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**Re: ID NRCS– 2022–0012. *Public Comments - West Fork Battle Creek Watershed Plan.***

On behalf of Friends of the Yampa (FOTY), thank you for the opportunity to provide comments on the West Fork Battle Creek Watershed Plan (Watershed Plan). FOTY's mission is to protect and enhance the environmental and recreational integrity of Yampa River and its tributaries through stewardship, advocacy, partnerships and education. Established in 1981, we have a long standing history of working to develop wide support for a healthy Yampa River that supports a vibrant, diverse economy and is accessible for all to enjoy. FOTY also conducts science and education programming to monitor water quality and educate individuals on the importance of the Yampa River Basin in the greater context of the Colorado River Basin.

FOTY provides these comments concerning the scope of the proposed action and potential alternatives for the forthcoming watershed plan EIS. FOTY has significant concerns with the actions identified in preliminary alternatives 2, and associated actions in alternatives 3, 4 and 5; consisting of land exchanges, and construction of a dam and reservoir to meet the purposes outlined in the West Fork Battle Creek Watershed Plan. FOTY supports the proposed action, alternative 1, and alternative 6; consisting of no action and alternative means of achieving the watershed plan goals, such as water conservation and habitat improvement projects.

The Little Snake River is a critical tributary to the Yampa River. The Yampa supplies most of the streamflow to the system, whereas most of the sediment is supplied episodically by the Little

Snake River. Together, the interconnected forces produce a rare and important reference condition for habitat diversity, wildlife and the natural biophysical process of snowmelt-driven rivers in the Upper Colorado River Basin. For these reasons and others, FOTY respectfully submits the following comments regarding the proposed actions.

**The West Fork Battle Creek Watershed Plan EIS must consider the cascading Impacts to the natural and synergistic processes of Battle Creek, the Little Snake and Yampa Rivers.**

The natural geomorphic process operating in the Yampa River Basin is a product of an interconnected watershed. The Watershed Plan Environmental Impact Statement (EIS) must consider how human-manipulated reductions and redistribution of spring runoff/discharge from the proposed alternatives 2 (and associated actions of alternatives 3, 4 and 5) will impact Battle Creek, the Little Snake River, and the Yampa River. Our concerns include, but are not limited to, the impact of modified sediment transport, geomorphic and ecological impacts from a modified diurnal and annual hydrologic regime, dynamic channel migration, recreational resources, riverine and riparian habitat diversity, native and endangered fish, and the outstanding remarkable values (ORV's) of Wild and Scenic suitable sections in Dinosaur National Monument. We are also concerned about impacts to wilderness values, cutthroat trout, and biodiversity of the Routt-Medicine Bow National Forest. The EIS process must thoroughly evaluate these potential impacts.

The watershed plan EIS must consider how reduced and modified flows will impact riparian composition and delivery of sediment downstream. The Little Snake River is remarkable in that the riparian corridor from Sand Creek to Seven Mile Draw is largely free of woody native, and non-native riparian shrubs and trees. Late season flows are episodic, geographically isolated and fluctuate in intensity and duration. Providing a regimented baseline flow can produce a "watering the garden" effect, essentially driving native and non-native riparian vegetation encroachment, potential establishment or enhancement of exotic riparian species. We ask that you consider these biological impacts preparing the forthcoming EIS including consultation with FOTY and coordination with BLM specialists in the Rock Springs and Little Snake field offices for consideration of specific areas and management objectives along the Little Snake River corridor.

**West Fork Battle Creek Watershed Plan Must Consider the Impact of the Proposed Actions to the Crisis in the Colorado River Basin.**

There is less water for use in the Colorado River Basin than has been allocated. This imbalance must be addressed, which will require reductions in use by all water users in all sectors, as recently declared by the Federal Government. The U.S. Department of the Interior recently asked the seven Basin States of Arizona, California, Colorado, Nevada, Utah, New Mexico and Wyoming to reduce water use by 2-4 million-acre-feet, and additional water development works counter to that objective. Voluntary and compensated reductions in water use are now being considered across the Colorado River Basin in advance of a threat of potential mandatory use reductions. Furthermore, numerous scientists, academia, and agency staff have all concluded the future of the Colorado River will be alarmingly and significantly hotter and drier, further exacerbating the imbalance.

FOTY recognizes the need to have robust science to understand the near and long term environmental impacts and sustainability of water development projects. Recent studies suggest the Colorado River Basin may continue to warm by 2.5 to 5 degrees Fahrenheit by 2050(1). Each degree of warming represents a 5 percent decrease in runoff. Human-caused climate change is intensifying the 20-year drought that's impacting Colorado and other Colorado basin states, according to a new report from the National Oceanic and Atmospheric Administration (2). Reclamation modeling indicates that within the next 3 years the status quo could be severe enough to include the loss of functioning federal infrastructure with dead pool conditions in Lake Powell to Lake Mead, and significant hydropower impacts.

The proposed reservoir in alternatives 2, 3, 4, and 5 would have present day priority, junior water rights that are governed in accordance with Article III of the Upper Colorado River Basin Compact (3). In the event that water is needed to satisfy senior water rights, junior priority rights will be the first curtailed to meet that need. The watershed plan must analyze and disclose impact to Colorado River Compact compliance and thoroughly consider the potential future possibility that the reservoir may not be able to fill under various climatological and political conditions.

Furthermore, 30 Tribal Nations within the Colorado River Basin have seniority and rights to the flow of the Colorado River, most of which are unquantified or the infrastructure to use water does not exist. As Tribes and the Federal Government continue to consult, states will need to ensure that water is equitably allocated. Importantly, in many cases, these water rights predate the 1922 Colorado River Compact. Development of additional water without direct leadership of Colorado River Basin Tribes is imprudent.

### **West Fork Battle Creek Watershed Plan EIS must include consultation with the appropriate Agencies.**

FOTY urges the watershed plan EIS to provide cooperating agency status to regional Tribes, Bureau of Land Management (BLM), National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS) and Wyoming Game and Fish Department.

### **Watershed Plan EIS must evaluate impacts to Dinosaur National Monument**

Dinosaur National Monument contains 47 miles of the lower Yampa River, a world renowned river trip and known as the last large river of its kind in the Colorado River System that naturally fluctuates from floods of melting spring snow, to low, warm water stream in late summer. In contrast, several miles upstream of the monument, the Green River is regulated by Flaming Gorge Dam. Below the confluence of the Green and Yampa Rivers in Dinosaur National Monument, a "hybrid" river exists. Dinosaur National Monument is a living laboratory of a natural and modified river system in the Colorado River Basin. This provides a rare opportunity to study river sciences, river management, endangered fish habitat and the important role of natural sediment transport. The 47 miles of the Yampa River in Dinosaur National Monument was found suitable as "wild" for inclusion in the Wild and Scenic Rivers Act. The NPS suitability study identified that *"upstream water resource projects on the Yampa or a combination of smaller*

*upstream projects could modify the present essentially natural flows of the Yampa River in the study area, diminishing the unique qualities of the study area and possibly the values which qualify the river for designation” (4).* Please ensure that Alternatives 2 and 3 are not pursued if there is any reduction in federal oversight and public engagement in the proposed action. There is a need for the watershed plan EIS to consider impacts to resources in Dinosaur National Monument, and provide cooperating agency status to the NPS.

**The Public Agencies Must Follow Current Procedural Requirements to Evaluate Encumbrances, Conflict and Unknown Impacts to Public Interest Prior to Any Proposed Land Exchange.**

The exchange proposal is seeking to acquire one key parcel of National Forest land located in the Sierra Madre Range along State Highway 70. This parcel includes the site of the proposed West Fork Reservoir, with access from Highway 70 to the reservoir site, and lands along the highway. The proponents have openly stated that conveying this parcel out of Federal ownership would eliminate the scrutiny needed to obtain a United States Forest Service special use permit for the reservoir.

The Medicine Bow National Forest Revised Land and Resource Management Plan (5) administrative guidelines direct Forest managers to consider lands that reduce conflict with stakeholders and resource values, lands that reduce administrative cost and enhance efficiency. This also includes reducing lands with title claims, such as mineral rights retained by the state of Wyoming. Forest Managers are directed to consider important botanical, wildlife, and fishery management areas, including lands supporting rare plant communities such as riparian areas. Any proposed land exchange must evaluate any increase in conflict between wildlife resources in the Belvidere Ditch, existing grazing leases and water right holders. The watershed plan EIS, and importantly Forest Managers, must examine and disclose how alternative 2 (and related Alternatives 3, 4, and 5) impact a wide range of local values and broad public interests. Furthermore the Forest Service manual for the Rocky Mountain Region, FSM 5400 (6) section 5407.1 directs each National Forest to prepare a Landownership Adjustment Analysis (LAA) and planning amendment for the Medicine Bow National Forest. If the Medicine Bow National Forest has not completed this analysis then no land exchange should occur until completed.

Finally, the Wyoming Office of State lands and Investments exchange proposal includes an equalization process that has not been finalized and therefore leaves the public lacking an understanding of exactly what lands are being exchanged and are therefore unable to provide specific public comment or concerns. This process must be finalized to allow adequate public input.

**Watershed Plan EIS must evaluate Proposed Reservoir Operations to address Fishery Impacts**

The watershed plan EIS must reevaluate, analyze and consider how the reservoir's construction and subsequent administration creates cascading impacts for Cutthroat populations in the Belvidere Ditch. FOTY recommends robust consultation with Wyoming Game and Fish

managers and instream flow biologists to determine impacts to existing fisheries and the feasibility of creating new fisheries behind the reservoir or in the tailwaters.

Colorado River Cutthroat Trout depend on water from the Belvidere Ditch, which diverts water from Haggarty Creek, an upper tributary of Battle Creek. The Belvidere Ditch supports the State of Wyoming's and the Yampa River Basin's most diverse genetic stock of Colorado River Cutthroat Trout. Due to Wyoming water law, regulation of Belvidere Ditch could limit diversions to the irrigation season which runs from April through September, dewatering the ditch during winter periods. Cutthroat trout co-evolved in beaver habitat, requiring specific winter conditions that mimic beaver ponds with deep, calm, low velocity water. The watershed plan EIS must analyze and consider how the reservoir's construction and subsequent administration creates cascading impacts for Cutthroat populations in the Belvidere Ditch.

The watershed plan anticipates providing ecological benefits, "to the confluence with the Yampa River including improvements to both cold water and warm water sensitive species." We find this to be a questionable claim given the project's stated primary purpose is to supply late season irrigation water and the limitation of capacity of the bypass account in the reservoir. Conveyance losses to water diversions, evapotranspiration, infiltration and impacts to biodiversity must be analyzed in the Watershed Plan EIS including additional study along the entire reach of the Little Snake River to assess species' high and low flow conditions and needs and how reservoir development and administration will impact and/or address ecological processes.

The natural hydrology reflects a snowmelt driven river with vast daily and seasonal fluctuation in water quantity, temperature and other variables. Introducing cold water from deep in the reservoir to provide baseline flows would be a significant change in the seasonal hydrologic timing and temperature of the Little Snake. The reservoir's design relies on releasing water from deep in the reservoir as a means to mix copper accumulations and dissolved oxygen that are anticipated to stratify and concentrate in the reservoir from the Ferris Haggarty Copper Mine and other legacy mines. Given this design limitation, the Watershed Plan EIS should evaluate the potential to support native, warm water sensitive or endangered fish species.

The Yampa River is home to populations of the endangered Colorado pikeminnow, with spawning habitat for humpback chub as well as roundtail chub and bluehead and flannelmouth suckers. The Little Snake provides suitable habitat and spawning sites for razorback sucker and Colorado pikeminnow (7). Humpback chub have been monitored in the Little Snake River during the spawning season and the Little Snake must be considered among potential recovery sites for Colorado pikeminnow. Colorado pikeminnows engage in annual spawning migrations of which the timing of migration and spawning for the Colorado pikeminnow is linked to water temperature and flow rates. The Watershed Plan EIS must evaluate reservoir operations that will cause changes in flow that will depress water temperatures and alter natural temperature fluctuations

**Watershed Plan EIS must evaluate Toxicity impacts resulting from the Ferris Haggarty Copper Mine and Copper Accumulations within the reservoir and flows that are released from the reservoir**

The Haggarty Creek headwaters contain legacy mines that discharge contaminated runoff water causing water quality and ecological impacts downstream. Copper, cadmium, and silver contaminate the waters of Haggarty Creek and concentrate during runoff (8) leading to a concerning accumulation of dissolved metals in the reservoir pool. Contamination from this mine is so severe that it has been proposed as a Superfund site and listed as an impaired water body.

The reservoir's design relies on releasing water from deep in the reservoir as a means to mix copper accumulations and dissolved-oxygen concentrations at the bottom of the reservoir that are anticipated to stratify in the reservoir from the Ferris Haggarty Copper Mine and other legacy mines. Currently, the sequestering actions of organic carbon play an important role in the fate, transport, and aquatic toxicity of dissolved metals in the stream and mitigating impacts downstream. Historic data of water quality has shown that elevated copper concentrations are seasonal with higher flows of contaminants occurring during the snowmelt period. The watershed plan EIS must analyze, quantify and disclose how acute and chronic copper levels may affect aquatic life and recreational resources associated with the proposed dam and reservoir across a variety of hydrologic conditions.

**Watershed Plan EIS must evaluate Reservoir Management as it relates to variable Climatological and Hydrologic conditions**

Reservoirs throughout the west are experiencing challenges with water quality and operations during periods of drought and when facing varied demand for water releases. This can respectively lead to lower pool levels over extended periods of time and lack of turnover of reservoir water. In a climate that is presenting new normals and in anticipation of potential years of varied runoff, the management of reservoir releases must be further studied. Hydrologic modeling must consider water quality including water temperature impacts during extended periods of drought where pool levels may not reach capacity and in the event where expected downstream releases are not called.

FOTY recommends the watershed plan EIS conduct a reevaluation of hydrologic modeling associated with the proposed alternatives 2, 3, and 4. This information would need to include identification and information on the administration of reservoir management across a wide range of hydrologic and climatological conditions while maintaining the project's purpose and public interest. Historical water yields may provide necessary data in order to model reservoir management to avoid costly and ecologically problematic future management issues. FOTY would request any proposal that includes Alternatives 2, 3, or 4 include more robust modeling of reservoir management to account for a broad range of inflow and release conditions. FOTY would also request that any modeling include robust accounting of the expected changes to climate and precipitation in the coming decades. The data provided by the Little Snake Level II Phase II Final Report and the Little Snake River Supplemental Storage Level II Final Report does not address the reservoir management and operational concerns.

### **Watershed Plan EIS must consider Modified Operational Releases from High Savery Reservoir as an alternative action**

The Level II Phase II Study (9) identifies 19,046AF that could be directly served by the proposed West Fork Reservoir to reduce average irrigation shortages estimated to be in the range of 3,600AF. However, 2,930AF of the total shortages are located on acres already served by High Savery Reservoir. This leaves 756AF of water for new lands, the majority of which are located in Colorado. From the initial Level II Study (8), the model scenarios used to determine shortages “uses current High Savery Reservoir operations with releases to downstream water users.” This means modified operations for High Savery Reservoir to meet these shortages were not considered in the screening and selection of the West Fork Reservoir. We also know from the Level II Phase II Study that “Currently there are no limits placed on the amount of water that can be released to any particular ditch in the proposed West Fork Reservoir service area and availability is first-come-first-serve.” High Savery Reservoir shares a vast service area with the West Fork Reservoir and is the only reservoir currently in operation. In order to develop the least environmentally damaging practicable alternative to be considered by the cooperating agencies, the watershed plan EIS must consider in its alternatives how modified operations of High Savery Reservoir can be considered in order to meet irrigation shortages for the proposed watershed plan.

### **Watershed Plan EIS must provide updated Cost/Benefit Analysis to validate Purpose and Need for dam and reservoir construction**

The Level II Phase II draft report stated the benefit-cost ratio for the West Fork Reservoir project to be less than one. The Level II Phase II Final report states that the benefit-cost ratio for the West Fork Reservoir to be greater than one, 1.2. We see the biggest increases in benefits between Draft and Final coming from the irrigation benefits column, going from \$35 million to \$51 million, a significant increase. It is unclear from which data sources caused these benefits to change from Draft to Final. Importantly, it must be made clear how much the cost per acre-foot will be for irrigators. The project sponsors must communicate this number before any actions are taken to avoid unintended consequences driven by economic constraints. If costs rise and irrigators are not able to afford water from the West Fork Project, the needs identified in the Watershed Plan may not be met or additional subsidy needed.

Updated final project cost information appears to be necessary. It appears that the project proposal relies on cost information that is a few years old at a time of significant cost escalation in the construction industry. Additional effort must be made to verify the numbers used in the benefit-cost analysis for both up-front costs and long-term revenue expectations.

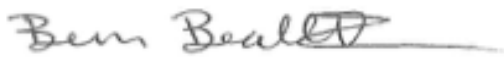
Benefits related to downstream recreational benefits appear to be limited to a select few landowners. Due to its inaccessible location, it seems unlikely that recreational activity would provide a significant benefit to the state economy. The recreational benefit of the dam was examined by citing a 2005 single nationwide survey. The dilution of recreation from the High Savery Reservoir close to this already remote location was also not accounted for in the phase II study. We suggest a reevaluation of recreational benefits and costs as it relates to Alternative 2 (and related Alternatives) and the overall project economics.

Each agency preparing the watershed plan EIS (NRCS, the Army Corps of Engineers, and the Forest Service) must review and verify the economic, environmental and social impacts and benefits provided by the Little Snake Storage Level II Phase II Final Report and the Little Snake River Supplemental Storage Level II Final Report using independent data. Each agency preparing the watershed plan EIS must also analyze and disclose the social and environmental impacts of the proposed action(s) considering a wide range of public input and values to public lands.

### **Conclusion**

FOTY appreciates the opportunity to participate in the scoping process of the West Fork Battle Creek Watershed Plan. Our organization's mission compels us to address our concerns with projects that have potential to impact the environmental and recreational integrity of the Yampa River system. FOTY recognizes that some water storage is necessary and beneficial for a variety of reasons that support our local economies and ecosystems. At the same time, we have significant concerns with the proposed project and request that the EIS address the concerns outlined in this letter with the forthcoming evaluation of the proposed project to ensure that any pursued direction does not create detrimental impacts. We also request that the agencies preparing the forthcoming EIS consider no action alternatives and alternatives that include use of existing reservoir infrastructure, natural restoration, or conservation projects to achieve the objectives set forth in the Watershed Plan.

Signed,

A handwritten signature in cursive script that reads "Ben Beall". The signature is written in black ink and includes a long horizontal flourish extending to the right.

Ben Beall  
President, Board of Directors  
Friends of the Yampa



## Citations

- 1). Lukas, Jeff, and Elizabeth Payton, eds. 2020. Colorado River Basin Climate and Hydrology: State of the Science. Western Water Assessment, University of Colorado Boulder. DOI: <https://doi.org/10.25810/3hcv-w477>.
- 2). Mankin JS, Simpson I, Hoell A, Fu R, Lisonbee J, Sheffield A, Barrie D. (2021) NOAA Drought Task Force Report on the 2020–2021 Southwestern U.S. Drought. NOAA Drought Task Force, MAPP, and NIDIS.
- 3). Upper Colorado River Basin Compact, 1948  
(<https://www.usbr.gov/lc/region/g1000/pdfiles/ucbsnact.pdf>)
- 4). Wild and Scenic River Study Green and Yampa, NPS. 1980  
<http://npshistory.com/publications/nwsr/co-green-yampa.pdf>
- 5). Medicine Bow National Forest Revised Land and Resource management Plan  
[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5163437.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5163437.pdf)
- 6). FSM 5400 – Landownership, Forest Service Manual Rocky Mountain Region, 2003. Supplement No.: r2\_5400-2003-1
- 7). Hawkins, J.A., and J. O'Brien. 2001. Research plan for developing flow recommendations in the Little Snake River, Colorado and Wyoming, for endangered fishes of the Colorado River Basin. Unpublished report to the Recovery Implementation Program for the Endangered Fish Species of the Upper Colorado River Basin, USFWS. Contribution 92 of the Larval Fish Laboratory, Ft. Collins, CO, 94 pp.
- 8). Little Snake Storage Level II Phase Study, 2017.  
[http://library.wrds.uwyo.edu/wwdcrept/Little\\_Snake/Little\\_Snake-Storage\\_Level\\_II\\_Phase\\_II-Final\\_Report-2017.html](http://library.wrds.uwyo.edu/wwdcrept/Little_Snake/Little_Snake-Storage_Level_II_Phase_II-Final_Report-2017.html)
- 9). Little Snake River Supplemental Storage Level II Study 2012.  
[http://library.wrds.uwyo.edu/wwdcrept/Little\\_Snake/Little\\_Snake\\_River-Supplemental\\_Storage\\_Level\\_II\\_Study-Final\\_Report-2012.html](http://library.wrds.uwyo.edu/wwdcrept/Little_Snake/Little_Snake_River-Supplemental_Storage_Level_II_Study-Final_Report-2012.html)