

# Utah Climate and Water Report

July 1, 2017



## **Yankee Reservoir SNOTEL**

**Fire damage from the Brian Head Fire, site to be repaired/rebuilt later this fall.**

**Photo by Bob Nault**

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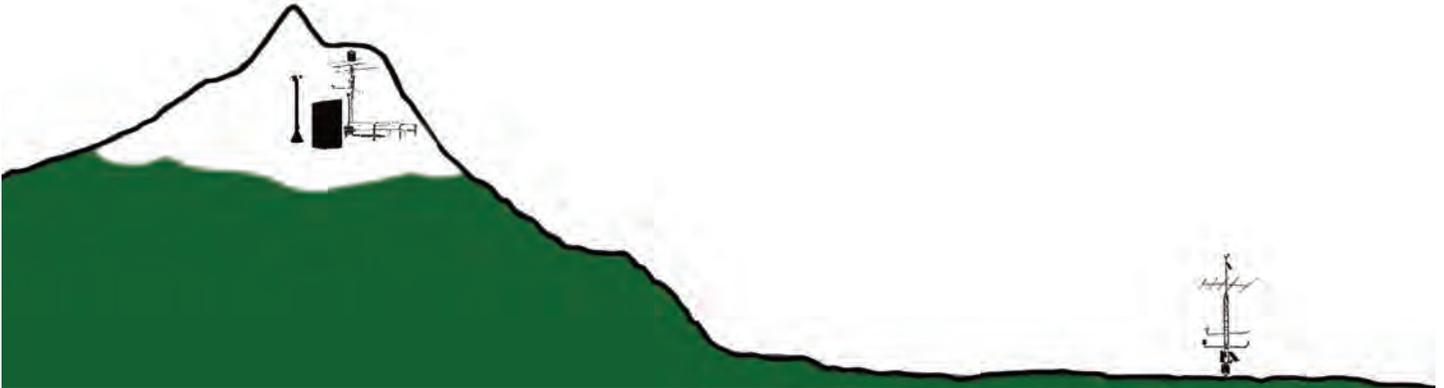
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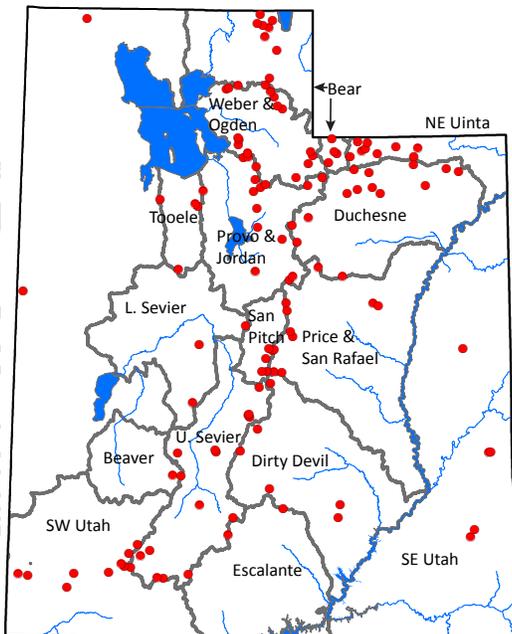
## Utah Climate and Water Report

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



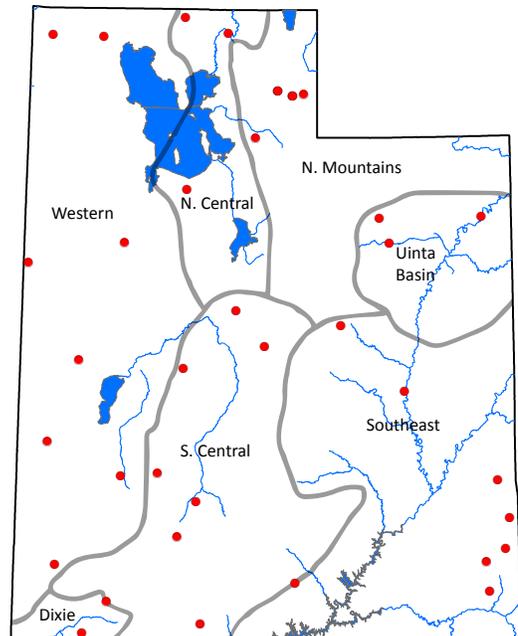
### SNOTEL

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



### SCAN

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



## Utah General Summary July 1, 2017

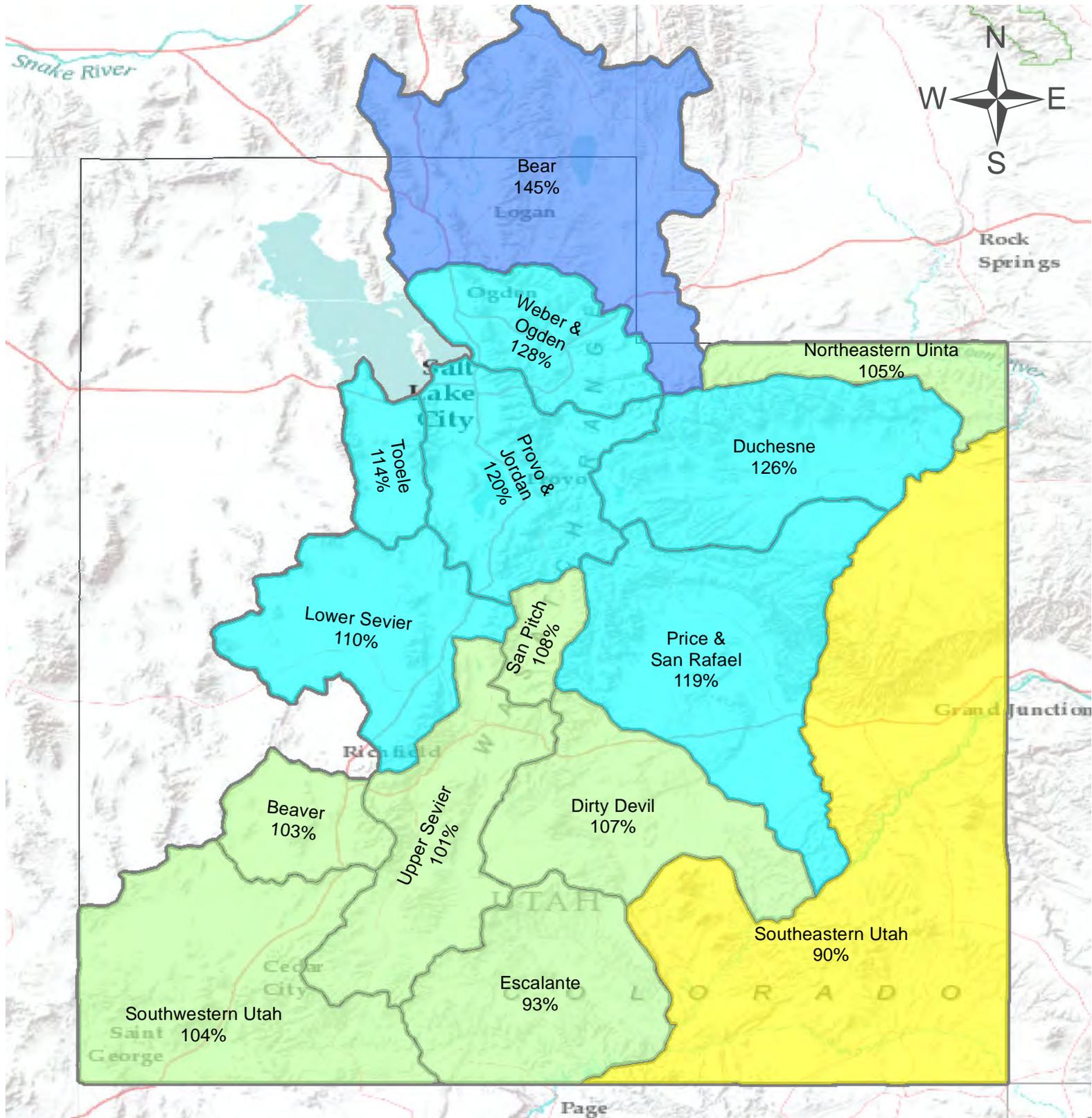
*This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (Soil Climate Analysis Network) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply is generated (SNOWTElemetry).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

### **Current Valley Conditions (SCAN)**

On average, June brought a paltry tenth of an inch of precipitation to Utah's valley locations, bringing the total to 9.1 inches for this water year. High pressure systems have maintained and exacerbated the dry and hot conditions statewide. Soil moisture is at 36% of normal, which is slightly higher than this time last year. Soil moisture levels in the northeast portion of the state, previously above average, have plummeted and now drier than normal conditions prevail throughout most Utah's valleys and lowlands. Though some areas are at near-normal to slightly below normal moisture levels, many sites are seeing record breaking dry conditions. At the majority of Utah SCAN sites, near-surface portions of the soil are now below permanent wilting point, but ample water remains to support plant growth below 8 inches, only Circleville SCAN has moisture levels above field capacity below 20 inches depth. The exception to this general pattern is found in Morgan and Rich counties and a few other locations where soils are ideal for plant growth throughout the much of the profile.

### **Current Mountain Conditions (SNOTEL)**

Snowpack throughout Utah has melted out for the season and most streamflow has peaked and is currently in recession. Some patches of snow exist at high elevations but no SNOTEL sites are currently reporting any snow. Most Utah reservoirs filled and are now actively seeing draw down, with some notable exceptions such as Piute and Sevier Bridge which failed to fill. Most streams and rivers in Utah peaked during June and are now seeing significant reduction in flow. Runoff is near average in most areas across the state with some locations in northern Utah running in the 90<sup>th</sup> percentile – remarkable given this has been the case for two months now. Precipitation in June averaged a dry 36% of normal statewide, with exceptionally dry conditions throughout southern Utah (some basins saw no precipitation in June) and slightly better conditions in the Bear and Provo basins, at 58% of normal. These drier conditions likely alleviated some of the flood potential in northern Utah. Seasonal precipitation (Oct-May) ranges from near average in the south (90%-119%) to above average in the north (105%-145%). Water Availability Indexes are generally near to well above average with the exception of the Lower Sevier River where storage in Sevier Bridge Reservoir is low.



# Statewide Precipitation

As of July 1, 2017:

121% of Normal Precipitation

36% of Normal Precipitation Last Month

## % of Normal

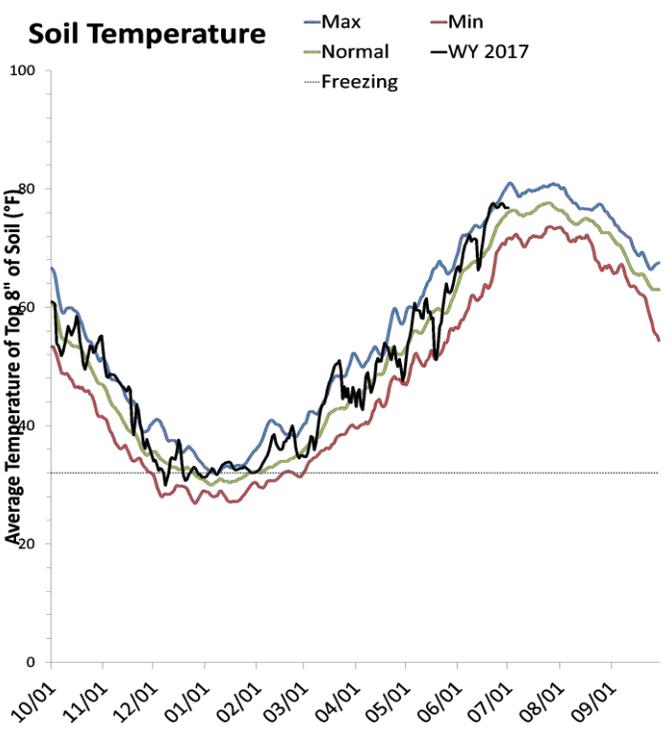
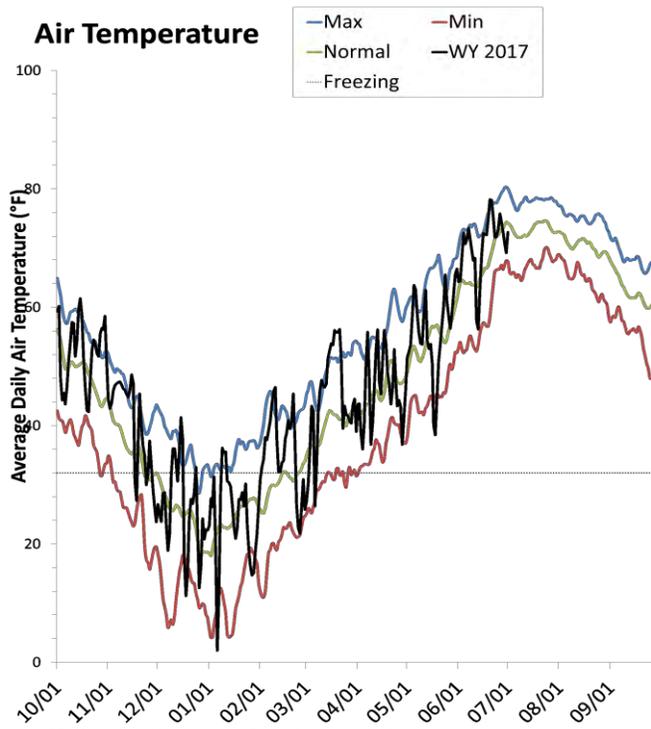
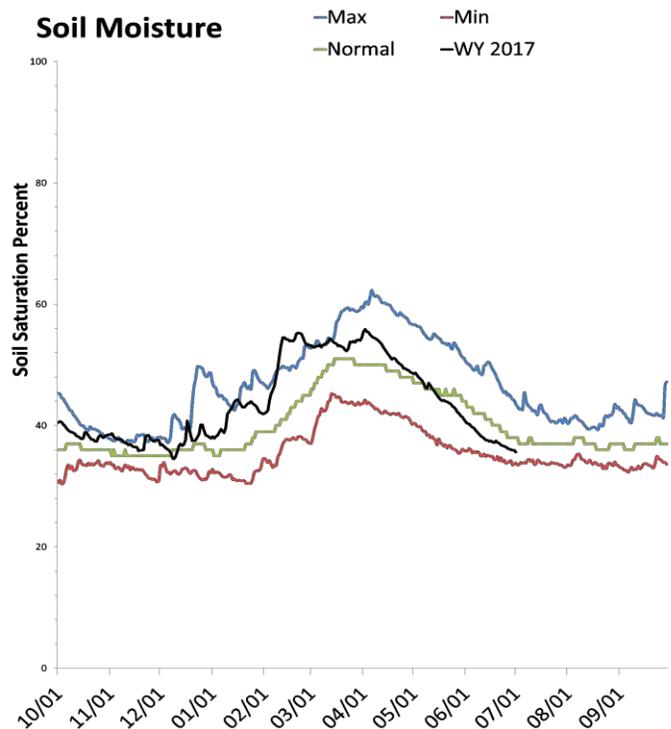
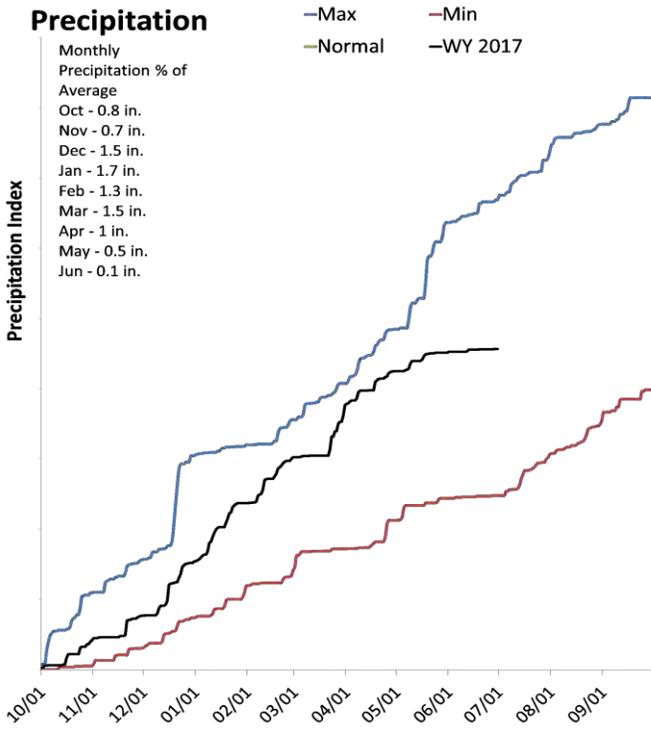
- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

0 10 20 40 60 80 100 Miles

# Statewide SCAN

July 1, 2017

The average precipitation at SCAN sites within Utah was 0.1 inches in June, which brings the seasonal accumulation (Oct-Jun) to 9.1 inches. Soil moisture is at 36% compared to 35% last year.



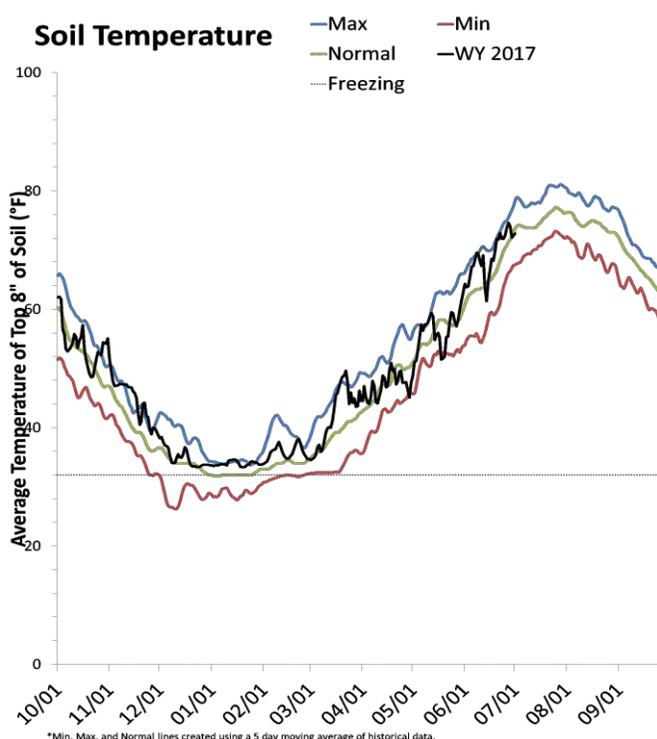
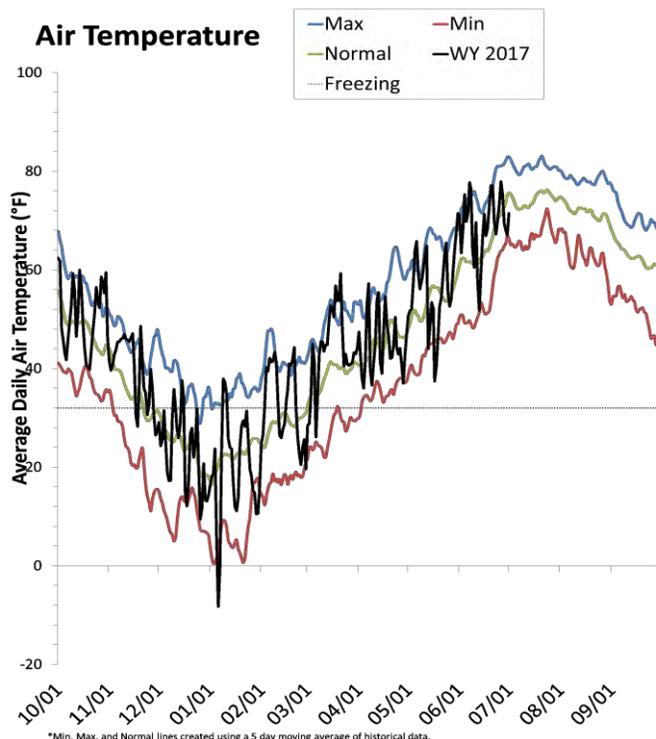
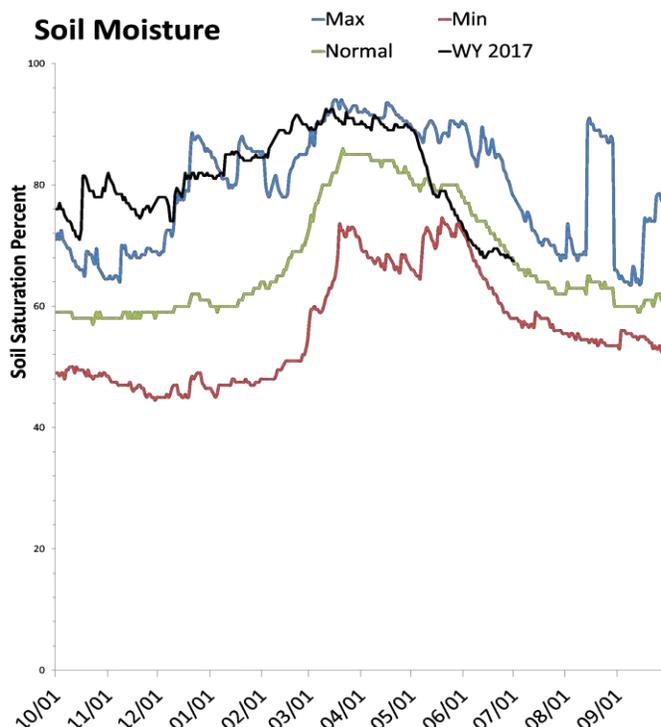
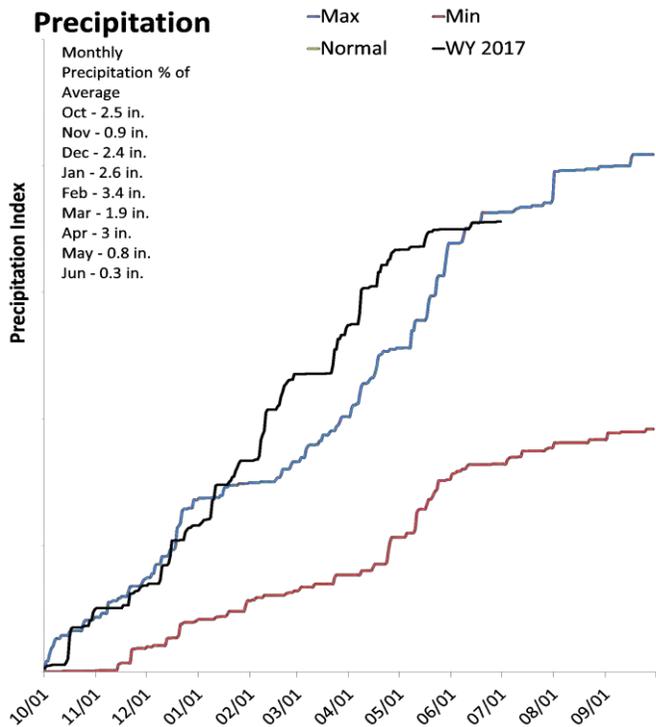
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# North Central

July 1, 2017

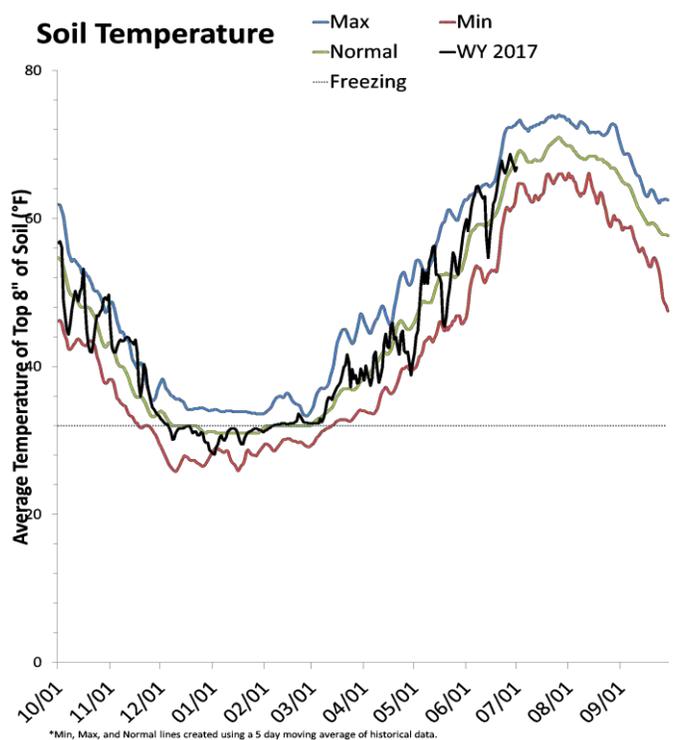
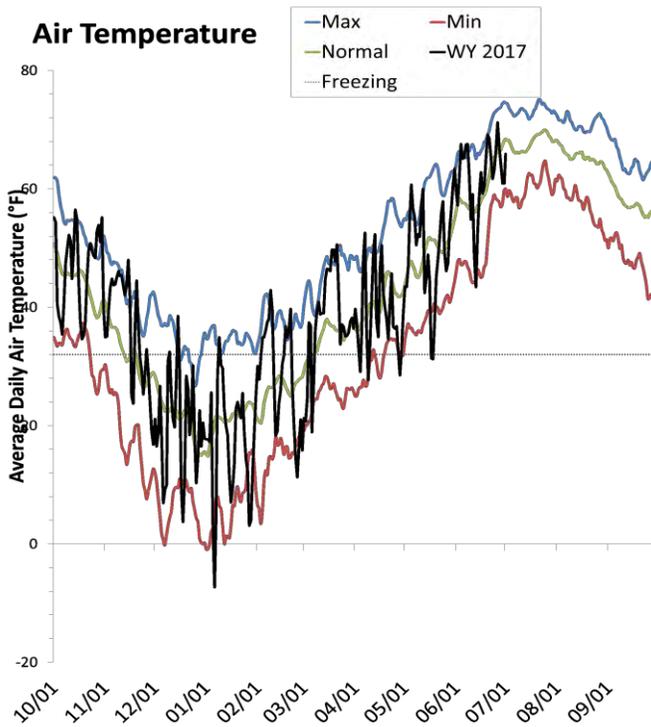
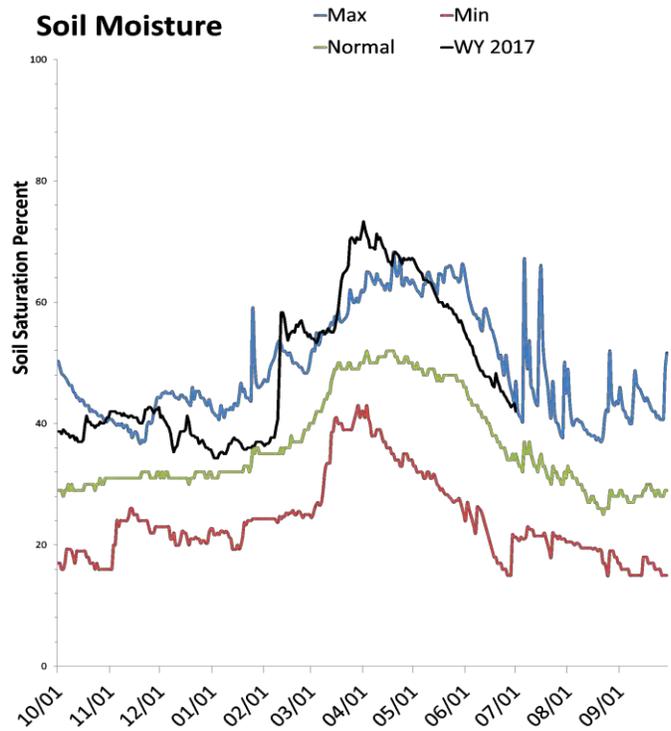
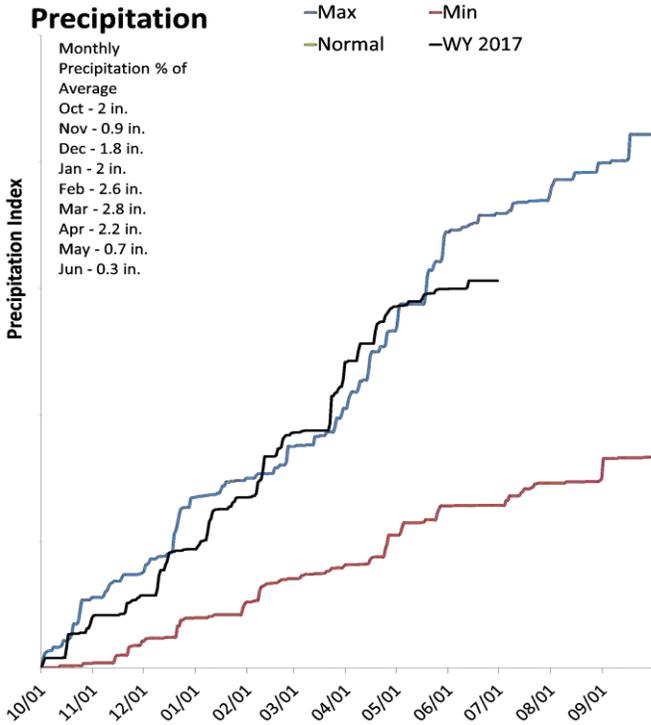
The average precipitation in June at SCAN sites within the basin was 0.3 inches, which brings the seasonal accumulation (Oct-Jun) to 17.8 inches. Soil moisture is at 68% compared to 65% last year.



# Northern Mountains

July 1, 2017

The average precipitation in June at SCAN sites within the basin was 0.3 inches, which brings the seasonal accumulation (Oct-Jun) to 15.3 inches. Soil moisture is at 43% compared to 40% last year.



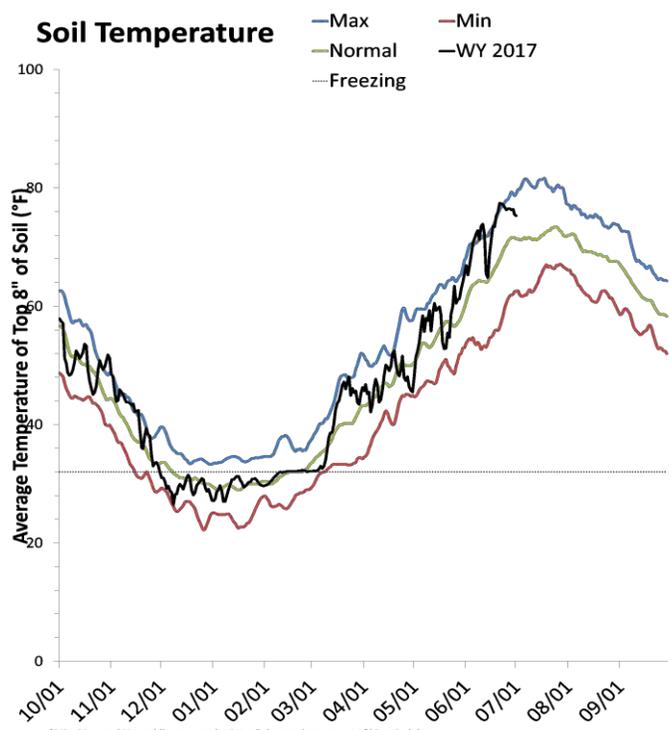
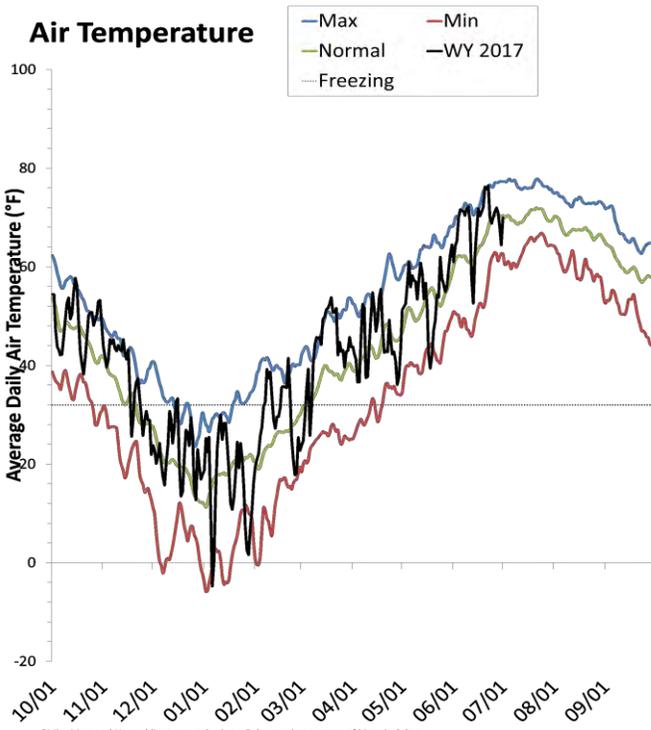
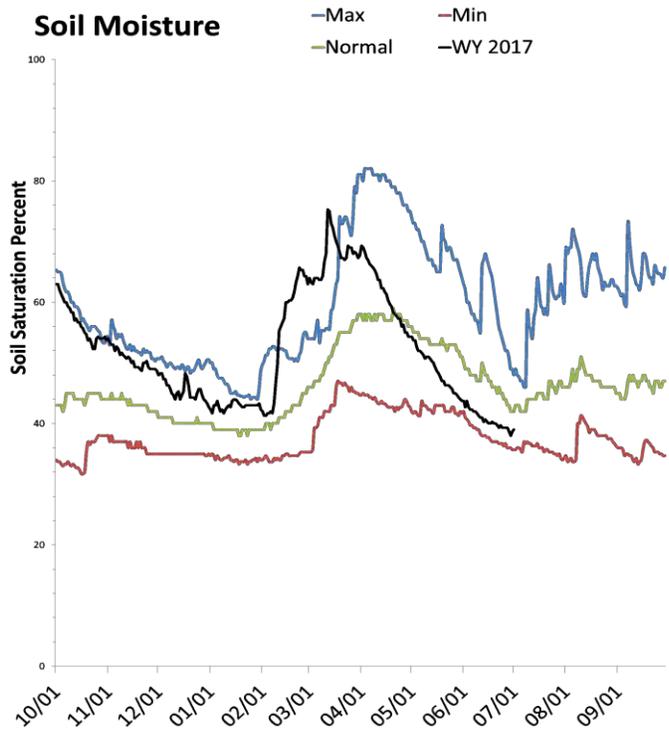
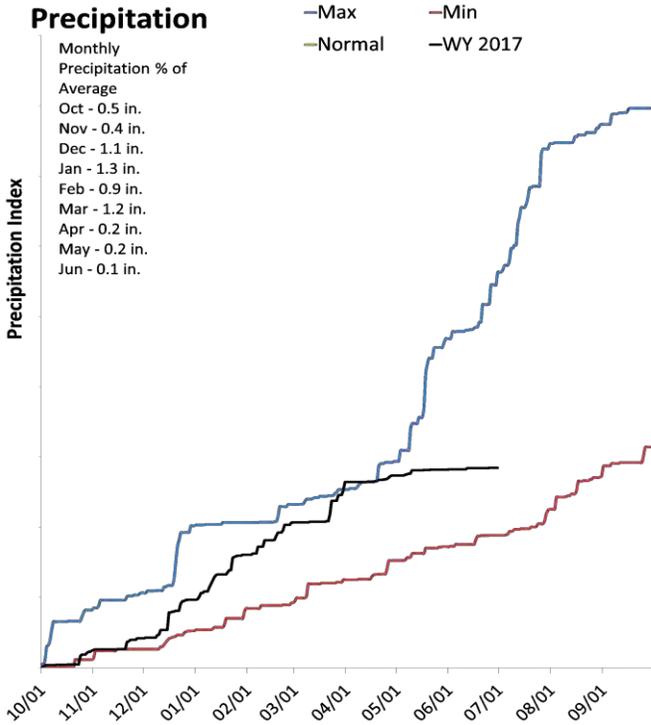
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Uinta Basin

July 1, 2017

The average precipitation in June at SCAN sites within the basin was 0.1 inches, which brings the seasonal accumulation (Oct-Jun) to 5.7 inches. Soil moisture is at 38% compared to 36% last year.



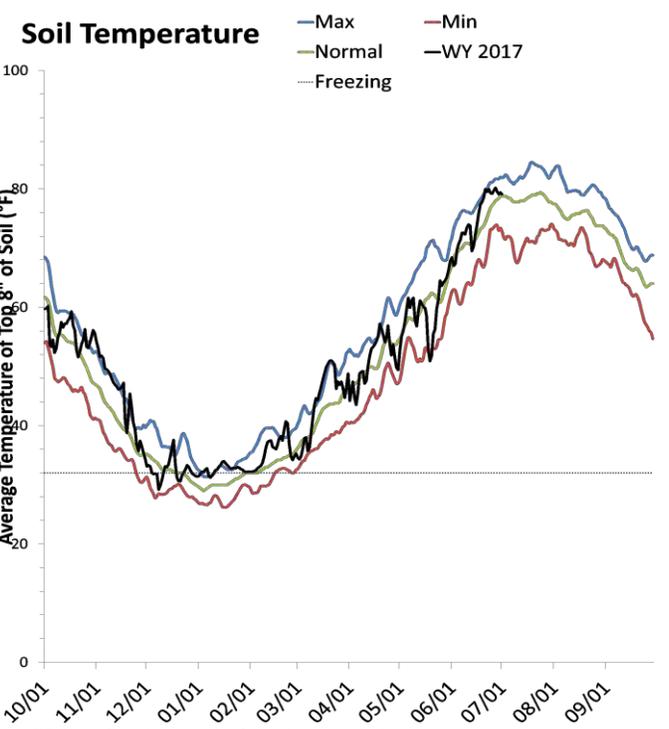
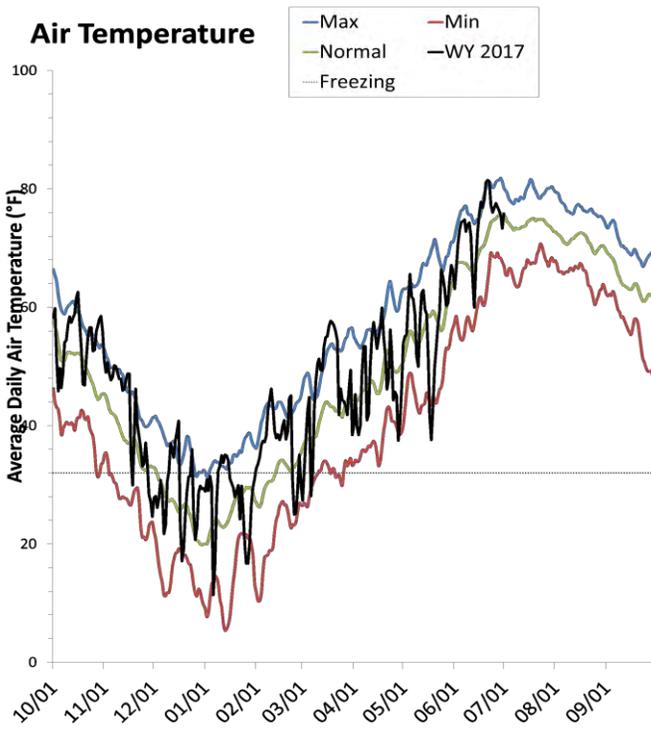
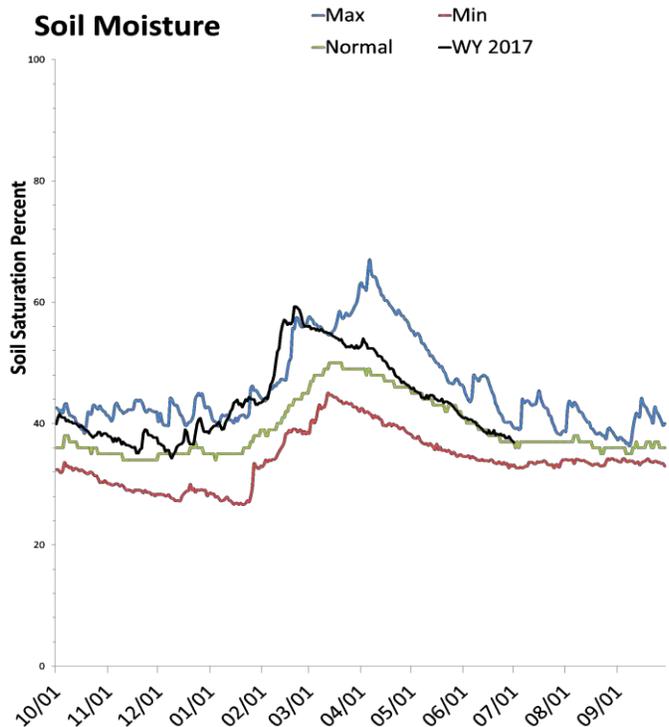
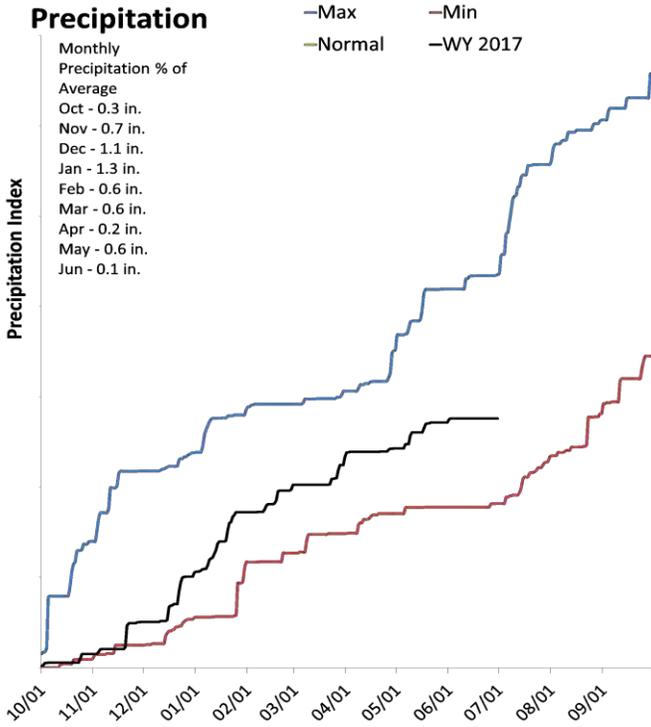
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Southeast

July 1, 2017

The average precipitation in June at SCAN sites within the basin was 0.1 inches, which brings the seasonal accumulation (Oct-Jun) to 5.5 inches. Soil moisture is at 37% compared to 36% last year.



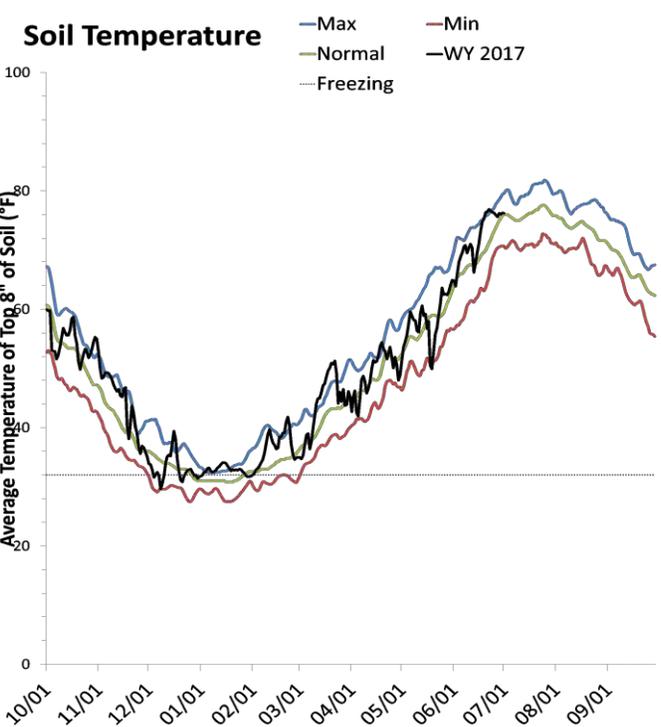
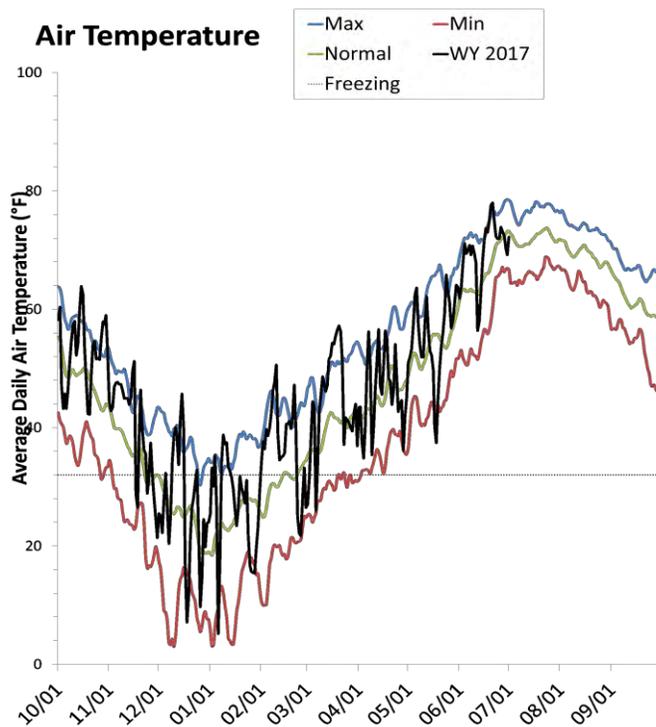
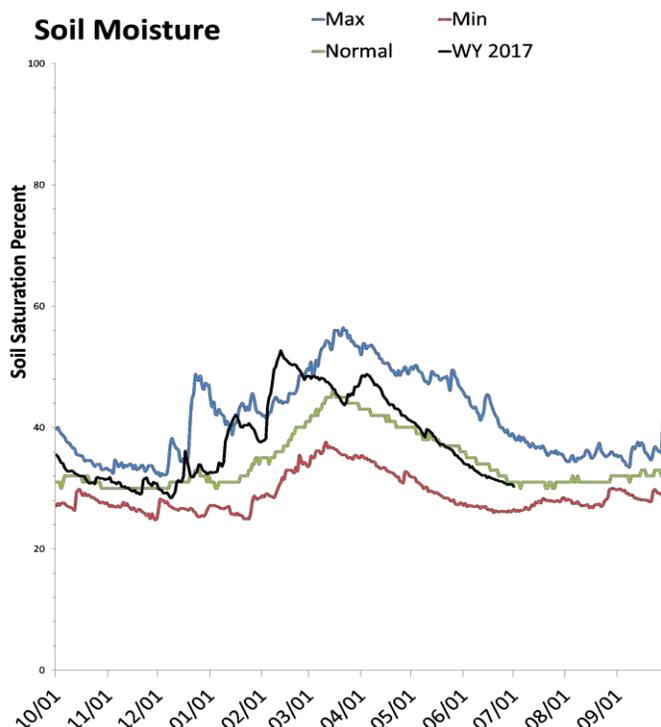
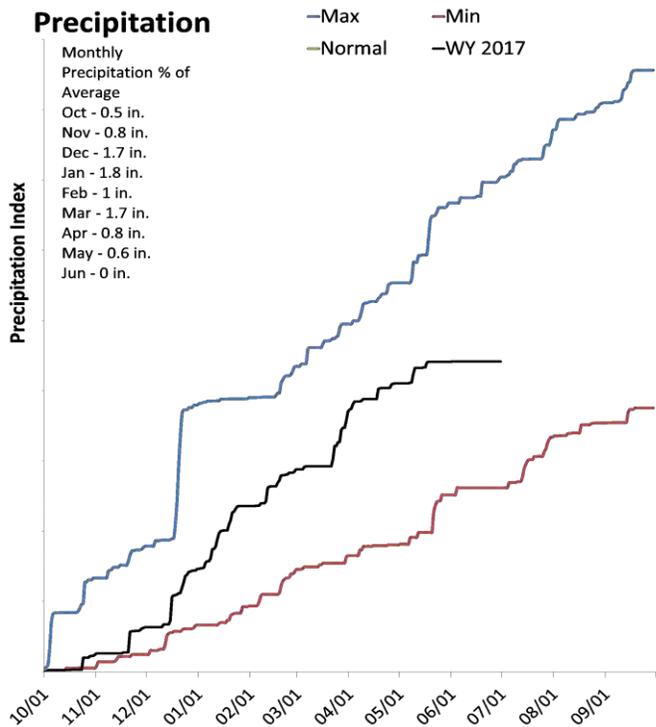
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# South Central

July 1, 2017

The average precipitation in June at SCAN sites within the basin was 0 inches, which brings the seasonal accumulation (Oct-Jun) to 8.8 inches. Soil moisture is at 30% compared to 31% last year.



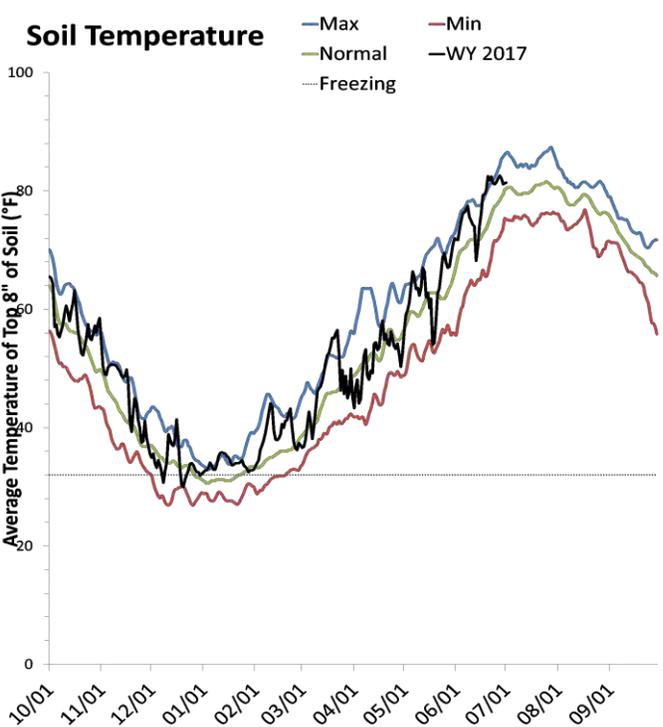
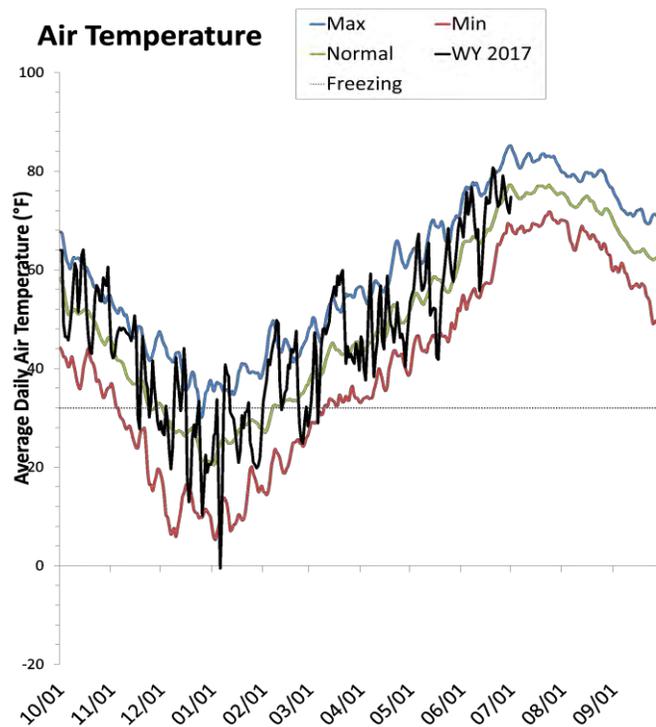
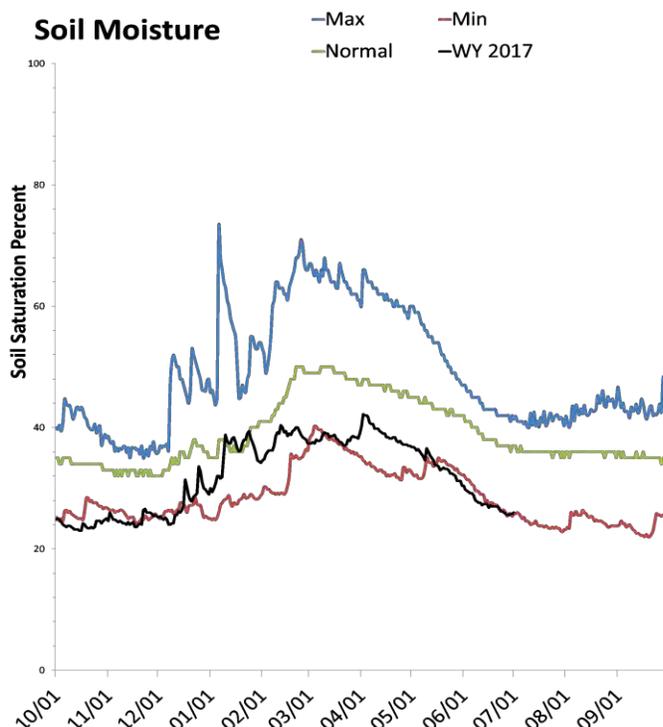
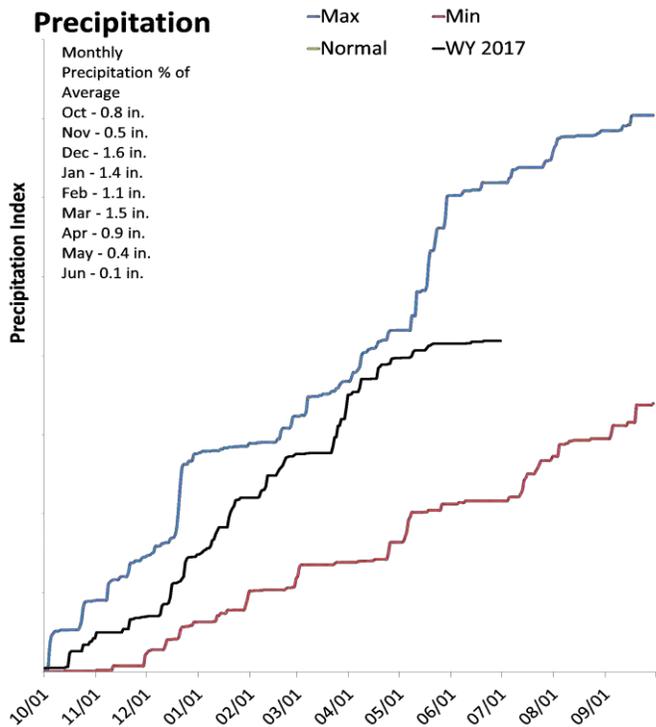
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# Western and Dixie

July 1, 2017

The average precipitation in June at SCAN sites within the basin was 0.1 inches, which brings the seasonal accumulation (Oct-Jun) to 8.4 inches. Soil moisture is at 26% compared to 26% last year.



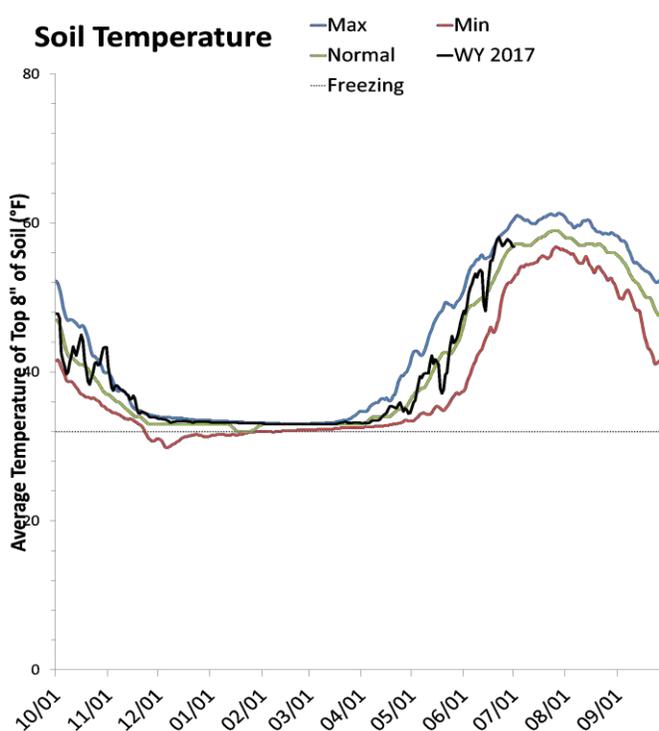
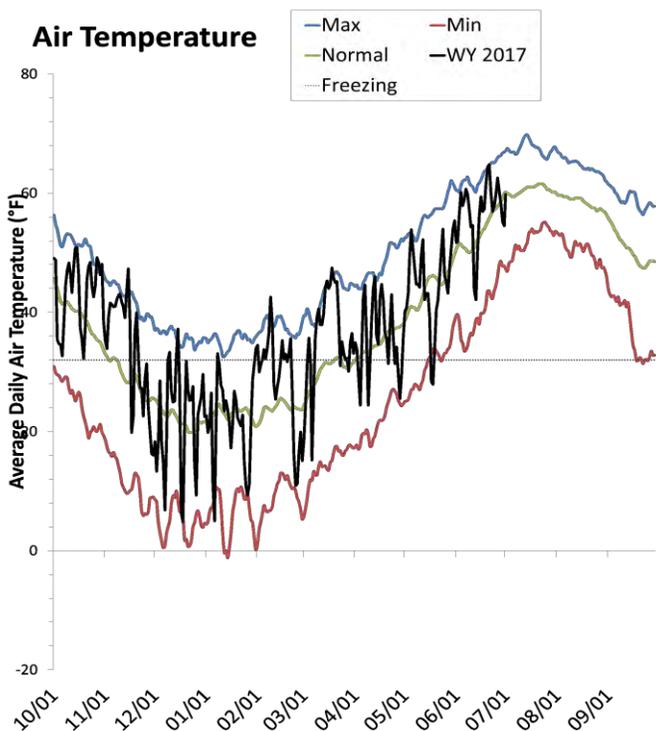
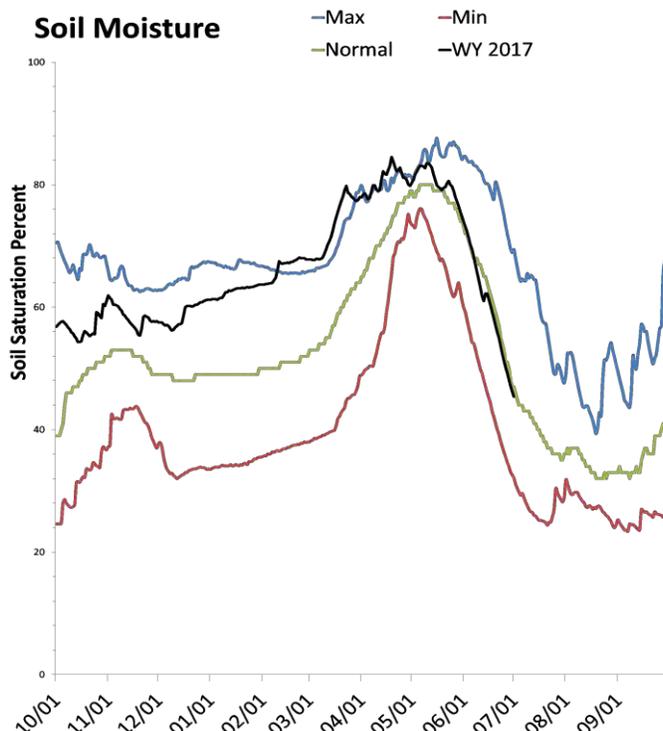
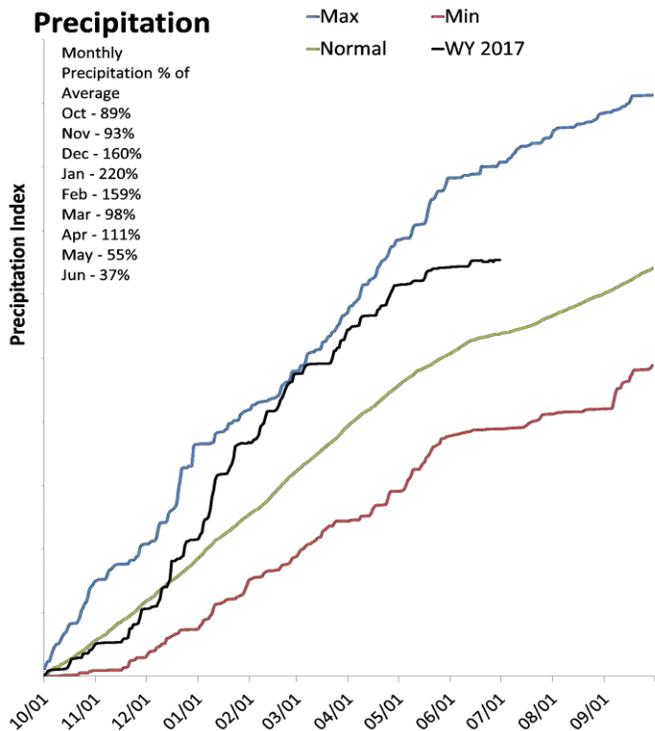
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Statewide SNOTEL

July 1, 2017

Precipitation at SNOTEL sites during June was much below average at 36%, which brings the seasonal accumulation (Oct-Jun) to 121% of average. Soil moisture is at 45% compared to 43% last year. Reservoir storage is at 84% of capacity, compared to 65% last year.



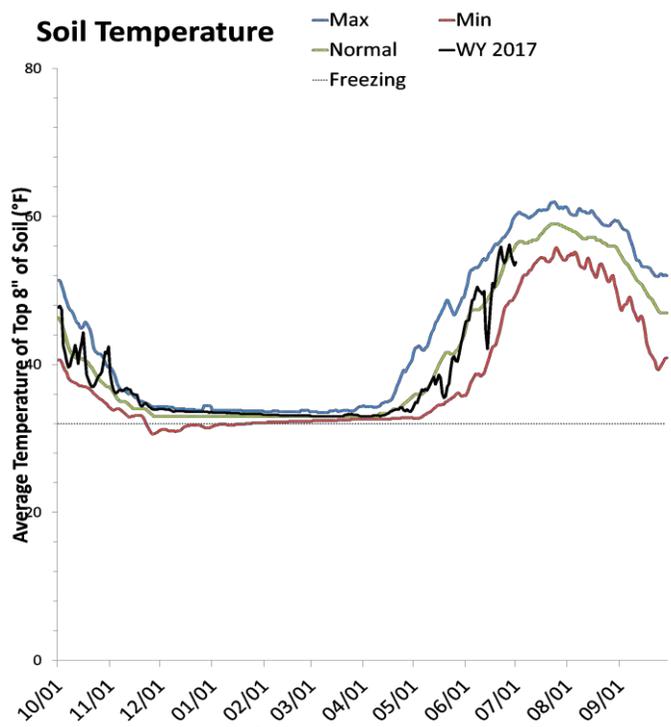
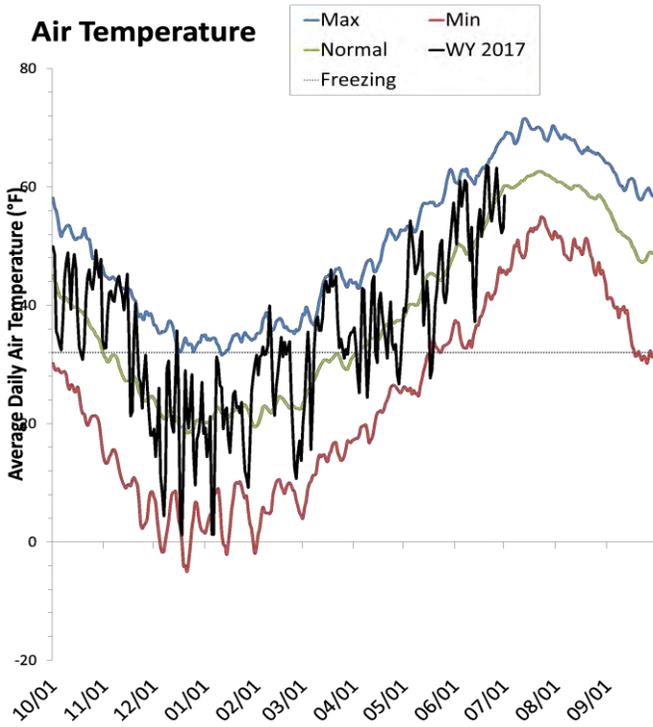
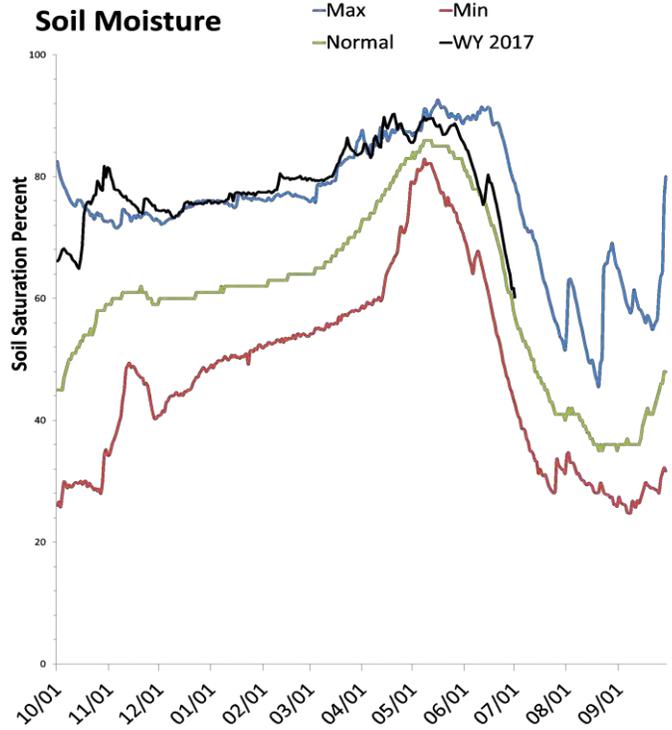
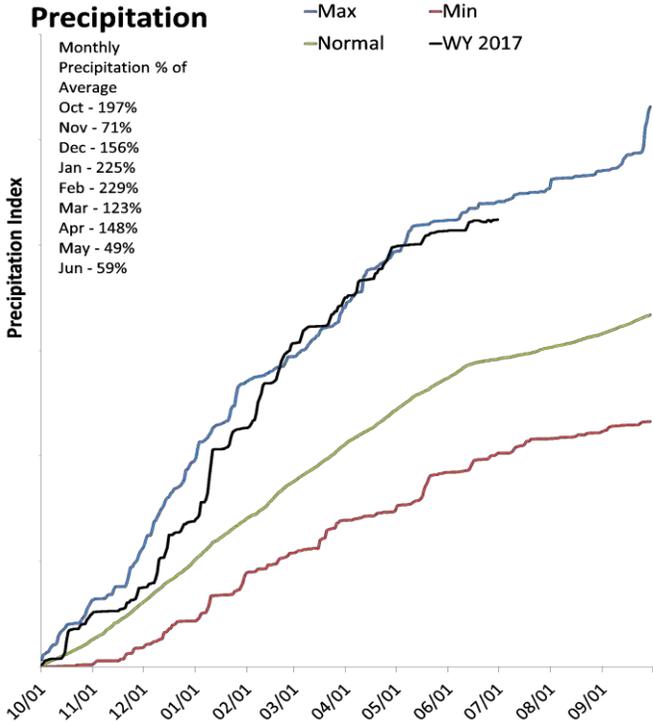
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Bear River Basin

July 1, 2017

Precipitation in June was much below average at 58%, which brings the seasonal accumulation (Oct-Jun) to 145% of average. Soil moisture is at 61% compared to 52% last year. Reservoir storage is at 92% of capacity, compared to 52% last year. The water availability index for the Bear River is 82%, 74% for Woodruff Narrows and 77% for the Little Bear.



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

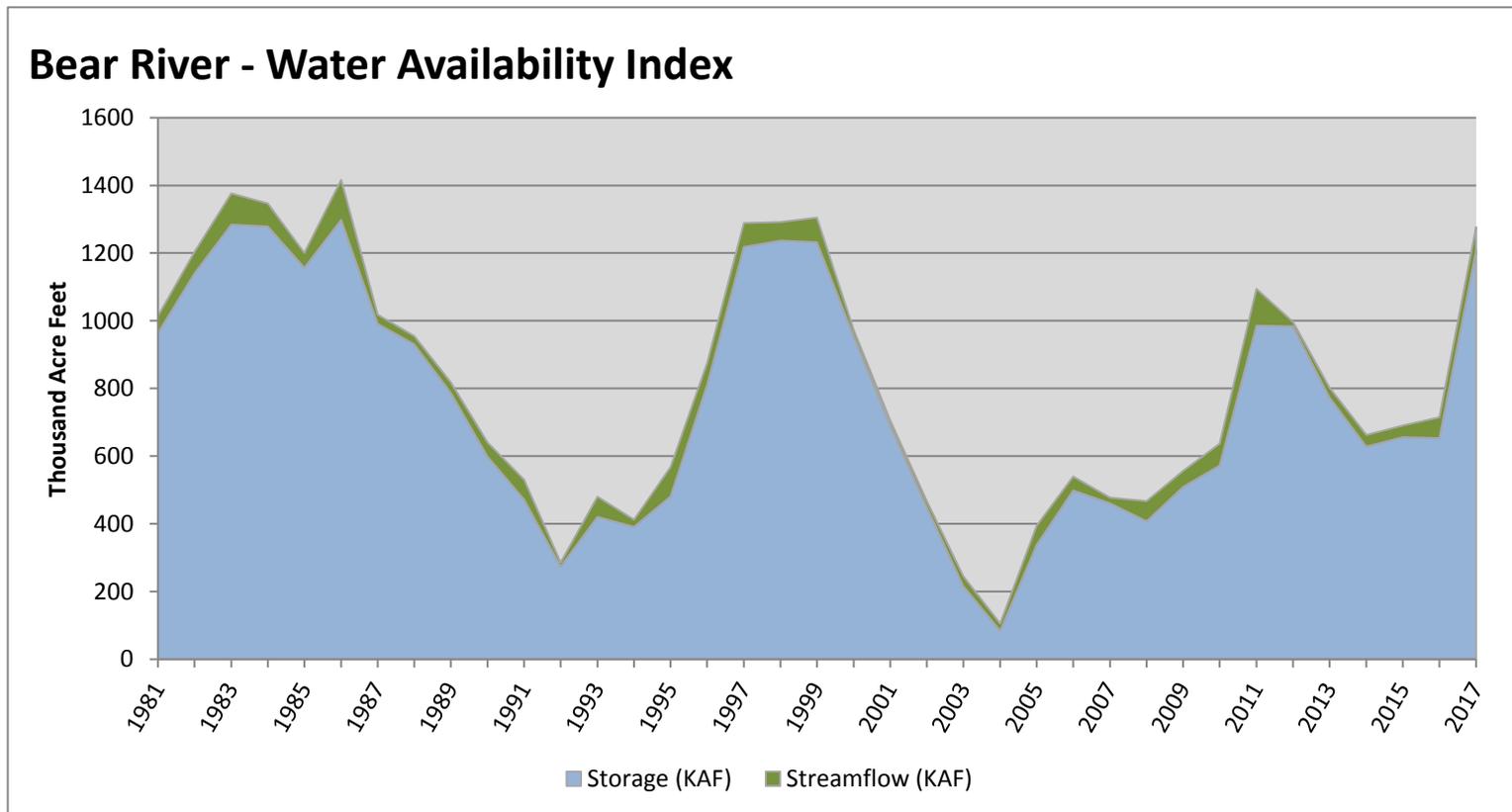
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Bear River</b>	<b>1207.09</b>	<b>69.89</b>	<b>1276.98</b>	<b>82</b>	<b>2.63</b>	<b>85, 82, 97, 98</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

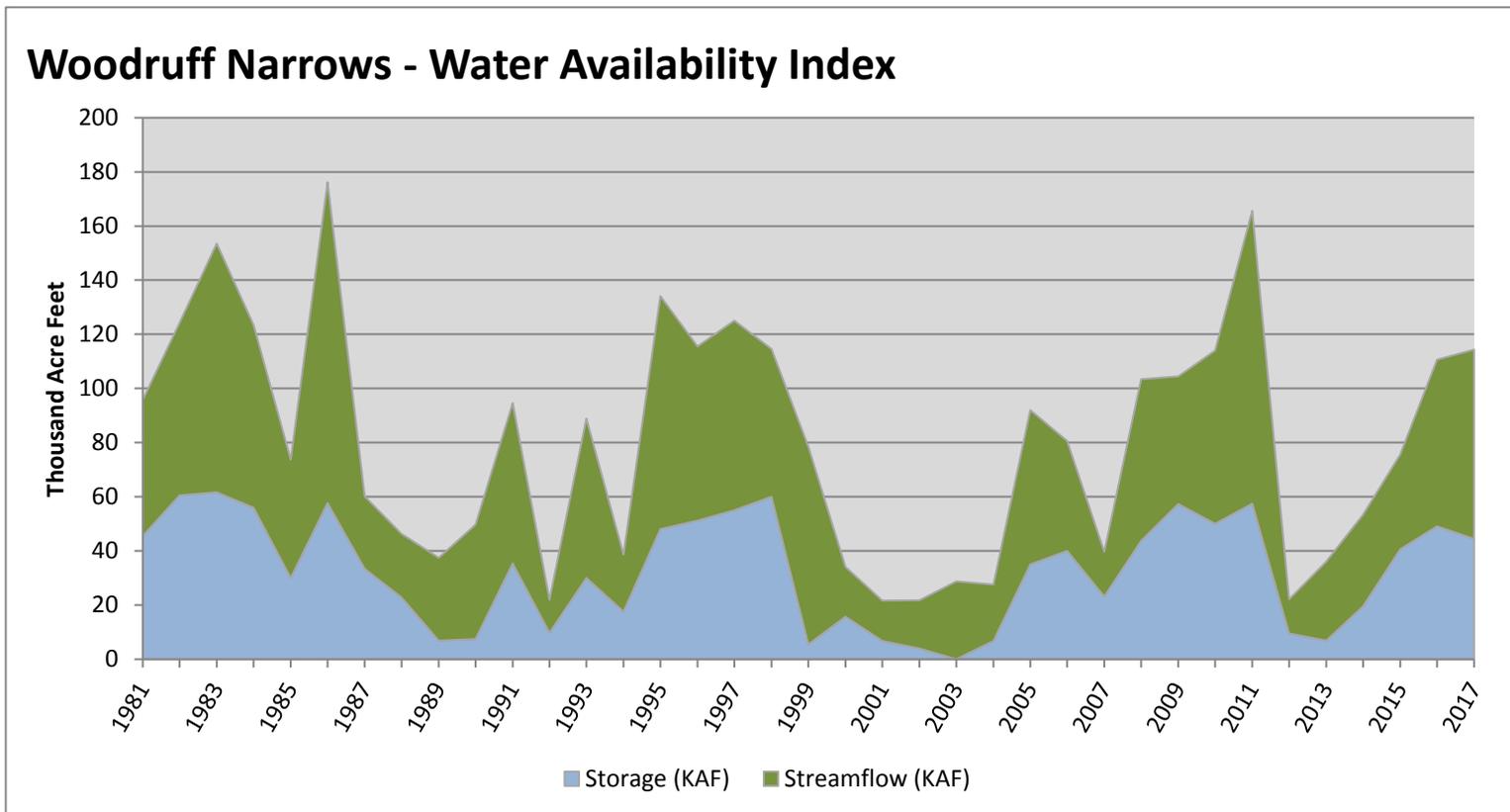


July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Woodruff Narrows</b>	<b>44.45</b>	<b>69.89</b>	<b>114.34</b>	<b>74</b>	<b>1.97</b>	<b>16, 10, 98, 96</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

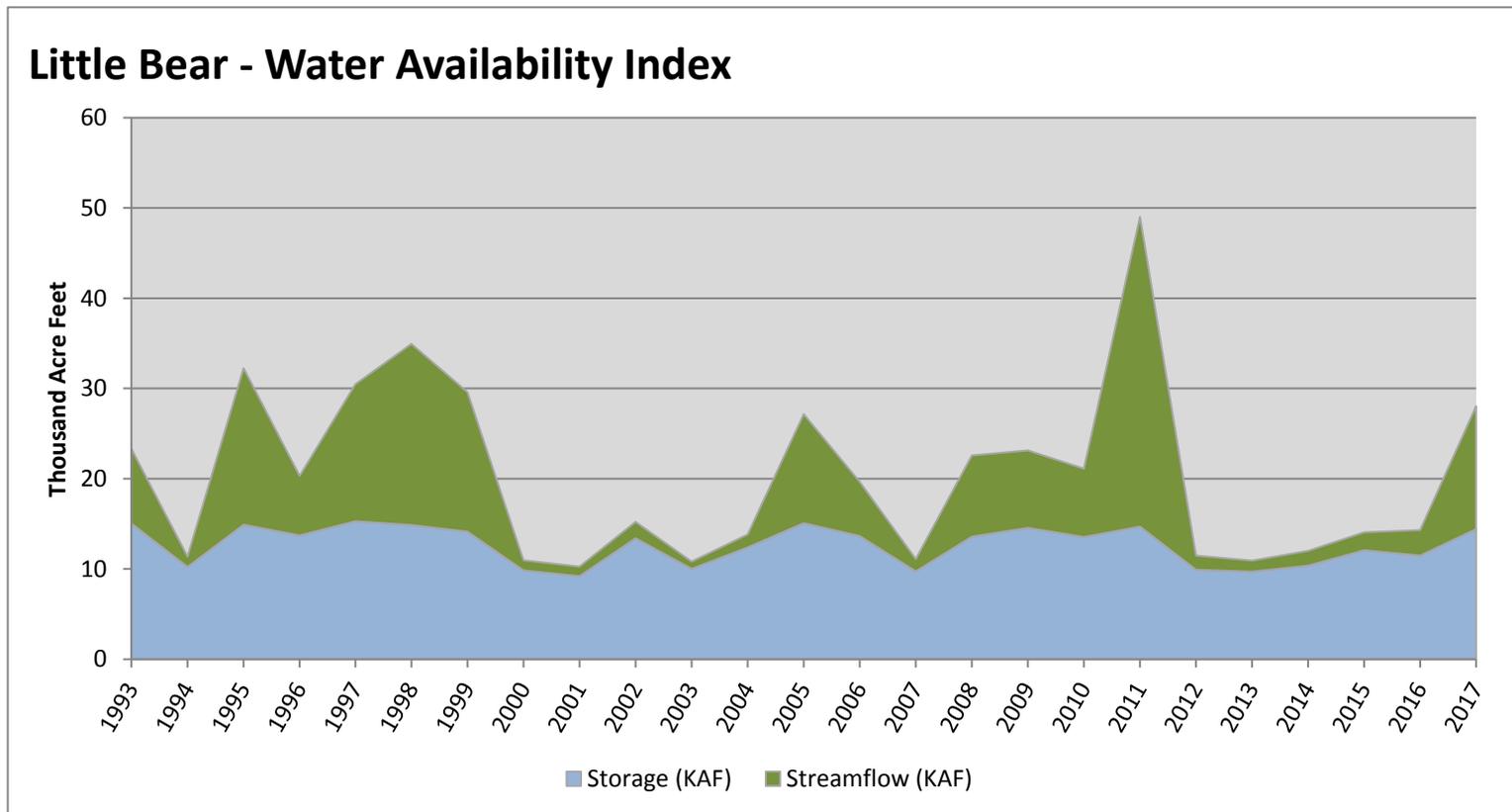


July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Little Bear</b>	<b>14.42</b>	<b>13.62</b>	<b>28.04</b>	<b>77</b>	<b>2.24</b>	<b>93, 05, 99, 97</b>

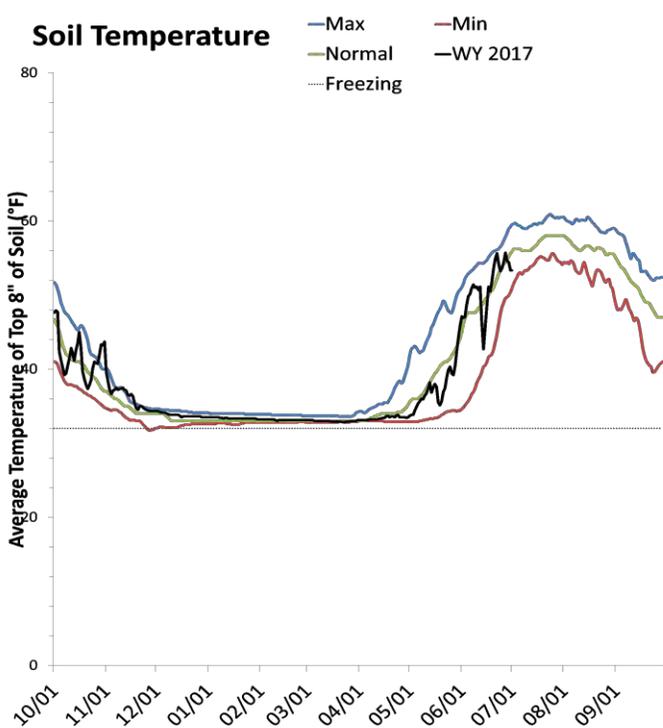
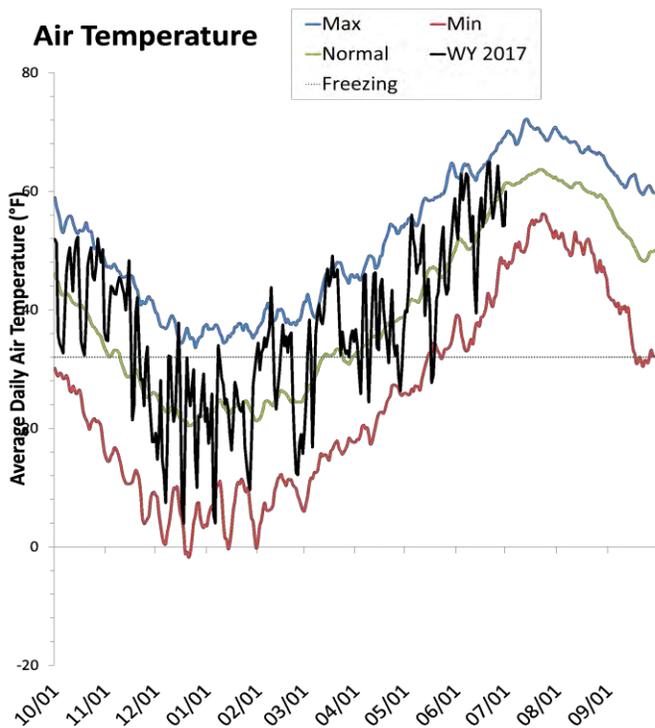
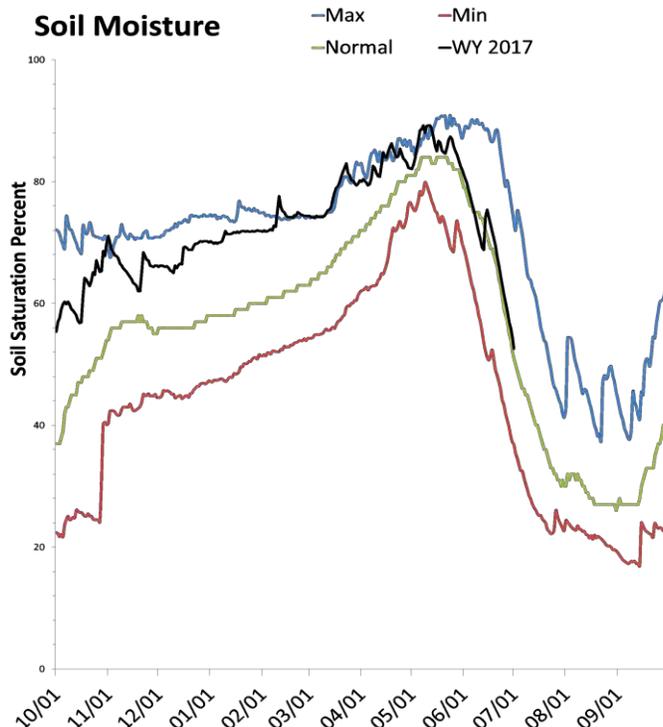
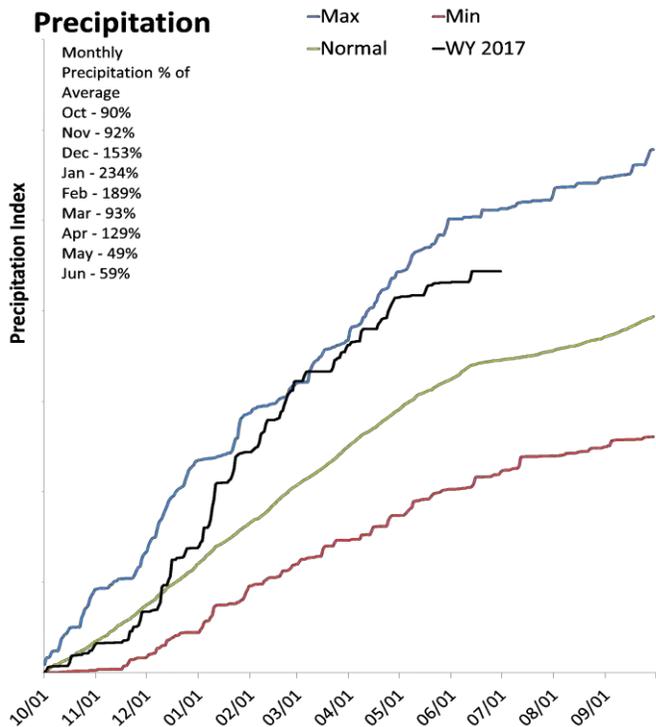
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Weber & Ogden River Basins

July 1, 2017

Precipitation in June was much below average at 58%, which brings the seasonal accumulation (Oct-Jun) to 128% of average. Soil moisture is at 54% compared to 41% last year. Reservoir storage is at 96% of capacity, compared to 83% last year. The water availability index for the Ogden River is 74% and 71% for the Weber River.



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

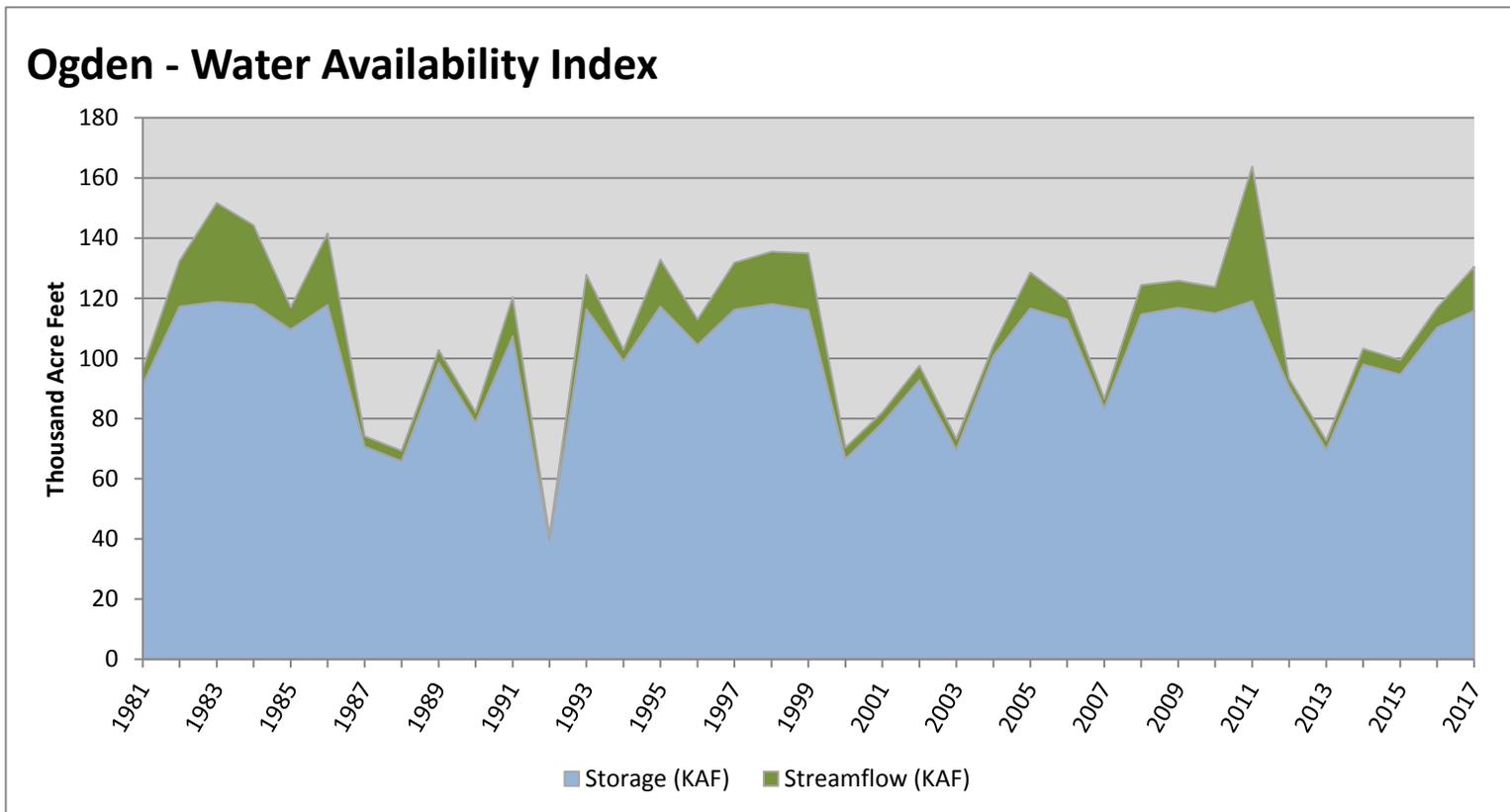
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Ogden</b>	<b>115.81</b>	<b>14.65</b>	<b>130.46</b>	<b>74</b>	<b>1.97</b>	<b>93, 05, 97, 82</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

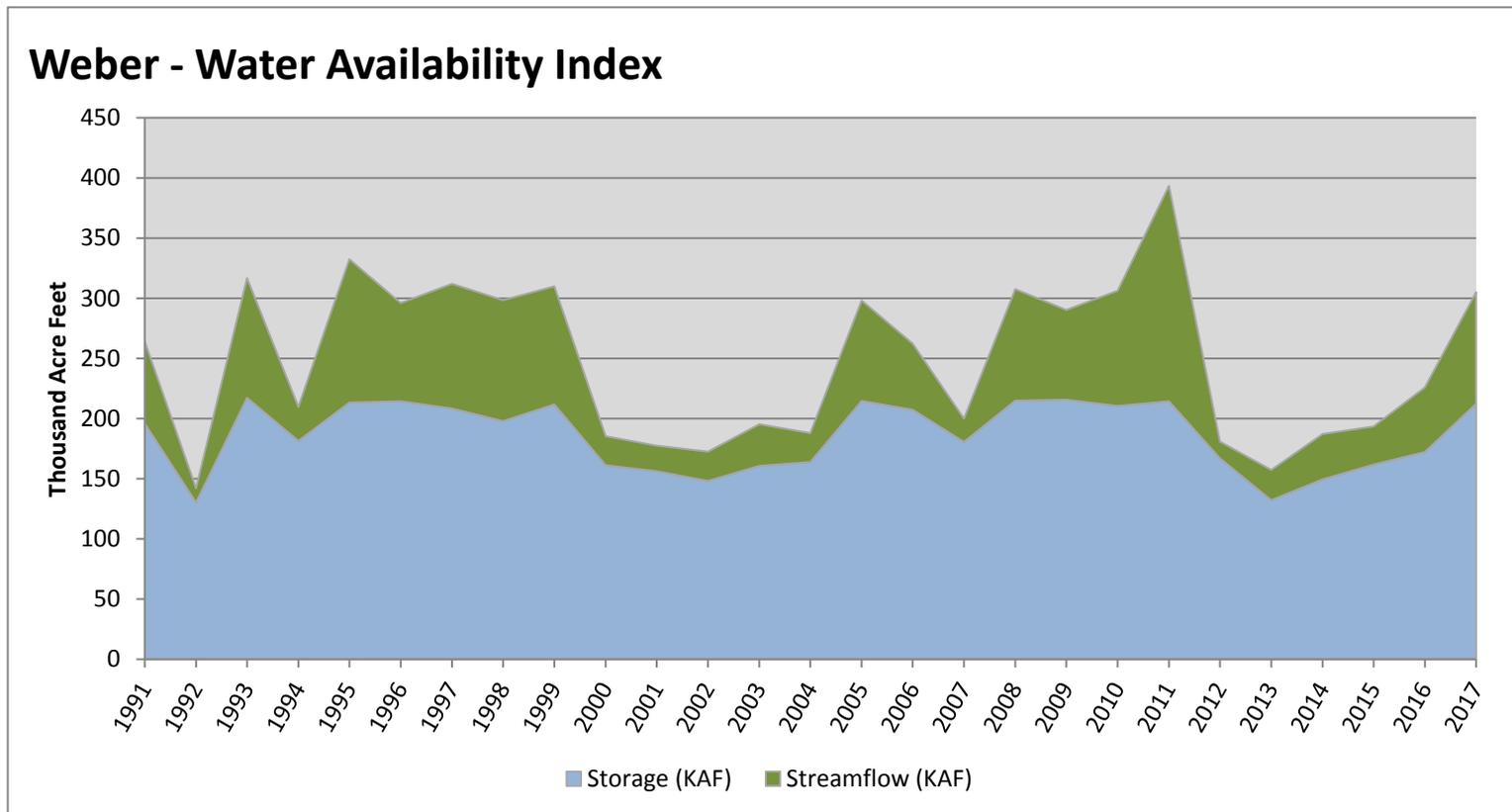


July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Weber</b>	<b>212.18</b>	<b>92.79</b>	<b>304.97</b>	<b>71</b>	<b>1.79</b>	<b>05, 98, 10, 08</b>

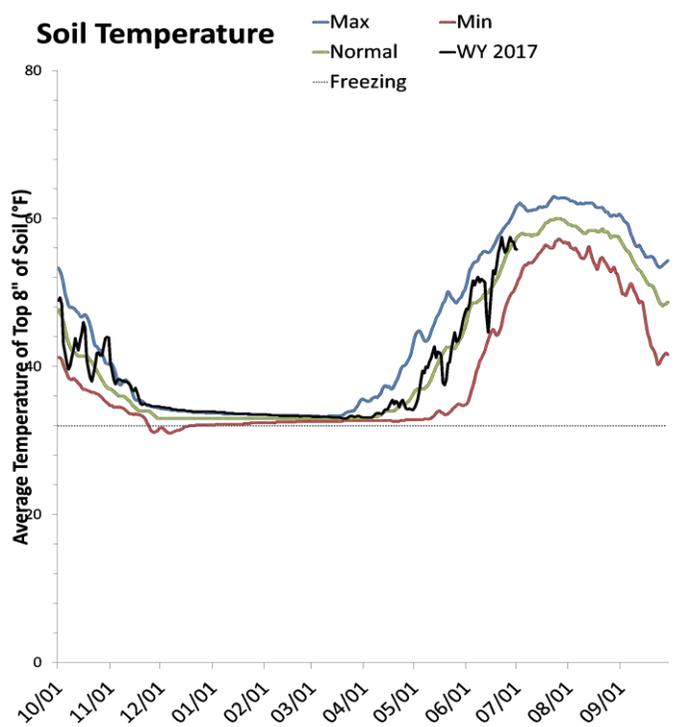
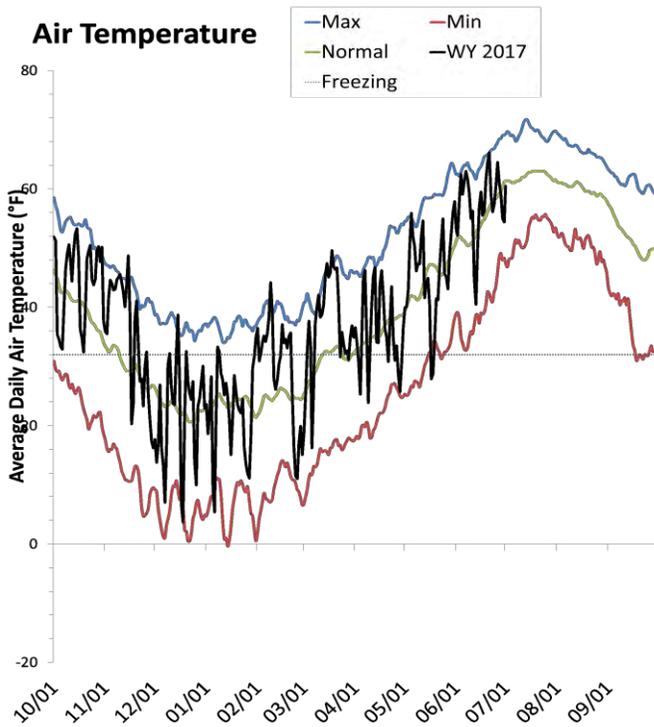
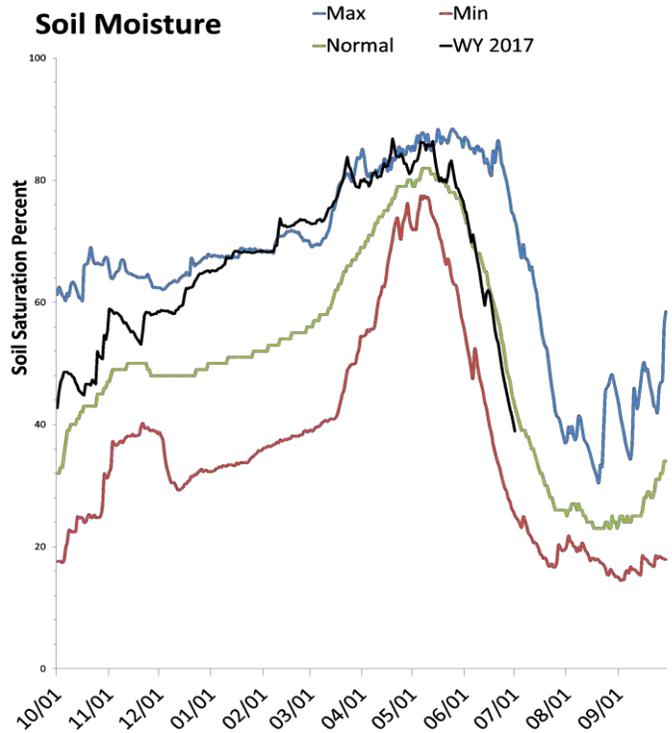
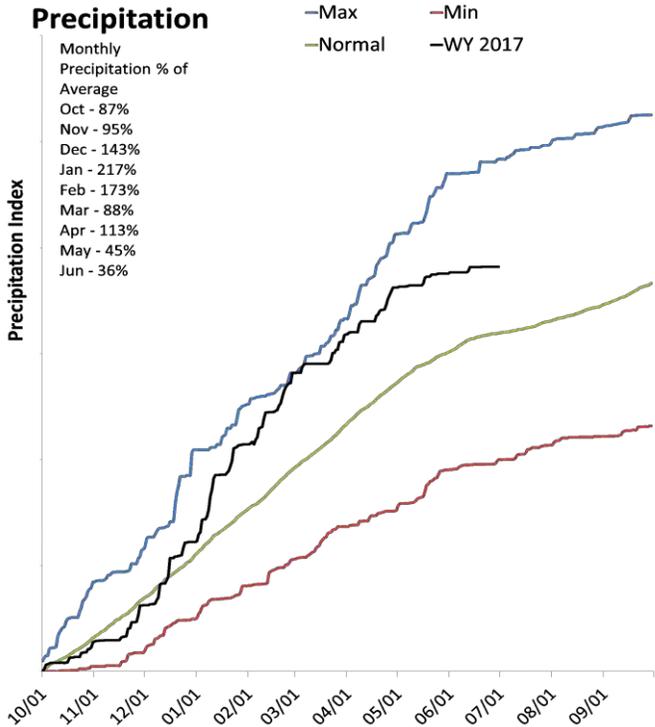
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Provo & Jordan River Basins

July 1, 2017

Precipitation in June was much below average at 36%, which brings the seasonal accumulation (Oct-Jun) to 120% of average. Soil moisture is at 39% compared to 35% last year. Reservoir storage is at 84% of capacity, compared to 69% last year. The water availability index for the Provo River is 91%.



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

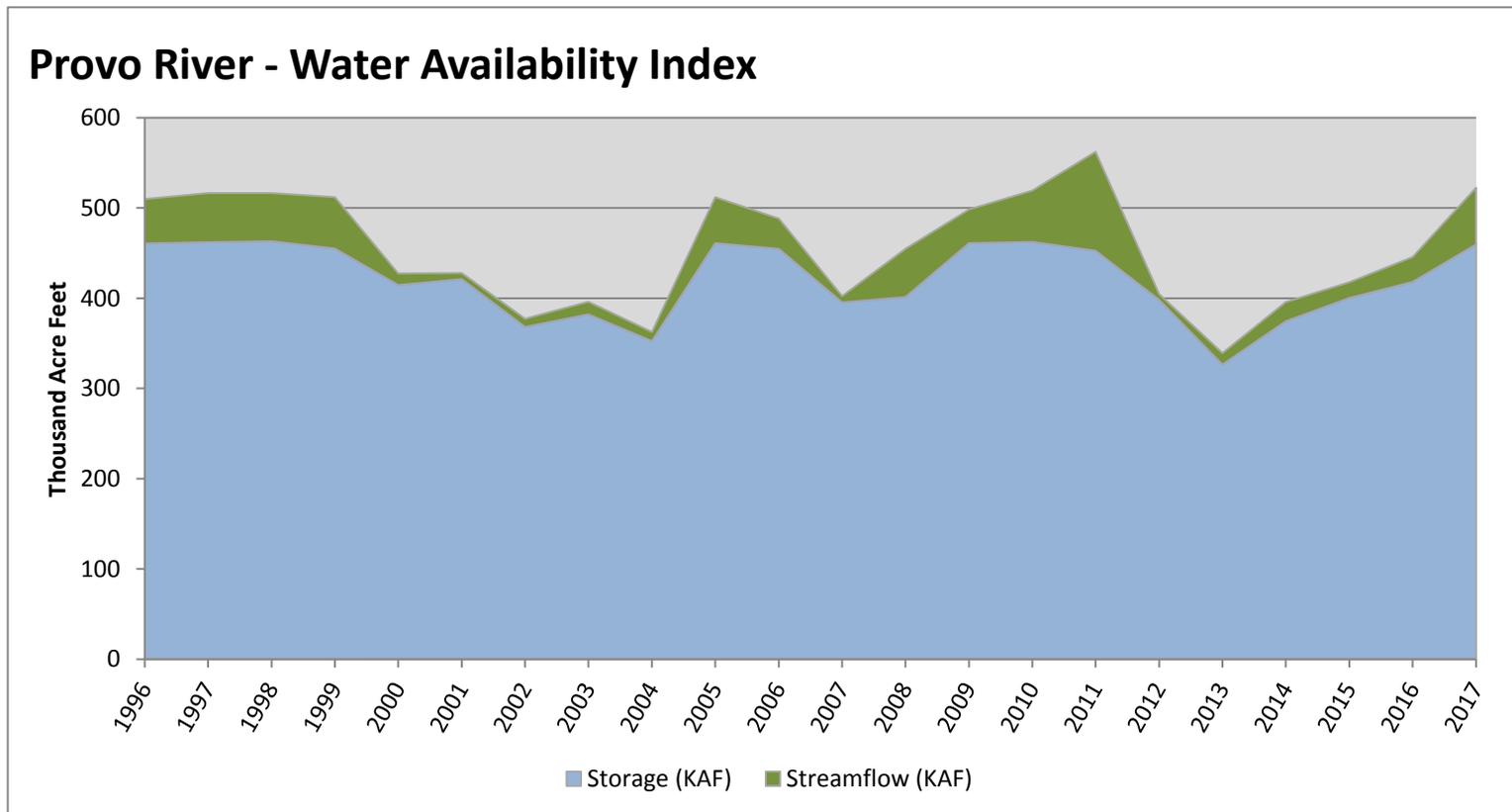
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Provo River</b>	<b>459.72</b>	<b>62.79</b>	<b>522.51</b>	<b>91</b>	<b>3.44</b>	<b>11, 10, 98, 97</b>

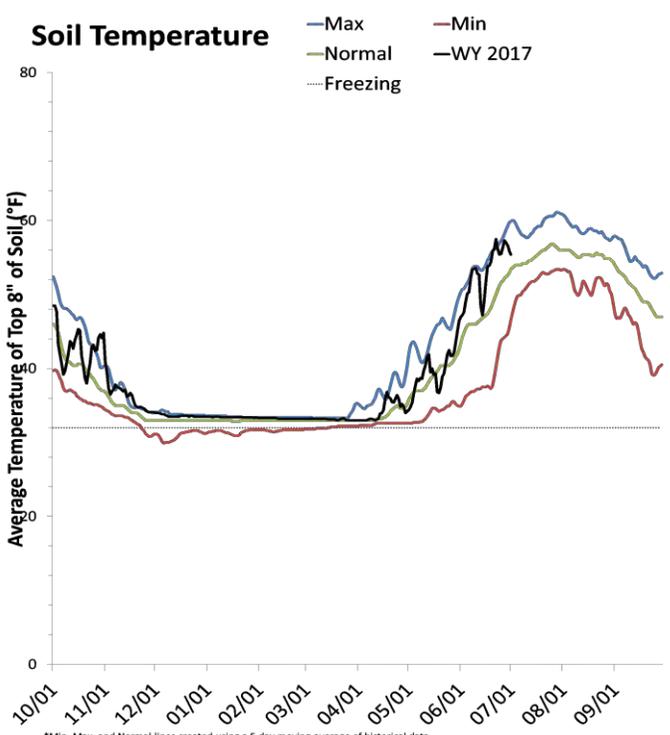
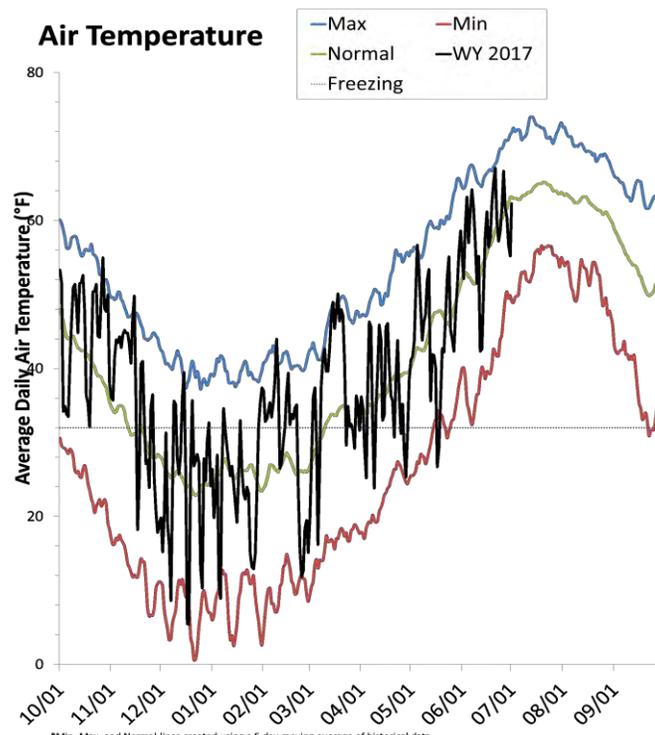
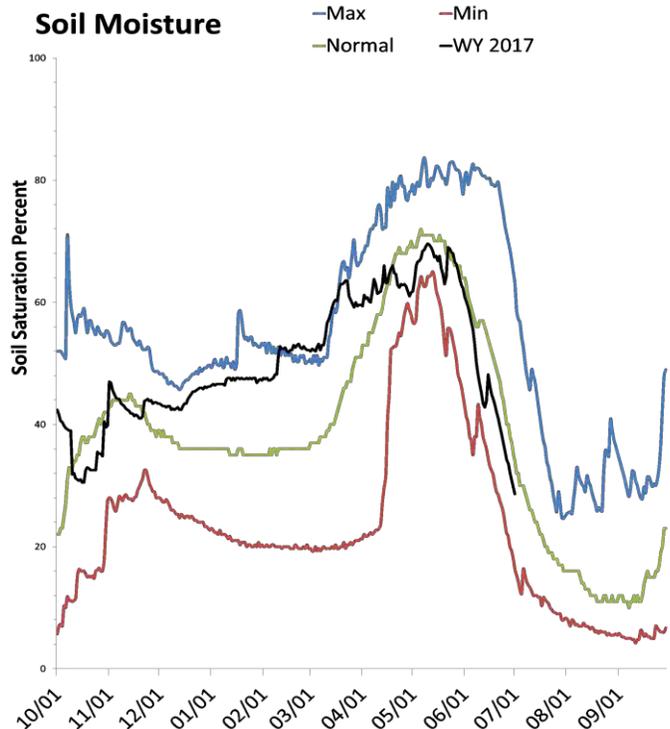
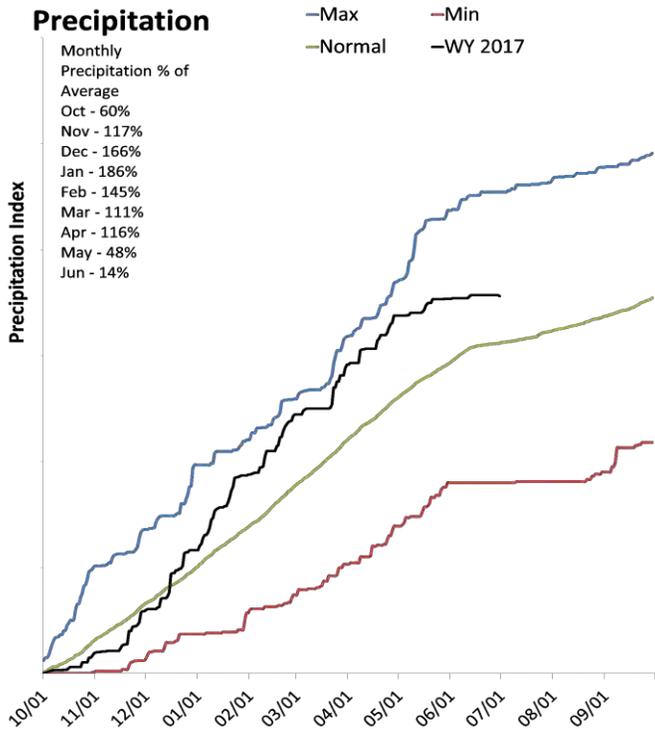
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Tooele Valley & West Desert Basins

July 1, 2017

Precipitation in June was much below average at 14%, which brings the seasonal accumulation (Oct-Jun) to 114% of average. Soil moisture is at 29% compared to 21% last year. Reservoir storage is at 84% of capacity, compared to 64% last year.



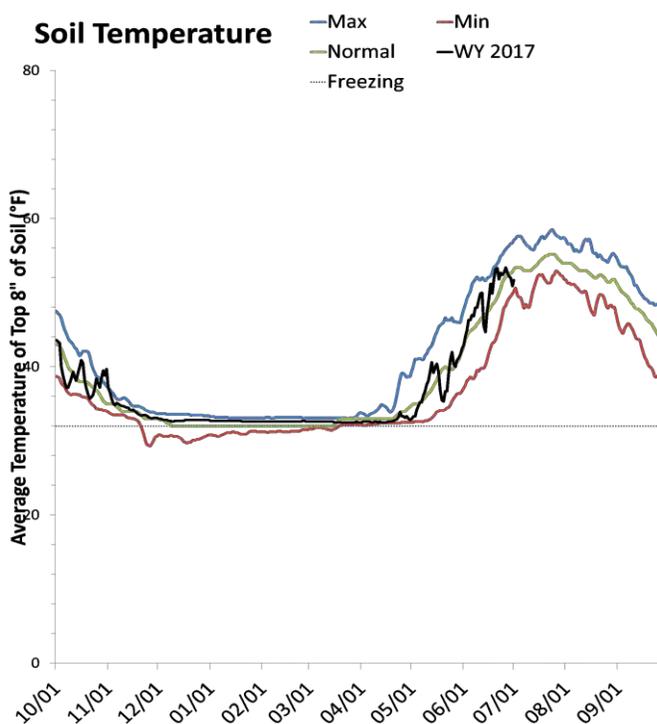
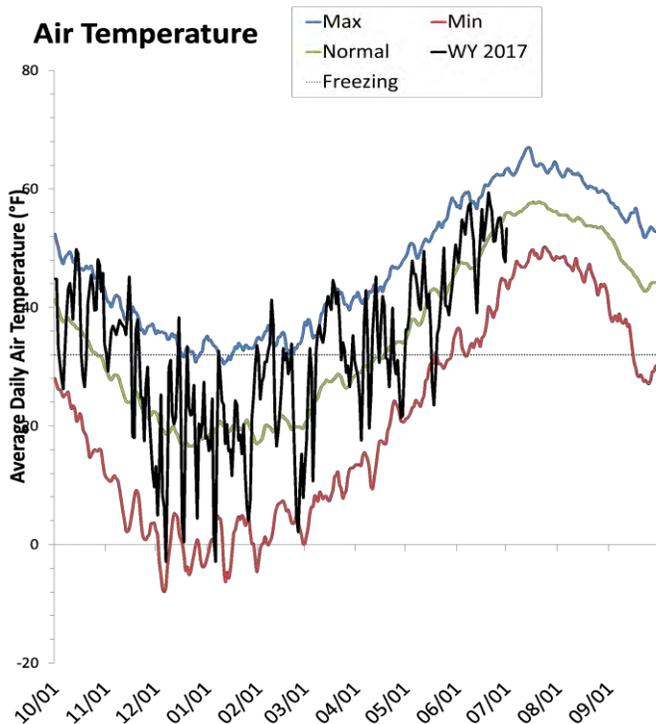
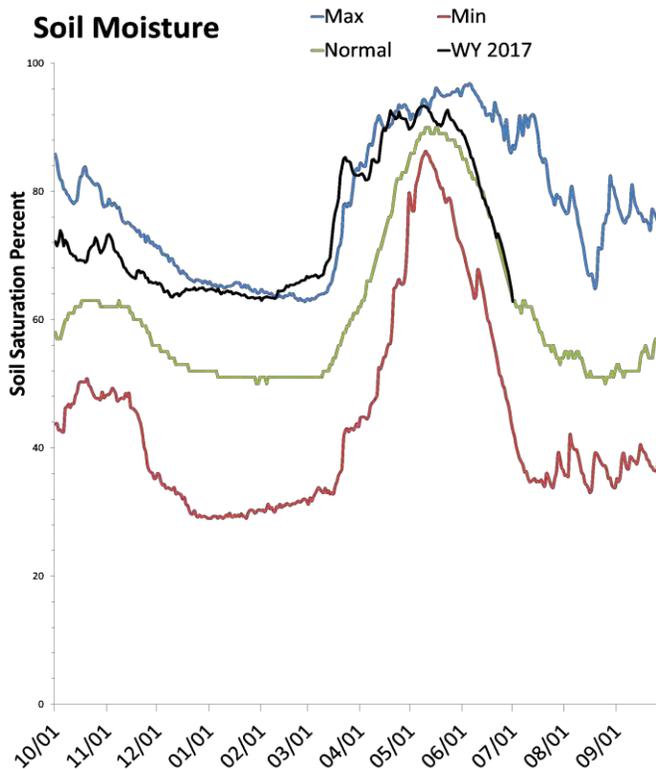
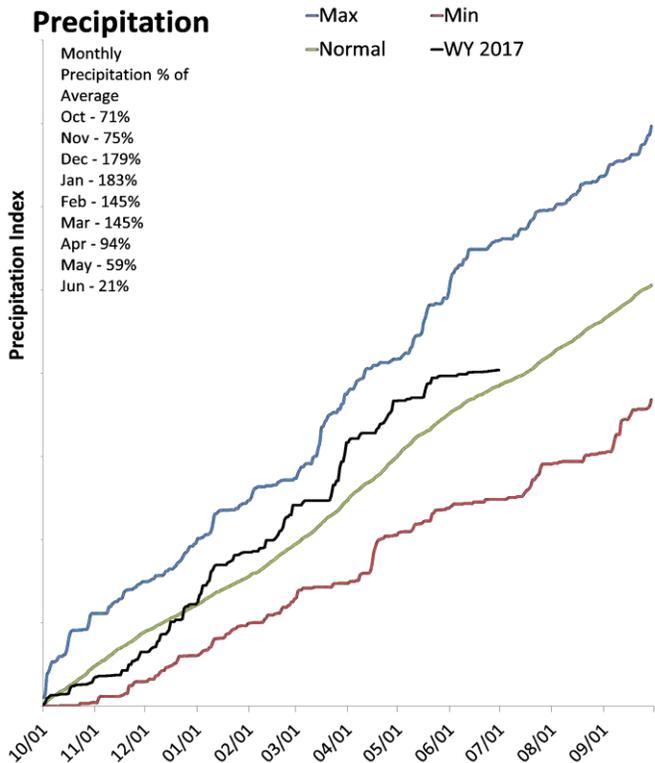
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

# Northeastern Uinta Basin

July 1, 2017

Precipitation in June was much below average at 21%, which brings the seasonal accumulation (Oct-Jun) to 105% of average. Soil moisture is at 61% compared to 68% last year. Reservoir storage is at 91% of capacity, compared to 90% last year. The water availability index for Blacks Fork is 74% and 85% for Smiths Creek.



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

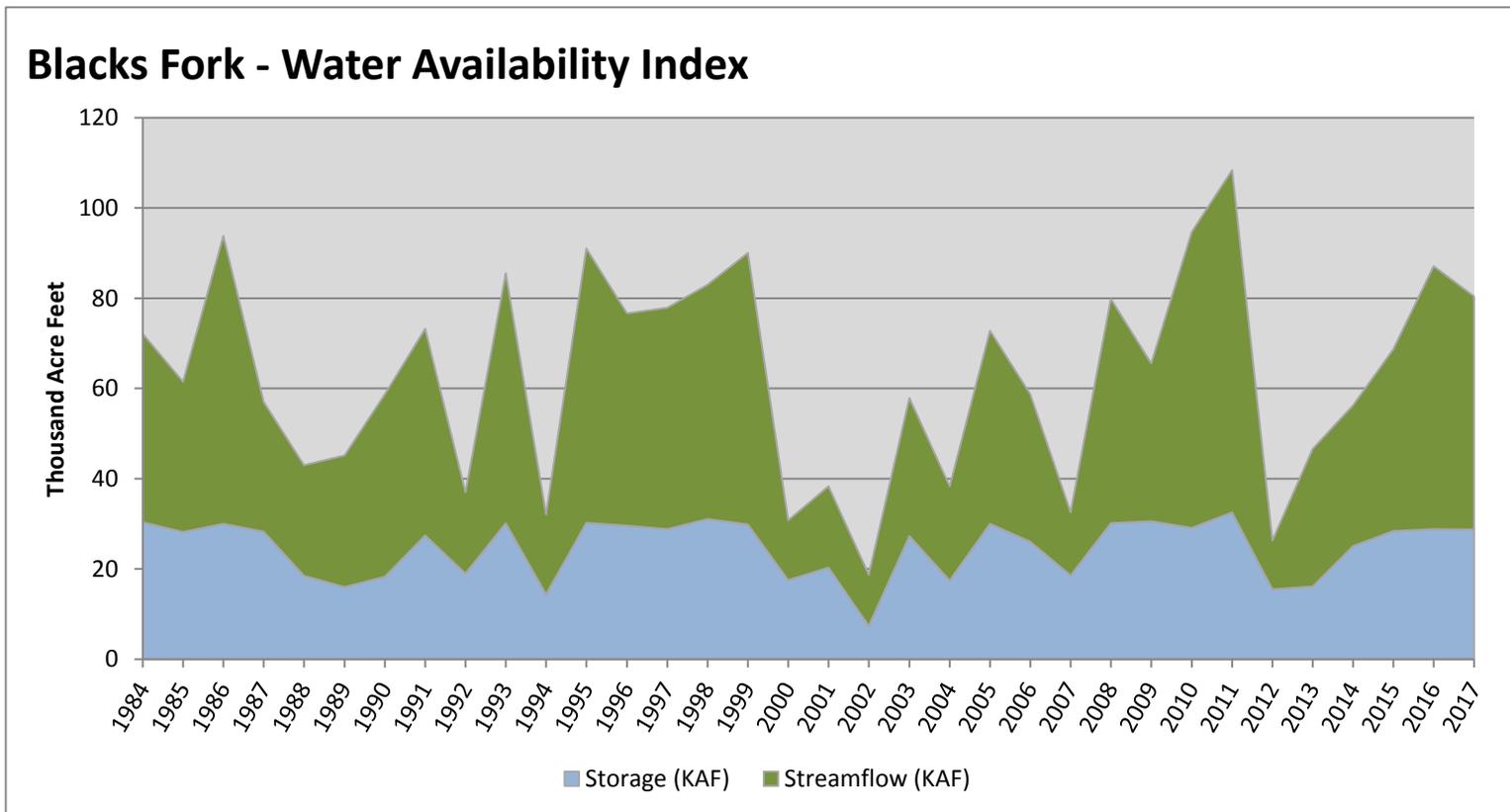
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Blacks Fork</b>	<b>28.79</b>	<b>51.60</b>	<b>80.39</b>	<b>74</b>	<b>2.02</b>	<b>97, 08, 98, 93</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

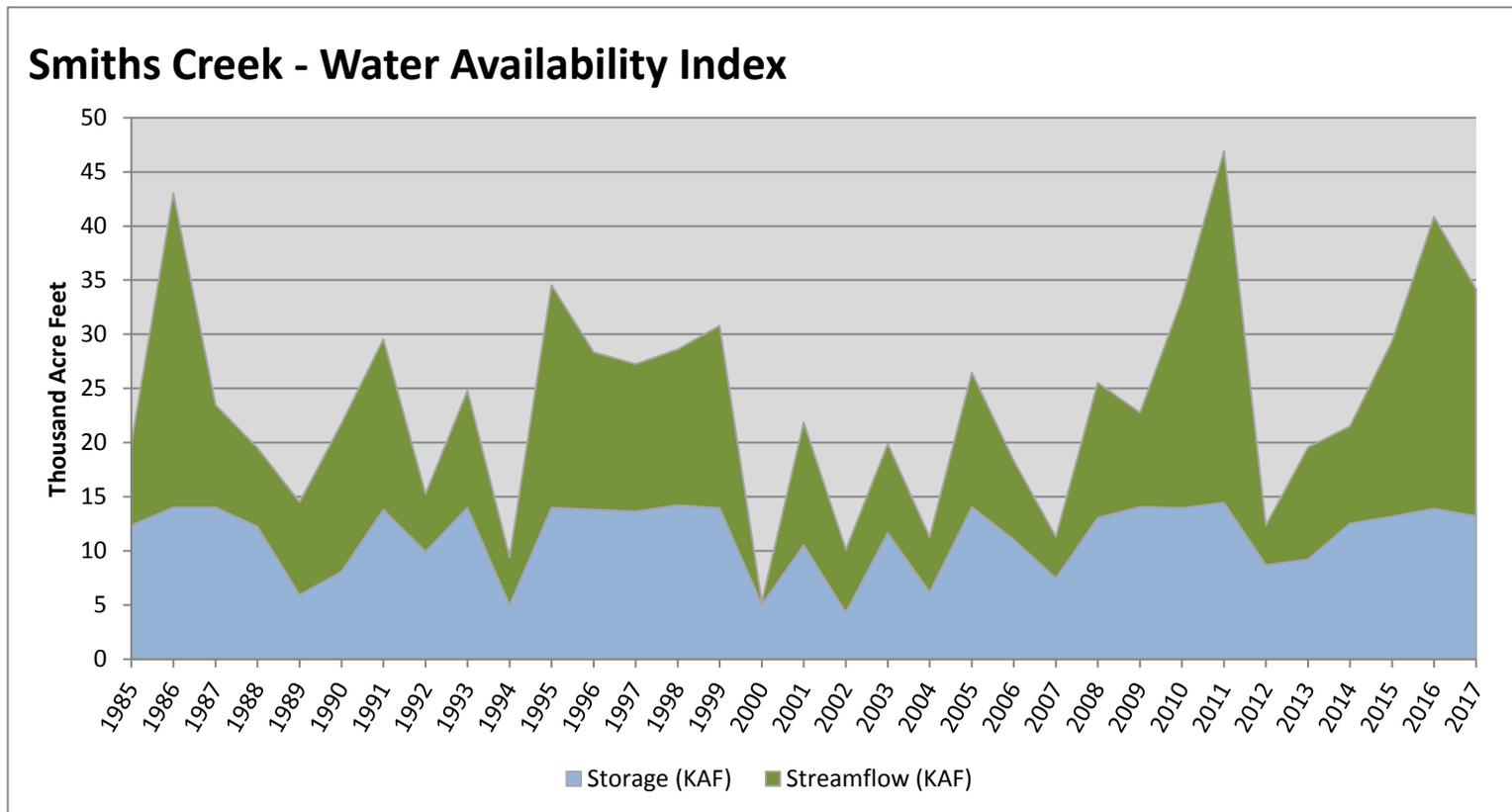


July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>^</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Smiths Creek</b>	<b>13.20</b>	<b>20.98</b>	<b>34.18</b>	<b>85</b>	<b>2.94</b>	<b>99, 10, 95, 16</b>

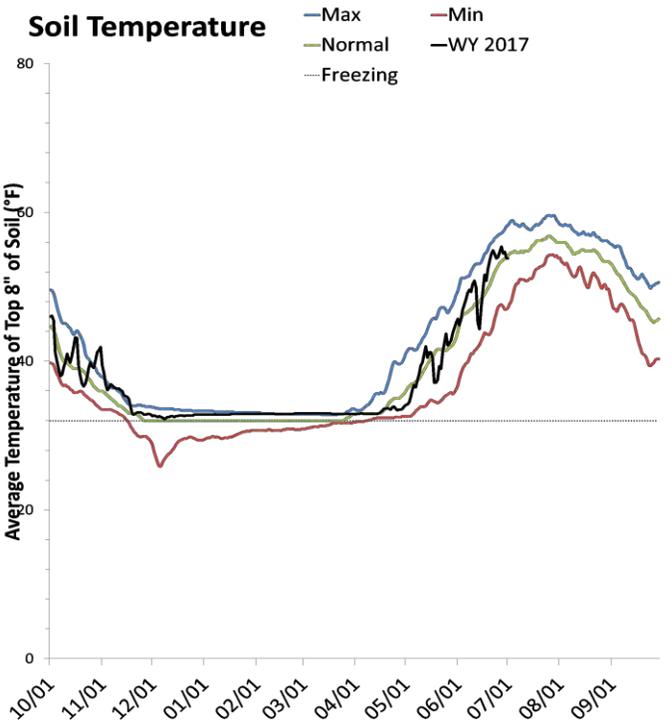
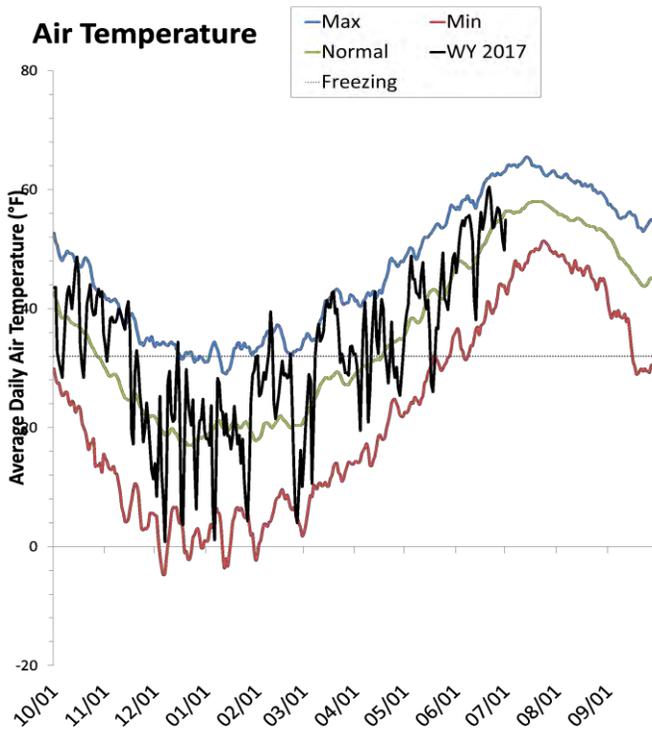
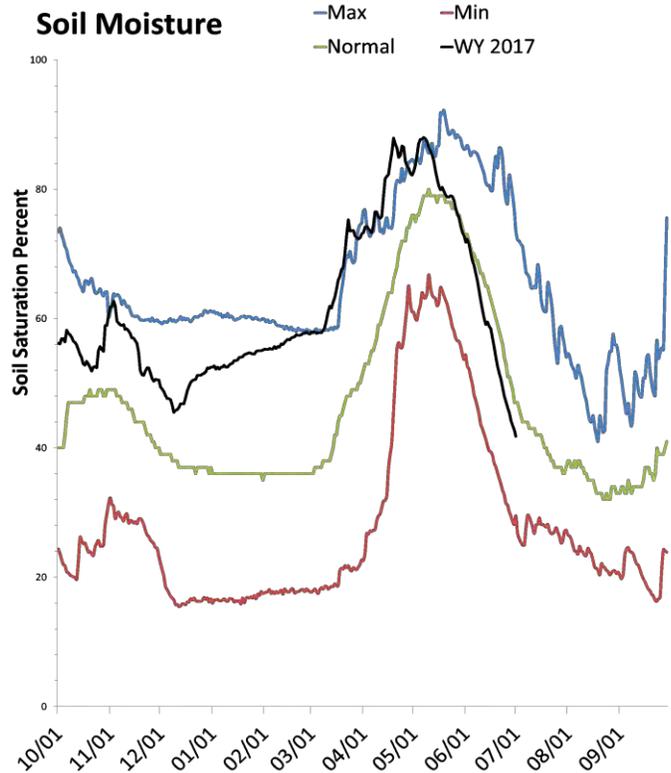
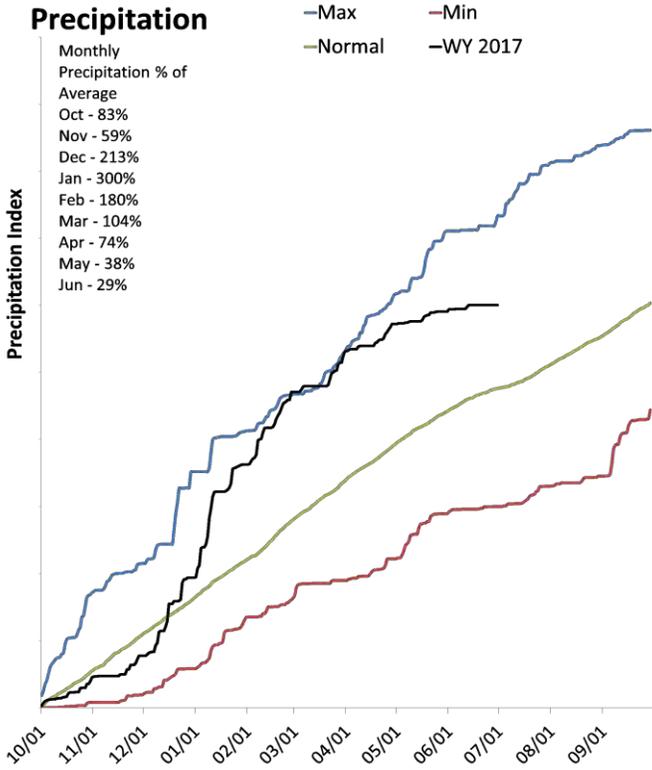
<sup>^</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Duchesne River Basin

July 1, 2017

Precipitation in June was much below average at 29%, which brings the seasonal accumulation (Oct-Jun) to 126% of average. Soil moisture is at 42% compared to 46% last year. Reservoir storage is at 87% of capacity, compared to 79% last year. The water availability index for the Western Uintas is 71% and 42% for the Eastern Uintas.



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

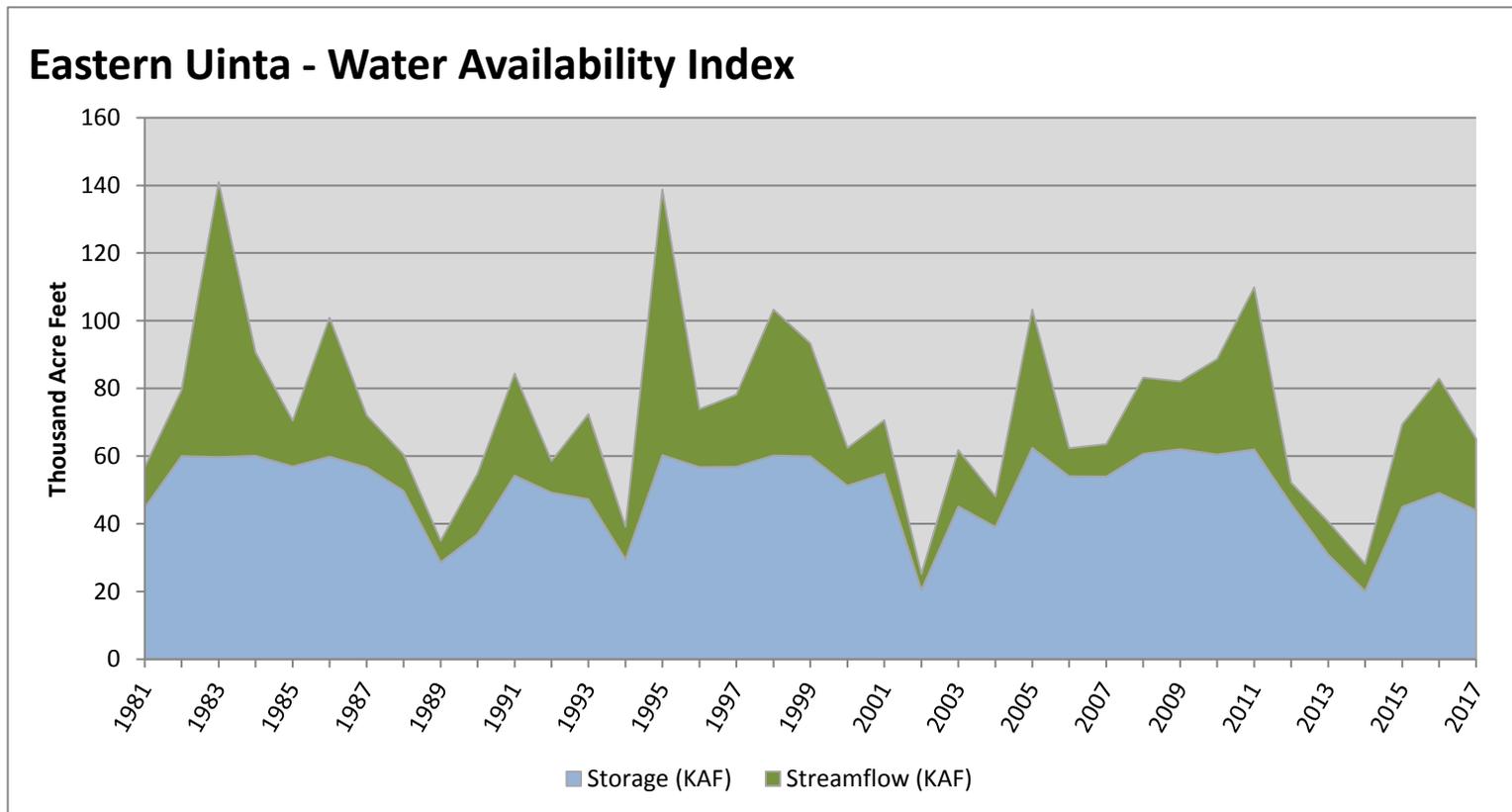
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Eastern Uinta</b>	<b>43.99</b>	<b>21.16</b>	<b>65.15</b>	<b>42</b>	<b>-0.66</b>	<b>00, 07, 15, 85</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

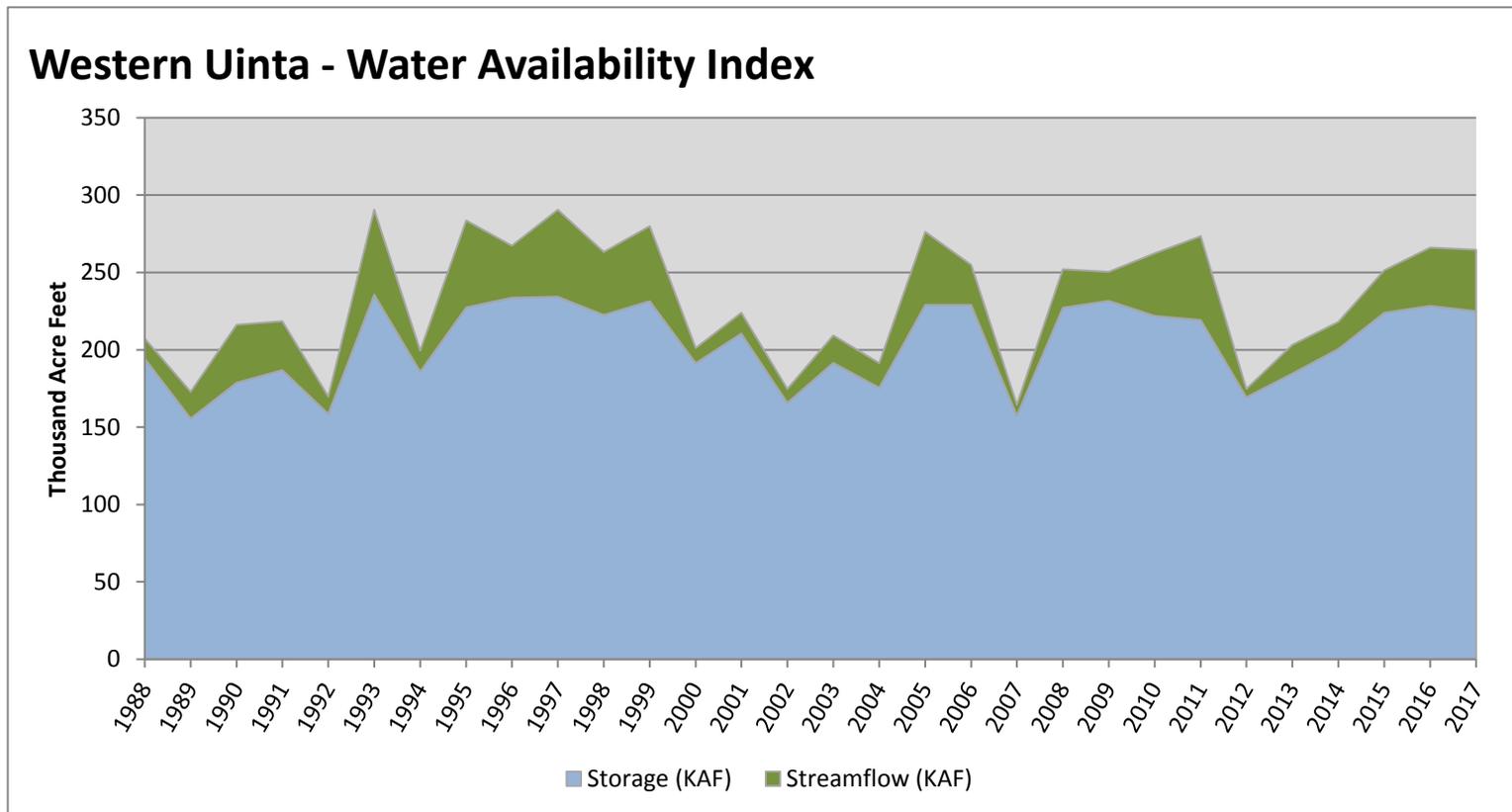


July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Western Uinta</b>	<b>224.88</b>	<b>39.80</b>	<b>264.68</b>	<b>71</b>	<b>1.75</b>	<b>10, 98, 16, 96</b>

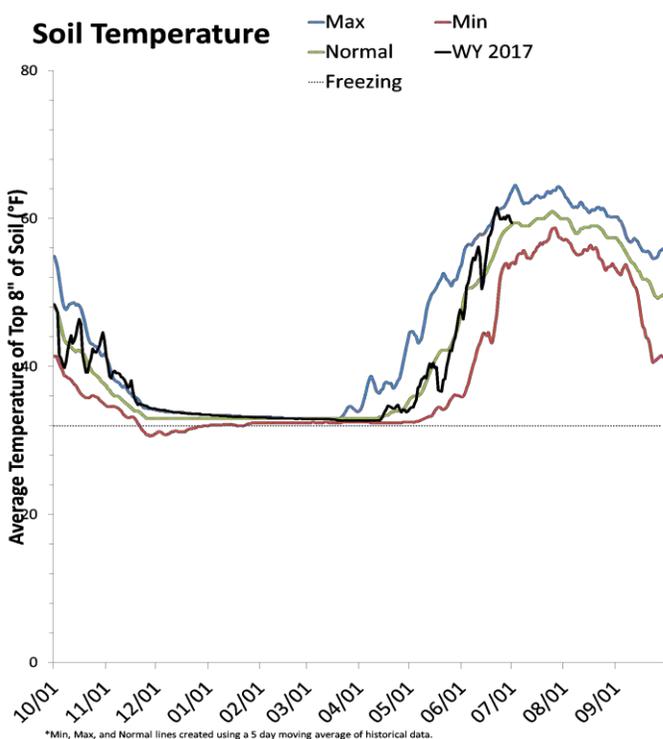
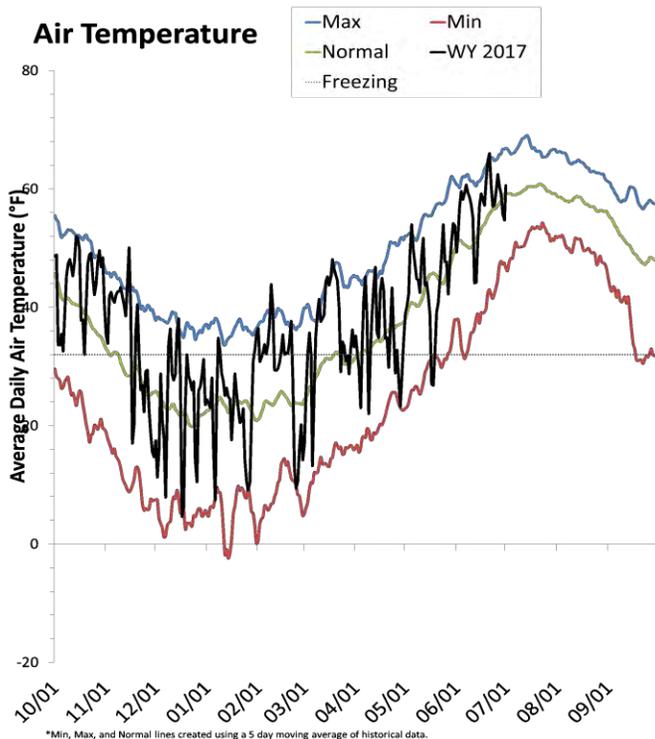
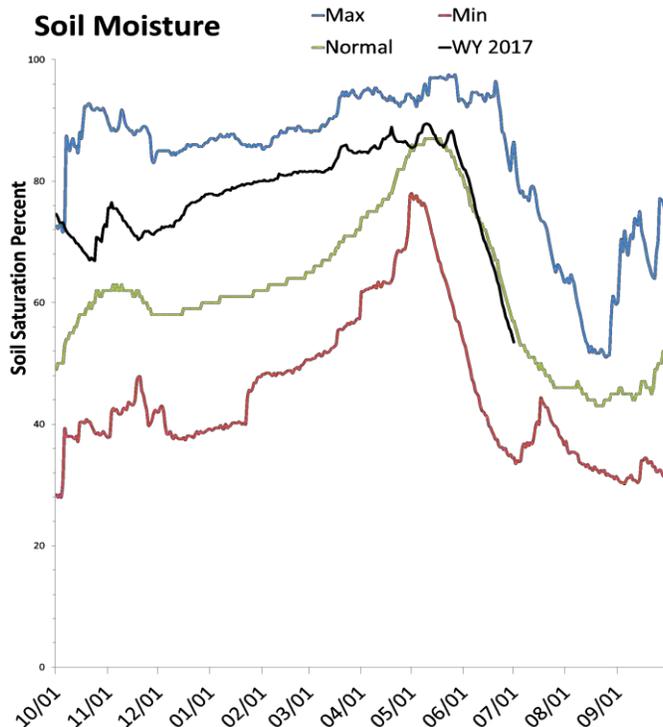
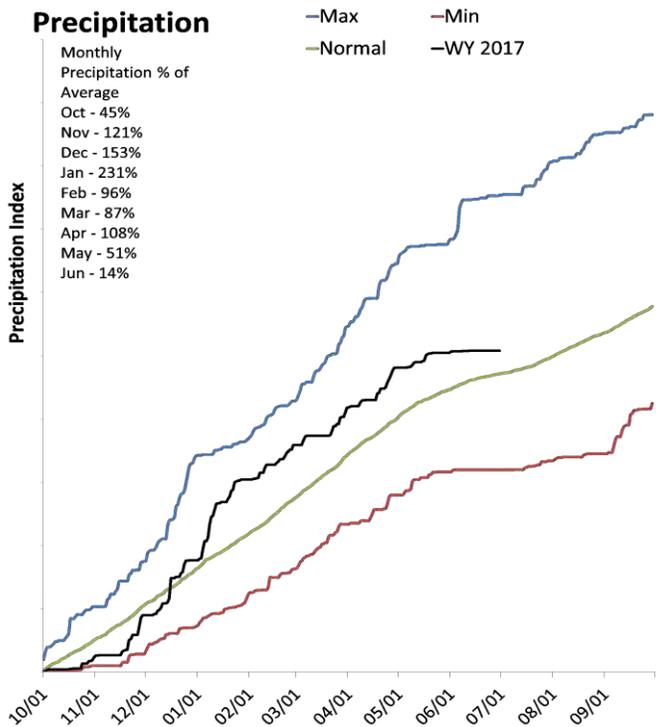
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# San Pitch River Basin

July 1, 2017

Precipitation in June was much below average at 15%, which brings the seasonal accumulation (Oct-Jun) to 108% of average. Soil Moisture is at 54% compared to 54% last year. Reservoir storage is at 71% of capacity, compared to 8% last year. The water availability index for the San Pitch is 53%.



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

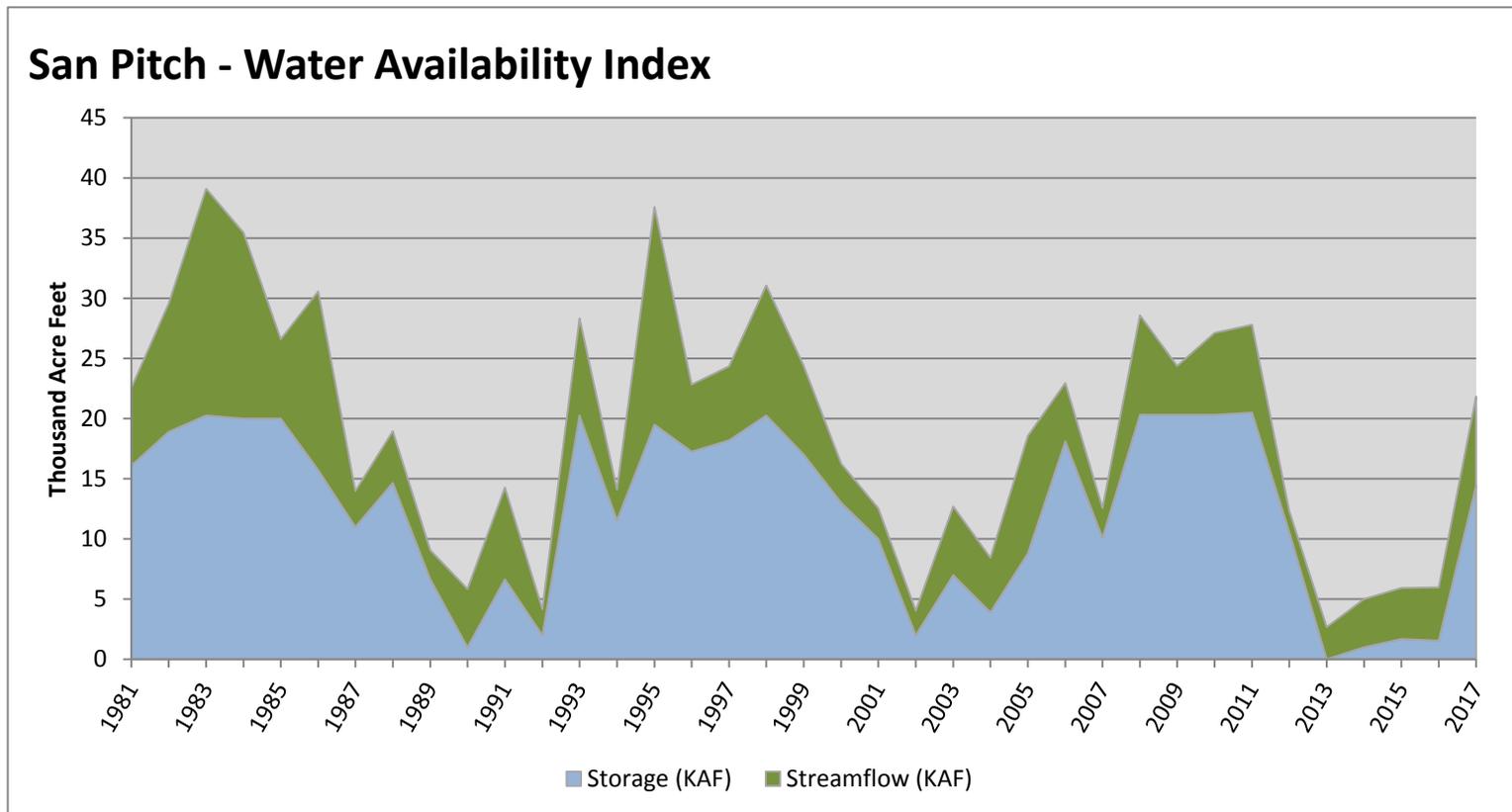
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>San Pitch</b>	<b>14.42</b>	<b>7.40</b>	<b>21.82</b>	<b>53</b>	<b>0.22</b>	<b>05, 88, 81, 96</b>

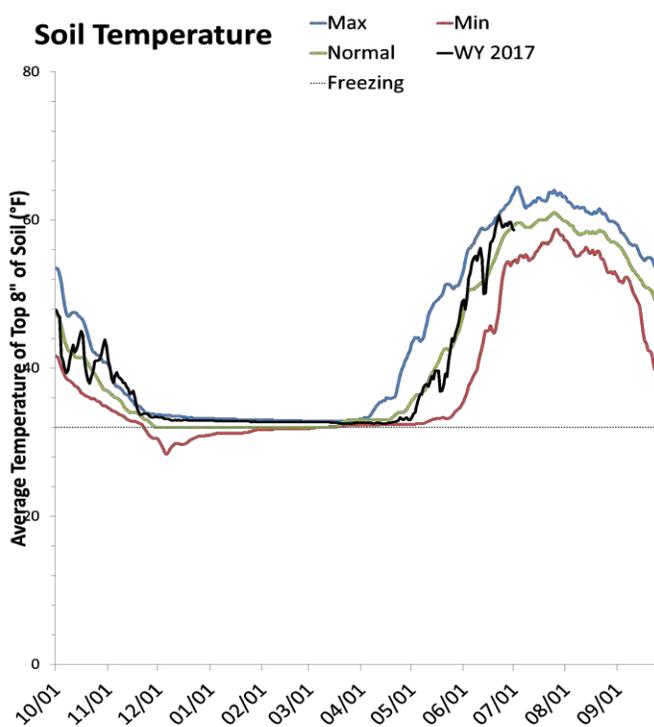
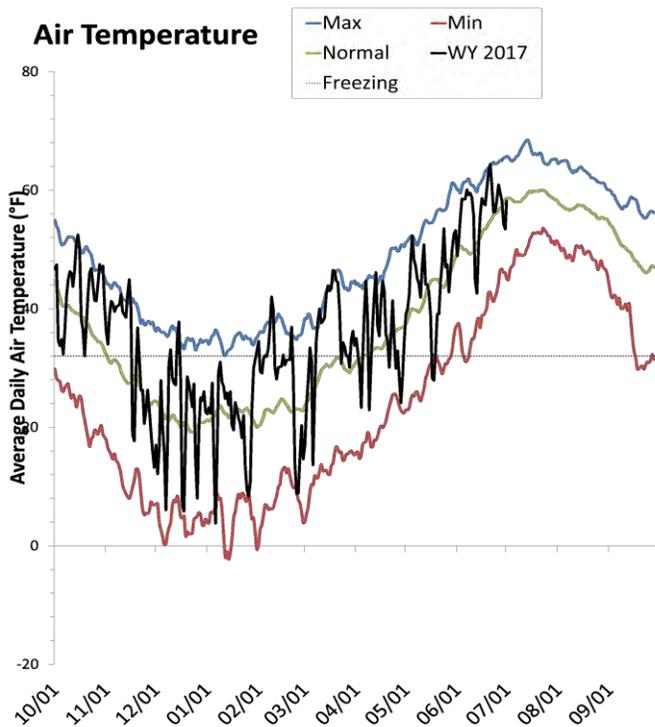
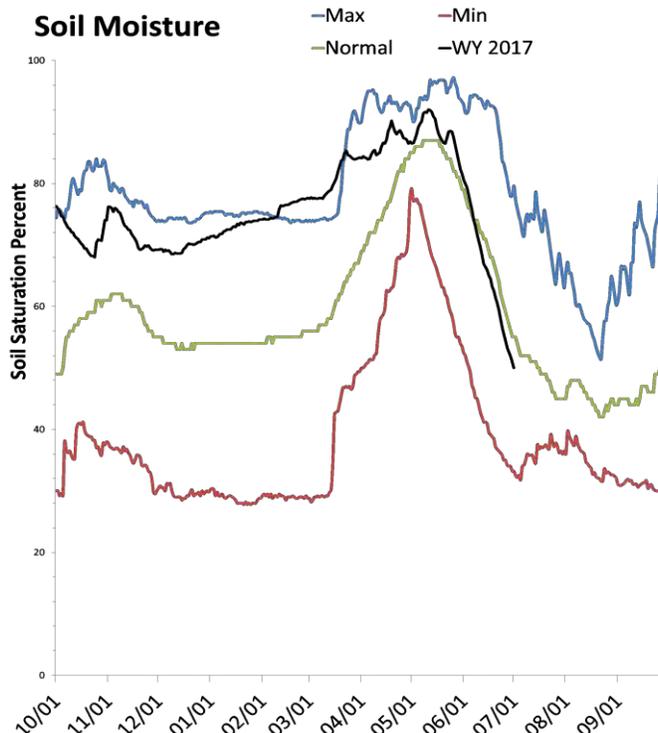
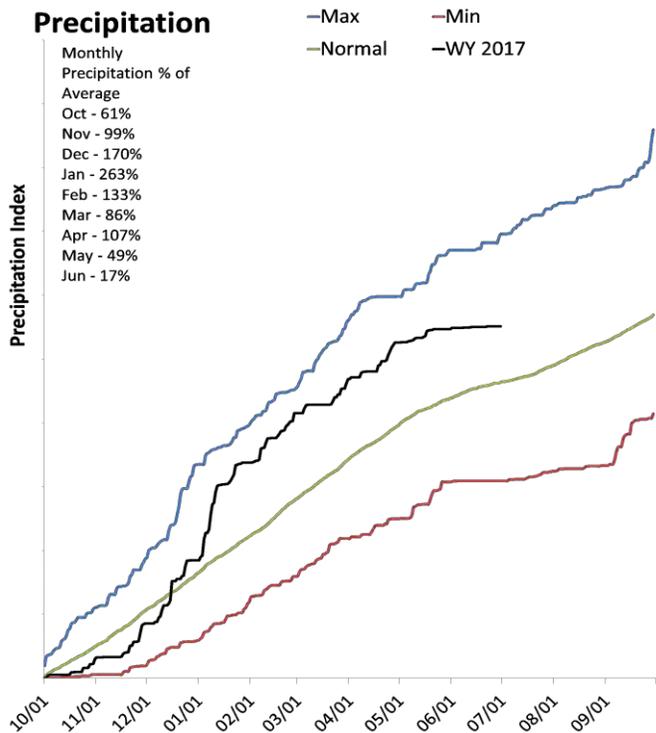
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Price & San Rafael Basins

July 1, 2017

Precipitation in June was much below average at 18%, which brings the seasonal accumulation (Oct-Jun) to 119% of average. Soil moisture is at 50% compared to 52% last year. Reservoir storage is at 99% of capacity, compared to 61% last year. The water availability index for the Price River is 74%, and 61% for Joe's Valley.



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

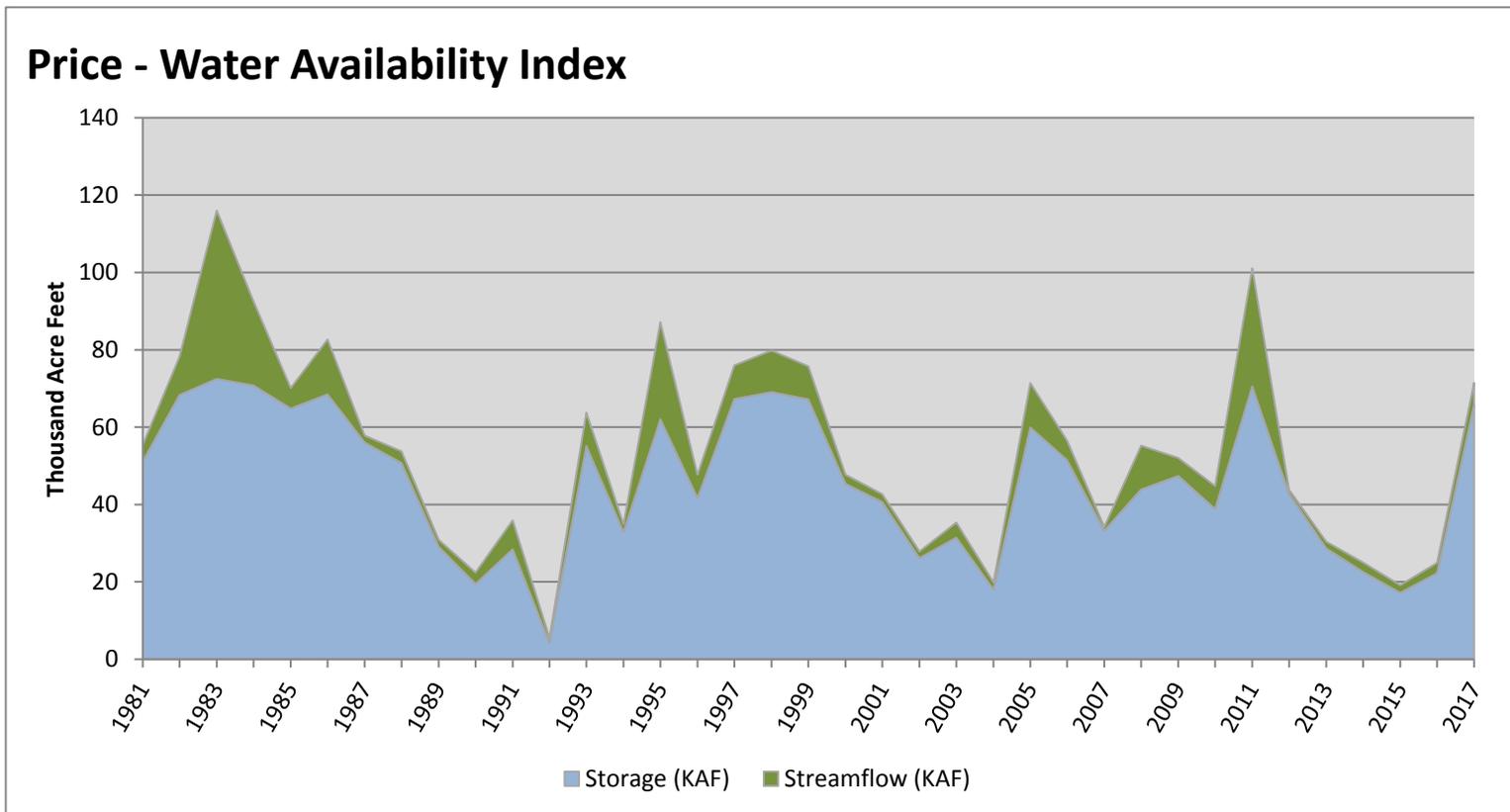
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Price</b>	<b>65.81</b>	<b>5.71</b>	<b>71.52</b>	<b>74</b>	<b>1.97</b>	<b>85, 05, 99, 97</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.

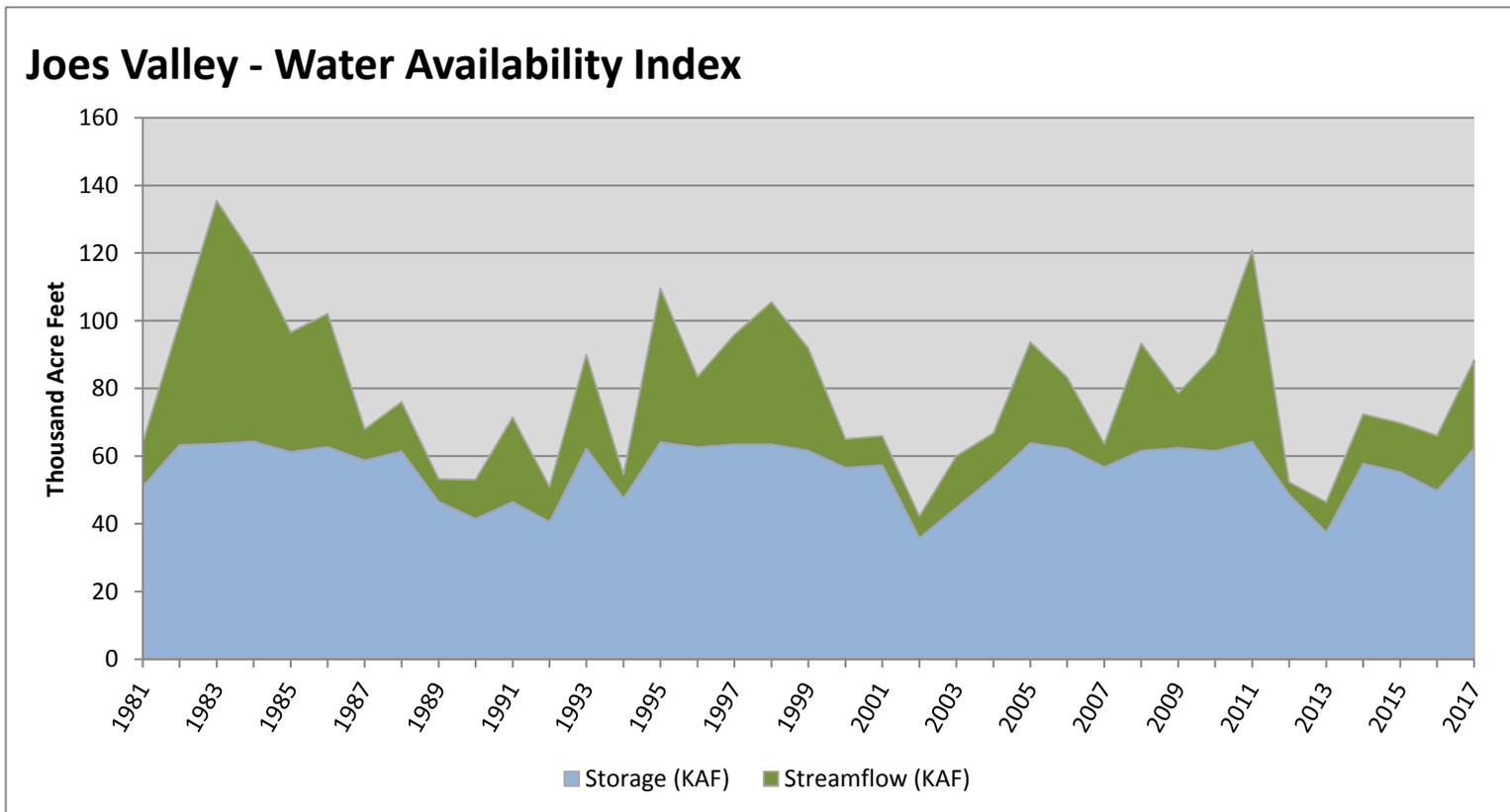


July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Joese Valley</b>	<b>62.22</b>	<b>26.08</b>	<b>88.30</b>	<b>61</b>	<b>0.88</b>	<b>06, 96, 93, 10</b>

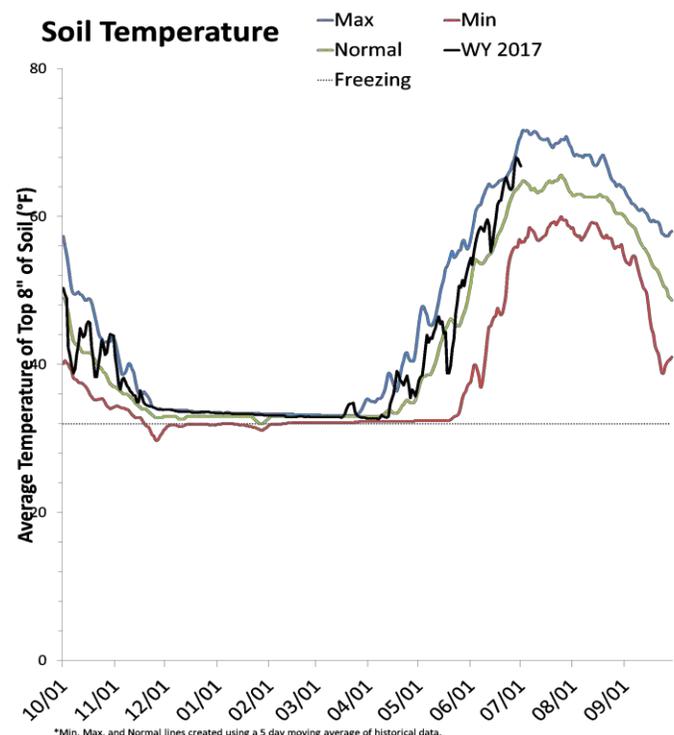
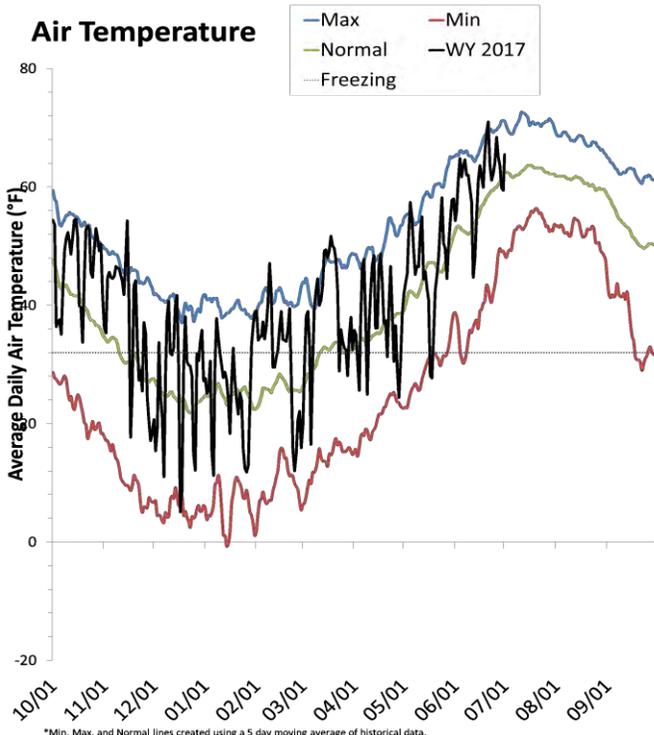
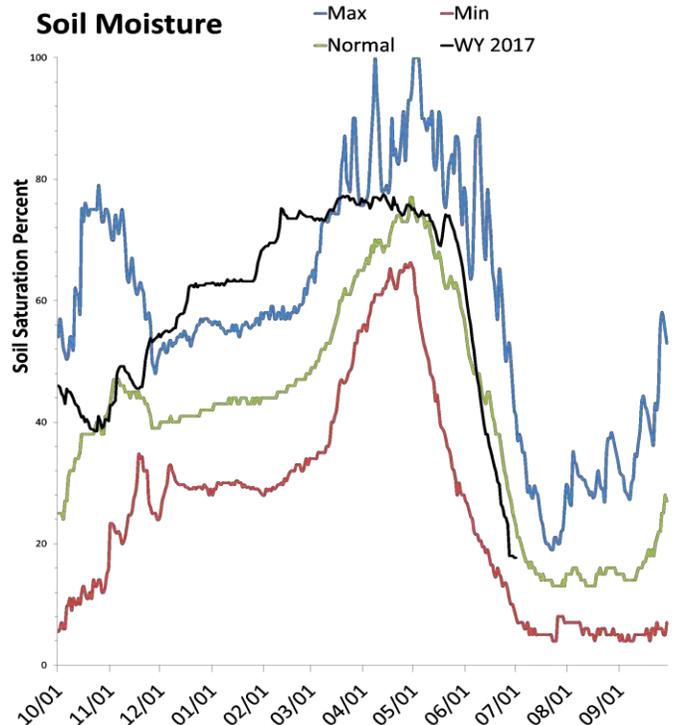
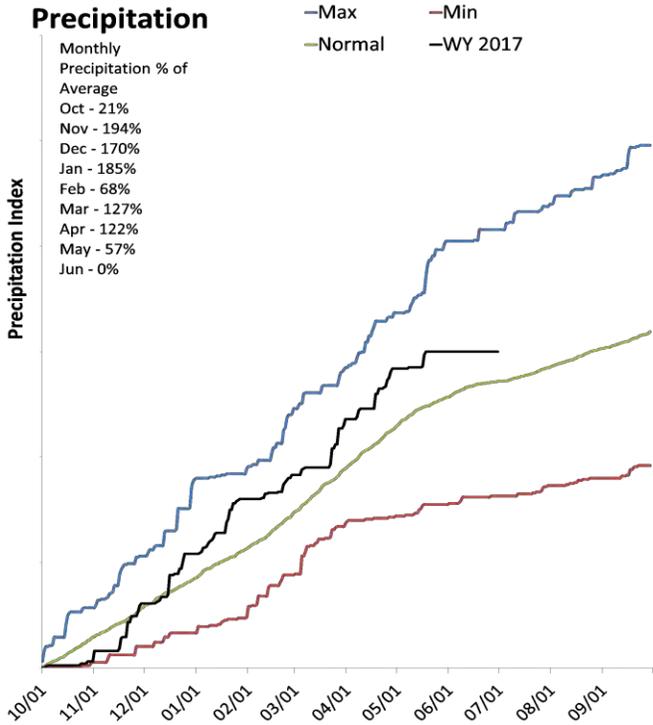
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Lower Sevier Basin

July 1, 2017

Precipitation in June was much below average at 0%, which brings the seasonal accumulation (Oct-Jun) to 110% of average. Soil moisture is at 22% compared to 19% last year. Reservoir storage is at 22% of capacity, compared to 23% 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.

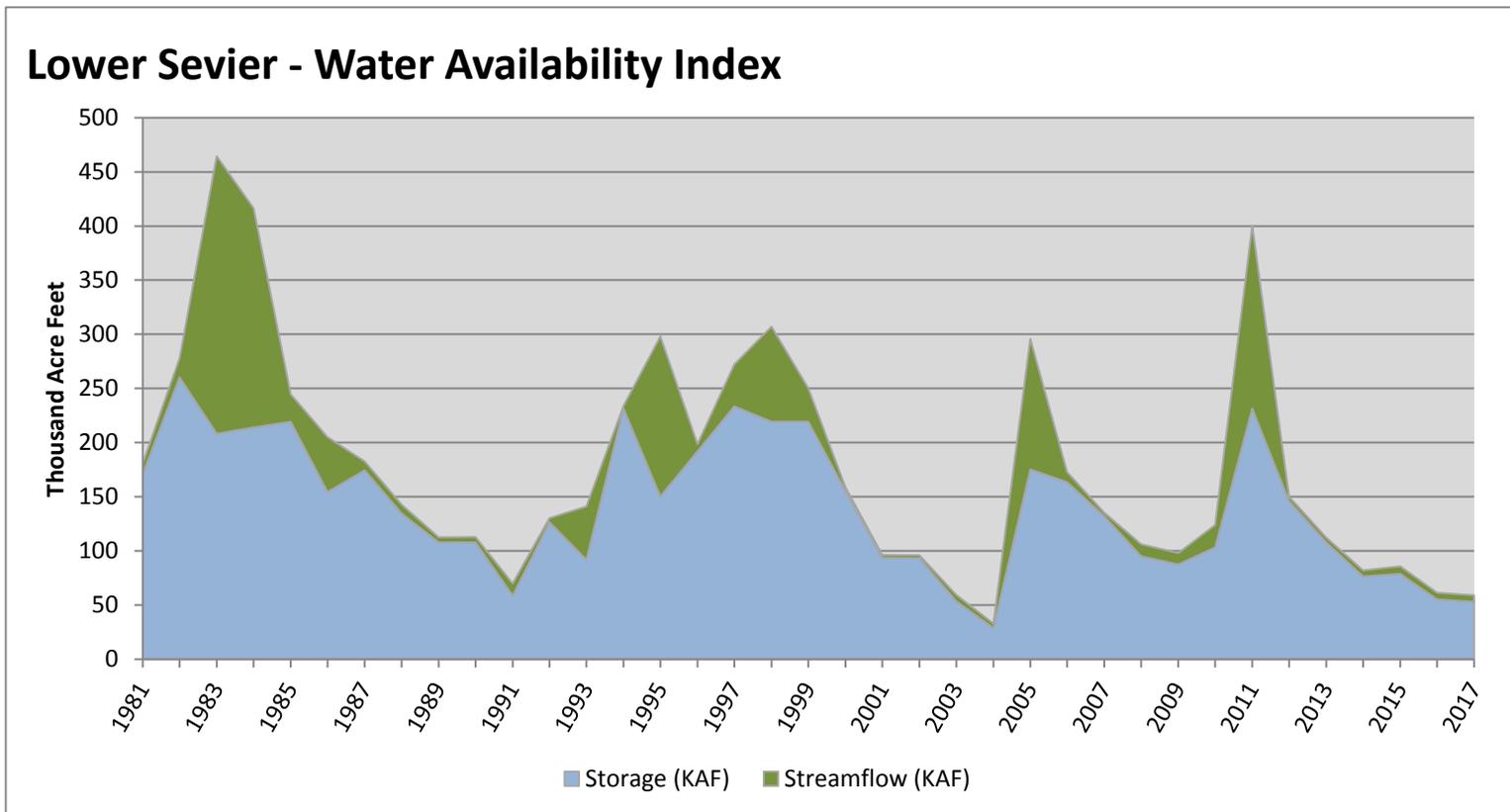
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Lower Sevier</b>	<b>53.00</b>	<b>5.90</b>	<b>58.90</b>	<b>5</b>	<b>-3.73</b>	<b>04, 03, 16, 91</b>

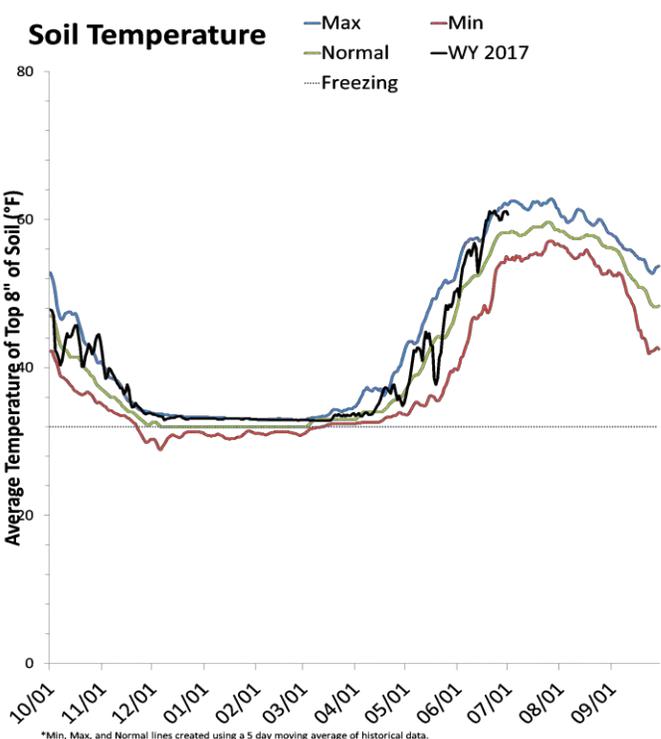
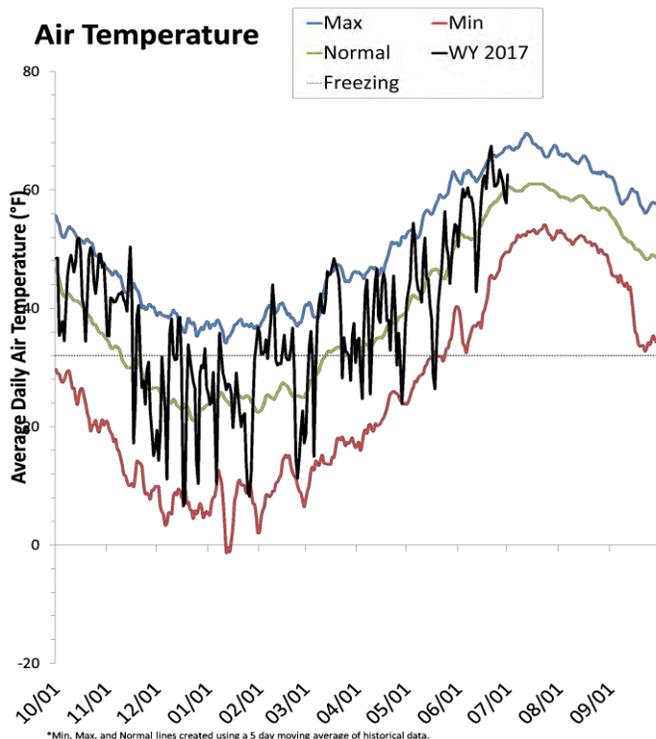
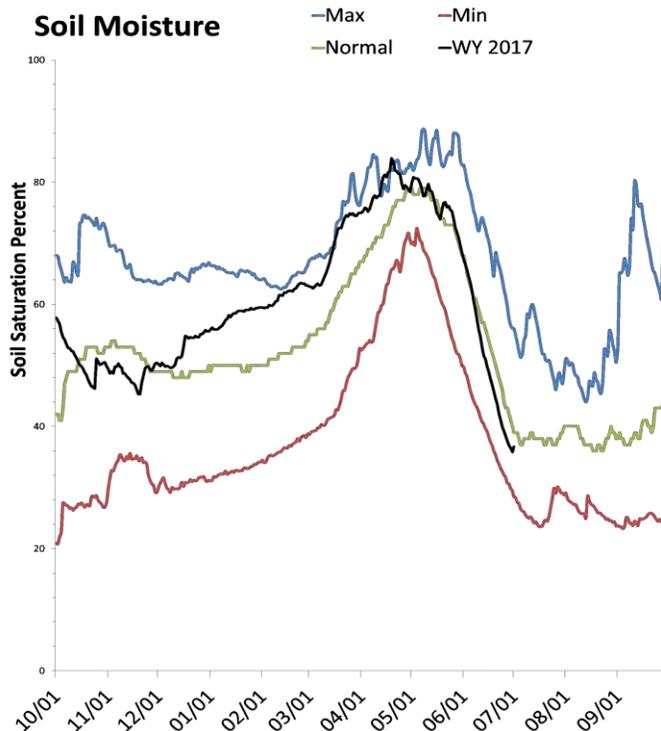
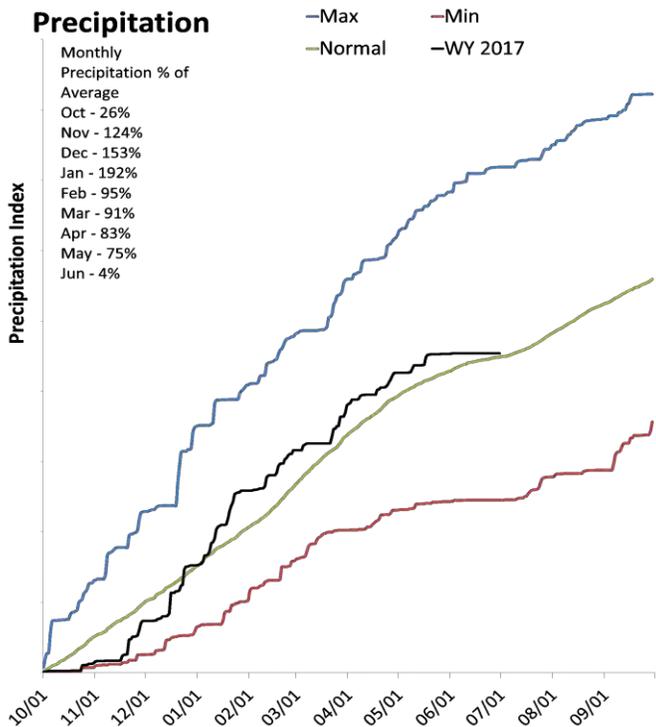
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Upper Sevier Basin

July 1, 2017

Precipitation in June was much below average at 4%, which brings the seasonal accumulation (Oct-Jun) to 101% of average. Soil moisture is at 36% compared to 37% last year. Reservoir storage is at 59% of capacity, compared to 56% last year. The water availability index for the Upper Sevier is 47%.



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

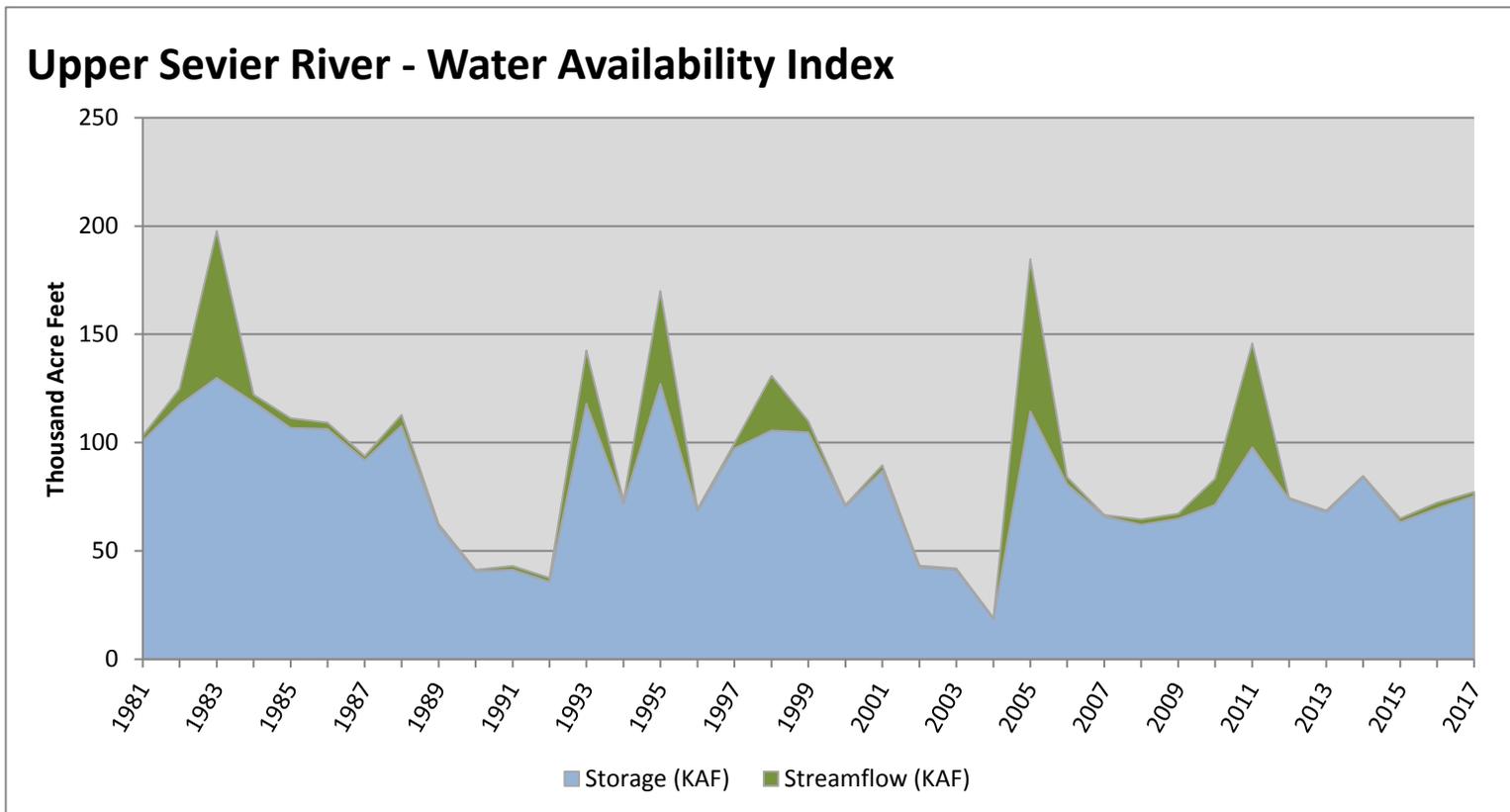
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Upper Sevier River</b>	<b>75.37</b>	<b>1.79</b>	<b>77.16</b>	<b>47</b>	<b>-0.22</b>	<b>94, 12, 10, 06</b>

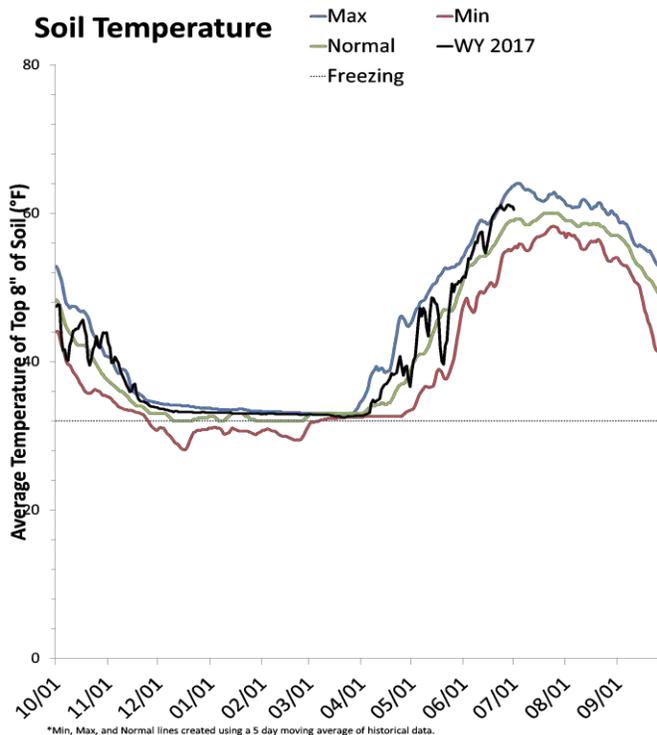
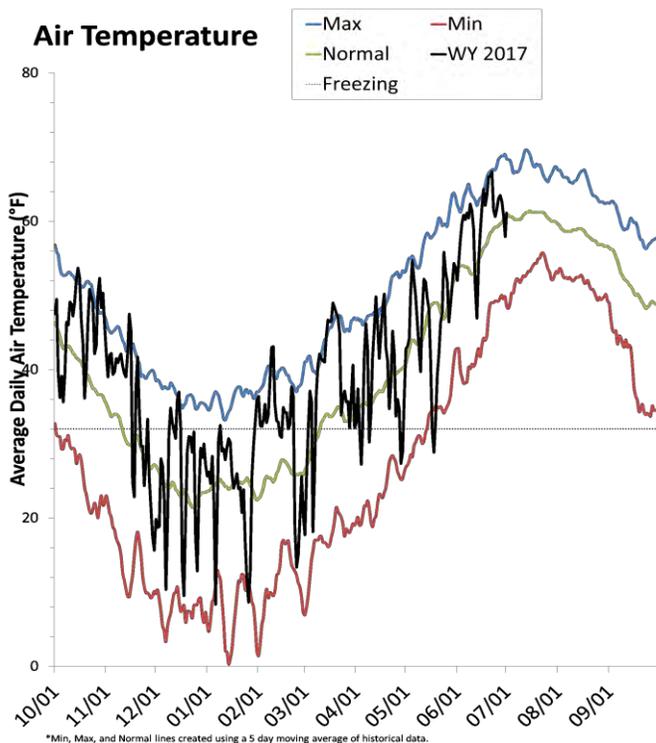
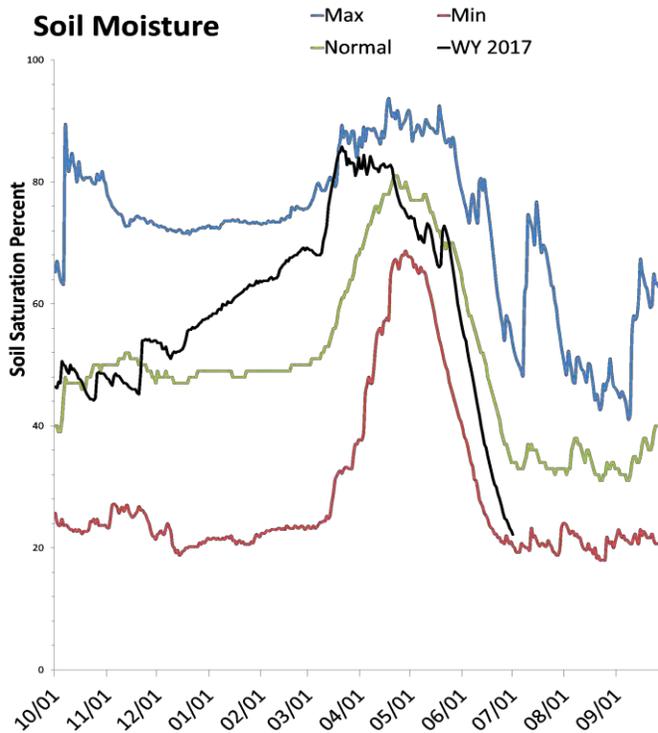
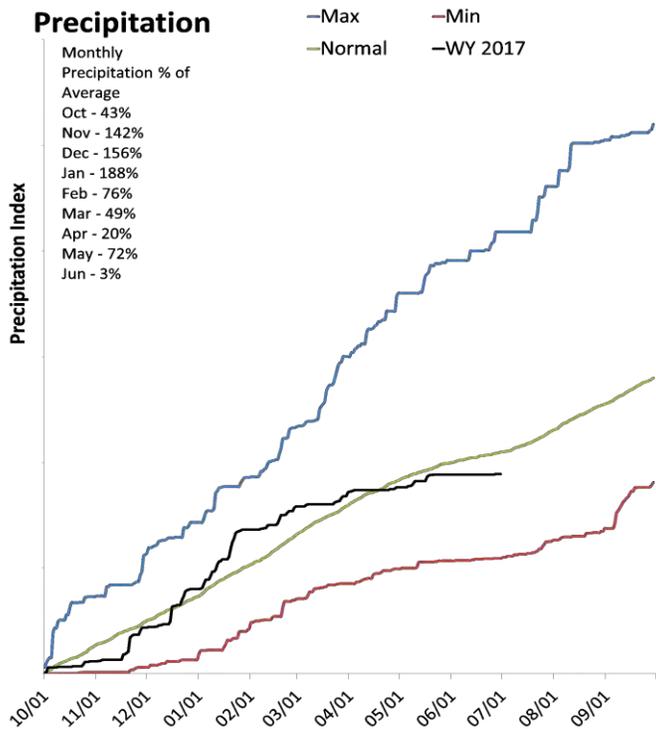
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Southeastern Utah

July 1, 2017

Precipitation in June was much below average at 3%, which brings the seasonal accumulation (Oct-Jun) to 90% of average. Soil moisture is at 22% compared to 42% last year. Reservoir storage is at 105% of capacity, compared to 111% last year. The water availability index for Moab is 68%.



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

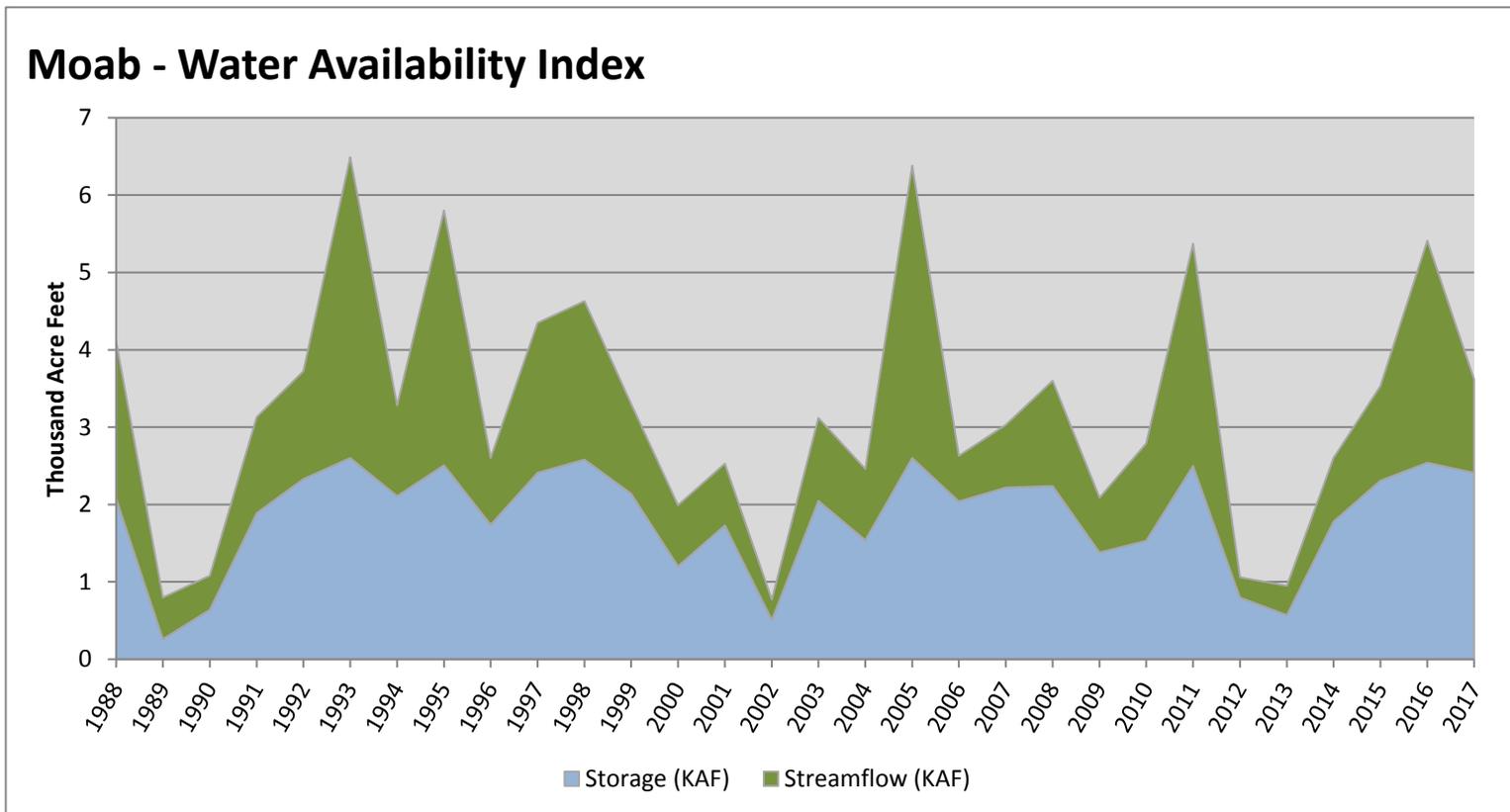
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Moab</b>	<b>2.41</b>	<b>1.21</b>	<b>3.62</b>	<b>68</b>	<b>1.48</b>	<b>15, 08, 92, 88</b>

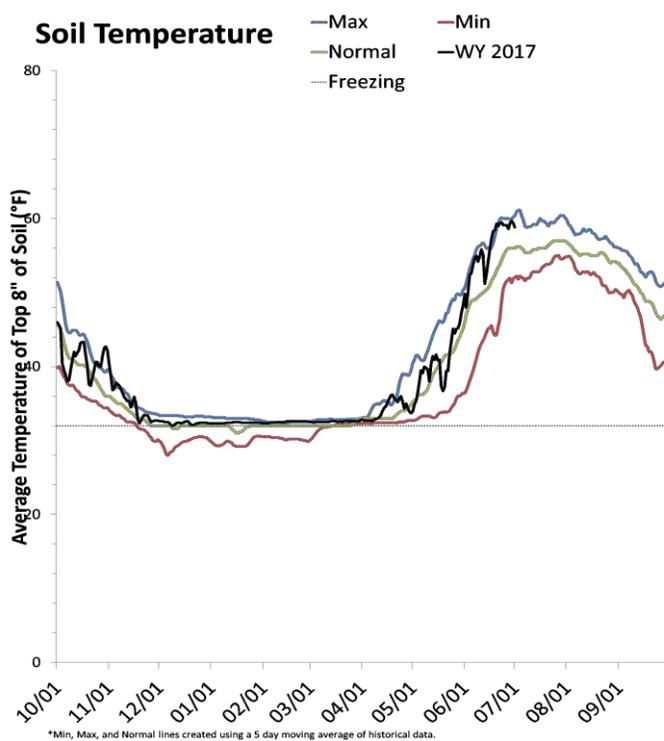
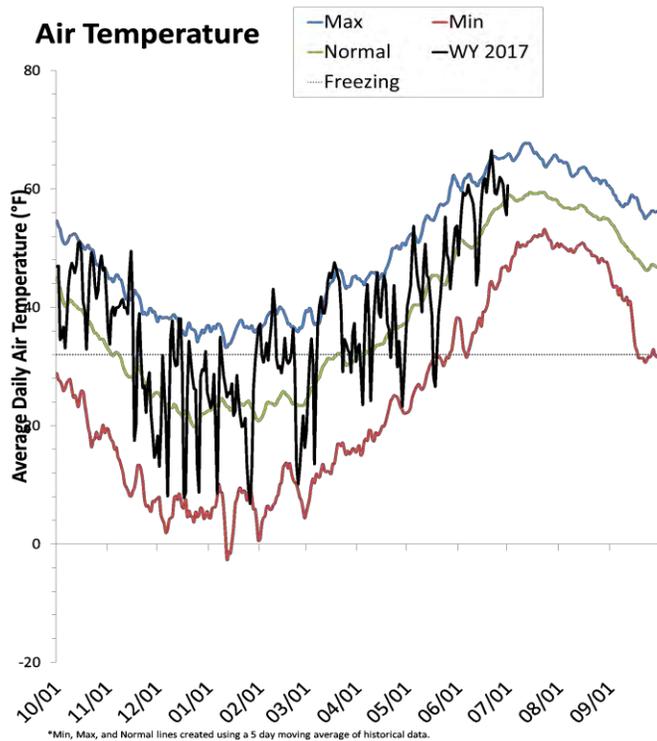
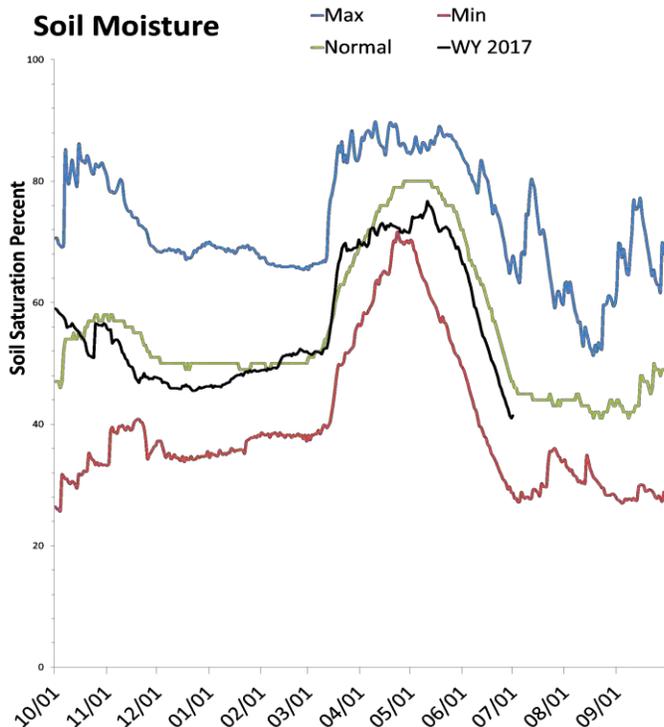
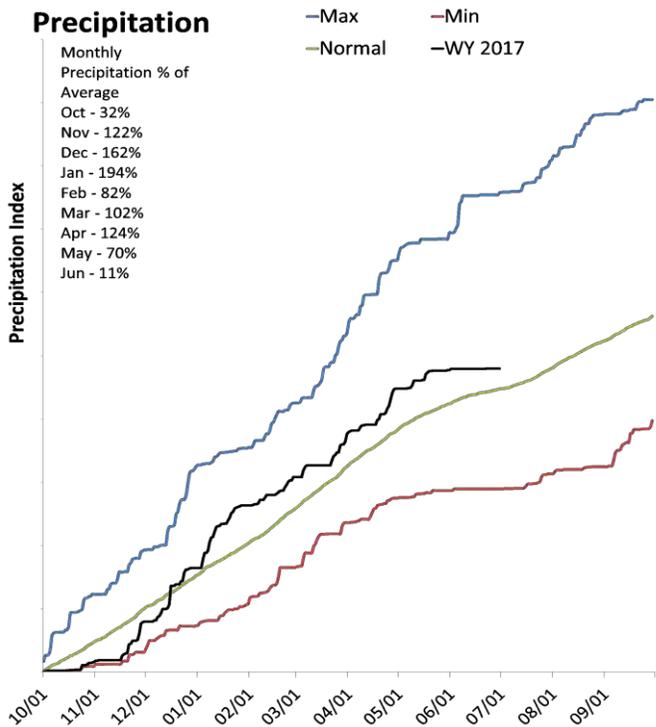
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Dirty Devil Basin

July 1, 2017

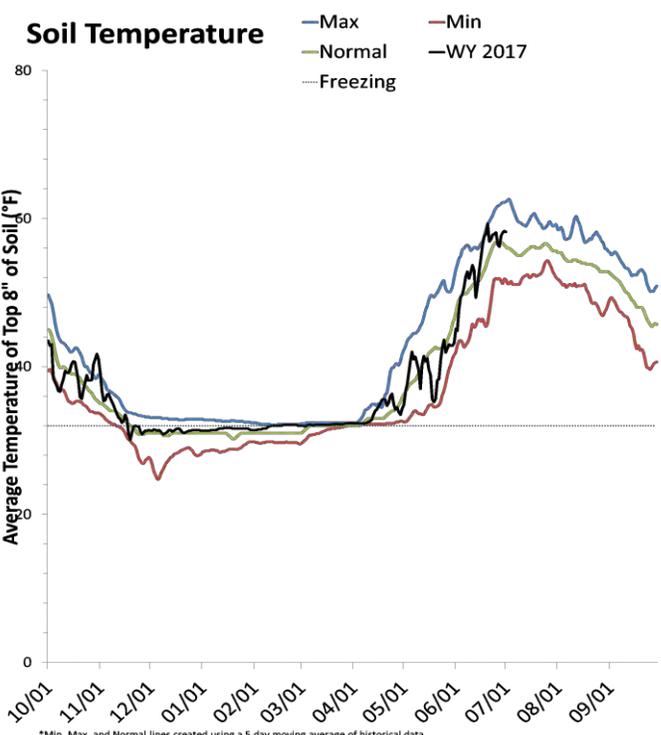
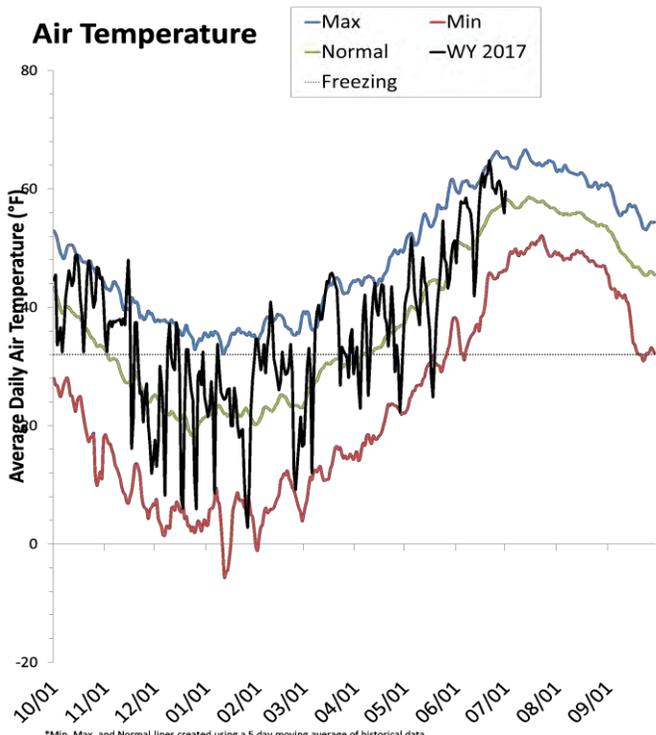
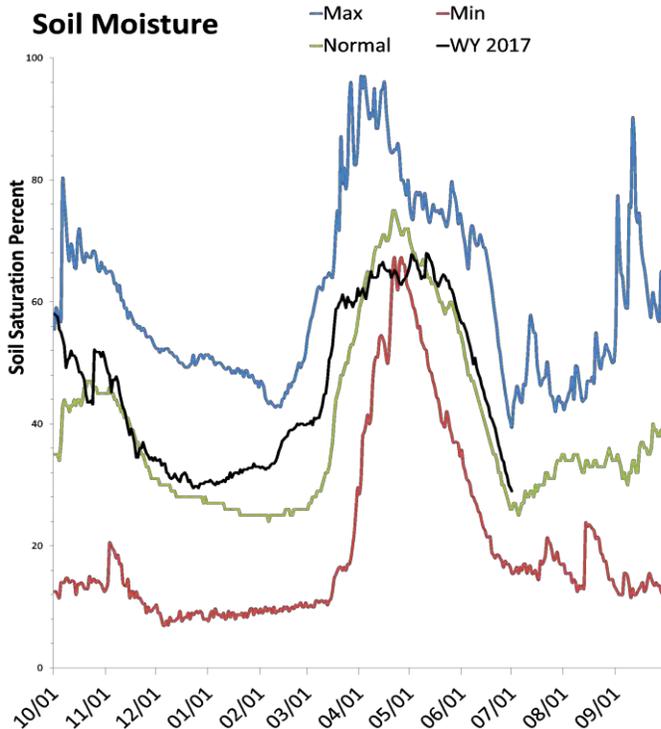
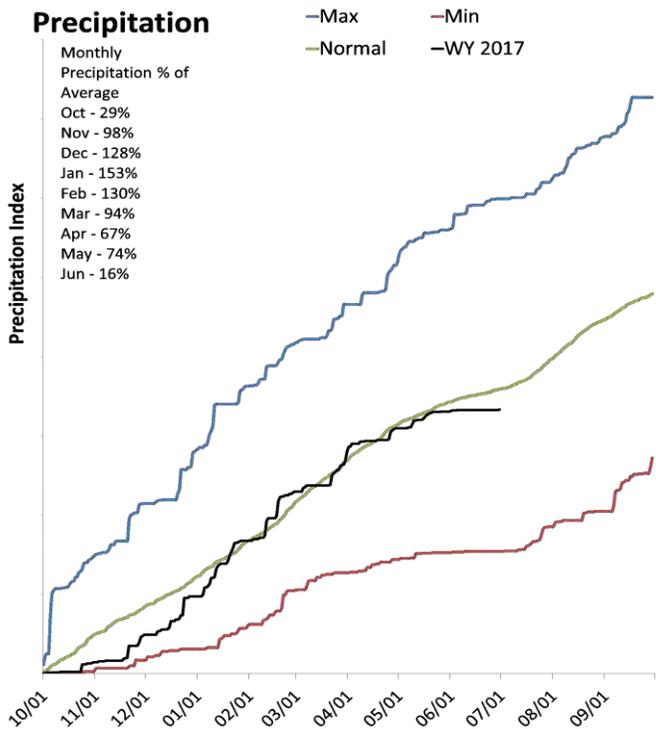
Precipitation in June was much below average at 11%, which brings the seasonal accumulation (Oct-Jun) to 107% of average. Soil moisture is at 40% compared to 33% last year.



# Escalante River Basin

July 1, 2017

Precipitation in June was much below average at 16%, which brings the seasonal accumulation (Oct-Jun) to 93% of average. Soil moisture is at 30% compared to 30% last year.



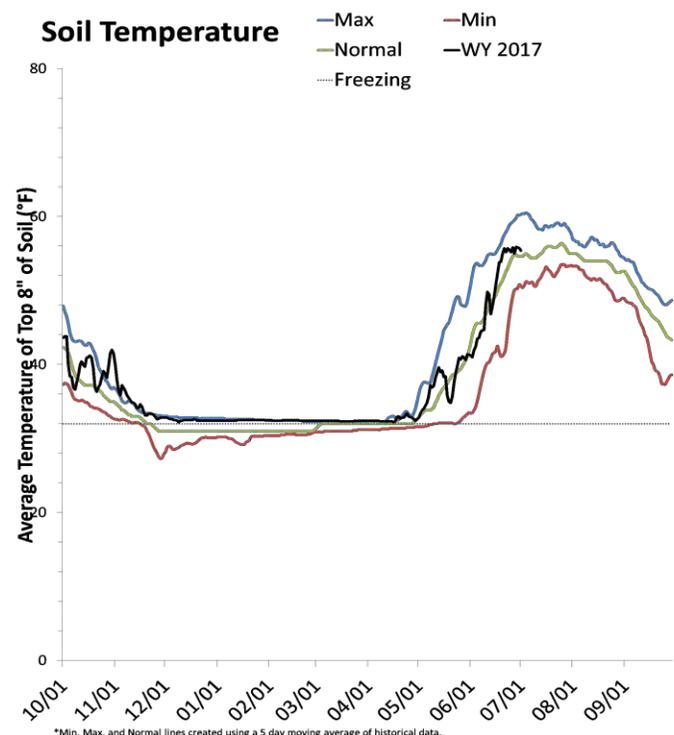
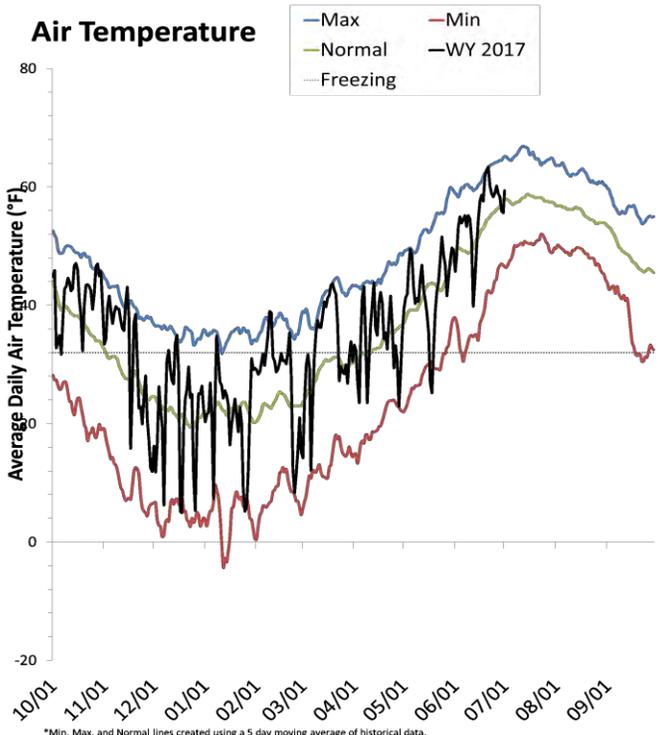
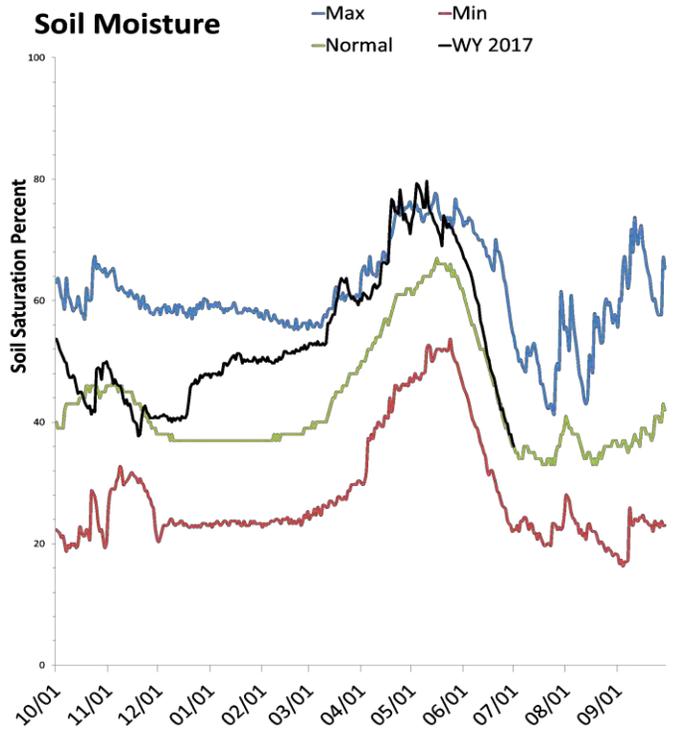
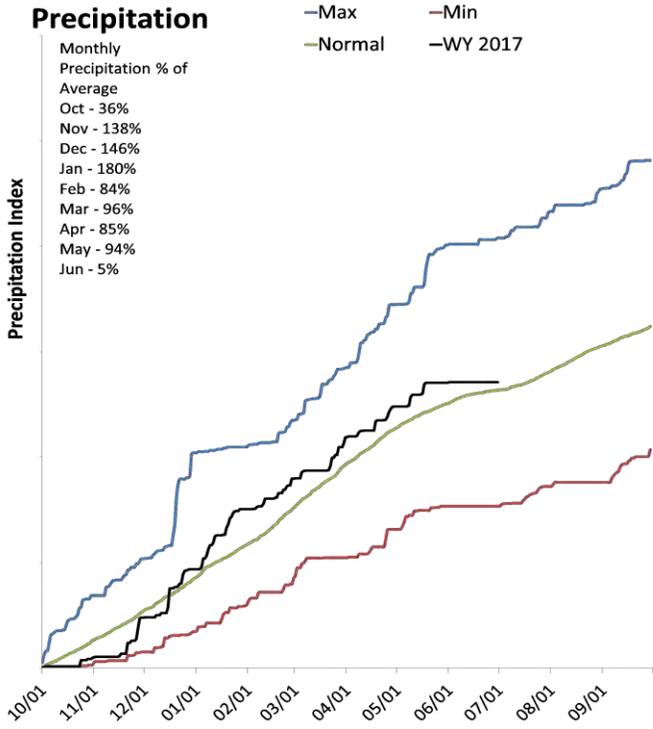
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

# Beaver River Basin

July 1, 2017

Precipitation in June was much below average at 5%, which brings the seasonal accumulation (Oct-Jun) to 103% of average. Soil moisture is at 36% compared to 42% last year. Reservoir storage is at 54% of capacity, compared to 35% last year. The water availability index for the Beaver River is 58%.



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

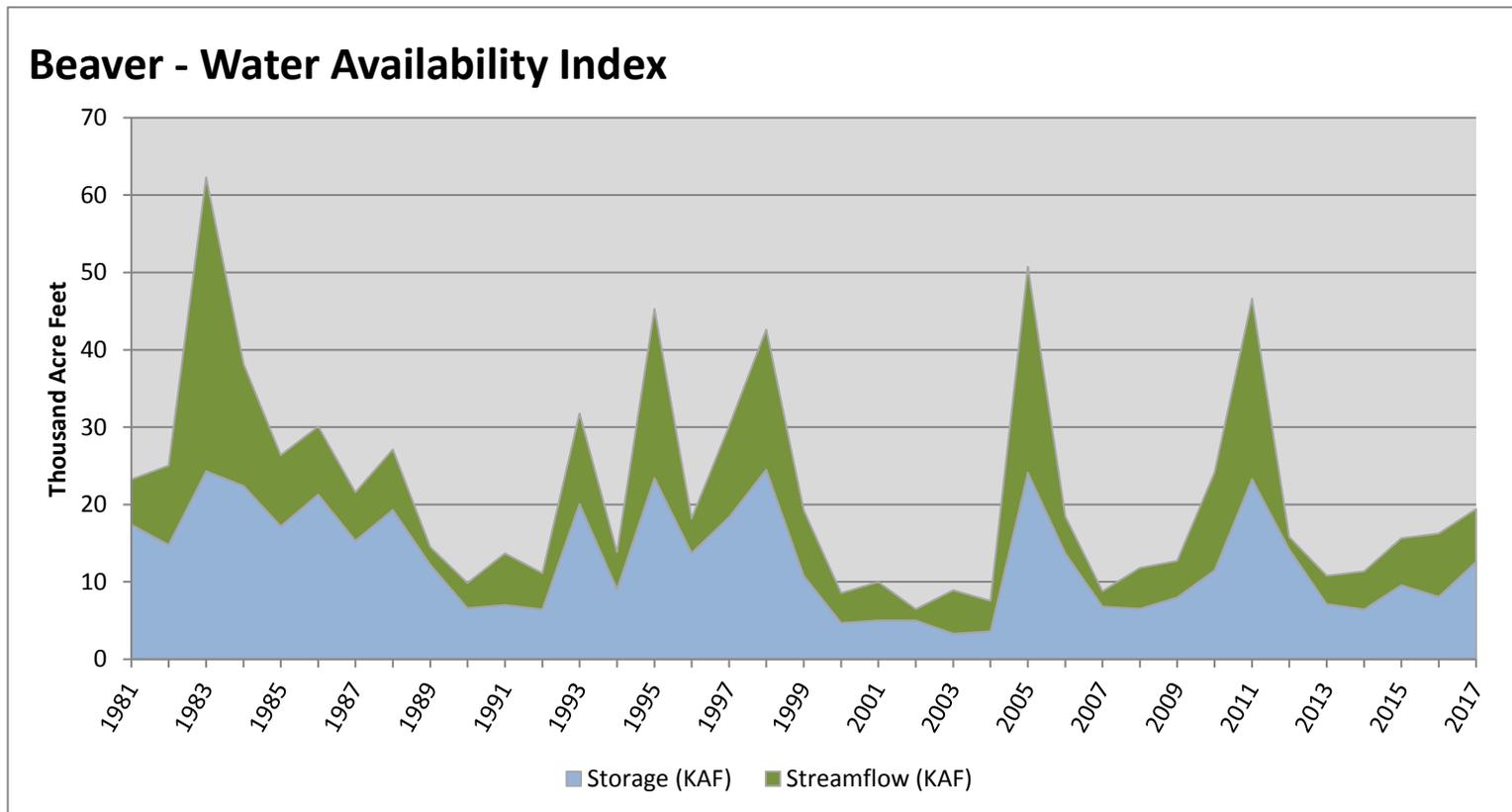
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Beaver</b>	<b>12.60</b>	<b>6.83</b>	<b>19.43</b>	<b>58</b>	<b>0.66</b>	<b>06, 99, 87, 81</b>

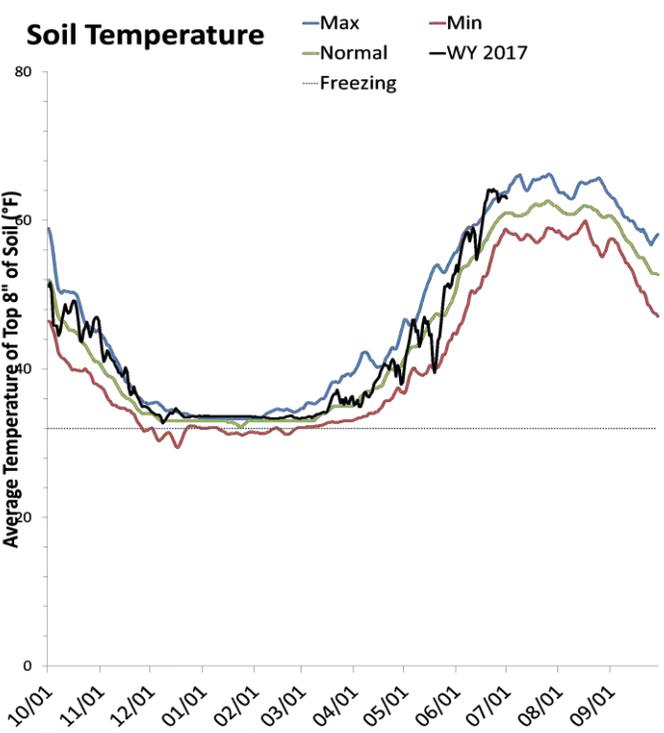
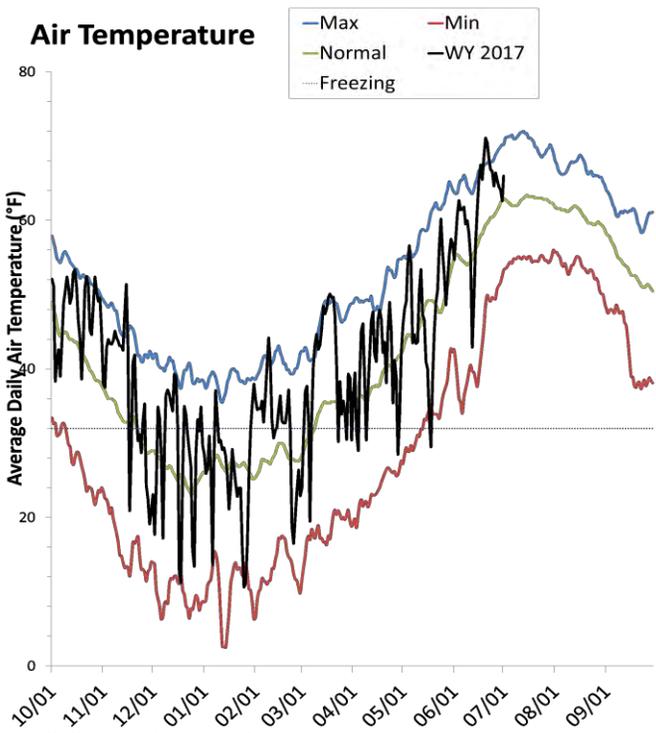
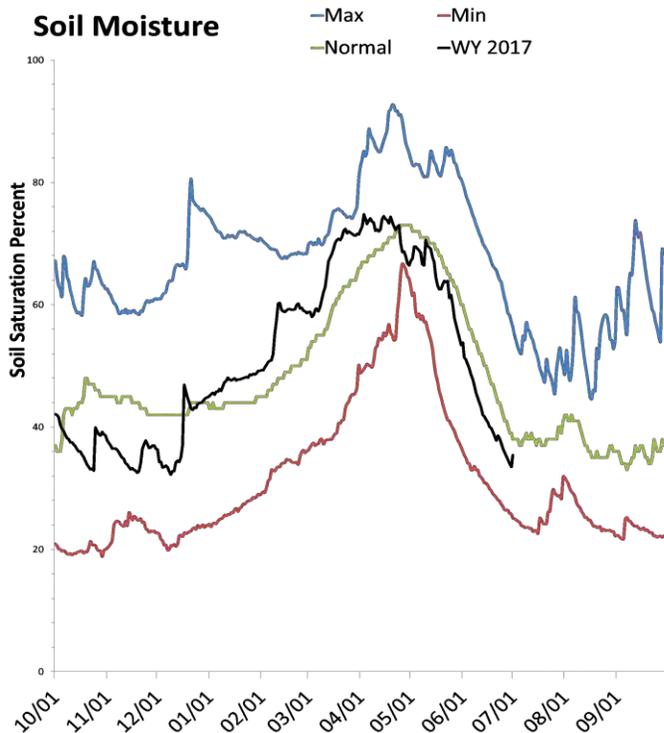
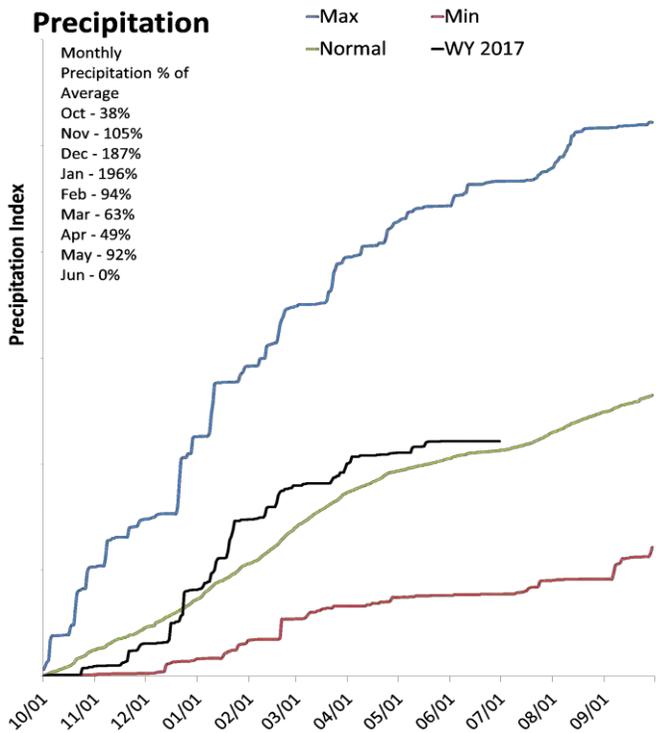
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Southwestern Utah

July 1, 2017

Precipitation in June was much below average at 0%, which brings the seasonal accumulation (Oct-Jun) to 104% of average. Soil moisture is at 33% compared to 39% last year. Reservoir storage is at 63% of capacity, compared to 57% last year. The water availability index for the Virgin River is 57%.



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

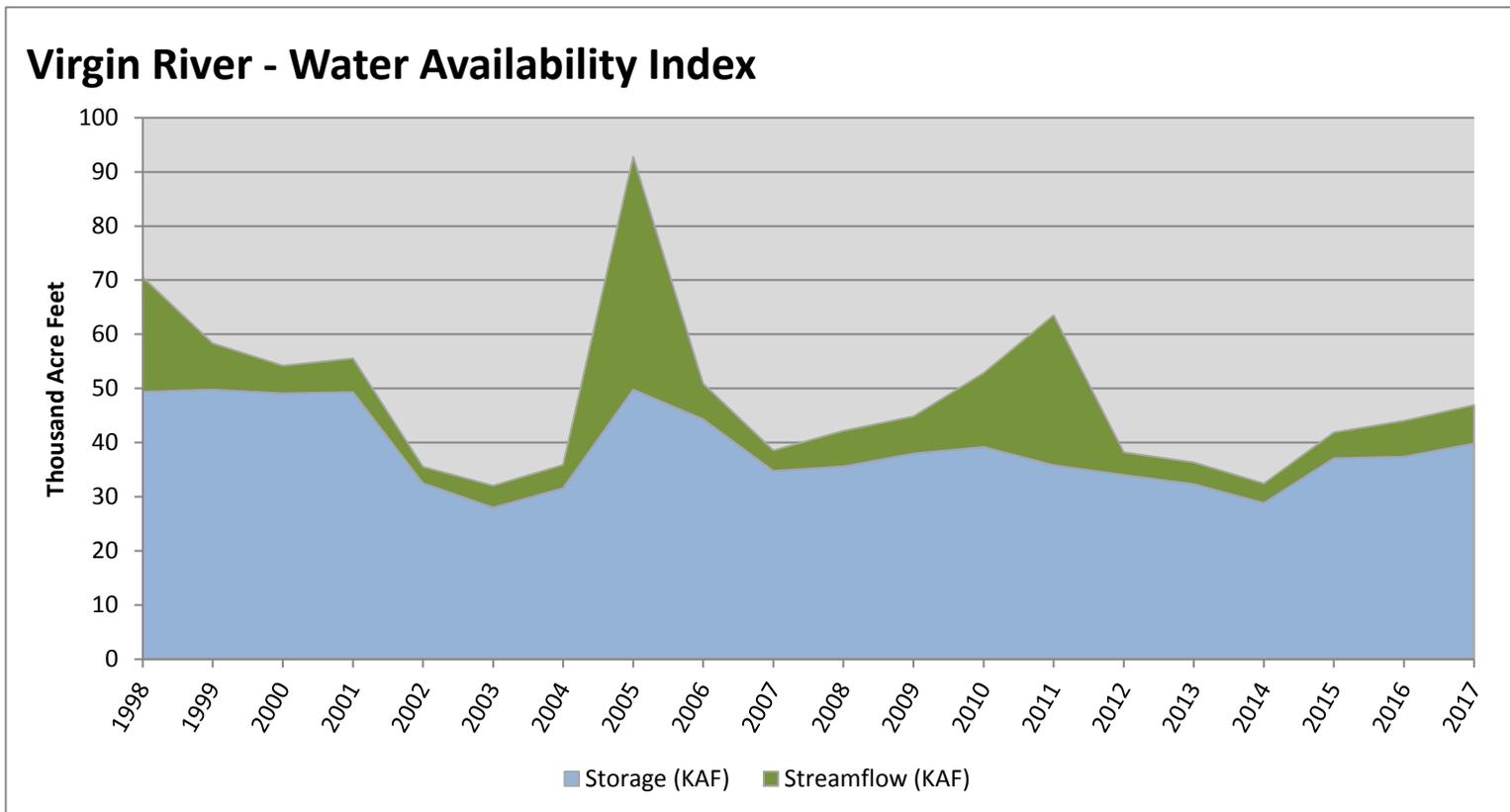
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM <sup>*</sup> Storage	June Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Virgin River</b>	<b>39.86</b>	<b>7.08</b>	<b>46.94</b>	<b>57</b>	<b>0.6</b>	<b>16, 09, 06, 10</b>

<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



July 1, 2017

## Water Availability Index

Basin or Region	Jun EOM*	June Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	Storage					
	KAF^	KAF^	KAF^	%		
<b>Bear River</b>	<b>1207</b>	<b>69.9</b>	<b>1277</b>	<b>82</b>	<b>2.6</b>	<b>85, 82, 97, 98</b>
<b>Woodruff Narrows</b>	<b>44.5</b>	<b>69.9</b>	<b>114.3</b>	<b>74</b>	<b>2.0</b>	<b>16, 10, 98, 96</b>
<b>Little Bear</b>	<b>14.4</b>	<b>13.6</b>	<b>28.0</b>	<b>77</b>	<b>2.2</b>	<b>93, 05, 99, 97</b>
<b>Ogden</b>	<b>115.8</b>	<b>14.7</b>	<b>130.5</b>	<b>74</b>	<b>2.0</b>	<b>93, 05, 97, 82</b>
<b>Weber</b>	<b>212.2</b>	<b>92.8</b>	<b>305.0</b>	<b>71</b>	<b>1.8</b>	<b>05, 98, 10, 08</b>
<b>Provo River</b>	<b>459.7</b>	<b>62.8</b>	<b>522.5</b>	<b>91</b>	<b>3.4</b>	<b>11, 10, 98, 97</b>
<b>Western Uinta</b>	<b>224.9</b>	<b>39.8</b>	<b>264.7</b>	<b>71</b>	<b>1.8</b>	<b>10, 98, 16, 96</b>
<b>Eastern Uinta</b>	<b>44.0</b>	<b>21.2</b>	<b>65.2</b>	<b>42</b>	<b>-0.7</b>	<b>00, 07, 15, 85</b>
<b>Blacks Fork</b>	<b>28.8</b>	<b>51.6</b>	<b>80.4</b>	<b>74</b>	<b>2.0</b>	<b>97, 08, 98, 93</b>
<b>Price</b>	<b>65.8</b>	<b>5.7</b>	<b>71.5</b>	<b>74</b>	<b>2.0</b>	<b>85, 05, 99, 97</b>
<b>Smiths Creek</b>	<b>13.2</b>	<b>21.0</b>	<b>34.2</b>	<b>85</b>	<b>2.9</b>	<b>99, 10, 95, 16</b>
<b>Joes Valley</b>	<b>62.2</b>	<b>26.1</b>	<b>88.3</b>	<b>61</b>	<b>0.9</b>	<b>06, 96, 93, 10</b>
<b>Moab</b>	<b>2.4</b>	<b>1.2</b>	<b>3.6</b>	<b>68</b>	<b>1.5</b>	<b>15, 08, 92, 88</b>
<b>Upper Sevier River</b>	<b>75.4</b>	<b>1.8</b>	<b>77.2</b>	<b>47</b>	<b>-0.2</b>	<b>94, 12, 10, 06</b>
<b>San Pitch</b>	<b>14.4</b>	<b>7.4</b>	<b>21.8</b>	<b>53</b>	<b>0.2</b>	<b>05, 88, 81, 96</b>
<b>Lower Sevier</b>	<b>53.0</b>	<b>5.9</b>	<b>58.9</b>	<b>5</b>	<b>-3.7</b>	<b>04, 03, 16, 91</b>
<b>Beaver</b>	<b>12.6</b>	<b>6.8</b>	<b>19.4</b>	<b>58</b>	<b>0.7</b>	<b>06, 99, 87, 81</b>
<b>Virgin River</b>	<b>39.9</b>	<b>7.1</b>	<b>46.9</b>	<b>57</b>	<b>0.6</b>	<b>16, 09, 06, 10</b>

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

### What is a Water Availability Index?

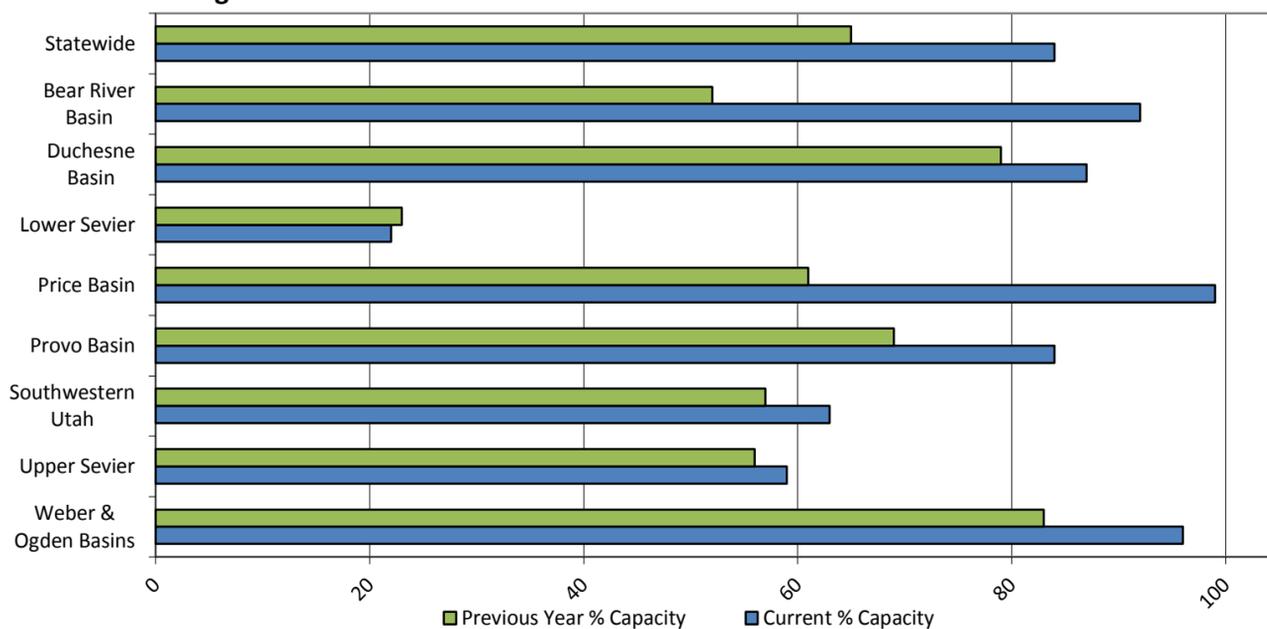
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) 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/](http://www.ut.nrcs.usda.gov/snow/) on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.

<b>Reservoir Storage Summary for the end of June 2017</b>	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	25.4	25.0		25.7	99%	97%			
Causey Reservoir	7.1	7.0	6.7	7.1	100%	99%	94%	106%	105%
Cleveland Lake	5.4	4.8		5.4	100%	90%			
Currant Creek Reservoir	14.5	15.0	15.2	15.5	94%	97%	98%	95%	99%
Deer Creek Reservoir	150.5	136.7	136.2	149.7	101%	91%	91%	111%	100%
East Canyon Reservoir	49.5	36.1	45.9	49.5	100%	73%	93%	108%	79%
Echo Reservoir	72.2	57.5	64.4	73.9	98%	78%	87%	112%	89%
Grantsville Reservoir	2.7	2.1	2.4	3.3	82%	64%	73%	113%	88%
Gunlock	9.5	4.0	7.3	10.4	91%	38%	70%	130%	54%
Gunnison Reservoir	14.4	1.5	14.2	20.3	71%	8%	70%	102%	11%
Huntington North Reservoir	3.6	2.7	3.4	4.2	86%	64%	81%	106%	79%
Hyrum Reservoir	14.4	11.5	13.1	15.3	94%	75%	86%	110%	88%
Joes Valley Reservoir	62.2	49.8	56.8	61.6	101%	81%	92%	110%	88%
Jordanelle Reservoir	309.2	281.2	296.7	320.0	97%	88%	93%	104%	95%
Ken's Lake	2.4	2.5	1.9	2.3	105%	111%	83%	126%	133%
Kolob Reservoir	5.5	5.5		5.6	99%	99%			
Lost Creek Reservoir	22.4	19.7	18.2	22.5	99%	88%	81%	123%	109%
Lower Enterprise	1.7	0.8	1.1	2.6	65%	29%	42%	155%	68%
Miller Flat Reservoir	5.2	4.3		5.2	100%	83%			
Millsite	15.3	15.8	15.7	16.7	91%	95%	94%	97%	101%
Minersville Reservoir	12.6	8.1	13.5	23.3	54%	35%	58%	93%	60%
Moon Lake Reservoir	37.4	37.5	33.6	35.8	104%	105%	94%	111%	112%
Otter Creek Reservoir	48.8	45.6	36.4	52.5	93%	87%	69%	134%	125%
Panguitch Lake	11.8	13.0	16.2	22.3	53%	58%	73%	73%	80%
Pineview Reservoir	108.7	103.2	93.0	110.1	99%	94%	84%	117%	111%
Piute Reservoir	26.6	24.0	45.0	71.8	37%	33%	63%	59%	53%
Porcupine Reservoir	11.3	9.8	10.6	11.3	100%	87%	94%	107%	92%
Quail Creek	30.4	33.4	29.0	40.0	76%	84%	73%	105%	115%
Red Fleet Reservoir	24.1	25.5	23.4	25.7	94%	99%	91%	103%	109%
Rockport Reservoir	59.8	50.6	56.9	60.9	98%	83%	93%	105%	89%
Sand Hollow Reservoir	47.5	45.4		50.0	95%	91%			
Scofield Reservoir	65.8	22.2	48.2	65.8	100%	34%	73%	137%	46%
Settlement Canyon Reservoir	0.9	0.6	0.8	1.0	90%	64%	82%	110%	78%
Sevier Bridge Reservoir	53.0	55.2	148.5	236.0	22%	23%	63%	36%	37%
Smith And Morehouse Reservoir	8.3	8.2	7.5	8.1	102%	102%	93%	110%	110%
Starvation Reservoir	156.1	159.2	153.2	165.3	94%	96%	93%	102%	104%
Stateline Reservoir	13.2	13.9	11.3	12.0	110%	116%	94%	117%	123%
Steinaker Reservoir	19.9	23.7	28.3	33.4	60%	71%	85%	70%	84%
Strawberry Reservoir	953.9	824.0	727.7	1105.9	86%	75%	66%	131%	113%
Upper Enterprise	3.2	0.3	3.7	10.0	32%	3%	37%	86%	8%
Upper Stillwater Reservoir	31.4	31.7	28.9	32.5	97%	98%	89%	109%	110%
Utah Lake	632.9	449.1	834.5	870.9	73%	52%	96%	76%	54%
Vernon Creek Reservoir	0.5	0.3	0.4	0.6	75%	50%	70%	107%	71%
Willard Bay	197.2	172.9	160.4	215.0	92%	80%	75%	123%	108%
Woodruff Creek	7.0	3.1	3.1	4.0	174%	77%	78%	224%	99%
Woodruff Narrows Reservoir	44.5	49.1	30.8	57.3	78%	86%	54%	144%	159%
Meeks Cabin Reservoir	28.8	28.8	24.9	32.5	89%	89%	77%	116%	116%
Bear Lake	1207.1	653.0	738.2	1302.0	93%	50%	57%	164%	88%
<b>Basin-wide Total</b>	<b>4546.5</b>	<b>3490.1</b>	<b>4007.3</b>	<b>5380.9</b>	<b>84%</b>	<b>65%</b>	<b>74%</b>	<b>113%</b>	<b>87%</b>
<b># of reservoirs</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>	<b>43</b>

### Reservoir Storage



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

