



Utah Climate and Water Report

February 1, 2018



Reeder Basin, near Chepeta SNOTEL

Uinta Mountains highlight the light snowpack characteristic of this winter

Photo by Troy Brosten

Report Contents

1) Statewide Hydrologic Summary

- a) Utah General Summary
 - Supporting Documents

2) Climate and Water Information – SCAN

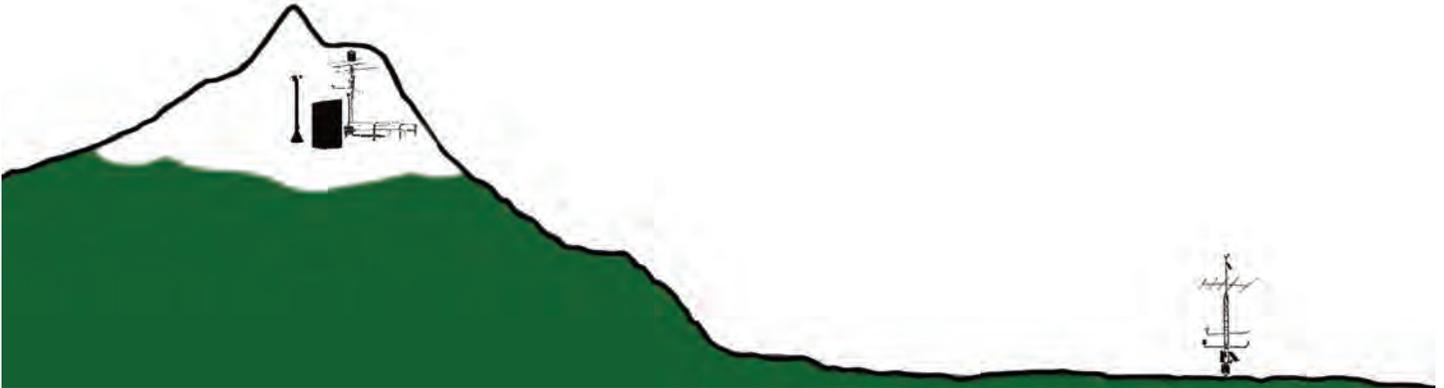
- a) Statewide SCAN
- b) Southeast
- c) South Central
- d) Western and Dixie
- e) Uinta Basin
- f) North Central
- g) Northern Mountains

3) Climate and Water Information – SNOTEL

- a) Statewide SNOTEL
- b) Bear River Basin
 - Water Availability Indices
- c) Weber & Ogden River Basins
 - Water Availability Indices
- d) Provo & Jordan River Basins
 - Water Availability Index
- e) Tooele Valley & West Desert Basins
- f) Northeastern Uinta Basin
 - Water Availability Indices
- g) Duchesne River Basins
 - Water Availability Indices
- h) San Pitch River Basin
 - Water Availability Index
- i) Price & San Rafael Basins
 - Water Availability Indices
- j) Lower Sevier Basin
 - Water Availability Index
- k) Upper Sevier Basin
 - Water Availability Index
- l) Southeastern Utah
 - Water Availability Index
- m) Dirty Devil
- n) Escalante River Basin
 - Water Availability Index
- o) Beaver River Basin
 - Water Availability Index
- p) Southwestern Utah
 - Water Availability Index

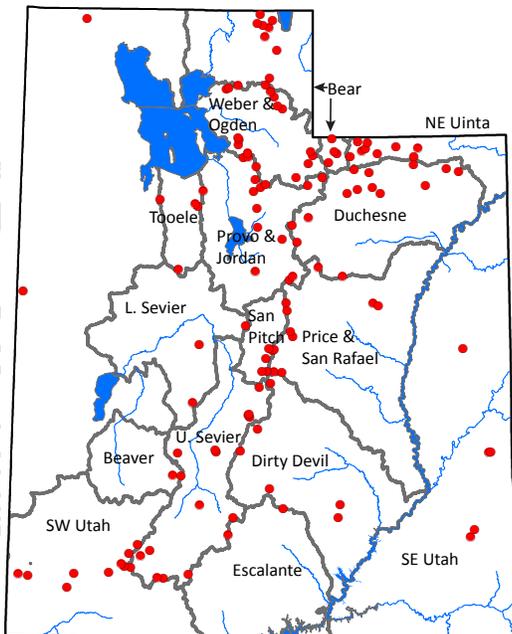
Utah Climate and Water Report

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.



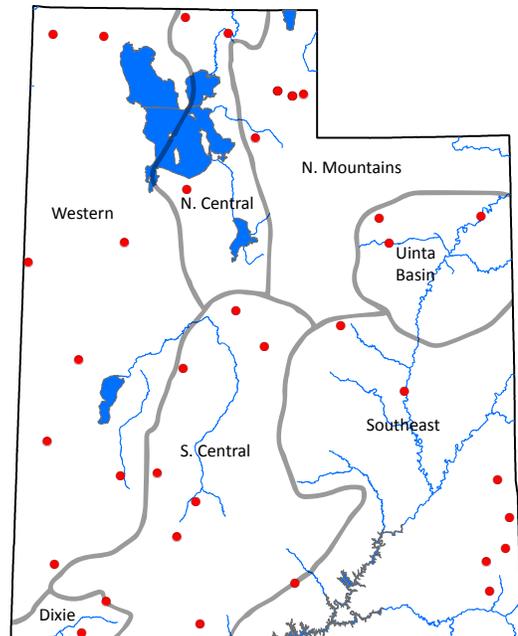
SNOTEL

- 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 February 1, 2018

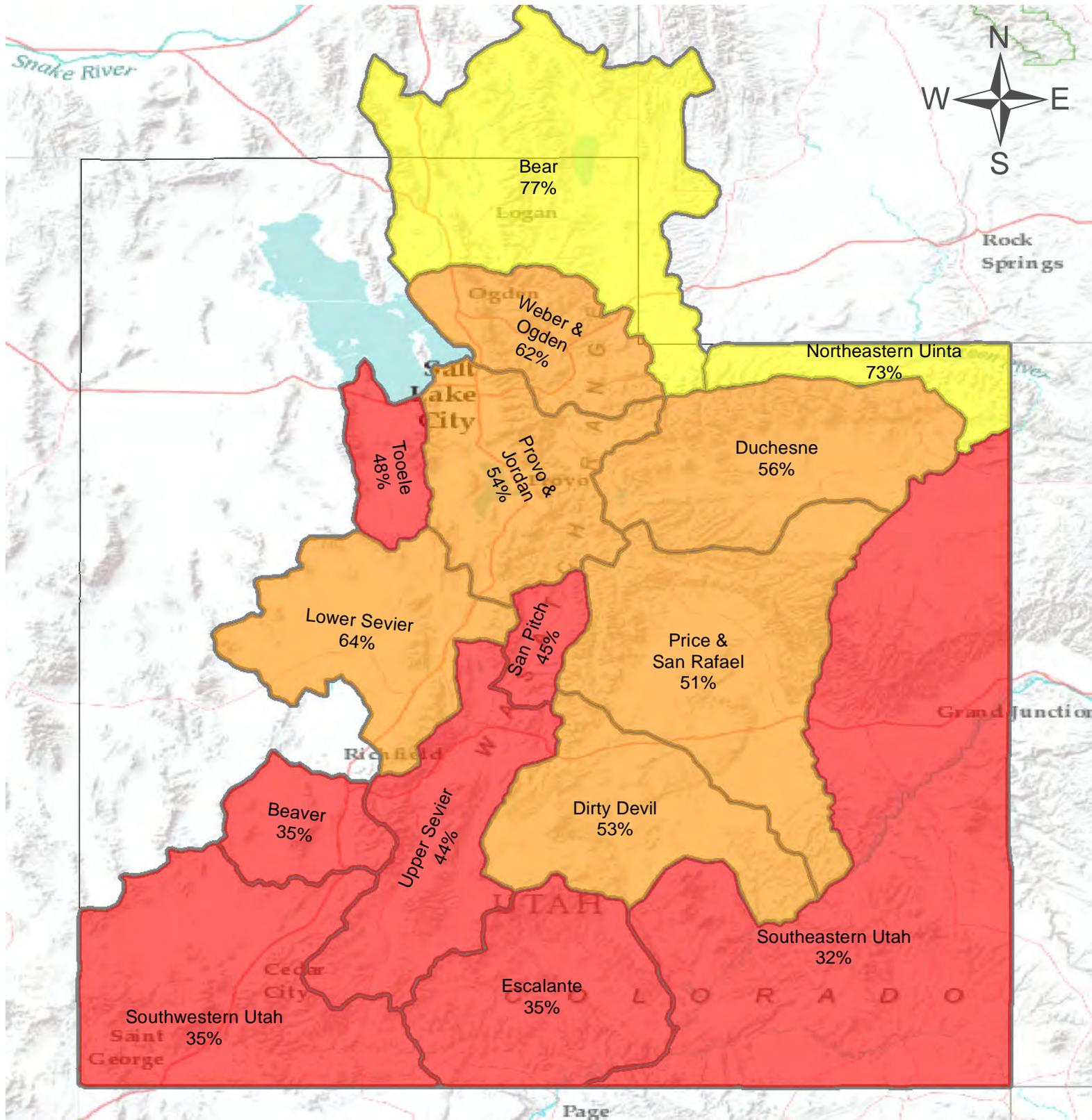
This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (Soil Climate Analysis Network) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply is generated (SNOWTElemetry). 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.usds.gov.

Current Valley Conditions (SCAN)

Unfortunately, this month brought more of the same to Utah's lower elevations. Slightly more precipitation fell in Utah's lower elevations in January than December, with an average of just 0.6". One change that bucked the trend of the last few months is that precipitation was more evenly distributed throughout the state. The Uinta Basin area got the least in January, at 0.3", but the South Central area received almost an inch. Overall, conditions remain drier than normal statewide. Soil moisture conditions remain good in the North, primarily due to hold-over moisture from previous months. The Southern regions drag the state average soil moisture down, remaining at or near record-low levels. Both air and soil temperatures increased dramatically this month, reflecting air temperatures consistently exceeding the average by more than of 9°F. Both soil and air temperature are above normal to record warm statewide at SCAN sites.

Current Mountain Conditions (SNOTEL)

Thanks to two storms in January, snowpack in Southern Utah has been pulled out of below abysmal up to just abysmal. So now, instead of being the worst snowpack on record, most of the basins south of Provo fall within the worst five years on record. Values of snow water equivalent (SWE) percent normal in Southern Utah range from 33% in Beaver up to 51% in the Lower Sevier. Basins north of Provo didn't see much in the way of improvement but also didn't lose much ground. The percent normal SWE in the Bear River Basin dropped a few percentage points to 78%, while the Northeastern Uinta Basin increased to 88% of normal. The rest of Northern Utah ranges from 49% to 58% of normal. Excluding our two most northern basins, Utah's statewide SWE falls in the 50% of normal or less range, and changes in the future weather pattern are not promising. While there's still a chance (albeit really small) of a turnaround, Southern Utah and some areas in Northern Utah should prepare for a very poor runoff year. The Water Availability Index (WAI) numbers are quite good (60 to 90 range) for many of the northern basins due to reservoir carryover, but they drop as we go south (10 to 40 range), due to less carryover from the previous water year. While reservoir storage is well above-average levels for this time of year, water managers should prepare for runoff flows well below average across the state of Utah.



Statewide Precipitation

As of February 1, 2018:

57% of Normal Precipitation

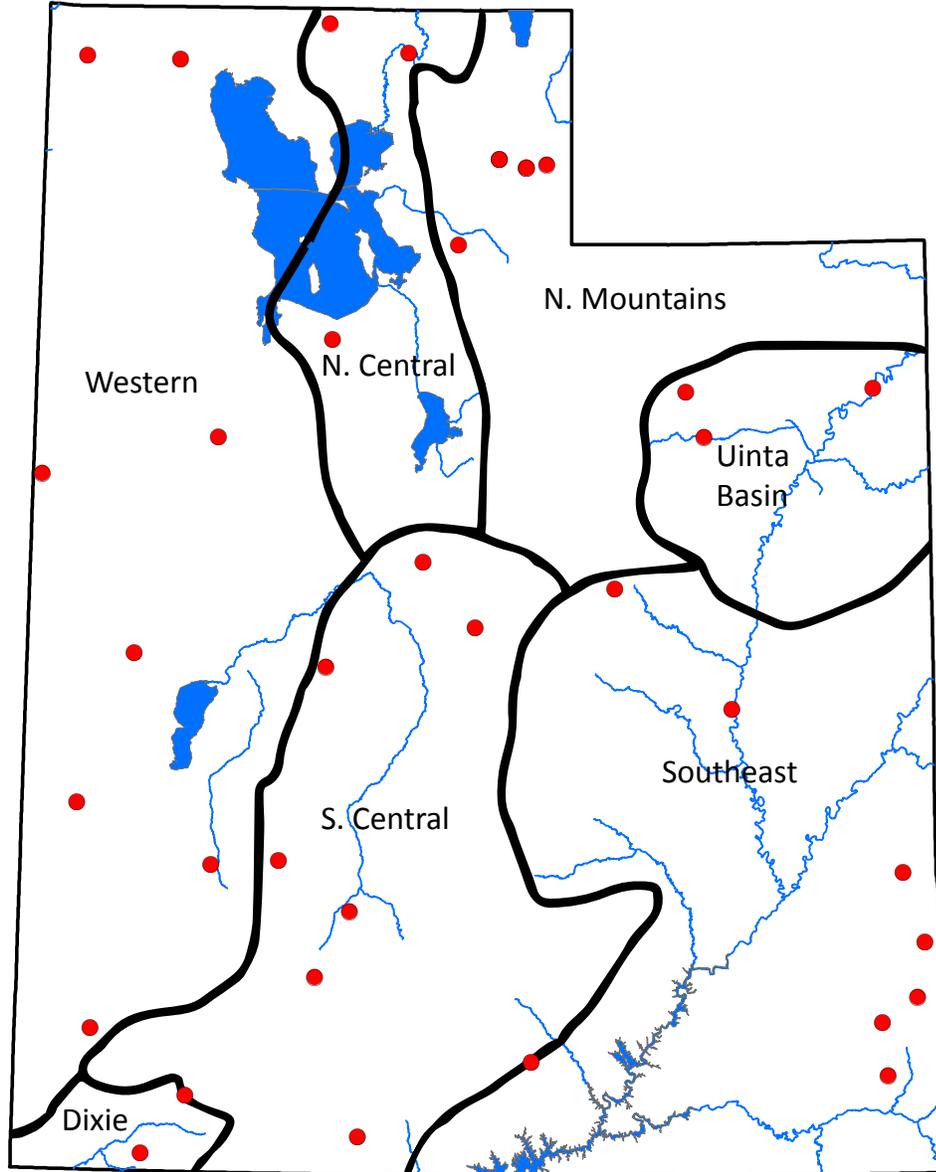
73% of Normal Precipitation Last Month



% of Normal



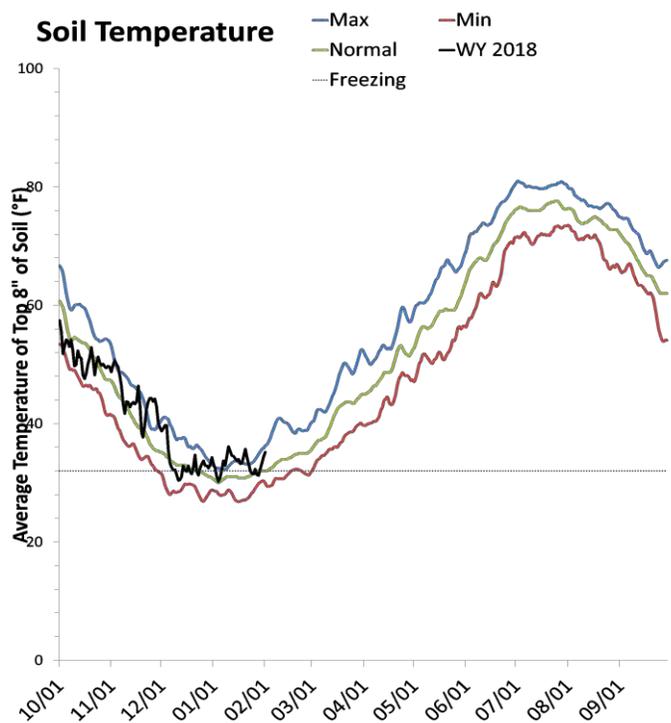
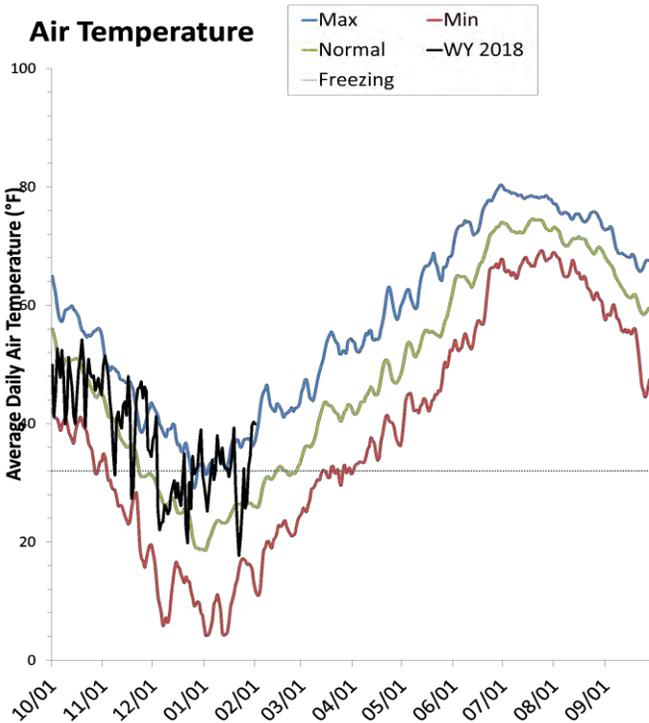
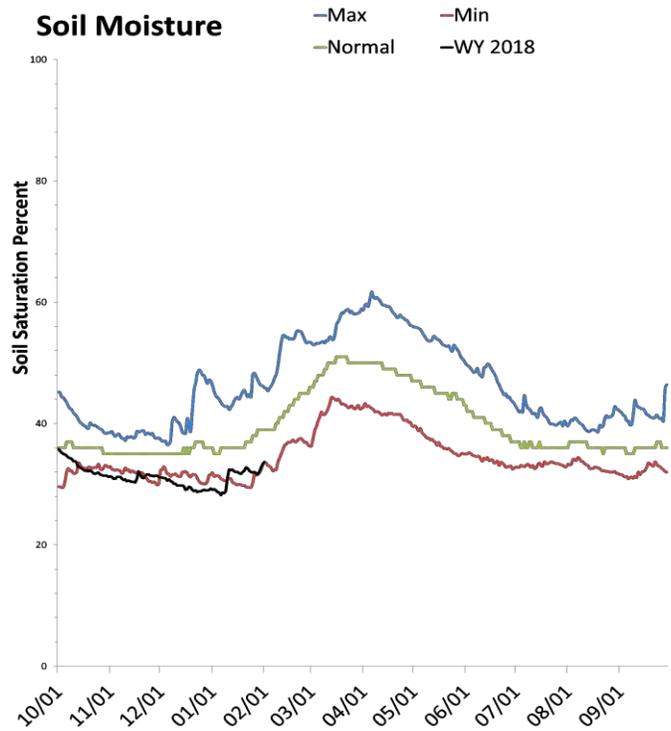
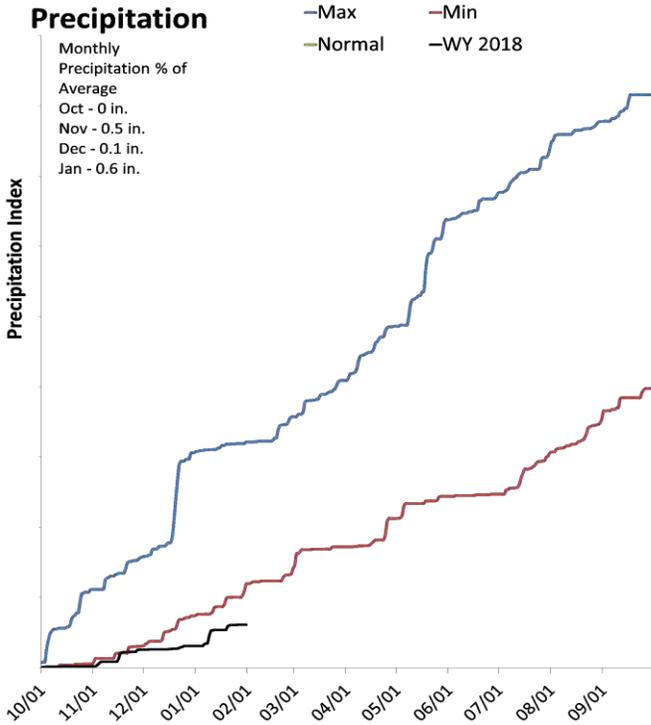
SCAN portion of report



Statewide SCAN

February 1, 2018

The average precipitation at SCAN sites within Utah was 0.6 inches in January, which brings the seasonal accumulation (Oct-Jan) to 1.2 inches. Soil moisture is at 33% compared to 42% last year.



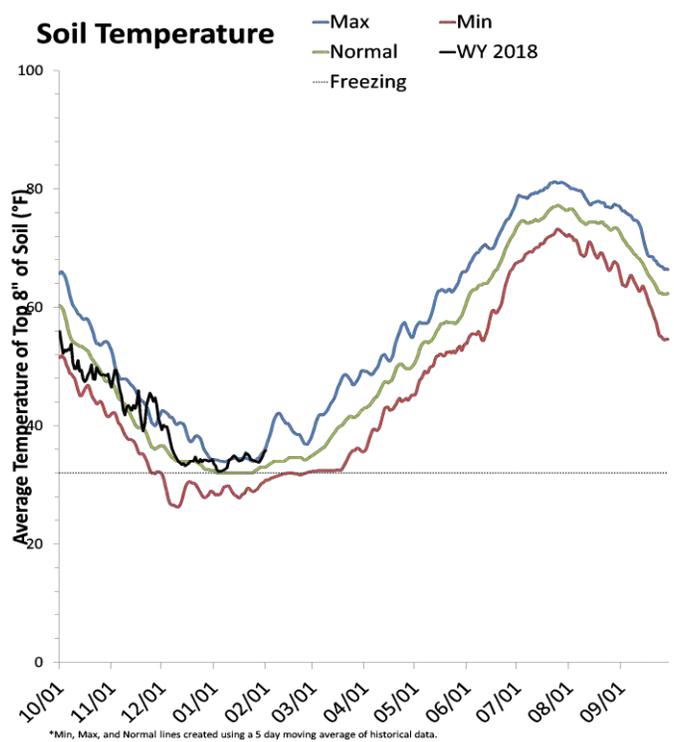
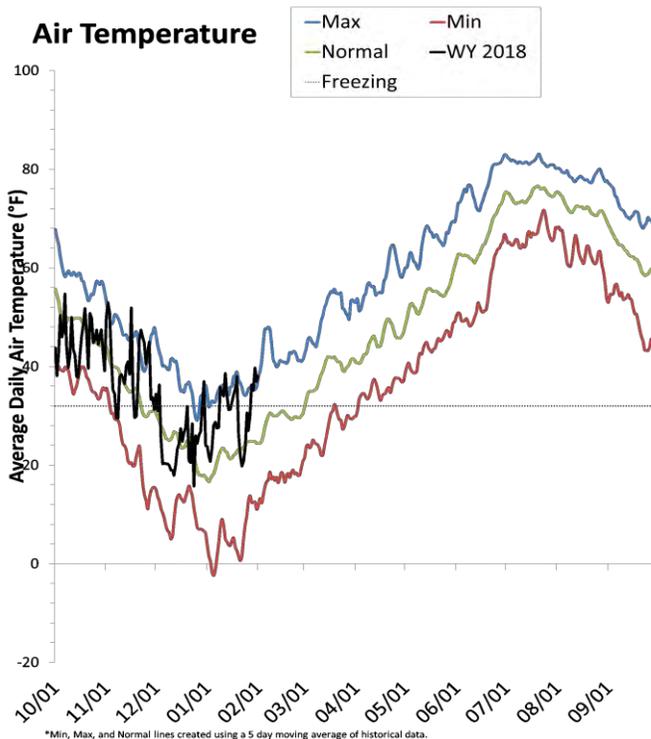
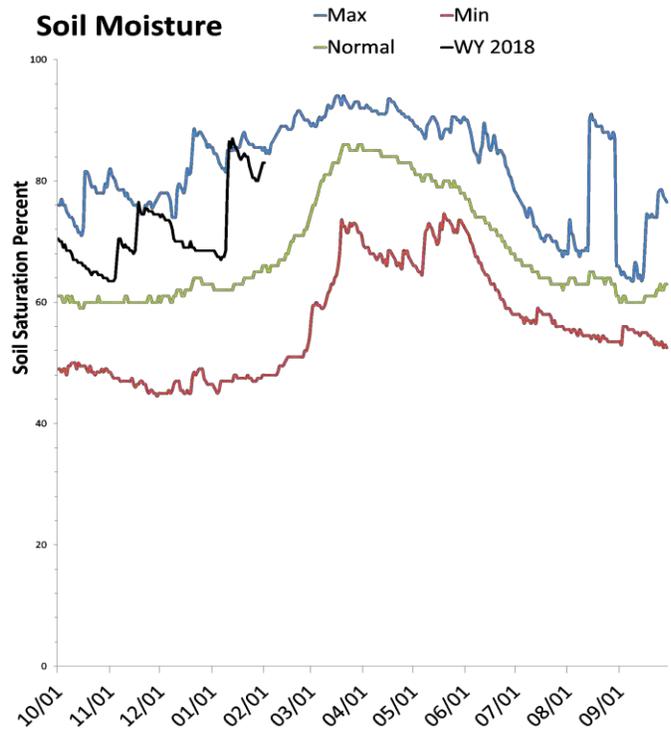
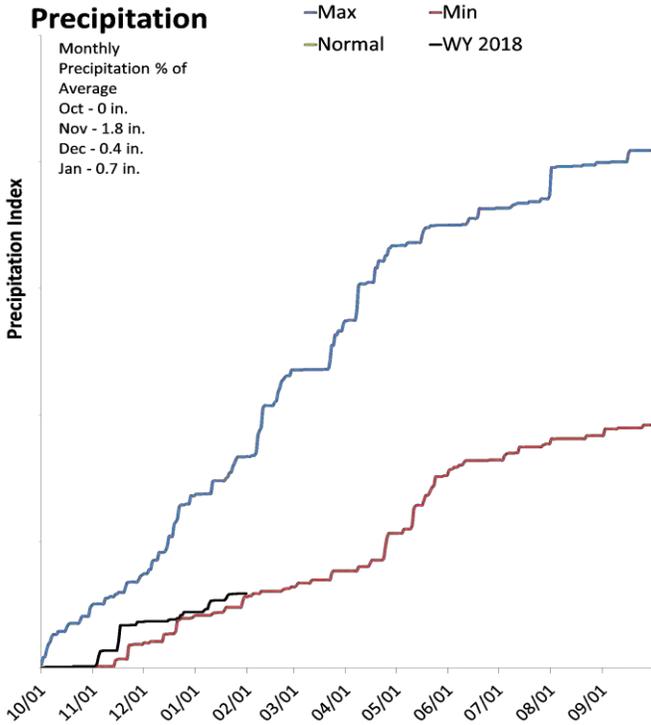
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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North Central

February 1, 2018

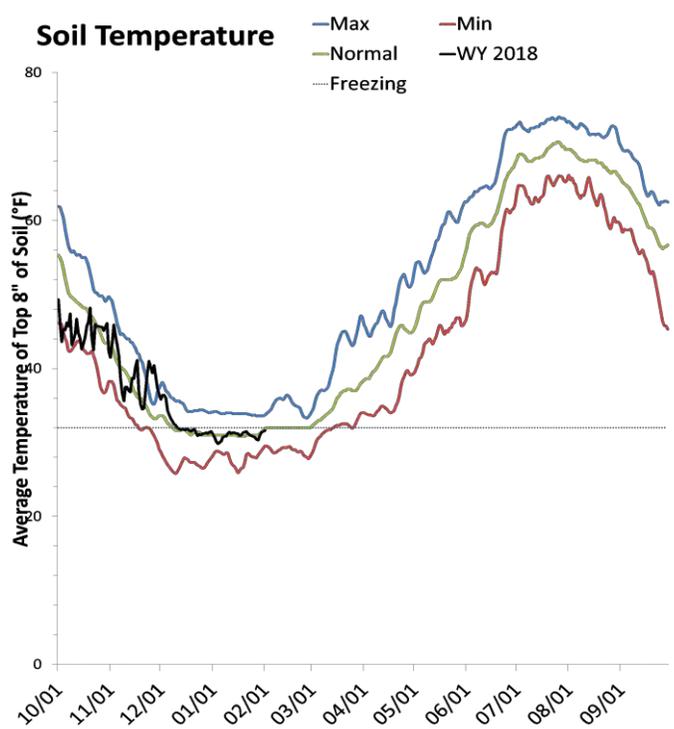
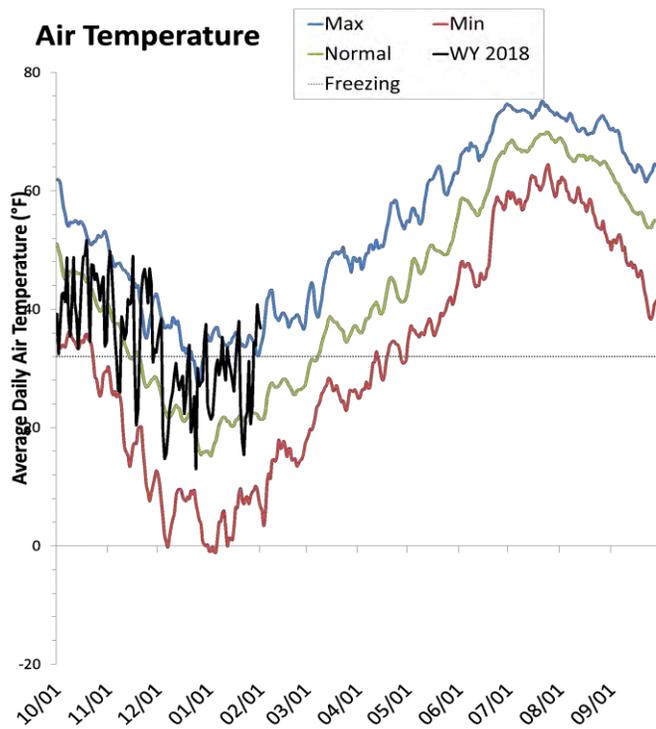
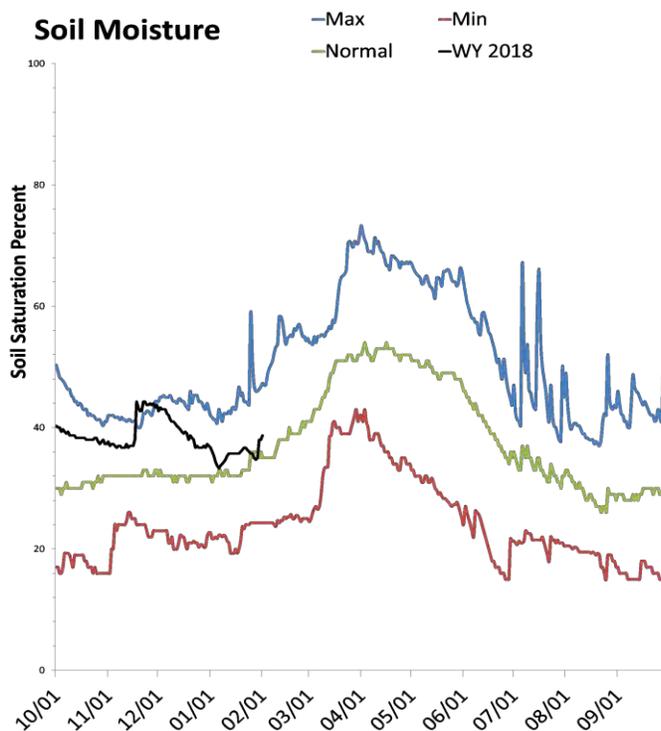
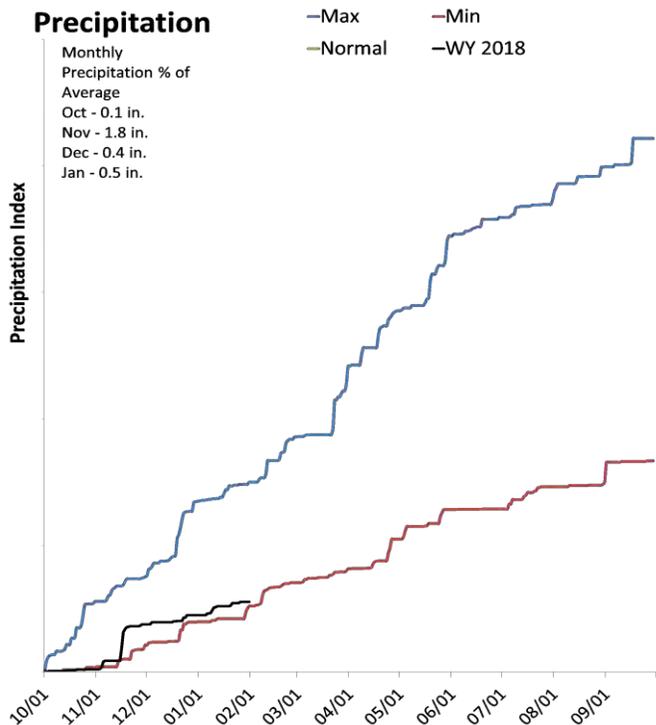
The average precipitation in January at SCAN sites within the basin was 0.7 inches, which brings the seasonal accumulation (Oct-Jan) to 2.9 inches. Soil moisture is at 83% compared to 85% last year.



Northern Mountains

February 1, 2018

The average precipitation in January at SCAN sites within the basin was 0.5 inches, which brings the seasonal accumulation (Oct-Jan) to 2.8 inches. Soil moisture is at 38% compared to 37% last year.



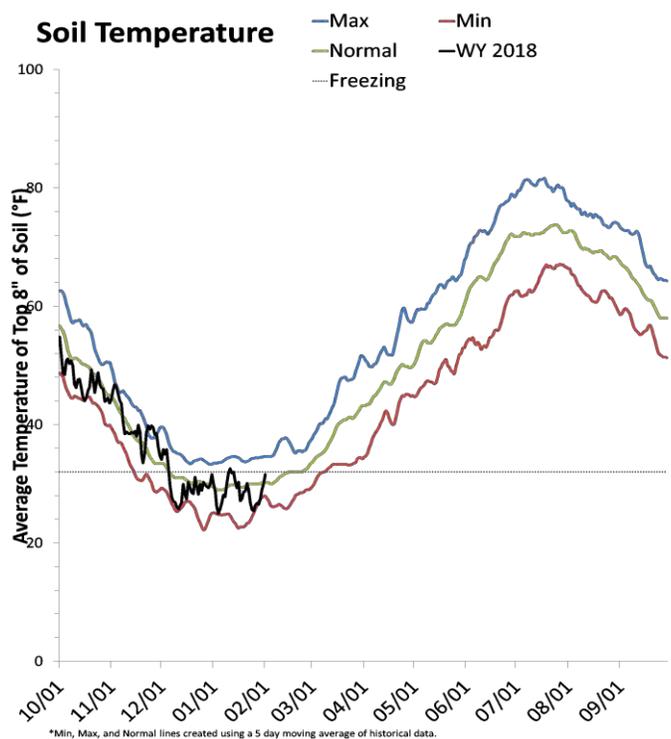
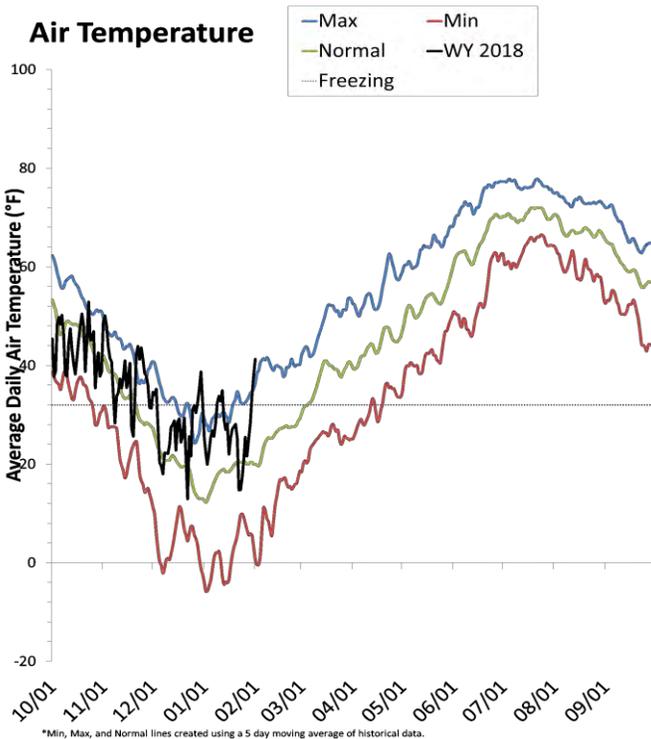
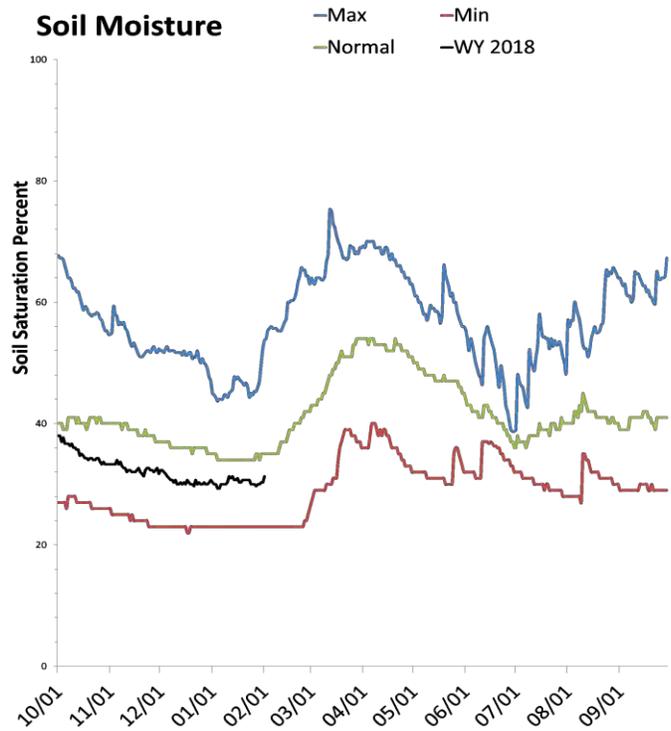
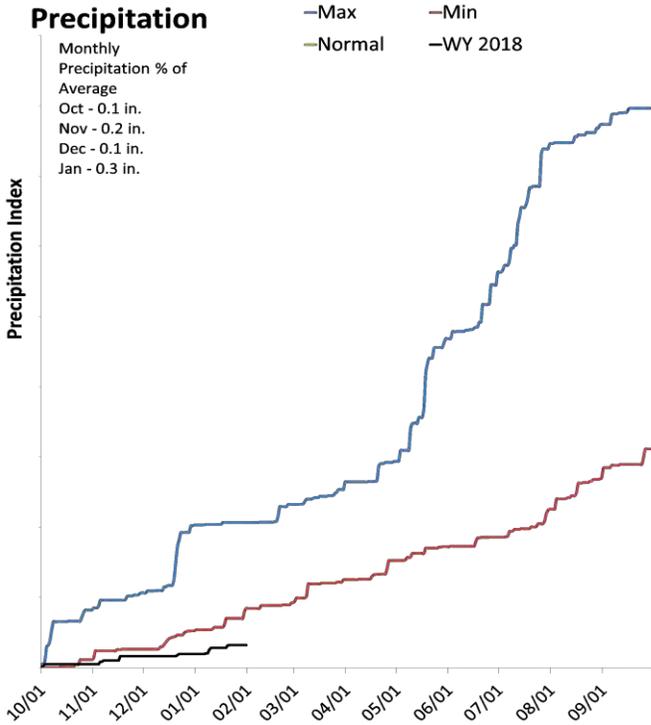
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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Uinta Basin

February 1, 2018

The average precipitation in January at SCAN sites within the basin was 0.3 inches, which brings the seasonal accumulation (Oct-Jan) to 0.6 inches. Soil moisture is at 31% compared to 42% last year.



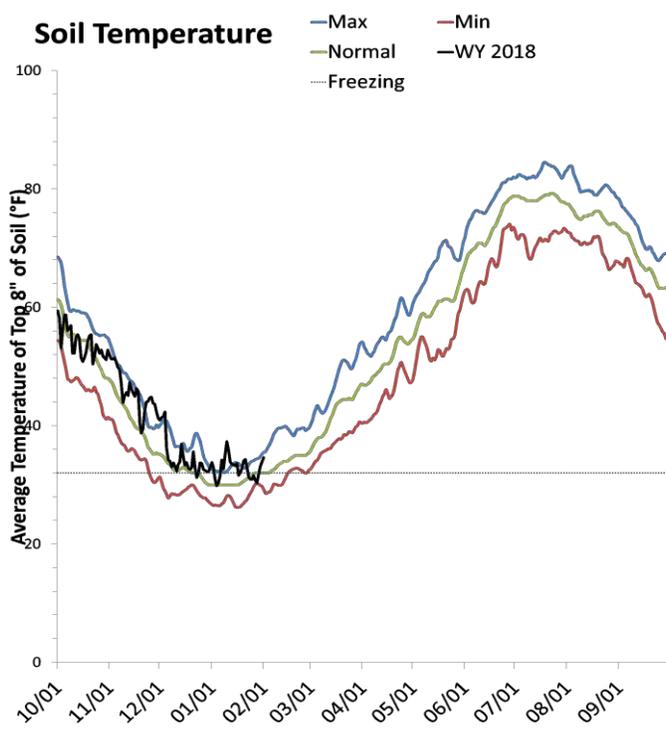
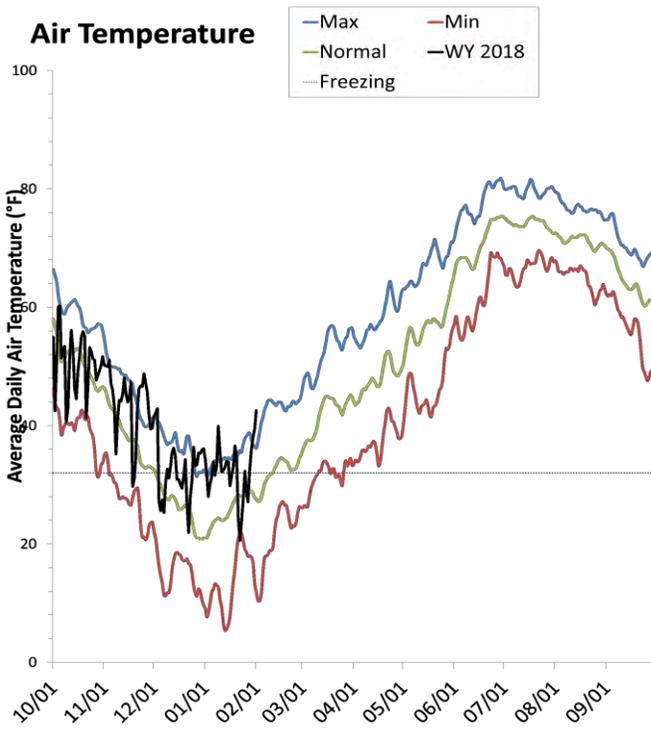
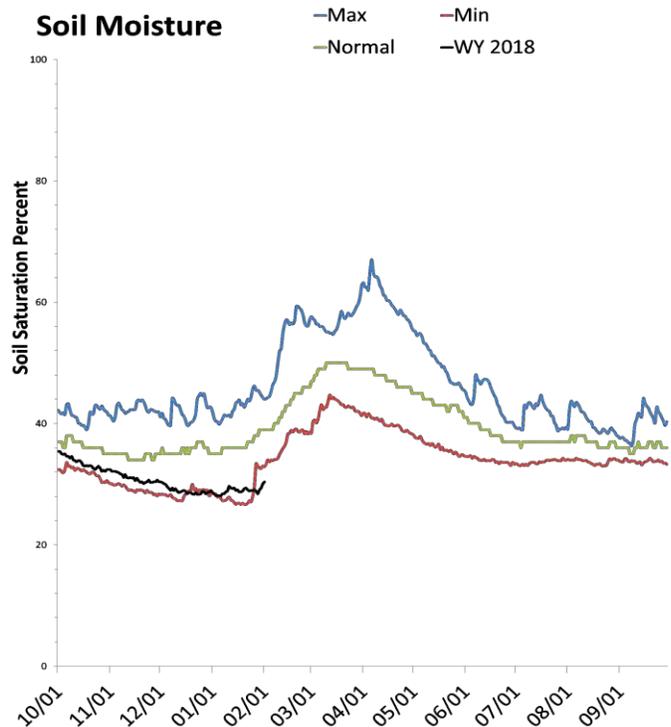
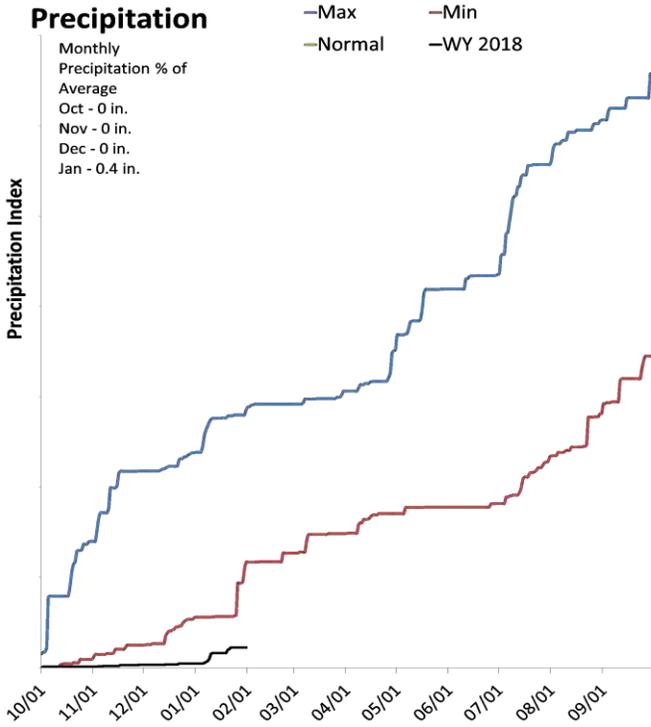
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

*Min, Max, and Normal lines created using a 5 day moving average of historical data.

Southeast

February 1, 2018

The average precipitation in January at SCAN sites within the basin was 0.4 inches, which brings the seasonal accumulation (Oct-Jan) to 0.4 inches. Soil moisture is at 30% compared to 43% last year.



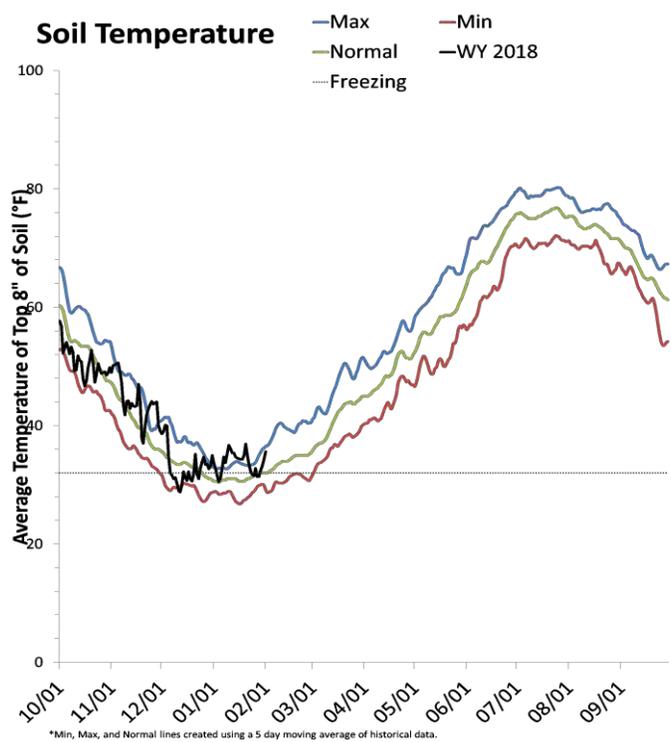
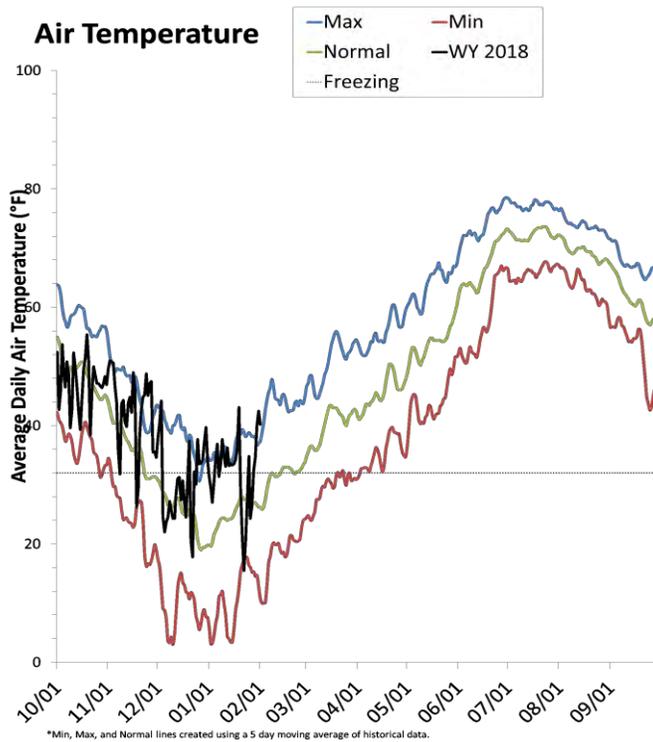
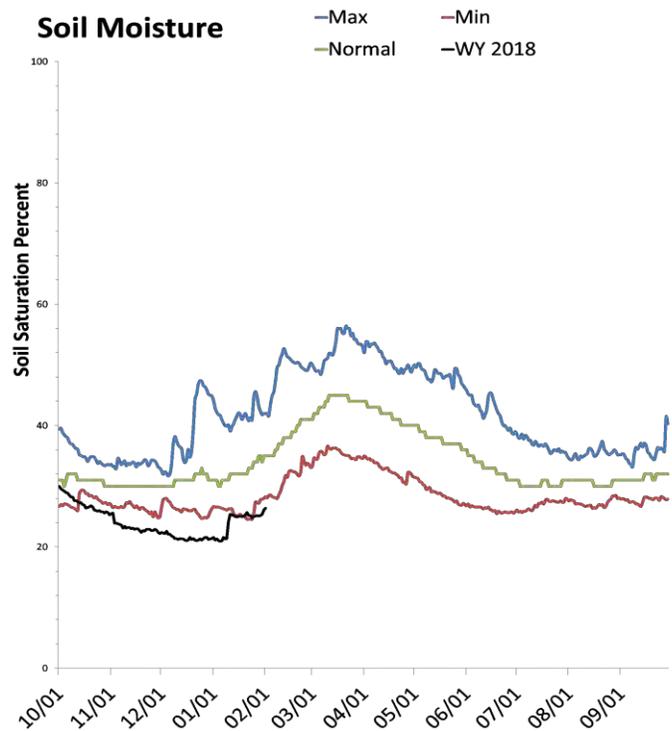
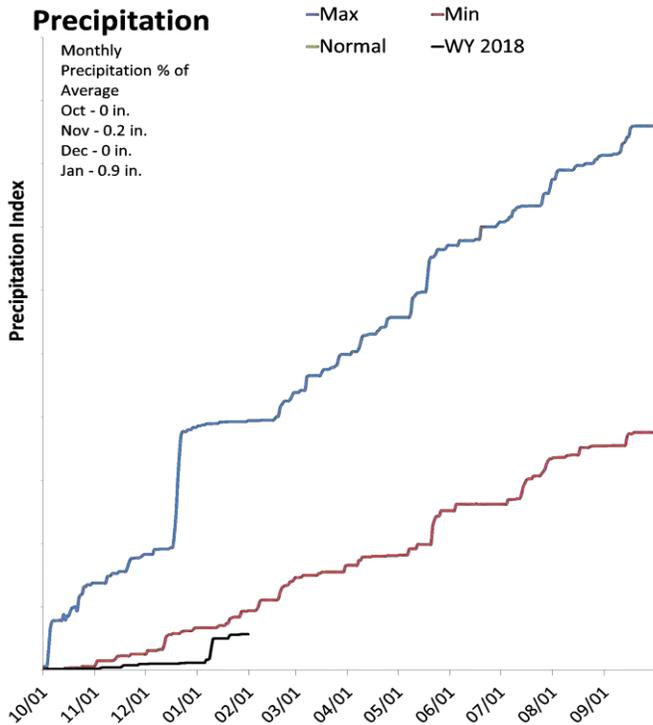
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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South Central

February 1, 2018

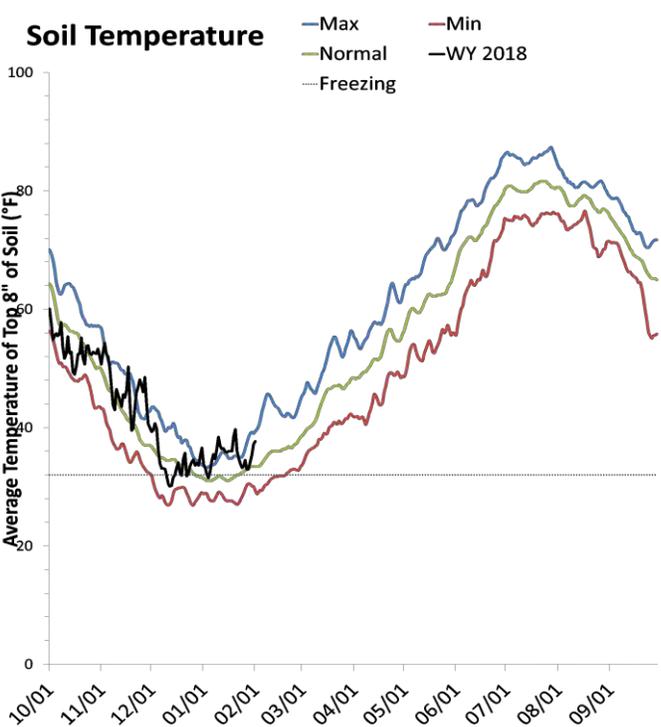
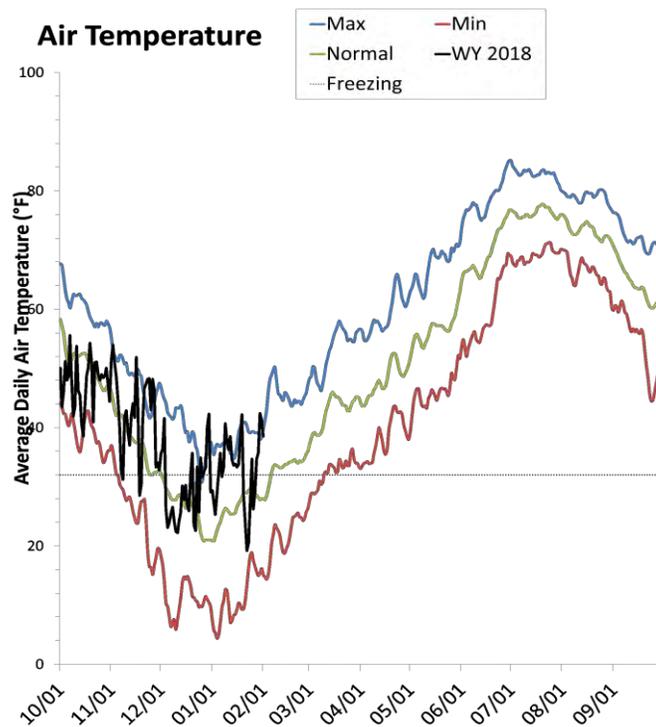
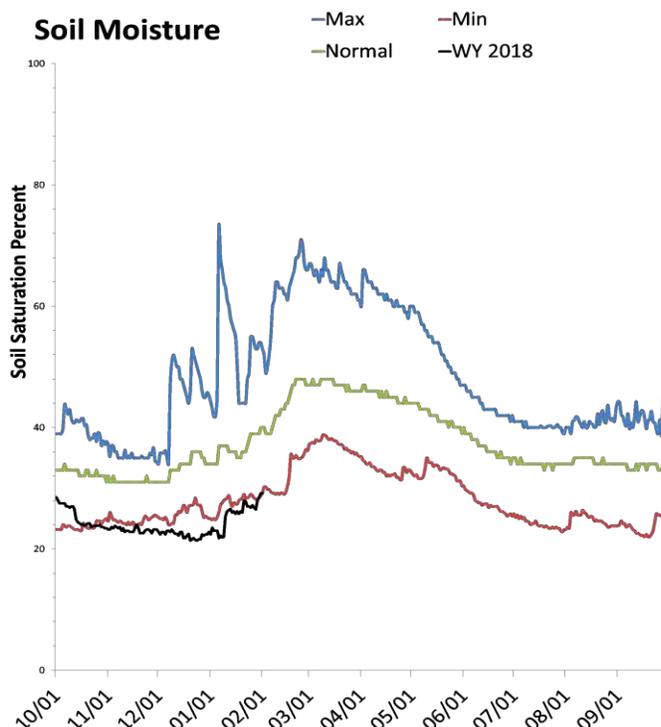
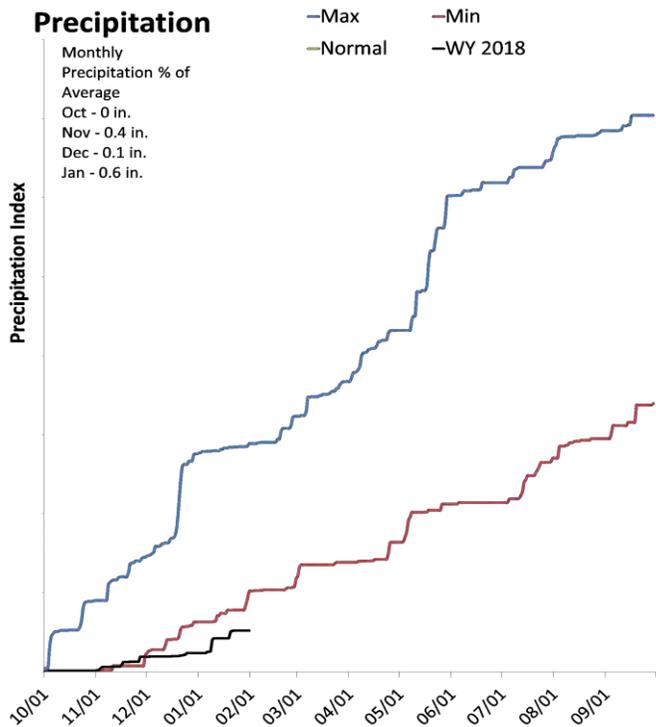
The average precipitation in January at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Jan) to 1.1 inches. Soil moisture is at 26% compared to 37% last year.



Western and Dixie

February 1, 2018

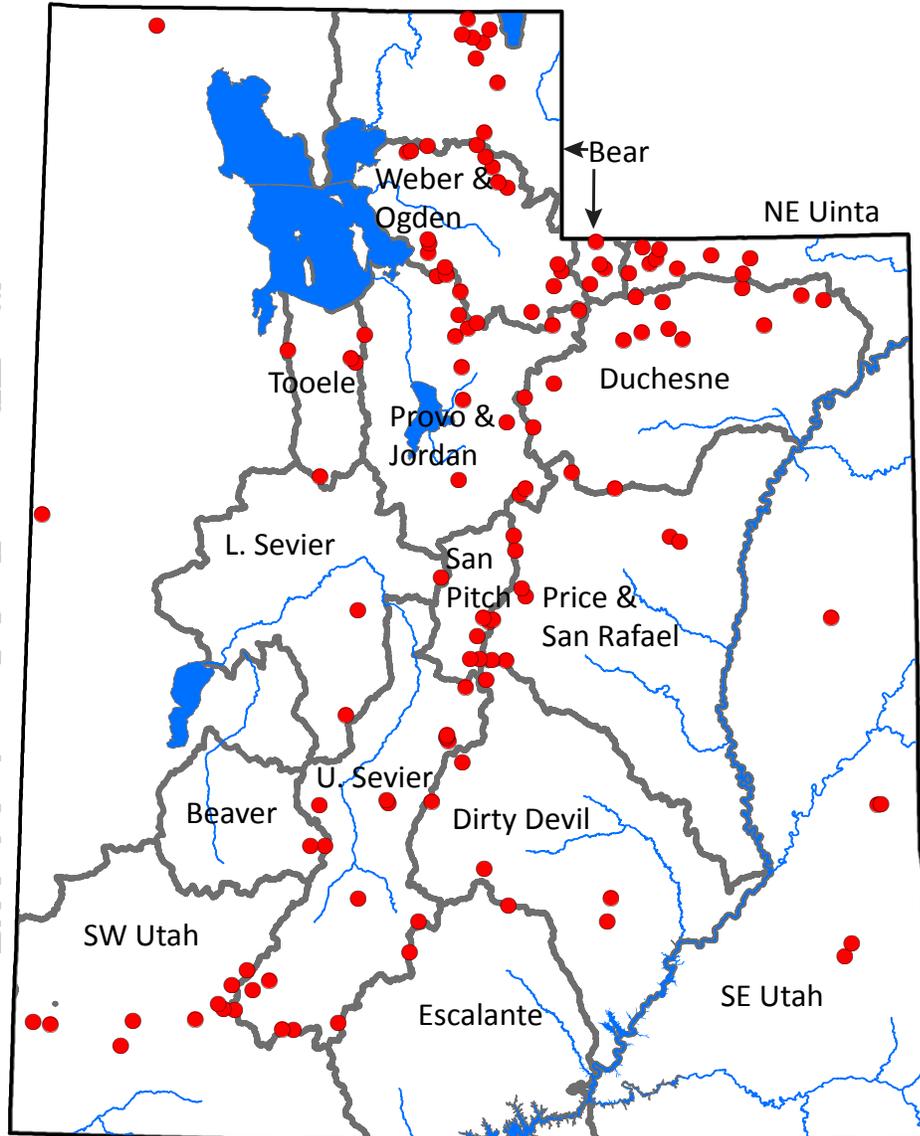
The average precipitation in January at SCAN sites within the basin was 0.6 inches, which brings the seasonal accumulation (Oct-Jan) to 1 inches. Soil moisture is at 28% compared to 34% last year.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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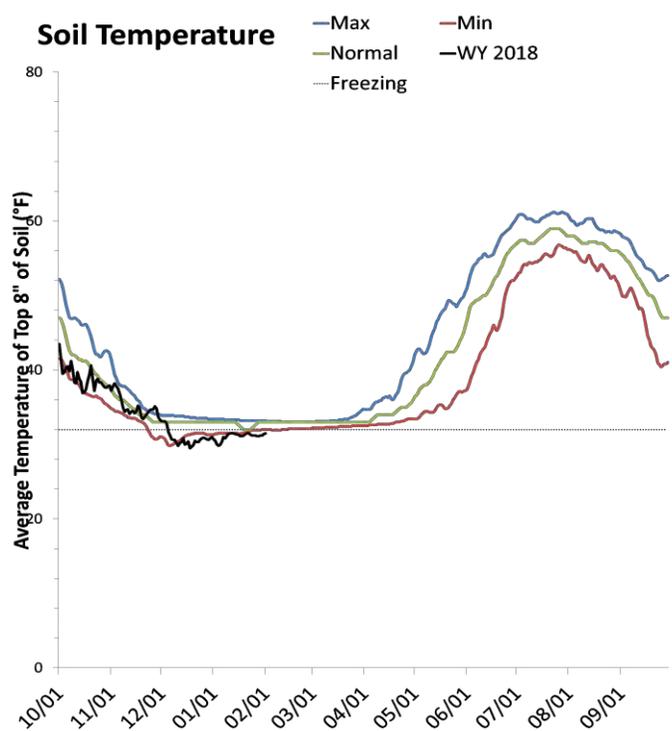
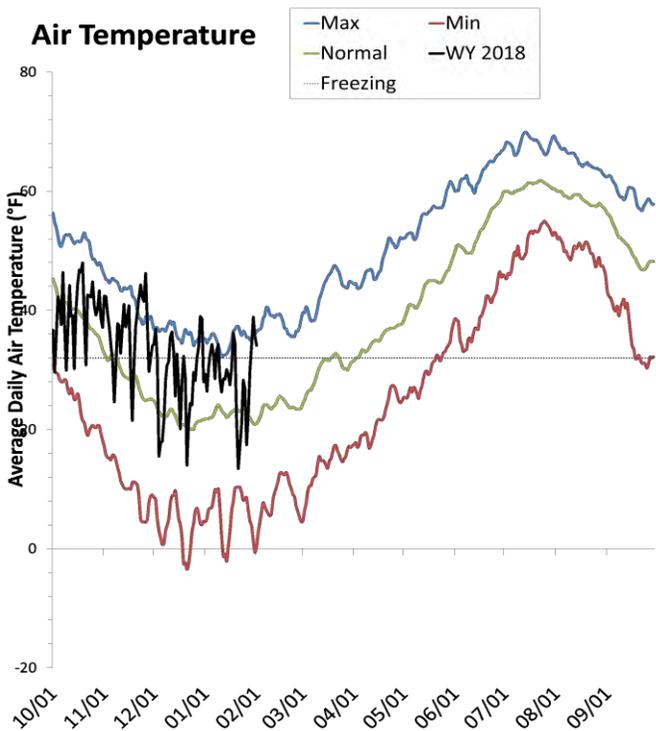
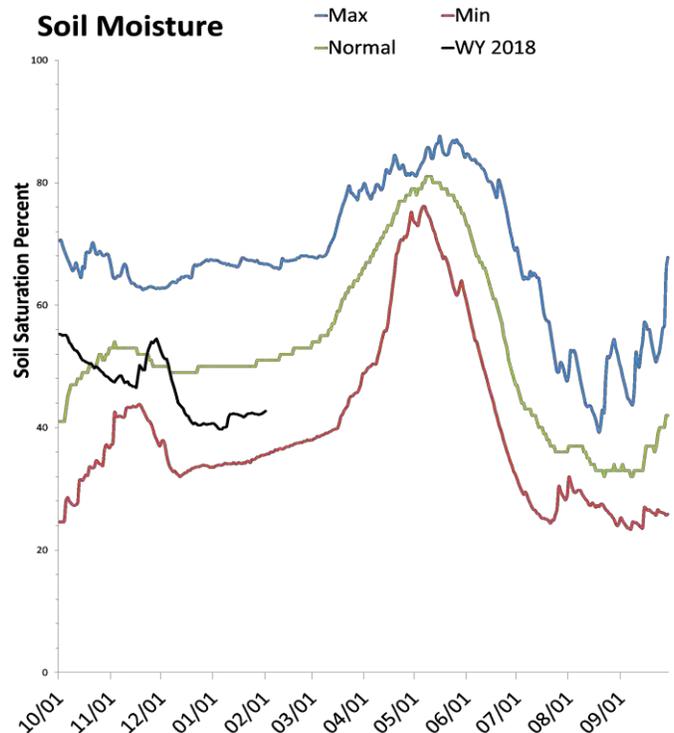
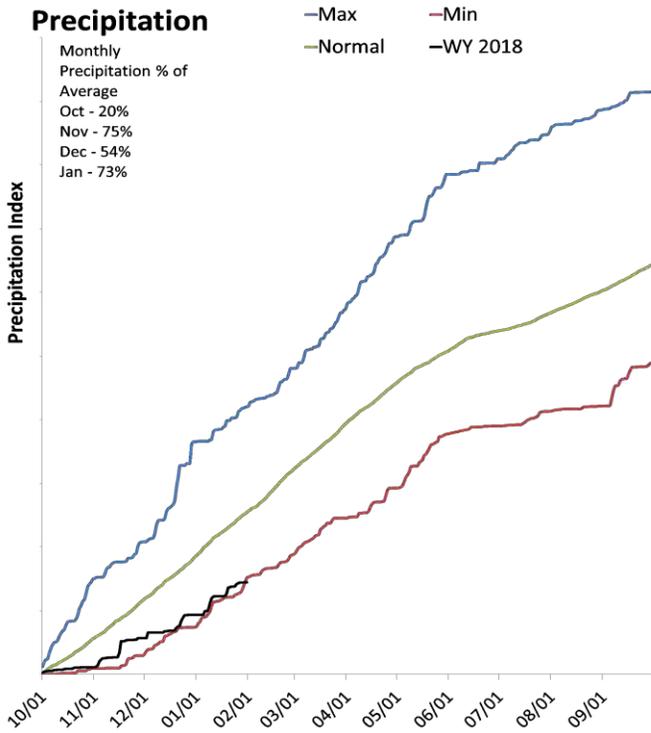
SNOTEL portion of report



Statewide SNOTEL

February 1, 2018

Precipitation at SNOTEL sites during January was below average at 73%, which brings the seasonal accumulation (Oct-Jan) to 57% of average. Soil moisture is at 42% compared to 63% last year. Reservoir storage is at 73% of capacity, compared to 53% last year.



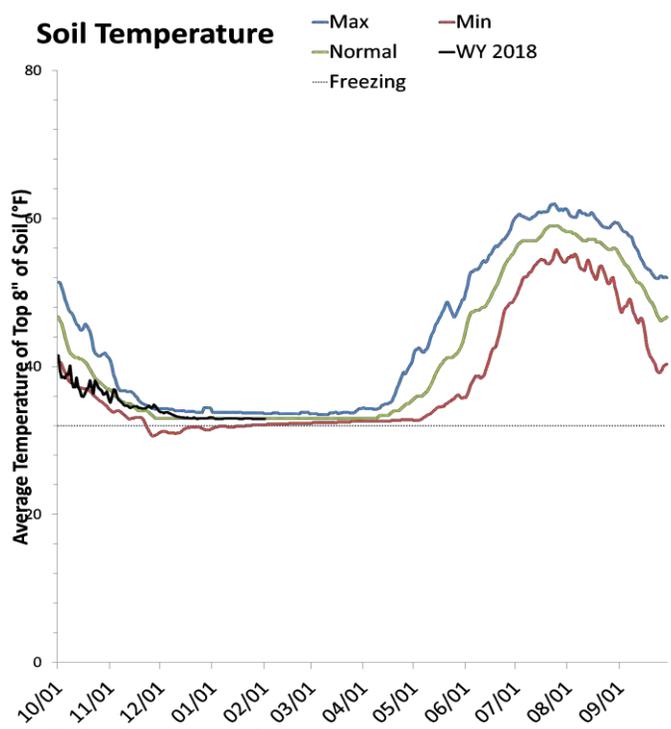
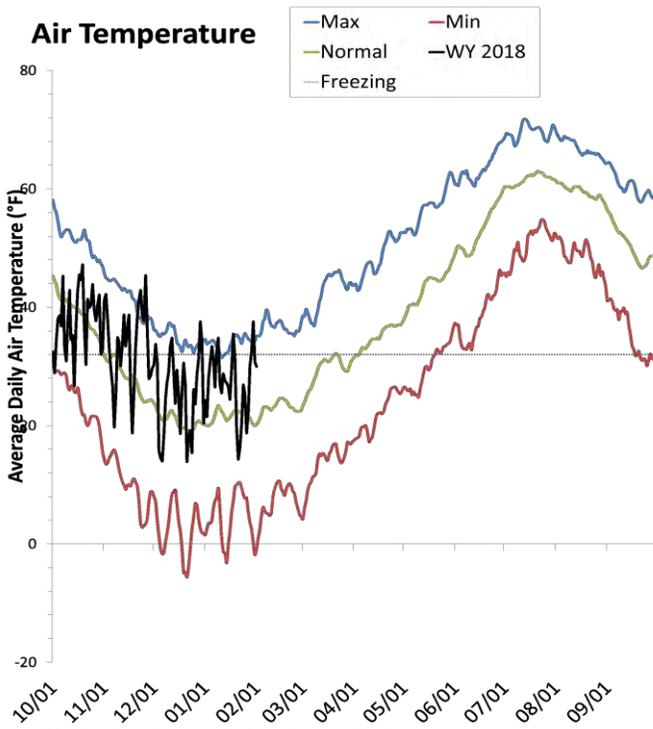
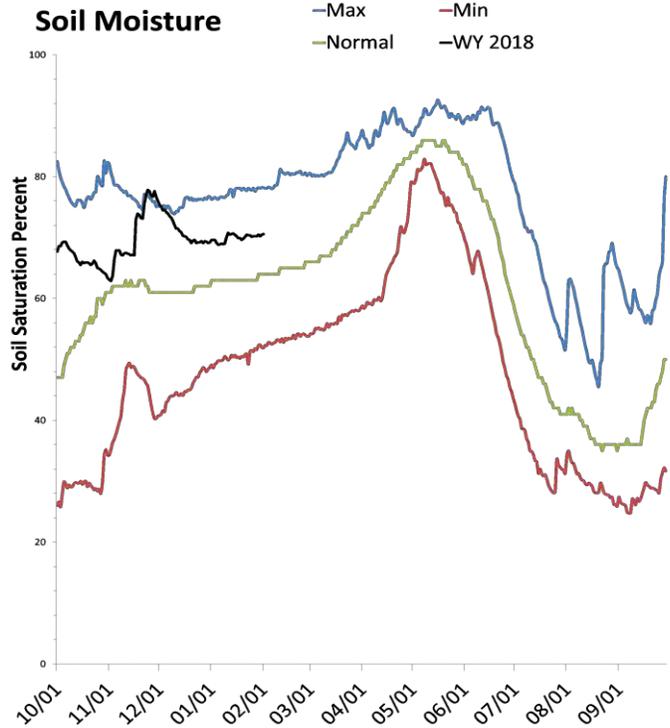
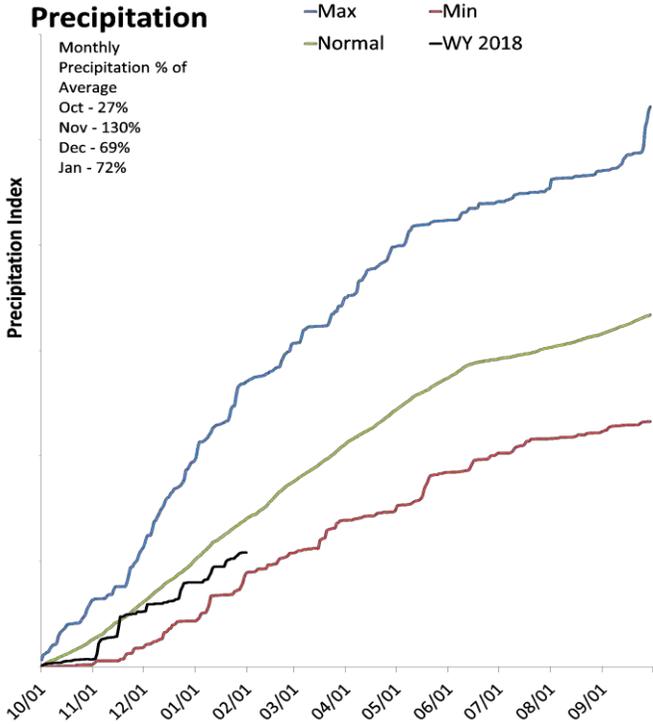
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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Bear River Basin

February 1, 2018

Precipitation in January was below average at 72%, which brings the seasonal accumulation (Oct-Jan) to 77% of average. Soil moisture is at 71% compared to 77% last year. Reservoir storage is at 78% of capacity, compared to 40% last year. The water availability index for the Bear River is 92%, 85% for Woodruff Narrows and 67% for the Little Bear.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

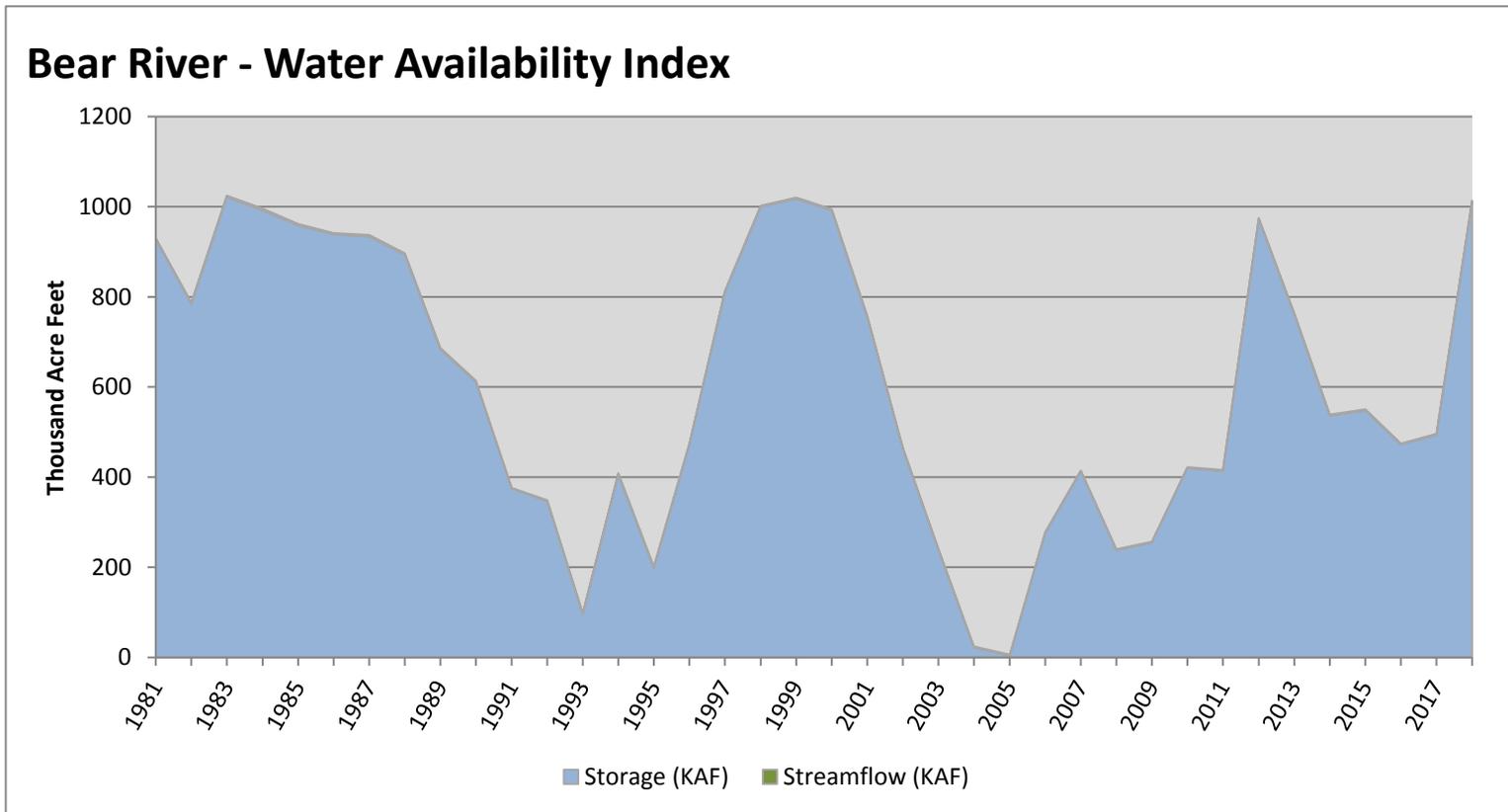
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February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	1011.72	2.03	1013.75	92	3.53	84, 98, 99, 83

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

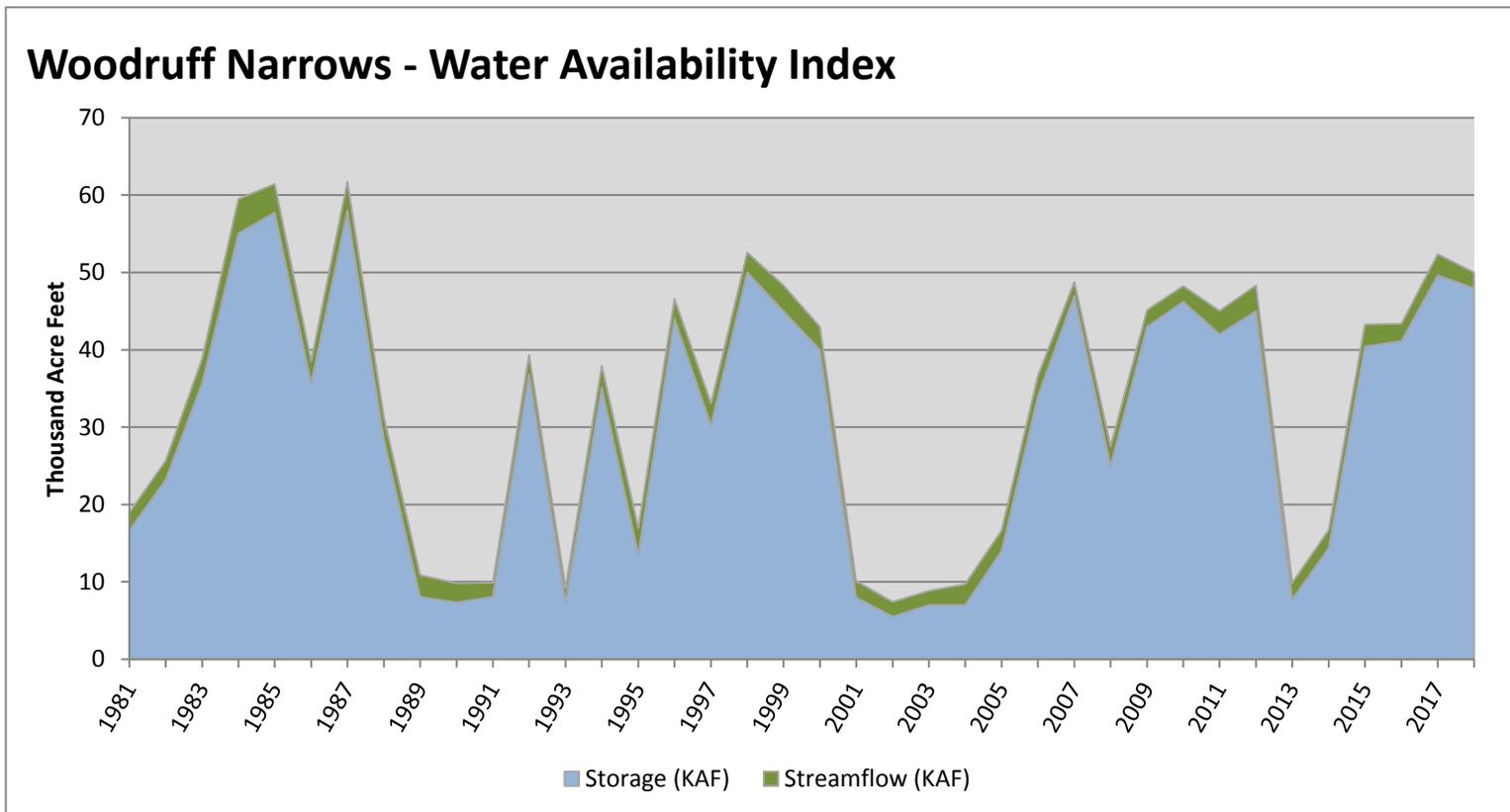


February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [^] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	47.96	2.03	49.99	85	2.88	99, 07, 17, 98

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

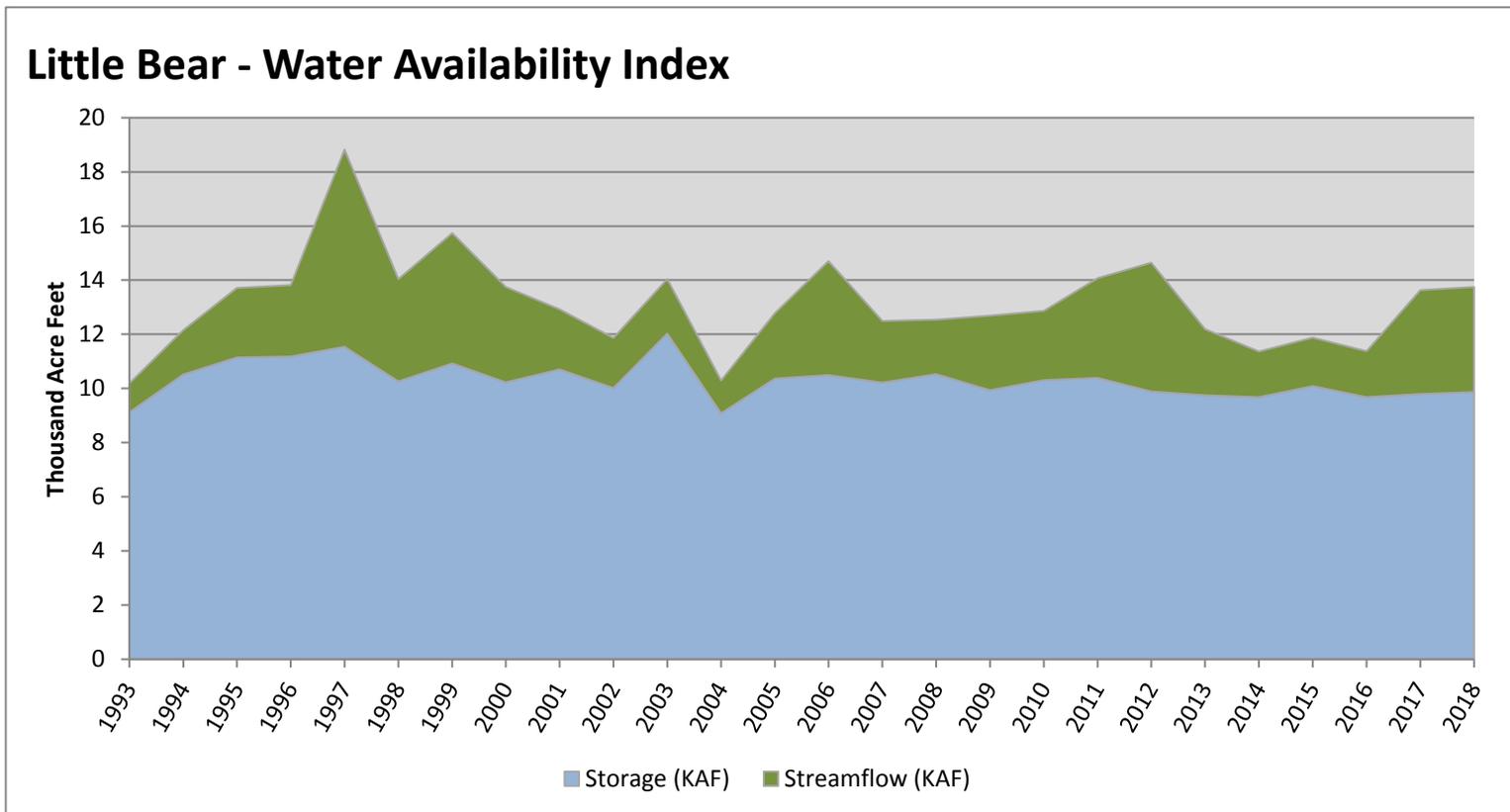


February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	9.87	3.88	13.75	67	1.39	95, 00, 96, 98

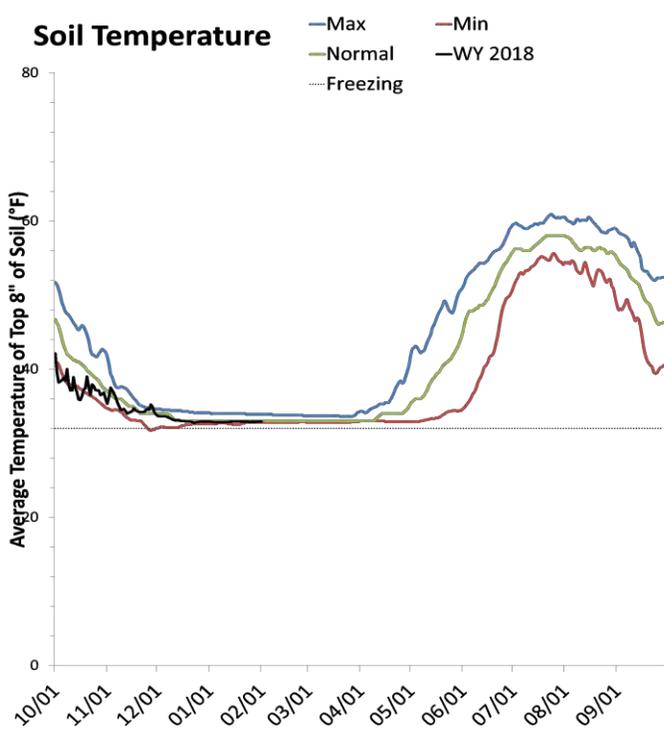
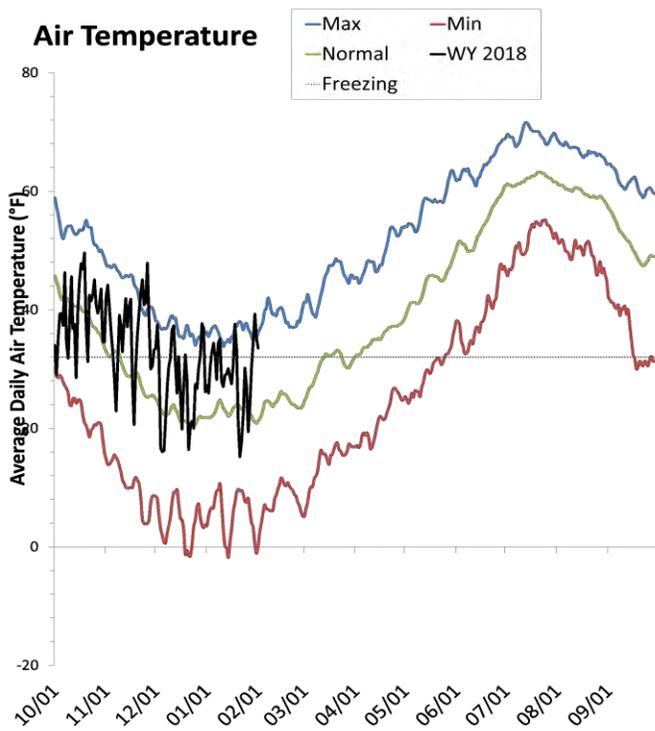
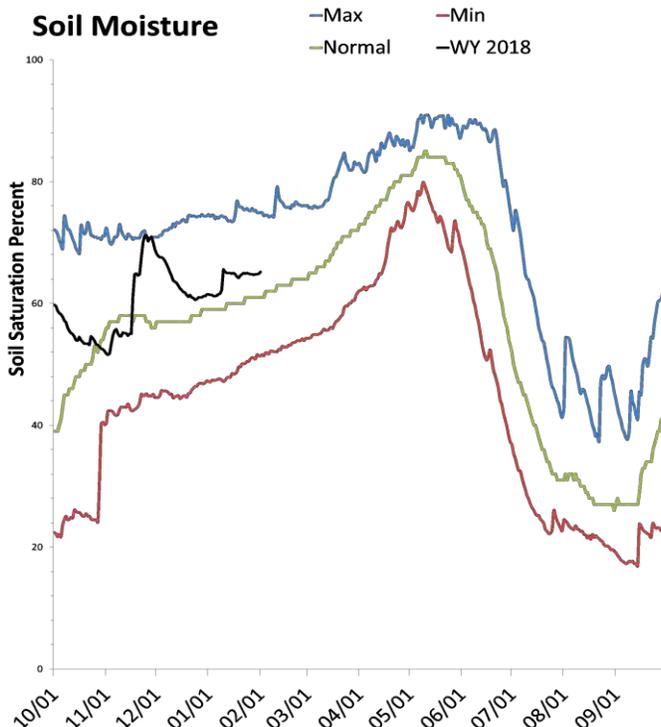
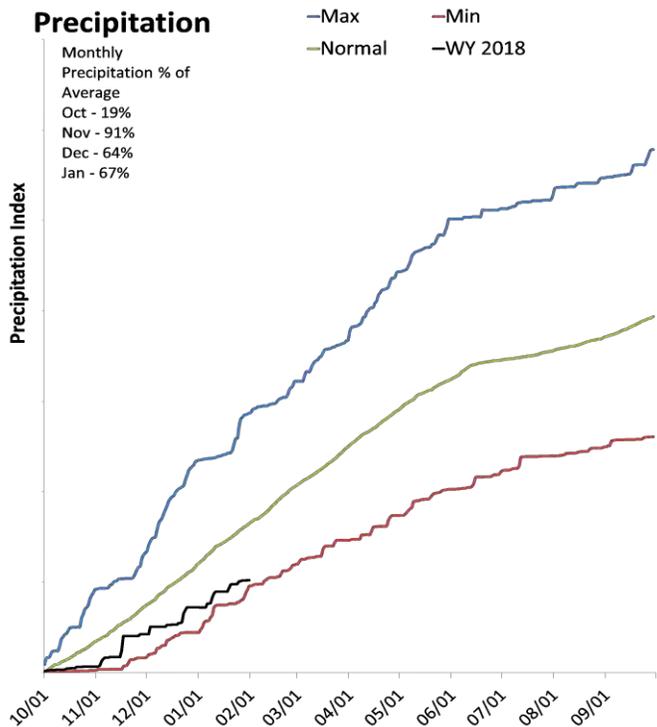
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Weber & Ogden River Basins

February 1, 2018

Precipitation in January was much below average at 66%, which brings the seasonal accumulation (Oct-Jan) to 62% of average. Soil moisture is at 65% compared to 72% last year. Reservoir storage is at 76% of capacity, compared to 63% last year. The water availability index for the Ogden River is 90% and 97% for the Weber River.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

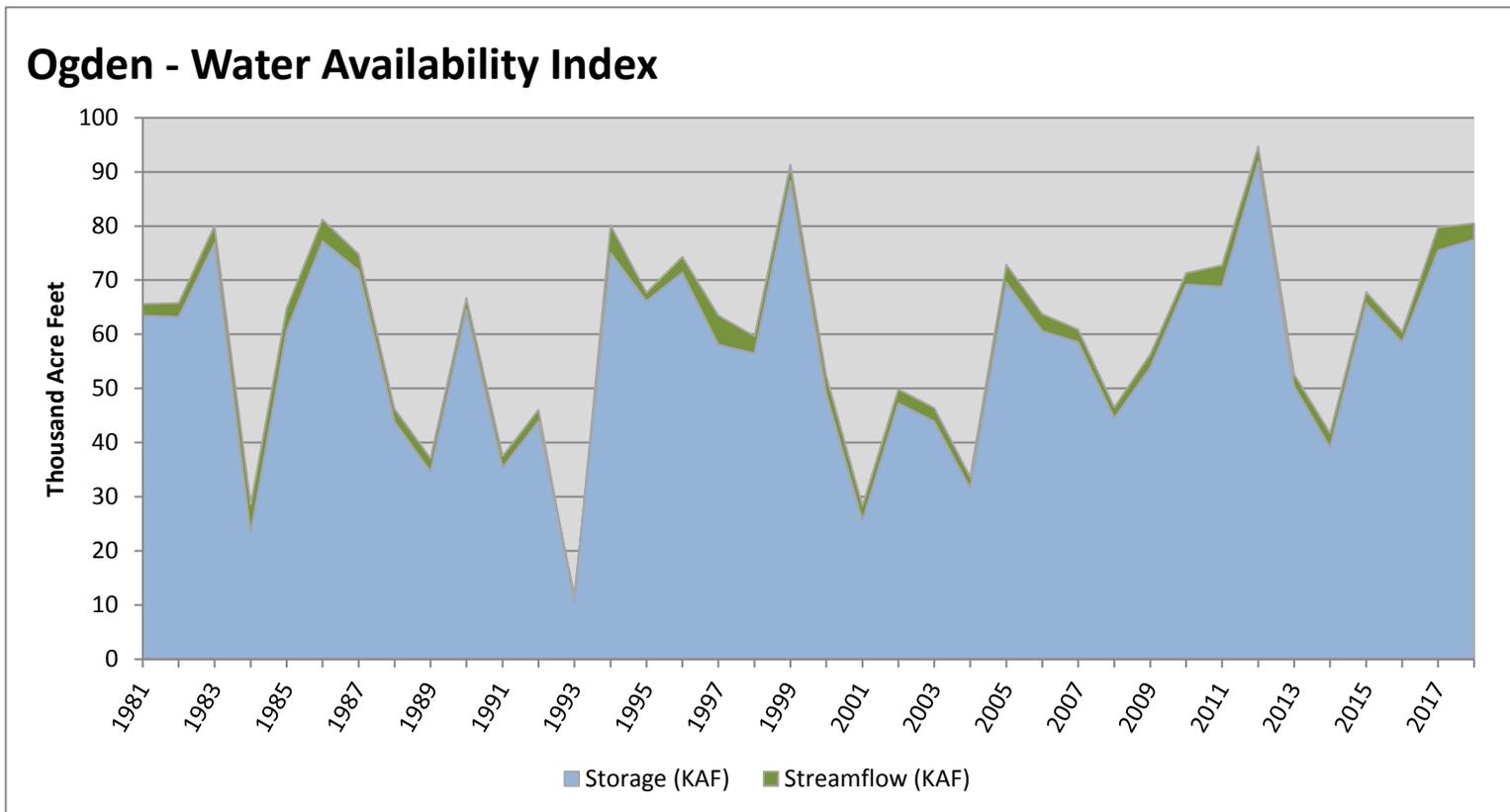
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	77.45	3.03	80.48	90	3.31	83, 94, 86, 99

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

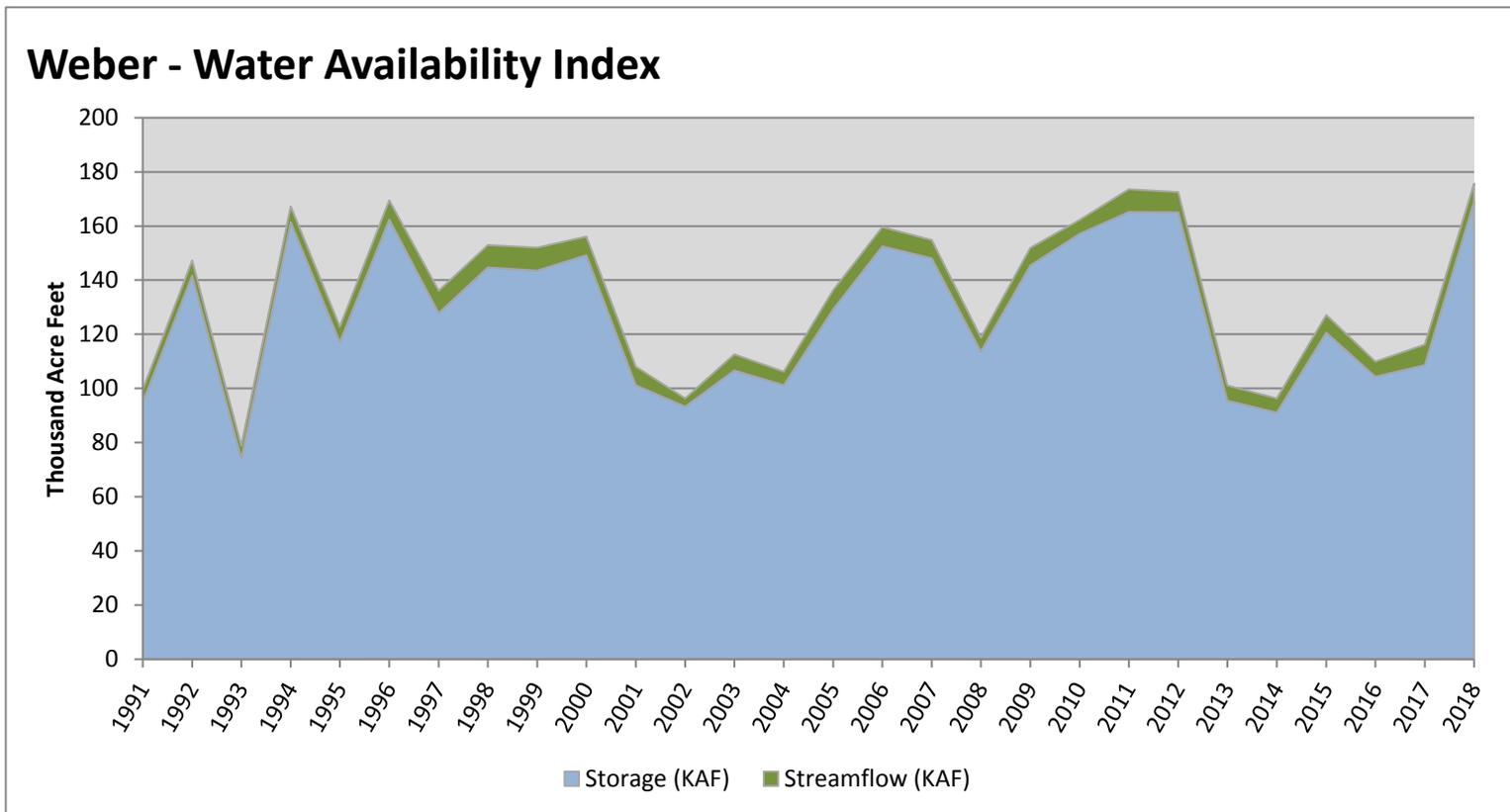


February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	168.97	6.72	175.69	97	3.88	11, 12, 96, 94

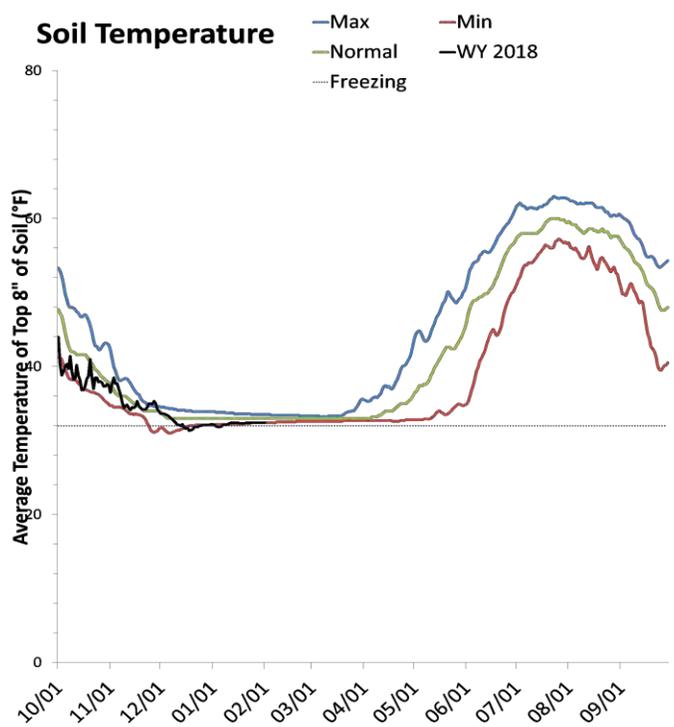
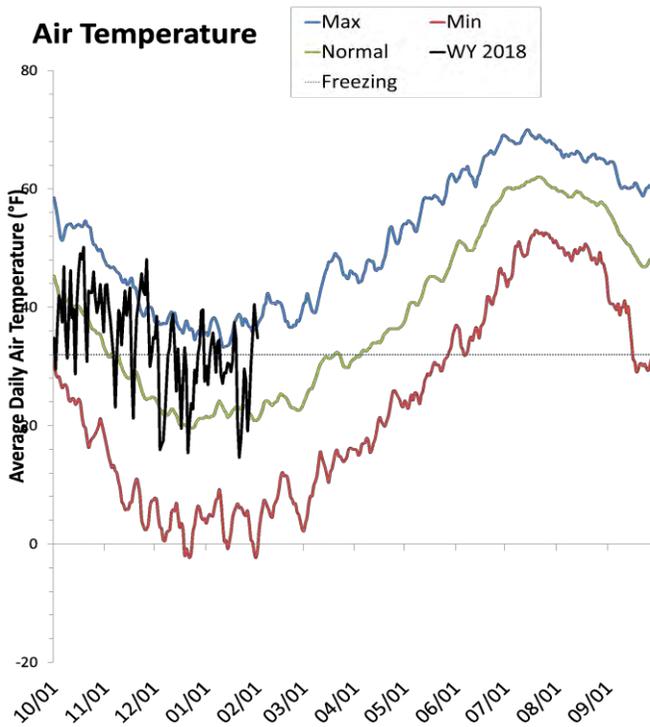
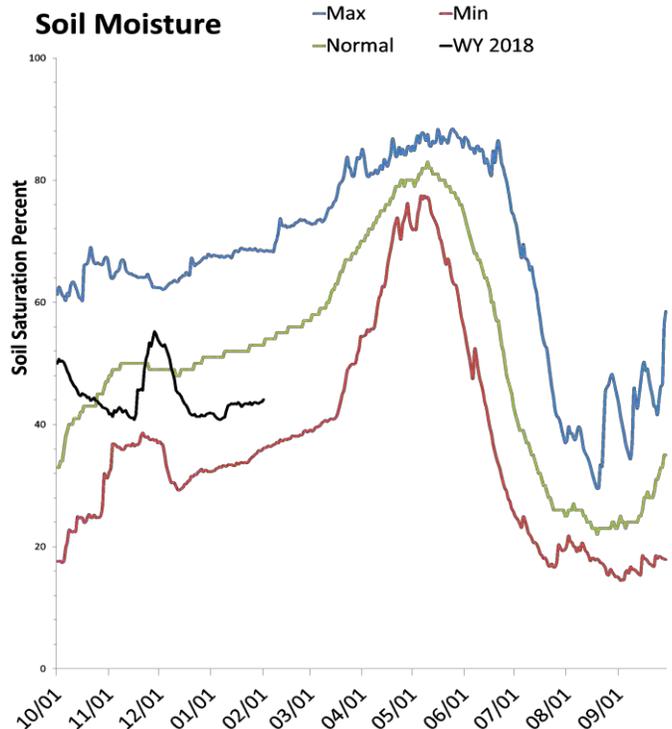
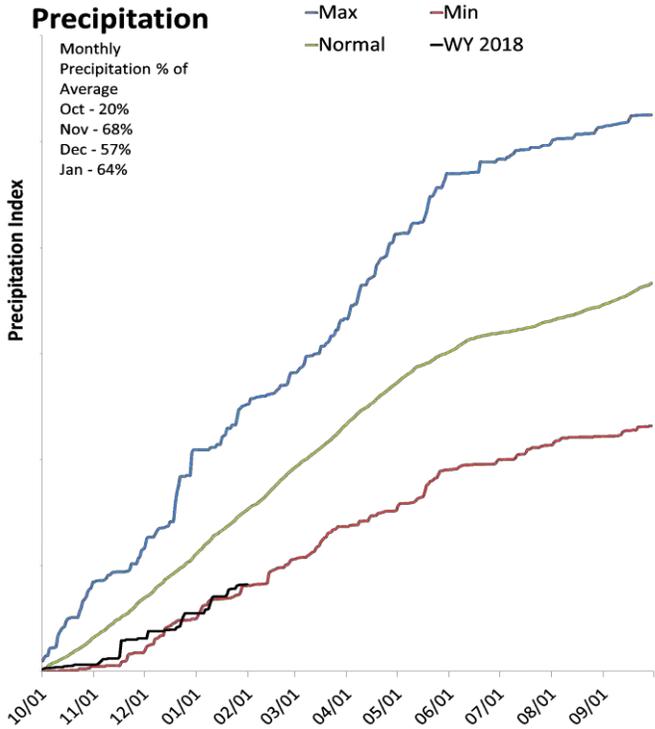
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Provo & Jordan River Basins

February 1, 2018

Precipitation in January was much below average at 64%, which brings the seasonal accumulation (Oct-Jan) to 54% of average. Soil moisture is at 44% compared to 69% last year. Reservoir storage is at 78% of capacity, compared to 61% last year. The water availability index for the Provo River is 88%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

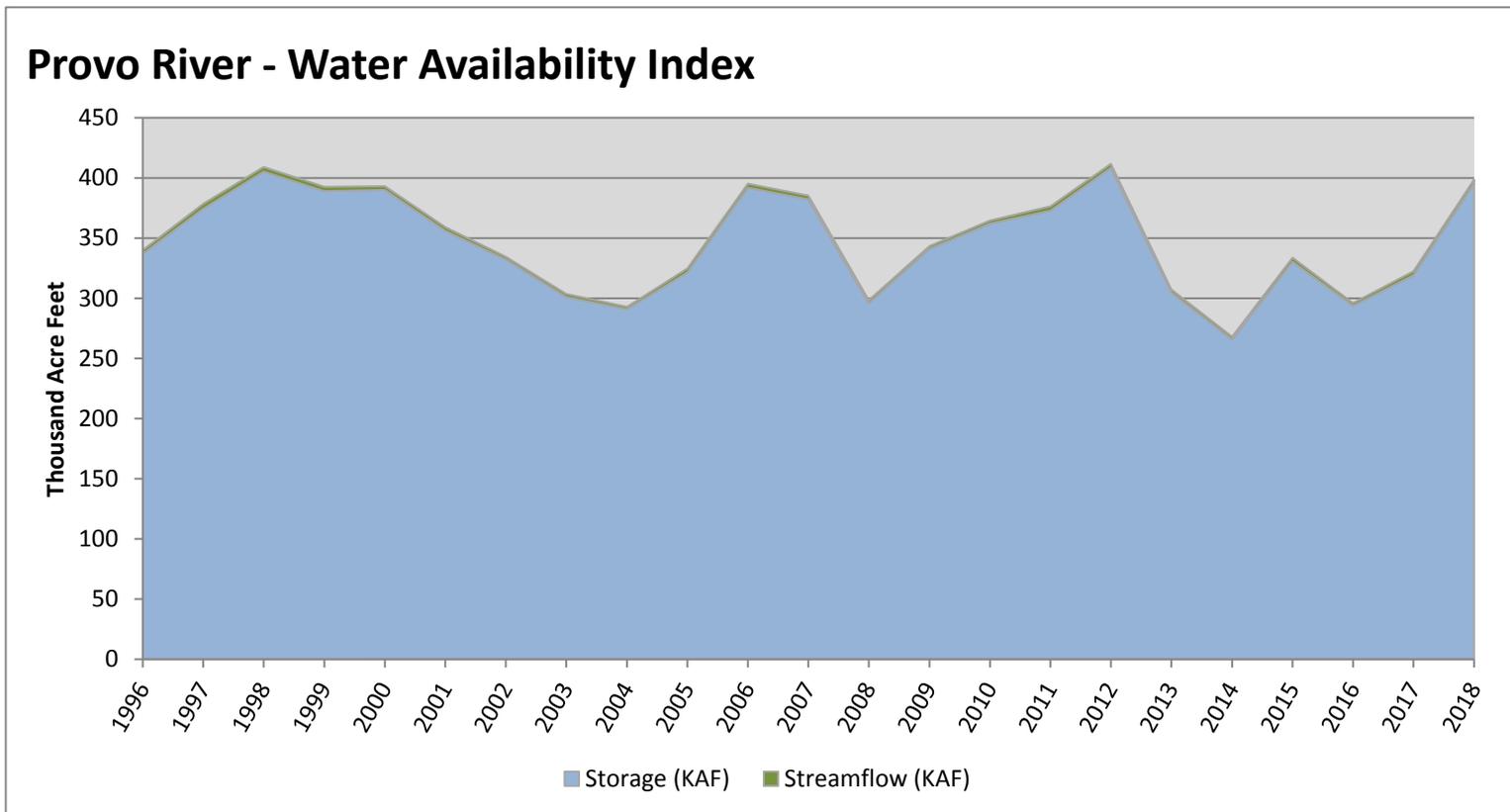
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	395.28	3.35	398.63	88	3.13	00, 06, 98, 12

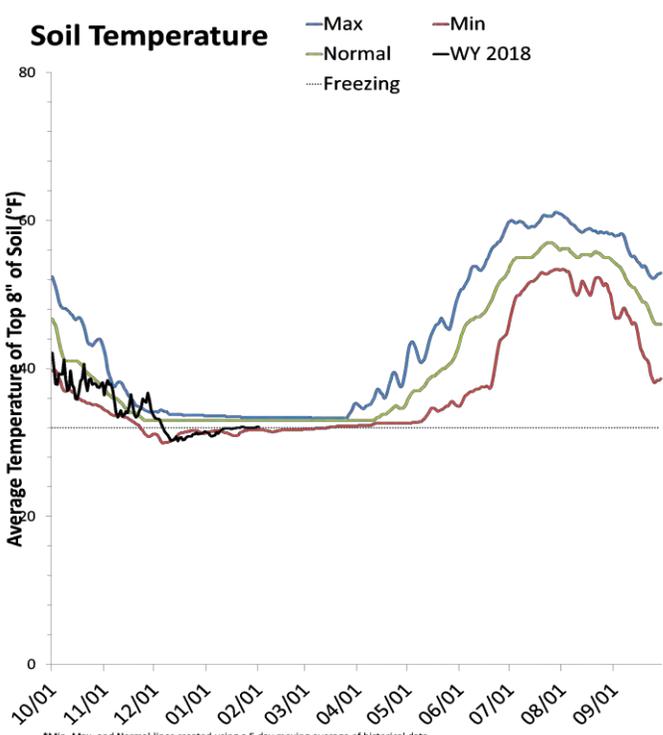
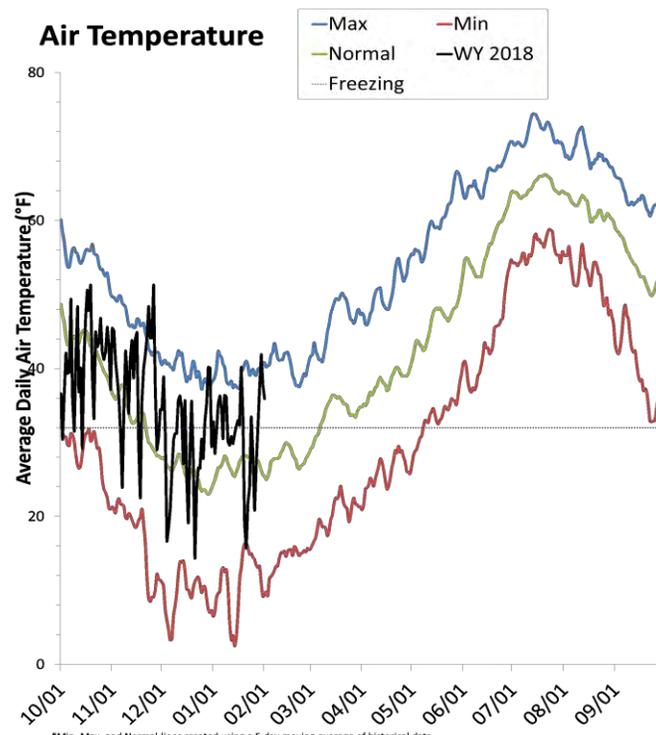
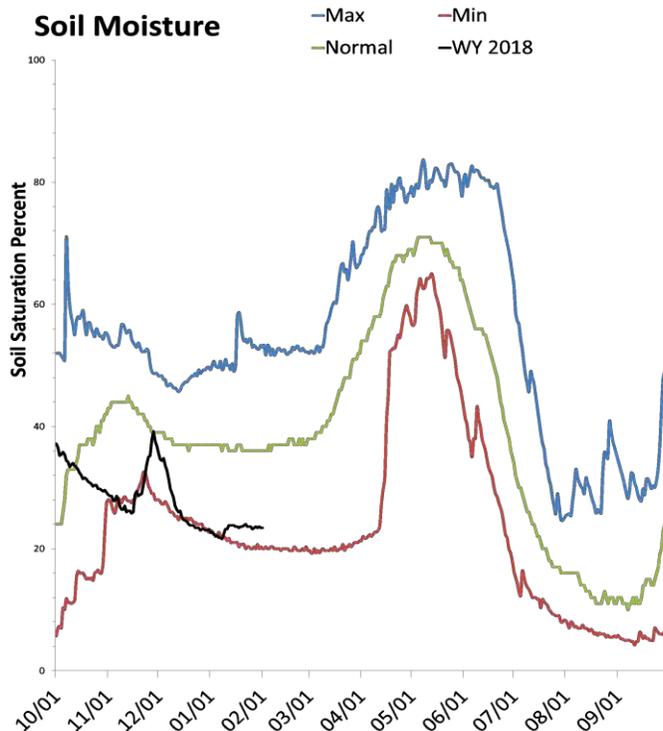
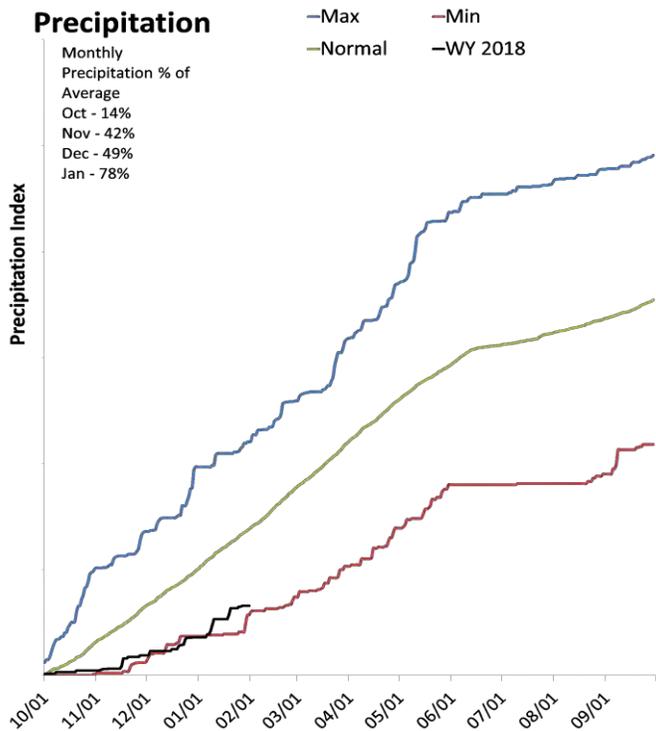
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Tooele Valley & West Desert Basins

February 1, 2018

Precipitation in January was below average at 80%, which brings the seasonal accumulation (Oct-Jan) to 48% of average. Soil moisture is at 23% compared to 47% last year. Reservoir storage is at 70% of capacity, compared to 21% last year.



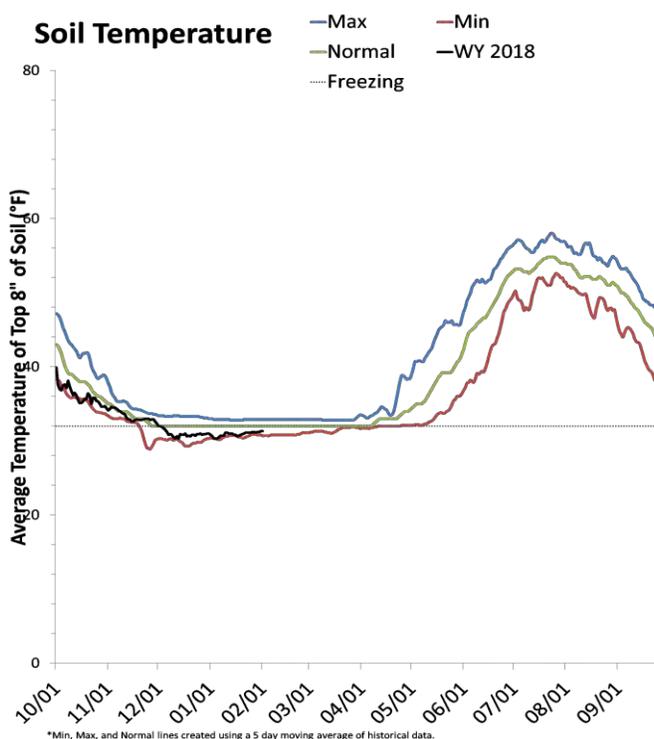
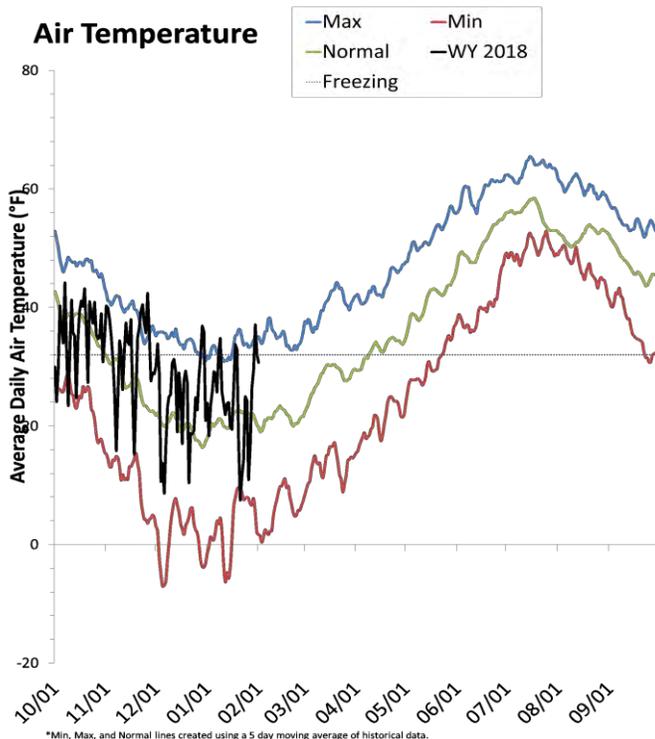
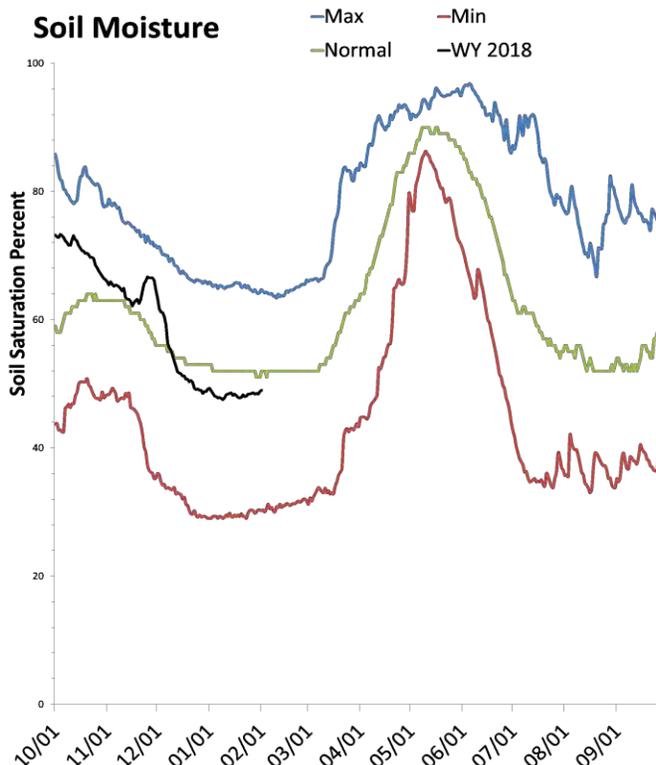
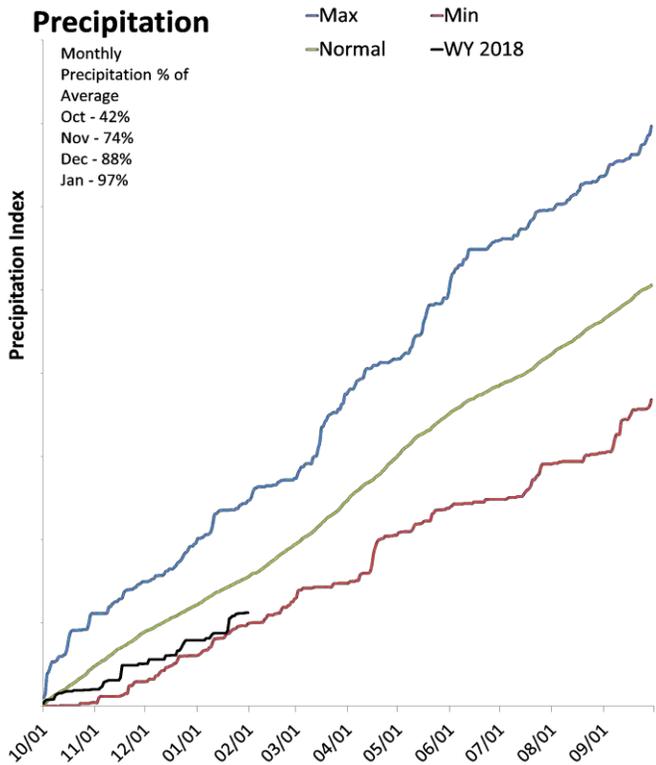
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

*Min, Max, and Normal lines created using a 5 day moving average of historical data.

Northeastern Uinta Basin

February 1, 2018

Precipitation in January was near average at 100%, which brings the seasonal accumulation (Oct-Jan) to 73% of average. Soil moisture is at 47% compared to 62% last year. Reservoir storage is at 86% of capacity, compared to 82% last year. The water availability index for Blacks Fork is 53% and 60% for Smiths Creek.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

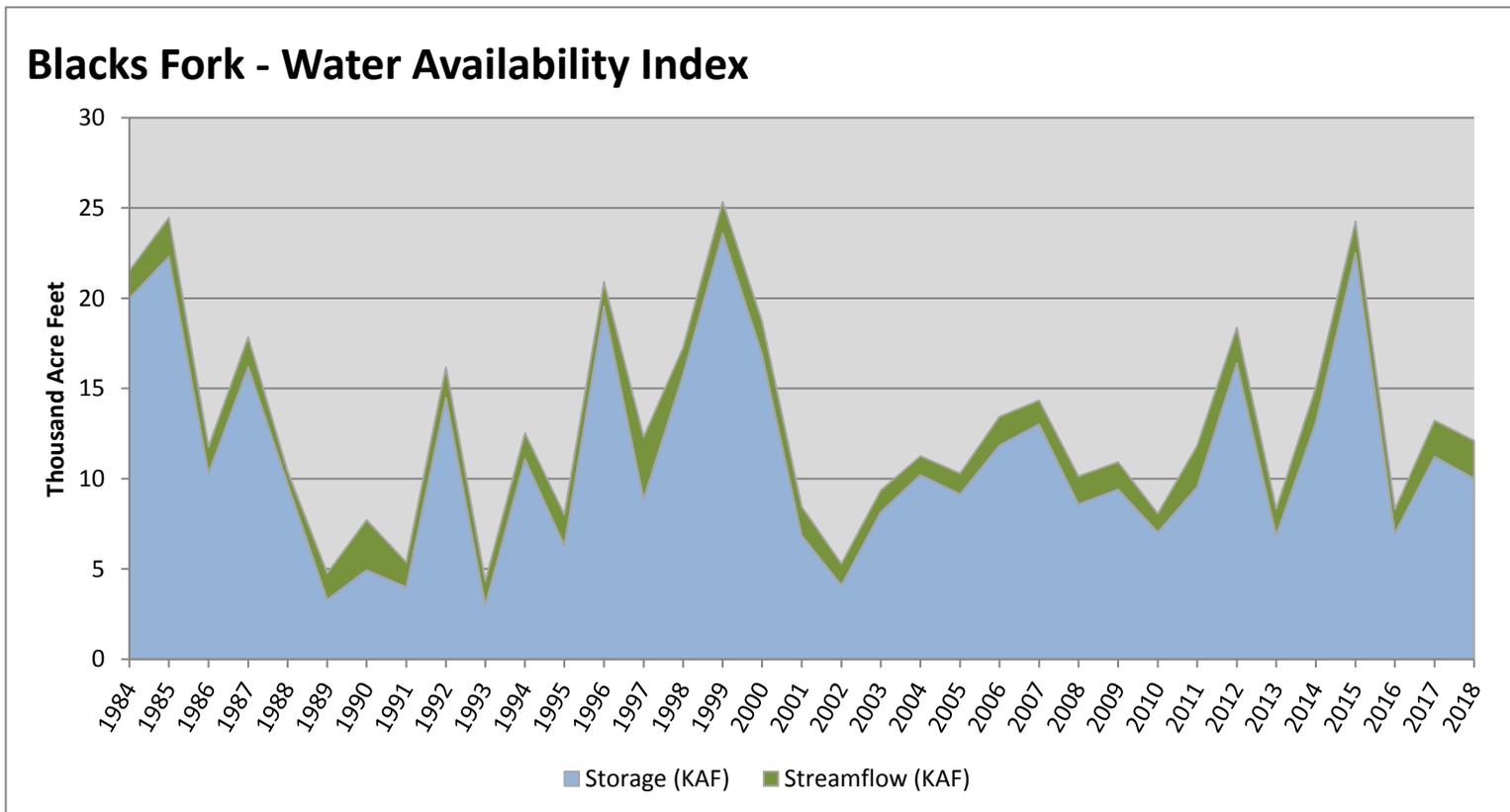
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	10.02	2.09	12.11	53	0.23	86, 11, 97, 94

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

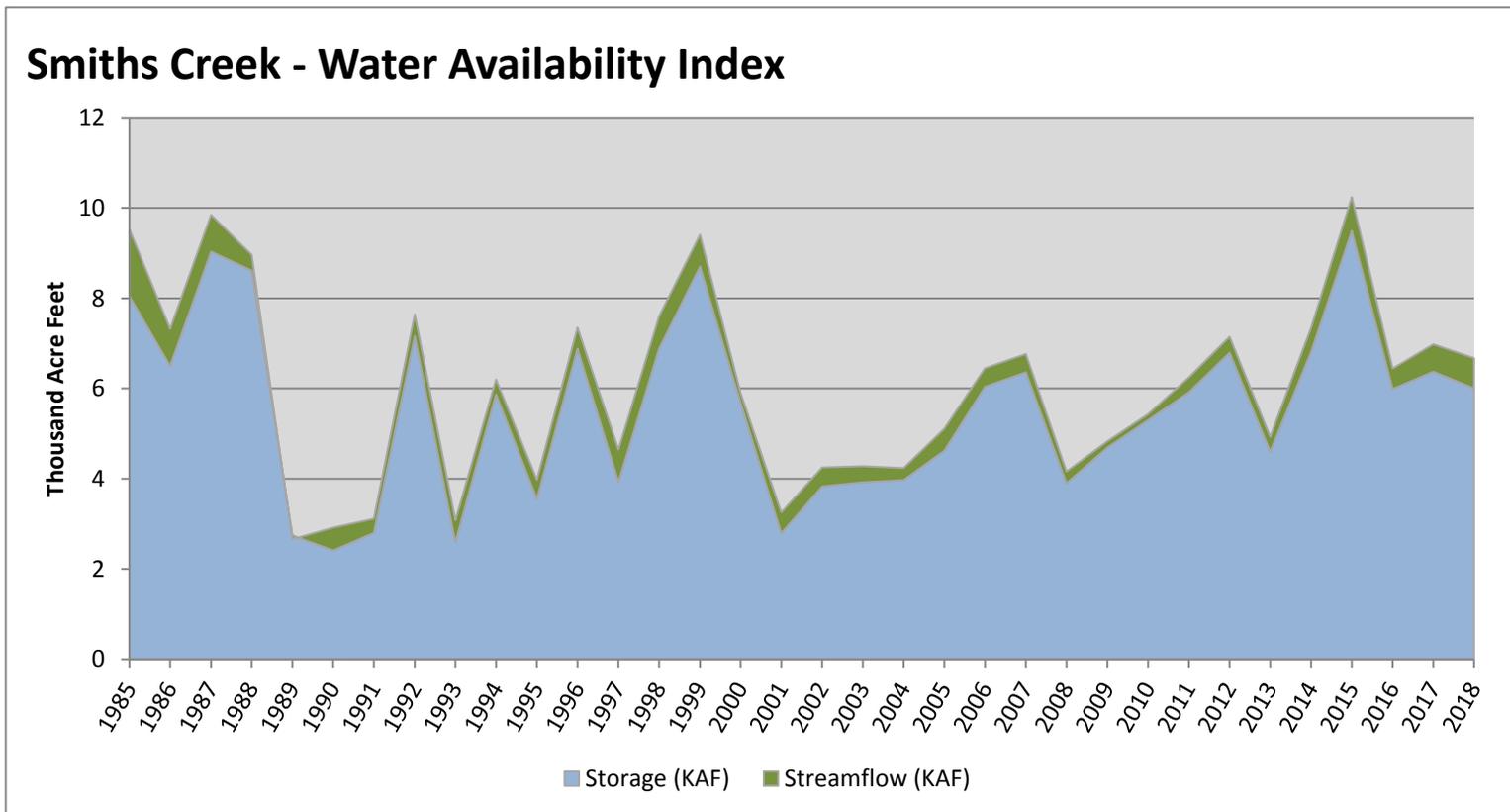


February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [^] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	6.00	0.67	6.67	60	0.83	16, 06, 07, 17

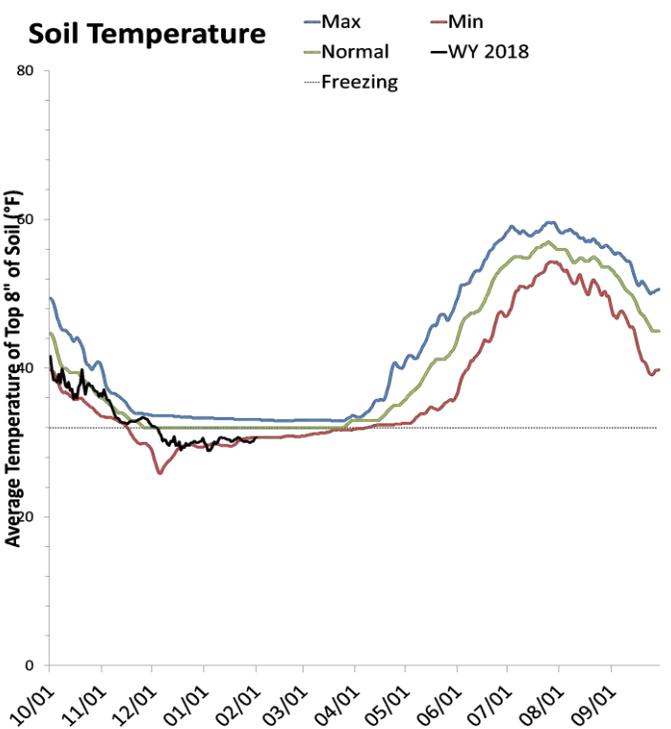
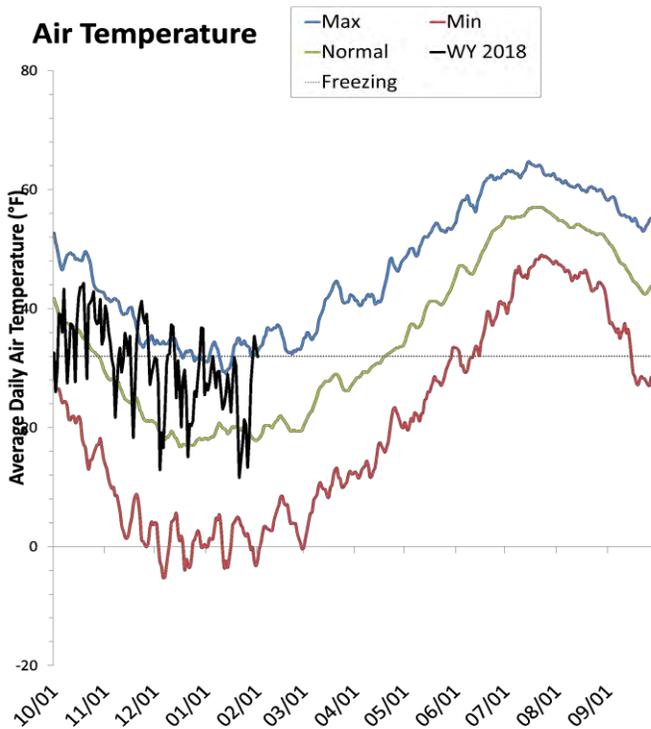
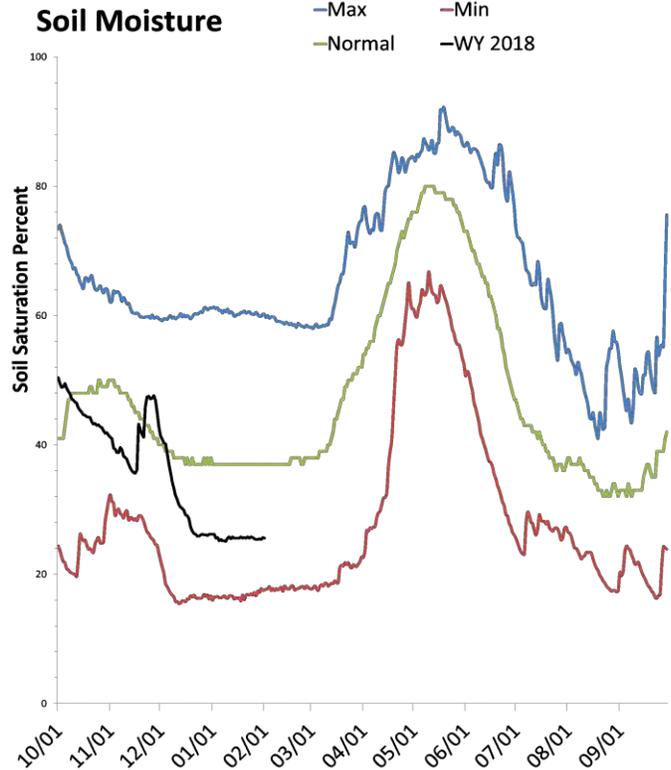
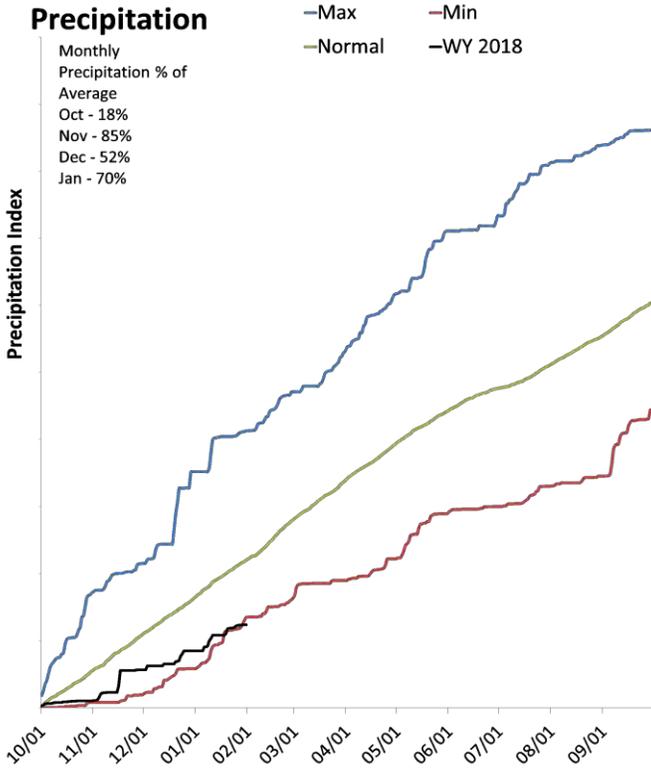
[^]EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Duchesne River Basin

February 1, 2018

Precipitation in January was below average at 70%, which brings the seasonal accumulation (Oct-Jan) to 56% of average. Soil moisture is at 26% compared to 55% last year. Reservoir storage is at 83% of capacity, compared to 72% last year. The water availability index for the Western Uintas is 94% and 31% for the Eastern Uintas.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

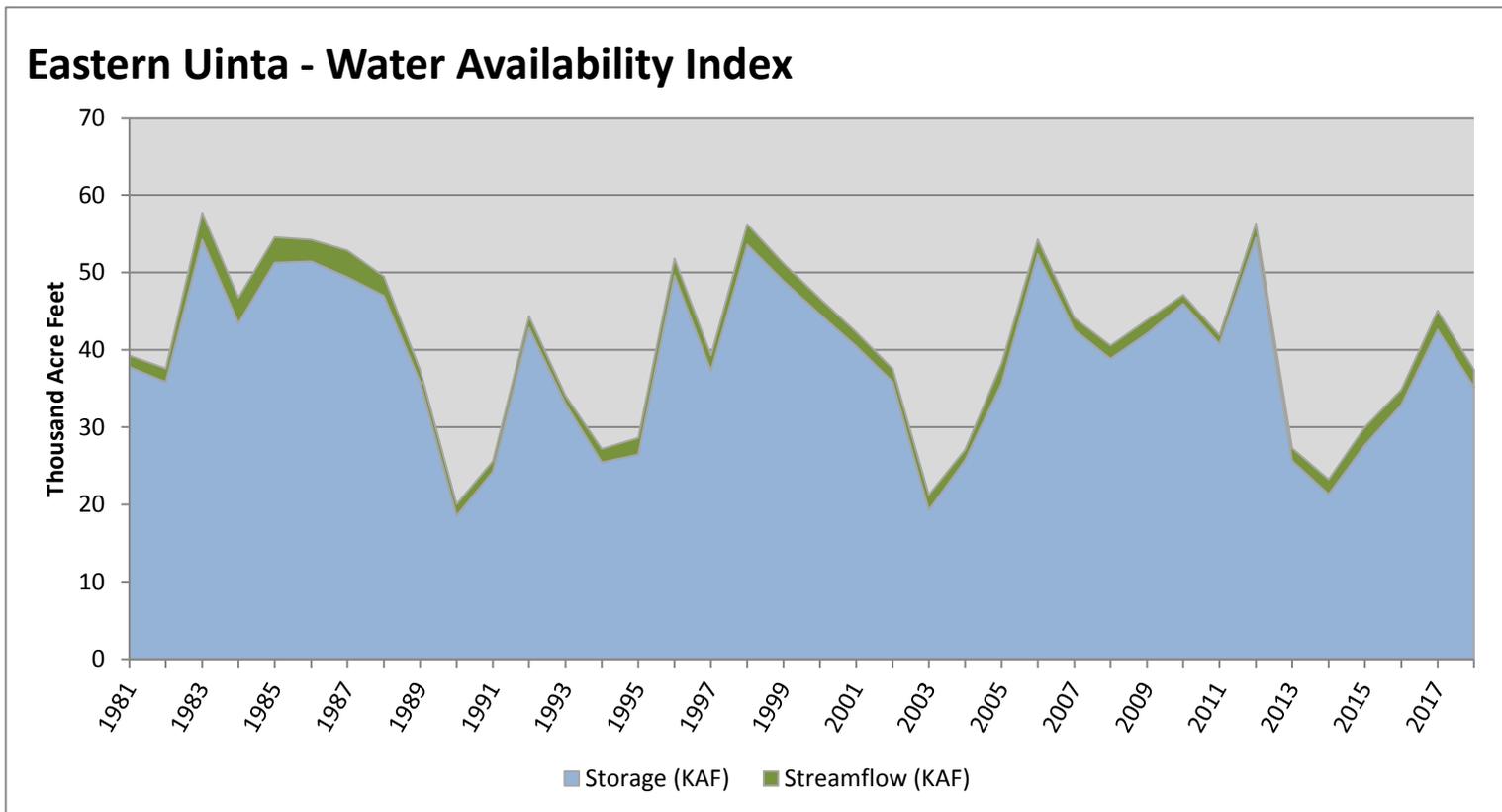
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [^] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uinta	35.16	2.24	37.40	31	-1.6	93, 16, 89, 02

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

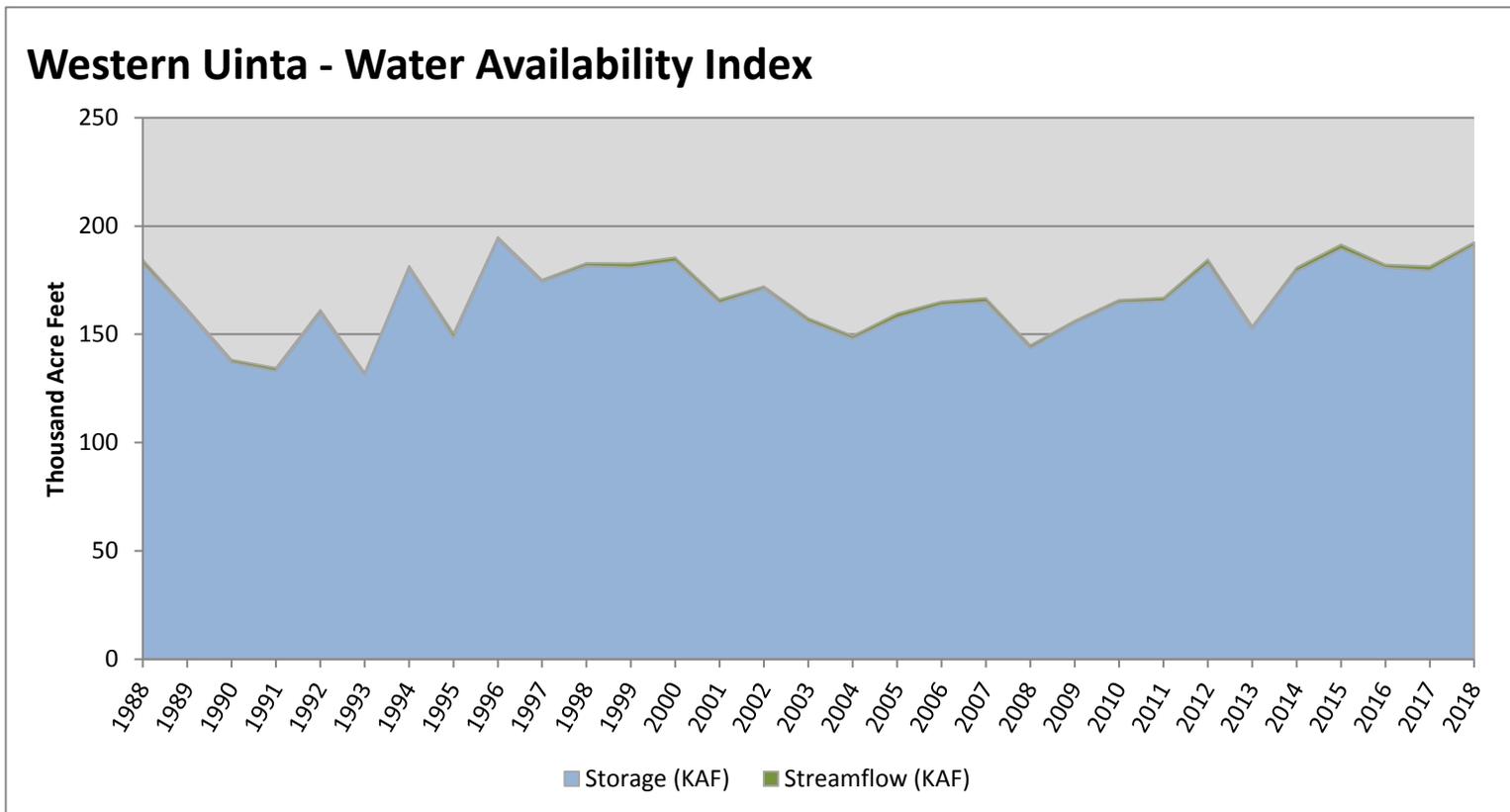


February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uinta	190.93	1.55	192.48	94	3.65	96, 15, 00, 12

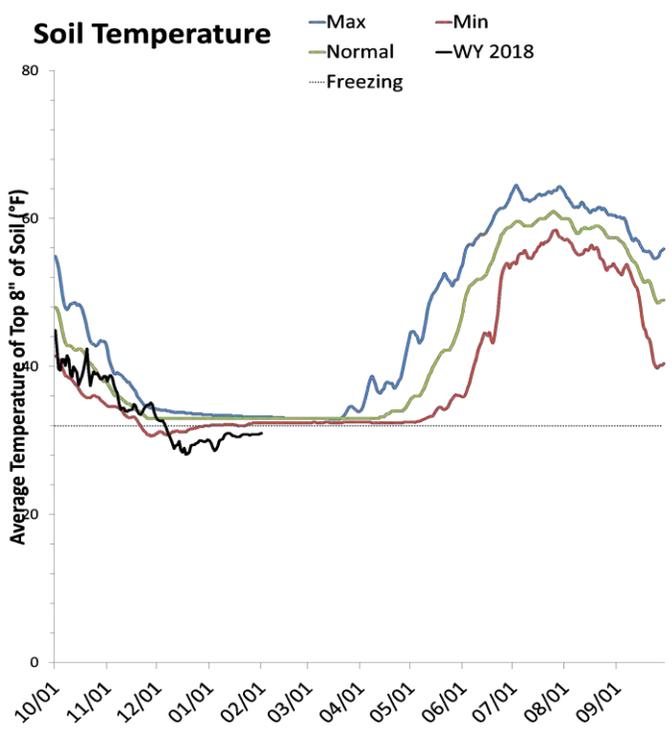
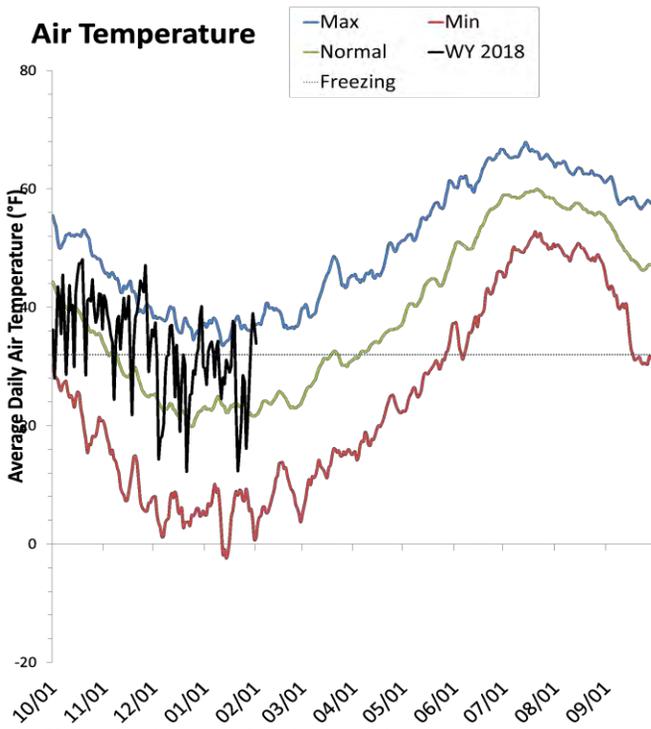
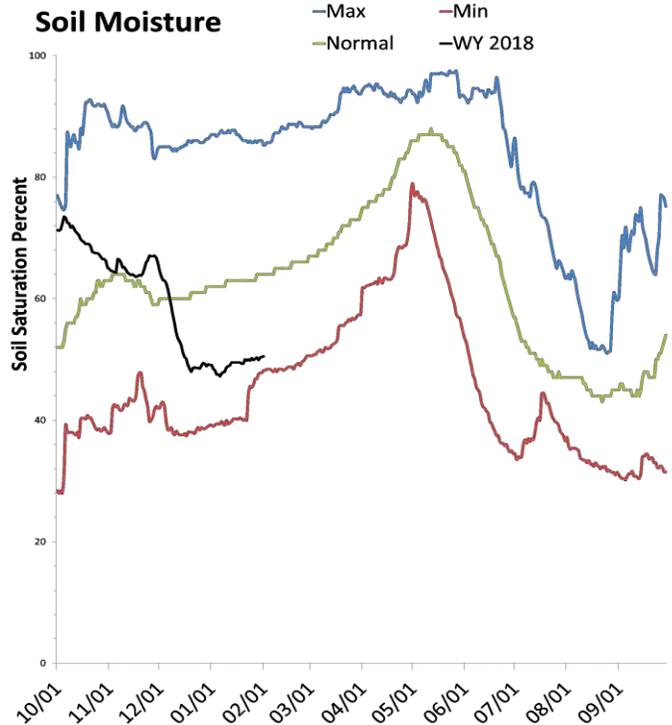
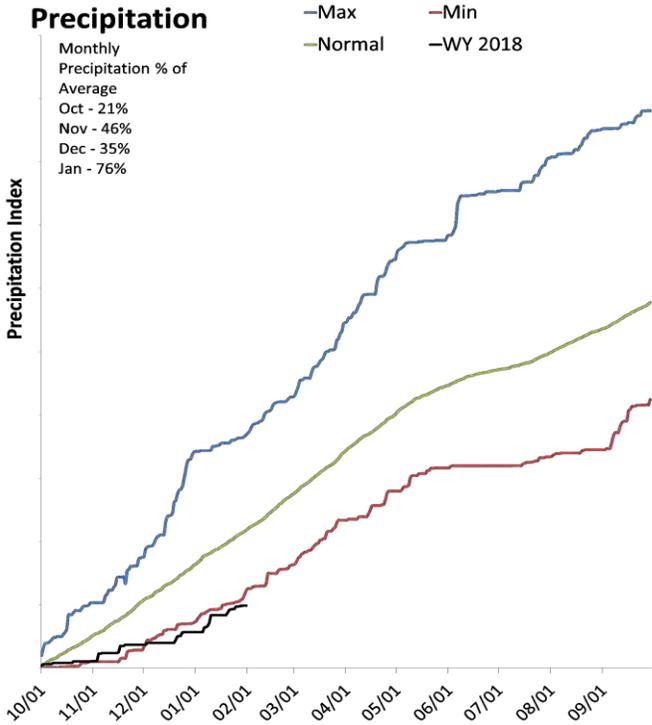
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



San Pitch River Basin

February 1, 2018

Precipitation in January was below average at 76%, which brings the seasonal accumulation (Oct-Jan) to 45% of average. Soil Moisture is at 50% compared to 80% last year. Reservoir storage is at 8% of capacity, compared to 2% last year. The water availability index for the San Pitch is 26%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

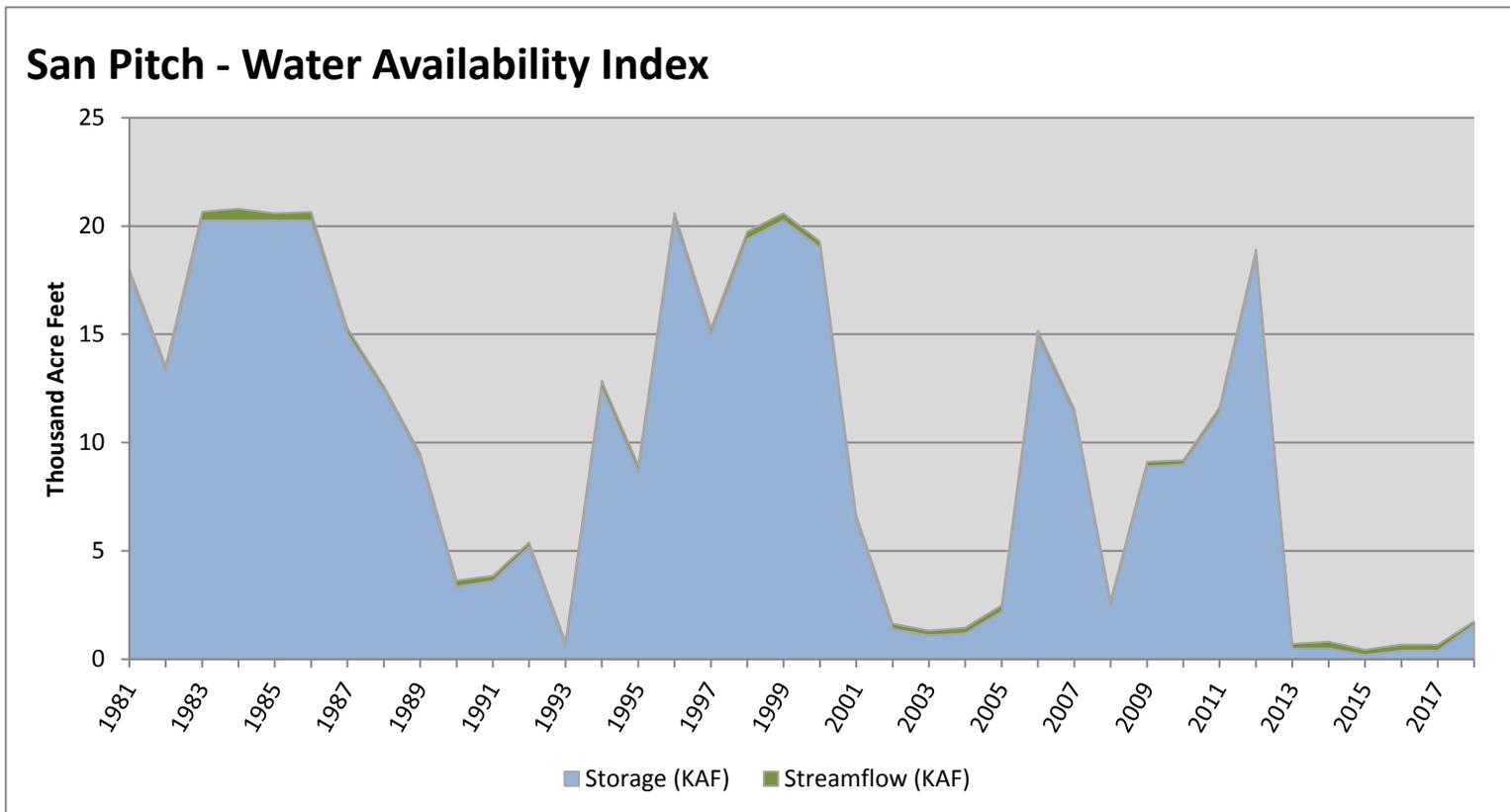
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [^] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	1.58	0.17	1.75	26	-2.03	04, 02, 05, 08

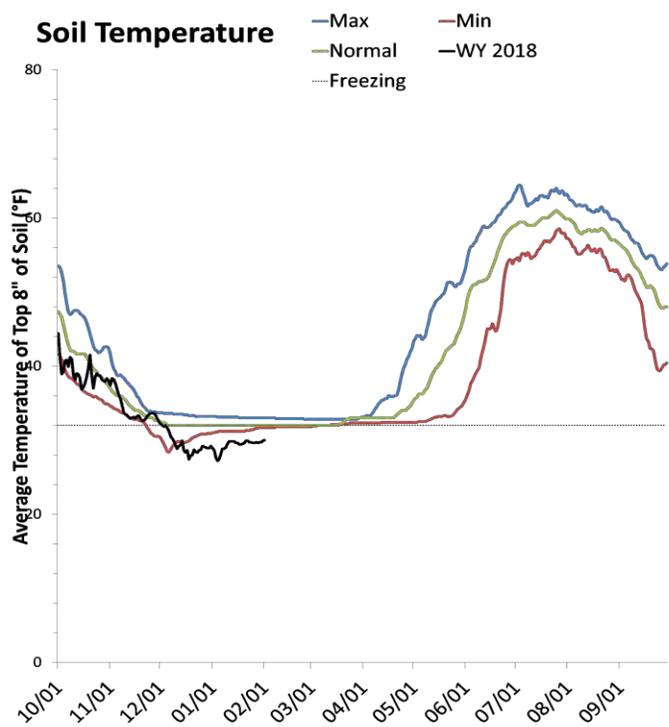
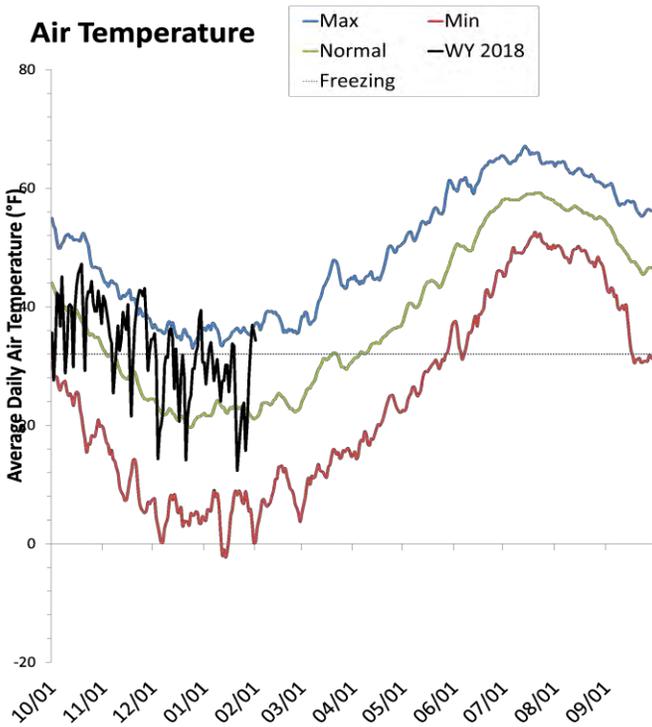
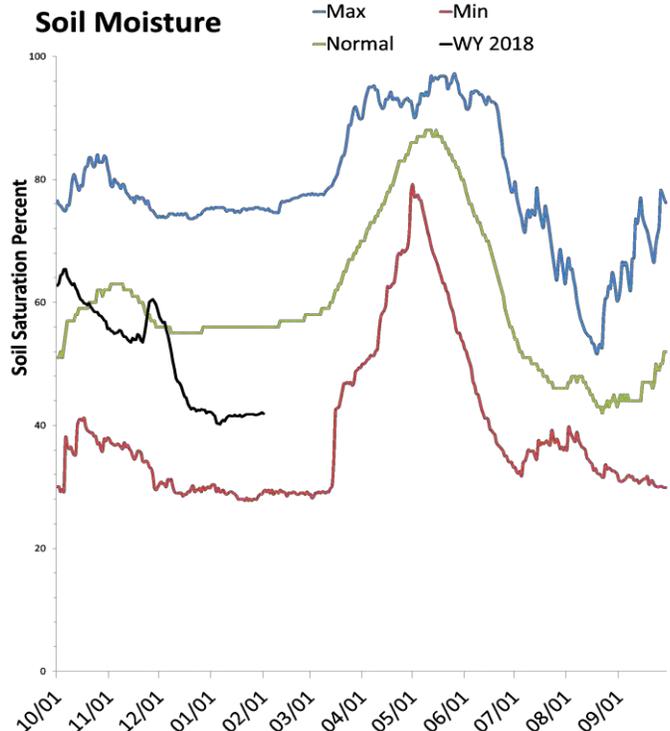
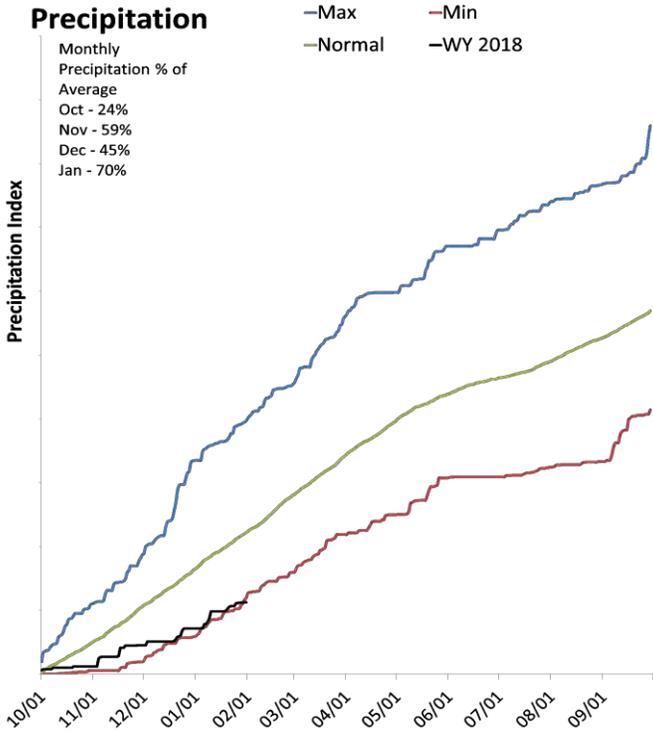
[^]EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Price & San Rafael Basins

February 1, 2018

Precipitation in January was below average at 70%, which brings the seasonal accumulation (Oct-Jan) to 51% of average. Soil moisture is at 42% compared to 76% last year. Reservoir storage is at 68% of capacity, compared to 39% last year. The water availability index for the Price River is 97%, and 69% for Joe's Valley.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

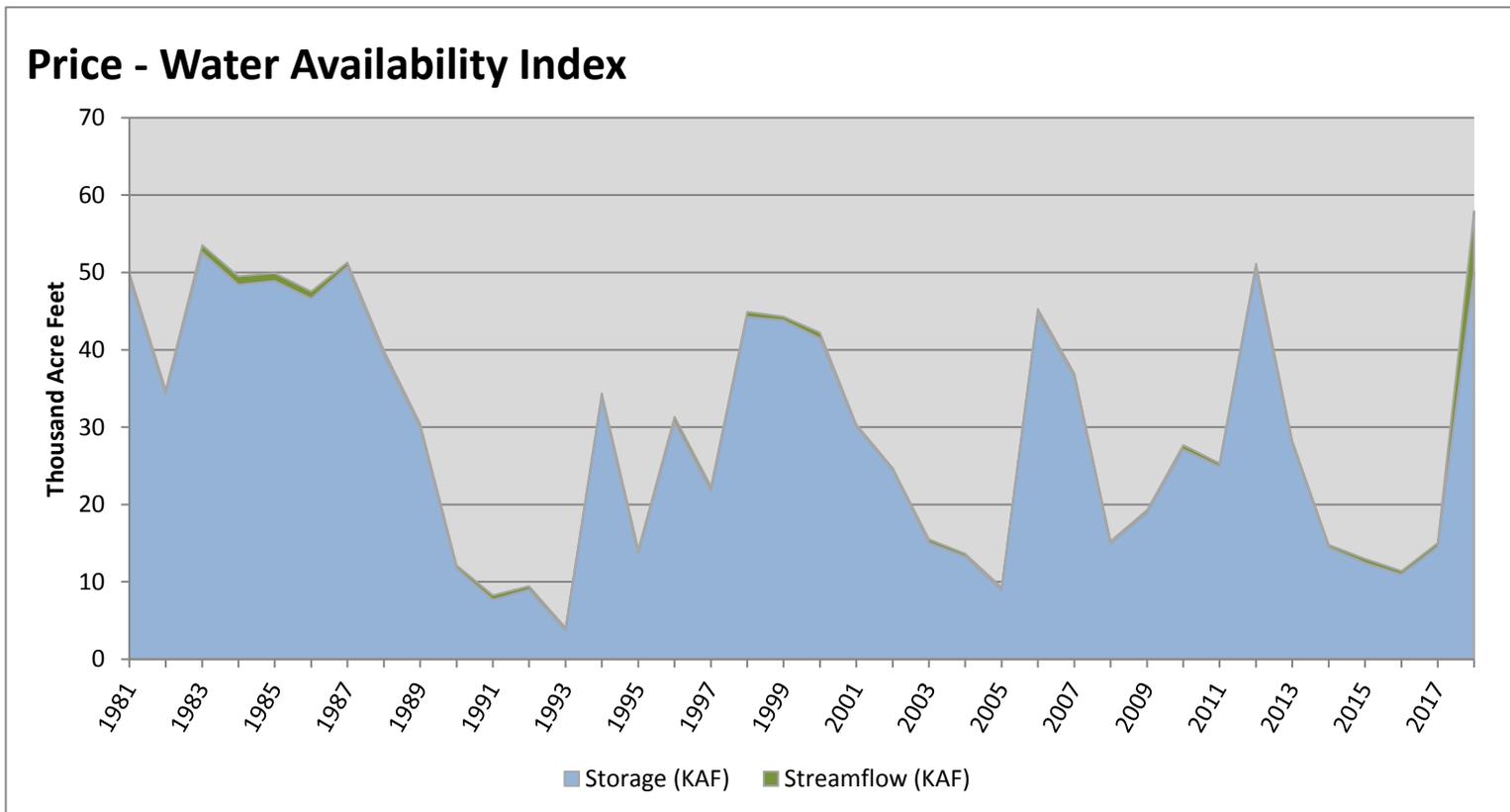
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	49.97	7.96	57.93	97	3.95	83, 87, 12, 81

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

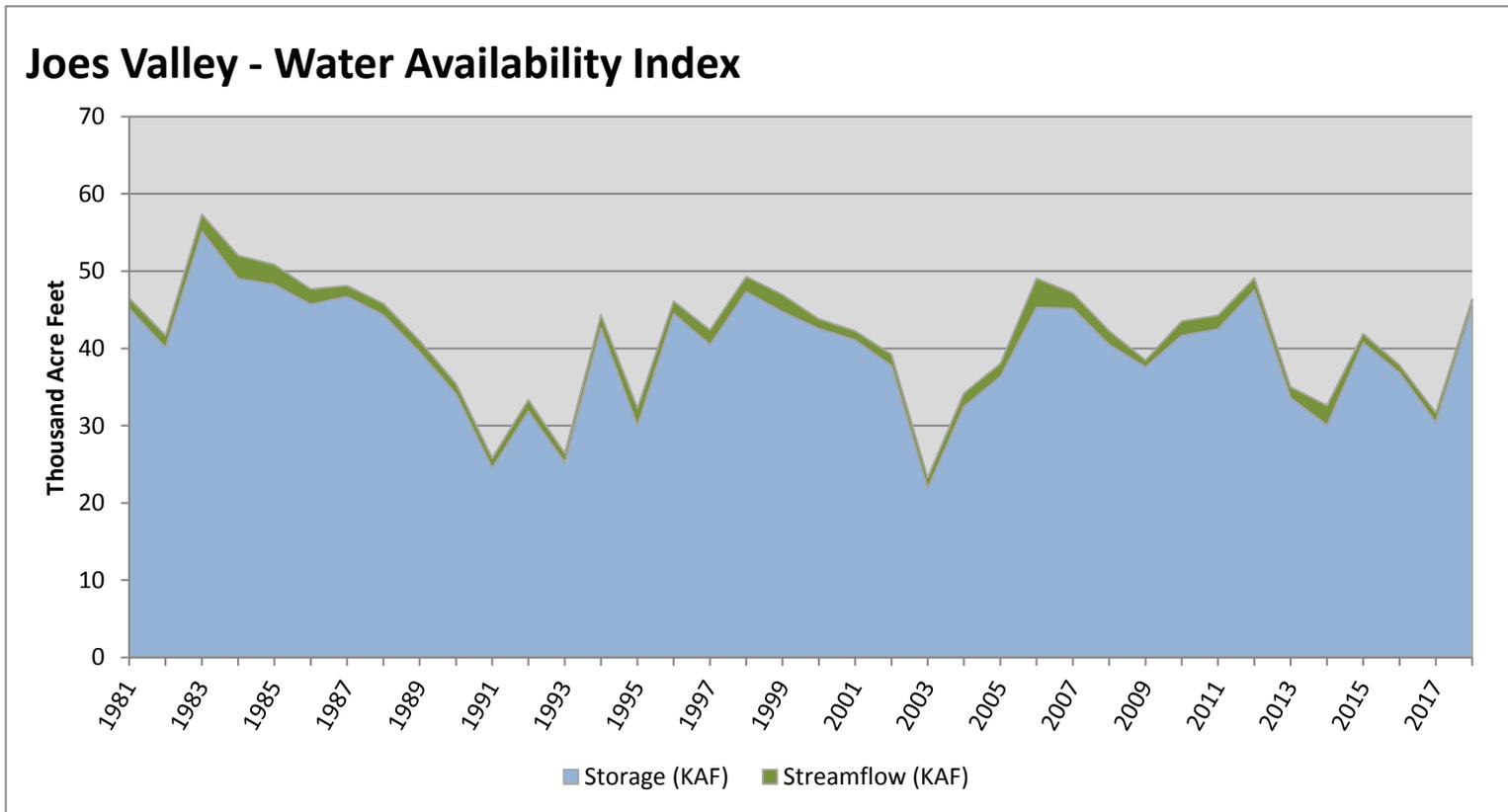


February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joos Valley	45.30	1.07	46.37	69	1.6	88, 96, 81, 99

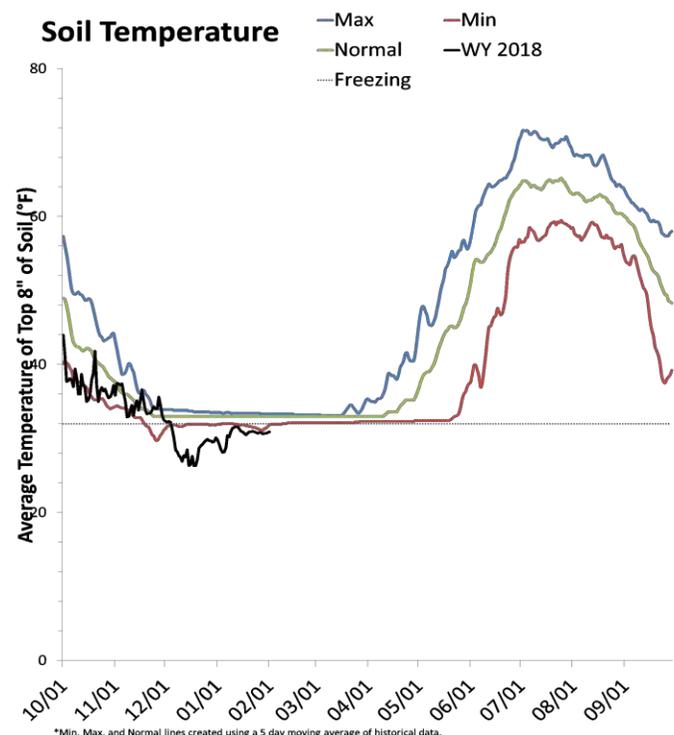
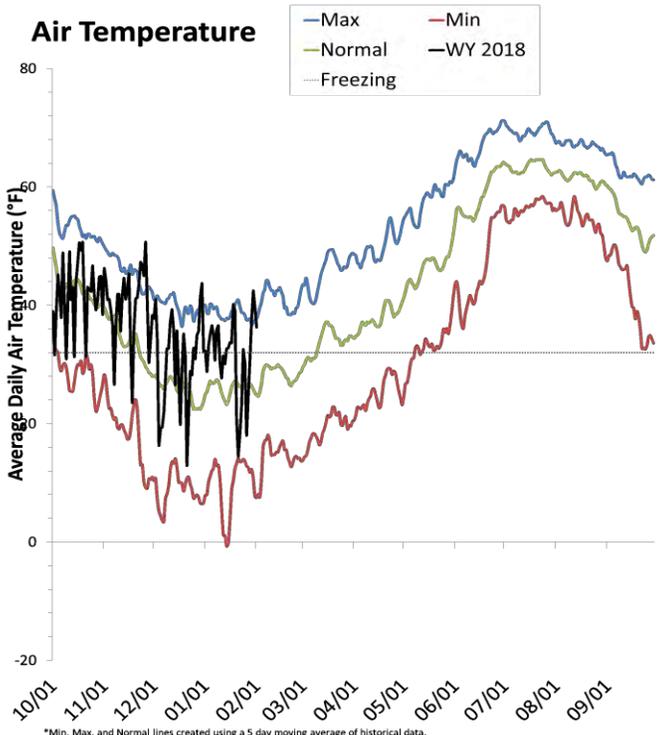
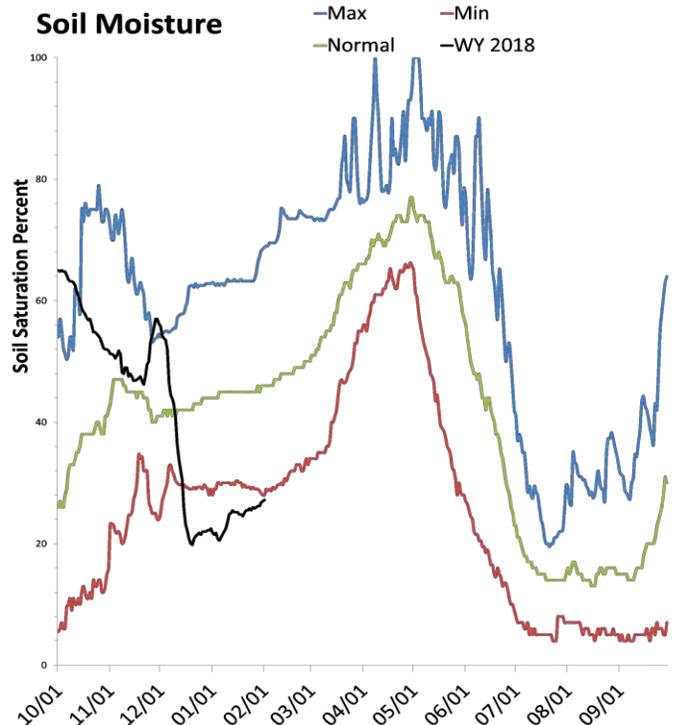
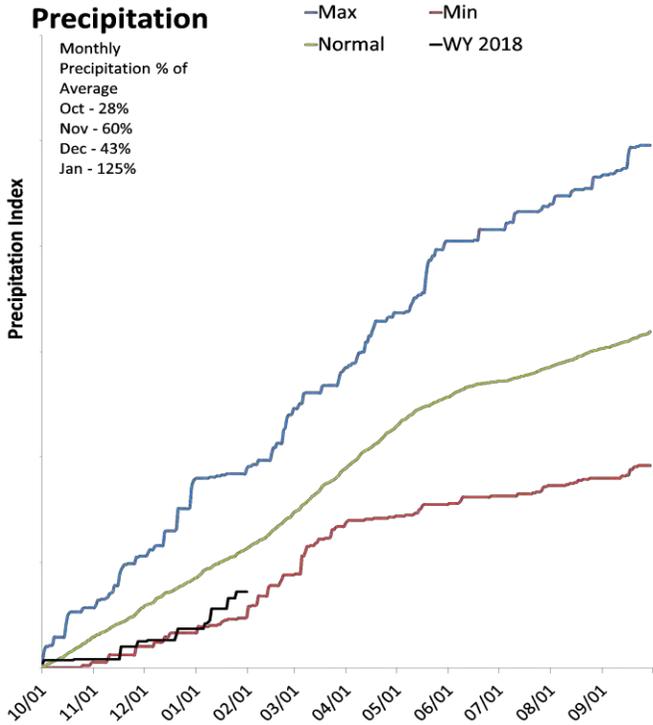
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Lower Sevier Basin

February 1, 2018

Precipitation in January was above average at 125%, which brings the seasonal accumulation (Oct-Jan) to 64% of average. Soil moisture is at 27% compared to 66% last year. Reservoir storage is at 23% of capacity, compared to 24% last year. The water availability index for the Lower Sevier is 10%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

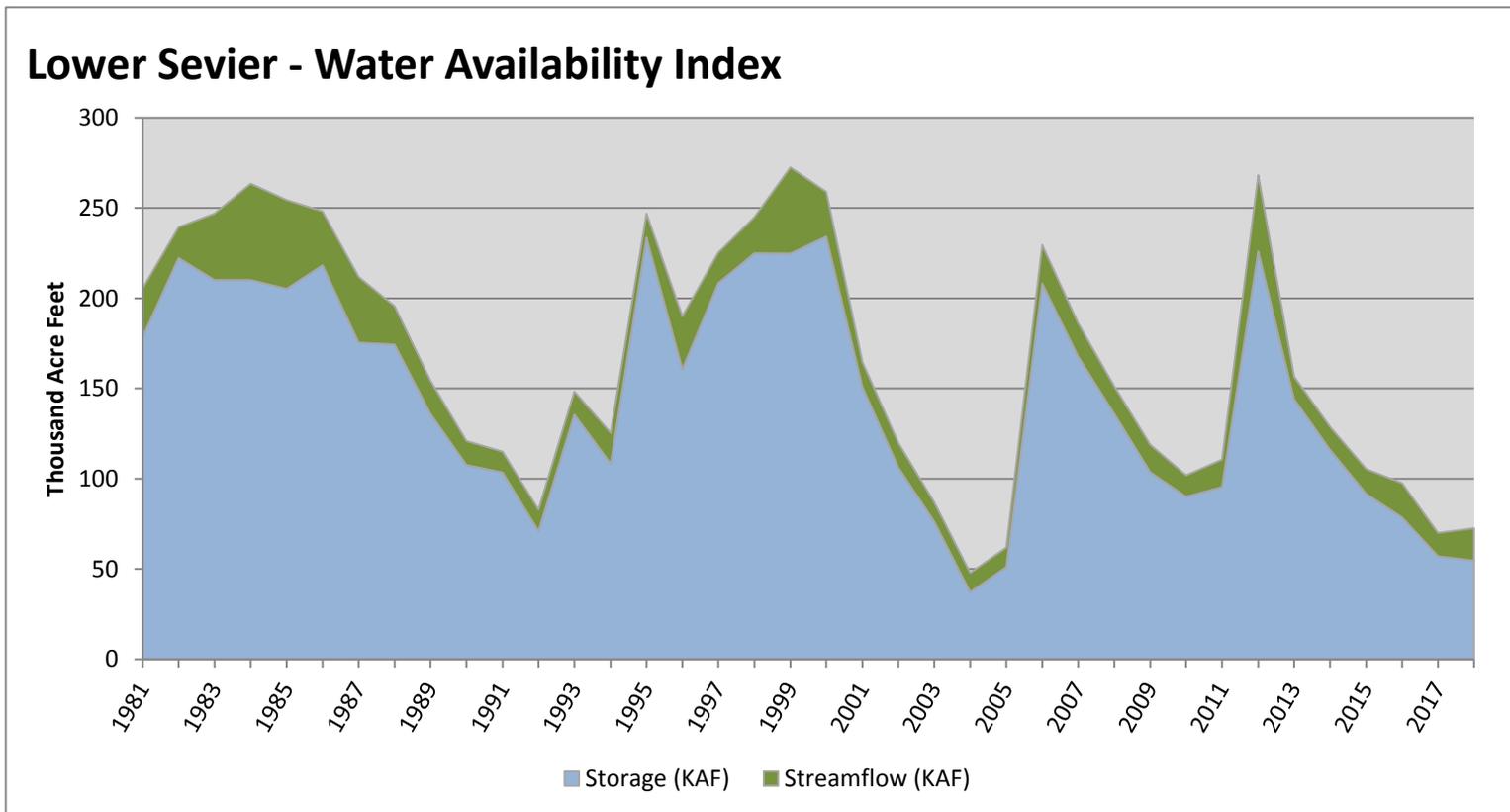
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	54.70	17.87	72.57	10	-3.31	05, 17, 92, 03

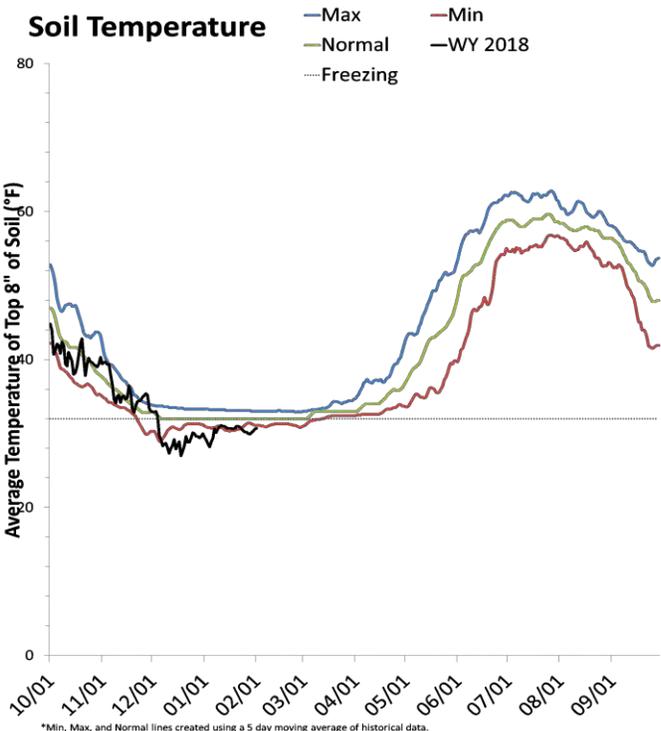
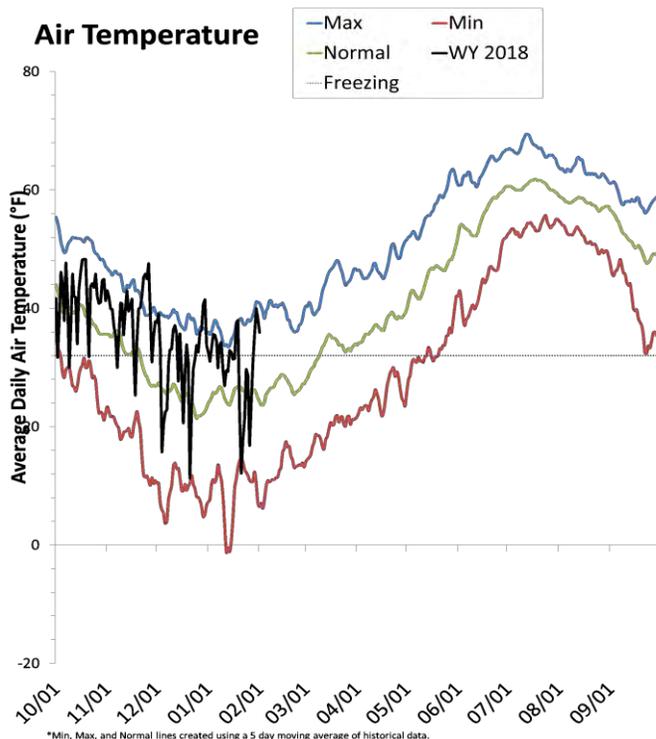
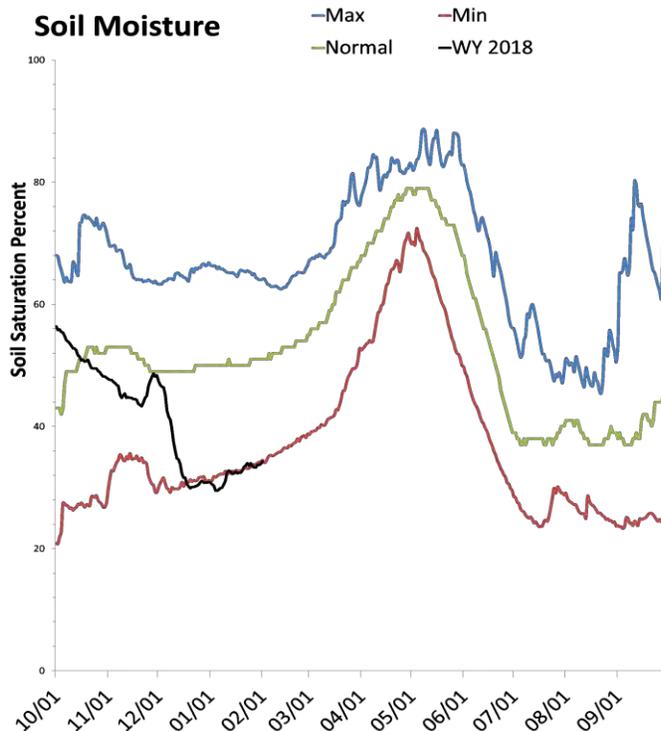
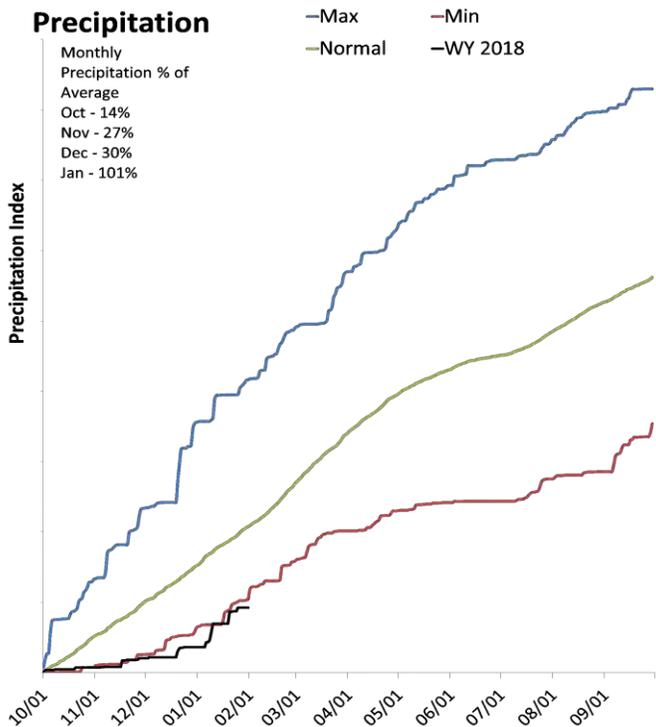
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Upper Sevier Basin

February 1, 2018

Precipitation in January was near average at 101%, which brings the seasonal accumulation (Oct-Jan) to 44% of average. Soil moisture is at 34% compared to 59% last year. Reservoir storage is at 49% of capacity, compared to 44% last year. The water availability index for the Upper Sevier is 28%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

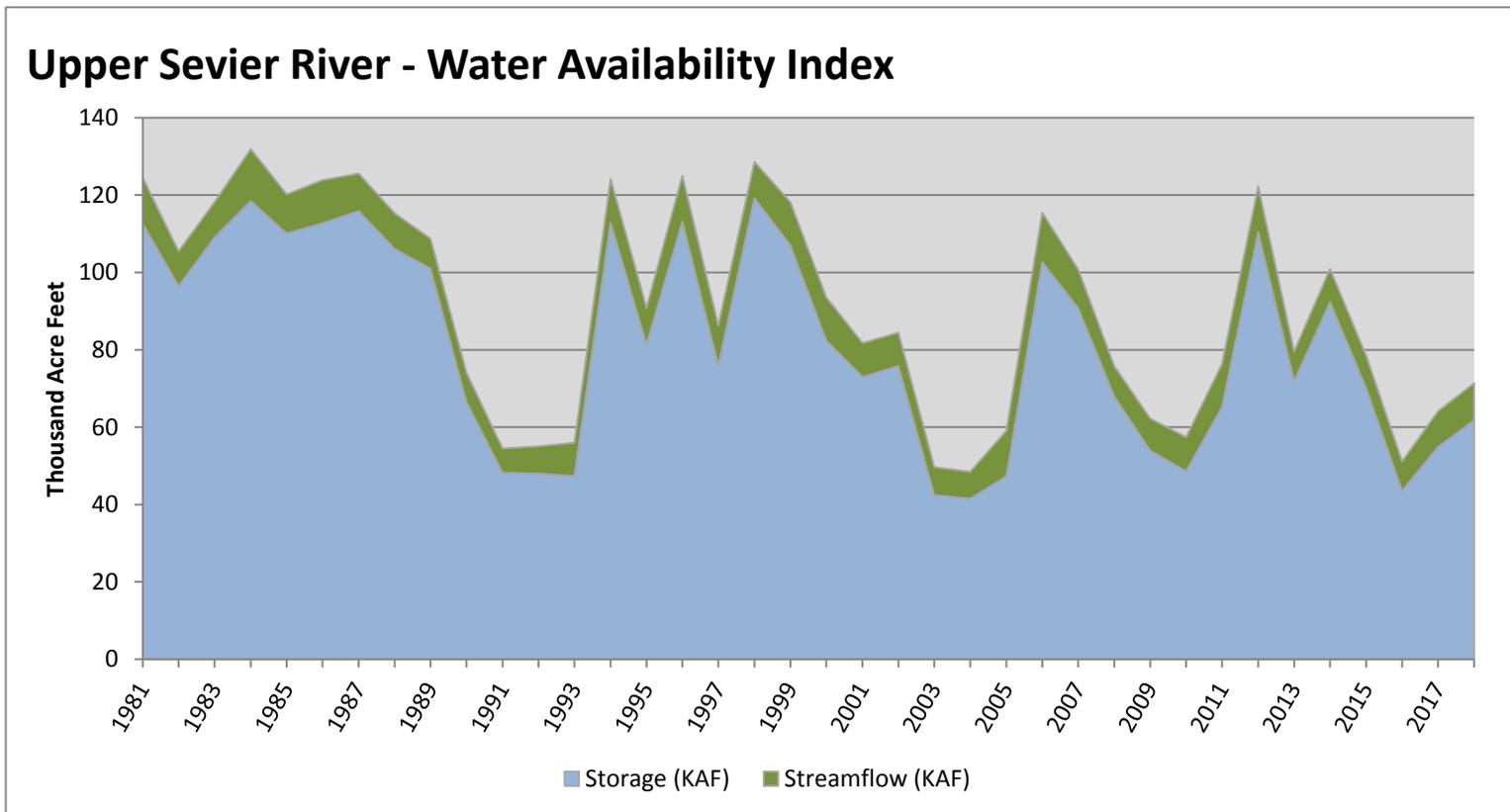
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	61.75	9.60	71.35	28	-1.82	09, 17, 90, 08

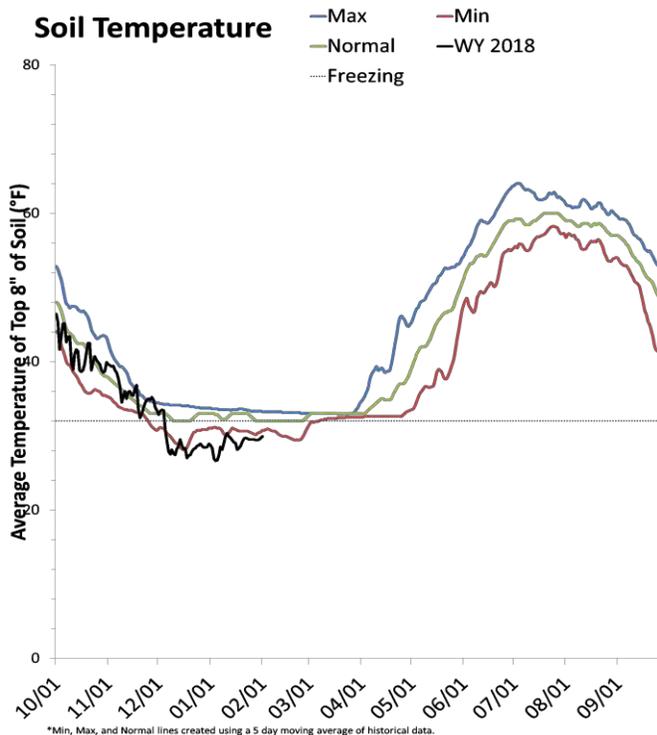
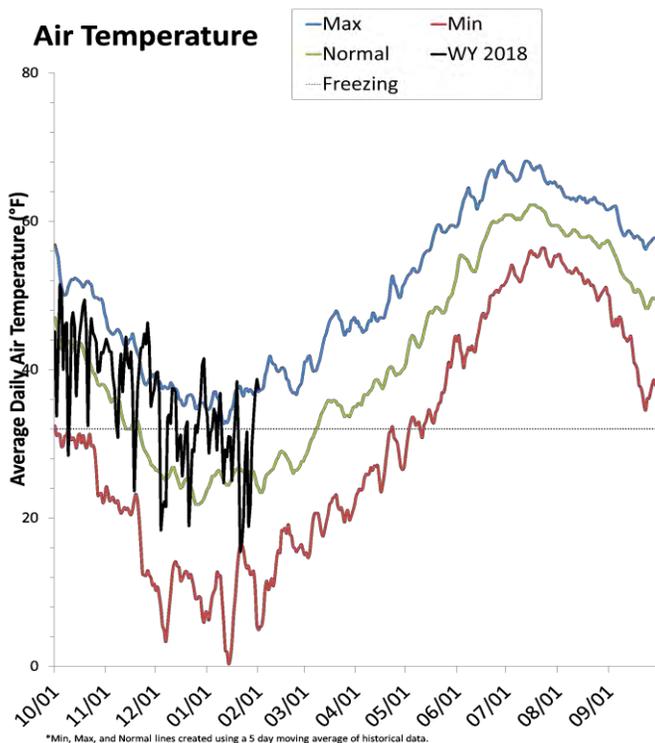
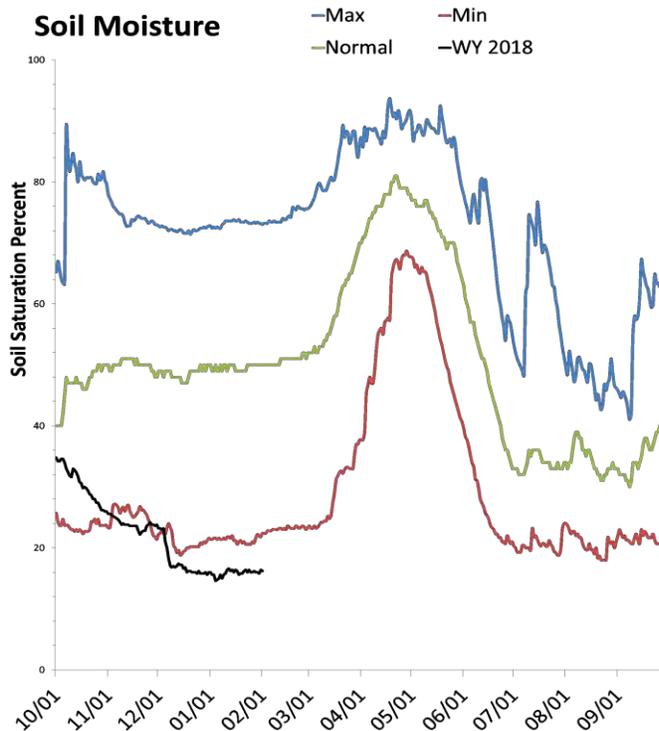
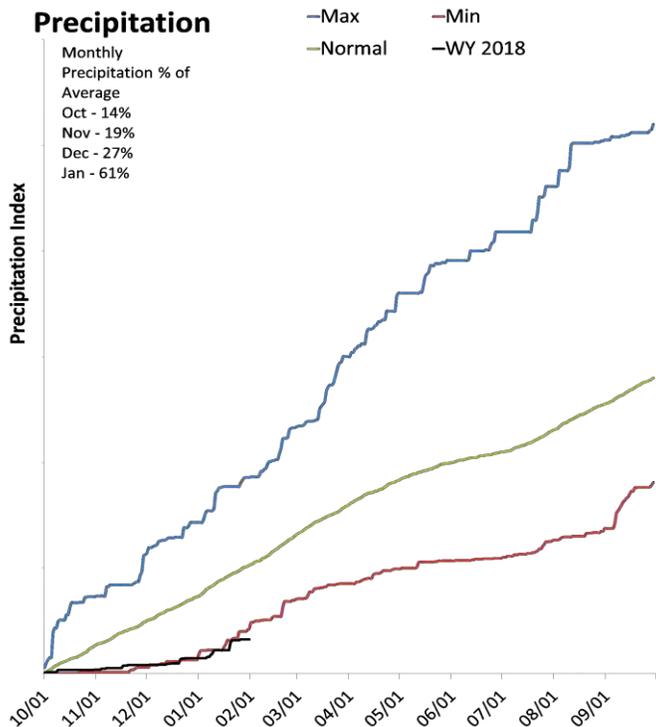
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southeastern Utah

February 1, 2018

Precipitation in January was much below average at 63%, which brings the seasonal accumulation (Oct-Jan) to 32% of average. Soil moisture is at 16% compared to 63% last year. Reservoir storage is at 57% of capacity, compared to 78% last year. The water availability index for Moab is 66%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

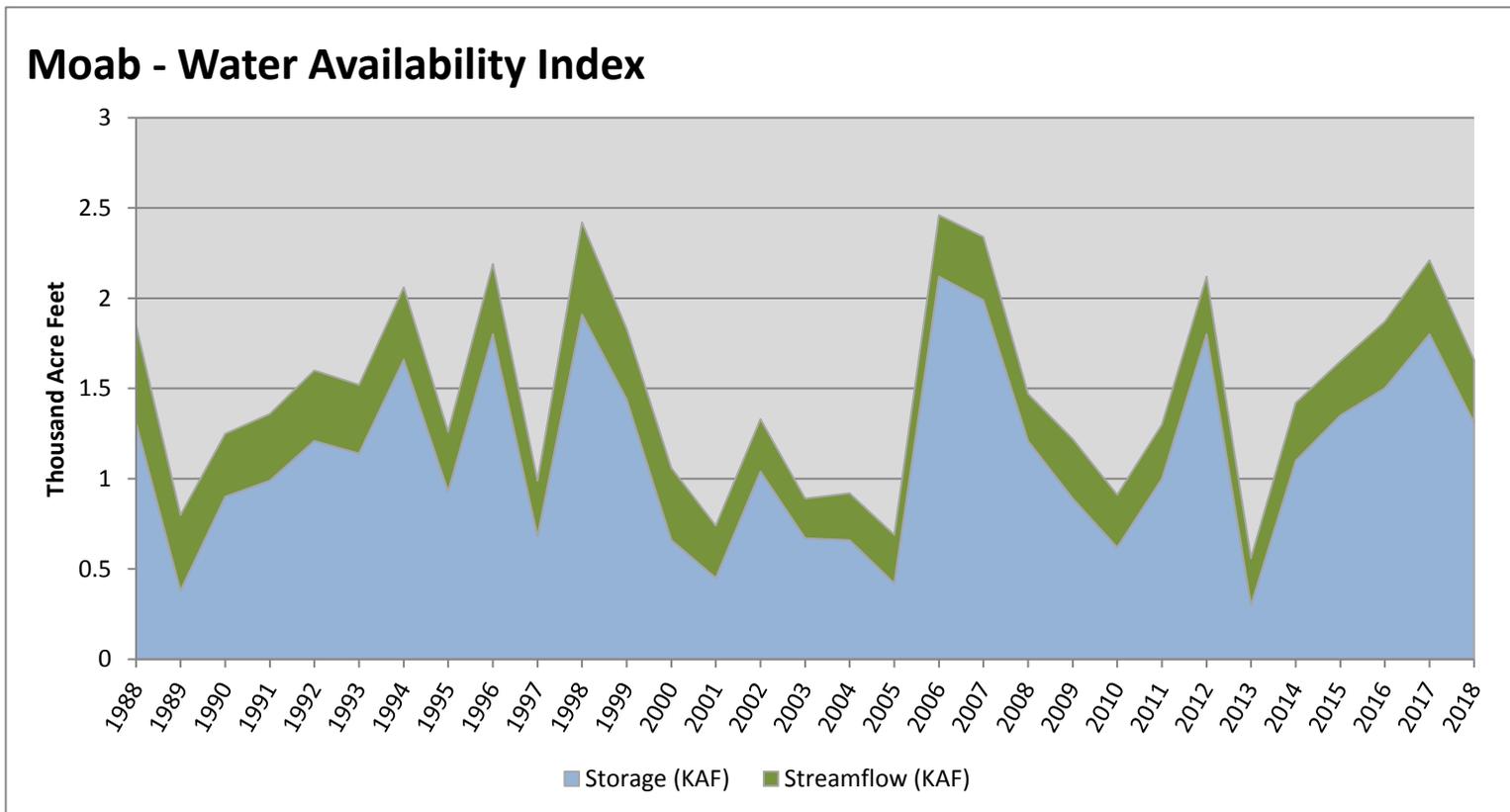
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	1.31	0.35	1.66	66	1.3	92, 15, 99, 88

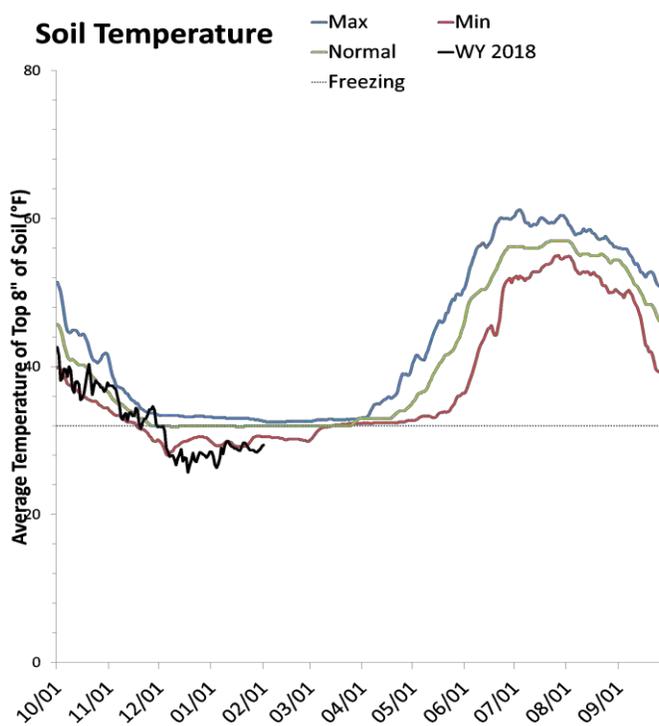
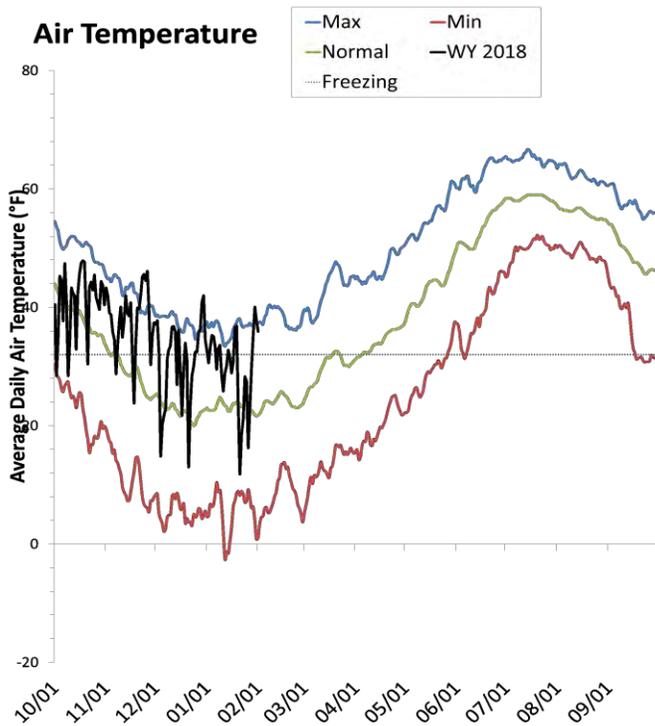
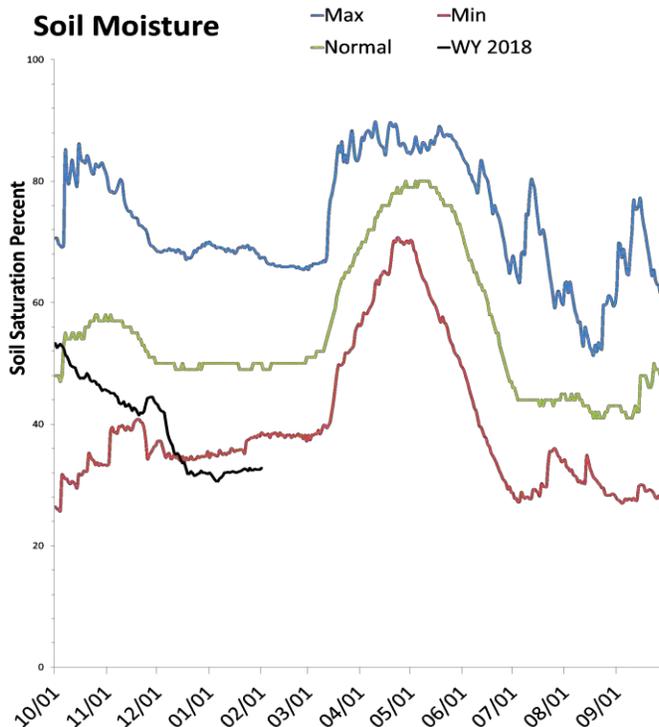
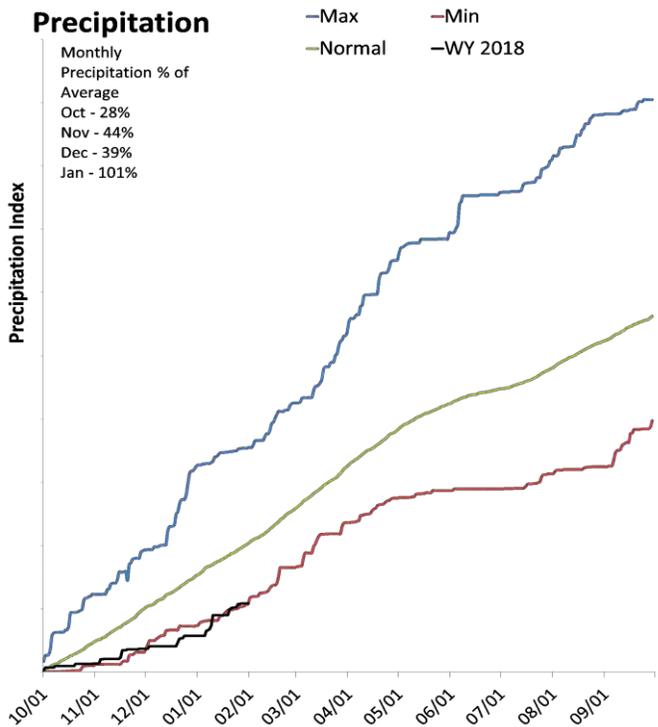
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Dirty Devil Basin

February 1, 2018

Precipitation in January was near average at 100%, which brings the seasonal accumulation (Oct-Jan) to 53% of average. Soil moisture is at 33% compared to 49% last year.



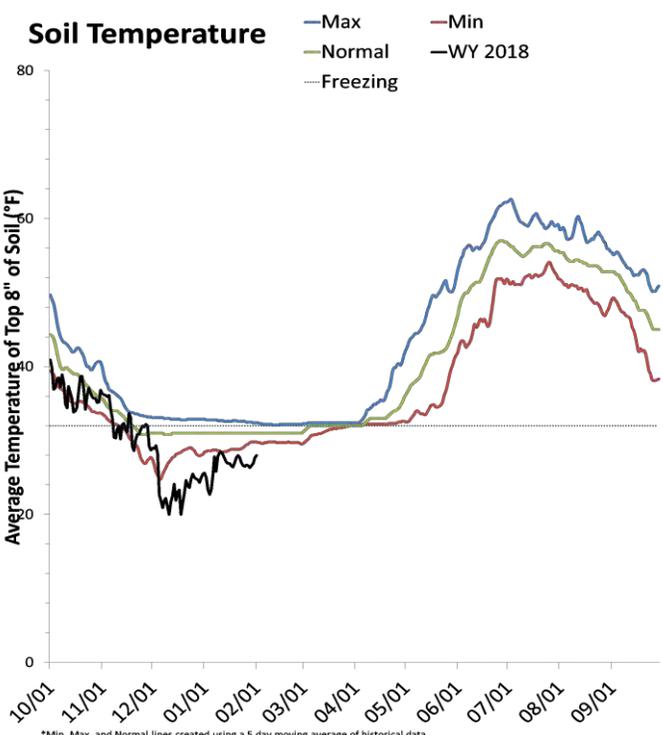
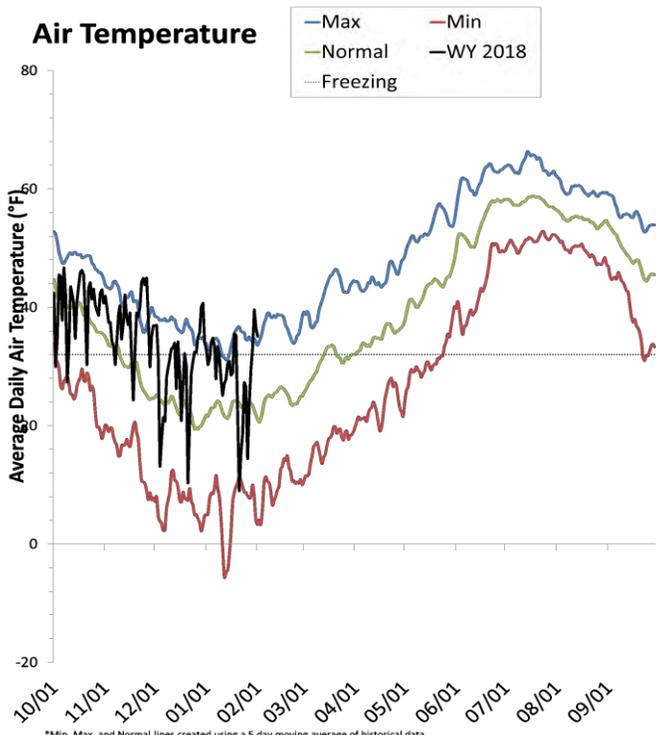
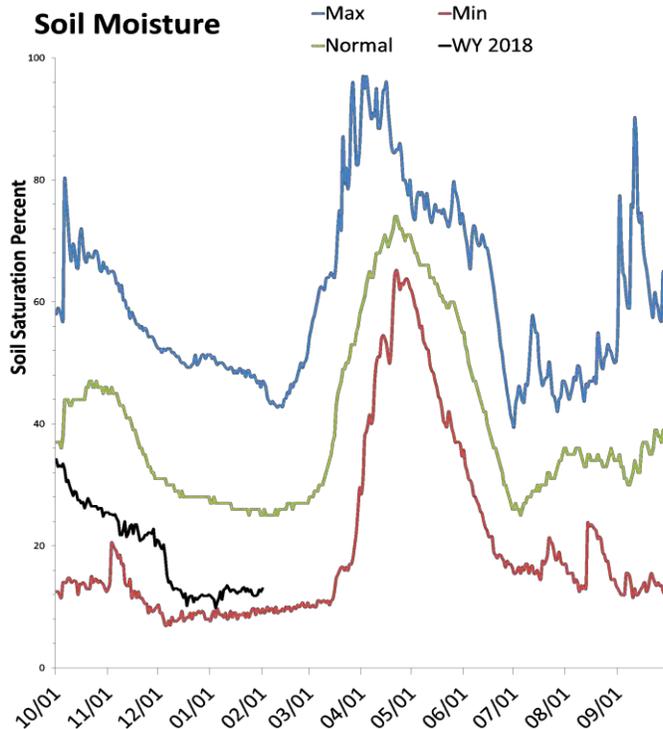
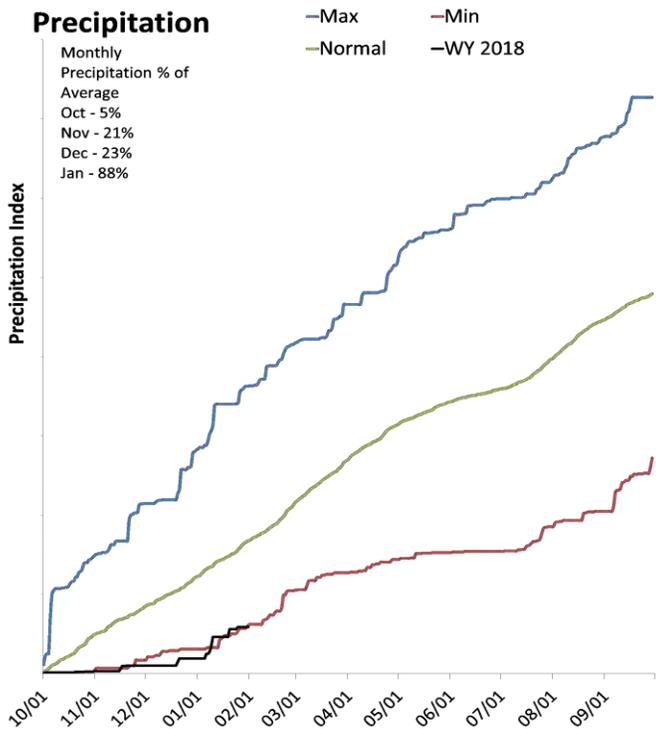
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

*Min, Max, and Normal lines created using a 5 day moving average of historical data.

Escalante River Basin

February 1, 2018

Precipitation in January was below average at 87%, which brings the seasonal accumulation (Oct-Jan) to 35% of average. Soil moisture is at 13% compared to 33% last year.



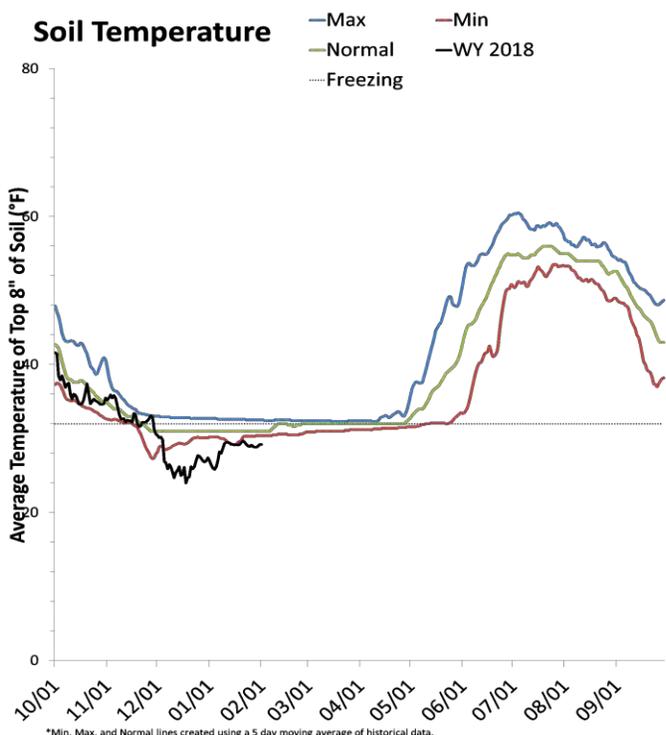
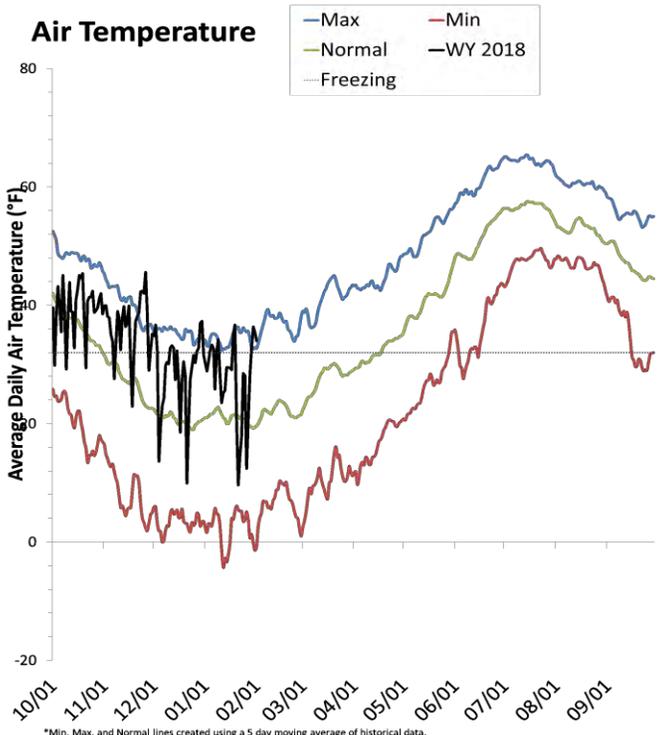
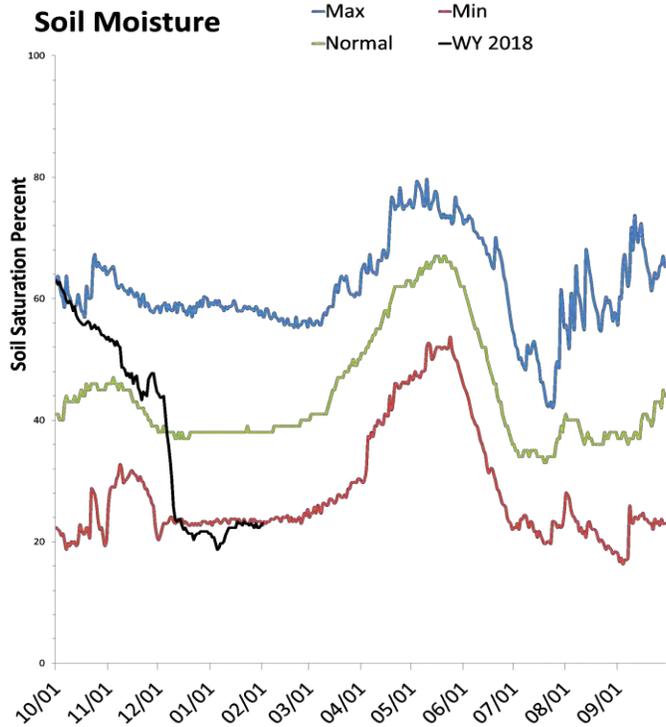
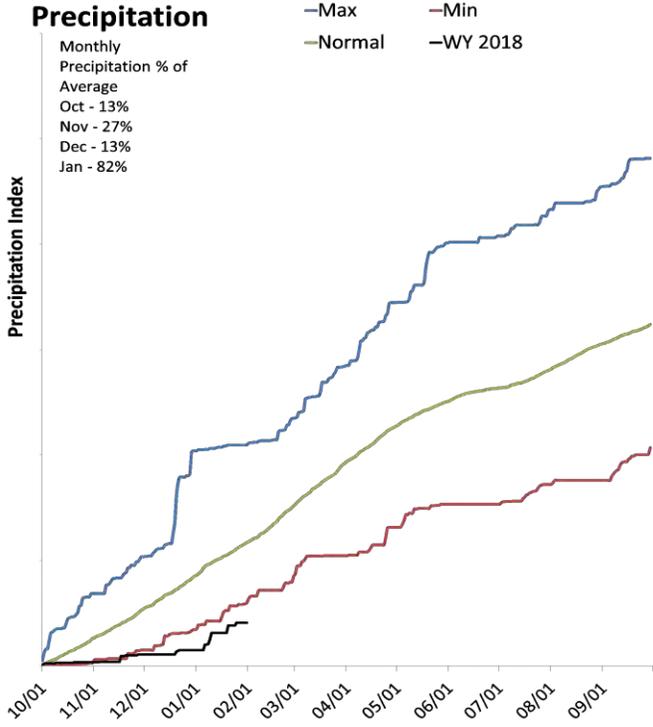
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

*Min, Max, and Normal lines created using a 5 day moving average of historical data.

Beaver River Basin

February 1, 2018

Precipitation in January was below average at 83%, which brings the seasonal accumulation (Oct-Jan) to 35% of average. Soil moisture is at 23% compared to 50% last year. Reservoir storage is at 42% of capacity, compared to 36% last year. The water availability index for the Beaver River is 46%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

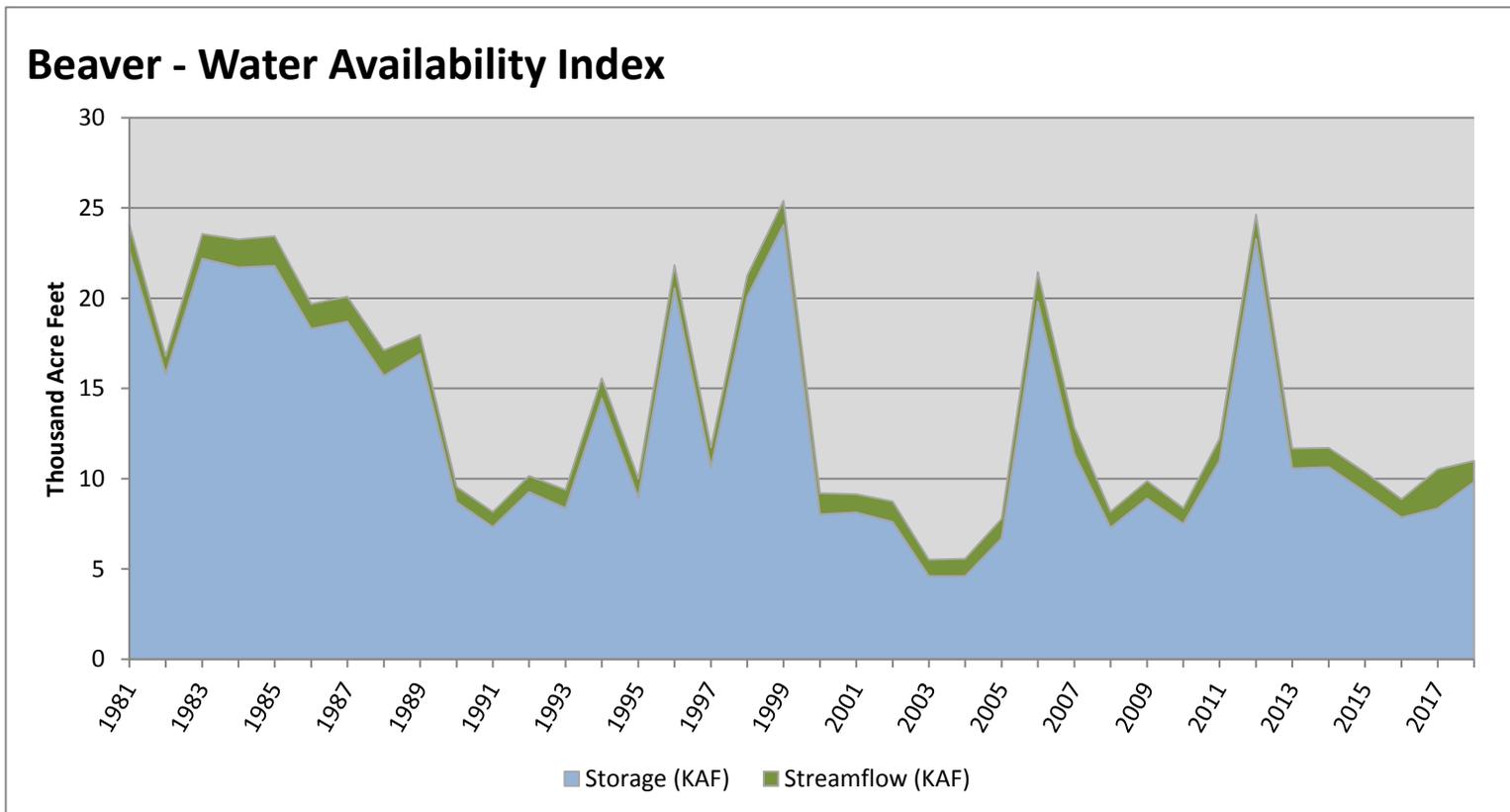
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	9.83	1.17	11.00	46	-0.32	15, 17, 13, 14

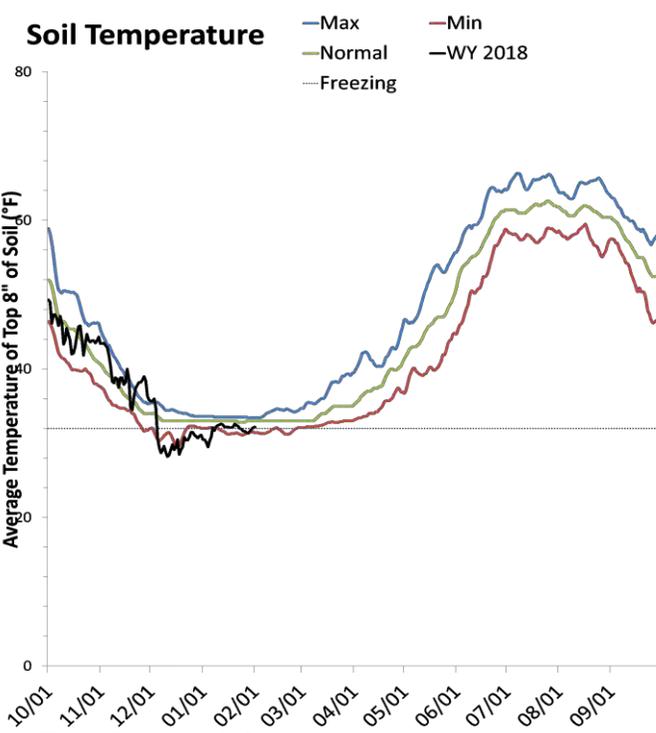
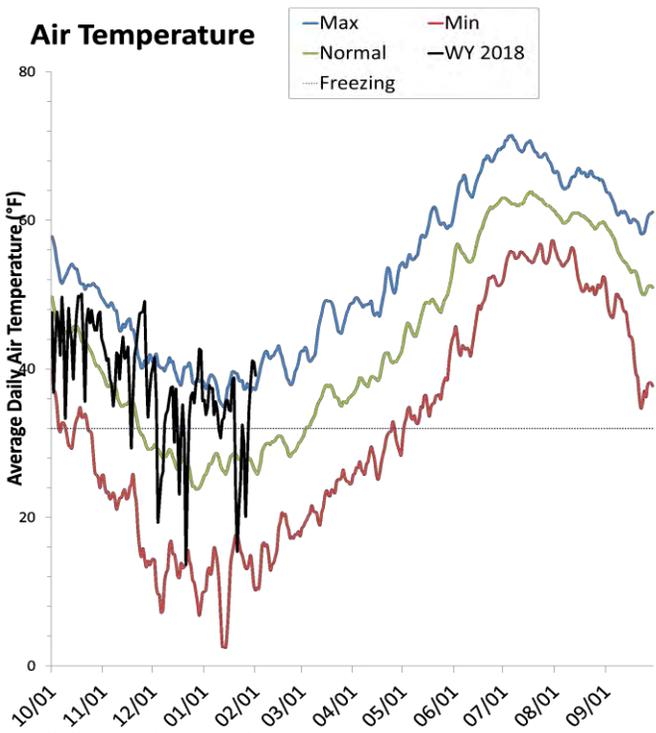
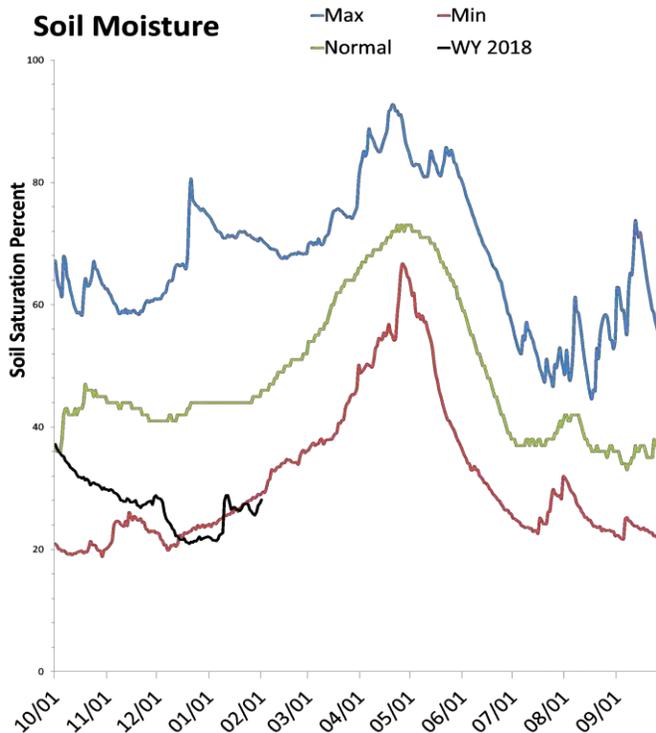
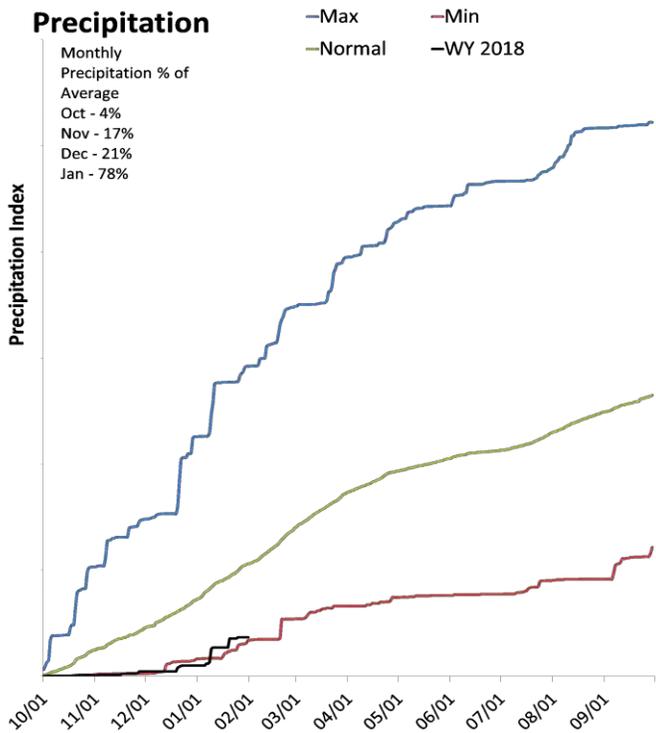
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southwestern Utah

February 1, 2018

Precipitation in January was below average at 78%, which brings the seasonal accumulation (Oct-Jan) to 35% of average. Soil moisture is at 28% compared to 48% last year. Reservoir storage is at 56% of capacity, compared to 47% last year. The water availability index for the Virgin River is 41%.



*Min, Max, and Normal lines created using a 5 day moving average of historical data.

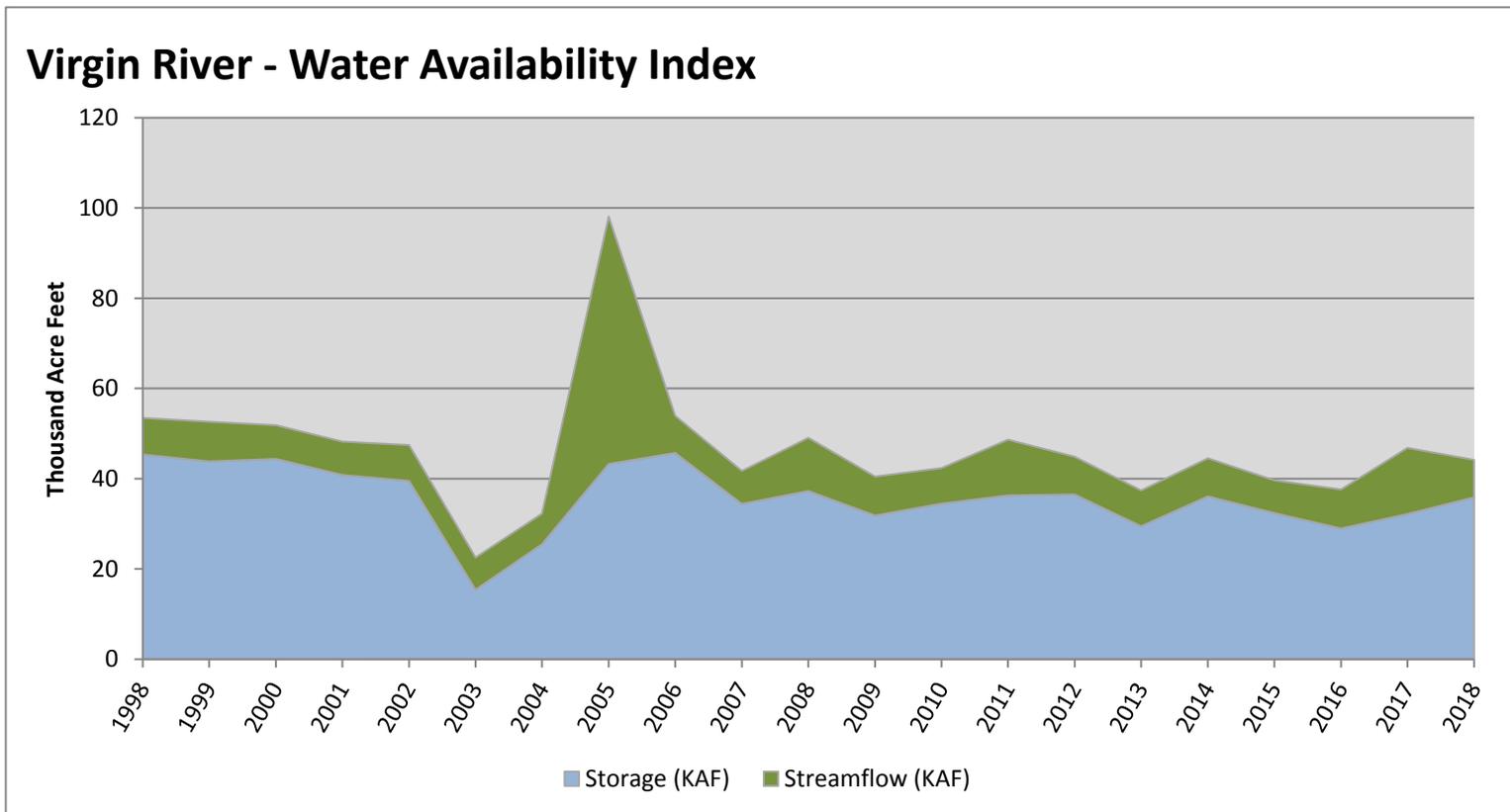
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2018

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	35.89	8.31	44.20	41	-0.76	07, 10, 14, 12

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



February 1, 2018

Water Availability Index

Basin or Region	Jan EOM* Storage	January Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	1012	2.0	1014	92	3.5	84, 98, 99, 83
Woodruff Narrows	48.0	2.0	50.0	85	2.9	99, 07, 17, 98
Little Bear	9.9	3.9	13.8	67	1.4	95, 00, 96, 98
Ogden	77.5	3.0	80.5	90	3.3	83, 94, 86, 99
Weber	169.0	6.7	175.7	97	3.9	11, 12, 96, 94
Provo River	395.3	3.4	398.6	88	3.1	00, 06, 98, 12
Western Uinta	190.9	1.6	192.5	94	3.7	96, 15, 00, 12
Eastern Uinta	35.2	2.2	37.4	31	-1.6	93, 16, 89, 02
Blacks Fork	10.0	2.1	12.1	53	0.2	86, 11, 97, 94
Price	50.0	8.0	57.9	97	4.0	83, 87, 12, 81
Smiths Creek	6.0	0.7	6.7	60	0.8	16, 06, 07, 17
Joes Valley	45.3	1.1	46.4	69	1.6	88, 96, 81, 99
Moab	1.3	0.4	1.7	66	1.3	92, 15, 99, 88
Upper Sevier River	61.8	9.6	71.4	28	-1.8	09, 17, 90, 08
San Pitch	1.6	0.2	1.8	26	-2.0	04, 02, 05, 08
Lower Sevier	54.7	17.9	72.6	10	-3.3	05, 17, 92, 03
Beaver	9.8	1.2	11.0	46	-0.3	15, 17, 13, 14
Virgin River	35.9	8.3	44.2	41	-0.8	07, 10, 14, 12

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

What is a Water Availability Index?

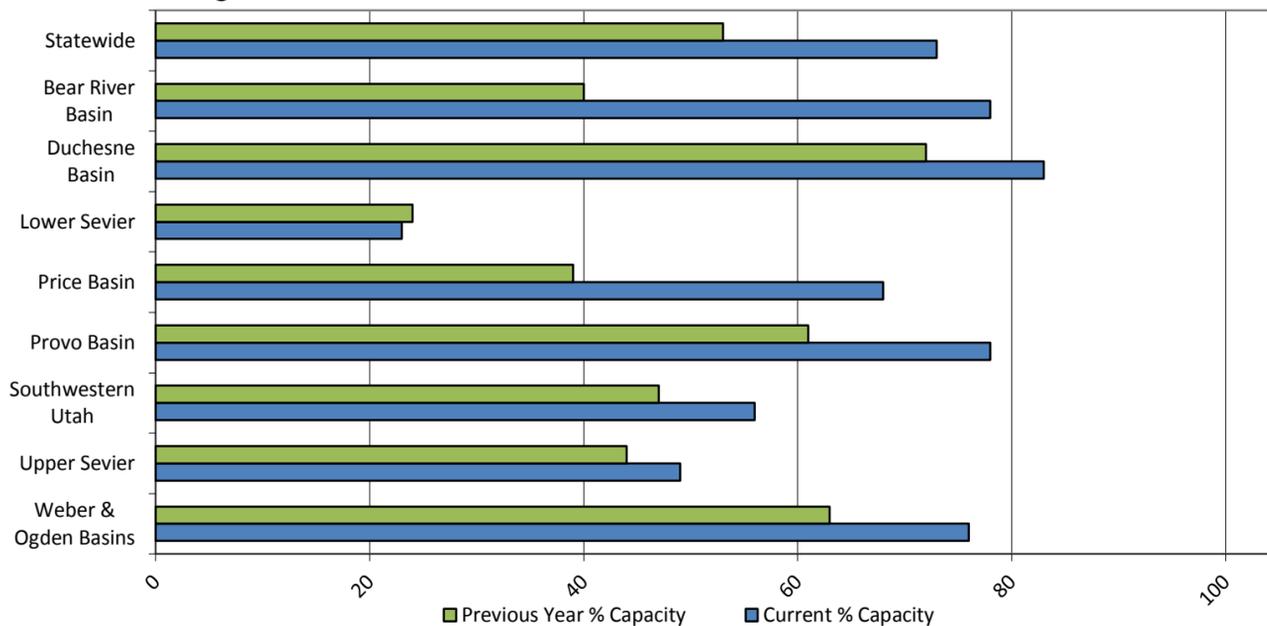
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) 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 January 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	25.5	25.2		25.7	99%	98%			
Causey Reservoir	5.5	5.0	3.2	7.1	78%	70%	45%	172%	156%
Cleveland Lake	2.7	1.6		5.4	49%	29%			
Currant Creek Reservoir	14.8	14.2	14.9	15.5	96%	92%	96%	99%	95%
Deer Creek Reservoir	140.4	133.1	107.7	149.7	94%	89%	72%	130%	124%
East Canyon Reservoir	39.8	25.3	34.7	49.5	81%	51%	70%	115%	73%
Echo Reservoir	51.5	30.7	46.3	73.9	70%	42%	63%	111%	66%
Grantsville Reservoir	2.2	0.6	1.8	3.3	67%	18%	53%	126%	34%
Gunlock	7.5	4.2	6.5	10.4	72%	40%	63%	115%	64%
Gunnison Reservoir	1.6	0.4	11.4	20.3	8%	2%	56%	14%	4%
Huntington North Reservoir	4.0	2.8	2.7	4.2	96%	67%	64%	149%	104%
Hyrum Reservoir	9.9	9.8	10.2	15.3	65%	64%	67%	97%	96%
Joes Valley Reservoir	45.3	30.4	39.9	61.6	74%	49%	65%	114%	76%
Jordanelle Reservoir	254.9	186.0	242.0	320.0	80%	58%	76%	105%	77%
Ken's Lake	1.3	1.8	1.1	2.3	57%	78%	49%	116%	159%
Kolob Reservoir	1.1	4.4		5.6	19%	79%			
Lost Creek Reservoir	18.4	15.1	12.3	22.5	82%	67%	55%	150%	122%
Lower Enterprise	1.3	0.5	0.6	2.6	49%	17%	24%	202%	71%
Miller Flat Reservoir	3.7	2.0		5.2	71%	38%			
Millsite	1.2	10.2	10.1	16.7	7%	61%	60%	11%	101%
Minersville Reservoir	9.8	8.4	13.4	23.3	42%	36%	58%	73%	62%
Moon Lake Reservoir	25.2	24.7	24.4	35.8	70%	69%	68%	103%	101%
Otter Creek Reservoir	36.2	31.7	35.0	52.5	69%	60%	67%	103%	90%
Panguitch Lake	9.4	9.9	12.7	22.3	42%	44%	57%	74%	78%
Pineview Reservoir	71.9	70.5	51.4	110.1	65%	64%	47%	140%	137%
Piute Reservoir	25.6	23.2	49.2	71.8	36%	32%	69%	52%	47%
Porcupine Reservoir	9.3	7.5	6.0	11.3	82%	66%	53%	155%	125%
Quail Creek	28.4	28.0	26.0	40.0	71%	70%	65%	109%	108%
Red Fleet Reservoir	19.8	21.4	17.9	25.7	77%	83%	70%	110%	119%
Rockport Reservoir	54.4	31.6	34.5	60.9	89%	52%	57%	158%	92%
Sand Hollow Reservoir	48.0	42.0		50.0	96%	84%			
Scofield Reservoir	50.0	14.5	29.9	65.8	76%	22%	45%	167%	49%
Settlement Canyon Reservoir	0.8	0.3	0.7	1.0	79%	30%	70%	113%	43%
Sevier Bridge Reservoir	54.7	57.0	155.7	236.0	23%	24%	66%	35%	37%
Smith And Morehouse Reservoir	4.8	5.9	3.6	8.1	59%	73%	44%	132%	165%
Starvation Reservoir	157.0	140.2	138.8	165.3	95%	85%	84%	113%	101%
Stateline Reservoir	6.0	6.4	5.4	12.0	50%	53%	45%	111%	118%
Steinaker Reservoir	15.4	21.2	21.7	33.4	46%	63%	65%	71%	98%
Strawberry Reservoir	930.5	776.4	658.4	1105.9	84%	70%	60%	141%	118%
Upper Enterprise	1.7	0.6	3.1	10.0	17%	6%	31%	53%	19%
Upper Stillwater Reservoir	8.8	14.5	8.6	32.5	27%	45%	26%	102%	169%
Utah Lake	587.8	388.2	752.5	870.9	67%	45%	86%	78%	52%
Vernon Creek Reservoir		0.1	0.5	0.6		23%	78%		30%
Willard Bay	169.2	159.2	133.7	215.0	79%	74%	62%	127%	119%
Woodruff Creek	1.5	2.0	2.4	4.0	38%	49%	60%	63%	81%
Woodruff Narrows Reservoir	48.0	49.6	29.0	57.3	84%	87%	51%	165%	171%
Meeks Cabin Reservoir	10.0	11.2	11.9	32.5	31%	35%	37%	84%	94%
Bear Lake	1011.7	493.6	584.8	1302.0	78%	38%	45%	173%	84%
Basin-wide Total	3947.3	2867.7	3356.1	5380.3	73%	53%	62%	118%	85%
# of reservoirs	42	42	42	42	42	42	42	42	42

Reservoir Storage



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Utah Climate and Water Report

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