



NATIONAL
WEATHER
SERVICE

Outlook: Water and Weather – Spring Flood

April 20, 2023

Presenter: Aldis Strautins, Senior Service Hydrologist, NWS Denver/Boulder



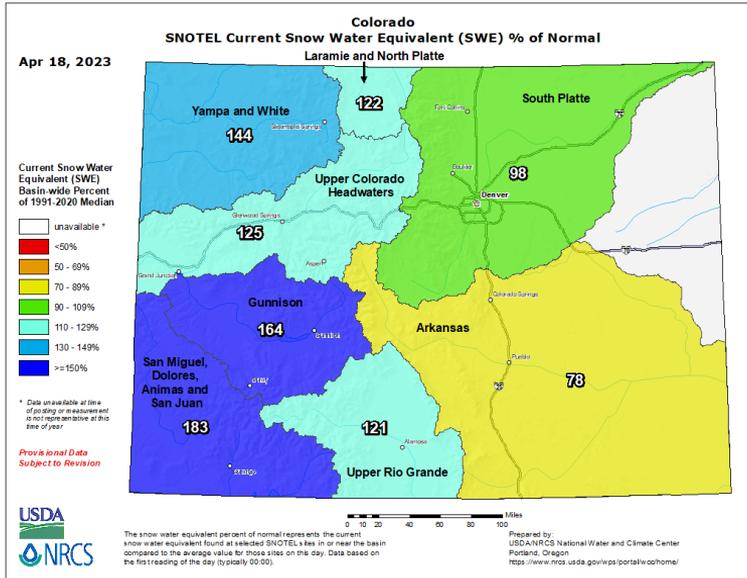
Outline

- Snowpack
- Spring Runoff Flooding Concerns
- Drought
- Weather outlook

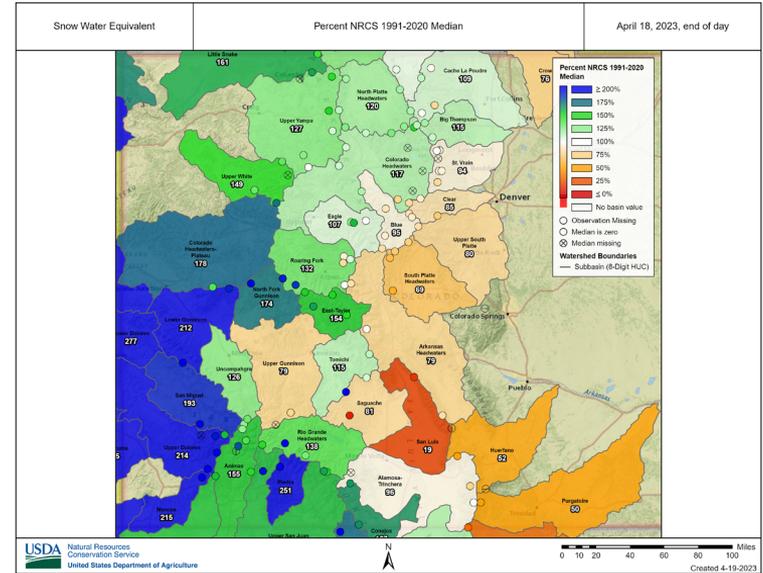


SNOTEL

Snowpack SWE – April 18



State Wide 131% of Median
(Well above normal west / normal northeast / below normal southeast)

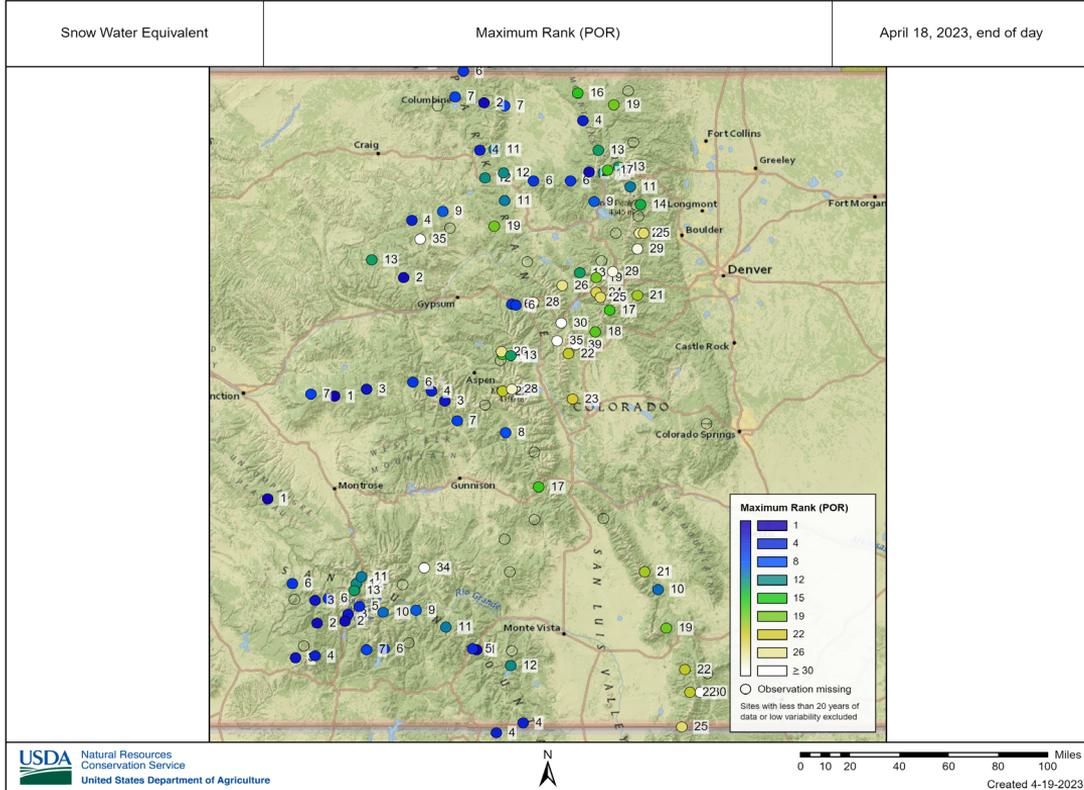


Sub-Basins – West 125% to over 200% / Northeast 94%-115% / South Central 69%-85%



SNOTEL

Snowpack SWE – April 19

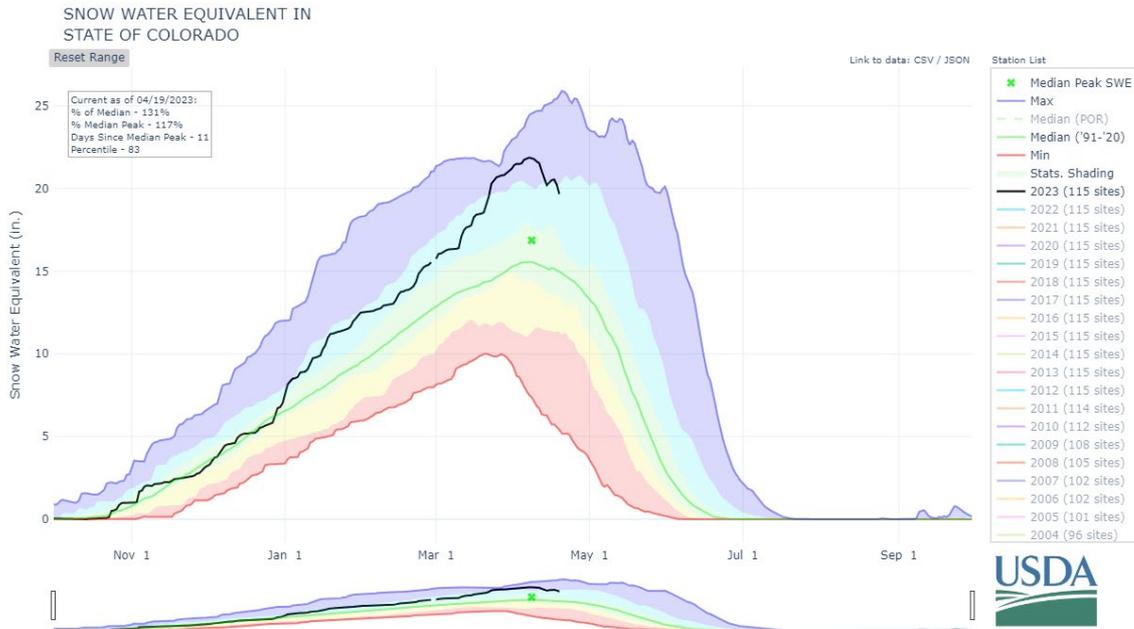


State Wide Maximum Rank POR. Many sites are top 10 out West.



SNOTEL

Snowpack SWE – April 19

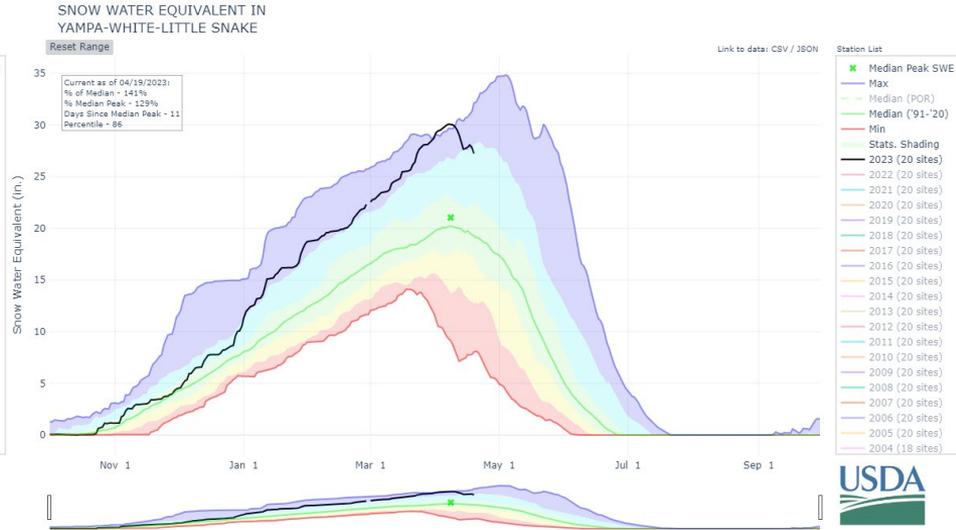
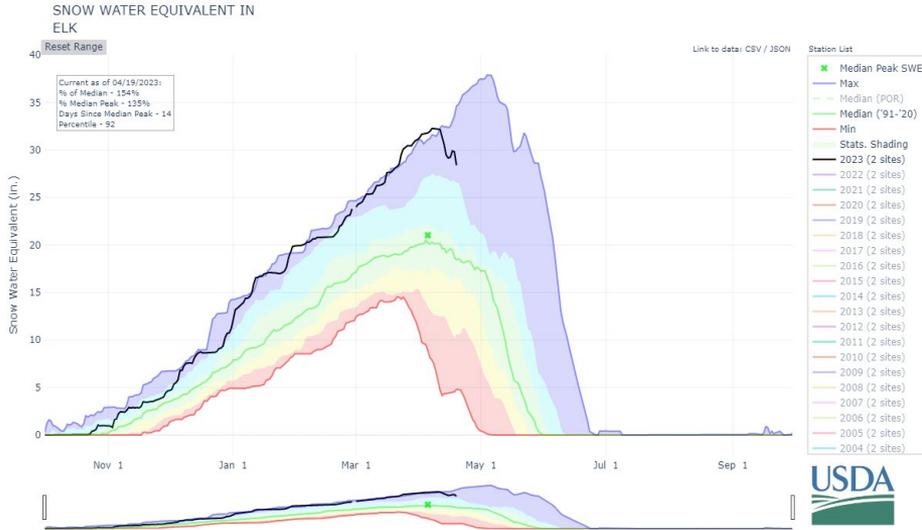


State Wide SWE. 131% of Median / 117% of Median Peak



SNOTEL – SWE as of Apr 19

% of Normal



Elk | 154% (Above daily max)

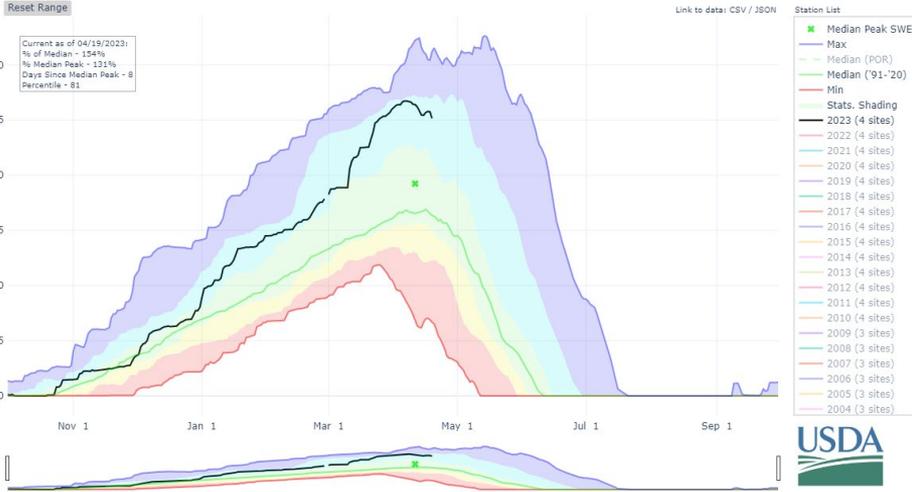
Yampa | 141%



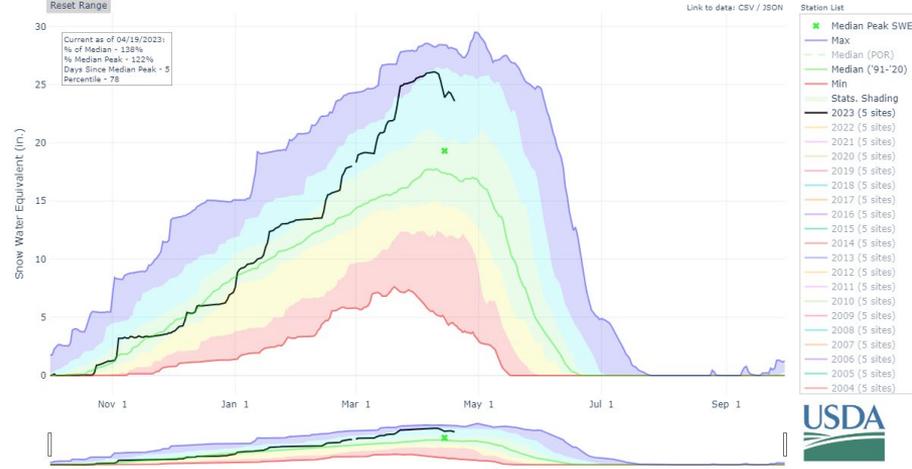
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SNOTEL – SWE as of Apr 19 % of Normal

SNOW WATER EQUIVALENT IN
EAST-TAYLOR



SNOW WATER EQUIVALENT IN
HEADWATERS RIO GRANDE



East and Taylor | 154%

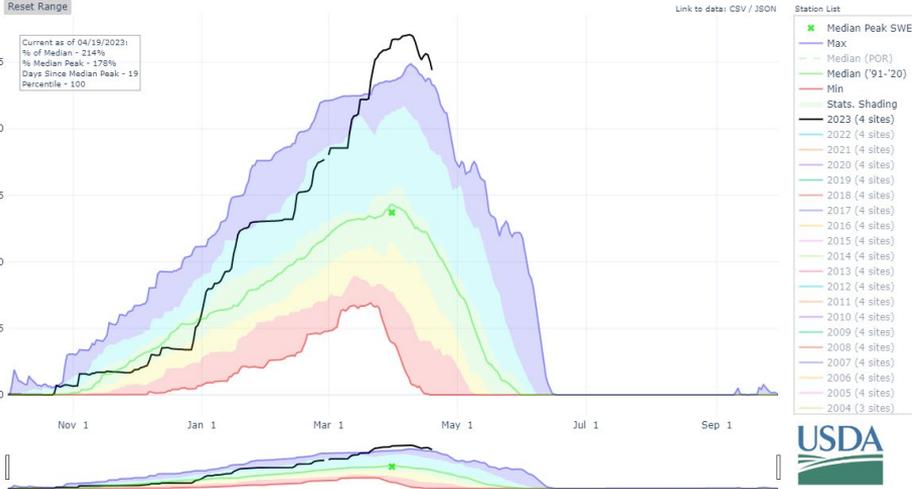
Rio Grande Headwaters | 138%



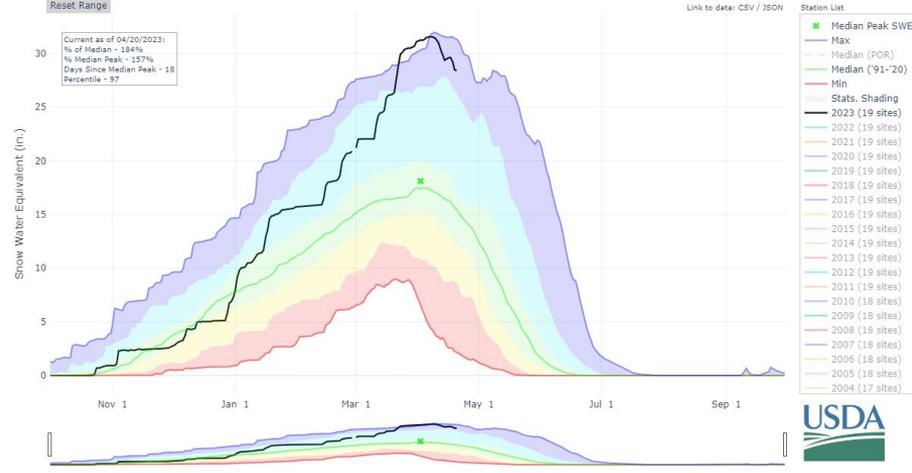
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SNOTEL – SWE as of Apr 19 % of Normal

SNOW WATER EQUIVALENT IN DOLORES



SNOW WATER EQUIVALENT IN SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN



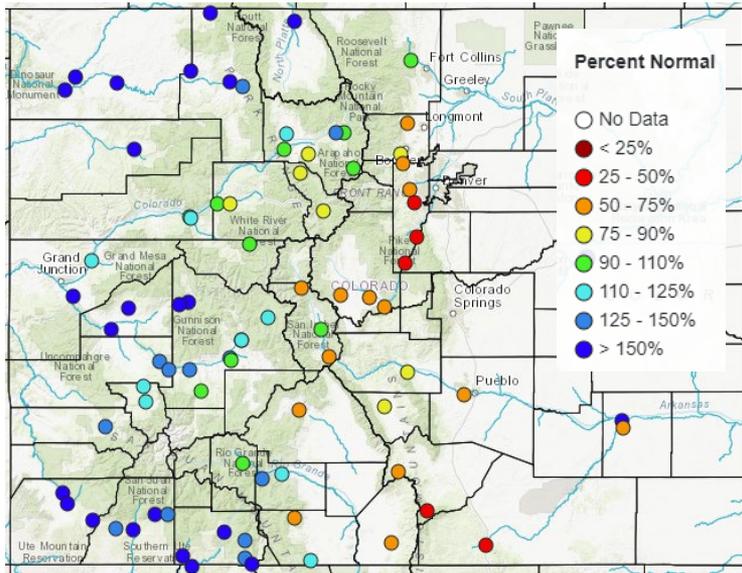
Upper Dolores | 214% (well above daily max) / 178% above Median peak

San Juan Basin overall | 184%

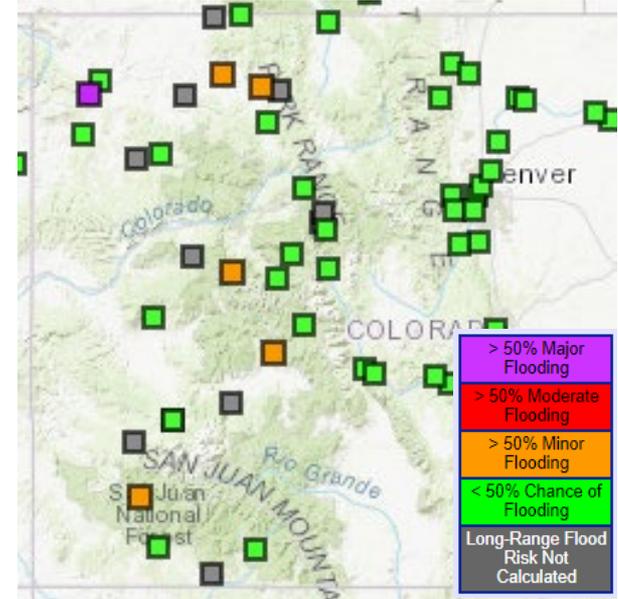


Outlook – Spring Runoff

Water Supply and Spring Flood potential for select sites



- Spring runoff volume forecasts are well above normal Western CO
- Spring Flood potential is above normal, from snow melt runoff alone, for multiple sites in Western CO



Water Supply (Apr 19, 2023)

(mid to late April snow accumulation could change the forecast)

Greater than 50% chance of flooding Apr - Jun



River Basins to Watch For Runoff Flooding from snowmelt alone

- **Yampa, Elk, Elkhead** and Little Snake
- **East** and Taylor, Ohio
- North Fork of the Gunnison, Crystal
- Dolores
- **San Juan Basin, Piedra** and Animas
- Upper Rio Grande
- North Platte (higher potential in WY)

Minor flooding from
local snowpack:
**Towns of Dolores,
Gateway, Mancos,
near Hayden (Lately)**

**Yellow – Higher Concern
for flooding**

**Green – Lower concern for
flooding**



Peak Forecast

Daily Peak Flow Forecast – April 19

Daily Peak Flow Forecast - YDLC2 - Yampa - Deerlodge Park

Model Run Date	2023-04-18 (Incl 7 Day Precip Forecast)
Flood Flow	20744 cfs
50% Forecast	24851 cfs
Rank of 50% Forecast	3rd Highest Flow / 38 Total Years
Percentile	94% of Years Below Forecast
Peak to Date	
Average Peak	12758 cfs
Percent Average	194%
Normal Time of Peak	05-13 - 06-06
Last Year's Peak	11300 cfs, on 2022-05-21



**Yampa River by Deerlodge Park. (3rd highest in 38 years)
(Maybell 3rd highest in 107 years)**



Peak Forecast

Daily Peak Flow Forecast – April 19

Daily Peak Flow Forecast - ENMC2 - Elk - Milner Nr

Model Run Date	2023-04-18 (Incl 7 Day Precip Forecast)
Flood Flow	5916 cfs
50% Forecast	6271 cfs
Rank of 50% Forecast	3rd Highest Flow / 53 Total Years
Percentile	96% of Years Below Forecast
Peak to Date	
Average Peak	3946 cfs
Percent Average	158%
Normal Time of Peak	05-16 - 06-06
Last Year's Peak	4190 cfs, on 2022-05-19



Elk River near Milner. (3th highest in 53 years)



Peak Forecast

Daily Peak Flow Forecast – April 19

Daily Peak Flow Forecast - ALEC2 - East - Almont

Model Run Date	2023-04-18 (Incl 7 Day Precip Forecast)
Flood Flow	3119 cfs
50% Forecast	3320 cfs
Rank of 50% Forecast	9th Highest Flow / 100 Total Years
Percentile	92% of Years Below Forecast
Peak to Date	
Average Peak	1949 cfs
Percent Average	170%
Normal Time of Peak	05-21 - 06-09
Last Year's Peak	1660 cfs, on 2022-05-20



East River by Almont. (9th highest in 100 years)



Peak Forecast

Daily Peak Flow Forecast – April 19

Daily Peak Flow Forecast - DRRC2 - Dolores - Rico Blo

Model Run Date	2023-04-19 (Incl 7 Day Precip Forecast)
Flood Flow	1772 cfs
50% Forecast	1542 cfs
Rank of 50% Forecast	8th Highest Flow / 69 Total Years
Percentile	89% of Years Below Forecast
Peak to Date	
Average Peak	897 cfs
Percent Average	171%
Normal Time of Peak	05-10 - 06-09
Last Year's Peak	638 cfs, on 2022-05-10

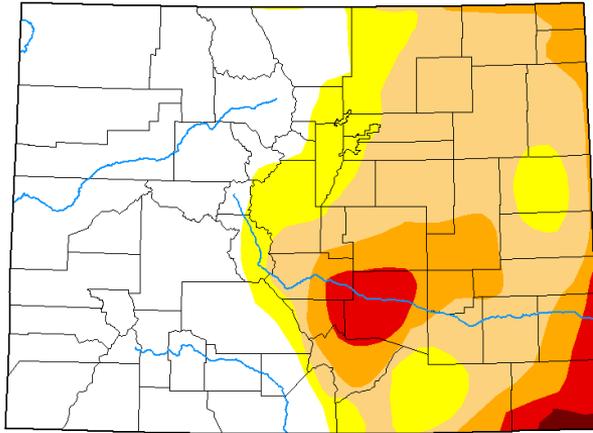


**Dolores River near Rico. (8th highest in 69 years)
(In Dolores 11th highest in 111 years)**



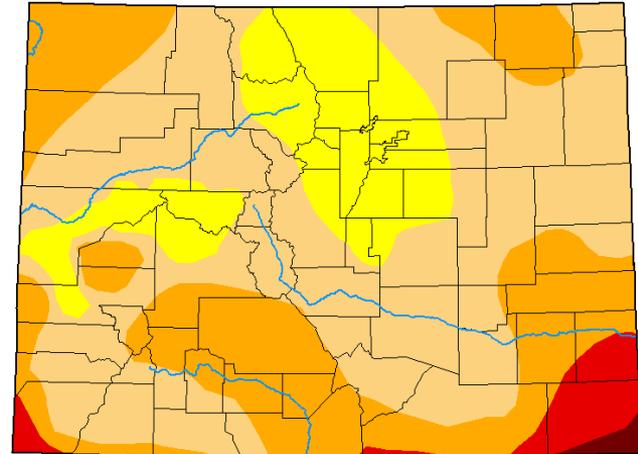
Drought

April 11, 2023



April 11, 2023

April 12, 2022



April 12, 2022 (last year)

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu

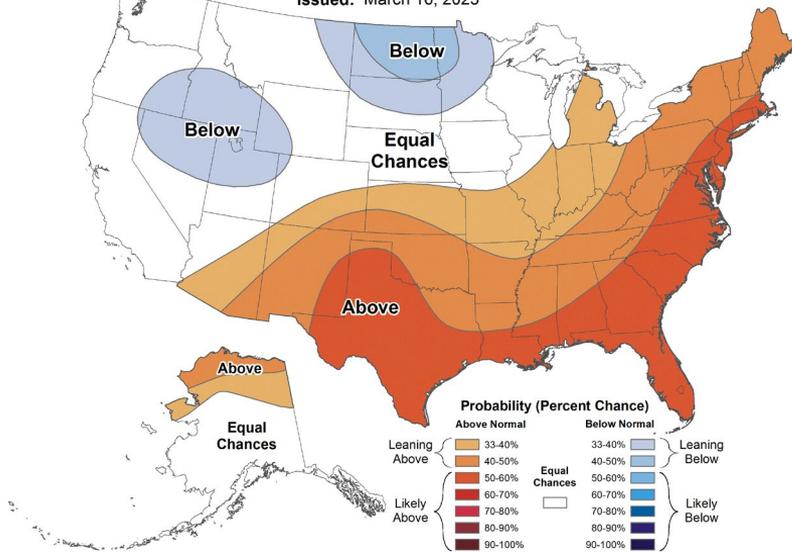
Outlook – Temp and Precip



Seasonal Temperature Outlook



Valid: Apr-May-Jun 2023
Issued: March 16, 2023



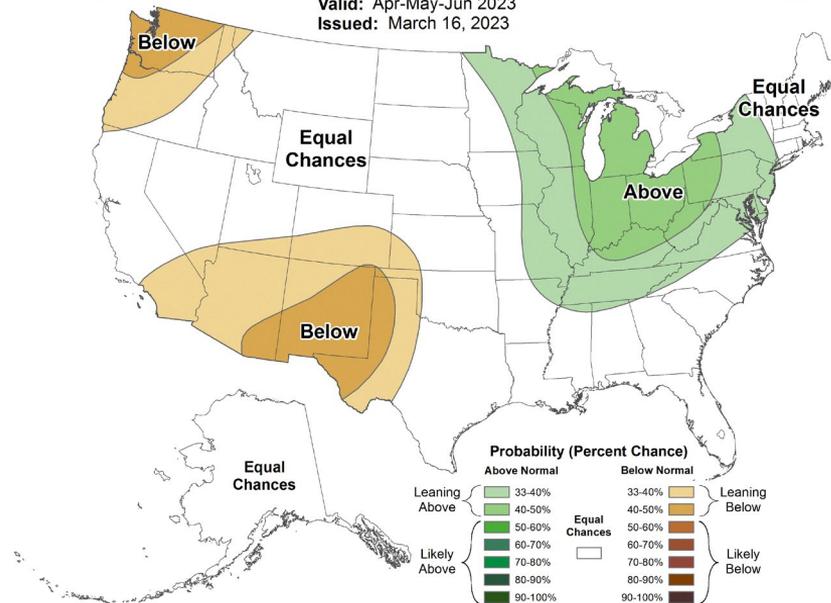
Temperature



Seasonal Precipitation Outlook



Valid: Apr-May-Jun 2023
Issued: March 16, 2023



Precipitation





Questions

