Snowmelt Outlook
for North Central & Northeast Colorado
May 15, 2020

- Rivers and creeks are not forecast to rise near bankfull in the next week, even with temperatures rising much above normal early next week.
- Mountain snowmelt alone is not forecast to cause flooding this spring.
- However, it should be noted that like every spring, an extended period of heavy rainfall falling on top of the snowpack can produce flooding.
- Also, thunderstorms with heavy rain can produce flash flooding. This on top of the swollen streams from snowmelt, could cause streams to flood.

Factors that may impact the mountain snowmelt:

- Future snowfall
- Stream levels during the melt
- When and how fast the snow melts (freezing and thawing in the mountains)
- Future rainfall amounts and timing
- Whether rain (especially a warm rain) falls on the snowpack
- Soil moisture
- Dry winds
Here are links to current forecasts (graphs) at ‘daily’ Forecast Points:

West of the Divide:
- Colorado River near Granby
- Colorado River near Kremmling
- Fraser River at Winter Park
- Williams Fork near Parshall
- Muddy Creek near Kremmling
- Blue River at Blue River
- Blue River below Dillon Rsvr
- Blue River below Green Mtn Rsvr
- Snake River near Montezuma
- Tenmile Creek at Frisco
- Straight Creek near Dillon

East of the Divide:
(available daily during the snowmelt runoff)
- South Platte at South Platte River
- South Platte River at Denver
- South Platte River at Kersey
- Cache la Poudre R. at Canyon Mouth
- Cache la Poudre R. near Greeley
- Inflow into Lake Estes at Estes Park
- North Fork Big Thompson R. at Drake
- Clear Creek at Golden

- Forecasts are issued as needed at other Forecast Points during times of high water, but are not routinely available. All forecasts are available on our AHPS webpage at https://water.weather.gov/ahps2/forecasts.php?wfo=bou
- Additional river gage observations are available (courtesy of the gage owners) at https://water.weather.gov/ahps2/index.php?wfo=bou
"Colorado floods come in several flavors", is from Nolan Doeskin. His slide below presents an overview of flood potential in Colorado.

- Snowmelt Floods (common, not extreme – large volumes, modest peak flows)
- Rain on Snow (possible but uncommon)
- Widespread Spring Rains (very possible)
- Late spring “hybrids” (Rare/extreme -- 1965)
- Summer flash floods (common, intense, local)
- Fall rains (Tropical moisture and “hybrid” upslope/convective systems -- more likely western Colorado but . . . . (1902, 1911, 1938, 1970, 1972, 1997, and 2013)

Colorado Climate Center website is at: http://climate.atmos.colostate.edu/
The remaining slides show mountain snowpack timeseries graphs for sub-basins the past 4 years (each line is a water year October - September)

Blue River

Colorado Basin River Forecast Center
Blue River (Summit County)

05/14/2020 Percent Median: 119% (10.3 / 8.6)
Percent Seasonal Median: 69% (10.3 / 14.8)
3 Day Melt Rate: -0.1 in/day

Created 05/15.17:56 GMT
NOAA/CBRFC, 2020


Summit County
Additional time series graphs can be produced on the Colorado Basin RFC website at: http://www.cbrfc.noaa.gov/station/sweplot/snowgroup.php
North Platte River (Jackson County)

05/15/2020 Percent Median: 96% (17.8 / 18.6)
Percent Seasonal Median: 78% (17.8 / 22.9)
3 Day Melt Rate: 0.5 in/day

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Cache la Poudre & Laramie Rivers

- 05/15/2020 Percent Median 84% (15.8 / 18.8)
- Percent Seasonal Median: 77% (15.8 / 20.6)
- 3 Day Melt Rate: -0.5 in/day

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NOAA/CBRFC, 2020


Past, Future

northern Larimer County
Big Thompson River

05/15/2020 Percent Median 93% (17.1 / 18.4)
Percent Seasonal Median: 83% (17.1 / 20.7)
3 Day Melt Rate: 0.5 in/day

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southern Larimer County

Map showing locations such as Fort Collins, Estes Park, Boulder, and Breckenridge.
Clear Creek
NRCS Time Series Snowpack Graphs of the major Colorado river basins are available at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/snow/products/?cid=nrcs144p2_063323