Utah Water Supply Outlook Report

January 1, 2024

View from Brighton Ski Resort above the Brighton SNOTEL site

Photo by Claire Stellick

STATE OF UTAH GENERAL OUTLOOK
January 1, 2024

SUMMARY

After a monster snowpack season last winter, this year's **snowpack** is off to a disappointing start. As of January 1st, the statewide snow water equivalent (SWE) measured at our SNOTEL sites was 69% of normal, with all major basins below 80%. Conditions worsen as one heads southward in the state—particularly for southwestern Utah watersheds. Decent storm activity has impacted Utah since January 1st, but this report is based on conditions as of the first of the calendar year.

Precipitation for this water year started off strong with abundant moisture in early October but since has flatlined, and December precipitation was a meager 80% of normal. As of January 1st, the water-year-to-date precipitation value for Utah was 78%. Similar to SWE, precipitation percent-of-normal conditions are notably worse in southern Utah.

Statewide **soil moisture** is at 51% of saturation, which is very close to last year's value and is slightly above normal for this time of year. Despite the poor start to our snowpack season, the relatively moist mountain soils will help promote runoff efficiency in the spring.

As a result of the factors listed above, **streamflow forecasts** for April to July snowmelt runoff volume are generally pessimistic, with between 48% and 117% of normal April through July flow predicted. However, please bear in mind that these forecast percent normal values are based on median instead of average, which (due to the character of the distribution of streamflow observations for Utah sites) results in a higher 'percent normal' for a given forecast value. For some sites, this difference can be quite pronounced. As an example, the 50% exceedance, April-July forecast for the Spanish Fork at Castilla is 30 thousand acre-feet, which is considered to be 100% of median but only 57% of average! (If one uses percent of average instead of median, the current percent of normal values for all of Utah's January 1 forecasts ranges from 23% to 92% of normal.) Water users should beware of misplaced optimism while assessing forecasts for most areas of the state. We recommend focusing on the forecast value itself, and not the percent of normal, when assessing these predictions. In addition, January 1 forecasts have significant uncertainty compared with those issued during spring months (closer to peak snowpack conditions) and are meant to be advisory only.

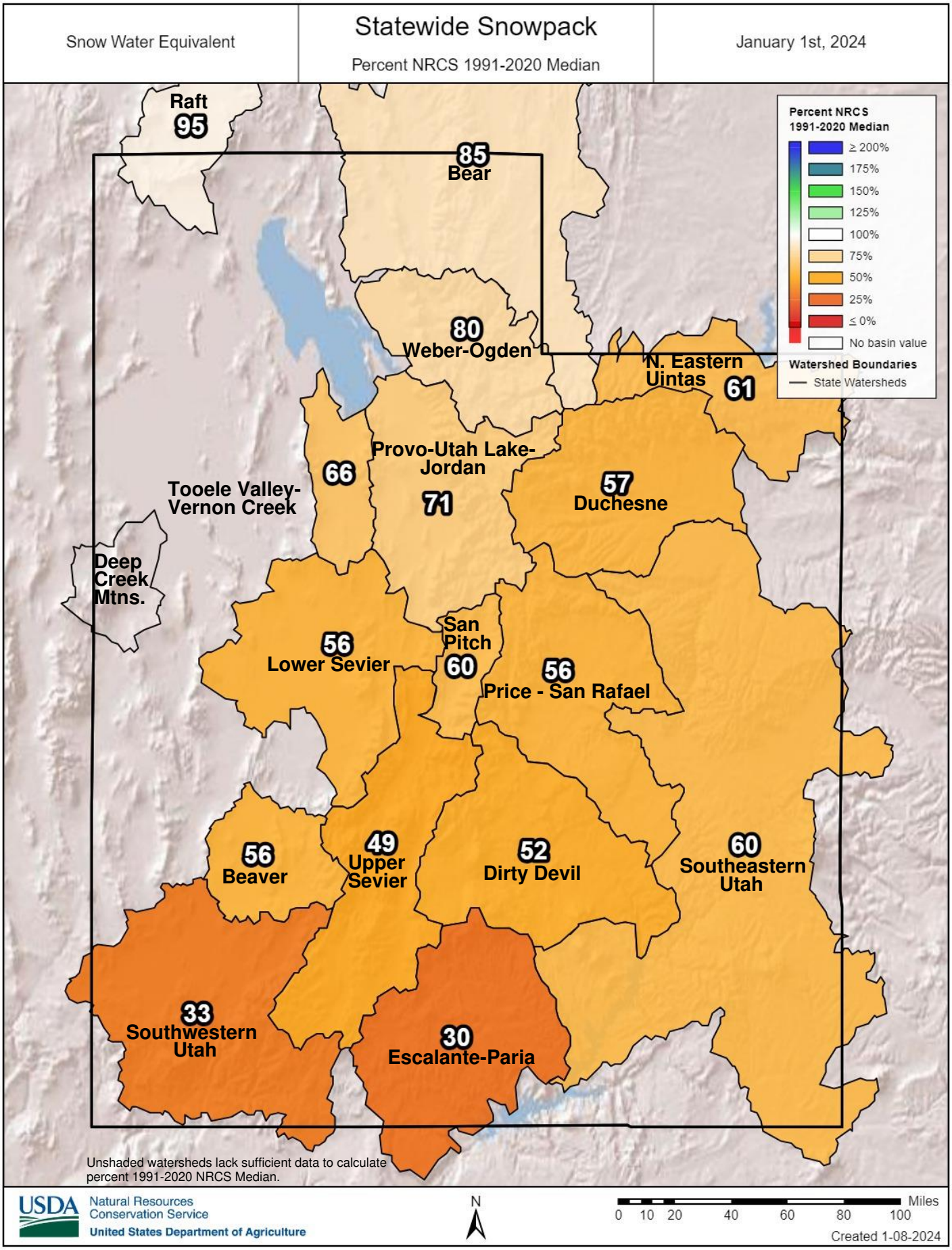
Utah's **reservoir storage** is currently at 78% of capacity, which is a whopping 32% higher than last year at this time. This storage level reflects the benefit of last winter's outstanding snowpack and the conservation measures promoted across Utah. **Surface Water Supply Indices** (SWSI) for Utah basins combine our current reservoir levels with the additional volume of water anticipated for each watershed based on these January 1 streamflow forecasts. While some areas of the state with significant ground to make up (due to large amounts of depleted reservoir storage) have low SWSI values, such as Ferron Creek and the Lower Sevier basins, SWSI values for most of the state are close to average (50th percentile) due to the disappointing snowpack thus far. That said, please recall that January 1 forecasts are meant to be advisory only; forecast accuracy improves as we approach peak snowpack accumulation (typically near April 1st).

We are excited to include in this Water Supply Outlook Report, for the first time, basin-level conditions and inflow forecasts for the **Great Salt Lake** (GSL). We have been working with hydrologists at the National Water and Climate Center, and we are now able to provide GSL current conditions for snowpack (SWE), precipitation, soil moisture, and reservoir storage within the GSL basin. In addition, our monthly Water Supply Reports (and our webpage) will now include forecast details for inflow into the Great Salt Lake as well as a predicted lake level rise due to this year's snowmelt runoff. We are hopeful that these details will prove useful to the wide-ranging efforts to retain and replenish water levels in the GSL. Currently, the snowpack in the GSL basin is at 80% of normal, which is discouraging. However, precipitation levels for this water year are close to normal (98%) and soil moisture is well above normal at 62% of saturation. Moreover, there is substantial carryover storage in GSL subbasin reservoirs; currently the region's storage is at 80% of capacity,

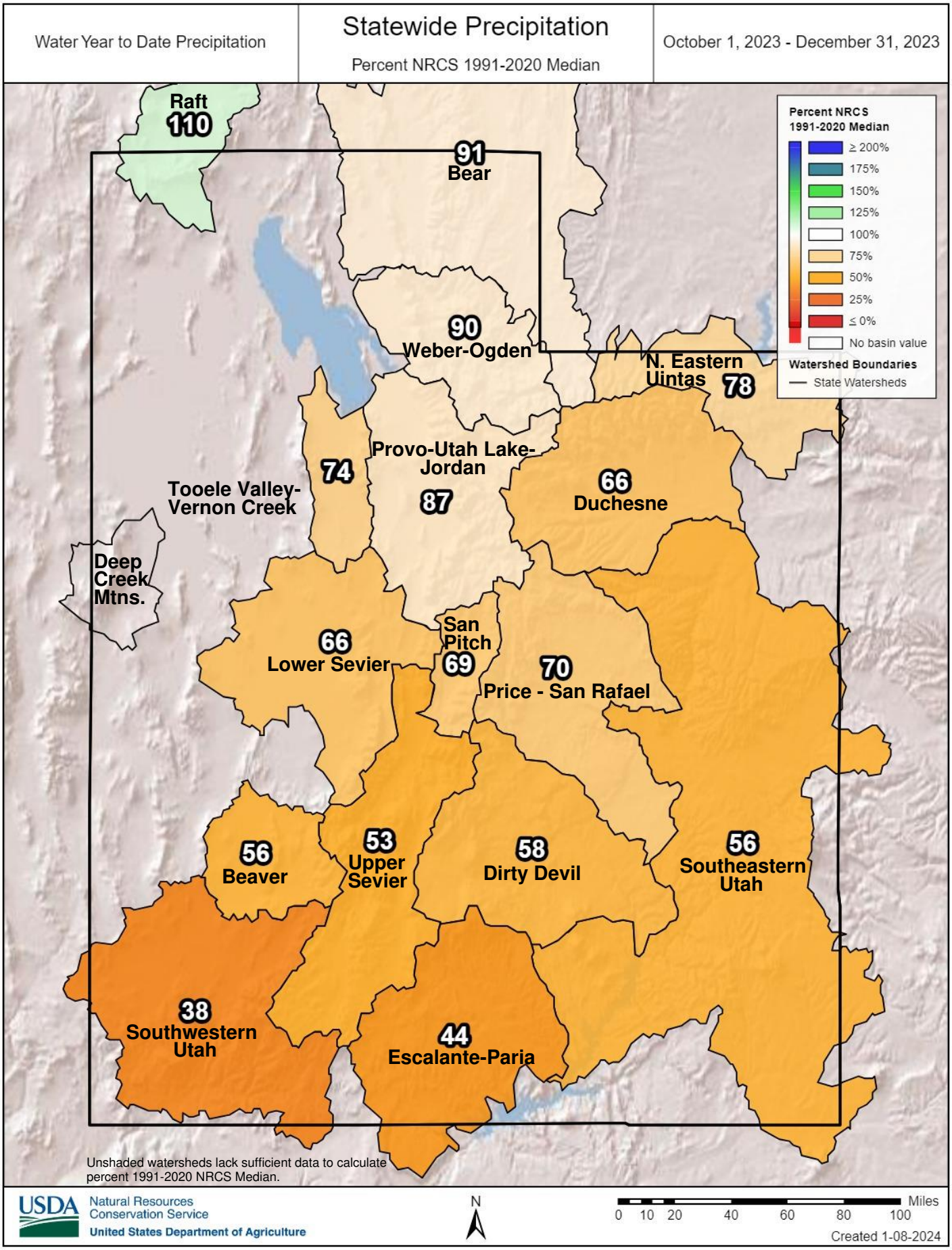
which is 33% higher than last year at this time. The 50% exceedance forecast for inflow into the GSL is 420 thousand acre-feet (93% of normal) which would result in a lake level rise of ~0.4 feet (with a probable range from 0 to 1.1 feet of lake level rise). That's a fairly meager increase, so keep fingers crossed that snowpack conditions improve! Please contact us with any questions related to these data and bear in mind that inflow forecasts for the GSL include substantial uncertainty.

Finally, the National Water and Climate Center has begun using a new water supply forecasting system. They provided the following informational summary: "This year, the NRCS begins using a new water supply forecast (WSF) system, the **Multi-Model Machine-Learning Metasystem**, or M^4. In comparison to the historic singular WSF model, the new system creates a mean value from six different forecast models. Using the mean of the ensemble of models harnesses the strengths of each technique while insulating against potential individual model vulnerabilities. The original NRCS WSF model remains as part of the suite of ensemble models. Testing shows that the ensemble mean generally equals or exceeds the performance of any individual model member. Application of NRCS water supply probabilistic forecasts remains unchanged." Please contact Angus Goodbody (angus.goodbody@usda.gov), the Lead Forecast Hydrologist for the NRCS Snow Survey and Water Supply Forecasting Program, with any questions related to M^4.

Utah (statewide) Snowpack



Utah (statewide) Precipitation



January 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	831.0	88.0	919.0	1.2	**64**	[1982, 1997]
Woodruff Narrows	48.2	75.0	123.2	0.21	**52**	[2006, 2020]
Little Bear	9.8	27.0	36.8	0.13	**52**	[2010, 2016]
Ogden	89.1	80.0	169.1	0.65	**58**	[1993, 1994]
Weber	358.2	215.0	573.2	0.83	**60**	[2005, 2009]
Provo	1200.7	133.5	1334.2	1.75	**71**	[2000, 2010]
Western Uintas	181.7	40.0	221.7	0.65	**58**	[2001, 2006]
Eastern Uintas	47.4	82.0	129.4	-0.83	**40**	[1992, 2015]
Blacks Fork	15.9	77.0	92.9	-0.4	**45**	[2018, 2020]
Smiths Fork	7.7	22.0	29.7	-0.4	**45**	[2006, 2020]
Price	56.6	25.0	81.6	1.94	**73**	[1997, 1999]
Joes Valley	49.9	38.0	87.9	0.46	**56**	[1993, 2010]
Ferron Creek	9.3	22.0	31.3	-2.31	**22**	[1981, 1988]
Moab	2.0	3.2	5.2	1.1	**63**	[2007, 2017]
Upper Sevier	100.7	18.8	119.5	0.28	**53**	[1994, 2000]
San Pitch	6.1	10.4	16.5	-0.83	**40**	[2008, 2017]
Lower Sevier	63.2	24.0	87.2	-2.87	**16**	[2003, 2016]
Beaver River	18.0	15.3	33.3	-0.09	**49**	[2010, 2012]
Virgin River	38.7	27.5	66.2	-0.88	**39**	[2009, 2012]

[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

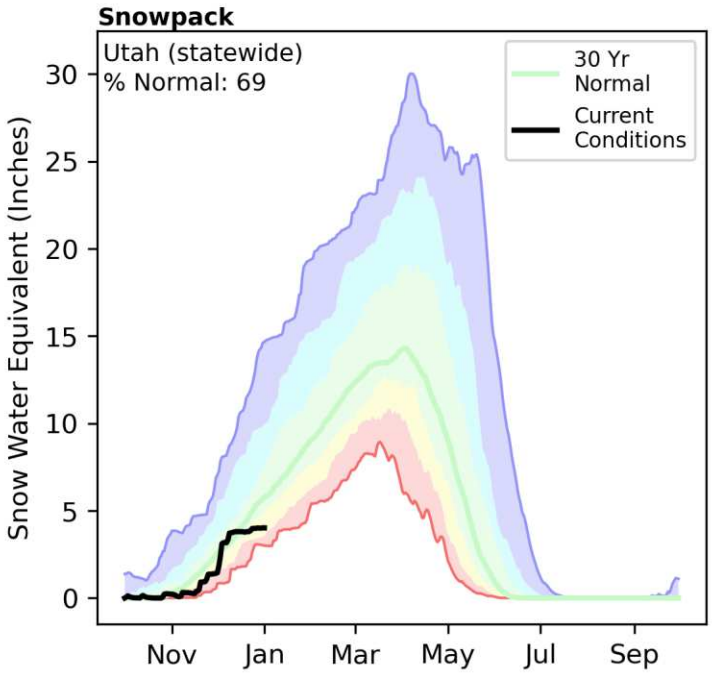
What is a Surface Water Supply Index?

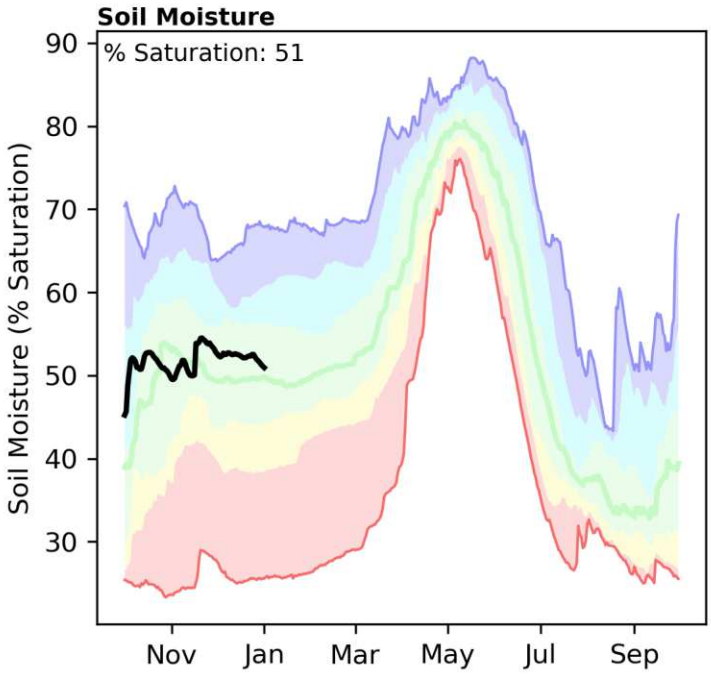
The Surface Water Supply Index (SWSI) is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based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

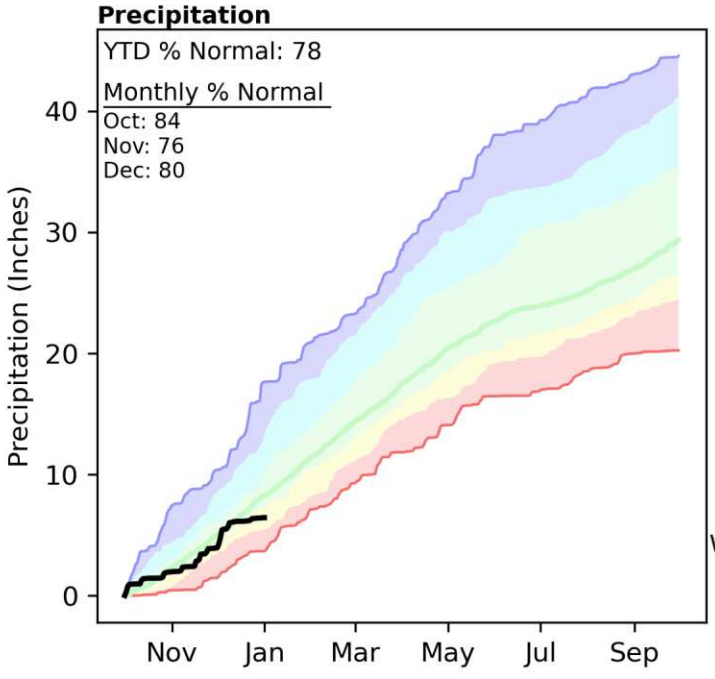
The Utah Snow Survey has also chosen to display the SWSI value as well as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has a simple application. It can be best thought of as a scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the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

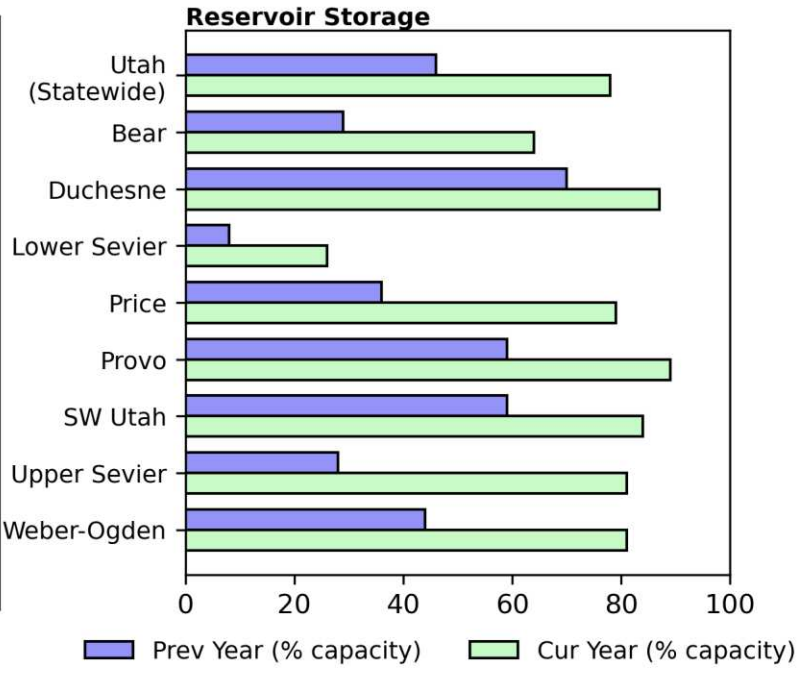
Utah (statewide) | January 1, 2024

Snowpack in Utah (statewide) is well below normal at 69% of median, compared to 153% at this time last year. Precipitation in December was below normal at 80%, which brings the seasonal accumulation (October-December) to 78% of median. Soil moisture is at 51% saturation compared to 52% saturation last year. Statewide, reservoir storage is 78% of capacity, compared to 46% last year[1]. Forecast streamflow volumes (50% exceedence, April-July) range from 48% to 117% of normal.







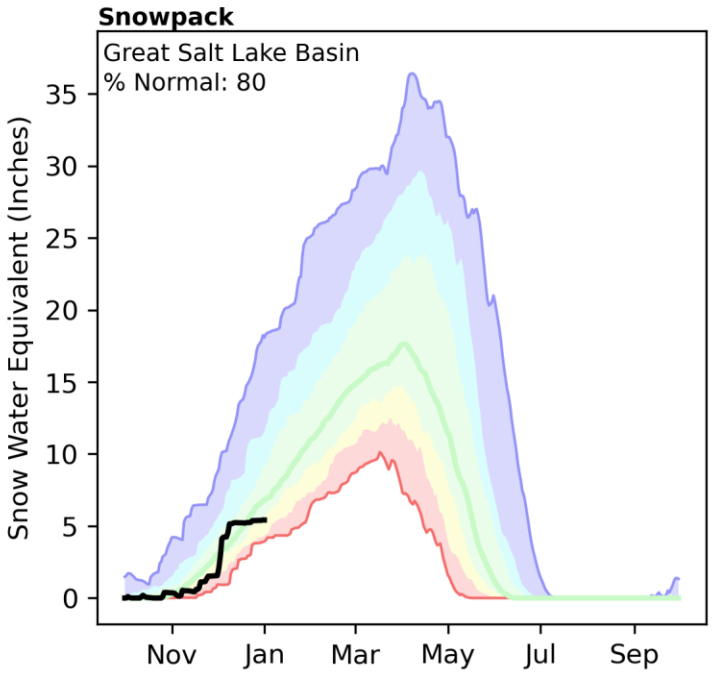


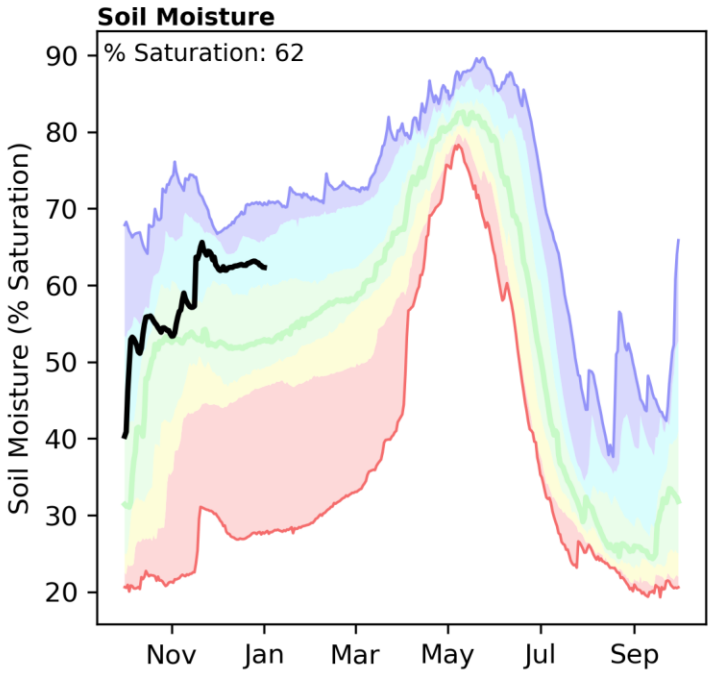
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

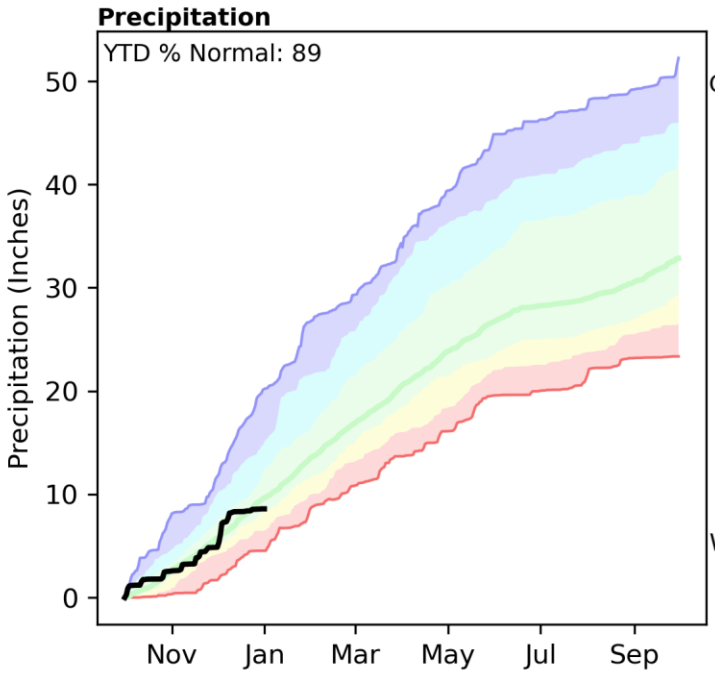
[1]Statewide reservoir percentages exclude Lake Powell and Flaming Gorge Reservoirs.

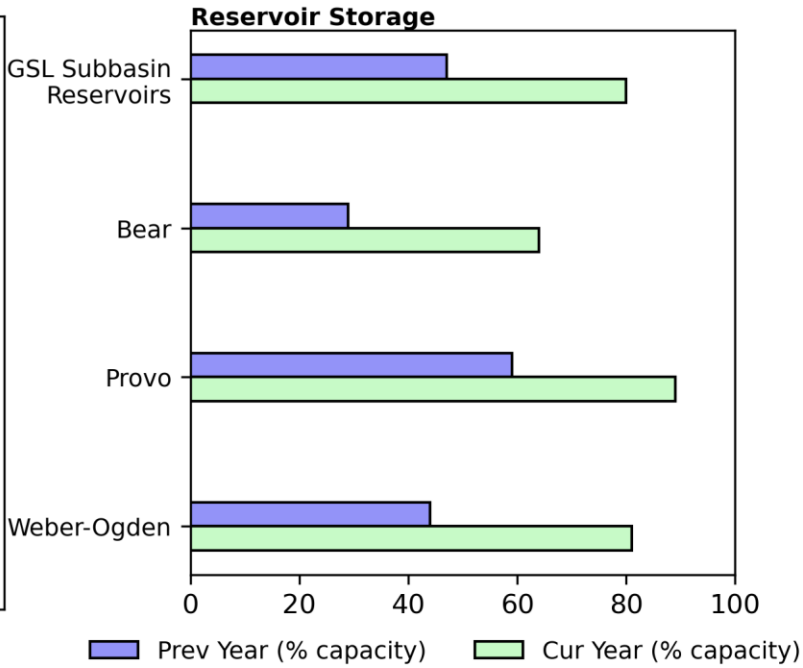
Great Salt Lake Basin | January 1, 2024

Snowpack in The Great Salt Lake (GSL) Basin[1] is below normal at 80% of median, compared to 160% at this time last year. Precipitation in December was about normal at 98%, which brings the seasonal accumulation (October-December) to 89% of median. Soil moisture is at 62% saturation compared to 52% saturation last year. Reservoir storage in GSL subbasins is 80% of capacity, compared to 47% last year. The forecast inflow volume (50% exceedence, April-July) for the GSL is 420,000 acre-feet (93% of normal), resulting in a projected lake level (stage) increase of 0.41 feet.





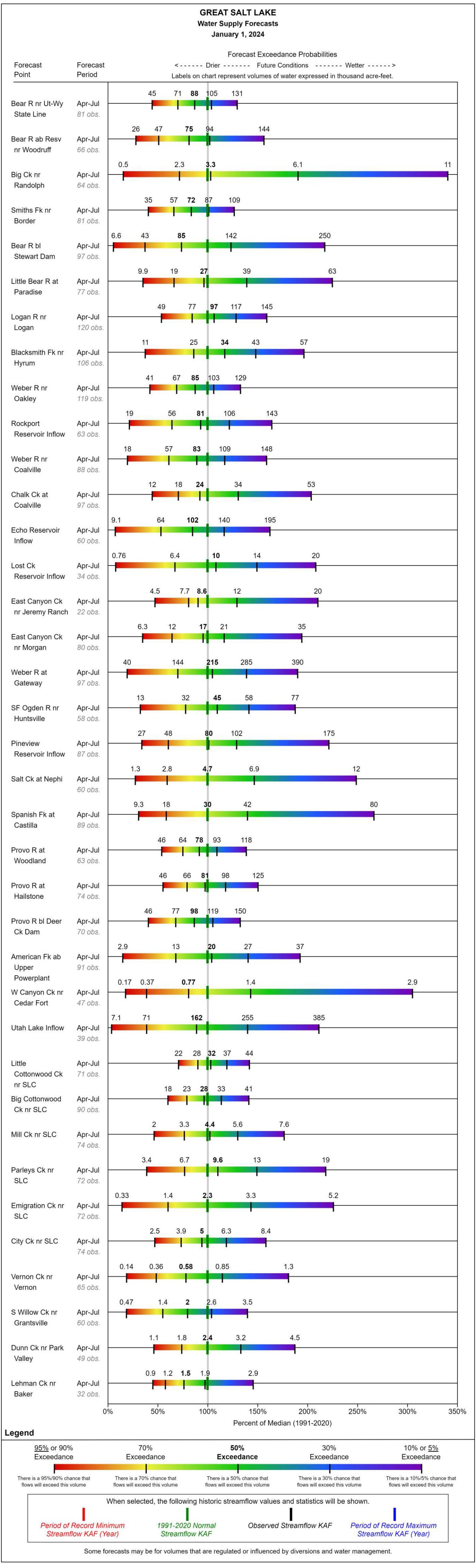




Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

[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.

Great Salt Lake Basin



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

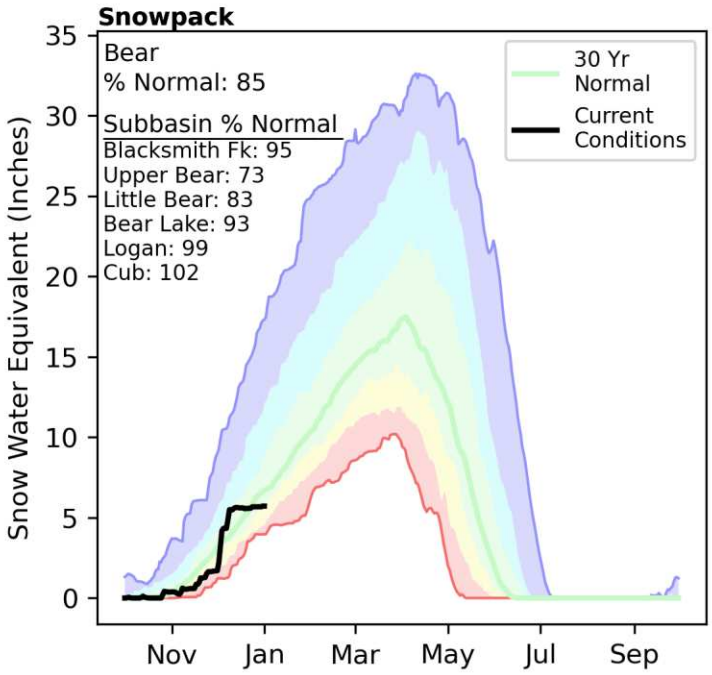
Observed Streamflow KAF

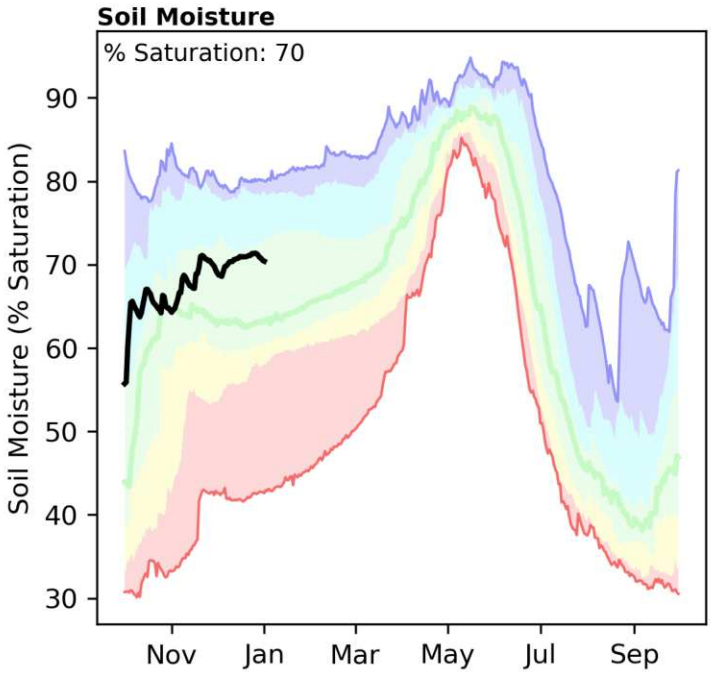
Period of Record Maximum Streamflow KAF (Year)

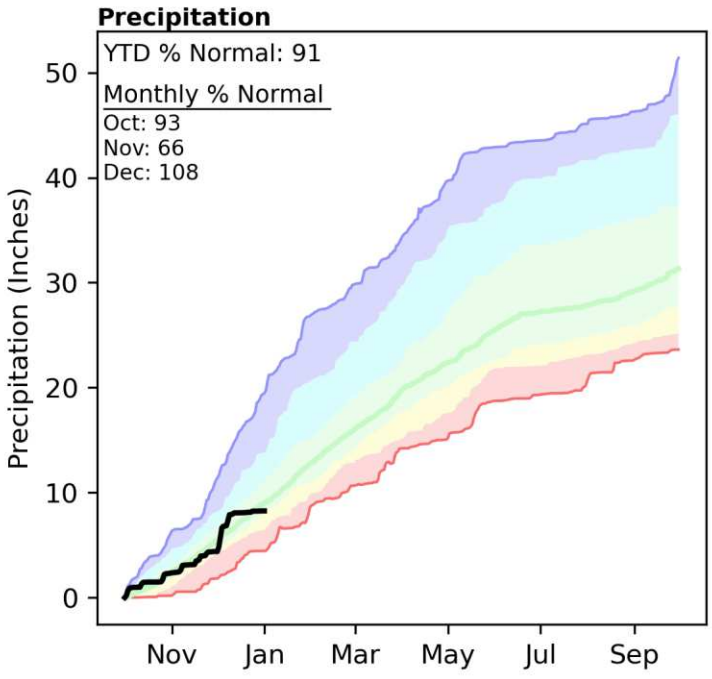
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

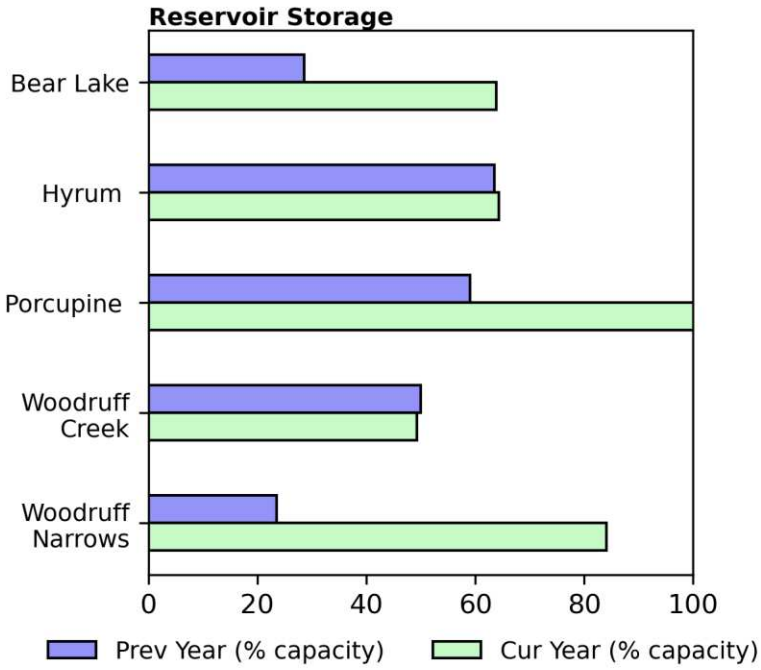
Bear | January 1, 2024

Snowpack in the Bear River Basin is below normal at 85% of median, compared to 154% at this time last year. Precipitation in December was about normal at 108%, which brings the seasonal accumulation (October-December) to 91% of median. Soil moisture is at 70% saturation compared to 60% saturation last year. Reservoir storage is 64% of capacity, compared to 29% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 74% to 117% of normal. The Surface Water Supply Index percentiles are 64% for the Bear, 52% for the Little Bear, and 52% for Woodruff Narrows.



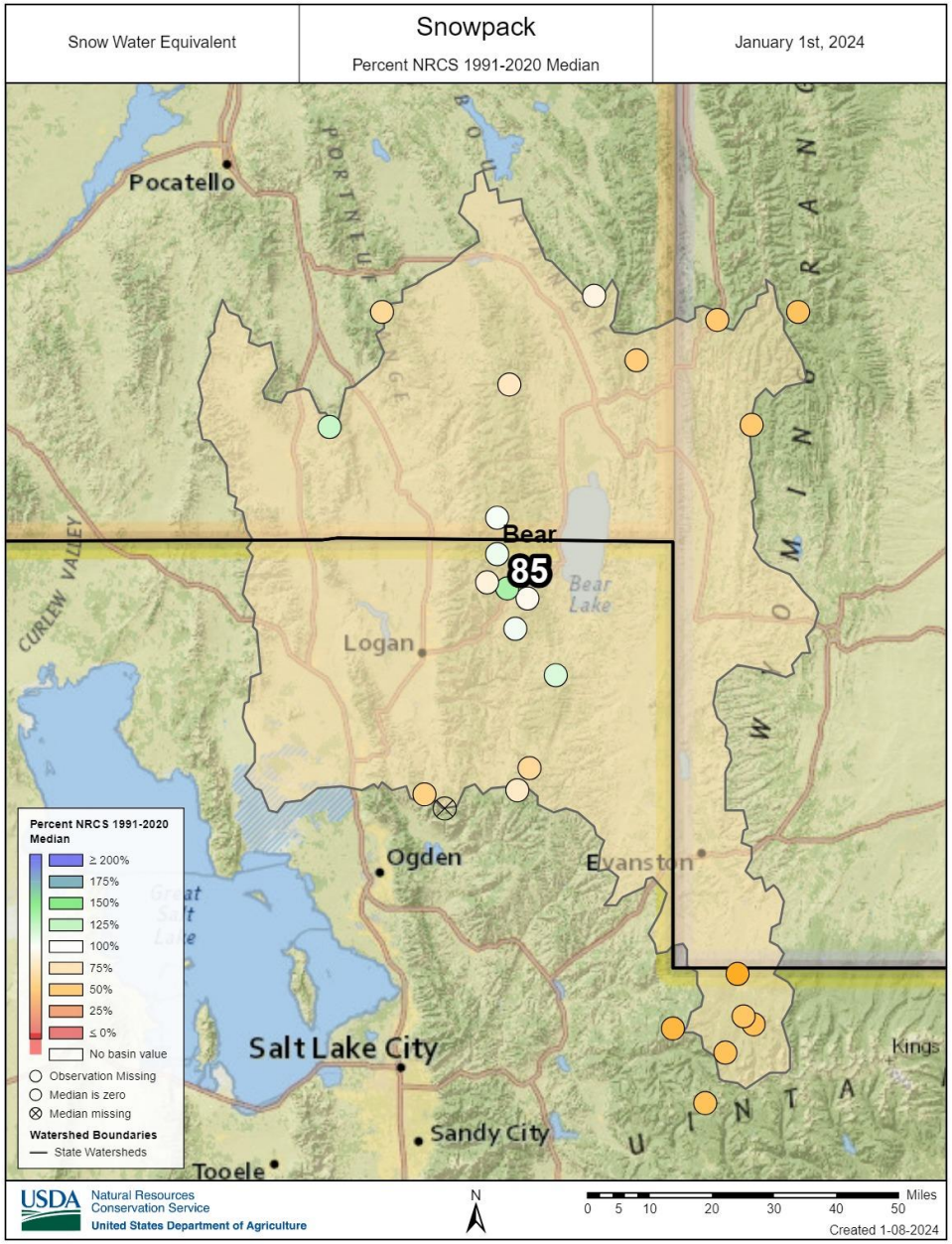


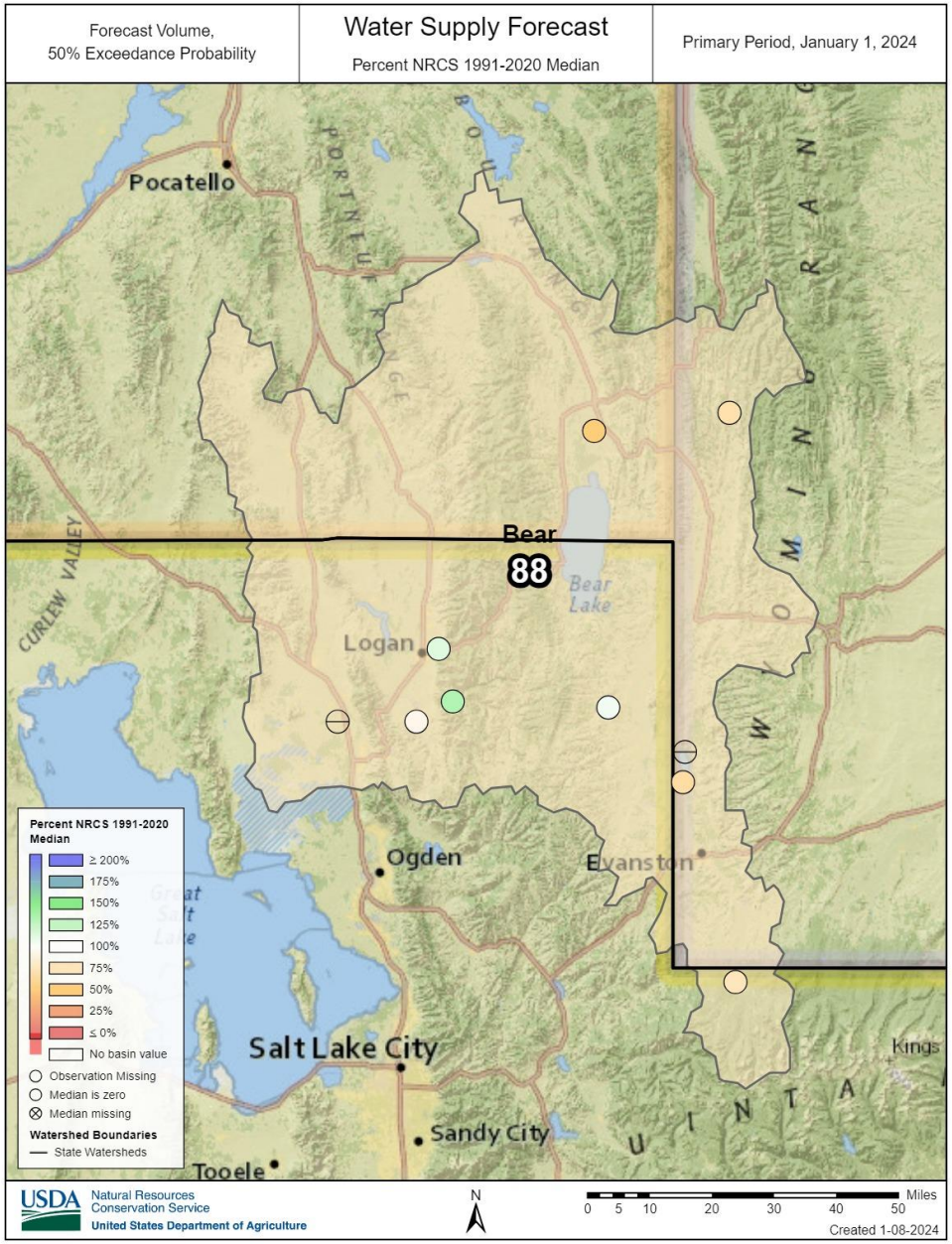




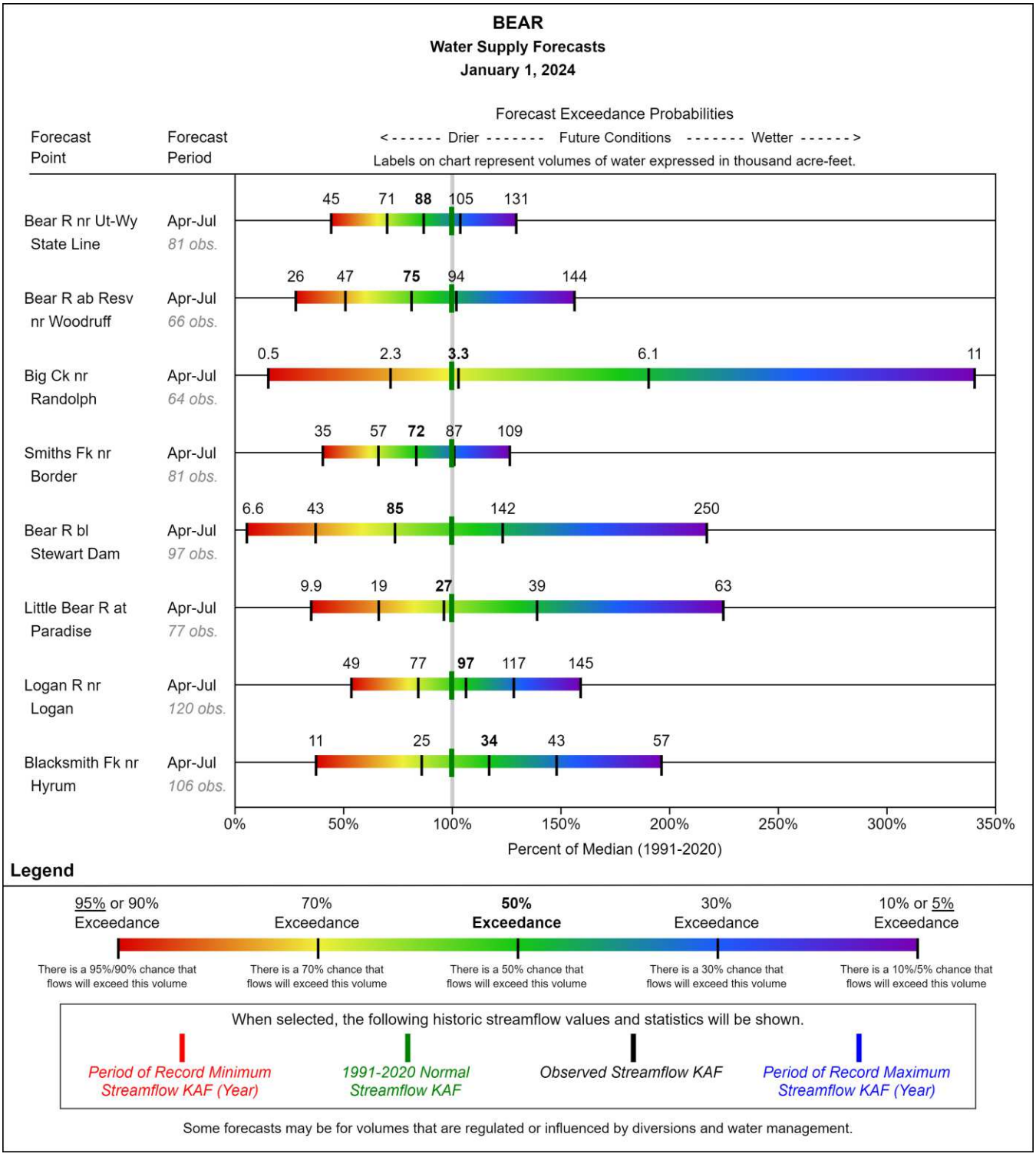
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Bear


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
January 1st, 2024
Pocatello
Bear
85
Logan
Ogden
Evanston
Salt Lake City
Sandy City
Tooele
Kings
Bear Lake
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 5 10 20 30 40 50
Created 1-08-2024

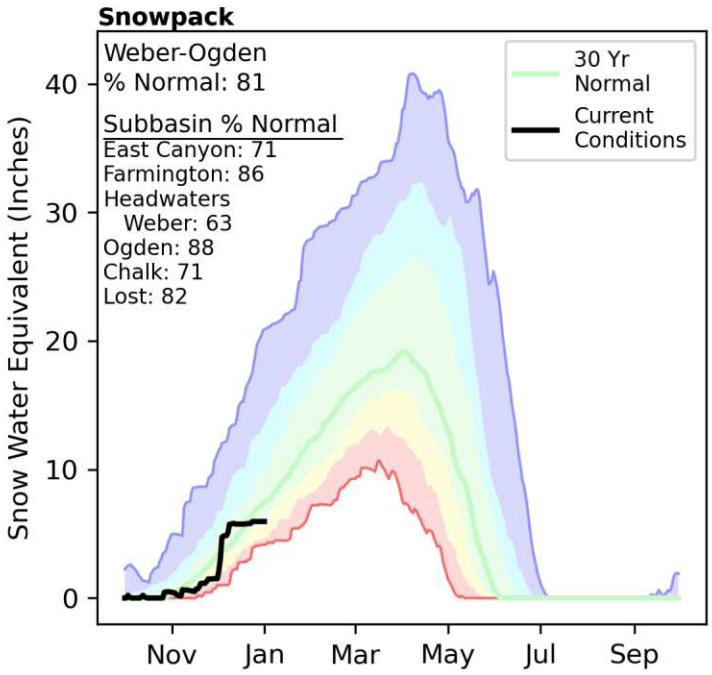

Forecast Volume,
50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Pocatello
Bear
88
Logan
Ogden
Evanston
Salt Lake City
Sandy City
Tooele
Kings
Bear Lake
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 5 10 20 30 40 50
Created 1-08-2024

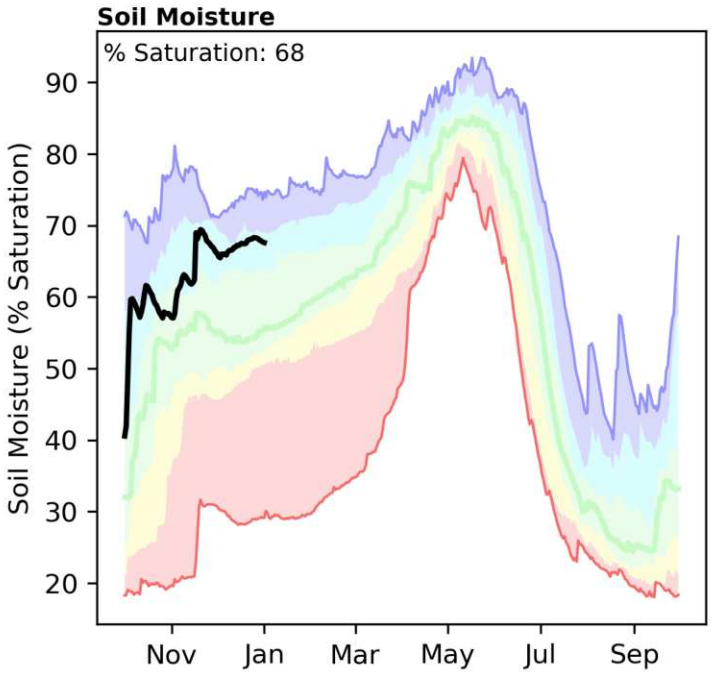
Bear

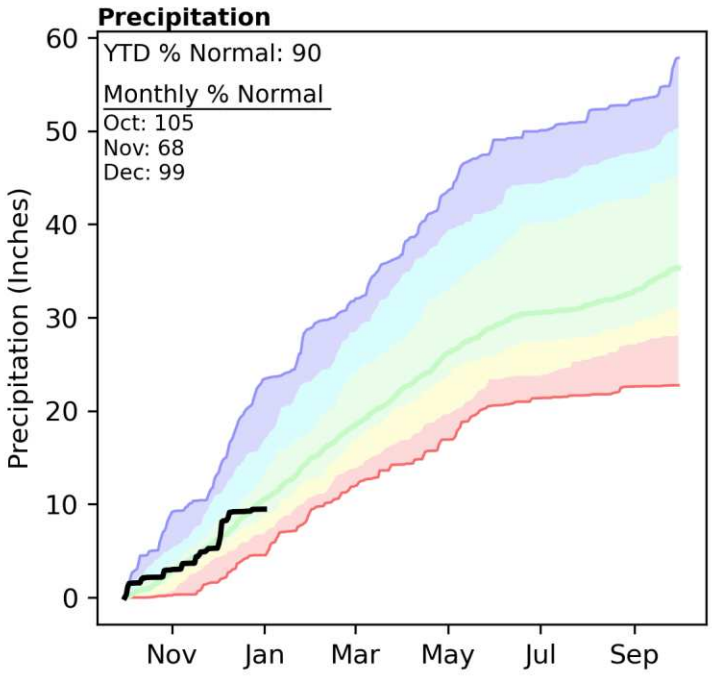

BEAR
Water Supply Forecasts
January 1, 2024
Forecast Exceedance Probabilities
<------- Drier -------- Future Conditions -------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Bear R nr Ut-Wy State Line
Apr-Jul
81 obs.
45 71 88 105 131
Bear R ab Resv nr Woodruff
Apr-Jul
66 obs.
26 47 75 94 144
Big Ck nr Randolph
Apr-Jul
64 obs.
0.5 2.3 3.3 6.1 11
Smiths Fk nr Border
Apr-Jul
81 obs.
35 57 72 87 109
Bear R bl Stewart Dam
Apr-Jul
97 obs.
6.6 43 85 142 250
Little Bear R at Paradise
Apr-Jul
77 obs.
9.9 19 27 39 63
Logan R nr Logan
Apr-Jul
120 obs.
49 77 97 117 145
Blacksmith Fk nr Hyrum
Apr-Jul
106 obs.
11 25 34 43 57
0% 50% 100% 150% 200% 250% 300% 350%
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.

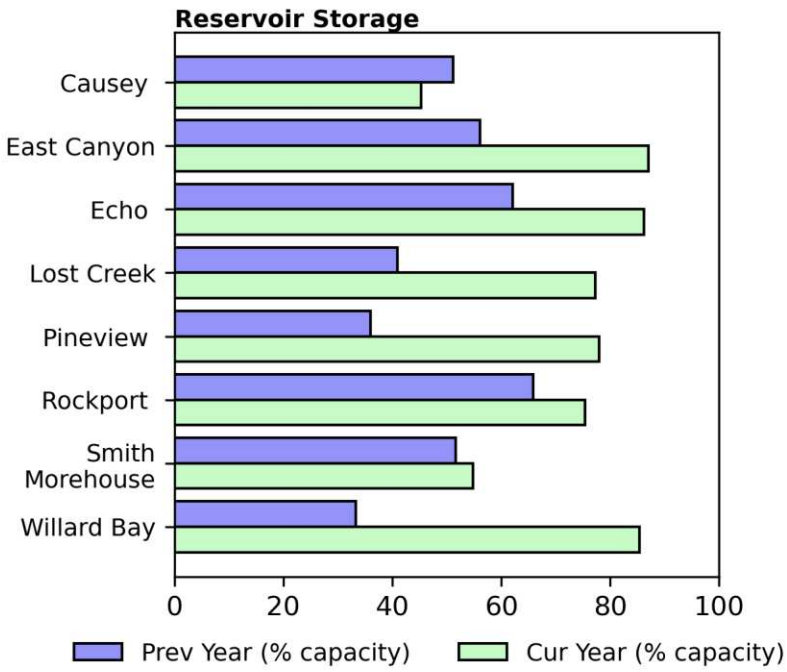
Weber-Ogden | January 1, 2024

Snowpack in the Weber and Ogden River Basins is below normal at 81% of median, compared to 158% at this time last year. Precipitation in December was about normal at 99%, which brings the seasonal accumulation (October-December) to 90% of median. Soil moisture is at 68% saturation compared to 56% saturation last year. Reservoir storage is 81% of capacity, compared to 44% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 85% to 110% of normal. The Surface Water Supply Index percentiles are 60% for the Weber, and 58% for the Ogden.



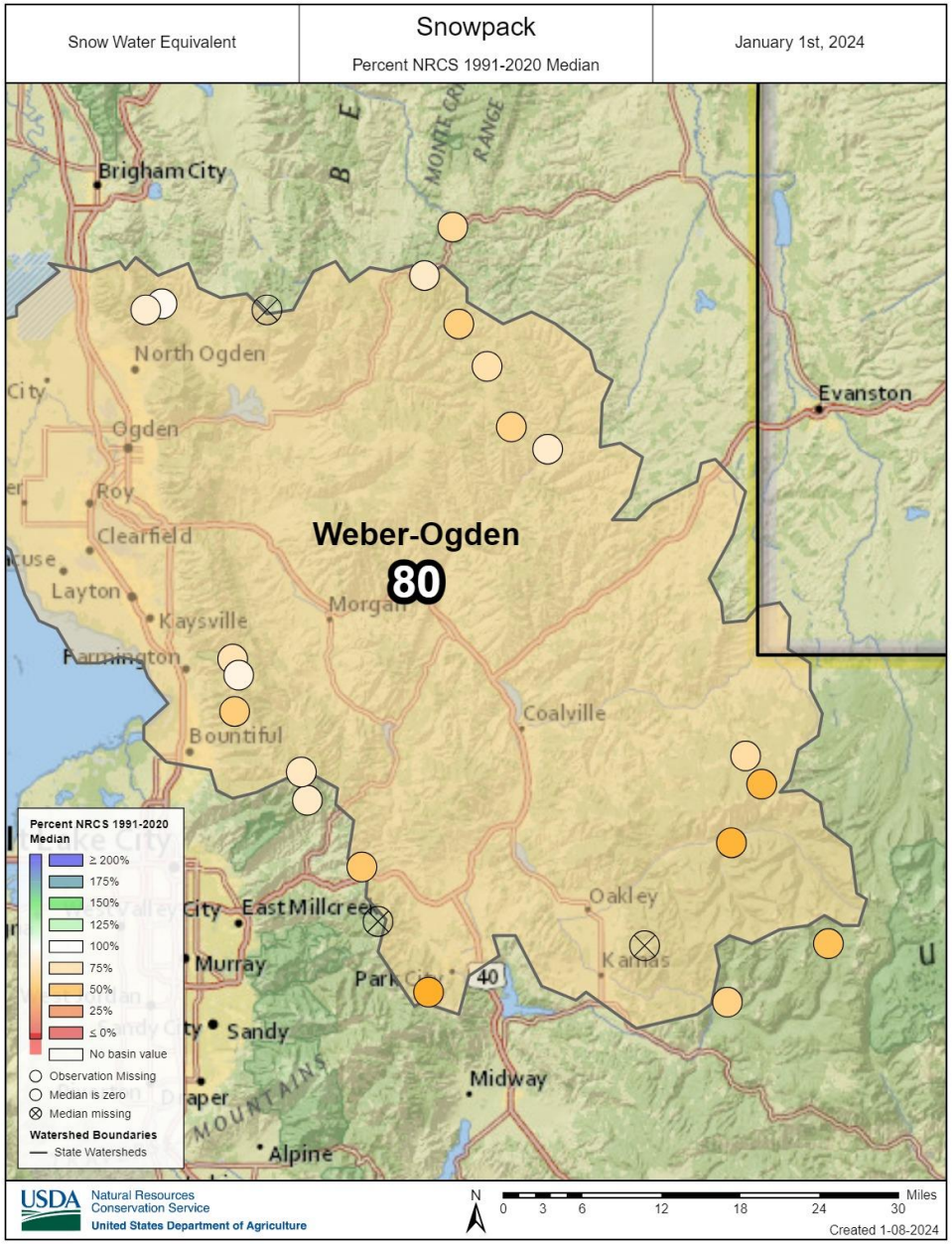


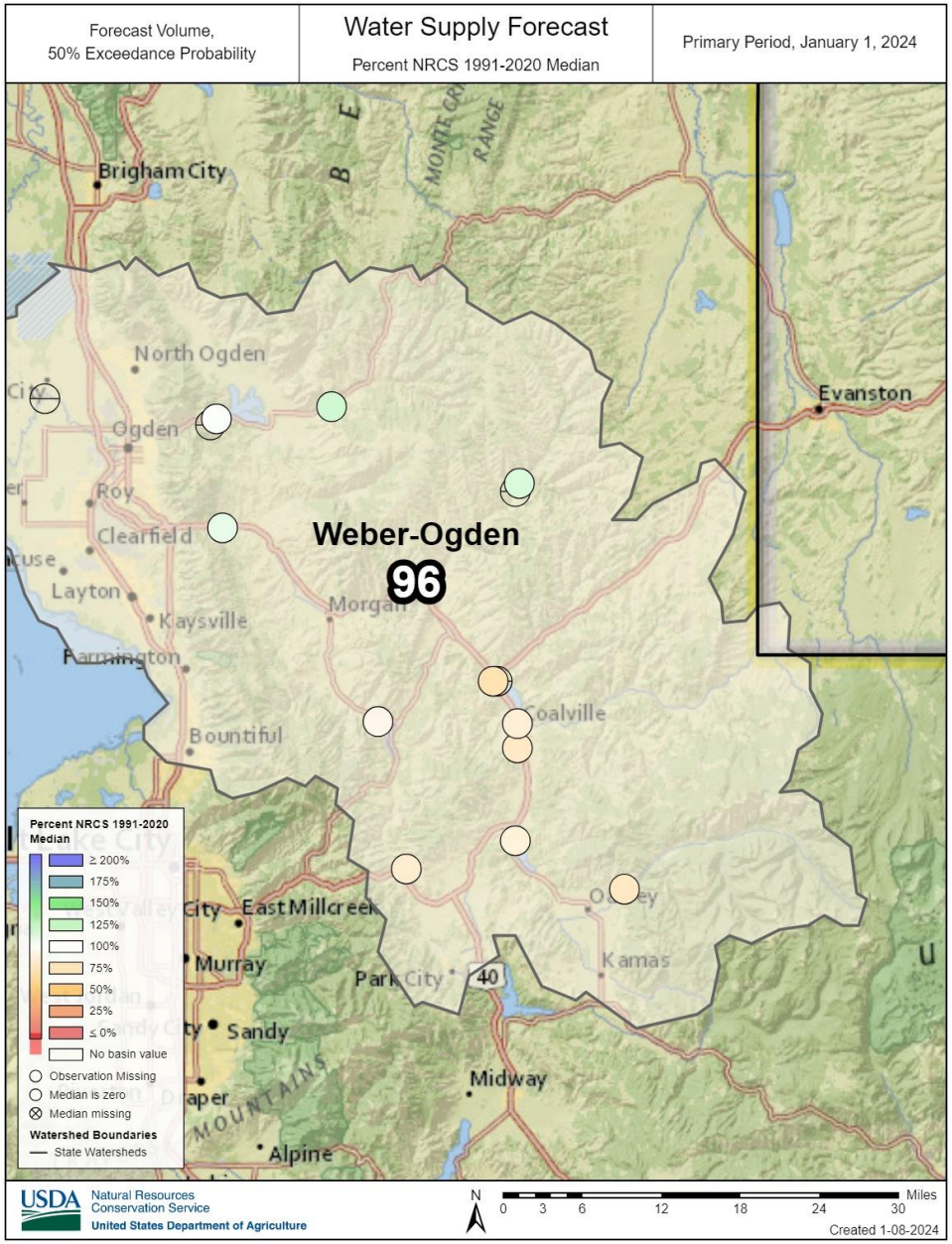




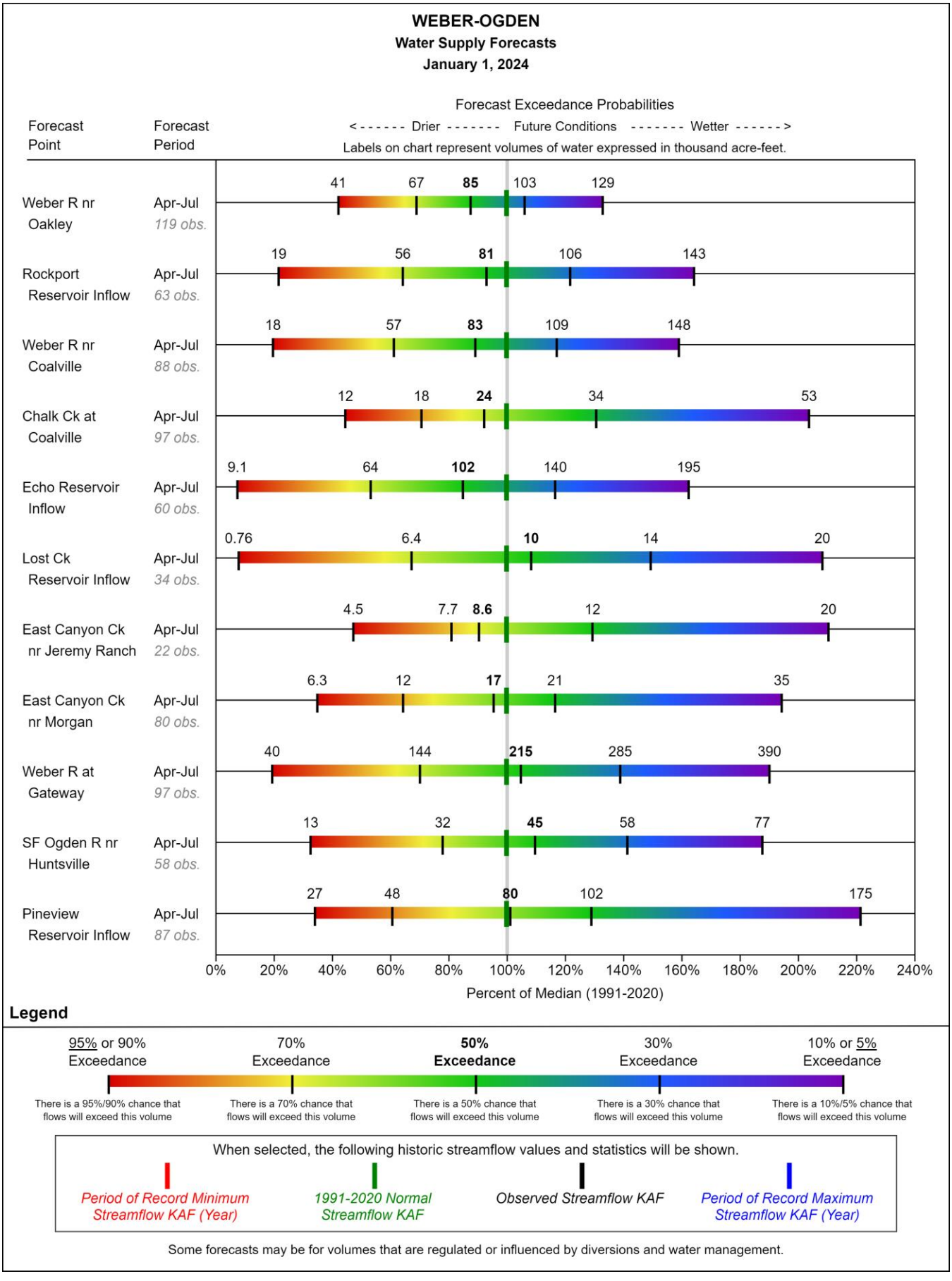
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Weber-Ogden


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
January 1st, 2024
Weber-Ogden
80
Brigham City
North Ogden
Ogden
Roy
Clearfield
Layton
Kaysville
Farmington
Bountiful
Morgan
Coalville
Evanston
Oakley
Kamas
Park City
Murray
Sandy
Midway
Alpine
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30 Miles
Created 1-08-2024

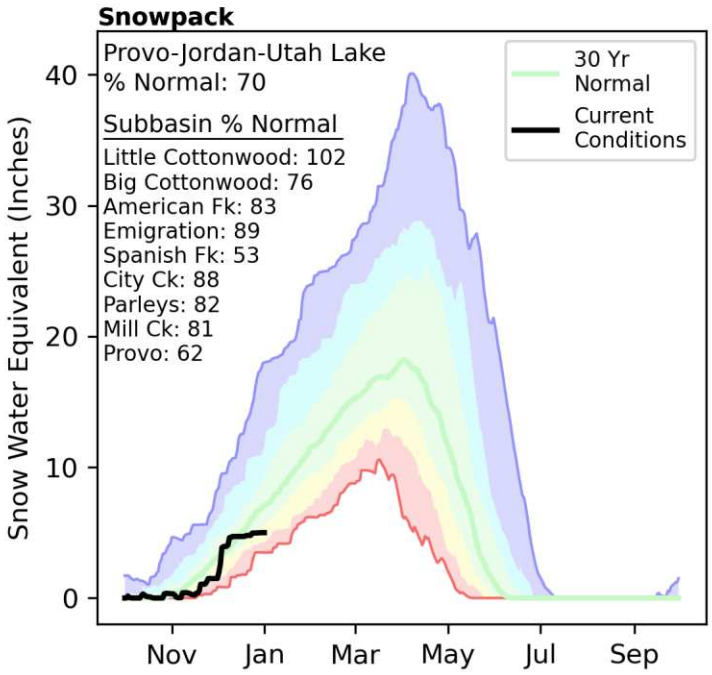

Forecast Volume,
50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Weber-Ogden
96
Brigham City
North Ogden
Ogden
Roy
Clearfield
Layton
Kaysville
Farmington
Bountiful
Morgan
Coalville
Evanston
Kamas
Park City
Murray
Sandy
Midway
Alpine
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30 Miles
Created 1-08-2024

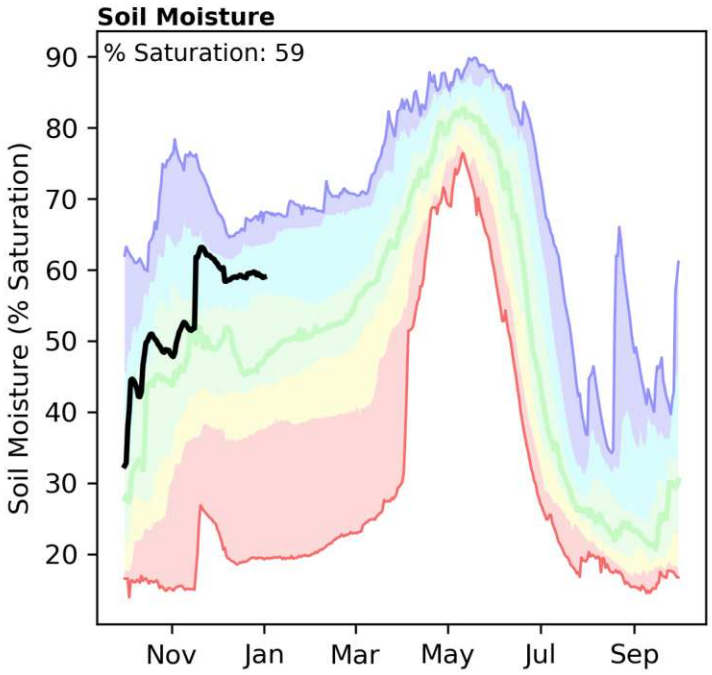
Weber-Ogden

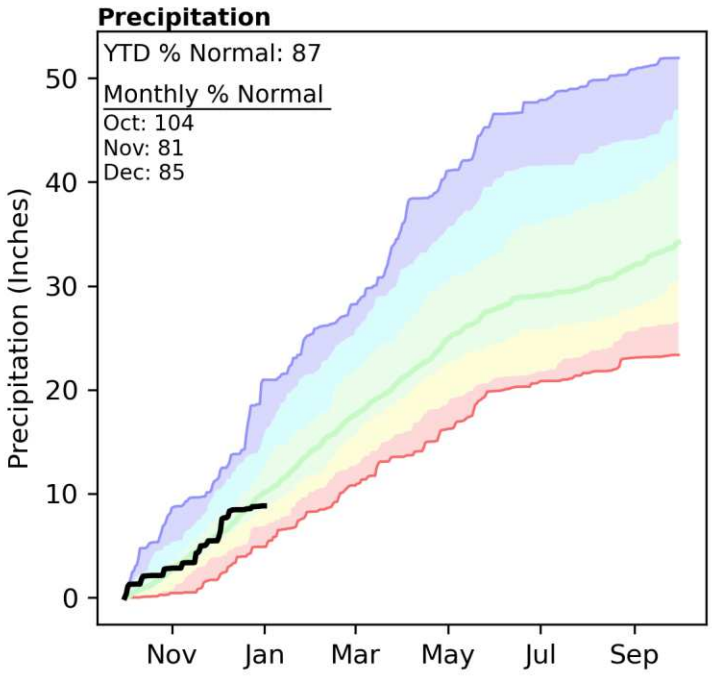

WEBER-OGDEN
Water Supply Forecasts
January 1, 2024
Forecast Exceedance Probabilities
< ------ Drier ------- Future Conditions ------- Wetter ------ >
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Weber R nr Oakley Apr-Jul 119 obs. 41 67 85 103 129
Rockport Reservoir Inflow Apr-Jul 63 obs. 19 56 81 106 143
Weber R nr Coalville Apr-Jul 88 obs. 18 57 83 109 148
Chalk Ck at Coalville Apr-Jul 97 obs. 12 18 24 34 53
Echo Reservoir Inflow Apr-Jul 60 obs. 9.1 64 102 140 195
Lost Ck Reservoir Inflow Apr-Jul 34 obs. 0.76 6.4 10 14 20
East Canyon Ck nr Jeremy Ranch Apr-Jul 22 obs. 4.5 7.7 8.6 12 20
East Canyon Ck nr Morgan Apr-Jul 80 obs. 6.3 12 17 21 35
Weber R at Gateway Apr-Jul 97 obs. 40 144 215 285 390
SF Ogden R nr Huntsville Apr-Jul 58 obs. 13 32 45 58 77
Pineview Reservoir Inflow Apr-Jul 87 obs. 27 48 80 102 175
0% 20% 40% 60% 80% 100% 120% 140% 160% 180% 200% 220% 240%
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.

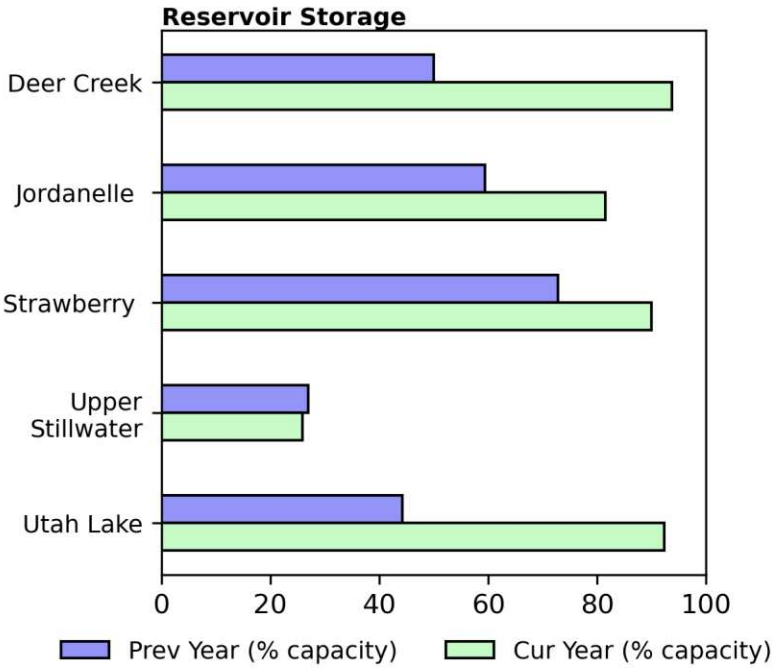
Provo-Jordan-Utah Lake | January 1, 2024

Snowpack in the Provo and Jordan River Basins is well below normal at 70% of median, compared to 163% at this time last year. Precipitation in December was below normal at 85%, which brings the seasonal accumulation (October-December) to 87% of median. Soil moisture is at 59% saturation compared to 47% saturation last year. Reservoir storage is 89% of capacity, compared to 59% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 81% to 110% of normal. The Surface Water Supply Index percentile is 71% for the Provo.



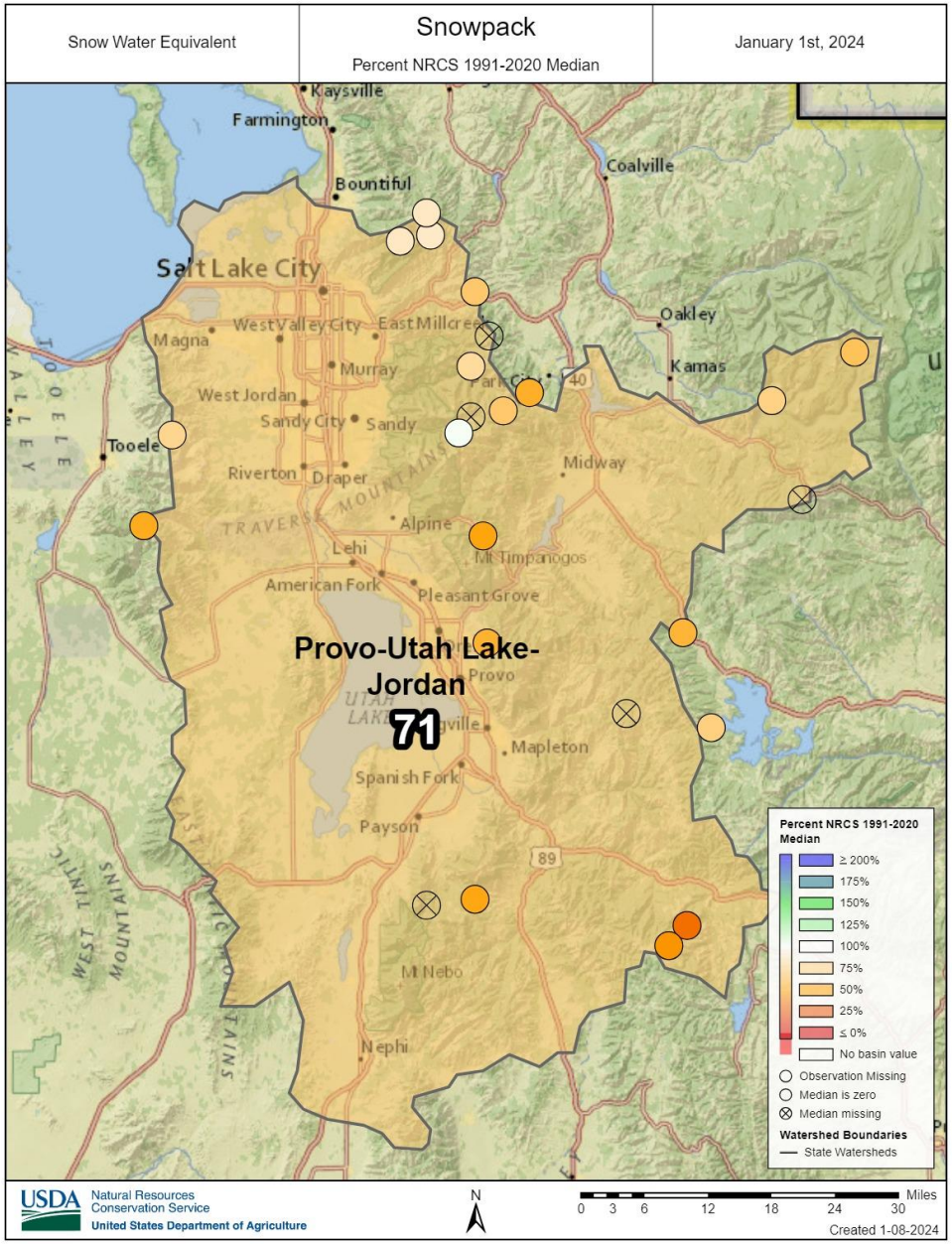


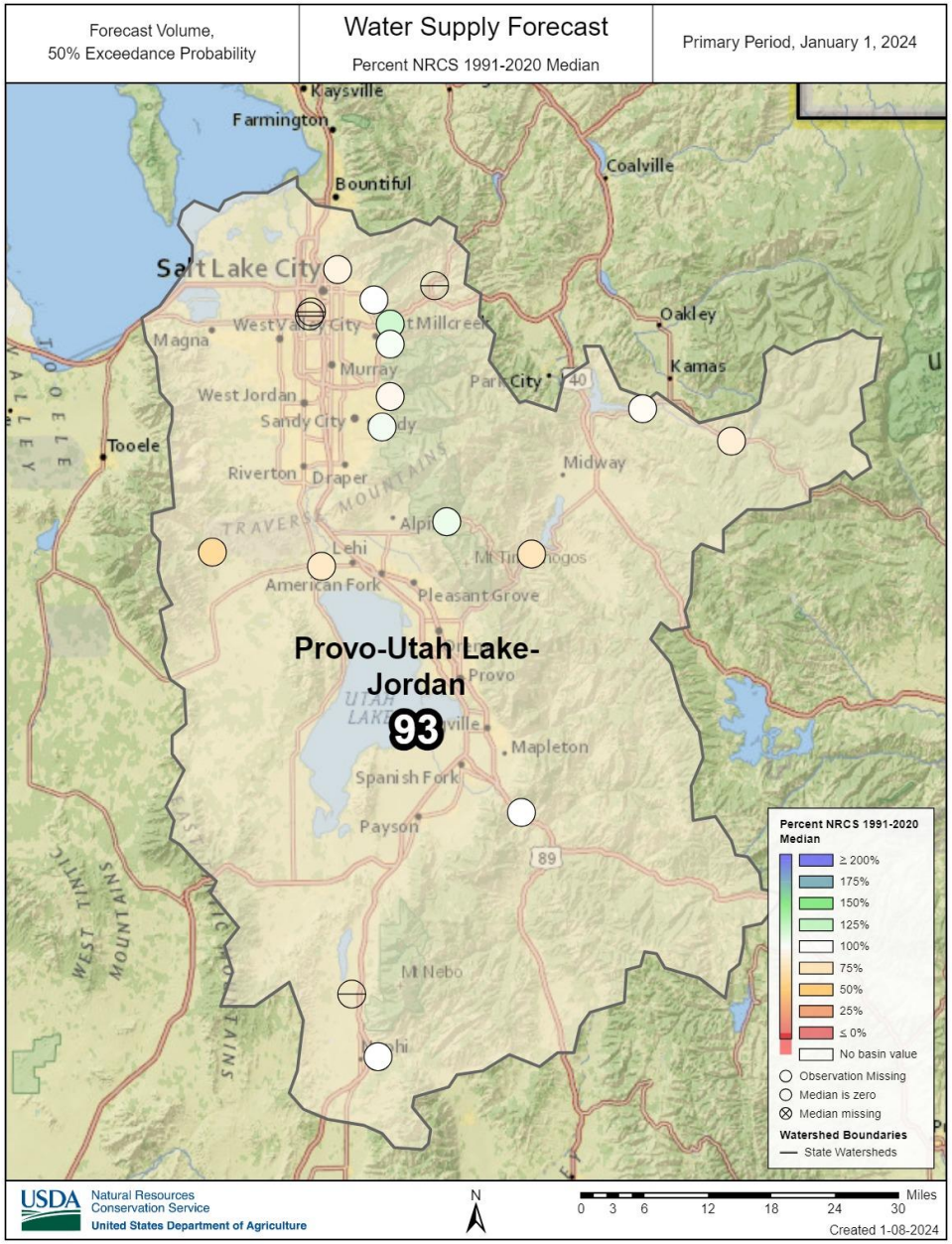




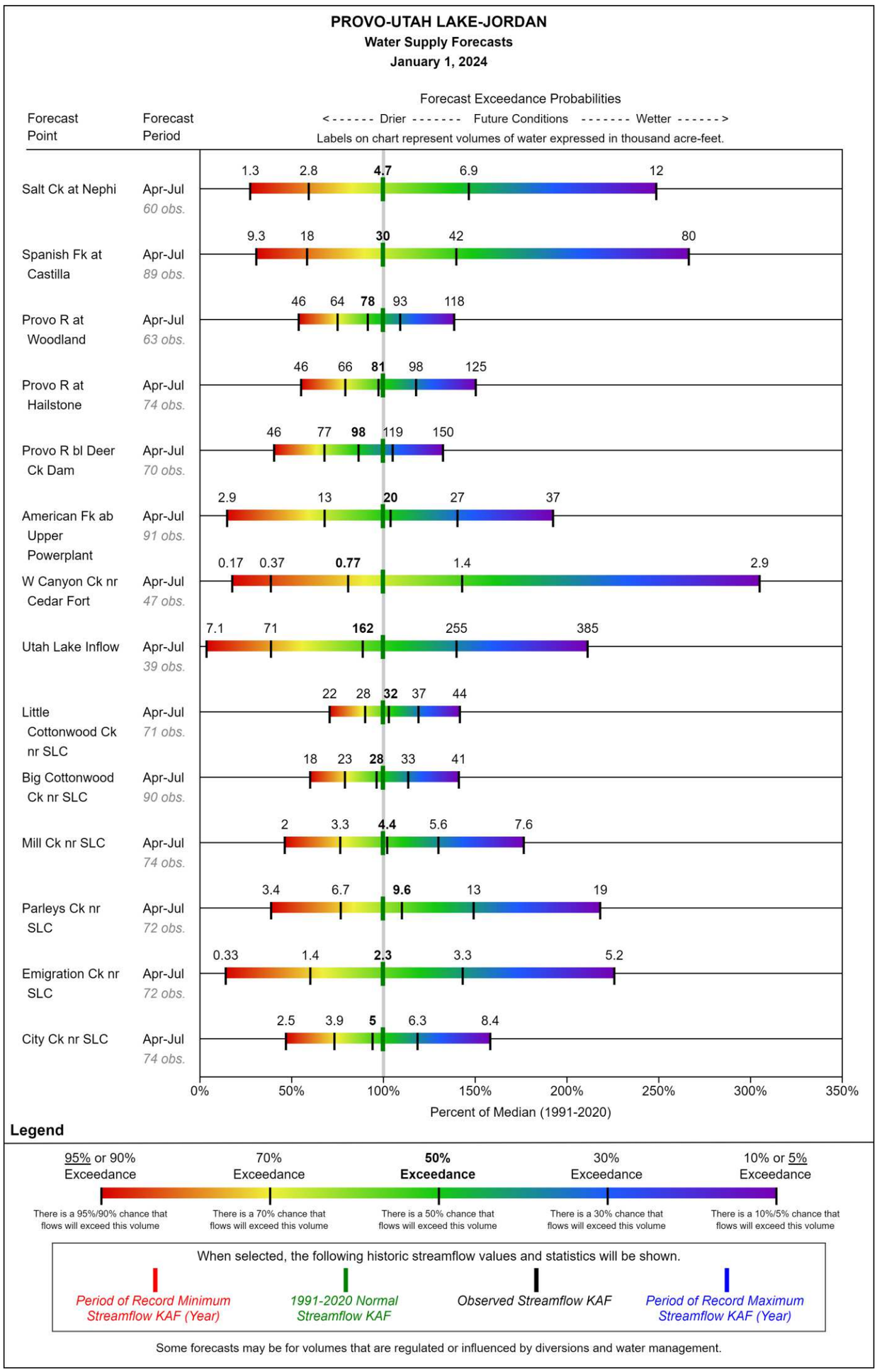
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Provo-Utah Lake-Jordan



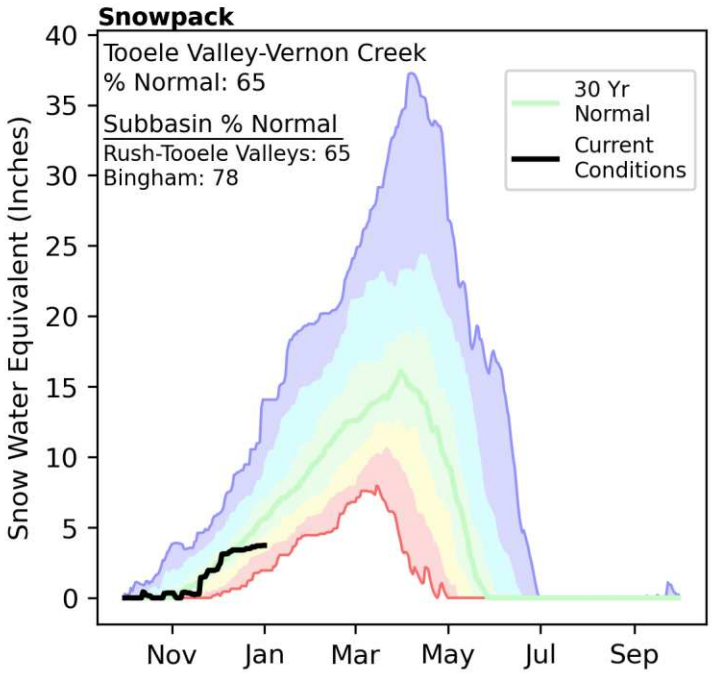


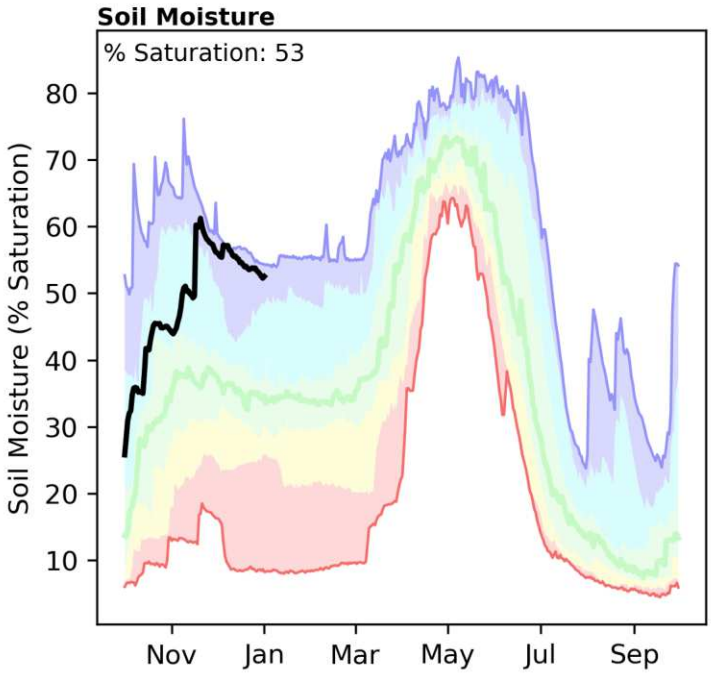
Provo-Utah Lake-Jordan

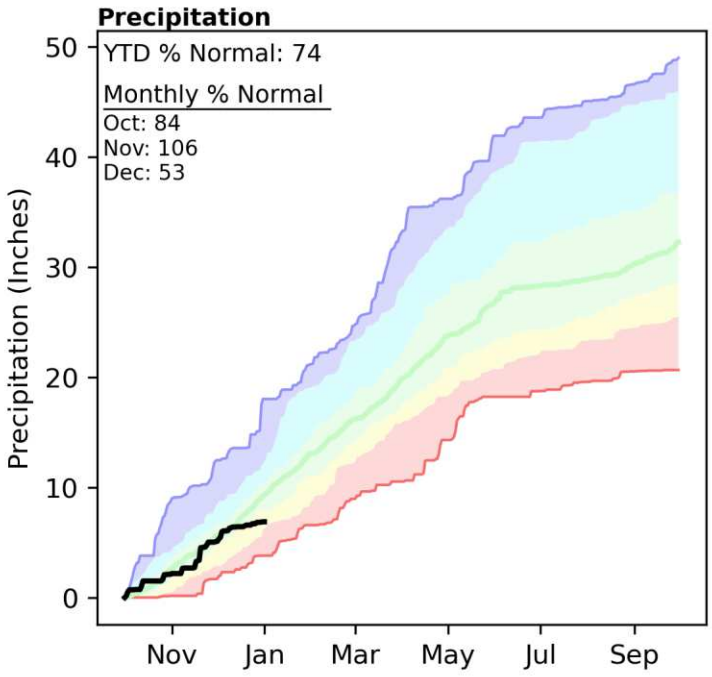


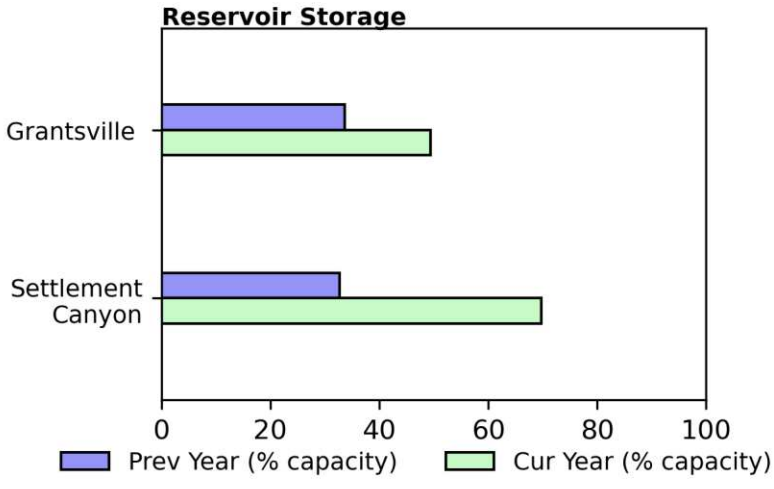
Tooele Valley-Vernon Creek | January 1, 2024

Snowpack in the Tooele Valley and West Desert Region is well below normal at 65% of median, compared to 177% at this time last year. Precipitation in December was well below normal at 53%, which brings the seasonal accumulation (October-December) to 74% of median. Soil moisture is at 53% saturation compared to 32% saturation last year. Reservoir storage is 54% of capacity, compared to 33% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 78% to 100% of normal.



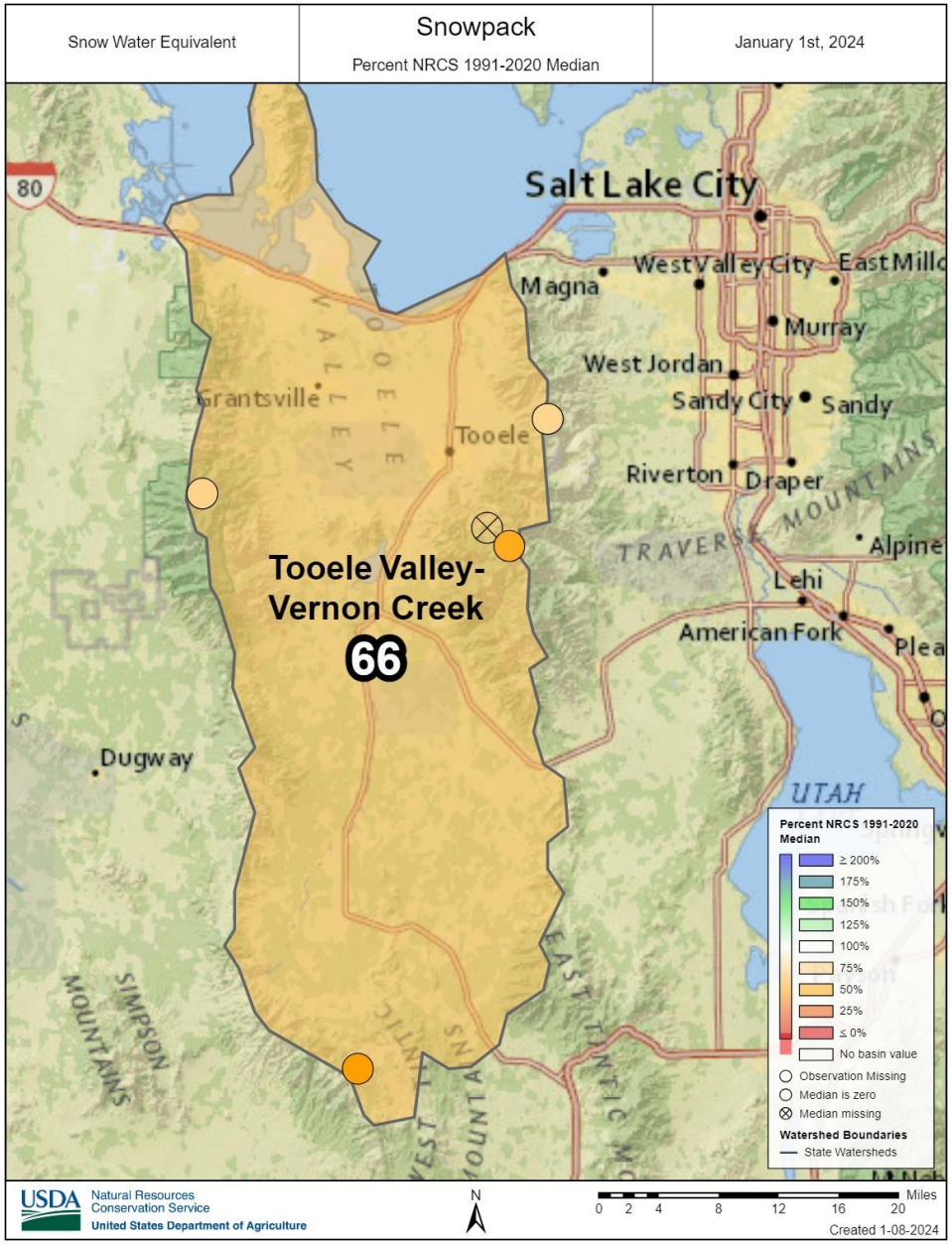


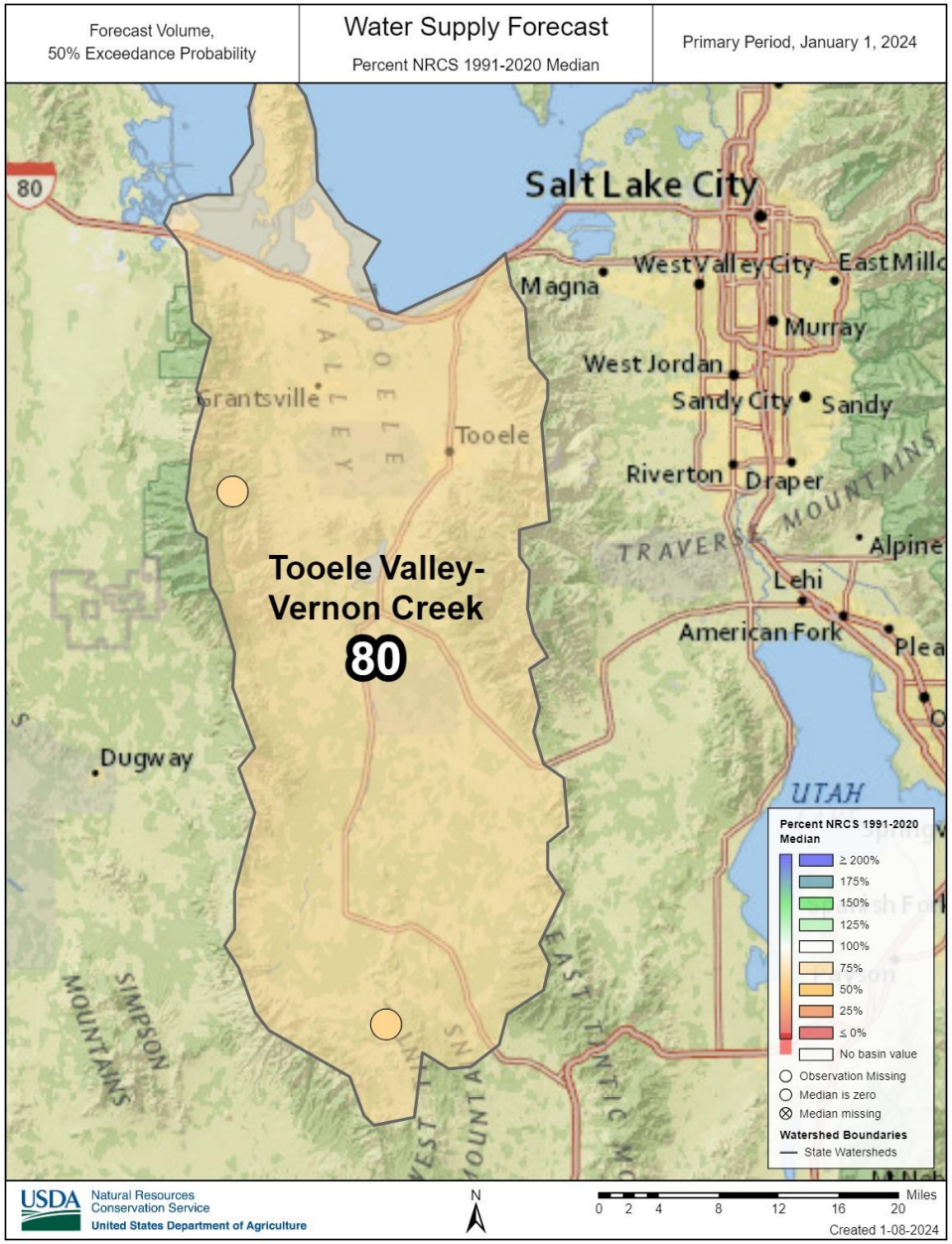




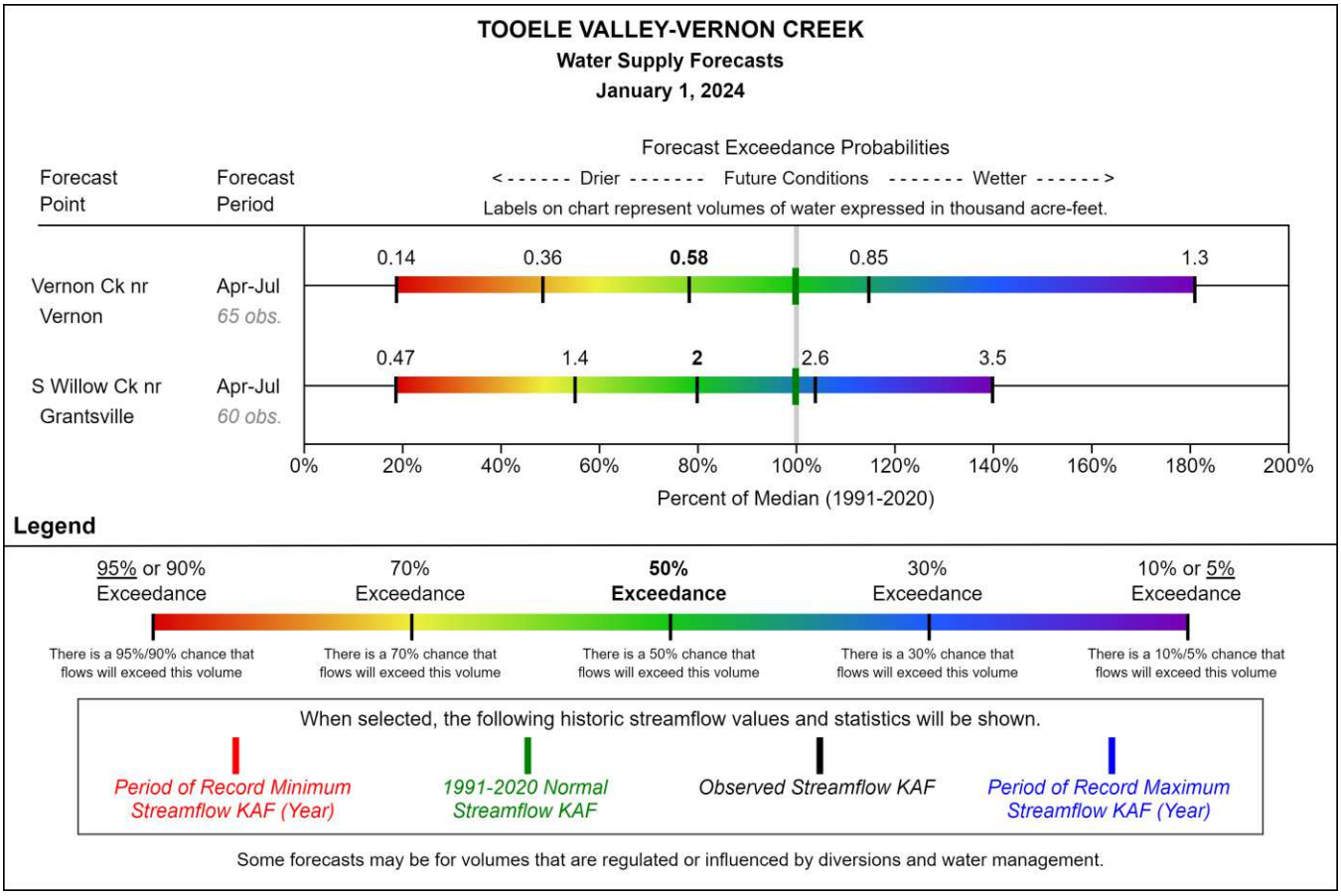
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Tooele Valley-Vernon Creek



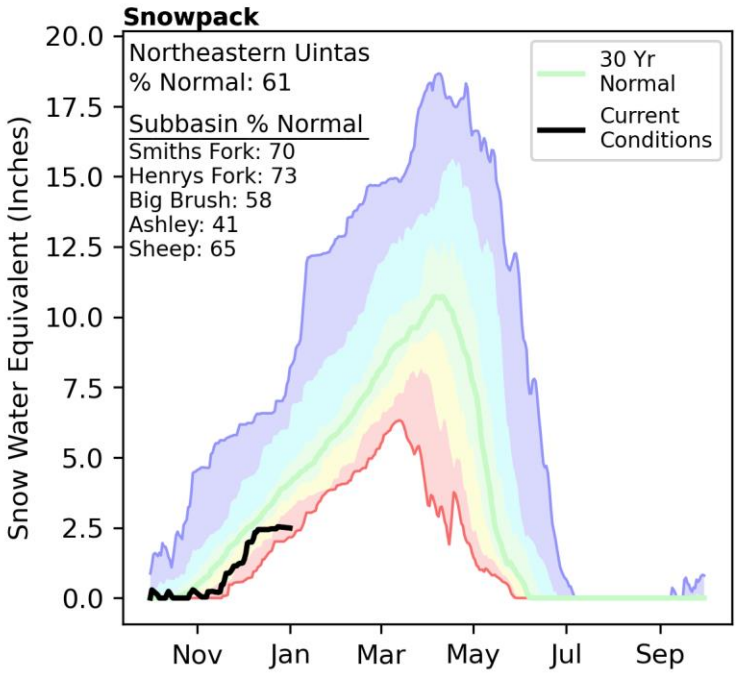


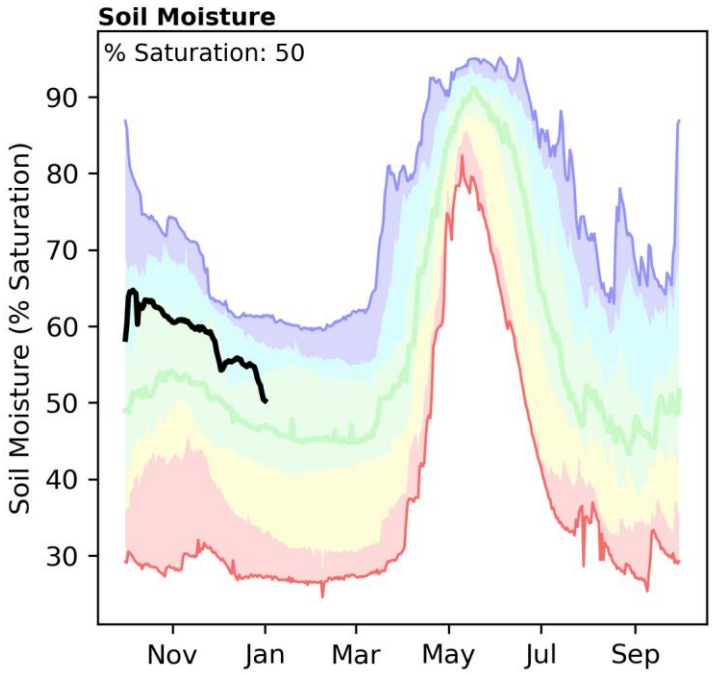
Tooele Valley-Vernon Creek

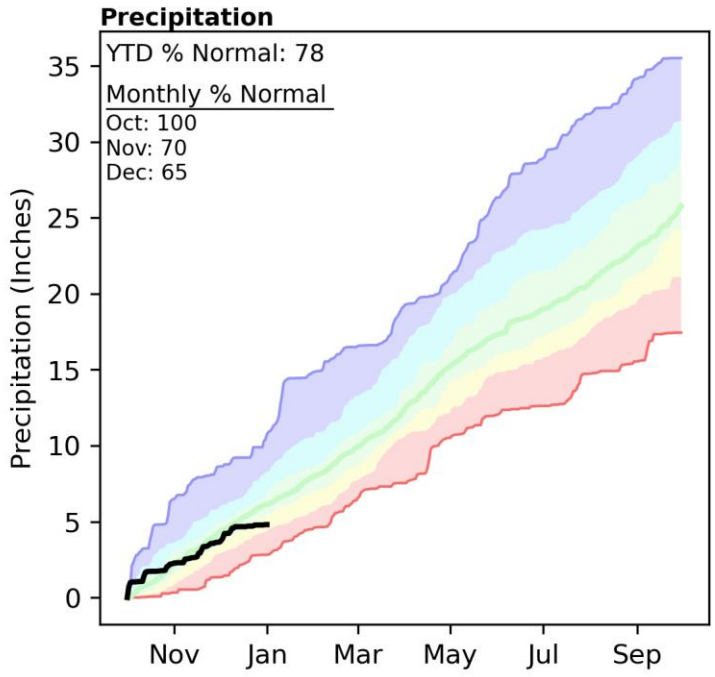


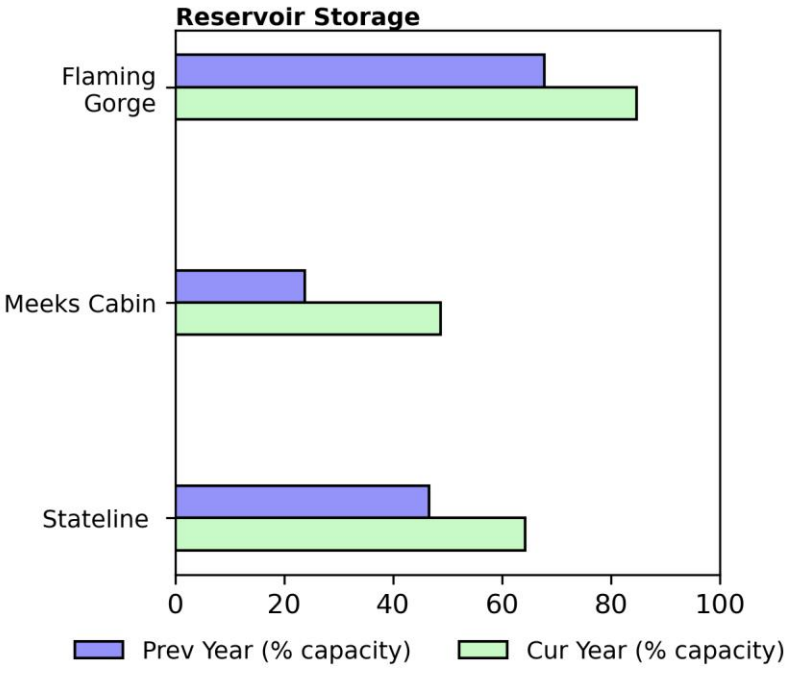
Northeastern Uintas | January 1, 2024

Snowpack in the Northeastern Uintas is well below normal at 61% of median, compared to 156% at this time last year. Precipitation in December was well below normal at 65%, which brings the seasonal accumulation (October-December) to 78% of median. Soil moisture is at 50% saturation compared to 54% saturation last year. Reservoir storage is 84% of capacity, compared to 67% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 70% to 85% of normal. The Surface Water Supply Index percentiles are 45% for the Blacks Fork, and 45% for the Smiths Fork.



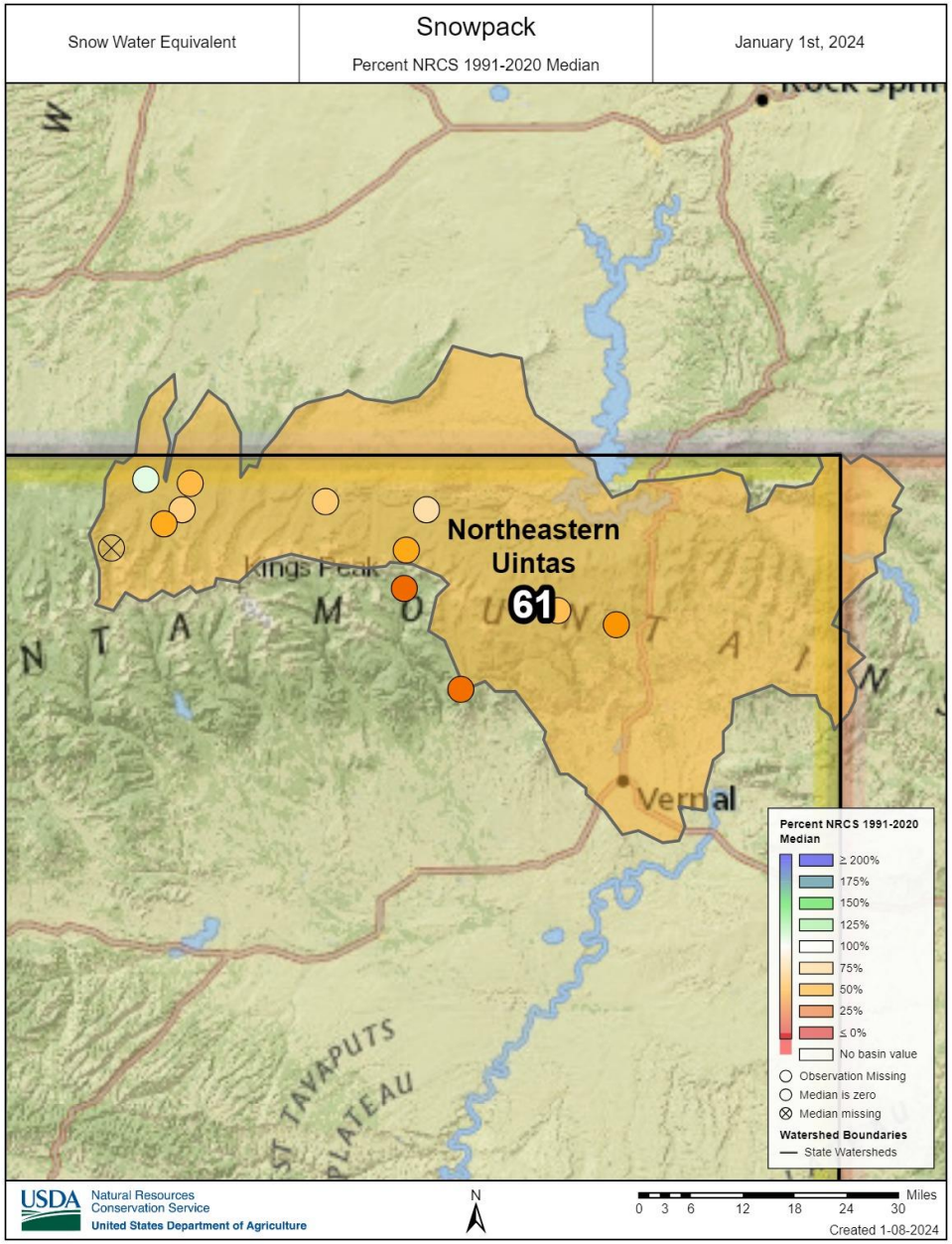


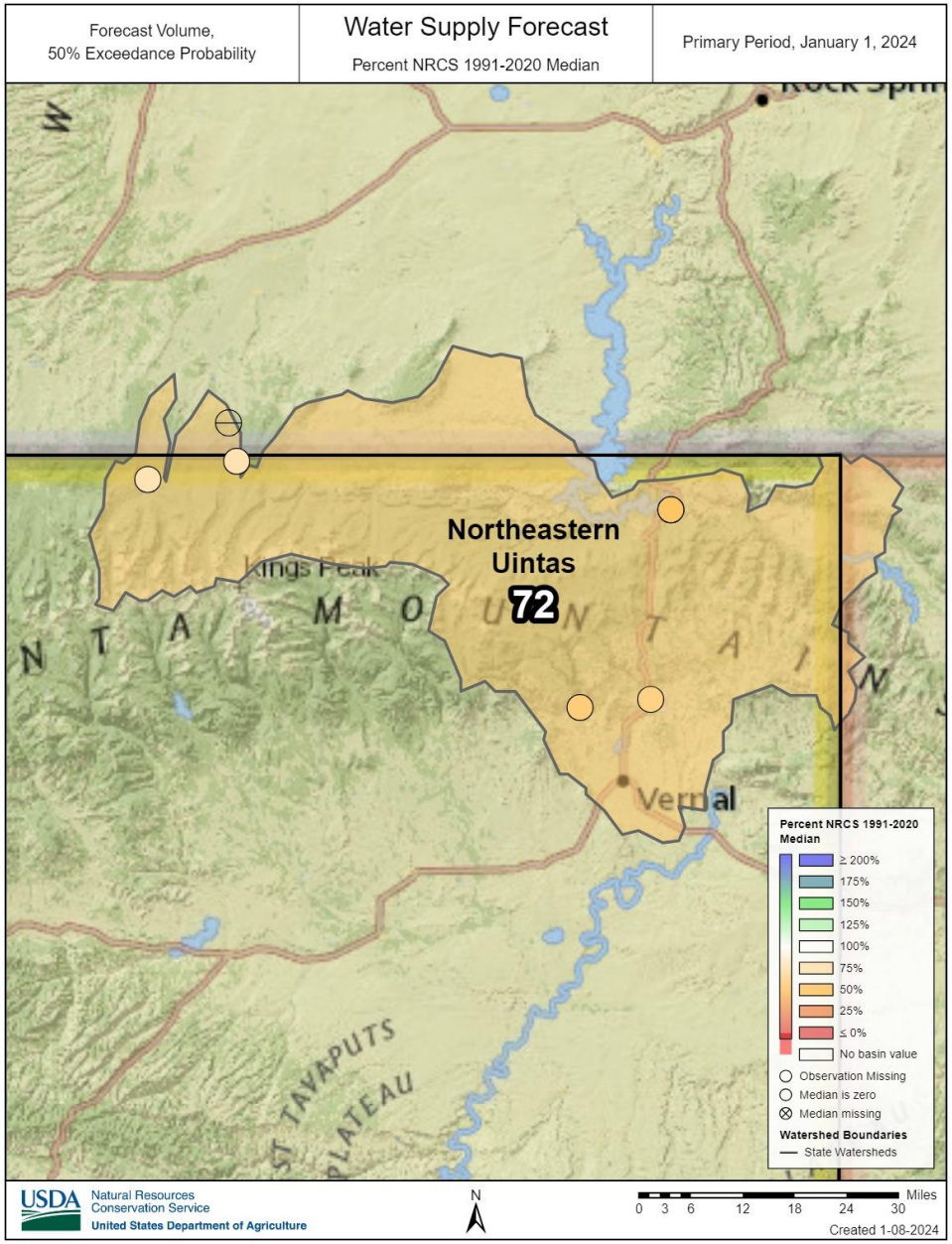




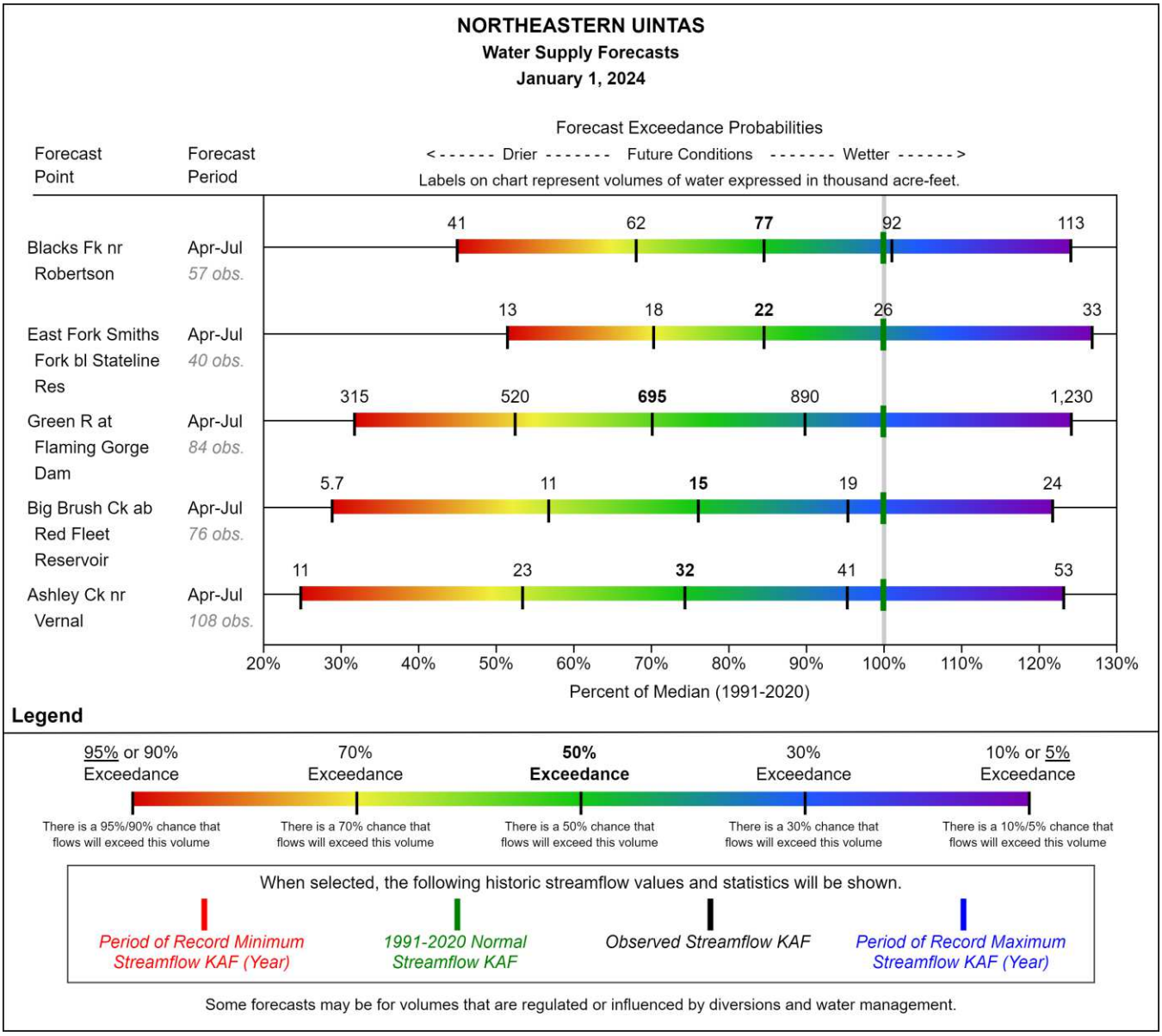
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Northeastern Uintas



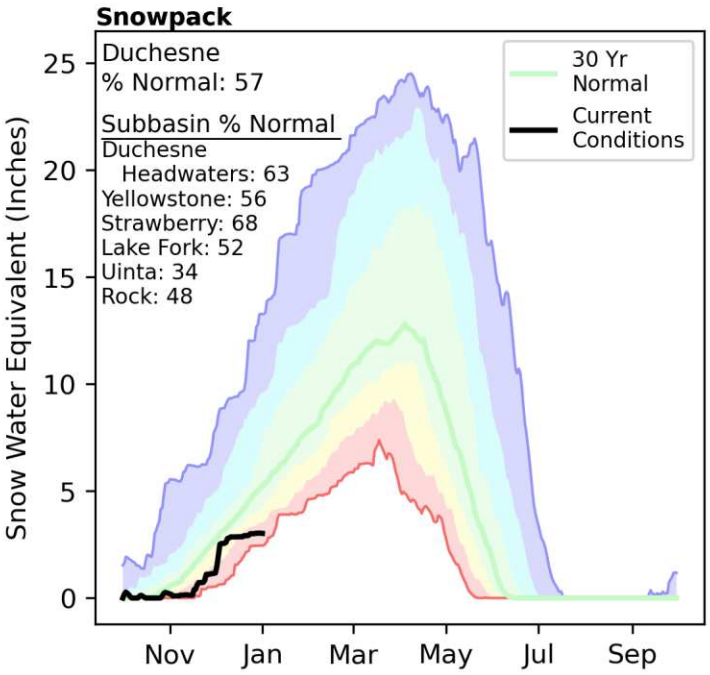


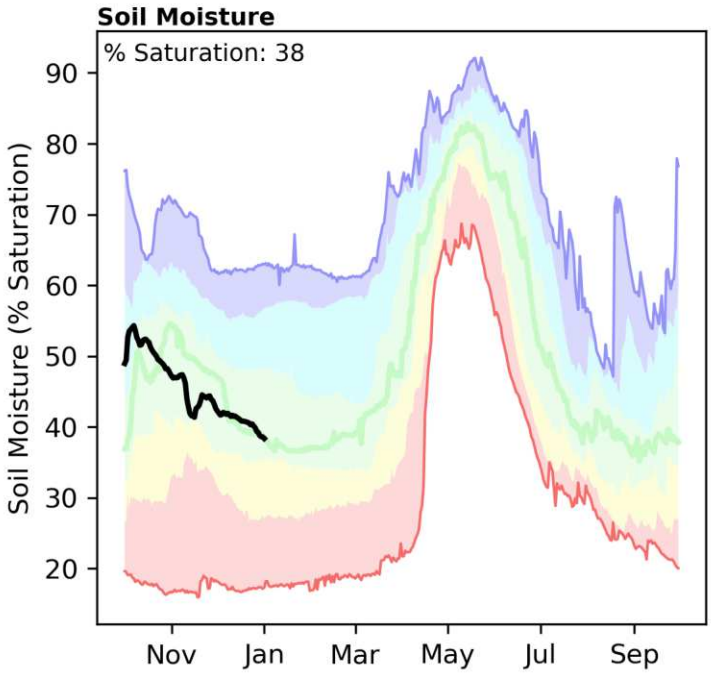
Northeastern Uintas

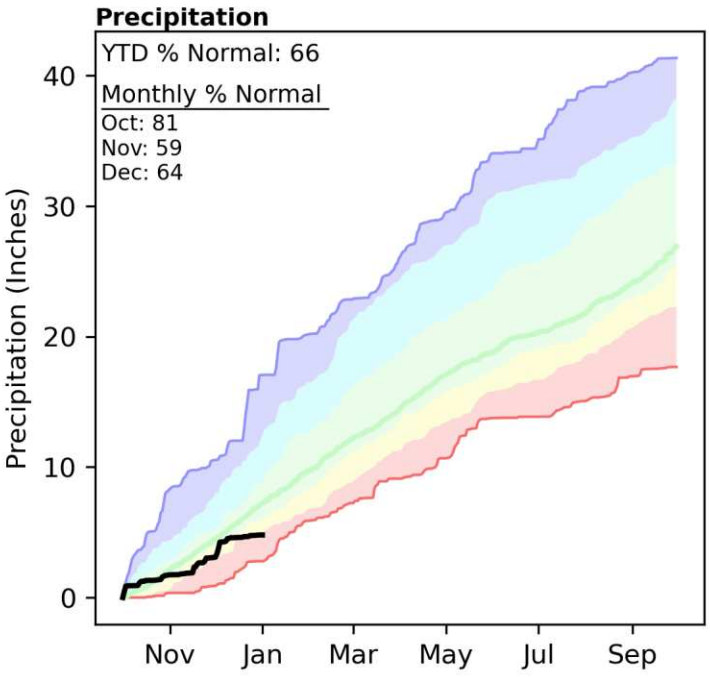


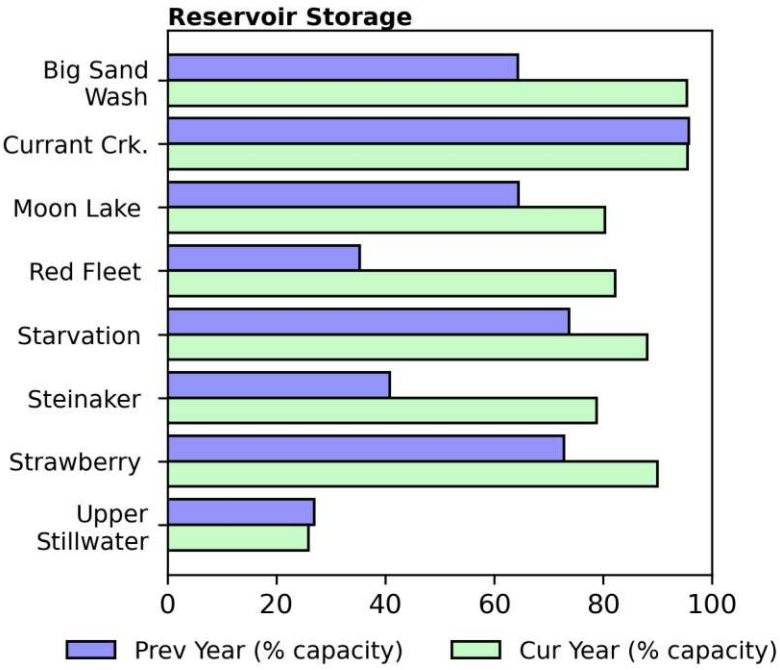
Duchesne | January 1, 2024

Snowpack in the Duchesne River Basin is well below normal at 57% of median, compared to 147% at this time last year. Precipitation in December was well below normal at 64%, which brings the seasonal accumulation (October-December) to 66% of median. Soil moisture is at 38% saturation compared to 49% saturation last year. Reservoir storage is 87% of capacity, compared to 70% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 67% to 102% of normal. The Surface Water Supply Index percentiles are 58% for the Western Uintas, and 40% for the Eastern Uintas.



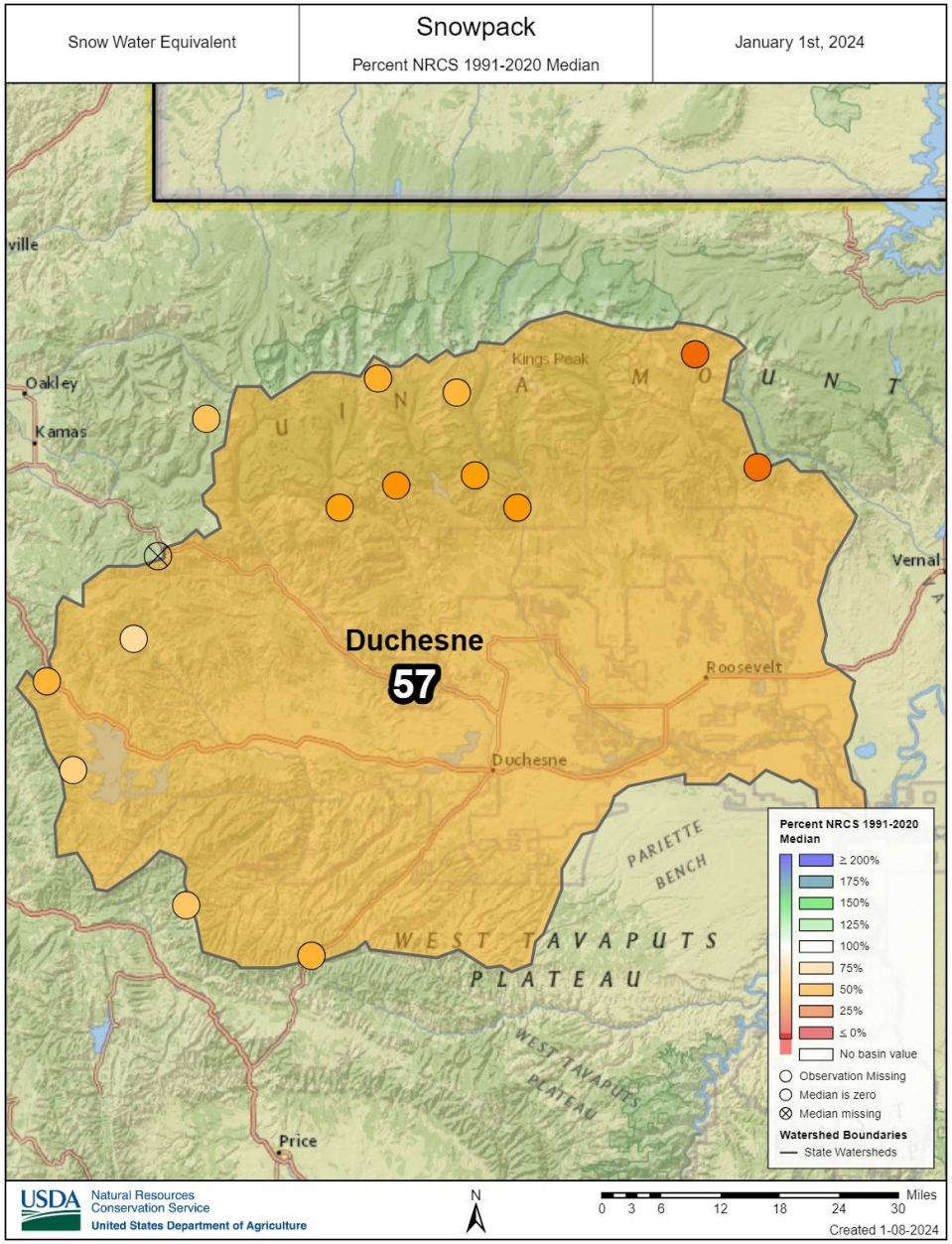


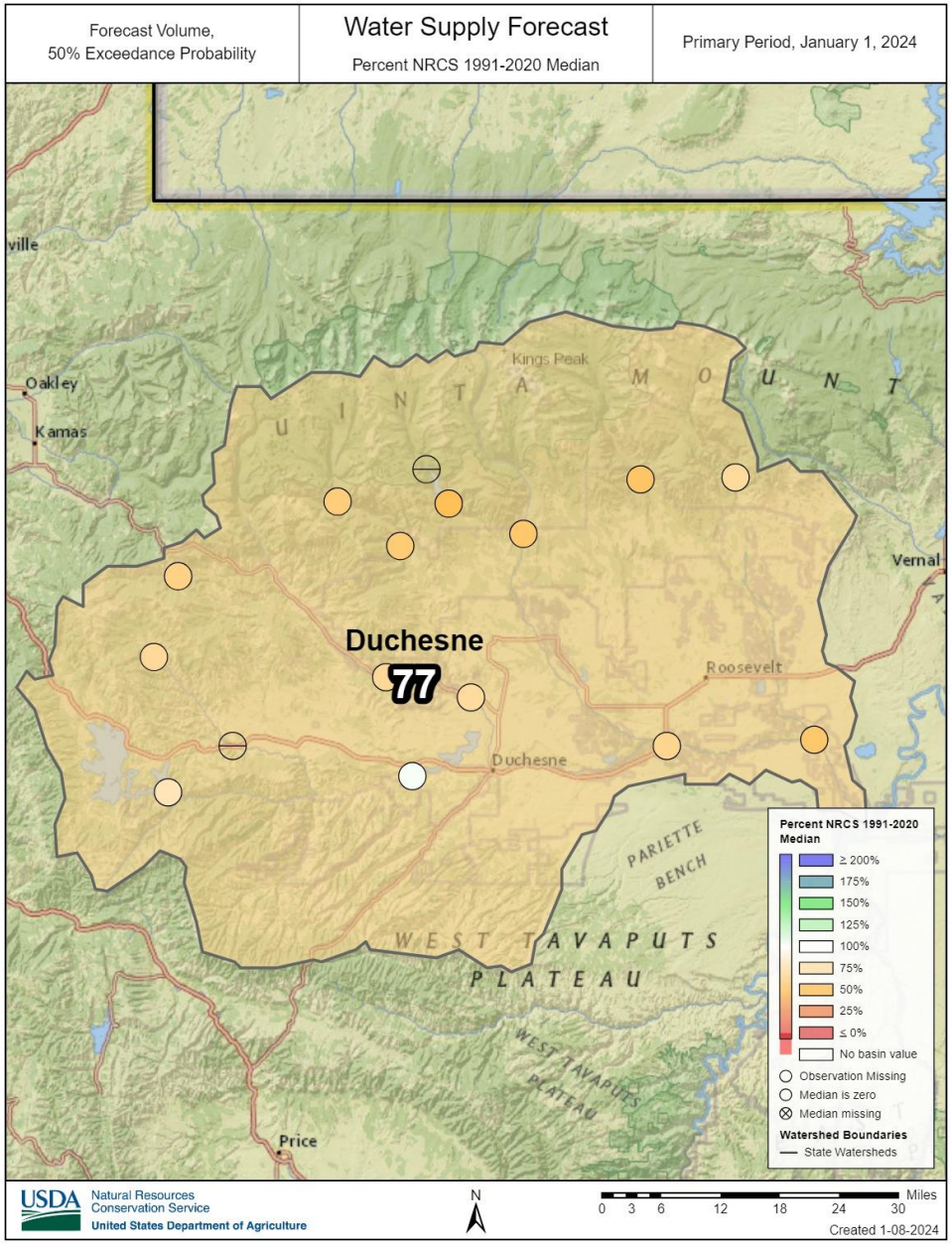




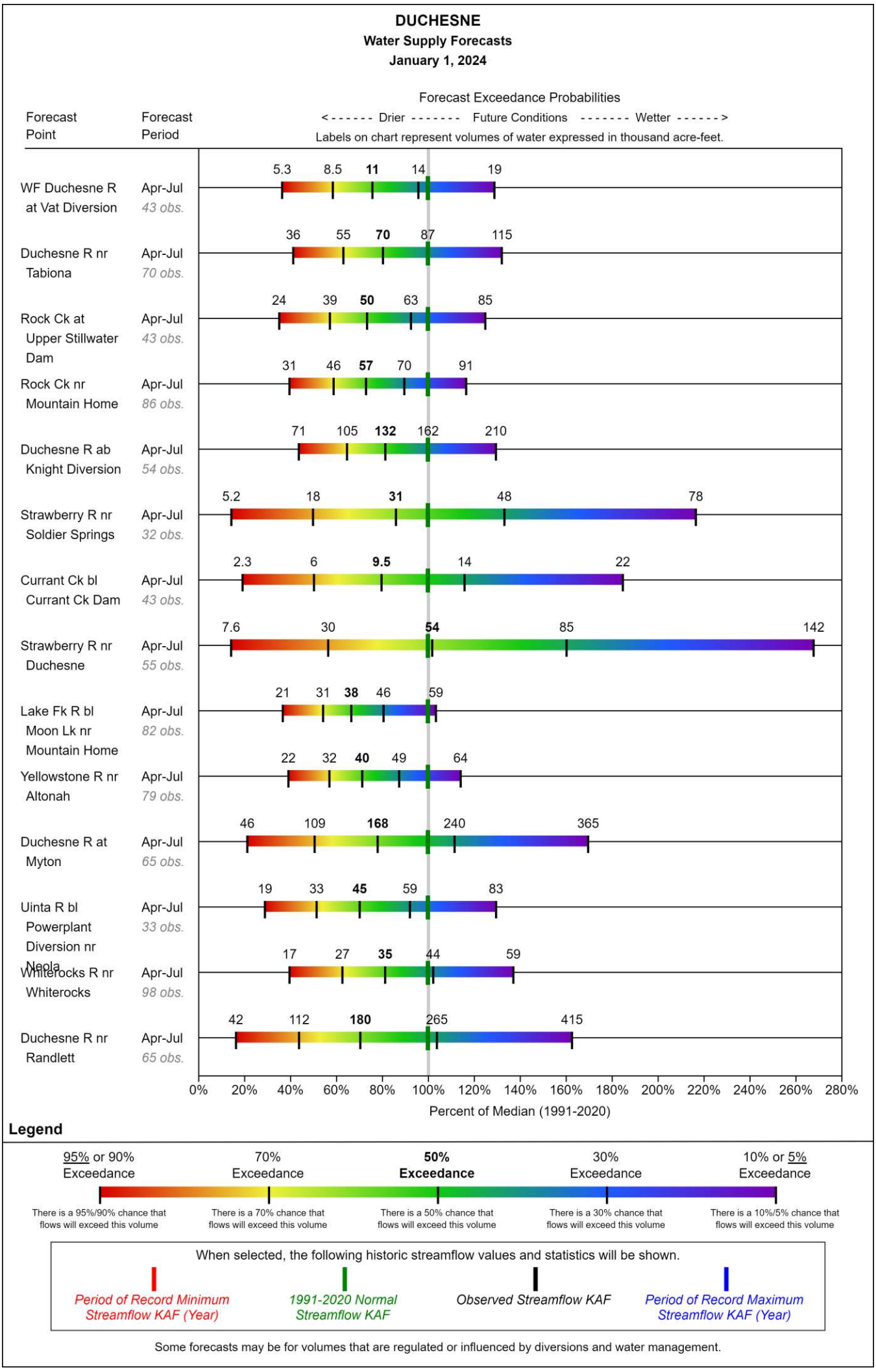
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Duchesne


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
January 1st, 2024
Kings Peak
Oakley
Kamas
Vernal
Duchesne
57
Roosevelt
Duchesne
PARIETTE BENCH
WEST TAVAPUTS PLATEAU
Price
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 3 6 12 18 24 30
Created 1-08-2024


Forecast Volume,
50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Kings Peak
Oakley
Kamas
Vernal
Duchesne
77
Roosevelt
Duchesne
PARIETTE BENCH
WEST TAVAPUTS PLATEAU
Price
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 3 6 12 18 24 30
Created 1-08-2024

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

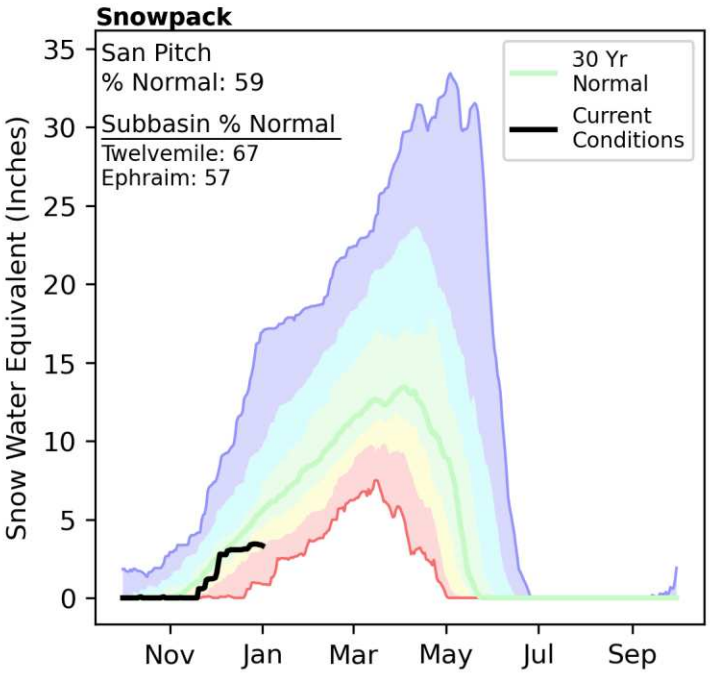
Observed Streamflow KAF

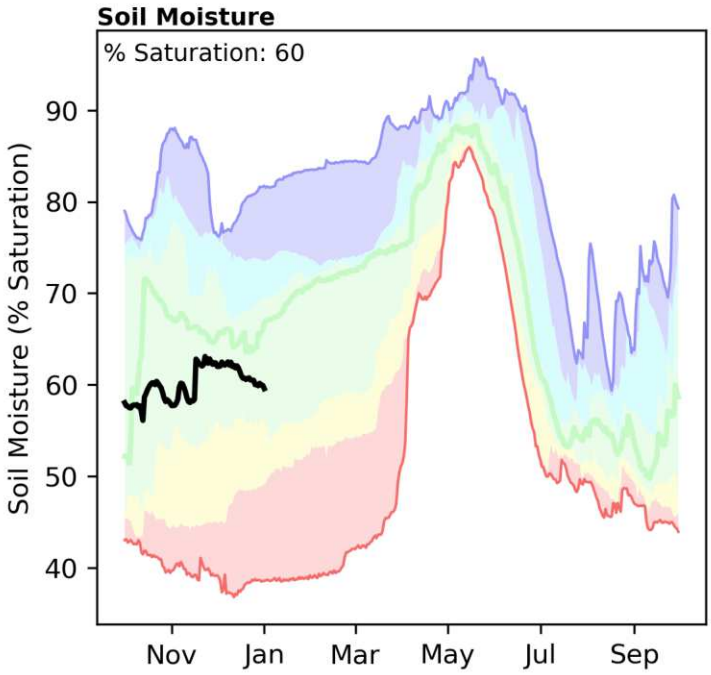
Period of Record Maximum Streamflow KAF (Year)

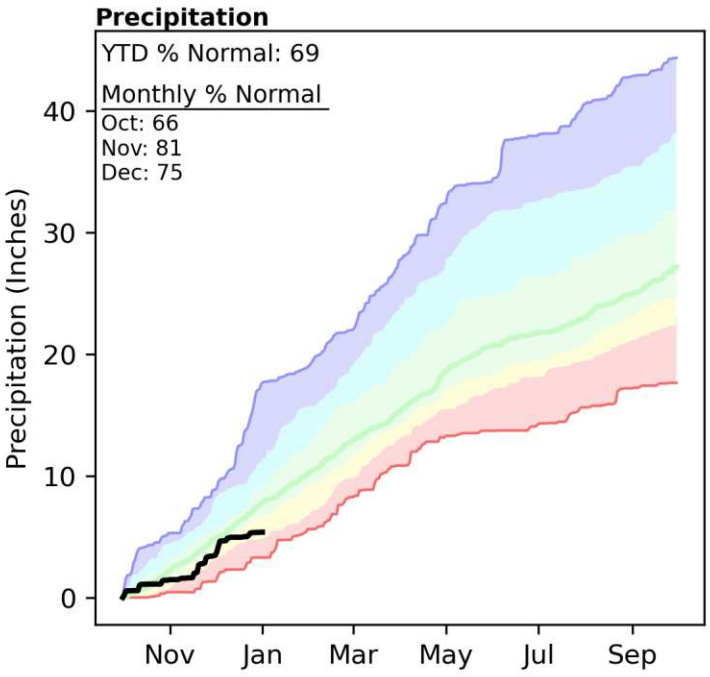
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

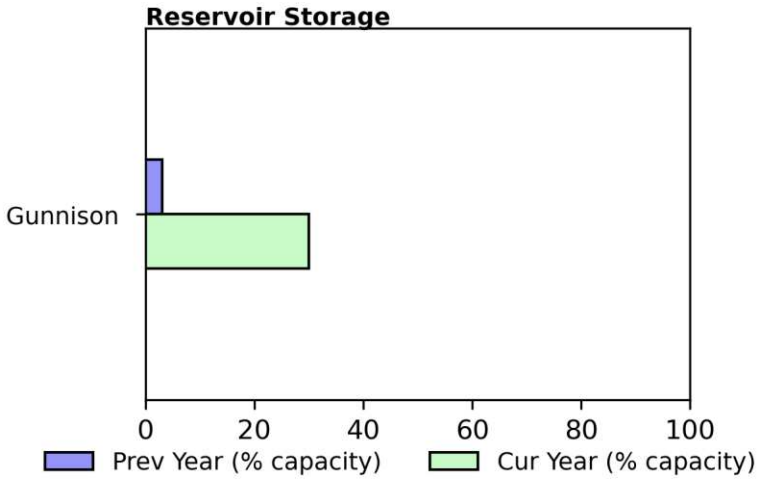
San Pitch | January 1, 2024

Snowpack in the San Pitch River Basin is well below normal at 59% of median, compared to 168% at this time last year. Precipitation in December was below normal at 75%, which brings the seasonal accumulation (October-December) to 69% of median. Soil moisture is at 60% saturation compared to 67% saturation last year. Reservoir storage is 29% of capacity, compared to 3% last year. The forecast streamflow volume (50% exceedence, April-July) for Manti Creek is 80% of normal. The Surface Water Supply Index percentile is 40% for the San Pitch.



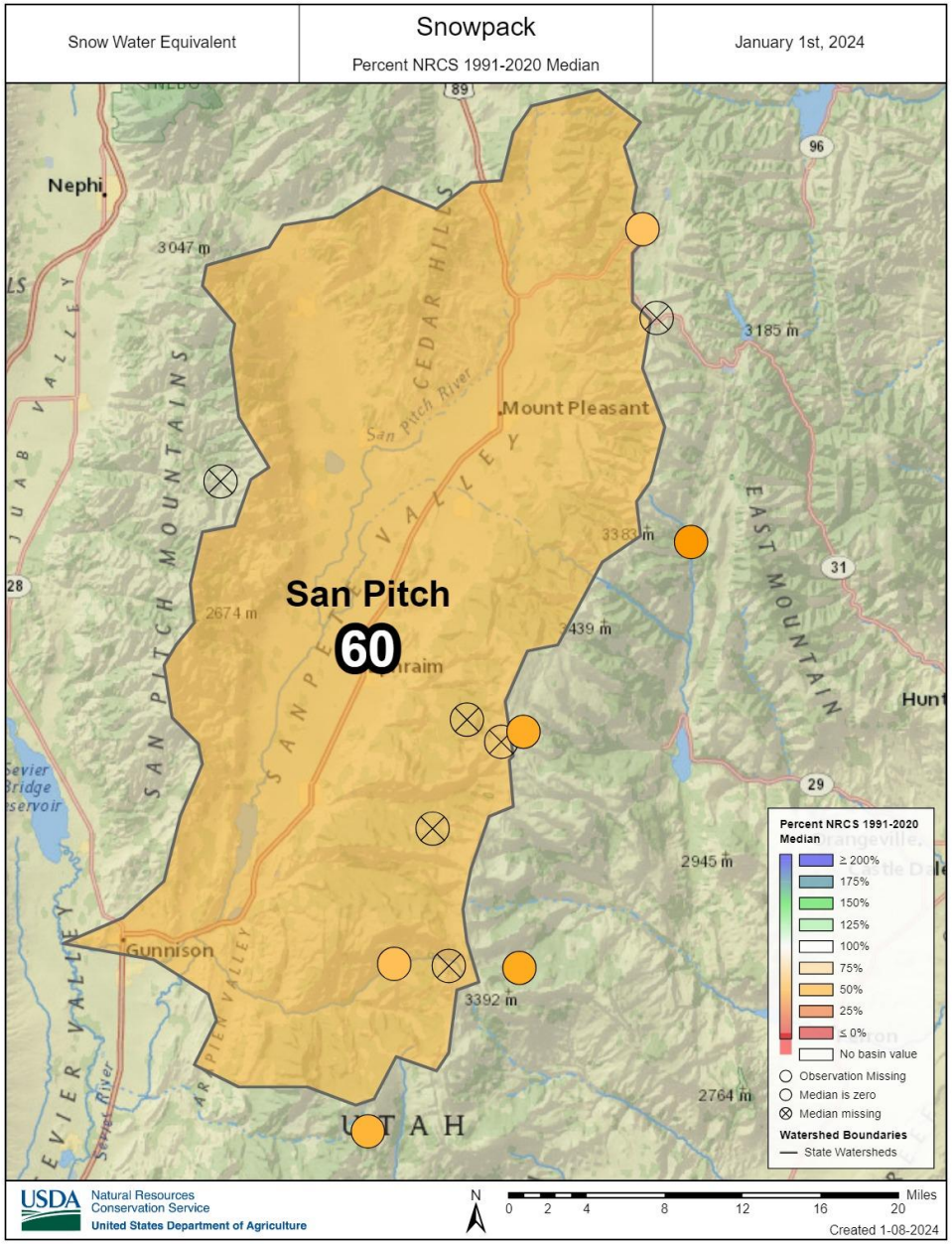


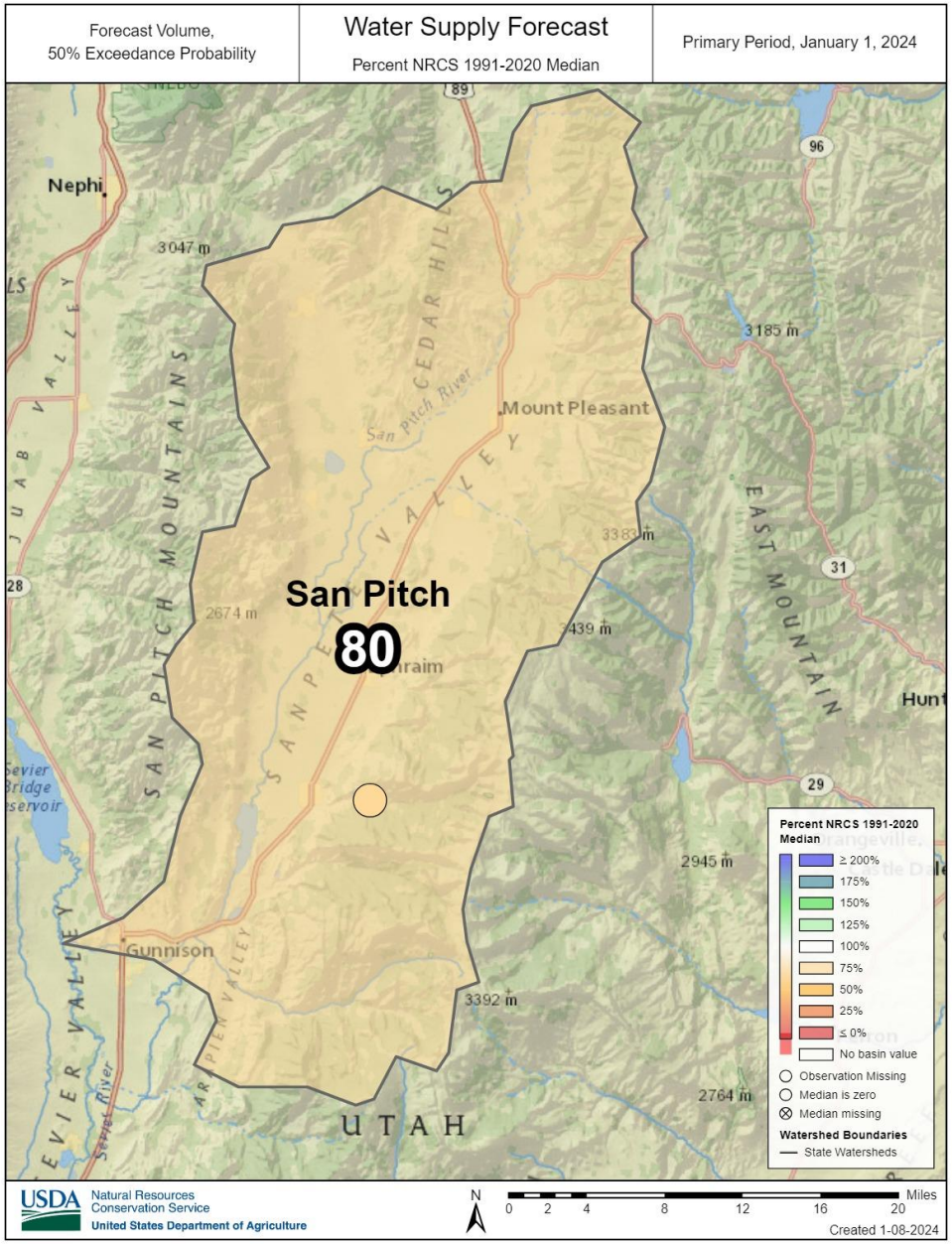




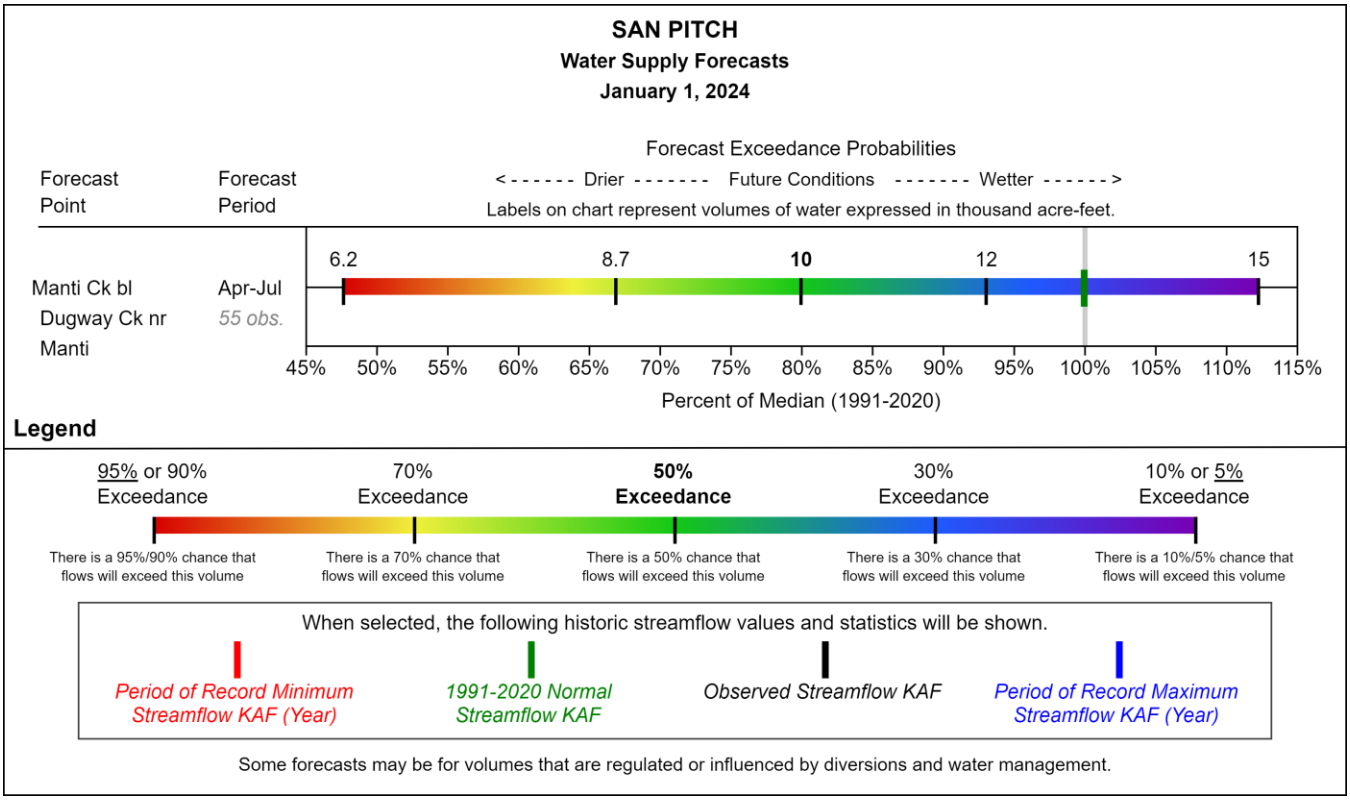
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

San Pitch


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
January 1st, 2024
San Pitch
60
Nephi
Mount Pleasant
Gunnison
UTAH
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 1-08-2024

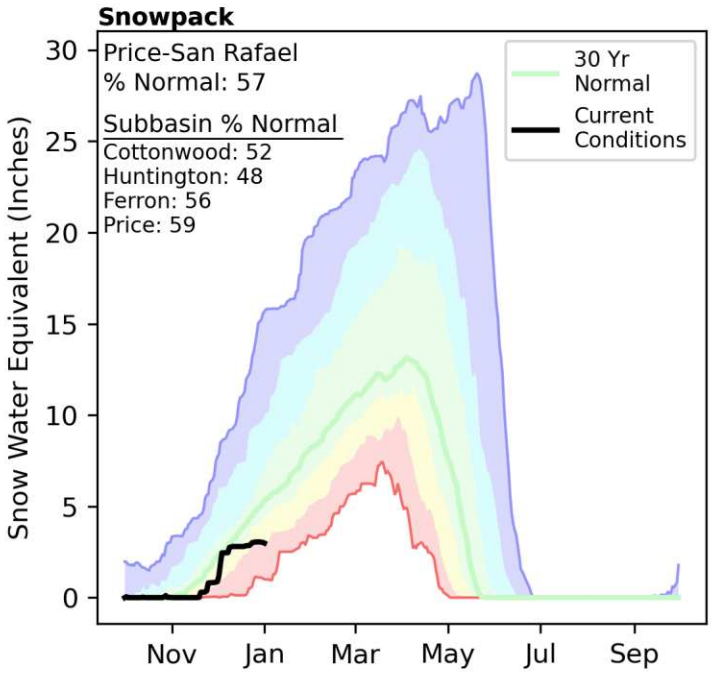

Forecast Volume,
50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
San Pitch
80
Nephi
Mount Pleasant
Gunnison
UTAH
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 1-08-2024

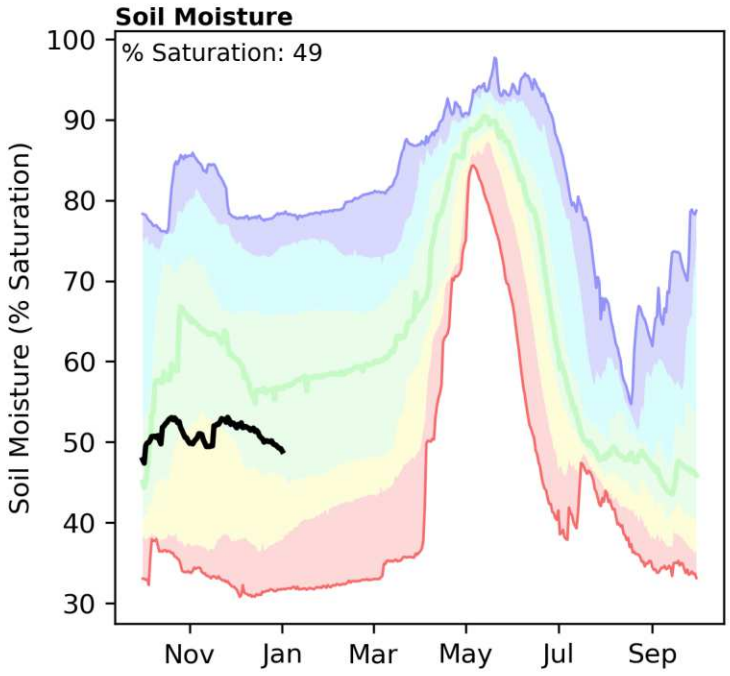
San Pitch

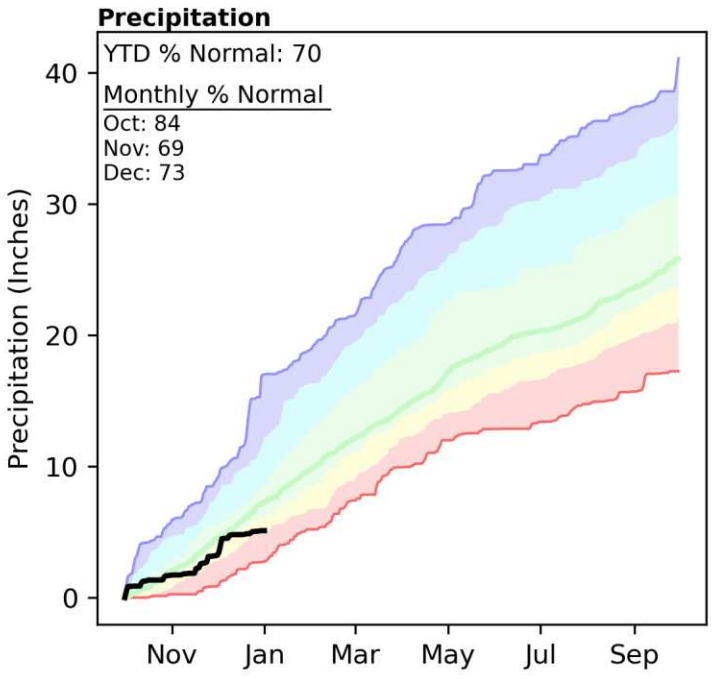

SAN PITCH
Water Supply Forecasts
January 1, 2024
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
<------- Drier ------- Future Conditions ------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Manti Ck bl Dugway Ck nr Manti
Apr-Jul
55 obs.
6.2
8.7
10
12
15
45% 50% 55% 60% 65% 70% 75% 80% 85% 90% 95% 100% 105% 110% 115%
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.

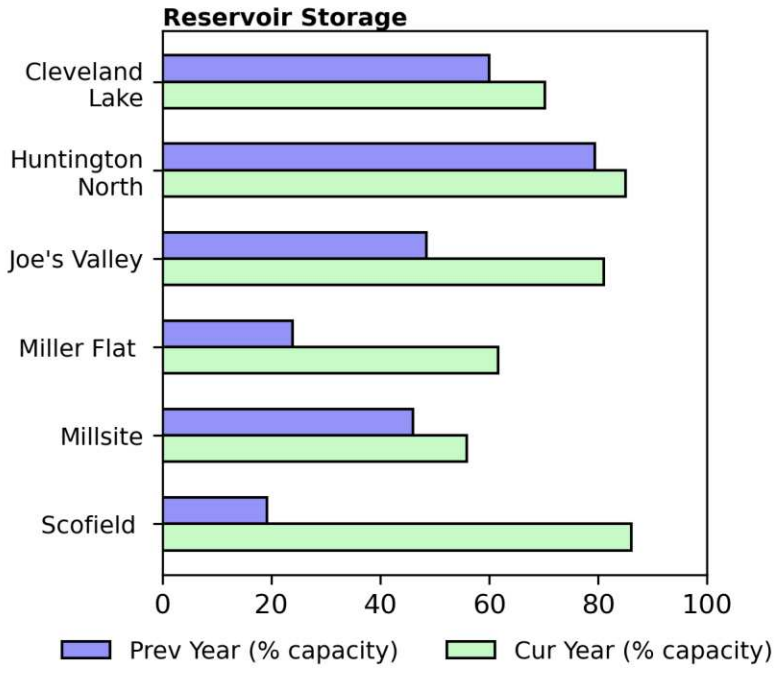
Price-San Rafael | January 1, 2024

Snowpack in the Price and San Rafael River Basins is well below normal at 57% of median, compared to 166% at this time last year. Precipitation in December was below normal at 73%, which brings the seasonal accumulation (October-December) to 70% of median. Soil moisture is at 49% saturation compared to 52% saturation last year. Reservoir storage is 79% of capacity, compared to 36% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 61% to 101% of normal. The Surface Water Supply Index percentiles are 73% for the Price, 56% for Joes Valley, and 22% for Ferron Creek.



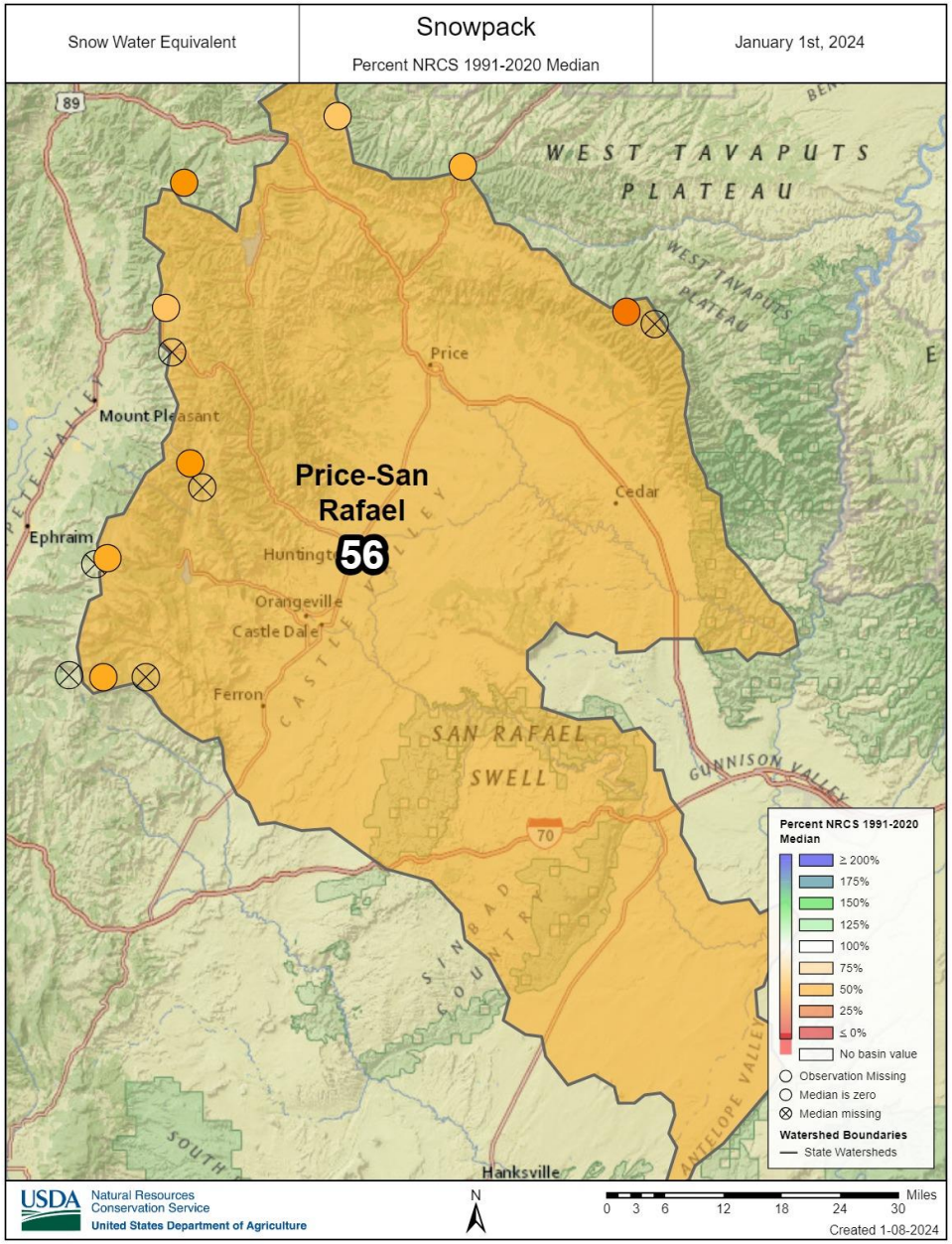


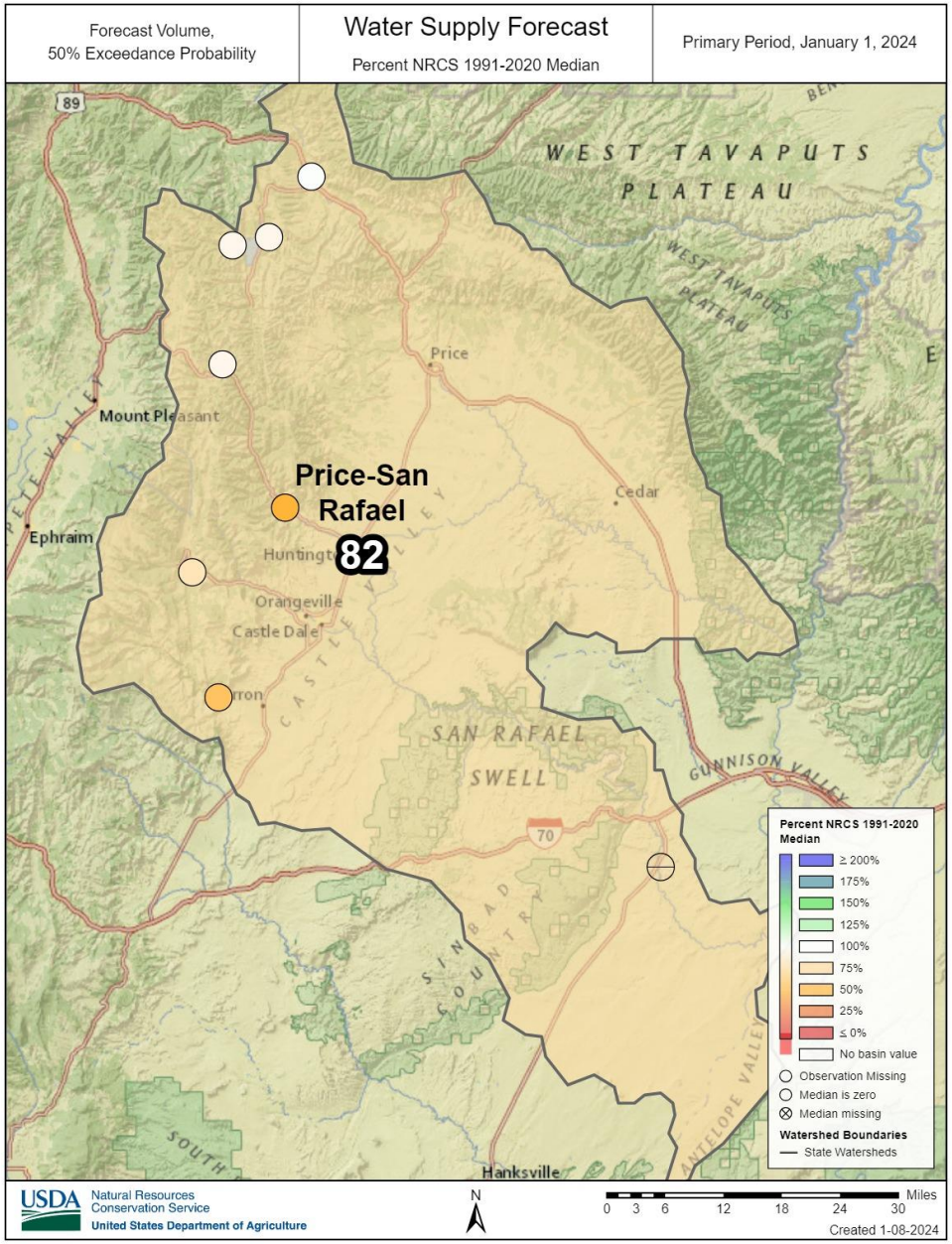




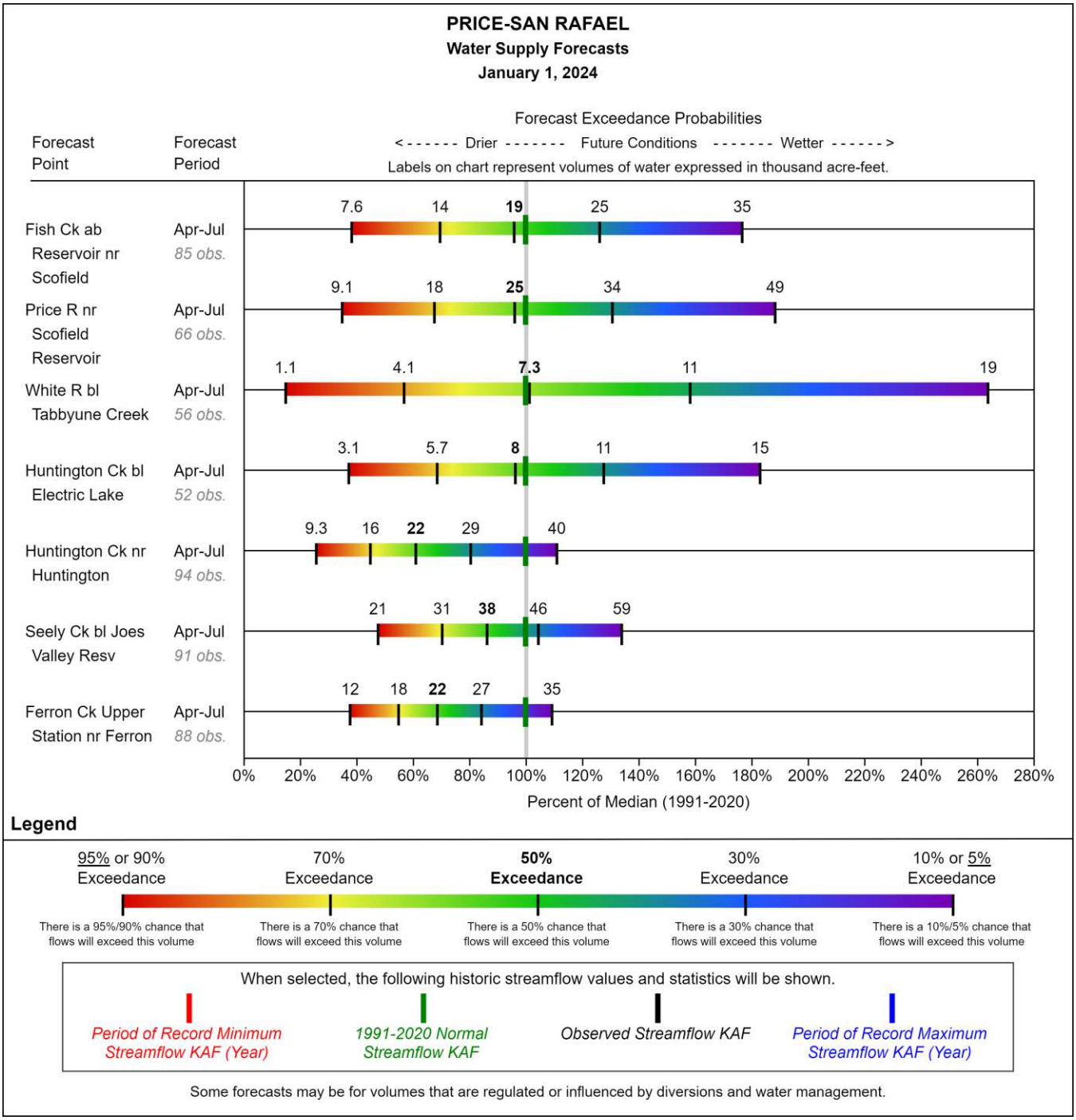
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Price San-Rafael



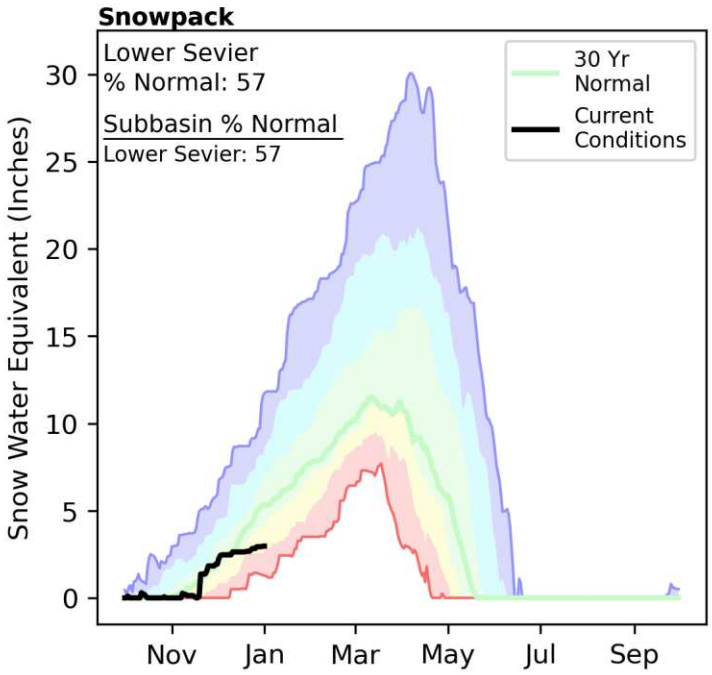


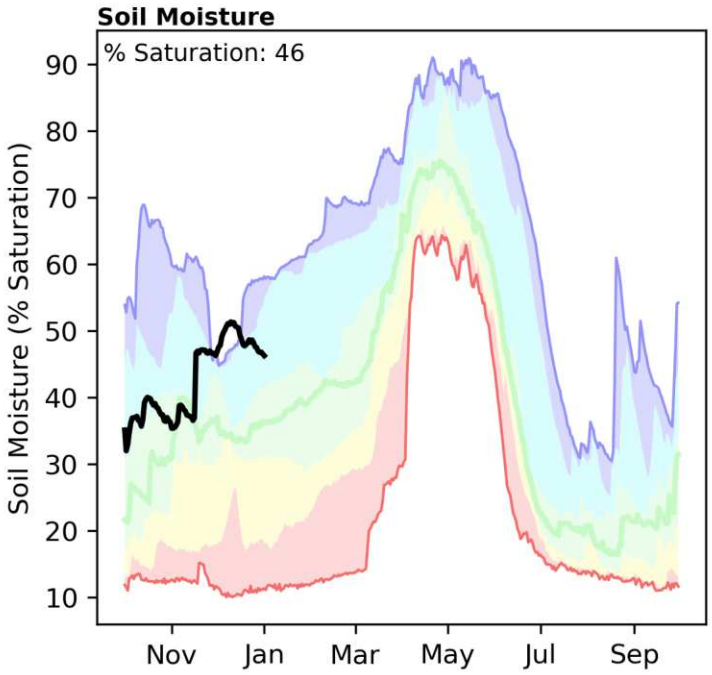
Price-San Rafael

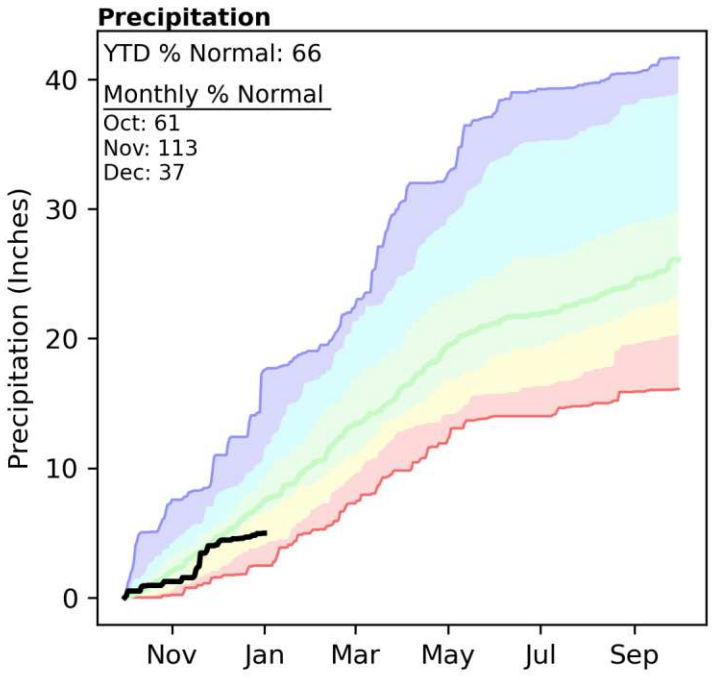


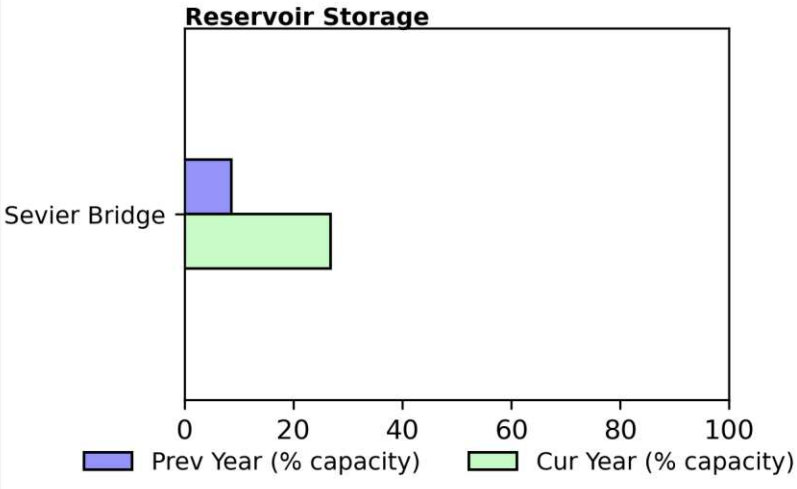
Lower Sevier | January 1, 2024

Snowpack in the Lower Sevier River Basin is well below normal at 57% of median, compared to 164% at this time last year. Precipitation in December was well below normal at 37%, which brings the seasonal accumulation (October-December) to 66% of median. Soil moisture is at 46% saturation compared to 55% saturation last year. Reservoir storage is 26% of capacity, compared to 8% last year. Forecast streamflow volume (50% exceedence, April-July) for the Sevier River near Gunnison is 80% of normal. The Surface Water Supply Index percentile is 16% for the Lower Sevier.



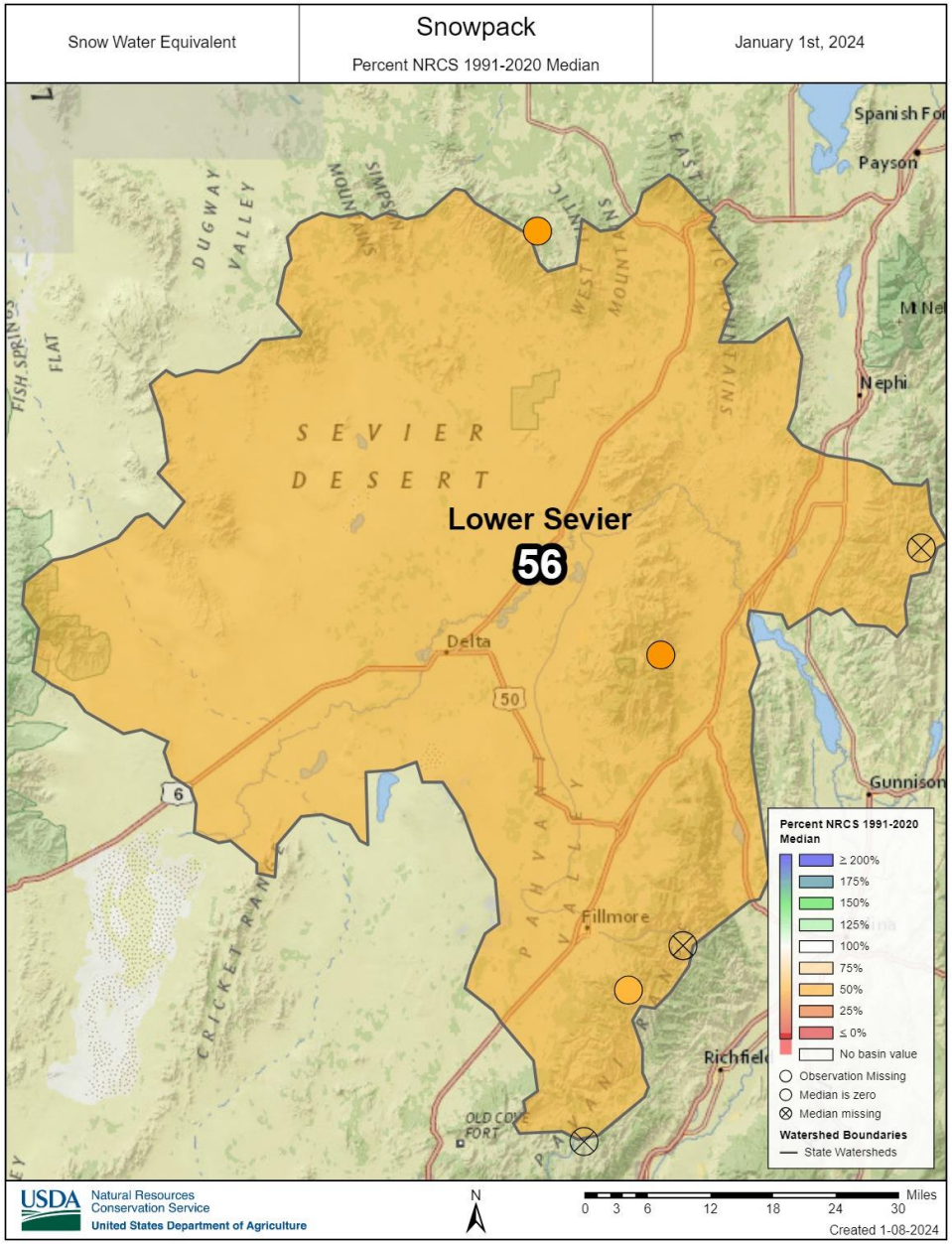


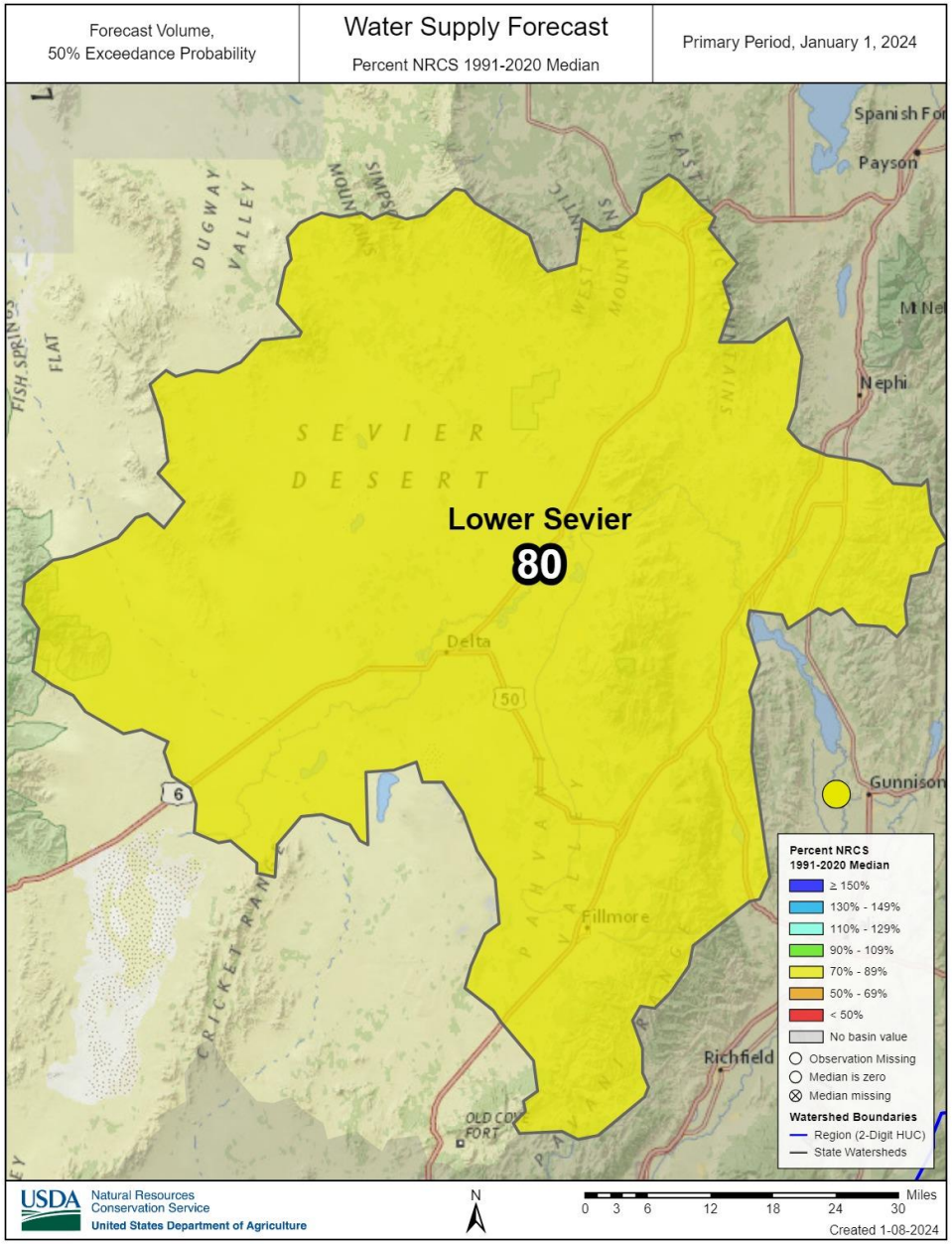




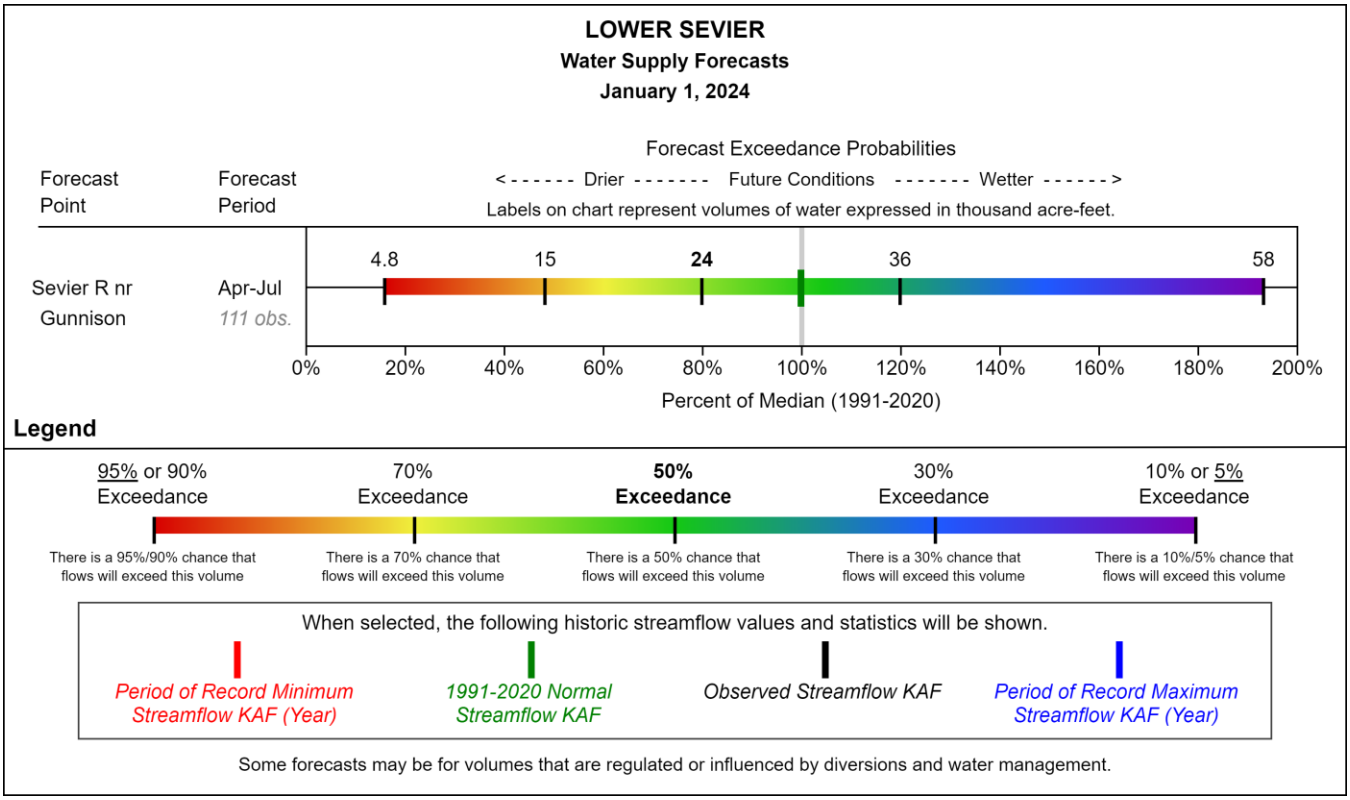
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Lower Sevier



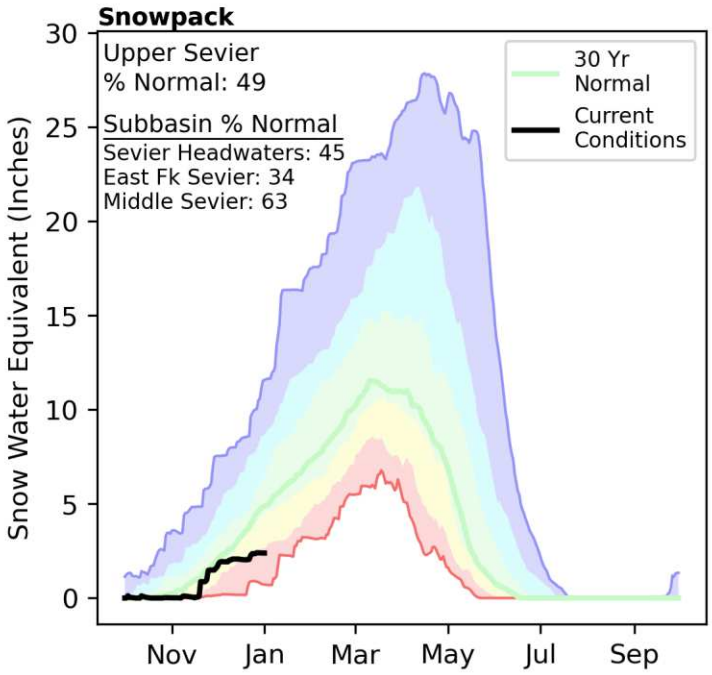


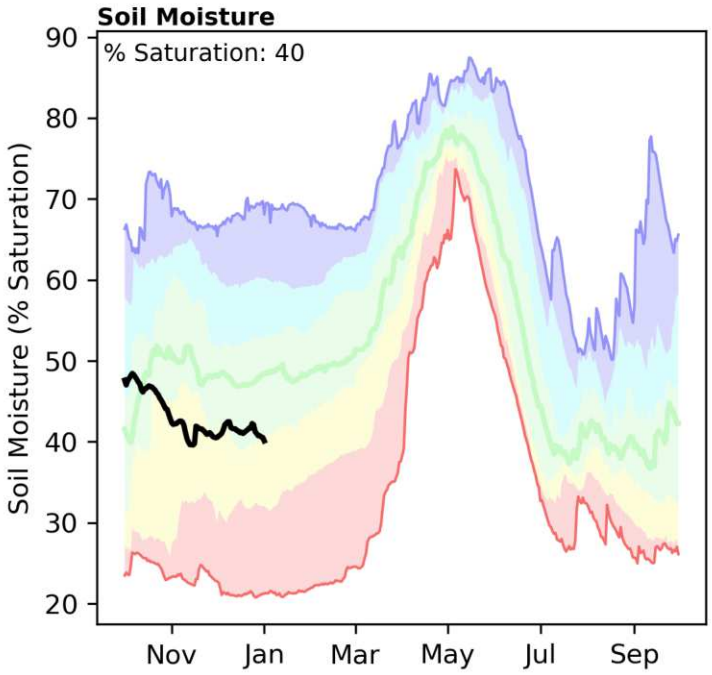
Lower Sevier

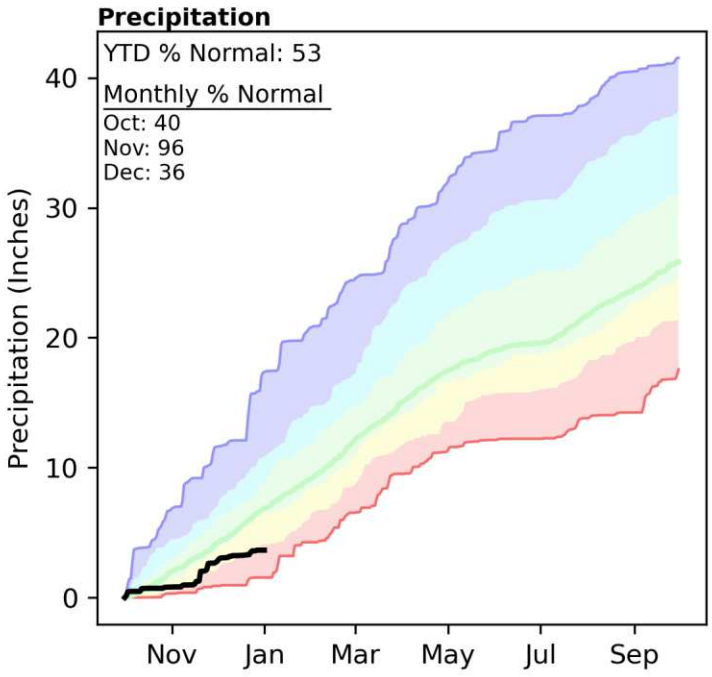


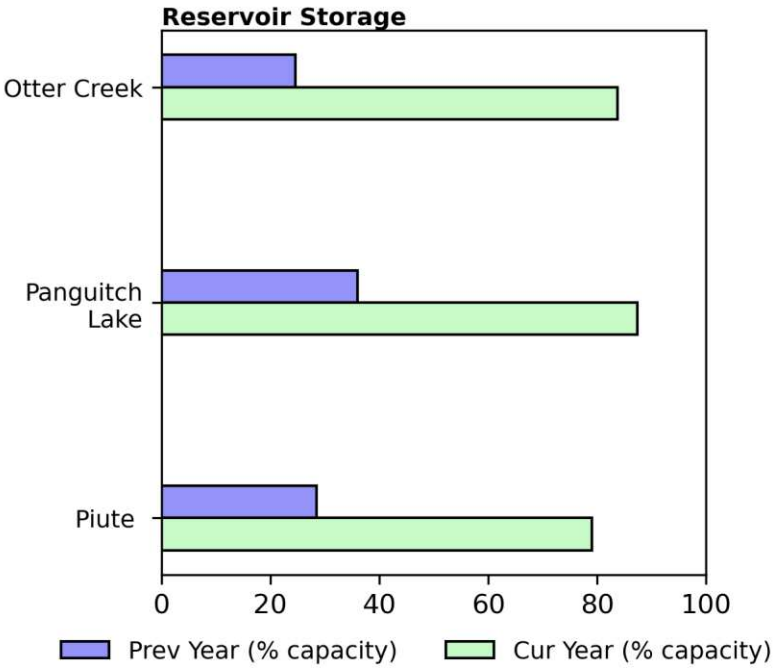
Upper Sevier | January 1, 2024

Snowpack in the Upper Sevier River Basin is well below normal at 49% of median, compared to 147% at this time last year. Precipitation in December was well below normal at 36%, which brings the seasonal accumulation (October-December) to 53% of median. Soil moisture is at 40% saturation compared to 53% saturation last year. Reservoir storage is 81% of capacity, compared to 28% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 60% to 83% of normal. The Surface Water Supply Index percentile is 53% for the Upper Sevier.



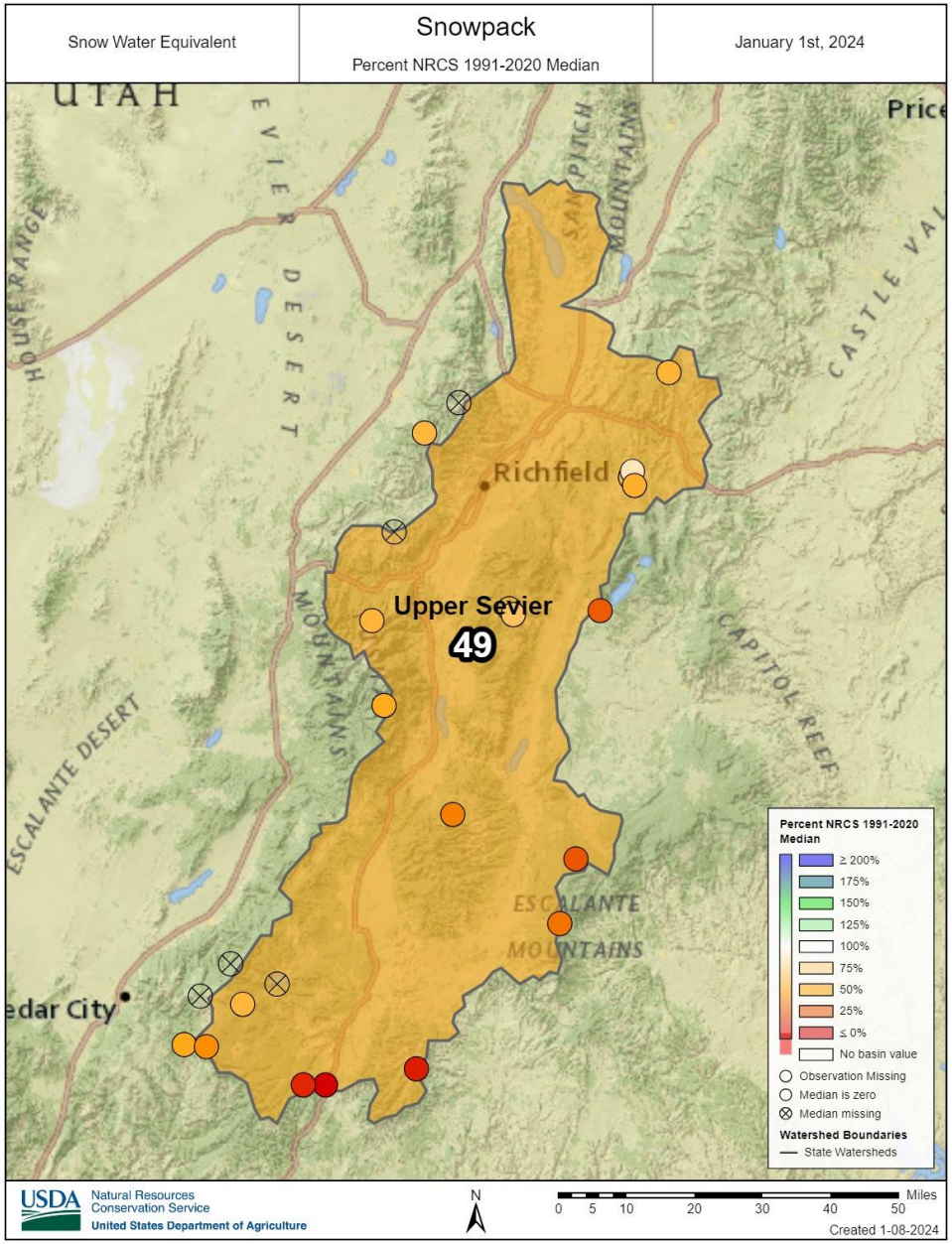


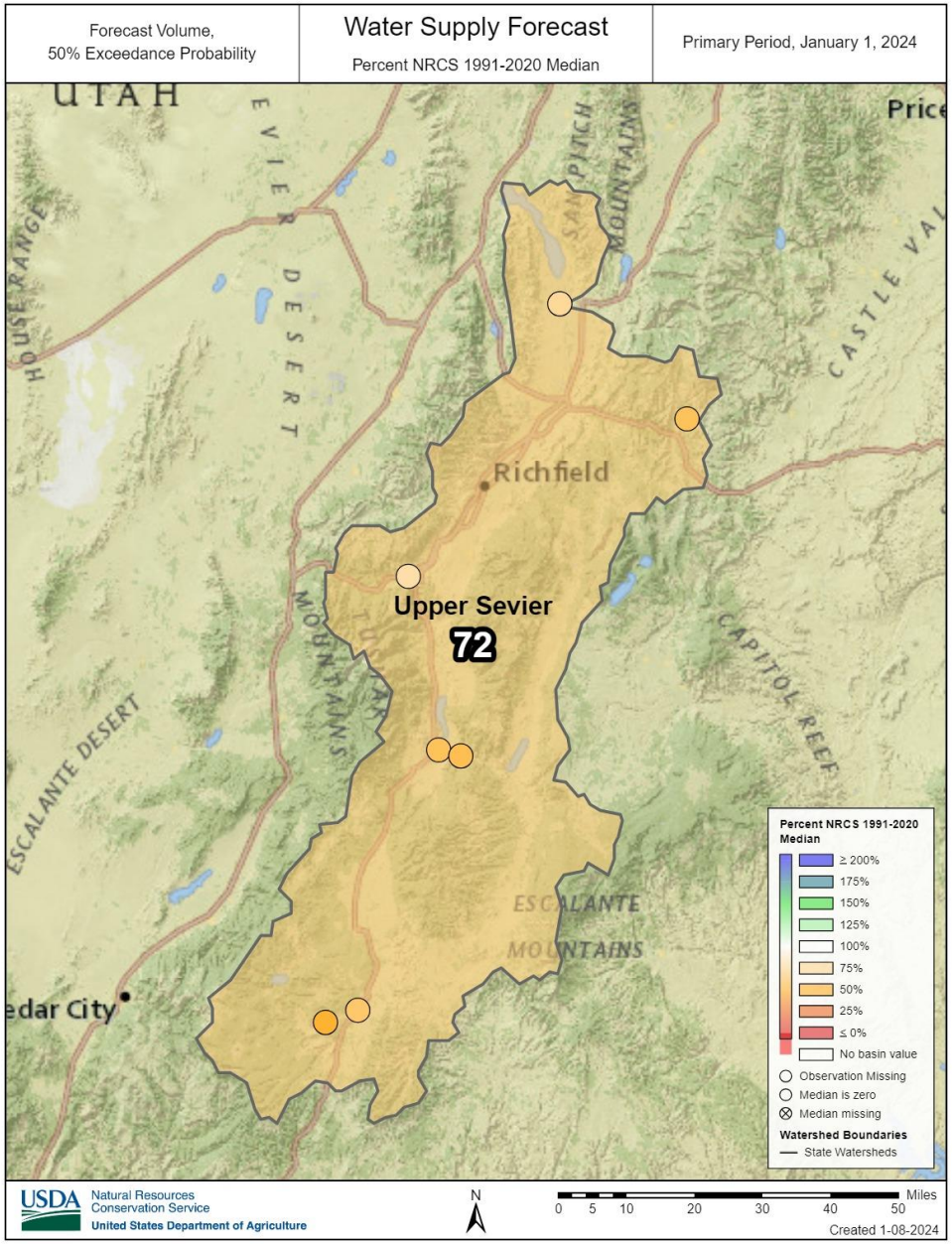




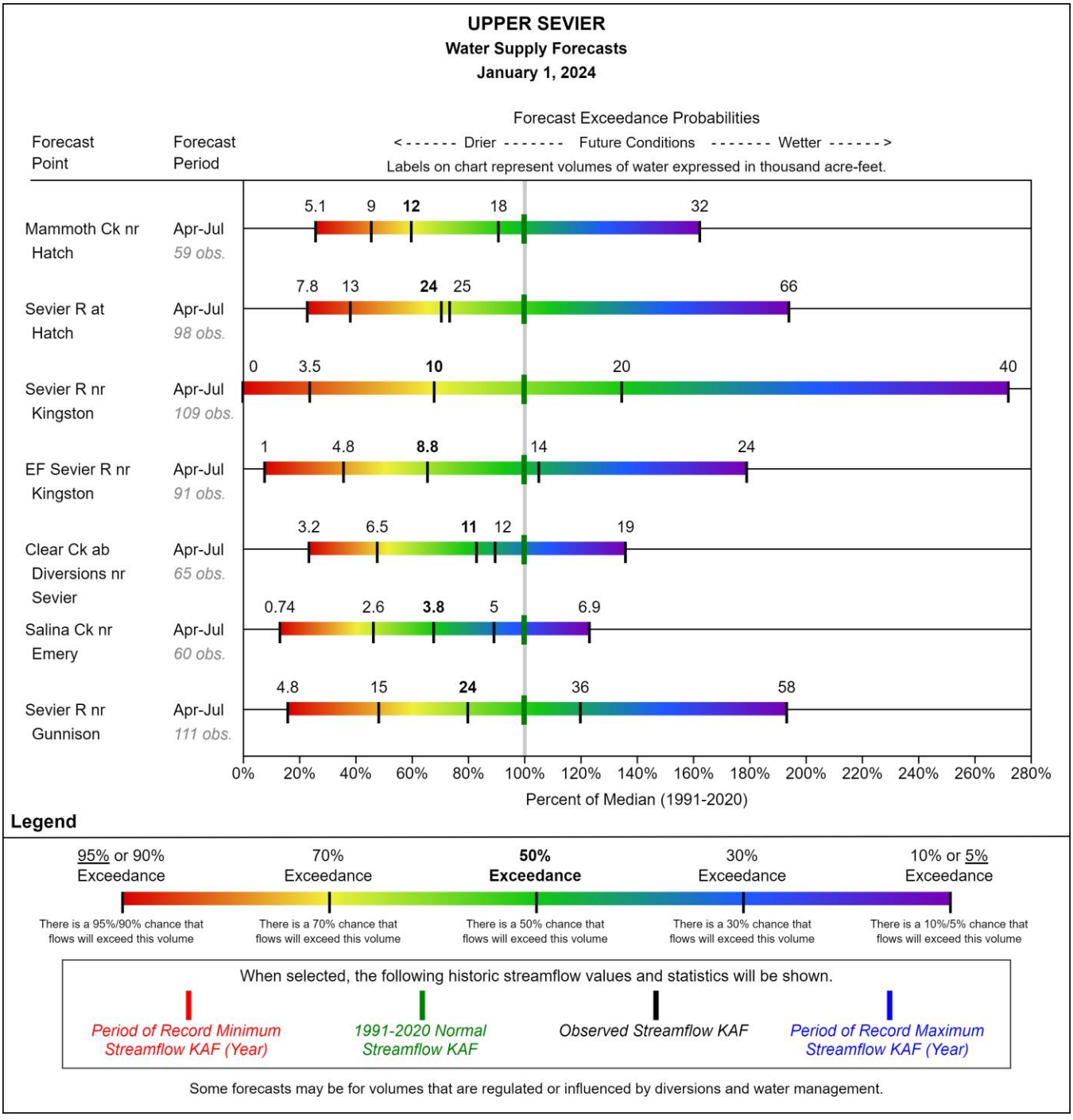
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Upper Sevier





Upper Sevier



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

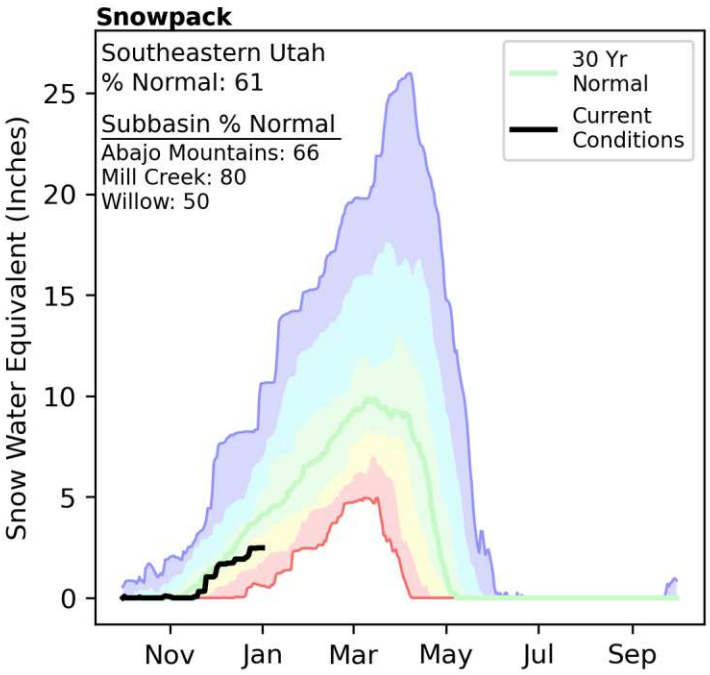
Observed Streamflow KAF

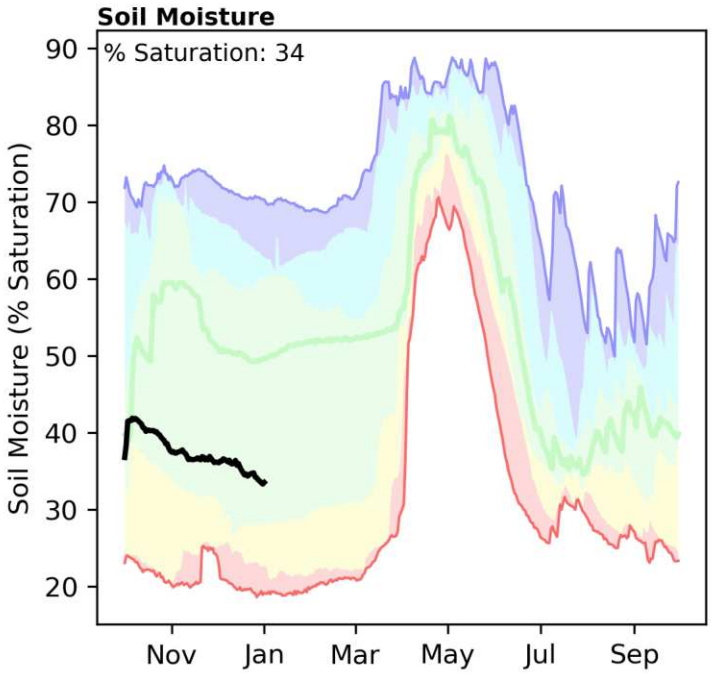
Period of Record Maximum Streamflow KAF (Year)

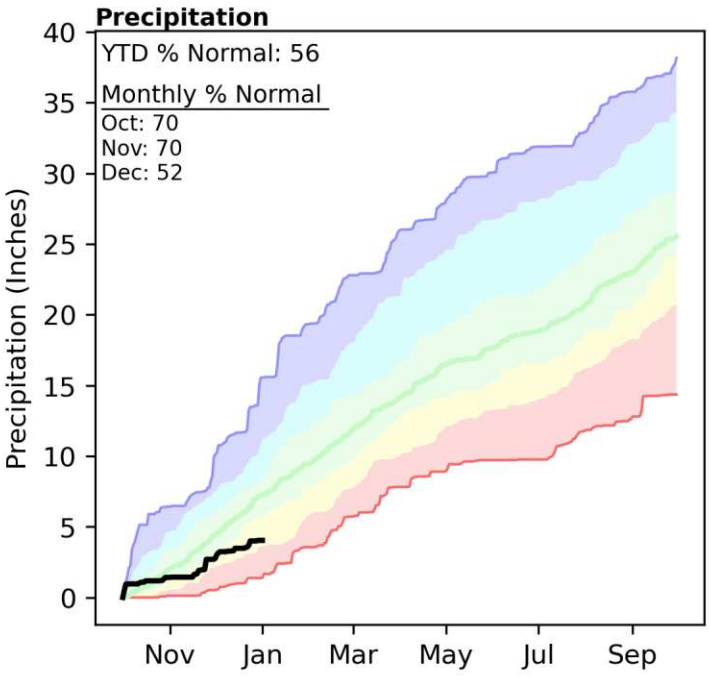
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

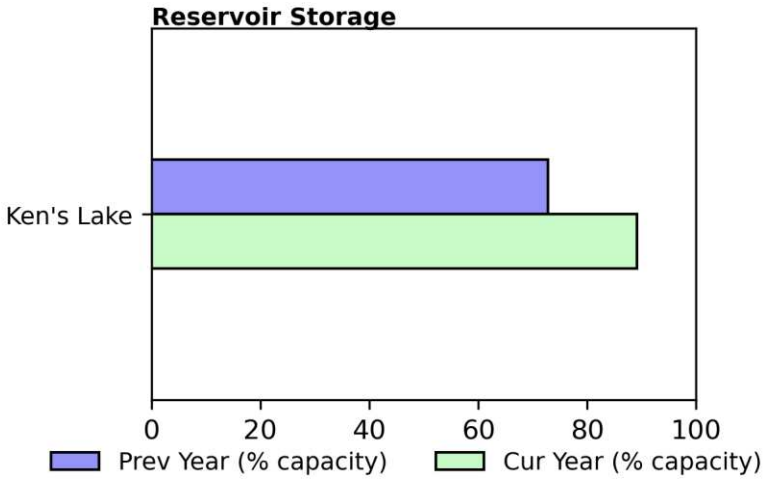
Southeastern Utah | January 1, 2024

Snowpack in Southeastern Utah is well below normal at 61% of median, compared to 149% at this time last year. Precipitation in December was well below normal at 52%, which brings the seasonal accumulation (October-December) to 56% of median. Soil moisture is at 34% saturation compared to 50% saturation last year. Reservoir storage is 89% of capacity, compared to 72% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 49% to 97% of normal. The Surface Water Supply Index percentile is 63% for Moab.



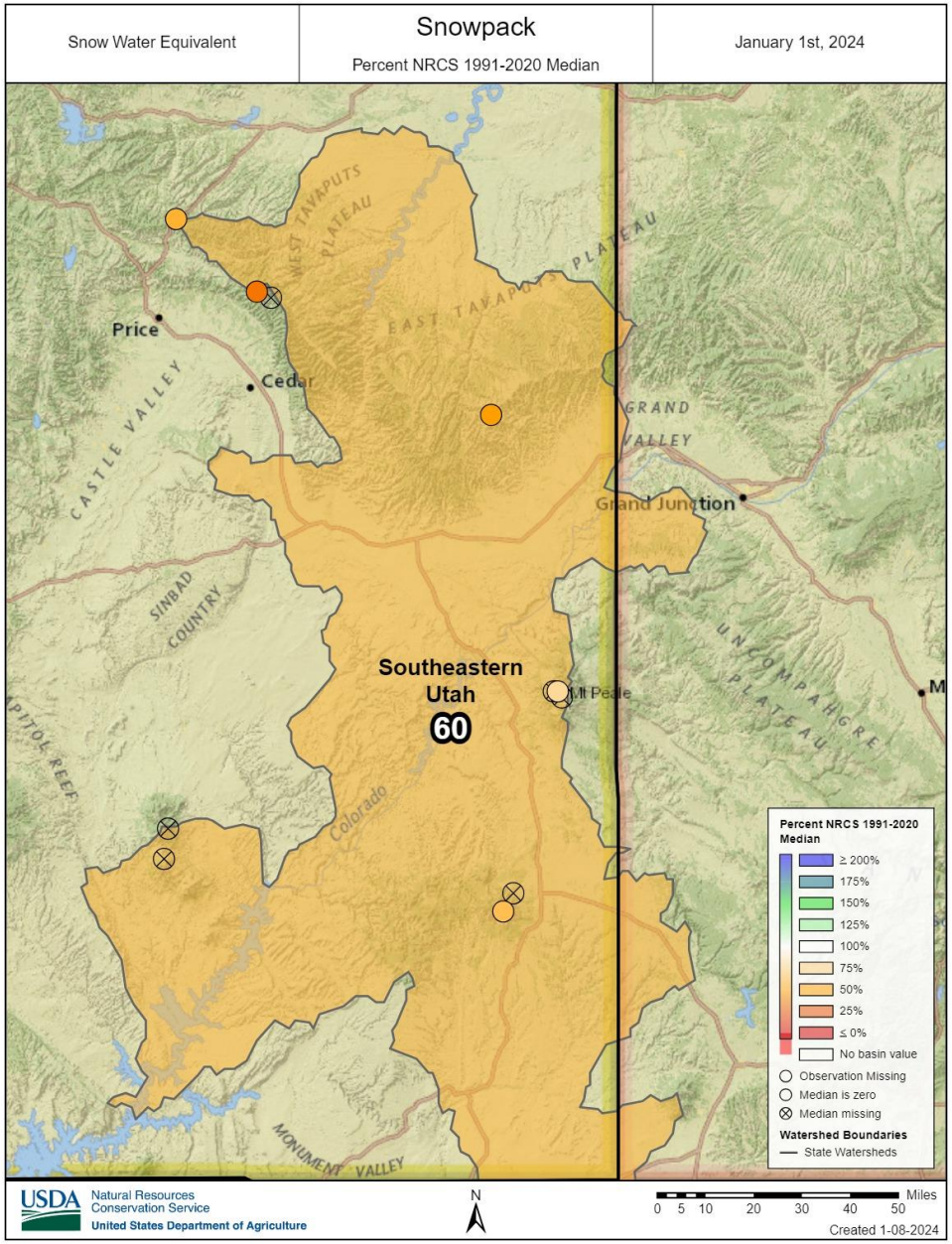


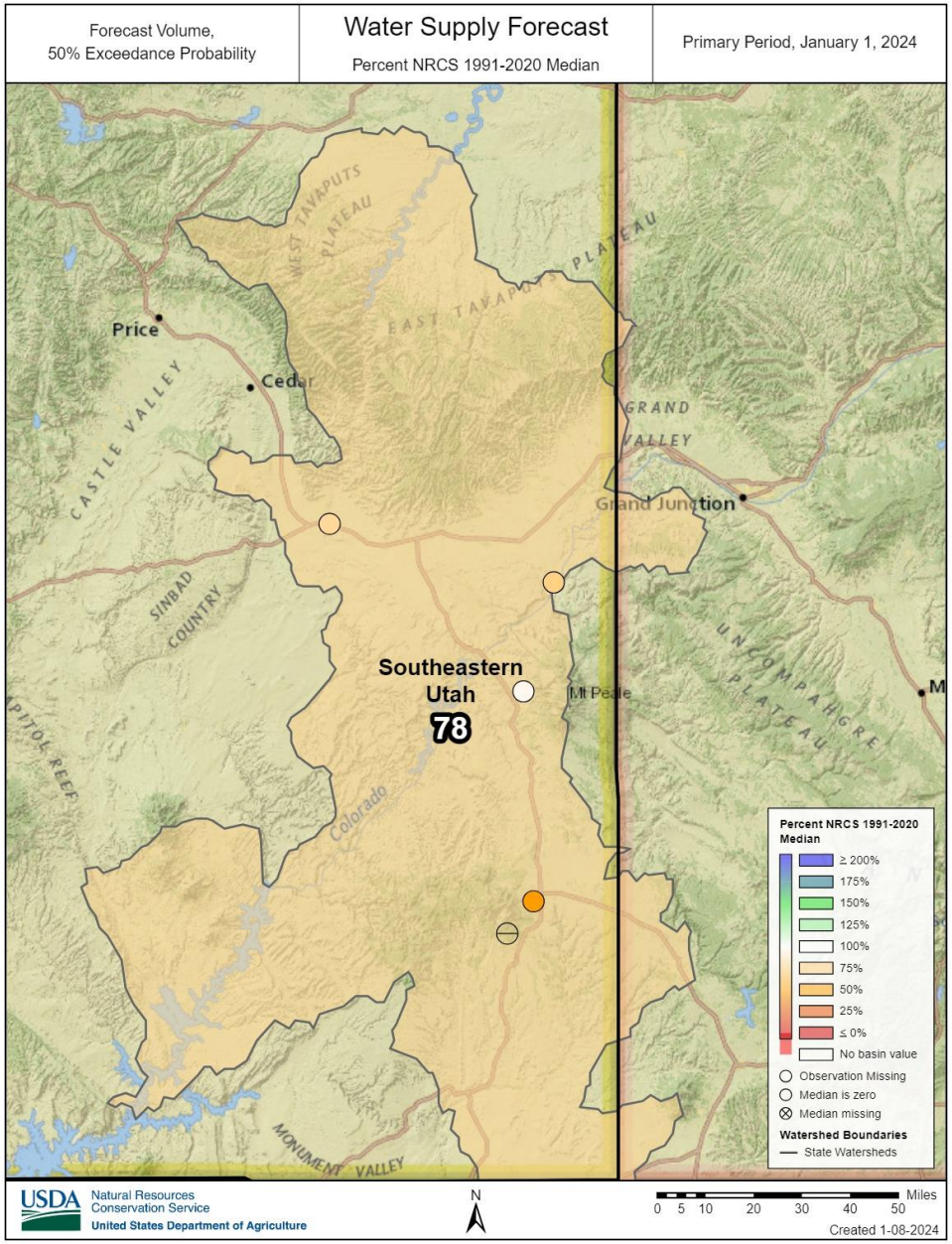




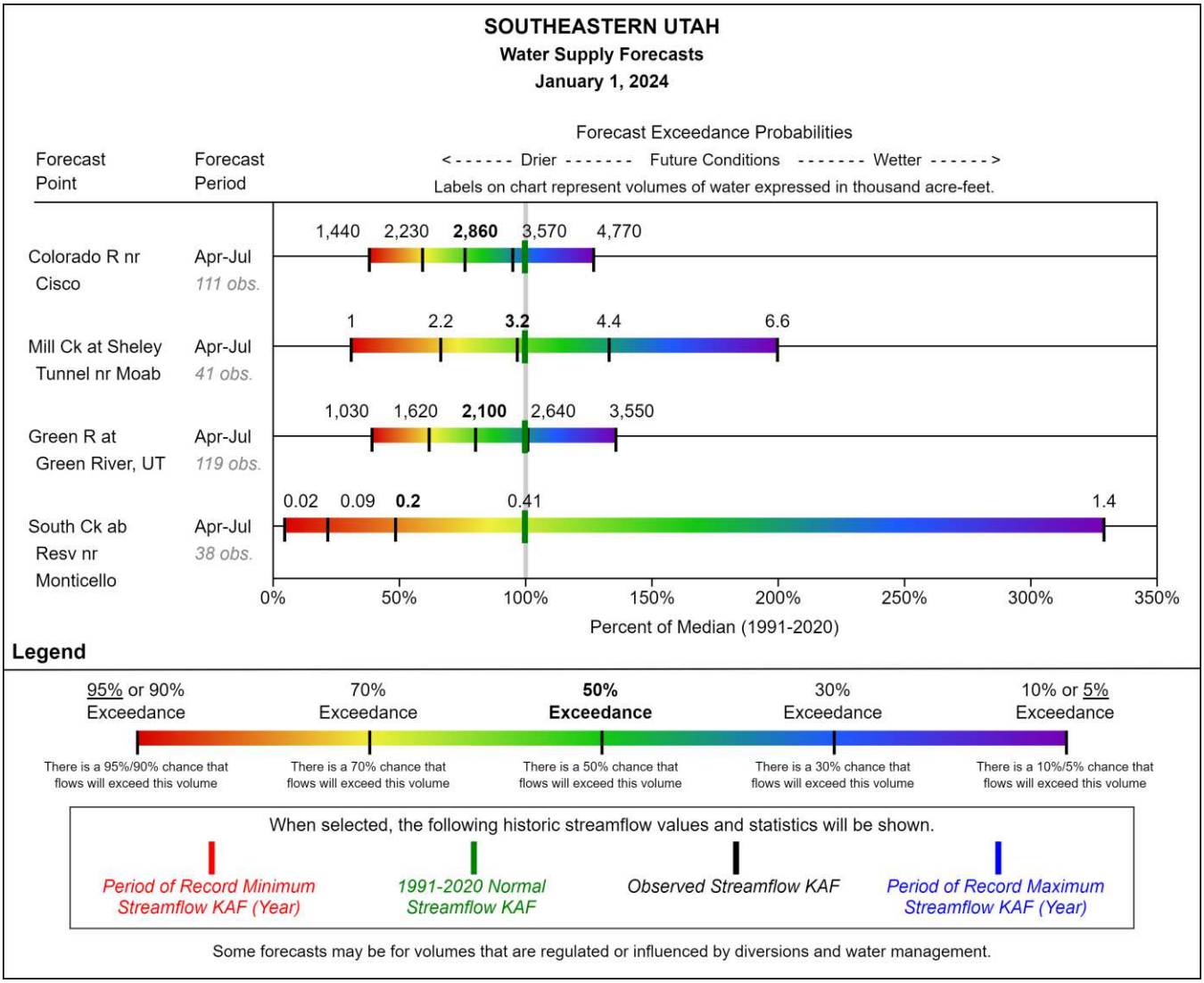
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Southeastern Utah





Southeastern Utah



Legend

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

Period of Record Minimum Streamflow KAF (Year)

1991-2020 Normal Streamflow KAF

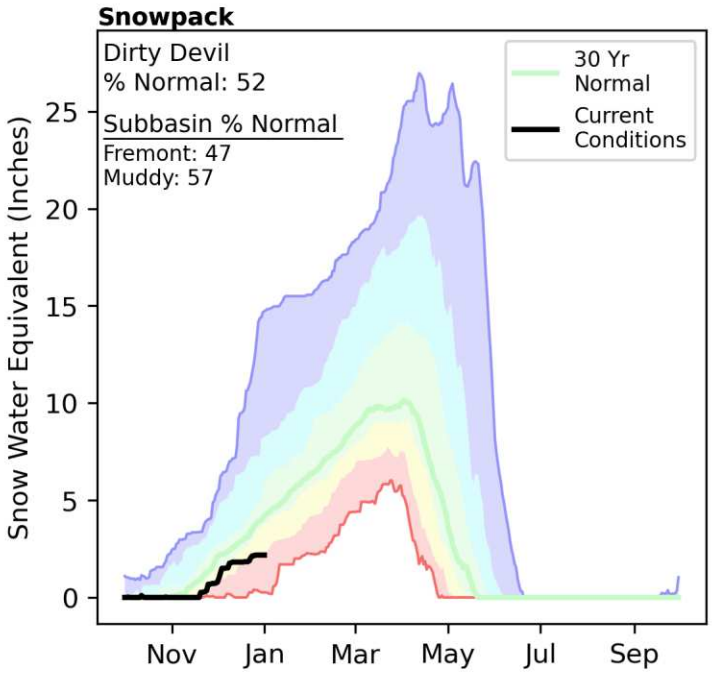
Observed Streamflow KAF

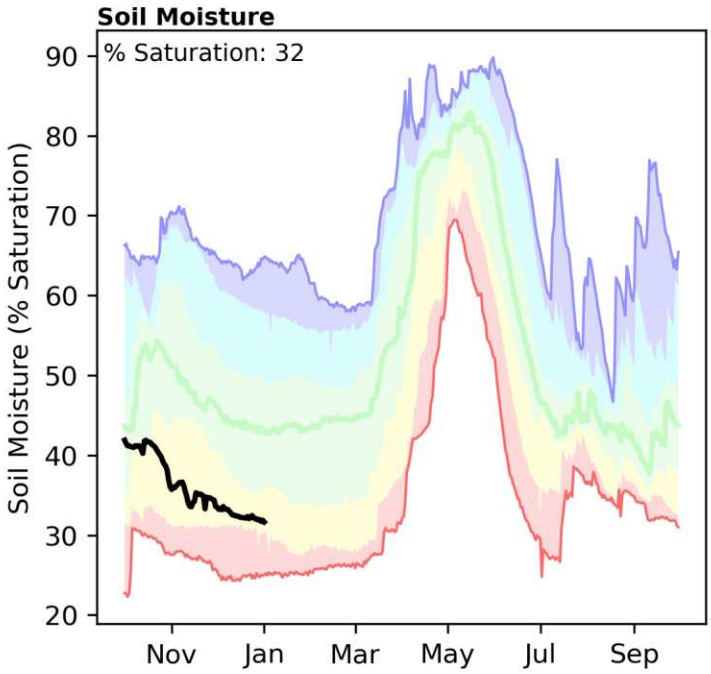
Period of Record Maximum Streamflow KAF (Year)

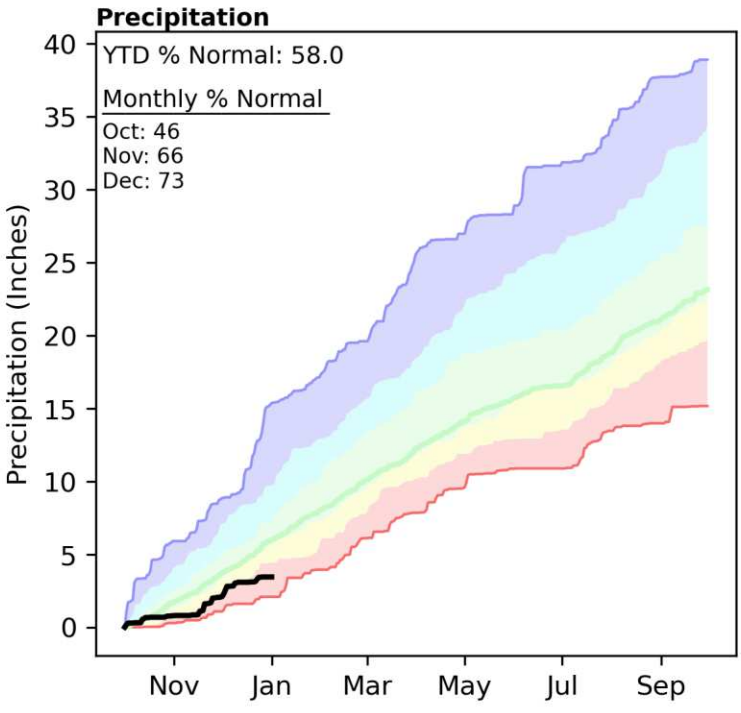
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

Dirty Devil | January 1, 2024

Snowpack in the Dirty Devil River Basin is well below normal at 52% of median, compared to 150% at this time last year. Precipitation in December was below normal at 73%, which brings the seasonal accumulation (October-December) to 58% of median. Soil moisture is at 32% saturation compared to 38% saturation last year. Forecast streamflow volumes (50% exceedence, April-July) range from 67% to 79% of normal.

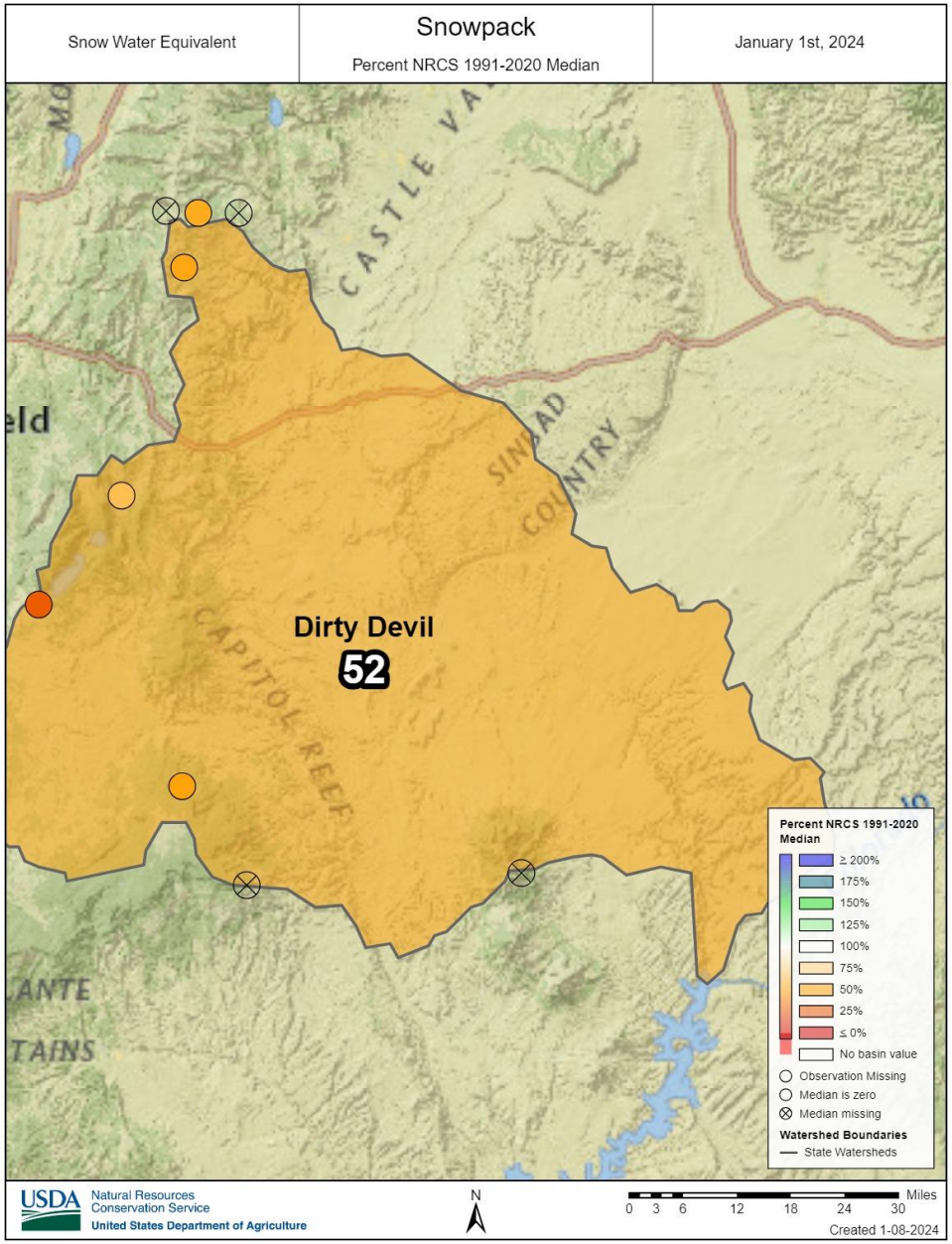


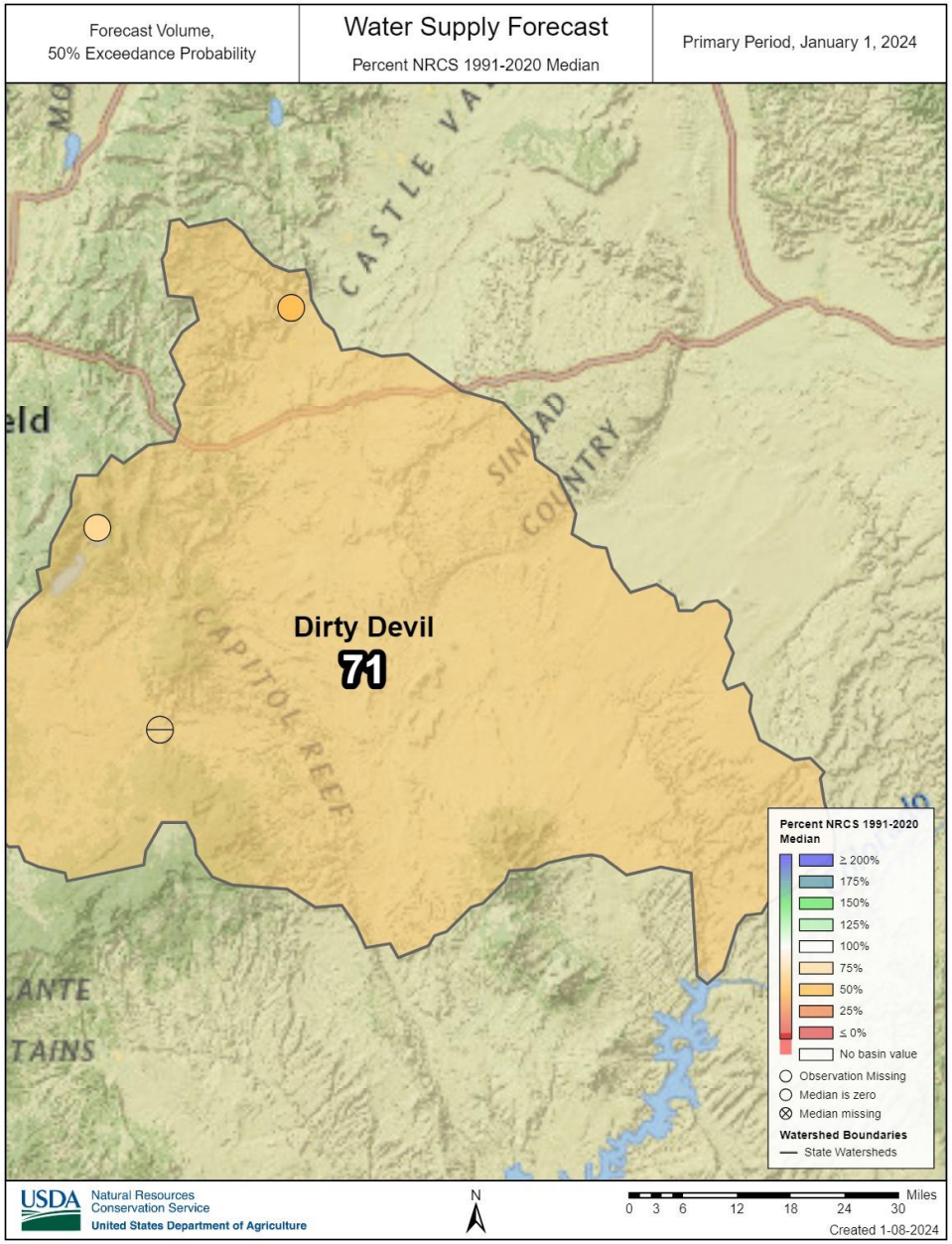




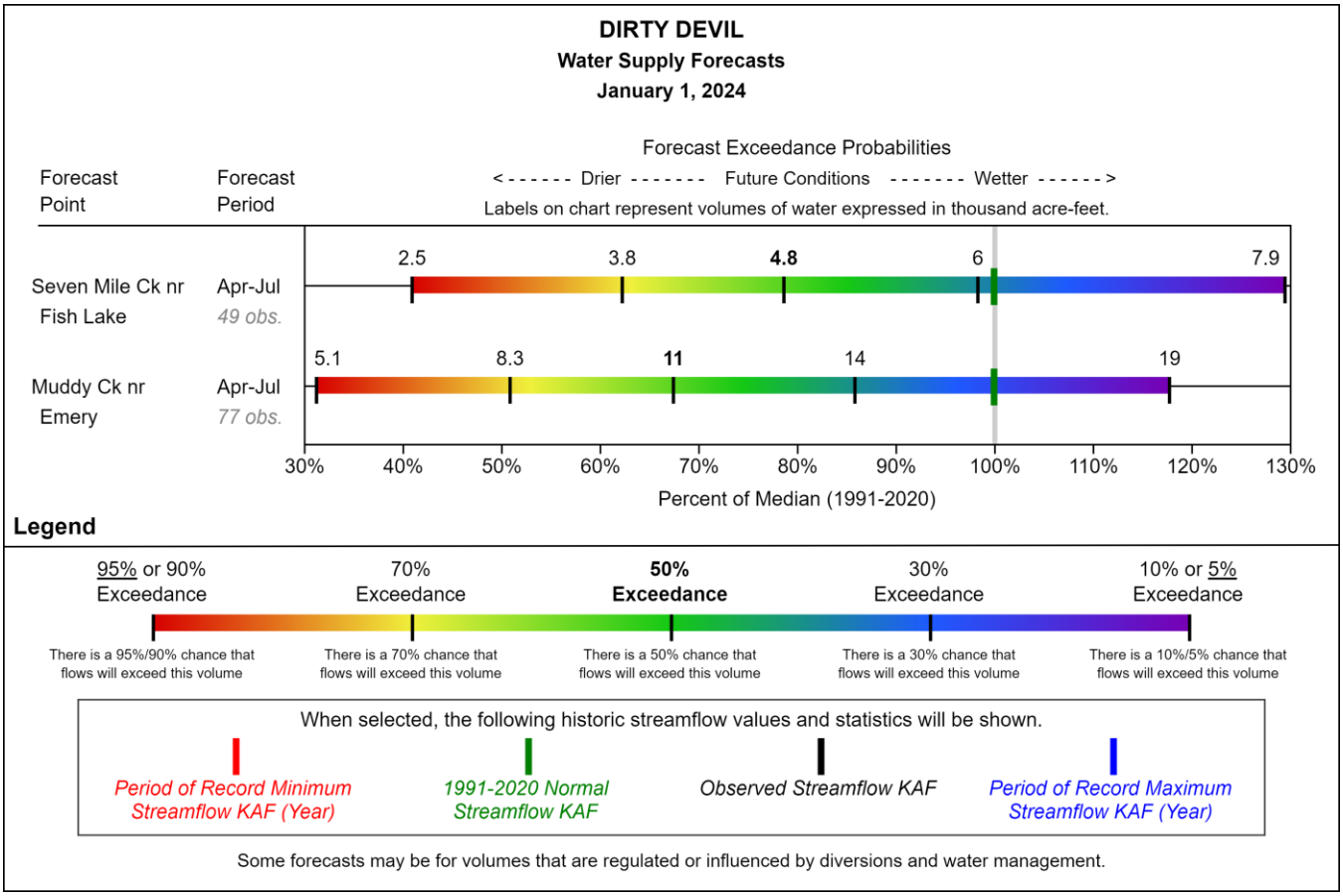
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Dirty Devil


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
January 1st, 2024
CASTLE VA
SINBAD COUNTRY
CAPITOL REEF
Dirty Devil
52
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30 Miles
Created 1-08-2024

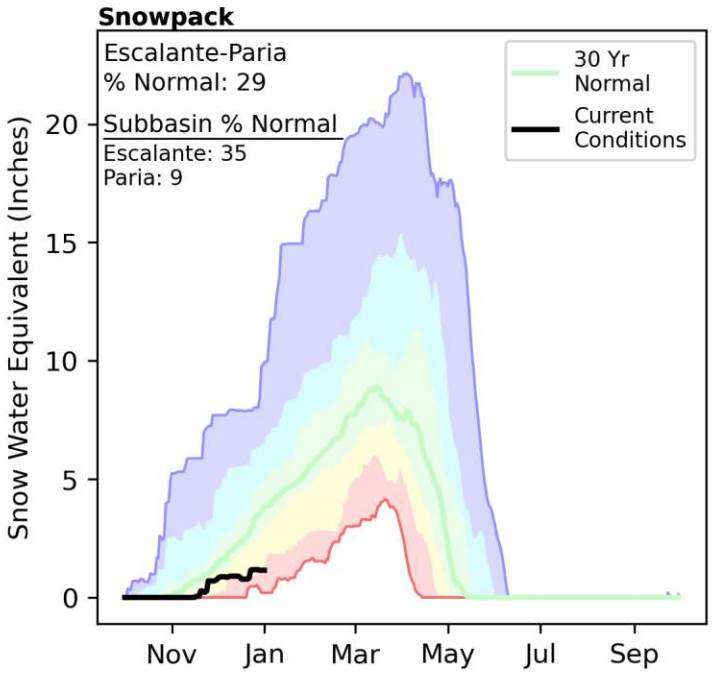

Forecast Volume,
50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
CASTLE VA
SINBAD COUNTRY
CAPITOL REEF
Dirty Devil
71
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 3 6 12 18 24 30 Miles
Created 1-08-2024

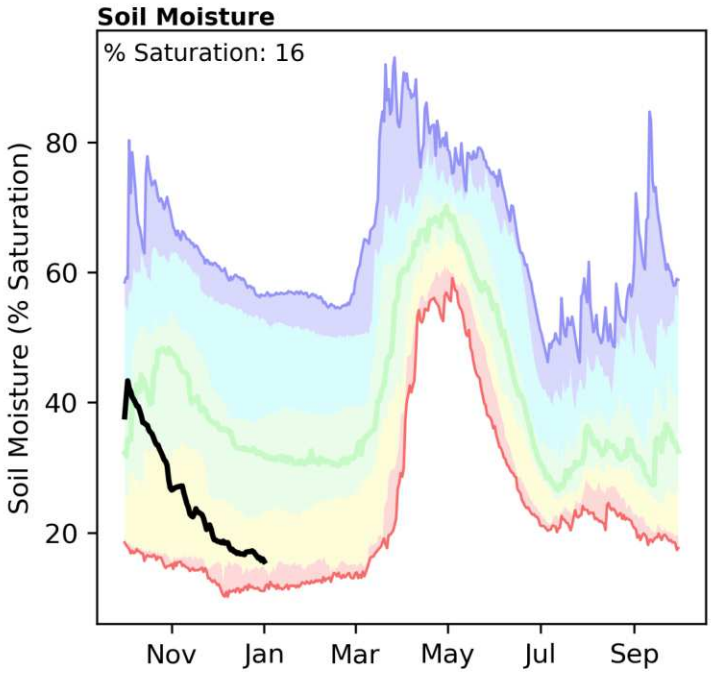
Dirty Devil

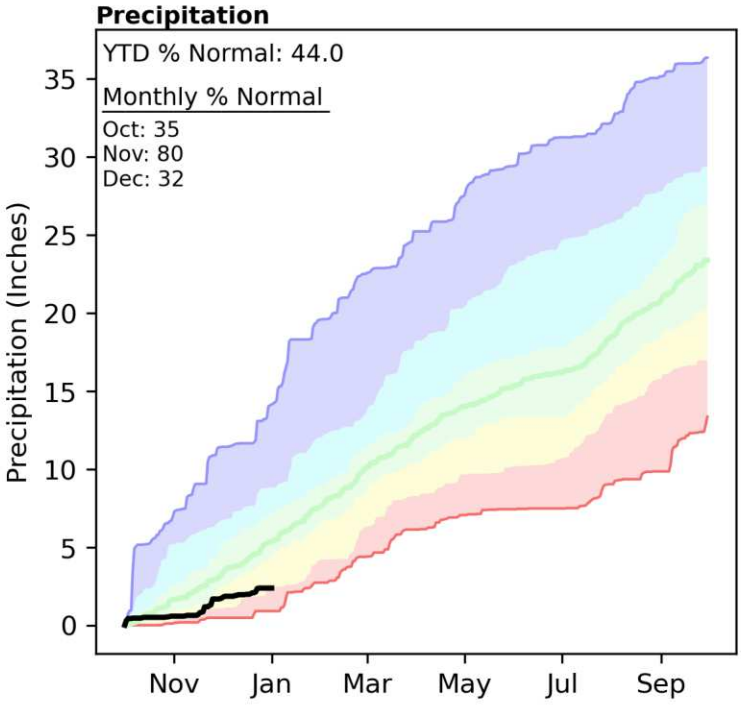

DIRTY DEVIL
Water Supply Forecasts
January 1, 2024
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
<------- Drier -------- Future Conditions -------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Seven Mile Ck nr Fish Lake
Apr-Jul
49 obs.
2.5
3.8
4.8
6
7.9
Muddy Ck nr Emery
Apr-Jul
77 obs.
5.1
8.3
11
14
19
30%
40%
50%
60%
70%
80%
90%
100%
110%
120%
130%
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 | January 1, 2024

Snowpack in the Escalante and Paria River Basins is well below normal at 29% of median, compared to 150% at this time last year. Precipitation in December was well below normal at 32%, which brings the seasonal accumulation (October-December) to 44% of median. Soil moisture is at 16% saturation compared to 38% saturation last year. The forecast streamflow volume (50% exceedence, April-July) for Pine Creek is 80% of normal.

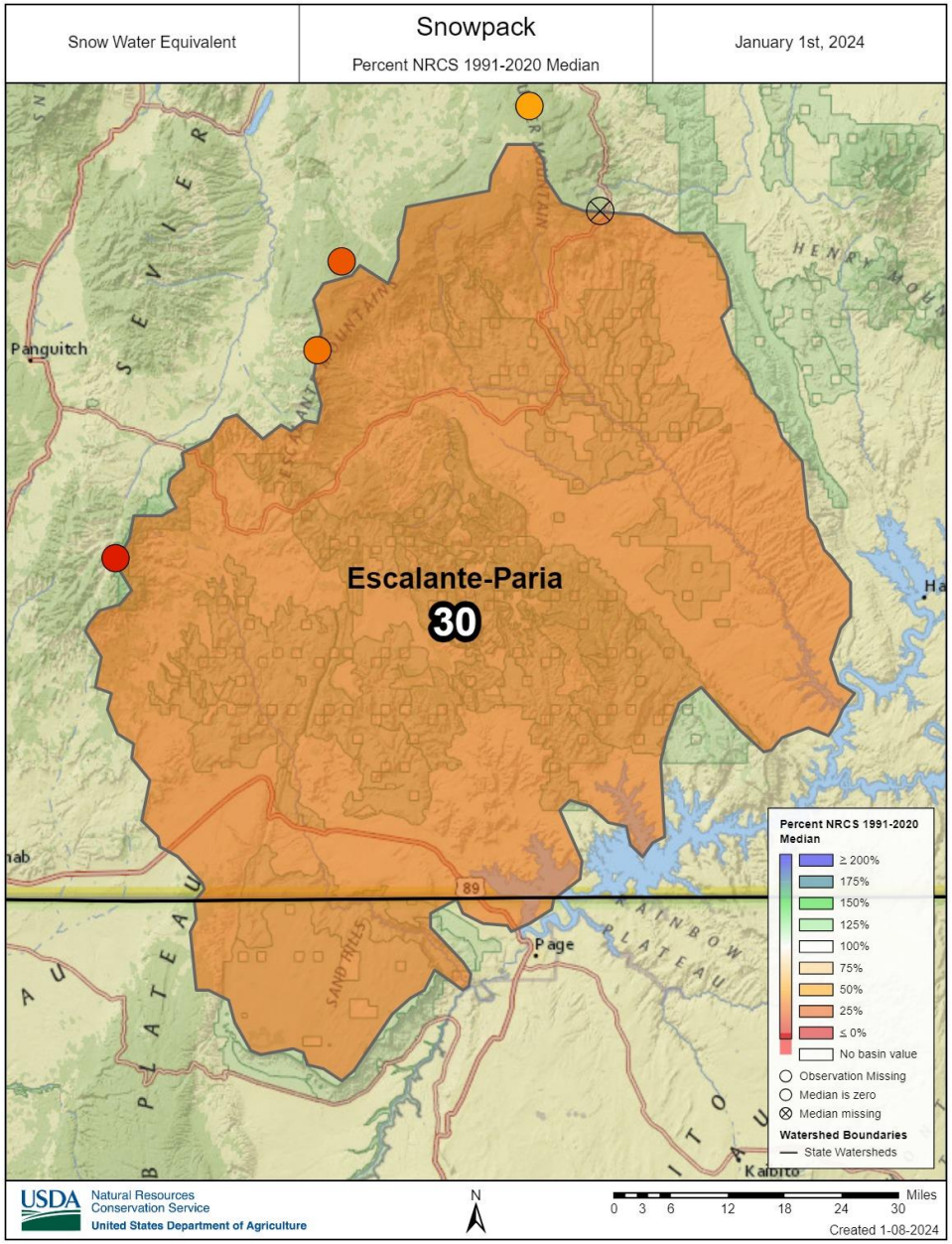


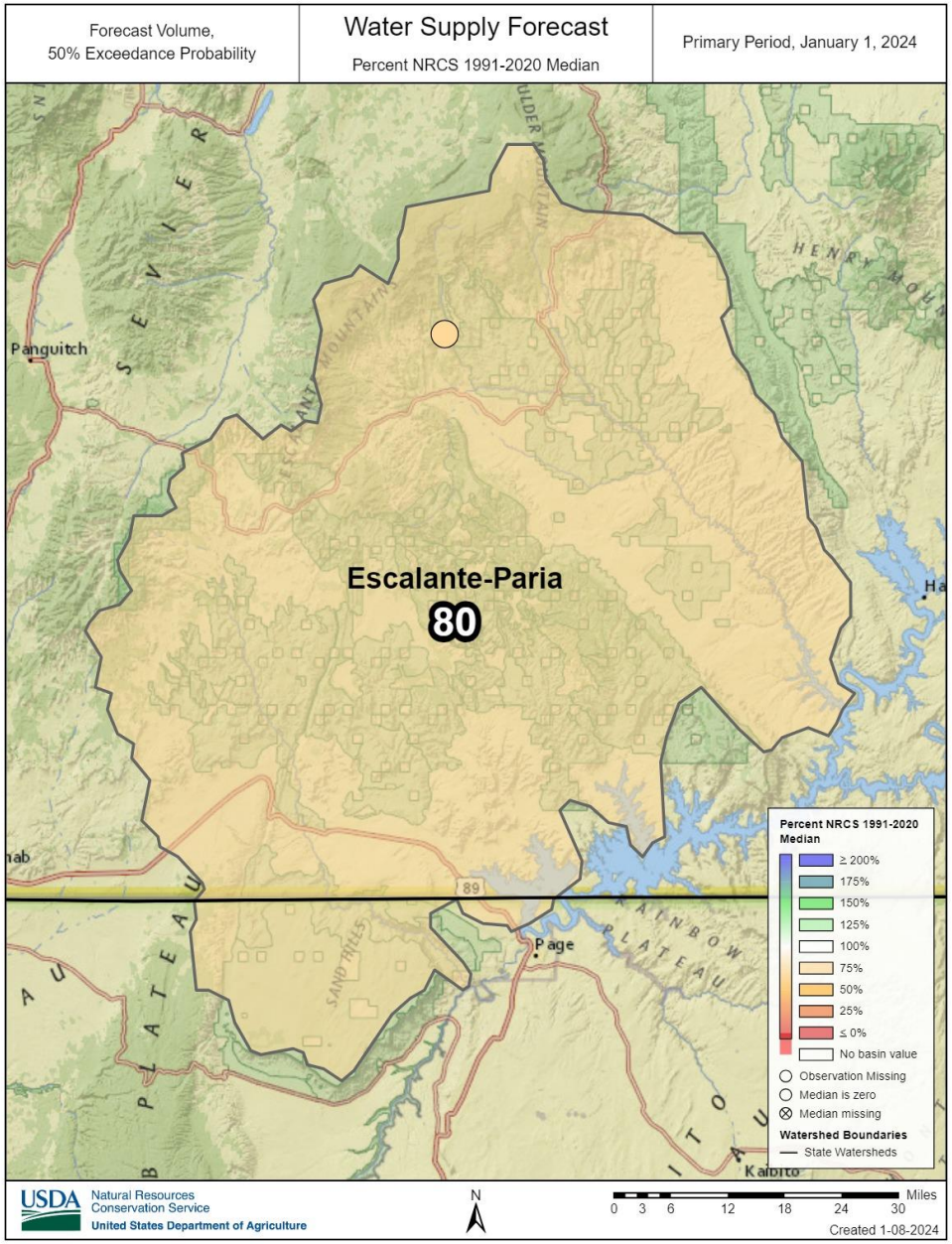




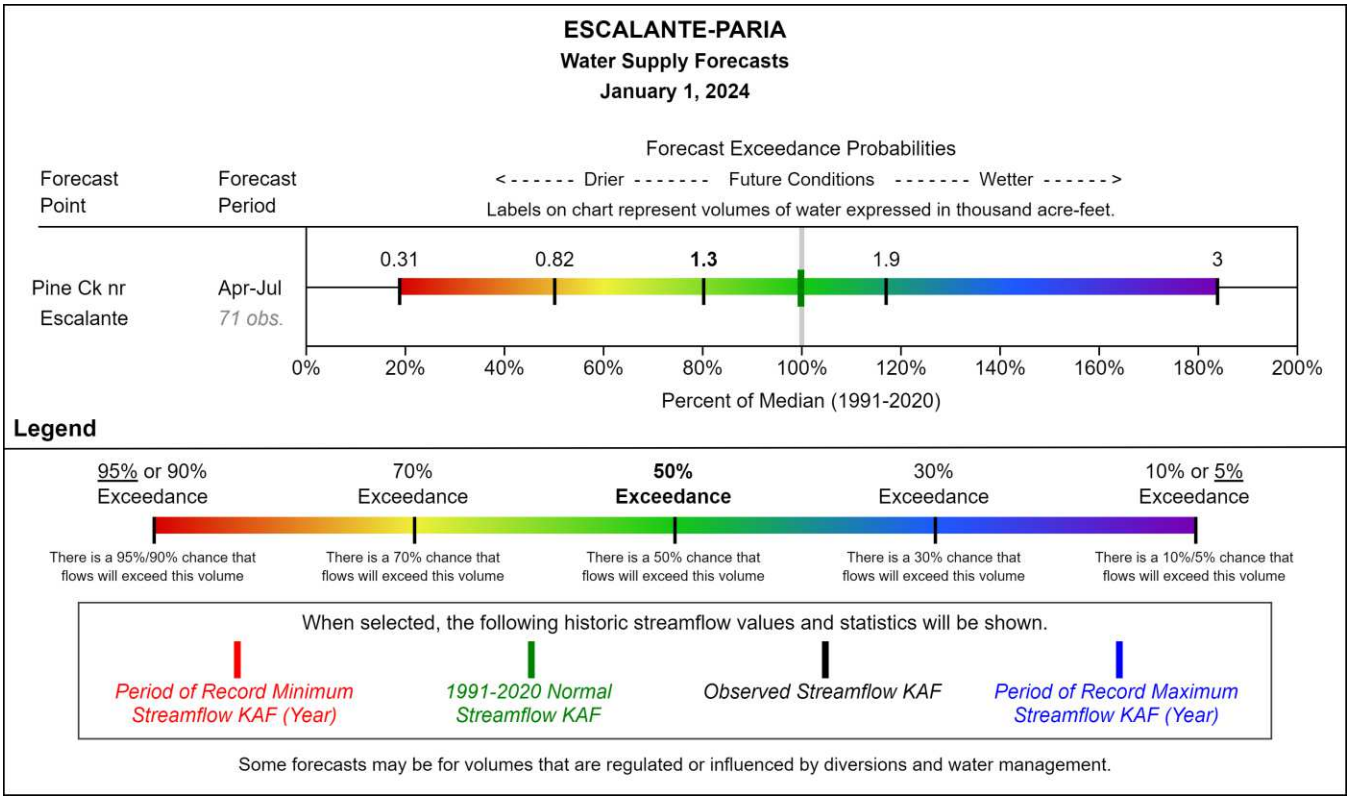
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Escalante-Paria



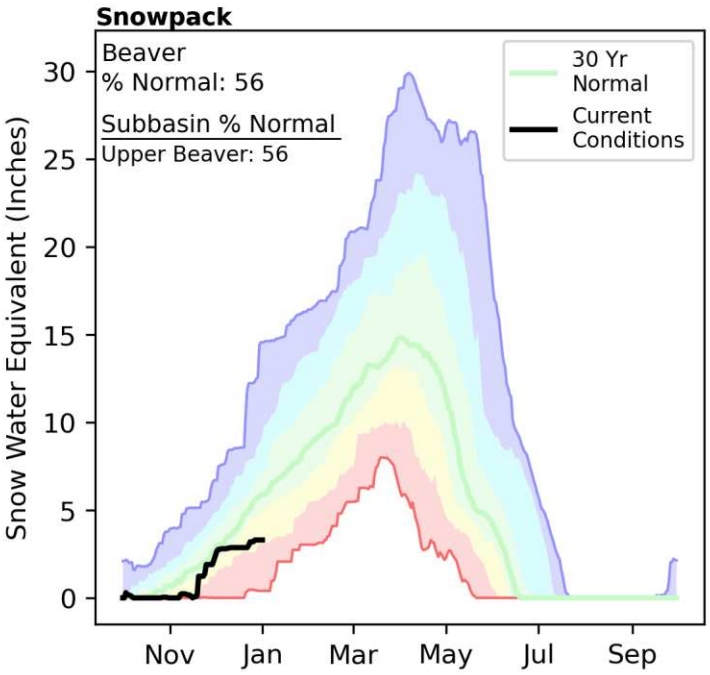


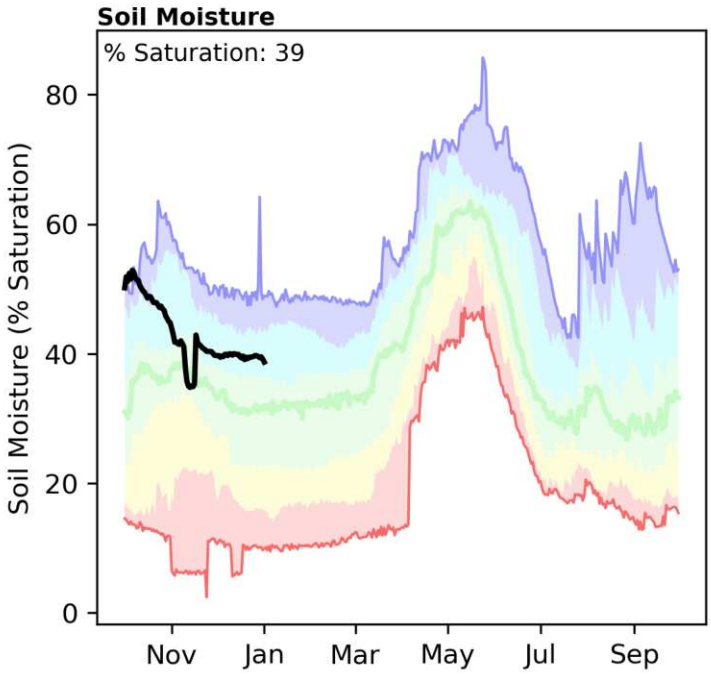
Escalante-Paria

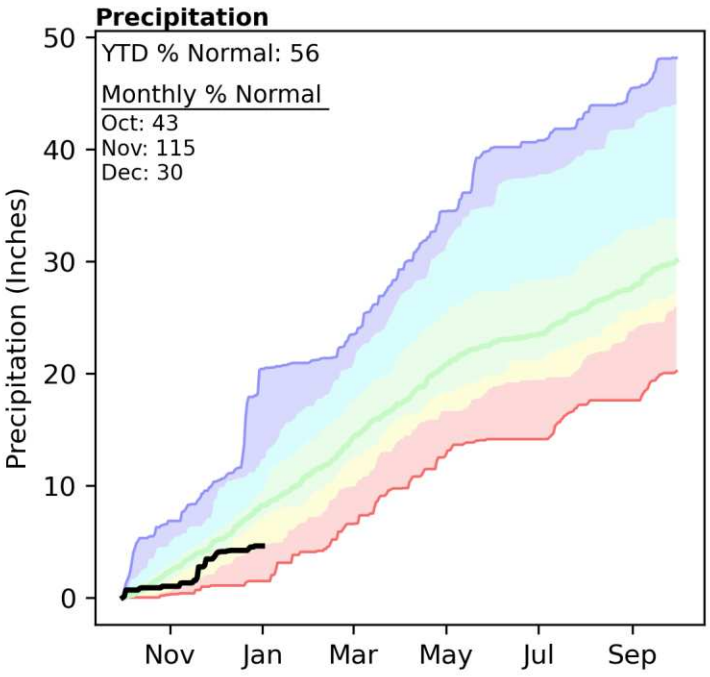


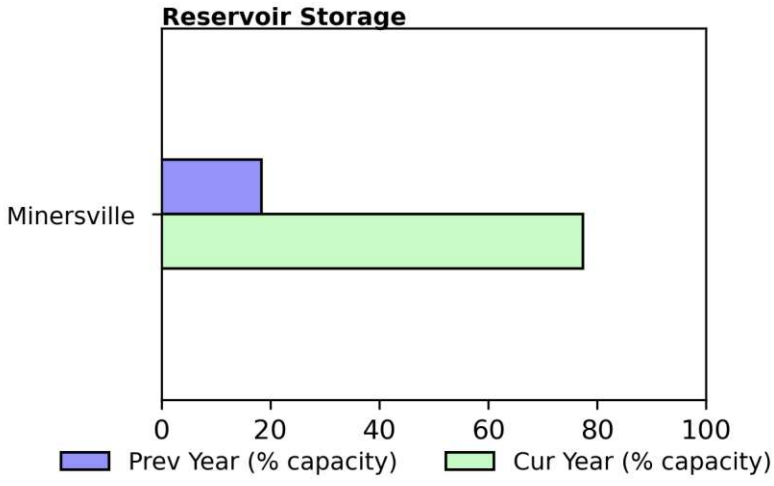
Beaver | January 1, 2024

Snowpack in the Beaver River Basin is well below normal at 56% of median, compared to 158% at this time last year. Precipitation in December was well below normal at 30%, which brings the seasonal accumulation (October-December) to 56% of median. Soil moisture is at 39% saturation compared to 46% saturation last year. Reservoir storage is 77% of capacity, compared to 18% last year. The forecast streamflow volume (50% exceedence, April-July) for the Beaver River is 88% of normal. The Surface Water Supply Index percentile is 49% for the Beaver River.



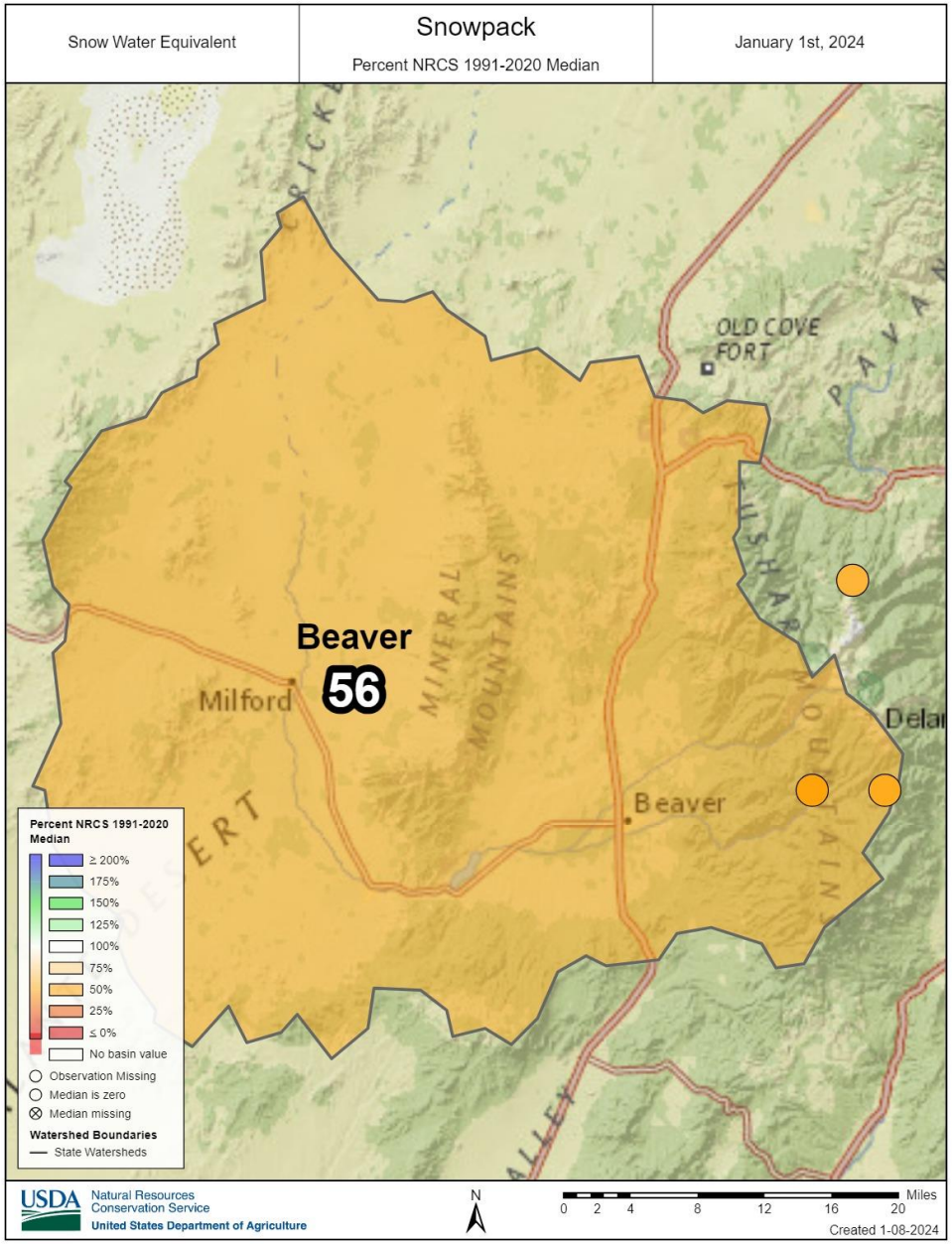


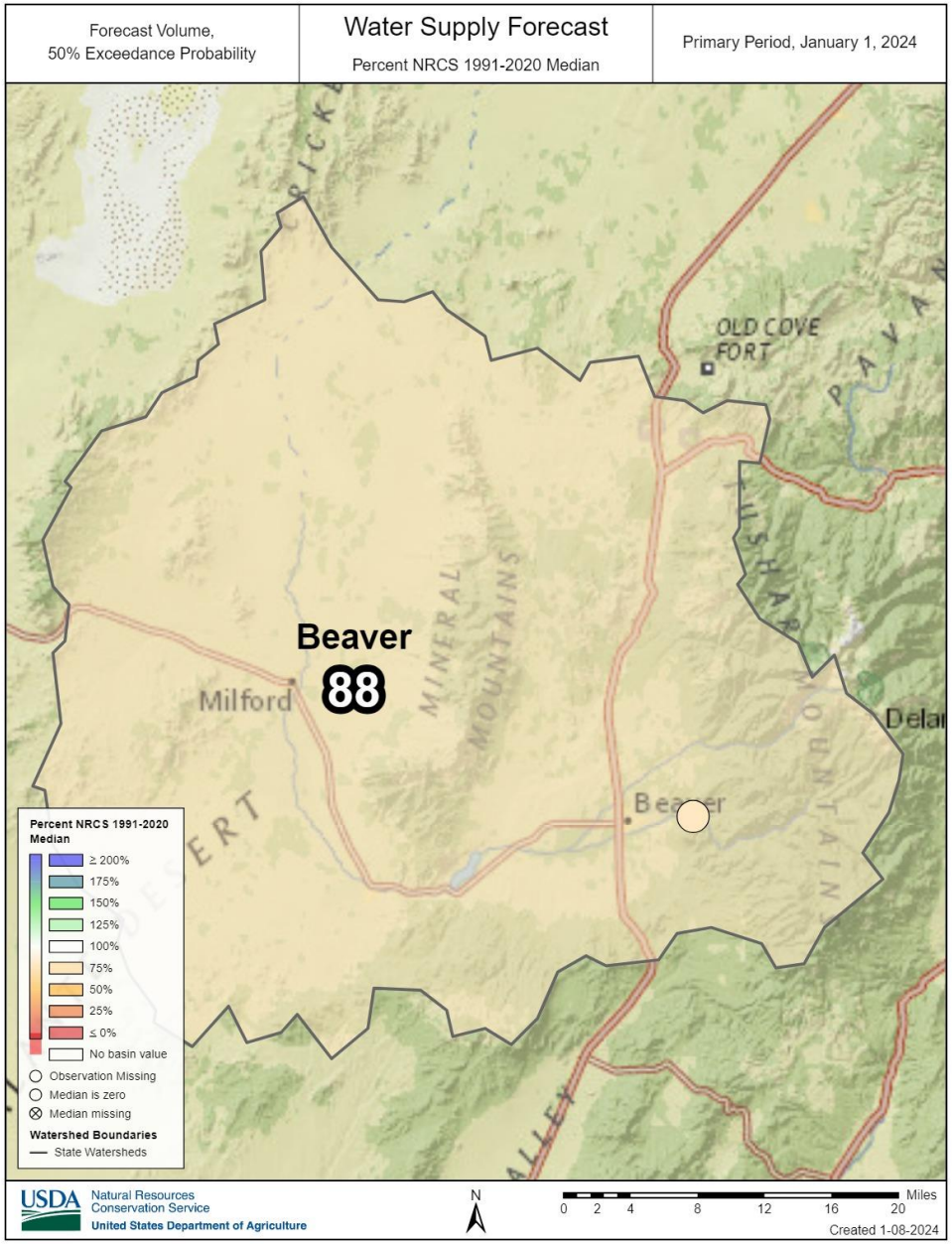




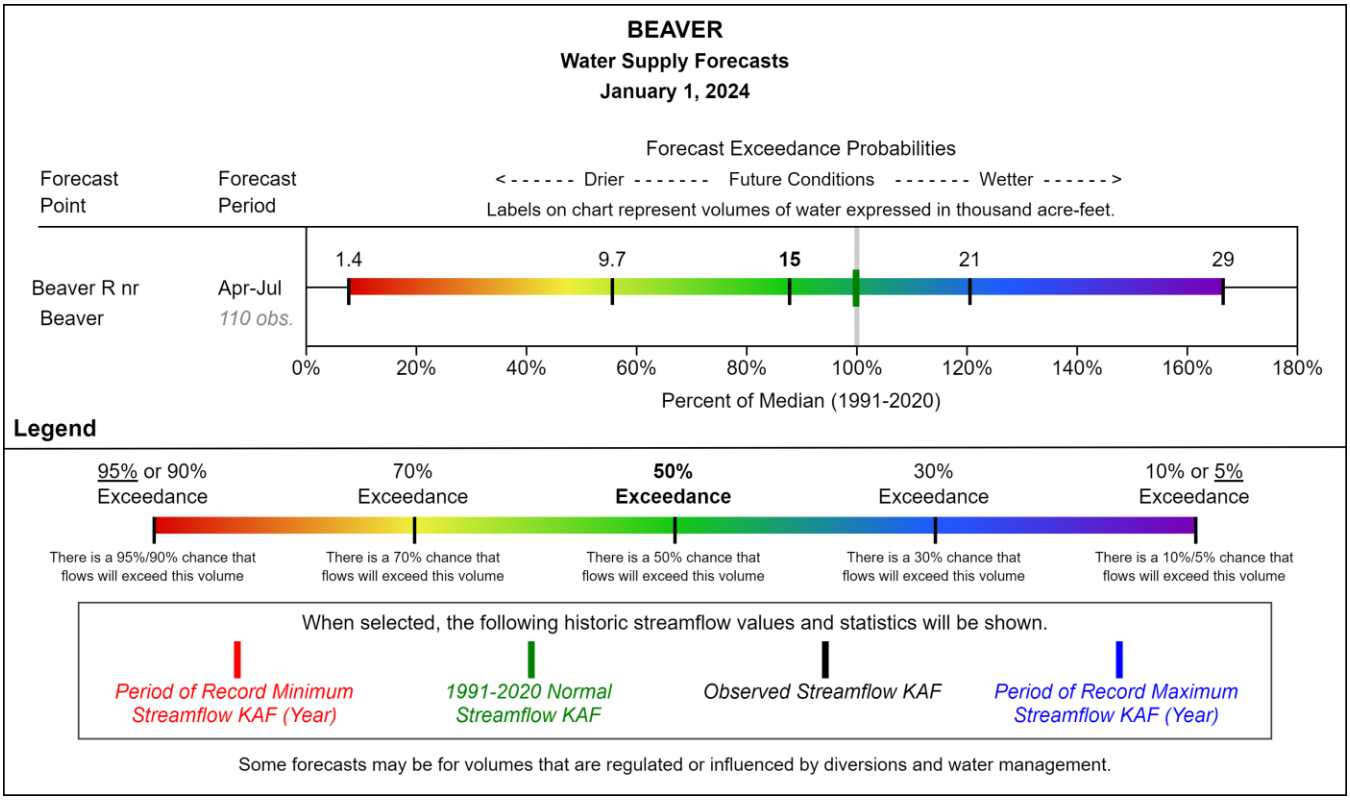
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Beaver


Snow Water Equivalent
Snowpack
Percent NRCS 1991-2020 Median
January 1st, 2024
OLD COVE FORT
Beaver
56
Milford
Beaver
MINERAL MOUNTAINS
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 1-08-2024

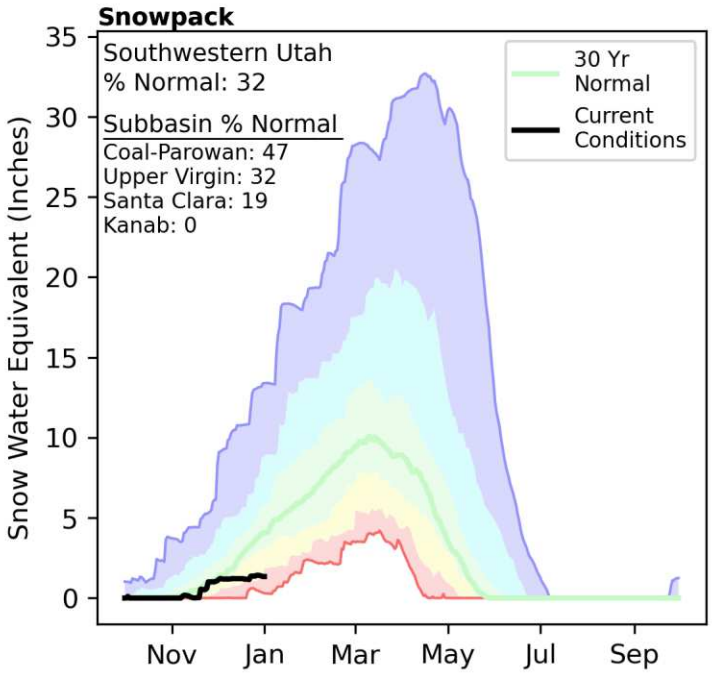

Forecast Volume,
50% Exceedance Probability
Water Supply Forecast
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
OLD COVE FORT
Beaver
88
Milford
MINERAL MOUNTAINS
Percent NRCS 1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 2 4 8 12 16 20 Miles
Created 1-08-2024

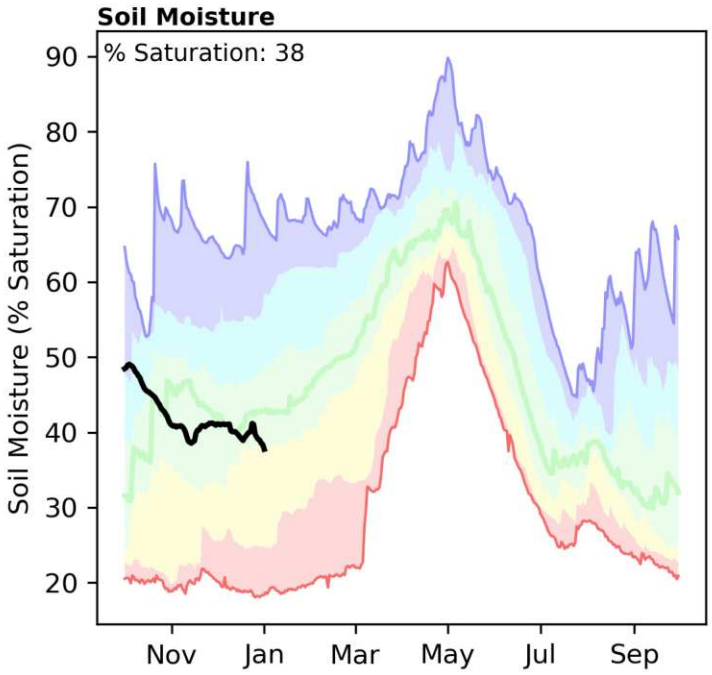
Beaver

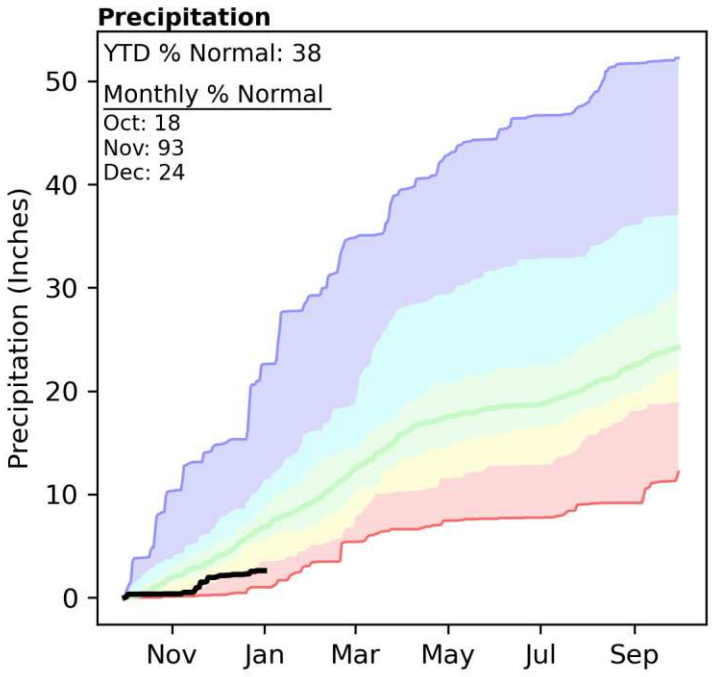

BEAVER
Water Supply Forecasts
January 1, 2024
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
< ------- Drier ------- Future Conditions ------- Wetter ------- >
Labels on chart represent volumes of water expressed in thousand acre-feet.
Beaver R nr Beaver
Apr-Jul
110 obs.
1.4
9.7
15
21
29
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.

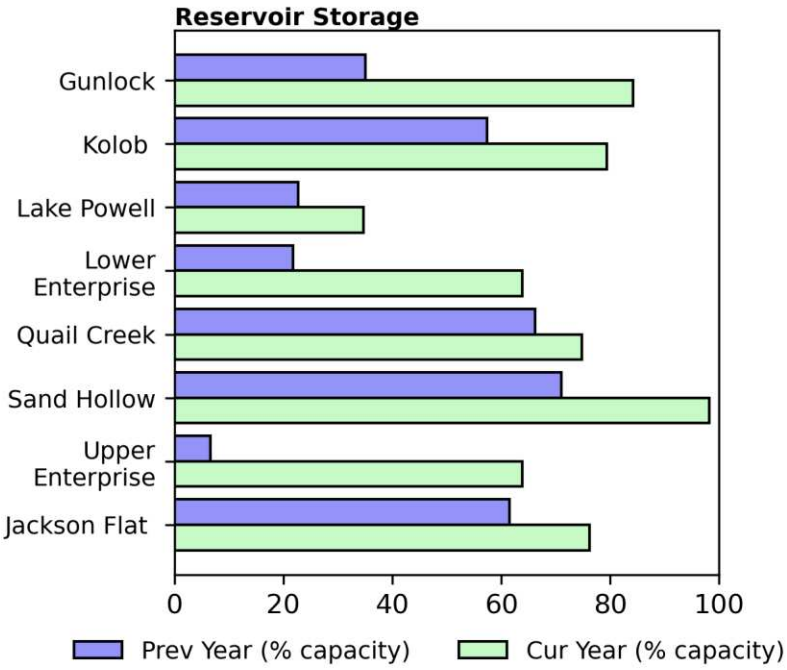
Southwestern Utah | January 1, 2024

Snowpack in Southwestern Utah is well below normal at 32% of median, compared to 139% at this time last year. Precipitation in December was well below normal at 24%, which brings the seasonal accumulation (October-December) to 38% of median. Soil moisture is at 38% saturation compared to 57% saturation last year. Reservoir storage is 34% of capacity, compared to 22% last year. Forecast streamflow volumes (50% exceedence, April-July) range from 48% to 85% of normal. The Surface Water Supply Index percentile is 39% for the Virgin River.



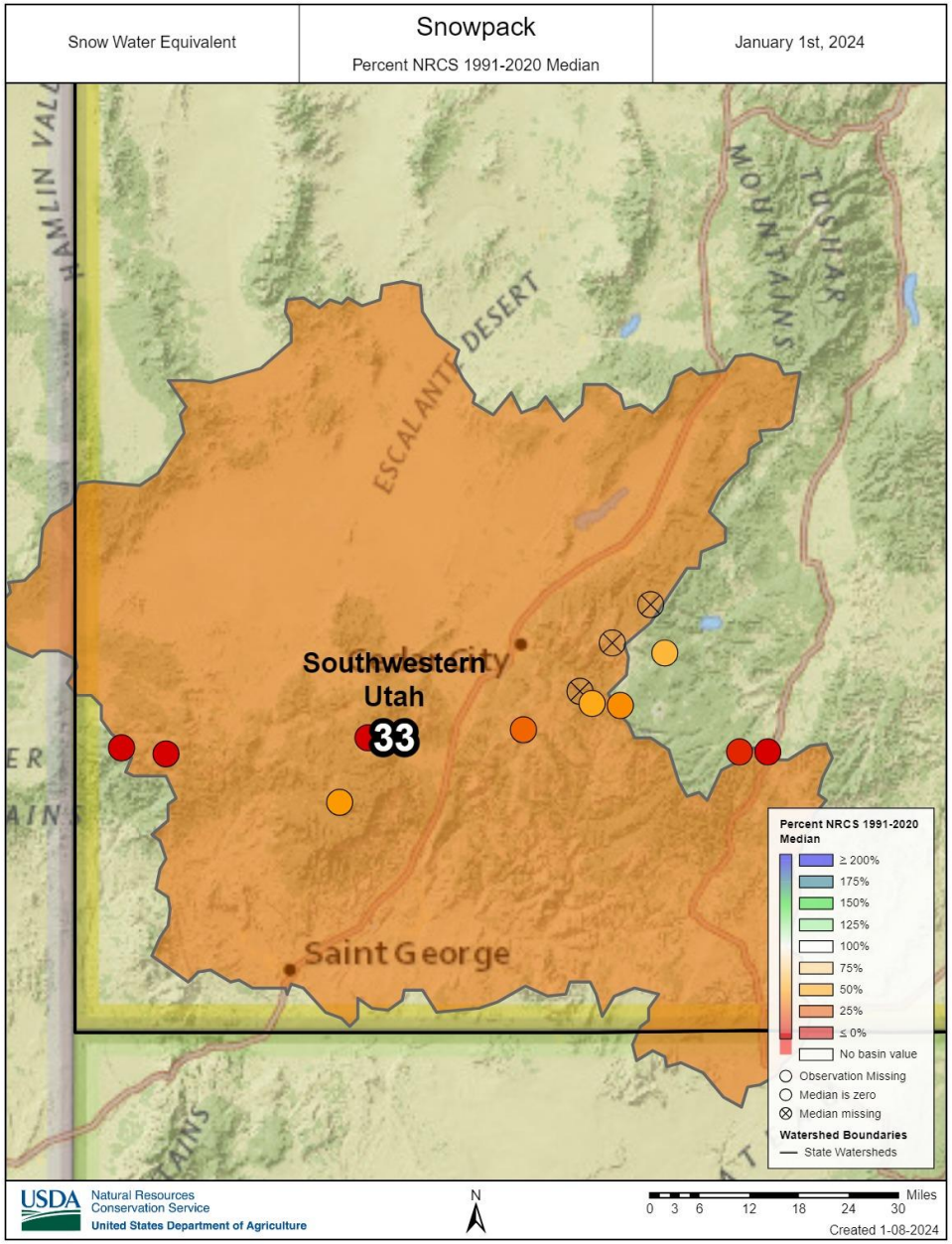


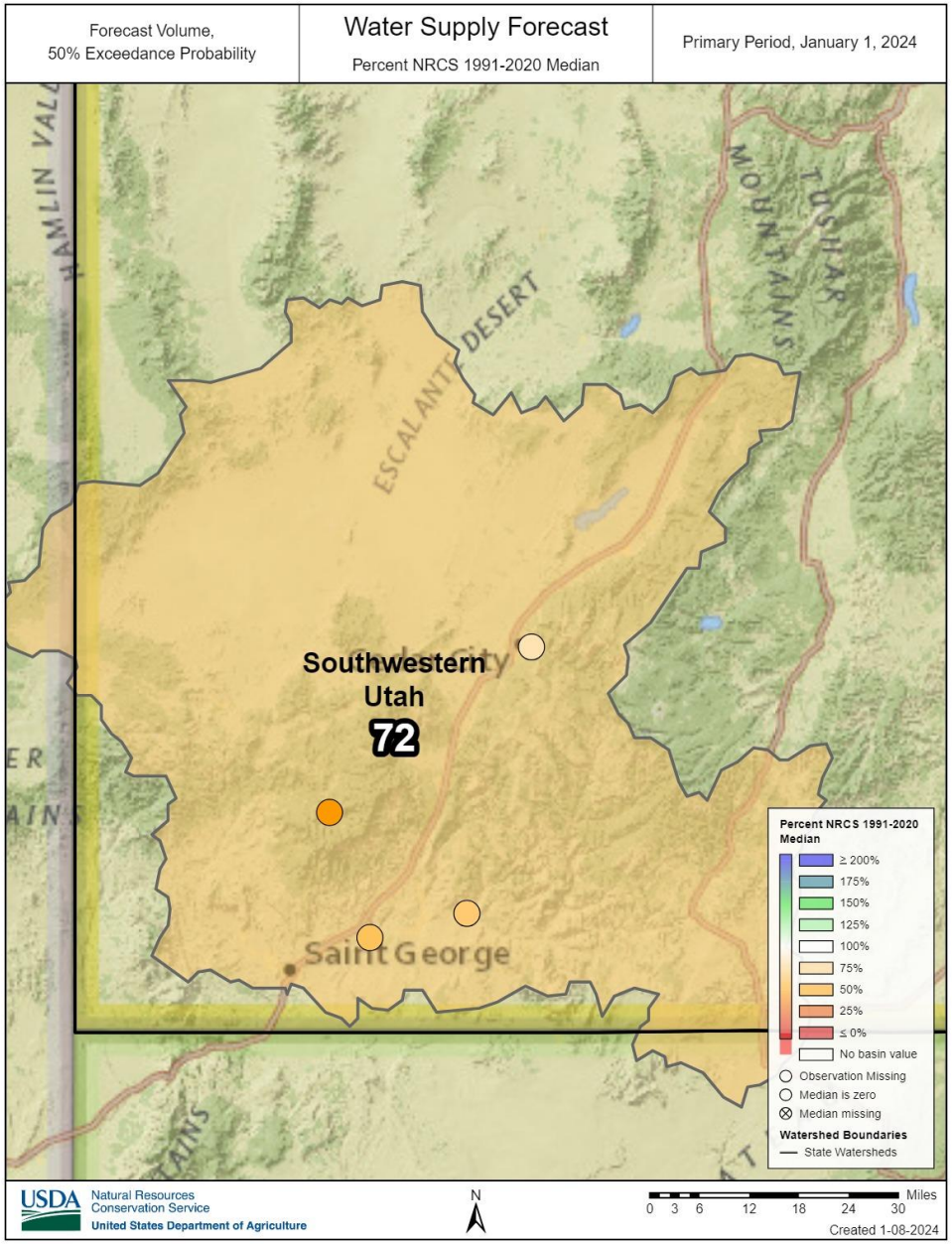




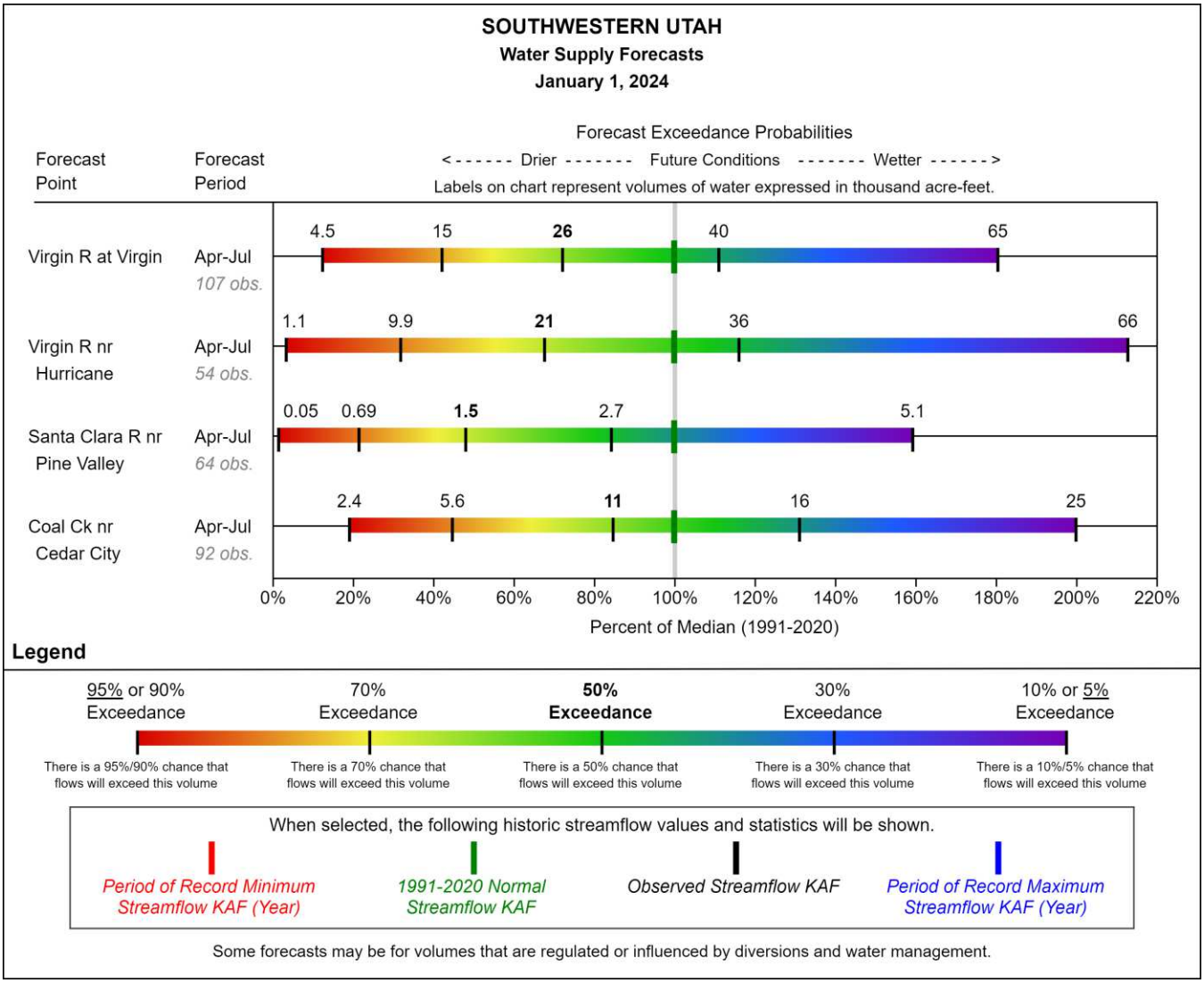
Statistical shading breaks at 10th, 30th, 50th, 70th, and 90th percentiles.
For more information visit: 30 year normal calculation description

Southwestern Utah





Southwestern 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.

January 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)	4278	5469	46	78
Utah (Statewide) Incl. Flaming G. & Lk. Powell	15896	33540	31	47
Bear	902	1389	29	64
Weber-Ogden	447	547	44	81
Northeastern Uintas	3248	3852	66	84
Tooele Valley	2	4	33	54
Duchesne	1215	1379	71	88
Provo	1200	1334	48	89
San Pitch	6	20	3	29
Price	126	158	36	79
Upper Sevier	183	382	16	47
Southeast UT	2	2	72	89
Beaver	18	23	18	77
Southwest Utah	103	122	59	84

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	831	1302	28	63
Big Sand Wash Reservoir	24	25	64	95
Causey Reservoir	3	7	51	45
Cleveland Lake	3	5	59	70
Currant Creek Reservoir	14	15	95	95
Deer Creek Reservoir	140	149	49	93
East Canyon Reservoir	43	49	56	87
Echo Reservoir	63	73	62	86
Flaming Gorge Reservoir	3177	3749	67	84
Grantsville Reservoir	1	3	33	49
Gunlock	8	10	35	84
Gunnison Reservoir	6	20	3	29
Huntington North Reservoir	3	4	79	84
Hyrum Reservoir	9	15	63	64
Jackson Flat Reservoir	3	4	61	76
Joes Valley Reservoir	49	61	48	80
Jordanelle Reservoir	255	314	59	81
Ken's Lake	2	2	72	89
Kolob Reservoir	4	5	57	79
Lake Powell	8440	24322	22	34
Lost Creek Reservoir	17	22	40	77
Lower Enterprise	1	2	21	63
Meeks Cabin Reservoir	15	32	23	48
Miller Flat Reservoir	3	5	23	61
Millsite	9	16	46	55
Minersville Reservoir	18	23	18	77
Moon Lake Reservoir	28	35	64	80
Otter Creek Reservoir	43	52	24	83
Panguitch Lake	19	22	35	87
Pineview Reservoir	85	110	36	78
Piute Reservoir	56	71	28	79
Porcupine Reservoir	11	11	58	101
Quail Creek	29	40	66	74
Red Fleet Reservoir	21	25	35	82
Rockport Reservoir	45	60	65	75
Sand Hollow Reservoir	49	50	71	98
Scofield Reservoir	56	65	19	86
Settlement Canyon Reservoir	0	1	32	69
Sevier Bridge Reservoir	63	236	8	26
Smith and Morehouse	4	8	51	54
Starvation Reservoir	144	164	73	88
Stateline Reservoir	7	12	46	64
Steinaker Reservoir	26	33	40	78
Strawberry Reservoir	994	1105	72	89
Upper Enterprise	6	10	6	63
Upper Stillwater Reservoir	8	32	27	25
Utah Lake	804	870	44	92
Willard Bay	183	215	33	85
Woodruff Creek	1	4	50	49
Woodruff Narrows Reservoir	48	57	23	84

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

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

Raft	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Dunn Ck nr Park Valley								
	APR-JUL	1.11	1.78	2.4	100%	3.2	4.5	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

Bear	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Blacksmith Fk nr Hyrum								
	APR-JUL	10.9	25	34	117%	43	57	29
Big Ck nr Randolph								
	APR-JUL	0.5	2.3	3.3	103%	6.1	10.9	3.2
Smiths Fk nr Border								
	APR-JUL	35	57	72	84%	87	109	86
	APR-SEP	44	68	85	85%	102	126	100
Bear R ab Resv nr Woodruff								
	APR-JUL	26	47	75	82%	94	144	92
	APR-SEP	23	49	78	79%	104	151	99
Bear R bl Stewart Dam								
	FEB-JUL	14.9	58	104	78%	163	275	133
	FEB-SEP	15.7	63	113	78%	178	300	145
	APR-JUL	6.6	43	85	74%	142	250	115
	APR-SEP	7.4	47	94	77%	157	280	122
Bear R nr UT-WY State Line								
	APR-JUL	45	71	88	87%	105	131	101
	APR-SEP	50	78	97	85%	116	144	114
Logan R nr Logan								
	APR-JUL	49	77	97	107%	117	145	91
Little Bear at Paradise								
	APR-JUL	9.9	18.6	27	96%	39	63	28

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

Weber-Ogden	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Weber R at Gateway								
	APR-JUL	40	144	215	105%	285	390	205
Weber R nr Coalville								
	APR-JUL	18.4	57	83	89%	109	148	93
Chalk Ck at Coalville								
	APR-JUL	11.6	18.4	24	92%	34	53	26
East Canyon Ck nr Jeremy Ranch								
	APR-JUL	4.5	7.7	8.6	91%	12.3	20	9.5
SF Ogden R nr Huntsville								
	APR-JUL	13.4	32	45	110%	58	77	41
Weber R nr Oakley								

	APR-JUL	41	67	85	88%	103	129	97
Rockport Reservoir Inflow								
	APR-JUL	18.9	56	81	93%	106	143	87
East Canyon Ck nr Morgan								
	APR-JUL	6.3	11.6	17.2	96%	21	35	18
Pineview Reservoir Inflow								
	APR-JUL	27	48	80	101%	102	175	79
Lost Ck Reservoir Inflow								
	APR-JUL	0.76	6.4	10.3	108%	14.2	19.8	9.5
Echo Reservoir Inflow								
	APR-JUL	9.1	64	102	85%	140	195	120

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)
Blacks Fk nr Robertson								
	APR-JUL	41	62	77	85%	92	113	91
Ashley Ck nr Vernal								
	APR-JUL	10.7	23	32	74%	41	53	43
Flaming Gorge Reservoir Inflow [2]								
	APR-JUL	315	520	695	70%	890	1230	990
Stateline Reservoir Inflow[2]								
	APR-JUL	13.4	18.3	22	85%	26	33	26
Big Brush Ck ab Red Fleet Reservoir								
	APR-JUL	5.7	11.2	15	76%	18.8	24	19.7

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						
Tooele Valley-Vernon Creek	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
S Willow Ck nr Grantsville								
	APR-JUL	0.47	1.38	2	80%	2.6	3.5	2.5
Vernon Ck nr Vernon								
	APR-JUL	0.14	0.36	0.58	78%	0.85	1.34	0.74

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)
Yellowstone R nr Altonah								
	APR-JUL	22	32	40	71%	49	64	56
WF Duchesne R at VAT Diversion[2]								
	APR-JUL	5.3	8.5	11	76%	13.9	18.7	14.5
Currant Ck Reservoir Inflow[2]								
	APR-JUL	2.3	6	9.5	80%	13.8	22	11.9

Duchesne R at Myton [2]								
	APR-JUL	46	109	168	78%	240	365	215
Upper Stillwater Reservoir Inflow[2]								
	APR-JUL	24	39	50	74%	63	85	68
Strawberry R nr Duchesne [2]								
	APR-JUL	7.6	30	54	102%	85	142	53
Duchesne R nr Tabiona [2]								
	APR-JUL	36	55	70	80%	87	115	87
Duchesne R nr Randlett [2]								
	APR-JUL	42	112	180	71%	265	415	255
Strawberry R nr Soldier Springs [2]								
	APR-JUL	5.2	18	31	86%	48	78	36
Uinta R bl Powerplant Diversion nr Neola								
	APR-JUL	18.6	33	45	70%	59	83	64
Rock Ck nr Mountain Home [2]								
	APR-JUL	31	46	57	73%	70	91	78
Lake Fk R bl Moon Lk nr Mountain Home[2]								
	APR-JUL	21	31	38	67%	46	59	57
Whiterocks R nr Whiterocks								
	APR-JUL	17.1	27	35	81%	44	59	43
Duchesne R ab Knight Diversion [2]								
	APR-JUL	71	105	132	81%	162	210	162

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)
W Canyon Ck nr Cedar Fort								
	APR-JUL	0.17	0.37	0.77	81%	1.36	2.9	0.95
Provo R bl Deer Ck Dam								
	APR-JUL	46	77	98	87%	119	150	113
Emigration Ck nr SLC								
	APR-JUL	0.33	1.39	2.3	100%	3.3	5.2	2.3
Utah Lake Inflow								
	APR-JUL	7.1	71	162	89%	255	385	182
Parleys Ck nr SLC								
	APR-JUL	3.4	6.7	9.6	110%	13	19	8.7
Provo R at Hailstone								
	APR-JUL	46	66	81	98%	98	125	83
American Fk ab Upper Powerplant								
	APR-JUL	2.9	13.1	20	104%	27	37	19.2
Provo R at Woodland								
	APR-JUL	46	64	78	92%	93	118	85
Little Cottonwood Ck nr SLC								
	APR-JUL	22	28	32	103%	37	44	31
Dell Fk nr SLC								
City Ck nr SLC								
	APR-JUL	2.5	3.9	5	94%	6.3	8.4	5.3
Salt Ck at Nephi								
	APR-JUL	1.3	2.8	4.7	100%	6.9	11.7	4.7
Spanish Fk at Castilla								
	APR-JUL	9.3	17.6	30	100%	42	80	30
Big Cottonwood Ck nr SLC								
	APR-JUL	17.5	23	28	97%	33	41	29
Mill Ck nr SLC								

	APR-JUL	2	3.3	4.4	102%	5.6	7.6	4.3

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	4.8	14.5	24	80%	36	58	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	6.2	8.7	10.4	80%	12.1	14.6	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)
Joes Valley Reservoir Inflow[2]								
	APR-JUL	21	31	38	86%	46	59	44
Fish Ck ab Reservoir nr Scofield								
	APR-JUL	7.6	13.8	19	96%	25	35	19.8
Huntington Ck nr Huntington [2]								
	APR-JUL	9.3	16.2	22	61%	29	40	36
White R bl Tabbyune Creek								
	APR-JUL	1.08	4.1	7.3	101%	11.4	19	7.2
Ferron Ck (Upper Station) nr Ferron								
	APR-JUL	12.1	17.6	22	69%	27	35	32
Electric Lake Inflow [2]								
	APR-JUL	3.1	5.7	8	96%	10.6	15.2	8.3
Price R nr Scofield Reservoir[2]								
	APR-JUL	9.1	17.6	25	96%	34	49	26

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								
	APR-JUL	0.74	2.6	3.8	68%	5	6.9	5.6

Sevier R at Hatch								
	APR-JUL	7.8	13	24	71%	25	66	34
EF Sevier R nr Kingston								
	APR-JUL	1.04	4.8	8.8	66%	14.1	24	13.4
Mammoth Ck nr Hatch								
	APR-JUL	5.1	9	11.8	60%	17.9	32	19.7
Sevier R nr Gunnison								
	APR-JUL	4.8	14.5	24	80%	36	58	30
Sevier R nr Kingston								
	APR-JUL	0	3.5	10	68%	19.8	40	14.7
Clear Ck ab Diversions nr Sevier								
	APR-JUL	3.2	6.5	11.3	83%	12.2	18.5	13.6

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)
Mill Ck at Sheley Tunnel nr Moab								
	APR-JUL	1.03	2.2	3.2	97%	4.4	6.6	3.3
Colorado R nr Cisco [2]								
	APR-JUL	1440	2230	2860	76%	3570	4770	3750
Green R at Green River, UT [2]								
	APR-JUL	1030	1620	2100	80%	2640	3550	2610
South Ck ab Resv nr Monticello								
	APR-JUL	0.02	0.09	0.2	49%	0.41	1.35	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	5.1	8.3	11	67%	14	19.2	16.3
Seven Mile Ck nr Fish Lake								
	APR-JUL	2.5	3.8	4.8	79%	6	7.9	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	1.37	9.7	15.3	88%	21	29	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

Southwestern Utah	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Virgin R nr Hurricane								
	APR-JUL	1.07	9.9	21	68%	36	66	31
Virgin R at Virgin								
	APR-JUL	4.5	15.2	26	72%	40	65	36
Santa Clara R nr Pine Valley								
	APR-JUL	0.05	0.69	1.54	48%	2.7	5.1	3.2
Coal Ck nr Cedar City								
	APR-JUL	2.4	5.6	10.6	85%	16.4	25	12.5

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

Escalante-Paria	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Pine Ck nr Escalante								
	APR-JUL	0.31	0.82	1.31	80%	1.91	3	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

Great Salt Lake	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Blacksmith Fk nr Hyrum								
	APR-JUL	10.9	25	34	117%	43	57	29
Parleys Ck nr SLC								
	APR-JUL	3.4	6.7	9.6	110%	13	19	8.7
Lehman Ck nr Baker								
	APR-JUL	0.9	1.15	1.52	76%	1.94	2.9	1.99
Great Salt Lake Inflow								
	APR-JUL	130	285	420	93%	590	905	450
Salt Ck at Nephi								
	APR-JUL	1.3	2.8	4.7	100%	6.9	11.7	4.7
Little Bear at Paradise								
	APR-JUL	9.9	18.6	27	96%	39	63	28
SF Ogden R nr Huntsville								
	APR-JUL	13.4	32	45	110%	58	77	41
Emigration Ck nr SLC								
	APR-JUL	0.33	1.39	2.3	100%	3.3	5.2	2.3
Utah Lake Inflow								
	APR-JUL	7.1	71	162	89%	255	385	182
Smiths Fk nr Border								
	APR-JUL	35	57	72	84%	87	109	86
	APR-SEP	44	68	85	85%	102	126	100
Little Cottonwood Ck nr SLC								
	APR-JUL	22	28	32	103%	37	44	31
Rockport Reservoir Inflow								
	APR-JUL	18.9	56	81	93%	106	143	87
East Canyon Ck nr Morgan								
	APR-JUL	6.3	11.6	17.2	96%	21	35	18

Spanish Fk at Castilla								
	APR-JUL	9.3	17.6	30	100%	42	80	30
Mill Ck nr SLC								
	APR-JUL	2	3.3	4.4	102%	5.6	7.6	4.3
Weber R at Gateway								
	APR-JUL	40	144	215	105%	285	390	205
East Canyon Ck nr Jeremy Ranch								
	APR-JUL	4.5	7.7	8.6	91%	12.3	20	9.5
Chalk Ck at Coalville								
	APR-JUL	11.6	18.4	24	92%	34	53	26
Provo R bl Deer Ck Dam								
	APR-JUL	46	77	98	87%	119	150	113
Provo R at Hailstone								
	APR-JUL	46	66	81	98%	98	125	83
American Fk ab Upper Powerplant								
	APR-JUL	2.9	13.1	20	104%	27	37	19.2
Dell Fk nr SLC								
Bear R ab Resv nr Woodruff								
	APR-JUL	26	47	75	82%	94	144	92
	APR-SEP	23	49	78	79%	104	151	99
Bear R bl Stewart Dam								
	FEB-JUL	14.9	58	104	78%	163	275	133
	FEB-SEP	15.7	63	113	78%	178	300	145
	APR-JUL	6.6	43	85	74%	142	250	115
	APR-SEP	7.4	47	94	77%	157	280	122
City Ck nr SLC								
	APR-JUL	2.5	3.9	5	94%	6.3	8.4	5.3
Weber R nr Oakley								
	APR-JUL	41	67	85	88%	103	129	97
Pineview Reservoir Inflow								
	APR-JUL	27	48	80	101%	102	175	79
Logan R nr Logan								
	APR-JUL	49	77	97	107%	117	145	91
Echo Reservoir Inflow								
	APR-JUL	9.1	64	102	85%	140	195	120
W Canyon Ck nr Cedar Fort								
	APR-JUL	0.17	0.37	0.77	81%	1.36	2.9	0.95
Vernon Ck nr Vernon								
	APR-JUL	0.14	0.36	0.58	78%	0.85	1.34	0.74
Weber R nr Coalville								
	APR-JUL	18.4	57	83	89%	109	148	93
Dunn Ck nr Park Valley								
	APR-JUL	1.11	1.78	2.4	100%	3.2	4.5	2.4
Big Ck nr Randolph								
	APR-JUL	0.5	2.3	3.3	103%	6.1	10.9	3.2
Provo R at Woodland								
	APR-JUL	46	64	78	92%	93	118	85
S Willow Ck nr Grantsville								
	APR-JUL	0.47	1.38	2	80%	2.6	3.5	2.5
Bear R nr UT-WY State Line								
	APR-JUL	45	71	88	87%	105	131	101
	APR-SEP	50	78	97	85%	116	144	114
Big Cottonwood Ck nr SLC								
	APR-JUL	17.5	23	28	97%	33	41	29
Lost Ck Reservoir Inflow								
	APR-JUL	0.76	6.4	10.3	108%	14.2	19.8	9.5

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

State of Utah	Forecast Period	Forecast Exceedance Probabilities For Risk Assessment Chance that actual volume will exceed forecast 90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Blacks Fk nr Robertson								
	APR-JUL	41	62	77	85%	92	113	91
Duchesne R nr Tabiona [2]								
	APR-JUL	36	55	70	80%	87	115	87
EF Sevier R nr Kingston								
	APR-JUL	1.04	4.8	8.8	66%	14.1	24	13.4
Strawberry R nr Soldier Springs [2]								
	APR-JUL	5.2	18	31	86%	48	78	36
Price R nr Scofield Reservoir[2]								
	APR-JUL	9.1	17.6	25	96%	34	49	26
Little Cottonwood Ck nr SLC								
	APR-JUL	22	28	32	103%	37	44	31
Huntington Ck nr Huntington [2]								
	APR-JUL	9.3	16.2	22	61%	29	40	36
Rock Ck nr Mountain Home [2]								
	APR-JUL	31	46	57	73%	70	91	78
Fish Ck ab Reservoir nr Scofield								
	APR-JUL	7.6	13.8	19	96%	25	35	19.8
Sevier R at Hatch								
	APR-JUL	7.8	13	24	71%	25	66	34
Dell Fk nr SLC								
Duchesne R nr Randlett [2]								
	APR-JUL	42	112	180	71%	265	415	255
City Ck nr SLC								
	APR-JUL	2.5	3.9	5	94%	6.3	8.4	5.3
Mammoth Ck nr Hatch								
	APR-JUL	5.1	9	11.8	60%	17.9	32	19.7
Electric Lake Inflow [2]								
	APR-JUL	3.1	5.7	8	96%	10.6	15.2	8.3
Seven Mile Ck nr Fish Lake								
	APR-JUL	2.5	3.8	4.8	79%	6	7.9	6.1
White R bl Tabbyune Creek								
	APR-JUL	1.08	4.1	7.3	101%	11.4	19	7.2
Ferron Ck (Upper Station) nr Ferron								
	APR-JUL	12.1	17.6	22	69%	27	35	32
Flaming Gorge Reservoir Inflow [2]								
	APR-JUL	315	520	695	70%	890	1230	990
Joes Valley Reservoir Inflow[2]								
	APR-JUL	21	31	38	86%	46	59	44
Parleys Ck nr SLC								
	APR-JUL	3.4	6.7	9.6	110%	13	19	8.7
Green R at Green River, UT [2]								
	APR-JUL	1030	1620	2100	80%	2640	3550	2610
SF Ogden R nr Huntsville								
	APR-JUL	13.4	32	45	110%	58	77	41
Santa Clara R nr Pine Valley								
	APR-JUL	0.05	0.69	1.54	48%	2.7	5.1	3.2
Emigration Ck nr SLC								
	APR-JUL	0.33	1.39	2.3	100%	3.3	5.2	2.3
East Canyon Ck nr Jeremy Ranch								
	APR-JUL	4.5	7.7	8.6	91%	12.3	20	9.5
Salina Ck nr Emery								
	APR-JUL	0.74	2.6	3.8	68%	5	6.9	5.6
Provo R bl Deer Ck Dam								
	APR-JUL	46	77	98	87%	119	150	113

American Fk ab Upper Powerplant								
	APR-JUL	2.9	13.1	20	104%	27	37	19.2
Bear R ab Resv nr Woodruff								
	APR-JUL	26	47	75	82%	94	144	92
	APR-SEP	23	49	78	79%	104	151	99
Bear R bl Stewart Dam								
	FEB-JUL	14.9	58	104	78%	163	275	133
	FEB-SEP	15.7	63	113	78%	178	300	145
	APR-JUL	6.6	43	85	74%	142	250	115
	APR-SEP	7.4	47	94	77%	157	280	122
Muddy Ck nr Emery								
	APR-JUL	5.1	8.3	11	67%	14	19.2	16.3
Echo Reservoir Inflow								
	APR-JUL	9.1	64	102	85%	140	195	120
Vernon Ck nr Vernon								
	APR-JUL	0.14	0.36	0.58	78%	0.85	1.34	0.74
Dunn Ck nr Park Valley								
	APR-JUL	1.11	1.78	2.4	100%	3.2	4.5	2.4
Provo R at Woodland								
	APR-JUL	46	64	78	92%	93	118	85
S Willow Ck nr Grantsville								
	APR-JUL	0.47	1.38	2	80%	2.6	3.5	2.5
Colorado R nr Cisco [2]								
	APR-JUL	1440	2230	2860	76%	3570	4770	3750
Whiterocks R nr Whiterocks								
	APR-JUL	17.1	27	35	81%	44	59	43
Duchesne R ab Knight Diversion [2]								
	APR-JUL	71	105	132	81%	162	210	162
Lost Ck Reservoir Inflow								
	APR-JUL	0.76	6.4	10.3	108%	14.2	19.8	9.5
Manti Ck bl Dugway Ck nr Manti								
	APR-JUL	6.2	8.7	10.4	80%	12.1	14.6	13
Upper Stillwater Reservoir Inflow[2]								
	APR-JUL	24	39	50	74%	63	85	68
Strawberry R nr Duchesne [2]								
	APR-JUL	7.6	30	54	102%	85	142	53
Mill Ck at Sheley Tunnel nr Moab								
	APR-JUL	1.03	2.2	3.2	97%	4.4	6.6	3.3
Pine Ck nr Escalante								
	APR-JUL	0.31	0.82	1.31	80%	1.91	3	1.63
Virgin R at Virgin								
	APR-JUL	4.5	15.2	26	72%	40	65	36
Uinta R bl Powerplant Diversion nr Neola								
	APR-JUL	18.6	33	45	70%	59	83	64
South Ck ab Resv nr Monticello								
	APR-JUL	0.02	0.09	0.2	49%	0.41	1.35	0.41
Sevier R nr Kingston								
	APR-JUL	0	3.5	10	68%	19.8	40	14.7
Yellowstone R nr Altonah								
	APR-JUL	22	32	40	71%	49	64	56
WF Duchesne R at VAT Diversion[2]								
	APR-JUL	5.3	8.5	11	76%	13.9	18.7	14.5
Smiths Fk nr Border								
	APR-JUL	35	57	72	84%	87	109	86
	APR-SEP	44	68	85	85%	102	126	100
Rockport Reservoir Inflow								
	APR-JUL	18.9	56	81	93%	106	143	87
Coal Ck nr Cedar City								
	APR-JUL	2.4	5.6	10.6	85%	16.4	25	12.5
Weber R at Gateway								
	APR-JUL	40	144	215	105%	285	390	205
Chalk Ck at Coalville								

	APR-JUL	11.6	18.4	24	92%	34	53	26
Provo R at Hailstone								
	APR-JUL	46	66	81	98%	98	125	83
Pineview Reservoir Inflow								
	APR-JUL	27	48	80	101%	102	175	79
Sevier R nr Gunnison								
	APR-JUL	4.8	14.5	24	80%	36	58	30
Clear Ck ab Diversions nr Sevier								
	APR-JUL	3.2	6.5	11.3	83%	12.2	18.5	13.6
W Canyon Ck nr Cedar Fort								
	APR-JUL	0.17	0.37	0.77	81%	1.36	2.9	0.95
Big Brush Ck ab Red Fleet Reservoir								
	APR-JUL	5.7	11.2	15	76%	18.8	24	19.7
Virgin R nr Hurricane								
	APR-JUL	1.07	9.9	21	68%	36	66	31
Bear R nr UT-WY State Line								
	APR-JUL	45	71	88	87%	105	131	101
	APR-SEP	50	78	97	85%	116	144	114
Blacksmith Fk nr Hyrum								
	APR-JUL	10.9	25	34	117%	43	57	29
Salt Ck at Nephi								
	APR-JUL	1.3	2.8	4.7	100%	6.9	11.7	4.7
Little Bear at Paradise								
	APR-JUL	9.9	18.6	27	96%	39	63	28
Utah Lake Inflow								
	APR-JUL	7.1	71	162	89%	255	385	182
East Canyon Ck nr Morgan								
	APR-JUL	6.3	11.6	17.2	96%	21	35	18
Lake Fk R bl Moon Lk nr Mountain Home[2]								
	APR-JUL	21	31	38	67%	46	59	57
Spanish Fk at Castilla								
	APR-JUL	9.3	17.6	30	100%	42	80	30
Mill Ck nr SLC								
	APR-JUL	2	3.3	4.4	102%	5.6	7.6	4.3
Beaver R nr Beaver								
	APR-JUL	1.37	9.7	15.3	88%	21	29	17.4
Currant Ck Reservoir Inflow[2]								
	APR-JUL	2.3	6	9.5	80%	13.8	22	11.9
Stateline Reservoir Inflow[2]								
	APR-JUL	13.4	18.3	22	85%	26	33	26
Weber R nr Oakley								
	APR-JUL	41	67	85	88%	103	129	97
Logan R nr Logan								
	APR-JUL	49	77	97	107%	117	145	91
Ashley Ck nr Vernal								
	APR-JUL	10.7	23	32	74%	41	53	43
Weber R nr Coalville								
	APR-JUL	18.4	57	83	89%	109	148	93
Duchesne R at Myton [2]								
	APR-JUL	46	109	168	78%	240	365	215
Big Ck nr Randolph								
	APR-JUL	0.5	2.3	3.3	103%	6.1	10.9	3.2
Big Cottonwood Ck nr SLC								
	APR-JUL	17.5	23	28	97%	33	41	29

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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Utah Water Supply Outlook Report

Natural Resources Conservation Service
Salt Lake City, UT