

DRAFT INSTREAM FLOW RECOMMENDATION – SUBJECT TO CHANGE

Mr. Rob Viehl
Colorado Water Conservation Board
1313 Sherman Street, Room 721
Denver, Colorado 80203

Dear Mr. Viehl:

The Bureau of Land Management (BLM) is writing this letter to formally communicate its recommendation for an instream flow water right on the unnamed tributary to Willow Creek that flows through Ways Gulch, located in Water Division 6.

Location and Land Status. The unnamed tributary originates on the south flank of Hahns Peak and flows into Willow Creek just downstream from Steamboat Lake. This recommendation addresses the portion of the unnamed tributary that starts at the headwaters and extends downstream to the confluence with Willow Creek, a distance of approximately 4.5 miles. The BLM manages approximately 0.5 miles of this reach, the U.S. Forest Service manages 1.5 miles, Steamboat Lake State Park manages 0.3 miles, and 2.2 miles are in private ownership.

Biological Summary. This unnamed tributary to Willow Creek is a cold water, high gradient stream. It begins in a narrow, densely forested valley, and then emerges into a wide meadow area that surrounds Steamboat Lake. Substrate is generally from small to large in diameter, ranging from gravels to 1-foot boulders. Beaver activity is extensive on the upper portions of the stream, resulting in a large number of ponds that are able to support fish populations during low flow periods. A low quantity of riffle habitat is a limiting factor for the fish population.

Water quality is excellent for supporting cold water species. Fish surveys have documented a self-supporting population of native mountain suckers. Spot surveys have revealed abundant populations of stonefly, caddisfly, and mayfly.

The unnamed tributary in Ways Gulch supports a healthy riparian community comprised of spruce, willow, and alder. Bank stability appears to be good, except in areas of high livestock usage.

R2Cross Analysis. The BLM collected the following R2Cross data from the unnamed tributary to Willow Creek that flows through Ways Gulch:

Cross Section Date	Discharge Rate	Top Width	Winter Flow Recommendation (meets 2 of 3 hydraulic criteria)	Summer Flow Recommendation (meets 3 of 3 hydraulic criteria)
5/14/2021 #1	2.50 cfs	7.60 feet	Out of range	1.49 cfs
5/14/2021 #2	2.27 cfs	9.00 feet	0.91 cfs	0.95 cfs

Averages: 0.91 cfs 1.22 cfs

BLM’s analysis of these data indicates that the following flows are needed to protect the natural environment to a reasonable degree.

1.20 cubic feet per second is recommended during the snowmelt runoff period and summer, from April 1 through August 31. This recommendation is driven by the average depth criteria. This flow rate will ensure that the riffle habitat can be fully utilized during the spring and summer period, when fish are spawning and moving actively between pools.

0.9 cubic feet per second is recommended during fall, from September 1 through November 30. This recommendation is driven by the mean velocity criteria. This flow rate should maintain full and sufficiently cool pools during the fall when stream temperatures can still be high and provide sufficient water for passage between pools.

0.6 cubic feet per second is recommended during the cold weather period from December 1 through March 31. This recommendation is driven by naturally limited water availability. This flow rate should prevent pools from completely icing during winter, allowing the fish population to successfully overwinter.

Water Availability. BLM recommends using a variety of data sources to confirm water availability, because BLM is not aware of any historical gage data on this creek. Use of Streamstats can provide an estimate of natural hydrology. One nearby gage may provide an estimate of the seasonality of flows, because it is located on a watershed with similar characteristics. USGS Gage 09240800, on South Fork Elk River near Clark, is located on a larger watershed but appears to be relatively unaffected by diversion and storage operations.

BLM is not aware of any water rights that authorize diversion of water directly from this 4.5-mile tributary to Willow Creek. However, there are multiple water rights on springs located within the Ways Gulch watershed.

Relationship to Land Management Plans. BLM's management plan calls for actions to maintain and enhance habitat that supports fish species. Specifically, the BLM plan calls for making instream flow recommendations to the Colorado Water Conservation Board to meet minimum instream flow requirements to maintain fisheries. Finally, the plan calls for maintaining and improving the function of riparian areas to achieve advanced ecological stage for the riparian community, and it also calls for protecting riparian and wetland systems from activities that could degrade those habitats. Establishing an instream flow water right would assist in meeting these objectives.

Data sheets, R2Cross output, fishery survey information, and photographs of the cross section were included with BLM's draft recommendation in February 2022. BLM thanks both Colorado Parks and Wildlife and the Colorado Water Conservation Board for their cooperation in this effort.

If you have any questions regarding our instream flow recommendation, please contact Roy Smith at 303-239-3940.

Sincerely,

Deputy State Director
Resources

Cc: Bruce Sillitoe, Little Snake Field Office
Eric Scherff, Little Snake Field Office
Elijah Waters, Northwest District Manager