

# Utah Climate and Water Report

August 1, 2021



**New SNOTEL site at Powder Mountain Ski Resort**

Photo by Jordan Clayton

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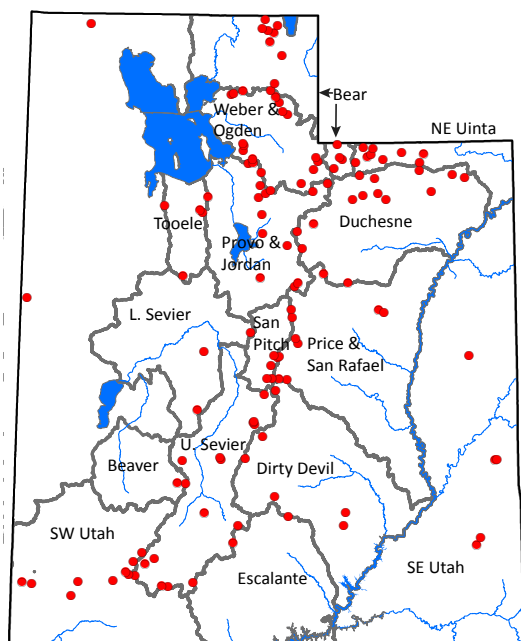
## Utah Climate and Water Report

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.



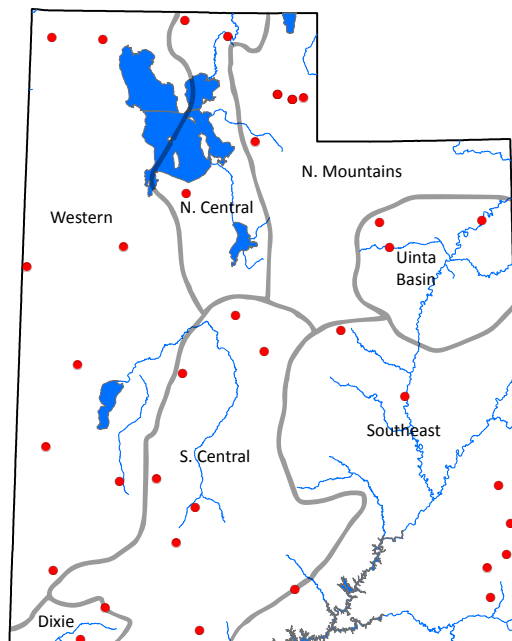
### SNOTEL

- 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**

### **August 1, 2021**

*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 [jordan.clayton@usda.gov](mailto:jordan.clayton@usda.gov).*

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

July brought some welcome relief to Utah's Valley locations, where more precipitation fell than in the previous three months combined! An average of 1.6 inches was recorded at Utah's SCAN sites in July, bringing the water year total to 5.8 inches. Southern Utah fared the best this month, which is fortunate since it is the region in greatest need of precipitation. Soil temperatures across most of the state moderated during the month, ending July near normal. Thankfully, this significant change in the weather has produced small but meaningful improvements in the drought situation in Utah: although 99% of the state remains in Extreme (D3) to Exceptional (D4) drought, the portion of Utah experiencing D4 is down to 51%, from 64% at the beginning of the month.

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

Monsoon! While we are still deep in drought, this summer's unusually strong monsoonal precipitation has helped boost the water supply conditions in Utah's mountains. July's accumulated precipitation was 186% of normal and improved the statewide precipitation total at Utah's SNOTEL sites by 2.5 inches. Whereas we started July at 9.6" below average, by the end of the month this number was down to 8.5", and additional monsoonal moisture in August has brought that value down a bit more. In addition to improving our precipitation totals and soil moisture levels (more on that below), the strong monsoonal moisture has also helped in several ways, including: (a) a reduction in the rate of water withdrawal from our reservoir system (because less water is needed for irrigation and landscaping when it's being delivered as rainfall), (b) decreased fire risk, and (c) an improved likelihood of an efficient snowmelt runoff when next winter's snowpack melts in spring 2022. This is because soil moisture levels tend not to vary during winter months in Utah's mountains, so whatever amount of soil moisture is available in headwater soils going into the snow season tends to be intact when the snowmelt begins. Last year's phenomenally dry soils were a major reason why we ended up experiencing the severe drought conditions that are ongoing. If we can enter this coming winter's snow season with wetter soils, that will improve the chances for an average or above-average runoff, depending on how much snow we get... This last point (c) is the most important benefit the monsoonal moisture has provided from a water supply perspective.



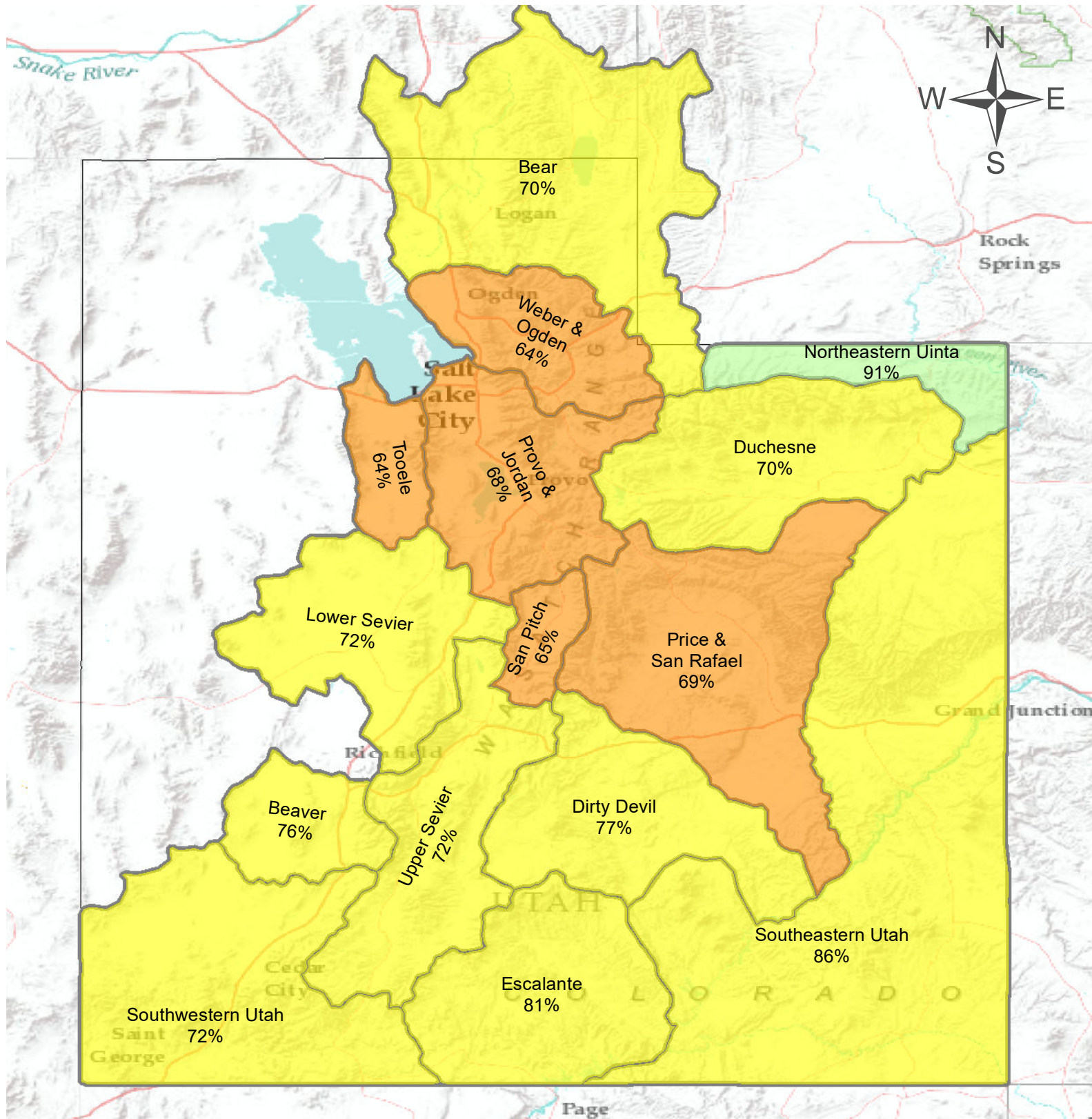
That said, Utah's water supply conditions are still in very poor shape. Our water-year-to-date accumulated precipitation is 70% of average and is in the bottom 10<sup>th</sup> percentile of the historical observations<sup>1</sup>. To help create a picture of how much moisture Utah would need to get out of the current drought, we need to combine the current precipitation deficit relative to normal with last year's; this gives a value of roughly 16.2" of precipitation. Certainly this isn't a perfect measure of what the state needs to no longer be in a drought situation—for example, the shortages in our reservoir system are not accounted for—but at least this gives a rough picture of how much additional moisture is needed to get us back to 'normal'. To be sure, that's around 16" of *additional* precipitation, meaning that we need that much *more* rain and snow than we would normally receive.

Statewide soil moisture benefited significantly from the recent rainfall—currently at 44% of saturation, up 6% from last month. Soils in central and southern Utah and the Tooele area fared the best from the monsoonal precipitation with basins above 150% of normal for this time of year. Last winter Utah's soils reached historically dry conditions and have been hovering near or below record lows until this recent influx of moisture. As noted above, we will keep fingers crossed that we can sustain reasonably moist soils going into our snowpack season.

Utah's reservoir storage is currently at 52% of capacity, which is 24% lower than last year at this time. While the state's overall storage has declined, the rate of decline has slowed due to the recent rain and other factors. As noted in last month's report, Utah's *reservoirs are very unlikely to see substantial gains until next spring's runoff*. April to July streamflow in Utah has been incredibly poor: roughly half of the gage locations in the state reported flow volumes only 25% of normal or lower, and 16 hit new record lows. These ongoing water supply conditions are causing Utah's current Water Availability Indices (WAIs) to remain at historically-low levels (bottom 20<sup>th</sup> percentile) for 14 of Utah's 18 major basins.

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<sup>1</sup> For perspective, until the recent rain we were below the previous minimum, so at least Utah's precipitation isn't the worst-on-record anymore!



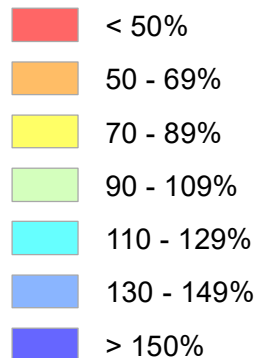
# Statewide Precipitation

As of August 1, 2021:

70% of Normal Precipitation

186% of Normal Precipitation Last Month

## % of Normal



August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similar WAI
	KAF^	KAF^	KAF^	%		
<b>Bear River</b>	<b>620</b>	<b>4.3</b>	<b>624</b>	<b>48</b>	<b>-0.2</b>	<b>95, 01, 13, 89</b>
<b>Woodruff Narrows</b>	<b>7.4</b>	<b>4.3</b>	<b>11.7</b>	<b>7</b>	<b>-3.6</b>	<b>03, 02, 92, 01</b>
<b>Little Bear</b>	<b>4.1</b>	<b>0.8</b>	<b>4.9</b>	<b>3</b>	<b>-3.9</b>	<b>03, 01, 13, 07</b>
<b>Ogden</b>	<b>35.0</b>	<b>2.1</b>	<b>37.1</b>	<b>5</b>	<b>-3.8</b>	<b>92, 00, 88, 03</b>
<b>Weber</b>	<b>73.9</b>	<b>5.9</b>	<b>79.8</b>	<b>3</b>	<b>-3.9</b>	<b>92, 13, 02, 14</b>
<b>Provo River</b>	<b>289.1</b>	<b>3.5</b>	<b>292.6</b>	<b>4</b>	<b>-3.9</b>	<b>13, 04, 02, 14</b>
<b>Western Uinta</b>	<b>143.2</b>	<b>3.1</b>	<b>146.4</b>	<b>14</b>	<b>-3.0</b>	<b>92, 02, 94, 03</b>
<b>Eastern Uinta</b>	<b>15.5</b>	<b>3.5</b>	<b>19.0</b>	<b>7</b>	<b>-3.6</b>	<b>02, 14, 18, 94</b>
<b>Blacks Fork</b>	<b>5.0</b>	<b>4.6</b>	<b>9.7</b>	<b>8</b>	<b>-3.5</b>	<b>02, 94, 00, 12</b>
<b>Price</b>	<b>23.3</b>	<b>0.3</b>	<b>23.6</b>	<b>33</b>	<b>-1.4</b>	<b>03, 07, 10, 01</b>
<b>Smiths Creek</b>	<b>5.8</b>	<b>6.8</b>	<b>12.6</b>	<b>47</b>	<b>-0.2</b>	<b>85, 97, 20, 14</b>
<b>Joes Valley</b>	<b>28.1</b>	<b>1.5</b>	<b>29.6</b>	<b>2</b>	<b>-4.0</b>	<b>02, 13, 90, 92</b>
<b>Moab</b>	<b>0.7</b>	<b>0.3</b>	<b>1.0</b>	<b>20</b>	<b>-2.5</b>	<b>90, 12, 00, 09</b>
<b>Upper Sevier River</b>	<b>14.0</b>	<b>0.5</b>	<b>14.5</b>	<b>5</b>	<b>-3.8</b>	<b>04, 92, 03, 18</b>
<b>San Pitch</b>	<b>0.0</b>	<b>0.7</b>	<b>0.7</b>	<b>5</b>	<b>-3.8</b>	<b>18, 13, 02, 16</b>
<b>Lower Sevier</b>	<b>28.5</b>	<b>1.8</b>	<b>30.3</b>	<b>12</b>	<b>-3.2</b>	<b>18, 16, 17, 92</b>
<b>Beaver</b>	<b>4.4</b>	<b>1.2</b>	<b>5.5</b>	<b>14</b>	<b>-3.0</b>	<b>03, 01, 92, 07</b>
<b>Virgin River</b>	<b>32.7</b>	<b>5.4</b>	<b>38.1</b>	<b>36</b>	<b>-1.2</b>	<b>07, 08, 09, 18</b>

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

### What is a Water Availability Index?

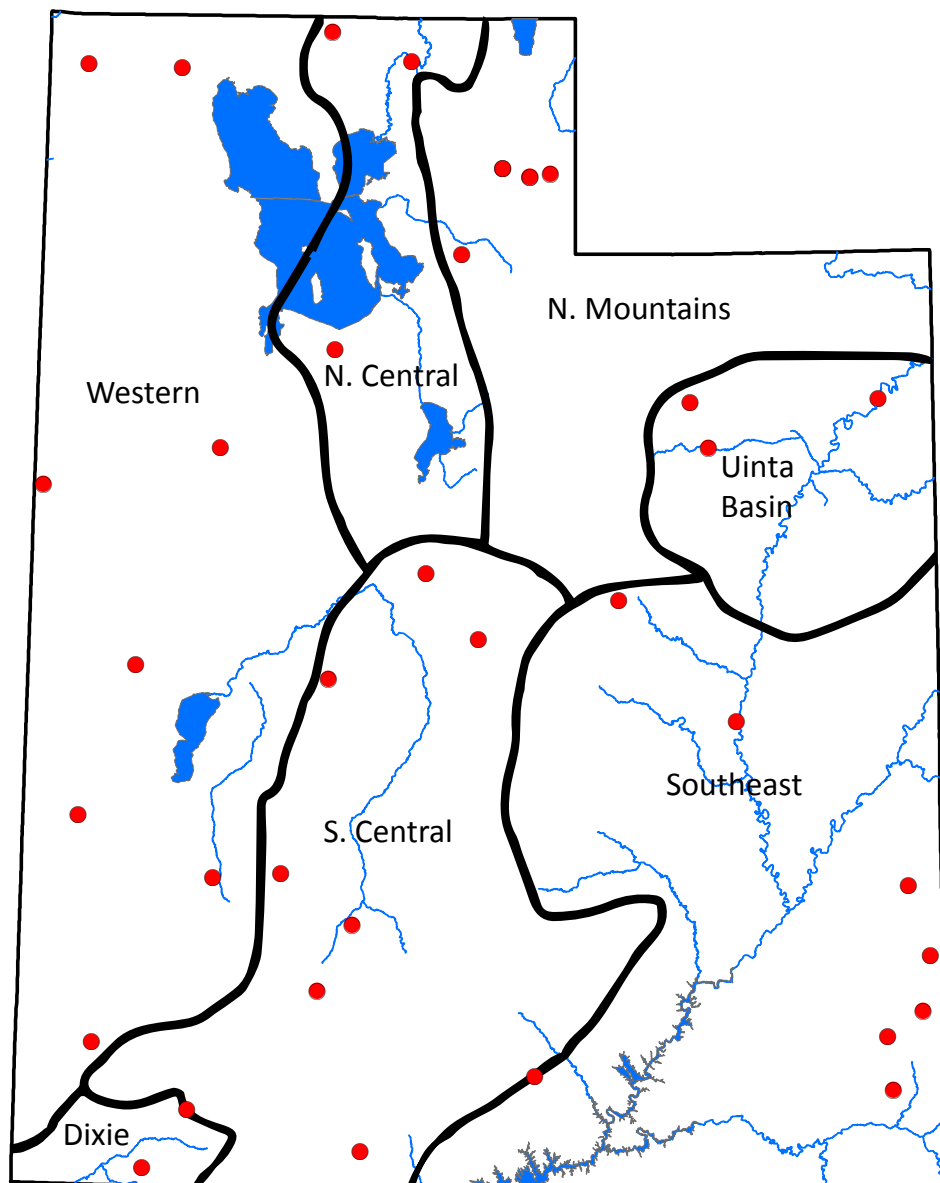
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry)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

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

For more information on the WAI go to: [www.ut.nrcs.usda.gov/snow/](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.



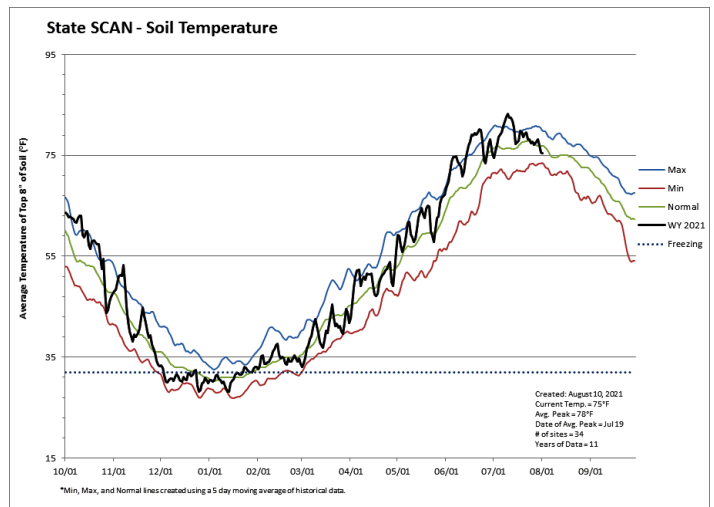
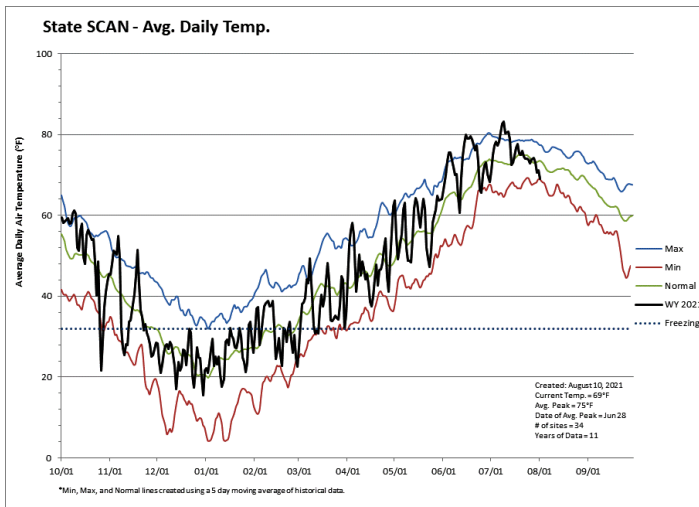
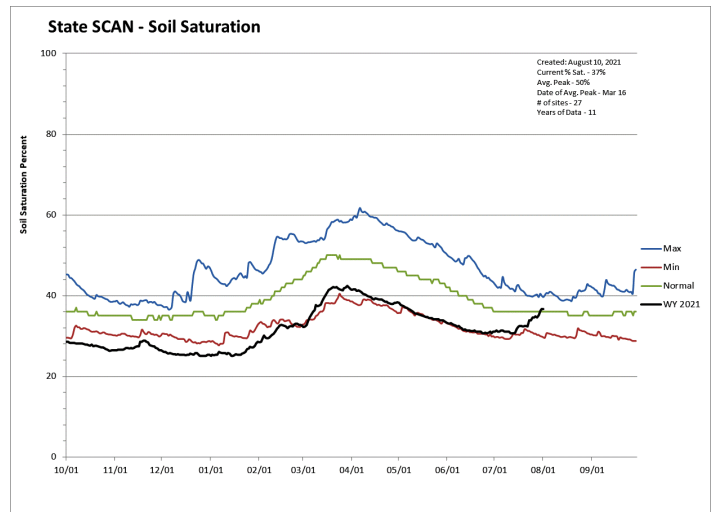
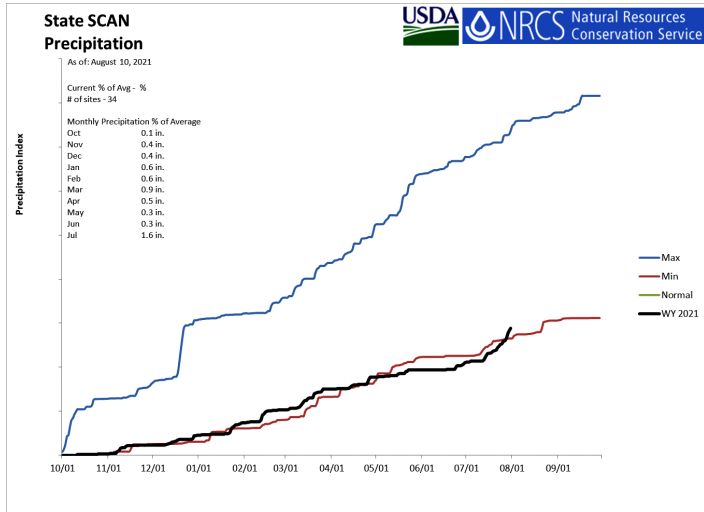
## SCAN portion of report



# Statewide SCAN

August 1, 2021

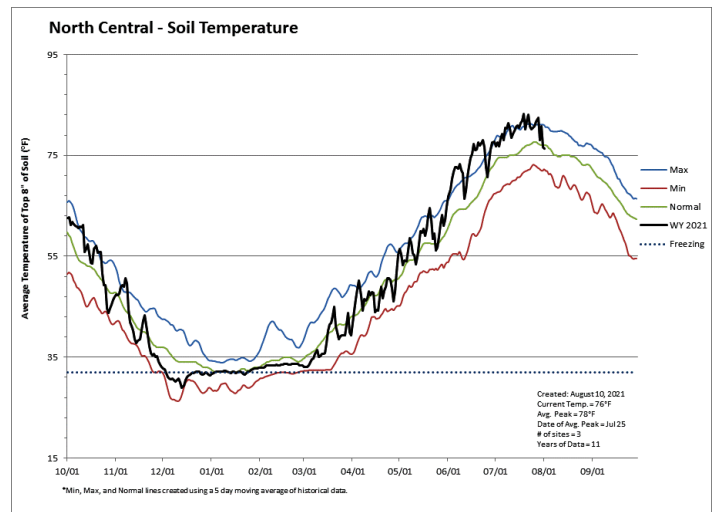
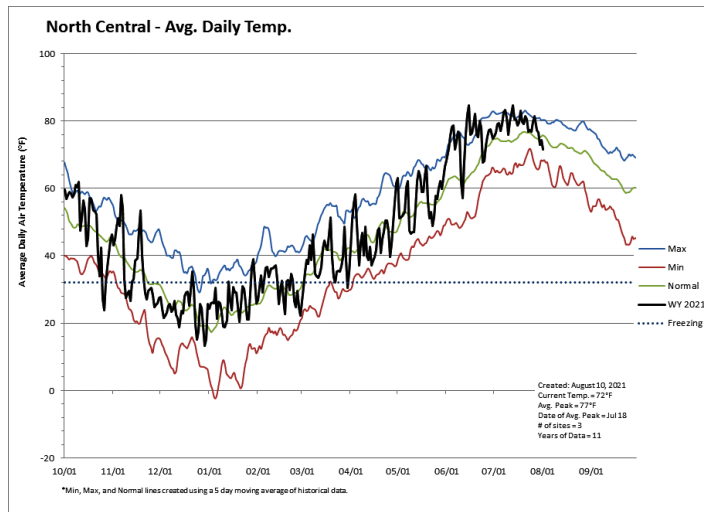
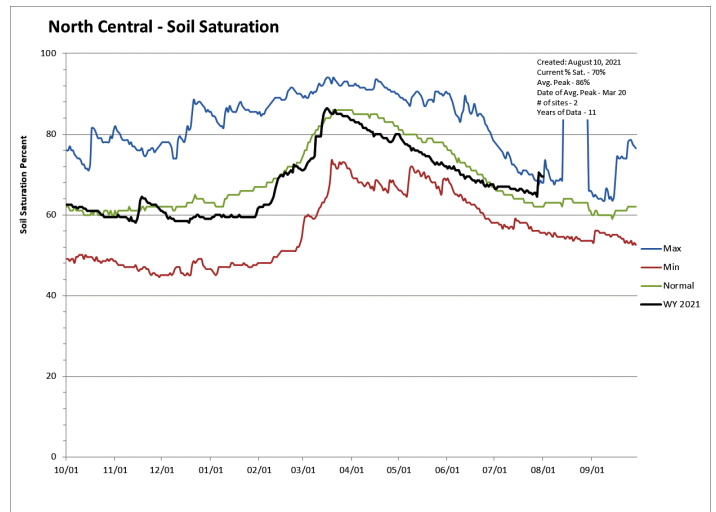
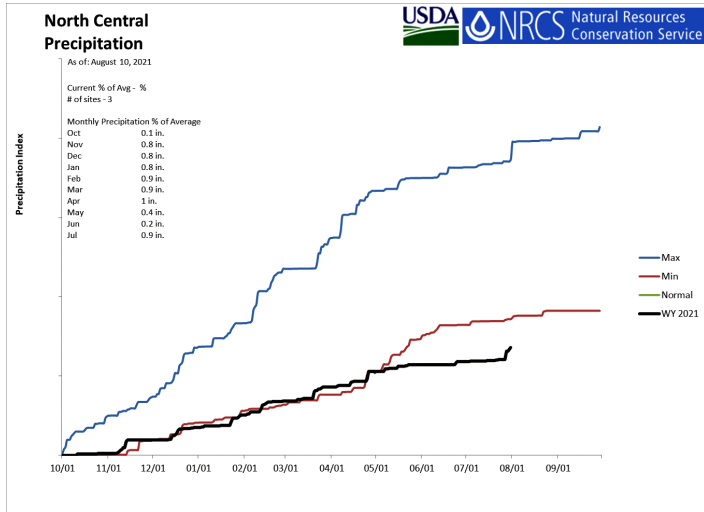
The average precipitation at SCAN sites within Utah was 1.6 inches in July, which brings the seasonal accumulation (Oct-Jul) to 5.8 inches. Soil moisture is at 37% compared to 32% last year.



# North Central

August 1, 2021

The average precipitation in July at SCAN sites within the basin was 0.9 inches, which brings the seasonal accumulation (Oct-Jul) to 6.8 inches. Soil moisture is at 70% compared to 70% last year.

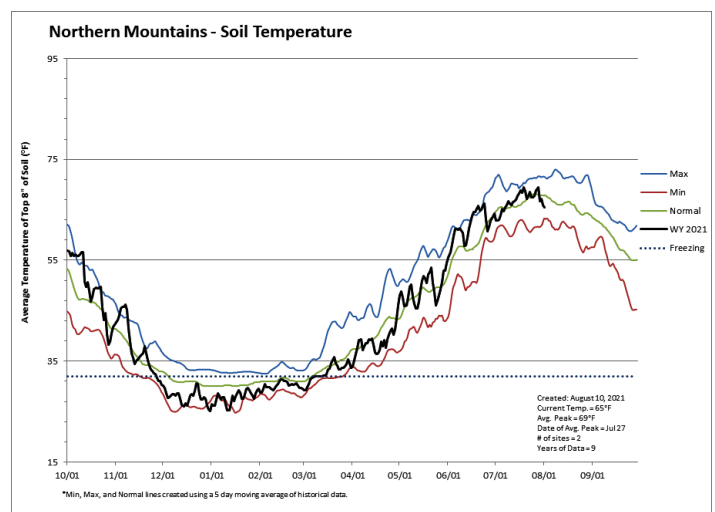
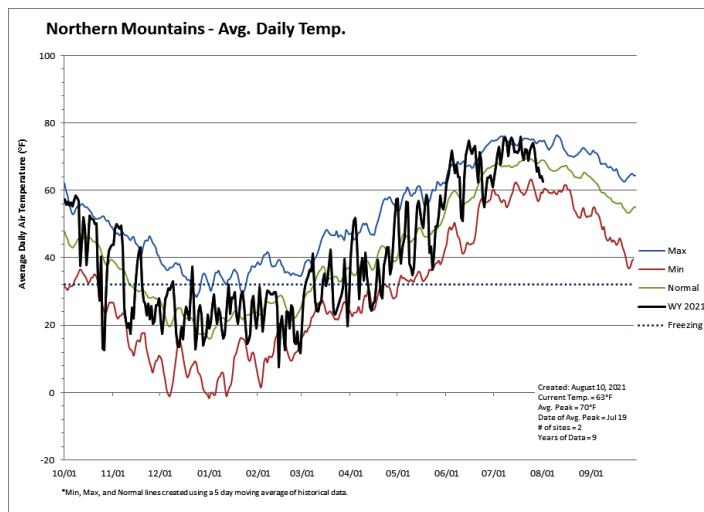
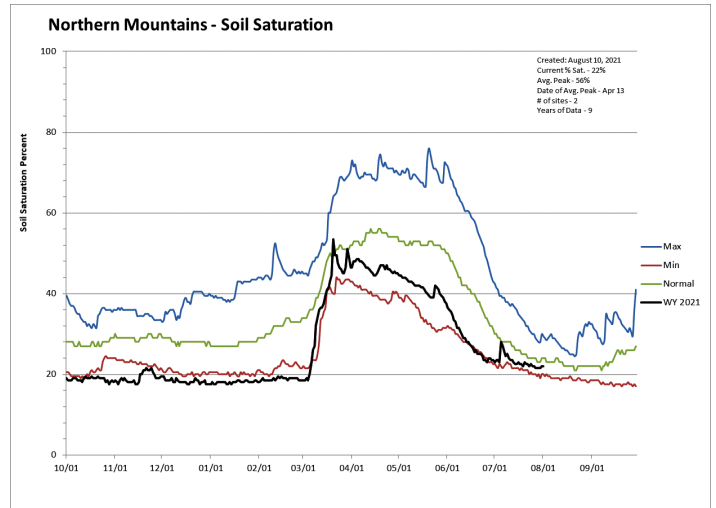
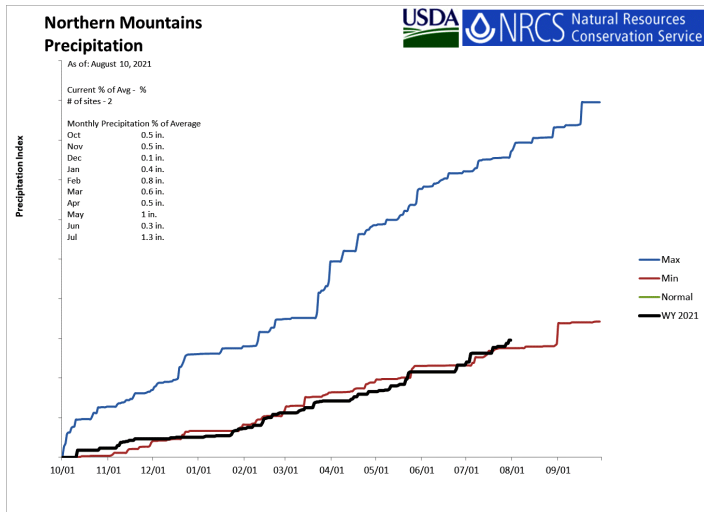




# Northern Mountains

August 1, 2021

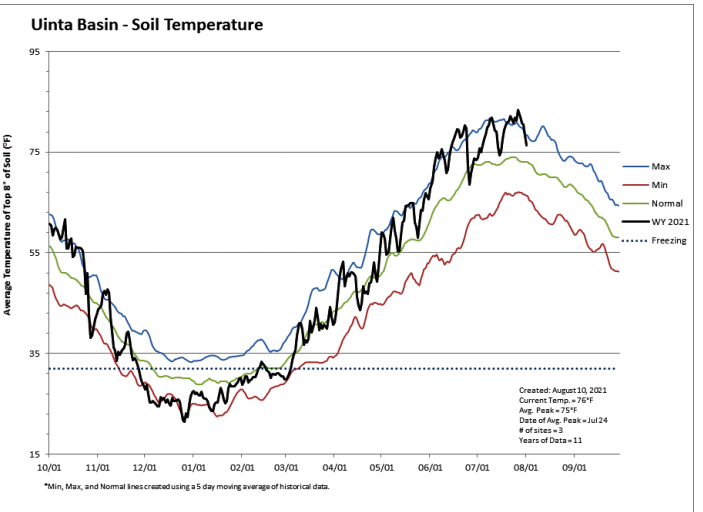
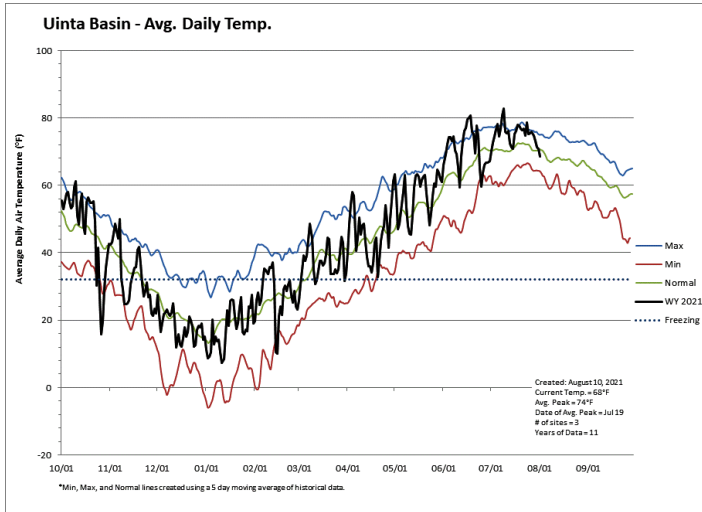
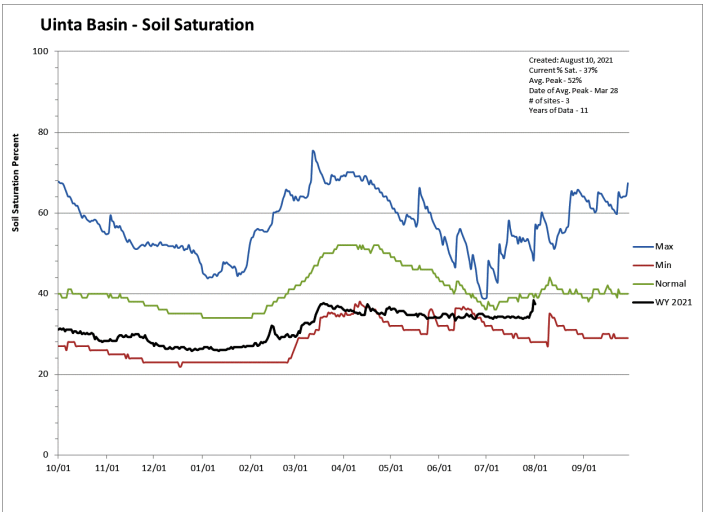
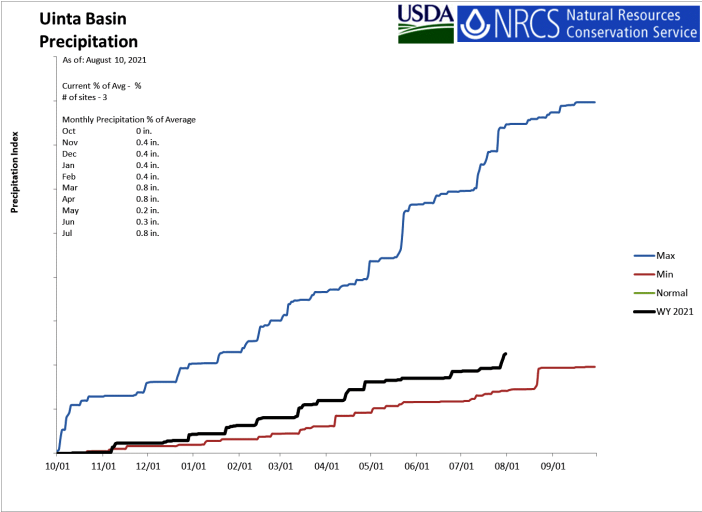
The average precipitation in July at SCAN sites within the basin was 1.3 inches, which brings the seasonal accumulation (Oct-Jul) to 5.9 inches. Soil moisture is at 22% compared to 24% last year.



# Uinta Basin

## August 1, 2021

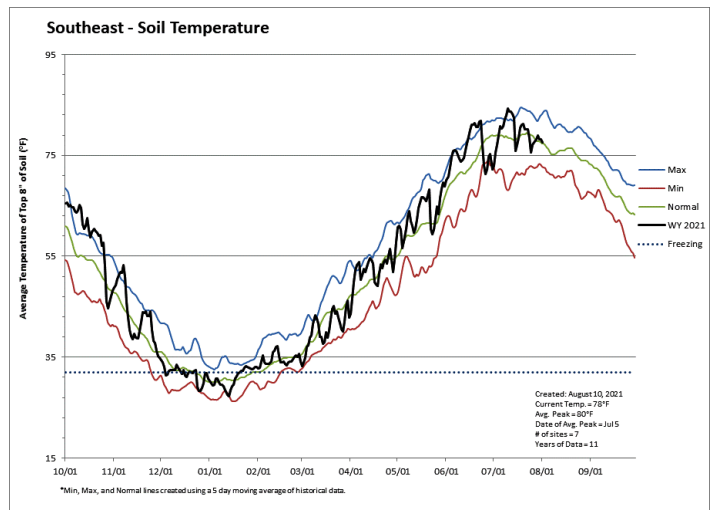
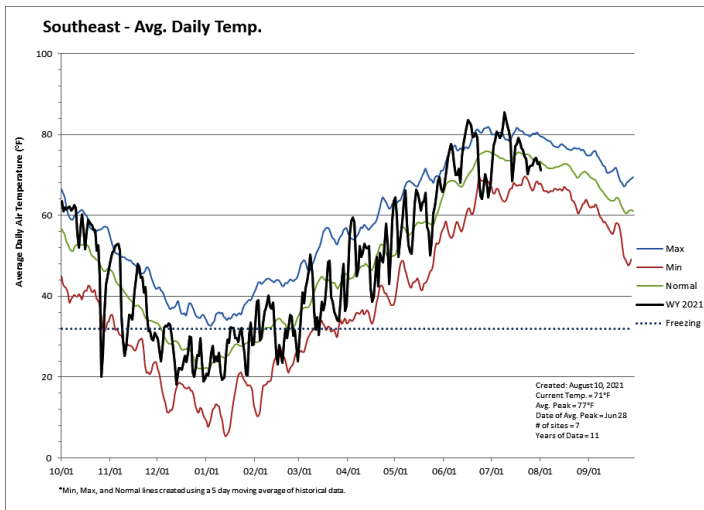
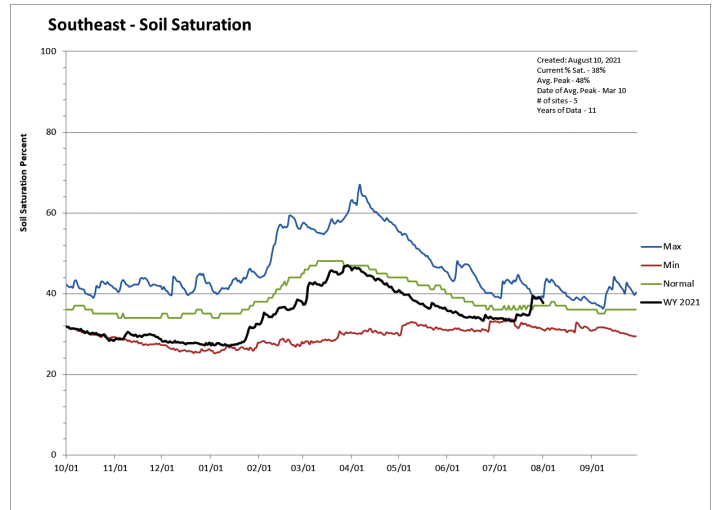
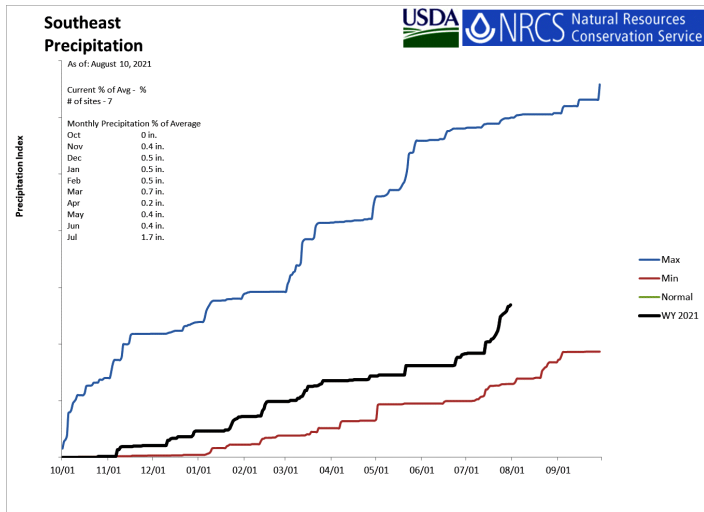
The average precipitation in July at SCAN sites within the basin was 0.8 inches, which brings the seasonal accumulation (Oct-Jul) to 4.5 inches. Soil moisture is at 38% compared to 35% last year.



# Southeast

August 1, 2021

The average precipitation in July at SCAN sites within the basin was 1.7 inches, which brings the seasonal accumulation (Oct-Jul) to 5.4 inches. Soil moisture is at 38% compared to 35% last year.

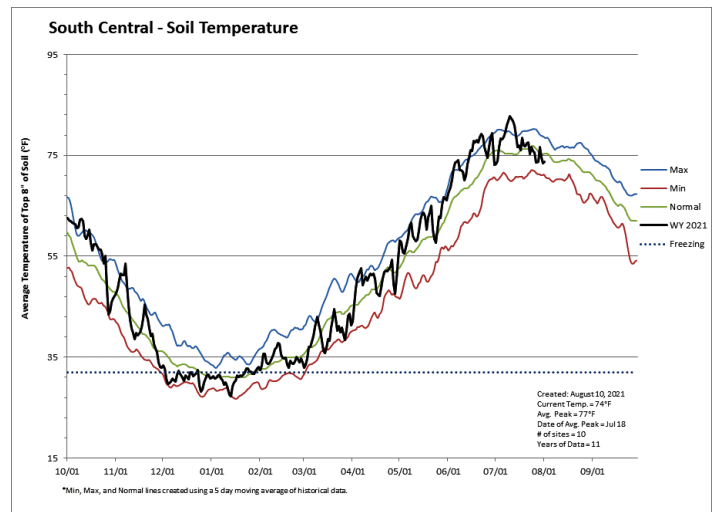
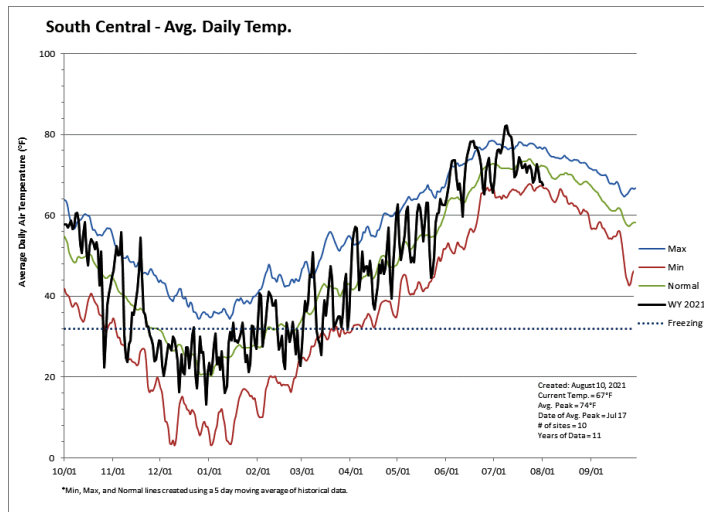
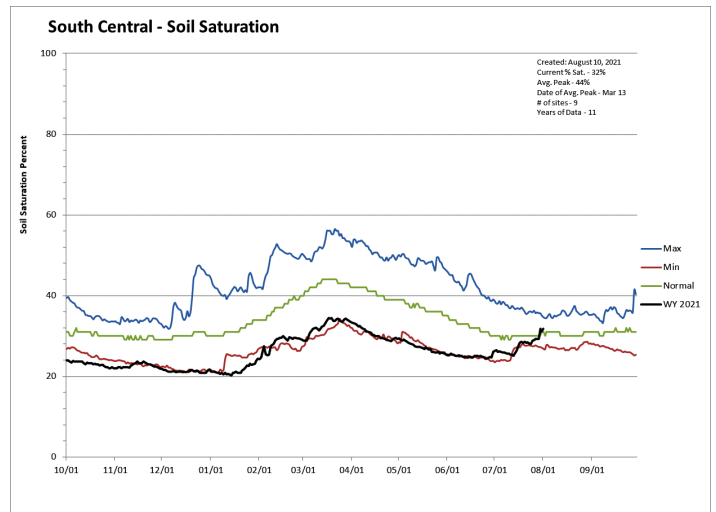
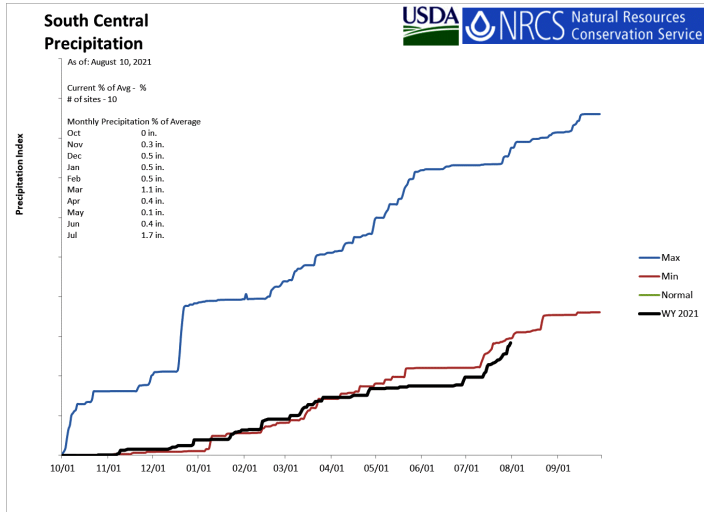




# South Central

August 1, 2021

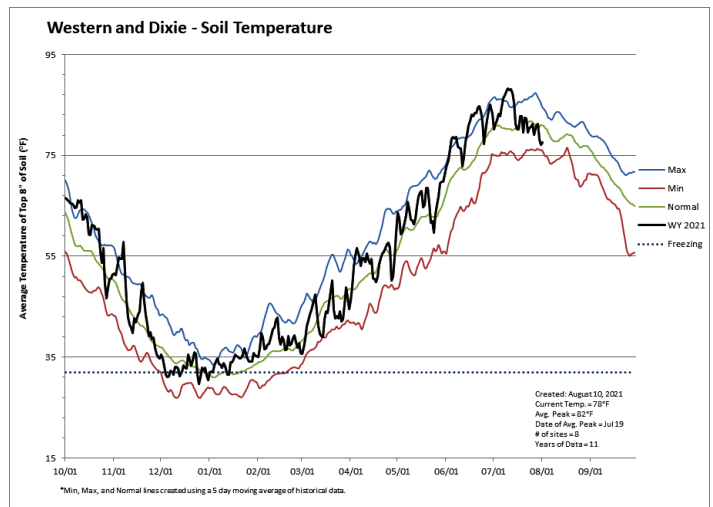
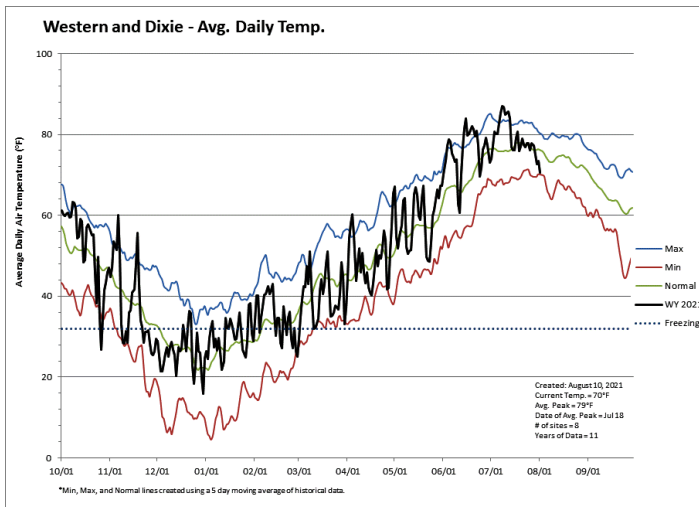
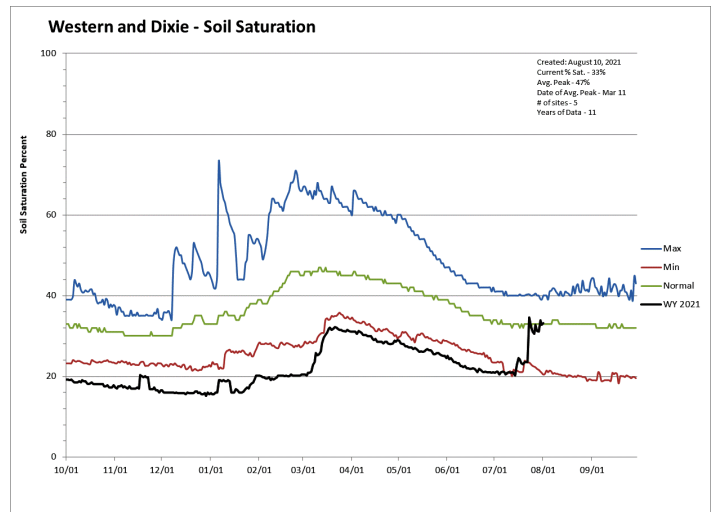
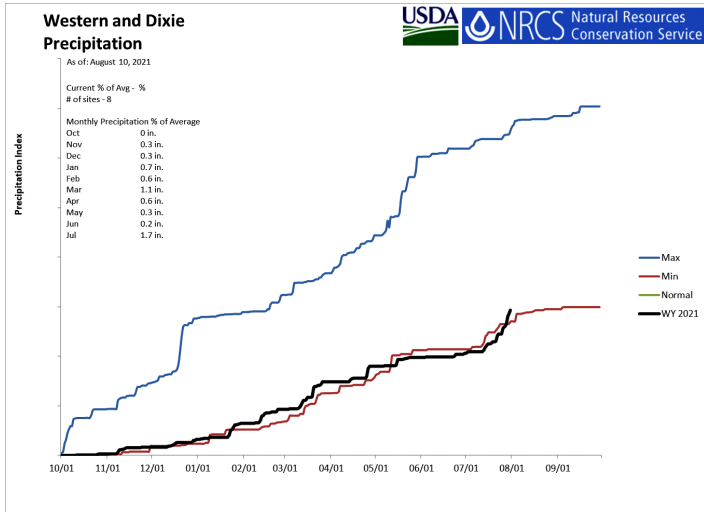
The average precipitation in July at SCAN sites within the basin was 1.7 inches, which brings the seasonal accumulation (Oct-Jul) to 5.7 inches. Soil moisture is at 31% compared to 27% last year.



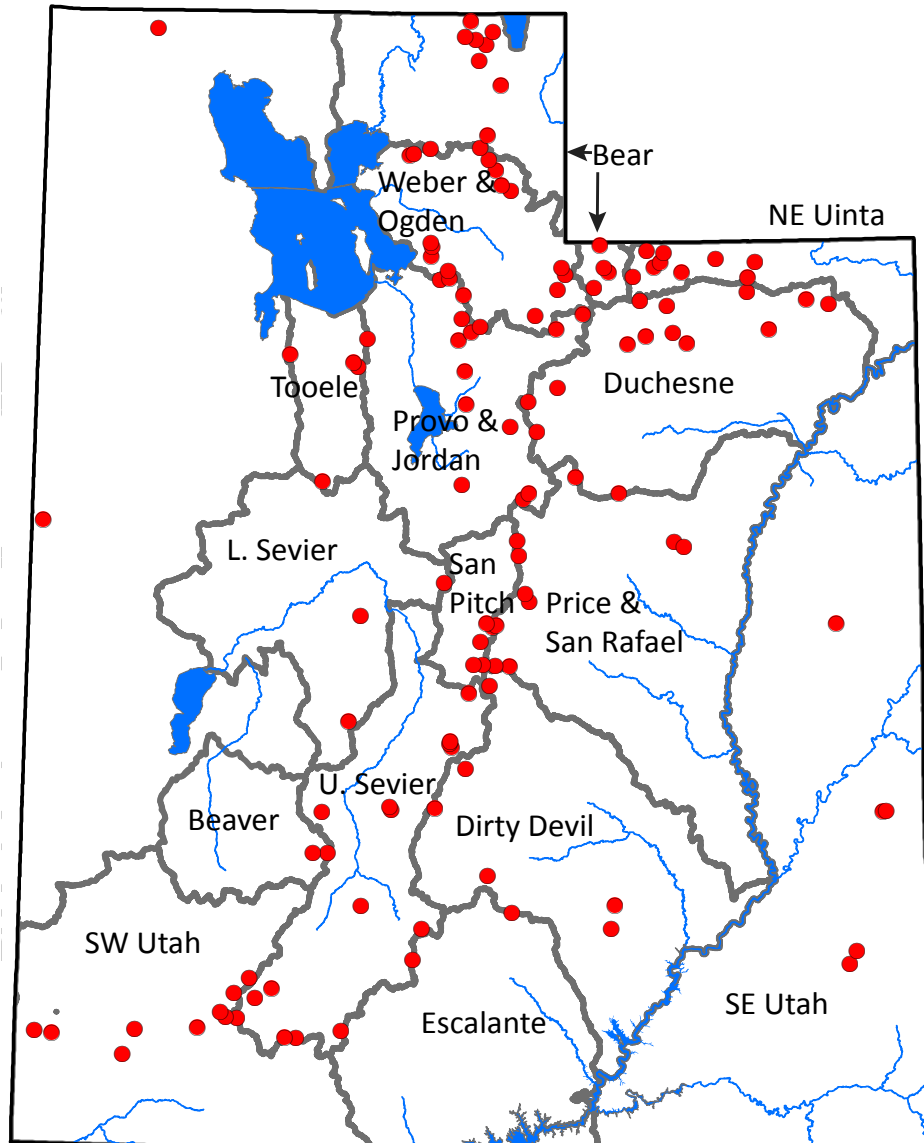
# Western and Dixie

August 1, 2021

The average precipitation in July at SCAN sites within the basin was 1.7 inches, which brings the seasonal accumulation (Oct-Jul) to 5.9 inches. Soil moisture is at 32% compared to 22% last year.



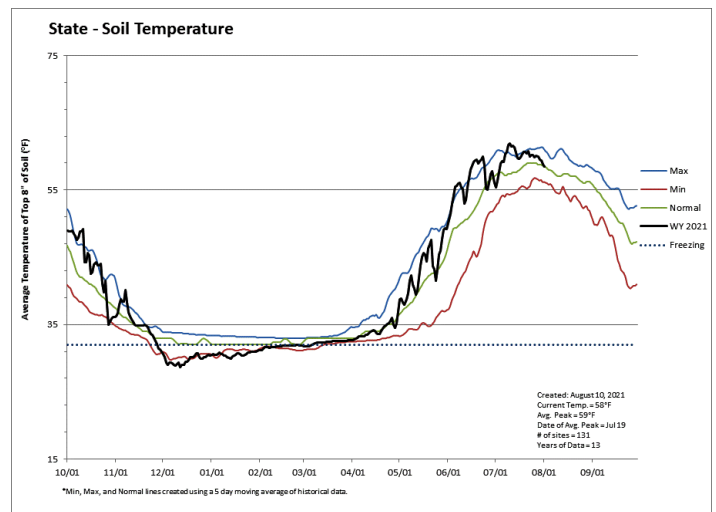
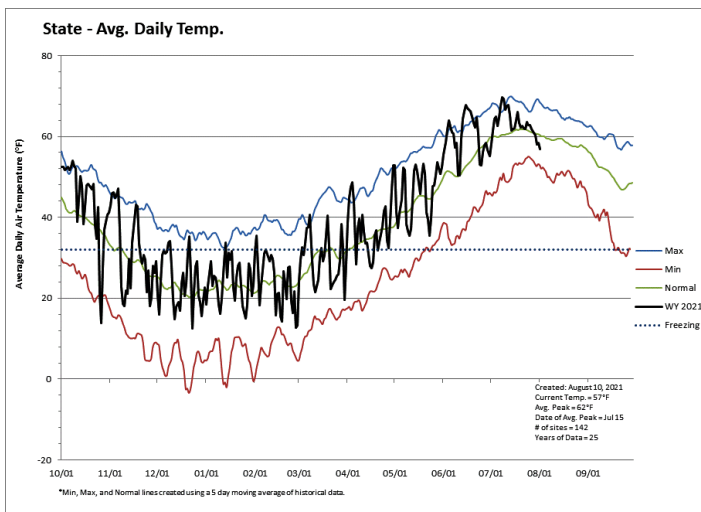
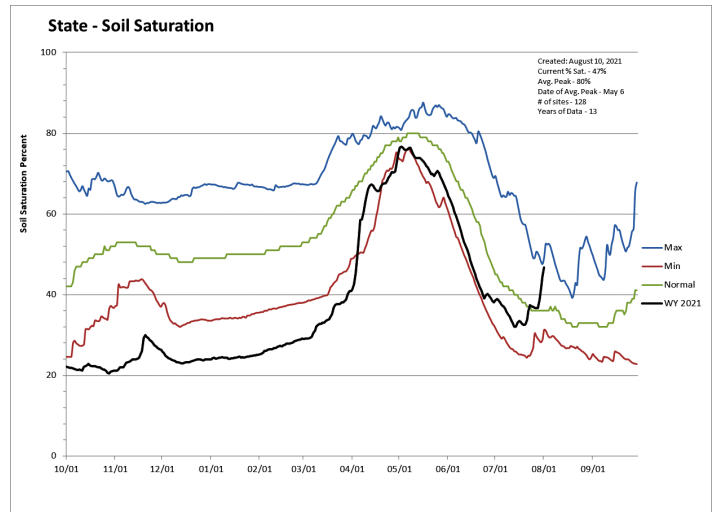
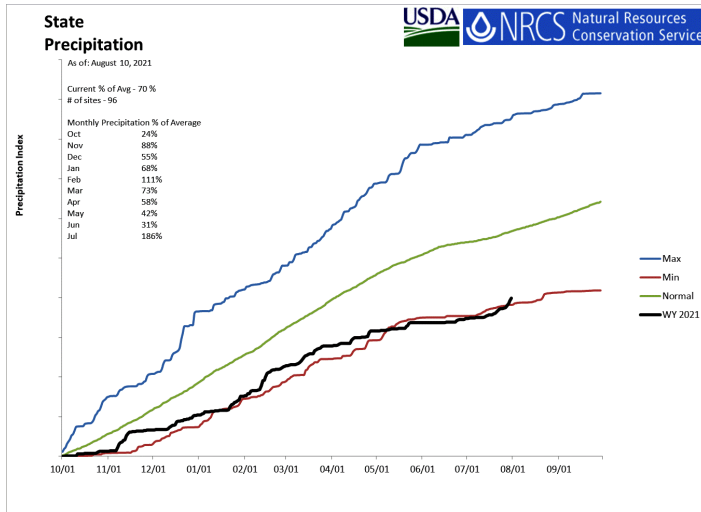
## SNOTEL portion of report



# Statewide SNOTEL

August 1, 2021

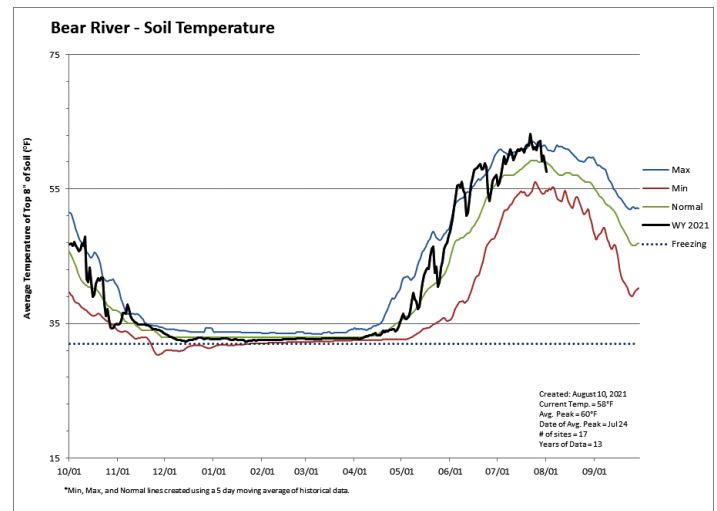
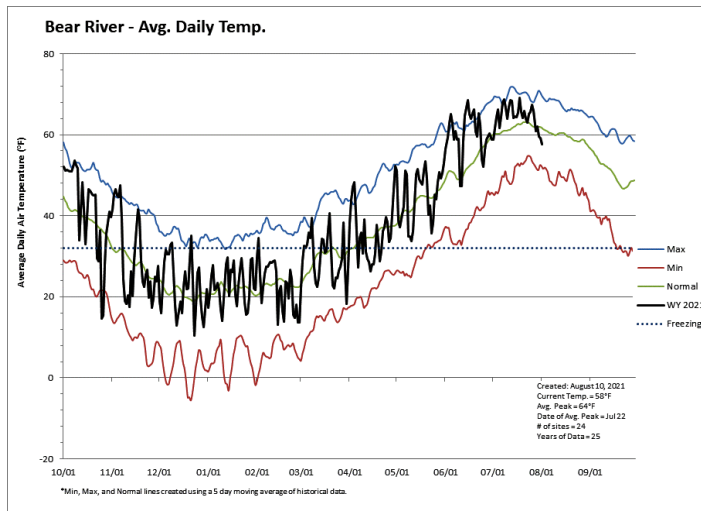
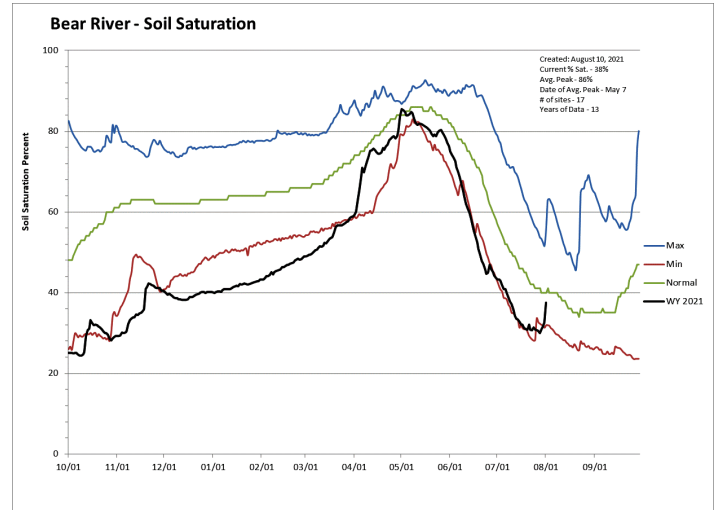
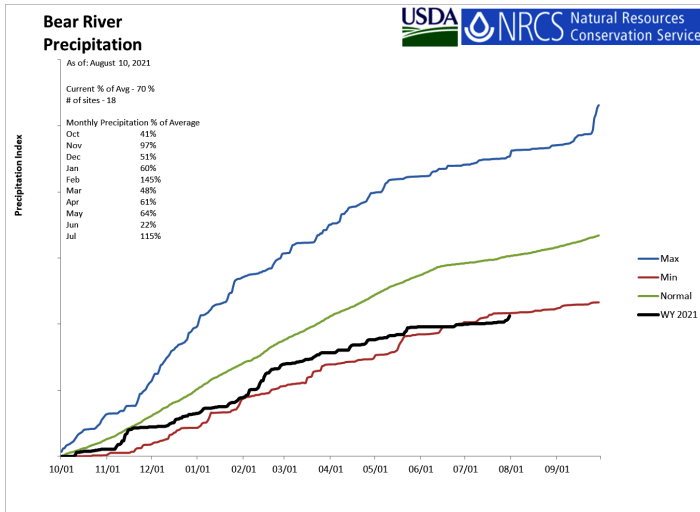
Precipitation at SNOTEL sites during July was much above average at 186%, which brings the seasonal accumulation (Oct-Jul) to 70% of average. Soil moisture is at 44% compared to 33% last year. Reservoir storage is at 52% of capacity, compared to 76% last year.



# Bear River Basin

August 1, 2021

Precipitation in July was above average at 115%, which brings the seasonal accumulation (Oct-Jul) to 70% of average. Soil moisture is at 35% compared to 40% last year. Reservoir storage is at 46% of capacity, compared to 72% last year. The water availability index for the Bear River is 48%, 7% for Woodruff Narrows and 3% for the Little Bear.



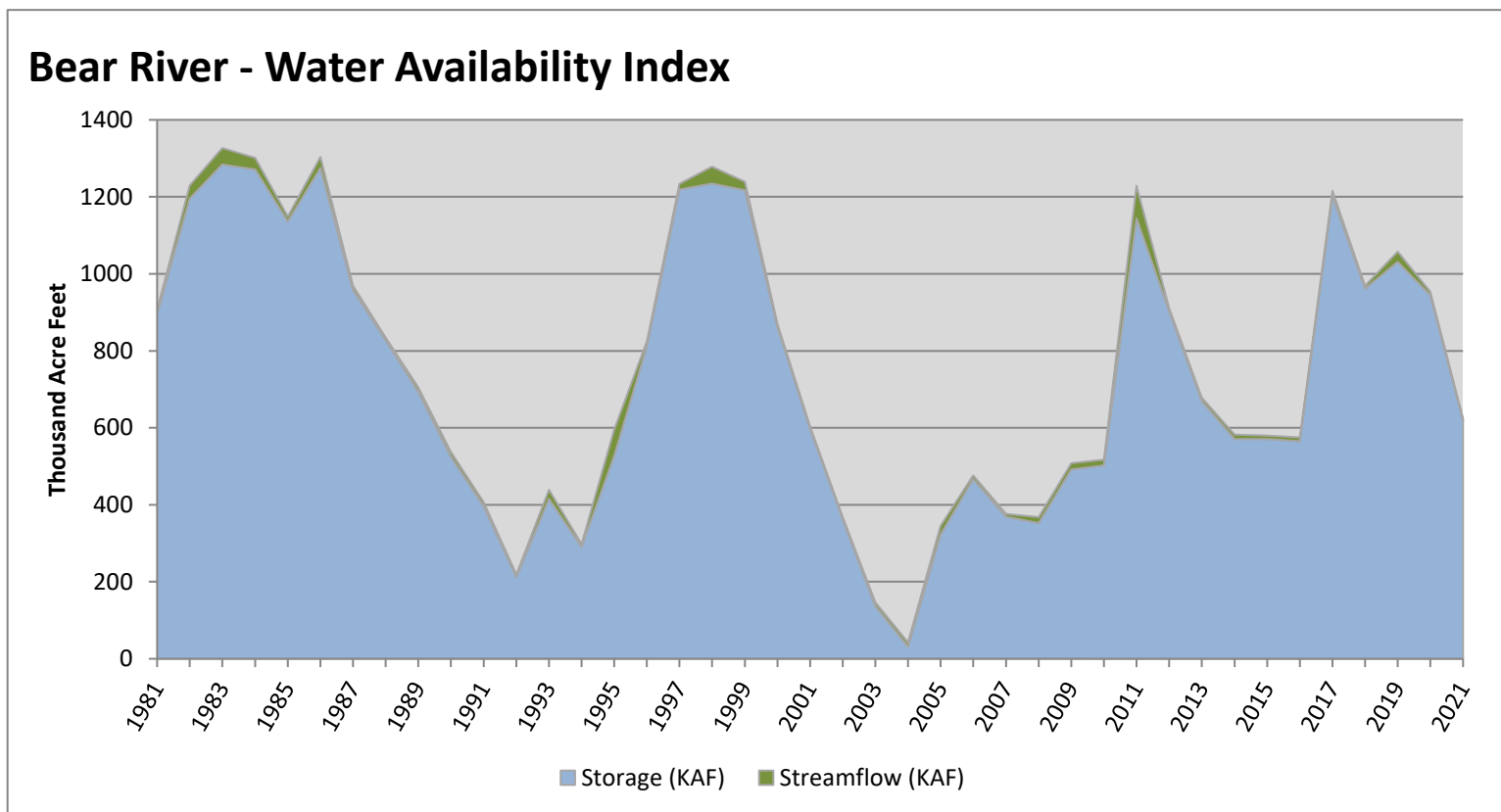


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Bear River</b>	<b>619.57</b>	<b>4.32</b>	<b>623.89</b>	<b>48</b>	<b>-0.2</b>	<b>95, 01, 13, 89</b>

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



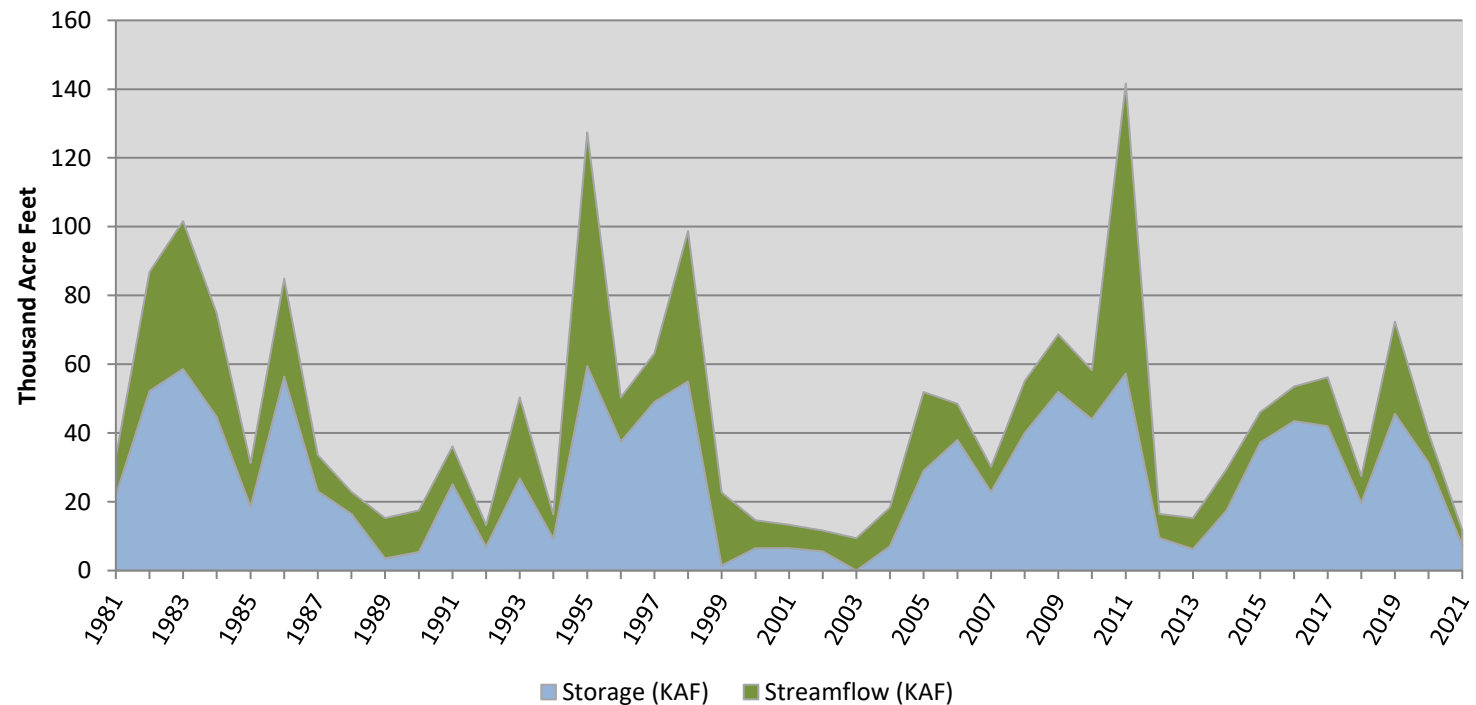
August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Woodruff Narrows</b>	<b>7.39</b>	<b>4.32</b>	<b>11.71</b>	<b>7</b>	<b>-3.57</b>	<b>03, 02, 92, 01</b>

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

### Woodruff Narrows - Water Availability Index

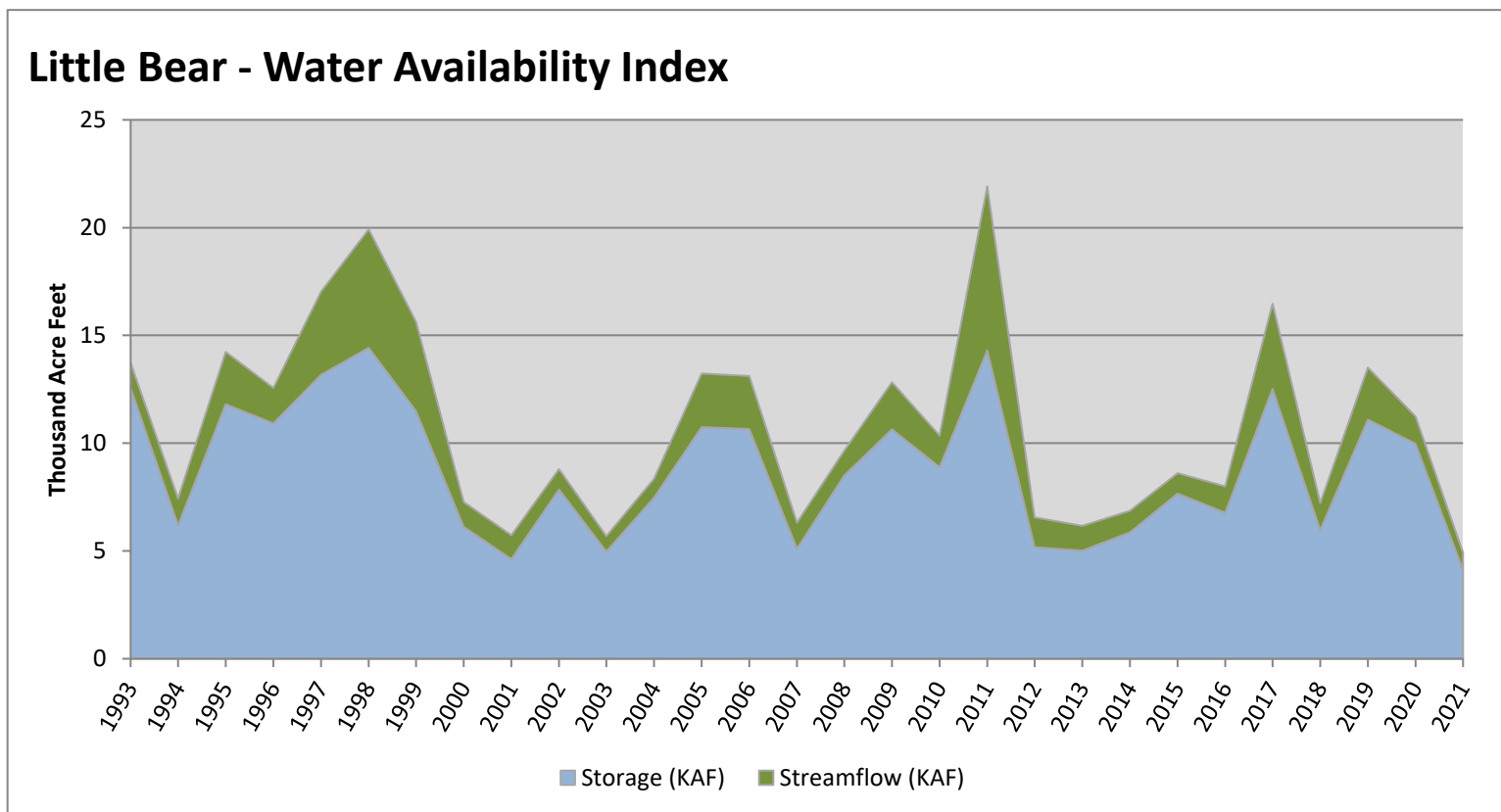


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similiar WAI
	KAF^	KAF^	KAF^	%		
<b>Little Bear</b>	<b>4.12</b>	<b>0.79</b>	<b>4.91</b>	<b>3</b>	<b>-3.89</b>	<b>03, 01, 13, 07</b>

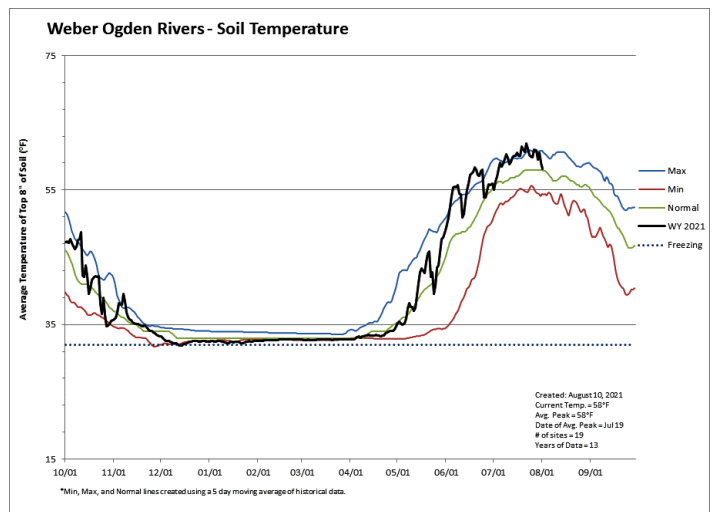
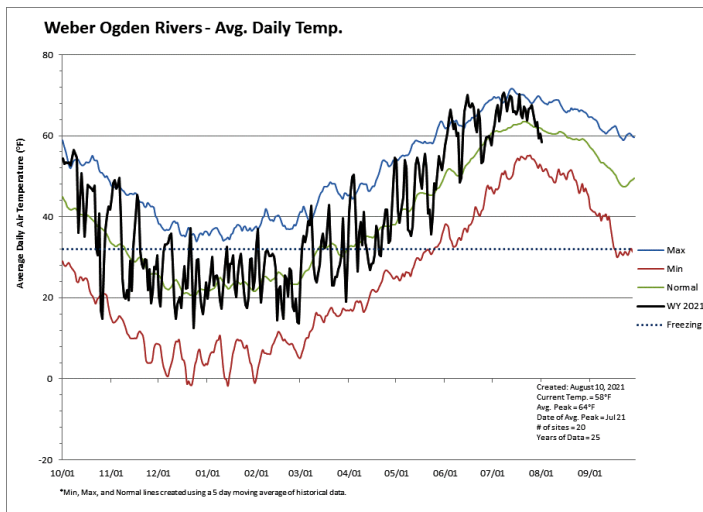
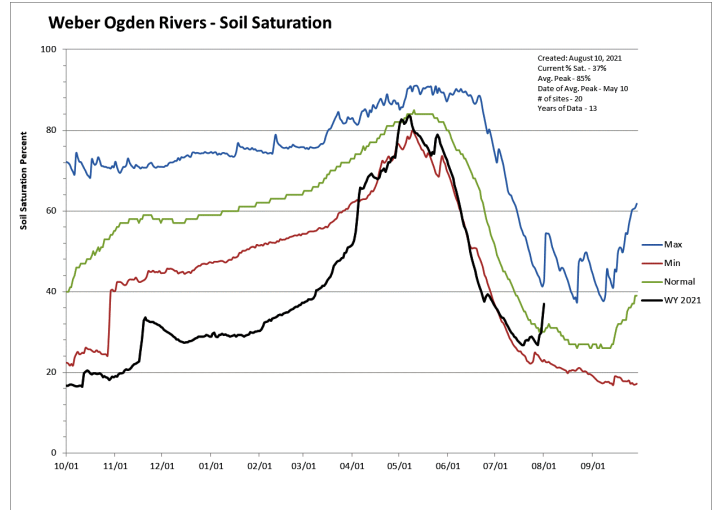
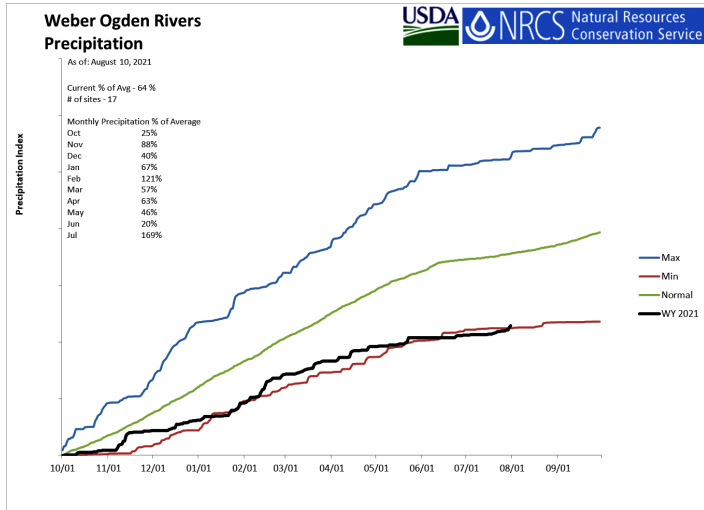
\*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.



# Weber & Ogden River Basins

August 1, 2021

Precipitation in July was much above average at 172%, which brings the seasonal accumulation (Oct-Jul) to 64% of average. Soil moisture is at 33% compared to 31% last year. Reservoir storage is at 39% of capacity, compared to 75% last year. The water availability index for the Ogden River is 5% and 3% for the Weber River.

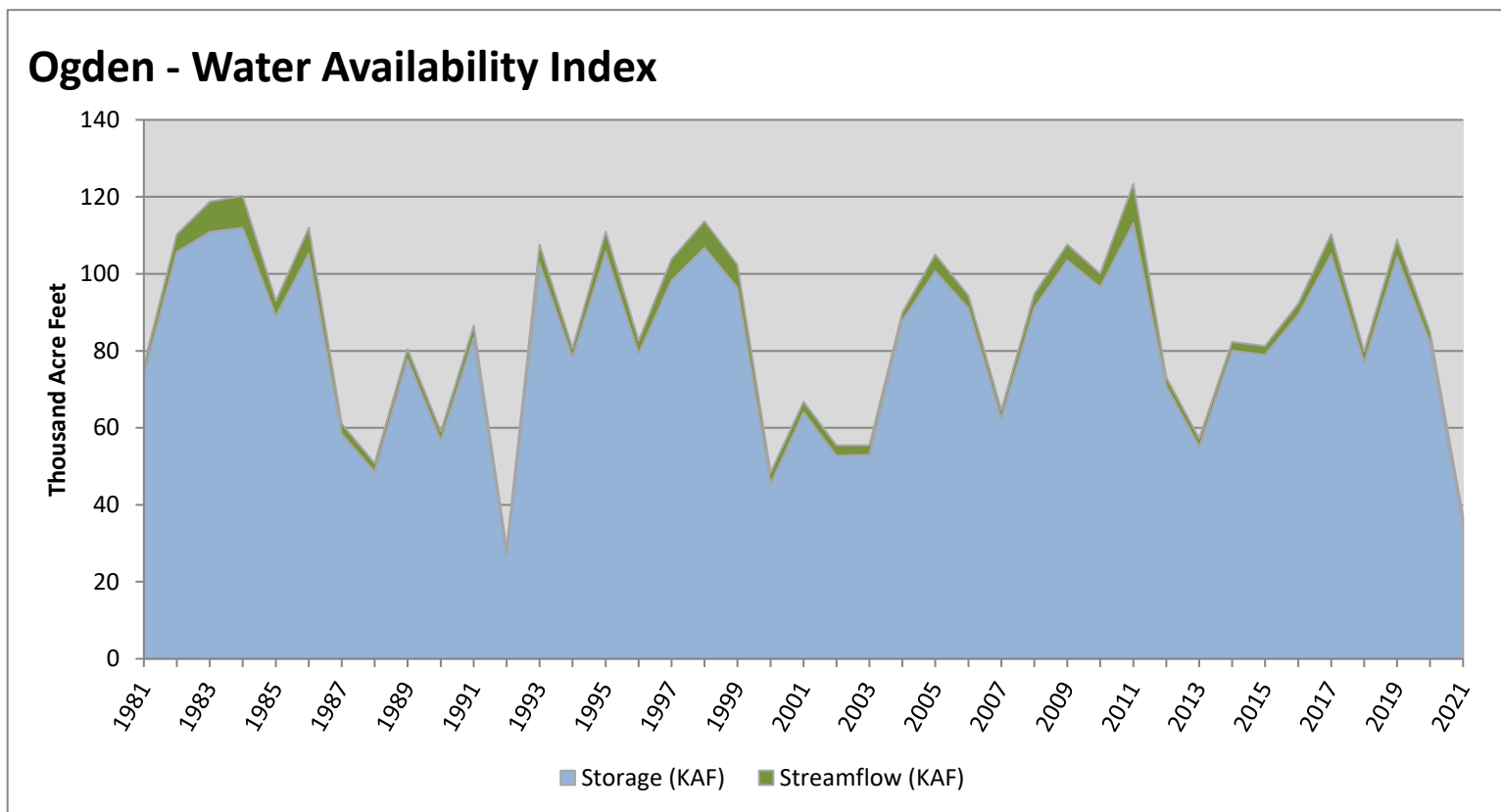


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Ogden</b>	<b>35.00</b>	<b>2.08</b>	<b>37.08</b>	<b>5</b>	<b>-3.77</b>	<b>92, 00, 88, 03</b>

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



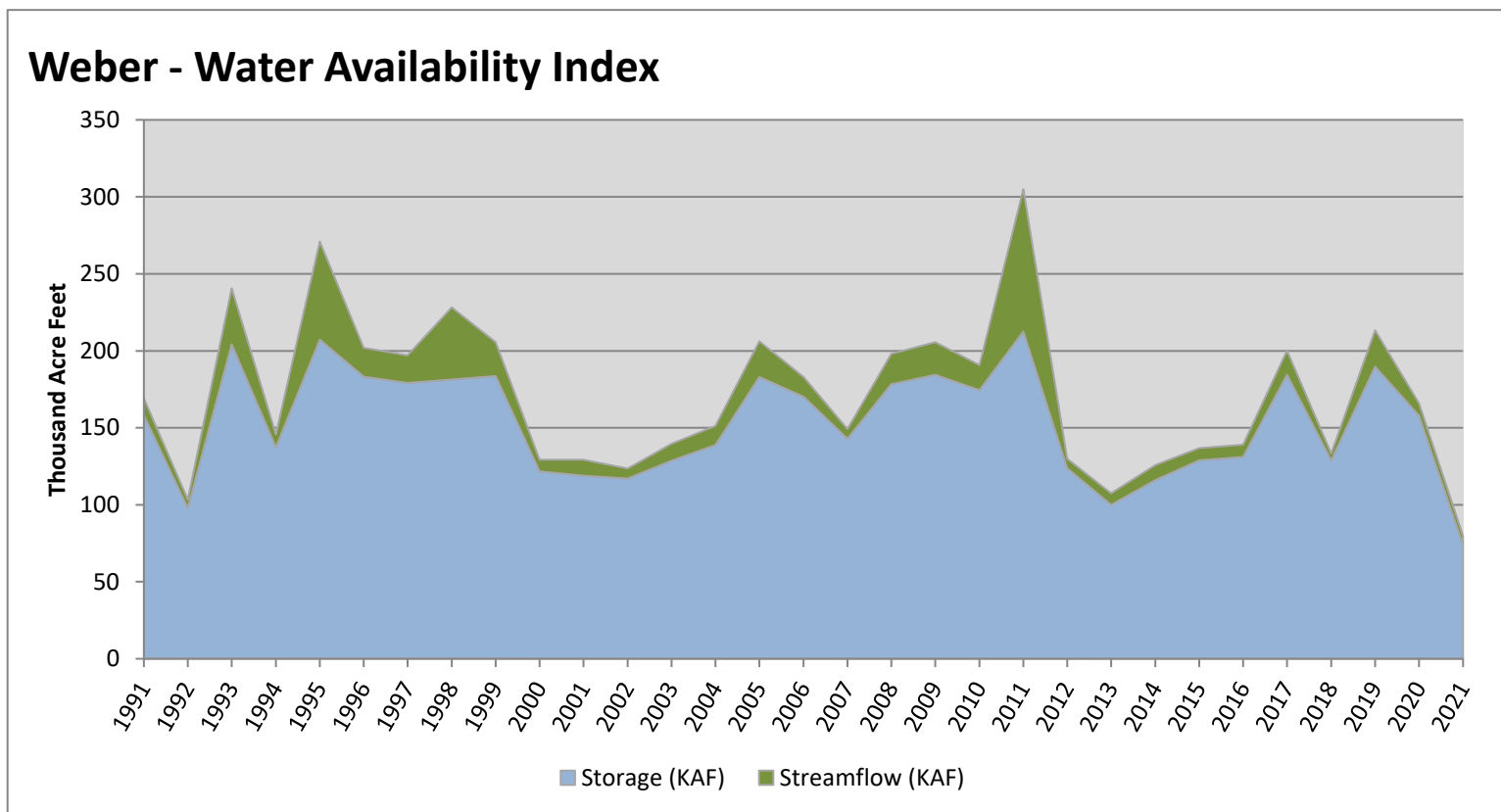


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Weber</b>	<b>73.85</b>	<b>5.92</b>	<b>79.77</b>	<b>3</b>	<b>-3.91</b>	<b>92, 13, 02, 14</b>

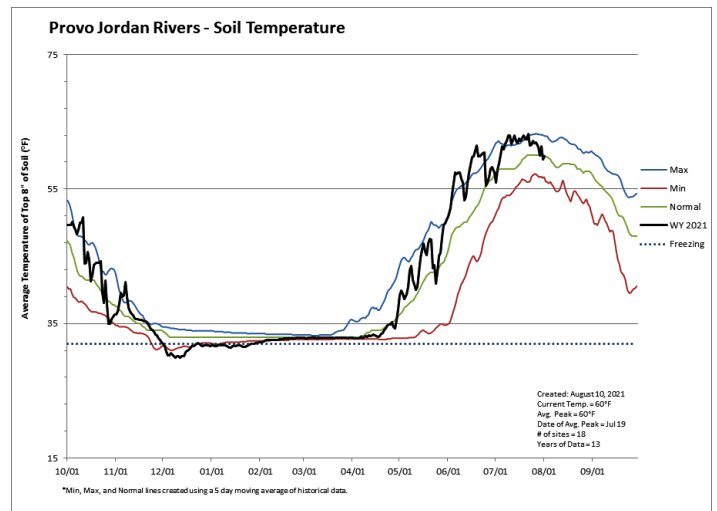
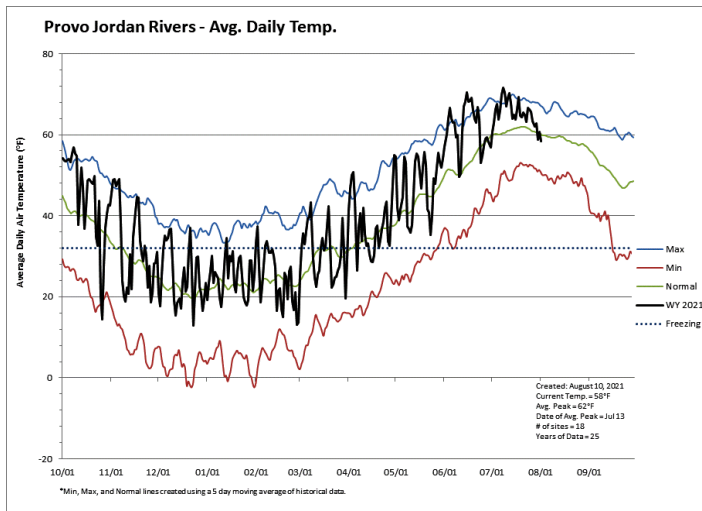
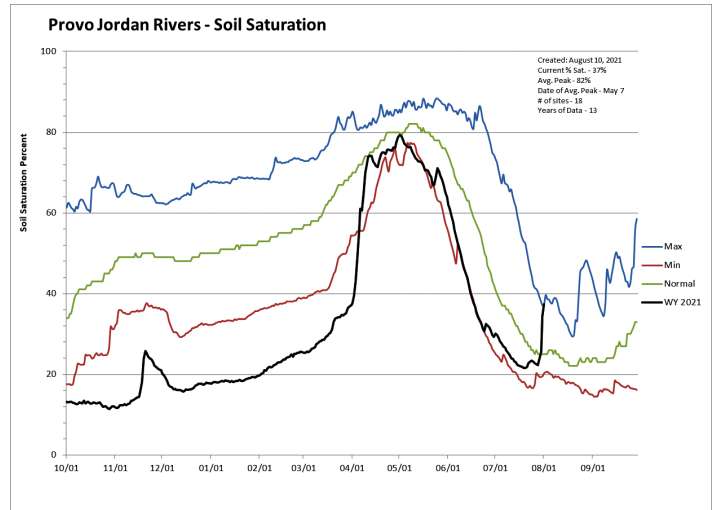
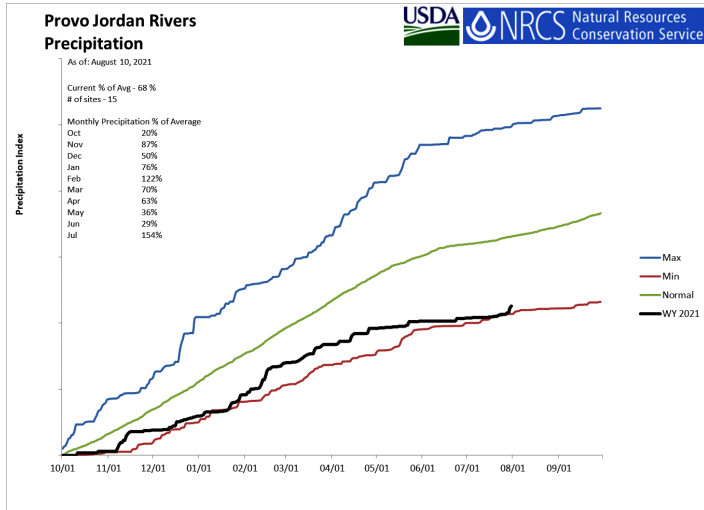
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Provo & Jordan River Basins

August 1, 2021

Precipitation in July was much above average at 152%, which brings the seasonal accumulation (Oct-Jul) to 68% of average. Soil moisture is at 34% compared to 22% last year. Reservoir storage is at 66% of capacity, compared to 86% last year. The water availability index for the Provo River is 4%.

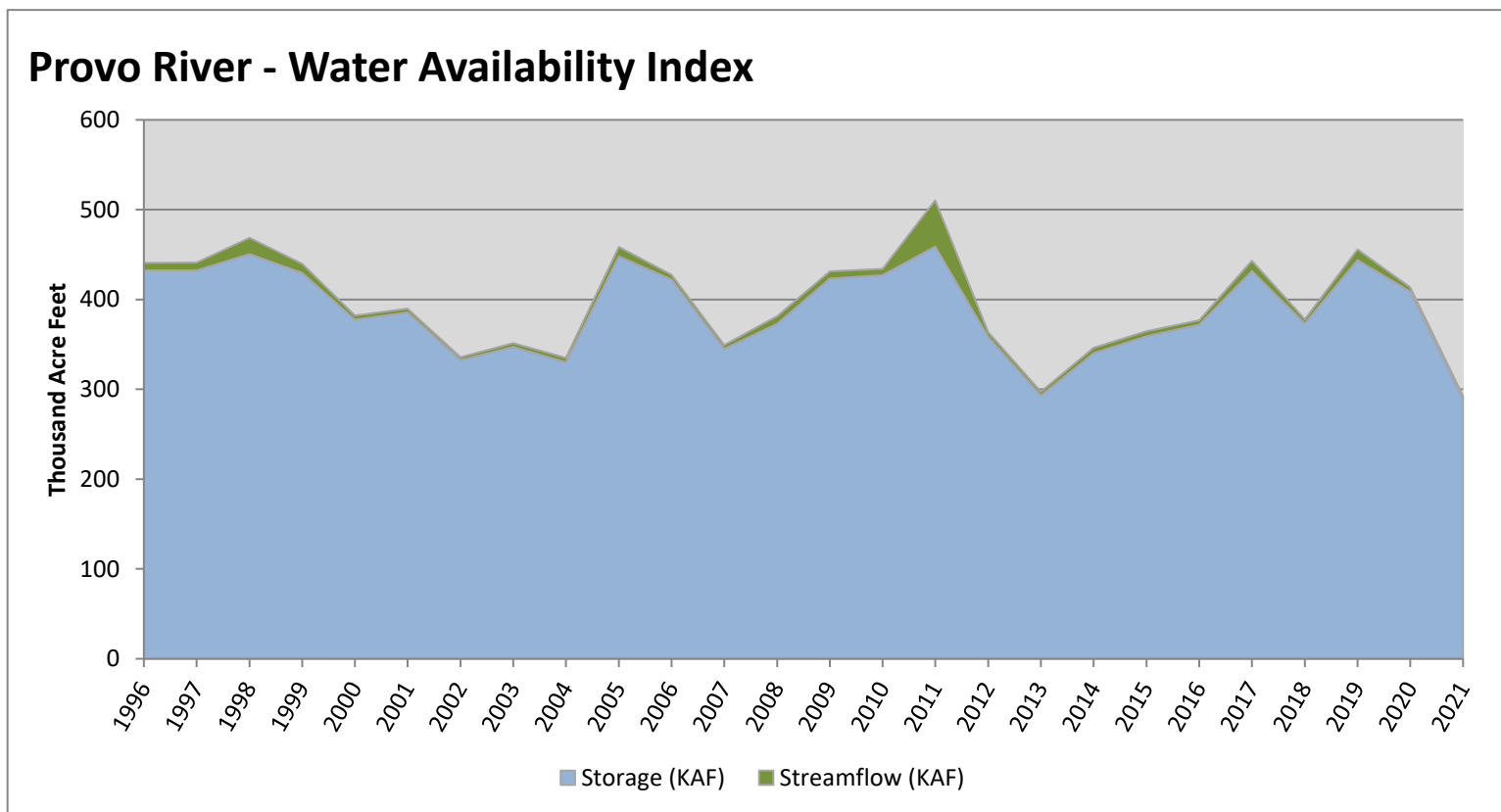


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Provo River</b>	<b>289.14</b>	<b>3.45</b>	<b>292.59</b>	<b>4</b>	<b>-3.86</b>	<b>13, 04, 02, 14</b>

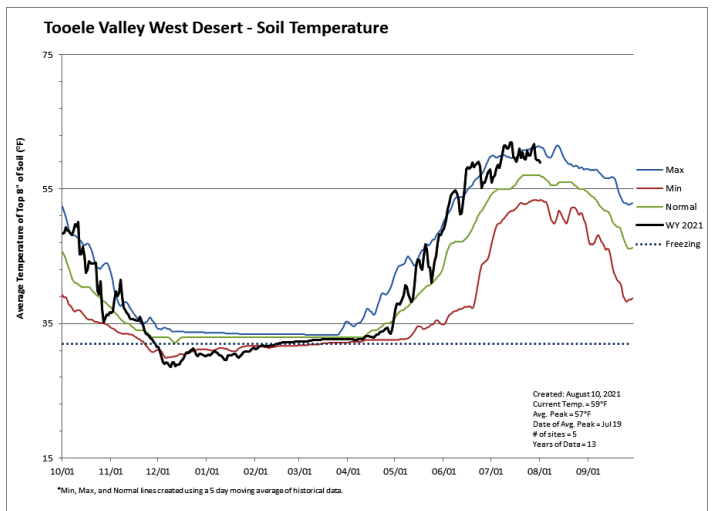
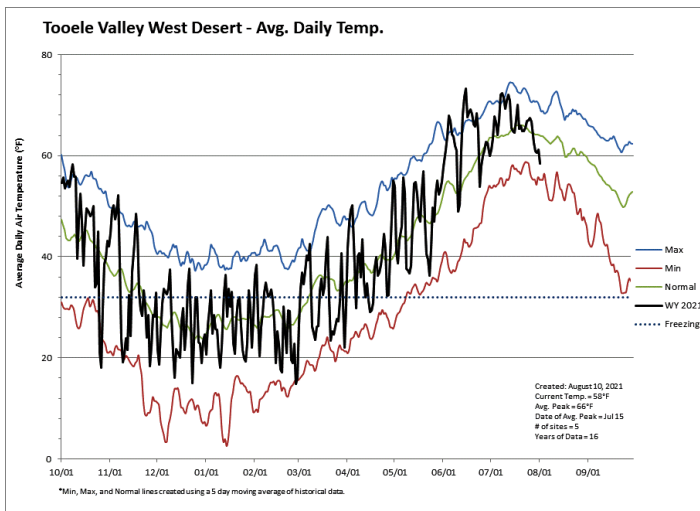
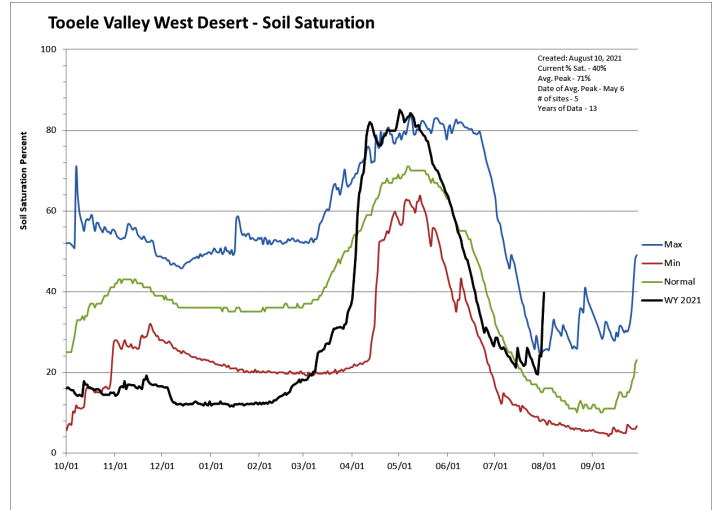
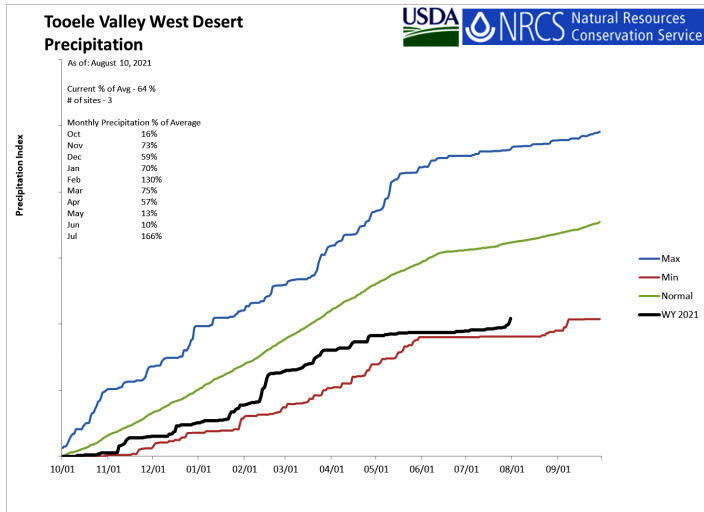
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Tooele Valley & West Desert Basins

August 1, 2021

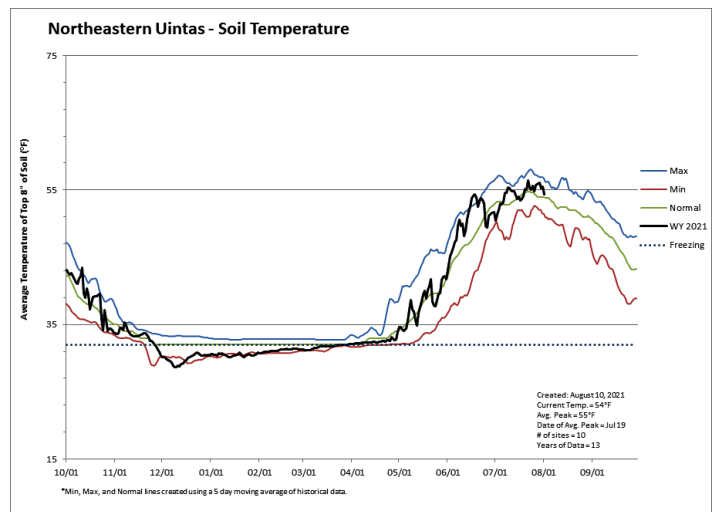
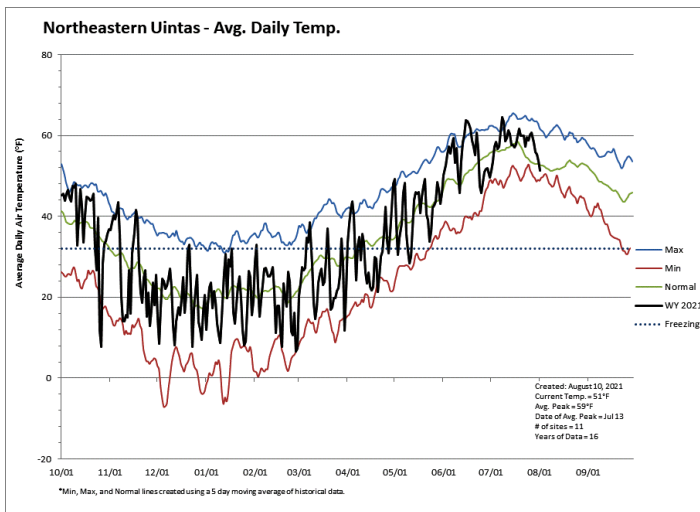
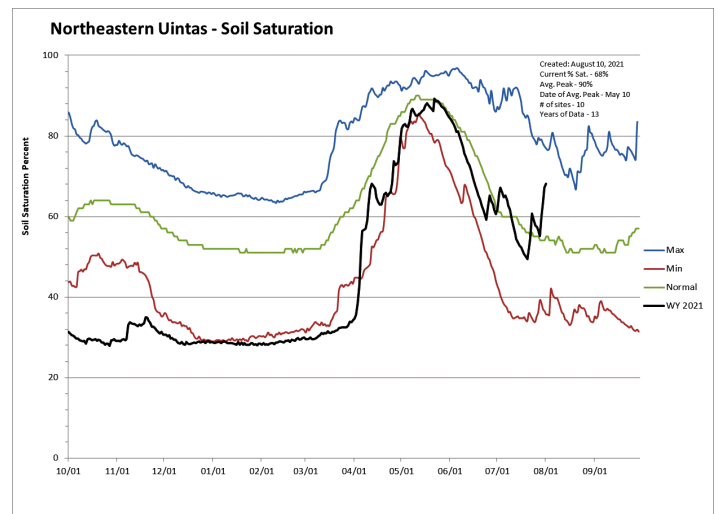
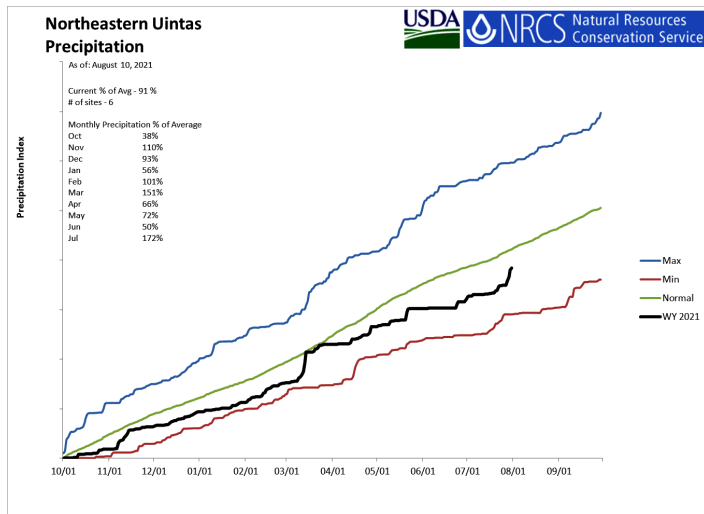
Precipitation in July was much above average at 163%, which brings the seasonal accumulation (Oct-Jul) to 64% of average. Soil moisture is at 28% compared to 21% last year. Reservoir storage is at 39% of capacity, compared to 46% last year.



# Northeastern Uinta Basin

August 1, 2021

Precipitation in July was much above average at 172%, which brings the seasonal accumulation (Oct-Jul) to 91% of average. Soil moisture is at 64% compared to 39% last year. Reservoir storage is at 82% of capacity, compared to 87% last year. The water availability index for Blacks Fork is 8% and 47% for Smiths Creek.



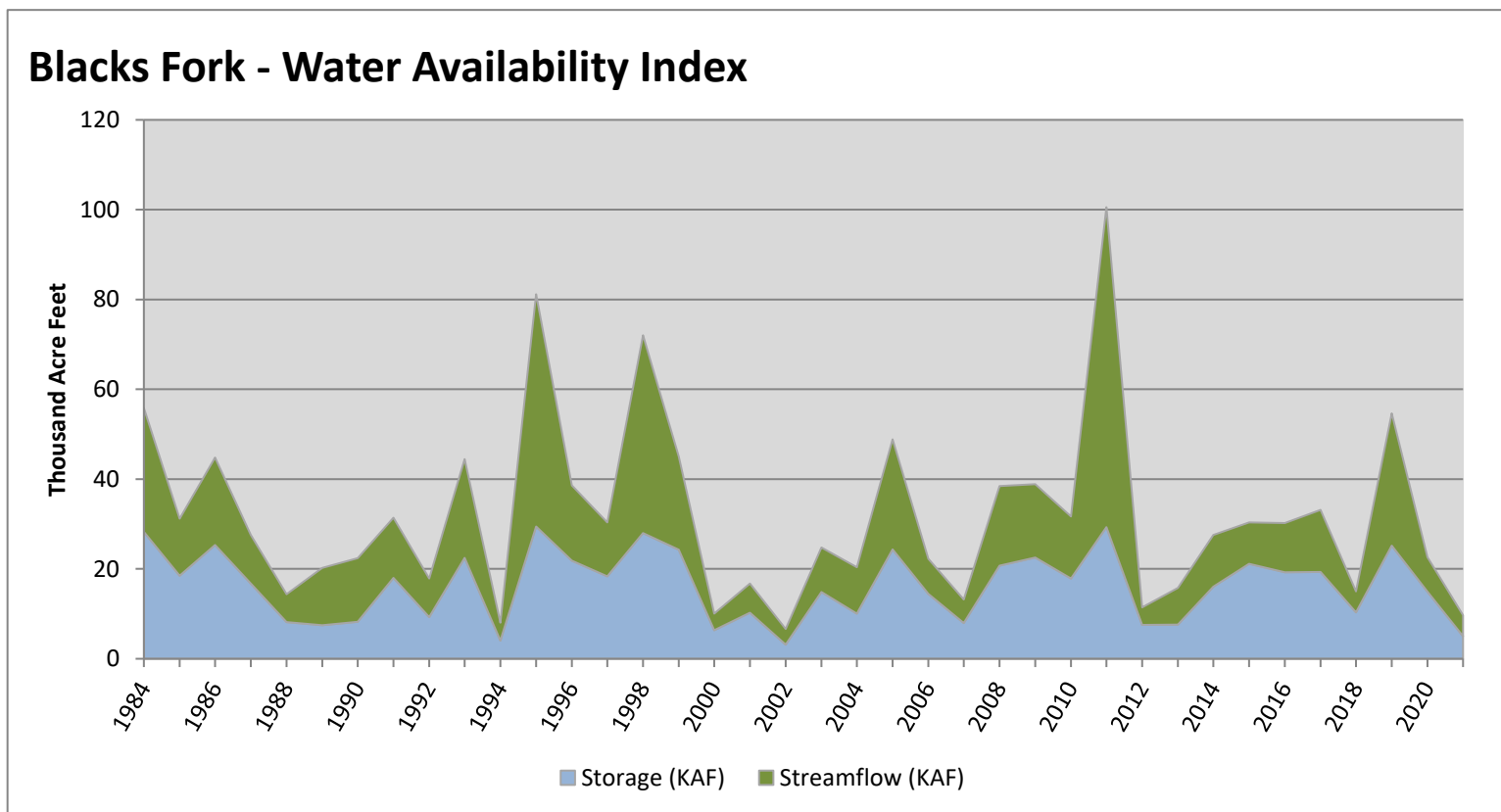


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Blacks Fork</b>	<b>5.03</b>	<b>4.64</b>	<b>9.67</b>	<b>8</b>	<b>-3.53</b>	<b>02, 94, 00, 12</b>

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

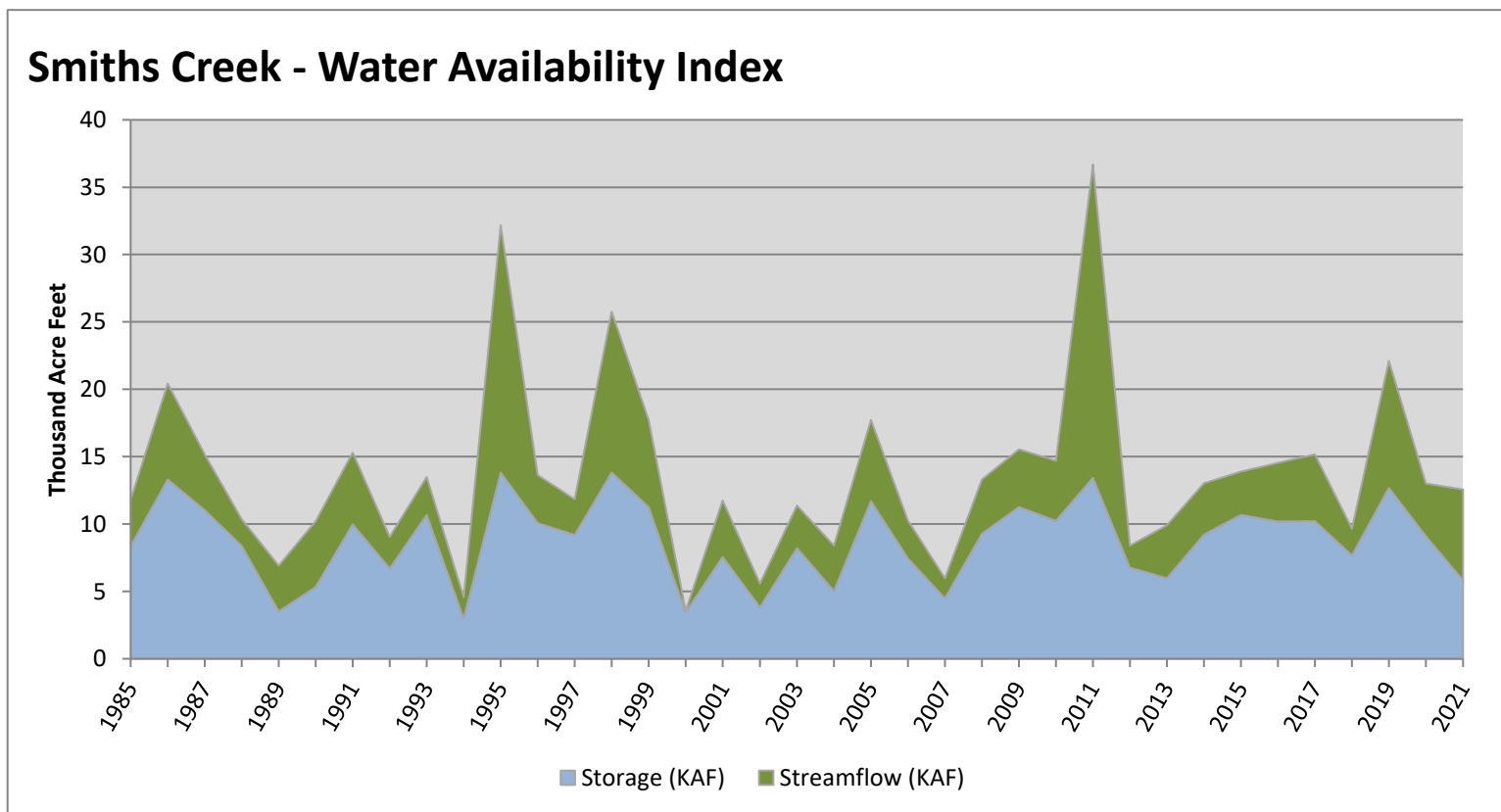


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM* Storage	July Flow	Storage + Flow	Percentile	WAI#	Years with similar WAI
	KAF^	KAF^	KAF^	%		
<b>Smiths Creek</b>	<b>5.82</b>	<b>6.75</b>	<b>12.57</b>	<b>47</b>	<b>-0.22</b>	<b>85, 97, 20, 14</b>

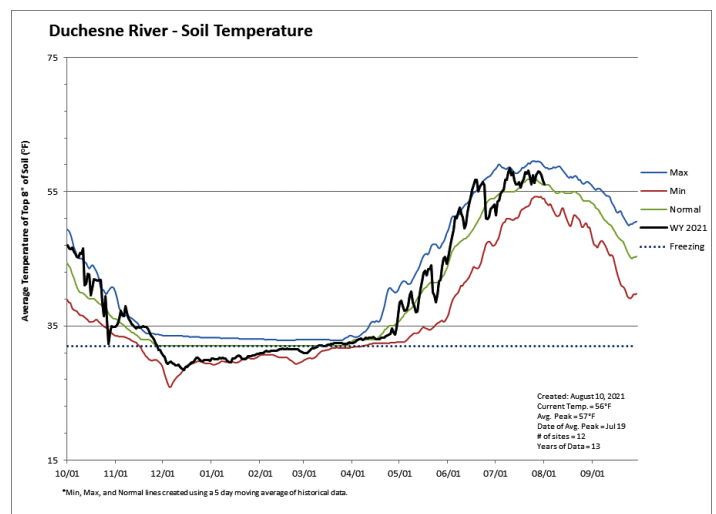
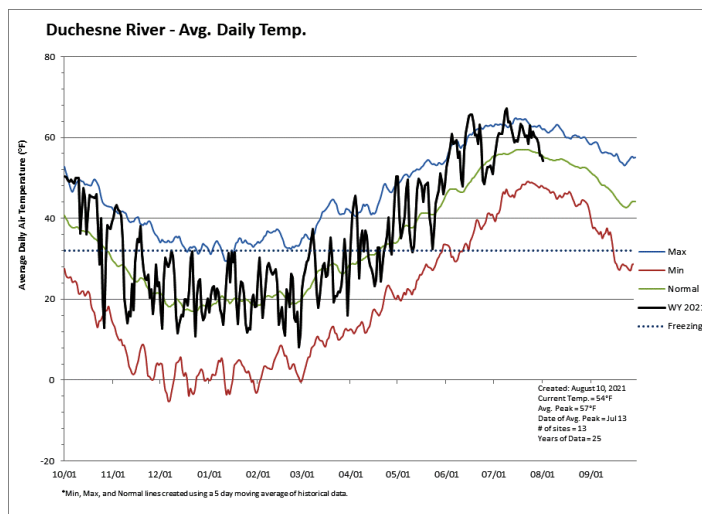
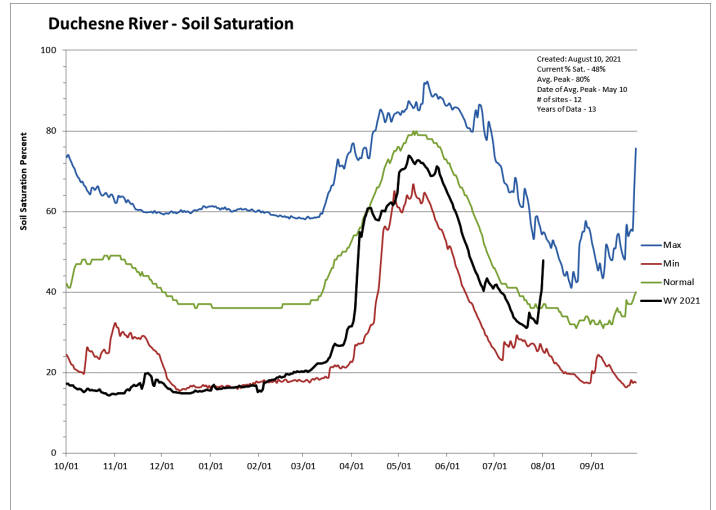
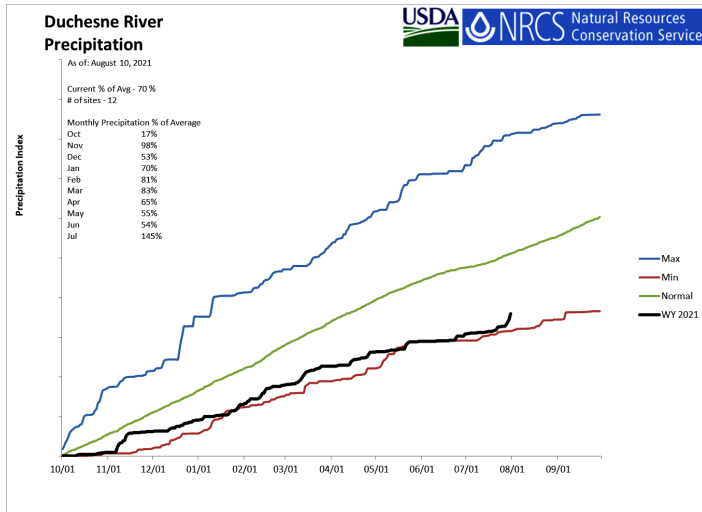
\*EOM, end of month; #WAI, Water Availability Index; ^KAF, thousand acre-feet.



# Duchesne River Basin

August 1, 2021

Precipitation in July was much above average at 144%, which brings the seasonal accumulation (Oct-Jul) to 70% of average. Soil moisture is at 42% compared to 33% last year. Reservoir storage is at 72% of capacity, compared to 86% last year. The water availability index for the Western Uintas is 14% and 7% for the Eastern Uintas.

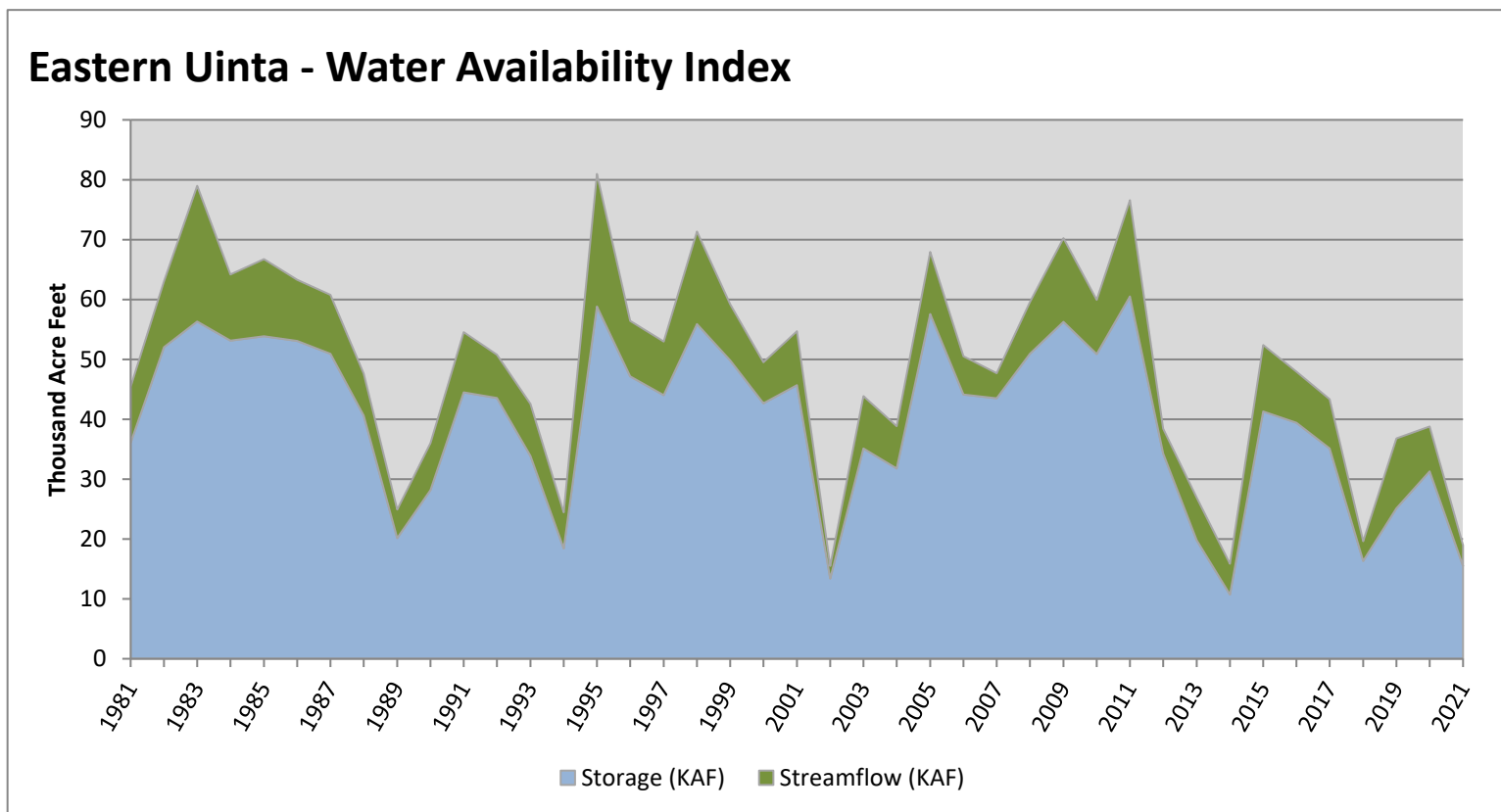


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Eastern Uinta</b>	<b>15.49</b>	<b>3.46</b>	<b>18.95</b>	<b>7</b>	<b>-3.57</b>	<b>02, 14, 18, 94</b>

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

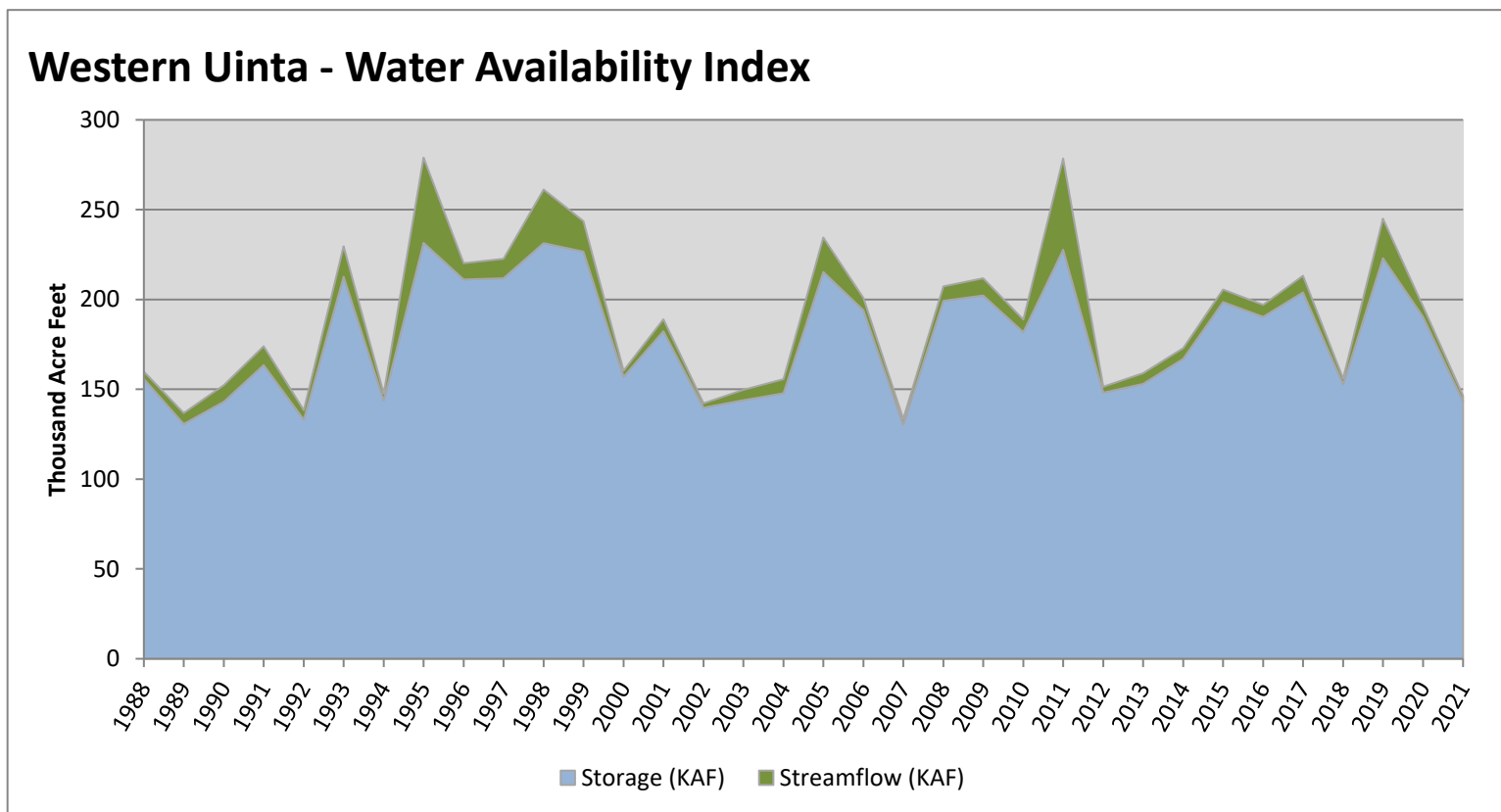


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Western Uinta</b>	<b>143.24</b>	<b>3.11</b>	<b>146.35</b>	<b>14</b>	<b>-2.98</b>	<b>92, 02, 94, 03</b>

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

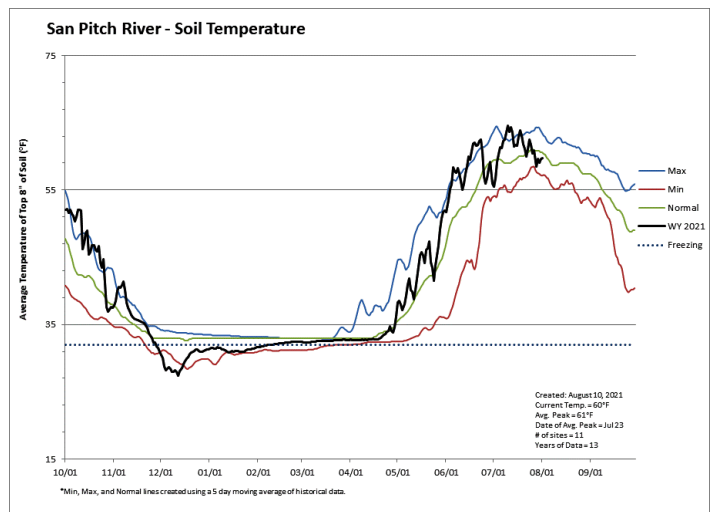
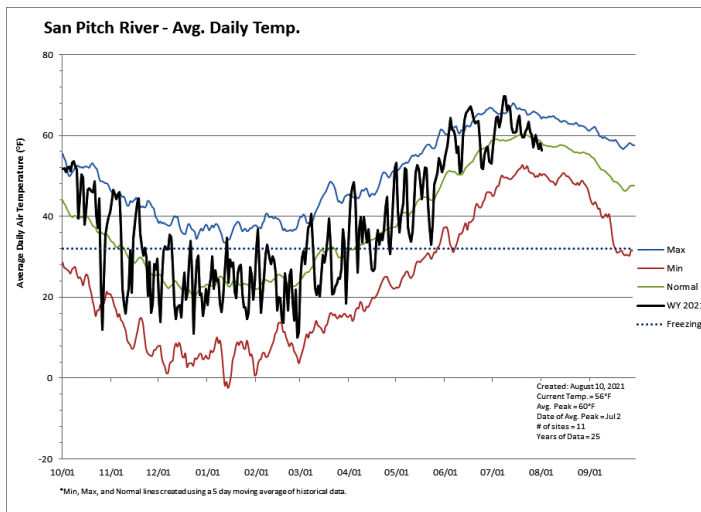
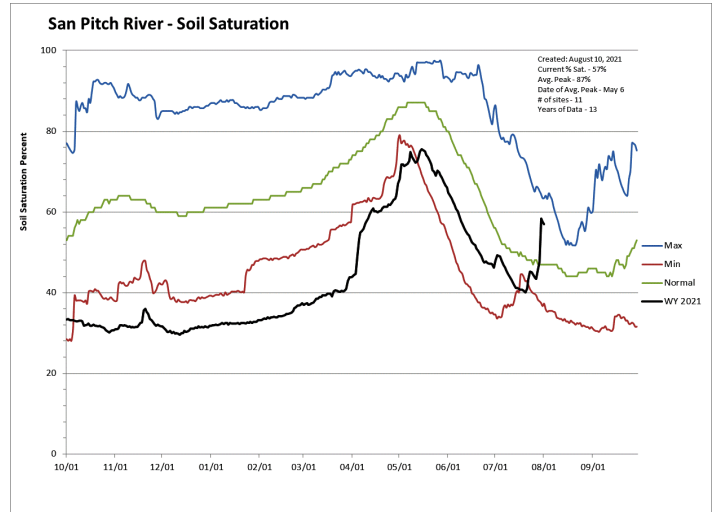
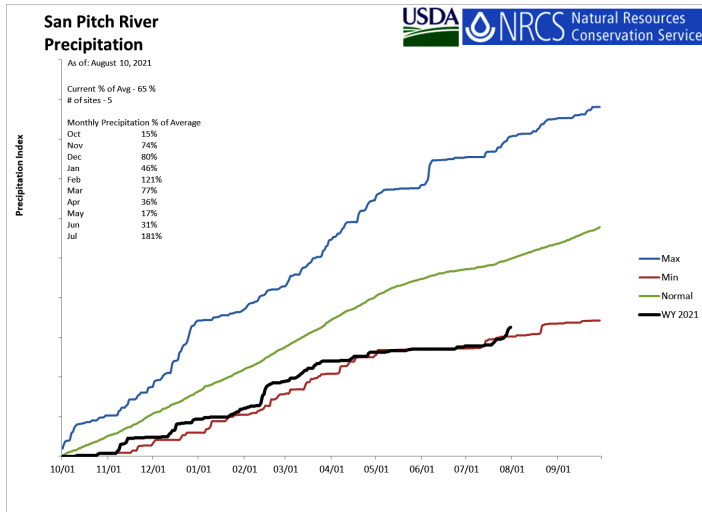




# San Pitch River Basin

August 1, 2021

Precipitation in July was much above average at 182%, which brings the seasonal accumulation (Oct-Jul) to 65% of average. Soil Moisture is at 57% compared to 44% last year. Reservoir storage is at 0% of capacity, compared to 5% last year. The water availability index for the San Pitch is 5%.

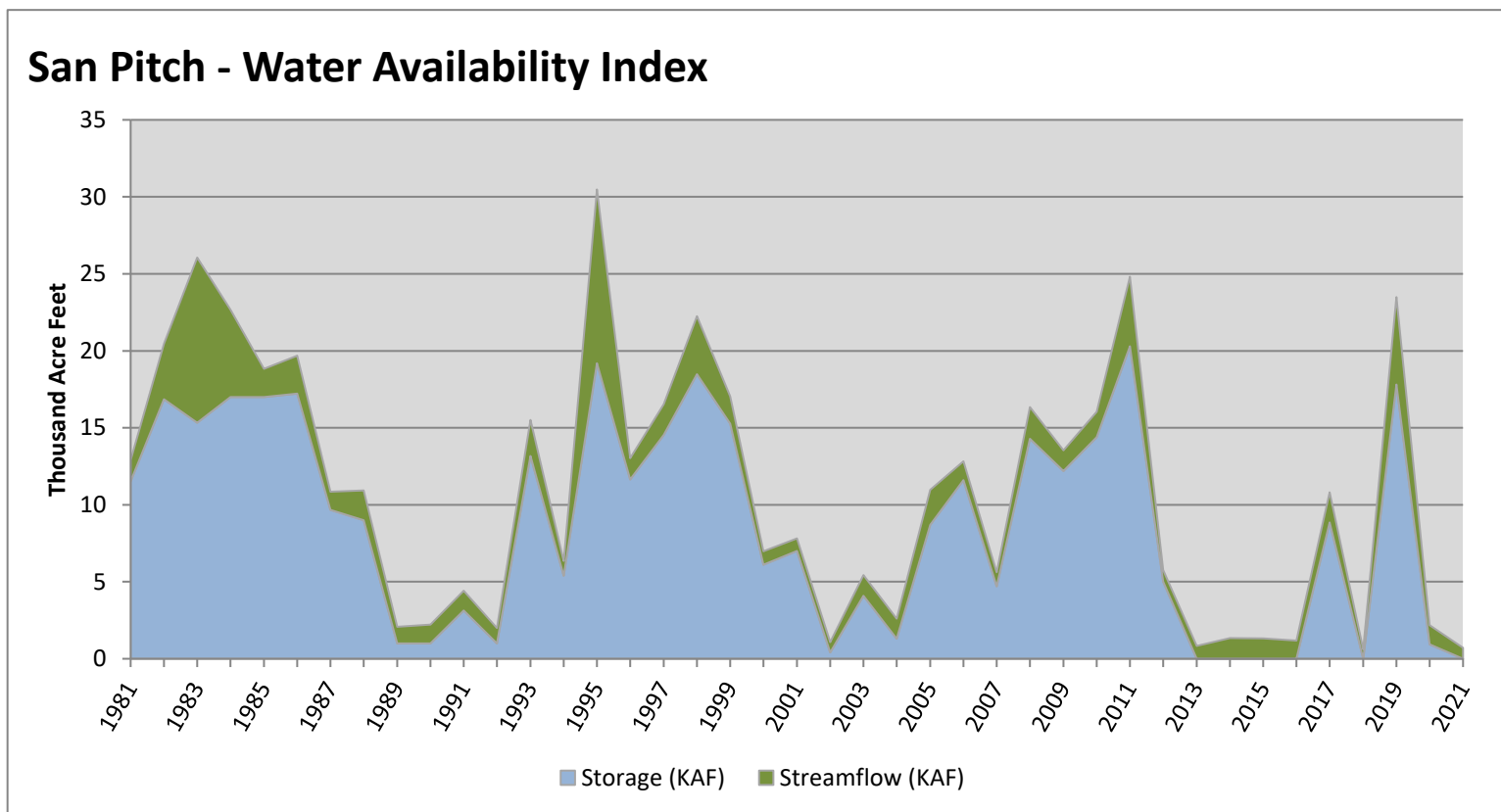


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>San Pitch</b>	<b>0.00</b>	<b>0.71</b>	<b>0.71</b>	<b>5</b>	<b>-3.77</b>	<b>18, 13, 02, 16</b>

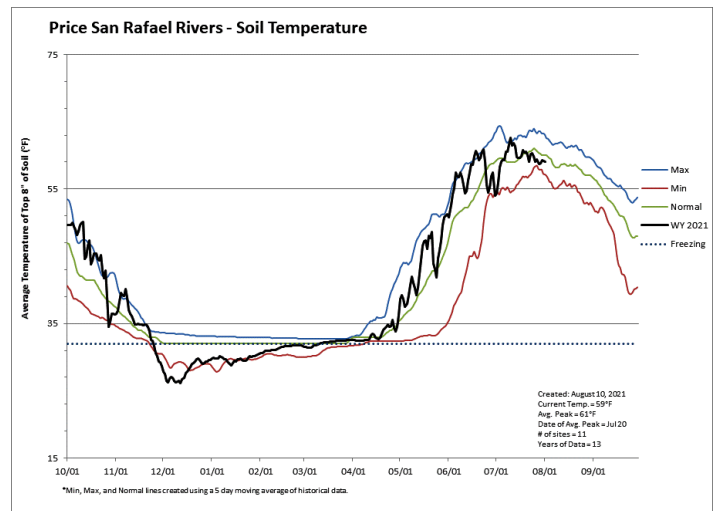
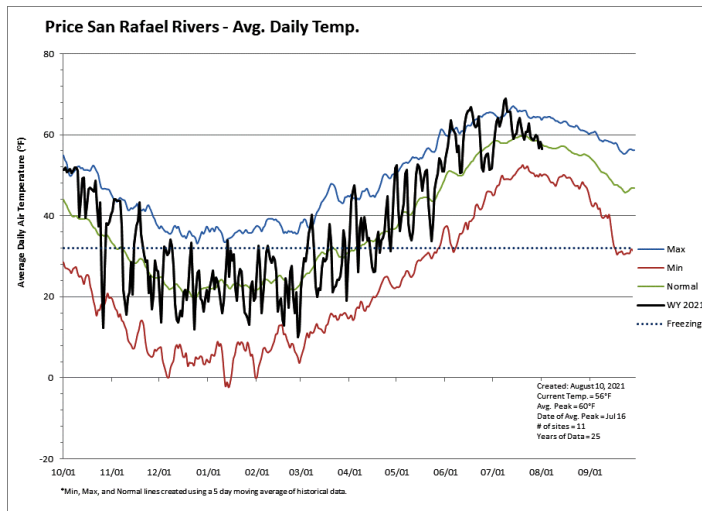
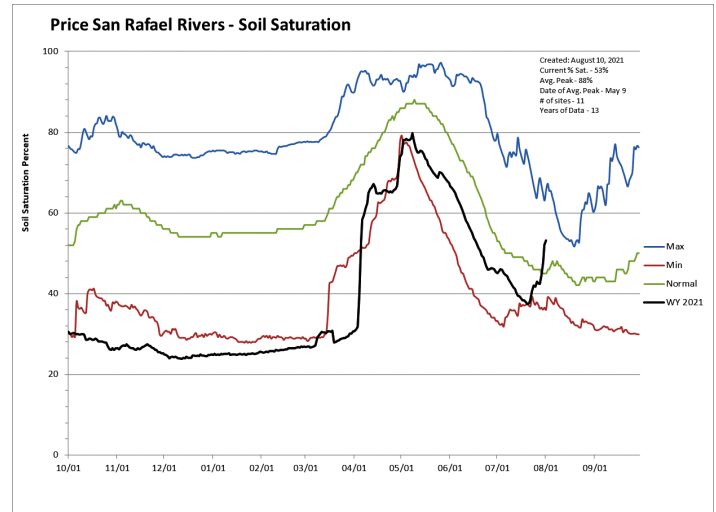
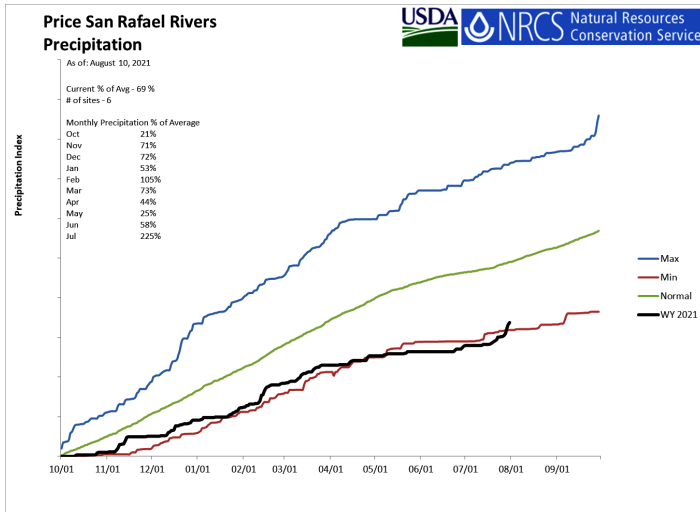
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Price & San Rafael Basins

August 1, 2021

Precipitation in July was much above average at 223%, which brings the seasonal accumulation (Oct-Jul) to 69% of average. Soil moisture is at 52% compared to 39% last year. Reservoir storage is at 38% of capacity, compared to 76% last year. The water availability index for the Price River is 33%, and 2% for Joe's Valley.

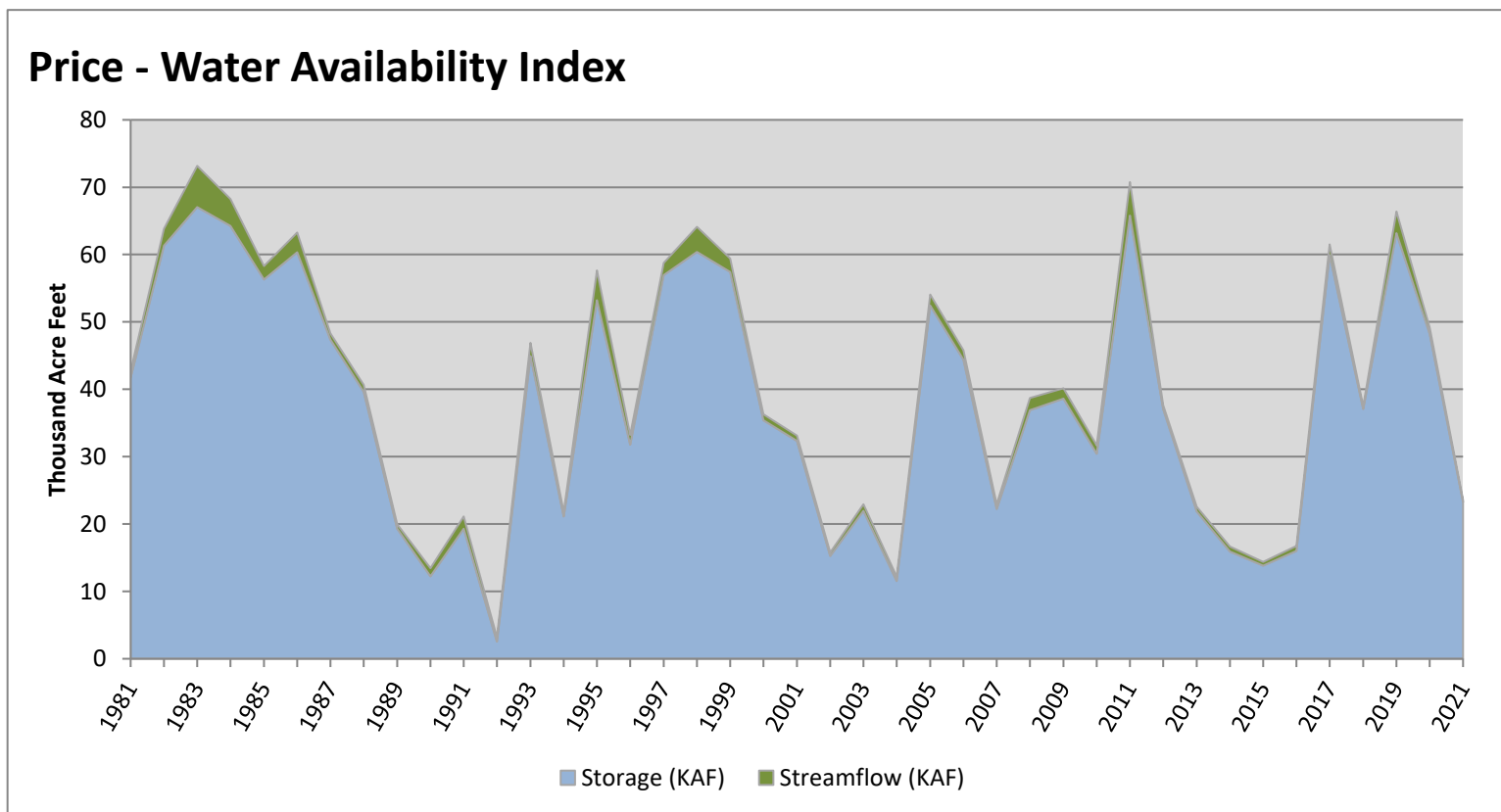


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Price</b>	<b>23.27</b>	<b>0.33</b>	<b>23.60</b>	<b>33</b>	<b>-1.39</b>	<b>03, 07, 10, 01</b>

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

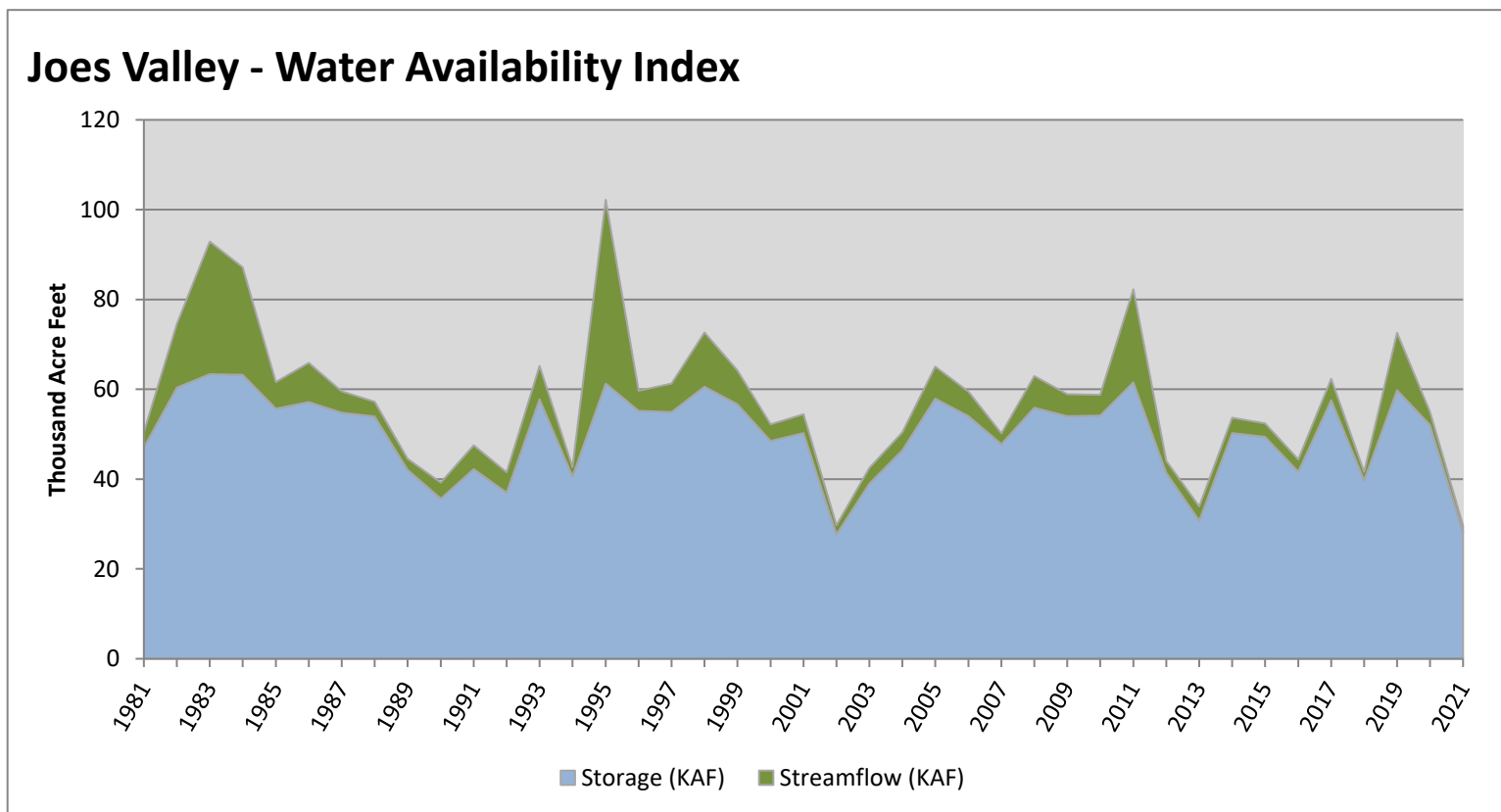


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Joes Valley</b>	<b>28.14</b>	<b>1.49</b>	<b>29.63</b>	<b>2</b>	<b>-3.97</b>	<b>02, 13, 90, 92</b>

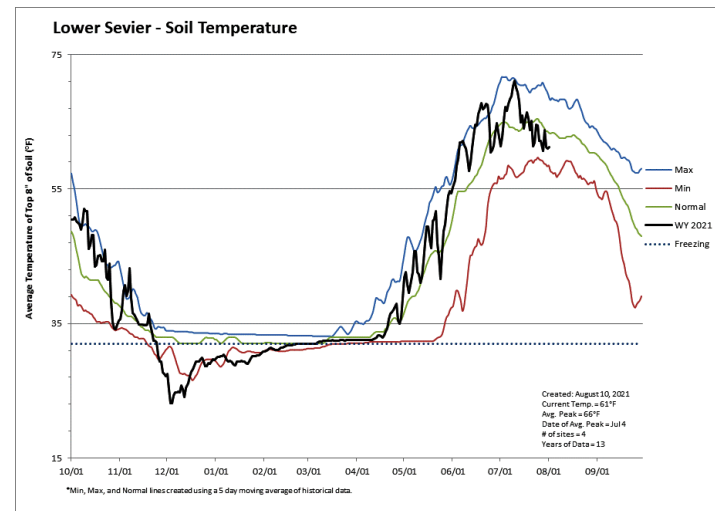
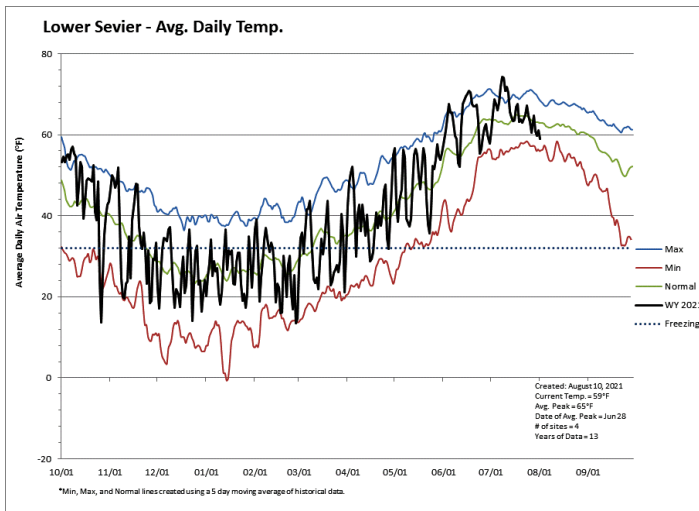
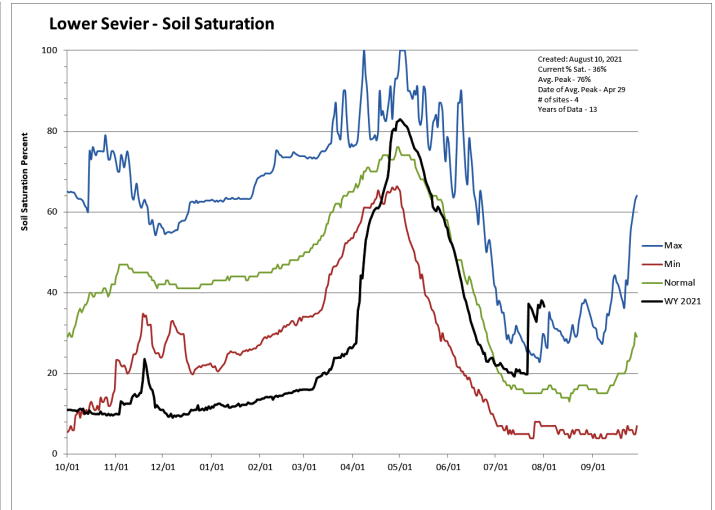
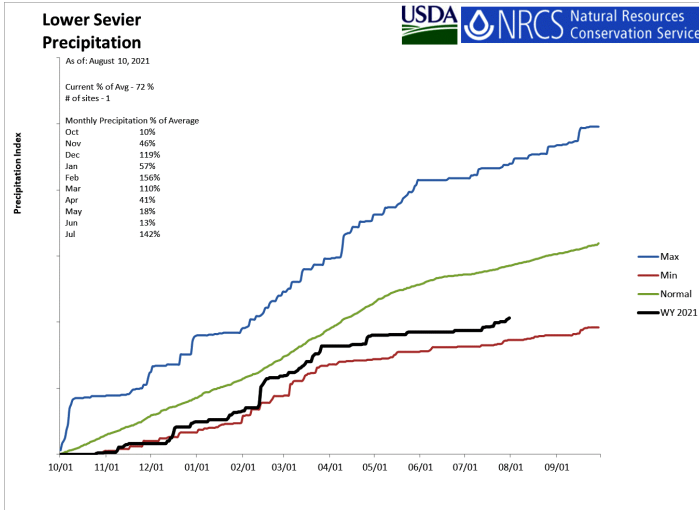
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Lower Sevier Basin

August 1, 2021

Precipitation in July was much above average at 146%, which brings the seasonal accumulation (Oct-Jul) to 72% of average. Soil moisture is at 37% compared to 20% last year. Reservoir storage is at 12% of capacity, compared to 24% last year. The water availability index for the Lower Sevier is 12%.

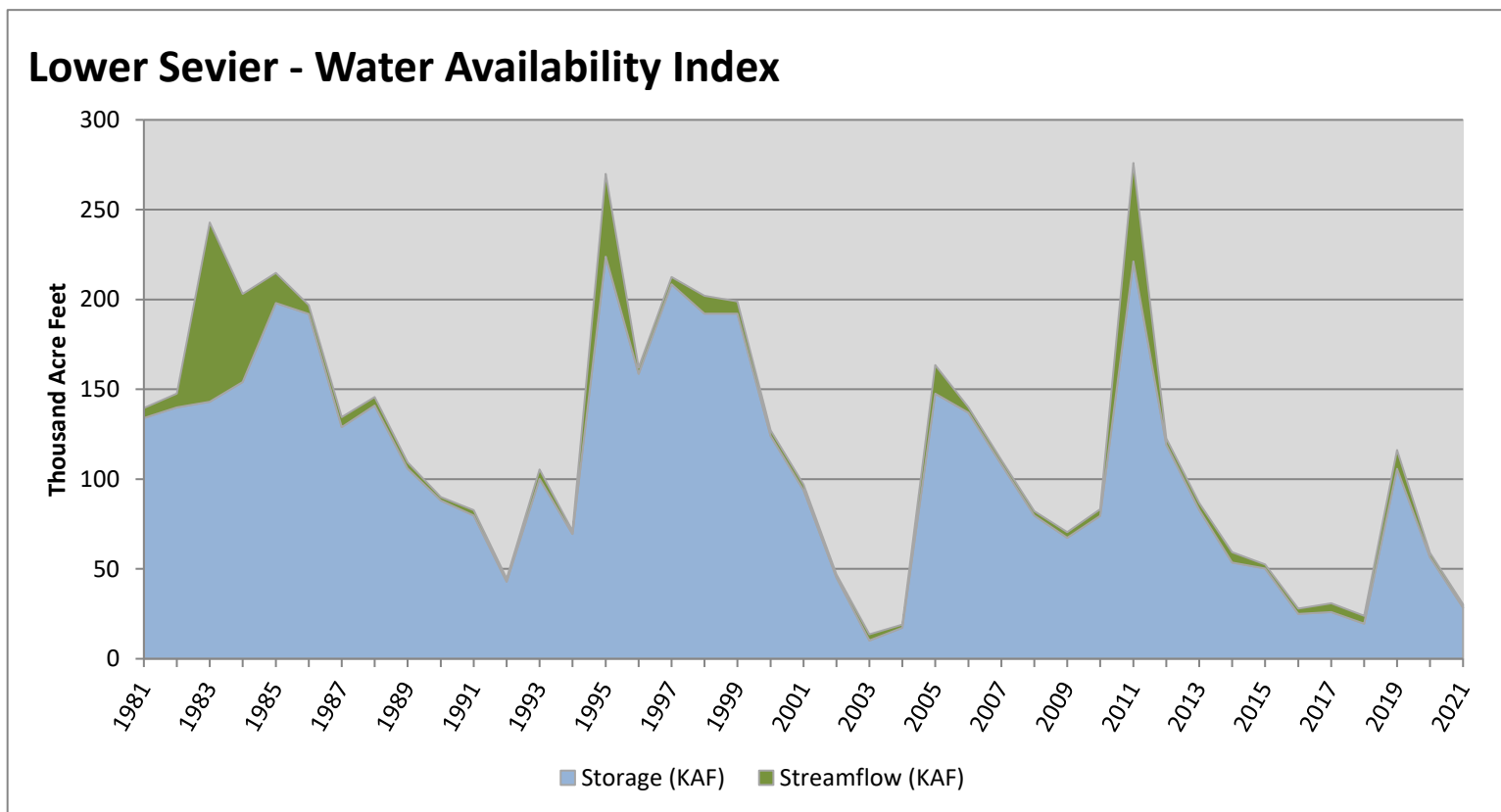


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Lower Sevier</b>	<b>28.53</b>	<b>1.79</b>	<b>30.32</b>	<b>12</b>	<b>-3.17</b>	<b>18, 16, 17, 92</b>

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

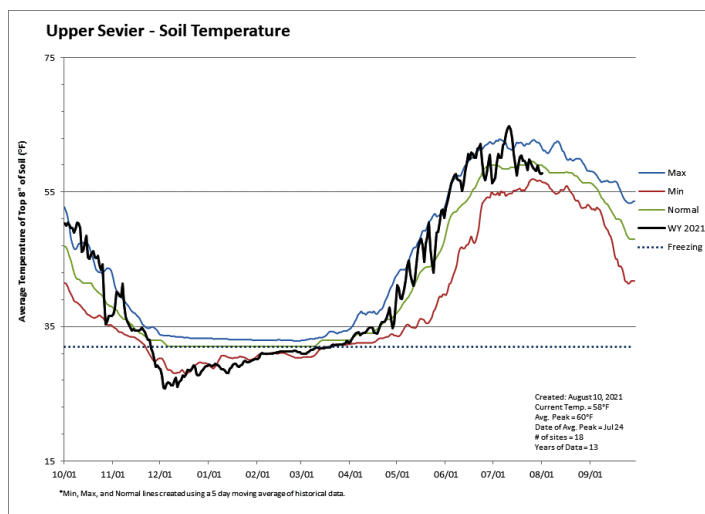
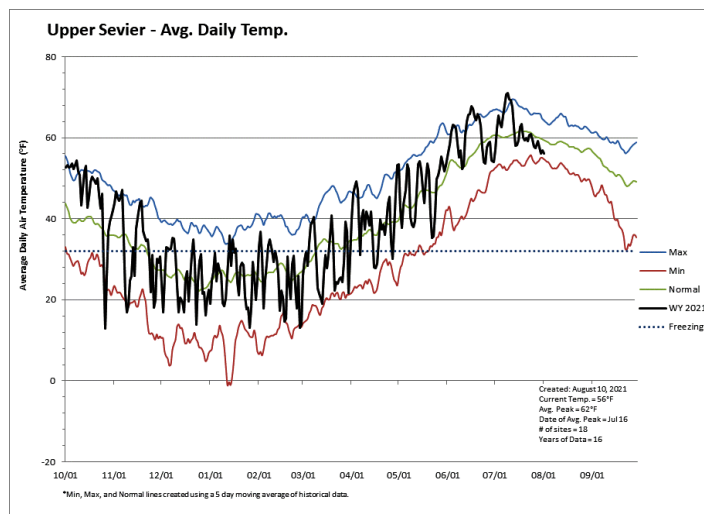
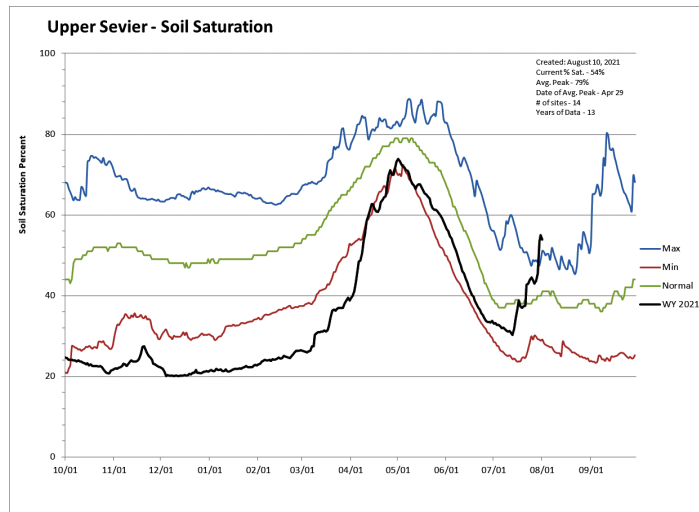
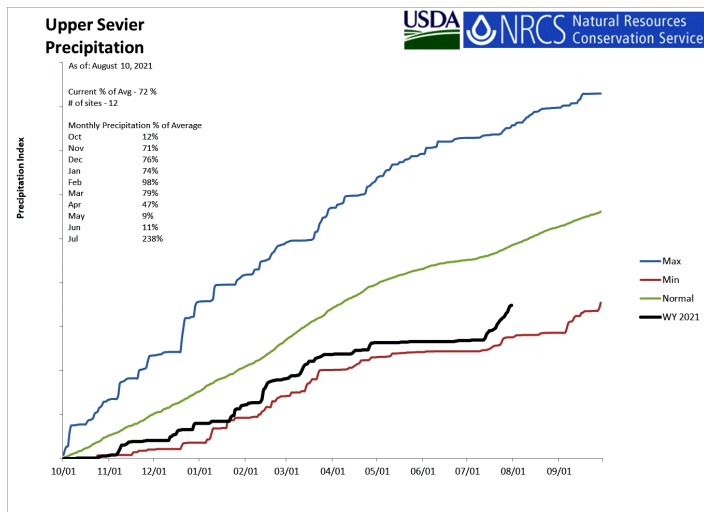




# Upper Sevier Basin

August 1, 2021

Precipitation in July was much above average at 236%, which brings the seasonal accumulation (Oct-Jul) to 72% of average. Soil moisture is at 54% compared to 37% last year. Reservoir storage is at 15% of capacity, compared to 52% last year. The water availability index for the Upper Sevier is 5%.

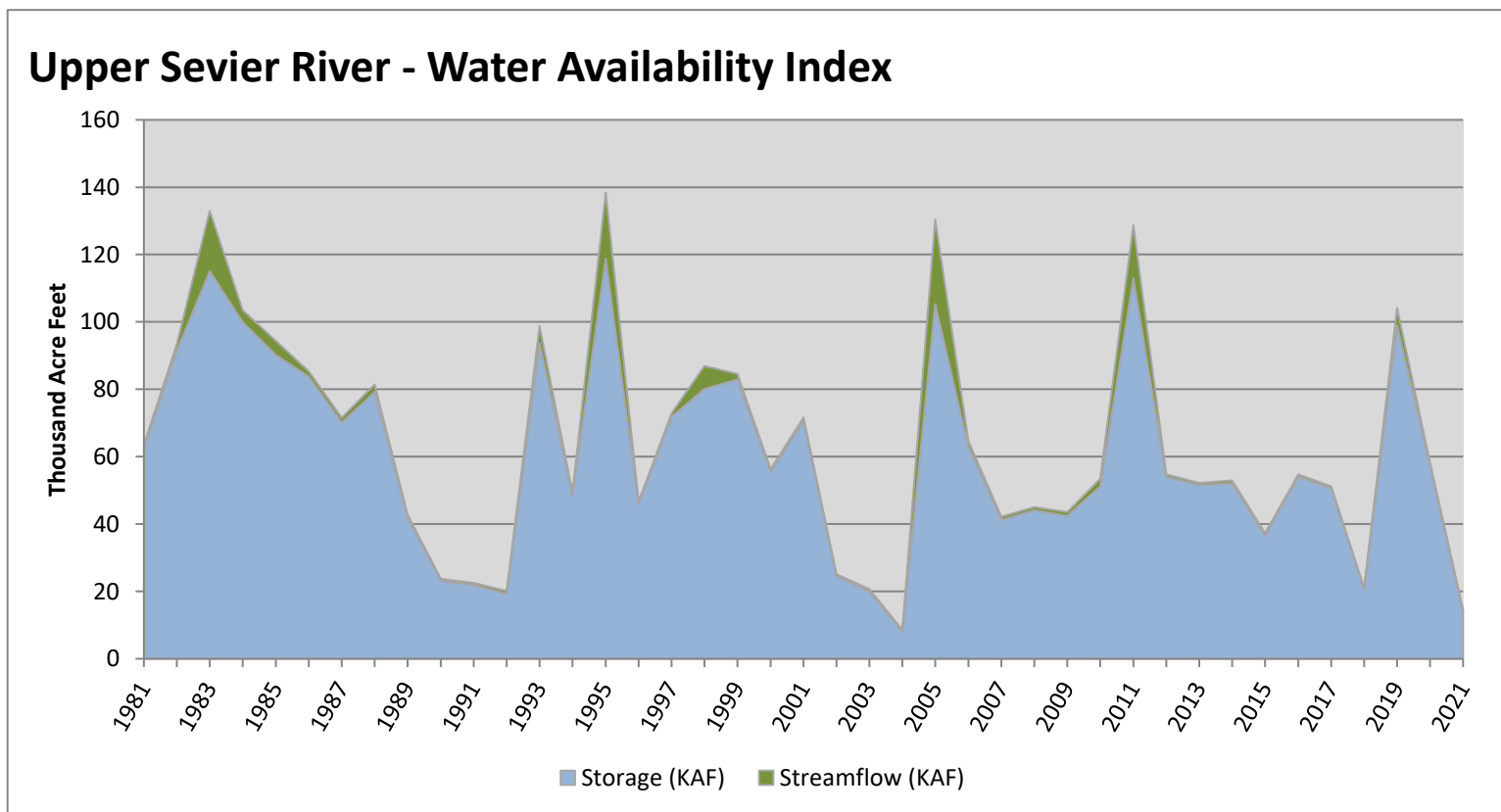


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Upper Sevier River</b>	<b>13.95</b>	<b>0.53</b>	<b>14.48</b>	<b>5</b>	<b>-3.77</b>	<b>04, 92, 03, 18</b>

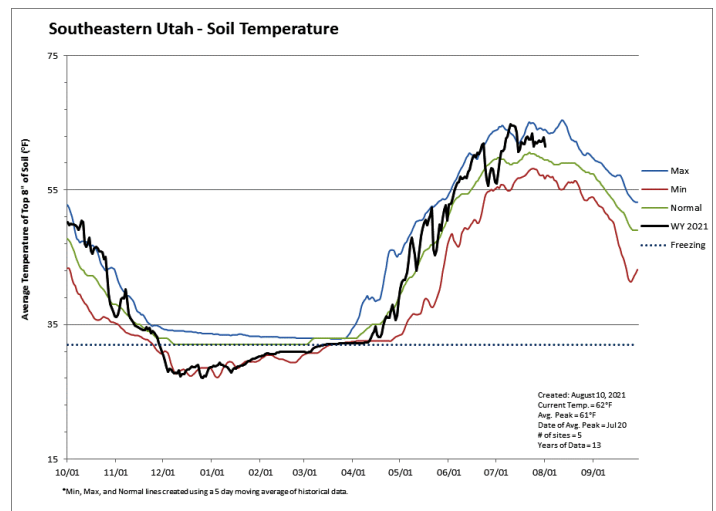
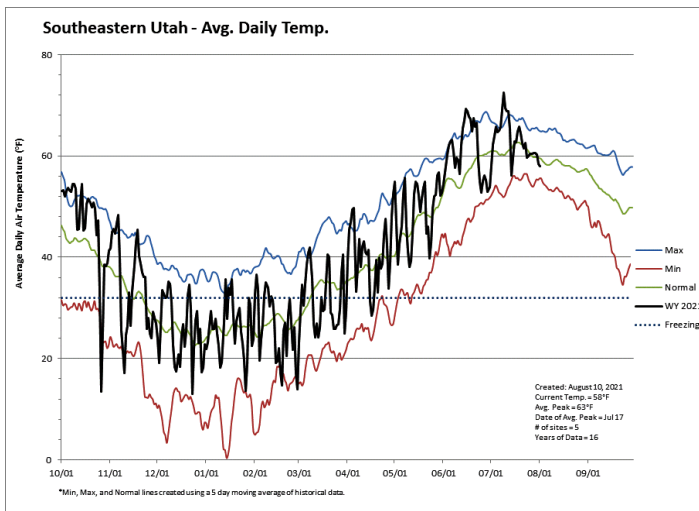
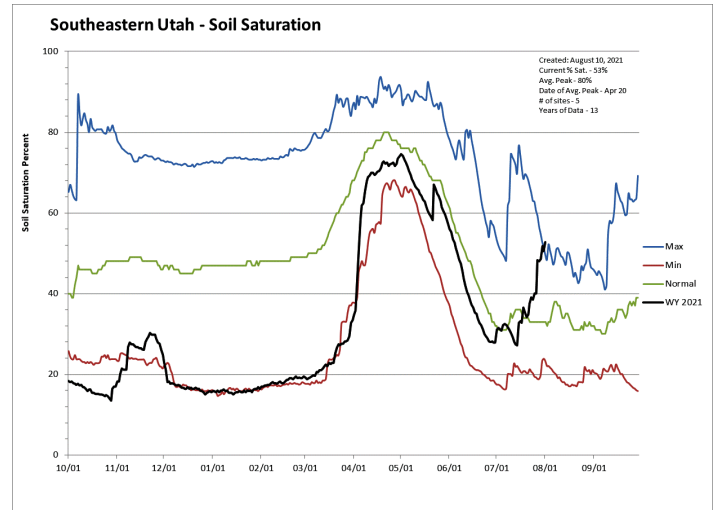
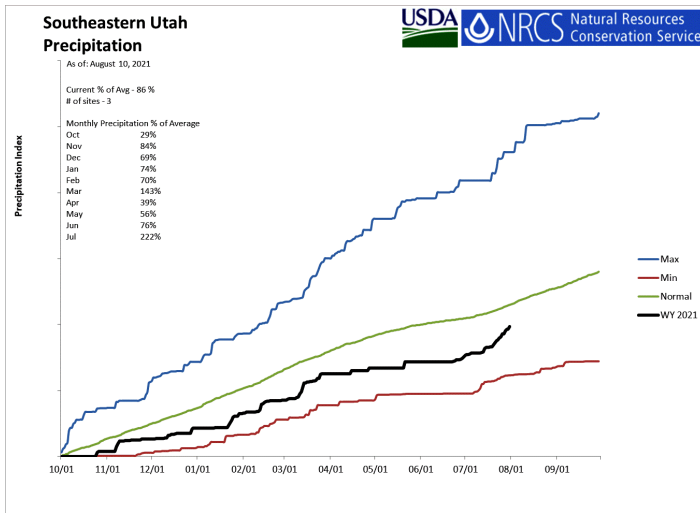
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Southeastern Utah

August 1, 2021

Precipitation in July was much above average at 221%, which brings the seasonal accumulation (Oct-Jul) to 86% of average. Soil moisture is at 52% compared to 27% last year. Reservoir storage is at 32% of capacity, compared to 45% last year. The water availability index for Moab is 20%.

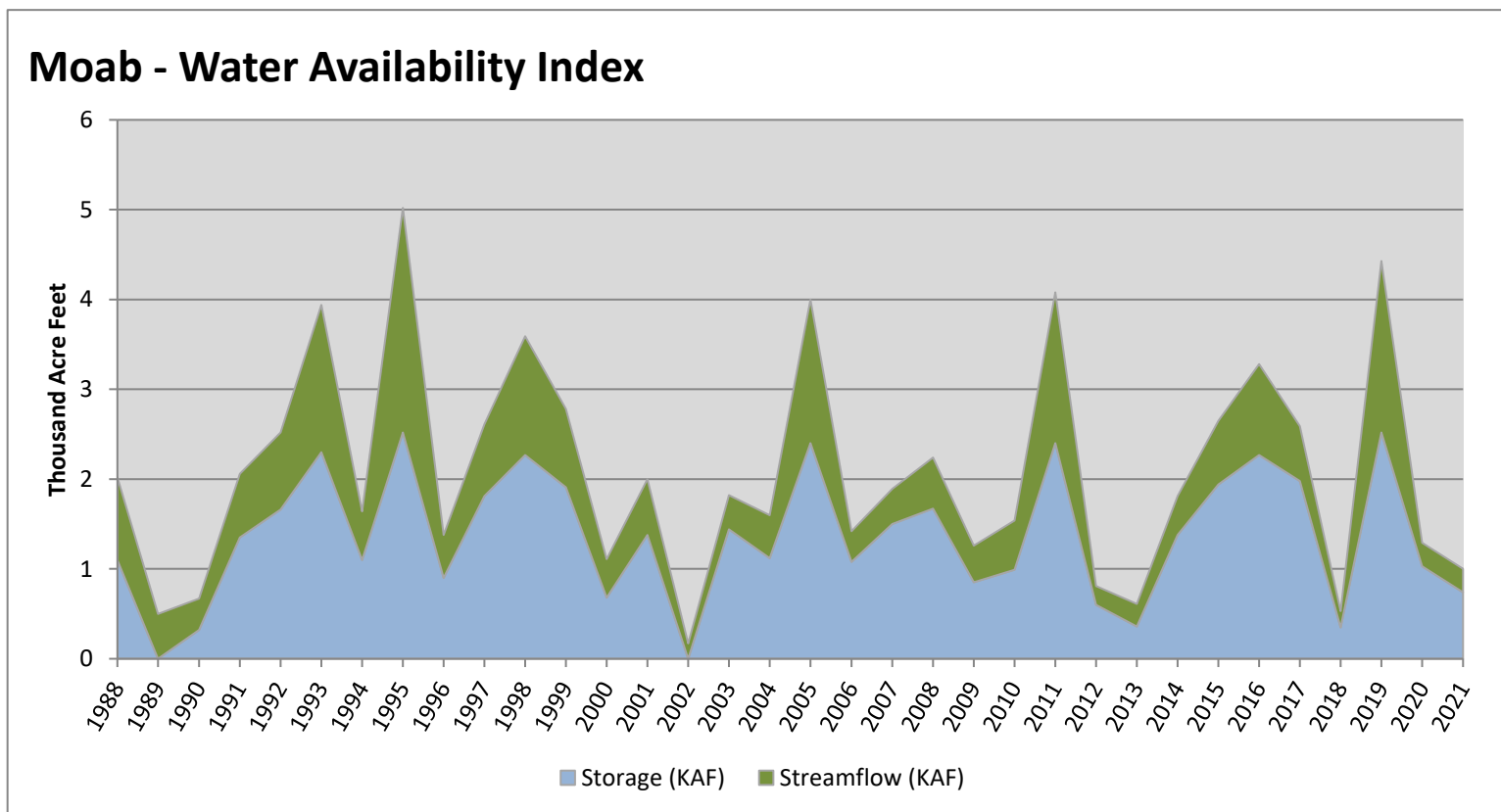


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Moab</b>	<b>0.74</b>	<b>0.26</b>	<b>1.00</b>	<b>20</b>	<b>-2.5</b>	<b>90, 12, 00, 09</b>

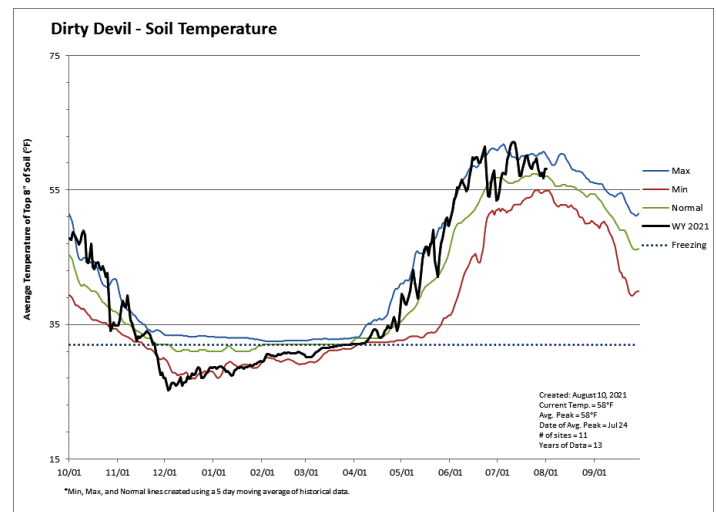
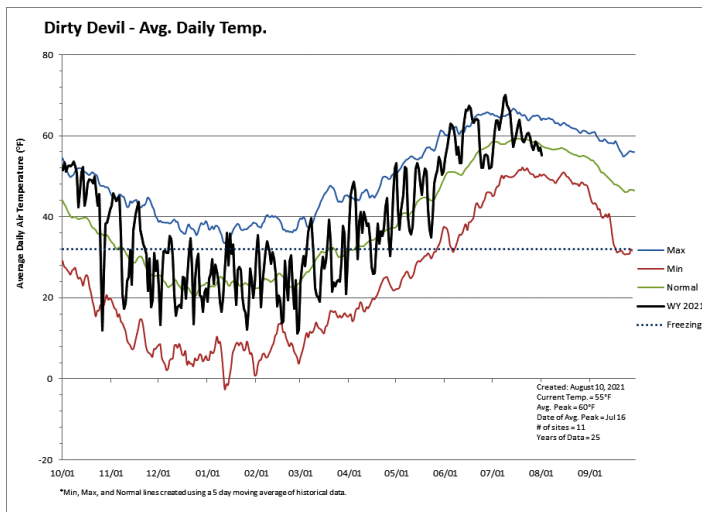
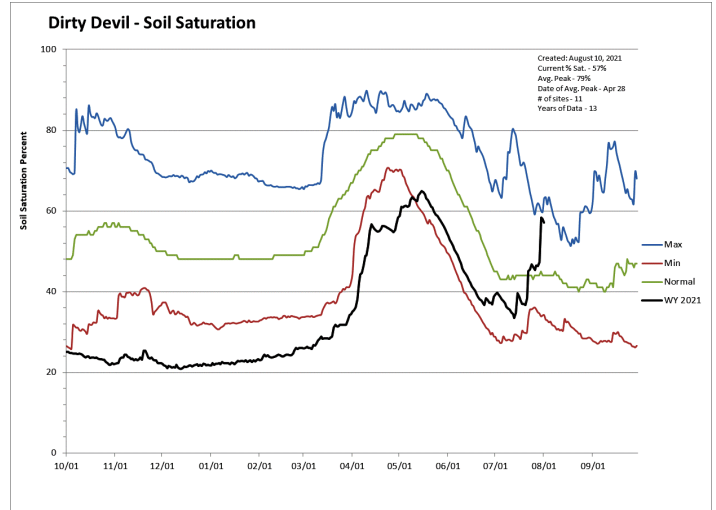
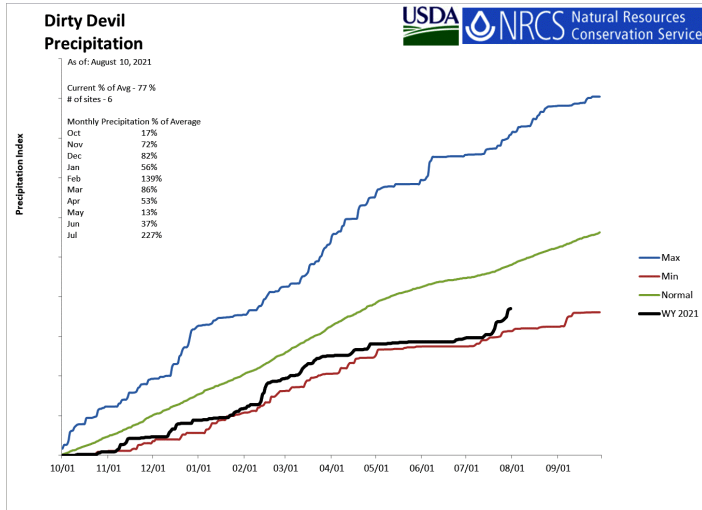
<sup>\*</sup>EOM, end of month; <sup>#</sup>WAI, Water Availability Index; <sup>^</sup>KAF, thousand acre-feet.



# Dirty Devil Basin

August 1, 2021

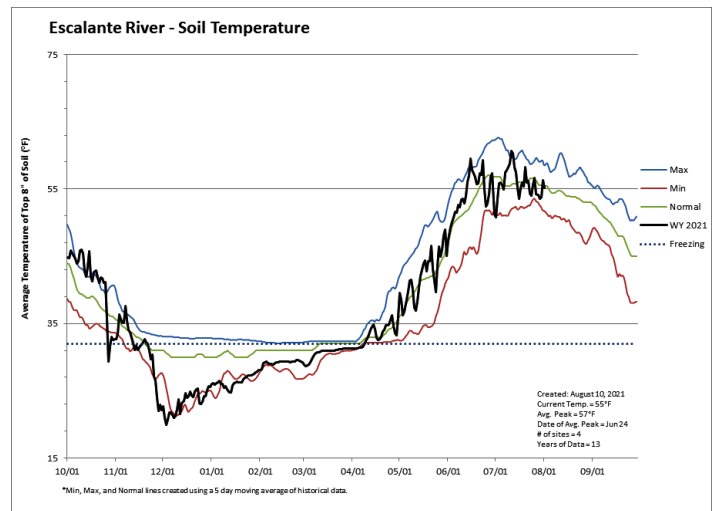
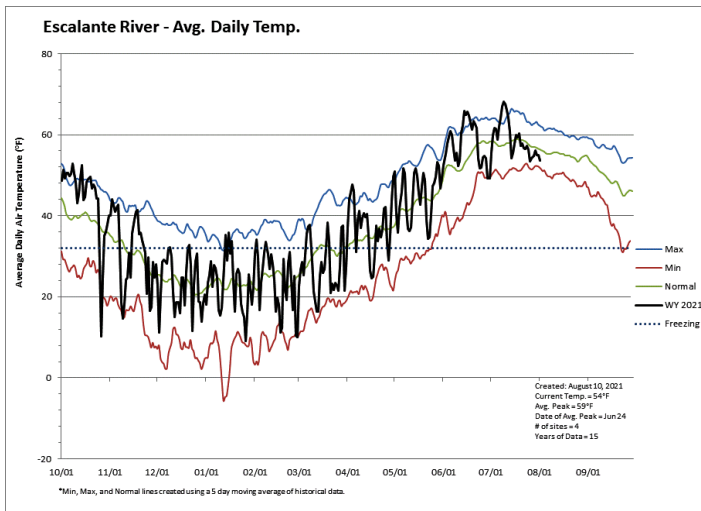
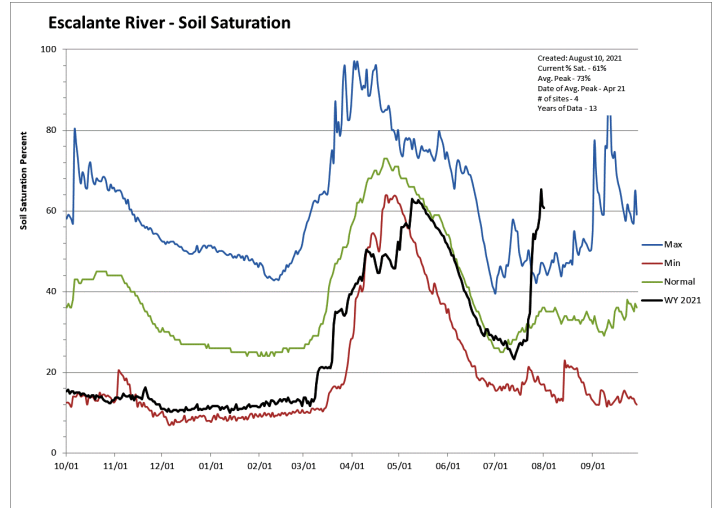
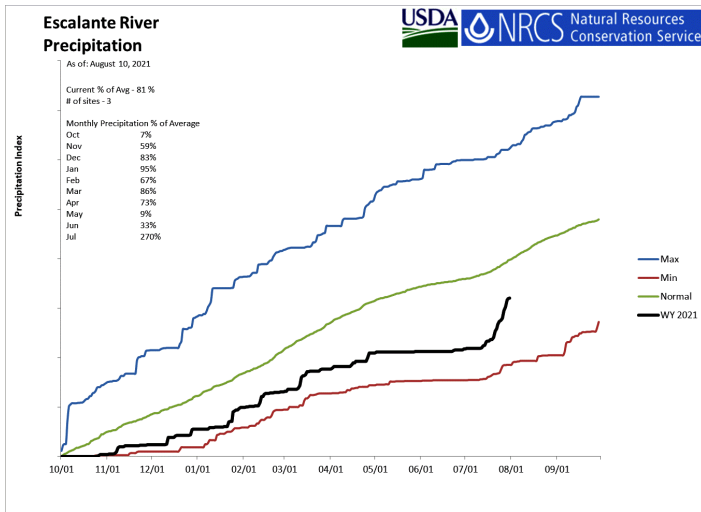
Precipitation in July was much above average at 231%, which brings the seasonal accumulation (Oct-Jul) to 77% of average. Soil moisture is at 59% compared to 40% last year.



# Escalante River Basin

August 1, 2021

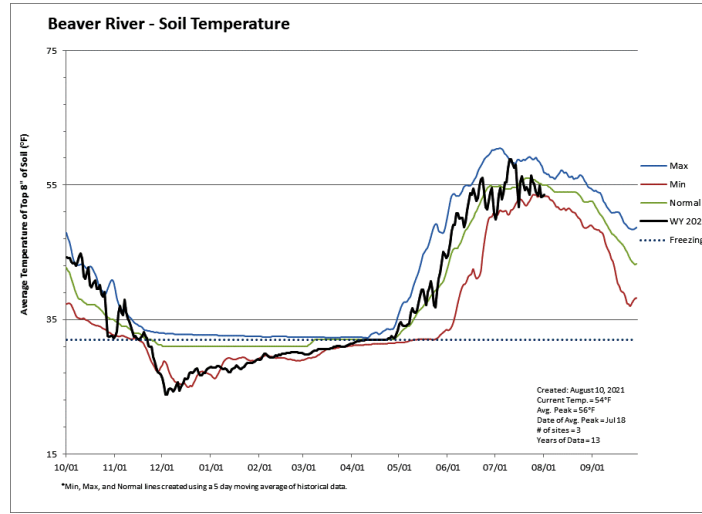
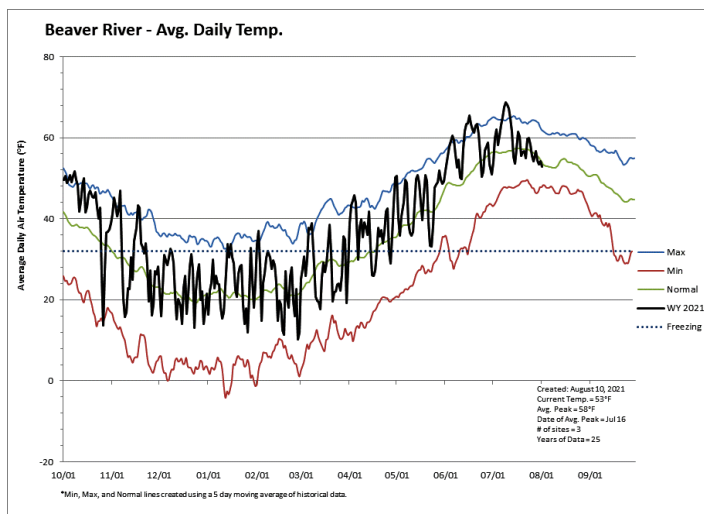
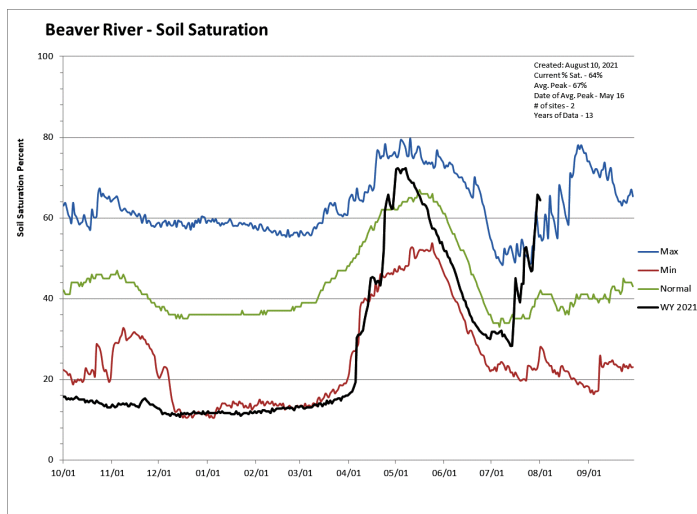
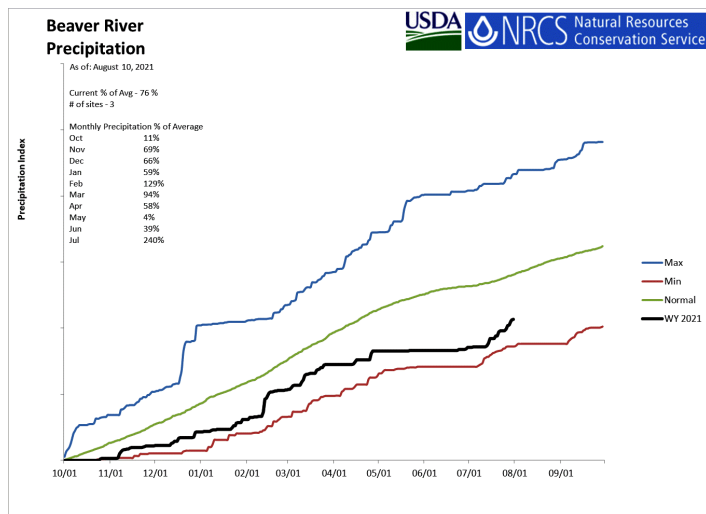
Precipitation in July was much above average at 270%, which brings the seasonal accumulation (Oct-Jul) to 81% of average. Soil moisture is at 61% compared to 29% last year.



# Beaver River Basin

August 1, 2021

Precipitation in July was much above average at 242%, which brings the seasonal accumulation (Oct-Jul) to 76% of average. Soil moisture is at 64% compared to 27% last year. Reservoir storage is at 19% of capacity, compared to 36% last year. The water availability index for the Beaver River is 14%.

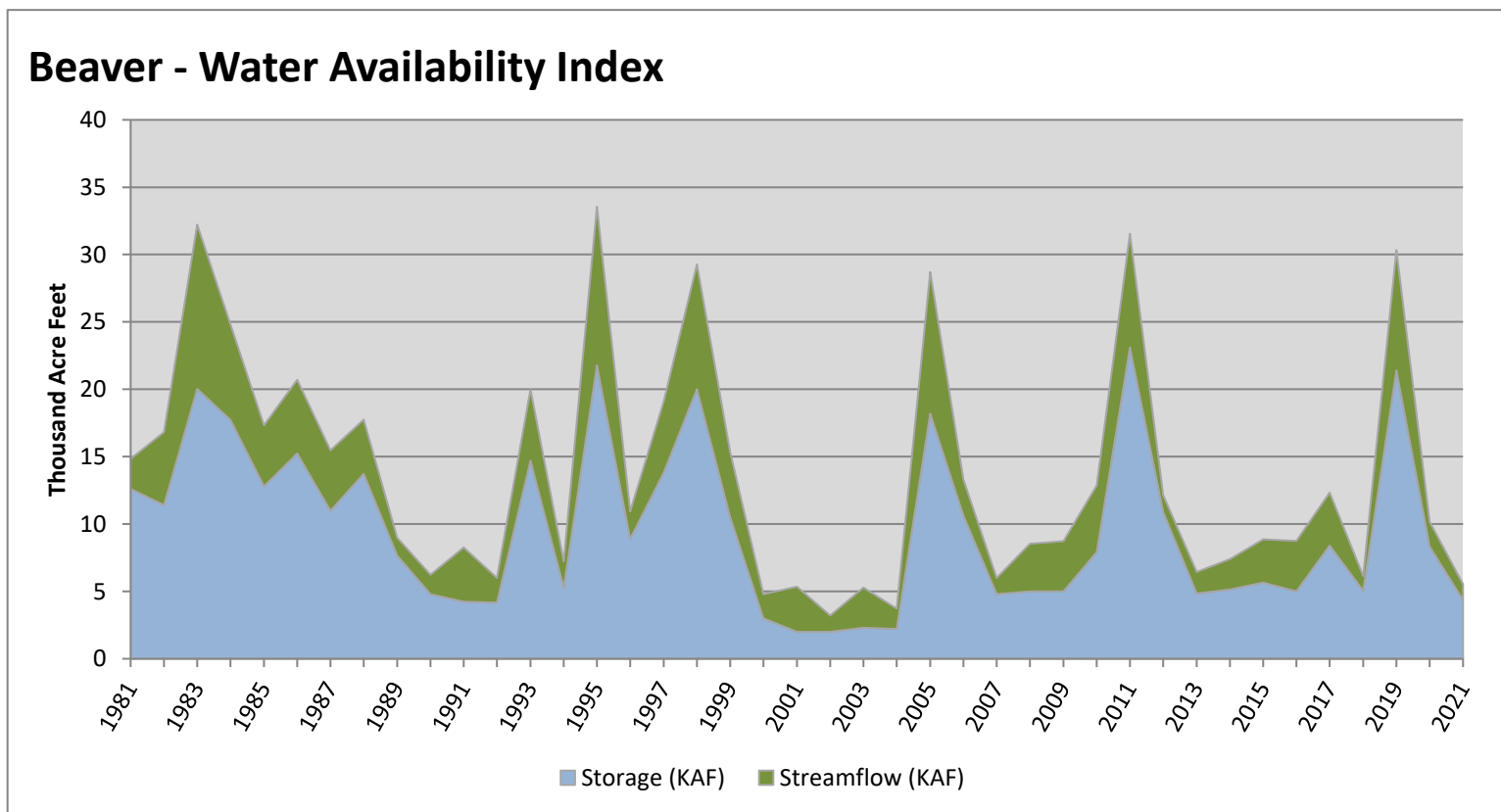


August 1, 2021

## Water Availability Index

Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Beaver</b>	<b>4.35</b>	<b>1.18</b>	<b>5.53</b>	<b>14</b>	<b>-2.98</b>	<b>03, 01, 92, 07</b>

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

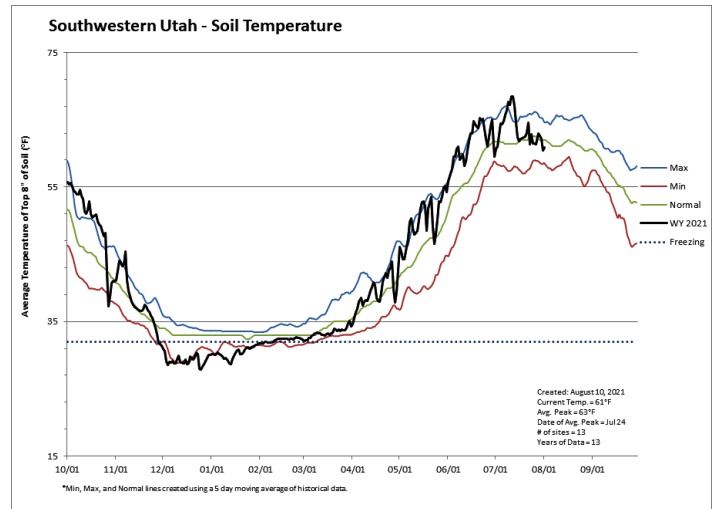
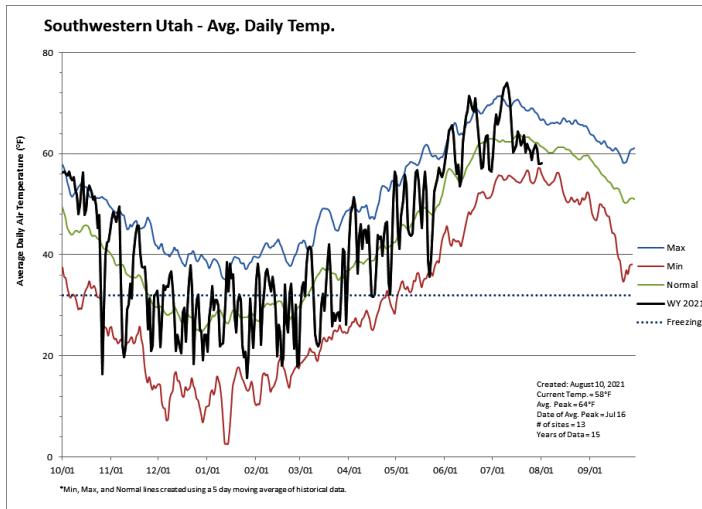
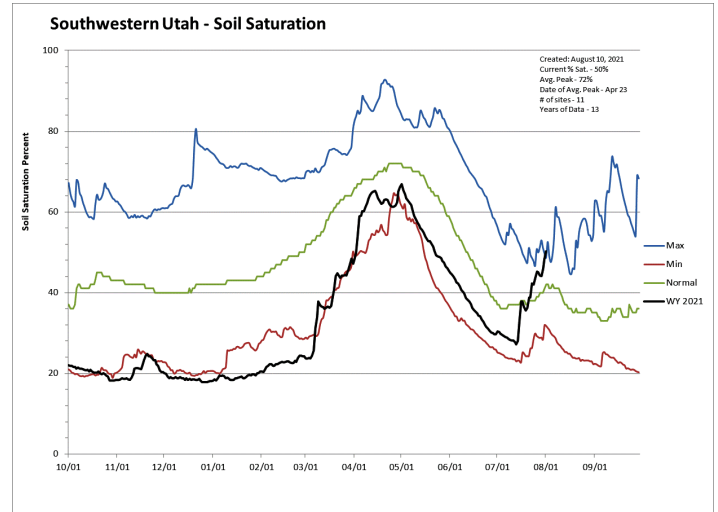
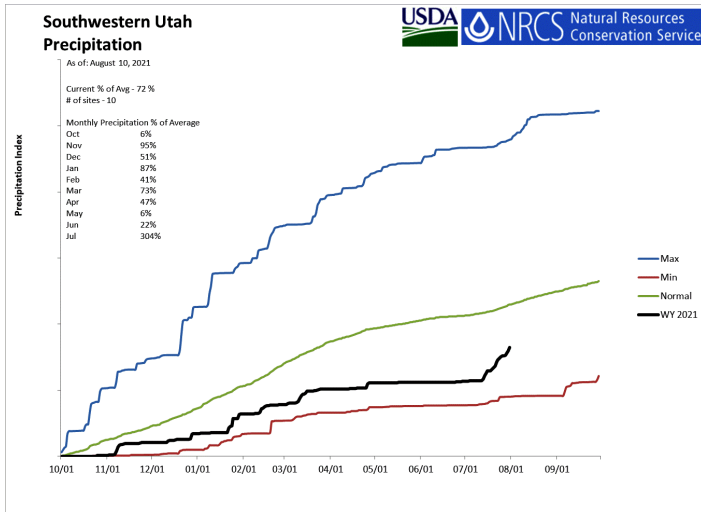




# Southwestern Utah

August 1, 2021

Precipitation in July was much above average at 301%, which brings the seasonal accumulation (Oct-Jul) to 72% of average. Soil moisture is at 49% compared to 27% last year. Reservoir storage is at 32% of capacity, compared to 51% last year. The water availability index for the Virgin River is 36%.

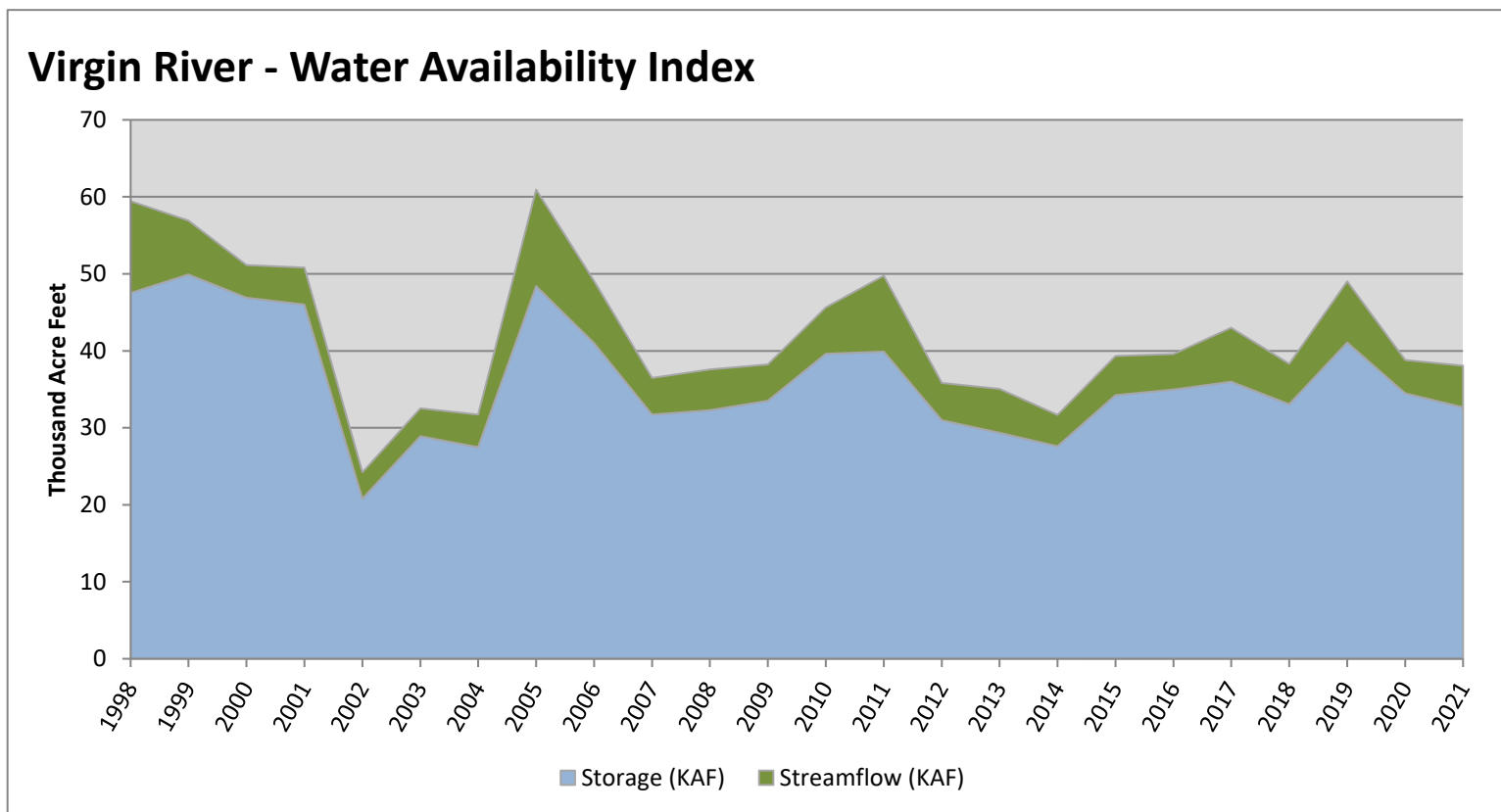


August 1, 2021

## Water Availability Index

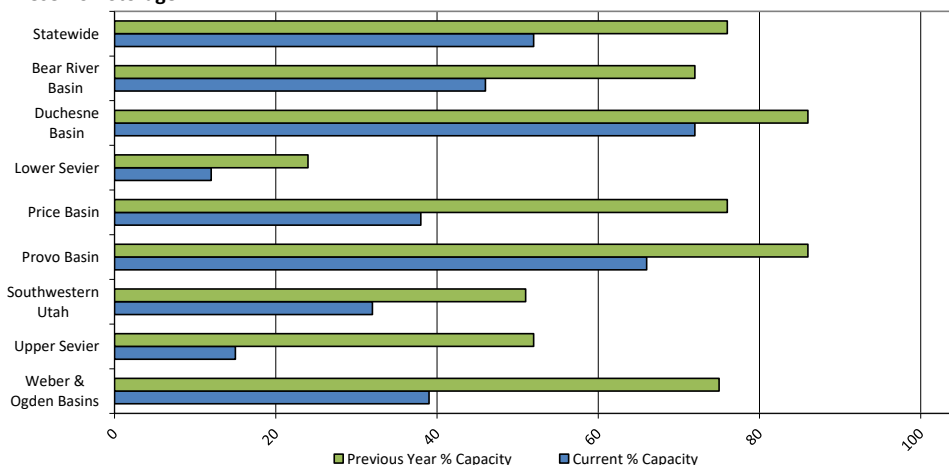
Basin or Region	Jul EOM <sup>*</sup> Storage	July Flow	Storage + Flow	Percentile	WAI <sup>#</sup>	Years with similiar WAI
	KAF <sup>^</sup>	KAF <sup>^</sup>	KAF <sup>^</sup>	%		
<b>Virgin River</b>	<b>32.67</b>	<b>5.39</b>	<b>38.06</b>	<b>36</b>	<b>-1.17</b>	<b>07, 08, 09, 18</b>

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



<b>Reservoir Storage Summary for the end of July 2021</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	4.1	12.5		25.7	16%	49%			
Causey Reservoir	4.0	5.3	5.2	7.1	56%	75%	73%	76%	102%
Cleveland Lake	1.9	3.1		5.4	35%	58%			
Currant Creek Reservoir	14.8	14.5	15.2	15.5	96%	93%	98%	97%	95%
Deer Creek Reservoir	92.3	131.6	123.4	149.7	62%	88%	82%	75%	107%
East Canyon Reservoir	26.4	40.6	40.9	49.5	53%	82%	83%	65%	99%
Echo Reservoir	14.2	42.3	49.0	73.9	19%	57%	66%	29%	86%
Grantsville Reservoir	1.5	1.6	1.7	3.3	46%	48%	51%	90%	94%
Gunlock	4.5	7.4	7.2	10.4	43%	71%	69%	63%	102%
Gunnison Reservoir	0.0	0.9	10.4	20.3	0%	5%	51%	0%	9%
Huntington North Reservoir	1.8	3.6	2.6	4.2	42%	86%	62%	68%	138%
Hyrum Reservoir	4.1	10.0	9.5	15.3	27%	65%	62%	43%	105%
Joes Valley Reservoir	28.1	52.0	51.0	61.6	46%	84%	83%	55%	102%
Jordanelle Reservoir	196.9	277.3	288.4	314.0	63%	88%	92%	68%	96%
Ken's Lake	0.7	1.0	1.4	2.3	32%	45%	62%	52%	72%
Kolob Reservoir	2.9	5.4		5.6	52%	96%			
Lost Creek Reservoir	11.8	18.9	16.0	22.5	52%	84%	71%	74%	118%
Lower Enterprise	0.7	1.4	0.4	2.6	26%	54%	16%	165%	341%
Miller Flat Reservoir	1.3	3.8		5.2	26%	72%			
Millsite	3.8	8.7	14.5	16.7	23%	52%	87%	26%	60%
Minersville Reservoir	4.3	8.3	10.0	23.3	19%	36%	43%	43%	83%
Moon Lake Reservoir	5.9	23.9	26.1	35.8	17%	67%	73%	23%	92%
Otter Creek Reservoir	8.5	36.8	29.4	52.5	16%	70%	56%	29%	125%
Panguitch Lake	7.8	18.7	14.6	22.3	35%	84%	65%	53%	128%
Pineview Reservoir	31.0	76.8	77.0	110.1	28%	70%	70%	40%	100%
Piute Reservoir	5.4	20.7	32.1	71.8	8%	29%	45%	17%	64%
Porcupine Reservoir	3.6	9.6	8.5	11.3	32%	85%	75%	43%	113%
Quail Creek	28.2	27.1	26.1	40.0	70%	68%	65%	108%	104%
Red Fleet Reservoir	12.3	19.6	21.2	25.7	48%	76%	82%	58%	93%
Rockport Reservoir	17.6	49.7	51.5	60.9	29%	82%	85%	34%	96%
Sand Hollow Reservoir	36.6	44.9		50.0	73%	90%			
Scotfield Reservoir	23.3	48.3	39.7	65.8	35%	73%	60%	59%	122%
Settlement Canyon Reservoir	0.2	0.4	0.7	1.0	16%	39%	67%	24%	57%
Sevier Bridge Reservoir	28.5	56.5	120.0	236.0	12%	24%	51%	24%	47%
Smith And Morehouse Reservoir	3.8	6.6	6.5	8.1	47%	81%	80%	59%	101%
Starvation Reservoir	113.4	139.4	143.2	164.1	69%	85%	87%	79%	97%
Stateline Reservoir	5.8	9.1	8.9	12.0	48%	76%	74%	65%	102%
Steinaker Reservoir	3.2	11.7	22.5	33.4	10%	35%	67%	14%	52%
Strawberry Reservoir	841.2	976.2	713.1	1105.9	76%	88%	64%	118%	137%
Upper Enterprise	1.0	2.3	2.8	10.0	10%	23%	28%	36%	83%
Upper Stillwater Reservoir	23.9	27.0	24.5	32.5	73%	83%	75%	97%	110%
Utah Lake	471.3	713.6	756.4	870.9	54%	82%	87%	62%	94%
Willard Bay	103.1	168.2	148.3	215.0	48%	78%	69%	70%	113%
Woodruff Creek	0.8	0.9	1.3	4.0	20%	23%	32%	63%	73%
Woodruff Narrows Reservoir	7.4	31.4	25.7	57.3	13%	55%	45%	29%	122%
Meeks Cabin Reservoir	5.0	14.9	16.7	32.5	15%	46%	51%	30%	89%
Bear Lake	619.6	944.9	696.0	1302.0	48%	73%	53%	89%	136%
Basin-wide Total	2781.9	4059.7	3659.6	5373.1	52%	76%	68%	76%	111%
# of reservoirs	42.0	42.0	42.0	42.0	42	42	42	42	42
# 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**

