

Flaming Gorge Technical Working Group

May 23, 2018 Hydrology Summary

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This hydrologic update provides information regarding current conditions and fulfills the requirements detailed in the 2005 Flaming Gorge Final Environmental Impact Statement (FEIS) in Section 2.5.3 related to an operational plan for Flaming Gorge Dam (“Hydrology Summary”). The Hydrology Summary is to describe the current hydrologic classification of the Green River and Yampa River Basins, including the most probable runoff patterns for the two basins.

Hydrologic determinations for both the Yampa River Basin and Green River Basin above Flaming Gorge have been made and are unlikely to change unless significant, unexpected precipitation occurs in either basin. The Green River Basin above Flaming Gorge Reservoir is expected to receive 1,120,000 acre-feet in the April through July runoff period (May mid-month forecast), placing it in the average (below median) hydrologic classification. The Yampa River Basin is expected to receive 841,000 acre-feet for the same April through July runoff period, placing it in the moderately dry hydrologic classification. These projections are based off of the Colorado River Forecast Center’s May Final Forecast.

Snow water equivalent (SWE) as of May 23, 2018, for the Upper Green River and Yampa/White River Basins are 92 and 45 percent of median, respectively. Flaming Gorge SWE is similar to 2003 and 2006, while Deerlodge SWE is similar to 2001 and 2017. The Tower snotel site, used as a reference point for Yampa snowpack and runoff, currently has 28.0 inches of SWE (61 percent of median). On May 23, 2001 the Tower SNOTEL measured a SWE of 27.3 inches during a runoff season where the Yampa yielded 790 kaf (62% of 30-year average, Maybell + Lily).

SNOTEL tracking graphs, with analogous years, are provided in Figure 1 for the Upper Green River Basin above Flaming Gorge and Figure 2 for the Yampa River at the Deerlodge Park, CO gage.

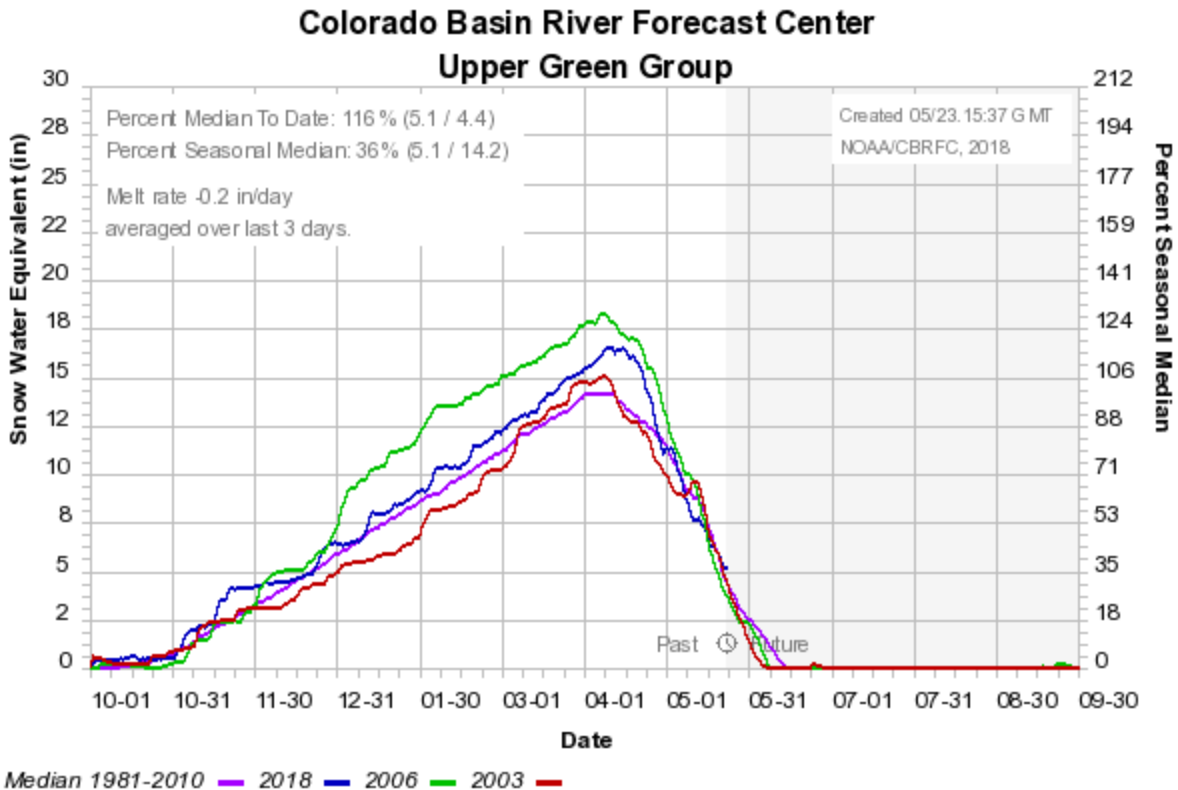


Figure 1 - Upper Green River Basin SNOTEL Tracking. 1981-2010 percent of median compared against 2018 YTD Snow Water Equivalent (SWE), and analog years 2006 and 2003.

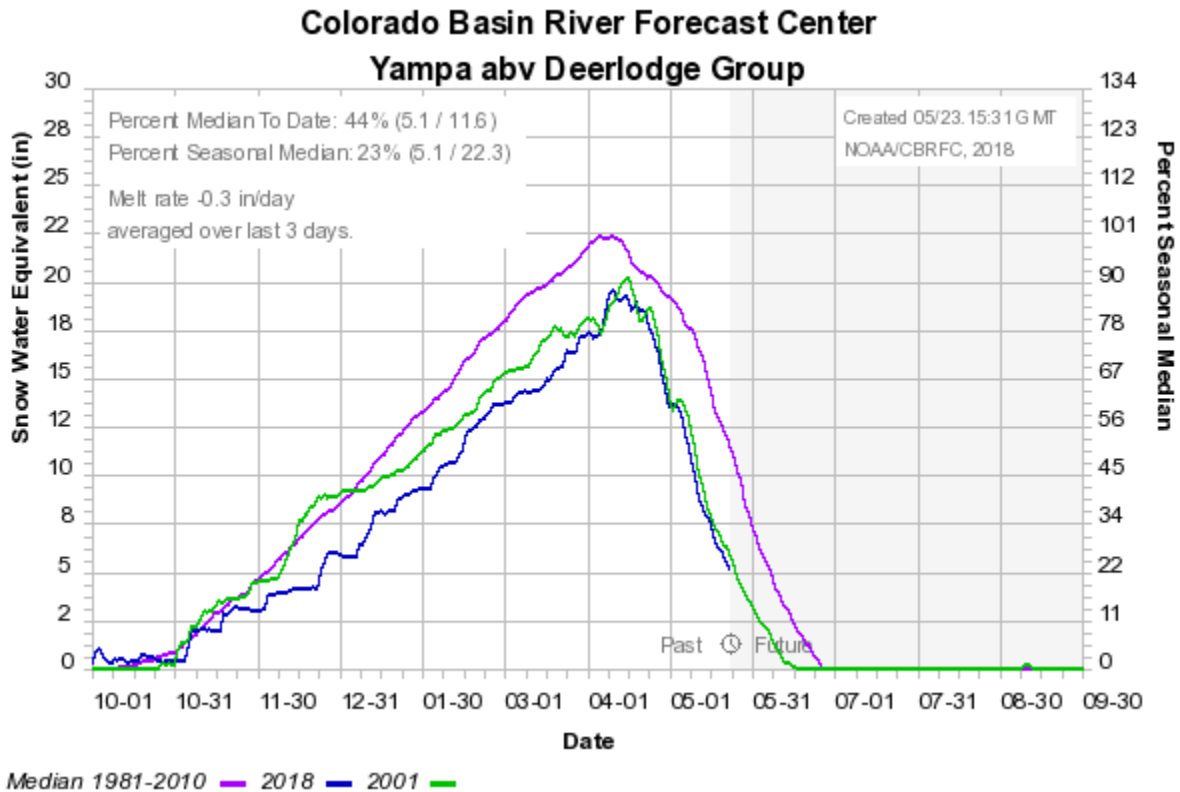


Figure 2 - Yampa River above Deerlodge SNOTEL Group. 1981-2010 percent of average SWE compared against 2018 YTD, and analog years 2001 and 2017.

10-Day Streamflow Forecasts

Observed data from the Deerlodge Park gage indicates that the Yampa River saw a peak flow of around 9,000 cfs, May 12-13. The following, Figure 3, illustrates 10-day forecasted flow values for the Yampa River at the Deerlodge Park gage, May 23 through June 3, 2018. Table 1 shows the 15-day ESP output from the CBRFC Daily Model (05/23/2018).

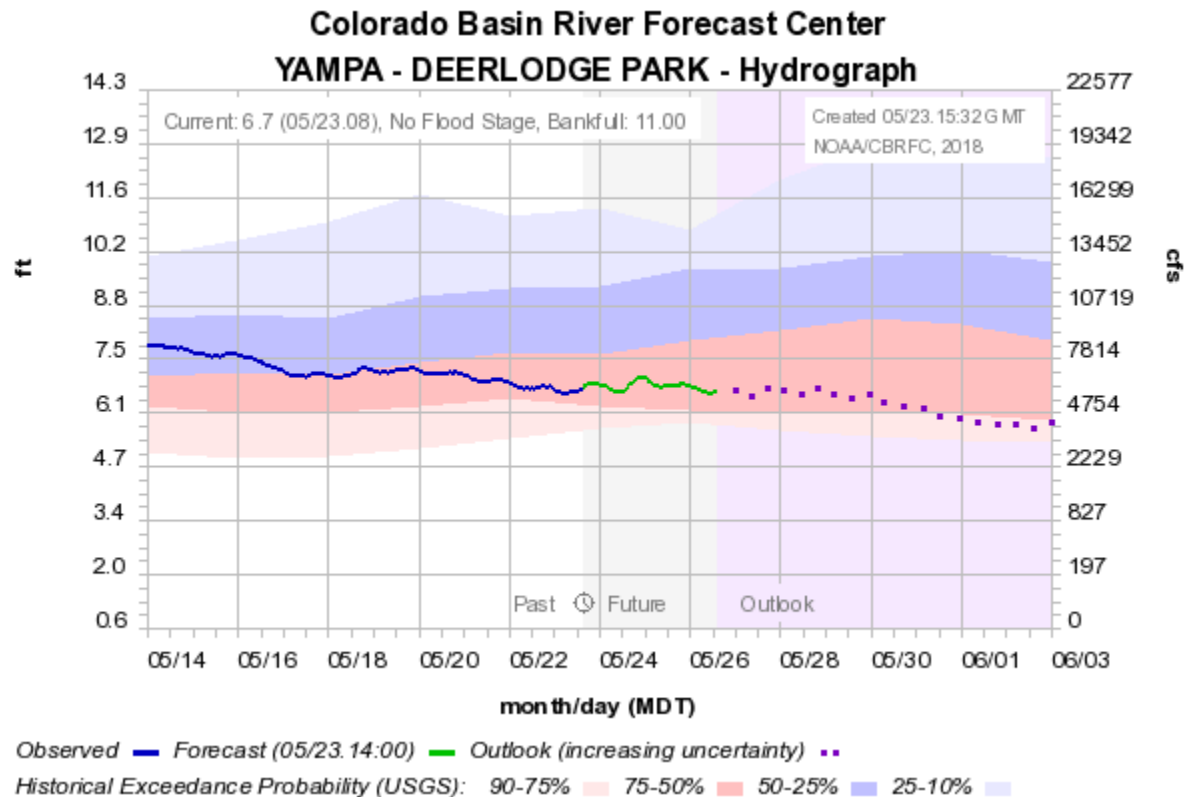


Figure 3 - Streamflow forecast for the Yampa River, May 23 – June 3, 2018.

Table 1- CBRFC Yampa River 15-Day ESP

DATE	TOTAL	
2018-05-24	6246	Daily Model Output (20180523)
2018-05-25	6482	
2018-05-26	6218	
2018-05-27	6010	
2018-05-28	6076	
2018-05-29	5981	
2018-05-30	5650	
2018-05-31	5032	
2018-06-01	4434	
2018-06-02	4114	
2018-06-03	4066	
2018-06-04	4063	
2018-06-05	3752	
2018-06-06	3382	
2018-06-07	3098	

Planned Flaming Gorge releases and Jensen projections

The following figures (Figure 4 and Figure 5) are provided by the CBRFC to demonstrate projected flows at the Jensen gage given the currently planned release schedule.

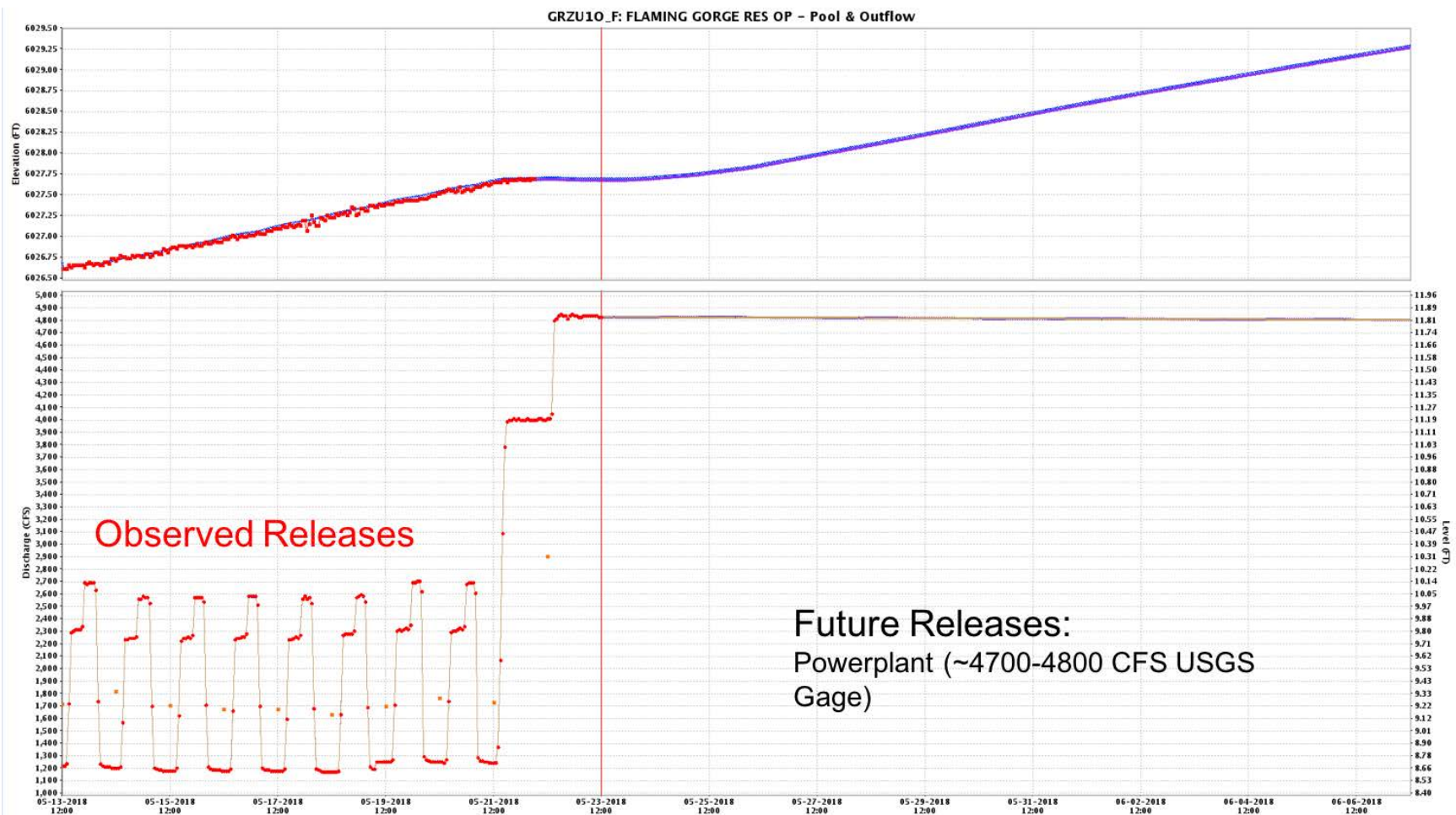


Figure 4- Currently planned release schedule from Flaming Gorge

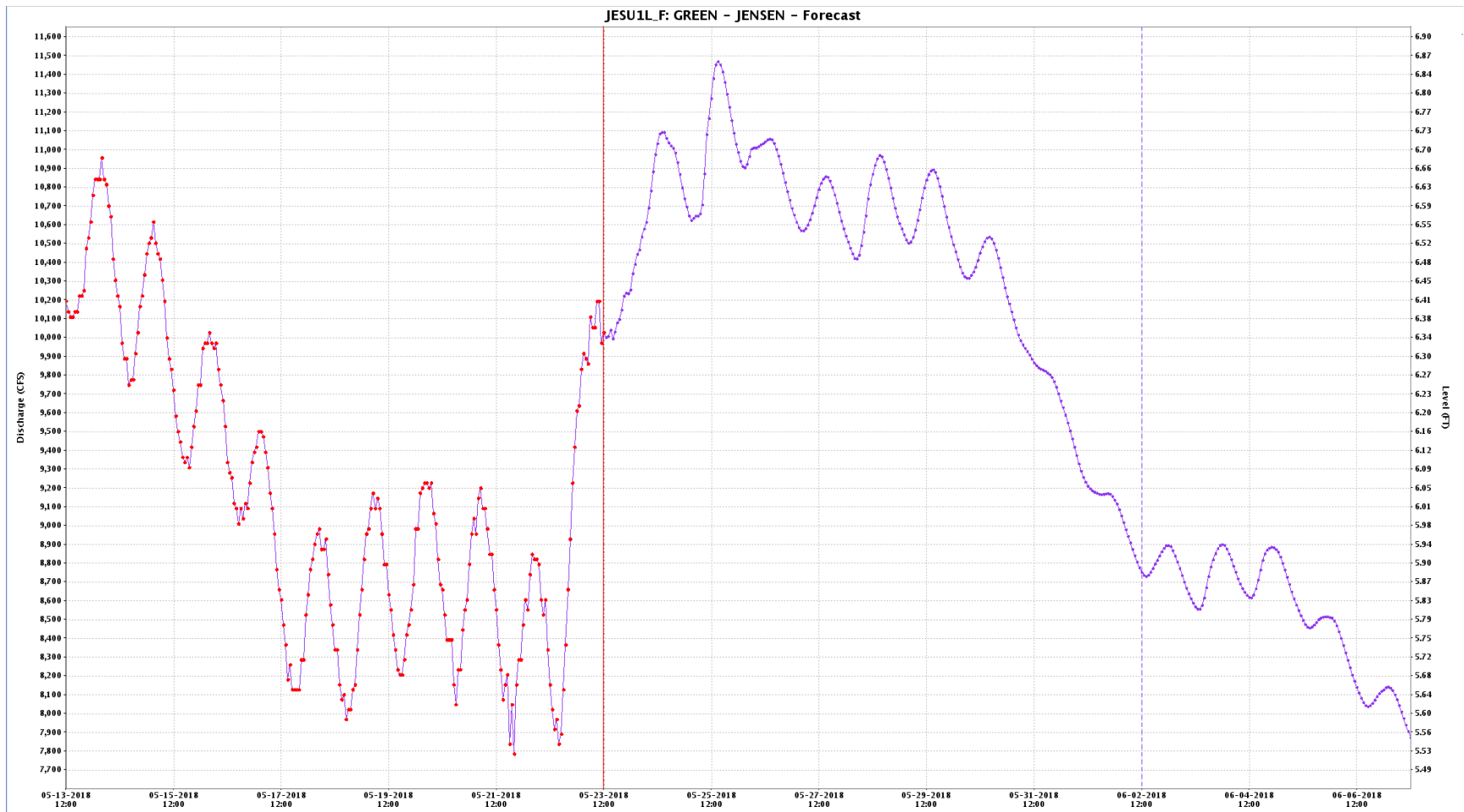


Figure 5 - Jensen flow projections given current FG release plan