WGFP 1054

United States Department of the Interior

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Code	Surname	Date
1340	WM	12/9/08

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In Reply Refer To:
7250 (CO-932)

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Tully

Official File Copy
File Code ENV-6.00 W6FP
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Mr. Will Tully
Bureau of Reclamation
11056 W. County Road 18E
Loveland, CO 80537

Dear Mr. Tully:

Please accept the Colorado Bureau of Land Management's (BLM) enclosed comments on the proposed Windy Gap Firming Project. The BLM appreciates the Bureau of Reclamation's (BOR) recognition of the Wild and Scenic River analysis process that is currently underway as part of the revision of the Kremmling and Glenwood Springs Resource Management Plans. The BLM hopes that the enclosed comments will assist BOR and water users in clarifying potential impacts that could occur to resources managed by BLM as a result of the proposed project. We also hope that the enclosed comments provide Reclamation with workable ideas for project mitigation that could be cooperatively implemented with Northern Colorado Water Conservancy District to minimize project impacts.

If you would like to arrange further discussion of the enclosed comments, please contact Roy Smith at (303) 239-3940.

Sincerely,

Acting

Sally Wisely
State Director

Enclosure

cc:
Dave Stout, Kremmling Field Office Manager
Jamie Connell, Glenwood Springs Field Office Manager
Roy Masinton, Royal Gorge Field Office Manage

BLM Colorado Comments – Windy Gap Draft EIS

- **Affected Area for Impact Analysis** - BLM is concerned that the area analyzed for impacts differs from resource to resource. For example, the aquatic resources analysis extends downstream only to the confluence with the Blue River, while the recreation analysis extends downstream to State Bridge. Measurable impacts were noted for recreational resources in the Blue River to State Bridge reach, so it is possible that measurable impacts could occur to aquatic resources. BLM suggests incorporating an analysis of aquatic resource impacts from the Blue River to State Bridge, including a discussion of temperature impacts during low flow periods.

- **Stream Temperature Impacts on Fisheries** - The EIS makes it clear that the greatest temperature impacts will occur during the May through August period. However, the monthly analysis provided does not allow a more detailed analysis of the period in which the river typically experiences problems with high water temperature impacts on fish populations. Specifically, the analysis stated that stream temperatures may increase up to 4 degrees Celsius just above the confluence with the Williams Fork when the river is at the minimum flow of 90 cfs. This conclusion is based on the analysis of one day (July 25), but it is clear that stream temperatures are affected by conditions on antecedent days. If the river experiences extended length and frequency of low flow periods at 90 cfs as a result of the project, temperatures could rise significantly beyond the increase calculated in the one-day analysis. Typically, temperature impacts on fisheries are assessed for increases in both acute temperatures and average weekly temperatures.

  BLM suggests that the EIS include a daily flow analysis of the annual period of July 15 through August 15, so that the reader can identify how much more frequently the 90 cfs condition will occur and can identify how much more frequently temperature issues may occur. This daily analysis could be included in both the direct and cumulative impact sections. BLM also suggests including a discussion of the impact of extended low flow and high temperature periods on the recruitment success and disease resistance for trout species. If these analyses reveal fish population impacts from temperatures, we also suggest a discussion on the resulting indirect impacts to recreational fishing opportunities.

  Finally, Reclamation may want to consider mitigation in the form of a real-time temperature gaging staging station just above the confluence with the Williams Fork River, and posting of that data continuously on Northern's or Reclamation's website. Having temperature information constantly available would allow water managers in the basin to take preventative actions when temperatures start approaching acute levels, rather than waiting until the fish population demonstrates signs of stress. Reclamation could also consider operational restrictions that would be triggered only when temperatures reach acute levels for the trout population.

- **Scope of Fisheries Analysis** - BLM suggests a more complete fisheries analysis from our perspective as managers of aquatic habitat on federal lands. The current analysis focuses only on the amount of habitat available for adult and juvenile fishes, and includes no analysis of habitat available for spawning or fry life stages. The analysis also includes no discussion on impacts to

other fish species, such as mottled sculpin. In addition, the fisheries analysis doesn't include population trend data for the existing condition, information that BLM believes is readily available from the Division of Wildlife.

The report concludes that the species composition and distribution of macroinvertebrates is not expected to change. However, the EIS doesn't include an analysis of how extended low flow periods will affect the macroinvertebrate community, since a lower percentage of the stream channel will be inundated after the project is implemented.

- **Whirling Disease Impacts on Fisheries** - In the aquatic resources section, Nehring (DOW) is quoted as saying in 2006 that the last 5-6 years has shown a decrease in the Triactinomyxon populations (stage in the life cycle of the Whirling Disease parasite) in Windy Gap reservoir. BLM suggests that Reclamation may want to consider whether there is any relationship between TAM populations and specific Windy Gap operations.

- **Channel Maintenance Flows** - While the proposed changes to the river hydrograph may not affect overall stream morphology as defined by large materials and bedrock, BLM believes there may be a potential for significant impacts related to fine sediments and algal growth. In other river systems in Colorado, BLM has experienced situations in which the stream channel becomes "cemented" when algal growth and fine sediments are not washed out by regular high flow events. This "cementing" drastically reduces the interstitial spaces available for fish spawning and drastically reduces the surfaces available for macroinvertebrate habitat. BLM suggests analysis and discussion of this potential impact, and Reclamation may want to consider mitigation measures for preventing this impact. As part of this analysis, BLM recommends specific disclosure of the reduction in the number of years in which "wet" year hydrology will occur, and conclusions about whether any reduction in "wet" years will result in impacts to fine sediments and algal growth.

- **Rafting and Kayaking Impacts** – In the EIS, BLM noted a potential impact on rafting and kayaking flows between Big Gore Canyon and Pumphouse. BLM has identified recreational boating as an outstandingly remarkable value for this stream segment as part of its Wild & Scenic Rivers suitability analysis. For rafting, the proposed project would have no impact during 37 of the 47 years analyzed during the period of record, but during the other ten years it could reduce flows outside of the preferred range for rafting by an average of 2.3 days. Although this doesn't appear to be a large number of days, when the Windy Gap impact is combined with other cumulative impacts, the overall impact is to reduce flows below rates that are considered preferred for rafting during significant portions of some years. For example, the cumulative effects portrayed in Figure 22 result in flows below the preferred level for rafting during both May and August, when compared to the current condition. Reclamation may want to consider an operational stipulation, in the form of limits on diversion during certain flow conditions, to minimize impacts on the outstandingly remarkable value. As noted above, this operational restriction would have operational impacts on the project only 10 years in 47, and then only during a few days of each of those years. BLM acknowledges that the recognition of Wild &

Scenic Rivers values occurred long after water rights were established for the Windy Gap Project, but the project proponents may be willing to alter operations and minimize project impacts.

- **Minimum Flows for Acceptable Rafting** - In the affected environment Recreation section, the minimum acceptable flows for rafting below Pumphouse are identified at 400 to 800 cfs, citing Sommerhoff. BLM suggests using the broader data set established by the Upper Colorado River stakeholders group to establish minimum acceptable flows for rafting. That data set suggests slightly higher flows, in the 800 to 1000 cfs range.

  The environmental effects section on Big Gore Canyon identifies mitigation to possible impacts to the annual Gore Canyon Race by reducing diversions if the river flow is below 2,200 cfs. The affected environment section correctly states that the preferred level for rafting in Gore Canyon is between 850 and 1,250 cfs. The race participants would prefer flows in the preferred range, rather than 2,200 cfs.

- **Recreation Use Numbers** - In the affected environment section, some of the numbers cited from Arkin for commercial and private fishing days appear to be erroneous by a factor of ten. BLM suggests that Reclamation revisit these numbers with the Kremmling Field Office to ensure that they are accurately stated.

- **Riparian Communities** - BLM is concerned that the vegetation analysis lacks an analysis of impact of the proposed project on riparian communities along the Colorado River. Even though the draft EIS concludes that there will be no significant change to channel morphology or sediment transport, there still could be significant effects to riparian communities. Reduction in peak flows may result in significantly shorter periods of time when riparian species root zones are saturated, and may result in less recharge to alluvial aquifers that support riparian communities during low flow periods. Dramatic reductions in flow when additional project diversions occur may reduce reproductive success of cottonwood trees, which rely on slow, gradual reductions of flows after cottonwood seedlings are established on sand and gravel bars in the river channel. Finally, reduced peak flow periods could result in increased invasion of the floodplain zone by upland species, if floodplain areas are saturated for shorter periods of time.

- **Mitigation and Bypass Flow Requirements** - It is not clear in the draft document what types of mitigation requirements and bypass flow requirements are built into the analysis. For example, will diversion from the firming project be subject to the same bypass flow requirements that have previously governed all Windy Gap operations? Will the firming project diversion be junior or senior to Colorado Water Conservation Board instream flow water rights? There should be specific disclosure as to whether Reclamation believes that current Windy Gap project mitigation requirements will be sufficient to minimize and offset impacts from the additional proposed diversions.