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January 25, 2018

Jay Skinner
Colorado Parks and Wildlife
6060 Broadway
Denver, CO 80216

Dear Mr. Skinner:

This letter is in response to your request for peer review of a letter dated November 30, 2017 and written by Forest Service Supervisor Kara Chadwick pertaining to a recommendation to establish an instream flow water right on Himes Creek. This letter should not be considered to represent the official opinions or perspectives of the Wyoming Game and Fish Department (WGFD). Rather, I am providing my perspective as Aquatic Habitat Program Manager and as a member representative of the Instream Flow Council. The Instream Flow Council (IFC) is an organization of state, provincial, and territorial fish and wildlife agencies working to improve the effectiveness of instream flow programs and activities for conserving fish and wildlife and related aquatic resources). This letter also contains the perspective of Dave Zafft, WGFD Fisheries Management Coordinator and Colorado River Cutthroat Trout Conservation Team interagency team leader. Our joint comments are provided below:

Our understanding is that Himes Creek is a very small, high gradient stream located on the San Juan National Forest and tributary to the West Fork San Juan River. The stream is laterally confined, has step pools and large cobble and boulder substrate. The trout community includes a population of Colorado River cutthroat trout (CRCT). The Forest Service is recommending that all unappropriated flow in Himes Creek is the amount needed for maintaining this cutthroat population and is petitioning for an instream flow water right pursuant to the rules of the Colorado Instream Flow and Natural Lake Level Program.

The CRCT population in question is one of only eight known populations of CRCT that have retained characteristics of a lineage native to the San Juan River drainage. The headwater reach of Himes Creek is home to one of only five known core conservation populations (>99% genetically pure) containing the unique San Juan River haplotype of CRCT. Conservation of these few core conservation populations is essential if we are to conserve the unique genetic characteristics that have likely enabled CRCT to persist in the upper reaches of the San Juan River basin in Colorado.

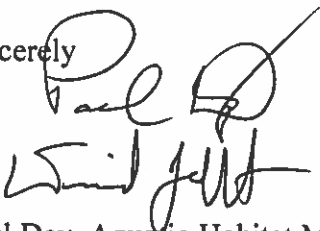
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We support efforts to secure the stream flows necessary to protect a unique CRCT population. The flow regime recommendation for Himes Creek appears reasonable based on our experience with similar streams in Wyoming. We adopt an approach similar to that of the FS on Himes Creek in that we assess all portions of the flow regime and the needs of all life stages of the fishery. We are familiar with the R2Cross methodology and employ a similar riffle-based approach we call "Habitat Retention" when developing flow recommendations. It is not surprising that this approach would be deemed inappropriate in Himes Creek because of its small, steep step-pool configuration and lack of conventional riffles. We have encountered similar streams where we could not employ our riffle-based approach. Likewise, in small headwater streams trout survival depends on maintenance of small pools which, by their nature, are susceptible to small changes in flow. It appears reasonable to recommend the entire flow regime in this instance to provide a margin of safety for an important fishery. As noted by the IFC (Annear et al. 2004) "in these situations it is wise to adopt what is known as the precautionary principle—that when in doubt about outcomes or their potential harm to the protection or restoration of valuable public resources, society also should err on the conservative side when making decisions."

The approach and recommendations developed by the Forest Service appear consistent with practices applied nationally by recognized experts. These practices include developing presumptive flow standards (Richter 2011) and identifying flows to protect aquatic life (Novak et al. 2016). The approach also appears to consider essential elements of biology, water quality, geomorphology, etc. as advocated by the Instream flow Council (Annear et al. 2004).

In summary, we have reviewed the Forest Service's recommendation for an instream flow water right on Himes Creek and find it makes a strong case for protecting all the flow in order to preserve a rare population of a genetically unique lineage of CRCT.

Sincerely

The block contains two handwritten signatures. The first signature is in dark ink and appears to read 'Paul Dey'. The second signature is in lighter ink and appears to read 'Dave Zafft'.

Paul Dey, Aquatic Habitat Manager
Dave Zafft, Team Leader, Colorado River Cutthroat Conservation Team

References

Richter, B., M. Davis, C. Apse, and C. Konrad. 2011. A presumptive standard for environmental flow protection. Short Communication. River Research and Applications. 28(8).

Novak, Rachael, Kennen, J.G., Abele, R.W., Baschon, C.F., Carlisle, D.M., Dlugolecki, Laura, Eignor, D.M., Flotemersch, J.E., Ford, Peter, Fowler, Jamie, Galer, Rose, Gordon, L.P., Hansen, S.E., Herbold, Bruce, Johnson, T.E., Johnston, J.M., Konrad, C.P., Leamond, Beth, and Seelbach, P.W, 2016, Final EPA-USGS Technical Report:Protecting Aquatic Life from Effects of Hydrologic Alteration: U.S. Geological Survey Scientific Investigations Report 2016–5164, U.S. Environmental Protection Agency EPA Report 822-R-156-007, 156 p.,<http://pubs.usgs.gov/sir/2015/5160/> and <http://www2.epa.gov/wqc/aquatic> life-ambient-water quality-criteria

Annear, T., I. Chisholm, H. Beecher, A. Locke, P. Aarrestad, C. Coomer, C. Estes, J. Hunt, R. Jacobson, G. Jöbssis, J. Kauffman, J. Marshall, K. Mayes, G. Smith, R. Wentworth, and C. Stalnaker. 2004. *Instream Flows for Riverine Resource Stewardship, Revised Edition*. Instream Flow Council, Cheyenne, WY. 268 pp.