USDA United States Department of Agriculture
Natural Resources Conservation Service

# Colorado
# Water Supply Outlook Report
## January 1st, 2024

**The Colorado Data Collection Office monitors snowpack throughout a wide region from southern Wyoming to New Mexico and Arizona. This photo was taken by Arizona snow surveyor Jason Barnes with the USFS at the Nutrioso snow course during their first snow measurement for the season. Nutrioso is in the Lower Colorado Region and while the overall basin is below percent of median this site has above median snowpack and is currently sitting at 1.8'' of SWE.**

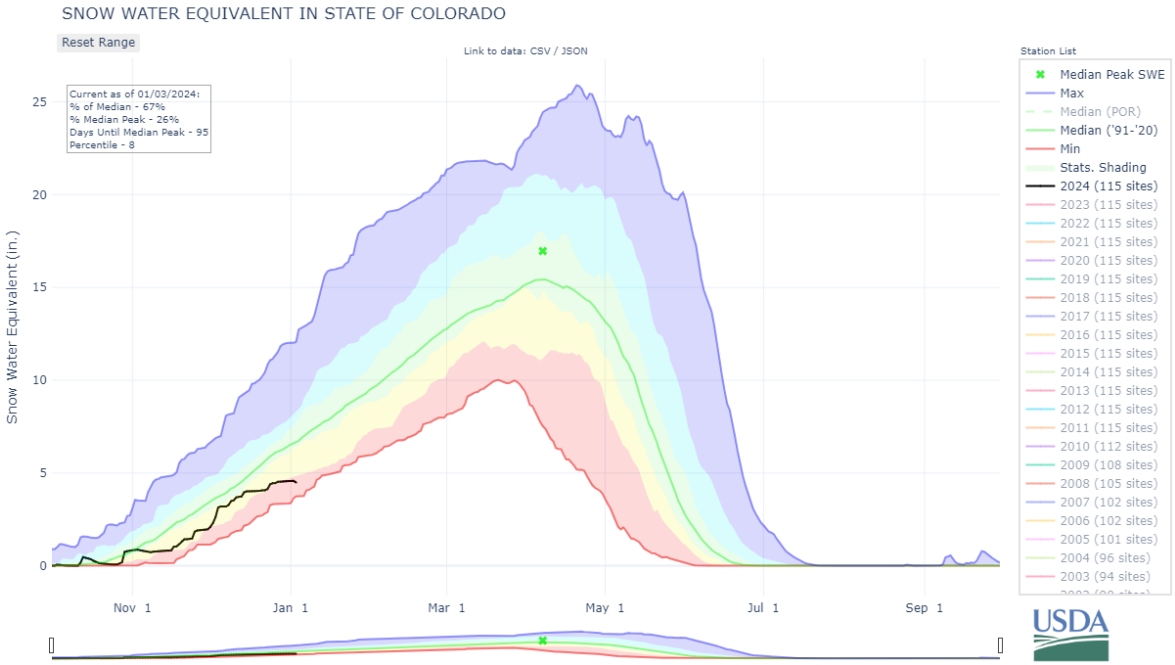
**Photo By: Jason Barnes**

**REMINDER:** We are soliciting field work photos from the field again this year. Each month we will pick one to grace the cover of this report! Please include information on where, when and of who/what the photo was taken.

# Contents

# Colorado Statewide Water Supply Conditions for January 1st

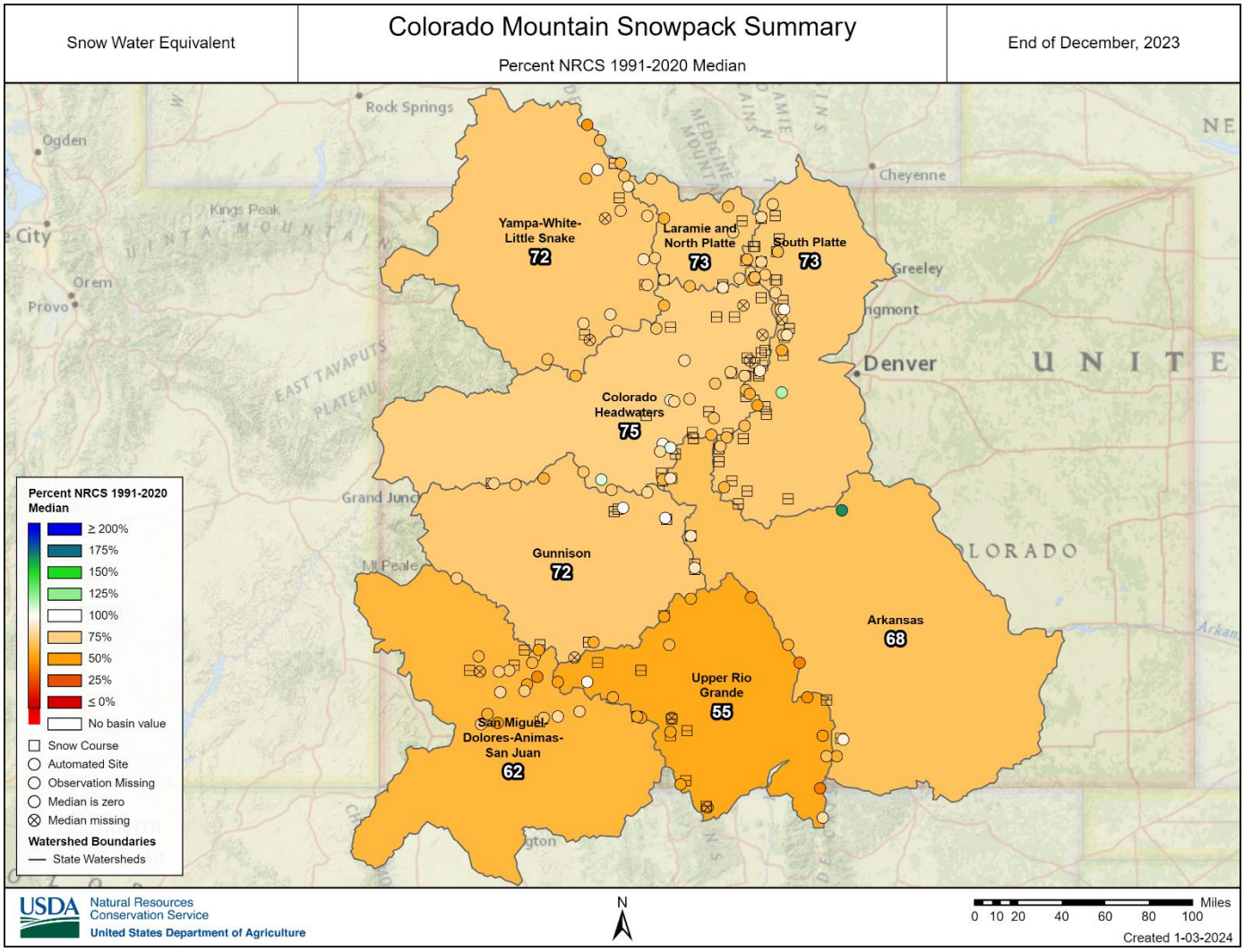
## Summary




*For the above graph, snow water equivalent (SWE) values are calculated using daily SNOTEL data only. SWE numbers presented in the text are values from the first of the month and include manual Snow Course measurements along with SNOTEL data.

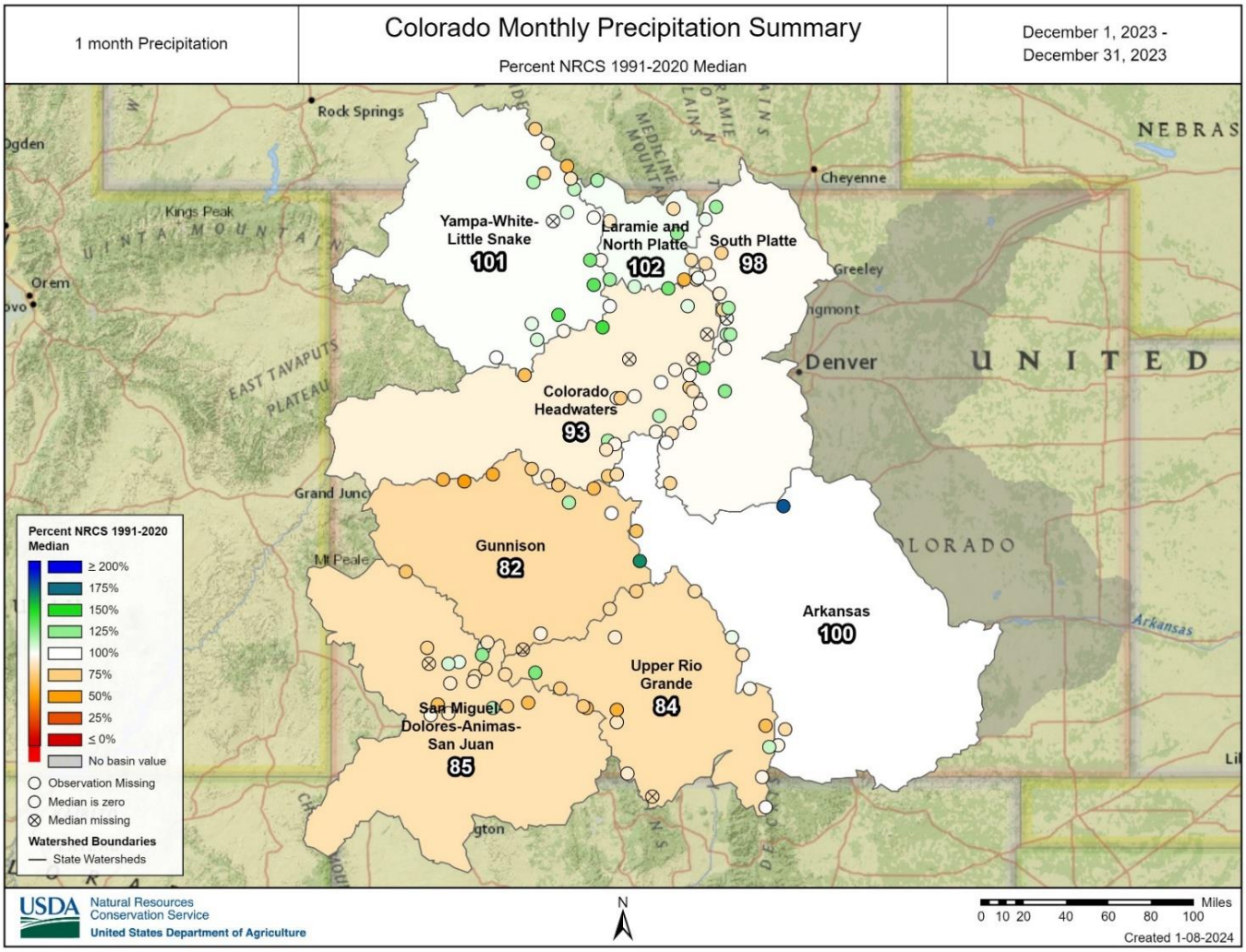
The state's snowpack registered at 68 percent of normal, a sluggish start reflective of the erratic precipitation patterns influenced by the prevailing El Niño phase. The Colorado Headwaters basin is at a modest 75 percent of median, whereas the Upper Rio Grande basin's snowpack is notably lower at 55 percent of median. Examining the precipitation data from the current quarter (October through December 2023), we observe a temporal patchwork of moisture delivery. The distribution and intensity of precipitation have been sporadic due to atmospheric rivers and prevailing westerly flows, contributing to a varied snowpack landscape. Above average temperatures have also contributed to dry conditions. For instance, observed air temperatures on December 20th reached a high of 31°F, exceeding the maximum average for the state. Drought monitor updates reveal that despite recent precipitation surges in the High Plains, pockets of north-central Colorado have escalated from abnormally dry (D0) to moderate drought (D1). We can use late summer precipitation patterns as a proxy for soil moisture. July was a dry month statewide and particularly for the southern basins, ranging from 22 to 42 percent of median in the Gunnison and Arkansas, respectively. August brought better conditions by increasing precipitation to above normal in the northern regions and near to above normal in southern basins. This enhanced moisture can be expected to positively impact the efficiency of snowmelt transitioning to streamflow in these regions. Turning to reservoir storage, we observe an intriguing dynamic. The prior year's above-normal snowpack has bolstered many reservoirs, resulting in current storage levels that, in some cases, surpass those of the previous year. This is evident throughout most basins like the Upper Rio Grande River basin at 121 percent of median and the Arkansas River basin at 112 percent of median, where reservoirs exhibit healthier volumes. However, it is important to interpret these figures within the context of long-term trends, given that this year's snowpack is lower than the previous year's. Streamflow data, both observed and projected, correlate closely with precipitation and snowpack trends, painting a mixed picture. The forecasts, however, remain contingent on the evolving winter weather patterns and subsequent spring temperatures, which influence melt rates and runoff efficiency.

## Snowpack



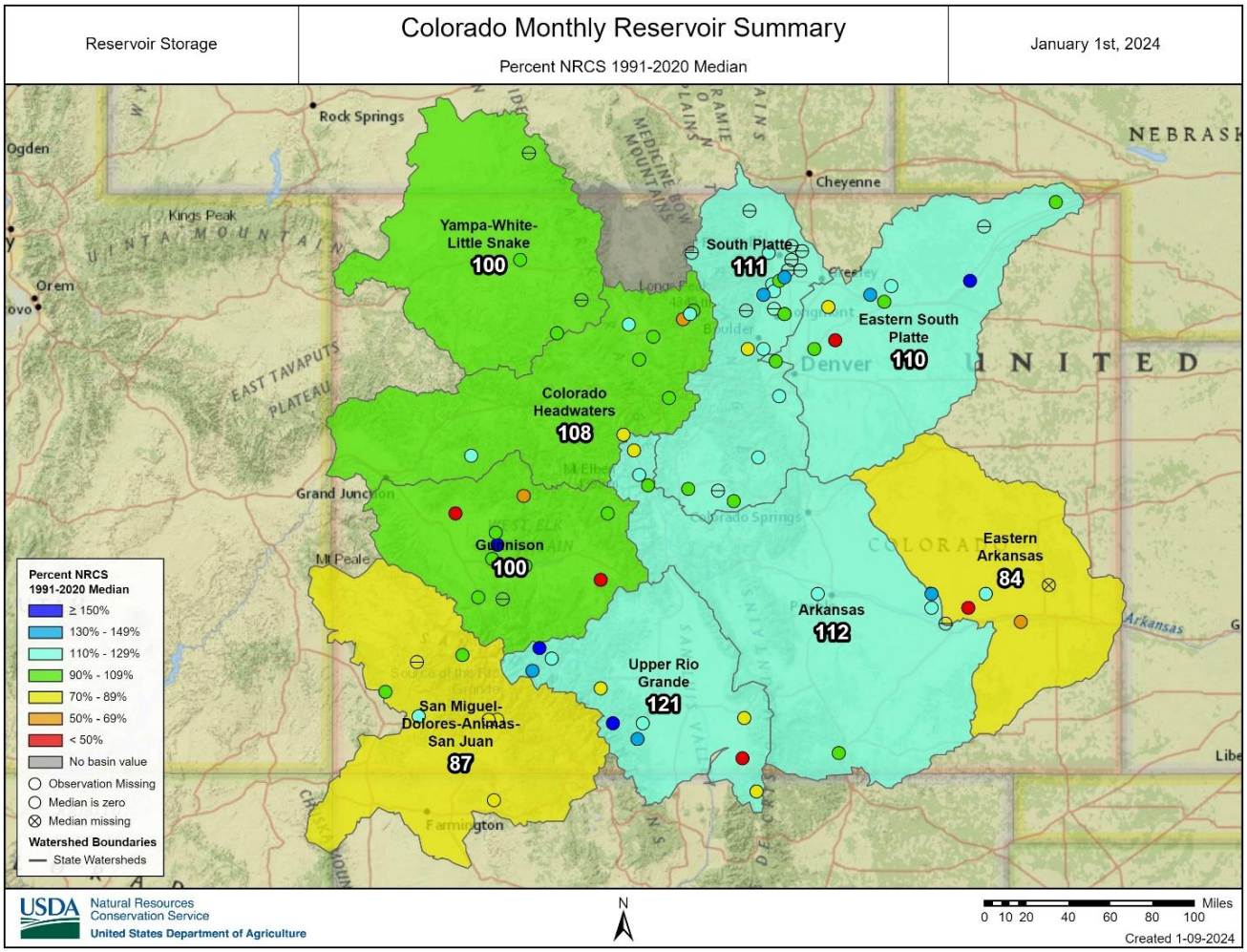

Colorado's snowpack as we entered the New Year remains a patchwork of highs and lows, shaped significantly by prevailing weather patterns. Statewide, snowpack hovers at 68 percent of median, indicating a slower commencement to this season's accumulation. Breaking down the numbers, the Colorado Headwaters basin slightly outperforms the state average at 75 percent of median. In contrast, the Upper Rio Grande basin is notably below the average at 55 percent of median, indicating a need for sustained precipitation to improve conditions. In the northern reaches, the basins of Yampa-White-Little Snake, Laramie and North Platte have been subject to the whims of northwesterly flows, which sporadically delivered moisture but have yet contributed to a robust snowpack, leaving these basins at 72 percent and 73 percent of median, respectively. The Gunnison basin, sitting at 72 percent of median, is indicative of the variable nature of snowpack during El Niño years. Despite the general expectation of wetter conditions, this region is experiencing below-median snowpack levels. The Roaring Fork sub-basin stands out, boasting a closer to normal snowpack at 84 percent of median. This patchwork of snowpack levels across Colorado, vividly illustrates the complexities and vagaries of weather. As we move forward into the season, the hope for increased snowfall remains, particularly in basins currently lagging behind their historical averages. The NOAA outlook indicates that the prevailing El Niño conditions could bring much needed moisture and suggests that the state could experience periods of colder temperatures, which would preserve the existing snowpack. This news is taken with a grain of salt, as there are equal chances for the temperature outlook and there is uncertainty around potential sudden stratospheric warming events.

# Precipitation



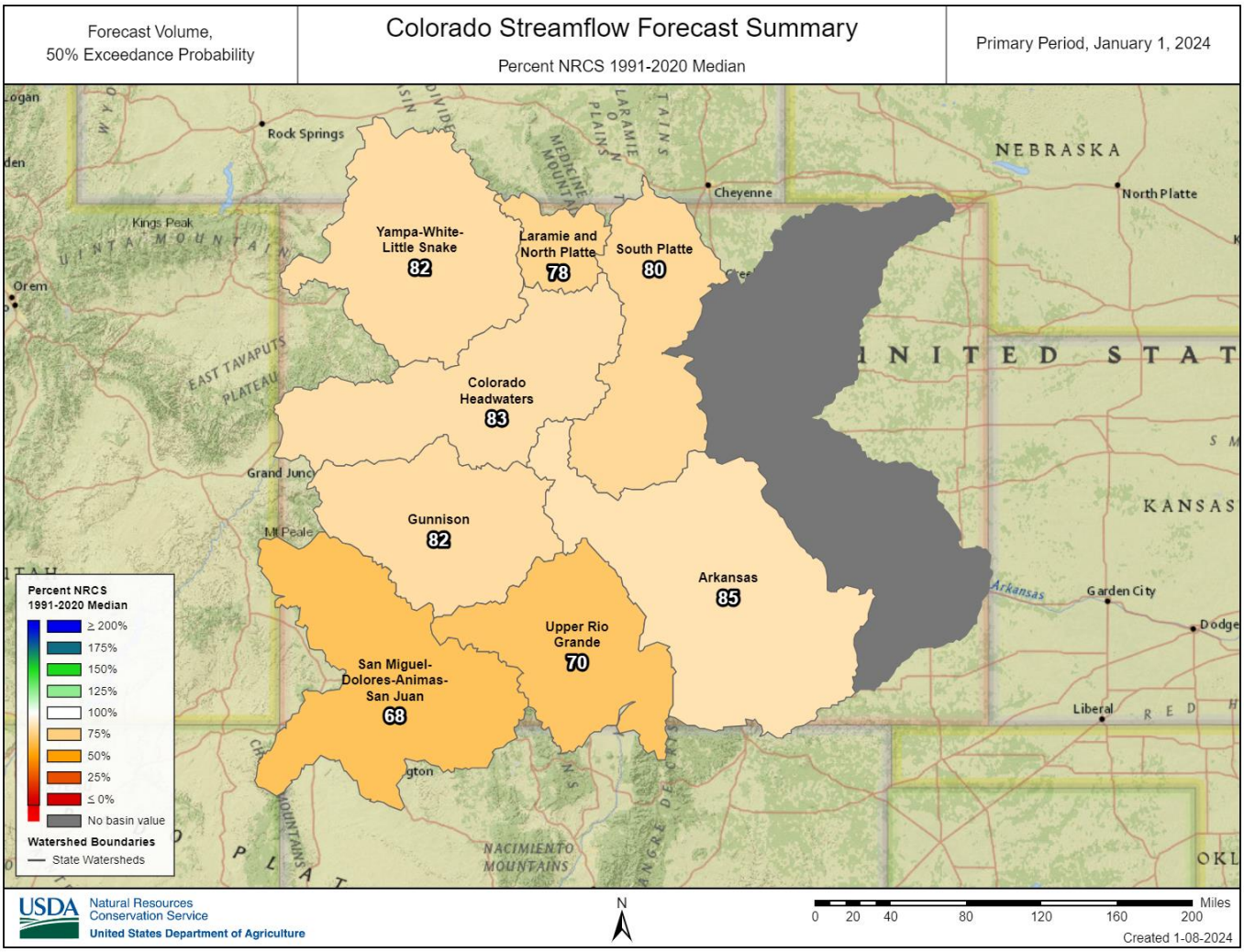

To date, Colorado water year 2024 (WY 24) precipitation data trends similar to that of water year 2018 and 2021. Statewide, the total precipitation percentage of median for WY 2024 to date, is 76 percent of median. The month of October, though yielding the highest percent of median seen thus far this WY, at 85 percent, had an extremely disproportionate degree of precipitation percentage from median across Colorado river basins ranging from 54 to 114 percent of median. The basins yielding higher percent medians in October of WY 24 were the Gunnison, Colorado Headwaters, combined Yampa-White-Little Snake, and Arkansas River basins, ranging from 86 to 114 percent, with the Gunnison and Colorado Headwaters at the top of the list at over 100 percent. The remaining basins fell below 73 percent of median with the combined San Miguel-Dolores-Animas-San Juan River basin significantly receiving the least precipitation compared to normal at 54 percent. Statewide, precipitation during the month of November was significantly below median and has been the driest month in WY 24 at 68 percent, with individual river basins ranging from 50 to 73 percent of median. Conditions slightly improved in December where Colorado river basins received precipitation ranging from 82 to 100 percent of median. Colorado WY-to-date precipitation as of December 31 was only 76 percent of median. On a basin level, WY-to-date precipitation ranged from 59 to 87 percent of median. Currently the driest river are the combined San Miguel-Dolores-Animas-San Juan and Upper Rio Grande River basins at 59 and 62 percent of median, respectively. Other Colorado river basins are above 74 percent with the three highest being Yampa-White-Little Snake, Gunnison, Colorado Headwaters River basins at 83, 84, 87 percent of median, respectively.

# Reservoir Storage




As of January 1, Colorado reservoir basin storage in water year 2024 is tracking above median in nearly all basins with over 10 percent more in percent capacity utilized statewide as compared to this time last year. The two most southwest basins, Gunnison and San Miguel-Dolores-Animas San Juan, were both below median in the 60th percentile last year whereas this year the lowest basins, East Arkansas and San Miguel-Dolores-Animas San Juan, are in the 80th percentile. East Arkansas, Gunnison, Eastern South Platte, and Yampa-White-Little Snake, last year at 32, 64, 73, and 83 percent respectively, show the highest degree of positive difference from last year. Most notably, compared to this time last year, basin reservoir storage volume is more than double for East Arkansas, moving from 3 to 8 percent, increased by 25 percentage points for Gunnison moving from 45 to 70 percent, and increased by 28 percentage points for Eastern South Platte, moving from 52 to 80 percent (see End of December Reservoir Storage Capacity Comparison Chart here). Though the rest of the basins track more similar to last year they track slightly higher in comparison, with all above the median and in some cases significantly above median such as the Upper Rio Grande reading 121 percent of median, whereas last year the remaining basins' percent median range was slightly lower falling between 92 and 106 percent of median.

# Streamflow

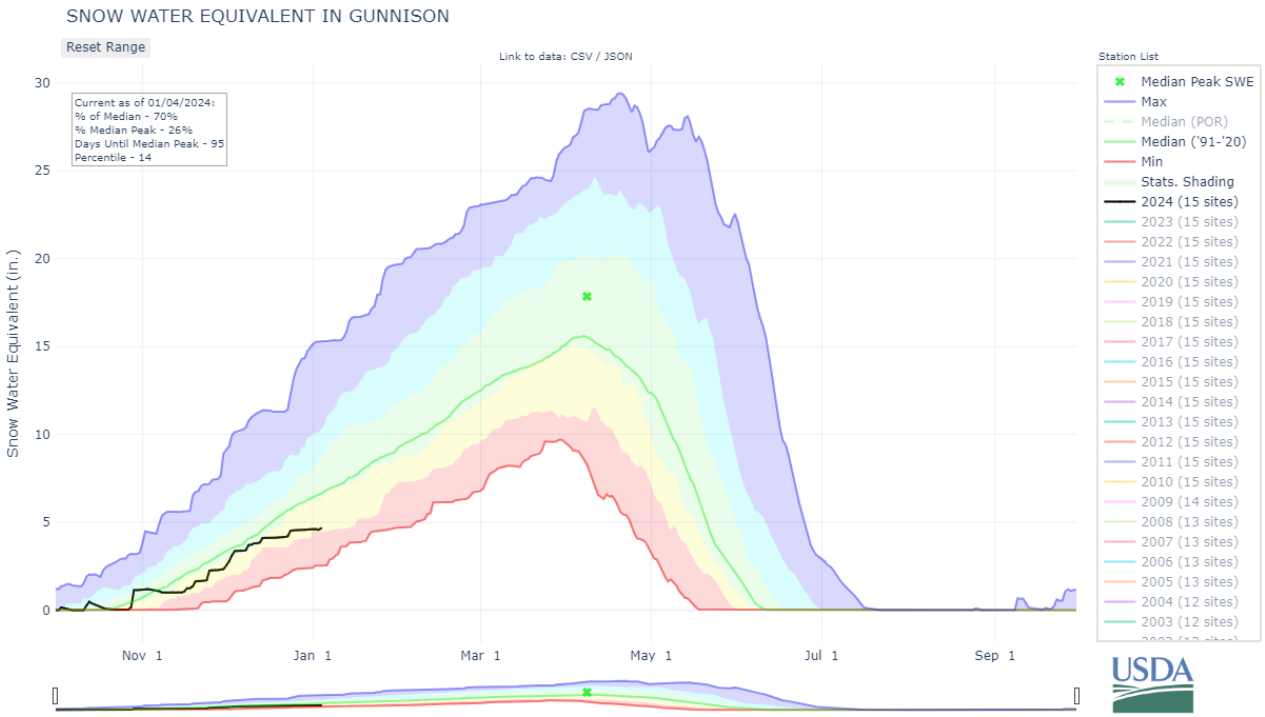



Streamflow forecasts for Colorado closely resemble the current snowpack and precipitation conditions observed across the state. Dry conditions have dominated the water year so far, and the below median precipitation and snowpack has led to below median streamflow forecasts for all major basins. Notably, southern portions of the state have the lowest streamflow forecasts compared to median, largely based on current conditions, but also from soil moisture deficits caused by a warm and dry summer last year. Streamflow forecasts are currently highest for areas in the central mountains, especially the Elk Mountains, where the Slate River near Crested Butte is forecasted to have 105 percent of median flows from April to July. Conversely, Sangre De Cristo Creek in the San Luis Valley is forecasted to have 32 percent of median flows from April to September. Although individual forecast points across the state can vary greatly from others, most basin-wide forecasts are similar this month. Current streamflow forecasts range from 85 percent of median in the Arkansas River basin to 68 percent of median in the combined San Miguel-Dolores-Animas-San Juan River basins. The Upper Rio Grande River basin is currently forecasted to be 70 percent of median streamflow. The Gunnison and Colorado Headwaters River basin forecasts are 82 and 83 percent of median. Along the Front Range, the South Platte River basin forecast is 80 percent of median. Lastly, the combined Yampa-White-Little Snake and the Laramie-North Platte River basins are forecasted at 82 and 78 percent of median. Most current forecast points across the state show that there is only a ten to thirty percent chance of observed streamflow volumes equaling or exceeding normal streamflow volumes this water year. Although this is a bleak outlook, it's important to note that there is greater uncertainty in the forecast models this time of year and as the snow accumulation season progresses and future weather events happen, forecast model certainty will increase. All in all, current indications point to below normal streamflow volumes this runoff season, however, there's plenty of time for conditions to improve.

# GUNNISON RIVER BASIN

January 1st, 2024

Snowpack in the Gunnison River basin is below normal at 72% of median. Precipitation for December was 82% of median which brings water year-to-date precipitation to 84% of median. Reservoir storage at the end of December was 100% of median compared to 64% last year. Current streamflow forecasts range from 65% of median at Uncompahgre River at Colona to 105% of median at Slate River near Crested Butte.

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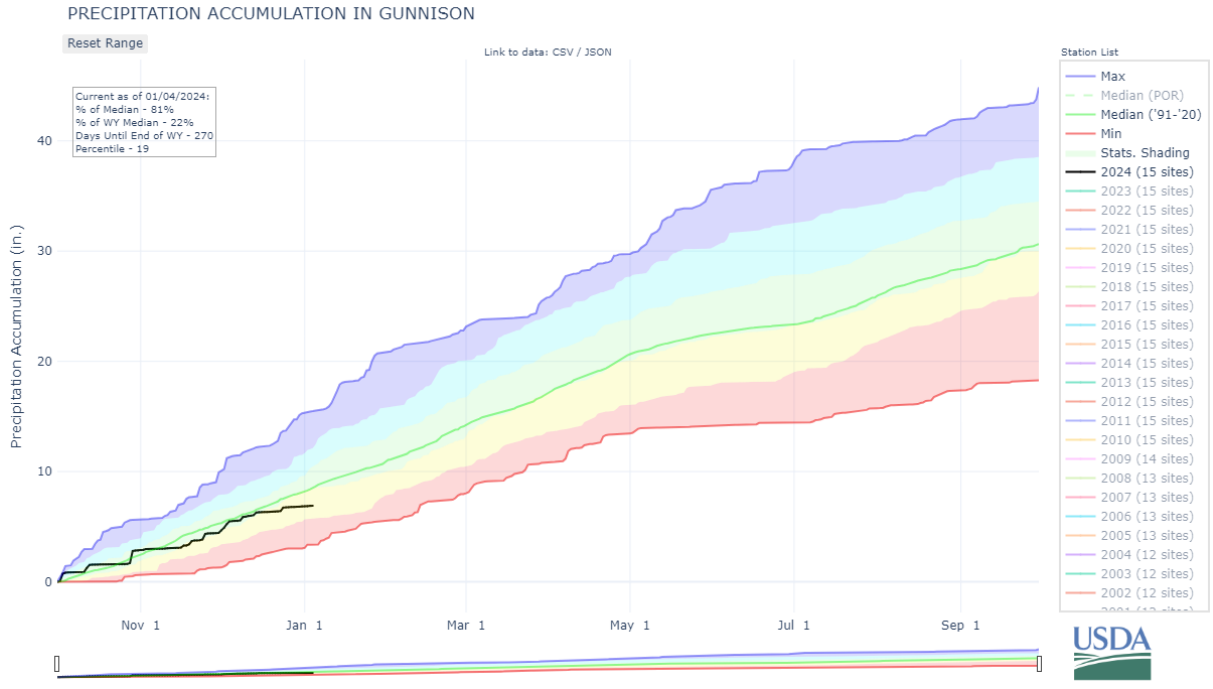
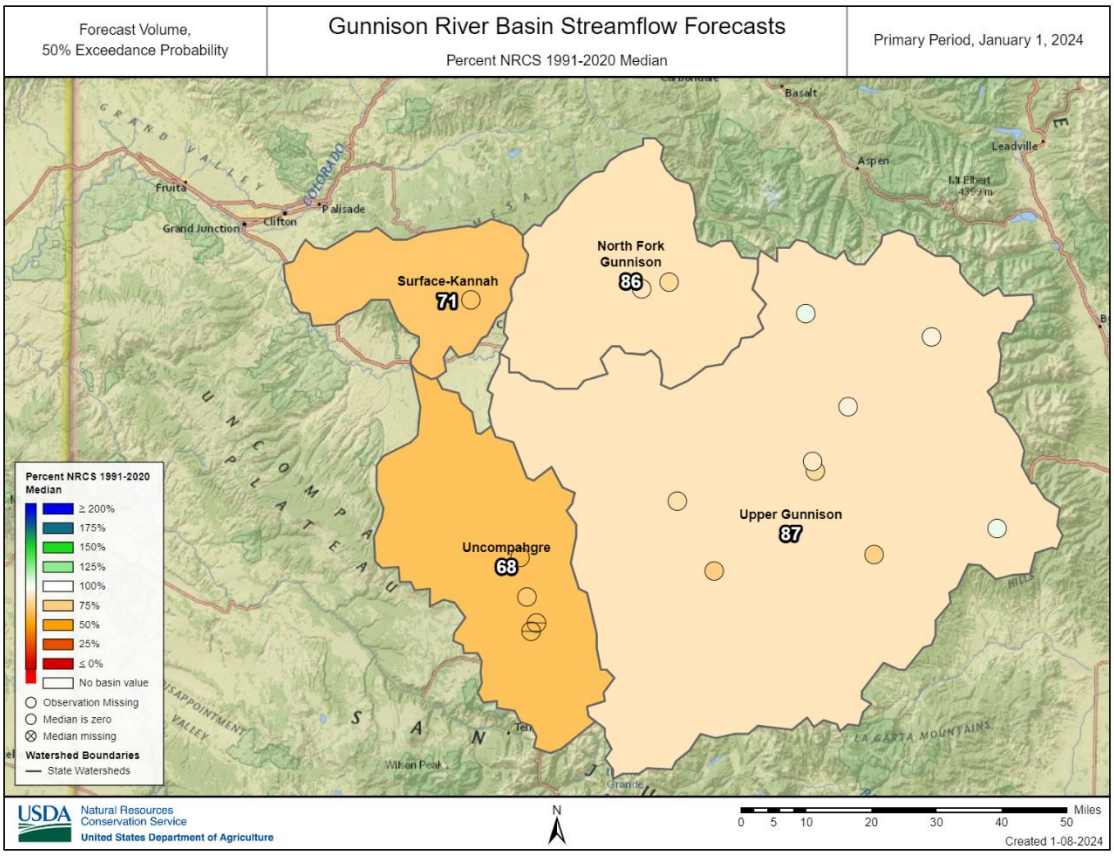
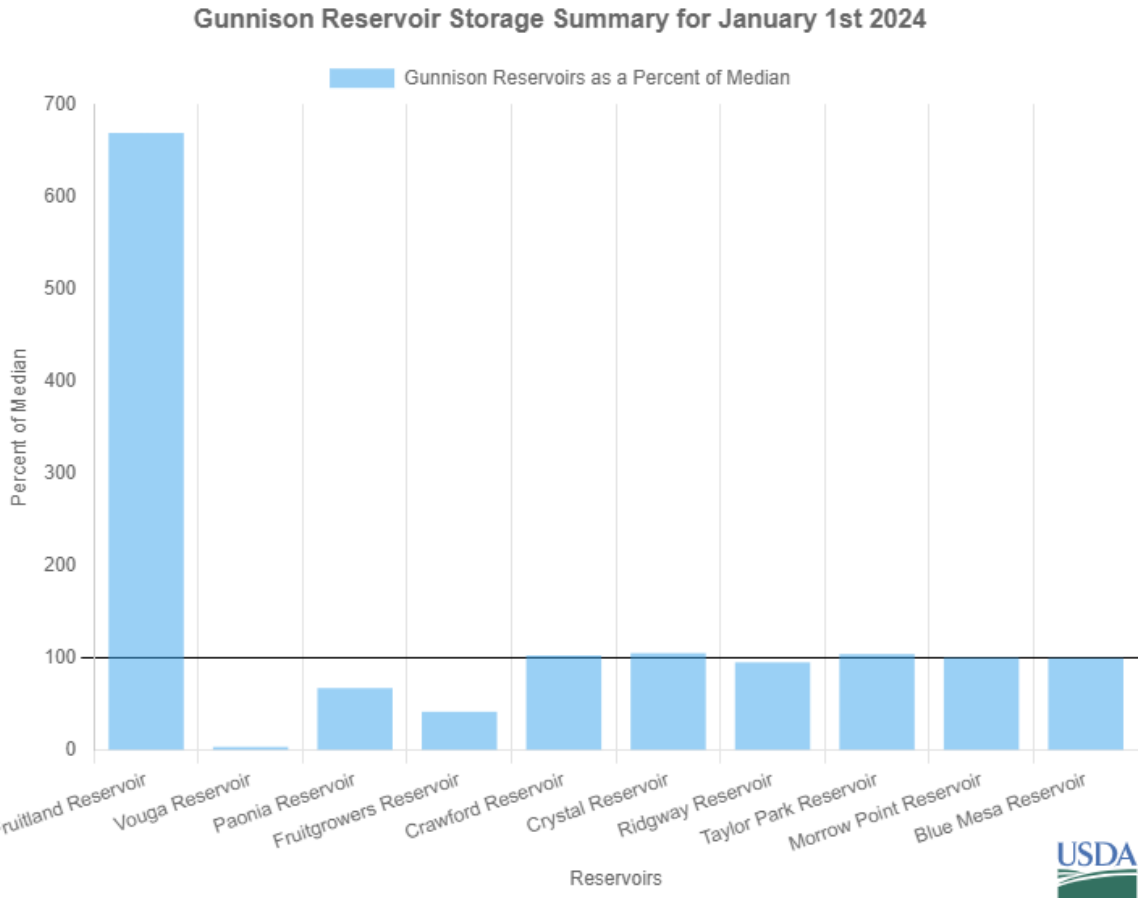



Forecast Volume,
50% Exceedance Probability
Gunnison River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Surface-Kannah
71
North Fork
Gunnison
86
Uncompahgre
68
Upper Gunnison
87
Percent NRCS 1991-2020
Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Natural Resources
Conservation Service
United States Department of Agriculture
N
Miles
0 5 10 20 30 40 50
Created 1-08-2024


Gunnison Reservoir Storage Summary for January 1st 2024
Gunnison Reservoirs as a Percent of Median
Percent of Median
700
600
500
400
300
200
100
0
Fruitland Reservoir
Vouga Reservoir
Paonia Reservoir
Fruitgrowers Reservoir
Crawford Reservoir
Crystal Reservoir
Ridgway Reservoir
Taylor Park Reservoir
Morrow Point Reservoir
Blue Mesa Reservoir
Reservoirs
USDA

# Watershed Snowpack Analysis January 1st, 2024

Gunnison Sub-Basin Snow Data

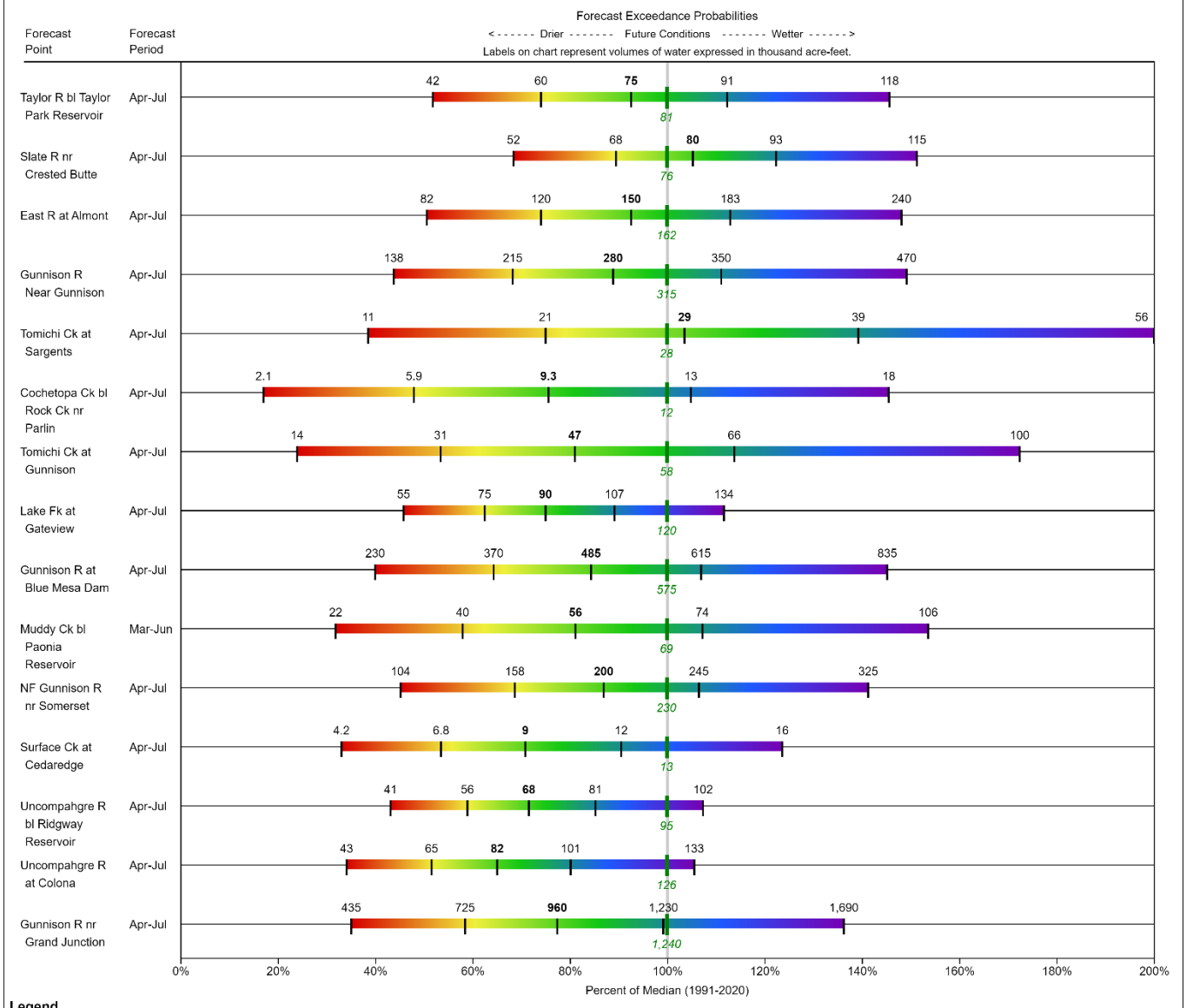
| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| North Fork Gunnison | 3.0 | 69.1 | 122.4 |
| Surface-Kannah | 2.0 | 74.2 | 127.7 |
| Uncompahgre Plateau | 1.0 | 74.6 | 185.1 |
| Upper Gunnison | 8.0 | 75.7 | 118.8 |
| Uncompahgre | 2.0 | 60.9 | 102.0 |

# Reservoir Storage End of December 2023

Gunnison Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Crystal Reservoir | 7.8 | 8.86 | 7.4 | 105.4 |
| Taylor Park Reservoir | 73.92 | 66.27 | 70.8 | 104.4 |
| Blue Mesa Reservoir | 578.07 | 290.17 | 579.3 | 99.8 |
| Silverjack Reservoir | nan | 1.16 | 4.1 | nan |
| Paonia Reservoir | 1.28 | 0.95 | 1.9 | 67.4 |
| Crawford Reservoir | 5.66 | 1.86 | 5.5 | 102.9 |
| Vouga Reservoir | 0.03 | 0.16 | 0.69 | 4.3 |
| Ridgway Reservoir | 63.42 | 67.75 | 66.5 | 95.4 |
| Fruitland Reservoir | 3.34 | 0.68 | 0.5 | 668.0 |
| Fruitgrowers Reservoir | 0.92 | 1.27 | 2.2 | 41.8 |
| Morrow Point Reservoir | 111.25 | 102.86 | 110.7 | 100.5 |

**GUNNISON**
**Water Supply Forecasts**
**January 1, 2024**




**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.

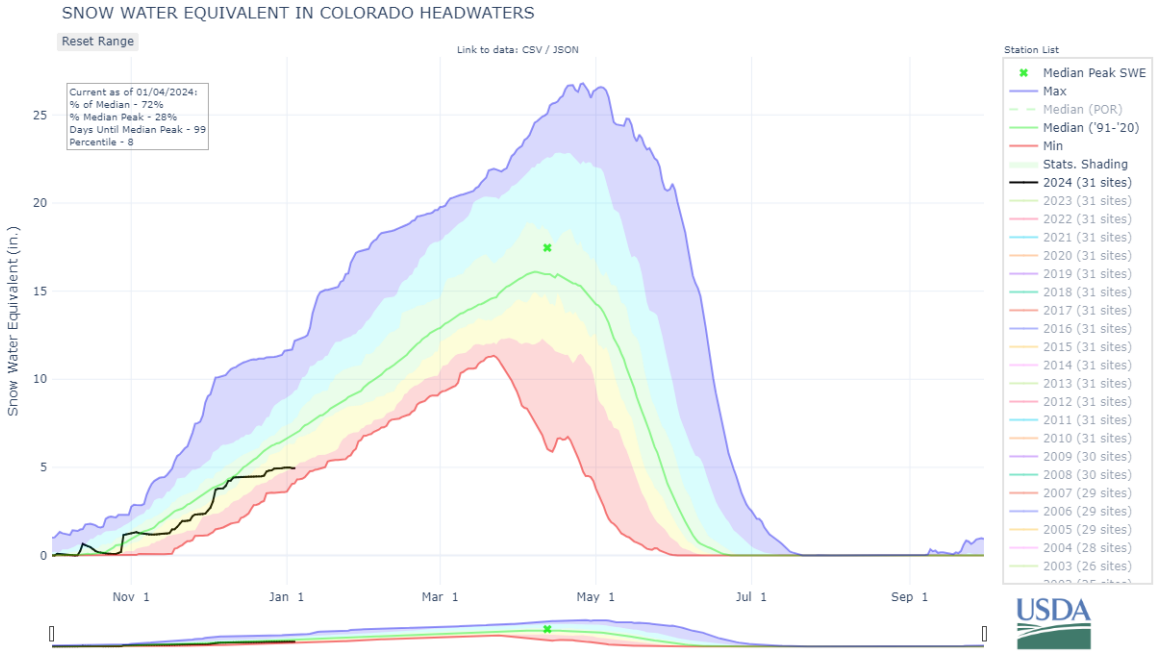
*Period of Record Minimum Streamflow KAF (Year)*
*1991-2020 Normal Streamflow KAF*
*Observed Streamflow KAF*
*Period of Record Maximum Streamflow KAF (Year)*

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

# COLORADO HEADWATERS RIVER BASIN

January 1st, 2024

Snowpack in the Colorado River basin is below normal at 75% of the median. Precipitation for December was 93% of median which brings water year-to-date precipitation to 87% of median. Reservoir storage at the end of December was 108% of median compared to 100% last year. Current streamflow forecasts range from 78% of median at Williams Fork below Williams Fork Reservoir to 98% of median at Frying Pan River at Ruedi.

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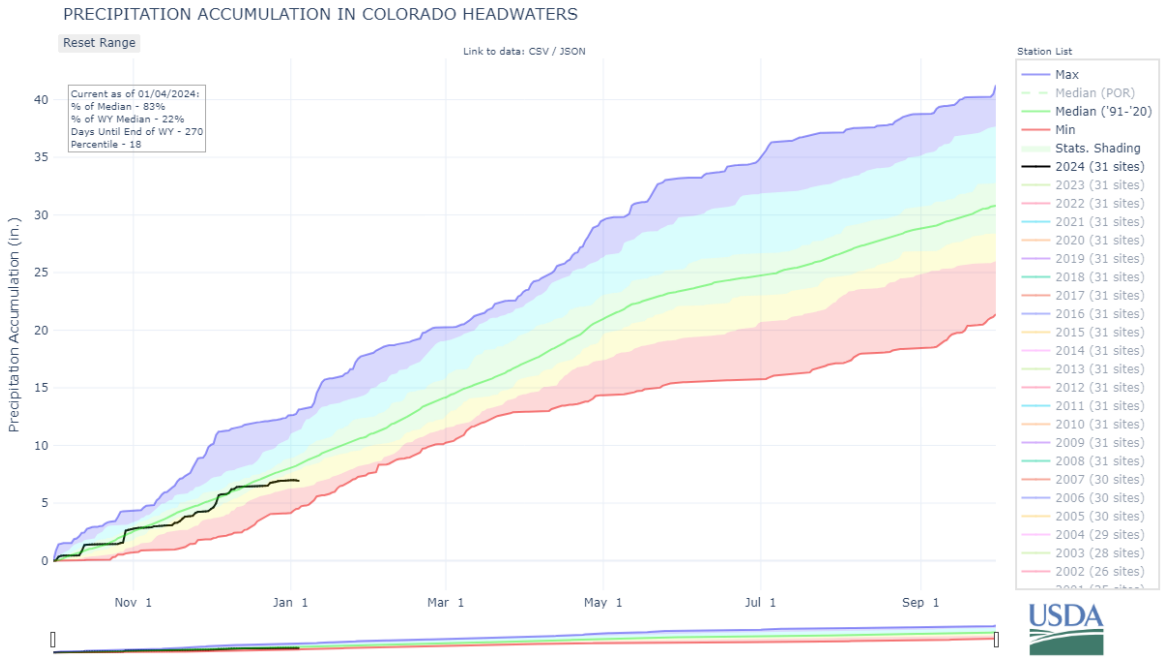
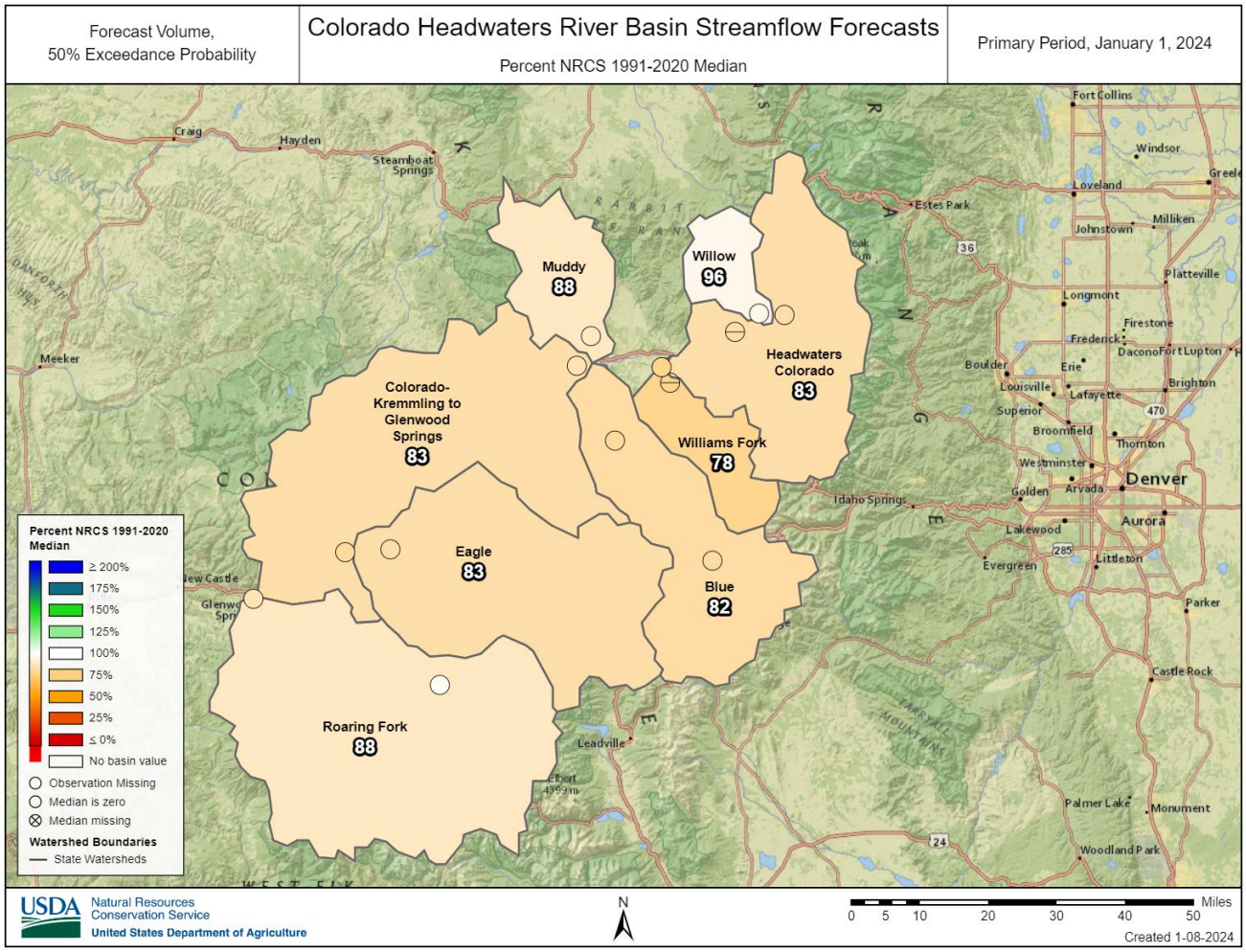
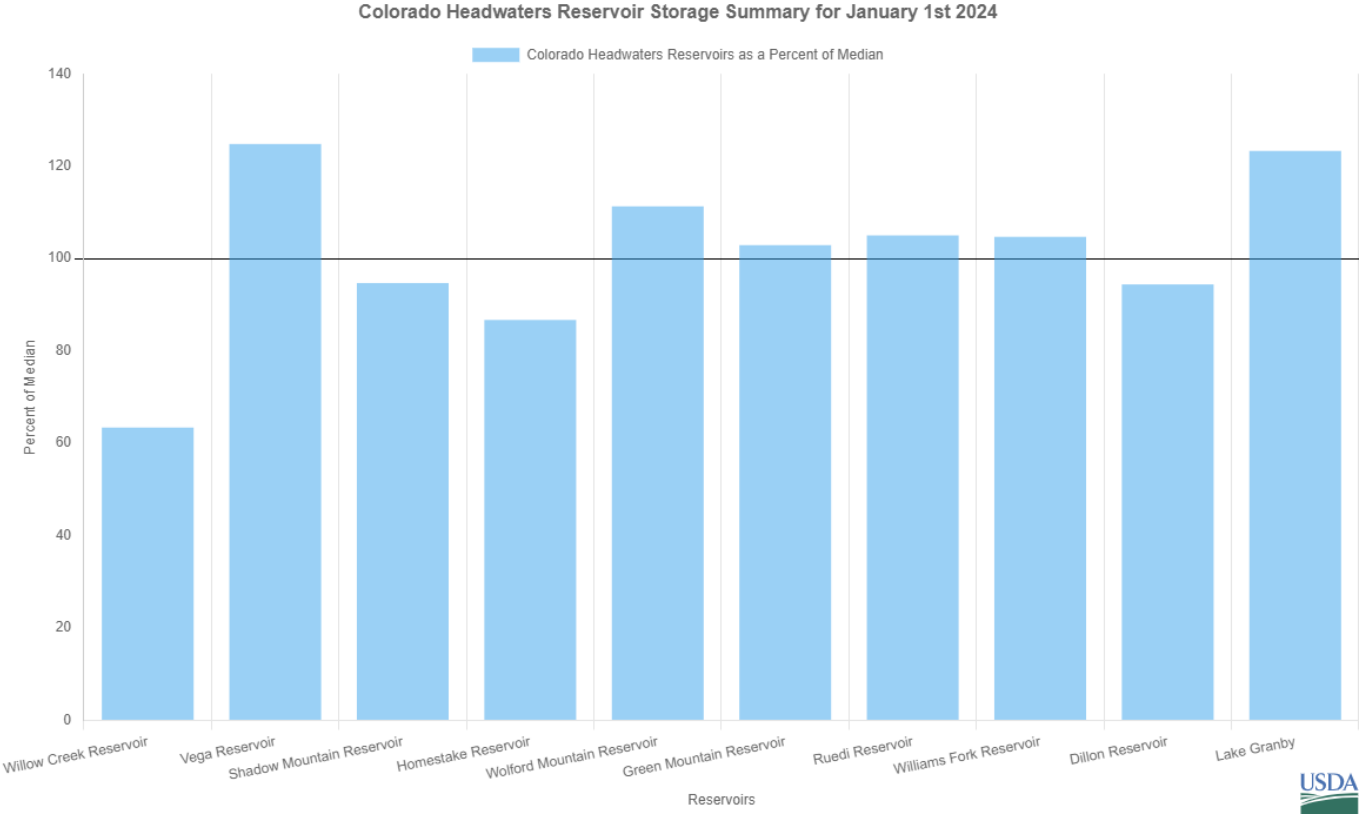



Forecast Volume,
50% Exceedance Probability
Colorado Headwaters River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Muddy
88
Willow
96
Headwaters
Colorado
83
Colorado-
Kremmling to
Glenwood
Springs
83
Williams Fork
78
Eagle
83
Blue
82
Roaring Fork
88
Percent 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 5 10 20 30 40 50
Miles
Created 1-08-2024


Colorado Headwaters Reservoir Storage Summary for January 1st 2024
Colorado Headwaters Reservoirs as a Percent of Median
Percent of Median
0
20
40
60
80
100
120
140
Willow Creek Reservoir
Vega Reservoir
Shadow Mountain Reservoir
Homestake Reservoir
Wolford Mountain Reservoir
Green Mountain Reservoir
Ruedi Reservoir
Williams Fork Reservoir
Dillon Reservoir
Lake Granby
Reservoirs
USDA

## Watershed Snowpack Analysis January 1st, 2024

Colorado Headwaters Sub-Basin Snow Data

| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| Colorado-Kremmling to Glenwood Springs | 4.0 | 71.3 | 151.1 |
| Eagle | 4.0 | 75.5 | 128.6 |
| Muddy | 2.0 | 70.1 | 125.7 |
| Williams Fork | 2.0 | 76.1 | 119.3 |
| Blue | 5.0 | 68.1 | 130.9 |
| Roaring Fork | 8.0 | 84.5 | 124.1 |
| Plateau | 3.0 | 70.6 | 123.7 |
| Headwaters Colorado | 3.0 | 72.1 | 117.8 |
| Willow | 1.0 | 87.9 | 131.0 |
| Troublesome | 1.0 | 66.0 | 112.0 |

## Reservoir Storage End of December 2023

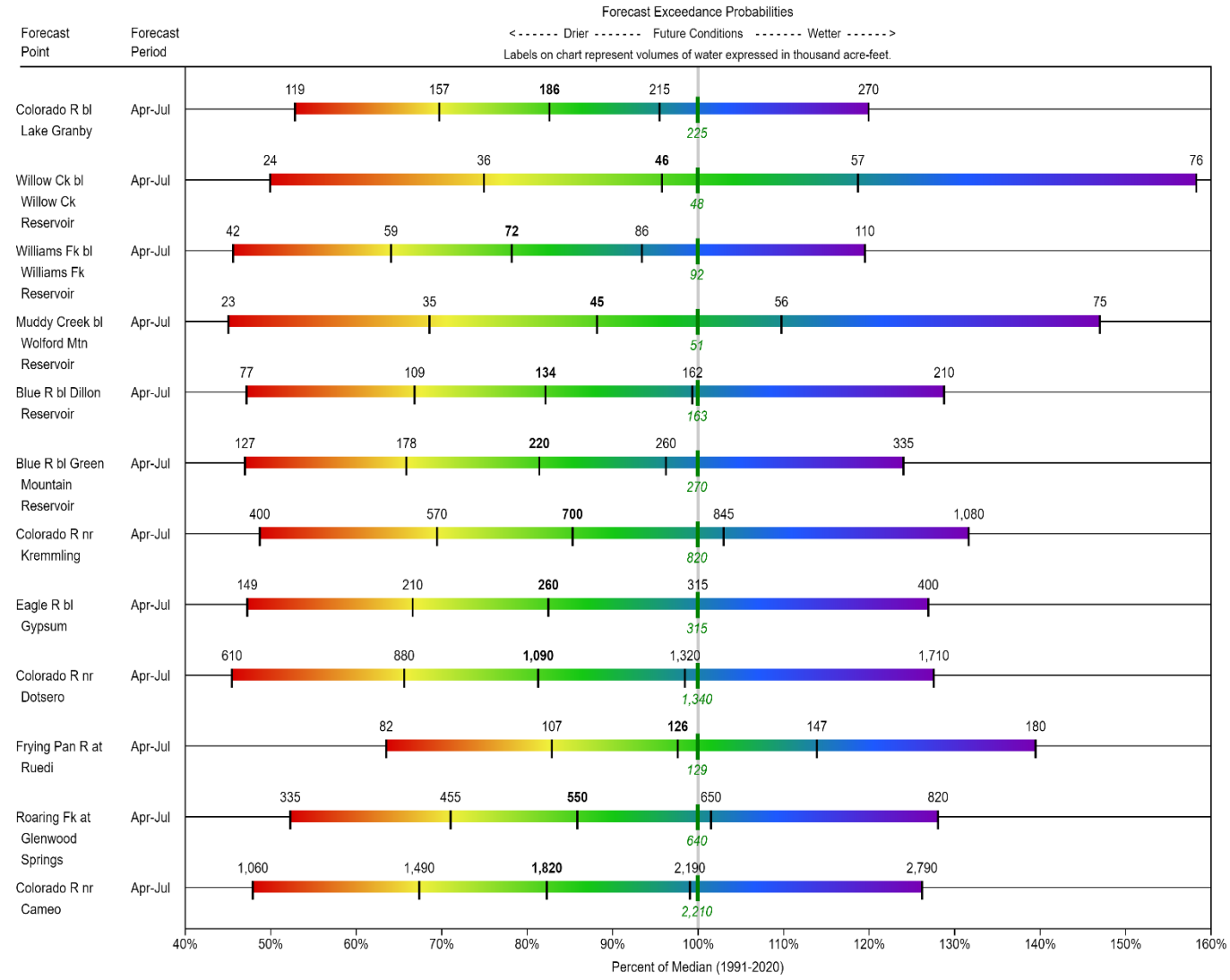
Colorado Headwaters Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Wolford Mountain Reservoir | 53.86 | 40.28 | 48.4 | 111.3 |
| Green Mountain Reservoir | 74.01 | 77.04 | 71.9 | 102.9 |
| Williams Fork Reservoir | 78.35 | 45.59 | 74.8 | 104.7 |
| Shadow Mountain Reservoir | 16.38 | 16.53 | 17.3 | 94.7 |
| Lake Granby | 408.25 | 407.35 | 331.2 | 123.3 |
| Homestake Reservoir | 34.77 | 29.7 | 40.1 | 86.7 |
| Dillon Reservoir | 212.4 | 206.0 | 225.0 | 94.4 |
| Vega Reservoir | 14.36 | 8.09 | 11.5 | 124.9 |
| Willow Creek Reservoir | 4.06 | 5.87 | 6.4 | 63.4 |
| Ruedi Reservoir | 78.22 | 66.65 | 74.5 | 105.0 |

## COLORADO HEADWATERS

**Water Supply Forecasts**

**January 1, 2024**




**Legend**

| 95% or 90% Exceedance | 70% Exceedance | **50% Exceedance** | 30% Exceedance | 10% or 5% Exceedance |
|---|---|---|---|---|
| There is a 95%/90% chance that flows will exceed this volume | There is a 70% chance that flows will exceed this volume | There is a 50% chance that flows will exceed this volume | There is a 30% chance that flows will exceed this volume | There is a 10%/5% chance that flows will exceed this volume |

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

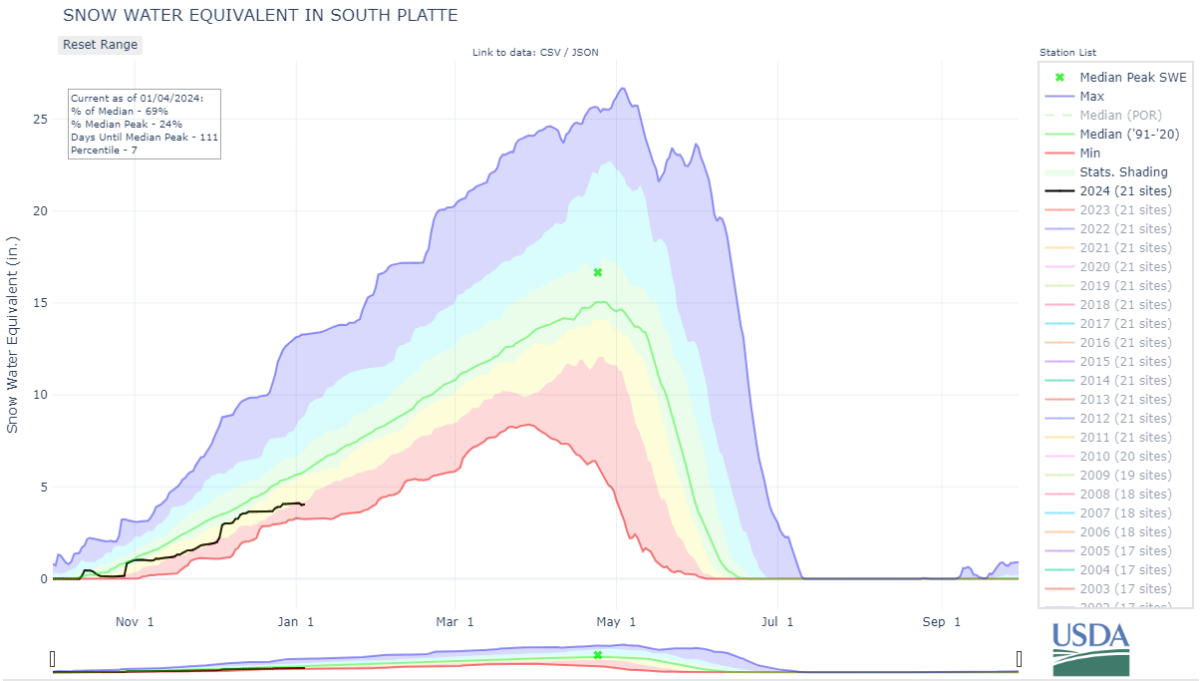
| *Period of Record Minimum Streamflow KAF (Year)* | *1991-2020 Normal Streamflow KAF* | *Observed Streamflow KAF* | *Period of Record Maximum Streamflow KAF (Year)* |
|---|---|---|---|

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

# SOUTH PLATTE RIVER BASIN

January 1st, 2024

Snowpack in the South Platte River basin is below normal at 73% of median. Precipitation for December was 100% of median which brings water year-to-date precipitation to 72% of median. Reservoir storage at the end of December was 108% of median compared to 86% last year. Current streamflow forecasts are at 92 percent of median and range from 72% of median at Cache La Poudre at Canyon Mouth to 91% of median at Boulder Creek near Orodell.

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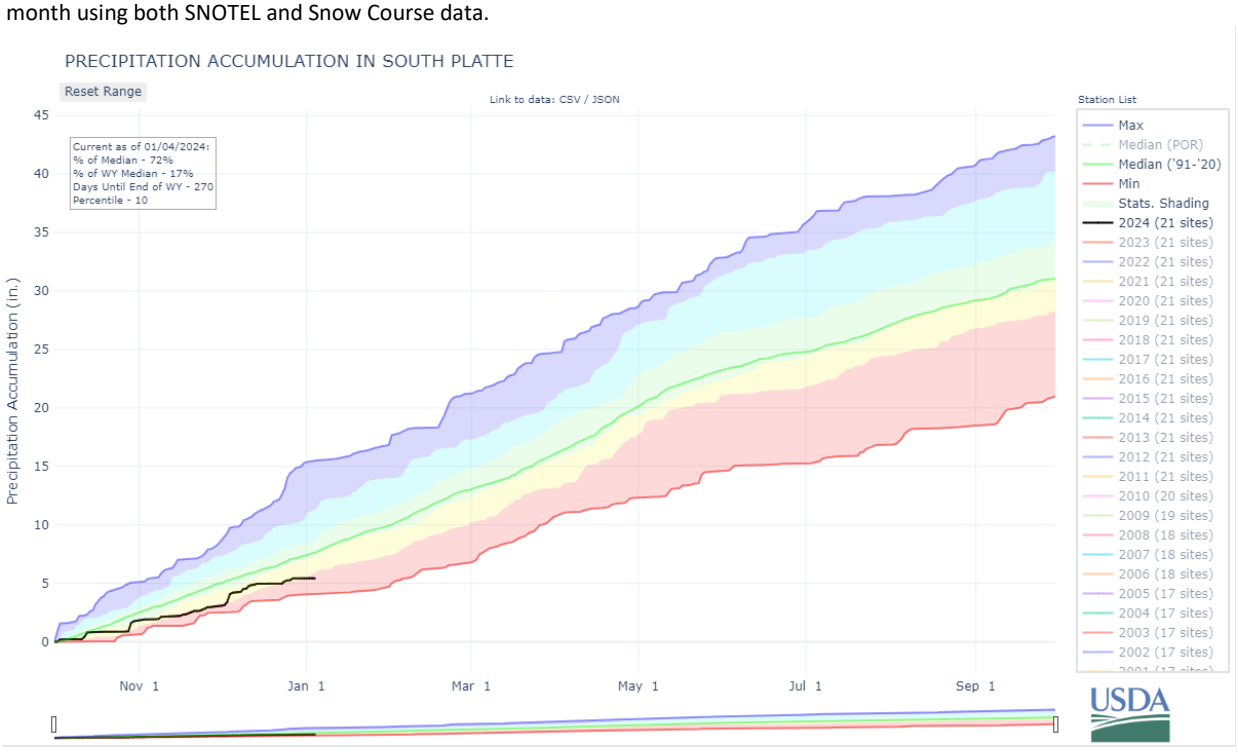
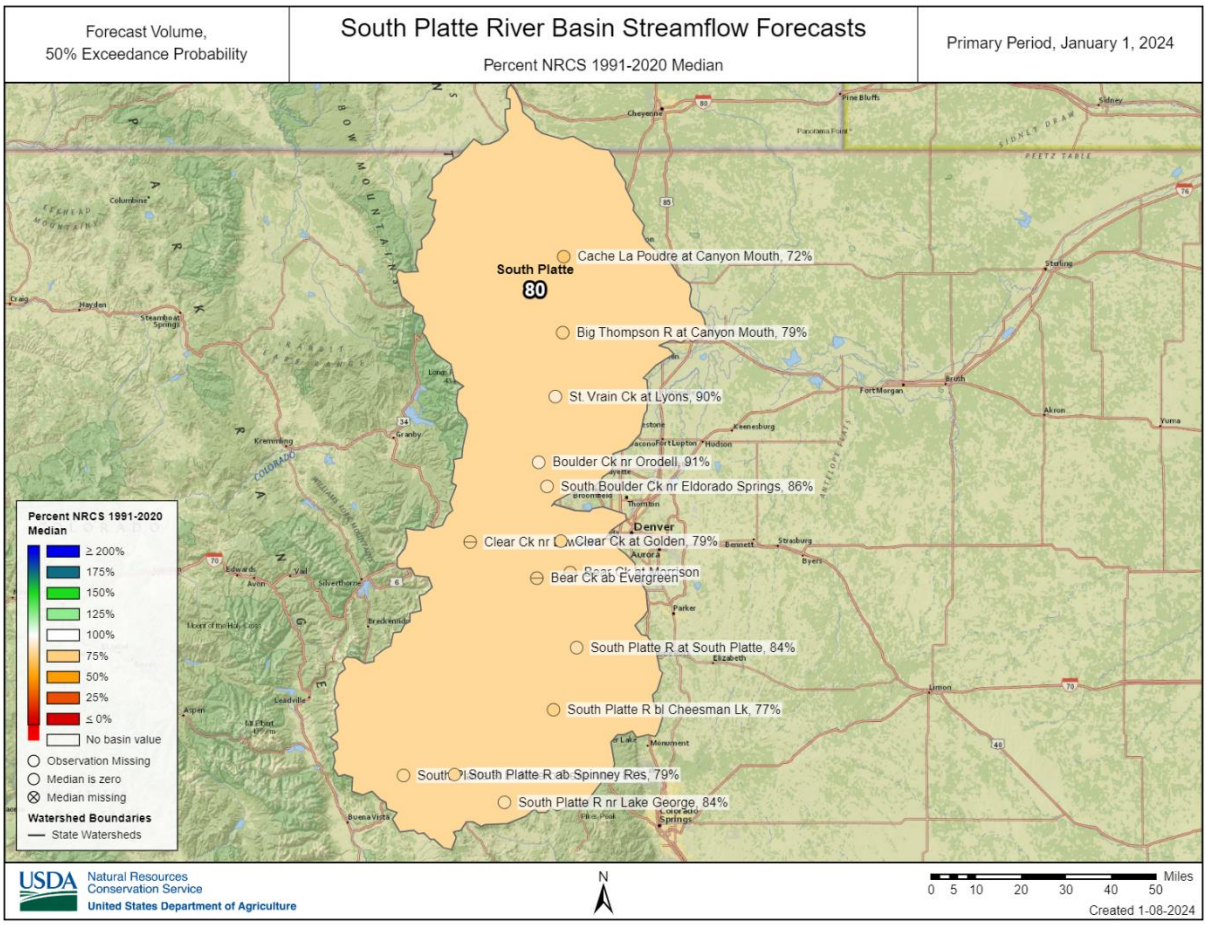
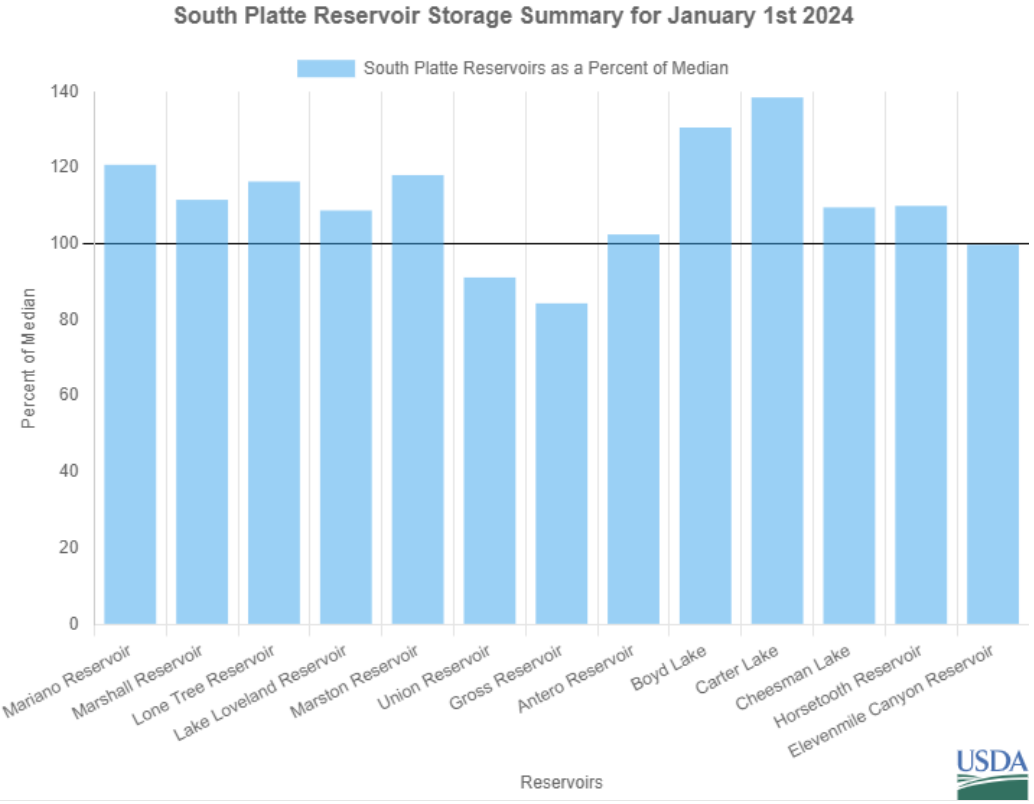





** As of January 9th, we are still missing data from Northern Water Reservoirs. Please see website for updates.*

## Watershed Snowpack Analysis January 1st, 2024

South Platte Sub-Basin Snow Data

| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| Upper South Platte | 6.0 | 68.5 | 76.6 |
| Big Thompson | 3.0 | 72.0 | 140.8 |
| North Fork Cache La Poudre | 2.0 | 79.2 | 99.2 |
| Clear | 3.0 | 82.8 | 113.2 |
| Boulder | 3.0 | 71.0 | 131.6 |
| Cache La Poudre | 5.0 | 69.3 | 123.8 |
| Saint Vrain | 2.0 | 79.5 | 146.6 |

## South Platte Reservoir Storage End of December 2023

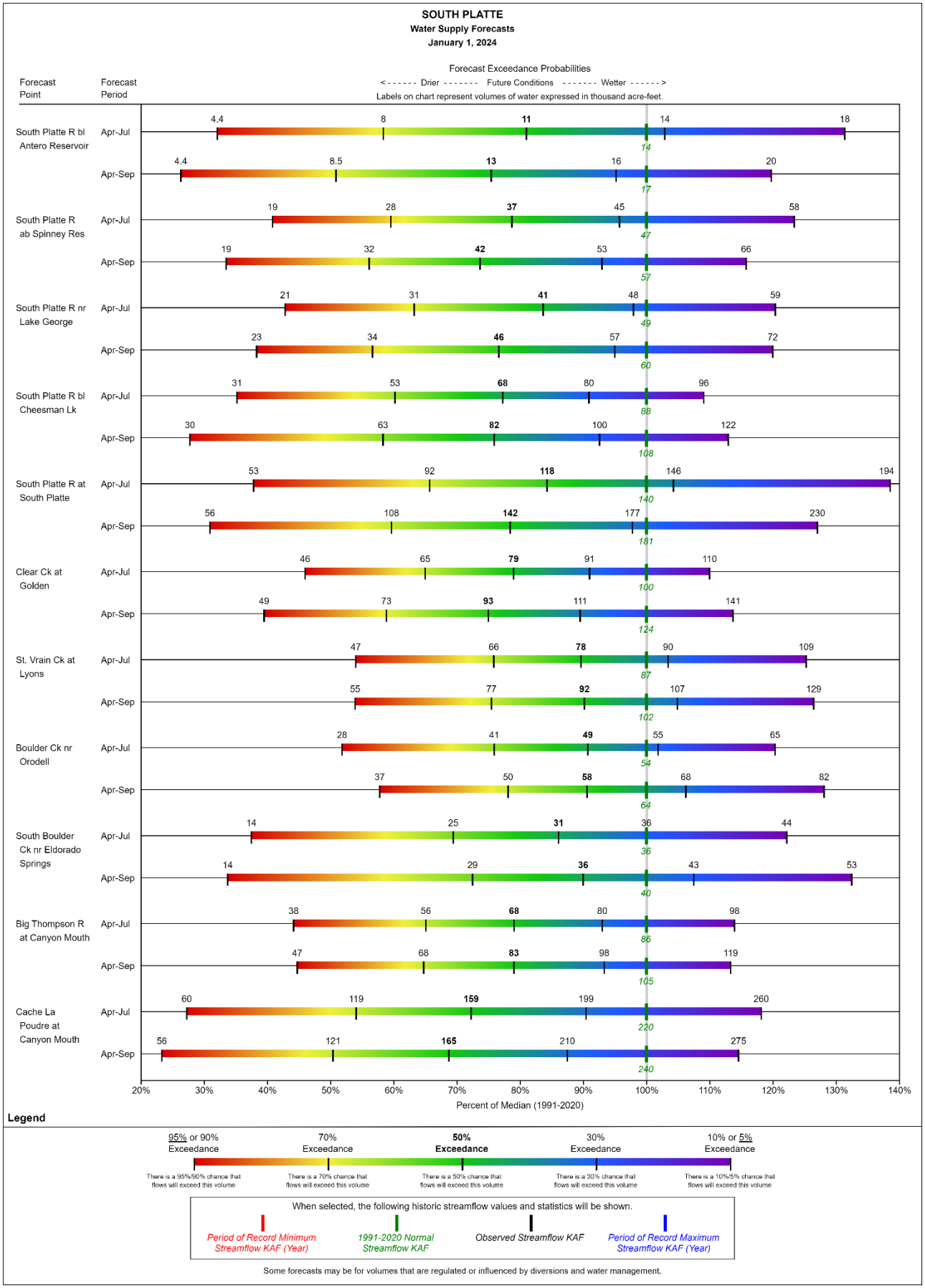
South Platte Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Elevenmile Canyon Reservoir | 99.28 | 99.97 | 99.5 | 99.8 |
| Gross Reservoir | 15.69 | 22.24 | 18.6 | 84.4 |
| Lake Loveland Reservoir | 7.94 | 4.34 | 7.3 | 108.8 |
| Horsetooth Reservoir | 102.06 | 70.57 | 92.8 | 110.0 |
| Lone Tree Reservoir | 6.99 | 2.83 | 6.0 | 116.5 |
| Windsor Reservoir | nan | 12.04 | 11.9 | nan |
| Mariano Reservoir | 3.99 | 3.91 | 3.3 | 120.9 |
| Carter Lake | 82.71 | 50.22 | 59.7 | 138.5 |
| Cheesman Lake | 73.2 | 71.17 | 66.8 | 109.6 |
| Cobb Lake | nan | 14.88 | 14.4 | nan |
| Fossil Creek Reservoir | nan | 6.48 | 7.8 | nan |
| Black Hollow Reservoir | nan | 4.64 | 3.0 | nan |
| Marshall Reservoir | 6.25 | 5.46 | 5.6 | 111.6 |
| Chambers Lake | nan | 4.49 | 3.6 | nan |
| Halligan Reservoir | nan | 4.86 | 3.8 | nan |
| Antero Reservoir | 20.09 | 20.04 | 19.6 | 102.5 |
| Spinney Mountain Reservoir | nan | 20.48 | 33.6 | nan |
| Union Reservoir | 9.66 | 10.69 | 10.6 | 91.1 |
| Ralph Price Reservoir | nan | 15.35 | 14.8 | nan |
| Marston Reservoir | 10.15 | 14.09 | 8.6 | 118.0 |
| Terry Reservoir | nan | 6.36 | 5.5 | nan |
| Cache La Poudre | nan | 1.83 | 6.0 | nan |
| Boyd Lake | 39.43 | 22.26 | 30.2 | 130.6 |

## Eastern South Platte Reservoir Storage End of December 2023

Eastern South Platte Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Empire Reservoir | 21.15 | 20.91 | 22.6 | 93.6 |
| Julesburg Reservoir | 16.14 | 15.16 | 16.6 | 97.2 |
| Barr Lake | 20.51 | 15.29 | 22.8 | 90.0 |
| Riverside Reservoir | 55.66 | 25.76 | 40.5 | 137.4 |
| Standley Reservoir | 37.83 | 39.01 | 37.1 | 102.0 |
| Prewitt Reservoir | 28.25 | 8.17 | 15.8 | 178.8 |
| Point Of Rocks Reservoir | nan | 29.25 | 46.5 | nan |
| Jackson Lake Reservoir | 24.56 | 18.52 | 21.2 | 115.8 |
| Horsecreek Reservoir | 3.7 | 2.4 | 8.1 | 45.7 |
| Milton Reservoir | 14.36 | 6.5 | 16.7 | 86.0 |

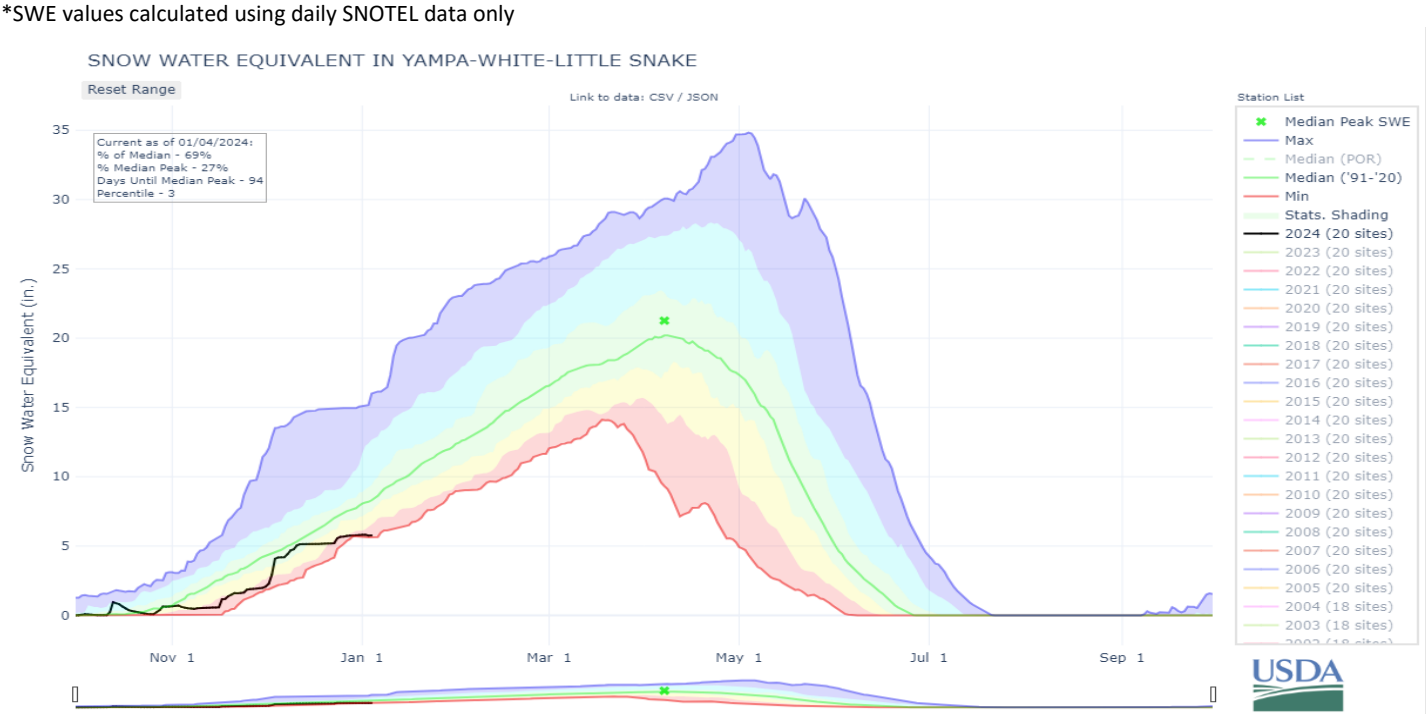

SOUTH PLATTE
Water Supply Forecasts
January 1, 2024
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
< ------ Drier ------- Future Conditions ------- Wetter ------ >
Labels on chart represent volumes of water expressed in thousand acre-feet.
South Platte R bl Antero Reservoir
Apr-Jul
4.4 8 11 14 18
14
Apr-Sep
4.4 8.5 13 16 20
17
South Platte R ab Spinney Res
Apr-Jul
19 28 37 45 58
47
Apr-Sep
19 32 42 53 66
57
South Platte R nr Lake George
Apr-Jul
21 31 41 48 59
49
Apr-Sep
23 34 46 57 72
60
South Platte R bl Cheesman Lk
Apr-Jul
31 53 68 80 96
88
Apr-Sep
30 63 82 100 122
108
South Platte R at South Platte
Apr-Jul
53 92 118 146 194
140
Apr-Sep
56 108 142 177 230
181
Clear Ck at Golden
Apr-Jul
46 65 79 91 110
100
Apr-Sep
49 73 93 111 141
124
St. Vrain Ck at Lyons
Apr-Jul
47 66 78 90 109
87
Apr-Sep
55 77 92 107 129
102
Boulder Ck nr Orodell
Apr-Jul
28 41 49 55 65
54
Apr-Sep
37 50 58 68 82
64
South Boulder Ck nr Eldorado Springs
Apr-Jul
14 25 31 36 44
36
Apr-Sep
14 29 36 43 53
40
Big Thompson R at Canyon Mouth
Apr-Jul
38 56 68 80 98
86
Apr-Sep
47 68 83 98 119
105
Cache La Poudre at Canyon Mouth
Apr-Jul
60 119 159 199 260
220
Apr-Sep
56 121 165 210 275
240
20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140%
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.

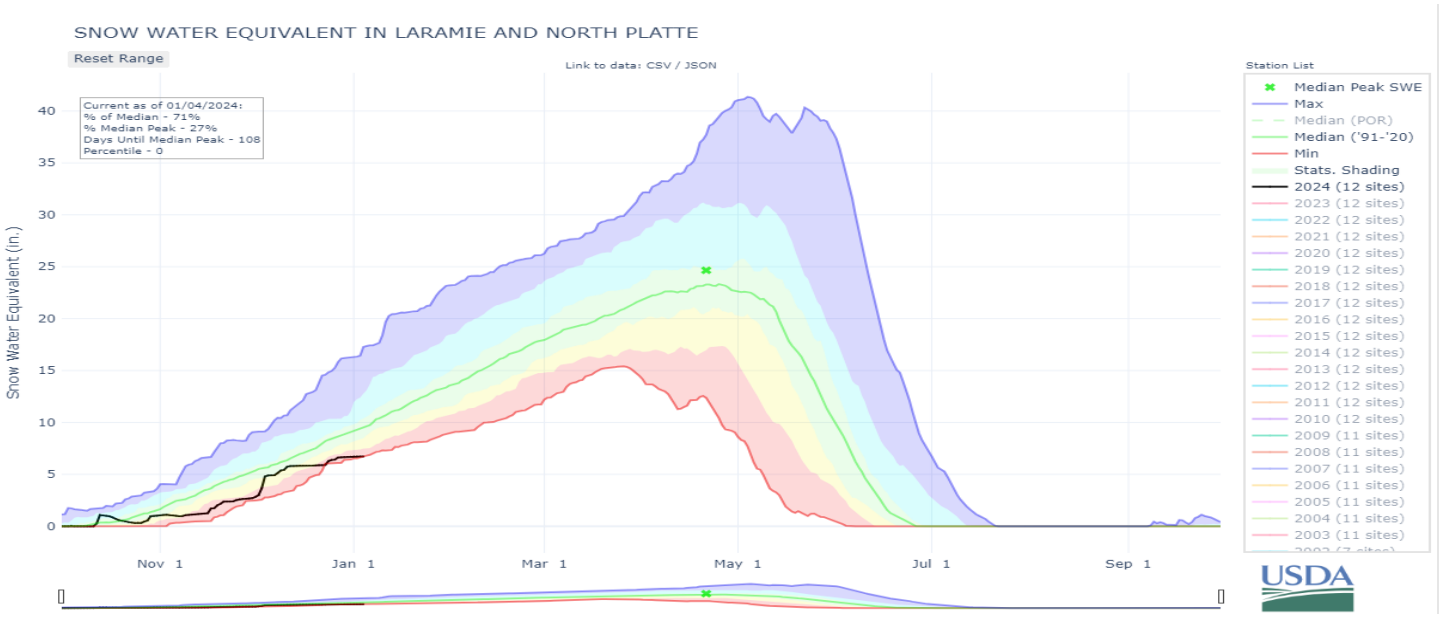
# YAMPA-WHITE-LITTLE SNAKE AND LARAMIE-NORTH PLATTE RIVER BASINS

January 1st, 2024

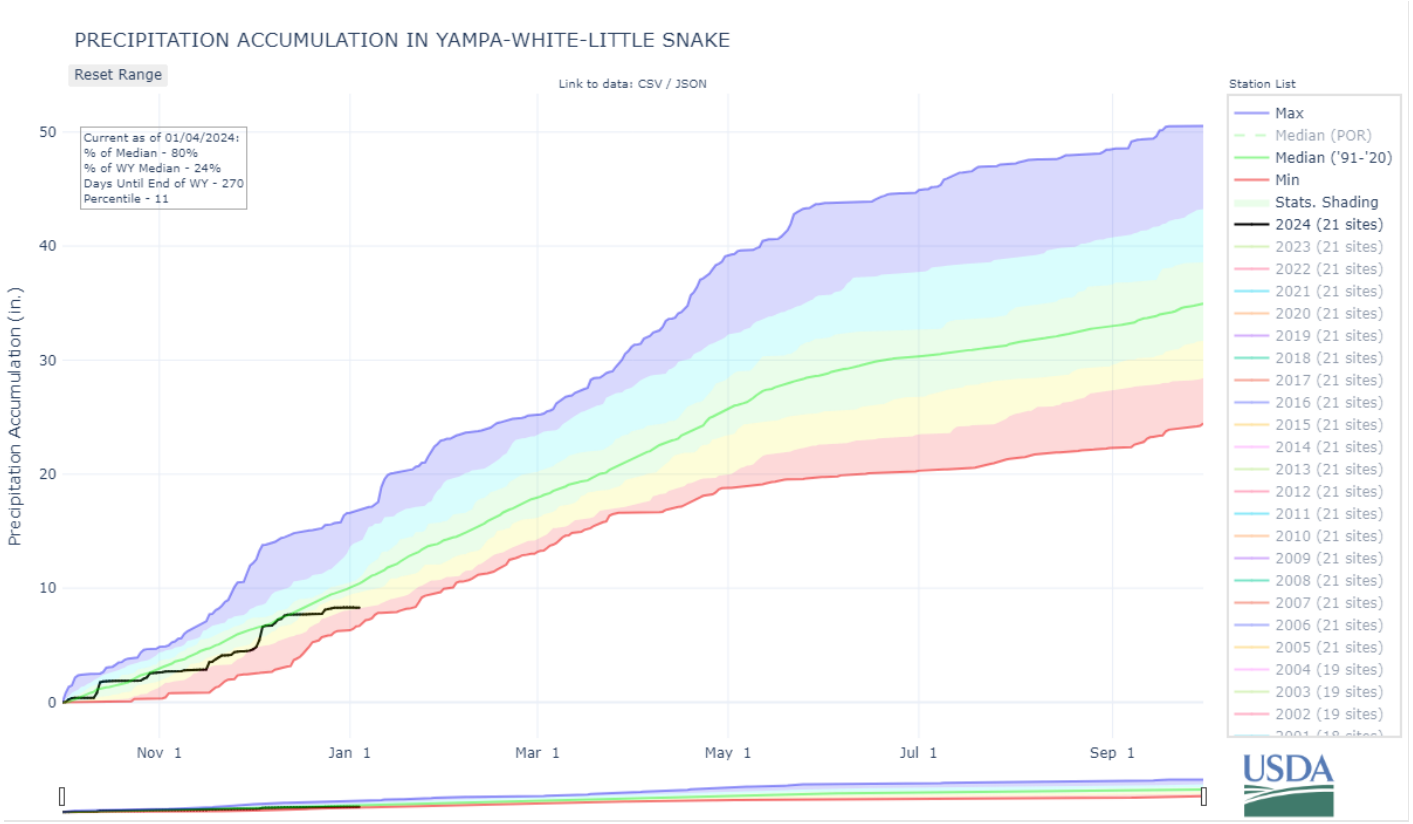
Snowpack in the Yampa-White-Little Snake and the Laramie-North Platte River basins are below normal at 72% and 73% of the median. Precipitation for December was 102% and 103% of median and water year-to-date precipitation is 80% and 73% of median, respectively. Reservoir storage at the end of December for the Yampa-White-Little Snake was 108% of median compared to 83% last year. Current streamflow forecasts range from 54% of median at Little Snake River near Dixon to 96% of median at Yampa River above Stagecoach Reservoir.

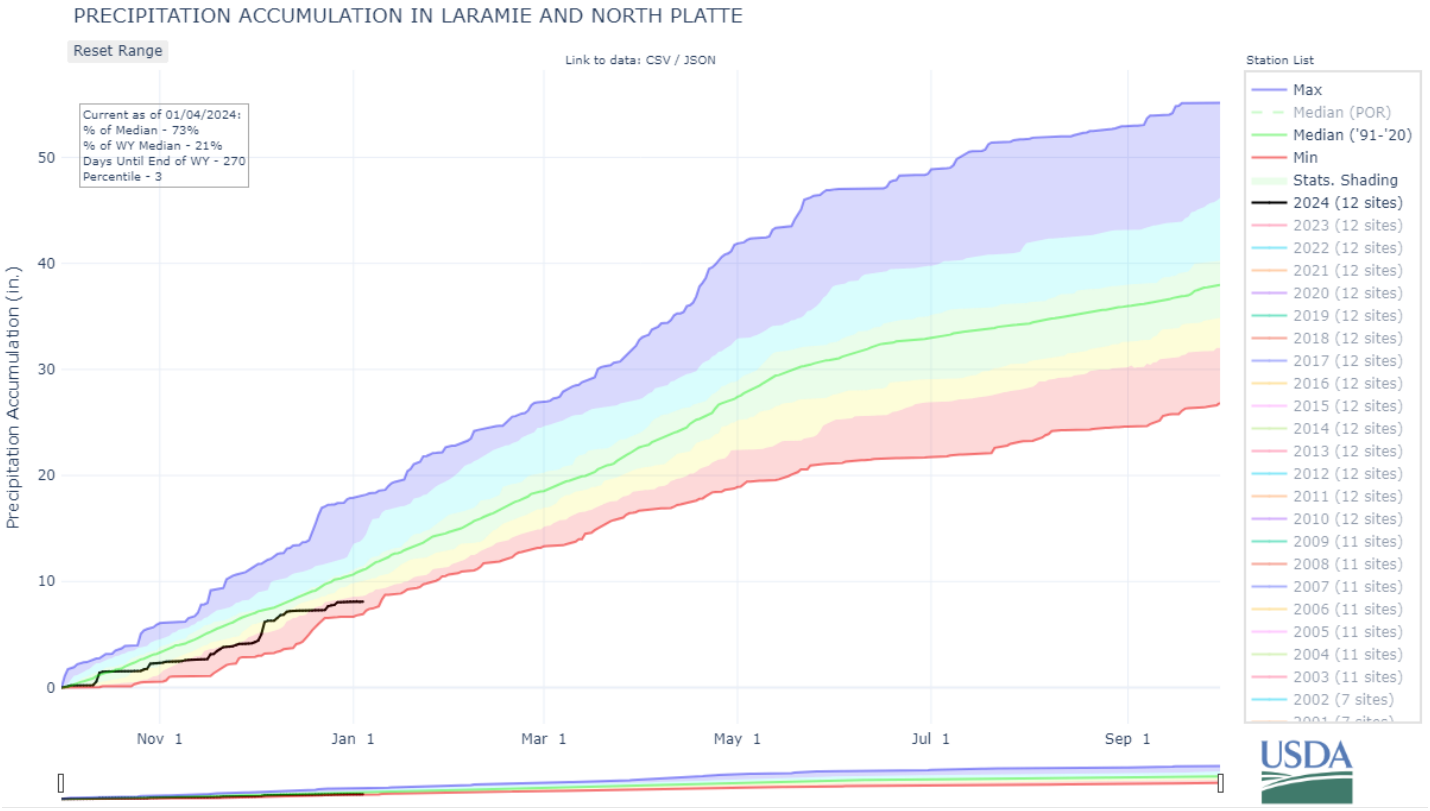
*SWE values calculated using daily SNOTEL data only

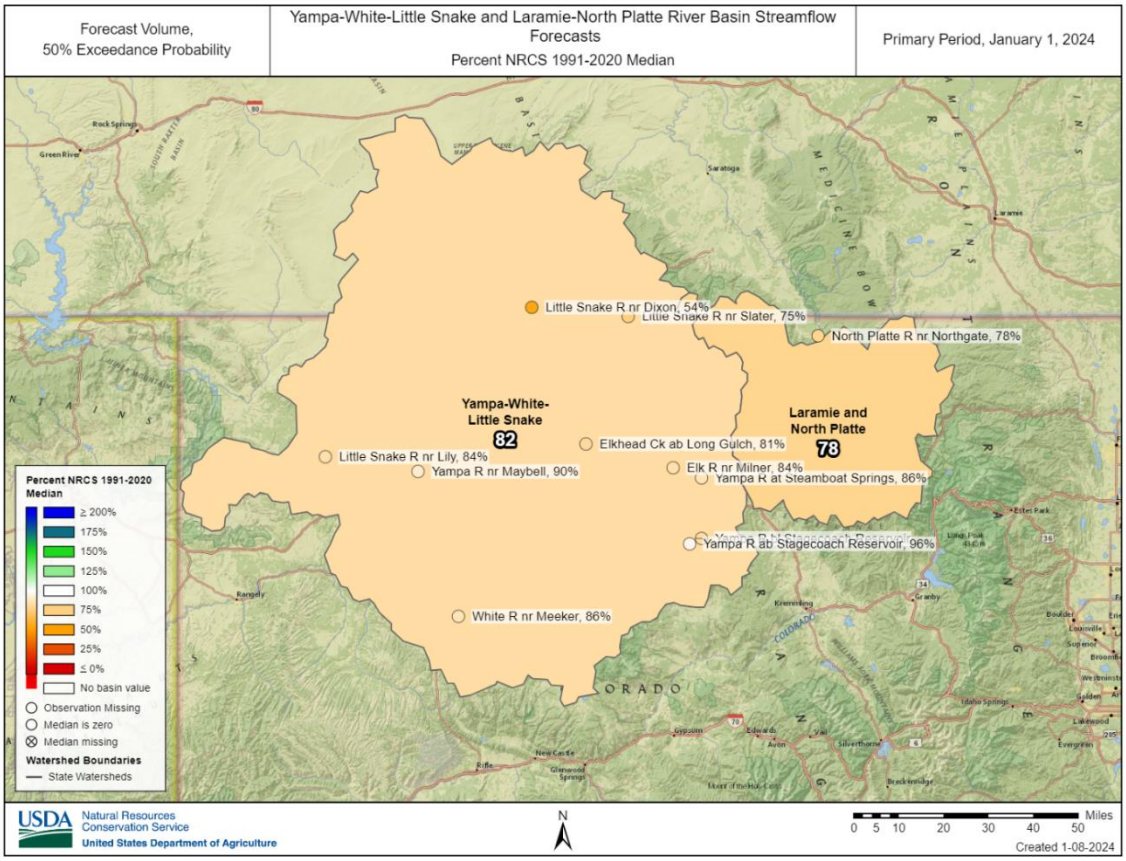


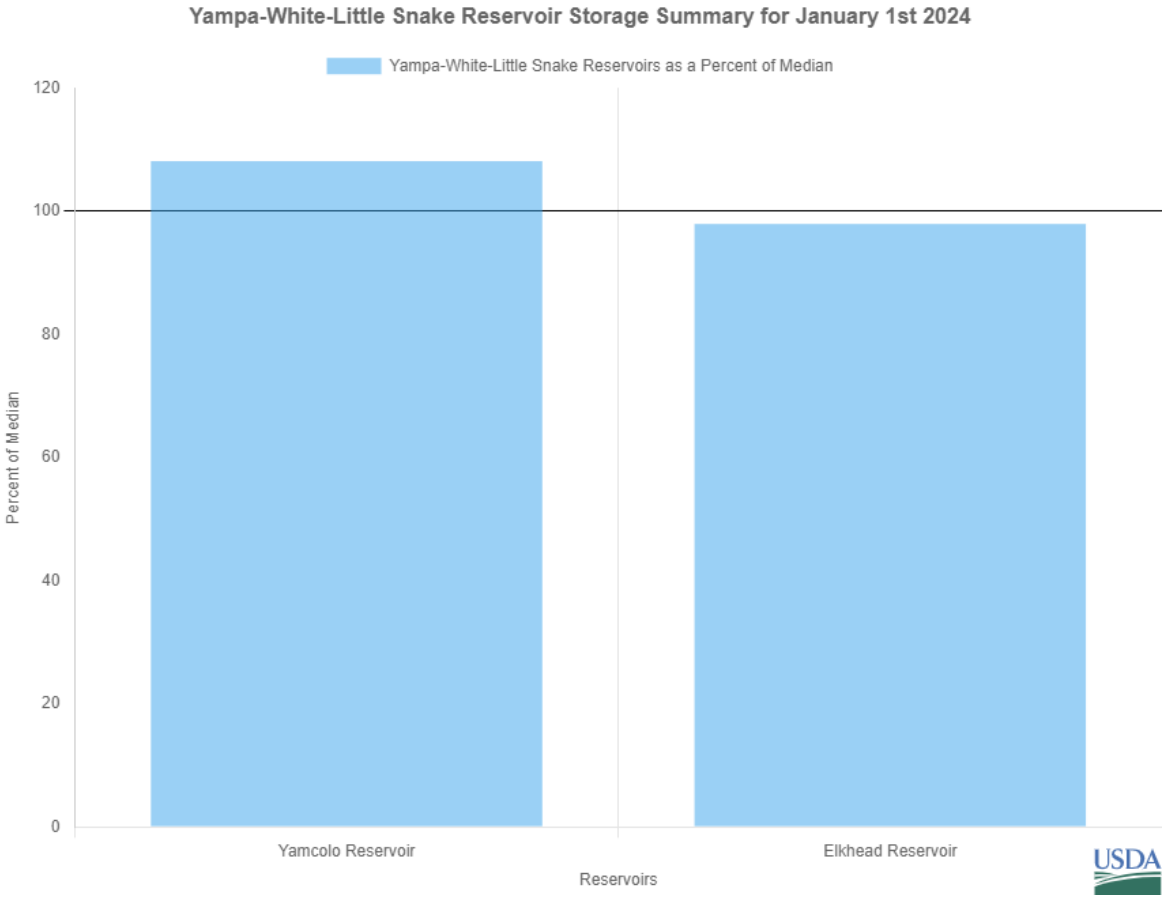




*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.


PRECIPITATION ACCUMULATION IN YAMPA-WHITE-LITTLE SNAKE
Reset Range
Link to data: CSV / JSON
Current as of 01/04/2024:
% of Median - 80%
% of WY Median - 24%
Days Until End of WY - 270
Percentile - 11
Precipitation Accumulation (in.)
0
10
20
30
40
50
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
Station List
Max
Median (POR)
Median ('91-'20)
Min
Stats. Shading
2024 (21 sites)
2023 (21 sites)
2022 (21 sites)
2021 (21 sites)
2020 (21 sites)
2019 (21 sites)
2018 (21 sites)
2017 (21 sites)
2016 (21 sites)
2015 (21 sites)
2014 (21 sites)
2013 (21 sites)
2012 (21 sites)
2011 (21 sites)
2010 (21 sites)
2009 (21 sites)
2008 (21 sites)
2007 (21 sites)
2006 (21 sites)
2005 (21 sites)
2004 (19 sites)
2003 (19 sites)
2002 (19 sites)
USDA


PRECIPITATION ACCUMULATION IN LARAMIE AND NORTH PLATTE
Reset Range
Link to data: CSV / JSON
Current as of 01/04/2024:
% of Median - 73%
% of WY Median - 21%
Days Until End of WY - 270
Percentile - 3
Precipitation Accumulation (in.)
0
10
20
30
40
50
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
Station List
Max
Median (POR)
Median ('91-'20)
Min
Stats. Shading
2024 (12 sites)
2023 (12 sites)
2022 (12 sites)
2021 (12 sites)
2020 (12 sites)
2019 (12 sites)
2018 (12 sites)
2017 (12 sites)
2016 (12 sites)
2015 (12 sites)
2014 (12 sites)
2013 (12 sites)
2012 (12 sites)
2011 (12 sites)
2010 (12 sites)
2009 (11 sites)
2008 (11 sites)
2007 (11 sites)
2006 (11 sites)
2005 (11 sites)
2004 (11 sites)
2003 (11 sites)
2002 (7 sites)
USDA




*No reservoirs are currently monitored in the Laramie-North Platte combined basin.

## Watershed Snowpack Analysis January 1st, 2024

Yampa-White-Little Snake Sub-Basin Snow Data

| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| Yampa | 8.0 | 75.3 | 135.9 |
| Little Snake | 8.0 | 69.6 | 143.6 |
| Elk | 2.0 | 74.7 | 153.8 |
| White | 3.0 | 69.8 | 144.0 |
| Williams Fork of the Yampa | 1.0 | 78.4 | 152.0 |

Laramie and North Platte Sub-Basin Snow Data

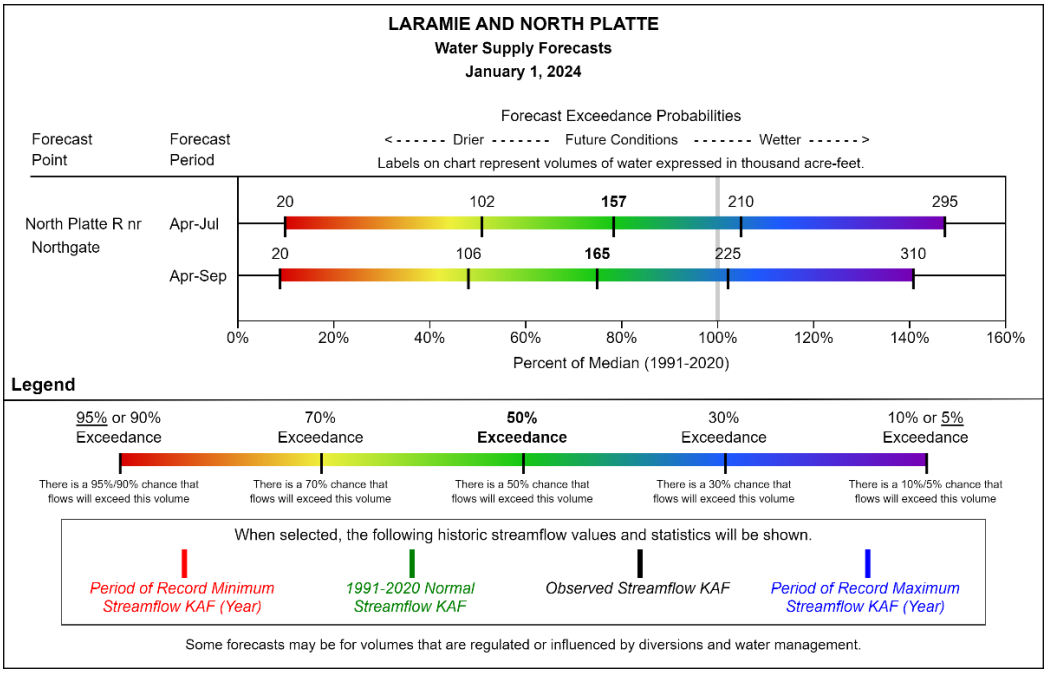
| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| North Platte Headwaters | 10.0 | 73.2 | 128.4 |
| Laramie | 3.0 | 74.3 | 124.6 |

## Reservoir Storage End of December 2023

Yampa-White-Little Snake Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Yamcolo Reservoir | 6.59 | 3.88 | 6.1 | 108.0 |
| High Savery Reservoir | nan | 6.76 | 11.6 | nan |
| Elkhead Reservoir | 18.32 | 17.83 | 18.7 | 98.0 |
| Stagecoach Reservoir nr Oak Creek | nan | 27.08 | 30.2 | nan |

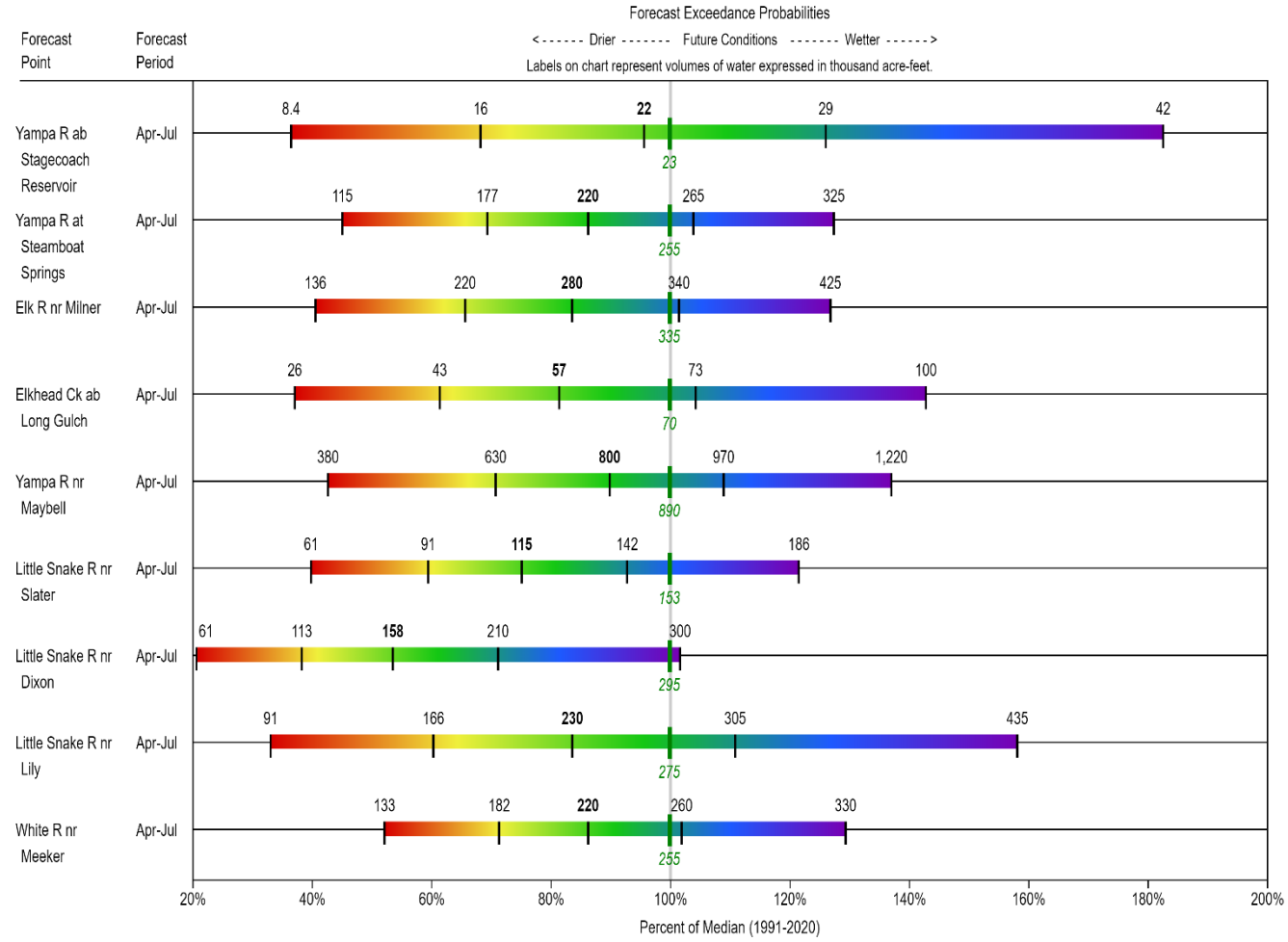
*No reservoirs are currently monitored in our database for the Laramie-North Platte combined basin.



## YAMPA-WHITE-LITTLE SNAKE

**Water Supply Forecasts**

**January 1, 2024**




**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*

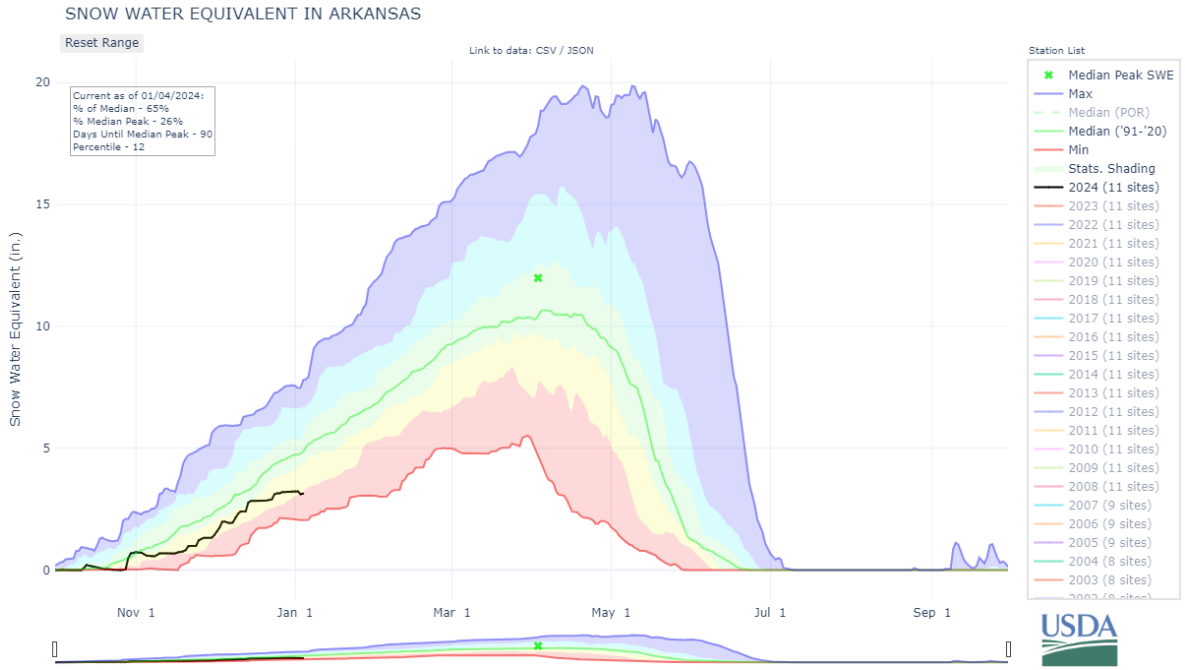
*Period of Record Maximum Streamflow KAF (Year)*

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

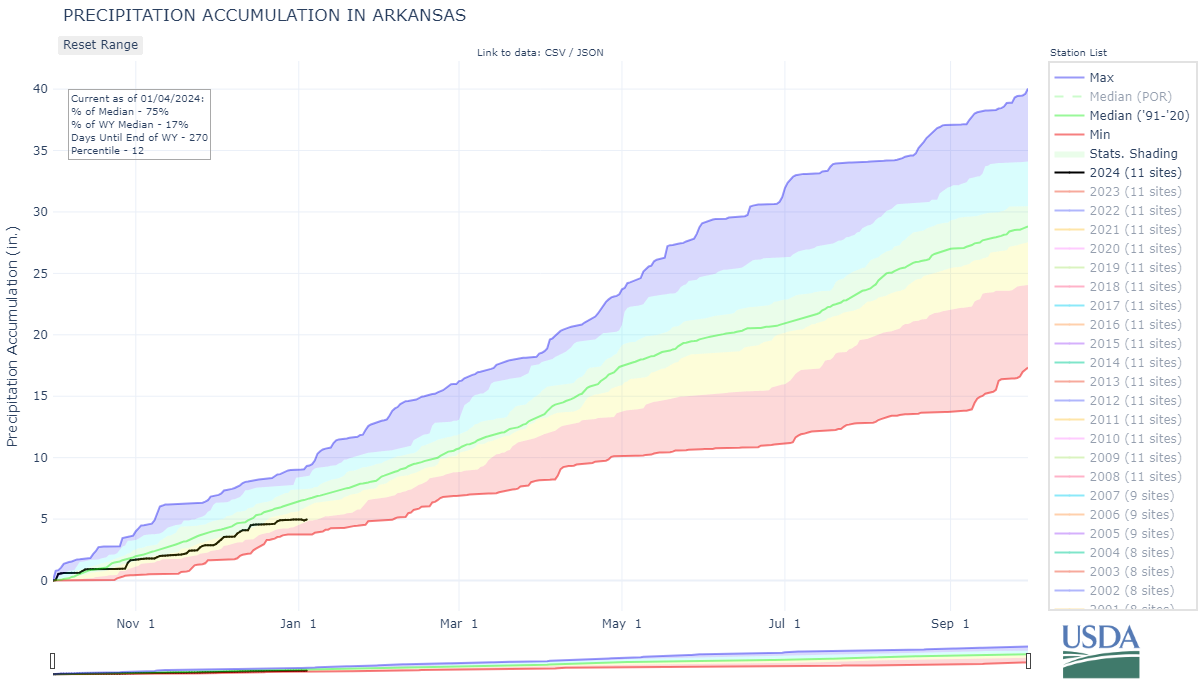
# ARKANSAS RIVER BASIN

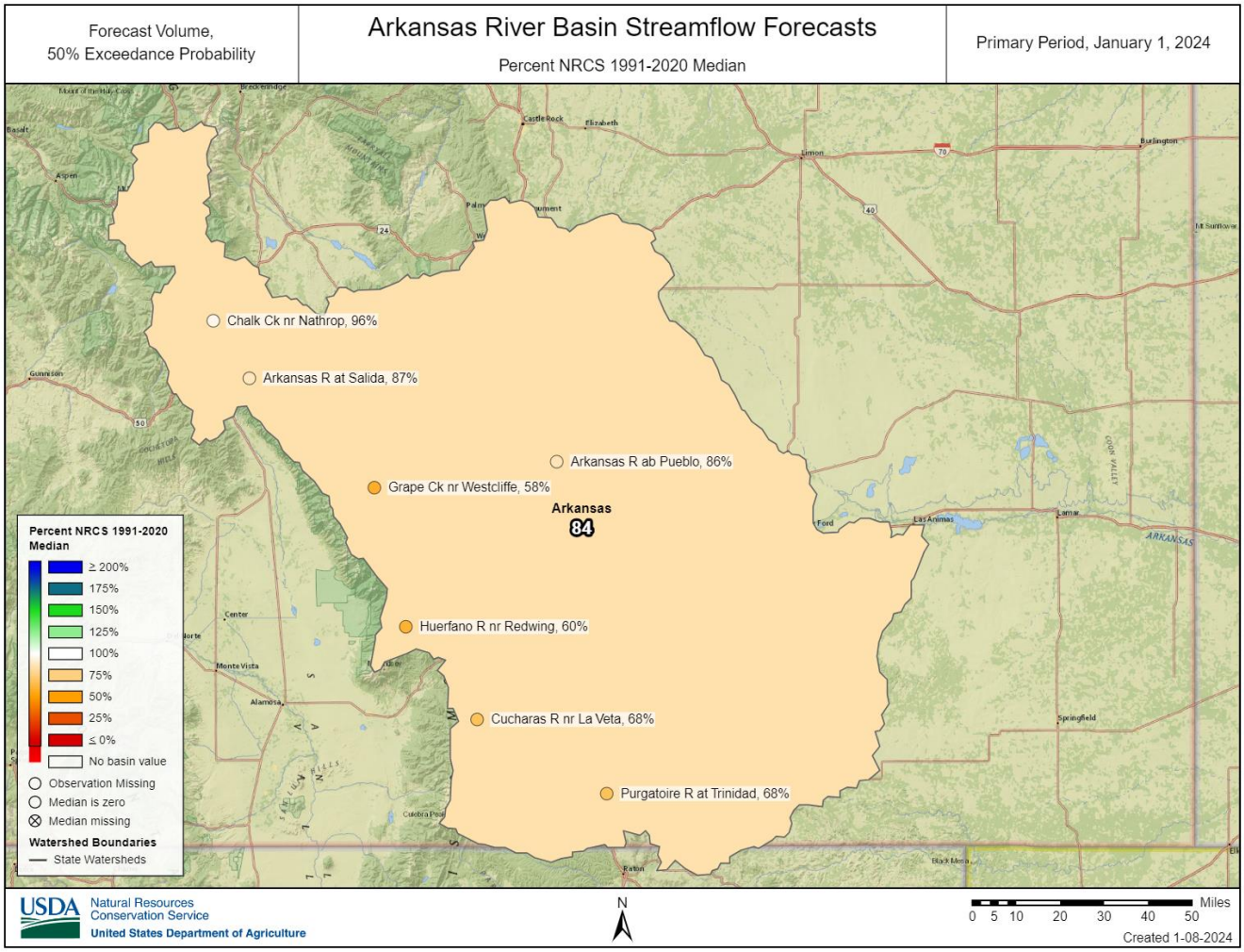
January 1st, 2024

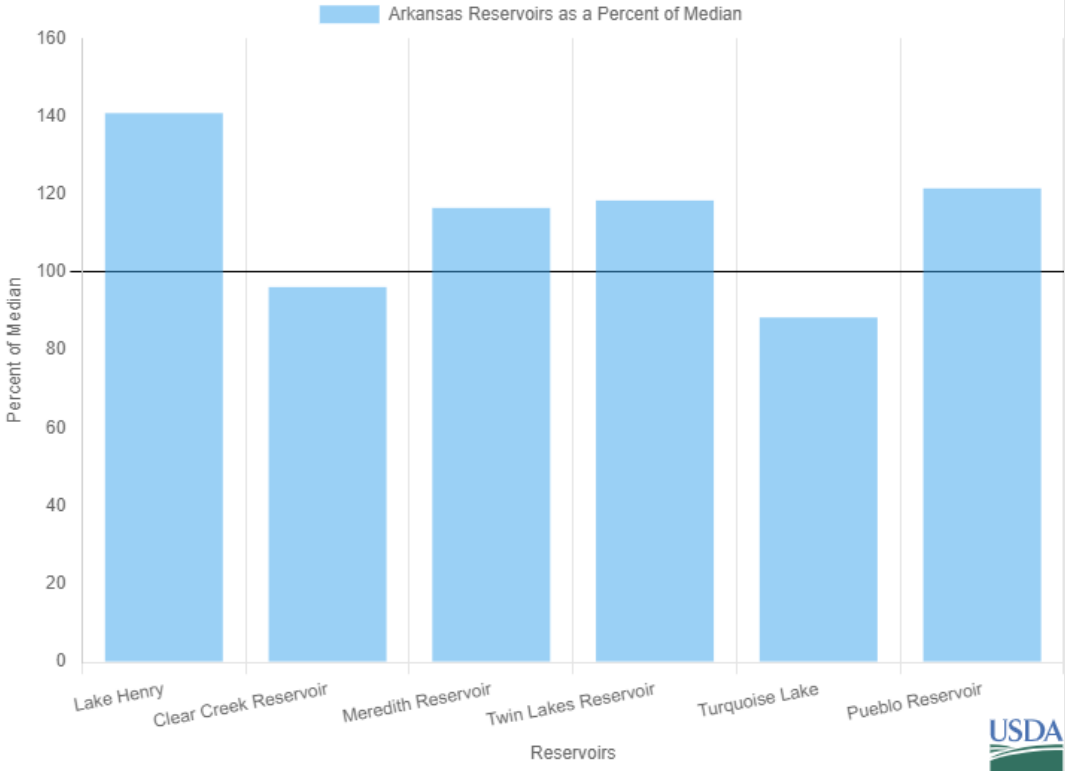
Snowpack in the Arkansas River basin is below normal at 68% of median. Precipitation for December was 109% of median which brings water year-to-date precipitation to 75% of median. Reservoir storage at the end of December was 112% of median compared to 95% last year. Current streamflow forecasts range from 58% of median at Grape Creek near Westcliffe to 96% of median at Chalk Creek near Nathrop.




*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
Arkansas River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Chalk Ck nr Nathrop, 96%
Arkansas R at Salida, 87%
Arkansas R ab Pueblo, 86%
Grape Ck nr Westcliffe, 58%
Arkansas
84
Huerfano R nr Redwing, 60%
Cucharas R nr La Veta, 68%
Purgatoire R at Trinidad, 68%
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


Arkansas Reservoir Storage Summary for January 1st 2024
Arkansas Reservoirs as a Percent of Median
160
140
120
100
80
60
40
20
0
Percent of Median
Lake Henry
Clear Creek Reservoir
Meredith Reservoir
Twin Lakes Reservoir
Turquoise Lake
Pueblo Reservoir
Reservoirs
USDA

## Watershed Snowpack Analysis January 1st, 2024

Arkansas Sub-Basin Snow Data

| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| Apishapa | 1.0 | 92.9 | 32.1 |
| Purgatoire | 2.0 | 71.6 | 33.8 |
| Lower Arkansas Headwaters | 3.0 | 62.8 | 50.7 |
| Upper Arkansas Headwaters | 4.0 | 79.5 | 107.8 |
| Cucharas & Huerfano | 3.0 | 56.5 | 34.3 |

## Arkansas Reservoir Storage End of December 2023

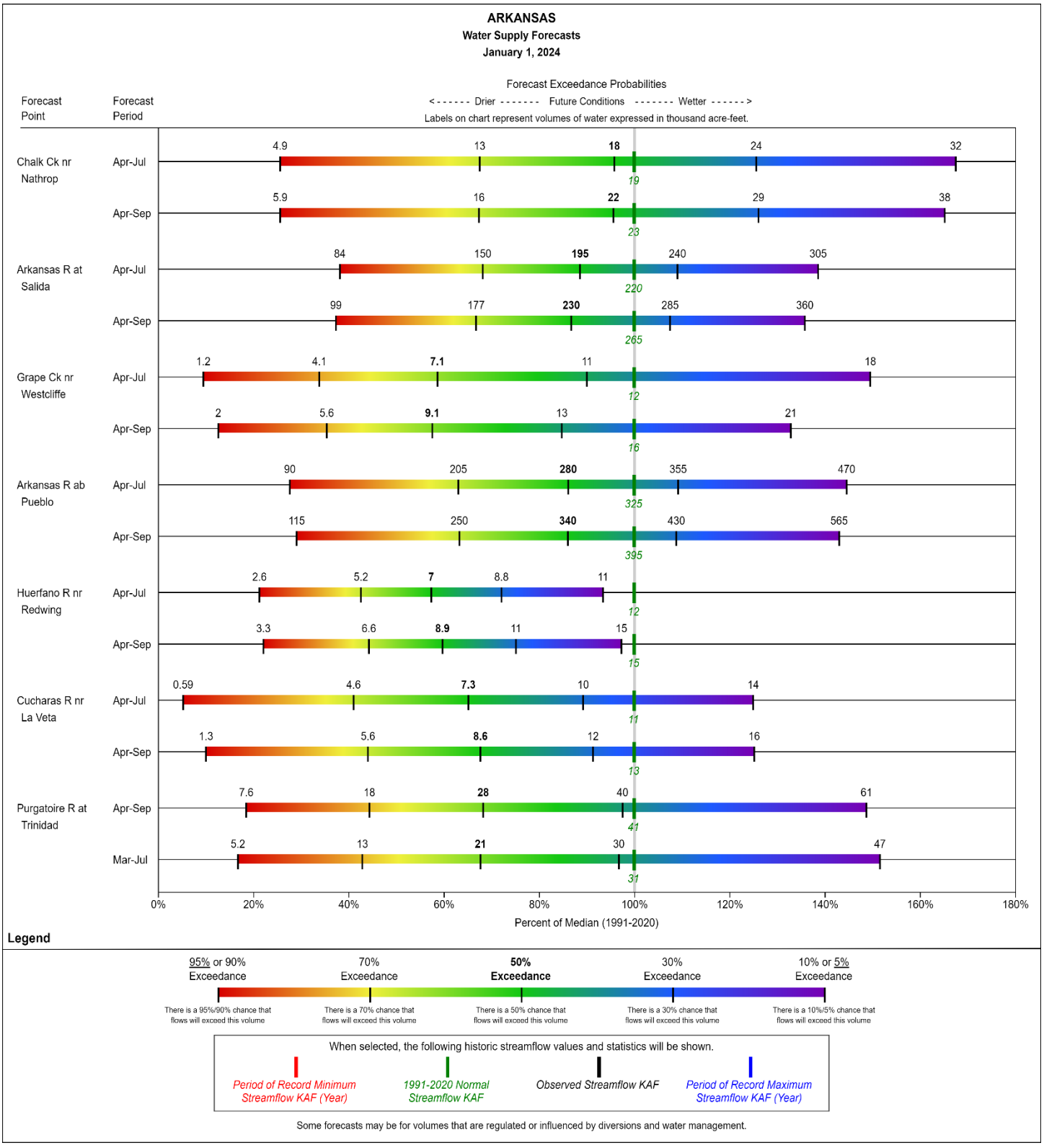
Arkansas Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Clear Creek Reservoir | 6.93 | 7.44 | 7.2 | 96.2 |
| Twin Lakes Reservoir | 53.86 | 42.19 | 45.5 | 118.4 |
| Trinidad Lake | nan | 21.01 | 18.8 | nan |
| Pueblo Reservoir | 231.01 | 192.3 | 190.1 | 121.5 |
| Turquoise Lake | 78.17 | 81.16 | 88.4 | 88.4 |
| Meredith Reservoir | 26.79 | 10.9 | 23.0 | 116.5 |
| Lake Henry | 6.2 | 4.92 | 4.4 | 140.9 |

## Eastern Arkansas Reservoir Storage End of December 2023

Eastern Arkansas Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Horse Creek Reservoir | 0.0 | 0.0 | 2.1 | 0.0 |
| John Martin Reservoir | 35.97 | 22.26 | 51.8 | 69.4 |
| Holbrook Lake | nan | 0.0 | 1.94 | nan |
| Adobe Creek Reservoir | 32.73 | 4.36 | 27.7 | 118.2 |




**Legend**




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

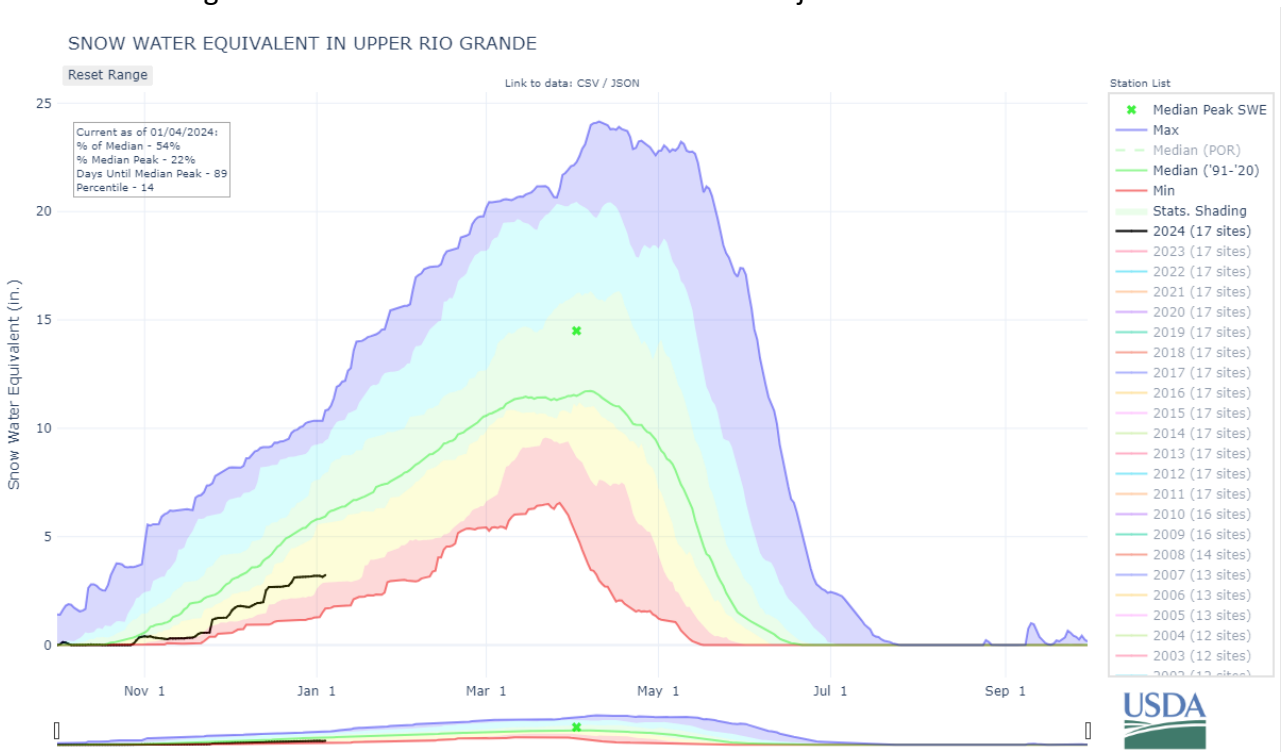
*Period of Record Minimum Streamflow KAF (Year)* | *1991-2020 Normal Streamflow KAF* | *Observed Streamflow KAF* | *Period of Record Maximum Streamflow KAF (Year)*

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

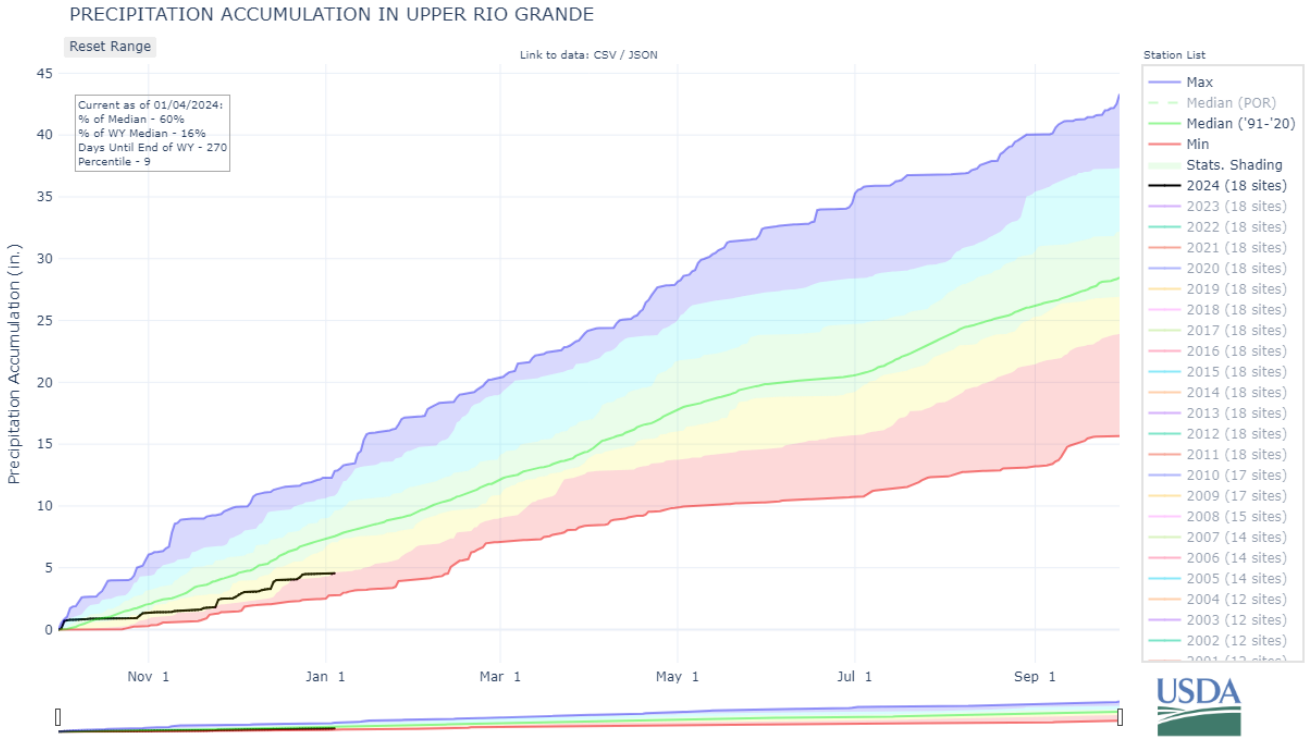
# UPPER RIO GRANDE RIVER BASIN

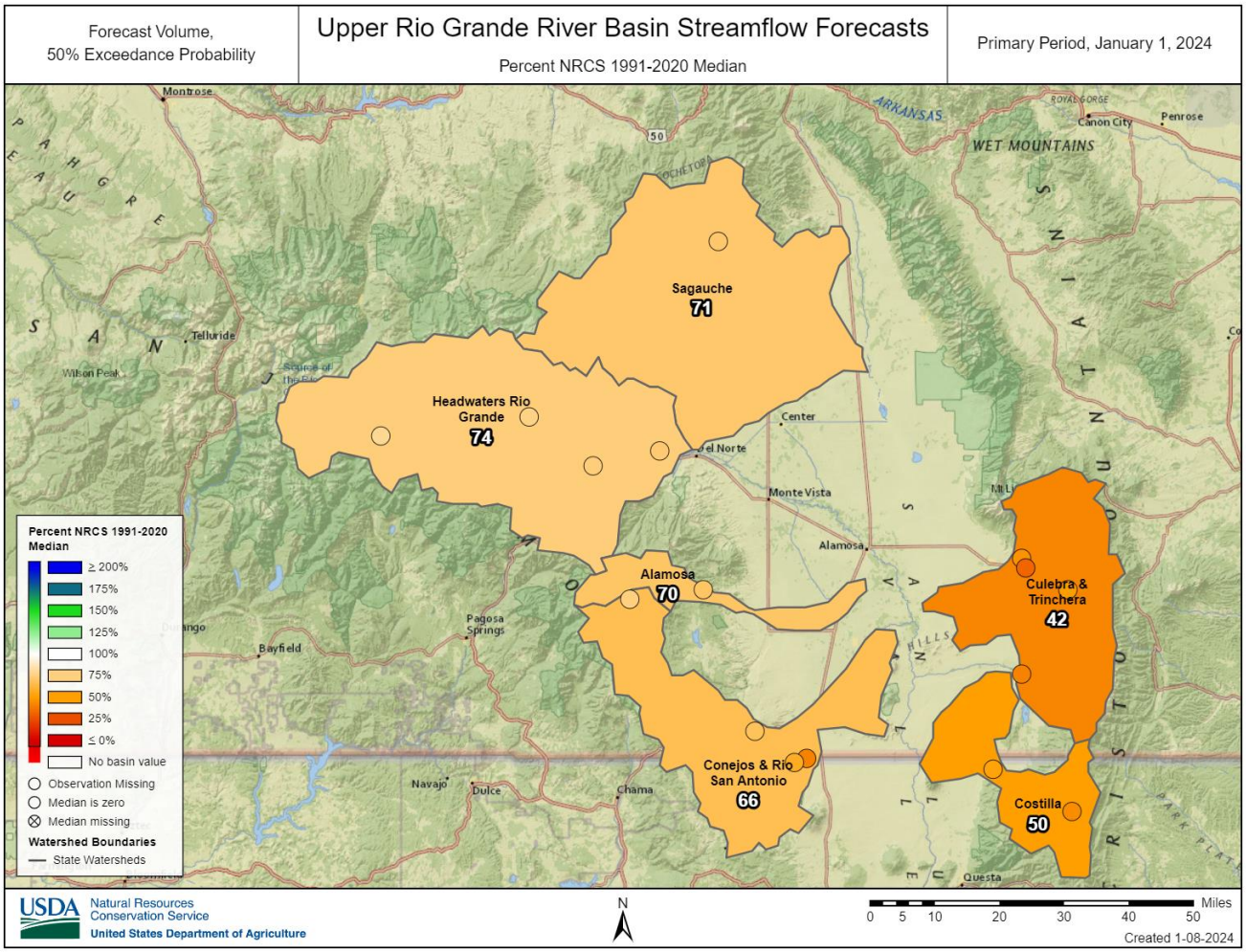
January 1st, 2024

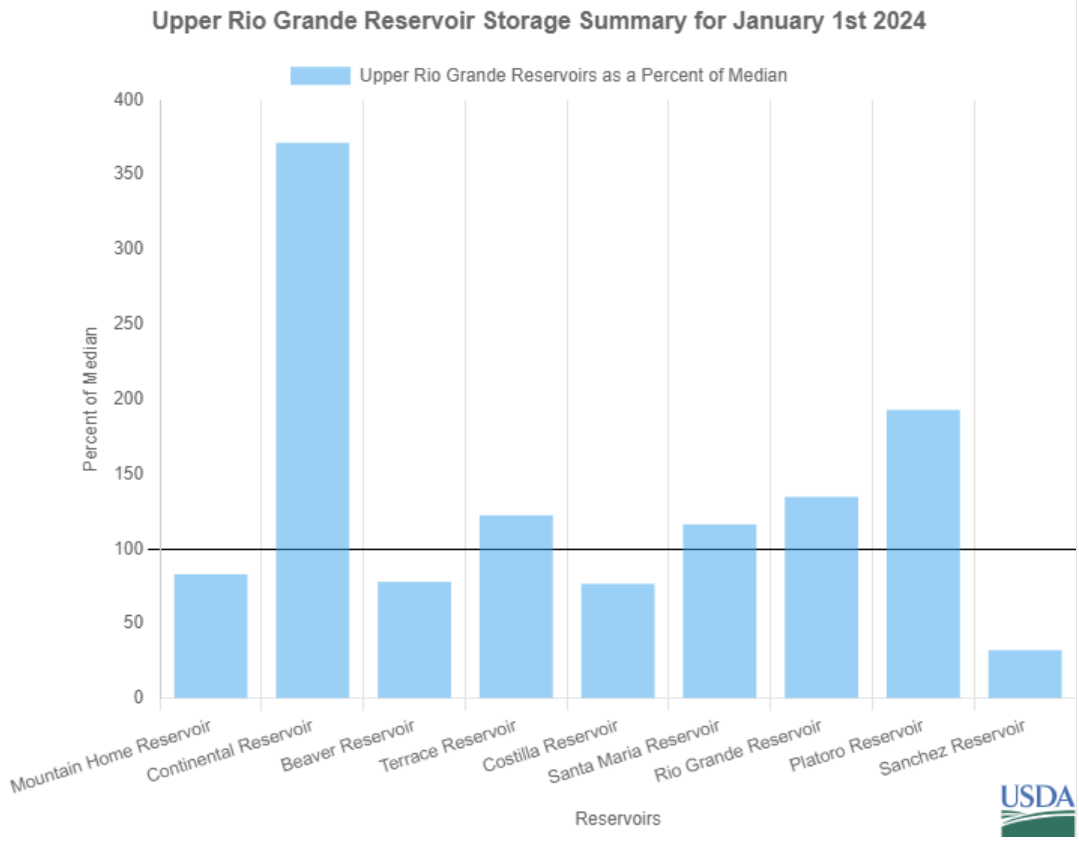
Snowpack in the Upper Rio Grande River basin is below normal at 55% of median. Precipitation for December was 92% of median which brings water year-to-date precipitation to 60% of median. Reservoir storage at the end of December was 121% of median compared to 106% last year. Current streamflow forecasts range from 32% of median at Sangre De Cristo Creek to 78% of median at Conejos River below Platoro Reservoir.




*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
Upper Rio Grande River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Sagauche
71
Headwaters Rio Grande
74
Alamosa
70
Culebra & Trinchera
42
Conejos & Rio San Antonio
66
Costilla
50
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


Upper Rio Grande Reservoir Storage Summary for January 1st 2024
Upper Rio Grande Reservoirs as a Percent of Median
Percent of Median
400
350
300
250
200
150
100
50
0
Mountain Home Reservoir
Continental Reservoir
Beaver Reservoir
Terrace Reservoir
Costilla Reservoir
Santa Maria Reservoir
Rio Grande Reservoir
Platoro Reservoir
Sanchez Reservoir
Reservoirs
USDA

## Watershed Snowpack Analysis January 1st, 2024

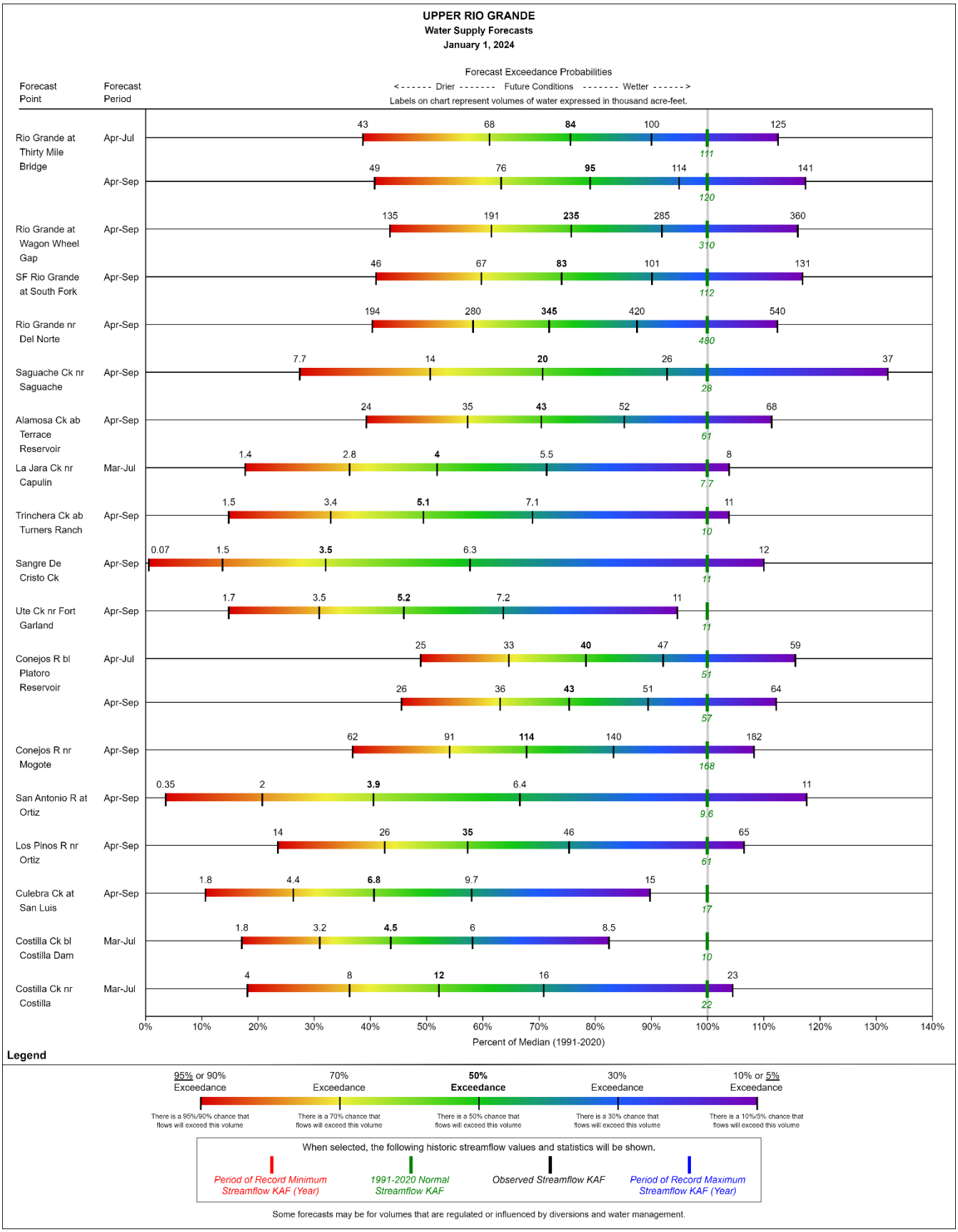
Upper Rio Grande Sub-Basin Snow Data

| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| Sagauche | 3.0 | 57.0 | 88.2 |
| Northern San Luis Valley | 2.0 | 44.3 | 29.5 |
| Culebra & Trinchera | 3.0 | 54.9 | 58.6 |
| Conejos & Rio San Antonio | 2.0 | 52.8 | 97.5 |
| Headwaters Rio Grande | 5.0 | 57.1 | 89.4 |
| Alamosa | 1.0 | 53.3 | 88.3 |
| Costilla | 2.0 | 57.6 | 35.6 |

## Reservoir Storage End of December 2023

Upper Rio Grande Reservoir Data

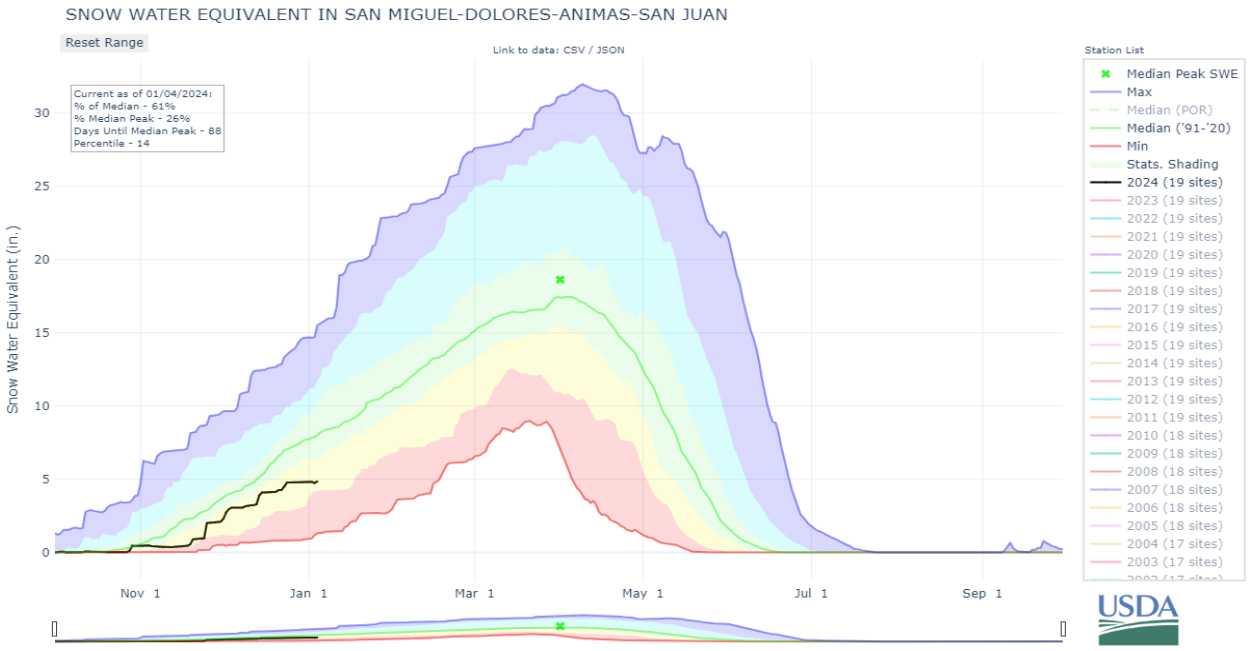
| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Costilla Reservoir | 4.22 | 6.21 | 5.5 | 76.7 |
| Continental Reservoir | 11.88 | 10.23 | 3.2 | 371.2 |
| Mountain Home Reservoir | 1.99 | 3.92 | 2.4 | 82.9 |
| Terrace Reservoir | 5.14 | 5.57 | 4.2 | 122.4 |
| Santa Maria Reservoir | 8.73 | 8.87 | 7.5 | 116.4 |
| Sanchez Reservoir | 6.25 | 7.87 | 19.3 | 32.4 |
| Platoro Reservoir | 33.19 | 13.89 | 17.2 | 193.0 |
| Rio Grande Reservoir | 20.63 | 23.92 | 15.3 | 134.8 |
| La Jara Reservoir | nan | 1.1 | 1.64 | nan |
| Beaver Reservoir | 3.2 | 3.29 | 4.1 | 78.0 |


UPPER RIO GRANDE
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
Rio Grande at Thirty Mile Bridge Apr-Jul 43 68 84 100 125 111
Apr-Sep 49 76 95 114 141 120
Rio Grande at Wagon Wheel Gap Apr-Sep 135 191 235 285 360 310
SF Rio Grande at South Fork Apr-Sep 46 67 83 101 131 112
Rio Grande nr Del Norte Apr-Sep 194 280 345 420 540 480
Saguache Ck nr Saguache Apr-Sep 7.7 14 20 26 37 28
Alamosa Ck ab Terrace Reservoir Apr-Sep 24 35 43 52 68 61
La Jara Ck nr Capulin Mar-Jul 1.4 2.8 4 5.5 8 7.7
Trinchera Ck ab Turners Ranch Apr-Sep 1.5 3.4 5.1 7.1 11 10
Sangre De Cristo Ck Apr-Sep 0.07 1.5 3.5 6.3 12 11
Ute Ck nr Fort Garland Apr-Sep 1.7 3.5 5.2 7.2 11 11
Conejos R bl Platoro Reservoir Apr-Jul 25 33 40 47 59 51
Apr-Sep 26 36 43 51 64 57
Conejos R nr Mogote Apr-Sep 62 91 114 140 182 168
San Antonio R at Ortiz Apr-Sep 0.35 2 3.9 6.4 11 9.6
Los Pinos R nr Ortiz Apr-Sep 14 26 35 46 65 61
Culebra Ck at San Luis Apr-Sep 1.8 4.4 6.8 9.7 15 17
Costilla Ck bl Costilla Dam Mar-Jul 1.8 3.2 4.5 6 8.5 10
Costilla Ck nr Costilla Mar-Jul 4 8 12 16 23 22
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140%
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.

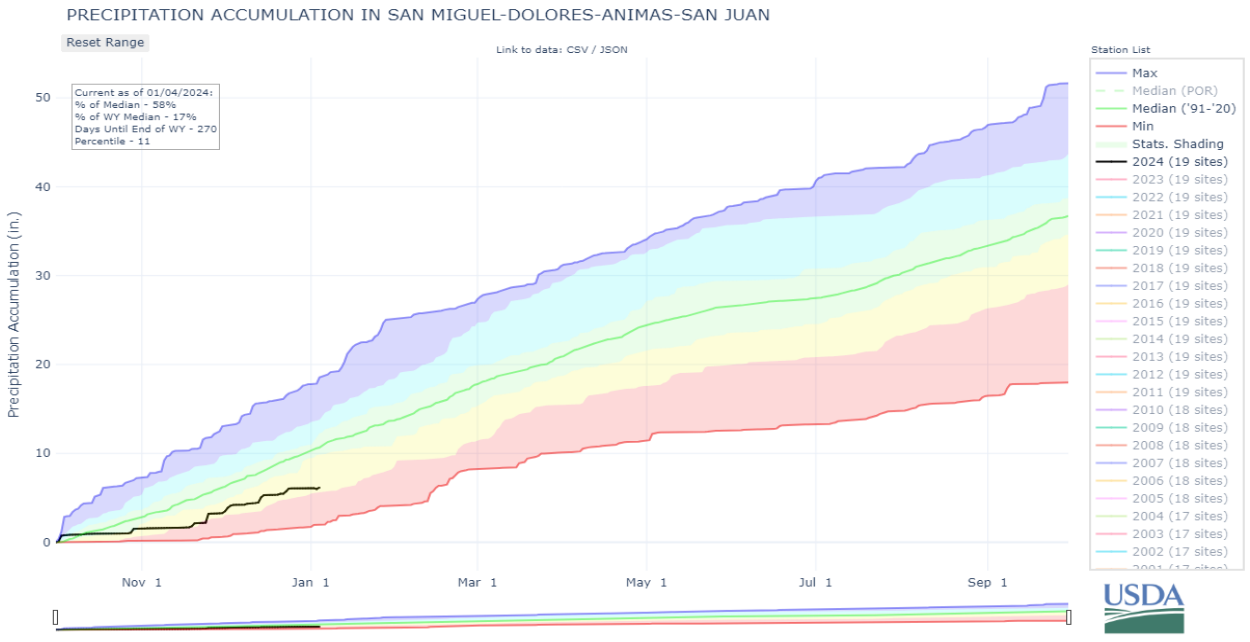
# SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN COMBINED RIVER BASIN

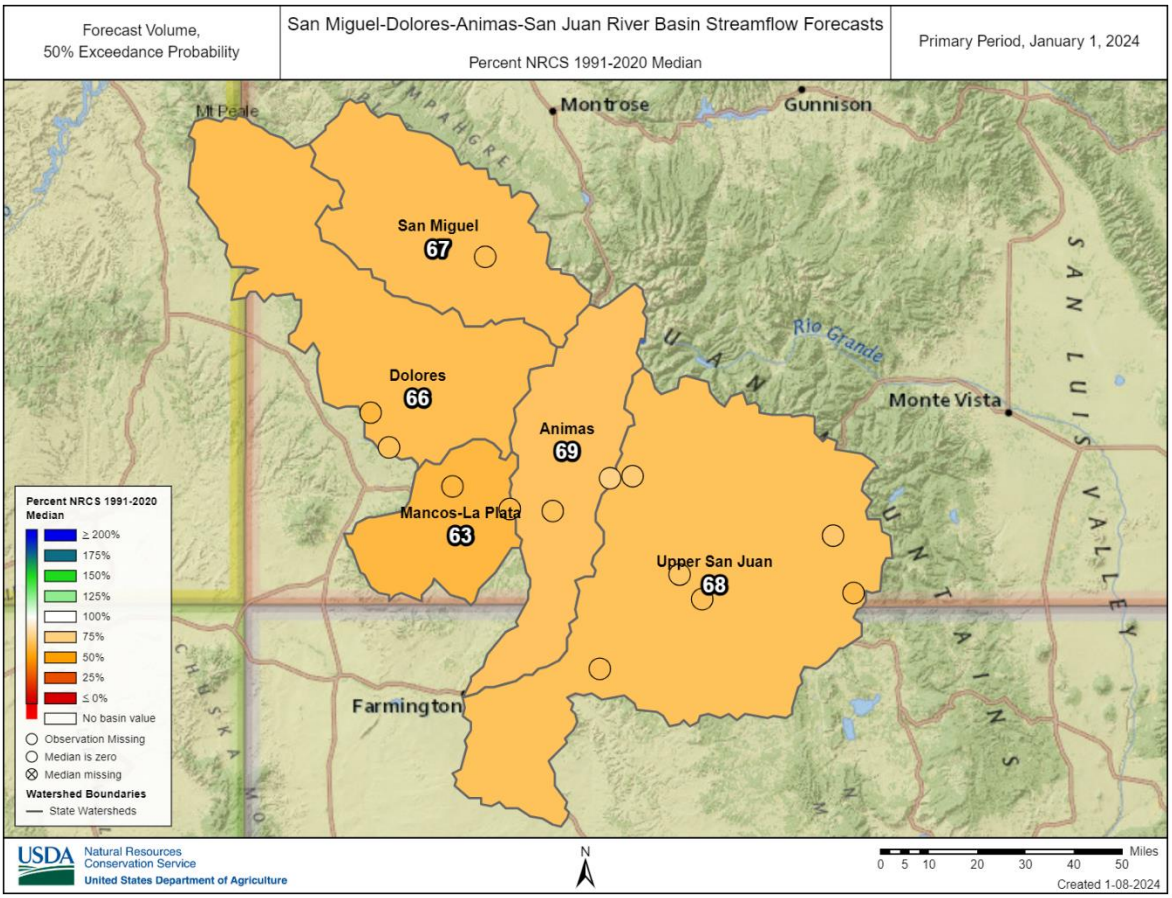
January 1st, 2024

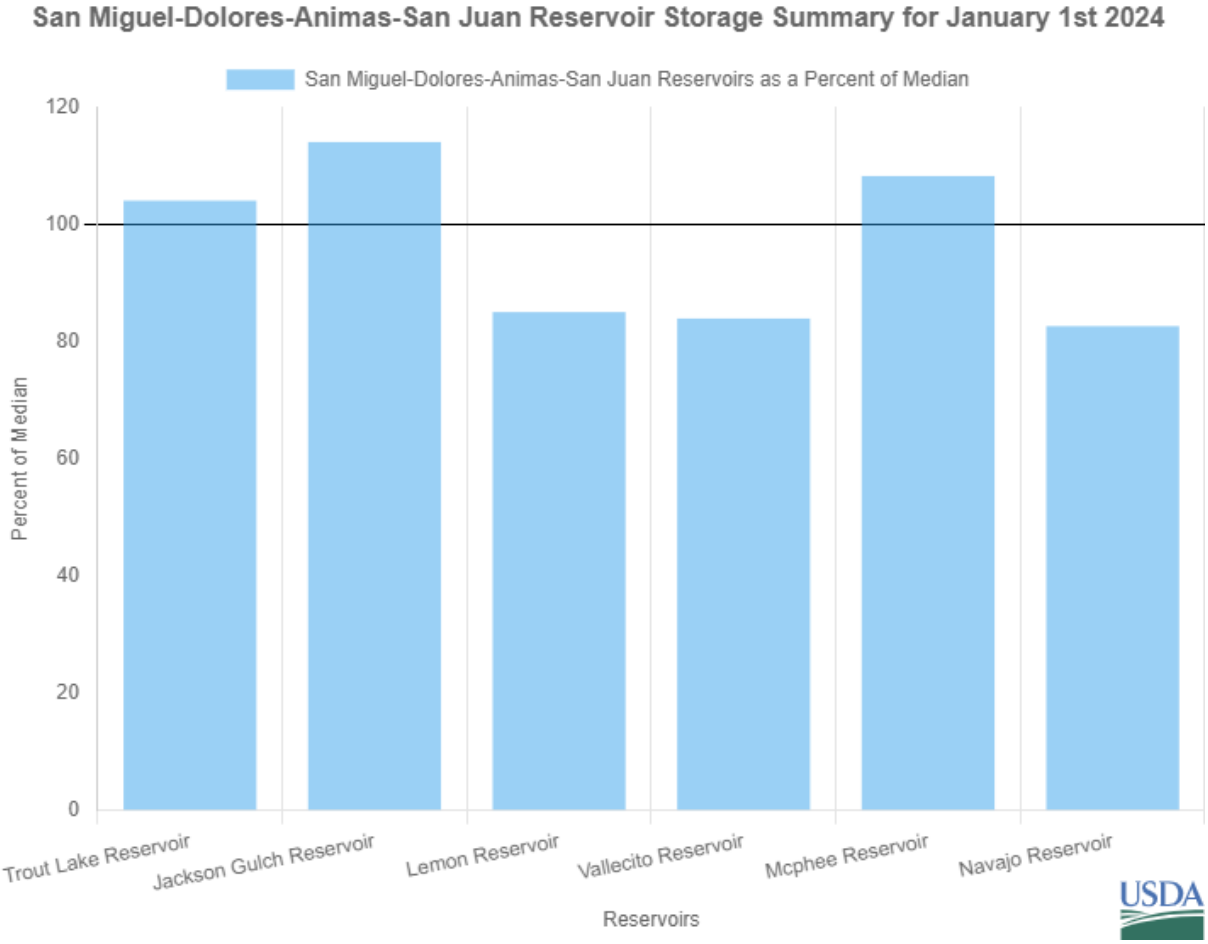
Snowpack in the combined southwest river basins is below normal at 62% of median. Precipitation for December was 85% of median which brings water year-to-date precipitation to 58% of median. Reservoir storage at the end of December was 87% of median compared to 66% last year. Current streamflow forecasts range from 63% of median at Mancos River near Mancos to 76% of median at Florida River below Lemon Reservoir near Durango.




*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
San Miguel-Dolores-Animas-San Juan River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, January 1, 2024
Mt Peale
Montrose
Gunnison
San Miguel
67
Dolores
66
Animas
69
Mancos-La Plata
63
Upper San Juan
68
Rio Grande
Monte Vista
Farmington
SAN LUIS VALLEY
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


San Miguel-Dolores-Animas-San Juan Reservoir Storage Summary for January 1st 2024
San Miguel-Dolores-Animas-San Juan Reservoirs as a Percent of Median
120
100
80
60
40
20
0
Percent of Median
Trout Lake Reservoir
Jackson Gulch Reservoir
Lemon Reservoir
Vallecito Reservoir
Mcphee Reservoir
Navajo Reservoir
Reservoirs
USDA

## Watershed Snowpack Analysis January 1st, 2024

San Miguel-Dolores-Animas-San Juan Sub-Basin Snow Data

| | # of Sites | % Median | Last Year % Median |
|---|---|---|---|
| Mancos-La Plata | 3.0 | 58.8 | 85.5 |
| Animas | 8.0 | 57.2 | 96.2 |
| Upper San Juan | 6.0 | 62.0 | 94.1 |
| San Miguel | 4.0 | 68.2 | 129.1 |
| Dolores | 4.0 | 68.9 | 109.2 |

## Reservoir Storage End of December 2023

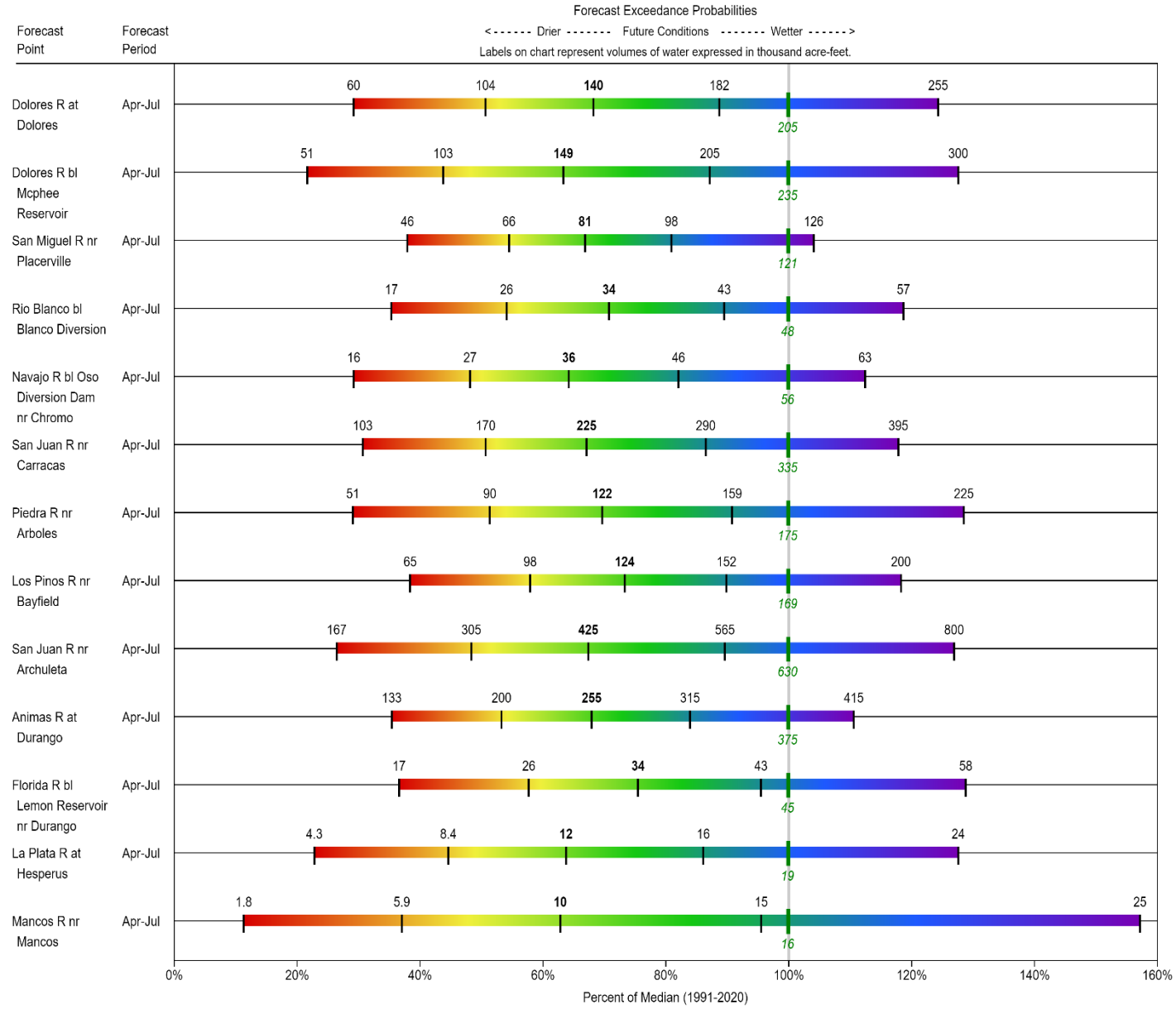
San Miguel-Dolores-Animas-San Juan Reservoir Data

| | Current Storage (KAF) | LY Storage (KAF) | Median (KAF) | Percent of Median |
|---|---|---|---|---|
| Trout Lake Reservoir | 2.6 | 2.43 | 2.5 | 104.0 |
| Navajo Reservoir | 1098.48 | 852.42 | 1330.0 | 82.6 |
| Lemon Reservoir | 15.56 | 16.8 | 18.3 | 85.0 |
| Vallecito Reservoir | 60.51 | 66.75 | 72.1 | 83.9 |
| Jackson Gulch Reservoir | 4.56 | 5.53 | 4.0 | 114.0 |
| Groundhog Reservoir | nan | 0.0 | 14.2 | nan |
| Mcphee Reservoir | 292.48 | 186.84 | 270.3 | 108.2 |

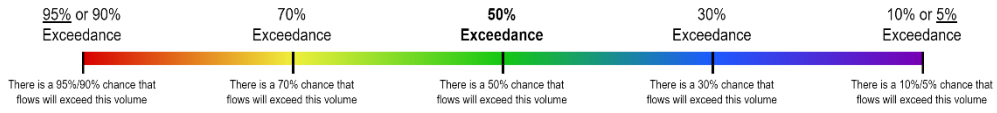
**SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN**

**Water Supply Forecasts**

**January 1, 2024**




**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)* |
|---|---|---|---|

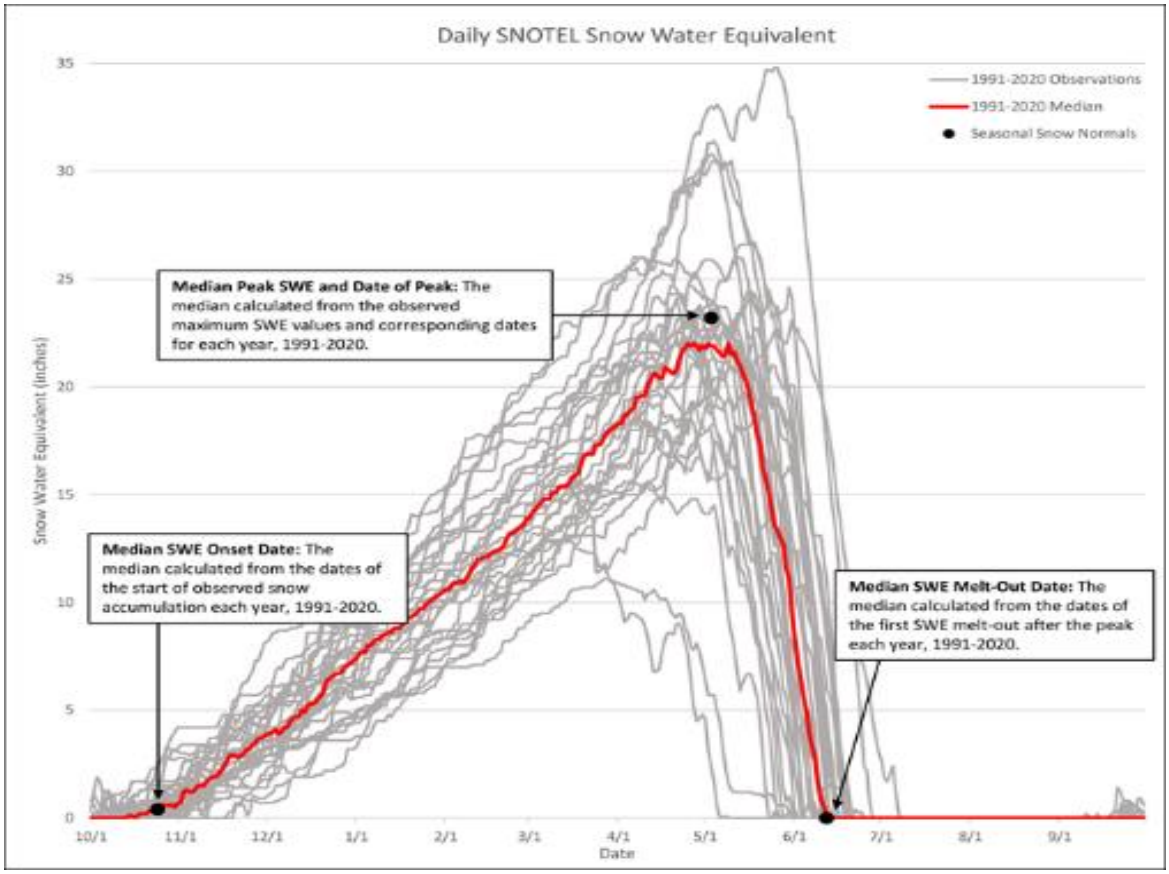
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

# New 1991-2020 Statistical Normals

The NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program recently published new statistical normals (medians or averages) to describe the central tendency of a data record over a 30-year period. Data normals are key in helping water users compare current conditions to past conditions using the metric "% of normal." Every 10 years, the SSWSF Program updates the 30-year normals reference period to stay consistent with World Meteorological Organization standards that account for changing climatic conditions over time. As such, this year the SSWSF Program transitioned from using 1981-2010 data normals to using 1991-2020 data normals.

For the 1991-2020 reference period, the median is the official NRCS normal when conveying information about current snowpack, precipitation, and water supply conditions. The median was previously used as the official 1981-2010 normal for SWE and some streamflow forecast points, but the average was used for other data types. Setting the official normal to the median provides consistency across data types and stations. Viewing the 30-year average December be preferable over the median in some instances, therefore, both the average and the median are available in most NRCS reports and products. See Median vs. Average for more information about the median.

A new suite of statistics for automated snow monitoring stations are available to provide information about normal seasonal snowpack characteristics. These new seasonal statistics include medians and averages for the SWE onset date and melt-out date, as well as the median and average maximum seasonal SWE value (Peak SWE) and date of Peak SWE. More detailed information on the updated normals can be found on the Water and Climate Center's [30-year normals page.]



# How to Read Snowpack Graphs

The graphs show snow water equivalent (SWE) (in inches), using daily SNOTEL data. for the October 1 through September 30 water year. Basin "observed" SWE values are computed using SNOTEL sites which are characteristic of the snowpack of the particular basin.

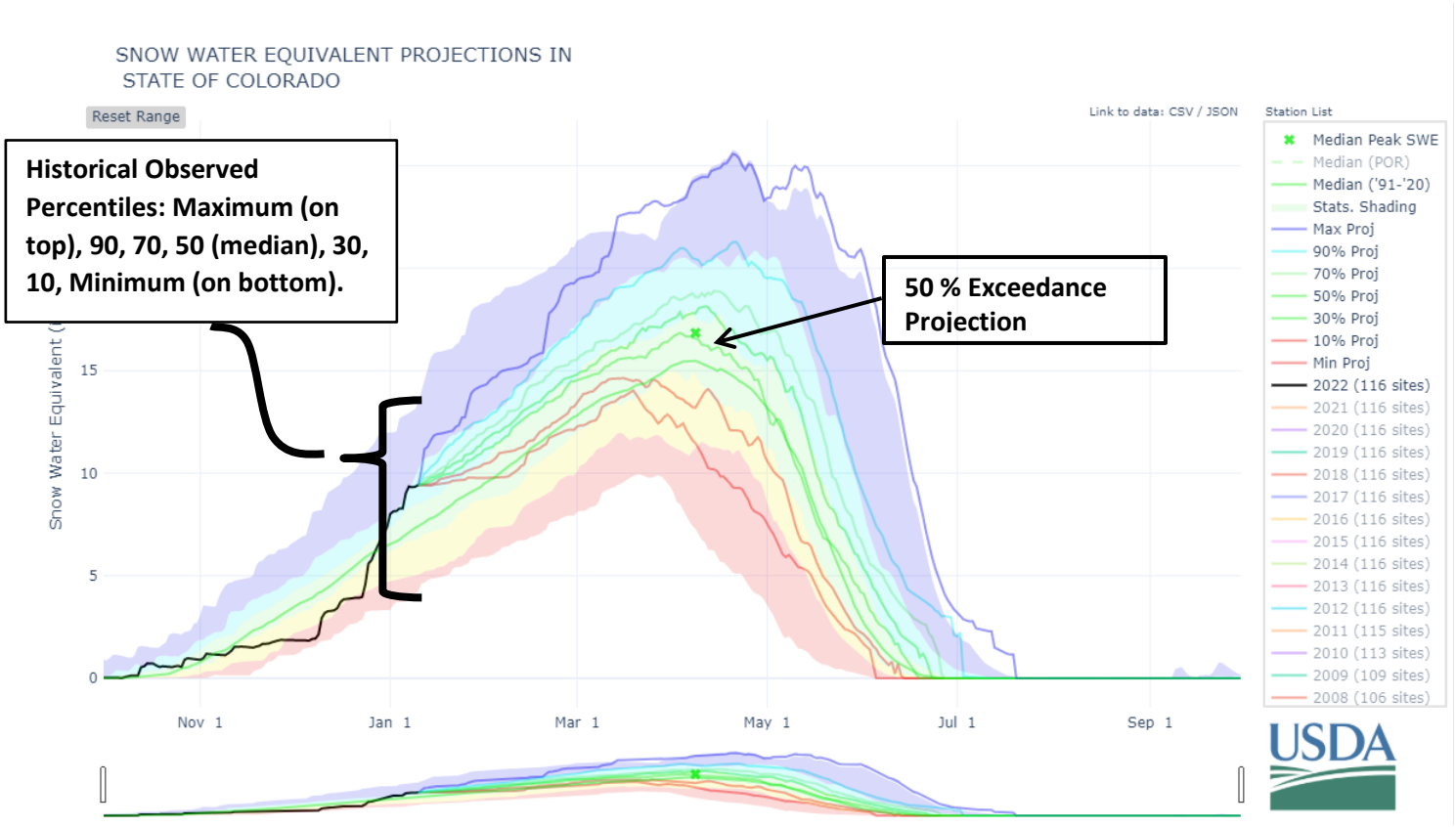
**Current** water year is represented by the heavy red line terminating on the last day the graphic was updated.

**Historical** observed percentile range is shown as a gray background area on the graph. Shades of gray indicate maximum, 90 percentile, 70 percentile, 50 percentile (solid black line), 30 percentile, 10 percentile, and minimum for the period of record.

**50 % Exceedance Projection**: The most probabilistic snowpack projection, based on the median snowpack is projected forward from the end of the current period to the end of the current water year.

For more detailed information on these graphs visit:

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_062291.pdf



# How Forecasts Are Made

*For more water supply and resource management information, contact:*

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**USDA, Natural Resources Conservation Service**
**Denver Federal Center, Bldg 56, Rm 2604**
**PO Box 25426**
**Denver, CO 80225-0426**
**Phone (720) 544-2852**
**Website: http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/snow/**

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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 snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized 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 December 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 December 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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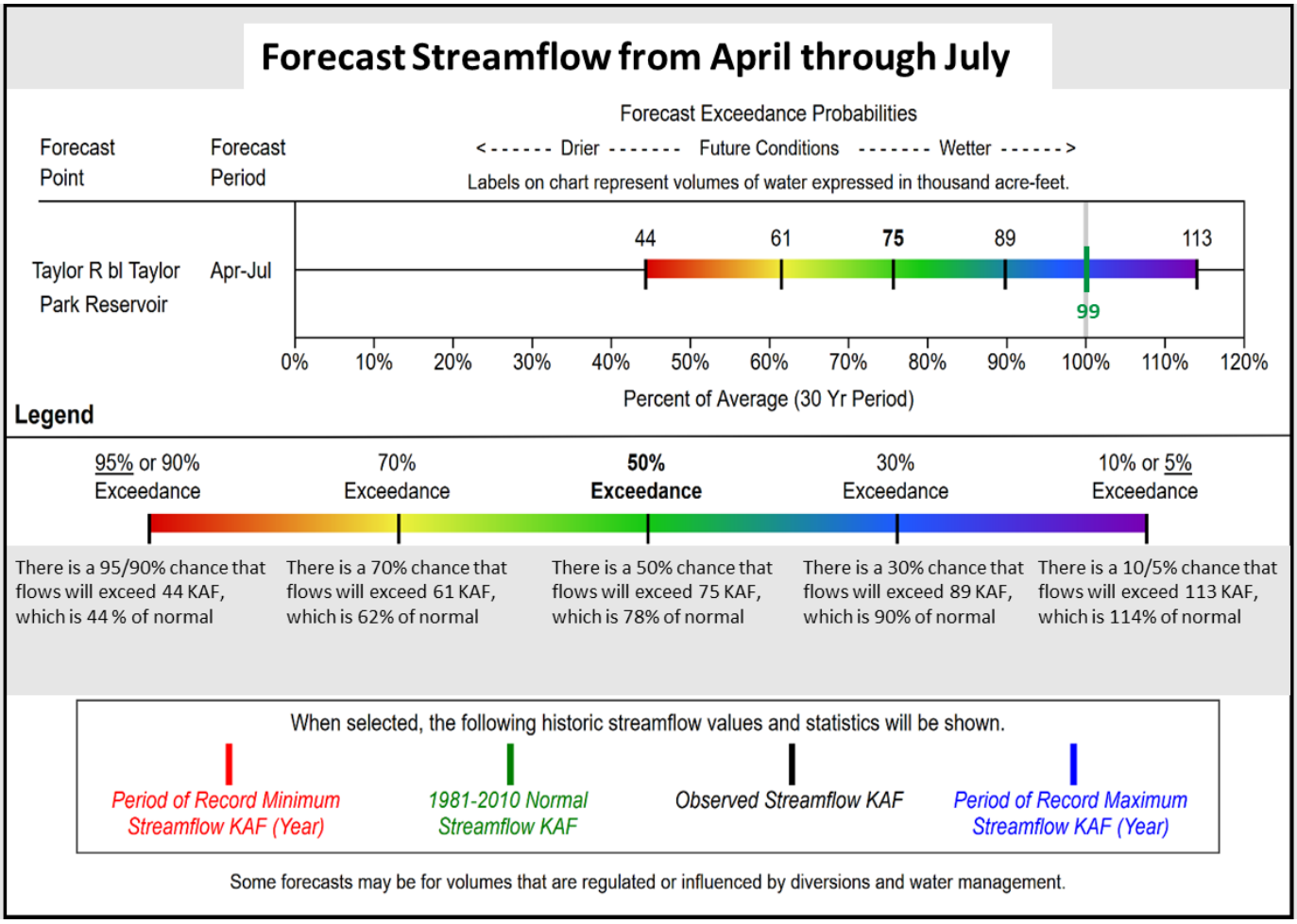
# Interpreting the Forecast Graphics

These graphics provide a new way to visualize the range of streamflows represented by the forecast exceedance probabilities for each forecast period. The colors in the bar for each forecast point indicate the exceedance probability of the forecasts and the vertical lines on the bar signify the five published forecast exceedance probabilities. The numbers displayed above the color scale represent the actual forecasted streamflow volume (in KAF) for the given exceedance probability. The horizontal axis provides the percent of median represented by each forecast and the gray line centered above 100% represents the 1981-2010 historical median streamflow. The position of the gray line relative to the color scale provides a benchmark for considering future streamflows. If the majority of the forecast range is to the right of the gray line, there is a higher likelihood of above median streamflow volumes during the provided forecast period. Conversely, if the majority of the color bar is to the left of the median mark, below median volumes are more likely. The horizontal span of the forecasts offers an indication of the uncertainty in a given forecast: when the bar spans a large horizontal range, the forecast skill is low and uncertainty is high; when the bar is narrow in width, the forecast skill is higher and uncertainty lower.



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Denver, CO  80225-0426

In addition to the water supply outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, February through June.  The information December be obtained from the Natural Resources Conservation Service web page at
http://www.wcc.nrcs.usda.gov/wsf/westwide.html

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**Lakewood, Colorado**

# Colorado
# Water Supply Outlook Report
**Natural Resources Conservation Service**
**Lakewood, CO**