



To: Bill Schenk, Adam Strainer

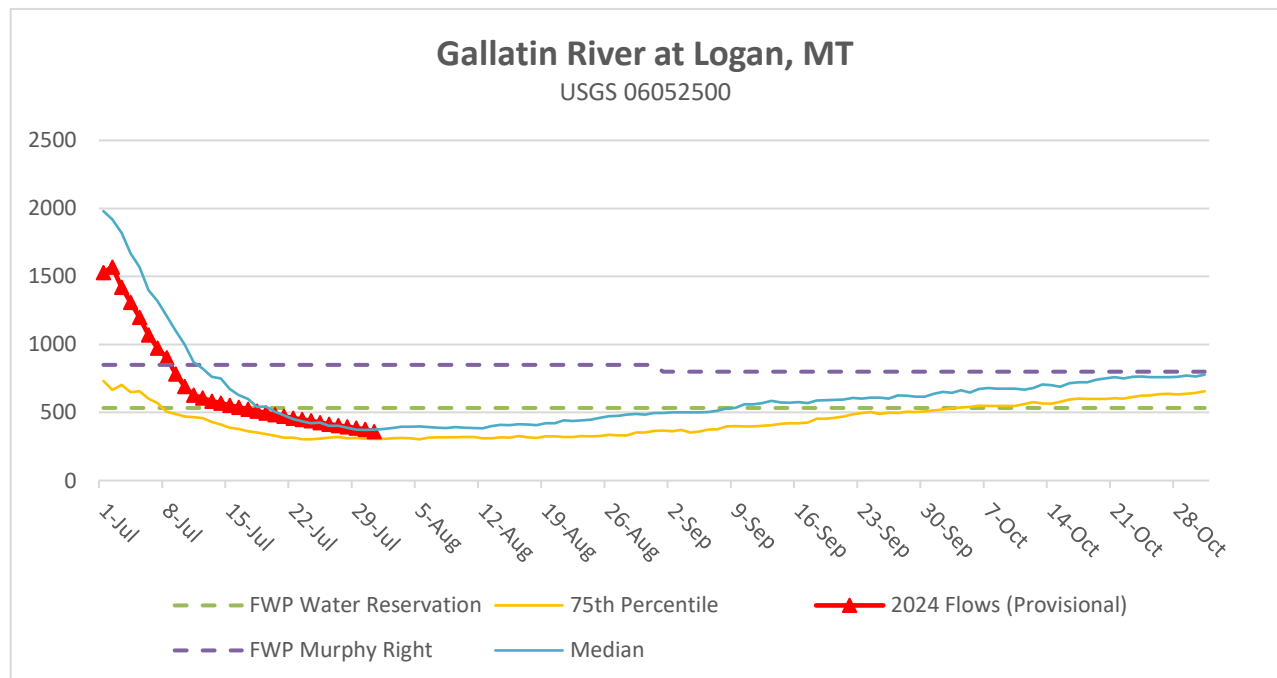
C: Adam Pankratz, Mike Duncan, Amy Groen, Andy Brummond

From: Stephen Begley, FWP Water Program  
Keith Wellstone, Bozeman Area Fisheries Management Biologist

Date: August 1, 2024

Subject: Gallatin River – Call on Junior Water Rights

Fisheries and Water Program staff have monitored flow and water temperature in the Gallatin River and consulted on river conditions and potential merits of placing call on junior water uses. We jointly recommend that FWP make call on the Gallatin River. Stream flow in the Gallatin River has dropped below FWP’s instream water reservation. The hydrograph below shows that flow is slightly above the 75<sup>th</sup> percentile exceedance flow (level met or exceeded 3 out of 4 years) for the USGS gage at Logan (131-year period of record).



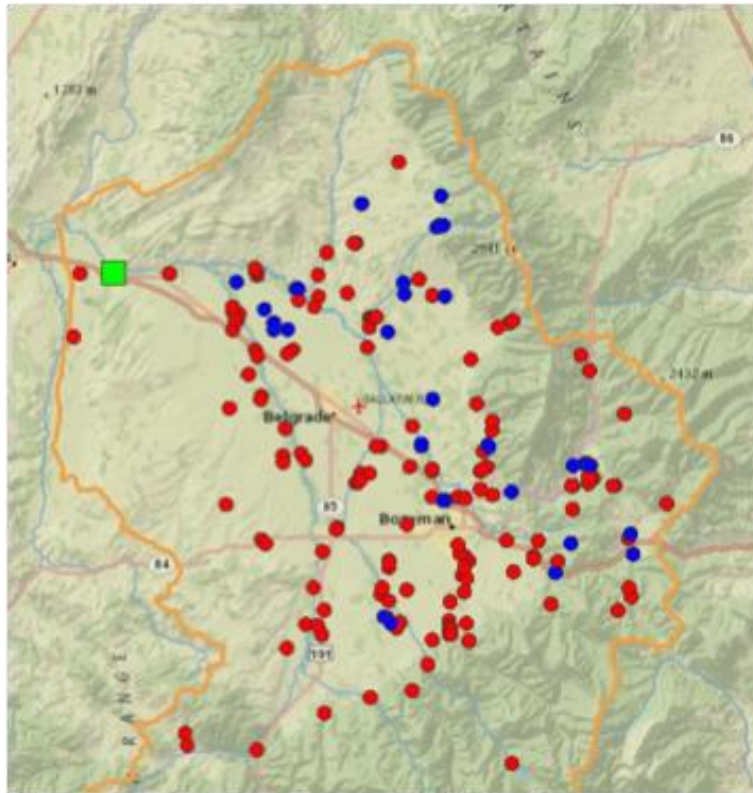
The 6-14-day precipitation outlooks lean towards above normal precipitation while the August monthly outlook leans towards below normal precipitation (graphics below). However, normal precipitation for this time of year is relatively light overall so increased chances of precipitation do not necessarily translate to improved stream flow. Temperature outlook for most reporting periods point toward above normal temperatures with the exception of the 8-14 outlook which suggests near normal to slightly below normal temperatures. Given expected weather conditions and high demand for irrigation water, streamflow would not be expected to again meet FWP’s instream flow rights until the fall without significant precipitation events.



Given that there are active water distribution projects on the West Gallatin River, most junior water users on both the mainstem and tributaries are shut off by the water commissioner early in the season. FWP’s focus is on junior water users who divert water from both the mainstem and tributaries of the East Gallatin River where no water commissioner is currently present<sup>1</sup>. A review of DNRC’s water rights database includes a list of 37 junior water rights. Each of the water rights were reviewed to determine if cessation of water use would likely result in additional flow reaching the Gallatin River. The following table lists the water rights by purpose of use.

Purpose	Call	No Call	Total Called Flow Rate
Irrigation	33	48	36.35 cfs
Domestic Lawn and Garden	2	15	0.71 cfs
Fish and Wildlife/Recreation	2	144	2.33 cfs
Stock	0	17	--
Other	0	9	--
<b>Total</b>	<b>37</b>		<b>39.39 cfs</b>

The following map shows the location of all junior water rights. Those represented by blue dots would be called while those represented by red dots would not because of the low likelihood of improving flow in the river. The green square is the location of USGS Gage 06052500.



<sup>1</sup> On August 1, FWP contacted George Alberda who is the Water Commissioner for the West Gallatin and tributary streams. Mr. Alberda confirmed that juniors to FWPs Water Rights were already shut off and he was administering rights senior to FWPs.

The Gallatin River and its tributaries provide essential habitat for native and nonnative, wild trout fisheries. Dewatering and associated warm water temperatures can negatively affect the fishery by reducing suitable habitat availability, fragmenting habitat, increasing disease susceptibility, and inducing acute stress and mortality. During high-temperature periods, increased streamflow can mitigate these negative effects and improve fish survival by moderating water temperatures and providing more deep pool habitat where fish can seek refuge from higher water temperatures. The chart below shows maximum daily water temperatures at the Logan gage below the confluence of the East and mainstem Gallatin River. With higher air temperatures forecasted, maximum daily water temperatures are expected to continue exceeding 73°F. Fishing restrictions are currently in place throughout the lower Gallatin and East Gallatin rivers to help reduce stress to the fisheries caused by high water temperatures and low-flow conditions.

**At this time, we recommend making a call to water users on the Gallatin River who are junior to FWP’s Murphy Right.**

