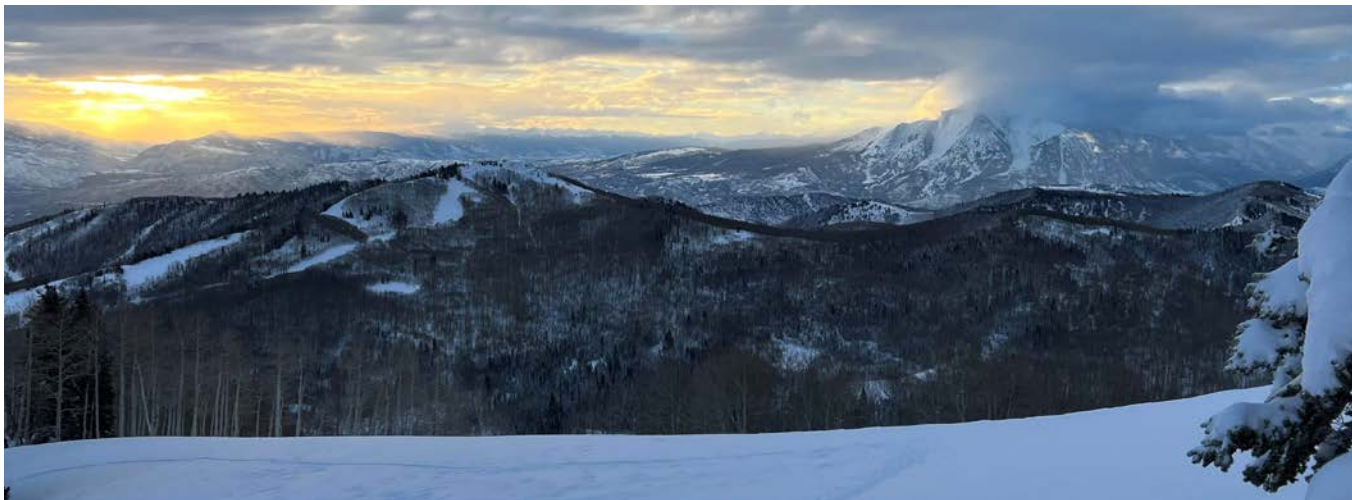


2023 State of the River Meetings – Middle Colorado Outlook: Water Year 2023



Caleb Foy, P.E.
Lead Assistant Division Engineer
May 2, 2023



COLORADO
Division of Water Resources
Department of Natural Resources

Agenda

- Colorado River Basin Snowpack
- Distribution of Winter Precipitation
- Subbasin Snowpack
- Soil Moisture Conditions
- April 1st CBRFC Water Supply Forecasts
- Current Reservoir Conditions
- Peak Flow Forecasts
- Similar Year Call Scenarios at Shoshone and Cameo
- Seasonal Precipitation Outlook



Colorado River Basin Snowpack



Early January Snowpack in Roaring Fork River

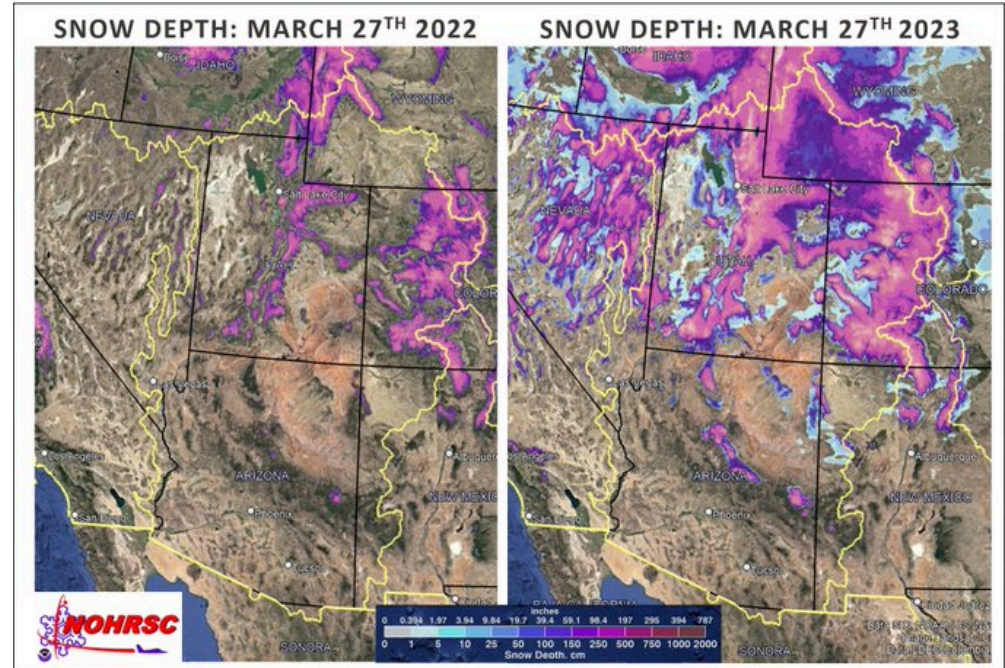


Image Courtesy of Colorado Basin River Forecast Center

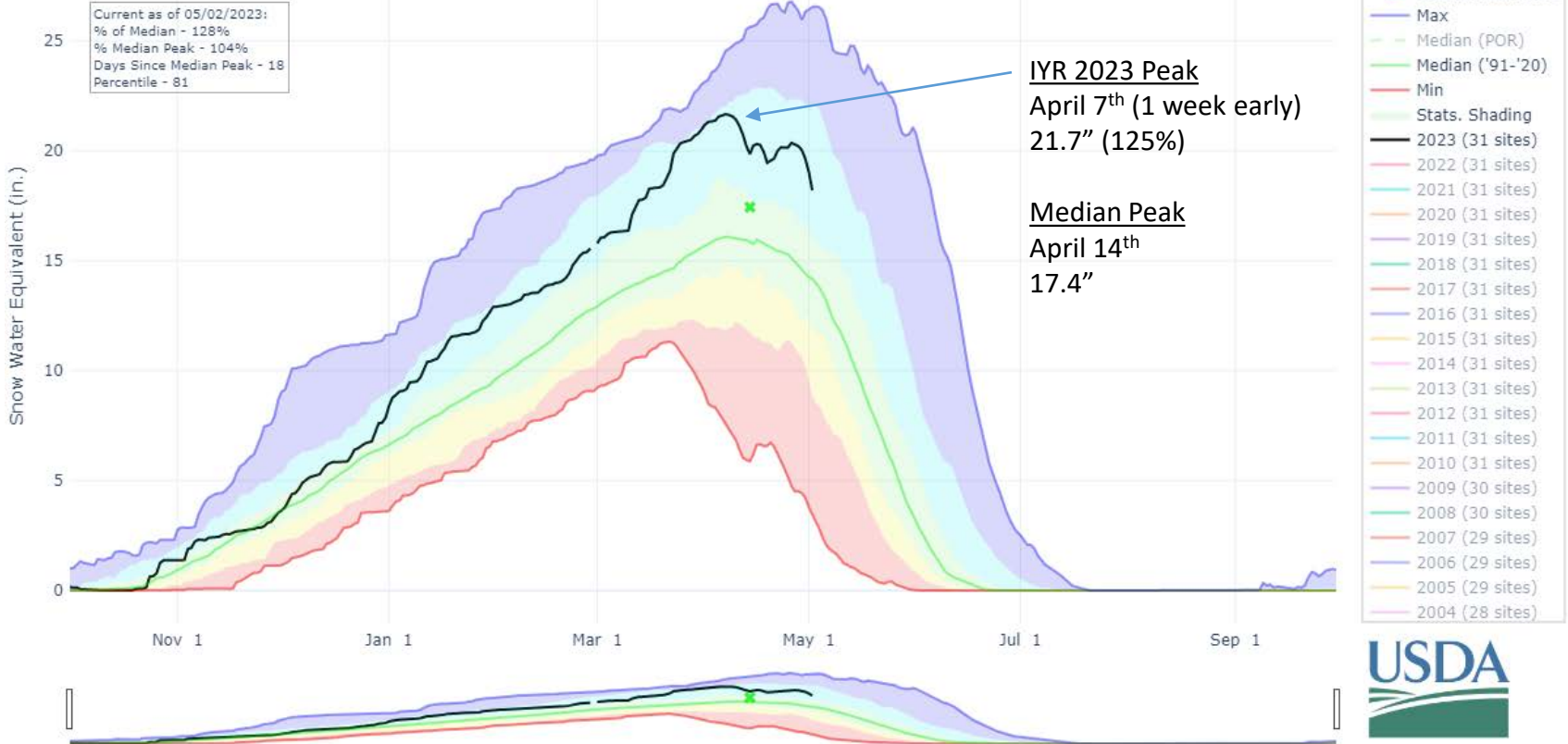


SNOW WATER EQUIVALENT IN COLORADO HEADWATERS

Reset Range

[Link to data: CSV / JSON](#)

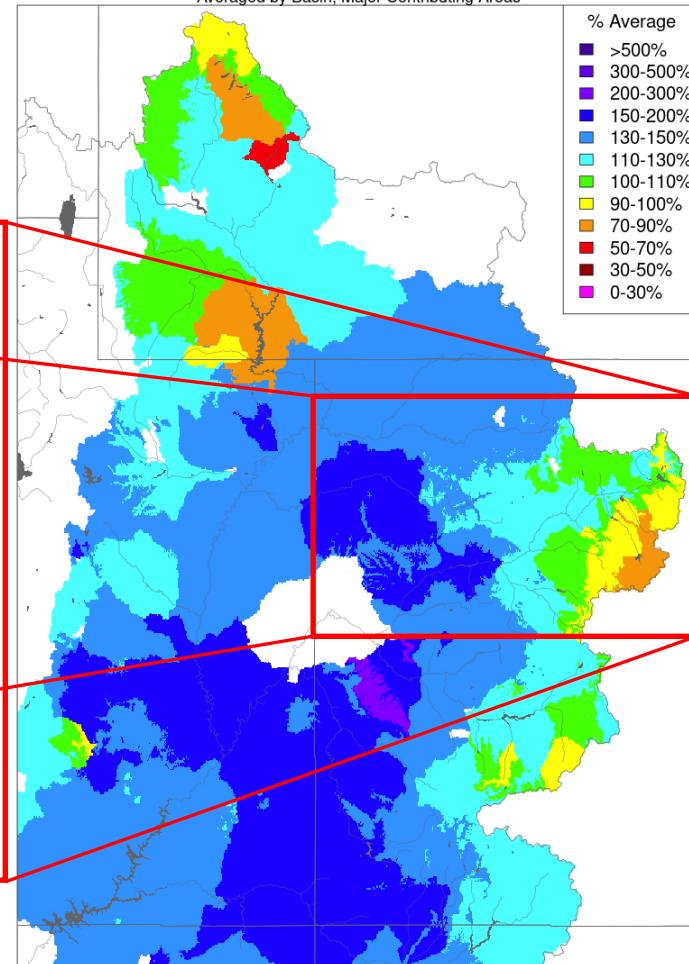
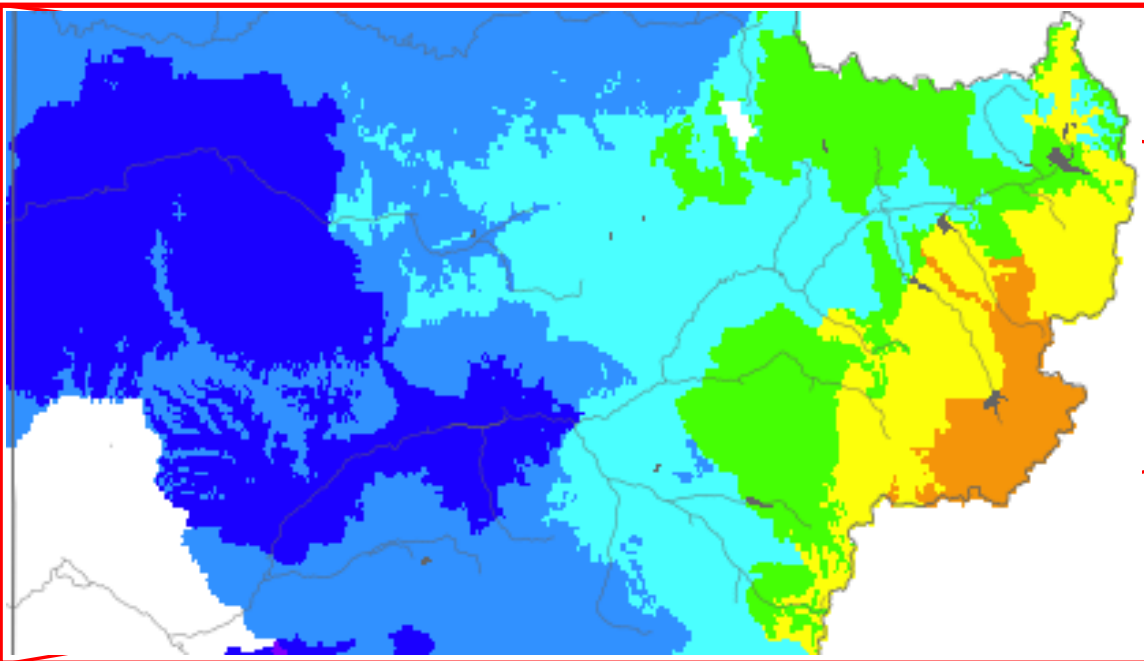
[Station List](#)



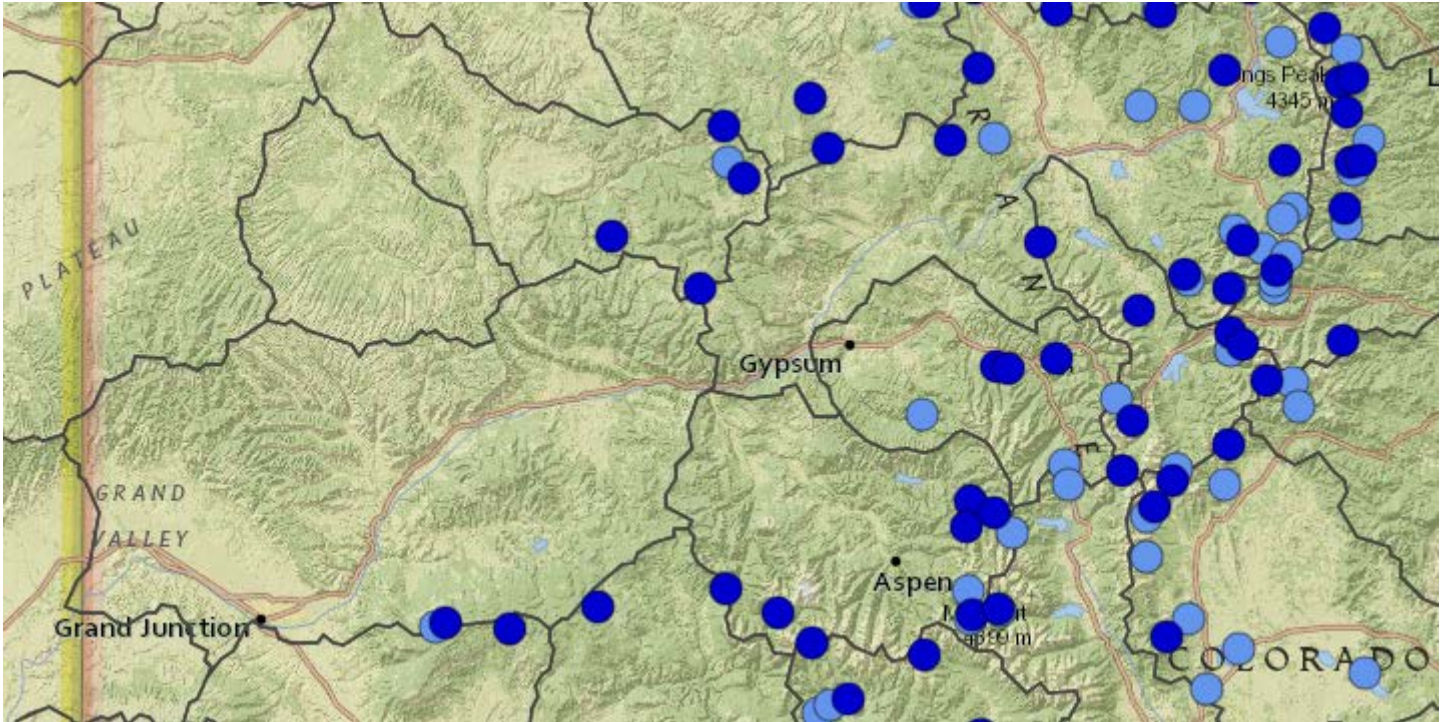
Distribution of Winter Precipitation



Precipitation Since 10/1/2022



Subbasin Snowpack



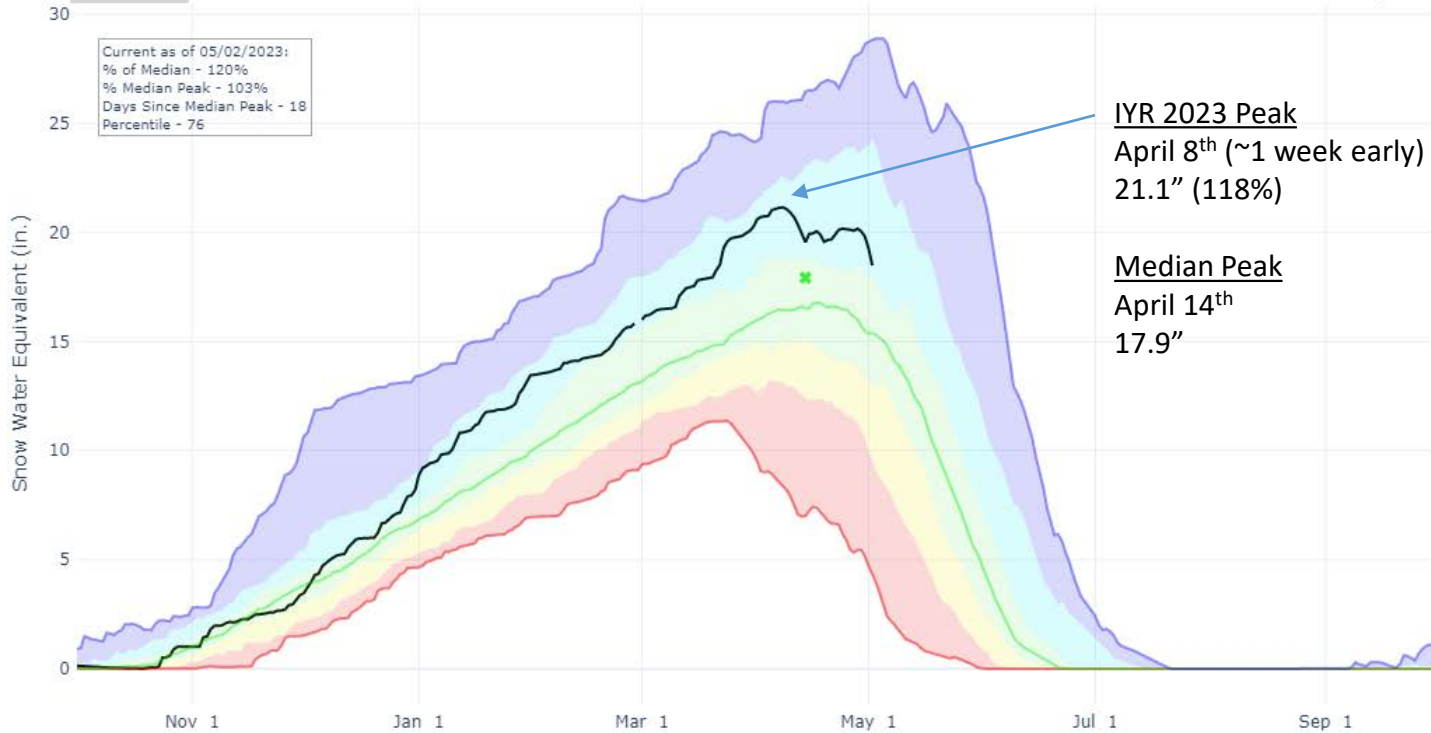
SNOW WATER EQUIVALENT IN COLORADO HEADWATERS

Reset Range

[Link to data: CSV / JSON](#)

[Station List](#)

Current as of 05/02/2023:
 % of Median - 120%
 % Median Peak - 103%
 Days Since Median Peak - 18
 Percentile - 76



IYR 2023 Peak
 April 8th (~1 week early)
 21.1" (118%)

Median Peak
 April 14th
 17.9"

- * Median Peak SWE
- Max
- - - Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (13 sites)
- 2022 (13 sites)
- 2021 (13 sites)
- 2020 (13 sites)
- 2019 (13 sites)
- 2018 (13 sites)
- 2017 (13 sites)
- 2016 (13 sites)
- 2015 (13 sites)
- 2014 (13 sites)
- 2013 (13 sites)
- 2012 (13 sites)
- 2011 (13 sites)
- 2010 (13 sites)
- 2009 (12 sites)
- 2008 (12 sites)
- 2007 (12 sites)
- 2006 (12 sites)
- 2005 (12 sites)
- 2004 (11 sites)

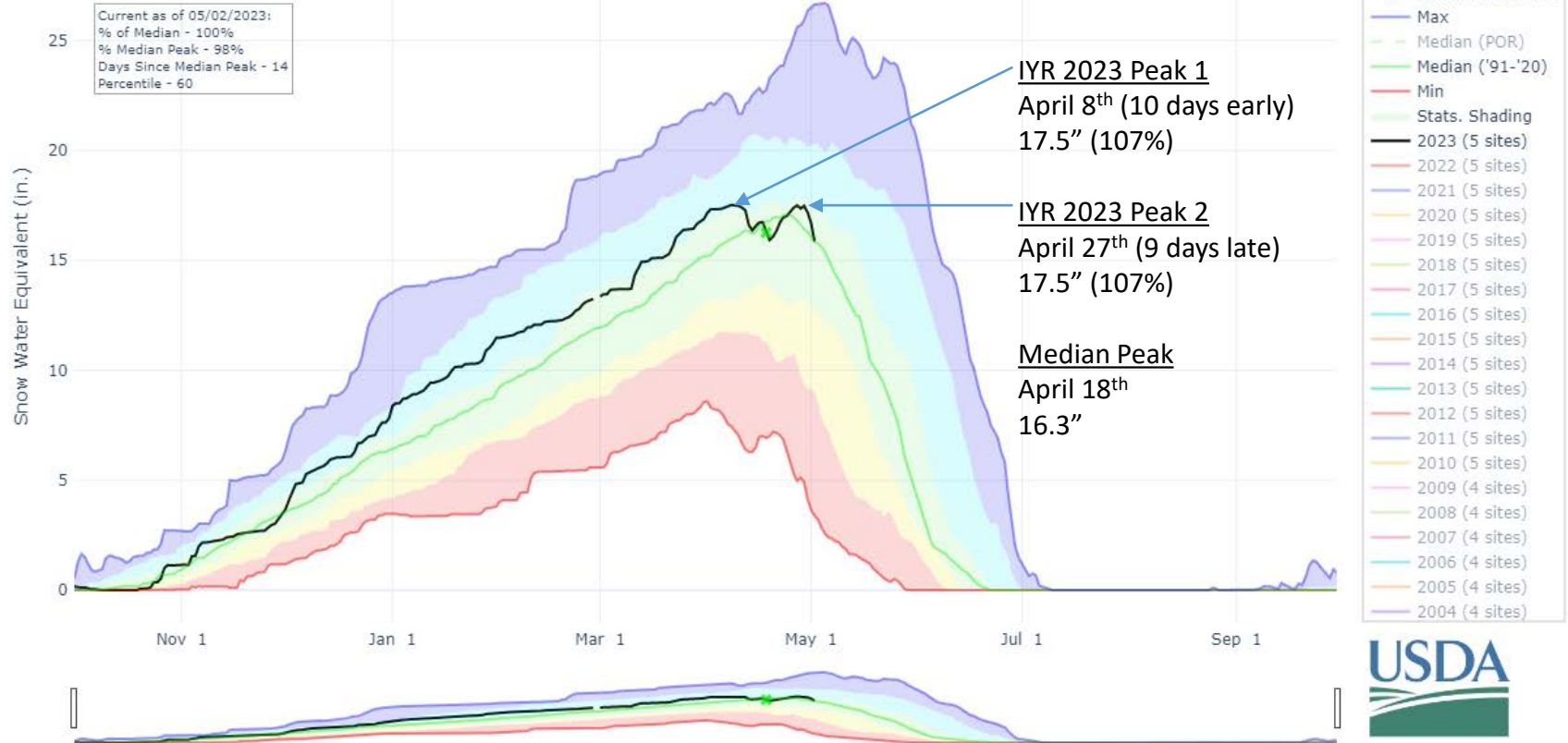


SNOW WATER EQUIVALENT IN BLUE

Reset Range

[Link to data: CSV / JSON](#)

Station List



- ★ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2023 (5 sites)
- 2022 (5 sites)
- 2021 (5 sites)
- 2020 (5 sites)
- 2019 (5 sites)
- 2018 (5 sites)
- 2017 (5 sites)
- 2016 (5 sites)
- 2015 (5 sites)
- 2014 (5 sites)
- 2013 (5 sites)
- 2012 (5 sites)
- 2011 (5 sites)
- 2010 (5 sites)
- 2009 (4 sites)
- 2008 (4 sites)
- 2007 (4 sites)
- 2006 (4 sites)
- 2005 (4 sites)
- 2004 (4 sites)

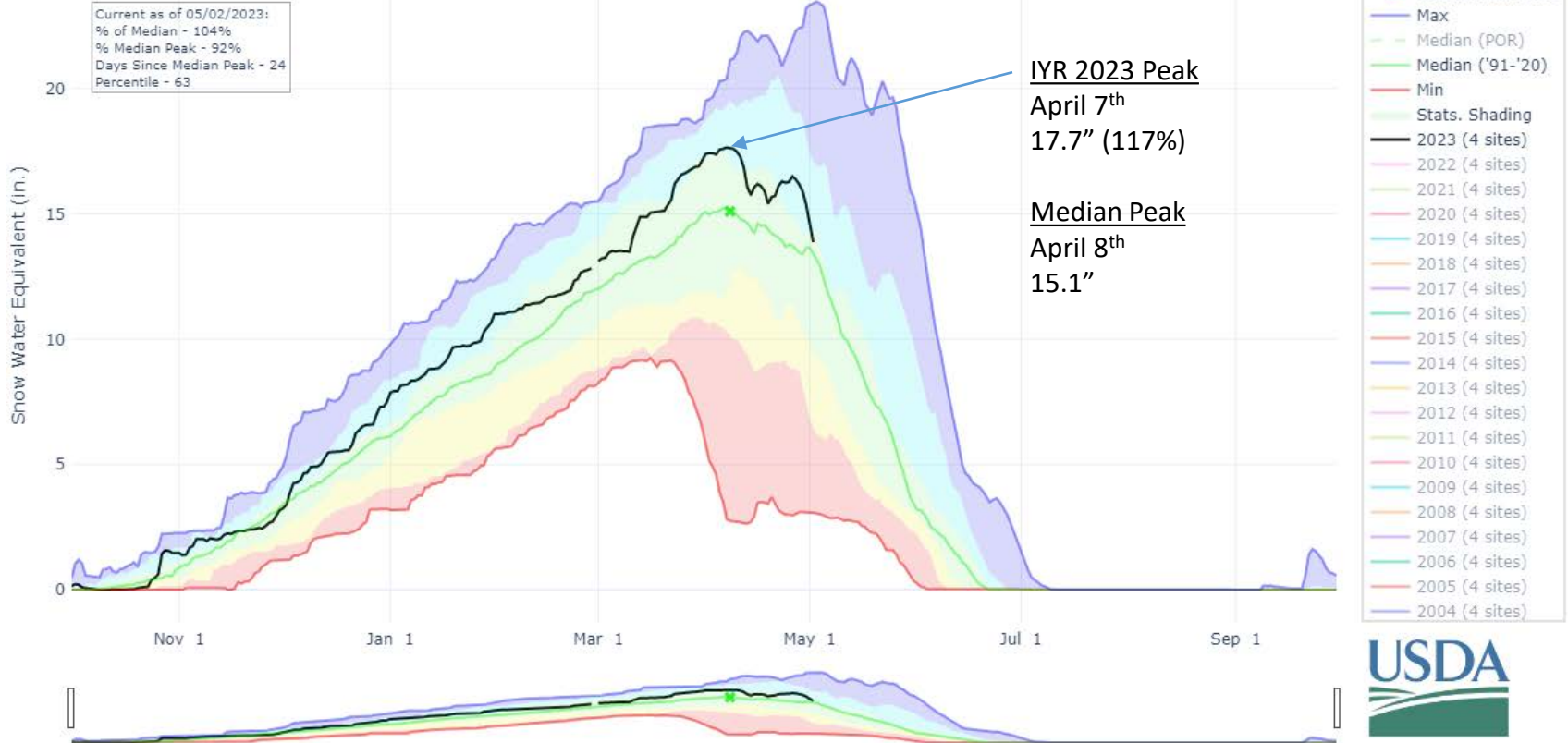


SNOW WATER EQUIVALENT IN EAGLE

Reset Range

[Link to data: CSV / JSON](#)

[Station List](#)

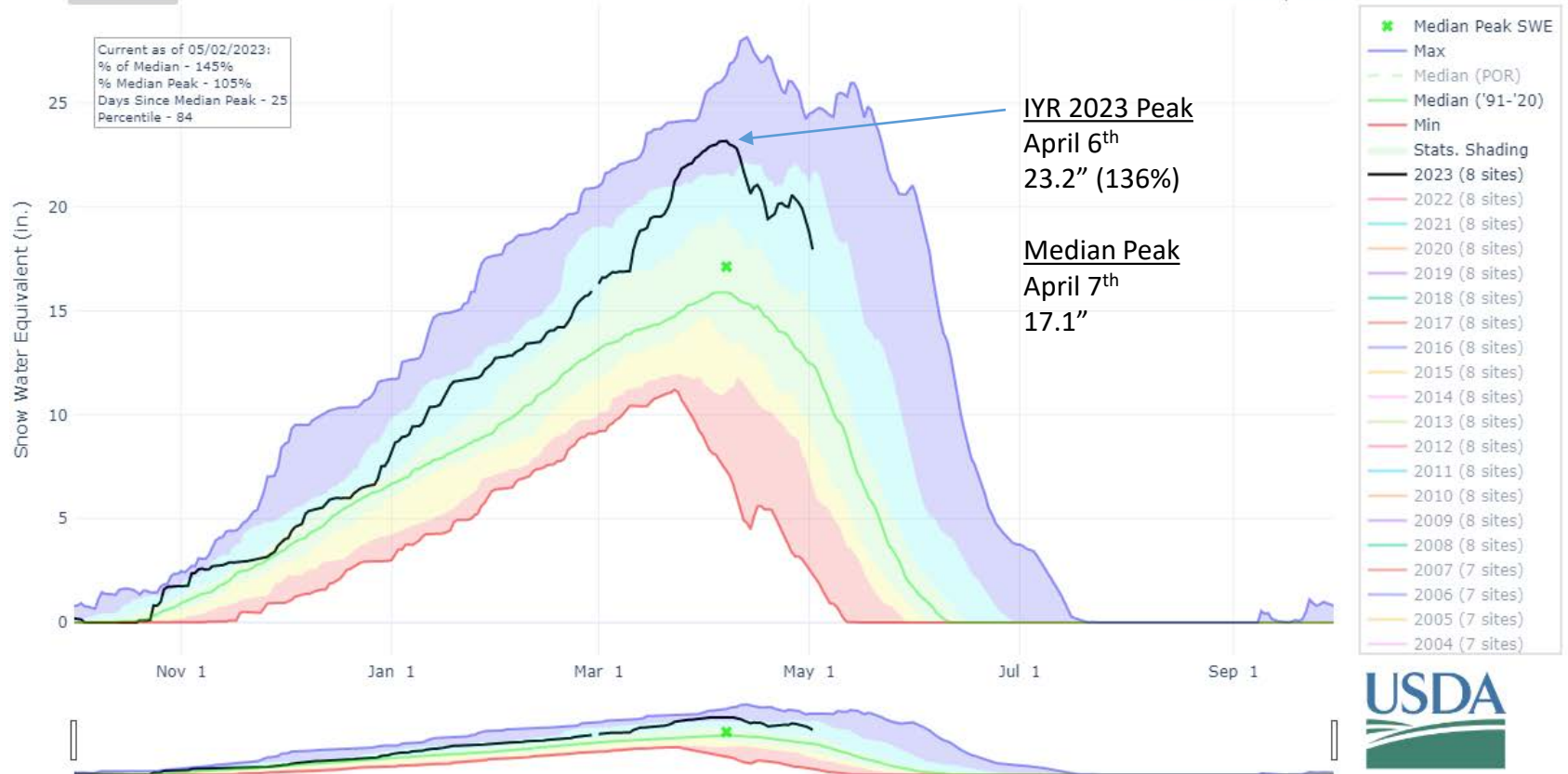


SNOW WATER EQUIVALENT IN ROARING FORK

Reset Range

[Link to data: CSV / JSON](#)

[Station List](#)

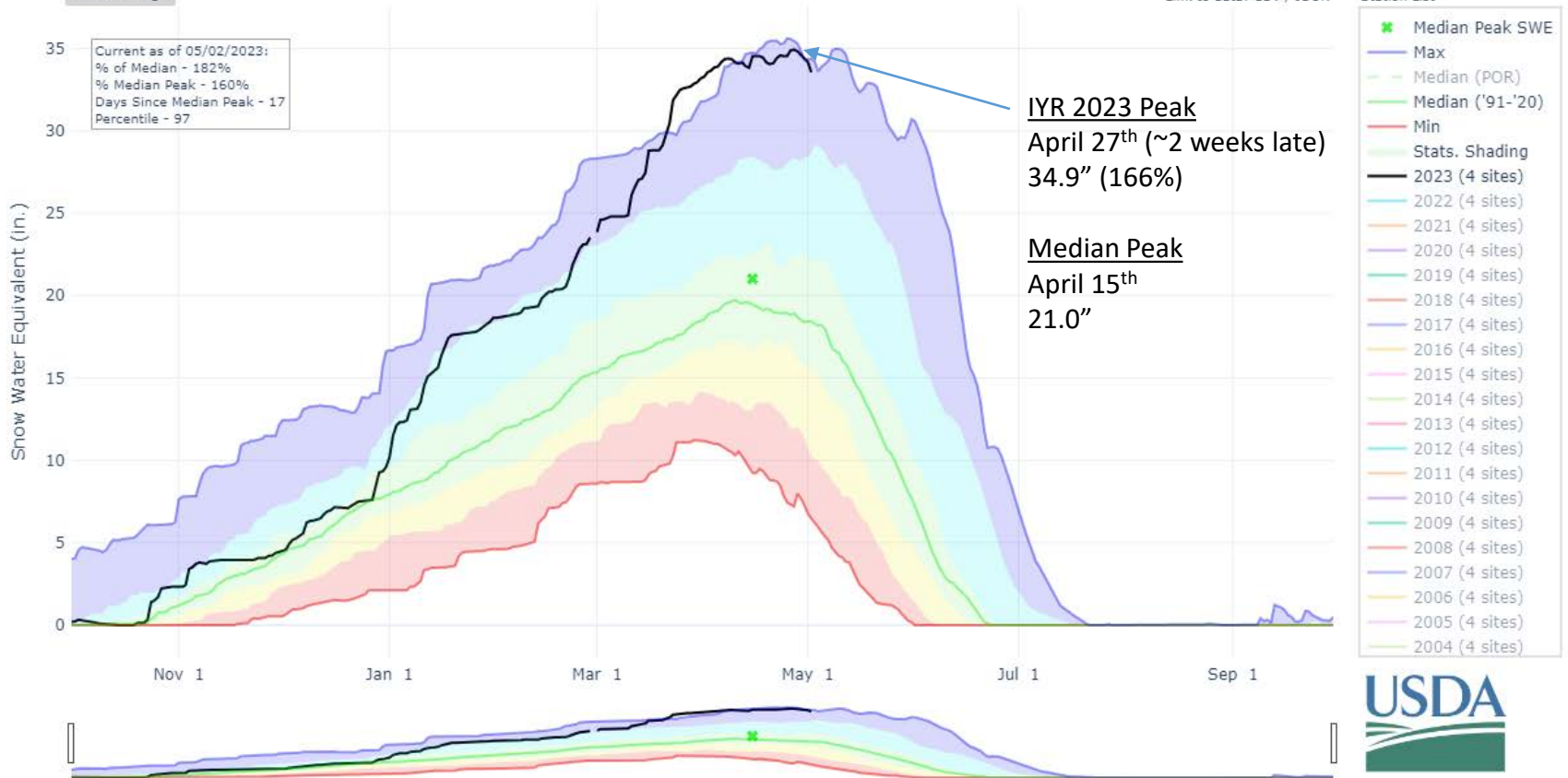


SNOW WATER EQUIVALENT IN COLORADO HEADWATERS-PLATEAU

Reset Range

[Link to data: CSV / JSON](#)

[Station List](#)

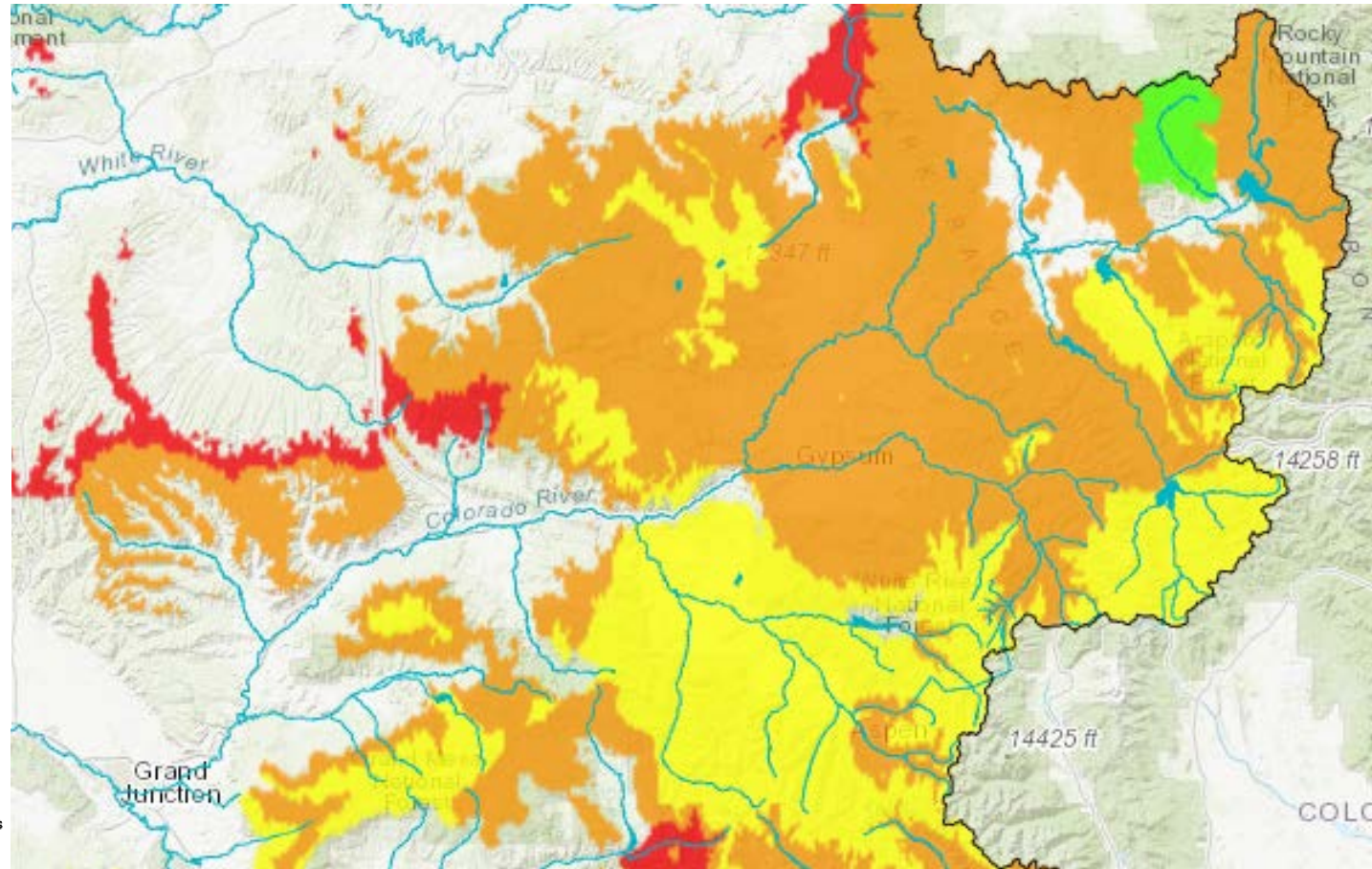
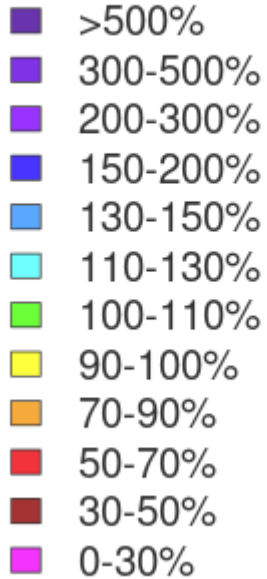


Soil Moisture Conditions



11/2/2022 CBRFC Modeled Soil Moisture Conditions

% Average



April 1st CBRFC Water Supply Forecasts

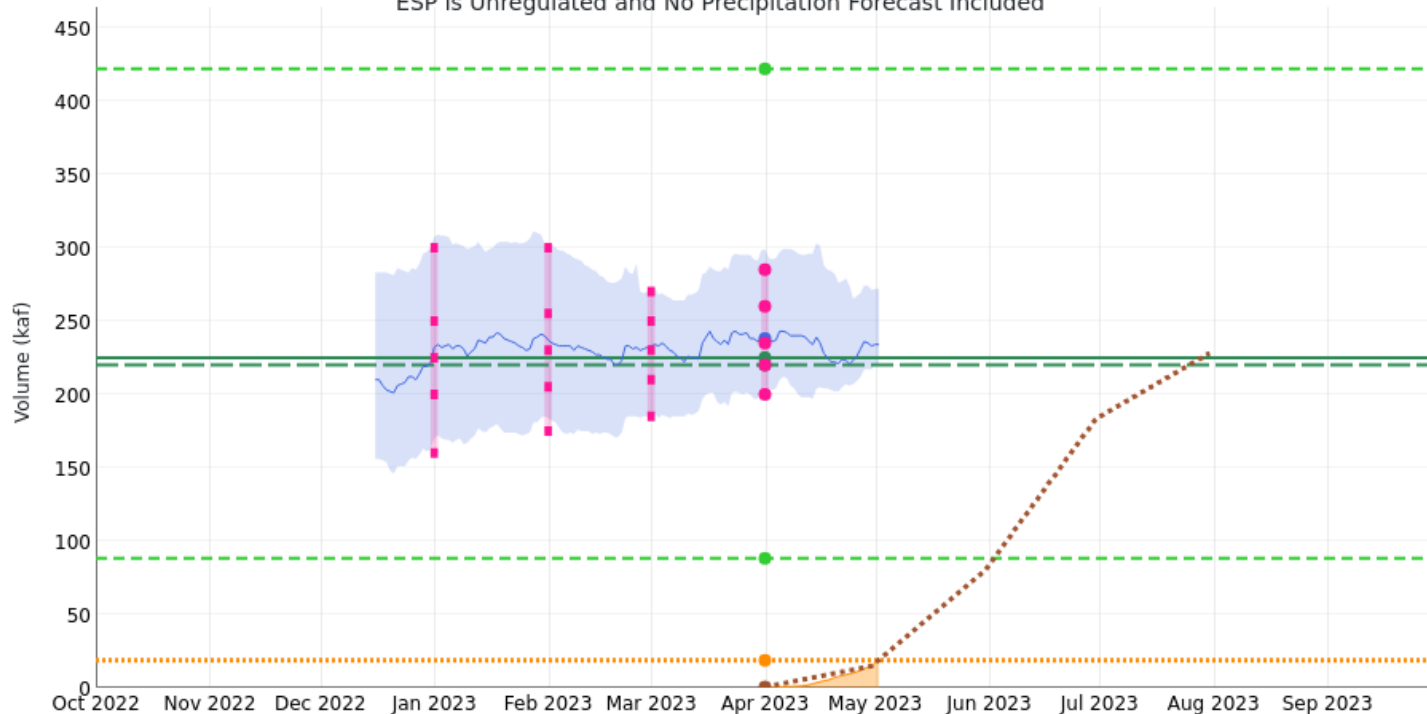




Colorado - Lake Granby, Granby, Nr (GBYC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 235 kaf (104% Average, 107% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 2011: 421.85

Min 2002: 88.2

Average: 225

Median: 220

Observed Total: 18.7

Normal Accumulation: 0.49

ESP: 238

Official 10: 285

Official 30: 260

Official 50: 235

Official 70: 220

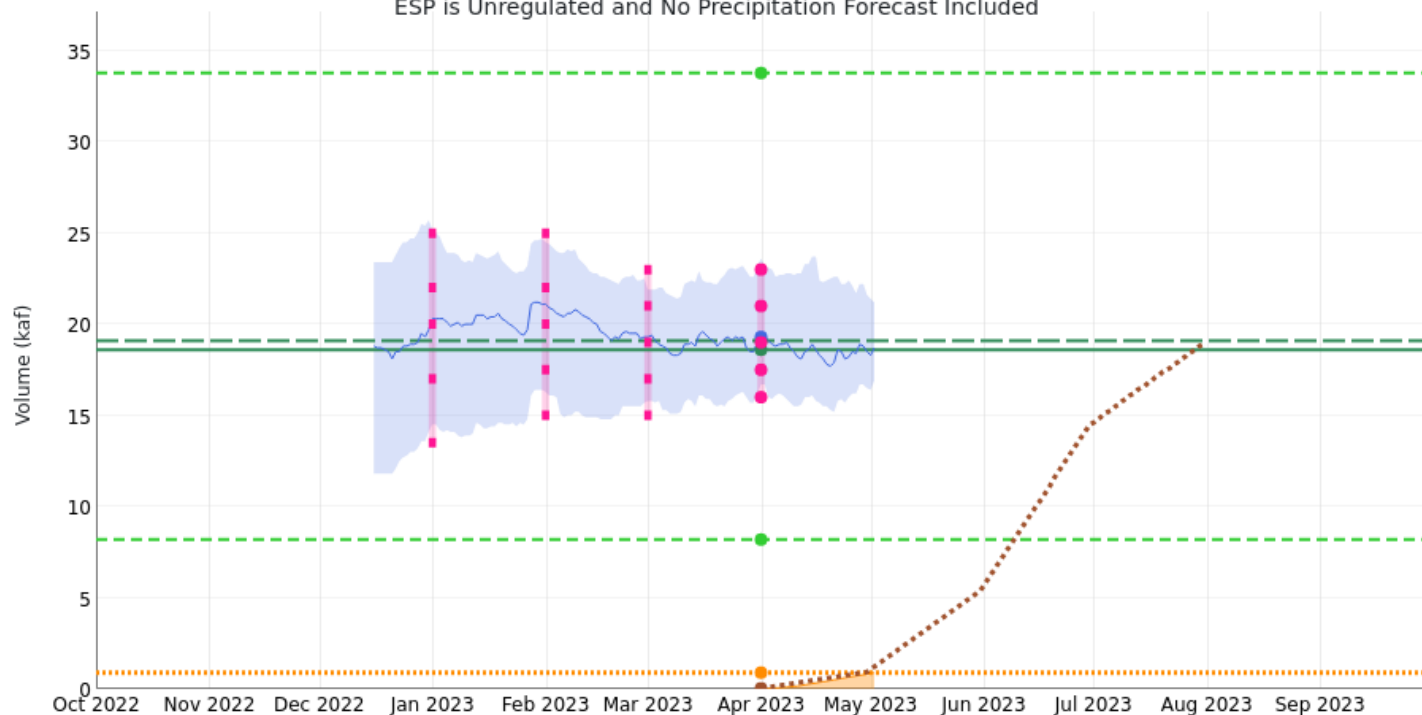
Official 90: 200



Fraser - Winter Park (FRWC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 19 kaf (102% Average, 99% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 1984: 33.77

Min 2012: 8.19

Average: 18.6

Median: 19.1

Observed Total: 0.9

Normal Accumulation: 0.03

ESP: 19.3

Official 10: 23

Official 30: 21

Official 50: 19

Official 70: 17.5

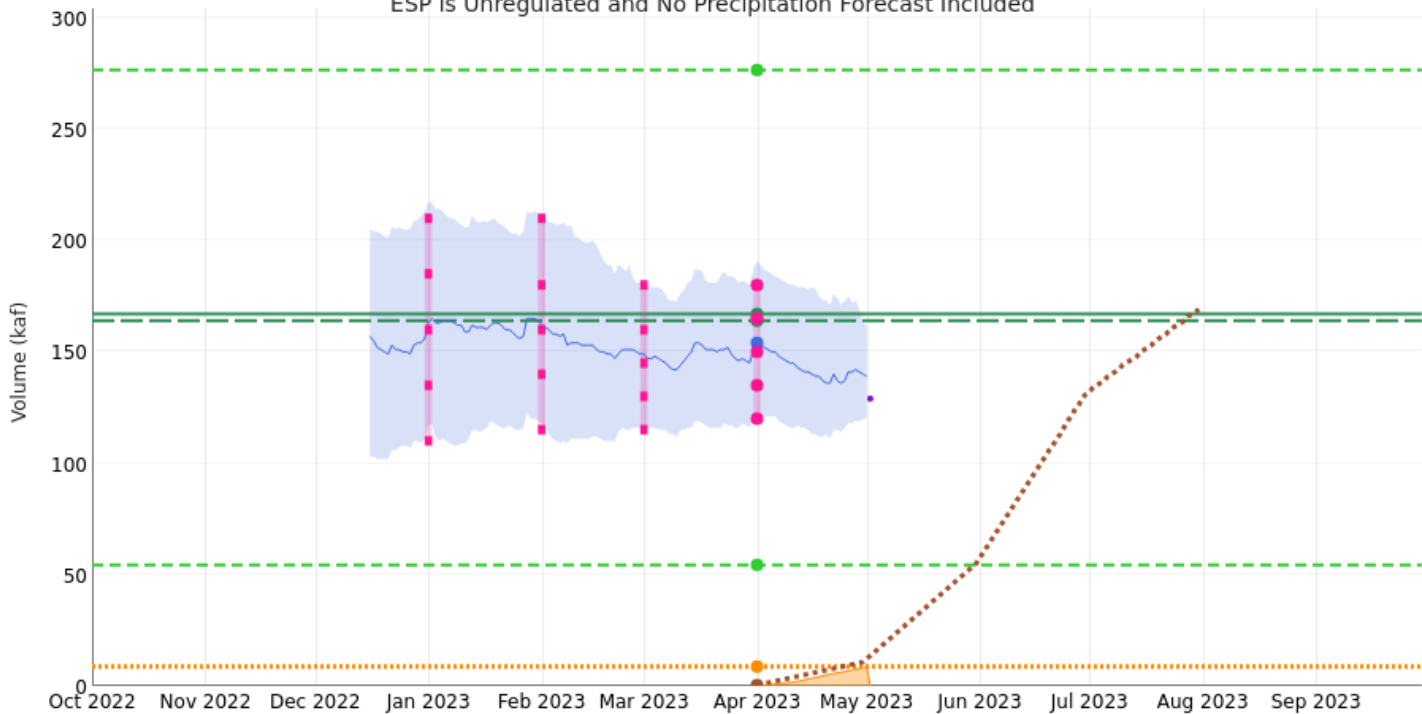
Official 90: 16



Blue - Dillon Reservoir (DIRC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 150 kaf (90% Average, 91% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 1984: 276.51

Min 2002: 54.36

Average: 167

Median: 164

Observed Total: 8.7

Normal Accumulation: 0.36

ESP: 154

Official 10: 180

Official 30: 165

Official 50: 150

Official 70: 135

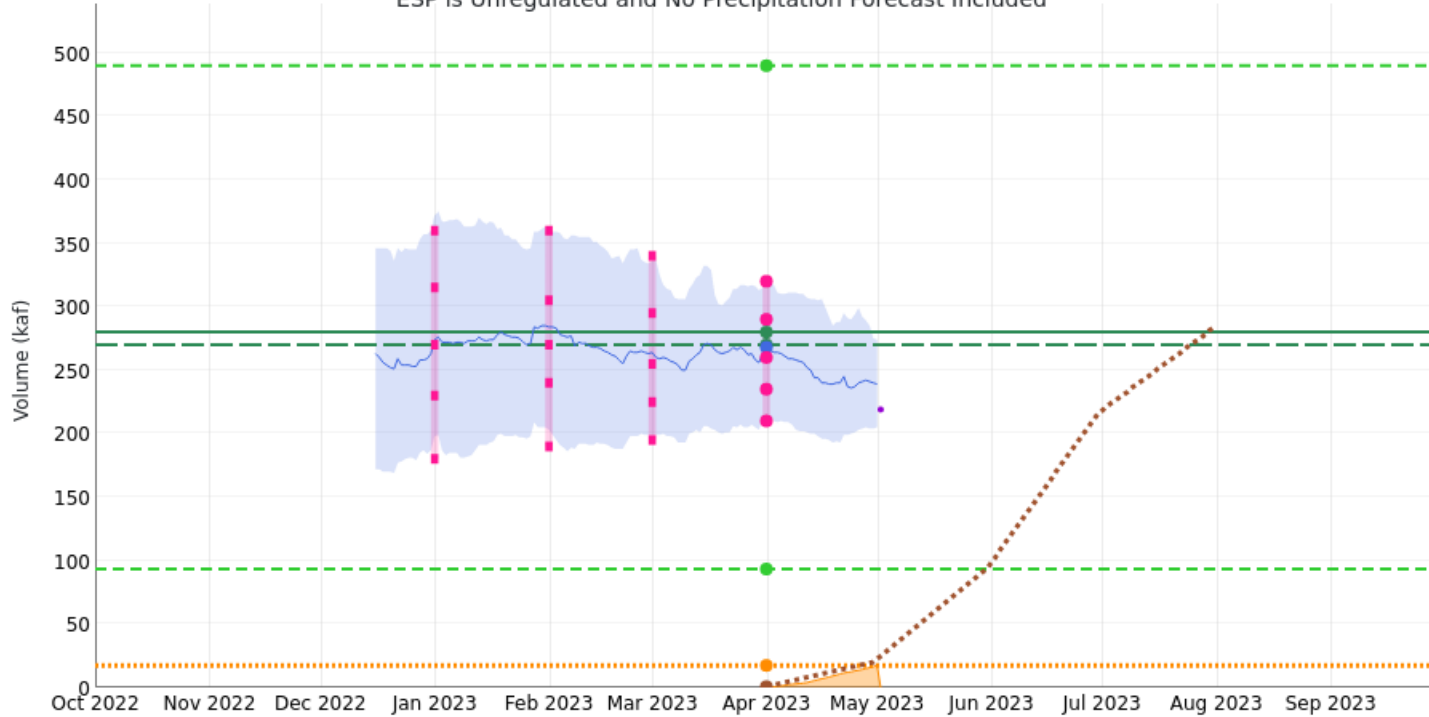
Official 90: 120



Blue - Green Mtn Reservoir (GMRC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 260 kaf (93% Average, 96% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 1984: 489.79

Min 2002: 93.36

Average: 280

Median: 270

Observed Total: 17.4

Normal Accumulation: 0.67

ESP: 268

Official 10: 320

Official 30: 290

Official 50: 260

Official 70: 235

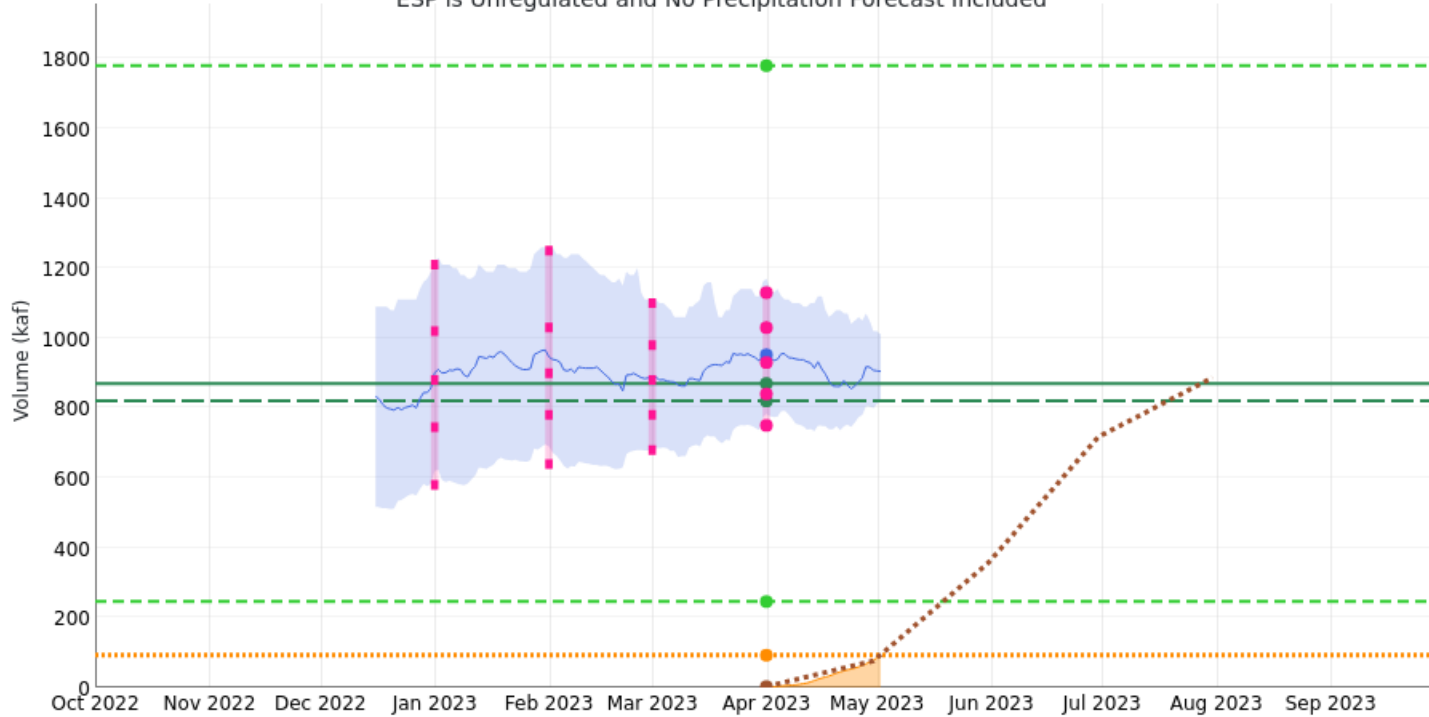
Official 90: 210



Colorado - Kremmling, Nr (KRMC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 930 kaf (107% Average, 113% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 2011: 1779.44

Min 2002: 246.03

Average: 870

Median: 820

Observed Total: 92.4

Normal Accumulation: 2.54

ESP: 952

Official 10: 1130

Official 30: 1030

Official 50: 930

Official 70: 840

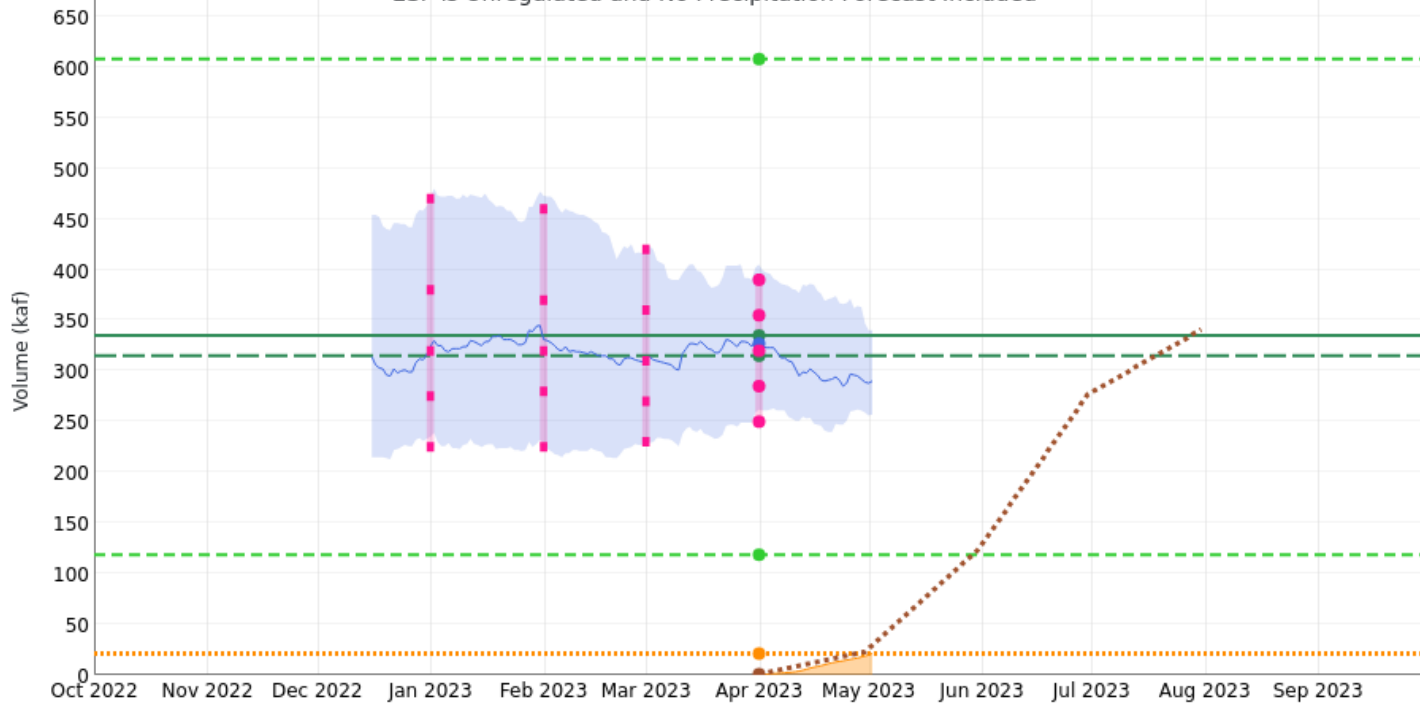
Official 90: 750



Eagle - Gypsum, Blo (GPSC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 320 kaf (96% Average, 102% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 1984: 607.8

Min 2002: 118.63

Average: 335

Median: 315

Observed Total: 21.1

Normal Accumulation: 0.76

ESP: 327

Official 10: 390

Official 30: 355

Official 50: 320

Official 70: 285

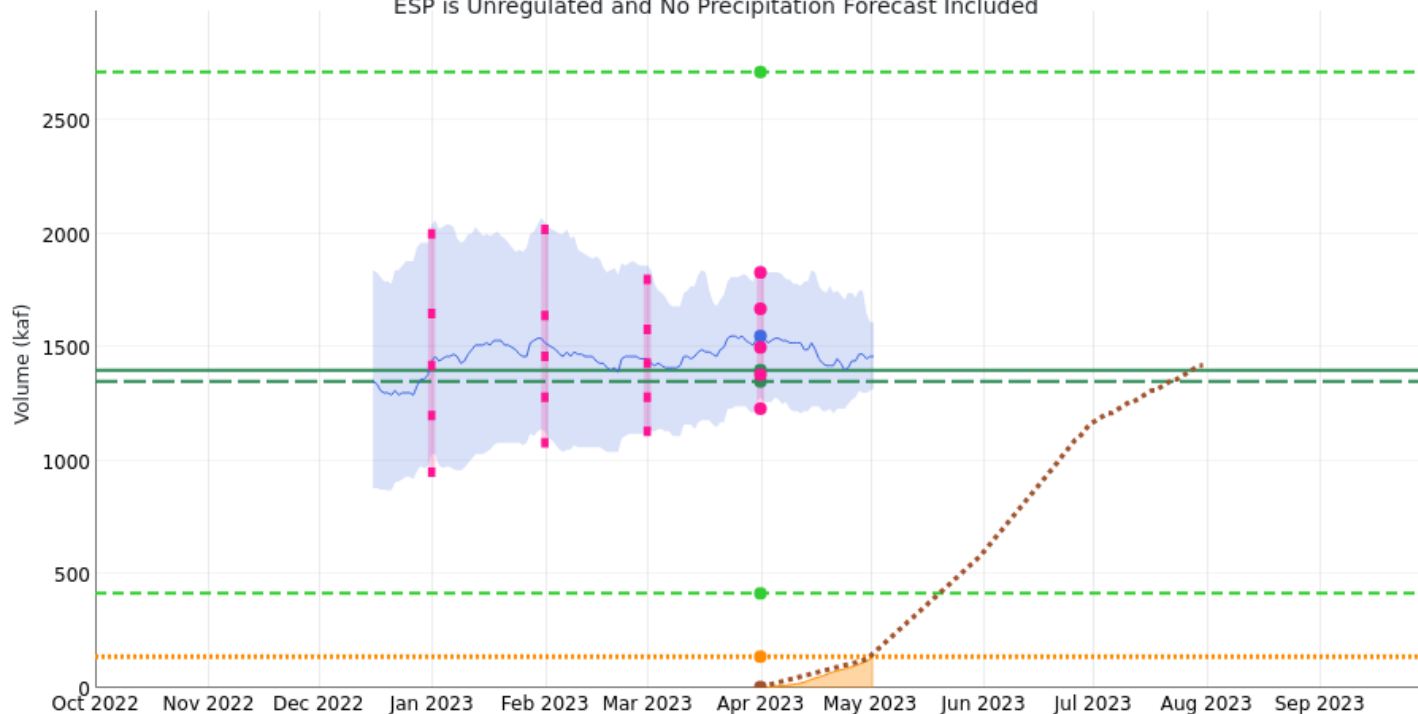
Official 90: 250



Colorado - Dotsero, Nr (EGLC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 1500 kaf (107% Average, 111% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 2011: 2712.61

Min 2002: 416.7

Average: 1400

Median: 1350

Observed Total: 138

Normal Accumulation: 4.16

ESP: 1550

Official 10: 1830

Official 30: 1670

Official 50: 1500

Official 70: 1380

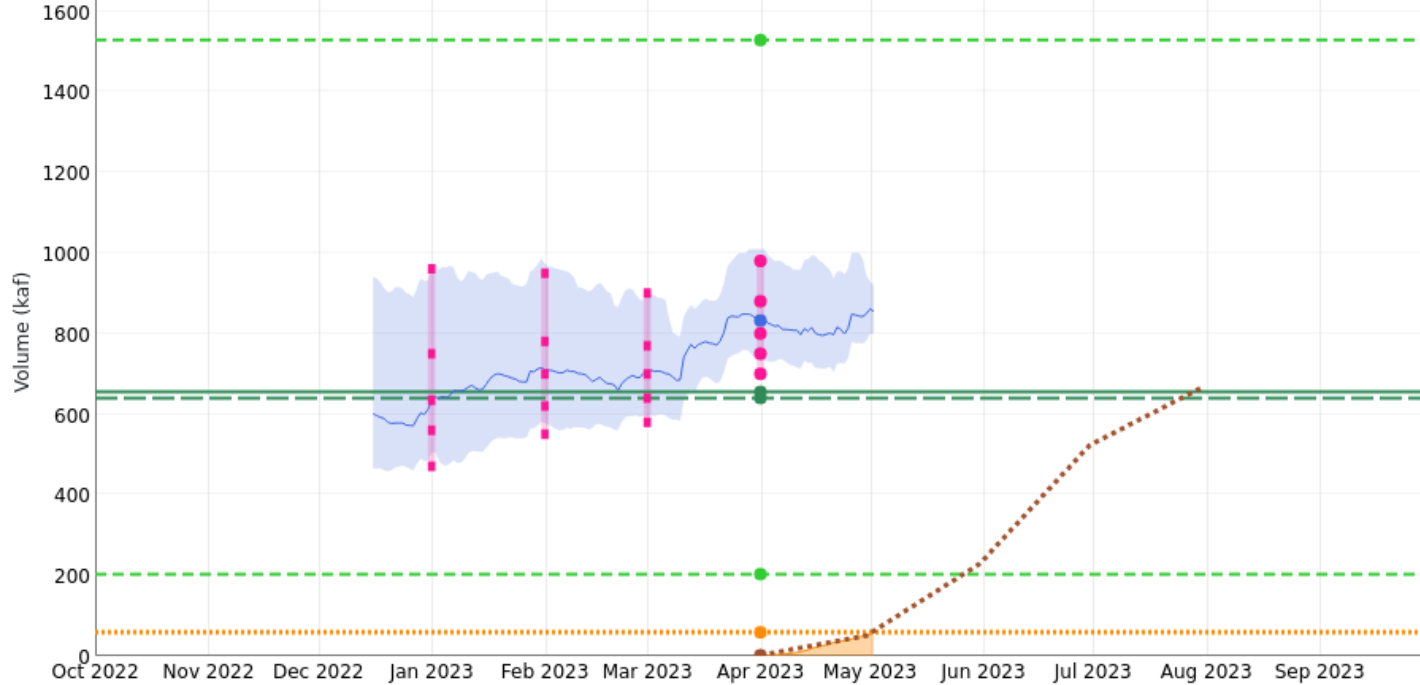
Official 90: 1230



Roaring Fork - Glenwood Springs (GWSC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 800 kaf (122% Average, 125% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 1914: 1527.97

Min 1977: 203.04

Average: 655

Median: 640

Observed Total: 58.7

Normal Accumulation: 1.68

ESP: 832

Official 10: 980

Official 30: 880

Official 50: 800

Official 70: 750

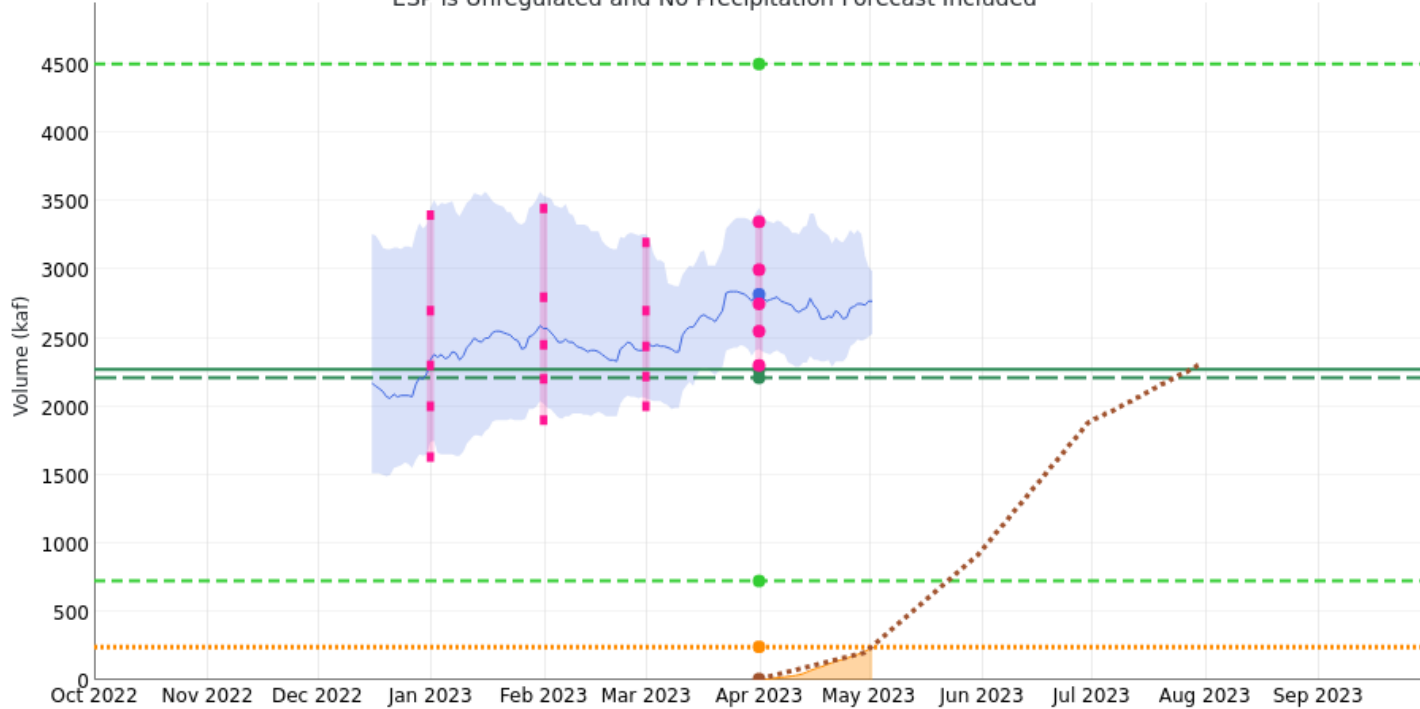
Official 90: 700



Colorado - Cameo, Nr (CAMC2)

Period: Apr-Jul, Official 50% Forecast (2023-04-01): 2750 kaf (121% Average, 124% Median)

ESP is Unregulated and No Precipitation Forecast Included



2023/04/01:

Max 1984: 4503.5

Min 2002: 723.88

Average: 2270

Median: 2210

Observed Total: 242

Normal Accumulation: 6.69

ESP: 2820

Official 10: 3350

Official 30: 3000

Official 50: 2750

Official 70: 2550

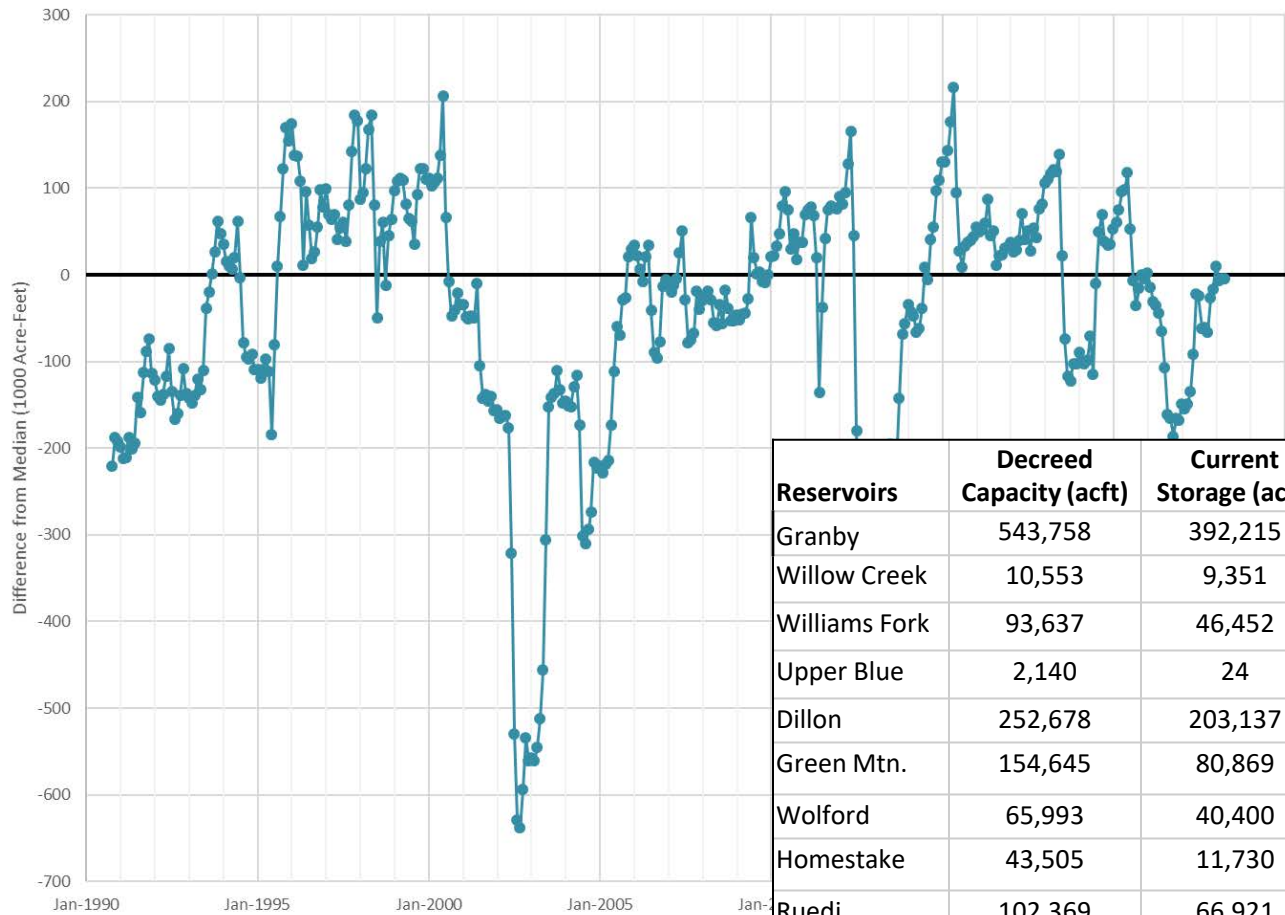
Official 90: 2300



Current Reservoir Conditions



Departure from Median



Reservoirs	Decreed Capacity (acft)	Current Storage (acft)	Available Capacity (acft)	Percent Full
Granby	543,758	392,215	151,543	72.1%
Willow Creek	10,553	9,351	1,202	88.6%
Williams Fork	93,637	46,452	47,185	49.6%
Upper Blue	2,140	24	2,116	1.1%
Dillon	252,678	203,137	49,541	80.4%
Green Mtn.	154,645	80,869	73,776	52.3%
Wolford	65,993	40,400	25,593	61.2%
Homestake	43,505	11,730	31,775	27.0%
Ruedi	102,369	66,921	35,448	65.4%
Vega	33,500	15,520	17,980	46.3%
Total	1,302,778	866,619	436,159	66.5%

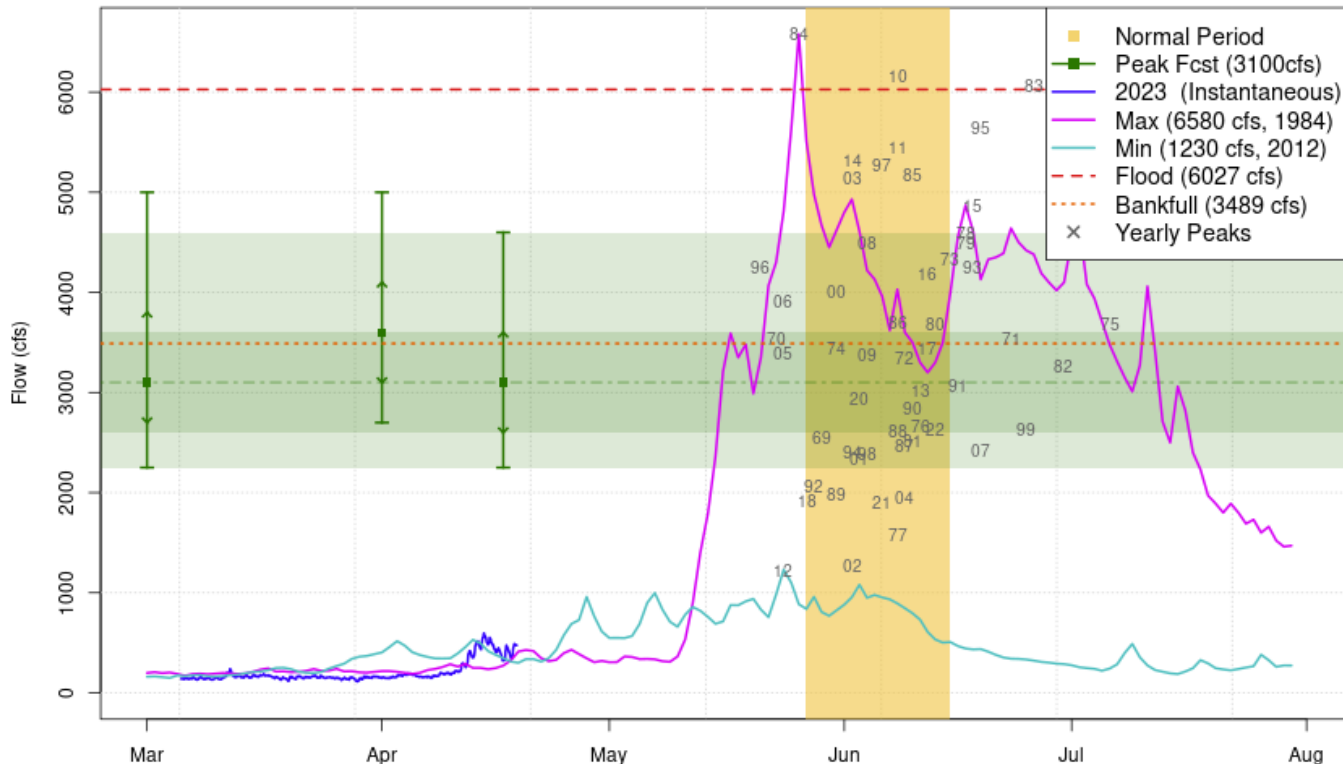
Storage as of 5/2/2023



Peak Flow Forecasts



2023 Mean Daily Peak Flow Forecast Eagle - Gypsum- Blo (GPSC2)



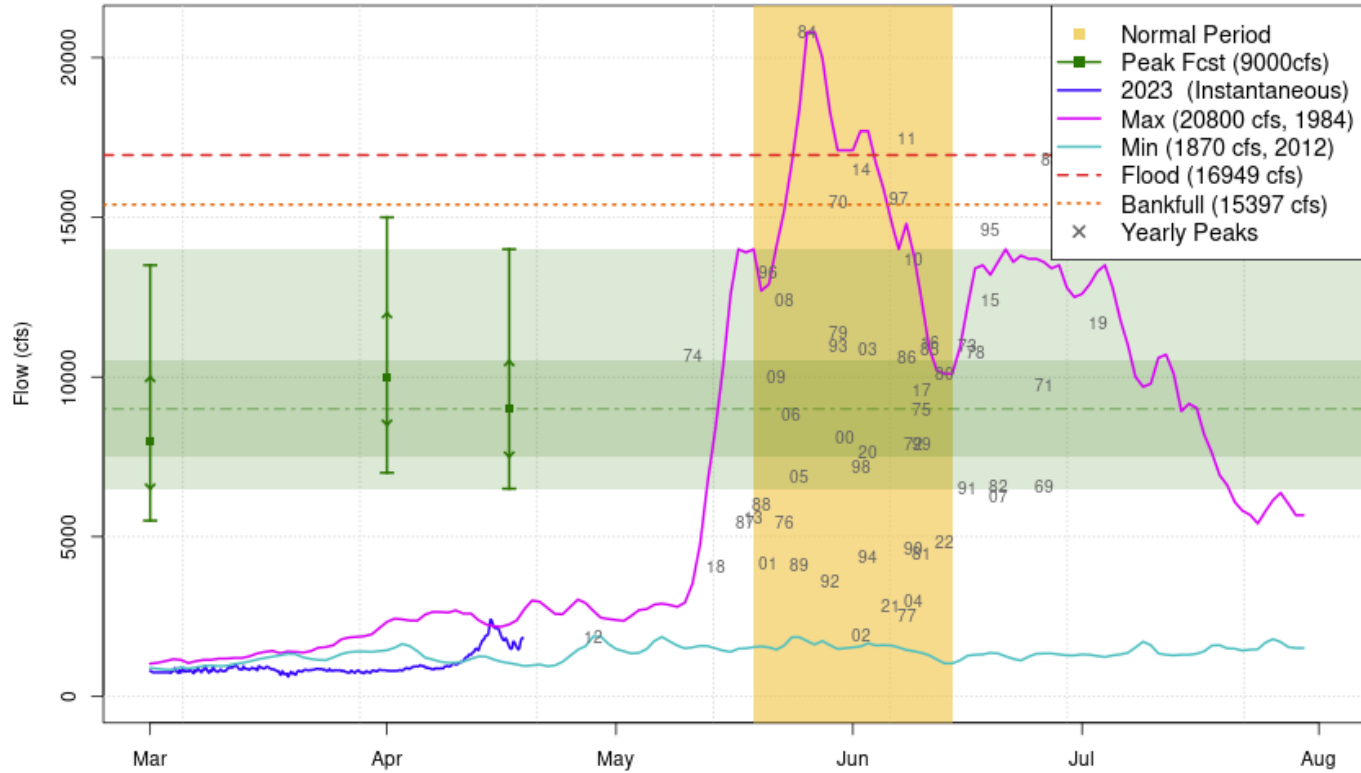
These graphics are updated approximately every two weeks between 3/1 and 5/1

Plot Created 2023-04-18 20:04:20

CBRFC / NWS / NOAA



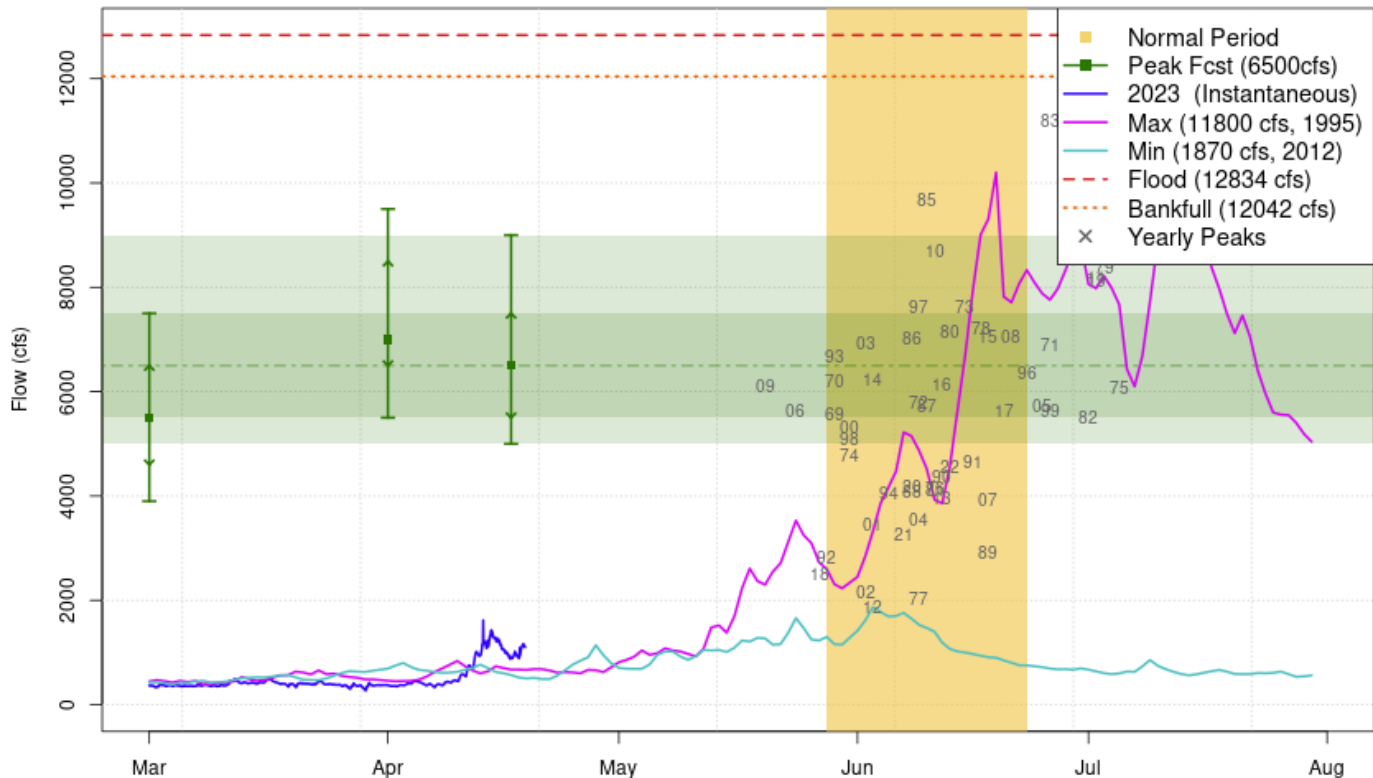
2023 Mean Daily Peak Flow Forecast Colorado - Dotsero- Nr (EGLC2)



These graphics are updated approximately every two weeks between 3/1 and 5/1
Plot Created 2023-04-18 20:04:23
CBRFC / NWS / NOAA



2023 Mean Daily Peak Flow Forecast Roaring Fork - Glenwood Springs (GWSC2)



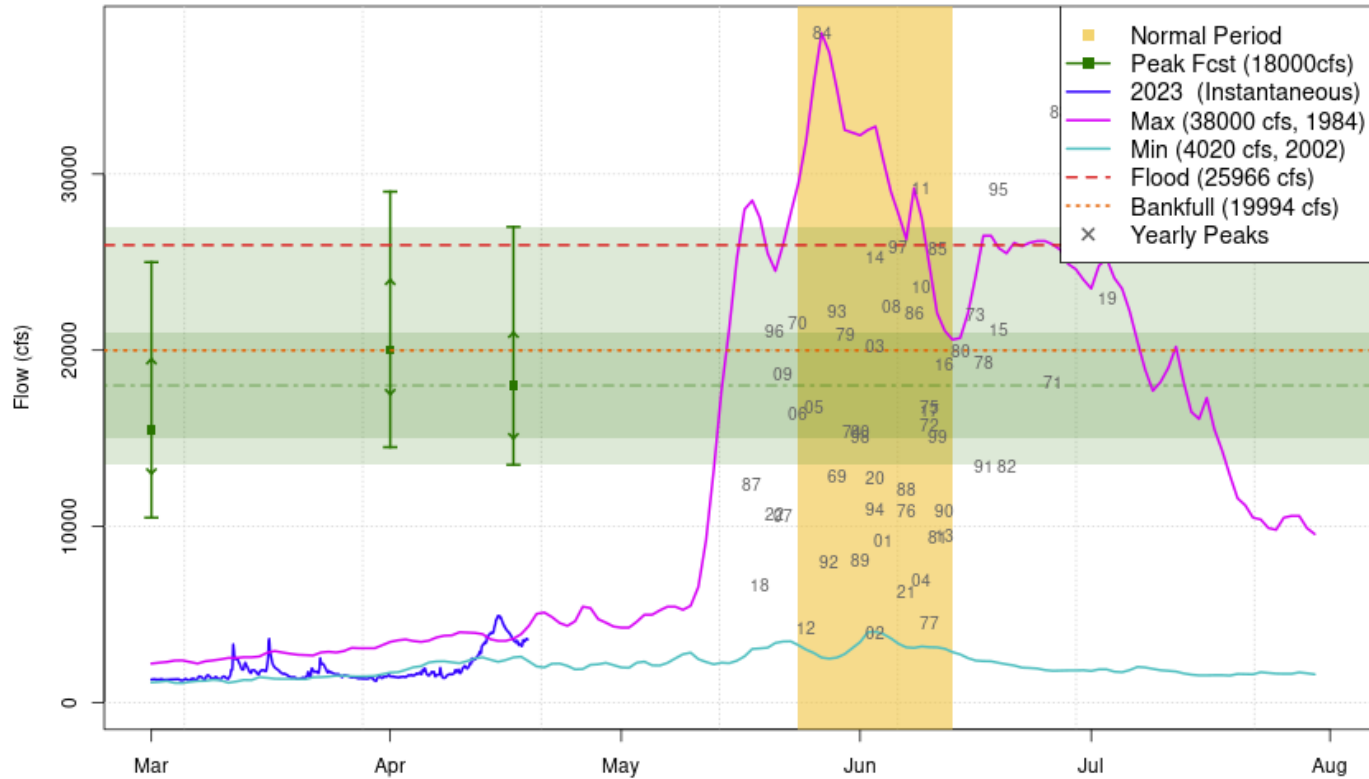
These graphics are updated approximately every two weeks between 3/1 and 5/1

Plot Created 2023-04-18 20:04:28

CBRFC / NWS / NOAA



2023 Mean Daily Peak Flow Forecast Colorado - Cameo- Nr (CAMC2)

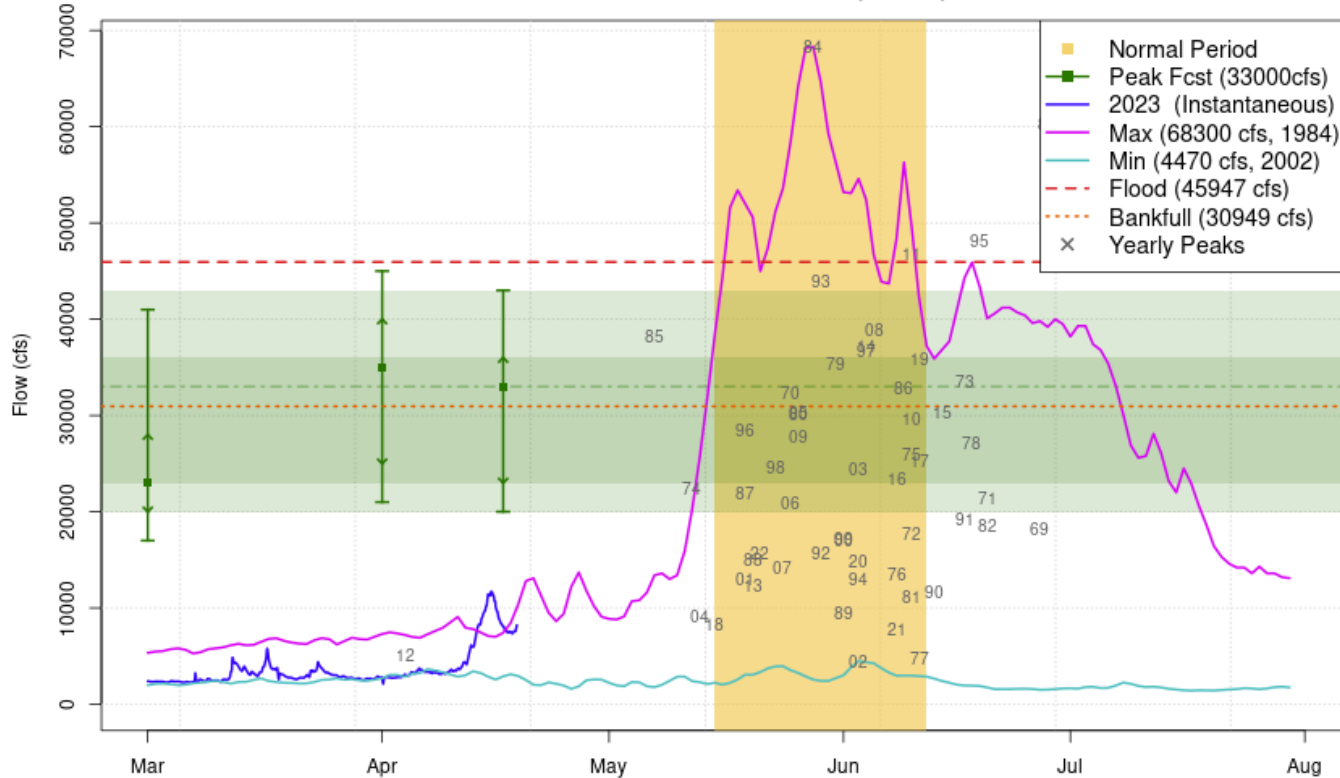


These graphics are updated approximately every two weeks between 3/1 and 5/1

Plot Created 2023-04-18 20:04:31
CBRFC / NWS / NOAA



2023 Mean Daily Peak Flow Forecast Colorado - Co-ut State Line- Nr (CCUC2)



These graphics are updated approximately every two weeks between 3/1 and 5/1
 Plot Created 2023-04-18 20:04:34
 CBRFC / NWS / NOAA



Similar Year Call Scenarios at Shoshone and Cameo

Similar Year Call Scenarios at Shoshone and Cameo

- Similar recent years for water supply and peak forecasts:
 - 2015
 - 2017
 - 2019

- Shoshone Call – Mid to late August
- Cameo Call – Late August to early September

Seasonal Precipitation Outlook

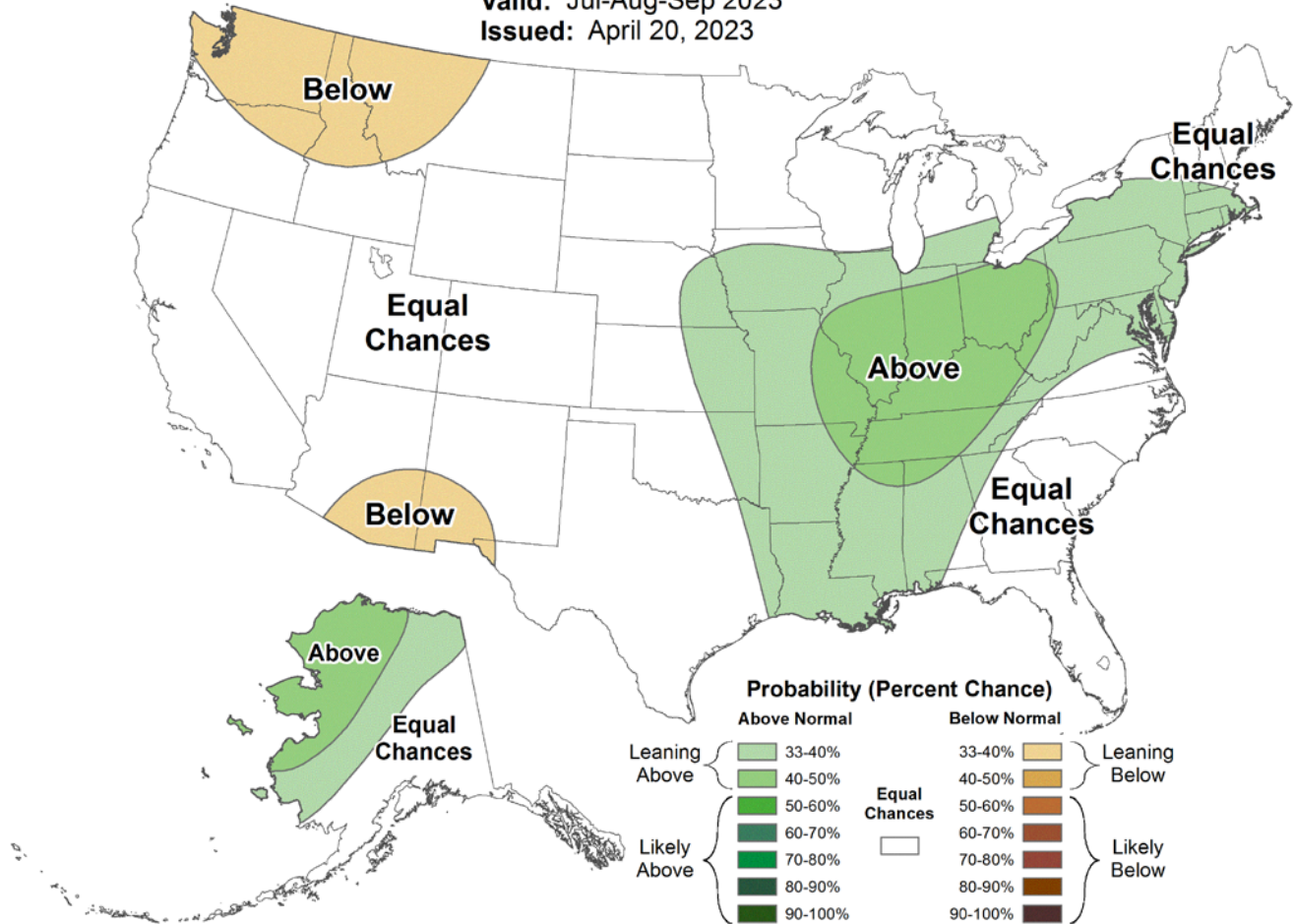


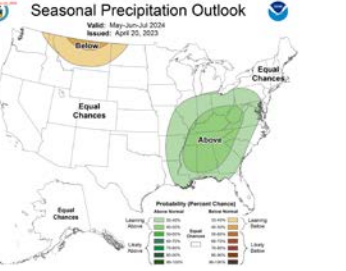
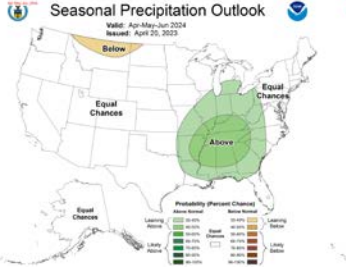
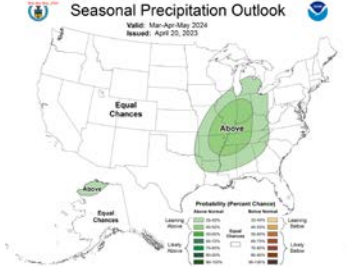
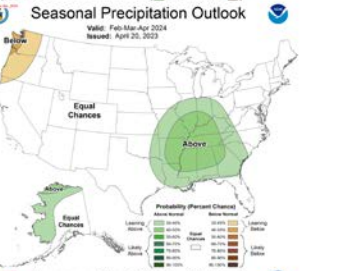
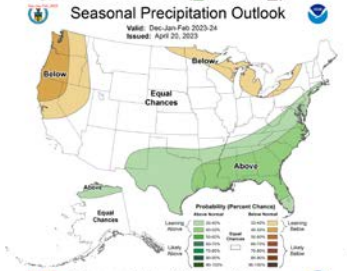
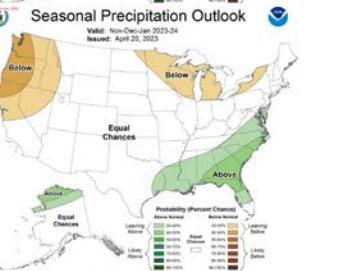
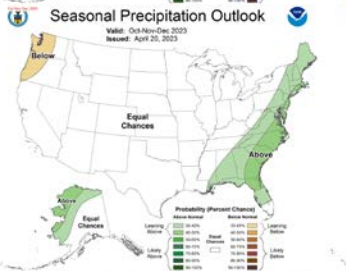
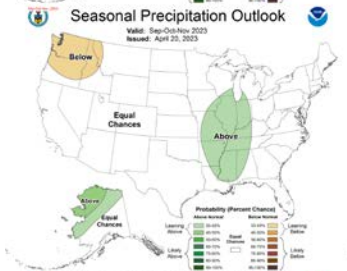
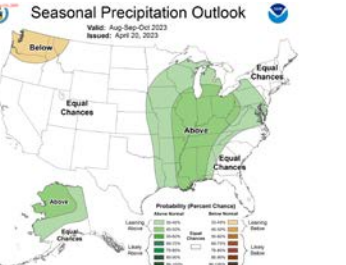
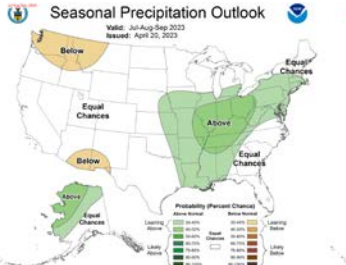
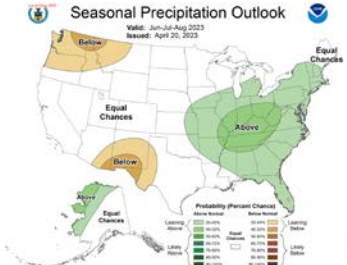
Seasonal Precipitation Outlook



Valid: Jul-Aug-Sep 2023

Issued: April 20, 2023





Questions?

Division 5	Lead Assistant D.E.	Caleb Foy	Caleb.Foy@state.co.us	(970) 945-5665 x5017
Districts 37, 38, 39, 45, 52 & 53 - Middle River	Lead Water Commissioner	Dave Hale	Dave.Hale@state.co.us	(970) 456-9378
District 37	Water Commissioner	Joe Zupancic	Raymond.Zupancic@state.co.us	(970) 379-8439
District 38 (Lower)	Water Commissioner	Heather Ramsey	Heather.Ramsey@state.co.us	(970) 355-4787
District 38 (Upper)	Water Commissioner	Bill Blakeslee	Bill.Blakeslee@state.co.us	(970) 309-3741
District 39	Water Commissioner	Glen Lund	Glen.Lund@state.co.us	(970) 948-2297
District 45	Water Commissioner	Bill West	WilliamE.West@state.co.us	(970) 930-5365
Districts 52 & 53	Water Commissioner	Rick Bumgardner	Rick.Bumgardner@state.co.us	(970) 987-0177



Reference Slides

- [AWS Plot \(usda.gov\)](https://usda.gov) Colorado headwaters
- [AWS Plot \(usda.gov\)](https://usda.gov) blue
- [AWS Plot \(usda.gov\)](https://usda.gov) eagle
- [AWS Plot \(usda.gov\)](https://usda.gov) roaring fork
- [AWS Plot \(usda.gov\)](https://usda.gov) Colorado headwaters-plateau
- [AWS Plot \(usda.gov\)](https://usda.gov) Entire Div 5

Water Supply Forecasts

- Colorado River – Cameo
- Roaring Fork – Glenwood Springs
- Colorado River – Dotsero
- Eagle River – Gypsum
- Colorado River – Kremmling
- Blue River – Green Mountain Reservoir
- Blue River – Dillon Reservoir
- Colorado River – Lake Granby
- Fraser River – Winter Park