Summary of Daily Average and Four-day Moving Average Flows at Station 10, Little Wood River at Richfield, May 1 – September 30, 2022

This document summarizes flows in the Little Wood River at Station near Richfield, Idaho from May 1, 2022 through September 30, 2022, in support of other year end reporting specified in the BWRGWMA Management Plan (Management Plan):

A goal of the Management Plan is to maintain a 32 cubic feet per second (cfs) four-day moving average stream flow target from May 1 through September 30 at Station 10 on the Little Wood near Richfield. This flow target is intended to support delivery of senior surface water rights and both stream and aquifer health.[1]

The Ground Water Districts (GWDs) will submit a year-end report to the Idaho Department of Water Resources (IDWR) by December 1 summarizing actions taken to maintain the stream flow target.[2]

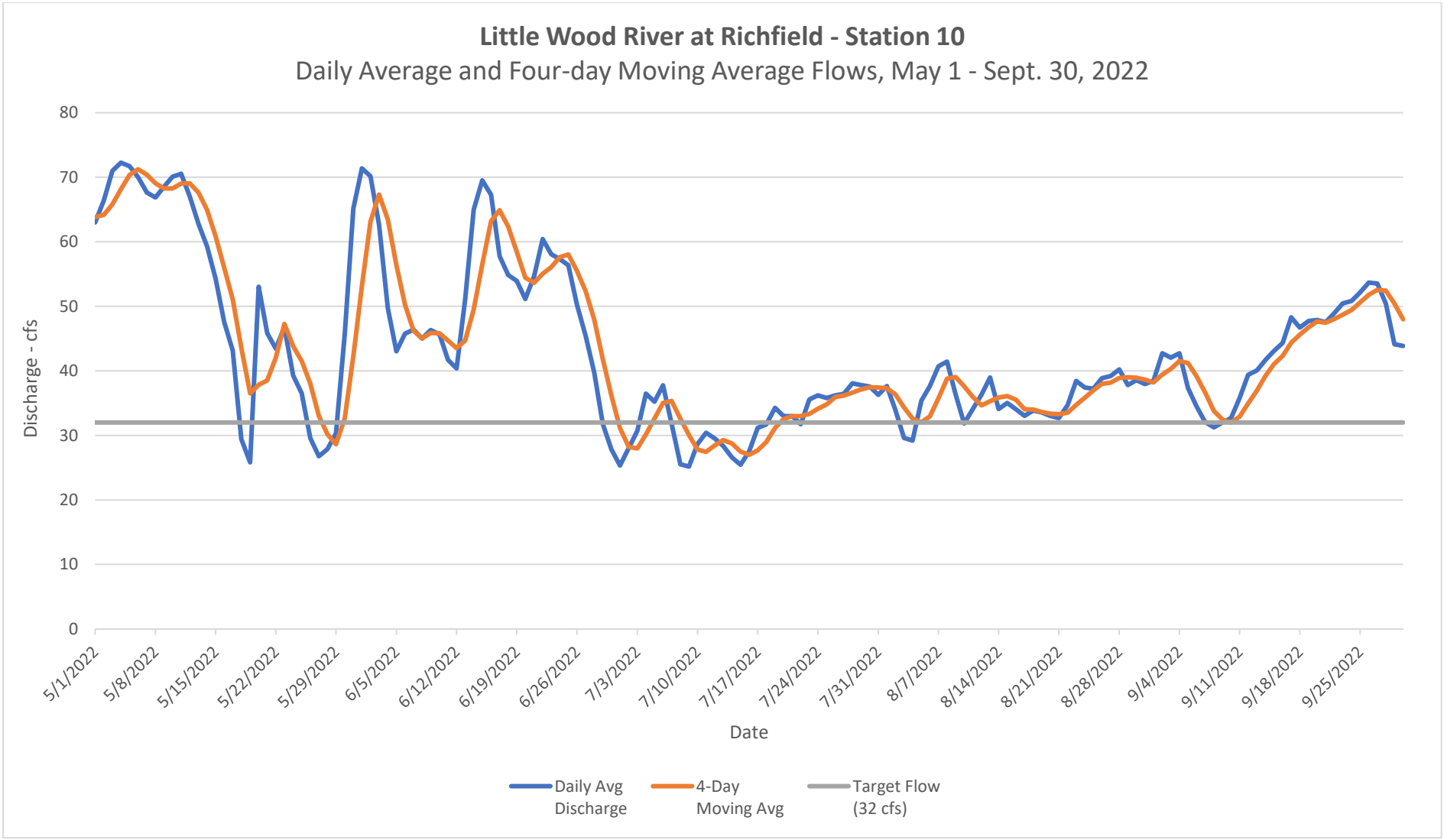
The Station 10 gage is a site where river gage monitoring equipment has been used to measure and record river flows for many years. The site has been maintained in the past by both the USGS and Water District 37. Both Water District 37 and IDWR currently maintain flow monitoring equipment at the site. IDWR has monitored the site since Spring 2021. Instantaneous and average daily flows at Station 10, and other gage stations maintained by IDWR, are published to IDWR's Aqua Info webpage at: https://research.idwr.idaho.gov/apps/hydrologic/aquainfo

Department staff make regularly visits to Station 10 to calibrate monitoring equipment, maintain a river stage-discharge rating, and apply rating shifts as necessary. In 2022, IDWR staff visited Station 10 about every two weeks from May 10 to September 29. At each visit, staff inspect monitoring equipment and measure stream discharge. The ongoing measurement are used to maintain the stage-discharge rating developed by IDWR. Rating shifts are applied as necessary by staff.

The hydrograph on the following page shows both daily average and four-day moving average flows in the Little Wood River near Richfield at Station 10. The daily average flows shown are those published for Station 10 on IDWR's Aqua Info web page. The daily four-day moving average flows were calculated separately by IDWR staff.

As observed from the hydrograph, the 32 cfs four-daily moving average target flow was mostly satisfied during the May 1- September 30 period. The moving average dropped below 32 cfs a total of 17 days during the period from May 28 through May 29, from July 1 through July 4, and from July 9 through July 19. The minimum four-day moving average flow was 27 cfs on July 16. The average of all four-day moving average flows below the 32 cfs target was approximately 29 cfs. It is noted that the May 28-29 low flow period occurred just before snowmelt runoff and when surface water and ground water diversions were minimal. In other words, few if any actions could be taken at that time to avoid flows dropping below the 32 cfs target. As mentioned in the GWDs' 2022 reports, the GWDs closely monitored Station 10 flows and "water users made diversion adjustments, within priority, to attempt to maintain the required discharge at Station 10. For the most part the adjustments by water users were successful except when changing weather conditions, particularly heat, reduced the discharge at Station 10 more rapidly than diversion adjustments by the South Valley Ground Water District (SVGWD) water users could reach Station 10."[3]

[1] Final Big Wood River Ground Water Management Area Management Plan. April 29, 2022, p. 9.
[2] Final Big Wood River Ground Water Management Area Management Plan. April 29, 2022, p. 10.
[3] SVGWD 2022 Actions to Maintain the Discharge at Station 10. December 1, 2022.


Little Wood River at Richfield - Station 10
Daily Average and Four-day Moving Average Flows, May 1 - Sept. 30, 2022
Discharge - cfs
80
70
60
50
40
30
20
10
0
5/1/2022
5/8/2022
5/15/2022
5/22/2022
5/29/2022
6/5/2022
6/12/2022
6/19/2022
6/26/2022
7/3/2022
7/10/2022
7/17/2022
7/24/2022
7/31/2022
8/7/2022
8/14/2022
8/21/2022
8/28/2022
9/4/2022
9/11/2022
9/18/2022
9/25/2022
Date
Daily Avg Discharge
4-Day Moving Avg
Target Flow (32 cfs)