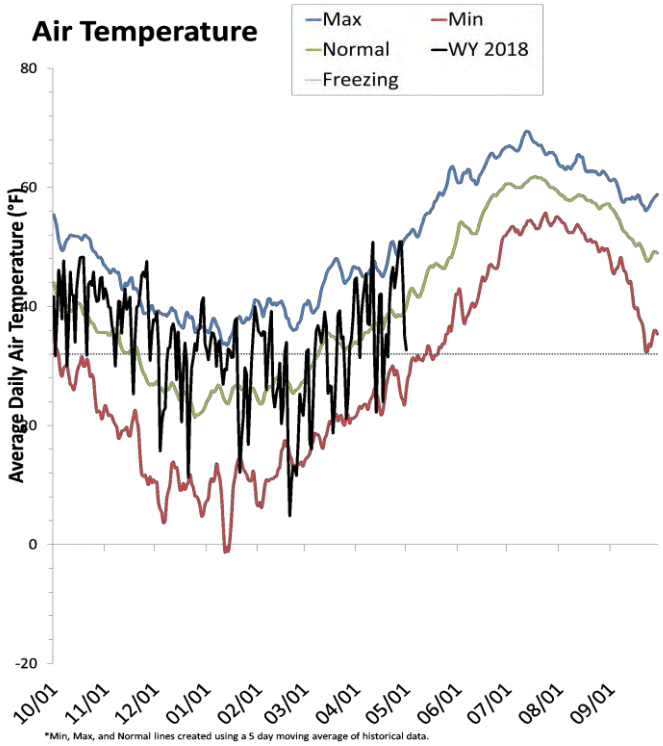
Upper Sevier Basin

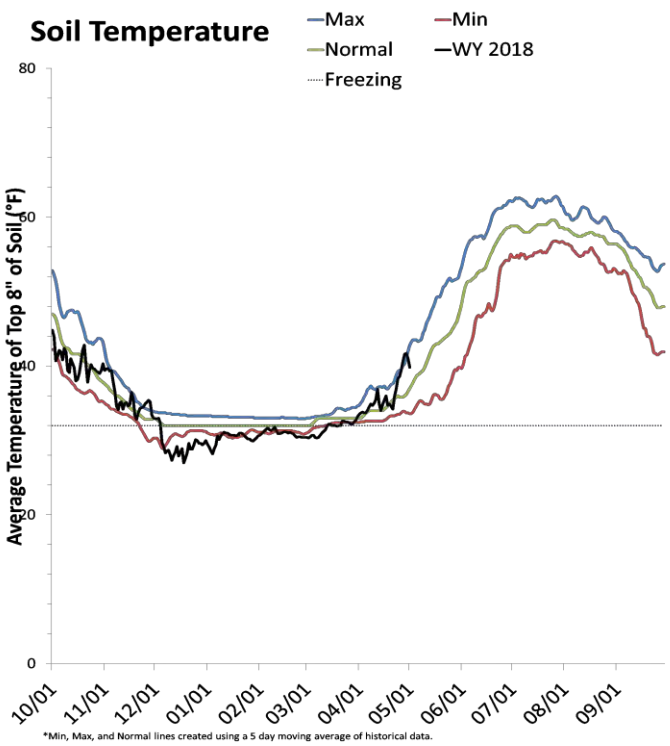
May 1, 2018

Precipitation in April was much below average at 66%, which brings the seasonal accumulation (Oct-Apr) to 62% of average. Soil moisture is at 76% compared to 78% last year. Reservoir storage is at 62% of capacity, compared to 72% last year. The water availability index for the Upper Sevier is 13%.







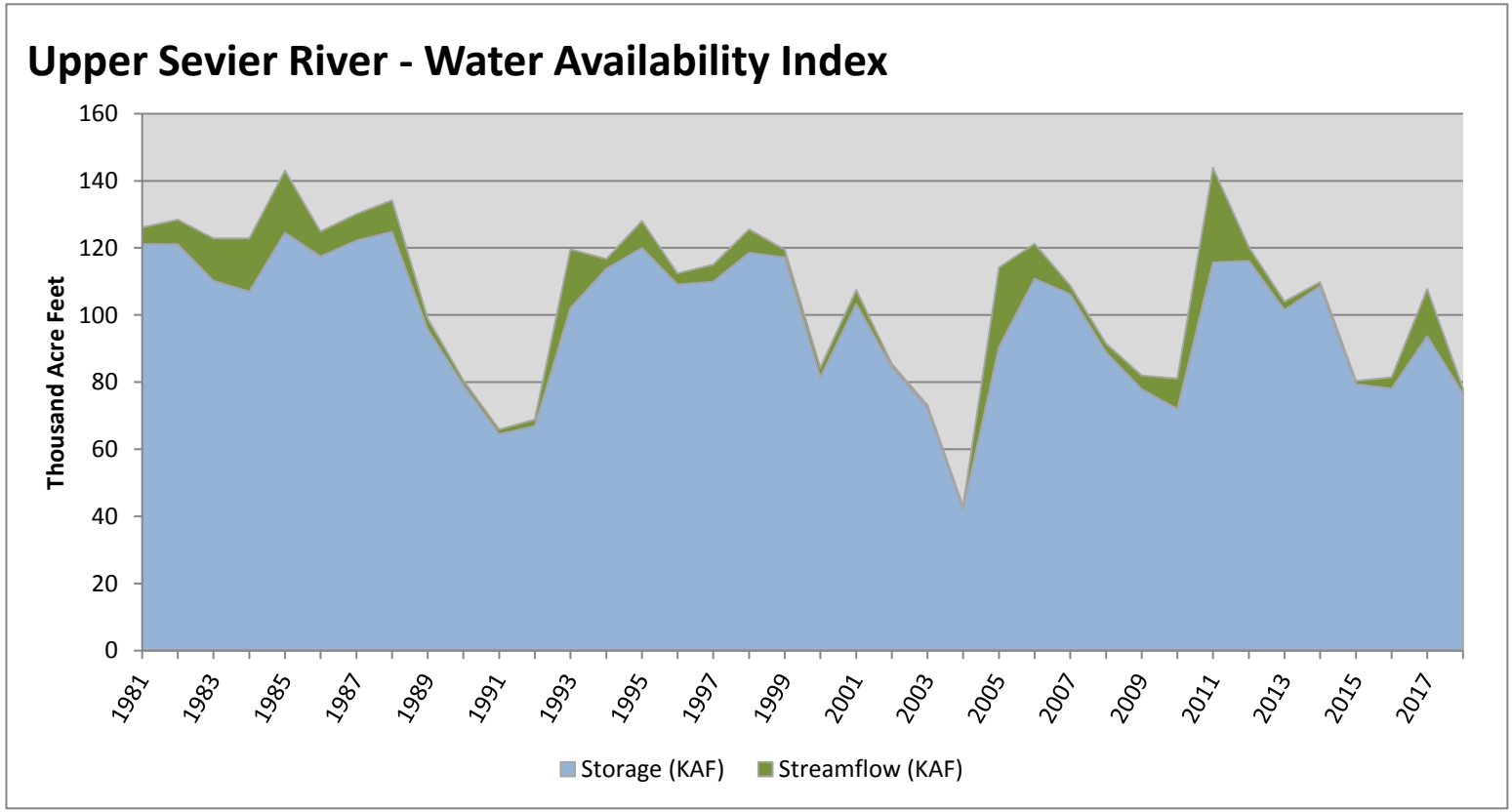


May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Upper Sevier River	**76.50**	**1.64**	**78.14**	**13**	**-3.1**	**92, 03, 15, 90**

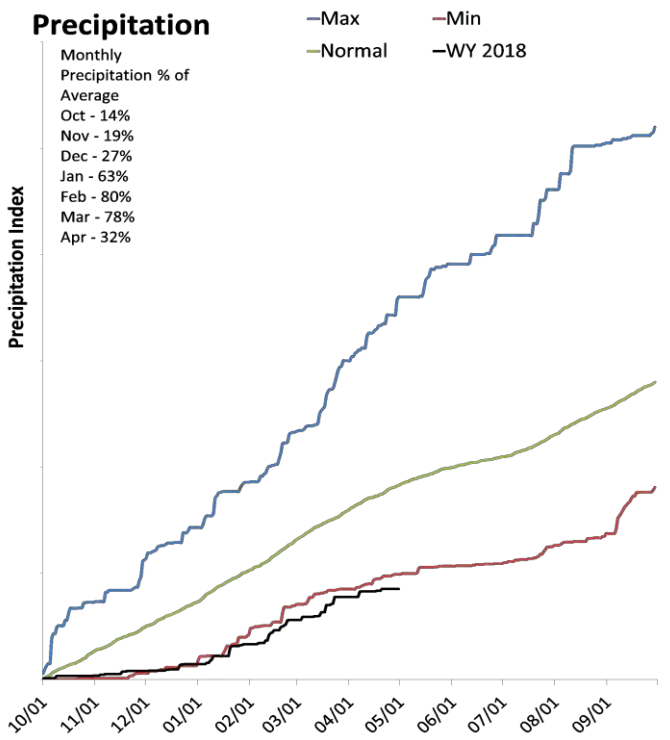
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

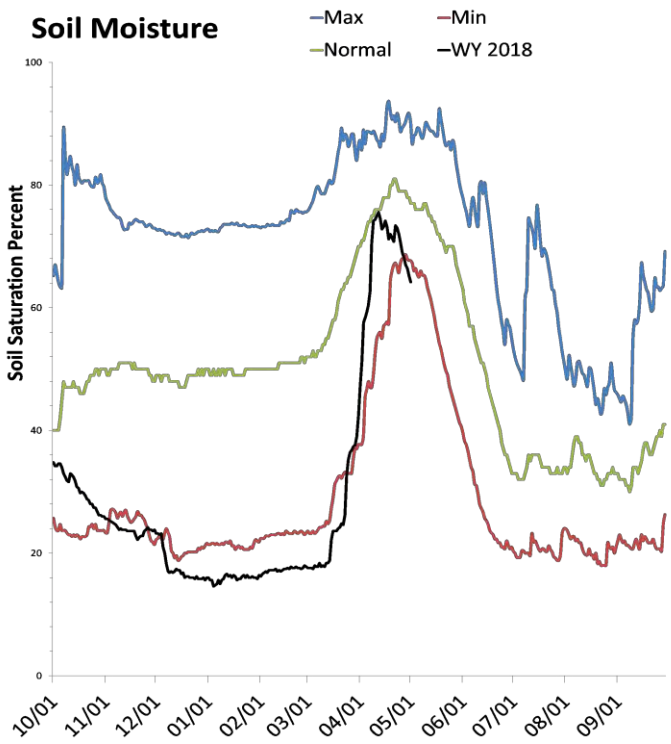


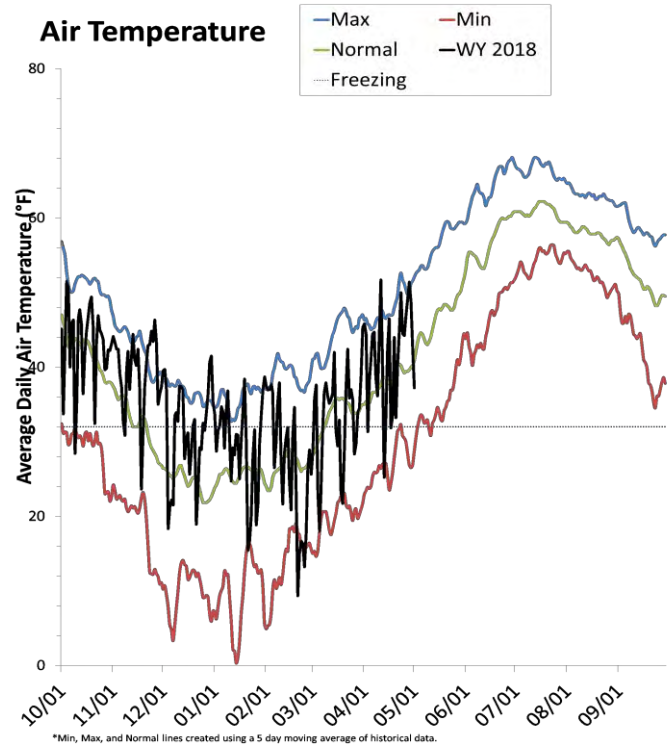
Southeastern Utah

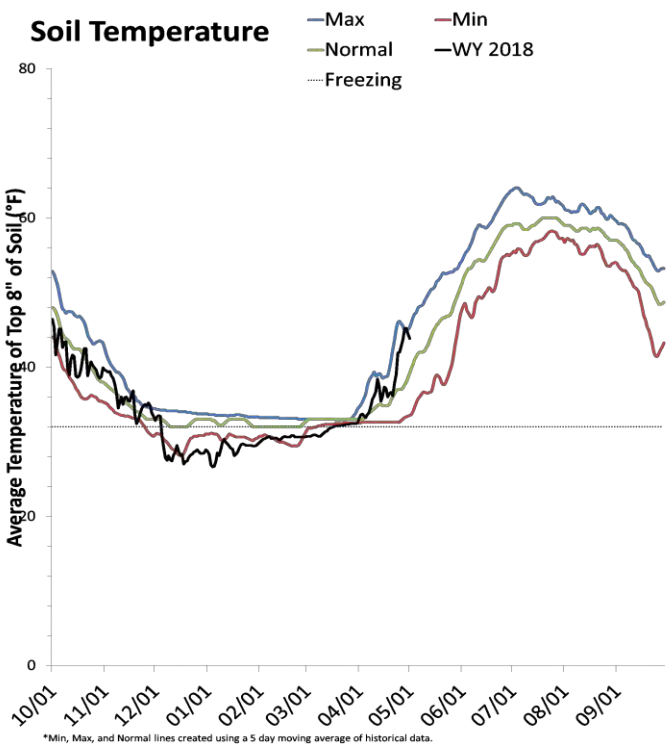
May 1, 2018

Precipitation in April was much below average at 31%, which brings the seasonal accumulation (Oct-Apr) to 46% of average. Soil moisture is at 64% compared to 74% last year. Reservoir storage is at 49% of capacity, compared to 92% last year. The water availability index for Moab is 25%.









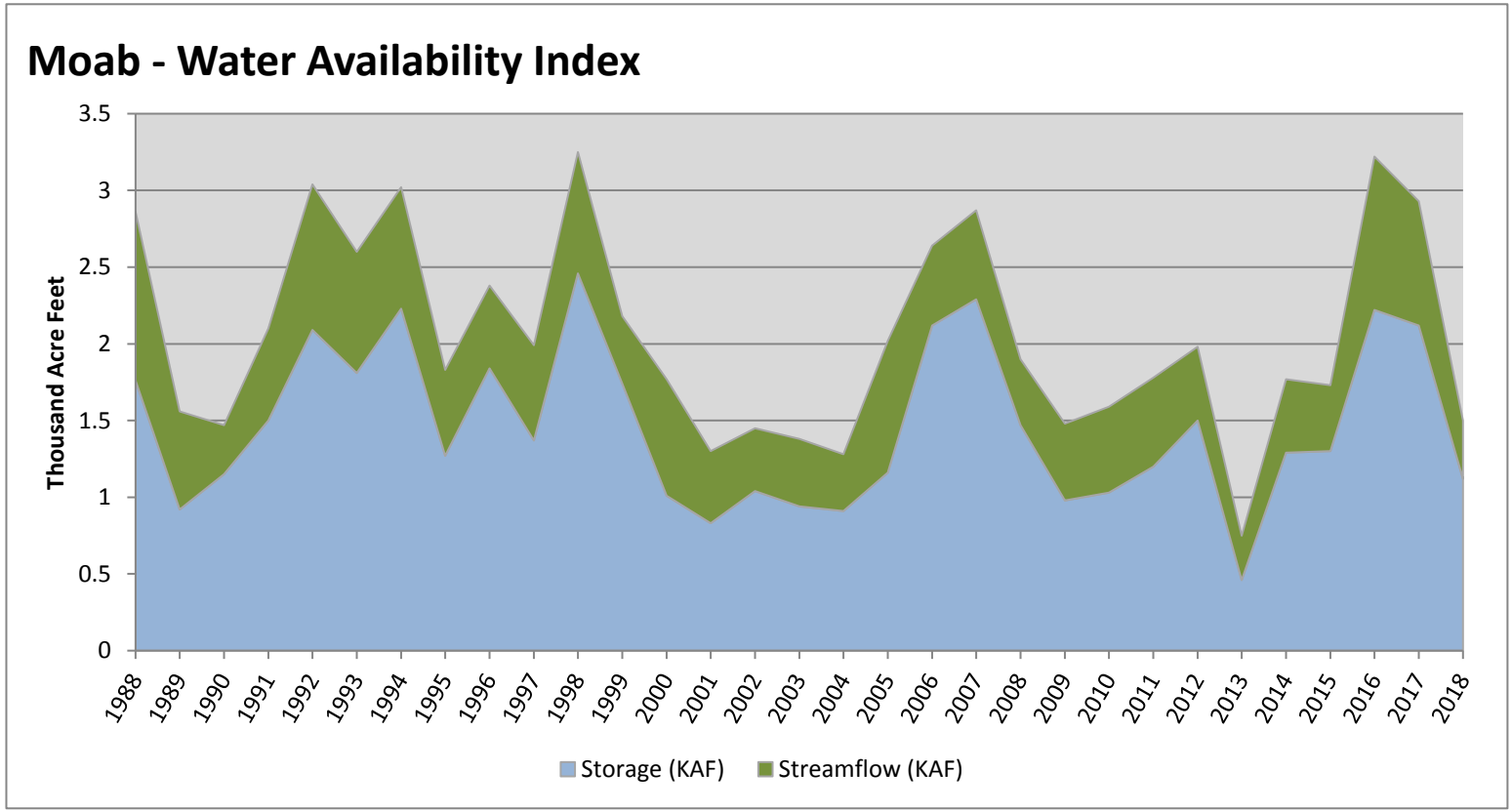
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Moab	**1.12**	**0.38**	**1.50**	**25**	**-2.08**	**90, 09, 89, 10**

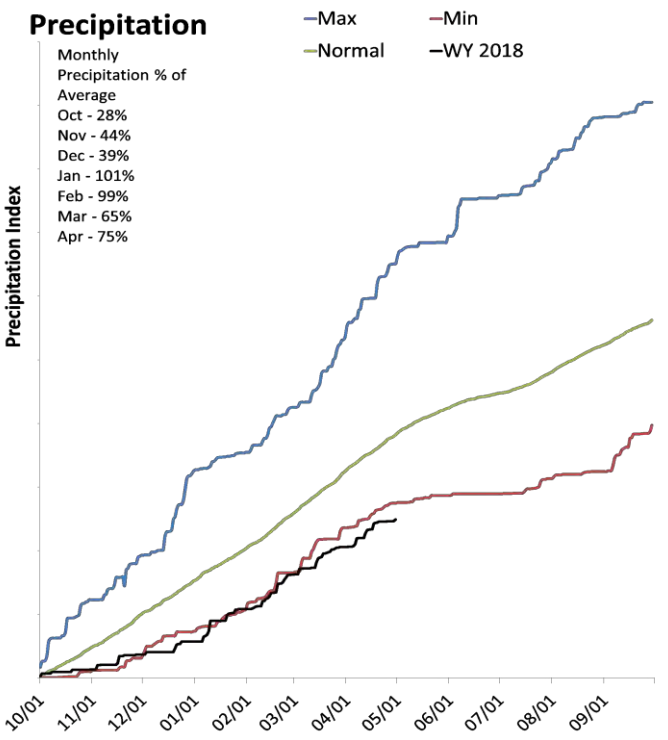
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

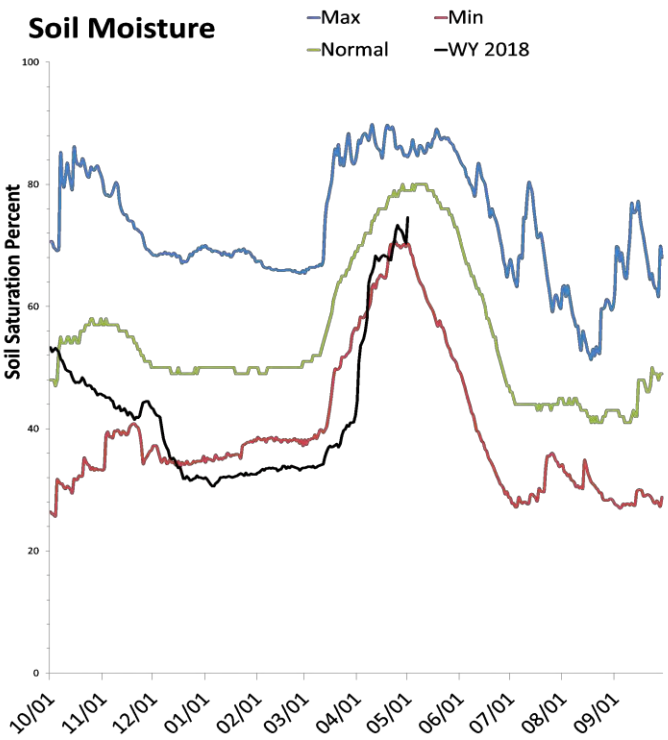


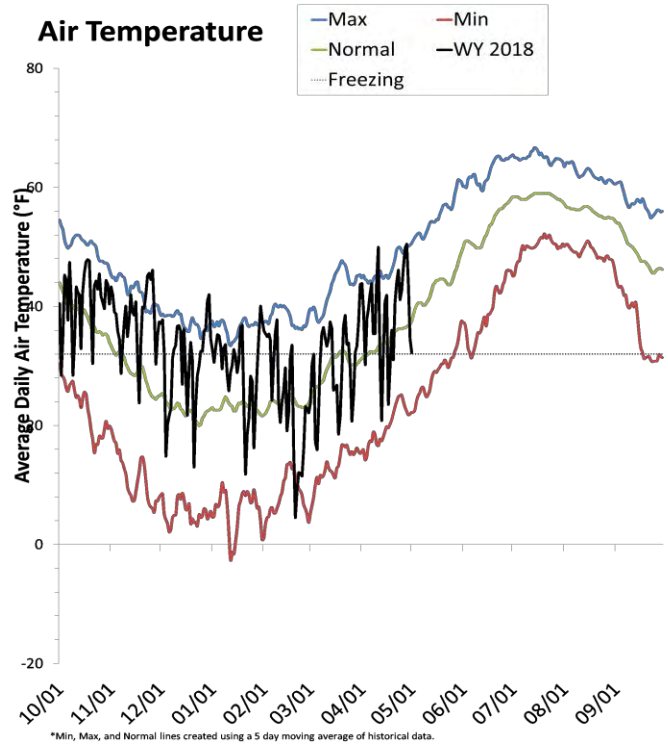
Dirty Devil Basin

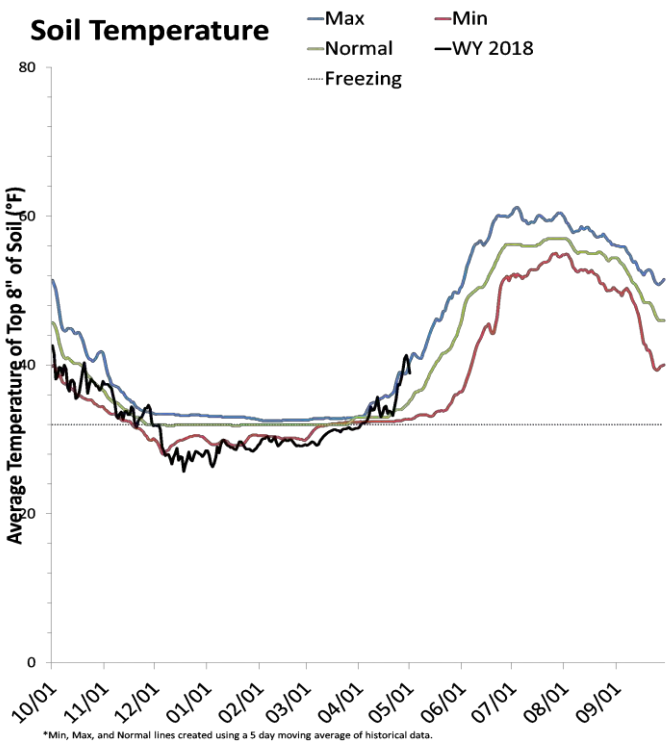
May 1, 2018

Precipitation in April was below average at 76%, which brings the seasonal accumulation (Oct-Apr) to 65% of average. Soil moisture is at 75% compared to 73% last year.





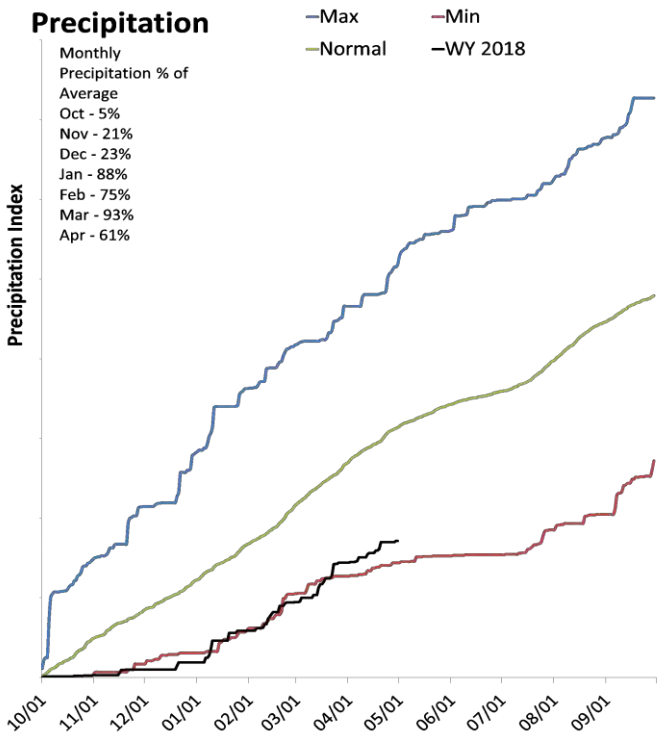


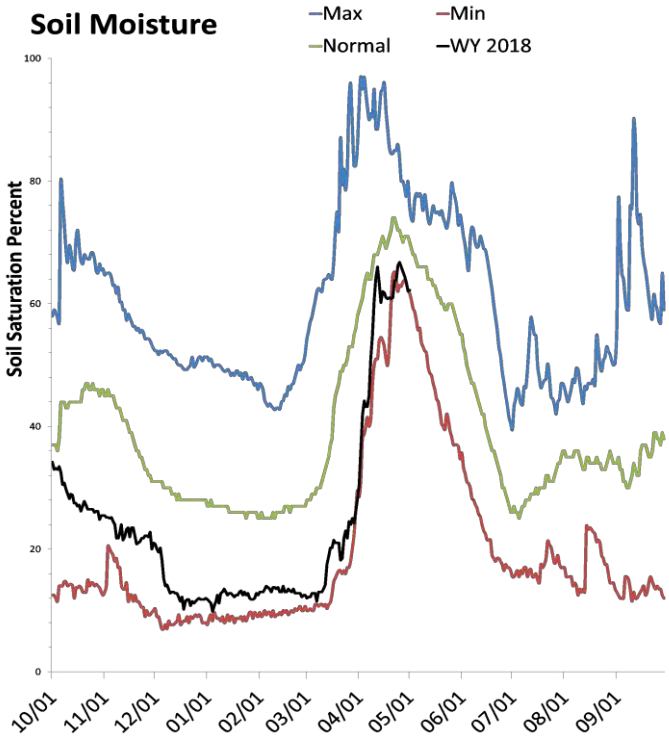


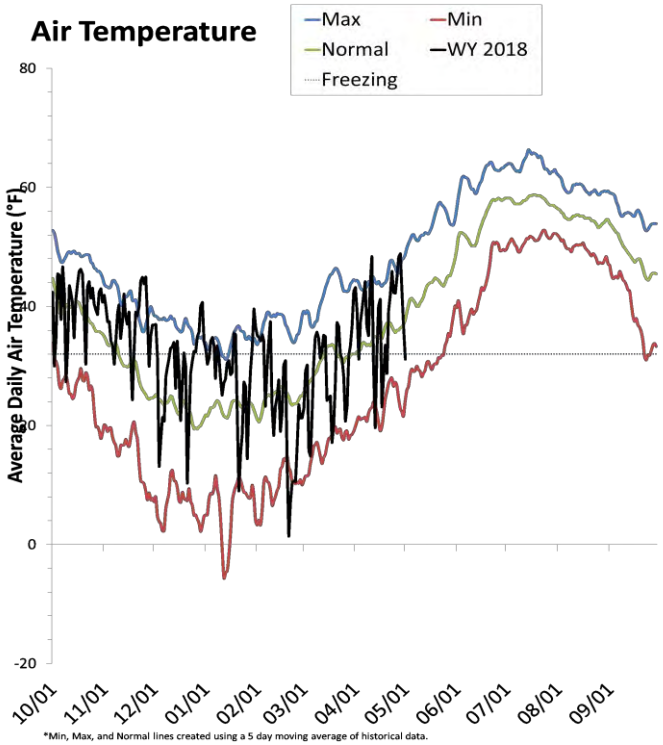
Escalante River Basin

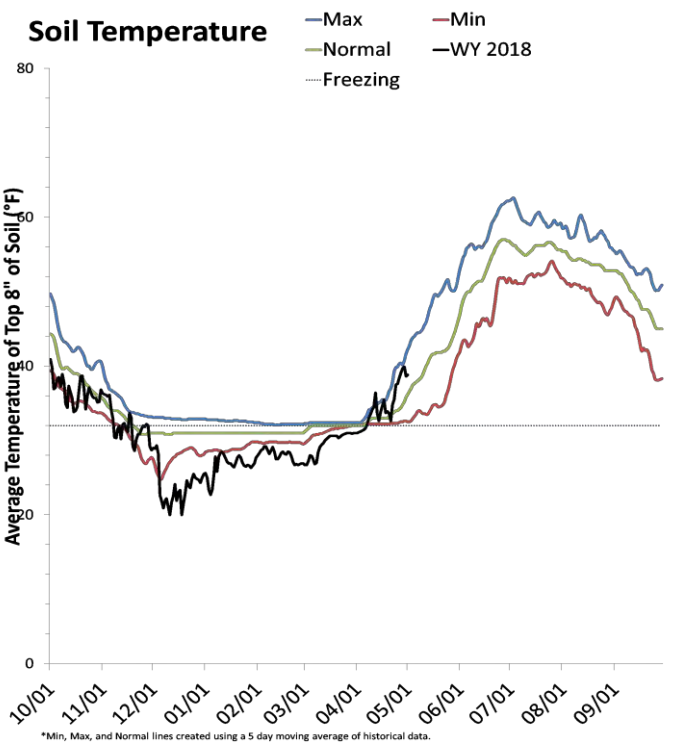
May 1, 2018

Precipitation in April was much below average at 61%, which brings the seasonal accumulation (Oct-Apr) to 55% of average. Soil moisture is at 63% compared to 65% last year.







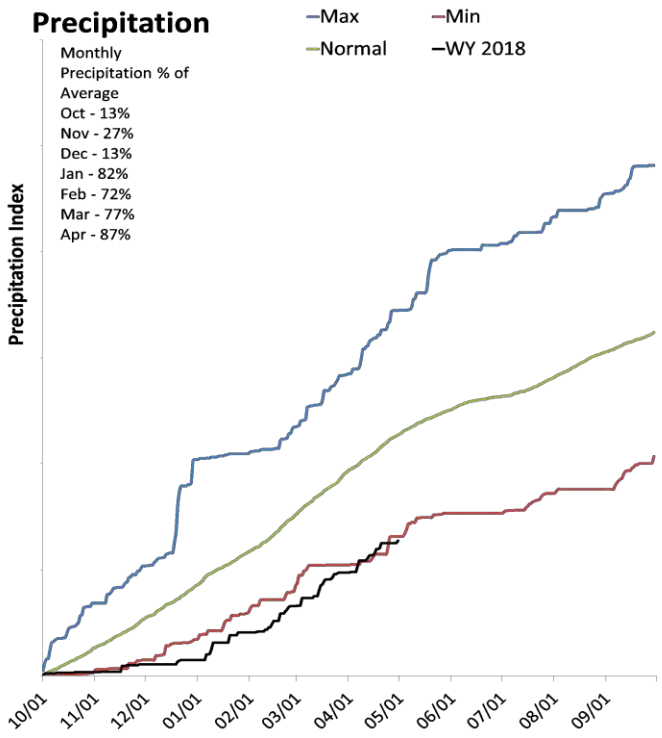


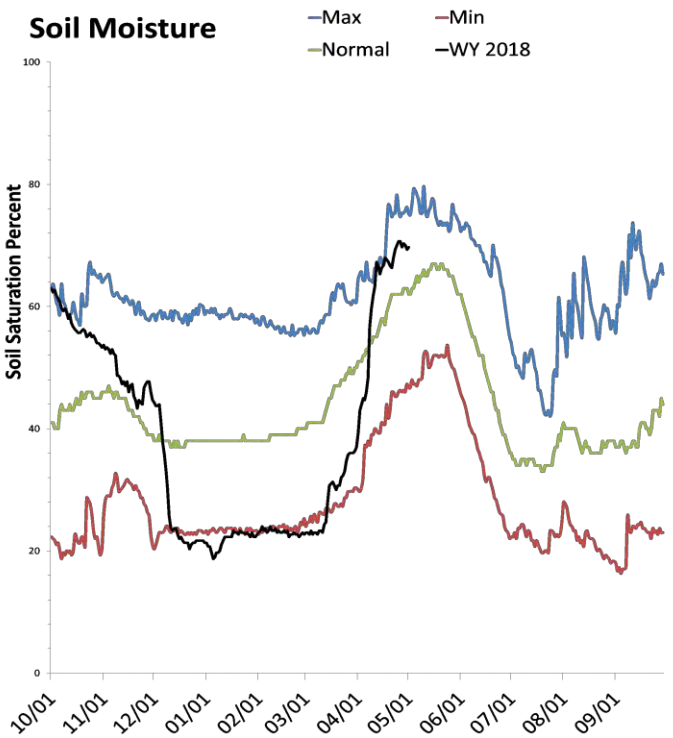
SNOTEL Data

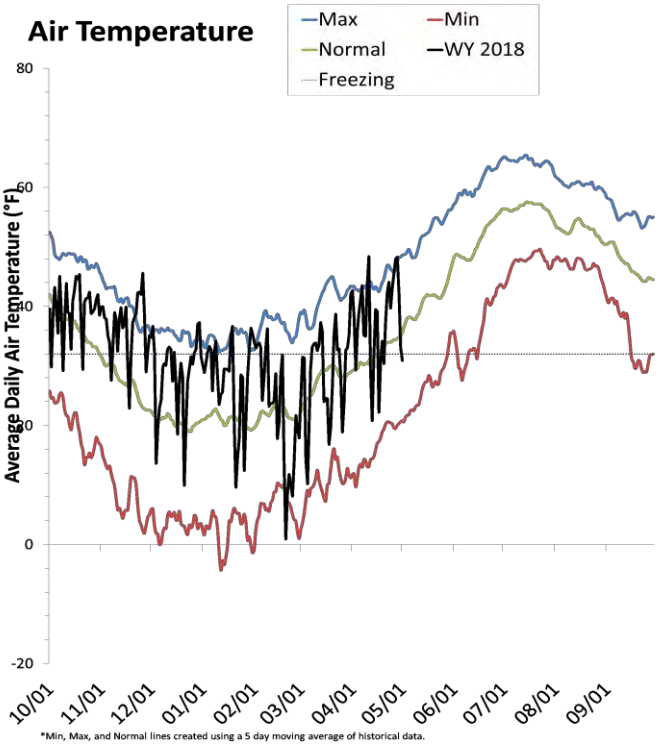
Beaver River Basin

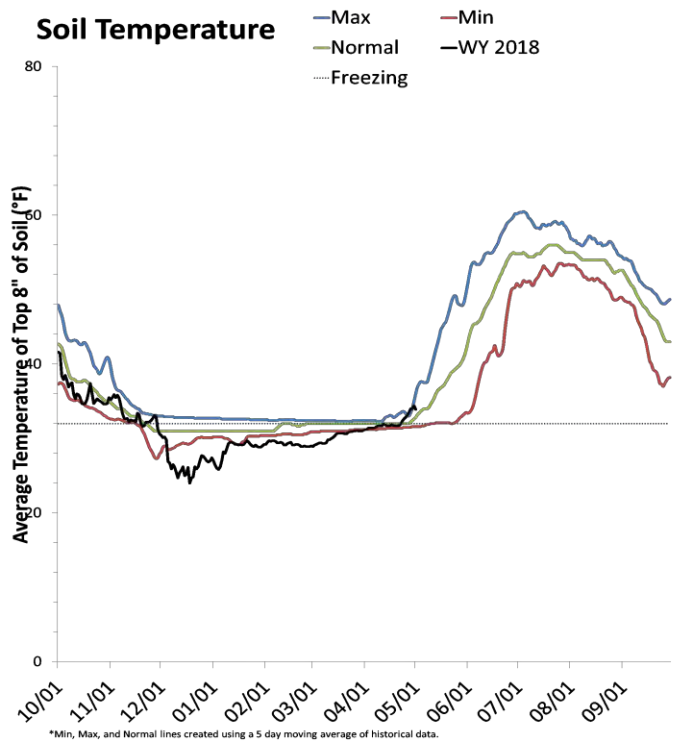
May 1, 2018

Precipitation in April was below average at 87%, which brings the seasonal accumulation (Oct-Apr) to 56% of average. Soil moisture is at 69% compared to 72% last year. Reservoir storage is at 50% of capacity, compared to 53% last year. The water availability index for the Beaver River is 33%.









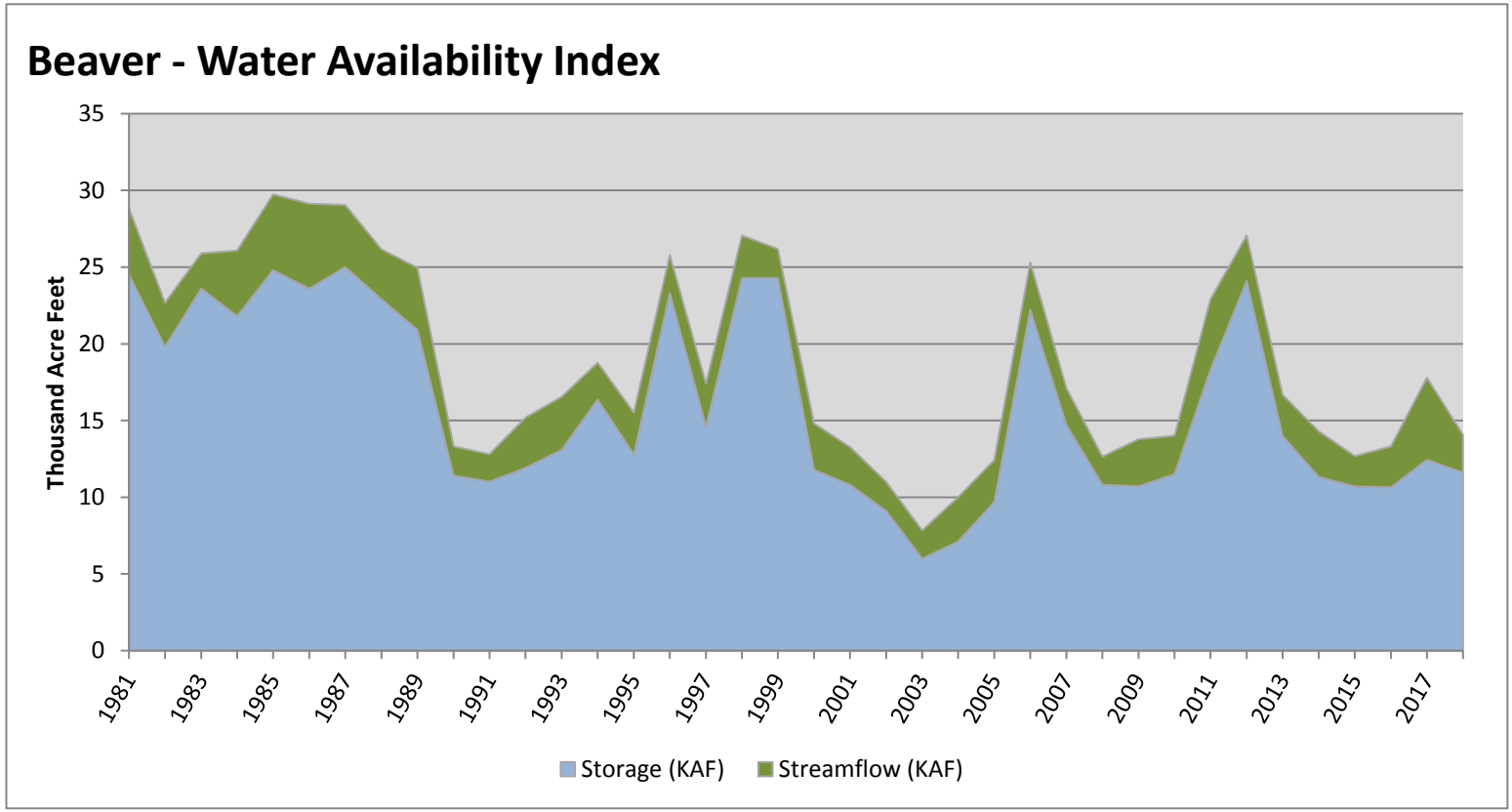
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Beaver	**11.60**	**2.46**	**14.06**	**33**	**-1.39**	**09, 10, 14, 00**

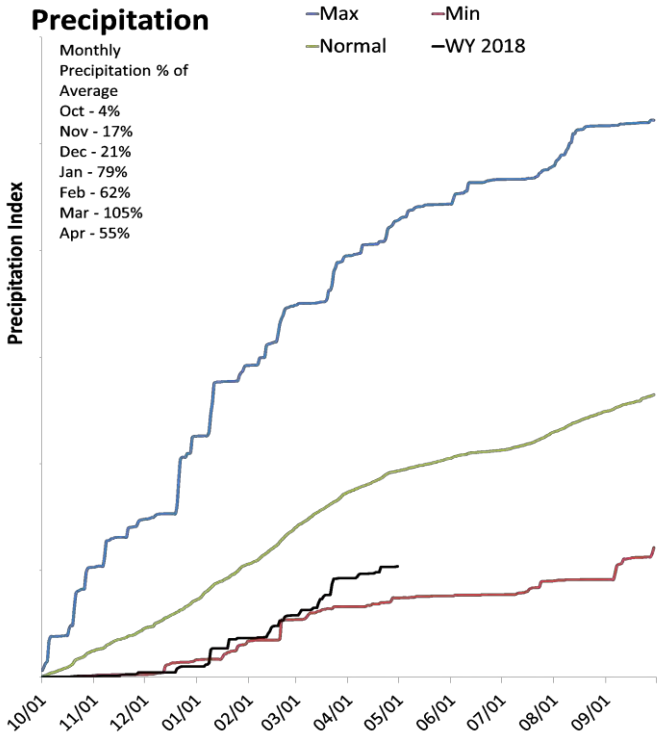
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.

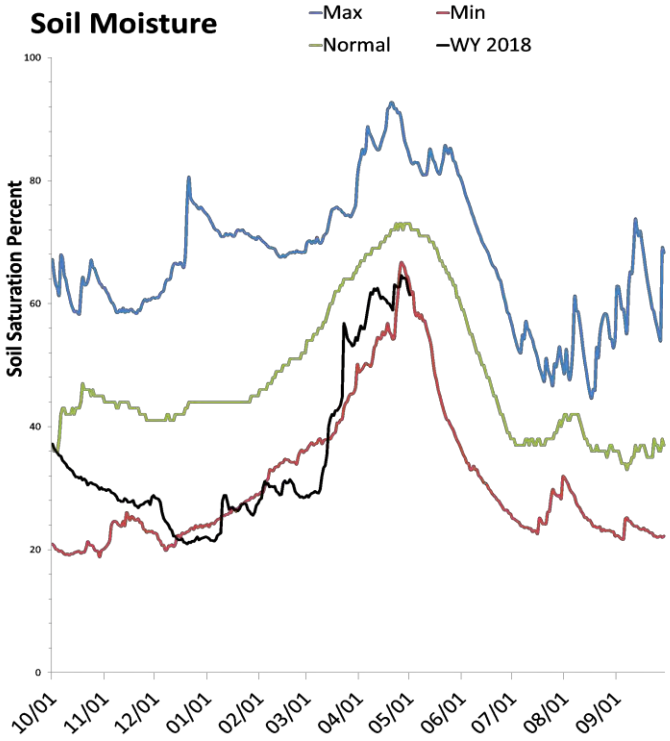


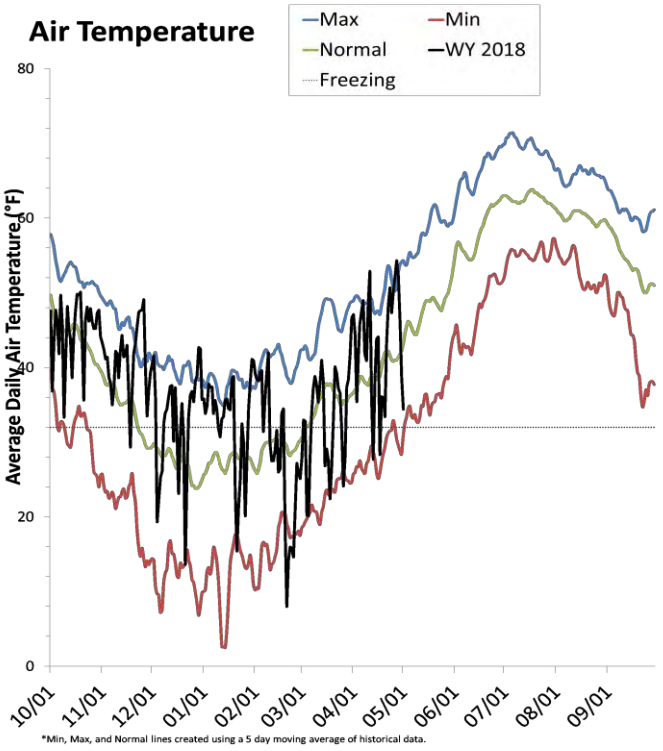
Southwestern Utah

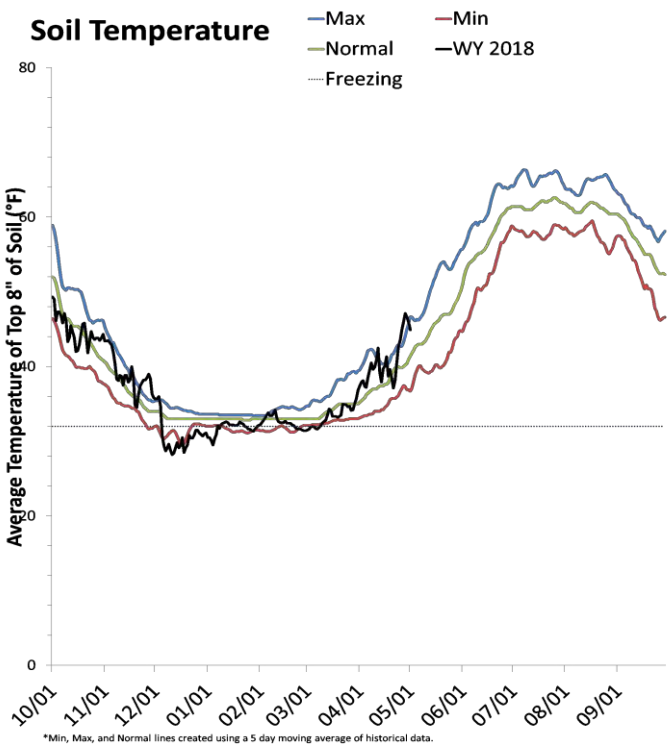
May 1, 2018

Precipitation in April was much below average at 55%, which brings the seasonal accumulation (Oct-Apr) to 54% of average. Soil moisture is at 62% compared to 67% last year. Reservoir storage is at 52% of capacity, compared to 50% last year. The water availability index for the Virgin River is 27%.









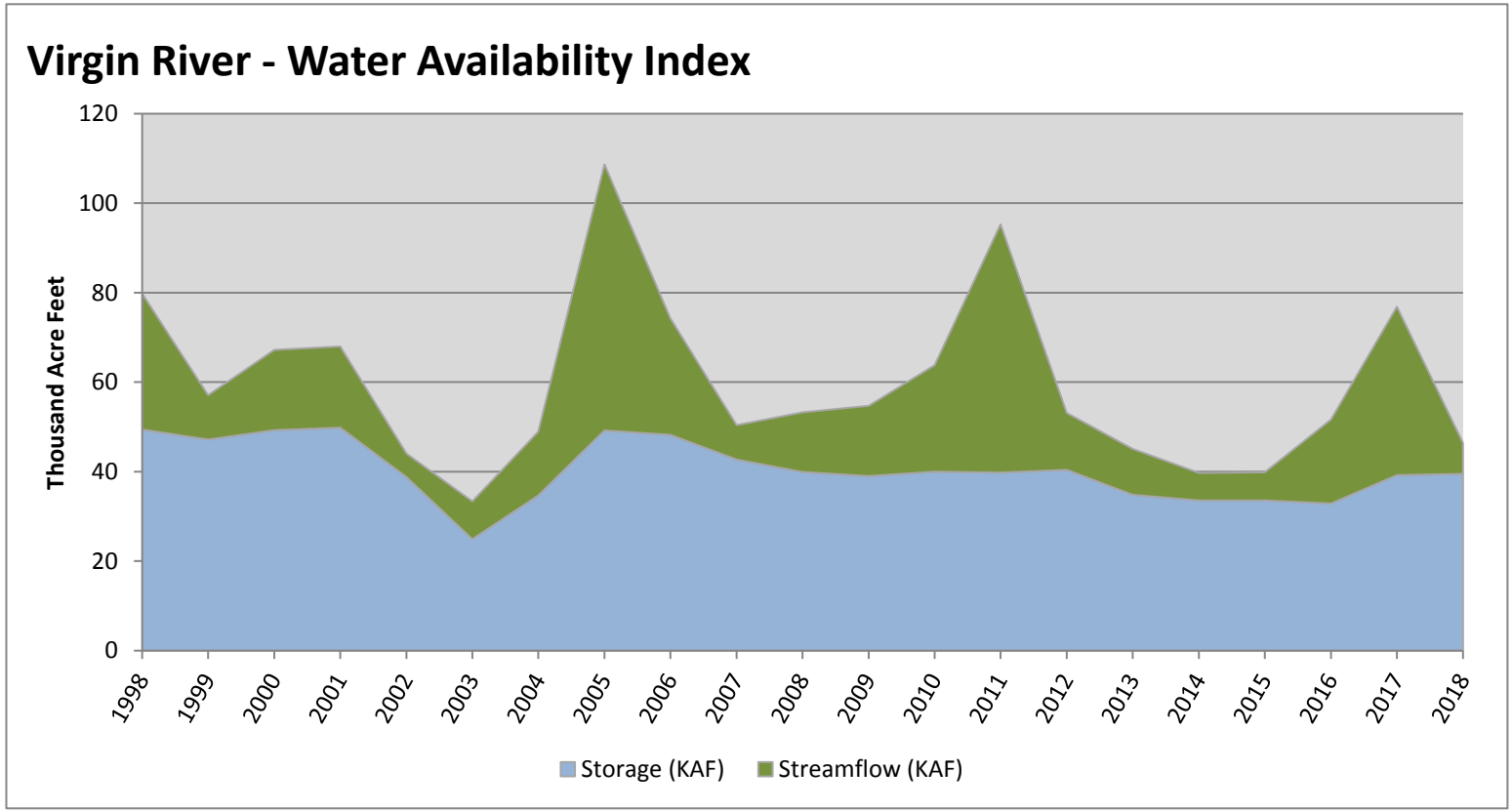
SNOTEL Data

May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Virgin River	**39.50**	**6.94**	**46.44**	**27**	**-1.89**	**02, 13, 04, 07**

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



May 1, 2018

Water Availability Index

Basin or Region	Apr EOM* Storage	April Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	*KAF^*	*KAF^*	*KAF^*	*%*		
Bear River	**1027**	**10.0**	**1037**	**92**	**3.5**	**85, 98, 12, 86**
Woodruff Narrows	**59.1**	**10.0**	**69.1**	**87**	**3.1**	**88, 07, 86, 87**
Little Bear	**13.8**	**13.7**	**27.5**	**56**	**0.5**	**99, 16, 93, 94**
Ogden	**112.5**	**12.1**	**124.5**	**85**	**2.9**	**86, 06, 94, 12**
Weber	**204.4**	**17.7**	**222.0**	**90**	**3.3**	**10, 09, 12, 07**
Provo River	**411.9**	**11.6**	**423.5**	**92**	**3.5**	**12, 17, 07, 06**
Western Uinta	**199.1**	**2.0**	**201.1**	**94**	**3.7**	**15, 88, 12, 00**
Eastern Uinta	**40.0**	**3.3**	**43.4**	**31**	**-1.6**	**04, 02, 82, 16**
Blacks Fork	**18.4**	**11.3**	**29.7**	**78**	**2.3**	**99, 00, 92, 85**
Price	**53.8**	**2.3**	**56.1**	**85**	**2.9**	**00, 86, 88, 12**
Smiths Creek	**7.6**	**1.7**	**9.3**	**69**	**1.6**	**07, 16, 99, 88**
Joes Valley	**46.1**	**3.1**	**49.2**	**74**	**2.0**	**96, 88, 99, 00**
Moab	**1.1**	**0.4**	**1.5**	**25**	**-2.1**	**90, 09, 89, 10**
Upper Sevier River	**76.5**	**1.6**	**78.1**	**13**	**-3.1**	**92, 03, 15, 90**
San Pitch	**1.8**	**0.7**	**2.5**	**8**	**-3.5**	**15, 16, 04, 14**
Lower Sevier	**72.3**	**5.4**	**77.7**	**3**	**-4.0**	**04, 05, 03, 17**
Beaver	**11.6**	**2.5**	**14.1**	**33**	**-1.4**	**09, 10, 14, 00**
Virgin River	**39.5**	**6.9**	**46.4**	**27**	**-1.9**	**02, 13, 04, 07**

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

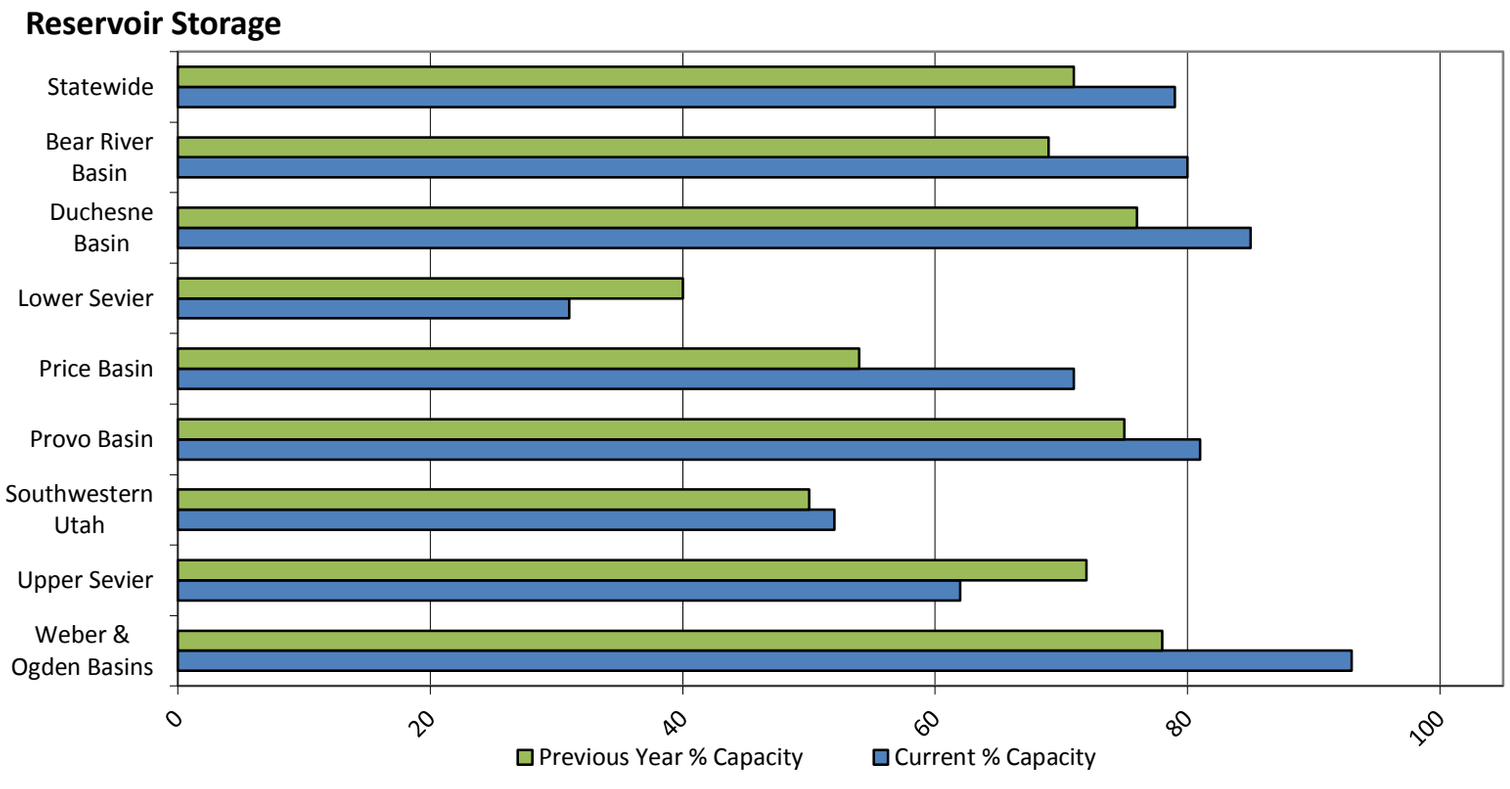
What is a Water Availability Index?

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 April 2018	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	23.8	25.8		25.7	93%	101%			
Causey Reservoir	7.1	7.1	5.0	7.1	100%	100%	70%	142%	142%
Cleveland Lake	3.3	2.7		5.4	61%	50%			
Currant Creek Reservoir	15.1	13.6	14.9	15.5	97%	88%	96%	101%	91%
Deer Creek Reservoir	148.4	146.9	122.0	149.7	99%	98%	81%	122%	120%
East Canyon Reservoir	47.6	43.5	40.4	49.5	96%	88%	82%	118%	108%
Echo Reservoir	72.3	49.4	54.4	73.9	98%	67%	74%	133%	91%
Grantsville Reservoir	2.8	3.3	2.8	3.3	84%	100%	85%	99%	118%
Gunlock	8.3	8.1	6.8	10.4	80%	78%	65%	122%	119%
Gunnison Reservoir	1.8	4.5	14.2	20.3	9%	22%	70%	13%	32%
Huntington North Reservoir	4.7	3.7	3.9	4.2	112%	88%	93%	121%	95%
Hyrum Reservoir	13.8	10.4	14.1	15.3	90%	68%	92%	98%	73%
Joes Valley Reservoir	46.1	31.6	40.1	61.6	75%	51%	65%	115%	79%
Jordanelle Reservoir	263.5	252.8	247.1	314.0	84%	81%	79%	107%	102%
Ken's Lake	1.1	2.1	1.5	2.3	49%	92%	65%	75%	143%
Kolob Reservoir	1.9	5.6		5.6	34%	101%			
Lost Creek Reservoir	21.4	18.5	14.6	22.5	95%	82%	65%	146%	127%
Lower Enterprise	1.2	2.5	1.4	2.6	44%	96%	55%	81%	176%
Miller Flat Reservoir	4.3	3.1		5.2	83%	59%			
Millsite	1.2	10.9	11.2	16.7	7%	65%	67%	11%	97%
Minersville Reservoir	11.6	12.4	16.5	23.3	50%	53%	71%	70%	75%
Moon Lake Reservoir	28.8	29.8	27.6	35.8	80%	83%	77%	104%	108%
Otter Creek Reservoir	42.2	50.3	44.8	52.5	80%	96%	85%	94%	112%
Panguitch Lake	14.3	11.8	15.9	22.3	64%	53%	71%	90%	74%
Pineview Reservoir	105.3	74.6	79.9	110.1	96%	68%	73%	132%	93%
Piute Reservoir	34.3	43.5	54.4	71.8	48%	61%	76%	63%	80%
Porcupine Reservoir	11.3	11.4	10.1	11.3	100%	101%	89%	112%	113%
Quail Creek	31.2	31.1	31.6	40.0	78%	78%	79%	99%	98%
Red Fleet Reservoir	20.9	20.1	19.8	25.7	81%	78%	77%	106%	102%
Rockport Reservoir	55.8	26.9	40.1	60.9	92%	44%	66%	139%	67%
Sand Hollow Reservoir	48.0	46.9		50.0	96%	94%			
Scofield Reservoir	53.8	34.3	33.2	65.8	82%	52%	50%	162%	103%
Settlement Canyon Reservoir	0.8	0.8	0.8	1.0	84%	82%	80%	105%	102%
Sevier Bridge Reservoir	72.3	94.9	172.9	236.0	31%	40%	73%	42%	55%
Smith And Morehouse Reservoir	7.2	5.2	4.5	8.1	89%	64%	56%	159%	116%
Starvation Reservoir	162.9	131.1	151.9	164.1	99%	80%	93%	107%	86%
Stateline Reservoir	7.6	9.6	6.3	12.0	63%	80%	53%	120%	152%
Steinaker Reservoir	19.1	23.1	25.3	33.4	57%	69%	76%	75%	91%
Strawberry Reservoir	941.2	851.3	678.4	1105.9	85%	77%	61%	139%	125%
Upper Enterprise	1.4	5.5	5.0	10.0	14%	55%	50%	28%	110%
Upper Stillwater Reservoir	7.3	1.8	2.9	32.5	23%	6%	9%	253%	63%
Utah Lake	633.9	574.8	830.9	870.9	73%	66%	95%	76%	69%
Willard Bay	193.1	199.8	158.7	215.0	90%	93%	74%	122%	126%
Woodruff Creek	4.0	4.2	3.8	4.0	100%	105%	95%	105%	111%
Woodruff Narrows Reservoir	59.1	50.8	45.5	57.3	103%	89%	79%	130%	112%
Meeks Cabin Reservoir	18.4	24.7	16.5	32.5	57%	76%	51%	111%	150%
Bear Lake	1027.1	883.3	651.7	1302.0	79%	68%	50%	158%	136%
Basin-wide Total	4221.4	3816.2	3723.4	5373.1	79%	71%	69%	113%	102%
# of reservoirs	42.0	42.0	42.0	42.0	42	42	42	42	42
# of reservoirs	42	42	42	42	42	42	42	42	42



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Utah Climate and Water Report

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Salt Lake City, UT