

Utah Climate and Water Report

March 1, 2017



Trial Lake SNOTEL

With snow depth reaching 112 inches this week, the precipitation gage at Trial Lake SNOTEL will soon need an extension

Photo by Kent Sutcliffe

Utah Climate and Water Report

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

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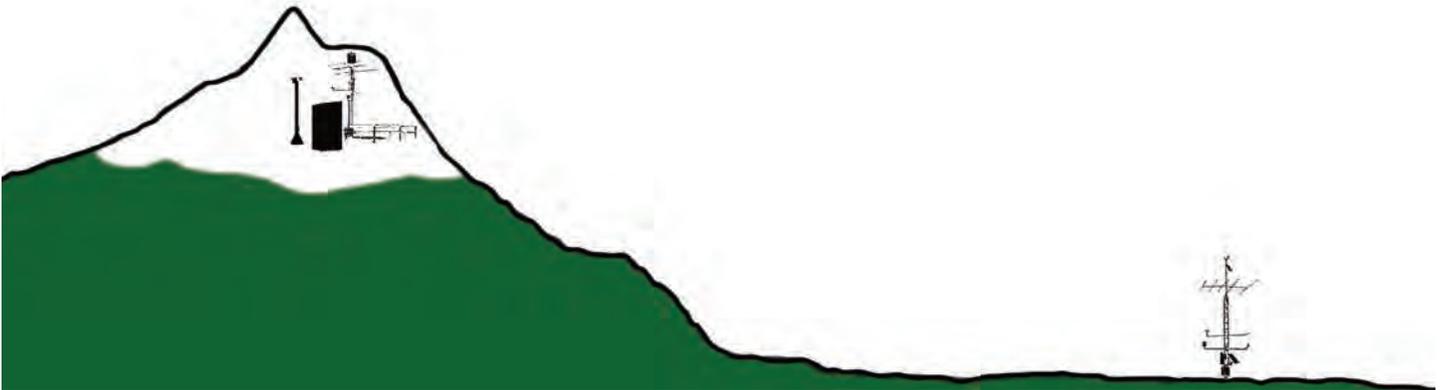
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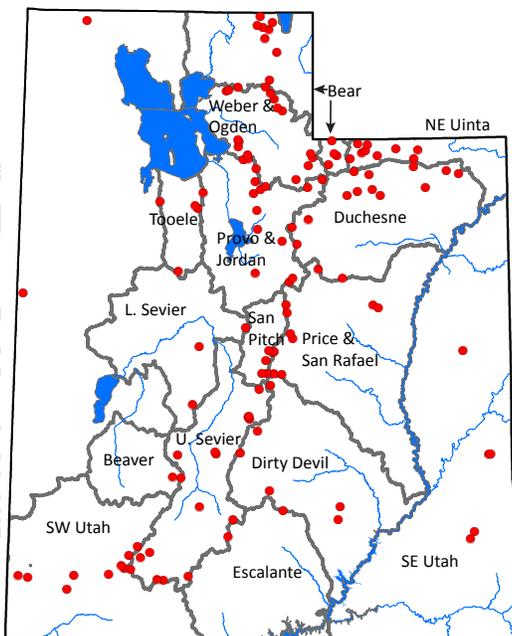
Utah Climate and Water Report

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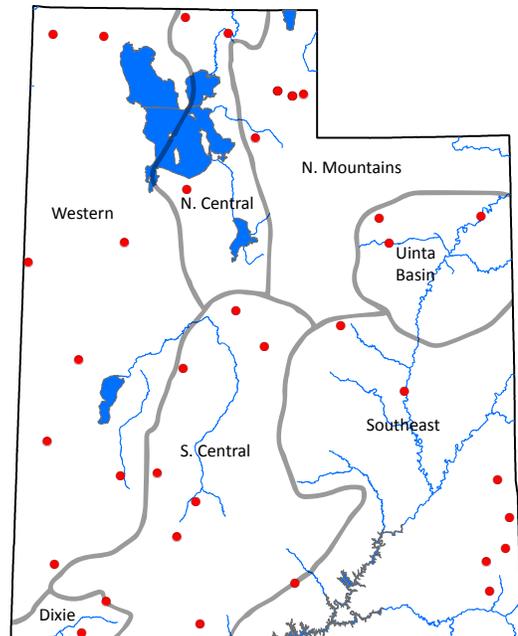
SNOTEL

- 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

March 1, 2017

*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 Randy.Julander@ut.usda.gov.*

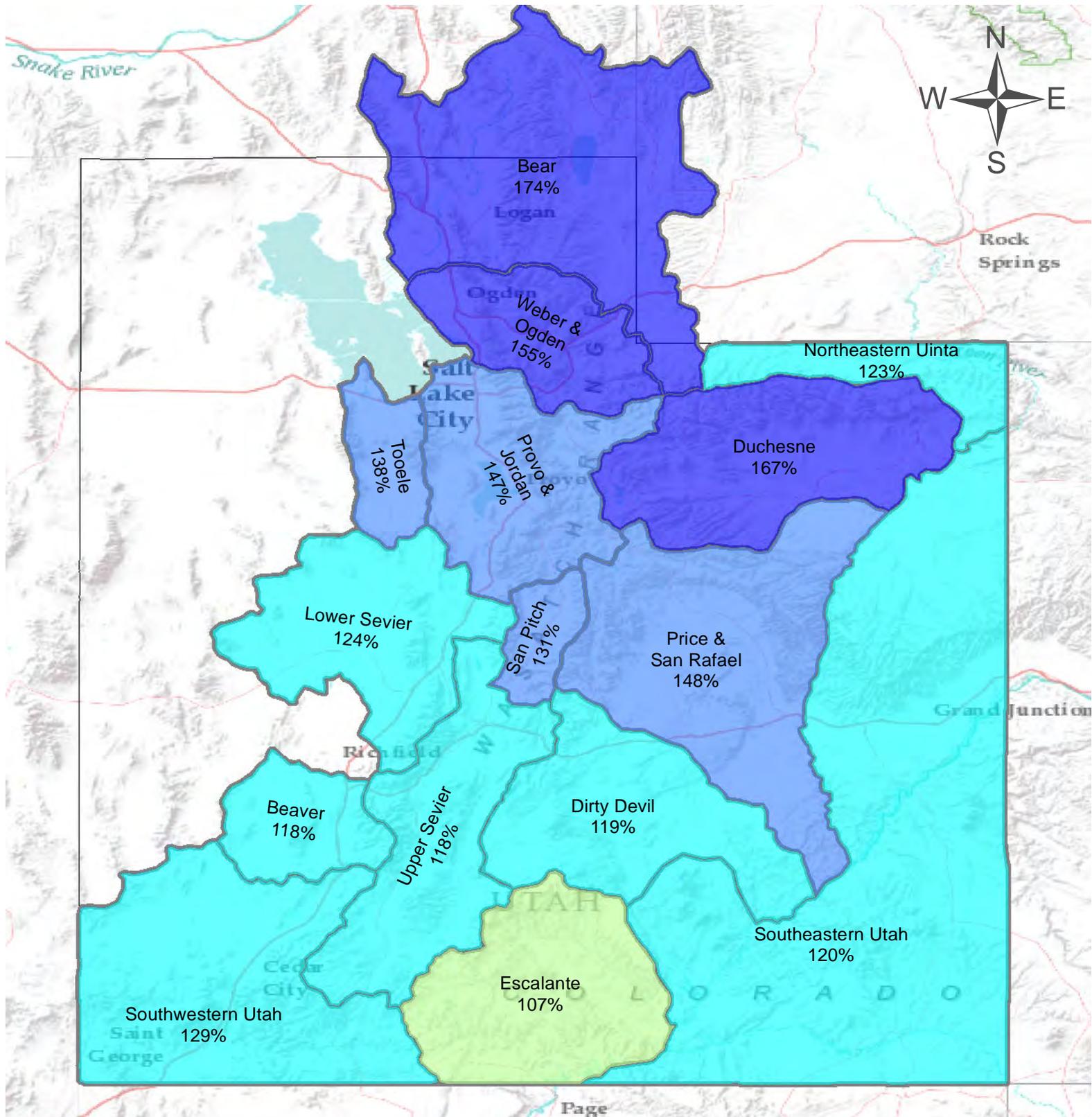
Current Valley Conditions (SCAN)

February brought 1.3 inches of precipitation to Utah's valley locations, bringing the total to 6 inches for this water year. The trend favoring Northern Utah locations was strongly expressed in February, with both water year precipitation totals and soil moisture conditions reflecting this. Precipitation ranged from 3.4 inches in the North Central area, to a dry 0.6 inches in the Southeastern region. Soil moisture levels are high throughout the state, with the exception of the Western and Dixie areas, where soil moisture is below normal. We have too much of a good thing in Cache and Box Elder Counties; soil moisture levels are so high that flooding is widespread and landslides and mudslides have become common. Several SCAN sites in these counties show saturated or near-saturated conditions to a depth of forty inches. It is going to take a while for these soils to dry to the point where farming and other over-the-ground activities can commence. A precipitous decline in soil temperatures occurred in the second half of the month. Soils temperatures are now at or slightly below normal for March 1.

Current Mountain Conditions (SNOTEL)

February was another exceptional snow month. The snow course at Trial Lake was measured and has 35.8 inches of snow water equivalent, just 0.2 inches off the March 1 record of 36 inches recorded in 1997. That is fantastic news for the Bear, Weber, Provo and Duchesne rivers. Snowpacks across the state are well above average ranging from 125% in the Lower Sevier to 188% in the Duchesne watershed. While snowpacks are well above average, they are also far more dense than normal and have the potential for earlier melt. This is a function of both warmer temperatures as well as warm storms. We have seen active melt at many lower elevation and southern sites. This is likely a good pattern given the magnitude of the snowpacks across the state, early melt would remove much of the lower elevation and potentially some of the mid elevation snowpacks as a sequential melt pattern, thereby decreasing the potential for flooding. The worst case scenario for flooding would be cold and increasing snowpacks through March and April, resulting in synchronous snowmelt from a range of elevations. Precipitation in February was 156% of average which brings the seasonal accumulation (Oct-Feb) to 147% of average. Soil moisture is well above average (68% compared to 56% last year) across the state with many of the northern basins near record high values and southern watersheds average and

above. This means that runoff efficiency will likely be high with snowpacks ready to melt and soils close to saturation. Reservoir storage has been increasing and is currently at 58% of capacity compared to 54% last year. Most reservoirs should easily fill this year, and the large capacity reservoirs that may not fill (such as Bear Lake and Utah Lake and others) will add substantially to their storage. Streamflow forecasts are extraordinarily high with many in the 150% to 250% of average range. Rivers and streams are going run high and long this year which gives water managers the opportunity to not only fill reservoirs but to keep them full longer into the season.



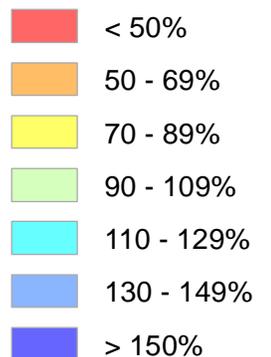
Statewide Precipitation

As of March 1, 2017:

147% of Normal Precipitation

157% of Normal Precipitation Last Month

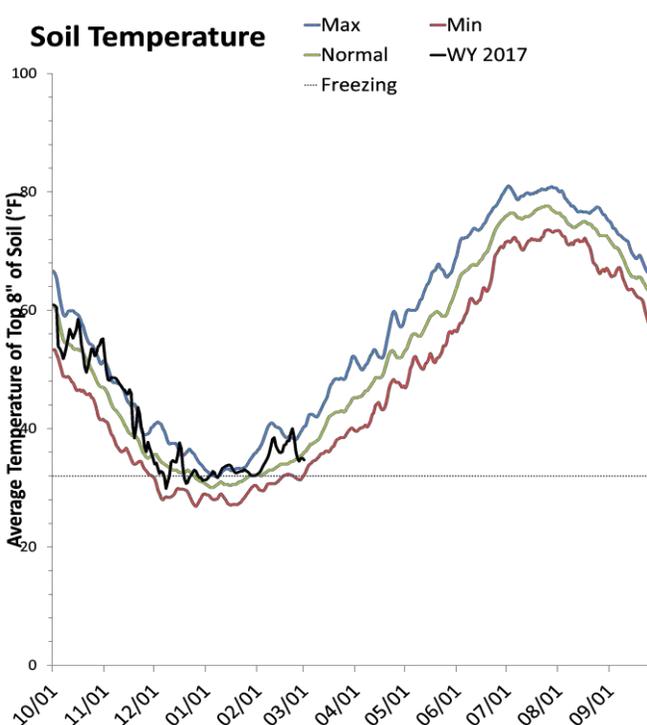
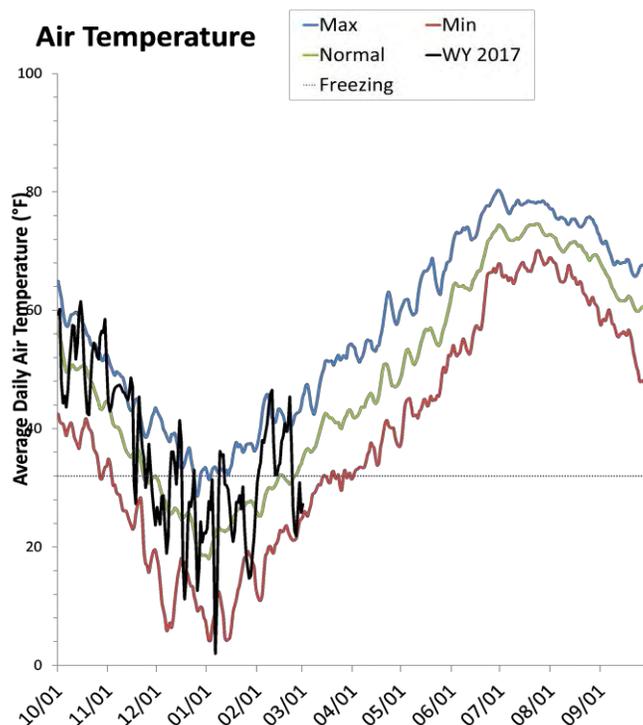
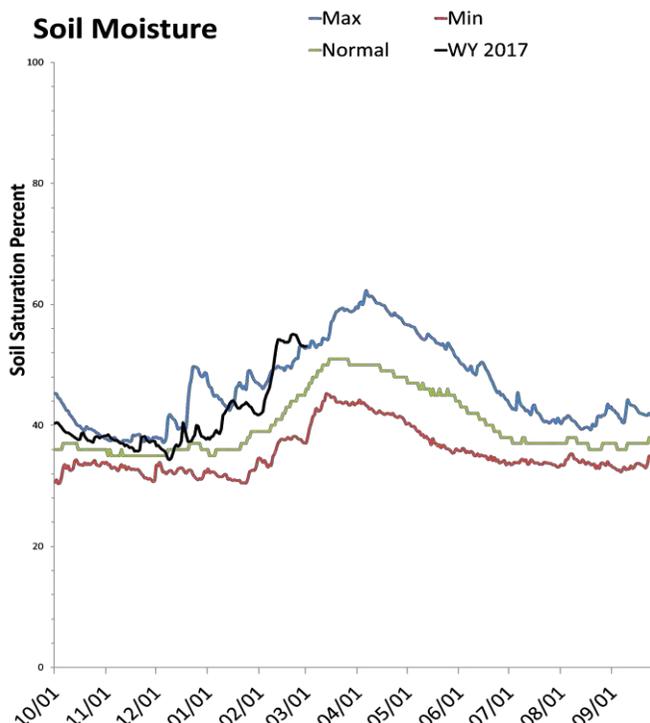
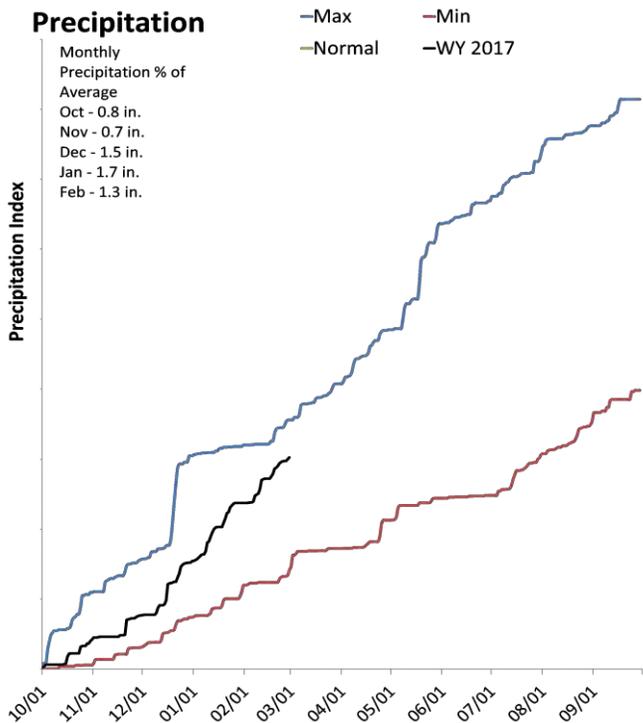
% of Normal



Statewide SCAN

March 1, 2017

The average precipitation at SCAN sites within Utah was 1.3 inches in February, which brings the seasonal accumulation (Oct-Feb) to 6 inches. Soil moisture is at 53% compared to 53% last year.



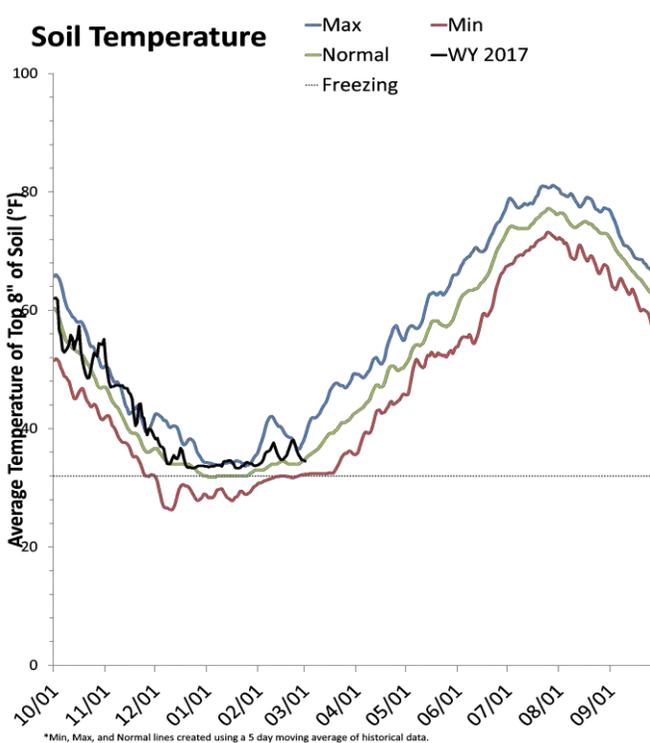
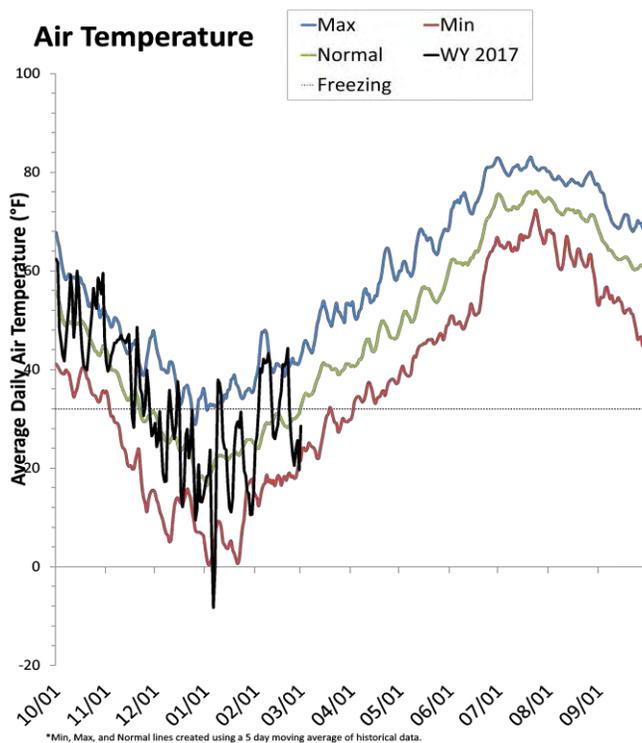
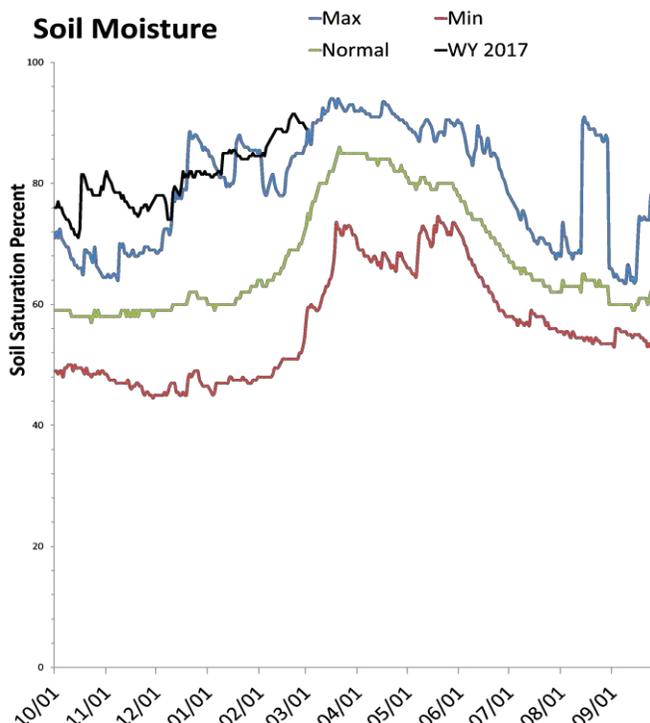
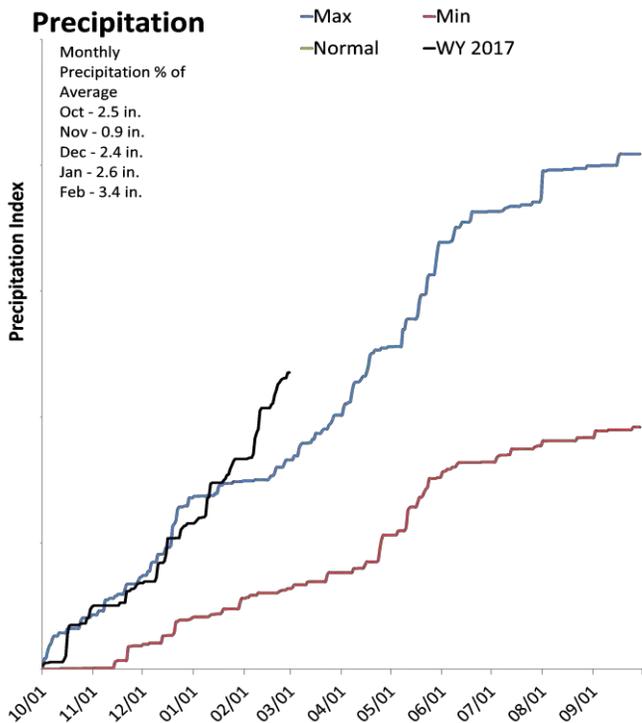
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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North Central

March 1, 2017

The average precipitation in February at SCAN sites within the basin was 3.4 inches, which brings the seasonal accumulation (Oct-Feb) to 11.8 inches. Soil moisture is at 89% compared to 86% last year.



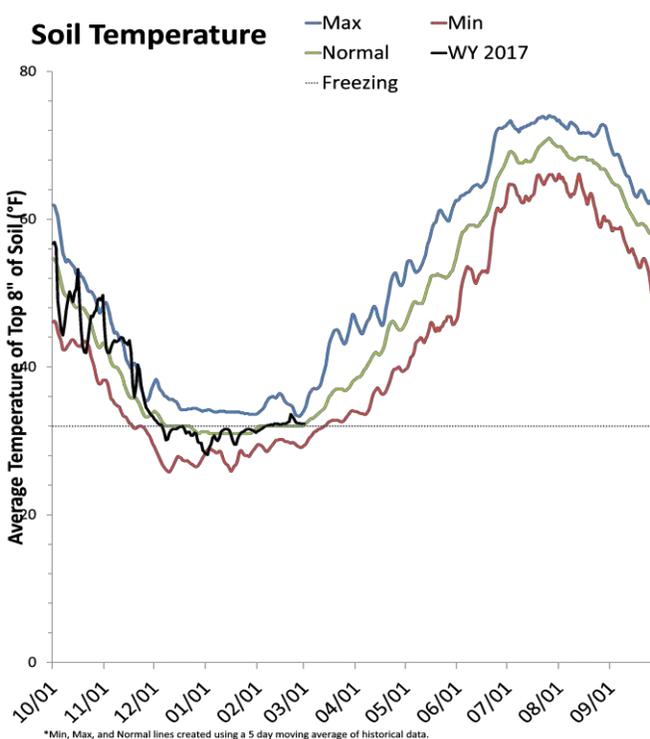
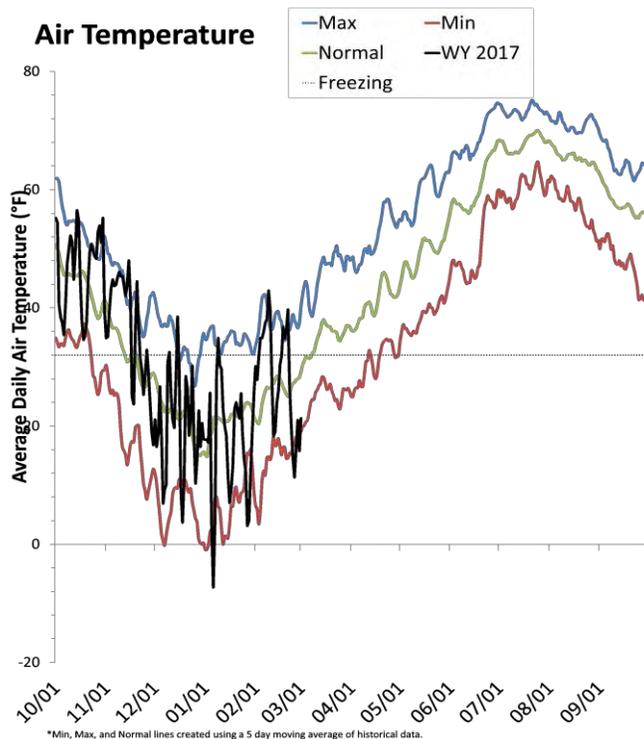
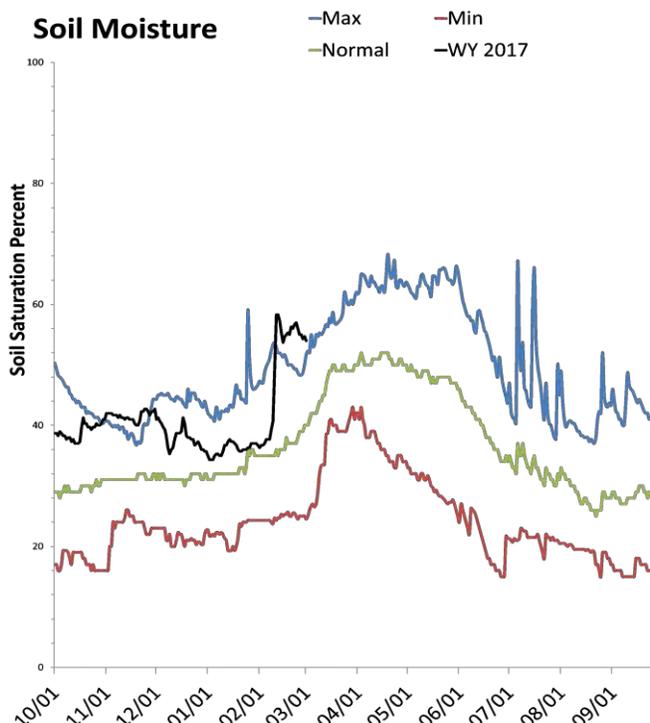
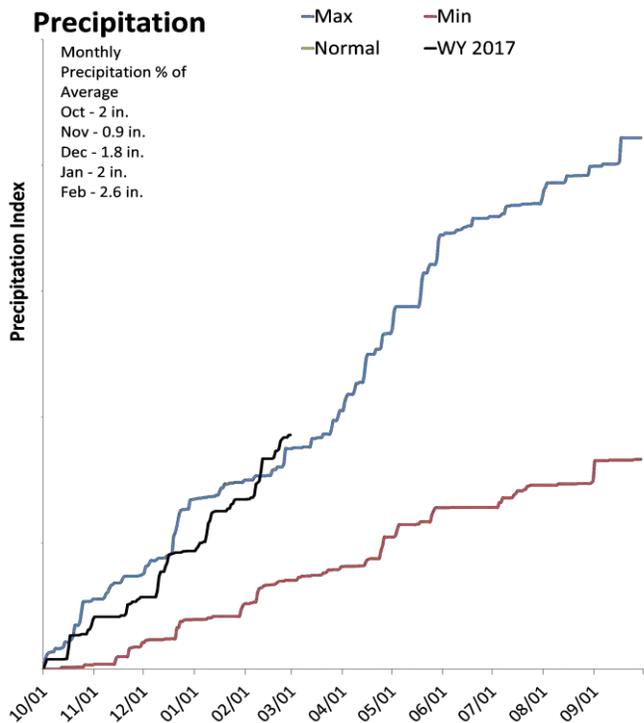
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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Northern Mountains

March 1, 2017

The average precipitation in February at SCAN sites within the basin was 2.6 inches, which brings the seasonal accumulation (Oct-Feb) to 9.3 inches. Soil moisture is at 54% compared to 49% last year.



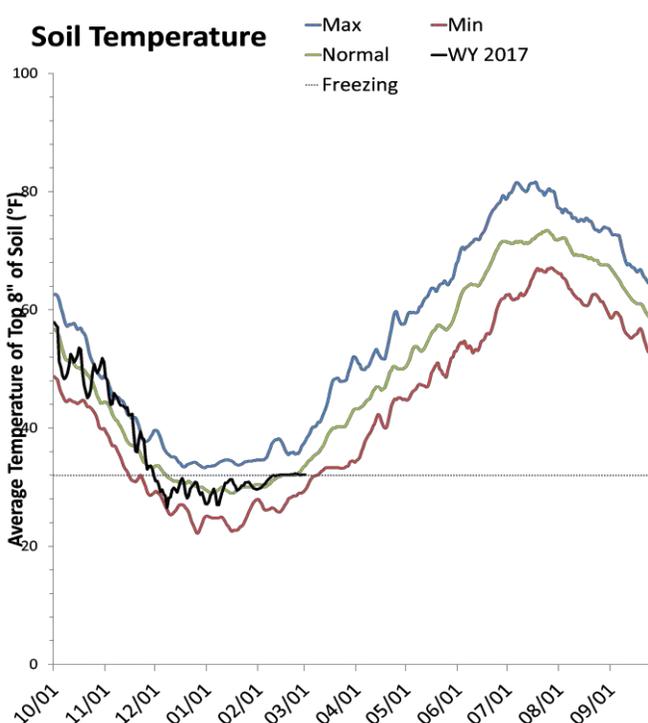
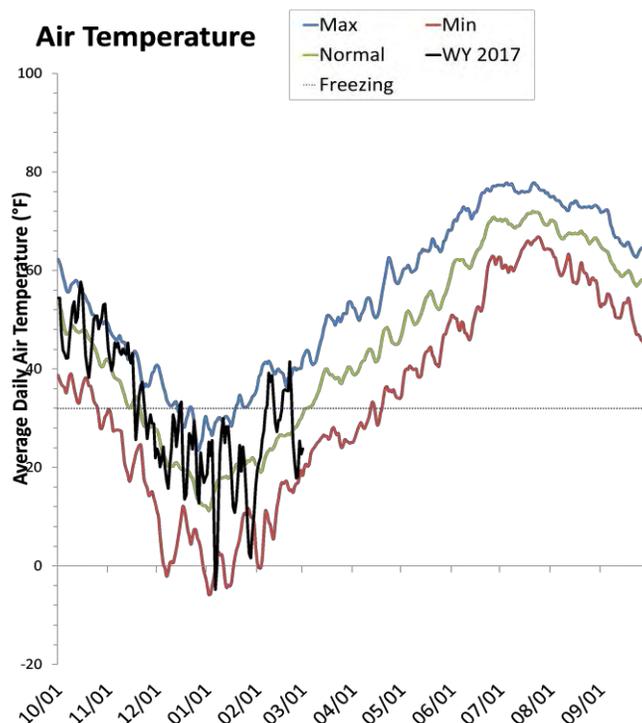
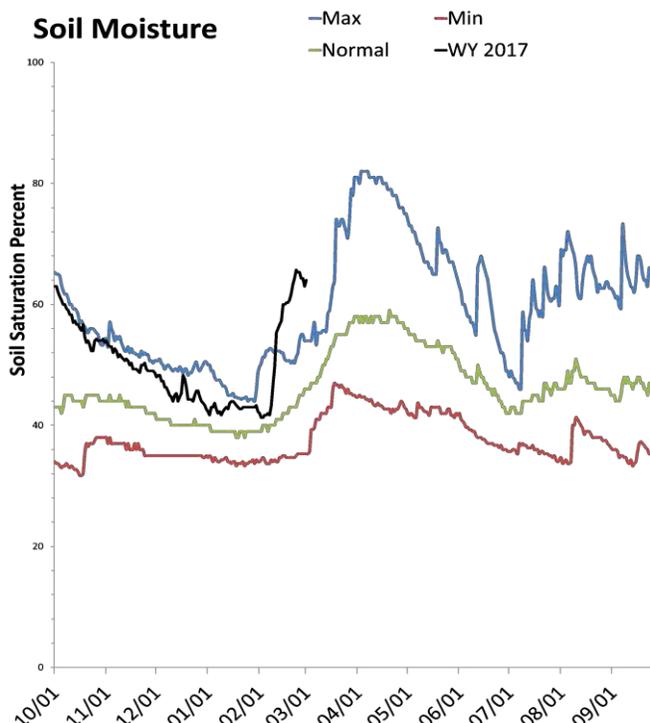
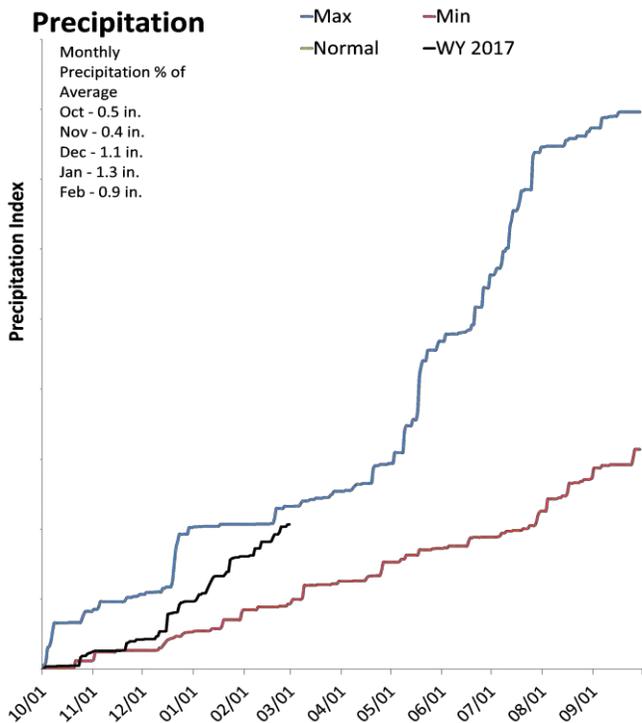
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Uinta Basin

March 1, 2017

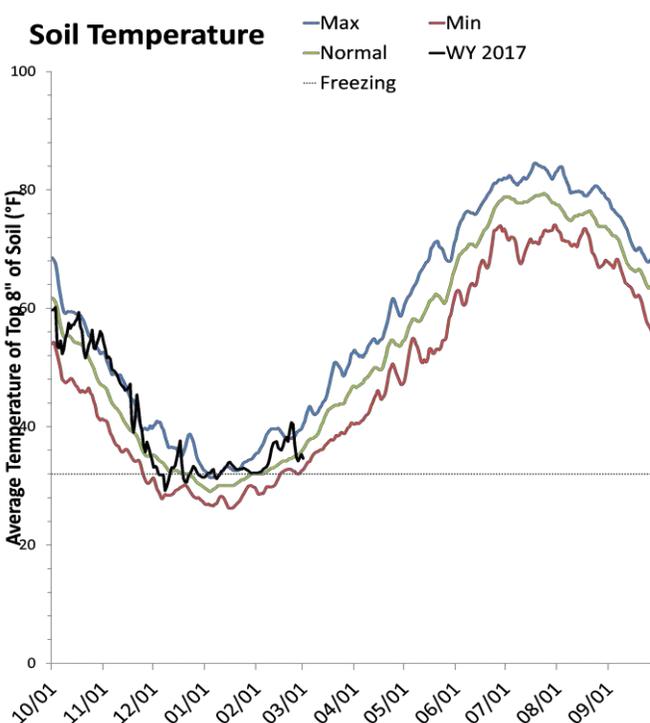
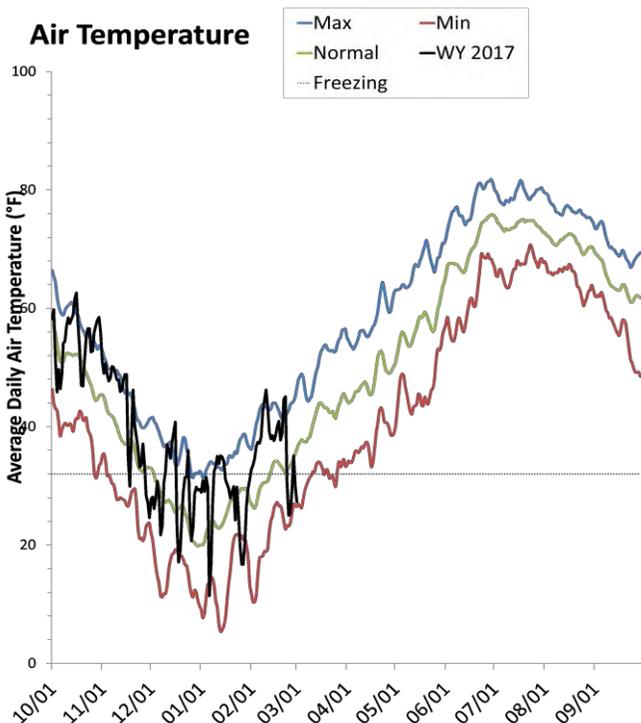
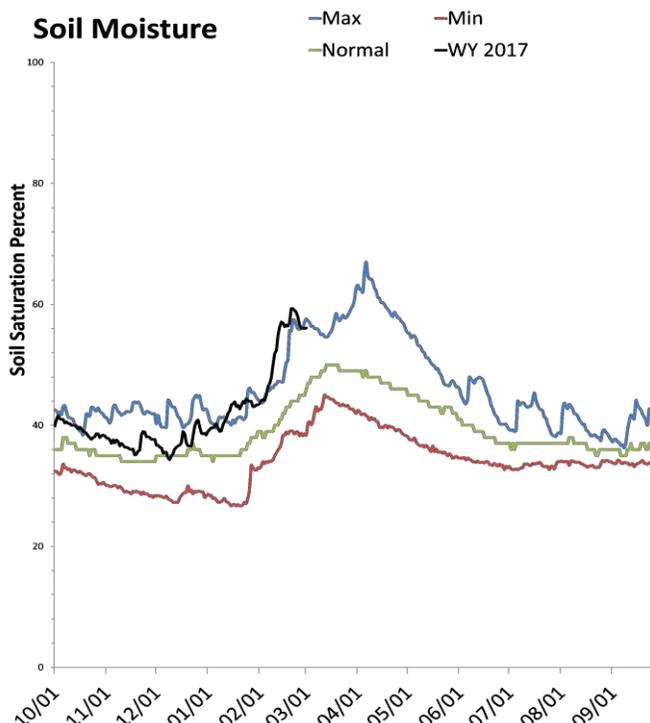
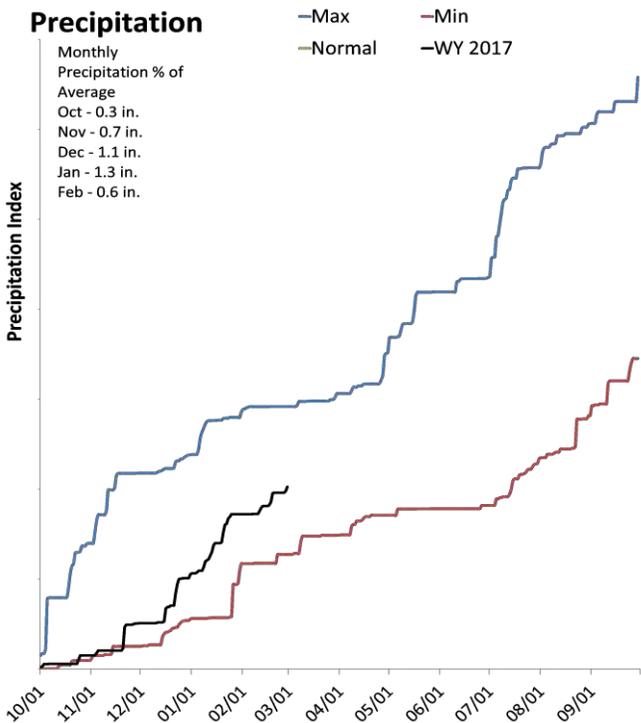
The average precipitation in February at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Feb) to 4.1 inches. Soil moisture is at 63% compared to 53% last year.



Southeast

March 1, 2017

The average precipitation in February at SCAN sites within the basin was 0.6 inches, which brings the seasonal accumulation (Oct-Feb) to 4.1 inches. Soil moisture is at 56% compared to 58% last year.



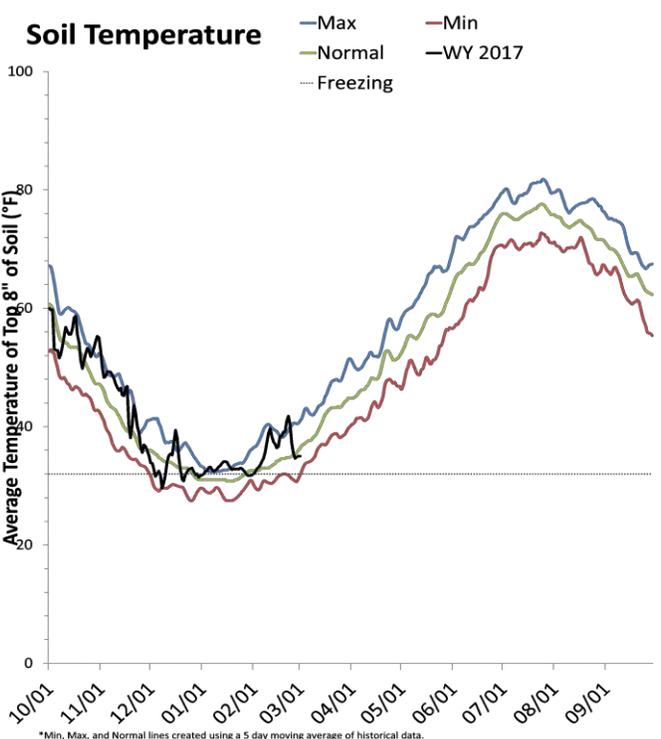
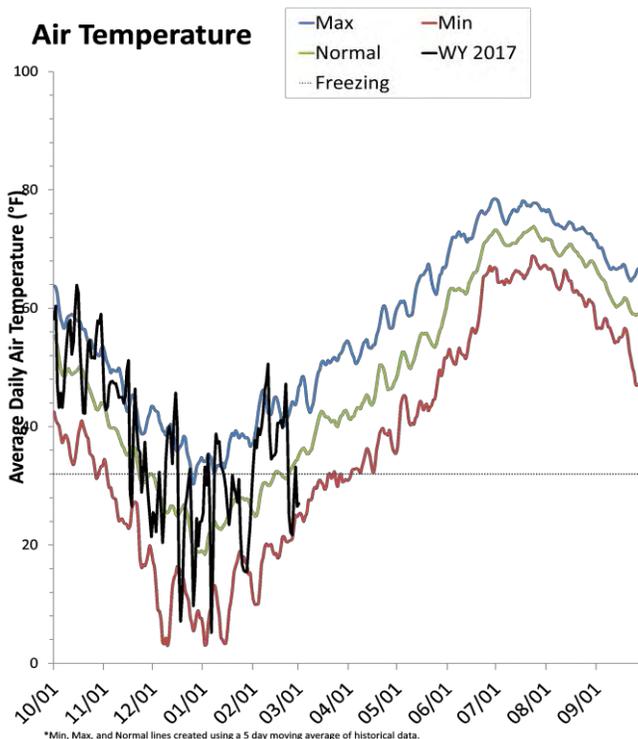
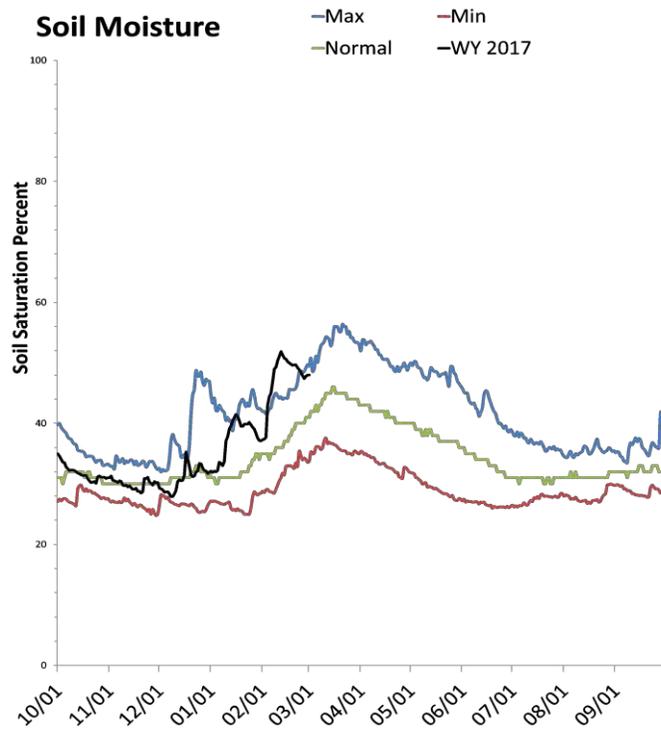
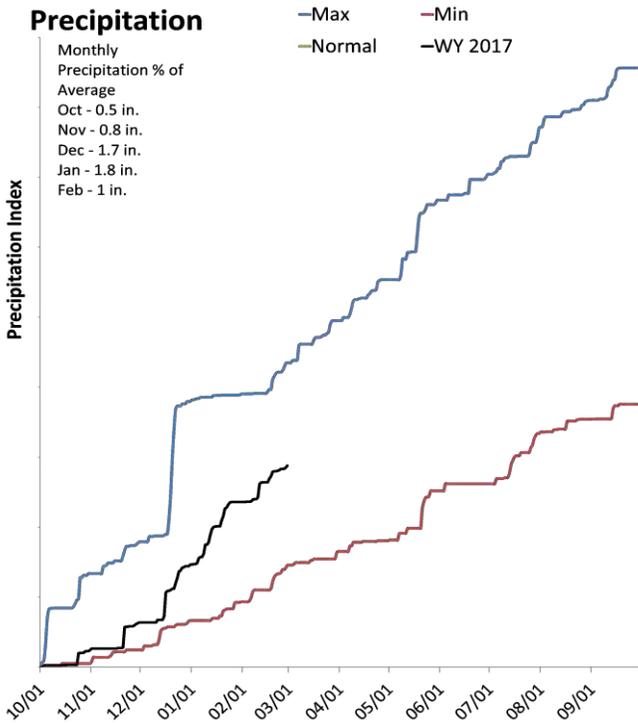
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South Central

March 1, 2017

The average precipitation in February at SCAN sites within the basin was 1 inches, which brings the seasonal accumulation (Oct-Feb) to 5.8 inches. Soil moisture is at 48% compared to 49% last year.



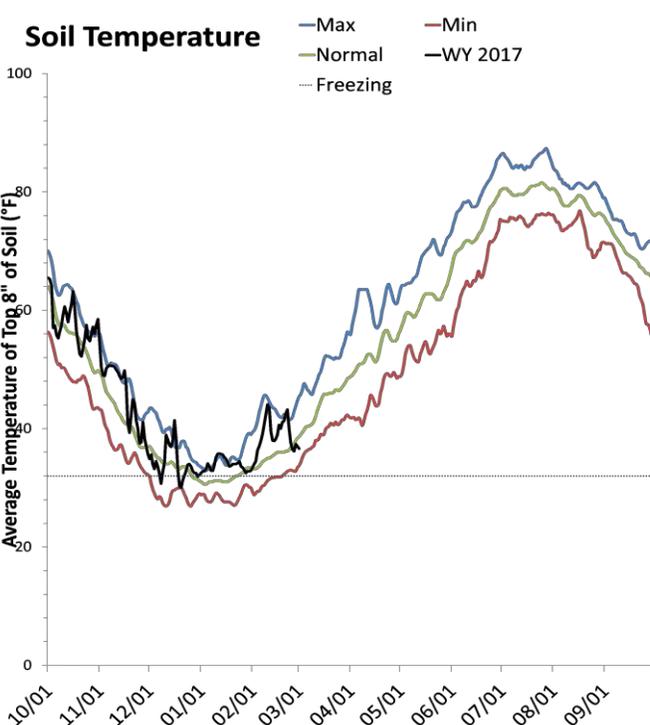
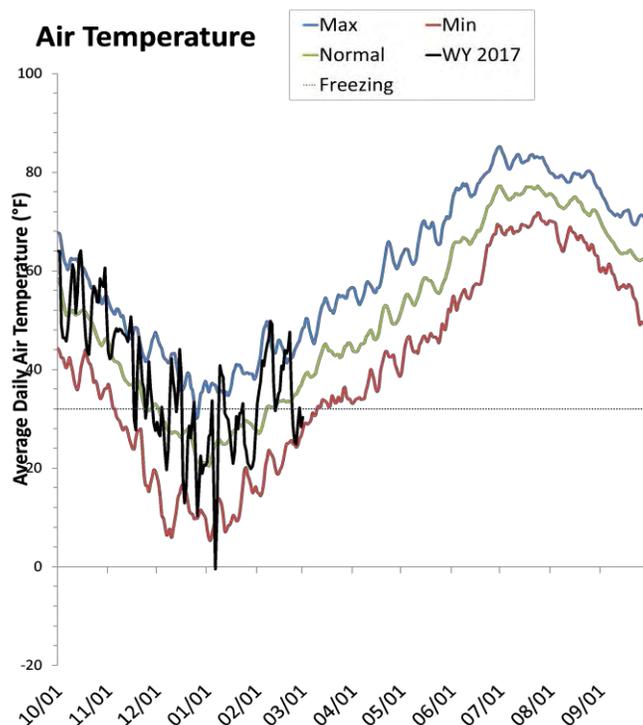
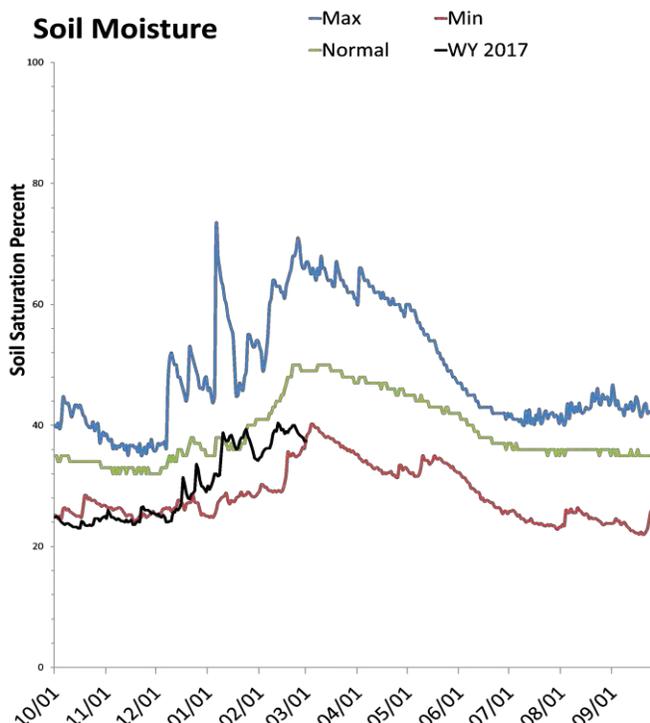
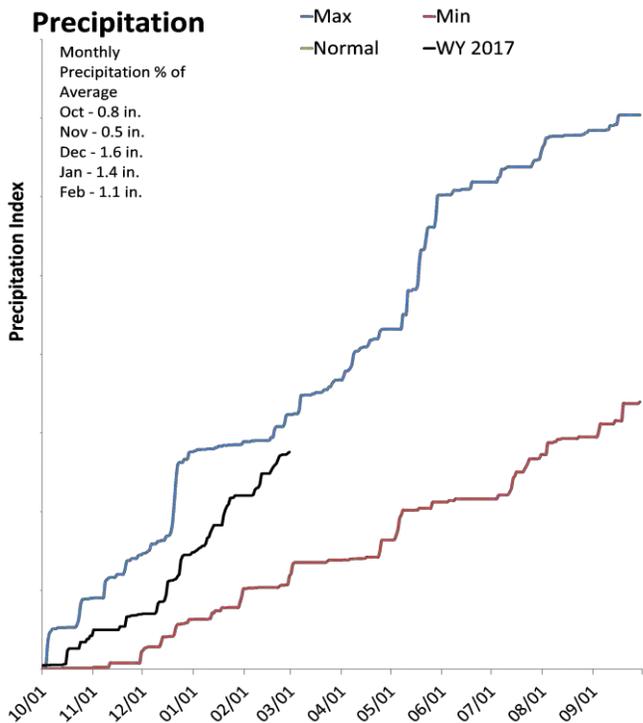
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Western and Dixie

March 1, 2017

The average precipitation in February at SCAN sites within the basin was 1.1 inches, which brings the seasonal accumulation (Oct-Feb) to 5.5 inches. Soil moisture is at 37% compared to 41% last year.



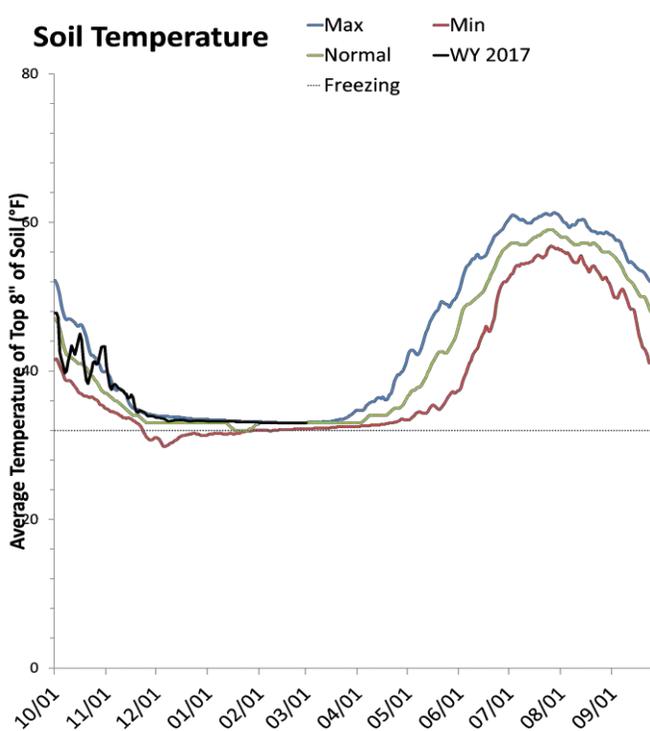
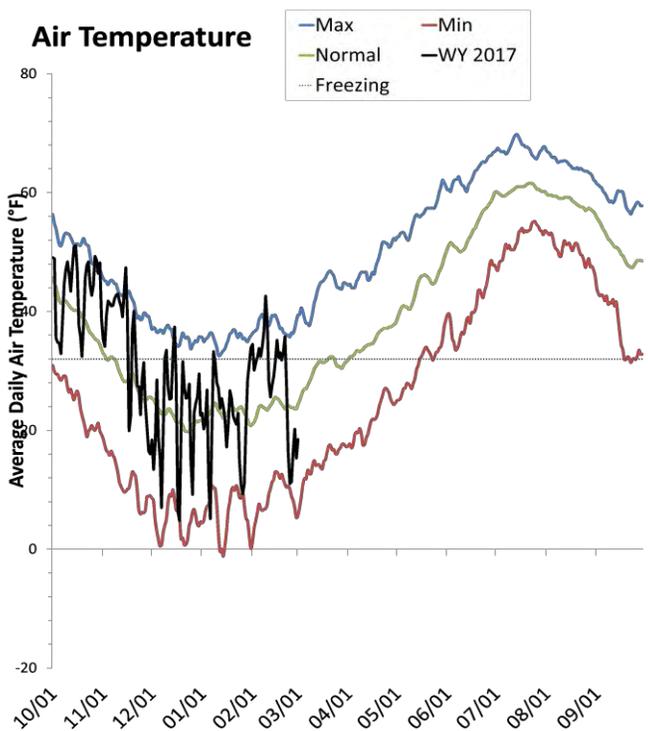
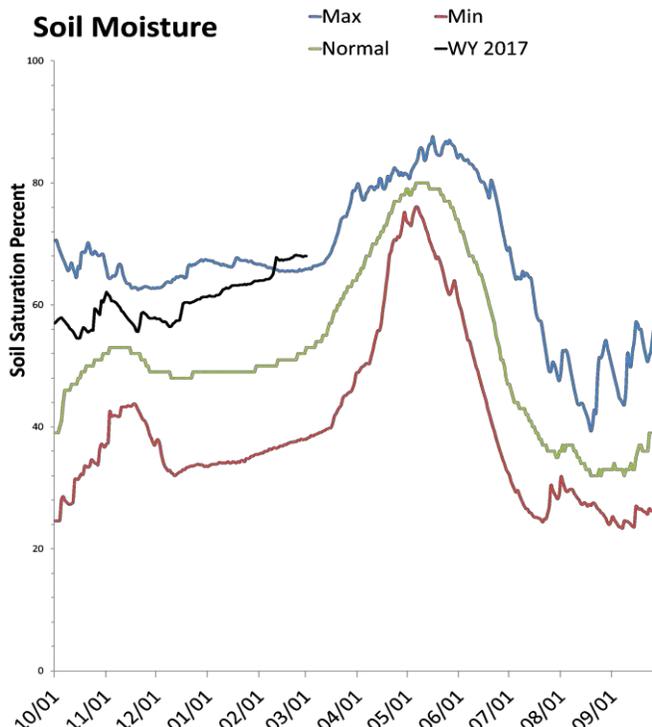
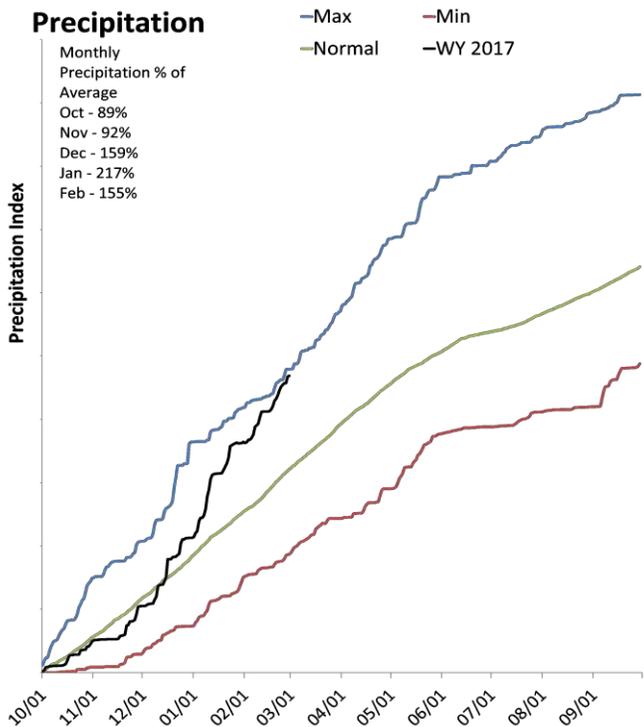
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Statewide SNOTEL

March 1, 2017

Precipitation at SNOTEL sites during February was much above average at 157%, which brings the seasonal accumulation (Oct-Feb) to 147% of average. Soil moisture is at 68% compared to 56% last year. Reservoir storage is at 58% of capacity, compared to 54% last year.



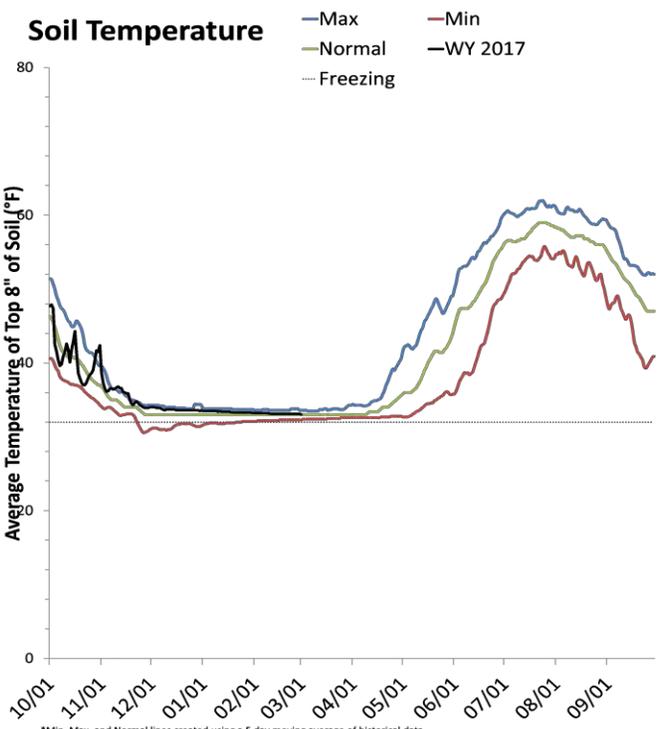
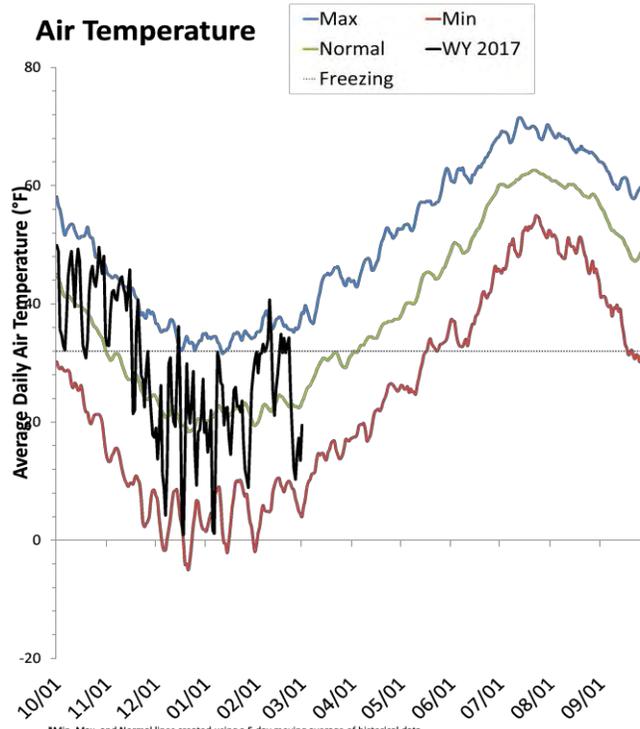
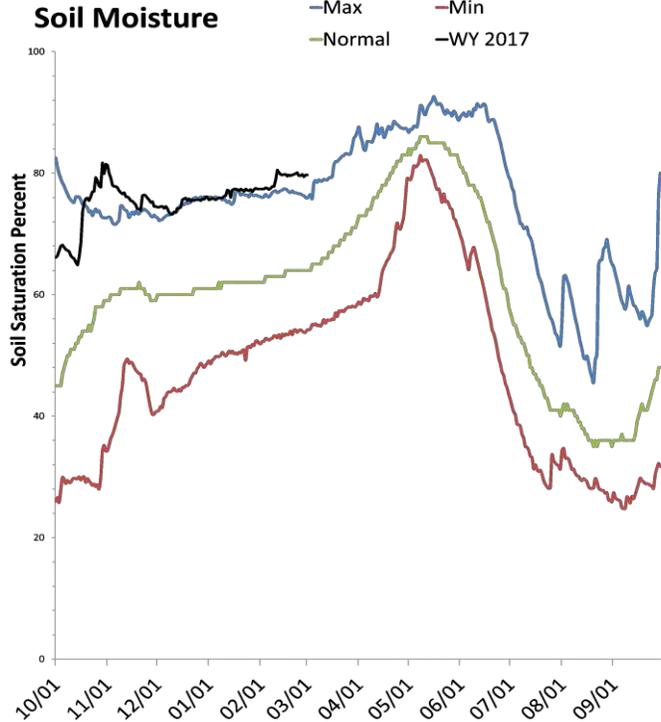
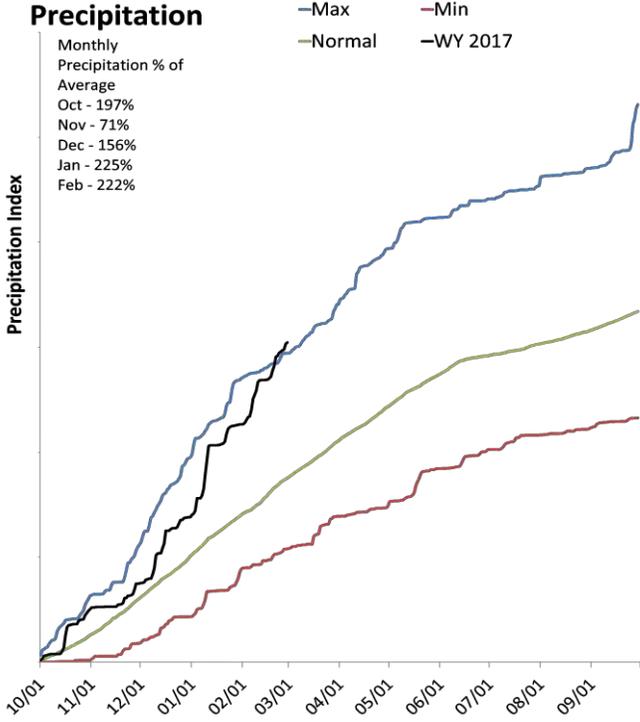
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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Bear River Basin

March 1, 2017

Precipitation in February was much above average at 223%, which brings the seasonal accumulation (Oct-Feb) to 174% of average. Soil moisture is at 79% compared to 63% last year. Reservoir storage is at 45% of capacity, compared to 40% last year. The water availability index for the Bear River is 47%, 87% for Woodruff Narrows and 96% for the Little Bear.



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

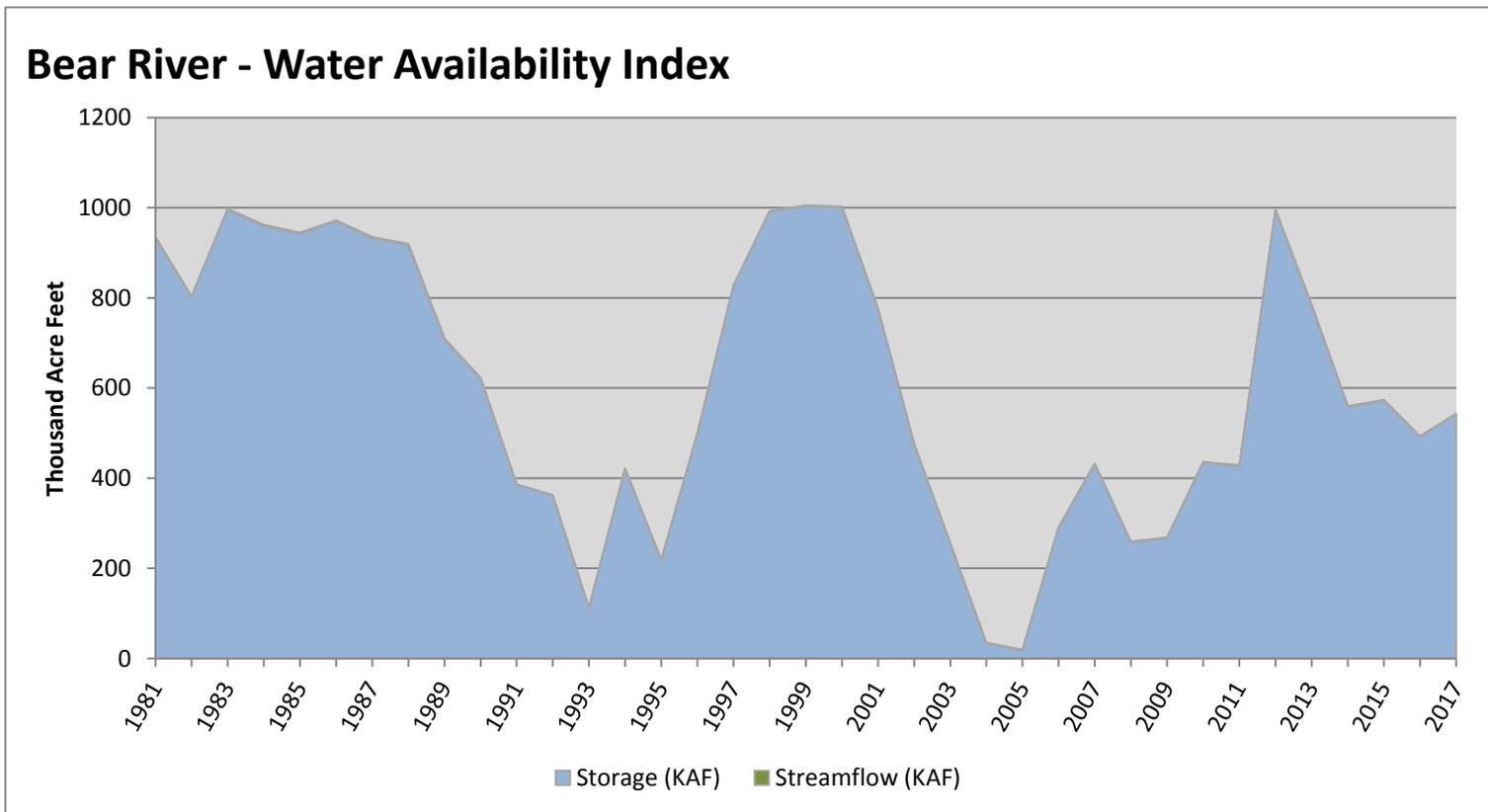
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March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	540.85	2.51	543.36	47	-0.22	16, 96, 14, 15

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

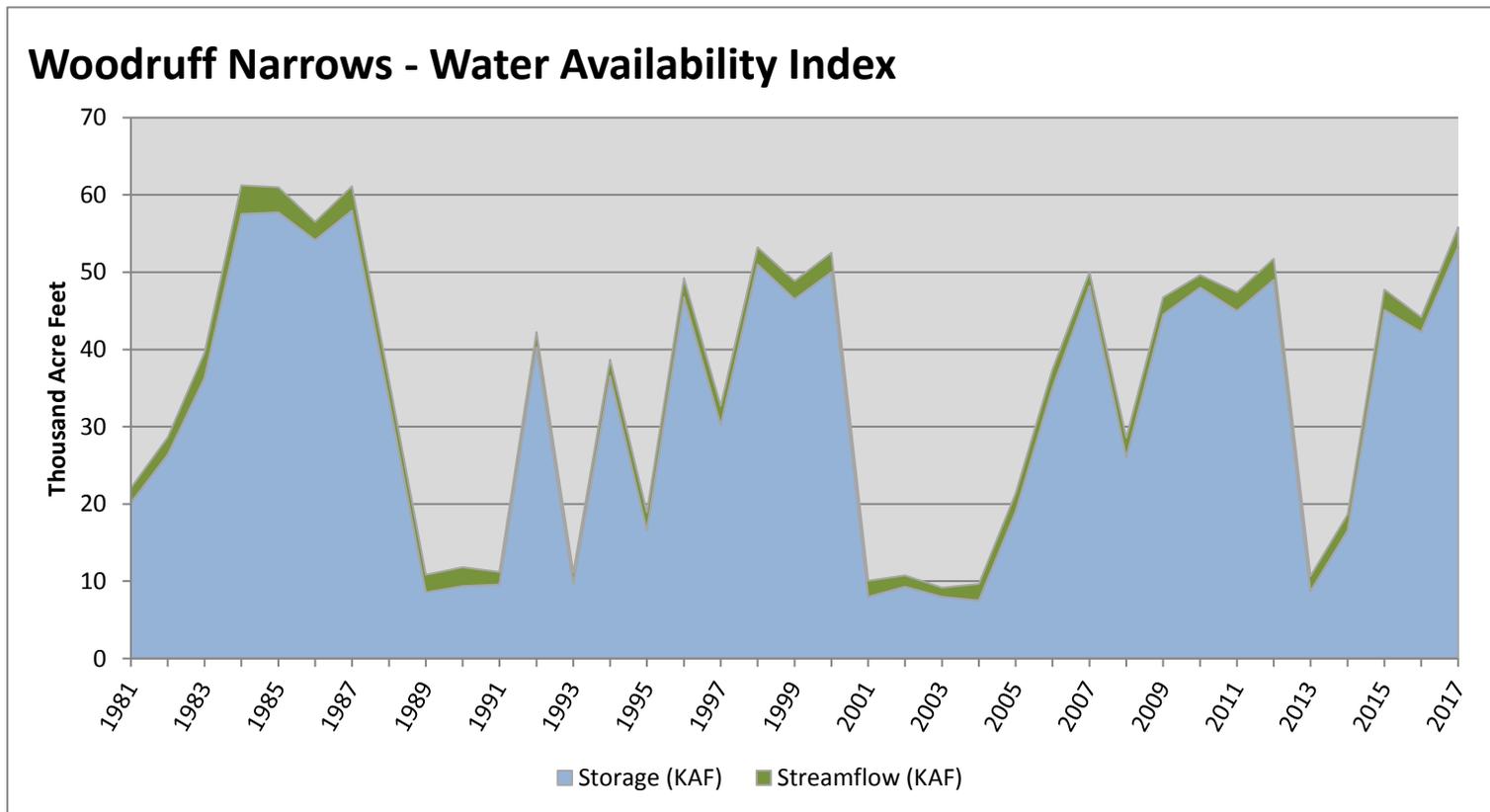


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	53.31	2.51	55.82	87	3.07	00, 98, 86, 85

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

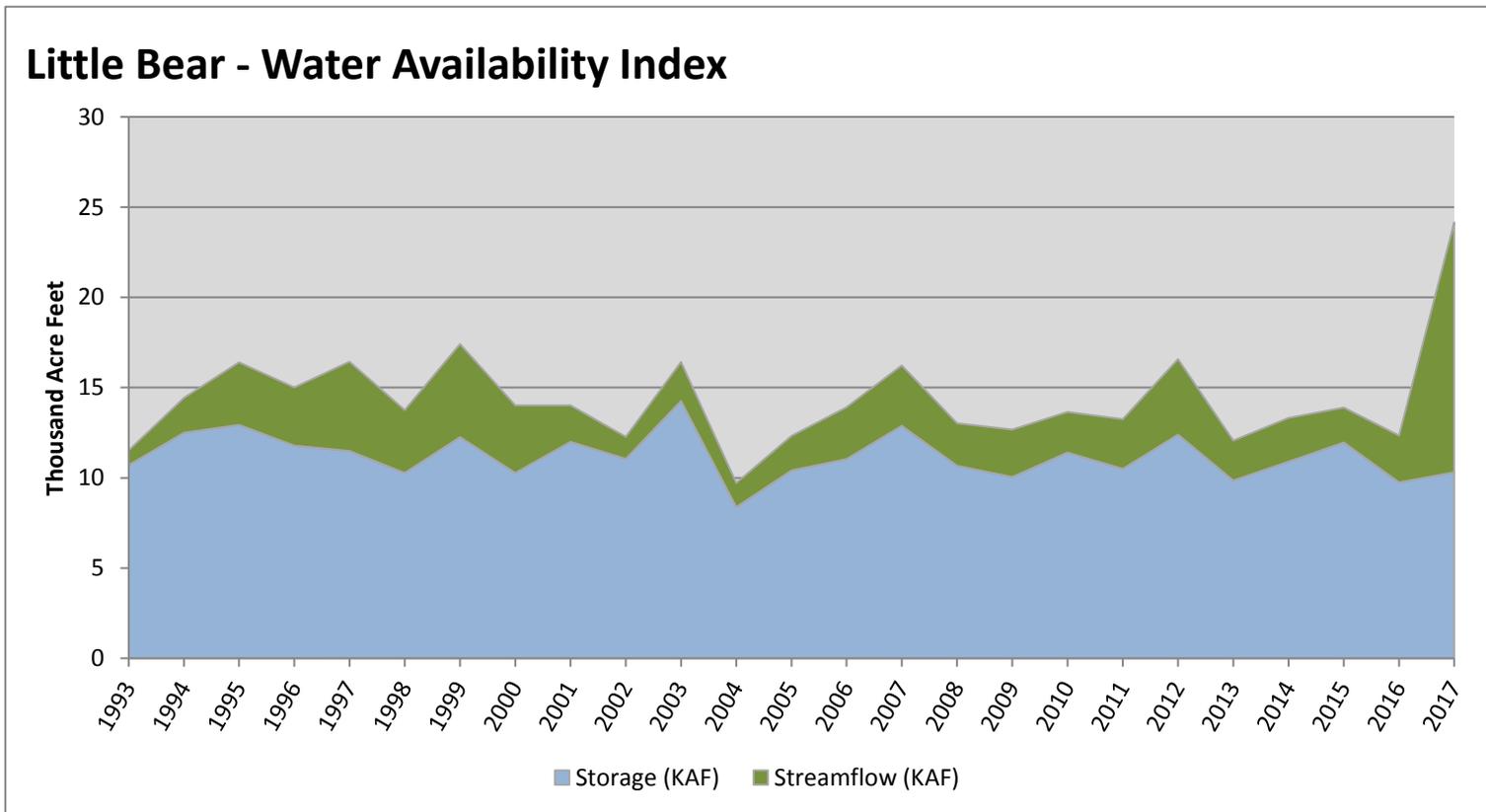


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM* Storage	February Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Little Bear	10.30	13.85	24.15	96	3.85	99, 12, 97, 03

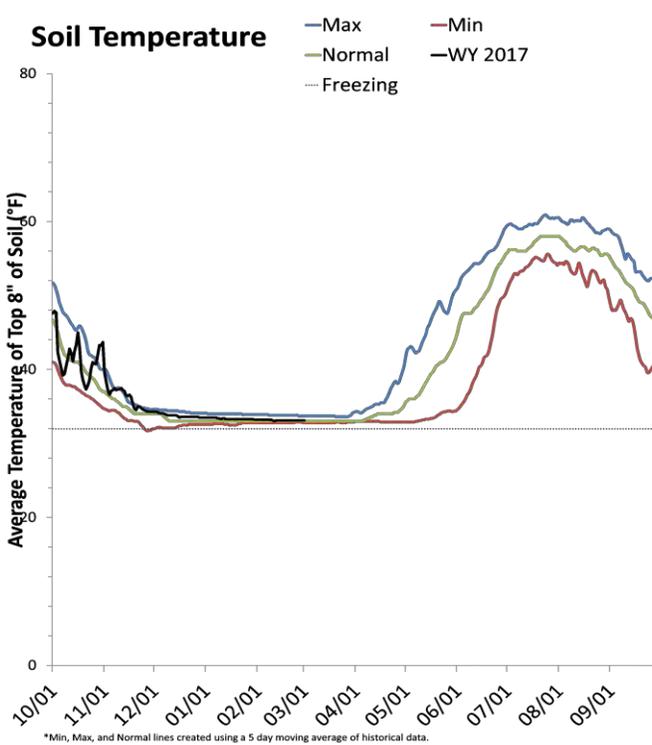
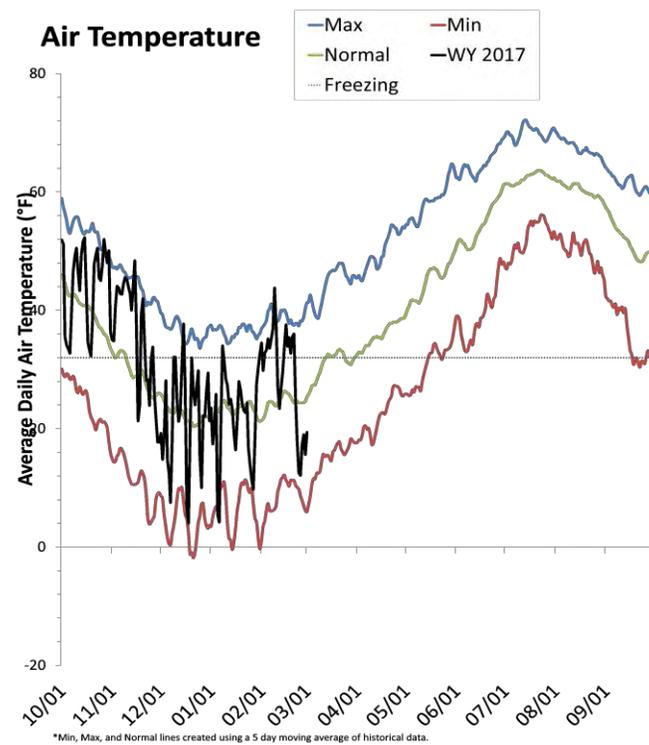
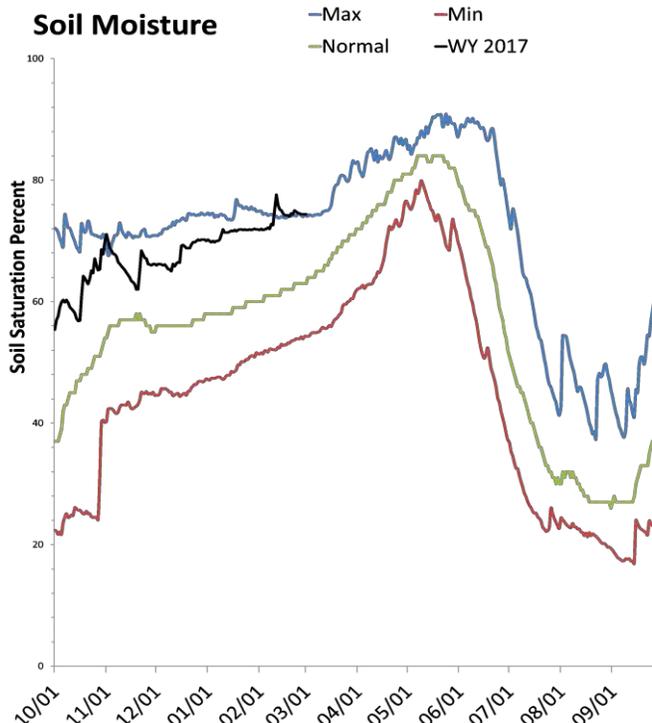
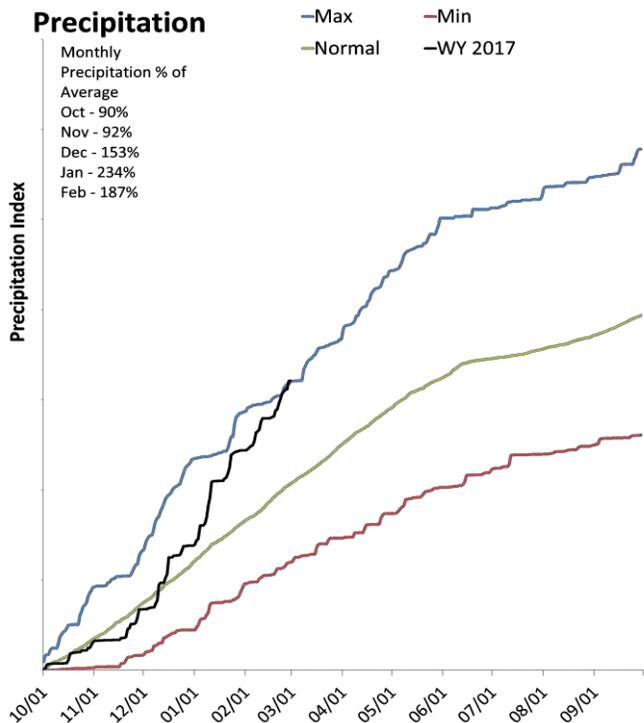
*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.



Weber & Ogden River Basins

March 1, 2017

Precipitation in February was much above average at 187%, which brings the seasonal accumulation (Oct-Feb) to 155% of average. Soil moisture is at 74% compared to 58% last year. Reservoir storage is at 71% of capacity, compared to 51% last year. The water availability index for the Ogden River is 84% and 50% for the Weber River.



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

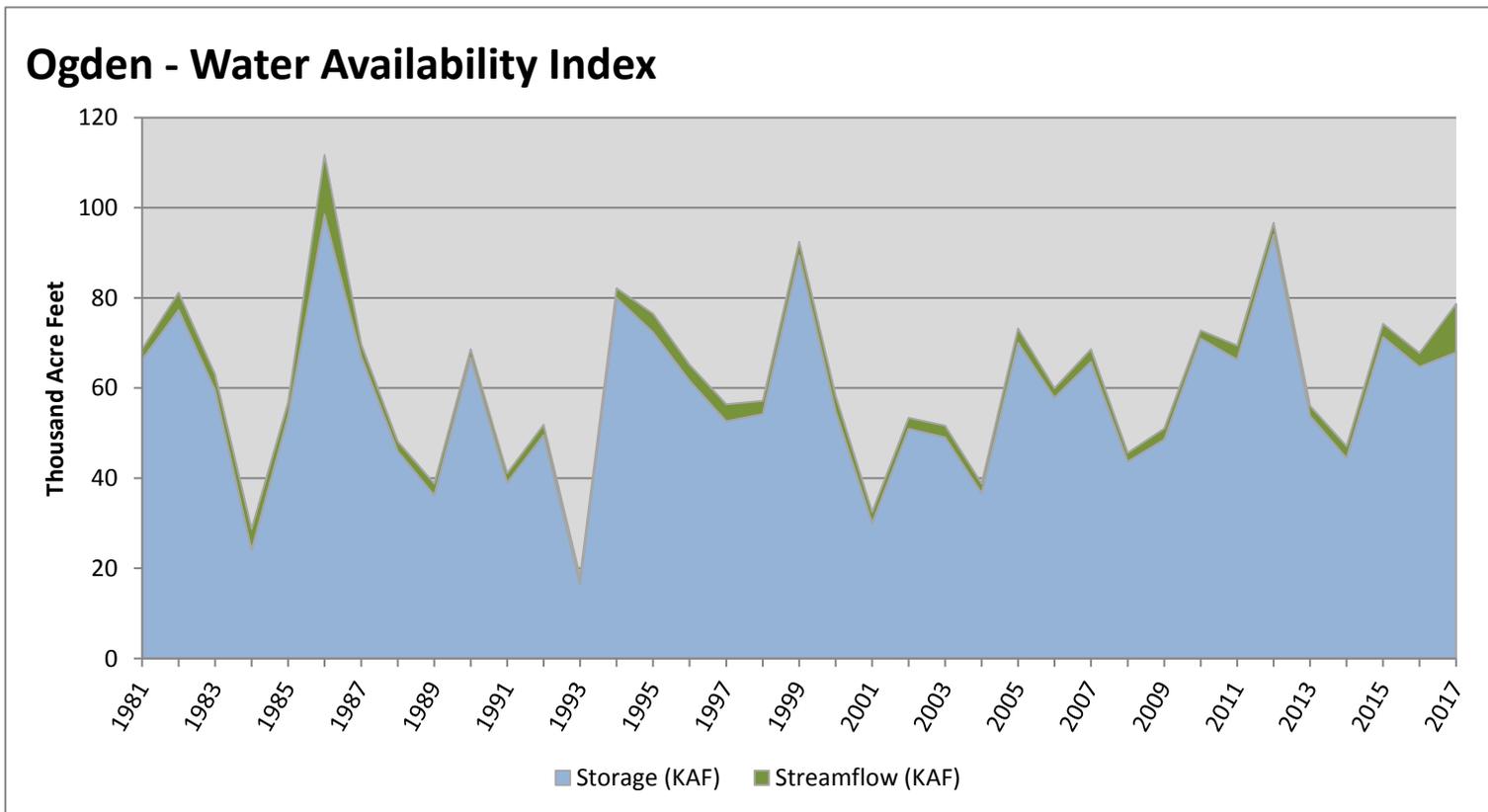
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	67.90	10.75	78.65	84	2.85	15, 95, 82, 94

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

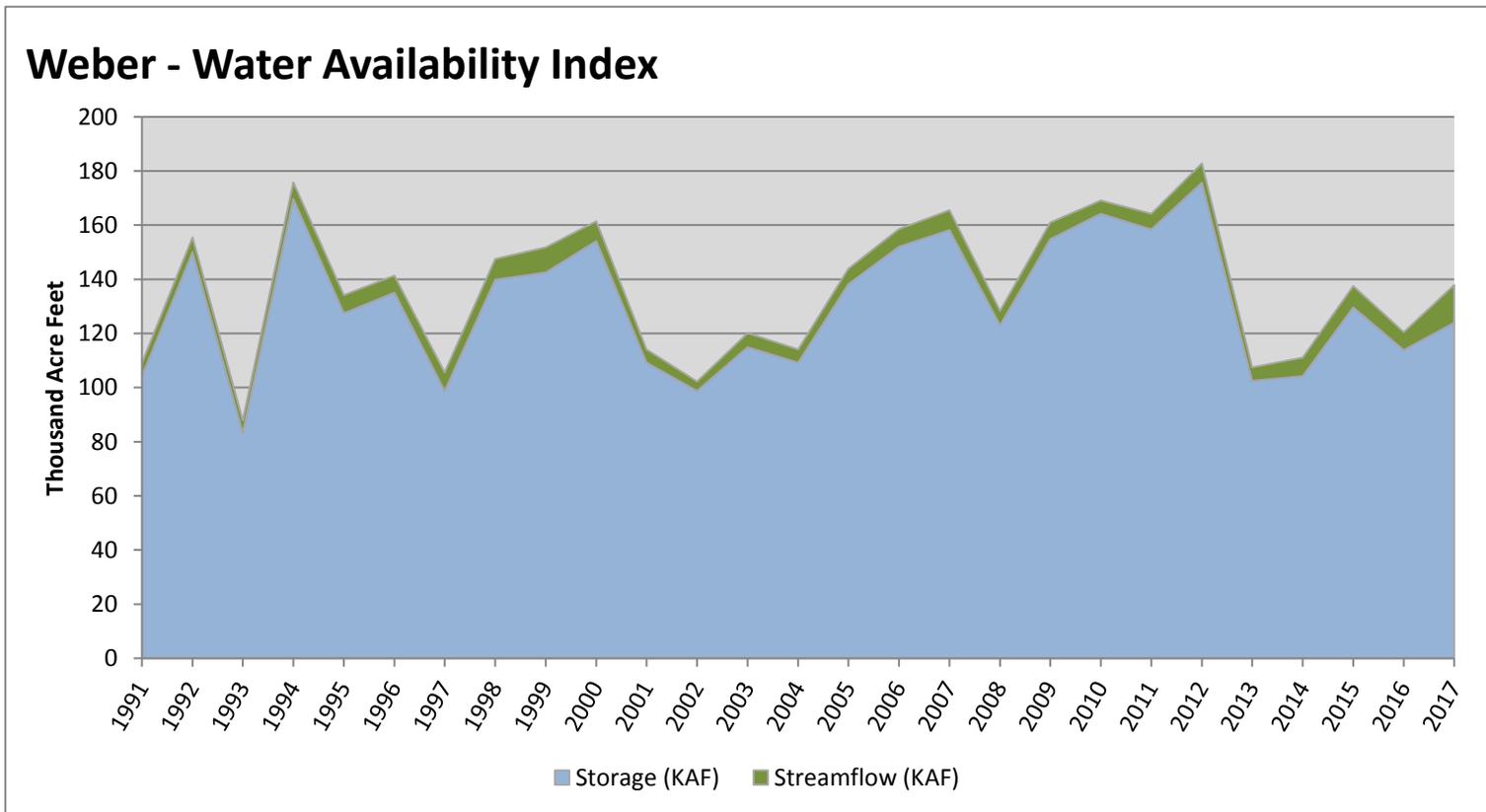


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	123.95	13.96	137.91	50	0	95, 15, 96, 05

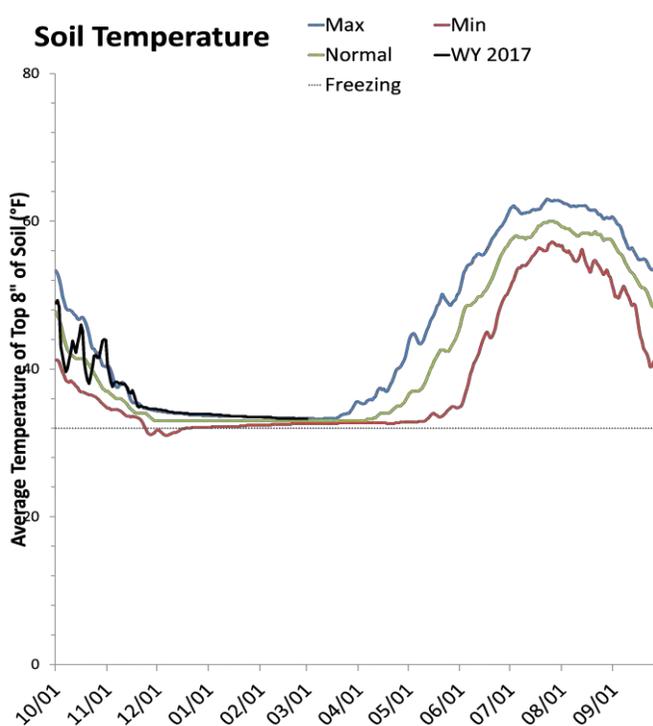
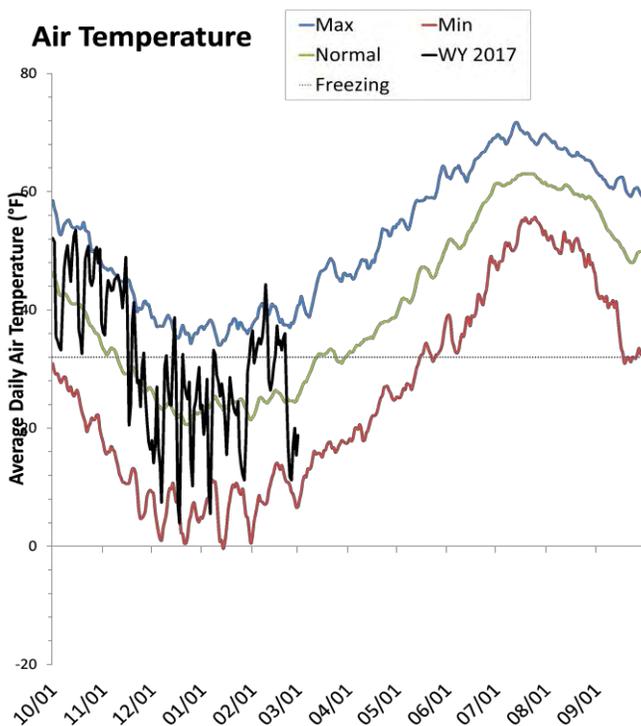
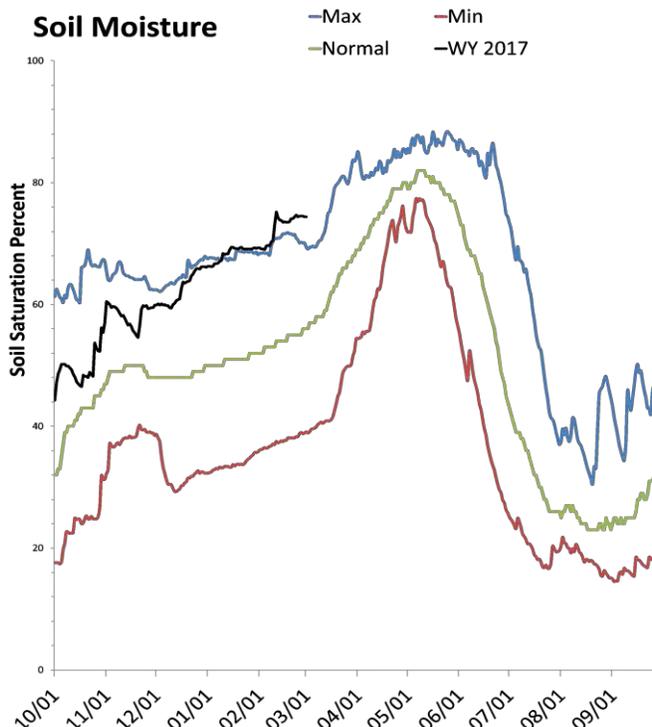
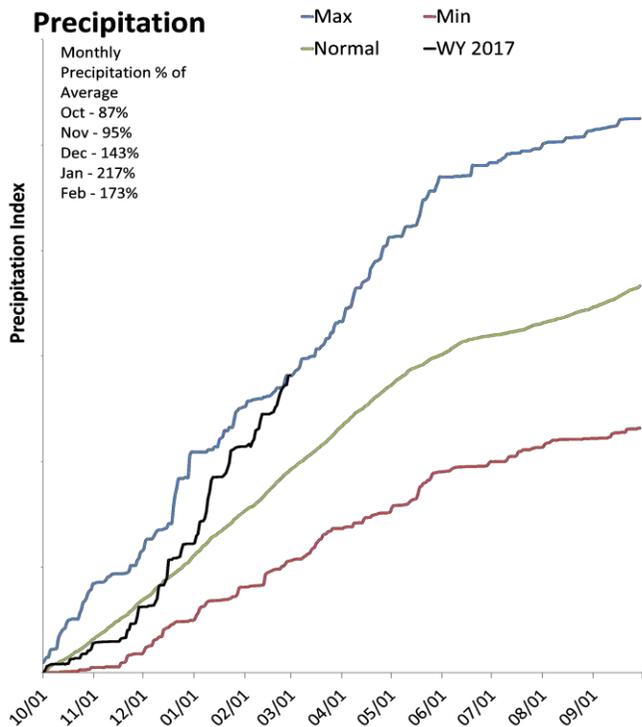
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Provo & Jordan River Basins

March 1, 2017

Precipitation in February was much above average at 173%, which brings the seasonal accumulation (Oct-Feb) to 147% of average. Soil moisture is at 74% compared to 50% last year. Reservoir storage is at 64% of capacity, compared to 64% last year. The water availability index for the Provo River is 39%.



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

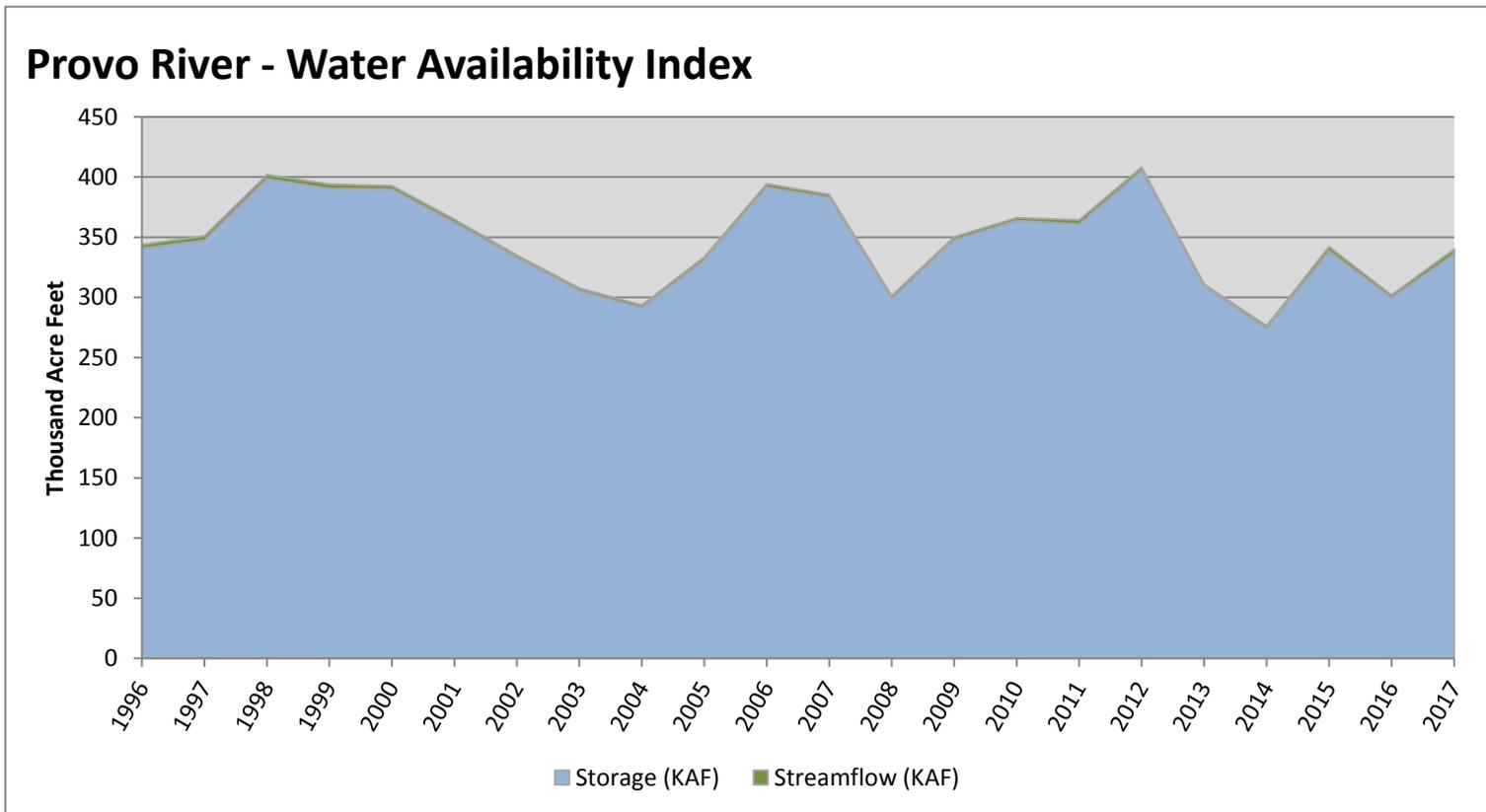
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	336.04	3.88	339.92	39	-0.91	05, 02, 15, 96

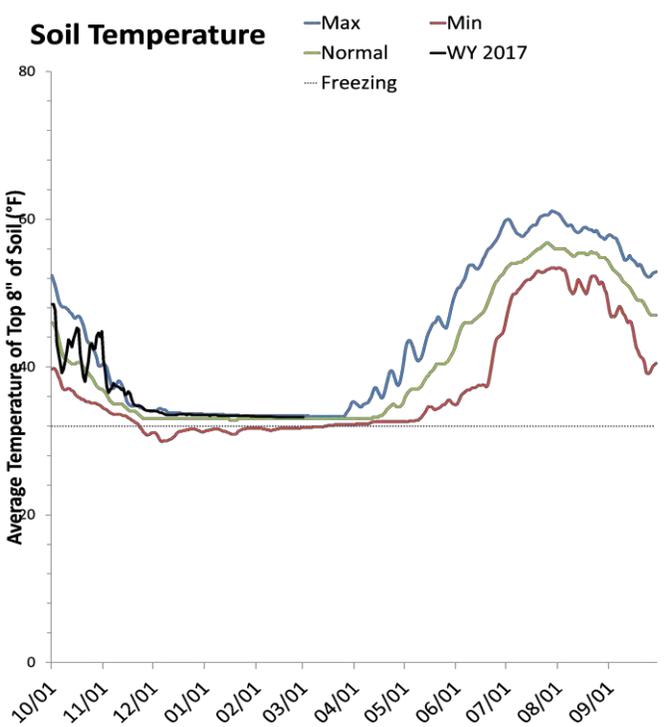
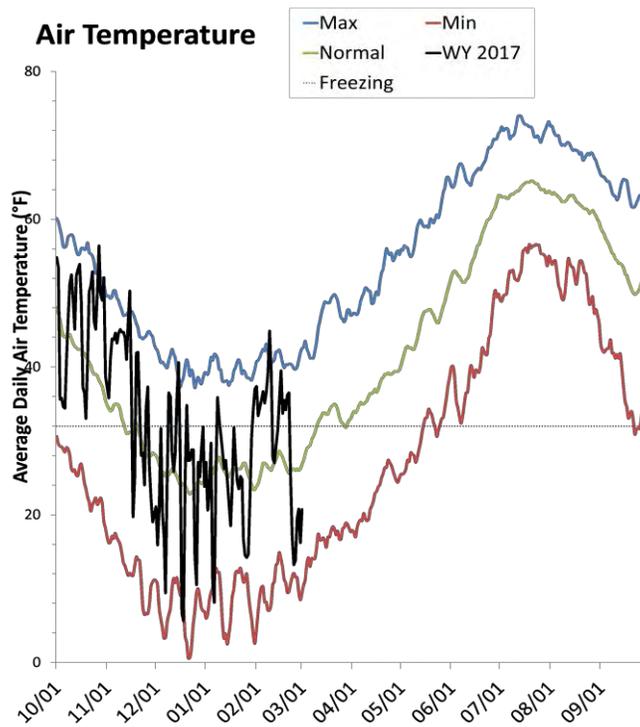
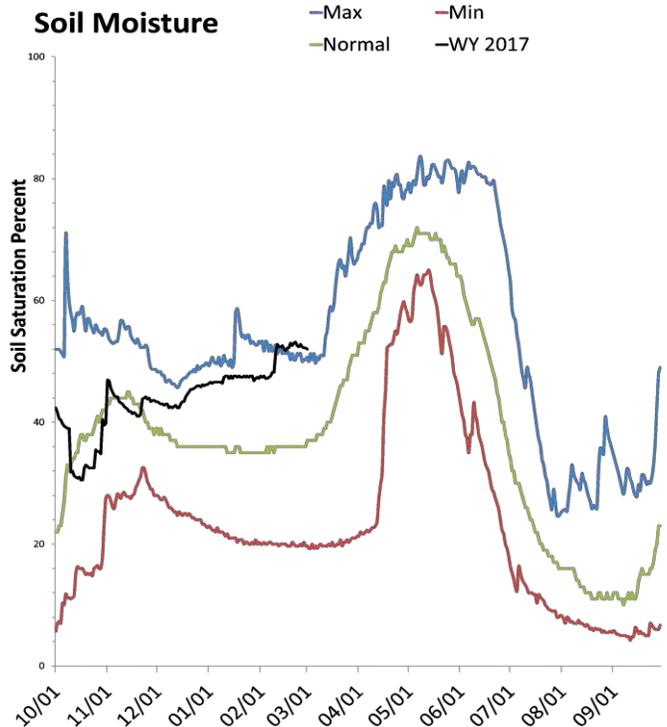
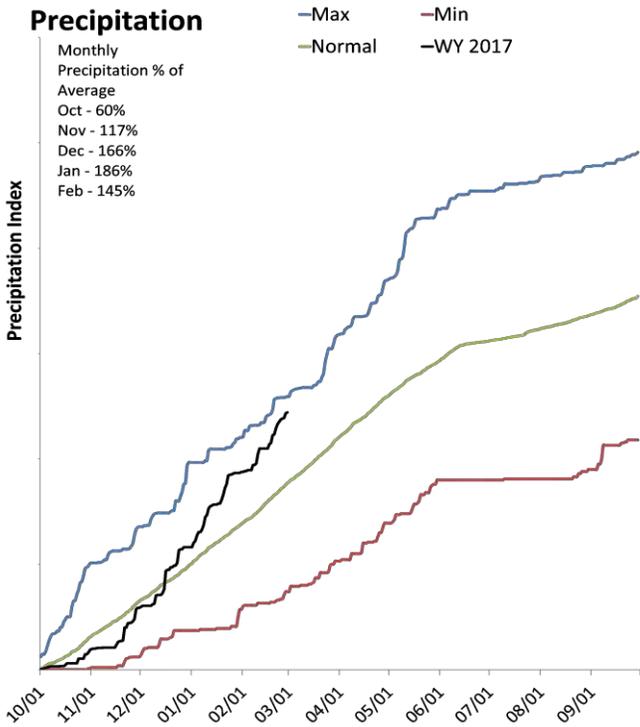
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Tooele Valley & West Desert Basins

March 1, 2017

Precipitation in February was much above average at 145%, which brings the seasonal accumulation (Oct-Feb) to 138% of average. Soil moisture is at 52% compared to 33% last year. Reservoir storage is at 48% of capacity, compared to 56% last year.



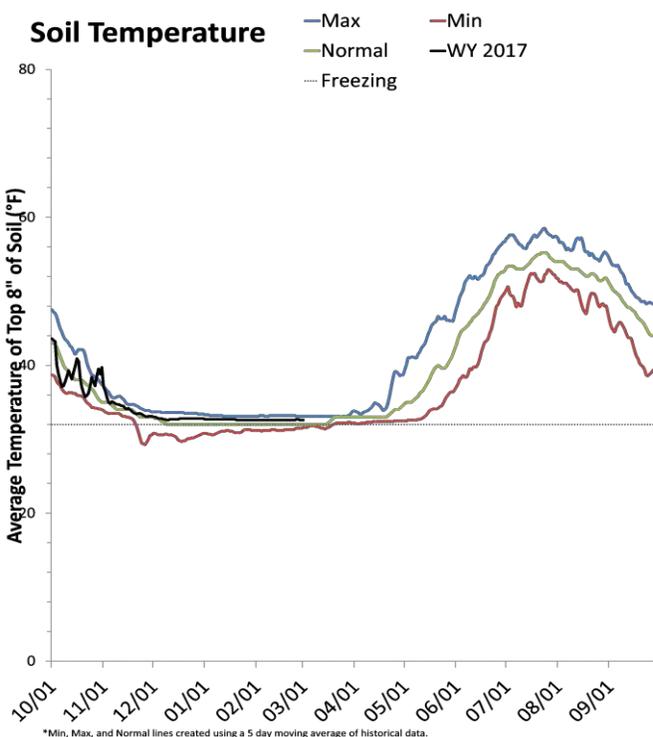
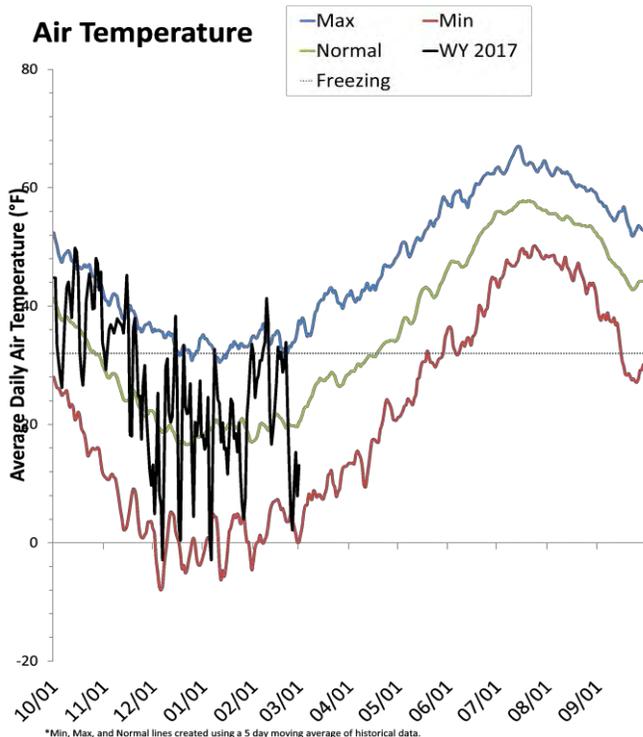
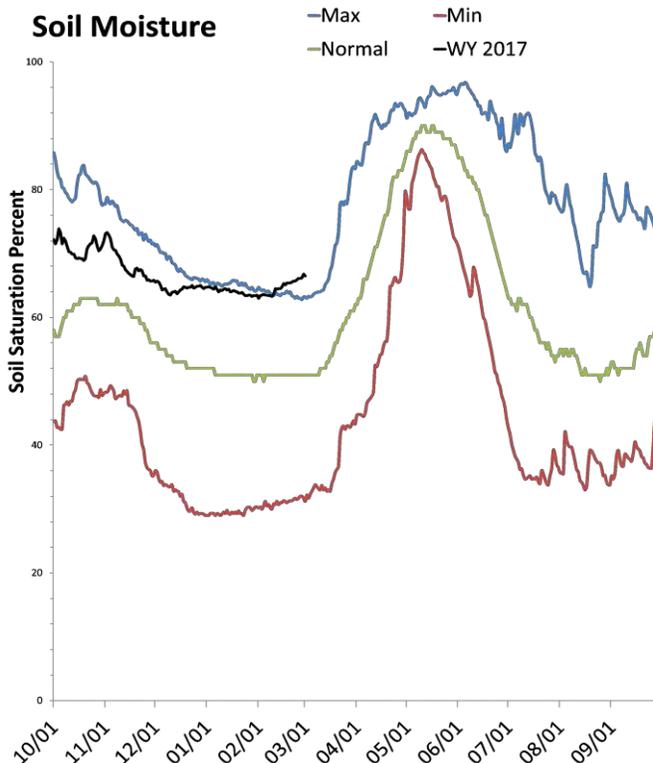
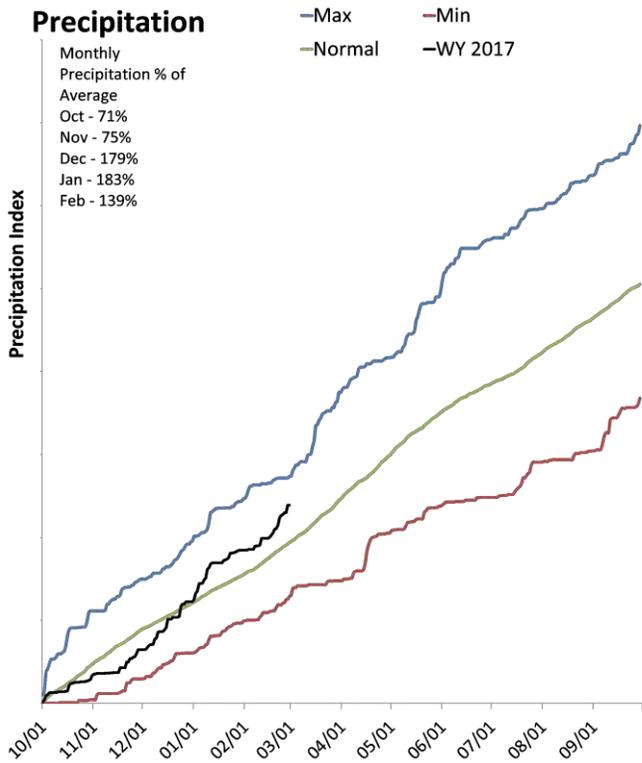
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Northeastern Uinta Basin

March 1, 2017

Precipitation in February was much above average at 137%, which brings the seasonal accumulation (Oct-Feb) to 123% of average. Soil moisture is at 66% compared to 57% last year. Reservoir storage is at 82% of capacity, compared to 83% last year. The Water availability Index for Blacks Fork is 66% and 65% for Smiths Creek.

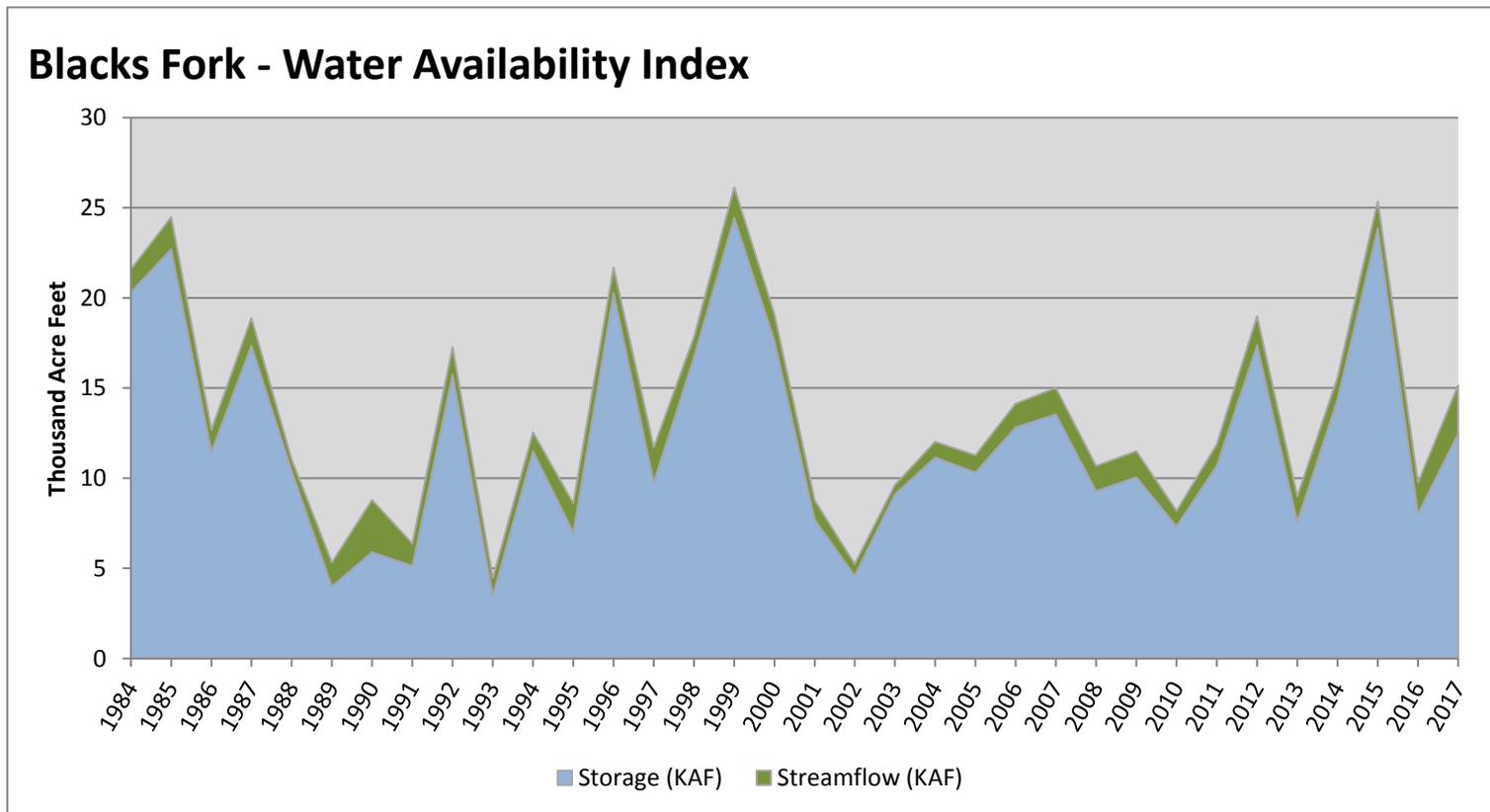


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	12.48	2.67	15.15	66	1.31	06, 07, 14, 92

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

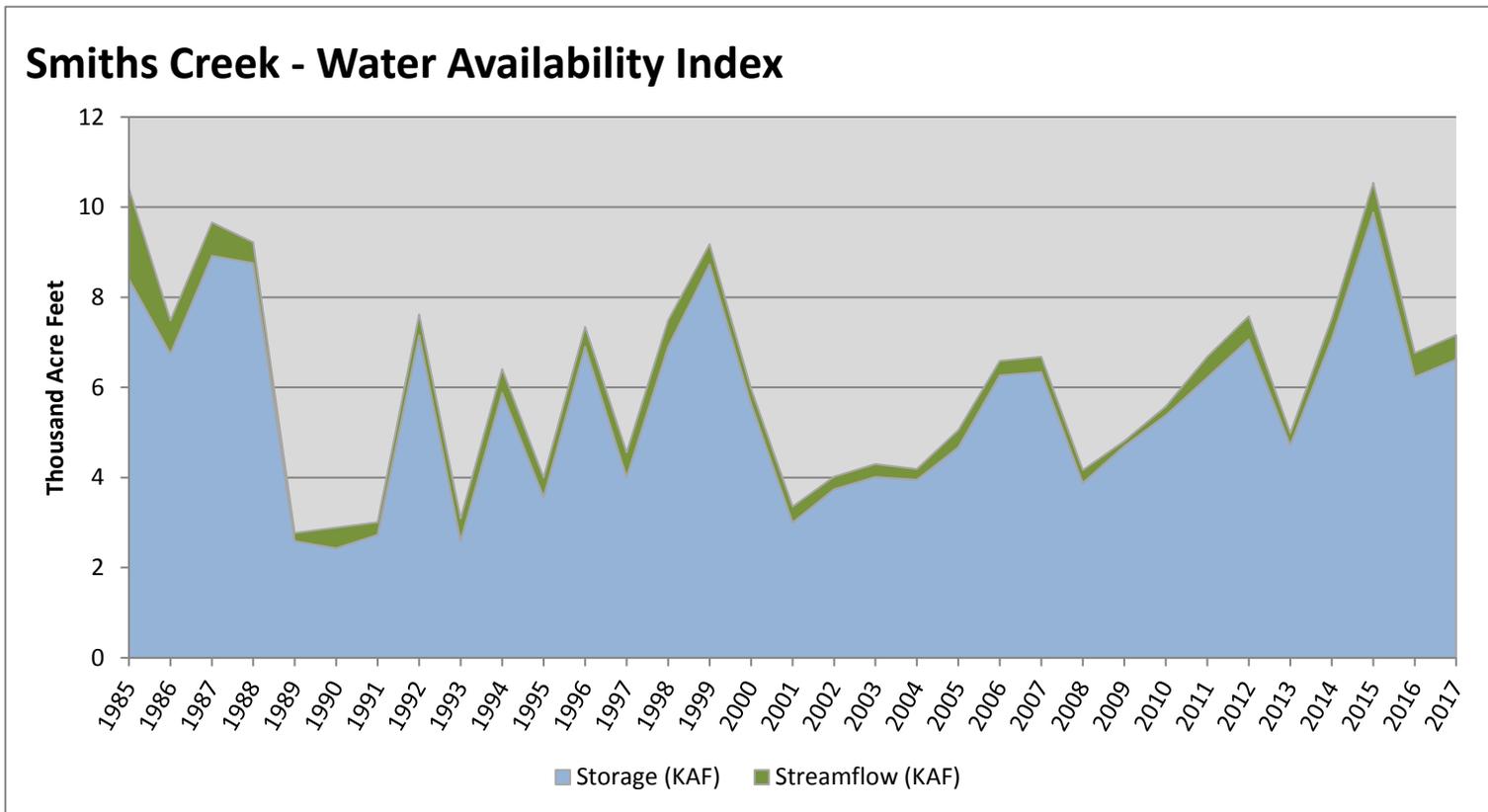


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	6.62	0.54	7.16	65	1.23	11, 16, 96, 86

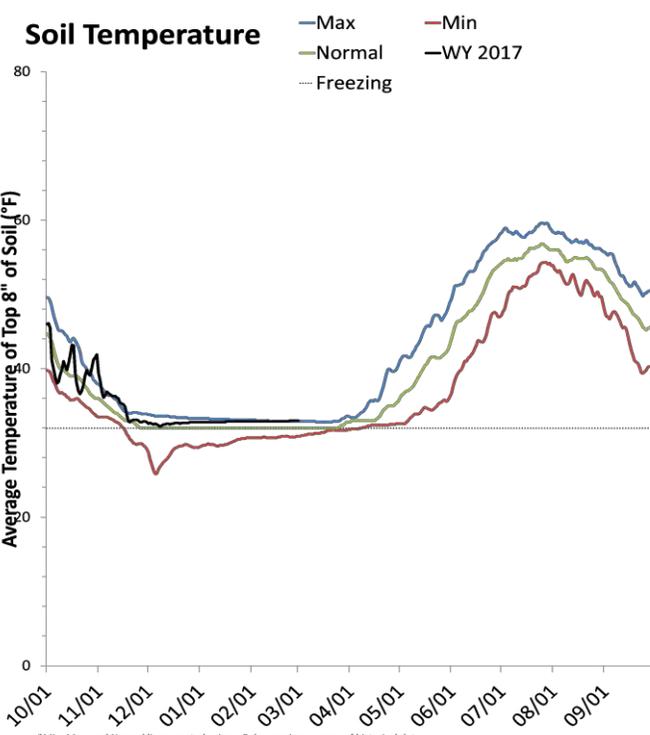
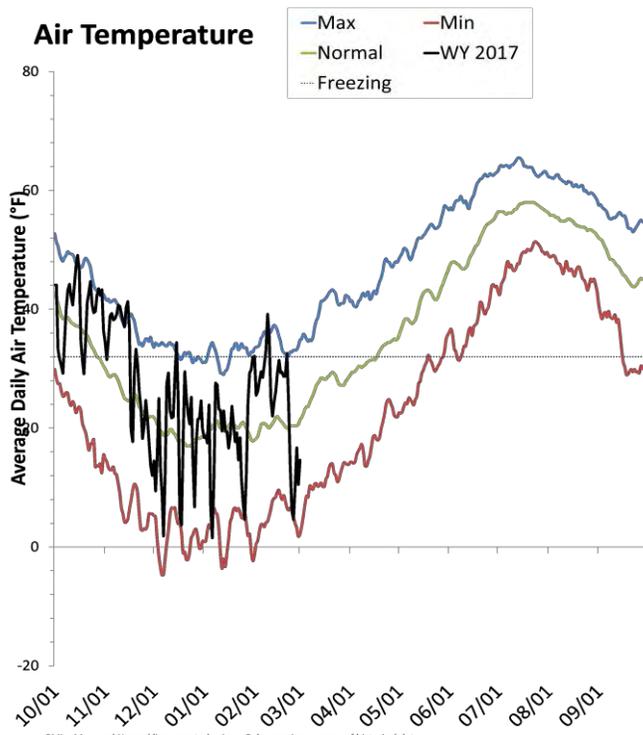
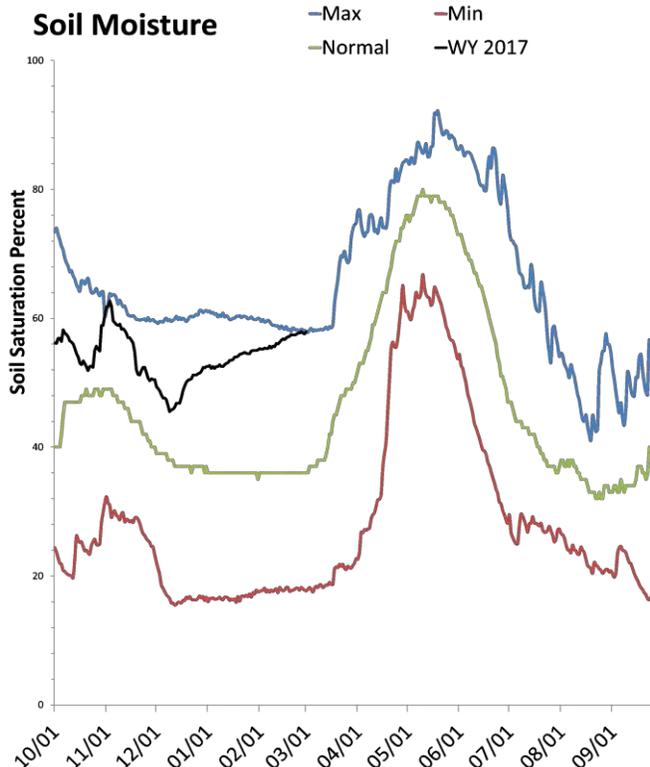
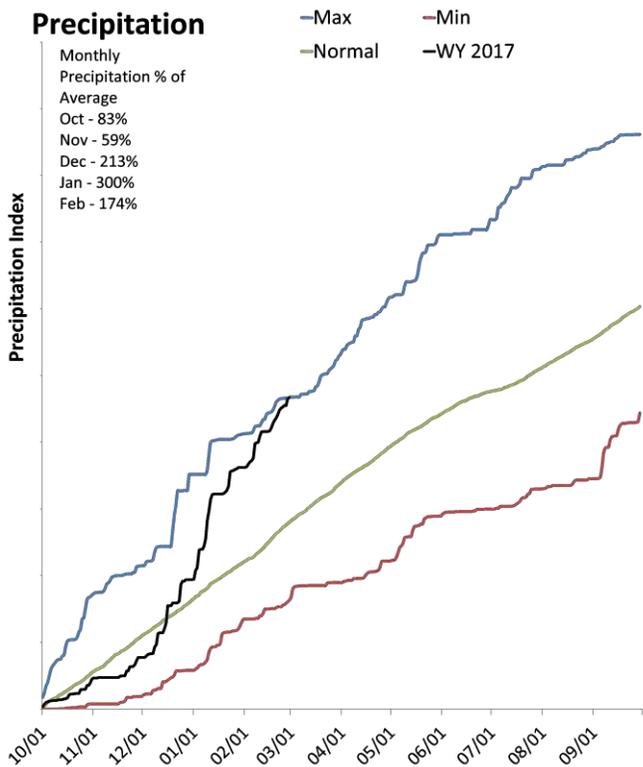
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Duchesne River Basin

March 1, 2017

Precipitation in February was much above average at 174%, which brings the seasonal accumulation (Oct-Feb) to 167% of average. Soil moisture is at 59% compared to 41% last year. Reservoir storage is at 71% of capacity, compared to 72% last year. The water availability index for the Western Uintas is 48% and 63% for the Eastern Uintas.



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

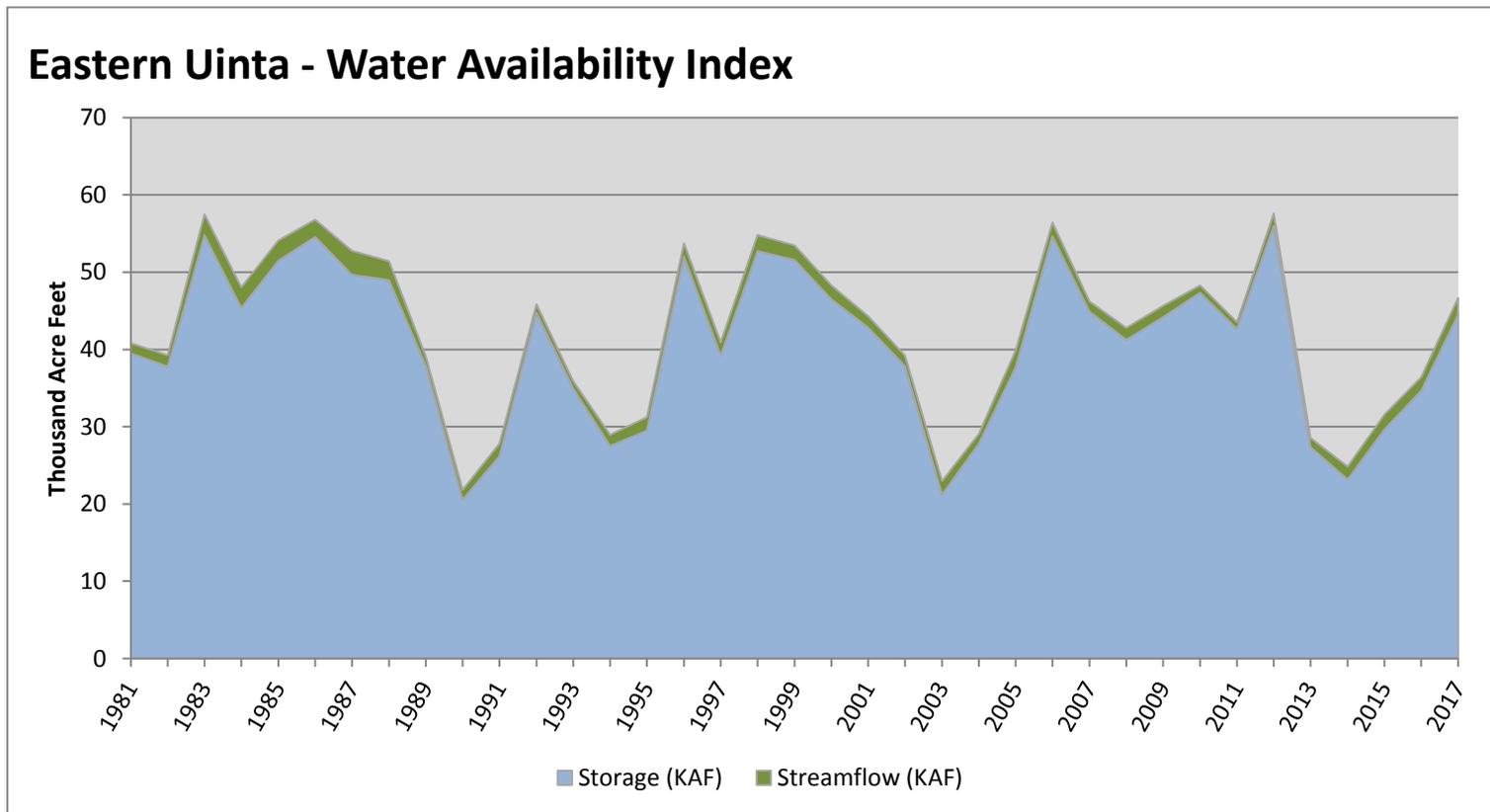
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uinta	44.51	2.16	46.67	63	1.1	92, 07, 84, 00

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

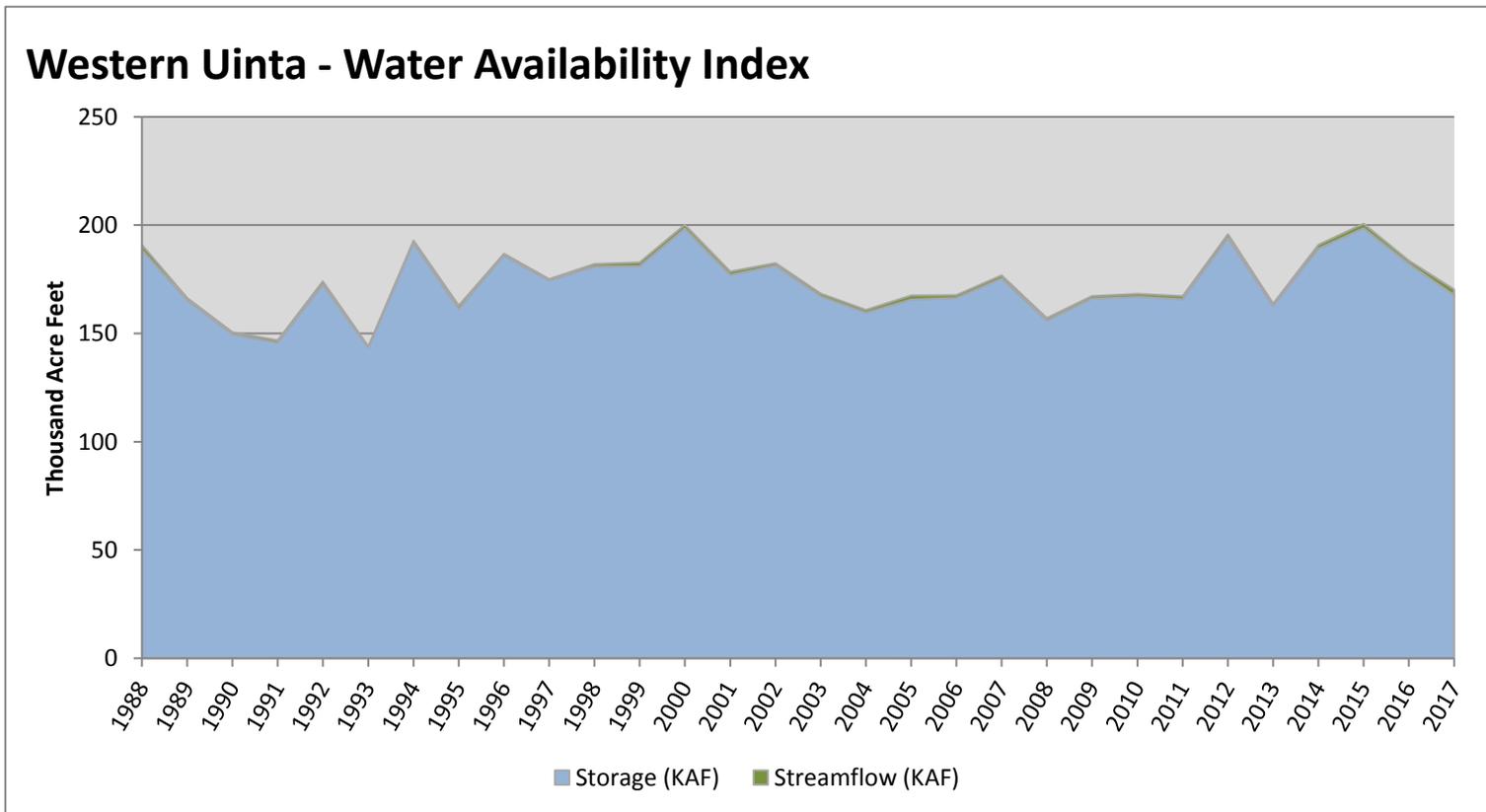


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uinta	167.66	2.67	170.33	48	-0.13	10, 03, 92, 97

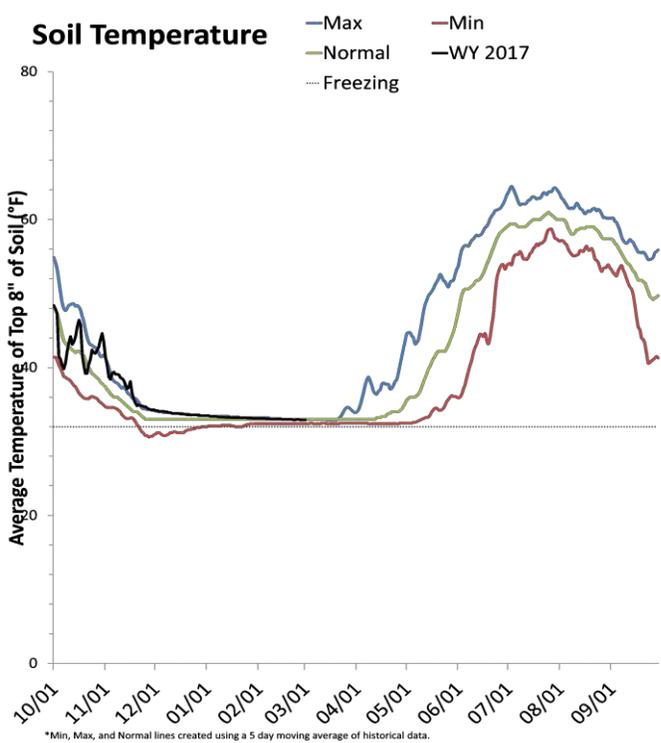
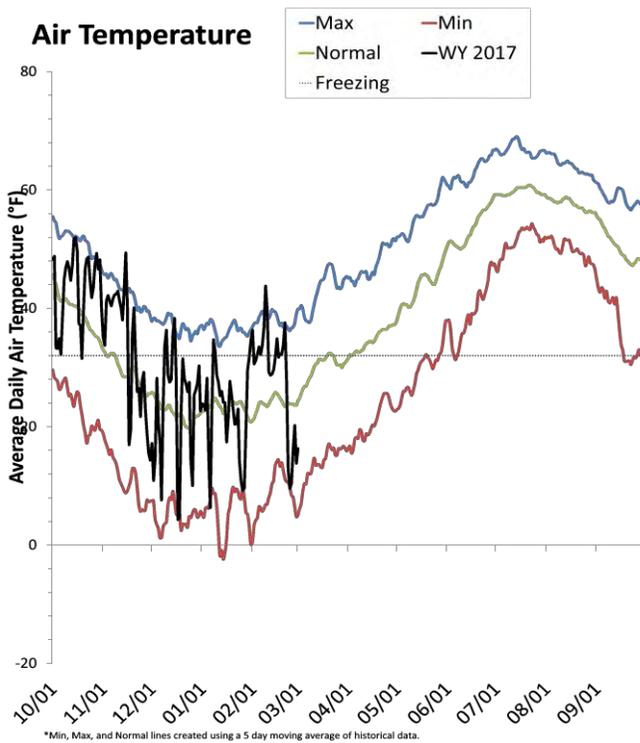
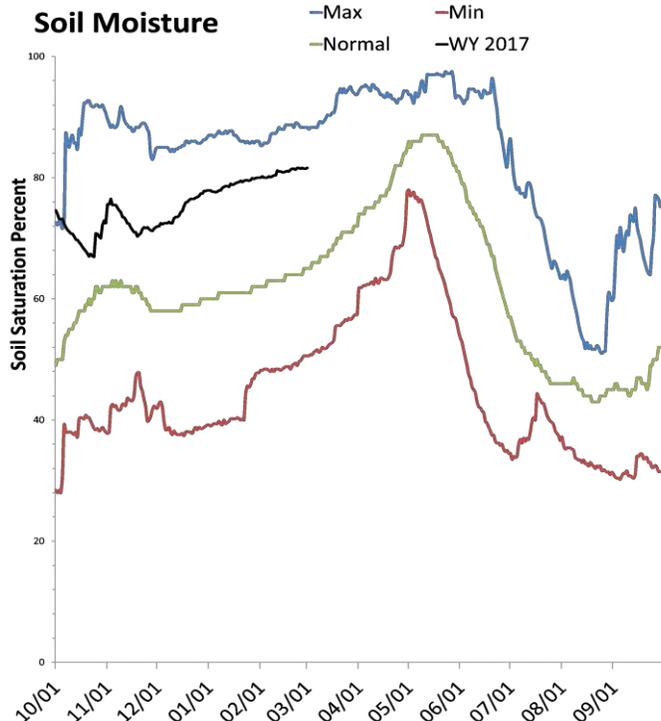
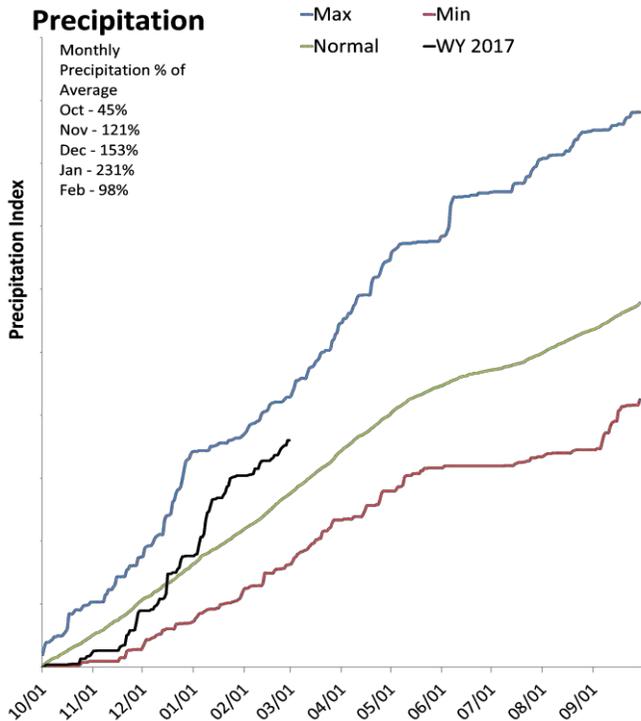
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



San Pitch River Basin

March 1, 2017

Precipitation in February was near average at 99%, which brings the seasonal accumulation (Oct-Feb) to 131% of average. Soil Moisture is at 82% compared to 66% last year. Reservoir storage is at 11% of capacity, compared to 9% last year. The water availability index for the San Pitch is 16%.



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

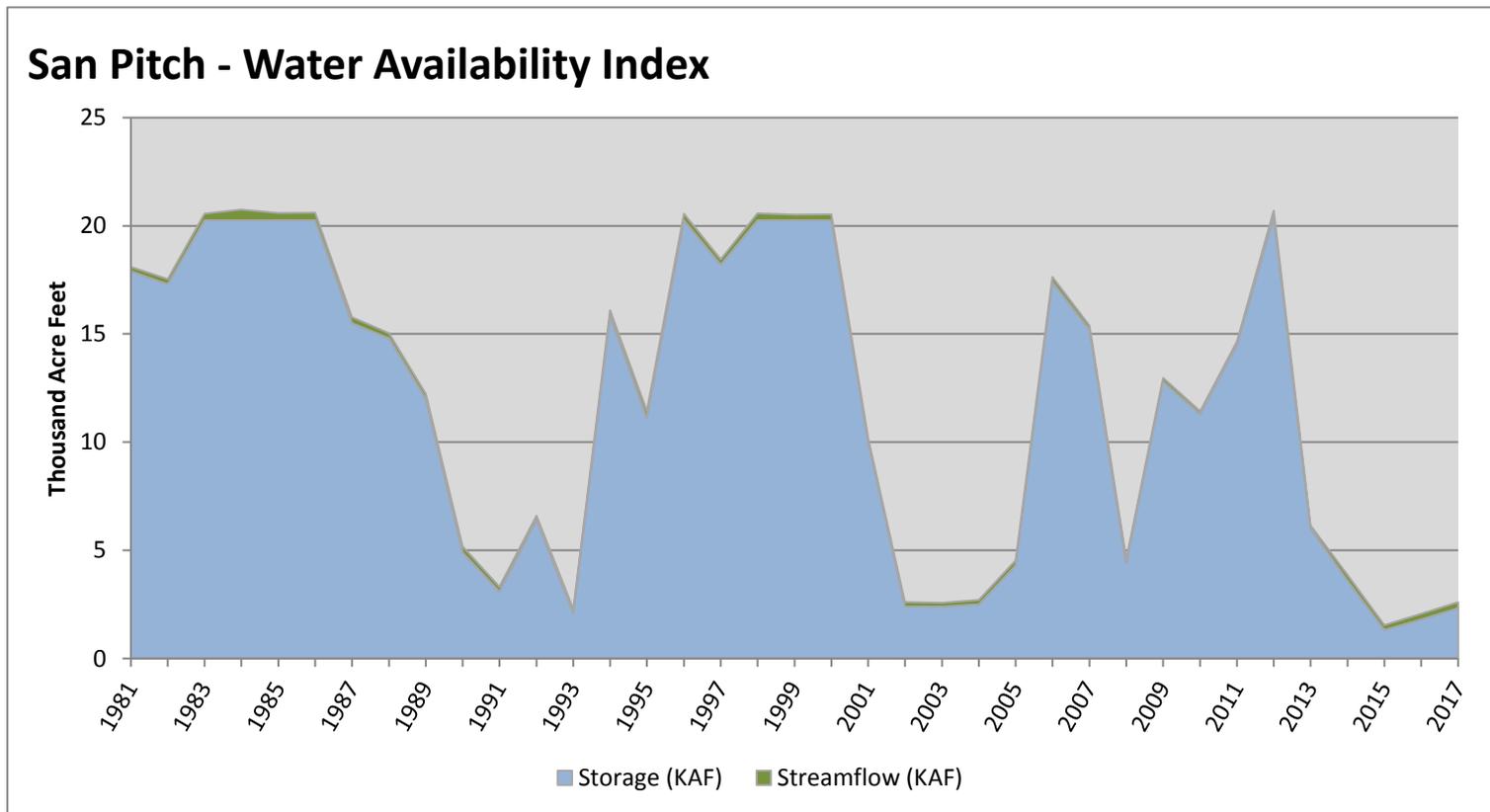
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	2.33	0.28	2.61	16	-2.85	03, 02, 04, 91

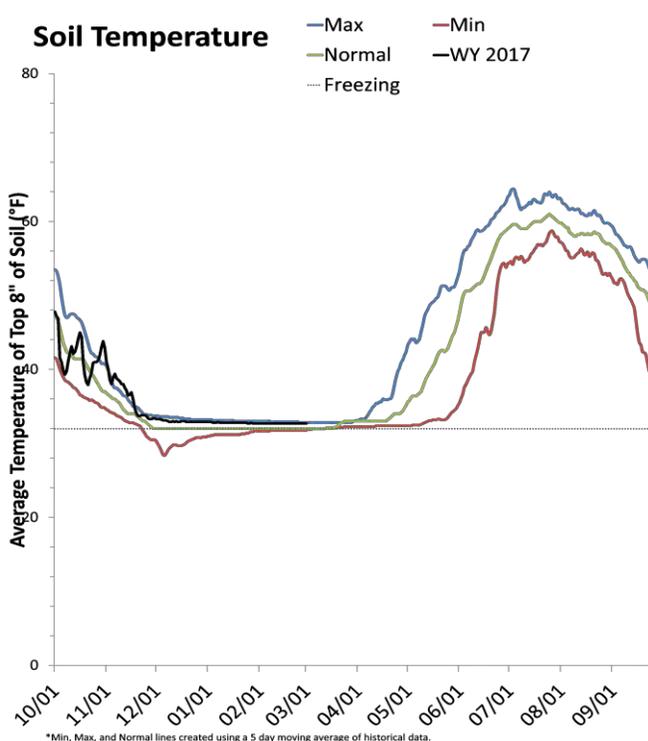
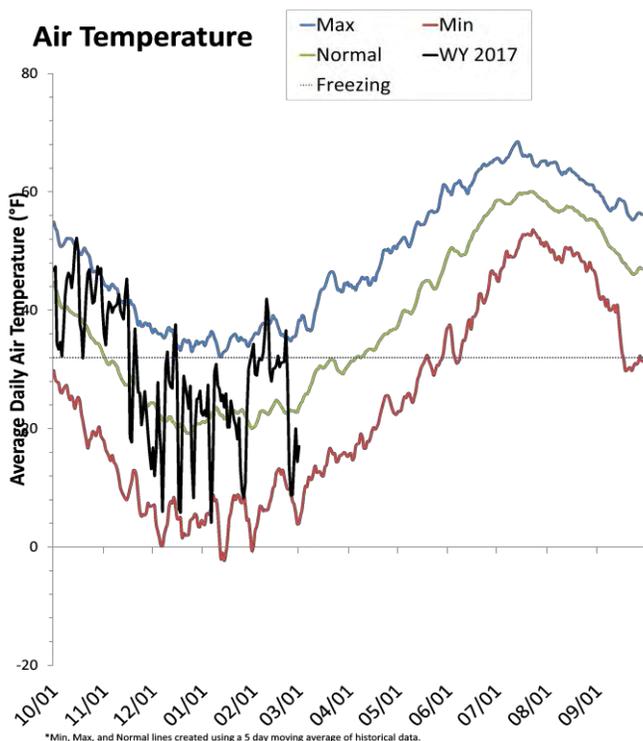
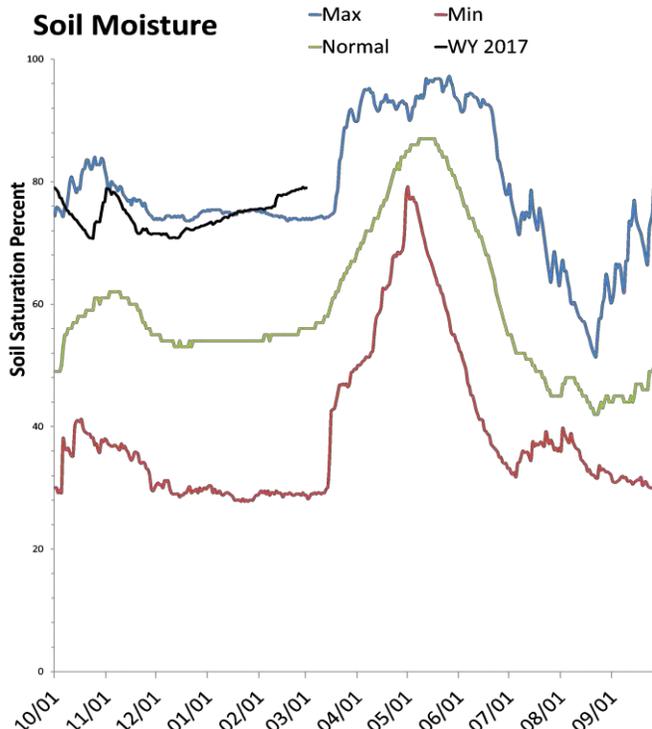
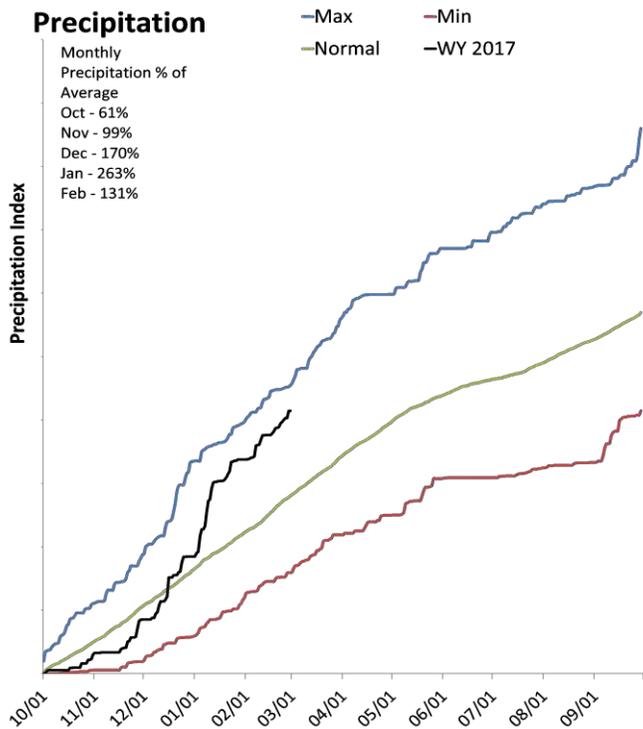
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Price & San Rafael Basins

March 1, 2017

Precipitation in February was much above average at 131%, which brings the seasonal accumulation (Oct-Feb) to 148% of average. Soil moisture is at 79% compared to 61% last year. Reservoir storage is at 42% of capacity, compared to 40% last year. The water availability index for the Price River is 34%, and 16% for Joe's Valley.



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

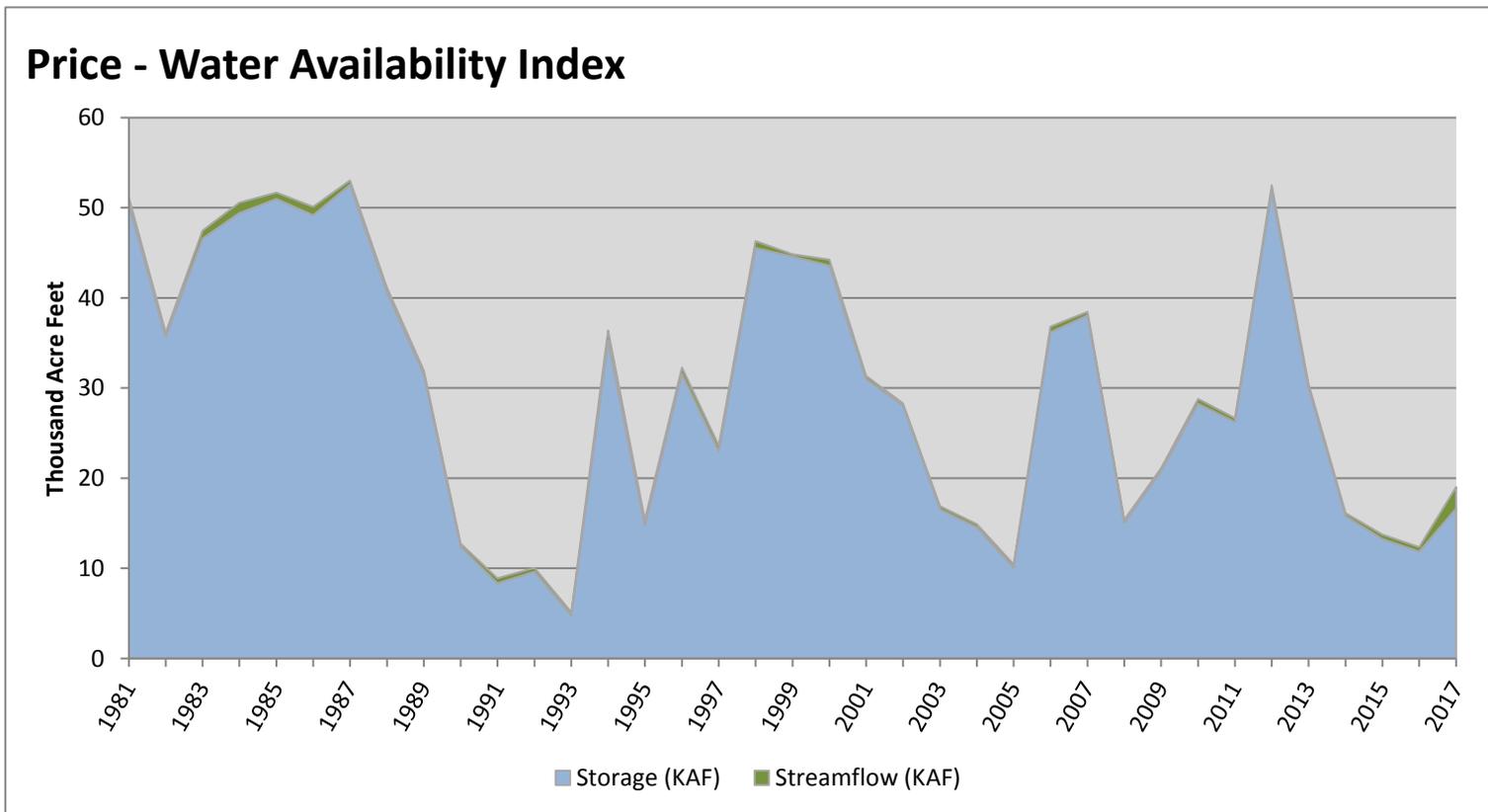
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	16.63	2.39	19.02	34	-1.32	14, 03, 09, 97

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

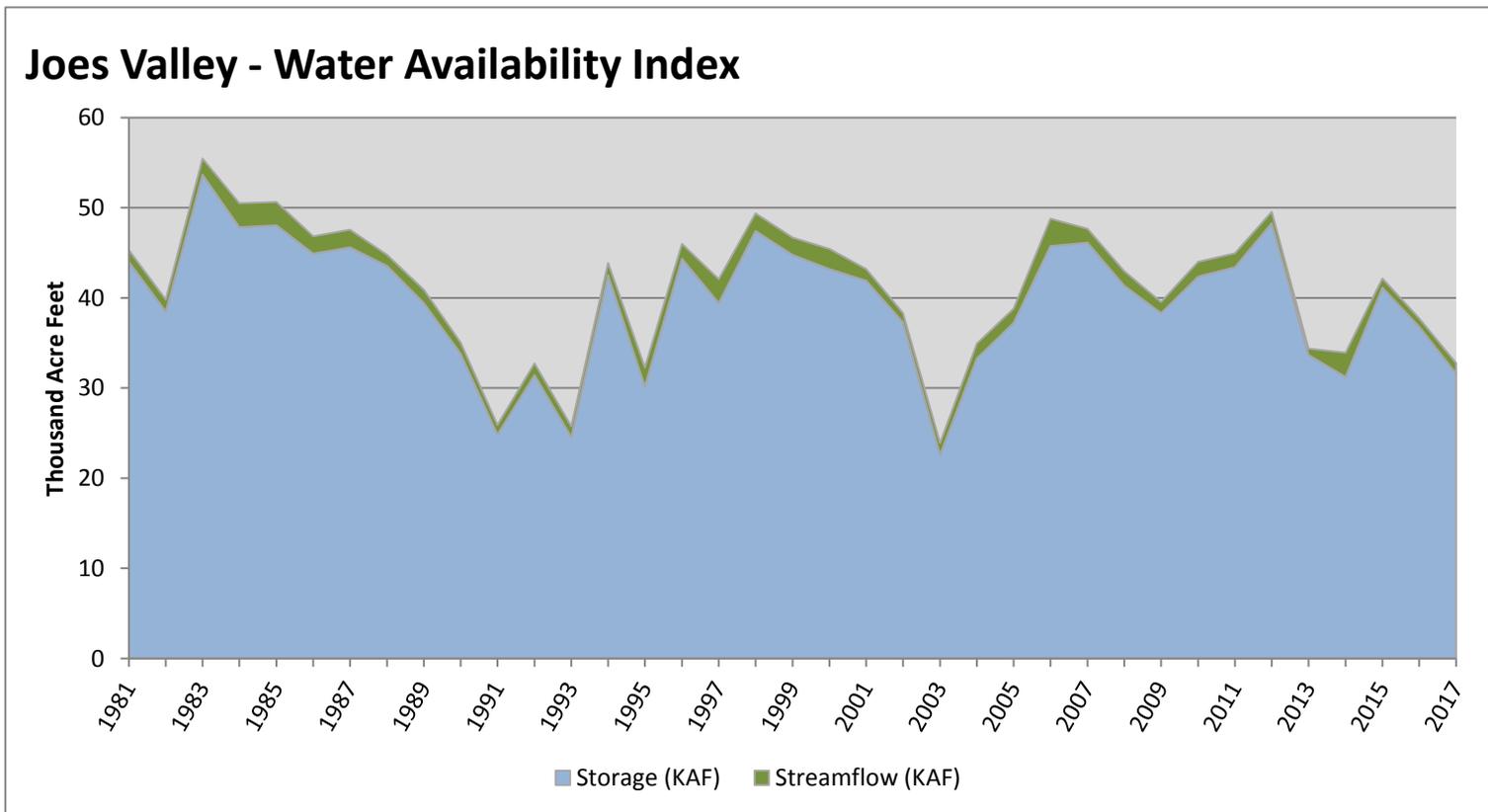


March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joese Valley	31.62	1.15	32.77	16	-2.85	95, 92, 14, 13

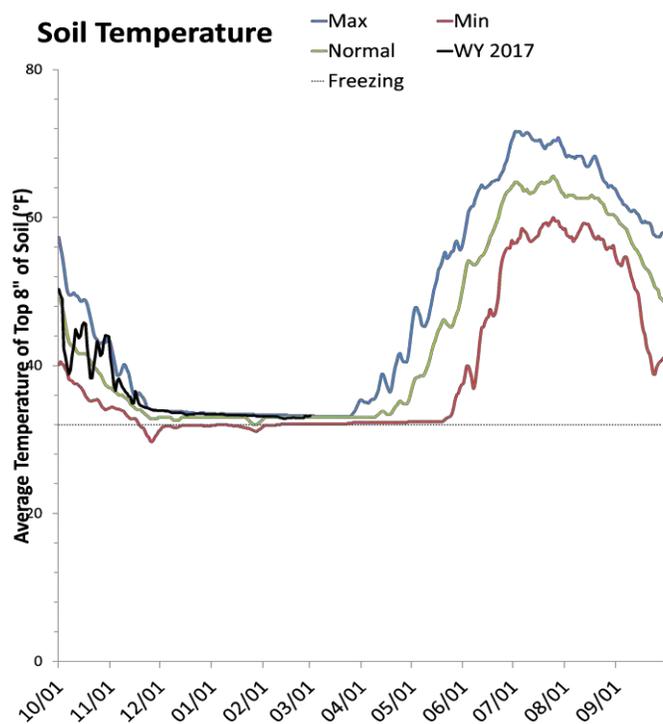
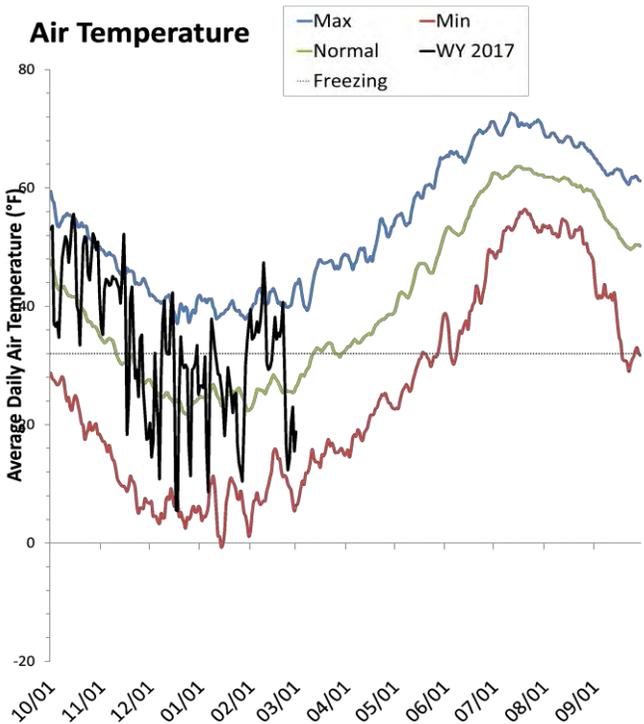
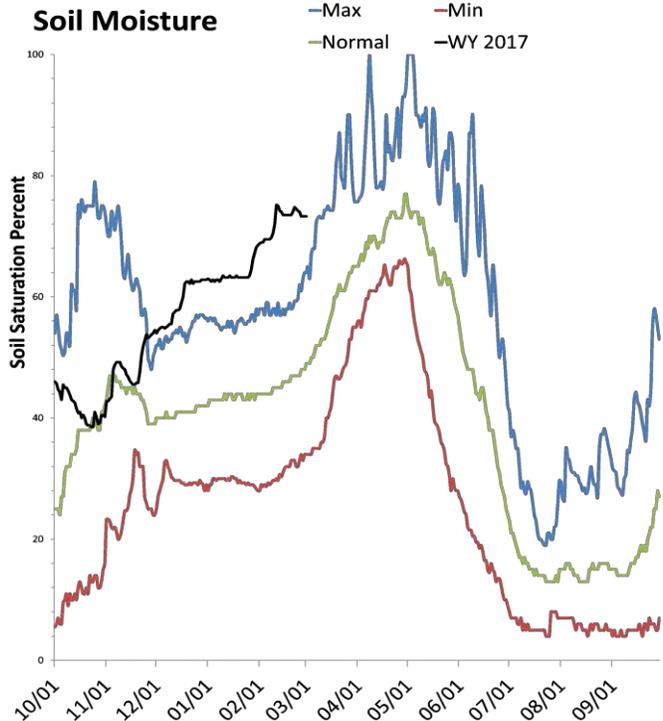
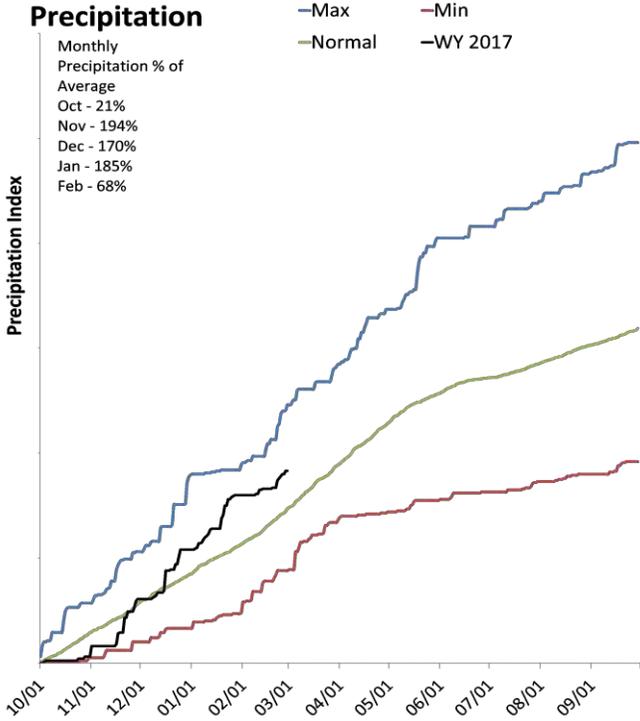
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Lower Sevier Basin

March 1, 2017

Precipitation in February was much below average at 68%, which brings the seasonal accumulation (Oct-Feb) to 124% of average. Soil moisture is at 71% compared to 51% last year. Reservoir storage is at 31% of capacity, compared to 39% last year. The water availability index for the Lower Sevier is 5%.



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

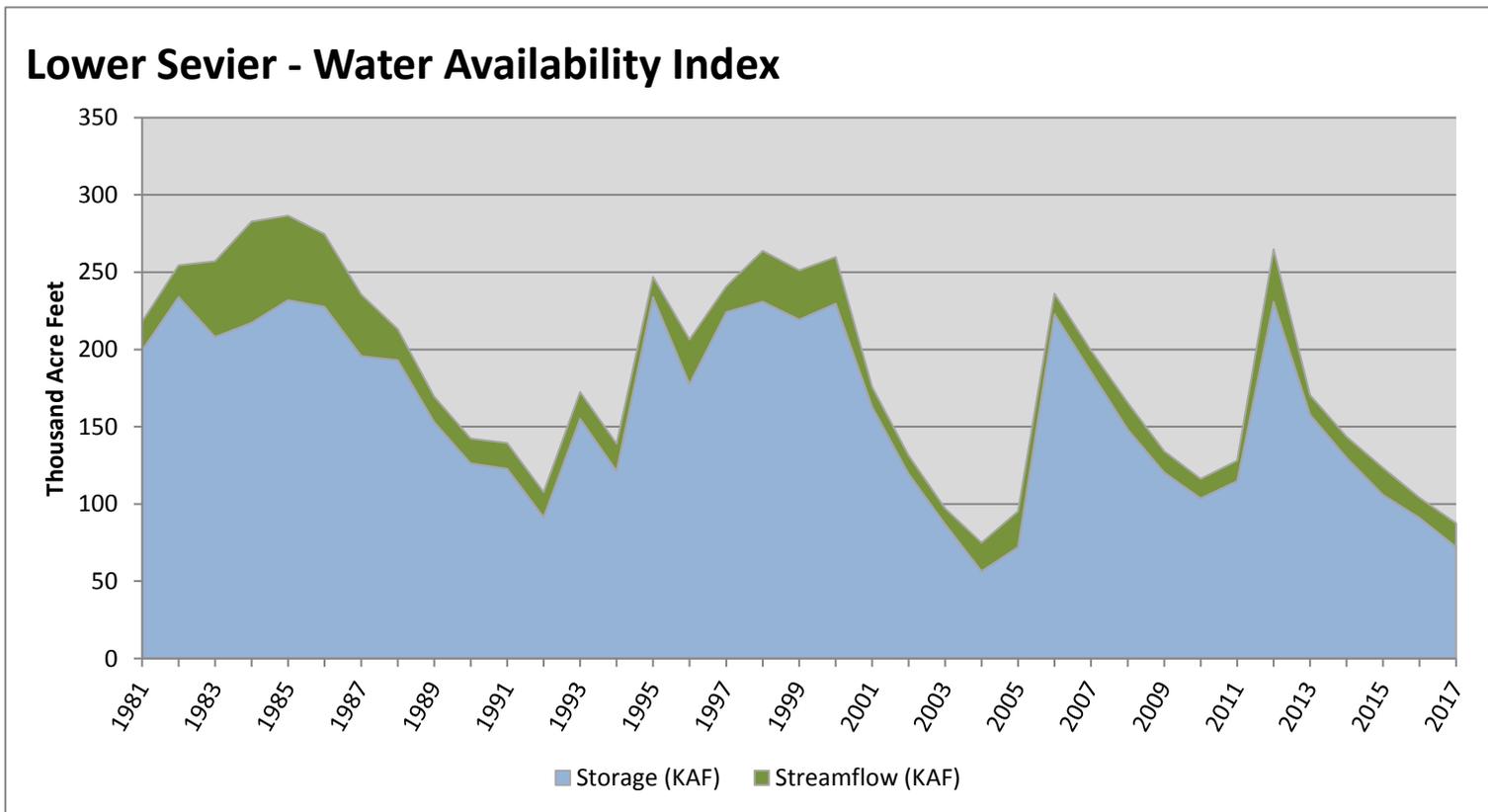
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	72.07	15.42	87.49	5	-3.73	04, 05, 03, 16

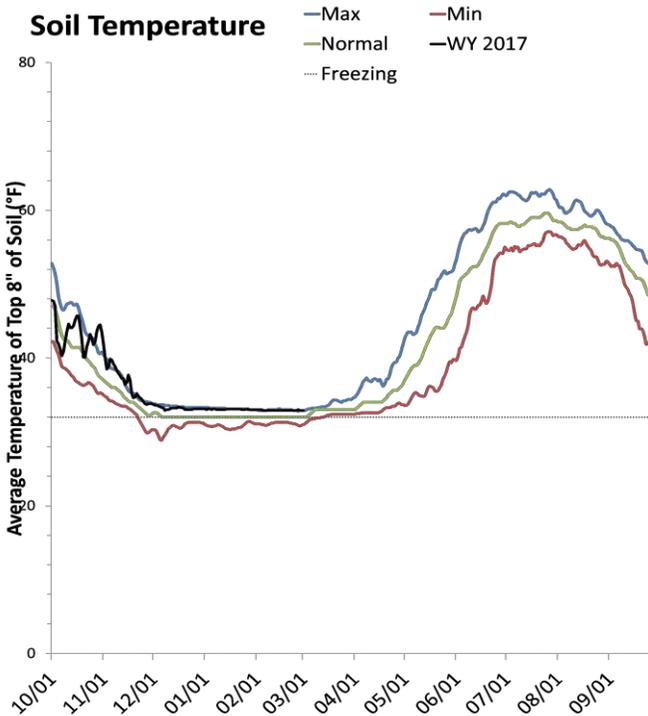
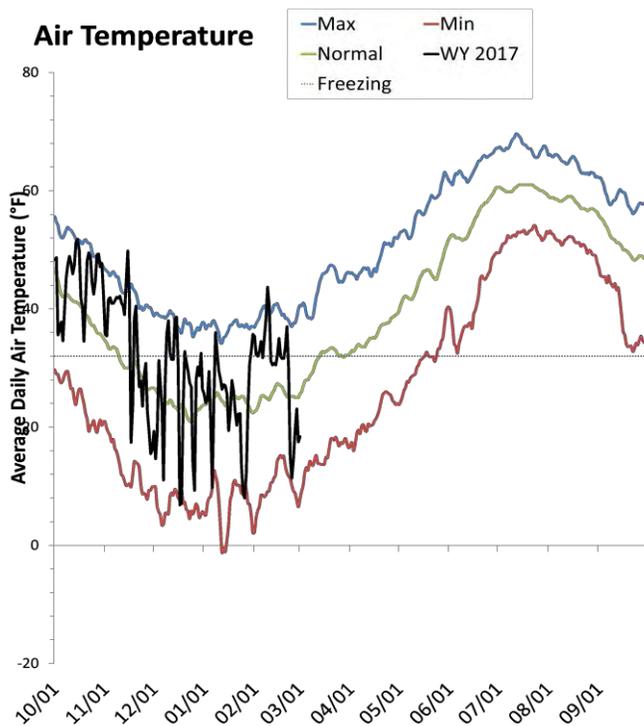
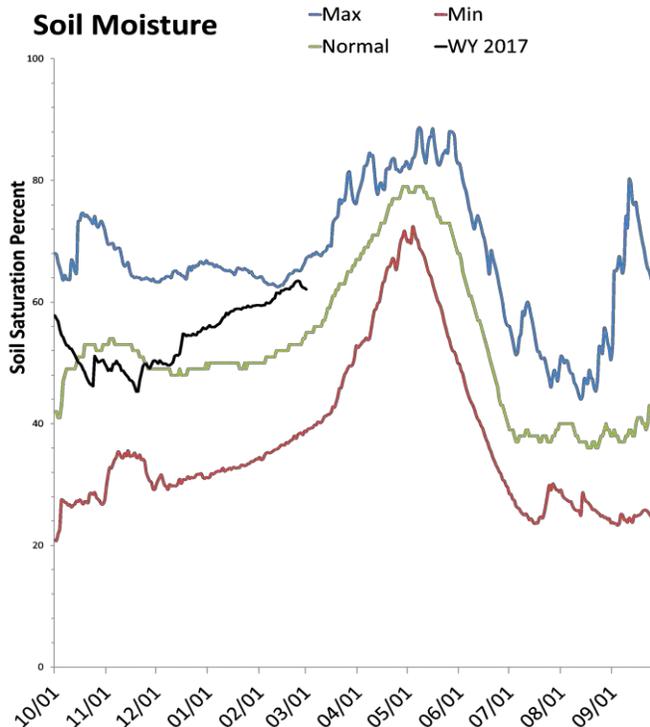
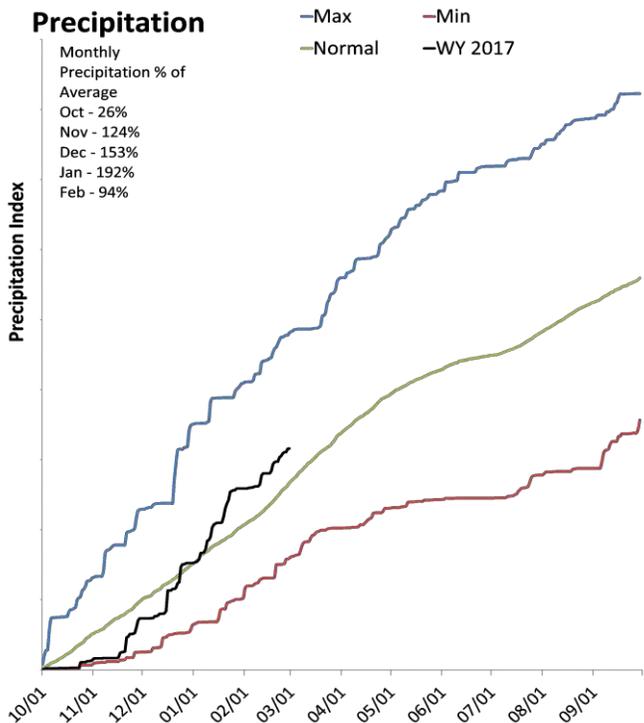
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Upper Sevier Basin

March 1, 2017

Precipitation in February was near average at 94%, which brings the seasonal accumulation (Oct-Feb) to 118% of average. Soil moisture is at 62% compared to 62% last year. Reservoir storage is at 54% of capacity, compared to 42% last year. The water availability index for the Upper Sevier is 26%.



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

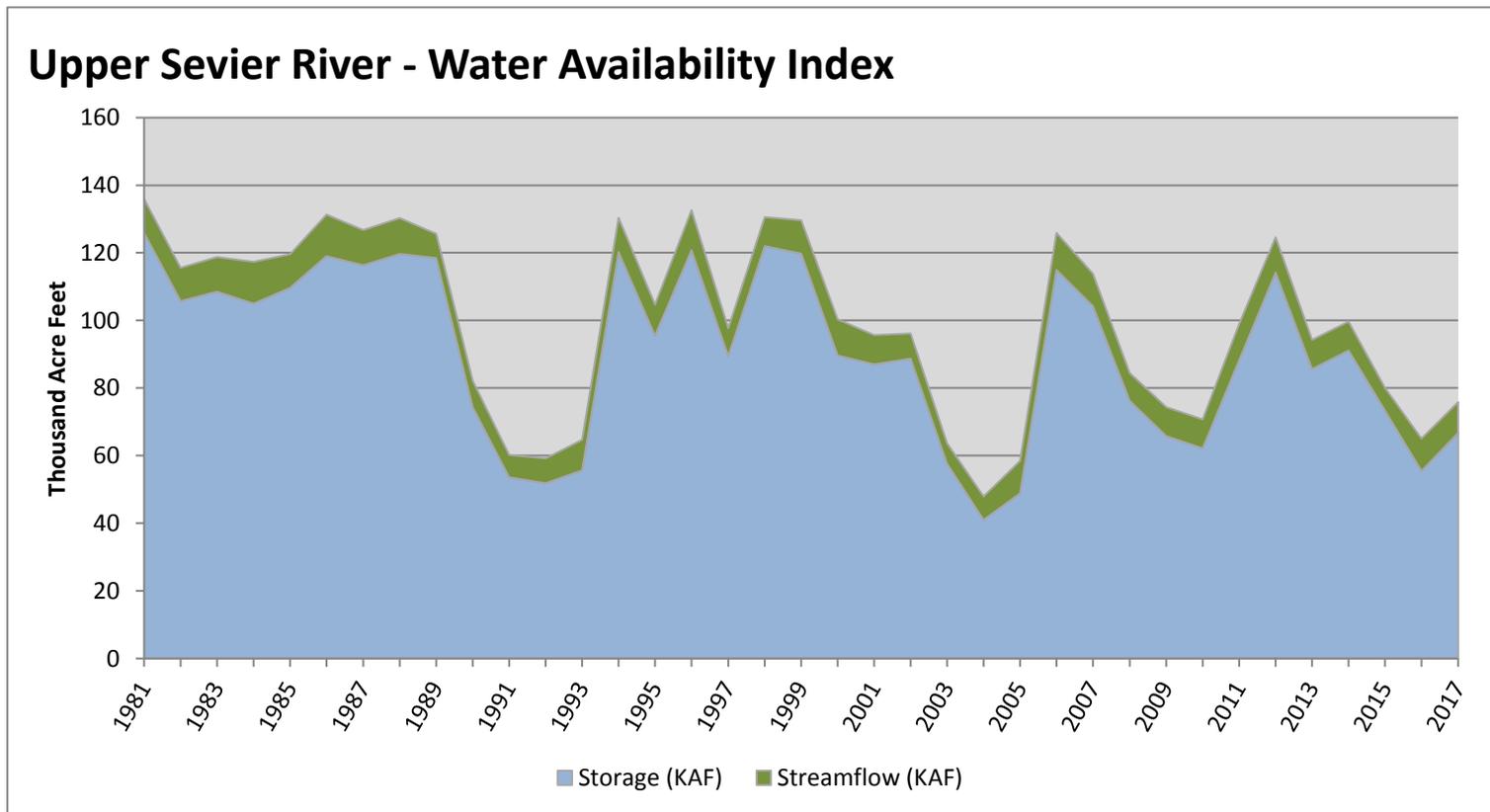
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	66.71	9.18	75.89	26	-1.97	10, 09, 15, 90

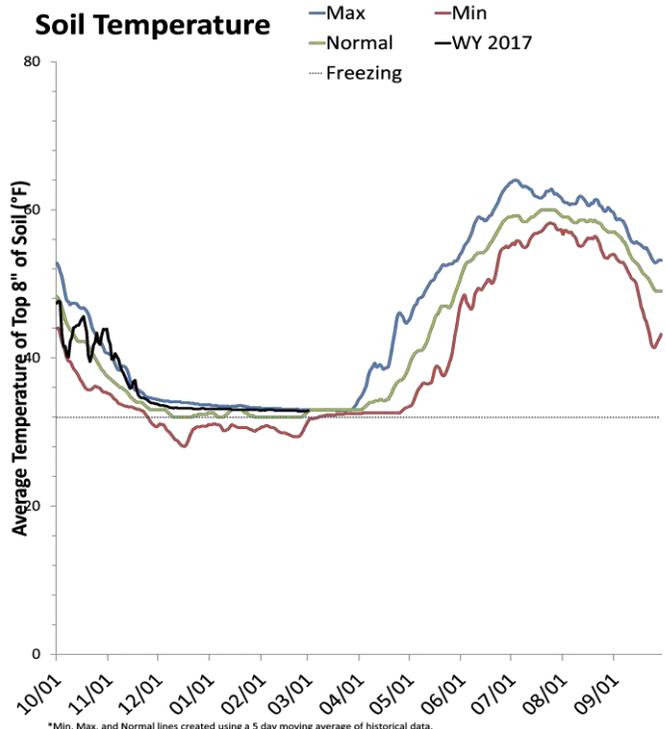
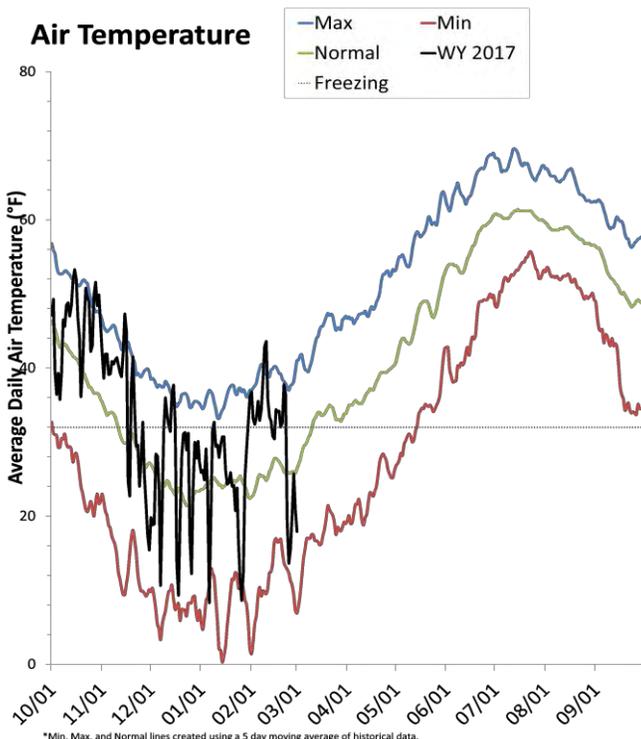
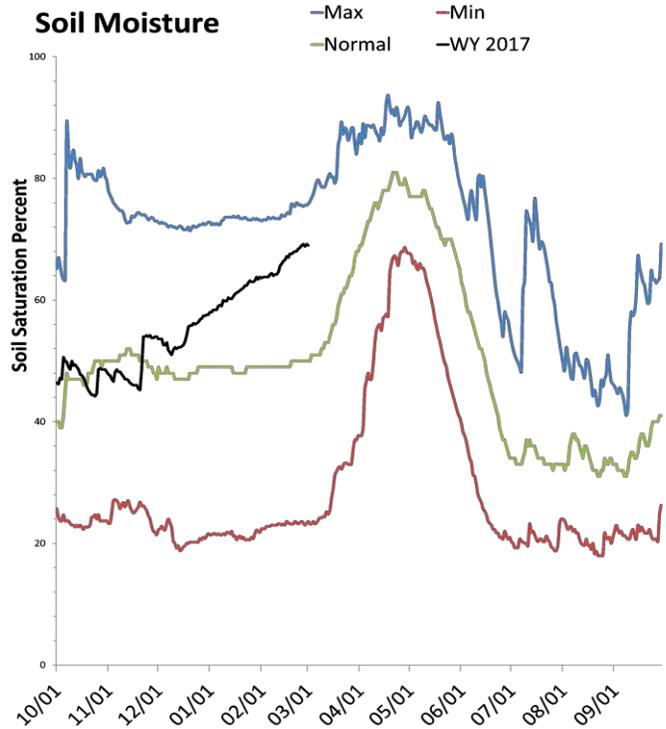
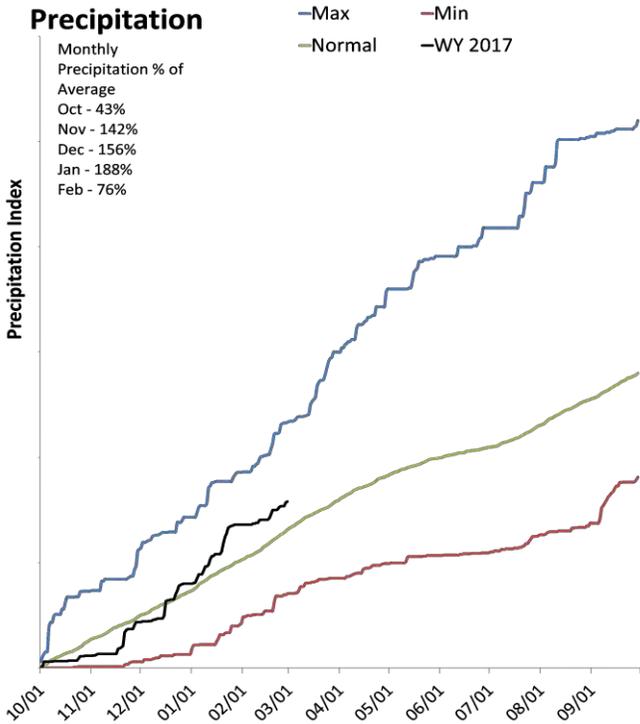
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southeastern Utah

March 1, 2017

Precipitation in February was below average at 76%, which brings the seasonal accumulation (Oct-Feb) to 120% of average. Soil moisture is at 69% compared to 76% last year. Reservoir storage is at 83% of capacity, compared to 70% last year. The water availability index for Moab is 84%.



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

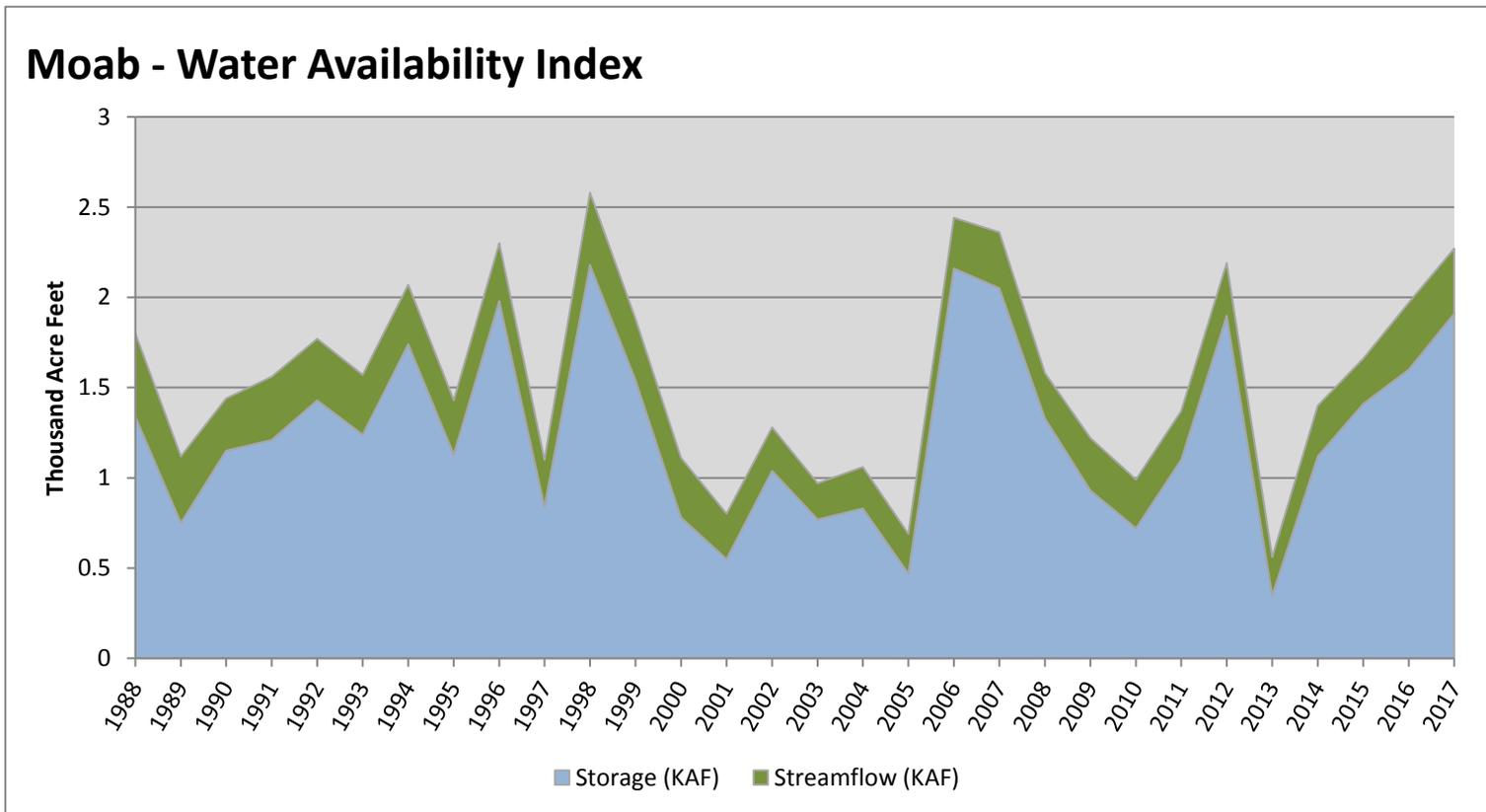
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	1.91	0.36	2.27	84	2.82	94, 12, 96, 07

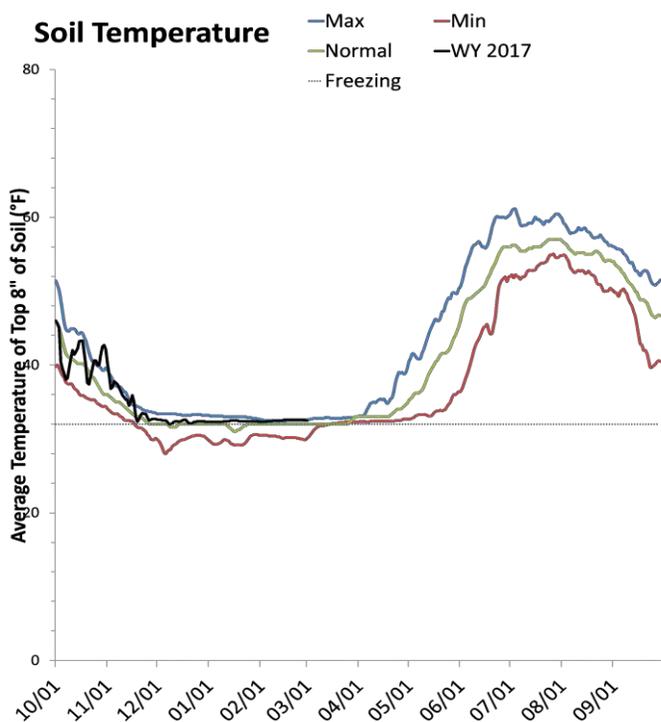
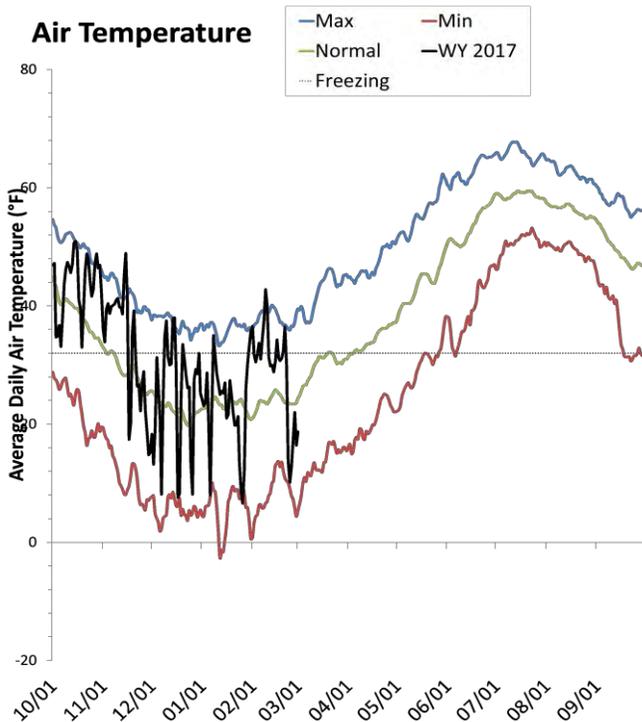
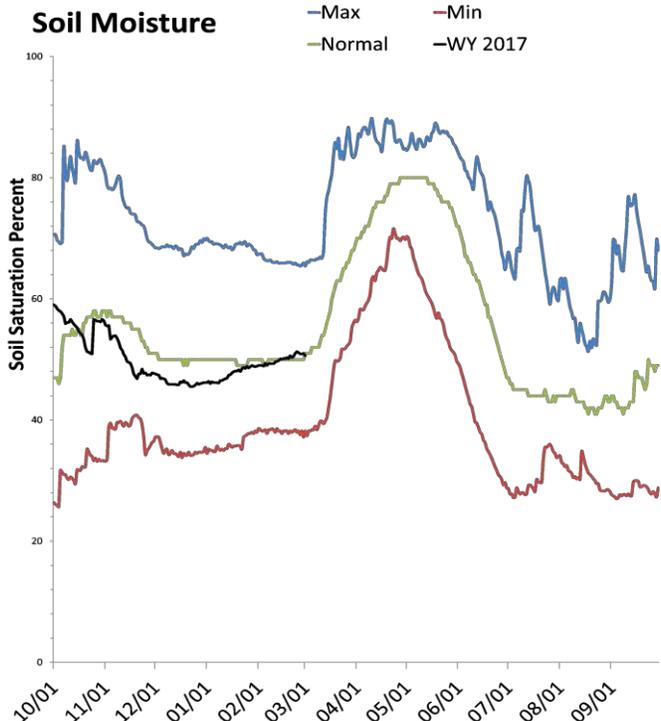
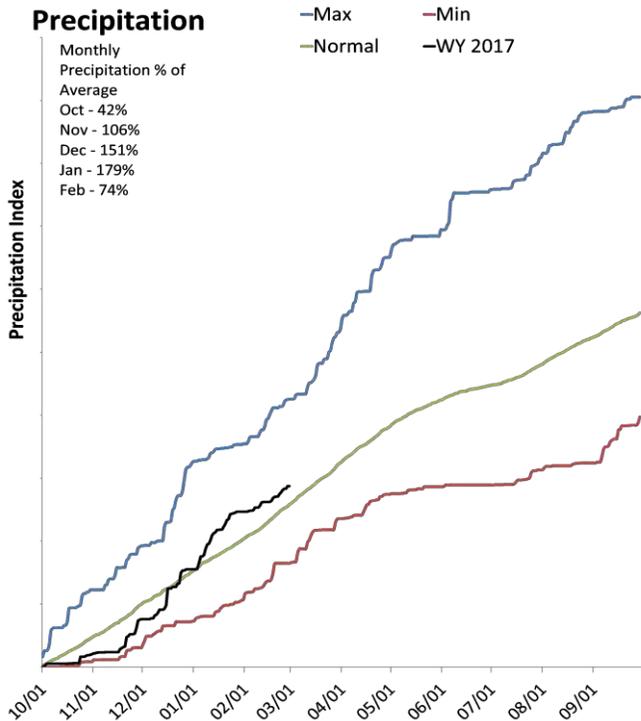
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Dirty Devil Basin

March 1, 2017

Precipitation in February was below average at 81%, which brings the seasonal accumulation (Oct-Feb) to 119% of average. Soil moisture is at 51% compared to 36% last year.



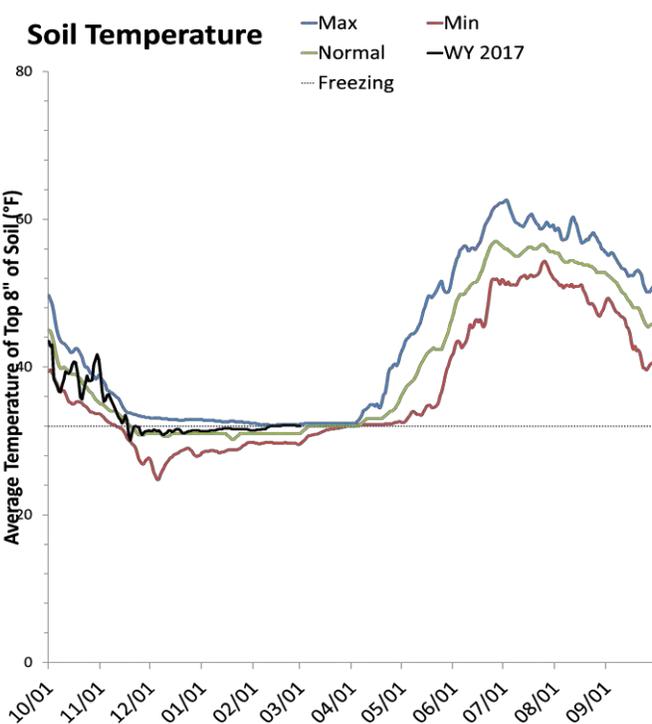
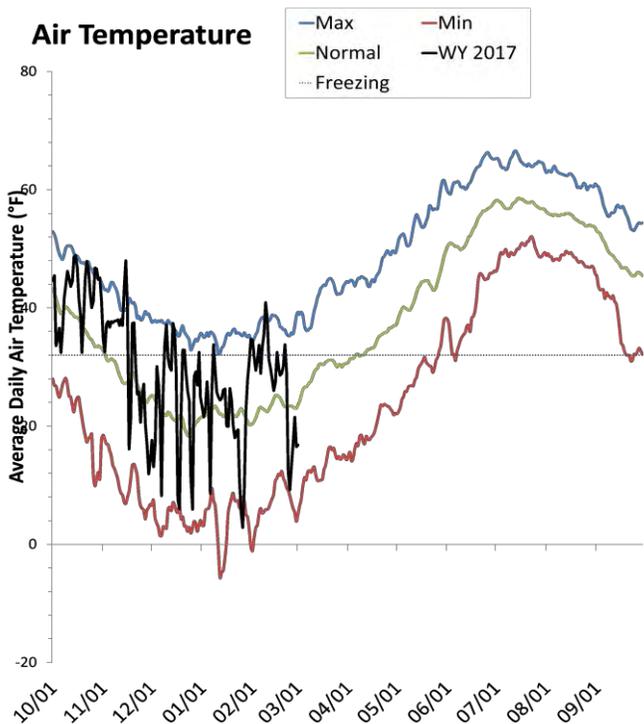
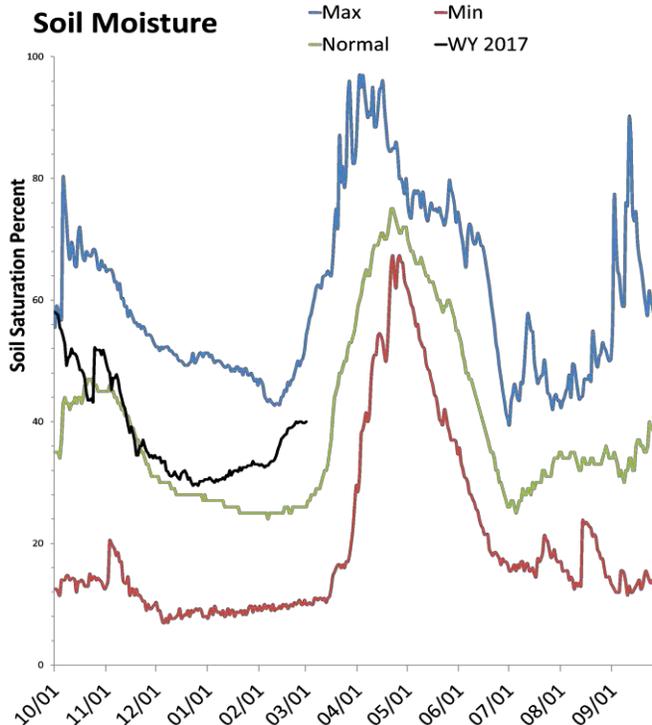
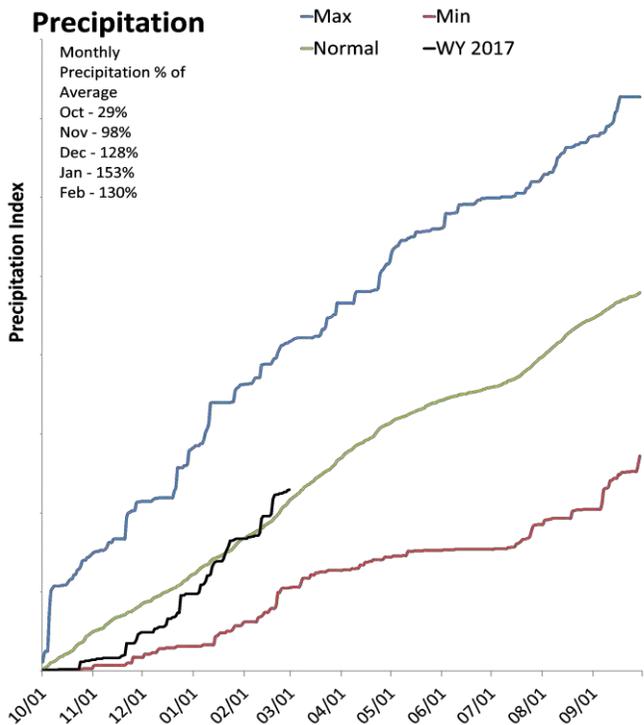
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Escalante River Basin

March 1, 2017

Precipitation in February was much above average at 131%, which brings the seasonal accumulation (Oct-Feb) to 107% of average. Soil moisture is at 40% compared to 50% last year.



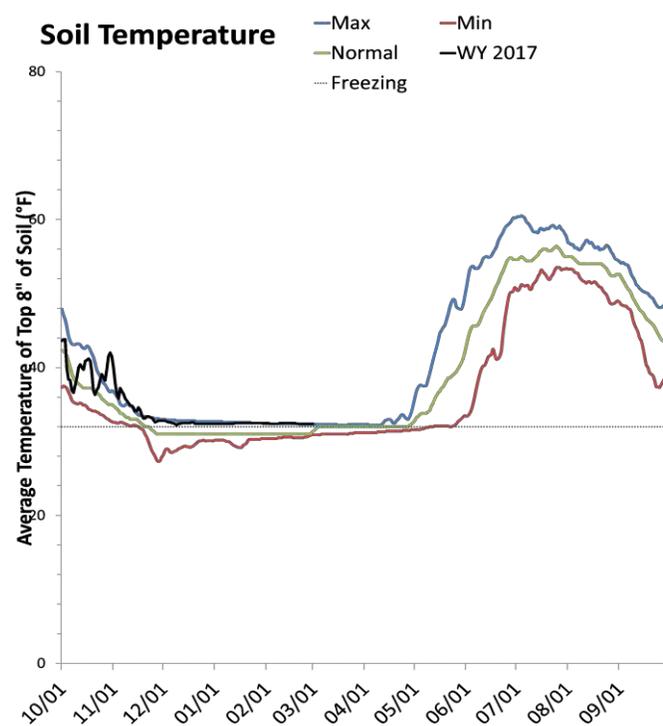
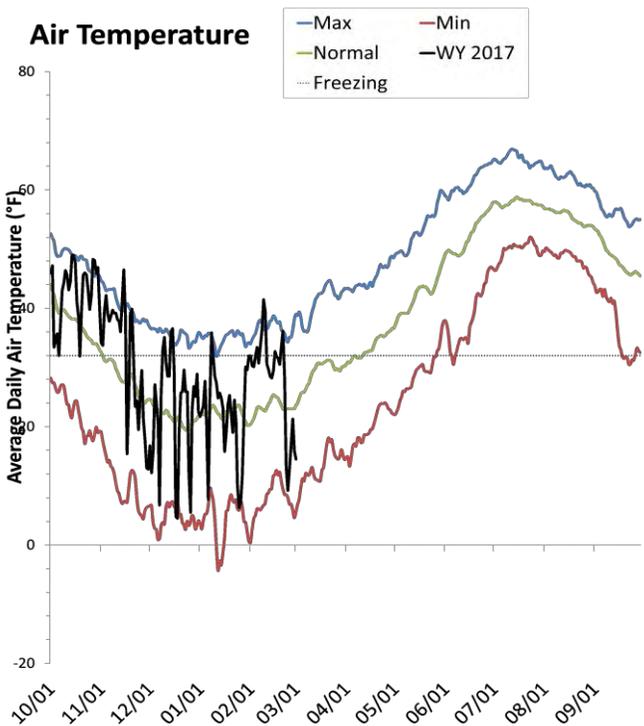
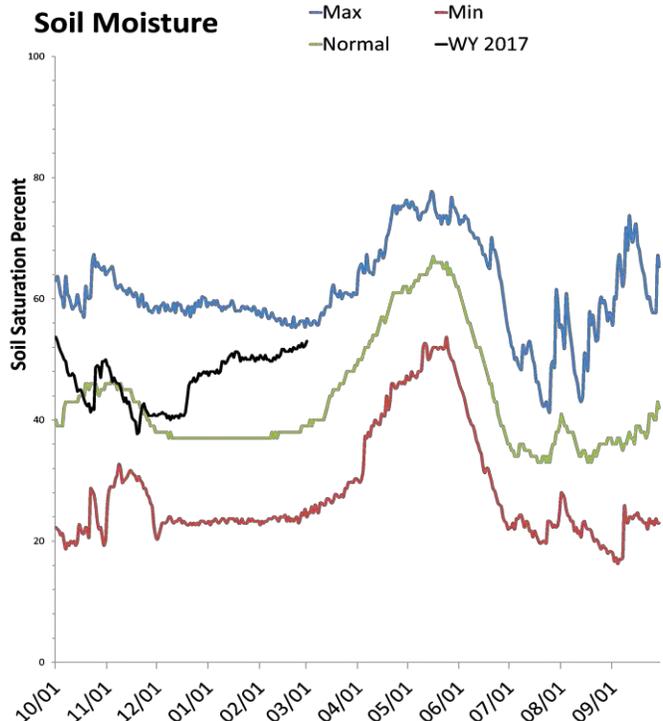
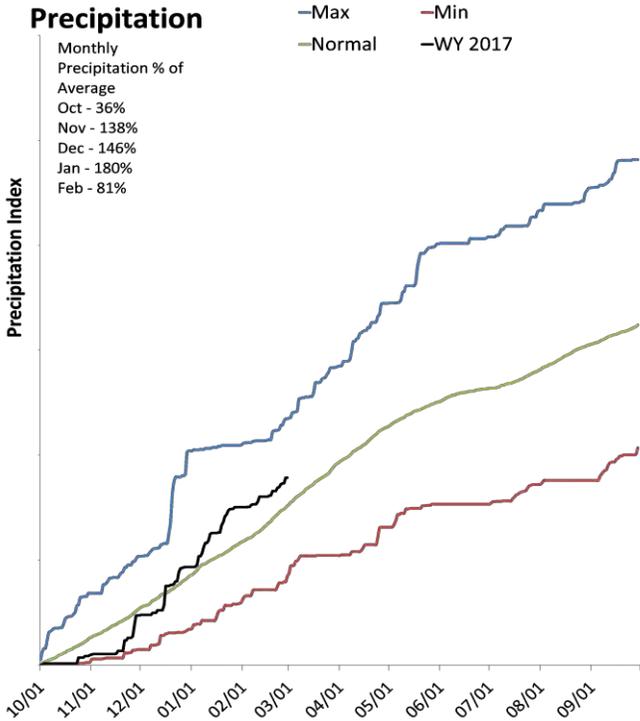
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Beaver River Basin

March 1, 2017

Precipitation in February was below average at 81%, which brings the seasonal accumulation (Oct-Feb) to 118% of average. Soil moisture is at 53% compared to 26% last year. Reservoir storage is at 43% of capacity, compared to 42% last year. The water availability index for the Beaver River is 26%.



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

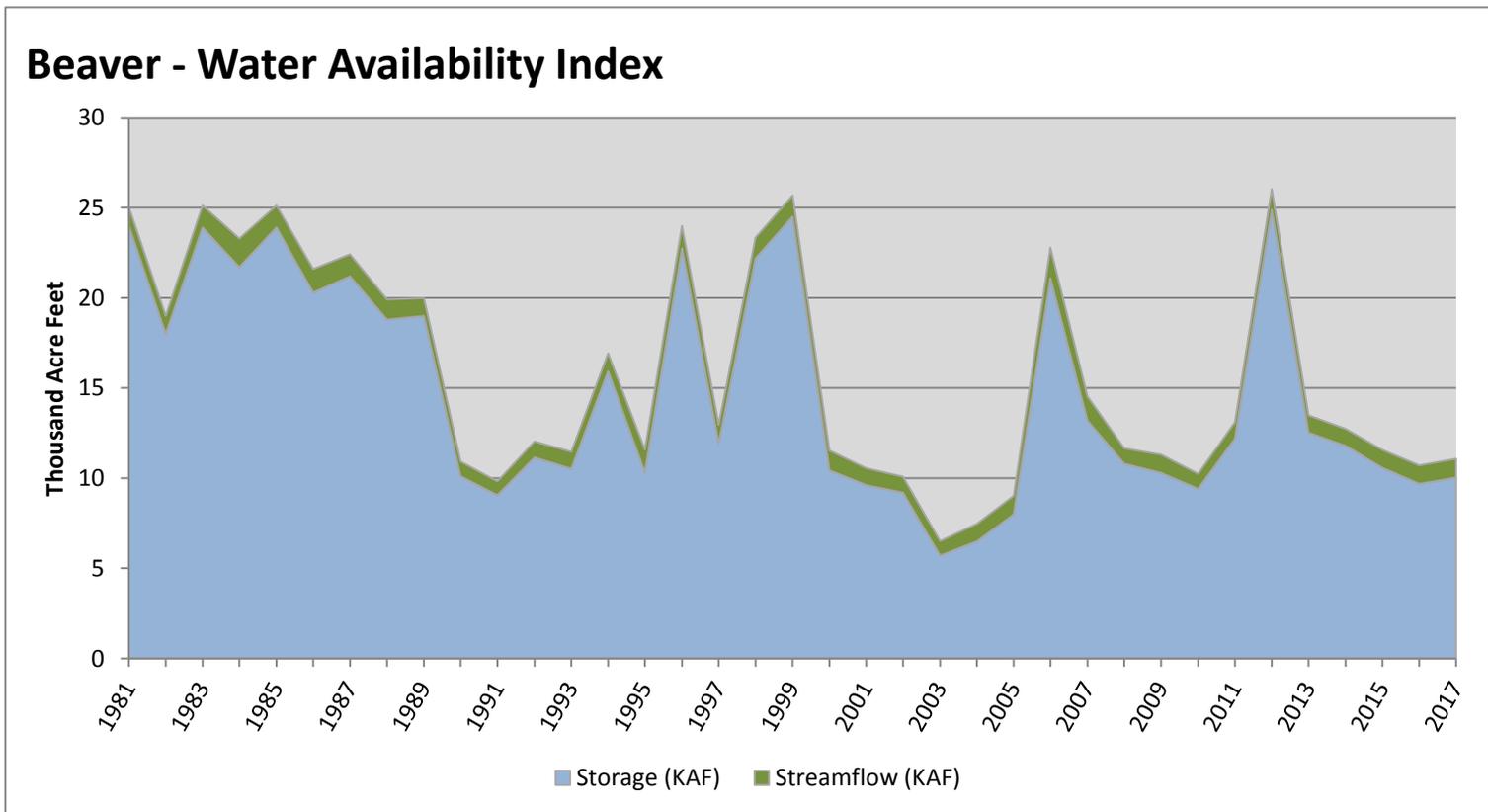
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	10.03	1.05	11.08	26	-1.97	16, 90, 09, 93

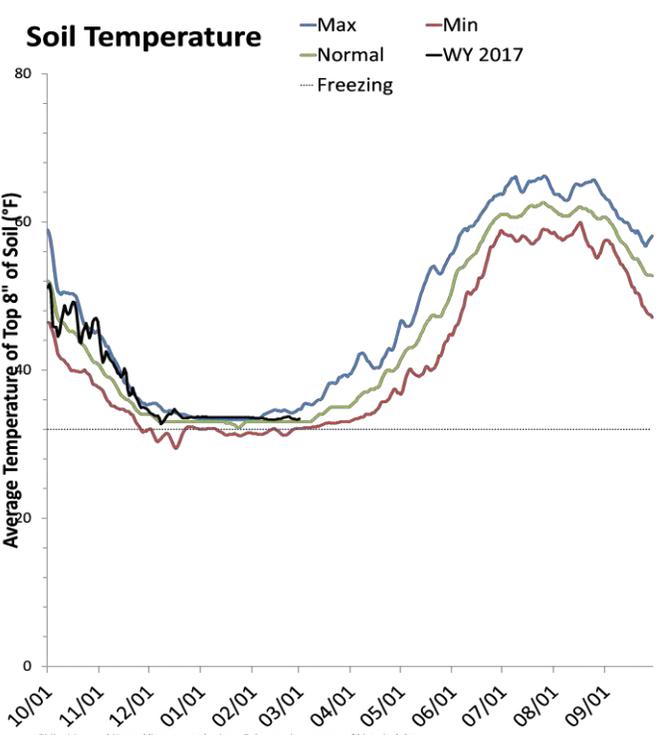
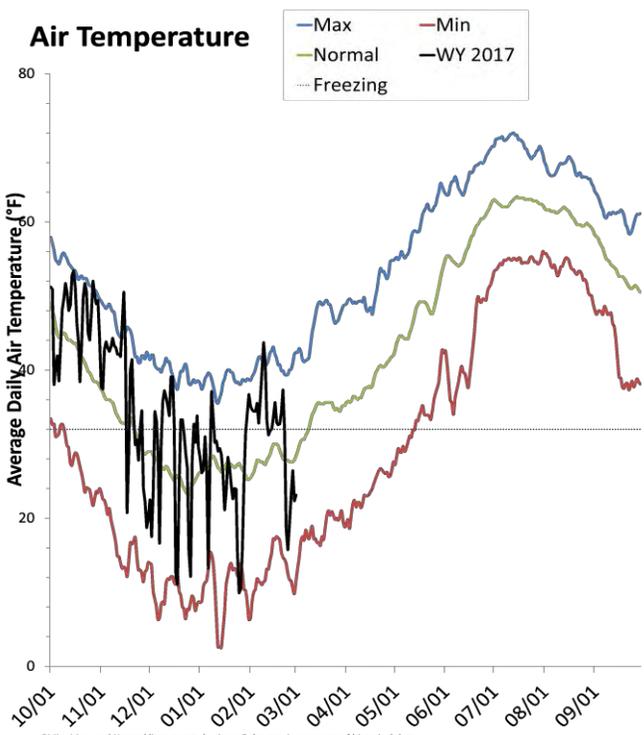
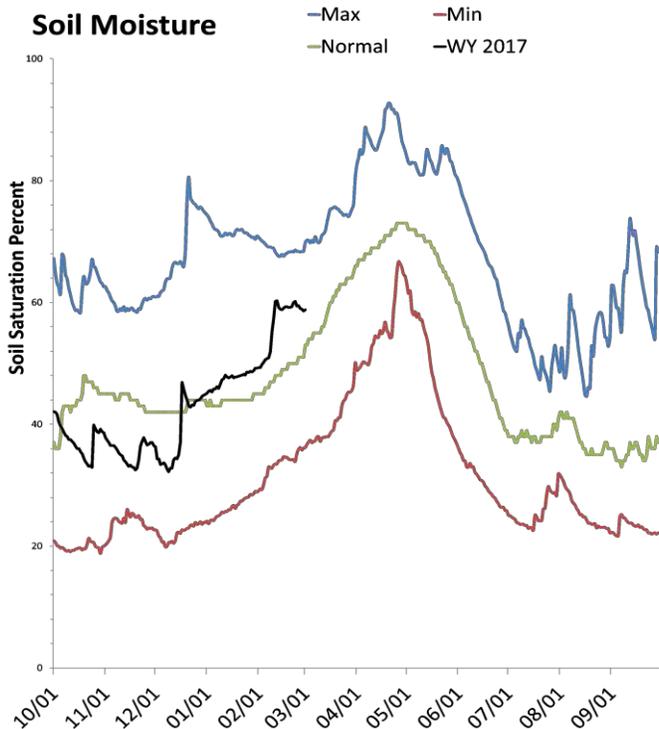
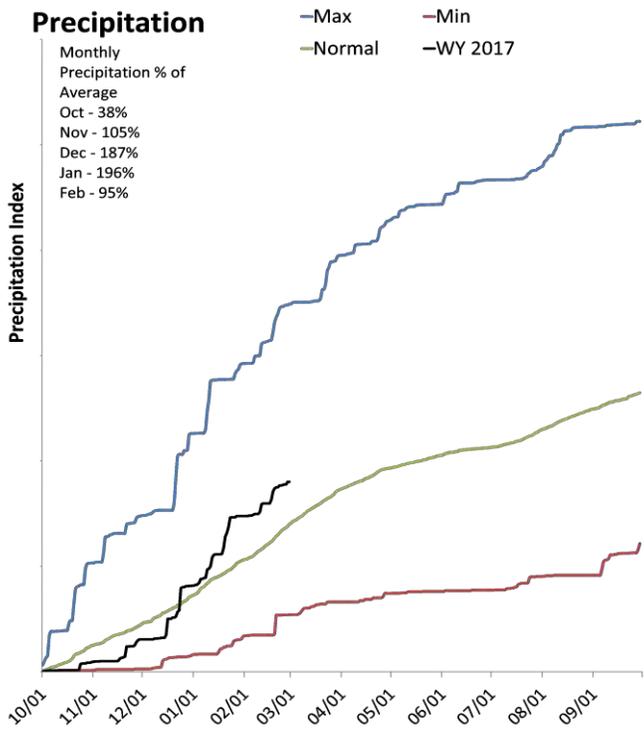
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southwestern Utah

March 1, 2017

Precipitation in February was near average at 96%, which brings the seasonal accumulation (Oct-Feb) to 129% of average. Soil moisture is at 59% compared to 69% last year. Reservoir storage is at 46% of capacity, compared to 46% last year. The water availability index for the Virgin River is 90%.



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

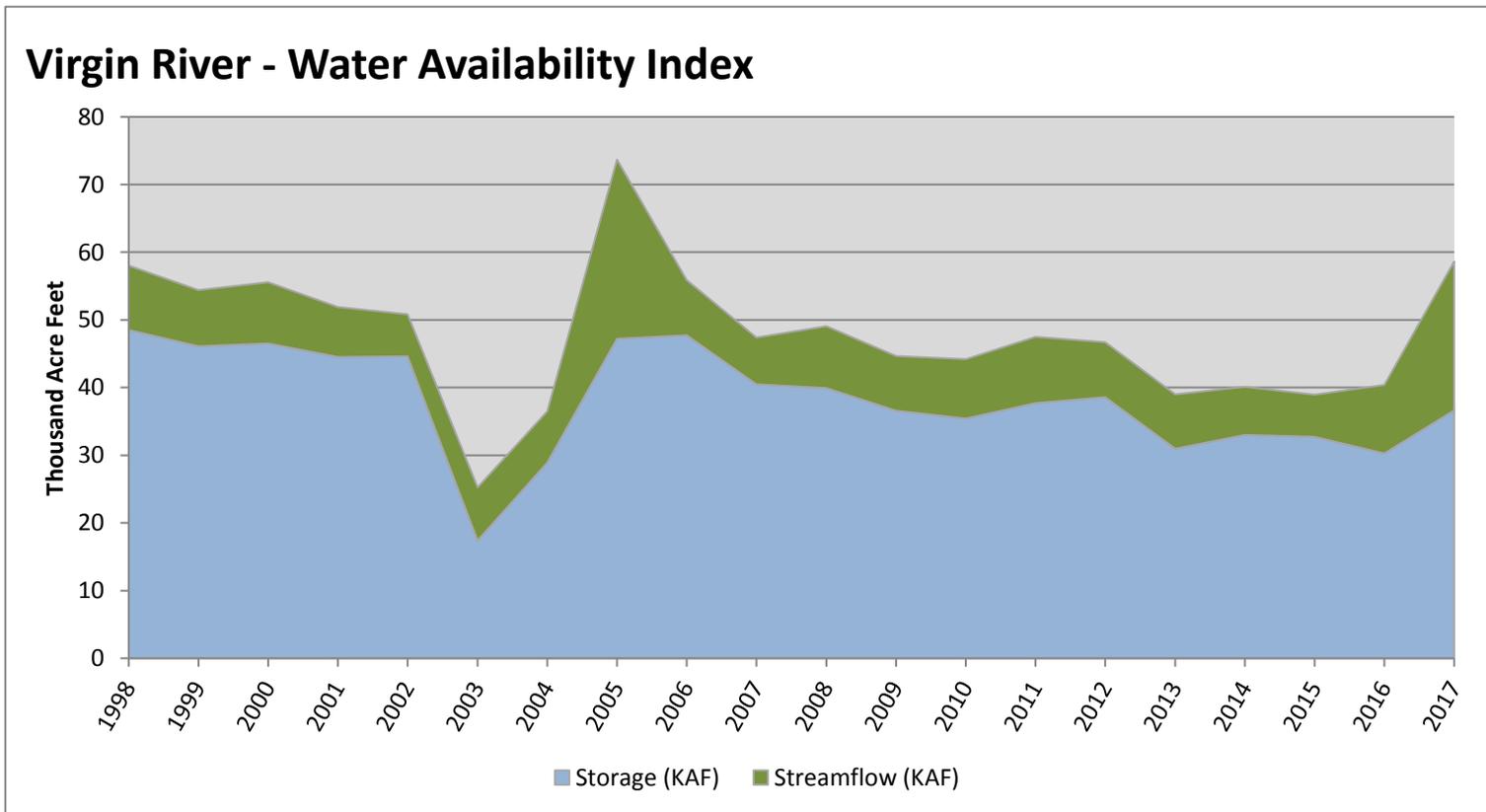
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

March 1, 2017

Water Availability Index

Basin or Region	Feb EOM [*] Storage	February Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	36.65	22.00	58.65	90	3.37	05, 98, 06, 00

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



March 1, 2017

Water Availability Index

Basin or Region	Feb EOM*	February Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	Storage					
	KAF^	KAF^	KAF^	%		
Bear River	541	2.5	543	47	-0.2	16, 96, 14, 15
Woodruff Narrows	53.3	2.5	55.8	87	3.1	00, 98, 86, 85
Little Bear	10.3	13.9	24.2	96	3.9	99, 12, 97, 03
Ogden	67.9	10.8	78.7	84	2.9	15, 95, 82, 94
Weber	124.0	14.0	137.9	50	0.0	95, 15, 96, 05
Provo River	336.0	3.9	339.9	39	-0.9	05, 02, 15, 96
Western Uinta	167.7	2.7	170.3	48	-0.1	10, 03, 92, 97
Eastern Uinta	44.5	2.2	46.7	63	1.1	92, 07, 84, 00
Blacks Fork	12.5	2.7	15.2	66	1.3	06, 07, 14, 92
Price	16.6	2.4	19.0	34	-1.3	14, 03, 09, 97
Smiths Creek	6.6	0.5	7.2	65	1.2	11, 16, 96, 86
Joes Valley	31.6	1.2	32.8	16	-2.9	95, 92, 14, 13
Moab	1.9	0.4	2.3	84	2.8	94, 12, 96, 07
Upper Sevier River	66.7	9.2	75.9	26	-2.0	10, 09, 15, 90
San Pitch	2.3	0.3	2.6	16	-2.9	03, 02, 04, 91
Lower Sevier	72.1	15.4	87.5	5	-3.7	04, 05, 03, 16
Beaver	10.0	1.1	11.1	26	-2.0	16, 90, 09, 93
Virgin River	36.7	22.0	58.7	90	3.4	05, 98, 06, 00

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

What is a Water Availability Index?

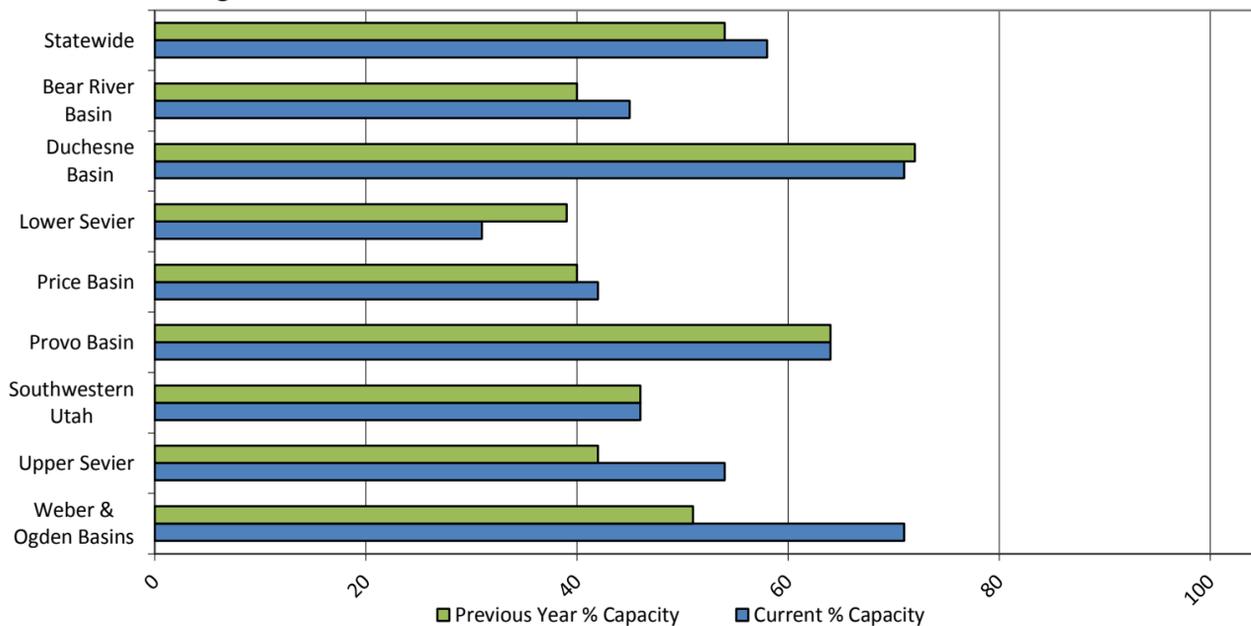
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) 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 February 2017	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	25.6	26.0		25.7	100%	101%			
Causey Reservoir	4.7	4.7	3.2	7.1	67%	66%	45%	148%	146%
Cleveland Lake	1.7	2.0		5.4	32%	38%			
Currant Creek Reservoir	14.3	14.8	14.8	15.5	92%	95%	95%	96%	100%
Deer Creek Reservoir	145.5	129.8	112.0	149.7	97%	87%	75%	130%	116%
East Canyon Reservoir	30.7	25.0	34.9	49.5	62%	51%	71%	88%	72%
Echo Reservoir	36.7	33.1	47.9	73.9	50%	45%	65%	77%	69%
Grantsville Reservoir	1.3	2.0	2.1	3.3	40%	60%	64%	62%	94%
Gunlock	6.5	2.7	6.7	10.4	62%	26%	64%	97%	41%
Gunnison Reservoir	2.3	1.8	13.0	20.3	11%	9%	64%	18%	14%
Huntington North Reservoir	3.7	2.6	3.3	4.2	88%	61%	79%	112%	78%
Hyrum Reservoir	10.3	9.8	11.2	15.3	67%	64%	73%	92%	87%
Joes Valley Reservoir	31.6	36.8	40.0	61.6	51%	60%	65%	79%	92%
Jordanelle Reservoir	190.5	169.7	239.4	320.0	60%	53%	75%	80%	71%
Ken's Lake	1.9	1.6	1.3	2.3	83%	70%	54%	153%	128%
Kolob Reservoir	4.5	1.6		5.6	81%	28%			
Lost Creek Reservoir	16.3	11.4	12.2	22.5	73%	51%	54%	134%	93%
Lower Enterprise	2.4	1.2	1.0	2.6	92%	46%	39%	235%	118%
Miller Flat Reservoir	2.1	1.9		5.2	41%	36%			
Millsite	10.9	8.8	10.2	16.7	65%	53%	61%	107%	86%
Minersville Reservoir	10.0	9.7	15.1	23.3	43%	42%	65%	66%	64%
Moon Lake Reservoir	26.7	22.6	26.3	35.8	75%	63%	73%	102%	86%
Otter Creek Reservoir	36.8	29.8	38.6	52.5	70%	57%	74%	95%	77%
Panguitch Lake	11.8	6.7	13.7	22.3	53%	30%	61%	86%	49%
Pineview Reservoir	63.2	60.0	53.0	110.1	57%	55%	48%	119%	113%
Piute Reservoir	29.9	25.7	53.6	71.8	42%	36%	75%	56%	48%
Porcupine Reservoir	11.8	6.6	7.0	11.3	104%	58%	62%	169%	94%
Quail Creek	30.2	27.5	30.0	40.0	75%	69%	75%	101%	92%
Red Fleet Reservoir	21.3	16.7	18.3	25.7	83%	65%	71%	116%	91%
Rockport Reservoir	34.7	40.7	34.8	60.9	57%	67%	57%	100%	117%
Sand Hollow Reservoir	45.9	39.8		50.0	92%	80%			
Scofield Reservoir	16.6	11.9	30.7	65.8	25%	18%	47%	54%	39%
Settlement Canyon Reservoir	0.5	0.3	0.7	1.0	52%	34%	69%	76%	50%
Sevier Bridge Reservoir	72.1	91.0	169.0	236.0	31%	39%	72%	43%	54%
Smith And Morehouse Reservoir	5.5	3.7	3.6	8.1	68%	45%	44%	153%	102%
Starvation Reservoir	128.3	149.1	144.5	165.3	78%	90%	87%	89%	103%
Stateline Reservoir	6.6	6.2	5.2	12.0	55%	52%	43%	127%	120%
Steinaker Reservoir	23.2	18.0	23.1	33.4	70%	54%	69%	101%	78%
Strawberry Reservoir	783.3	792.1	660.5	1105.9	71%	72%	60%	119%	120%
Upper Enterprise	3.7	1.5	3.9	10.0	37%	15%	39%	95%	38%
Upper Stillwater Reservoir	12.6	10.5	7.6	32.5	39%	32%	23%	166%	139%
Utah Lake	449.6	465.2	785.8	870.9	52%	53%	90%	57%	59%
Vernon Creek Reservoir	0.5	0.4	0.5	0.6	83%	73%	87%	96%	85%
Willard Bay	197.0	98.4	138.4	215.0	92%	46%	64%	142%	71%
Woodruff Creek	4.0	3.1	2.6	4.0	100%	78%	65%	154%	119%
Woodruff Narrows Reservoir	53.3	42.3	31.6	57.3	93%	74%	55%	169%	134%
Meeks Cabin Reservoir	12.5	8.0	11.9	32.5	38%	25%	37%	105%	67%
Bear Lake	540.9	491.7	594.1	1302.0	42%	38%	46%	91%	83%
Basin-wide Total	3096.4	2895.2	3457.3	5380.9	58%	54%	64%	90%	84%
# of reservoirs	43	43	43	43	43	43	43	43	43

Reservoir Storage



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