



# Utah Climate and Water Report

June 1, 2018



**Grantsville Reservoir**

**Photo by: Jordan Clayton**

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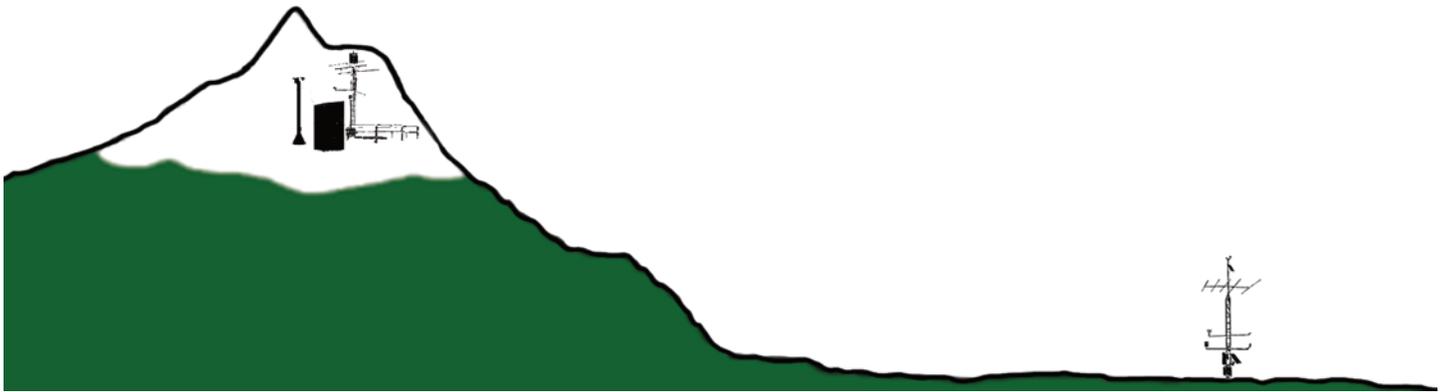
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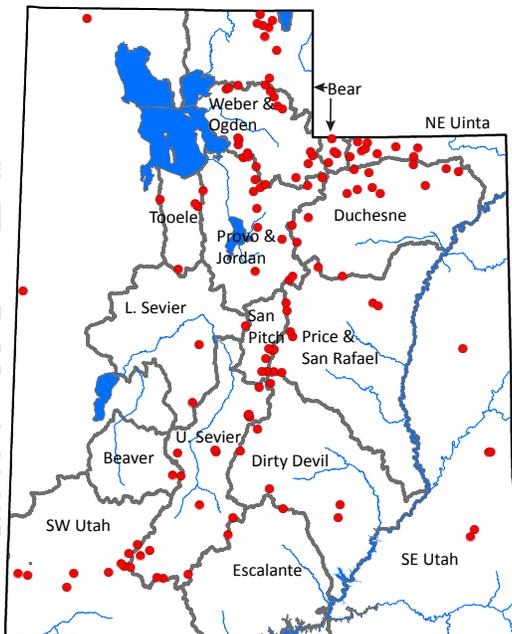
## Utah Climate and Water Report

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.



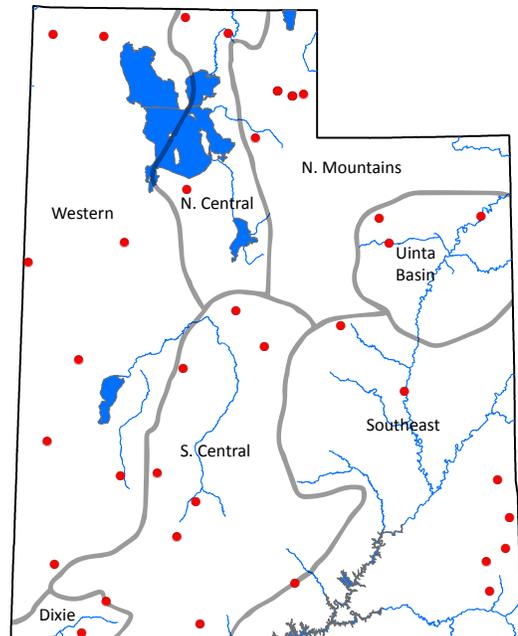
### SNOTEL

- 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

### June 1, 2018

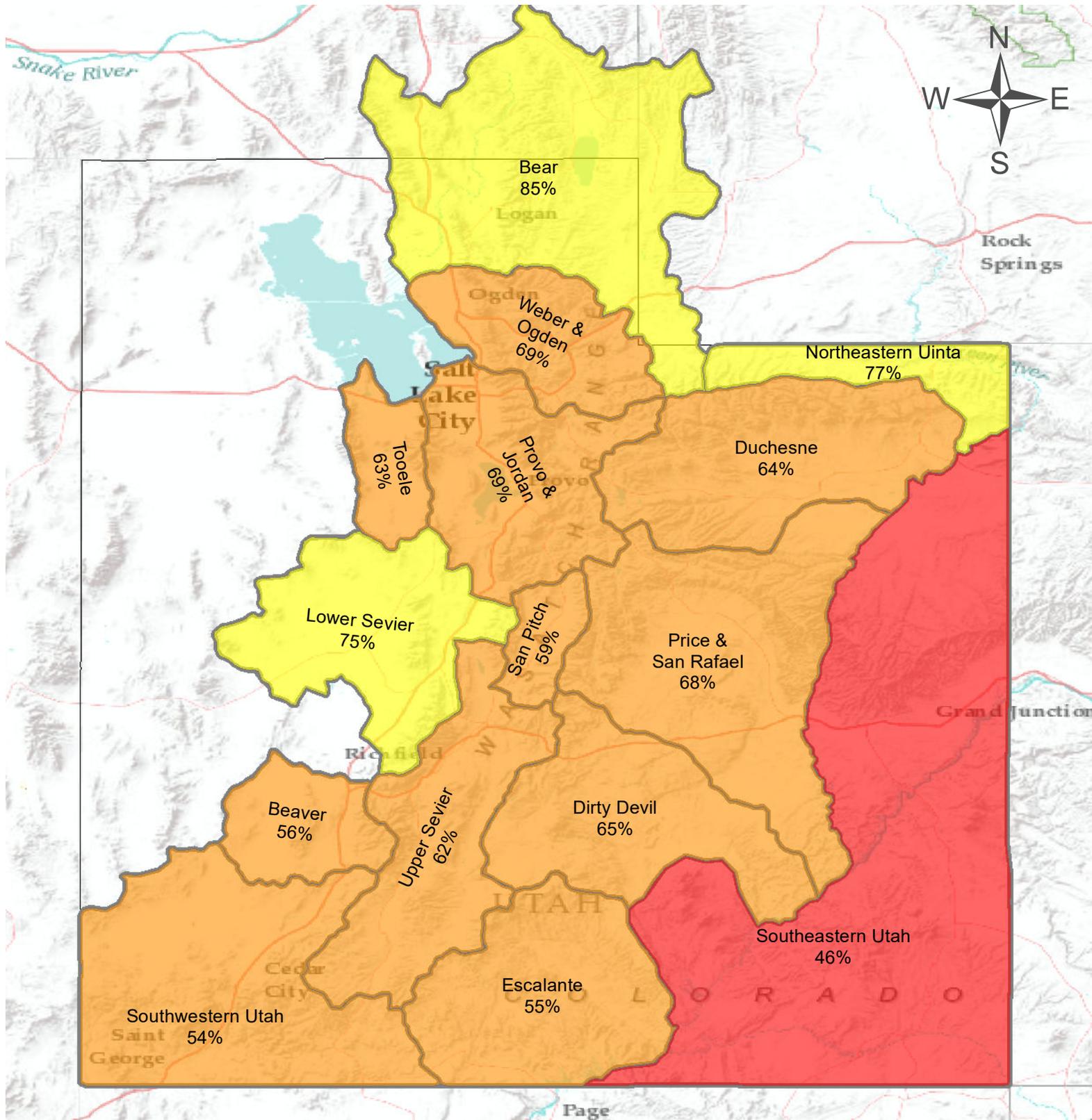
*This report has been reorganized to better reflect two distinct geographic areas being monitored – the low elevation valley sites (Soil Climate Analysis Network) that are critical for agricultural production and operations, and the high elevation mountainous areas where water supply is generated (SNOWTElemetry). Most of the graphs have been updated to utilize daily data versus the old monthly bar charts so that the timing and distribution of precipitation and other events can be seen. The timing distribution of precipitation can be as important as the overall amount in an agricultural context. These graphs are hyperlinked so that the user can simply click on the graph and be taken to the most recent version on the Snow Survey web page. Questions, comments and suggestions are welcome and should be directed to [Troy.Brosten@ut.usda.gov](mailto:Troy.Brosten@ut.usda.gov).*

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

An average of 1.1 inches of precipitation fell in Utah in May. This rainfall favored Utah's Northern and Western valley locations, where significantly more than an inch fell. The areas needing the moisture most, the Southeast and Uinta Basin, came up short at just 0.6 and 0.5 inches, respectively. Overall, soil temperatures are near normal and soil moisture levels continue to be low. This is typically a dry time of year for the whole state, so we expect these conditions to persist into June. Producers in Southwestern Utah have extremely difficult conditions to contend with following a very dry winter.

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

June 1 snowpack as measured by the SNOTEL network is effectively melted out. 2018 Snowpack conditions in the Bear River and Northeastern Uinta Basins fared much better (70% - 80% normal range) than our southern basins where they hovered around 50% of normal or less. Current streamflow conditions reflect our snowpack where streamflow in the far northern Utah areas are normal to near-normal while most streamflow in the rest of Utah have peaked and are currently in recession. May Precipitation at SNOTEL sites were not nearly as good as we'd hoped for ranging from 107% in Escalante River to 36% in the San Pitch River Basin with most basins catching up to 70% of the monthly average precipitation and bringing the seasonal cumulative precipitation to 69% of average across the state. All basins are showing rising soil temperatures and declining soil moisture which is another sign of declining runoff conditions. Many reservoirs are at or near capacity due to carryover from last water year however there are some reservoirs that did not fair as well from carryover and are significantly less than average for this time of year (e.g. Gunnison, Millsite, Piute, and Sevier Bridge Reservoirs). Storage in 48 of Utah's key irrigation reservoirs is at 78% of capacity, 4% less than last year. Reservoir storage by Basin: Bear – 83%, Weber – 92%, Provo – 80%, Duchesne – 85%, Price San Rafael– 72%, Upper Sevier – 49%, Southwestern Utah – 53% of capacity.



# Statewide Precipitation

As of June 1, 2018:

68% of Normal Precipitation

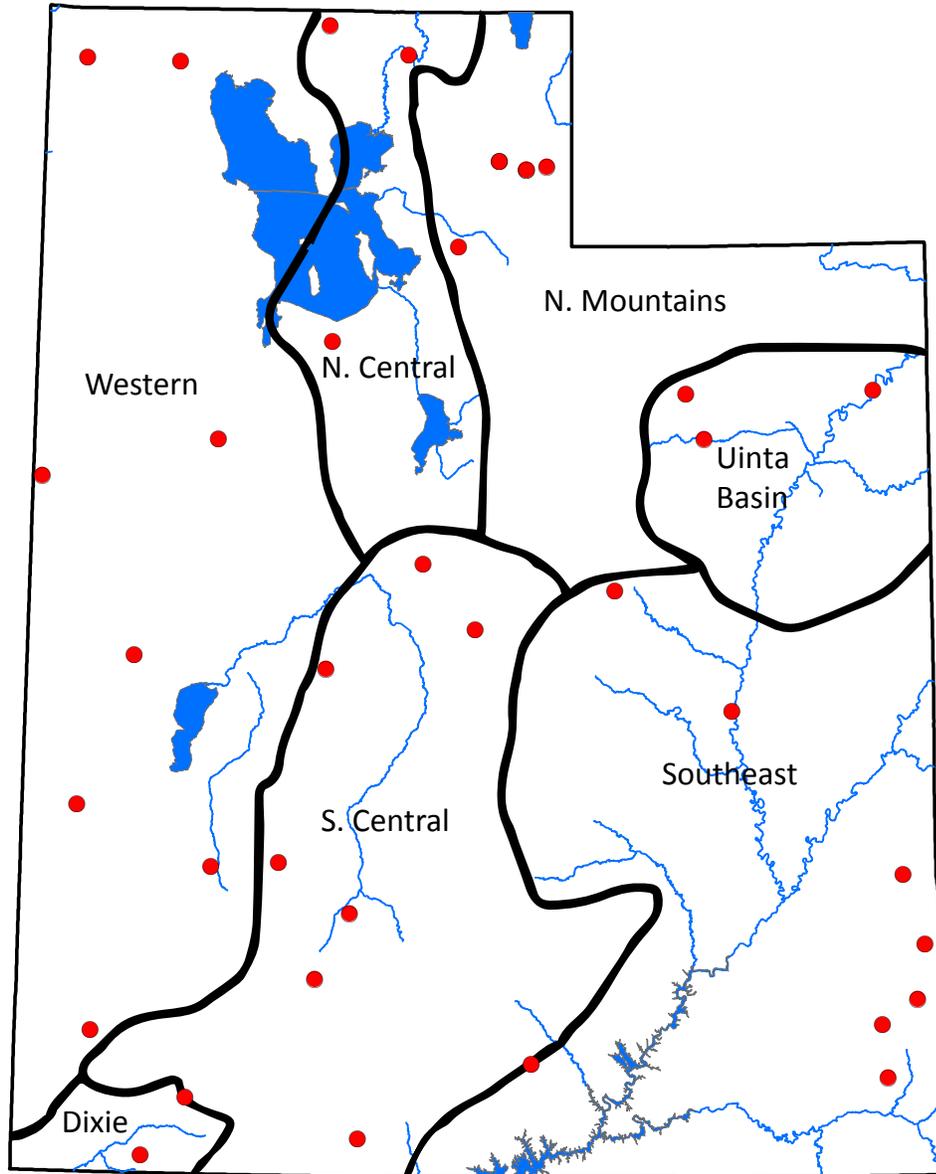
80% of Normal Precipitation Last Month

## % of Normal

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



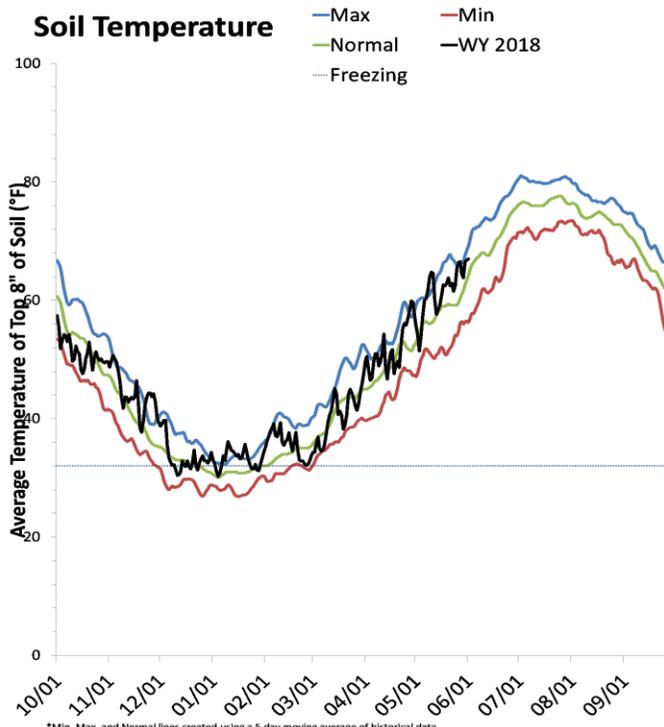
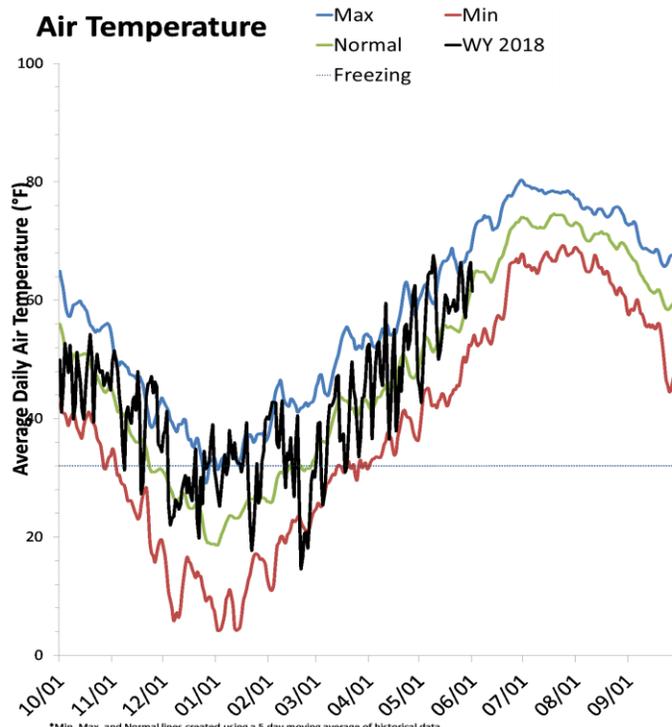
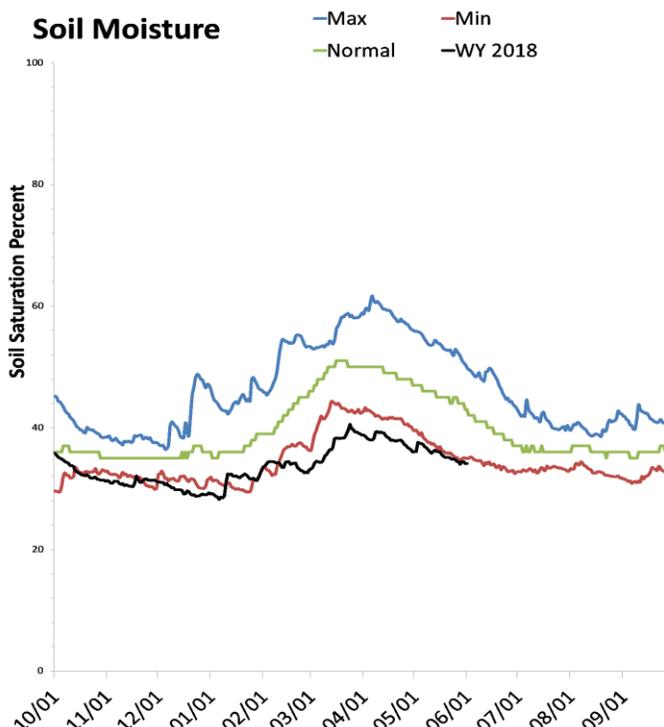
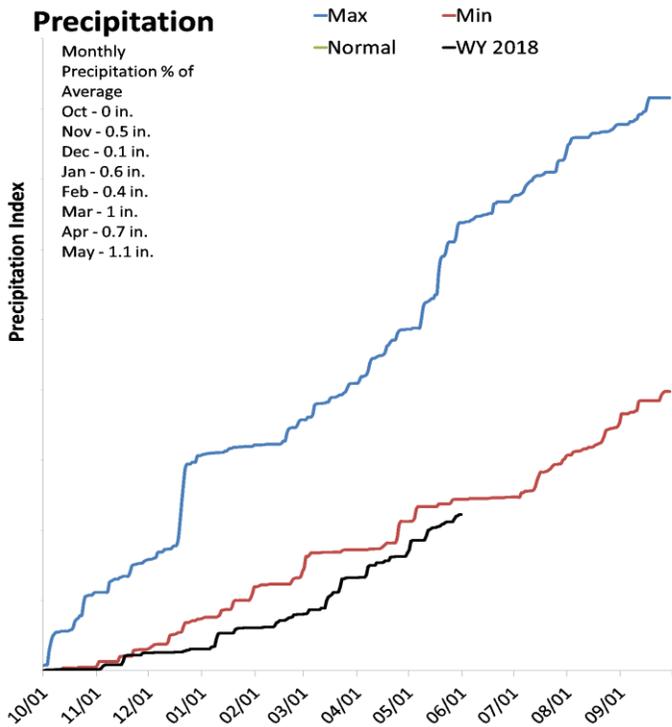
# SCAN portion of report



# Statewide SCAN

June 1, 2018

The average precipitation at SCAN sites within Utah was 1.1 inches in May, which brings the seasonal accumulation (Oct-May) to 4.5 inches. Soil moisture is at 34% compared to 41% last year.



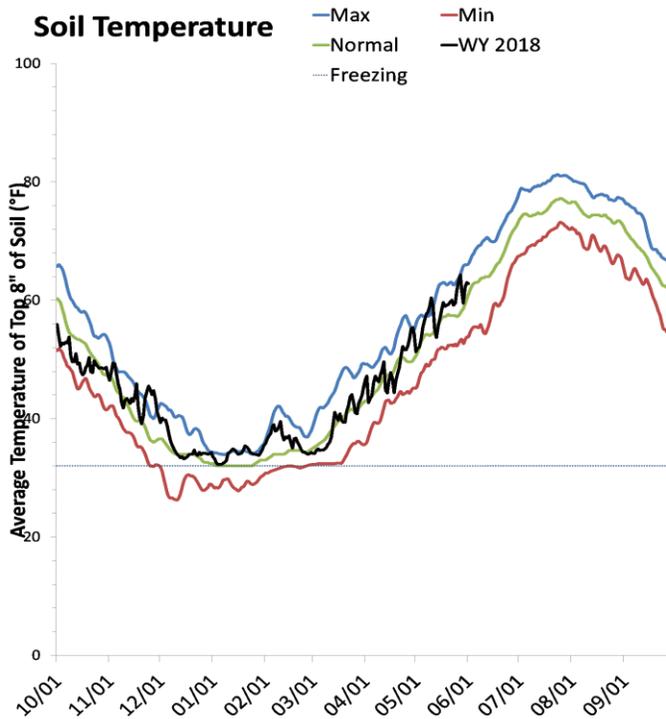
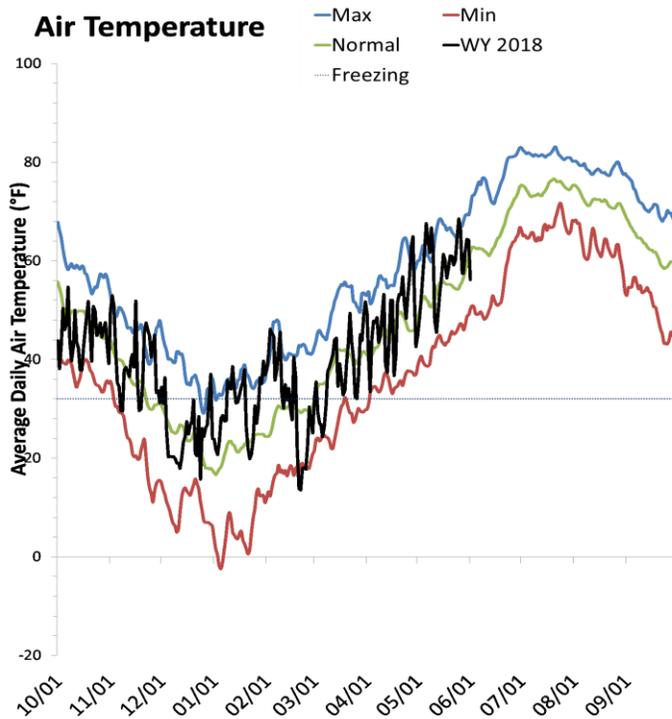
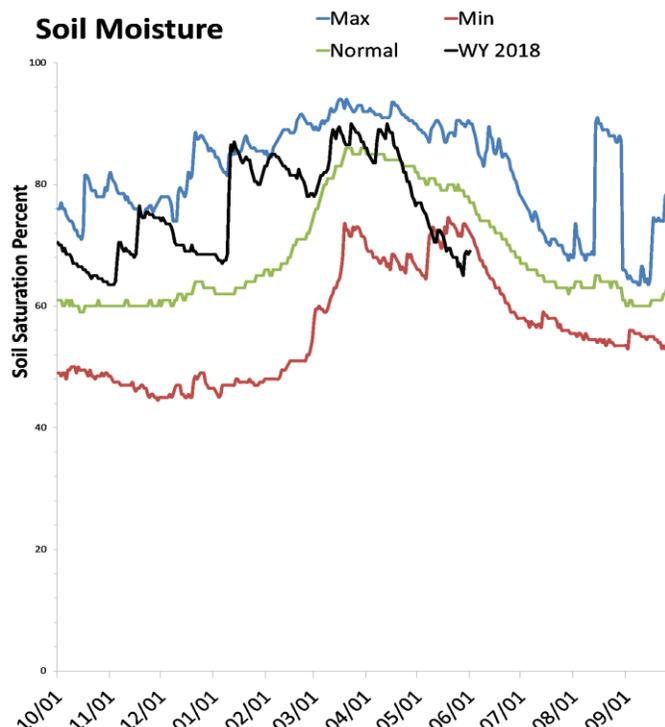
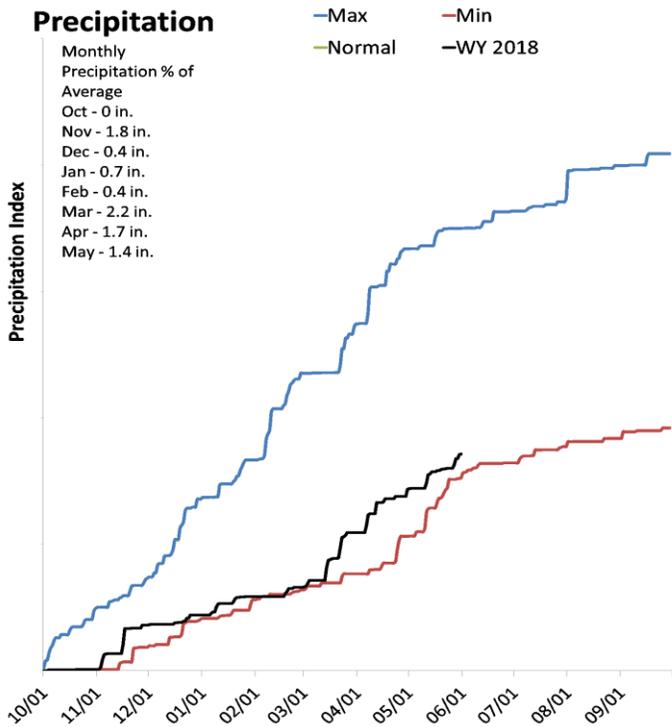
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# North Central

June 1, 2018

The average precipitation in May at SCAN sites within the basin was 1.4 inches, which brings the seasonal accumulation (Oct-May) to 8.6 inches. Soil moisture is at 69% compared to 73% last year.



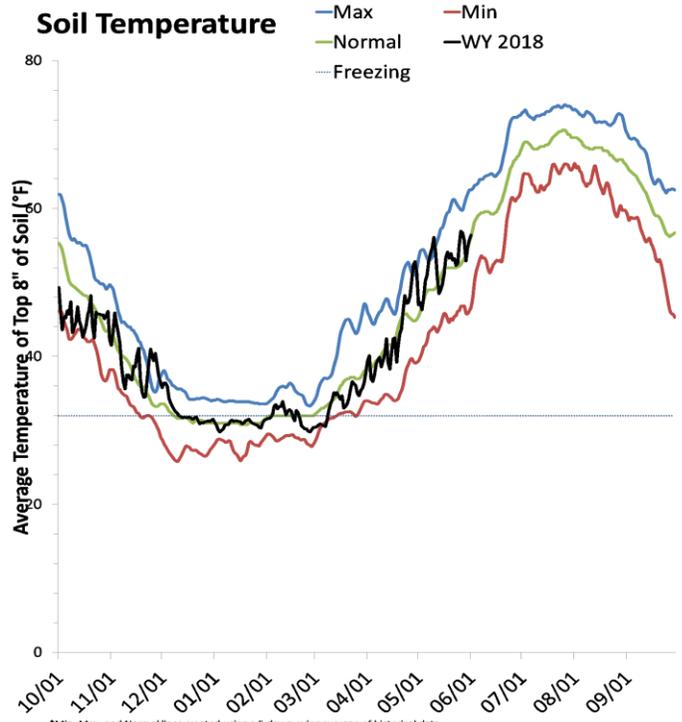
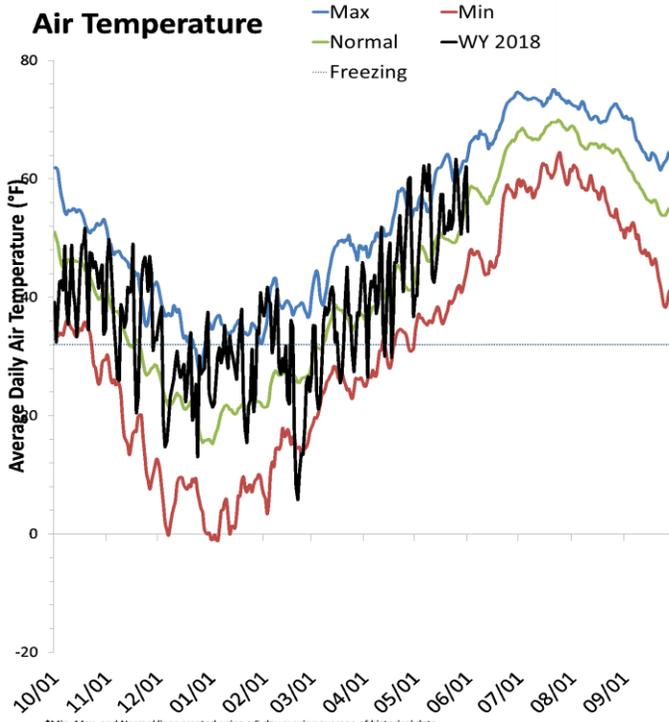
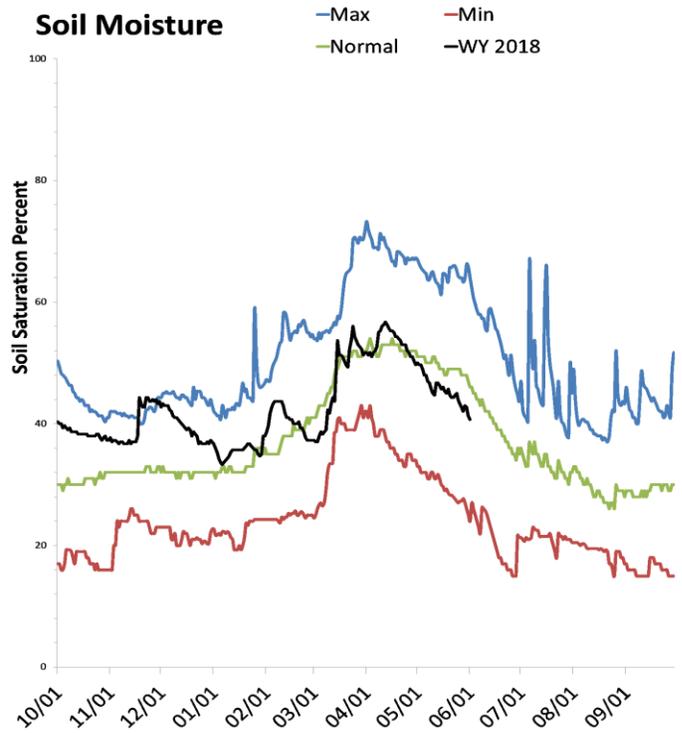
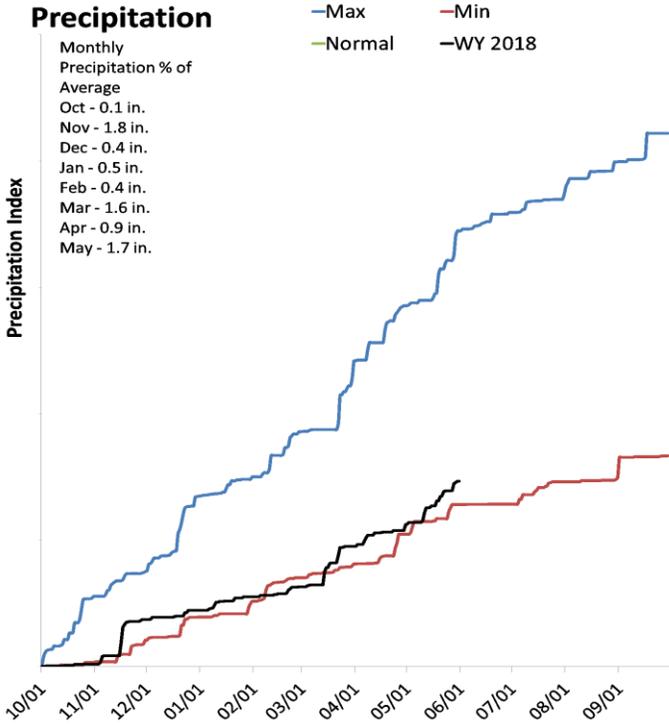
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# Northern Mountains

June 1, 2018

The average precipitation in May at SCAN sites within the basin was 1.7 inches, which brings the seasonal accumulation (Oct-May) to 7.3 inches. Soil moisture is at 41% compared to 55% last year.



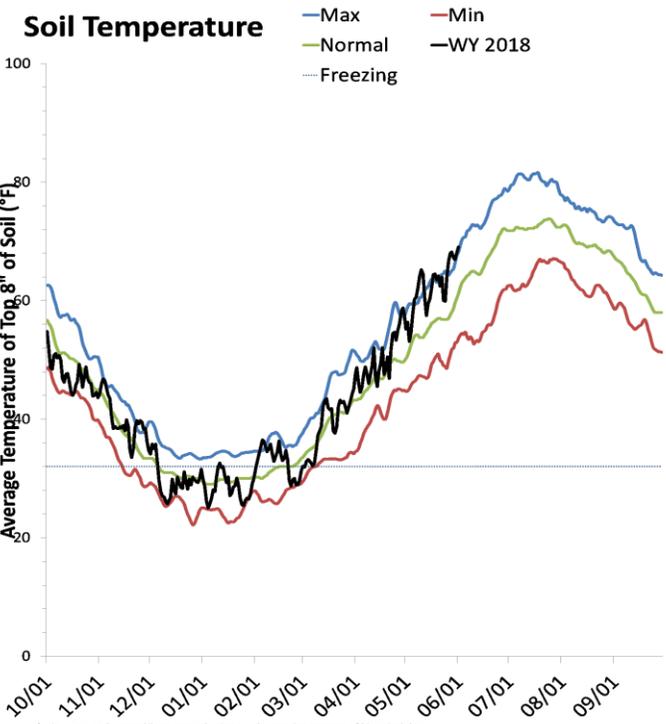
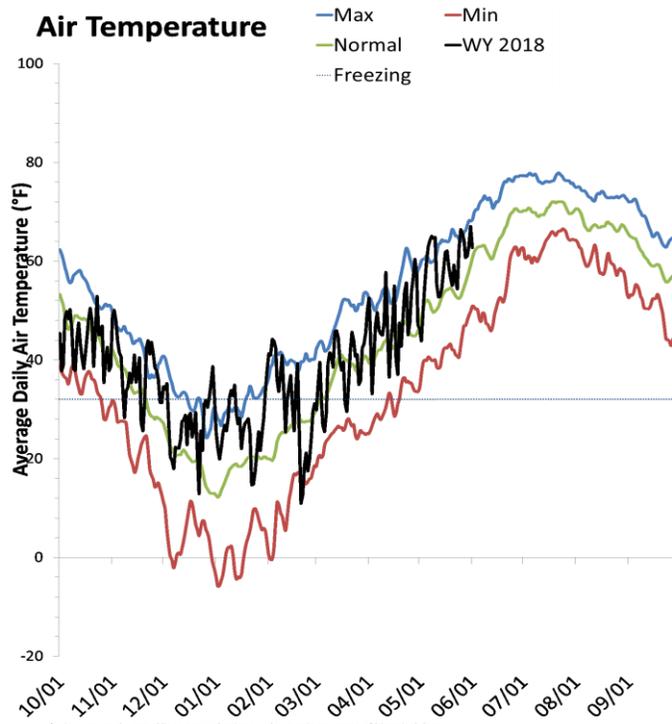
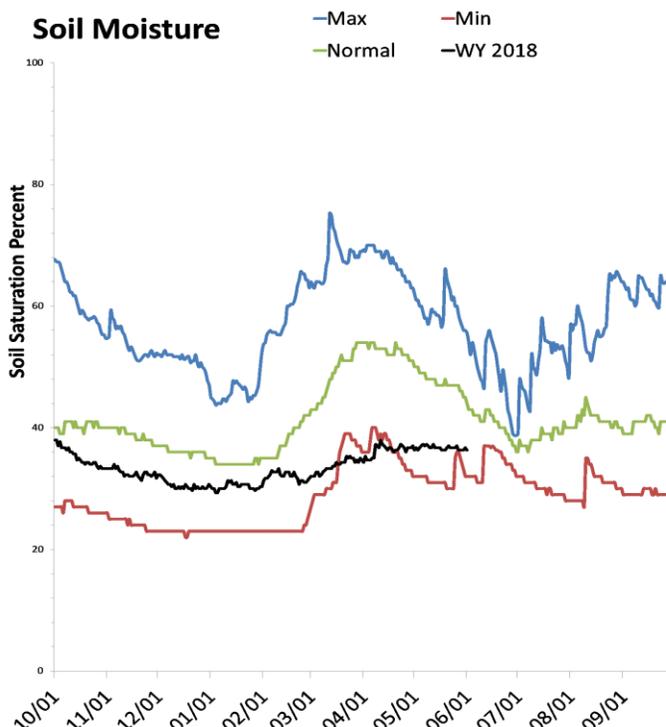
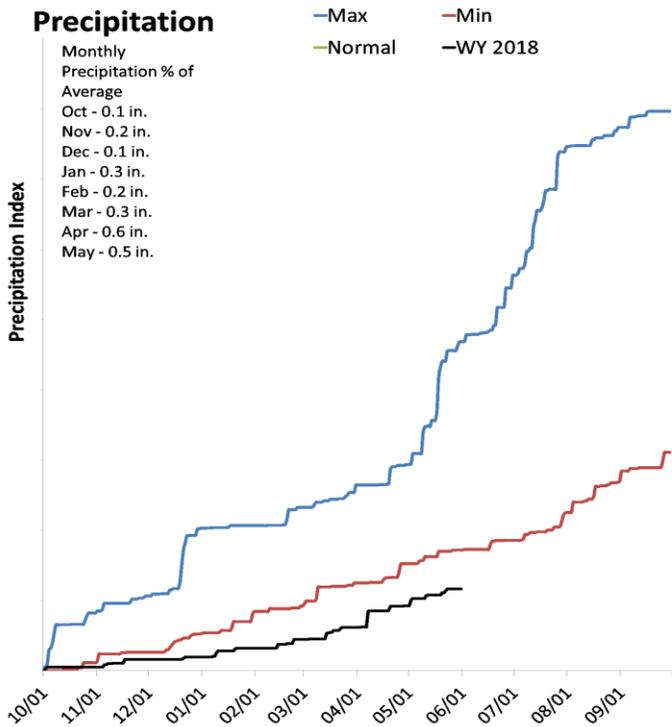
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Uinta Basin

June 1, 2018

The average precipitation in May at SCAN sites within the basin was 0.5 inches, which brings the seasonal accumulation (Oct-May) to 2.3 inches. Soil moisture is at 36% compared to 43% last year.



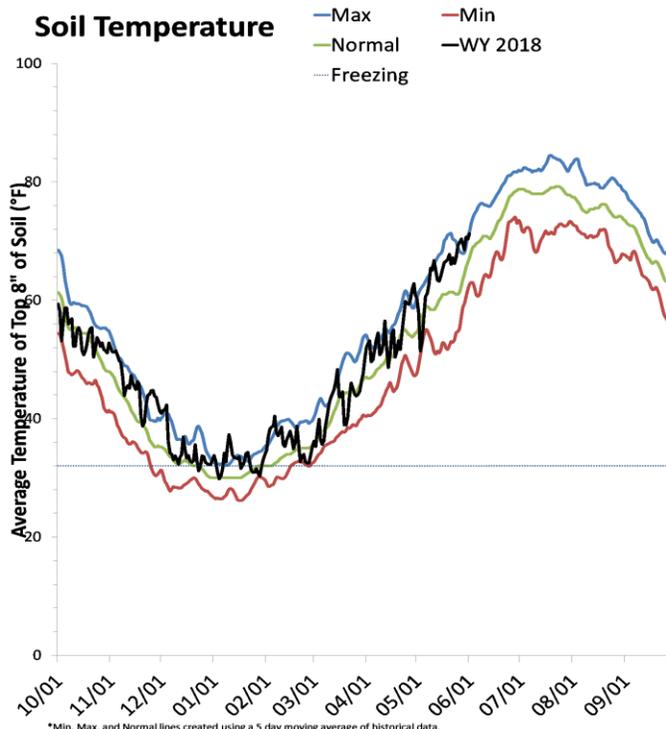
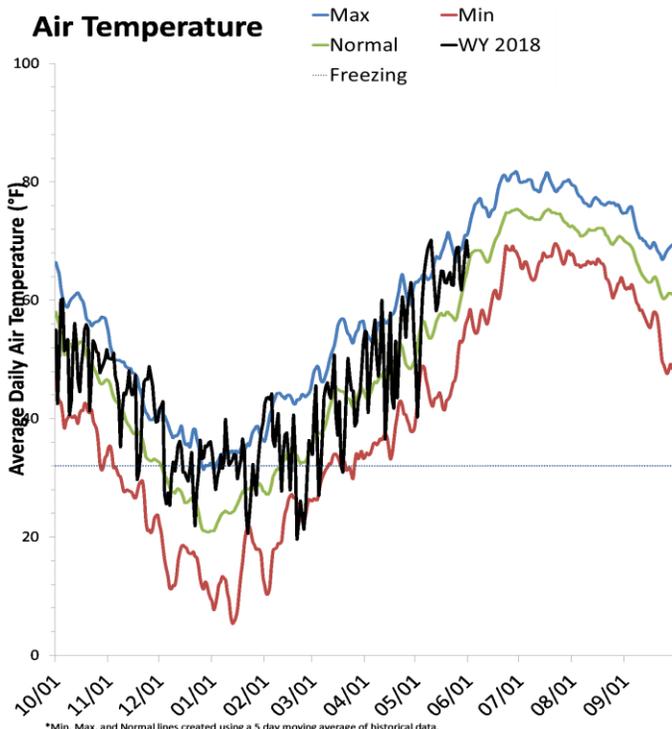
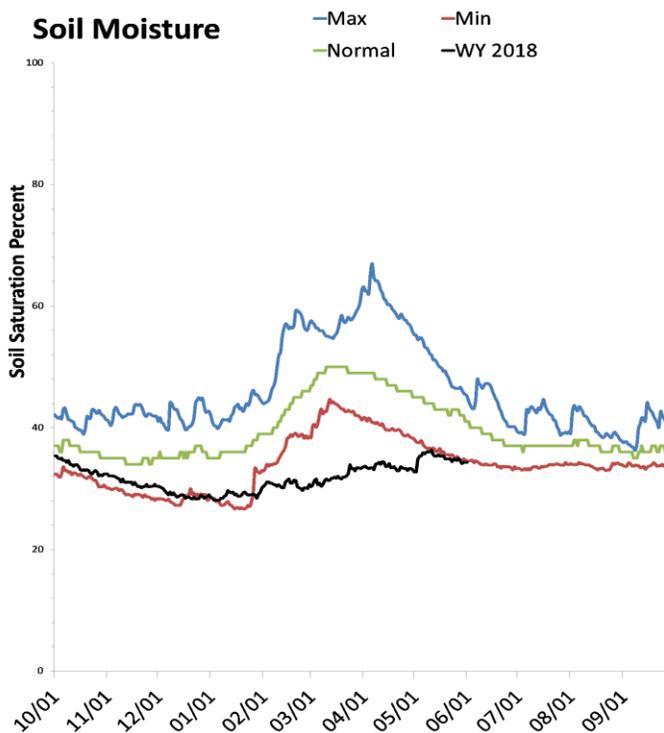
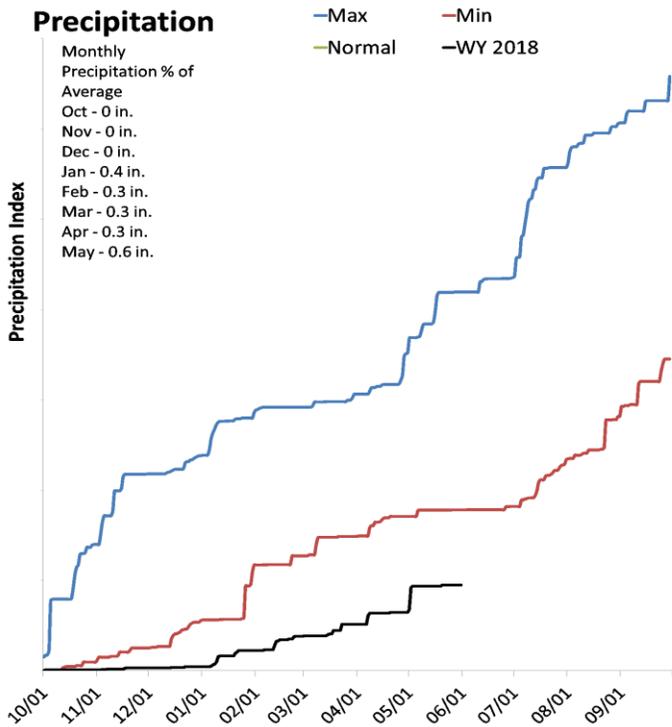
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# Southeast

June 1, 2018

The average precipitation in May at SCAN sites within the basin was 0.6 inches, which brings the seasonal accumulation (Oct-May) to 1.9 inches. Soil moisture is at 34% compared to 41% last year.



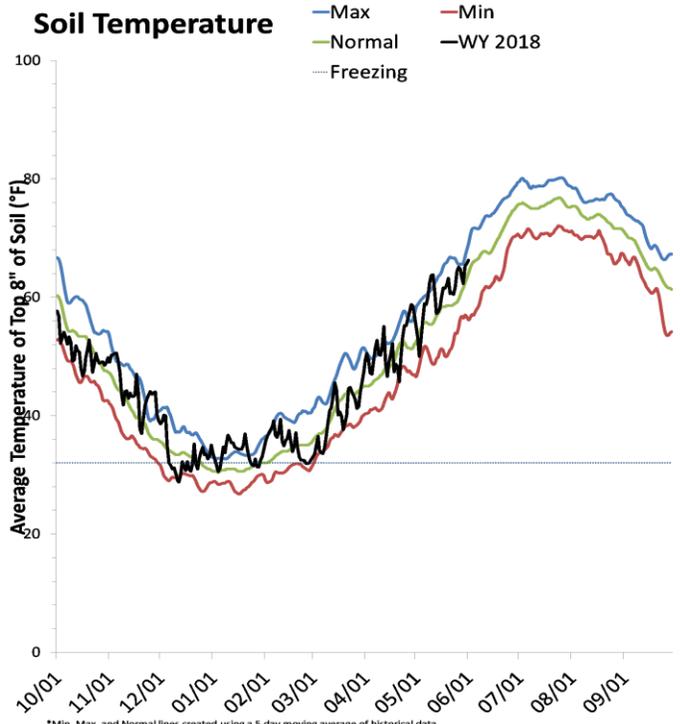
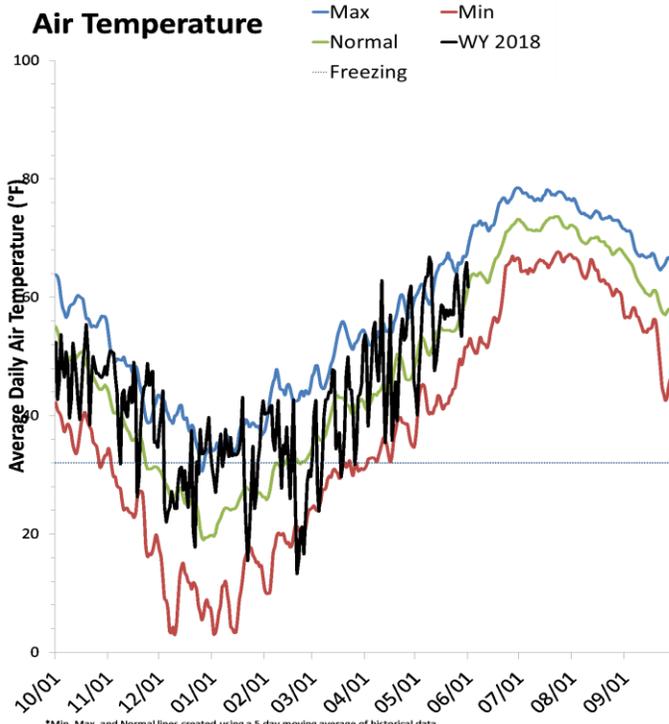
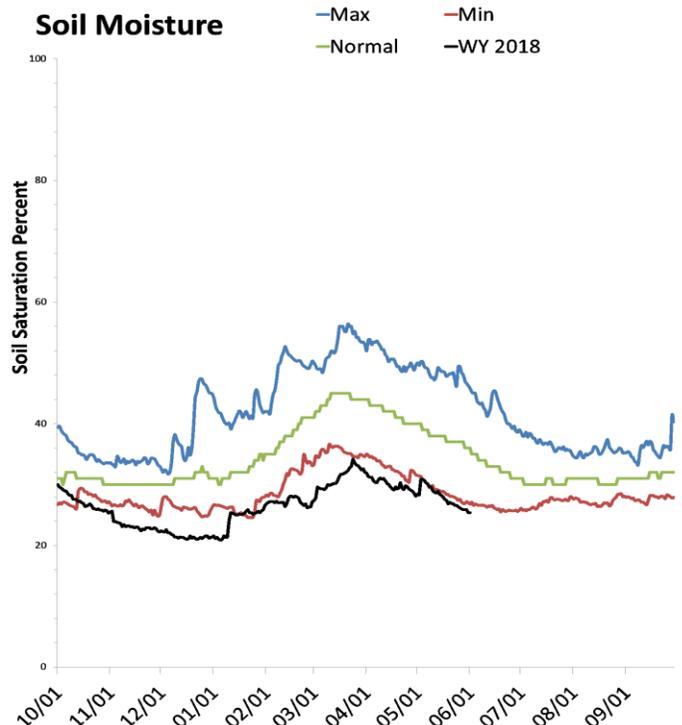
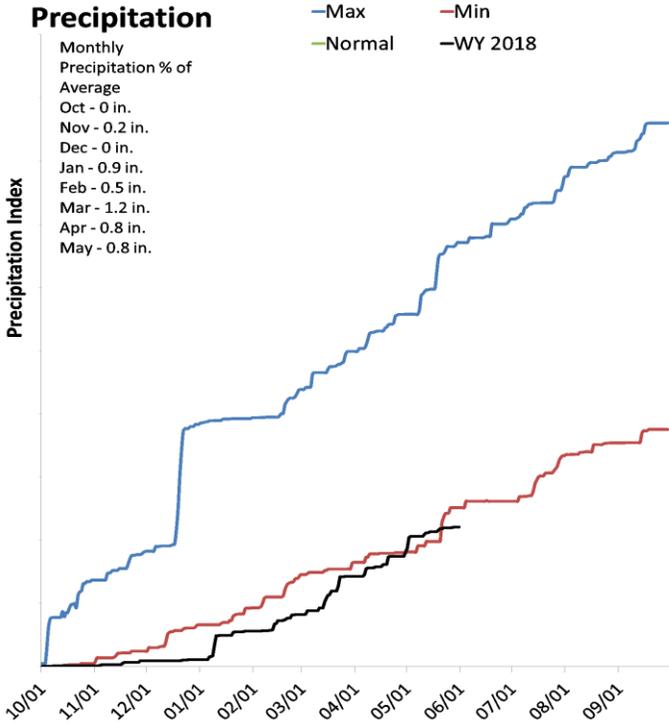
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# South Central

June 1, 2018

The average precipitation in May at SCAN sites within the basin was 0.8 inches, which brings the seasonal accumulation (Oct-May) to 4.4 inches. Soil moisture is at 26% compared to 34% last year.



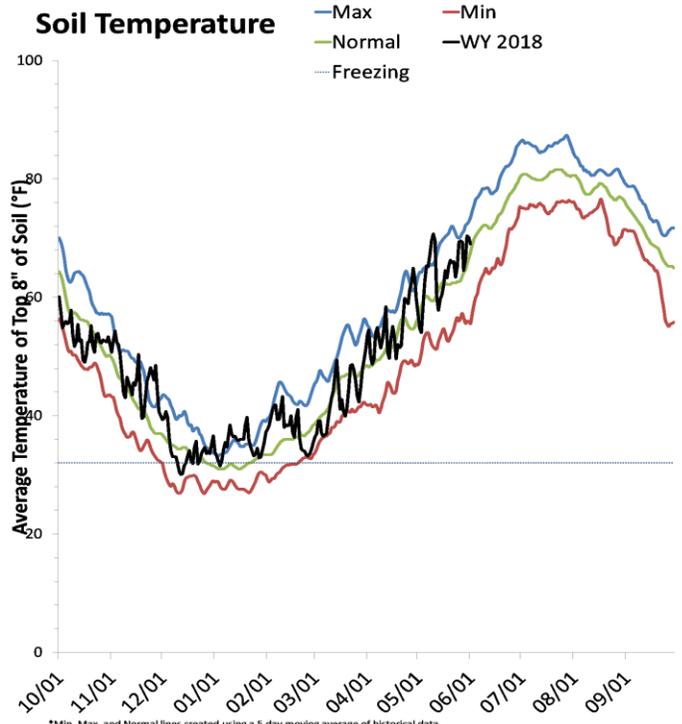
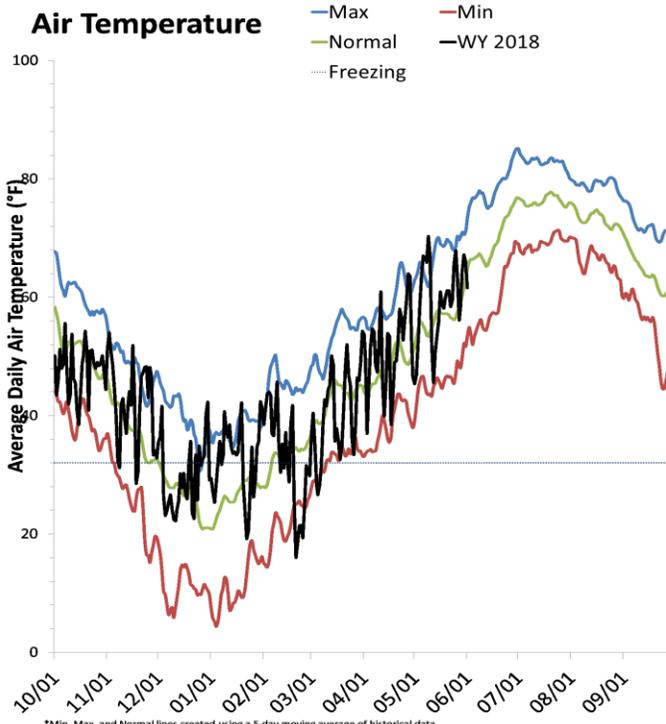
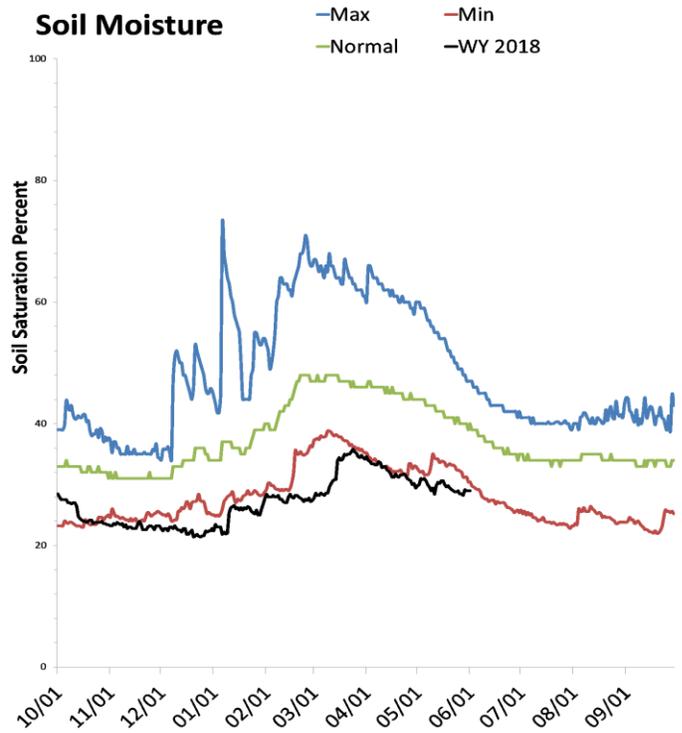
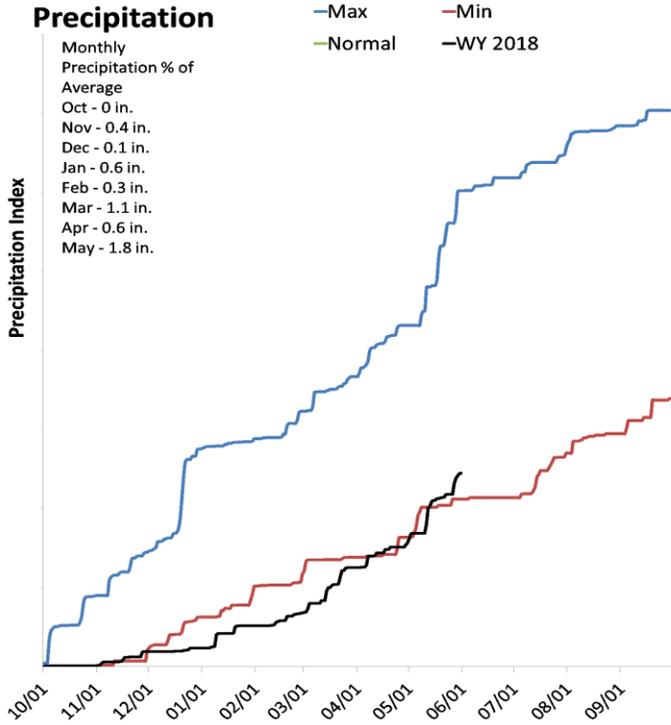
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Western and Dixie

June 1, 2018

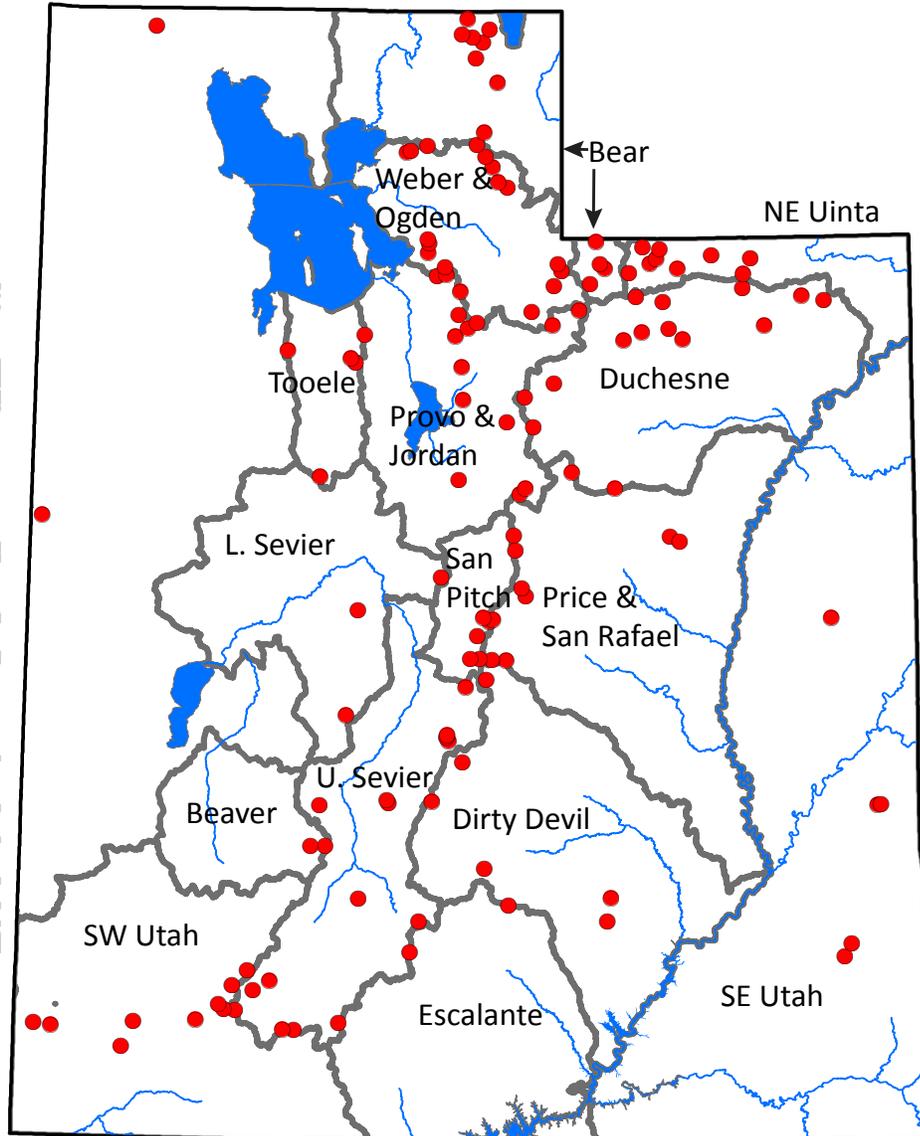
The average precipitation in May at SCAN sites within the basin was 1.8 inches, which brings the seasonal accumulation (Oct-May) to 4.9 inches. Soil moisture is at 28% compared to 30% last year.



\*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.

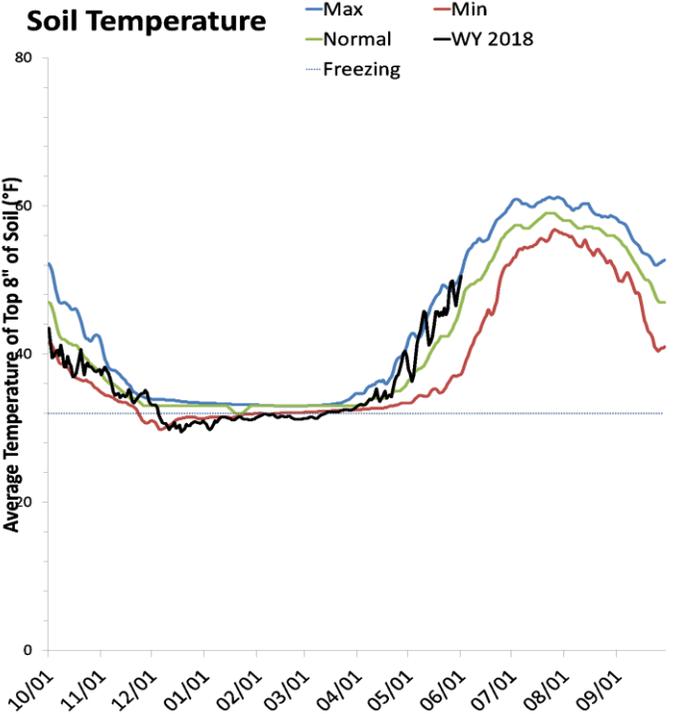
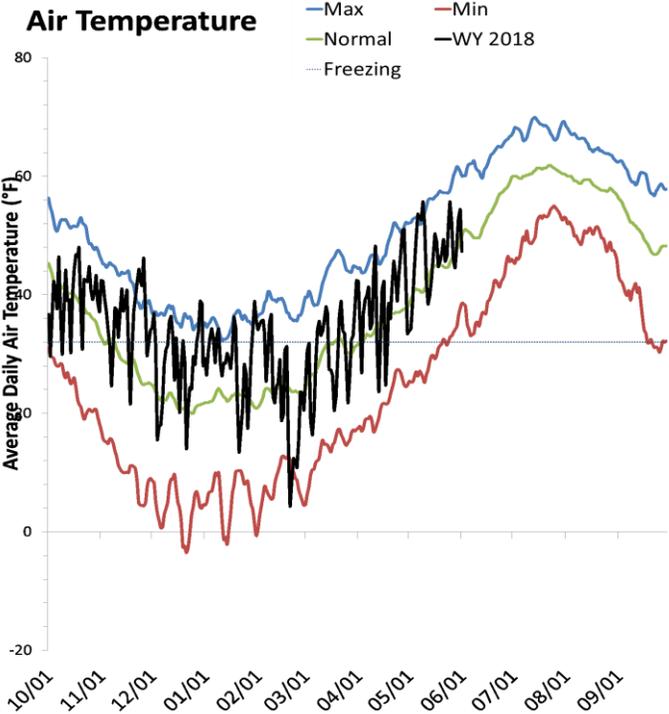
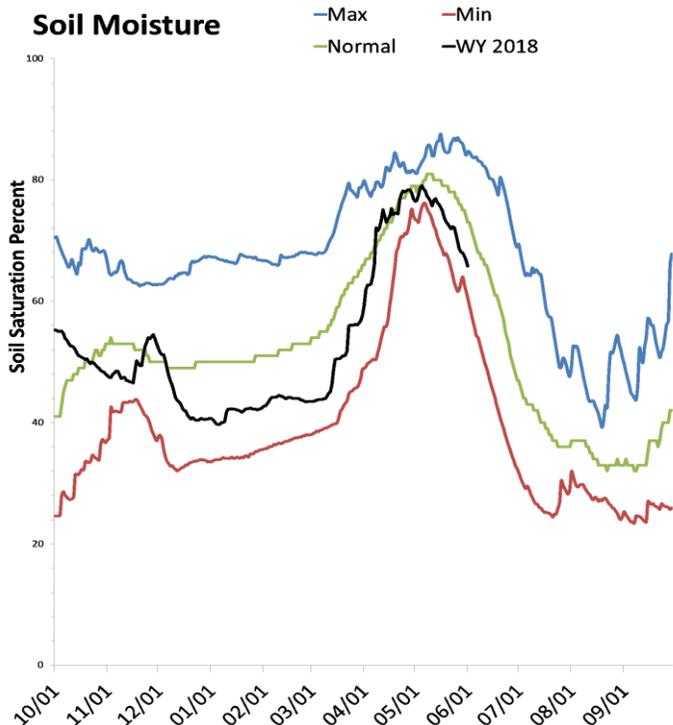
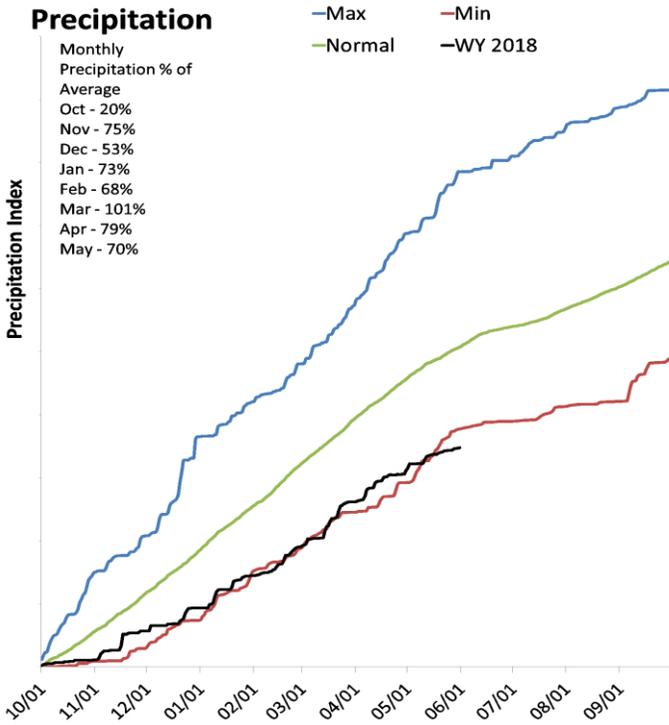
# SNOTEL portion of report



# Statewide SNOTEL

June 1, 2018

Precipitation at SNOTEL sites during May was below average at 70%, which brings the seasonal accumulation (Oct-May) to 69% of average. Soil moisture is at 66% compared to 74% last year. Reservoir storage is at 78% of capacity, compared to 82% last year.



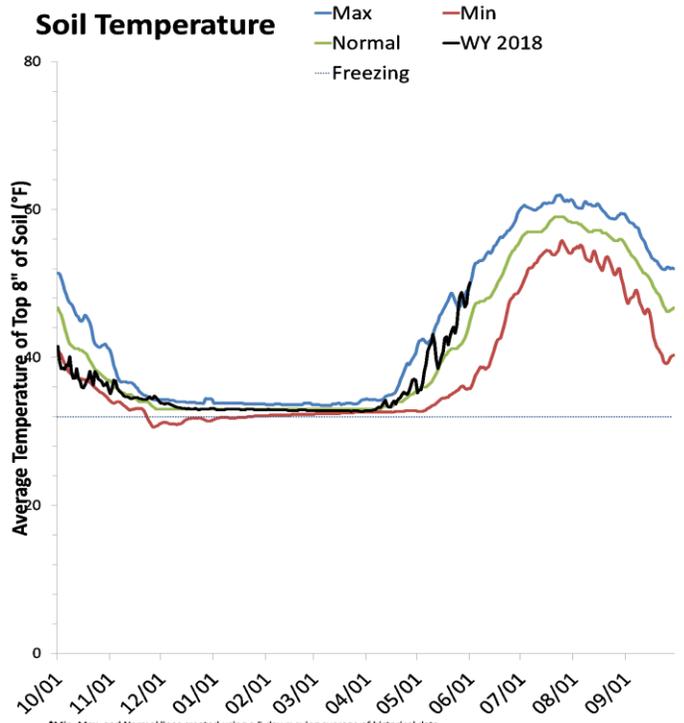
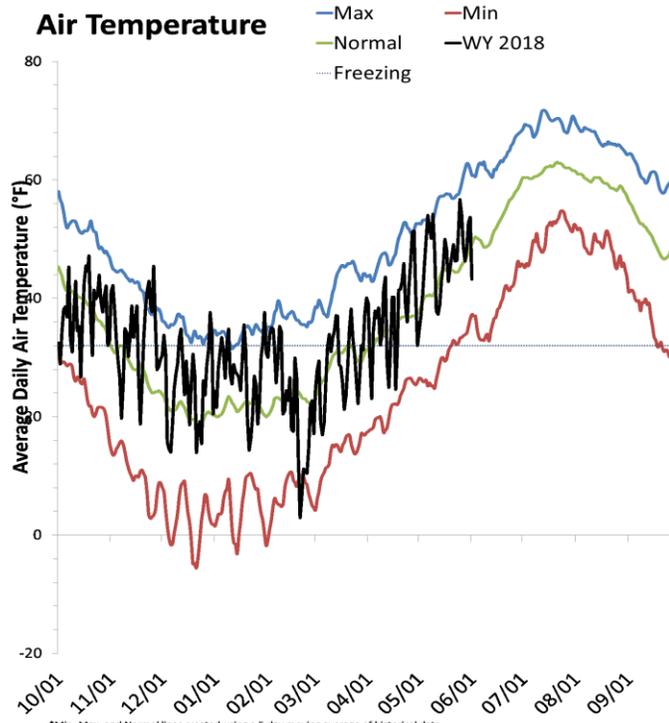
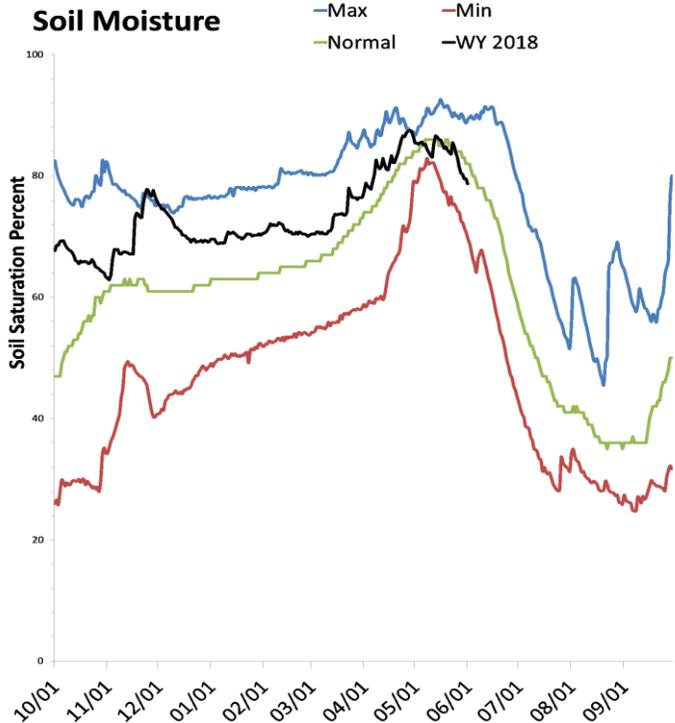
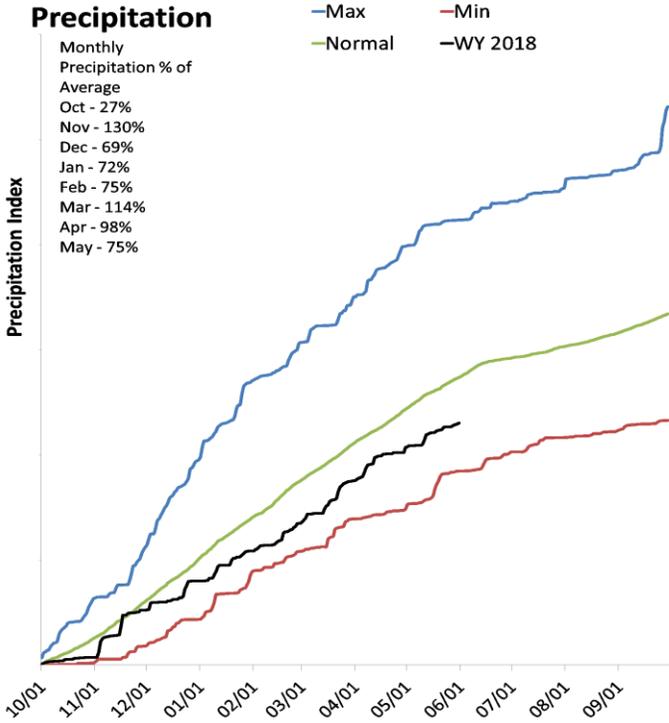
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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# Bear River Basin

June 1, 2018

Precipitation in May was below average at 76%, which brings the seasonal accumulation (Oct-May) to 84% of average. Soil moisture is at 78% compared to 85% last year. Reservoir storage is at 83% of capacity, compared to 84% last year. The water availability index for the Bear River is 77%, 67% for Woodruff Narrows and 44% for the Little Bear.



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

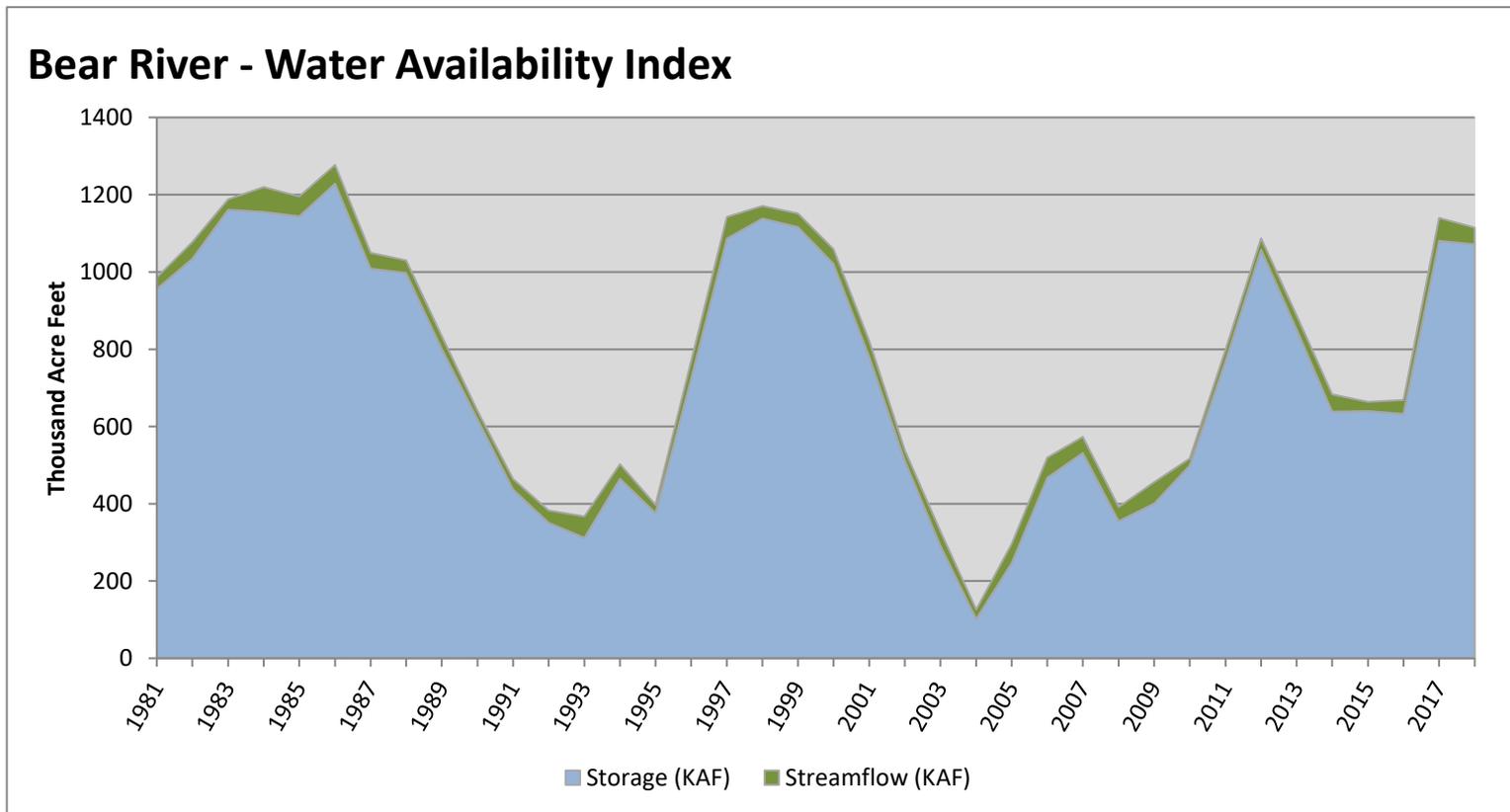
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>1071.77</b>	<b>42.88</b>	<b>1114.65</b>	<b>77</b>	<b>2.24</b>	<b>82, 12, 17, 97</b>

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

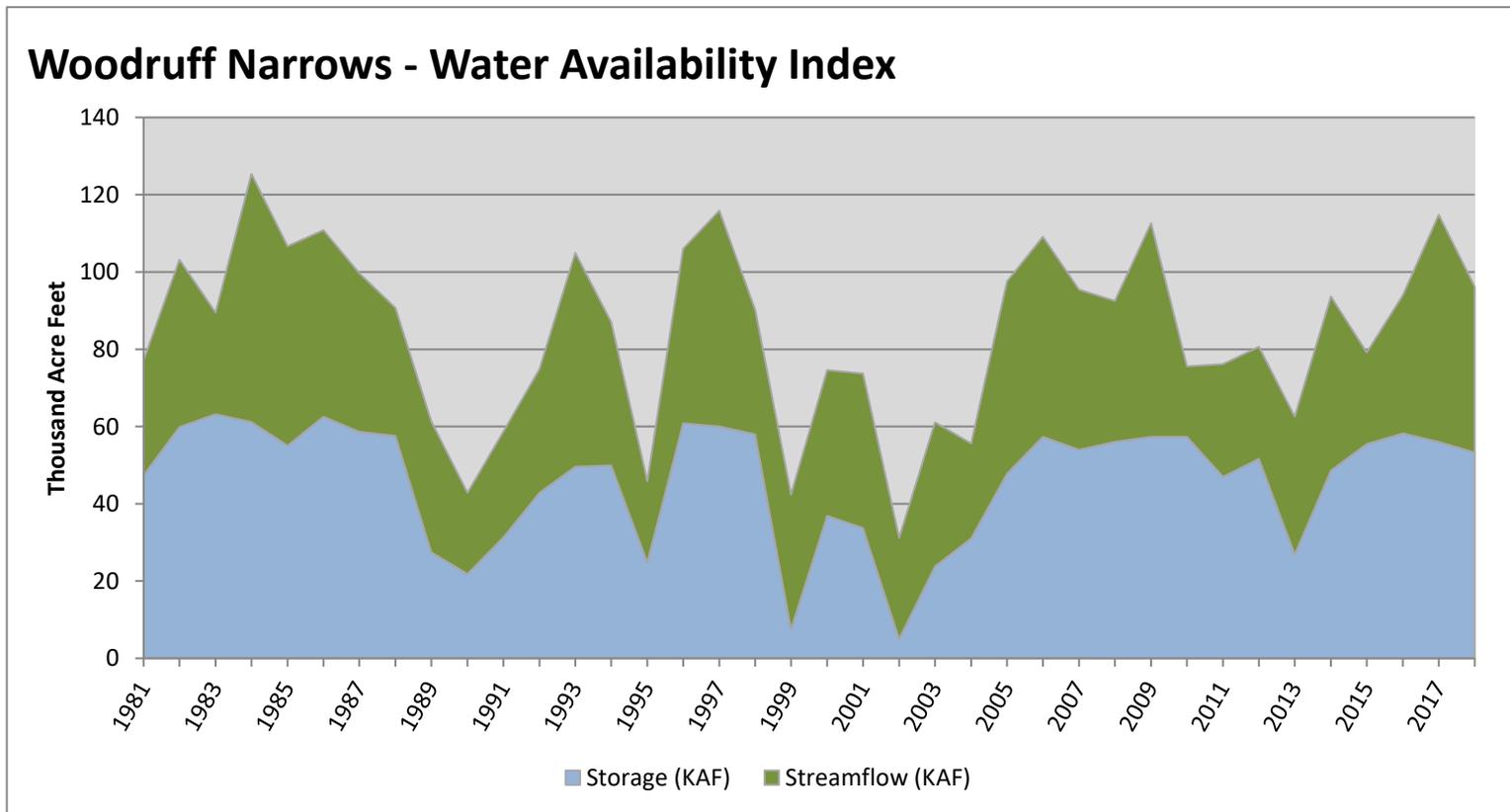


June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>53.27</b>	<b>42.88</b>	<b>96.15</b>	<b>67</b>	<b>1.39</b>	<b>16, 07, 05, 87</b>

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

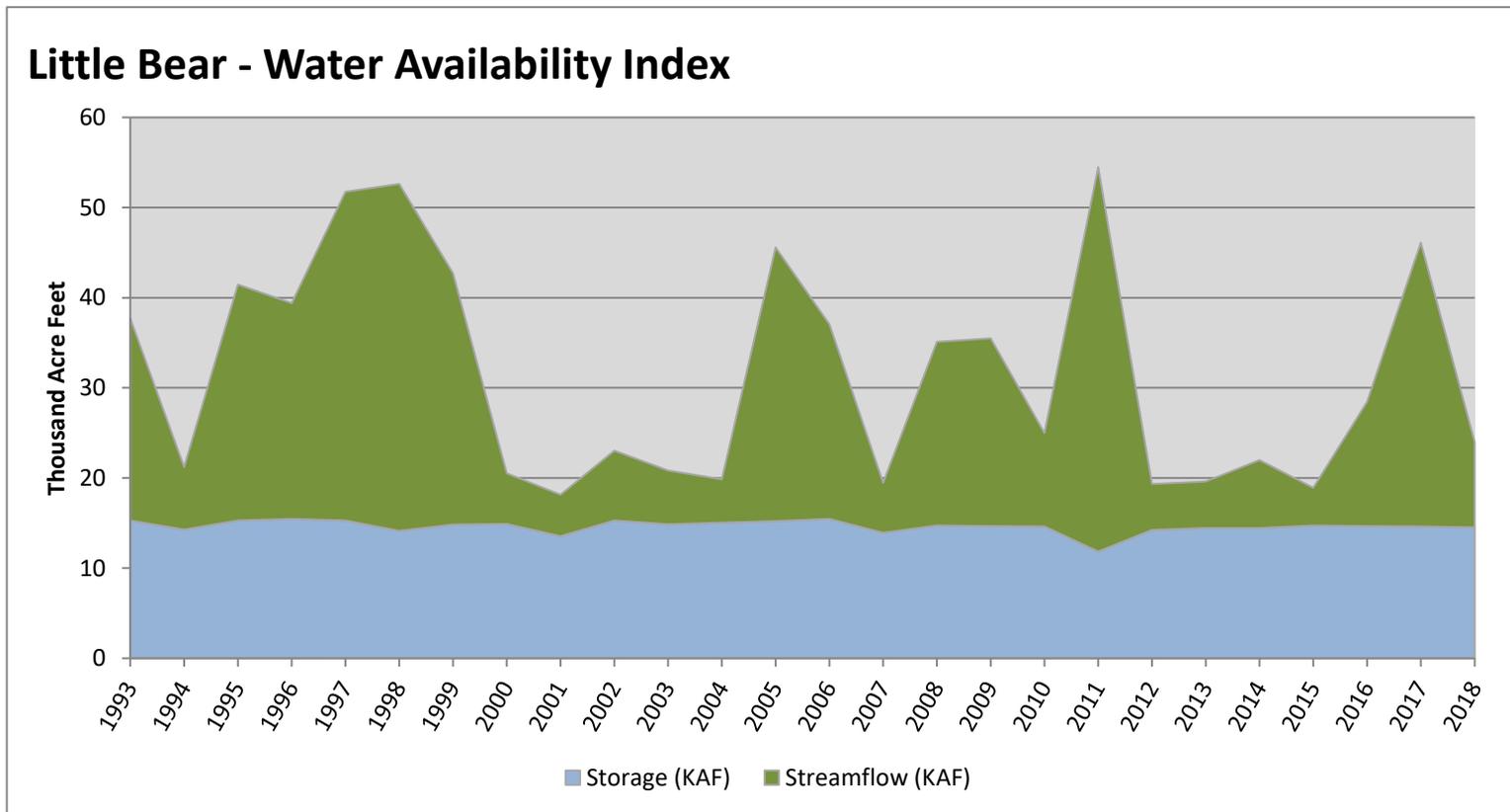


June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>14.51</b>	<b>9.48</b>	<b>23.99</b>	<b>44</b>	<b>-0.46</b>	<b>14, 02, 10, 16</b>

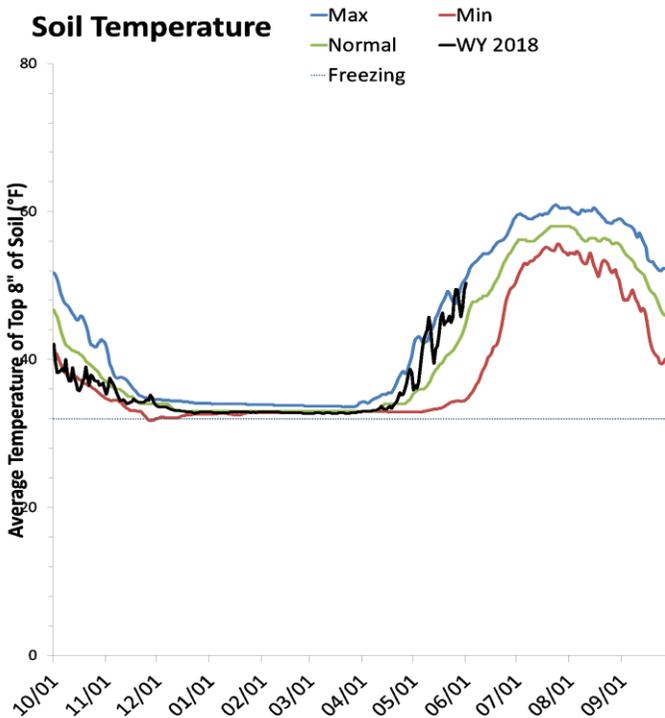
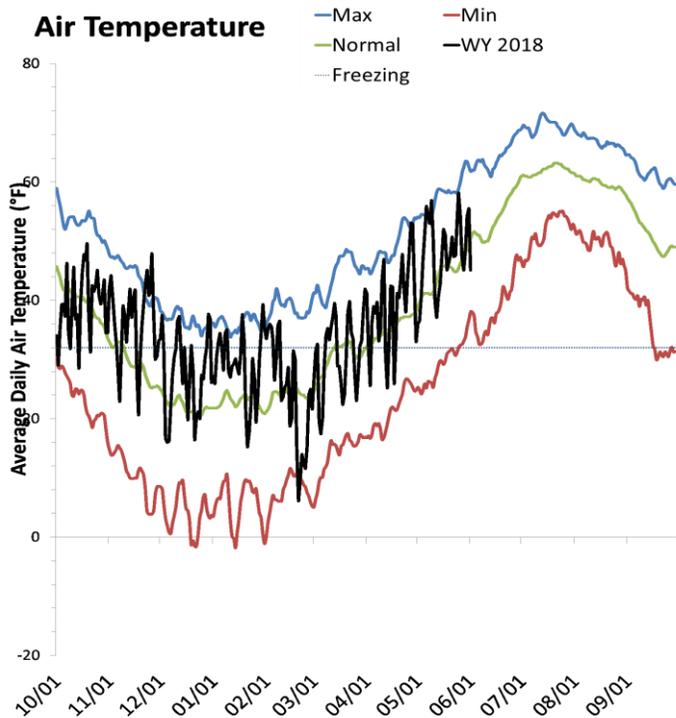
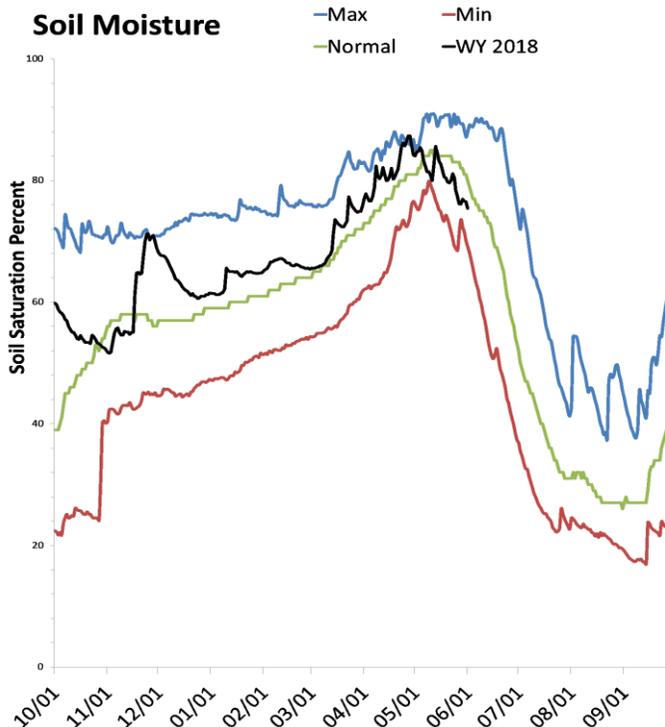
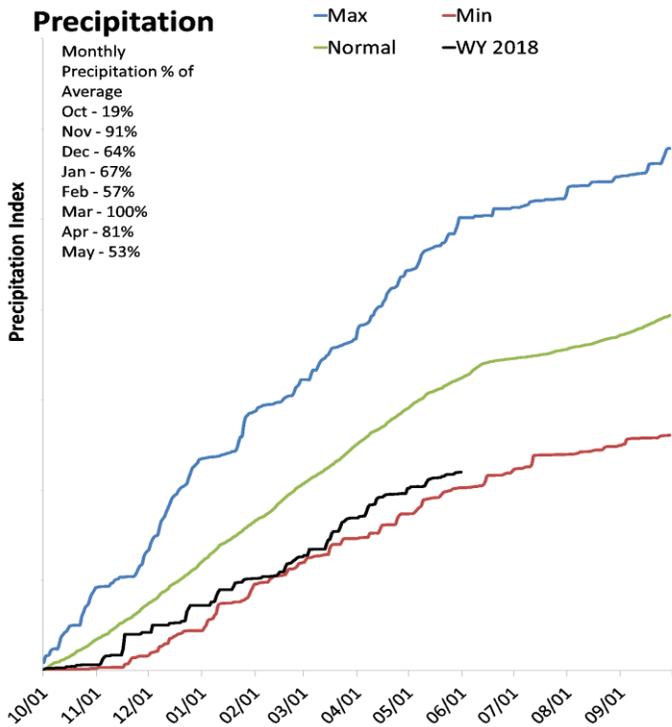
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Weber & Ogden River Basins

June 1, 2018

Precipitation in May was much below average at 53%, which brings the seasonal accumulation (Oct-May) to 67% of average. Soil moisture is at 75% compared to 81% last year. Reservoir storage is at 92% of capacity, compared to 99% last year. The water availability index for the Ogden River is 38% and 48% for the Weber River.



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

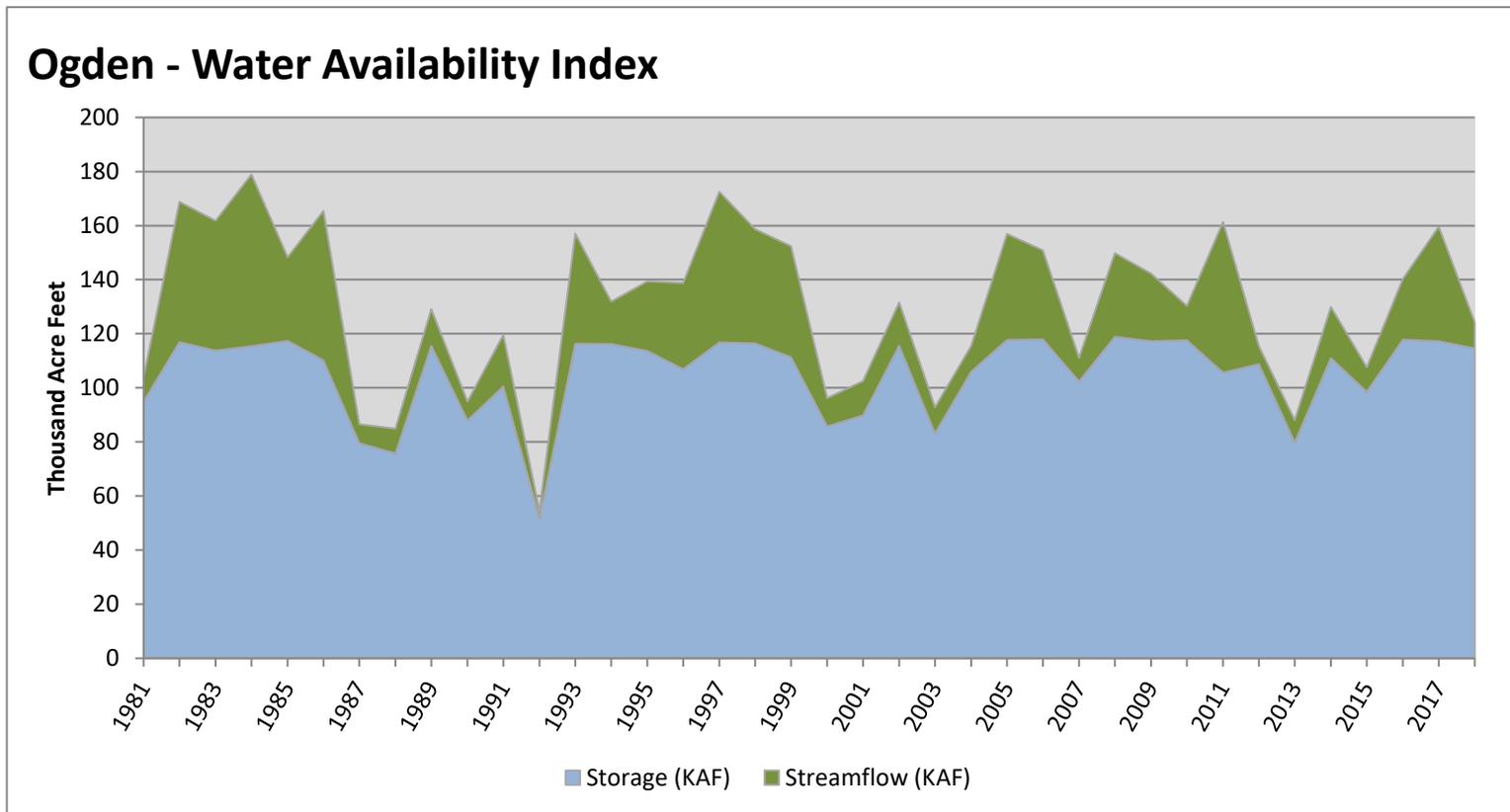
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Ogden</b>	<b>114.53</b>	<b>9.74</b>	<b>124.27</b>	<b>38</b>	<b>-0.96</b>	<b>04, 91, 89, 14</b>

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

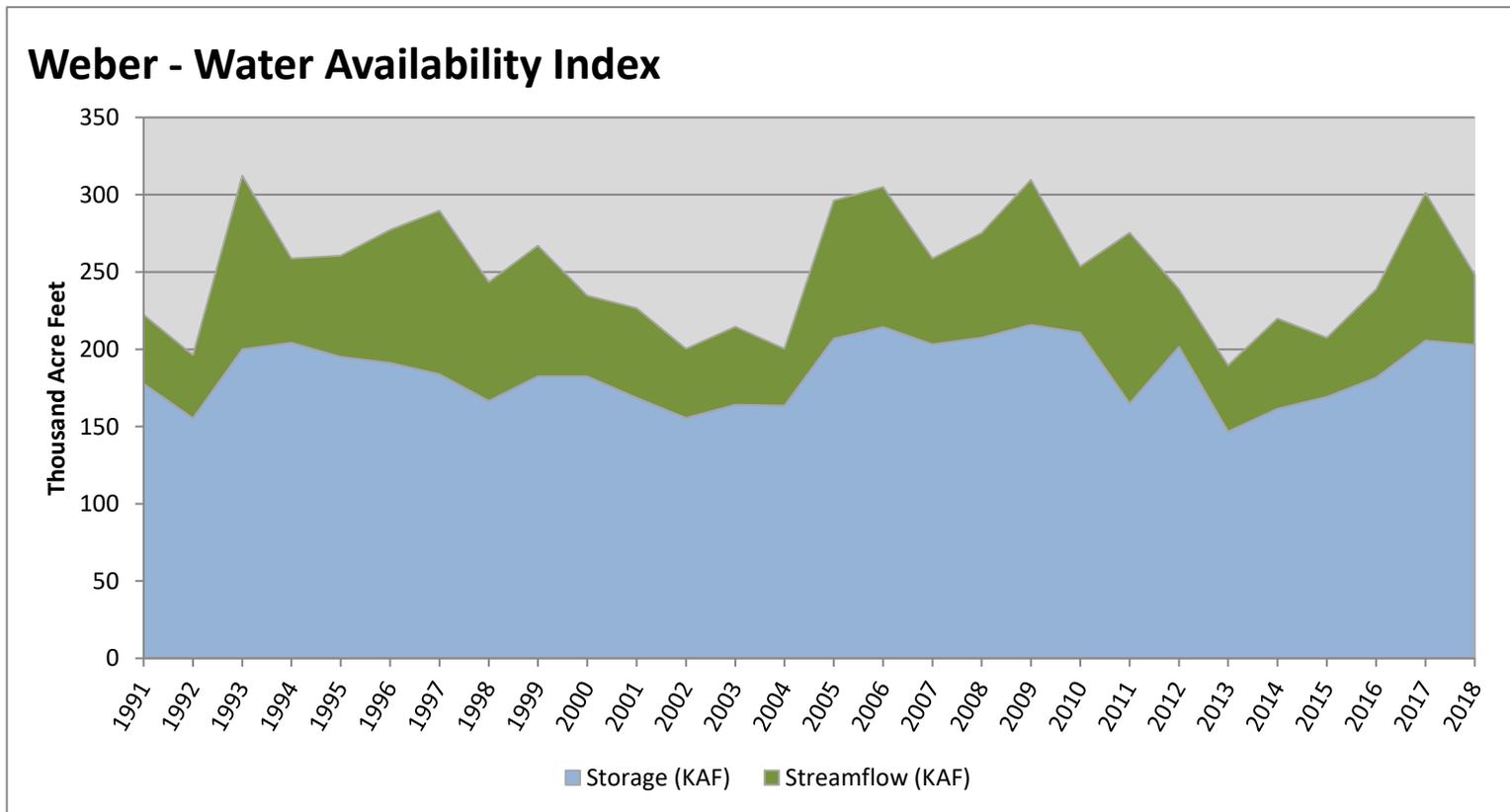


June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Weber</b>	<b>202.67</b>	<b>45.43</b>	<b>248.10</b>	<b>48</b>	<b>-0.14</b>	<b>12, 98, 10, 94</b>

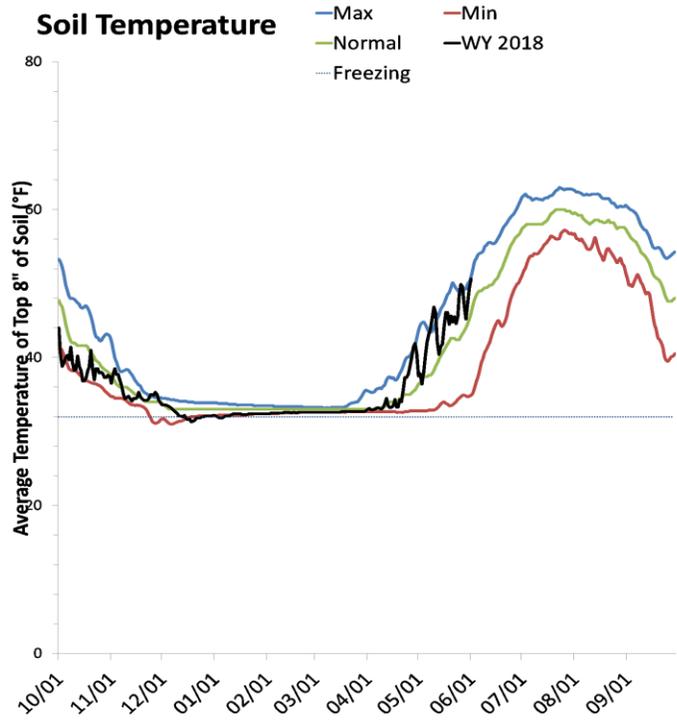
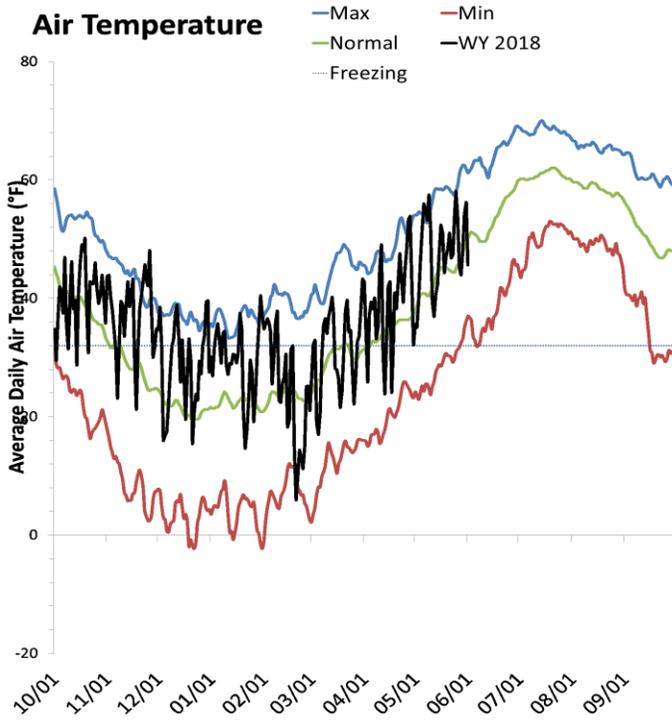
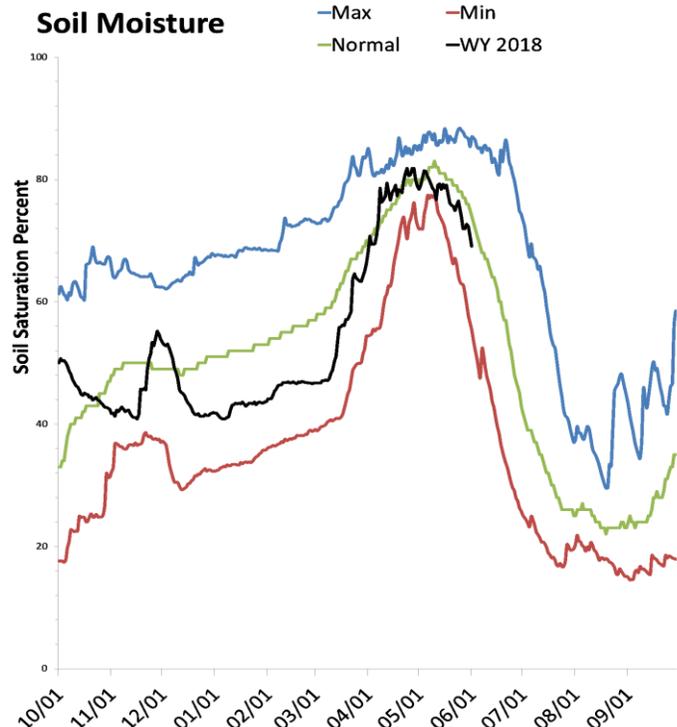
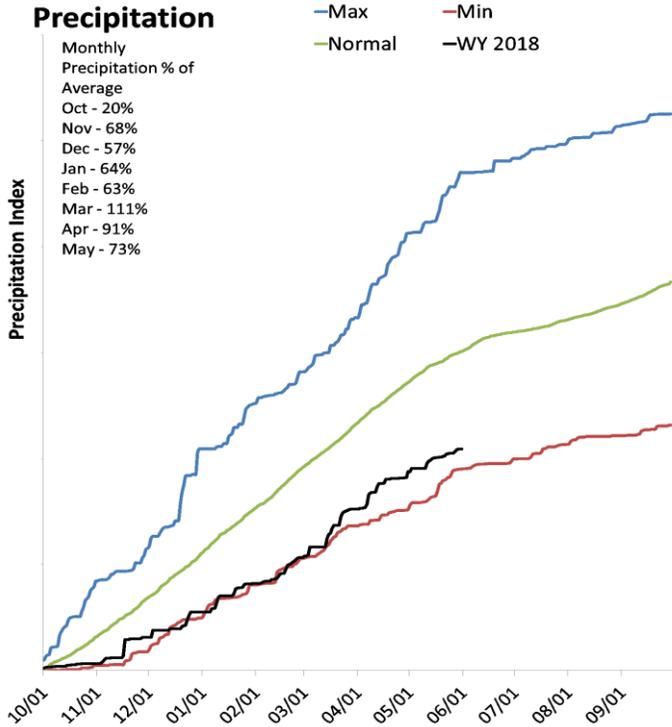
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Provo & Jordan River Basins

June 1, 2018

Precipitation in May was below average at 73%, which brings the seasonal accumulation (Oct-May) to 69% of average. Soil moisture is at 70% compared to 77% last year. Reservoir storage is at 80% of capacity, compared to 82% last year. The water availability index for the Provo River is 75%.



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

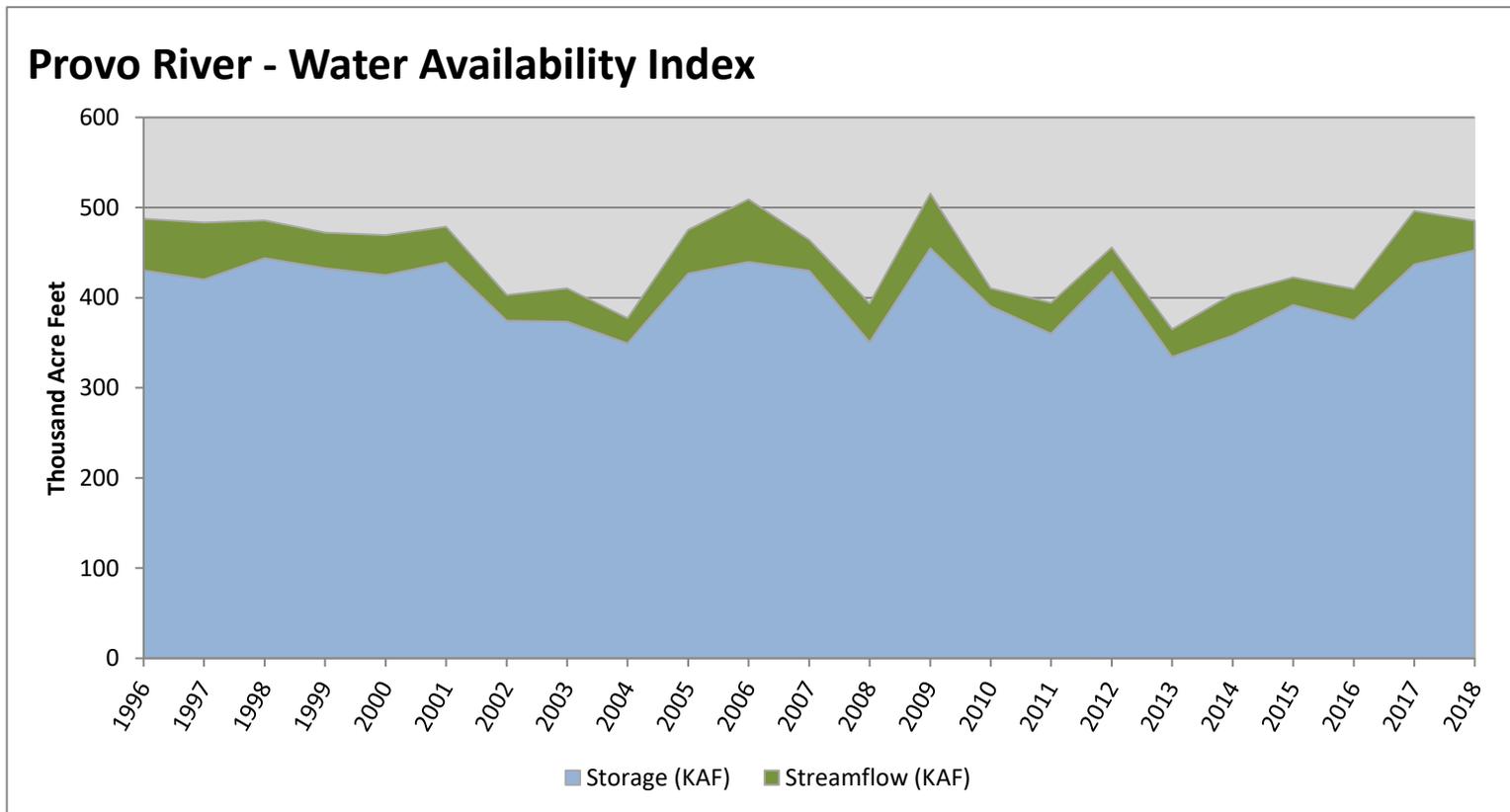
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>452.62</b>	<b>32.89</b>	<b>485.51</b>	<b>75</b>	<b>2.08</b>	<b>01, 97, 98, 96</b>

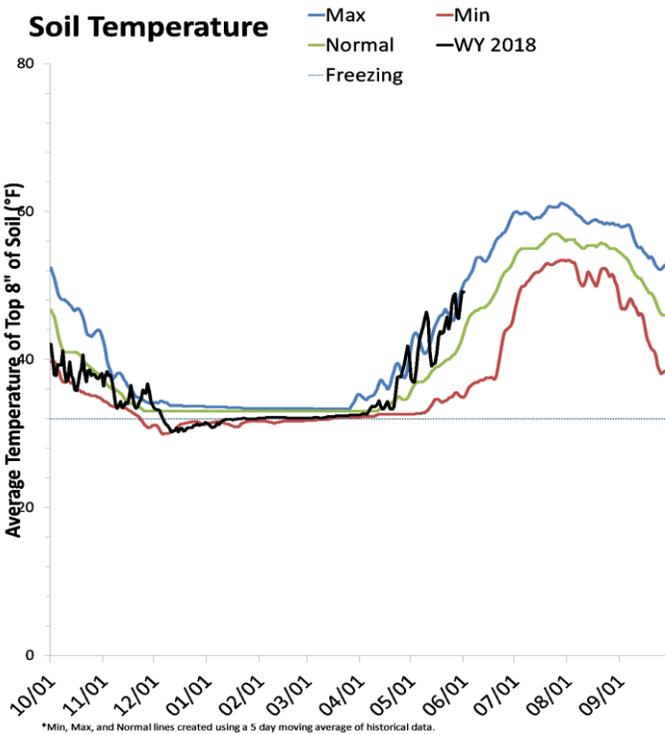
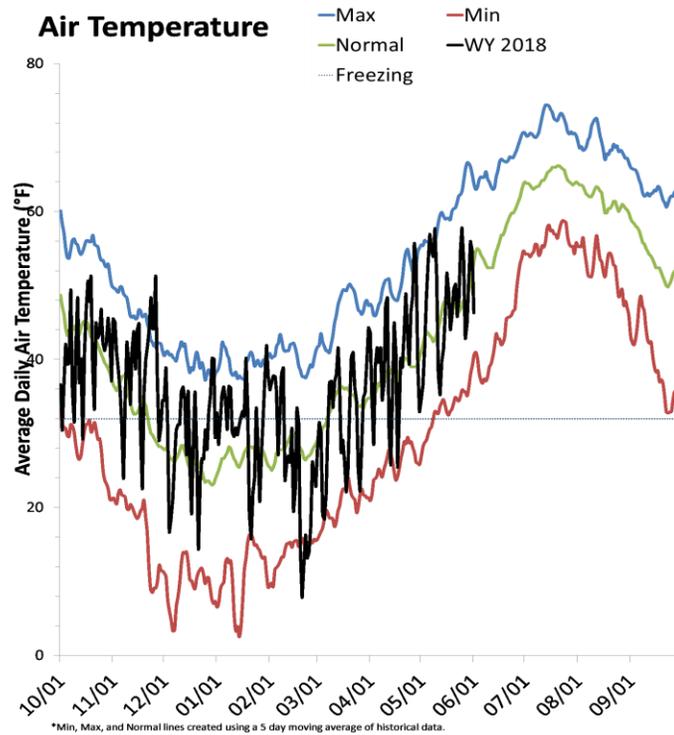
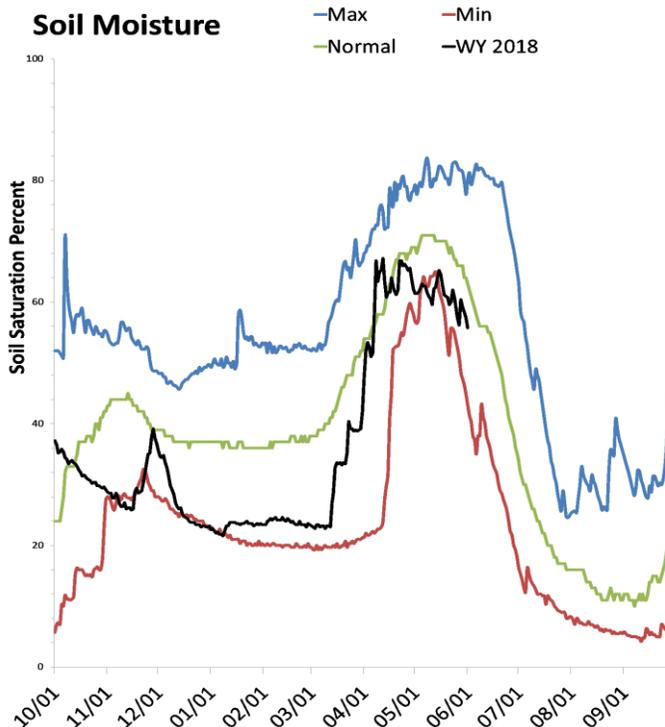
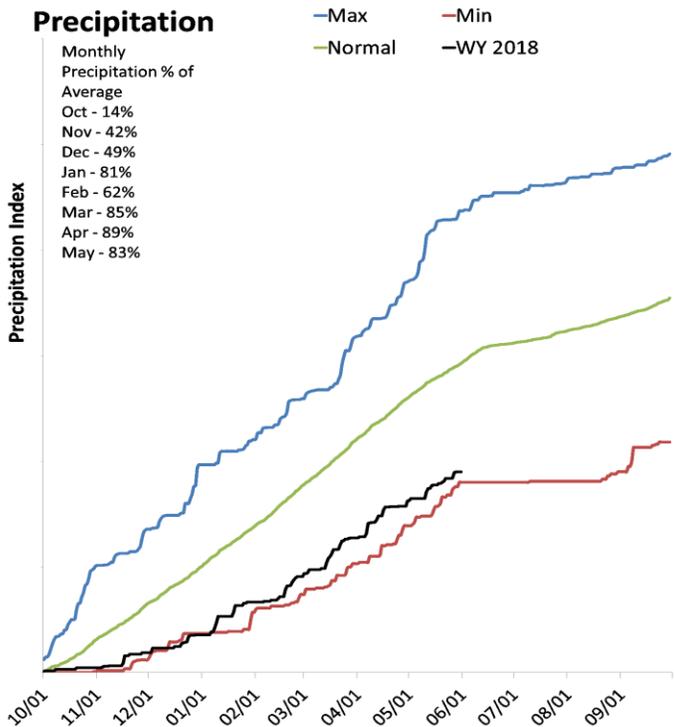
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Tooele Valley & West Desert Basins

June 1, 2018

Precipitation in May was below average at 82%, which brings the seasonal accumulation (Oct-May) to 65% of average. Soil moisture is at 57% compared to 62% last year. Reservoir storage is at 81% of capacity, compared to 102% last year.



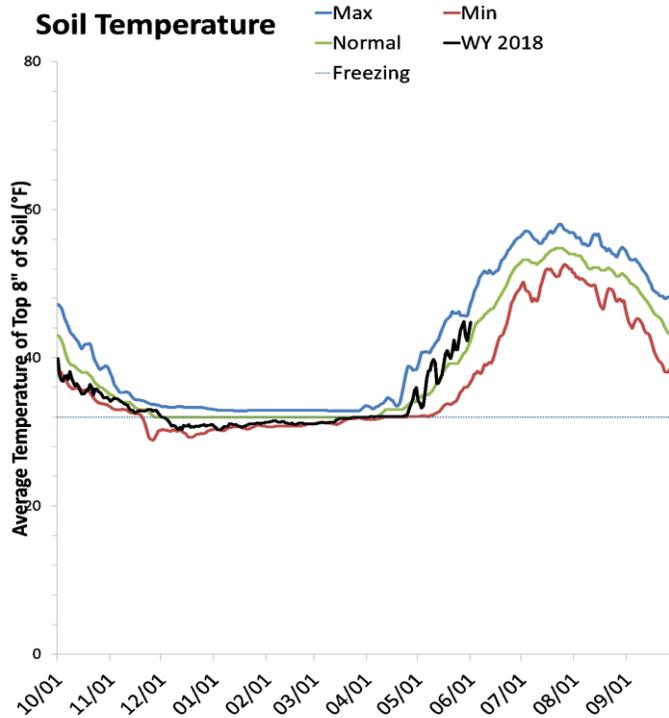
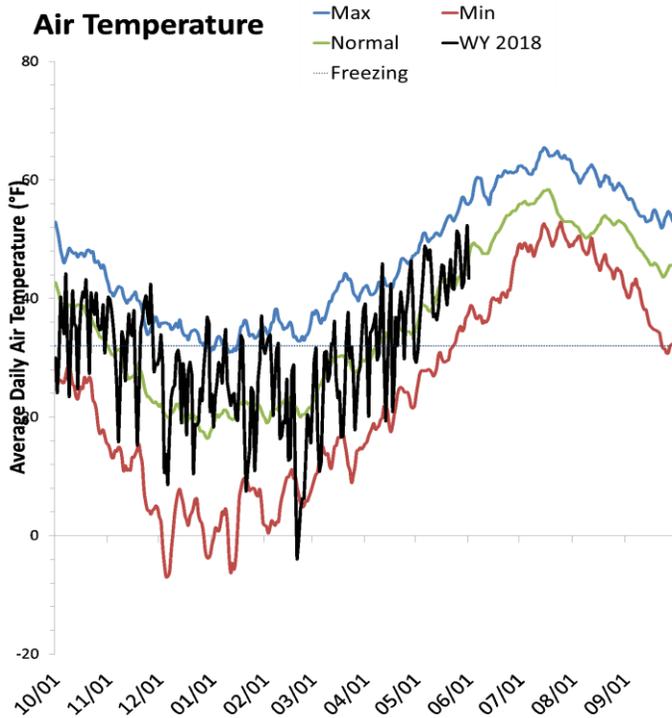
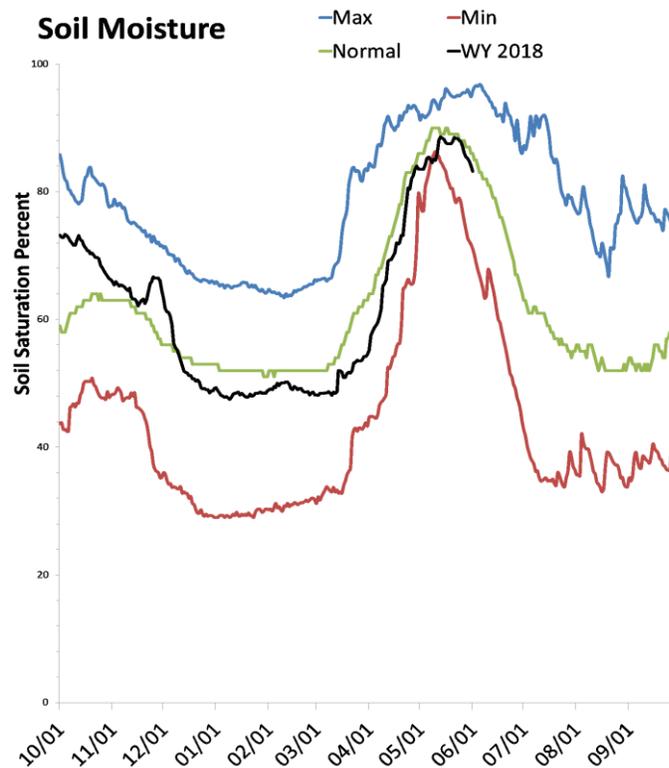
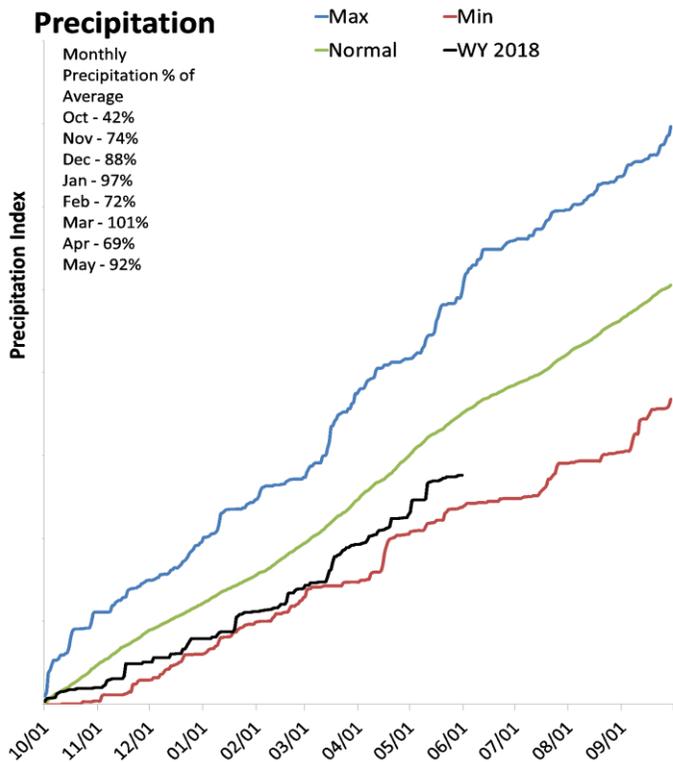
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

# Northeastern Uinta Basin

June 1, 2018

Precipitation in May was near average at 91%, which brings the seasonal accumulation (Oct-May) to 79% of average. Soil moisture is at 82% compared to 88% last year. Reservoir storage is at 88% of capacity, compared to 86% last year. The water availability index for Blacks Fork is 94% and 86% for Smiths Creek.



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

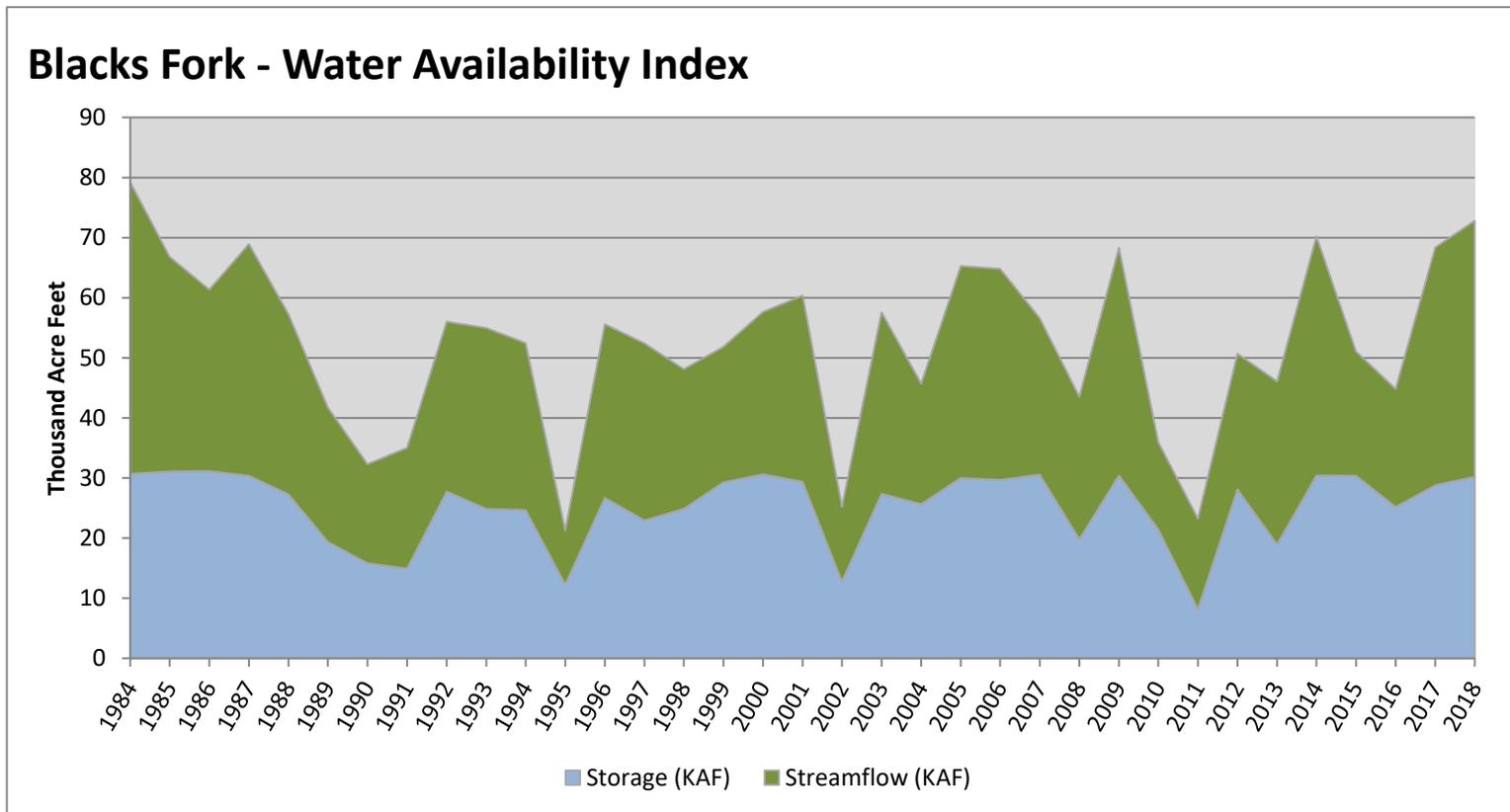
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>30.19</b>	<b>42.63</b>	<b>72.82</b>	<b>94</b>	<b>3.7</b>	<b>84, 14, 87, 17</b>

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

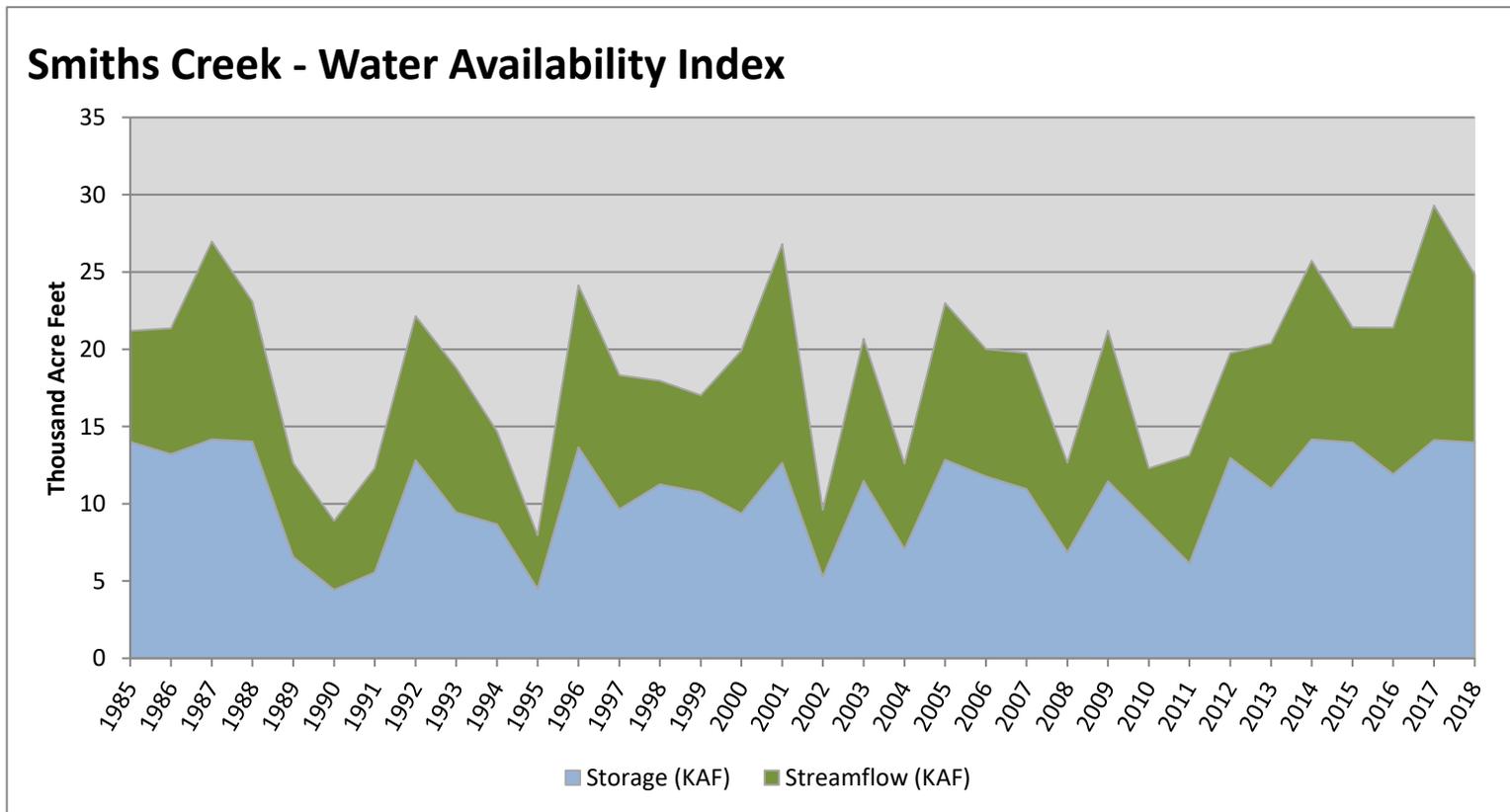


June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>13.97</b>	<b>10.86</b>	<b>24.83</b>	<b>86</b>	<b>2.98</b>	<b>88, 96, 14, 01</b>

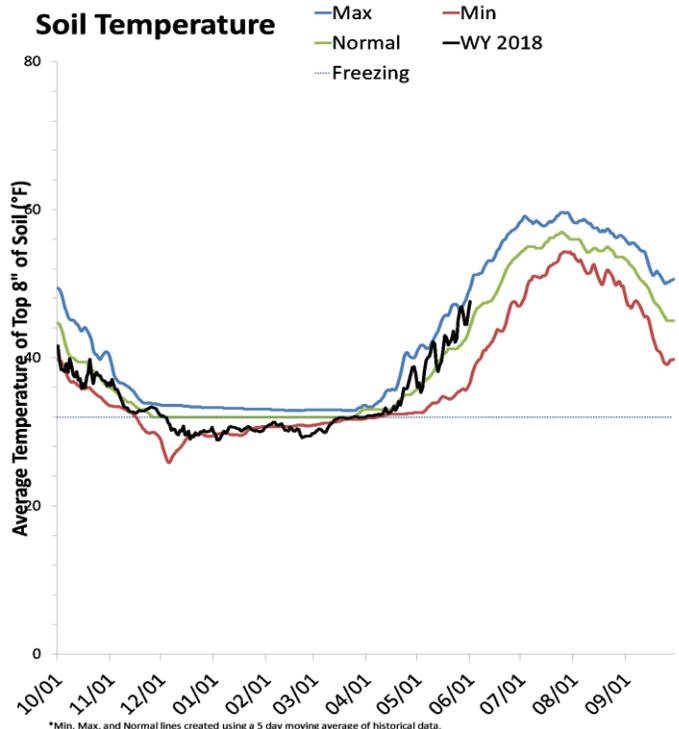
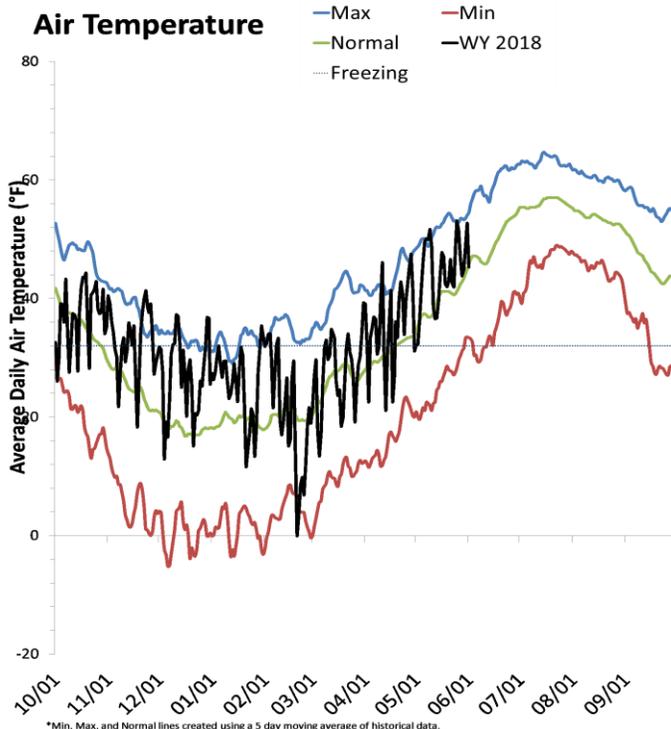
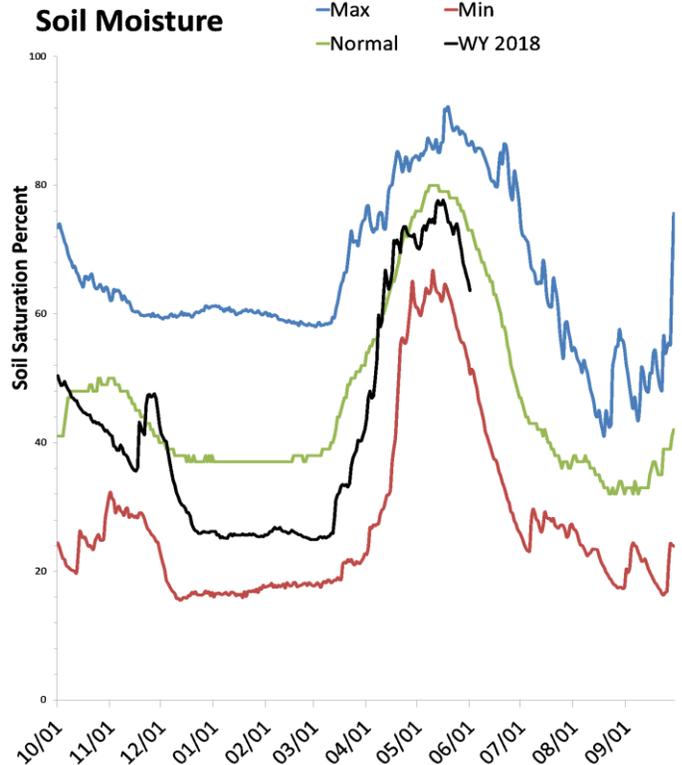
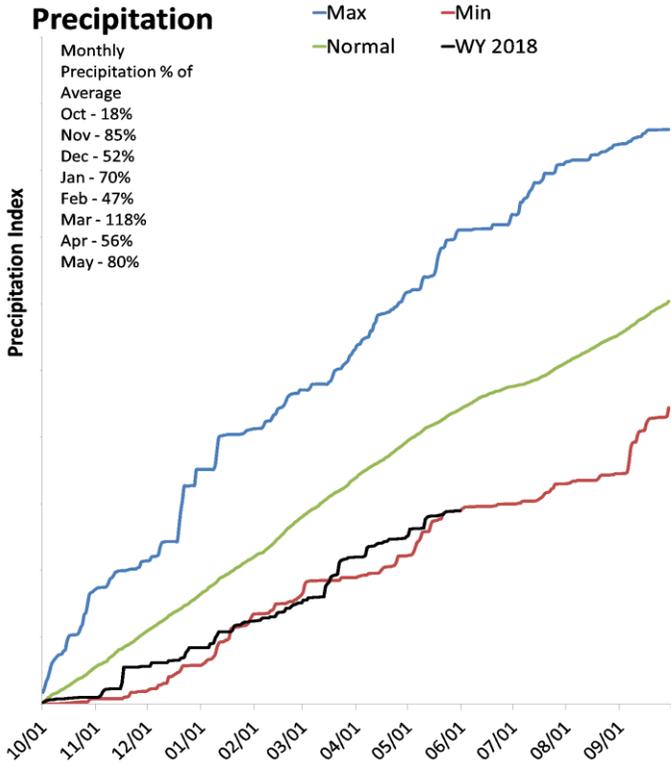
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Duchesne River Basin

June 1, 2018

Precipitation in May was below average at 80%, which brings the seasonal accumulation (Oct-May) to 66% of average. Soil moisture is at 64% compared to 72% last year. Reservoir storage is at 85% of capacity, compared to 83% last year. The water availability index for the Western Uintas is 75% and 10% for the Eastern Uintas.



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

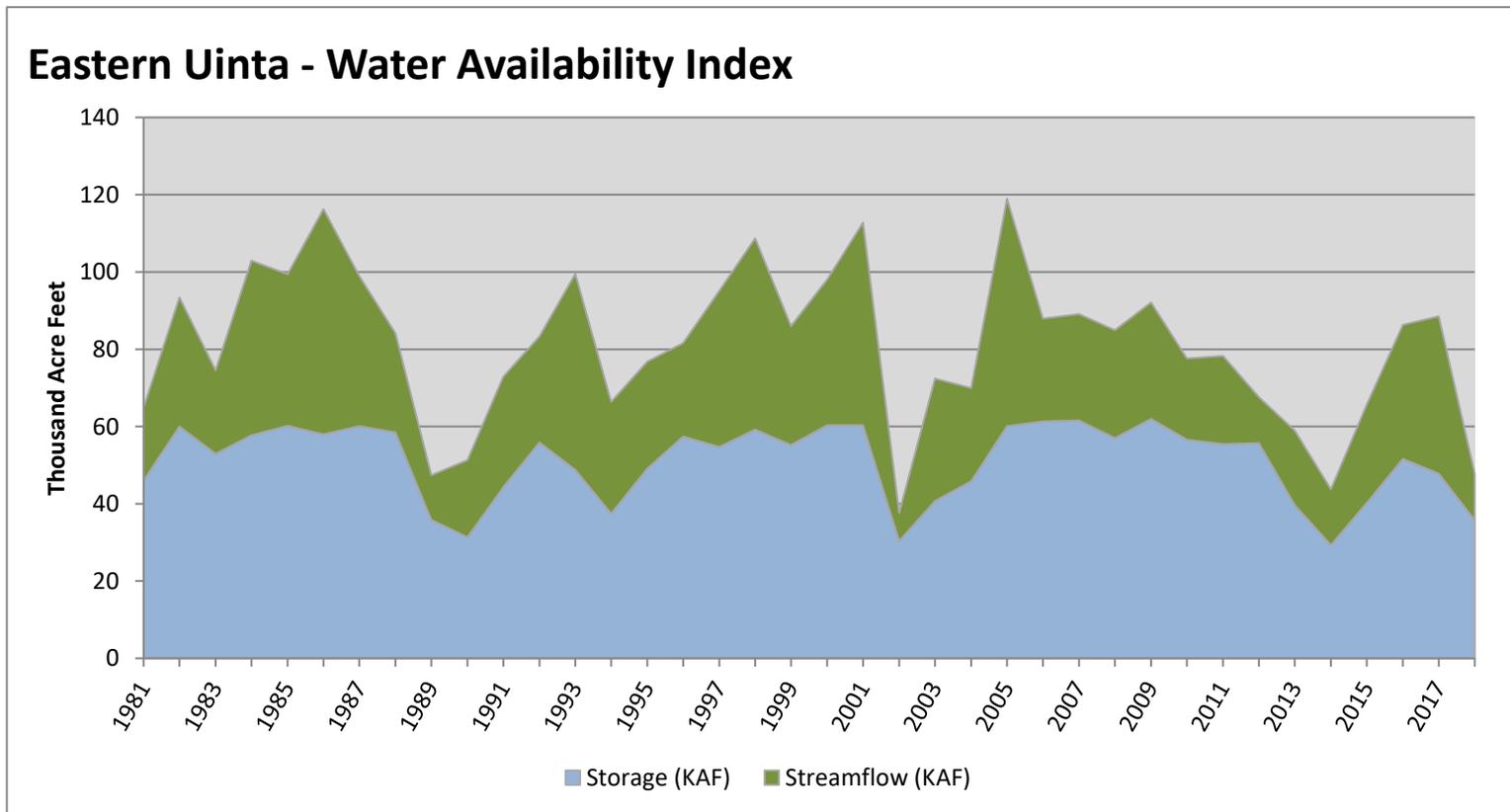
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>35.78</b>	<b>12.03</b>	<b>47.81</b>	<b>10</b>	<b>-3.31</b>	<b>14, 89, 90, 13</b>

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

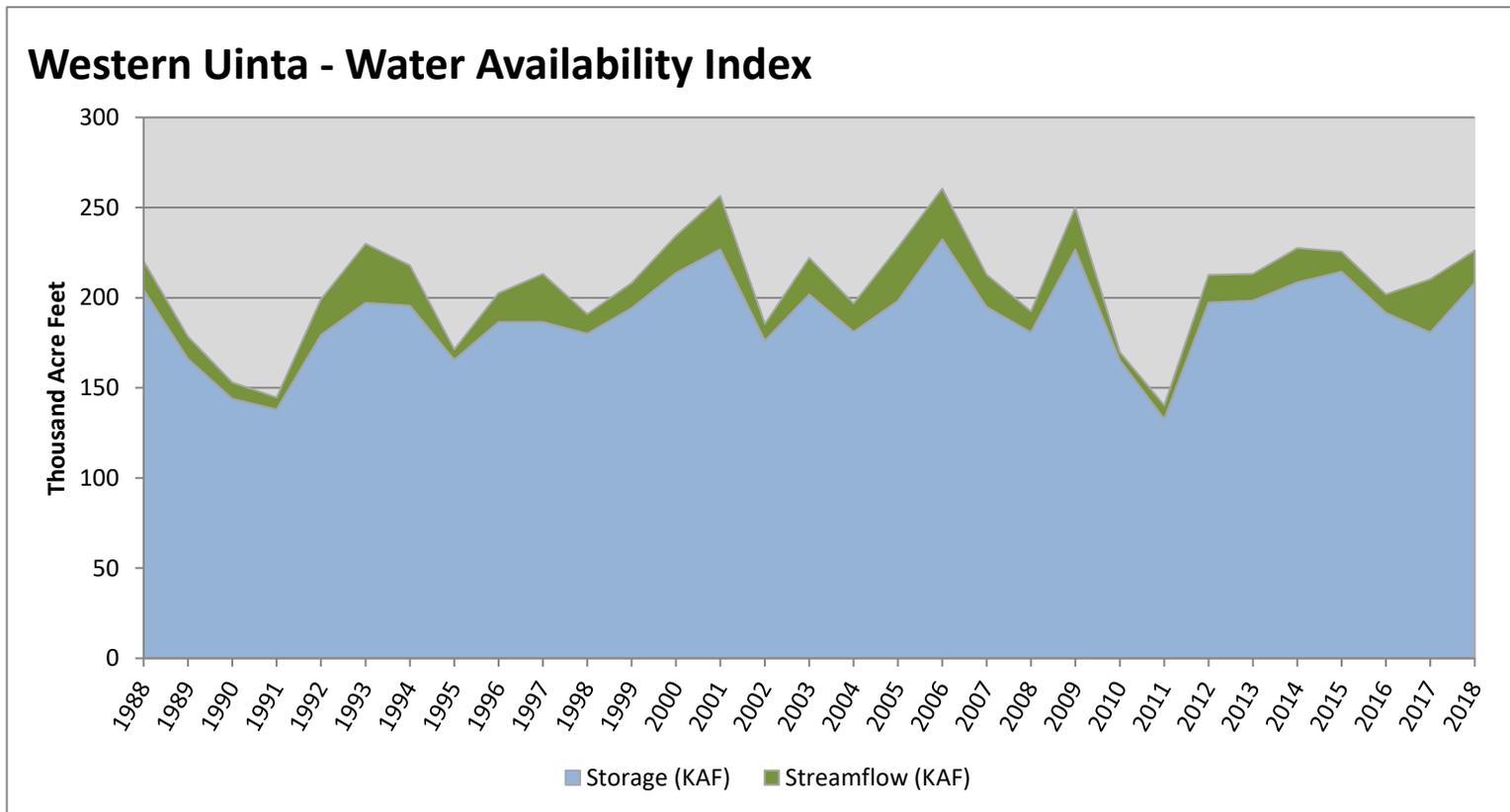


June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>208.22</b>	<b>17.99</b>	<b>226.21</b>	<b>75</b>	<b>2.08</b>	<b>03, 15, 14, 05</b>

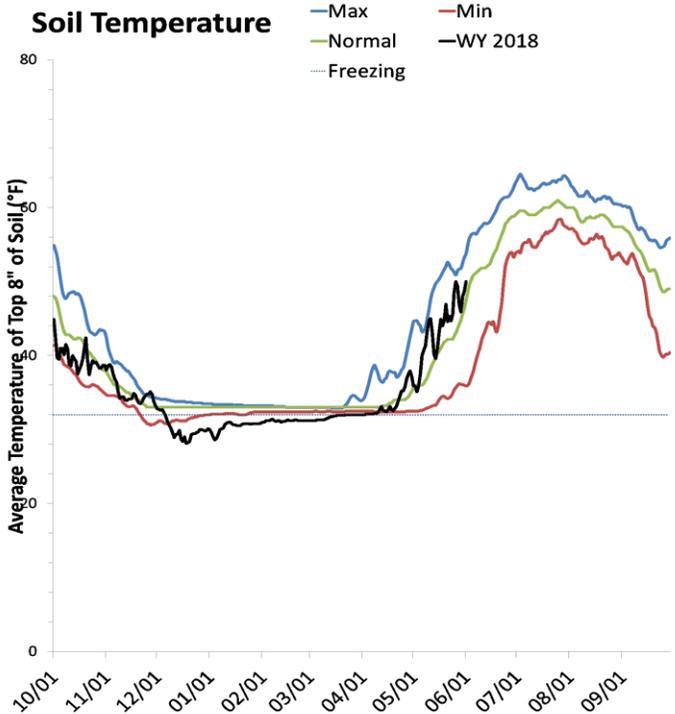
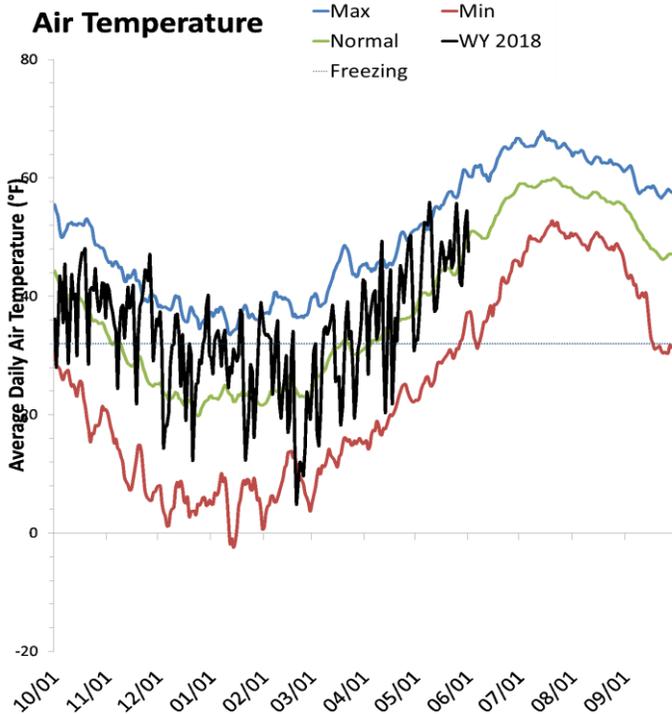
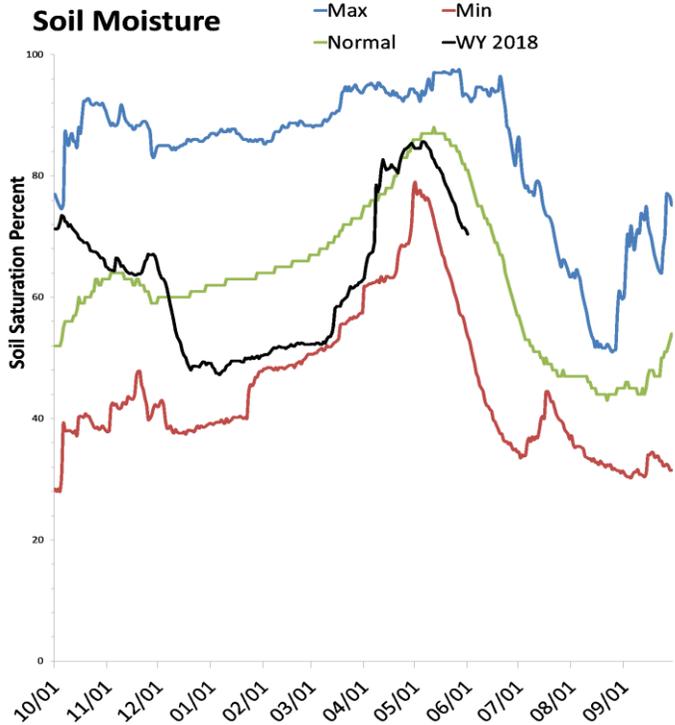
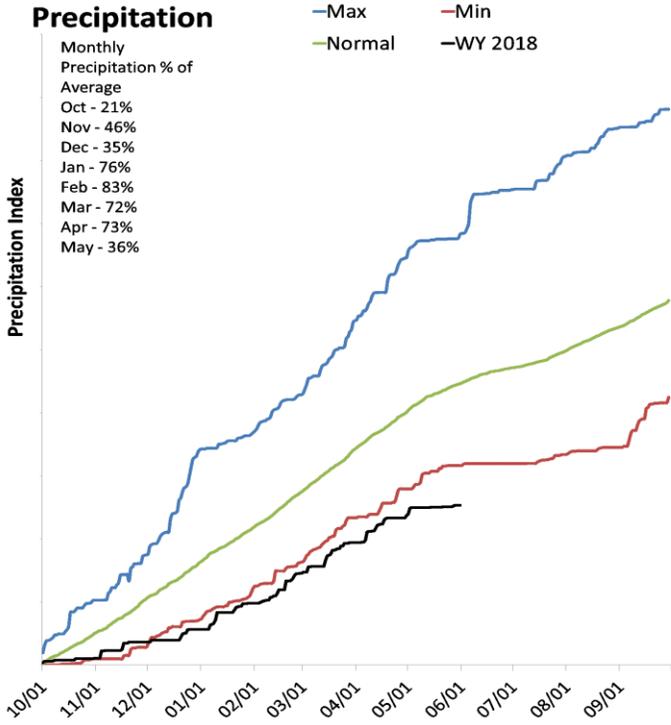
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# San Pitch River Basin

June 1, 2018

Precipitation in May was much below average at 36%, which brings the seasonal accumulation (Oct-May) to 57% of average. Soil Moisture is at 71% compared to 82% last year. Reservoir storage is at 1% of capacity, compared to 45% last year. The water availability index for the San Pitch is 5%.



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

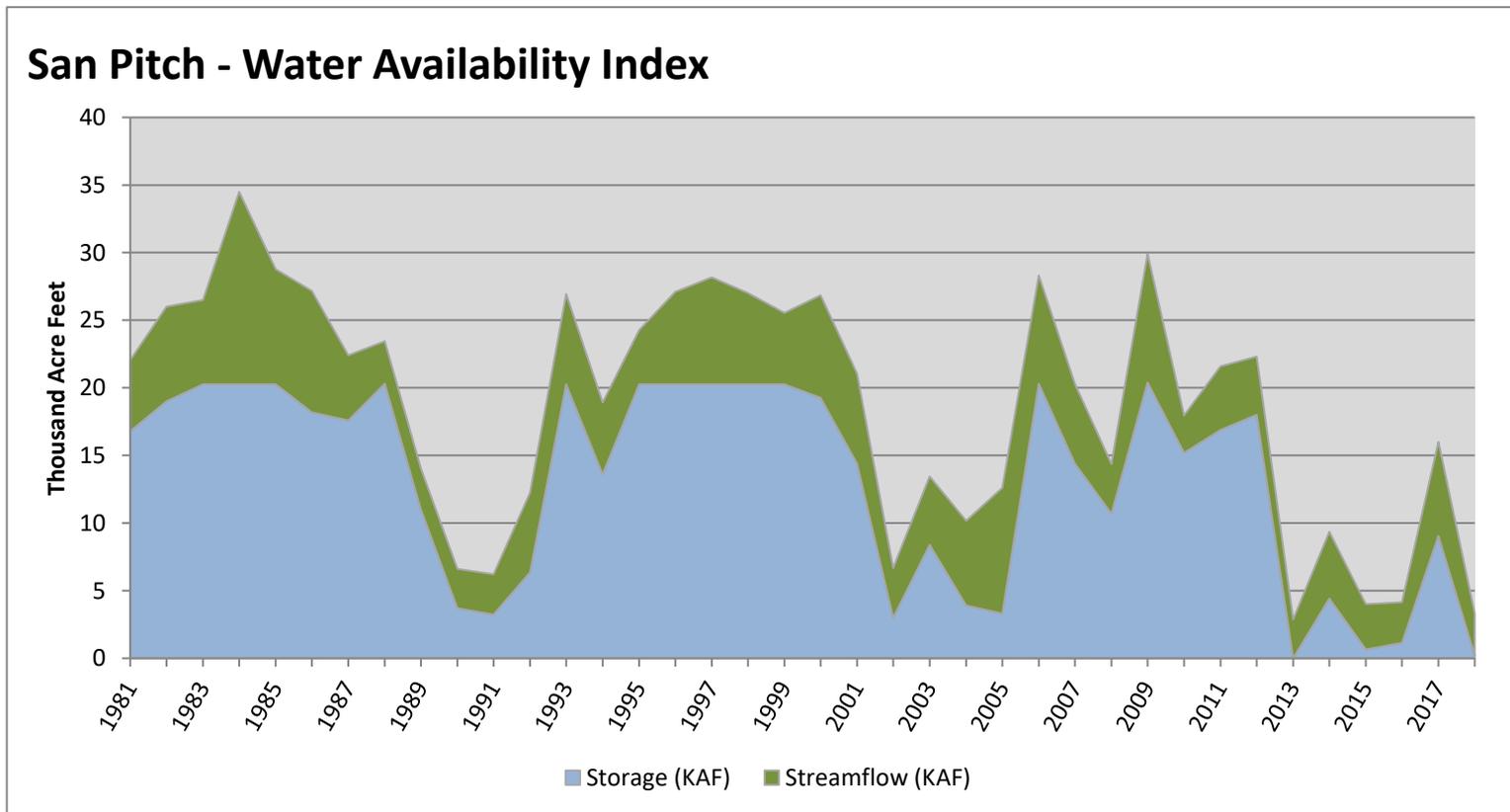
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>0.20</b>	<b>3.12</b>	<b>3.32</b>	<b>5</b>	<b>-3.74</b>	<b>13, 15, 16, 91</b>

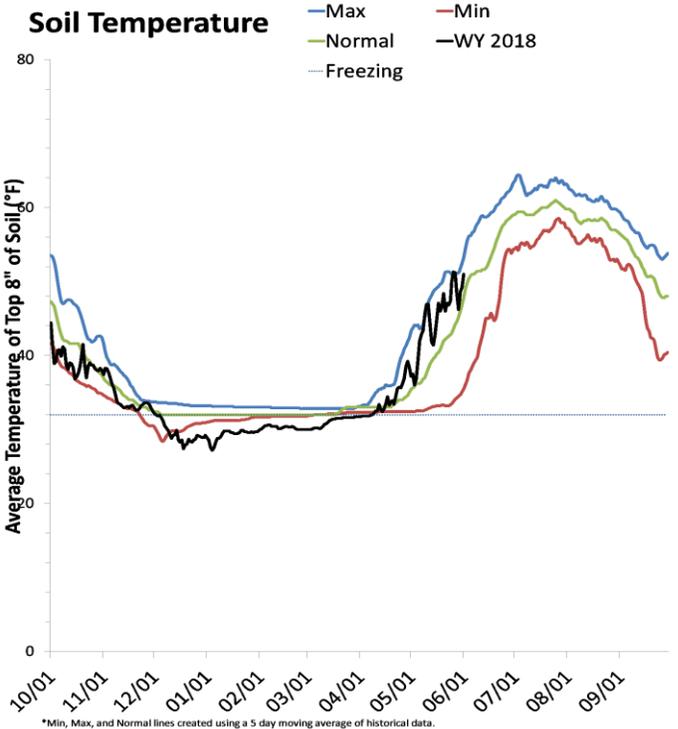
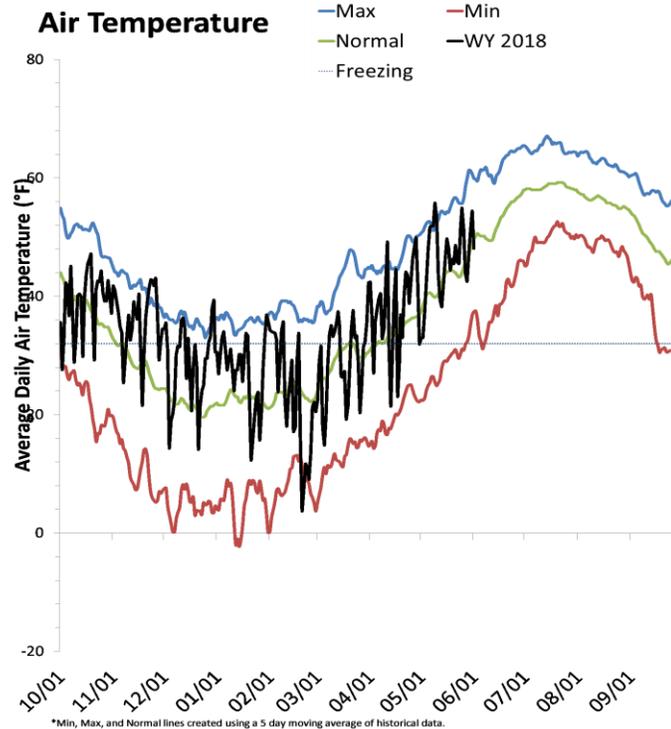
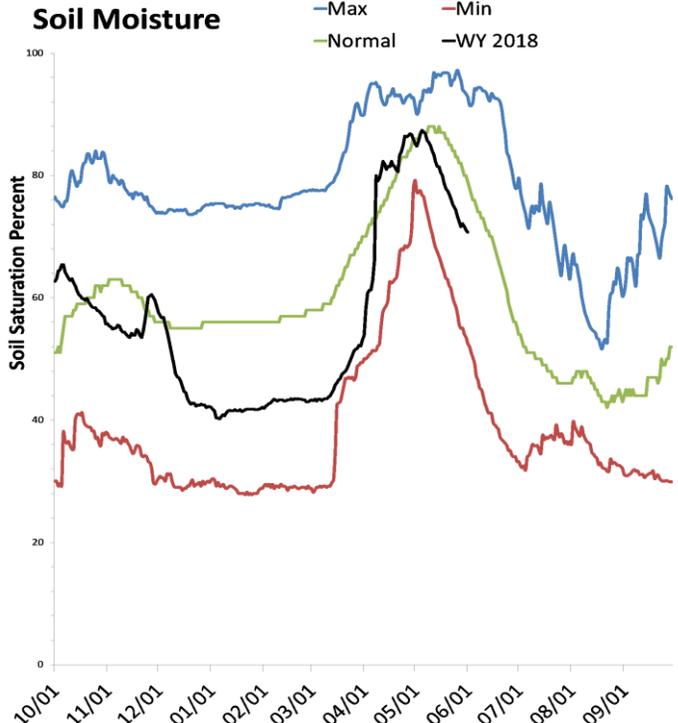
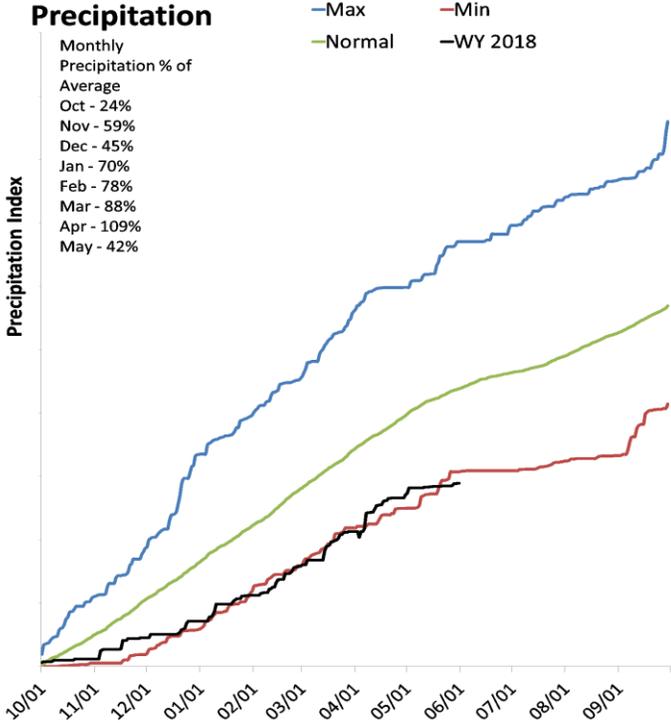
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Price & San Rafael Basins

June 1, 2018

Precipitation in May was much below average at 42%, which brings the seasonal accumulation (Oct-May) to 66% of average. Soil moisture is at 71% compared to 81% last year. Reservoir storage is at 72% of capacity, compared to 91% last year. The water availability index for the Price River is 41%, and 41% for Joe's Valley.



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

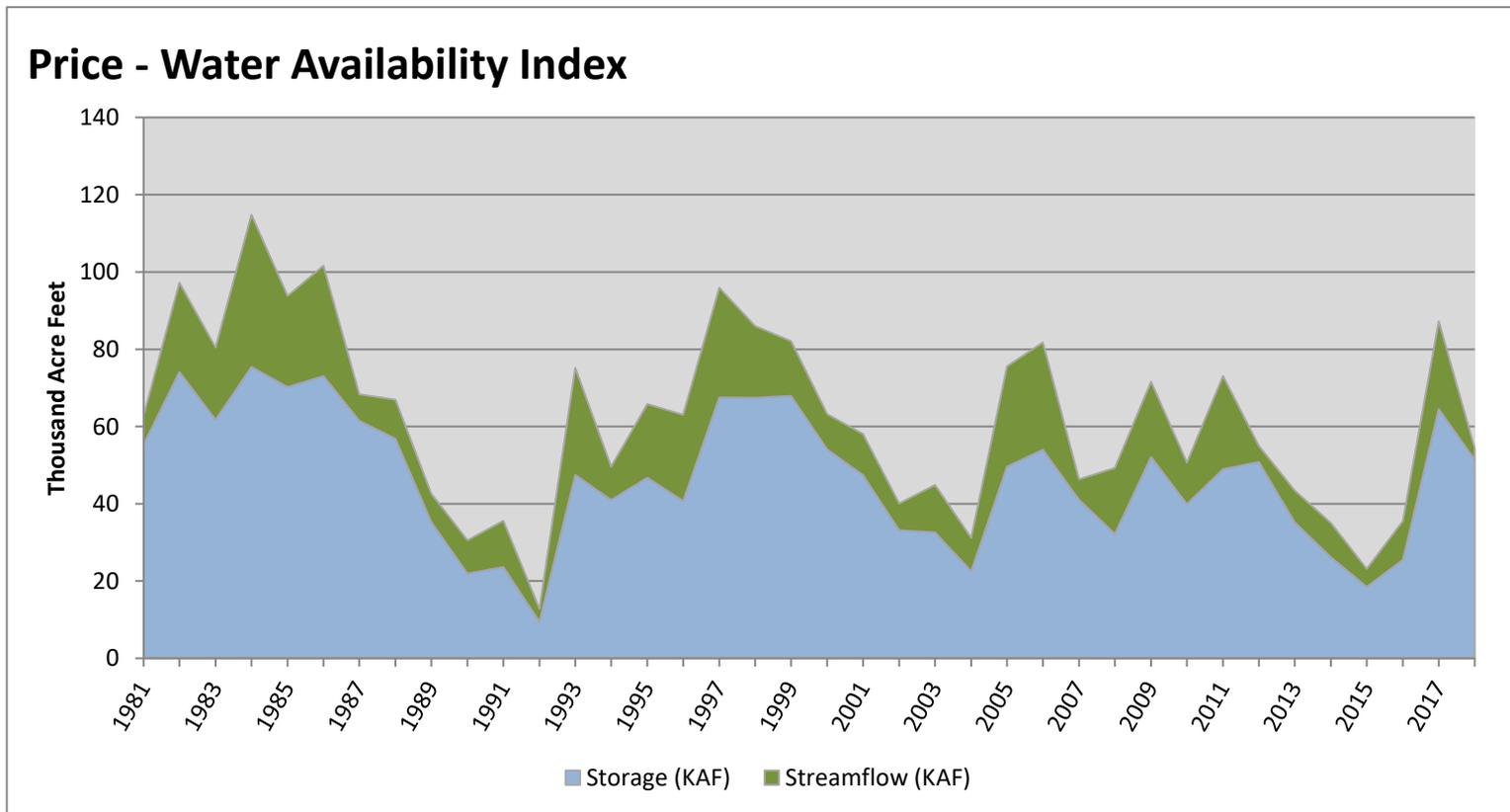
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Price</b>	<b>51.38</b>	<b>2.97</b>	<b>54.35</b>	<b>41</b>	<b>-0.75</b>	<b>94, 10, 12, 01</b>

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

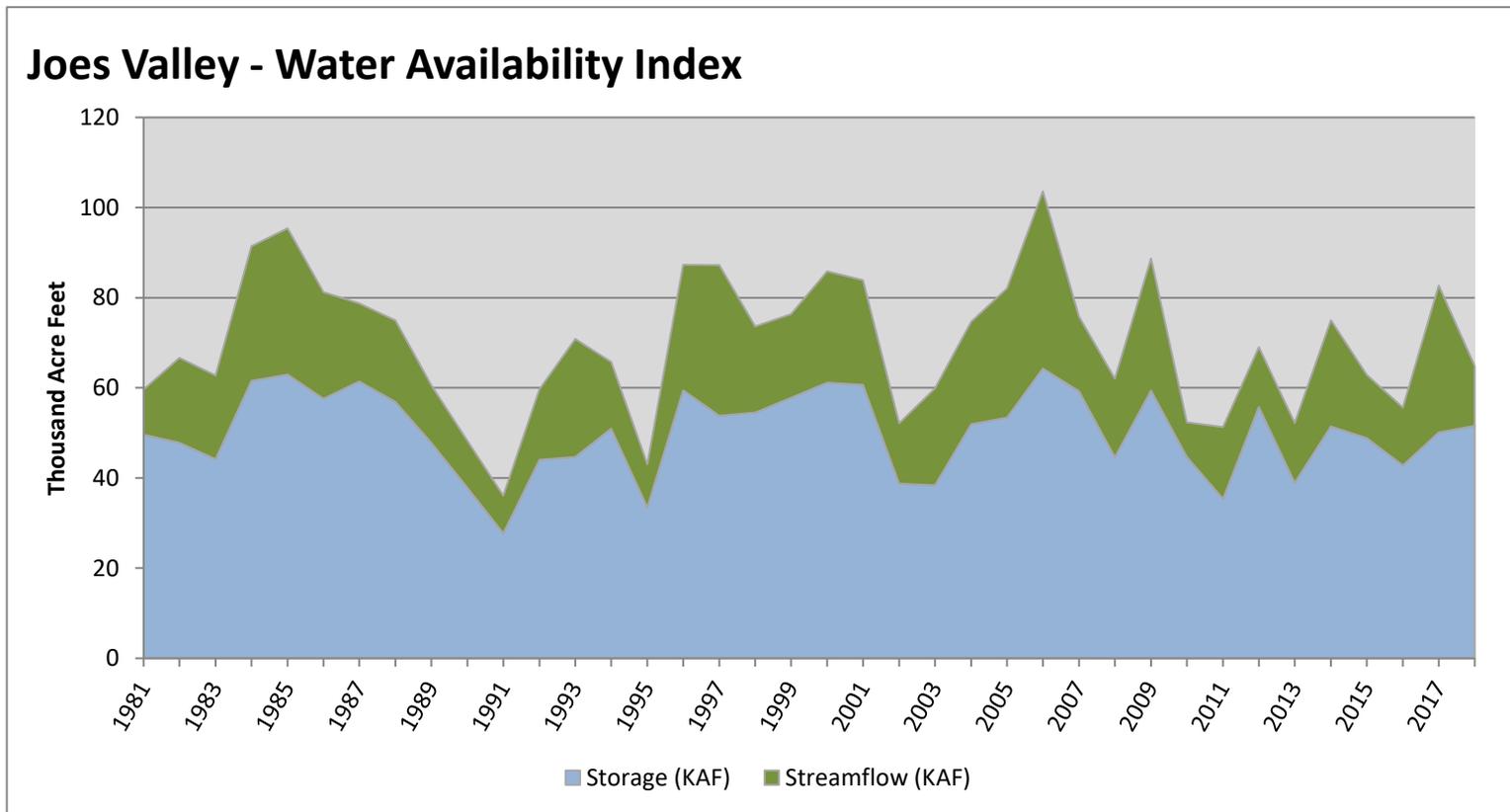


June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>51.58</b>	<b>13.29</b>	<b>64.87</b>	<b>41</b>	<b>-0.75</b>	<b>83, 15, 94, 82</b>

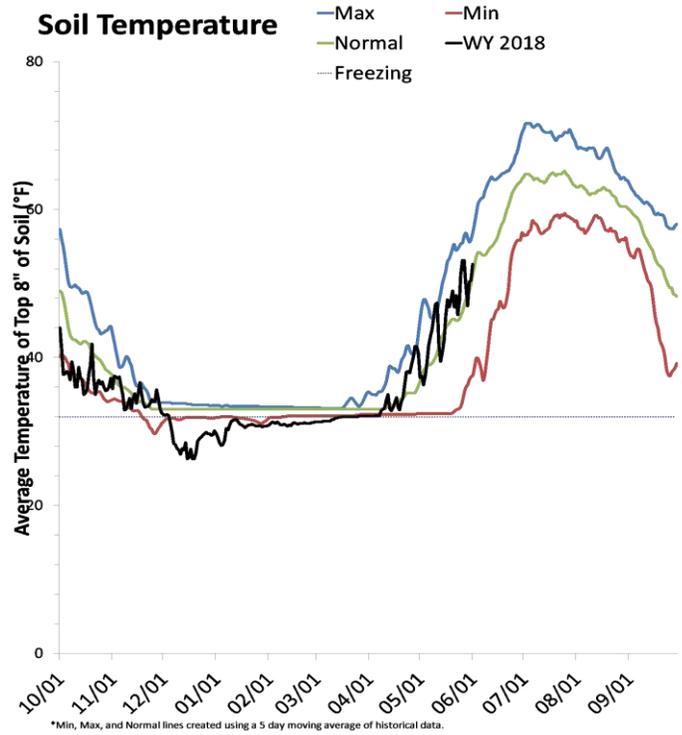
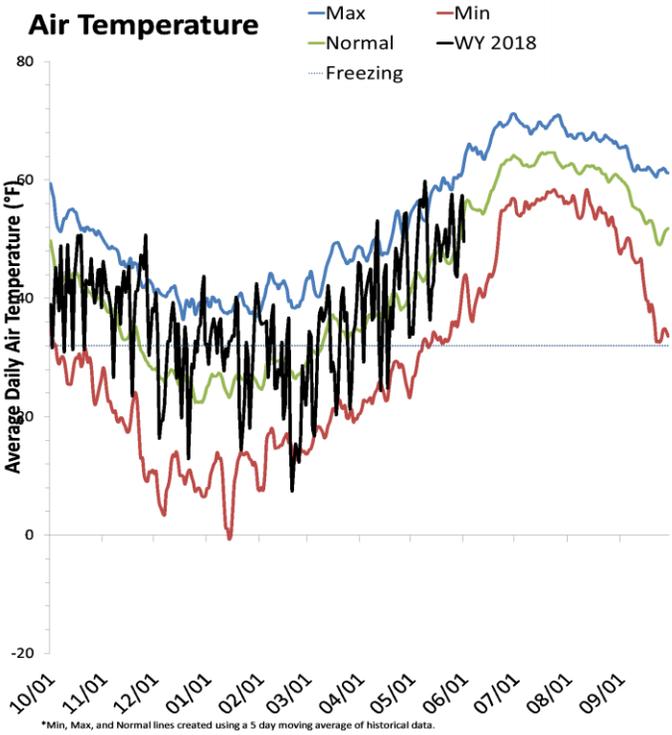
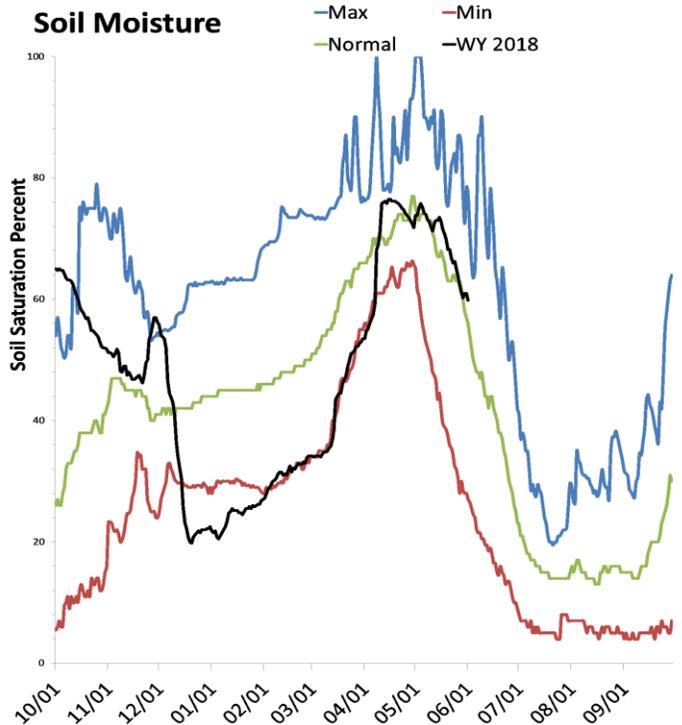
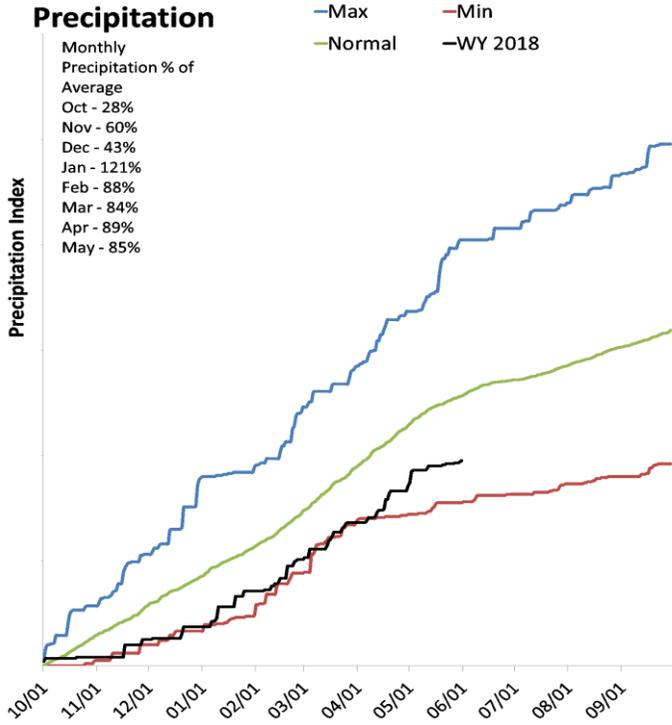
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Lower Sevier Basin

June 1, 2018

Precipitation in May was below average at 83%, which brings the seasonal accumulation (Oct-May) to 76% of average. Soil moisture is at 60% compared to 60% last year. Reservoir storage is at 22% of capacity, compared to 28% 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.

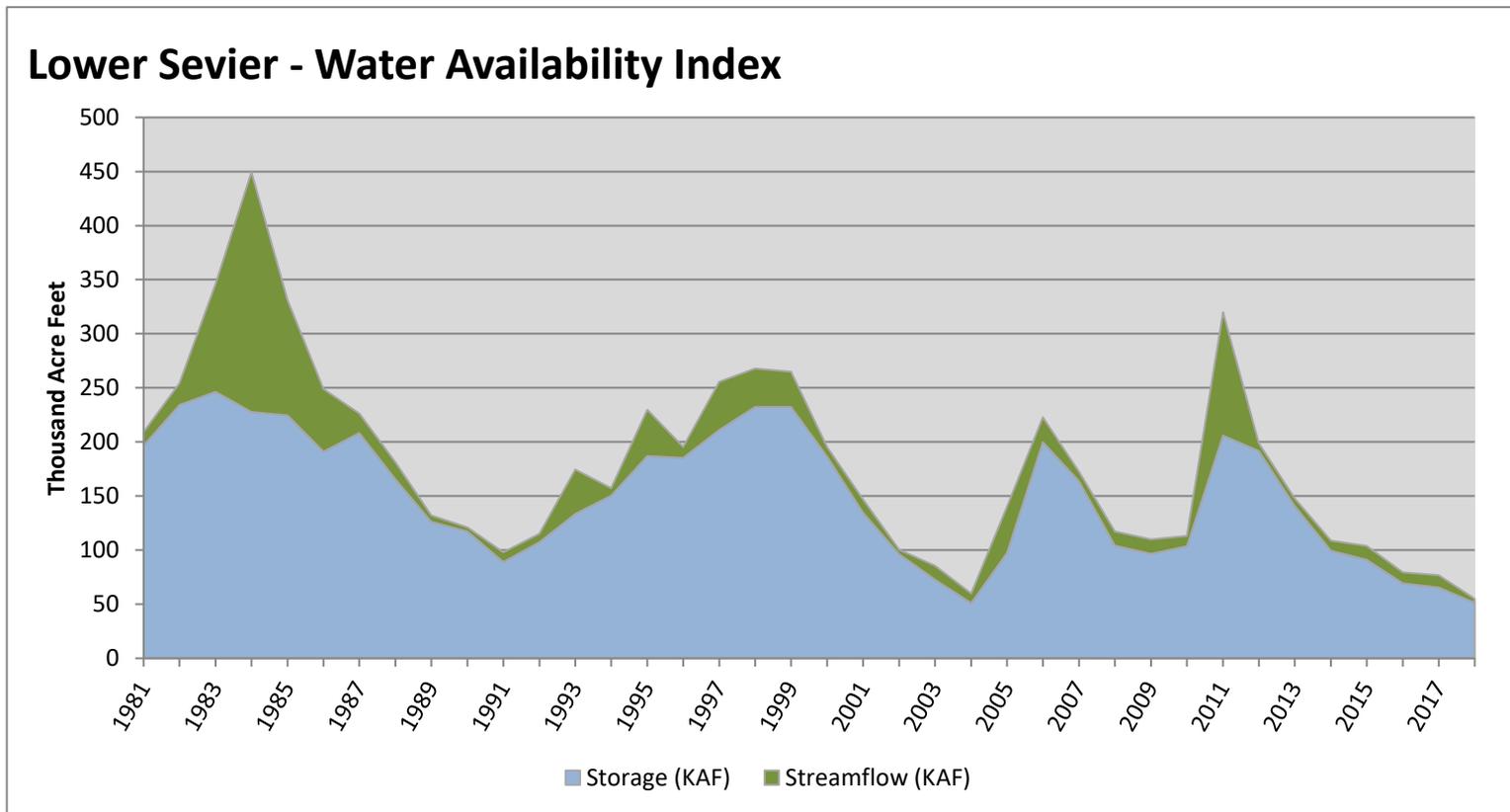
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>51.24</b>	<b>3.84</b>	<b>55.08</b>	<b>3</b>	<b>-3.95</b>	<b>04, 17, 16, 03</b>

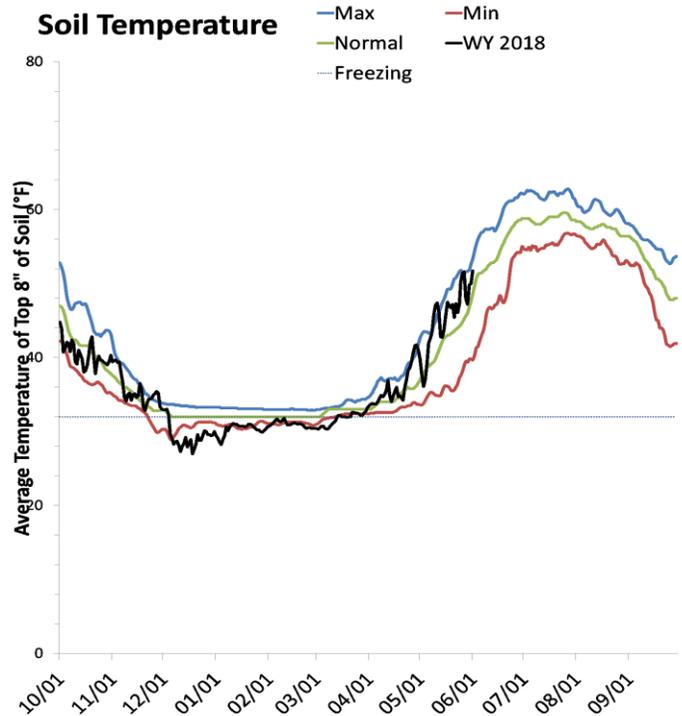
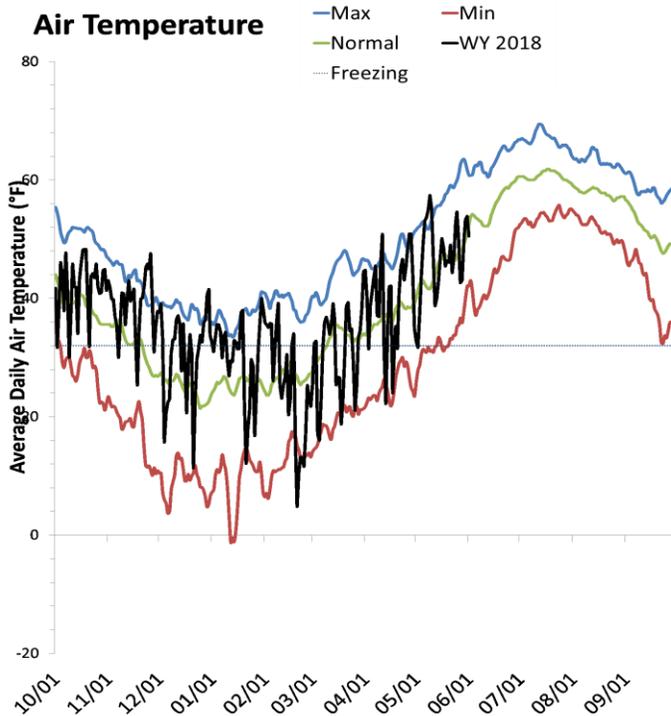
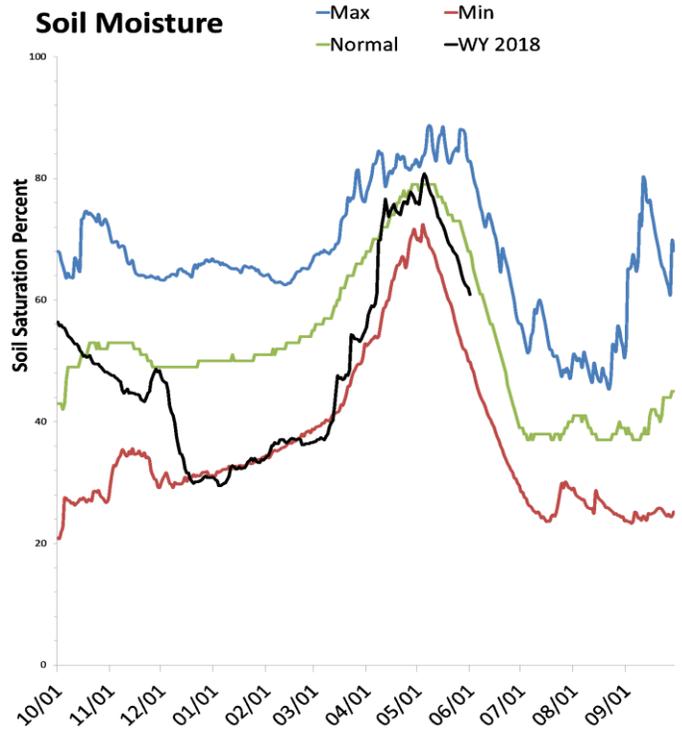
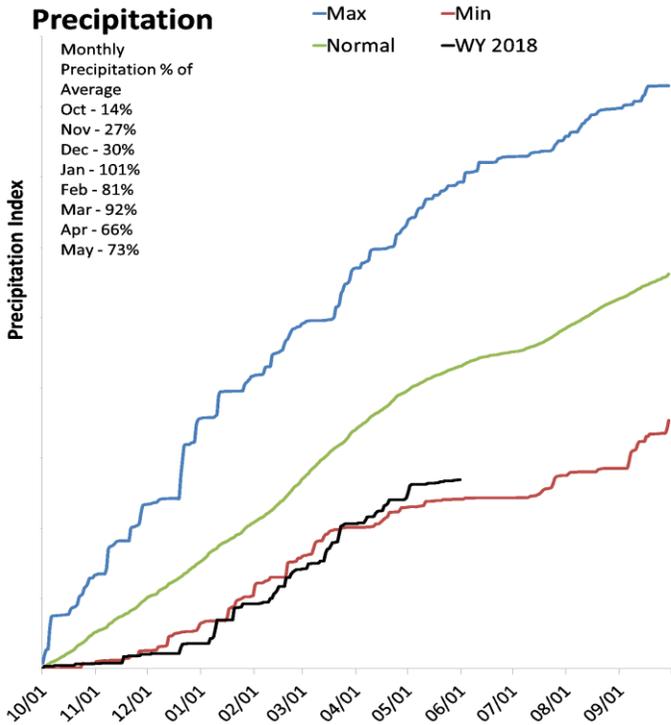
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Upper Sevier Basin

June 1, 2018

Precipitation in May was below average at 73%, which brings the seasonal accumulation (Oct-May) to 63% of average. Soil moisture is at 61% compared to 67% last year. Reservoir storage is at 49% of capacity, compared to 73% last year. The water availability index for the Upper Sevier is 10%.



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

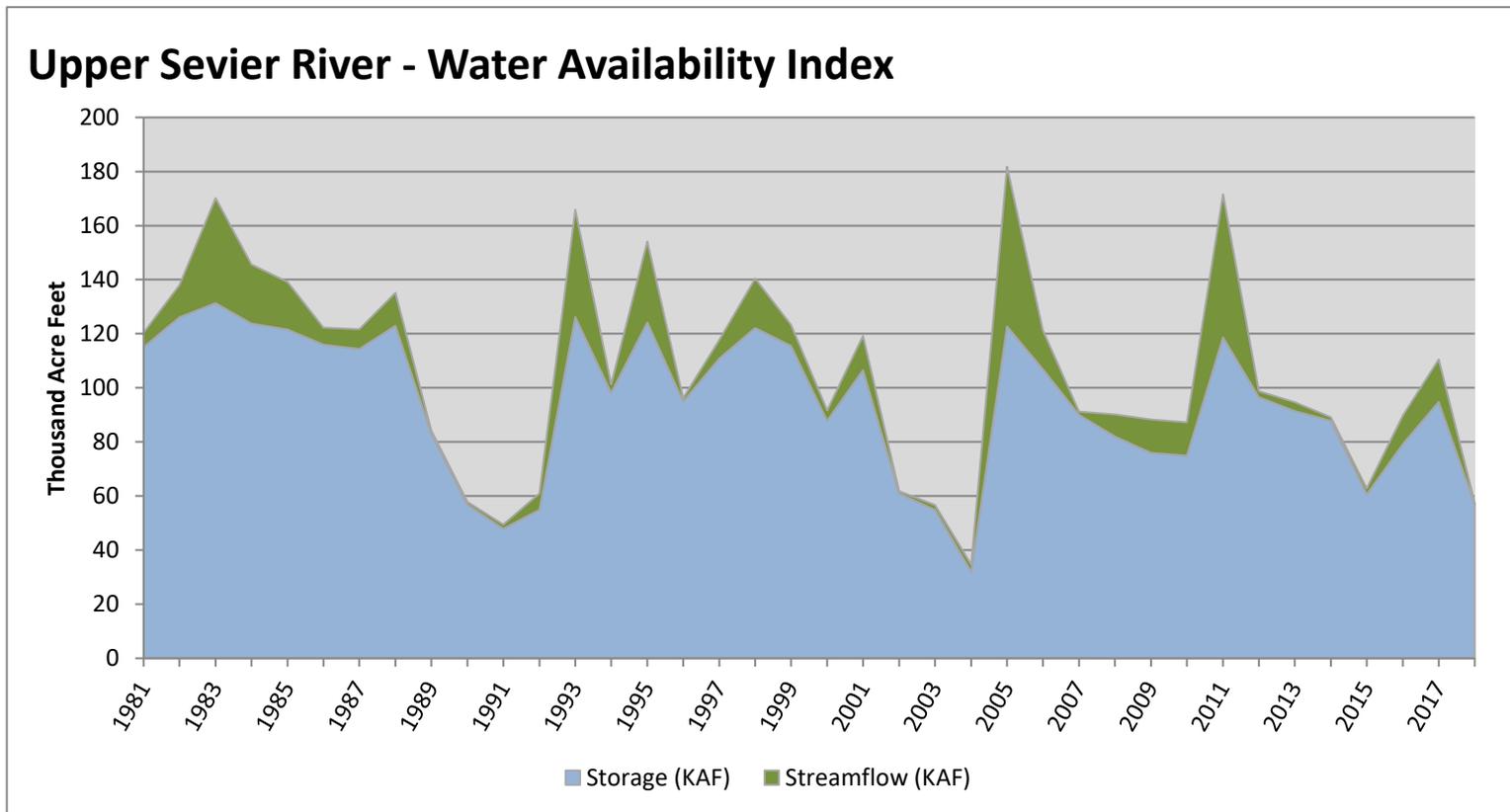
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>56.83</b>	<b>0.79</b>	<b>57.62</b>	<b>10</b>	<b>-3.31</b>	<b>91, 03, 90, 92</b>

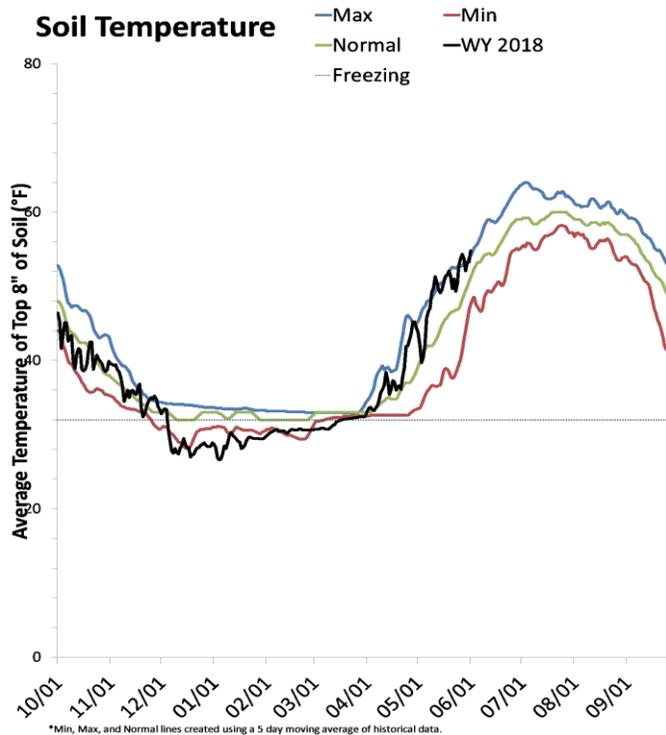
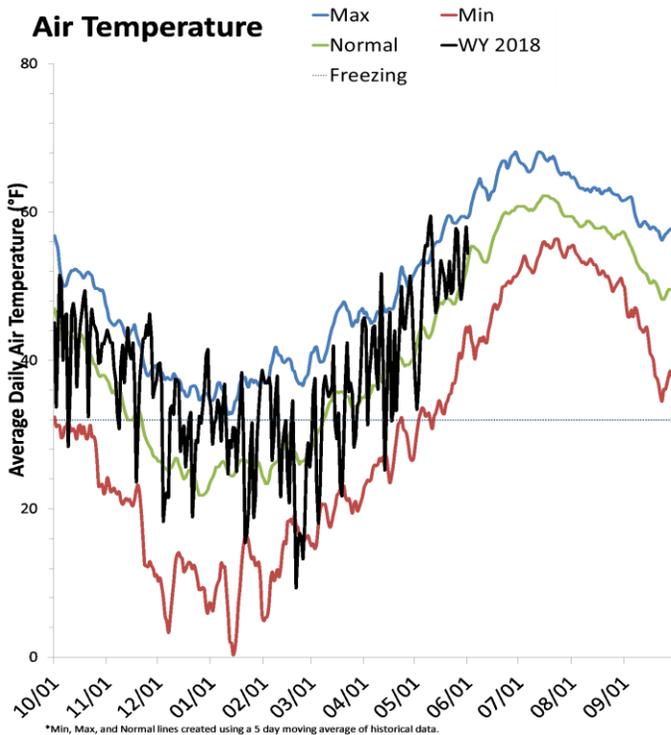
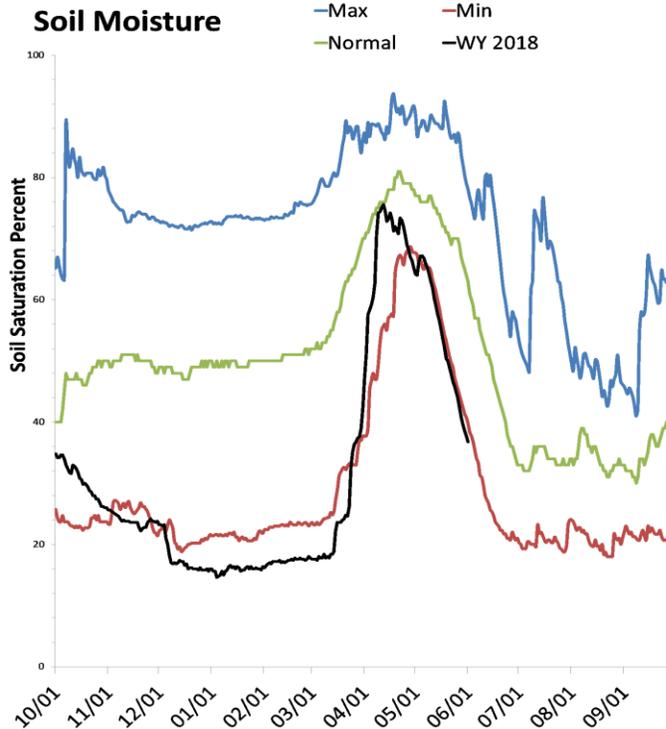
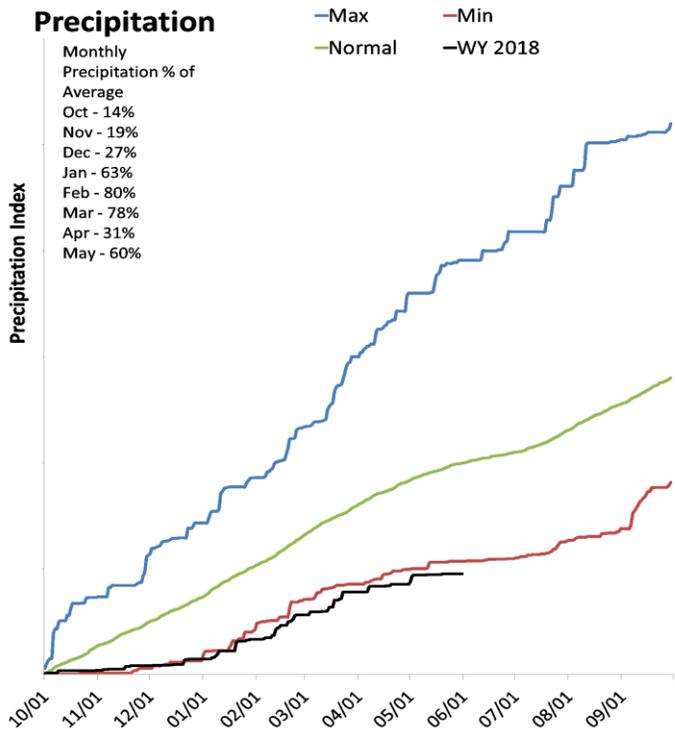
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Southeastern Utah

June 1, 2018

Precipitation in May was much below average at 60%, which brings the seasonal accumulation (Oct-May) to 48% of average. Soil moisture is at 37% compared to 56% last year. Reservoir storage is at 43% of capacity, compared to 106% last year. The water availability index for Moab is 9%.



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

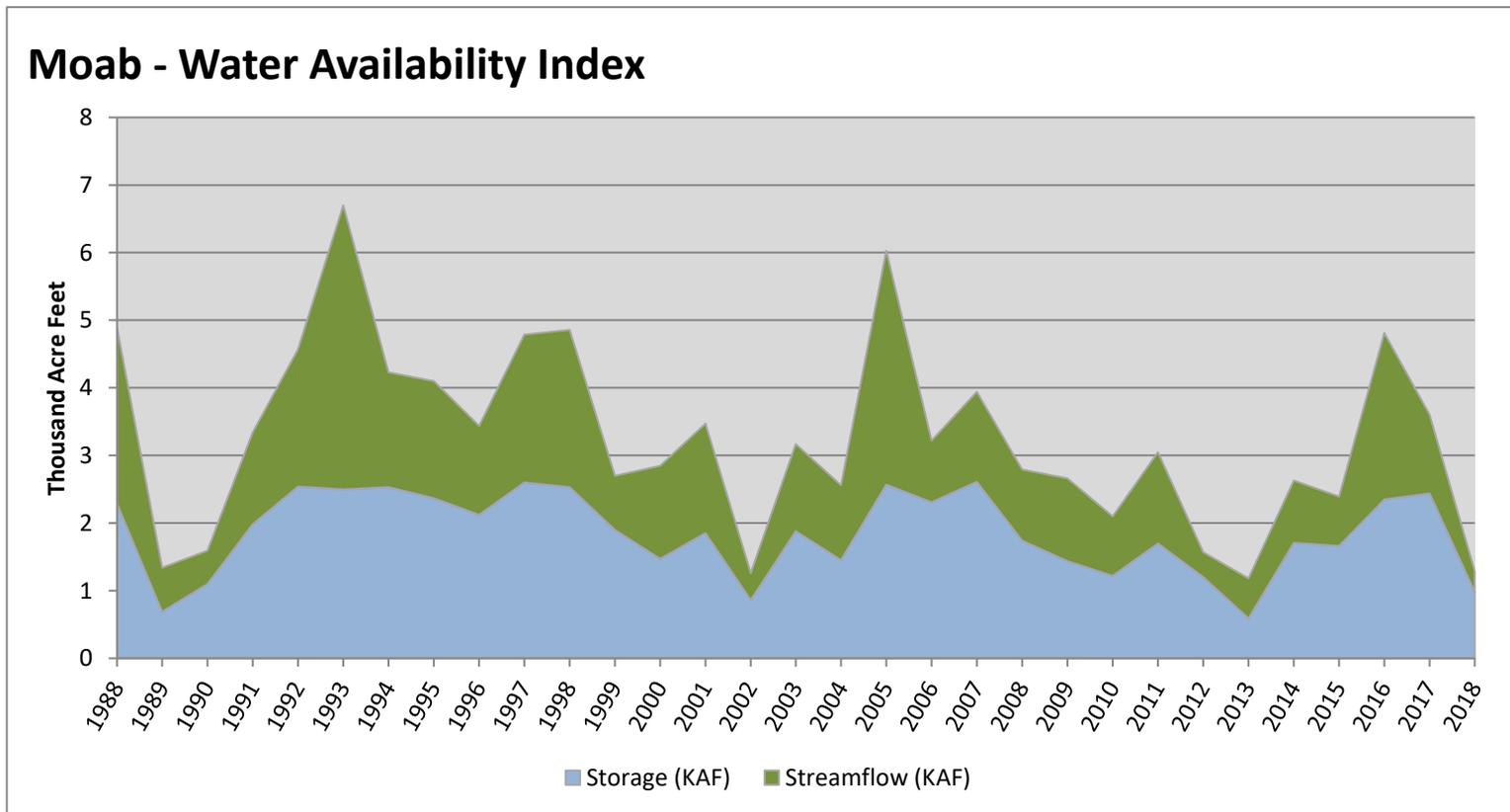
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Moab</b>	<b>0.98</b>	<b>0.31</b>	<b>1.29</b>	<b>9</b>	<b>-3.39</b>	<b>13, 02, 89, 12</b>

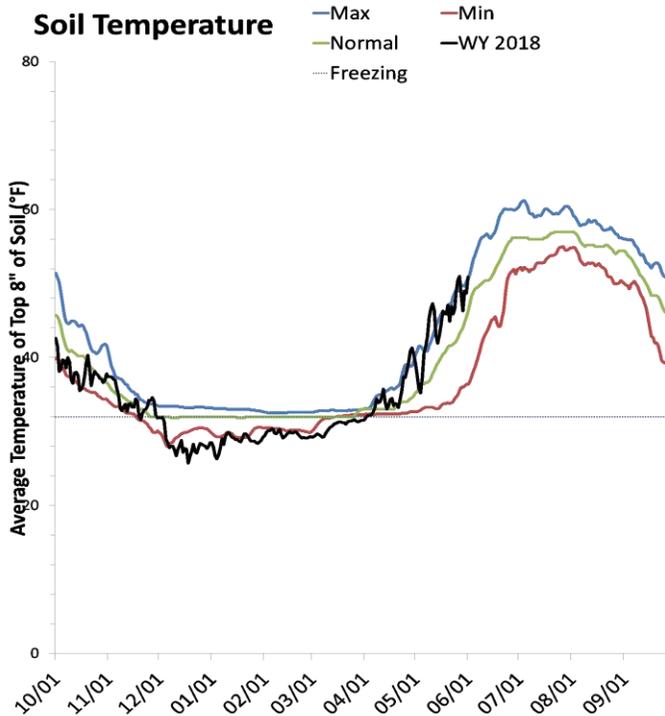
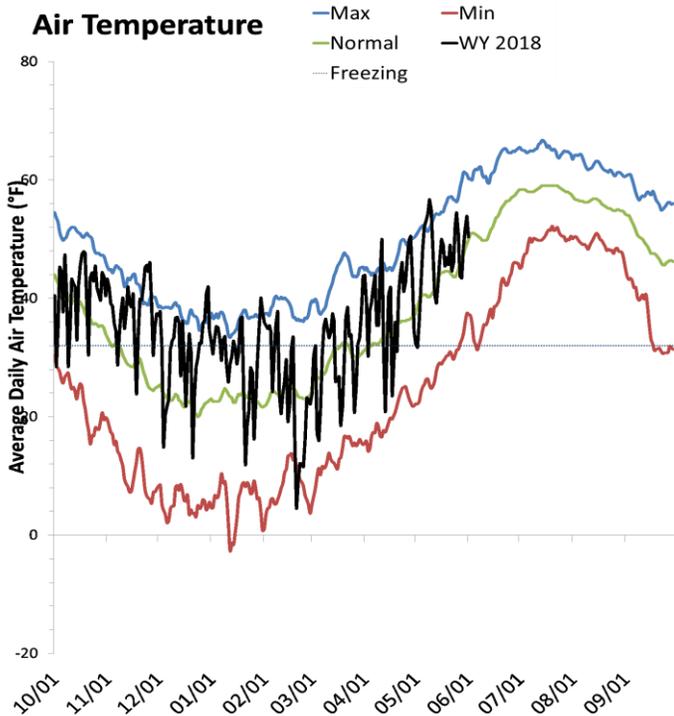
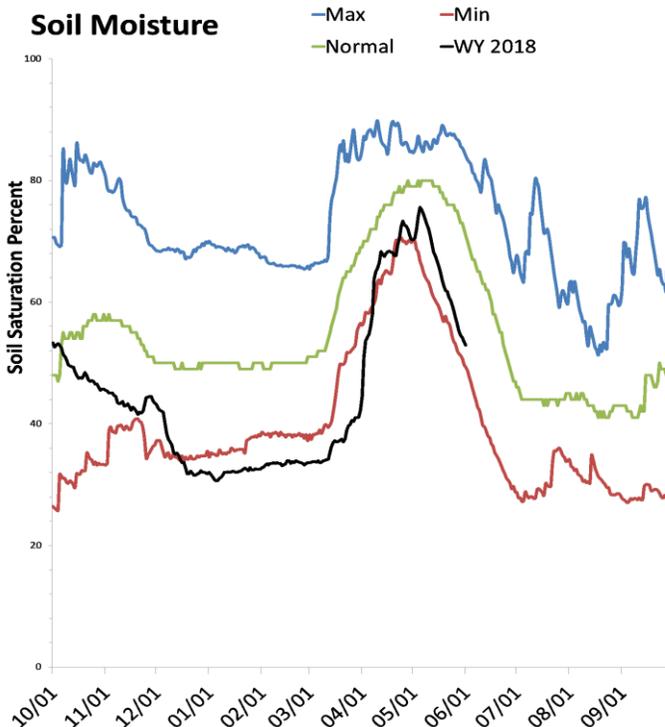
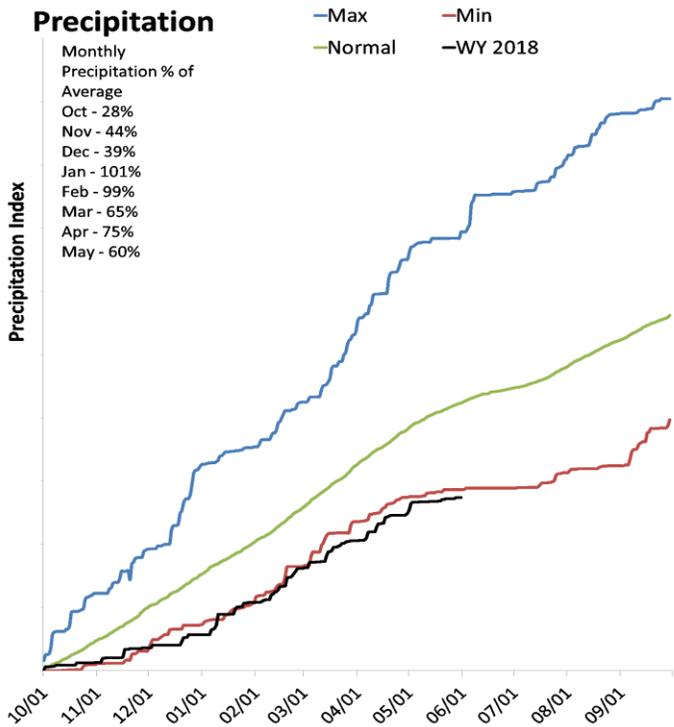
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Dirty Devil Basin

June 1, 2018

Precipitation in May was much below average at 60%, which brings the seasonal accumulation (Oct-May) to 65% of average. Soil moisture is at 53% compared to 67% last year.



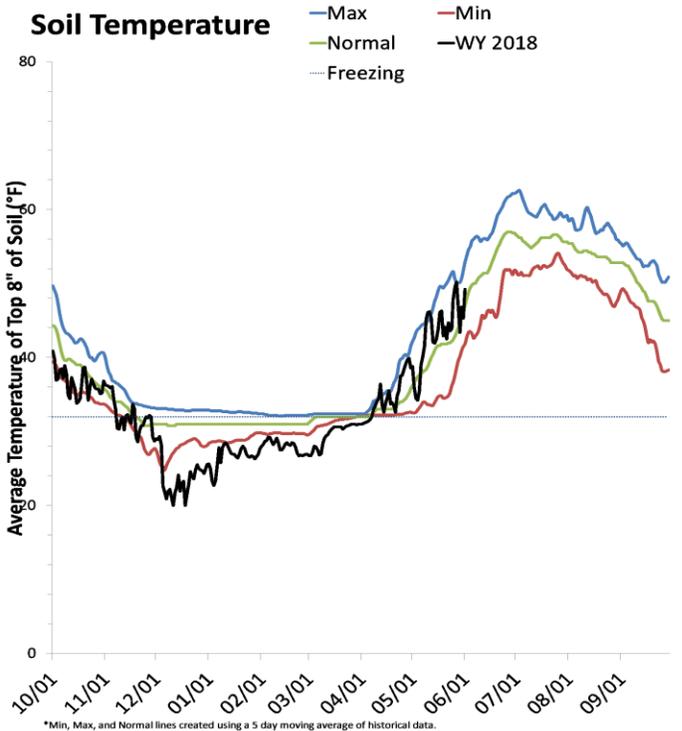
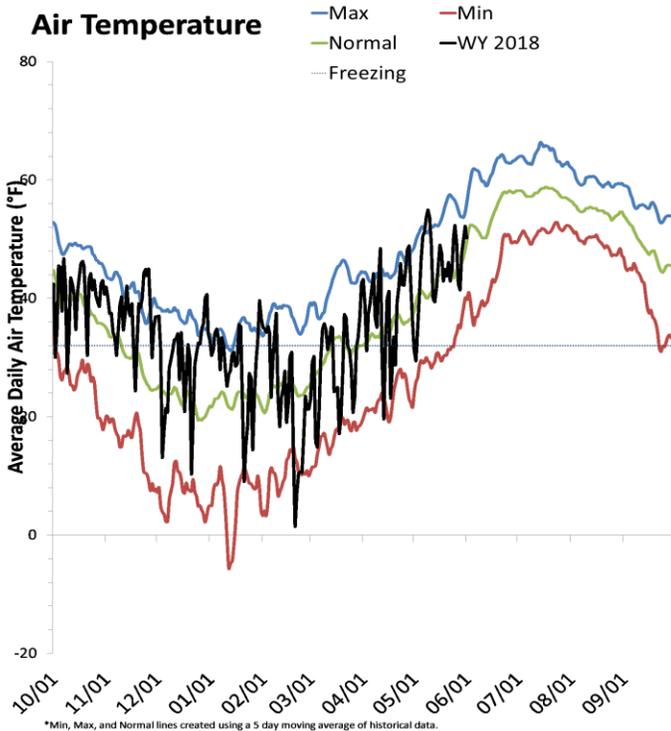
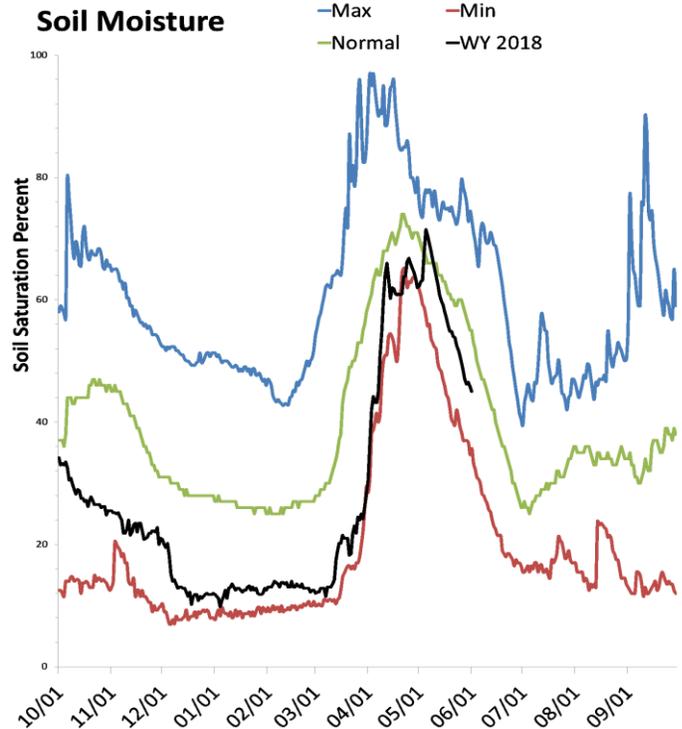
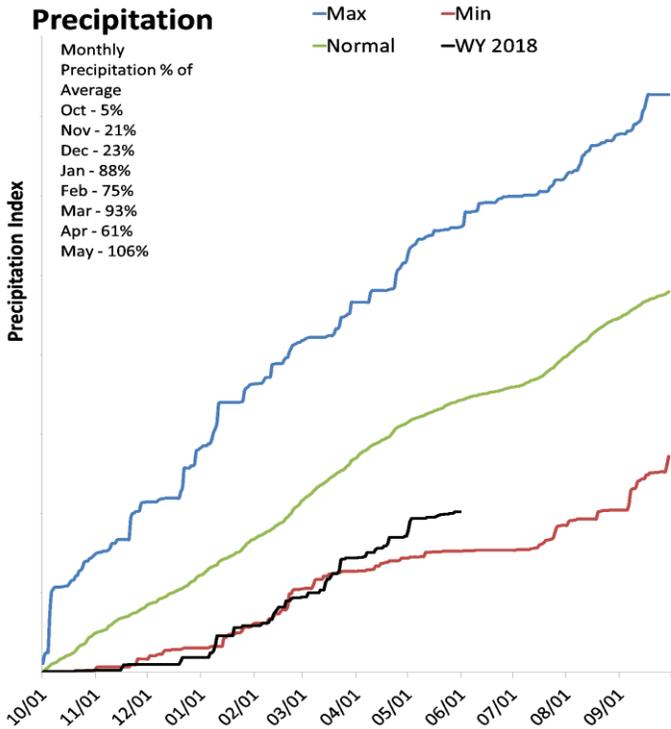
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

# Escalante River Basin

June 1, 2018

Precipitation in May was near average at 107%, which brings the seasonal accumulation (Oct-May) to 59% of average. Soil moisture is at 45% compared to 57% last year.



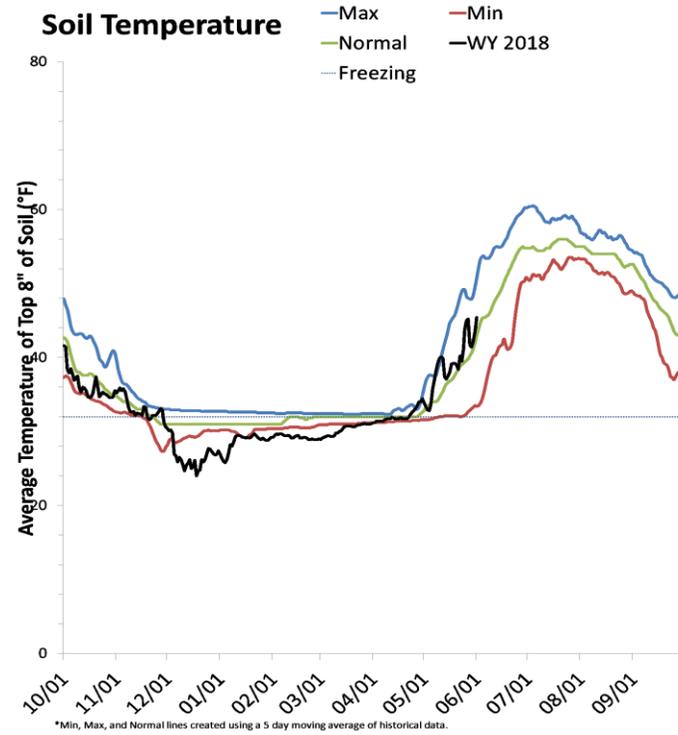
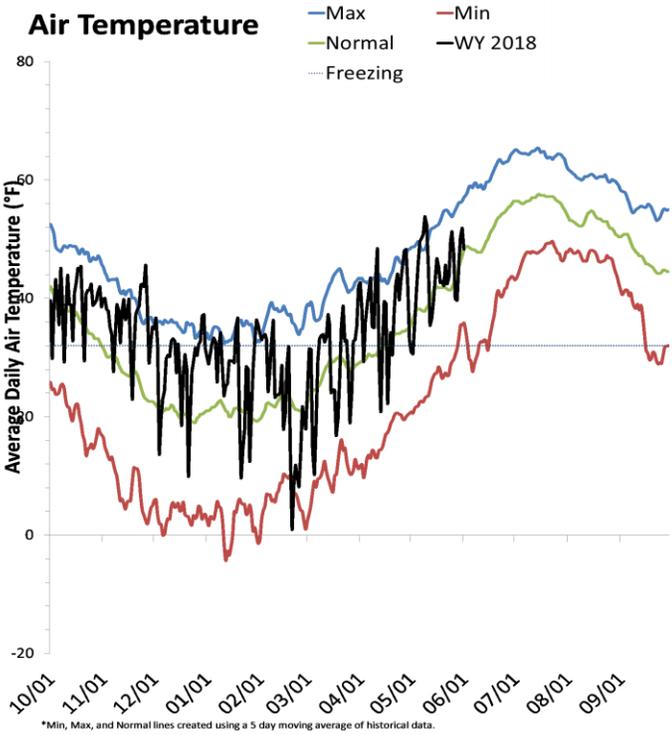
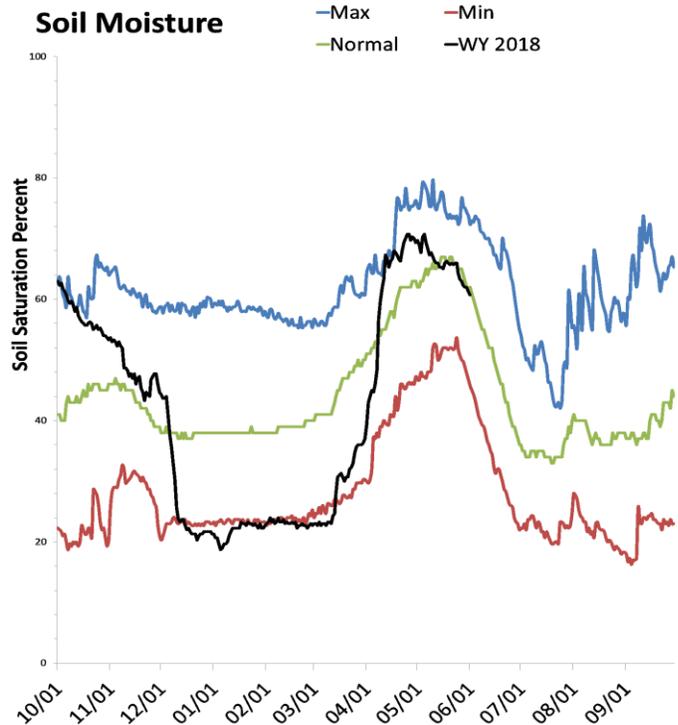
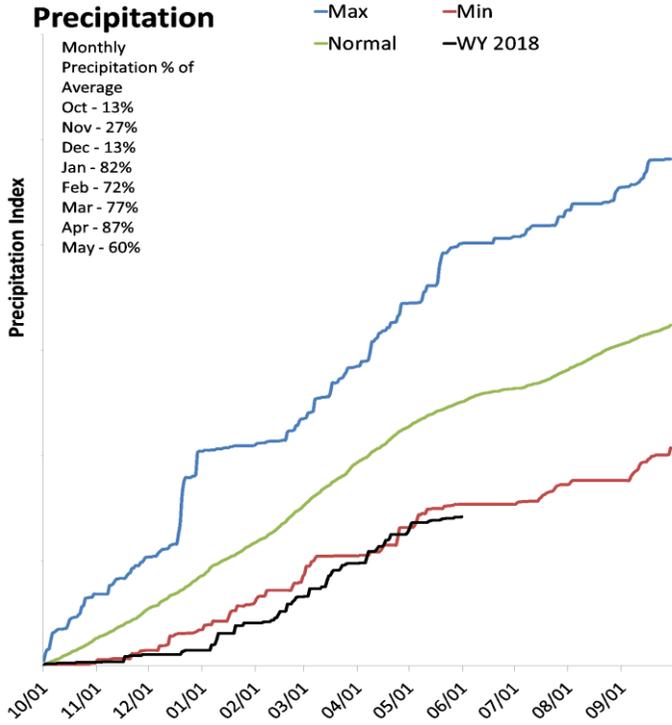
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

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

# Beaver River Basin

June 1, 2018

Precipitation in May was much below average at 61%, which brings the seasonal accumulation (Oct-May) to 57% of average. Soil moisture is at 61% compared to 67% last year. Reservoir storage is at 34% of capacity, compared to 68% last year. The water availability index for the Beaver River is 5%.



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

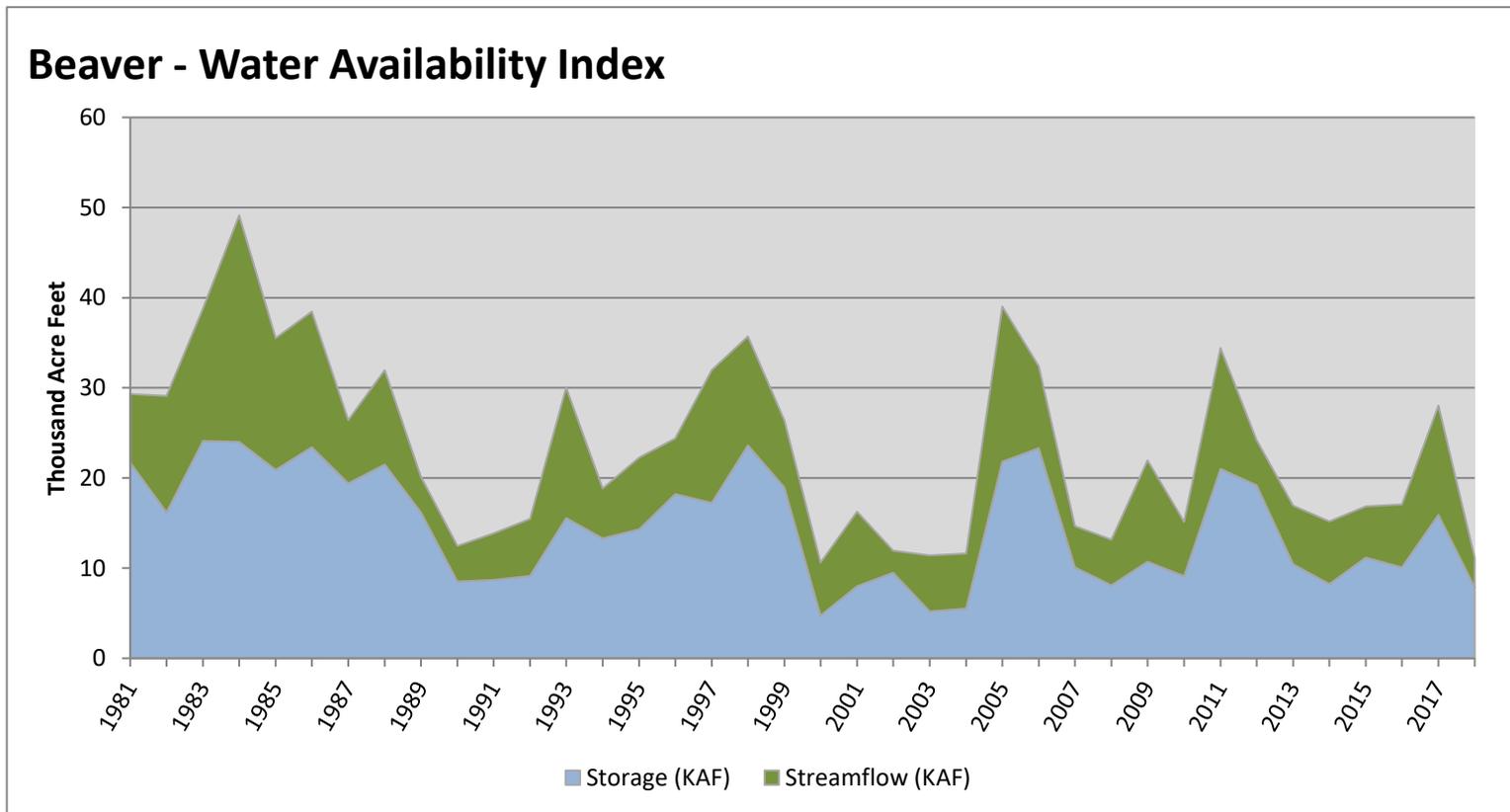
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Beaver</b>	<b>7.86</b>	<b>3.30</b>	<b>11.16</b>	<b>5</b>	<b>-3.74</b>	<b>00, 03, 04, 02</b>

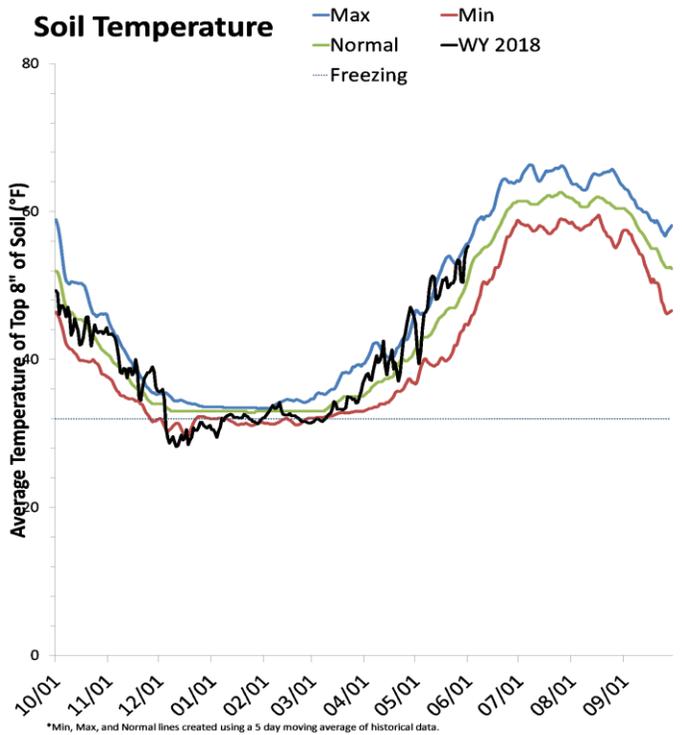
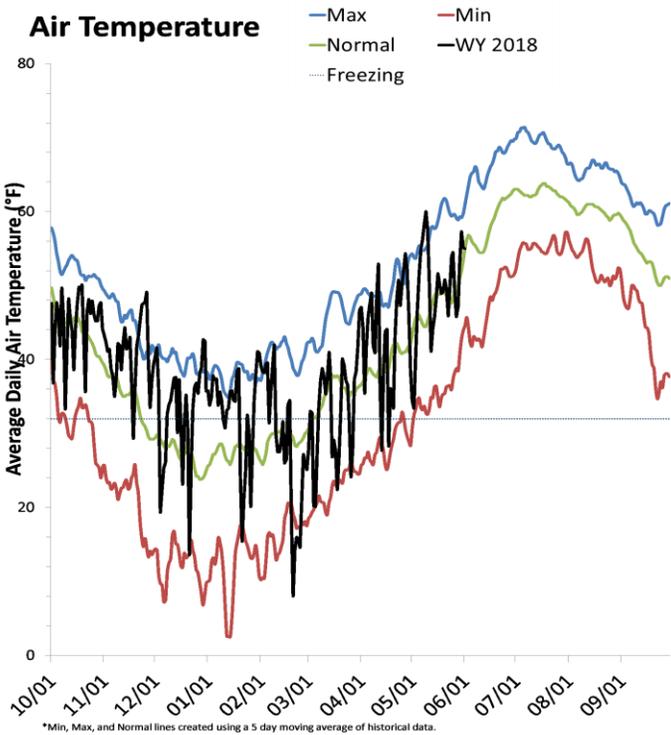
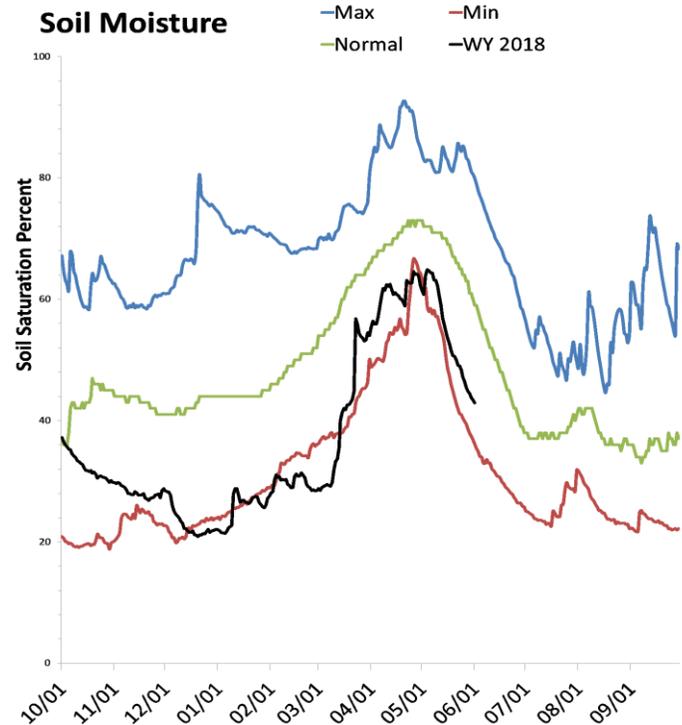
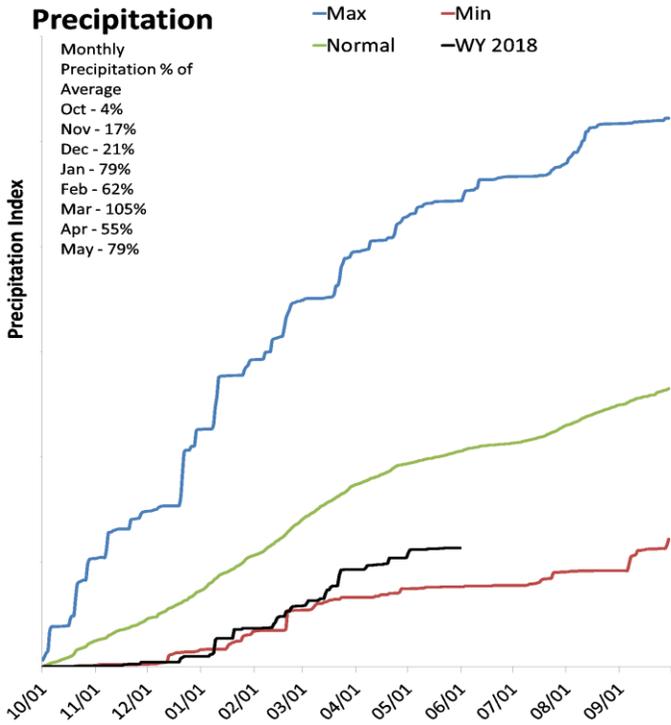
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Southwestern Utah

June 1, 2018

Precipitation in May was below average at 79%, which brings the seasonal accumulation (Oct-May) to 55% of average. Soil moisture is at 43% compared to 53% last year. Reservoir storage is at 53% of capacity, compared to 56% last year. The water availability index for the Virgin River is 23%.



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

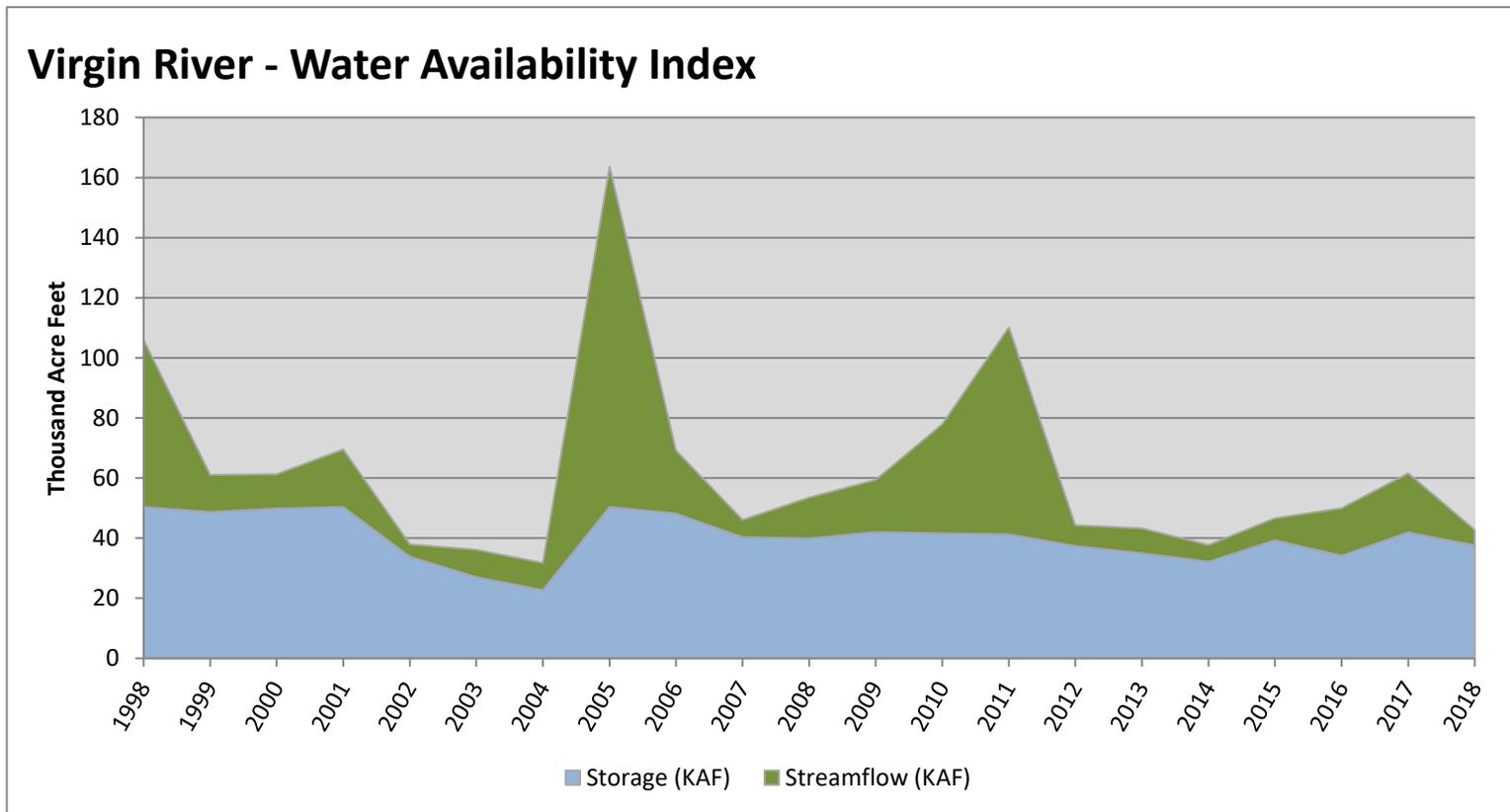
\*Min, Max, and Normal lines created using a 5 day moving average of historical data.

June 1, 2018

## Water Availability Index

Basin or Region	May EOM <sup>*</sup> Storage	May 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>37.61</b>	<b>5.13</b>	<b>42.74</b>	<b>23</b>	<b>-2.27</b>	<b>14, 02, 13, 12</b>

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



June 1, 2018

## Water Availability Index

Basin or Region	May EOM* Storage	May Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Bear River</b>	<b>1072</b>	<b>42.9</b>	<b>1115</b>	<b>77</b>	<b>2.2</b>	<b>82, 12, 17, 97</b>
<b>Woodruff Narrows</b>	<b>53.3</b>	<b>42.9</b>	<b>96.2</b>	<b>67</b>	<b>1.4</b>	<b>16, 07, 05, 87</b>
<b>Little Bear</b>	<b>14.5</b>	<b>9.5</b>	<b>24.0</b>	<b>44</b>	<b>-0.5</b>	<b>14, 02, 10, 16</b>
<b>Ogden</b>	<b>114.5</b>	<b>9.7</b>	<b>124.3</b>	<b>38</b>	<b>-1.0</b>	<b>04, 91, 89, 14</b>
<b>Weber</b>	<b>202.7</b>	<b>45.4</b>	<b>248.1</b>	<b>48</b>	<b>-0.1</b>	<b>12, 98, 10, 94</b>
<b>Provo River</b>	<b>452.6</b>	<b>32.9</b>	<b>485.5</b>	<b>75</b>	<b>2.1</b>	<b>01, 97, 98, 96</b>
<b>Western Uinta</b>	<b>208.2</b>	<b>18.0</b>	<b>226.2</b>	<b>75</b>	<b>2.1</b>	<b>03, 15, 14, 05</b>
<b>Eastern Uinta</b>	<b>35.8</b>	<b>12.0</b>	<b>47.8</b>	<b>10</b>	<b>-3.3</b>	<b>14, 89, 90, 13</b>
<b>Blacks Fork</b>	<b>30.2</b>	<b>42.6</b>	<b>72.8</b>	<b>94</b>	<b>3.7</b>	<b>84, 14, 87, 17</b>
<b>Price</b>	<b>51.4</b>	<b>3.0</b>	<b>54.4</b>	<b>41</b>	<b>-0.8</b>	<b>94, 10, 12, 01</b>
<b>Smiths Creek</b>	<b>14.0</b>	<b>10.9</b>	<b>24.8</b>	<b>86</b>	<b>3.0</b>	<b>88, 96, 14, 01</b>
<b>Joes Valley</b>	<b>51.6</b>	<b>13.3</b>	<b>64.9</b>	<b>41</b>	<b>-0.8</b>	<b>83, 15, 94, 82</b>
<b>Moab</b>	<b>1.0</b>	<b>0.3</b>	<b>1.3</b>	<b>9</b>	<b>-3.4</b>	<b>13, 02, 89, 12</b>
<b>Upper Sevier River</b>	<b>56.8</b>	<b>0.8</b>	<b>57.6</b>	<b>10</b>	<b>-3.3</b>	<b>91, 03, 90, 92</b>
<b>San Pitch</b>	<b>0.2</b>	<b>3.1</b>	<b>3.3</b>	<b>5</b>	<b>-3.7</b>	<b>13, 15, 16, 91</b>
<b>Lower Sevier</b>	<b>51.2</b>	<b>3.8</b>	<b>55.1</b>	<b>3</b>	<b>-4.0</b>	<b>04, 17, 16, 03</b>
<b>Beaver</b>	<b>7.9</b>	<b>3.3</b>	<b>11.2</b>	<b>5</b>	<b>-3.7</b>	<b>00, 03, 04, 02</b>
<b>Virgin River</b>	<b>37.6</b>	<b>5.1</b>	<b>42.7</b>	<b>23</b>	<b>-2.3</b>	<b>14, 02, 13, 12</b>

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

### What is a Water Availability Index?

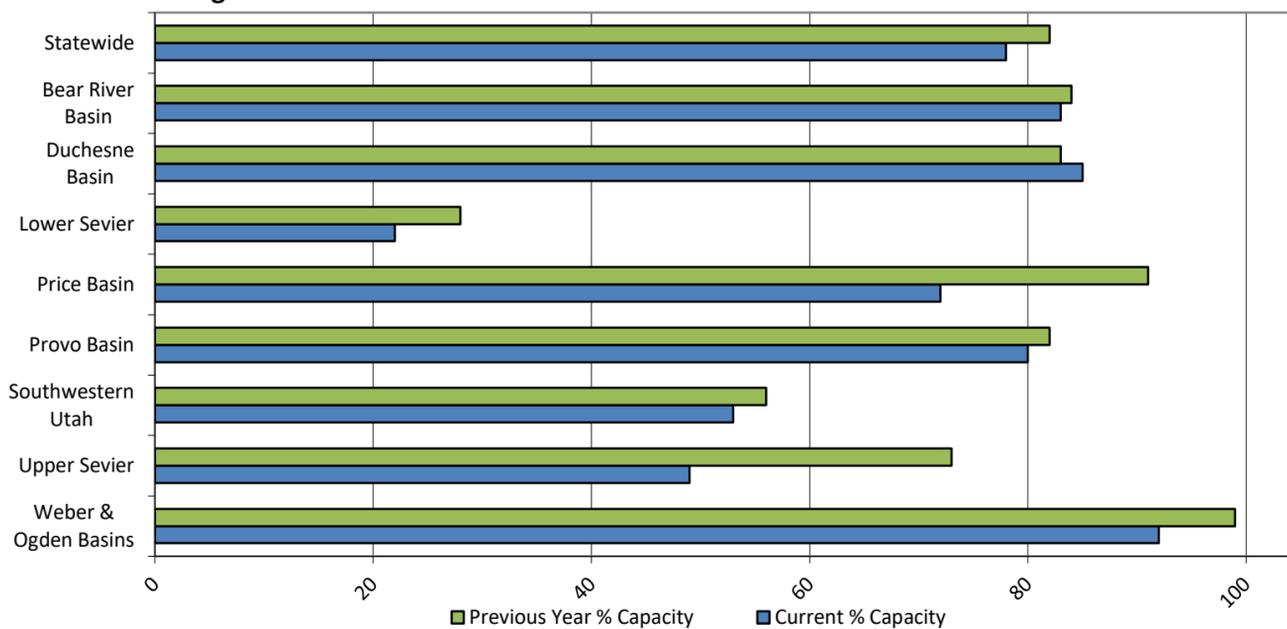
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) 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 May 2018</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	19.0	25.9		25.7	74%	101%			
Causey Reservoir	7.0	7.2	7.0	7.1	99%	101%	99%	100%	102%
Cleveland Lake	4.4	5.4		5.4	82%	100%			
Currant Creek Reservoir	15.1	14.3	15.2	15.5	98%	92%	98%	100%	94%
Deer Creek Reservoir	141.0	143.1	132.8	149.7	94%	96%	89%	106%	108%
East Canyon Reservoir	48.3	50.1	46.7	49.5	98%	101%	94%	103%	107%
Echo Reservoir	70.5	73.5	67.0	73.9	95%	99%	91%	105%	110%
Grantsville Reservoir	2.8	3.3	2.8	3.3	84%	100%	85%	99%	118%
Gunlock	8.0	10.3	7.9	10.4	77%	99%	76%	101%	130%
Gunnison Reservoir	0.2	9.0	14.7	20.3	1%	45%	72%	1%	61%
Huntington North Reservoir	2.8	3.5	3.7	4.2	68%	83%	88%	77%	95%
Hyrum Reservoir	14.5	14.6	14.6	15.3	95%	96%	95%	99%	100%
Joes Valley Reservoir	51.6	50.1	51.0	61.6	84%	81%	83%	101%	98%
Jordanelle Reservoir	311.6	293.7	274.4	314.0	99%	94%	87%	114%	107%
Ken's Lake	1.0	2.4	2.0	2.3	43%	106%	87%	49%	122%
Kolob Reservoir	2.2	5.7		5.6	39%	102%			
Lost Creek Reservoir	21.6	22.9	18.7	22.5	96%	102%	83%	115%	122%
Lower Enterprise		2.0	1.2	2.6		77%	45%		169%
Miller Flat Reservoir	4.9	5.4		5.2	95%	104%			
Millsite	1.2	16.7	15.9	16.7	7%	100%	95%	7%	105%
Minersville Reservoir	7.9	15.9	15.0	23.3	34%	68%	64%	52%	106%
Moon Lake Reservoir	36.0	30.0	28.6	35.8	100%	84%	80%	126%	105%
Otter Creek Reservoir	40.1	51.9	43.7	52.5	76%	99%	83%	92%	119%
Panguitch Lake	14.3	12.7	18.1	22.3	64%	57%	81%	79%	70%
Pineview Reservoir	107.5	110.1	97.8	110.1	98%	100%	89%	110%	113%
Piute Reservoir	16.7	42.9	53.0	71.8	23%	60%	74%	32%	81%
Porcupine Reservoir	11.3	11.5	10.8	11.3	100%	102%	96%	105%	106%
Quail Creek	29.6	31.6	31.5	40.0	74%	79%	79%	94%	100%
Red Fleet Reservoir	19.9	24.6	23.5	25.7	77%	96%	91%	85%	105%
Rockport Reservoir	54.7	50.8	50.8	60.9	90%	83%	83%	108%	100%
Sand Hollow Reservoir	47.0	49.0		50.0	94%	98%			
Scotfield Reservoir	51.4	64.5	48.7	65.8	78%	98%	74%	105%	132%
Settlement Canyon Reservoir	0.7	1.1	0.9	1.0	72%	110%	85%	84%	129%
Sevier Bridge Reservoir	51.2	65.6	159.0	236.0	22%	28%	67%	32%	41%
Smith And Morehouse Reservoir	7.7	8.4	6.7	8.1	95%	103%	83%	114%	125%
Starvation Reservoir	152.9	139.3	154.8	164.1	93%	85%	94%	99%	90%
Stateline Reservoir	14.0	14.1	10.2	12.0	116%	118%	85%	137%	138%
Steinaker Reservoir	15.9	23.2	29.2	33.4	48%	69%	87%	54%	79%
Strawberry Reservoir	948.2	929.1	714.9	1105.9	86%	84%	65%	133%	130%
Upper Enterprise		3.5	4.8	10.0		35%	48%		73%
Upper Stillwater Reservoir	19.4	11.4	15.7	32.5	60%	35%	48%	123%	72%
Utah Lake	545.9	636.1	864.9	870.9	63%	73%	99%	63%	74%
Willard Bay	185.3	221.1	164.5	215.0	86%	103%	77%	113%	134%
Woodruff Creek	4.0	4.1	3.8	4.0	100%	103%	95%	105%	108%
Woodruff Narrows Reservoir	53.3	56.0	44.8	57.3	93%	98%	78%	119%	125%
Meeks Cabin Reservoir	30.2	28.8	25.2	32.5	93%	89%	78%	120%	114%
Bear Lake	1071.8	1080.9	710.6	1302.0	82%	83%	55%	151%	152%
<b>Basin-wide Total</b>	<b>4186.9</b>	<b>4380.2</b>	<b>4001.1</b>	<b>5360.5</b>	<b>78%</b>	<b>82%</b>	<b>75%</b>	<b>105%</b>	<b>109%</b>
# of reservoirs	40.0	40.0	40.0	40.0	40	40	40	40	40
# of reservoirs	42	42	42	42	42	42	42	42	42

### Reservoir Storage



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## **Utah Climate and Water Report**

**Natural Resources Conservation Service**  
**Salt Lake City, UT**

