Teton River
Runoff Forecast
March 1, 2019

Snowpack Conditions

– Snowpack conditions (Snow Water Equivalent or SWE) at the Natural Resource Conservation Service (NRCS) Mt. Lockhart and Waldron SNOTEL sites are **trending slightly below normal at 92% of the median** (Figure 1) due to a dry spell in November. The deficit right now can be erased by one storm cycle. As of March 1, the mountains should have accumulated almost (80%) of the winters total snow.
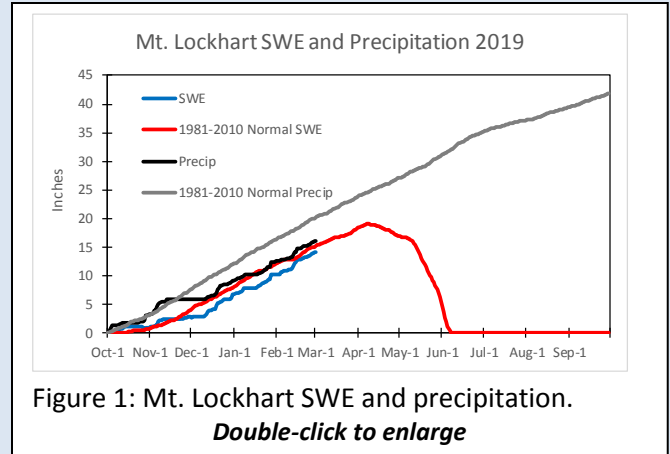

Figure 1: Mt. Lockhart SWE and precipitation.
Double-click to enlarge

Stream Flow Conditions

– The United States Geological Survey (USGS) gage 06102500 Teton River Below South Fork near Choteau (TRSF) is still in winter baseflow conditions and frozen. The low elevation (4,000 -5,000 ft) snowpack has yet to melt and raise water levels.

Runoff Forecast

– On a normal year 46,000 acre-feet of water flow by the TRSF gage from April 1-July 31. The DNRC March 1 runoff forecast, predicts a **normal volume of 45,900 acre-feet** (Figure 2). Current information indicates that the 2019 runoff is predicted to be similar to conditions observed in 2013. The **error associated with the March forecast is +/- 36** %, meaning the prediction could vary from dry to above normal conditions (Figure 2).

The error range in March is high since there is more than a month and a half to accumulate (or not to accumulate) snow in the mountains
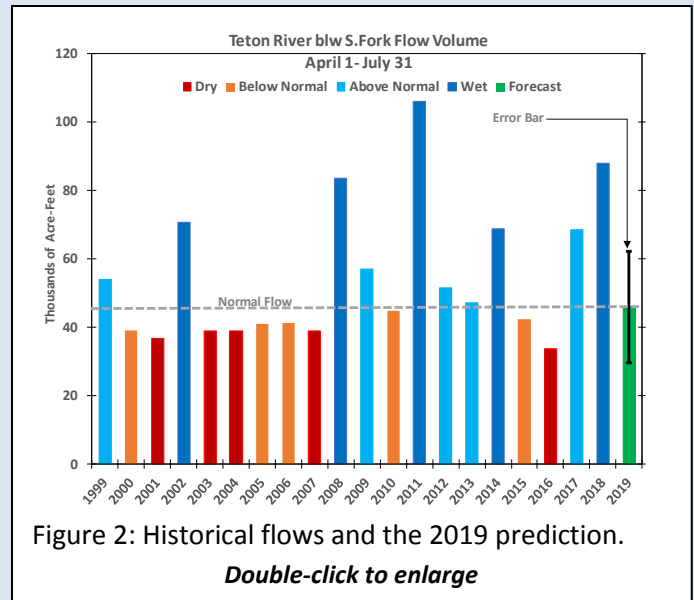
Weather Outlook

– The National Weather Service (NWS) **one-month outlook indicates normal precipitation and below normal temperatures** for Central Montana. The El Niño Southern Oscillation (ENSO) index, is a measure of whether equatorial Pacific Ocean conditions of El Niño (warm and dry for Montana) or La Niña (cold and wet) could develop and influence weather along the Rock Mountain Front. ENSO is currently indicating weak El Niño conditions for the next few months, meaning **El Niño will not strongly influence weather in the near-term**.

Figure 2: Historical flows and the 2019 prediction.
Double-click to enlarge