



Mely Whiting, Legal Counsel, Colorado Water Project

June 6, 2014

Rena Brand, Moffat EIS Project Manager
U.S. Army Corps of Engineers, Omaha District
Denver Regulatory Office
9307 South Wadsworth Blvd.
Littleton, CO 80128-6901

VIA EMAIL: moffat.eis@usace.army.mil

Re: Moffat Collection System Project Final Environmental Impact Statement

Dear Ms. Brand,

I am writing on behalf of Trout Unlimited to offer our comments on the final environmental impact statement (“final EIS”) for the Moffat Collection System Project (the “Moffat Project”). Trout Unlimited has been closely monitoring the project since scoping, more than 10 years ago, out of concern with its potential impacts on Colorado River headwater streams and their valuable fisheries. Transmountain diversions already take a large percentage of the native flows of the Fraser and Colorado River and dry up portions of many tributaries. The proposed Moffat Project will take significant additional native flows, raising the question of just how much water can be taken out of a stream before it is no longer able to sustain a healthy aquatic life population.

Earlier this year, Grand County, Denver Water and Trout Unlimited came to an agreement on a set of measures designed to both improve existing conditions and prevent additional impacts to the streams most affected by the proposed Moffat Project. These measures are embodied in the Grand County Mitigation and Enhancement Coordination Plan (MECP), described in Attachment M (Conceptual Mitigation) of the final EIS and attached to this comment letter as Attachment 1.¹ Some of these measures are identified as “mitigation” needed to prevent identified impacts of the proposed Moffat Project. Others are identified as “enhancements” offered by Denver Water to improve existing conditions. While Trout Unlimited does not agree that the mitigation measures outlined in the MECP are sufficient to prevent Moffat Project impacts, we believe that implementation of the MECP, as a whole, provides the best opportunity to prevent impacts and improve conditions in the areas most impacted by the Moffat Project.

Trout Unlimited, on its own and in conjunction with Grand County, the Colorado River Water Conservation District and other organizations, submitted extensive comments analyzing most aspects of the project’s draft EIS. Our comments highlighted a number of deficiencies which, in our experts’ opinion, rendered the draft EIS incapable of adequately predicting the project’s impacts on Colorado River headwaters streams. Our intent in submitting these comments is not to repeat our draft EIS comments. Rather, we want to identify some of the most significant issues left

¹ Note that the location of a Ranch Creek gage to monitor stream temperature, is in the process of being changed in the MECP.

unresolved by the final EIS and urge the USACE to look at the MECP as a means to enable the project to move forward.

As discussed in more detail in *Attachment 2*, some aspects of the final EIS are a significant improvement over the draft EIS, including its thoughtful and honest discussion of the complexity of the factors affecting aquatic ecosystems and the uncertainty inherent in any effort to predict future impacts. Other aspects, such as the final EIS's stream temperature impacts analysis, are significantly worse. Critical information – including stream temperature modeling and a Colorado State University study documenting impacts of the expected loss of peak flows on the Fraser River – are yet to be evaluated. Conclusions remain arbitrary, relying on an elusive and unexplained “best professional judgment.” Coupled with the inherent uncertainty in predicting complex aquatic biological and habitat interactions and the magnitude of depletions to which the affected streams and related ecosystems will be subject, the final EIS remains an unreliable tool to predict impacts of the Moffat Project on the aquatic resources of the headwater streams.

A monitoring and adaptive management program is an absolute necessity for the project to move forward. The need for monitoring and adaptive management is particularly urgent here given the quality of the headwater streams' aquatic resources, the level of depletion the streams will be subject to, and the fact that, as discussed in the final EIS, the additional depletions could push the aquatic habitat in several tributaries past the ecological “tipping point.”

Trout Unlimited believes that implementation of the MECP provides the best and most effective means to monitor stream conditions and implement adaptive measures to address problems unforeseen in the final EIS. At the heart of the MECP is “Learning by Doing” (LBD), a form of monitoring and adaptive management. LBD is to be implemented by a committee made up of representatives of key stakeholders, including Colorado Parks and Wildlife, Denver Water, Northern Colorado Water Conservation District (Municipal Subdistrict), Grand County, the Colorado River Water Conservation District, Middle-Park Water Conservancy District, and Trout Unlimited.

Under the MECP, the LBD committee is to monitor affected streams for existing problems or changes in key indicators of stream health, including (1) stream temperature, (2) channel stability/sediment transport, (3) benthic macroinvertebrates, and (4) riparian areas and wetlands. Resources committed by Denver Water would be deployed to address identified problems, prevent future problems from developing, and/or improving current conditions. These resources, listed in the MECP, include water, money, manpower and equipment, and operational flexibility (i.e., the ability to operate Denver Water's extensive diversion system so as to provide benefits to affected streams without loss of water supply yield).

Denver Water has agreed to make implementation of the MECP through LBD a term and condition of their 404 permit. In this regard, Attachment M (Conceptual Mitigation) provides:

Since LBD is integral to success of the MECP, Denver Water will request that the Corps add a permit condition to the Section 404 Permit requiring Denver Water to remain in good standing and actively participate in LBD for as long as the LBD is functioning. If LBD ceases to function, the requirement will be for Denver Water to participate in an alternative process approved by the Corps that is dedicated to implementing the elements of the MECP.

Attachment M, Section 2.3.2, page 26.

Trout Unlimited urges the USACE to incorporate such term and condition in the 404 permit for the Moffat Project and to rely on the MECP and LBD as the means to provide the requisite monitoring and adaptive management of Colorado River headwaters streams.

Trout Unlimited is supportive of the issuance of a 404 permit for the Moffat Project that relies on the MECP and LBD for monitoring and adaptive management. Absent adequate and enforceable monitoring and adaptive management, issuance of a 404 permit for the Moffat Project is unwarranted and contrary to the requirements of the Clean Water Act.

Thank you for the opportunity to comment.



Amelia (Mely) Whiting
Trout Unlimited, Colorado Water Project
P.O. Box 1544
Pagosa Springs, CO 81147
720.470.4758
mwhiting@tu.org

cc: U.S. EPA Region 8
CDPHE
U.S. Forest Service
Mark Udall, U.S. Senate
Michael Bennet, U.S. Senate
Jared Polis, U.S. House of Representatives
Governor John Hickenlooper
Randy Baumgardner, Colorado Senate
KC Becker, Colorado House
Grand County
Denver Water

Attachment 2**SUMMARY OF SIGNIFICANT OUTSTANDING ISSUES
IN THE FINAL EIS FOR THE MOFFAT COLLECTION SYSTEM PROJECT**

Trout Unlimited appreciates the additional data development and analysis conducted by the USACE in response to comments on the draft EIS for the project. Much of this additional work is reflected in the GIS's "*Aquatic Resources Technical Report for the Moffat Collection System Project Final Environmental Impact Statement*" dated December 2013 (2013 Aquatics Resource Report) and extensively incorporated in the aquatic resources sections of the final EIS.

1. Unlike the original aquatic impacts analysis that focused almost exclusively on habitat availability (PHABSIM) and simplistically concluded that "high flows are bad for fish," the 2013 Aquatics Resource Report provides a thoughtful description of the complexity of aquatic ecosystems and the dynamic factors that affect the health of aquatic life, including natural variability in flows. The report recognizes the limitations in our ability to predict flow-related impacts and acknowledges the uncertainty inherent in any quantitative analysis that attempts to do so.
2. The report also acknowledges important factors that were either omitted or disregarded as too difficult to analyze in the draft EIS, such as stream connectivity and biological thresholds (i.e., "tipping point"). These factors are used in the 2013 report and in the final EIS to evaluate both existing stream conditions and the potential impacts associated with the Moffat Project.
3. Using the very limited historical fish and macroinvertebrate data available, the report makes an attempt to describe the existing condition of each affected stream and to understand how those conditions may have changed over time due to historic Moffat Tunnel diversions.
4. Finally, acknowledging the potential impacts of prolonged drought conditions artificially created by increased storage during average and wet years that follow dry years, the final EIS evaluates potential changes in the frequency and duration of such conditions and uses the evaluation in its aquatic resources impacts analysis.

In spite of these improvements, the final EIS remains unreliable as a tool to predict the potential impacts of the proposed Moffat Project on Colorado River headwater streams.

1. In contrast with the thoughtful description of the challenges and limitations involved in predicting impacts due to flow changes, the final EIS's conclusions with respect to the magnitude of Moffat Project impacts on aquatic resources are arbitrary, often using little more than the rubric of "best professional judgment" as justification. This approach leads to indefensible conclusions, such as the conclusion that an increase in the length of time a stream remains dry is likely to lead to the loss of fish and macroinvertebrate populations and push the stream beyond its "tipping point" but such impacts are "minor." (See e.g., impacts evaluation for Vasquez Creek, Little Vasquez Creek, Jim Creek, North Fork Ranch Creek, etc.).

The final EIS's impacts analysis continues to rely on defective hydrological and sediment transport models. Problems with PACSM identified in comments to the draft EIS do not appear to have been addressed. Additional stream morphology and sediment transport data was collected. However, the final EIS's analysis selects a methodology that results in the smallest possible estimate of flows (i.e., Parker and Wilcox/Crowe) and leads to "unrealistically low estimates of sediment transport in some locations." (*Final EIS at p. 4-145*). Rather than selecting a more accurate and predictive method, the final EIS arbitrarily changes the recurrent flood interval (1.5 years) used in the evaluation to produce a more "realistic" result. Moreover, the final EIS does not evaluate critical, site specific sediment transport data and flow needs analysis prepared by Colorado State University (*Evaluation of Flushing Flows in the Fraser River and its Tributaries (Bledsoe 2013)*) provided to the USACE in advance of the final EIS. The final EIS relies on flawed models and incomplete information to determine whether reduction in peak flows will impact aquatic resources. Therefore, its conclusions are unreliable.

2. Elevated stream temperatures are a known problem in the Fraser River basin and in the Colorado River downstream of Windy Gap Reservoir, as reflected by current 303(d) impairment listings. The draft EIS attempted to predict potential additional impacts without the use of available models, using arbitrary criteria severely criticized by EPA and others. Rather than improving this important aspect of the analysis, the final EIS advances a new theory to the effect that increases in stream temperatures are not related to changes in stream flow. Such theory is founded on a "single variable regression analysis" that was unable to isolate depleted flows as the sole cause of increased water temperatures. Unable to isolate flow as the sole cause of stream temperature increases, the final EIS concludes that depleted stream flow is not a contributing factor to increased water temperatures. This conclusion is not only counterintuitive, it lacks scientific basis. Accordingly, the final EIS's analysis of the Moffat Project's potential impacts on stream temperatures and, therefore, on aquatic resources, is not reliable.
3. The impacts of climate change remain unknown. The final EIS acknowledges that climate change will likely have an impact on the ecology of the headwater streams but admits that there are currently no reliable models that can help predict the nature and extent of those impacts.

The final EIS makes the point that the degree of impacts analysis for this project is higher than the analysis involved in other projects requiring a 404 permit. Trout Unlimited submits that a high level of analysis and certainty is required given the value of the resources involved, existing degradation, and the high risk of further resource degradation and loss given the extremely high levels of depletion. The EIS analysis for the Moffat Project is comparable to the analysis for the Windy Gap FIRMING Project. The Southern Delivery Project is subject to monitoring and adaptive management requirements.

Given the uncertainty involved in attempting to predict the impacts of additional depletions of streams that have already been significantly impacted and the limitations of the final EIS, monitoring and adaptive management must be a requirement of any 404 permit issued for the Moffat Project. The MECP and LBD provide the best and most effective monitoring and adaptive management tool and should be incorporated as a term and condition of the 404 permit as proposed by Denver Water.