Overview of hydrologic conditions to date
April water supply forecasts
Looking ahead
Questions and comments
Water year precipitation near to above average in both the Upper and Lower basins.

Snow water equivalent 115% of median above Powell.

Lake Powell April-July inflow forecast: 6.7 MAF / 94% AVG

April-July Volume Forecasts:

- Flaming Gorge Res 685 kaf / 70%
- Green River UT 2460 kaf / 83%
- Blue Mesa Res 640 kaf / 95%
- Colorado – Cisco 4500 kaf / 101%
- Navajo Res 735 kaf / 100%
- San Juan – Bluff 1100 kaf / 100%
February Precipitation

Lower Colorado
~35% average

Upper Colorado
~50% average

Upper Colorado significant runoff contributing areas

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

Monthly Precipitation - March 2016
(Averaged by Basin)

Lower Colorado: <10% average

Upper Colorado: ~95% average
- Significant runoff contributing areas:
  - >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.cbrfc.noaa.gov
April 1 Conditions/Forecasts

- Water year precipitation near to below average in both the Upper and Lower basins.
- Snow water equivalent 95% of median above Powell.
- Lake Powell April-July inflow forecast: 5.3 MAF / 74% AVG

April-July Volume Forecasts:
- Flaming Gorge Res 740 kaf / 76%
- Green River UT 2250 kaf / 76%
- Blue Mesa Res 515 kaf / 76%
- Colorado – Cisco 3700 kaf / 83%
- Navajo Res 530 kaf / 72%
- San Juan – Bluff 790 kaf / 72%
April Weather

Month to Date Precipitation - April 07 2016
(Averaged by Basin)

500mb Geopotential Heights (m) Composite Mean
4/1/16 12z to 4/7/16 12z
NCEP/NCAR Reanalysis

700mb Temperatures (K) Composite Anomaly
4/1/16 12z to 4/7/16 12z
NCEP/NCAR Reanalysis

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Salt Lake City, Utah, www.cbrfc.noaa.gov
April Weather

Month to Date Precipitation - April 12 2016
(Averaged by Basin)

% Average
>500%
300-500%
200-300%
150-200%
130-150%
110-130%
100-110%
90-100%
80-90%
70-80%
50-70%
30-50%
0-30%

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Salt Lake City, Utah, www.cbrfc.noaa.gov
Snow – SNOTEL Network

Snow (% median): April 5, 2016

Snow (% median): April 19, 2016
Snow – SNOTEL Network

Snow (% median):
April 19, 2016

- **Colorado Basin River Forecast Center EKFW4 - ELKHART PARK G.S. (9,400 ft)**
  - Snow Water Equivalent (in): 20
  - Percent Median To Date: 72% (2/8/12)
  - Percent Seasonal Median: 75% (7/19/12)
  - Snow Water Equivalent (ft): 72% med
  - Snow Water Equivalent (in): 9,400 ft
  - Snow Water Equivalent (ft): 118% med
  - Snow Water Equivalent (in): (9,170 ft)
  - Snow Water Equivalent (ft): 87% med

- **Colorado Basin River Forecast Center BTSC2 - BERTHOUD SUMMIT (11,300 ft)**
  - Snow Water Equivalent (in): 20
  - Percent Median To Date: 107% (2/9/16)
  - Percent Seasonal Median: 127% (2/1/16)
  - Snow Water Equivalent (ft): 107% med
  - Snow Water Equivalent (in): 11,300 ft
  - Snow Water Equivalent (ft): 89% med
  - Snow Water Equivalent (in): (9,700 ft)
  - Snow Water Equivalent (ft): 90% med

- **Colorado Basin River Forecast Center TRFW4 - TRIPLE PEAKS (8,500 ft)**
  - Snow Water Equivalent (in): 30
  - Percent Median To Date: 118% (2/3/16)
  - Percent Seasonal Median: 102% (2/28/16)
  - Snow Water Equivalent (ft): 118% med
  - Snow Water Equivalent (in): 8,500 ft
  - Snow Water Equivalent (ft): 82% med
  - Snow Water Equivalent (in): (8,800 ft)
  - Snow Water Equivalent (ft): 87% med

- **Colorado Basin River Forecast Center WPCL1 - WEBSTER FLAT (9,170 ft)**
  - Snow Water Equivalent (in): 20
  - Percent Median To Date: 117% (7/1/16)
  - Percent Seasonal Median: 50% (7/1/16)
  - Snow Water Equivalent (ft): 117% med
  - Snow Water Equivalent (in): 9,170 ft
  - Snow Water Equivalent (ft): 87% med
  - Snow Water Equivalent (in): (9,600 ft)
  - Snow Water Equivalent (ft): 90% med

- **Colorado Basin River Forecast Center PKKC2 - PARK CONE (9,600 ft)**
  - Snow Water Equivalent (in): 20
  - Percent Median To Date: 87% (2/8/16)
  - Percent Seasonal Median: 75% (2/8/16)
  - Snow Water Equivalent (ft): 87% med
  - Snow Water Equivalent (in): 9,600 ft
  - Snow Water Equivalent (ft): 90% med
  - Snow Water Equivalent (in): (9,100 ft)
  - Snow Water Equivalent (ft): 90% med

- **Colorado Basin River Forecast Center WCCS2 - WOLF CREEK SUMMIT (11,000 ft)**
  - Snow Water Equivalent (in): 20
  - Percent Median To Date: 89% (9/2/16)
  - Percent Seasonal Median: 87% (8/31/16)
  - Snow Water Equivalent (ft): 89% med
  - Snow Water Equivalent (in): 11,000 ft
  - Snow Water Equivalent (ft): 90% med
  - Snow Water Equivalent (in): (11,100 ft)
  - Snow Water Equivalent (ft): 90% med
April Mid-Month Forecasts
(change since 4/1 forecast)

- **Flaming Gorge**
  - 740 kaf / 76% (no change)

- **Blue Mesa**
  - 515 kaf / 76% (no change)

- **Navajo**
  - 515 kaf / 70% (-15 kaf)

- **Powell**
  - 5300 kaf / 74% (no change)
Flaming Gorge Reservoir

Green - Flaming Gorge Res- Flaming Gorge Dam- At (GRNU1)
2015-04-15 Apr-Jul Official 50% Forecast: 740 kaf (76% of average)
ESP is unregressed and no precipitation forecast included

Official Forecast
Forecast Target Period

Exceedance probabilities

Volume (kaf)
1500
1000
500
0

Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep

Daily Model Guidance

Observed Volumes

The latest (2015-04-19) 50% ESP forecast is 765 kaf.
Plot Created 2016-04-19 14:49:44, NOAA / NWS / GCRFC
Forecasts in the forecast target period include observed values.
Colorado River near Cameo

Colorado - Cameo - Nr (CAMC2)
2016-04-01 Apr-Jul Official 50% Forecast: 2060 kaf (87% of average)
ESP is Unregulated and No Precipitation Forecast Included

The latest (2016-04-18) 50% ESP forecast is 2014 kaf.
Plot Created 2016-04-18 14:35:13, NOAA / NWS / CBRFC
Forecasts in the forecast target period include observed values.
Blue Mesa Reservoir

Gunnison - Blue Mesa Res (BMDC2)
2016-04-15 Apr-Jul Official 50% Forecast: 515 kaf (76% of average)
ESP is Unregulated and No Precipitation Forecast Included

The latest (2016-04-15) 50% ESP forecast is 506 kaf.
Plot Created 2016-04-18 14:32:17, NOAA / NWS / CBRFC
Forecasts in the forecast target period include observed values.
Navajo Reservoir

San Juan - Navajo Res- Archuleta- Nr (NVRNS)
2016-04-15 Apr-Jul Official 50% Forecast: 515 kaf (70% of average)
ESP is Unrequested and No Precipitation Forecast Included

The latest (2016-04-18) 50% ESP forecast is 535 kaf.
Plot Created 2016-04-18 15:00:51, NOAA / NWS / CBRFC
Forecasts in the forecast target period include observed values.
Lake Powell

Colorado - Lake Powell- Glen Cyn Dam- At (GLDA3)  
2016-04-15 Apr-Jul Official 50% Forecast: 5300 kaf (74% of average)  
ESP is Unregulated and No Precipitation Forecast Included

The latest (2016-04-18) 50% ESP forecast is 5337 kaf.  
Plot Created 2016-04-18 14:48:27, NOAA / NWS / CBRFC  
Forecasts in the forecast target period include observed values.
SNOTEL Index SWE vs. Runoff

Observed
1991 – 5288 kaf / 74%
2006 – 5347 kaf / 75%
2010 – 5655 kaf / 79%

Forecast
2016 – 5300 kaf / 74%

Other factors:
- SNOTEL station distribution
  - no station weighting on index
- point measurement to areal representation
- highest elevations not represented
- Antecedent conditions
  - soil moisture
- Spring weather
  - temperature
  - precipitation
2 Week Outlook

20

Week Outlook

Dashed black lines are climatology (10th of inches). Shaded areas are TCS values above or below (+) normal. Unshaded areas are near-normal.

Probability of Below

Probability of Above

Dashed black lines are climatology (10°F). Shaded areas are TCS values above or below (+) normal. Unshaded areas are near-normal.

Probability of Below

Probability of Above

Dashed black lines are climatology (10°F). Shaded areas are TCS values above or below (+) normal. Unshaded areas are near-normal.

Probability of Below

Probability of Above

Probability of Below

Probability of Above

Validity: Apr 28 - May 04, 2016

NOAA
1 and 3 Month Outlooks

May_2016

May-Jun-Jul_2016
The chance of El Niño gradually decreases during the spring and ENSO-neutral is favored during May-June-July (MJJ) 2016. The chance of La Niña increases to more than 50% in July-August-September (JAS) 2016.
Quick look at conditions that affect the water supply forecasts for Lake Powell unregulated inflow:
http://www.cbrfc.noaa.gov/dash/lp.php
Under ‘Water Supply’ Menu
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