



Utah Climate and Water Report

November 1, 2021



Big Cottonwood Canyon

View from Mill D-South Fork snow course area

Photo by Jordan Clayton

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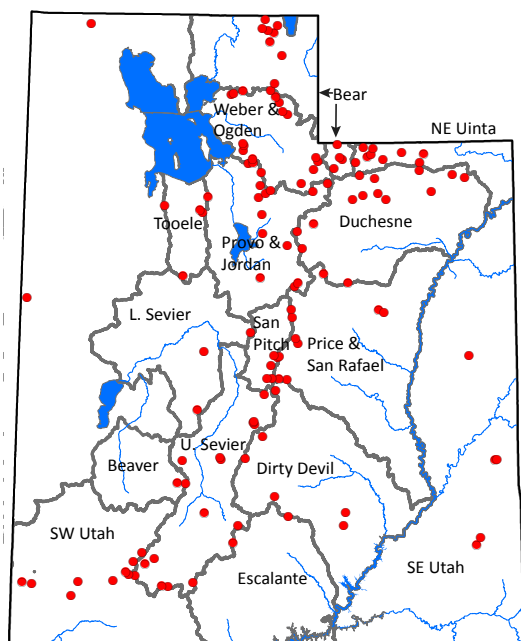
Utah Climate and Water Report

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.



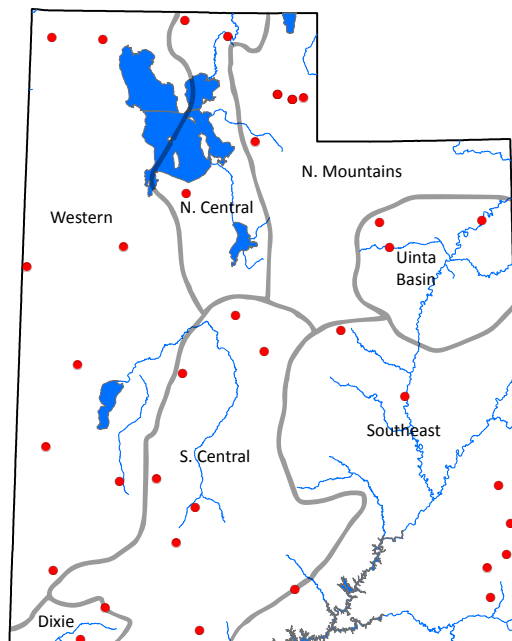
SNOTEL

- 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

November 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.*

Current Valley Conditions (SCAN)

October brought a fantastic start to the 2022 water year, with 2.1 inches of precipitation accumulating in Utah's valley locations! For perspective, this is more precipitation than fell from March through June of last year! Although the entire state benefitted from October's storms, Northern Utah fared the best during the month. Soil moisture at Utah's SCAN sites rebounded significantly due to the heavy precipitation and decreased evapotranspiration rates. The month ended with soil moisture at near record levels, except for the Uintah Basin and Southeast areas, which are closer to normal. Soil temperatures across the state ended October near normal. This is all good news for drought conditions in the state. Utah's percentage of exceptional (D4) drought has dropped from 20% to 14% during the month. Let's hope the trend continues.

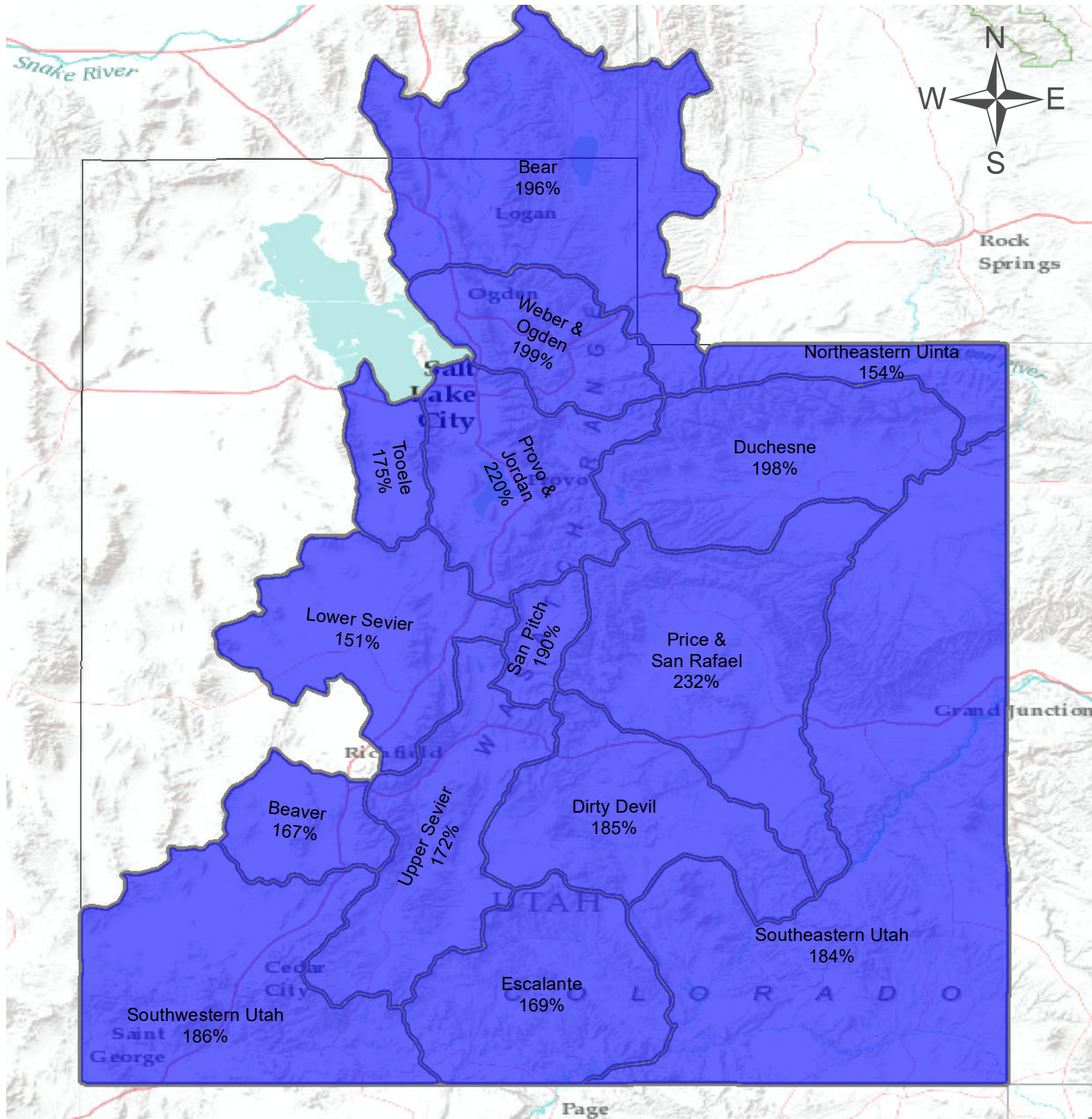
Current Mountain Conditions (SNOTEL)

October precipitation in Utah's mountain locations was well above normal at 196%. Statewide, we received 4.5 inches of precipitation for the month, which puts our current water year in the 93rd percentile. To put into perspective how much above normal these precipitation amounts have been, we are currently about four weeks ahead, meaning that Utah's mountains normally don't receive that much moisture until late November. While it's still too soon to get overjoyed about our new water year and its excellent start, this is a great way to kick things off. As was discussed in previous reports, it is useful to provide a long-term perspective on how Utah is doing with the ongoing drought conditions, and in this case, how much the recent moisture has benefited things. To that end, if we combine the statewide precipitation deficit from the end of the previous two water years with the current conditions, we get roughly 11" of additional moisture (above and beyond what we normally receive) that will be needed to get us back to 'normal'. For context, the median annual statewide precipitation is 32.1", so our current deficit is roughly 33% of what Utah normally gets in a year. While that is still a steep hill to climb, it should be noted that the accumulated deficit was as high as around 15" a few months ago, so there has been definite improvement.

Perhaps even more encouraging is the fact that the statewide soil moisture in Utah's mountains is extremely high right now. Statewide soil moisture is currently at 70% of saturation, which is well above normal for this time of year and up from 21% last year. That's a difference of almost 50 percent! In fact, current statewide soil moisture levels are above the previous maximum for this time of year from our 20 years of daily observations at Utah's SNOTEL sites. For context, this time last year we were setting records for new minimum soil moisture levels... These conditions bode very well for next spring's snowmelt runoff efficiency. Soils are now very likely to remain at moderate to high moisture levels through the winter which will lead to an improved amount of runoff during next spring's snowmelt season, which ought to help replenish our reservoir system—assuming we get a reasonable amount of snow this winter.

Unfortunately, Utah's water supply conditions remain stressed. Utah's reservoir storage is currently at 50% of capacity, which is 12% lower than last year at this time, causing our Water Availability Indices (WAIs) to remain at historically-low levels (bottom 20th percentile) for 10 of Utah's 18 major basins. Our reservoir levels will not increase substantially until next spring when we receive the water stored in this winter's snowpack, so water managers will need to continue to be diligent.

Finally, this is another reminder that our data have migrated to the new 1991-2020 climatological normals window. We recently published a Special Report to provide an overview of the updated normals published by the NRCS' Snow Survey and Water Supply Forecasting (SSWSF) Program. Details regarding the new normals, including the Special Report, may be obtained via the Utah Snow Survey [webpage](#) dedicated to this topic.



Statewide Precipitation

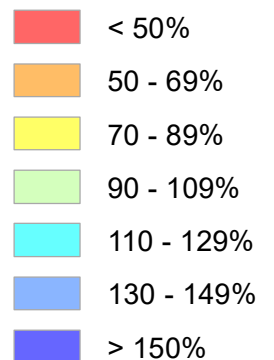
As of November 1, 2021:

195% of Normal Precipitation

196% of Normal Precipitation Last Month

0 10 20 40 60 80 100 Miles

% of Normal



November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI#	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	526	5.1	531	48	-0.2	15, 14, 13, 89
Woodruff Narrows	10.6	5.1	15.7	31	-1.6	88, 13, 99, 81
Little Bear	4.5	2.0	6.5	13	-3.1	01, 15, 07, 14
Ogden	22.8	2.1	24.9	10	-3.4	00, 03, 88, 90
Weber	69.8	8.0	77.8	16	-2.9	13, 01, 18, 03
Provo River	251.8	3.1	254.9	7	-3.6	13, 07, 15, 03
Western Uinta	146.2	4.8	151.0	49	-0.1	00, 10, 01, 05
Eastern Uinta	12.9	2.3	15.1	10	-3.4	89, 02, 13, 20
Blacks Fork	5.4	3.9	9.3	46	-0.3	87, 03, 07, 08
Price	13.3	0.4	13.8	33	-1.4	07, 13, 96, 08
Smiths Creek	4.2	1.4	5.6	45	-0.4	07, 08, 09, 15
Joes Valley	21.2	1.2	22.4	5	-3.8	02, 90, 92, 13
Moab	0.8	0.3	1.1	54	0.4	08, 01, 13, 03
Upper Sevier River	13.9	1.5	15.4	19	-2.6	04, 90, 09, 16
San Pitch	0.0	0.3	0.3	17	-2.8	04, 15, 07, 12
Lower Sevier	25.0	8.3	33.3	12	-3.2	04, 18, 17, 92
Beaver	1.6	1.1	2.7	10	-3.4	02, 04, 18, 01
Virgin River	27.7	7.5	35.2	48	-0.2	10, 18, 17, 13

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

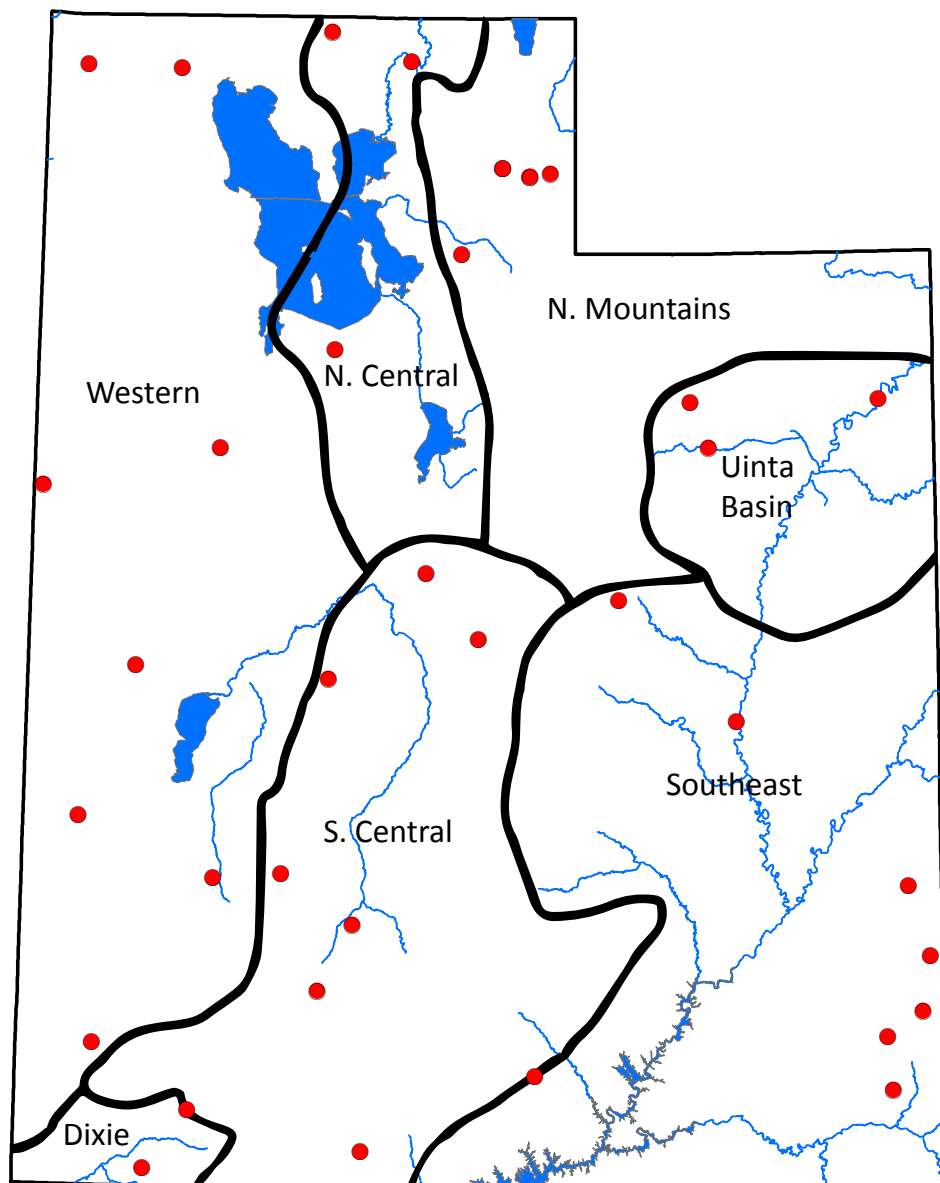
What is a Water Availability Index?

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: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/ut/snow/> on the Water Supply page. The entire period of historical record for reservoir storage and streamflow is available.

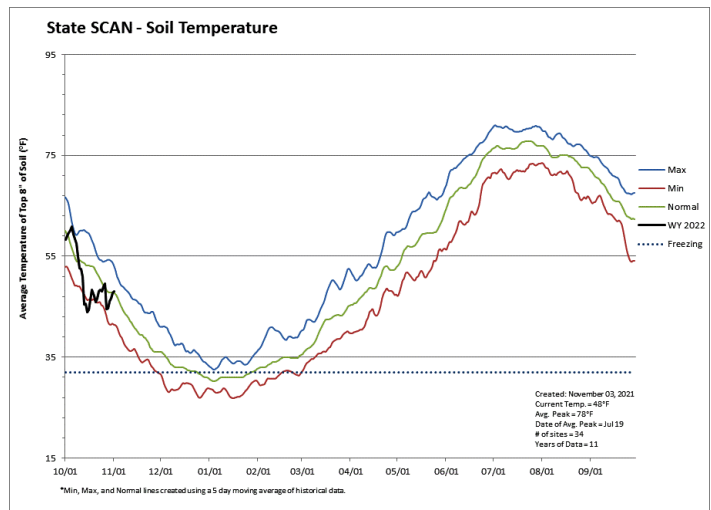
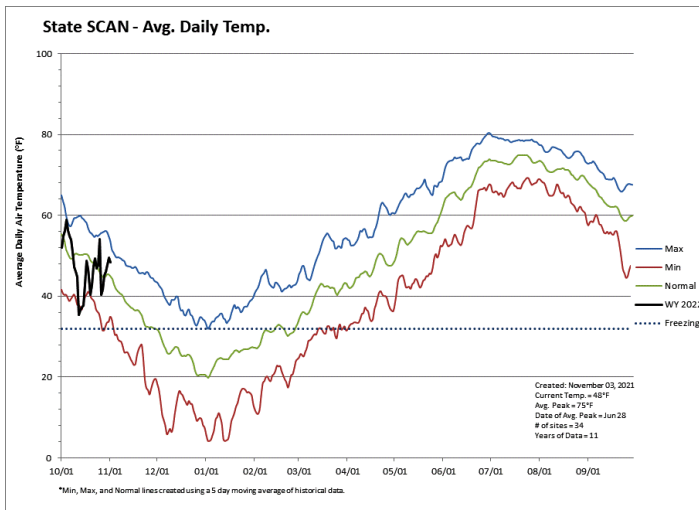
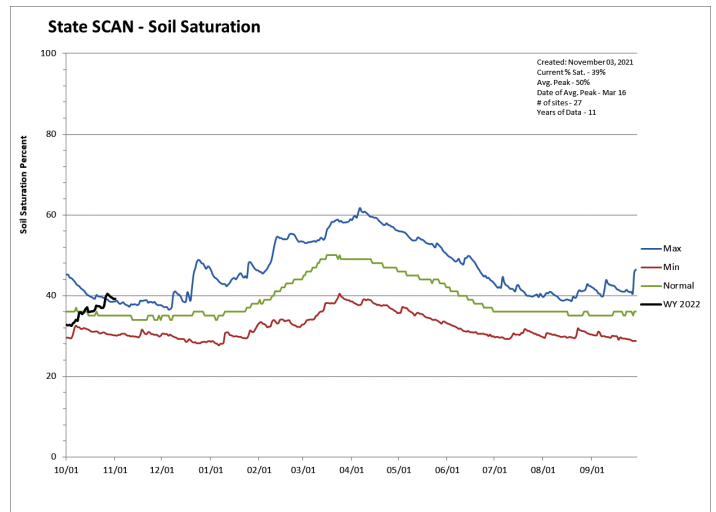
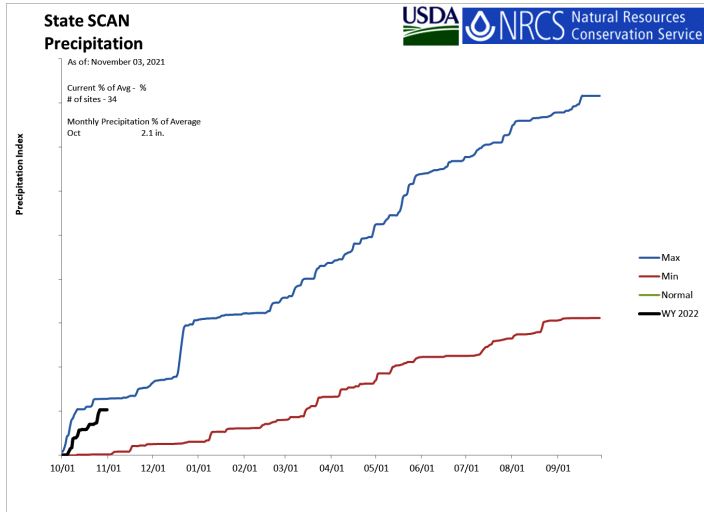
SCAN portion of report



Statewide SCAN

November 1, 2021

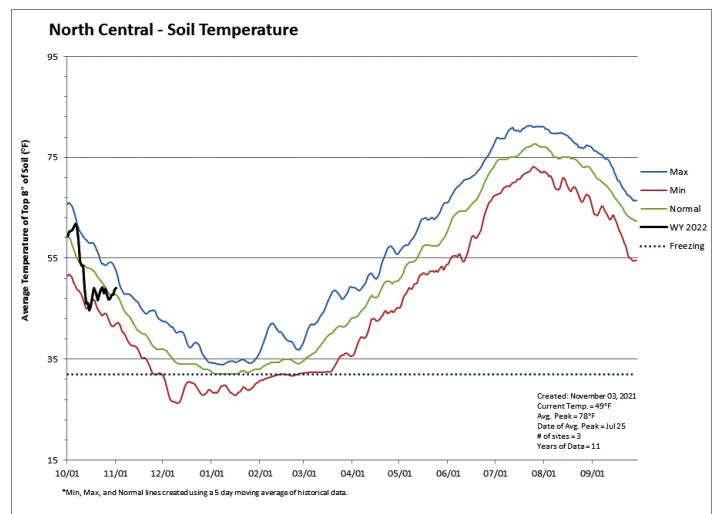
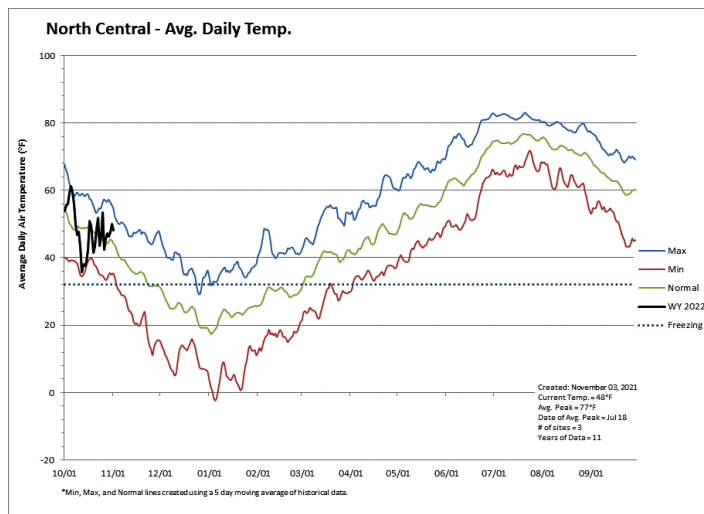
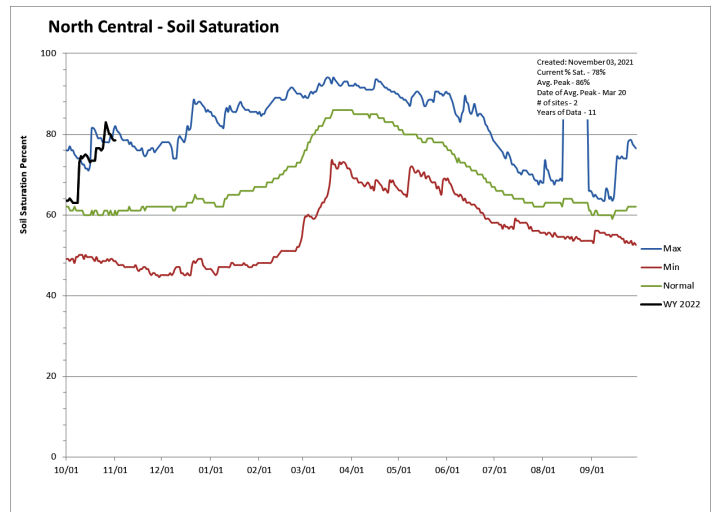
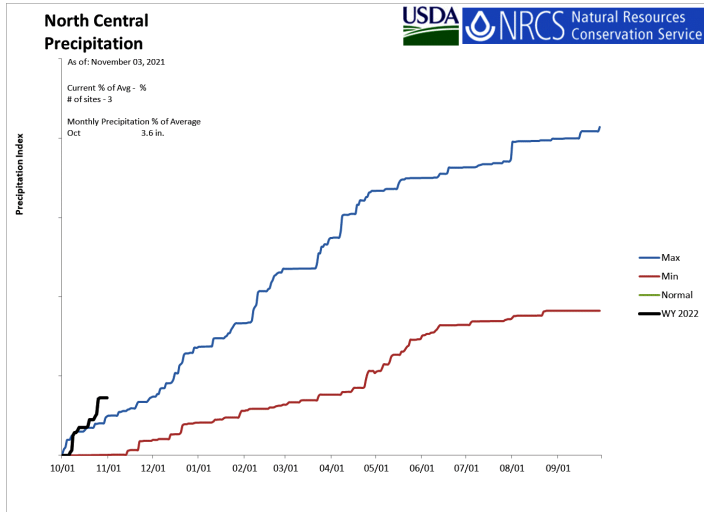
The average precipitation at SCAN sites within Utah was 2.1 inches in October, which brings the seasonal accumulation (Oct-Oct) to 2.1 inches. Soil moisture is at 38% compared to 26% last year.



North Central

November 1, 2021

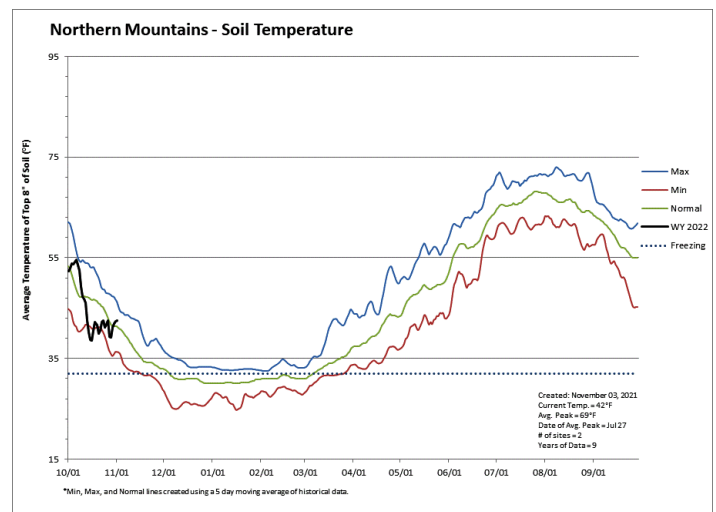
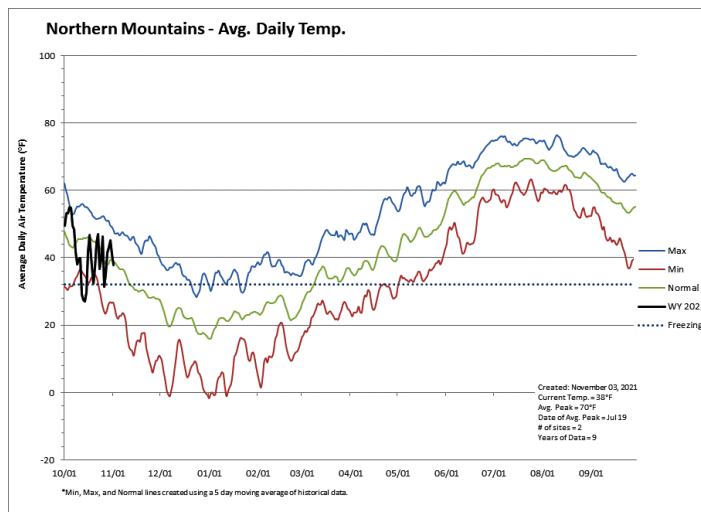
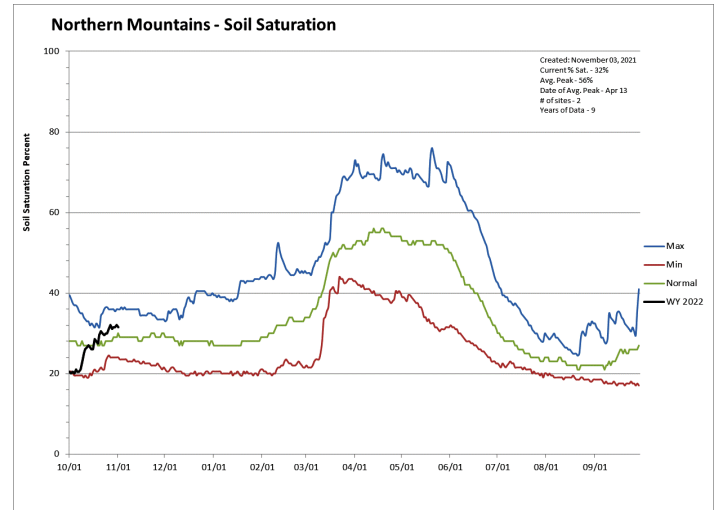
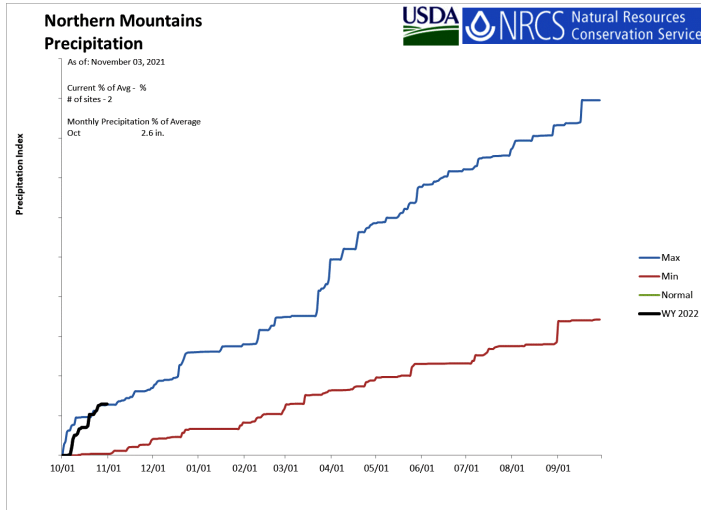
The average precipitation in October at SCAN sites within the basin was 3.6 inches, which brings the seasonal accumulation (Oct-Oct) to 3.6 inches. Soil moisture is at 79% compared to 60% last year.



Northern Mountains

November 1, 2021

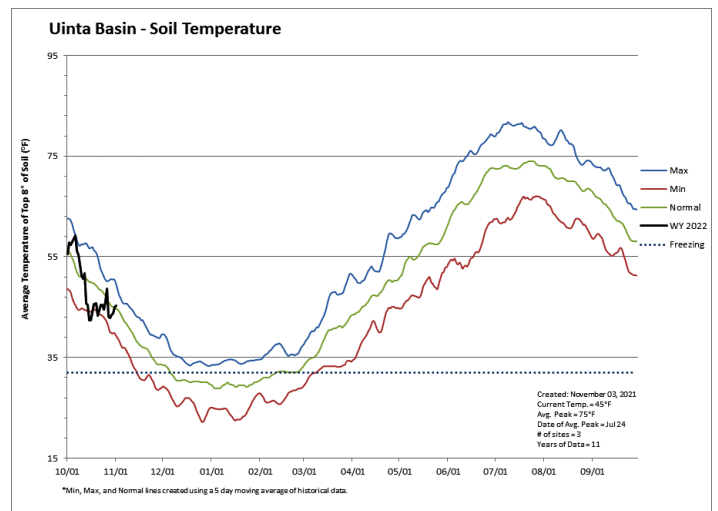
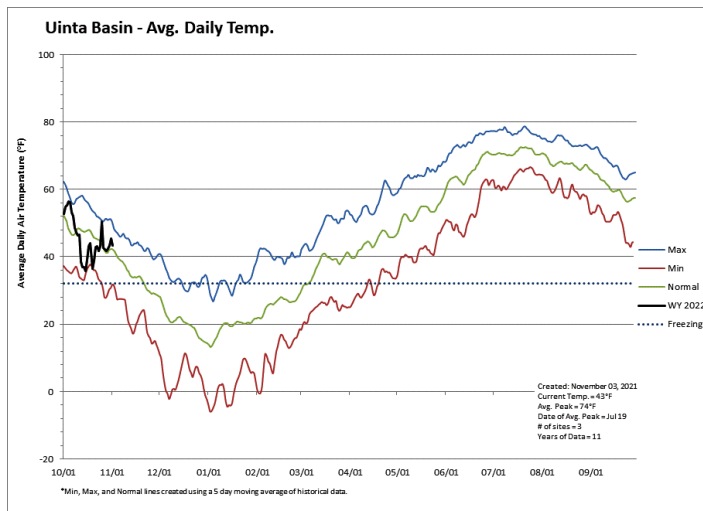
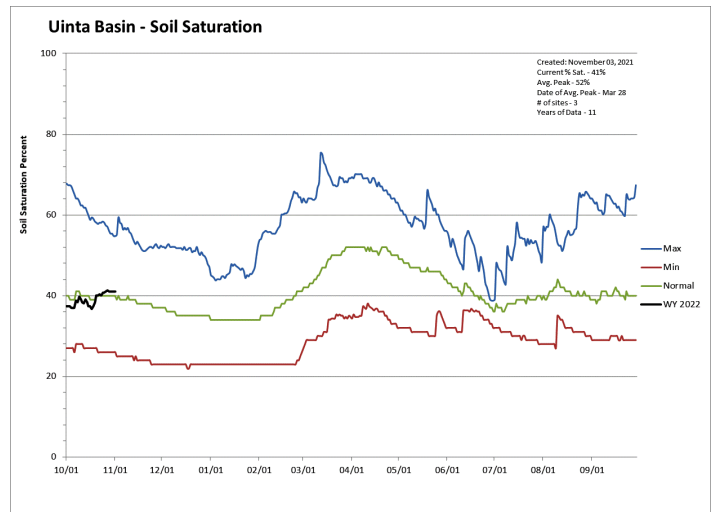
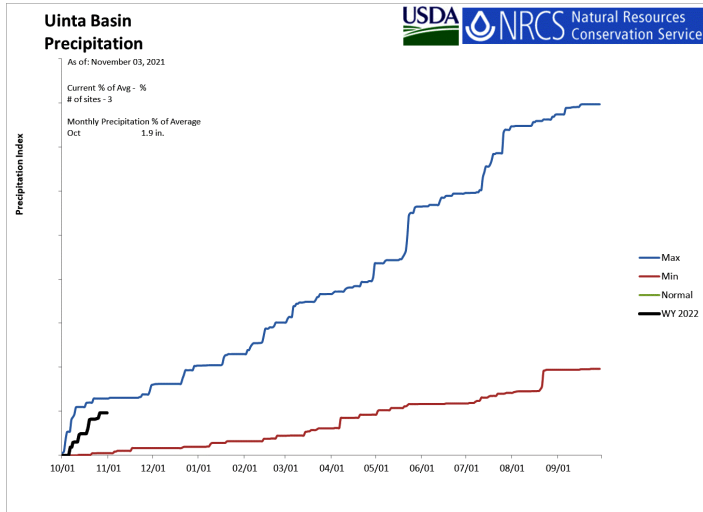
The average precipitation in October at SCAN sites within the basin was 2.6 inches, which brings the seasonal accumulation (Oct-Oct) to 2.6 inches. Soil moisture is at 32% compared to 19% last year.



Uinta Basin

November 1, 2021

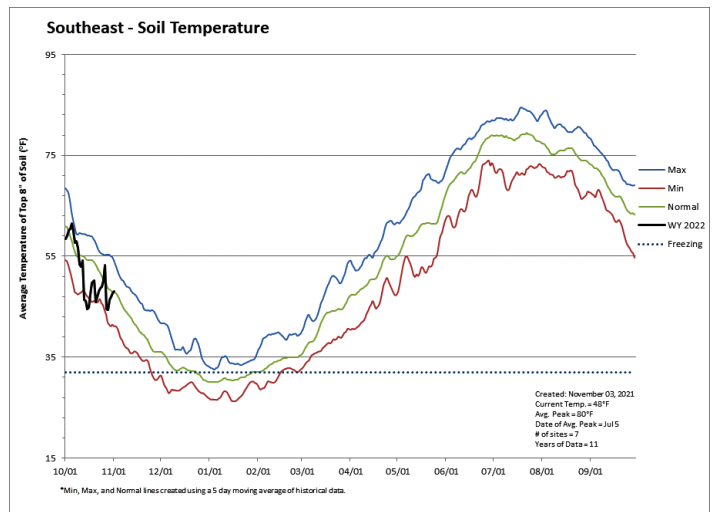
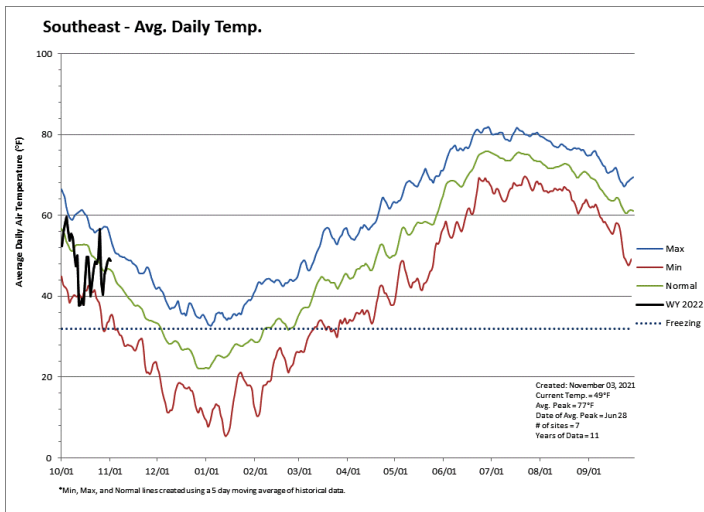
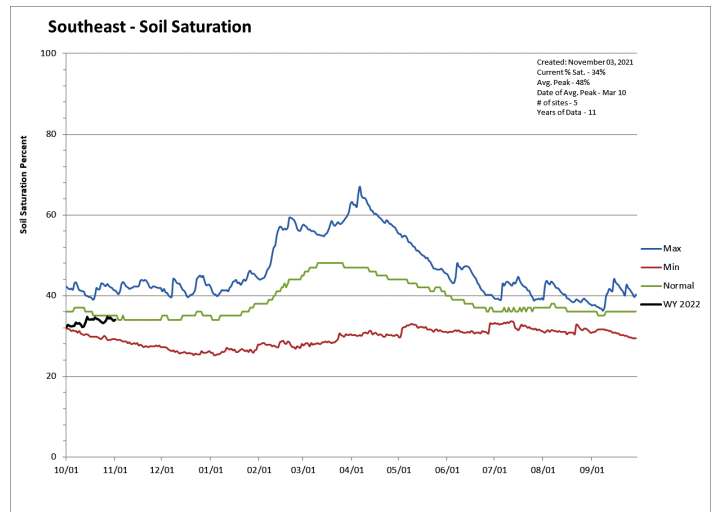
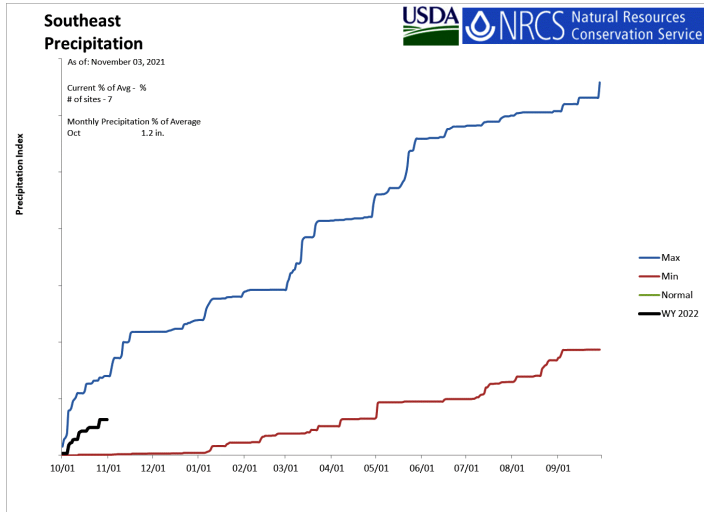
The average precipitation in October at SCAN sites within the basin was 1.9 inches, which brings the seasonal accumulation (Oct-Oct) to 1.9 inches. Soil moisture is at 41% compared to 28% last year.



Southeast

November 1, 2021

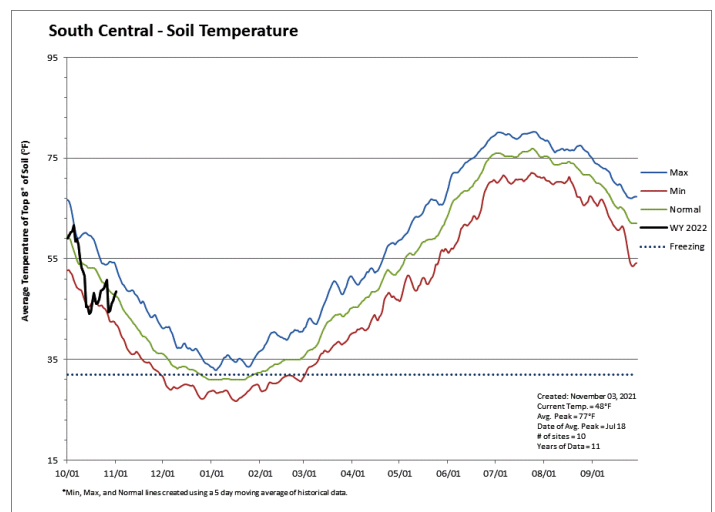
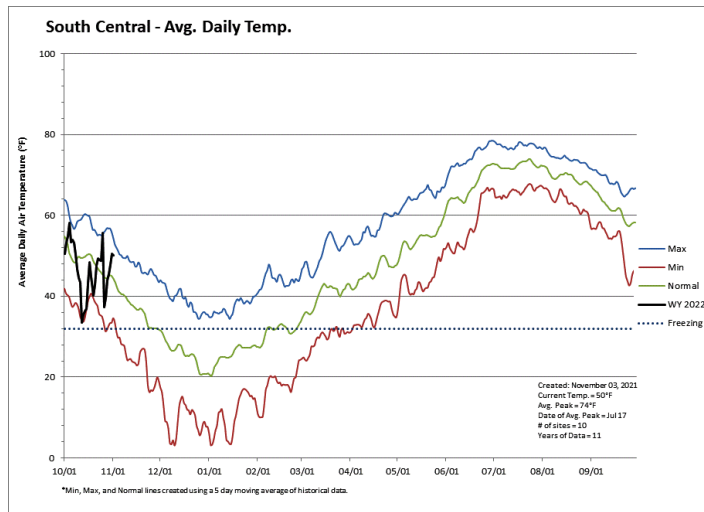
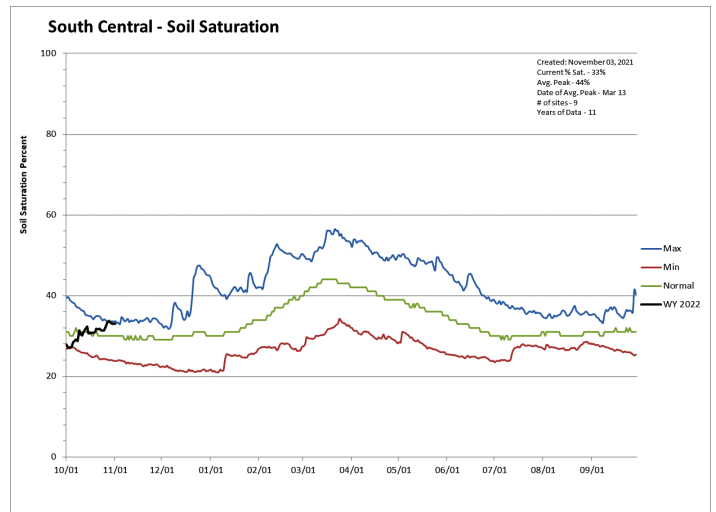
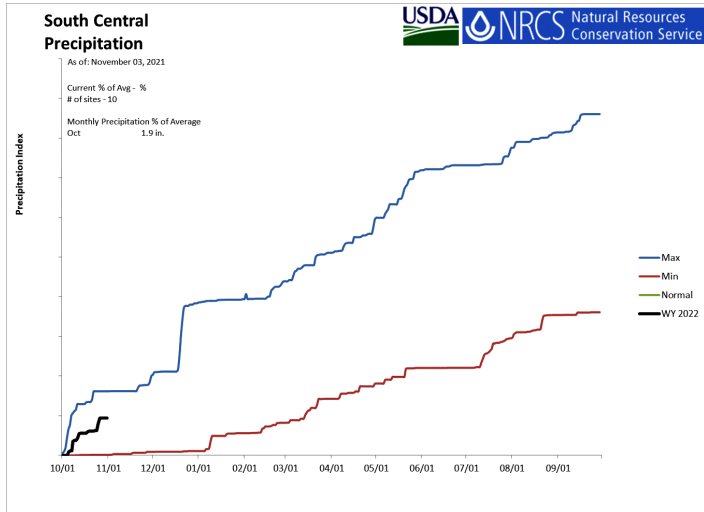
The average precipitation in October at SCAN sites within the basin was 1.3 inches, which brings the seasonal accumulation (Oct-Oct) to 1.3 inches. Soil moisture is at 34% compared to 29% last year.



South Central

November 1, 2021

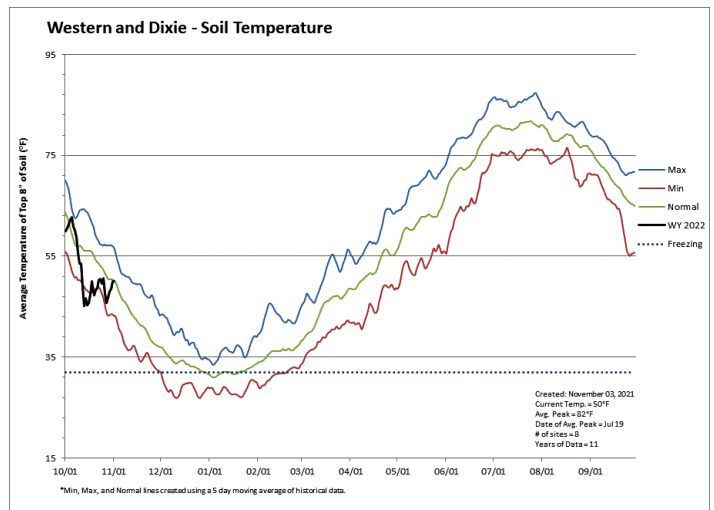
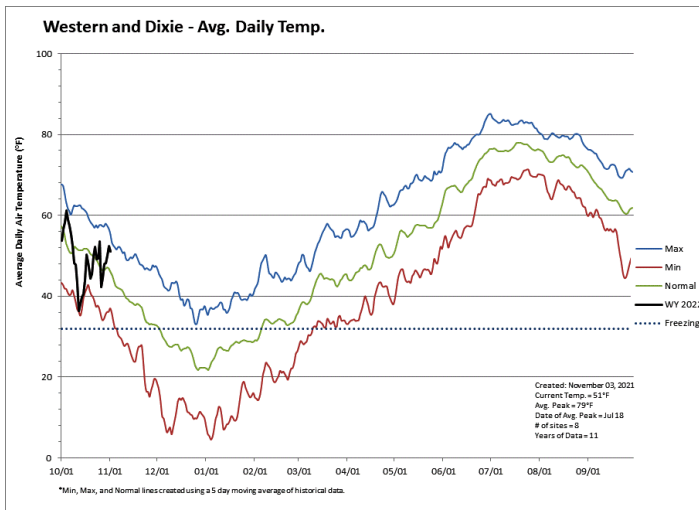
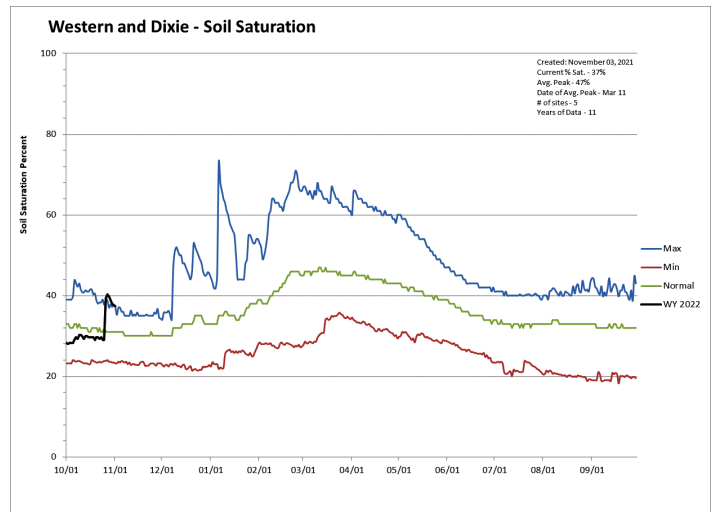
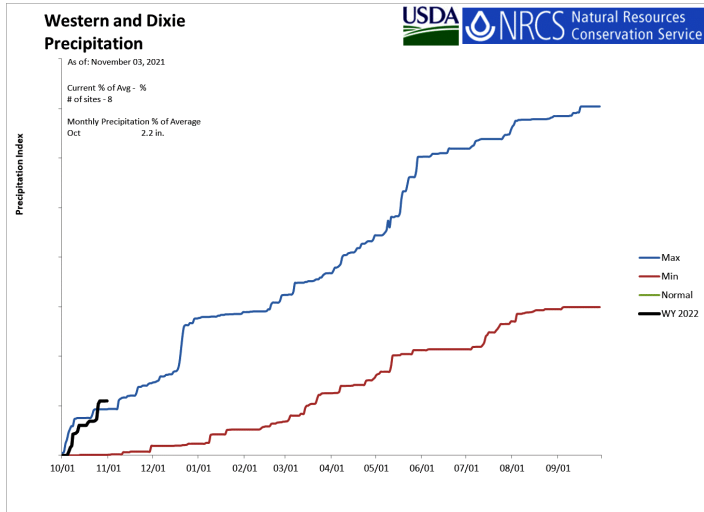
The average precipitation in October at SCAN sites within the basin was 1.9 inches, which brings the seasonal accumulation (Oct-Oct) to 1.9 inches. Soil moisture is at 32% compared to 22% last year.



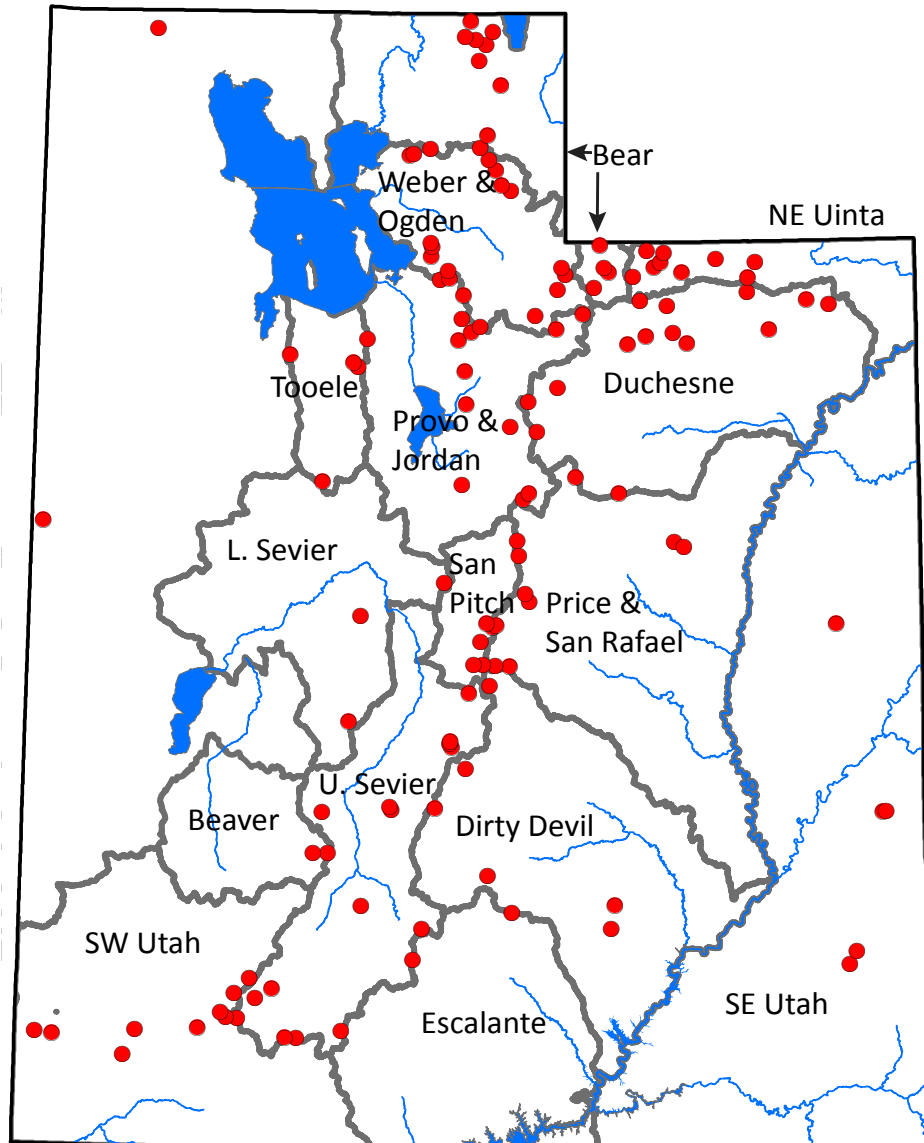
Western and Dixie

November 1, 2021

The average precipitation in October at SCAN sites within the basin was 2.2 inches, which brings the seasonal accumulation (Oct-Oct) to 2.2 inches. Soil moisture is at 31% compared to 17% last year.



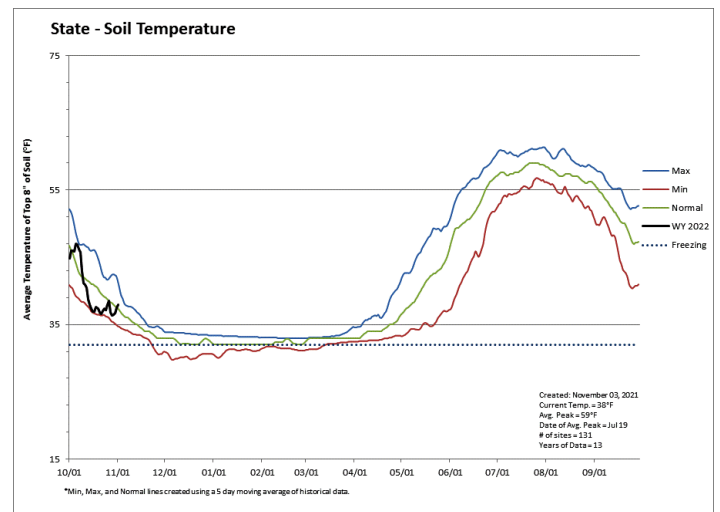
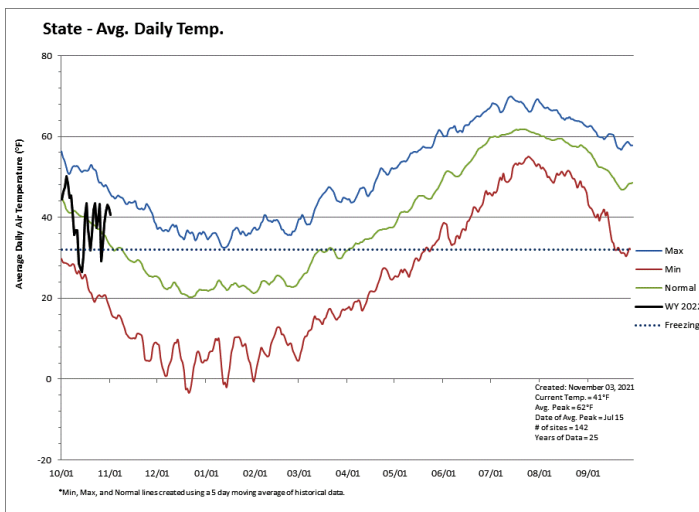
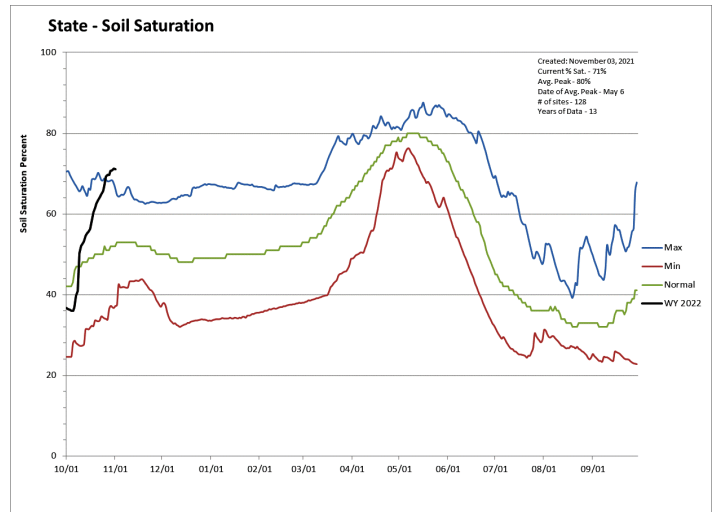
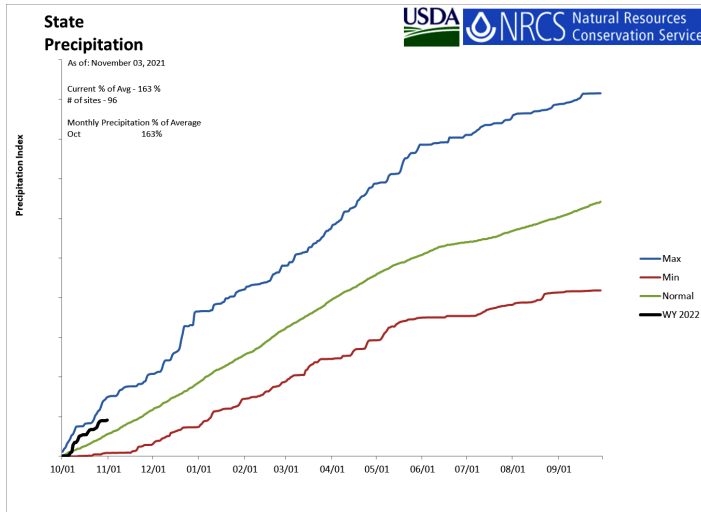
SNOTEL portion of report



Statewide SNOTEL

November 1, 2021

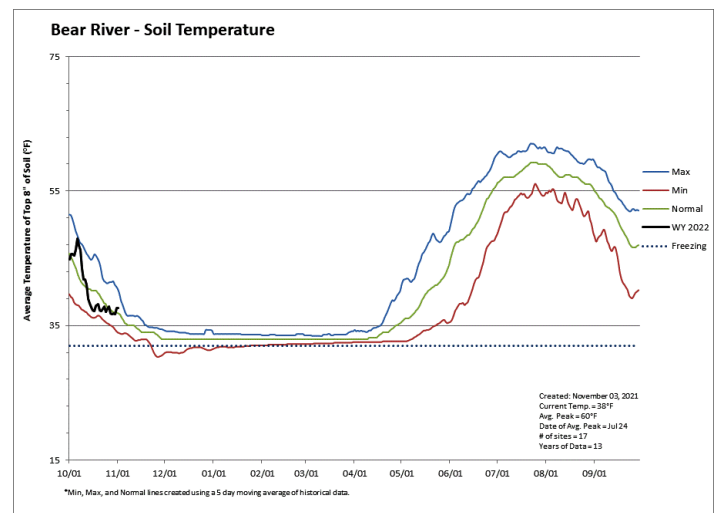
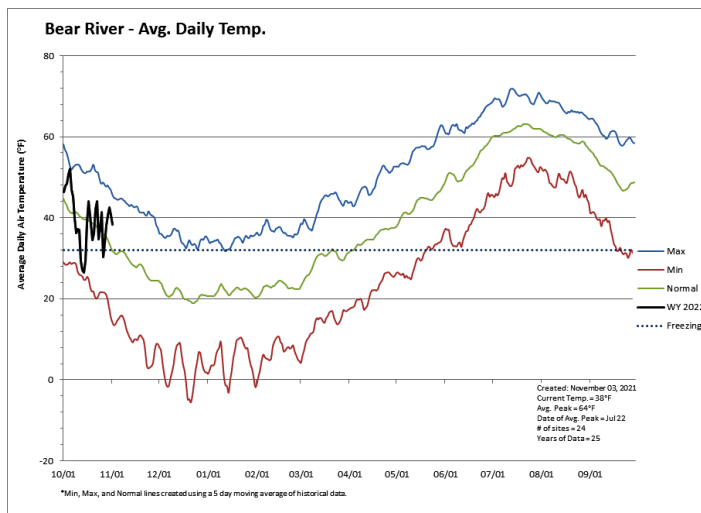
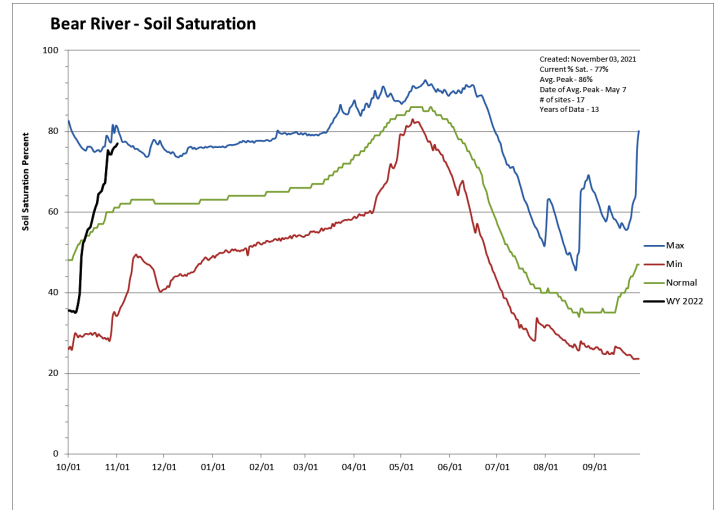
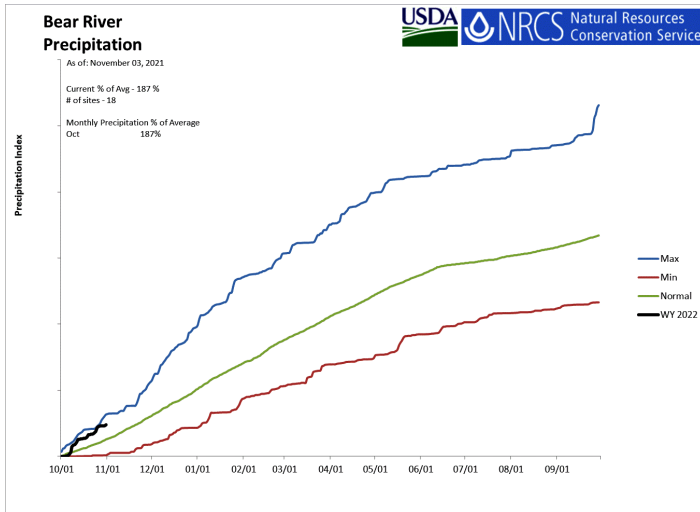
Precipitation at SNOTEL sites during October was much above average at 196%, which brings the seasonal accumulation (Oct-Oct) to 195% of average. Soil moisture is at 70% compared to 21% last year. Reservoir storage is at 50% of capacity, compared to 62% last year.



Bear River Basin

November 1, 2021

Precipitation in October was much above average at 196%, which brings the seasonal accumulation (Oct-Oct) to 196% of average. Soil moisture is at 76% compared to 28% last year. Reservoir storage is at 30% of capacity, compared to 47% last year. The water availability index for the Bear River is 48%, 31% for Woodruff Narrows and 13% for the Little Bear.

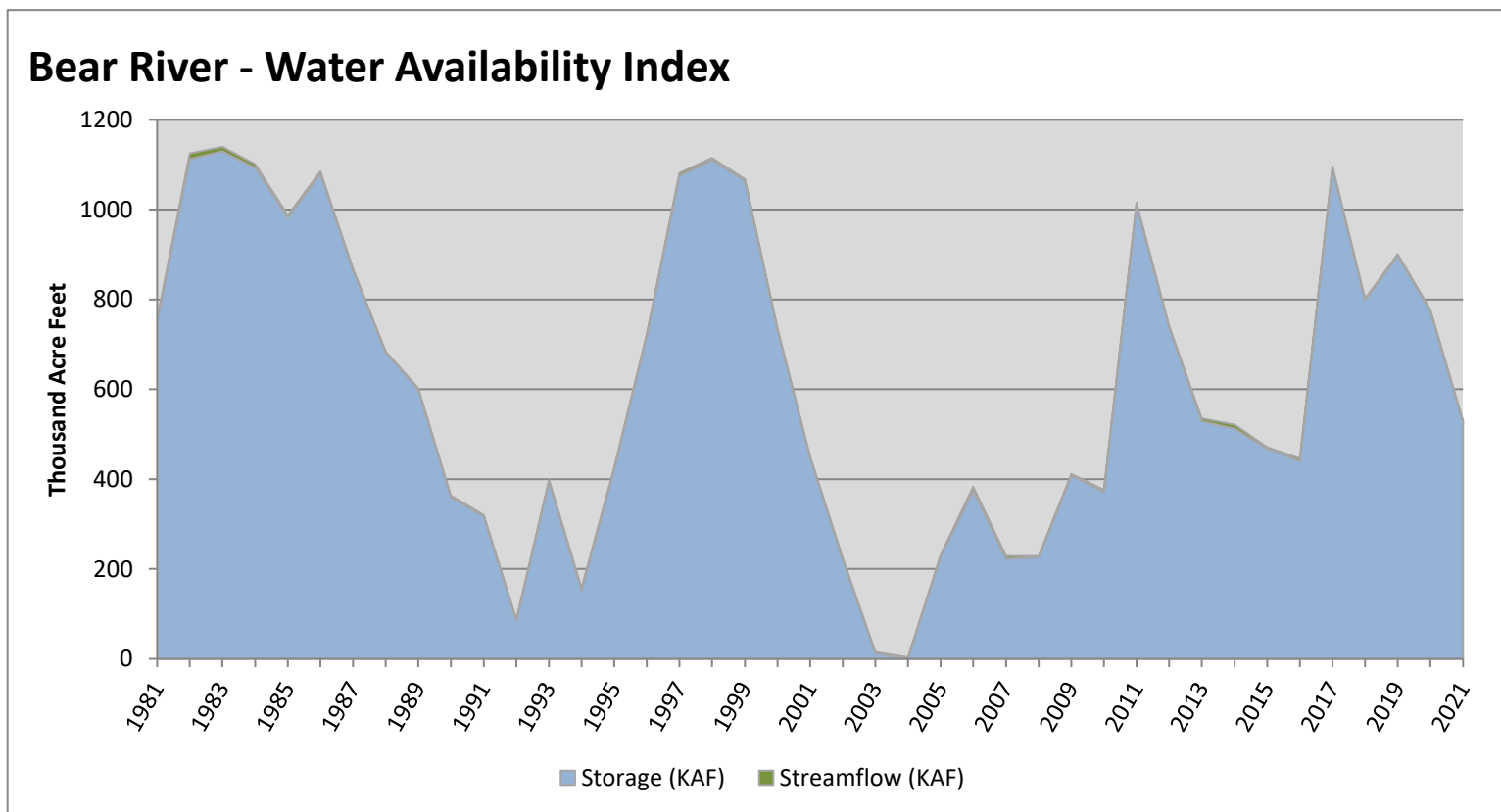


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Bear River	525.68	5.07	530.75	48	-0.2	15, 14, 13, 89

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

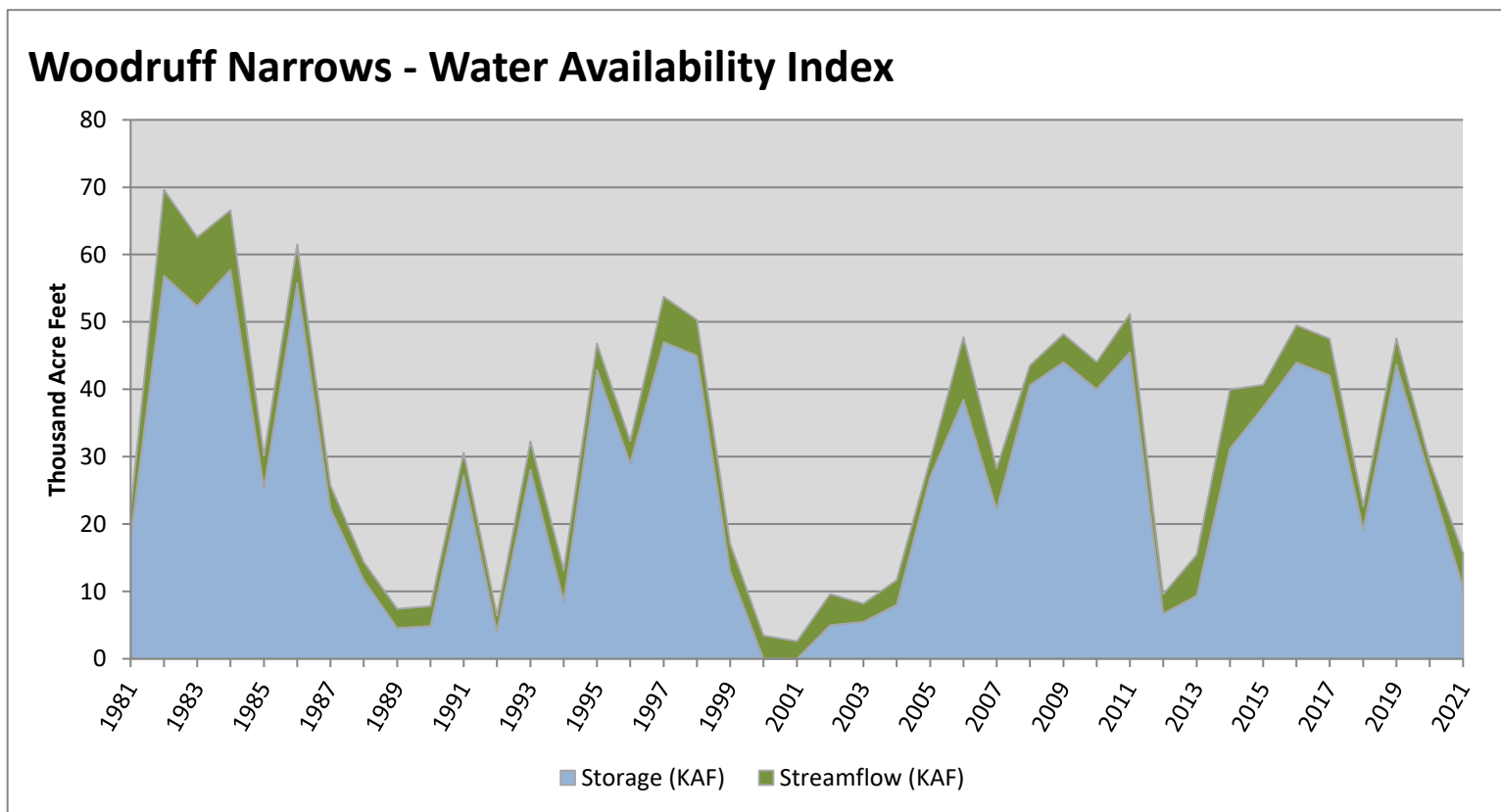


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Woodruff Narrows	10.58	5.07	15.65	31	-1.59	88, 13, 99, 81

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



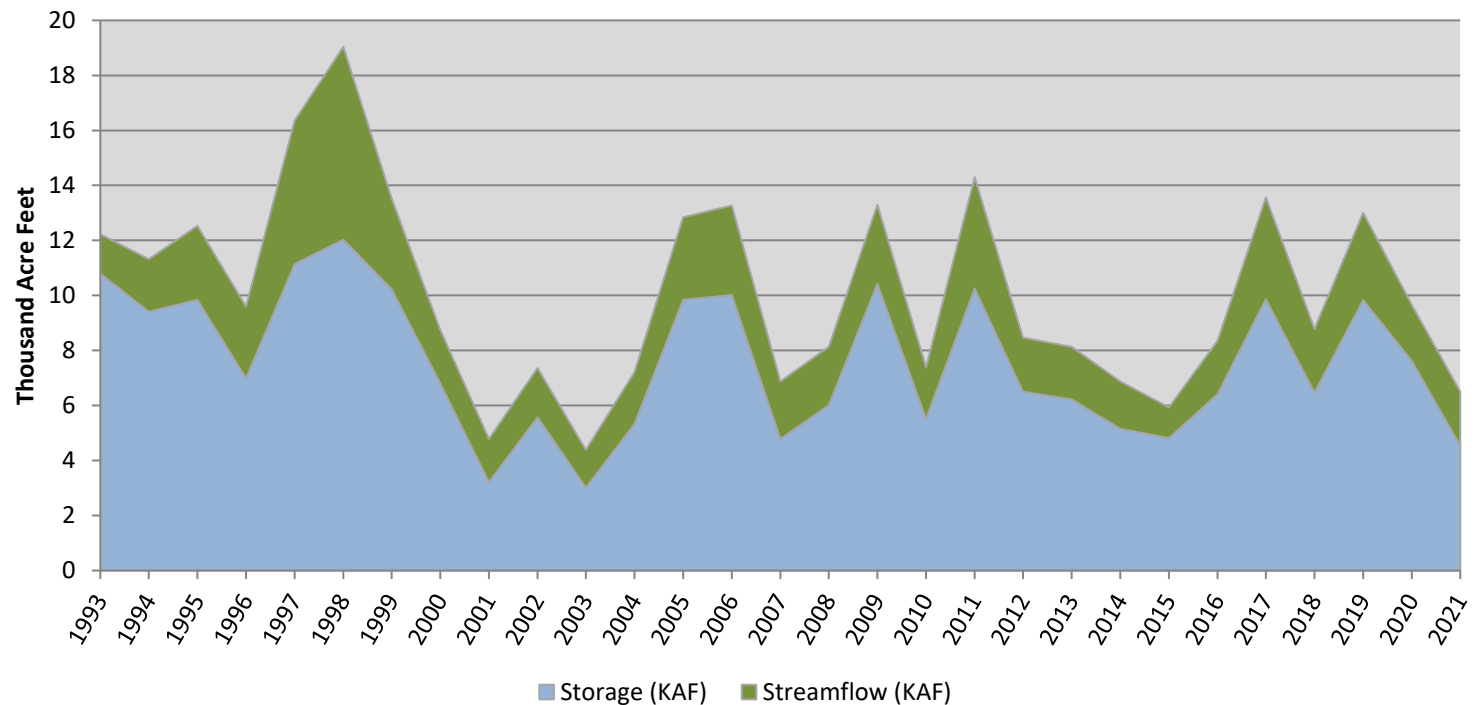
November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Little Bear	4.54	1.96	6.50	13	-3.06	01, 15, 07, 14

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

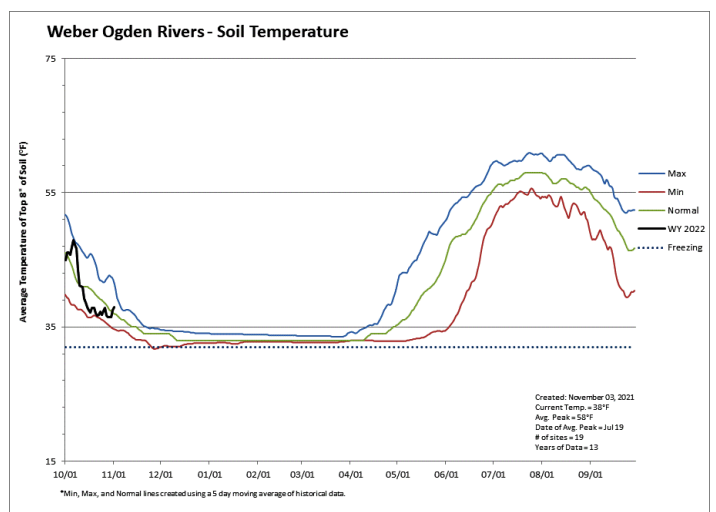
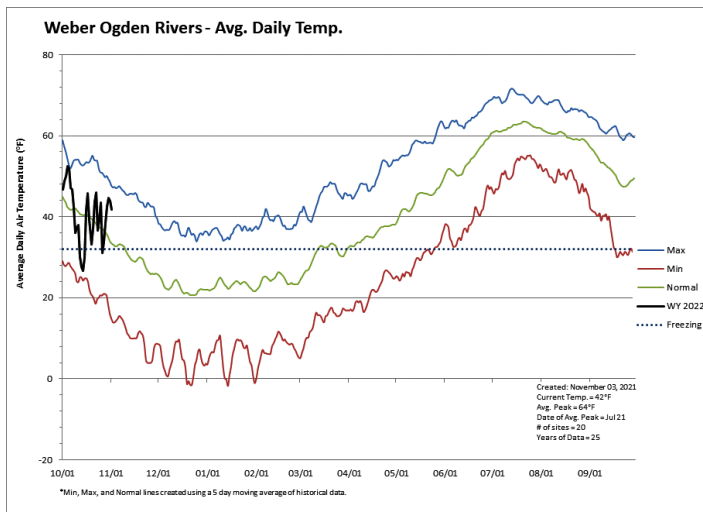
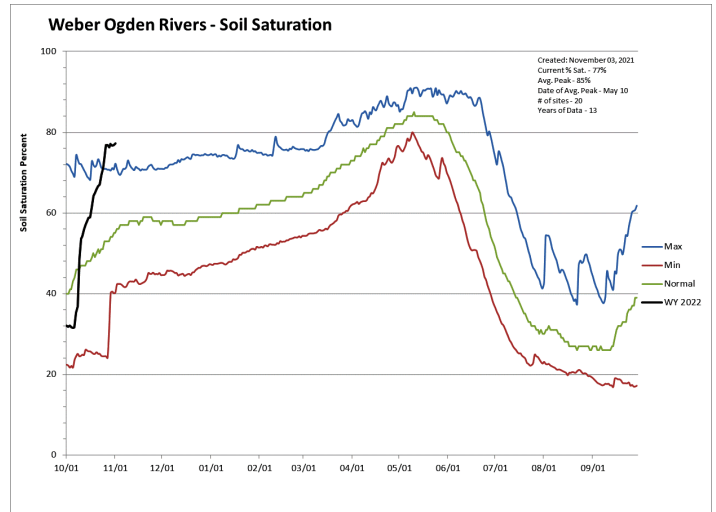
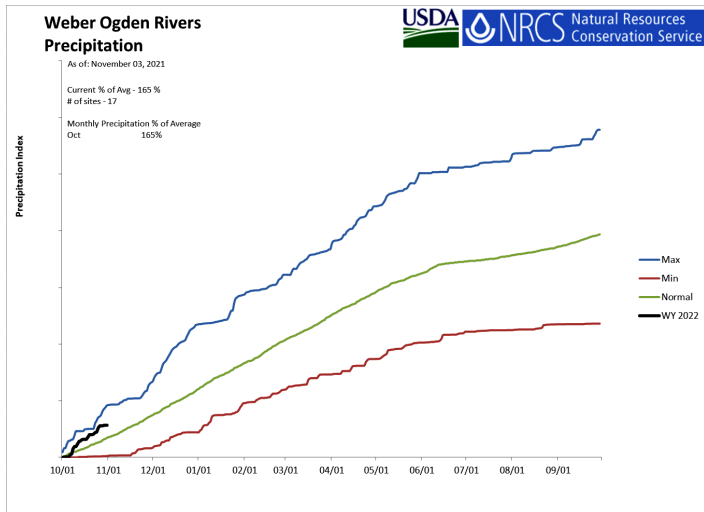
Little Bear - Water Availability Index



Weber & Ogden River Basins

November 1, 2021

Precipitation in October was much above average at 199%, which brings the seasonal accumulation (Oct-Oct) to 199% of average. Soil moisture is at 77% compared to 20% last year. Reservoir storage is at 28% of capacity, compared to 40% last year. The water availability index for the Ogden River is 10% and 16% for the Weber River.

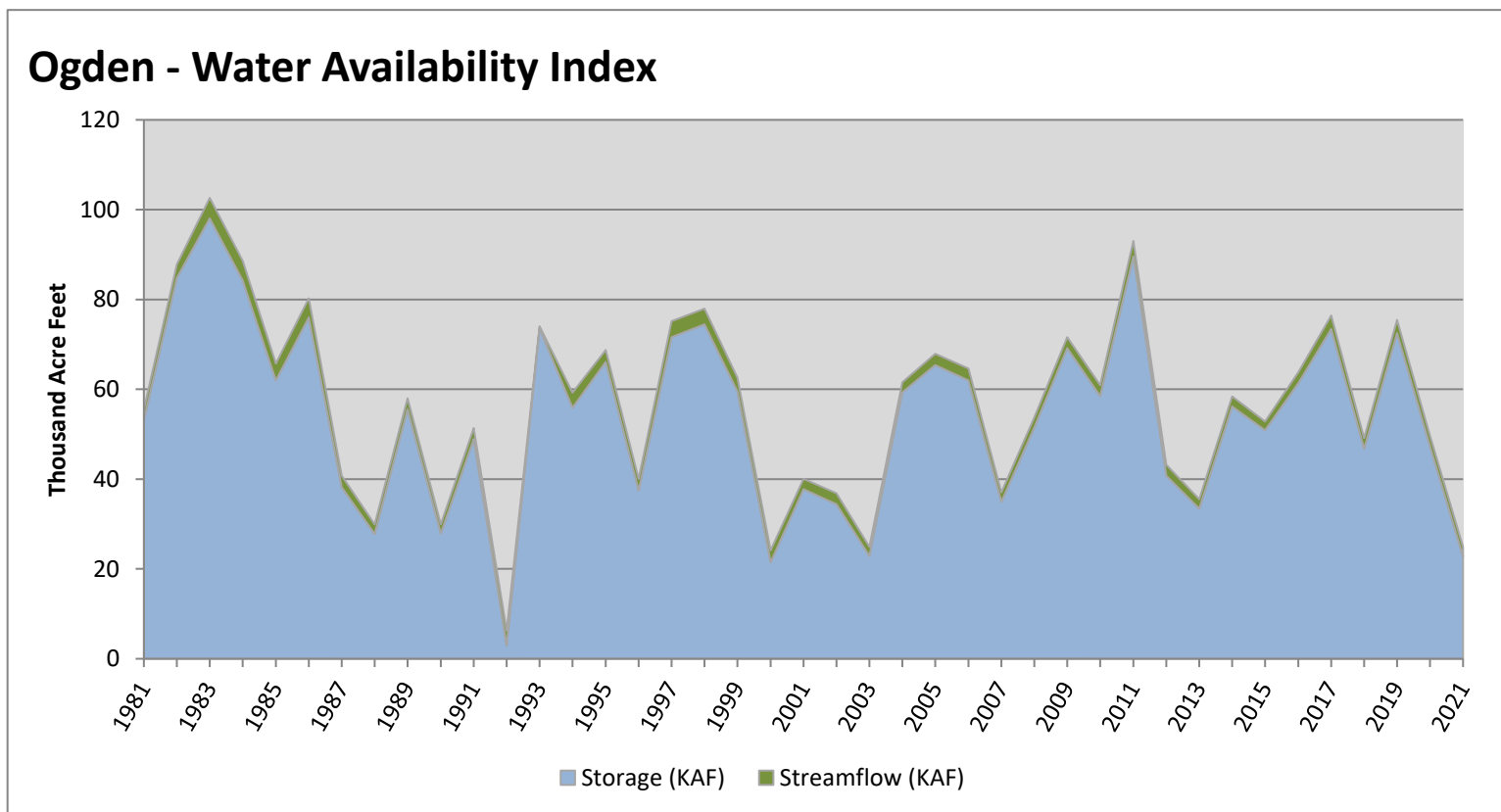


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Ogden	22.78	2.14	24.92	10	-3.37	00, 03, 88, 90

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

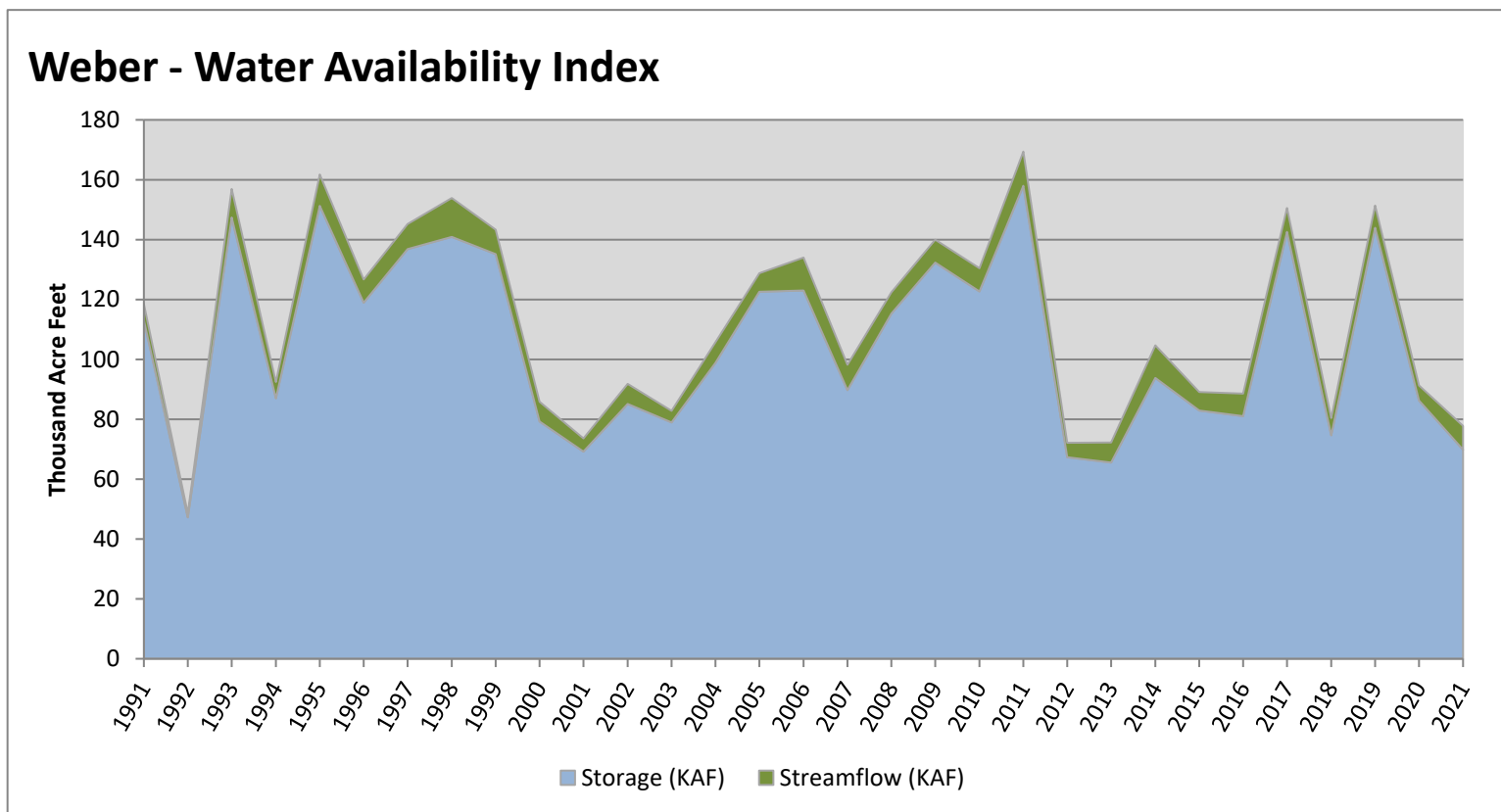


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Weber	69.81	7.98	77.79	16	-2.86	13, 01, 18, 03

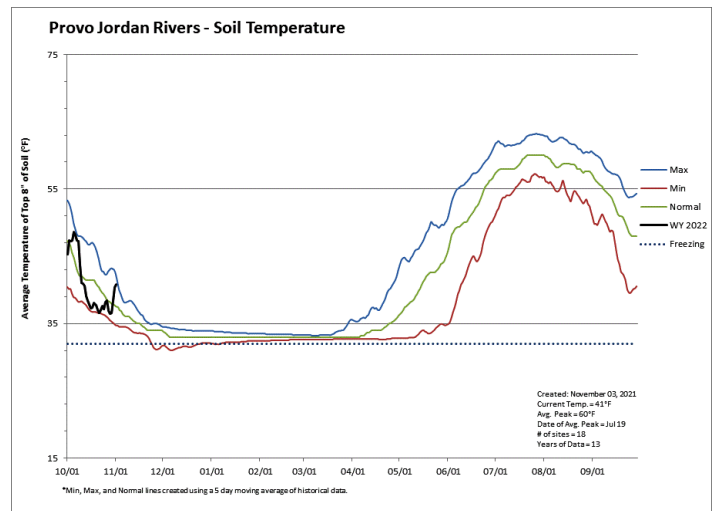
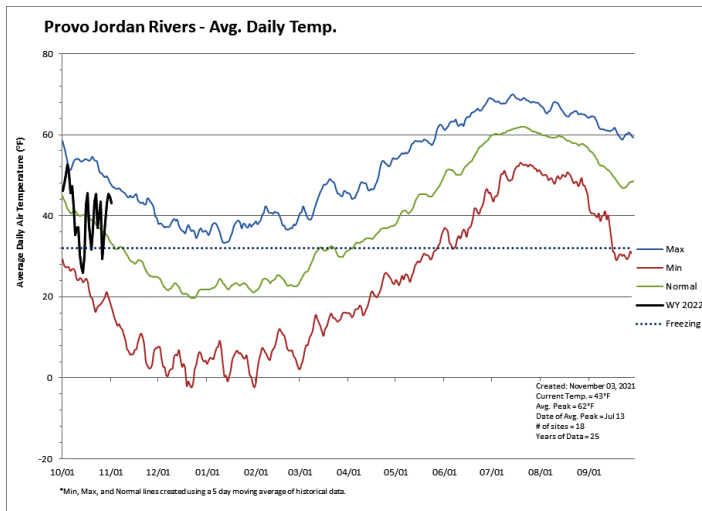
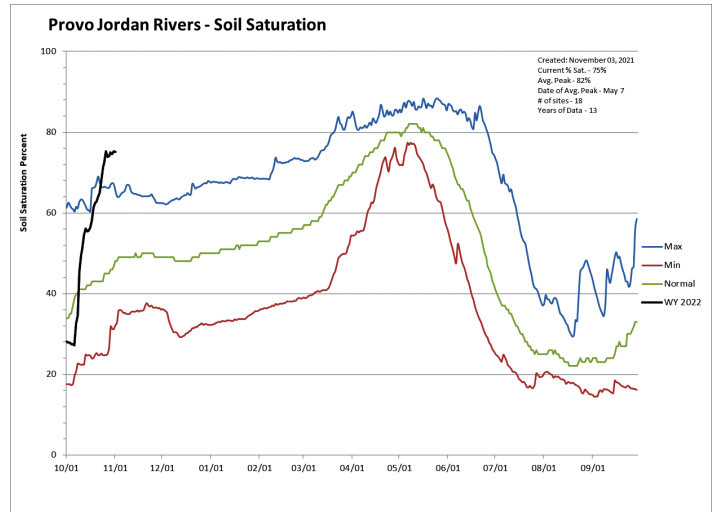
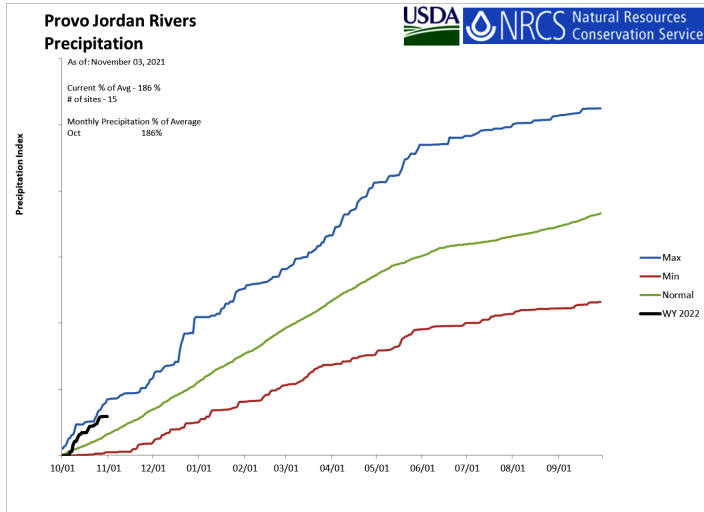
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Provo & Jordan River Basins

November 1, 2021

Precipitation in October was much above average at 220%, which brings the seasonal accumulation (Oct-Oct) to 220% of average. Soil moisture is at 75% compared to 12% last year. Reservoir storage is at 62% of capacity, compared to 75% last year. The water availability index for the Provo River is 7%.

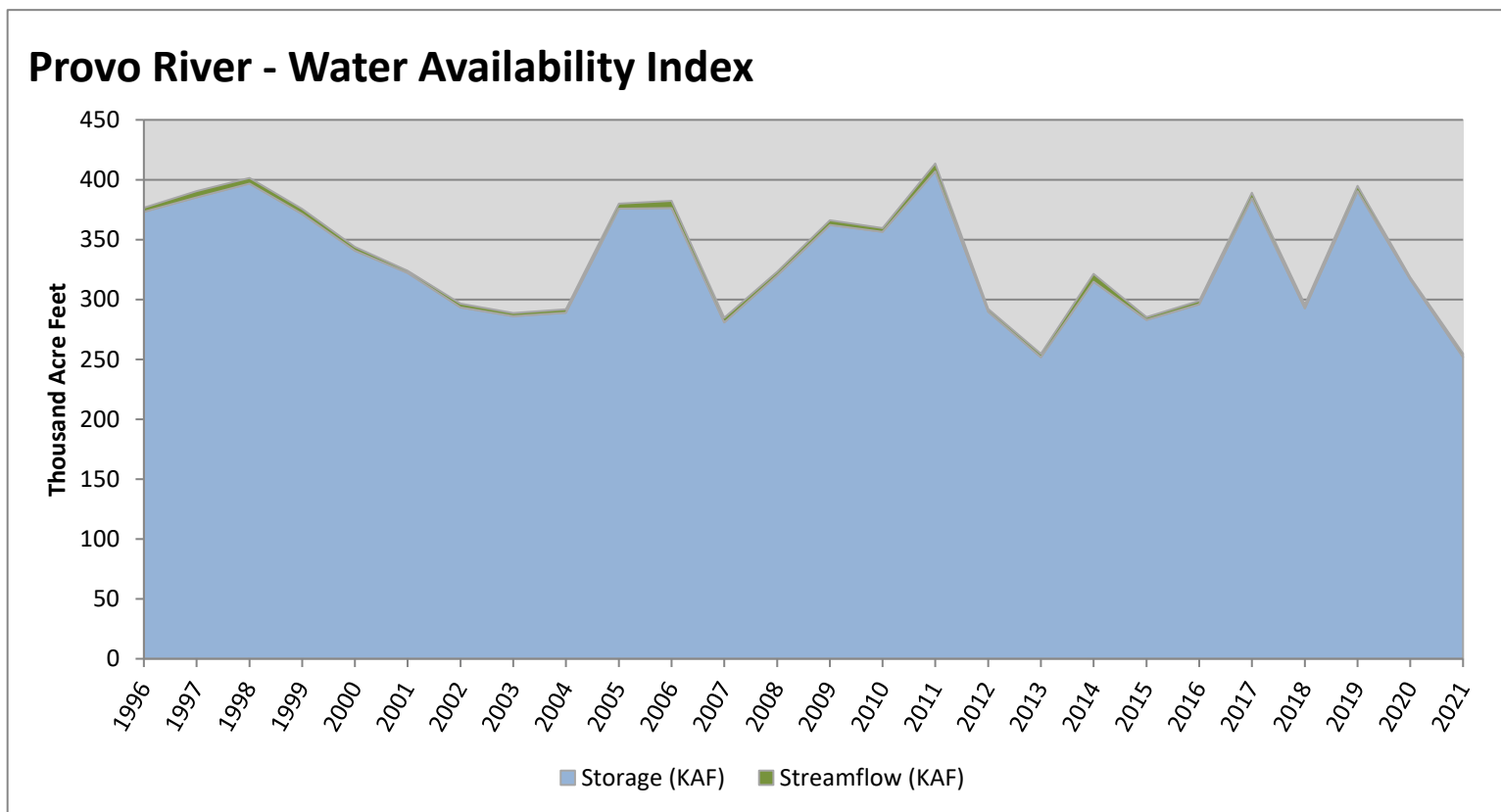


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Provo River	251.79	3.08	254.87	7	-3.55	13, 07, 15, 03

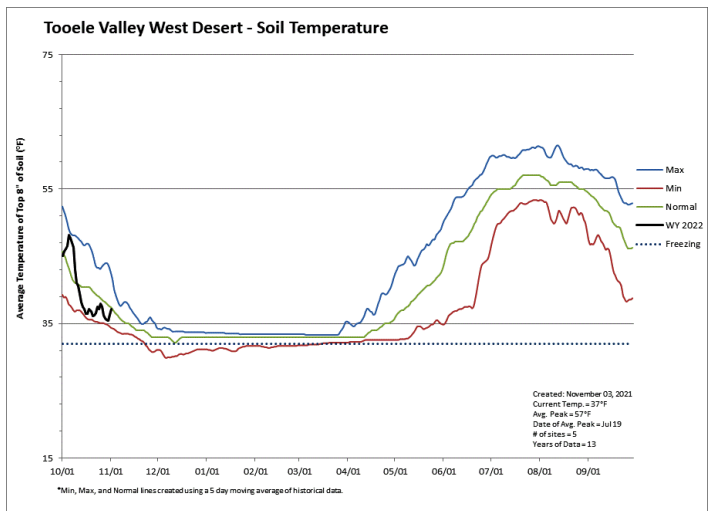
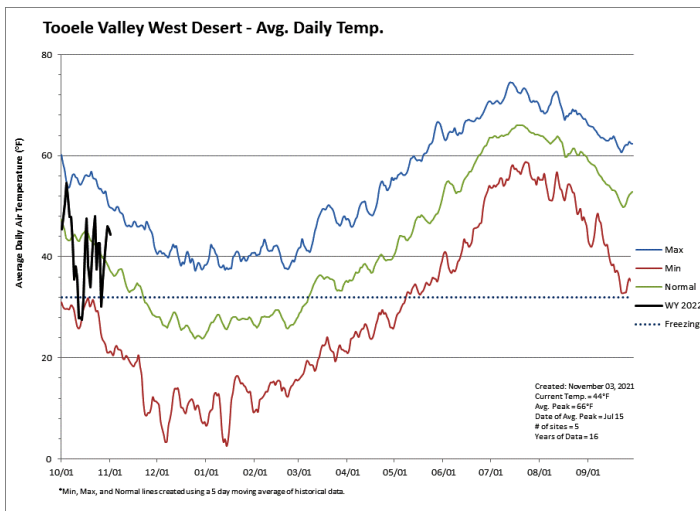
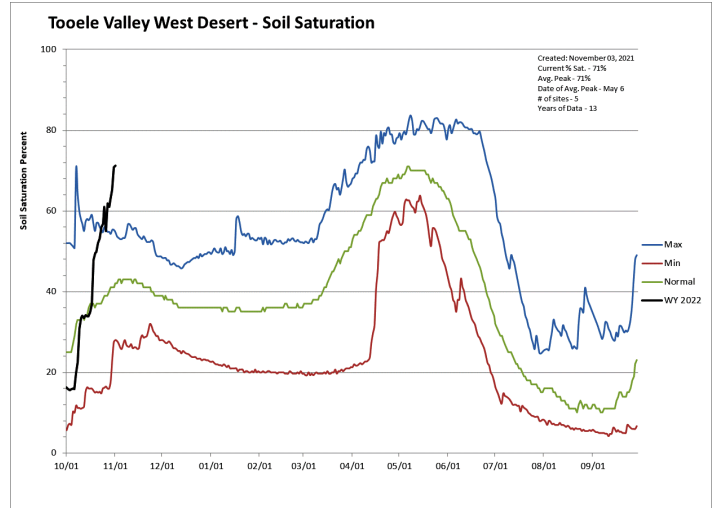
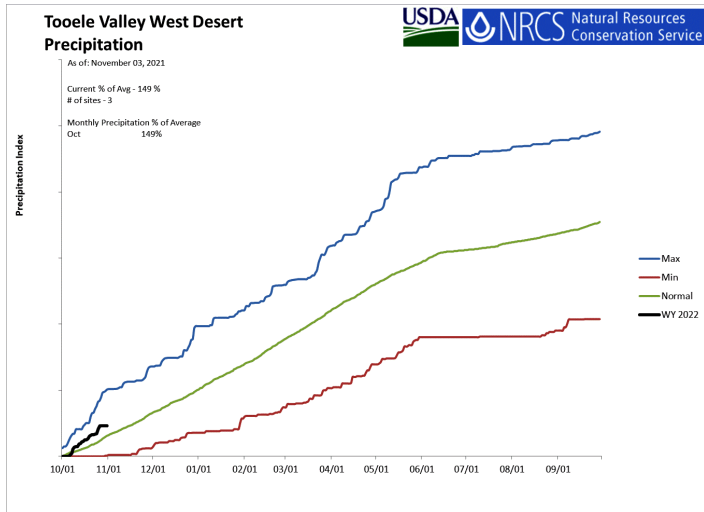
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Tooele Valley & West Desert Basins

November 1, 2021

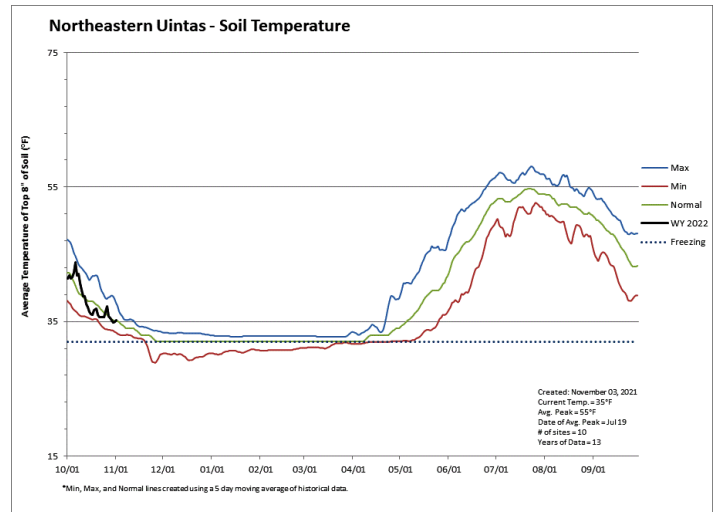
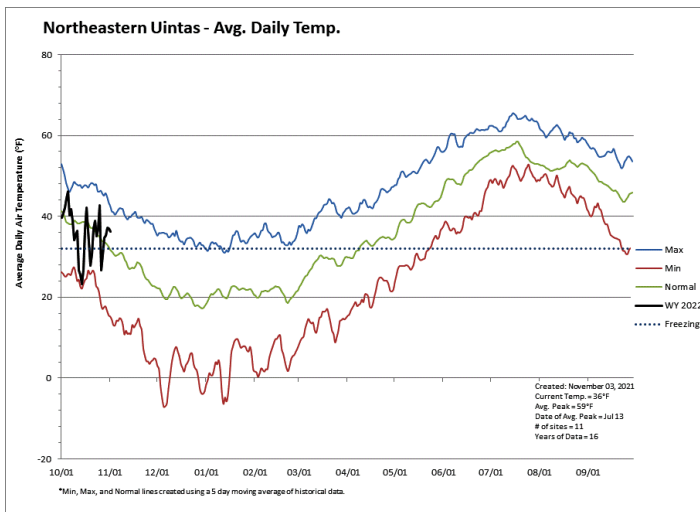
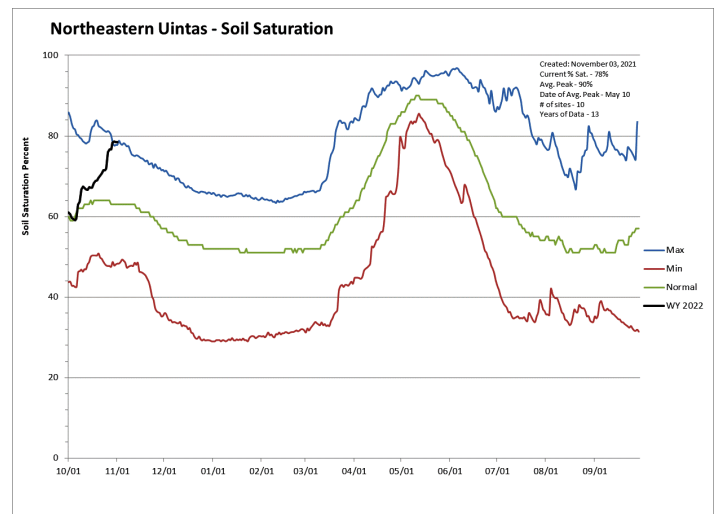
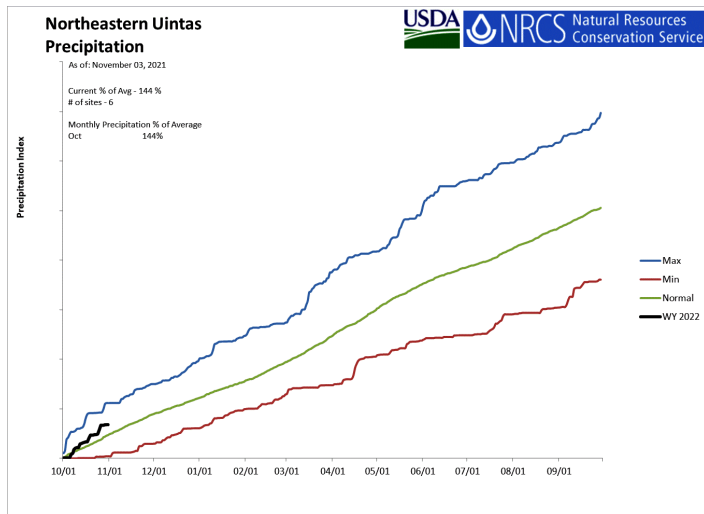
Precipitation in October was much above average at 175%, which brings the seasonal accumulation (Oct-Oct) to 175% of average. Soil moisture is at 60% compared to 9% last year. Reservoir storage is at 39% of capacity, compared to 30% last year.



Northeastern Uinta Basin

November 1, 2021

Precipitation in October was much above average at 156%, which brings the seasonal accumulation (Oct-Oct) to 154% of average. Soil moisture is at 77% compared to 30% last year. Reservoir storage is at 78% of capacity, compared to 84% last year. The water availability index for Blacks Fork is 46% and 45% for Smiths Creek.

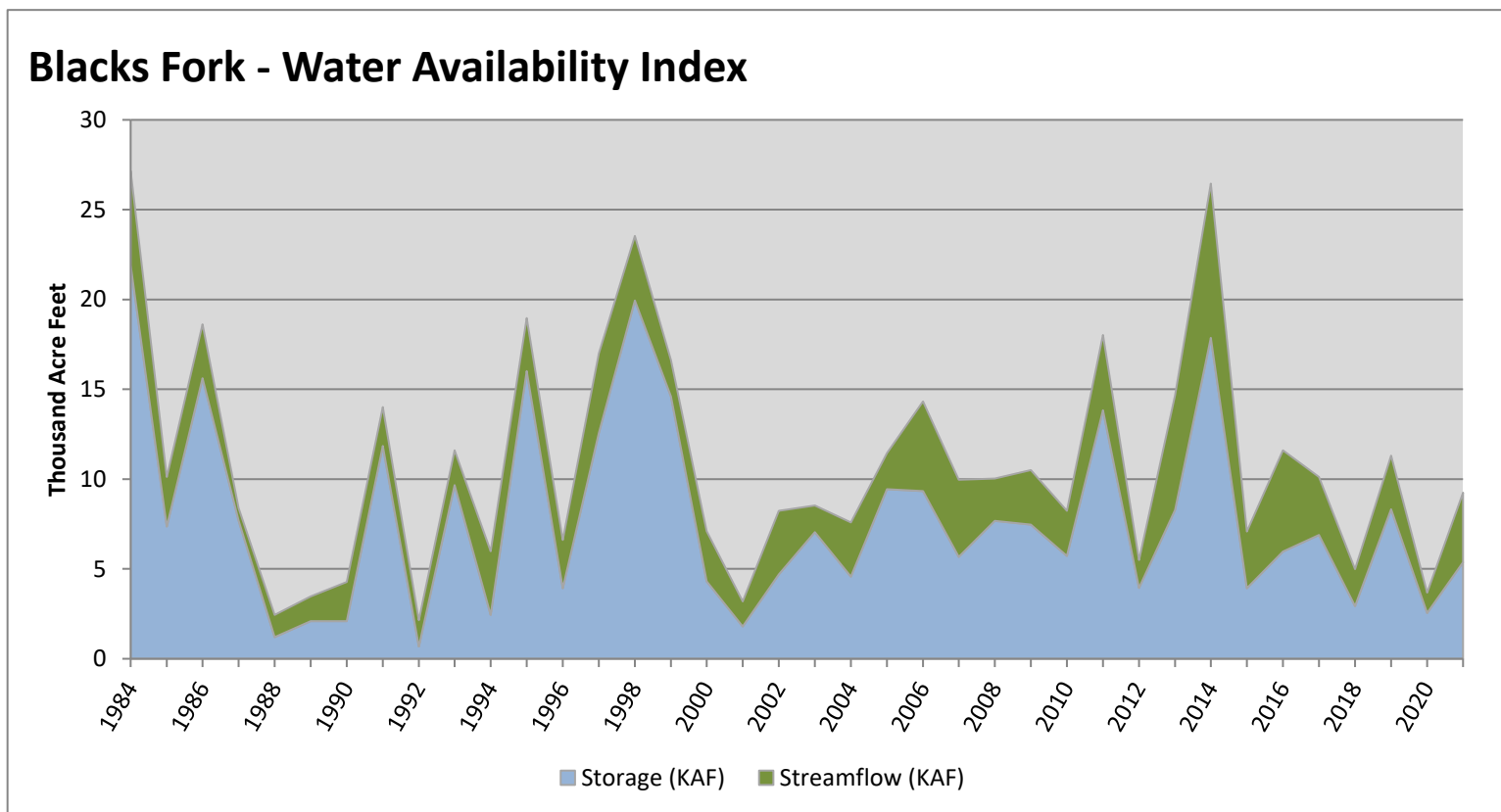


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Blacks Fork	5.38	3.87	9.25	46	-0.32	87, 03, 07, 08

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

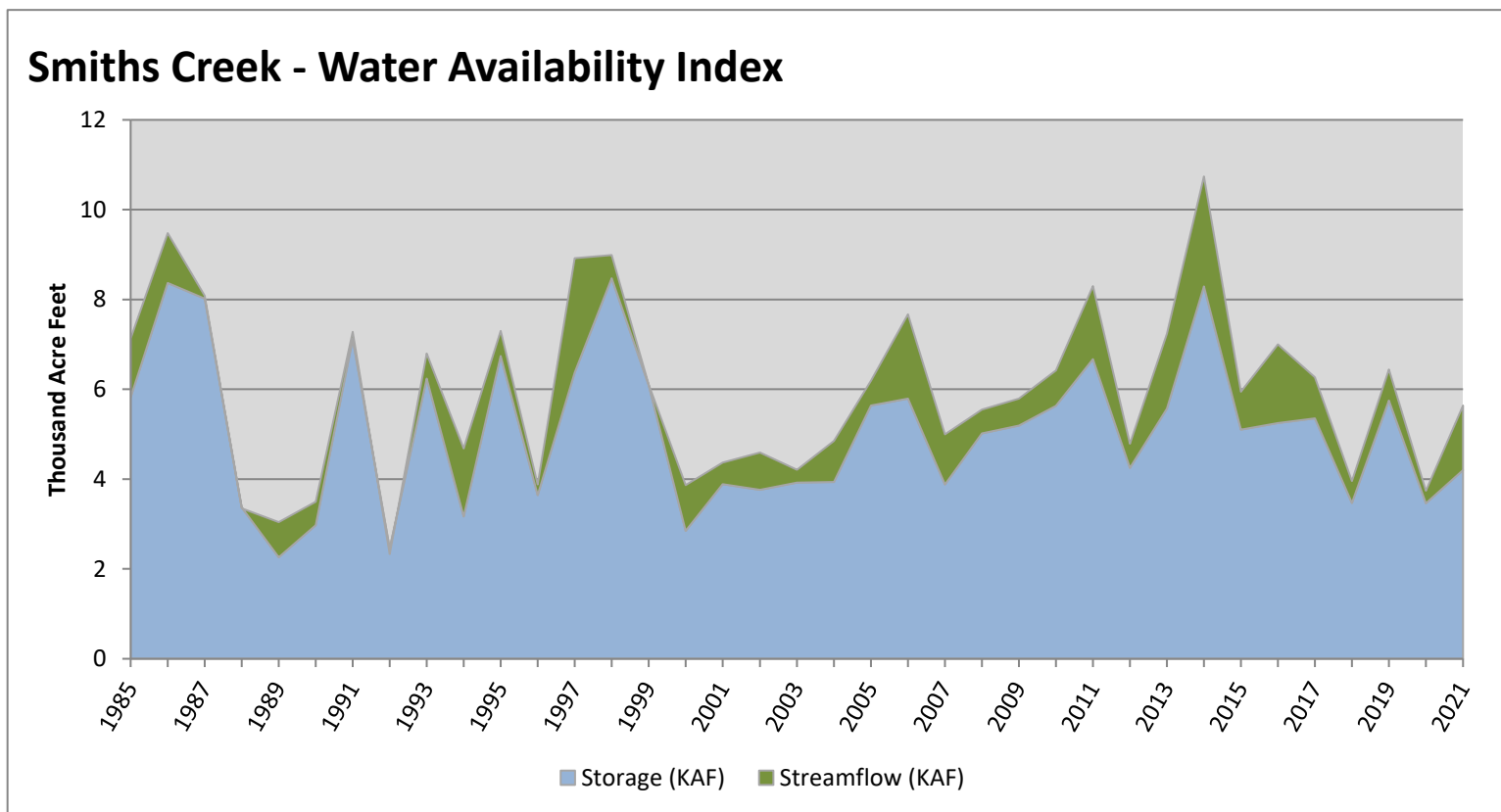


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Smiths Creek	4.20	1.44	5.64	45	-0.44	07, 08, 09, 15

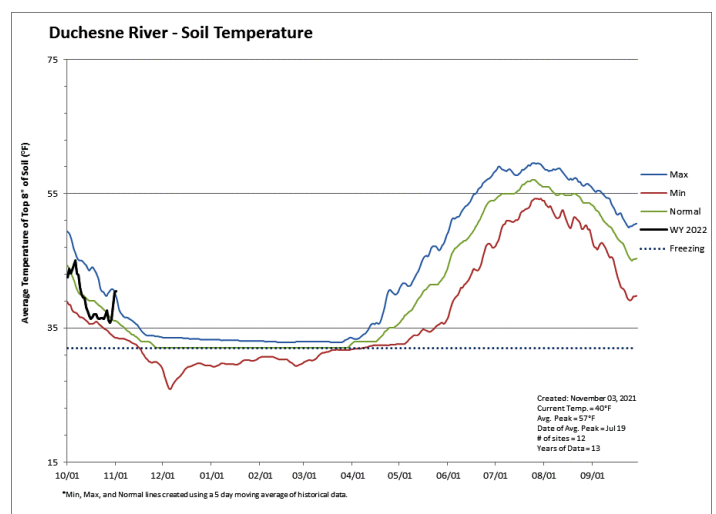
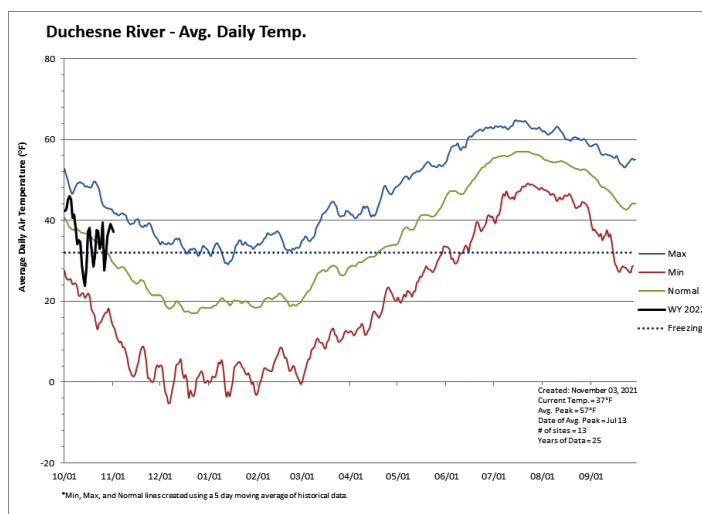
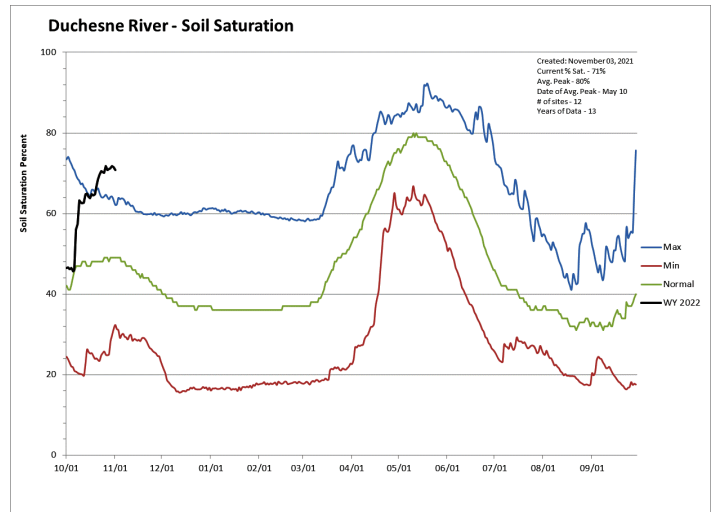
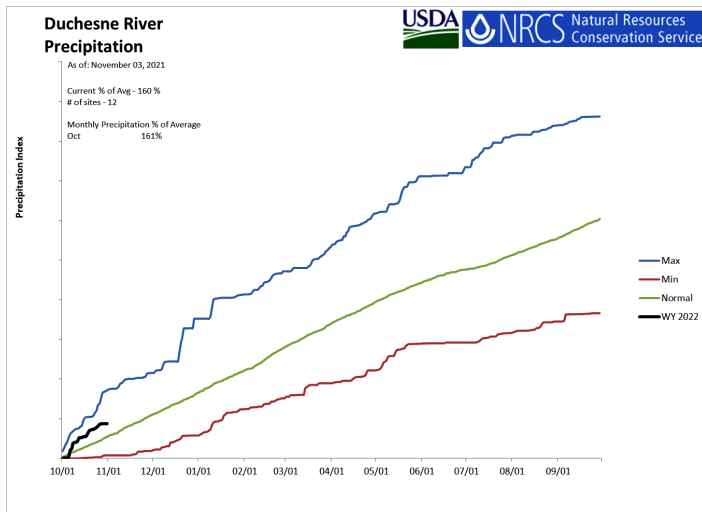
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Duchesne River Basin

November 1, 2021

Precipitation in October was much above average at 198%, which brings the seasonal accumulation (Oct-Oct) to 198% of average. Soil moisture is at 71% compared to 15% last year. Reservoir storage is at 70% of capacity, compared to 77% last year. The water availability index for the Western Uintas is 49% and 10% for the Eastern Uintas.

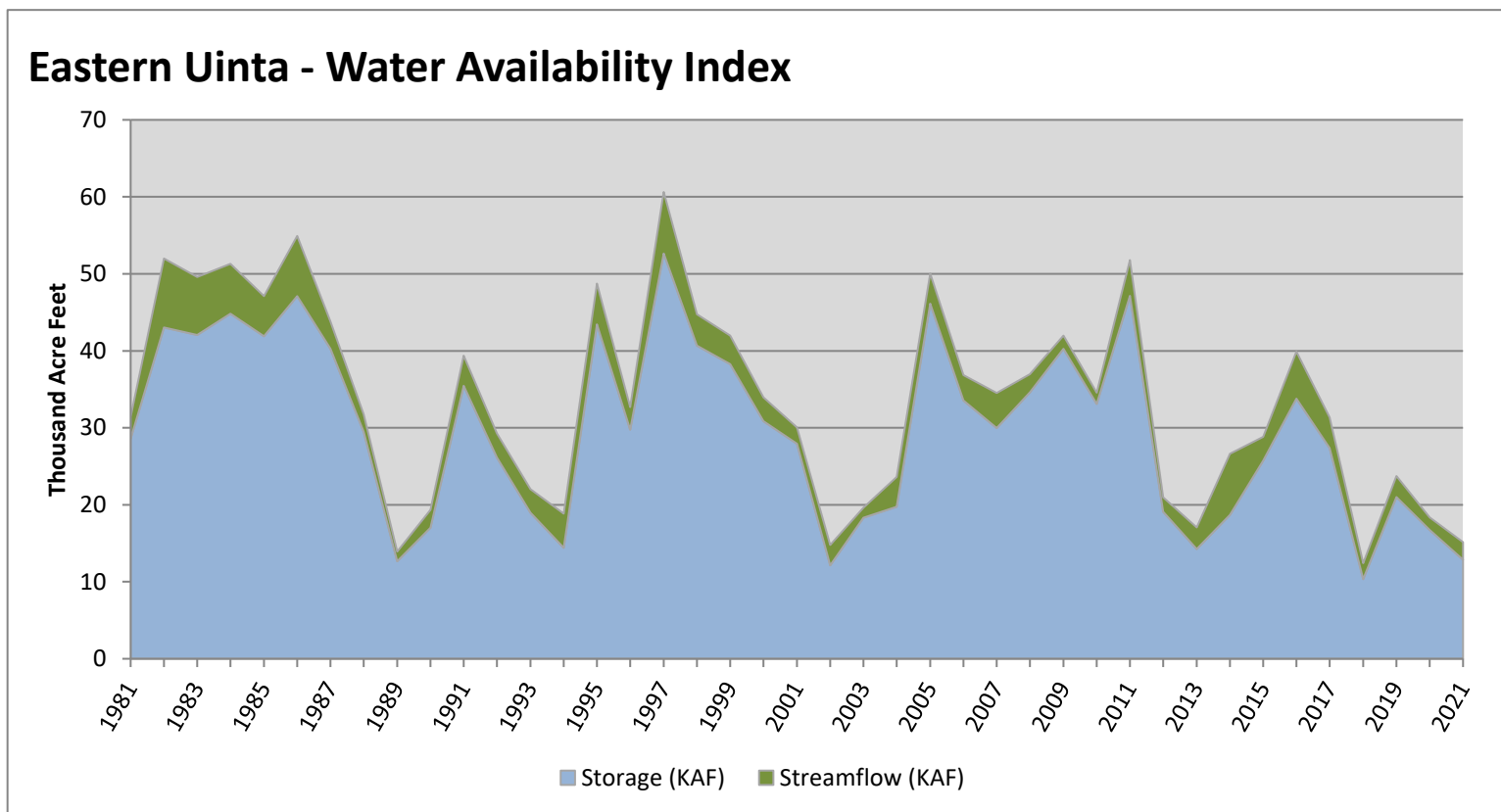


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Eastern Uinta	12.86	2.28	15.14	10	-3.37	89, 02, 13, 20

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

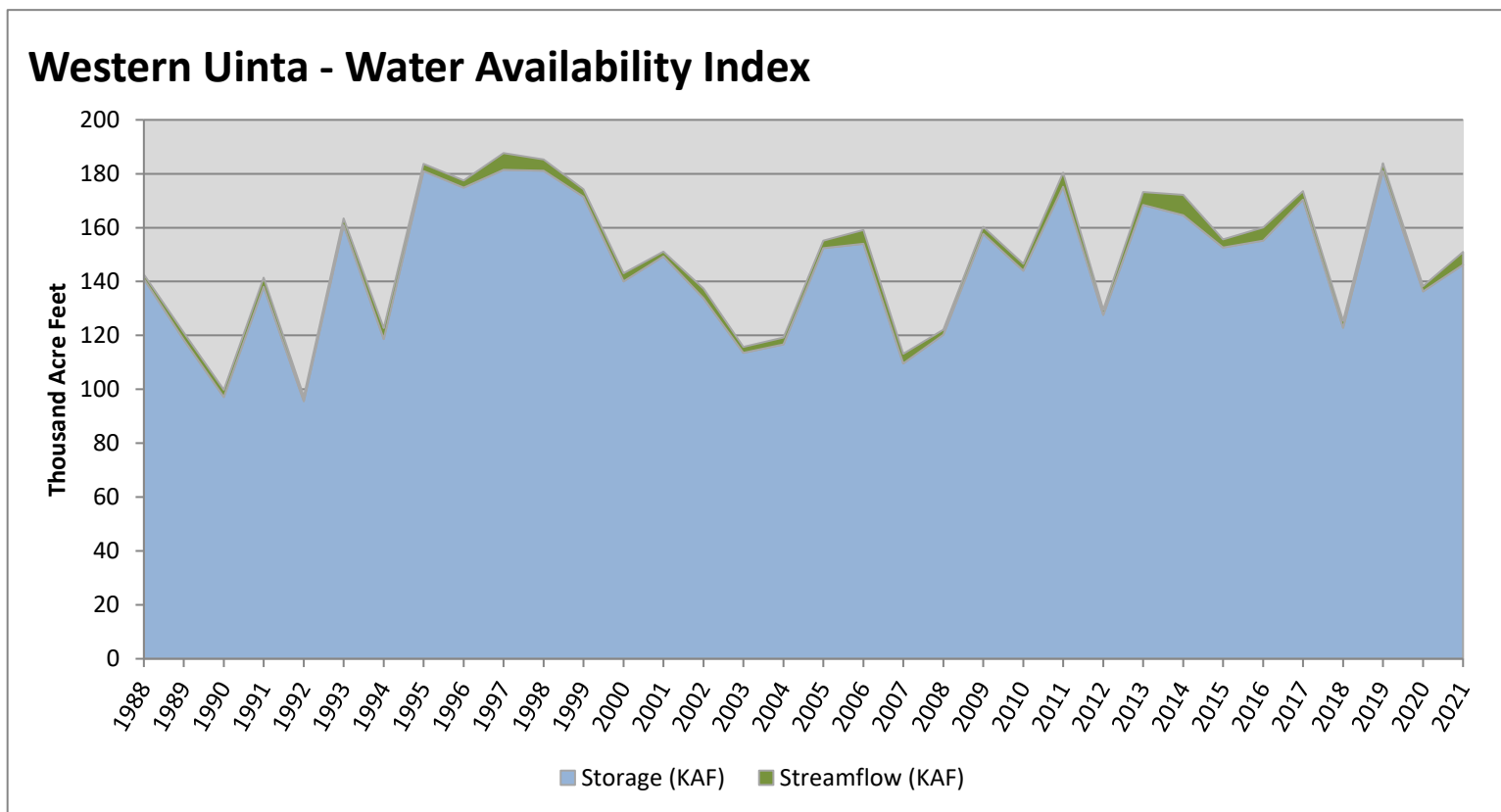


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Western Uinta	146.22	4.82	151.04	49	-0.12	00, 10, 01, 05

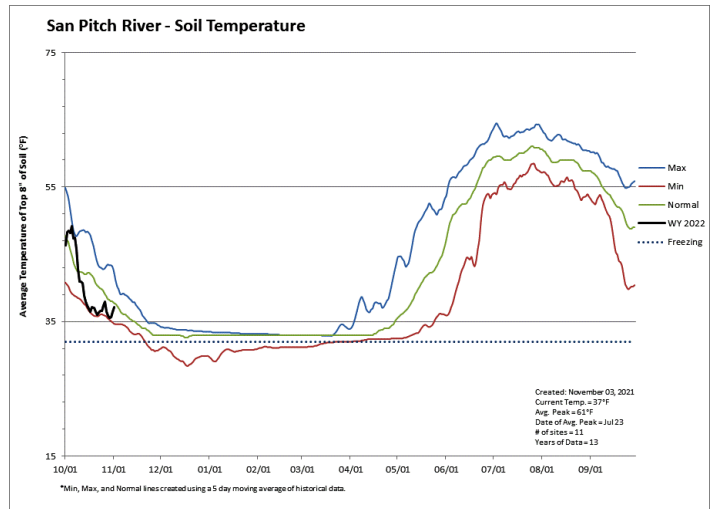
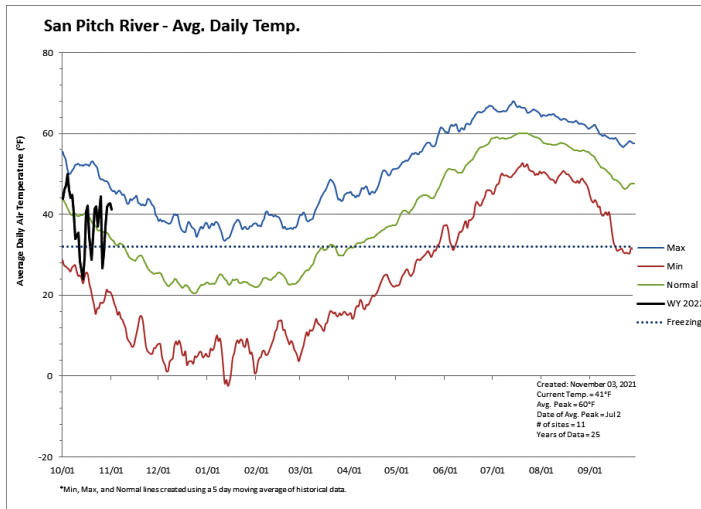
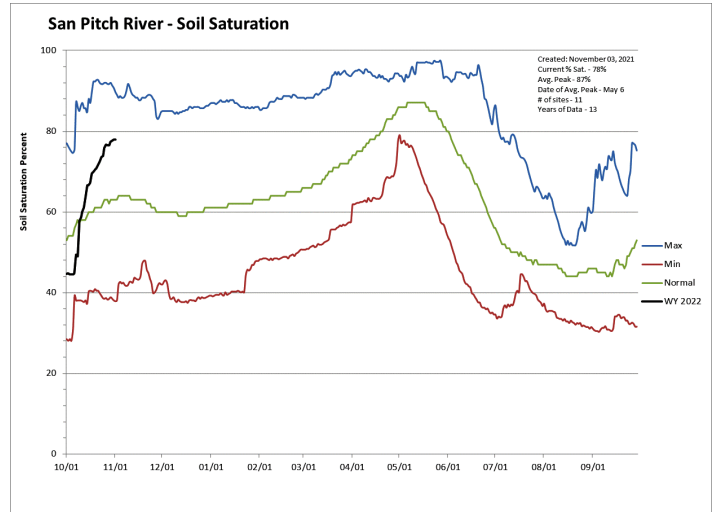
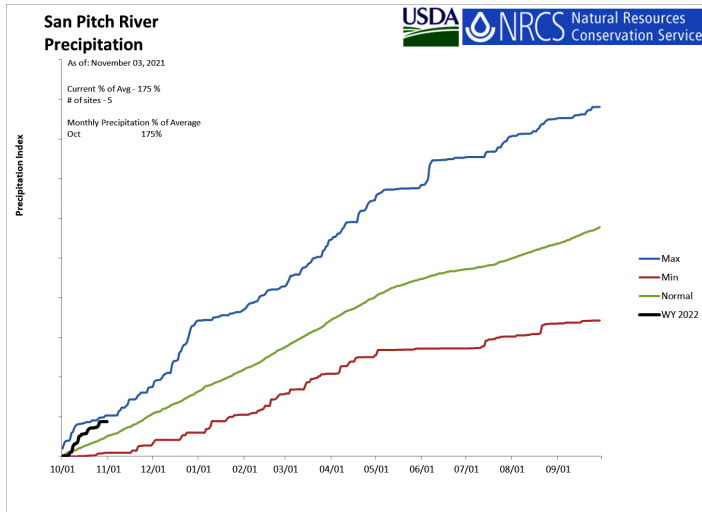
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



San Pitch River Basin

November 1, 2021

Precipitation in October was much above average at 190%, which brings the seasonal accumulation (Oct-Oct) to 190% of average. Soil Moisture is at 78% compared to 33% last year. Reservoir storage is at 0% of capacity, compared to 0% last year. The water availability index for the San Pitch is 17%.

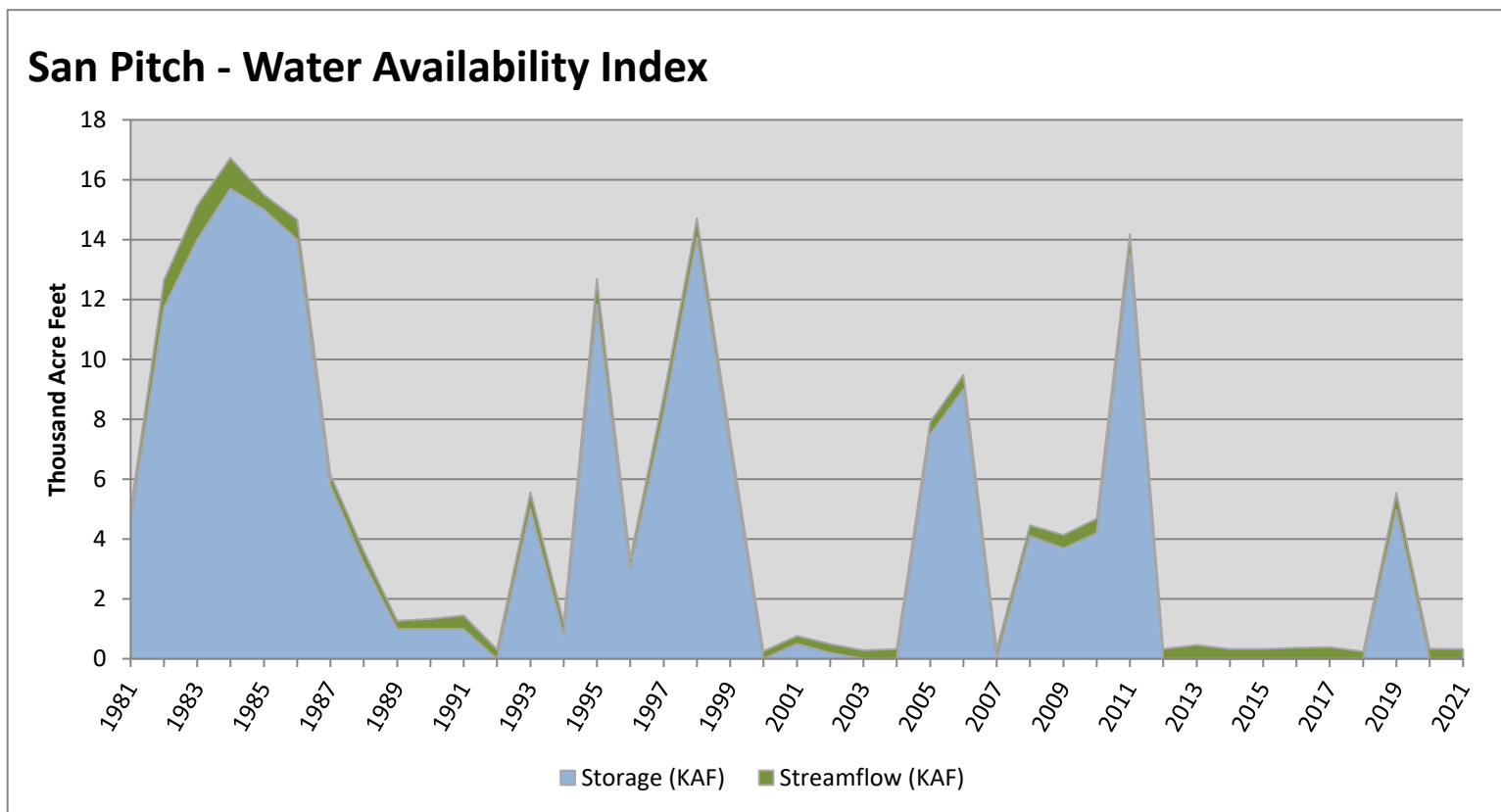


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
San Pitch	0.00	0.32	0.32	17	-2.78	04, 15, 07, 12

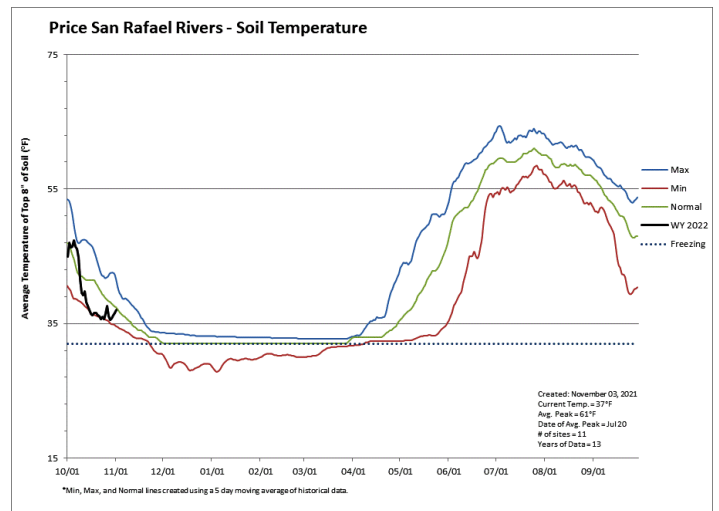
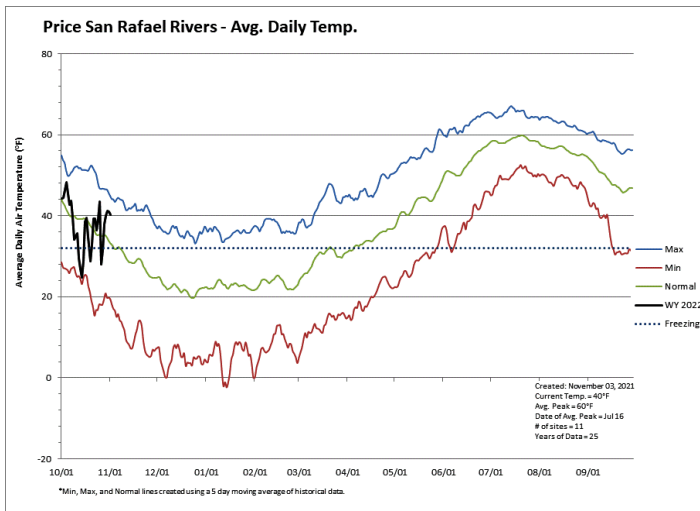
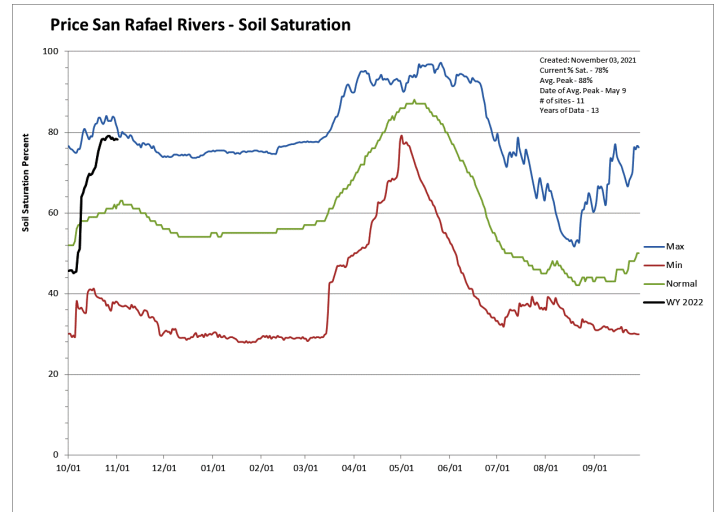
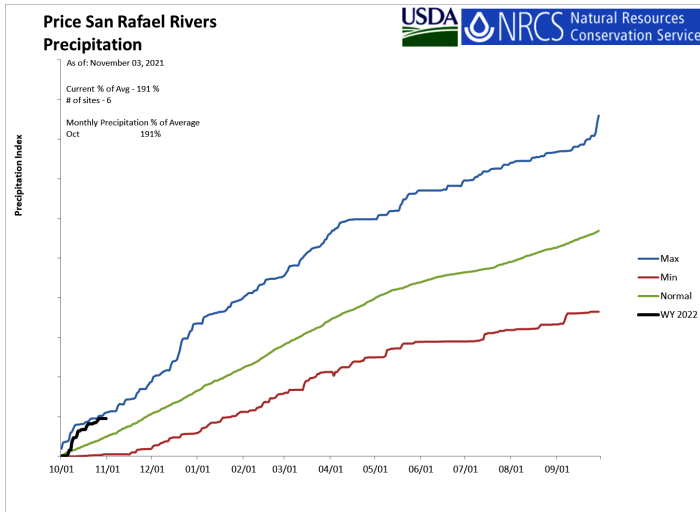
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Price & San Rafael Basins

November 1, 2021

Precipitation in October was much above average at 232%, which brings the seasonal accumulation (Oct-Oct) to 232% of average. Soil moisture is at 78% compared to 27% last year. Reservoir storage is at 27% of capacity, compared to 49% last year. The water availability index for the Price River is 33%, and 5% for Joe's Valley.

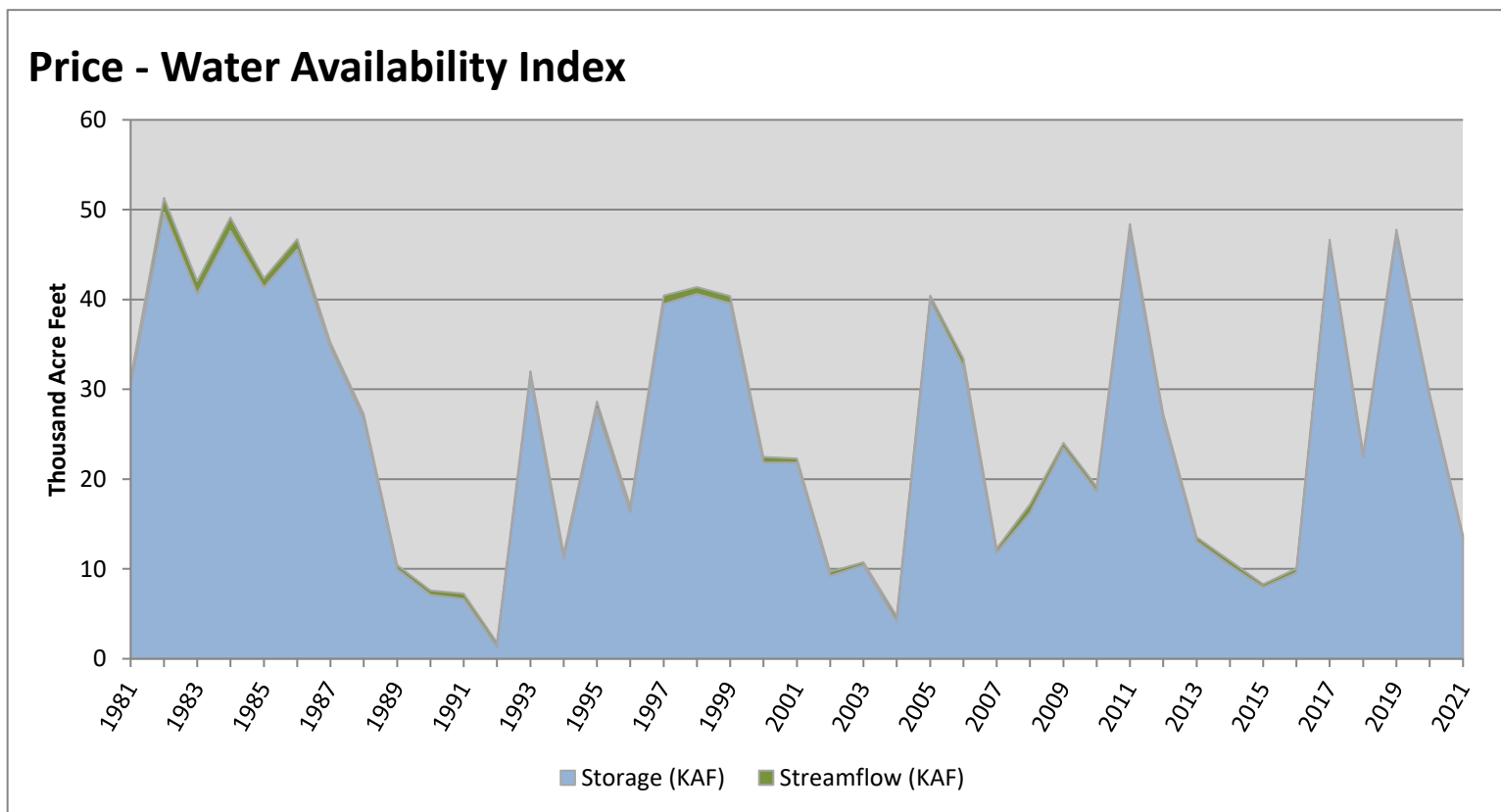


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Price	13.33	0.43	13.76	33	-1.39	07, 13, 96, 08

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

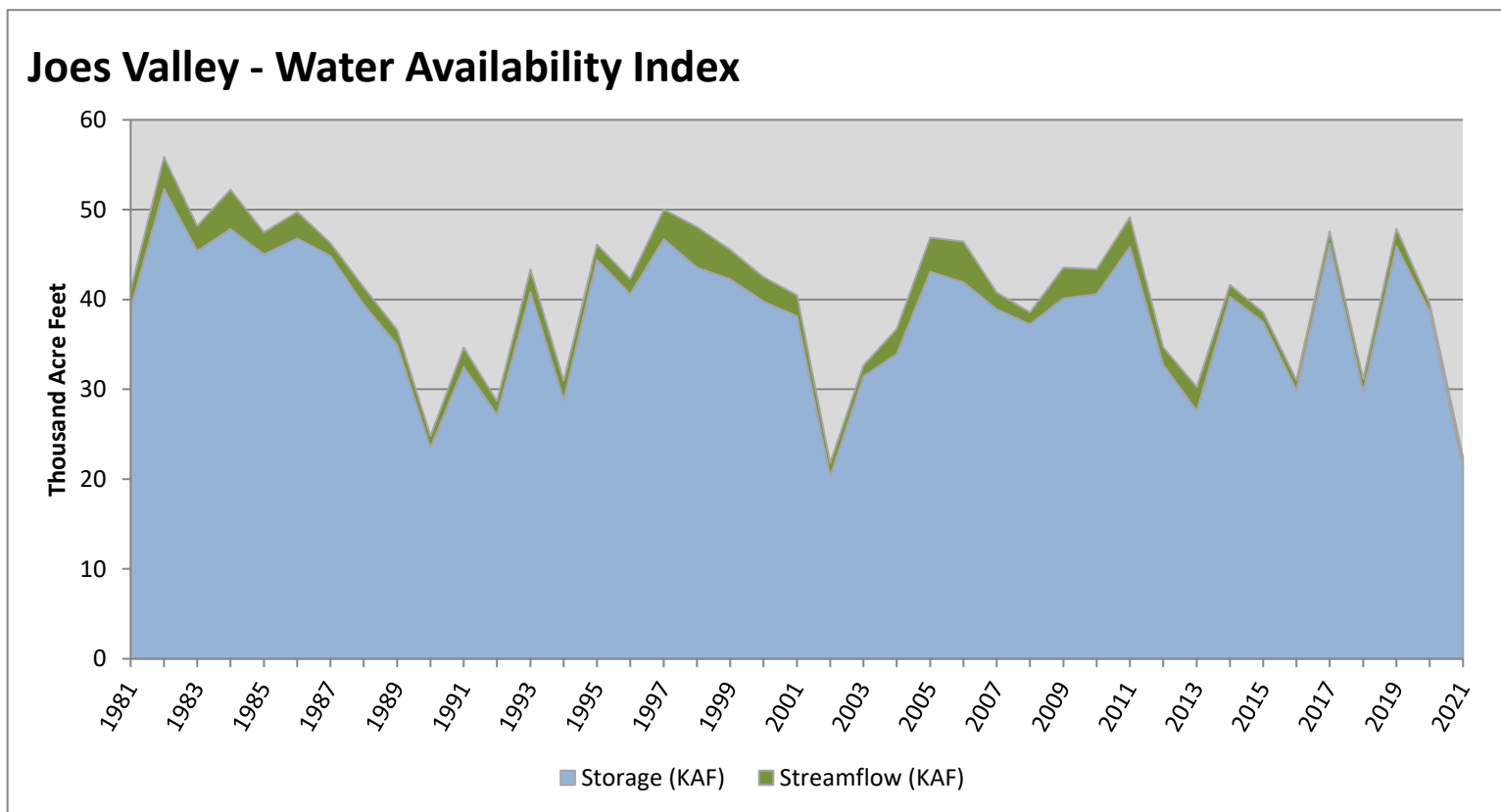


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Joese Valley	21.23	1.19	22.42	5	-3.77	02, 90, 92, 13

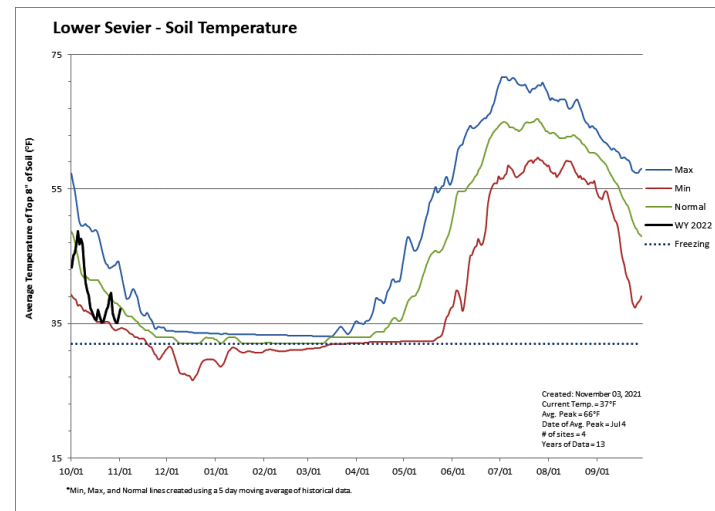
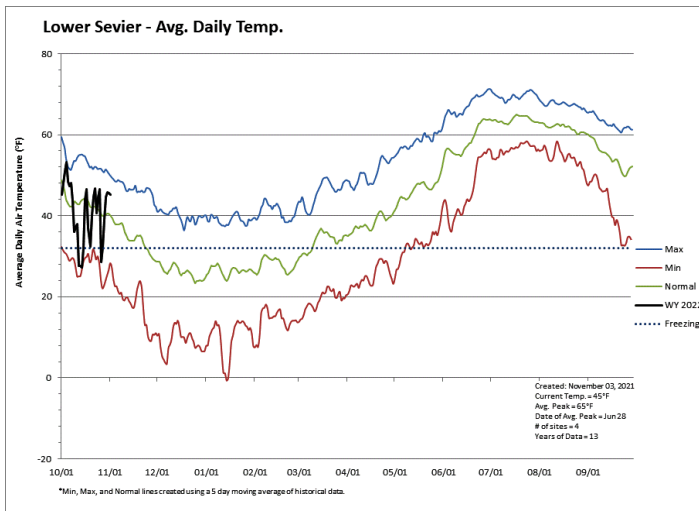
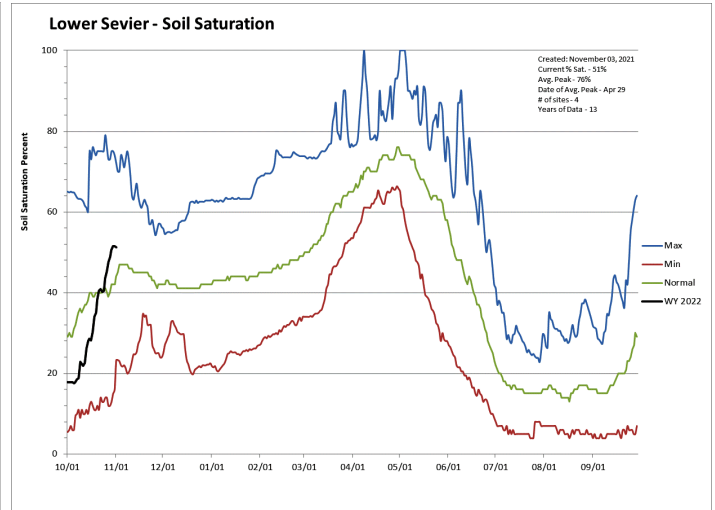
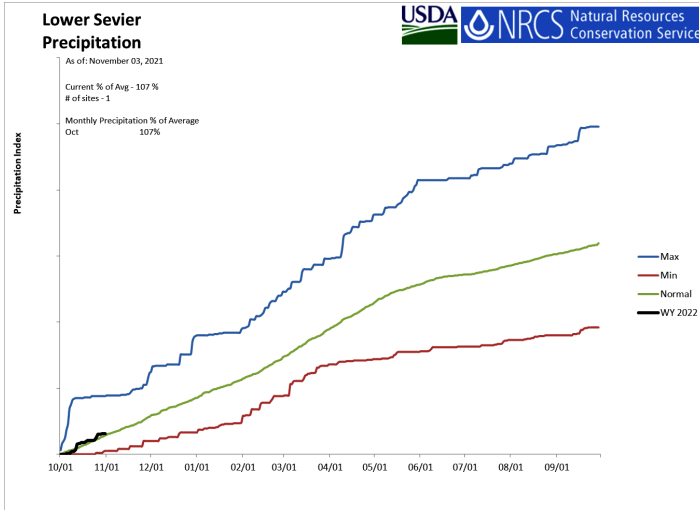
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Lower Sevier Basin

November 1, 2021

Precipitation in October was much above average at 151%, which brings the seasonal accumulation (Oct-Oct) to 151% of average. Soil moisture is at 51% compared to 10% last year. Reservoir storage is at 11% of capacity, compared to 19% last year. The water availability index for the Lower Sevier is 12%.

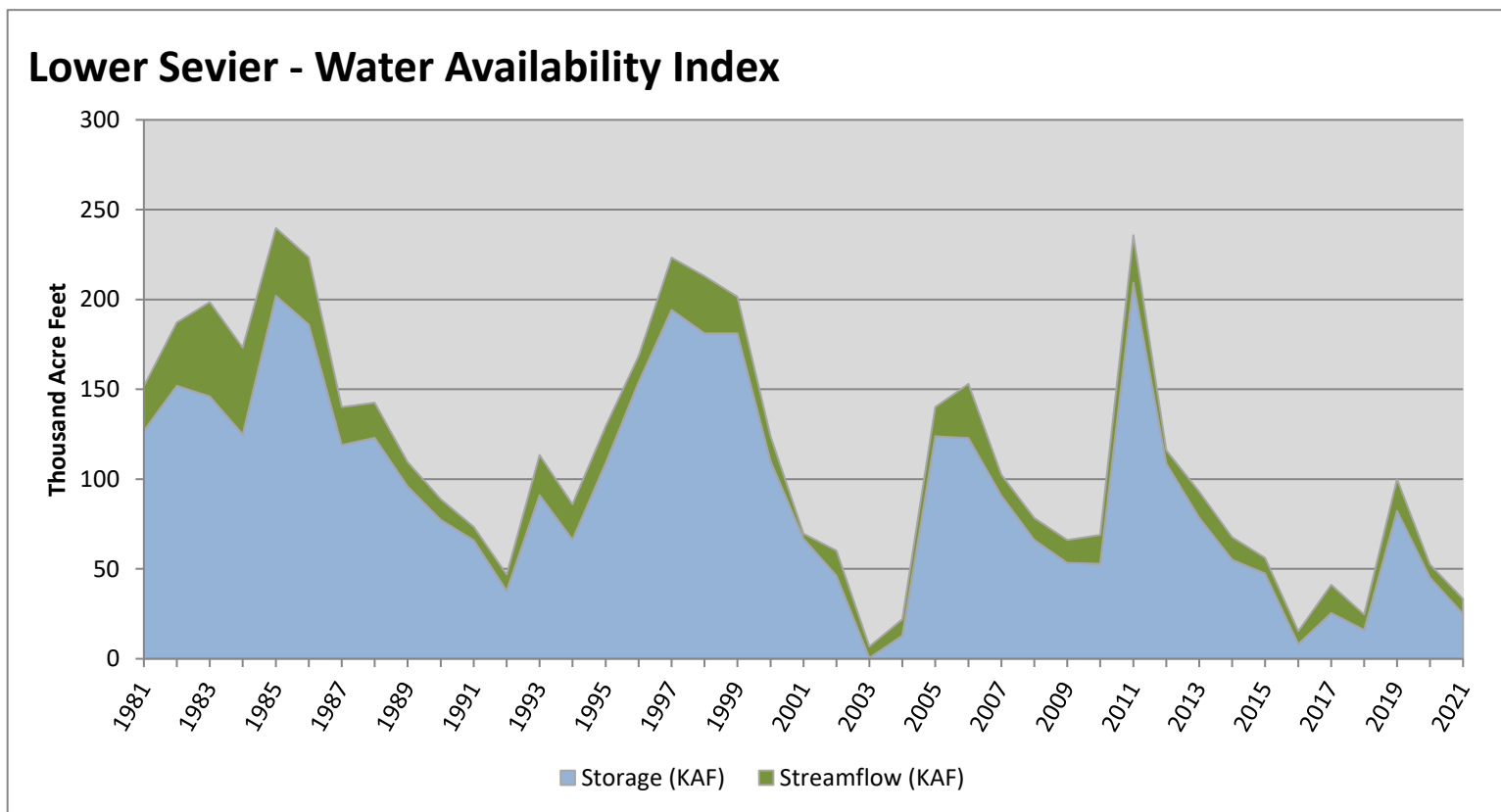


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Lower Sevier	25.00	8.25	33.25	12	-3.17	04, 18, 17, 92

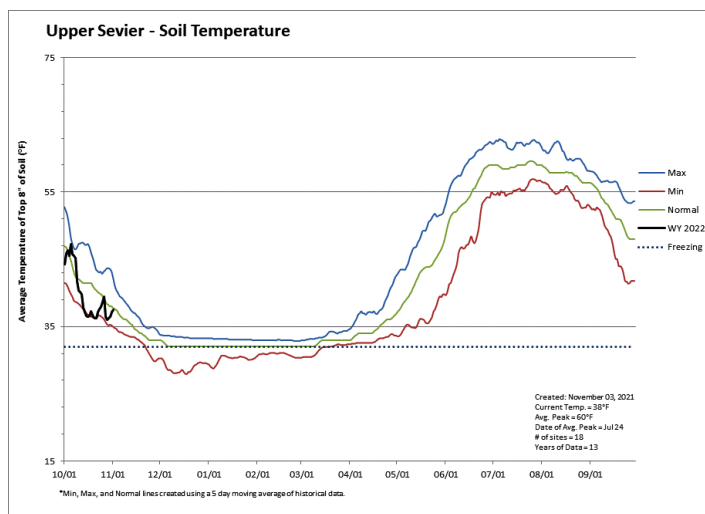
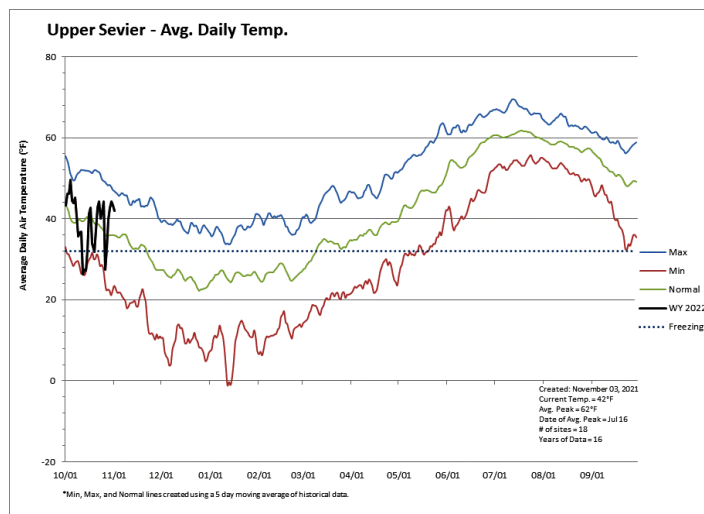
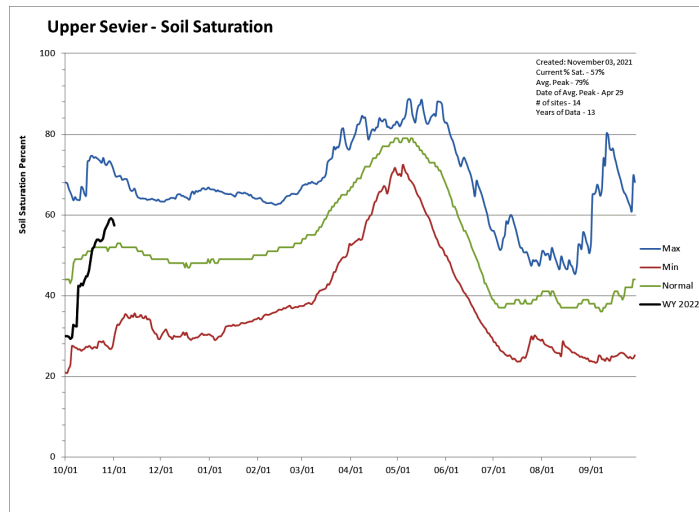
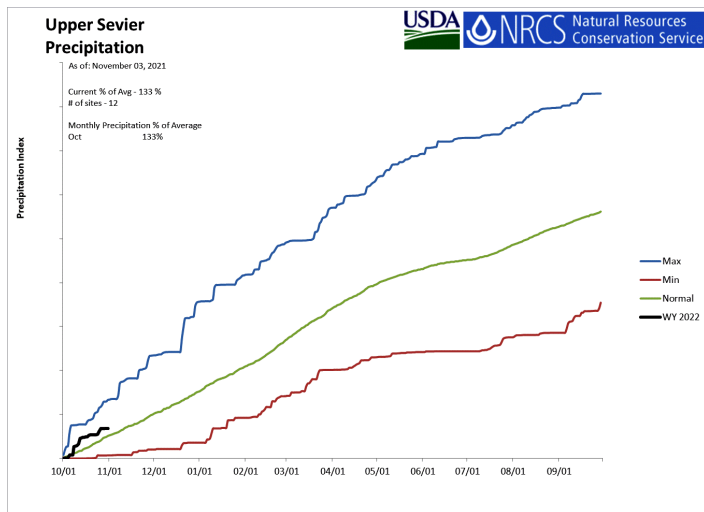
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Upper Sevier Basin

November 1, 2021

Precipitation in October was much above average at 172%, which brings the seasonal accumulation (Oct-Oct) to 172% of average. Soil moisture is at 59% compared to 21% last year. Reservoir storage is at 13% of capacity, compared to 31% last year. The water availability index for the Upper Sevier is 19%.

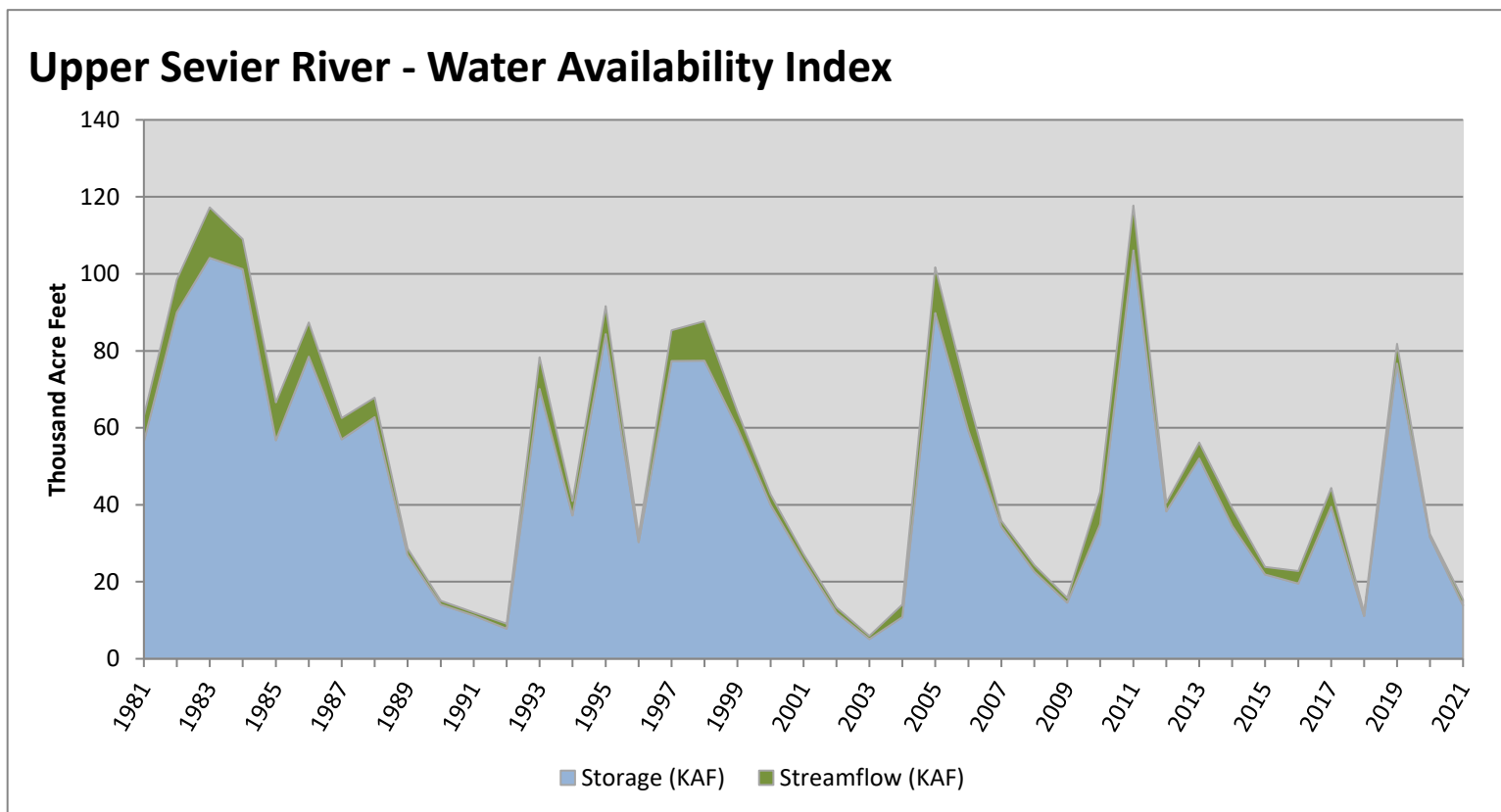


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similiar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Upper Sevier River	13.88	1.48	15.36	19	-2.58	04, 90, 09, 16

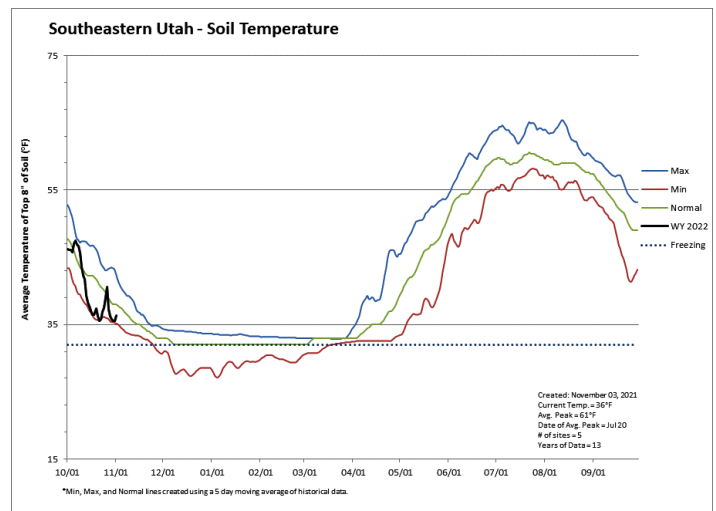
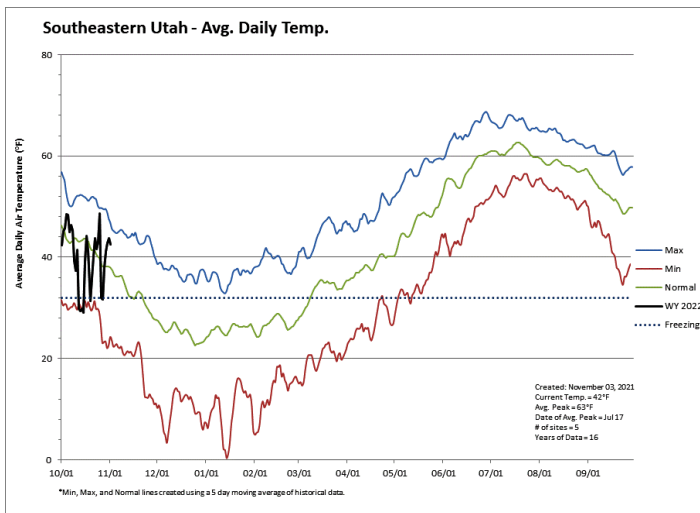
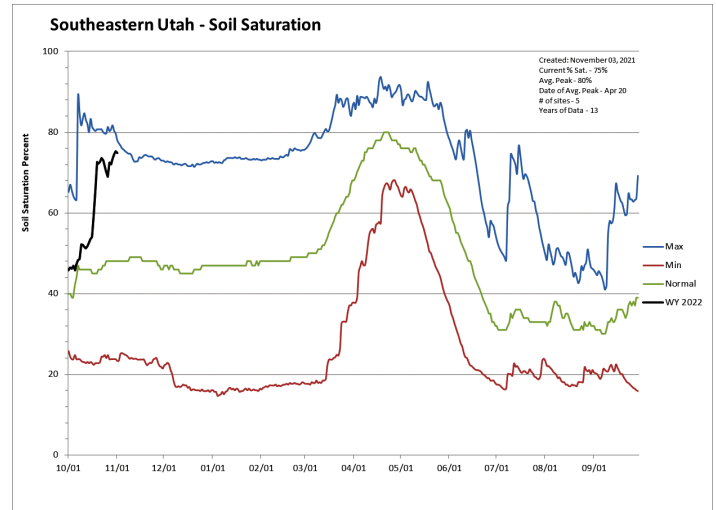
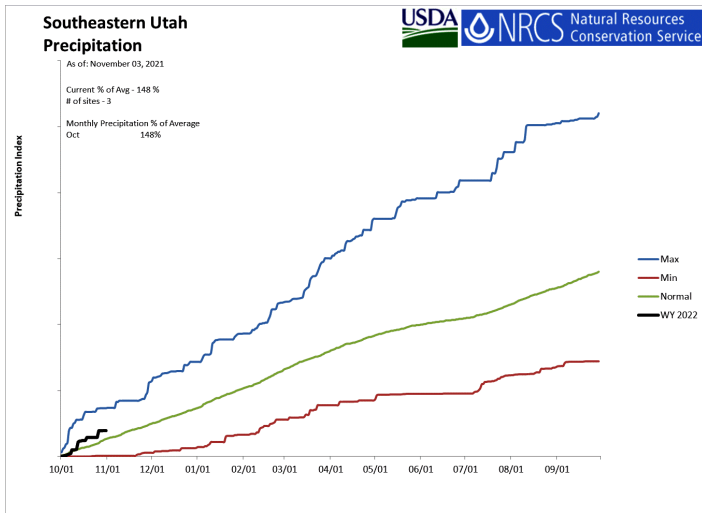
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southeastern Utah

November 1, 2021

Precipitation in October was much above average at 184%, which brings the seasonal accumulation (Oct-Oct) to 184% of average. Soil moisture is at 74% compared to 18% last year. Reservoir storage is at 34% of capacity, compared to 15% last year. The water availability index for Moab is 54%.

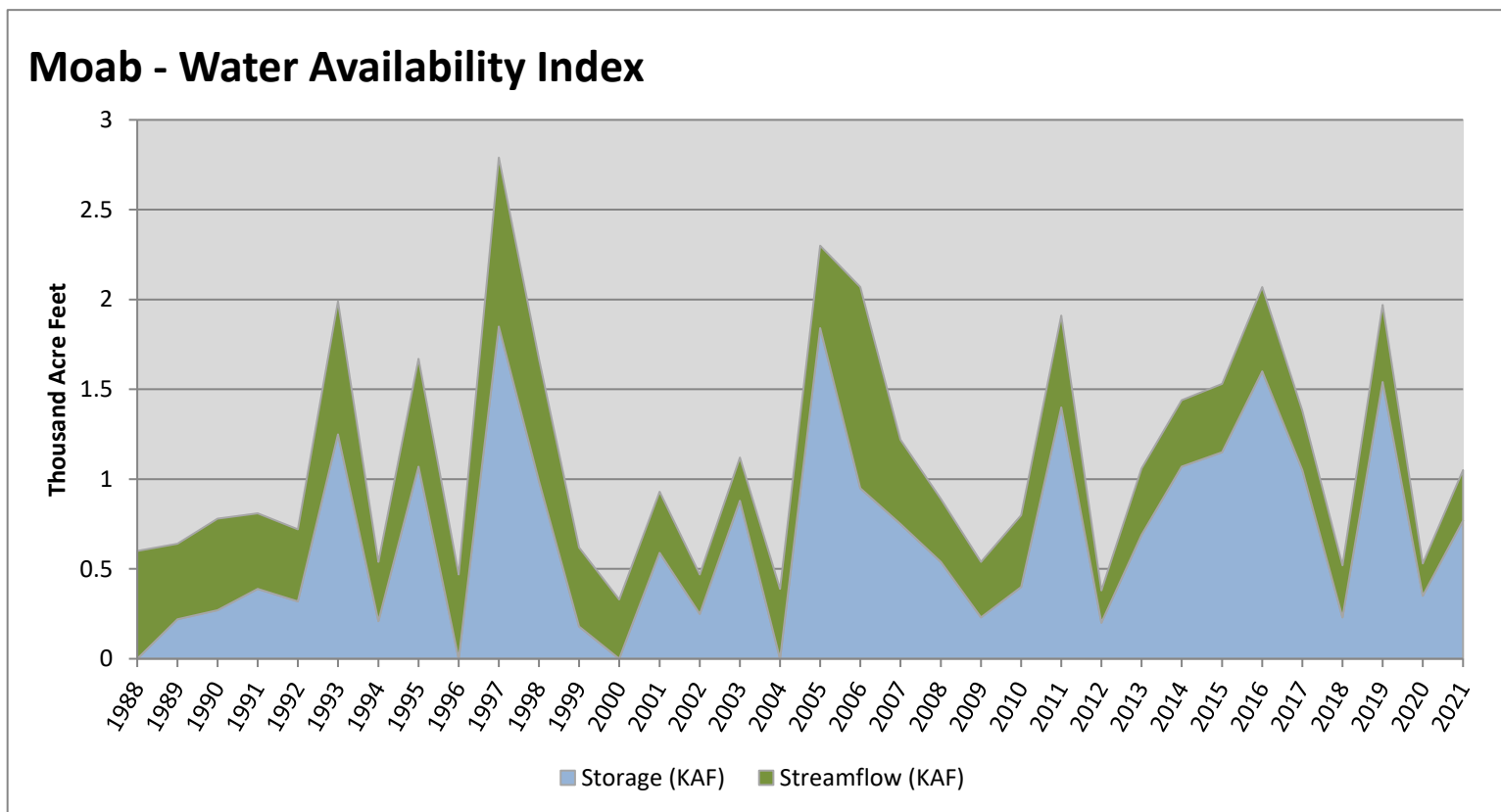


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Moab	0.77	0.28	1.05	54	0.36	08, 01, 13, 03

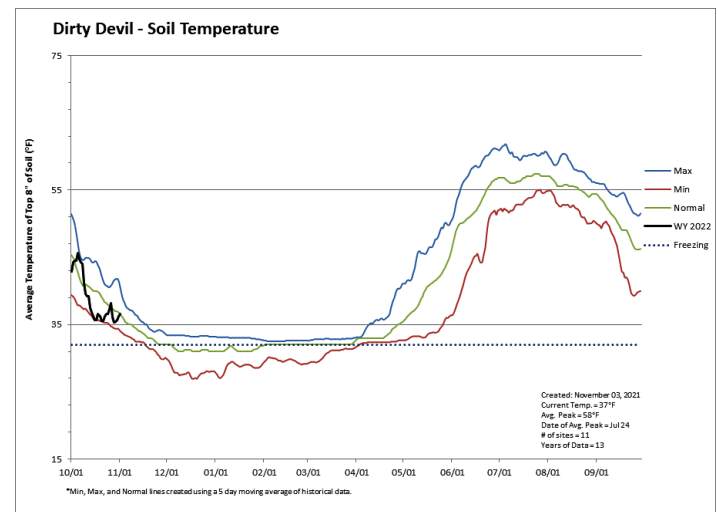
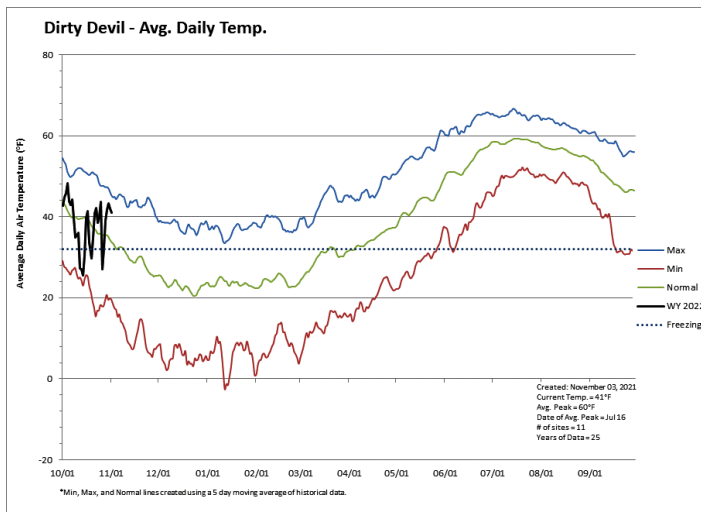
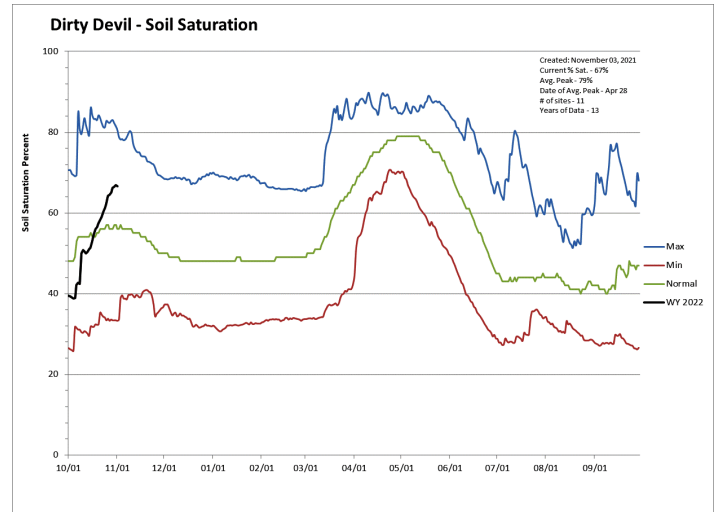
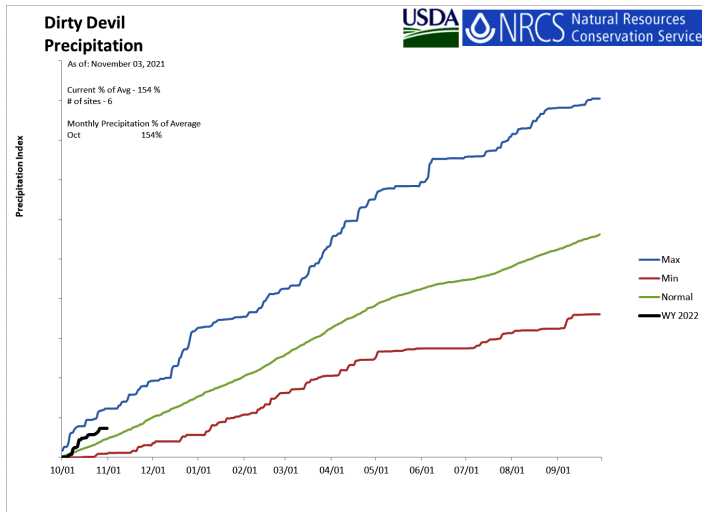
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Dirty Devil Basin

November 1, 2021

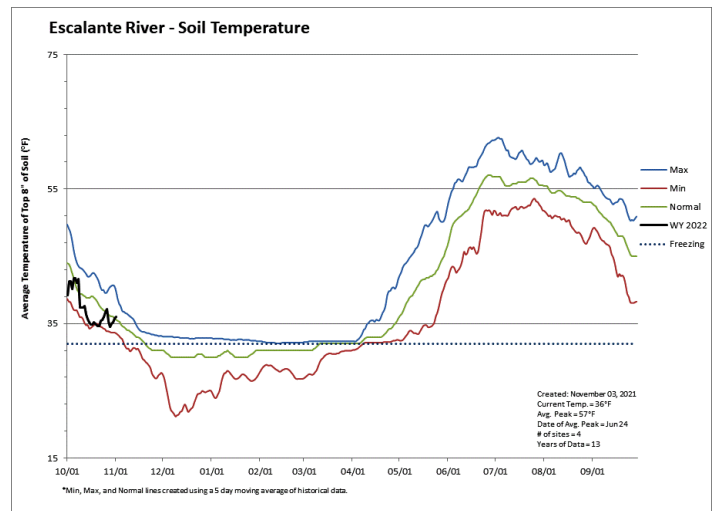
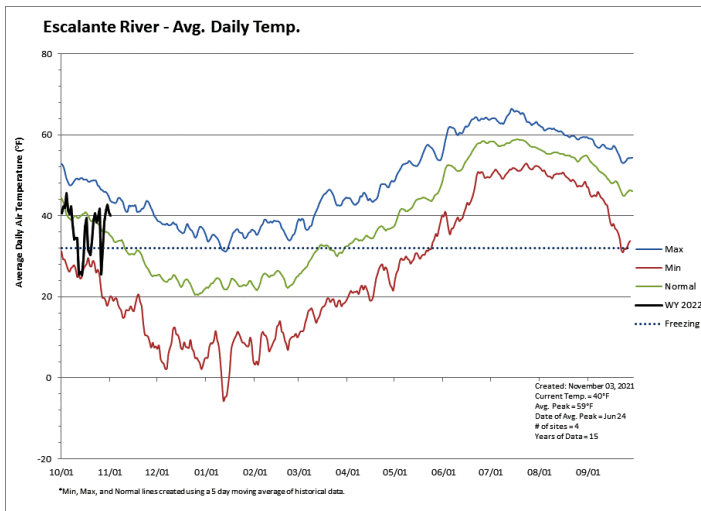
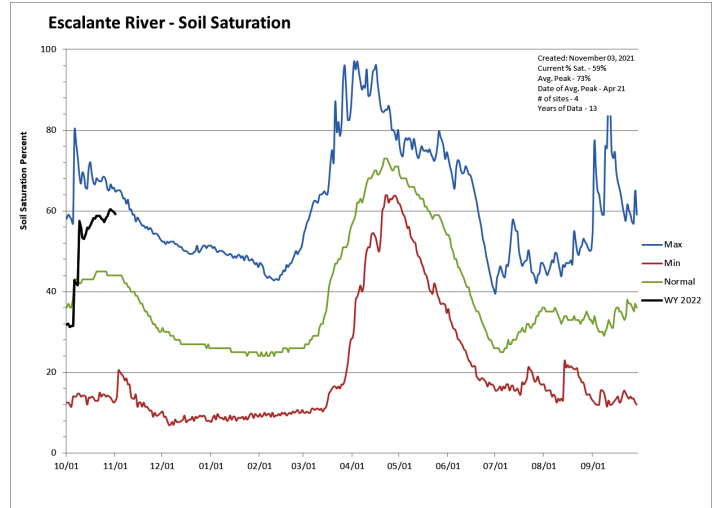
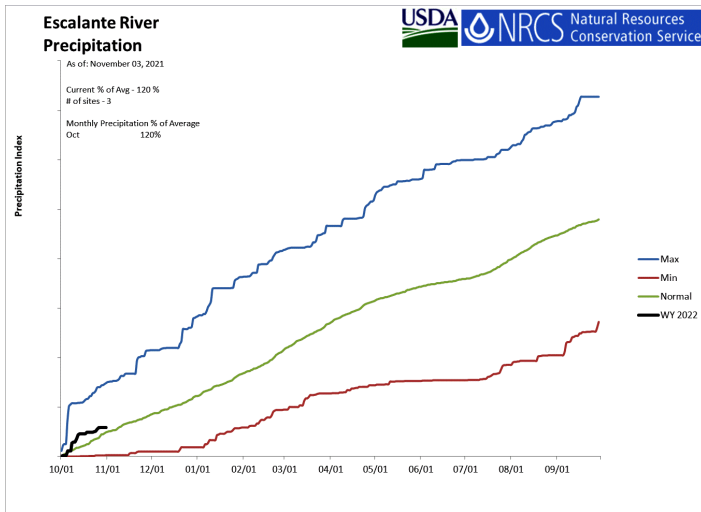
Precipitation in October was much above average at 185%, which brings the seasonal accumulation (Oct-Oct) to 185% of average. Soil moisture is at 66% compared to 23% last year.



Escalante River Basin

November 1, 2021

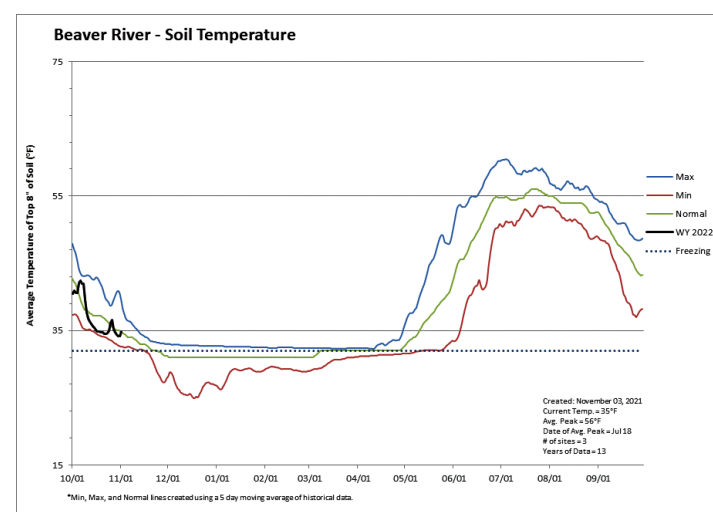
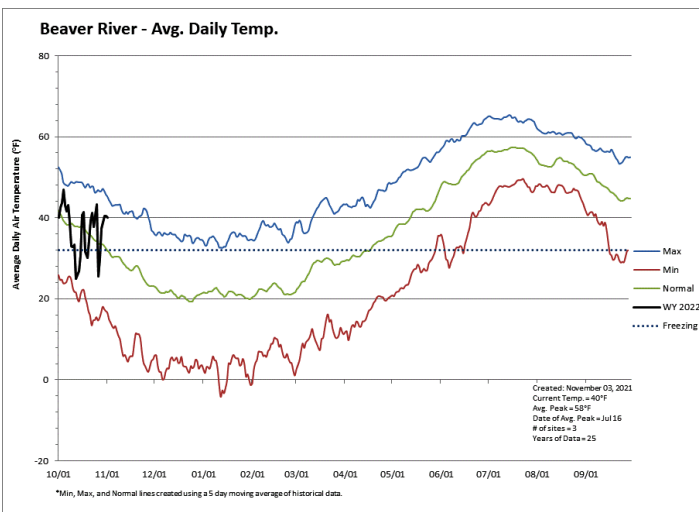
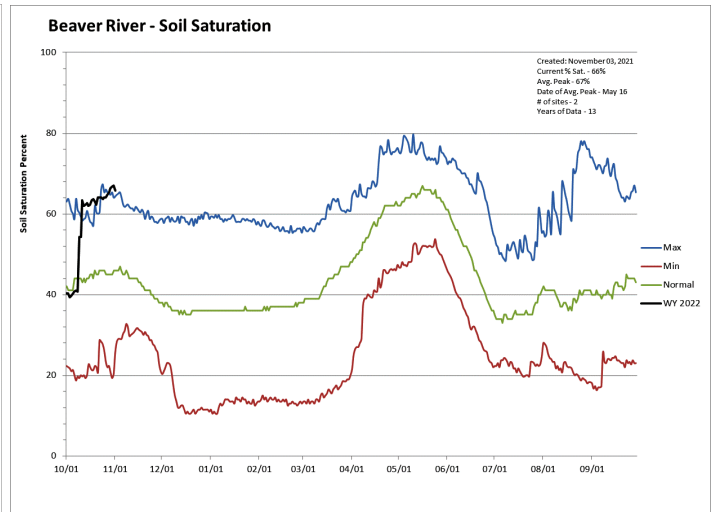
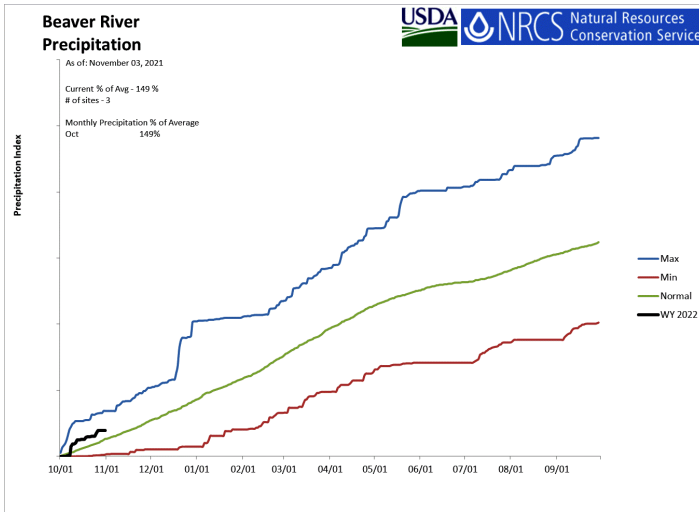
Precipitation in October was much above average at 169%, which brings the seasonal accumulation (Oct-Oct) to 169% of average. Soil moisture is at 60% compared to 13% last year.



Beaver River Basin

November 1, 2021

Precipitation in October was much above average at 167%, which brings the seasonal accumulation (Oct-Oct) to 167% of average. Soil moisture is at 67% compared to 13% last year. Reservoir storage is at 7% of capacity, compared to 13% last year. The water availability index for the Beaver River is 10%.

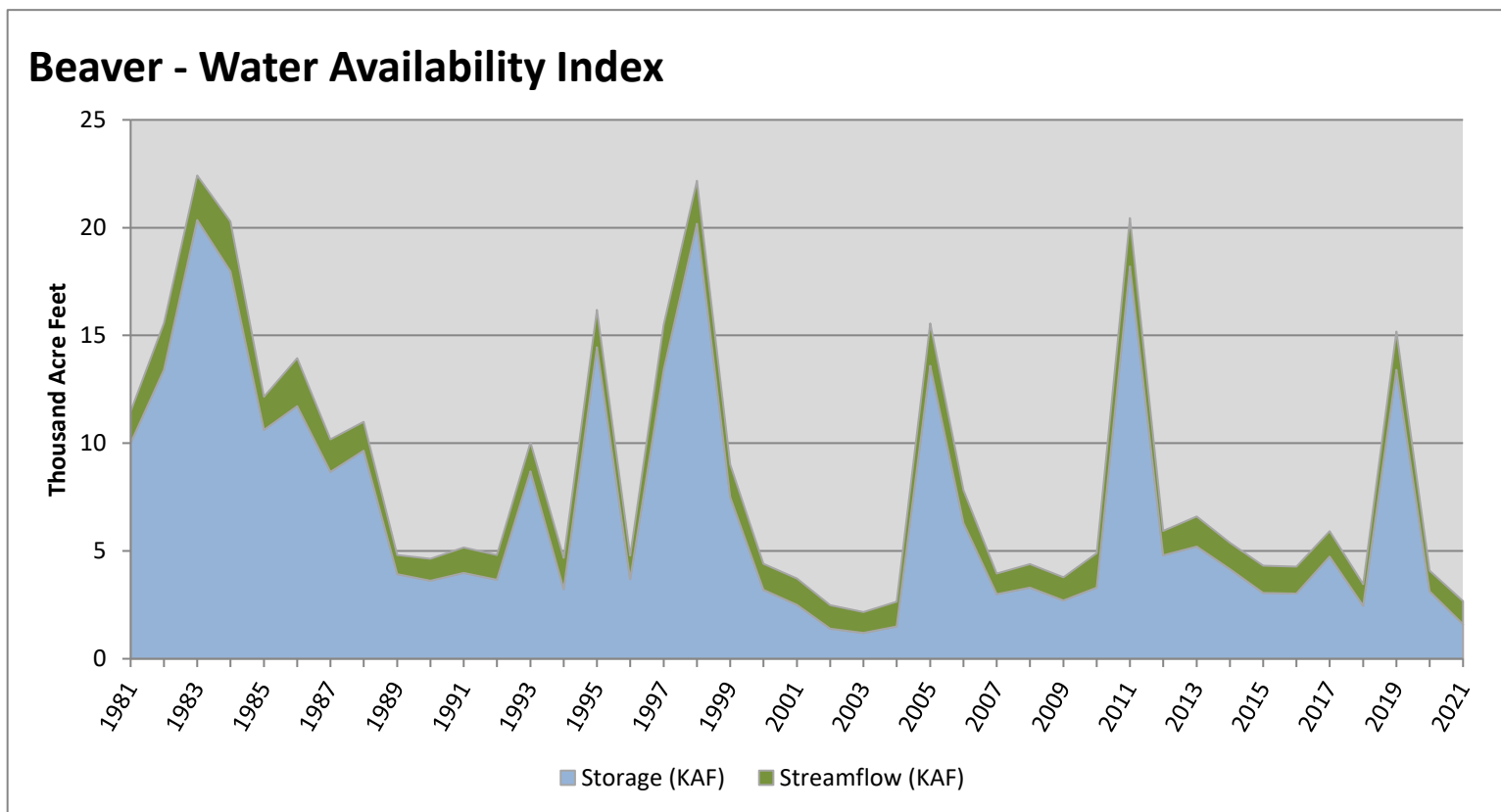


November 1, 2021

Water Availability Index

Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Beaver	1.60	1.08	2.68	10	-3.37	02, 04, 18, 01

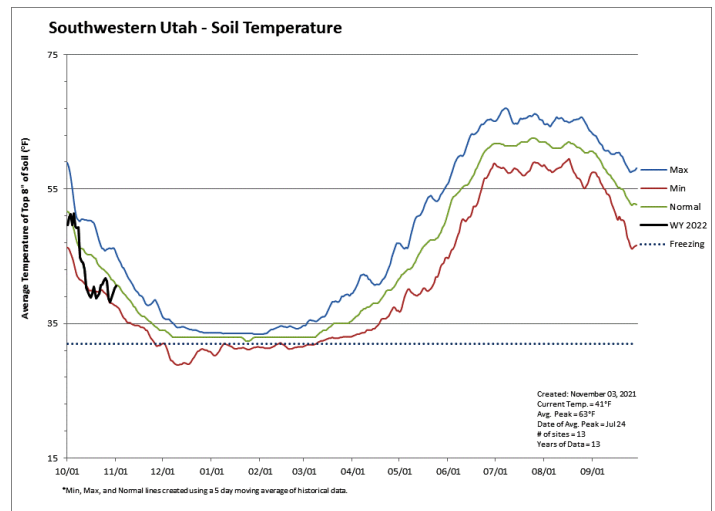
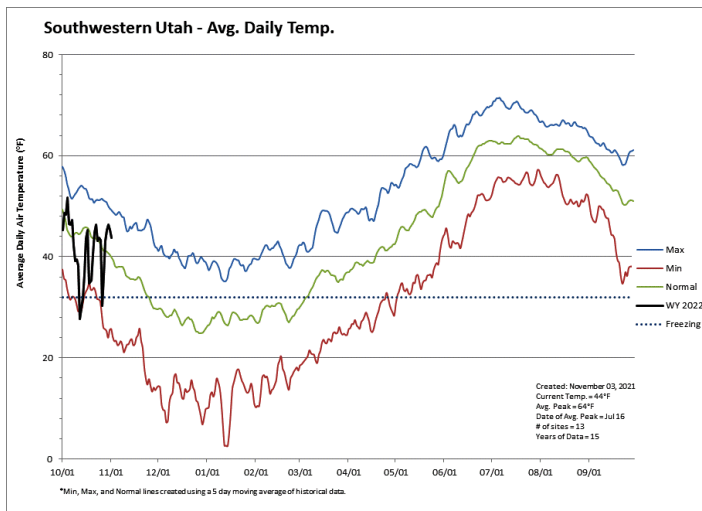
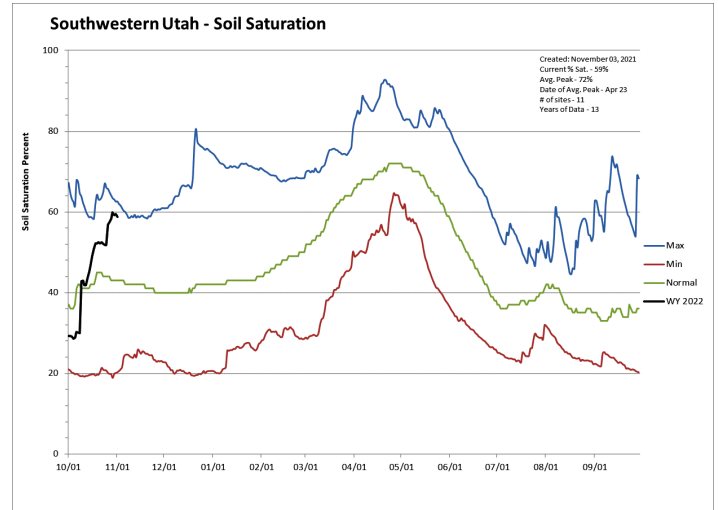
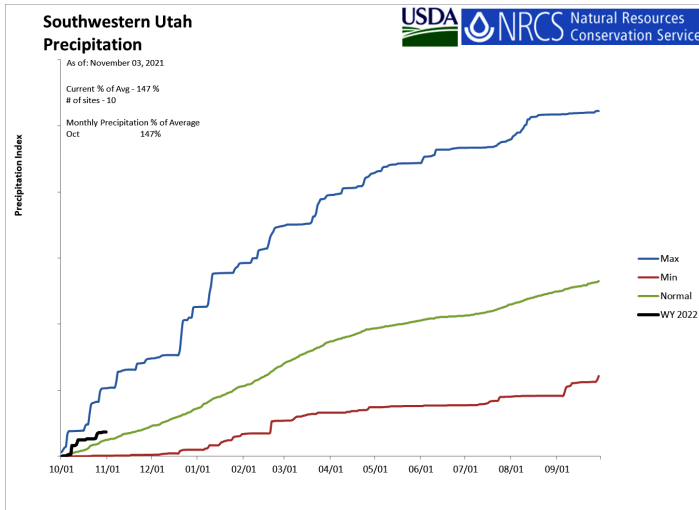
^{*}EOM, end of month; [#]WAI, Water Availability Index; [^]KAF, thousand acre-feet.



Southwestern Utah

November 1, 2021

Precipitation in October was much above average at 186%, which brings the seasonal accumulation (Oct-Oct) to 186% of average. Soil moisture is at 59% compared to 18% last year. Reservoir storage is at 47% of capacity, compared to 49% last year. The water availability index for the Virgin River is 48%.

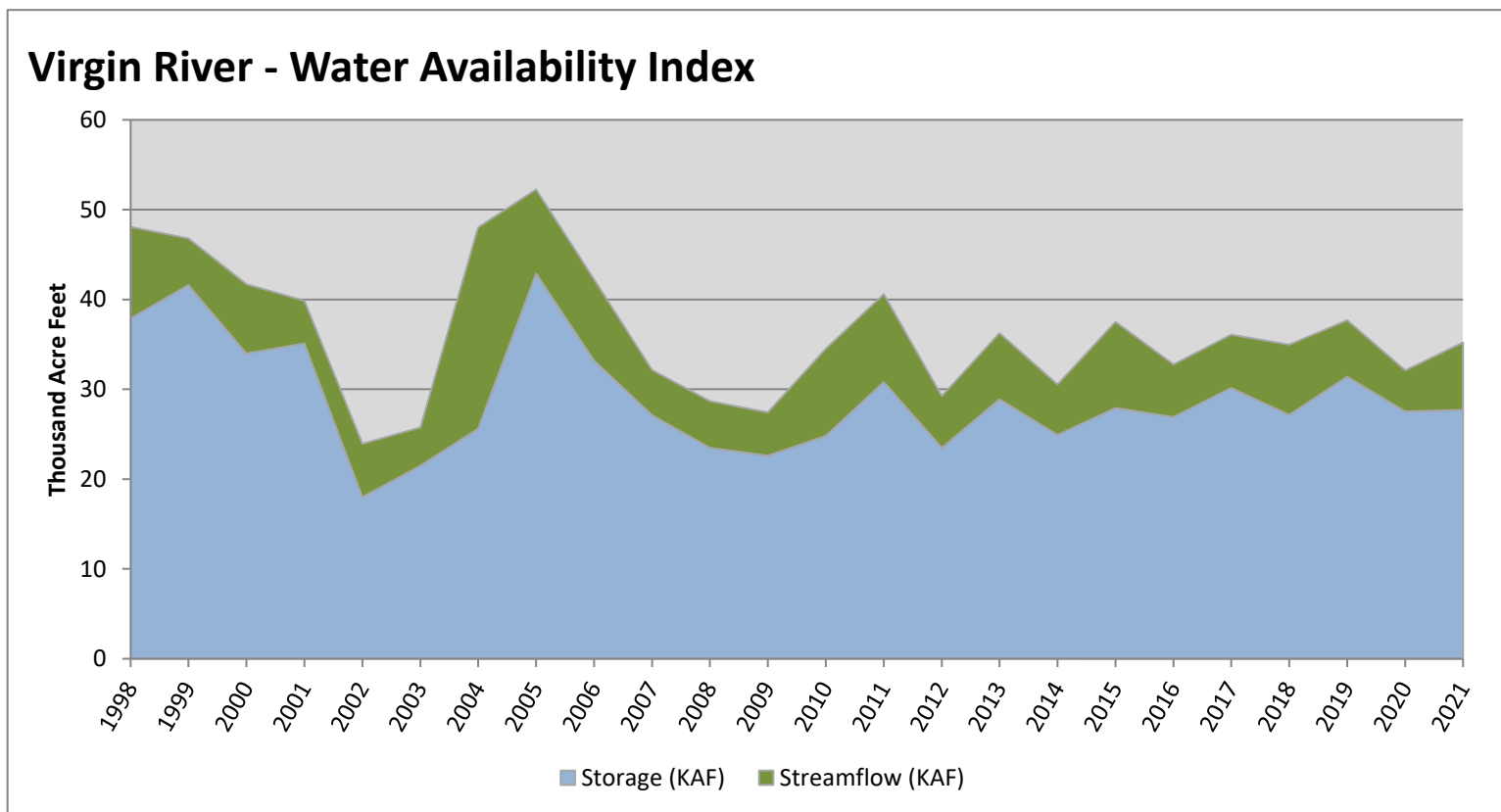


November 1, 2021

Water Availability Index

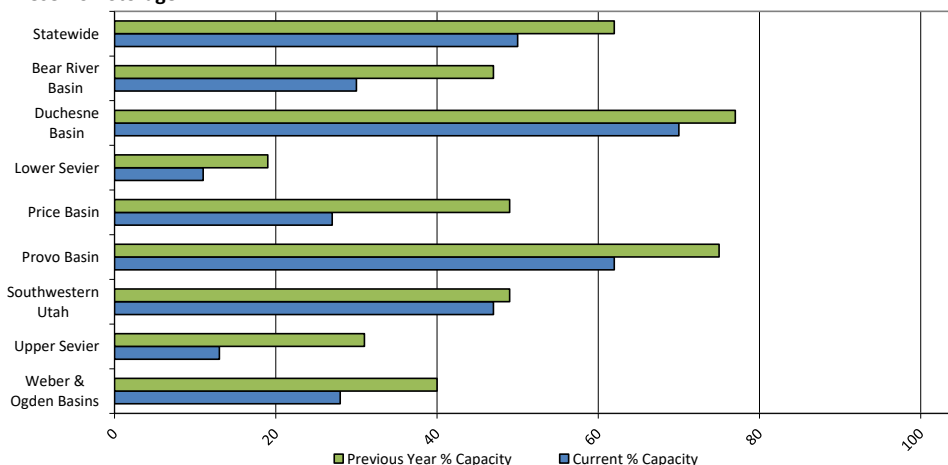
Basin or Region	Oct EOM [*] Storage	October Flow	Storage + Flow	Percentile	WAI [#]	Years with similar WAI
	KAF [^]	KAF [^]	KAF [^]	%		
Virgin River	27.71	7.51	35.22	48	-0.17	10, 18, 17, 13

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



Reservoir Storage Summary for the end of October 2021	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	5.0	2.1		25.7	19%	8%			
Causey Reservoir	3.3	2.6	2.7	7.1	47%	37%	38%	124%	97%
Cleveland Lake		0.8		5.4		14%			
Currant Creek Reservoir	15.1	14.6	14.7	15.5	97%	94%	95%	103%	100%
Deer Creek Reservoir	92.2	91.5	95.9	149.7	62%	61%	64%	96%	95%
East Canyon Reservoir	22.9	28.5	29.5	49.5	46%	58%	60%	78%	97%
Echo Reservoir	12.5	14.3	26.2	73.9	17%	19%	35%	48%	55%
Grantsville Reservoir	1.5	1.0	0.8	3.3	44%	31%	25%	173%	121%
Gunlock	4.3	4.5	5.5	10.4	42%	43%	53%	79%	82%
Gunnison Reservoir	0.0	0.0	3.3	20.3	0%	0%	16%	0%	0%
Huntington North Reservoir	1.6	1.3	1.4	4.2	37%	31%	34%	111%	92%
Hyrum Reservoir	4.5	7.6	7.5	15.3	30%	50%	49%	61%	102%
Joes Valley Reservoir	21.2	38.7	37.1	61.6	34%	63%	60%	57%	104%
Jordanelle Reservoir	159.5	225.3	200.2	314.0	51%	72%	64%	80%	113%
Ken's Lake	0.8	0.3	0.7	2.3	34%	15%	32%	106%	48%
Kolob Reservoir	2.9	4.9		5.6	51%	87%			
Lost Creek Reservoir	9.0	14.4	11.7	22.5	40%	64%	52%	77%	123%
Lower Enterprise	1.1	0.1	0.4	2.6	41%	2%	17%	240%	13%
Miller Flat Reservoir	1.4	1.3		5.2	26%	24%			
Millsite	3.7	3.5	8.9	16.7	22%	21%	53%	41%	39%
Minersville Reservoir	1.6	3.1	6.1	23.3	7%	13%	26%	26%	51%
Moon Lake Reservoir	14.8	8.1	14.2	35.8	41%	23%	40%	104%	57%
Otter Creek Reservoir	9.7	16.1	20.4	52.5	18%	31%	39%	47%	79%
Panguitch Lake	4.5	14.2	10.7	22.3	20%	64%	48%	42%	133%
Pineview Reservoir	19.4	44.7	49.3	110.1	18%	41%	45%	39%	91%
Piute Reservoir	4.2	15.5	20.2	71.8	6%	22%	28%	21%	77%
Porcupine Reservoir	3.3	5.2	5.6	11.3	30%	46%	50%	60%	93%
Quail Creek	23.4	23.0	23.9	40.0	58%	58%	60%	98%	96%
Red Fleet Reservoir	8.6	14.1	16.2	25.7	33%	55%	63%	53%	87%
Rockport Reservoir	19.4	26.8	34.4	60.9	32%	44%	56%	56%	78%
Sand Hollow Reservoir	35.7	37.7		50.0	71%	75%			
Scotfield Reservoir	13.3	29.2	22.1	65.8	20%	44%	34%	60%	132%
Settlement Canyon Reservoir	0.2	0.3	0.4	1.0	23%	29%	38%	59%	76%
Sevier Bridge Reservoir	25.0	45.1	84.5	236.0	11%	19%	36%	30%	53%
Smith And Morehouse Reservoir	6.0	2.4	4.0	8.1	74%	29%	49%	150%	59%
Starvation Reservoir	105.3	117.4	119.2	164.1	64%	72%	73%	88%	99%
Stateline Reservoir	4.2	3.5	5.1	12.0	35%	29%	43%	82%	68%
Steinaker Reservoir	4.3	2.6	12.4	33.4	13%	8%	37%	34%	21%
Strawberry Reservoir	809.2	922.7	809.3	1105.9	73%	83%	73%	100%	114%
Upper Enterprise	0.6	3.0	2.0	10.0	6%	30%	20%	31%	156%
Upper Stillwater Reservoir	26.2	10.7	13.6	32.5	81%	33%	42%	192%	79%
Utah Lake	442.0	585.8	570.0	870.9	51%	67%	65%	78%	103%
Willard Bay		138.5	129.5	215.0		64%	60%		107%
Woodruff Creek	1.4	1.7	1.0	4.0	36%	42%	26%	138%	162%
Woodruff Narrows Reservoir	10.6	27.0		57.3	18%	47%			
Meeks Cabin Reservoir	5.4	2.5		32.5	17%	8%			
Bear Lake	525.7	775.0		1302.0	40%	60%			
Basin-wide Total	1899.9	2343.5	2291.2	3766.3	50%	62%	61%	83%	102%
# of reservoirs	38.0	38.0	38.0	38.0	38	38	38	38	38
# of reservoirs	42	42	42	42	42	42	42	42	42

Reservoir Storage



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Utah Climate and Water Report

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