



Little Belt Creek Water Lease 2020

2020 was the second year of a 10-year water lease agreement on Little Belt Creek. The agreement calls for the lessor to divert no more than 1 cubic foot per second (cfs) compared to the right's maximum diversion rate of 25 cfs. Further, when streamflow drops below 2.1 cfs, the lessor must reduce irrigation diversion until such time streamflow meets or exceeds 2.1 cfs, even if that means ceasing to irrigate.

The streamflow gage is located at the downstream end of the lessors property in the location approved by DNRC as part of the Temporary Authorizaiton to Change part of the irrigation rights to instream flow.



Fig.1. Stream gage location on Little Belt Creek.

A water level logger was installed on March 26th and removed on November 4th. Eight monthly streamflow measurements were taken through this period. The measurements were used to refine the water level-discharge relationship created from 2019 data. The water level logger recorded the water level every 30 minutes. The water level-discharge relationship was used to calculate the streamflow every 30 minutes. The average daily streamflow is shown in Fig. 2 in comparison to the streamflow target of 2.1 cfs. A table of daily average streamflow at the gage site is attached.

Streamflow dropped slightly below 2.1 cfs lease target near the end of August and remained near this level until mid-October when precipitation events increased streamflow. During this period of low streamflow, no irrigation was occurring.

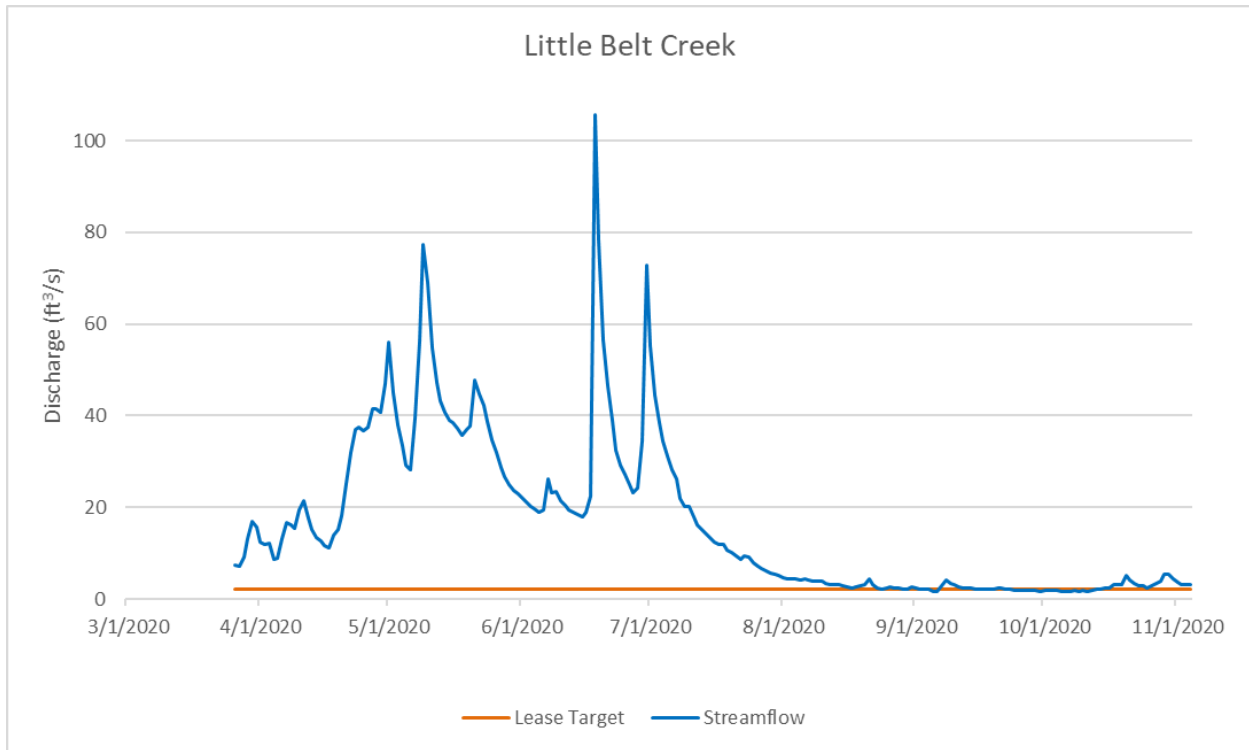


Fig.2. Average daily streamflow in comparison to 2.1 cfs lease target level.

The Change Authorization issued by DNRC requires that annual water measurement reports are filed with DNRC. This report has been filed for 2020.

