



Utah Climate and Water Report

September 1, 2018



Grantsville Reservoir, Tooele County

Photo by Jordan Clayton

Report Contents

1) Statewide Hydrologic Summary

- a) Utah General Summary
 - Supporting Documents

2) Climate and Water Information – SCAN

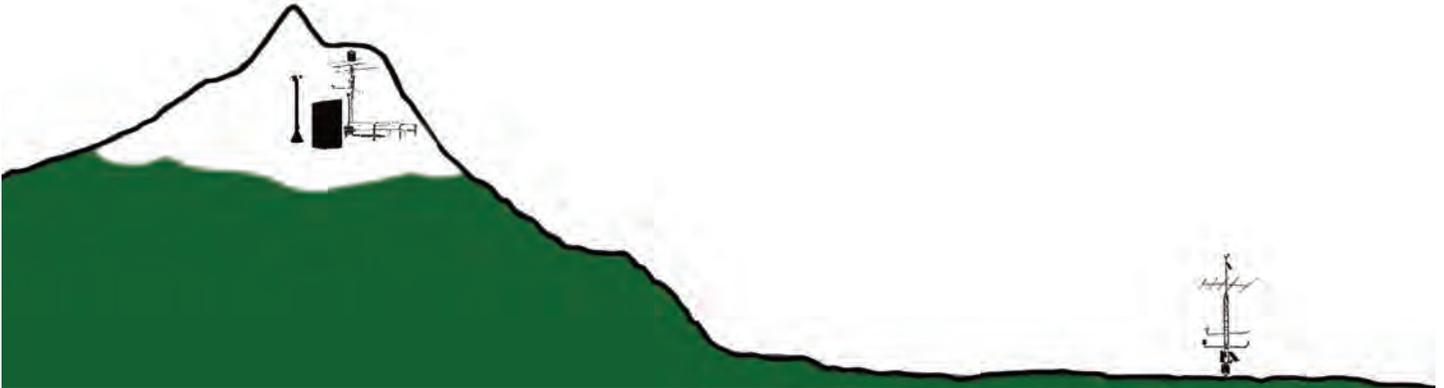
- a) Statewide SCAN
- b) Southeast
- c) South Central
- d) Western and Dixie
- e) Uinta Basin
- f) North Central
- g) Northern Mountains

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

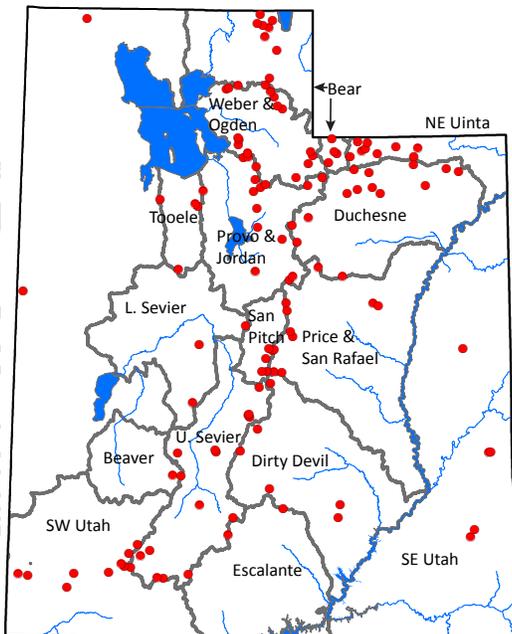
Utah Climate and Water Report

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.



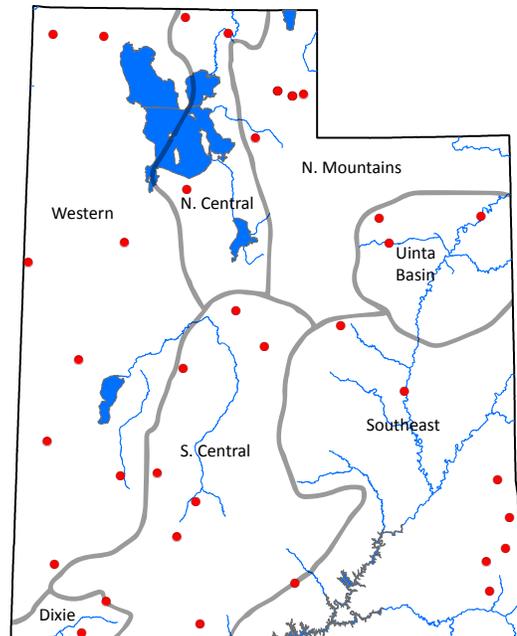
SNOTEL

- 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 September 1, 2018

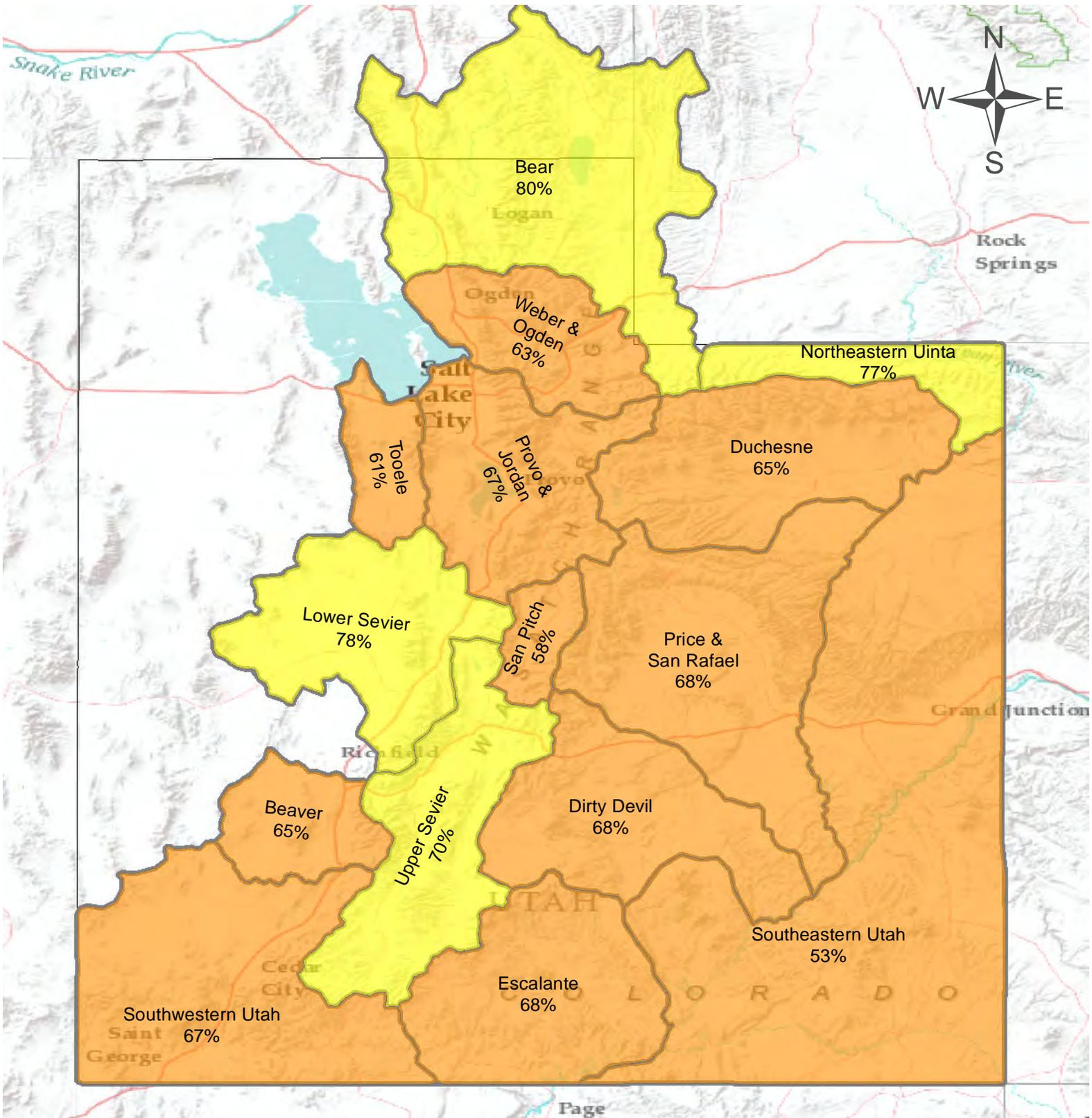
This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (Soil Climate Analysis Network) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply is generated (SNOWTElemetry).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

Current Valley Conditions (SCAN)

August was yet another dry month in Utah's valley locations, with limited monsoonal moisture. An average of 0.8 inches of precipitation fell at Utah's SCAN sites in August. Similar to July, rainfall favored Southern Utah in August, with 1.2 inches in the South Central Region. Northern areas of Utah recorded 0.9 and 0.4 inches of precipitation in the Mountain and Central Regions, respectively. The Uinta Basin received 1.1 inches of precipitation, which is more than the last several months combined. On average, statewide soil temperatures ended up near normal, after a bit of a cool down during the month. Soil moisture levels improved very slightly in August but continue to be very low. Current statewide percent saturation is roughly 31 percent, which is below what has been observed over the last ~15 years. This is consistent with the latest Drought Monitor data for Utah which has the entire state listed in the Moderate to Exceptional Drought categories.

Current Mountain Conditions (SNOTEL)

August was hot and dry in Utah's Mountains; precipitation statewide was 88% of average. This brings the water year accumulation (Oct-Aug) to 68% of average across the state with the San Pitch and Southeastern Utah basins ranking the driest at 58% and 53%, respectively. No surprise that San Pitch and San Juan counties continue to endure exceptional drought conditions, as reported by the U.S. Drought Monitor. Water year precipitation accumulation in the remaining basins ranges from 61% in Tooele to 80% in the Bear River Basin. Soil temperatures have been well above average with a few notable bumps in soil moisture from short, intense rain events, but the soil moisture trend remains very dry across most basins. Everything is thirsty – keep a grip on your water bottle while hiking because a thirsty tree might make a grab for it. Due to the continued hot and dry weather, reservoir storage has been dropping with most reservoirs at less than half (in some cases much less than half) capacity. Except for the Bear River and Virgin River basins, the Water Availability Index (WAI) is in the 40% range or lower. The 8-14 day weather outlook published by NOAA predicts above average temperatures and slightly below normal precipitation probability.



Statewide Precipitation

As of September 1, 2018:

68% of Normal Precipitation

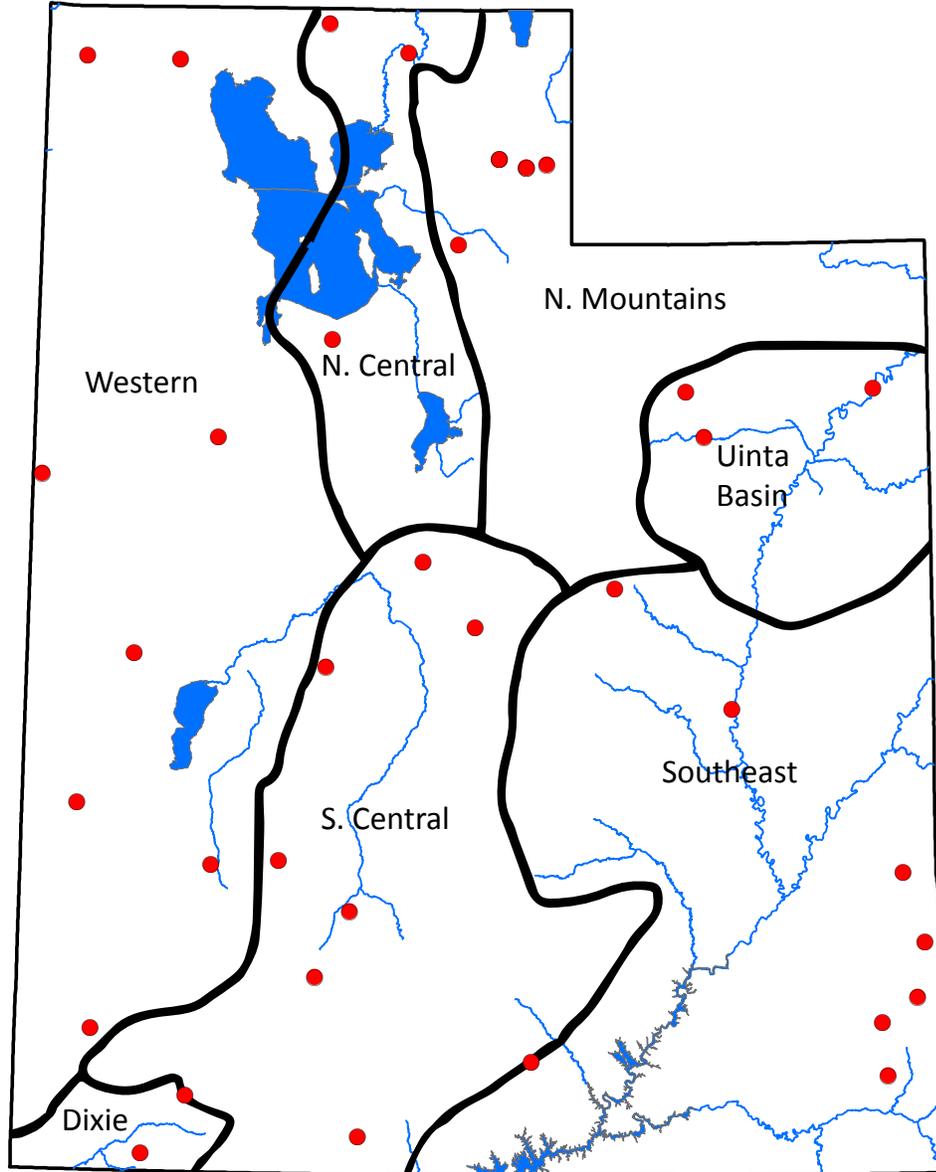
88% of Normal Precipitation Last Month

% of Normal

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

0 10 20 40 60 80 100 Miles

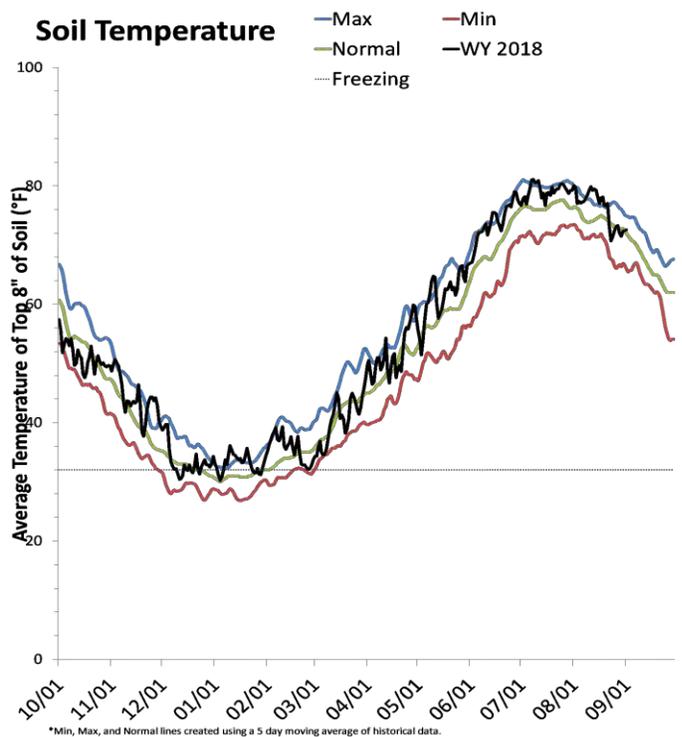
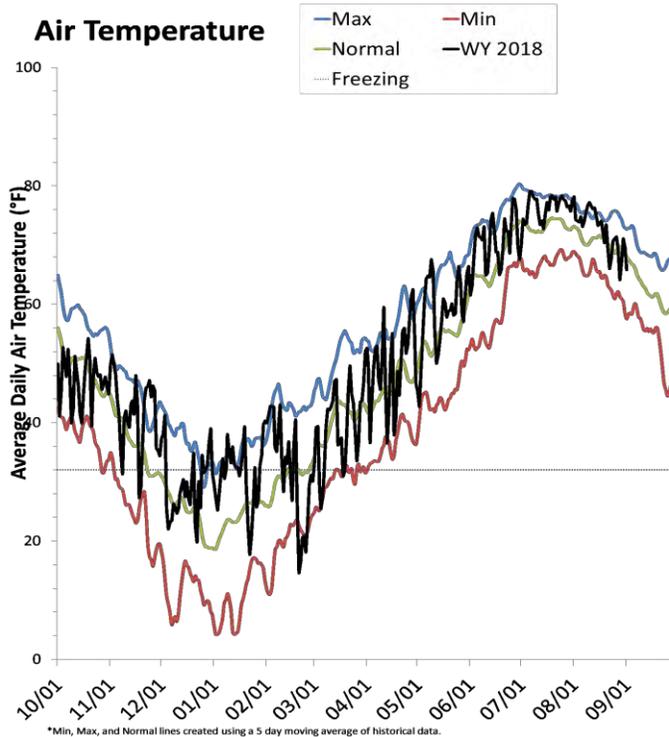
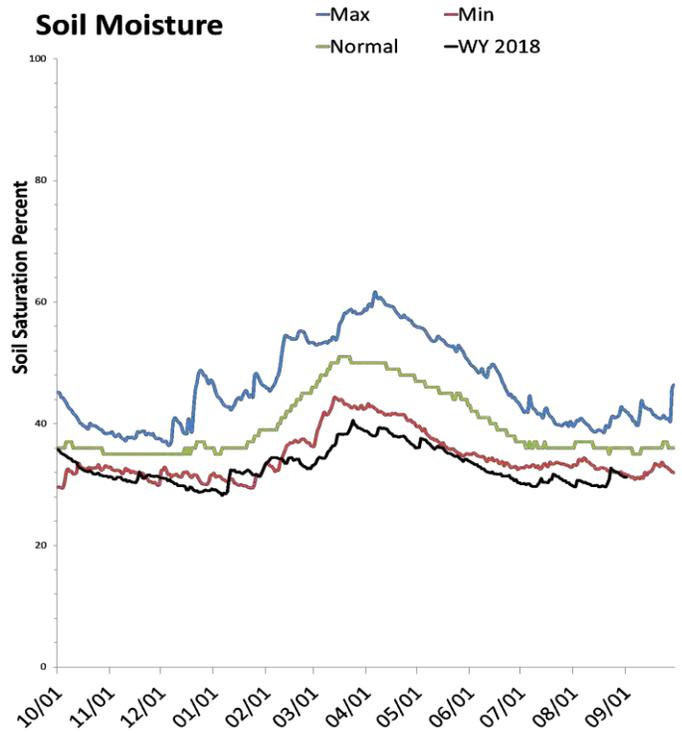
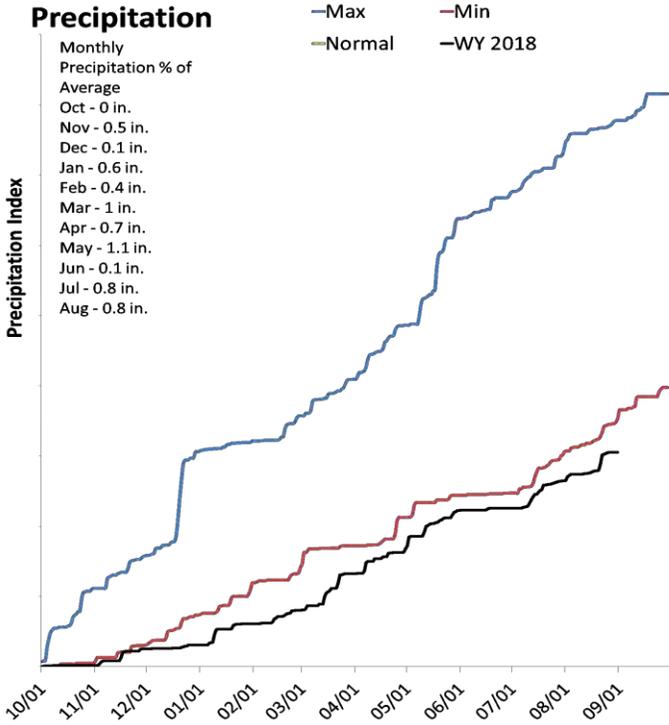
SCAN portion of report



Statewide SCAN

September 1, 2018

The average precipitation at SCAN sites within Utah was 0.8 inches in August, which brings the seasonal accumulation (Oct-Aug) to 6.1 inches. Soil moisture is at 31% compared to 34% last year.



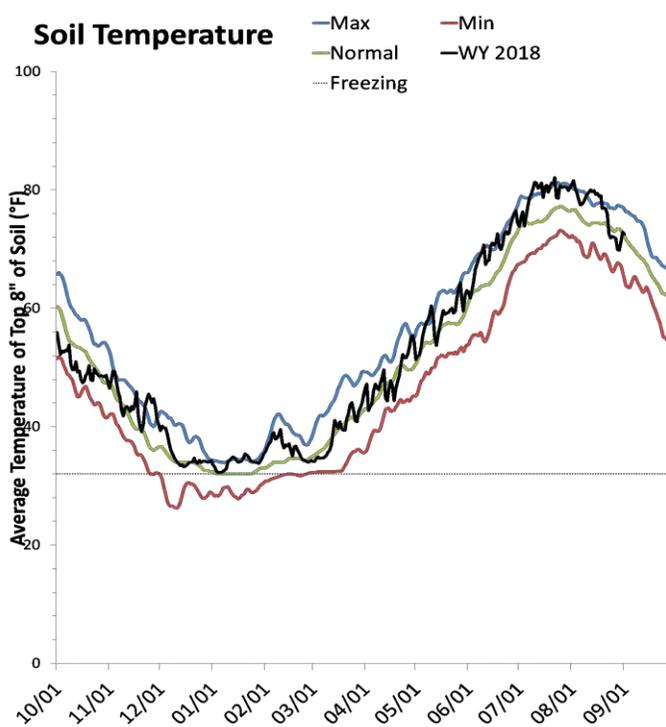
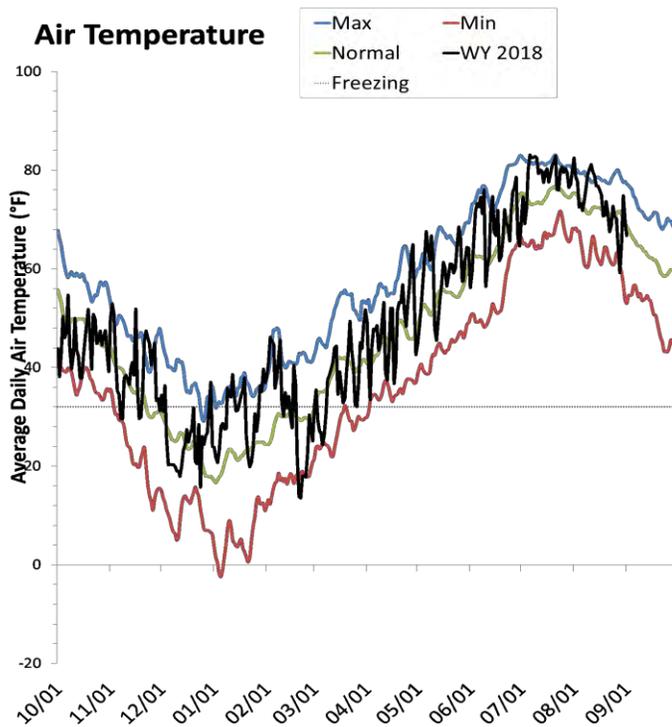
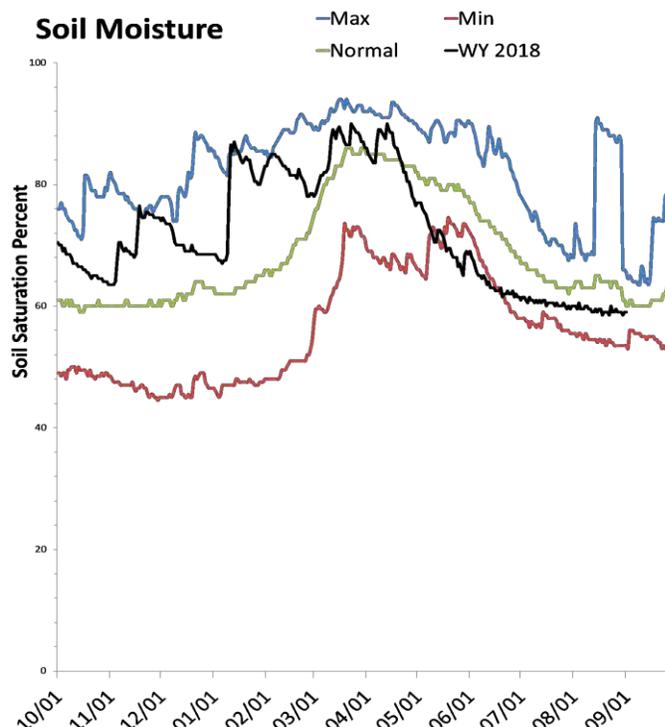
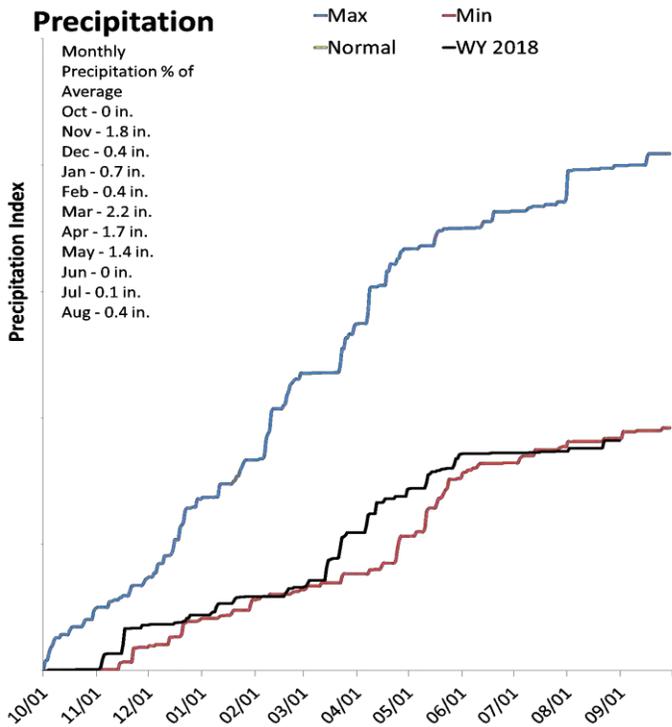
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

North Central

September 1, 2018

The average precipitation in August at SCAN sites within the basin was 0.4 inches, which brings the seasonal accumulation (Oct-Aug) to 9.1 inches. Soil moisture is at 59% compared to 64% last year.



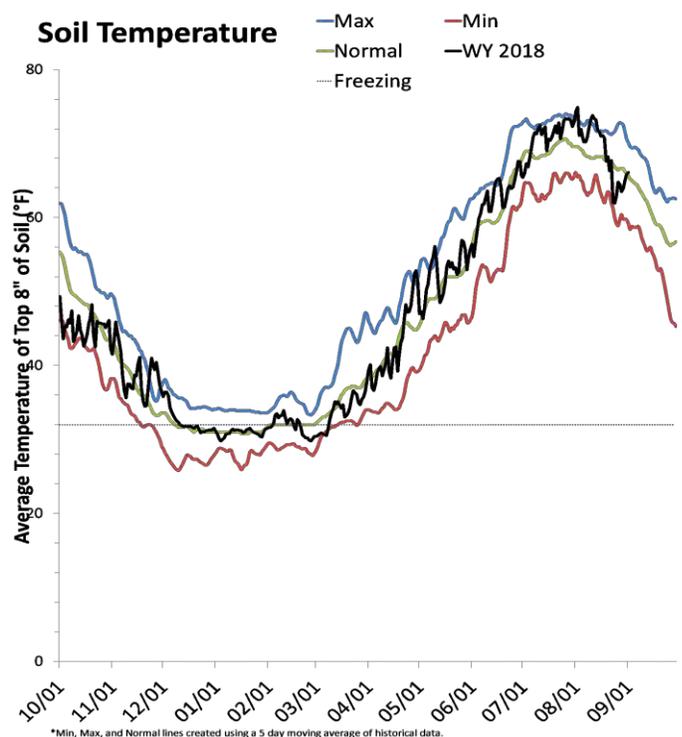
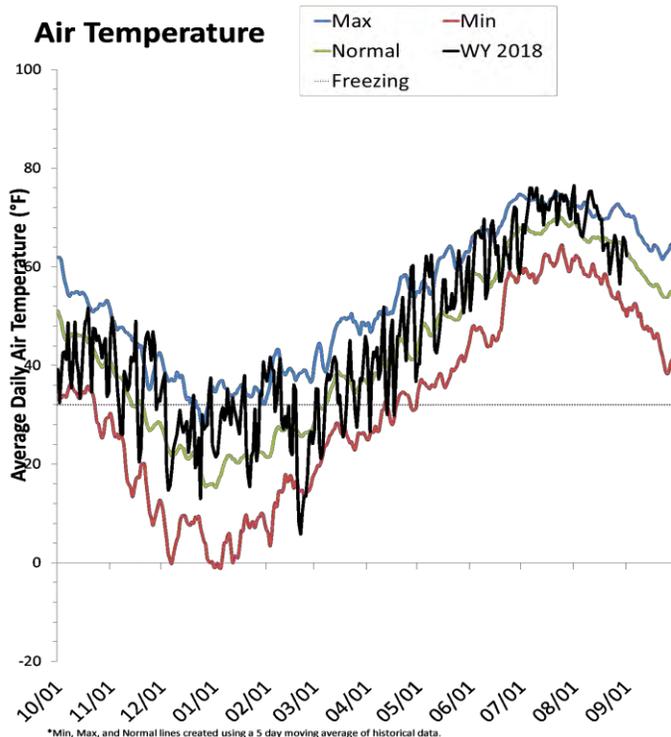
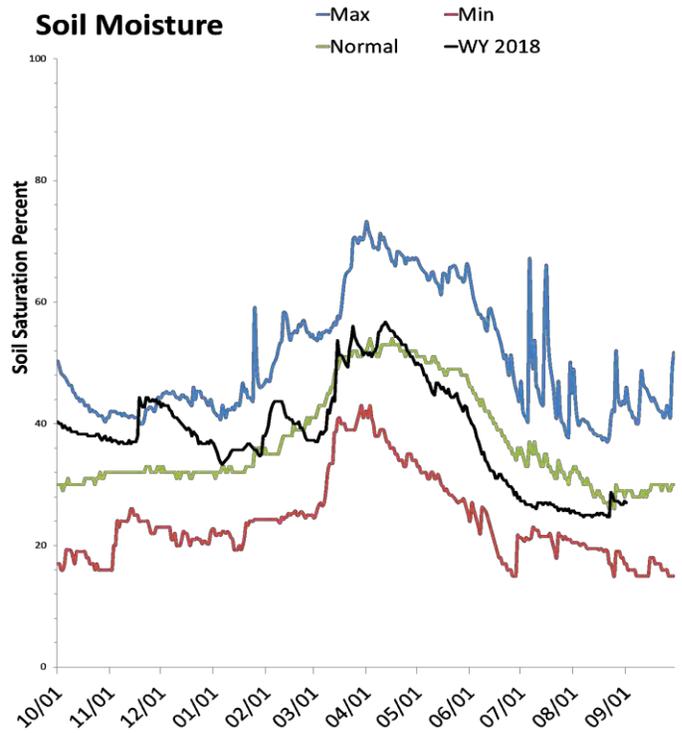
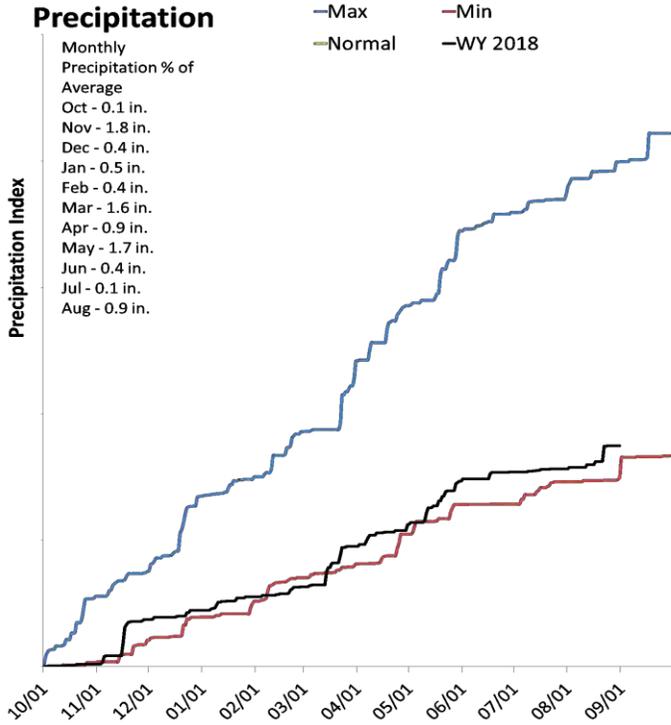
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Northern Mountains

September 1, 2018

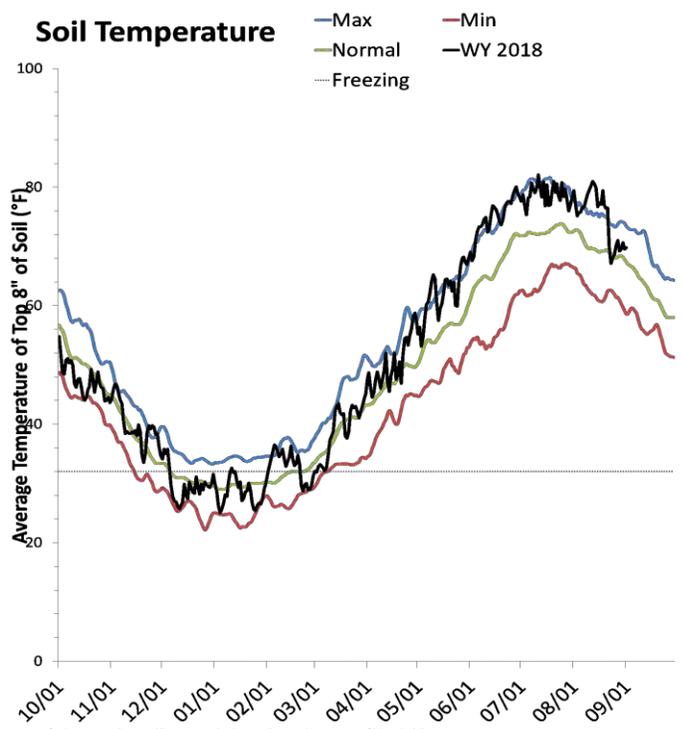
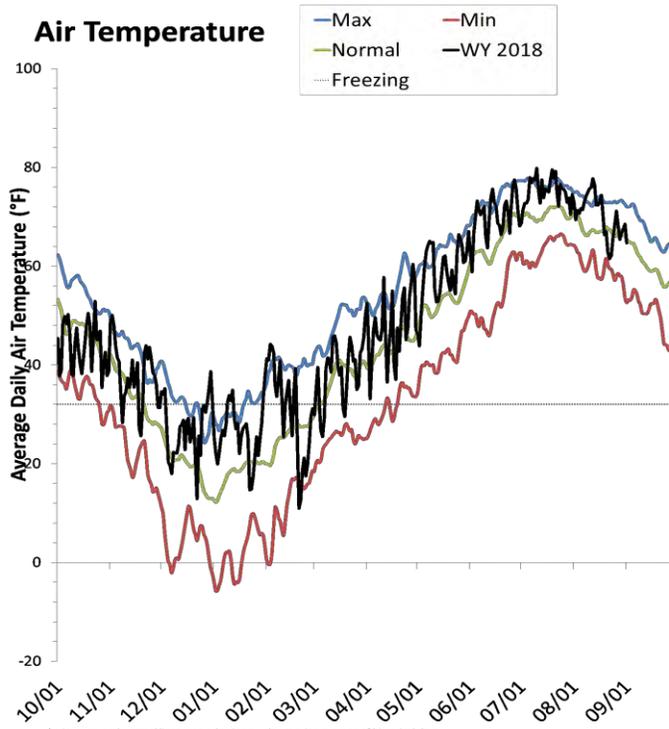
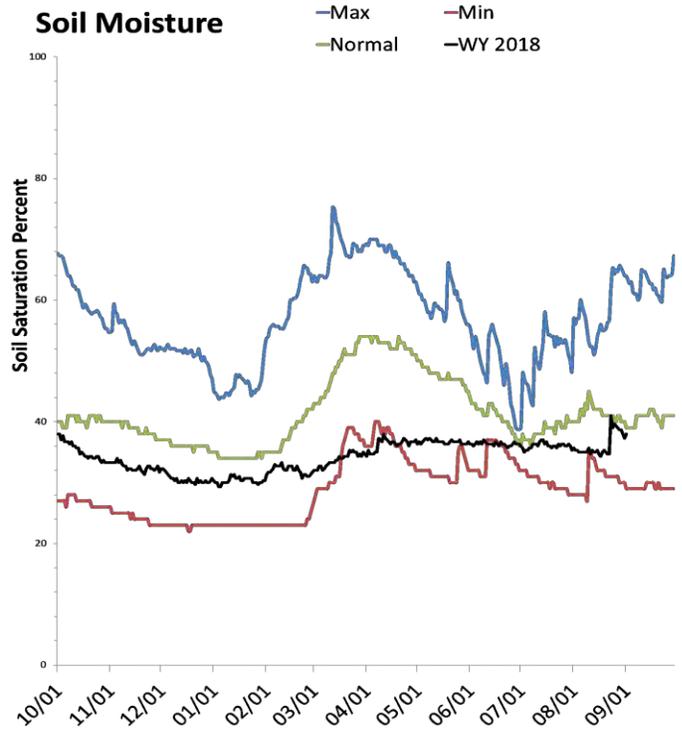
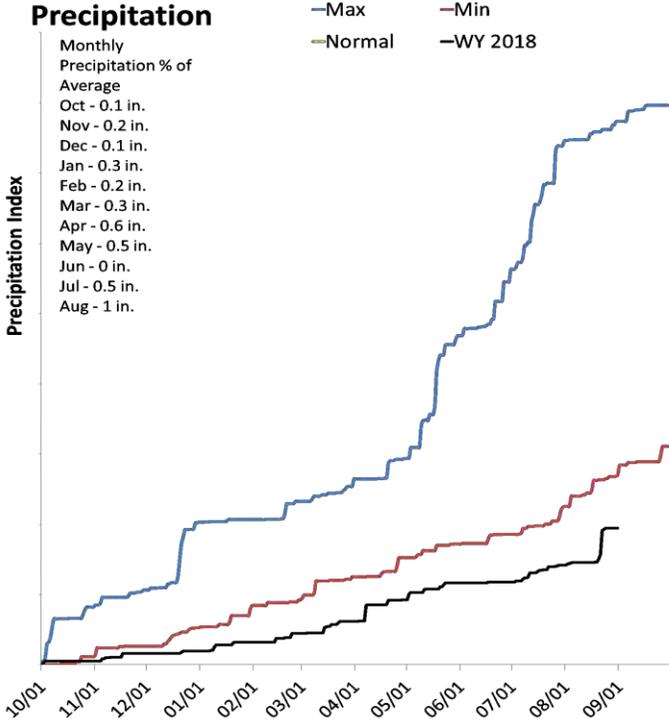
The average precipitation in August at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Aug) to 8.7 inches. Soil moisture is at 27% compared to 35% last year.



Uinta Basin

September 1, 2018

The average precipitation in August at SCAN sites within the basin was 1.1 inches, which brings the seasonal accumulation (Oct-Aug) to 3.9 inches. Soil moisture is at 38% compared to 37% last year.



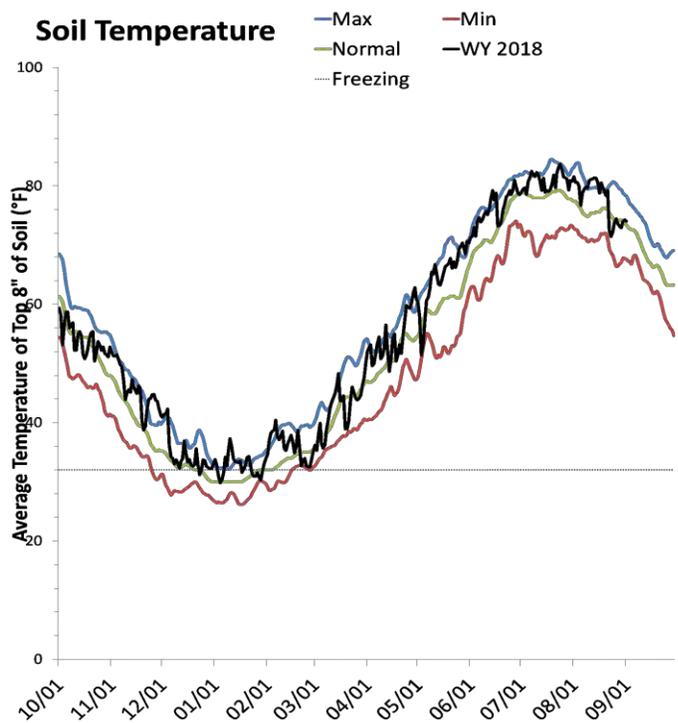
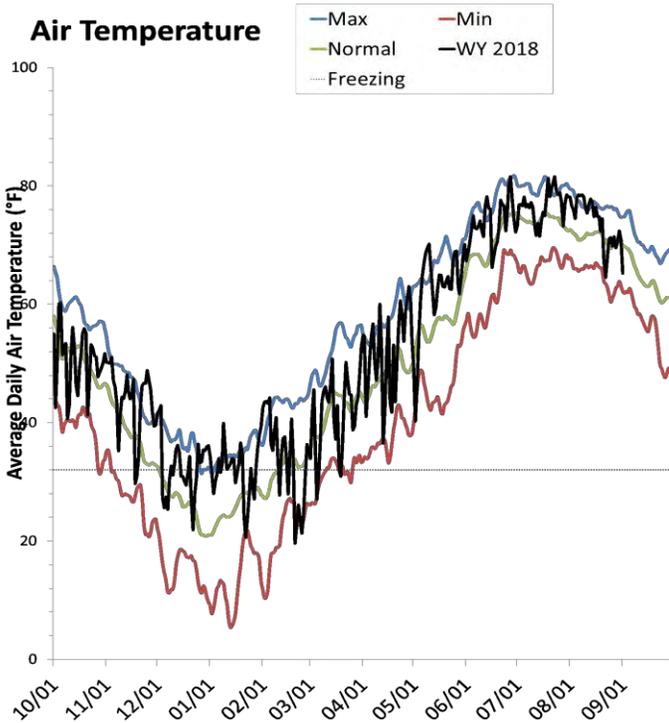
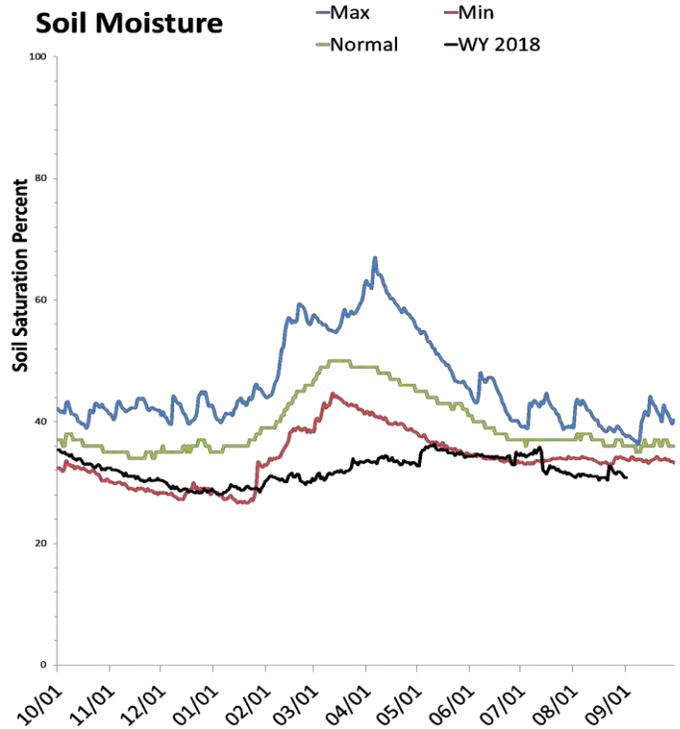
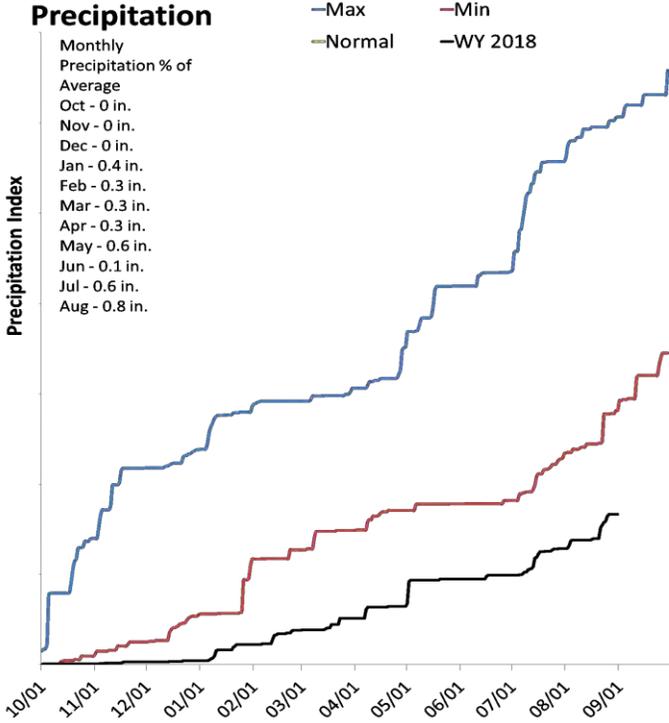
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Southeast

September 1, 2018

The average precipitation in August at SCAN sites within the basin was 0.8 inches, which brings the seasonal accumulation (Oct-Aug) to 3.3 inches. Soil moisture is at 31% compared to 37% last year.



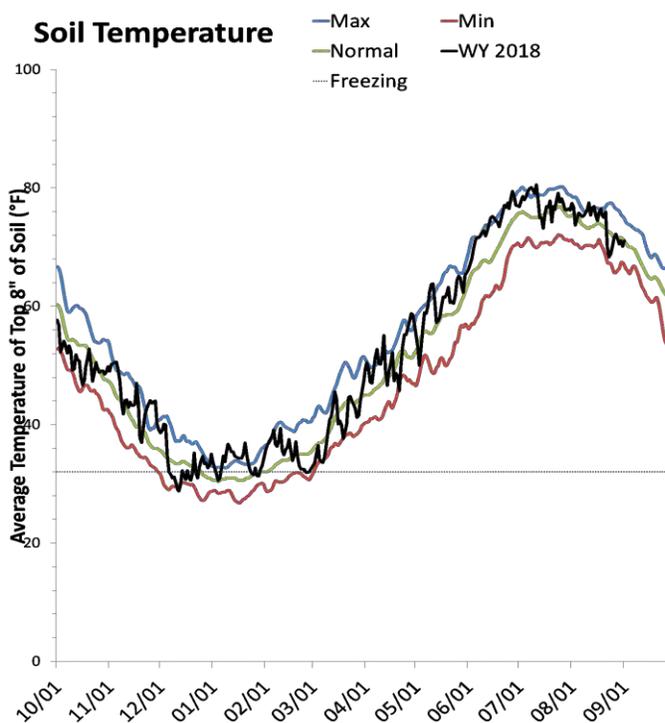
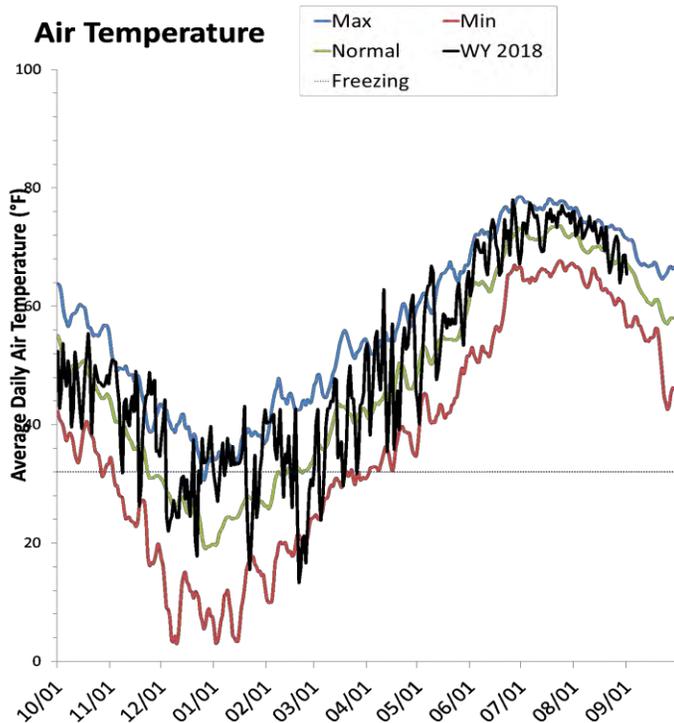
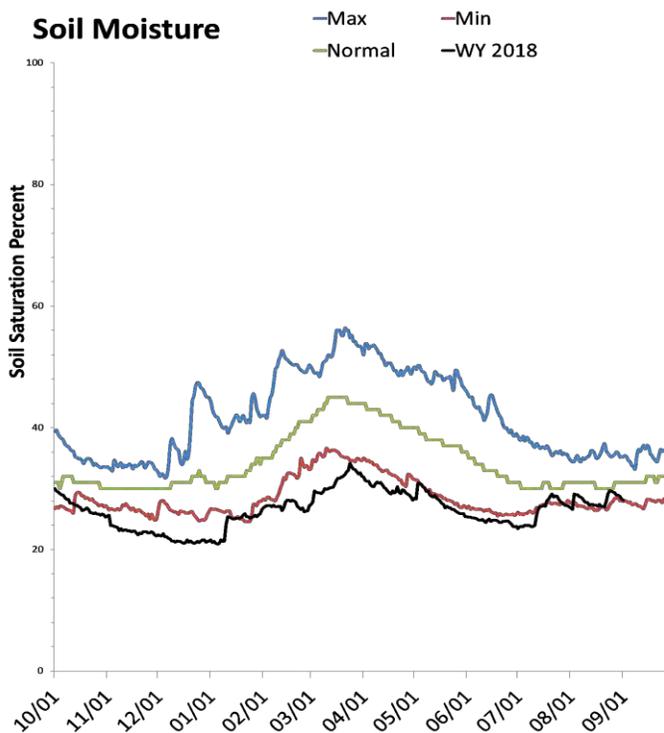
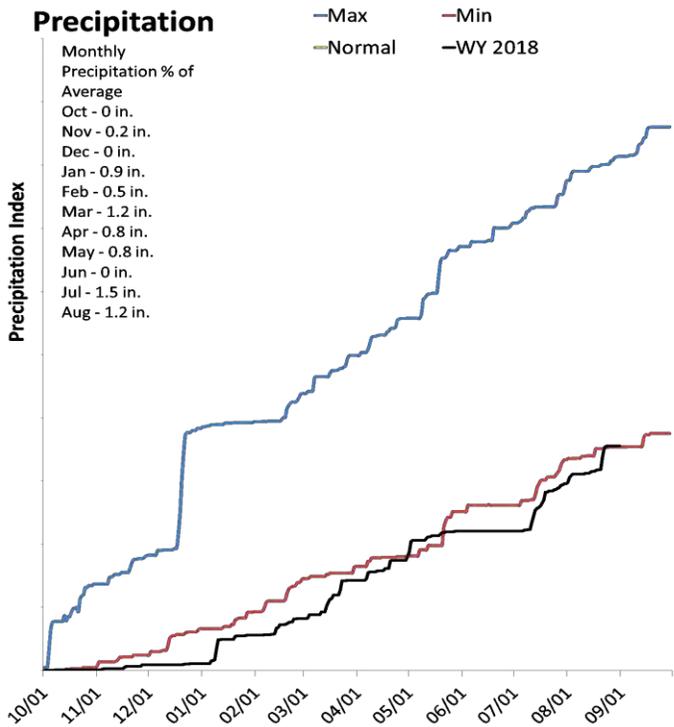
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

South Central

September 1, 2018

The average precipitation in August at SCAN sites within the basin was 1.2 inches, which brings the seasonal accumulation (Oct-Aug) to 7.1 inches. Soil moisture is at 28% compared to 28% last year.



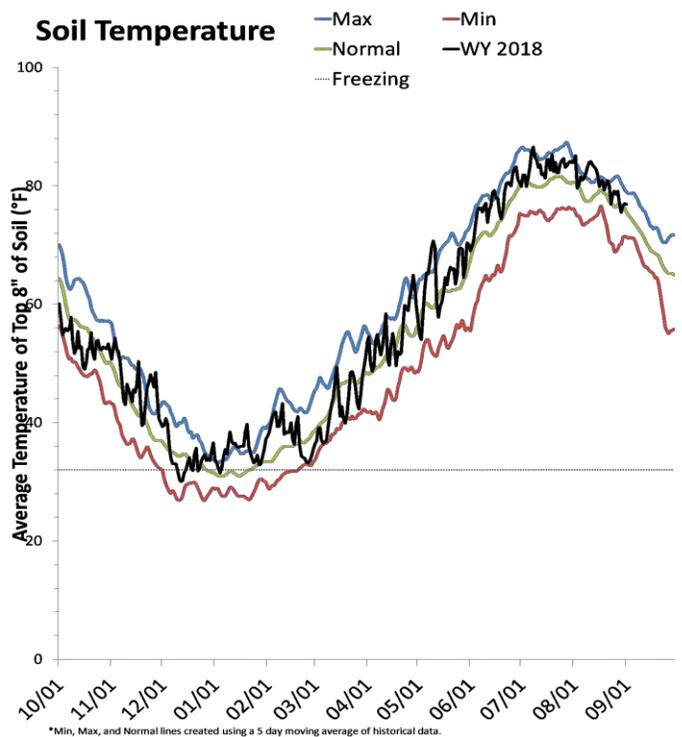
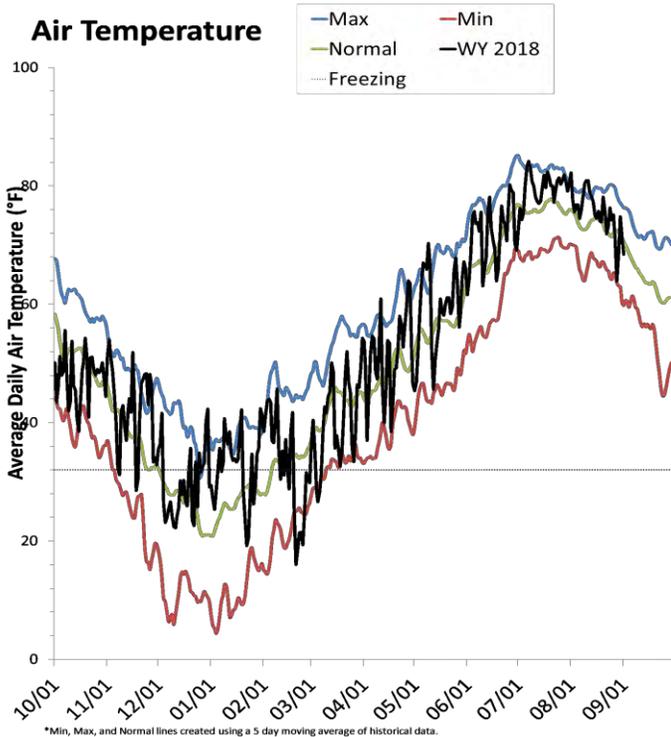
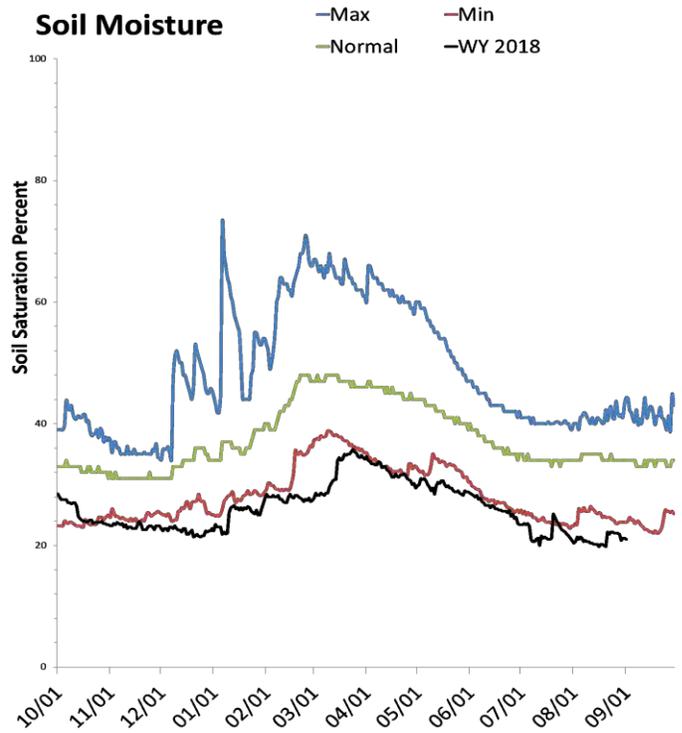
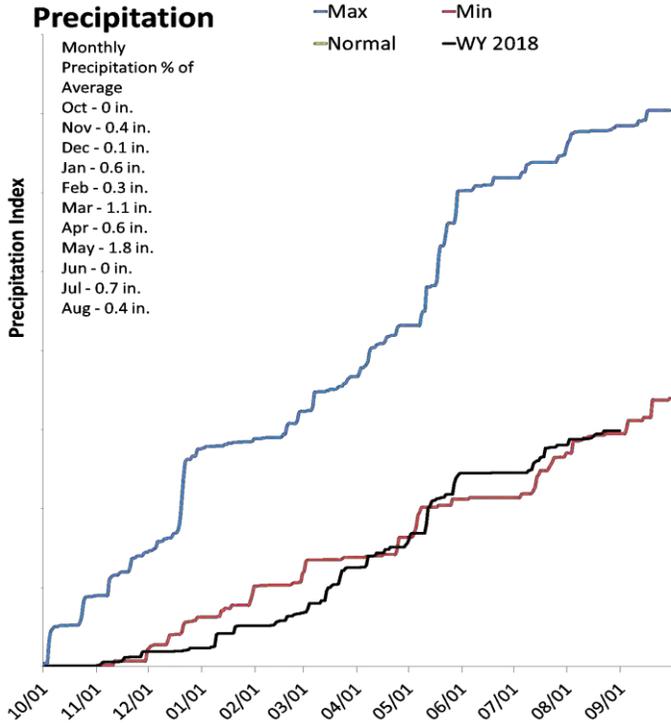
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Western and Dixie

September 1, 2018

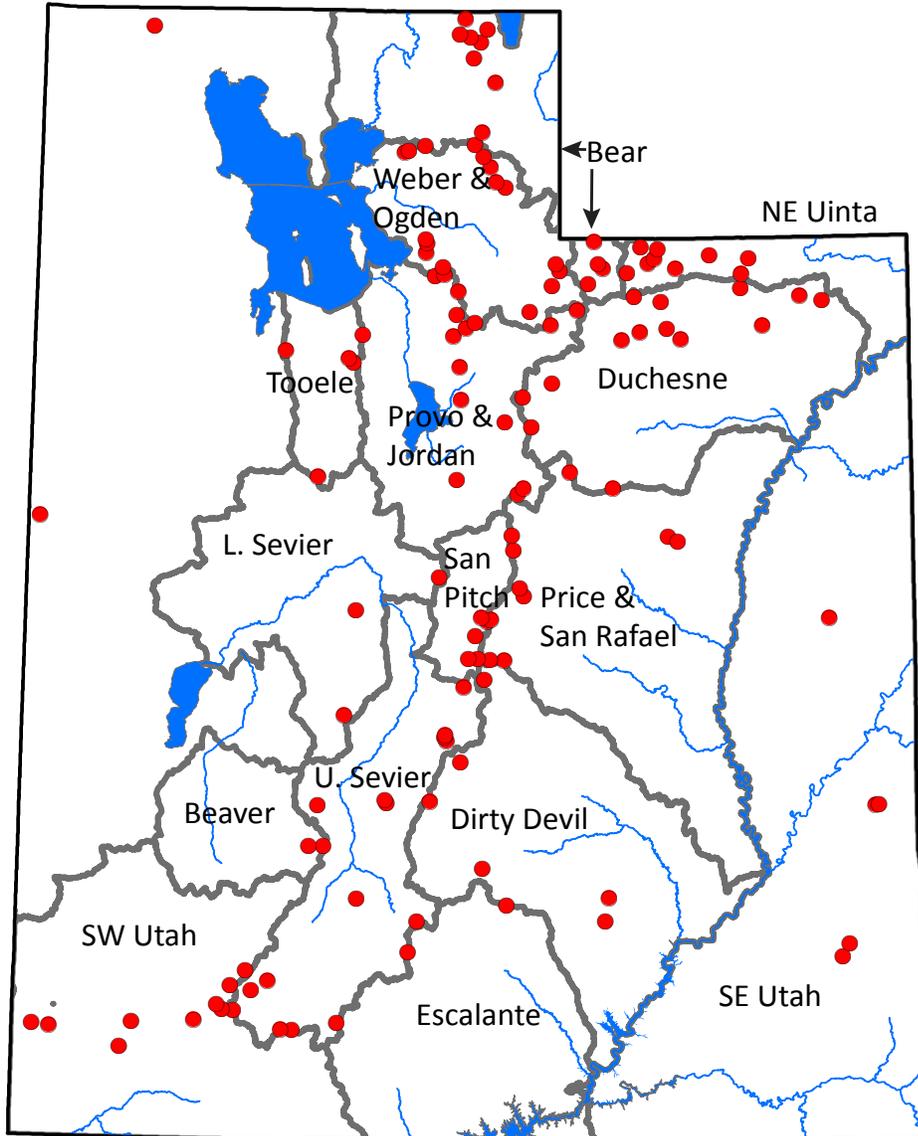
The average precipitation in August at SCAN sites within the basin was 0.4 inches, which brings the seasonal accumulation (Oct-Aug) to 6 inches. Soil moisture is at 19% compared to 26% last year.



*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.

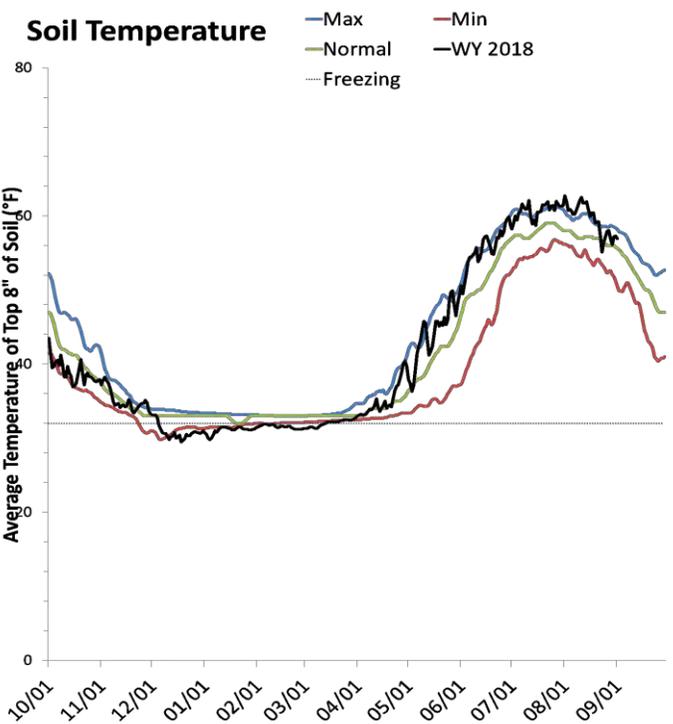
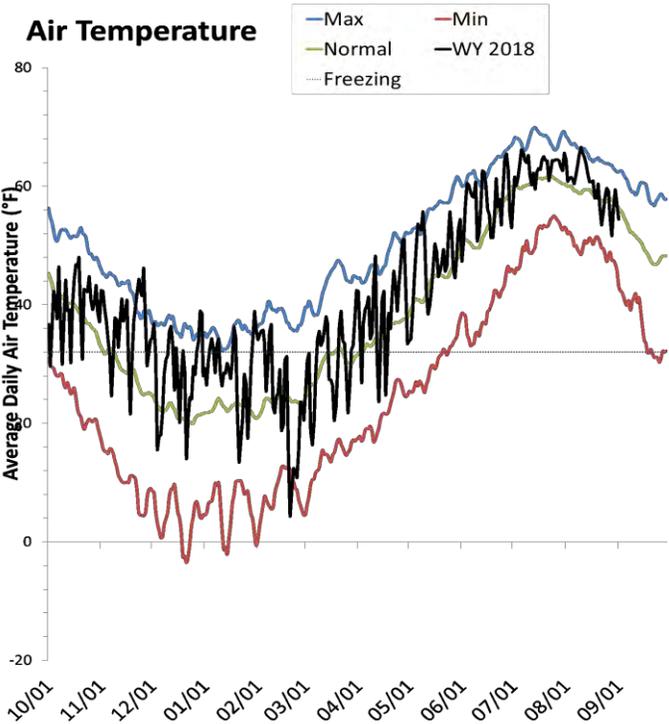
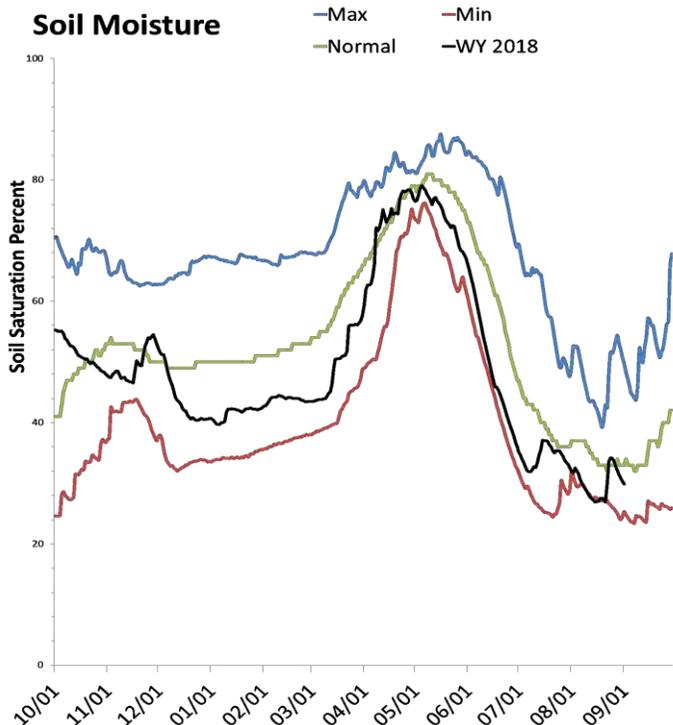
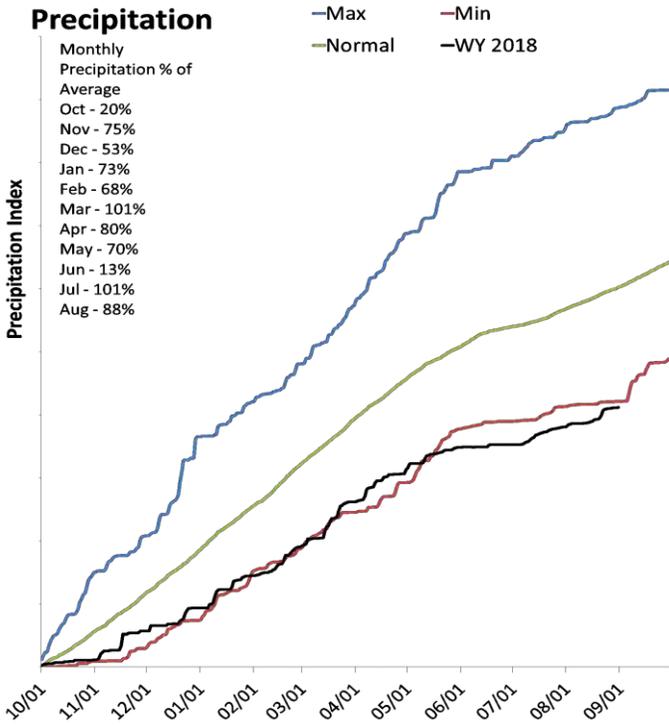
SNOTEL portion of report



Statewide SNOTEL

September 1, 2018

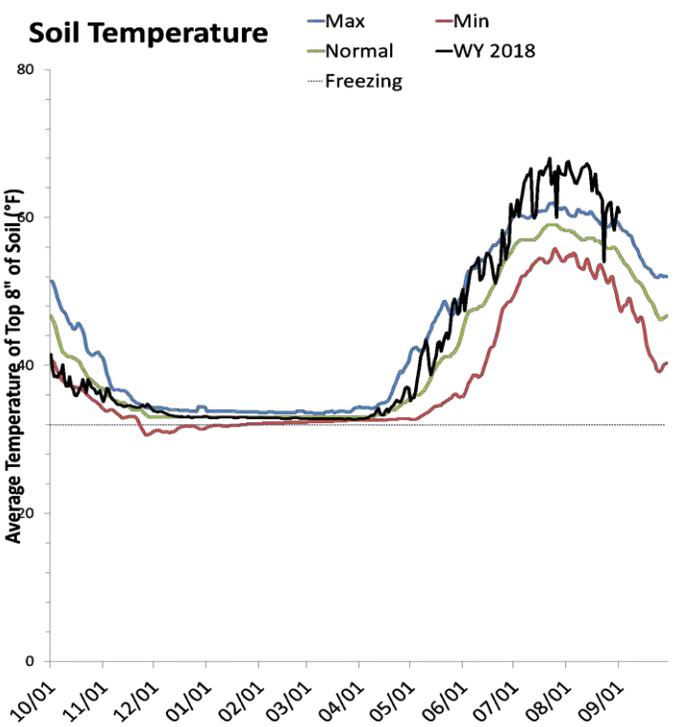
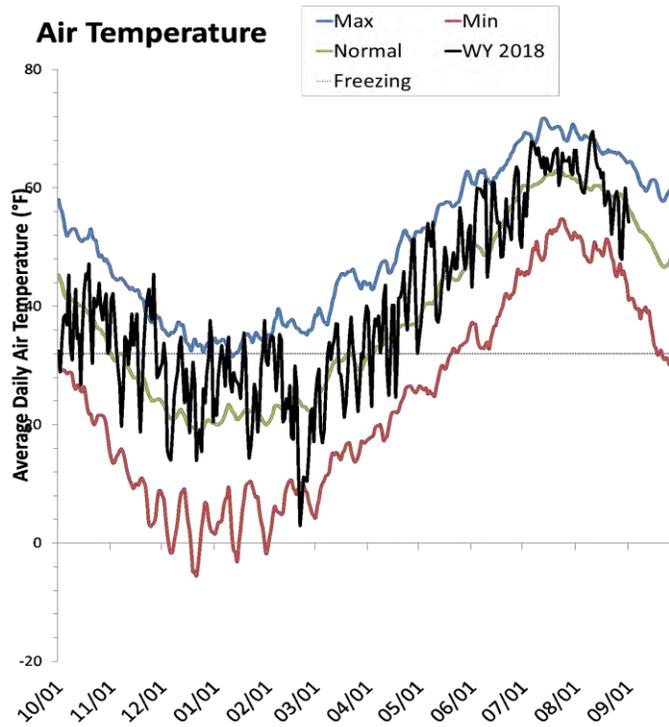
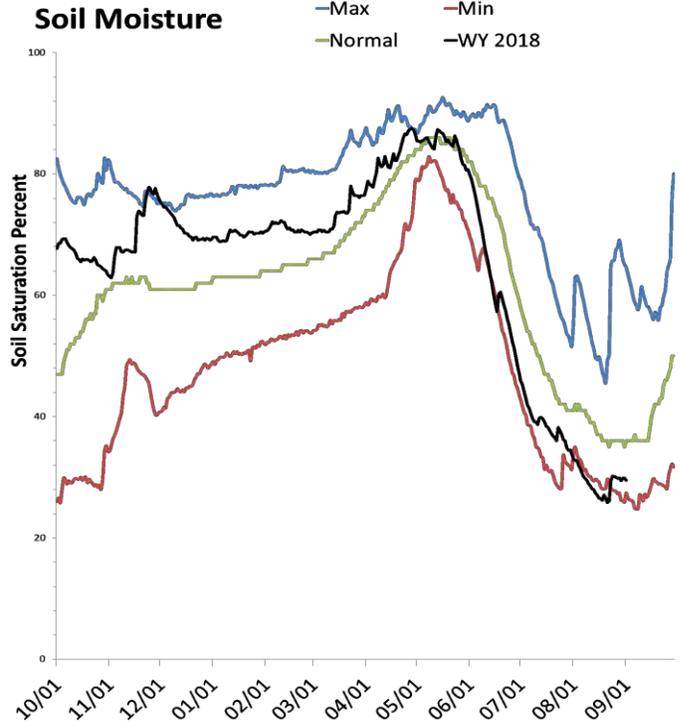
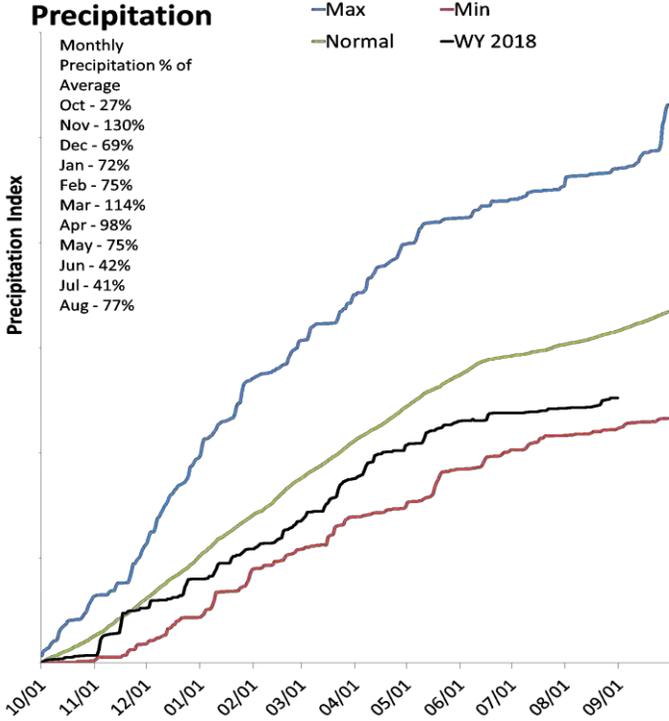
Precipitation at SNOTEL sites during August was below average at 88%, which brings the seasonal accumulation (Oct-Aug) to 68% of average. Soil moisture is at 30% compared to 35% last year. Reservoir storage is at 58% of capacity, compared to 74% last year.



Bear River Basin

September 1, 2018

Precipitation in August was below average at 77%, which brings the seasonal accumulation (Oct-Aug) to 80% of average. Soil moisture is at 30% compared to 33% last year. Reservoir storage is at 64% of capacity, compared to 87% last year. The water availability index for the Bear River is 69%, 44% for Woodruff Narrows and 37% for the Little Bear.



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

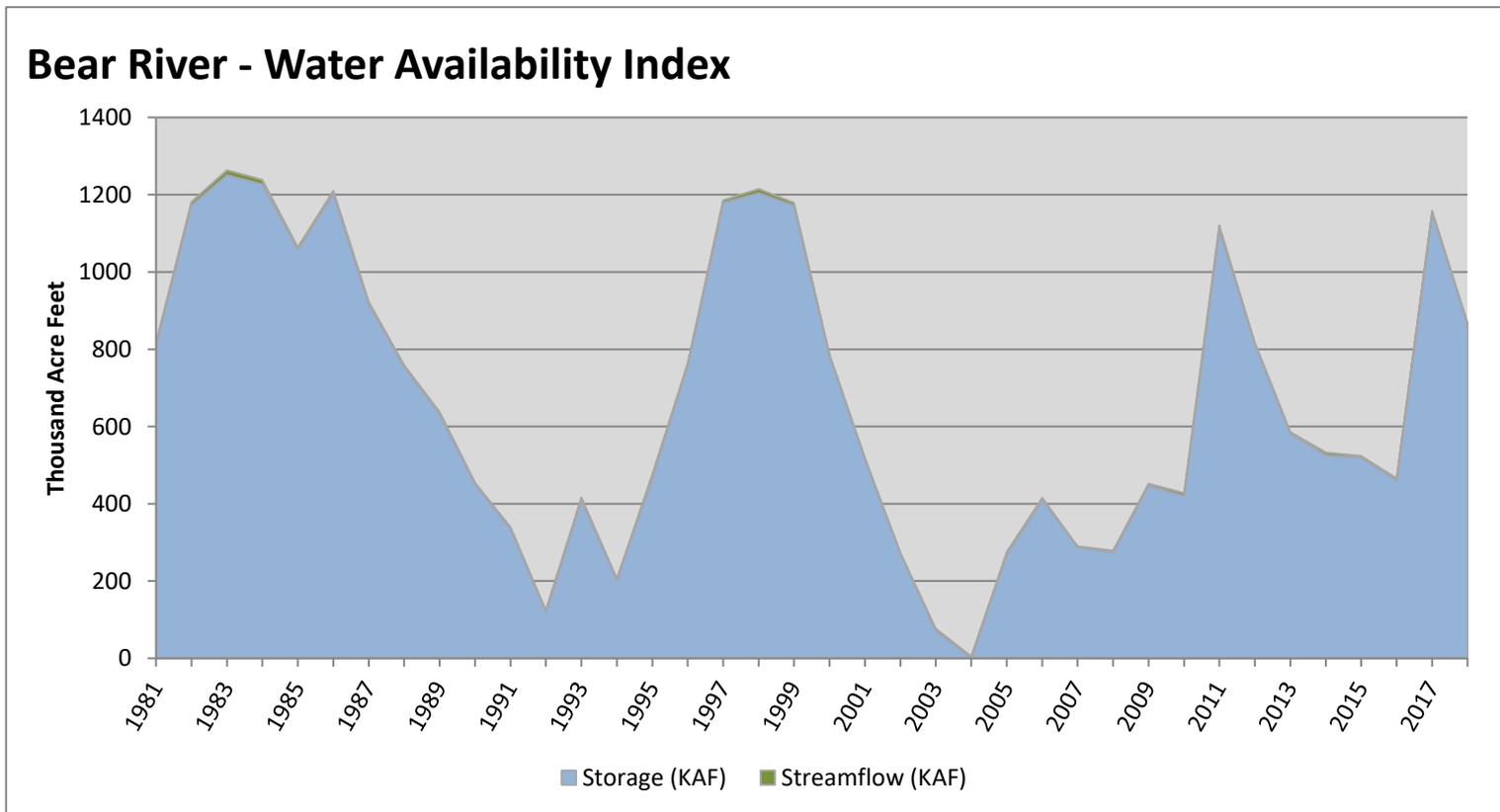
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	864.00	4.09	868.09	69	1.6	12, 81, 87, 85

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

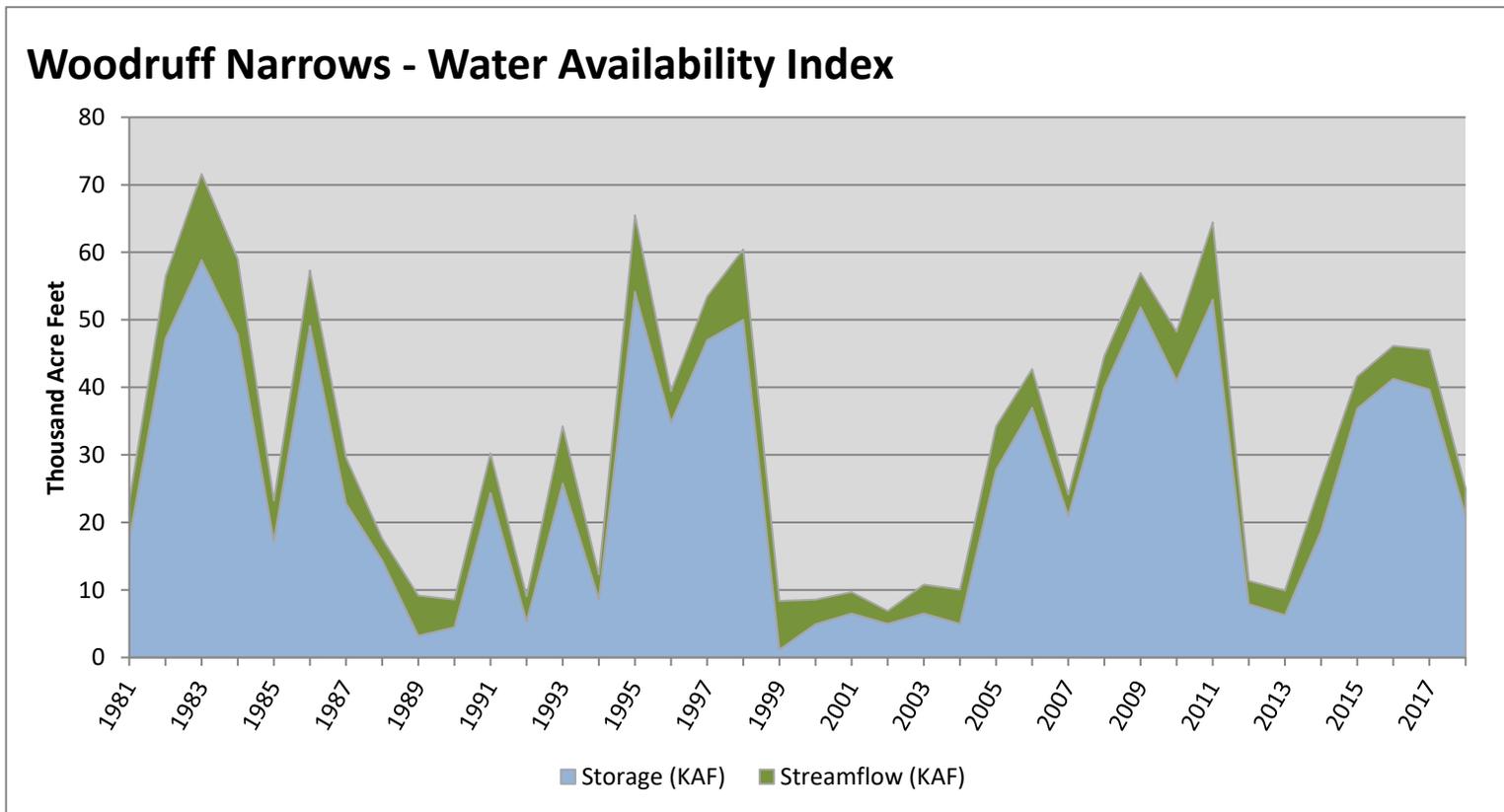


September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	20.95	4.09	25.04	44	-0.53	85, 07, 14, 87

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

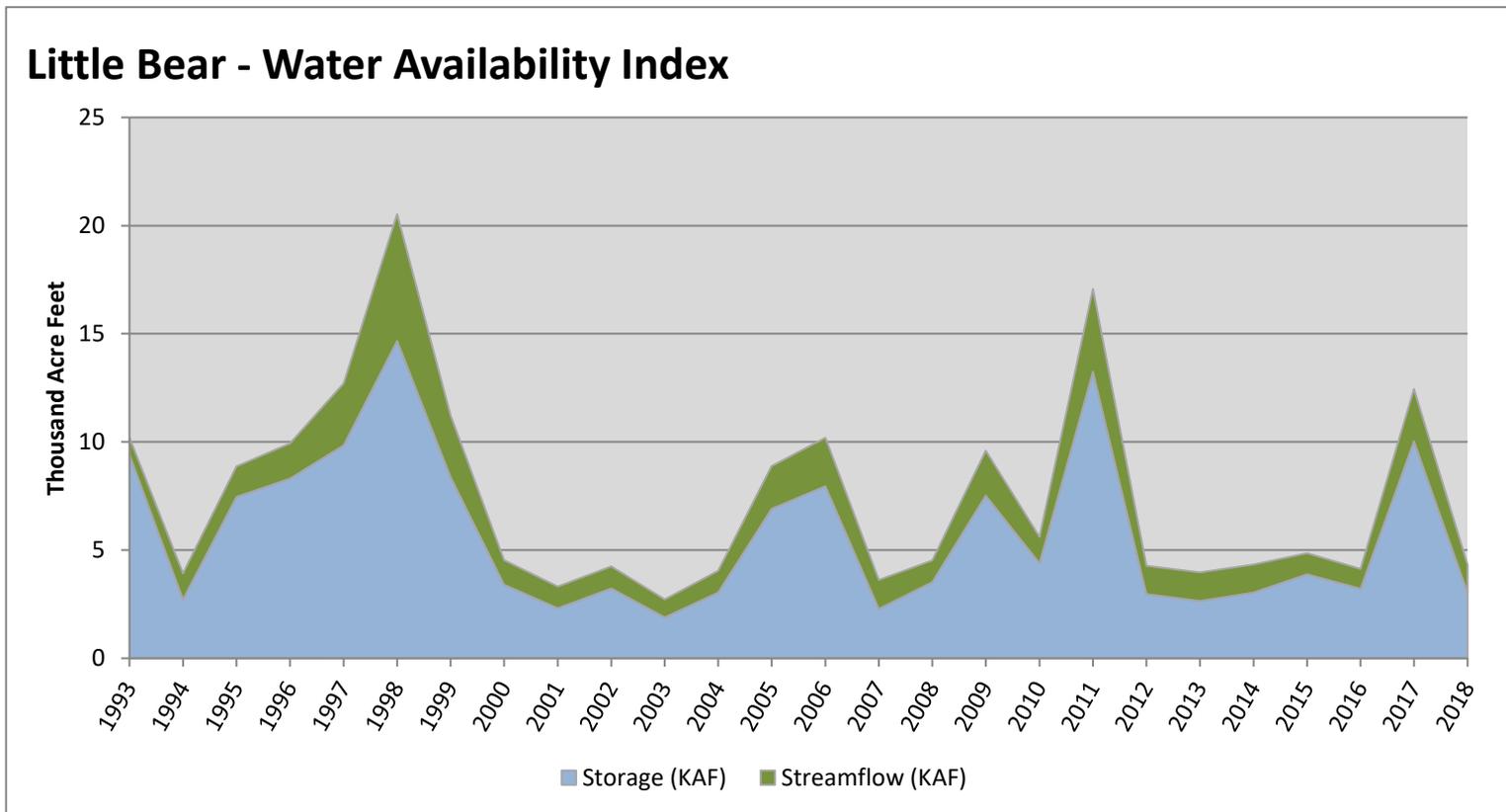


September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	3.03	1.29	4.32	37	-1.08	02, 12, 14, 08

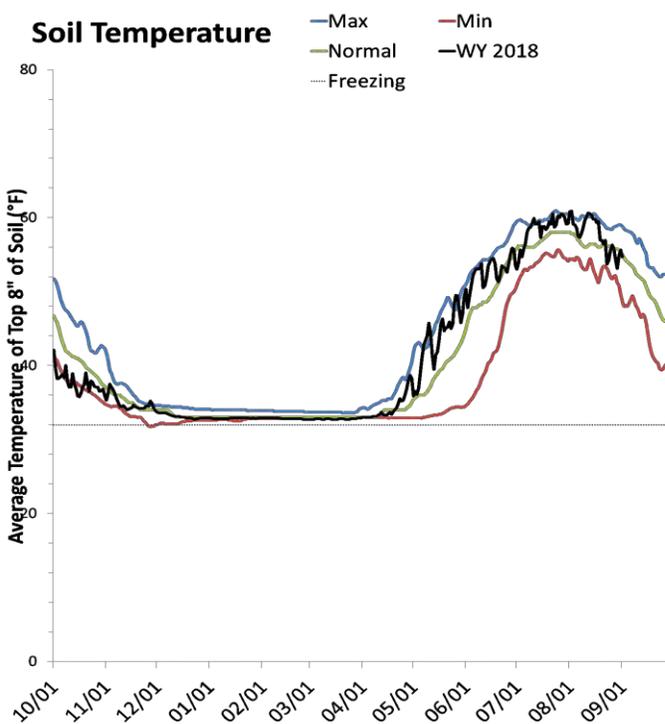
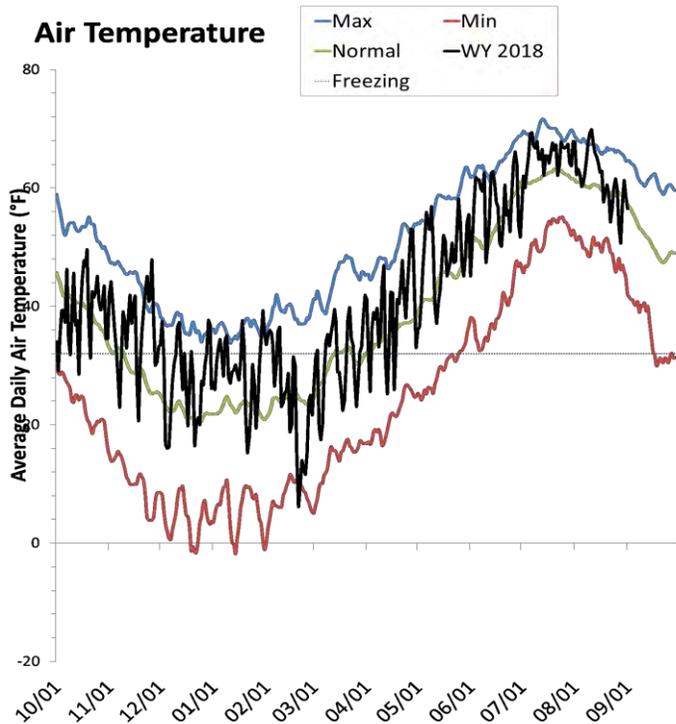
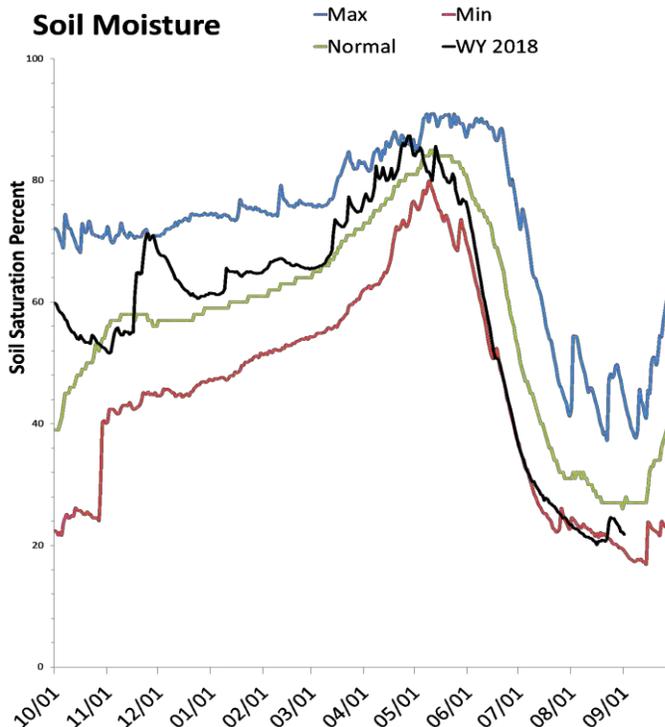
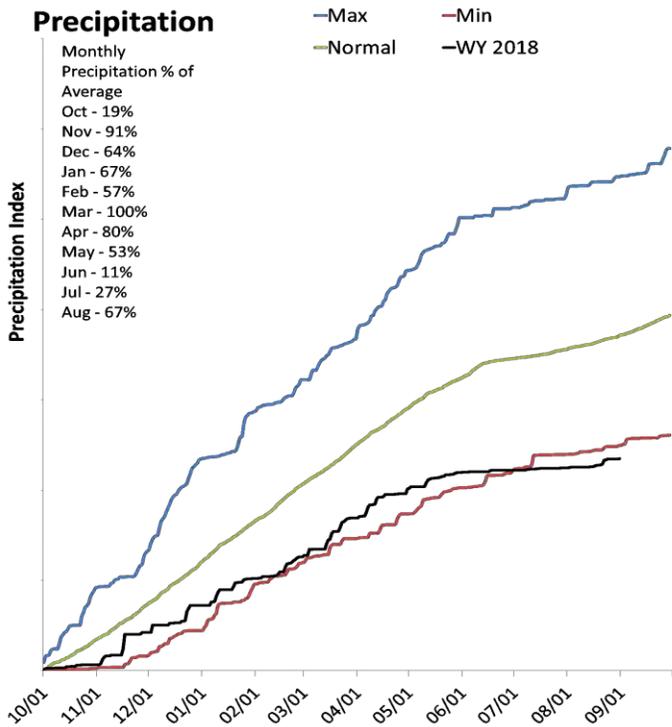
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Weber & Ogden River Basins

September 1, 2018

Precipitation in August was much below average at 67%, which brings the seasonal accumulation (Oct-Aug) to 63% of average. Soil moisture is at 22% compared to 25% last year. Reservoir storage is at 54% of capacity, compared to 76% last year. The water availability index for the Ogden River is 36% and 21% for the Weber River.



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

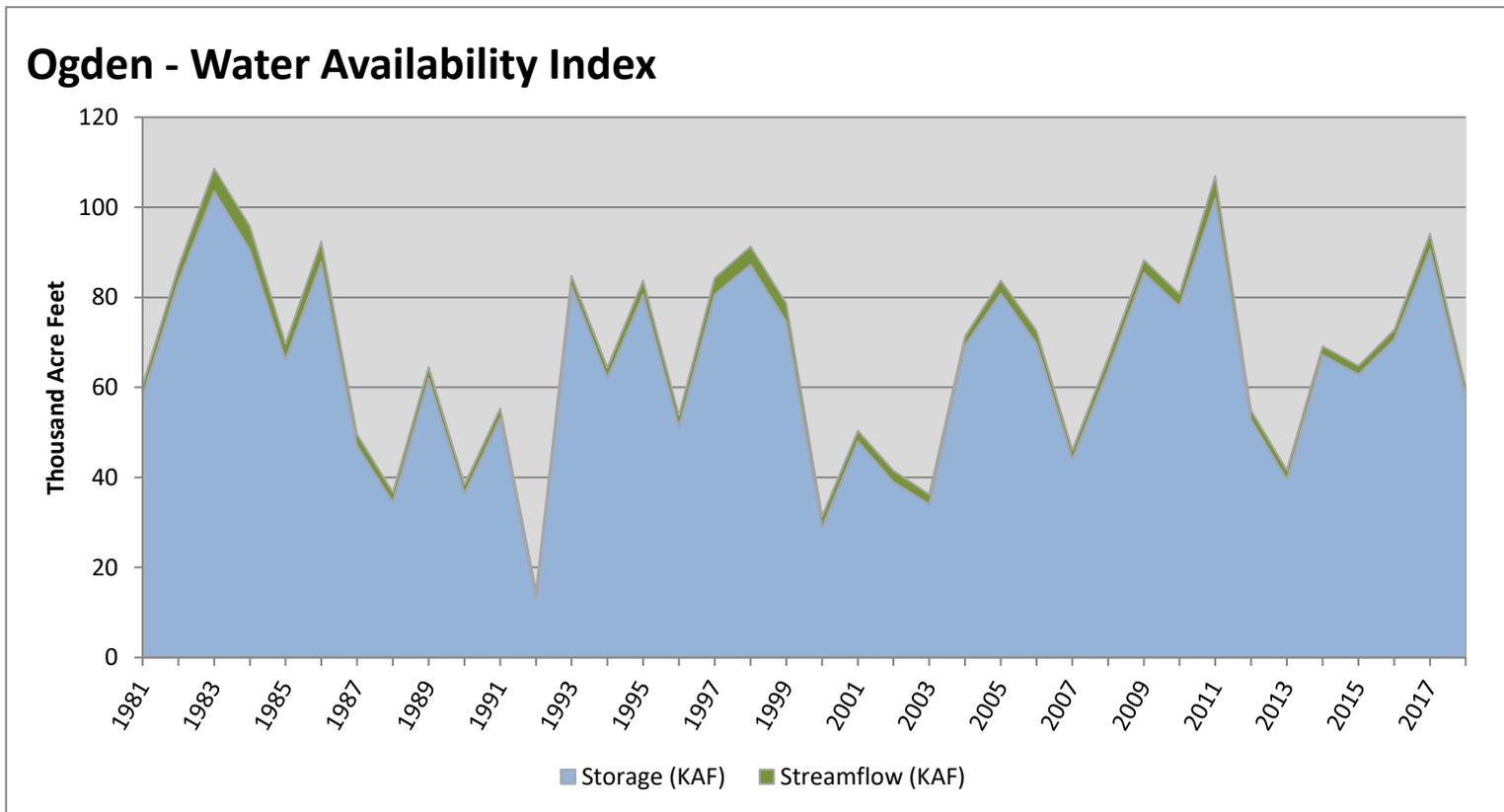
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	57.84	2.49	60.33	36	-1.18	12, 91, 81, 94

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

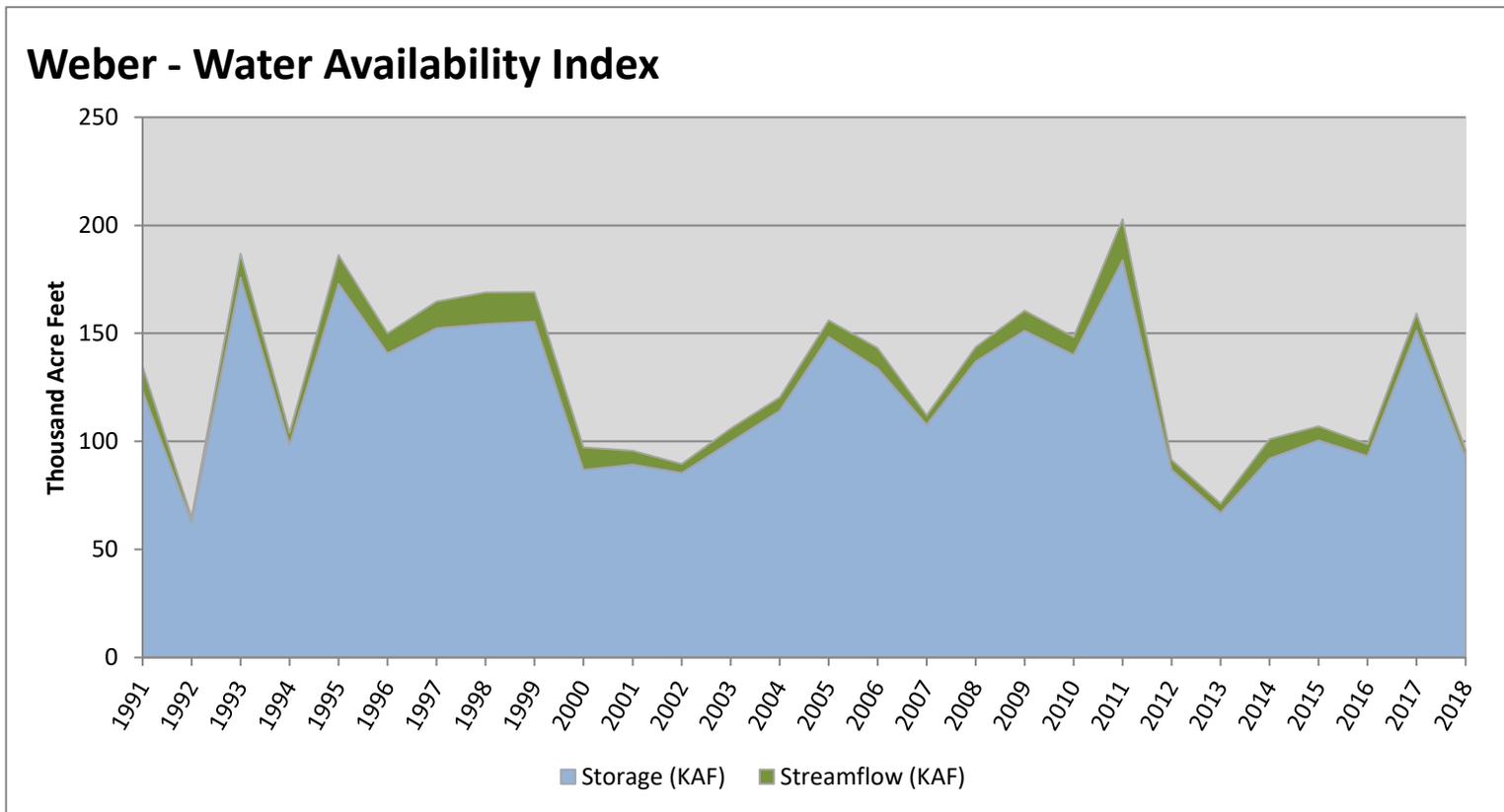


September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	92.31	3.85	96.16	21	-2.44	12, 01, 00, 16

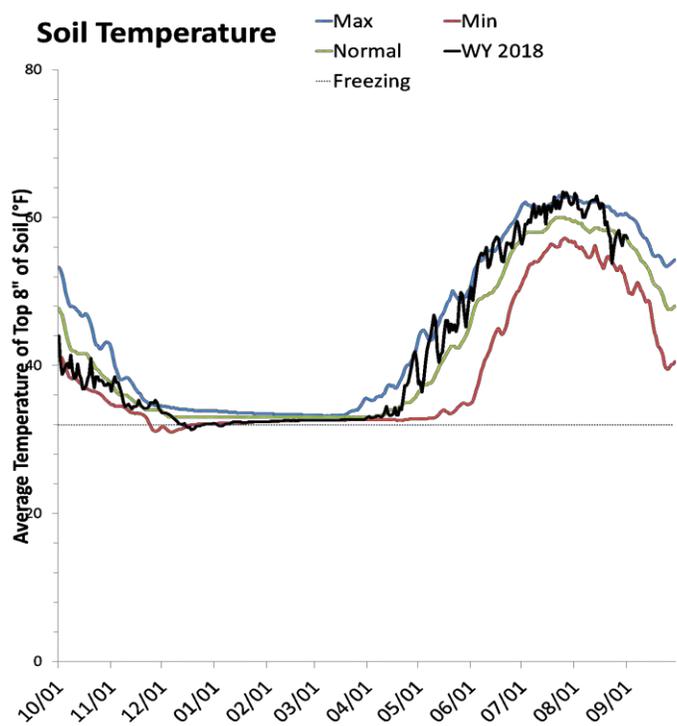
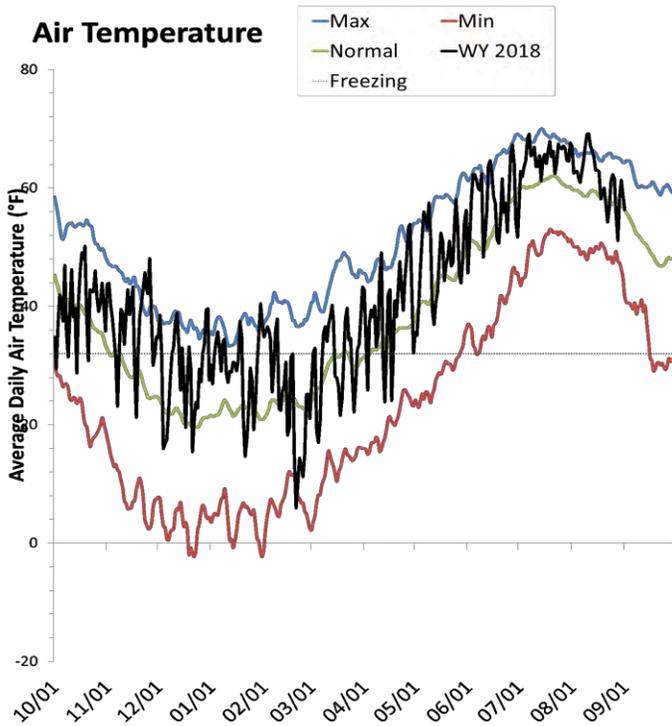
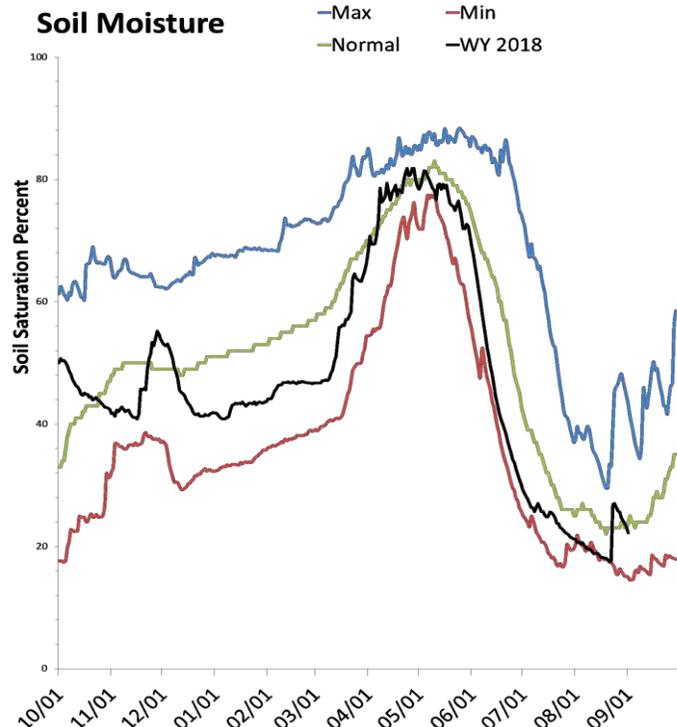
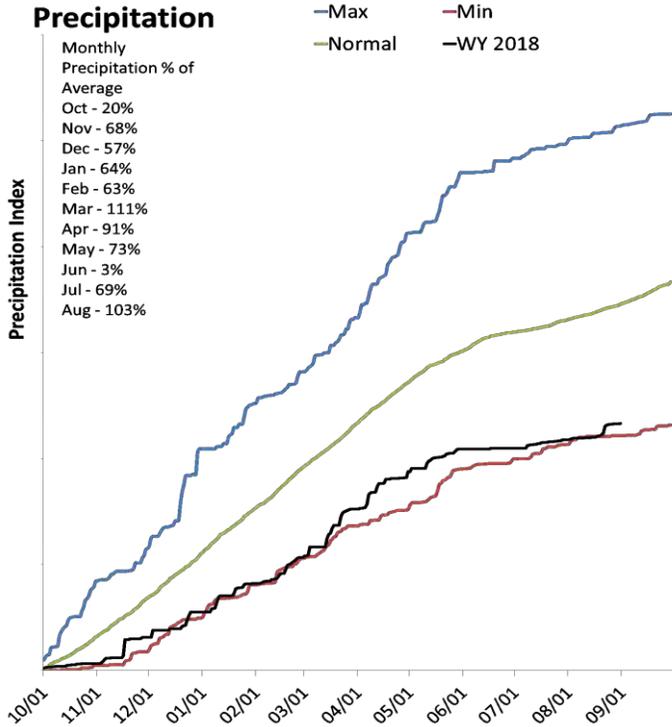
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Provo & Jordan River Basins

September 1, 2018

Precipitation in August was near average at 104%, which brings the seasonal accumulation (Oct-Aug) to 67% of average. Soil moisture is at 23% compared to 21% last year. Reservoir storage is at 67% of capacity, compared to 76% last year. The water availability index for the Provo River is 42%.



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

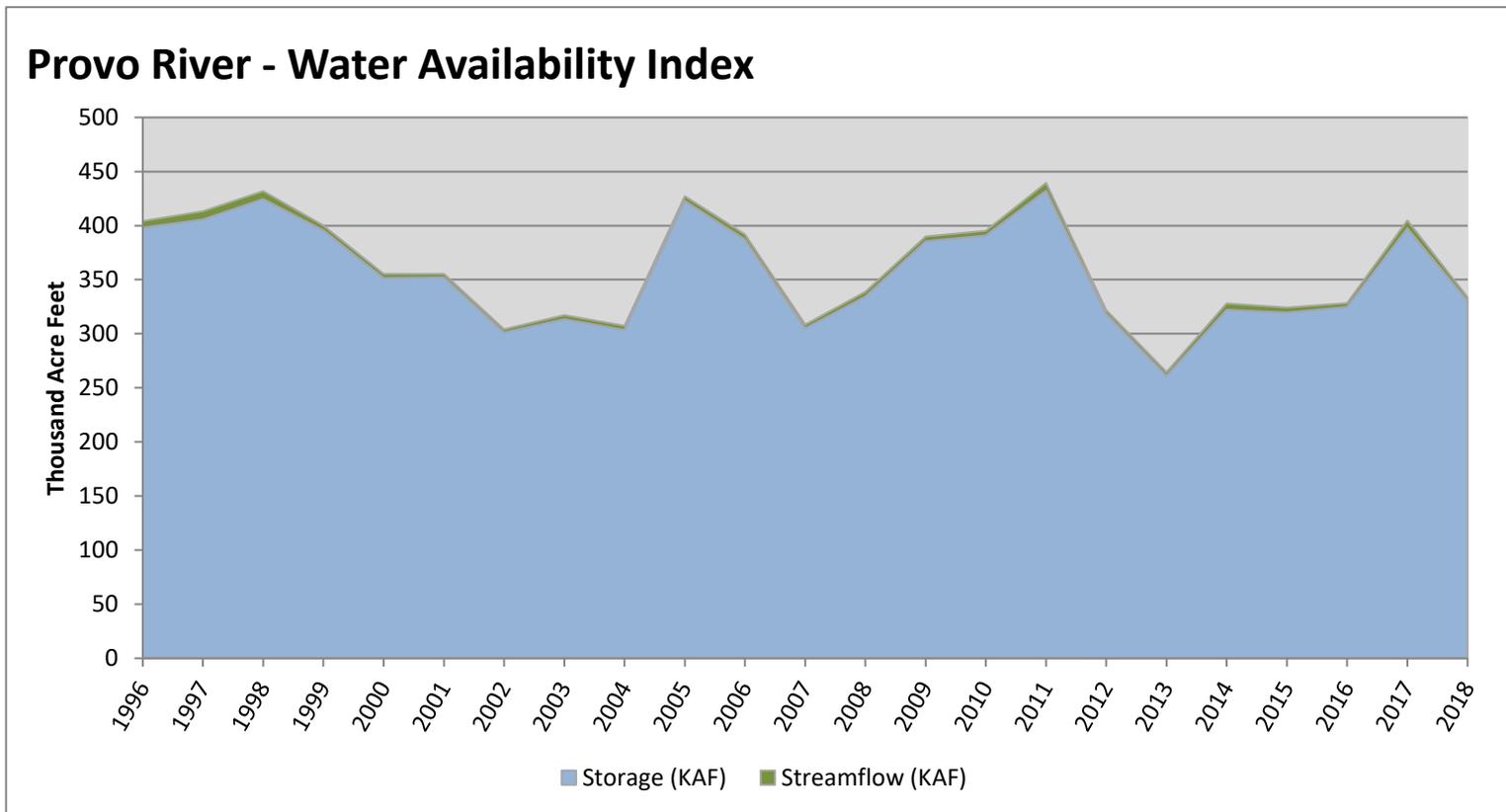
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	330.25	3.58	333.83	42	-0.69	14, 16, 08, 01

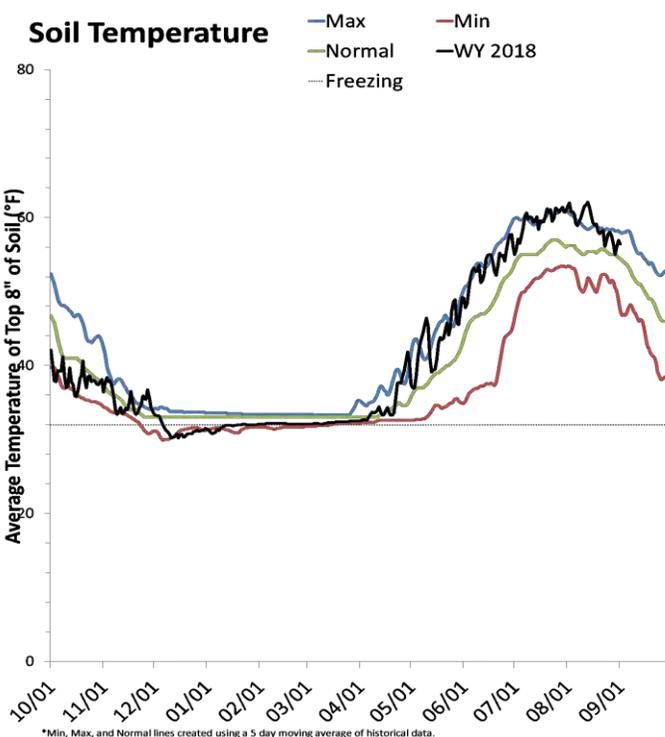
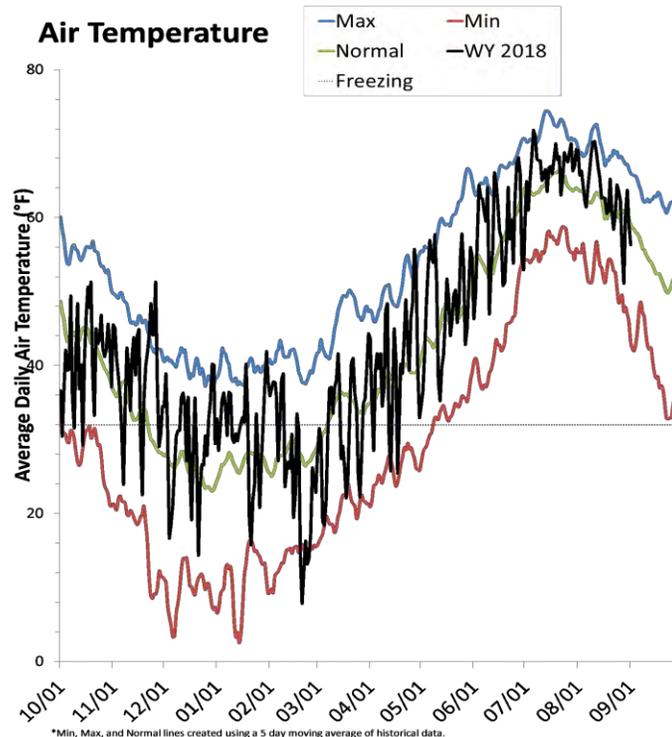
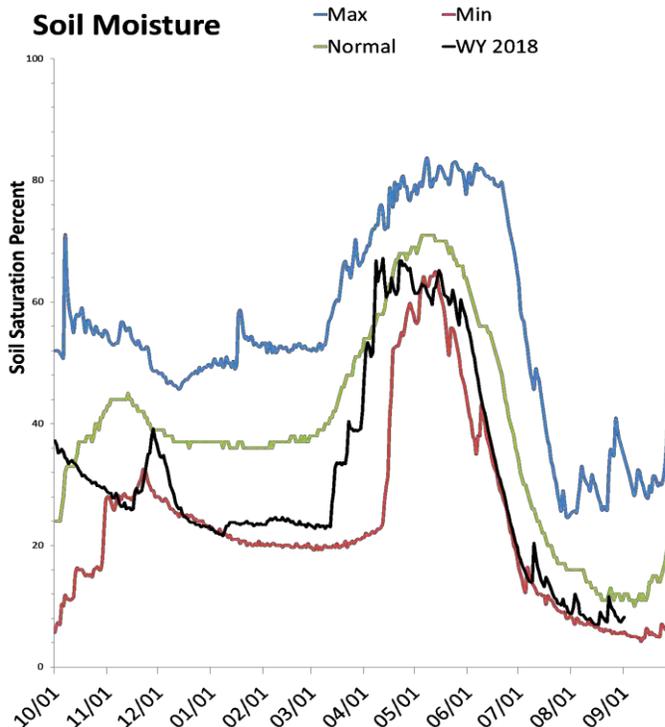
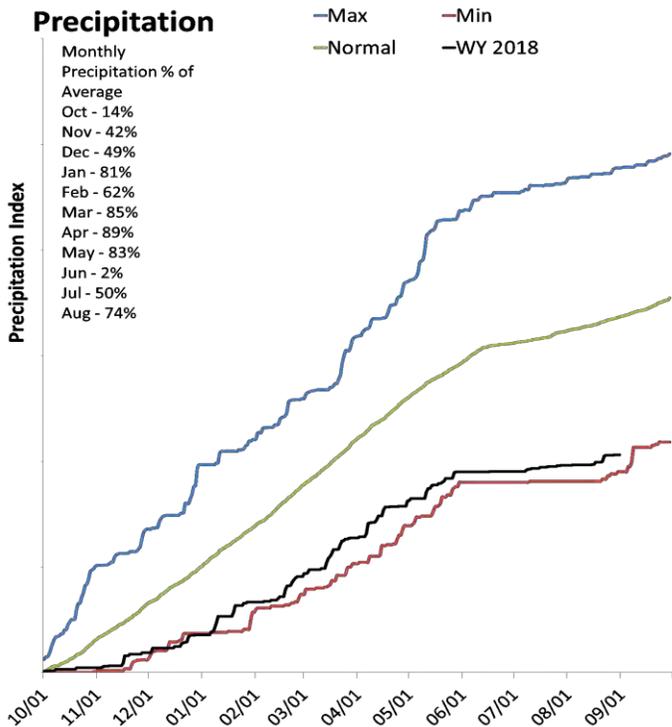
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Tooele Valley & West Desert Basins

September 1, 2018

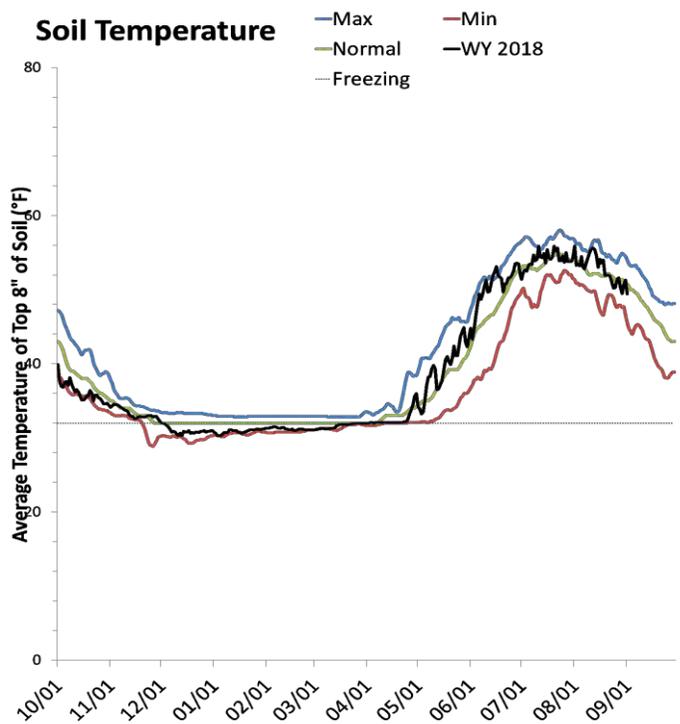
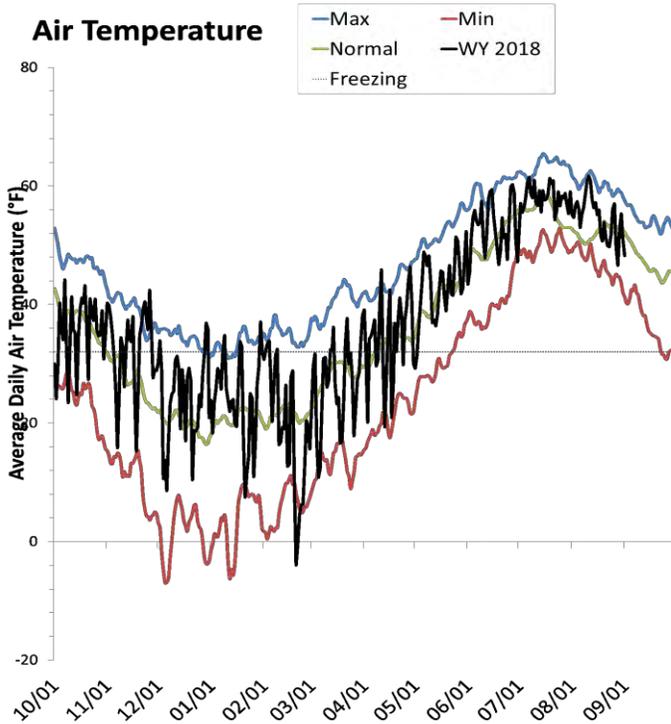
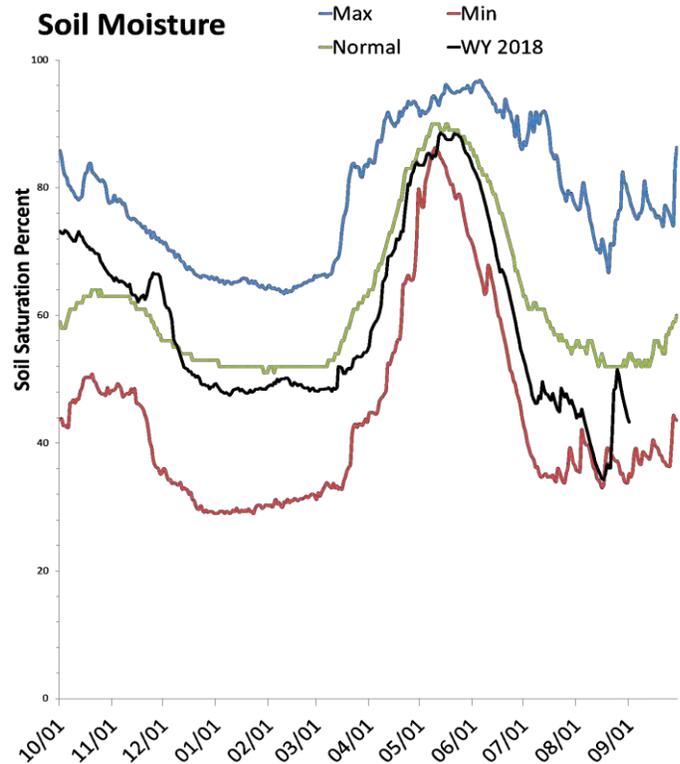
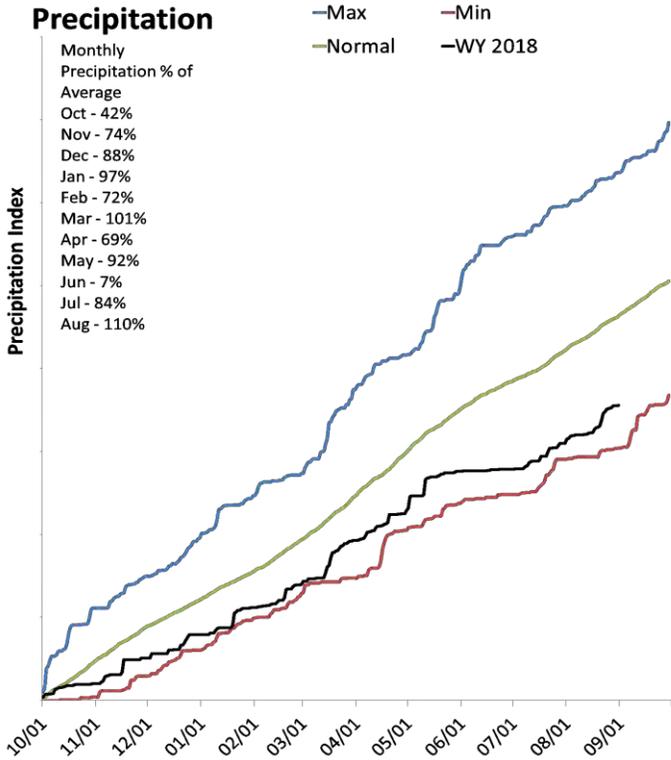
Precipitation in August was below average at 75%, which brings the seasonal accumulation (Oct-Aug) to 61% of average. Soil moisture is at 8% compared to 13% last year. Reservoir storage is at 25% of capacity, compared to 36% last year.



Northeastern Uinta Basin

September 1, 2018

Precipitation in August was above average at 111%, which brings the seasonal accumulation (Oct-Aug) to 77% of average. Soil moisture is at 42% compared to 68% last year. Reservoir storage is at 91% of capacity, compared to 94% last year. The water availability index for Blacks Fork is 11% and 34% for Smiths Creek.



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

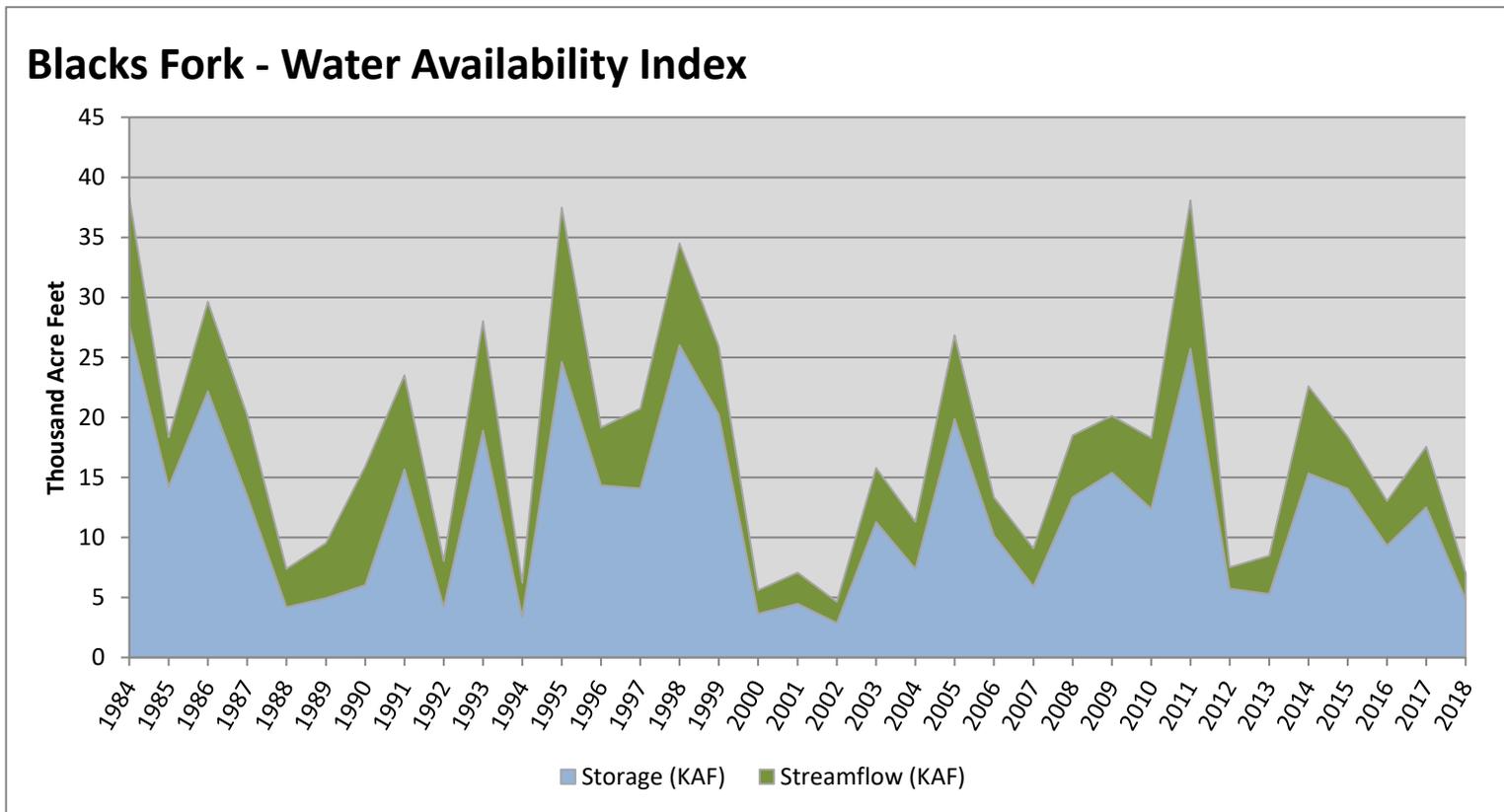
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	4.82	2.19	7.01	11	-3.24	00, 94, 01, 88

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

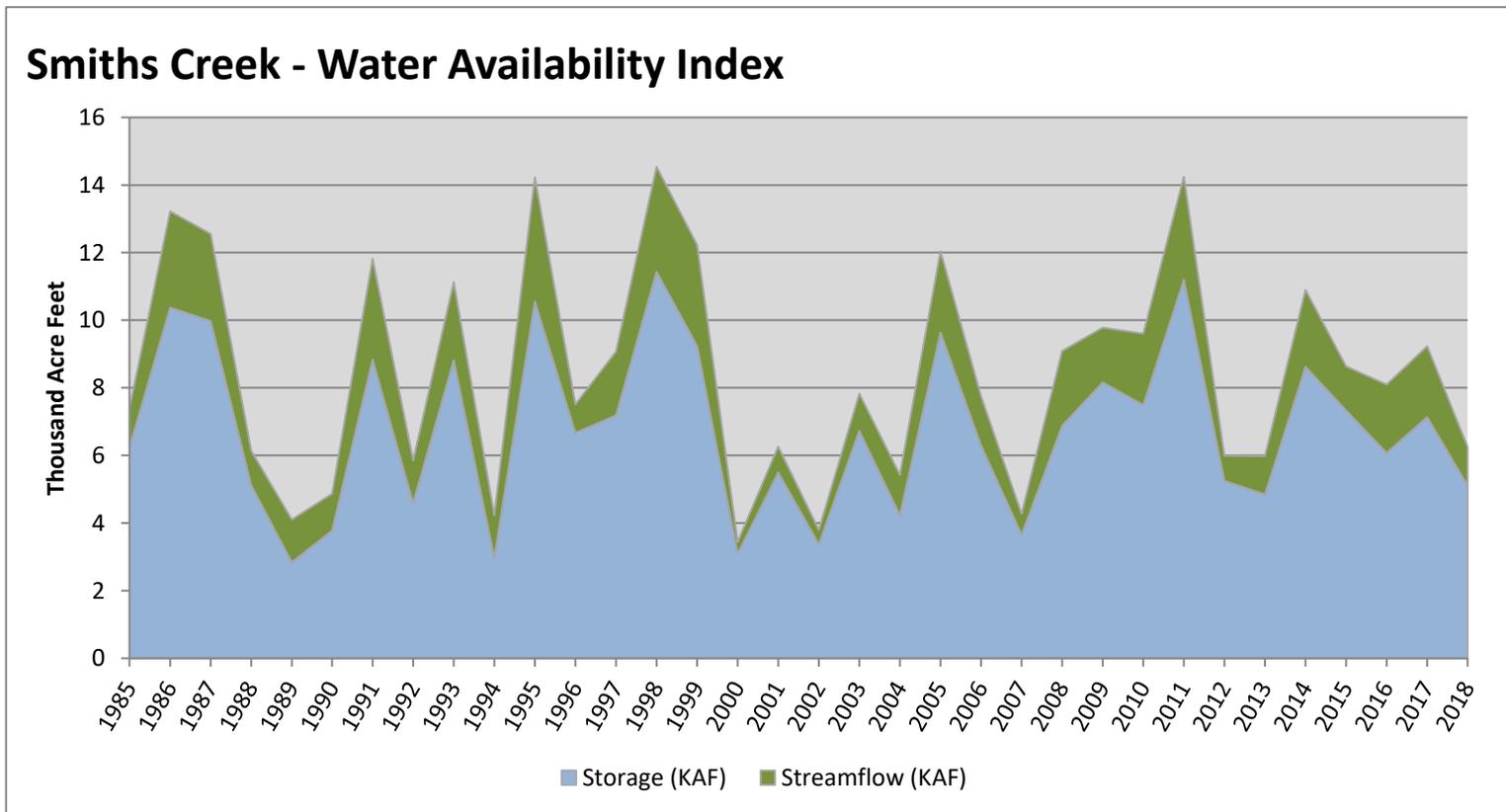


September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	5.11	1.14	6.25	34	-1.31	12, 88, 01, 85

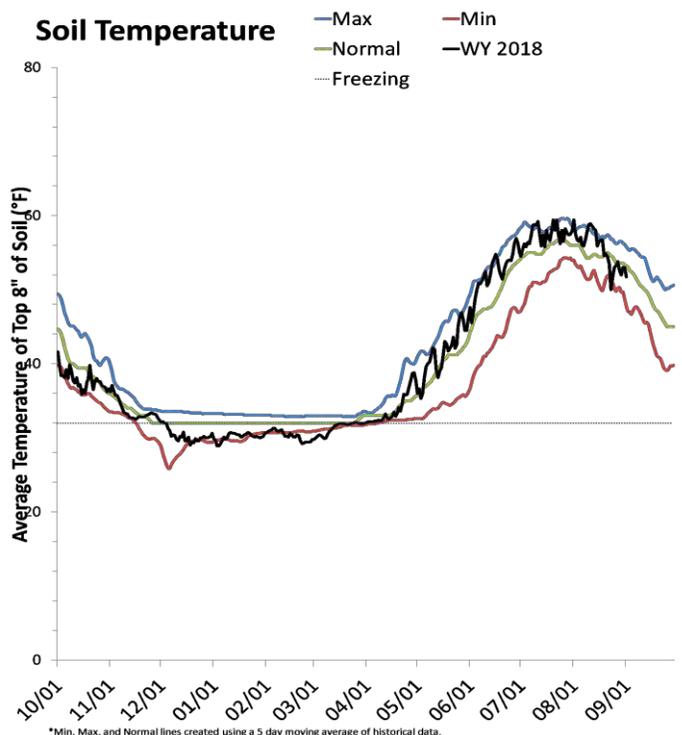
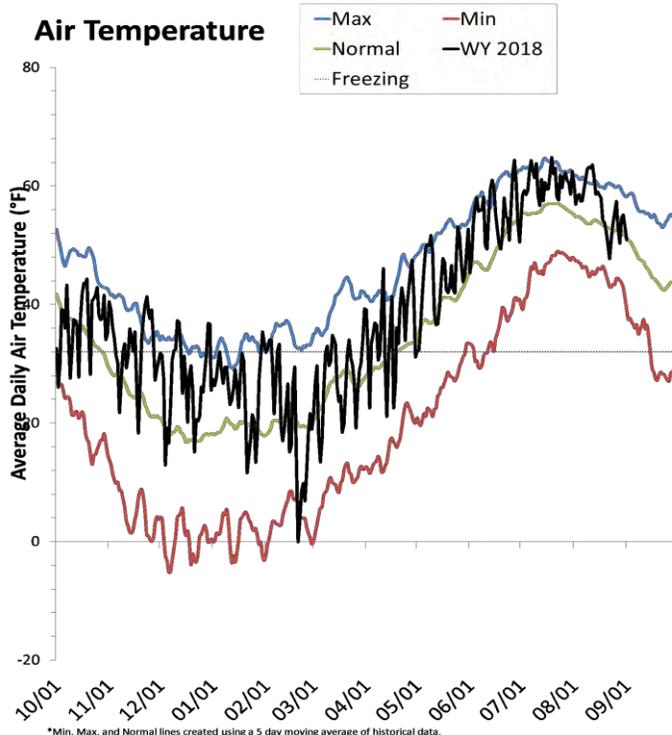
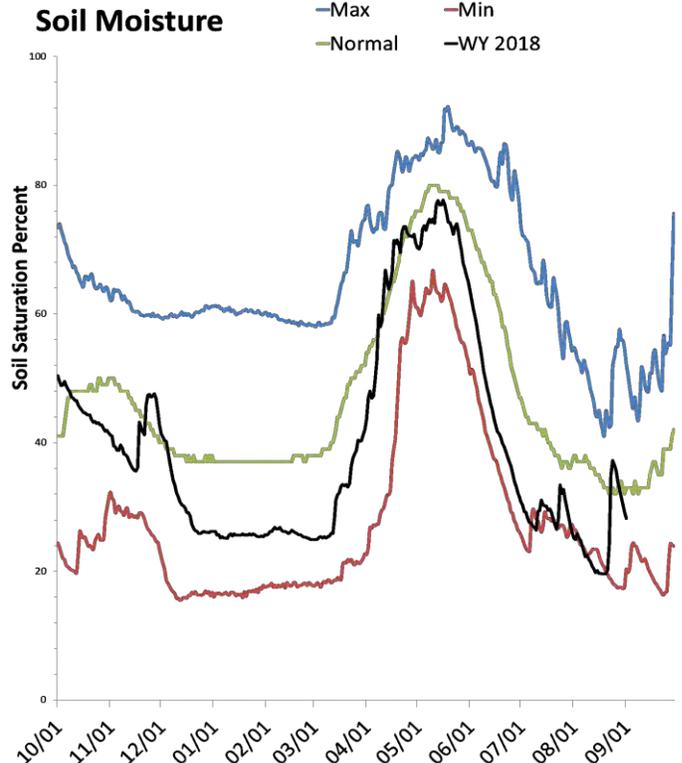
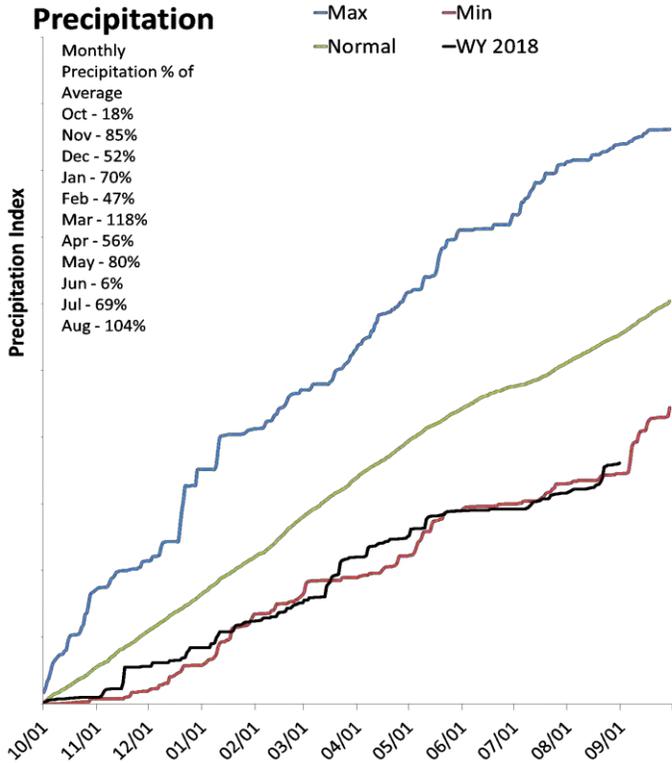
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Duchesne River Basin

September 1, 2018

Precipitation in August was near average at 105%, which brings the seasonal accumulation (Oct-Aug) to 65% of average. Soil moisture is at 29% compared to 36% last year. Reservoir storage is at 73% of capacity, compared to 83% last year. The water availability index for the Western Uintas is 28% and 5% for the Eastern Uintas.



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

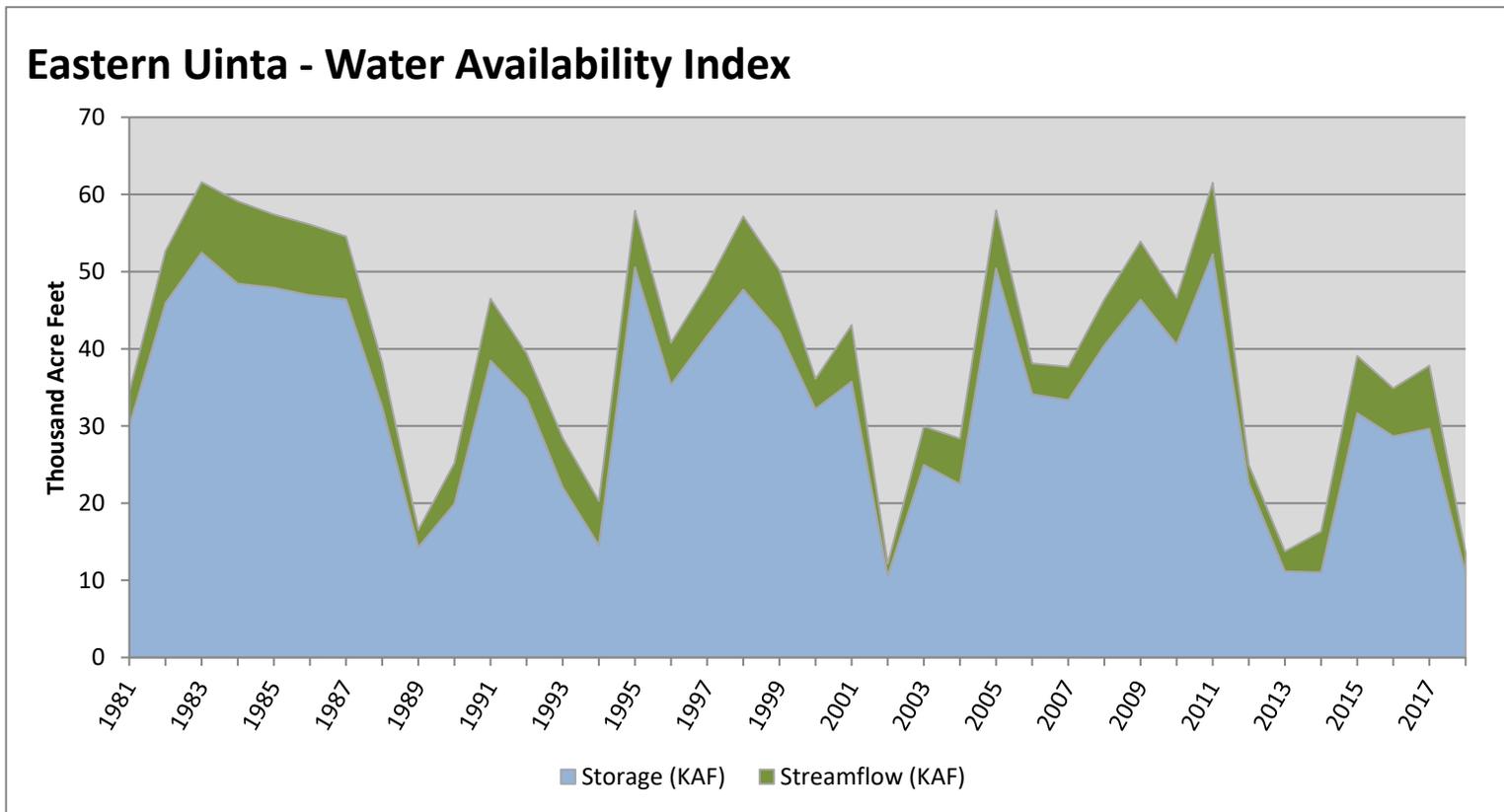
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uinta	10.87	2.69	13.56	5	-3.74	02, 13, 14, 89

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

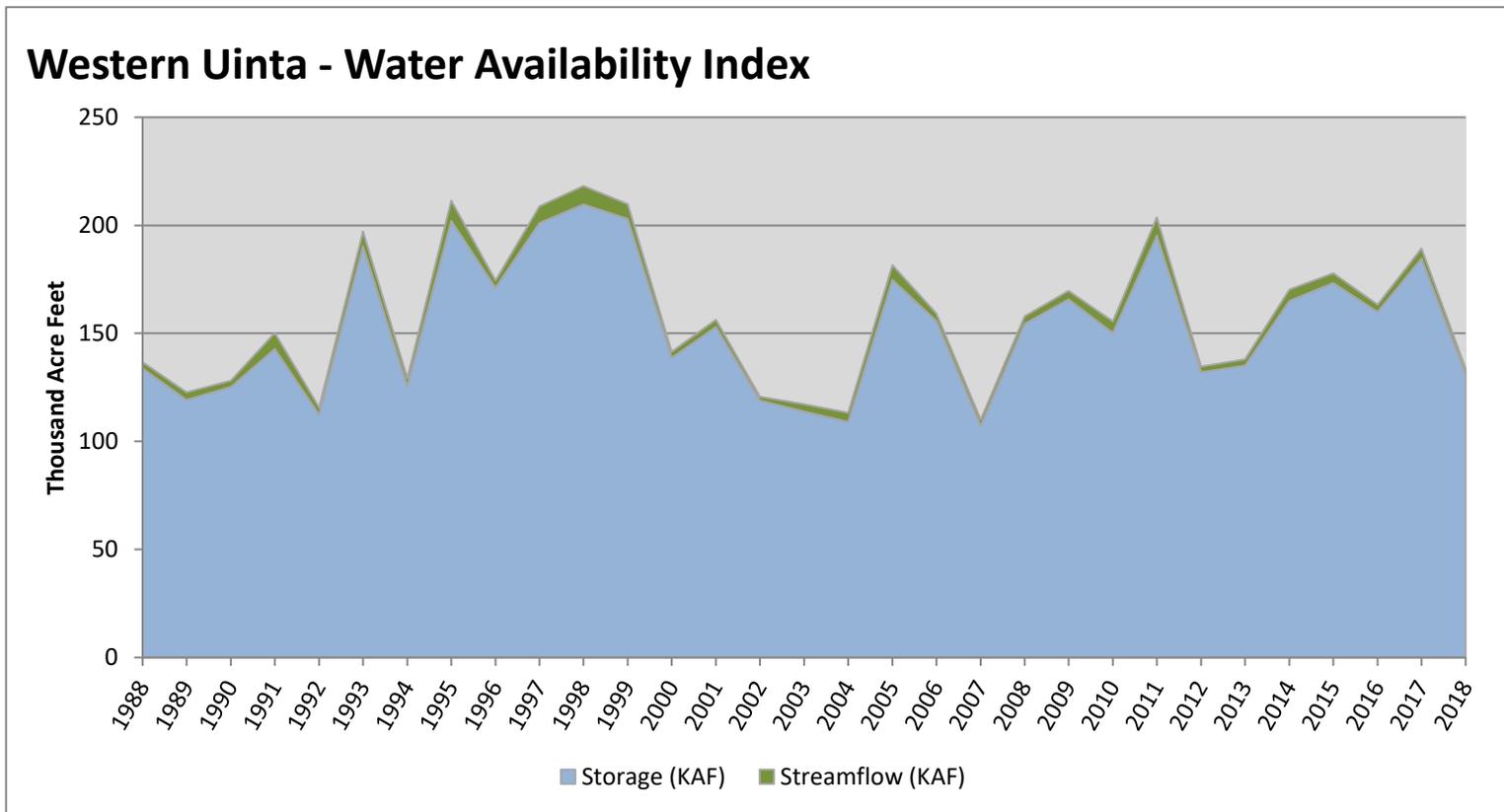


September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uinta	130.96	2.61	133.57	28	-1.82	90, 94, 12, 88

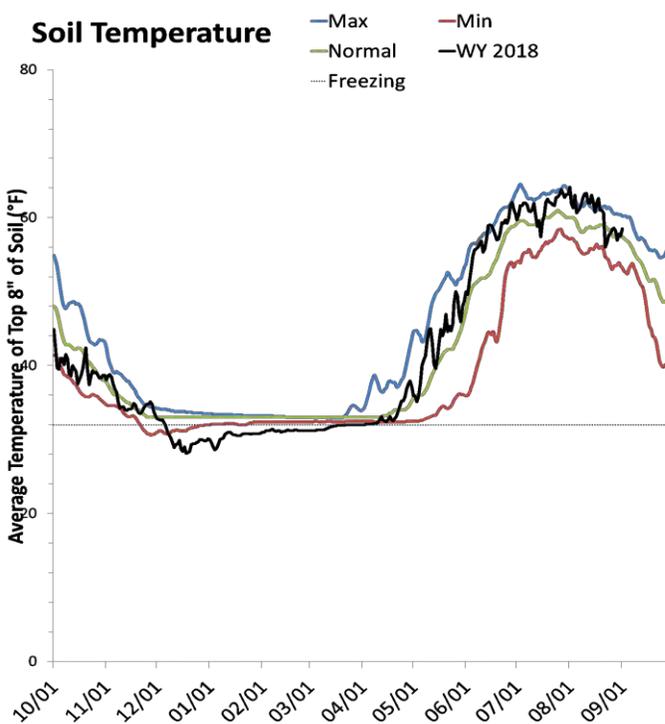
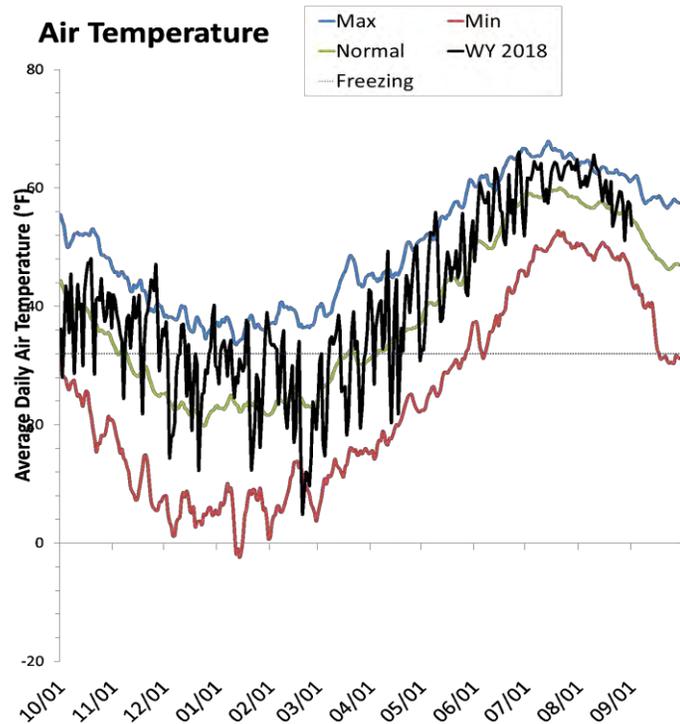
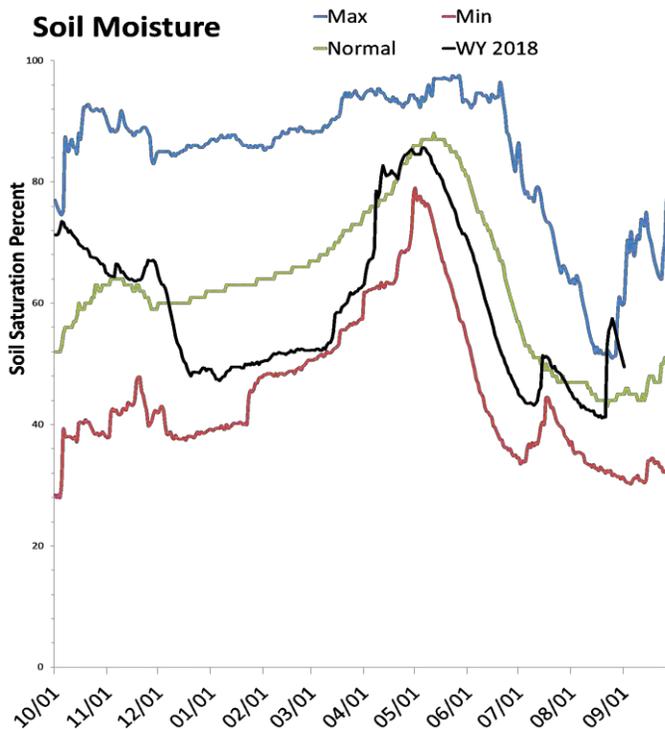
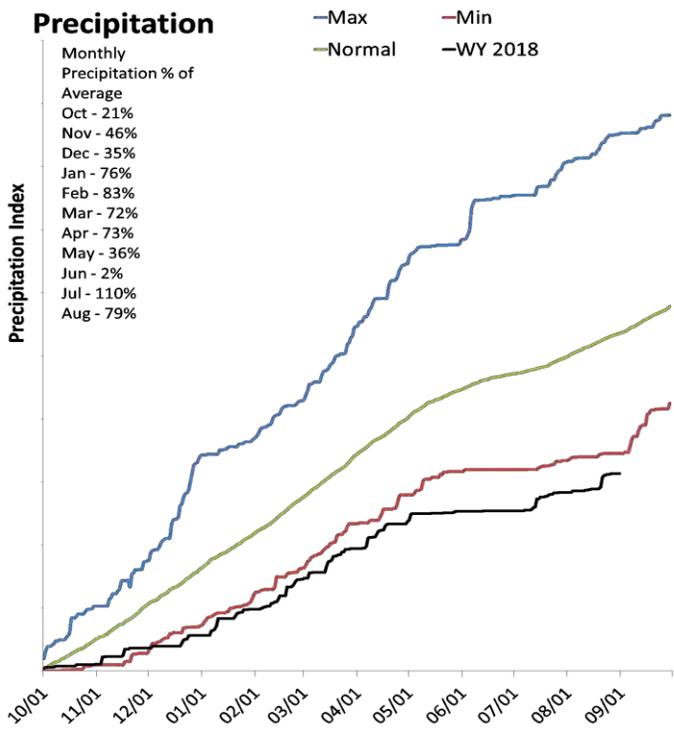
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



San Pitch River Basin

September 1, 2018

Precipitation in August was below average at 79%, which brings the seasonal accumulation (Oct-Aug) to 58% of average. Soil Moisture is at 50% compared to 43% last year. Reservoir storage is at 0% of capacity, compared to 21% last year. The water availability index for the San Pitch is 3%.



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

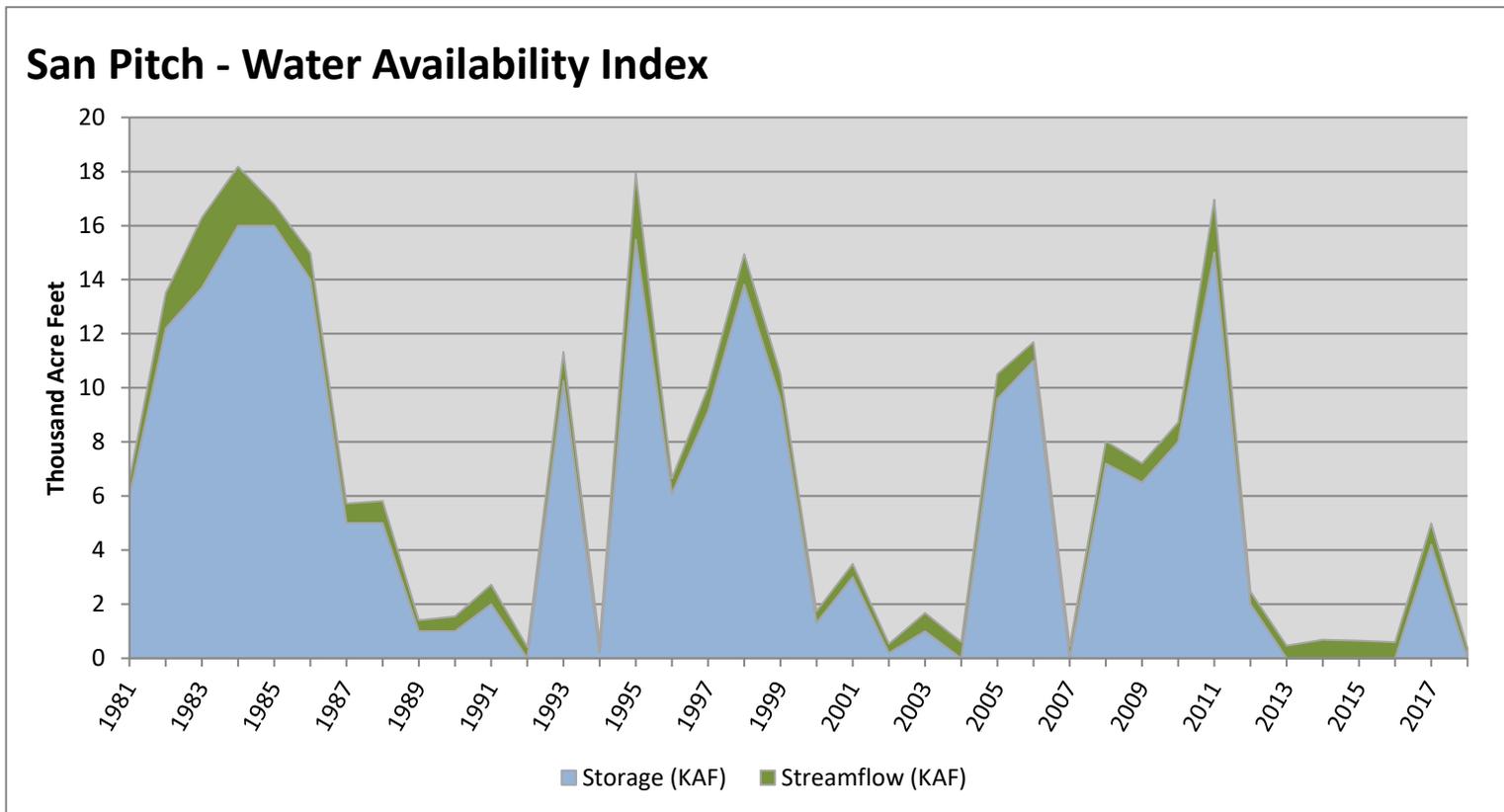
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	0.00	0.36	0.36	3	-3.95	92, 07, 13, 02

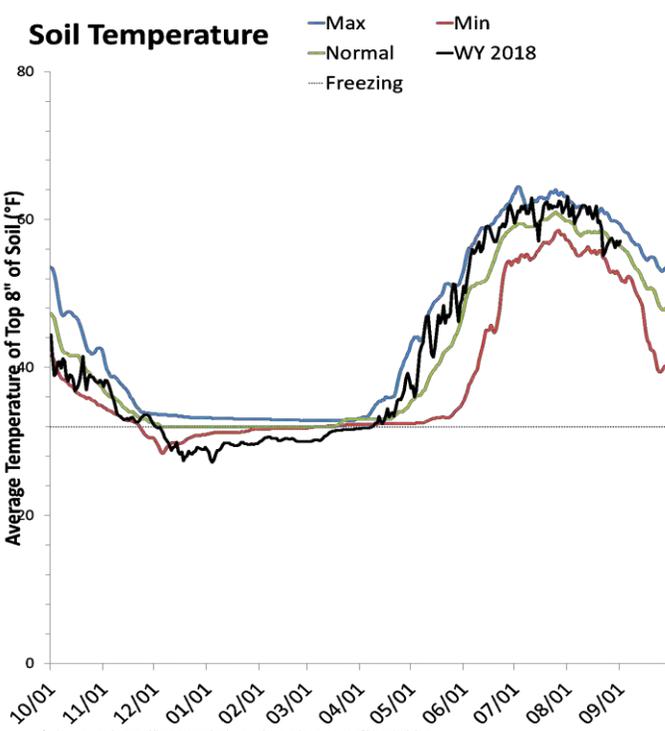
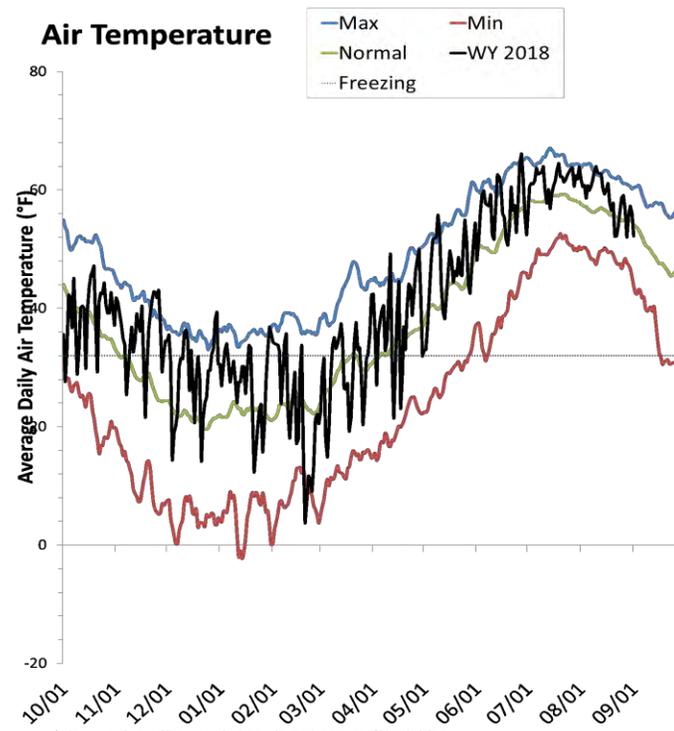
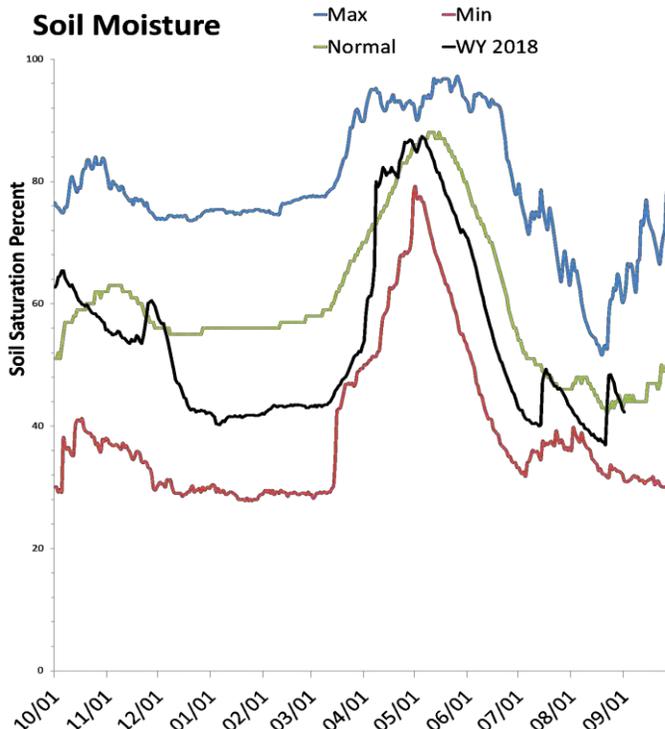
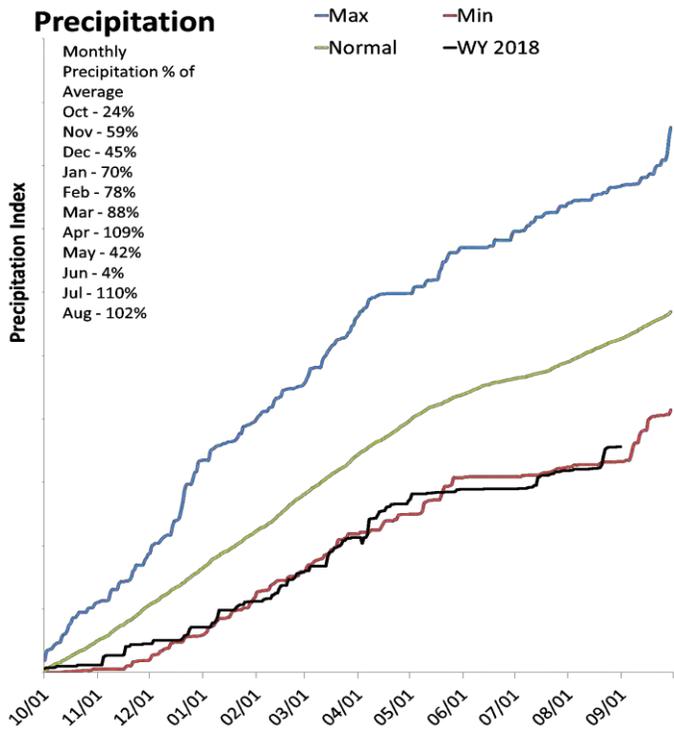
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Price & San Rafael Basins

September 1, 2018

Precipitation in August was near average at 102%, which brings the seasonal accumulation (Oct-Aug) to 68% of average. Soil moisture is at 43% compared to 46% last year. Reservoir storage is at 44% of capacity, compared to 76% last year. The water availability index for the Price River is 49%, and 13% for Joe's Valley.



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

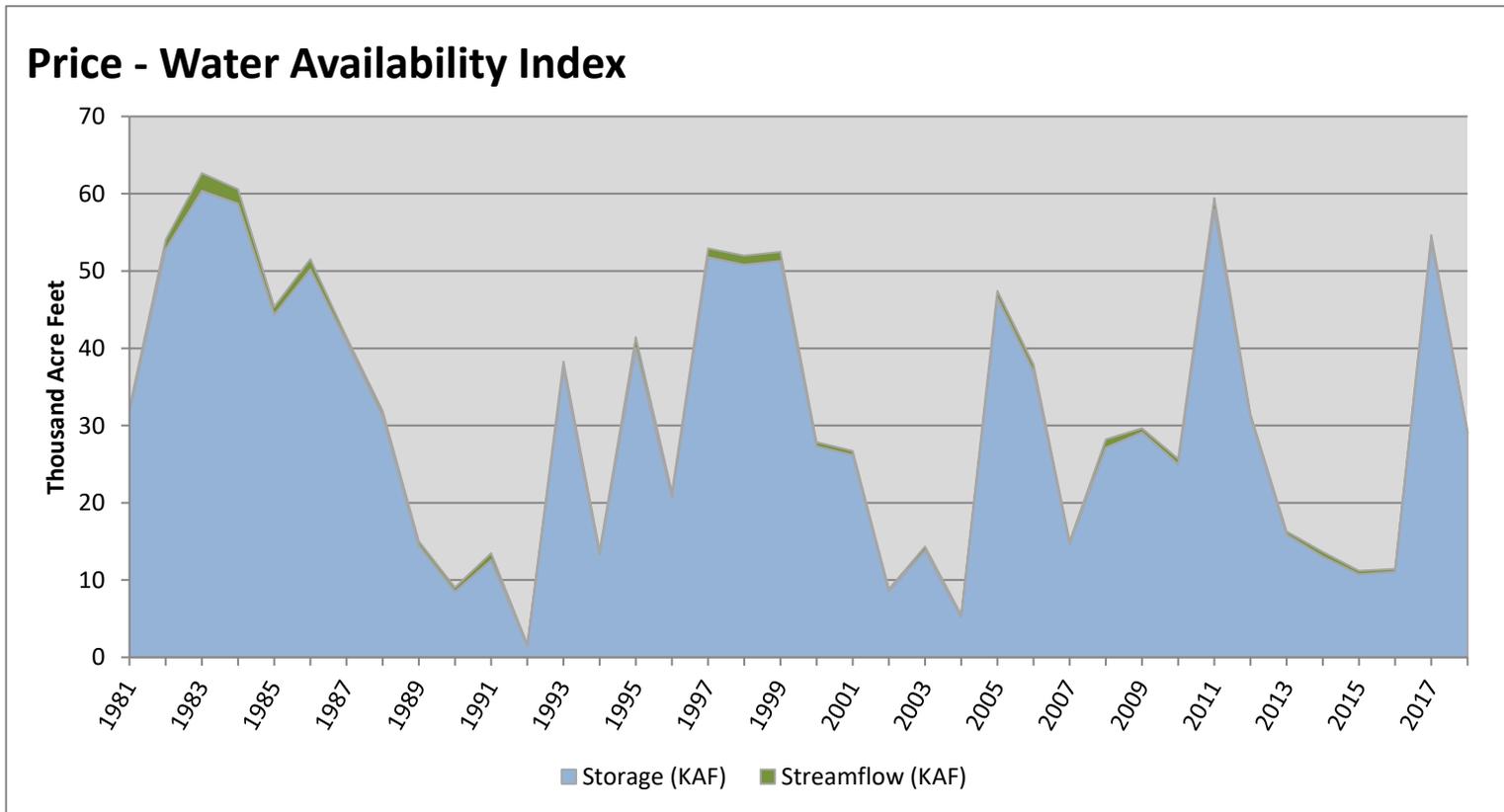
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	28.99	0.19	29.18	49	-0.11	00, 08, 09, 12

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

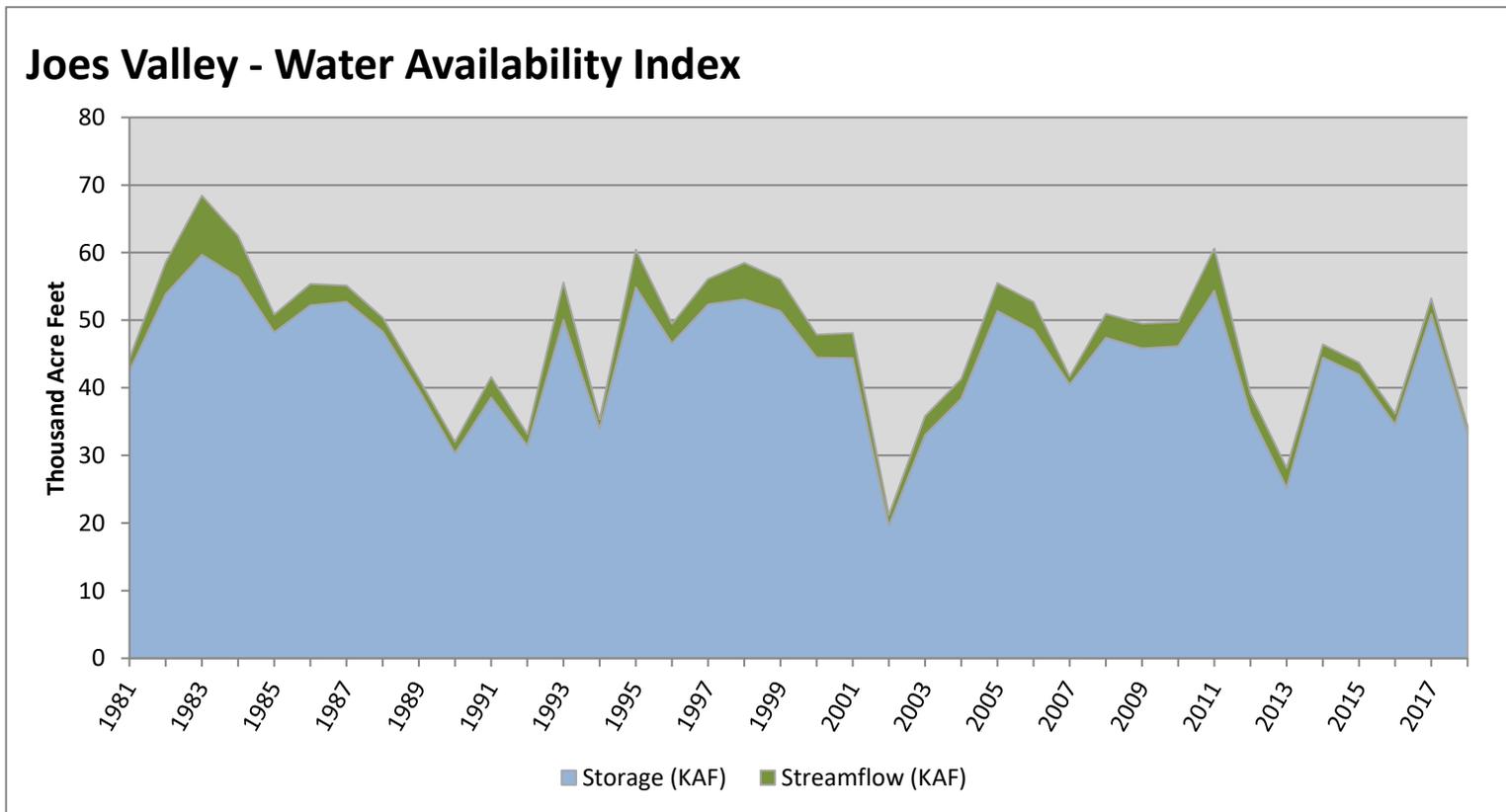


September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joese Valley	33.19	1.14	34.33	13	-3.1	90, 92, 94, 03

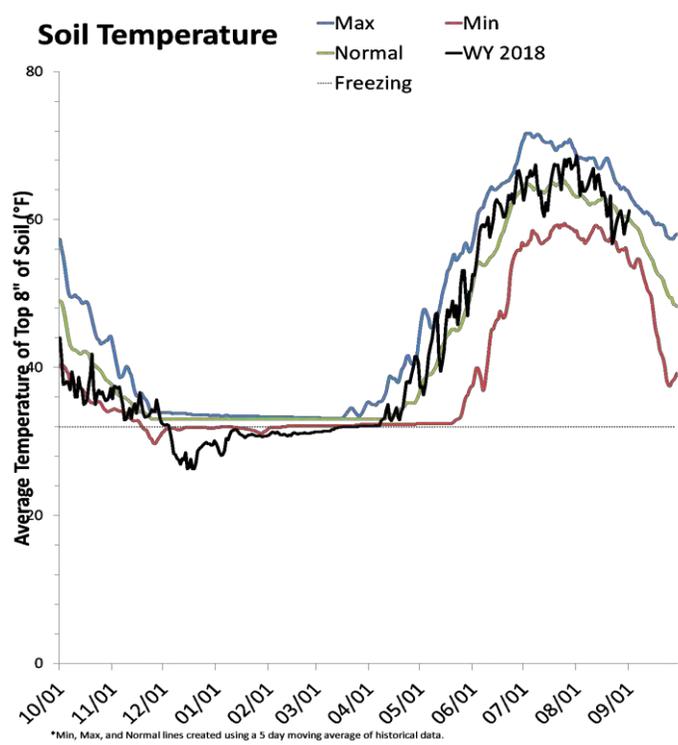
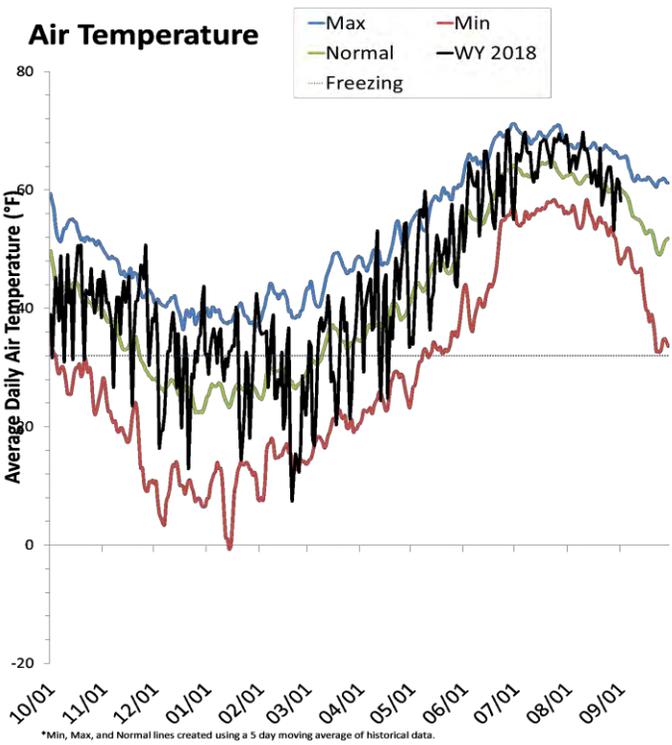
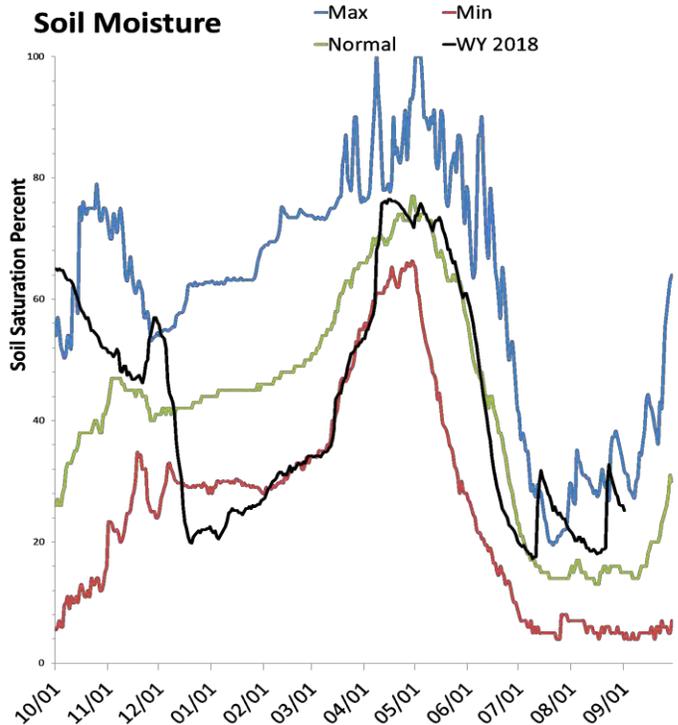
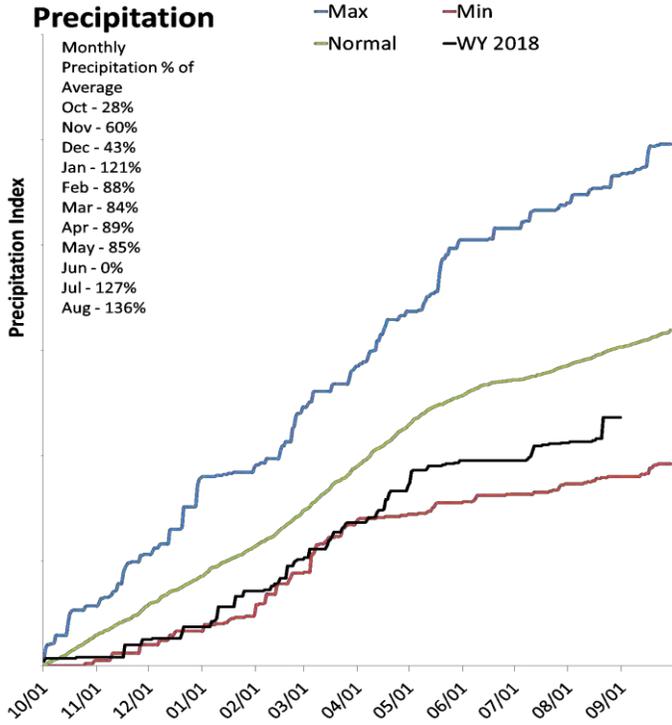
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Lower Sevier Basin

September 1, 2018

Precipitation in August was much above average at 133%, which brings the seasonal accumulation (Oct-Aug) to 78% of average. Soil moisture is at 26% compared to 17% last year. Reservoir storage is at 3% of capacity, compared to 5% 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.

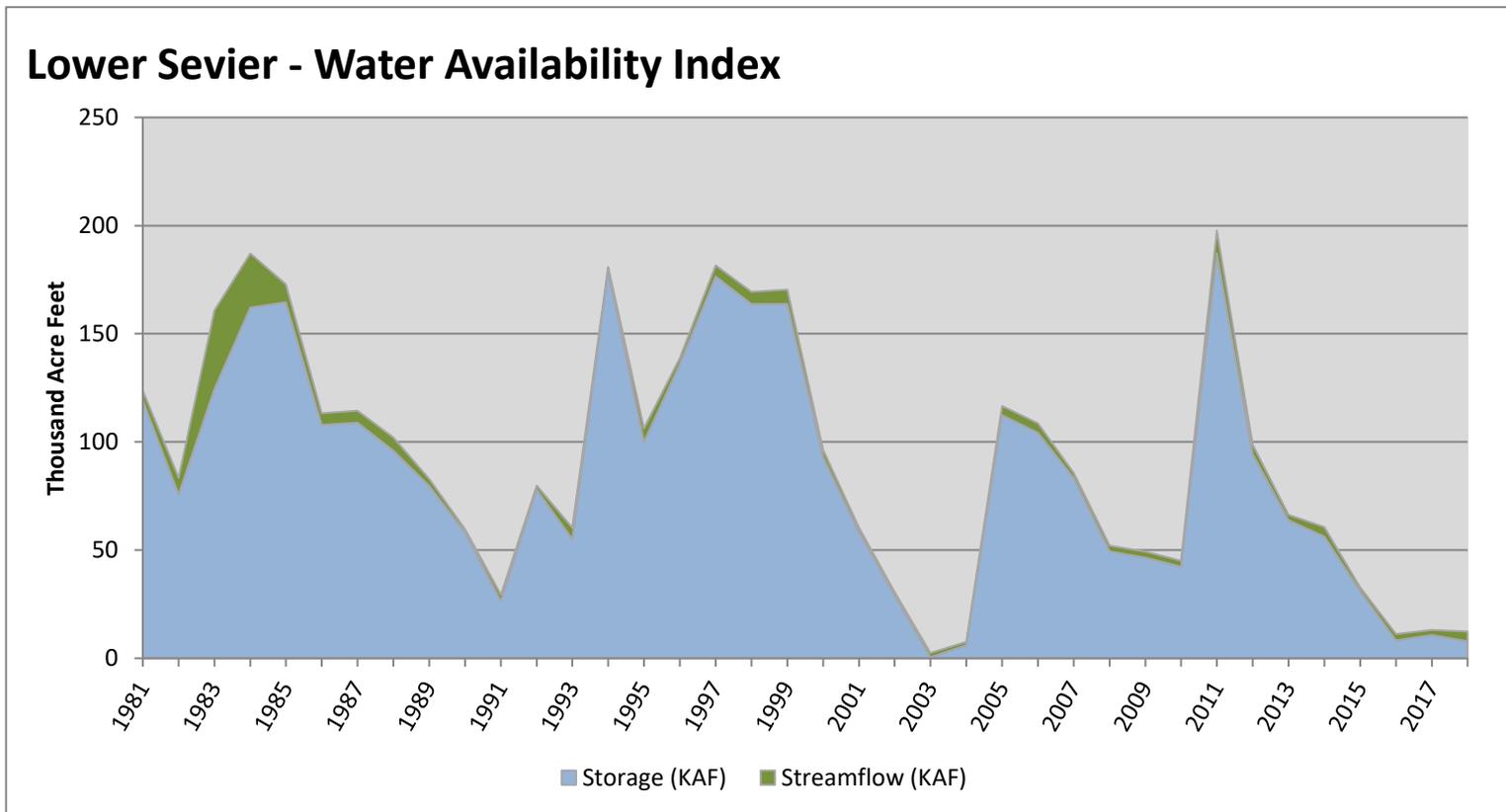
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	7.93	4.37	12.30	10	-3.31	04, 16, 17, 91

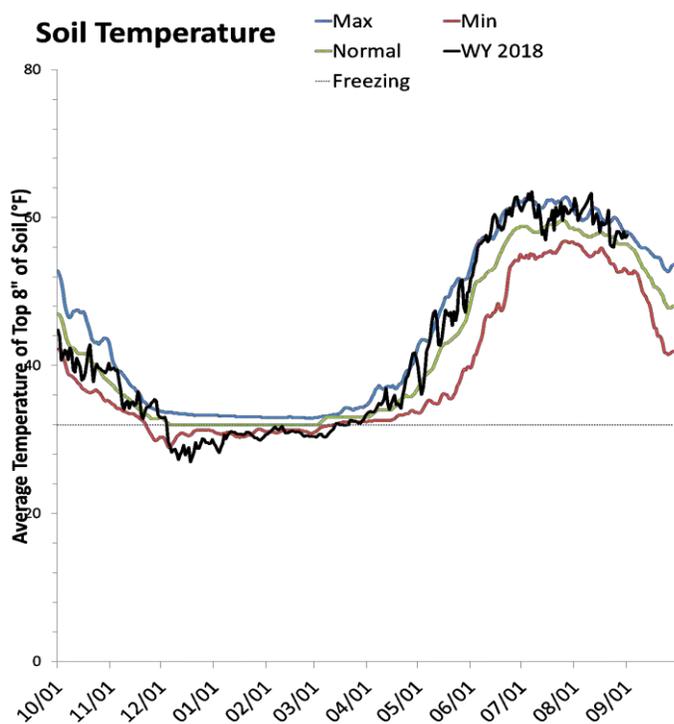
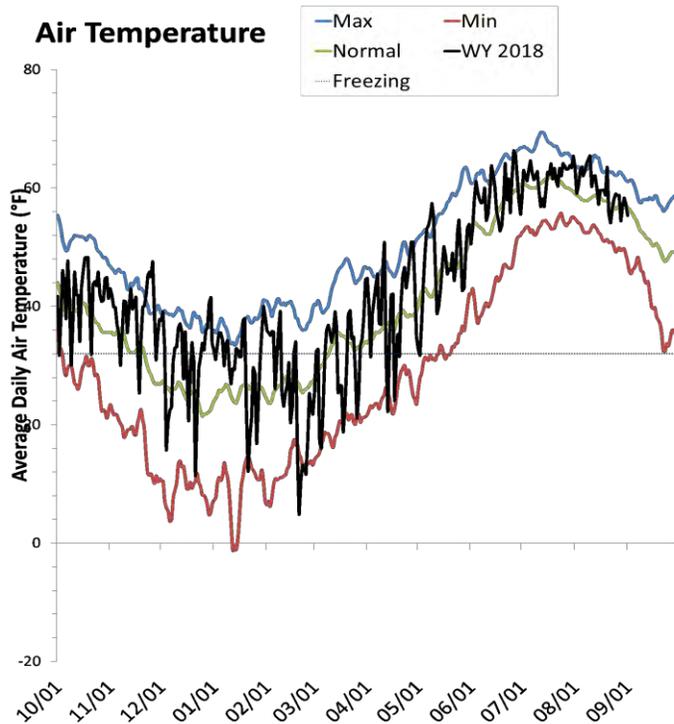
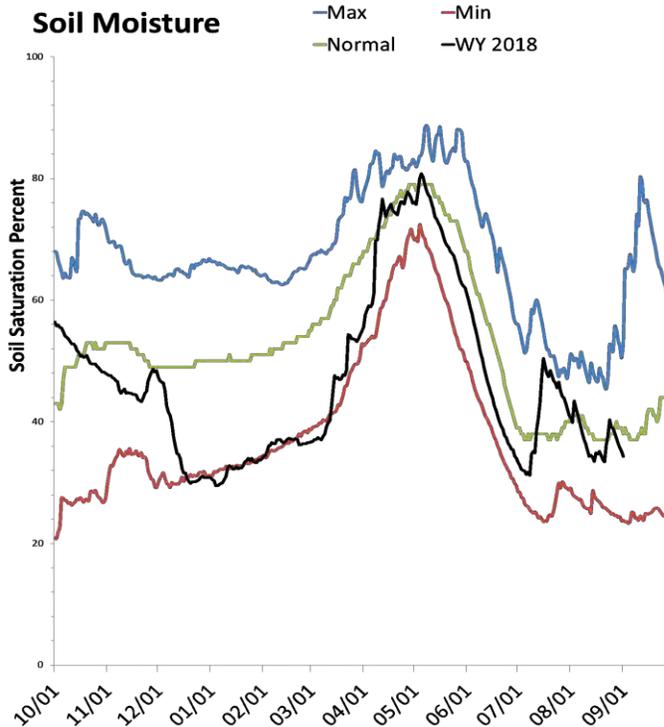
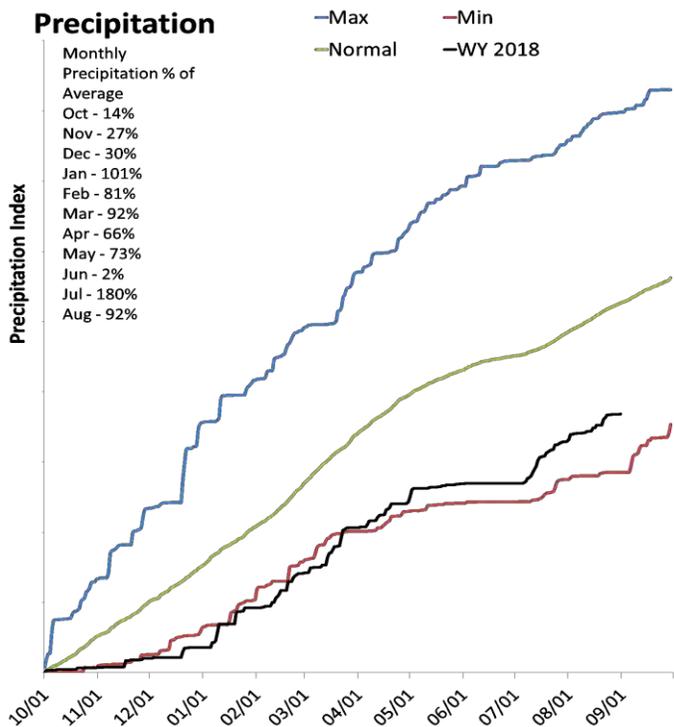
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Upper Sevier Basin

September 1, 2018

Precipitation in August was near average at 92%, which brings the seasonal accumulation (Oct-Aug) to 70% of average. Soil moisture is at 34% compared to 39% last year. Reservoir storage is at 12% of capacity, compared to 28% last year. The water availability index for the Upper Sevier is 10%.



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

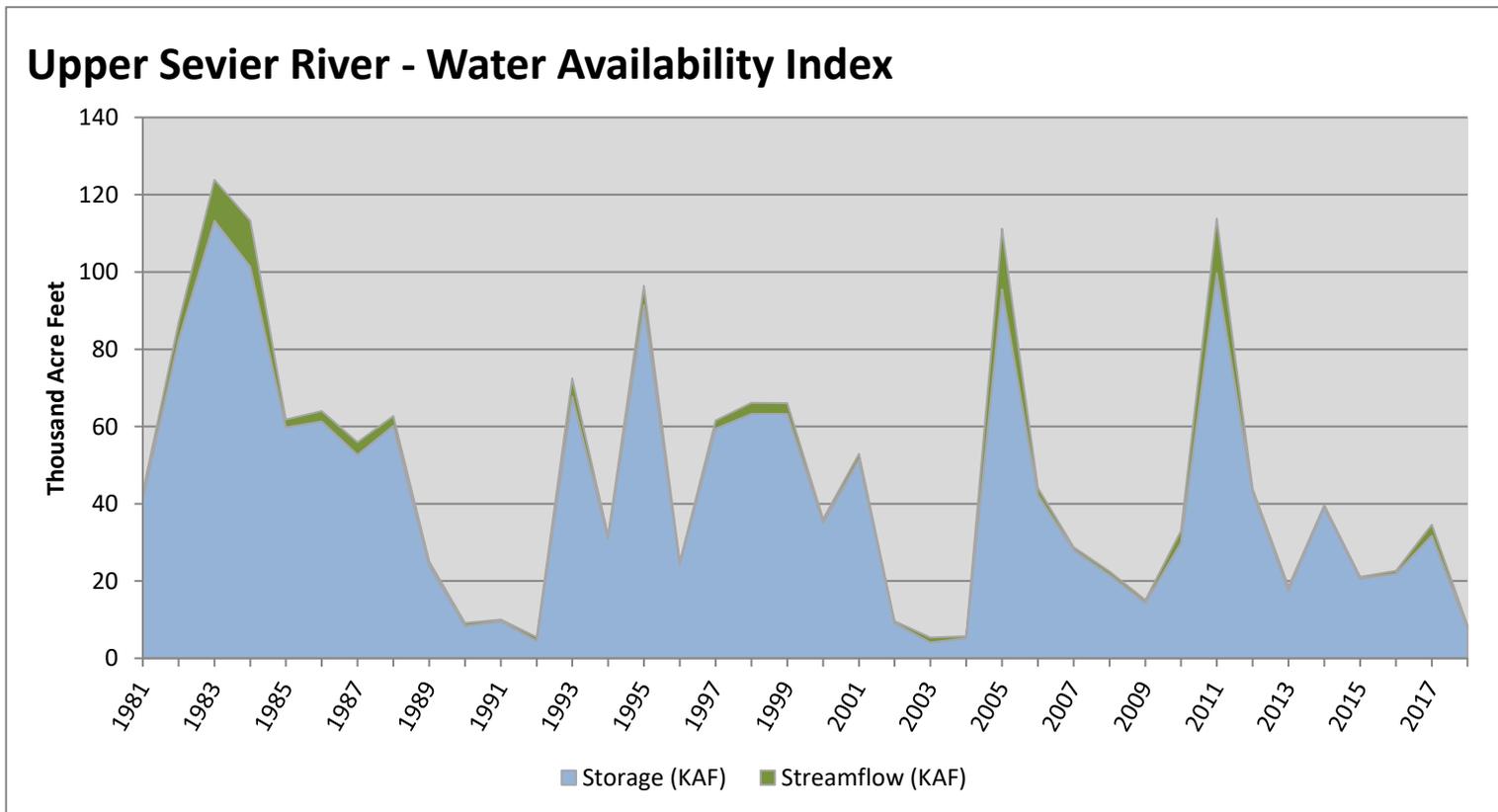
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	7.85	0.71	8.56	10	-3.31	92, 04, 90, 02

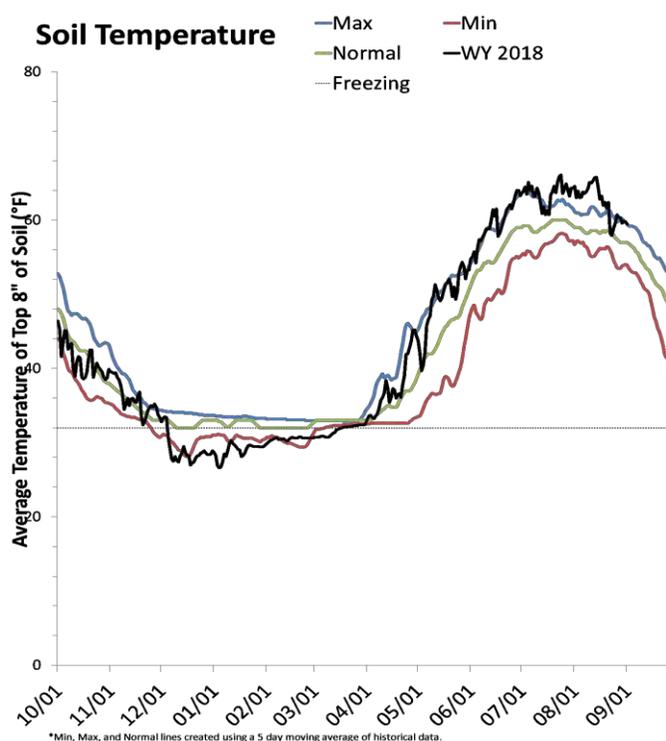
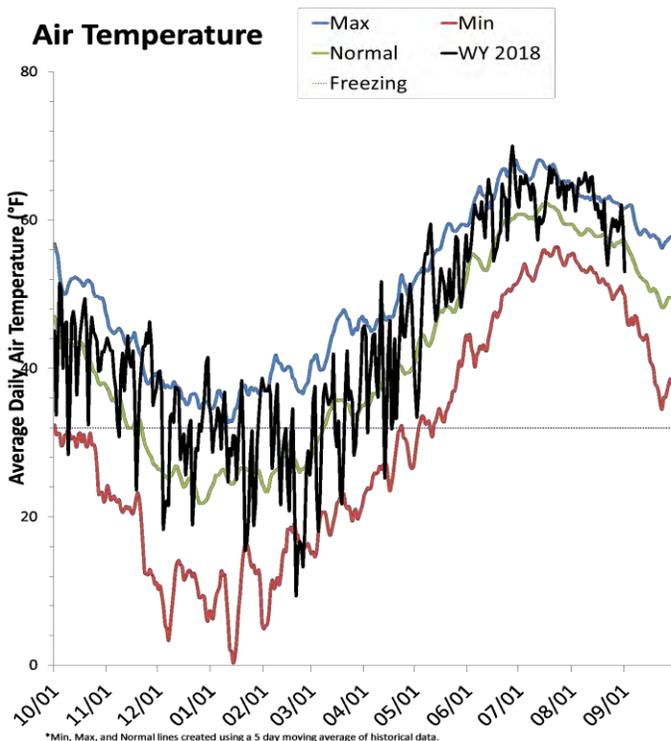
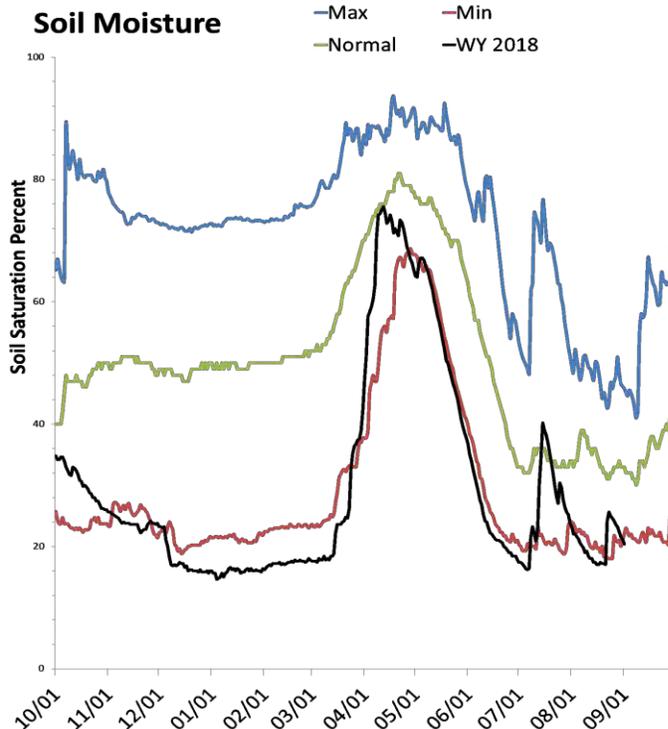
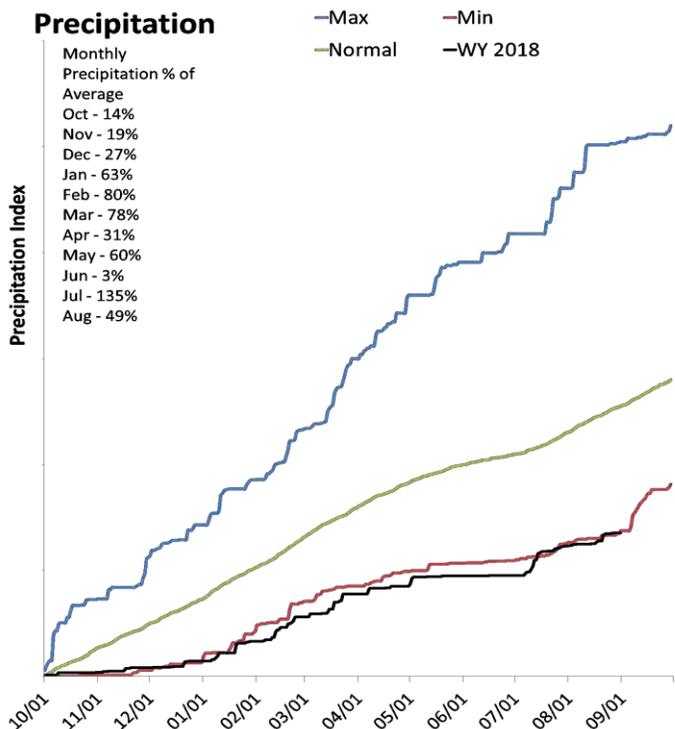
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southeastern Utah

September 1, 2018

Precipitation in August was much below average at 49%, which brings the seasonal accumulation (Oct-Aug) to 53% of average. Soil moisture is at 21% compared to 28% last year. Reservoir storage is at 10% of capacity, compared to 44% last year. The water availability index for Moab is 9%.



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

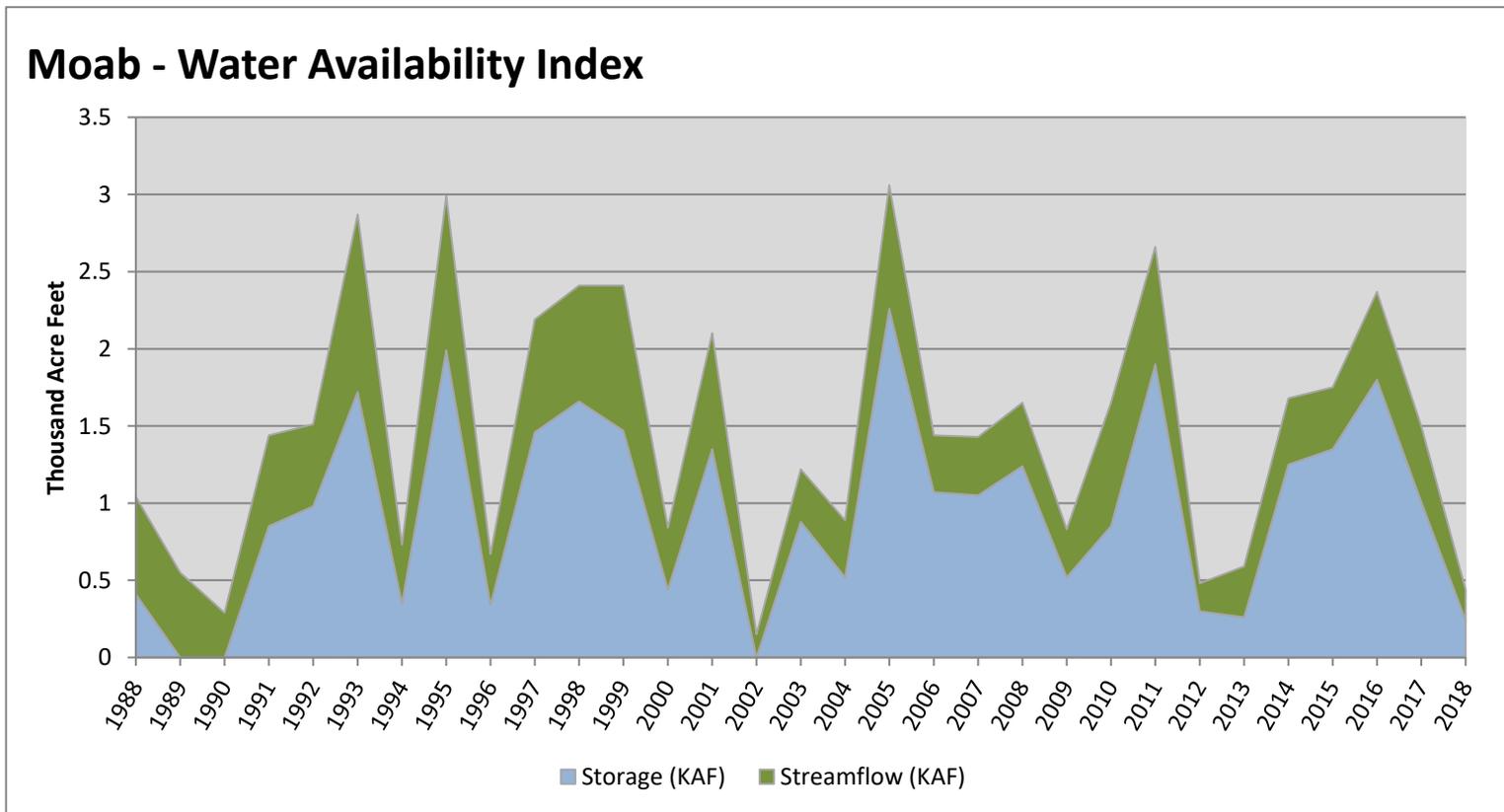
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	0.24	0.20	0.44	9	-3.39	02, 90, 12, 89

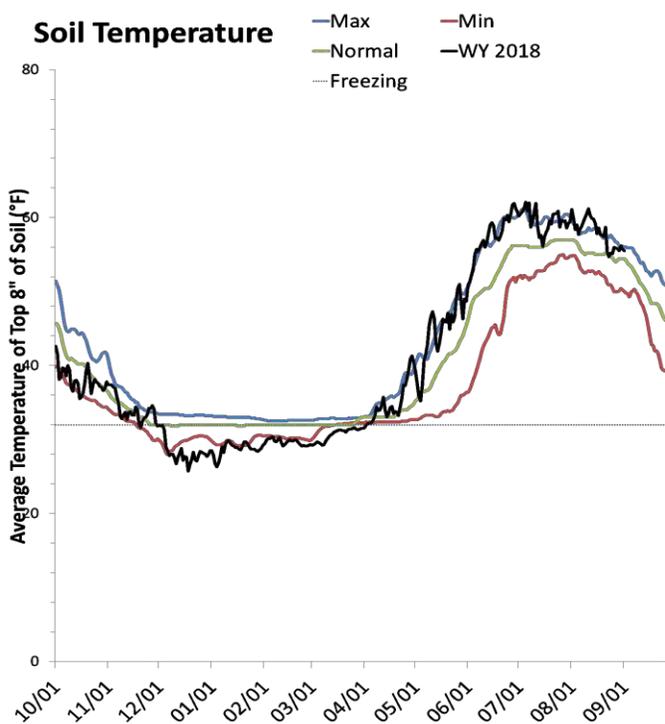
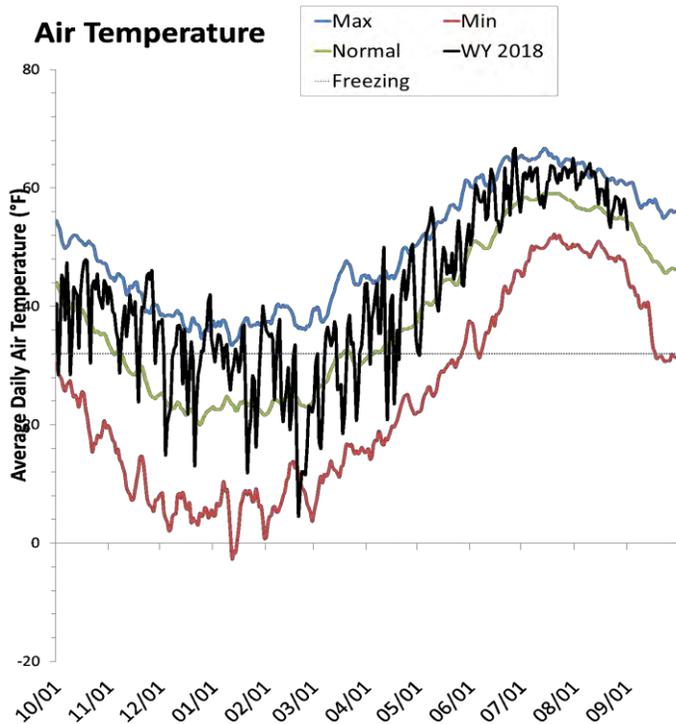
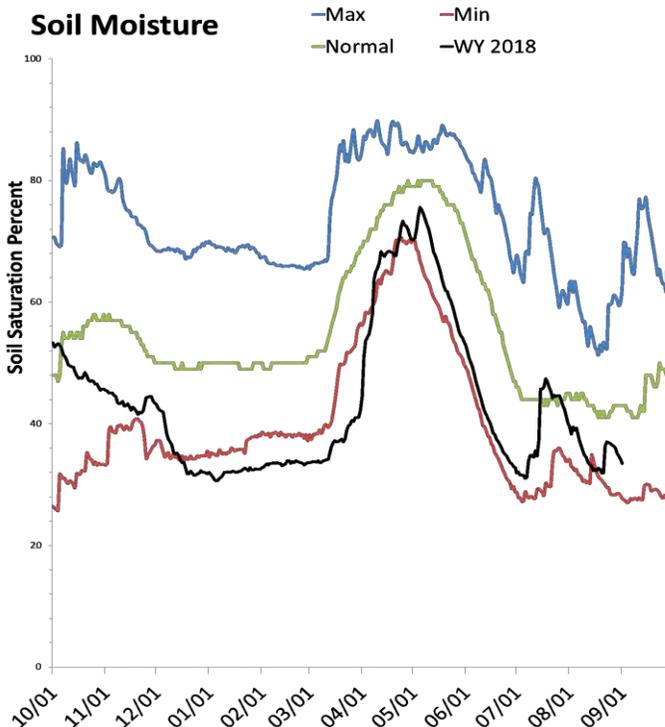
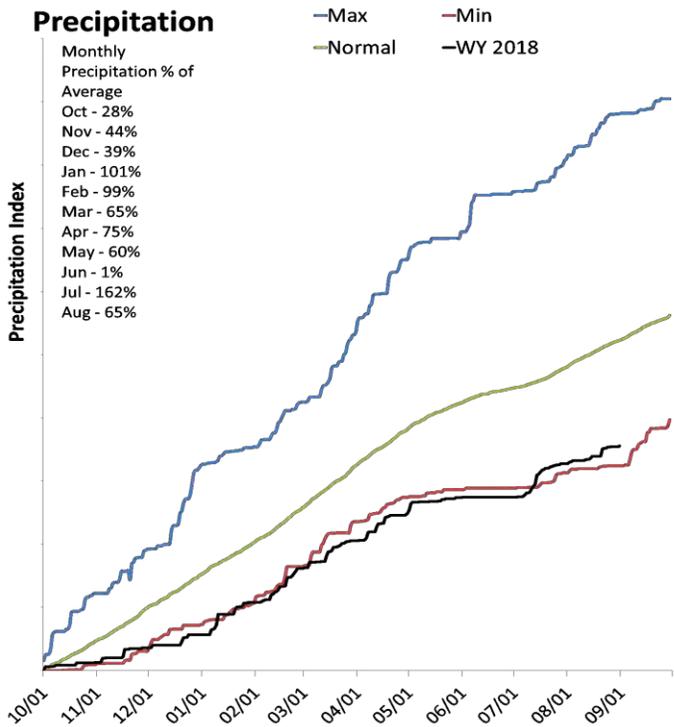
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Dirty Devil Basin

September 1, 2018

Precipitation in August was much below average at 64%, which brings the seasonal accumulation (Oct-Aug) to 68% of average. Soil moisture is at 34% compared to 39% last year.



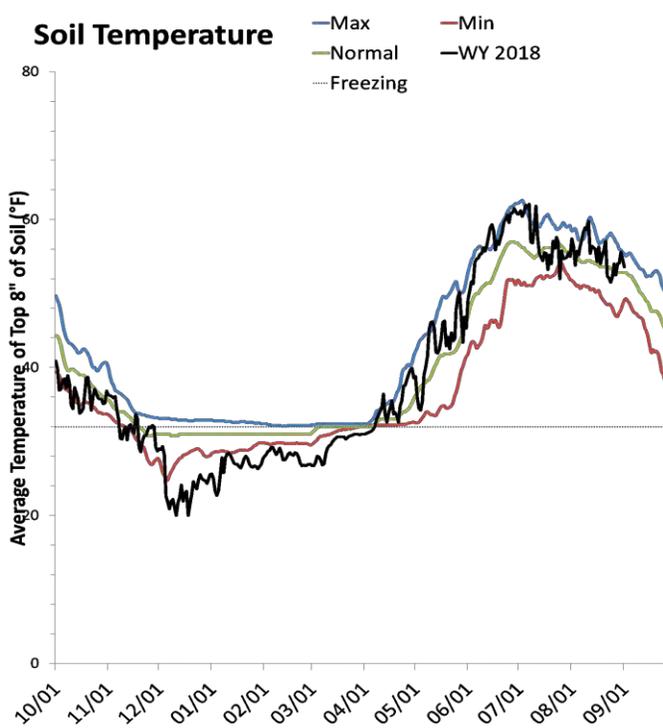
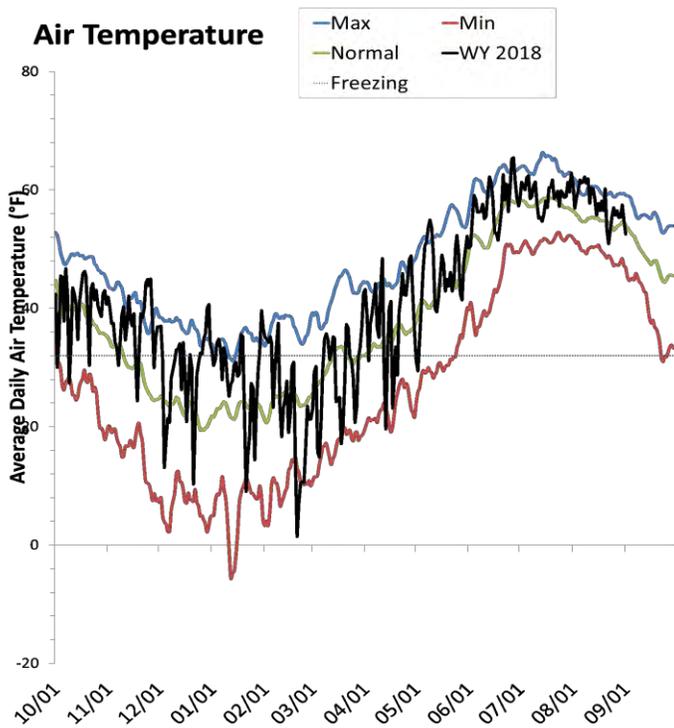
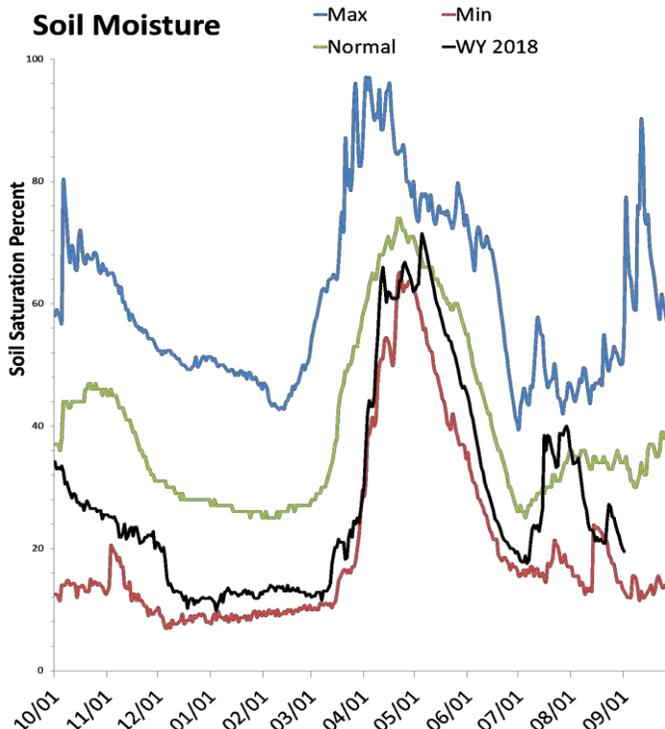
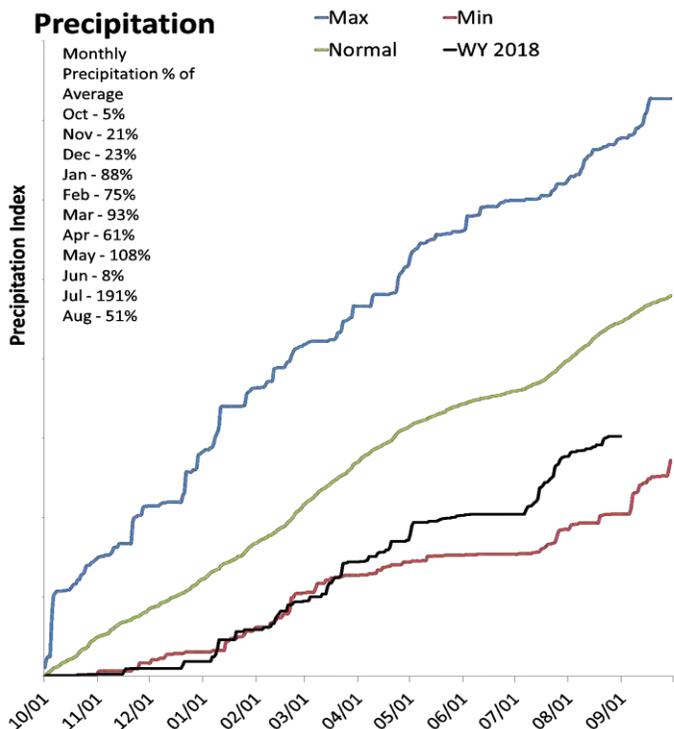
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Escalante River Basin

September 1, 2018

Precipitation in August was much below average at 51%, which brings the seasonal accumulation (Oct-Aug) to 68% of average. Soil moisture is at 20% compared to 32% last year.



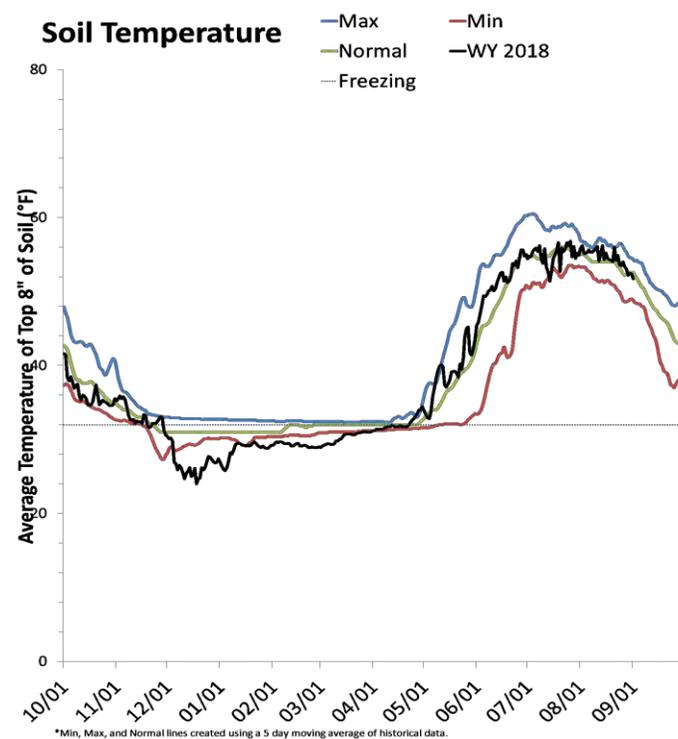
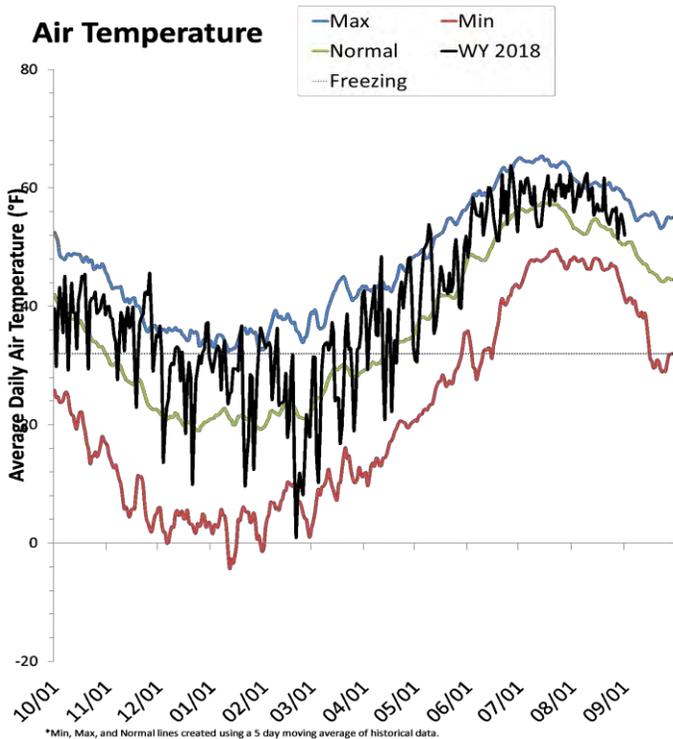
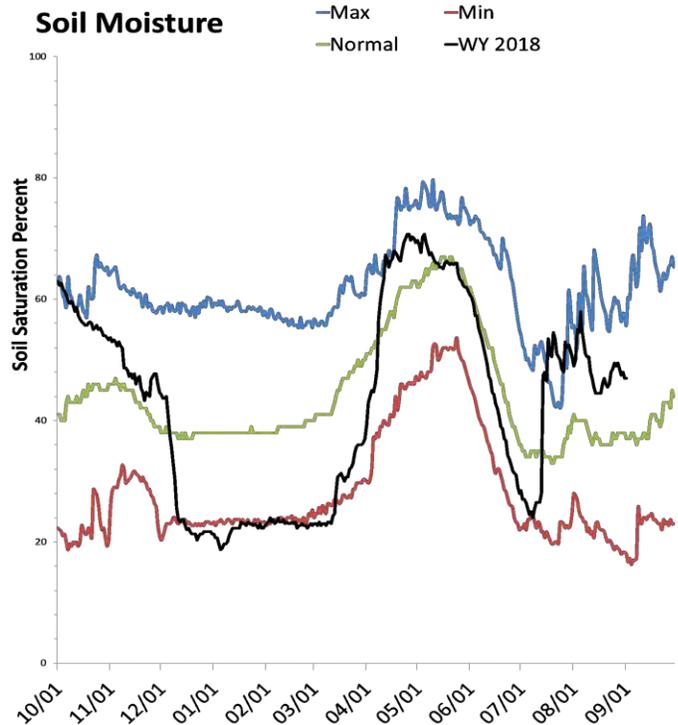
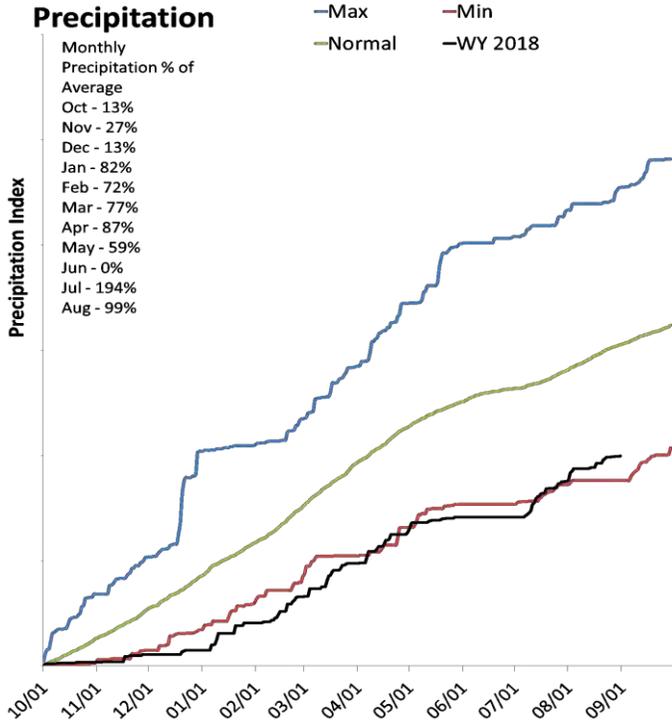
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Beaver River Basin

September 1, 2018

Precipitation in August was near average at 99%, which brings the seasonal accumulation (Oct-Aug) to 65% of average. Soil moisture is at 47% compared to 49% last year. Reservoir storage is at 15% of capacity, compared to 18% last year. The water availability index for the Beaver River is 18%.



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

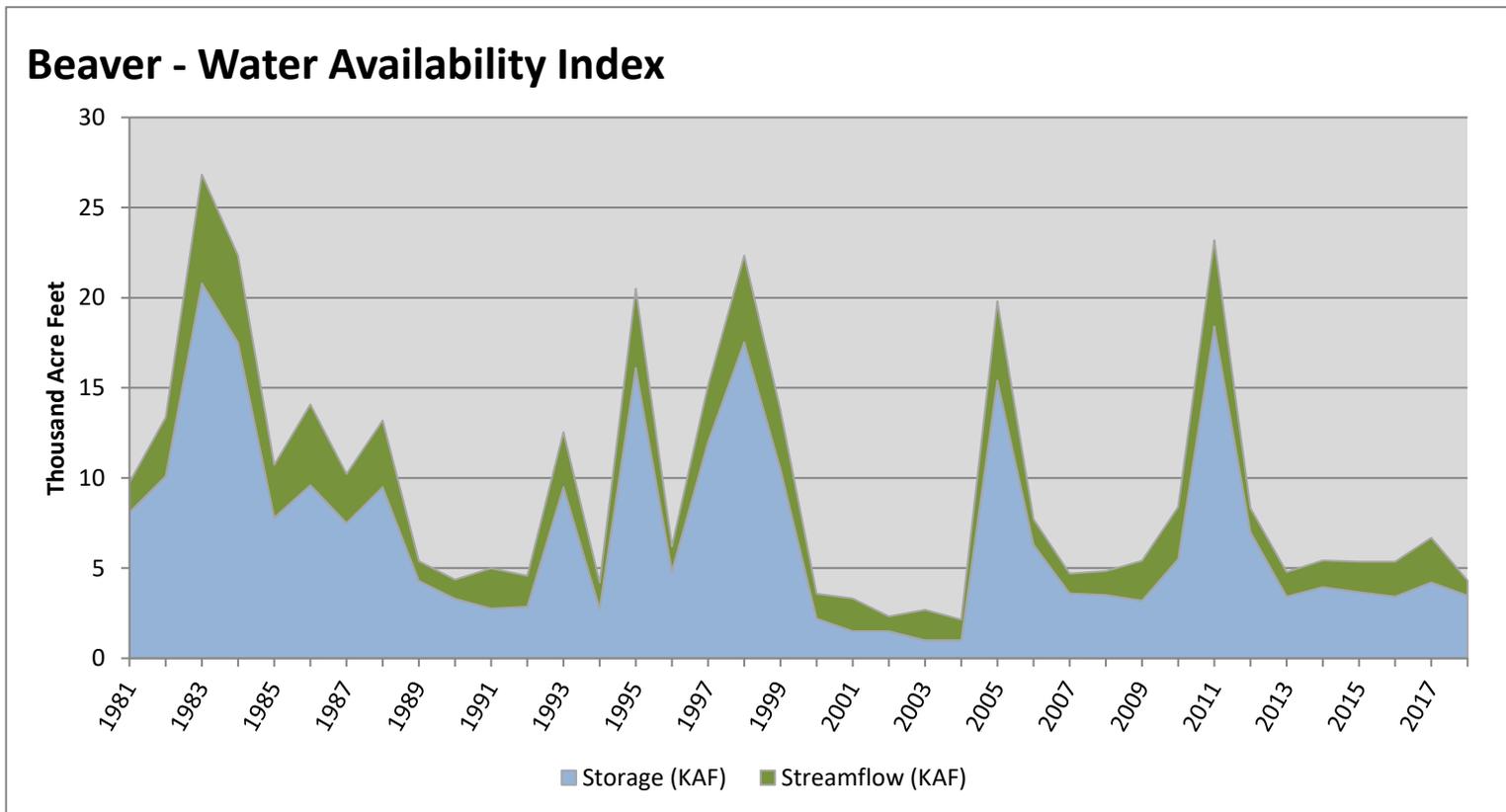
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	3.48	0.83	4.31	18	-2.67	00, 94, 90, 92

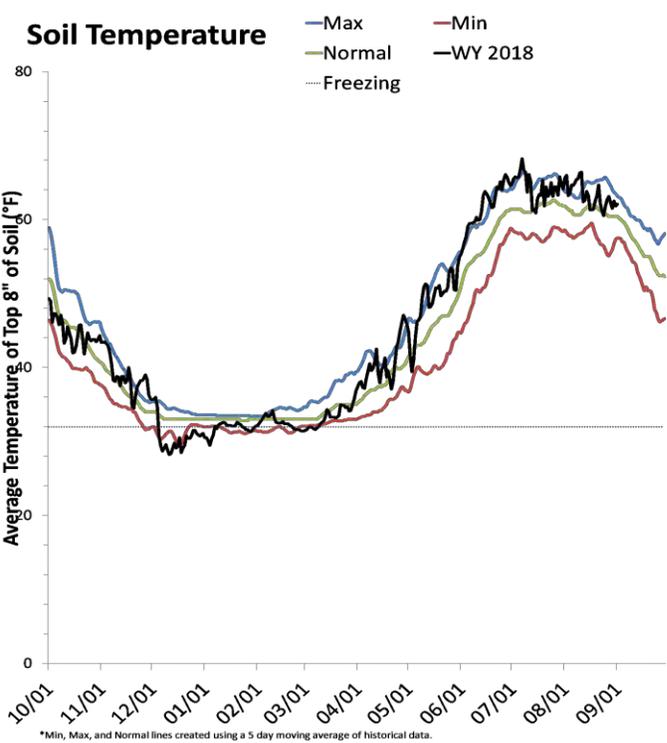
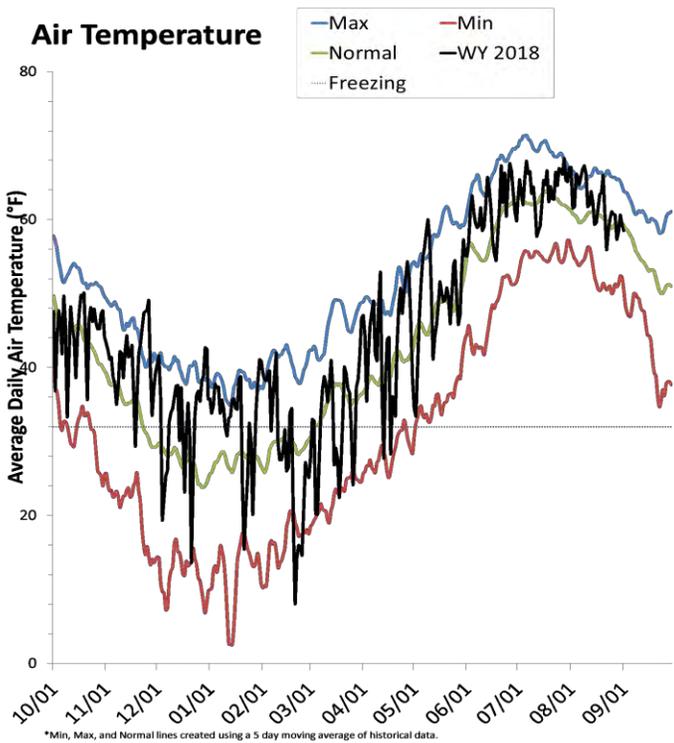
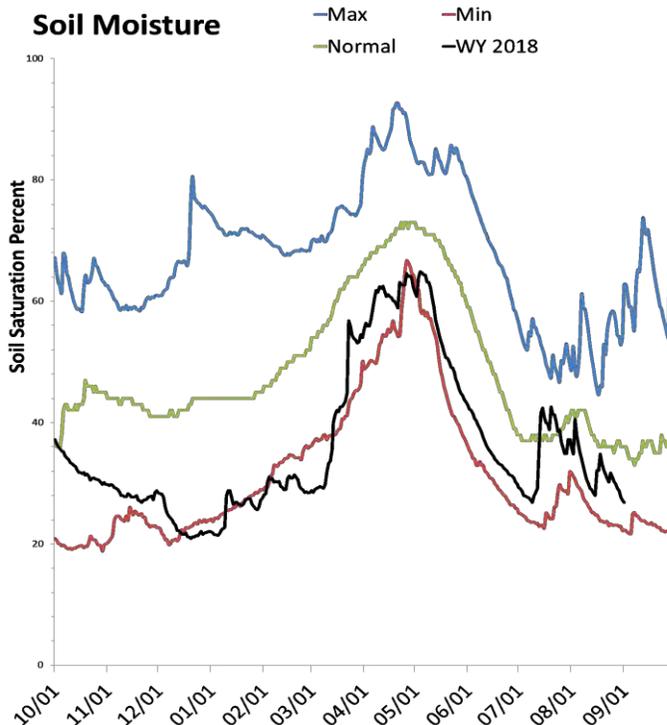
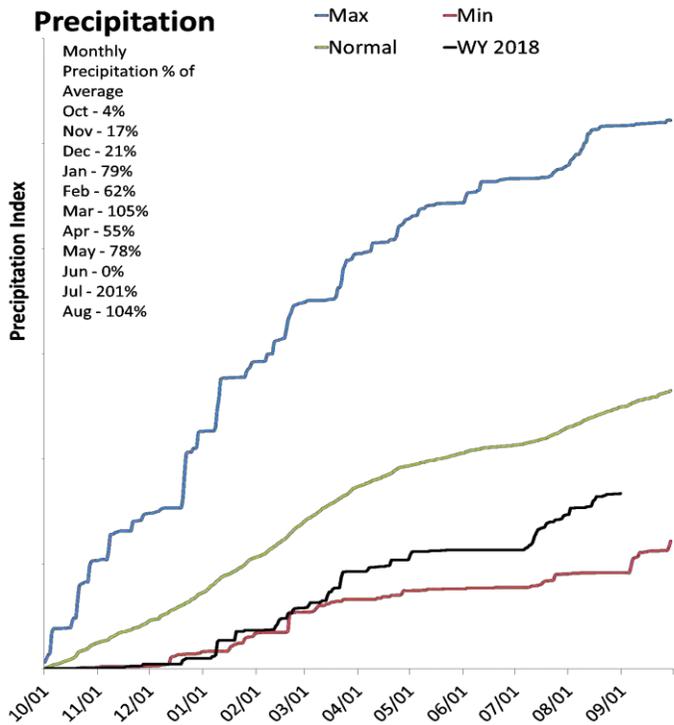
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southwestern Utah

September 1, 2018

Precipitation in August was near average at 104%, which brings the seasonal accumulation (Oct-Aug) to 67% of average. Soil moisture is at 27% compared to 37% last year. Reservoir storage is at 47% of capacity, compared to 61% last year. The water availability index for the Virgin River is 59%.



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

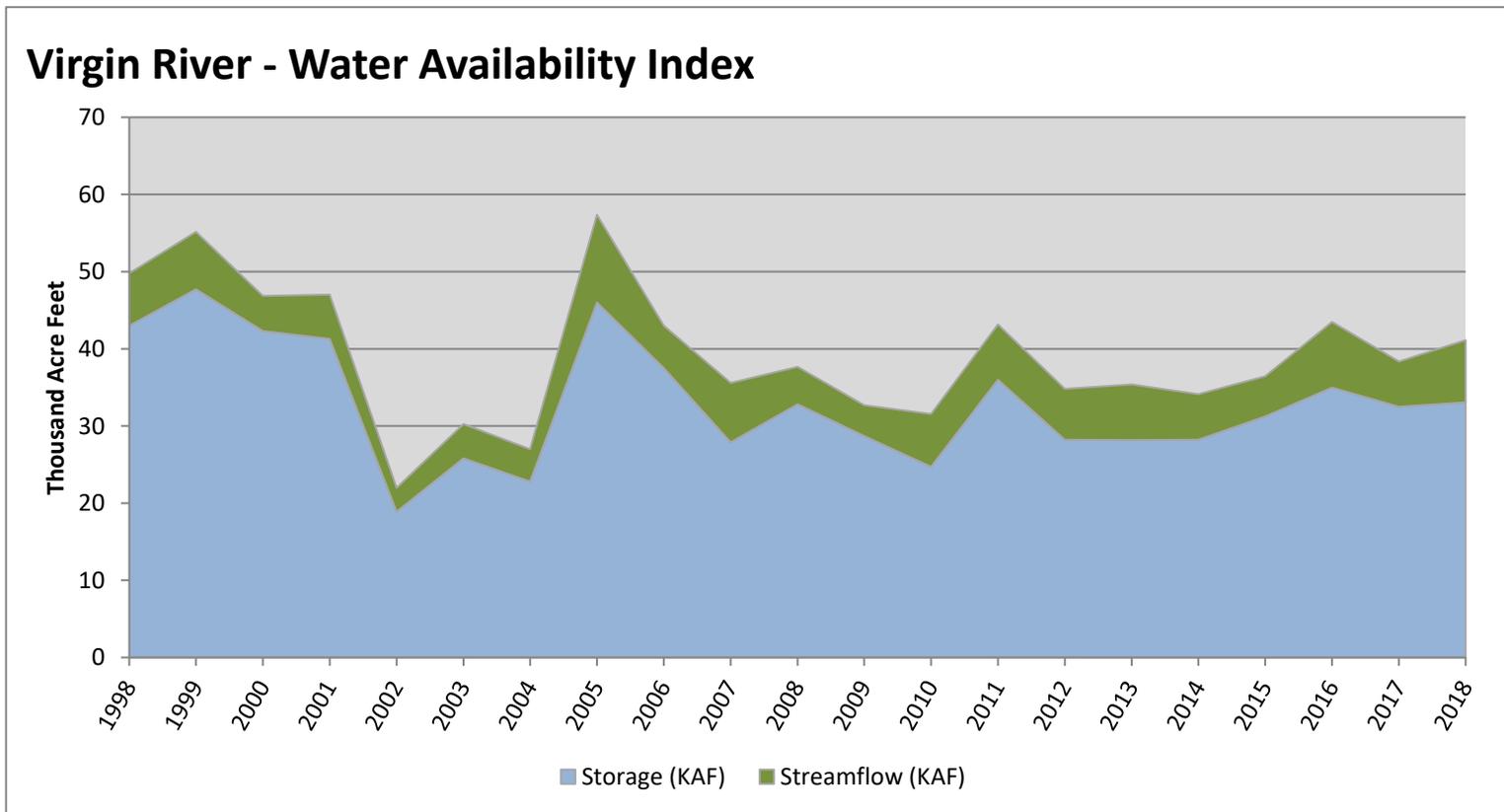
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

September 1, 2018

Water Availability Index

Basin or Region	Aug EOM [*] Storage	August Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	33.07	8.05	41.12	59	0.76	08, 17, 06, 11

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



September 1, 2018

Water Availability Index

Basin or Region	Aug EOM* Storage	August Flow	Storage + Flow	Percentile	WAI#	Years with similar WAI
	KAF^	KAF^	KAF^	%		
Bear River	864	4.1	868	69	1.6	12, 81, 87, 85
Woodruff Narrows	21.0	4.1	25.0	44	-0.5	85, 07, 14, 87
Little Bear	3.0	1.3	4.3	37	-1.1	02, 12, 14, 08
Ogden	57.8	2.5	60.3	36	-1.2	12, 91, 81, 94
Weber	92.3	3.9	96.2	21	-2.4	12, 01, 00, 16
Provo River	330.3	3.6	333.8	42	-0.7	14, 16, 08, 01
Western Uinta	131.0	2.6	133.6	28	-1.8	90, 94, 12, 88
Eastern Uinta	10.9	2.7	13.6	5	-3.7	02, 13, 14, 89
Blacks Fork	4.8	2.2	7.0	11	-3.2	00, 94, 01, 88
Price	29.0	0.2	29.2	49	-0.1	00, 08, 09, 12
Smiths Creek	5.1	1.1	6.3	34	-1.3	12, 88, 01, 85
Joes Valley	33.2	1.1	34.3	13	-3.1	90, 92, 94, 03
Moab	0.2	0.2	0.4	9	-3.4	02, 90, 12, 89
Upper Sevier River	7.9	0.7	8.6	10	-3.3	92, 04, 90, 02
San Pitch	0.0	0.4	0.4	3	-4.0	92, 07, 13, 02
Lower Sevier	7.9	4.4	12.3	10	-3.3	04, 16, 17, 91
Beaver	3.5	0.8	4.3	18	-2.7	00, 94, 90, 92
Virgin River	33.1	8.1	41.1	59	0.8	08, 17, 06, 11

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

What is a Water Availability Index?

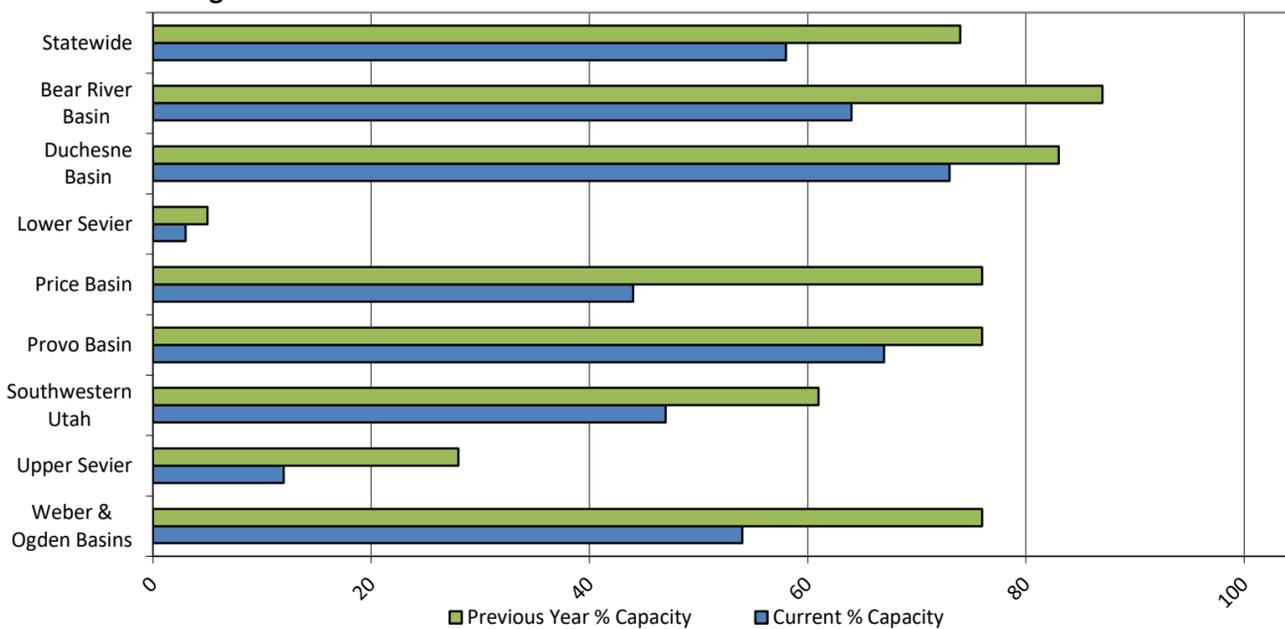
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) 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 August 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	1.7	13.2		25.7	7%	51%			
Causey Reservoir	3.0	5.8	3.4	7.1	43%	82%	48%	89%	172%
Cleveland Lake	1.6	3.5		5.4	29%	66%			
Currant Creek Reservoir	14.8	14.8	15.1	15.5	96%	96%	97%	98%	98%
Deer Creek Reservoir	102.2	127.4	105.7	149.7	68%	85%	71%	97%	121%
East Canyon Reservoir	29.8	39.0	34.8	49.5	60%	79%	70%	86%	112%
Echo Reservoir	18.5	32.9	33.3	73.9	25%	44%	45%	56%	99%
Grantsville Reservoir	0.9	1.1	1.0	3.3	27%	33%	30%	89%	110%
Gunlock	7.1	6.5	5.7	10.4	68%	62%	55%	124%	114%
Gunnison Reservoir	0.0	4.2	7.0	20.3	0%	21%	34%	0%	60%
Huntington North Reservoir	1.6	3.8	1.8	4.2	37%	91%	42%	90%	218%
Hyrum Reservoir	3.0	10.0	6.7	15.3	20%	66%	44%	45%	150%
Joes Valley Reservoir	33.2	50.9	45.1	61.6	54%	83%	73%	74%	113%
Jordanelle Reservoir	228.1	270.2	272.3	314.0	73%	86%	87%	84%	99%
Ken's Lake	0.2	1.0	1.0	2.3	10%	44%	44%	24%	100%
Kolob Reservoir	2.0	5.4		5.6	36%	96%			
Lost Creek Reservoir	15.0	18.4	13.8	22.5	67%	82%	61%	109%	133%
Lower Enterprise	0.0	1.0	0.2	2.6	2%	38%	8%	24%	500%
Miller Flat Reservoir	0.8	3.8		5.2	16%	73%			
Millsite	1.2	3.6	11.8	16.7	7%	22%	71%	10%	31%
Minersville Reservoir	3.5	4.2	7.5	23.3	15%	18%	32%	46%	56%
Moon Lake Reservoir	5.5	23.3	18.7	35.8	15%	65%	52%	30%	125%
Otter Creek Reservoir	7.3	31.1	23.8	52.5	14%	59%	45%	31%	131%
Panguitch Lake	9.7	9.4	13.6	22.3	43%	42%	61%	71%	69%
Pineview Reservoir	54.8	84.8	59.8	110.1	50%	77%	54%	92%	142%
Piute Reservoir	0.5	0.6	21.2	71.8	1%	1%	30%	2%	3%
Porcupine Reservoir	5.0	10.0	5.3	11.3	44%	88%	47%	94%	189%
Quail Creek	26.0	26.0	22.9	40.0	65%	65%	57%	114%	114%
Red Fleet Reservoir	10.9	19.3	19.0	25.7	42%	75%	74%	57%	102%
Rockport Reservoir	25.7	55.3	44.4	60.9	42%	91%	73%	58%	125%
Sand Hollow Reservoir	45.0	44.0		50.0	90%	88%			
Scotfield Reservoir	29.0	53.8	32.2	65.8	44%	82%	49%	90%	167%
Settlement Canyon Reservoir	0.2	0.5	0.5	1.0	17%	46%	49%	35%	94%
Sevier Bridge Reservoir	7.9	10.8	93.4	236.0	3%	5%	40%	8%	12%
Smith And Morehouse Reservoir	3.3	5.7	4.8	8.1	41%	70%	59%	69%	118%
Starvation Reservoir	103.4	134.8	130.5	164.1	63%	82%	80%	79%	103%
Stateline Reservoir	5.1	7.1	7.2	12.0	43%	60%	60%	71%	99%
Steinaker Reservoir	0.0	10.3	17.1	33.4		31%	51%		60%
Strawberry Reservoir	856.8	927.5	693.0	1105.9	77%	84%	63%	124%	134%
Upper Enterprise	0.2	1.8	1.7	10.0	2%	18%	17%	12%	103%
Upper Stillwater Reservoir	22.0	26.5	19.6	32.5	68%	82%	60%	112%	135%
Utah Lake	441.0	532.8	690.2	870.9	51%	61%	79%	64%	77%
Willard Bay	143.1	174.7	137.8	215.0	67%	81%	64%	104%	127%
Woodruff Creek	0.0	1.0	0.5	4.0	0%	25%	13%	0%	200%
Woodruff Narrows Reservoir	20.9	39.7	24.4	57.3	37%	69%	43%	86%	163%
Meeks Cabin Reservoir	4.8	12.5	13.2	32.5	15%	39%	41%	37%	95%
Bear Lake	864.0	1151.6	635.5	1302.0	66%	88%	49%	136%	181%
Basin-wide Total	3109.3	3935.5	3279.4	5339.7	58%	74%	61%	95%	120%
# of reservoirs	41.0	41.0	41.0	41.0	41	41	41	41	41
# of reservoirs	42	42	42	42	42	42	42	42	42

Reservoir Storage



Issued by

Leonard Jordan
Acting Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Prepared by

Snow Survey Staff:
Troy Brosten, Assistant Supervisor
Beau Uriona, Hydrologist
Jordan Clayton, Hydrologist
Kent Sutcliffe, Soil Scientist

Released by

Timothy Wilson
State Conservationist
Natural Resources Conservation Service
Salt Lake City, Utah



YOU MAY OBTAIN THIS PRODUCT AS WELL AS CURRENT SNOW, PRECIPITATION, TEMPERATURE AND SOIL MOISTURE, RESERVOIR, SURFACE WATER SUPPLY INDEX, AND OTHER DATA BY VISITING OUR WEB SITE @:

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/ut/snow/>

Snow Survey, NRCS, USDA
245 North Jimmy Doolittle Road
Salt Lake City, UT 84116
(385) 285-3114



Utah Climate and Water Report

Natural Resources Conservation Service
Salt Lake City, UT

