

Utah Climate and Water Report

February 1, 2017



Duchesne Ridge, January, 2017

Almost five feet of snow on the west end of Duchesne Ridge!

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.

Report Content

1) Statewide Hydrologic Summary

- a) Utah General Summary
 - Supporting Documents

2) Climate and Water Information – SCAN

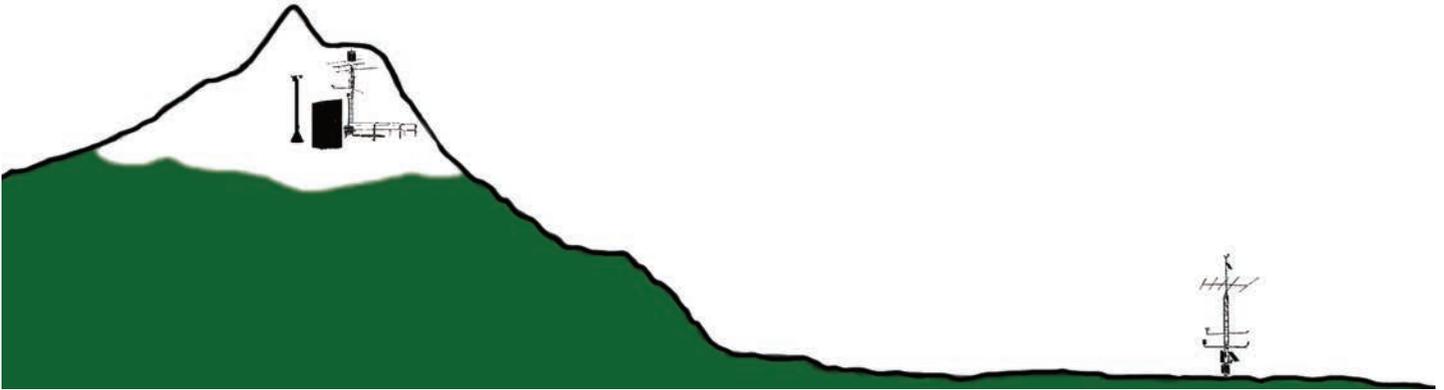
- a) Statewide SCAN
- b) North Central
- c) Northern Mountains
- d) Uinta Basin
- e) Southeast
- f) South Central
- g) Western and Dixie

3) Climate and Water Information – SNOTEL

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

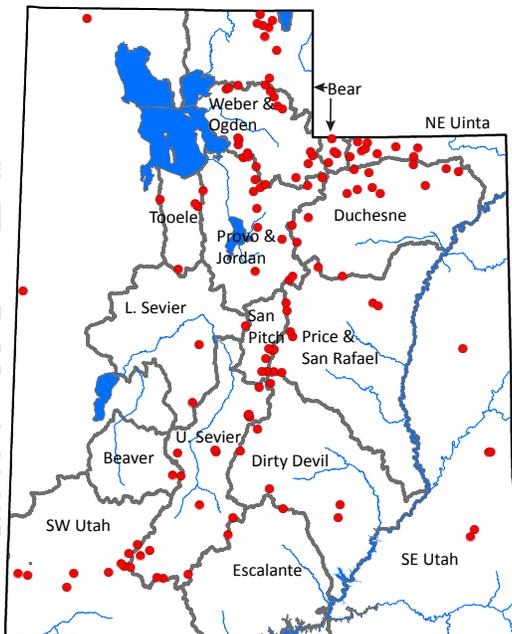
Utah Climate and Water Report

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



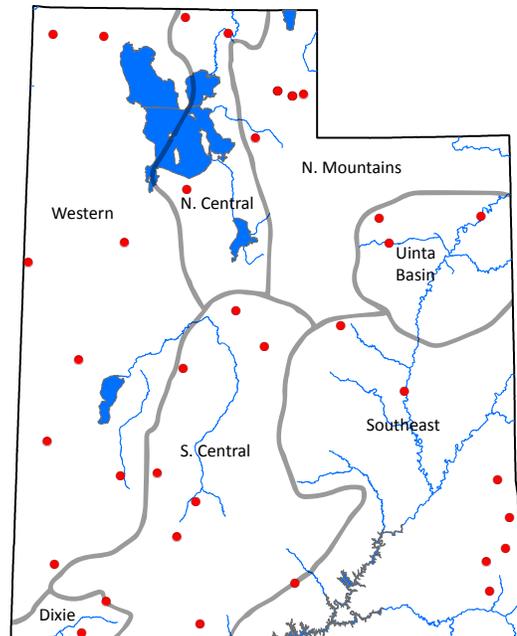
SNOTEL

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



SCAN

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



Utah General Summary February 1, 2017

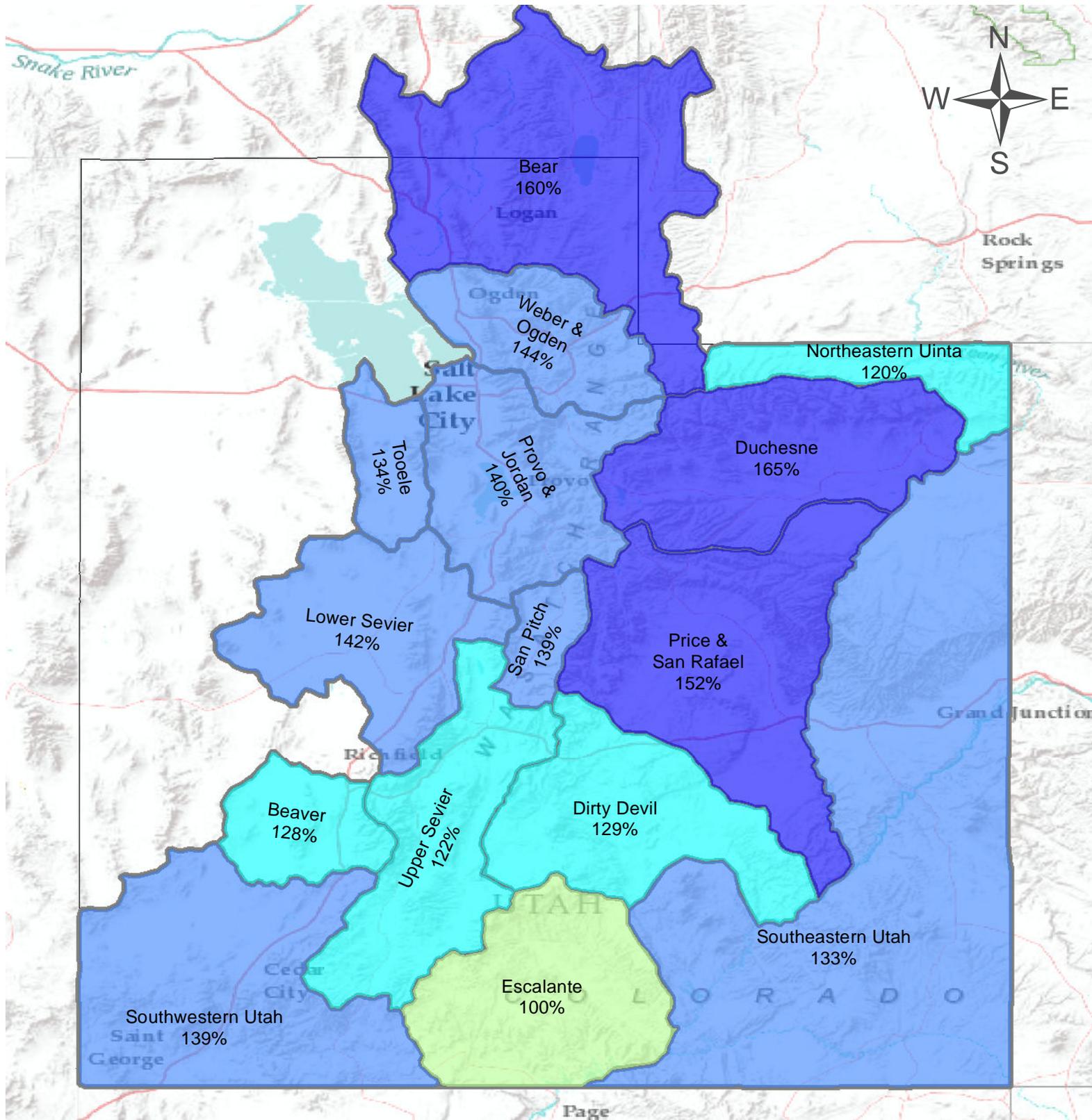
This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (Soil Climate Analysis Network) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply is generated (SNOWTElemetry).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

Utah's valley locations were not left out in the cold by January's storms. These locations averaged 1.7 inches in January, bring the total to 4.7 inches for this water year. As has been the case for the last several months, Northern Utah received more precipitation than Southern Utah. Precipitation ranged from 2.6 inches in the North Central area, to 1.6 inches in the Southeastern region. Soil moisture conditions are generally fantastic throughout the state, with the exception of the Western and Dixie areas, where soil moisture is below normal. Despite a cold month overall, soil temperatures are still pretty mild due to relatively good valley floor snow coverage insulating soils from the colder air temperatures.

Current Mountain Conditions (SNOTEL)

January was a fantastic snow accumulation month. Storm after storm with only a little break at the end. At the beginning of last month we had a great snowpack ranging from 125% to about 160% of normal – now we have a lot of watersheds that run between 160% and 220% of normal an increase of 25% to 60% over what was a really good situation. Many basin snowpacks have exceeded what they would normally have at peak snow accumulation in early April – meaning that any additional accumulation between now and April 1 is more icing on the cake and water in the pond. There is some uneasiness having snowpacks this big this early in the year and the potential for the much above average pattern to continue and if it does what that may mean for exceptionally high flows this spring. Forewarned is prepared. There are still 2 months of accumulation to go and potentially damaging flows are a distinct possibility. Precipitation in January was much above average at 214%, which brings the seasonal accumulation (Oct-Jan) to 143% of average. Northern Utah received a bit more than did southern Utah – the Duchesne Basin had 299% of average and the Escalante was driest at 152%. Soil moisture conditions in northern Utah are bumping record high values for this time of year meaning the potential of higher runoff efficiency and in southern Utah are in general near average. Reservoir storage is similar to last year at 52% of capacity. Streamflow forecasts have increased substantially over those issued last month and now range between 101% and 256% of average.



Statewide Precipitation

As of February 1, 2017:

143% of Normal Precipitation

213% of Normal Precipitation Last Month

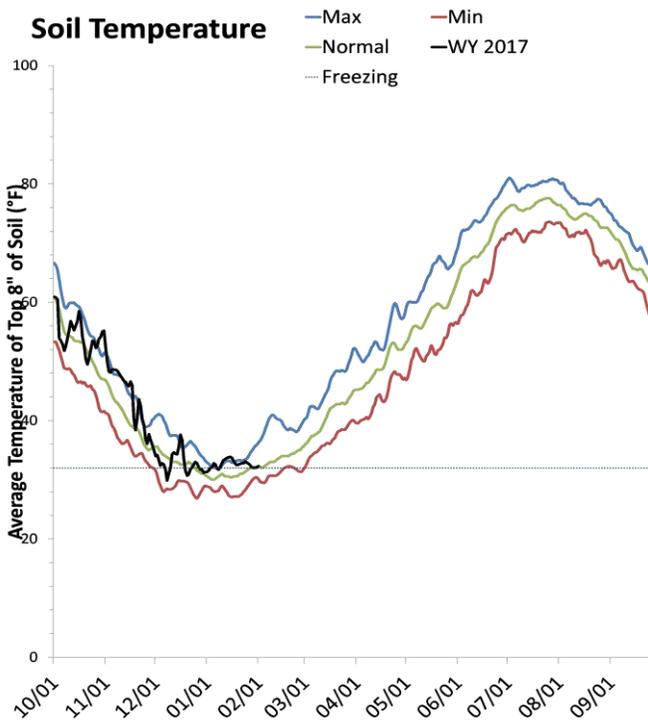
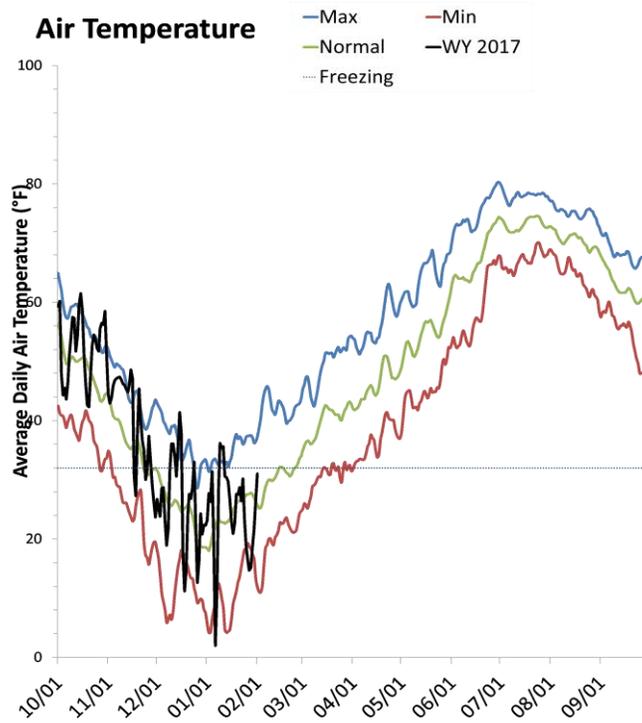
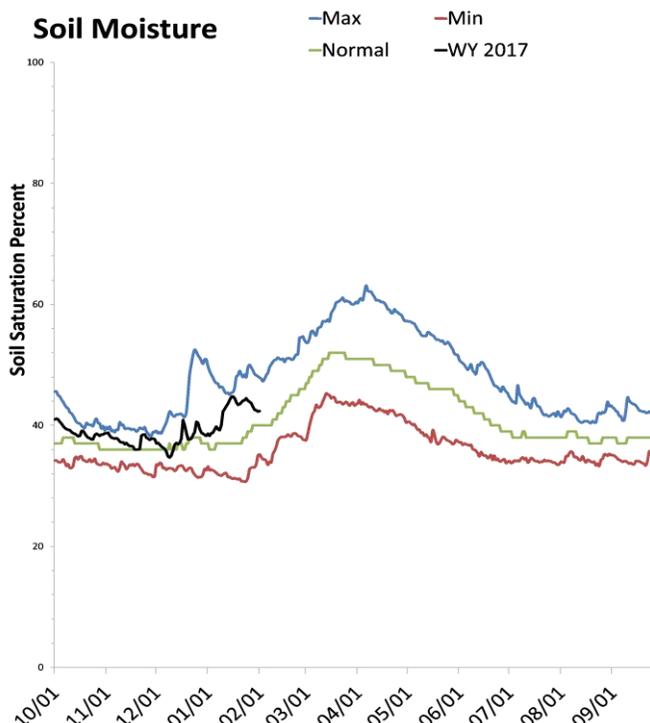
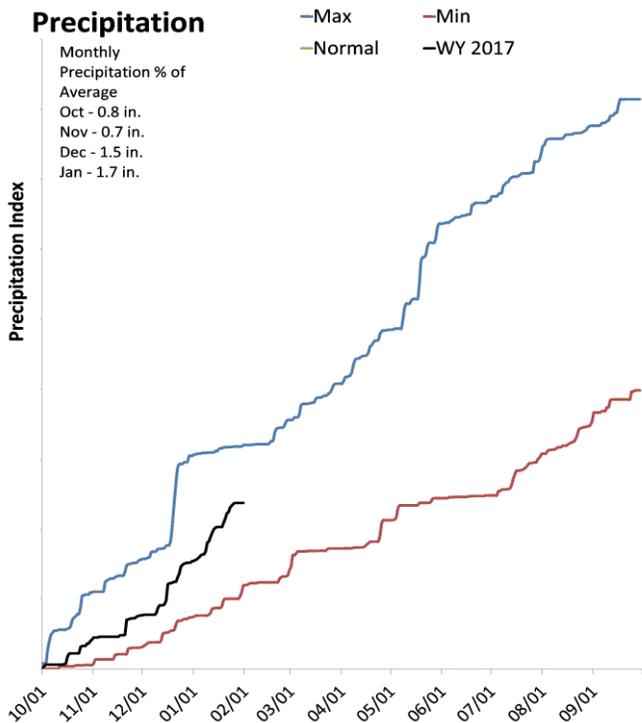
% of Normal



Statewide SCAN

February 1, 2017

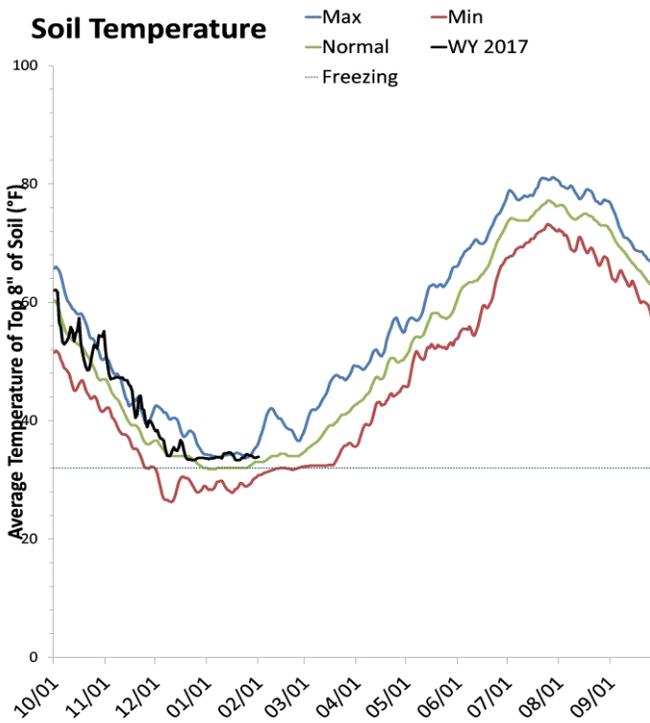
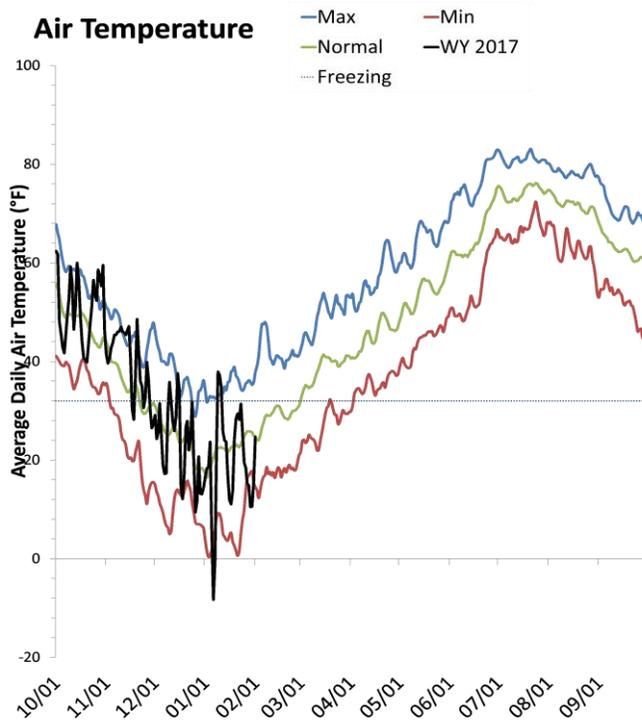
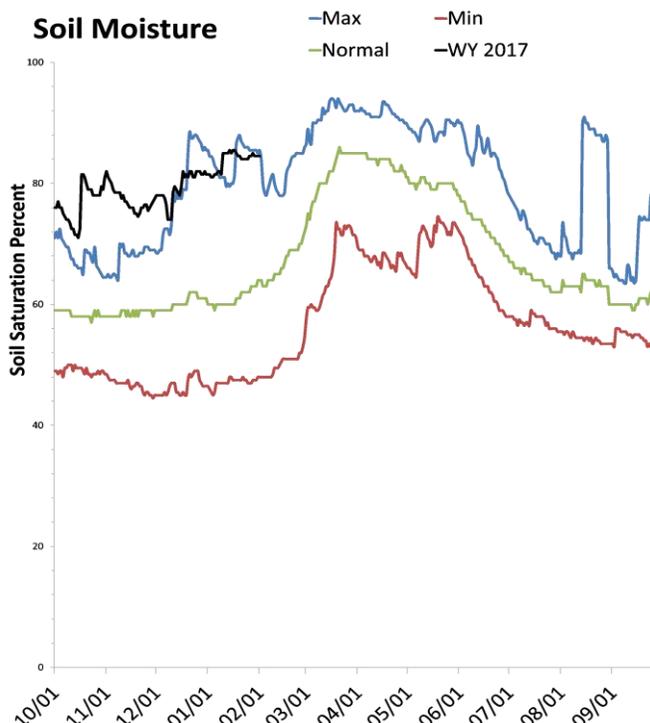
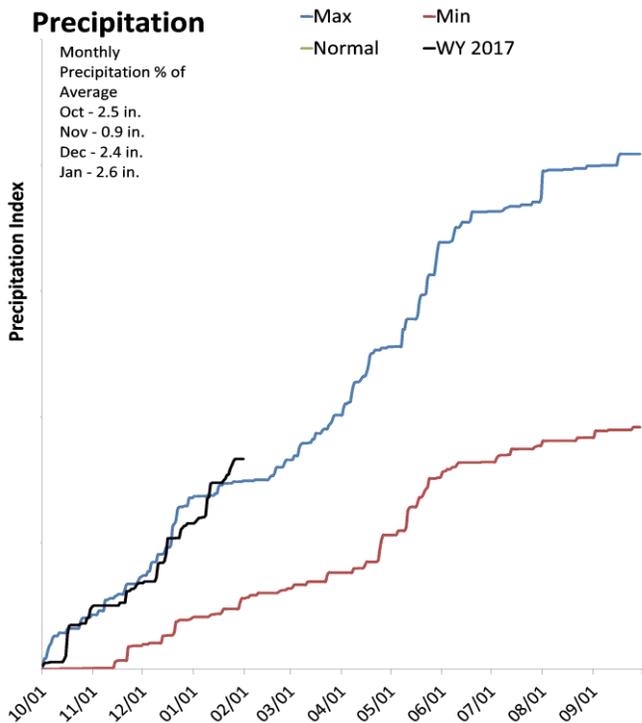
The average precipitation at SCAN sites within Utah was 1.7 inches in January, which brings the seasonal accumulation (Oct-Jan) to 4.7 inches. Soil moisture is at 42% compared to 39% last year.



North Central

February 1, 2017

The average precipitation in January at SCAN sites within the basin was 2.6 inches, which brings the seasonal accumulation (Oct-Jan) to 8.3 inches. Soil moisture is at 85% compared to 72% last year.



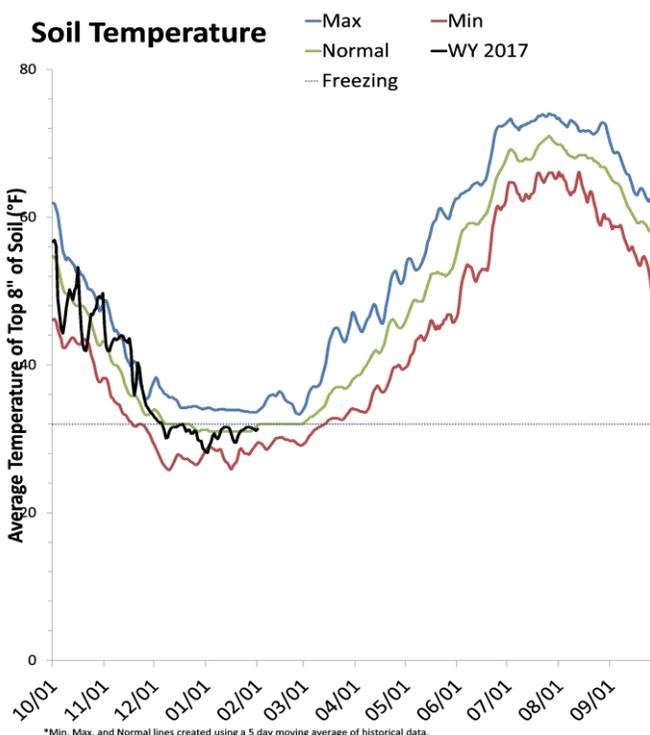
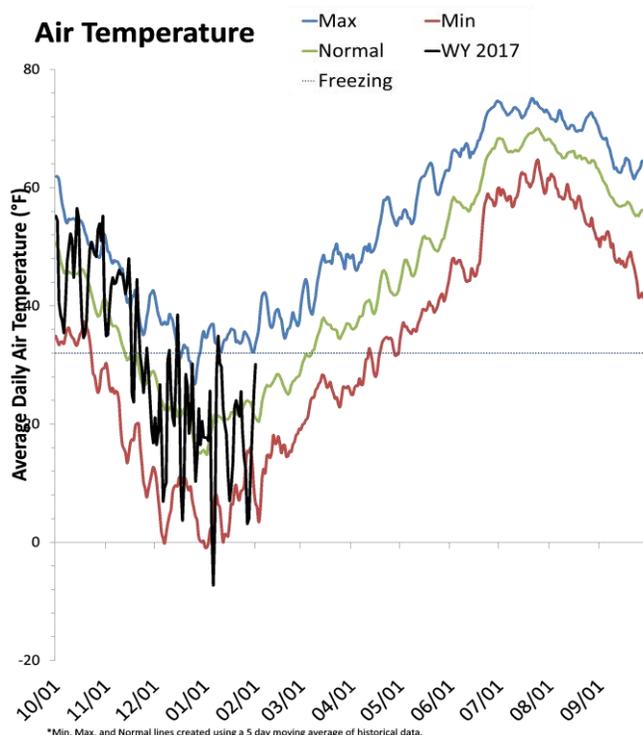
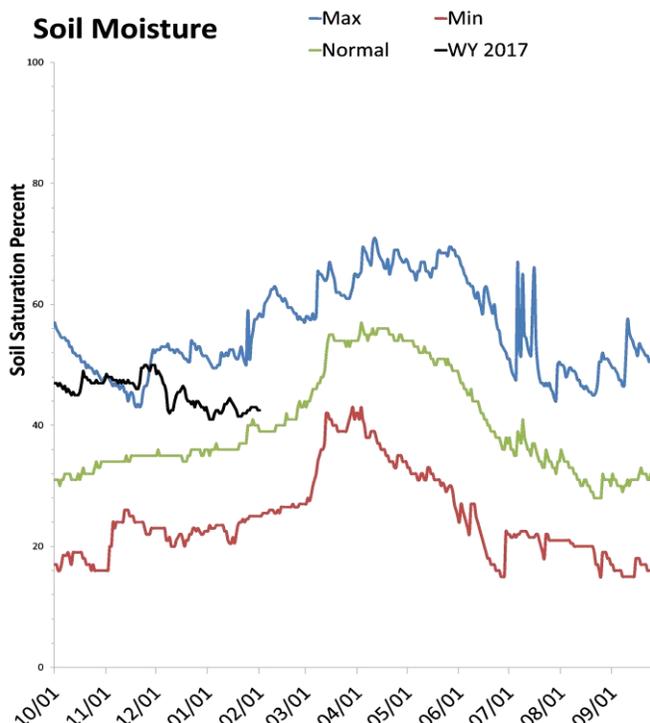
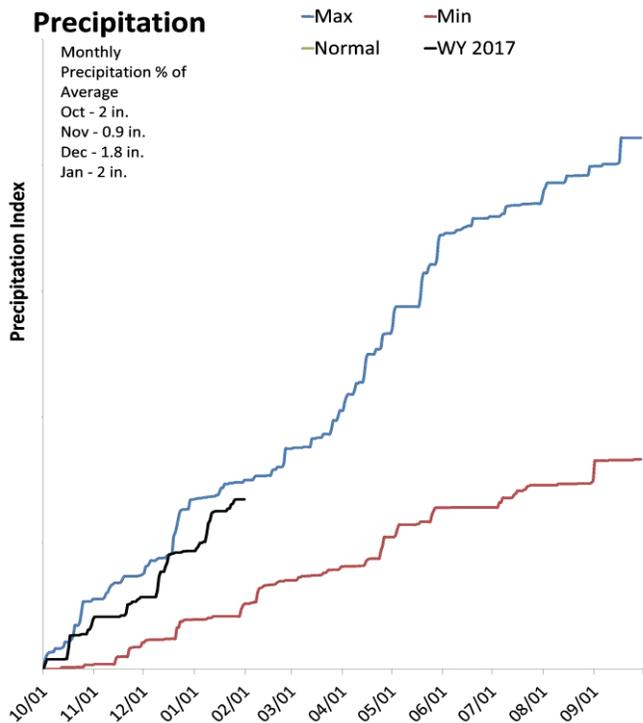
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Northern Mountains

February 1, 2017

The average precipitation in January at SCAN sites within the basin was 2 inches, which brings the seasonal accumulation (Oct-Jan) to 6.7 inches. Soil moisture is at 37% compared to 34% last year.



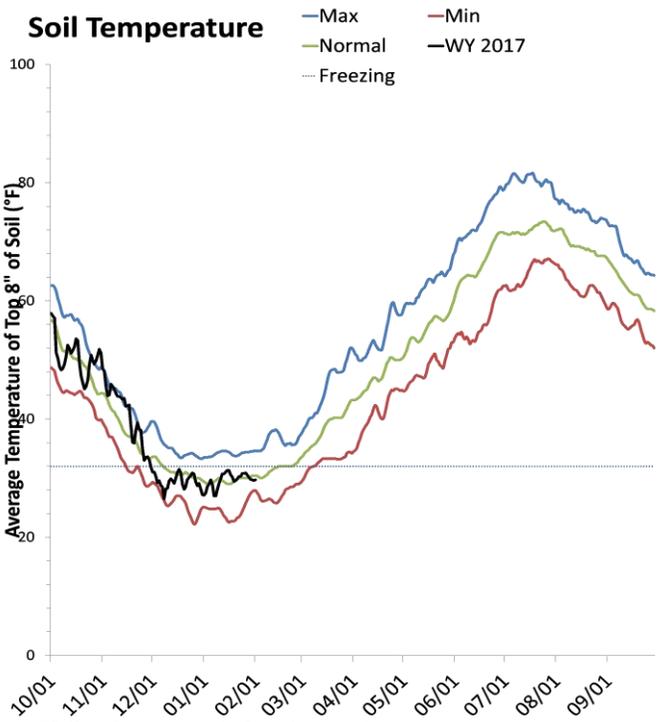
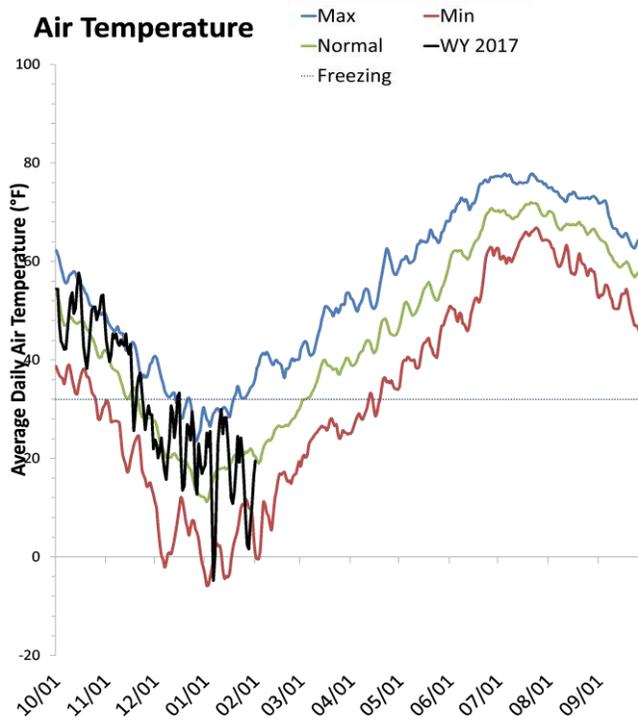
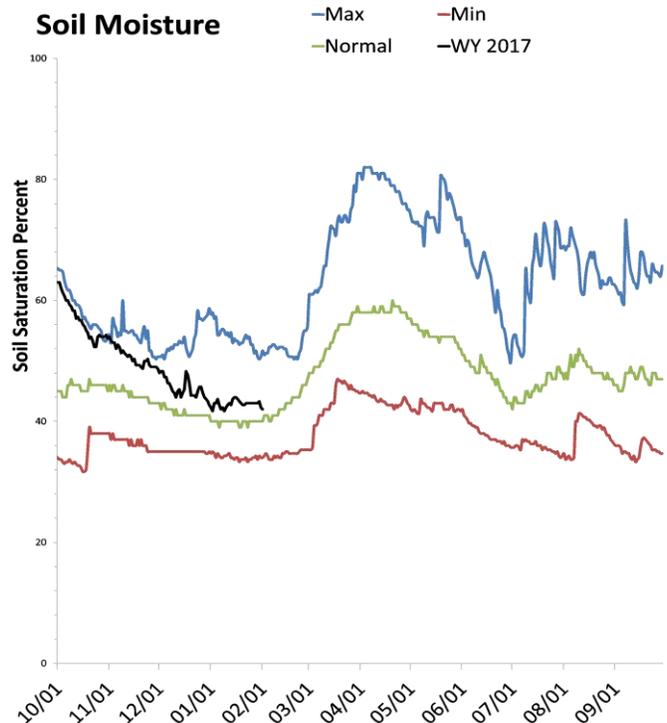
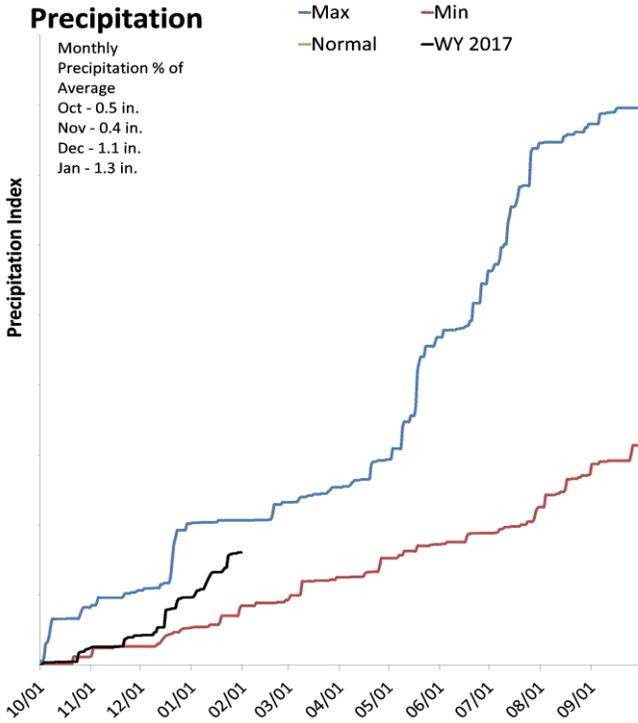
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Uinta Basin

February 1, 2017

The average precipitation in January at SCAN sites within the basin was 1.3 inches, which brings the seasonal accumulation (Oct-Jan) to 3.2 inches. Soil moisture is at 42% compared to 34% last year.



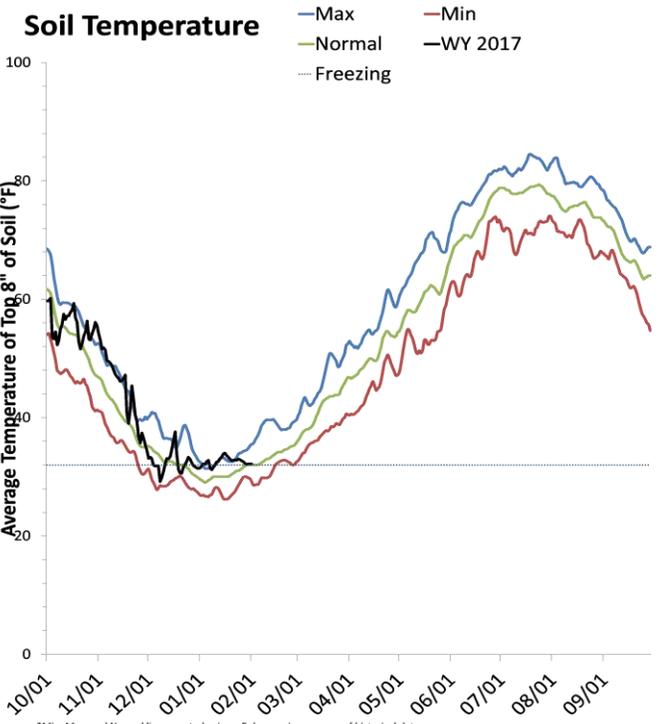
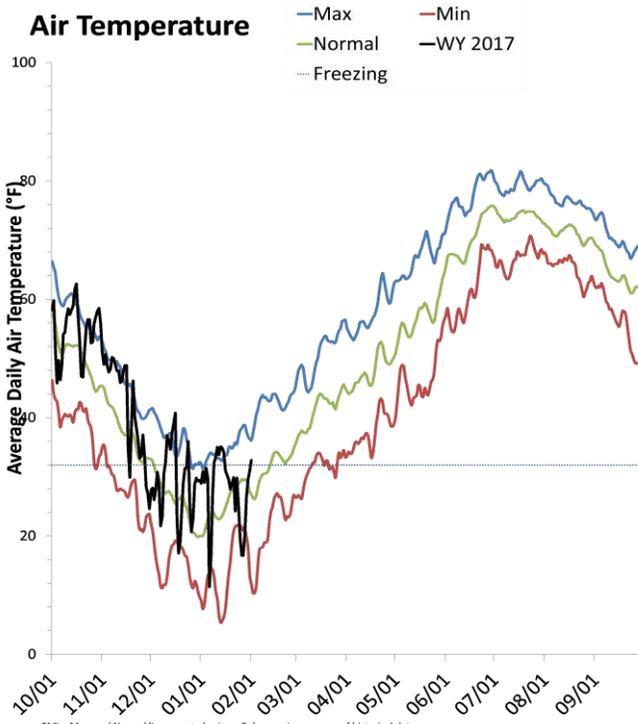
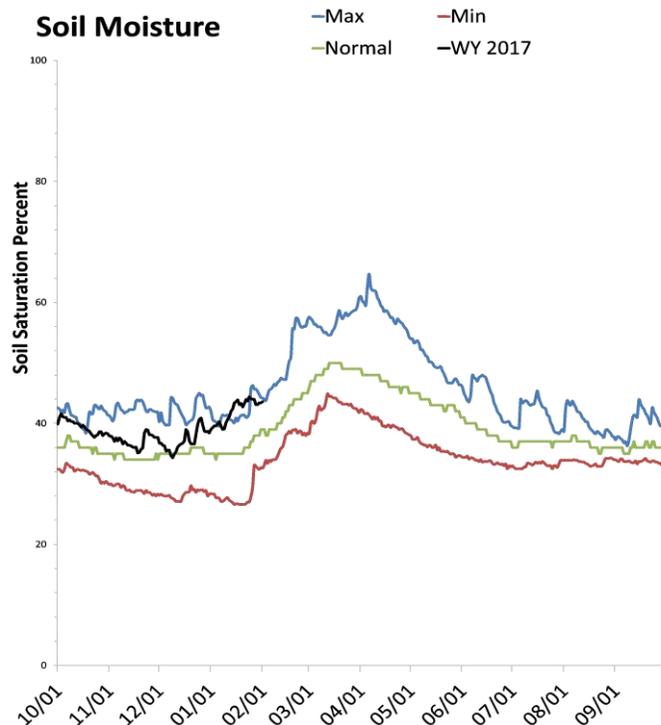
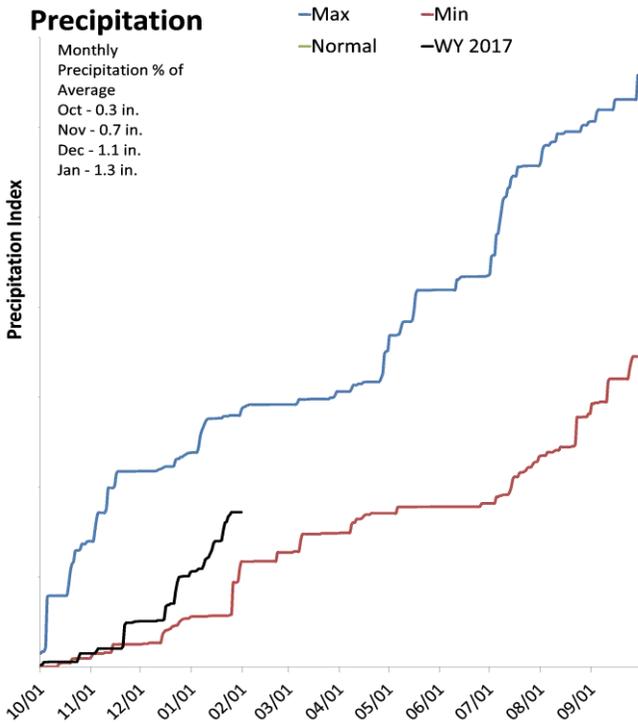
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Southeast

February 1, 2017

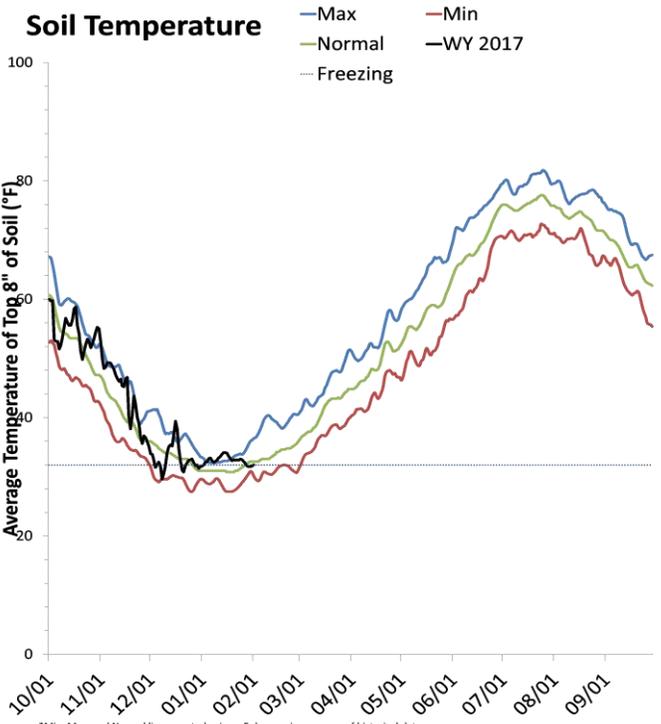
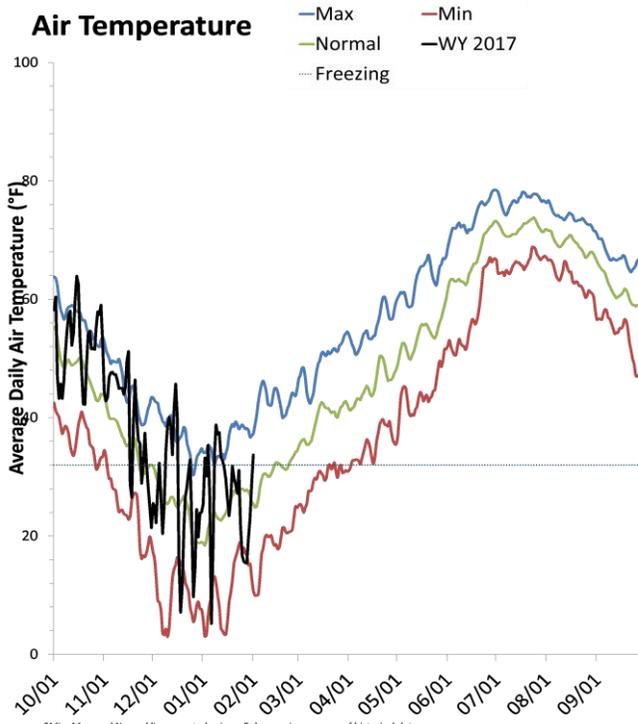
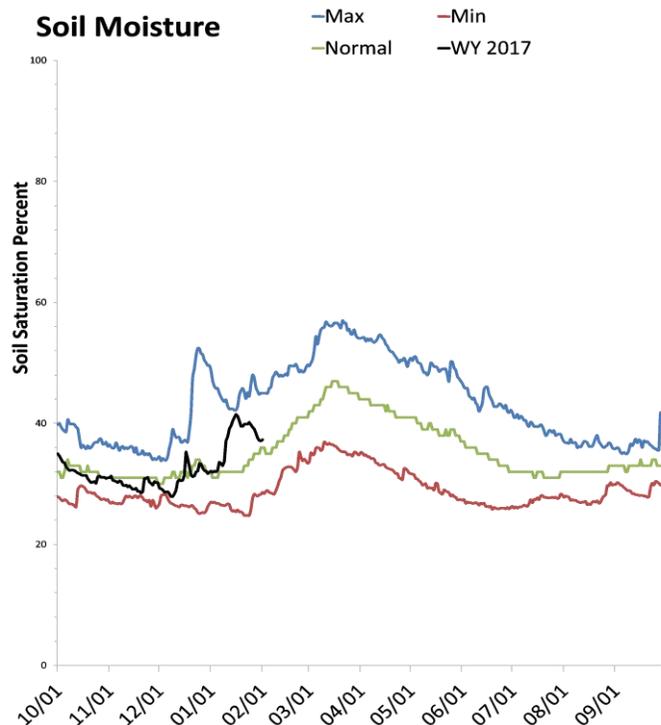
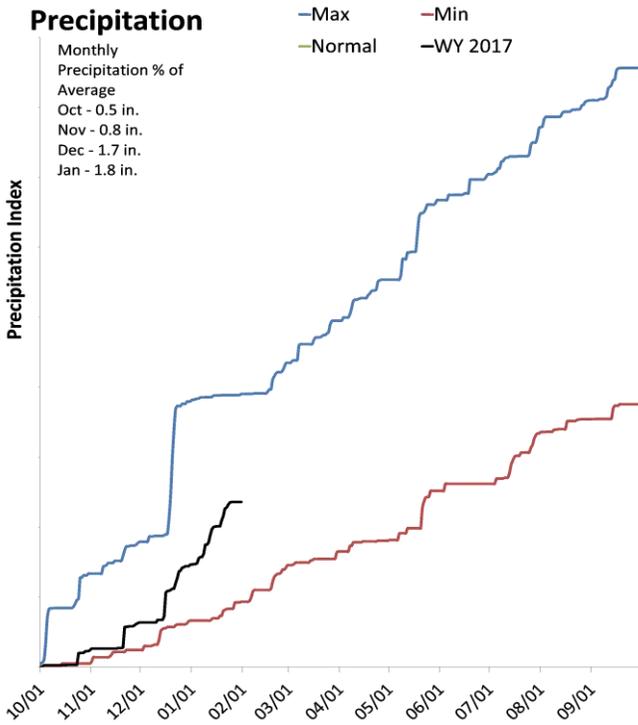
The average precipitation in January at SCAN sites within the basin was 1.3 inches, which brings the seasonal accumulation (Oct-Jan) to 3.4 inches. Soil moisture is at 43% compared to 43% last year.



South Central

February 1, 2017

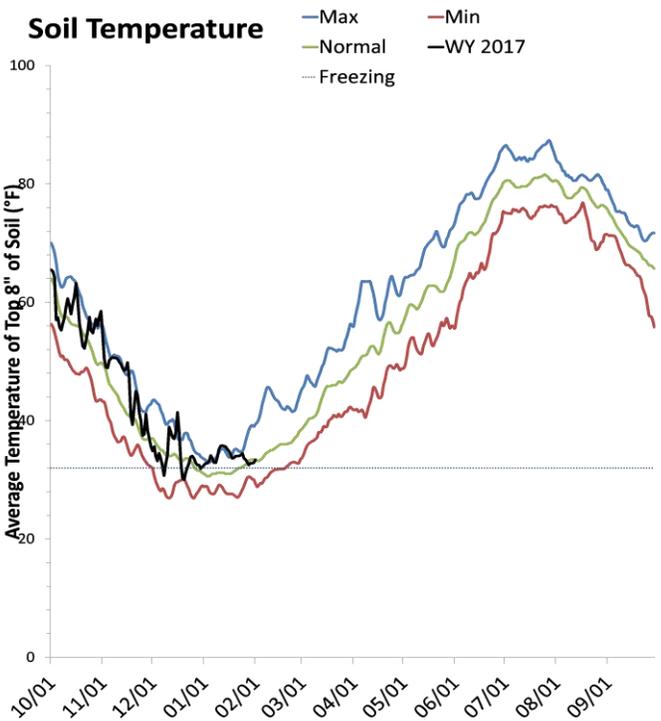
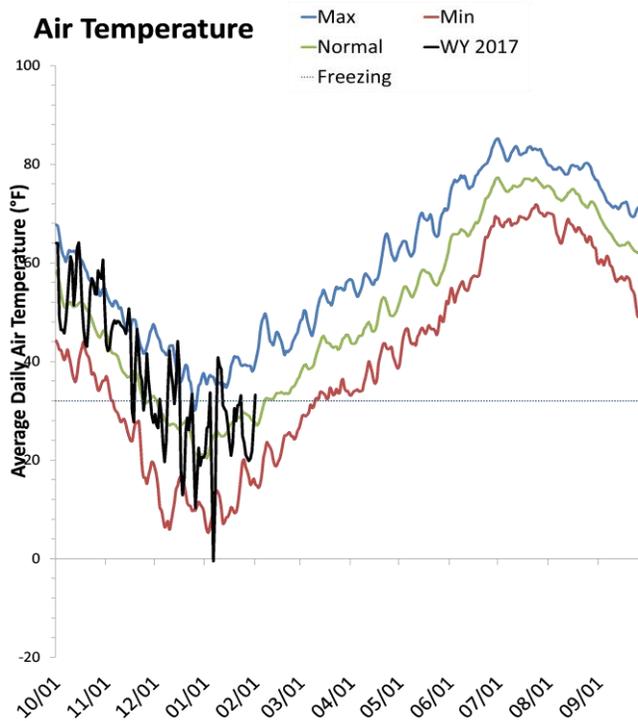
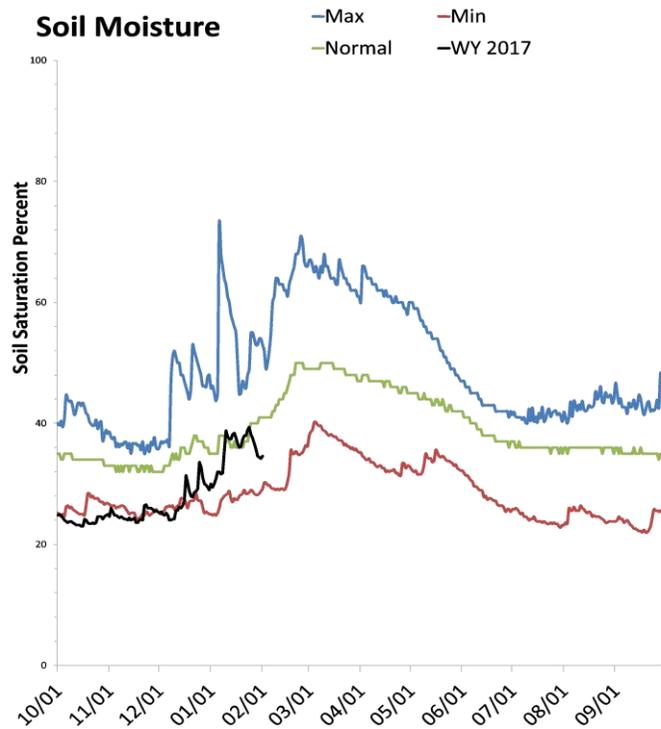
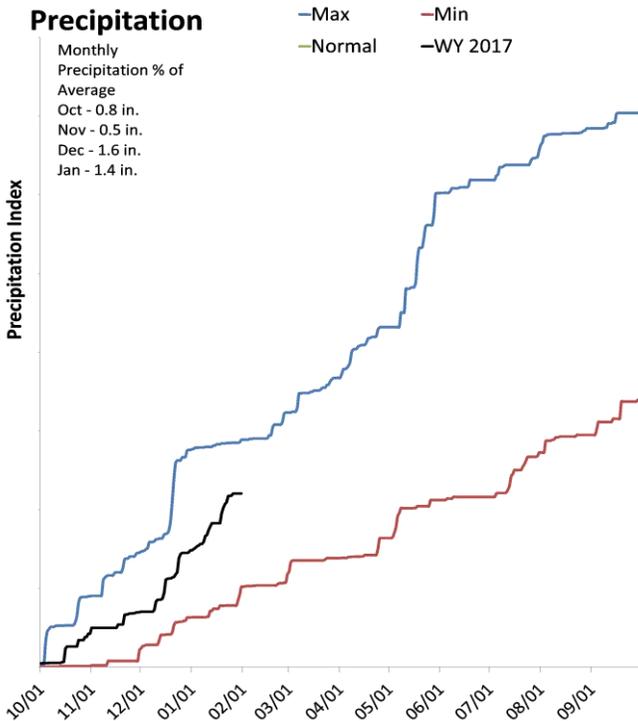
The average precipitation in January at SCAN sites within the basin was 1.8 inches, which brings the seasonal accumulation (Oct-Jan) to 4.7 inches. Soil moisture is at 37% compared to 36% last year.



Western and Dixie

February 1, 2017

The average precipitation in January at SCAN sites within the basin was 1.4 inches, which brings the seasonal accumulation (Oct-Jan) to 4.4 inches. Soil moisture is at 34% compared to 29% last year.



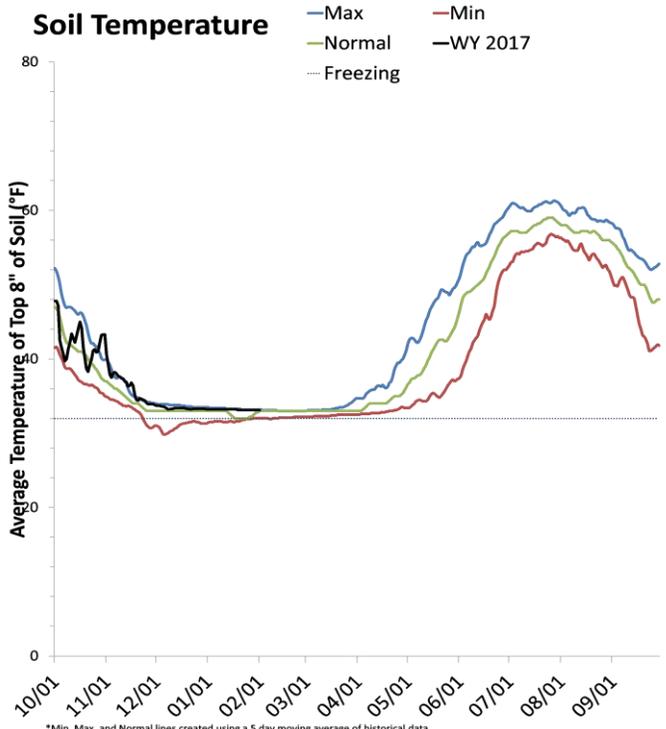
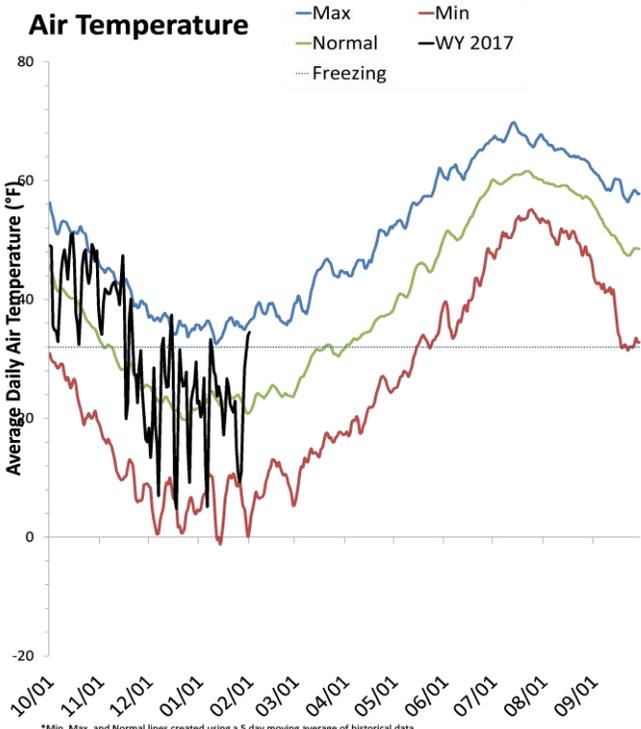
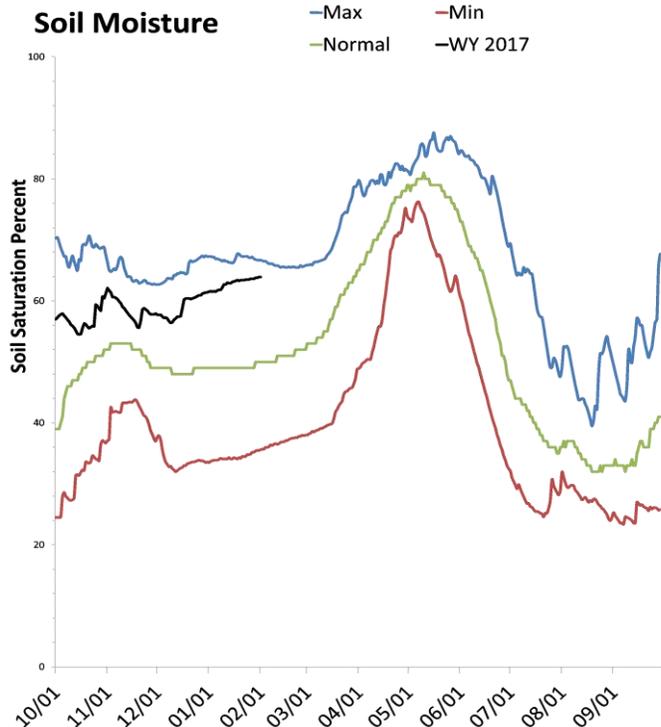
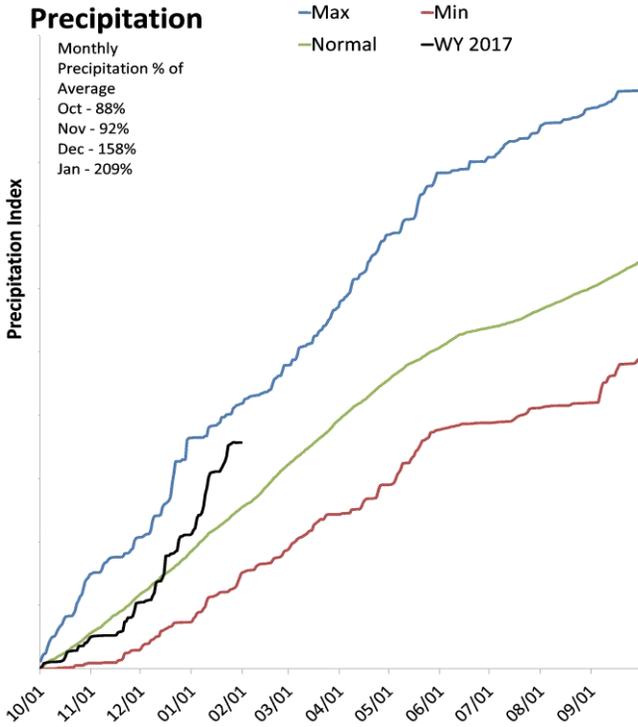
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Statewide SNOTEL

February 1, 2017

Precipitation at SNOTEL sites during January was much above average at 213%, which brings the seasonal accumulation (Oct-Jan) to 143% of average. Soil moisture is at 63% compared to 51% last year. Reservoir storage is at 52% of capacity, compared to 52% last year.



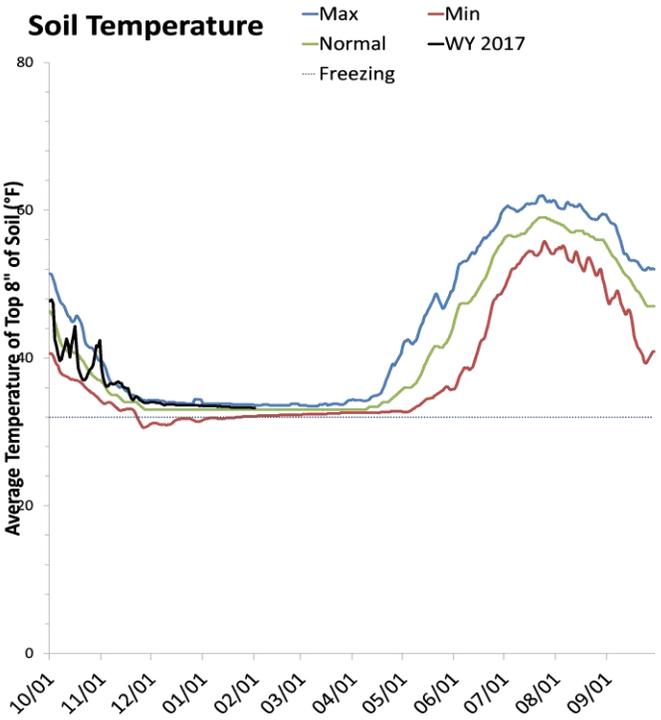
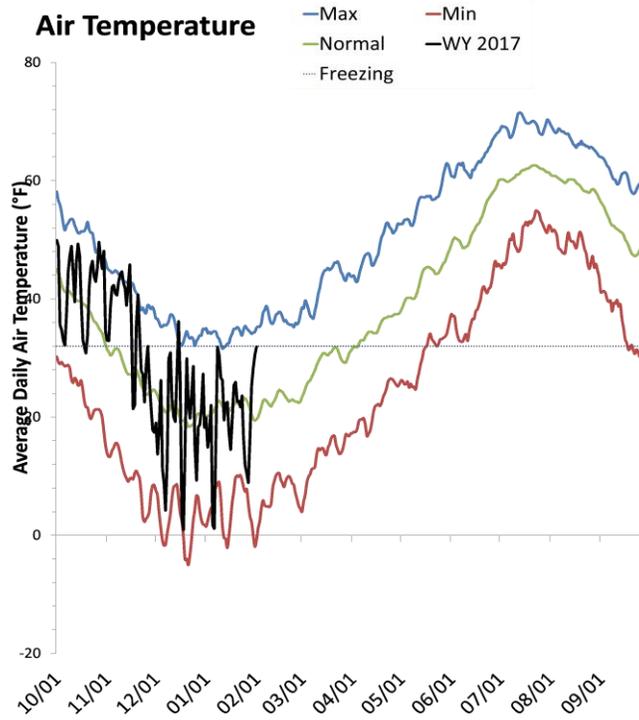
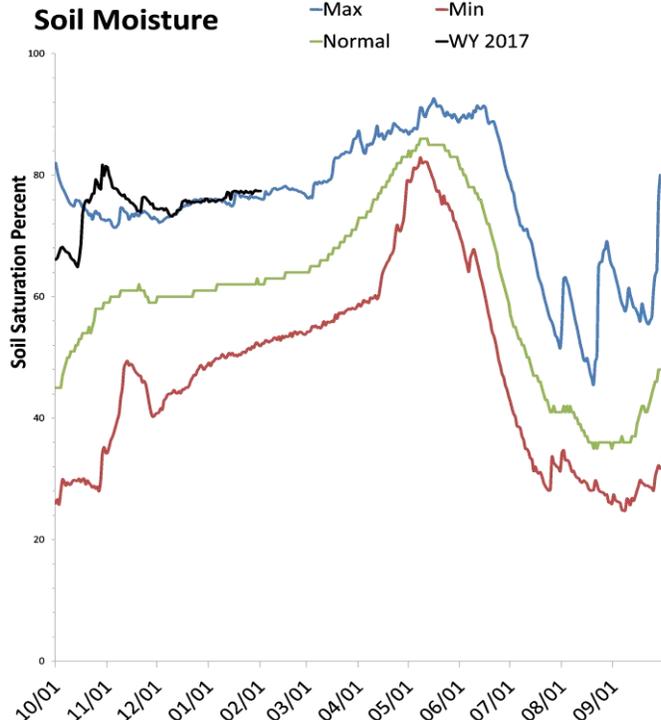
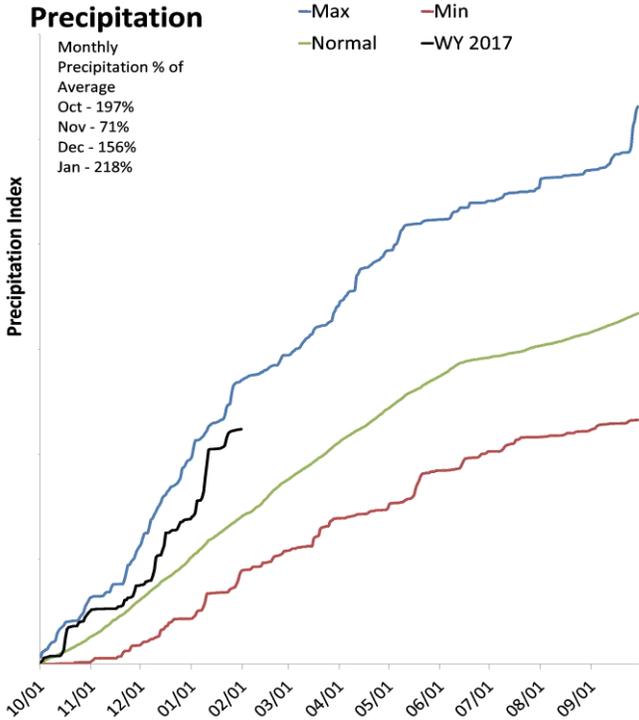
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Bear River Basin

February 1, 2017

Precipitation in January was much above average at 217%, which brings the seasonal accumulation (Oct-Jan) to 160% of average. Soil moisture is at 77% compared to 60% last year. Reservoir storage is at 38% of capacity, compared to 38% last year. The water availability index for the Bear River is 47%, 87% for Woodruff Narrows and 42% for the Little Bear.



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

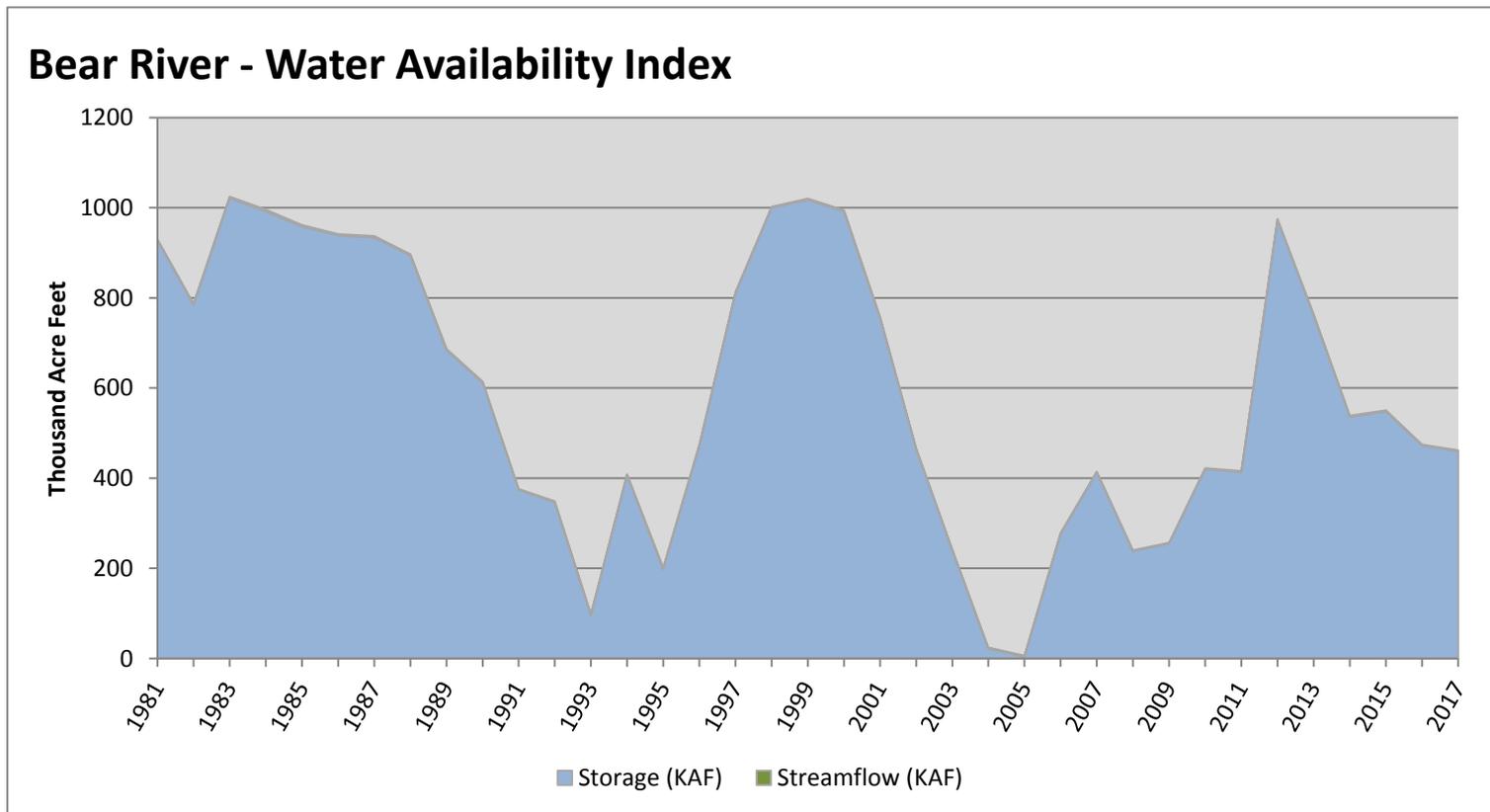
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	459.18	2.70	461.88	39	-0.88	11, 10, 02, 16

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

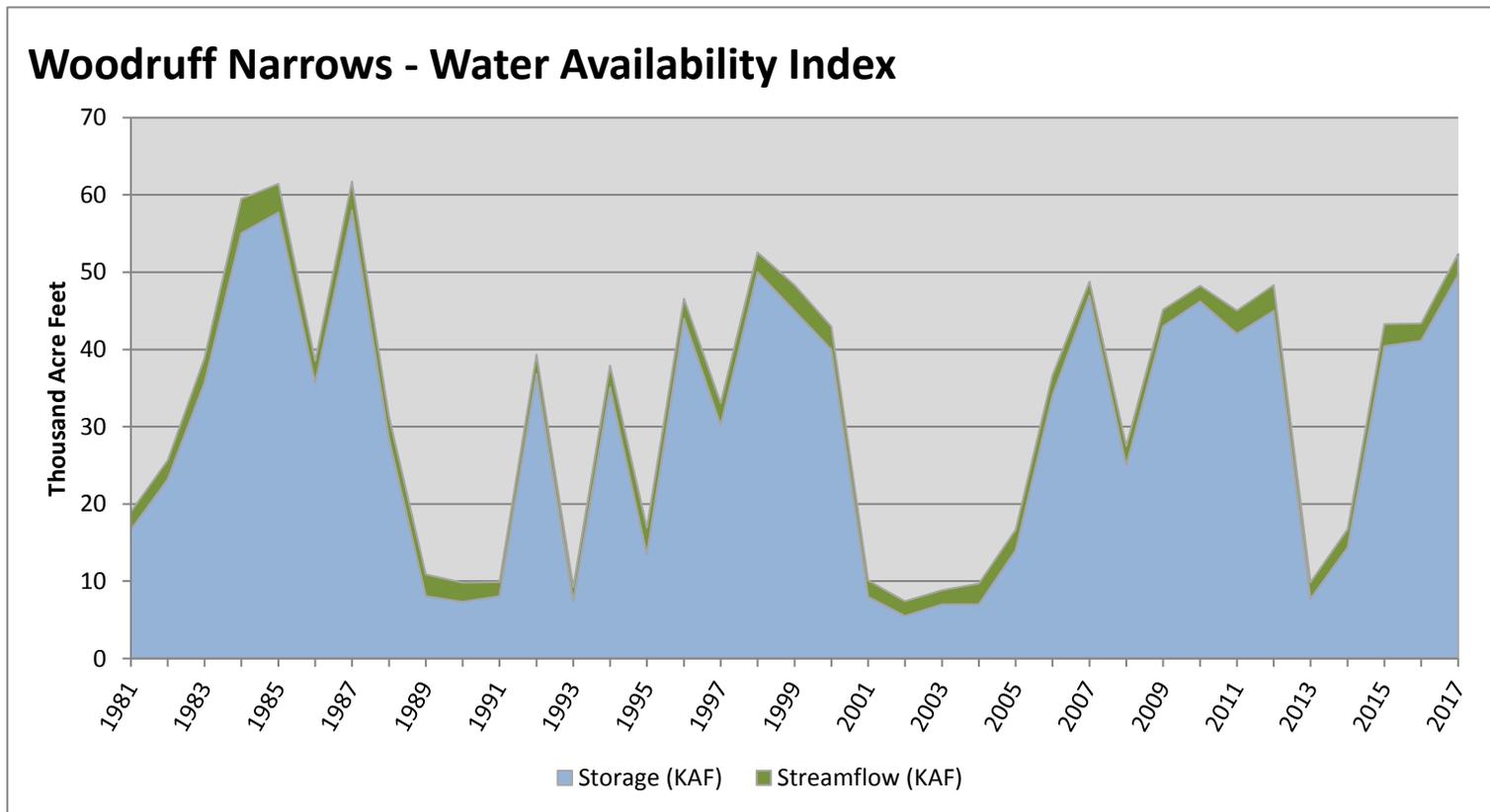


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage KAF [^]	January Flow KAF [^]	Storage + Flow KAF [^]	Percentile %	WAI [#]	Years with similar WAI
Woodruff Narrows	49.64	2.70	52.34	87	3.07	99, 07, 98, 84

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

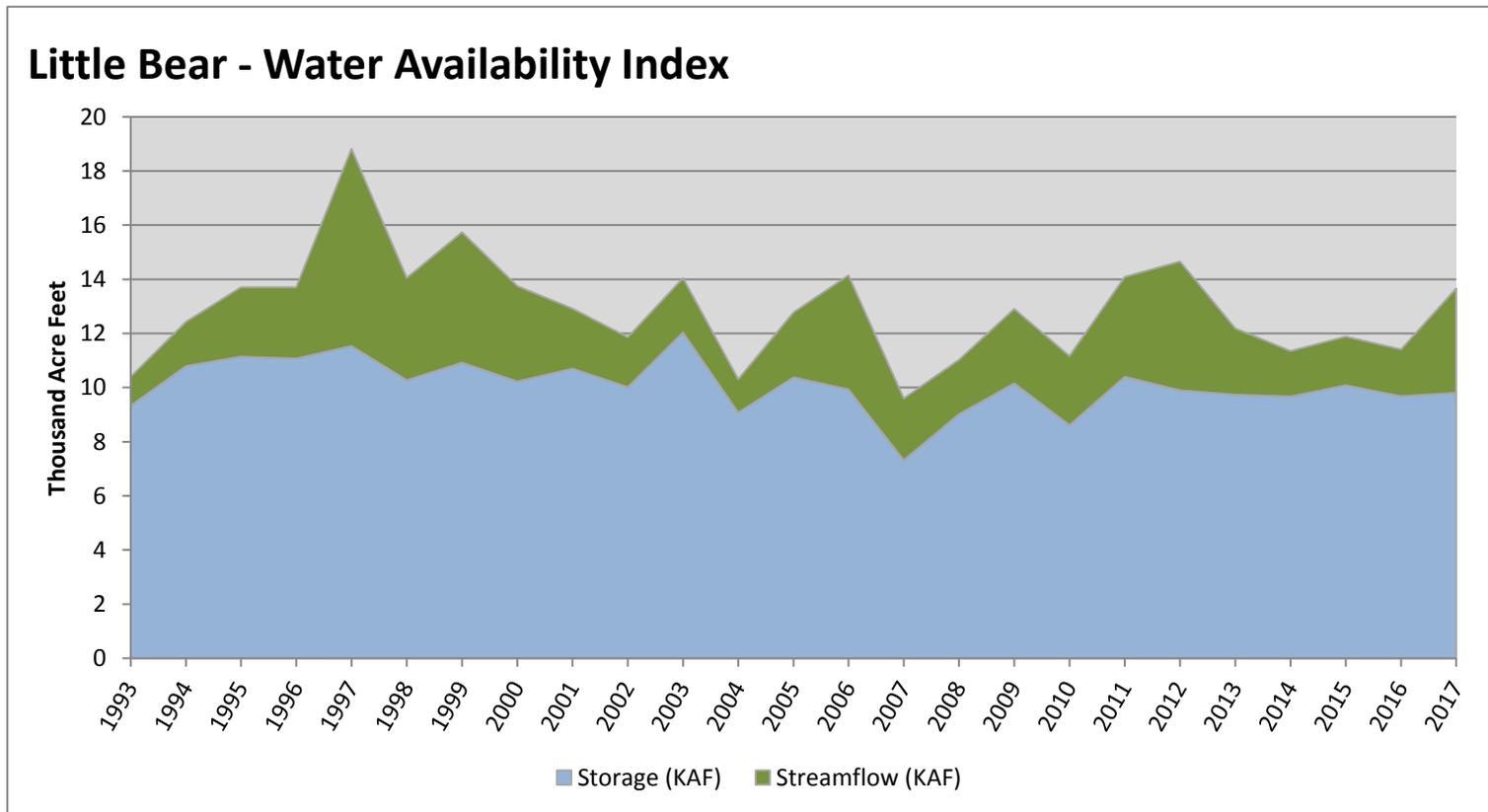


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	9.81	3.85	13.66	58	0.64	09, 01, 95, 96

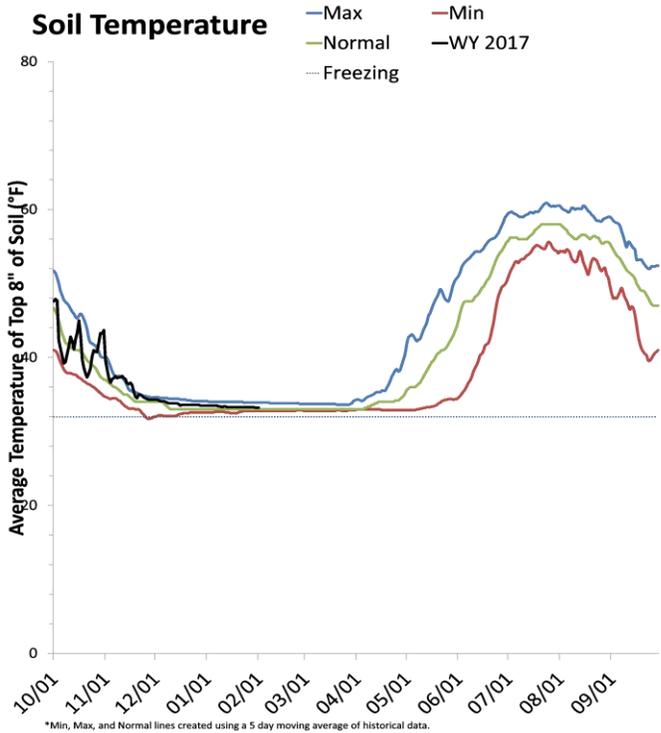
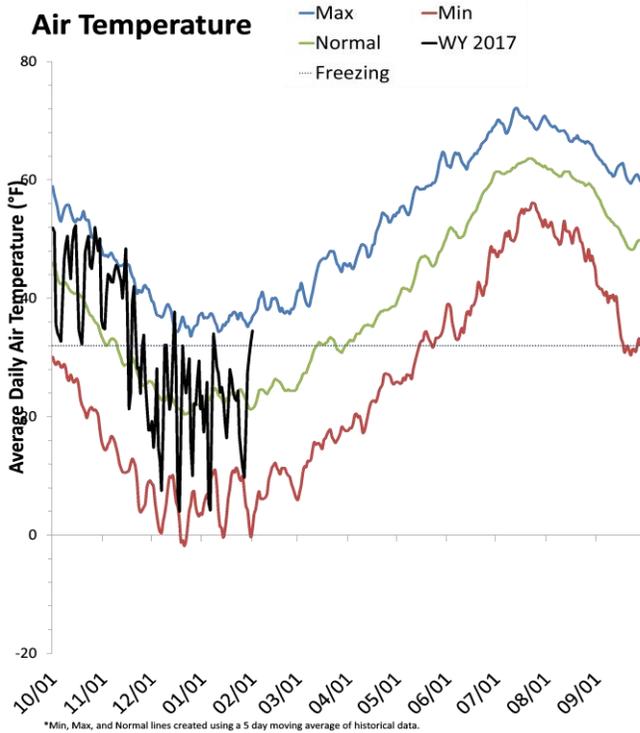
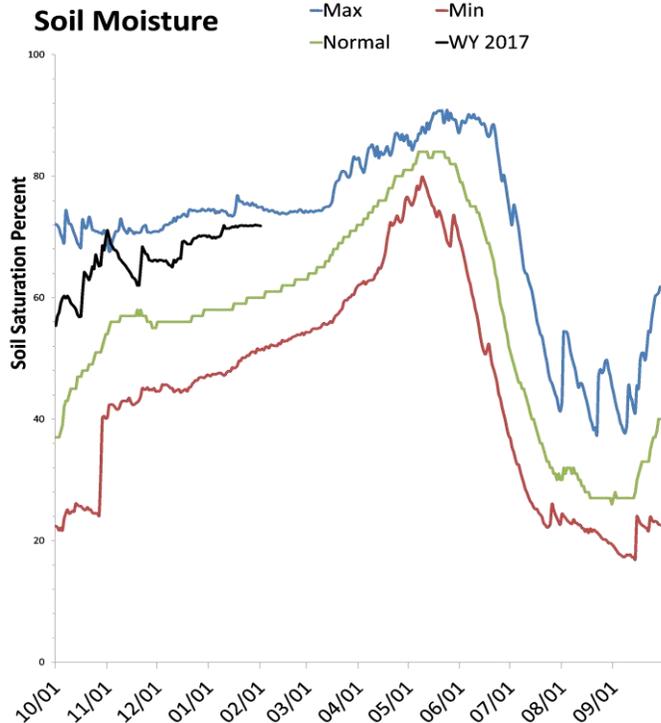
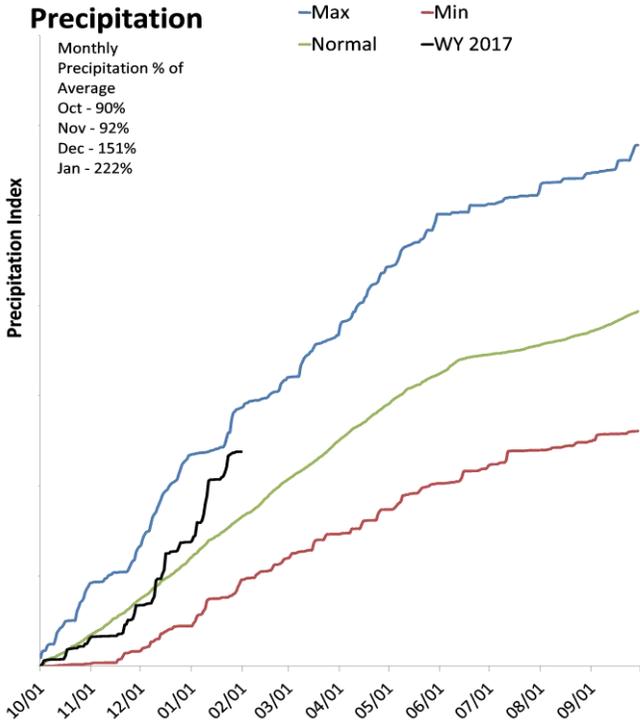
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Weber & Ogden River Basins

February 1, 2017

Precipitation in January was much above average at 222%, which brings the seasonal accumulation (Oct-Jan) to 144% of average. Soil moisture is at 72% compared to 54% last year. Reservoir storage is at 59% of capacity, compared to 46% last year. The water availability index for the Ogden River is 79% and 36% for the Weber River.



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

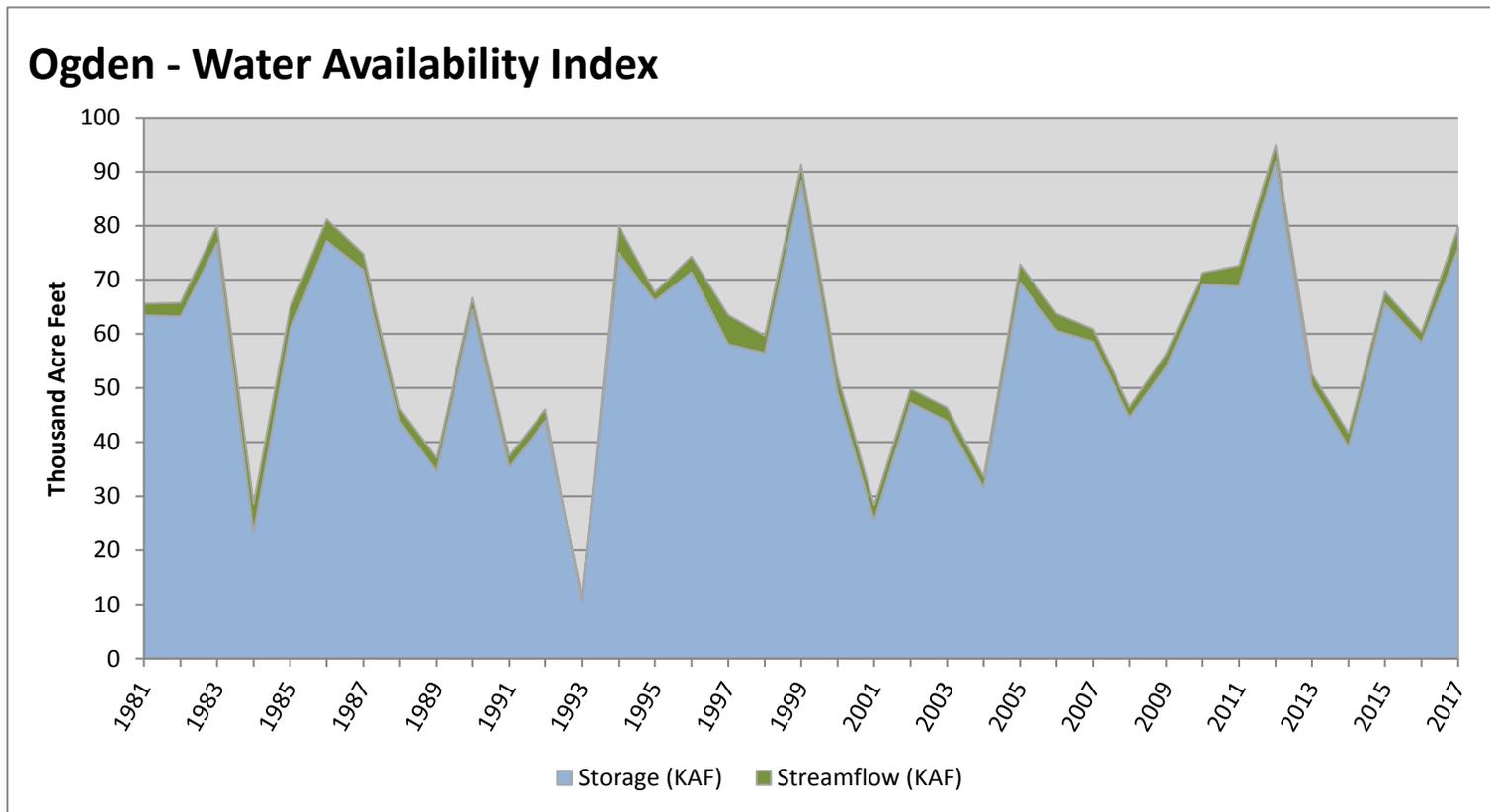
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	75.70	4.00	79.70	84	2.85	96, 87, 83, 94

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

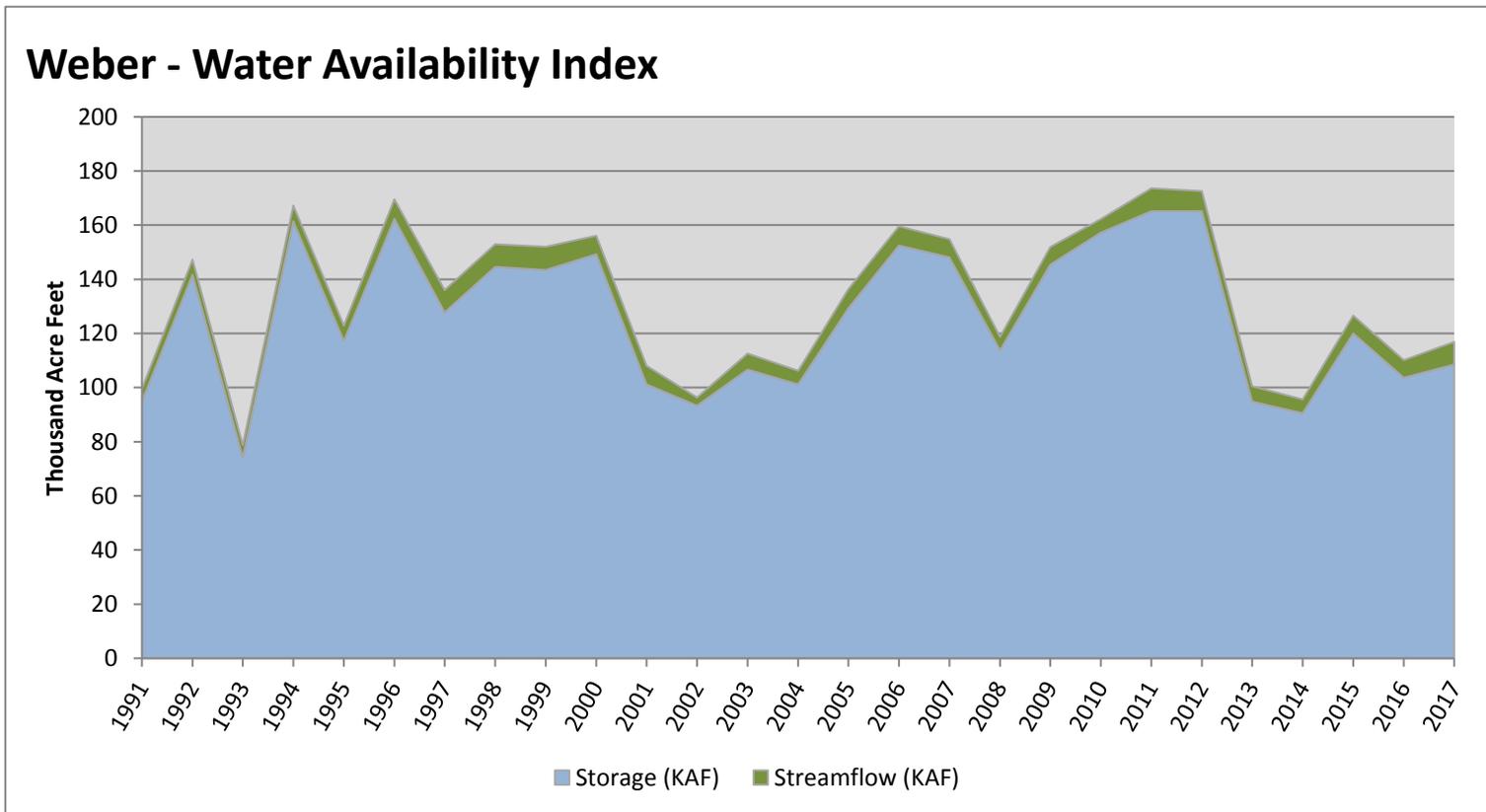


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	108.53	8.36	116.89	36	-1.19	16, 03, 08, 95

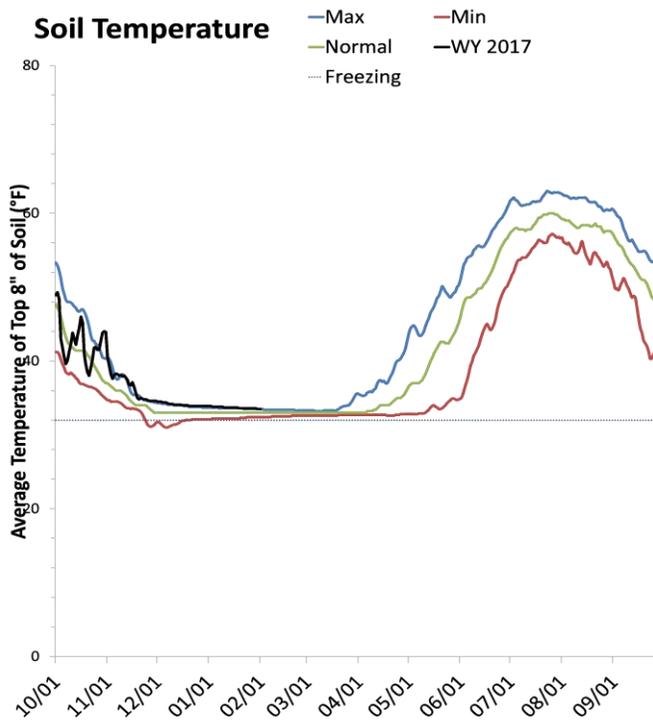
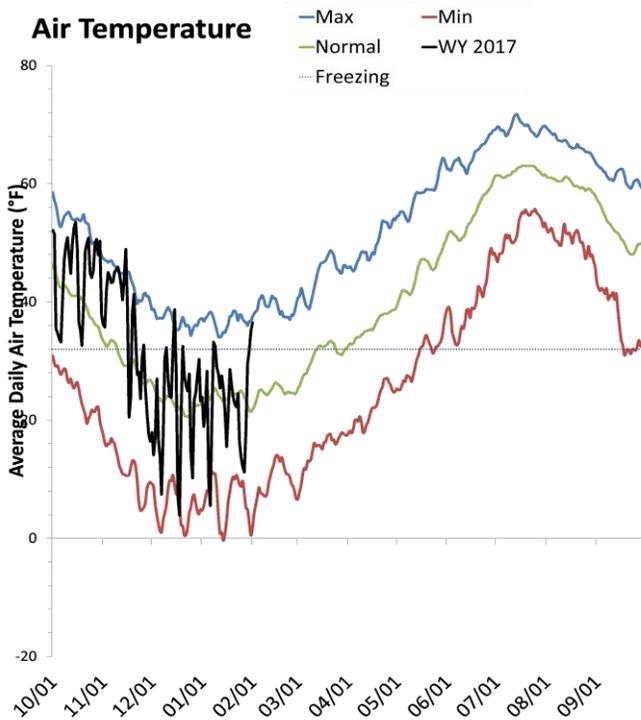
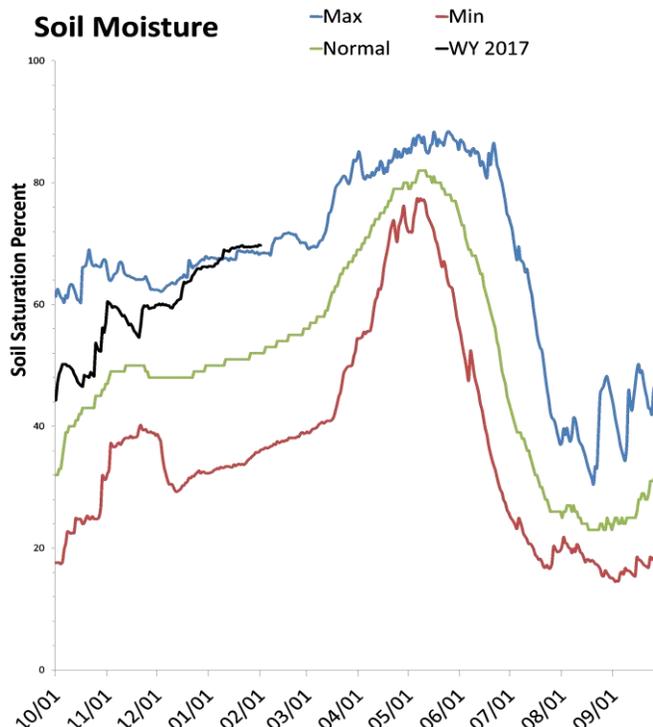
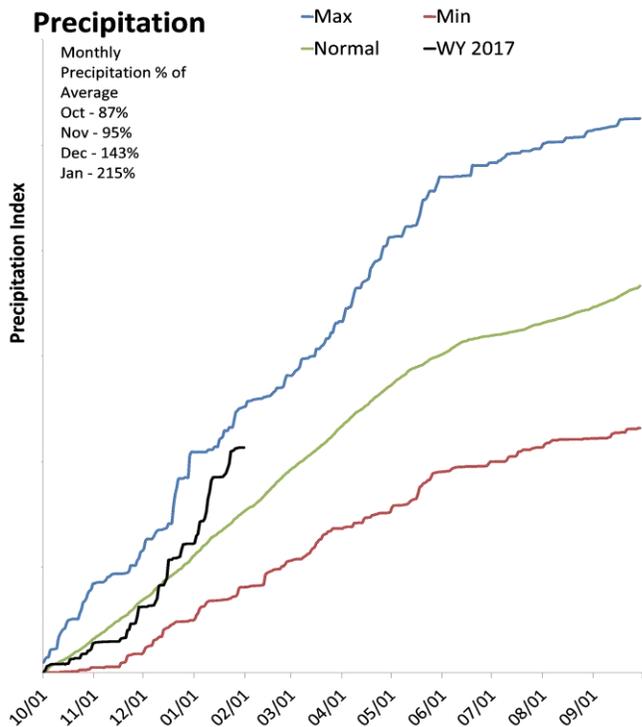
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Provo & Jordan River Basins

February 1, 2017

Precipitation in January was much above average at 215%, which brings the seasonal accumulation (Oct-Jan) to 140% of average. Soil moisture is at 69% compared to 43% last year. Reservoir storage is at 61% of capacity, compared to 62% last year. The water availability index for the Provo River is 35%.



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

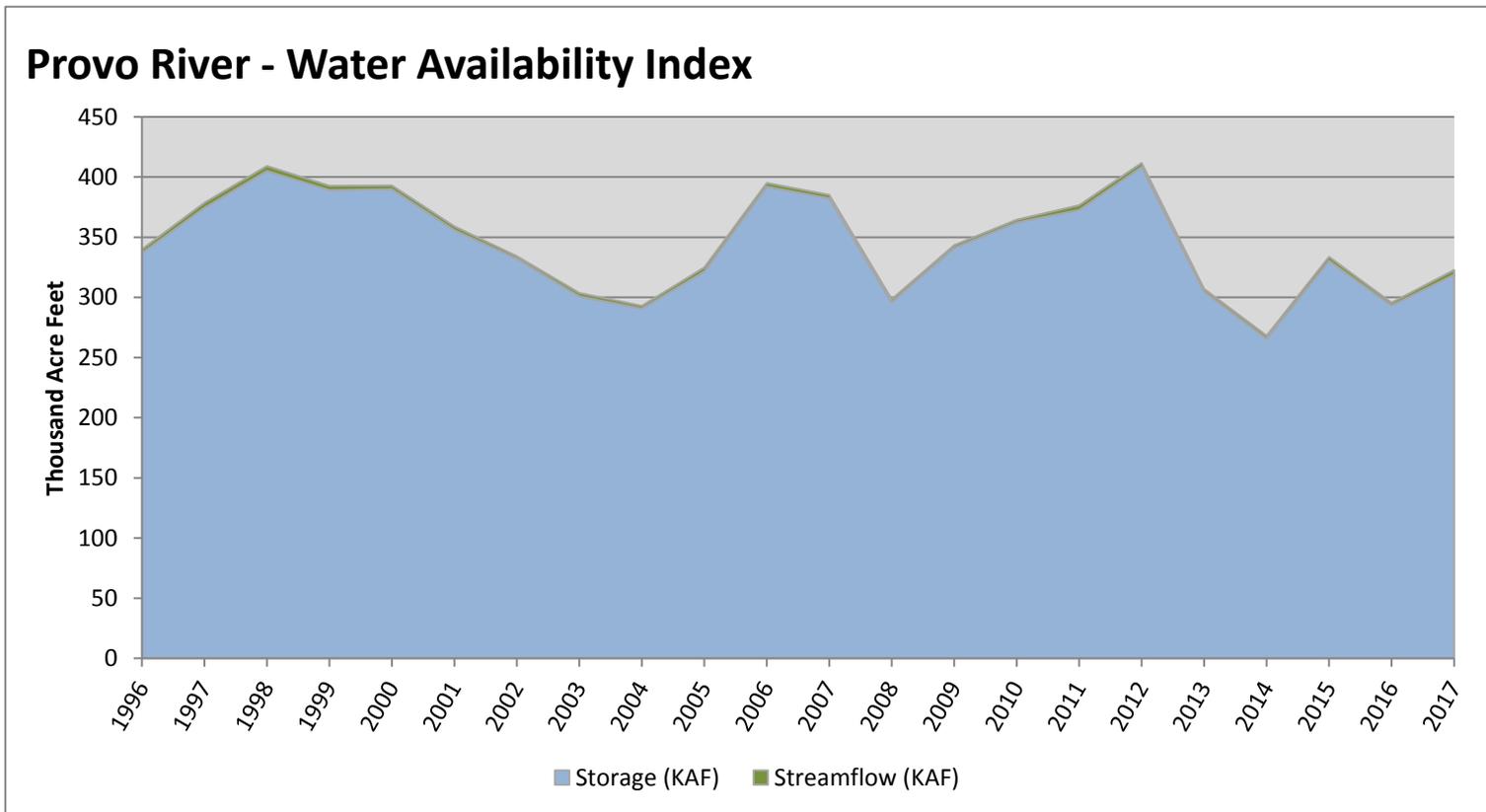
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	318.75	4.10	322.85	30	-1.63	03, 13, 05, 15

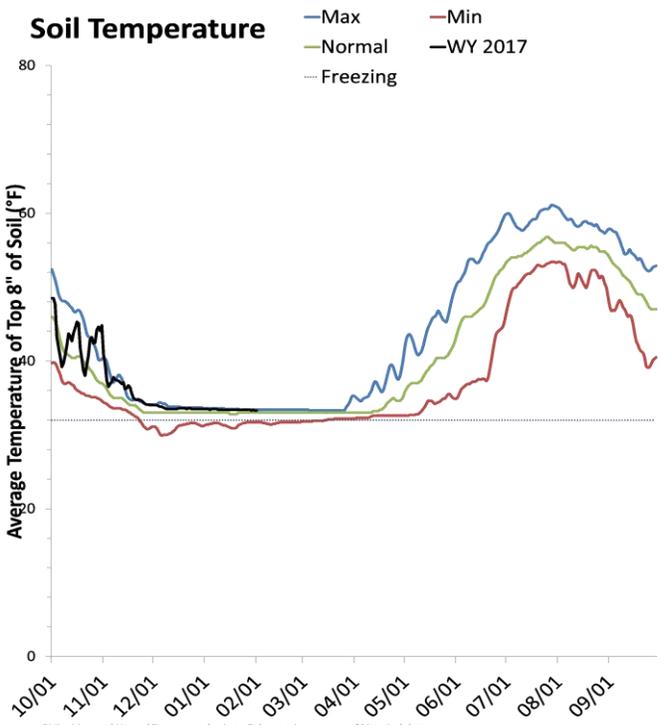
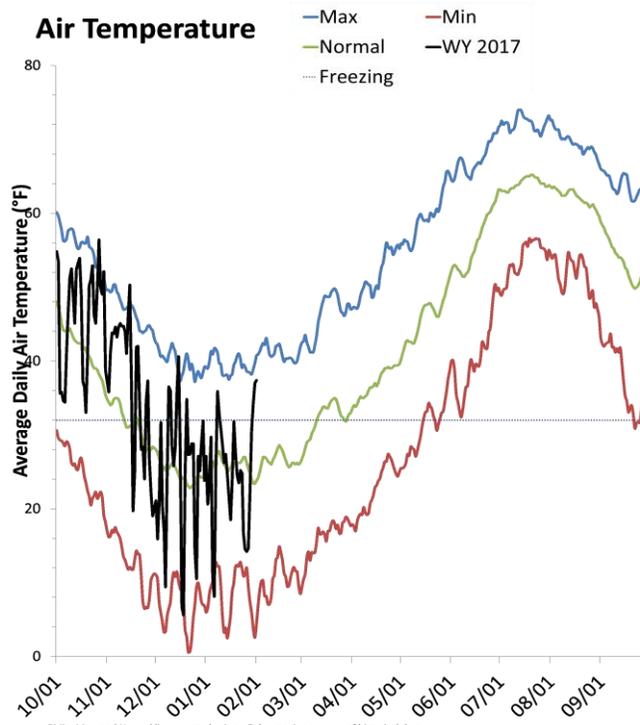
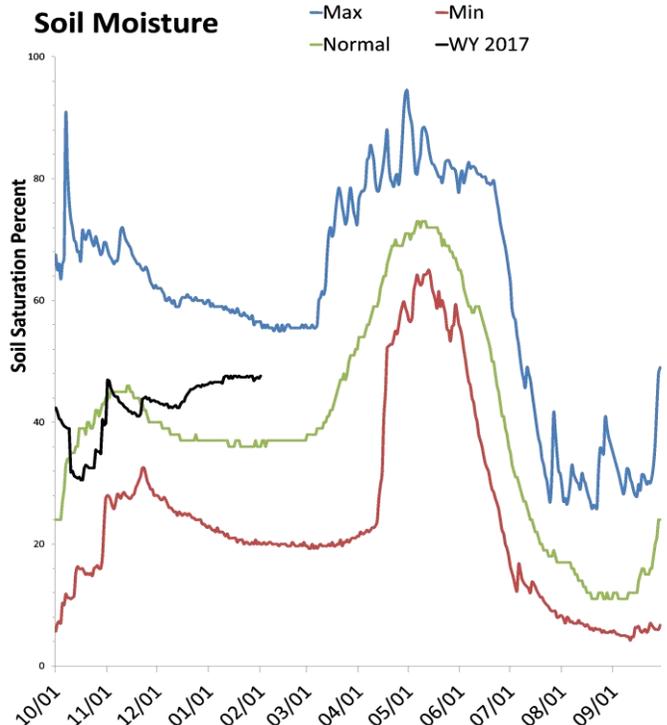
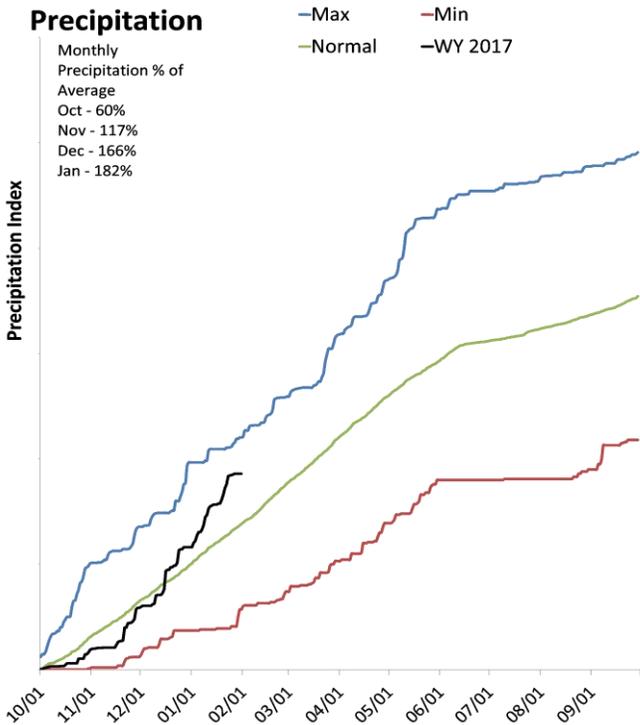
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Tooele Valley & West Desert Basins

February 1, 2017

Precipitation in January was much above average at 180%, which brings the seasonal accumulation (Oct-Jan) to 134% of average. Soil moisture is at 47% compared to 31% last year. Reservoir storage is at 21% of capacity, compared to 45% last year.



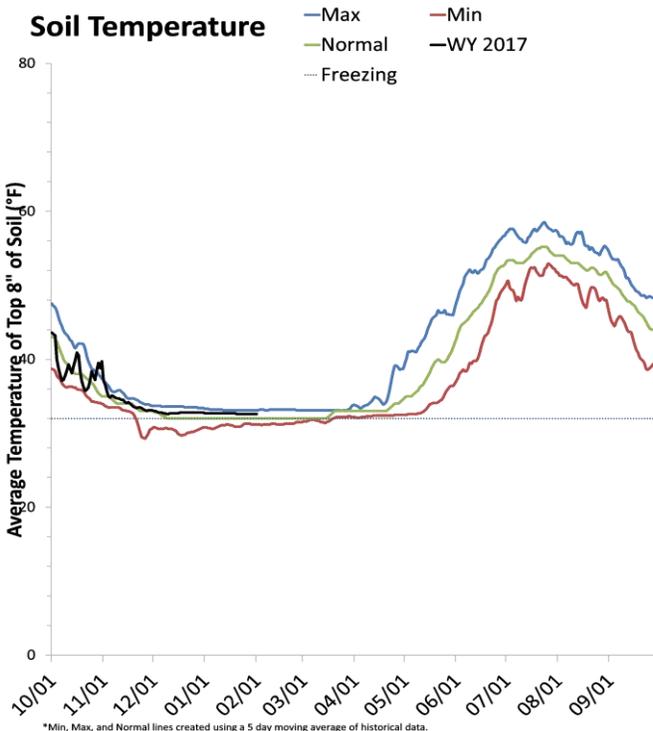
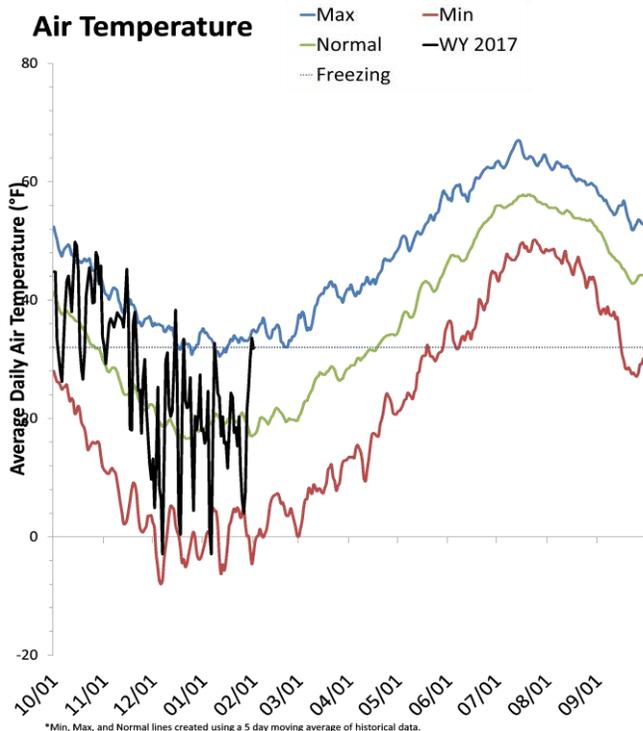
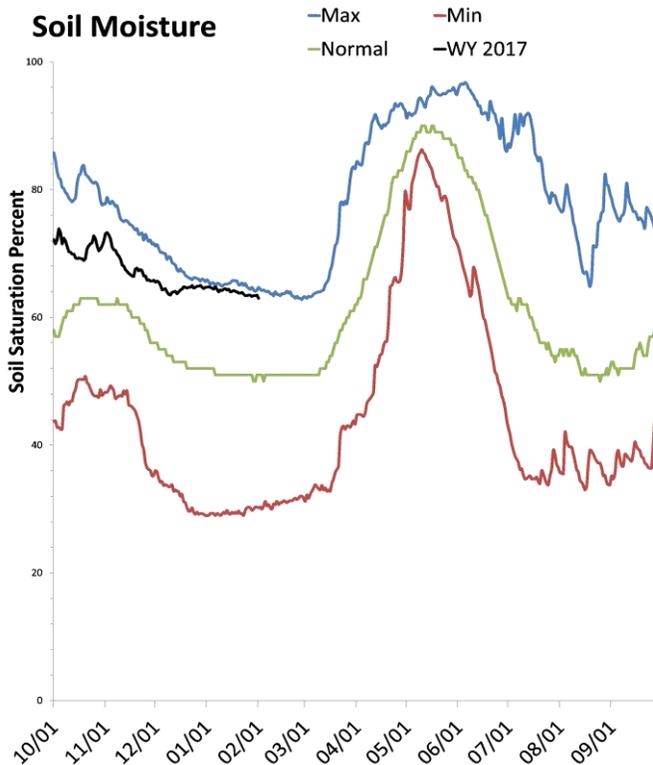
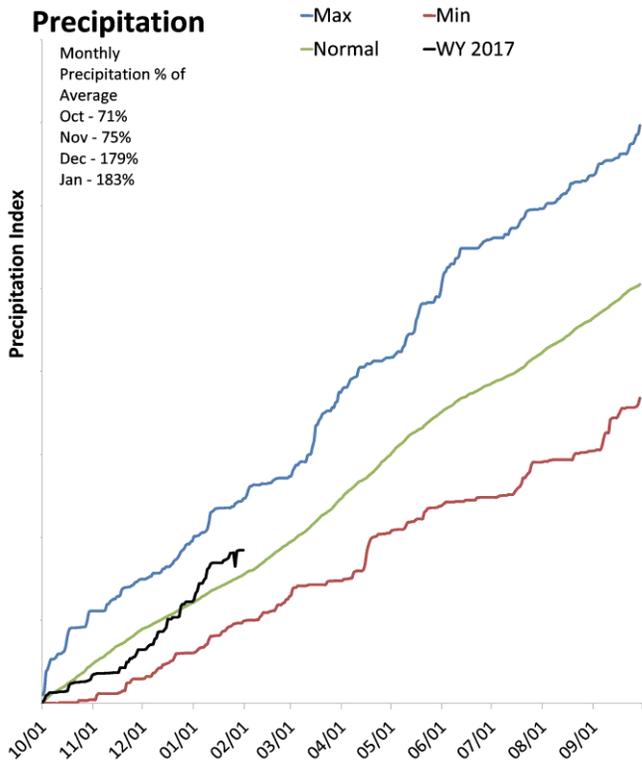
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Northeastern Uinta Basin

February 1, 2017

Precipitation in January was much above average at 187%, which brings the seasonal accumulation (Oct-Jan) to 120% of average. Soil moisture is at 62% compared to 55% last year. Reservoir storage is at 82% of capacity, compared to 84% last year. The Water availability Index for Blacks Fork is 69% and 76% for Smiths Creek.

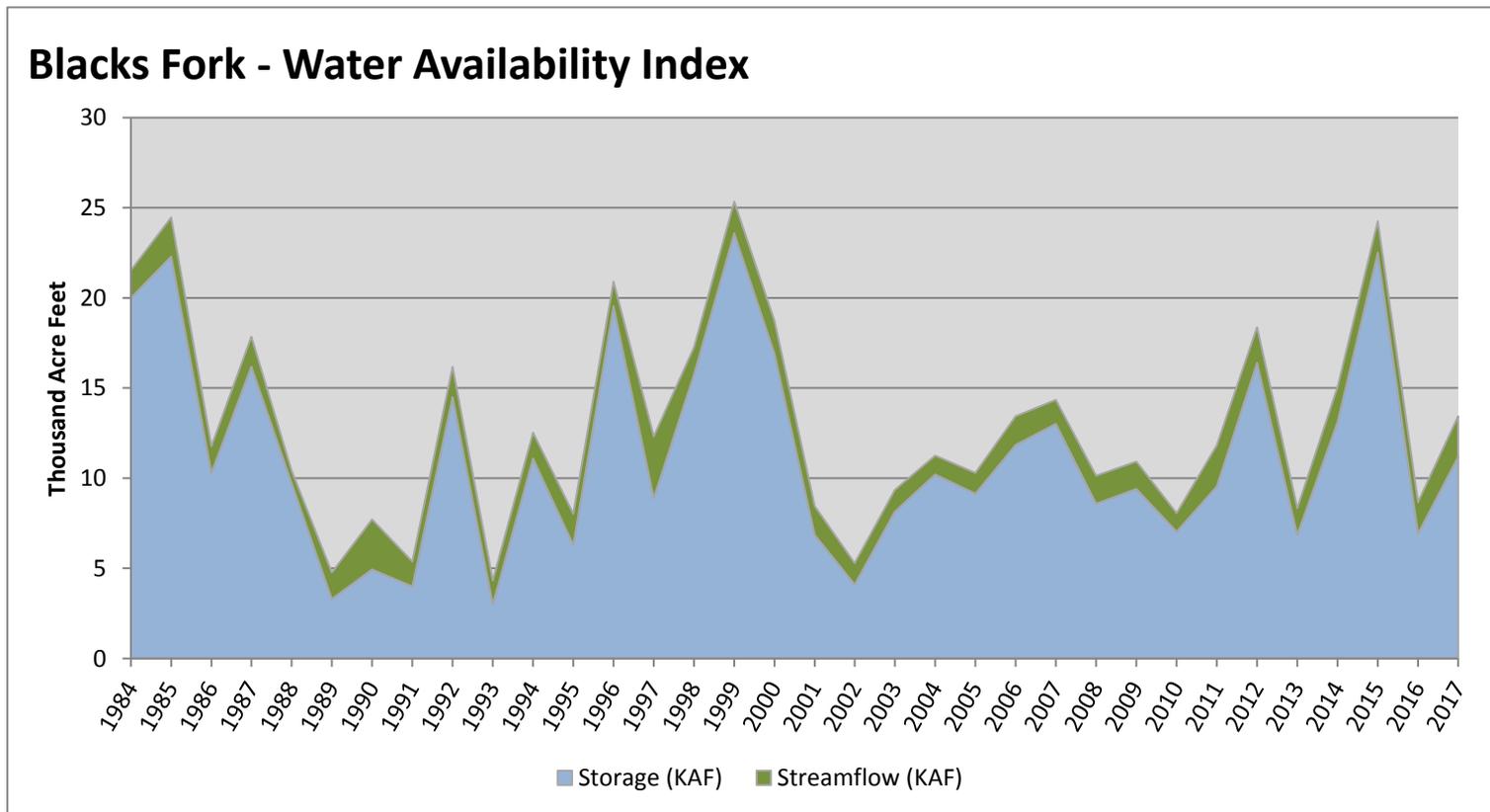


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	11.18	2.25	13.43	60	0.83	97, 94, 06, 07

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

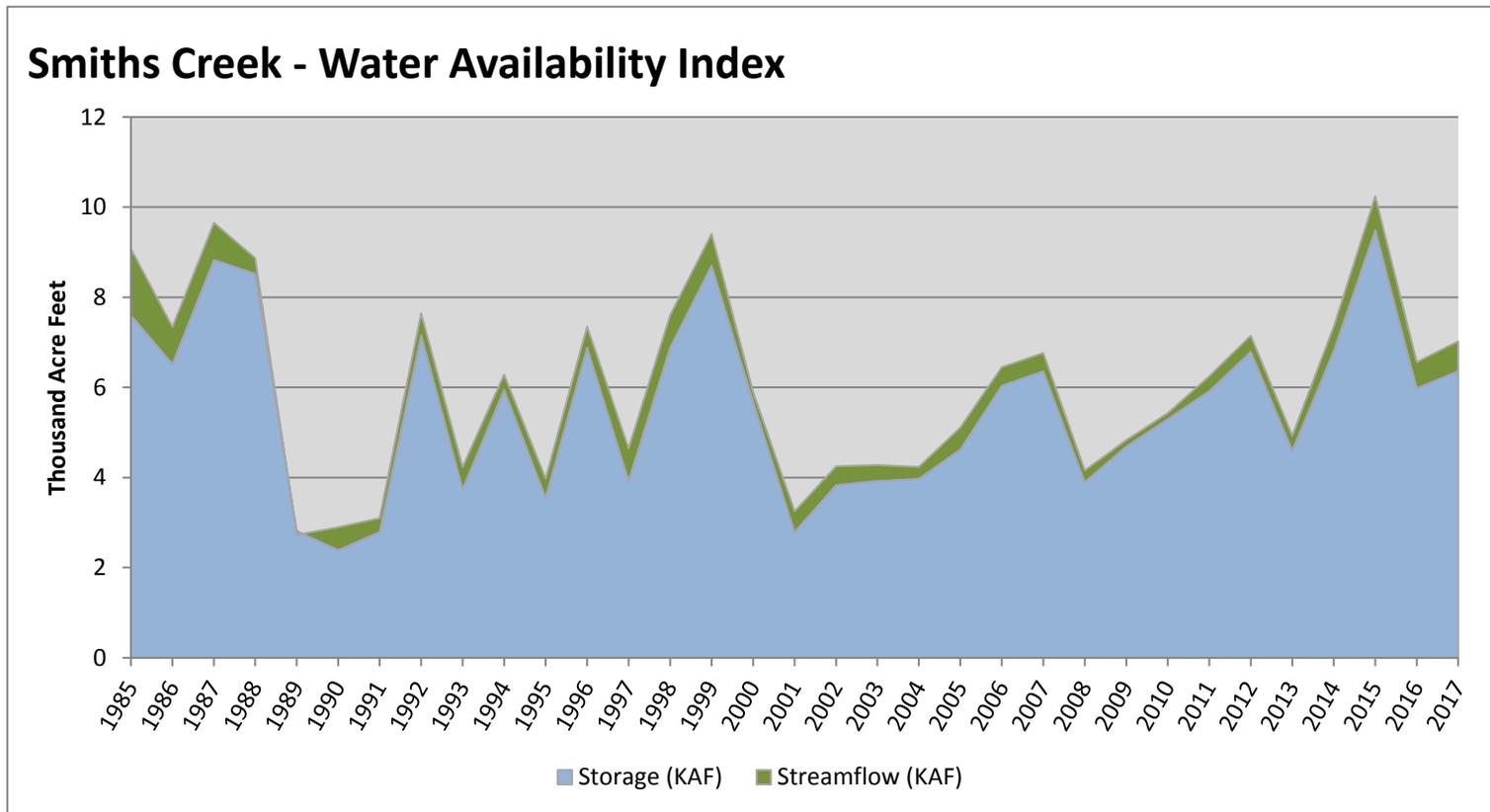


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	6.36	0.66	7.02	65	1.23	16, 07, 12, 86

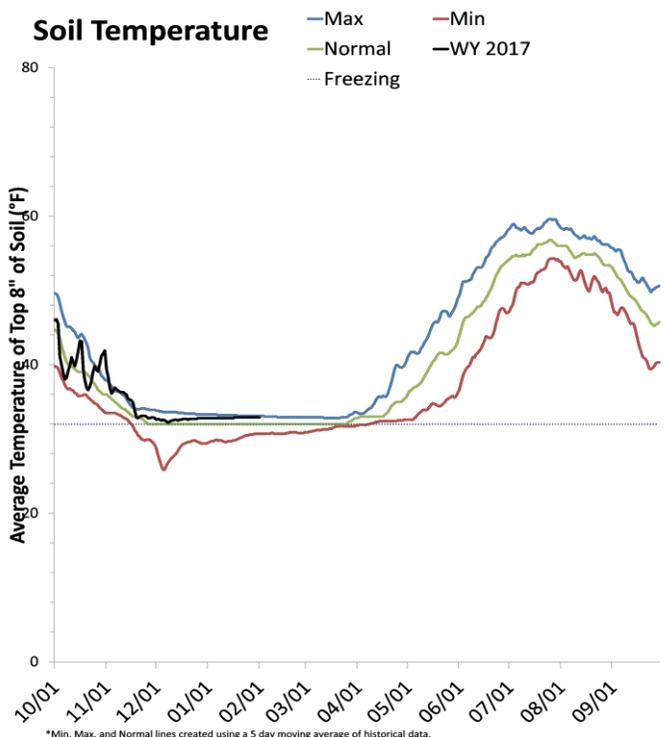
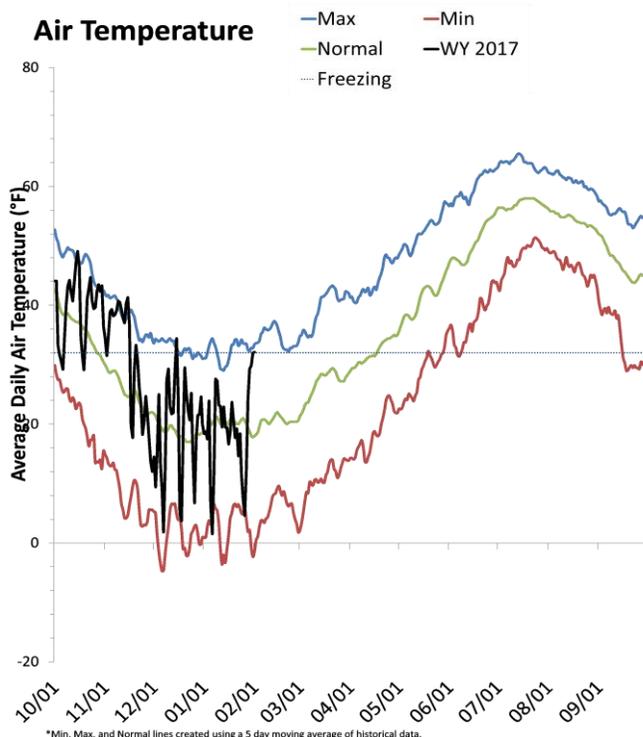
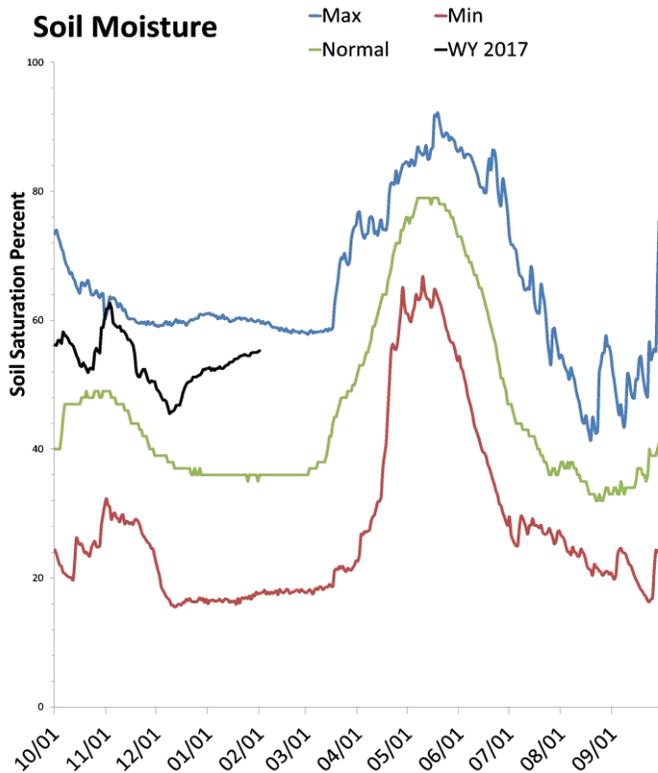
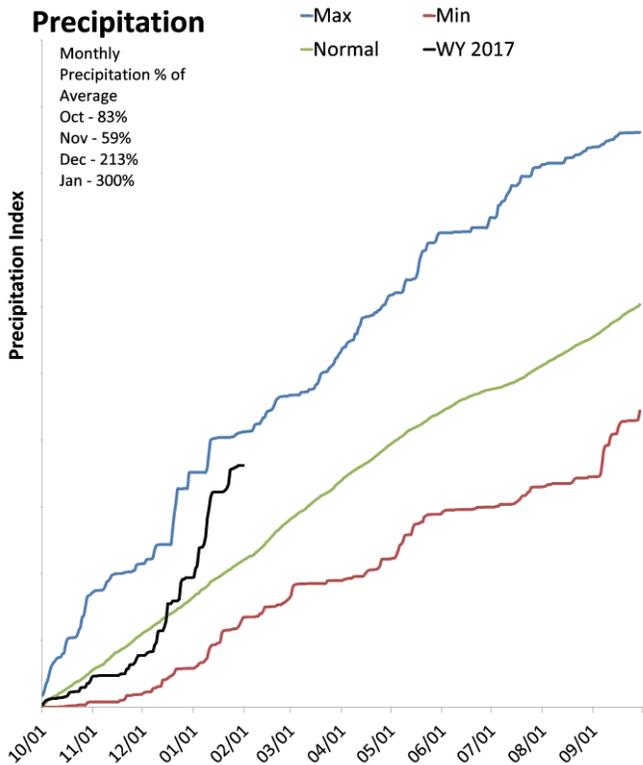
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Duchesne River Basin

February 1, 2017

Precipitation in January was much above average at 299%, which brings the seasonal accumulation (Oct-Jan) to 165% of average. Soil moisture is at 55% compared to 36% last year. Reservoir storage is at 72% of capacity, compared to 72% last year. The water availability index for the Western Uintas is 81% and 63% for the Eastern Uintas.



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

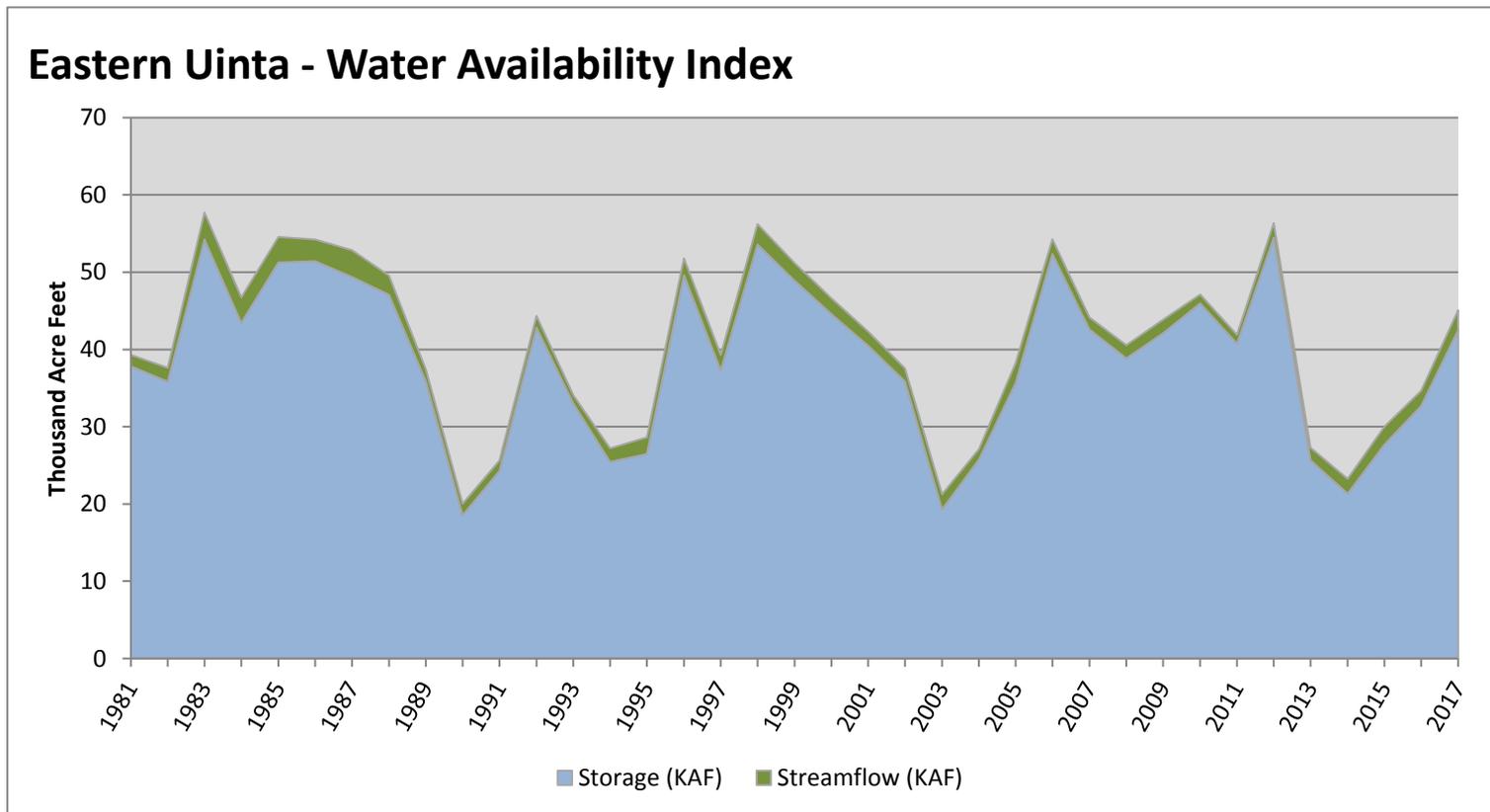
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uinta	42.51	2.57	45.08	63	1.1	07, 92, 00, 84

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

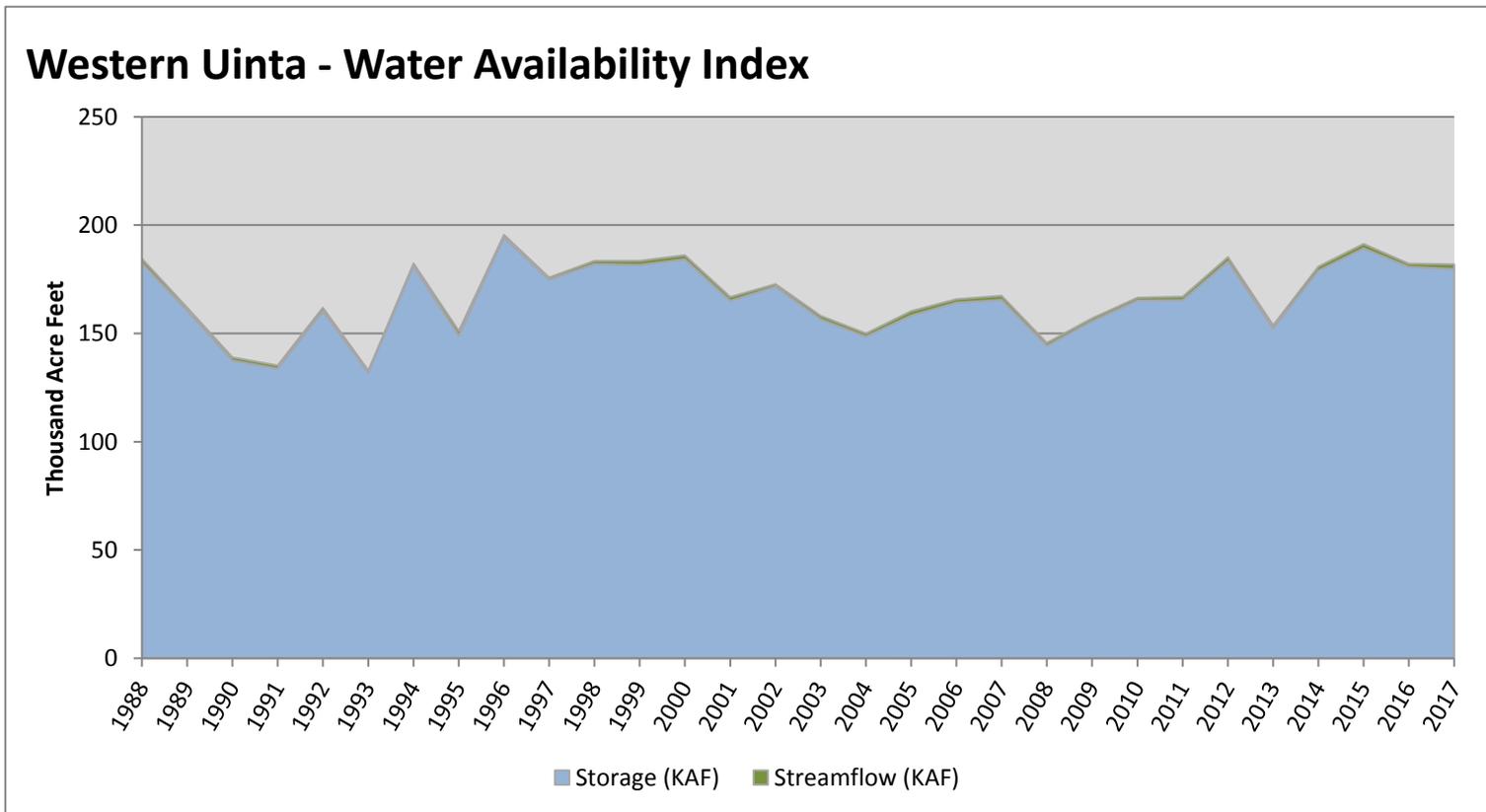


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uinta	179.81	2.06	181.87	68	1.48	97, 14, 16, 94

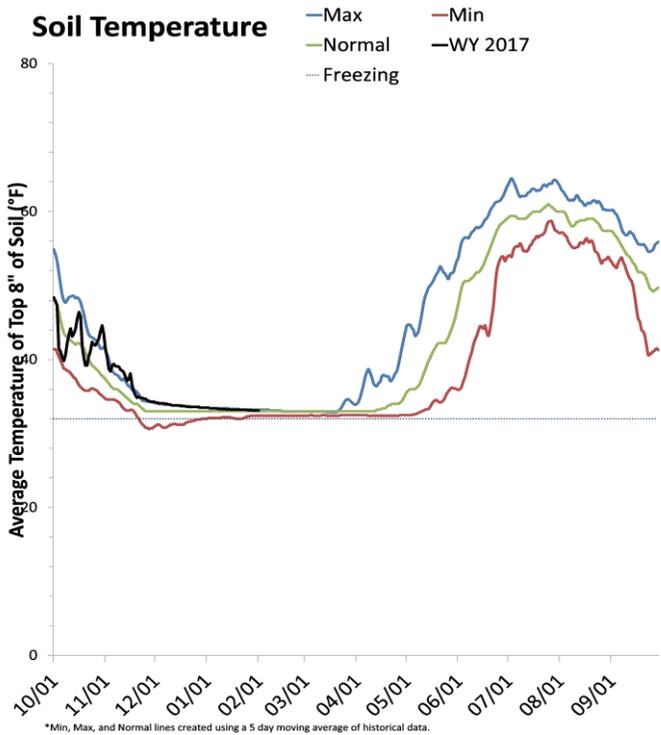
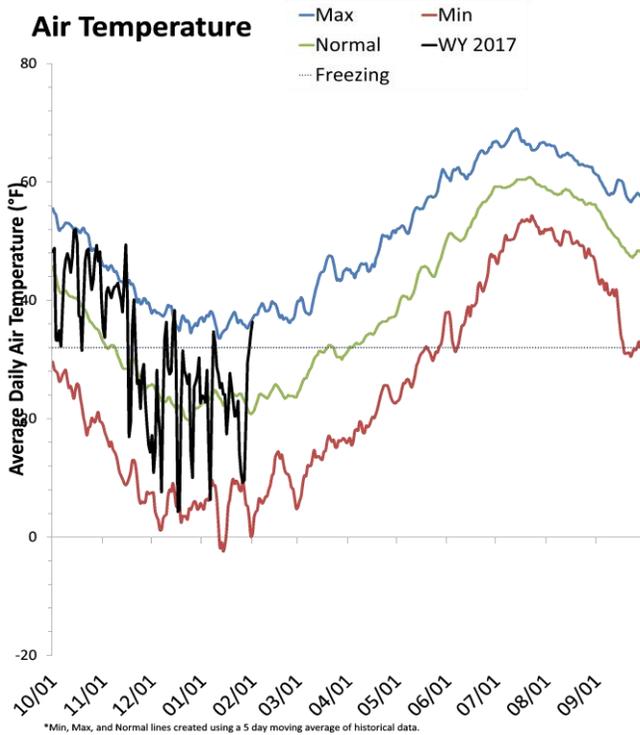
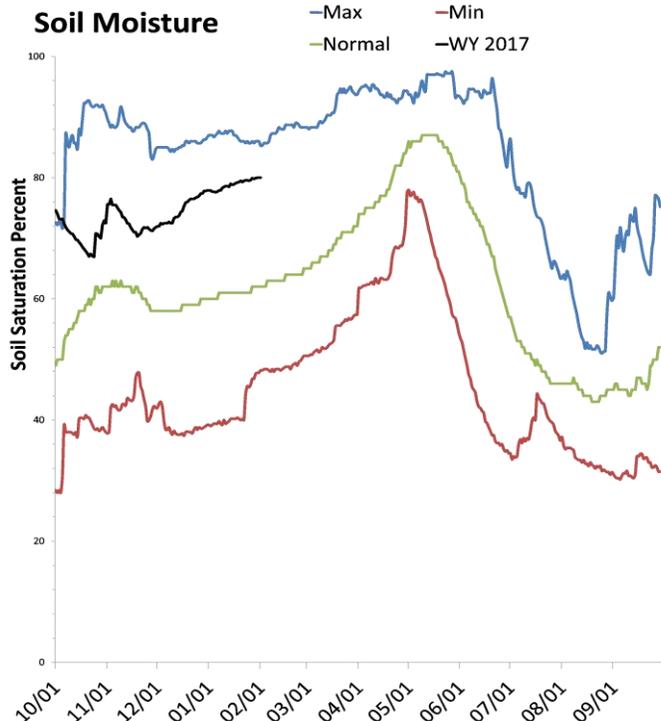
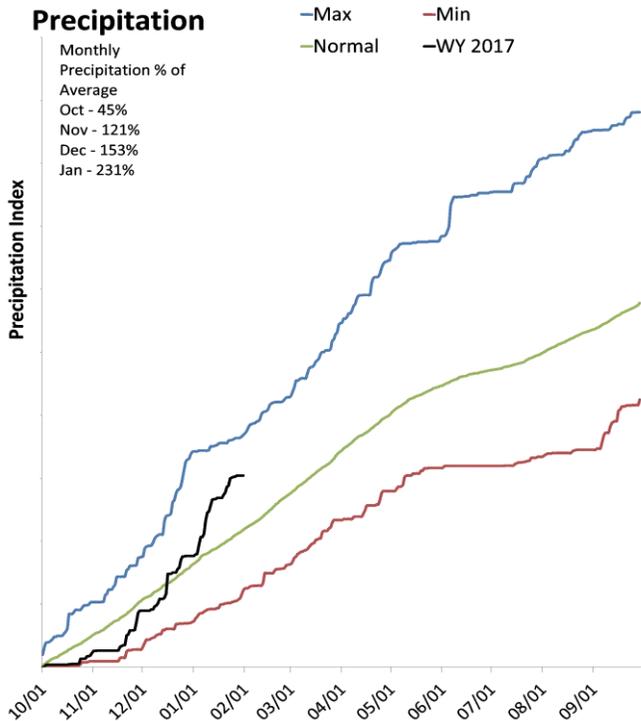
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



San Pitch River Basin

February 1, 2017

Precipitation in January was much above average at 229%, which brings the seasonal accumulation (Oct-Jan) to 139% of average. Soil Moisture is at 80% compared to 61% last year. Reservoir storage is at 2% of capacity, compared to 2% last year. The water availability index for the San Pitch is 13%.



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

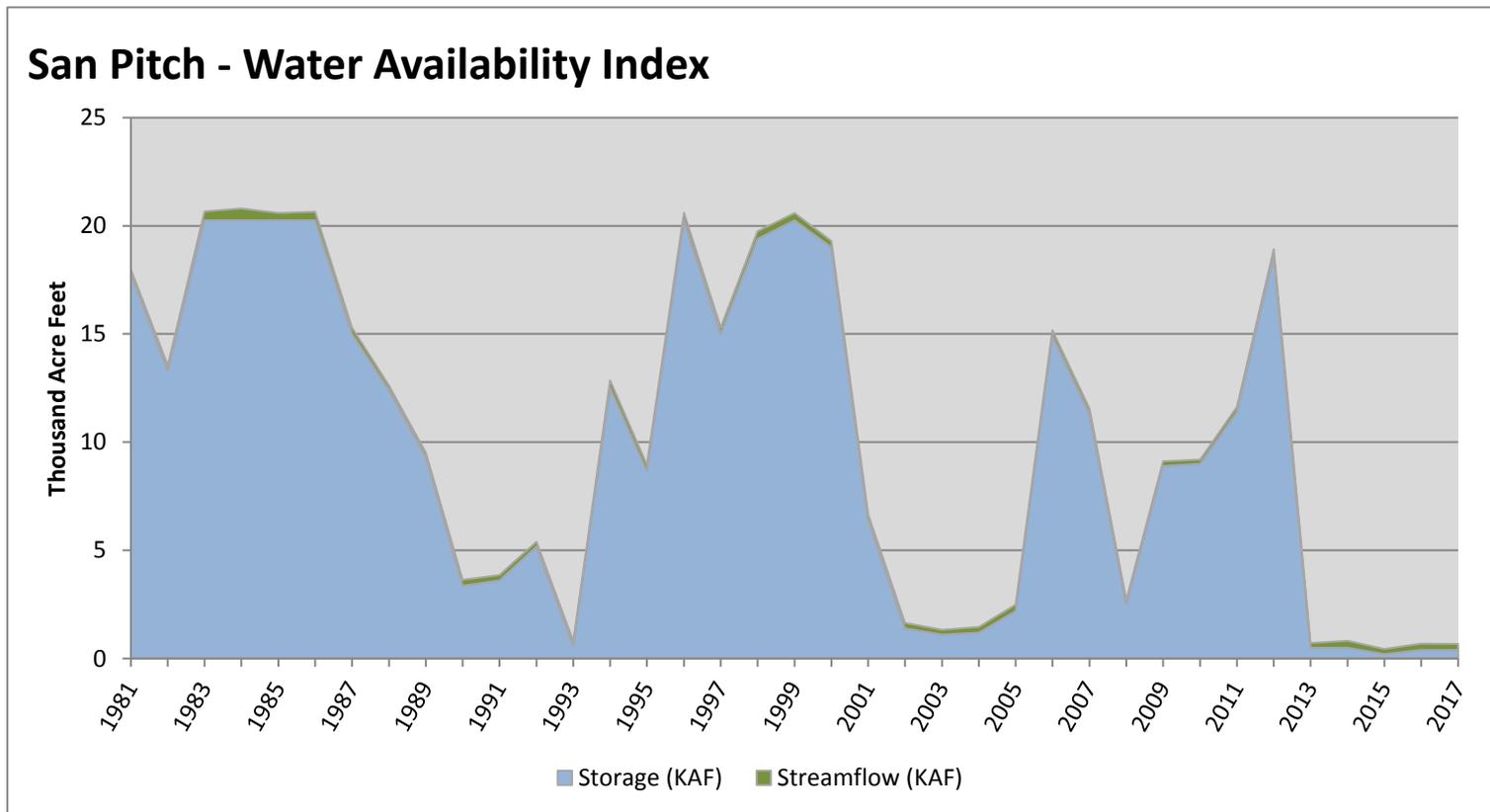
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	0.40	0.27	0.67	5	-3.73	15, 16, 13, 93

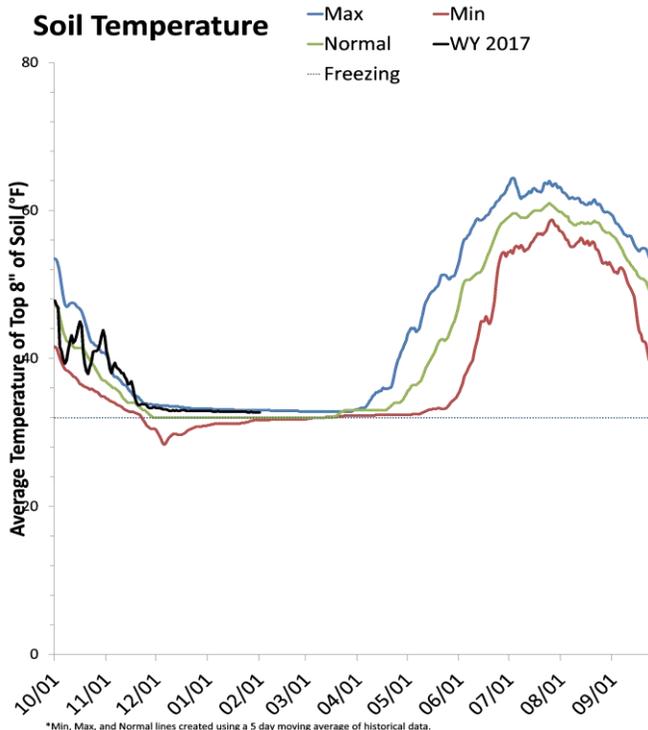
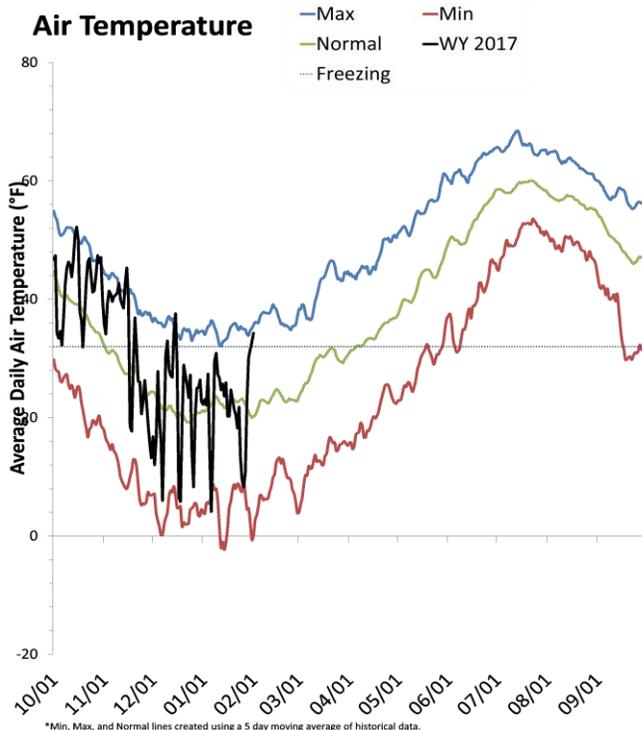
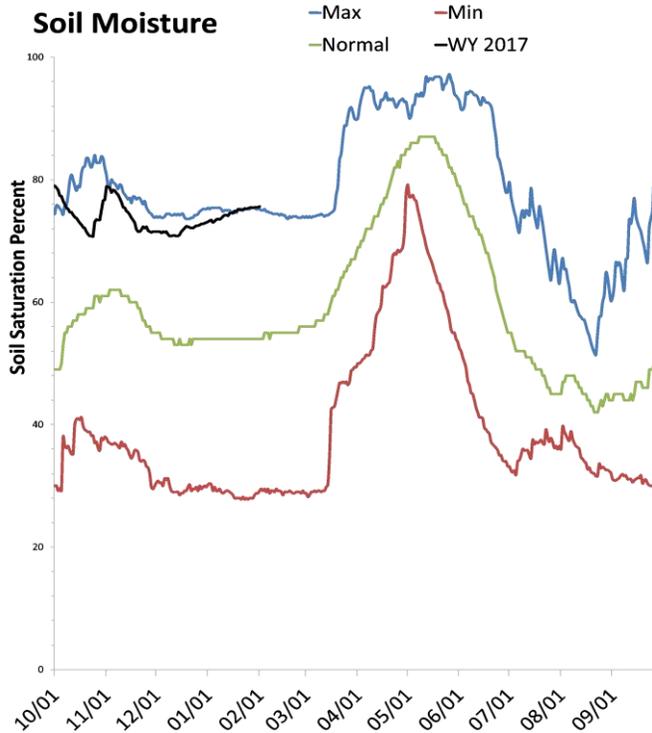
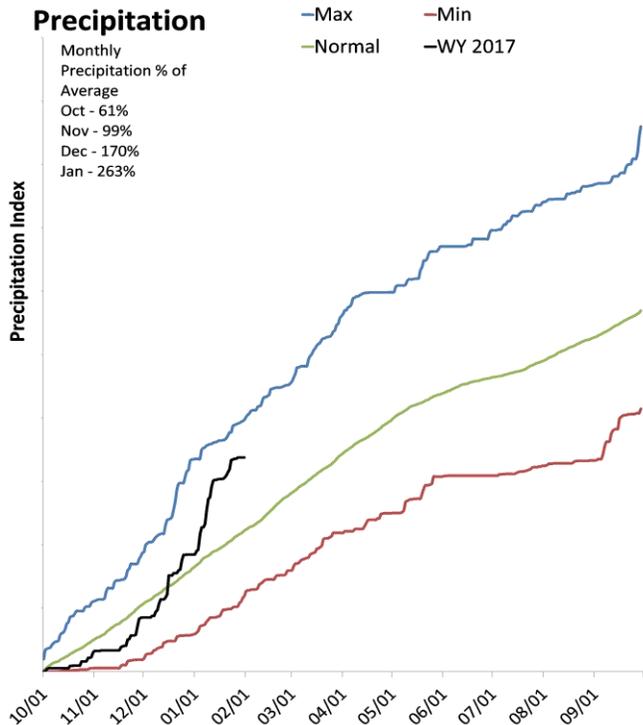
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Price & San Rafael Basins

February 1, 2017

Precipitation in January was much above average at 263%, which brings the seasonal accumulation (Oct-Jan) to 152% of average. Soil moisture is at 76% compared to 57% last year. Reservoir storage is at 39% of capacity, compared to 40% last year. The water availability index for the Price River is 24%, and 11% for Joe's Valley.



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

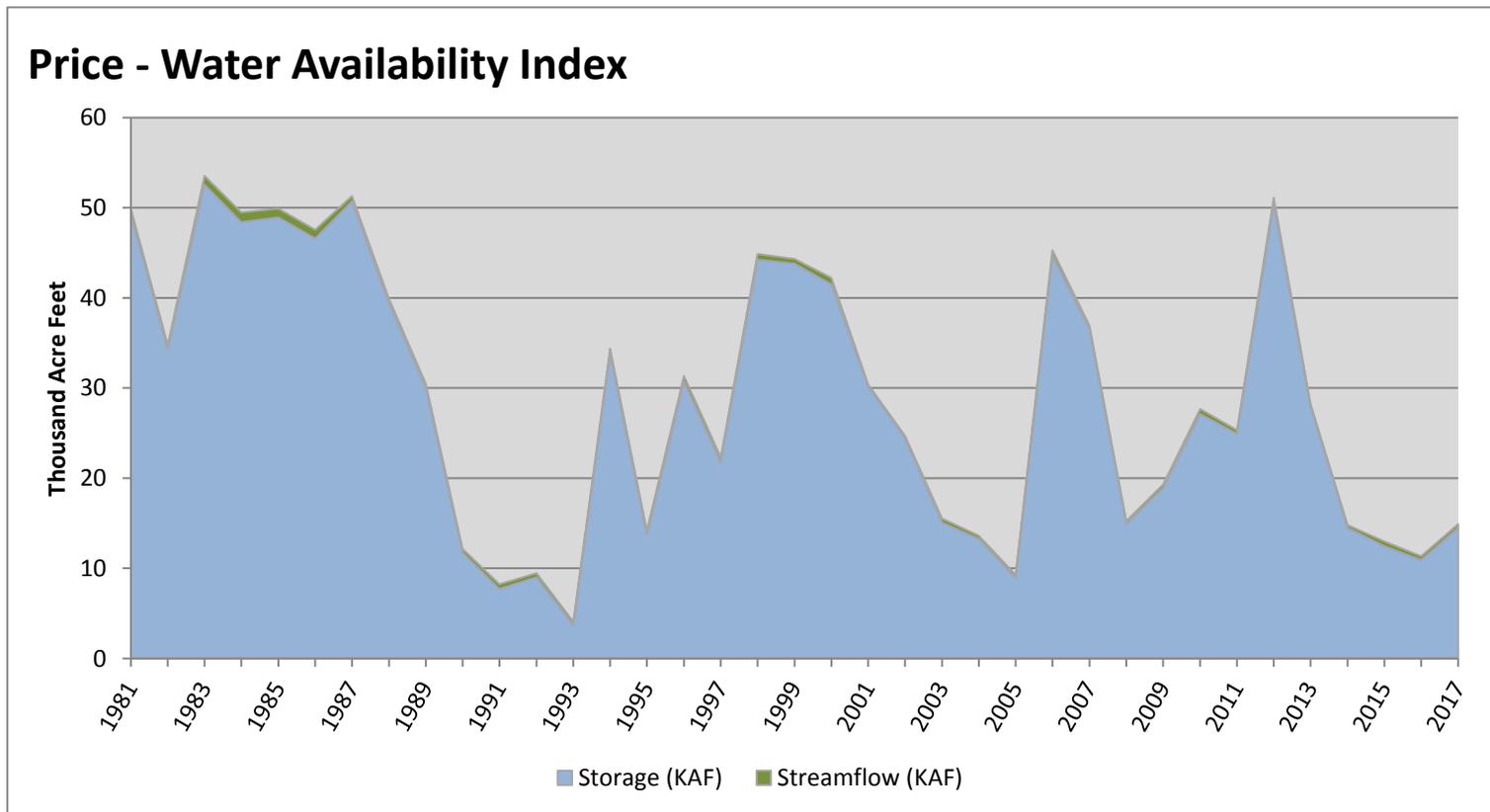
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	14.50	0.40	14.90	29	-1.75	95, 14, 08, 03

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

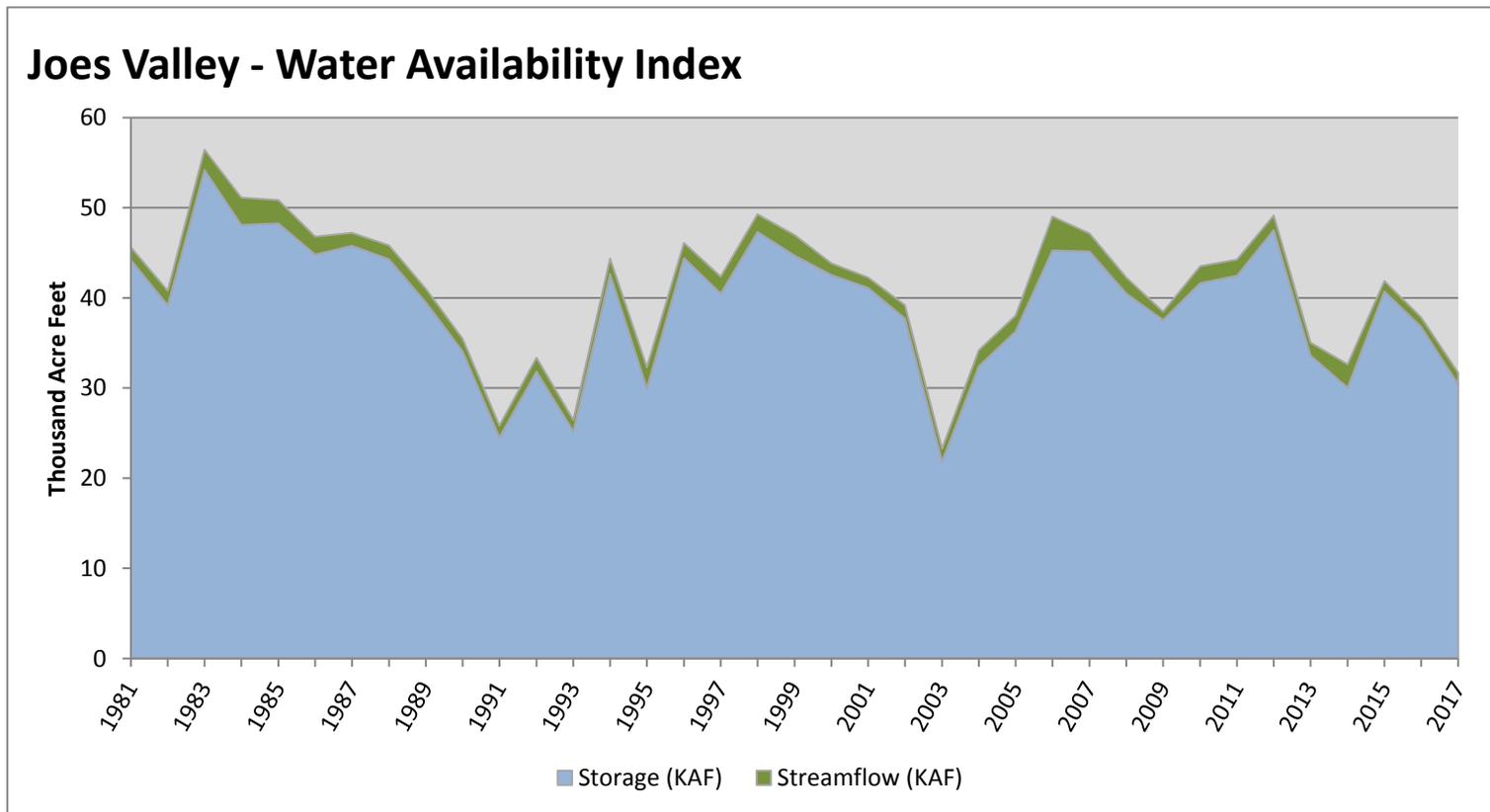


February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joese Valley	30.40	1.30	31.70	11	-3.29	91, 93, 95, 14

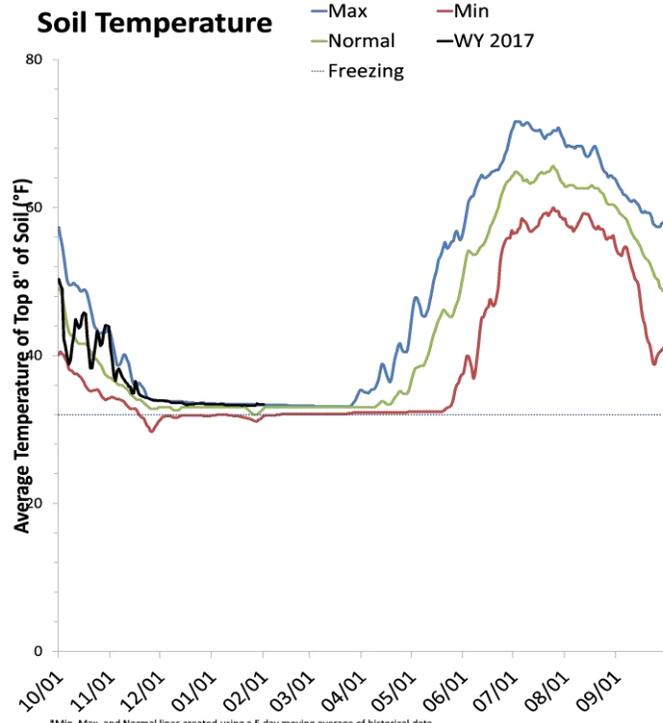
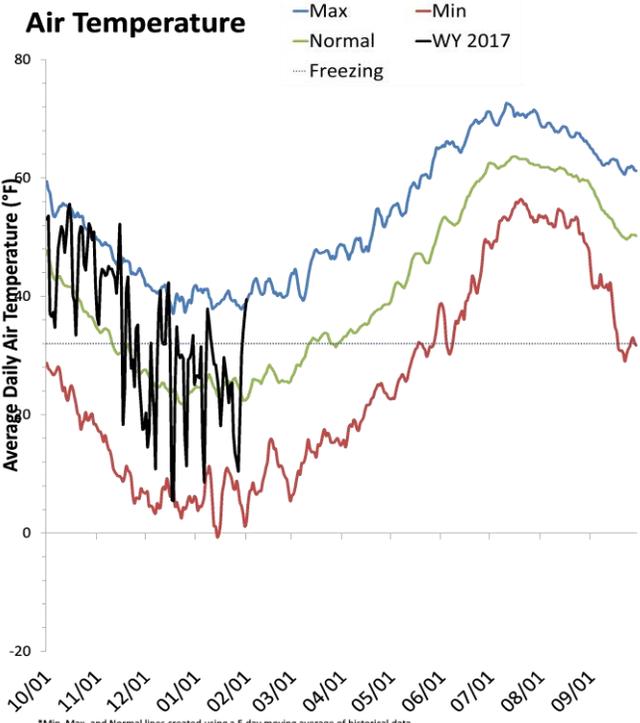
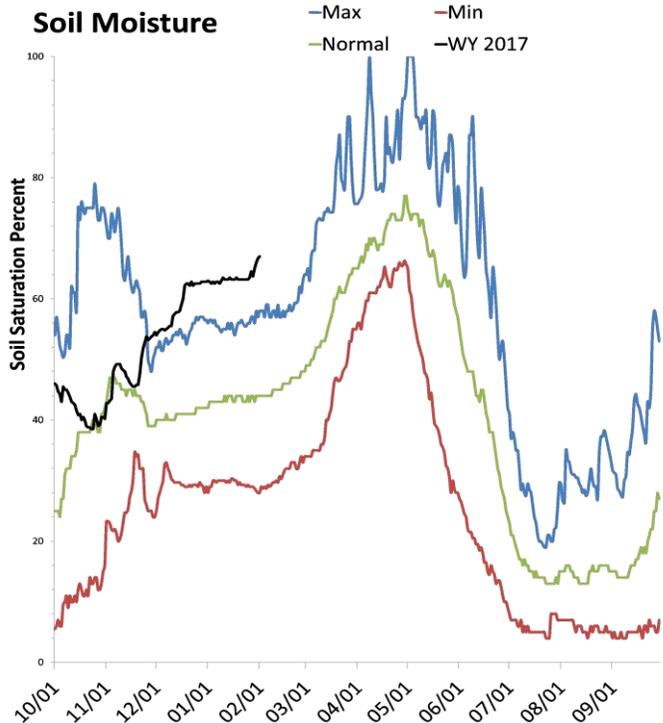
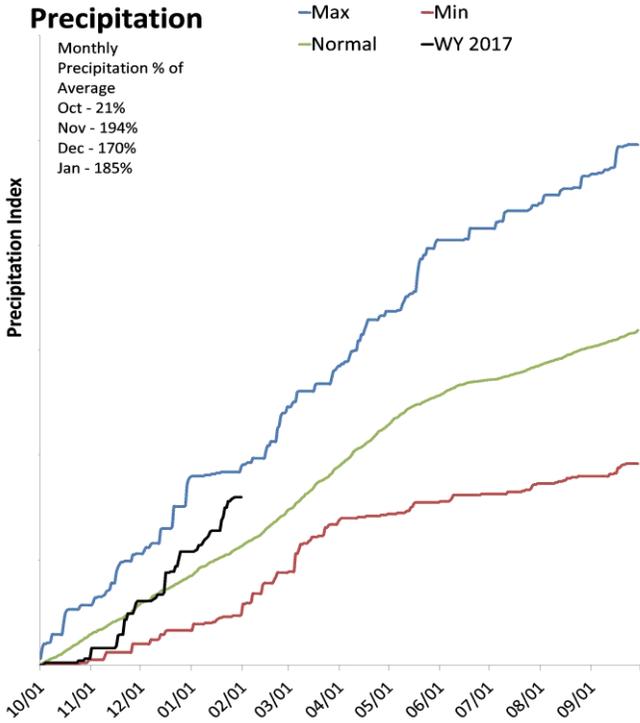
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Lower Sevier Basin

February 1, 2017

Precipitation in January was much above average at 186%, which brings the seasonal accumulation (Oct-Jan) to 142% of average. Soil moisture is at 66% compared to 42% last year. Reservoir storage is at 24% of capacity, compared to 33% last year. The water availability index for the Lower Sevier is 3%.



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

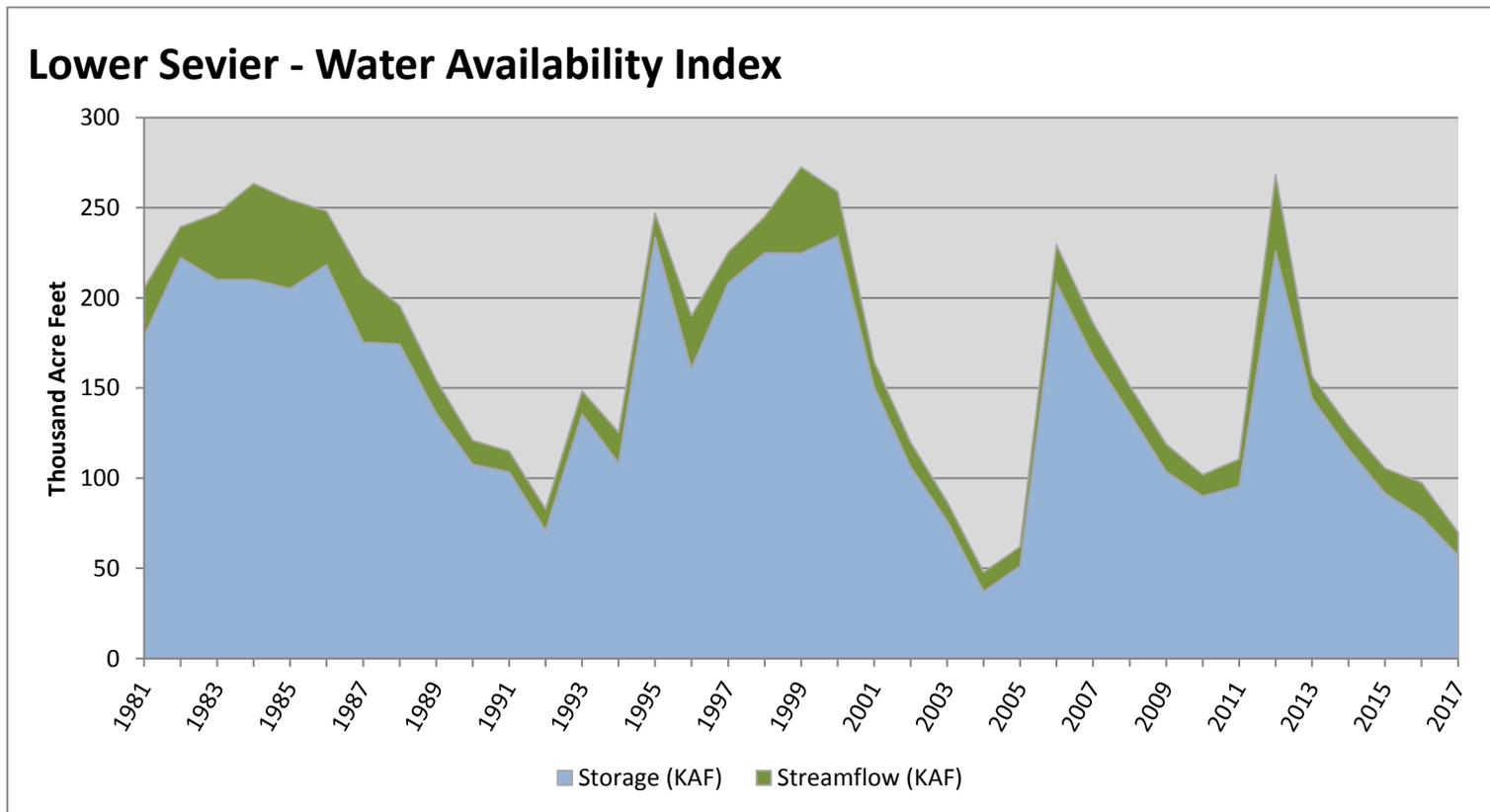
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	57.00	12.99	69.99	8	-3.51	04, 05, 92, 03

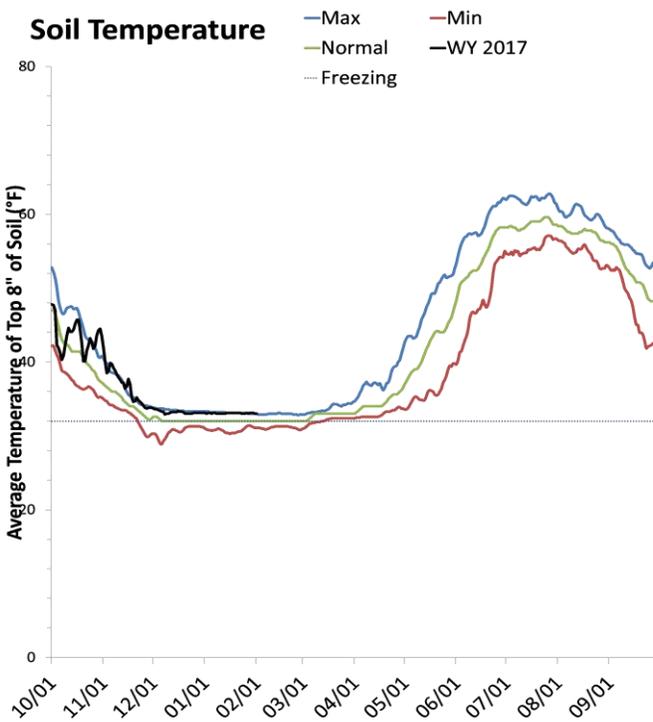
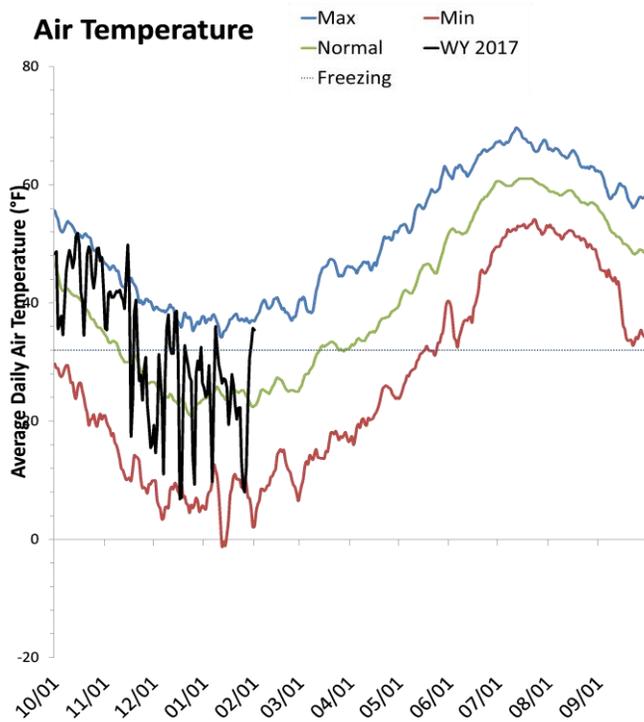
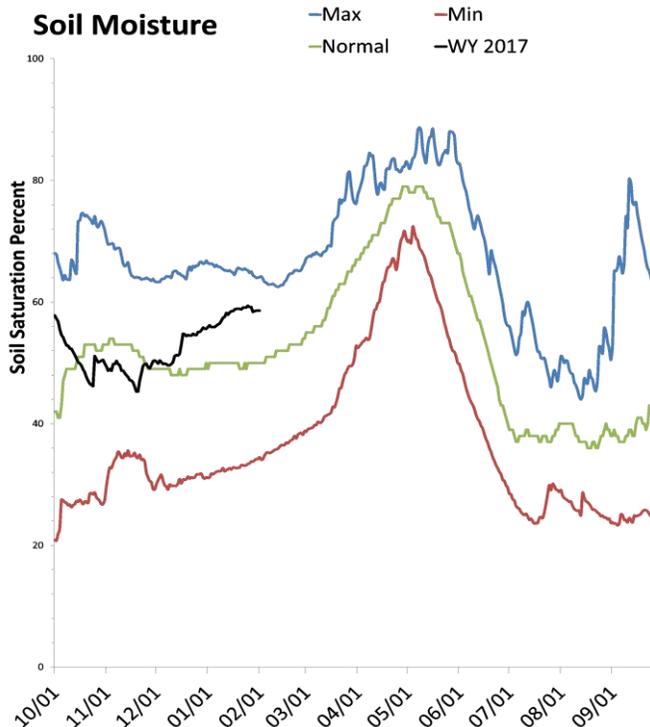
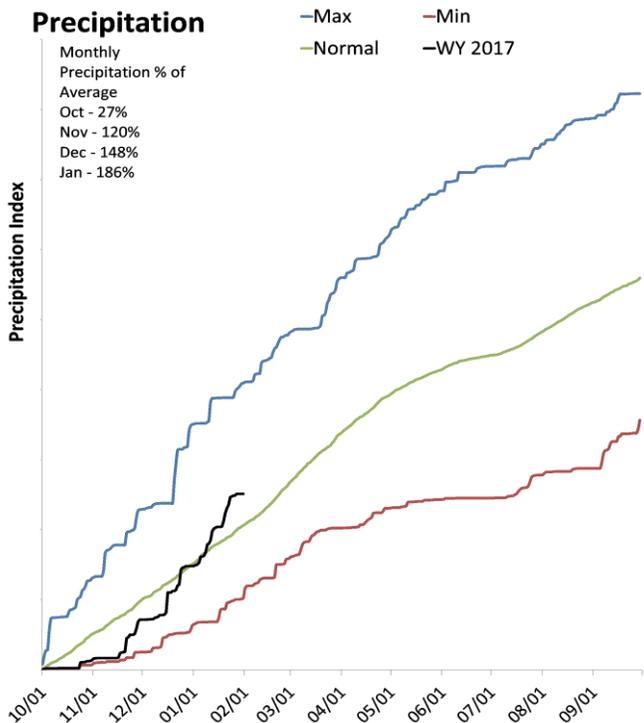
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Upper Sevier Basin

February 1, 2017

Precipitation in January was much above average at 186%, which brings the seasonal accumulation (Oct-Jan) to 122% of average. Soil moisture is at 59% compared to 57% last year. Reservoir storage is at 44% of capacity, compared to 34% 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.

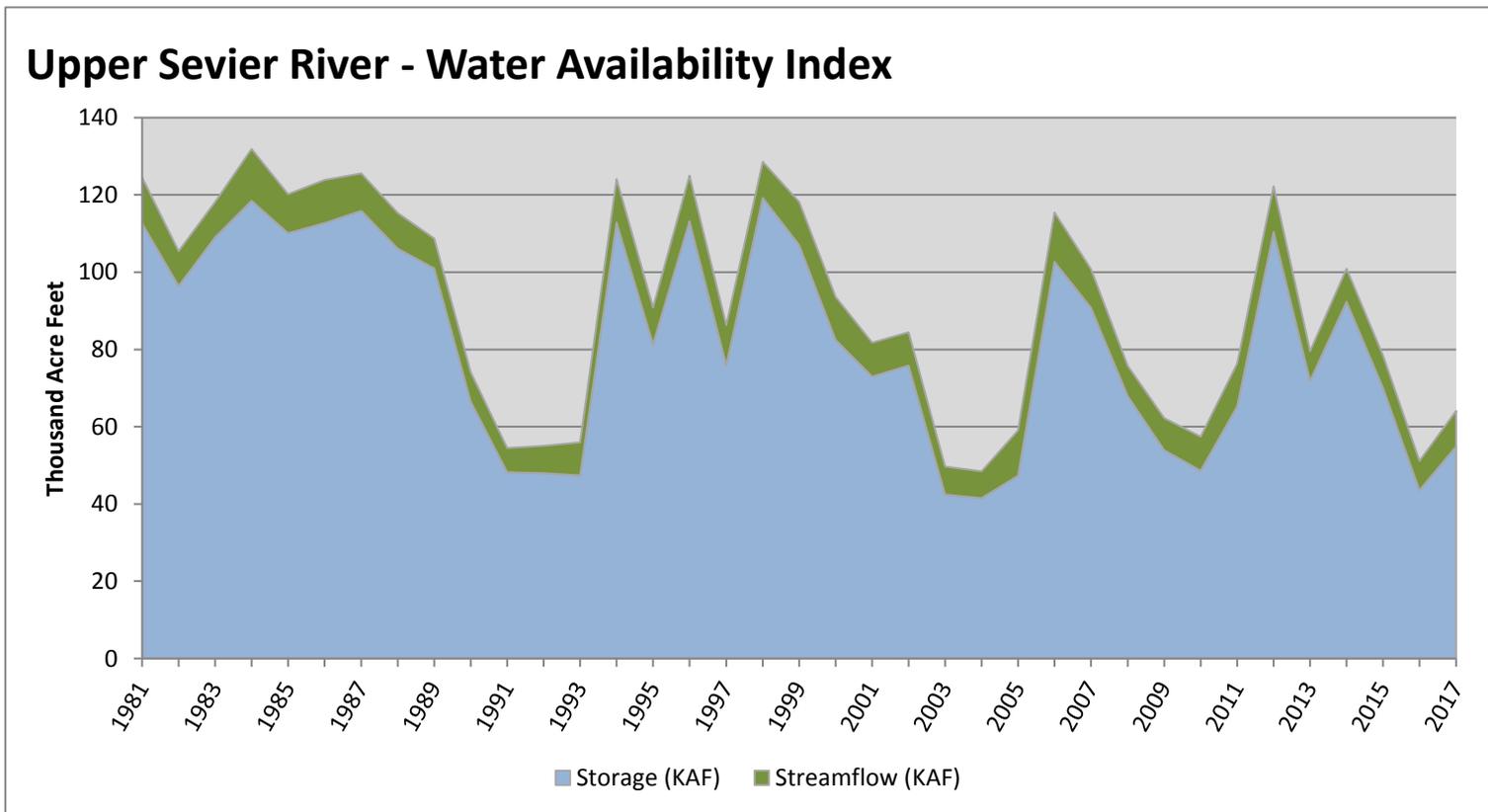
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	54.86	9.20	64.06	26	-1.97	05, 09, 90, 08

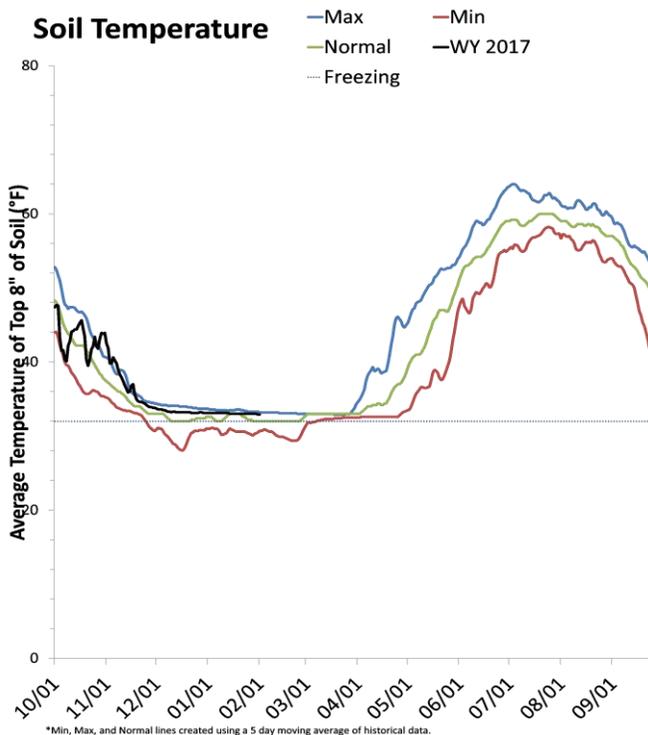
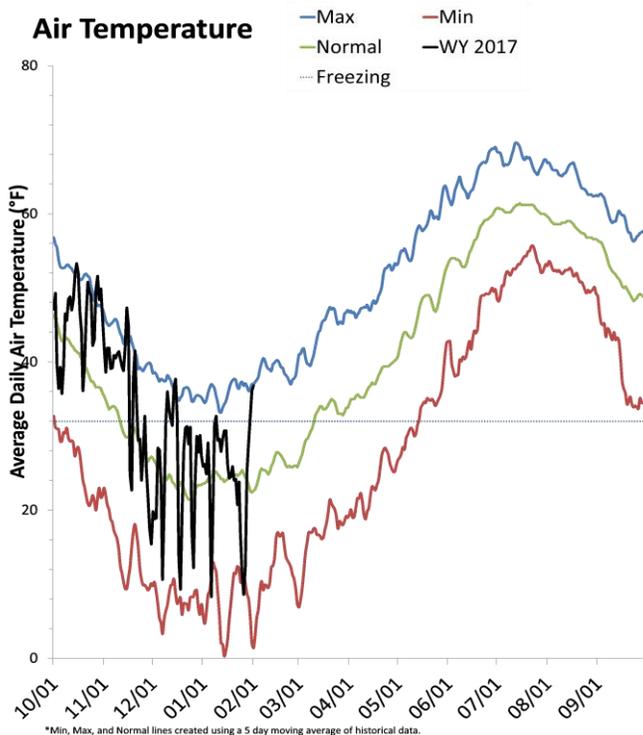
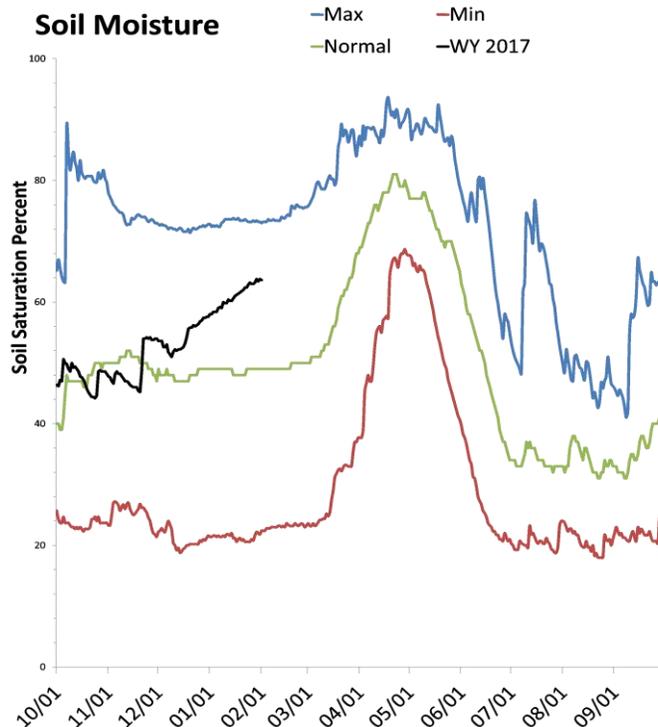
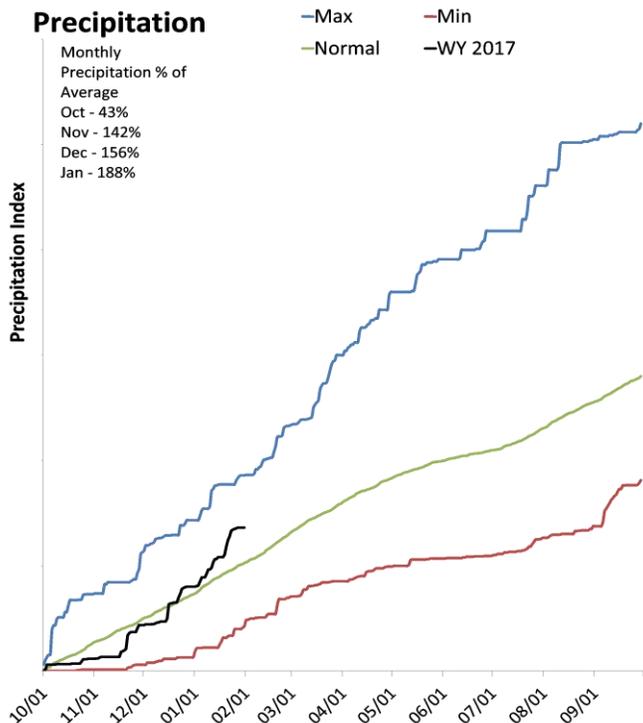
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southeastern Utah

February 1, 2017

Precipitation in January was much above average at 189%, which brings the seasonal accumulation (Oct-Jan) to 133% of average. Soil moisture is at 63% compared to 73% last year. Reservoir storage is at 78% of capacity, compared to 65% last year. The water availability index for Moab is 87%.



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

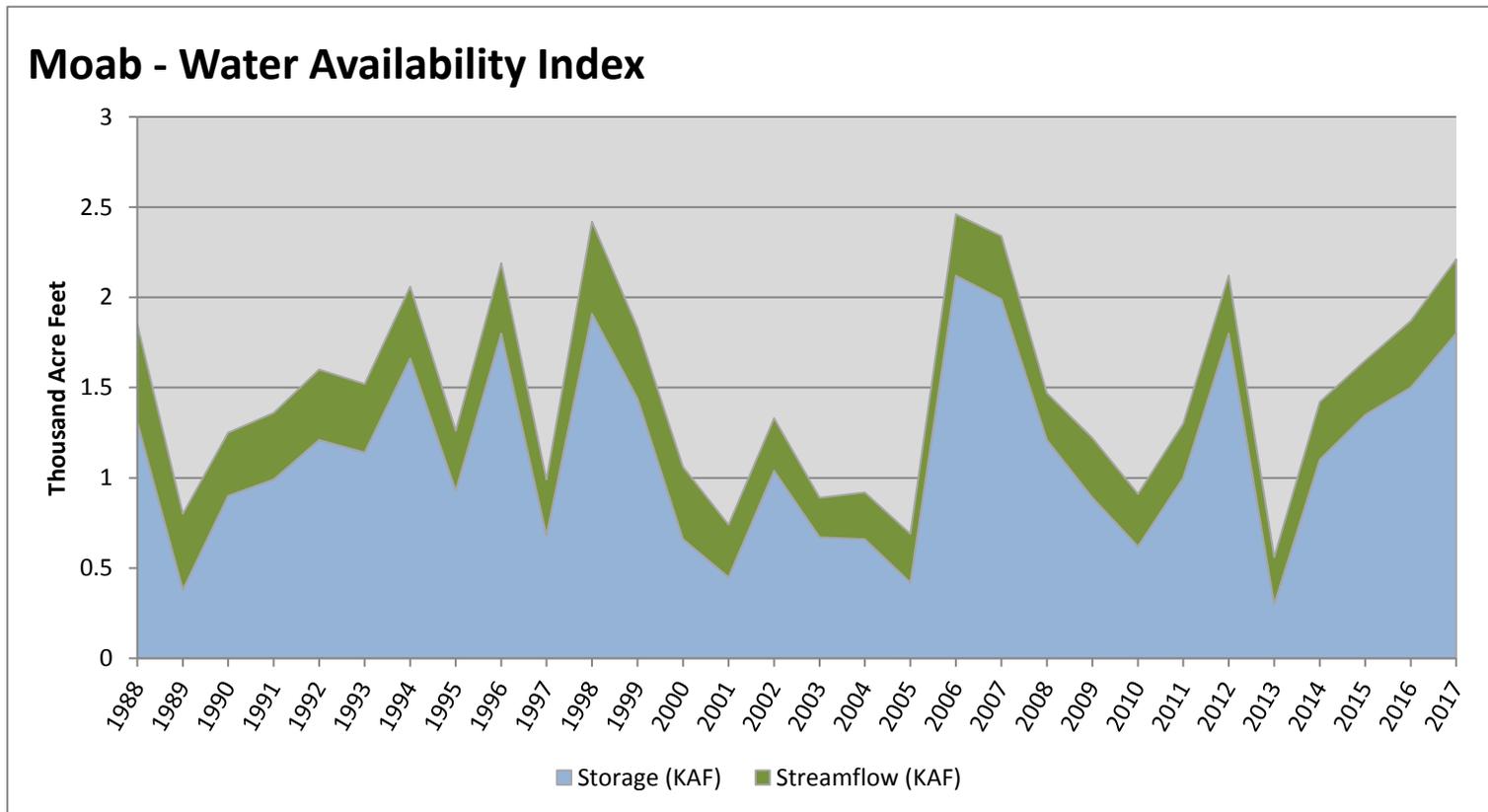
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage KAF [^]	January Flow KAF [^]	Storage + Flow KAF [^]	Percentile %	WAI [#]	Years with similar WAI
Moab	1.80	0.41	2.21	87	3.09	12, 96, 07, 98

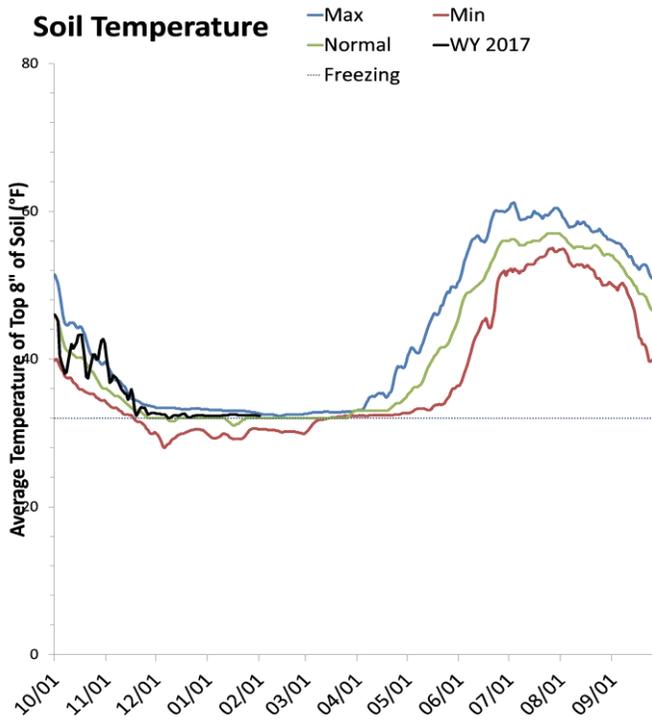
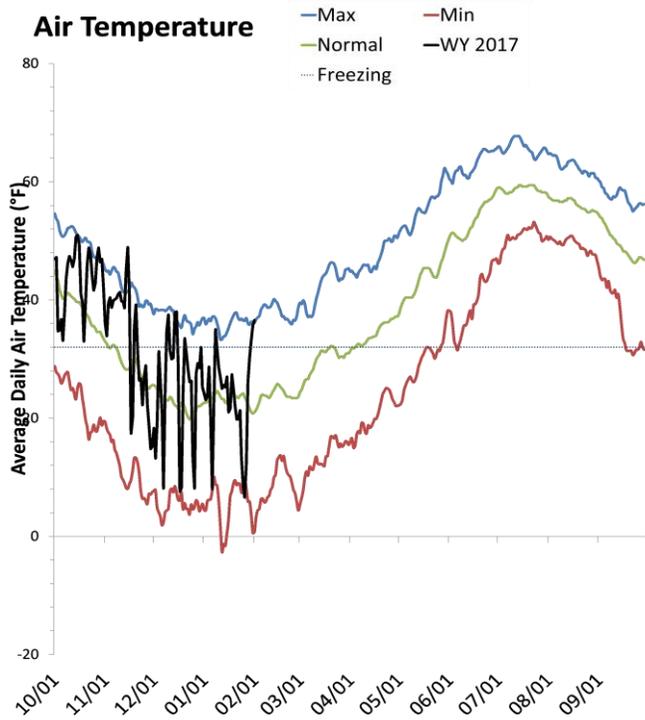
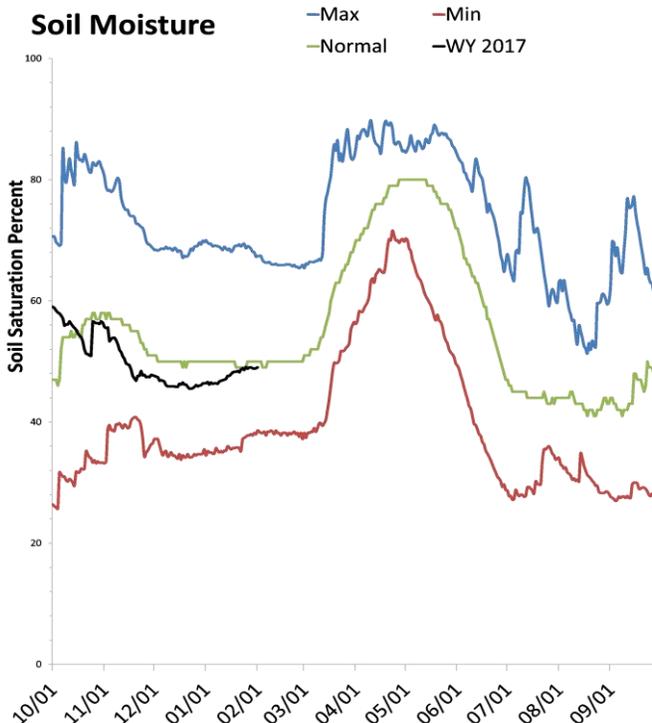
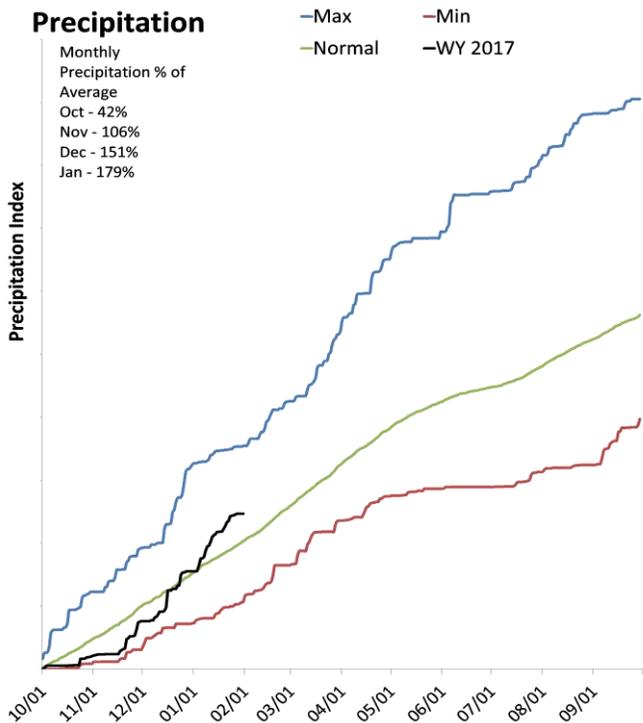
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Dirty Devil Basin

February 1, 2017

Precipitation in January was much above average at 193%, which brings the seasonal accumulation (Oct-Jan) to 129% of average. Soil moisture is at 49% compared to 33% last year.



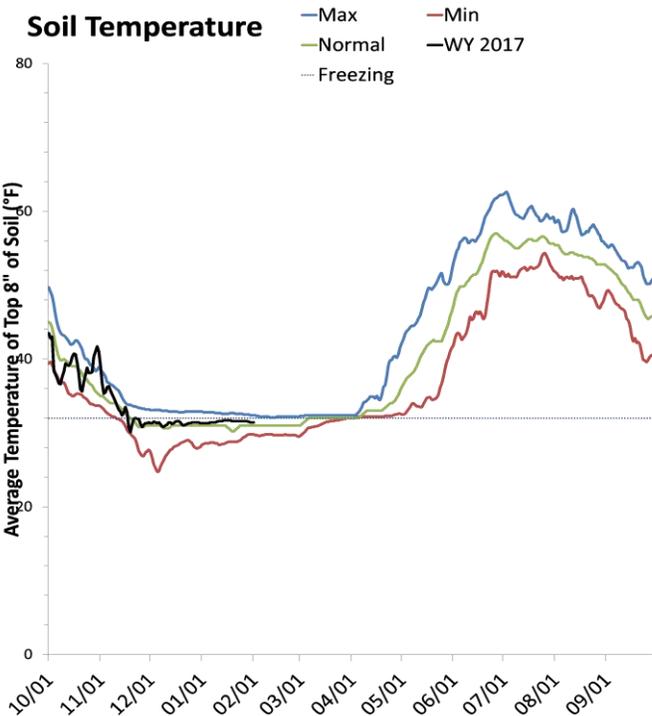
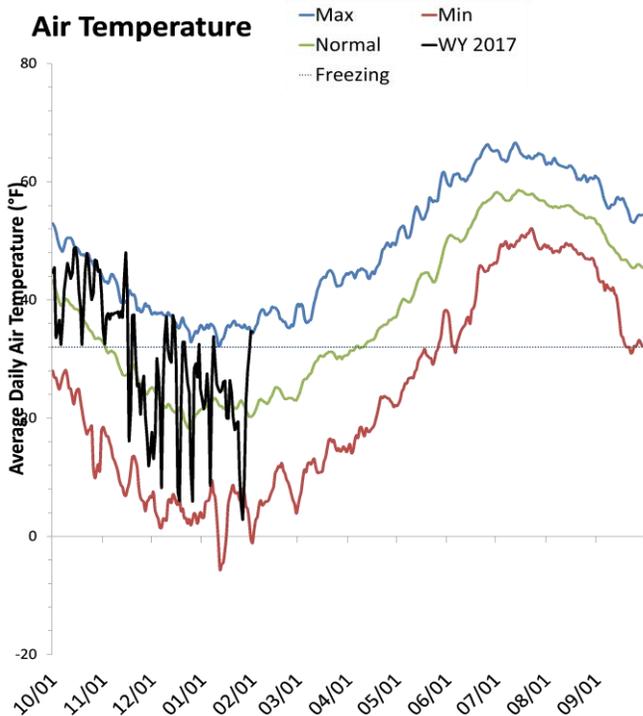
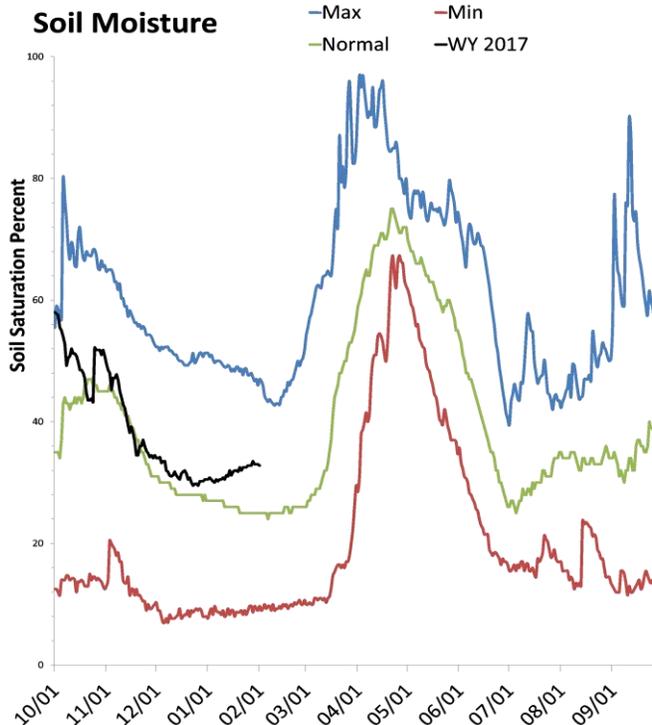
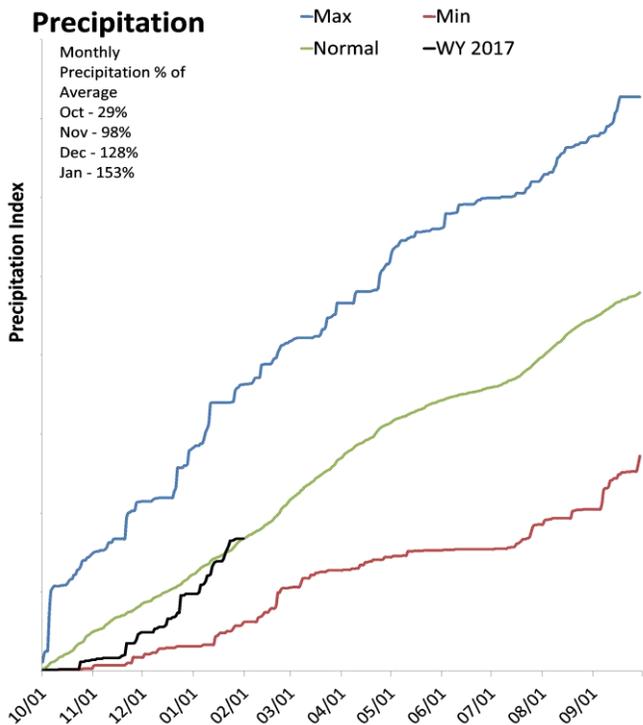
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Escalante River Basin

February 1, 2017

Precipitation in January was much above average at 152%, which brings the seasonal accumulation (Oct-Jan) to 100% of average. Soil moisture is at 33% compared to 41% last year.



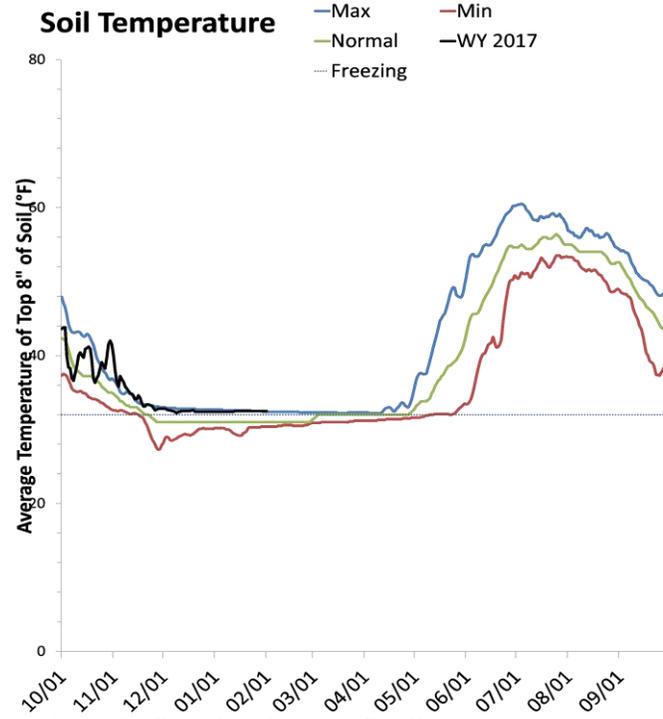
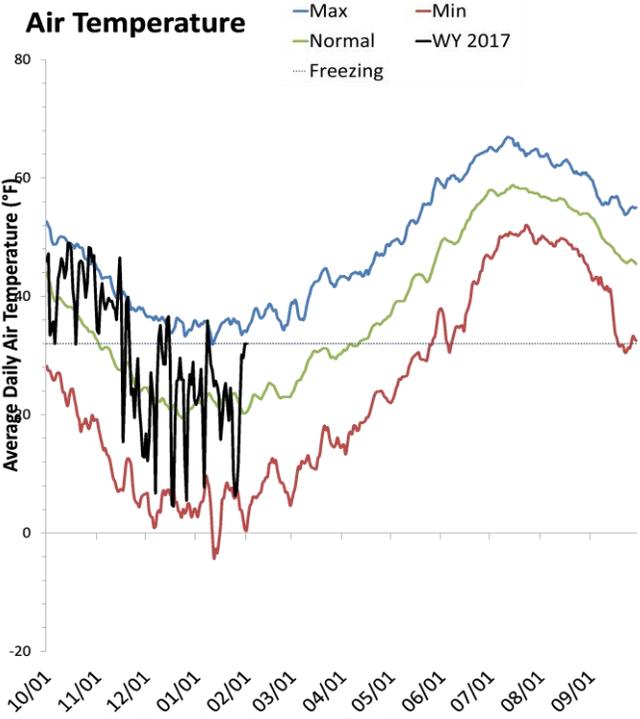
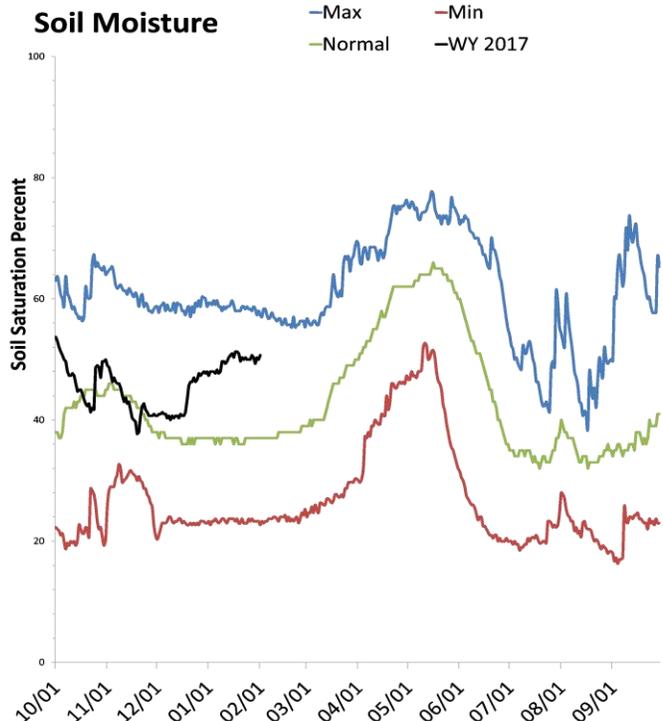
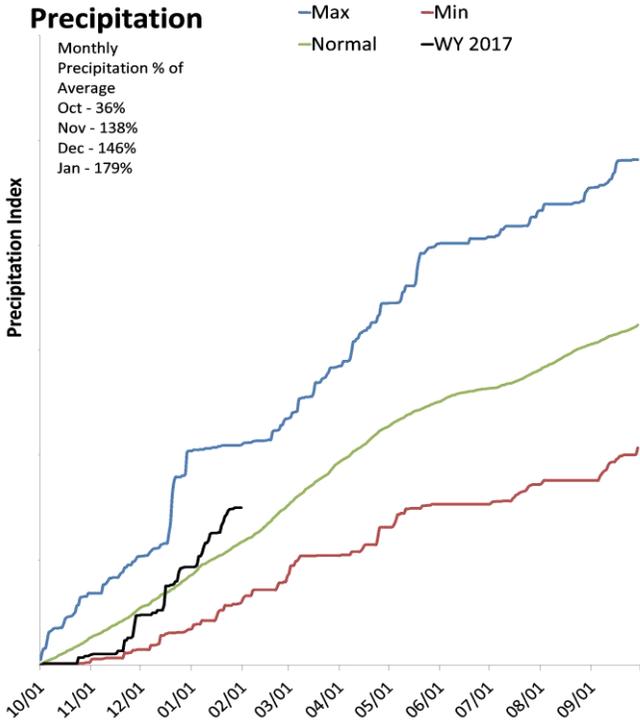
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

Beaver River Basin

February 1, 2017

Precipitation in January was much above average at 181%, which brings the seasonal accumulation (Oct-Jan) to 128% of average. Soil moisture is at 50% compared to 24% last year. Reservoir storage is at 36% of capacity, compared to 34% last year. The water availability index for the Beaver River is 34%.



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

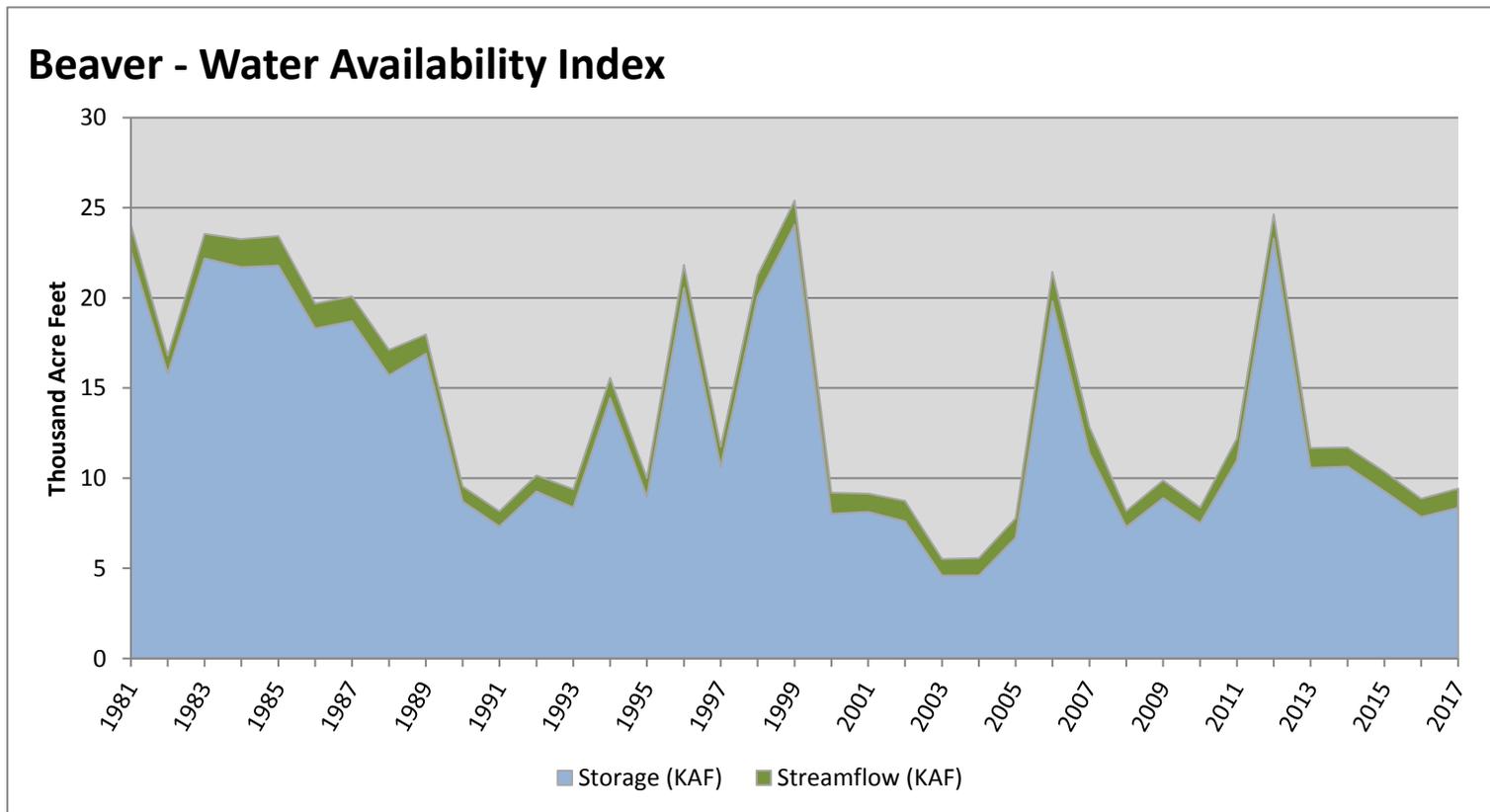
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	8.35	1.08	9.43	32	-1.54	00, 93, 90, 09

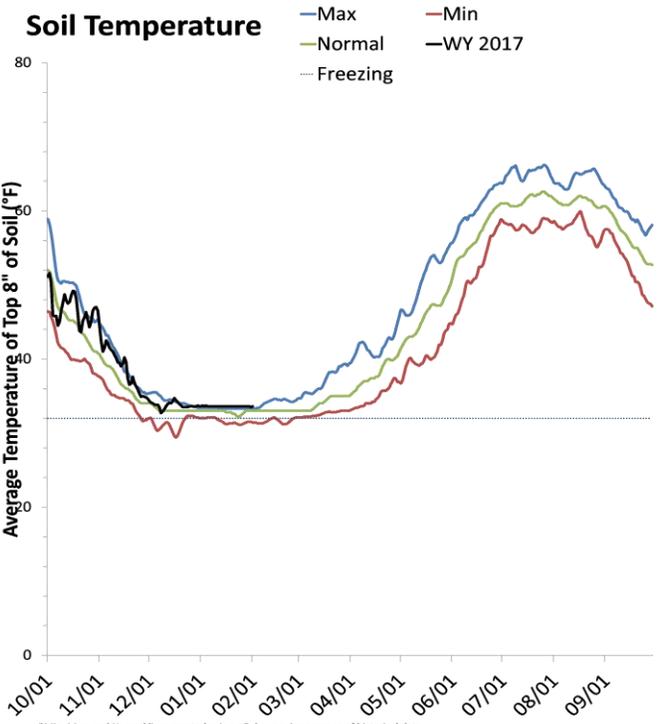
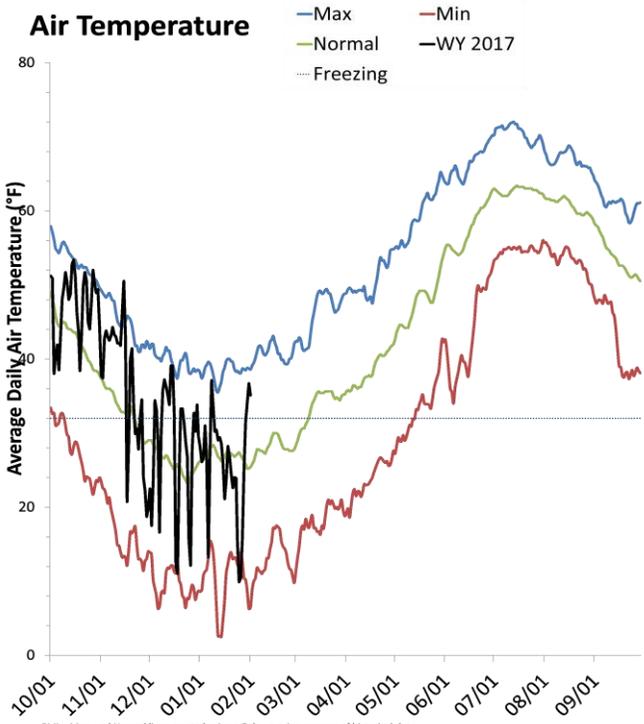
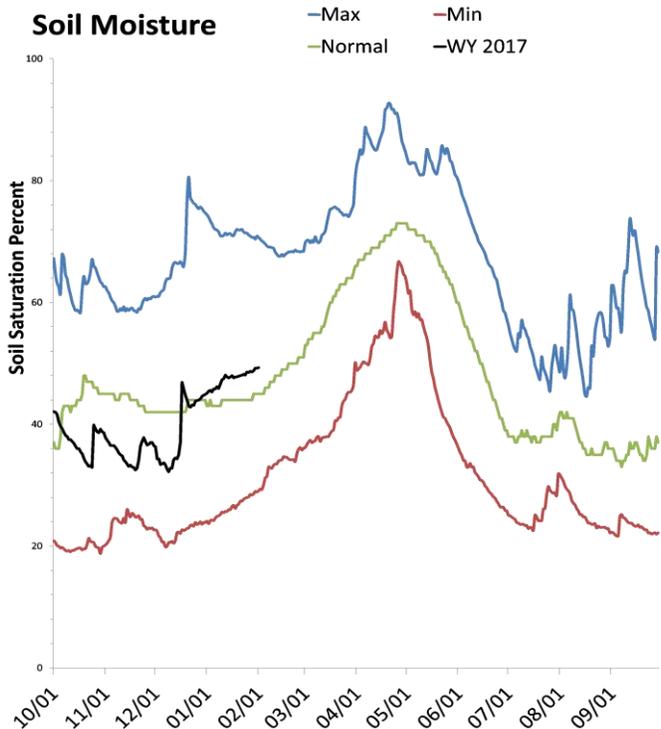
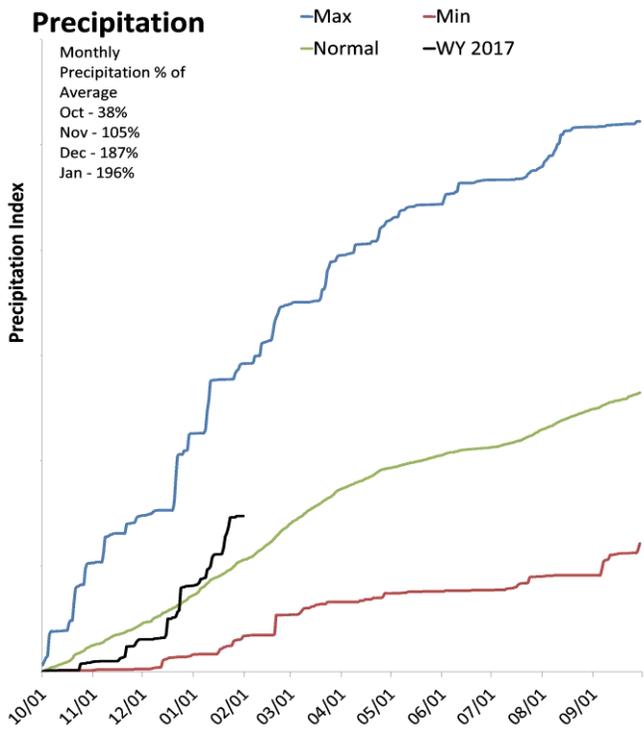
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southwestern Utah

February 1, 2017

Precipitation in January was much above average at 195%, which brings the seasonal accumulation (Oct-Jan) to 139% of average. Soil moisture is at 48% compared to 54% last year. Reservoir storage is at 47% of capacity, compared to 47% last year. The water availability index for the Virgin River is 76%.



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

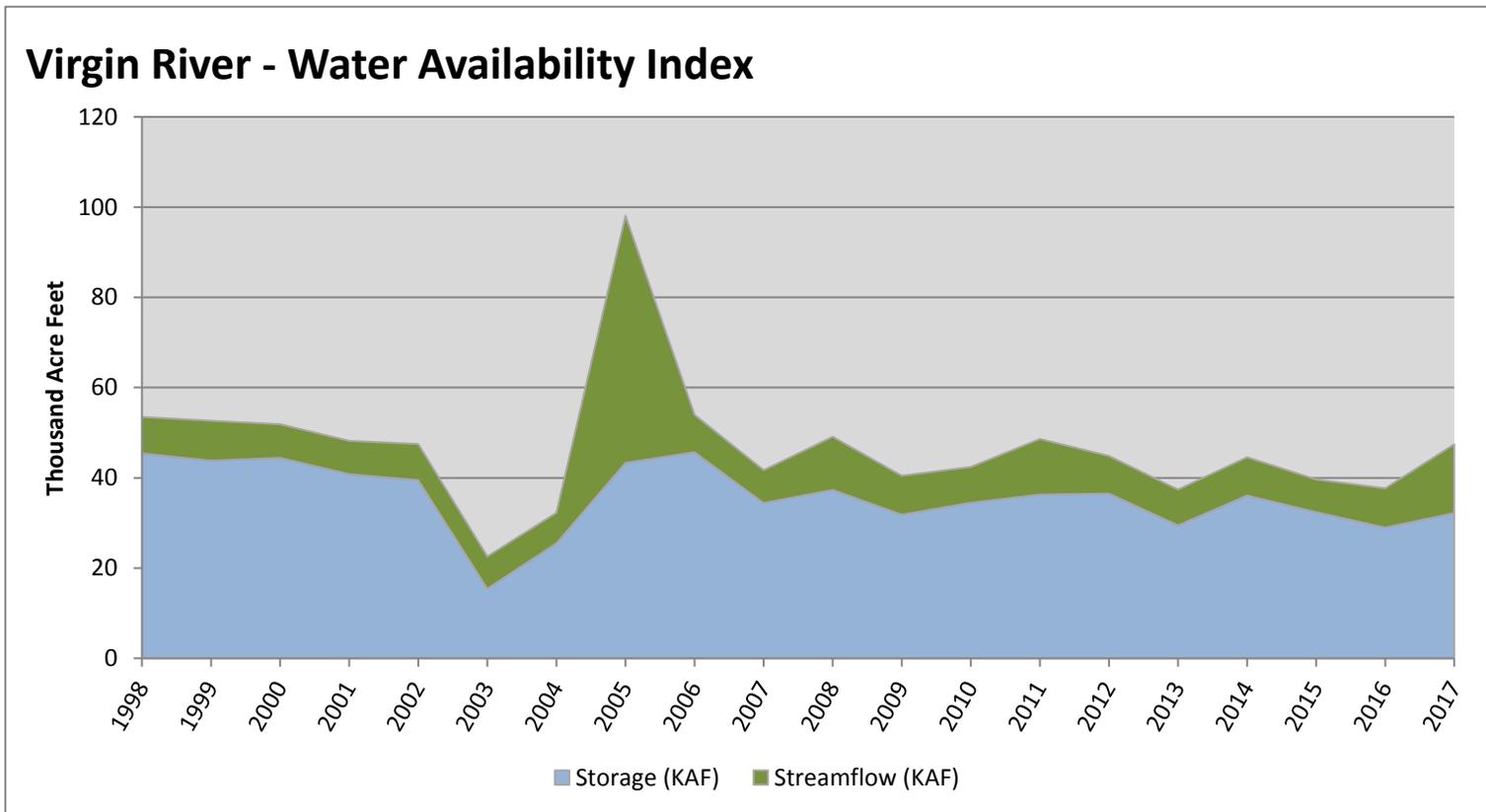
*Min, Max, and Normal lines created using a 5 day moving average of historical data.

February 1, 2017

Water Availability Index

Basin or Region	Jan EOM [*] Storage	January Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	32.16	15.27	47.43	52	0.2	14, 12, 02, 01

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



February 1, 2017

Water Availability Index

Basin or Region	Jan EOM* Storage	January Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
Bear River	459	2.7	462	39	-0.9	11, 10, 02, 16
Woodruff Narrows	49.6	2.7	52.3	87	3.1	99, 07, 98, 84
Little Bear	9.8	3.9	13.7	58	0.6	09, 01, 95, 96
Ogden	75.7	4.0	79.7	84	2.9	96, 87, 83, 94
Weber	108.5	8.4	116.9	36	-1.2	16, 03, 08, 95
Provo River	318.8	4.1	322.9	30	-1.6	03, 13, 05, 15
Western Uinta	179.8	2.1	181.9	68	1.5	97, 14, 16, 94
Eastern Uinta	42.5	2.6	45.1	63	1.1	07, 92, 00, 84
Blacks Fork	11.2	2.3	13.4	60	0.8	97, 94, 06, 07
Price	14.5	0.4	14.9	29	-1.8	95, 14, 08, 03
Smiths Creek	6.4	0.7	7.0	65	1.2	16, 07, 12, 86
Joes Valley	30.4	1.3	31.7	11	-3.3	91, 93, 95, 14
Moab	1.8	0.4	2.2	87	3.1	12, 96, 07, 98
Upper Sevier River	54.9	9.2	64.1	26	-2.0	05, 09, 90, 08
San Pitch	0.4	0.3	0.7	5	-3.7	15, 16, 13, 93
Lower Sevier	57.0	13.0	70.0	8	-3.5	04, 05, 92, 03
Beaver	8.4	1.1	9.4	32	-1.5	00, 93, 90, 09
Virgin River	32.2	15.3	47.4	52	0.2	14, 12, 02, 01

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

What is a Water Availability Index?

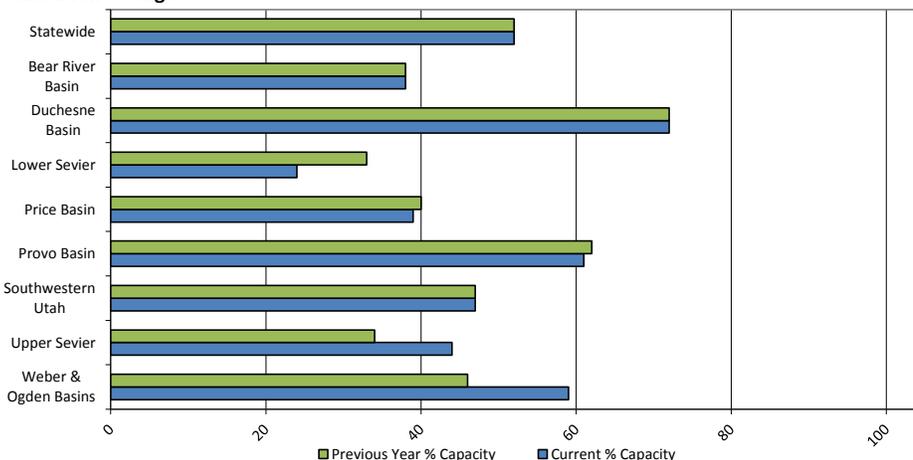
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero (0) indicating median water supply as compared to historical analysis. WAI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index.

Utah Snow Surveys has also chosen to display the WAI value as well as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has the simplest application. It can be best thought of as a scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and a value of 50 representing average conditions. This rating scale is a percentile rating as well, for example a WAI of 75% means that this years water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a WAI of 10% means that 90% of historical events have been greater than this one and that only 10% have had less total water supply. This scale is comparable between basins: a SWSI of 50% means the same relative ranking on watershed A as it does on watershed B, which may not be strictly true of the +4 to -4 scale.

For more information on the WAI go to: www.ut.nrcs.usda.gov/snow/ on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.

Reservoir Storage Summary for the end of January 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	25.2	24.6		25.7	98%	96%			
Causey Reservoir	5.0	4.3	3.2	7.1	70%	60%	45%	156%	133%
Cleveland Lake	1.6	1.9		5.4	29%	36%			
Currant Creek Reservoir	14.2	14.6	14.9	15.5	92%	94%	96%	95%	98%
Deer Creek Reservoir	132.8	120.7	107.7	149.7	89%	81%	72%	123%	112%
East Canyon Reservoir	25.4	23.4	34.7	49.5	51%	47%	70%	73%	67%
Echo Reservoir	30.6	29.4	46.3	73.9	41%	40%	63%	66%	64%
Grantsville Reservoir	0.6	1.6	1.8	3.3	18%	49%	53%	34%	93%
Gunlock	4.2	2.3	6.5	10.4	40%	22%	63%	64%	36%
Gunnison Reservoir	0.4	0.4	11.4	20.3	2%	2%	56%	4%	4%
Huntington North Reservoir	2.8	3.2	2.7	4.2	67%	75%	64%	104%	117%
Hyrum Reservoir	9.8	9.7	10.2	15.3	64%	63%	67%	96%	95%
Joes Valley Reservoir	30.4	36.8	39.9	61.6	49%	60%	65%	76%	92%
Jordanelle Reservoir	186.0	172.5	242.0	320.0	58%	54%	76%	77%	71%
Ken's Lake	1.8	1.5	1.1	2.3	78%	65%	49%	159%	132%
Kolob Reservoir	4.4	2.4		5.6	79%	43%			
Lost Creek Reservoir	15.0	11.0	12.3	22.5	67%	49%	55%	122%	90%
Lower Enterprise	0.5	1.0	0.6	2.6	17%	38%	24%	71%	159%
Miller Flat Reservoir	2.0	1.8		5.2	38%	34%			
Millsite	10.2	8.0	10.1	16.7	61%	48%	60%	101%	79%
Minersville Reservoir	8.4	7.9	13.4	23.3	36%	34%	58%	62%	59%
Moon Lake Reservoir	24.6	21.6	24.4	35.8	69%	60%	68%	101%	89%
Otter Creek Reservoir	31.7	27.7	35.0	52.5	60%	53%	67%	90%	79%
Panguitch Lake	9.9	6.3	12.7	22.3	44%	28%	57%	78%	49%
Pineview Reservoir	70.7	54.2	51.4	110.1	64%	49%	47%	138%	105%
Piute Reservoir	23.2	15.9	49.2	71.8	32%	22%	69%	47%	32%
Porcupine Reservoir	7.5	6.5	6.0	11.3	66%	58%	53%	125%	108%
Quail Creek	28.0	26.6	26.0	40.0	70%	67%	65%	108%	102%
Red Fleet Reservoir	21.4	16.1	17.9	25.7	83%	63%	70%	119%	90%
Rockport Reservoir	31.5	36.2	34.5	60.9	52%	59%	57%	91%	105%
Sand Hollow Reservoir	42.0	37.1		50.0	84%	74%			
Scofield Reservoir	14.5	10.9	29.9	65.8	22%	17%	45%	48%	36%
Settlement Canyon Reservoir	0.3	0.3	0.7	1.0	30%	33%	70%	43%	47%
Sevier Bridge Reservoir	57.0	78.6	155.7	236.0	24%	33%	66%	37%	50%
Smith And Morehouse Reservoir	5.9	3.6	3.6	8.1	73%	44%	44%	165%	99%
Starvation Reservoir	140.7	148.7	138.8	165.3	85%	90%	84%	101%	107%
Stateline Reservoir	6.4	6.0	5.4	12.0	53%	50%	45%	118%	111%
Steinaker Reservoir	21.1	16.6	21.7	33.4	63%	50%	65%	97%	76%
Strawberry Reservoir	775.7	792.0	658.4	1105.9	70%	72%	60%	118%	120%
Upper Enterprise	0.6	0.9	3.1	10.0	6%	9%	31%	19%	29%
Upper Stillwater Reservoir	14.5	10.4	8.6	32.5	45%	32%	26%	169%	121%
Utah Lake	386.8	442.5	752.5	870.9	44%	51%	86%	51%	59%
Vernon Creek Reservoir	0.1	0.3	0.5	0.6	23%	42%	78%	30%	53%
Willard Bay	136.7	91.0	133.7	215.0	64%	42%	62%	102%	68%
Woodruff Creek	2.0	2.5	2.4	4.0	49%	61%	60%	81%	102%
Woodruff Narrows Reservoir	49.6	41.1	29.0	57.3	87%	72%	51%	171%	142%
Meeks Cabin Reservoir	11.2	6.9	11.9	32.5	34%	21%	37%	94%	58%
Bear Lake	459.2	472.2	584.8	1302.0	35%	36%	45%	79%	81%
Basin-wide Total	2808.7	2783.7	3356.6	5380.9	52%	52%	62%	84%	83%
# of reservoirs	43	43	43	43	43	43	43	43	43

Reservoir Storage



Issued by

Jason Weller
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Prepared by

Snow Survey Staff
Randall Julander, Supervisor
Troy Brosten, Assistant Supervisor
Beau Uriona, Hydrologist
Jordan Clayton, Hydrologist
Kent Sutcliffe, Soil Scientist
Bob Nault, Electronics Technician

Released by

David Brown
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 @: <http://www.ut.nrcs.usda.gov/snow/>

Snow Survey, NRCS, USDA
245 North Jimmy Doolittle Road
Salt Lake City, UT 84116
(801) 524-5213



**Utah Climate and
Water Report**
Natural Resources Conservation Service
Salt Lake City, UT

