



Utah Climate and Water Report

October 1, 2020



Gunnison Reservoir, near Ephraim

Photo by Anthony Steinfeldt, Utah NRCS

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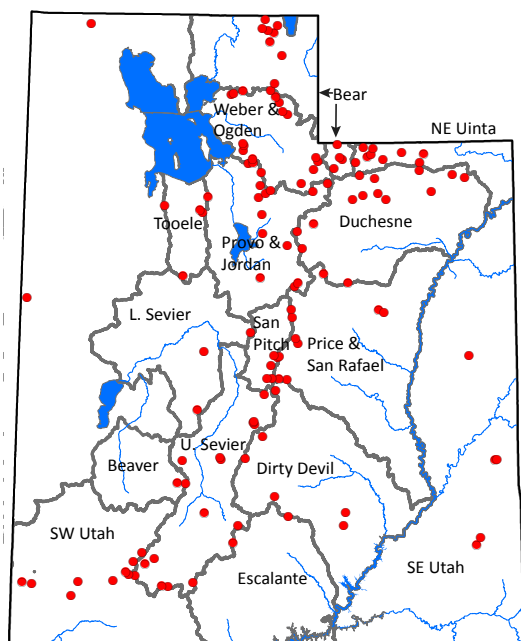
Utah Climate and Water Report

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.



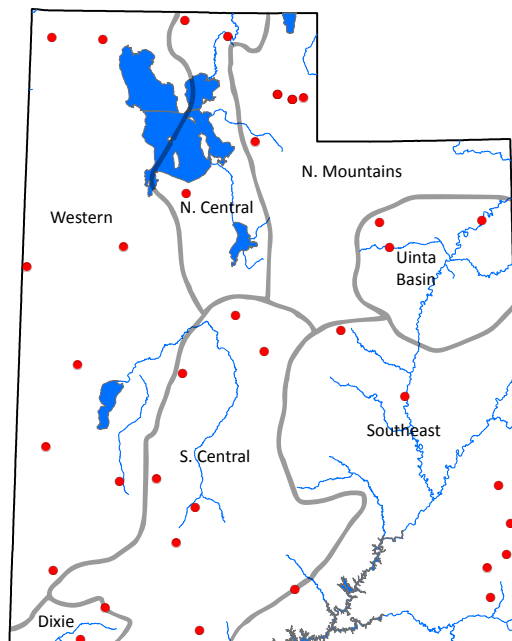
SNOTEL

- 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

October 1, 2020

*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.*

Current Valley Conditions (SCAN)

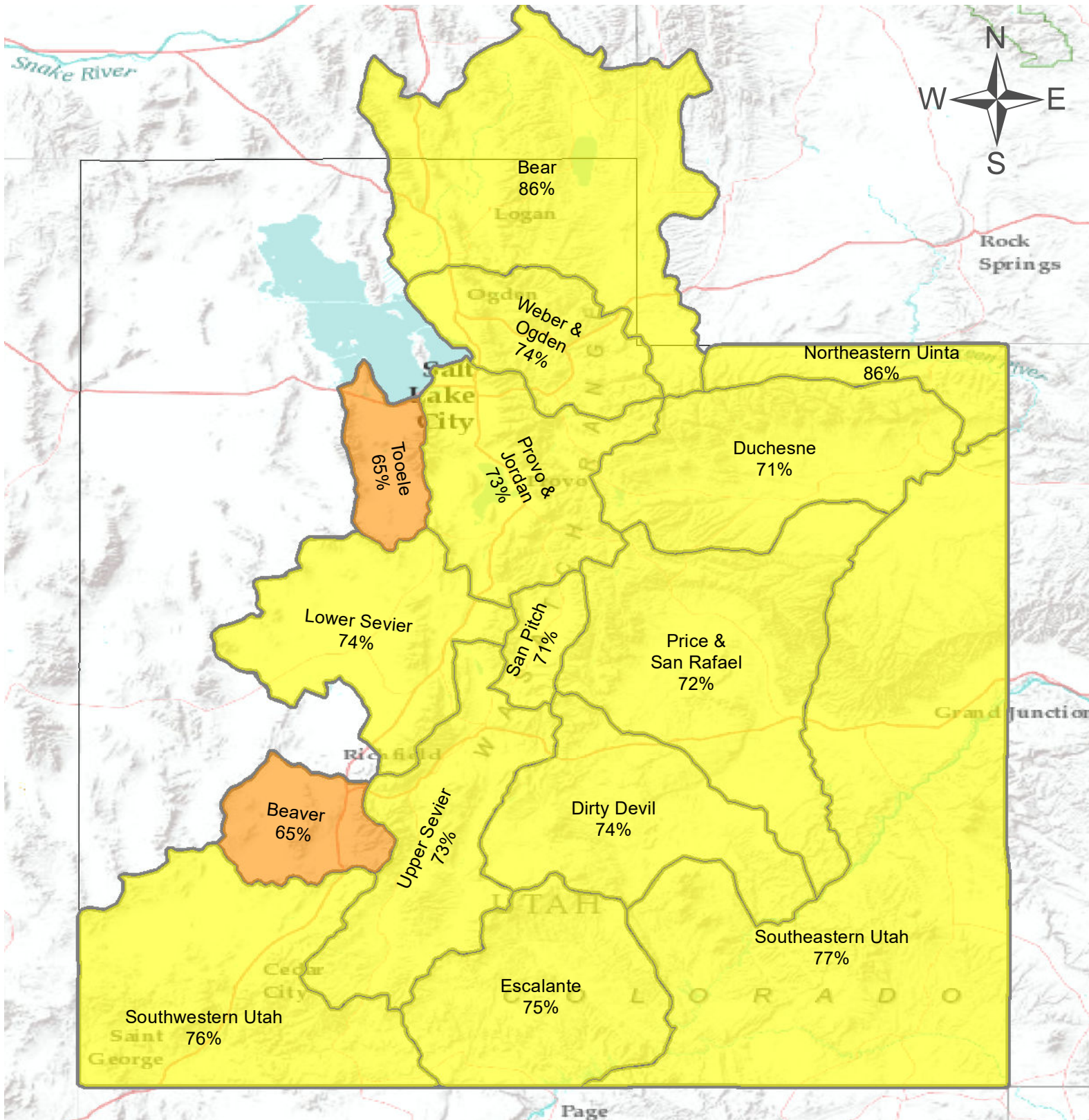
Utah's Valley locations ended the 2020 water year with an average of 7.7 inches of precipitation. While this is low, it doesn't tell the whole story; almost 70% of this precipitation accumulated during the first half of the water year. Like last summer, there just wasn't any monsoonal moisture during the growing season. The exceptional dryness during the growing season is reflected in current drought conditions and the extended fire season. Last year at this time, only 54% of Utah was designated in any category of drought, now 100% of the state is Abnormally Dry (DO) or worse. More troubling is that conditions in 13% of the state are currently designated as Exceptional Drought (D4). Not surprisingly, soil moisture levels are very low- just 26% of saturation compared to 28% last year. Although dry conditions are likely to persist into the near future, we can hope that October will bring a big pattern change and the start of storms more characteristic of winter.

Current Mountain Conditions (SNOTEL)

The 2020 water year drew to a close at the end of September. The water year precipitation ended at 76% of average, but as noted above, most of that moisture was received months ago. The late spring and summer seasons provided far below average precipitation, including only 30% of normal for the month of September. Statewide soil moisture is hovering close to record lows for the observed period, and reservoir storage is at 62% of capacity compared to 74% last year. Water Availability Indices (WAI) are all below normal except for the Bear River basin and its subwatersheds. Several basins in Utah have exceptionally low WAI values, including the Blacks Fork, Smiths Creek, San Pitch, Eastern Uintas, and Lower Sevier. We desperately need replenishing snow this winter!

Also, SNOTEL sites are situated in mountain environments in order to measure the snowpack's water content and predict spring runoff, which unfortunately also means that they tend to be vulnerable to wildfires and other natural phenomena. September saw two of Utah's SNOTEL sites go down. First, the Parrish Creek site fell prey to the massive windstorm event that impacted the Wasatch Front. Located above Centerville near Skyline Drive, the winds toppled an extraordinary number of trees around the site, including several that landed on the snow pillow and knocked the snow depth sensor arm sideways. The Snow Survey crew plans to rebuild this site by mid-October. More recently, the Brown Duck SNOTEL site (south slope of the Uintas, northwest of Mountain Home) partially burned down. As of October 1st, fires in that area were still active, so rebuilding the site will need to wait until conditions are safe. We are hopeful that the weather will hold- if so the Snow Survey staff will bring in a new shelter and repair the electronics in late October. However, this is a high elevation site so it's possible that early snow will block passage until next summer.

These impacted sites aside, the Utah Snow Survey has been able to manage near-normal field operations this summer despite everything that 2020 has thrown at us...



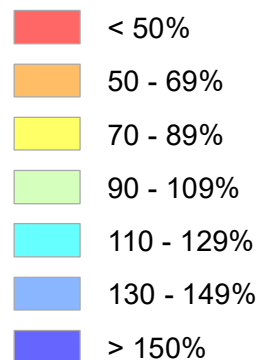
Statewide Precipitation

As of October 1, 2020:

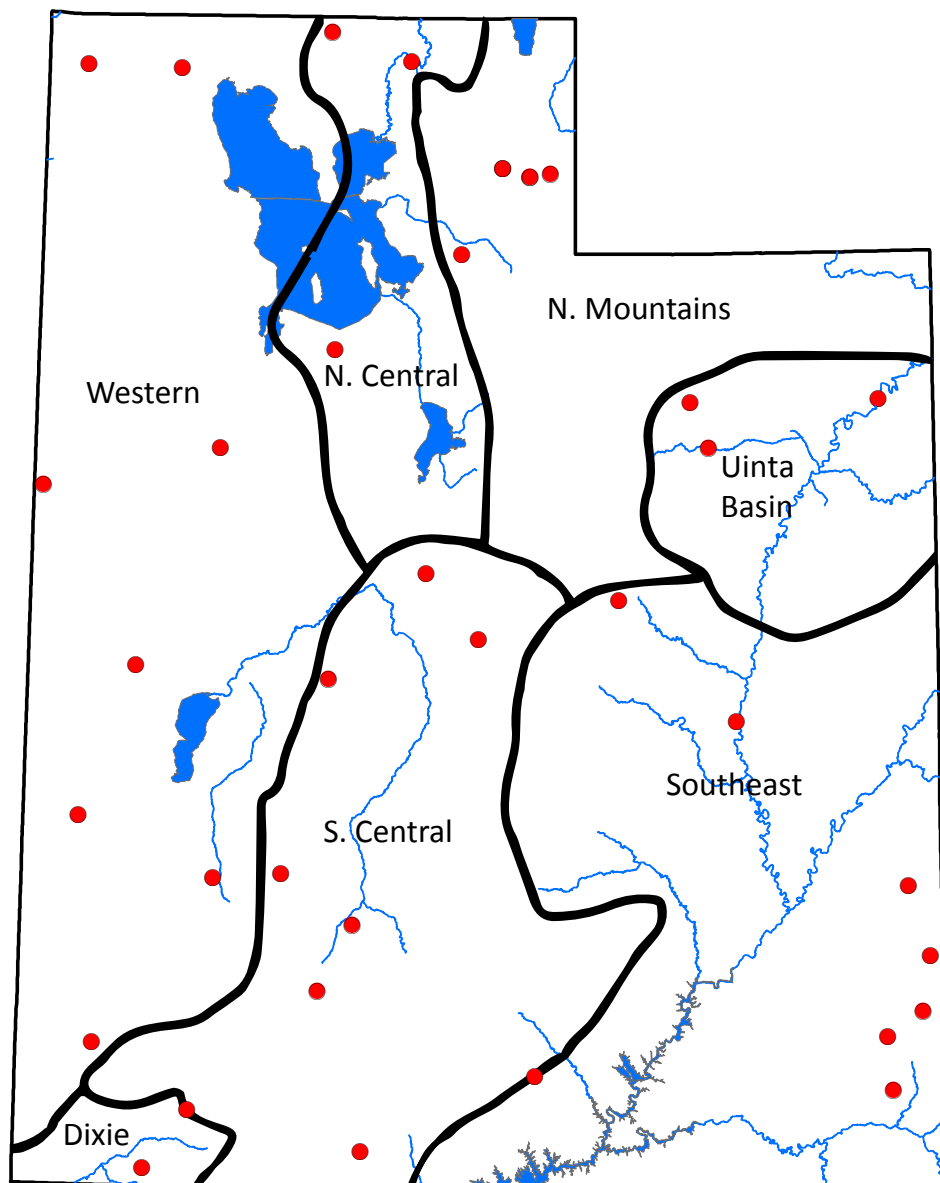
76% of Normal Precipitation

30% of Normal Precipitation Last Month

% of Normal



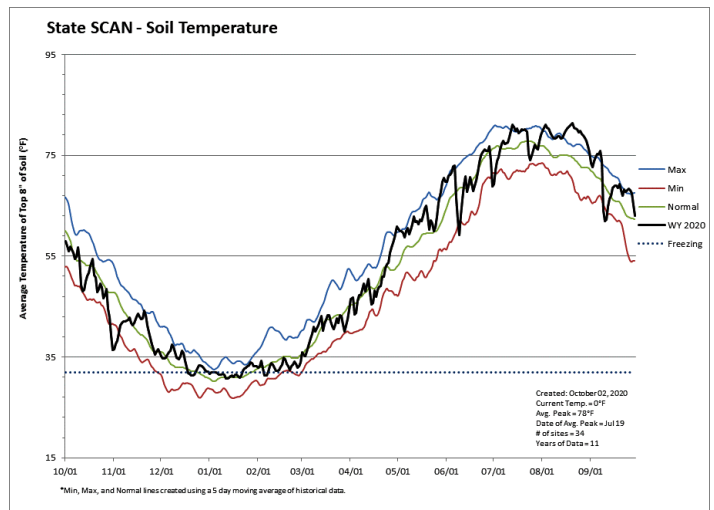
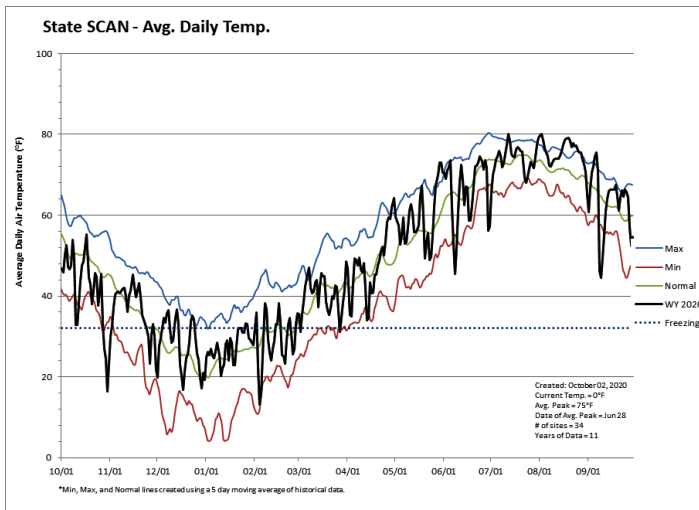
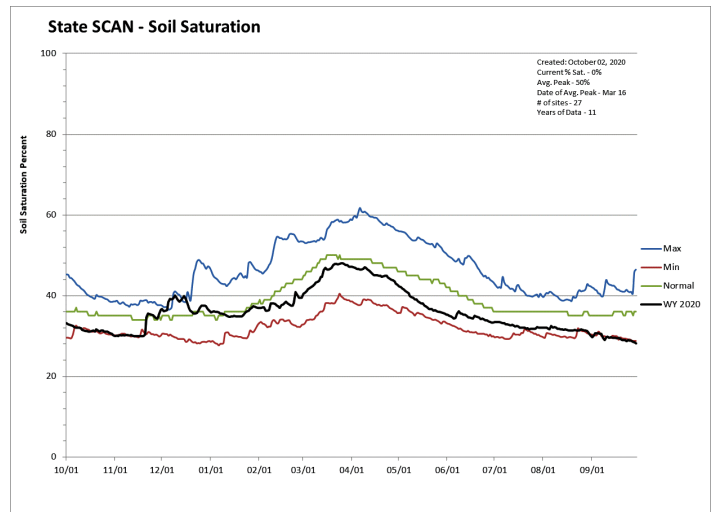
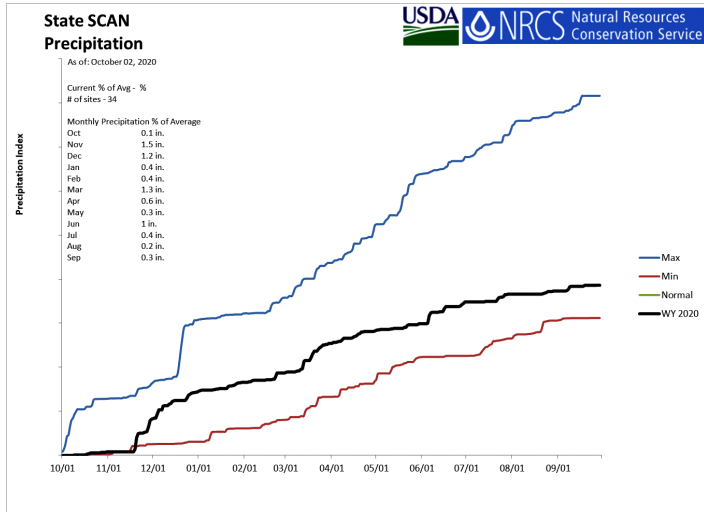
SCAN portion of report



Statewide SCAN

October 1, 2020

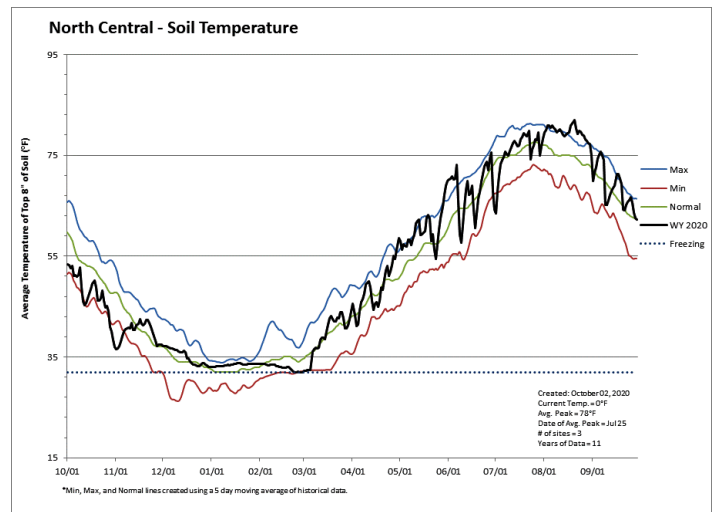
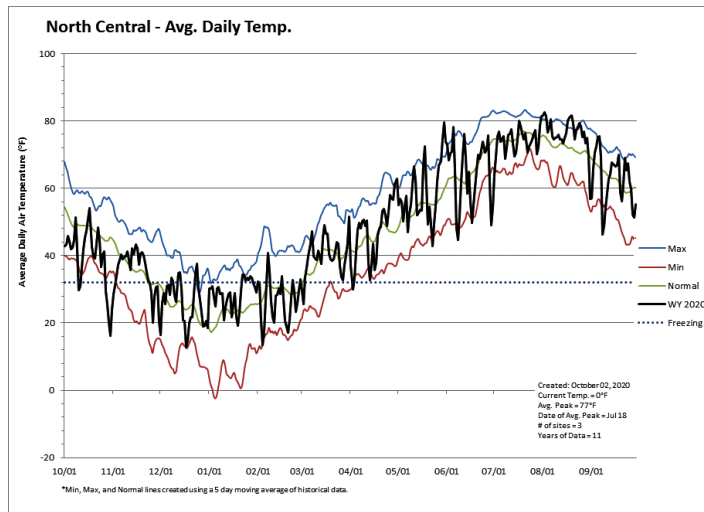
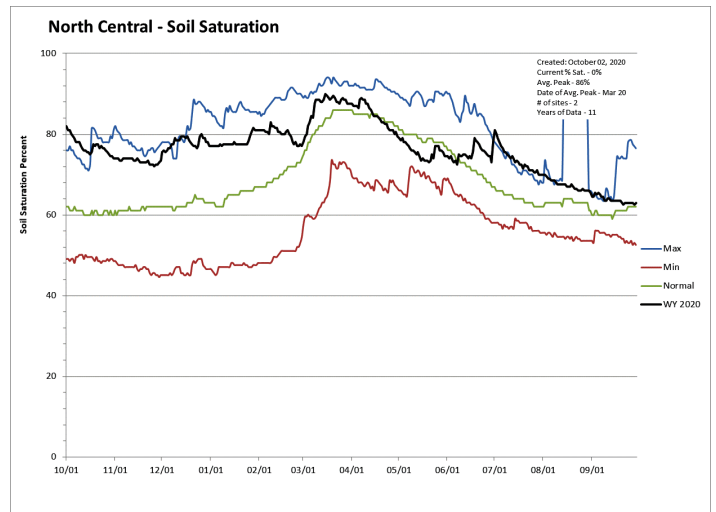
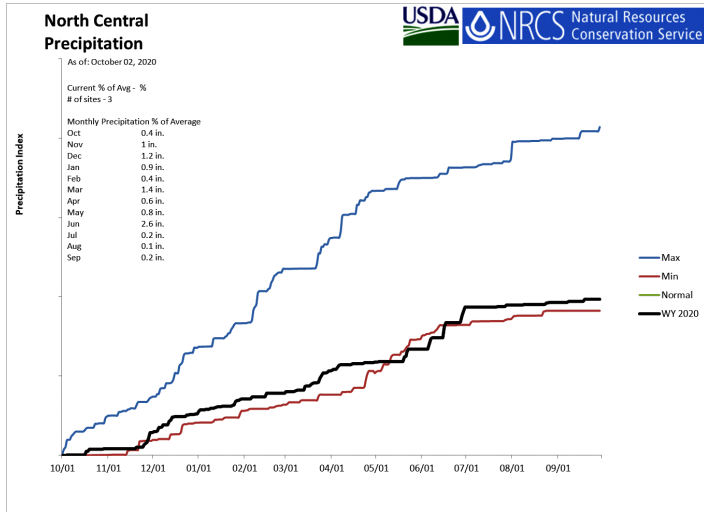
The average precipitation at SCAN sites within Utah was 0.3 inches in September, which brings the seasonal accumulation (Oct-Sep) to 7.7 inches. Soil moisture is at 28% compared to 28% last year.



North Central

October 1, 2020

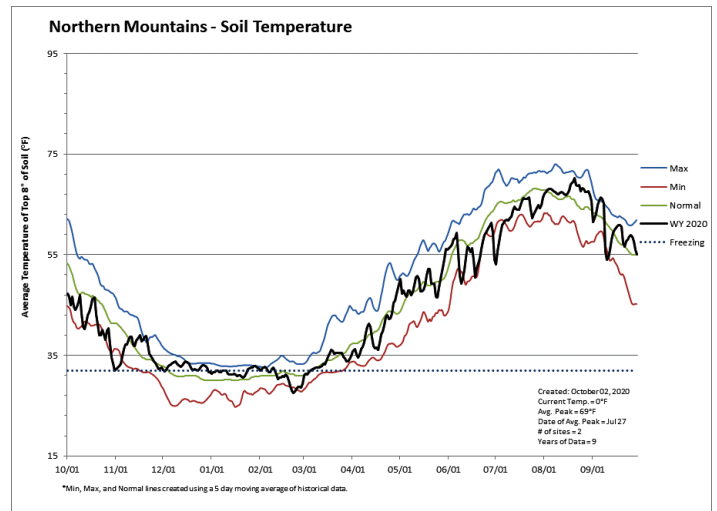
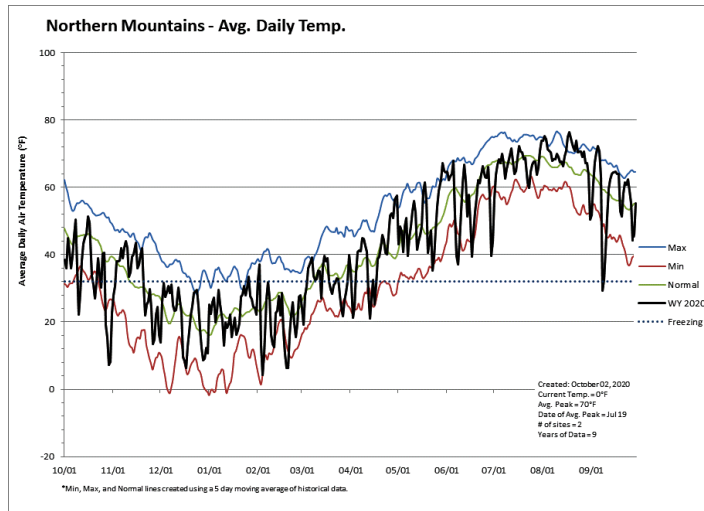
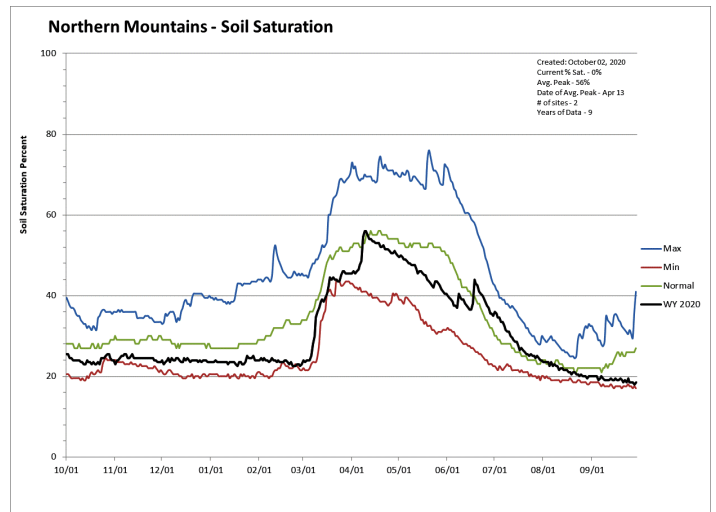
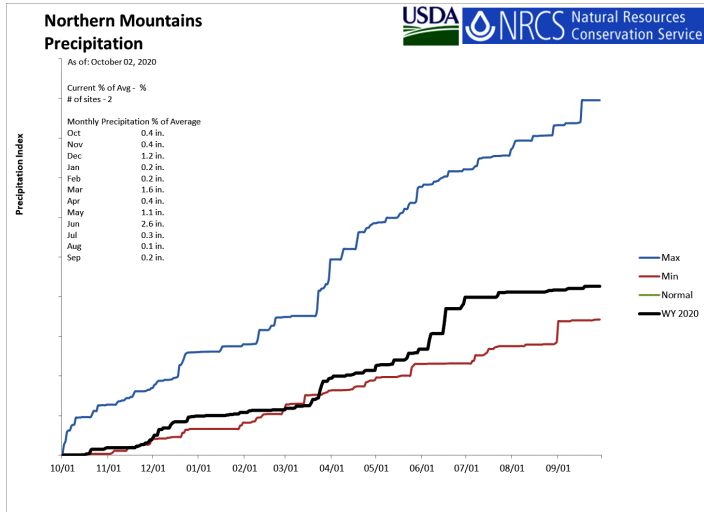
The average precipitation in September at SCAN sites within the basin was 0.2 inches, which brings the seasonal accumulation (Oct-Sep) to 9.8 inches. Soil moisture is at 63% compared to 57% last year.



Northern Mountains

October 1, 2020

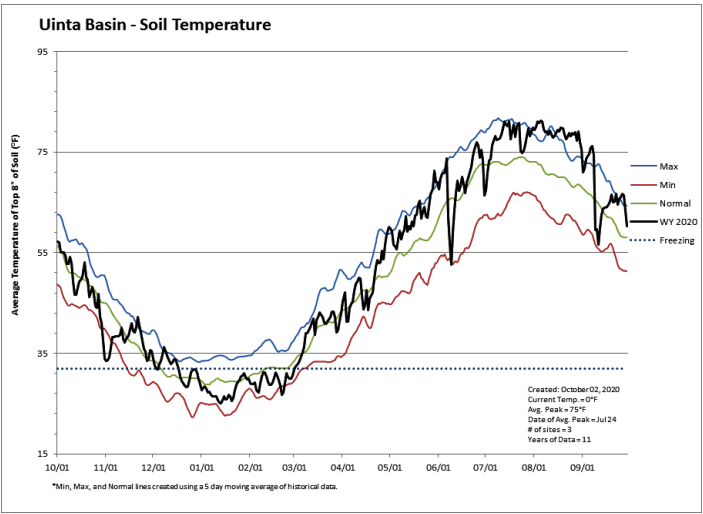
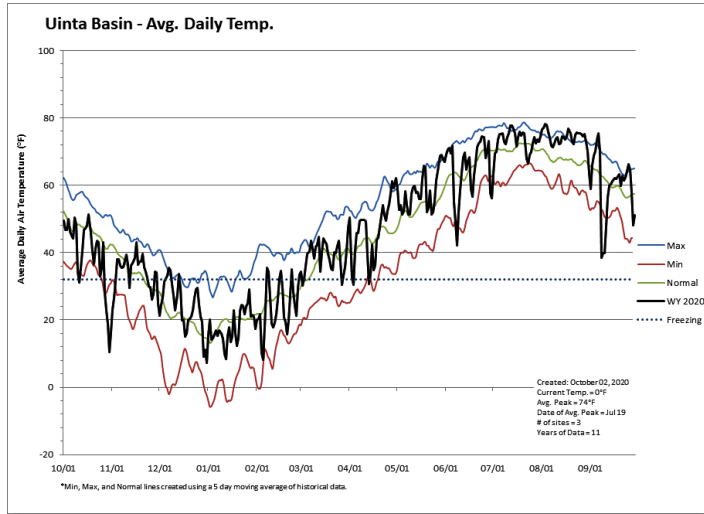
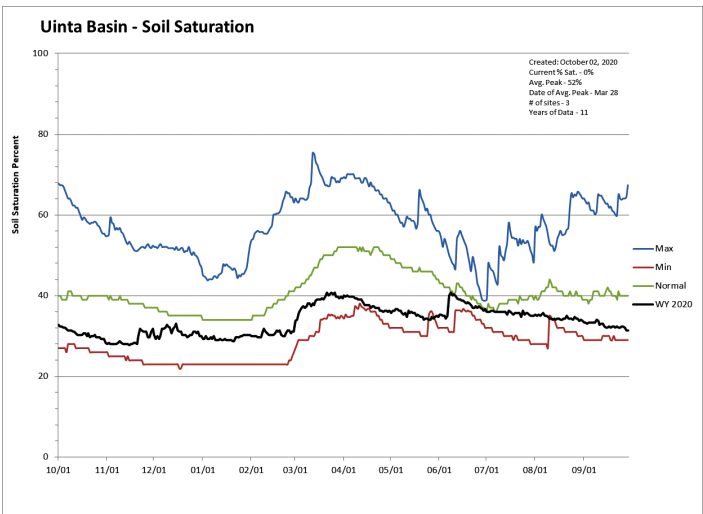
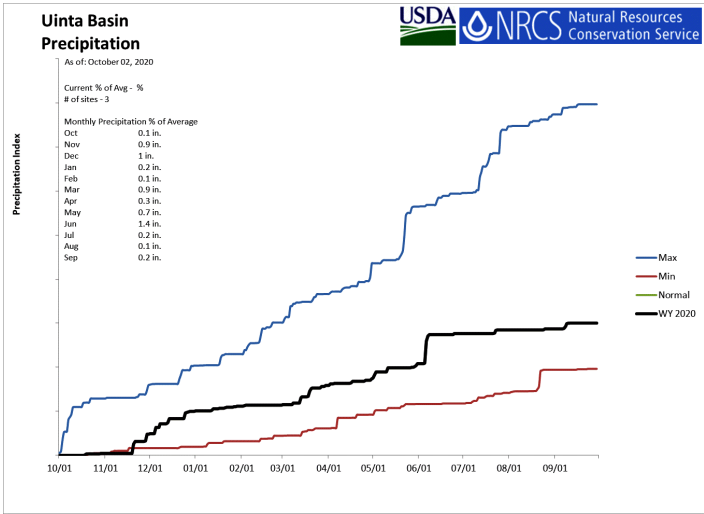
The average precipitation in September at SCAN sites within the basin was 0.2 inches, which brings the seasonal accumulation (Oct-Sep) to 8.5 inches. Soil moisture is at 19% compared to 25% last year.



Uinta Basin

October 1, 2020

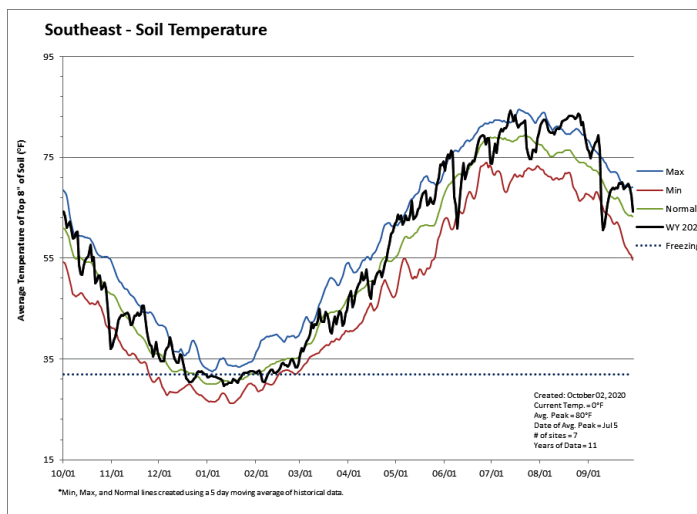
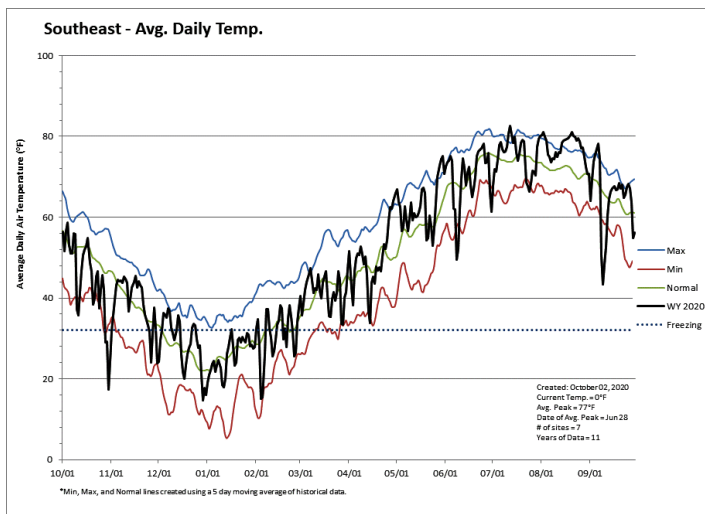
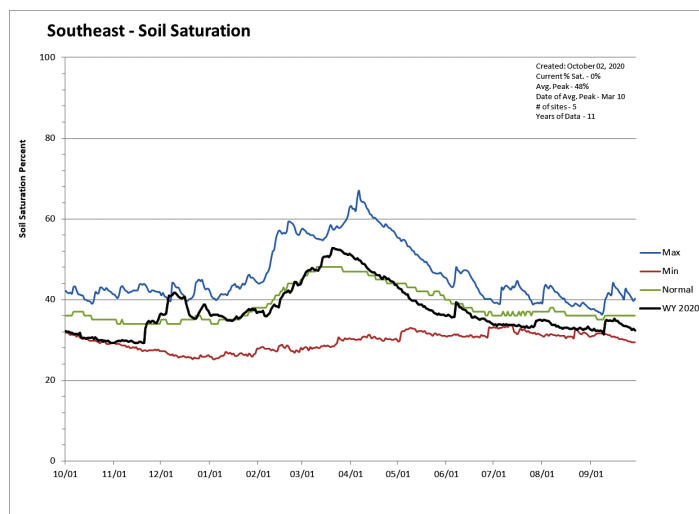
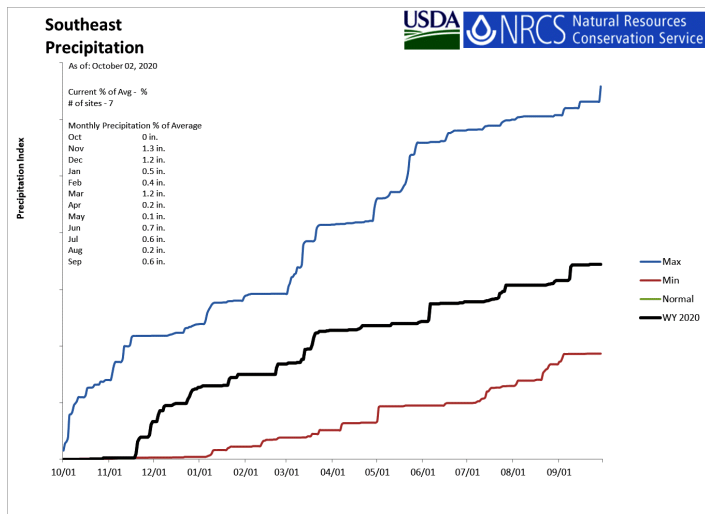
The average precipitation in September at SCAN sites within the basin was 0.2 inches, which brings the seasonal accumulation (Oct-Sep) to 6 inches. Soil moisture is at 31% compared to 34% last year.



Southeast

October 1, 2020

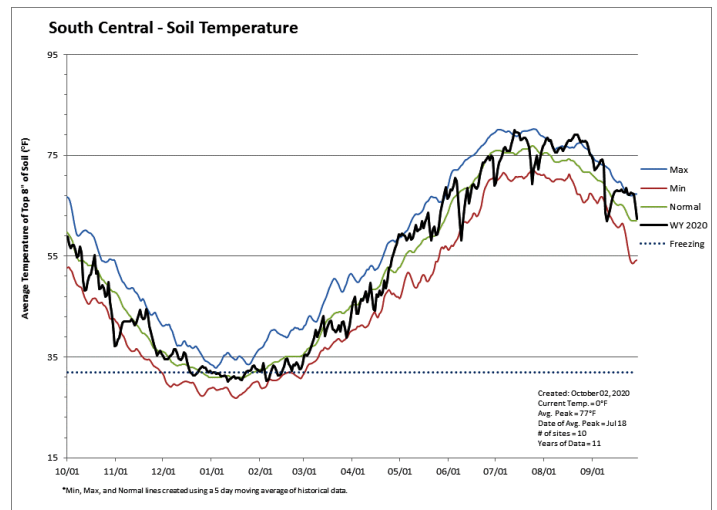
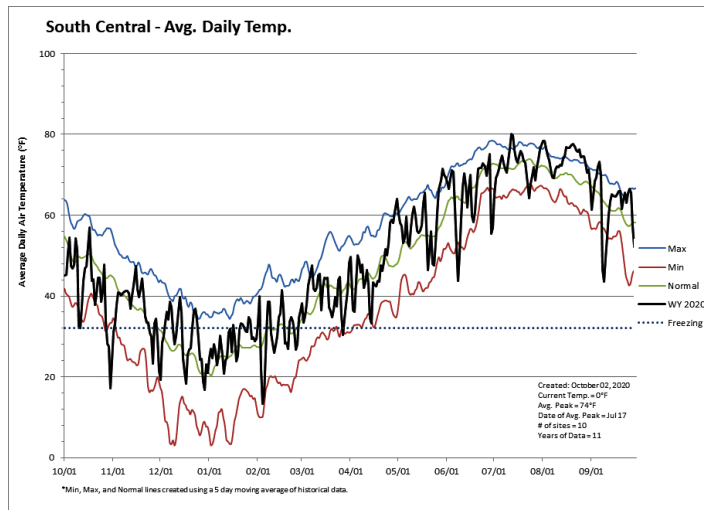
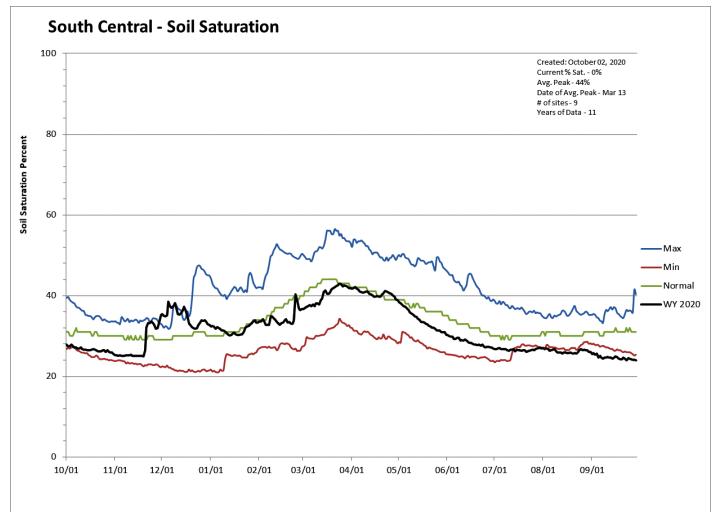
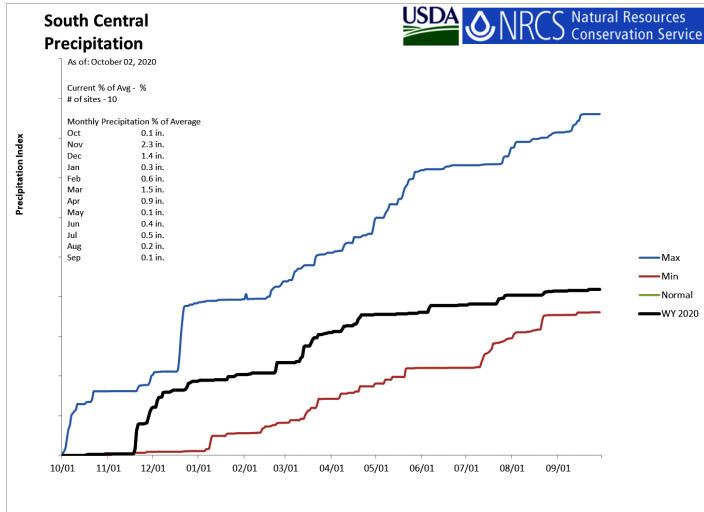
The average precipitation in September at SCAN sites within the basin was 0.6 inches, which brings the seasonal accumulation (Oct-Sep) to 6.9 inches. Soil moisture is at 32% compared to 29% last year.



South Central

October 1, 2020

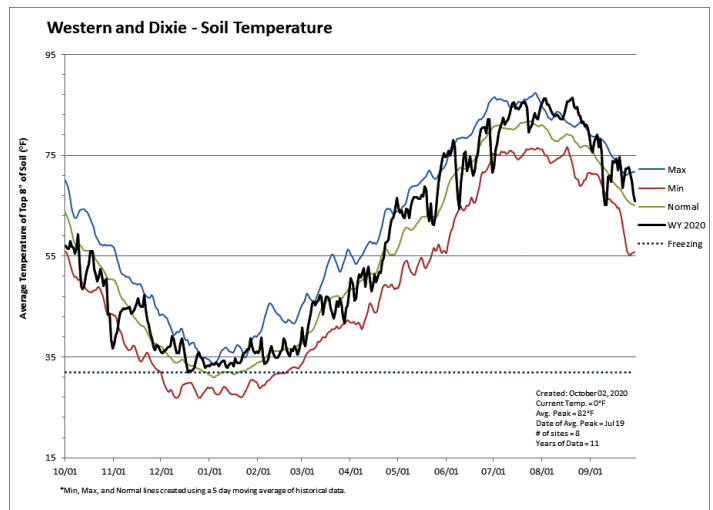
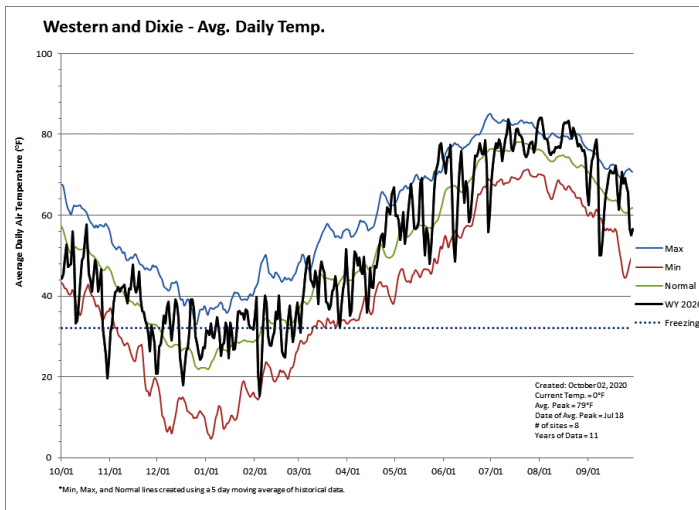
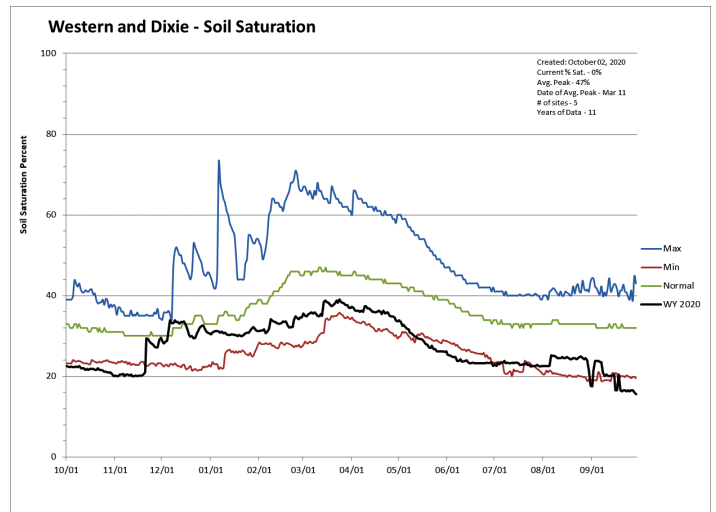
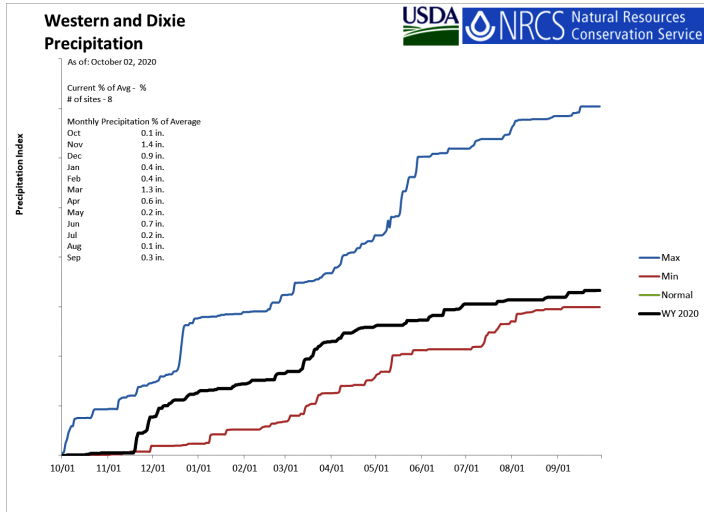
The average precipitation in September at SCAN sites within the basin was 0.1 inches, which brings the seasonal accumulation (Oct-Sep) to 8.4 inches. Soil moisture is at 24% compared to 26% last year.



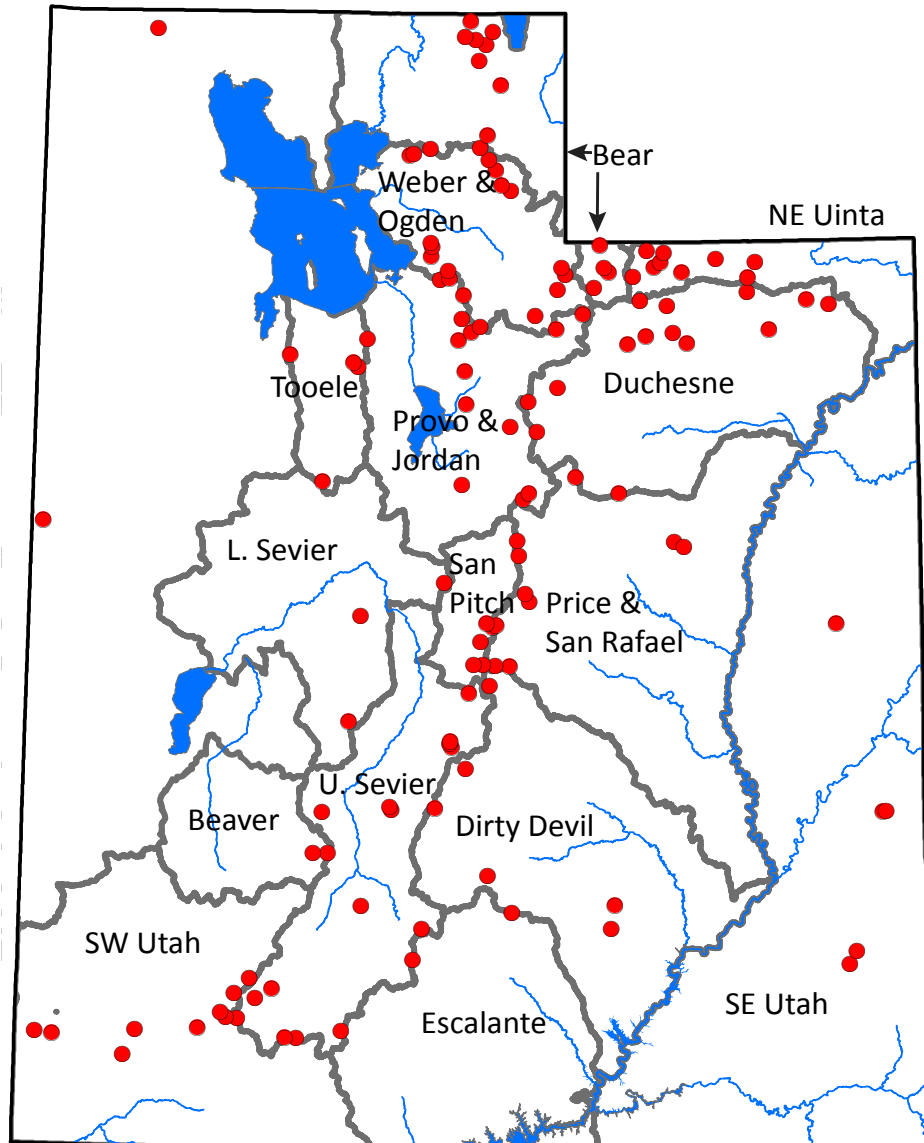
Western and Dixie

October 1, 2020

The average precipitation in September at SCAN sites within the basin was 0.3 inches, which brings the seasonal accumulation (Oct-Sep) to 6.7 inches. Soil moisture is at 16% compared to 18% last year.



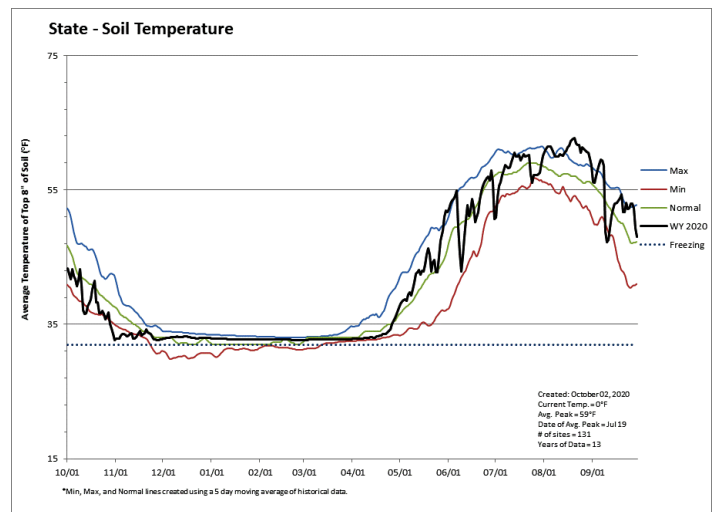
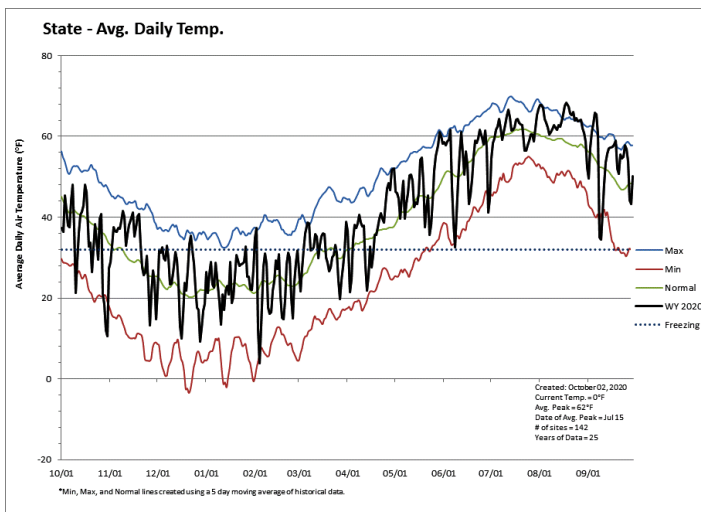
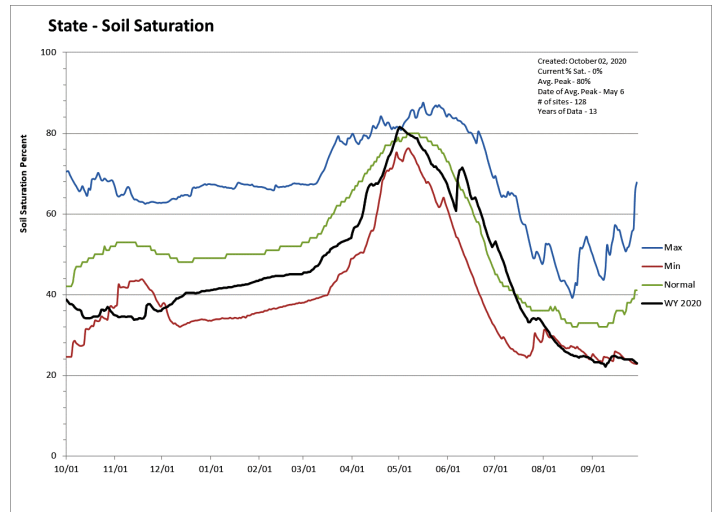
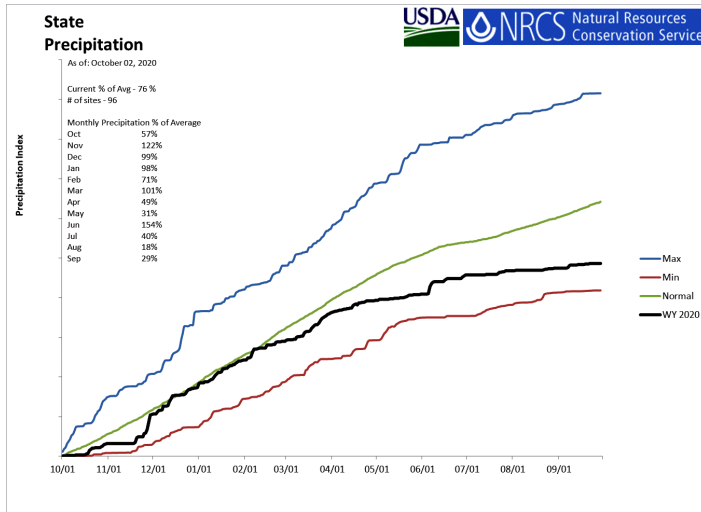
SNOTEL portion of report



Statewide SNOTEL

October 1, 2020

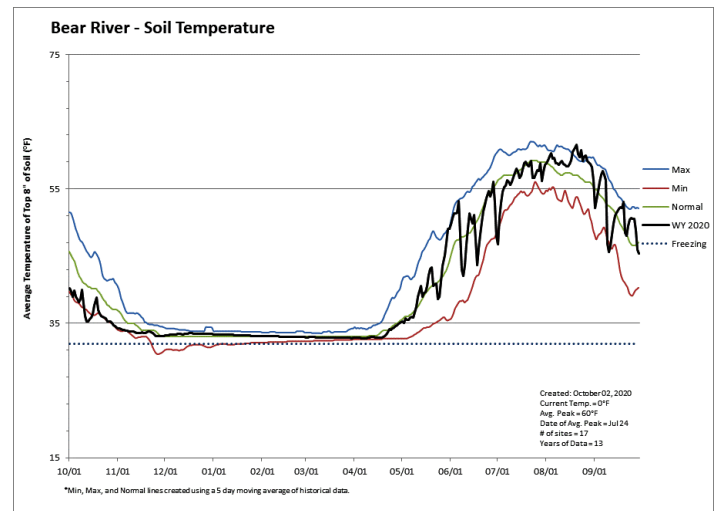
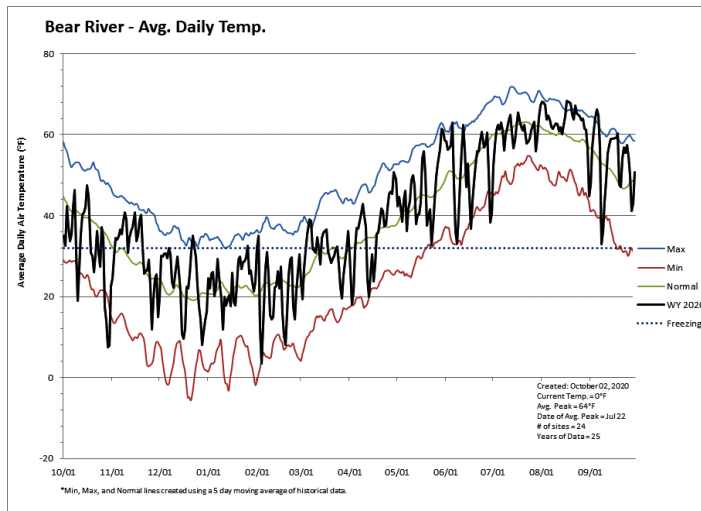
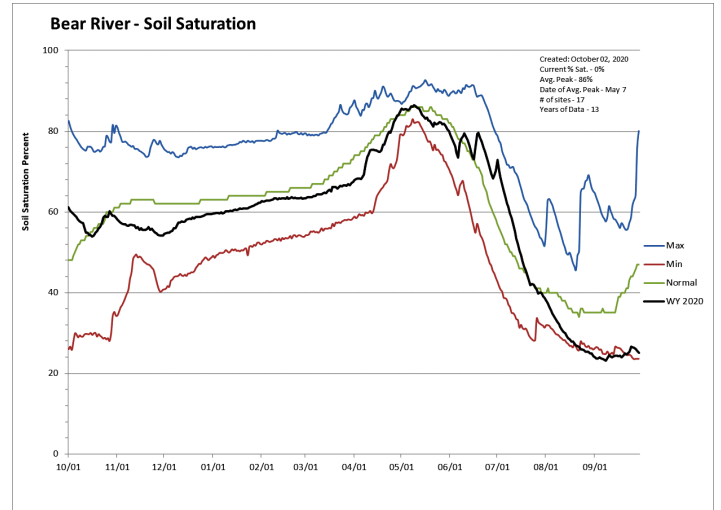
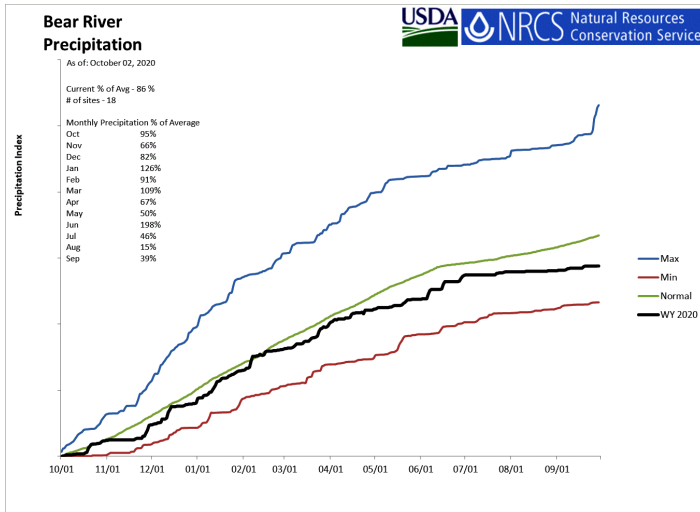
Precipitation at SNOTEL sites during September was much below average at 30%, which brings the seasonal accumulation (Oct-Sep) to 76% of average. Soil moisture is at 23% compared to 23% last year. Reservoir storage is at 62% of capacity, compared to 74% last year.



Bear River Basin

October 1, 2020

Precipitation in September was much below average at 41%, which brings the seasonal accumulation (Oct-Sep) to 87% of average. Soil moisture is at 25% compared to 23% last year. Reservoir storage is at 60% of capacity, compared to 69% last year. The water availability index for the Bear River is 66%, 54% for Woodruff Narrows and 55% for the Little Bear.

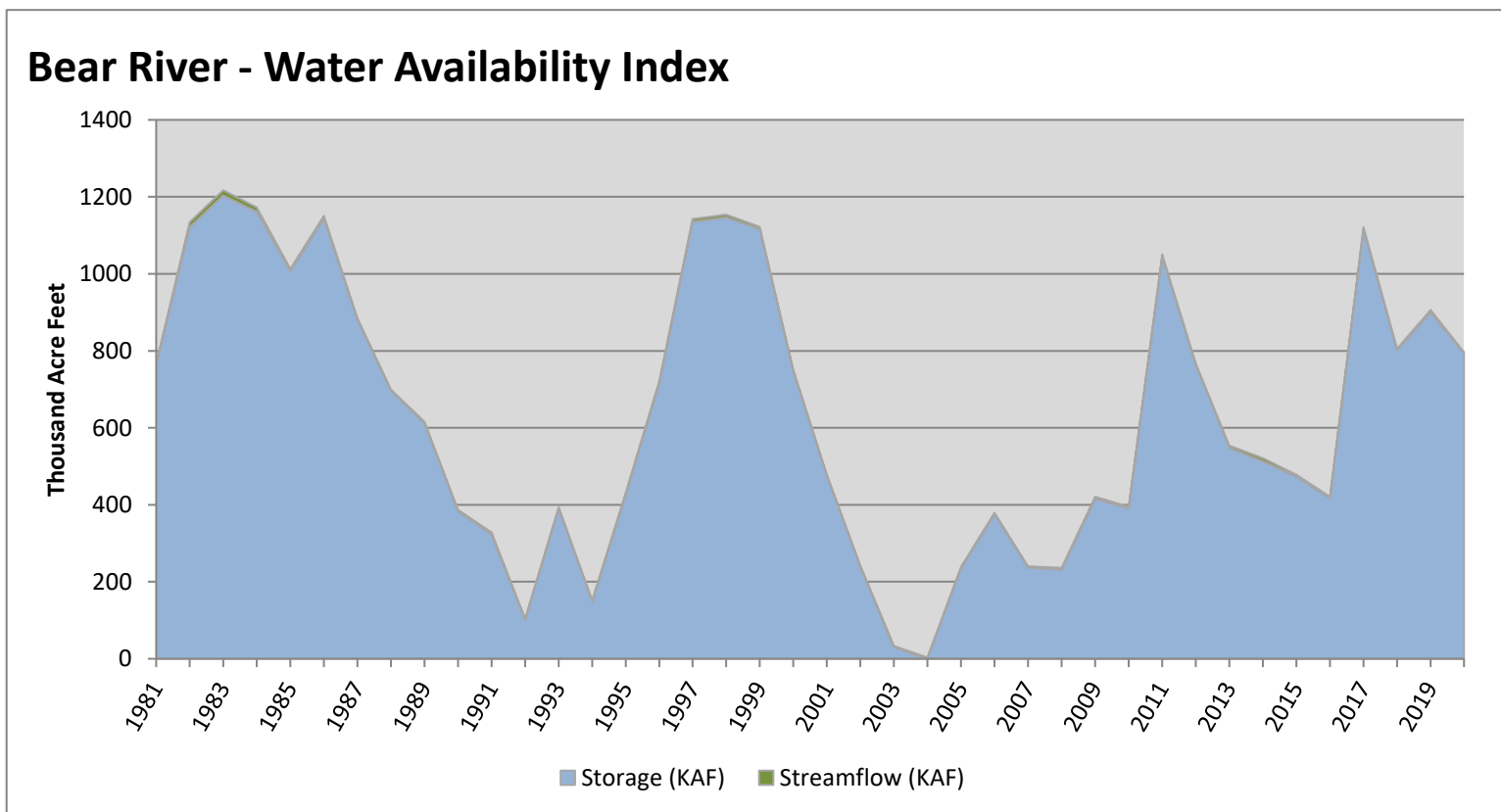


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	793.40	3.03	796.43	66	1.32	12, 81, 18, 87

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

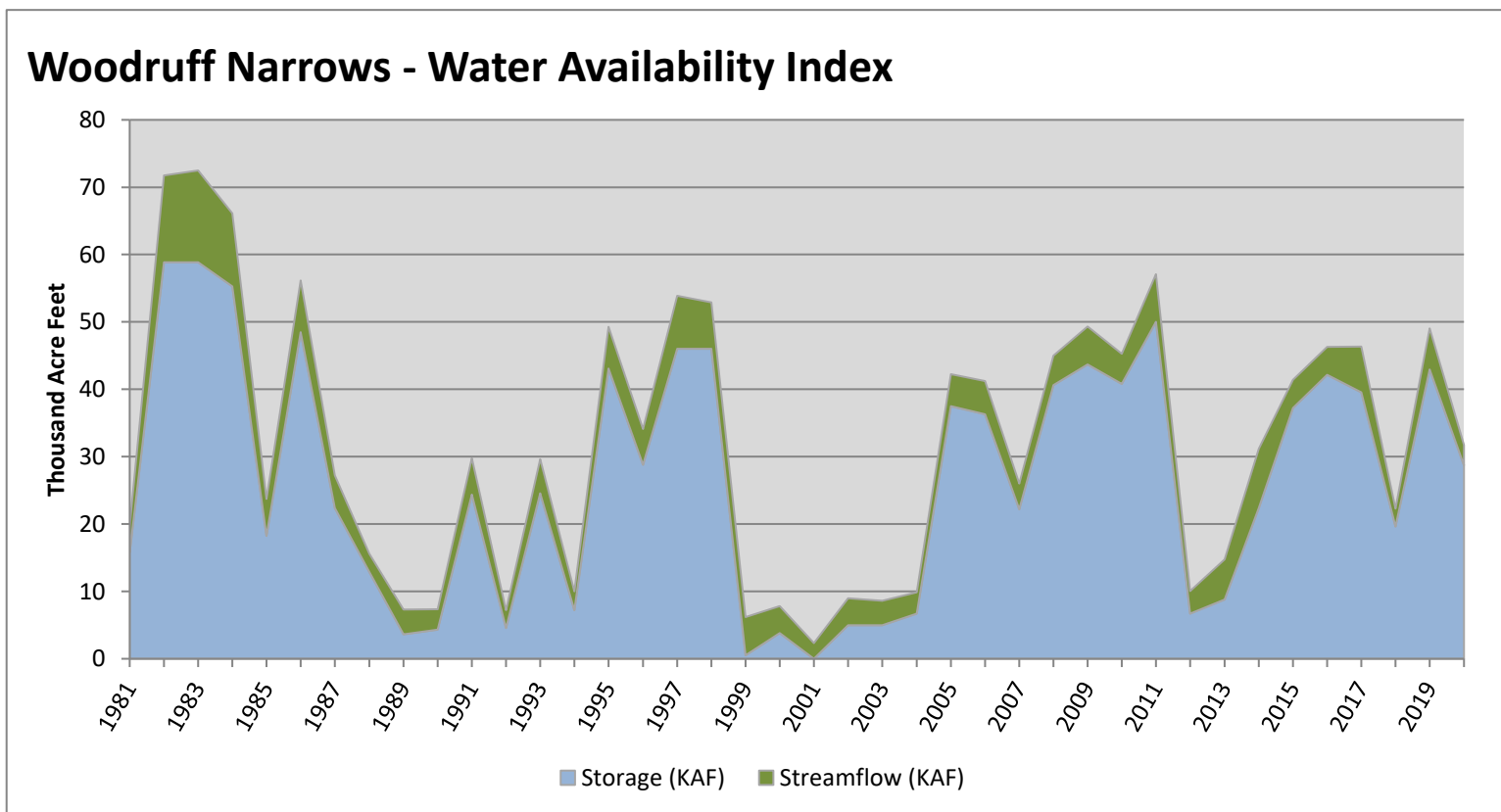


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	28.72	3.03	31.75	54	0.3	91, 14, 96, 06

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

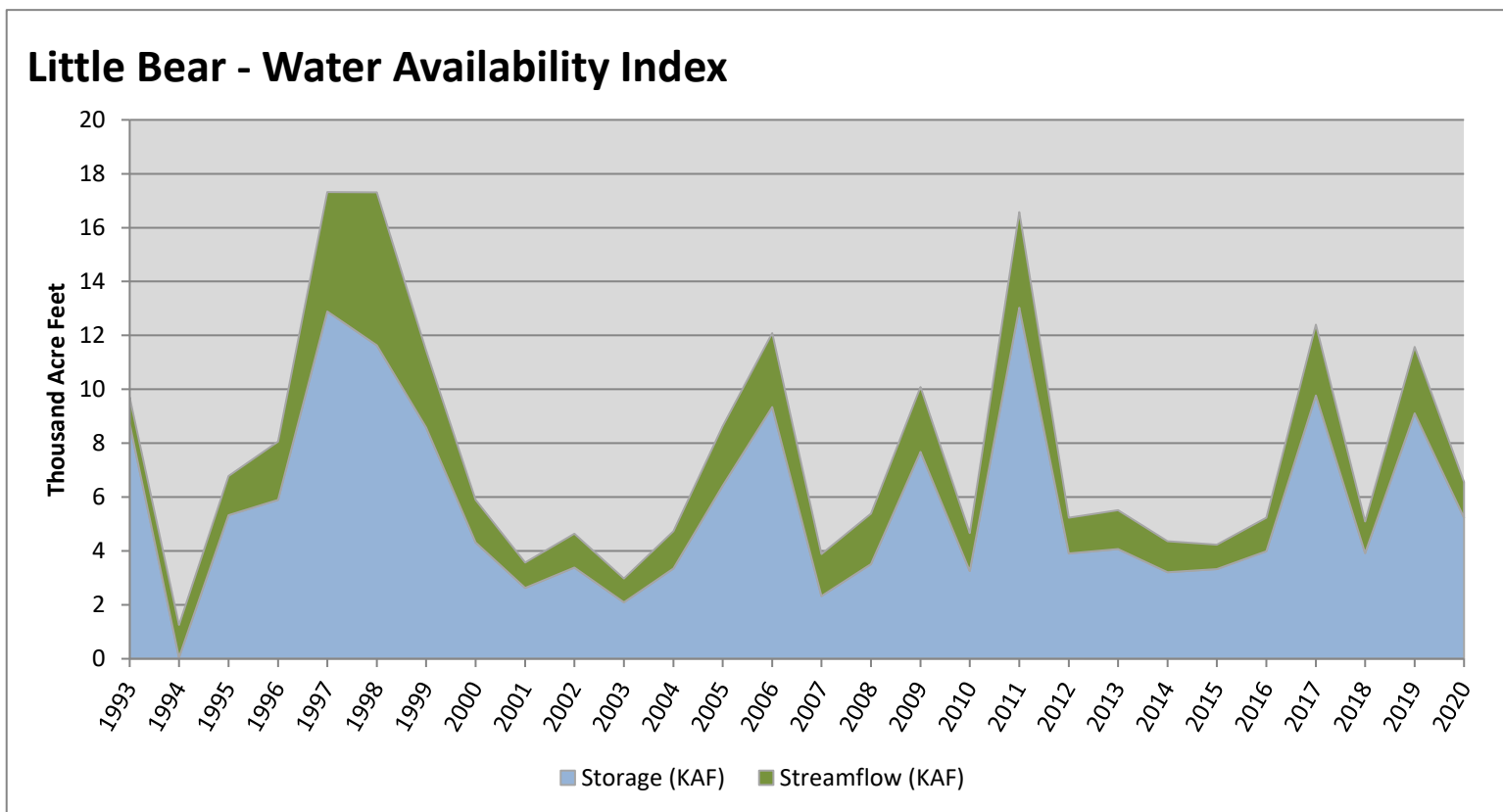


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	5.24	1.32	6.56	55	0.43	13, 00, 95, 96

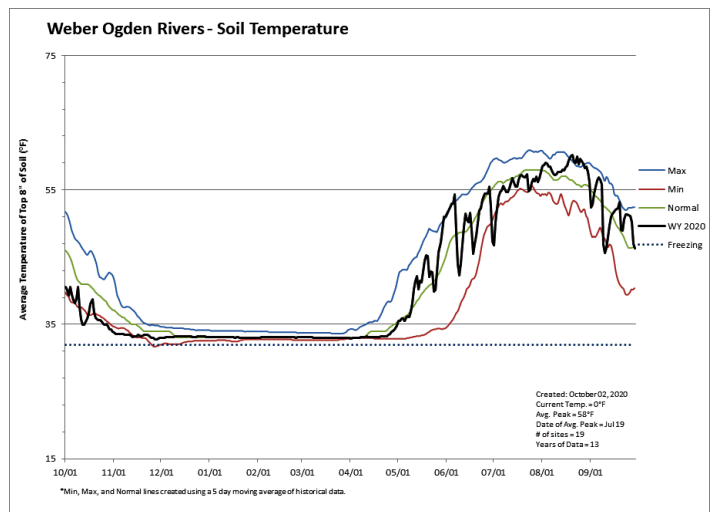
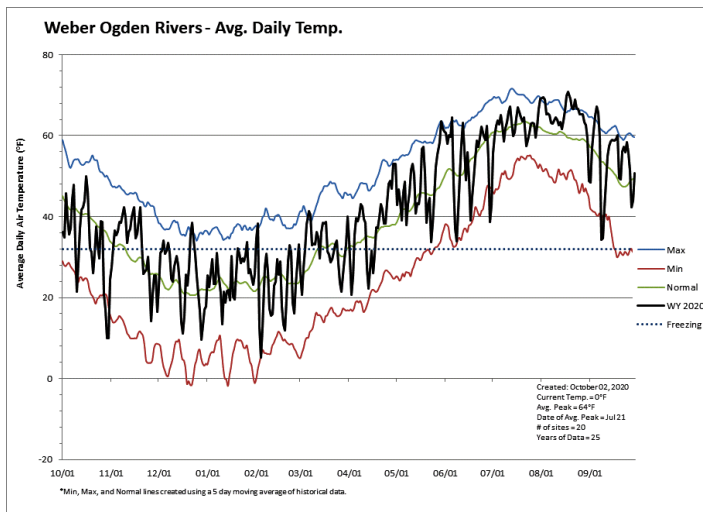
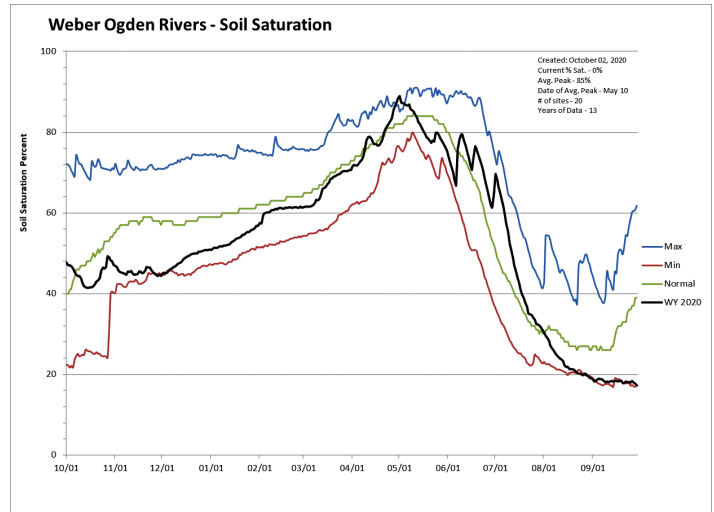
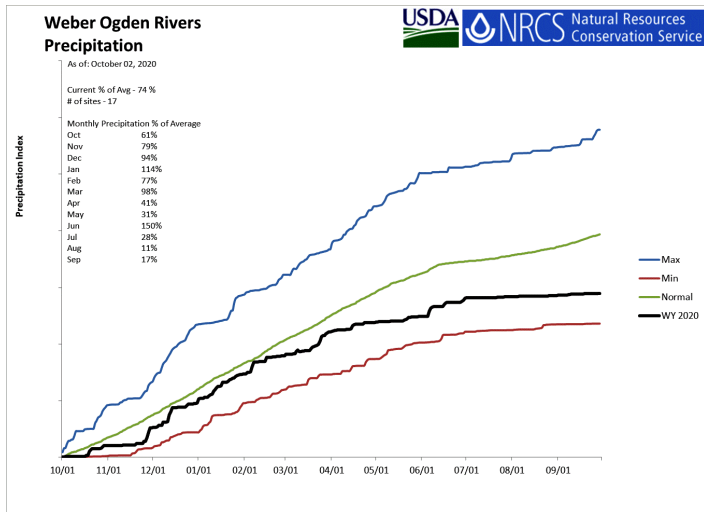
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Weber & Ogden River Basins

October 1, 2020

Precipitation in September was much below average at 17%, which brings the seasonal accumulation (Oct-Sep) to 74% of average. Soil moisture is at 17% compared to 18% last year. Reservoir storage is at 51% of capacity, compared to 72% last year. The water availability index for the Ogden River is 41% and 45% for the Weber River.

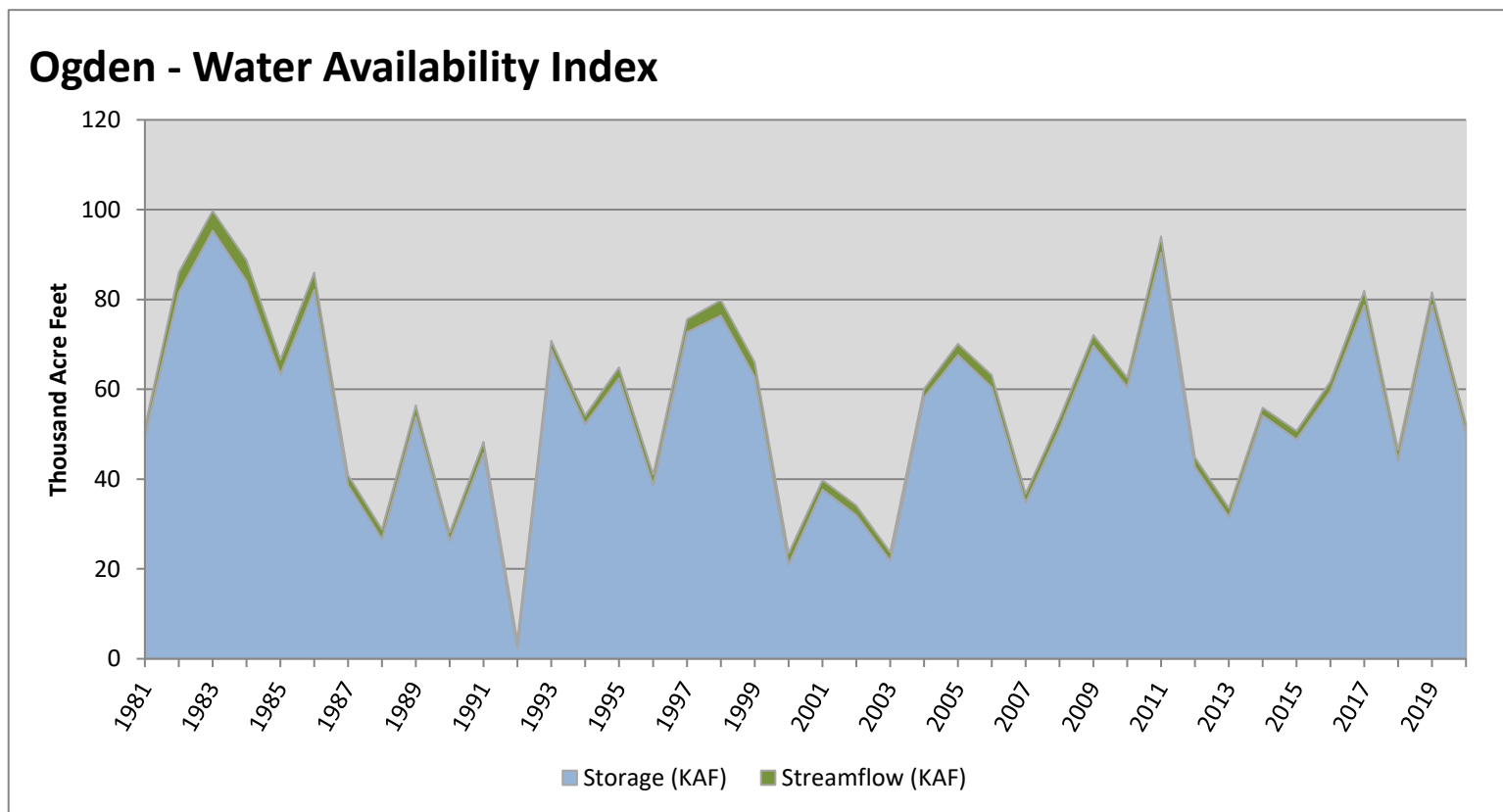


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	50.11	2.28	52.39	41	-0.71	15, 81, 08, 94

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

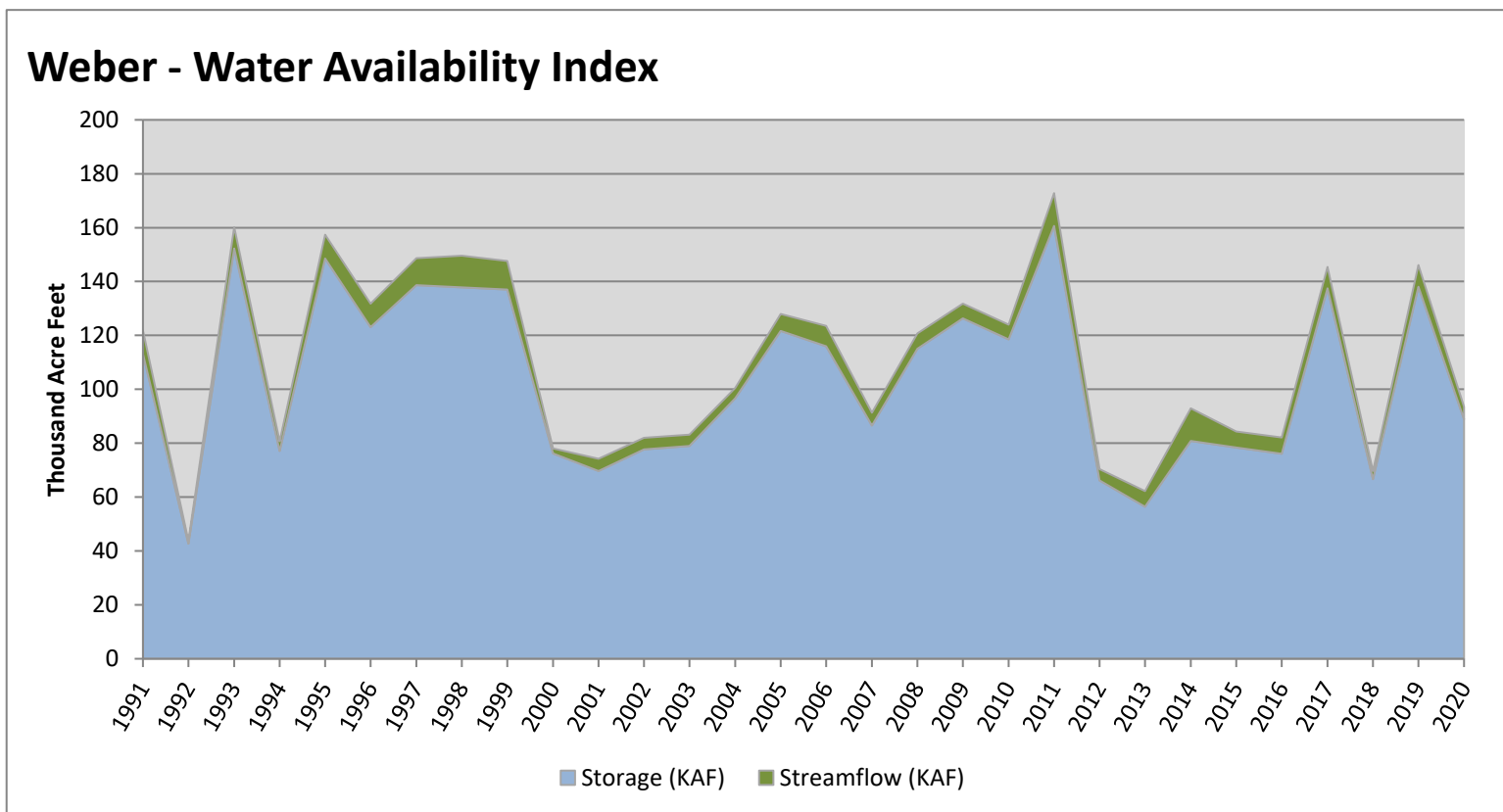


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	88.93	4.57	93.50	45	-0.4	07, 14, 04, 08

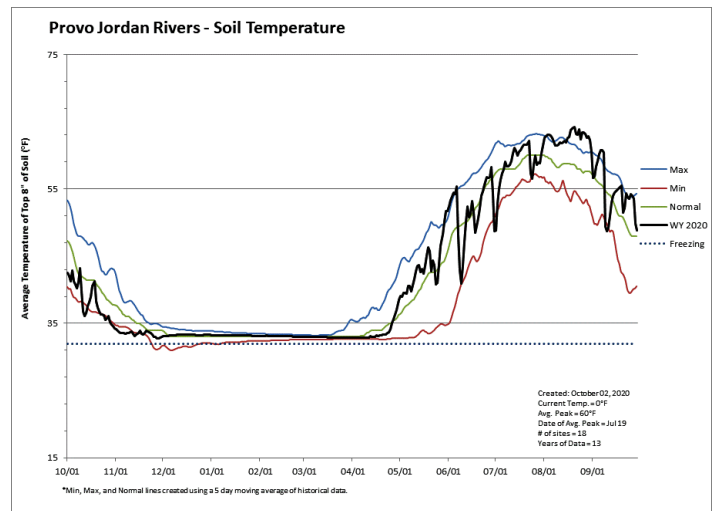
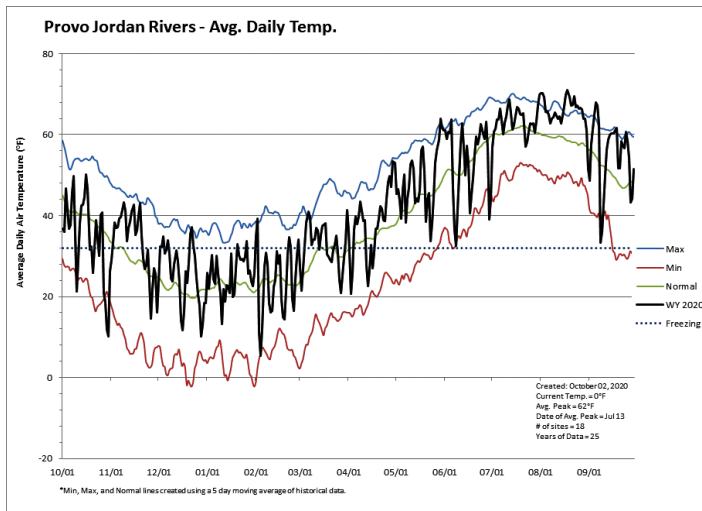
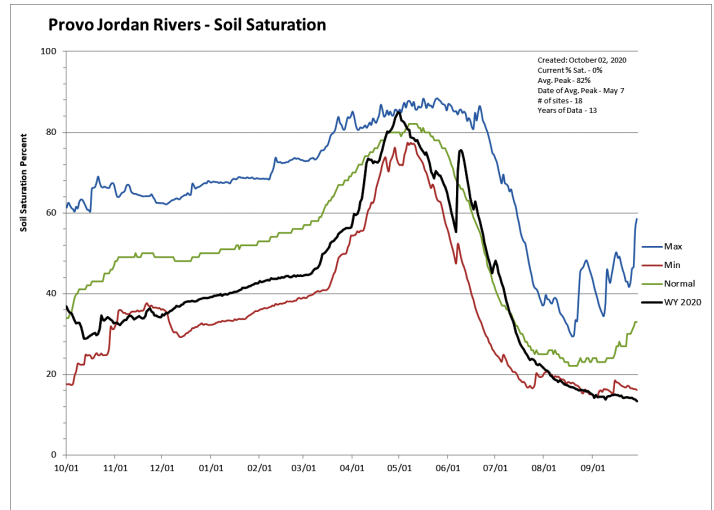
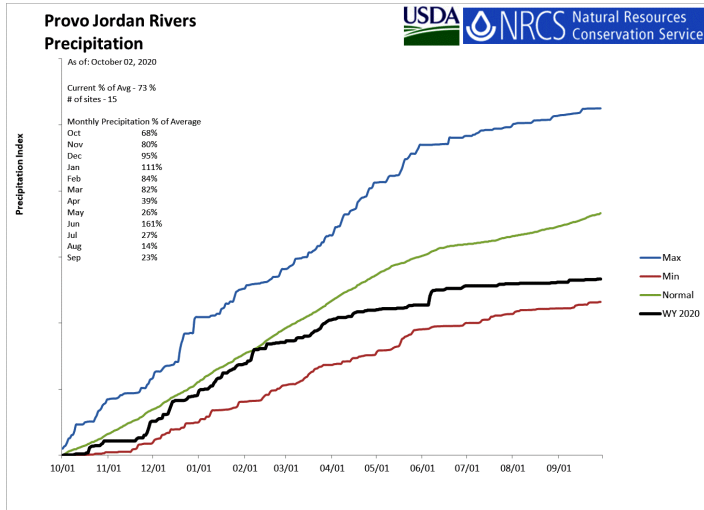
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Provo & Jordan River Basins

October 1, 2020

Precipitation in September was much below average at 22%, which brings the seasonal accumulation (Oct-Sep) to 73% of average. Soil moisture is at 13% compared to 17% last year. Reservoir storage is at 76% of capacity, compared to 84% last year. The water availability index for the Provo River is 50%.

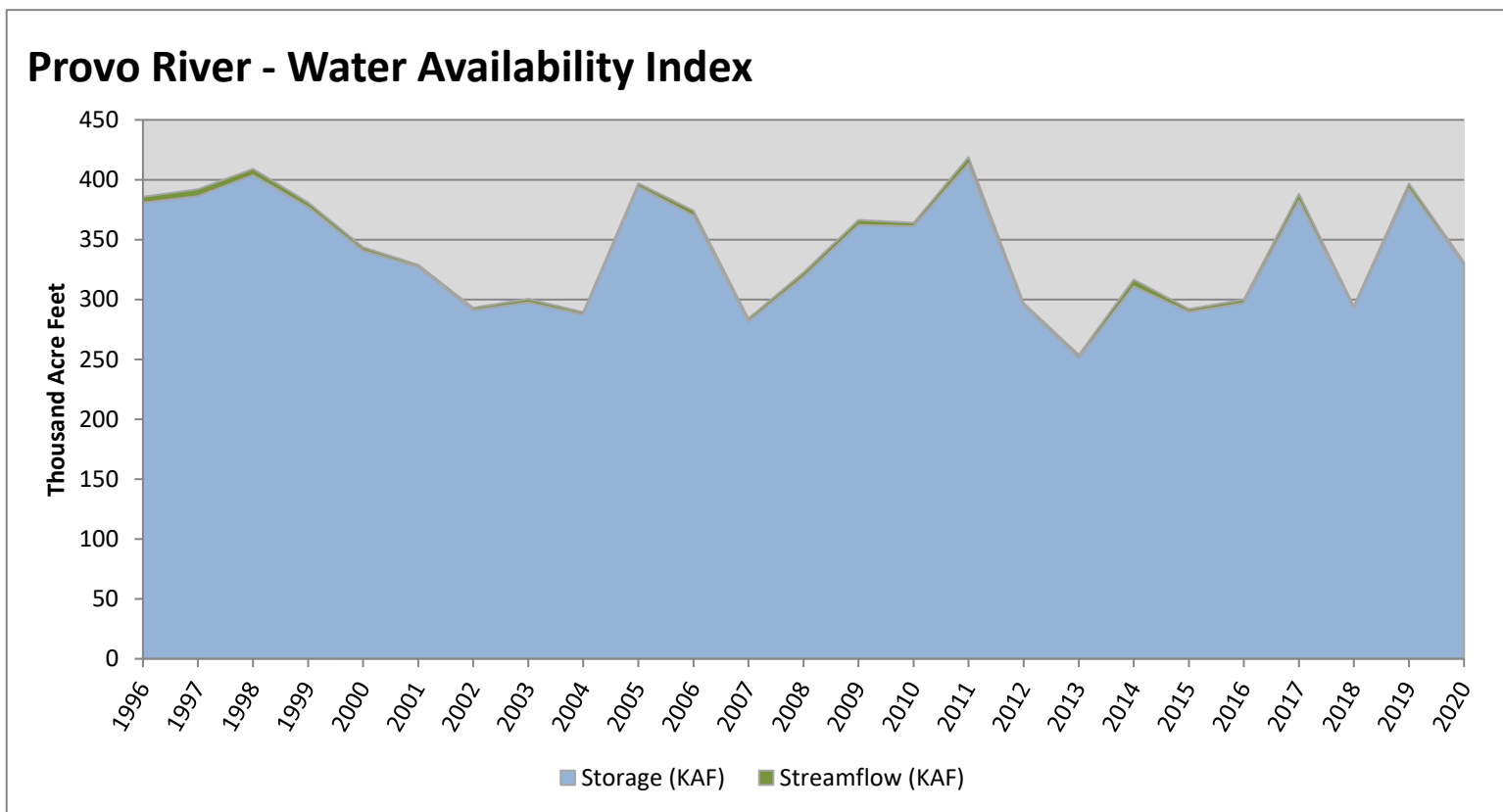


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	328.96	2.21	331.17	50	0	08, 01, 00, 10

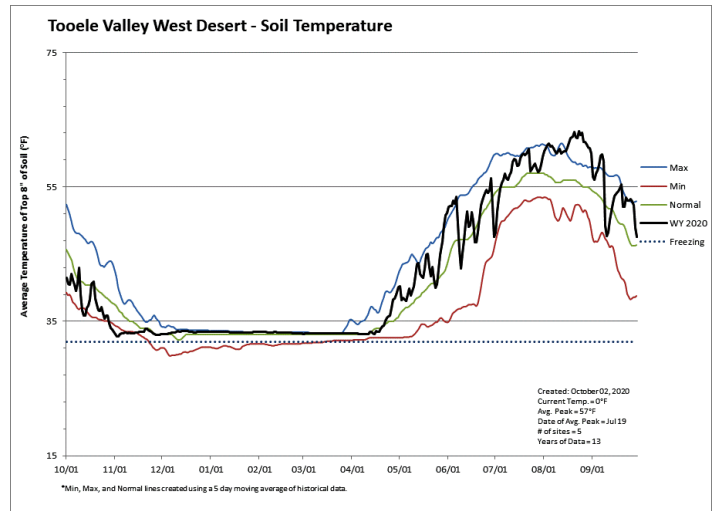
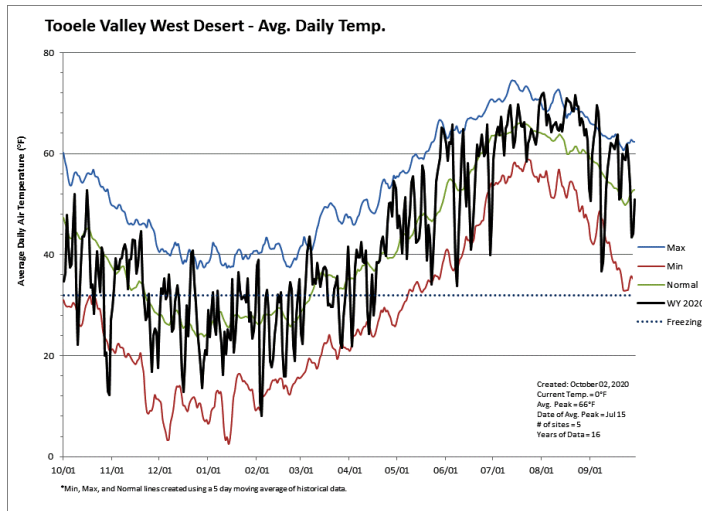
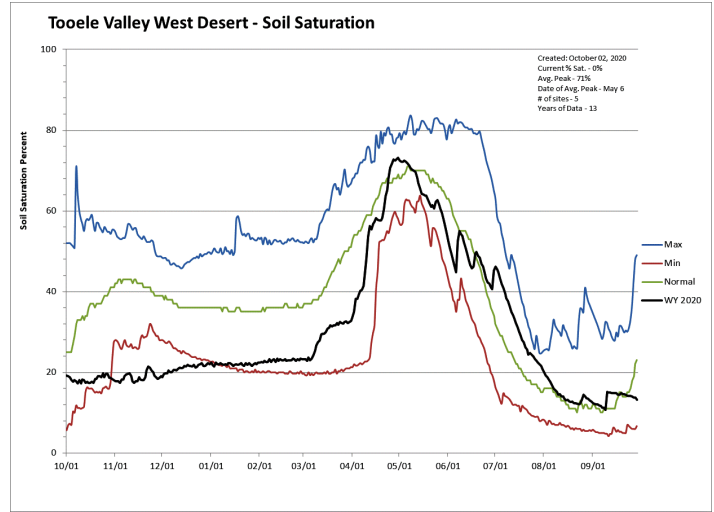
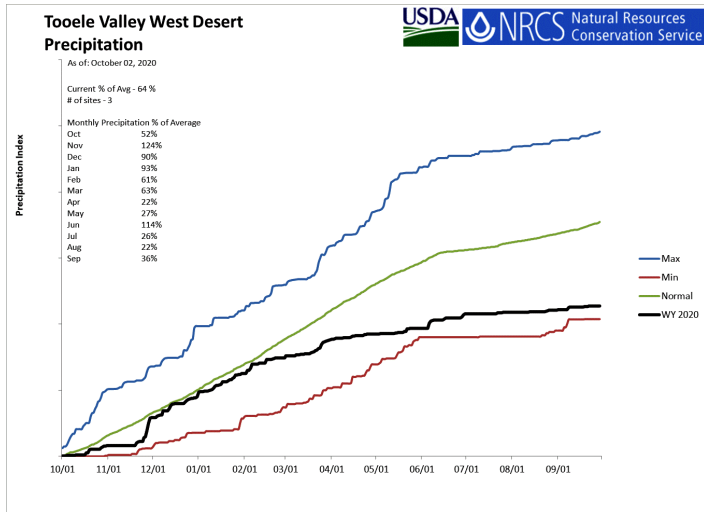
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Tooele Valley & West Desert Basins

October 1, 2020

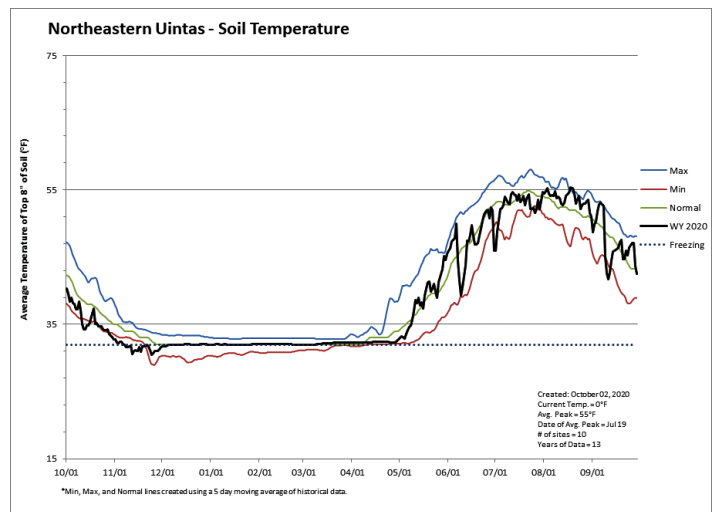
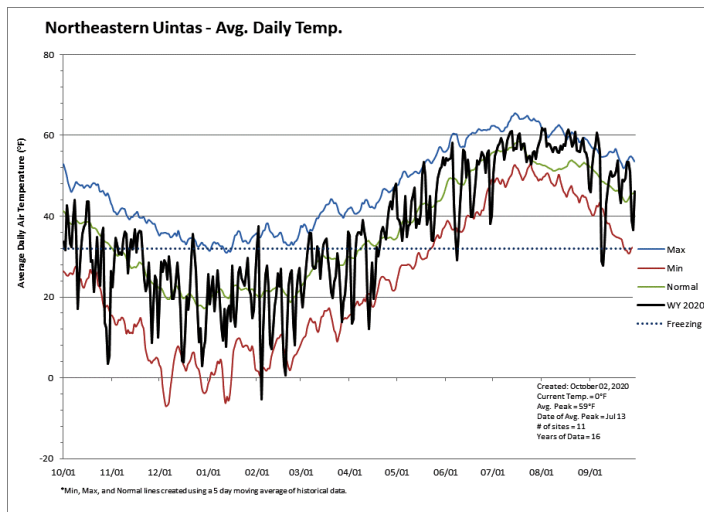
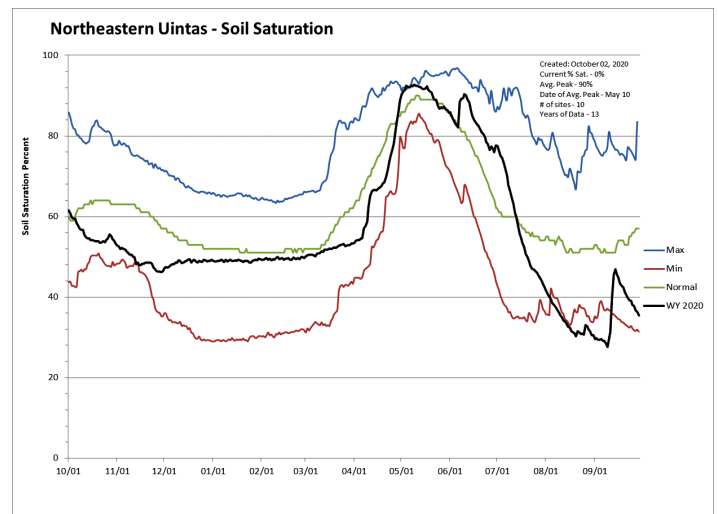
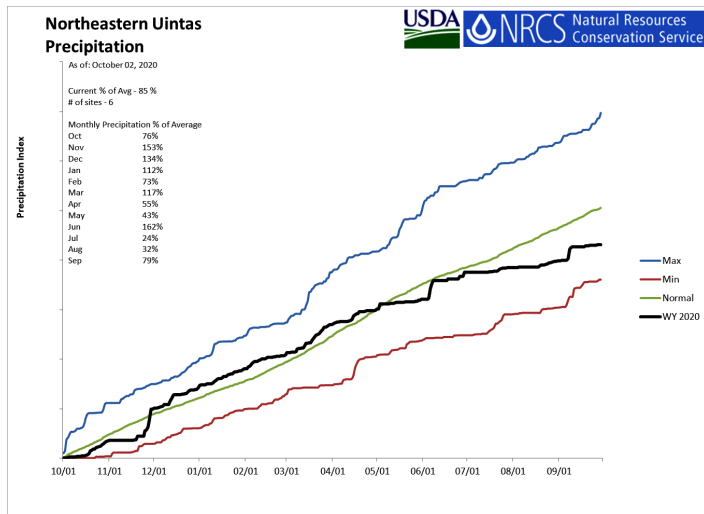
Precipitation in September was much below average at 40%, which brings the seasonal accumulation (Oct-Sep) to 65% of average. Soil moisture is at 13% compared to 7% last year. Reservoir storage is at 24% of capacity, compared to 43% last year.



Northeastern Uinta Basin

October 1, 2020

Precipitation in September was below average at 82%, which brings the seasonal accumulation (Oct-Sep) to 86% of average. Soil moisture is at 34% compared to 31% last year. Reservoir storage is at 84% of capacity, compared to 90% last year. The water availability index for Blacks Fork is 5% and 19% for Smiths Creek.

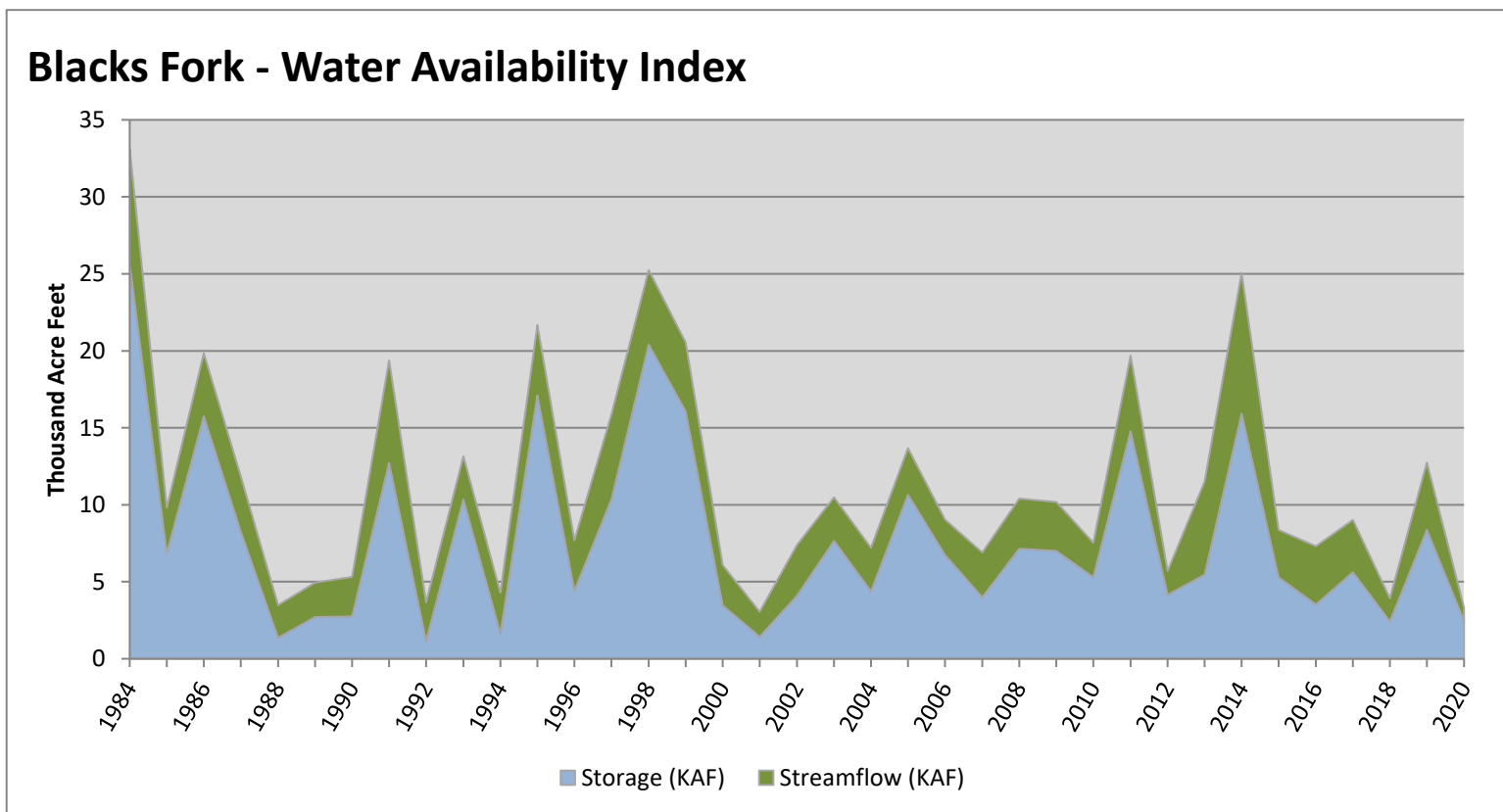


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	2.47	0.84	3.31	5	-3.73	01, 88, 92, 18

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

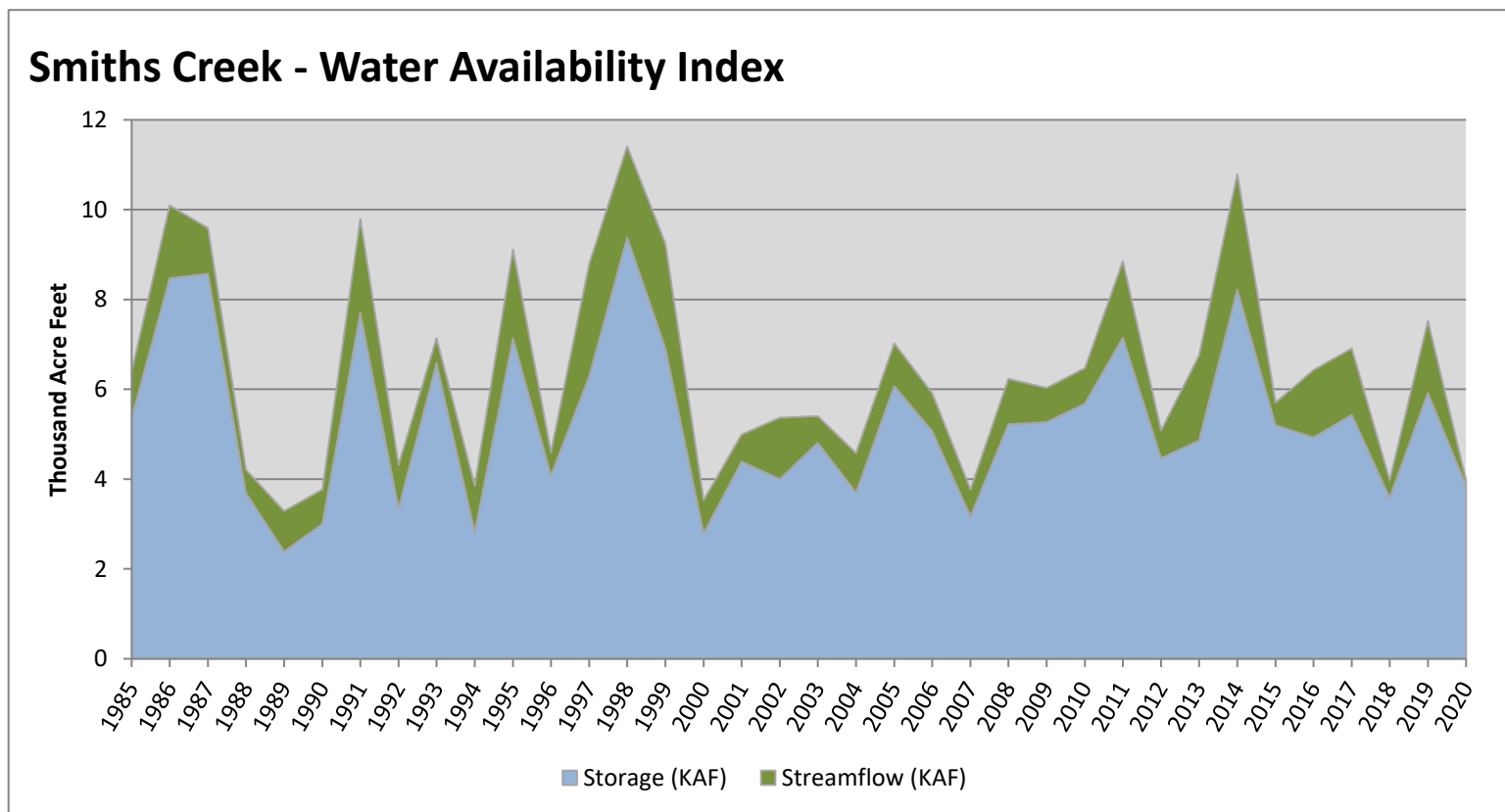


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	3.85	0.13	3.98	19	-2.59	94, 18, 88, 92

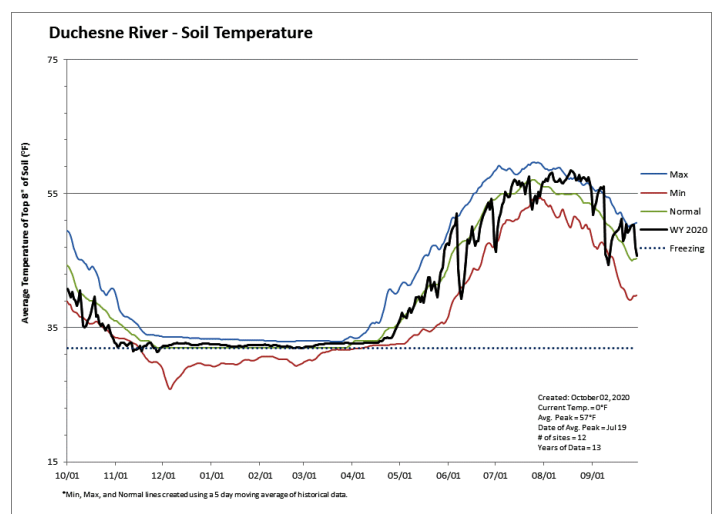
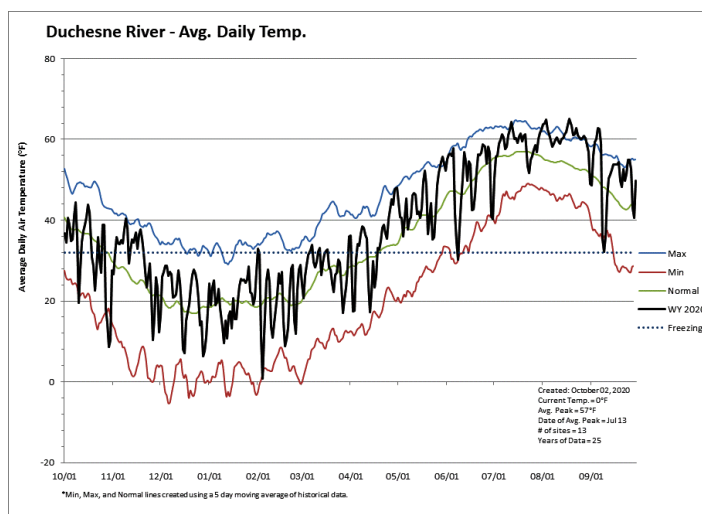
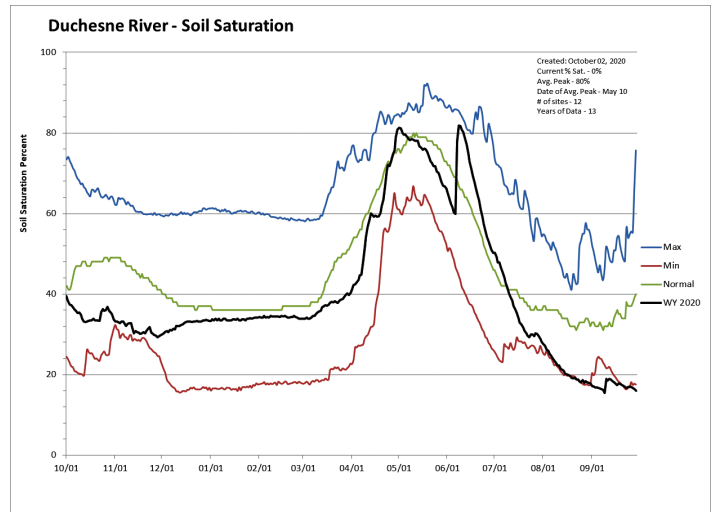
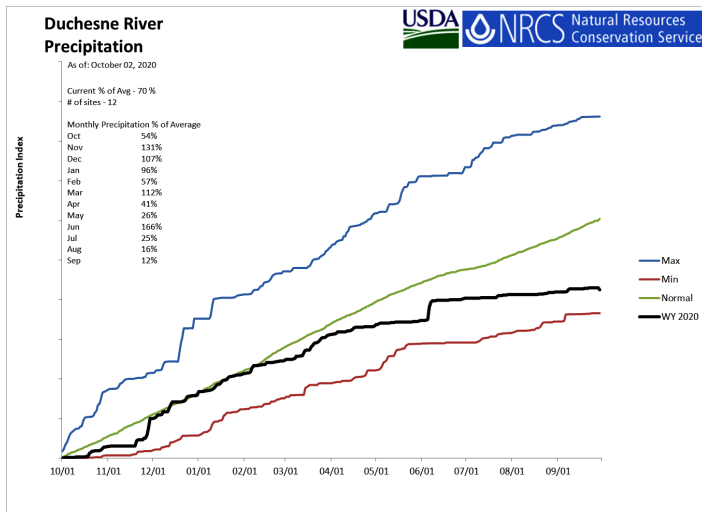
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Duchesne River Basin

October 1, 2020

Precipitation in September was much below average at 21%, which brings the seasonal accumulation (Oct-Sep) to 71% of average. Soil moisture is at 19% compared to 18% last year. Reservoir storage is at 77% of capacity, compared to 84% last year. The water availability index for the Western Uintas is 38% and 17% for the Eastern Uintas.

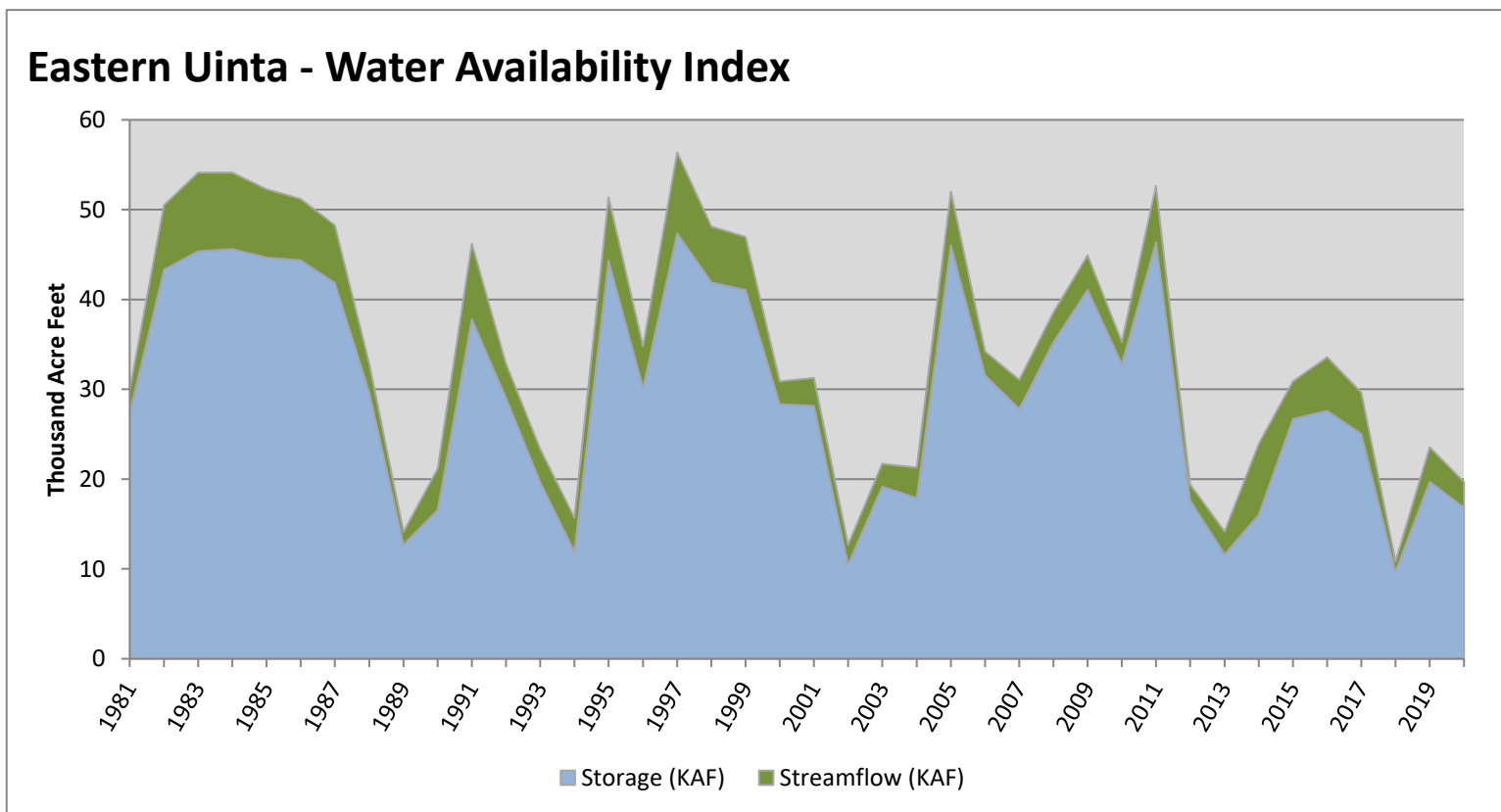


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uinta	16.81	2.89	19.70	17	-2.74	94, 12, 90, 04

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

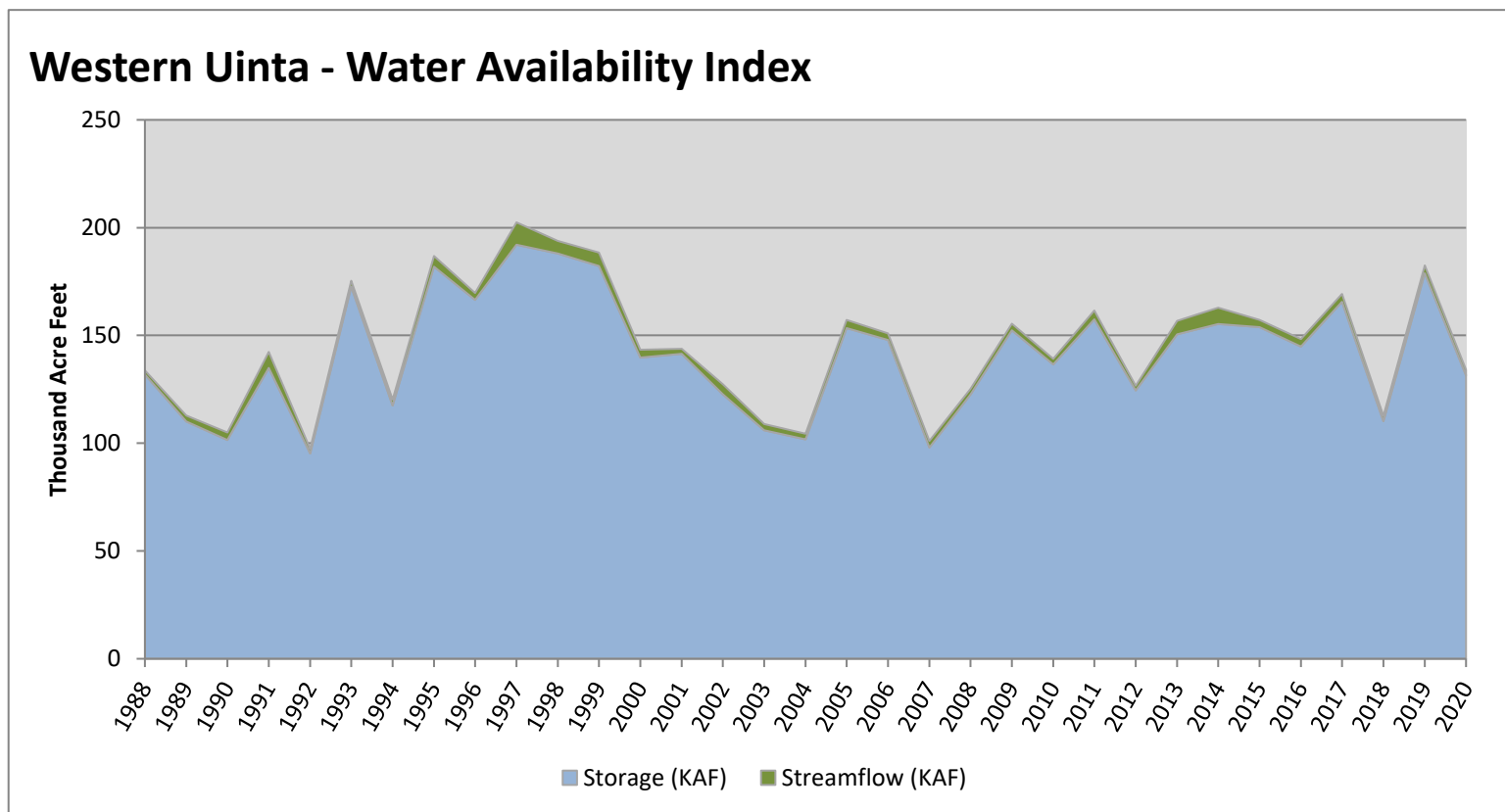


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uinta	131.42	2.62	134.04	38	-0.98	02, 88, 10, 91

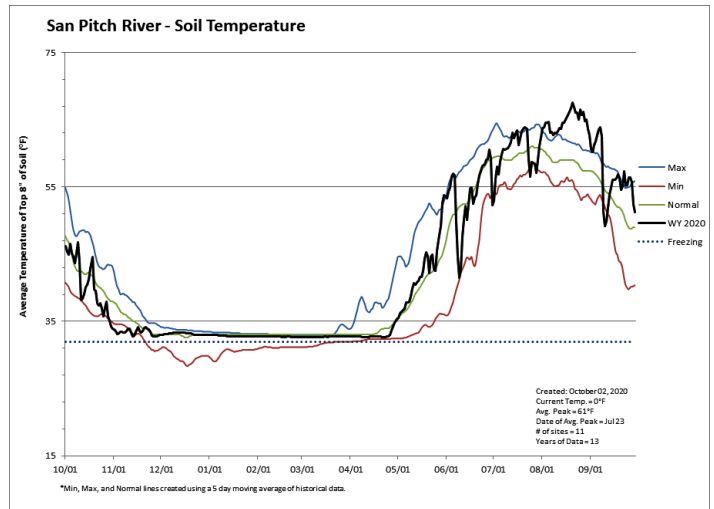
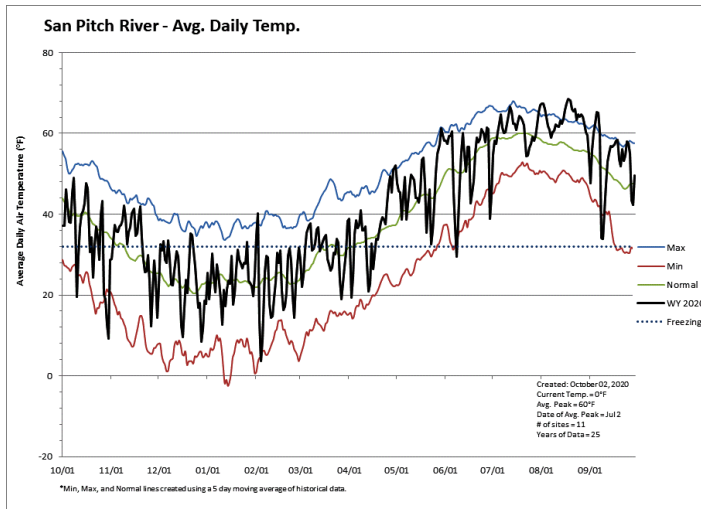
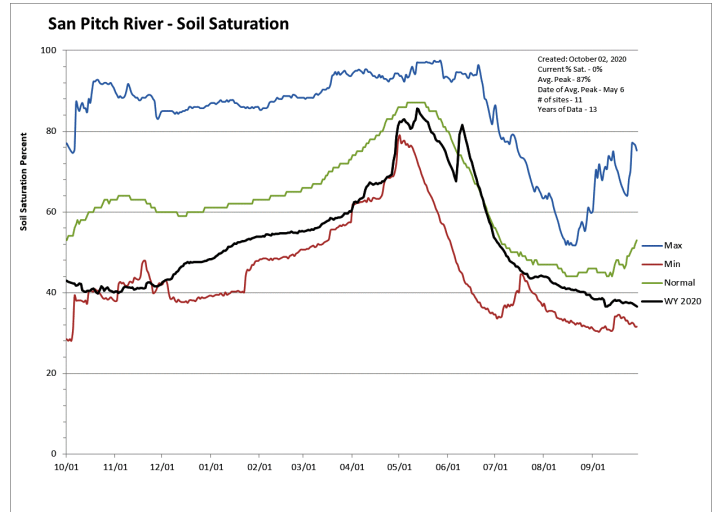
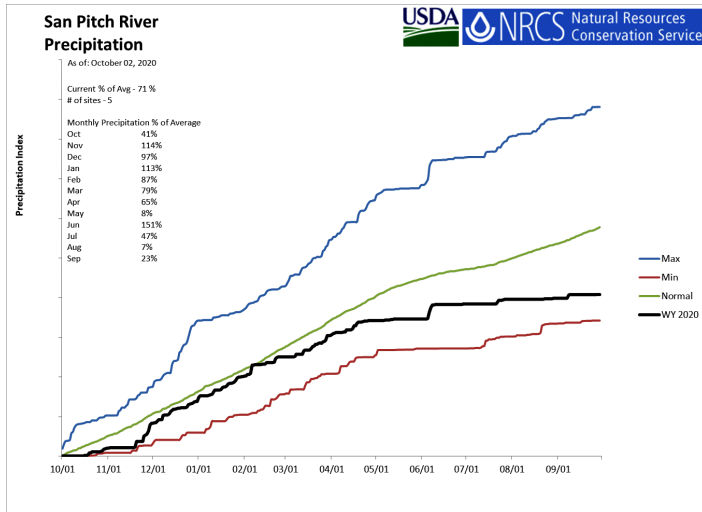
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



San Pitch River Basin

October 1, 2020

Precipitation in September was much below average at 25%, which brings the seasonal accumulation (Oct-Sep) to 71% of average. Soil Moisture is at 36% compared to 40% last year. Reservoir storage is at 0% of capacity, compared to 28% last year. The water availability index for the San Pitch is 15%.

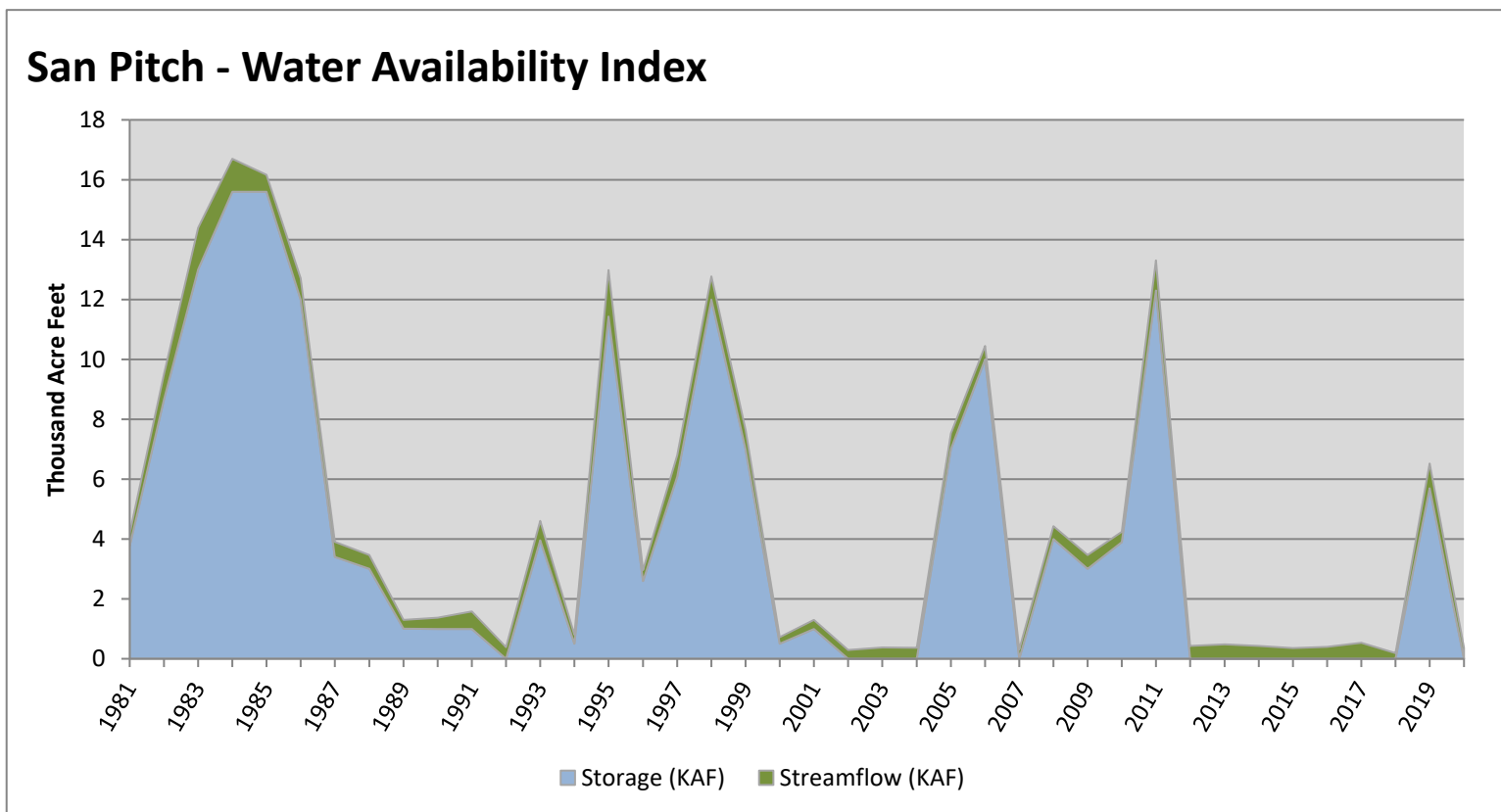


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	0.00	0.37	0.37	15	-2.95	15, 04, 03, 92

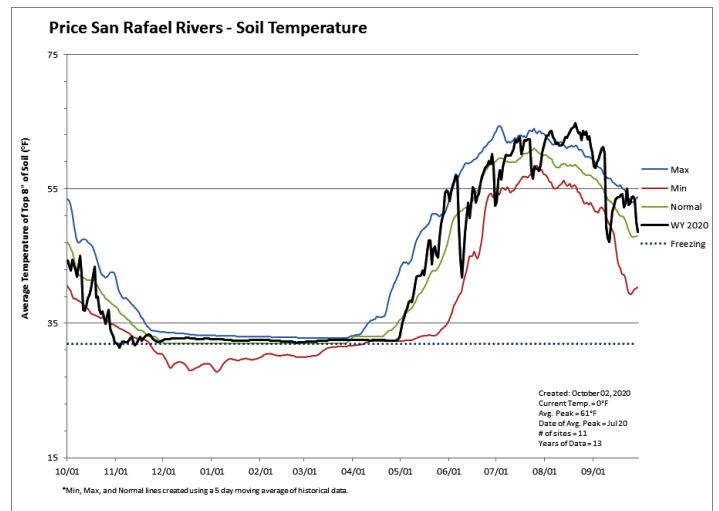
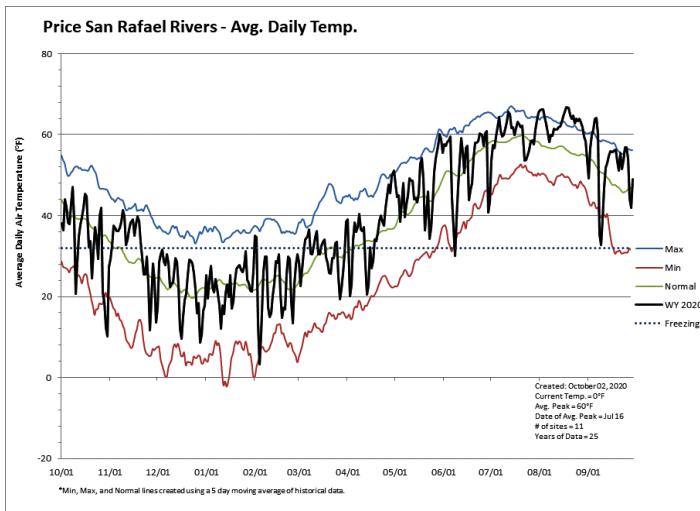
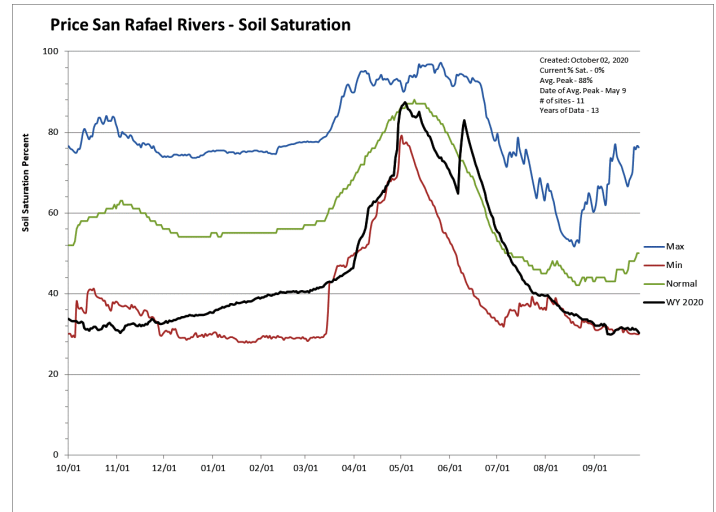
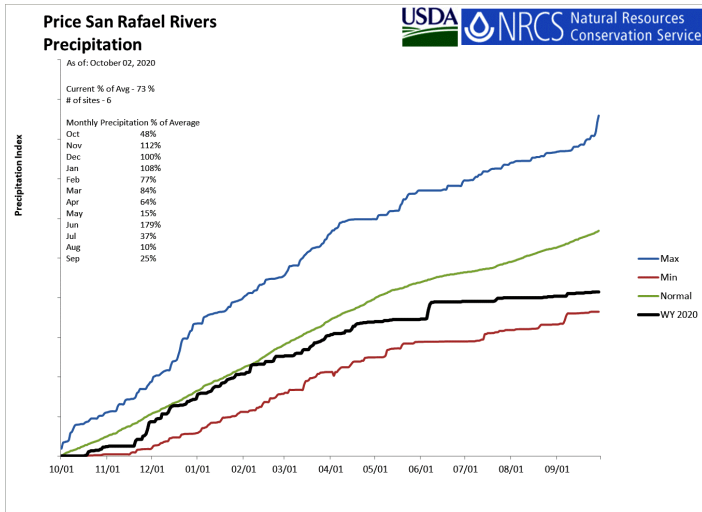
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Price & San Rafael Basins

October 1, 2020

Precipitation in September was much below average at 24%, which brings the seasonal accumulation (Oct-Sep) to 72% of average. Soil moisture is at 31% compared to 34% last year. Reservoir storage is at 53% of capacity, compared to 71% last year. The water availability index for the Price River is 66%, and 37% for Joe's Valley.

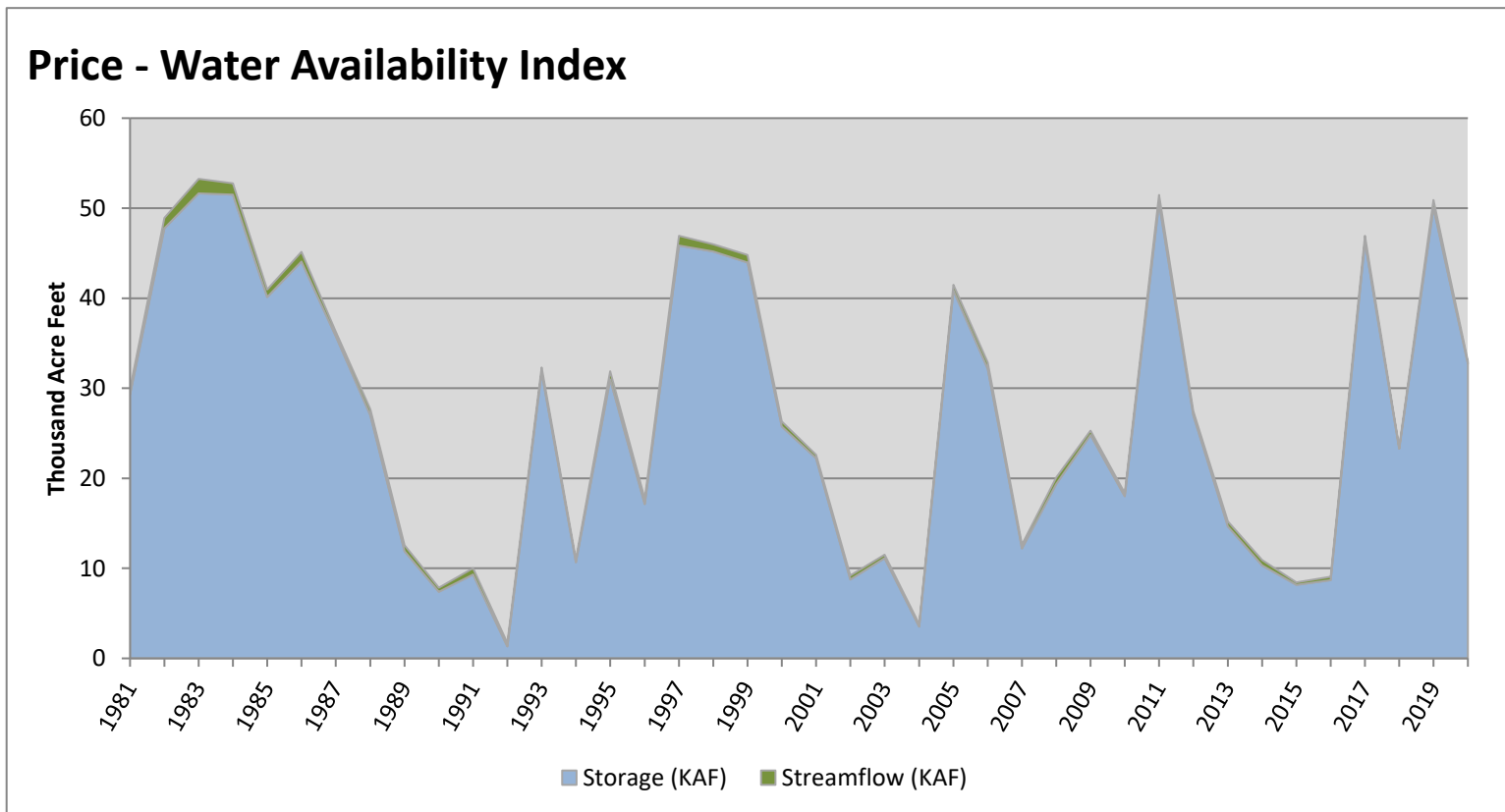


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	32.73	0.27	33.00	66	1.32	93, 06, 87, 85

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

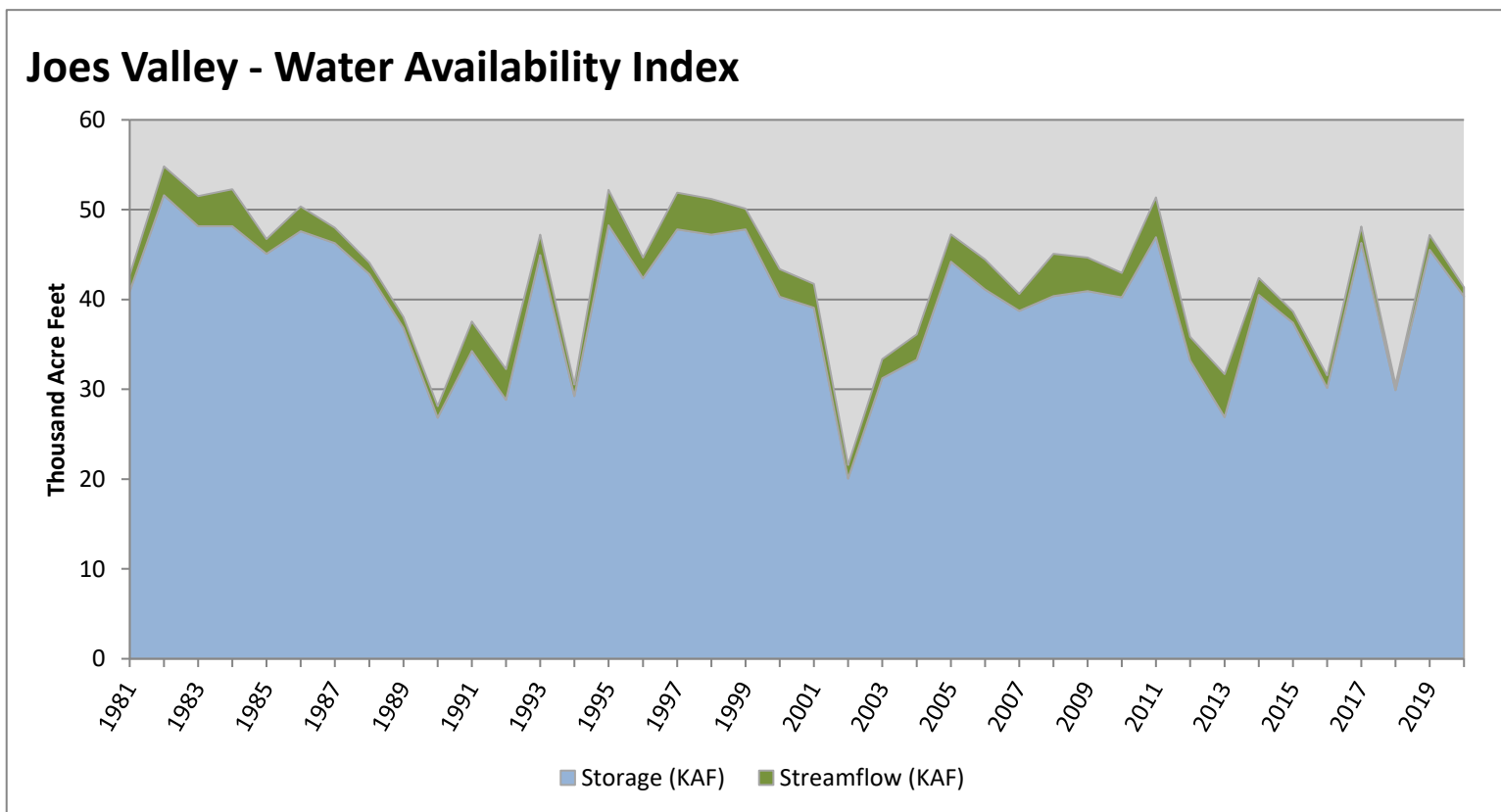


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joos Valley	40.35	1.02	41.37	37	-1.12	15, 07, 01, 14

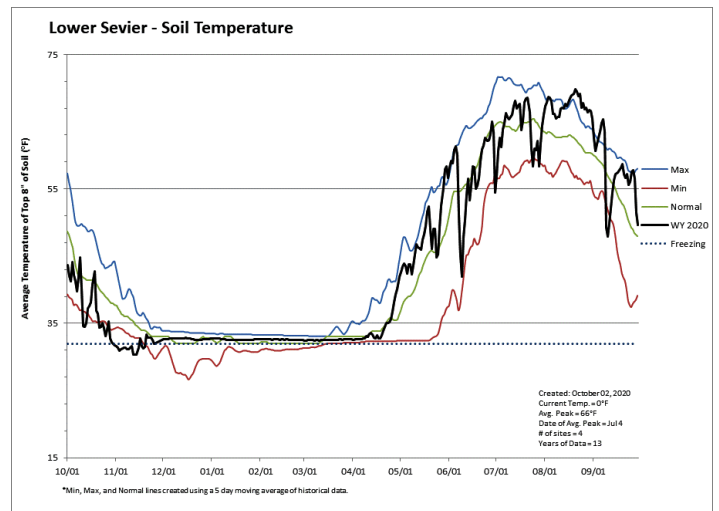
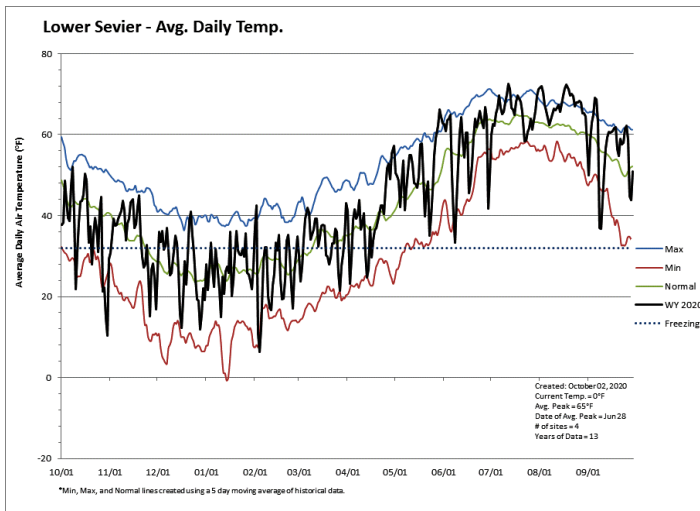
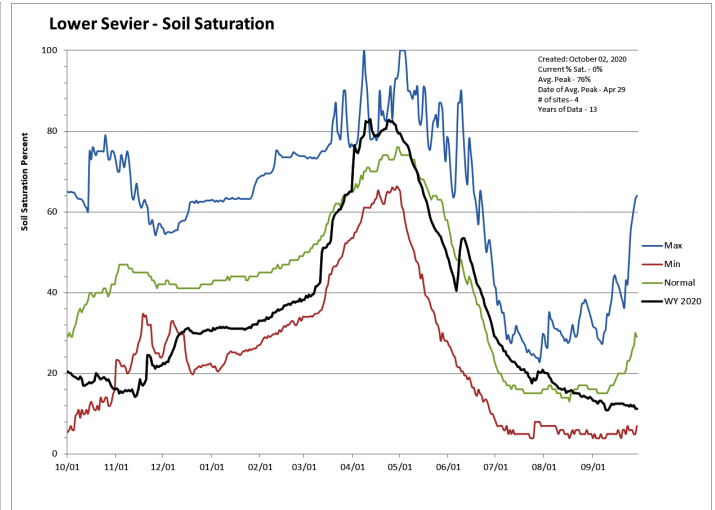
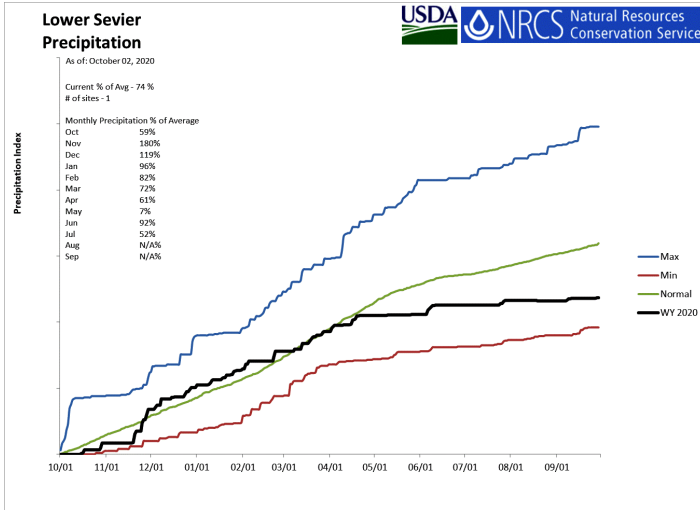
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Lower Sevier Basin

October 1, 2020

Precipitation in September was much below average at 31%, which brings the seasonal accumulation (Oct-Sep) to 74% of average. Soil moisture is at 11% compared to 17% last year. Reservoir storage is at 18% of capacity, compared to 34% last year. The water availability index for the Lower Sevier is 22%.

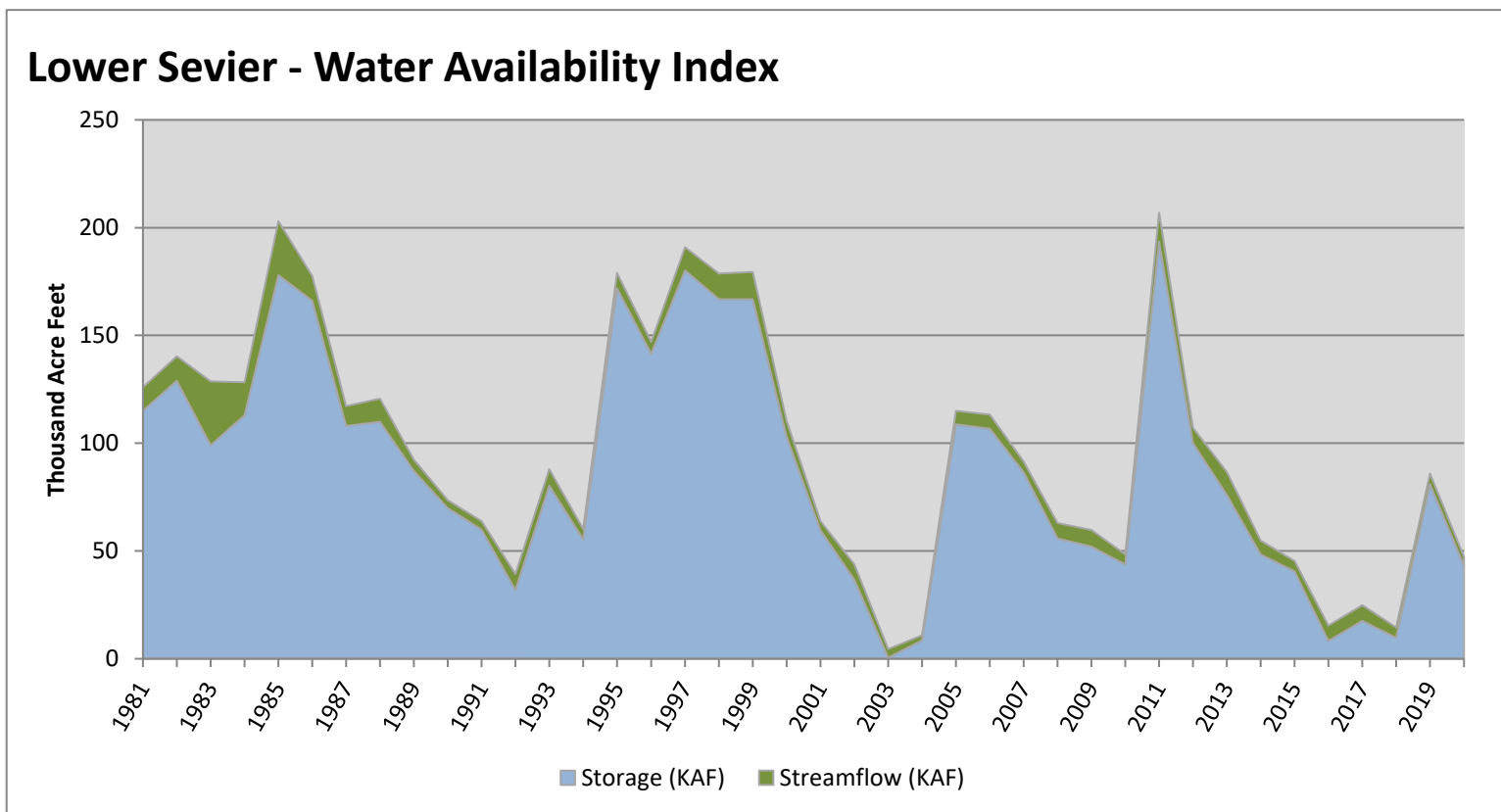


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	43.17	4.10	47.27	22	-2.34	02, 15, 10, 14

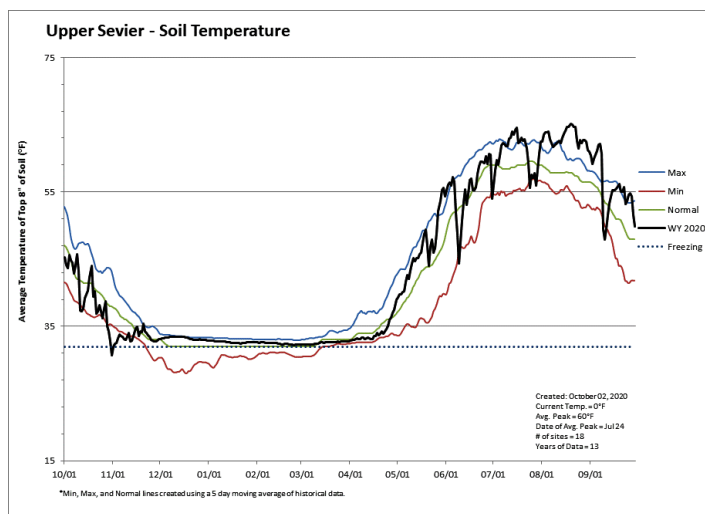
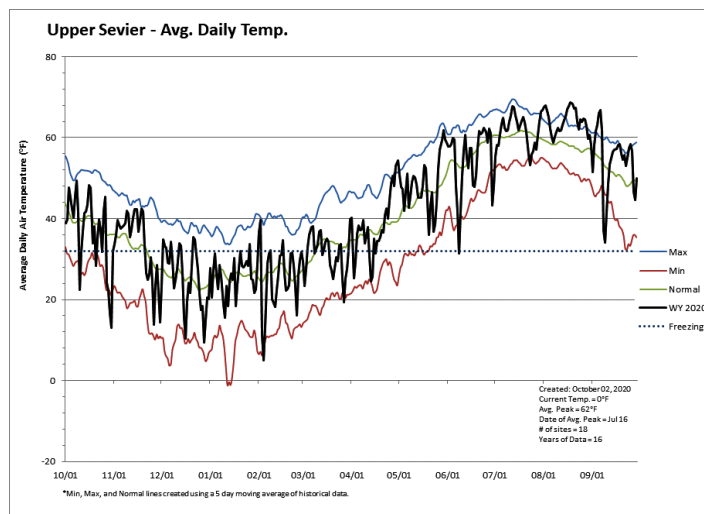
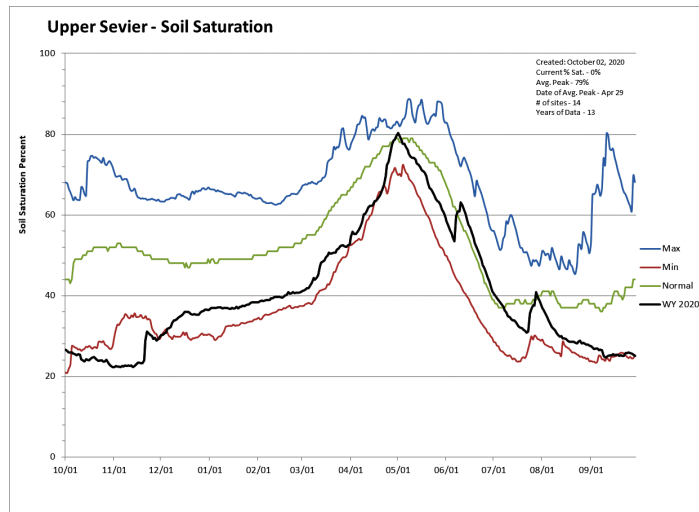
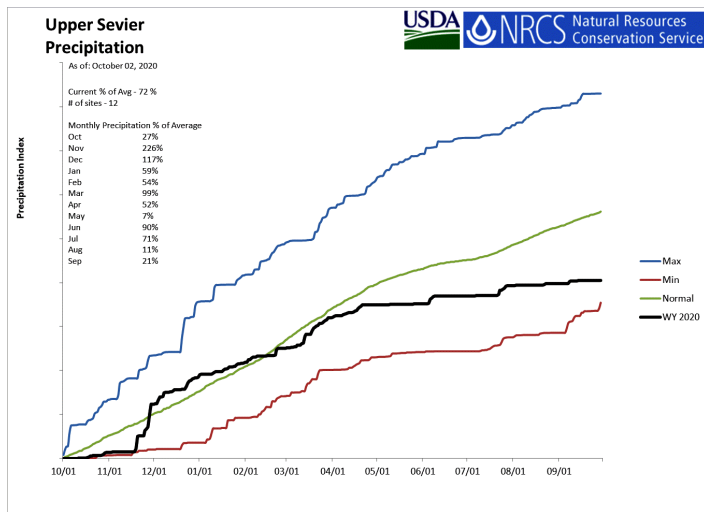
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Upper Sevier Basin

October 1, 2020

Precipitation in September was much below average at 24%, which brings the seasonal accumulation (Oct-Sep) to 73% of average. Soil moisture is at 25% compared to 26% last year. Reservoir storage is at 29% of capacity, compared to 58% last year. The water availability index for the Upper Sevier is 34%.

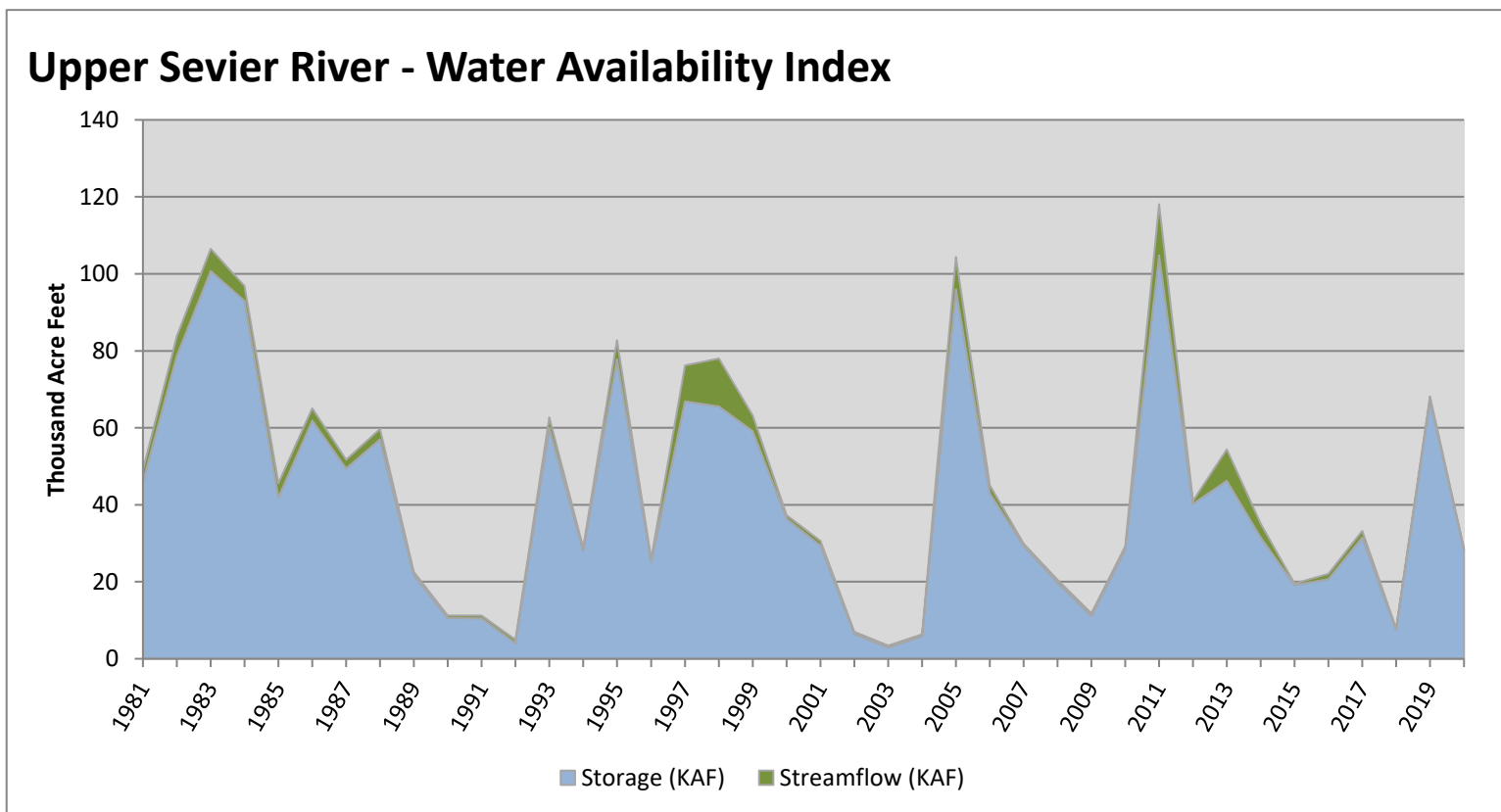


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	28.26	0.39	28.65	34	-1.32	89, 96, 94, 10

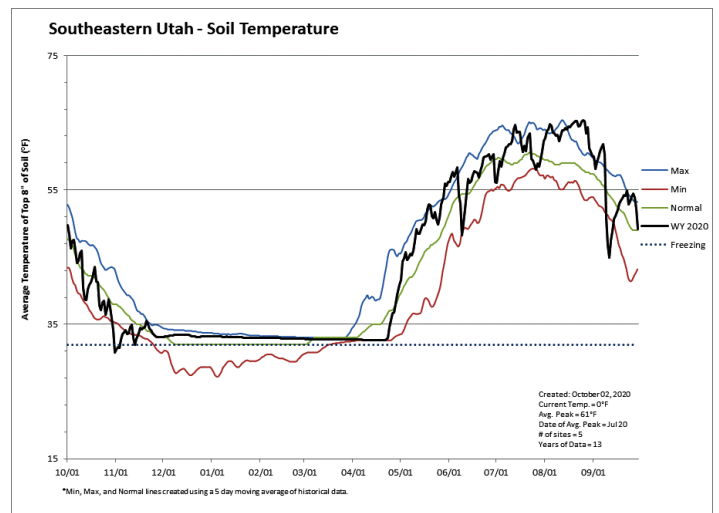
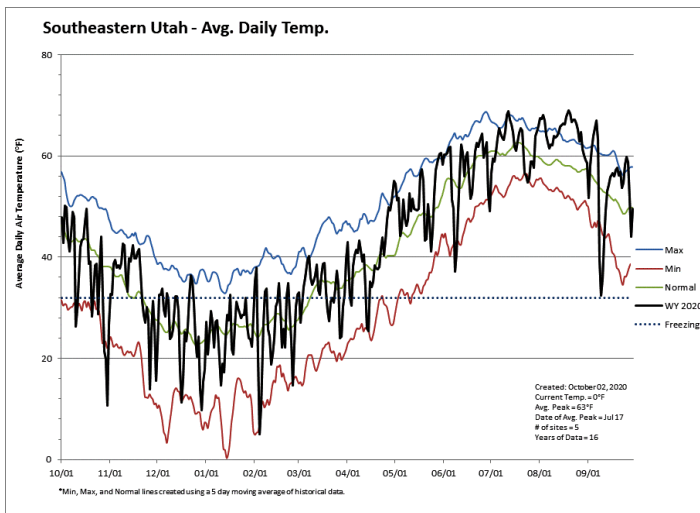
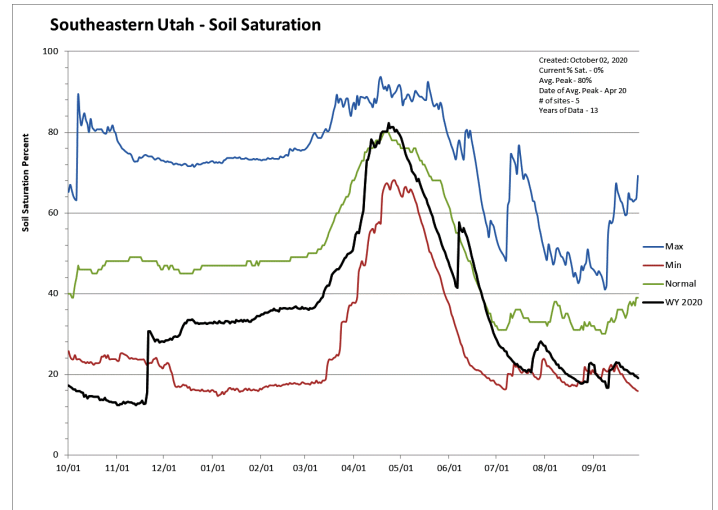
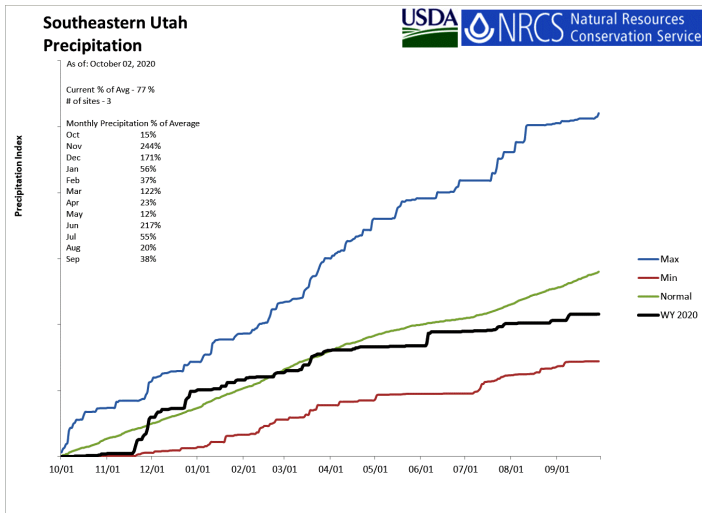
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southeastern Utah

October 1, 2020

Precipitation in September was much below average at 37%, which brings the seasonal accumulation (Oct-Sep) to 77% of average. Soil moisture is at 19% compared to 15% last year. Reservoir storage is at 19% of capacity, compared to 77% last year. The water availability index for Moab is 24%.

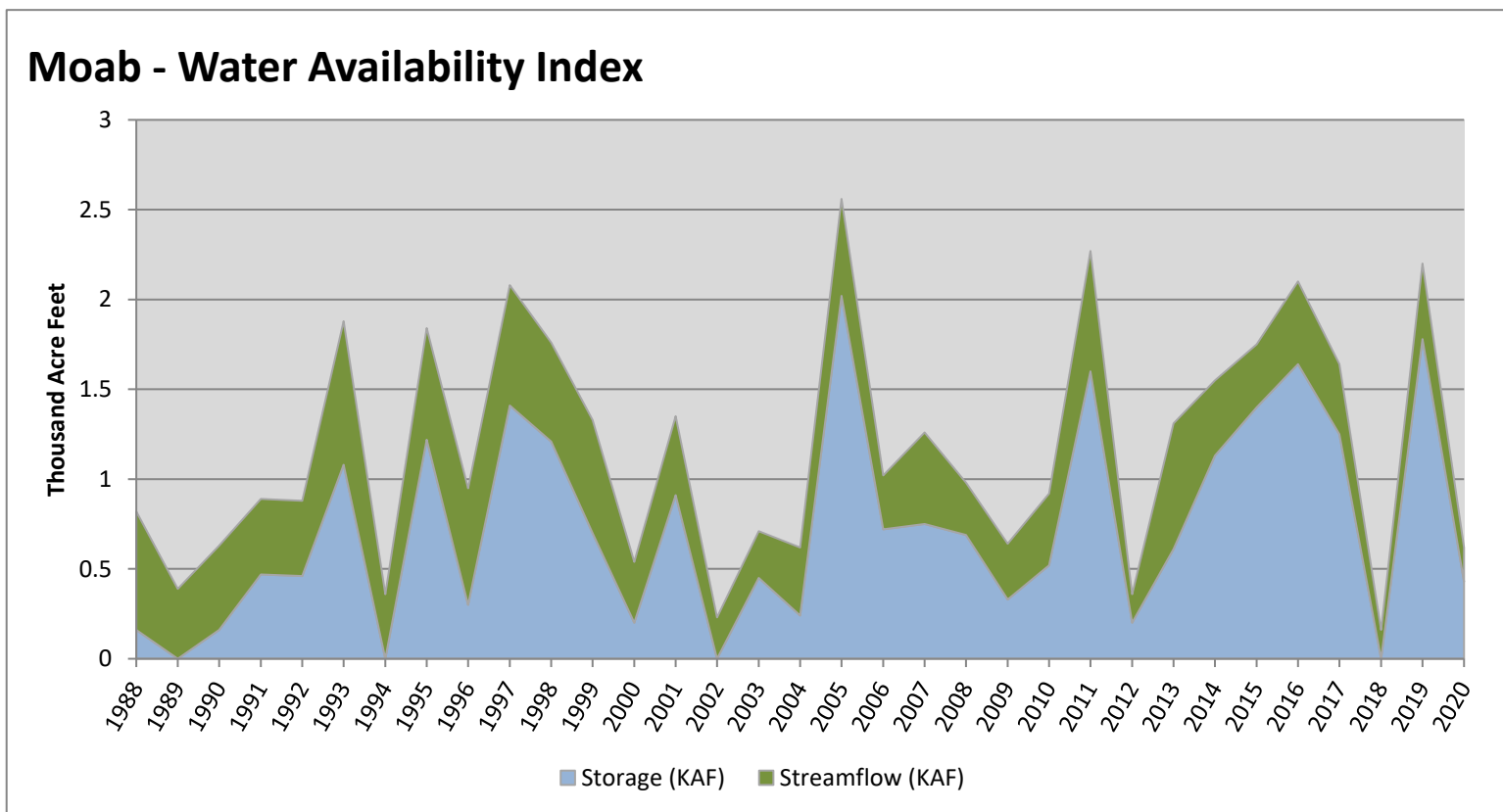


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	0.43	0.19	0.62	24	-2.21	00, 04, 90, 09

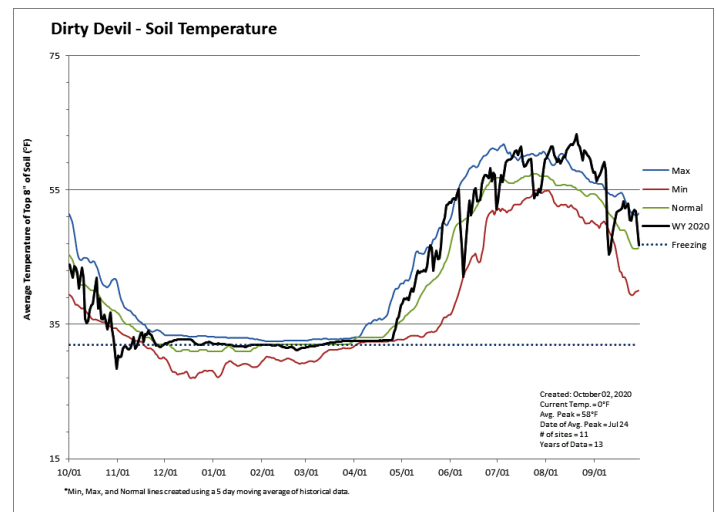
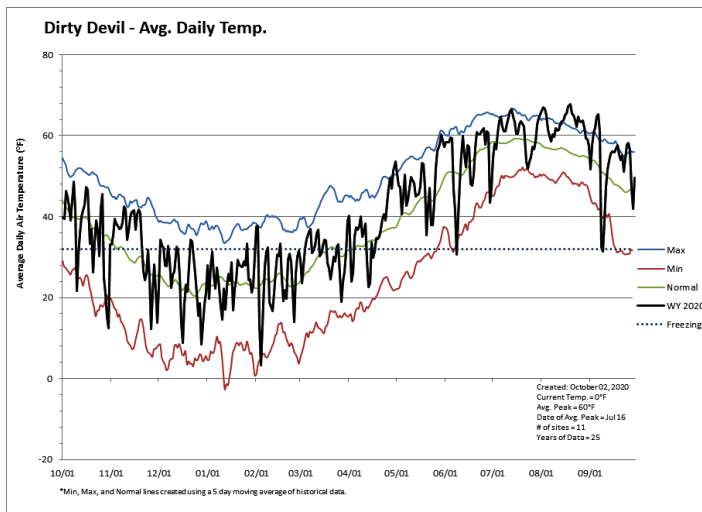
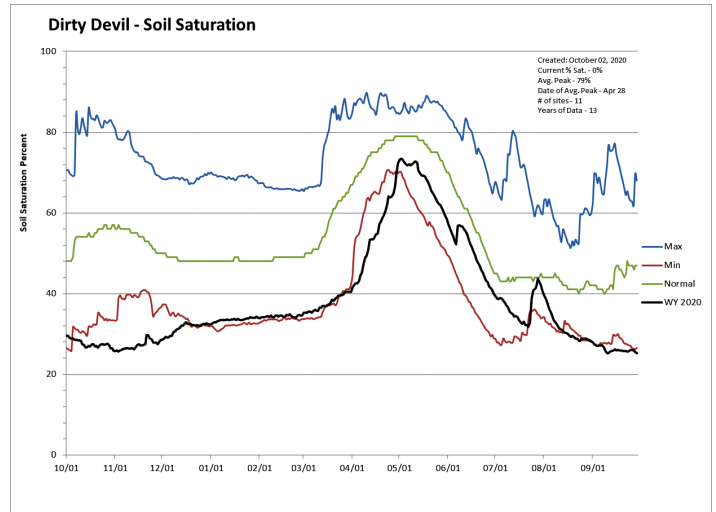
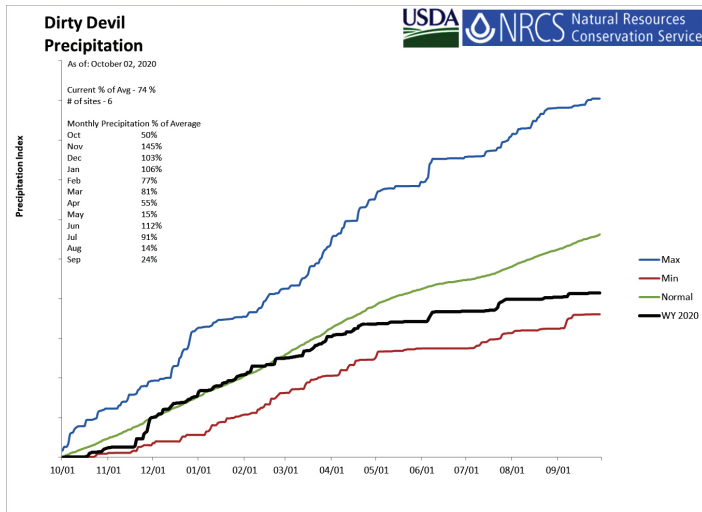
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Dirty Devil Basin

October 1, 2020

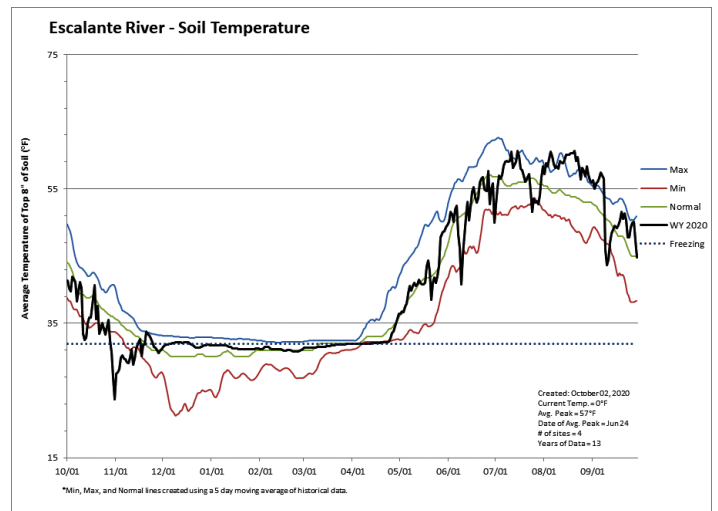
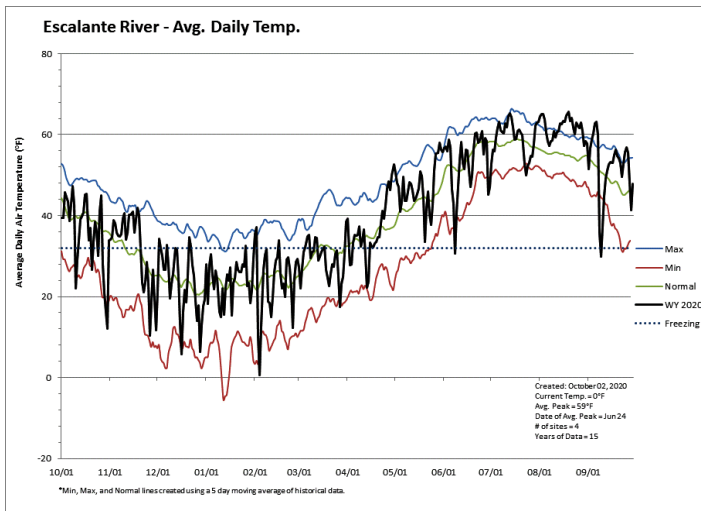
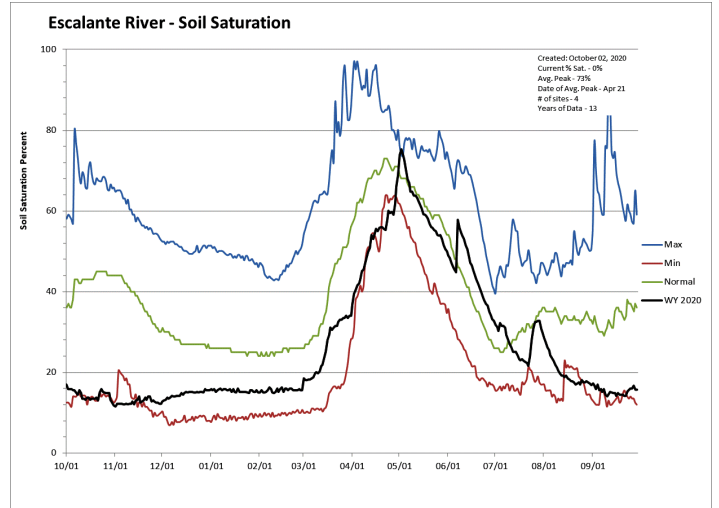
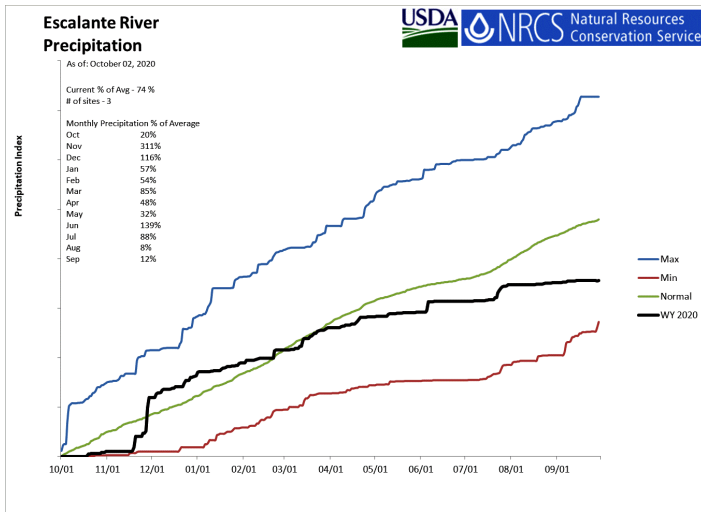
Precipitation in September was much below average at 29%, which brings the seasonal accumulation (Oct-Sep) to 74% of average. Soil moisture is at 25% compared to 27% last year.



Escalante River Basin

October 1, 2020

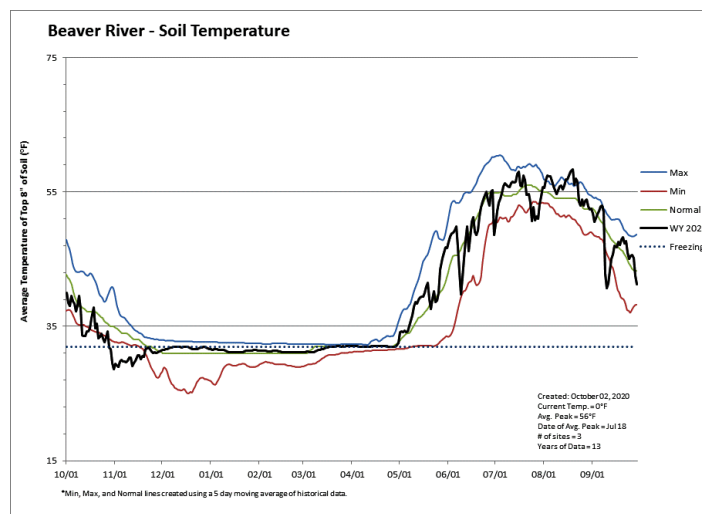
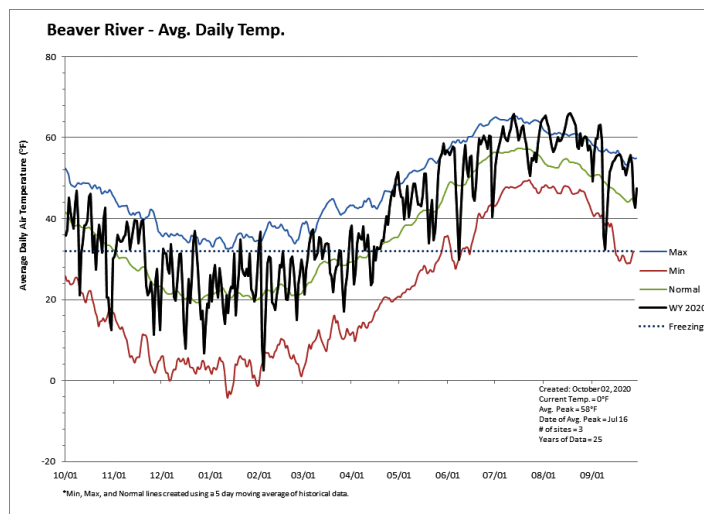
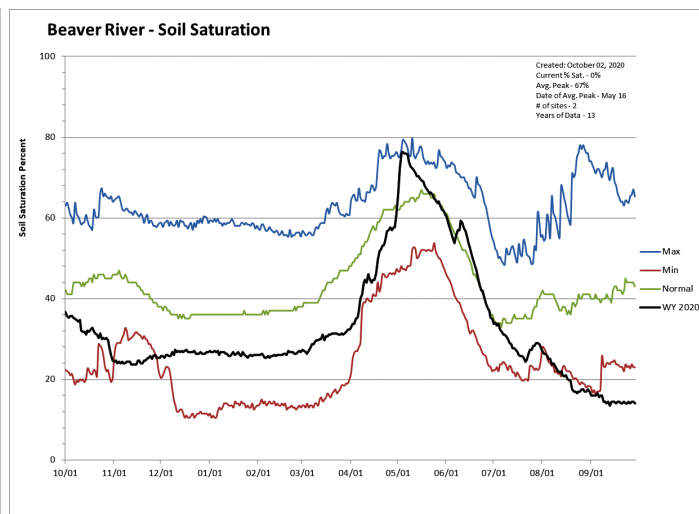
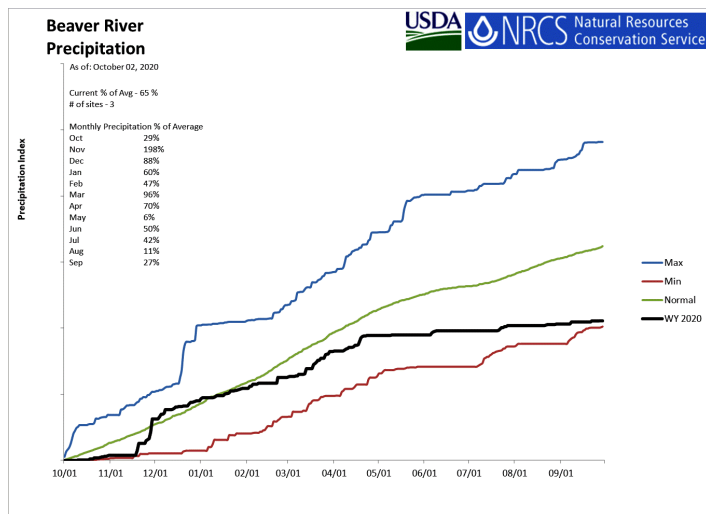
Precipitation in September was much below average at 14%, which brings the seasonal accumulation (Oct-Sep) to 75% of average. Soil moisture is at 15% compared to 15% last year.



Beaver River Basin

October 1, 2020

Precipitation in September was much below average at 26%, which brings the seasonal accumulation (Oct-Sep) to 65% of average. Soil moisture is at 14% compared to 28% last year. Reservoir storage is at 14% of capacity, compared to 55% last year. The water availability index for the Beaver River is 49%.

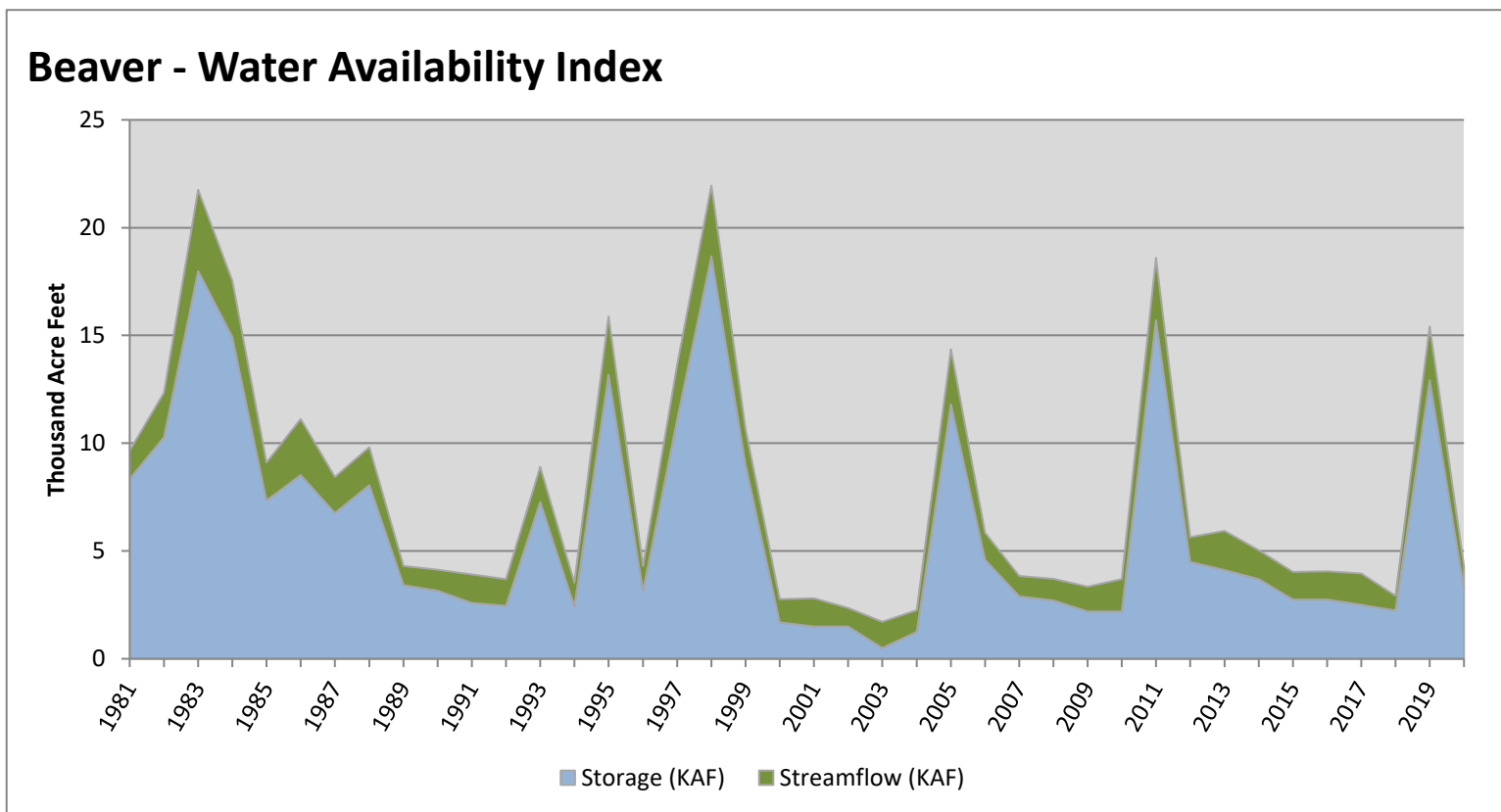


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	3.24	1.06	4.30	49	-0.1	89, 96, 14, 12

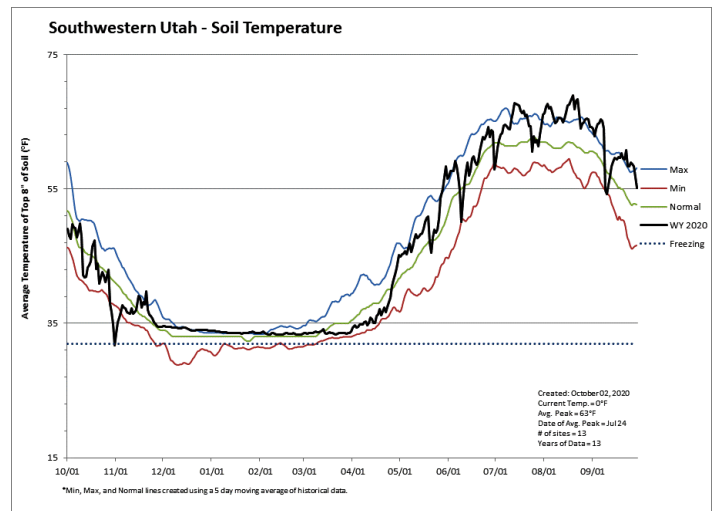
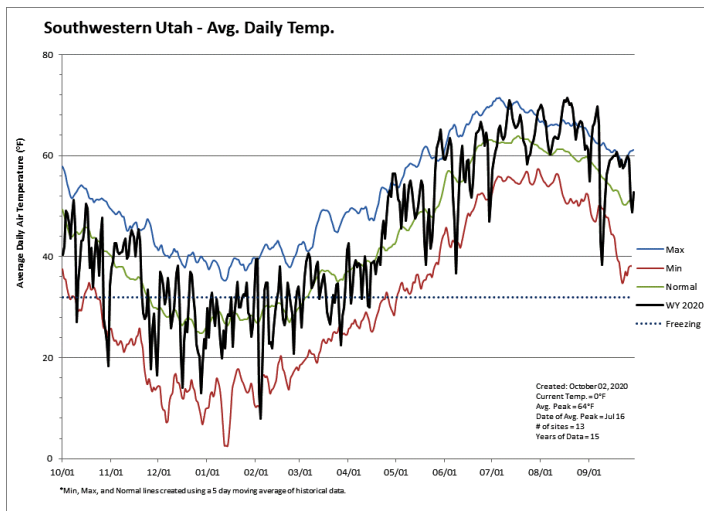
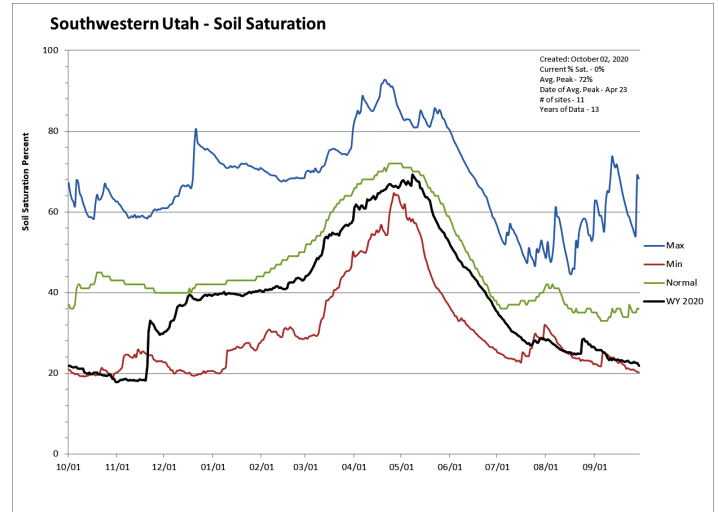
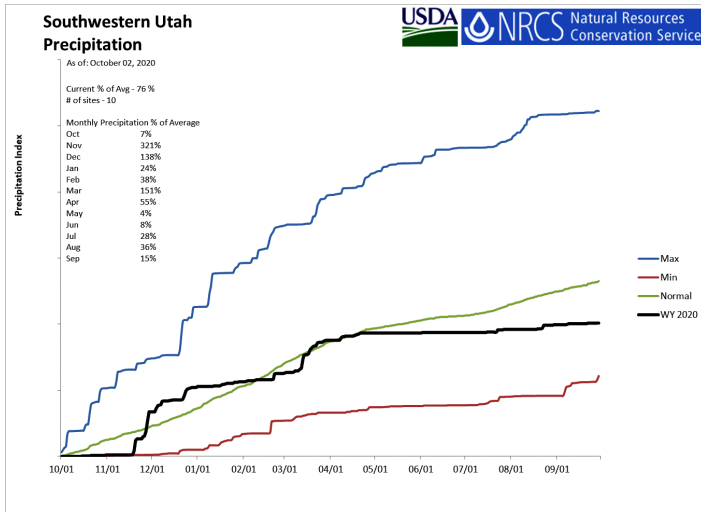
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southwestern Utah

October 1, 2020

Precipitation in September was much below average at 16%, which brings the seasonal accumulation (Oct-Sep) to 76% of average. Soil moisture is at 22% compared to 21% last year. Reservoir storage is at 47% of capacity, compared to 55% last year. The water availability index for the Virgin River is 29%.

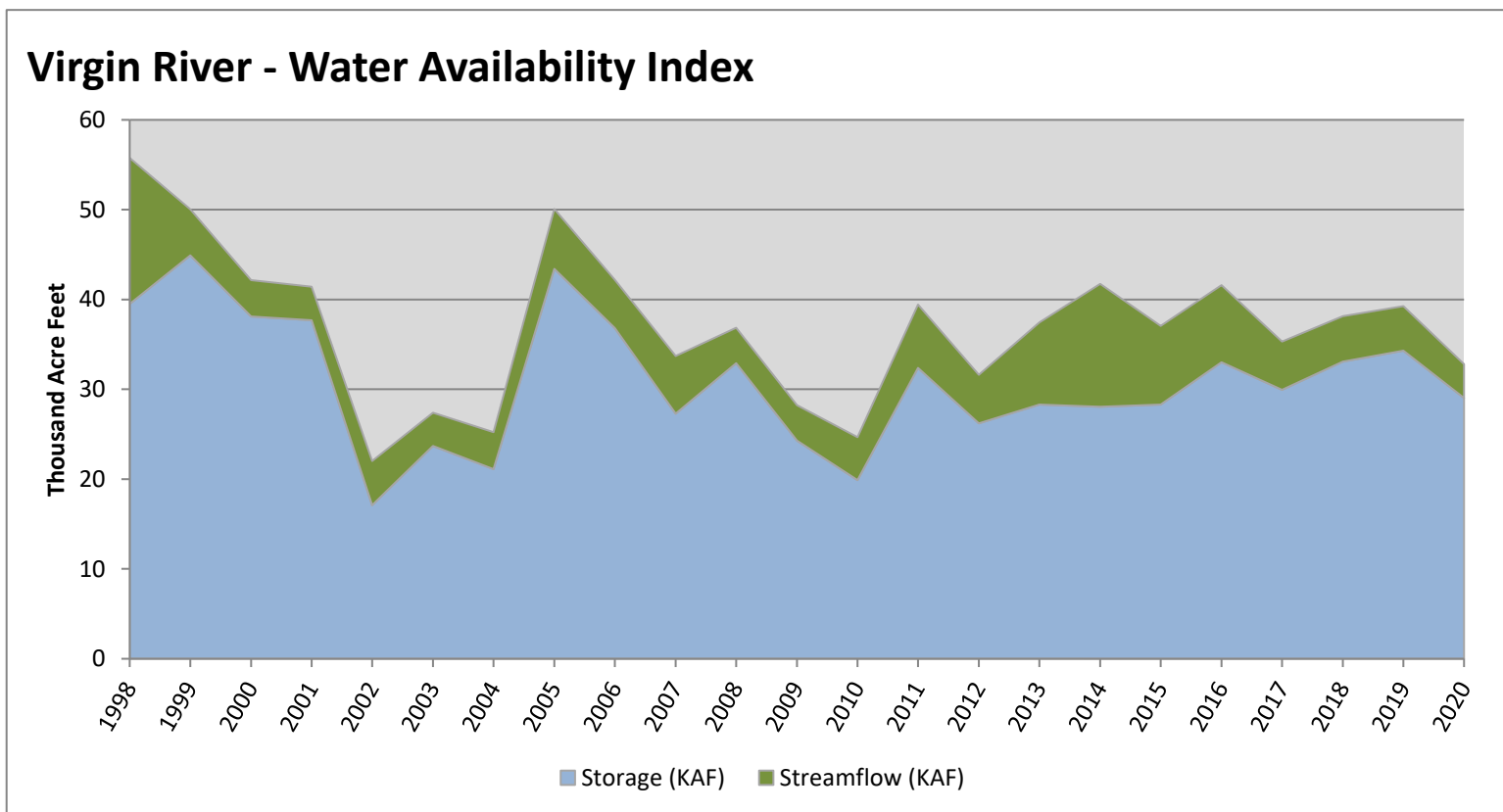


October 1, 2020

Water Availability Index

Basin or Region	Sep EOM [*] Storage	September Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	29.04	3.76	32.80	29	-1.74	09, 12, 07, 17

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



October 1, 2020

Water Availability Index

Basin or Region	Sep EOM* Storage	September Flow	Storage + Flow	Percentile	WAI#	Years with similar WAI
	KAF^	KAF^	KAF^	%		
Bear River	793	3.0	796	66	1.3	12, 81, 18, 87
Woodruff Narrows	28.7	3.0	31.8	54	0.3	91, 14, 96, 06
Little Bear	5.2	1.3	6.6	55	0.4	13, 00, 95, 96
Ogden	50.1	2.3	52.4	41	-0.7	15, 81, 08, 94
Weber	88.9	4.6	93.5	45	-0.4	07, 14, 04, 08
Provo River	329.0	2.2	331.2	50	0.0	08, 01, 00, 10
Western Uinta	131.4	2.6	134.0	38	-1.0	02, 88, 10, 91
Eastern Uinta	16.8	2.9	19.7	17	-2.7	94, 12, 90, 04
Blacks Fork	2.5	0.8	3.3	5	-3.7	01, 88, 92, 18
Price	32.7	0.3	33.0	66	1.3	93, 06, 87, 85
Smiths Creek	3.9	0.1	4.0	19	-2.6	94, 18, 88, 92
Joes Valley	40.4	1.0	41.4	37	-1.1	15, 07, 01, 14
Moab	0.4	0.2	0.6	24	-2.2	00, 04, 90, 09
Upper Sevier River	28.3	0.4	28.7	34	-1.3	89, 96, 94, 10
San Pitch	0.0	0.4	0.4	15	-3.0	15, 04, 03, 92
Lower Sevier	43.2	4.1	47.3	22	-2.3	02, 15, 10, 14
Beaver	3.2	1.1	4.3	49	-0.1	89, 96, 14, 12
Virgin River	29.0	3.8	32.8	29	-1.7	09, 12, 07, 17

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

What is a Water Availability Index?

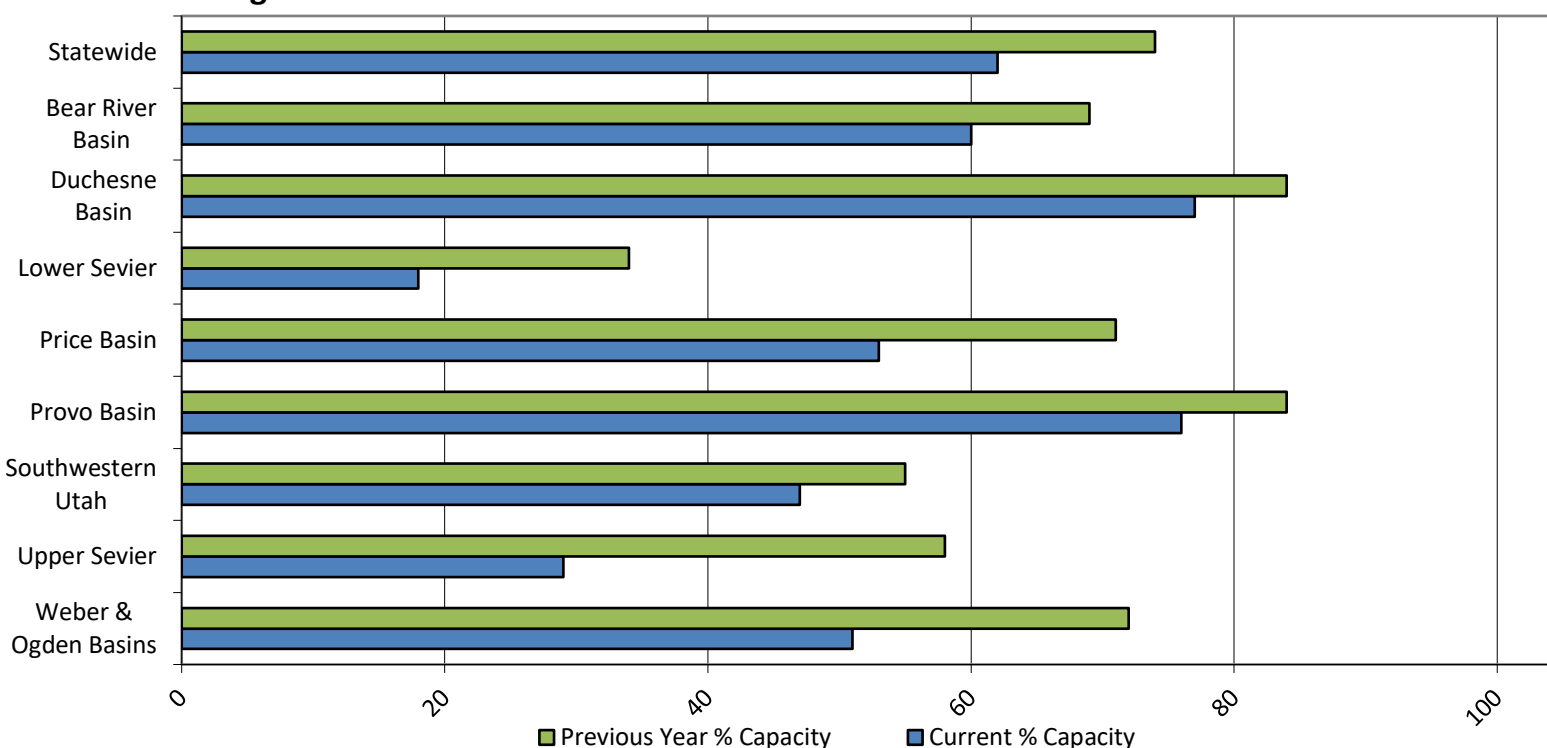
The Water Availability Index (WAI) is an observed hydrologic indicator of current surface water availability within a watershed. The index is calculated by combining current reservoir storage with the previous months streamflow. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry)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

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

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

Reservoir Storage Summary for the end of September 2020	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	1.4	7.6		25.7	6%	30%			
Causey Reservoir	2.4	3.9	2.5	7.1	33%	55%	35%	95%	155%
Cleveland Lake	1.2	4.5		5.4	22%	83%			
Currant Creek Reservoir	14.6	15.1	14.9	15.5	94%	97%	96%	98%	101%
Deer Creek Reservoir	91.1	122.9	93.9	149.7	61%	82%	63%	97%	131%
East Canyon Reservoir	29.3	36.8	31.6	49.5	59%	74%	64%	93%	117%
Echo Reservoir	13.7	36.0	24.3	73.9	19%	49%	33%	57%	148%
Grantsville Reservoir	0.8	1.5	0.8	3.3	25%	44%	23%	110%	191%
Gunlock	4.7	8.3	5.8	10.4	45%	80%	56%	81%	143%
Gunnison Reservoir	0.0	5.7	5.3	20.3	0%	28%	26%	0%	108%
Huntington North Reservoir	1.8	3.4	1.4	4.2	42%	81%	34%	124%	237%
Hyrum Reservoir	5.2	9.1	6.7	15.3	34%	60%	44%	78%	136%
Joes Valley Reservoir	40.4	45.6	40.4	61.6	66%	74%	66%	100%	113%
Jordanella Reservoir	237.9	269.5	258.3	314.0	76%	86%	82%	92%	104%
Ken's Lake	0.4	1.8	0.7	2.3	19%	77%	30%	64%	261%
Kolob Reservoir	5.0	5.3		5.6	89%	95%			
Lost Creek Reservoir	14.7	16.7	12.6	22.5	65%	74%	56%	116%	132%
Lower Enterprise	0.0	0.0	0.3	2.6	2%	0%	12%	13%	0%
Miller Flat Reservoir	1.3	0.9		5.2	24%	17%			
Millsite	3.5	6.3	10.9	16.7	21%	38%	65%	32%	58%
Minersville Reservoir	3.2	12.9	6.5	23.3	14%	55%	28%	50%	199%
Moon Lake Reservoir	7.3	20.5	16.5	35.8	20%	57%	46%	44%	124%
Otter Creek Reservoir	14.8	37.6	22.7	52.5	28%	72%	43%	65%	165%
Panguitch Lake	14.2	18.0	15.0	22.3	64%	81%	67%	95%	120%
Pineview Reservoir	47.7	74.9	50.7	110.1	43%	68%	46%	94%	148%
Piute Reservoir	13.5	29.5	19.5	71.8	19%	41%	27%	69%	151%
Porcupine Reservoir	4.9	7.9	4.3	11.3	43%	70%	38%	114%	184%
Quail Creek	24.4	26.0	21.0	40.0	61%	65%	53%	116%	124%
Red Fleet Reservoir	14.4	18.6	17.4	25.7	56%	72%	68%	83%	107%
Rockport Reservoir	28.8	42.6	40.1	60.9	47%	70%	66%	72%	106%
Sand Hollow Reservoir	38.3	45.0		50.0	77%	90%			
Scofield Reservoir	32.7	50.0	27.8	65.8	50%	76%	42%	118%	180%
Settlement Canyon Reservoir	0.2	0.4	0.4	1.0	20%	40%	39%	50%	102%
Sevier Bridge Reservoir	43.2	81.1	95.9	236.0	18%	34%	41%	45%	85%
Smith And Morehouse Reservoir	2.4	6.1	3.8	8.1	30%	75%	47%	64%	161%
Starvation Reservoir	113.3	139.8	123.2	164.1	69%	85%	75%	92%	113%
Stateline Reservoir	3.9	5.9	5.8	12.0	32%	49%	48%	66%	102%
Steinaker Reservoir	2.4	1.2	14.9	33.4	7%	3%	45%	16%	8%
Strawberry Reservoir	929.9	968.6	681.5	1105.9	84%	88%	62%	136%	142%
Upper Enterprise	3.7	3.0	1.8	10.0	37%	30%	18%	208%	169%
Upper Stillwater Reservoir	10.9	18.5	17.1	32.5	34%	57%	53%	64%	108%
Utah Lake	601.4	692.3	672.6	870.9	69%	79%	77%	89%	103%
Willard Bay	142.6	174.6	132.0	215.0	66%	81%	61%	108%	132%
Woodruff Creek	1.6	2.0	0.7	4.0	41%	50%	18%	234%	286%
Woodruff Narrows Reservoir	28.7	43.0	24.8	57.3	50%	75%	43%	116%	173%
Meeks Cabin Reservoir	2.5	8.4	8.8	32.5	8%	26%	27%	28%	95%
Bear Lake	793.4	899.9	595.0	1302.0	61%	69%	46%	133%	151%
Basin-wide Total	3346.4	3965.7	3130.1	5373.1	62%	74%	58%	107%	127%
# 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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<https://www.nrcs.usda.gov/wps/portal/nrcs/main/ut/snow/>

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Utah Climate and Water Report

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