Current Conditions and Forecasts

CRFS March 24, 2022
Water Year Precipitation: Oct-Feb

### Upper Colorado

**Water Year Precipitation, October 2021 - February 2022**

Averaged by Basin, Major Contributing Areas

<table>
<thead>
<tr>
<th>BASIN</th>
<th>OCT-FEB %AVG</th>
<th>NOV-FEB %AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Green</td>
<td>95%</td>
<td>75%</td>
</tr>
<tr>
<td>Duchesne</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>Yampa/White</td>
<td>100%</td>
<td>90%</td>
</tr>
<tr>
<td>Upper Col</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Gunnison</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>Dolores</td>
<td>95%</td>
<td>85%</td>
</tr>
<tr>
<td>San Juan</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Virgin</td>
<td>100%</td>
<td>85%</td>
</tr>
<tr>
<td>Lake Powell</td>
<td>100%</td>
<td>90%</td>
</tr>
</tbody>
</table>

### Lower Colorado

**Water Year Precipitation, October 2021 - February 2022**

Averaged by Basin, Major Contributing Areas

<table>
<thead>
<tr>
<th>BASIN</th>
<th>OCT-FEB %AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verde</td>
<td>70%</td>
</tr>
<tr>
<td>Salt</td>
<td>70%</td>
</tr>
<tr>
<td>Little Colorado</td>
<td>80%</td>
</tr>
<tr>
<td>Upper Gila</td>
<td>45%</td>
</tr>
</tbody>
</table>
Winter Precipitation: Dec-Feb

Monthly Precipitation - December 2021
Averaged by Basin

% Average
- >500%
- 300-500%
- 200-300%
- 150-200%
- 130-150%
- 110-130%
- 100-110%
- 90-100%
- 70-90%
- 50-70%
- 30-50%
- 0-30%

Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrf.noaa.gov

Monthly Precipitation - January 2022
Averaged by Basin

% Average
- >500%
- 300-500%
- 200-300%
- 150-200%
- 130-150%
- 110-130%
- 100-110%
- 90-100%
- 70-90%
- 50-70%
- 30-50%
- 0-30%

Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrf.noaa.gov

Monthly Precipitation - February 2022
Averaged by Basin

% Average
- >500%
- 300-500%
- 200-300%
- 150-200%
- 130-150%
- 110-130%
- 100-110%
- 90-100%
- 70-90%
- 50-70%
- 30-50%
- 0-30%

Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrf.noaa.gov
March 1-23 Precipitation

Upper Colorado

Month to Date Precipitation - March 23 2022
Averaged by Basin, Major Contributing Areas

Lower Colorado

Month to Date Precipitation - March 23 2022
Averaged by Basin, Major Contributing Areas

Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov
March Temperatures

Below normal temperatures for the Upper Colorado so far this month.

Have begun to see snowmelt in lower elevations, but not anything too extreme or out of the ordinary.

**CBRFC Model Snow**
- DOLC2LUF (>11000 ft)
- DOLC2LMF (9500-11000 ft)
- DOLC2LLF (<9500 ft)

**Departure from Normal Average Max Temperature (F)**
3/1/2022-3/22/2022

**1991-2020 SWE Median**
**2022 Model Snow**
### Snow Conditions: CBRFC Model Snow

#### Trend in SWE since 3/1

<table>
<thead>
<tr>
<th>BASIN</th>
<th>Change in % Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Green</td>
<td>+3%</td>
</tr>
<tr>
<td>Duchesne</td>
<td>+5%</td>
</tr>
<tr>
<td>Yampa/White</td>
<td>+5%</td>
</tr>
<tr>
<td>Upper Col</td>
<td>+3%</td>
</tr>
<tr>
<td>Gunnison</td>
<td>+4%</td>
</tr>
<tr>
<td>Dolores</td>
<td>+10%</td>
</tr>
<tr>
<td>San Juan</td>
<td>+3%</td>
</tr>
</tbody>
</table>

#### Snow Conditions - March 01 2022

Modeled, Averaged by Basin, Major Contributing Areas

#### Snow Conditions - March 23 2022

Modeled, Averaged by Basin, Major Contributing Areas

Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov
Streamflow Conditions

Map of 7-day average streamflow compared to historical streamflow for the day of the year

[Map showing streamflow conditions with color-coded percentile classes]

USGS 09361500 ANIMAS RIVER AT DURANGO, CO
(Drainage area: 701 square miles, No. of years of record: 107 - 110 years)

USGS 09400000 TONTO CREEK ABOVE CUN CREEK, NEAR ROOSEVELT, AZ
(Drainage area: 675 square miles, No. of years of record: 73 - 80 years)

Explanation - Percentile classes
- Low
- 10-24
- 25-75
- 75-90
- >90
- High
- Not-ranked
Trend in Raw Model Guidance: March 1-23

Does not mean official forecasts will increase/decrease this much. Official forecasts include basin forecaster discretion/knowledge.
Current model guidance is near the March 1 forecast volume, but additional precipitation is needed during the last week of the month to maintain that level.
Forecast Evolution Plot – Blue Mesa Inflow

Gunnison - Blue Mesa Reservoir (BMDC2)
Period: Apr-Jul, Official 50% Forecast (2022-03-15): 585 kaf (92% Average, 102% Median)
ESP is Unregulated and No Precipitation Forecast Included

2022/03/23:
Average: 635
Median: 575
ESP: 563

3/1 Forecast: 560 KAF/88%
3/16 Forecast: 585 KAF/92%
3/23 ESP No Precip: 563 KAF/89%
3/23 ESP 7 Day Precip: 542 KAF/85%

Model Snow with SNOTEL
March 23, 2022
Forecast Evolution Plot – Navajo Inflow

San Juan - Navajo Reservoir, Archuleta, Nr (NVRN5)
Period: Apr-Jul, Official 50% Forecast (2022-03-15): 465 kaf (74% Average, 74% Median)
ESP is Unregulated and Includes 7 Day Precipitation Forecast

2022/03/23:
Average: 630
Median: 630
ESP: 406

3/1 Forecast: 455 KAF/72%
3/15 Forecast: 465 KAF/74%
3/23 ESP No Precip: 450 KAF/71%
3/23 ESP 7 Day Precip: 406 KAF/64%

San Juan 7 Day Forecast Precipitation (inches): 3/23

[Map of San Juan basin with precipitation data]
Forecast Evolution Plot – Lake Powell

Colorado - Lake Powell, Glen Cyn Dam, At (GLDA3)
Period: Apr-Jul, Official 50% Forecast (2022-03-15): 4600 kaf (72% Average, 75% Median)
ESP is Unregulated and No Precipitation Forecast Included

Max Trace: 8360 KAF
1995 Future Weather
3% Chance

Min Trace: 2280 KAF
2002 Future Weather

3/1 Forecast: 4400 KAF/69%
3/16 Forecast: 4600 KAF/72%
3/23 ESP No Precip: 4380 KAF/69%
3/23 ESP 7 Day Precip: 4170 KAF/65%

 Probability Traces

Colorado - Lake Powell, Glen Cyn Dam, At (GLDA3)
Period: Apr-Jul, Official 50% Forecast (2022-03-15): 4600 kaf (72% Average, 75% Median)
ESP is Unregulated and No Precipitation Forecast Included

Max Trace: 8360 KAF
1995 Future Weather
3% Chance

Min Trace: 2280 KAF
2002 Future Weather

Colorado Basin River Forecast Center
Lake Powell 17 Group

2022/03/23:
Average: 6390
Median: 6130
ESP: 4380

03/23/2022 Percent Median: 90% (10.2 / 18.6)
Percent Seasonal Median: 16% (18.2 / 21.5)
3 Day Accum Rate: 0.0 In/day

Created 03/23/2022 GMT
NOAA/CBRFC, 2022

Lower Colorado River Water Supply

Gila/Salt/Verde/Little Colorado River Basins
January – May Forecast Volume
(Latest ESP % Median)
Upcoming Weather

- High pressure will build over the region into this weekend initiating a warming trend that will bring record to near-record temperatures to much of the area.

- An upper low will move into the western US early next week. Widespread precipitation is expected through midweek next week. Precipitation totals are expected to be generally below ½ of an inch, with the exception of the higher terrain of Colorado which could see up to an inch of precipitation in the 7 day period. There is quite a bit of uncertainty in terms of precipitation amounts. However, in most scenarios, the higher terrain of Colorado will see the highest precipitation totals.
10-Day Streamflow Forecasts

Forecast Hydrograph – Yampa – Deerlodge Park (YDLC2)
Forecast Hydrograph – Colorado – Kremmling, Nr (KRMC2)
Forecast Hydrograph – Nf Gunnison – Somerset, Nr (SOMC2)
Forecast Hydrograph – Animas – Durango (DRGC2)
Upcoming Weather: 8-14 day outlook (March 31- April 6)

An active weather pattern is expected through the beginning of April. This will result in generally wetter and cooler weather than normal.
CPC Seasonal Outlook for April-June

CPC seasonal outlook for the rest of spring (April-June) shows above normal temperatures for the entire area with below normal precipitation for the northern two-thirds of the area.
Summary

- April 1 forecasts will likely be similar to the March 1 forecasts or decrease depending on how next week’s weather materializes.

- Soil moisture deficits do exist. Forecasts are accounting for this deficit.
  - Deficits must be fulfilled before runoff can occur.

- Next two months weather are critical to water supply and runoff outcomes.

- Much above average temperature expected through early next week
  - Expecting rises in streamflow from melt and rain

- Active weather is expected starting early next week into the first week of April
  - Uncertainty is high in precipitation amounts