Utah Water Supply Outlook Report

May 1, 2025

Mount Nebo, UT, taken from near Santaquin Meadows SNOTEL site

Photo by Logan Jamison

STATE OF UTAH GENERAL OUTLOOK
May 1, 2025

SUMMARY

Shortly after we published last month's version of this report on April 4th, our snowmelt in Utah (which had already begun—our state snowpack peaked on March 23rd) accelerated to the point where, as of only a week later, all of Utah's basins had below normal snowpack. By a couple weeks after then, only the Bear watershed was close to normal at 91%. Central Utah watersheds ranged from 50% to 70% of normal, and all of Utah's southern basins were below 50% of normal—with Southeastern Utah and the Escalante-Paria basin showing almost no measurable snow at our SNOTEL sites. This rapid deterioration of our snowpack occurred due to well-below normal precipitation during April, early snowpack ripening, and (generally) above-normal temperatures across the state. Resultingly, the water supply forecasts issued in this report predict substantially lower runoff volumes than those from last month.

As noted throughout our reports this winter and spring, indexed statewide conditions do a poor job of reflecting the important and drastic differences in snowpack conditions that impacted northern versus southern Utah this year. That said, we provide the statewide values herein to facilitate comparisons with other years. As of May 1st, Utah's statewide **snow water equivalent** (SWE) was 64% of normal (39% lower than last year's May 1 value, and a 28% drop from last month). April **precipitation** in Utah was well below-normal at 57%, which lowers the statewide water-year-to-date precipitation value to 93% of normal. As of May 1st, northern Utah major watersheds had received generally close to normal water year precipitation, while southern Utah basins were well below-normal.

Our staff use previously-identified saturation points for **soil moisture** at each one of our sites to obtain percent of saturation values at our 2", 8", and 20" sensor depths. Data from across Utah's SNOTEL network are then amalgamated to produce a singular, statewide value for soil moisture percent of saturation that can be compared with previous years. When we look at May 1st conditions through that lens, our statewide soil moisture is at 72% of saturation (very close to normal), compared with 77% at this time last year. As for other parameters, however, soil moisture varies strongly across the state, with extremely dry mountain soils in the Escalante-Paria, Upper Sevier, Southeastern, and Southwestern regions of the state. In fact, mountain soils in Southwestern Utah have been record-dry since April 18th and remain well below previous minimums. Similarly, soil moisture levels in the mountains of Southeastern Utah have been record-dry since April 23rd and also continue to set historic minimums. Elsewhere in southern Utah the situation is only marginally better. In addition to the concerns these conditions generate about our snowmelt runoff, Utahns should be aware that the dry mountain soils and early snowmelt has the potential to increase the risk of forest fires.

Utah's **reservoir storage** is currently at 83% of capacity, down only 4% from last year. Utah continues to be second only to Oregon in the Western U.S. for how full its reservoir system is. Most areas of the state currently have similar reservoir storage as last year at this time, though storage in Southwestern Utah and the Upper Sevier is somewhat drawn down. We encourage Utahns to continue to conserve water to help keep as much water in our reservoirs as possible moving forward, to provide a buffer against possible below-normal water supply conditions in the future.

As noted above, NRCS **streamflow forecasts** for snowmelt runoff volume have come down a bit from the April 1 to May 1 predictions due to the below normal precipitation received in Utah during April. A new NRCS tool allows our users to view how individual forecasts have evolved over time. These plots are also available on our website by clicking the "Streamflow Forecasts" box. Geographically, our water supply forecasts continue to reflect this year's snowpack and precipitation patterns, such that extremely poor snowmelt runoff is forecasted for southern Utah while northern Utah forecasts are more optimistic (while still being somewhat to well below normal).

Values range from 7% to 35% of average for the Southeastern Utah, Escalante-Paria, and Southwestern Utah regions, with the Upper Sevier only slightly better. Farther north, the Price-San Rafael and Duchesne basins have snowmelt runoff predictions in the 50% to 82% of average range. Closer to the Wasatch Front, the forecast numbers vary widely; from as low as 28% of average for W Canyon Creek near Cedar Fort to as high as 93% of average for the Provo River at Woodland[1]. The Colorado Basin River Forecast Center (CBRFC) produces peak flow forecasts in addition to volumetric water supply forecasts. For example, their map of 2025 peak flows predicts rivers in Southwestern Utah to peak at only around 10 to 25% of normal; elsewhere in the state peak flows are forecasted to peak around 50 to 80% of normal (central Utah), 30 to 70% of normal (Duchesne basin), and 15 to 70% of normal (Wasatch Front region). The East Fork of the Virgin River near Glendale's forecasted peak flow percentile is zero, suggesting that it may set a record for lowest peak flow since the streamgage was installed in 1970. In fact, this year's peak for that river is predicted to be significantly below the previous minimums set in 1990 and 2002. Pulling back to the watershed scale, (not surprisingly) the lowest percent-of-average region was the southwest corner of the state.

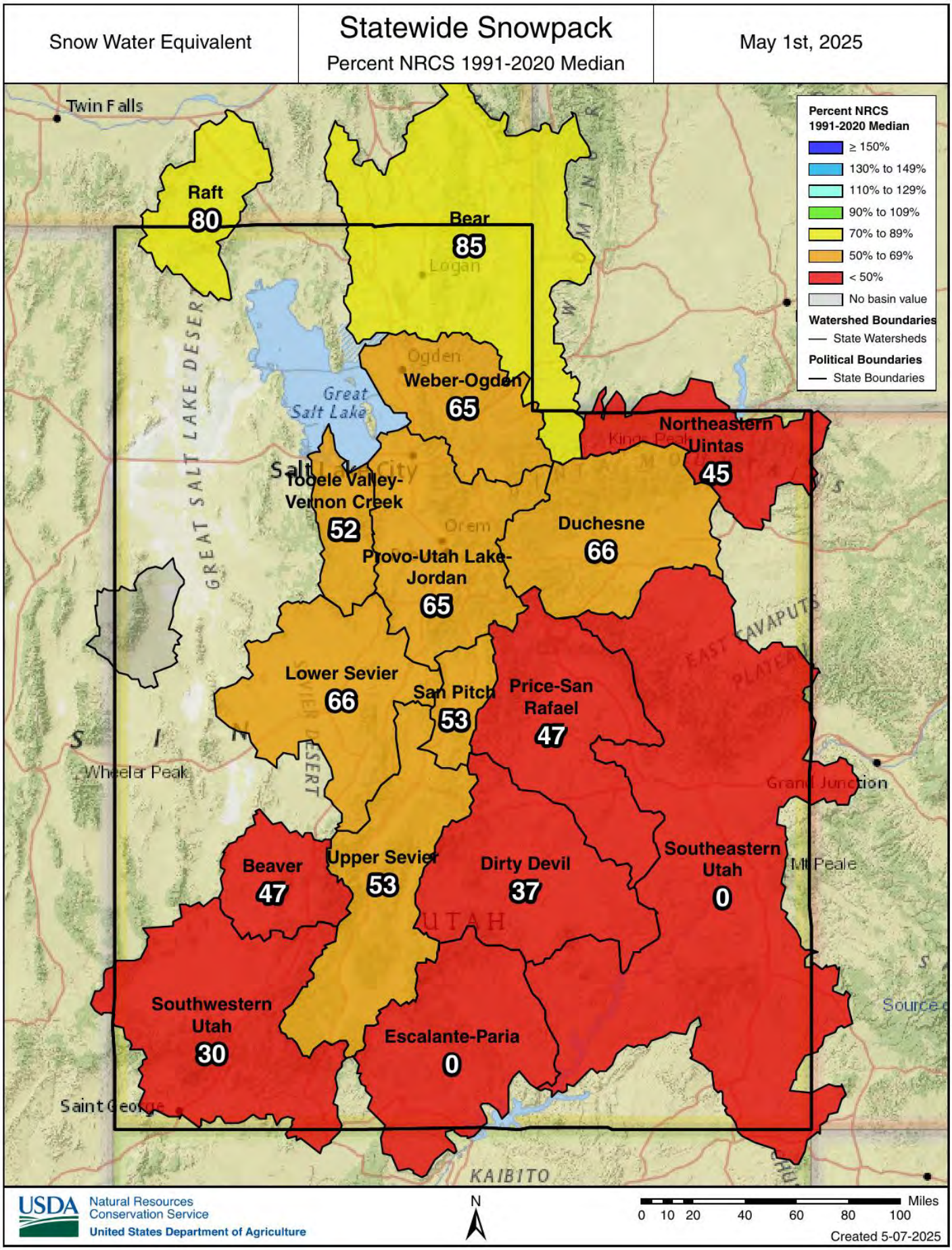
To expand upon conditions in **Southwestern Utah**, current streamflow observations provided by the U.S. Geological Survey (USGS) for the Virgin River have already been flirting with historic lows, and many USGS gages in Southwestern Utah are reporting streamflows in the bottom 10th percentile. As noted above, soil moisture values in Southwestern Utah are breaking records for dryness, water supply forecasts are exceptionally low, and peak runoff forecasts are predicted to be in the bottom 15th percentile, if not record-setting. Despite resilient reservoir supply conditions, we remain very concerned about the water supply outlook in Southwestern Utah this summer due to these factors. In fact, the **Surface Water Supply Index** (SWSI) values for the Virgin and Upper Sevier Rivers, which combine current reservoir levels in each basin with the volume of runoff predicted by these May 1 streamflow forecasts, rank below the bottom 15th percentile, again suggesting that this area of the state will have well below-normal water supply conditions.

Snow water equivalent in the **Great Salt Lake** (GSL) basin was at 72% of normal as of May 1st, compared with 108% at this time last year. Basin-wide precipitation in April was very poor (52% of normal), bringing the water year to date value down to 98% of normal. Soil moisture is close to normal at 75% of saturation, and the basin's reservoir storage is at 87% of capacity. Our GSL inflow forecast for May through July ranges from 94 thousand acre-feet (kaf) to 625 kaf, with the most probable value closer to 320 kaf (64% of average). Similarly, our predictions for lake level rise from May until peak lake stage ranges from 0.1 to 0.7 feet, with a 50th exceedance probability (most probable) rise of around 0.3 ft. On May 1st the south arm of the GSL was at 4193.4 ft elevation, so our expectation is that the lake will peak at around 4193.7 ft stage this year, which is down 0.3 ft from our prediction provided last month in the April version of this report.

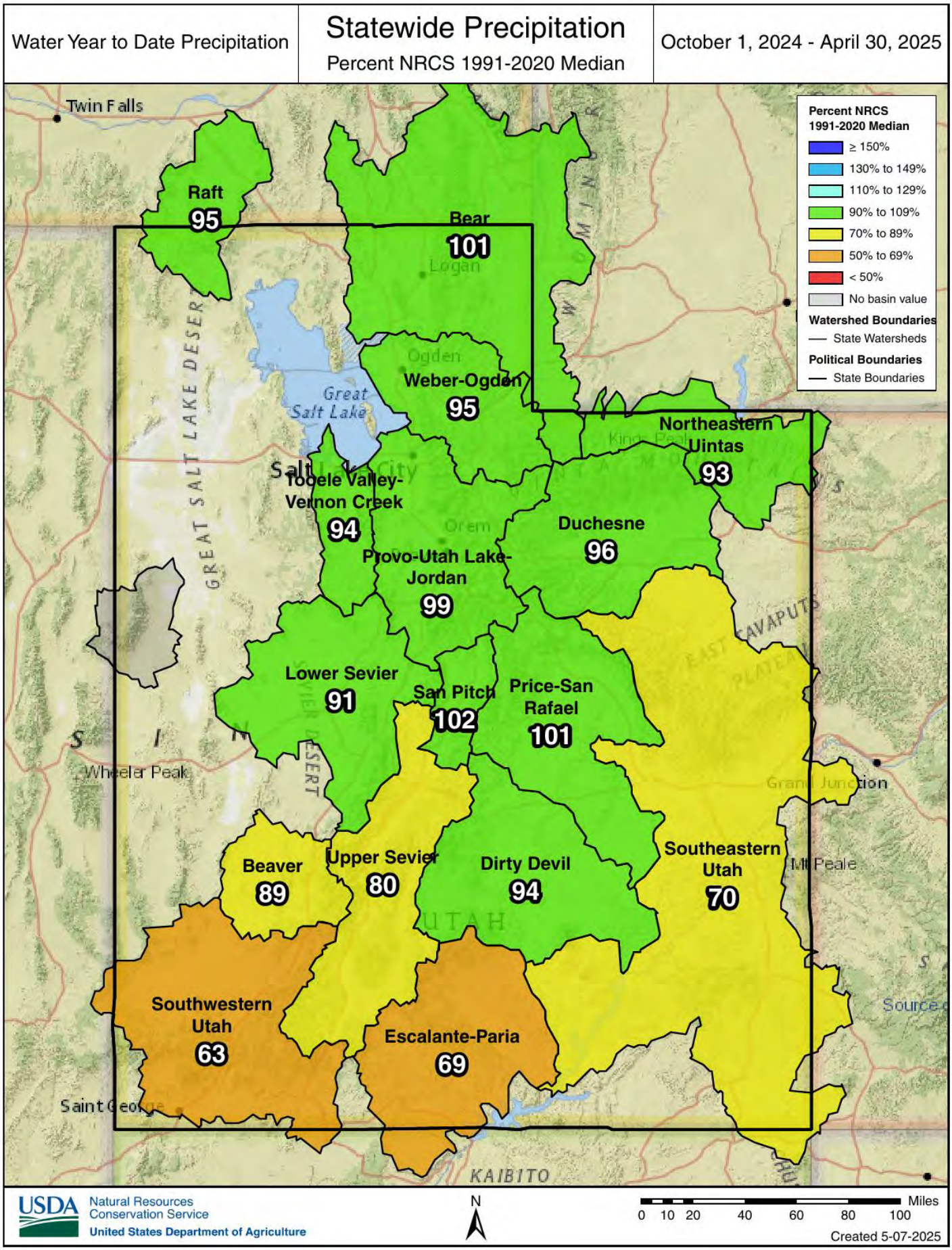
This is our last Water Supply Outlook Report for this water year. Monthly reports will recommence starting next winter. For questions or information in the meantime, please visit our website.

[1] Note that while official 'normal' values for streamflow use median, this summary uses average instead of median as the measure of central tendency. This is done because the impact of normals based on median instead of average is particularly pronounced for Utah's runoff locations due to our streamflow hydrology and the frequency distribution of various magnitude flows. If we presented streamflow forecasts based on percent of median as our choice of "normal", this would significantly elevate the percent of normal due to these factors, artificially making the forecast look more optimistic. Please be cautious while evaluating the streamflow forecast percent normal values included herein. Our recommendation is to focus on the predicted flow volume (kaf) instead of the percent normal for runoff. See here for additional details on the NRCS normals. Users can also toggle between the expression of our forecasts as percent of average versus percent of median by toggling back and forth in our Interactive Map (second section under Map Controls in the right-side panel).

Utah (Statewide) Snowpack



Utah (Statewide) Precipitation



May 1, 2025 | Surface Water Supply Index (SWSI)

Basin or Region	Reservoir Storage[1] (KAF)[2]	May-July Forecast (KAF)[2]	Forecast + Storage (KAF)[2]	SWSI[3]	Percentile[4] (%)	Similar Years
Bear	983.9	79.0	1062.9	1.99	**74**	[1987, 2019]
Woodruff Narrows	55.8	59.0	114.8	-0.1	**49**	[1987, 2014]
Little Bear	12.7	11.4	24.1	-1.47	**32**	[1994, 2022]
Ogden	109.3	32.0	141.3	0.0	**50**	[1994, 1996]
Weber	391.8	109.0	500.8	0.0	**50**	[2008, 2020]
Provo	1262.4	117.9	1380.3	1.82	**72**	[2009, 2020]
Western Uintas	187.3	34.0	221.3	-1.63	**30**	[1984, 2014]
Eastern Uintas	39.3	57.5	96.8	-2.9	**15**	[2013, 2022]
Blacks Fork	16.0	60.0	76.0	-2.42	**21**	[2004, 2013]
Smiths Fork	6.1	17.3	23.4	-2.62	**19**	[2007, 2018]
Price	58.8	21.0	79.8	1.63	**70**	[2017, 2024]
Joes Valley	47.8	35.0	82.8	-0.36	**46**	[2001, 2004]
Ferron Creek	8.7	22.0	30.7	-1.99	**26**	[1988, 1994]
Moab	1.6	1.3	2.9	-2.46	**21**	[1989, 2009]
Upper Sevier	89.9	8.6	98.5	-2.17	**24**	[2002, 2009]
San Pitch	9.5	9.1	18.6	-1.63	**30**	[2013, 2020]
Lower Sevier	102.2	12.8	115.0	-3.08	**13**	[2003, 2017]
Beaver River	14.6	10.8	25.4	-1.99	**26**	[1992, 2014]
Virgin River	36.6	12.2	48.8	-3.19	**12**	[2014, 2021]

[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

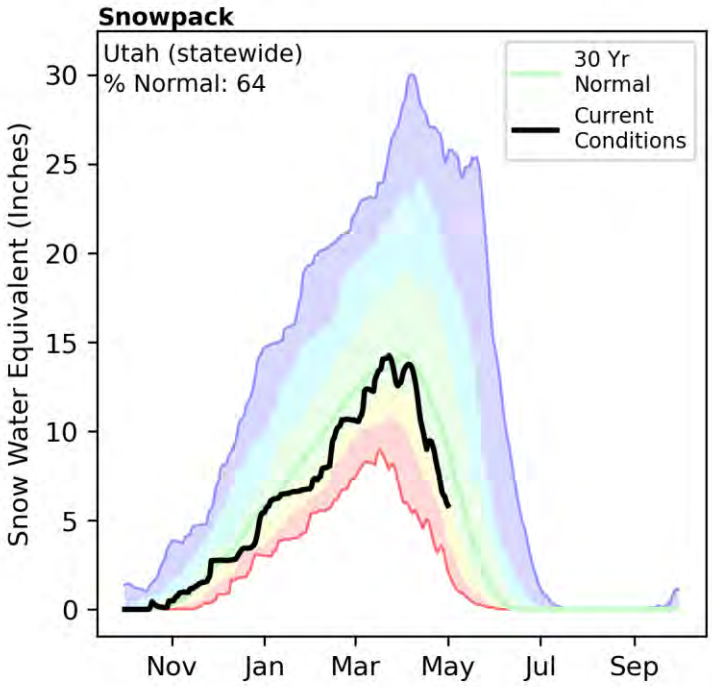
What is a Surface Water Supply Index?

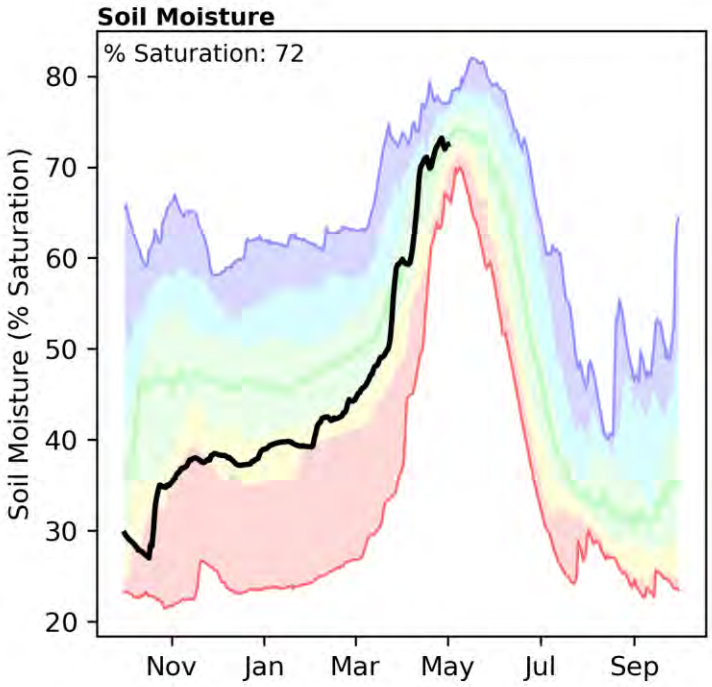
The Surface Water Supply Index (SWSI) is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based 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.

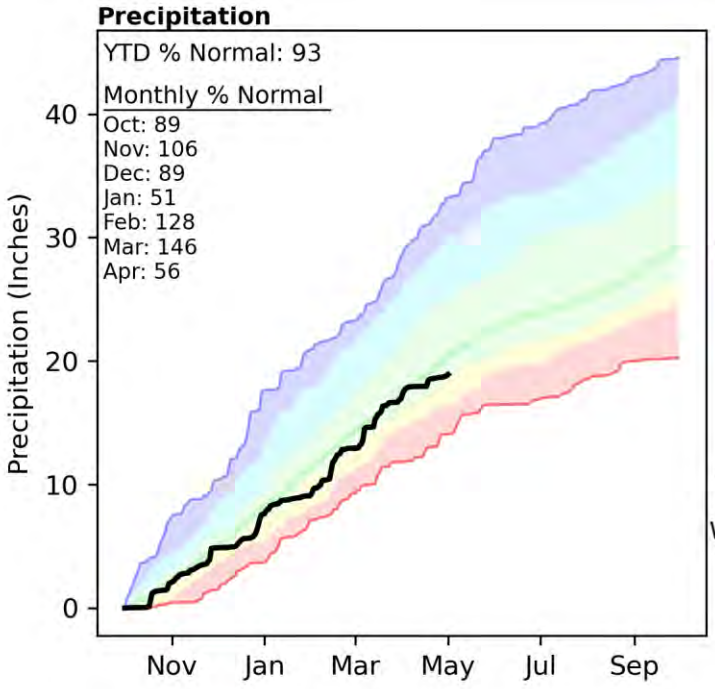
The Utah Snow Survey has also chosen to display the SWSI value as well as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has a simple application. It can be best thought of as a scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the 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.

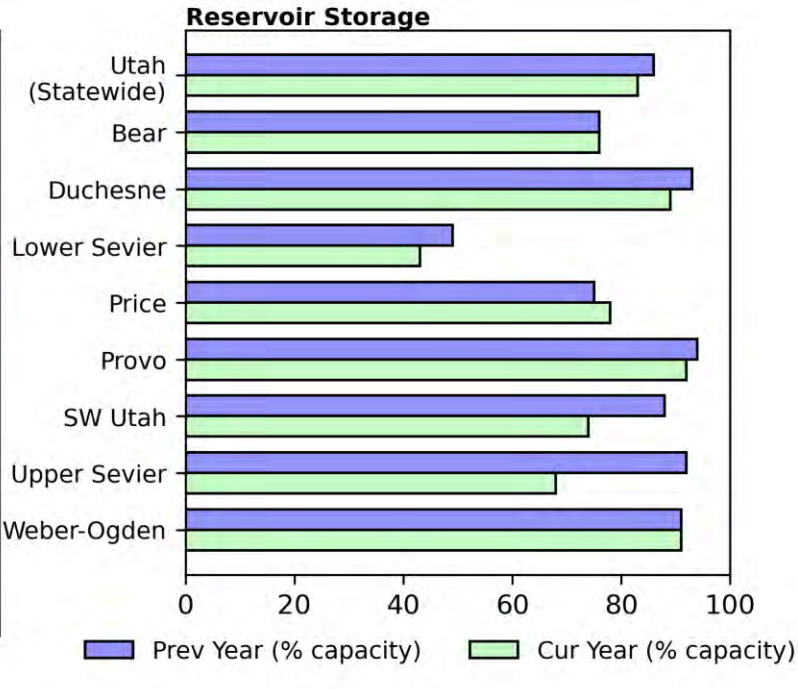
Utah (statewide) | May 1, 2025

Snowpack in Utah (statewide) is well below normal at 64% of median, compared to 103% at this time last year. Precipitation in April was well below normal at 56%, which brings the seasonal accumulation (October-April) to 93% of median. Soil moisture is at 72% saturation compared to 77% saturation last year. Statewide, reservoir storage is 83% of capacity, compared to 87% last year[1]. Forecast streamflow volumes (50% exceedence, May-July) range from 23% to 111% of normal.







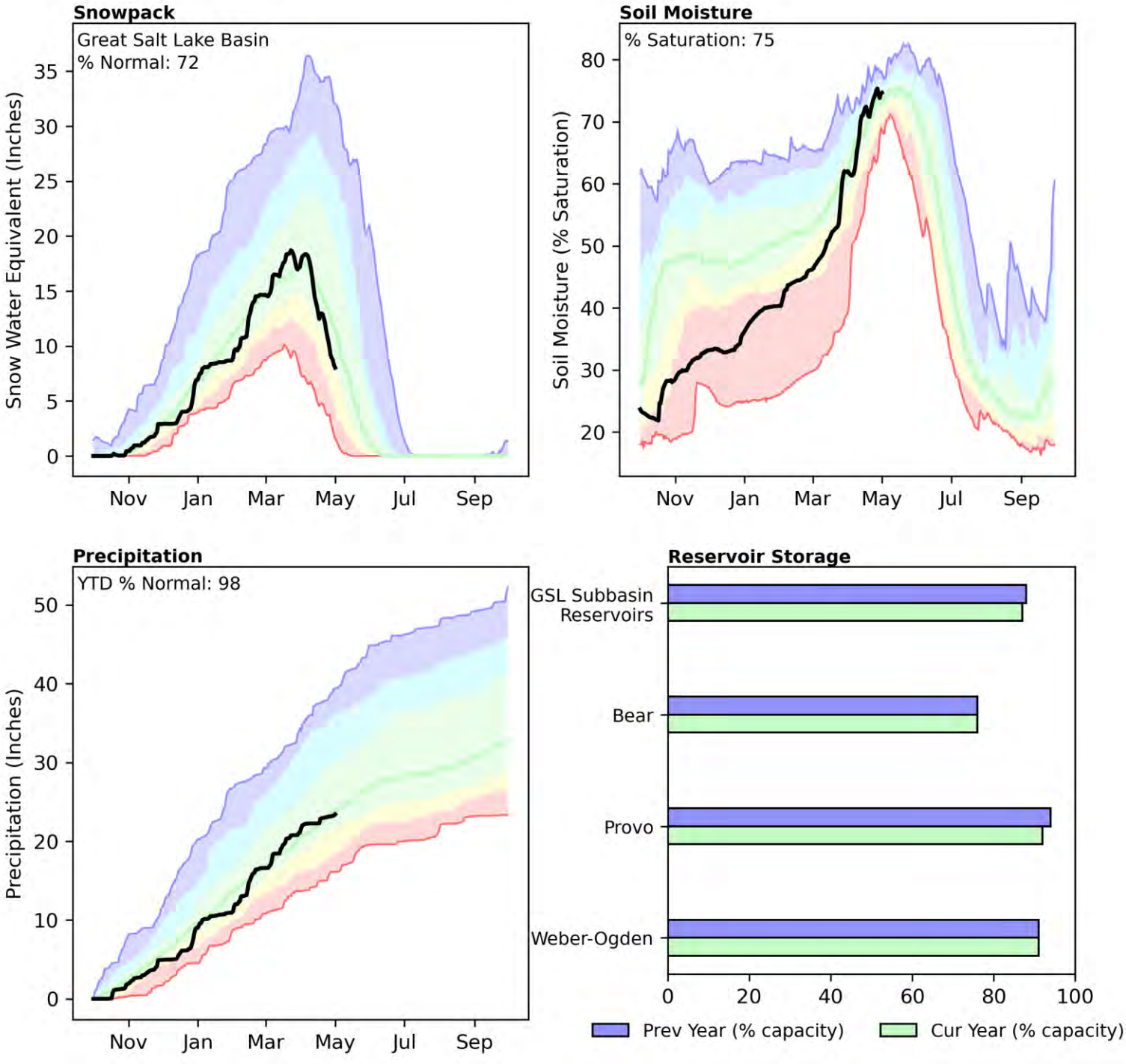


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

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

Great Salt Lake Basin | May 1, 2025

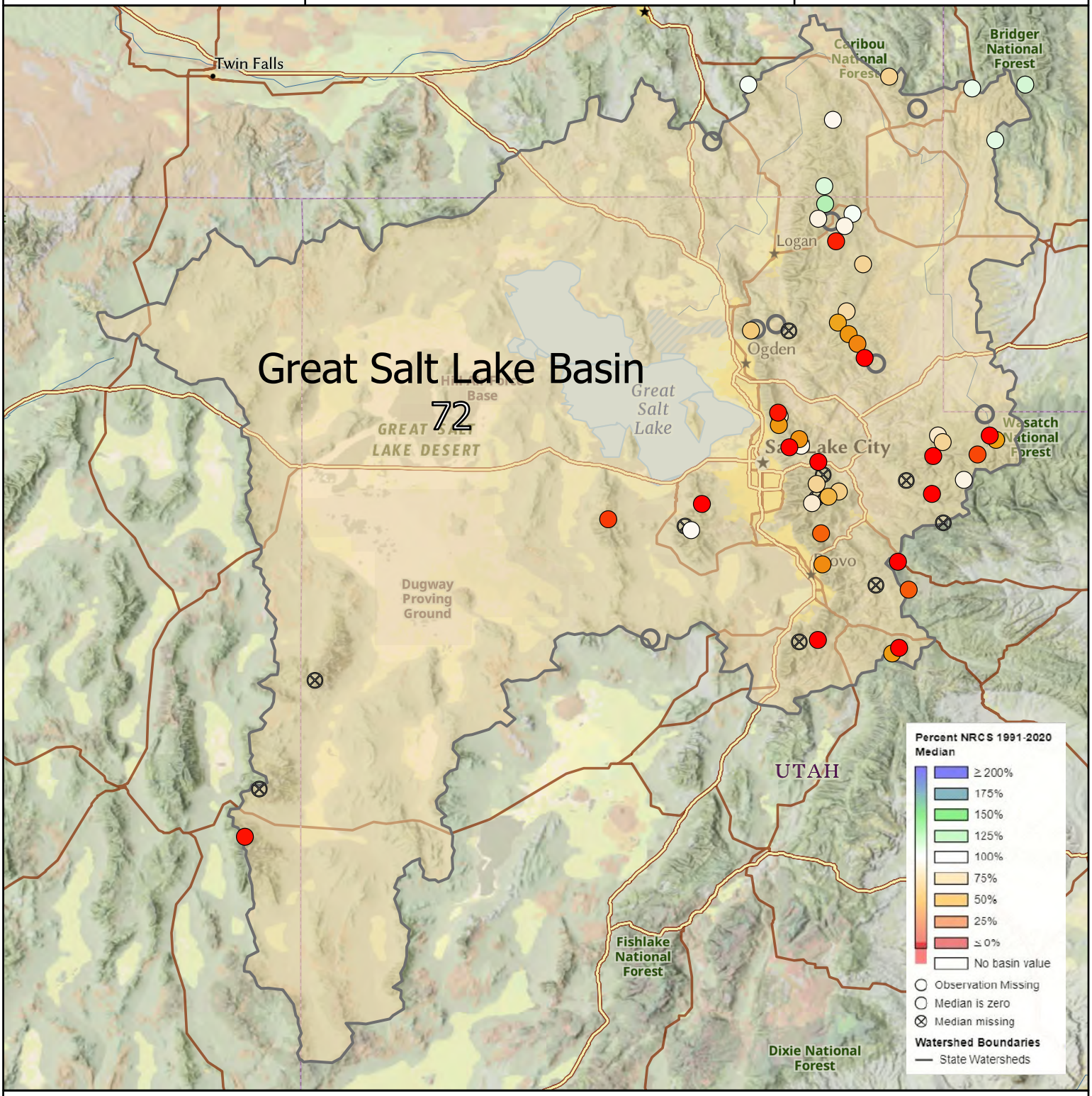
Snowpack in The Great Salt Lake (GSL) Basin[1] is below normal at 72% of median, compared to 108% at this time last year. Precipitation in April was well below normal at 52%, which brings the seasonal accumulation (October-April) to 98% of median. Soil moisture is at 75% saturation compared to 78% saturation last year. Reservoir storage in GSL subbasins is 87% of capacity, compared to 88% last year. The forecast inflow volume (50% exceedence, May-July) for the GSL is 320 thousand acre-feet (64% of average), resulting in a projected lake level (stage) increase from May 1 to peak of 0.3 feet.



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

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

Snow Water Equivalent	Snowpack Percent NRCS 1991-2020 Median	May 1st, 2025

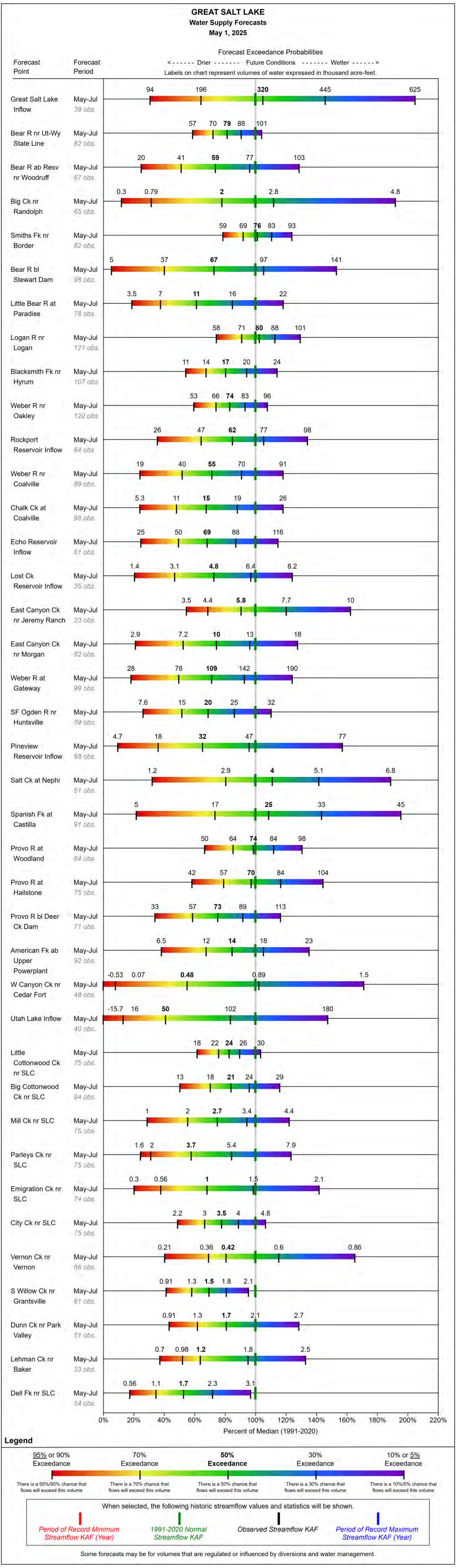


USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

N

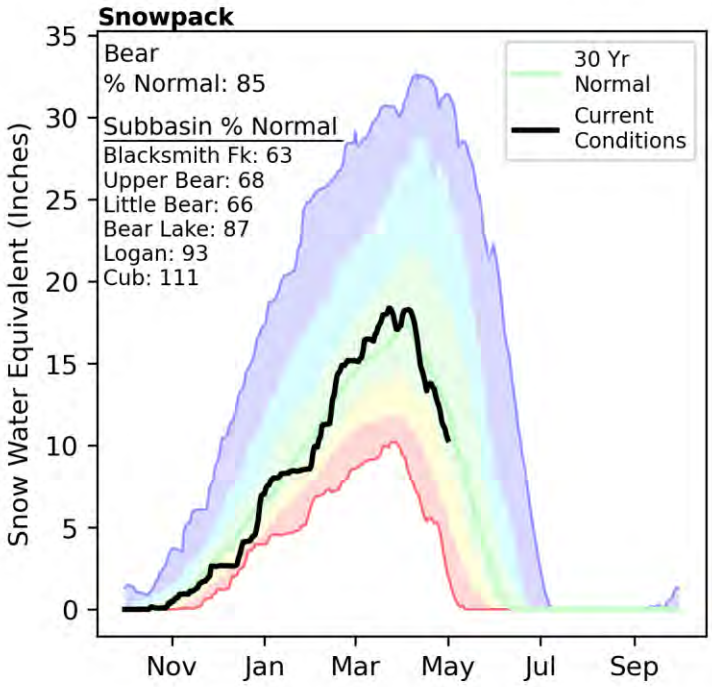
0 25 50 75 100 Miles

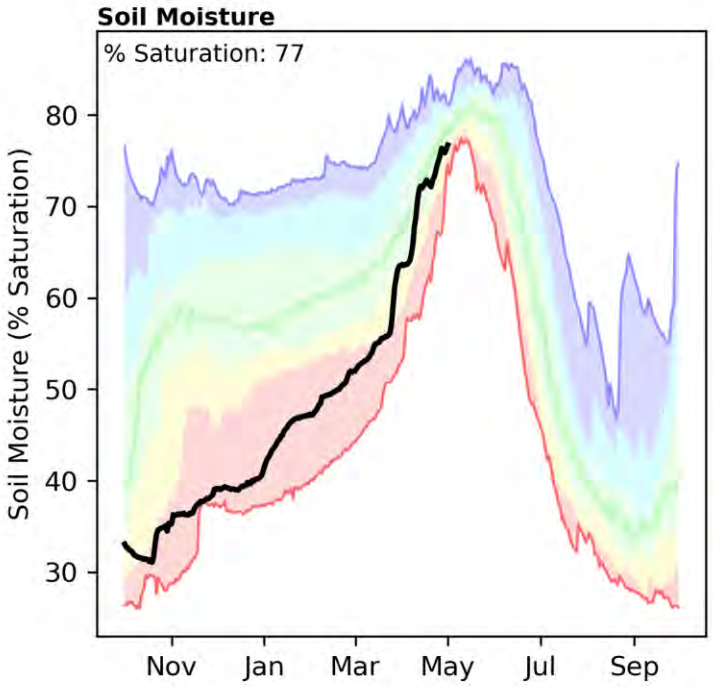
Great Salt Lake Basin

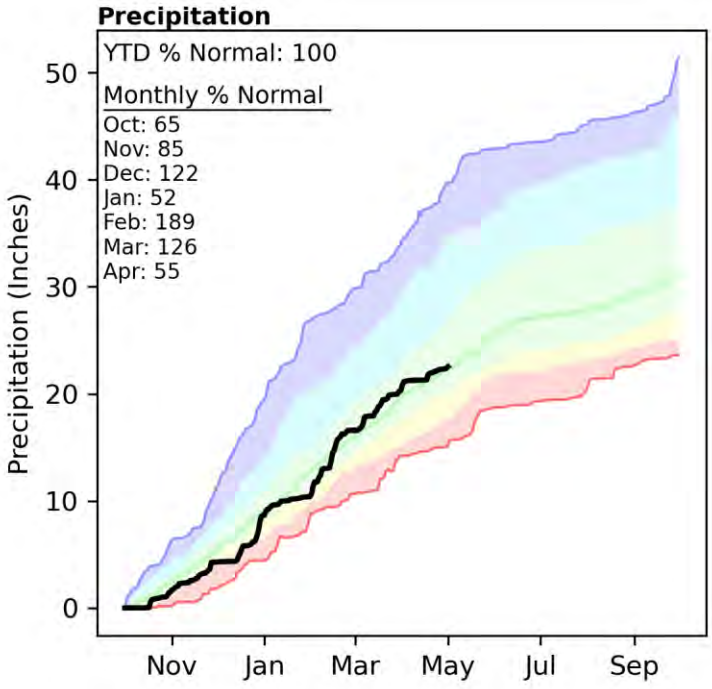


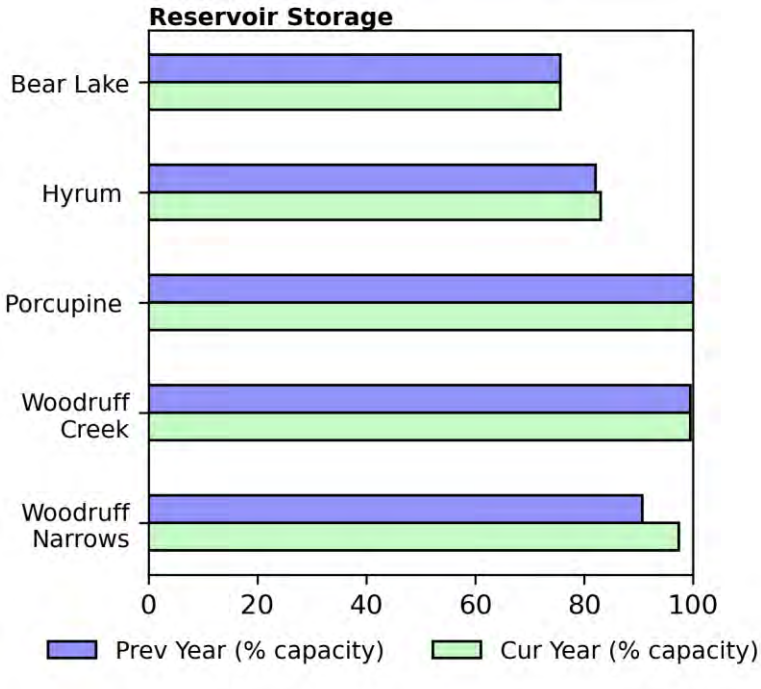
Bear | May 1, 2025

Snowpack in the Bear River Basin is below normal at 85% of median, compared to 106% at this time last year. Precipitation in April was well below normal at 55%, which brings the seasonal accumulation (October-April) to 100% of median. Soil moisture is at 77% saturation compared to 80% saturation last year. Reservoir storage is 76% of capacity, compared to 76% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 61% to 103% of normal. The Surface Water Supply Index percentiles are 74% for the Bear, 32% for the Little Bear, and 49% for Woodruff Narrows.



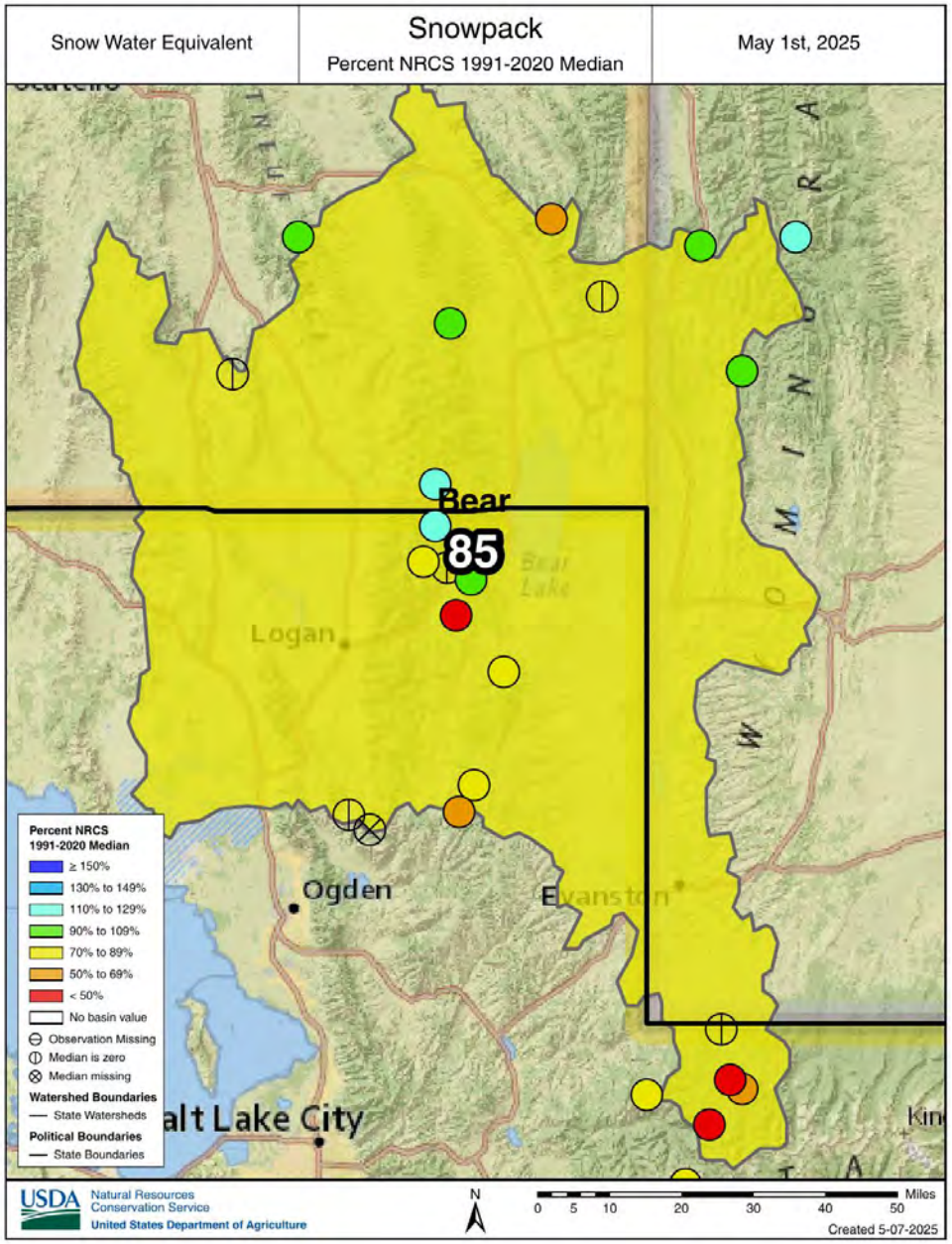


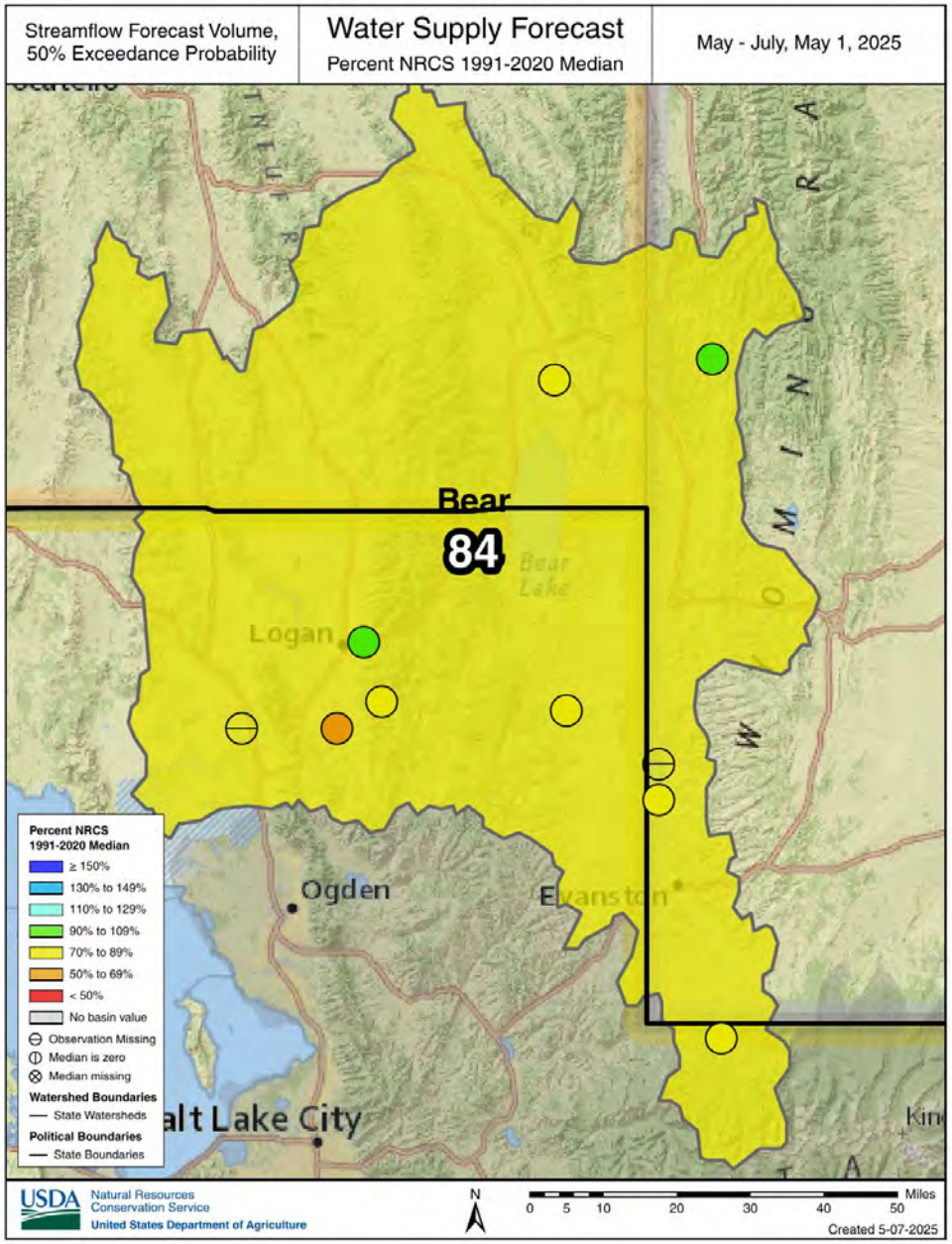




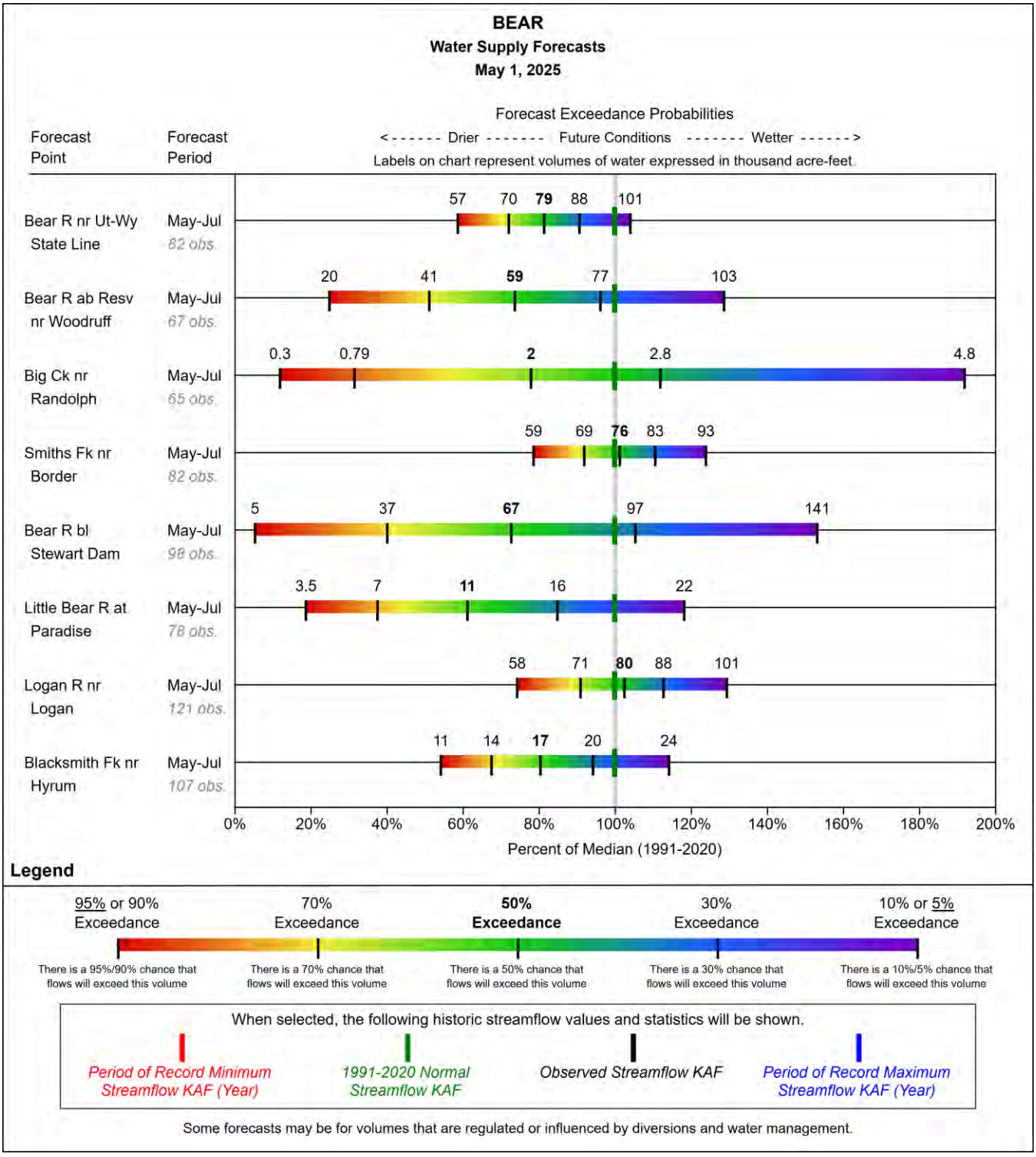
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Bear


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
May 1st, 2025
Bear
85
Logan
Ogden
Evanston
Bear Lake
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 5 10 20 30 40 50 Miles
Created 5-07-2025

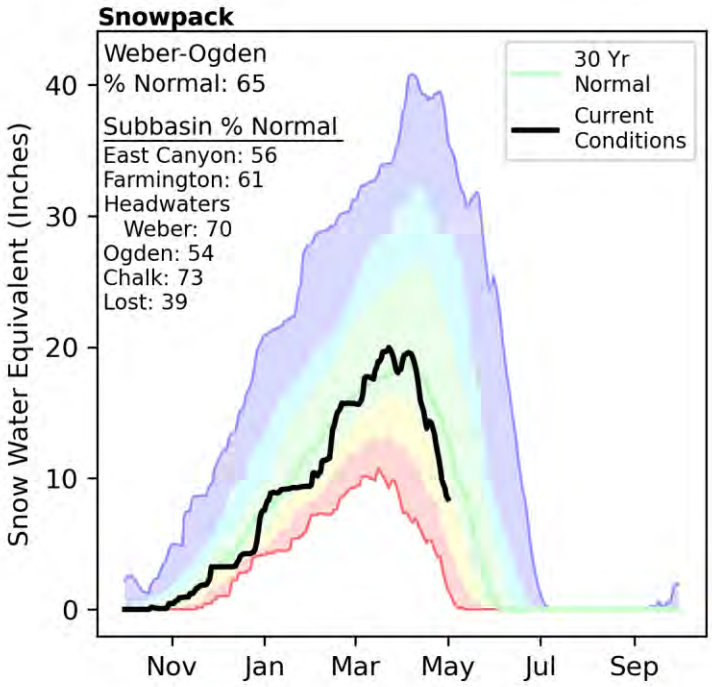

Streamflow Forecast Volume, 50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
May - July, May 1, 2025
Bear
84
Logan
Ogden
Evanston
Bear Lake
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 5 10 20 30 40 50 Miles
Created 5-07-2025

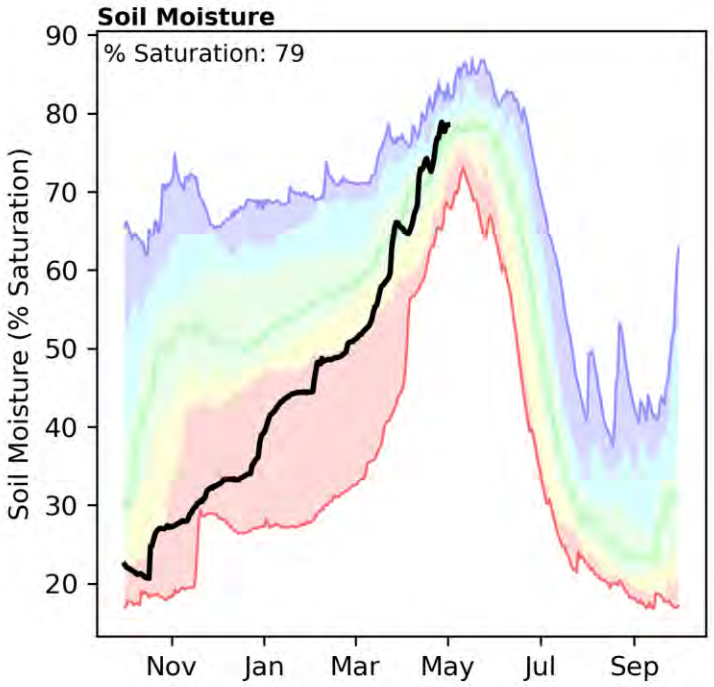
Bear

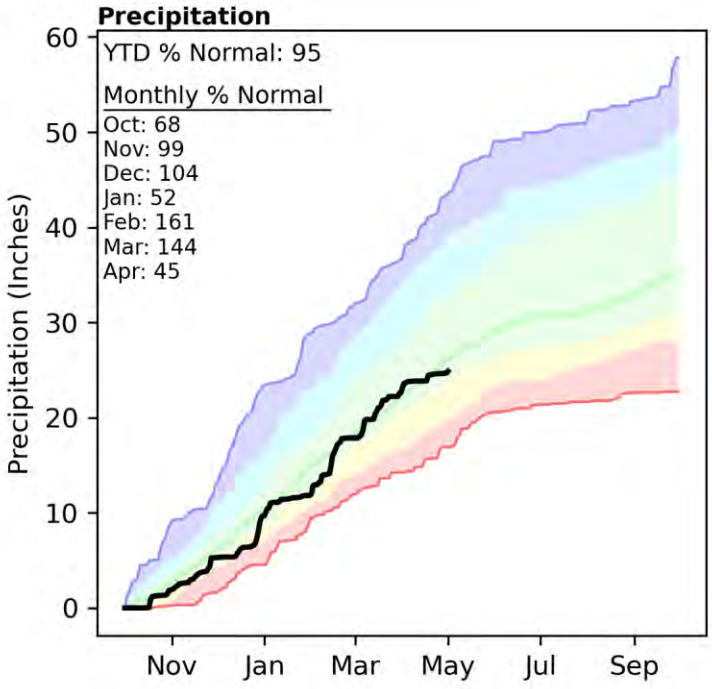

BEAR
Water Supply Forecasts
May 1, 2025
Forecast Exceedance Probabilities
<------- Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet
Forecast Point
Forecast Period
Bear R nr Ut-Wy State Line
May-Jul
82 obs.
57 70 79 88 101
Bear R ab Resv nr Woodruff
May-Jul
67 obs.
20 41 59 77 103
Big Ck nr Randolph
May-Jul
65 obs.
0.3 0.79 2 2.8 4.8
Smiths Fk nr Border
May-Jul
82 obs.
59 69 76 83 93
Bear R bl Stewart Dam
May-Jul
98 obs.
5 37 67 97 141
Little Bear R at Paradise
May-Jul
78 obs.
3.5 7 11 16 22
Logan R nr Logan
May-Jul
121 obs.
58 71 80 88 101
Blacksmith Fk nr Hyrum
May-Jul
107 obs.
11 14 17 20 24
0% 20% 40% 60% 80% 100% 120% 140% 160% 180% 200%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

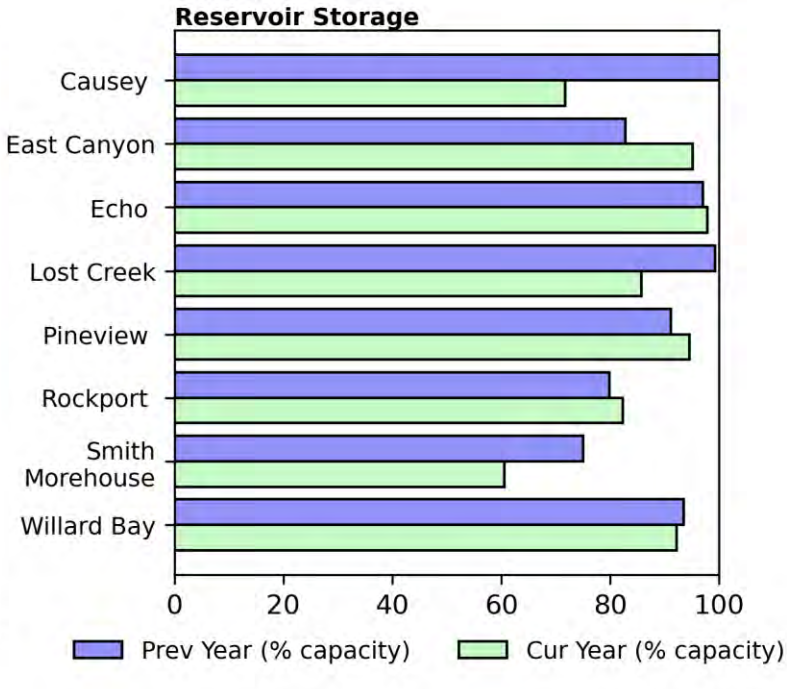
Weber-Ogden | May 1, 2025

Snowpack in the Weber and Ogden River Basins is well below normal at 65% of median, compared to 115% at this time last year. Precipitation in April was well below normal at 45%, which brings the seasonal accumulation (October-April) to 95% of median. Soil moisture is at 79% saturation compared to 82% saturation last year. Reservoir storage is 91% of capacity, compared to 91% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 65% to 91% of normal. The Surface Water Supply Index percentiles are 50% for the Weber, and 50% for the Ogden.



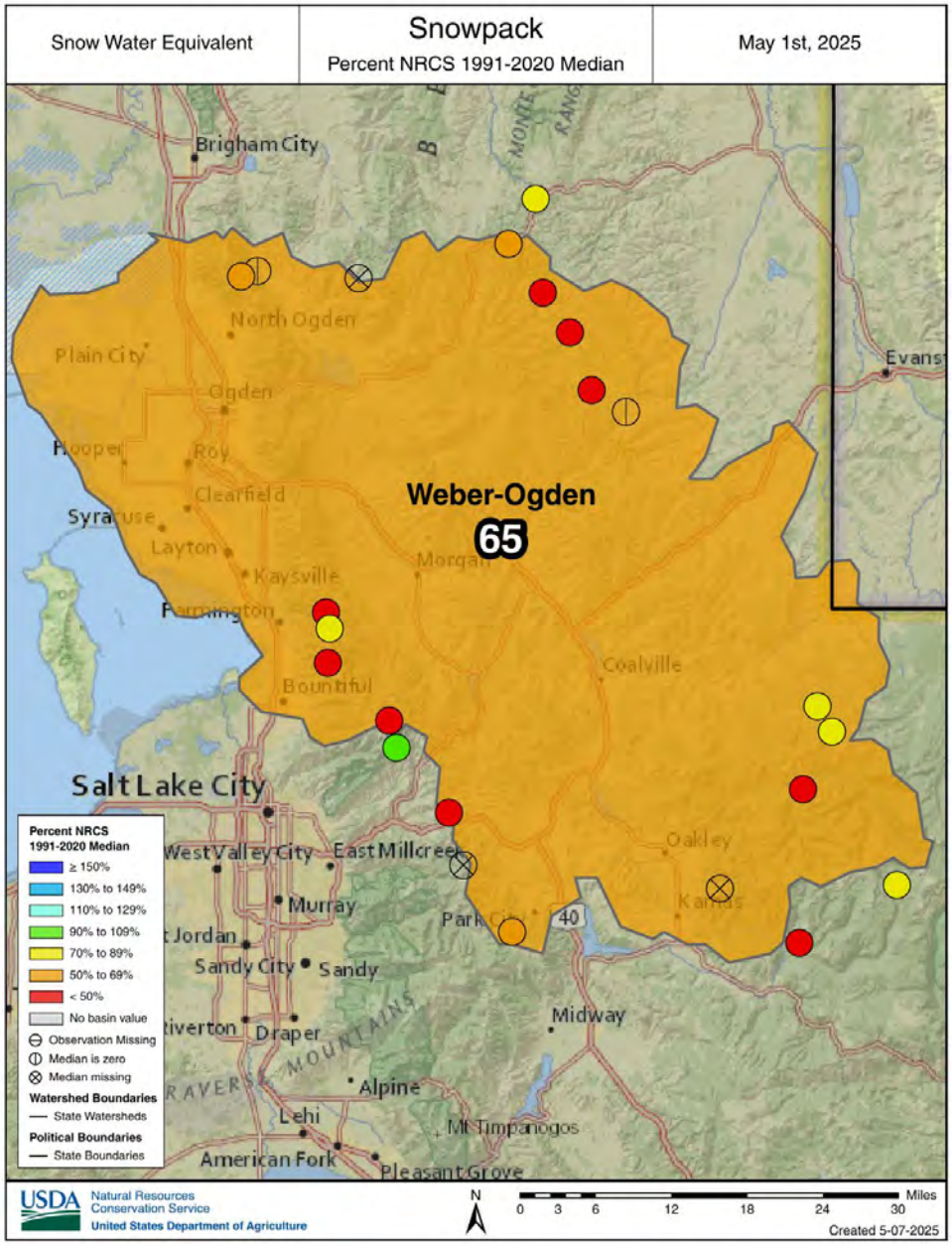


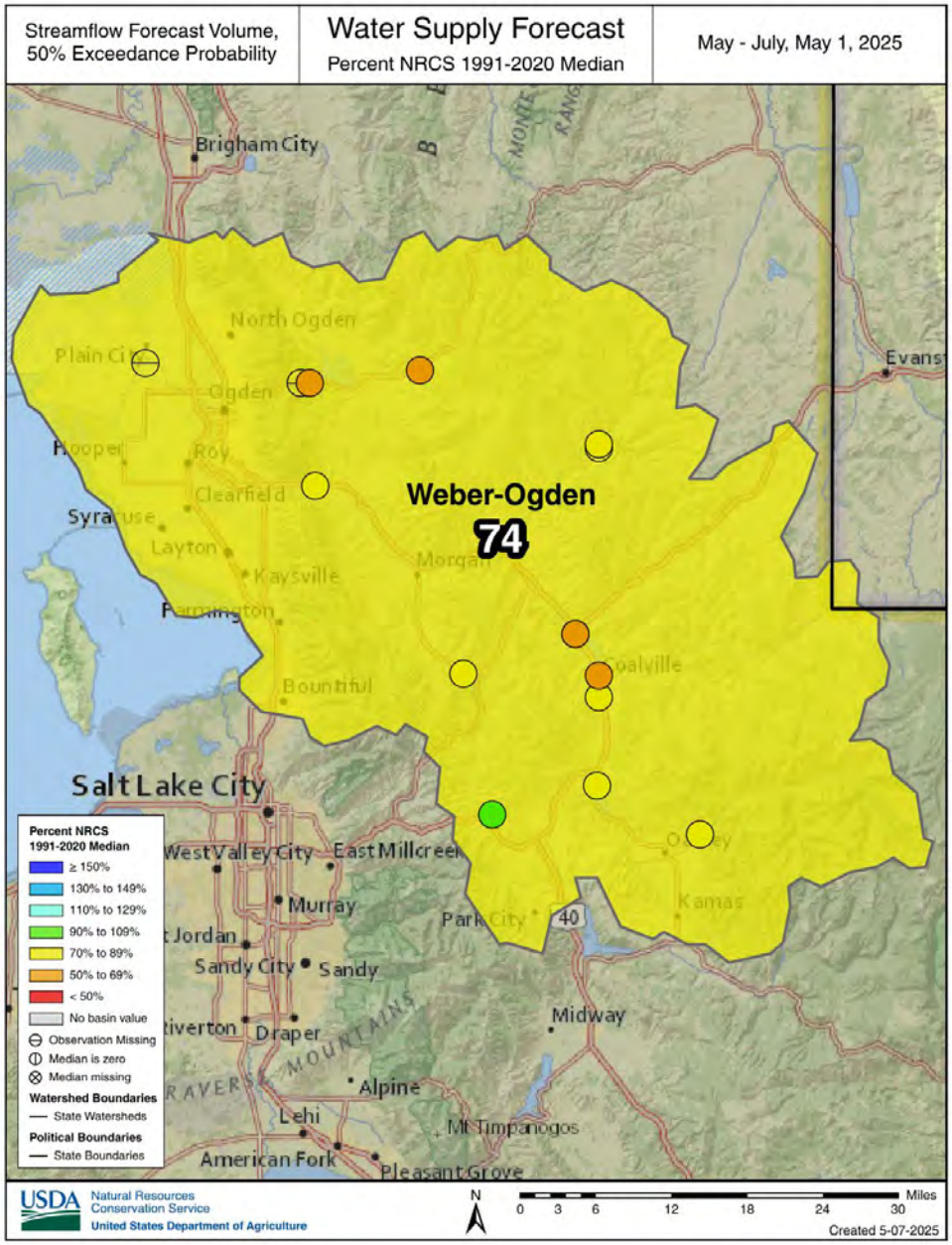




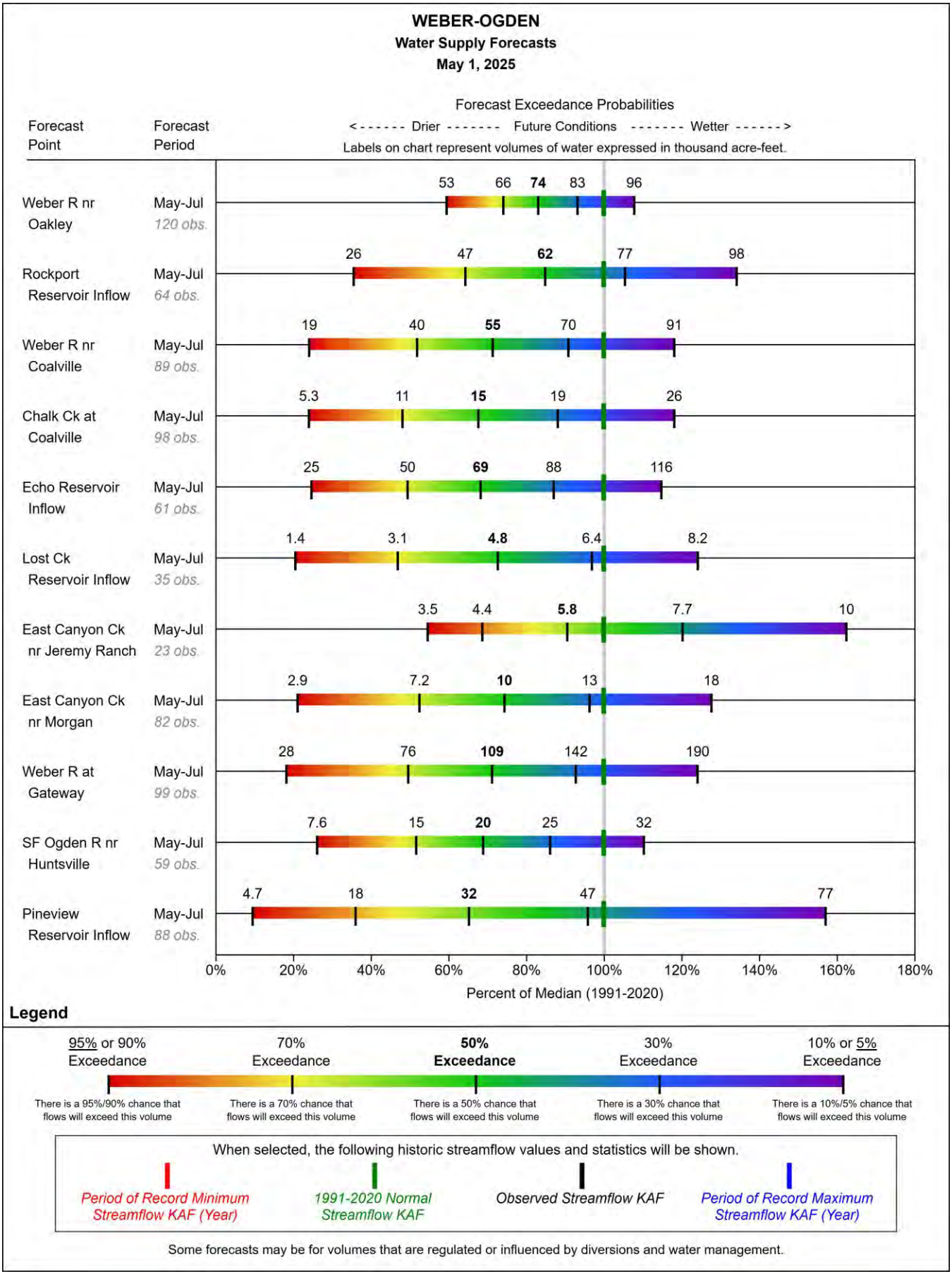
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Weber-Ogden


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
May 1st, 2025
Weber-Ogden
65
Brigham City
North Ogden
Plain City
Ogden
Hooper
Roy
Clearfield
Syracuse
Layton
Kaysville
Farmington
Bountiful
Morgan
Coalville
Salt Lake City
West Valley City
East Millcreek
Murray
Park City
Jordan
Sandy City
Sandy
Riverton
Draper
Midway
Alpine
Lehi
Mt Timpanogos
American Fork
Pleasant Grove
Oakley
Kamas
40
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30
Miles
Created 5-07-2025

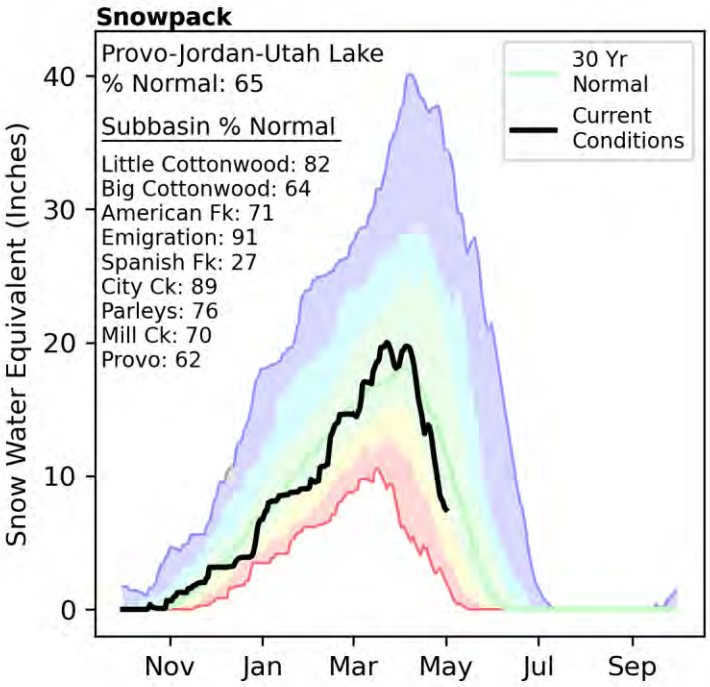

Streamflow Forecast Volume, 50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
May - July, May 1, 2025
Weber-Ogden
74
Brigham City
North Ogden
Ogden
Hooper
Roy
Clearfield
Layton
Kaysville
Bountiful
Morgan
Salt Lake City
West Valley City
East Millcreek
Murray
Park City
Jordan
Sandy City
Sandy
Midway
Alpine
Lehi
Mt Timpanogos
American Fork
Pleasant Grove
Kamas
40
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30
Miles
Created 5-07-2025

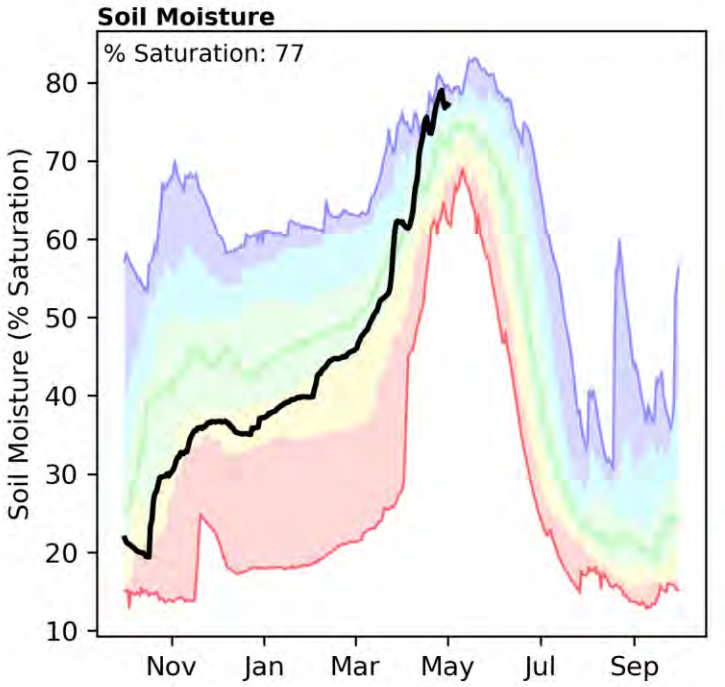
Weber-Ogden

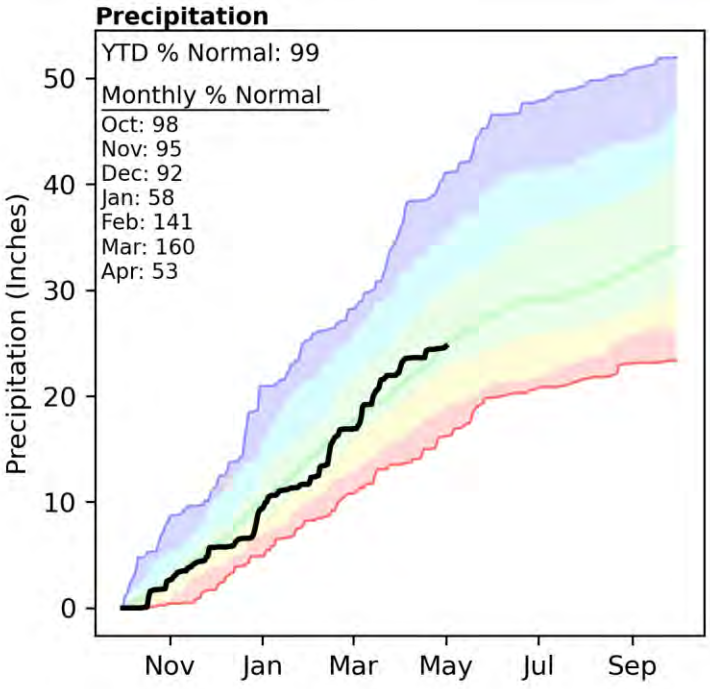

WEBER-OGDEN
Water Supply Forecasts
May 1, 2025
Forecast Exceedance Probabilities
<------- Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Weber R nr Oakley May-Jul 120 obs. 53 66 74 83 96
Rockport Reservoir Inflow May-Jul 64 obs. 26 47 62 77 98
Weber R nr Coalville May-Jul 89 obs. 19 40 55 70 91
Chalk Ck at Coalville May-Jul 98 obs. 5.3 11 15 19 26
Echo Reservoir Inflow May-Jul 61 obs. 25 50 69 88 116
Lost Ck Reservoir Inflow May-Jul 35 obs. 1.4 3.1 4.8 6.4 8.2
East Canyon Ck nr Jeremy Ranch May-Jul 23 obs. 3.5 4.4 5.8 7.7 10
East Canyon Ck nr Morgan May-Jul 82 obs. 2.9 7.2 10 13 18
Weber R at Gateway May-Jul 99 obs. 28 76 109 142 190
SF Ogden R nr Huntsville May-Jul 59 obs. 7.6 15 20 25 32
Pineview Reservoir Inflow May-Jul 88 obs. 4.7 18 32 47 77
0% 20% 40% 60% 80% 100% 120% 140% 160% 180%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

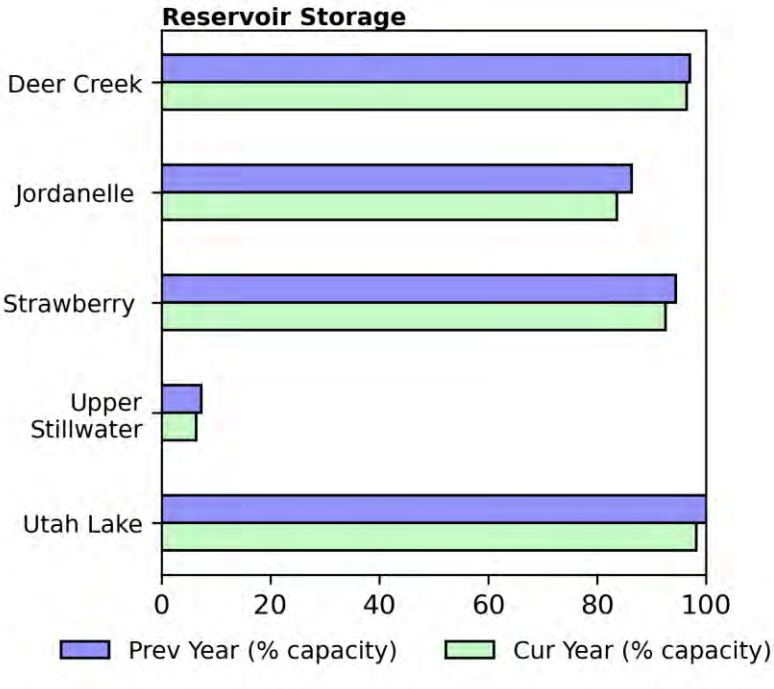
Provo-Jordan-Utah Lake | May 1, 2025

Snowpack in the Provo and Jordan River Basins is well below normal at 65% of median, compared to 106% at this time last year. Precipitation in April was well below normal at 53%, which brings the seasonal accumulation (October-April) to 99% of median. Soil moisture is at 77% saturation compared to 80% saturation last year. Reservoir storage is 92% of capacity, compared to 94% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 41% to 111% of normal. The Surface Water Supply Index percentile is 72% for the Provo.



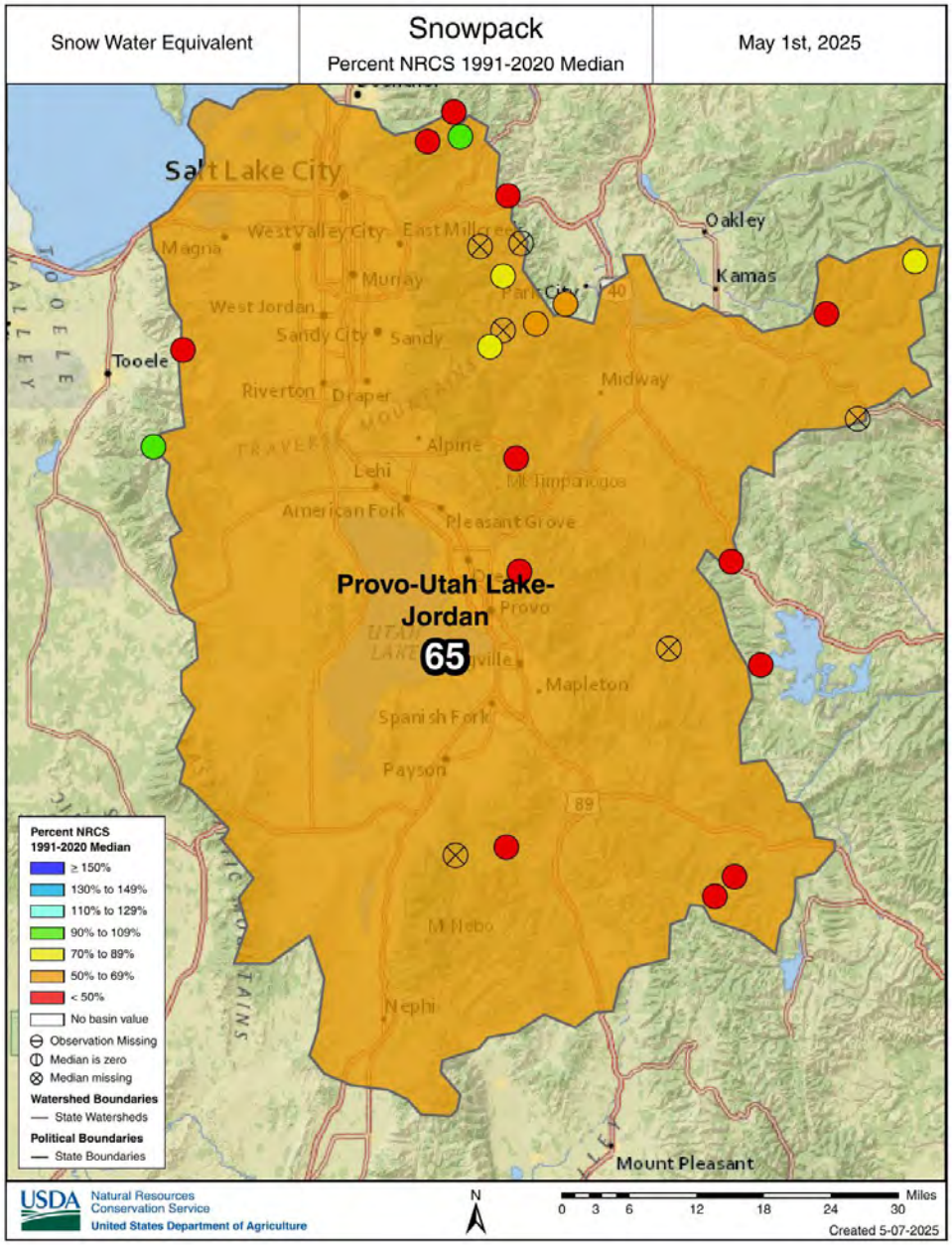


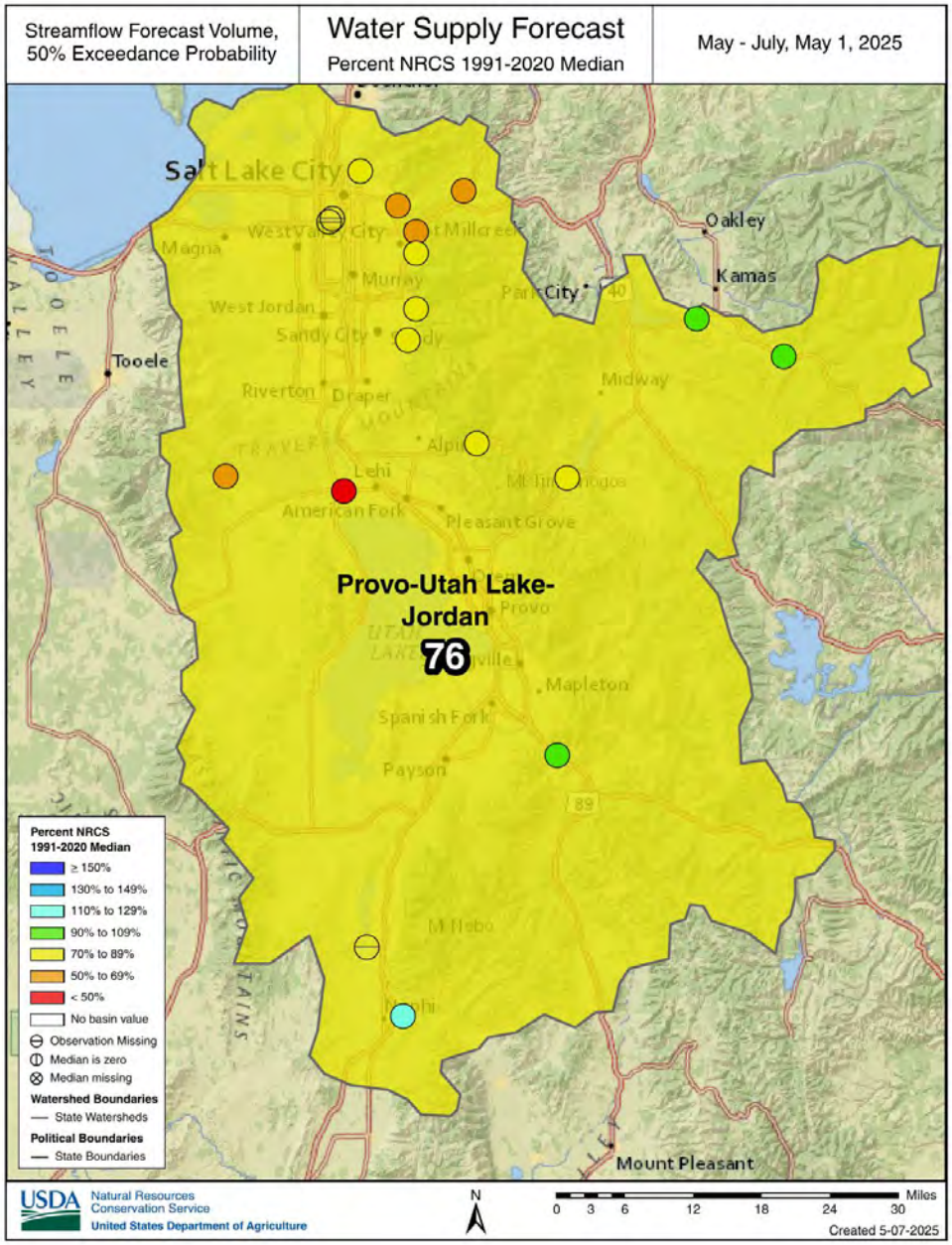




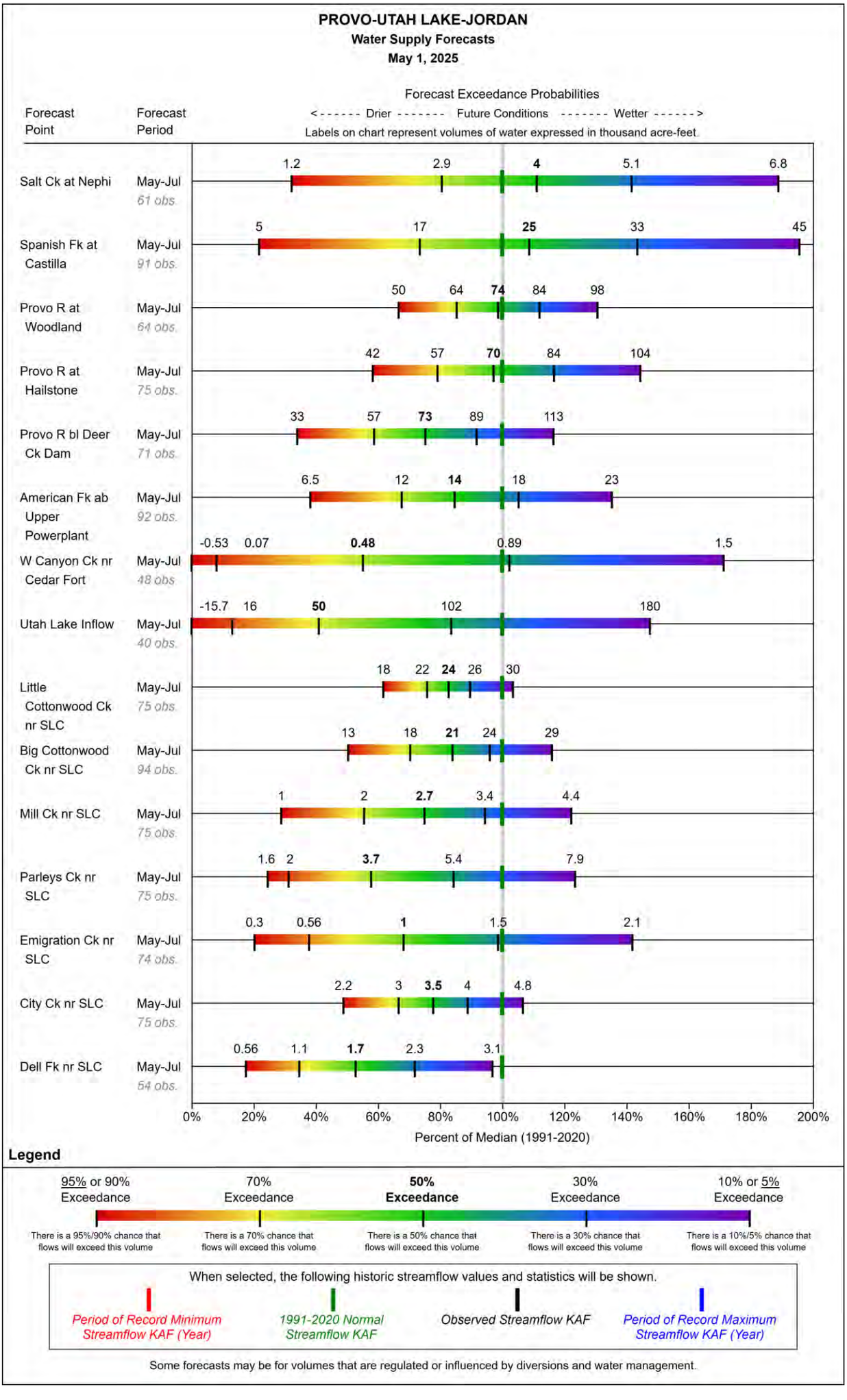
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Provo-Utah Lake-Jordan





Provo-Utah Lake-Jordan



Legend

95% or 90% Exceedance — There is a 95%/90% chance that flows will exceed this volume

70% Exceedance — There is a 70% chance that flows will exceed this volume

50% Exceedance — There is a 50% chance that flows will exceed this volume

30% Exceedance — There is a 30% chance that flows will exceed this volume

10% or 5% Exceedance — There is a 10%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)

1991-2020 Normal Streamflow KAF

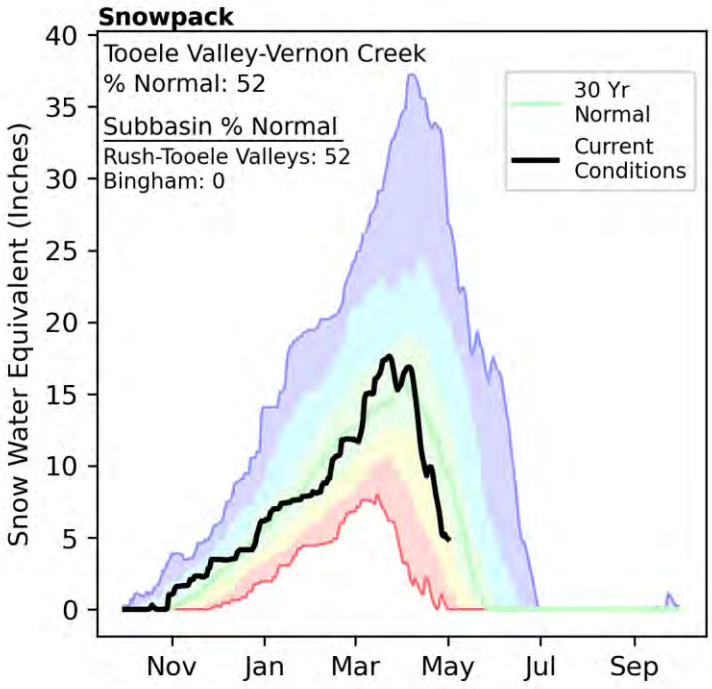
Observed Streamflow KAF

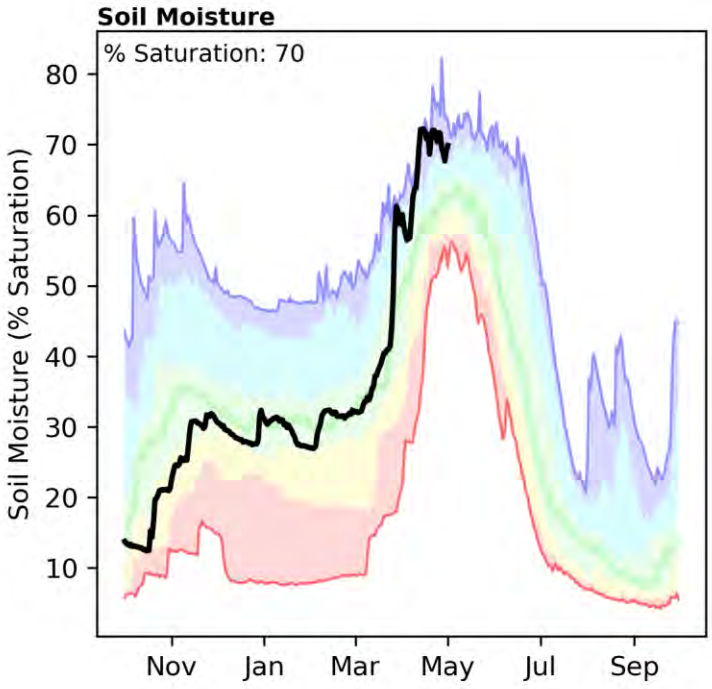
Period of Record Maximum Streamflow KAF (Year)

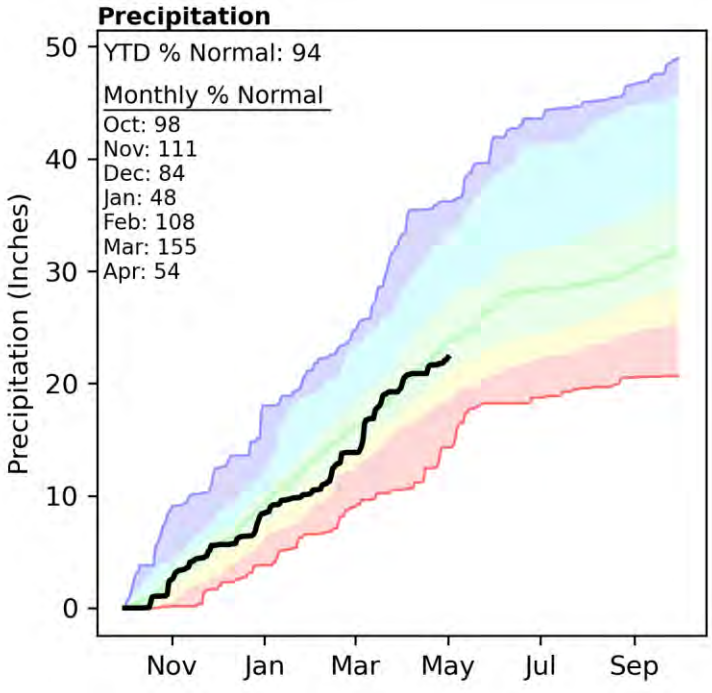
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

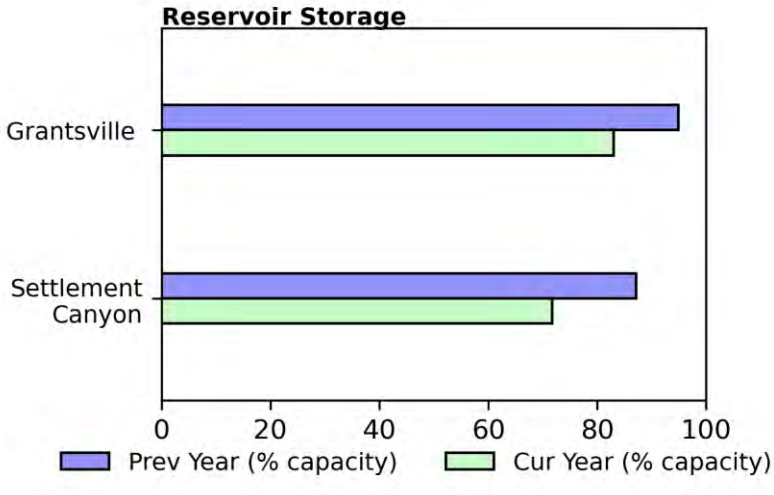
Tooele Valley-Vernon Creek | May 1, 2025

Snowpack in the Tooele Valley and West Desert Region is well below normal at 52% of median, compared to 99% at this time last year. Precipitation in April was well below normal at 54%, which brings the seasonal accumulation (October-April) to 94% of median. Soil moisture is at 70% saturation compared to 73% saturation last year. Reservoir storage is 80% of capacity, compared to 93% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 70% to 81% of normal.



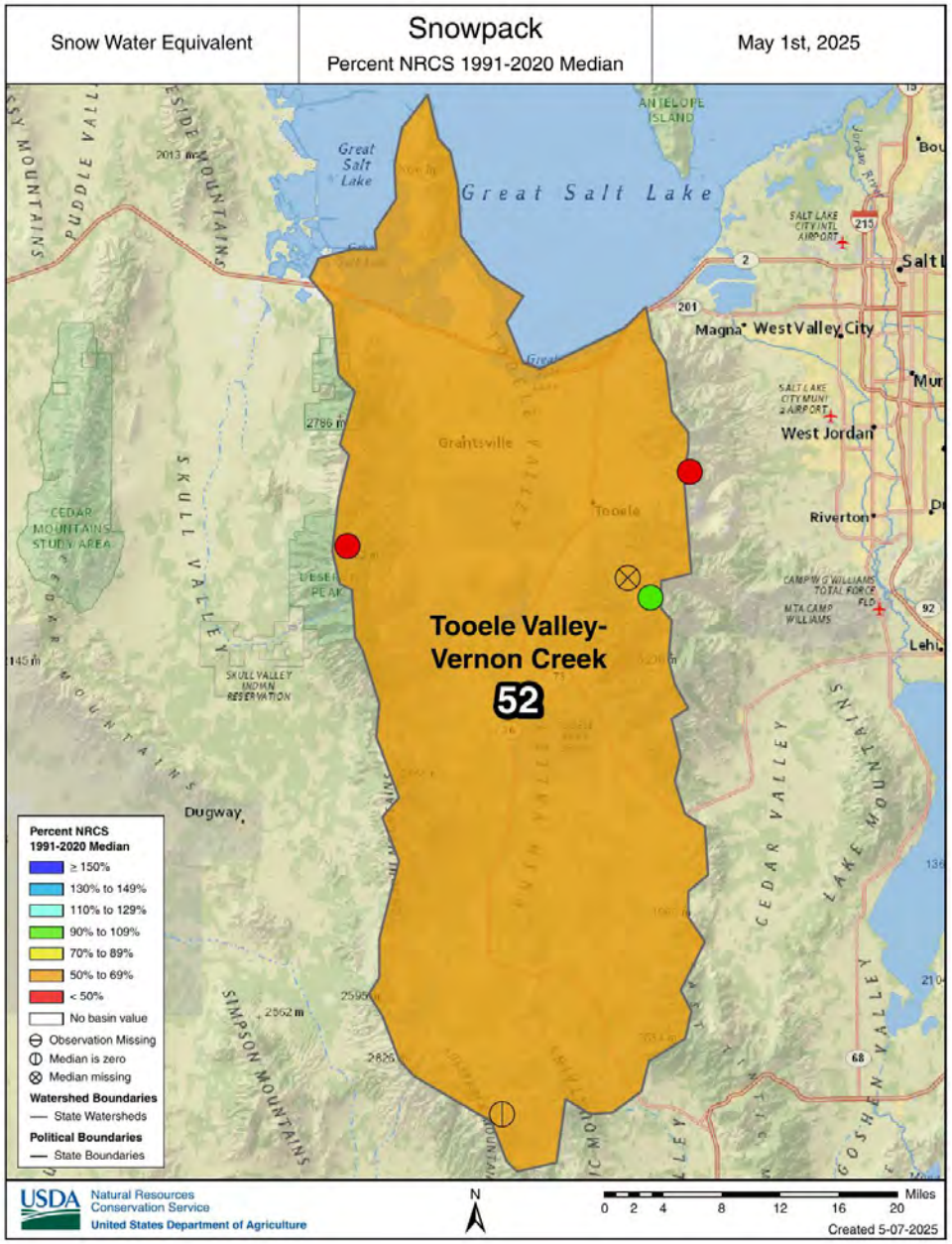


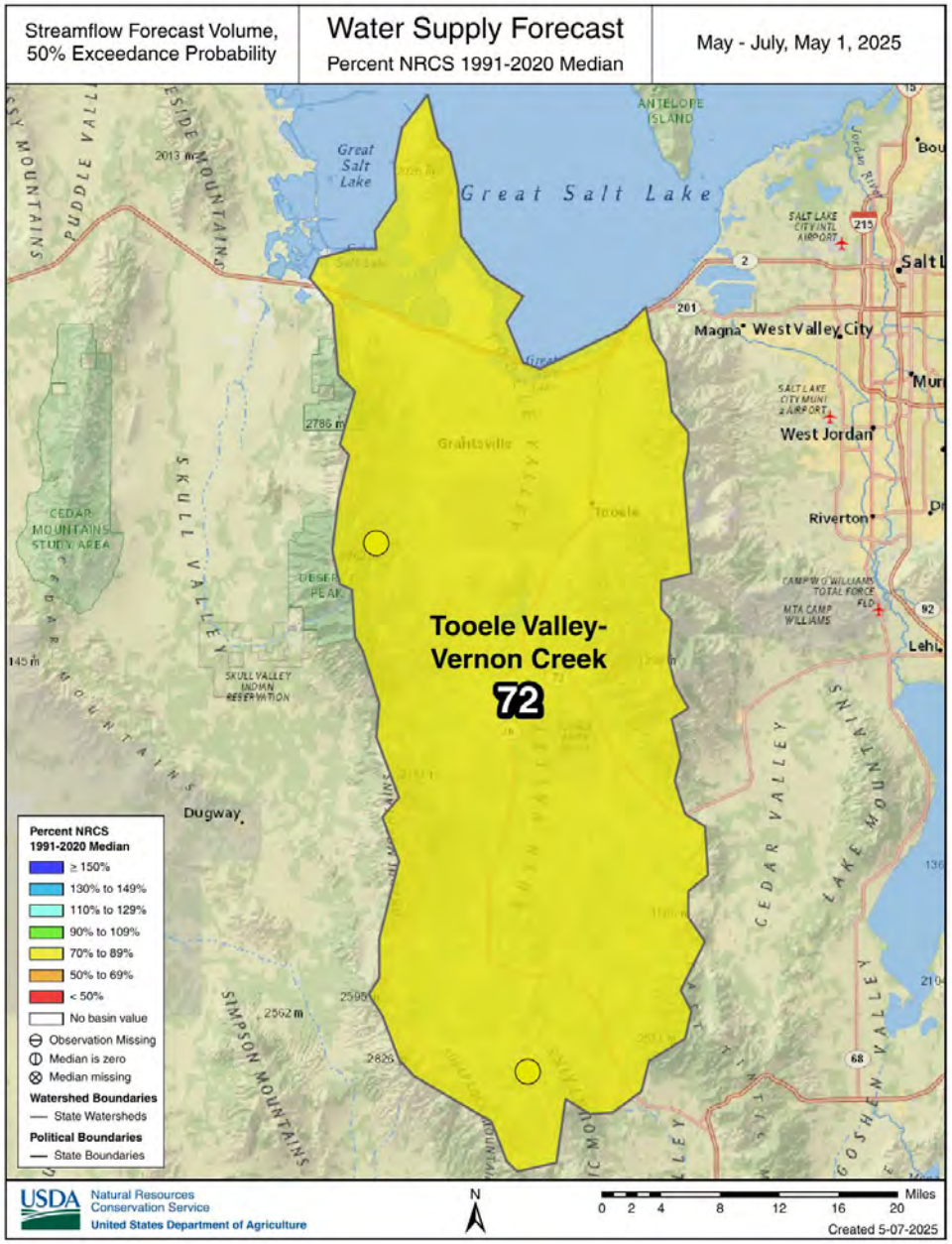




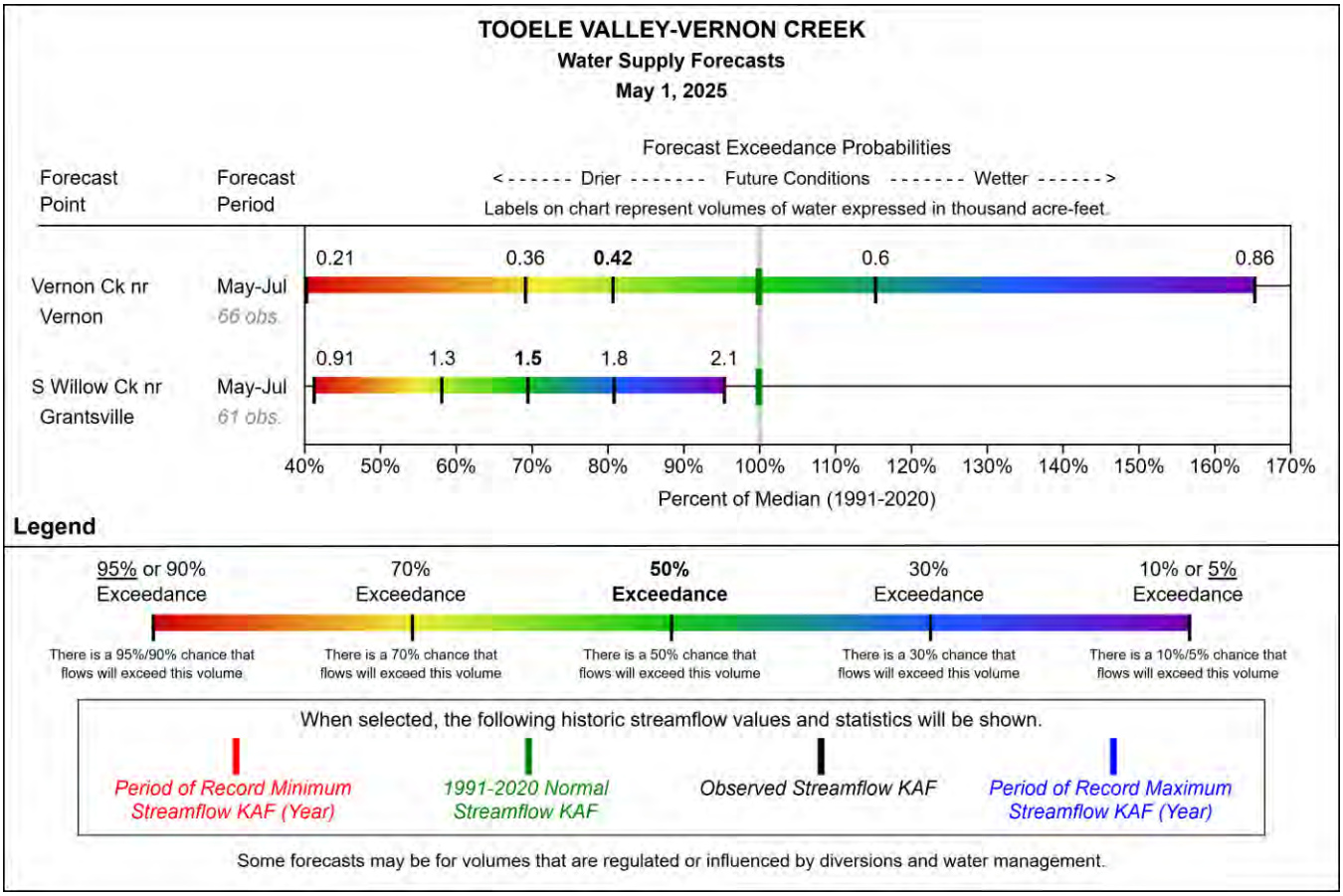
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Tooele Valley-Vernon Creek



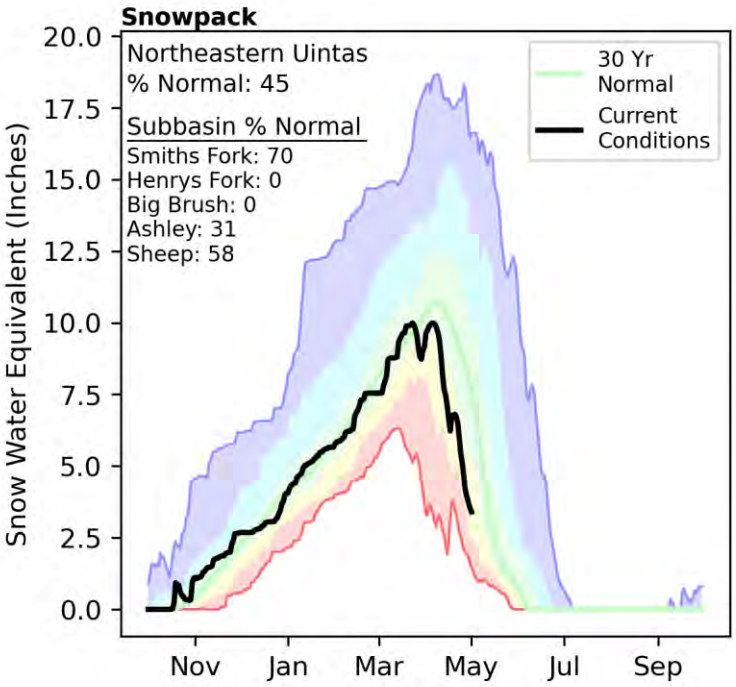


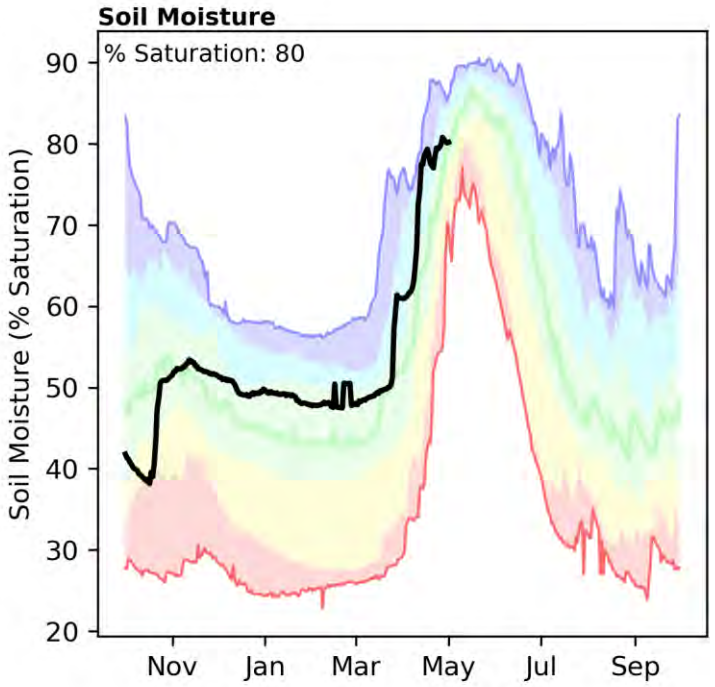
Tooele Valley-Vernon Creek

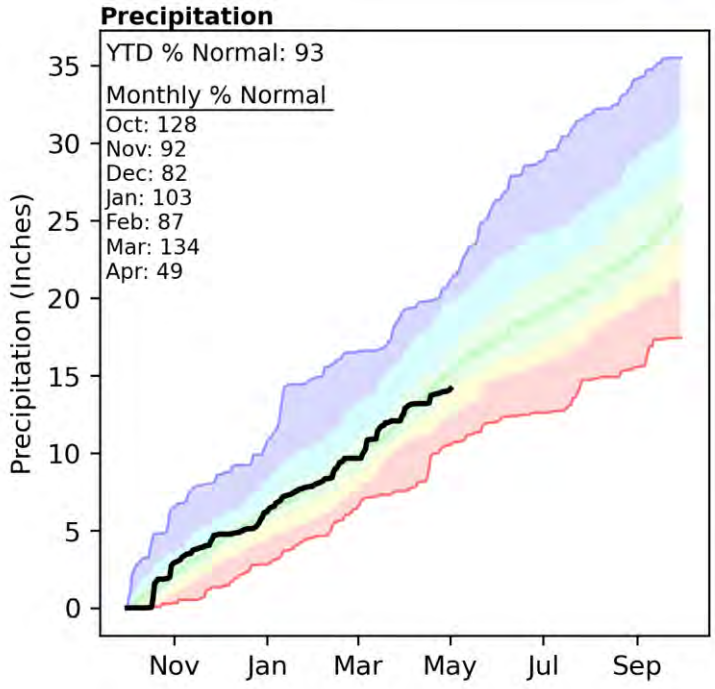


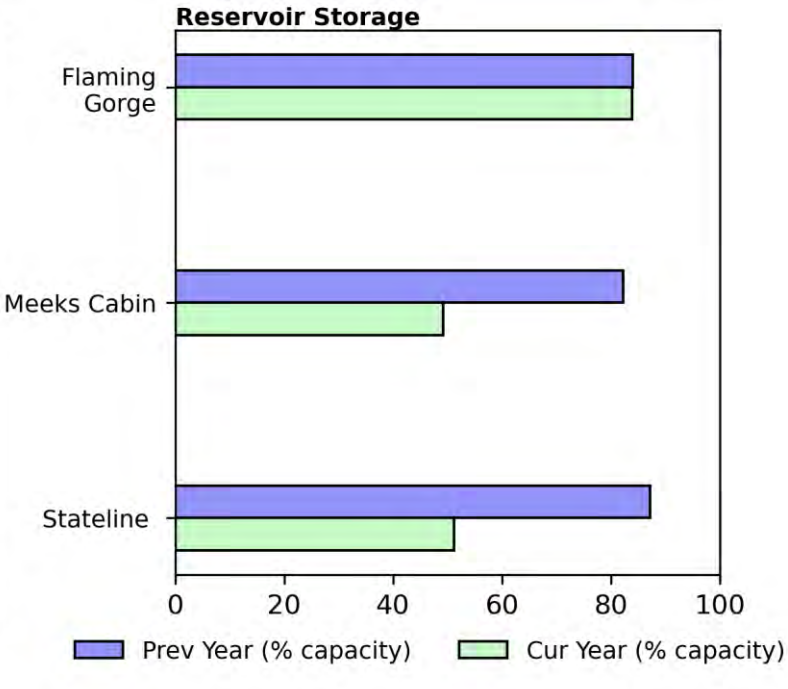
Northeastern Uintas | May 1, 2025

Snowpack in the Northeastern Uintas is well below normal at 45% of median, compared to 70% at this time last year. Precipitation in April was well below normal at 49%, which brings the seasonal accumulation (October-April) to 93% of median. Soil moisture is at 80% saturation compared to 84% saturation last year. Reservoir storage is 83% of capacity, compared to 84% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 55% to 80% of normal. The Surface Water Supply Index percentiles are 21% for the Blacks Fork, and 19% for the Smiths Fork.



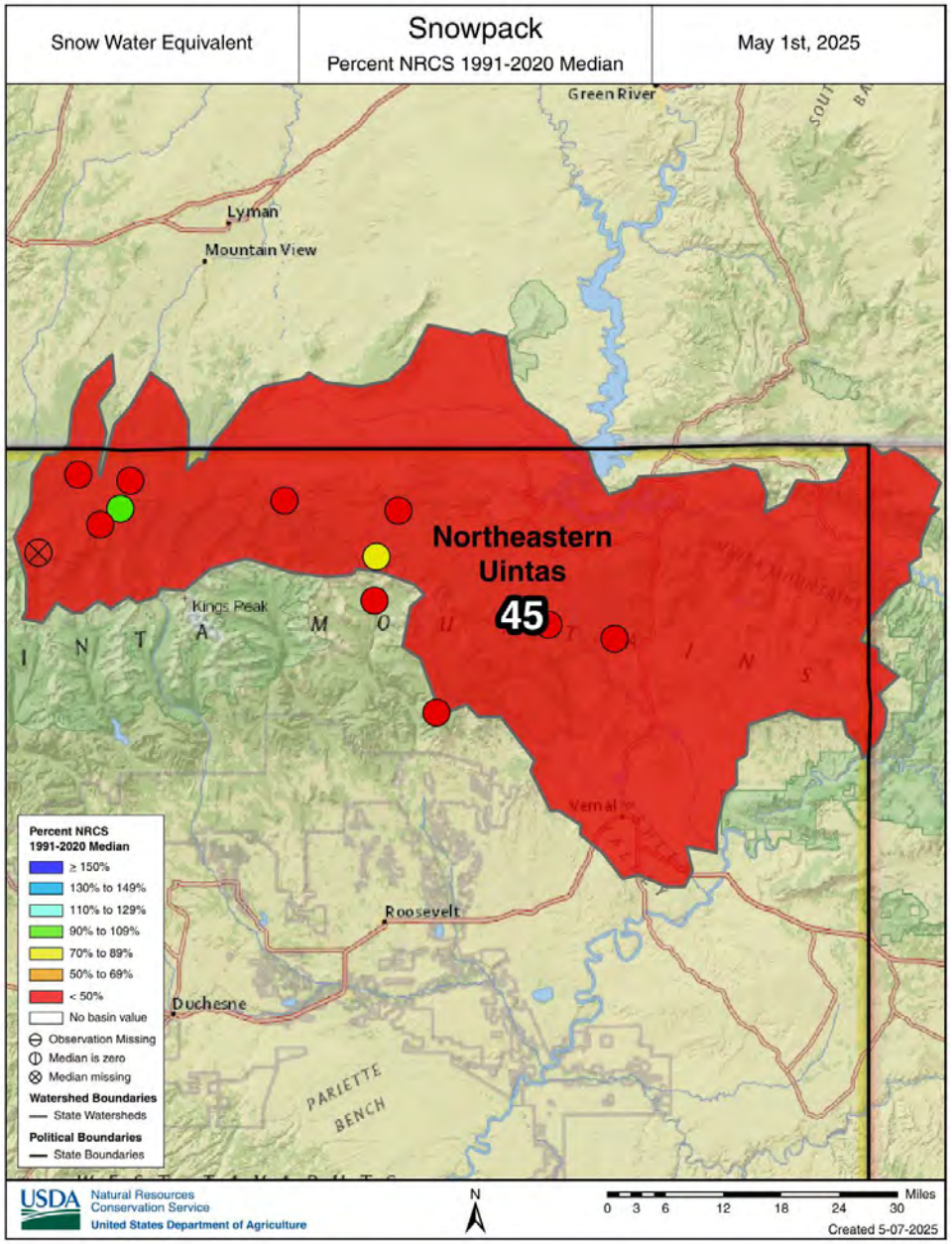


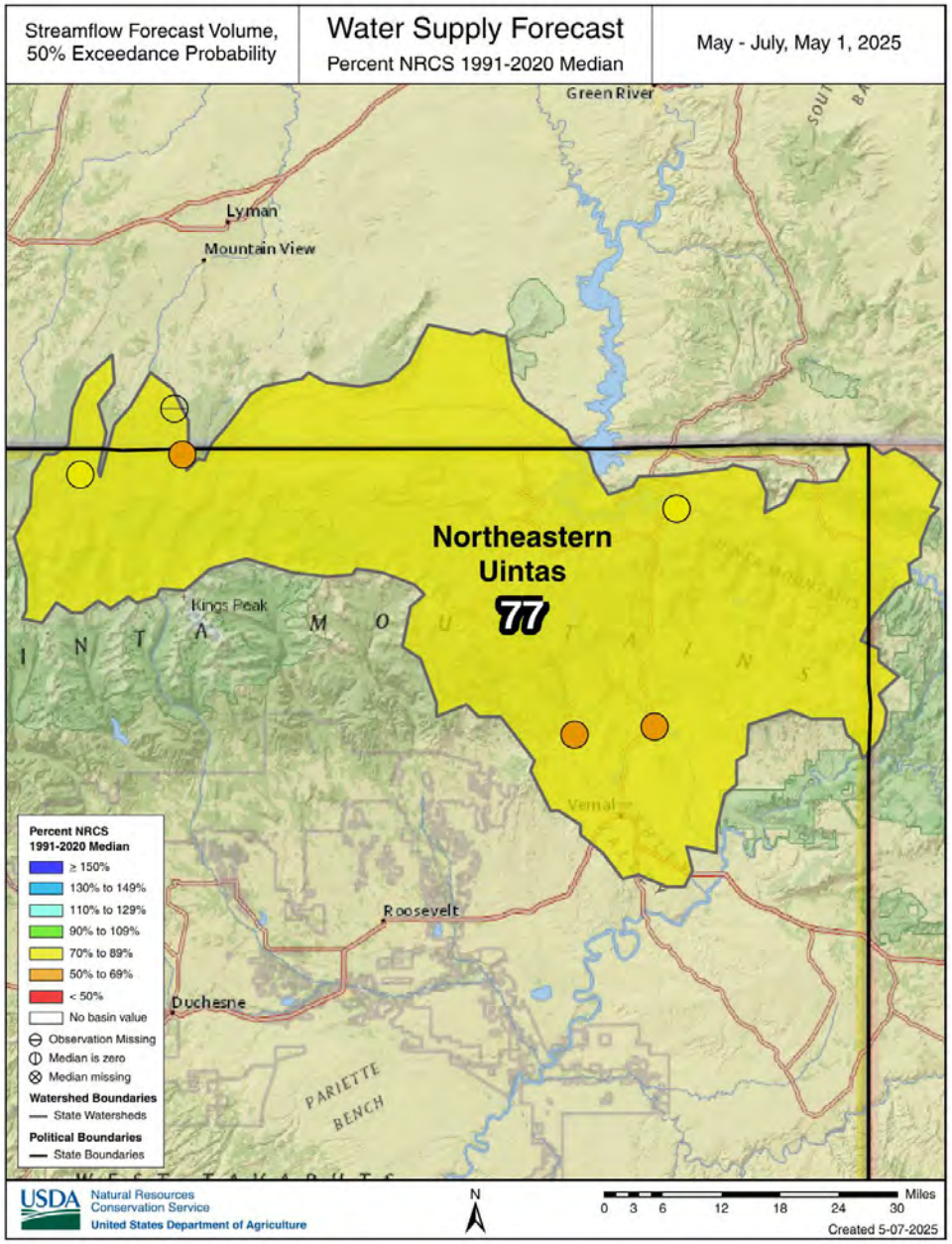




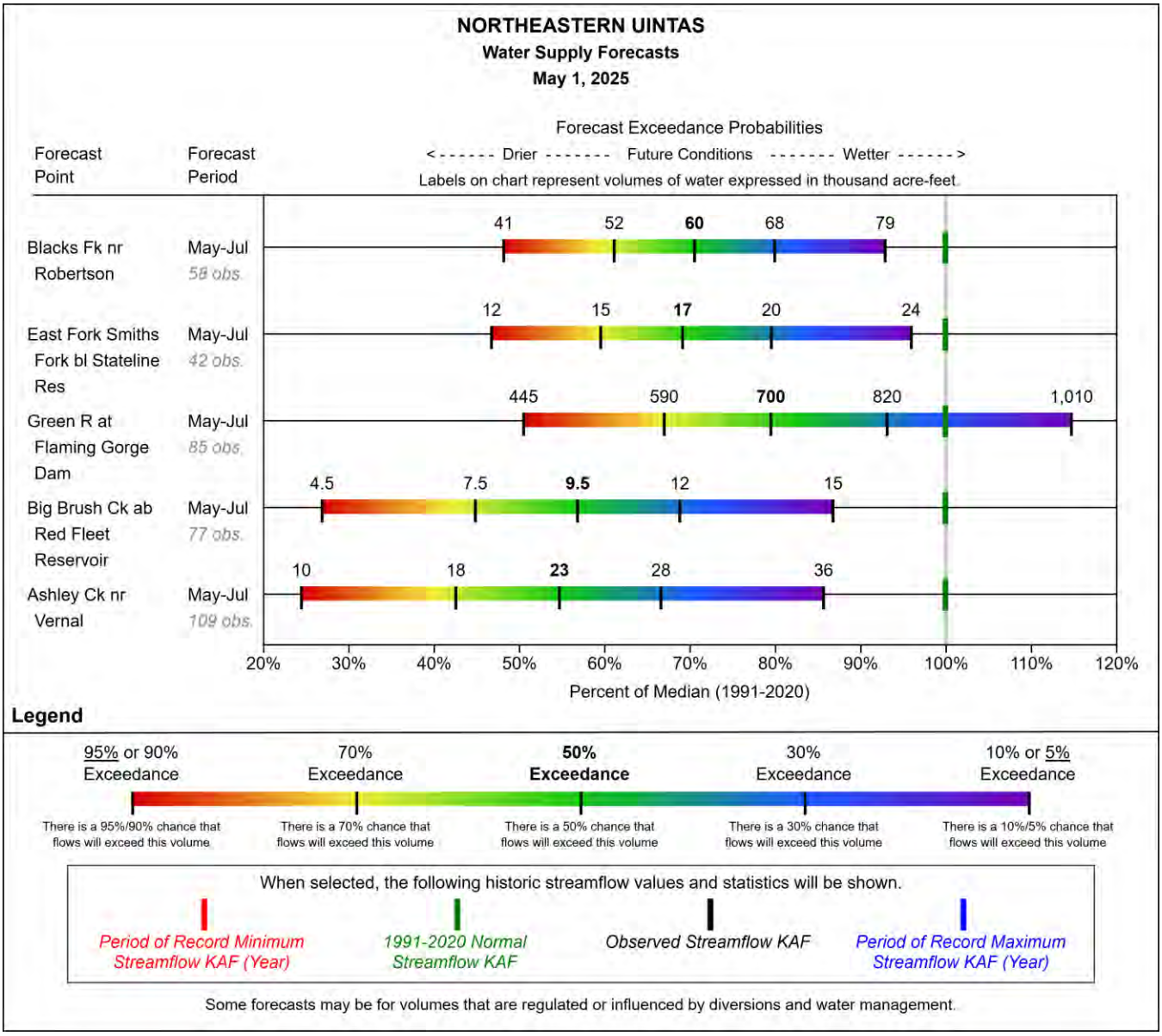
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Northeastern Uintas



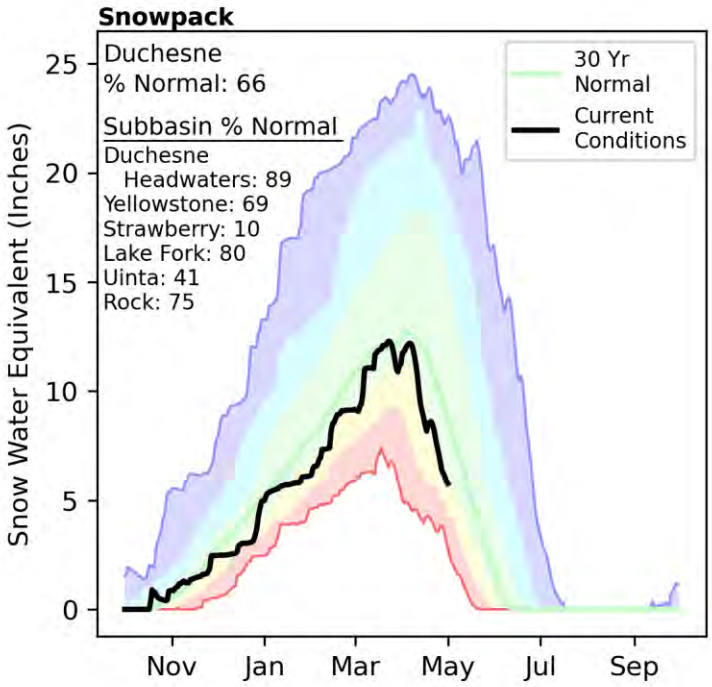


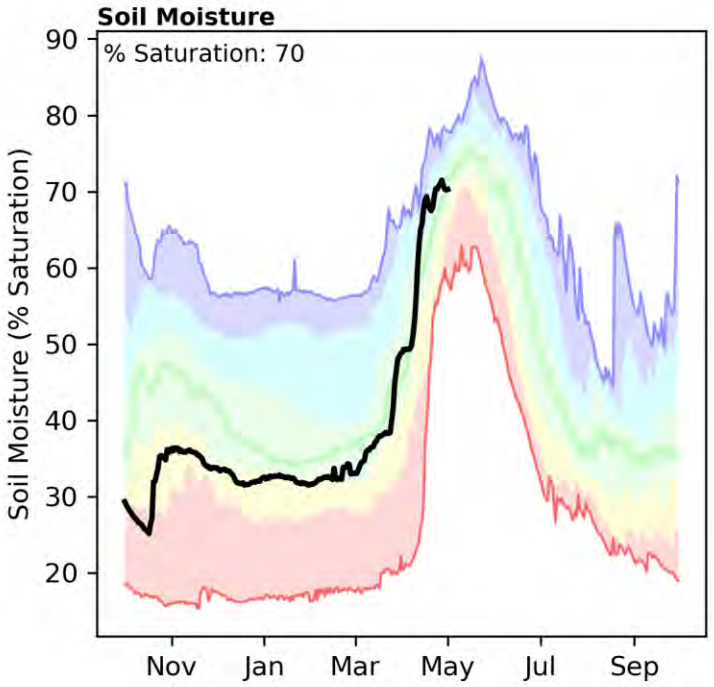
Northeastern Uintas

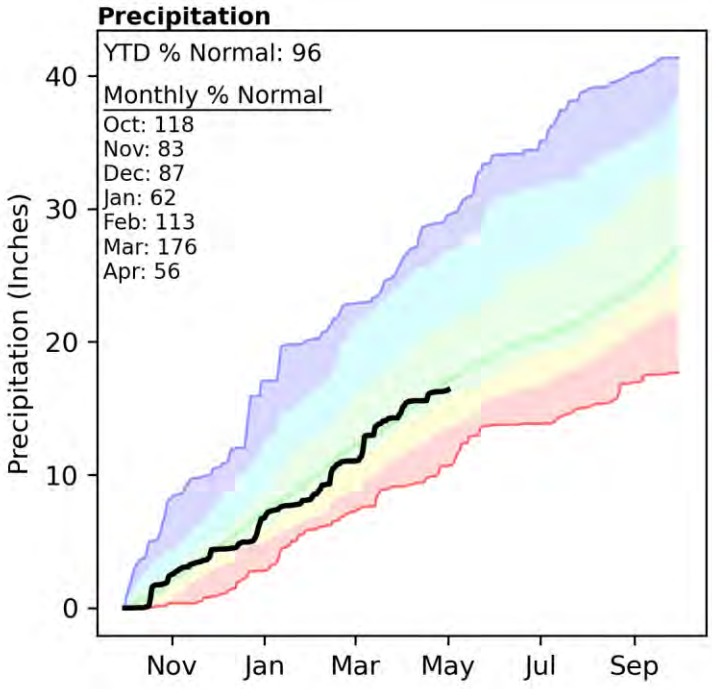


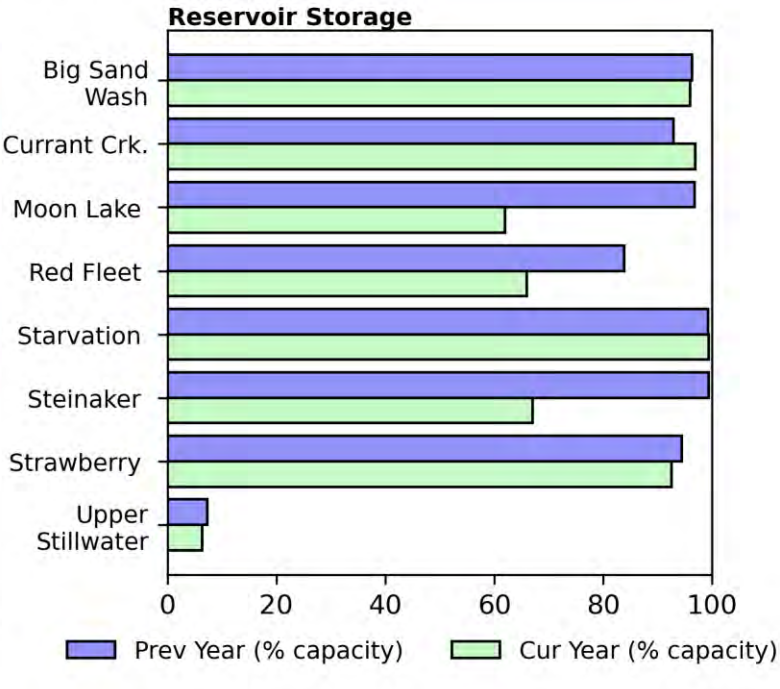
Duchesne | May 1, 2025

Snowpack in the Duchesne River Basin is well below normal at 66% of median, compared to 97% at this time last year. Precipitation in April was well below normal at 56%, which brings the seasonal accumulation (October-April) to 96% of median. Soil moisture is at 70% saturation compared to 73% saturation last year. Reservoir storage is 89% of capacity, compared to 93% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 54% to 100% of normal. The Surface Water Supply Index percentiles are 30% for the Western Uintas, and 15% for the Eastern Uintas.



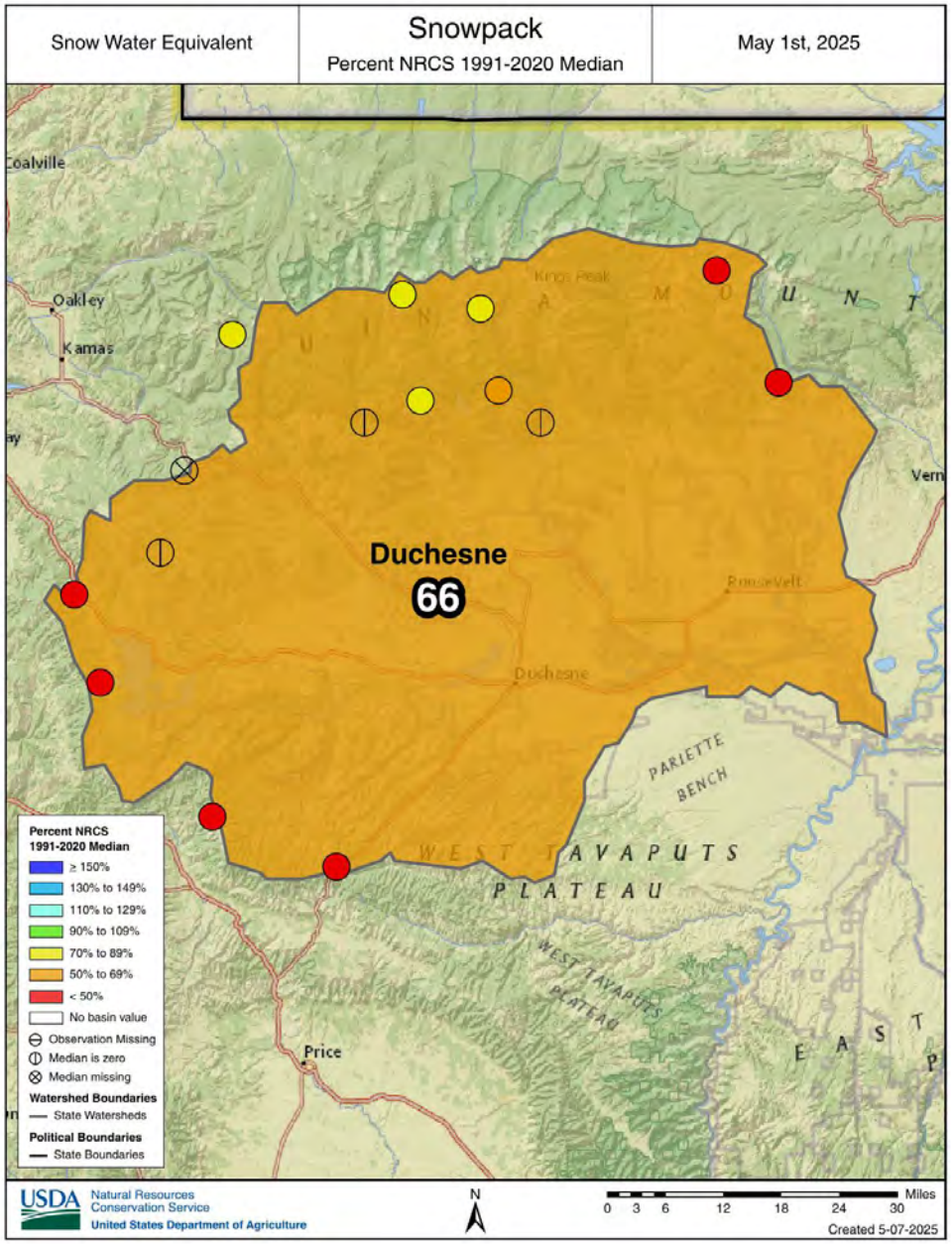


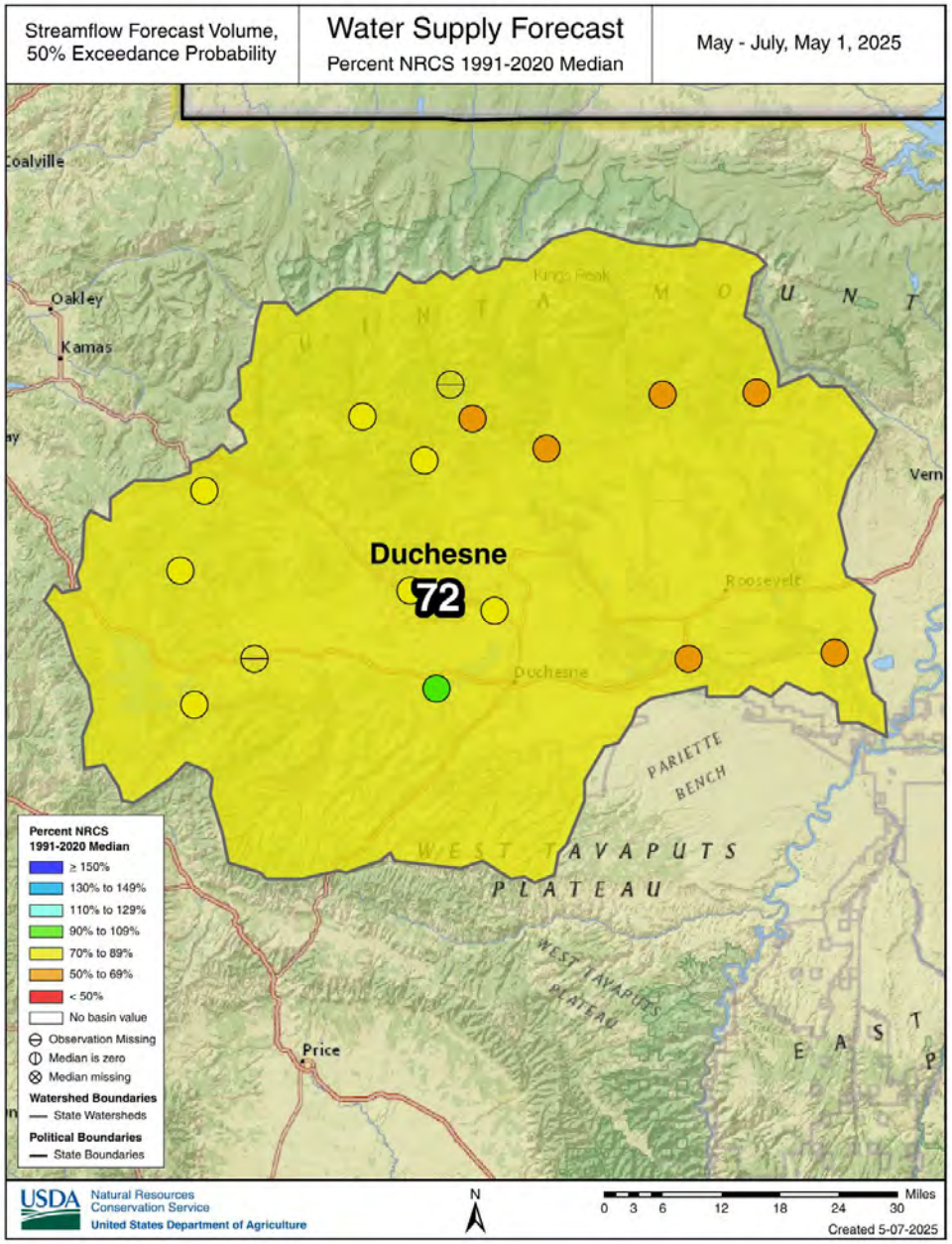




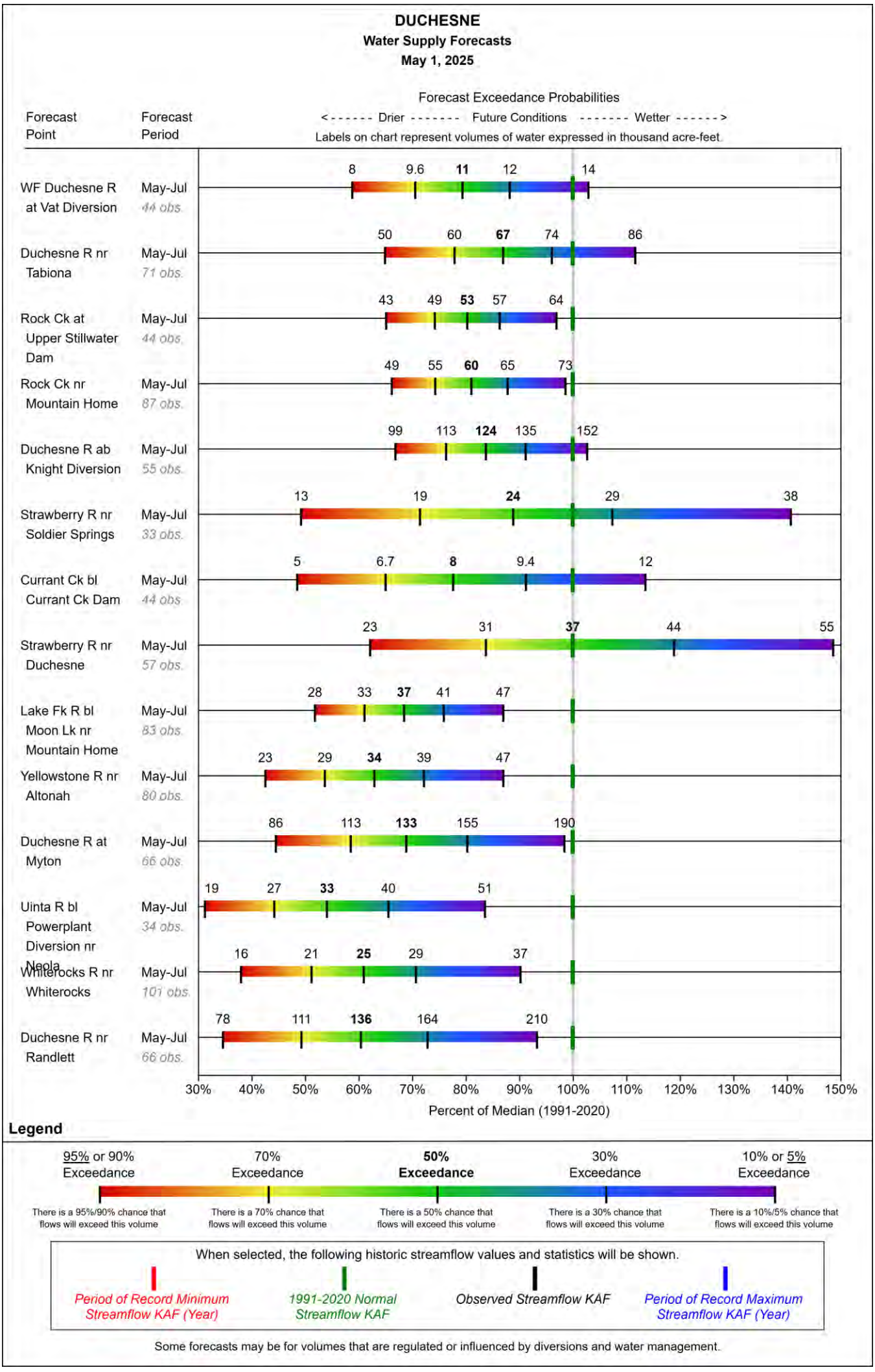
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Duchesne


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
May 1st, 2025
Duchesne
66
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 3 6 12 18 24 30
Created 5-07-2025


Streamflow Forecast Volume, 50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
May - July, May 1, 2025
Duchesne
72
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 3 6 12 18 24 30
Created 5-07-2025

Duchesne



Legend

95% or 90% Exceedance — There is a 95%/90% chance that flows will exceed this volume

70% Exceedance — There is a 70% chance that flows will exceed this volume

50% Exceedance — There is a 50% chance that flows will exceed this volume

30% Exceedance — There is a 30% chance that flows will exceed this volume

10% or 5% Exceedance — There is a 10%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)

1991-2020 Normal Streamflow KAF

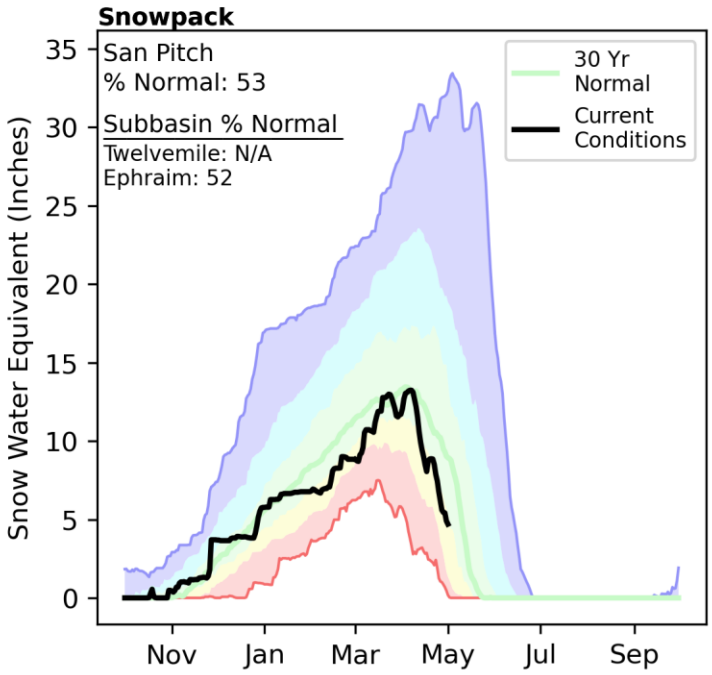
Observed Streamflow KAF

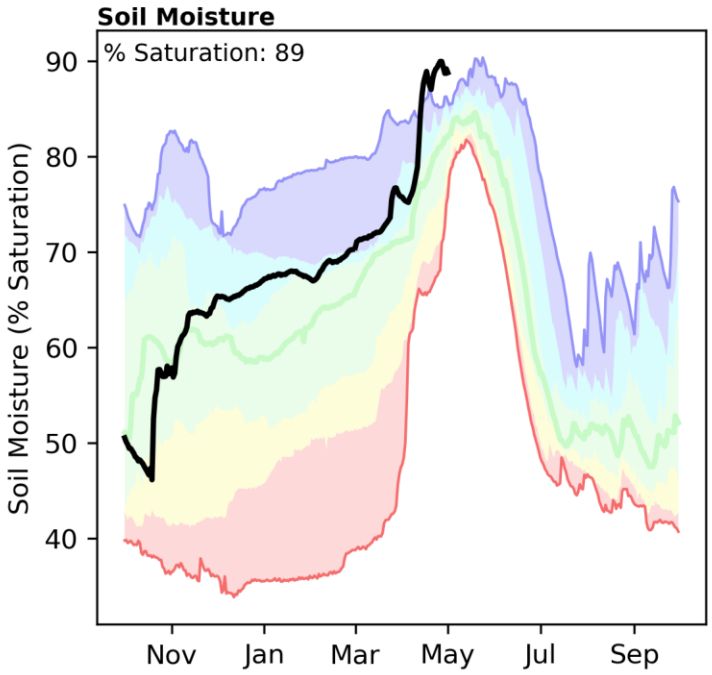
Period of Record Maximum Streamflow KAF (Year)

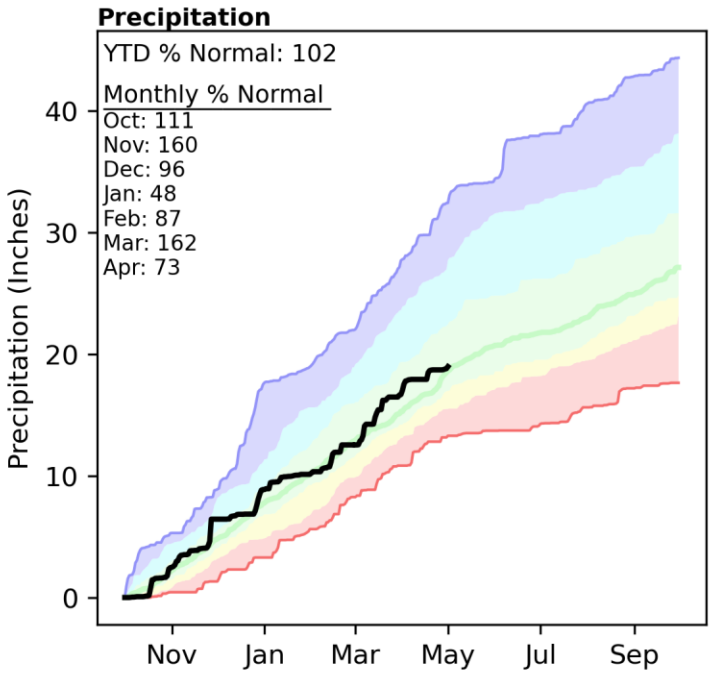
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

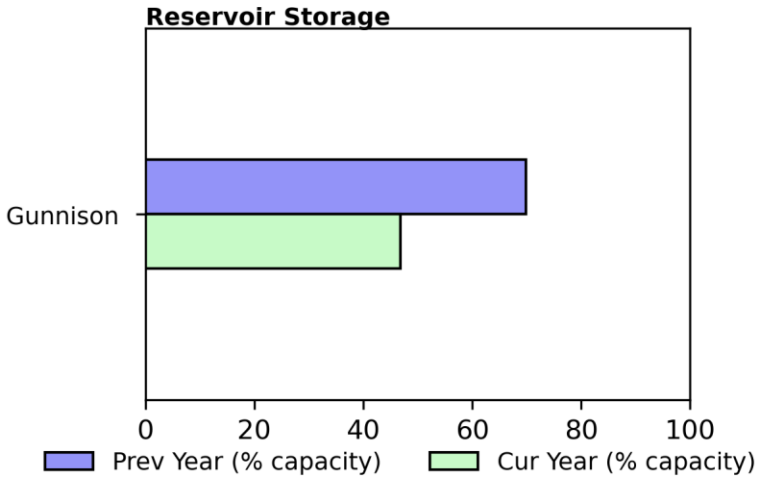
San Pitch | May 1, 2025

Snowpack in the San Pitch River Basin is well below normal at 53% of median, compared to 97% at this time last year. Precipitation in April was below normal at 73%, which brings the seasonal accumulation (October-April) to 102% of median. Soil moisture is at 89% saturation compared to 82% saturation last year. Reservoir storage is 46% of capacity, compared to 69% last year. The forecast streamflow volume (50% exceedence, May-July) for Manti Creek is 76% of normal The Surface Water Supply Index percentile is 9% for the San Pitch.



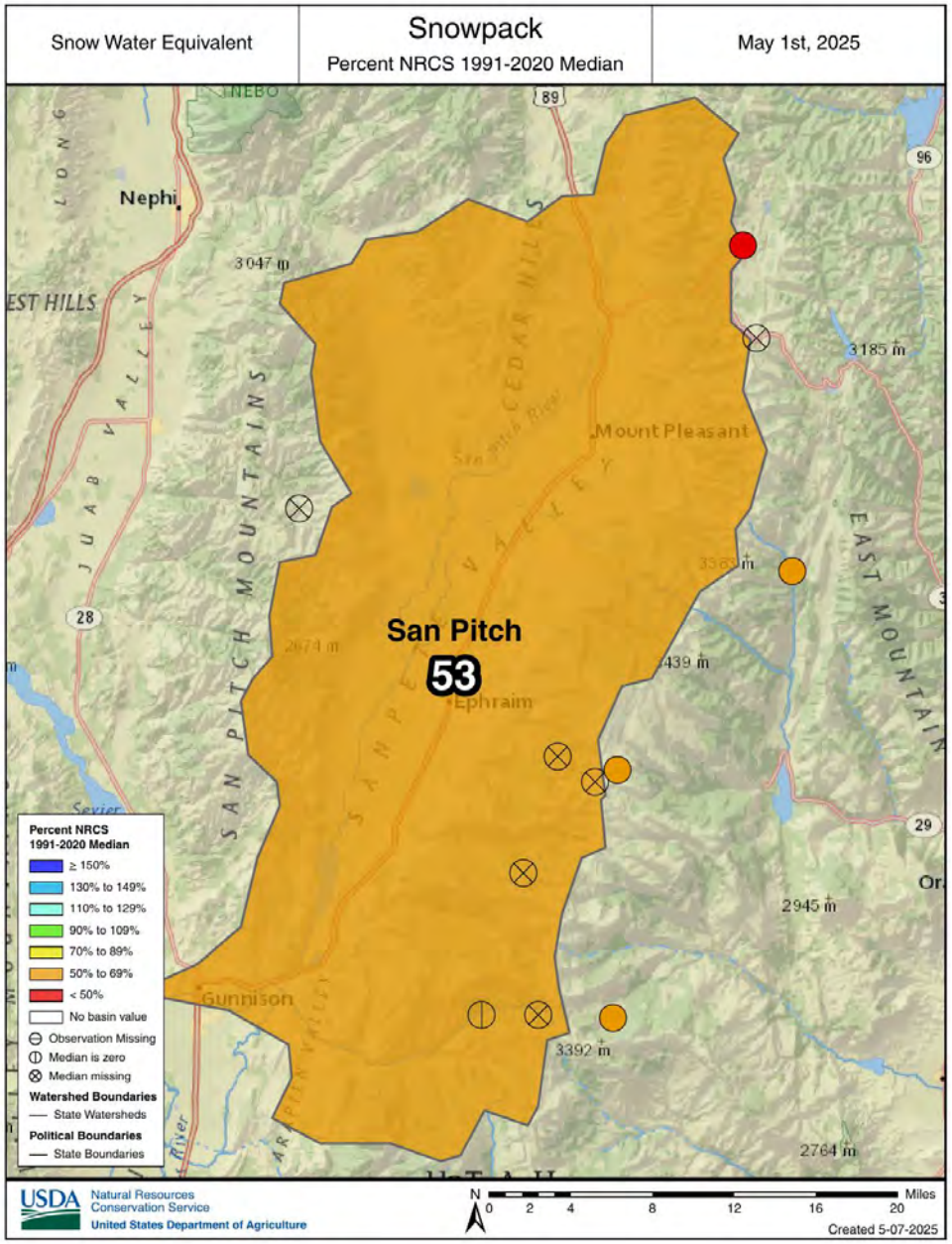


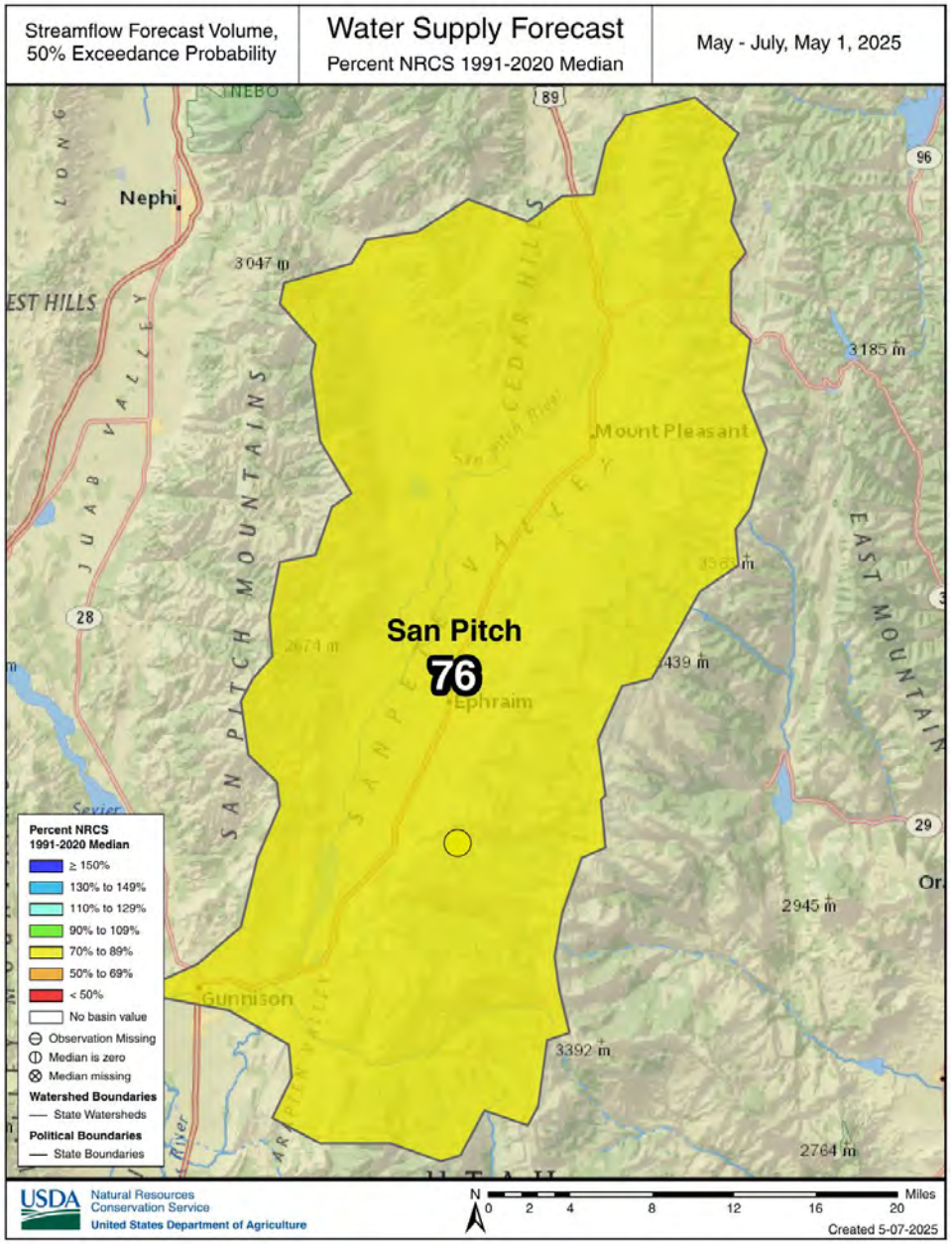




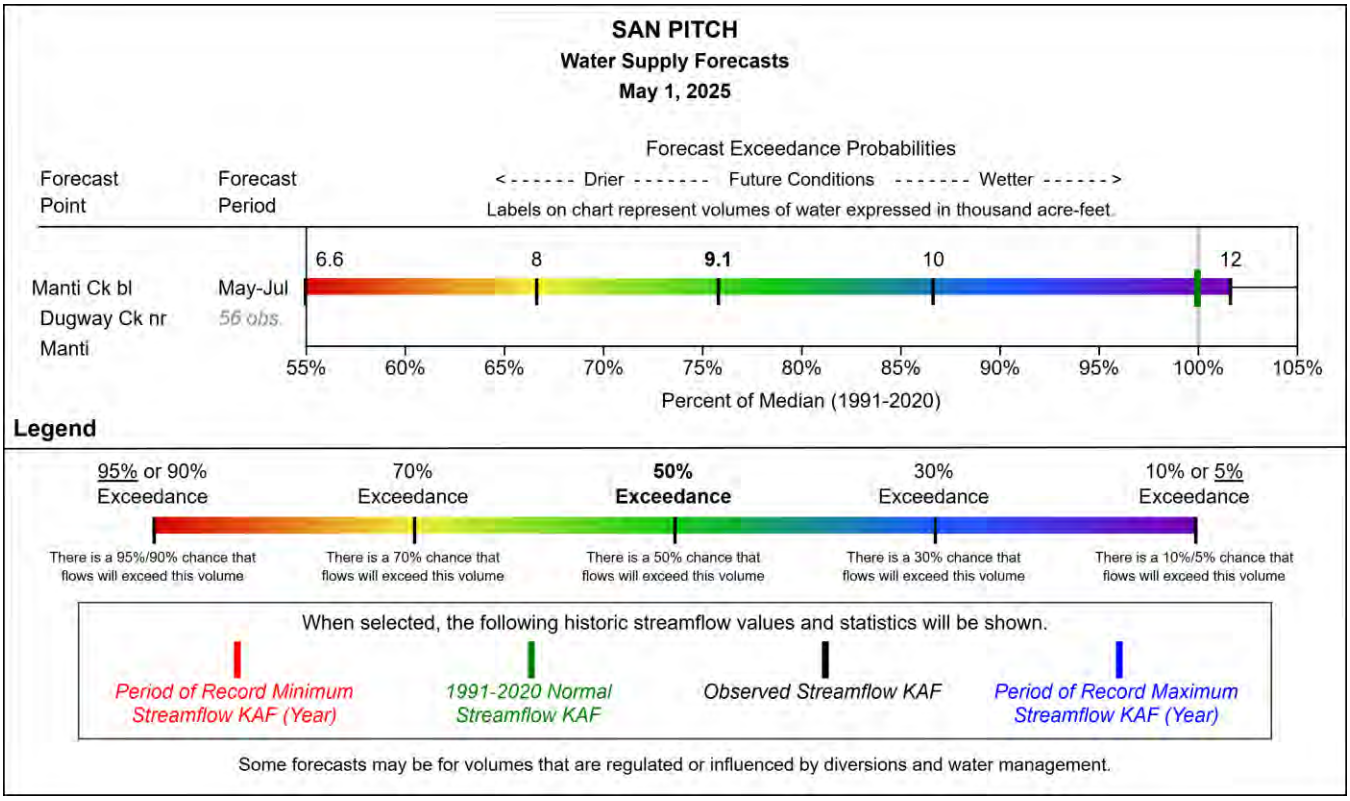
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

San Pitch


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
May 1st, 2025
San Pitch
53
Nephi
Mount Pleasant
Ephraim
Gunnison
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 5-07-2025

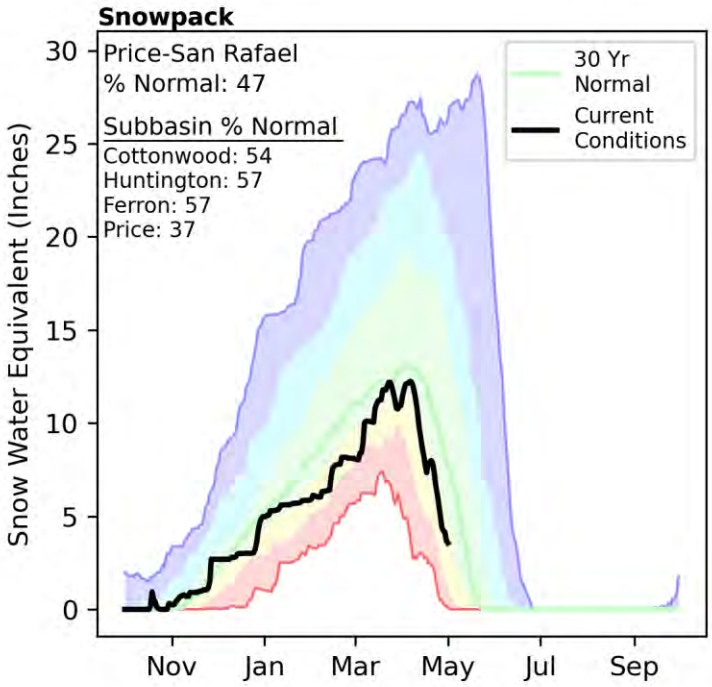

Streamflow Forecast Volume, 50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
May - July, May 1, 2025
San Pitch
76
Nephi
Mount Pleasant
Ephraim
Gunnison
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 5-07-2025

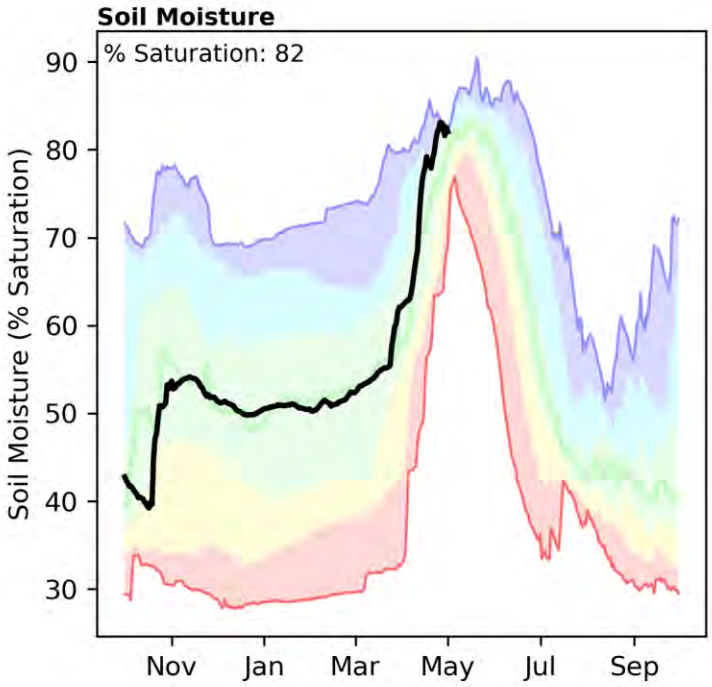
San Pitch

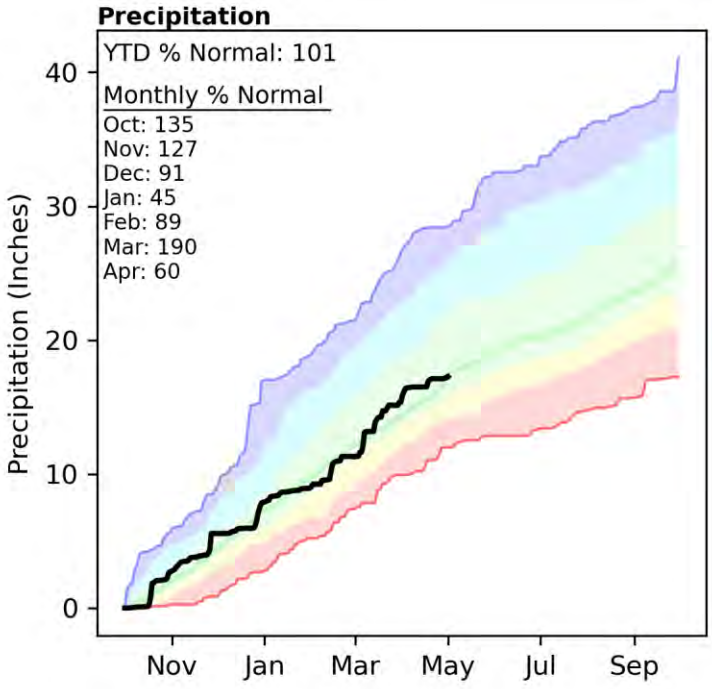

SAN PITCH
Water Supply Forecasts
May 1, 2025
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
<------- Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet.
Manti Ck bl Dugway Ck nr Manti
May-Jul
56 obs.
6.6
8
9.1
10
12
55% 60% 65% 70% 75% 80% 85% 90% 95% 100% 105%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

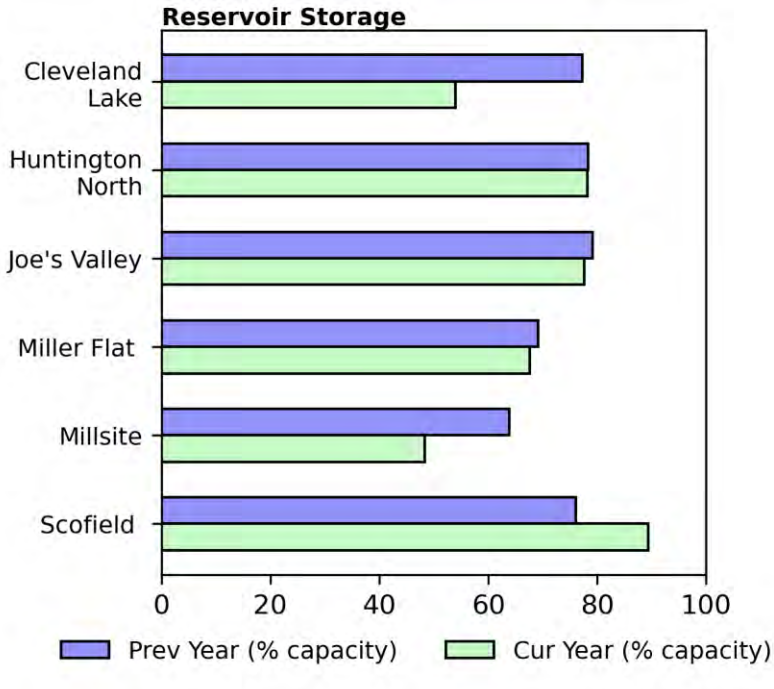
Price-San Rafael | May 1, 2025

Snowpack in the Price and San Rafael River Basins is well below normal at 47% of median, compared to 107% at this time last year. Precipitation in April was well below normal at 60%, which brings the seasonal accumulation (October-April) to 101% of median. Soil moisture is at 82% saturation compared to 80% saturation last year. Reservoir storage is 78% of capacity, compared to 75% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 74% to 108% of normal. The Surface Water Supply Index percentiles are 70% for the Price, 46% for Joes Valley, and 26% for Ferron Creek.



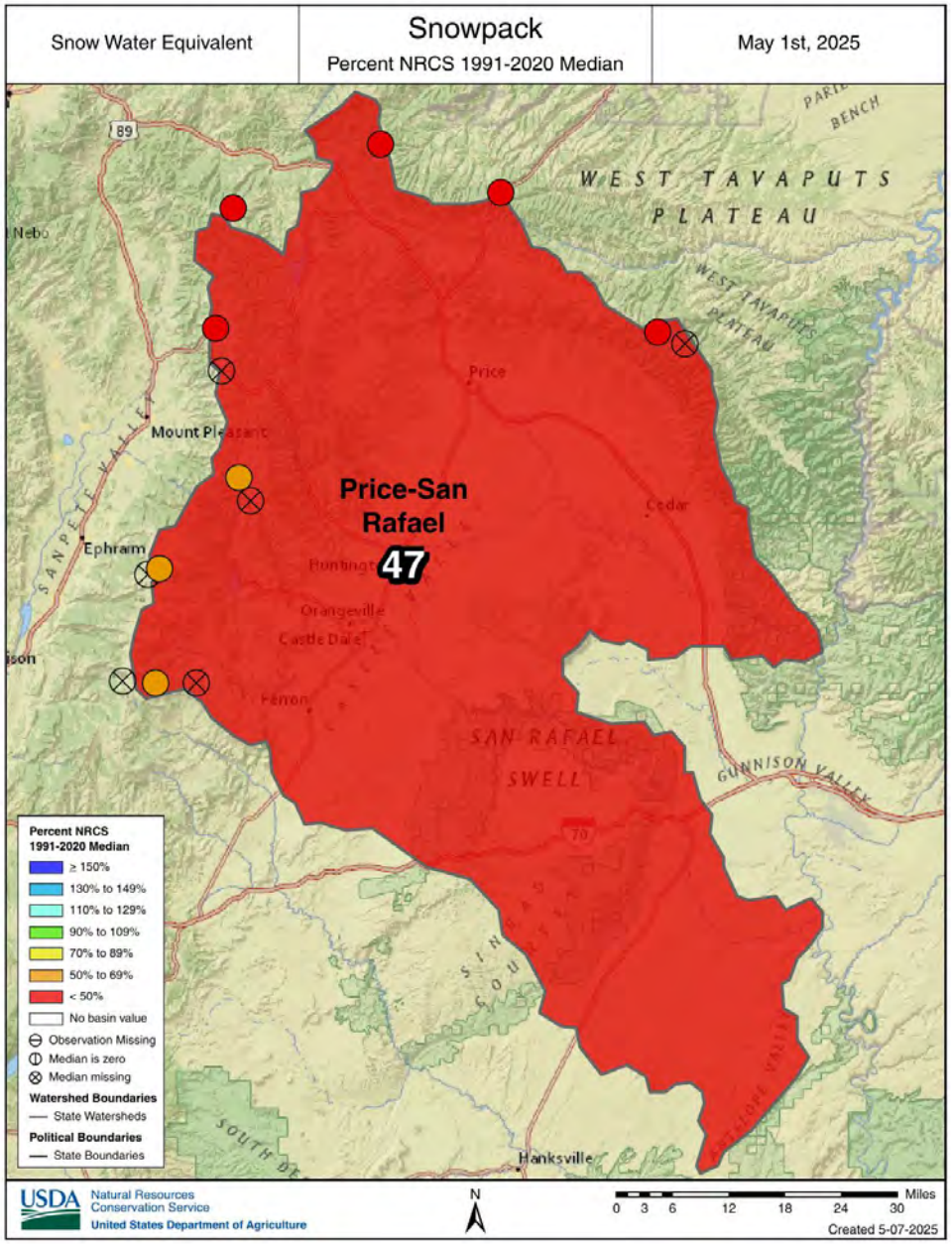


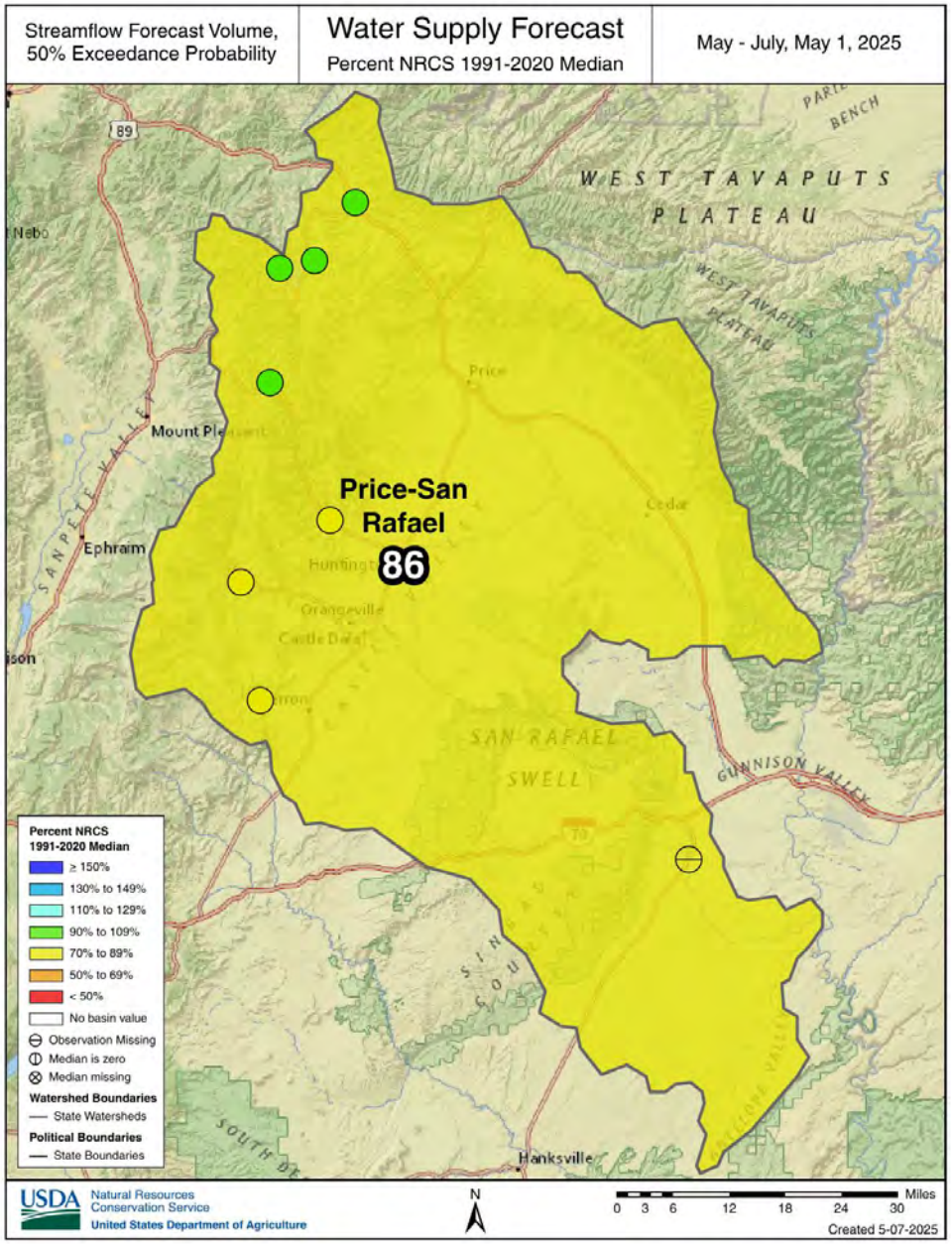




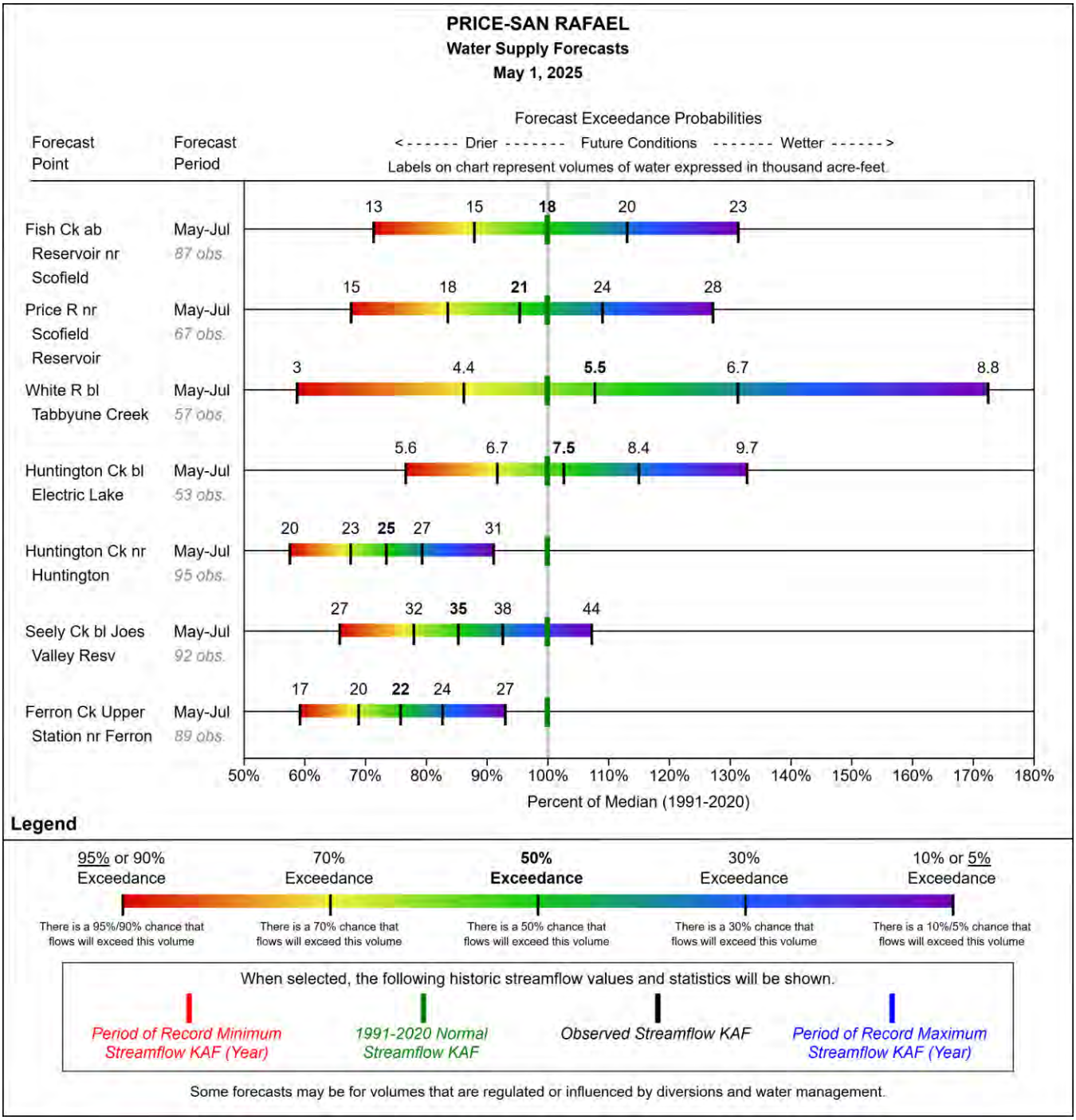
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Price San-Rafael





Price-San Rafael

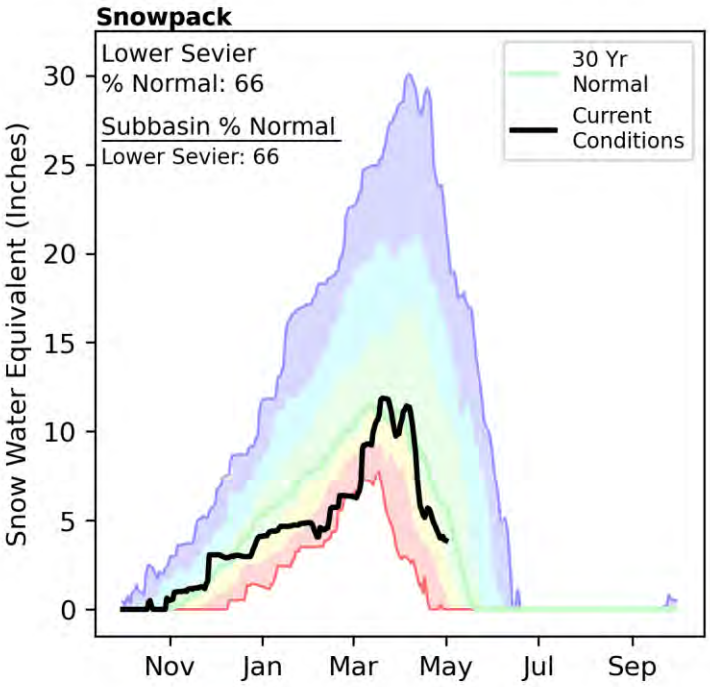


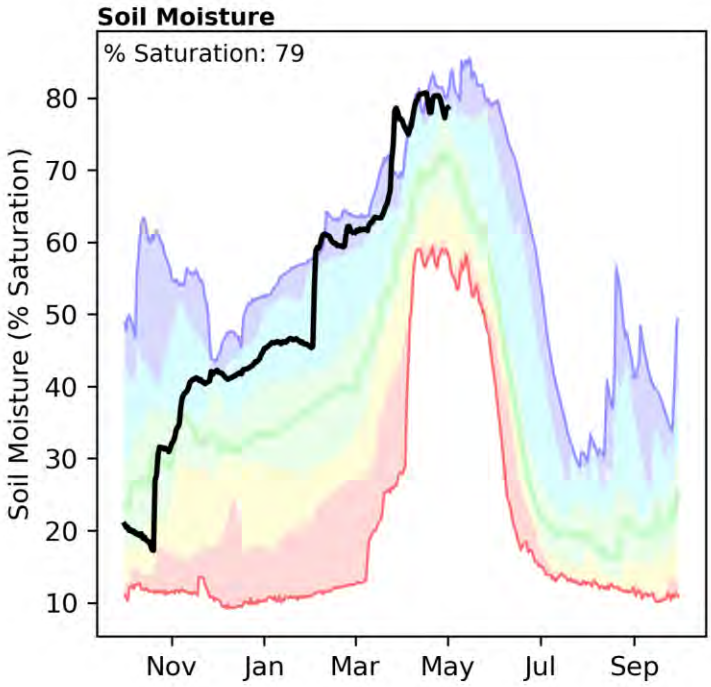
Legend

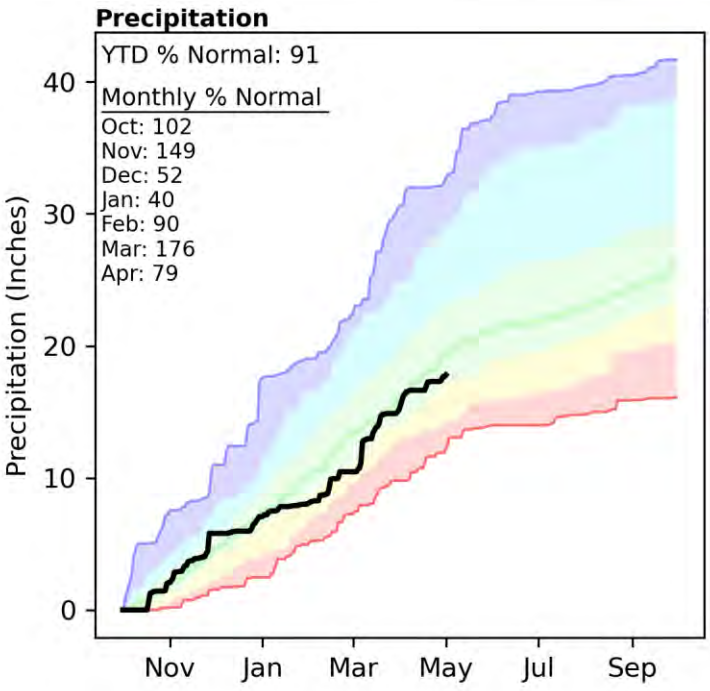
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

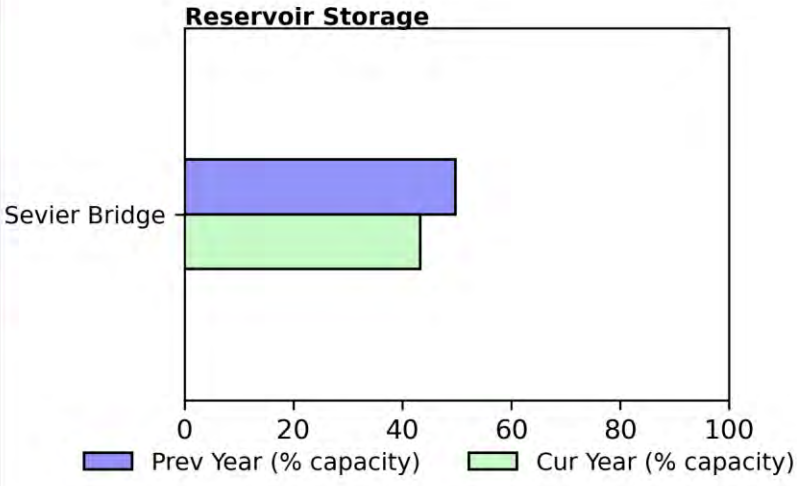
Lower Sevier | May 1, 2025

Snowpack in the Lower Sevier River Basin is well below normal at 66% of median, compared to 95% at this time last year. Precipitation in April was below normal at 79%, which brings the seasonal accumulation (October-April) to 91% of median. Soil moisture is at 79% saturation compared to 75% saturation last year. Reservoir storage is 43% of capacity, compared to 49% last year. Forecast streamflow volume (50% exceedence, May-July) for the Sevier River near Gunnison is 58% of normal. The Surface Water Supply Index percentile is 13% for the Lower Sevier.



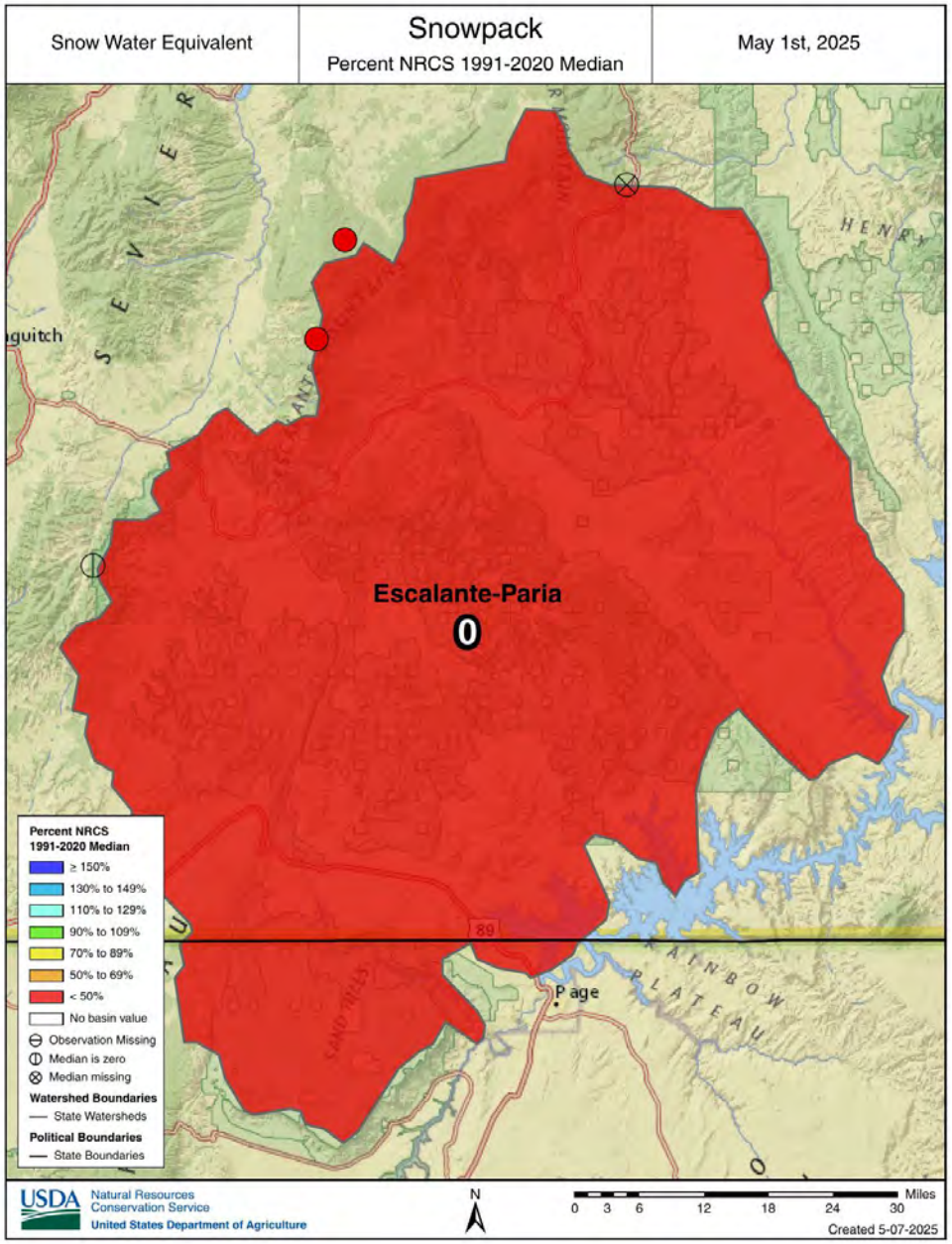


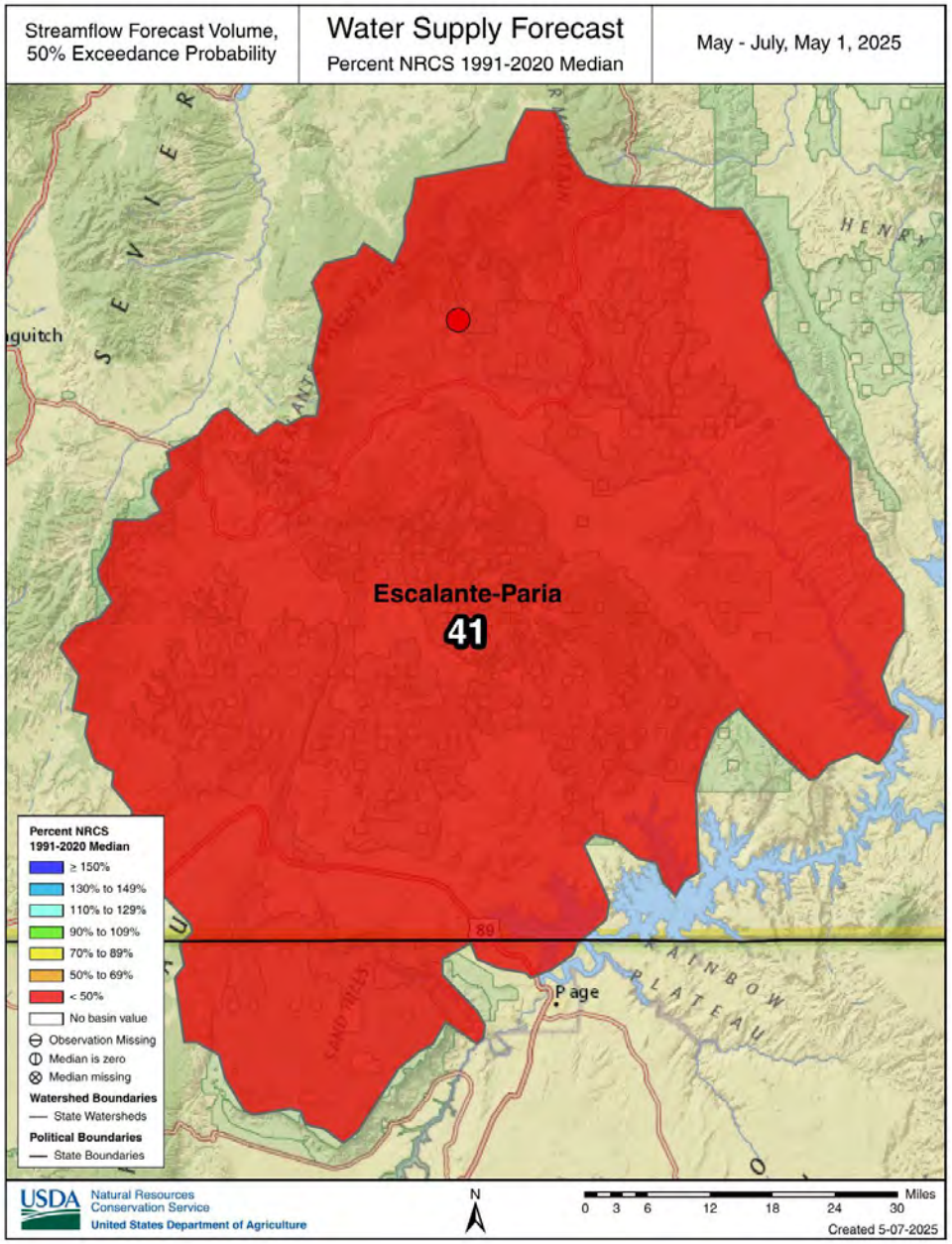




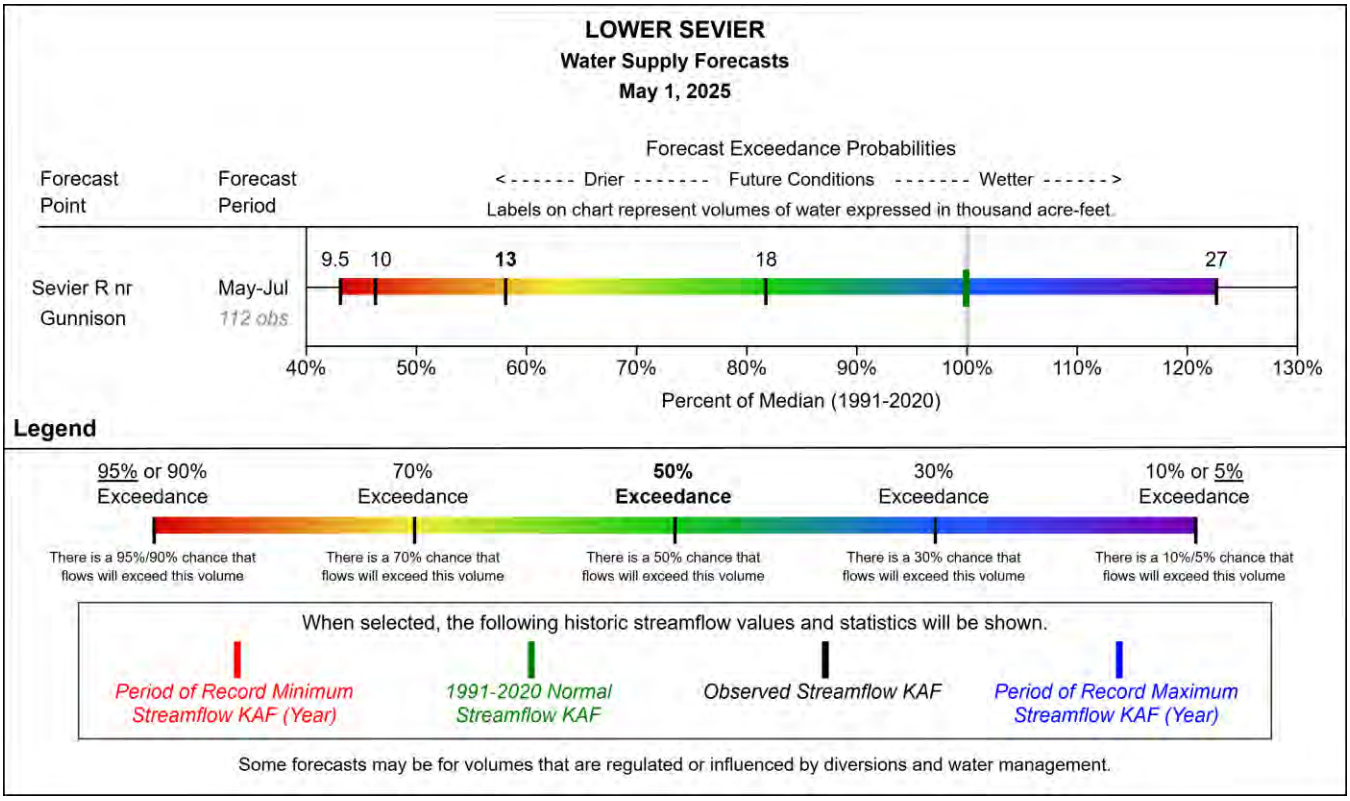
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Lower Sevier



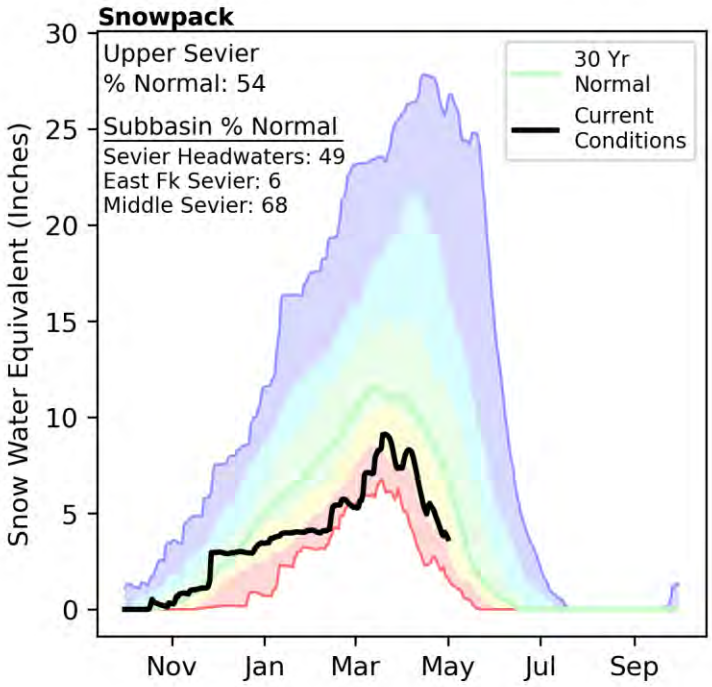


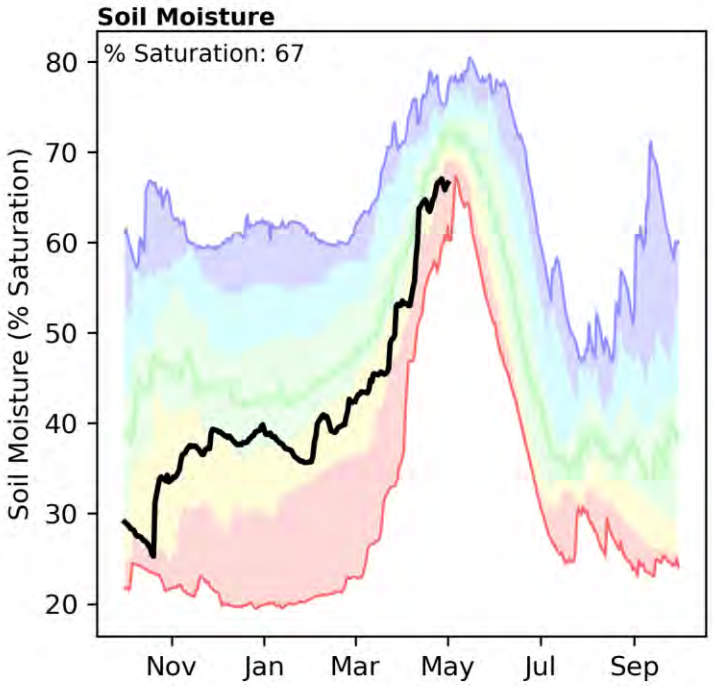
Lower Sevier

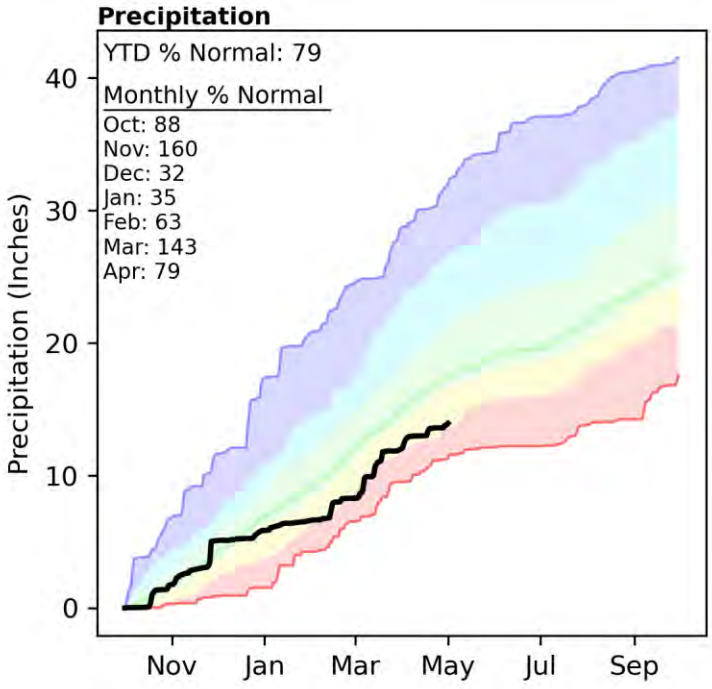


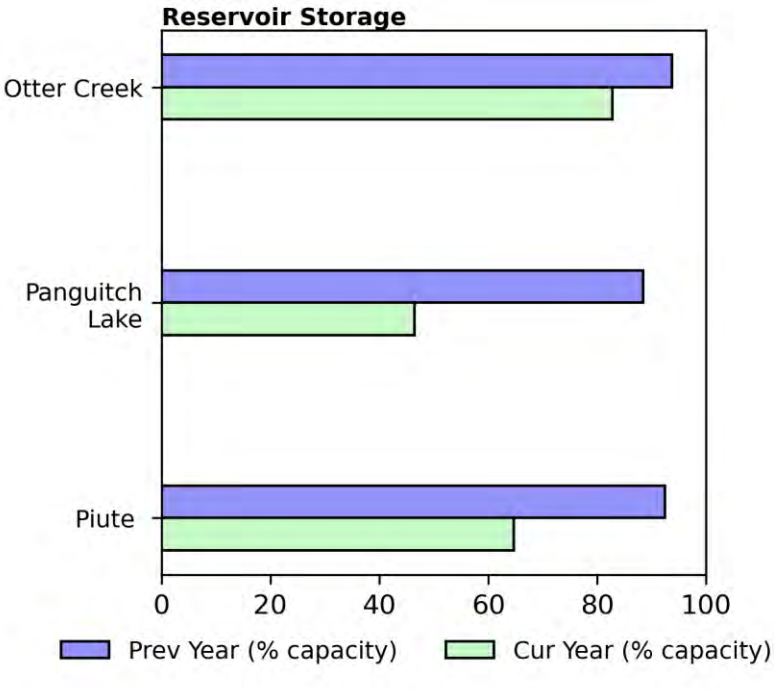
Upper Sevier | May 1, 2025

Snowpack in the Upper Sevier River Basin is well below normal at 54% of median, compared to 106% at this time last year. Precipitation in April was below normal at 79%, which brings the seasonal accumulation (October-April) to 79% of median. Soil moisture is at 67% saturation compared to 73% saturation last year. Reservoir storage is 68% of capacity, compared to 92% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 26% to 73% of normal. The Surface Water Supply Index percentile is 24% for the Upper Sevier.



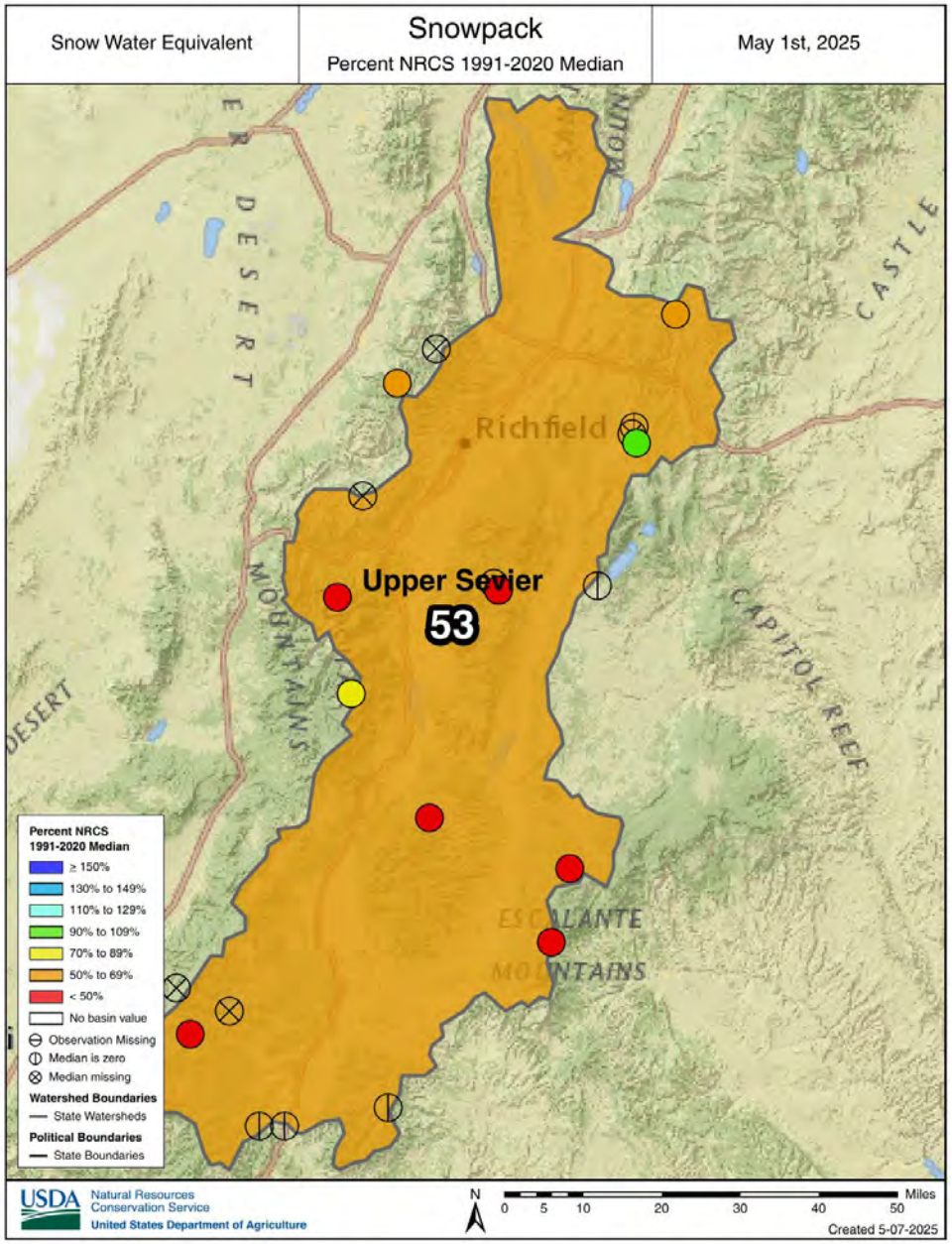


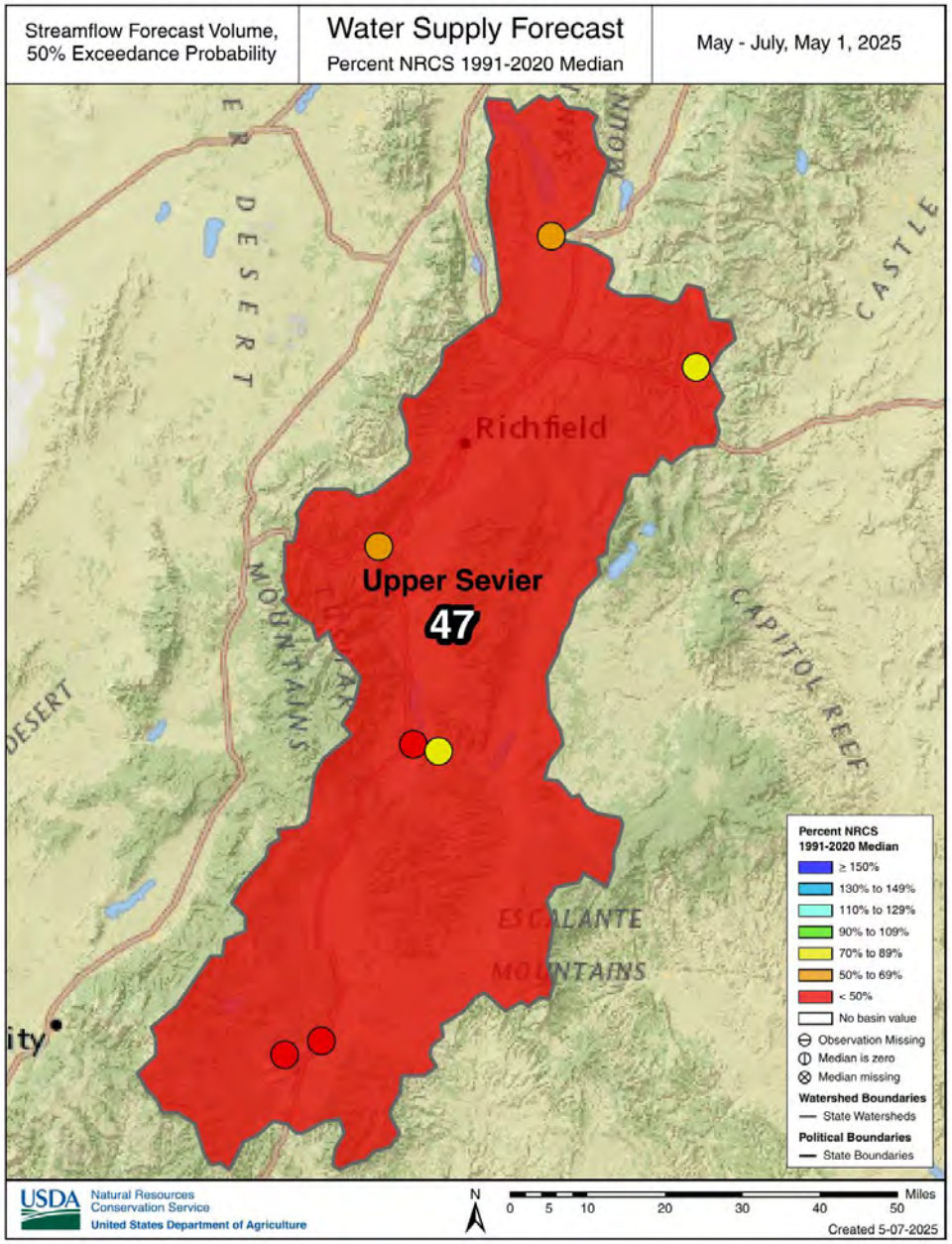




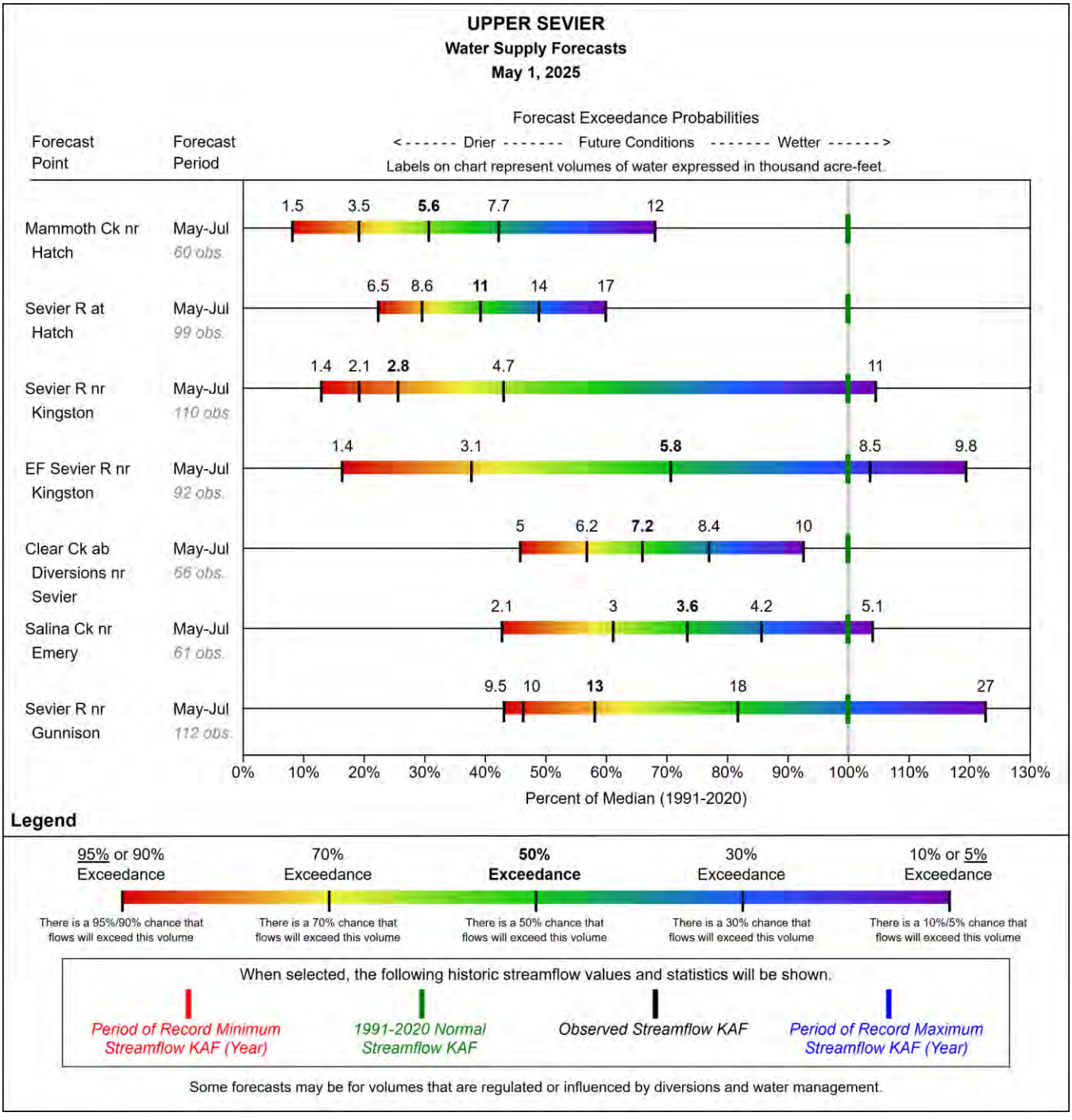
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Upper Sevier



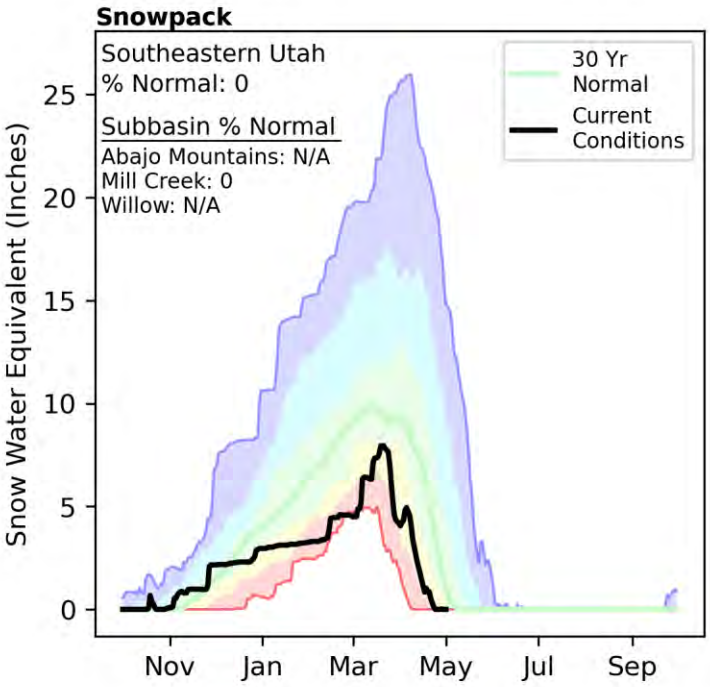


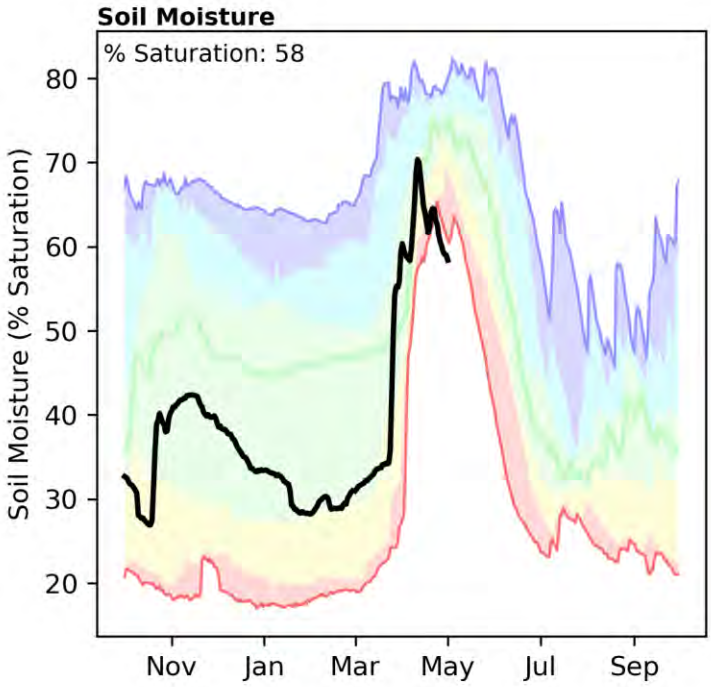
Upper Sevier

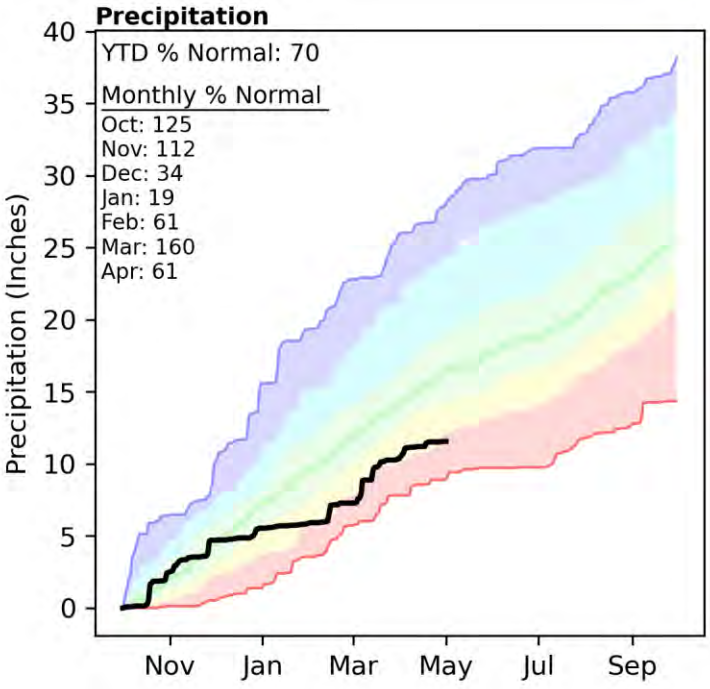


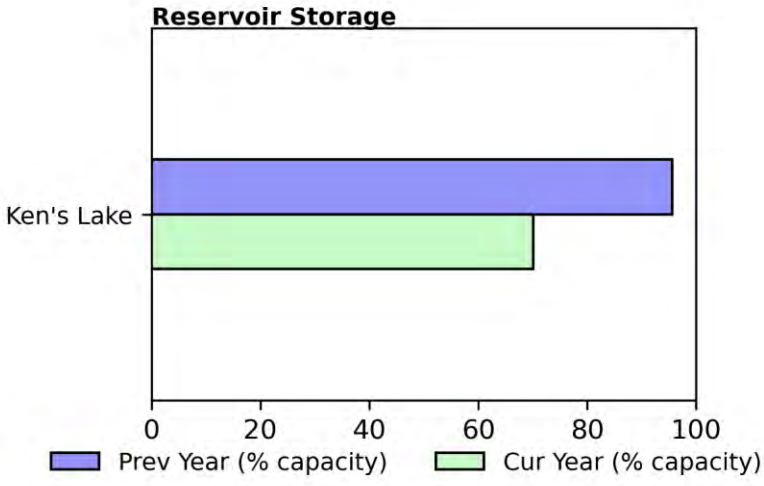
Southeastern Utah | May 1, 2025

Snowpack in Southeastern Utah is well below normal at 0% of median, compared to 36% at this time last year. Precipitation in April was well below normal at 61%, which brings the seasonal accumulation (October-April) to 70% of median. Soil moisture is at 58% saturation compared to 78% saturation last year. Reservoir storage is 70% of capacity, compared to 95% last year. Forecast streamflow volumes (50% exceedence, May-July) range from 23% to 70% of normal. The Surface Water Supply Index percentile is 21% for Moab.



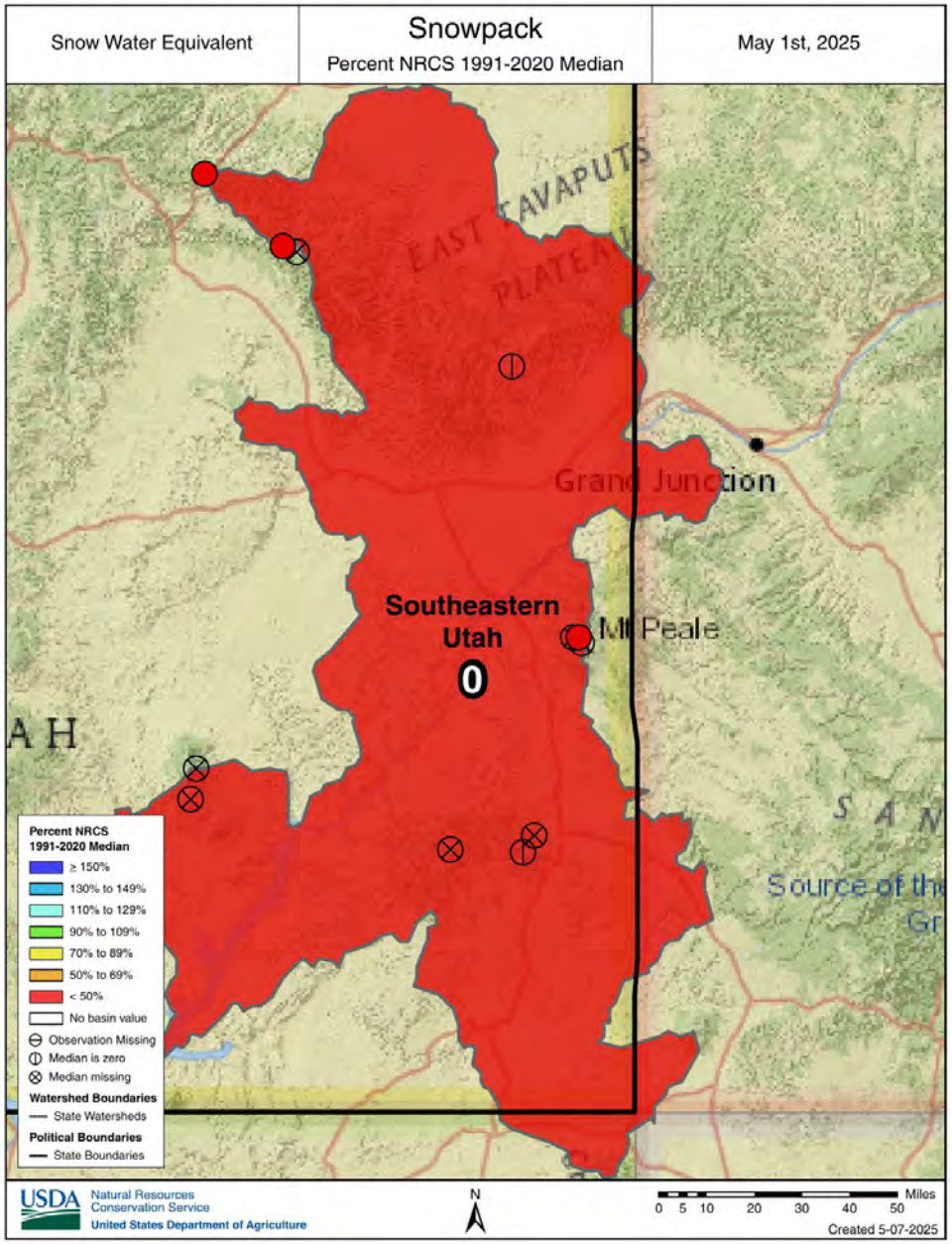


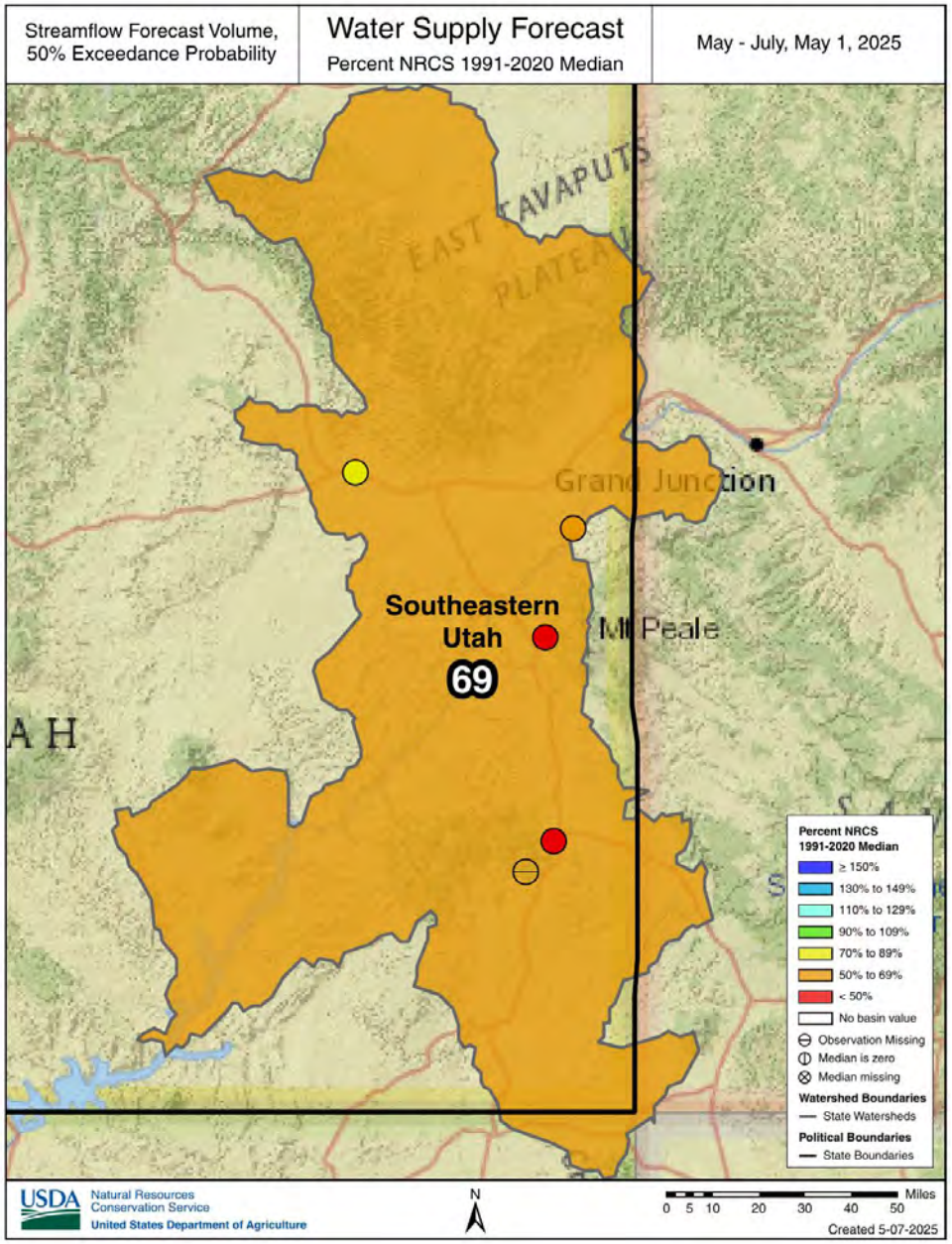




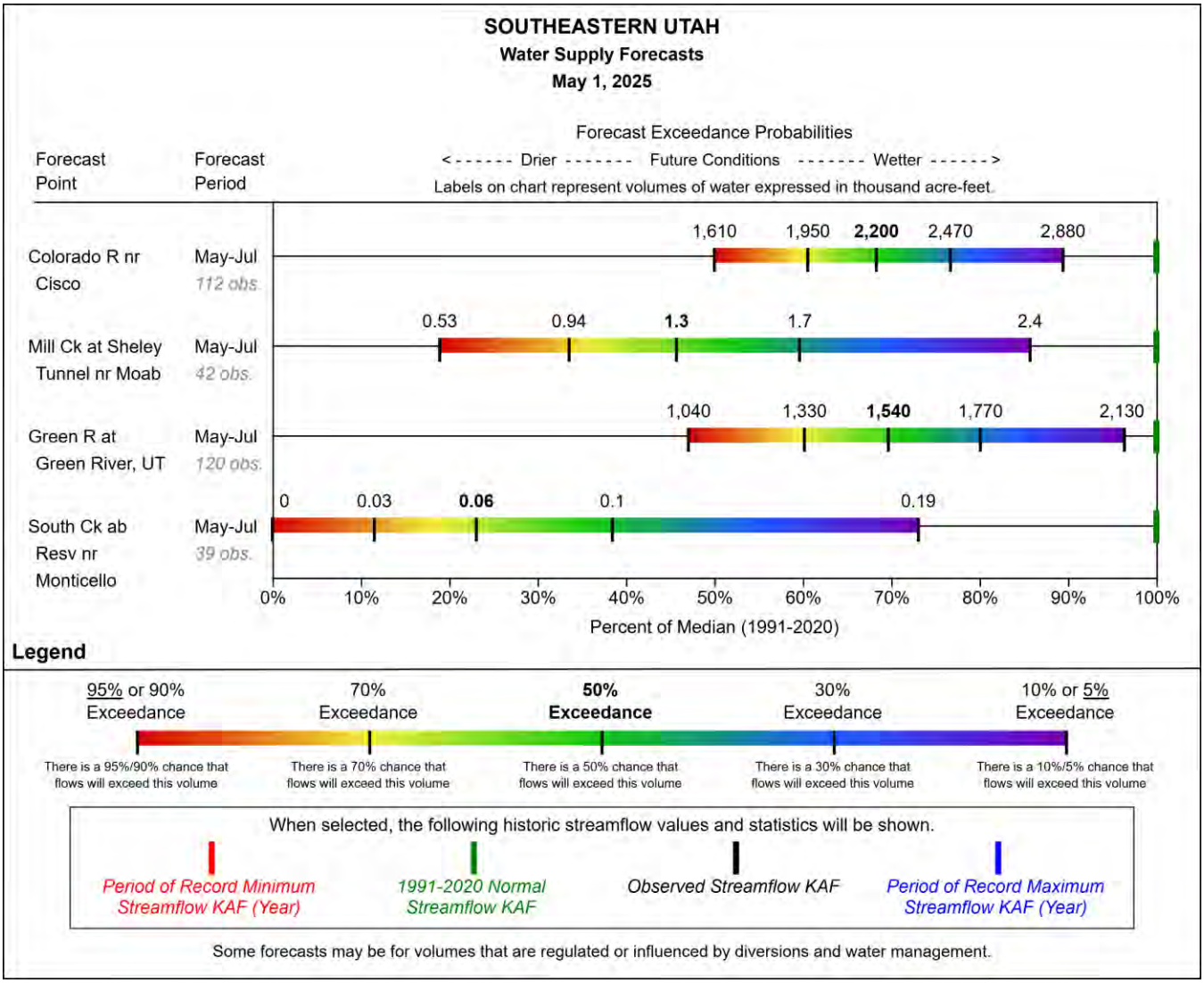
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Southeastern Utah





Southeastern Utah



Legend

95% or 90% Exceedance — There is a 95%/90% chance that flows will exceed this volume

70% Exceedance — There is a 70% chance that flows will exceed this volume

50% Exceedance — There is a 50% chance that flows will exceed this volume

30% Exceedance — There is a 30% chance that flows will exceed this volume

10% or 5% Exceedance — There is a 10%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)

1991-2020 Normal Streamflow KAF

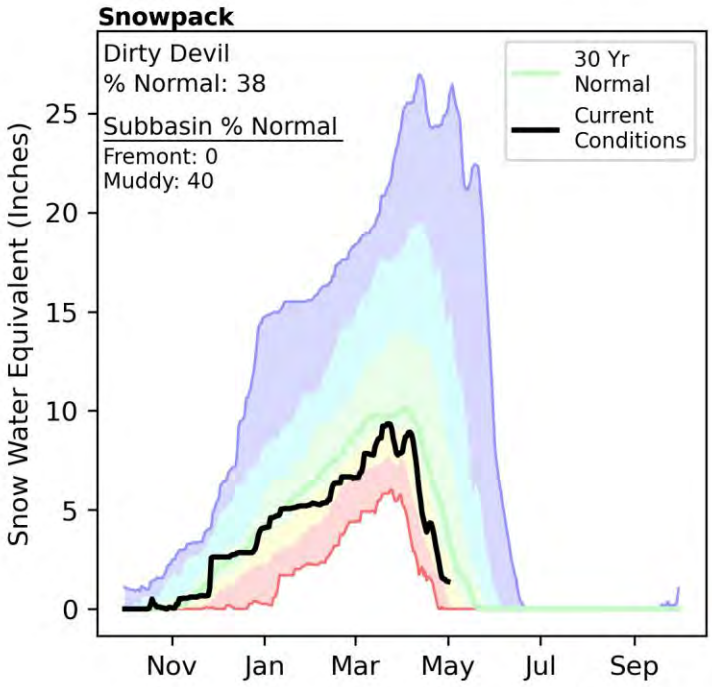
Observed Streamflow KAF

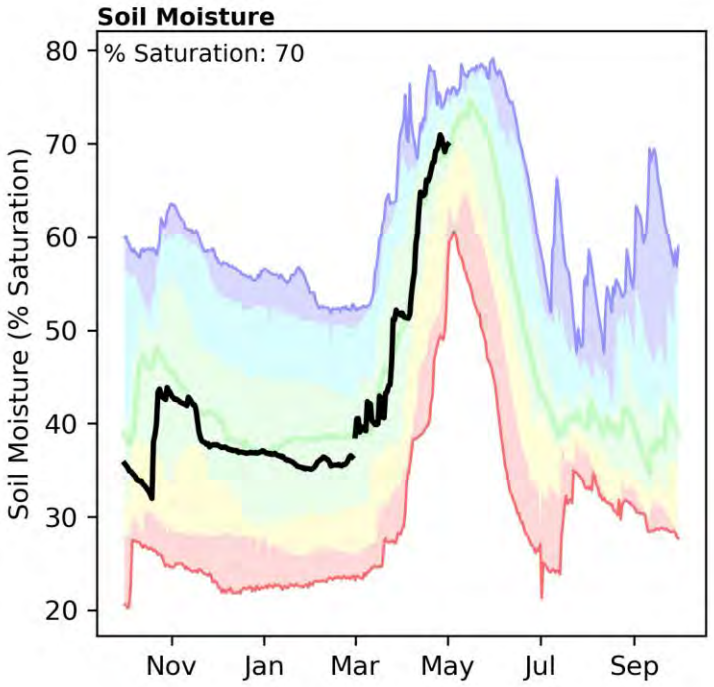
Period of Record Maximum Streamflow KAF (Year)

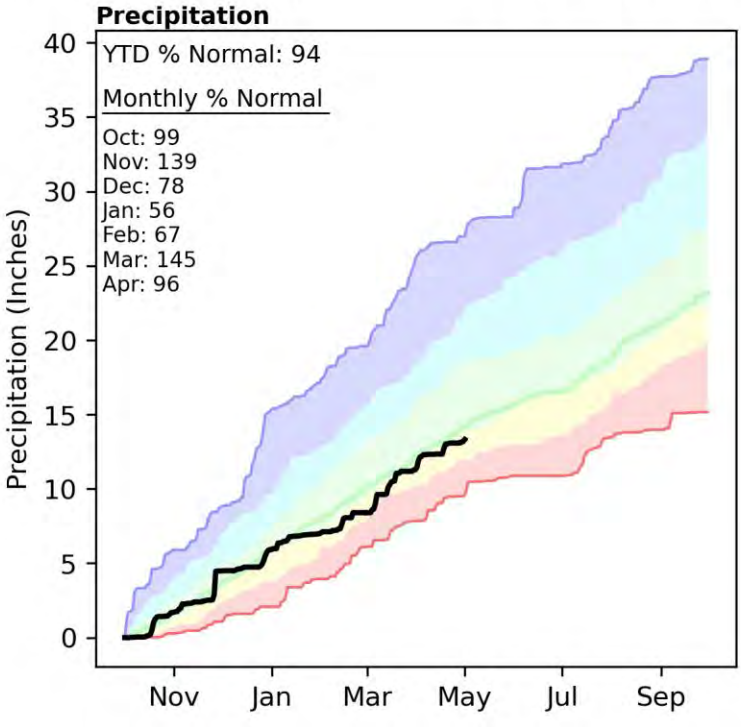
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

Dirty Devil | May 1, 2025

Snowpack in the Dirty Devil River Basin is well below normal at 38% of median, compared to 81% at this time last year. Precipitation in April was about normal at 96%, which brings the seasonal accumulation (October-April) to 94% of median. Soil moisture is at 70% saturation compared to 76% saturation last year. Forecast streamflow volumes (50% exceedence, May-July) range from 67% to 82% of normal.

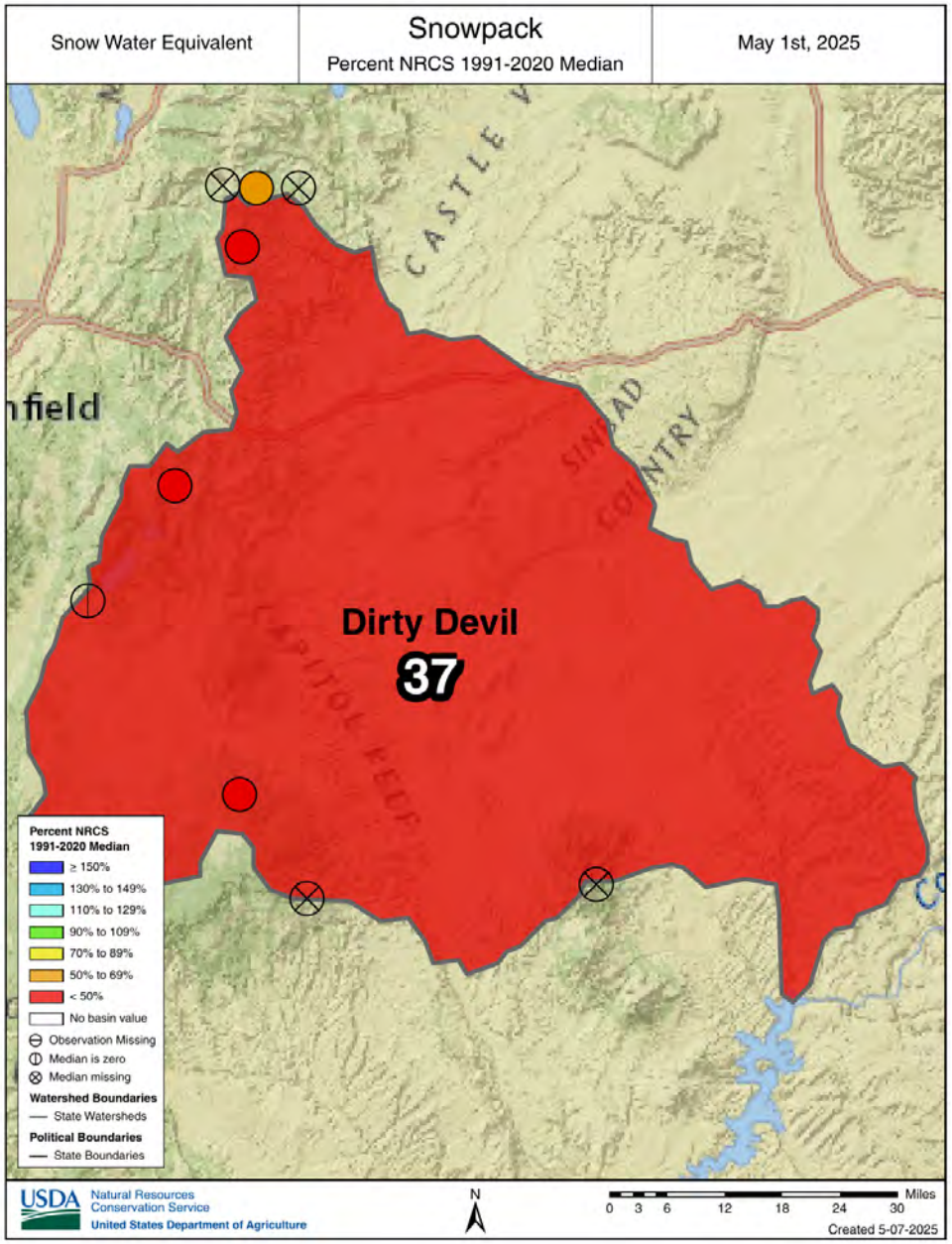


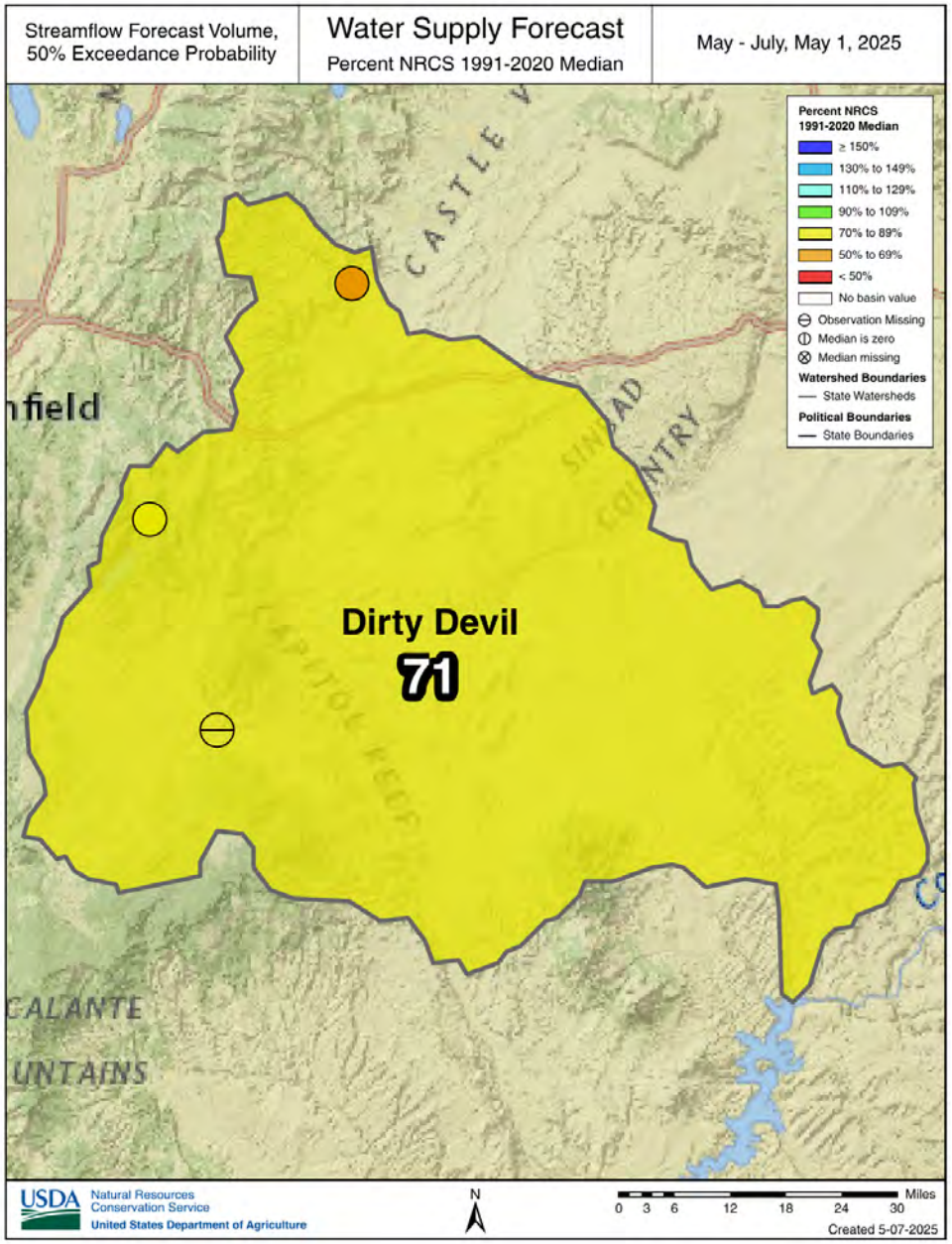




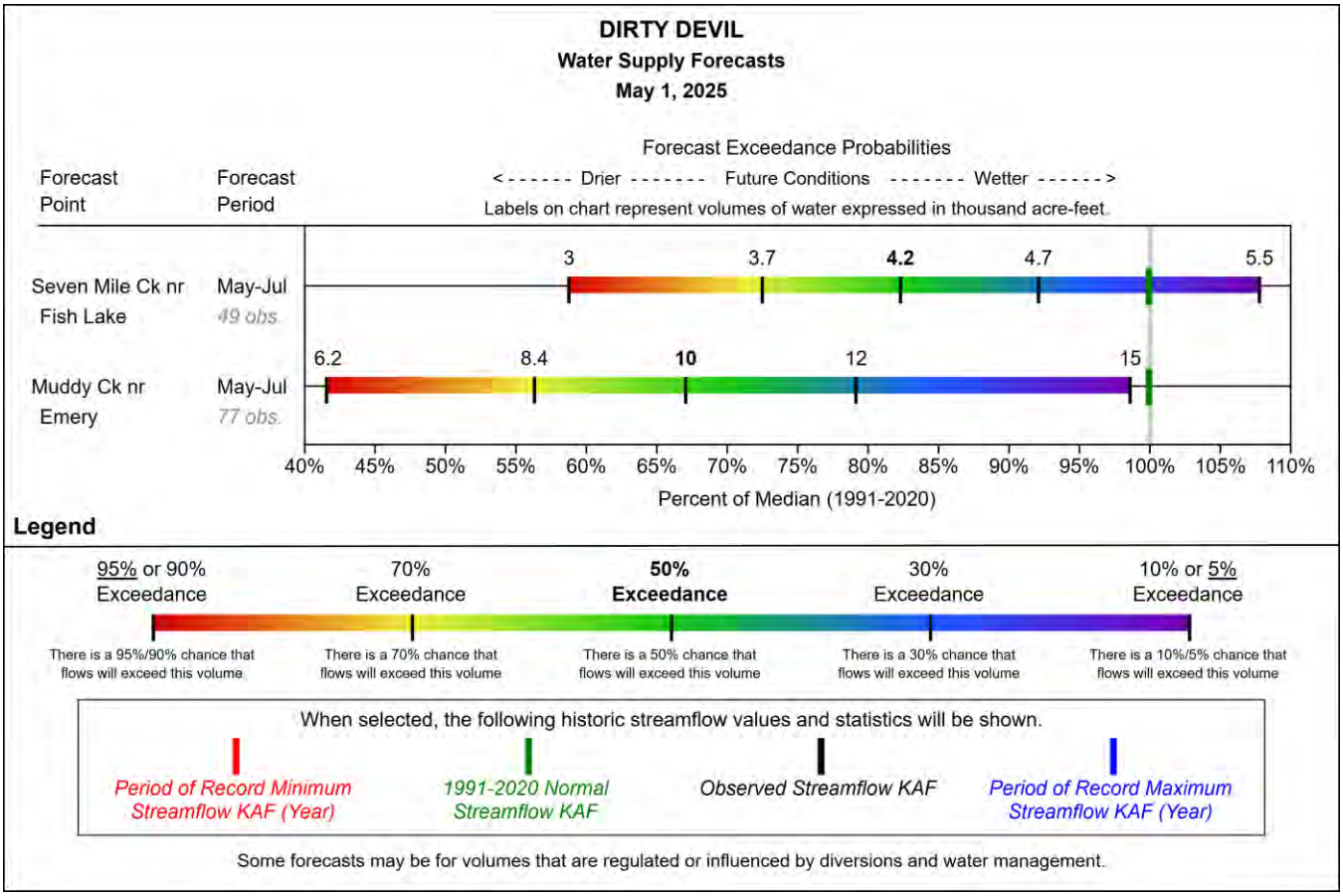
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Dirty Devil


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
May 1st, 2025
Dirty Devil
37
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30 Miles
Created 5-07-2025

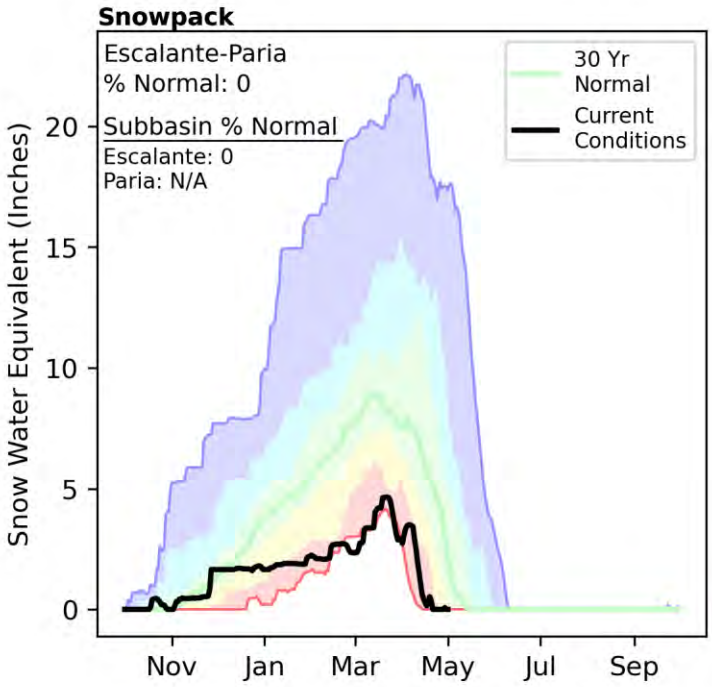

Streamflow Forecast Volume, 50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
May - July, May 1, 2025
Dirty Devil
71
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30 Miles
Created 5-07-2025

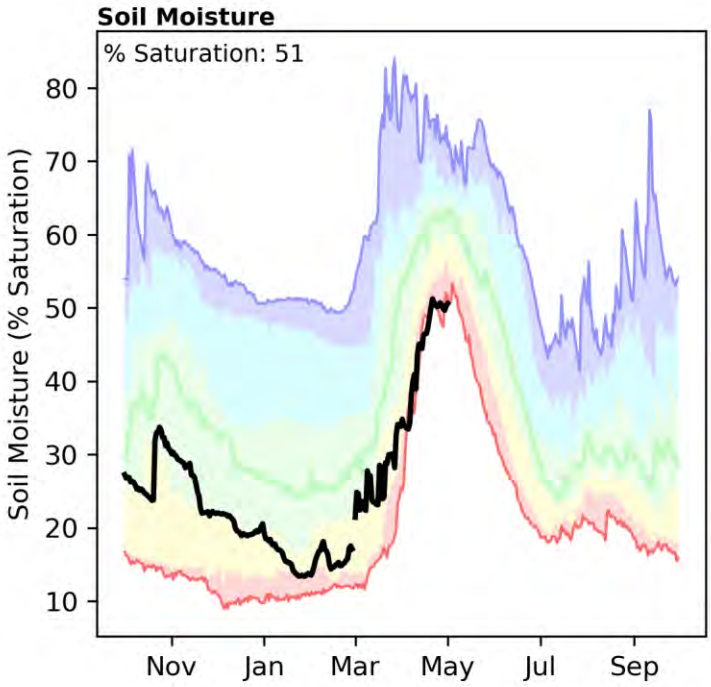
Dirty Devil

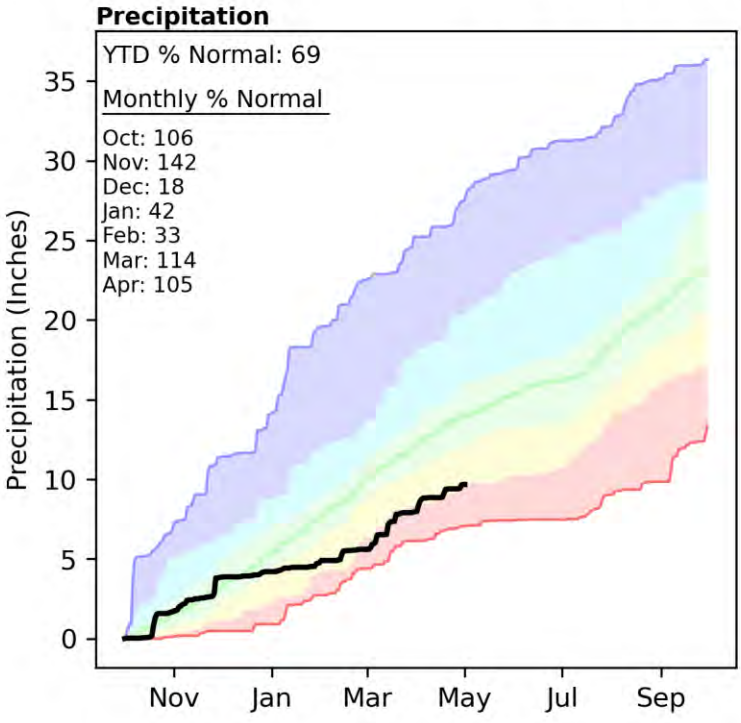

DIRTY DEVIL
Water Supply Forecasts
May 1, 2025
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
<------- Drier -------- Future Conditions -------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet.
Seven Mile Ck nr Fish Lake
May-Jul
49 obs.
3
3.7
4.2
4.7
5.5
Muddy Ck nr Emery
May-Jul
77 obs.
6.2
8.4
10
12
15
40% 45% 50% 55% 60% 65% 70% 75% 80% 85% 90% 95% 100% 105% 110%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

Escalante-Paria | May 1, 2025

Snowpack in the Escalante and Paria River Basins is well below normal at 0% of median, compared to 229% at this time last year. Precipitation in April was about normal at 105%, which brings the seasonal accumulation (October-April) to 69% of median. Soil moisture is at 51% saturation compared to 65% saturation last year. The forecast streamflow volume (50% exceedence, May-July) for Pine Creek is 41% of normal.

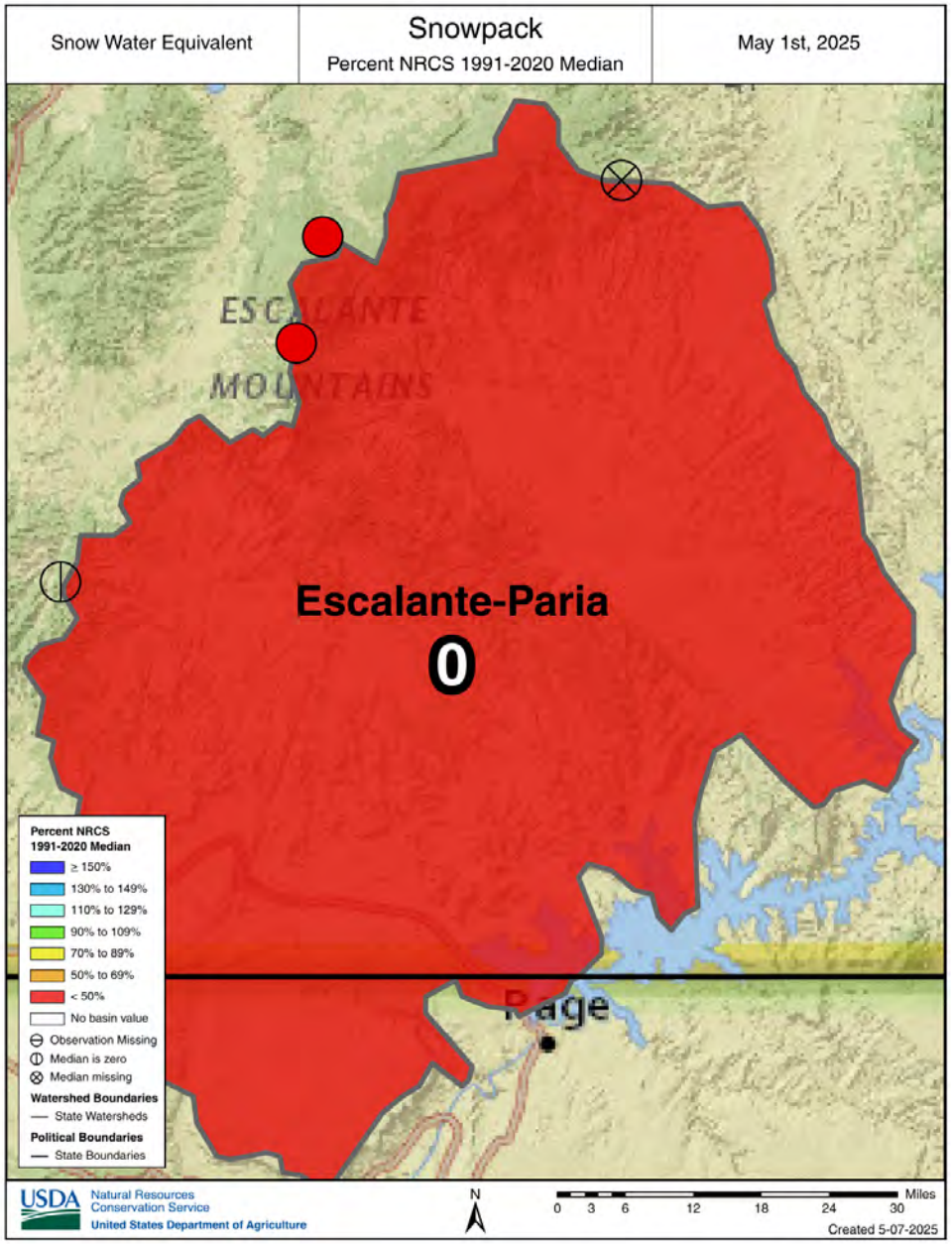


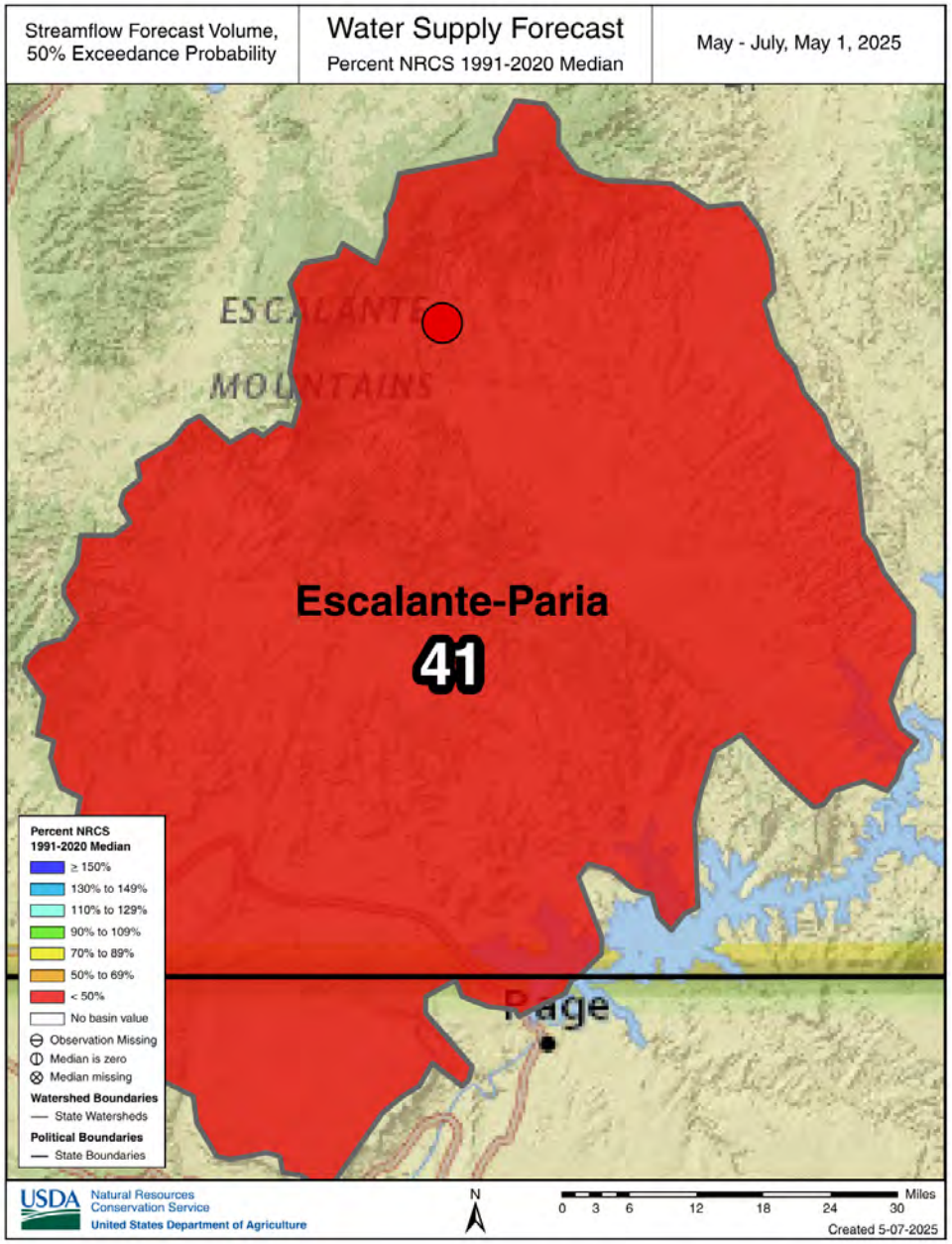




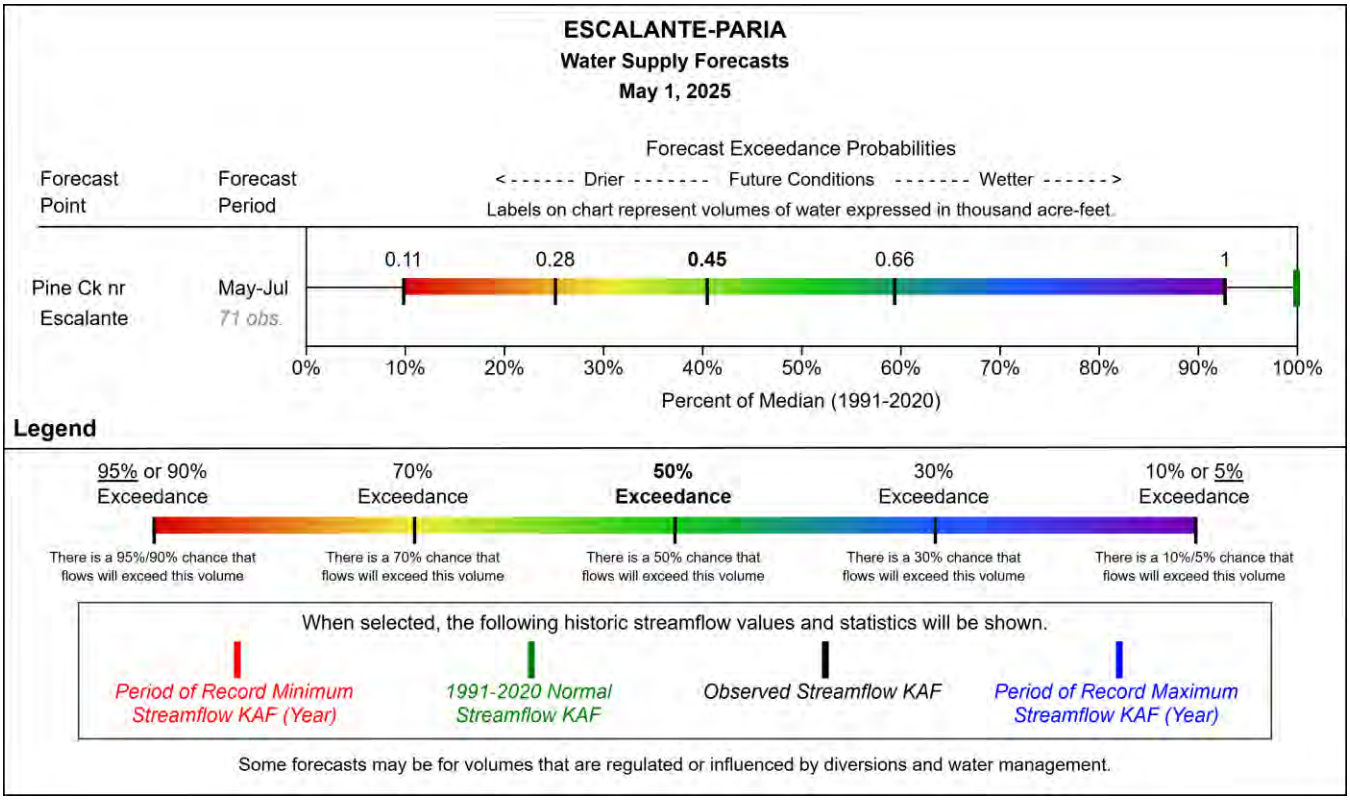
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Escalante-Paria



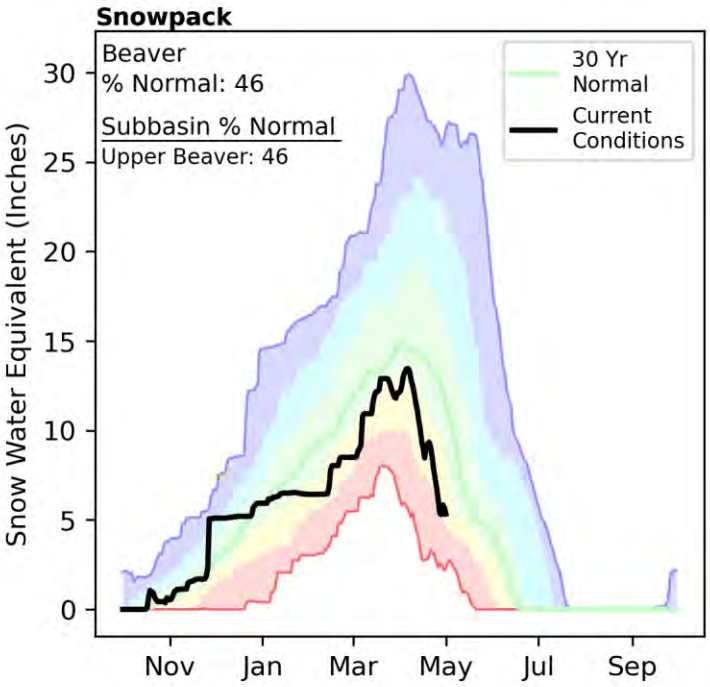


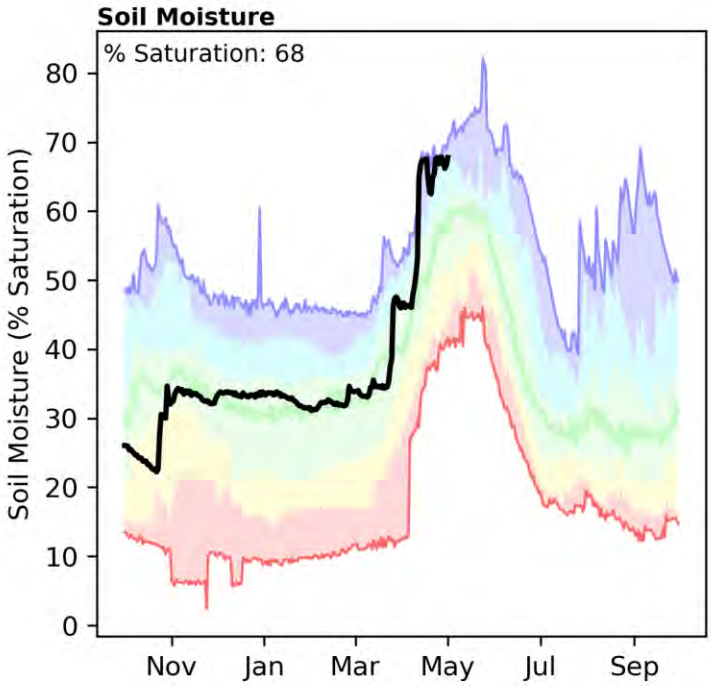
Escalante-Paria

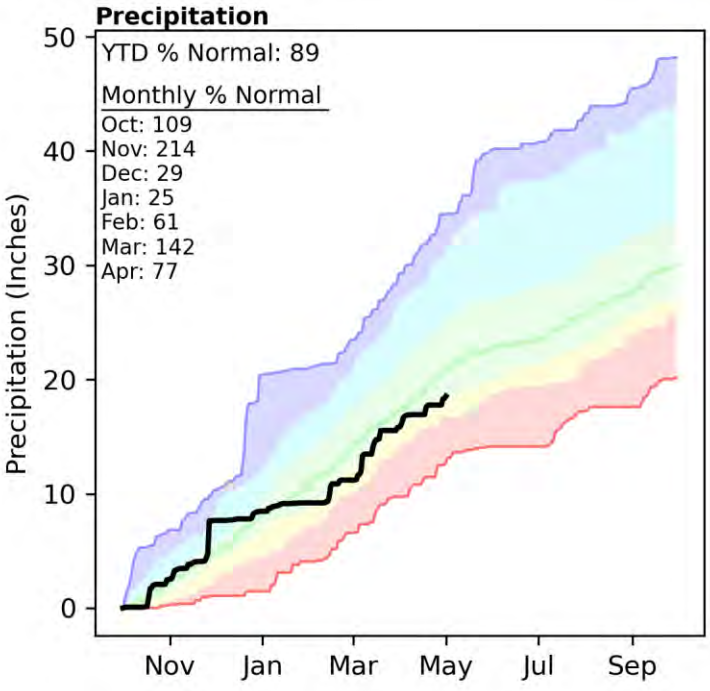


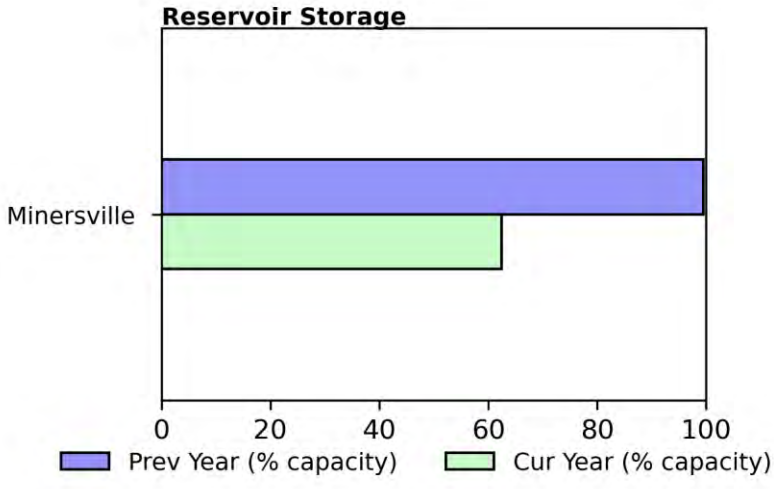
Beaver | May 1, 2025

Snowpack in the Beaver River Basin is well below normal at 46% of median, compared to 111% at this time last year. Precipitation in April was below normal at 77%, which brings the seasonal accumulation (October-April) to 89% of median. Soil moisture is at 68% saturation compared to 70% saturation last year. Reservoir storage is 62% of capacity, compared to 99% last year. The forecast streamflow volume (50% exceedence, May-July) for the Beaver River is 70% of normal. The Surface Water Supply Index percentile is 26% for the Beaver River.



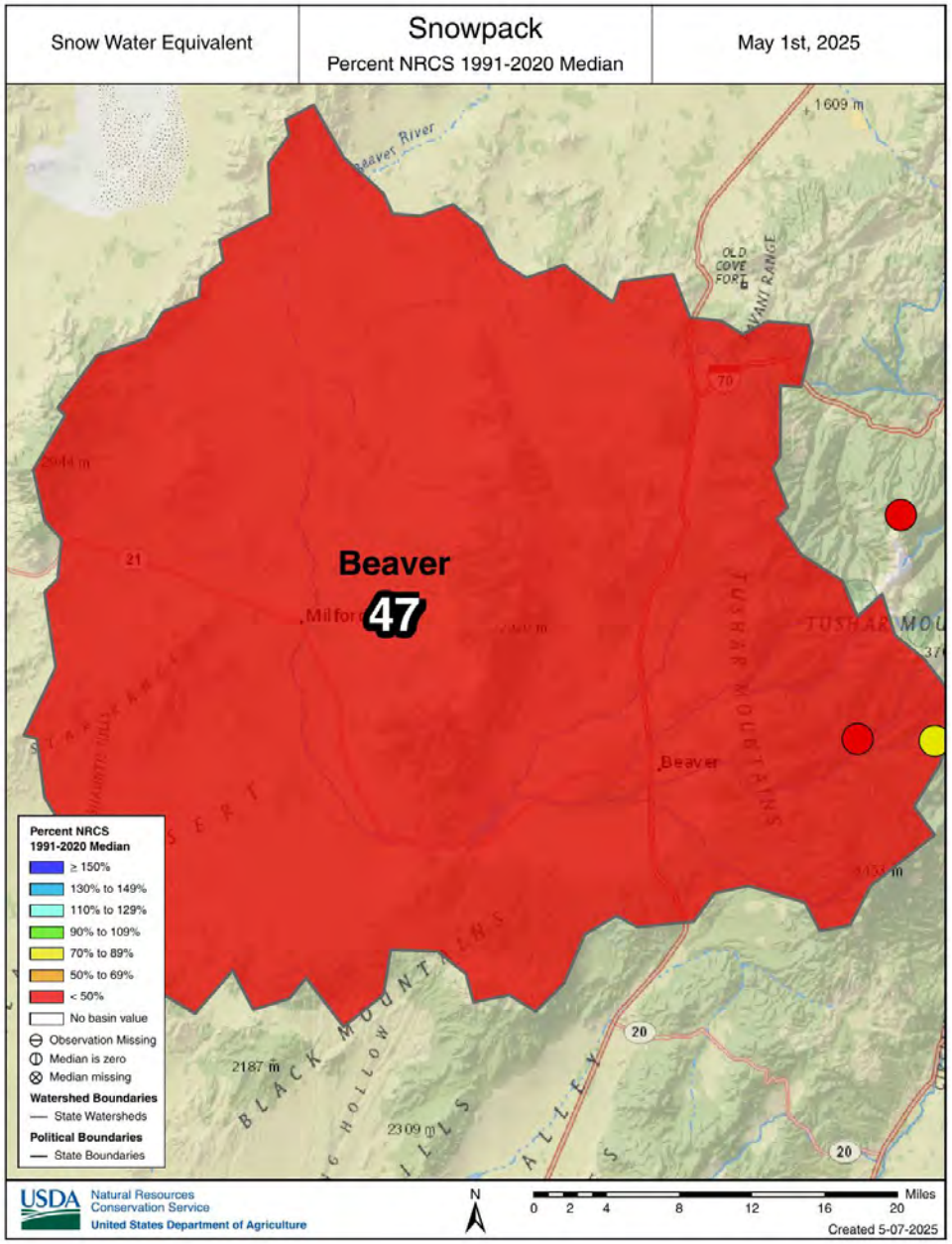


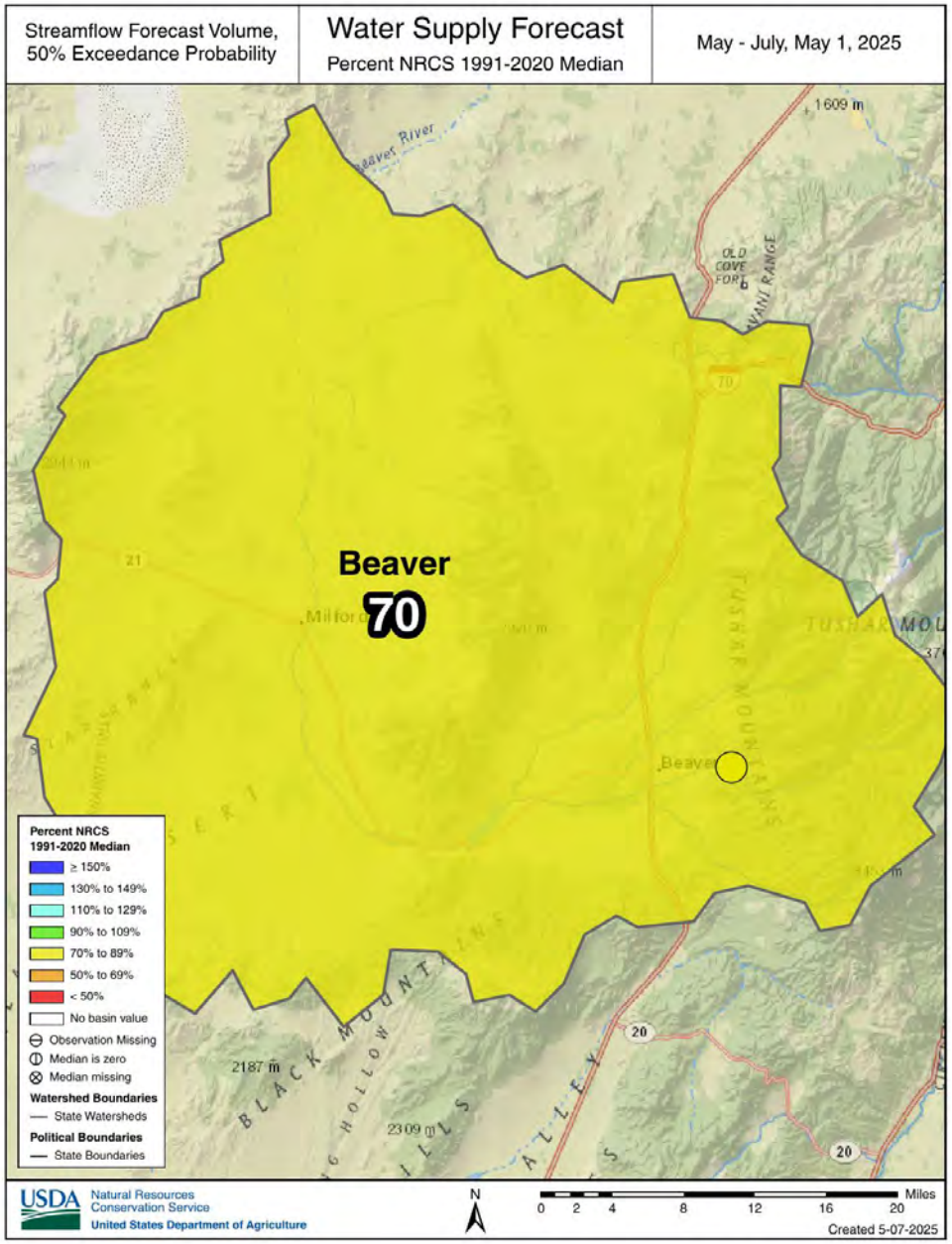




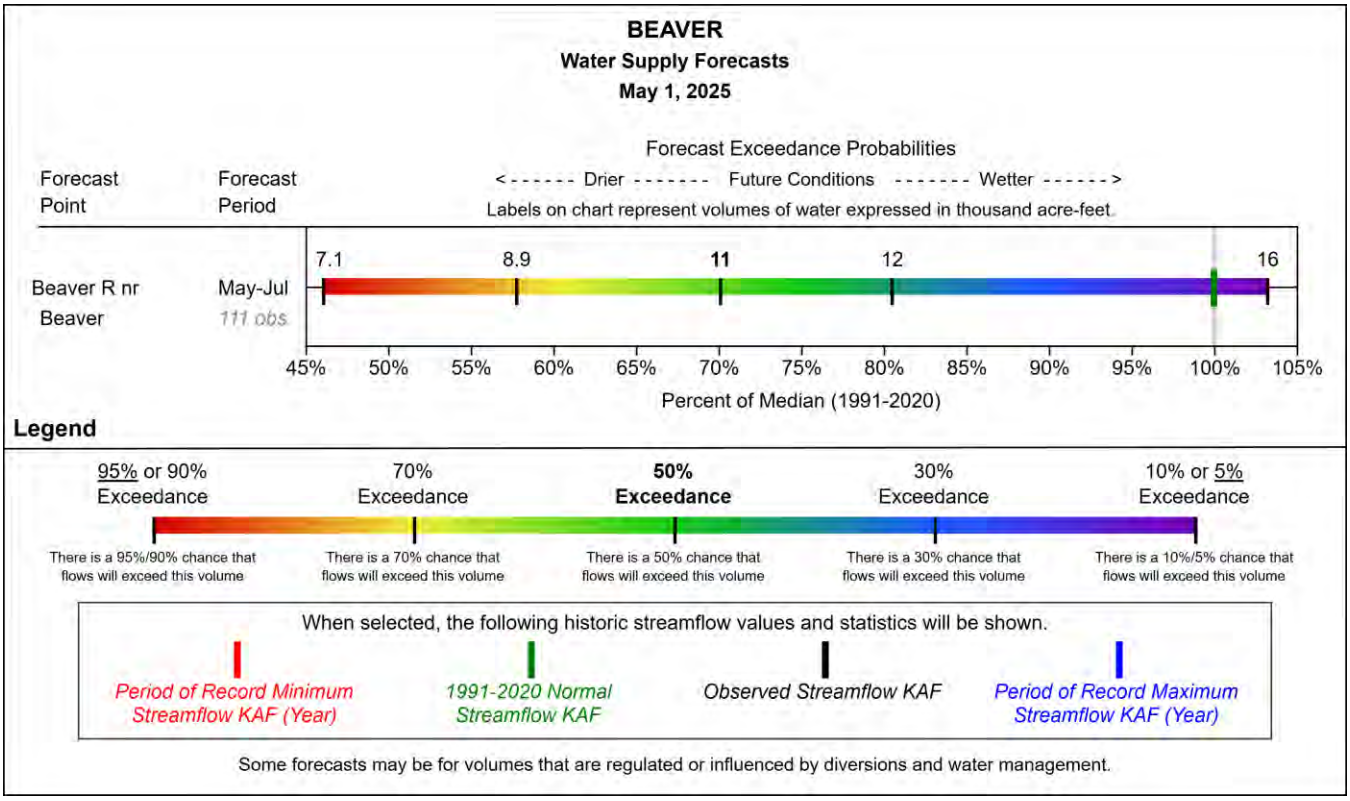
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Beaver


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
May 1st, 2025
Beaver
47
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 5-07-2025

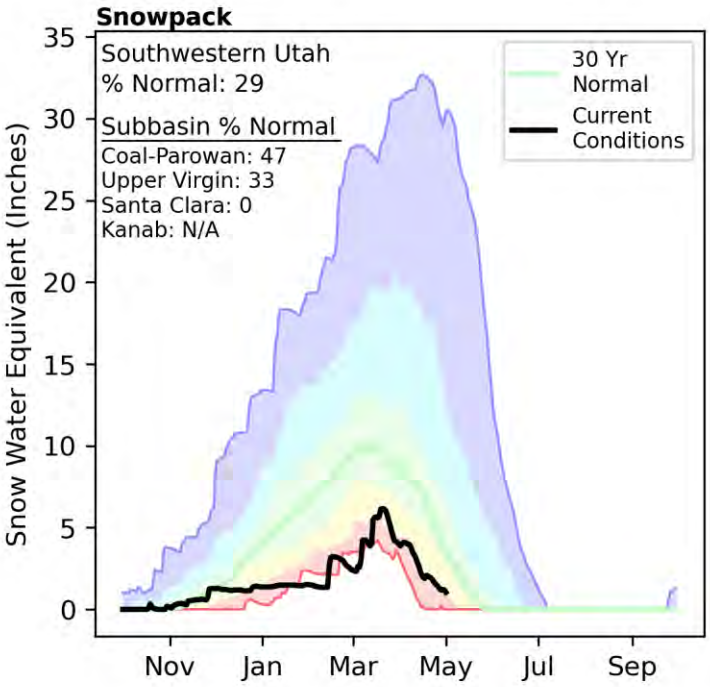

Streamflow Forecast Volume, 50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
May - July, May 1, 2025
Beaver
70
Percent NRCS 1991-2020 Median
≥ 150%
130% to 149%
110% to 129%
90% to 109%
70% to 89%
50% to 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 5-07-2025

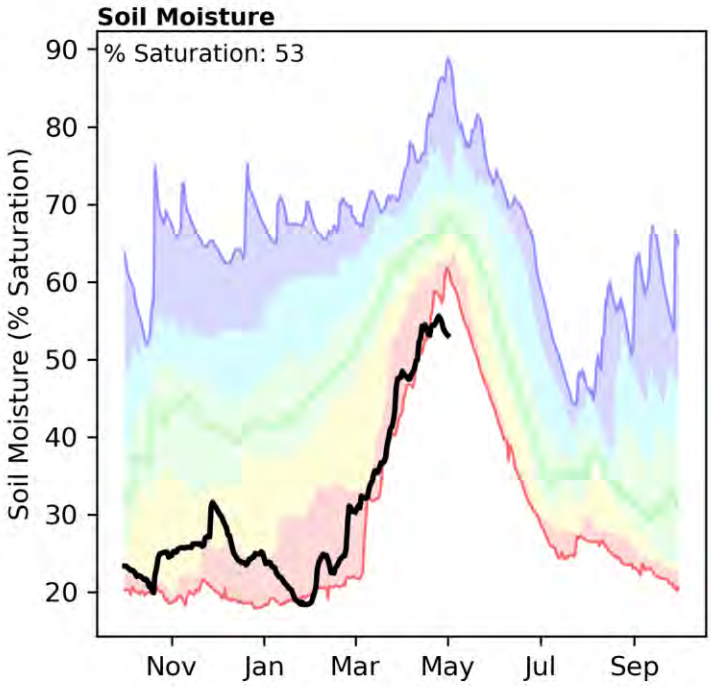
Beaver

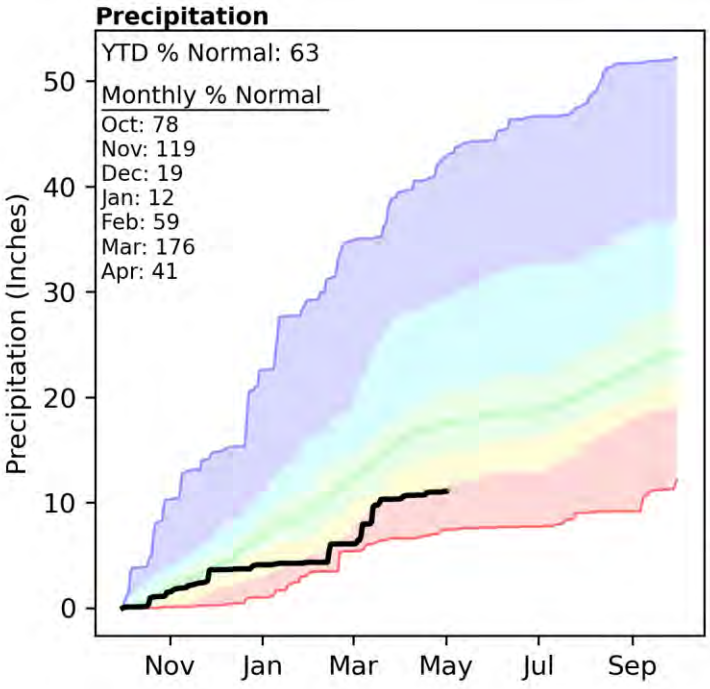

BEAVER
Water Supply Forecasts
May 1, 2025
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
<------- Drier ------- Future Conditions ------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Beaver R nr Beaver
May-Jul
111 obs
7.1
8.9
11
12
16
45% 50% 55% 60% 65% 70% 75% 80% 85% 90% 95% 100% 105%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
70% Exceedance
50% Exceedance
30% Exceedance
10% or 5% Exceedance
There is a 95%/90% chance that flows will exceed this volume
There is a 70% chance that flows will exceed this volume
There is a 50% chance that flows will exceed this volume
There is a 30% chance that flows will exceed this volume
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

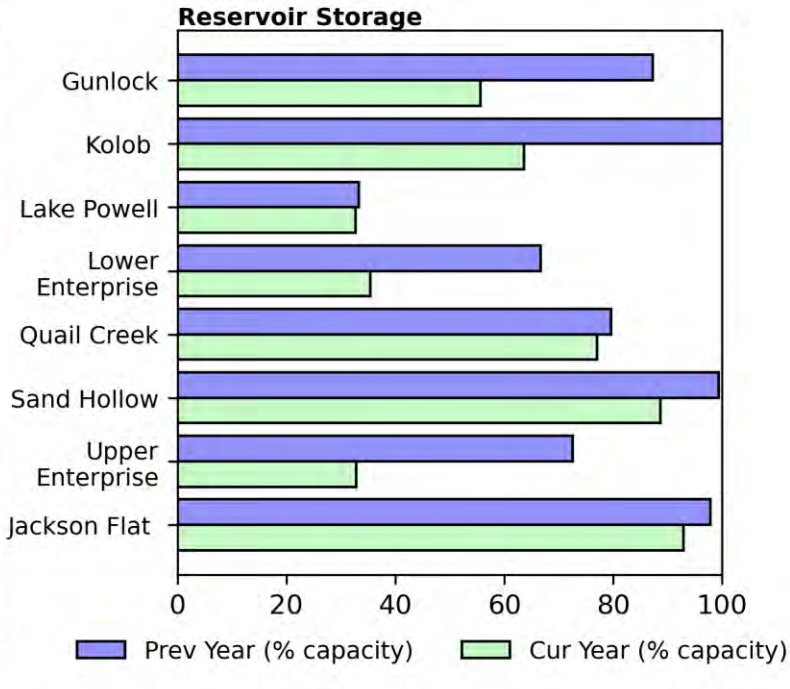
Southwestern Utah | May 1, 2025

Snowpack in Southwestern Utah is well below normal at 29% of median, compared to 103% at this time last year. Precipitation in April was well below normal at 41%, which brings the seasonal accumulation (October-April) to 63% of median. Soil moisture is at 53% saturation compared to 68% saturation last year. Reservoir storage is 75% of capacity, compared to 89% last year[1]. Forecast streamflow volumes (50% exceedence, May-July) range from 33% to 56% of normal. The Surface Water Supply Index percentile is 12% for the Virgin River.





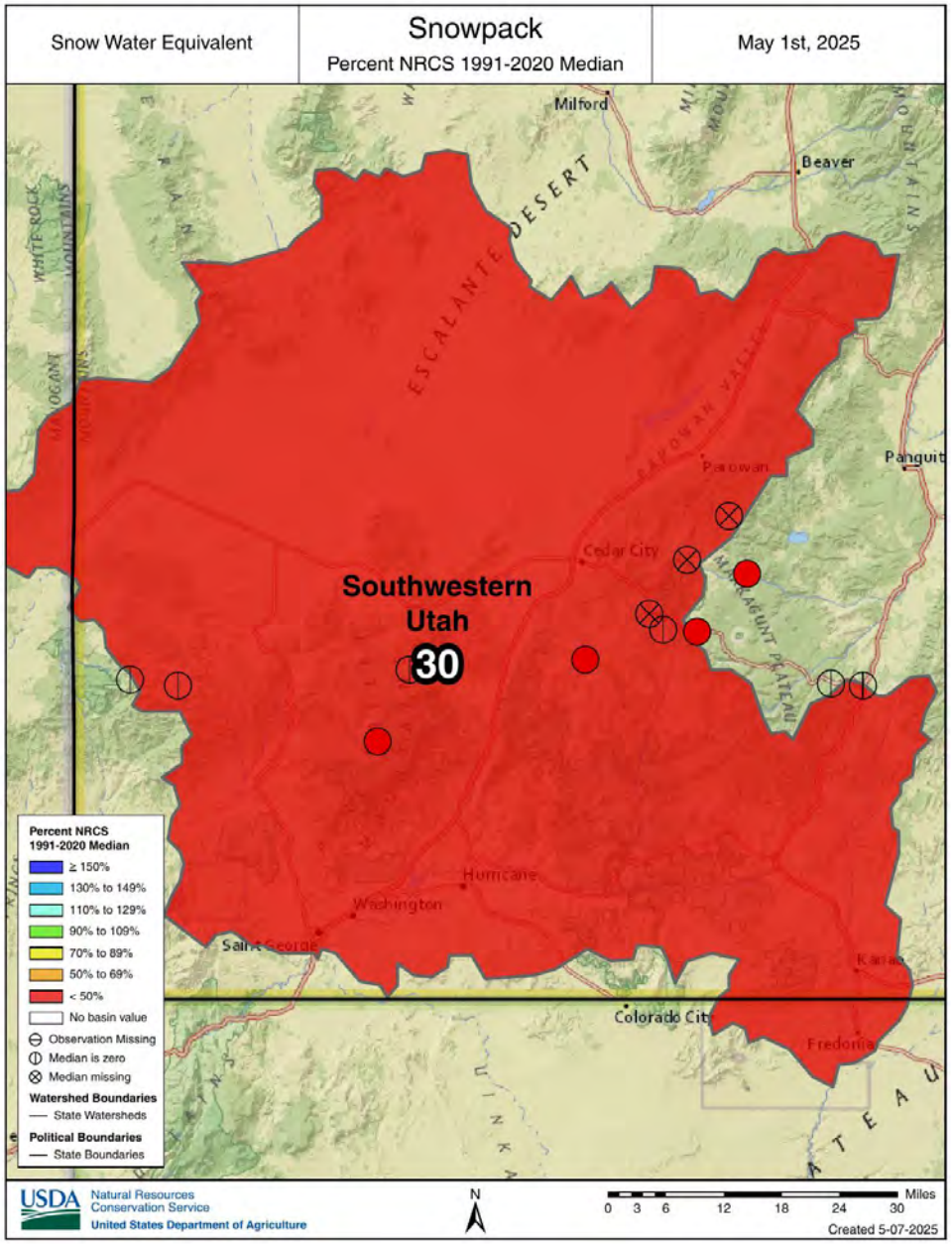


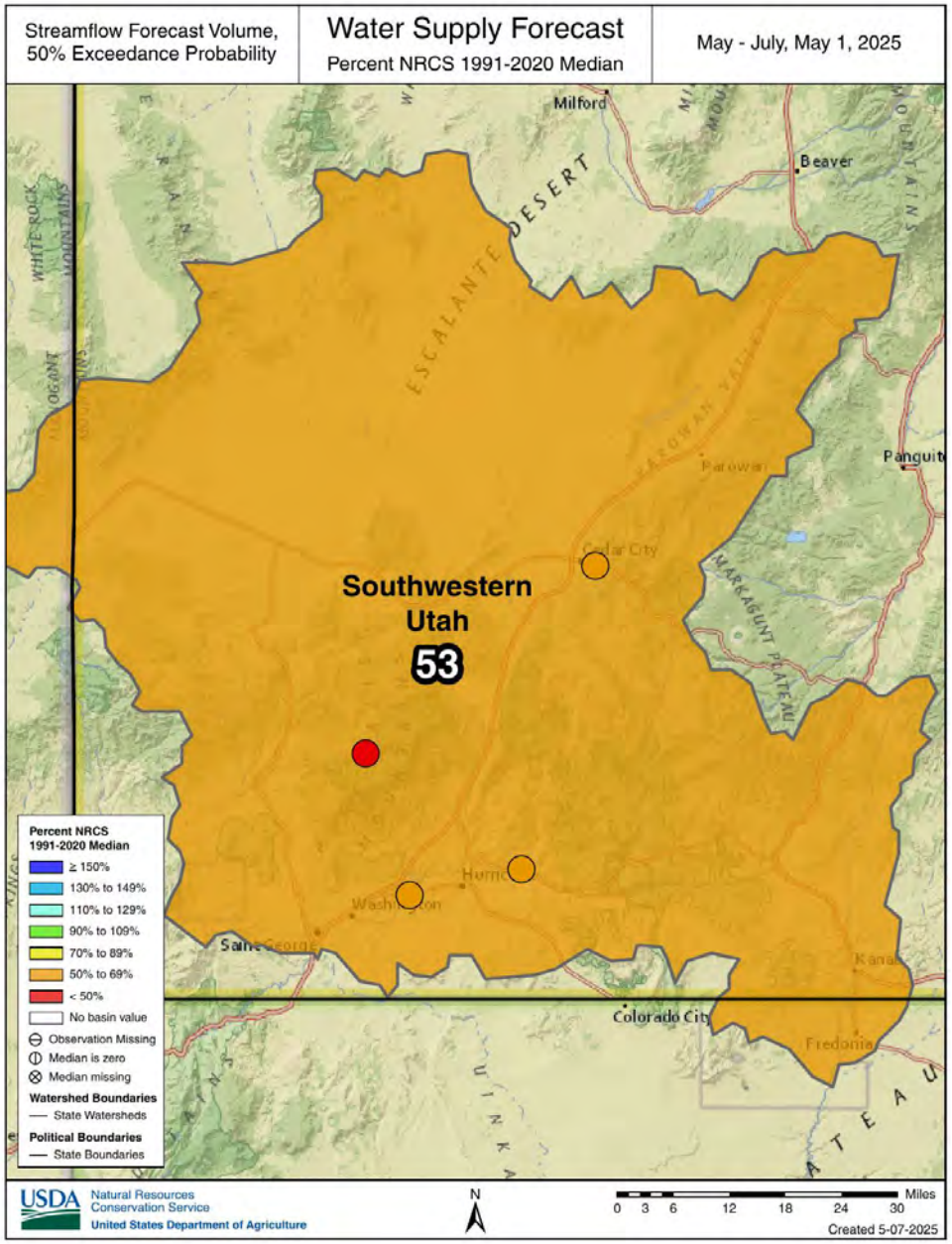


Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

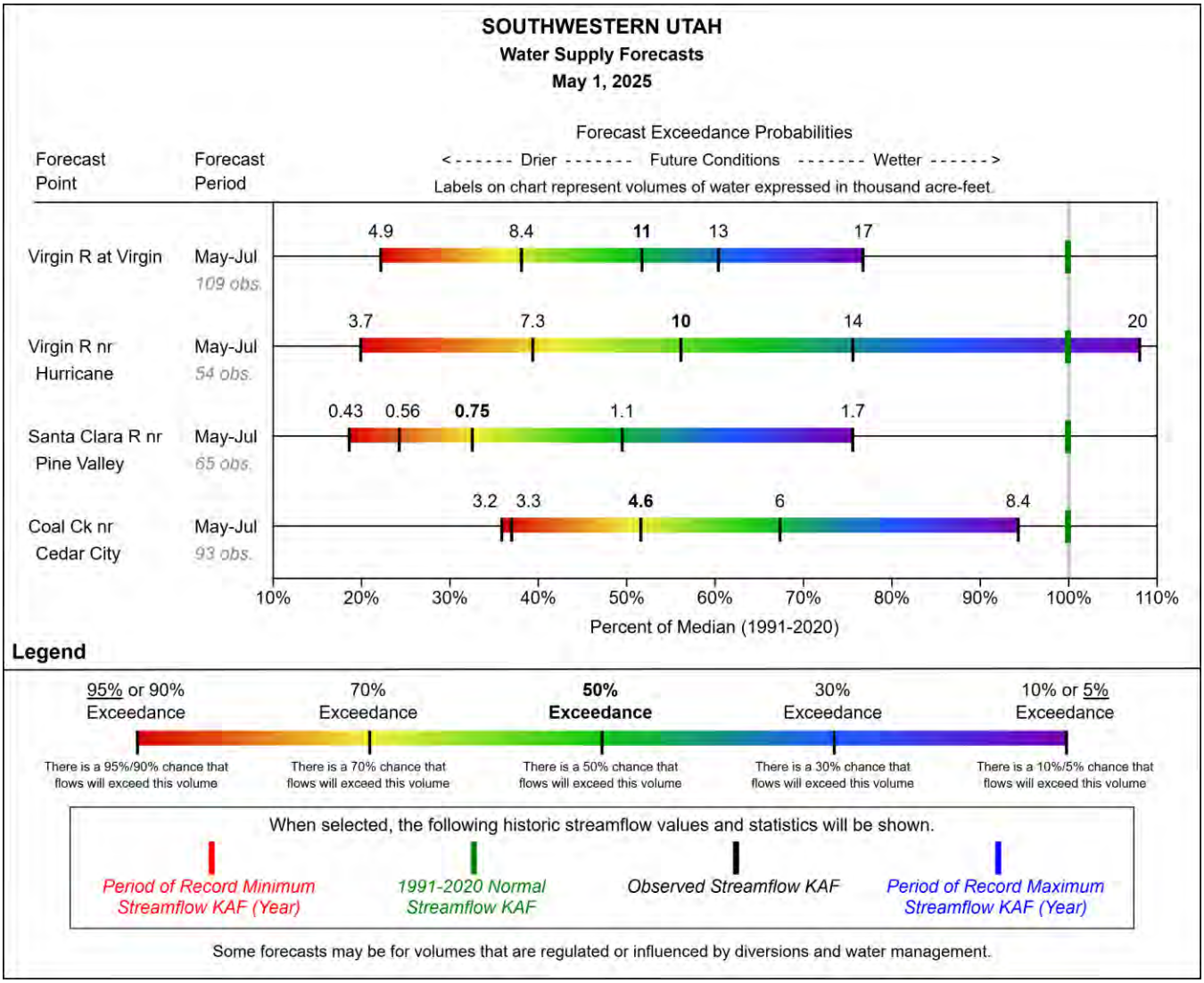
Southwest Utah reservoir percentages exclude Lake Powell.

Southwestern Utah





Southwestern Utah



Legend

Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

May 1, 2025 | Utah Reservoir Summary

Watershed/Region	Current Storage (Basinwide KAF)	Reservoir Capacity (Basinwide KAF)	Last Yr % Capacity (Basinwide)	This Yr % Capacity (Basinwide)
Utah (Statewide)	4593	5470	87	83
Utah (Statewide) Incl. Flaming G. & Lk. Powell	15376	32533	48	47
Bear	1069	1389	76	76
Weber-Ogden	501	547	91	91
Northeastern Uintas	3205	3852	84	83
Tooele Valley	3	4	93	80
Duchesne	1249	1379	93	90
Provo	1262	1334	96	94
San Pitch	9	20	69	46
Price	125	160	75	78
Upper Sevier	202	382	66	52
Southeast UT	1	2	95	70
Beaver	14	23	99	62
Southwest Utah	92	122	89	75

Reservoir	Current Storage (KAF)	Reservoir Capacity (KAF)	Last Yr % Capacity	This Yr % Capacity
Bear Lake	983	1302	75	75
Big Sand Wash Reservoir	24	25	96	95
Causey Reservoir	5	7	100	71
Cleveland Lake	2	5	77	54
Currant Creek Reservoir	15	15	92	96
Deer Creek Reservoir	144	149	96	96
East Canyon Reservoir	47	49	82	95
Echo Reservoir	72	73	97	97
Flaming Gorge Reservoir	3143	3749	84	83
Grantsville Reservoir	2	3	94	83
Gunlock	5	10	87	55
Gunnison Reservoir	9	20	69	46
Huntington North Reservoir	3	4	78	78
Hyrum Reservoir	12	15	82	82
Jackson Flat Reservoir	3	4	97	92
Joes Valley Reservoir	47	61	79	77
Jordanelle Reservoir	262	314	86	83
Ken's Lake	1	2	95	70
Kolob Reservoir	3	5	100	63
Lake Powell	7638	23314	33	32
Lost Creek Reservoir	19	22	99	85
Lower Enterprise	0	2	66	35
Meeks Cabin Reservoir	16	32	82	49
Miller Flat Reservoir	3	5	69	67
Millsite	8	18	63	48
Minersville Reservoir	14	23	99	62
Moon Lake Reservoir	22	35	96	61
Otter Creek Reservoir	43	52	93	82
Panguitch Lake	10	22	88	46
Pineview Reservoir	104	110	91	94
Piute Reservoir	46	71	92	64
Porcupine Reservoir	13	11	116	116
Quail Creek	30	40	79	77
Red Fleet Reservoir	16	25	83	66
Rockport Reservoir	50	60	79	82
Sand Hollow Reservoir	44	50	99	88
Scofield Reservoir	58	65	76	89
Settlement Canyon Reservoir	0	1	87	71
Sevier Bridge Reservoir	102	236	49	43
Smith and Morehouse	4	8	75	60
Starvation Reservoir	163	164	99	99
Stateline Reservoir	6	12	87	51
Steinaker Reservoir	22	33	99	66
Strawberry Reservoir	1022	1105	94	92
Upper Enterprise	3	10	72	32
Upper Stillwater Reservoir	2	32	7	6
Utah Lake	855	870	100	98
Willard Bay	198	215	93	92
Woodruff Creek	3	4	99	99
Woodruff Narrows Reservoir	55	57	90	97

Streamflow Forecast Summary for May 1, 2025

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
East Fork Smiths Fork bl Stateline Res	APR-JUL	26	13.7	16.9	19.3	74	22	26
East Fork Smiths Fork bl Stateline Res	MAY-JUL	25	11.7	14.9	17.3	69	19.9	24
Seven Mile Ck nr Fish Lake	APR-JUL	6.1	4.1	4.8	5.3	87	5.8	6.6
Seven Mile Ck nr Fish Lake	MAY-JUL	5.1	3	3.7	4.2	82	4.7	5.5
Blacks Fk nr Robertson	APR-JUL	91	46	57	65	71	73	84
Blacks Fk nr Robertson	MAY-JUL	85	41	52	60	71	68	79
Huntington Ck bl Electric Lake	APR-JUL	8.3	6.8	7.9	8.7	105	9.6	10.9
Huntington Ck bl Electric Lake	MAY-JUL	7.3	5.6	6.7	7.5	103	8.4	9.7
Rock Ck at Upper Stillwater Dam	APR-JUL	68	50	56	60	88	64	71
Rock Ck at Upper Stillwater Dam	MAY-JUL	66	43	49	53	80	57	64
Bear R nr Ut-Wy State Line	APR-JUL	101	67	80	89	88	98	111
Bear R nr Ut-Wy State Line	APR-SEP	114	75	89	99	87	109	123
Bear R nr Ut-Wy State Line	MAY-JUL	97	57	70	79	81	88	101
Bear R nr Ut-Wy State Line	MAY-SEP	108	65	79	89	82	99	113
Lake Fk R bl Moon Lk nr Mountain Home	APR-JUL	57	32	37	41	72	45	51
Lake Fk R bl Moon Lk nr Mountain Home	MAY-JUL	54	28	33	37	69	41	47
WF Duchesne R at Vat Diversion	APR-JUL	14.5	9.8	11.4	12.6	87	13.8	15.8
WF Duchesne R at Vat Diversion	MAY-JUL	13.6	8	9.6	10.8	79	12	14
Fish Ck ab Reservoir nr Scofield	APR-JUL	19.8	16.3	19.2	21	106	24	27

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
Fish Ck ab Reservoir nr Scofield	MAY-JUL	17.5	12.5	15.4	17.5	100	19.8	23
Price R nr Scofield Reservoir	APR-JUL	26	21	25	27	104	30	34
Price R nr Scofield Reservoir	MAY-JUL	22	14.9	18.4	21	95	24	28
Currant Ck bl Currant Ck Dam	APR-JUL	11.9	6.5	8.2	9.5	80	10.9	13.2
Currant Ck bl Currant Ck Dam	MAY-JUL	10.3	5	6.7	8	78	9.4	11.7
Yellowstone R nr Altonah	APR-JUL	56	26	32	37	66	42	50
Yellowstone R nr Altonah	MAY-JUL	54	23	29	34	63	39	47
Strawberry R nr Soldier Springs	APR-JUL	36	27	33	37	103	42	51
Strawberry R nr Soldier Springs	MAY-JUL	27	13.3	19.3	24	89	29	38
Uinta R bl Powerplant Diversion nr Neola	APR-JUL	64	22	30	36	56	43	54
Uinta R bl Powerplant Diversion nr Neola	MAY-JUL	61	19.1	27	33	54	40	51
Mammoth Ck nr Hatch	APR-JUL	19.7	2.8	4.8	6.9	35	9	13.7
Mammoth Ck nr Hatch	MAY-JUL	18.2	1.5	3.5	5.6	31	7.7	12.4
Rock Ck nr Mountain Home	APR-JUL	78	58	64	69	88	74	82
Rock Ck nr Mountain Home	MAY-JUL	74	49	55	60	81	65	73
White R bl Tabbyune Creek	APR-JUL	7.2	6.2	7.6	8.7	121	9.9	12
White R bl Tabbyune Creek	MAY-JUL	5.1	3	4.4	5.5	108	6.7	8.8
Whiterocks R nr Whiterocks	APR-JUL	43	18.1	23	27	63	31	39
Whiterocks R nr Whiterocks	MAY-JUL	41	15.6	21	25	61	29	37
South Ck ab Resv nr Monticello	APR-JUL1	0.41	--	0.03	0.06	15	0.1	0.19

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
South Ck ab Resv nr Monticello	MAY-JUL1	0.26	--	0.03	0.06	23	0.1	0.19
Salina Ck nr Emery	APR-JUL	5.6	2.8	3.7	4.3	77	4.9	5.8
Salina Ck nr Emery	MAY-JUL	4.9	2.1	3	3.6	73	4.2	5.1
Provo R at Woodland	APR-JUL	85	65	79	89	105	98	112
Provo R at Woodland	MAY-JUL	75	50	64	74	99	84	98
Seely Ck bl Joes Valley Resv	APR-JUL	44	31	36	39	89	42	48
Seely Ck bl Joes Valley Resv	MAY-JUL	41	27	32	35	85	38	44
Sevier R at Hatch	APR-JUL	34	10.3	12.4	15.2	45	18	21
Sevier R at Hatch	MAY-JUL	29	6.5	8.6	11.4	39	14.2	17.4
Smiths Fk nr Border	APR-JUL	86	69	79	86	100	93	103
Smiths Fk nr Border	APR-SEP	100	83	94	102	102	110	125
Smiths Fk nr Border	MAY-JUL	75	59	69	76	101	83	93
Smiths Fk nr Border	MAY-SEP	90	73	84	92	102	100	115
Weber R nr Oakley	APR-JUL	97	65	78	86	89	95	108
Weber R nr Oakley	MAY-JUL	89	53	66	74	83	83	96
Santa Clara R nr Pine Valley	APR-JUL	3.2	0.81	0.94	1.13	35	1.52	2.1
Santa Clara R nr Pine Valley	MAY-JUL	2.3	0.43	0.56	0.75	33	1.14	1.74
Muddy Ck nr Emery	APR-JUL	16.3	7.6	9.8	11.4	70	13.2	16.1
Muddy Ck nr Emery	MAY-JUL	14.9	6.2	8.4	10	67	11.8	14.7
Manti Ck bl Dugway Ck nr Manti	APR-JUL	13	7.7	9.1	10.2	78	11.5	13.3
Manti Ck bl Dugway Ck nr Manti	MAY-JUL	12	6.6	8	9.1	76	10.4	12.2
Bear R ab Resv nr Woodruff	APR-JUL	92	33	54	72	78	90	116
Bear R ab Resv nr Woodruff	APR-SEP	99	35	56	75	76	94	121
Bear R ab Resv nr Woodruff	MAY-JUL	80	20	41	59	74	77	103

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
Bear R ab Resv nr Woodruff	MAY-SEP	85	22	43	62	73	81	108
Huntington Ck nr Huntington	APR-JUL	36	23	27	29	81	31	35
Huntington Ck nr Huntington	MAY-JUL	34	19.6	23	25	74	27	31
Big Ck nr Randolph	APR-JUL	3.2	0.83	1.32	2.5	78	3.3	5.3
Big Ck nr Randolph	MAY-JUL	2.5	0.3	0.79	1.95	78	2.8	4.8
Pine Ck nr Escalante	APR-JUL	1.63	0.28	0.45	0.62	38	0.83	1.2
Pine Ck nr Escalante	MAY-JUL	1.11	0.11	0.28	0.45	41	0.66	1.03
S Willow Ck nr Grantsville	APR-JUL	2.5	1.25	1.61	1.86	74	2.1	2.4
S Willow Ck nr Grantsville	MAY-JUL	2.2	0.91	1.28	1.53	70	1.78	2.1
Ferron Ck Upper Station nr Ferron	APR-JUL	32	19.9	23	25	78	27	30
Ferron Ck Upper Station nr Ferron	MAY-JUL	29	17.2	20	22	76	24	27
Provo R at Hailstone	APR-JUL	83	62	77	90	108	104	124
Provo R at Hailstone	MAY-JUL	72	42	57	70	97	84	104
Dunn Ck nr Park Valley	APR-JUL	2.4	1.08	1.48	1.88	78	2.3	2.9
Dunn Ck nr Park Valley	MAY-JUL	2.1	0.91	1.3	1.7	81	2.1	2.7
East Canyon Ck nr Jeremy Ranch	APR-JUL	9.5	6.1	7	8.4	88	10.3	13
East Canyon Ck nr Jeremy Ranch	MAY-JUL	6.4	3.5	4.4	5.8	91	7.7	10.4
Ashley Ck nr Vernal	APR-JUL	43	12.5	20	25	58	30	38
Ashley Ck nr Vernal	MAY-JUL	42	10.3	17.9	23	55	28	36
Vernon Ck nr Vernon	APR-JUL	0.74	0.33	0.48	0.54	73	0.72	0.98
Vernon Ck nr Vernon	MAY-JUL	0.52	0.21	0.36	0.42	81	0.6	0.86
Beaver R nr Beaver	APR-JUL	17.4	9.9	11.7	13.6	78	15.2	18.7
Beaver R nr Beaver	MAY-JUL	15.4	7.1	8.9	10.8	70	12.4	15.9
Duchesne R nr Tabiona	APR-JUL	87	62	72	79	91	86	98
Duchesne R nr Tabiona	MAY-JUL	77	50	60	67	87	74	86

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
EF Sevier R nr Kingston	APR-JUL	13.4	3.6	5.3	8	60	10.7	12
EF Sevier R nr Kingston	MAY-JUL	8.2	1.35	3.1	5.8	71	8.5	9.8
Lost Ck Reservoir Inflow	APR-JUL	9.5	4.2	5.9	7.6	80	9.2	11
Lost Ck Reservoir Inflow	MAY-JUL	6.6	1.36	3.1	4.8	73	6.4	8.2
Coal Ck nr Cedar City	APR-JUL	12.5	4.9	5	6.3	50	7.7	10.1
Coal Ck nr Cedar City	MAY-JUL	8.9	3.2	3.3	4.6	52	6	8.4
Sevier R nr Kingston	APR-JUL	14.7	2.3	3	3.7	25	5.6	12.3
Sevier R nr Kingston	MAY-JUL	10.9	1.42	2.1	2.8	26	4.7	11.4
American Fk ab Upper Powerplant	APR-JUL	19.2	8.7	13.7	16.6	86	20	25
American Fk ab Upper Powerplant	MAY-JUL	17	6.5	11.5	14.4	85	17.9	23
Bear R bl Stewart Dam	APR-JUL	115	27	59	89	77	119	163
Bear R bl Stewart Dam	APR-SEP	122	27	70	103	84	136	185
Bear R bl Stewart Dam	MAY-JUL	92	5	37	67	73	97	141
Bear R bl Stewart Dam	MAY-SEP	108	5	48	81	75	114	163
Rockport Reservoir Inflow	APR-JUL	87	42	63	78	90	93	114
Rockport Reservoir Inflow	MAY-JUL	73	26	47	62	85	77	98
Duchesne R ab Knight Diversion	APR-JUL	162	121	135	146	90	157	174
Duchesne R ab Knight Diversion	MAY-JUL	148	99	113	124	84	135	152
Dell Fk nr SLC	APR-JUL	3.6	1.57	2.1	2.7	75	3.3	4.1
Dell Fk nr SLC	MAY-JUL	3.2	0.56	1.11	1.69	53	2.3	3.1
Strawberry R nr Duchesne	APR-JUL	53	39	47	53	100	60	71
Strawberry R nr Duchesne	MAY-JUL	37	23	31	37	100	44	55
Clear Ck ab Diversions nr Sevier	APR-JUL	13.6	6.8	8	9	66	10.2	11.9
Clear Ck ab Diversions nr Sevier	MAY-JUL	10.9	5	6.2	7.2	66	8.4	10.1

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	19.7	6.6	9.6	11.6	59	13.6	16.6
Big Brush Ck ab Red Fleet Reservoir	MAY-JUL	16.7	4.5	7.5	9.5	57	11.5	14.5
W Canyon Ck nr Cedar Fort	APR-JUL	0.95	-0.52	0.08	0.49	52	0.9	1.5
W Canyon Ck nr Cedar Fort	MAY-JUL	0.87	-0.53	0.07	0.48	55	0.89	1.49
Green R at Flaming Gorge Dam	APR-JUL	990	555	700	810	82	930	1120
Green R at Flaming Gorge Dam	MAY-JUL	880	445	590	700	80	820	1010
Weber R nr Coalville	APR-JUL	93	36	58	73	78	88	109
Weber R nr Coalville	MAY-JUL	77	18.6	40	55	71	70	91
Chalk Ck at Coalville	APR-JUL	26	9.2	14.5	18.8	72	23	30
Chalk Ck at Coalville	MAY-JUL	22	5.3	10.6	14.9	68	19.4	26
East Canyon Ck nr Morgan	APR-JUL	18	7.2	11.5	14.5	81	17.5	22
East Canyon Ck nr Morgan	MAY-JUL	13.7	2.9	7.2	10.2	74	13.2	17.5
Echo Reservoir Inflow	APR-JUL	120	46	71	90	75	109	137
Echo Reservoir Inflow	MAY-JUL	101	25	50	69	68	88	116
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	3.3	1.03	1.44	1.78	54	2.2	2.9
Mill Ck at Sheley Tunnel nr Moab	MAY-JUL	2.8	0.53	0.94	1.28	46	1.67	2.4
Salt Ck at Nephi	APR-JUL	4.7	2.6	4.3	5.4	115	6.6	8.3
Salt Ck at Nephi	MAY-JUL	3.6	1.16	2.9	4	111	5.1	6.8
Provo R bl Deer Ck Dam	APR-JUL	113	47	70	86	76	103	126
Provo R bl Deer Ck Dam	MAY-JUL	97	33	57	73	75	89	113
SF Ogden R nr Huntsville	APR-JUL	41	22	29	34	83	39	46
SF Ogden R nr Huntsville	MAY-JUL	29	7.6	15	20	69	25	32
Little Cottonwood Ck nr SLC	APR-JUL	31	21	24	27	87	29	33

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
Little Cottonwood Ck nr SLC	MAY-JUL	29	17.9	22	24	83	26	30
Mill Ck nr SLC	APR-JUL	4.3	1.74	2.7	3.4	79	4	5
Mill Ck nr SLC	MAY-JUL	3.6	1.04	2	2.7	75	3.4	4.4
Duchesne R at Myton	APR-JUL	215	126	153	173	80	195	230
Duchesne R at Myton	MAY-JUL	193	86	113	133	69	155	190
Sevier R nr Gunnison	APR-JUL	30	15.8	16.5	19.1	64	24	33
Sevier R nr Gunnison	MAY-JUL	22	9.5	10.2	12.8	58	18	27
Blacksmith Fk nr Hyrum	APR-JUL	29	18.8	22	24	83	27	31
Blacksmith Fk nr Hyrum	MAY-JUL	21	11.4	14.2	16.9	80	19.8	24
Big Cottonwood Ck nr SLC	APR-JUL	29	17.6	23	26	90	29	34
Big Cottonwood Ck nr SLC	MAY-JUL	25	12.6	17.6	21	84	24	29
Parleys Ck nr SLC	APR-JUL	8.7	3.7	4.1	5.8	67	7.5	10
Parleys Ck nr SLC	MAY-JUL	6.4	1.57	2	3.7	58	5.4	7.9
Emigration Ck nr SLC	APR-JUL	2.3	0.79	1.05	1.5	65	1.95	2.6
Emigration Ck nr SLC	MAY-JUL	1.48	0.3	0.56	1.01	68	1.46	2.1
Pineview Reservoir Inflow	APR-JUL	79	34	47	61	77	76	106
Pineview Reservoir Inflow	MAY-JUL	49	4.7	17.7	32	65	47	77
Spanish Fk at Castilla	APR-JUL	30	16.9	29	37	123	46	57
Spanish Fk at Castilla	MAY-JUL	23	5	16.9	25	109	33	45
Weber R at Gateway	APR-JUL	205	84	132	165	80	198	245
Weber R at Gateway	MAY-JUL	153	28	76	109	71	142	190
Duchesne R nr Randlett	APR-JUL	255	118	151	176	69	205	250
Duchesne R nr Randlett	MAY-JUL	225	78	111	136	60	164	210
Little Bear R at Paradise	APR-JUL	28	15.7	19.2	24	86	28	34
Little Bear R at Paradise	MAY-JUL	18.6	3.5	7	11.4	61	15.8	22
City Ck nr SLC	APR-JUL	5.3	3	3.8	4.3	81	4.8	5.6
City Ck nr SLC	MAY-JUL	4.5	2.2	3	3.5	78	4	4.8

STATE OF UTAH		Forecast Exceedance Probabilities For Risk Assessment						
Site	Forecast Period	Median (kaf)	90% (kaf)	70% (kaf)	50% (kaf)	50% (as % Median)	30% (kaf)	10% (kaf)
Logan R nr Logan	APR-JUL	91	71	84	93	102	101	114
Logan R nr Logan	MAY-JUL	78	58	71	80	103	88	101
Utah Lake Inflow	APR-JUL	182	49	81	115	63	167	245
Utah Lake Inflow	MAY-JUL	122	-15.7	16	50	41	102	180
Colorado R nr Cisco	APR-JUL	3750	1990	2330	2580	69	2850	3260
Colorado R nr Cisco	MAY-JUL	3220	1610	1950	2200	68	2470	2880
Green R at Green River, UT	APR-JUL	2610	1360	1650	1860	71	2090	2450
Green R at Green River, UT	MAY-JUL	2210	1040	1330	1540	70	1770	2130
Virgin R at Virgin	APR-JUL	36	11.3	14.8	17.8	49	19.7	23
Virgin R at Virgin	MAY-JUL	22	4.9	8.4	11.4	52	13.3	16.9
Virgin R nr Hurricane	APR-JUL	31	6.5	10.1	13.2	43	16.8	23
Virgin R nr Hurricane	MAY-JUL	18.5	3.7	7.3	10.4	56	14	20

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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Utah Water Supply Outlook Report

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