

Utah Water Supply Outlook Report

March 1, 2024



View of the Lasal Mountain Snow Course near Moab

Photo by Jordan Clayton

STATE OF UTAH GENERAL OUTLOOK

March 1, 2024

SUMMARY

February was a great month for Utah's **snowpack**! We received 157% of our typical amount of snow water equivalent (SWE) for the month, and our statewide SWE percent of normal ended the month at 117%. That is 48% higher than at the beginning of the calendar year! Utah's statewide SWE has now exceeded our typical annual peak, meaning that even if we don't receive any more snow this winter, we are still guaranteed an above normal snowpack season. With the historic 2023 winter barely in our rearview mirror, it's outstanding to see this winter come through with above normal conditions. Better yet, all of Utah's major basins now have above normal snowpack except for the Beaver (which is close), so the benefits of another good snowpack season are likely to be felt statewide. That said, northern Utah has done particularly well thus far this winter season.

Utah received 180% of normal **precipitation** for the month of February! It was an outstanding month. In fact, the monthly total precipitation broke records at 6 of Utah's SNOTEL sites (Mining Fork, Louis Meadow, Cascade Mountain, Lakefork Basin, and Kings Cabin in northern Utah, and Clayton Springs in southern Utah) and were second highest at an additional 12 sites. As of March 1st, the water-year-to-date precipitation value for Utah was 111% of normal, up 18% from the previous month. As for January, every major watershed in Utah received above normal precipitation during February, with >200% of normal monthly totals for the Raft, Duchesne, and Escalante-Paria watersheds. Wow!

Statewide **soil moisture** is at 56% of saturation, which is 108% of normal. As noted last month, soil moisture conditions are generally close to normal for this time of year for most of Utah's major basins except for the Price-San Rafael, San Pitch, and Southeastern Utah areas which have abnormally dry soils.

Utah's **streamflow forecasts** for April to July snowmelt runoff volume range from 83% to 223% of median (42% to 154% of average). Note that we recommend focusing on the forecast value itself or the percent of average when assessing these streamflow predictions (see discussion on pages 2-3 [here](#)). Forecasts are generally for above normal flows in northern Utah—particularly the Bear, Weber, and Provo-Jordan basins—close to normal flows in central Utah, and below normal flows in southern Utah—particularly for the Sevier, Beaver, and Southwestern Utah areas. Specific details are listed in each basin's section of this Water Supply Outlook Report.

Utah's current statewide **reservoir storage** is at 82% of capacity, which is 31% higher than last year. **Surface Water Supply Indices** (SWSI) for Utah basins combine our current reservoir levels with the additional volume of water anticipated for each watershed based on these March 1 streamflow forecasts. The SWSI for the Lower Sevier basin is concerning as it is below the 20th percentile. Everywhere else in the state is predicted to have close to normal surface water availability this summer (close to 50th percentile), with a few areas (Provo, Weber, and Price drainages in particular) predicted to have a well above normal water supply. These optimistic SWSI values reflect the impressive carryover storage in Utah's reservoirs as well as the improving snowpack conditions and resulting runoff forecasts.

For the first time, this year we are able to include basin-level conditions and inflow forecasts for the **Great Salt Lake** (GSL) in our monthly Water Supply Outlook Reports. This new section of our report includes updated GSL basin-wide conditions (SWE, precipitation, soil moisture, and reservoir) as well as forecast details (predicted April through July inflow volume as well as modeled lake level rise from March to this year's peak water elevation). Currently, SWE in the GSL basin is 123% of normal. February precipitation in the GSL basin was 183% of normal, bringing the water year to date precipitation value to 118% of normal. Soil moisture is well above normal at 67% of saturation, and the basin's reservoir storage is at 84% of capacity. With only

16% of available capacity remaining to fill in GSL basin reservoirs, it is likely that a large amount of additional water will be available to flow into the Great Salt Lake itself once all that snow melts. The 50% exceedance forecast for April through July inflow into the GSL is 870 thousand acre-feet (122% of average, 193% of median) which may result in a lake level rise of roughly 1.2 feet predicted from the beginning of March until the lake reaches its peak water elevation of around 4195 ft for this year.

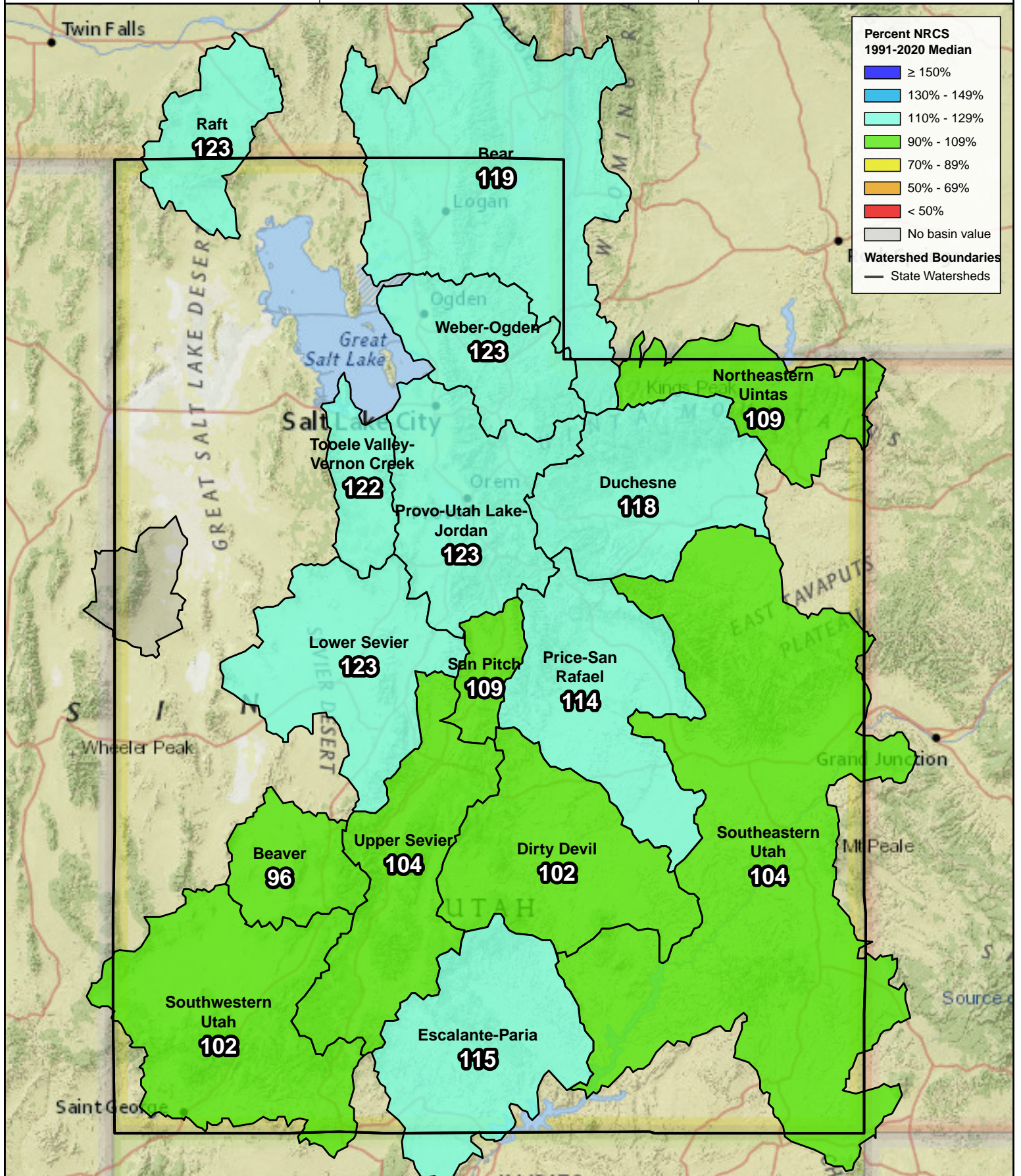
This lake level rise prediction uses two methodologies: first, we modeled the probabilistic range for the lake's rise from the historical relationship with current snowpack and precipitation conditions in the GSL basin (essentially the same process as we use for our other forecast points). This approach determines which upstream SNOTEL sites typically have the strongest statistical relationship with lake level rise, found from the range of previous observations. The same suite of upstream points is then used to predict this year's forthcoming rise based on current conditions. Second, we added the 50th percentile inflow forecast volume of 870 thousand acre-feet (which combines the expected flows into the GSL from the Bear, Weber, and Jordan Rivers) to the current volume of the lake to determine this year's peak elevation from the stage to volume relationship for the lake.

However, please bear in mind that both our inflow forecast and predicted lake level rise for the GSL include *substantial* uncertainty, including (1) unlike other forecast points in Utah, predicted flows into the GSL do not account for management actions upstream, such as withdrawals for diversions or storage in reservoirs. (2) Similarly, this year's forecasts are blind to the small remaining reservoir capacity in the GSL basin and the (high) potential for substantial excess water to make it to the lake after upstream reservoirs are filled. (3) The first approach above does not (yet) consider changes in storage for Willard Bay (these will be included in next year's runoff forecast). (4) The second approach used above does not consider complications in the lake's stage to volume relationship due to the existence (and recent changes in the condition) of the berm separating its south and north arms. (5) The second approach above also does not explicitly include losses of water in the lake due to evaporation nor additions due to direct precipitation onto the lake itself. Finally (6), the second method above only considers the 50th percentile exceedance forecast and ignores the wide range of forecasted probabilistic inflow volumes. That's a lot of caveats! Our inclusion of this inflow forecast and predicted lake level rise is meant to provide very rough guidance for Utah's water managers in light of the high level of interest in the lake's condition and numerous actions to restore lake levels. Please contact us with any questions related to these data or methodologies.

Snow Water Equivalent

Percent NRCS 1991-2020 Median

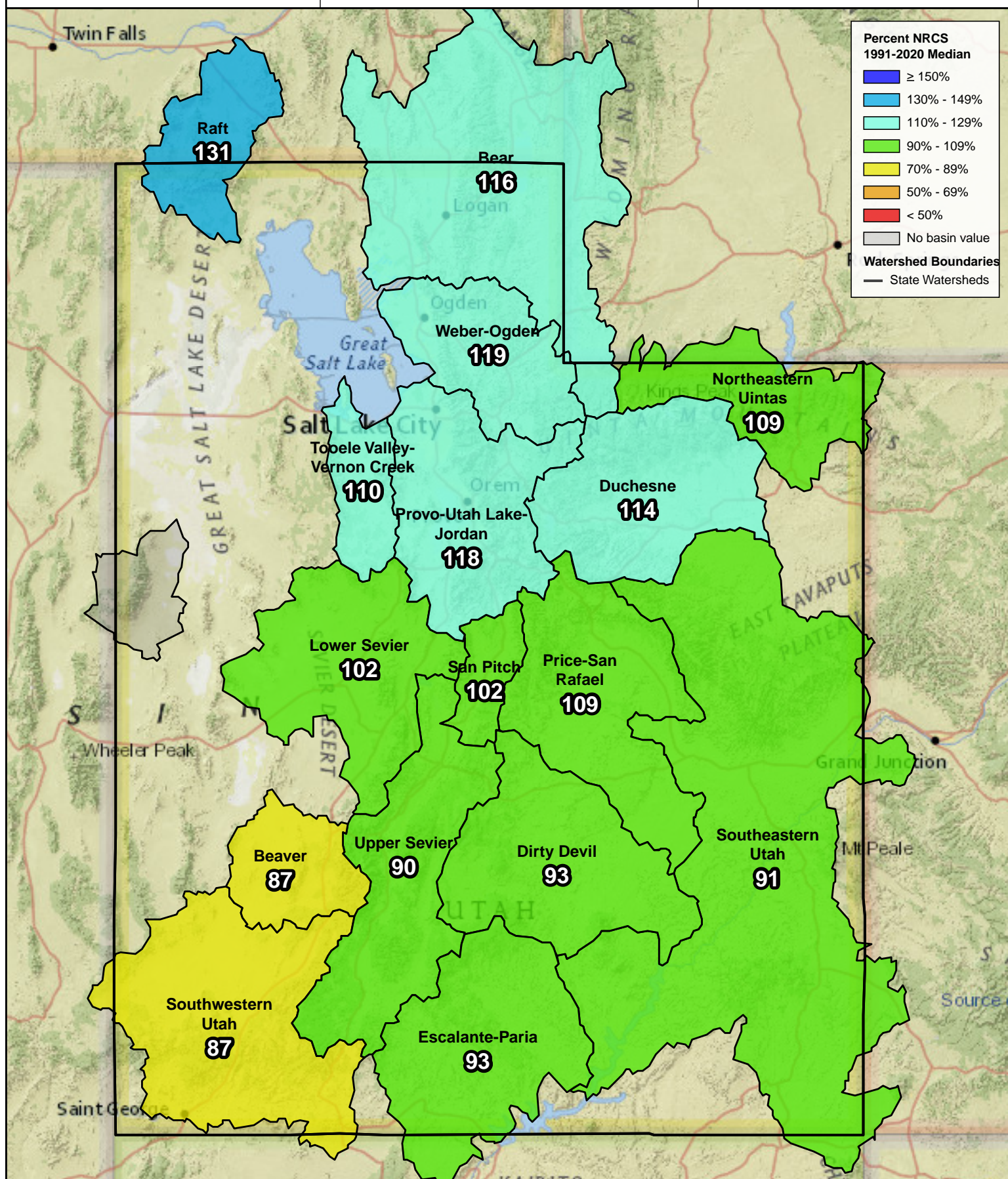
March 1, 2024, first of day



Water Year to Date Precipitation

Percent NRCS 1991-2020 Median

October 1, 2023 - March 1, 2024



Natural Resources
Conservation Service
United States Department of Agriculture



0 10 20 40 60 80 100 Miles

Created 3-07-2024

March 1, 2024 | Surface Water Supply Index (SWSI)

Basin or Region	Reservoir Storage ¹ (KAF) ²	Apr-July Forecast (KAF) ²	Forecast + Storage (KAF) ²	SWSI ³	Percentile ⁴ (%)	Similar Years
Bear	879.9	124.0	1003.9	1.76	71	[1988, 2020]
Woodruff Narrows	48.8	114.0	162.8	1.25	65	[2016, 2019]
Little Bear	10.1	47.0	57.1	0.88	61	[1993, 2009]
Ogden	84.4	144.0	228.4	1.57	69	[1995, 2019]
Weber	370.3	370.0	740.3	2.13	76	[1997, 2017]
Provo	1283.6	218.9	1502.5	2.82	84	[1996, 1999]
Western Uintas	197.1	59.0	256.1	1.76	71	[2015, 2020]
Eastern Uintas	51.7	100.0	151.7	0.28	53	[1996, 2010]
Blacks Fork	18.3	90.0	108.3	1.19	64	[2014, 2015]
Smiths Fork	8.3	29.0	37.3	1.98	74	[1996, 2016]
Price	58.4	38.0	96.4	2.69	82	[1998, 2019]
Joes Valley	50.7	48.0	98.7	0.83	60	[2008, 2009]
Ferron Creek	10.5	30.0	40.5	0.09	51	[1991, 2001]
Moab	2.0	3.1	5.1	0.44	55	[1991, 1999]
Upper Sevier	108.1	24.3	132.4	0.09	51	[1996, 2001]
San Pitch	11.7	11.4	23.1	-0.28	47	[2010, 2020]
Lower Sevier	95.6	32.0	127.6	-2.69	18	[2002, 2003]
Beaver River	21.1	16.5	37.6	0.28	53	[2017, 2020]
Virgin River	38.9	39.9	78.8	-0.13	48	[2008, 2009]

¹ End of Month Reservoir Storage; ² KAF, Thousand Acre-Feet; ³ SWSI, Surface Water Supply Index; ⁴ Threshold for coloring: >75% Green, <25% Red

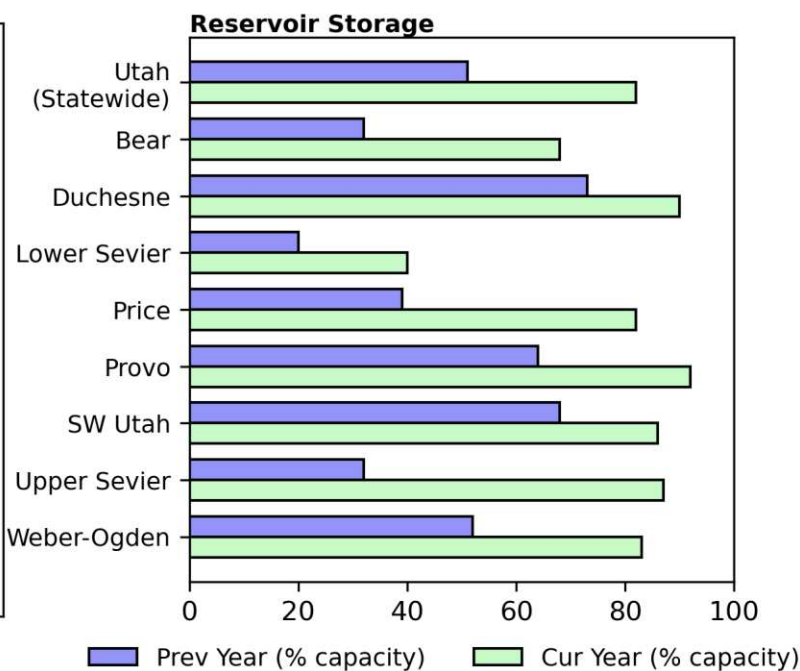
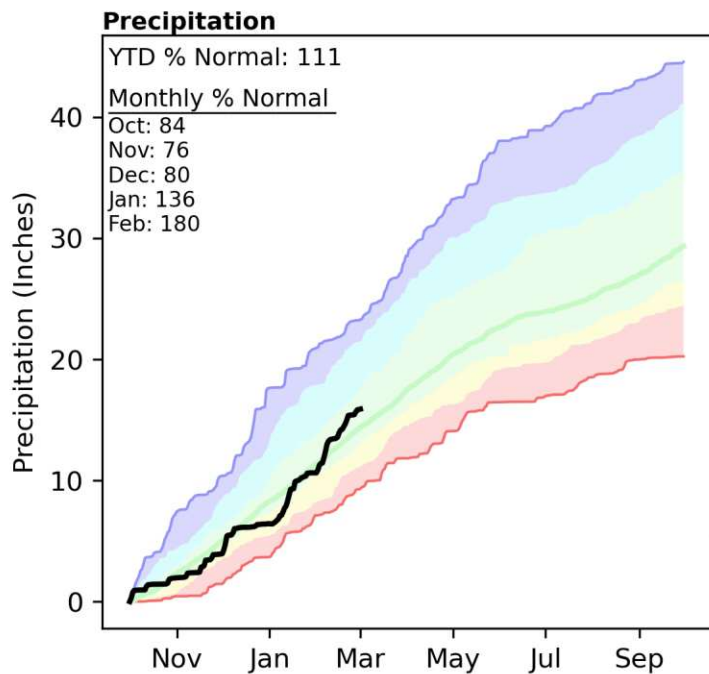
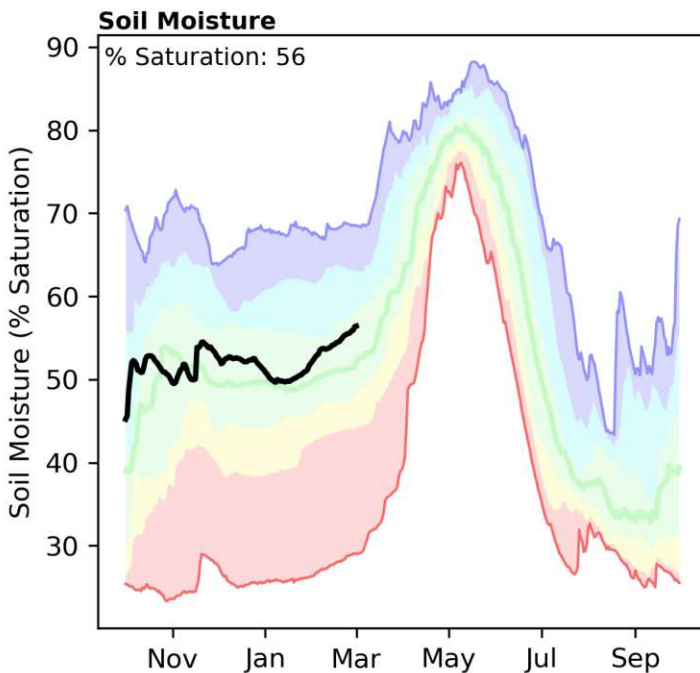
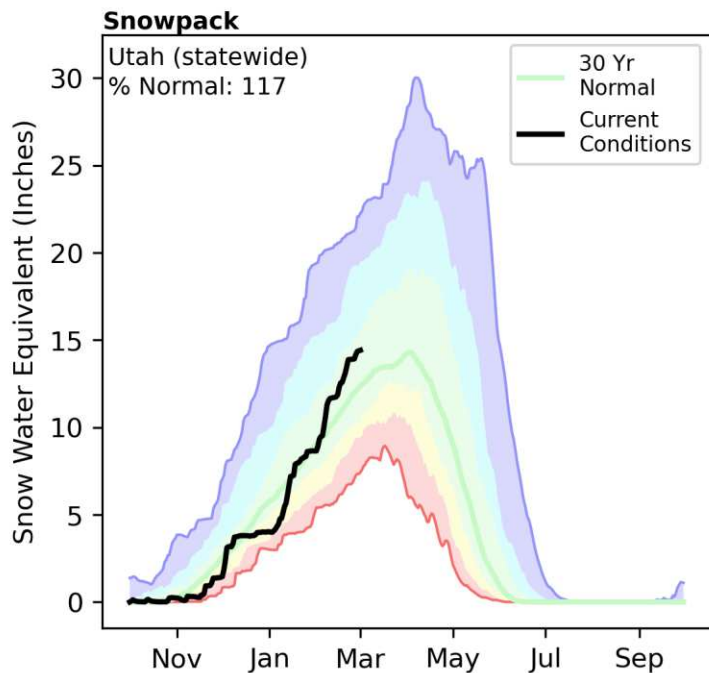
What is a Surface Water Supply Index?

The Surface Water Supply Index (SWSI) is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based on current snowpack and other hydrologic variables. SWSI 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. SWSI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index. See Appendix A for details on forecast points and reservoirs used in SWSI calculations.

The Utah Snow Survey has also chosen to display the SWSI value as well as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has a simple 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 SWSI 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 SWSI 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.

Utah (statewide) | March 1, 2024

Snowpack in Utah (statewide) is above normal at 117% of median, compared to 161% at this time last year. Precipitation in February was well above normal at 180%, which brings the seasonal accumulation (October-February) to 111% of median. Soil moisture is at 56% saturation compared to 58% saturation last year. Statewide, reservoir storage is 82% of capacity, compared to 51% last year¹. Forecast streamflow volumes (50% exceedence, April-July) range from 83% to 223% of normal.

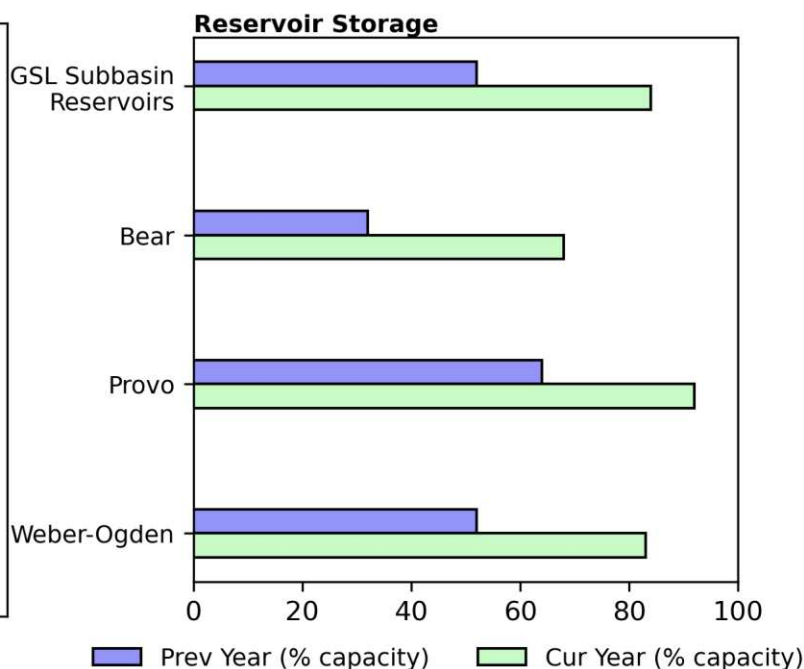
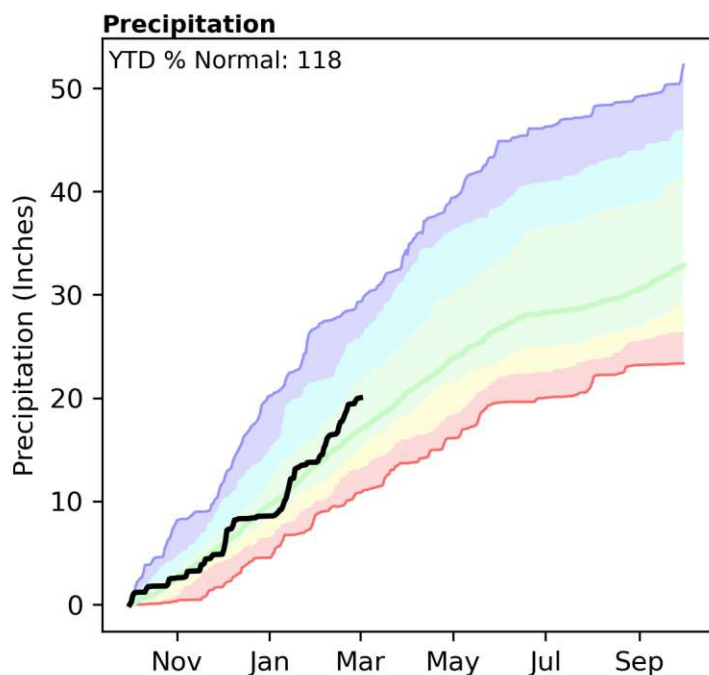
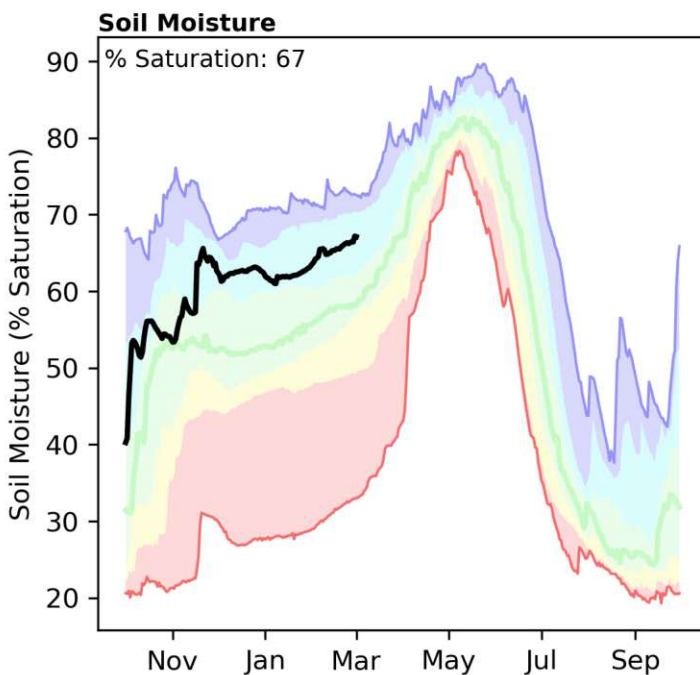
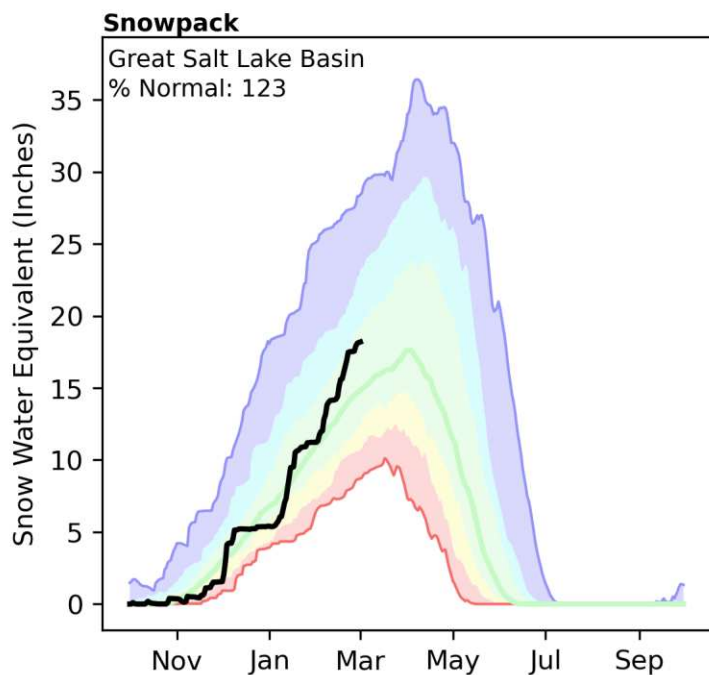


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

¹Statewide reservoir percentages exclude Lake Powell and Flaming Gorge Reservoirs.

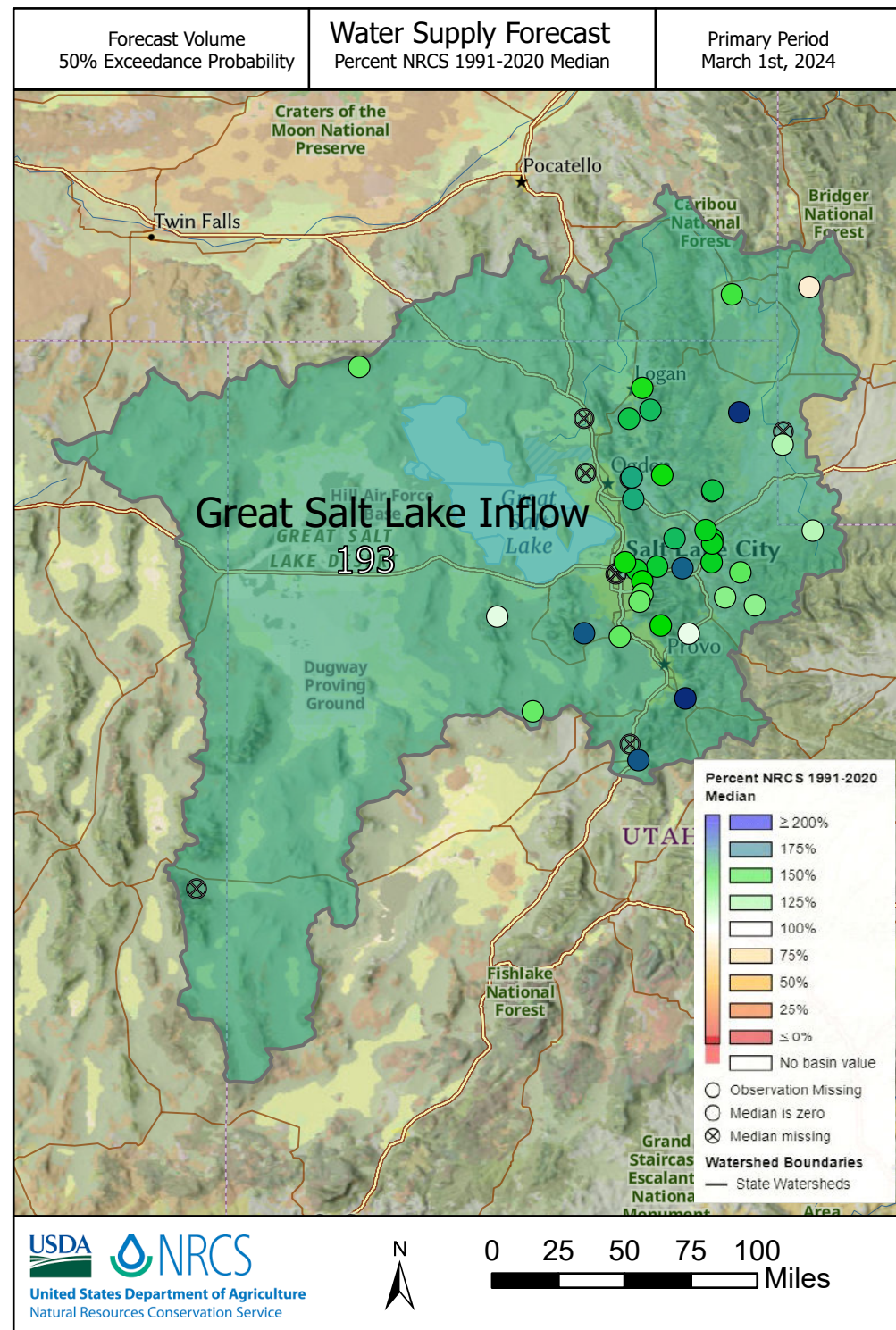
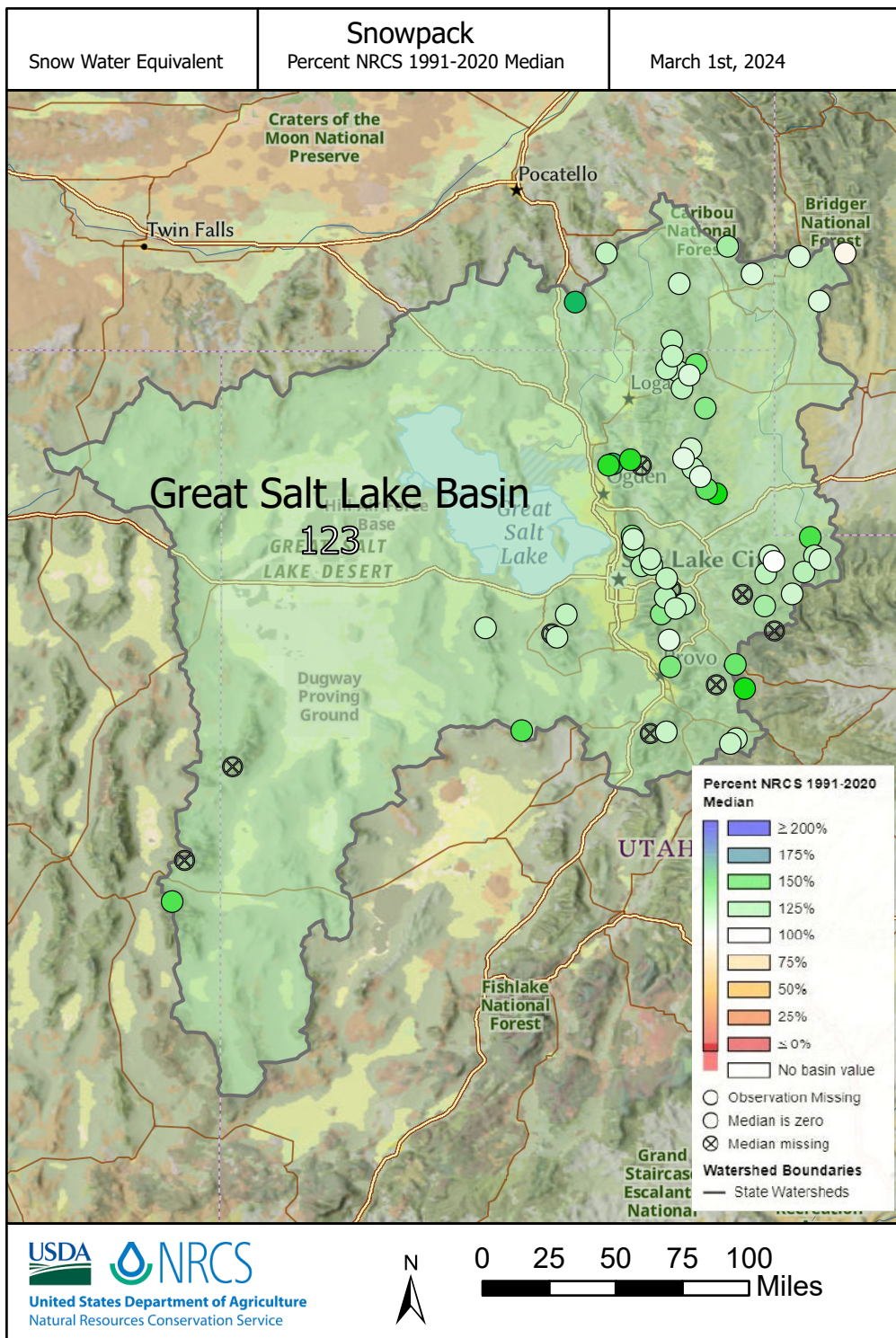
Great Salt Lake Basin | March 1, 2024

Snowpack in The Great Salt Lake (GSL) Basin¹ is above normal at 123% of median, compared to 156% at this time last year. Precipitation in February was well above normal at 183%, which brings the seasonal accumulation (October-February) to 118% of median. Soil moisture is at 67% saturation compared to 60% saturation last year. Reservoir storage in GSL subbasins is 84% of capacity, compared to 52% last year. The forecast inflow volume (50% exceedence, April-July) for the GSL is 870 thousand acre-feet (193% of median), resulting in a projected lake level increase of 1.2 feet from March 1 to peak stage. See pages 2-3 of this report for background on these forecast values.

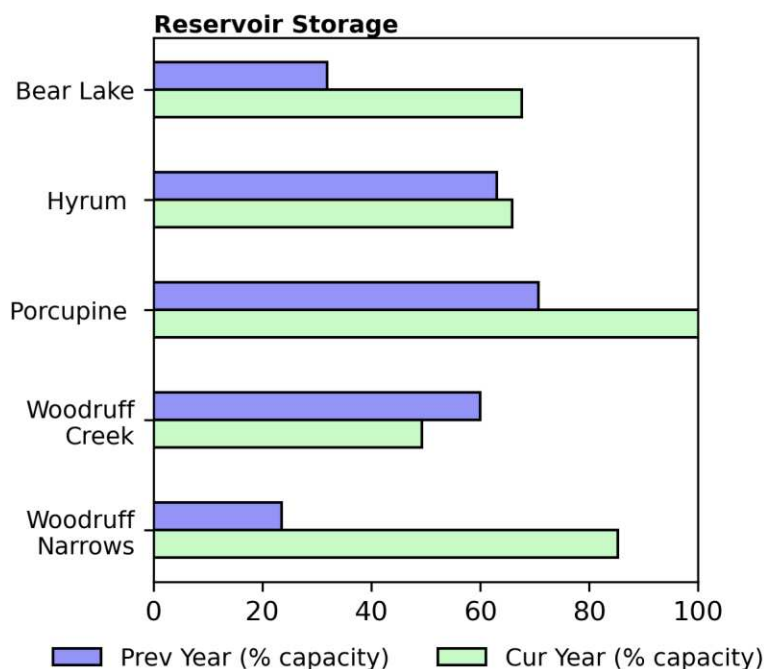
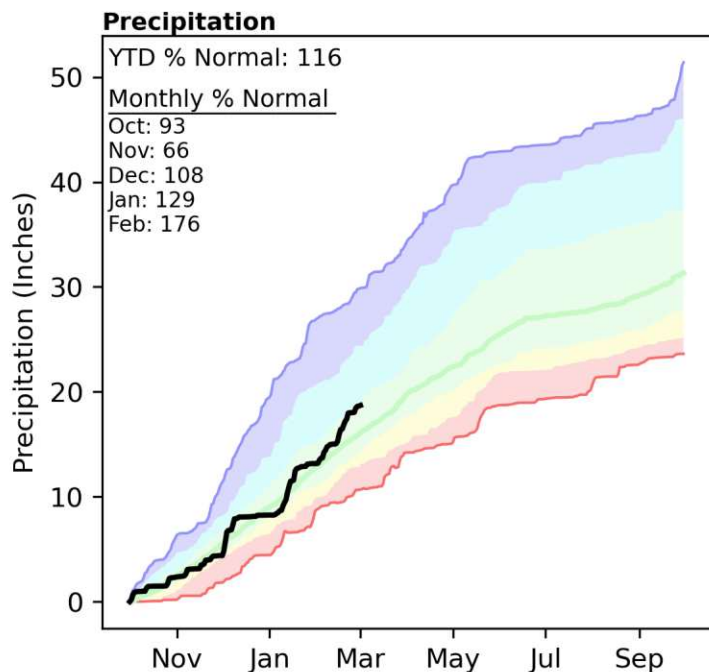
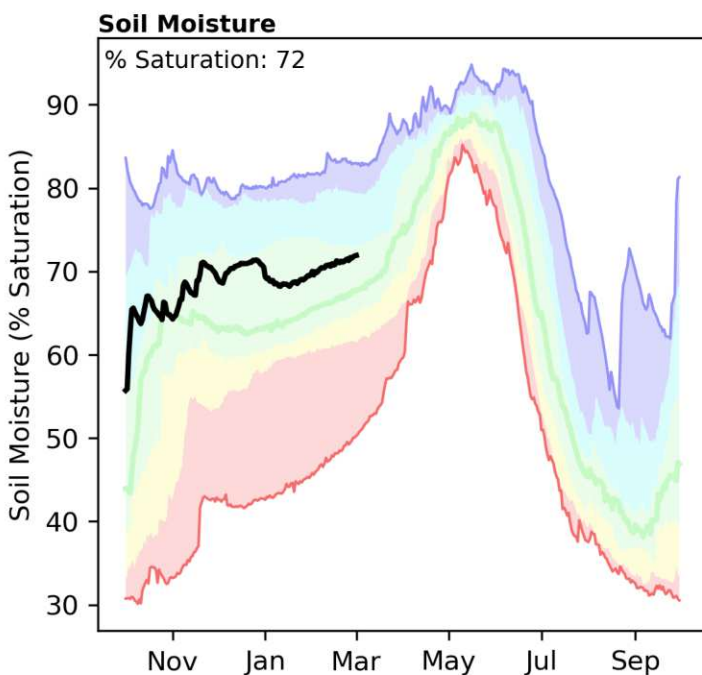
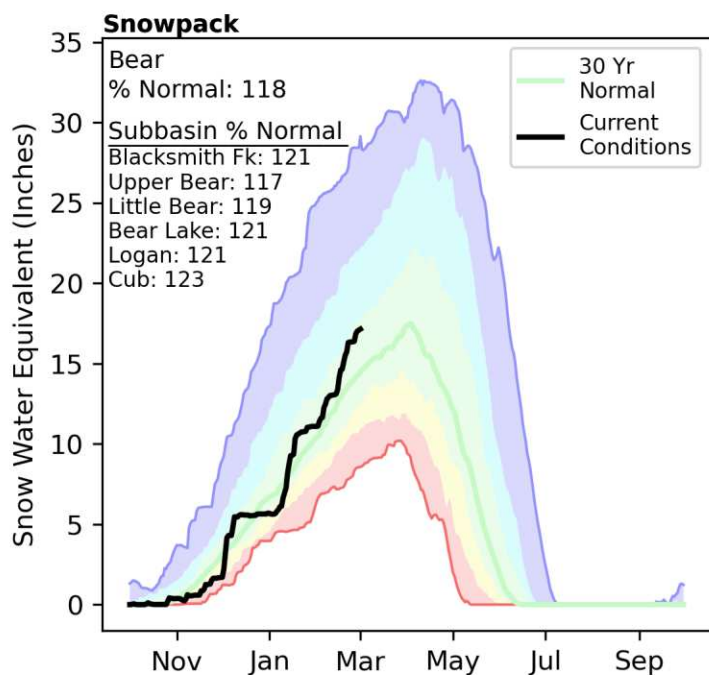


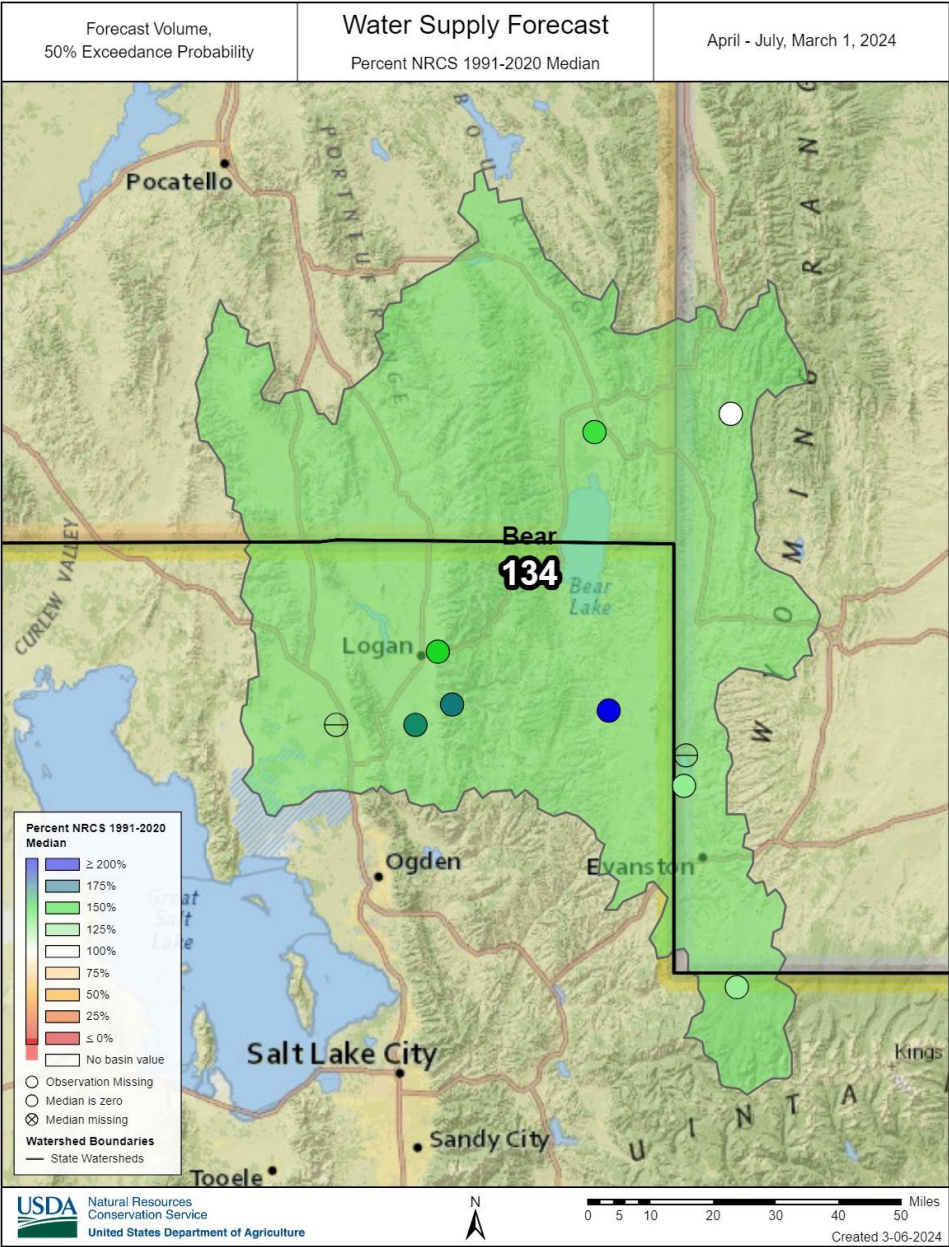
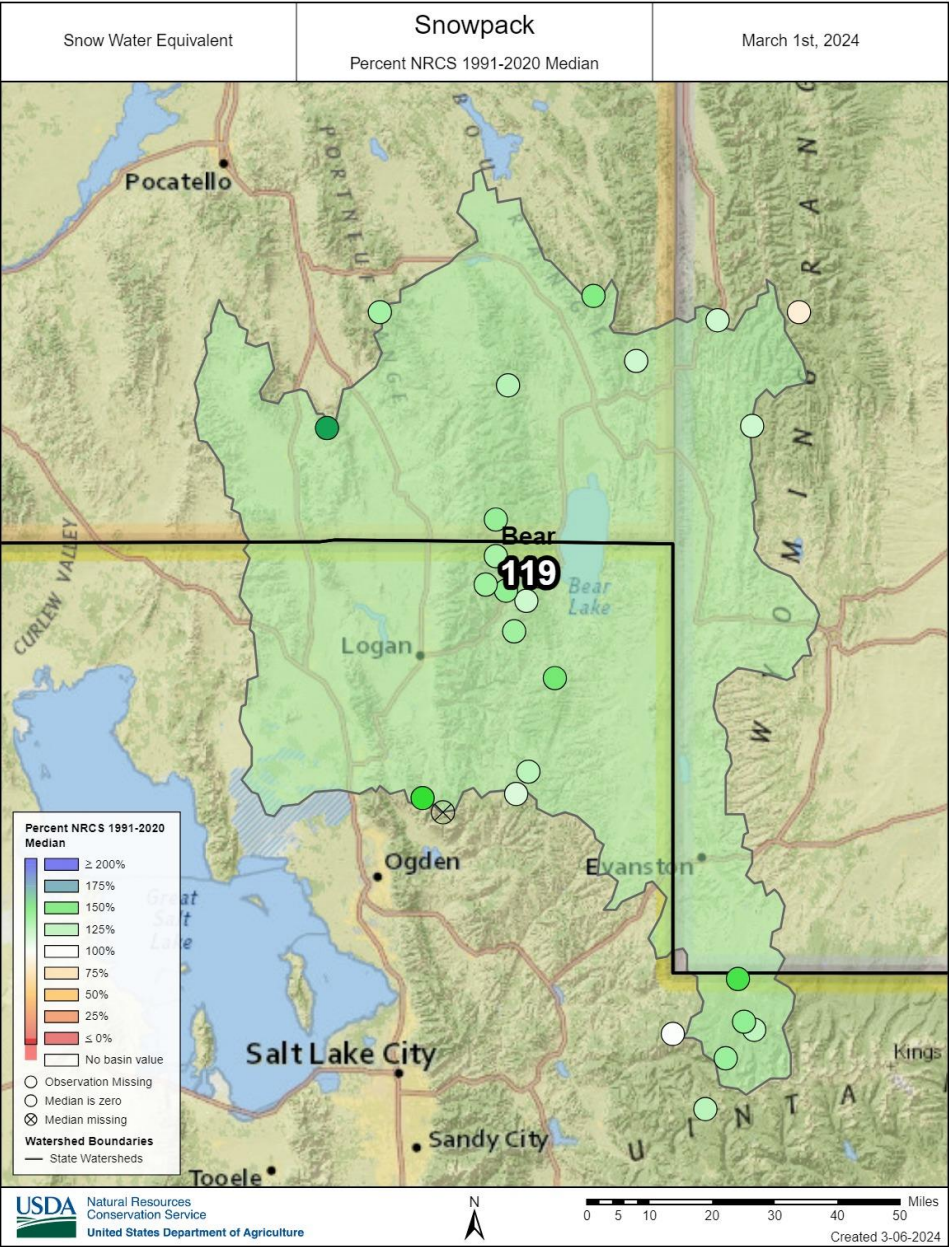
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

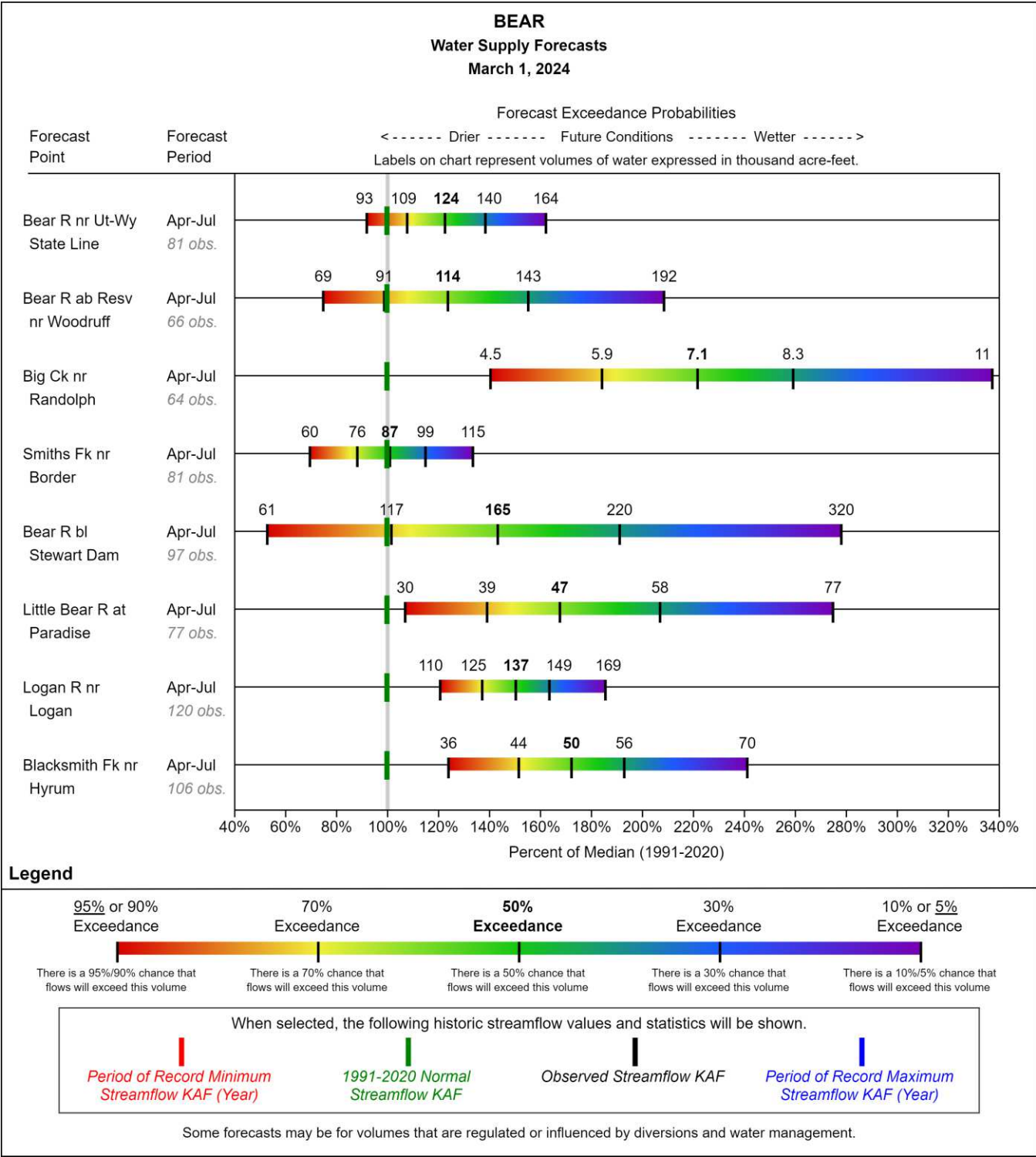
¹Comprised of the Weber, Provo, and Bear River Watersheds. Other subbasins for the Great Salt Lake do not substantively contribute to its seasonal rise.



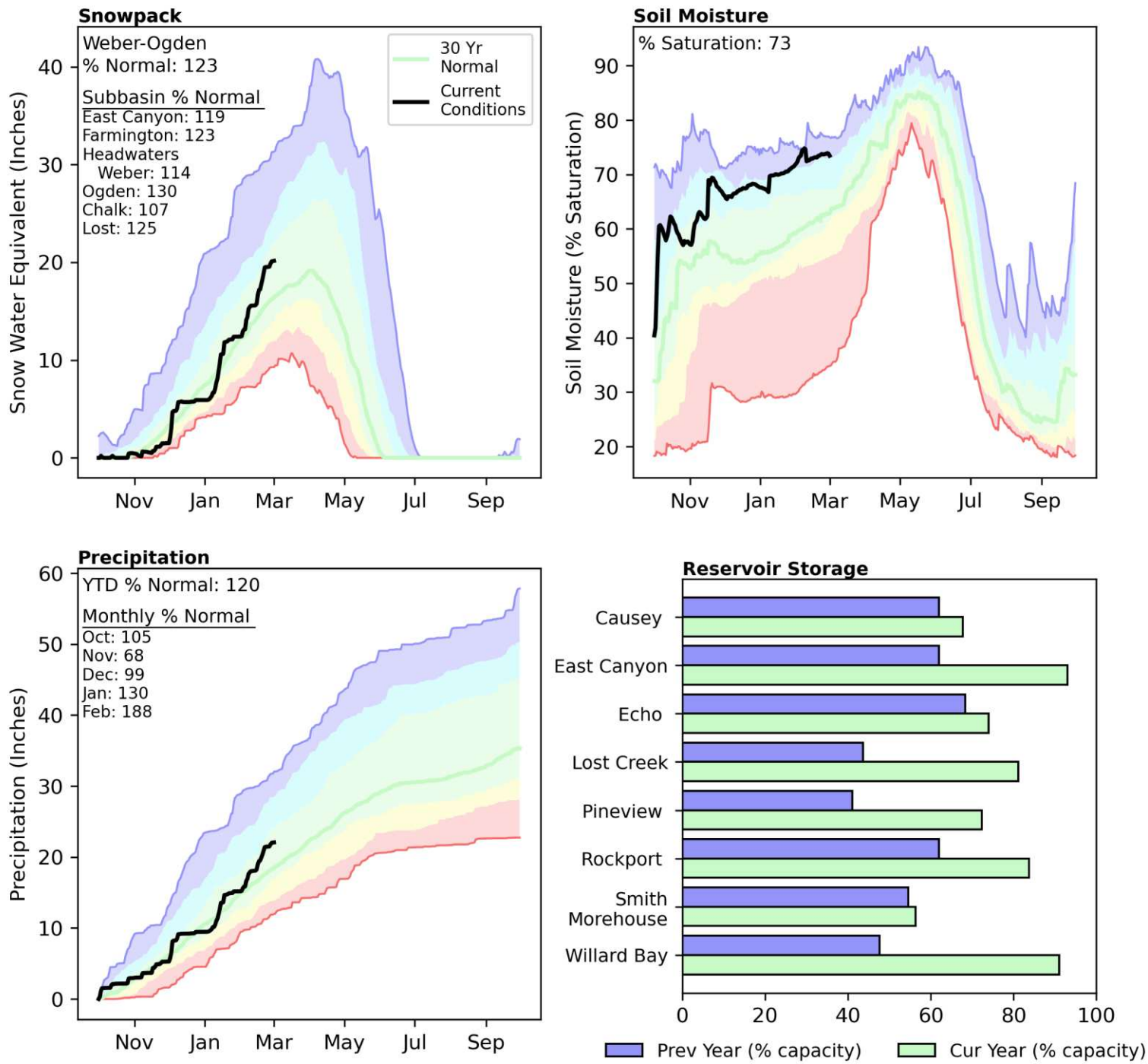
Snowpack in the Bear River Basin is above normal at 118% of median, compared to 142% at this time last year. Precipitation in February was well above normal at 176%, which brings the seasonal accumulation (October-February) to 116% of median. Soil moisture is at 72% saturation compared to 67% saturation last year. Reservoir storage is 68% of capacity, compared to 32% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 101% to 222% of normal. The Surface Water Supply Index percentiles are 71% for the Bear, 61% for the Little Bear, and 65% for Woodruff Narrows.





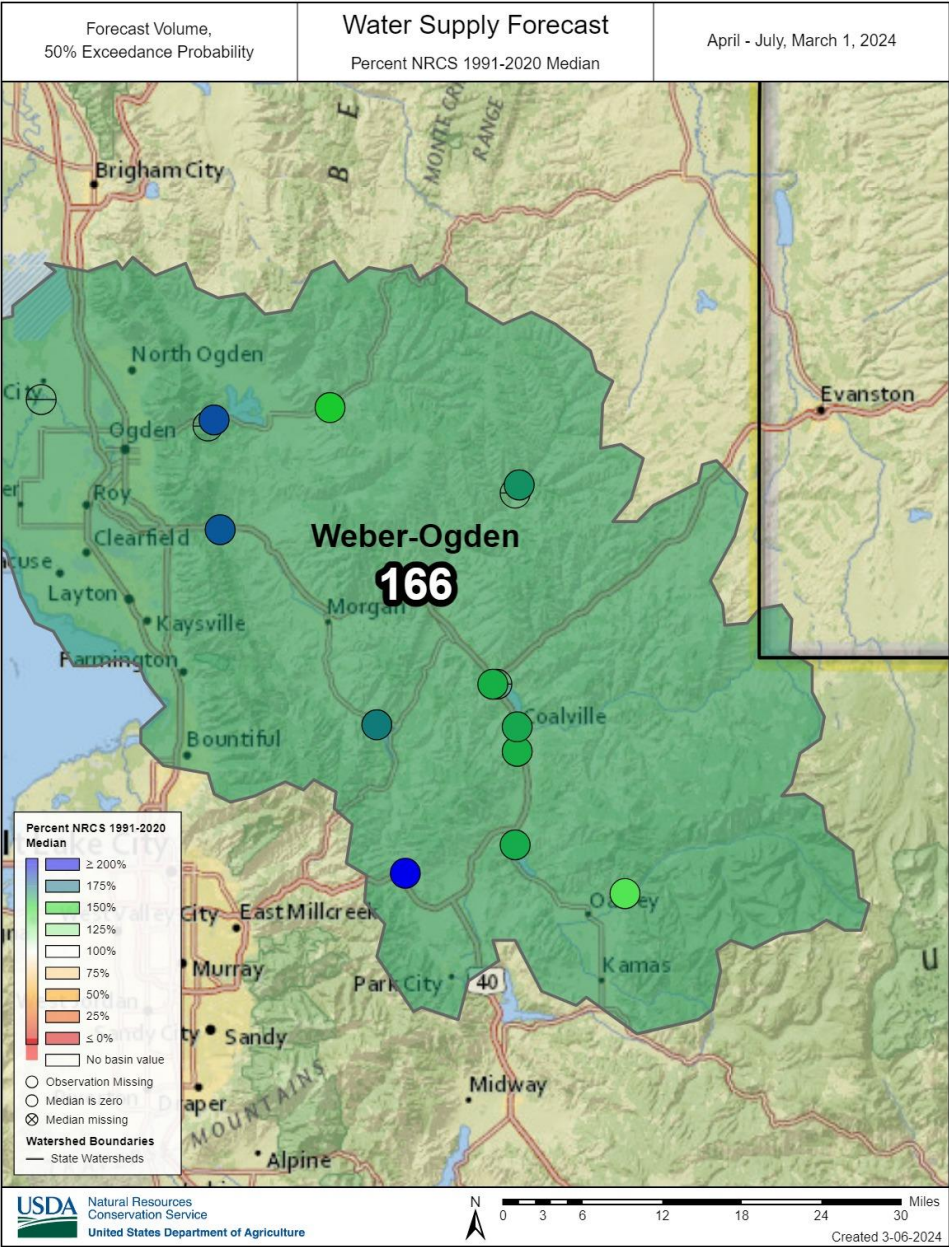
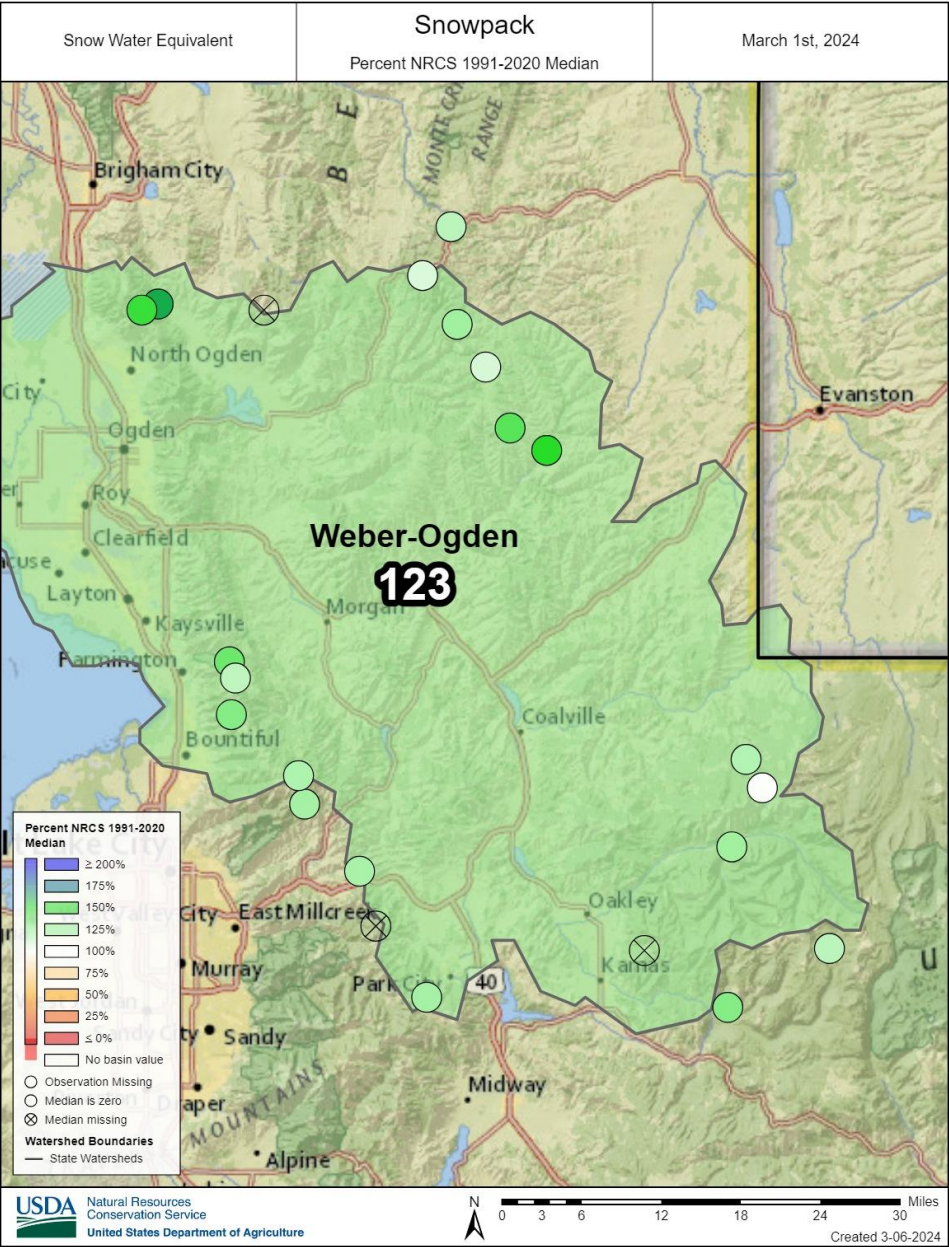


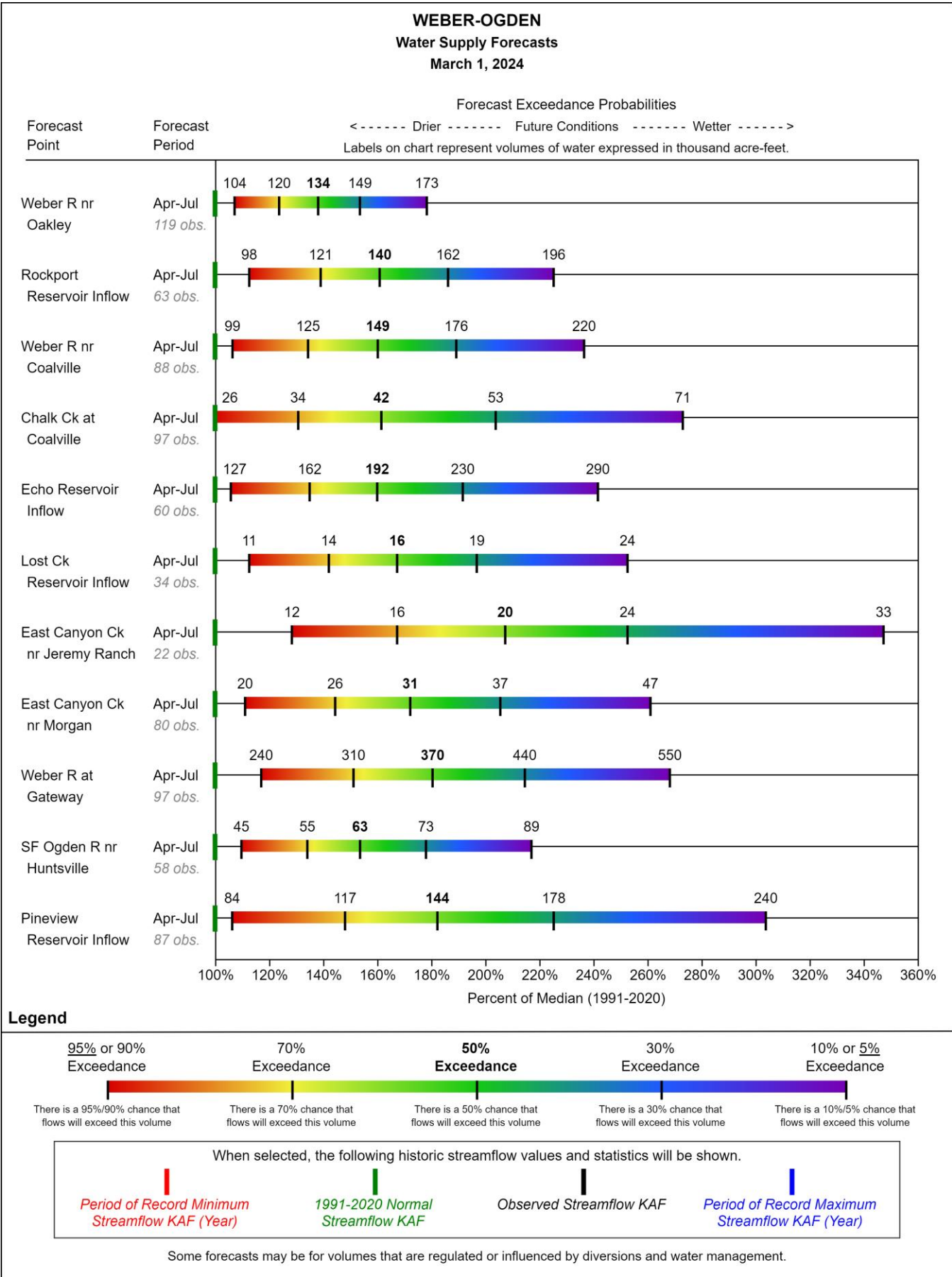
Snowpack in the Weber and Ogden River Basins is above normal at 123% of median, compared to 154% at this time last year. Precipitation in February was well above normal at 188%, which brings the seasonal accumulation (October-February) to 120% of median. Soil moisture is at 73% saturation compared to 65% saturation last year. Reservoir storage is 83% of capacity, compared to 52% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 138% to 207% of normal. The Surface Water Supply Index percentiles are 76% for the Weber, and 69% for the Ogden.



Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

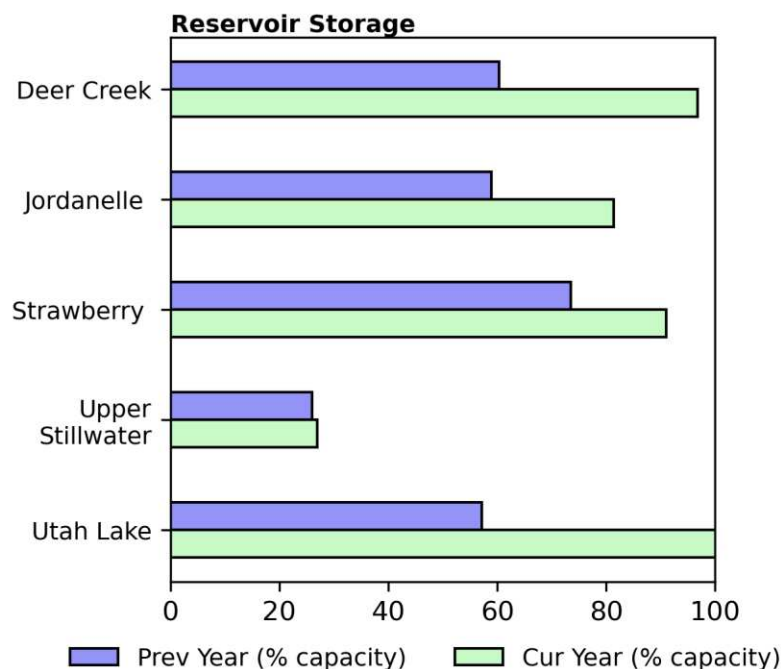
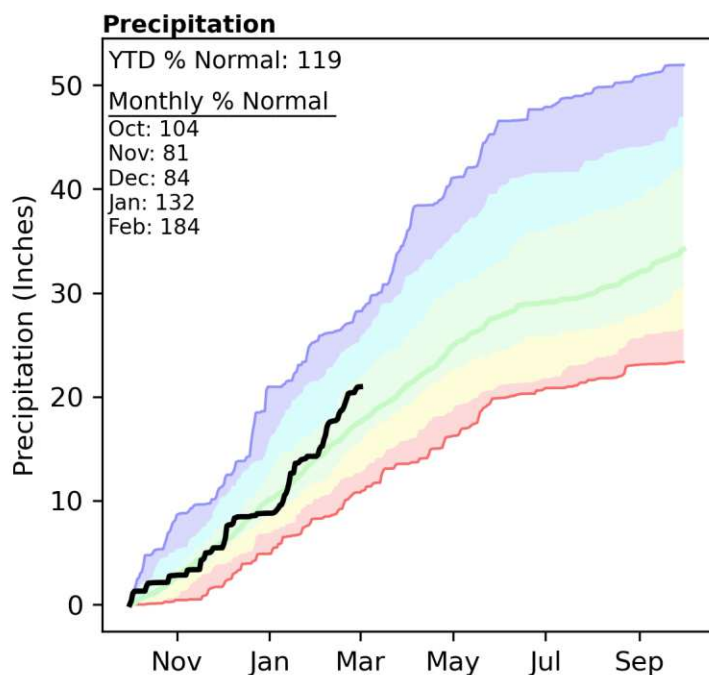
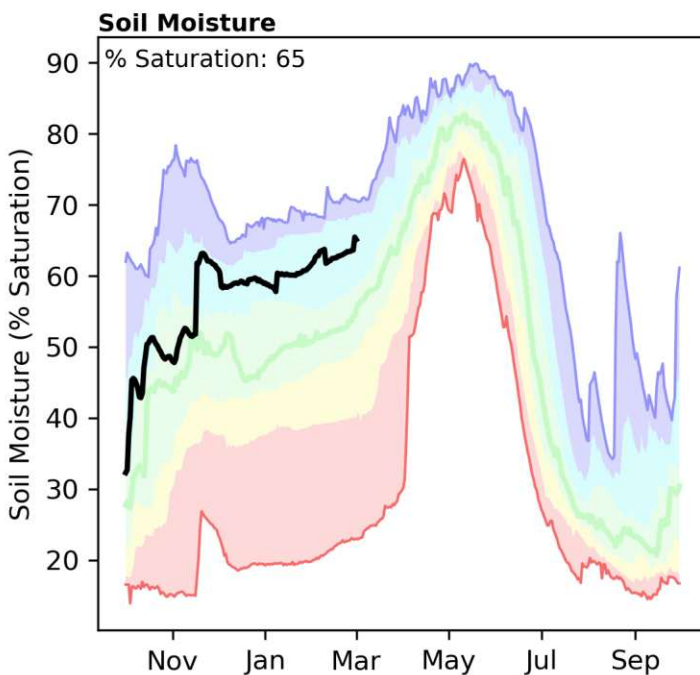
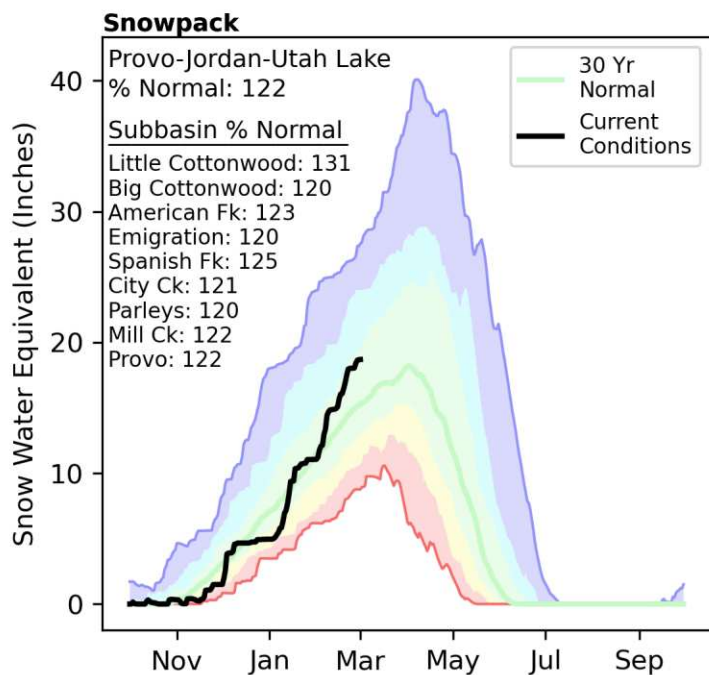
Weber-Ogden





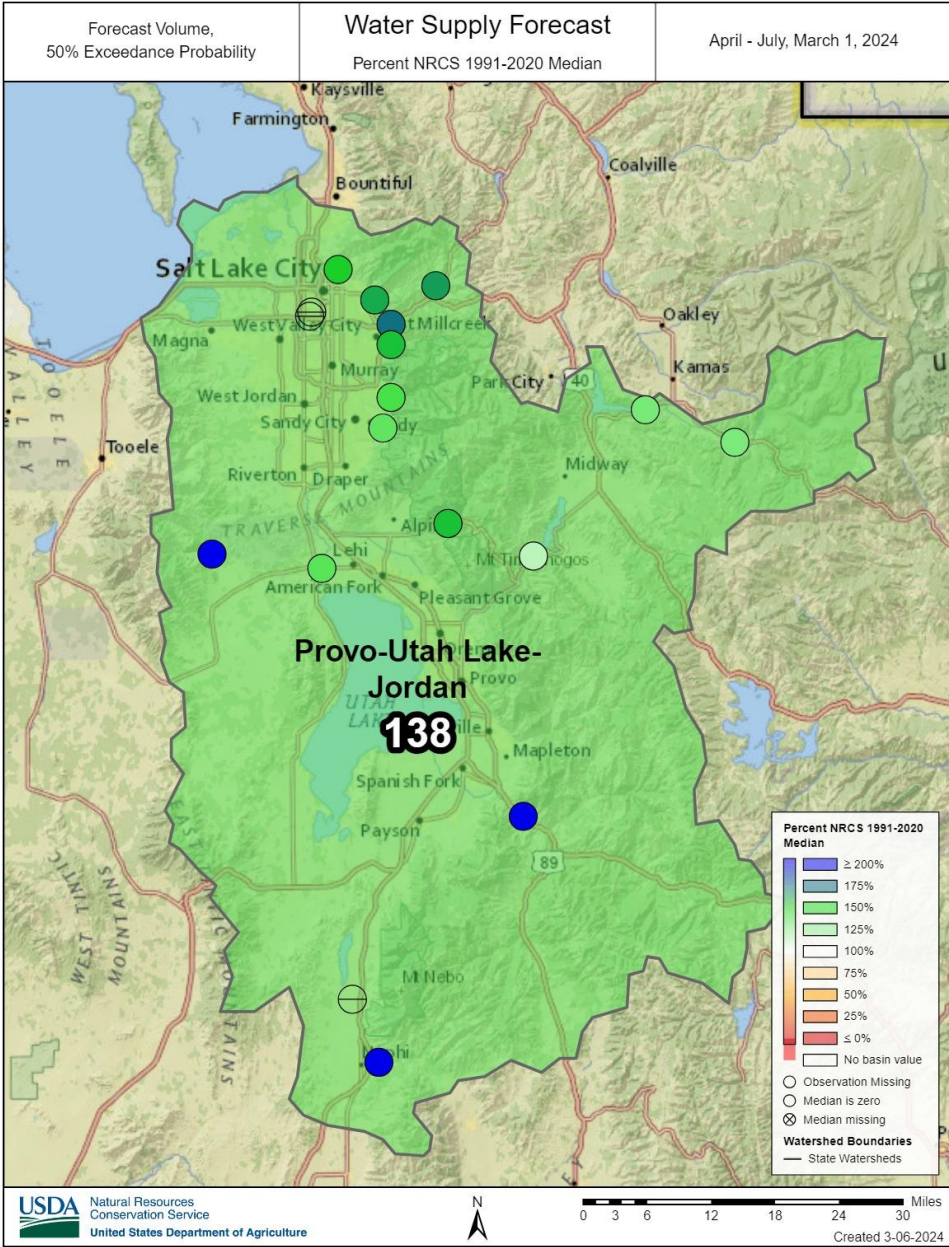
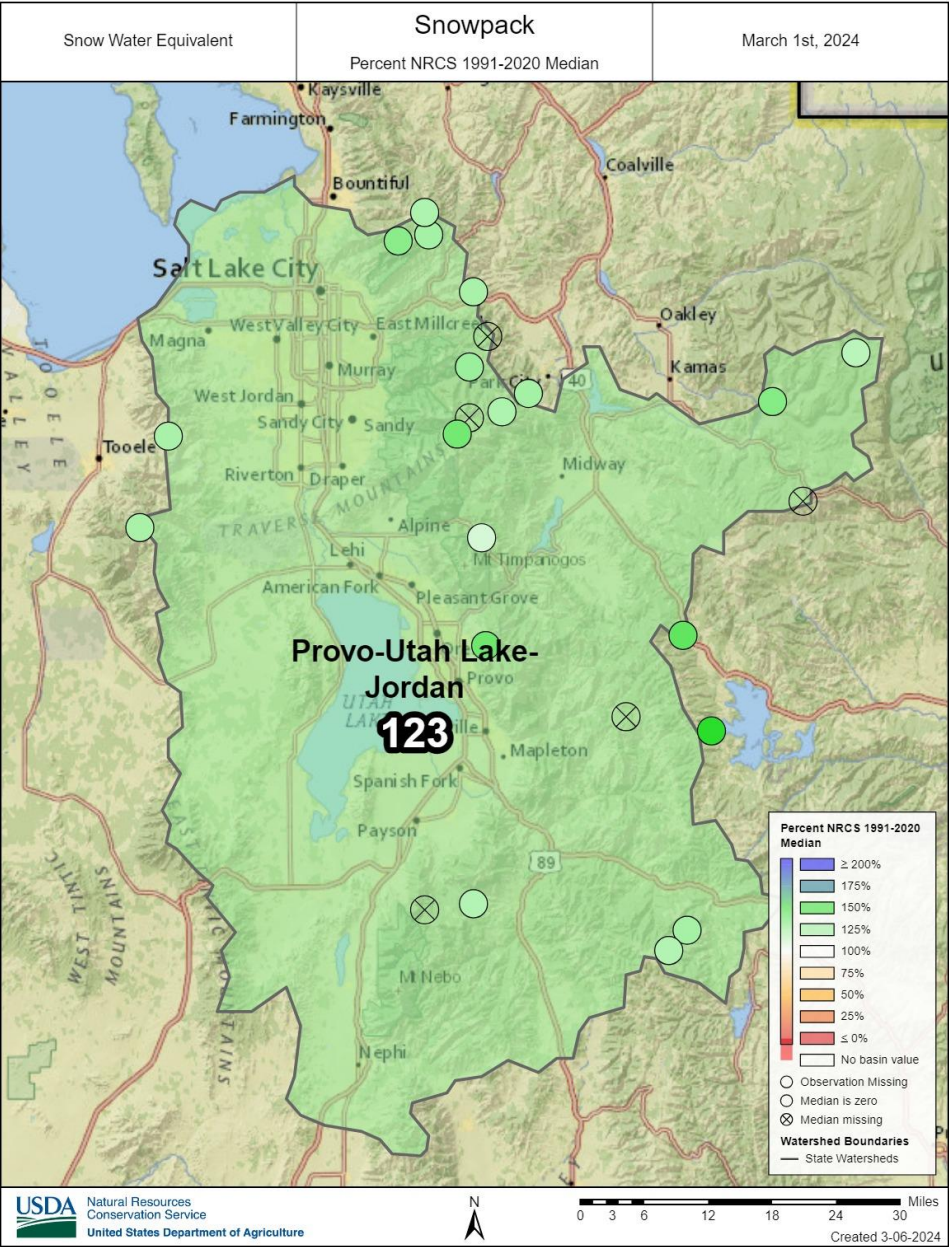
Provo-Jordan-Utah Lake | March 1, 2024

Snowpack in the Provo and Jordan River Basins is above normal at 122% of median, compared to 167% at this time last year. Precipitation in February was well above normal at 184%, which brings the seasonal accumulation (October-February) to 119% of median. Soil moisture is at 65% saturation compared to 58% saturation last year. Reservoir storage is 92% of capacity, compared to 64% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 115% to 223% of normal. The Surface Water Supply Index percentile is 84% for the Provo.

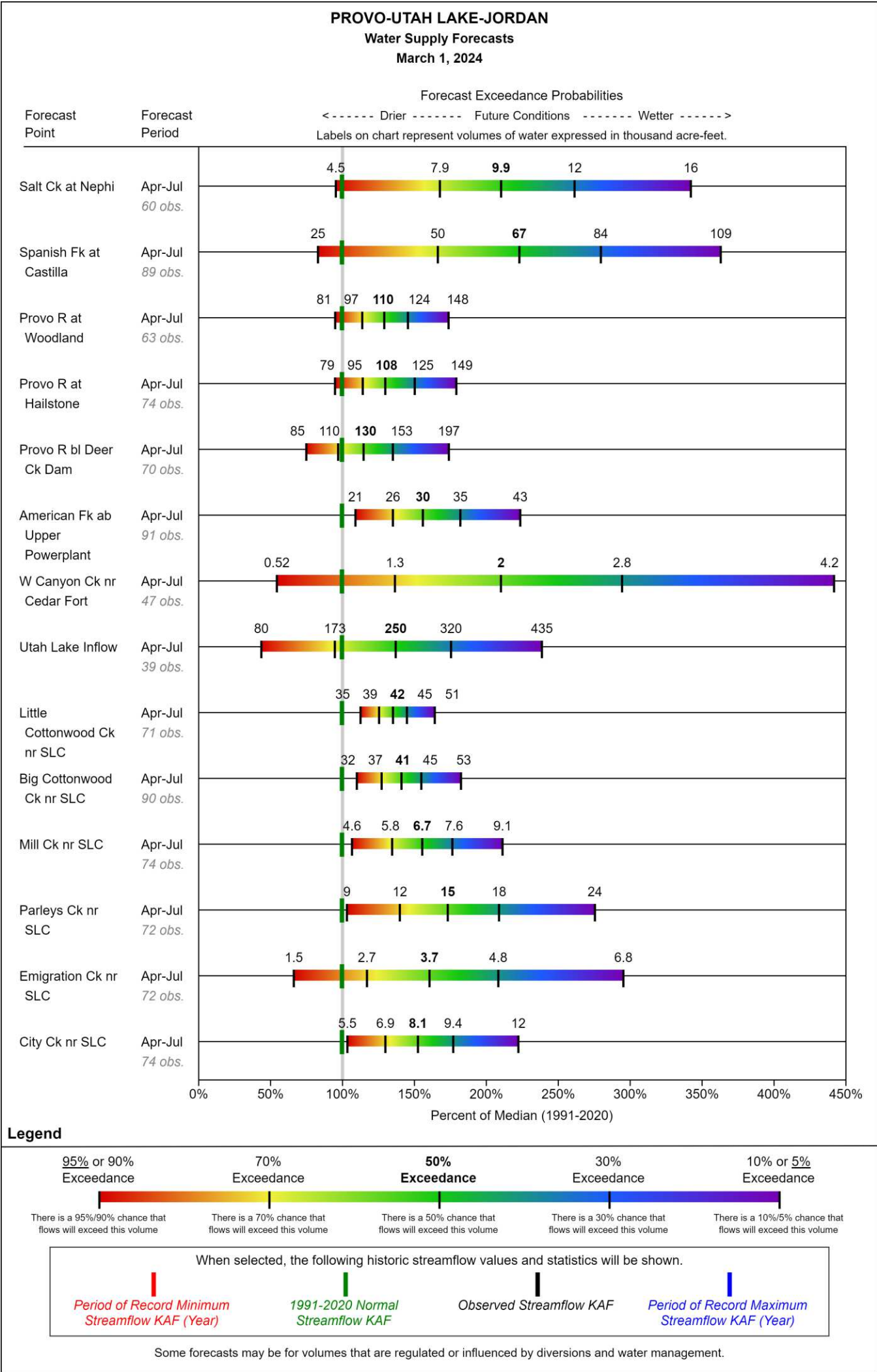


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

Provo-Utah Lake-Jordan

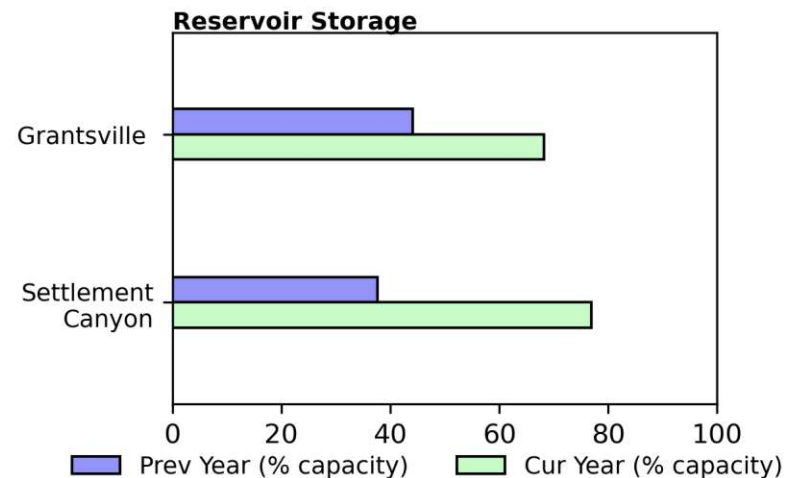
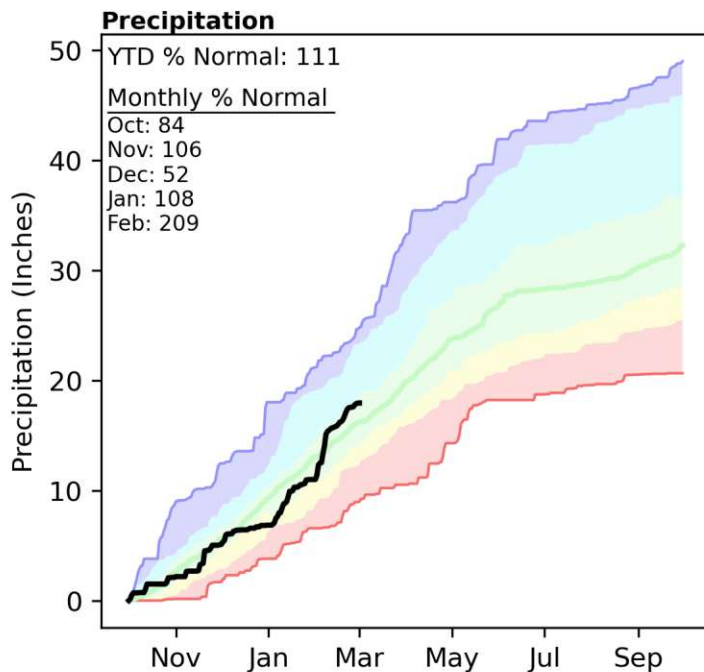
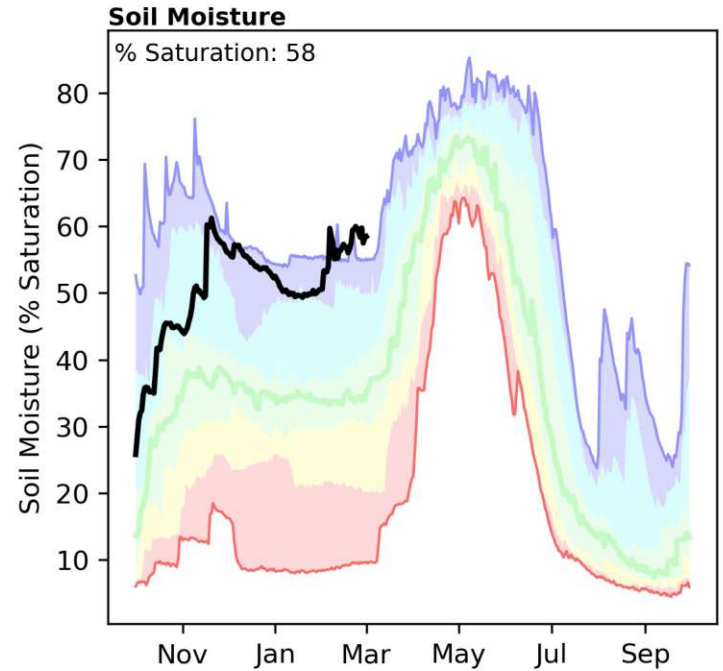
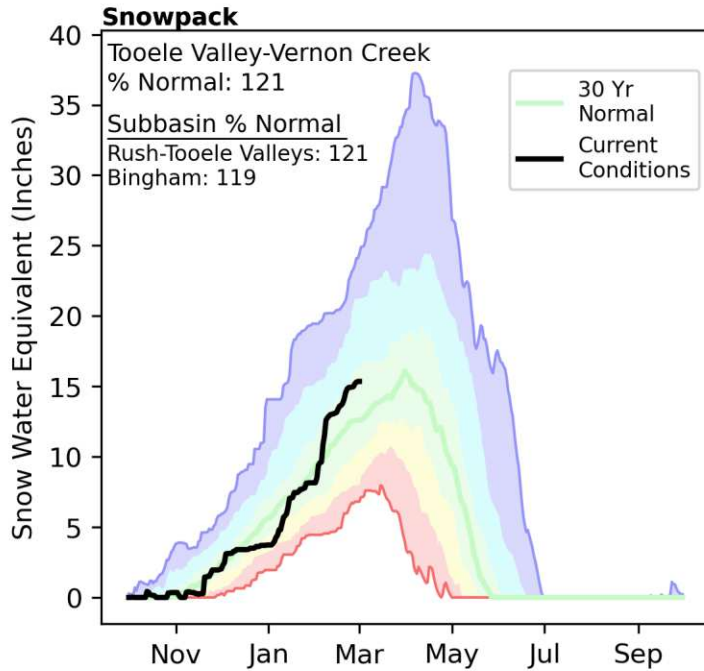


Provo-Utah Lake-Jordan



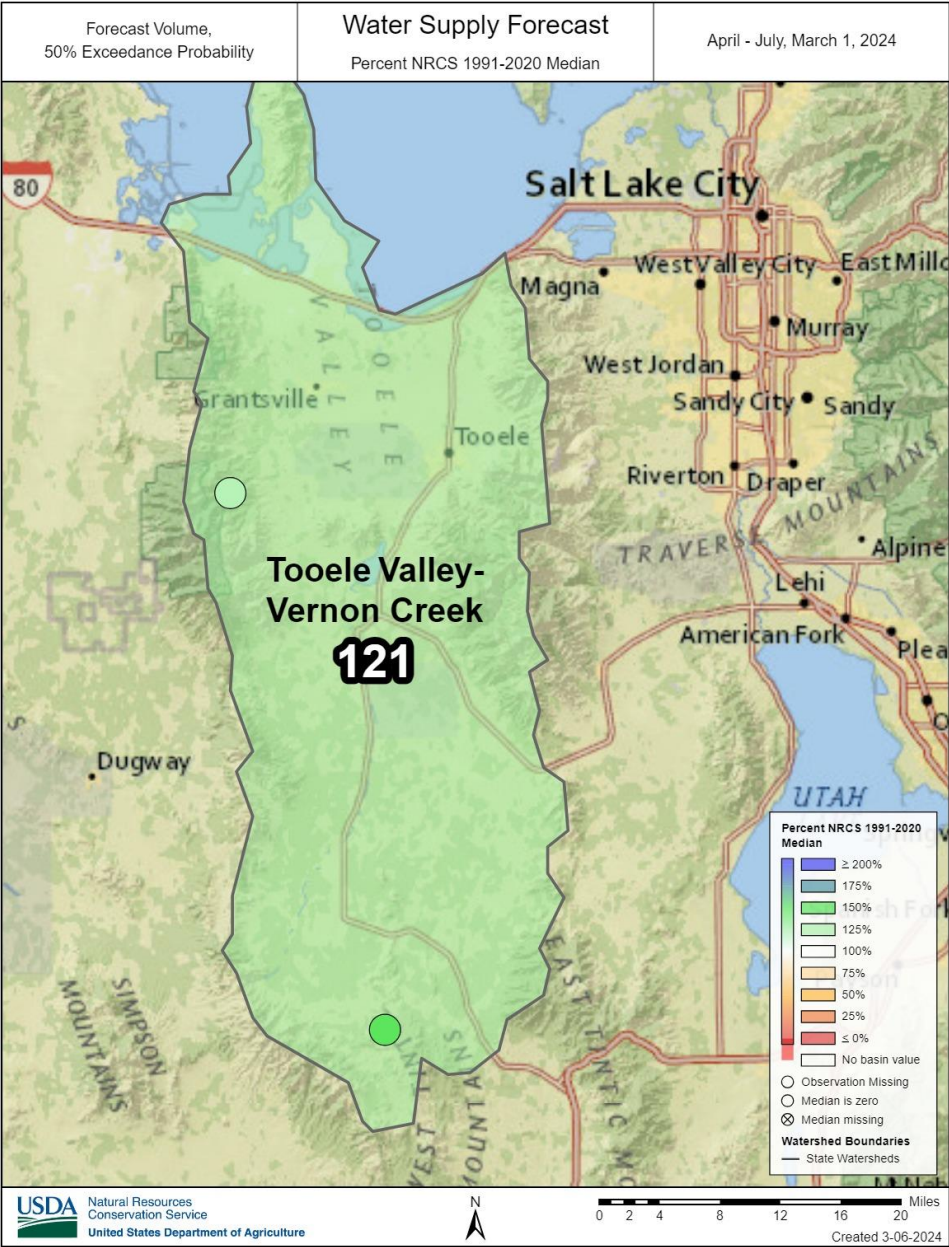
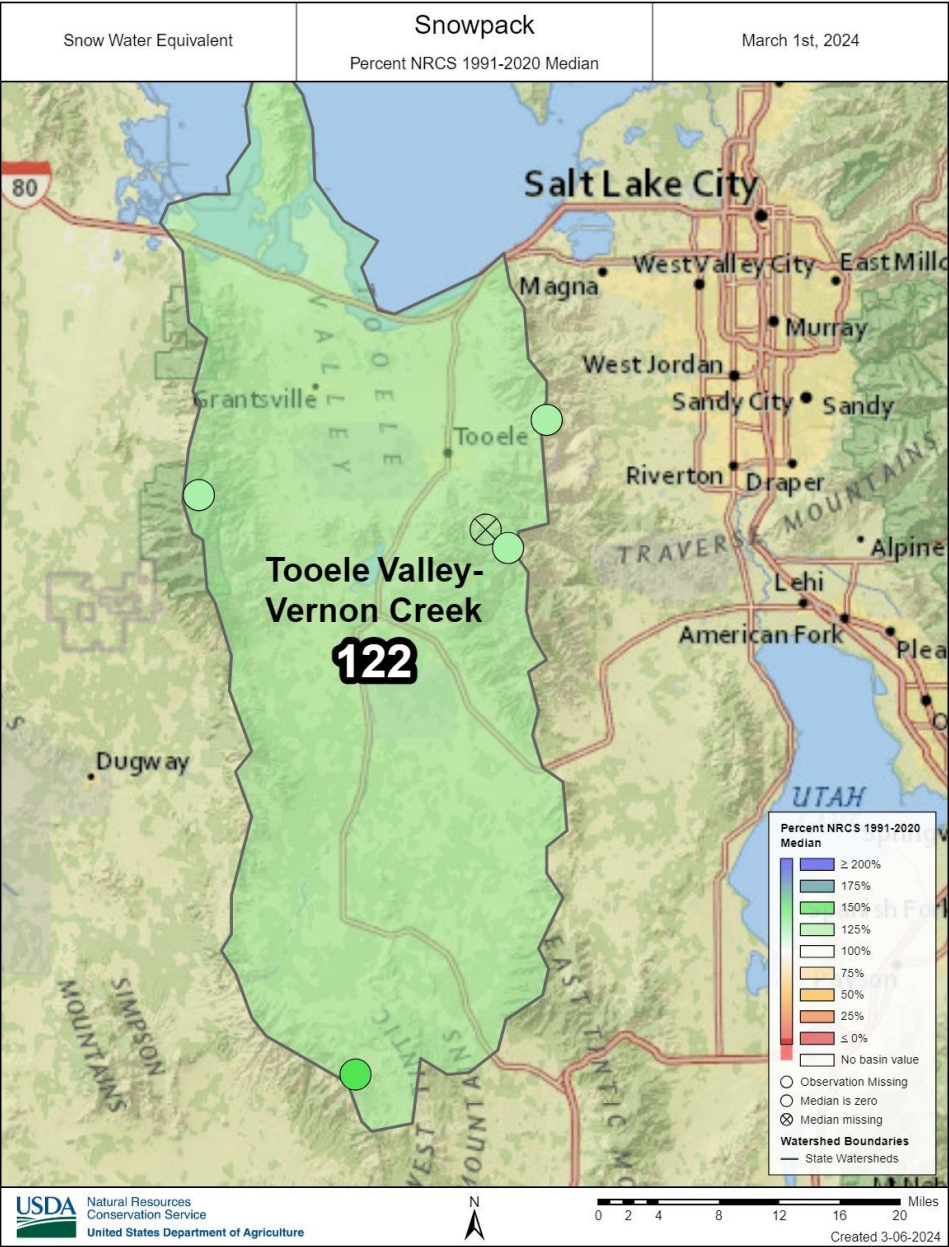
Tooele Valley-Vernon Creek | March 1, 2024

Snowpack in the Tooele Valley and West Desert Region is above normal at 121% of median, compared to 194% at this time last year. Precipitation in February was well above normal at 209%, which brings the seasonal accumulation (October-February) to 111% of median. Soil moisture is at 58% saturation compared to 36% saturation last year. Reservoir storage is 70% of capacity, compared to 42% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 116% to 138% of normal.

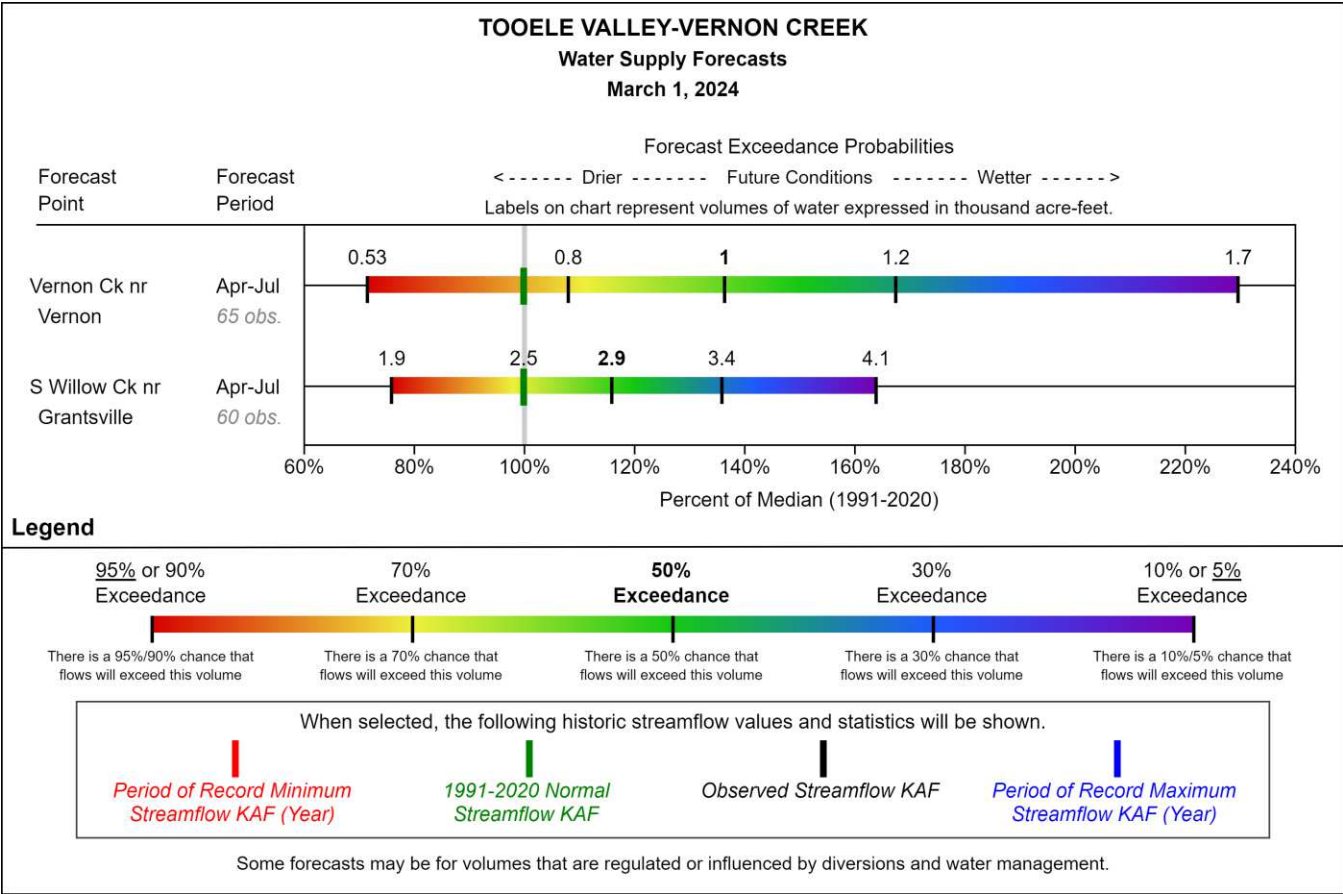


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

Tooele Valley-Vernon Creek

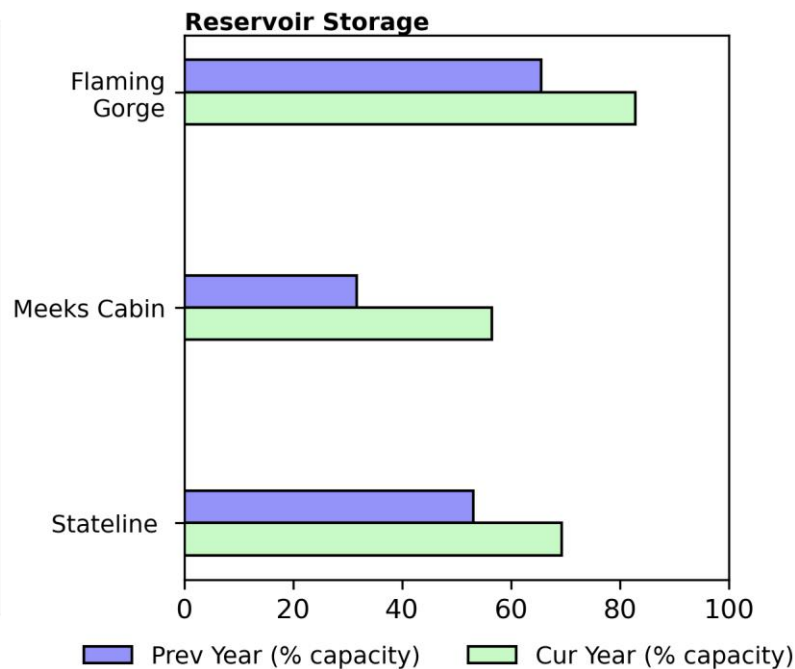
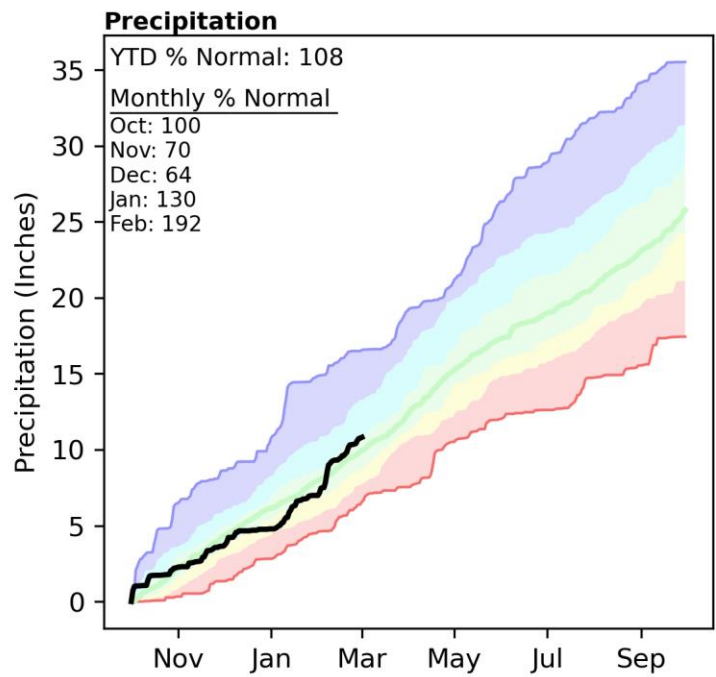
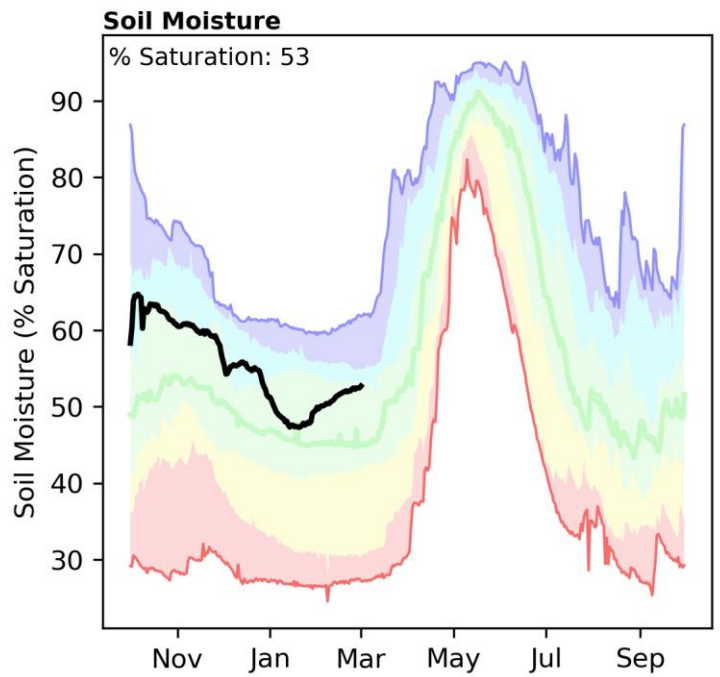
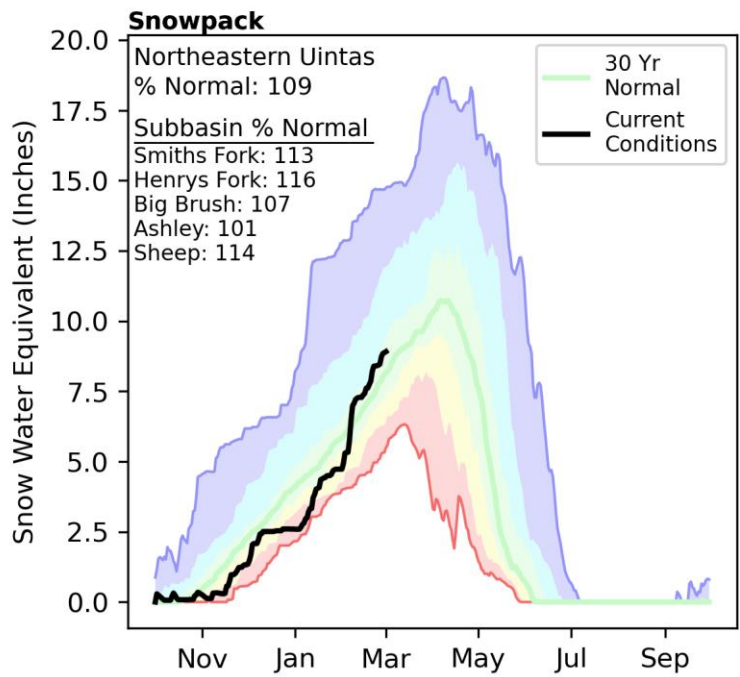


Tooele Valley-Vernon Creek



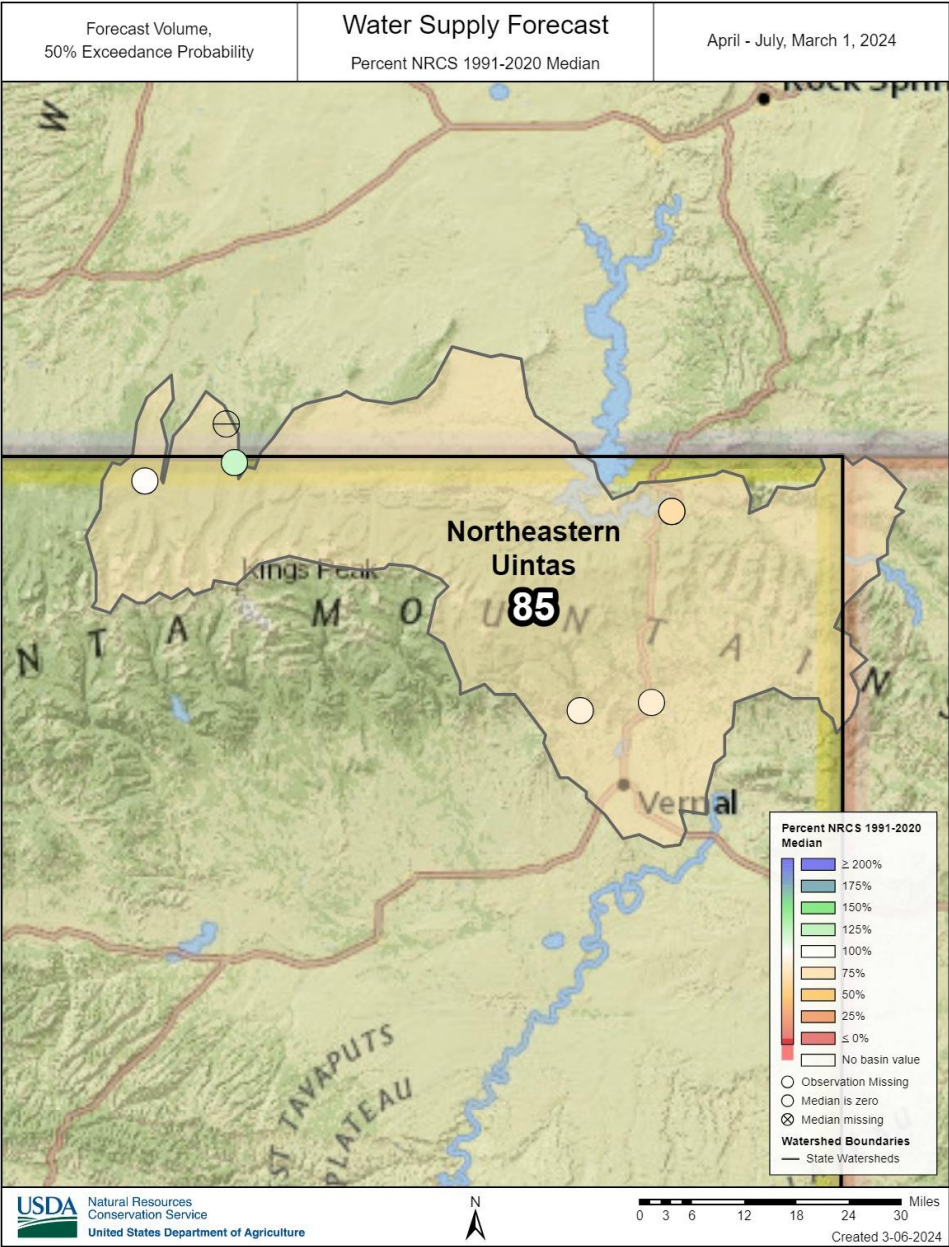
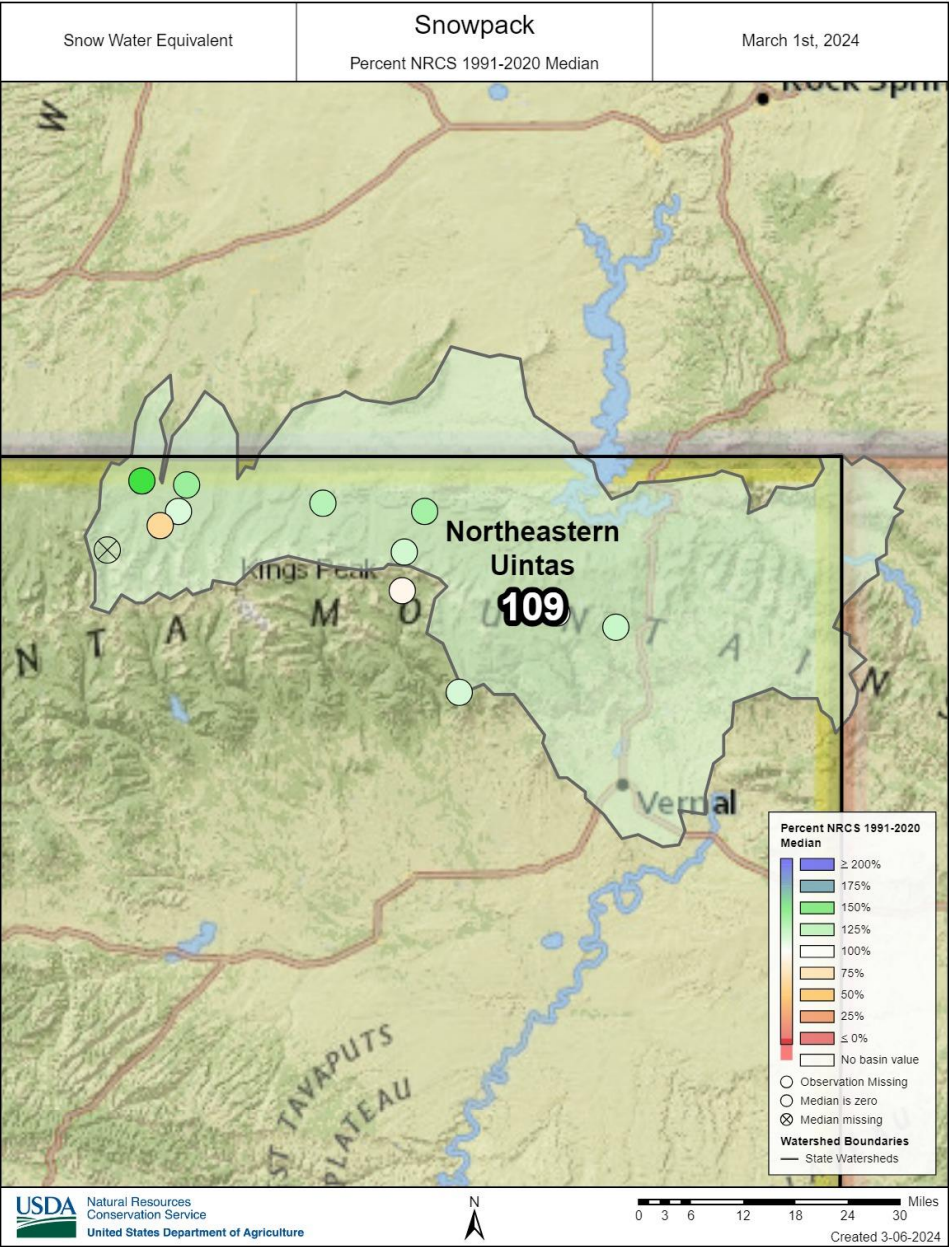
Northeastern Uintas | March 1, 2024

Snowpack in the Northeastern Uintas is about normal at 109% of median, compared to 148% at this time last year. Precipitation in February was well above normal at 192%, which brings the seasonal accumulation (October-February) to 108% of median. Soil moisture is at 53% saturation compared to 55% saturation last year. Reservoir storage is 82% of capacity, compared to 65% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 83% to 112% of normal. The Surface Water Supply Index percentiles are 64% for the Blacks Fork, and 74% for the Smiths Fork.

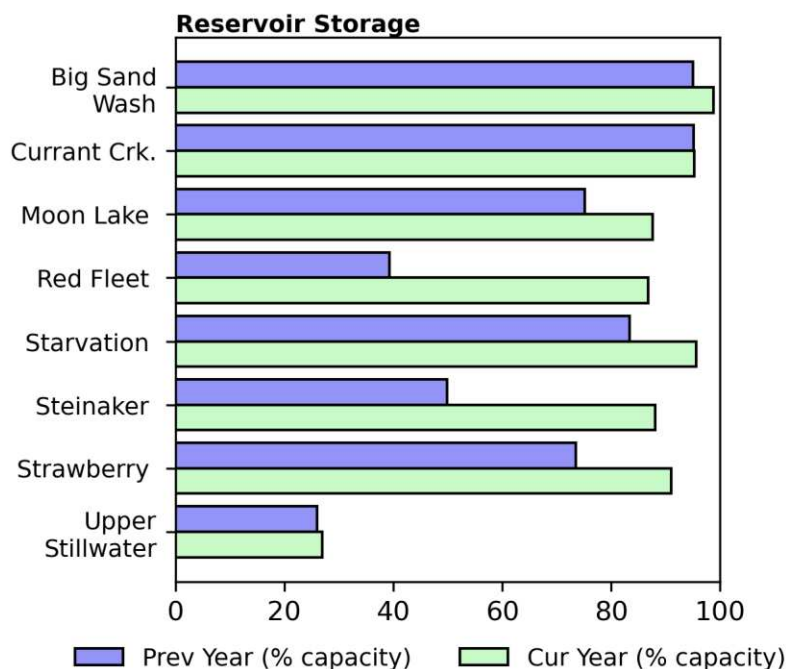
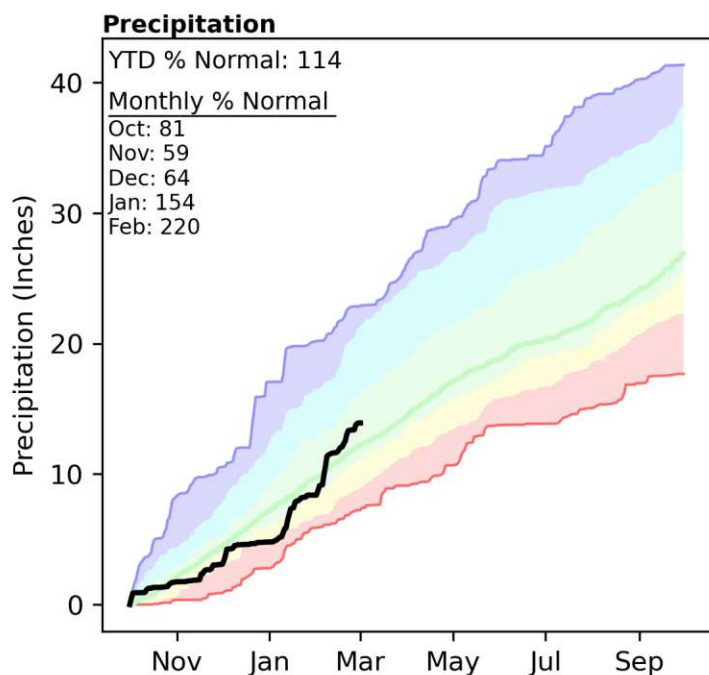
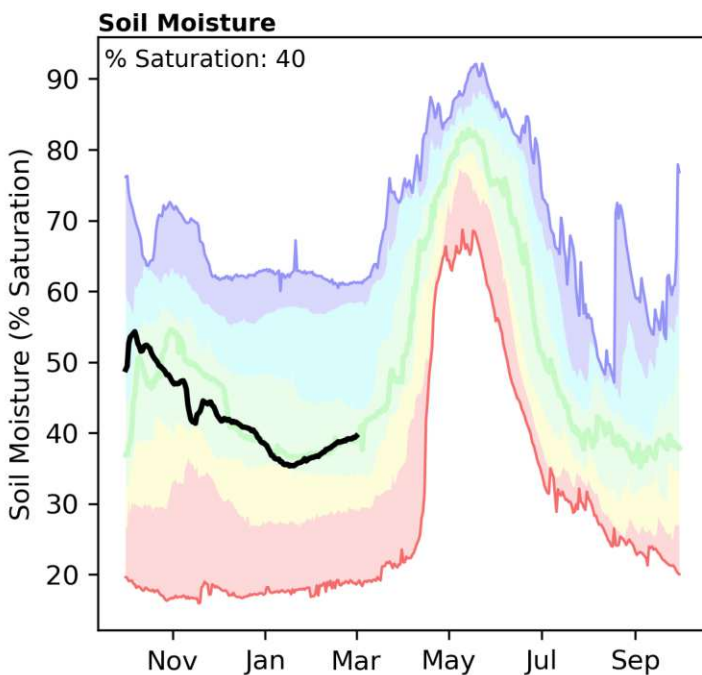
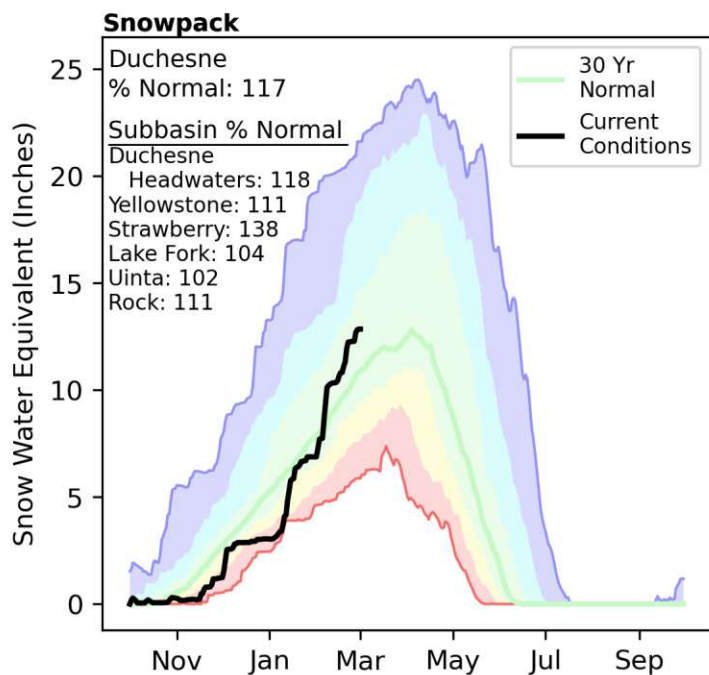


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

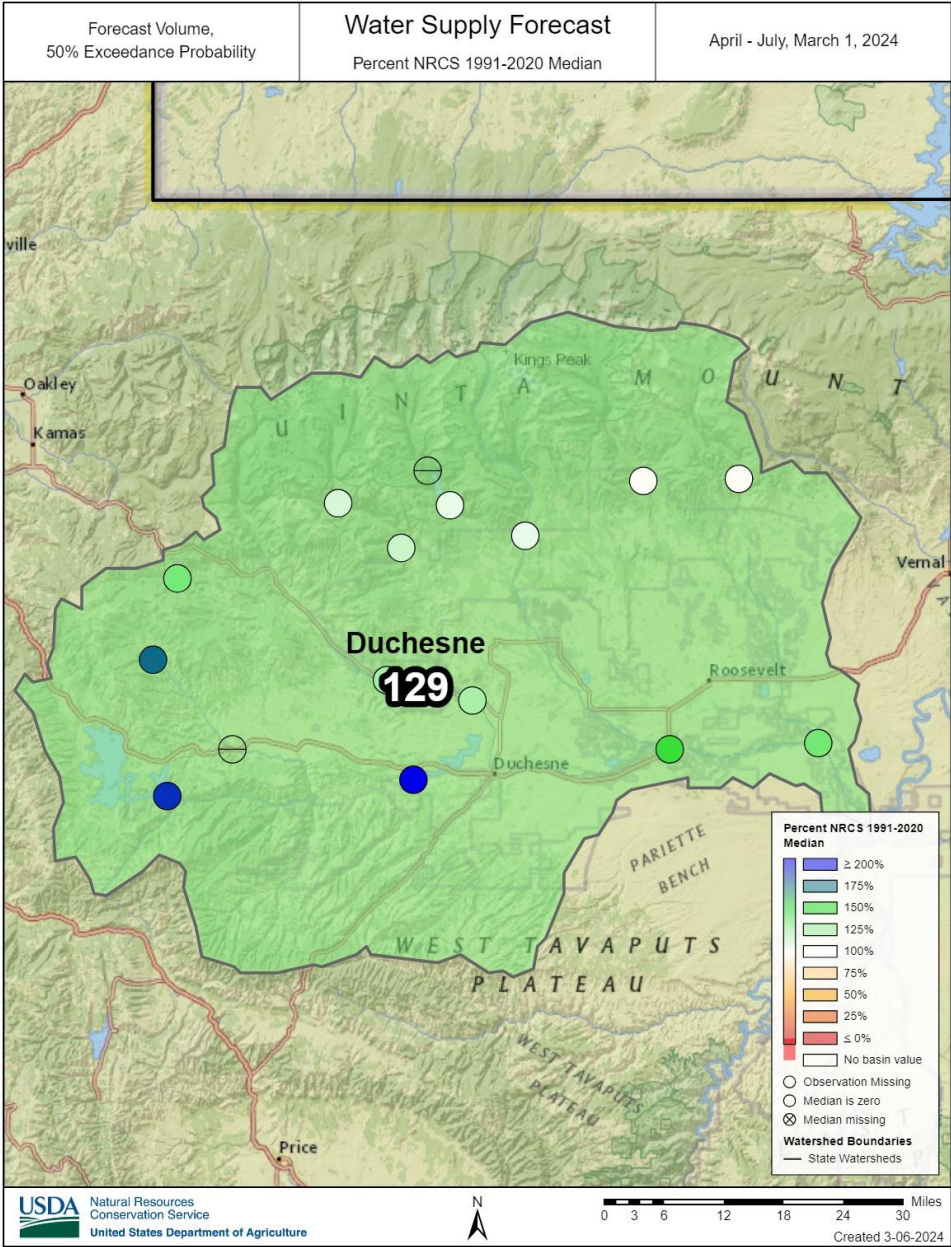
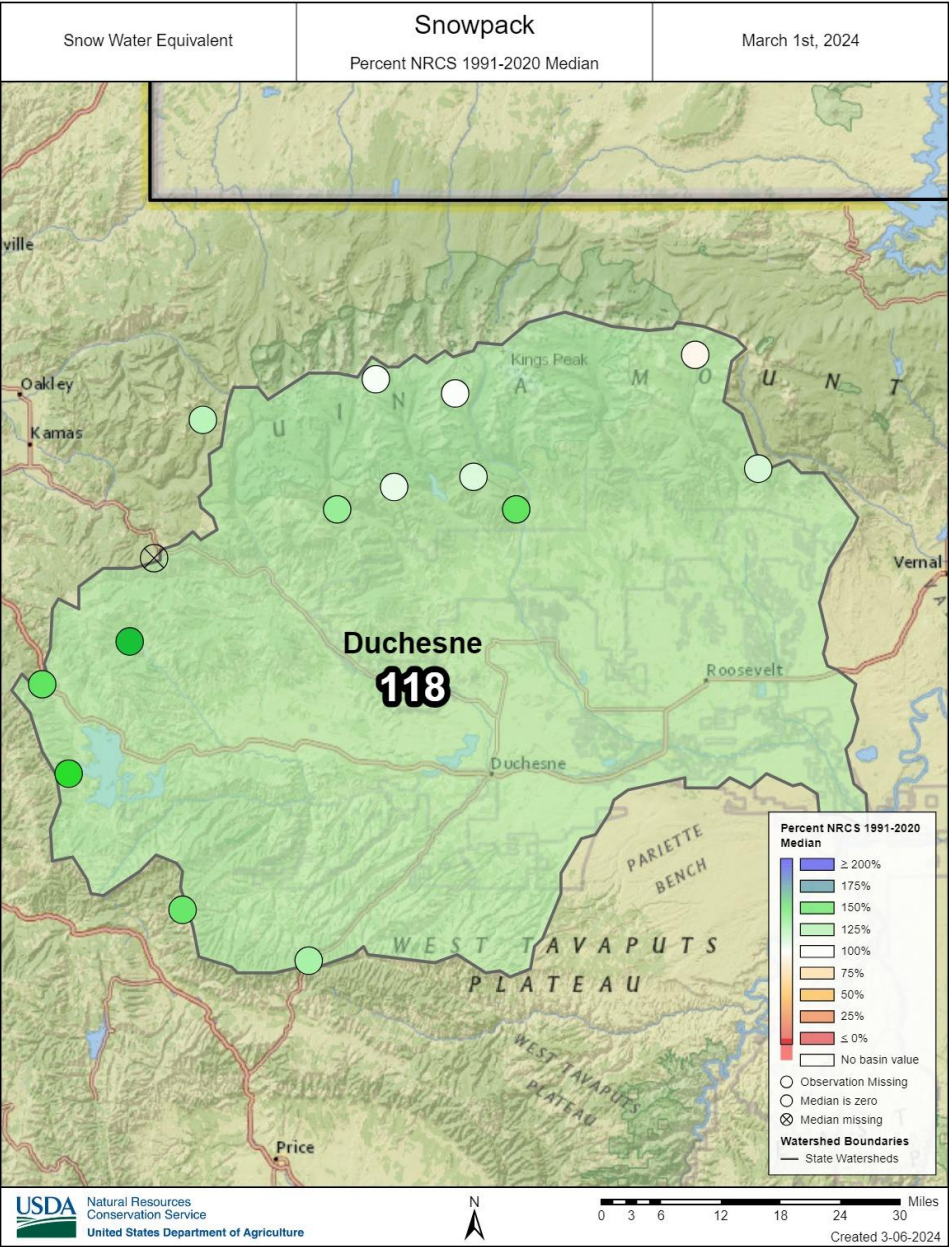
Northeastern Uintas

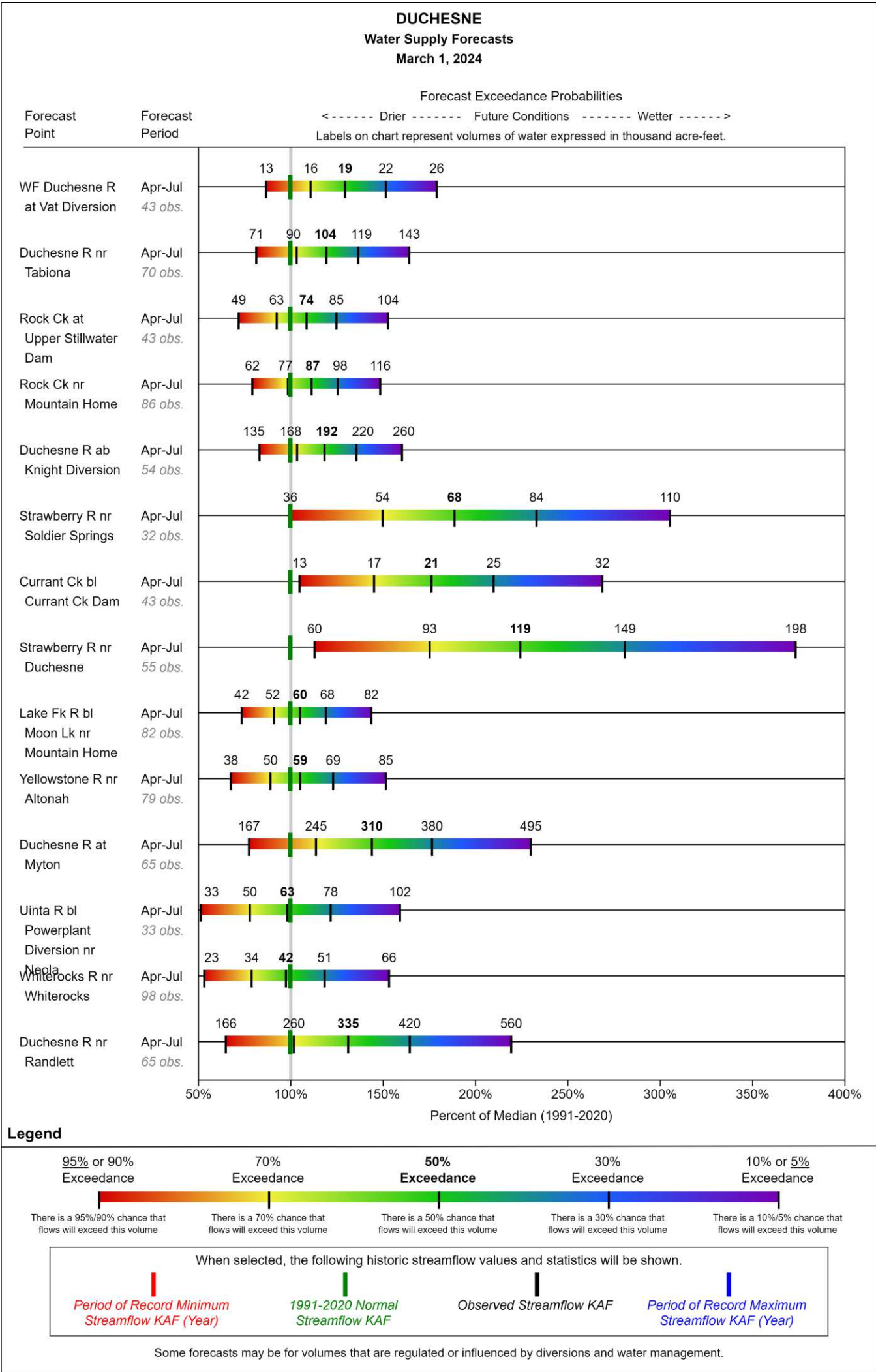


Snowpack in the Duchesne River Basin is above normal at 117% of median, compared to 149% at this time last year. Precipitation in February was well above normal at 220%, which brings the seasonal accumulation (October-February) to 114% of median. Soil moisture is at 40% saturation compared to 51% saturation last year. Reservoir storage is 90% of capacity, compared to 73% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 98% to 225% of normal. The Surface Water Supply Index percentiles are 71% for the Western Uintas, and 53% for the Eastern Uintas.

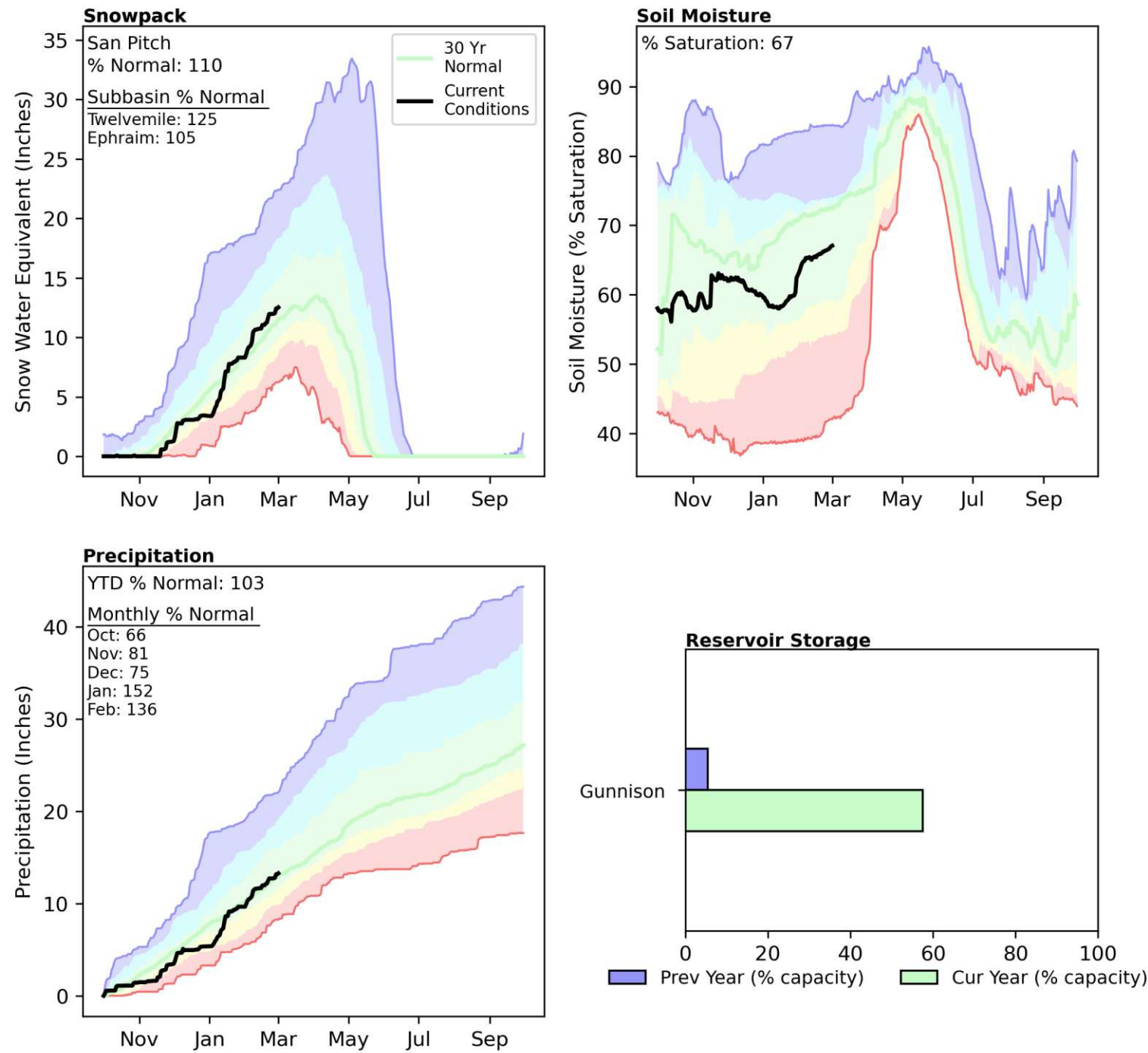


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)



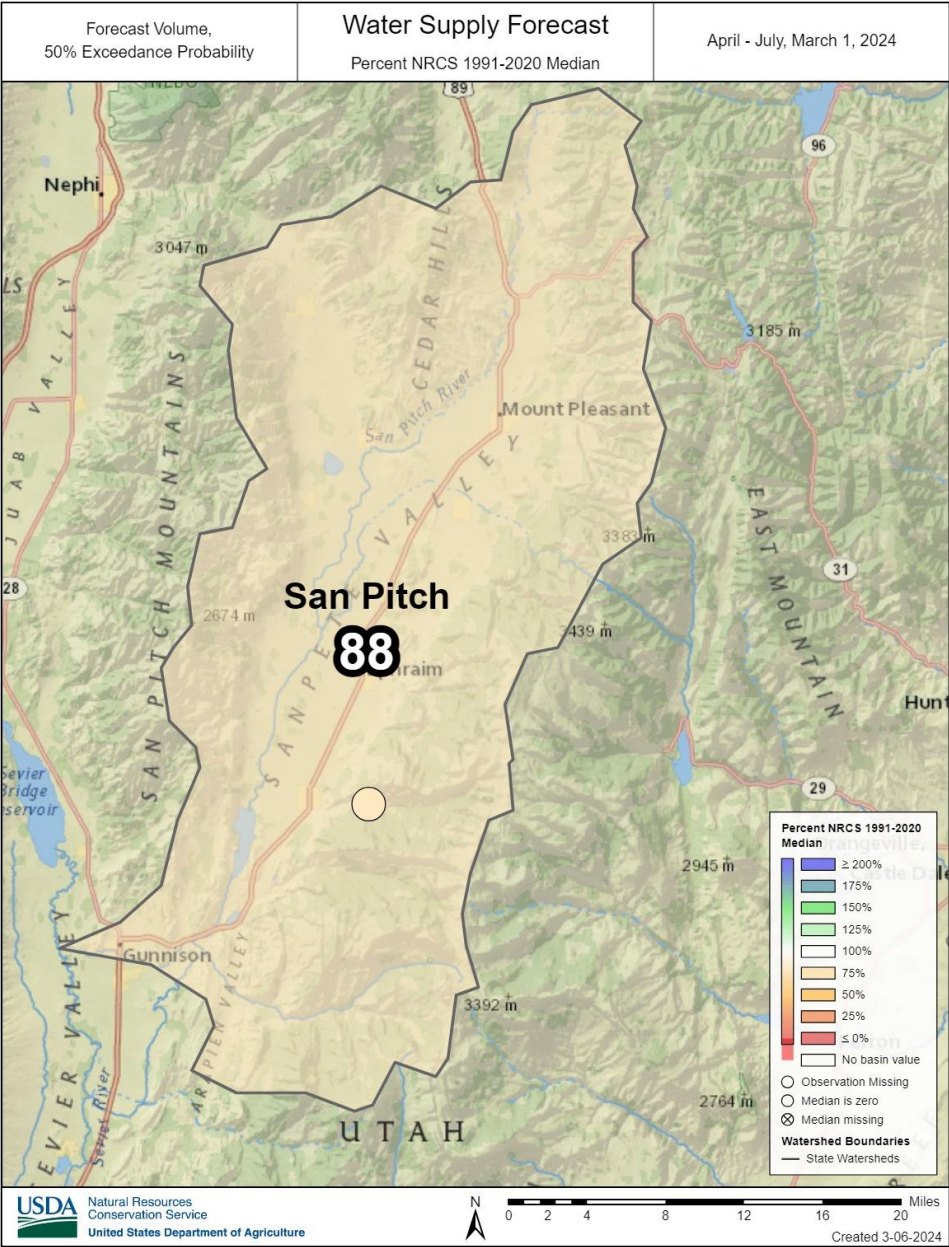
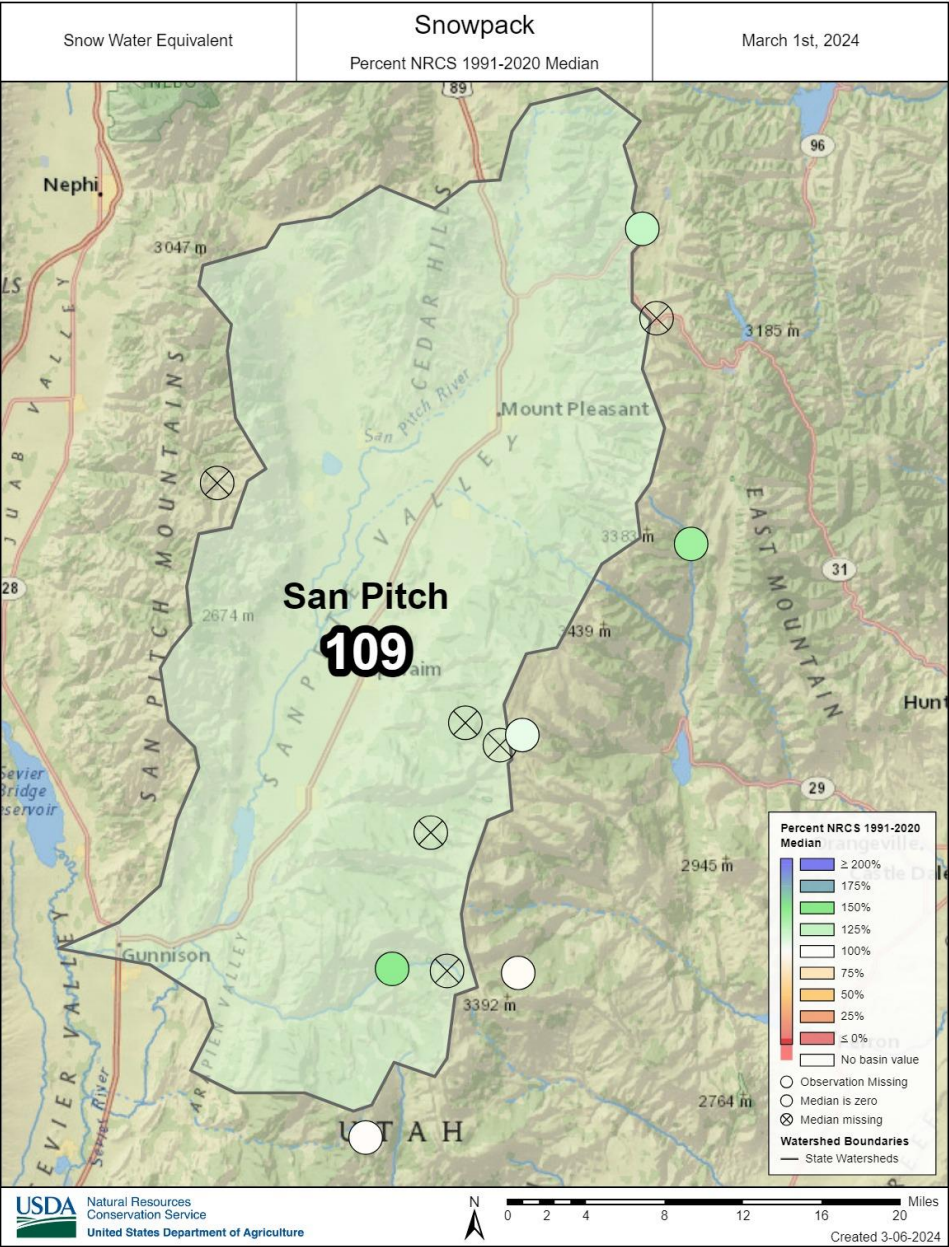


Snowpack in the San Pitch River Basin is about normal at 110% of median, compared to 159% at this time last year. Precipitation in February was well above normal at 136%, which brings the seasonal accumulation (October-February) to 103% of median. Soil moisture is at 67% saturation compared to 74% saturation last year. Reservoir storage is 57% of capacity, compared to 5% last year. The forecast streamflow volume (50% exceedence, April-July) for Manti Creek is 88% of normal. The Surface Water Supply Index percentile is 47% for the San Pitch.

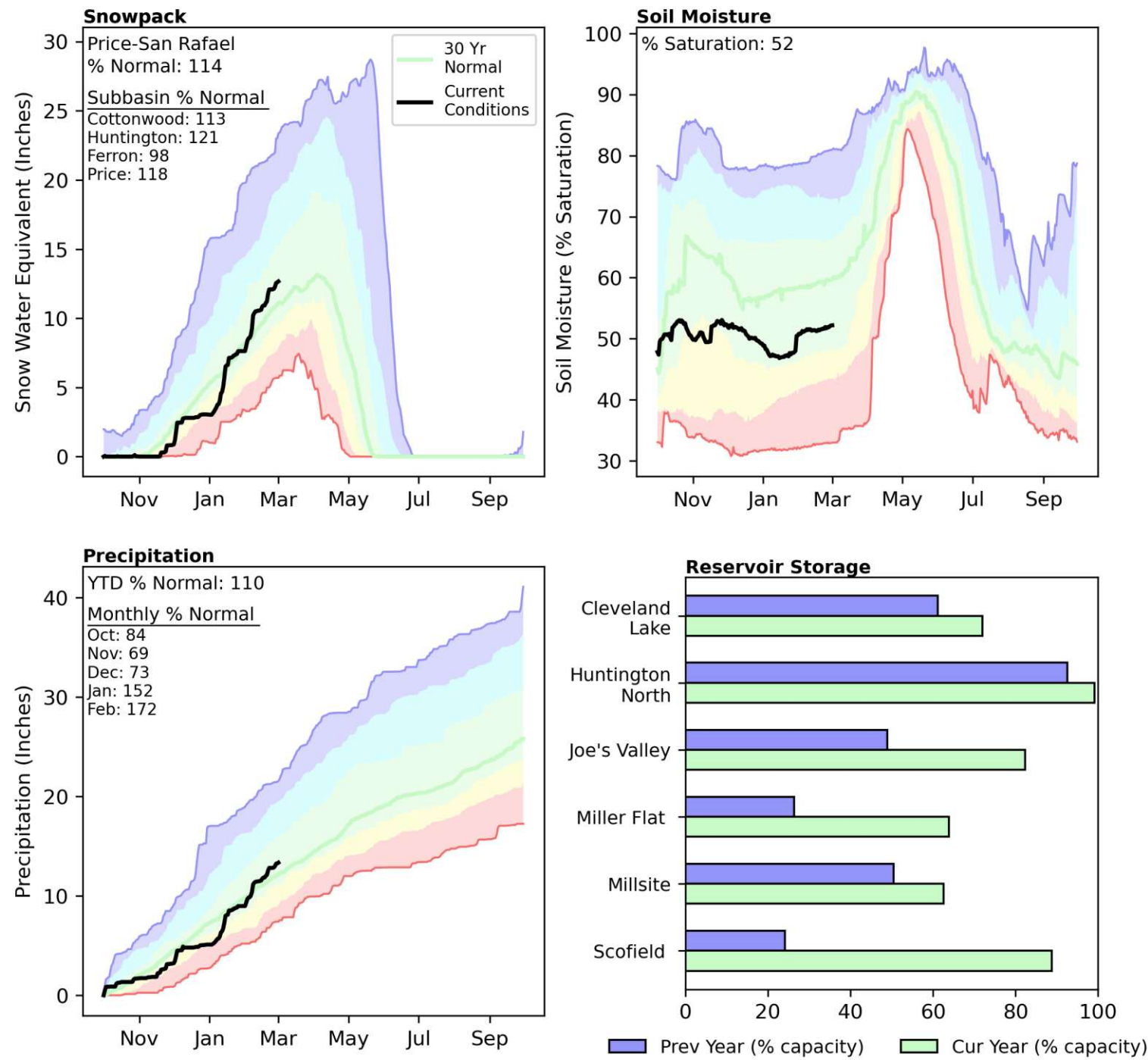


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

San Pitch

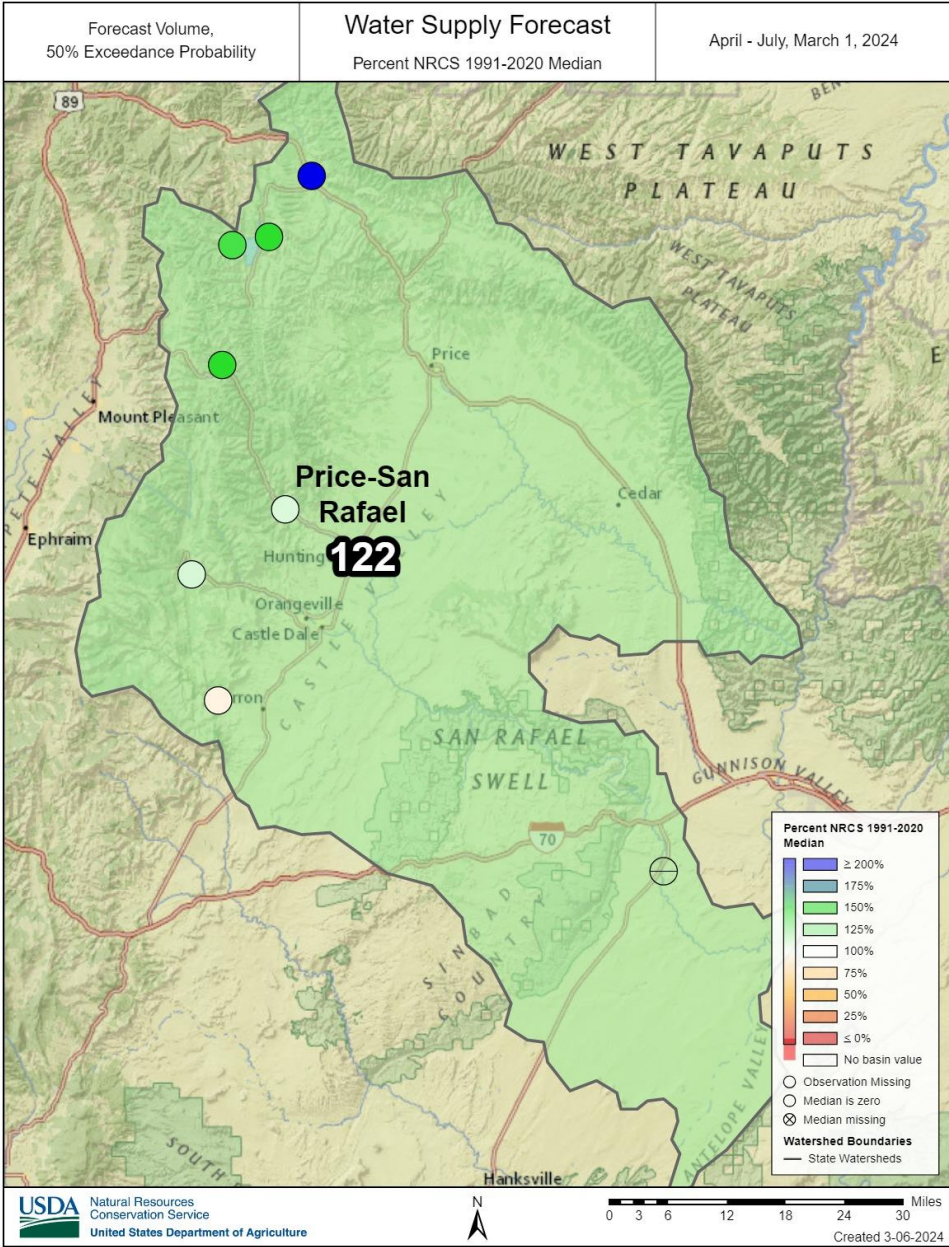
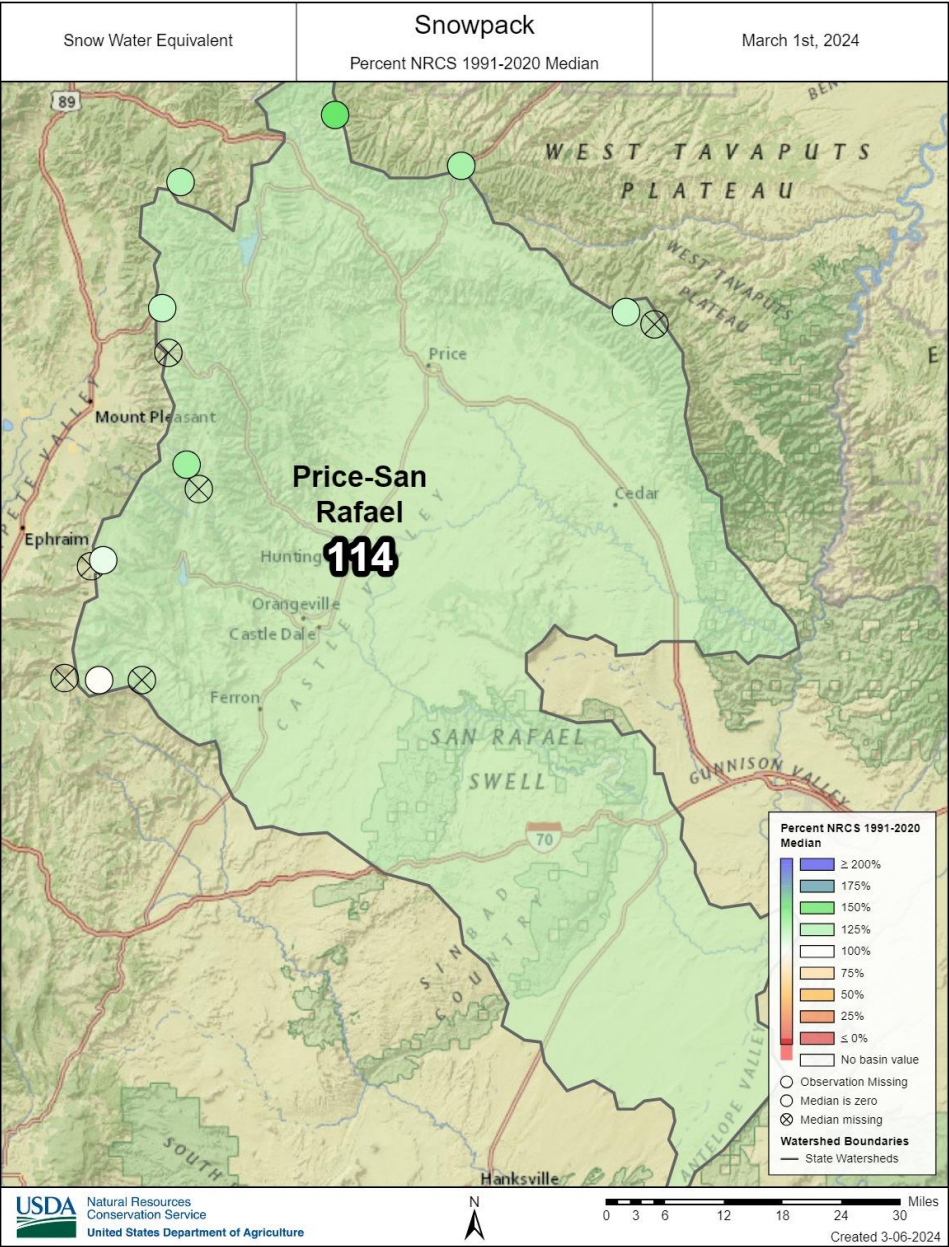


Snowpack in the Price and San Rafael River Basins is above normal at 114% of median, compared to 167% at this time last year. Precipitation in February was well above normal at 172%, which brings the seasonal accumulation (October-February) to 110% of median. Soil moisture is at 52% saturation compared to 59% saturation last year. Reservoir storage is 82% of capacity, compared to 39% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 94% to 222% of normal. The Surface Water Supply Index percentiles are 82% for the Price, 60% for Joes Valley, and 51% for Ferron Creek.

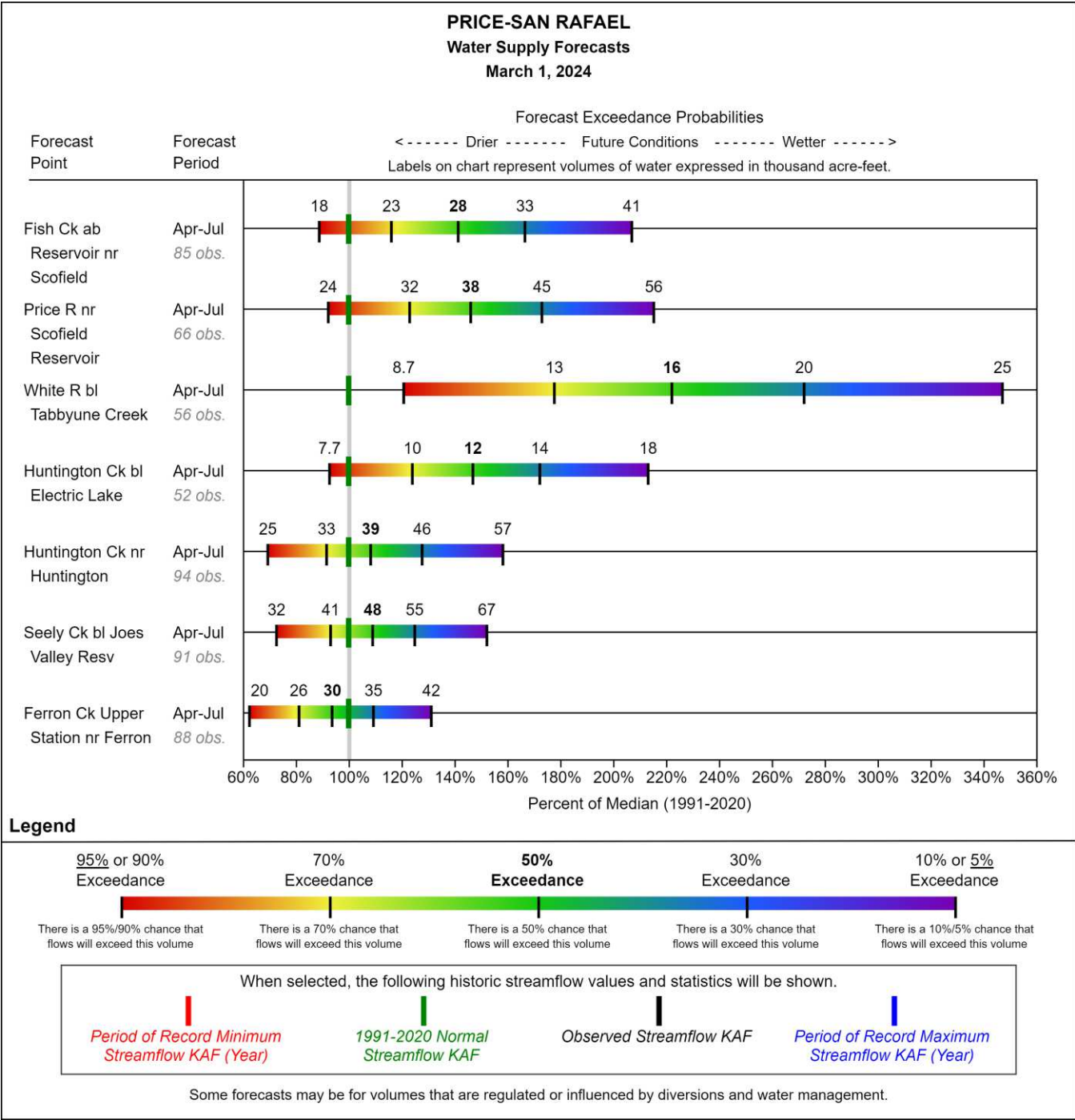


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

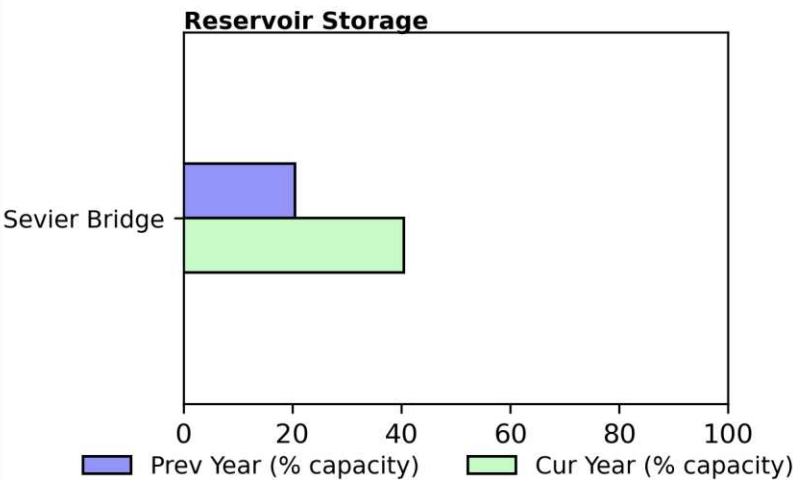
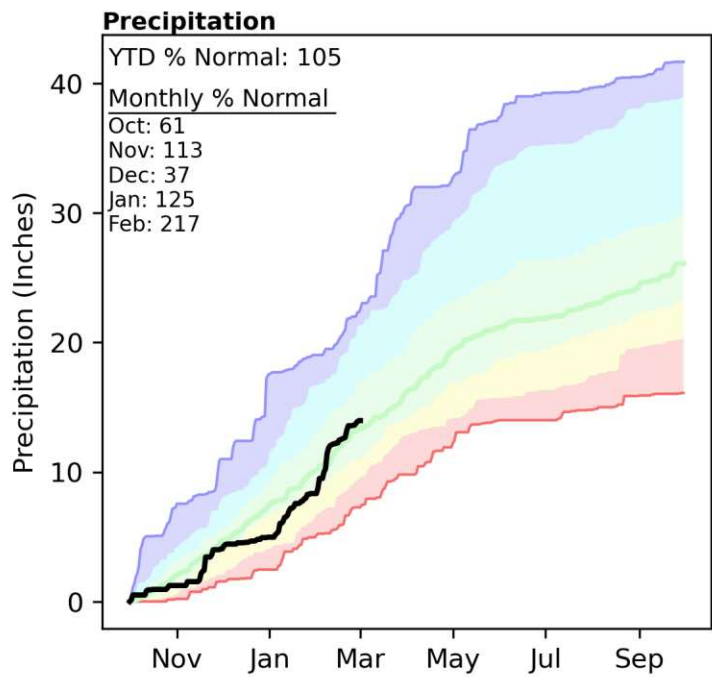
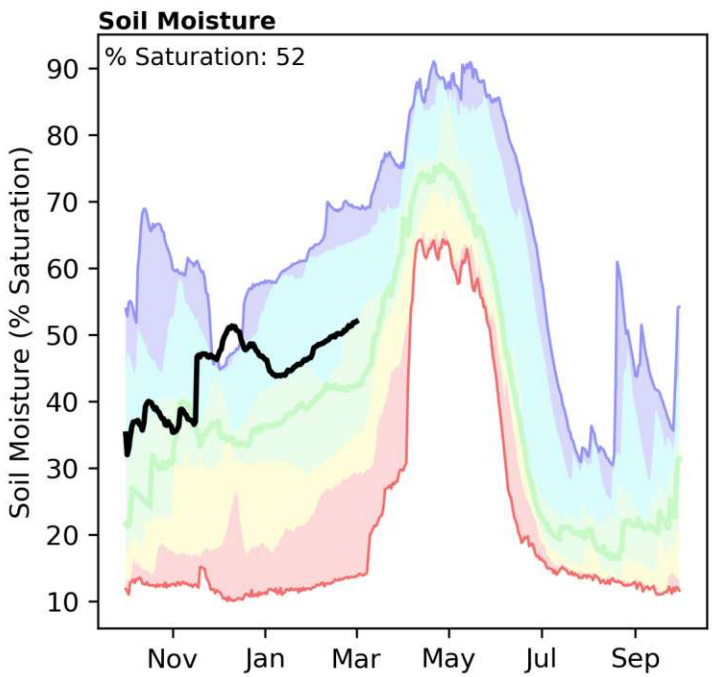
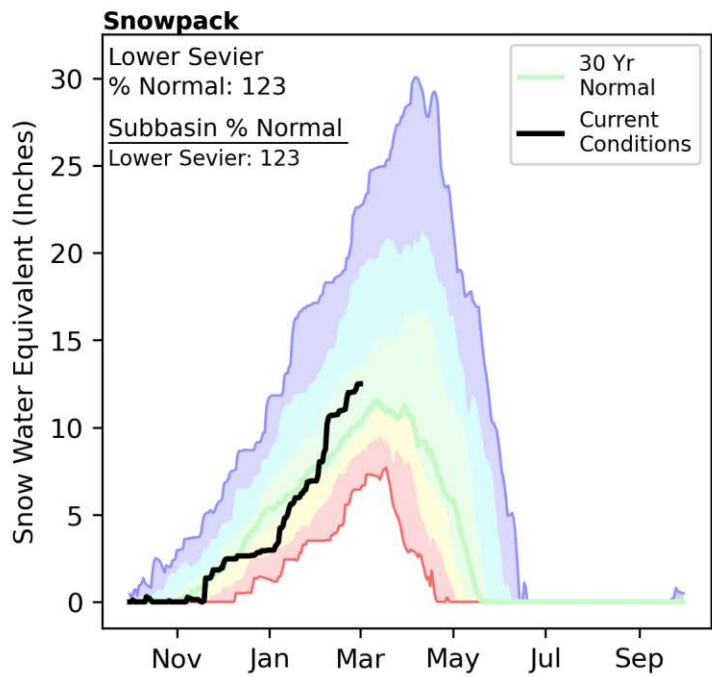
Price San-Rafael



Price-San Rafael

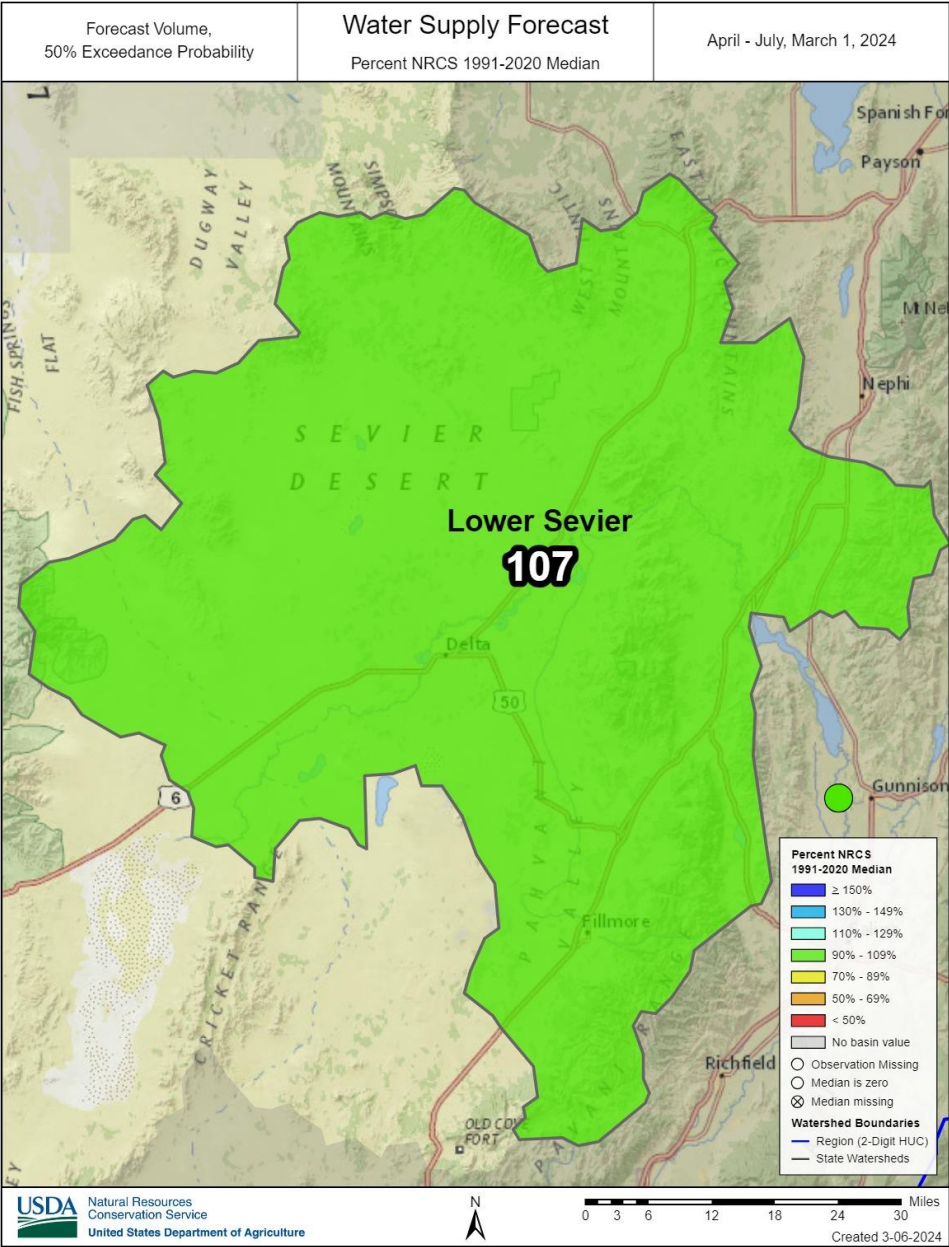
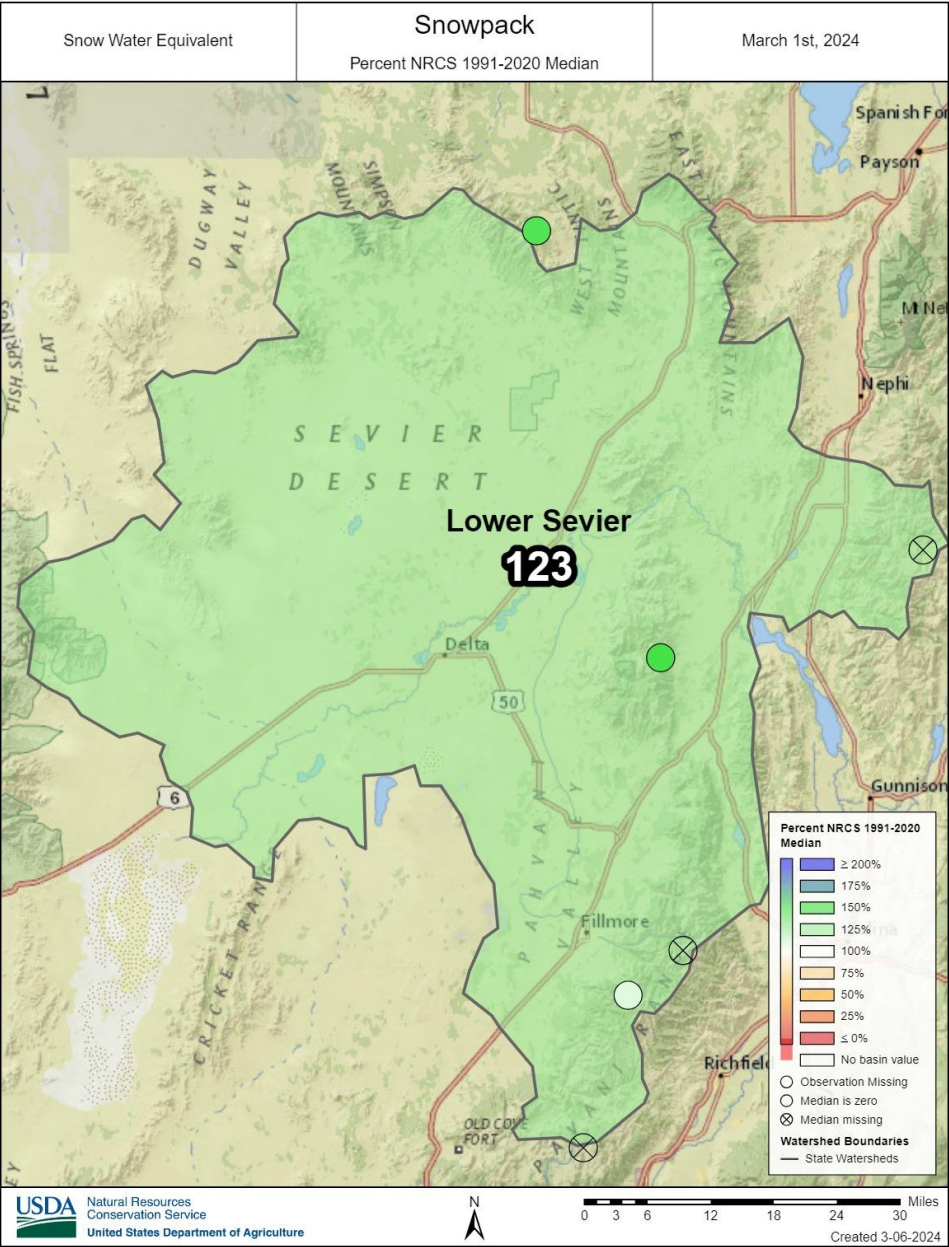


Snowpack in the Lower Sevier River Basin is above normal at 123% of median, compared to 212% at this time last year. Precipitation in February was well above normal at 217%, which brings the seasonal accumulation (October-February) to 105% of median. Soil moisture is at 52% saturation compared to 64% saturation last year. Reservoir storage is 40% of capacity, compared to 20% last year. Forecast streamflow volume (50% exceedence, April-July) for the Sevier River near Gunnison is 107% of normal. The Surface Water Supply Index percentile is 18% for the Lower Sevier.

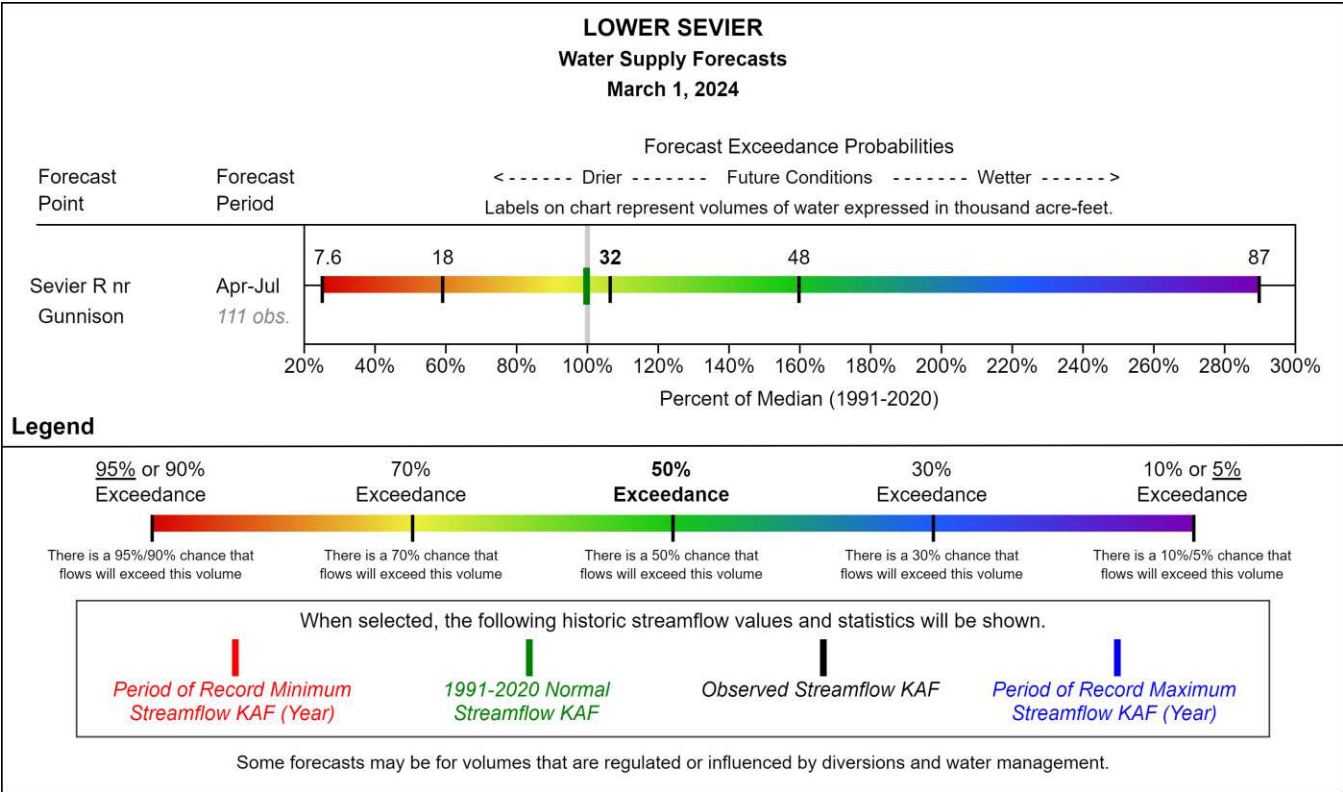


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

Lower Sevier

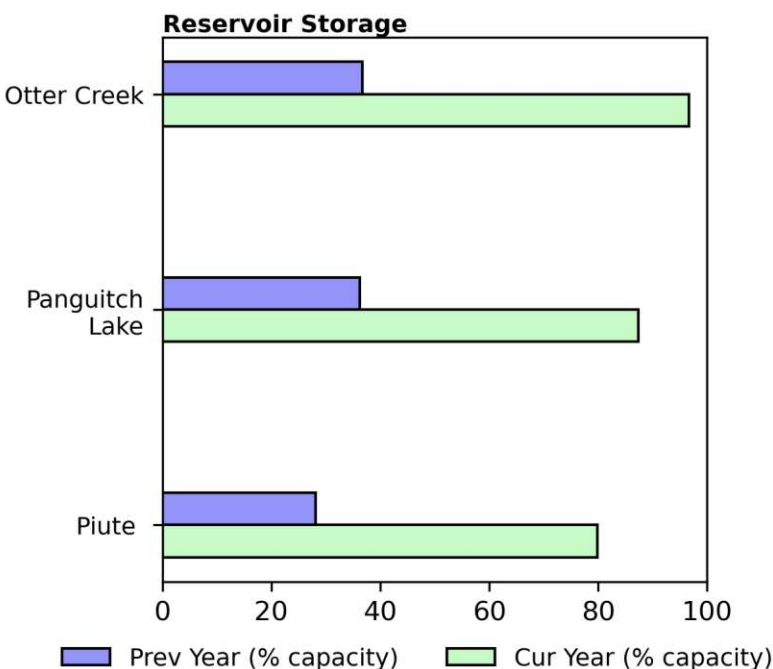
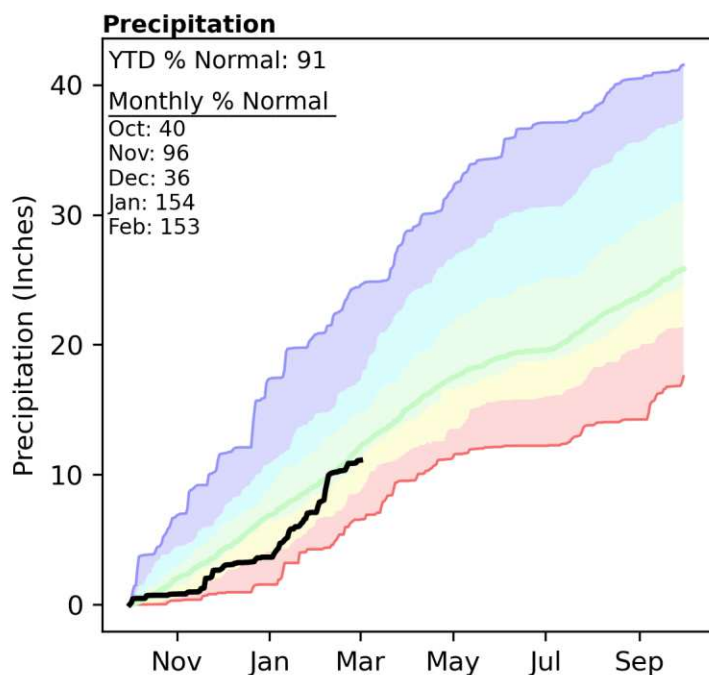
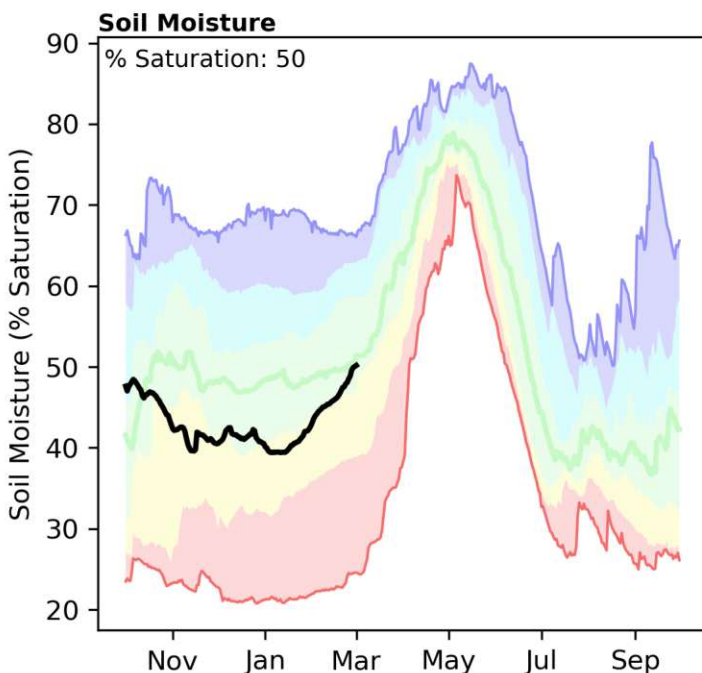
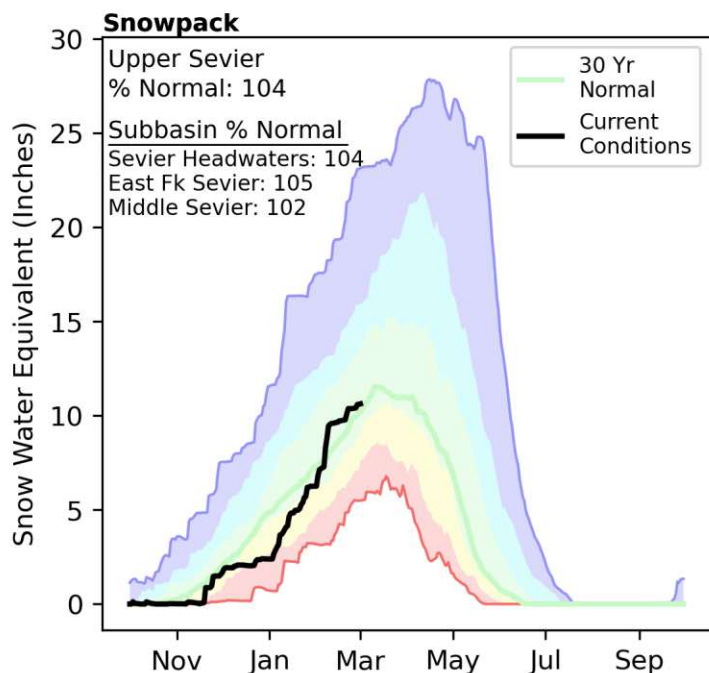


Lower Sevier



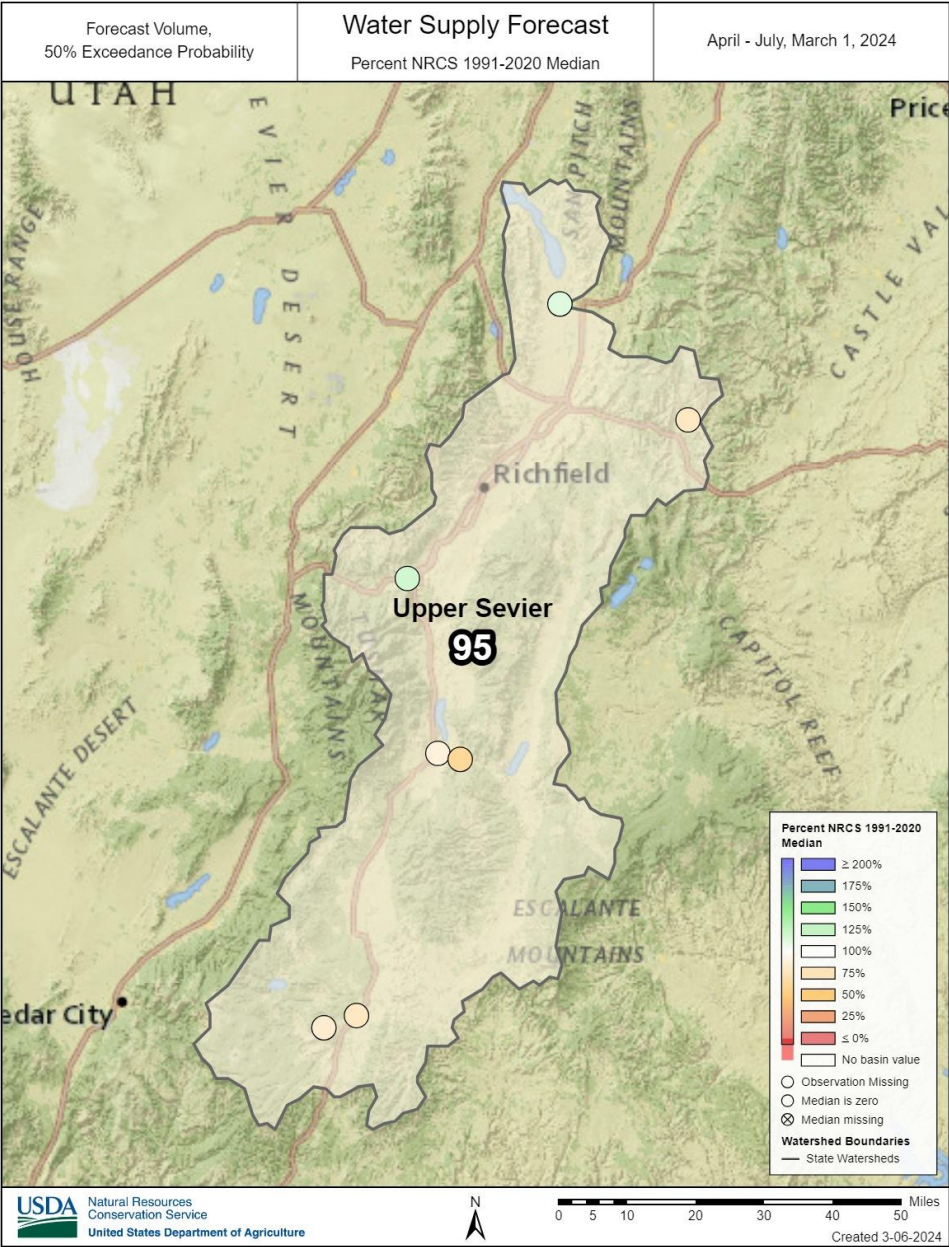
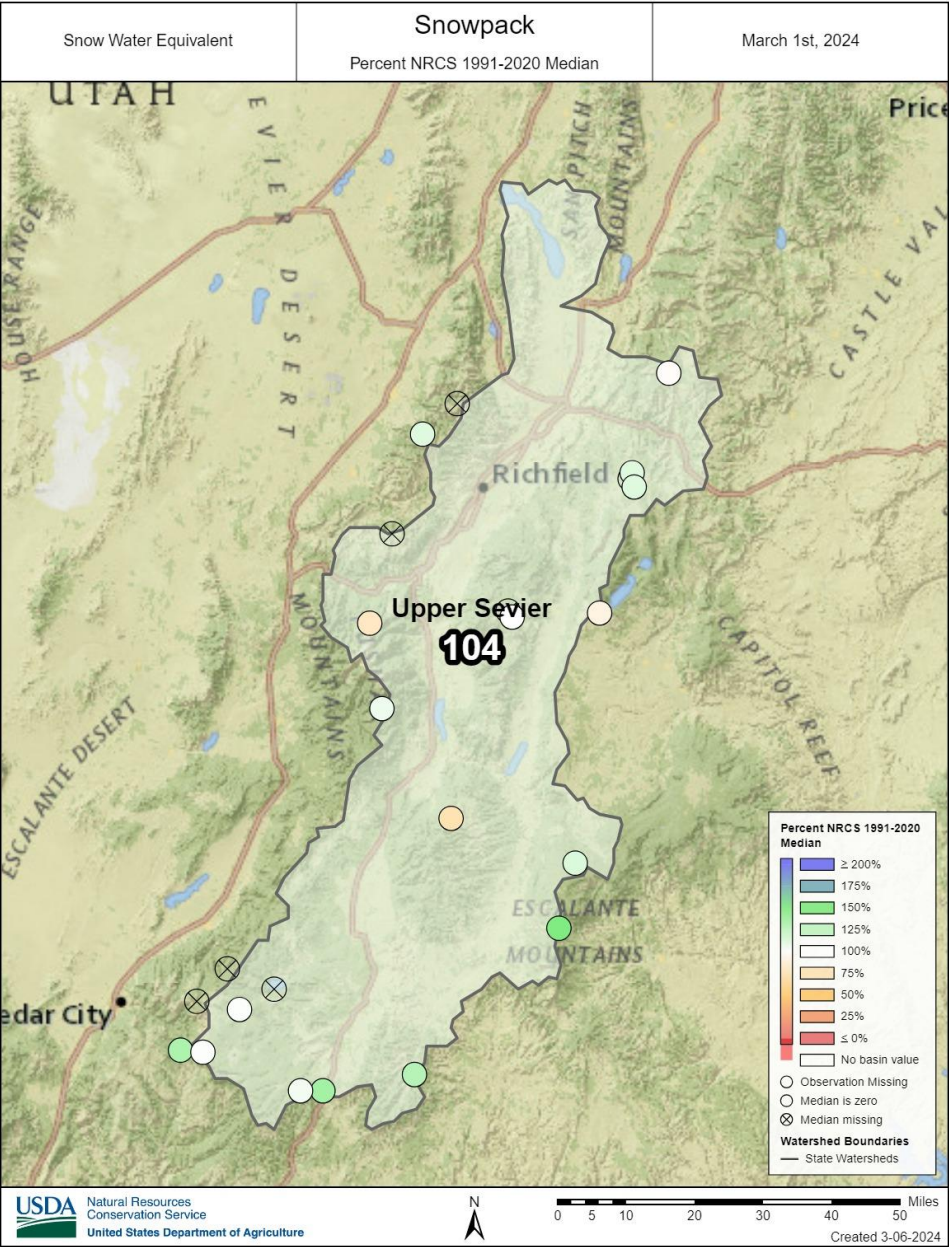
Upper Sevier | March 1, 2024

Snowpack in the Upper Sevier River Basin is about normal at 104% of median, compared to 170% at this time last year. Precipitation in February was well above normal at 153%, which brings the seasonal accumulation (October-February) to 91% of median. Soil moisture is at 50% saturation compared to 60% saturation last year. Reservoir storage is 87% of capacity, compared to 32% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 80% to 110% of normal. The Surface Water Supply Index percentile is 51% for the Upper Sevier.

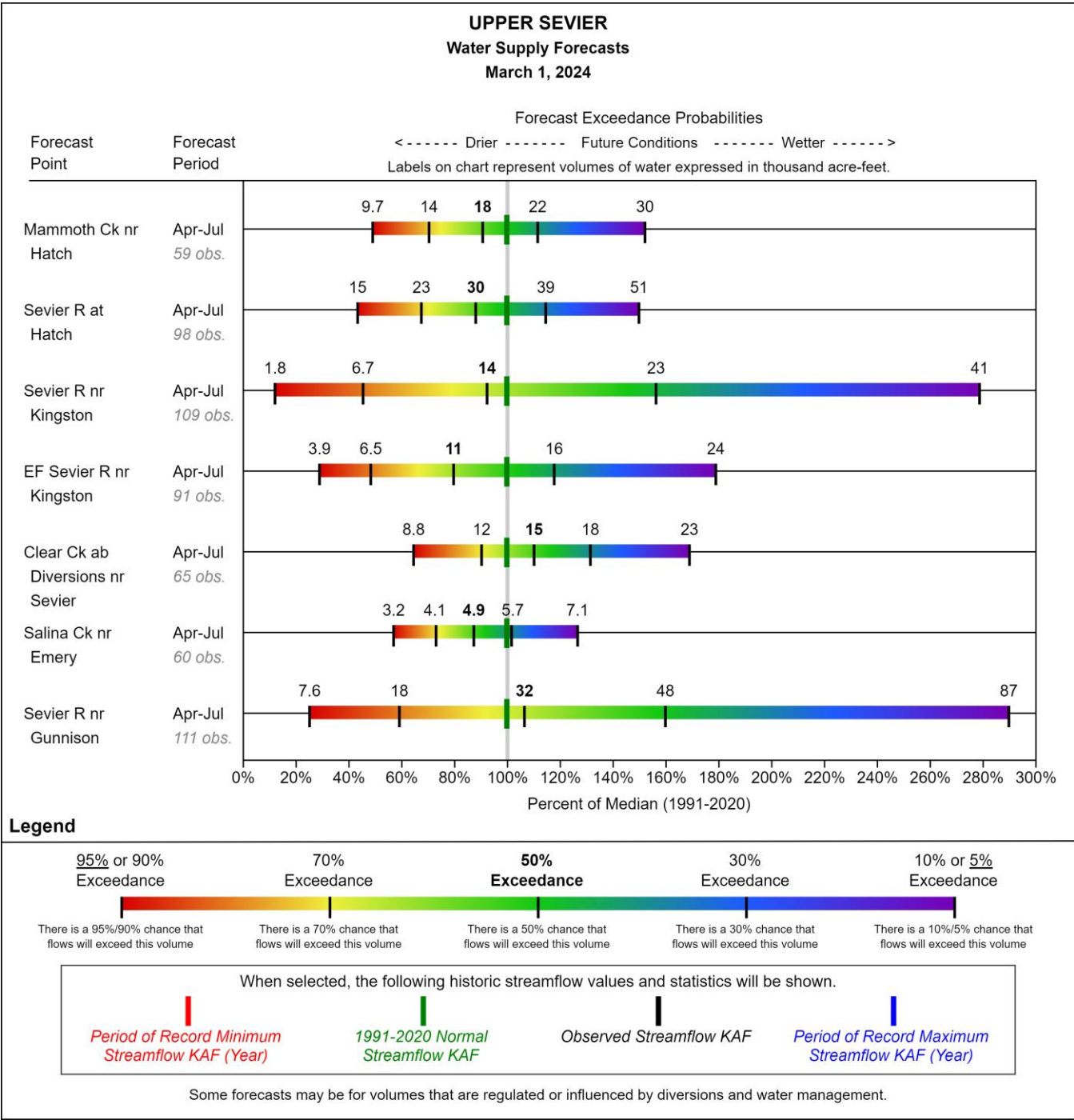


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

Upper Sevier

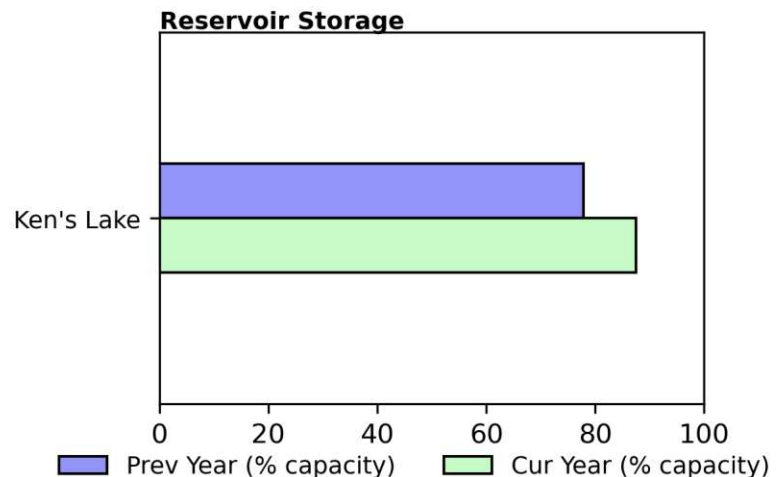
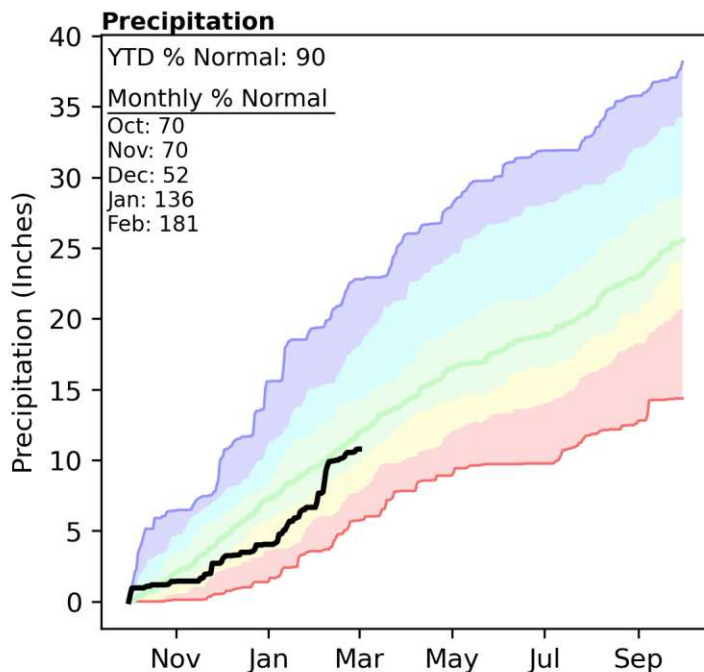
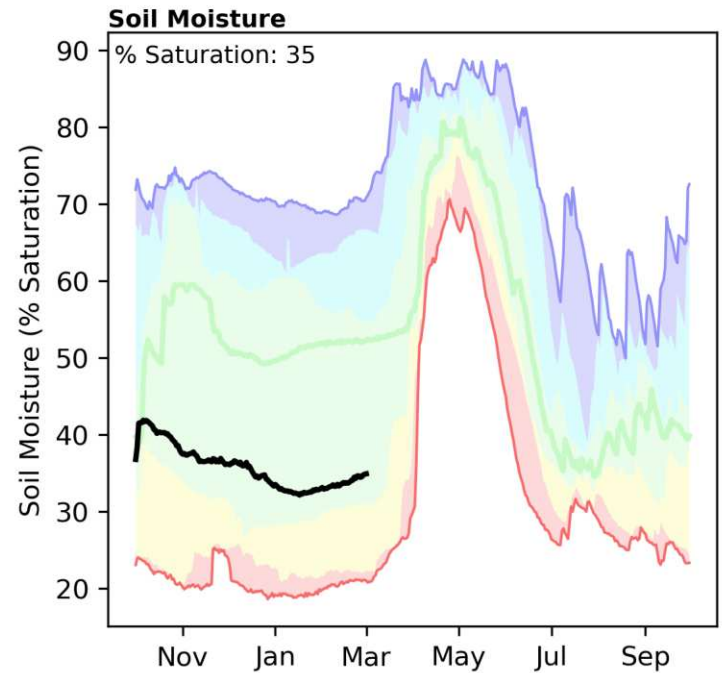
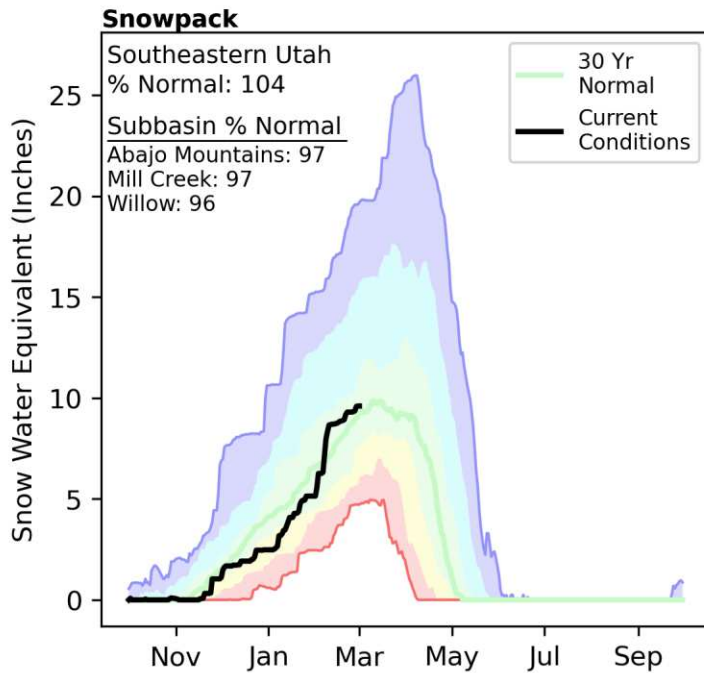


Upper Sevier



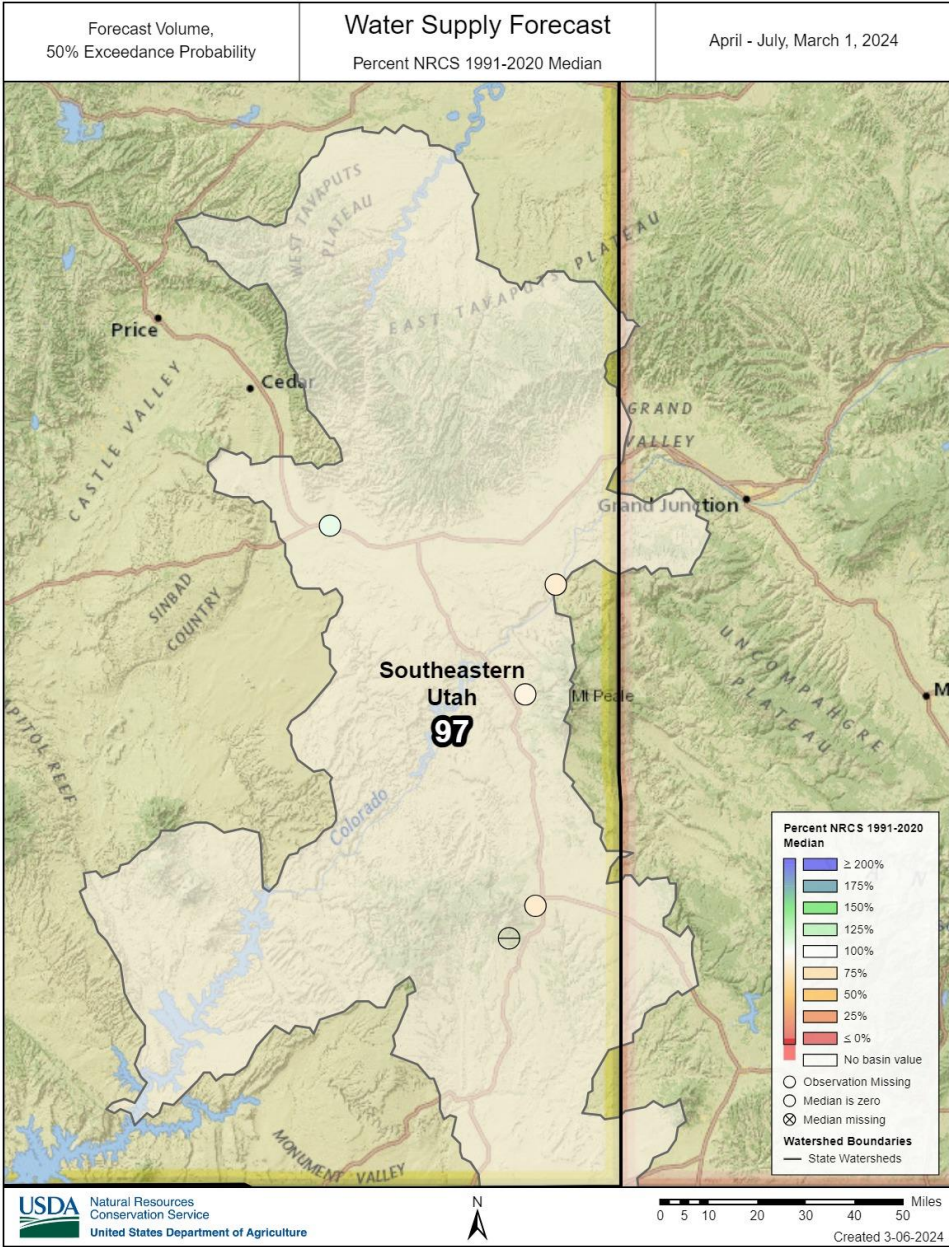
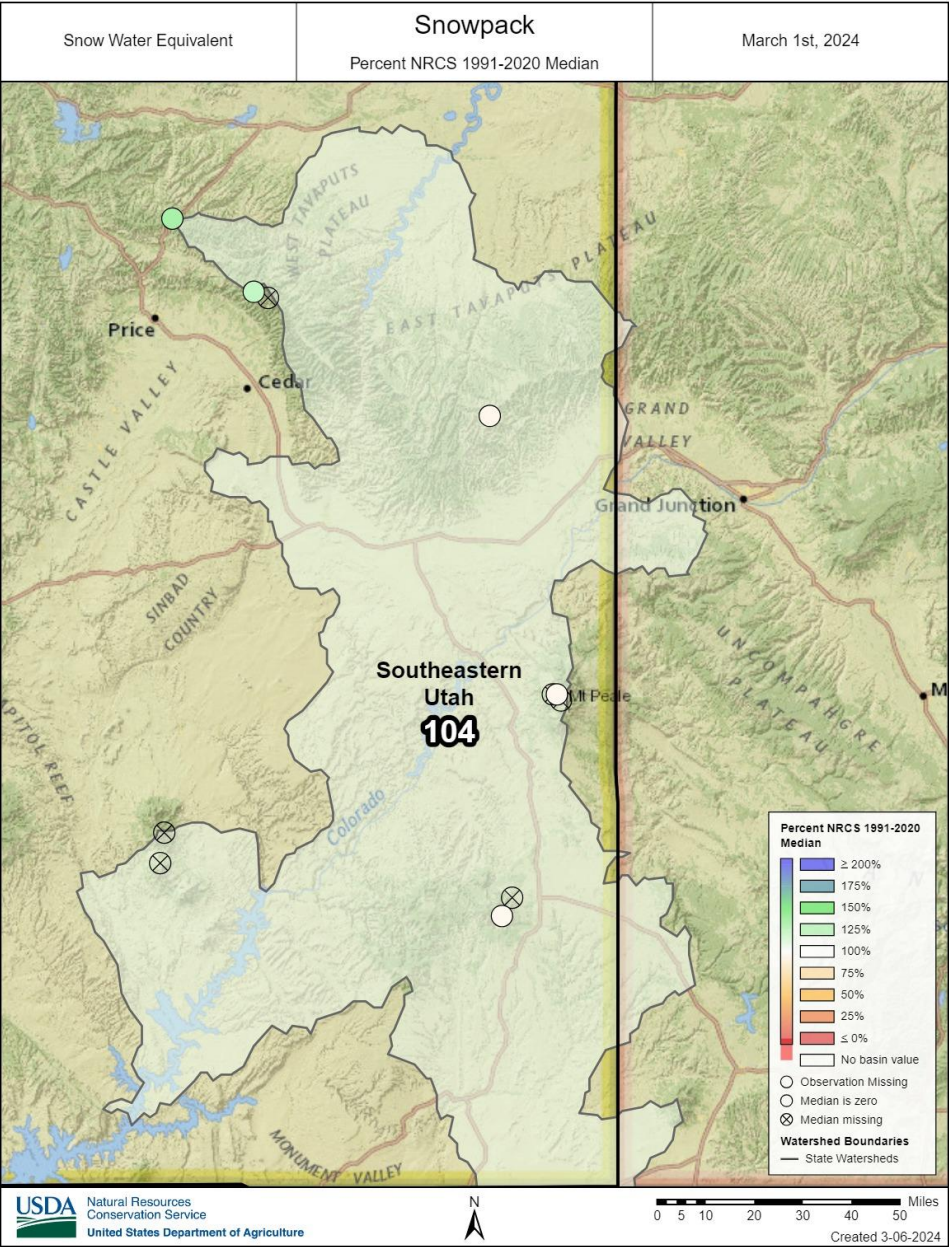
Southeastern Utah | March 1, 2024

Snowpack in Southeastern Utah is about normal at 104% of median, compared to 192% at this time last year. Precipitation in February was well above normal at 181%, which brings the seasonal accumulation (October-February) to 90% of median. Soil moisture is at 35% saturation compared to 52% saturation last year. Reservoir storage is 87% of capacity, compared to 77% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 90% to 105% of normal. The Surface Water Supply Index percentile is 55% for Moab.

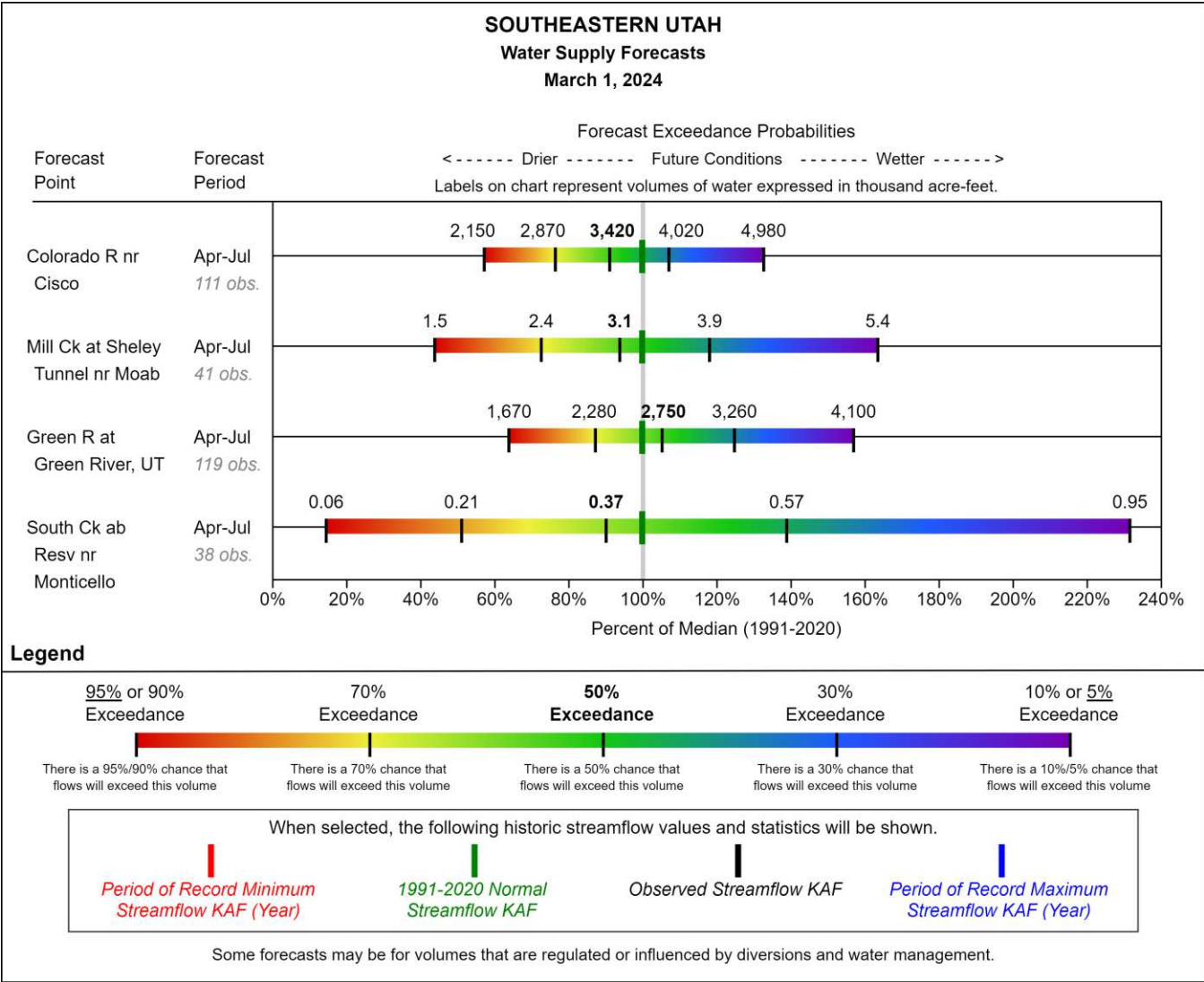


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

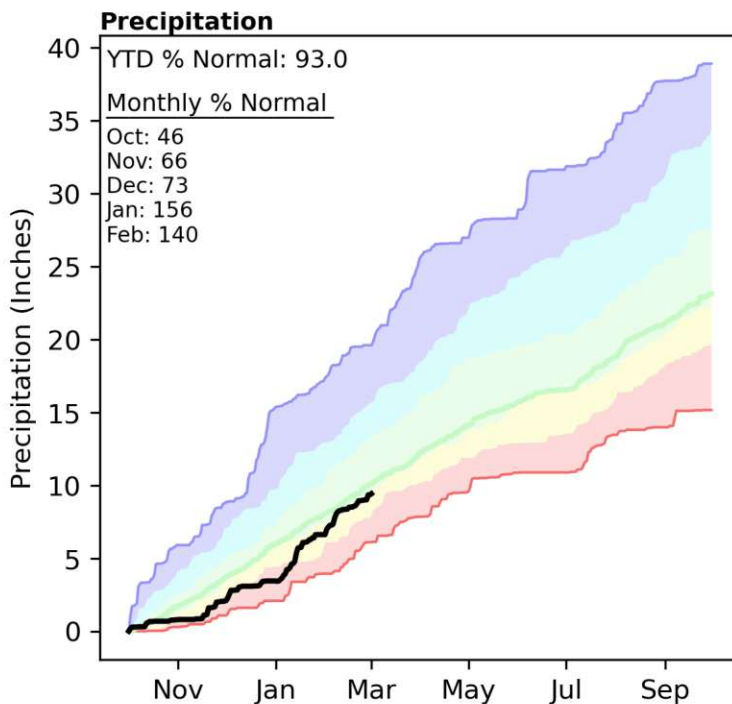
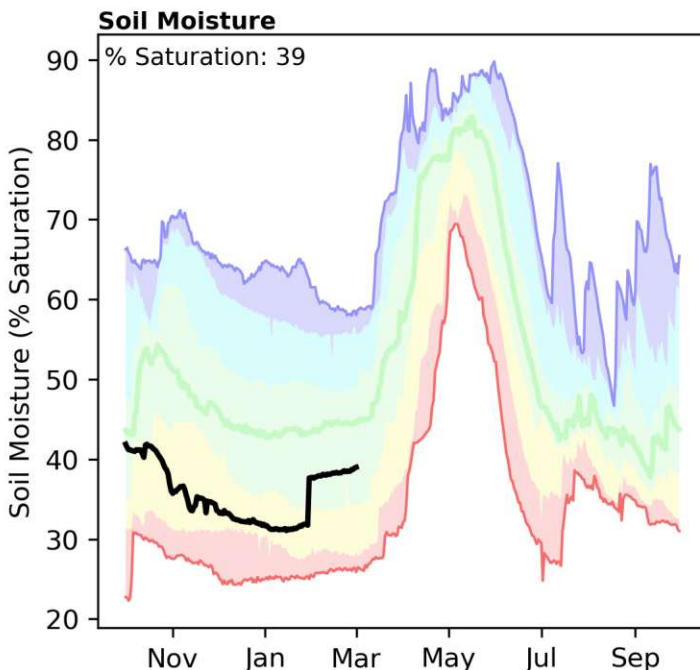
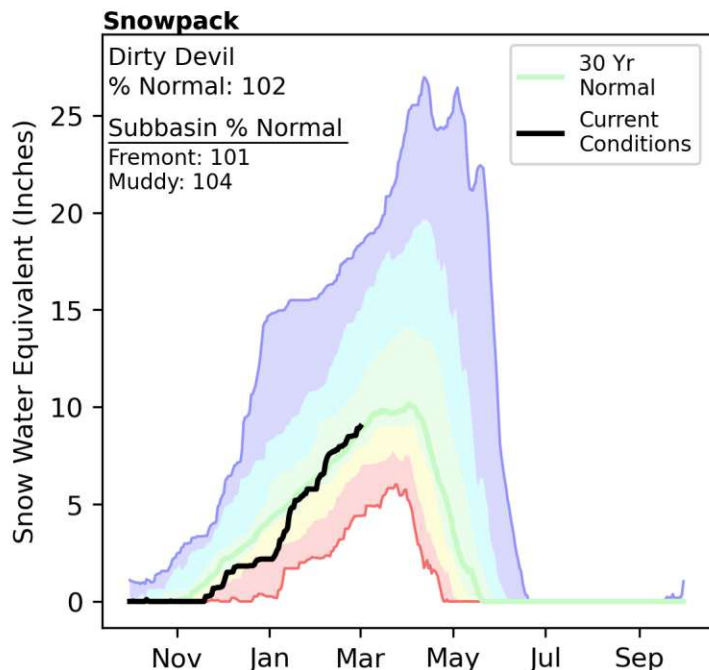
Southeastern Utah



Southeastern Utah

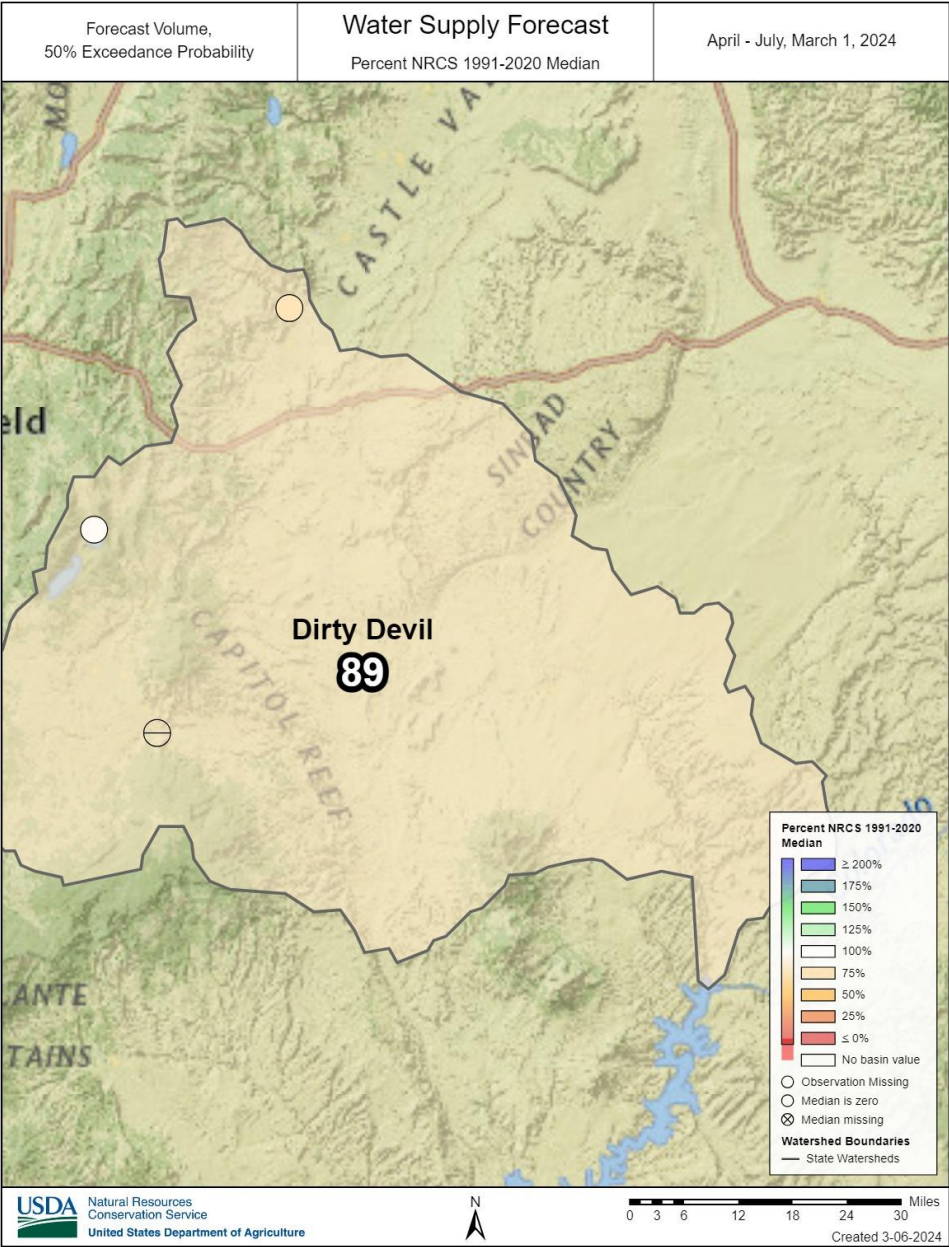
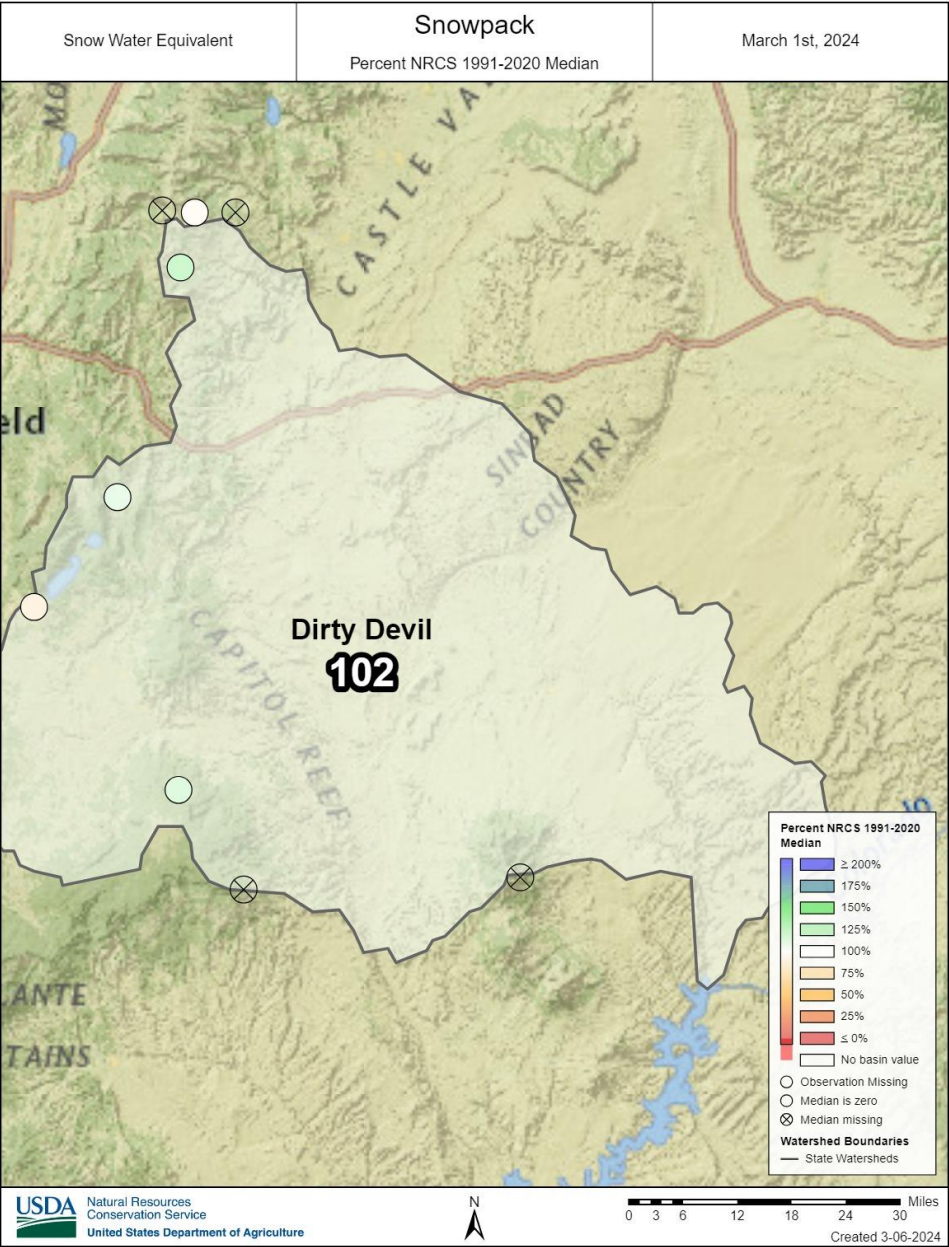


Snowpack in the Dirty Devil River Basin is about normal at 102% of median, compared to 150% at this time last year. Precipitation in February was well above normal at 140%, which brings the seasonal accumulation (October-February) to 93% of median. Soil moisture is at 39% saturation compared to 41% saturation last year. Forecast streamflow volumes (50% exceedence, April-July) range from 86% to 98% of normal.

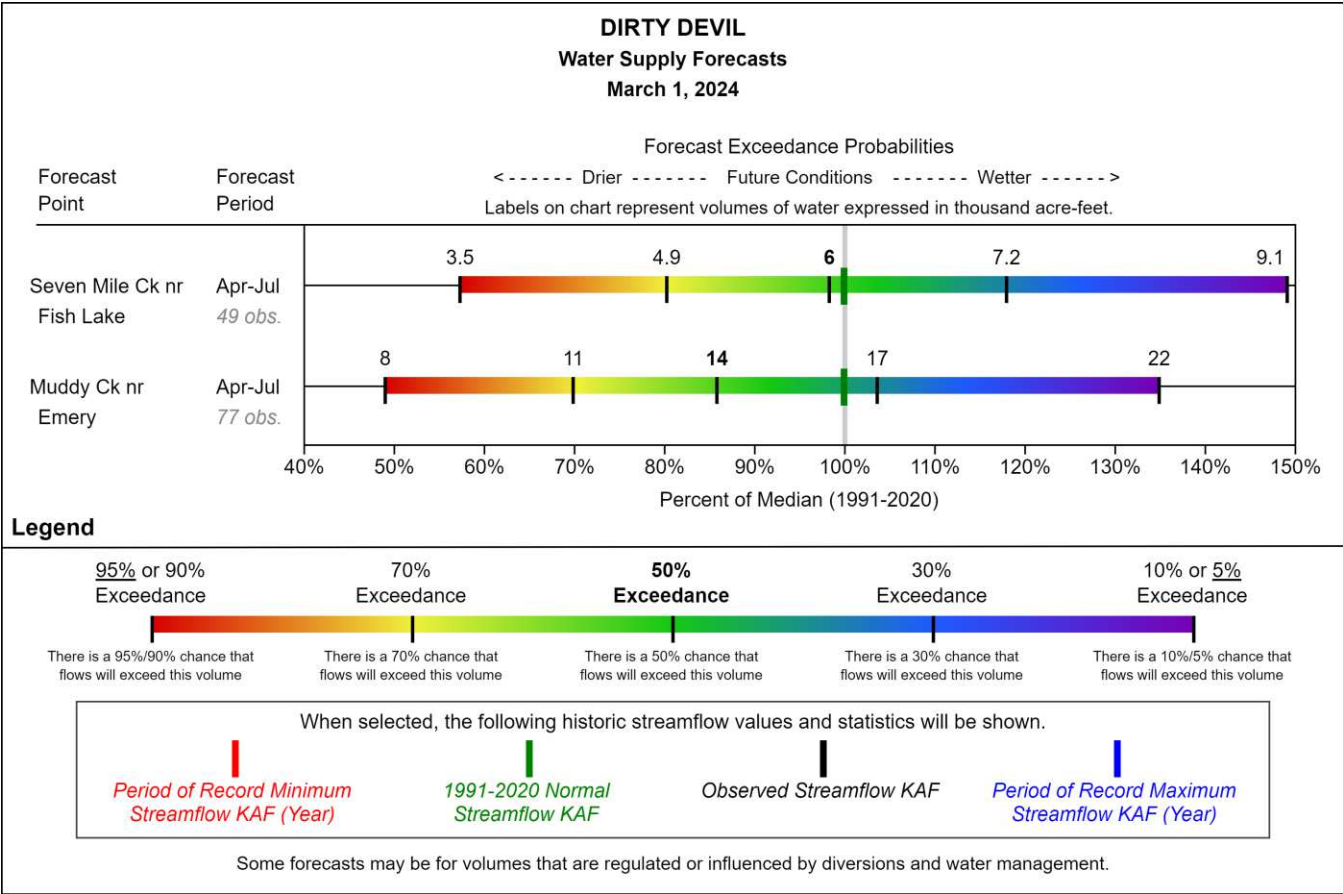


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

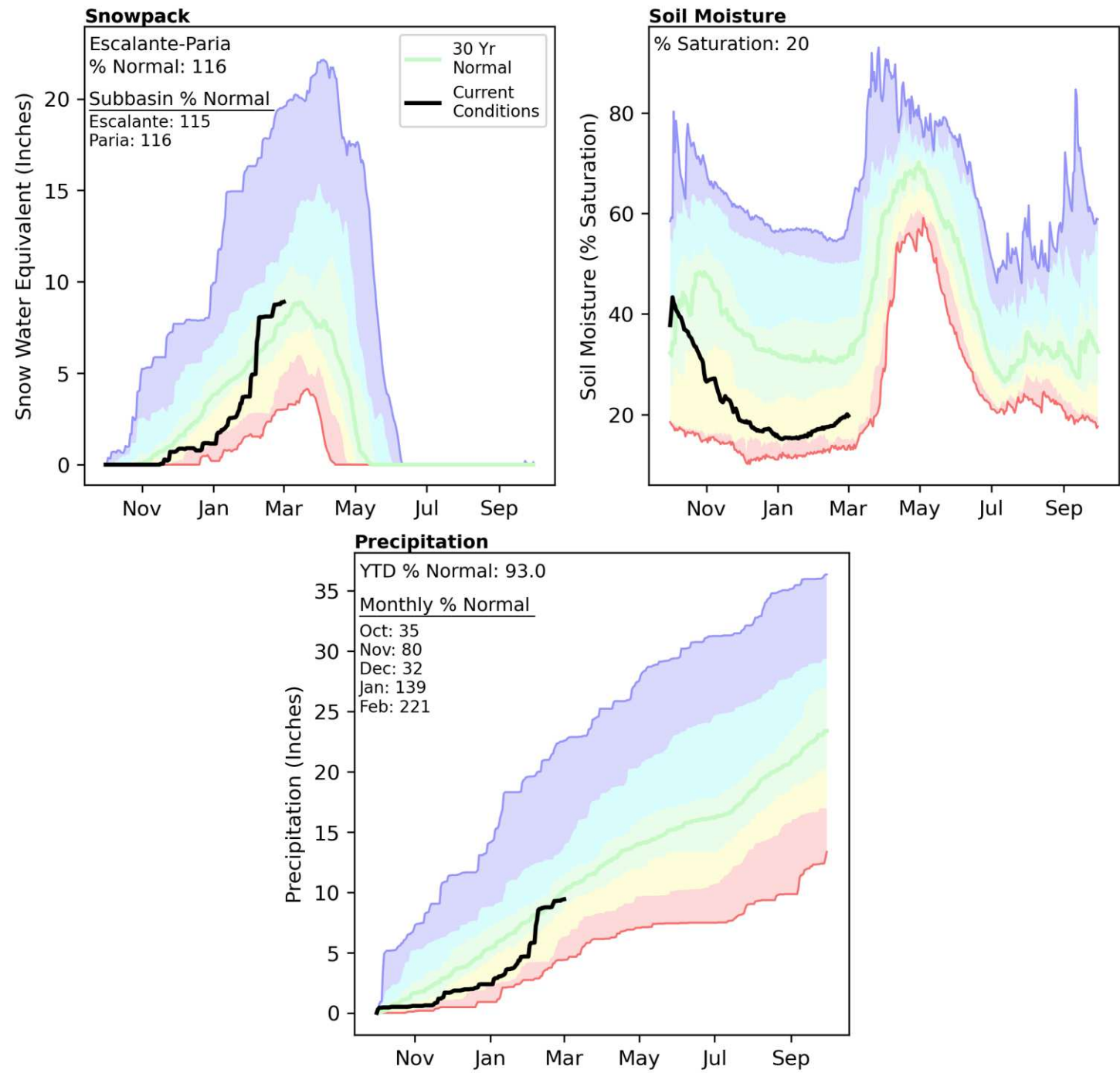
Dirty Devil



Dirty Devil

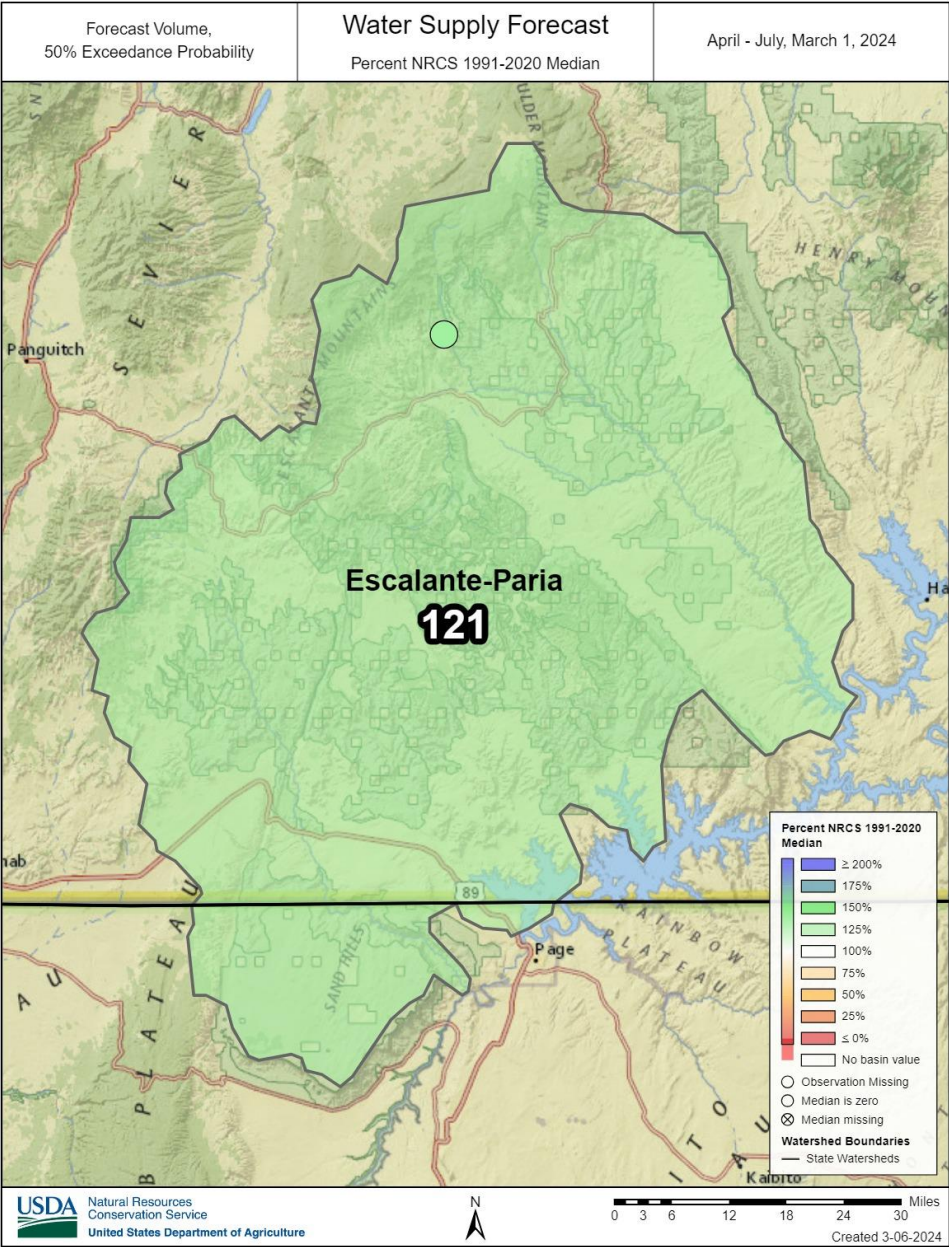
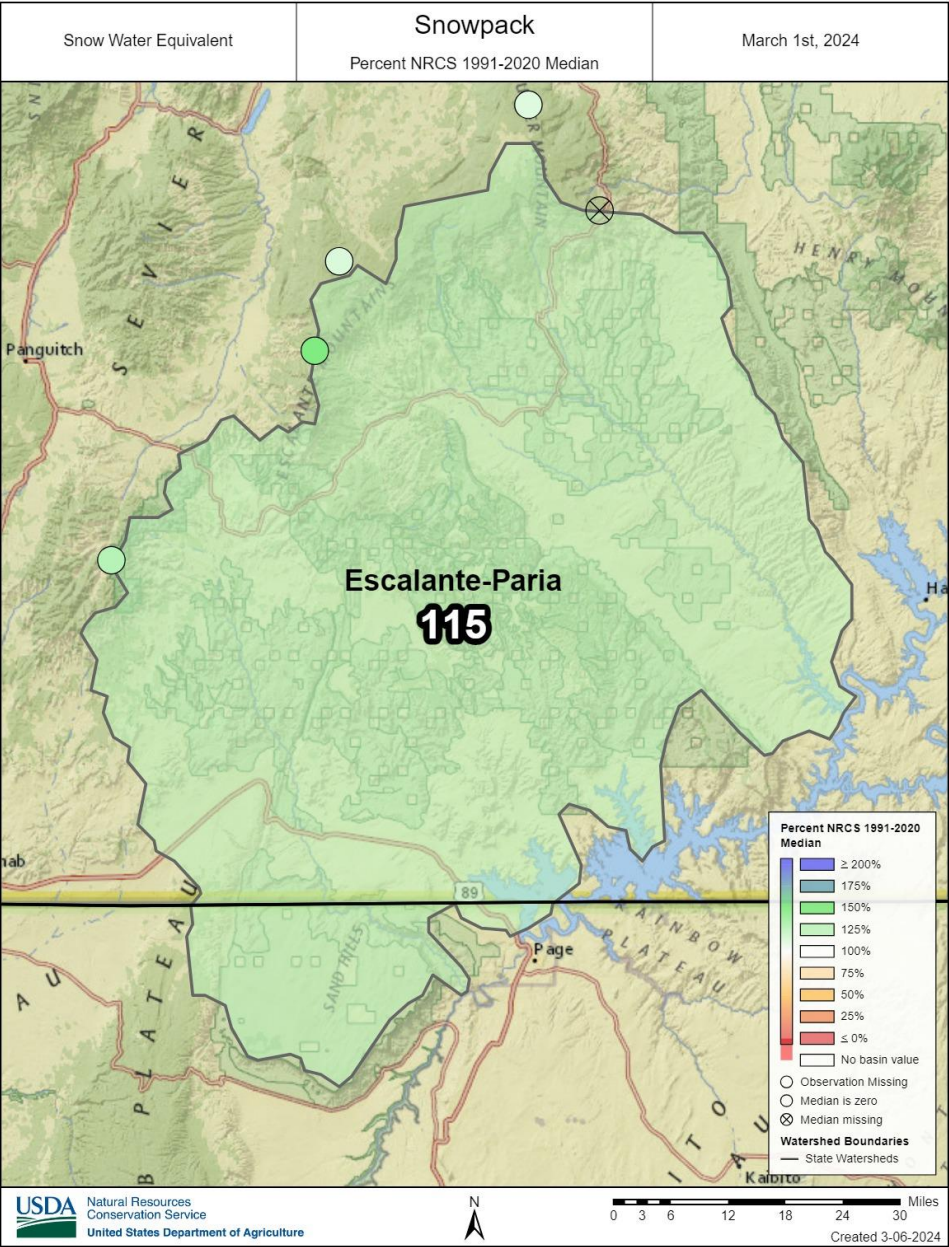


Snowpack in the Escalante and Paria River Basins is above normal at 116% of median, compared to 168% at this time last year. Precipitation in February was well above normal at 221%, which brings the seasonal accumulation (October-February) to 93% of median. Soil moisture is at 20% saturation compared to 39% saturation last year. The forecast streamflow volume (50% exceedence, April-July) for Pine Creek is 121% of normal.

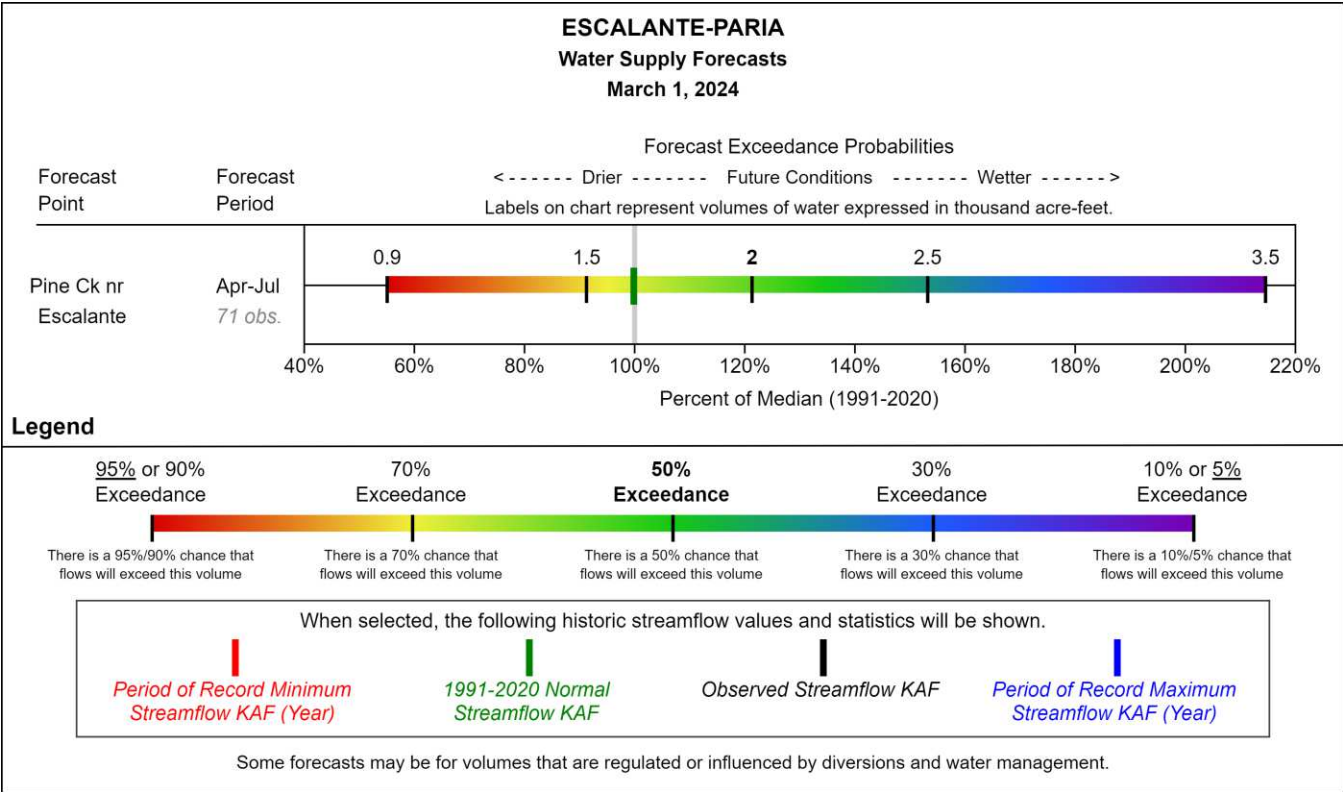


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

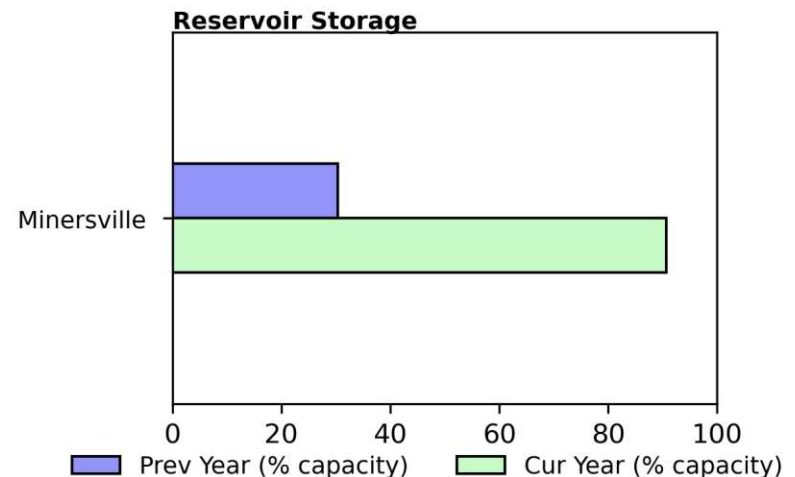
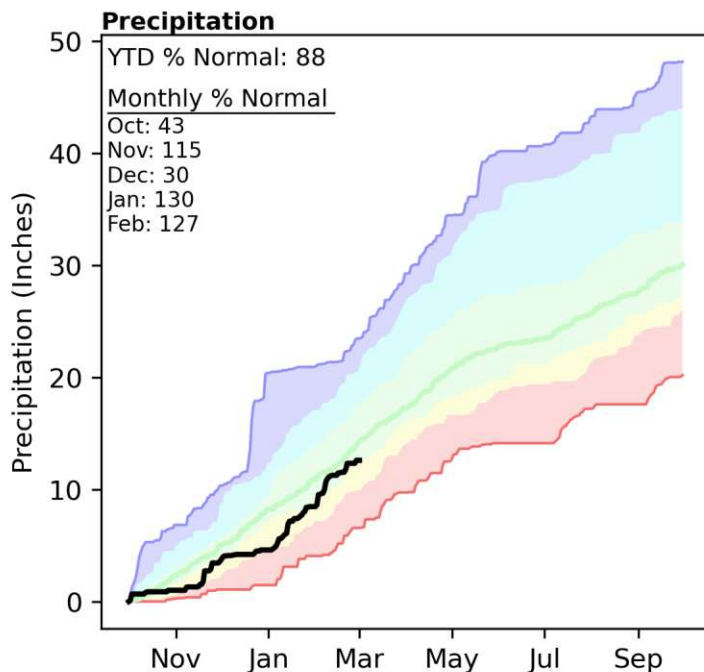
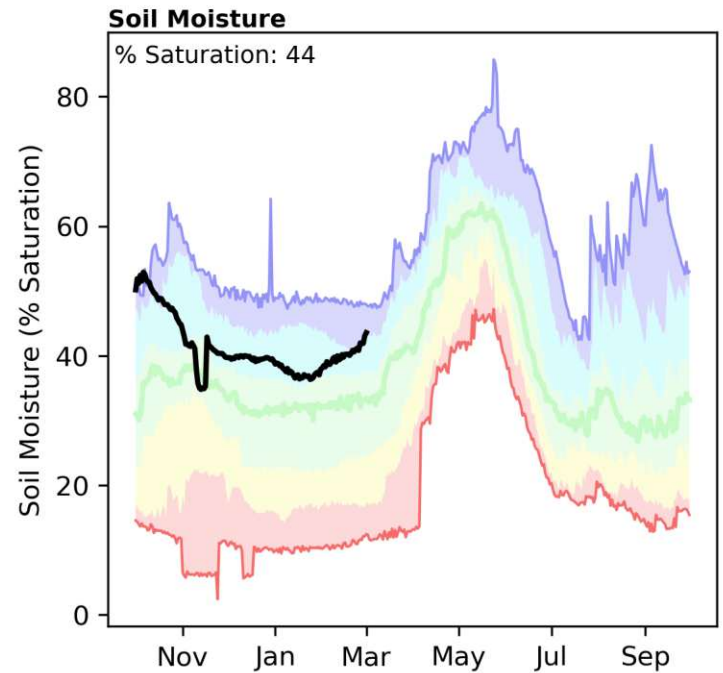
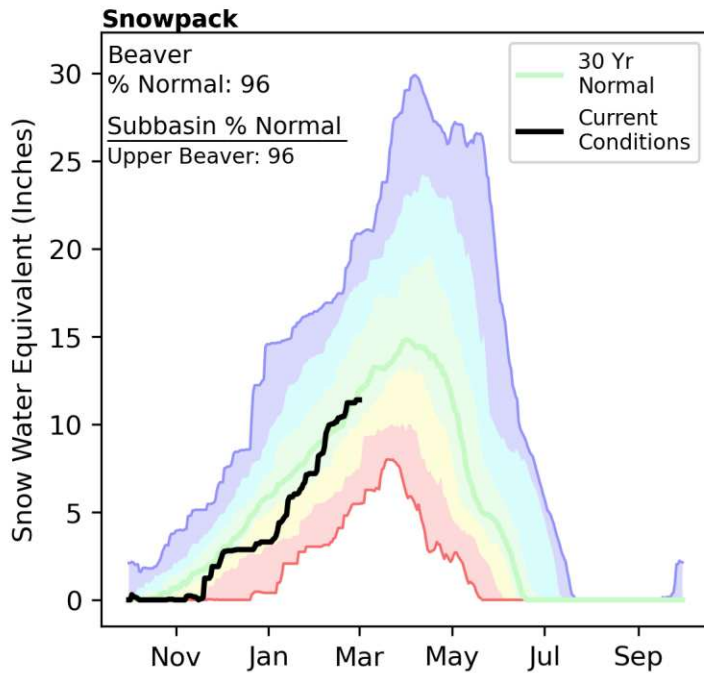
Escalante-Paria



Escalante-Paria

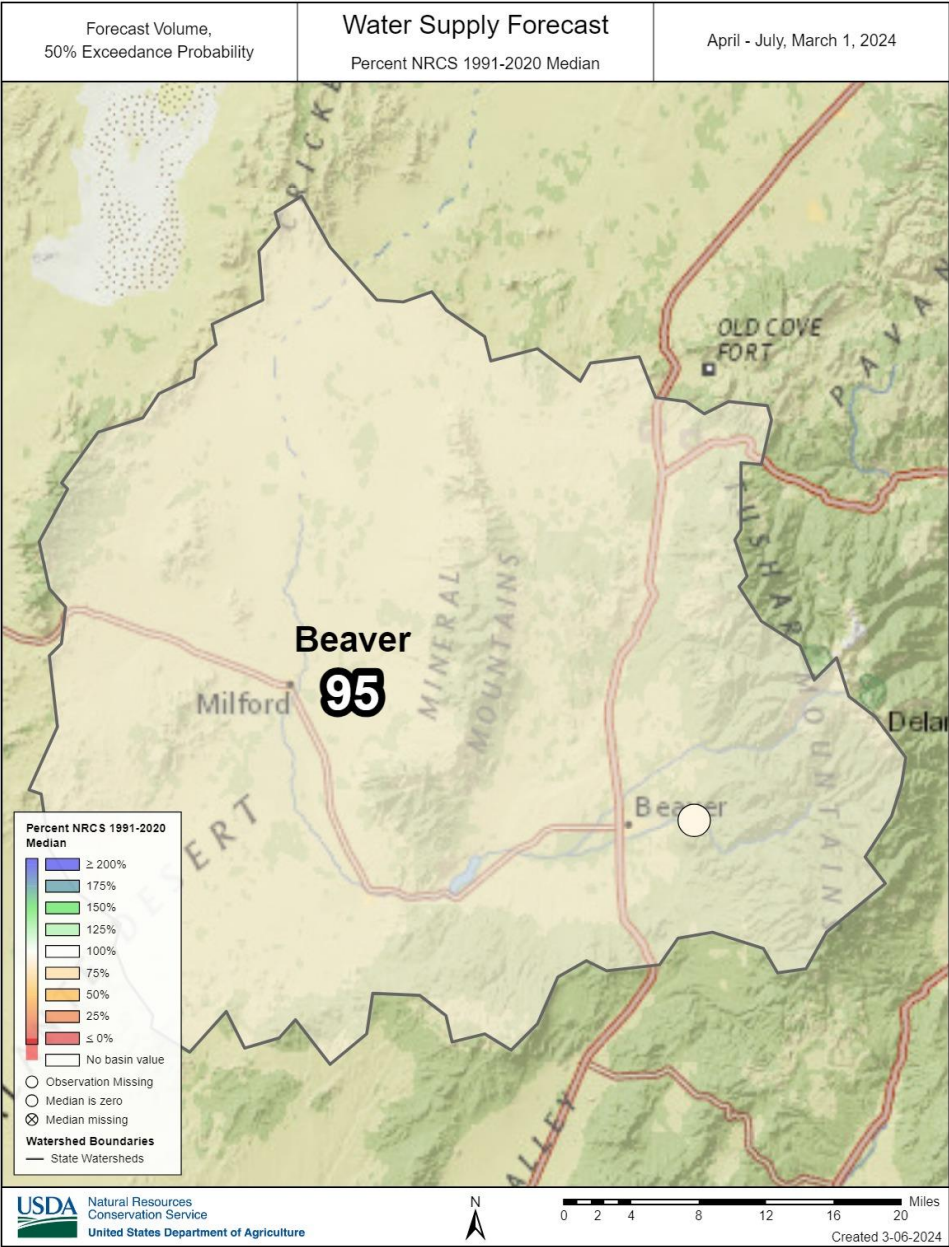
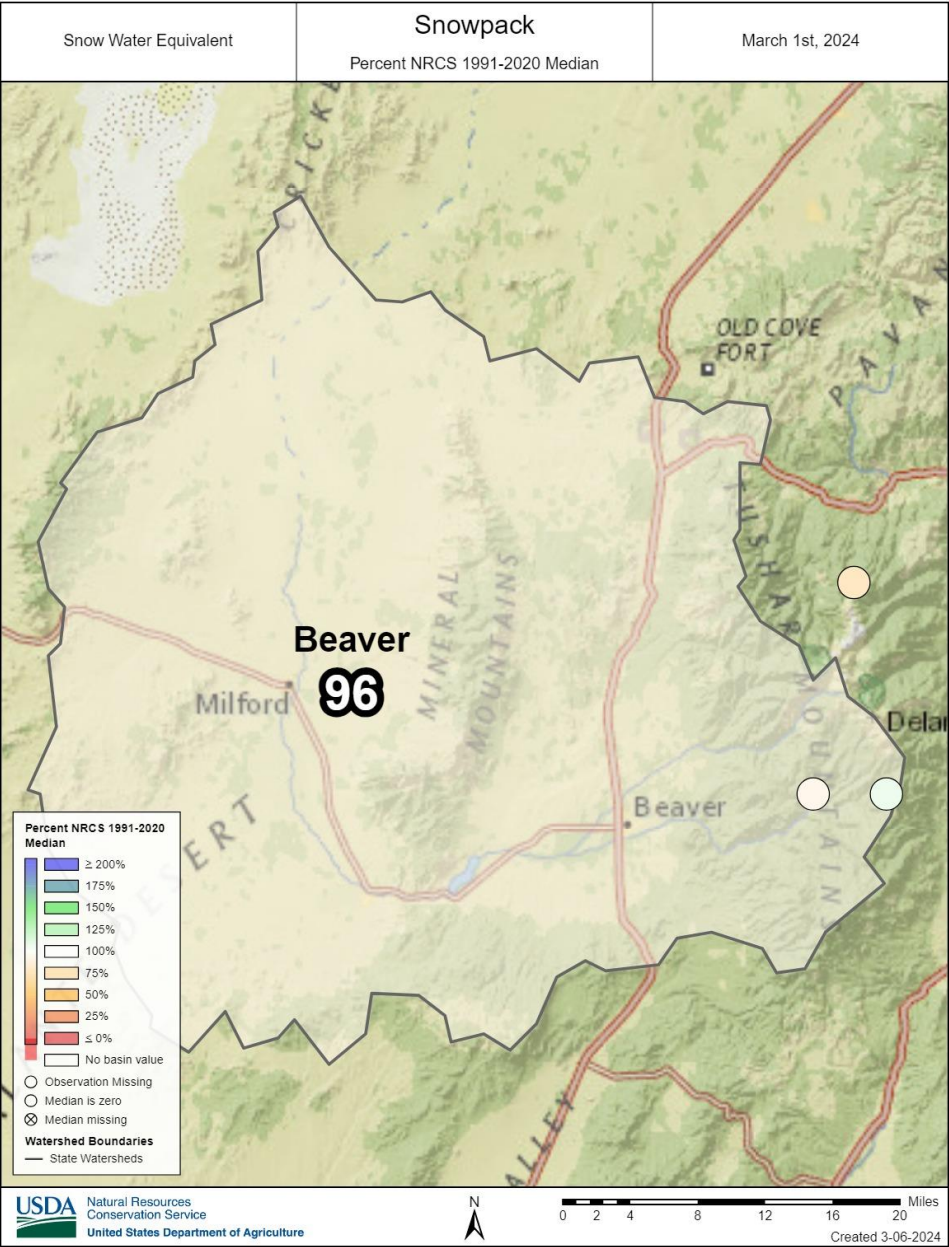


Snowpack in the Beaver River Basin is about normal at 96% of median, compared to 166% at this time last year. Precipitation in February was above normal at 127%, which brings the seasonal accumulation (October-February) to 88% of median. Soil moisture is at 44% saturation compared to 48% saturation last year. Reservoir storage is 90% of capacity, compared to 30% last year. The forecast streamflow volume (50% exceedence, April-July) for the Beaver River is 95% of normal. The Surface Water Supply Index percentile is 53% for the Beaver River.



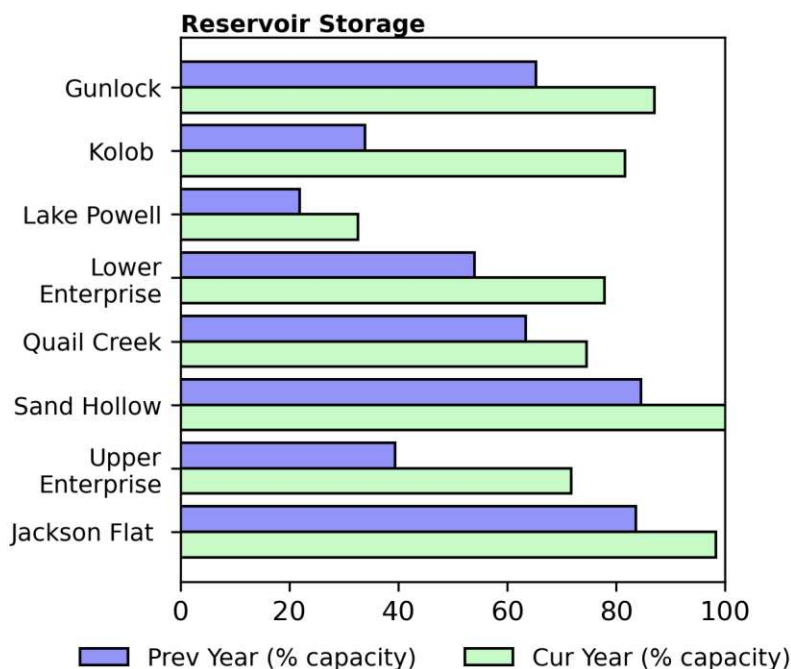
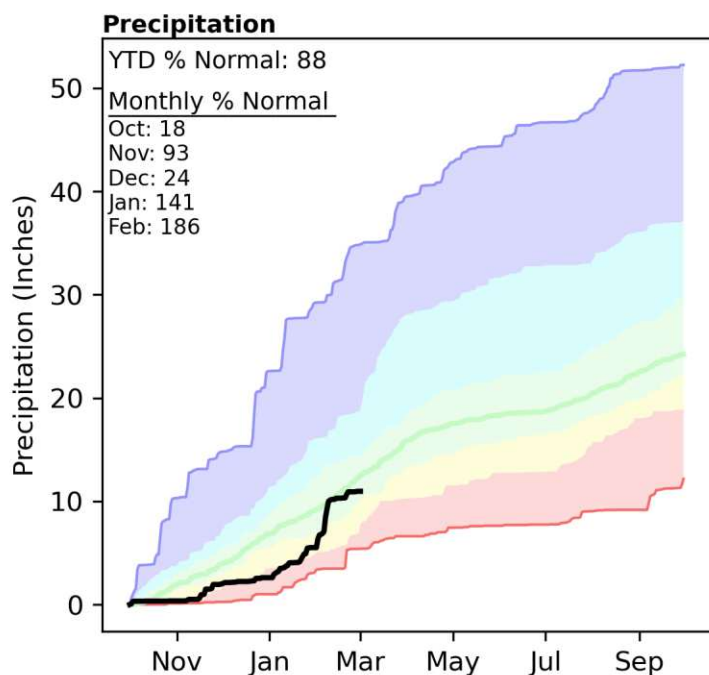
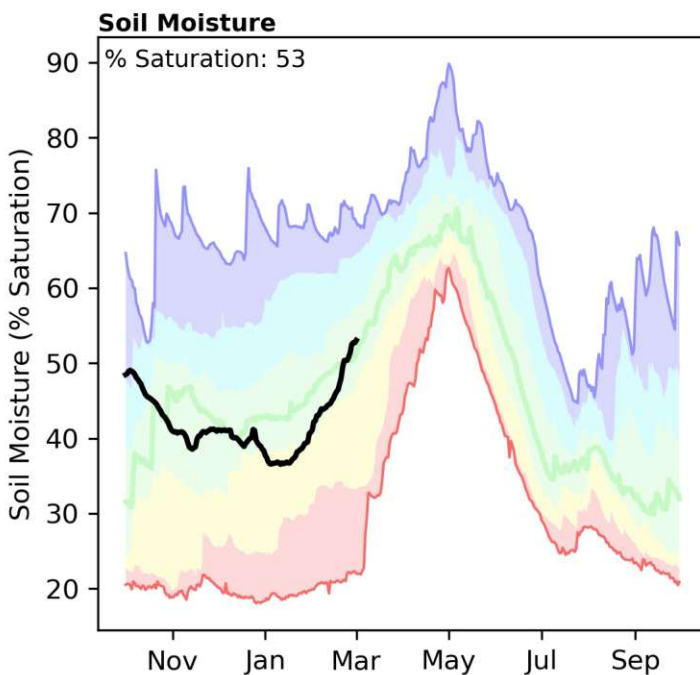
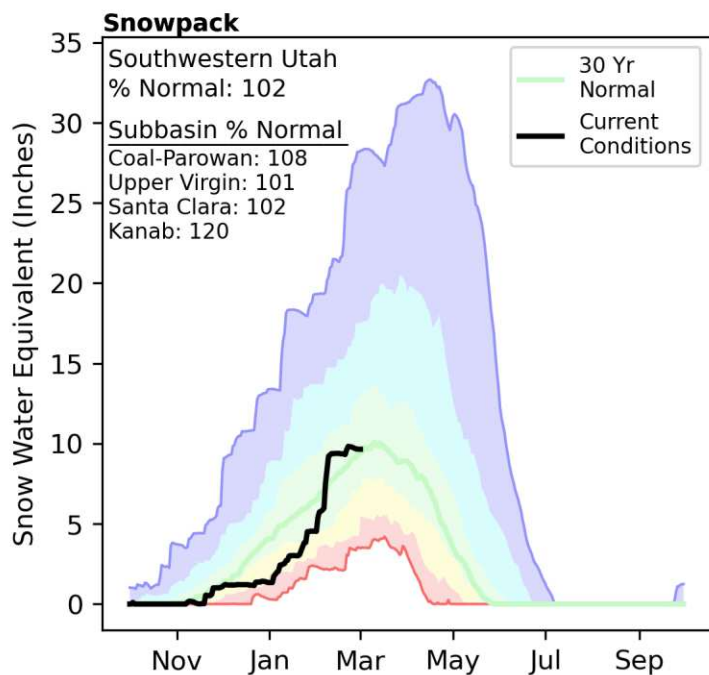
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

Beaver



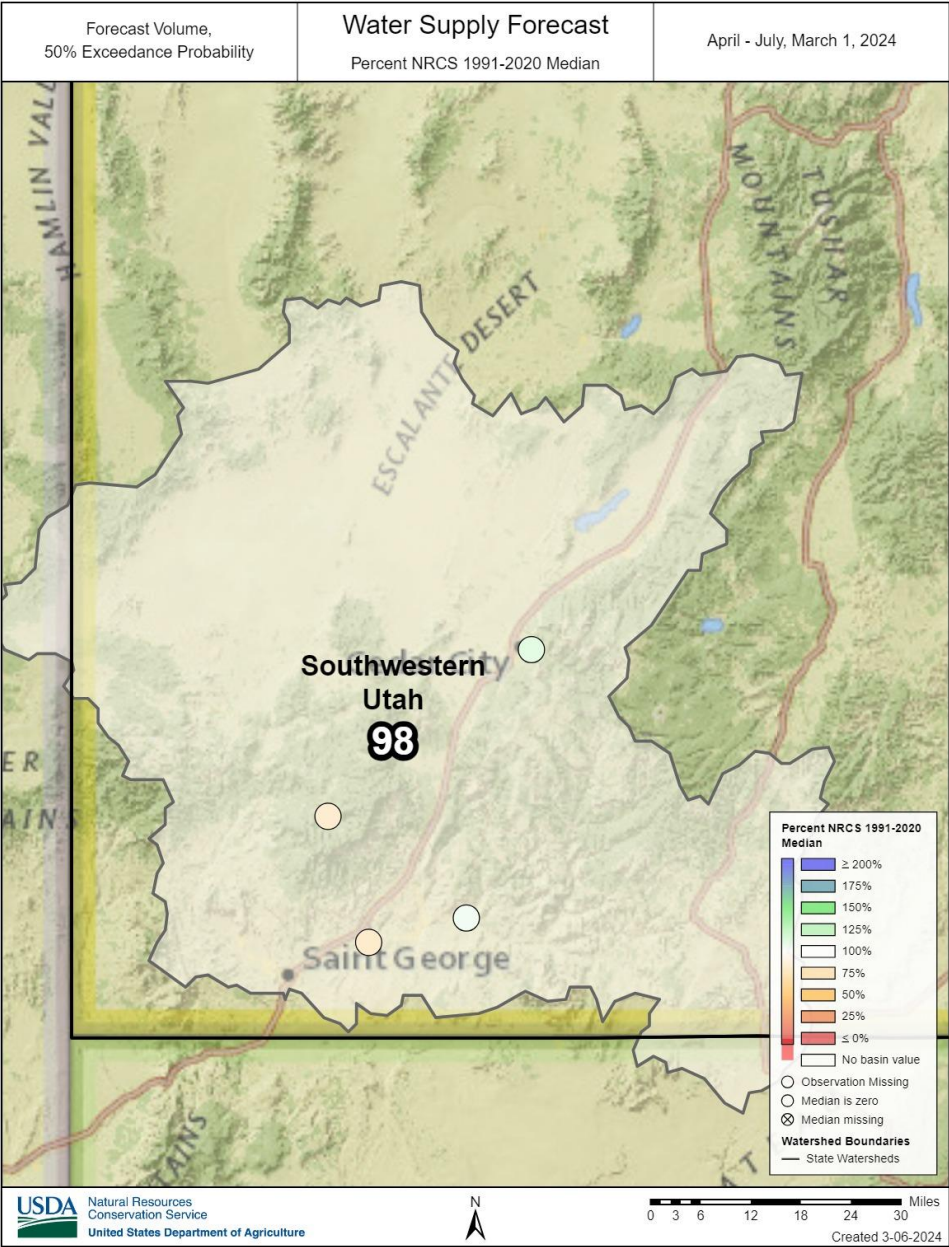
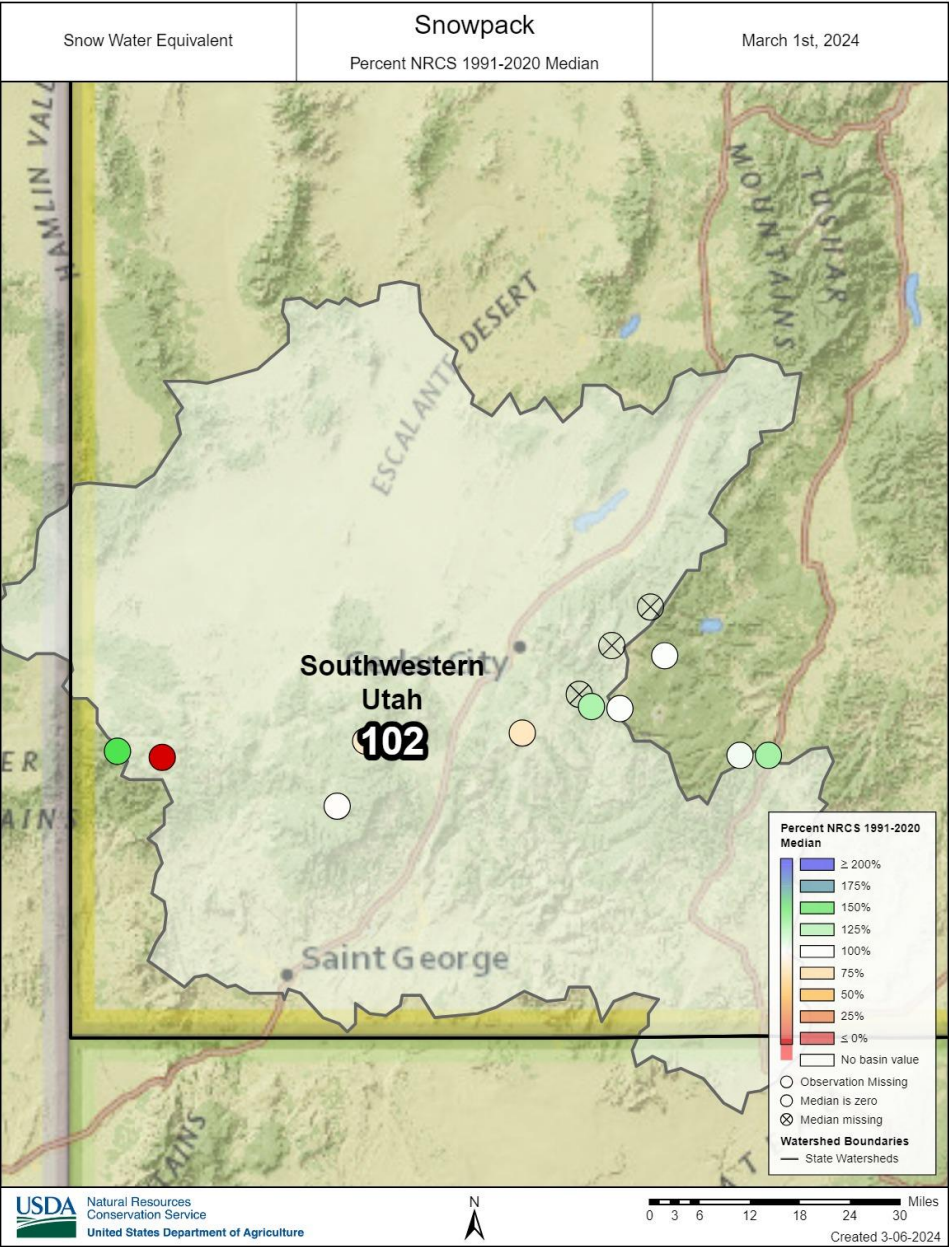
Southwestern Utah | March 1, 2024

Snowpack in Southwestern Utah is about normal at 102% of median, compared to 208% at this time last year. Precipitation in February was well above normal at 186%, which brings the seasonal accumulation (October-February) to 88% of median. Soil moisture is at 53% saturation compared to 62% saturation last year. Reservoir storage is 32% of capacity, compared to 22% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 90% to 106% of normal. The Surface Water Supply Index percentile is 48% for the Virgin River.



Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: [30 year normal calculation description](#)

Southwestern Utah





March 1, 2024 | Utah Reservoir Summary

Watershed/Region	Current Storage (Basinwide KAF)	Reservoir Capacity (Basinwide KAF)	Last Yr % Capacity (Basinwide)	This Yr % Capacity (Basinwide)
Utah (Statewide)	4511	5469	51	82
Utah (Statewide) Incl. Flaming G. & Lk. Powell	15553	33540	31	46
Bear	952	1389	32	68
Weber-Ogden	454	547	52	83
Northeastern Uintas	3185	3852	64	82
Tooele Valley	3	4	42	70
Duchesne	1243	1379	74	90
Provo	1283	1334	57	96
San Pitch	11	20	5	57
Price	130	158	39	82
Upper Sevier	223	382	25	58
Southeast UT	2	2	77	87
Beaver	21	23	30	90
Southwest Utah	106	122	69	87

Red (green) shading indicates >5% decrease (increase) in % capacity from this time last year.

Reservoir	Current Storage (KAF)	Reservoir Capacity (KAF)	Last Yr % Capacity	This Yr % Capacity
Bear Lake	879	1302	31	67
Big Sand Wash Reservoir	25	25	95	98
Causey Reservoir	4	7	62	67
Cleveland Lake	3	5	61	72
Currant Creek Reservoir	14	15	95	95
Deer Creek Reservoir	144	149	60	96
East Canyon Reservoir	46	49	61	93
Echo Reservoir	54	73	68	74
Flaming Gorge Reservoir	3106	3749	65	82
Grantsville Reservoir	2	3	44	68
Gunlock	9	10	65	86
Gunnison Reservoir	11	20	5	57
Huntington North Reservoir	4	4	92	99
Hyrum Reservoir	10	15	63	65
Jackson Flat Reservoir	4	4	83	98
Joes Valley Reservoir	50	61	48	82
Jordanelle Reservoir	255	314	58	81
Ken's Lake	2	2	77	87
Kolob Reservoir	4	5	33	81
Lake Powell	7935	24322	21	32
Lost Creek Reservoir	18	22	43	81
Lower Enterprise	2	2	54	77
Meeks Cabin Reservoir	18	32	31	56
Miller Flat Reservoir	3	5	26	63
Millsite	10	16	50	62
Minersville Reservoir	21	23	30	90
Moon Lake Reservoir	31	35	75	87
Otter Creek Reservoir	50	52	36	96
Panguitch Lake	19	22	36	87
Pineview Reservoir	79	110	41	72
Piute Reservoir	57	71	28	79
Porcupine Reservoir	12	11	70	106
Quail Creek	29	40	63	74
Red Fleet Reservoir	22	25	39	86
Rockport Reservoir	50	60	61	83
Sand Hollow Reservoir	50	50	84	100
Scofield Reservoir	58	65	24	88
Settlement Canyon Reservoir	0	1	37	76
Sevier Bridge Reservoir	95	236	20	40
Smith and Morehouse	4	8	54	56
Starvation Reservoir	156	164	83	95
Stateline Reservoir	8	12	53	69
Steinaker Reservoir	29	33	49	88
Strawberry Reservoir	1006	1105	73	90
Upper Enterprise	7	10	39	71
Upper Stillwater Reservoir	8	32	25	26
Utah Lake	883	870	57	101
Willard Bay	195	215	47	91
Woodruff Creek	1	4	60	49
Woodruff Narrows Reservoir	48	57	23	85

Red (green) shading indicates >5% decrease (increase) in % capacity from this time last year.

Report Created:
3/6/2024 11:52:38 AM

Streamflow Forecast Summary: March 1, 2024
(Medians based On 1991-2020 reference period)

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast								
Raft	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Dunn Ck nr Park Valley ²	APR-JUL	2	2.7	3.3	138%	4.1	5.5	2.4

- 1) 90% And 10% exceedance probabilities are actually 95% And 5%
2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast								
Bear	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Bear R bl Stewart Dam	MAR-JUL	86	144	192	152%	245	340	126
	MAR-SEP	94	158	210	151%	270	370	139
	APR-JUL	61	117	165	143%	220	320	115
	APR-SEP	69	130	183	150%	245	350	122
Smiths Fk nr Border	APR-JUL	60	76	87	101%	99	115	86
Little Bear at Paradise	APR-JUL	30	39	47	168%	58	77	28
Bear R nr UT-WY State Line	APR-JUL	93	109	124	123%	140	164	101
	APR-SEP	100	118	135	118%	152	182	114
Bear R ab Resv nr Woodruff	APR-JUL	69	91	114	124%	143	192	92
	APR-SEP	82	107	130	131%	158	205	99
Logan R nr Logan	APR-JUL	110	125	137	151%	149	169	91
Blacksmith Fk nr Hyrum	APR-JUL	36	44	50	172%	56	70	29
Big Ck nr Randolph	APR-JUL	4.5	5.9	7.1	222%	8.3	10.8	3.2

- 1) 90% And 10% exceedance probabilities are actually 95% And 5%
2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast								
Weber-Ogden	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Rockport Reservoir Inflow ²	APR-JUL	98	121	140	161%	162	196	87
Weber R nr Oakley ²	APR-JUL	104	120	134	138%	149	173	97
Lost Ck Reservoir Inflow	APR-JUL	10.7	13.5	15.9	167%	18.7	24	9.5
East Canyon Ck nr Jeremy Ranch ²	APR-JUL	12.2	15.9	19.7	207%	24	33	9.5
Chalk Ck at Coalville	APR-JUL	26	34	42	162%	53	71	26
Weber R at Gateway ²	APR-JUL	240	310	370	180%	440	550	205
Echo Reservoir Inflow ²								

SF Ogden R nr Huntsville	APR-JUL	127	162	192	160%	230	290	120
Pineview Reservoir Inflow	APR-JUL	45	55	63	154%	73	89	41
East Canyon Ck nr Morgan ²	APR-JUL	84	117	144	182%	178	240	79
Weber R nr Coalville ²	APR-JUL	20	26	31	172%	37	47	18
	APR-JUL	99	125	149	160%	176	220	93

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Northeastern Uintas	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	9.7	14.6	18	91%	21	26	19.7
Flaming Gorge Reservoir Inflow ²	APR-JUL	440	650	820	83%	1010	1320	990
Ashley Ck nr Vernal	APR-JUL	21	32	40	93%	48	59	43
Stateline Reservoir Inflow ²	APR-JUL	19.4	25	29	112%	33	41	26
Blacks Fk nr Robertson	APR-JUL	59	77	90	99%	103	121	91

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Tooele Valley-Vernon Creek	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Vernon Ck nr Vernon ²	APR-JUL	0.53	0.8	1.01	136%	1.24	1.7	0.74
S Willow Ck nr Grantsville ²	APR-JUL	1.9	2.5	2.9	116%	3.4	4.1	2.5

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Duchesne	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Whiterocks R nr Whiterocks	APR-JUL	23	34	42	98%	51	66	43
WF Duchesne R at VAT Diversion ²	APR-JUL	12.6	16.1	18.8	130%	22	26	14.5
Uinta R bl Powerplant Diversion nr Neola	APR-JUL	33	50	63	98%	78	102	64
Duchesne R at Myton ²	APR-JUL	167	245	310	144%	380	495	215

Currant Ck Reservoir Inflow ²	APR-JUL	12.5	17.3	21	176%	25	32	11.9
Strawberry R nr Duchesne ²	APR-JUL	60	93	119	225%	149	198	53
Duchesne R ab Knight Diversion ²	APR-JUL	135	168	192	119%	220	260	162
Lake Fk R bl Moon Lk nr Mountain Home ²	APR-JUL	42	52	60	105%	68	82	57
Upper Stillwater Reservoir Inflow ²	APR-JUL	49	63	74	109%	85	104	68
Strawberry R nr Soldier Springs ²	APR-JUL	36	54	68	189%	84	110	36
Duchesne R nr Tabiona ²	APR-JUL	71	90	104	120%	119	143	87
Rock Ck nr Mountain Home ²	APR-JUL	62	77	87	112%	98	116	78
Duchesne R nr Randlett ²	APR-JUL	166	260	335	131%	420	560	255
Yellowstone R nr Altonah	APR-JUL	38	50	59	105%	69	85	56

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Provo-Utah Lake-Jordan	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
City Ck nr SLC	APR-JUL	5.5	6.9	8.1	153%	9.4	11.8	5.3
Mill Ck nr SLC	APR-JUL	4.6	5.8	6.7	156%	7.6	9.1	4.3
Parleys Ck nr SLC	APR-JUL	9	12.2	15.1	174%	18.2	24	8.7
Provo R bl Deer Ck Dam ²	APR-JUL	85	110	130	115%	153	197	113
Little Cottonwood Ck nr SLC	APR-JUL	35	39	42	135%	45	51	31
W Canyon Ck nr Cedar Fort ²	APR-JUL	0.52	1.3	2	211%	2.8	4.2	0.95
Provo R at Woodland ²	APR-JUL	81	97	110	129%	124	148	85
Spanish Fk at Castilla	APR-JUL	25	50	67	223%	84	109	30
Utah Lake Inflow ²	APR-JUL	80	173	250	137%	320	435	182
American Fk ab Upper Powerplant	APR-JUL	21	26	30	156%	35	43	19.2
Salt Ck at Nephi ²	APR-JUL	4.5	7.9	9.9	211%	12.3	16.1	4.7
Big Cottonwood Ck nr SLC	APR-JUL	32	37	41	141%	45	53	29
Provo R at Hailstone ²	APR-JUL	79	95	108	130%	125	149	83
Dell Fk nr SLC ²	APR-JUL	4.1	5.1	5.9	164%	6.6	7.8	3.6
Emigration Ck nr SLC ²	APR-JUL	1.53	2.7	3.7	161%	4.8	6.8	2.3

- 1) 90% And 10% exceedance probabilities are actually 95% And 5%
- 2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Lower Sevier	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Sevier R nr Gunnison	APR-JUL	7.6	17.8	32	107%	48	87	30

- 1) 90% And 10% exceedance probabilities are actually 95% And 5%
- 2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

San Pitch	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Manti Ck bl Dugway Ck nr Manti	APR-JUL	7.7	9.7	11.4	88%	13.6	16.5	13

- 1) 90% And 10% exceedance probabilities are actually 95% And 5%
- 2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Price-San Rafael	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Price R nr Scofield Reservoir ²	APR-JUL	24	32	38	146%	45	56	26
Huntington Ck nr Huntington ²	APR-JUL	25	33	39	108%	46	57	36
Ferron Ck (Upper Station) nr Ferron	APR-JUL	20	26	30	94%	35	42	32
Joes Valley Reservoir Inflow ²	APR-JUL	32	41	48	109%	55	67	44
White R bl Tabbyune Creek	APR-JUL	8.7	12.8	16	222%	19.6	25	7.2
Fish Ck ab Reservoir nr Scofield	APR-JUL	17.6	23	28	141%	33	41	19.8
Electric Lake Inflow ²	APR-JUL	7.7	10.3	12.2	147%	14.3	17.7	8.3

- 1) 90% And 10% exceedance probabilities are actually 95% And 5%
- 2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Upper Sevier	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Salina Ck nr Emery ²	APR-JUL	3.2	4.1	4.9	88%	5.7	7.1	5.6
Sevier R at Hatch	APR-JUL	14.8	23	30	88%	39	51	34
Sevier R nr Gunnison								

EF Sevier R nr Kingston ²	APR-JUL	7.6	17.8	32	107%	48	87	30
Clear Ck ab Diversions nr Sevier	APR-JUL	3.9	6.5	10.7	80%	15.8	24	13.4
Mammoth Ck nr Hatch	APR-JUL	8.8	12.3	15	110%	17.9	23	13.6
Sevier R nr Kingston	APR-JUL	9.7	13.9	17.9	91%	22	30	19.7
	APR-JUL	1.8	6.7	13.6	93%	23	41	14.7

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Southeastern Utah	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Green R at Green River, UT ²	APR-JUL	1670	2280	2750	105%	3260	4100	2610
Colorado R nr Cisco ²	APR-JUL	2150	2870	3420	91%	4020	4980	3750
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	1.45	2.4	3.1	94%	3.9	5.4	3.3
South Ck ab Resv nr Monticello	APR-JUL	0.06	0.21	0.37	90%	0.57	0.95	0.41

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Dirty Devil	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Muddy Ck nr Emery	APR-JUL	8	11.4	14	86%	16.9	22	16.3
Seven Mile Ck nr Fish Lake	APR-JUL	3.5	4.9	6	98%	7.2	9.1	6.1

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Beaver	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Beaver R nr Beaver	APR-JUL	10.5	13.7	16.5	95%	19.6	25	17.4

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Southwestern Utah	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Santa Clara R nr Pine Valley ²	APR-JUL	0.96	2.1	2.9	91%	3.8	6.2	3.2
Coal Ck nr Cedar City	APR-JUL	7.4	10.3	13.3	106%	16.3	22	12.5
Virgin R at Virgin ²	APR-JUL	16.3	28	37	103%	46	62	36
Virgin R nr Hurricane ²	APR-JUL	8.4	17.1	28	90%	40	60	31

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Escalante-Paria	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Pine Ck nr Escalante	APR-JUL	0.9	1.49	1.98	121%	2.5	3.5	1.63

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

Great Salt Lake	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Bear R bl Stewart Dam	MAR-JUL	86	144	192	152%	245	340	126
	MAR-SEP	94	158	210	151%	270	370	139
	APR-JUL	61	117	165	143%	220	320	115
	APR-SEP	69	130	183	150%	245	350	122
Smiths Fk nr Border	APR-JUL	60	76	87	101%	99	115	86
Parleys Ck nr SLC	APR-JUL	9	12.2	15.1	174%	18.2	24	8.7
Weber R at Gateway ²	APR-JUL	240	310	370	180%	440	550	205
Provo R at Woodland ²	APR-JUL	81	97	110	129%	124	148	85
American Fk ab Upper Powerplant	APR-JUL	21	26	30	156%	35	43	19.2
Pineview Reservoir Inflow	APR-JUL	84	117	144	182%	178	240	79
Salt Ck at Nephi ²	APR-JUL	4.5	7.9	9.9	211%	12.3	16.1	4.7
Big Cottonwood Ck nr SLC	APR-JUL	32	37	41	141%	45	53	29
Provo R at Hailstone ²	APR-JUL	79	95	108	130%	125	149	83
Big Ck nr Randolph	APR-JUL	4.5	5.9	7.1	222%	8.3	10.8	3.2
Dunn Ck nr Park Valley ²	APR-JUL	2	2.7	3.3	138%	4.1	5.5	2.4
East Canyon Ck nr Jeremy Ranch ²	APR-JUL	12.2	15.9	19.7	207%	24	33	9.5

S Willow Ck nr Grantsville ²	APR-JUL	1.9	2.5	2.9	116%	3.4	4.1	2.5
SF Ogden R nr Huntsville	APR-JUL	45	55	63	154%	73	89	41
Echo Reservoir Inflow ²	APR-JUL	127	162	192	160%	230	290	120
Vernon Ck nr Vernon ²	APR-JUL	0.53	0.8	1.01	136%	1.24	1.7	0.74
Dell Fk nr SLC ²	APR-JUL	4.1	5.1	5.9	164%	6.6	7.8	3.6
Little Bear at Paradise	APR-JUL	30	39	47	168%	58	77	28
Weber R nr Oakley ²	APR-JUL	104	120	134	138%	149	173	97
Little Cottonwood Ck nr SLC	APR-JUL	35	39	42	135%	45	51	31
W Canyon Ck nr Cedar Fort ²	APR-JUL	0.52	1.3	2	211%	2.8	4.2	0.95
Chalk Ck at Coalville	APR-JUL	26	34	42	162%	53	71	26
Spanish Fk at Castilla	APR-JUL	25	50	67	223%	84	109	30
Great Salt Lake Inflow								
East Canyon Ck nr Morgan ²	APR-JUL	20	26	31	172%	37	47	18
Emigration Ck nr SLC ²	APR-JUL	1.53	2.7	3.7	161%	4.8	6.8	2.3
Rockport Reservoir Inflow ²	APR-JUL	98	121	140	161%	162	196	87
Mill Ck nr SLC	APR-JUL	4.6	5.8	6.7	156%	7.6	9.1	4.3
City Ck nr SLC	APR-JUL	5.5	6.9	8.1	153%	9.4	11.8	5.3
Provo R bl Deer Ck Dam ²	APR-JUL	85	110	130	115%	153	197	113
Bear R nr UT-WY State Line	APR-JUL	93	109	124	123%	140	164	101
	APR-SEP	100	118	135	118%	152	182	114
Lost Ck Reservoir Inflow	APR-JUL	10.7	13.5	15.9	167%	18.7	24	9.5
Bear R ab Resv nr Woodruff	APR-JUL	69	91	114	124%	143	192	92
	APR-SEP	82	107	130	131%	158	205	99
Lehman Ck nr Baker								
Logan R nr Logan	APR-JUL	110	125	137	151%	149	169	91
Blacksmith Fk nr Hyrum	APR-JUL	36	44	50	172%	56	70	29
Utah Lake Inflow ²	APR-JUL	80	173	250	137%	320	435	182
Weber R nr Coalville ²	APR-JUL	99	125	149	160%	176	220	93

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast

State of Utah	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Bear R bl Stewart Dam	MAR-JUL	86	144	192	152%	245	340	126
	MAR-SEP	94	158	210	151%	270	370	139
	APR-JUL	61	117	165	143%	220	320	115
	APR-SEP	69	130	183	150%	245	350	122
Smiths Fk nr Border	APR-JUL	60	76	87	101%	99	115	86
Pine Ck nr Escalante	APR-JUL	0.9	1.49	1.98	121%	2.5	3.5	1.63
Pineview Reservoir Inflow	APR-JUL	84	117	144	182%	178	240	79
South Ck ab Resv nr Monticello	APR-JUL	0.06	0.21	0.37	90%	0.57	0.95	0.41
White R bl Tabbyune Creek	APR-JUL	8.7	12.8	16	222%	19.6	25	7.2
Big Ck nr Randolph	APR-JUL	4.5	5.9	7.1	222%	8.3	10.8	3.2
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	9.7	14.6	18	91%	21	26	19.7
Duchesne R nr Tabiona ²	APR-JUL	71	90	104	120%	119	143	87
Vernon Ck nr Vernon ²	APR-JUL	0.53	0.8	1.01	136%	1.24	1.7	0.74
Green R at Green River, UT ²	APR-JUL	1670	2280	2750	105%	3260	4100	2610
Duchesne R ab Knight Diversion ²	APR-JUL	135	168	192	119%	220	260	162
Seven Mile Ck nr Fish Lake	APR-JUL	3.5	4.9	6	98%	7.2	9.1	6.1
Blacks Fk nr Robertson	APR-JUL	59	77	90	99%	103	121	91
Mill Ck nr SLC	APR-JUL	4.6	5.8	6.7	156%	7.6	9.1	4.3
Sevier R at Hatch	APR-JUL	14.8	23	30	88%	39	51	34
Bear R ab Resv nr Woodruff	APR-JUL	69	91	114	124%	143	192	92
	APR-SEP	82	107	130	131%	158	205	99
Blacksmith Fk nr Hyrum	APR-JUL	36	44	50	172%	56	70	29
Parleys Ck nr SLC	APR-JUL	9	12.2	15.1	174%	18.2	24	8.7
Colorado R nr Cisco ²	APR-JUL	2150	2870	3420	91%	4020	4980	3750
Mammoth Ck nr Hatch	APR-JUL	9.7	13.9	17.9	91%	22	30	19.7
Coal Ck nr Cedar City	APR-JUL	7.4	10.3	13.3	106%	16.3	22	12.5
Strawberry R nr Duchesne ²	APR-JUL	60	93	119	225%	149	198	53
Dunn Ck nr Park Valley ²	APR-JUL	2	2.7	3.3	138%	4.1	5.5	2.4
SF Ogden R nr Huntsville	APR-JUL	45	55	63	154%	73	89	41
Virgin R at Virgin ²	APR-JUL	16.3	28	37	103%	46	62	36
Beaver R nr Beaver	APR-JUL	10.5	13.7	16.5	95%	19.6	25	17.4
Little Bear at Paradise	APR-JUL	30	39	47	168%	58	77	28

Upper Stillwater Reservoir Inflow ²								
APR-JUL	49	63	74	109%	85	104	68	
Sevier R nr Gunnison								
APR-JUL	7.6	17.8	32	107%	48	87	30	
Joes Valley Reservoir Inflow ²								
APR-JUL	32	41	48	109%	55	67	44	
East Canyon Ck nr Morgan ²								
APR-JUL	20	26	31	172%	37	47	18	
Virgin R nr Hurricane ²								
APR-JUL	8.4	17.1	28	90%	40	60	31	
WF Duchesne R at VAT Diversion ²								
APR-JUL	12.6	16.1	18.8	130%	22	26	14.5	
City Ck nr SLC								
APR-JUL	5.5	6.9	8.1	153%	9.4	11.8	5.3	
Provo R bl Deer Ck Dam ²								
APR-JUL	85	110	130	115%	153	197	113	
Santa Clara R nr Pine Valley ²								
APR-JUL	0.96	2.1	2.9	91%	3.8	6.2	3.2	
Duchesne R nr Randlett ²								
APR-JUL	166	260	335	131%	420	560	255	
Yellowstone R nr Altonah								
APR-JUL	38	50	59	105%	69	85	56	
Muddy Ck nr Emery								
APR-JUL	8	11.4	14	86%	16.9	22	16.3	
Strawberry R nr Soldier Springs ²								
APR-JUL	36	54	68	189%	84	110	36	
Weber R at Gateway ²								
APR-JUL	240	310	370	180%	440	550	205	
Clear Ck ab Diversions nr Sevier								
APR-JUL	8.8	12.3	15	110%	17.9	23	13.6	
Provo R at Hailstone ²								
APR-JUL	79	95	108	130%	125	149	83	
Uinta R bl Powerplant Diversion nr Neola								
APR-JUL	33	50	63	98%	78	102	64	
Duchesne R at Myton ²								
APR-JUL	167	245	310	144%	380	495	215	
EF Sevier R nr Kingston ²								
APR-JUL	3.9	6.5	10.7	80%	15.8	24	13.4	
Dell Fk nr SLC ²								
APR-JUL	4.1	5.1	5.9	164%	6.6	7.8	3.6	
Little Cottonwood Ck nr SLC								
APR-JUL	35	39	42	135%	45	51	31	
Chalk Ck at Coalville								
APR-JUL	26	34	42	162%	53	71	26	
Spanish Fk at Castilla								
APR-JUL	25	50	67	223%	84	109	30	
Ashley Ck nr Vernal								
APR-JUL	21	32	40	93%	48	59	43	
Emigration Ck nr SLC ²								
APR-JUL	1.53	2.7	3.7	161%	4.8	6.8	2.3	
Whiterocks R nr Whiterocks								
APR-JUL	23	34	42	98%	51	66	43	
Rockport Reservoir Inflow ²								
APR-JUL	98	121	140	161%	162	196	87	
Weber R nr Oakley ²								
APR-JUL	104	120	134	138%	149	173	97	
Weber R nr Coalville ²								
APR-JUL	99	125	149	160%	176	220	93	
Electric Lake Inflow ²								
APR-JUL	7.7	10.3	12.2	147%	14.3	17.7	8.3	
Salina Ck nr Emery ²								

Huntington Ck nr Huntington ²	APR-JUL	3.2	4.1	4.9	88%	5.7	7.1	5.6
Lake Fk R bl Moon Lk nr Mountain Home ²	APR-JUL	25	33	39	108%	46	57	36
Provo R at Woodland ²	APR-JUL	42	52	60	105%	68	82	57
Ferron Ck (Upper Station) nr Ferron	APR-JUL	81	97	110	129%	124	148	85
American Fk ab Upper Powerplant	APR-JUL	20	26	30	94%	35	42	32
Salt Ck at Nephi ²	APR-JUL	21	26	30	156%	35	43	19.2
Rock Ck nr Mountain Home ²	APR-JUL	4.5	7.9	9.9	211%	12.3	16.1	4.7
Stateline Reservoir Inflow ²	APR-JUL	62	77	87	112%	98	116	78
Big Cottonwood Ck nr SLC	APR-JUL	19.4	25	29	112%	33	41	26
Flaming Gorge Reservoir Inflow ²	APR-JUL	32	37	41	141%	45	53	29
East Canyon Ck nr Jeremy Ranch ²	APR-JUL	440	650	820	83%	1010	1320	990
S Willow Ck nr Grantsville ²	APR-JUL	12.2	15.9	19.7	207%	24	33	9.5
Echo Reservoir Inflow ²	APR-JUL	1.9	2.5	2.9	116%	3.4	4.1	2.5
Sevier R nr Kingston	APR-JUL	127	162	192	160%	230	290	120
Price R nr Scofield Reservoir ²	APR-JUL	1.8	6.7	13.6	93%	23	41	14.7
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	24	32	38	146%	45	56	26
W Canyon Ck nr Cedar Fort ²	APR-JUL	1.45	2.4	3.1	94%	3.9	5.4	3.3
Fish Ck ab Reservoir nr Scofield	APR-JUL	0.52	1.3	2	211%	2.8	4.2	0.95
Currant Ck Reservoir Inflow ²	APR-JUL	17.6	23	28	141%	33	41	19.8
Bear R nr UT-WY State Line	APR-JUL	12.5	17.3	21	176%	25	32	11.9
Manti Ck bl Dugway Ck nr Manti	APR-JUL	93	109	124	123%	140	164	101
Lost Ck Reservoir Inflow	APR-SEP	100	118	135	118%	152	182	114
Logan R nr Logan	APR-JUL	7.7	9.7	11.4	88%	13.6	16.5	13
Utah Lake Inflow ²	APR-JUL	10.7	13.5	15.9	167%	18.7	24	9.5
	APR-JUL	110	125	137	151%	149	169	91
	APR-JUL	80	173	250	137%	320	435	182

1) 90% And 10% exceedance probabilities are actually 95% And 5%

2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

Appendix A: Data used in SWSI Calculations

Watershed/ Region	USGS Gauging Station(s)	Reservoir(s)	Start Date
Bear	Bear R nr Ut-Wy State Line	Bear Lake	1981
Woodruff Narrows	Bear R ab Resv nr Woodruff	Woodruff Narrows Reservoir	1986
Little Bear	Little Bear R at Paradise	Hyrum Reservoir	1993
Ogden	Pineview Reservoir Inflow	Pineview Reservoir, Causey Reservoir	1981
Weber	Weber R at Gateway	East Canyon Reservoir, Echo Reservoir, Lost Creek Reservoir, Rockport Reservoir, Smith And Morehouse Reservoir, Willard Bay	1981
Provo	Provo R at Woodland, Spanish Fk at Castilla, W Canyon Ck nr Cedar Fort, Salt Ck at Nephi, American Fk ab Upper Powerplant	Utah Lake, Deer Creek Reservoir, Jordanelle Reservoir	1995
Western Uintas	Yellowstone R nr Altonah	Starvation Reservoir, Moon Lake Reservoir, Upper Stillwater Reservoir	1981
Eastern Uintas	Big Brush Ck ab Red Fleet Reservoir, Ashley Ck nr Vernal, Whiterocks R nr Whiterocks	Red Fleet Reservoir, Steinaker Reservoir	1981
Blacks Fork	Blacks Fk nr Robertson	Meeks Cabin Reservoir	1984
Smiths Fork	East Fork Smiths Fork bl Stateline Res	Stateline Reservoir	1984
Price	Fish Ck ab Reservoir nr Scofield	Scofield Reservoir	1981
Joes Valley	Seely Ck bl Joes Valley Resv	Joes Valley Reservoir	1981
Ferron Creek	Ferron Ck Upper Station nr Ferron	Millsite	1981
Moab	Mill Ck at Sheley Tunnel nr Moab	Ken's Lake	1988
Upper Sevier	Sevier R nr Kingston, EF Sevier R nr Kingston	Piute Reservoir, Otter Creek Reservoir	1981
San Pitch	Manti Ck bl Dugway Ck nr Manti	Gunnison Reservoir	1981
Lower Sevier	Sevier R nr Gunnison	Sevier Bridge Reservoir	1981
Beaver River	Beaver R nr Beaver	Minersville Reservoir	1981
Virgin River	Virgin R at Virgin, Santa Clara R nr Pine Valley	Quail Creek, Gunlock	1993

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in statistical and simulation models to prepare runoff forecasts. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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