COLORADO
Parks and Wildlife
Department of Natural Resources

Water Resources Section - Wildlife and Natural Resources Branch
6060 Broadway
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5 September 2014

Ms. Linda Bassi
Ms. Kaylea White
Colorado Water Conservation Board
Stream and Lake Protection Section
1313 Sherman, Room 723
Denver CO 80203

SUBJ: Agenda Item 17, Proposed Acquisition of Interest in Water on the Little Cimarron River

Dear Linda and Kaylea:

The purpose of this letter is to provide additional information to the Board for their final consideration of the McKinley Ditch (MD) acquisition. For the July CWCB meeting in Rangely, Colorado Parks and Wildlife (CPW) provided a letter that contained our recommendations and analyses related to this proposed acquisition; the purpose of this letter is to supplement the information that was contained within that letter and to provide additional information that has been collected and/or analyzed since then. CPW remains solidly in support of this proposal for a number of reasons - it restores flow and re-connects habitats in the Little Cimarron River (LCR) basin and it has unique flexibility to keep lands in agricultural production thus maintaining valuable upland and riparian habitats. The proposal also provides water to the Cimarron River (CR) existing ISF water right to improve the natural environment.

Data Analysis and Field Investigations

Since the July CWCB meeting, CPW has reviewed all of the data and information provided by the Colorado Water Trust (CWT), reviewed the historic data collected by CPW, and conducted a site visit to the LCR and CR to determine the applicability of the existing field data to the entire reach of stream affected by this proposal.

For the LCR, the proposed water acquisition affects two reaches of the stream; these reaches are divided by the point at which the McKinley Ditch's irrigation return flows accrue to the stream. The upper reach will benefit from the entire diversion amount being left in the stream and the lower reach benefits from the consumptive use of the water right. There is currently no ISF water right in place for the LCR below the Butte Ditch (upstream of the MD). Due to the fact that the MD has historically dried up the LCR during parts of most years, the water that is generated by this acquisition is considered to be an improvement to the natural environment - this is generally true in both reaches of the LCR.

In the CR, there is an existing CWCB ISF water right in place (84CW398) for 16 cfs year-round. The historic consumptive use of the MD will be used to improve the natural environment in this reach of stream. The amount of improvement was previously discussed in the July CPW letter to the Board. The Policy 19 factors for this reach of stream were also addressed in that July letter. The site visit conducted recently by CPW generally confirmed the statements made in our July letter. The only information that we would like to add at this point is that there is a short reach of the CR as it transitions from a gentle meadow stream into its descent into the Gunnison River where the stream is signicantly confined into an very narrow channel (between the Park Service road and the bedrock control of the conyon walls) where the acquired water will provide more depth than was described in our July letter (see photo - below). There will be a corresponding significant increase in pool volume in this short, narrow section of the Cimarron River.

In contrast, a majority of the CR ISF reach has the following appearance:

The remainder of this letter will address issues in the LCR reaches affected by this acquisition proposal. First, we will discuss the existing R2CROSS data that we have on the LCR. CWT provided the CWCB and CPW with 3 R2CROSS cross sections on the LCR - one of which is clearly in the upper reach (the full diversion amount improvement reach) and the other two in the lower reach (the consumptive use improvement reach). If we were looking at these cross sections to develop initial ISF recommendations, the upper reach cross section (Below the MD Turnback Structure - a short distance below the MD diversion structure) yeilds a flow recommendation of 4.9 cfs Winter/6.5 cfs Summer. As stated in our July letter, CPW is of the understanding that approximately 3.5 cfs will be added to this previously dry section of stream. While this flow does not bring the flow up to even the winter

R2CROSS numbers, it is a significant improvement over the near zero flow that is typically present in this reach of the LCR. CPW considers this to be an incremental improvement to the natural environment in this section of the LCR and will serve to provide new fish habitat in the LCR and will serve to re-connect the lower reach fish population to the upper reach fish population. As for the Policy 19 factors related to such an acquisition, this water will obviously improve water temperature and water quality conditions that currently impact the natural environment but due to the fact that we are below the R2CROSS criteria for a flow to preserve the natural environment, this acquisition obviously does not create hydraulic conditions detrimental to the natural environment.

In the lower reach of the LCR, CWT provided us with 2 R2CROSS cross sections to evaluate the effect of the acquired water on the natural environment. This section of the LCR definitely experiences very low flows and at times, and in places, near zero flows. Due to this fact, the acquired water's consuptive use is considered to be water that will improve the natural environment in the LCR. The 2 R2CROSS cross sections yeild composite in-range flow recommendations of 4.5 cfs Winter/14.6 cfs Summer. As stated in our July letter, CPW is of the understanding that the historic consumptive use of the MD water right is approximately 2 cfs. As is the case in the LCR above, the addition of up to 2 cfs in a previously nearly dry stream channel will obviously have a significant benefit to the natural environment in terms of both streamflow and habitat connectivity. CPW also views this as incremental improvement to the natural environment over the existing condition. The Policy 19 factors in this reach of the LCR are the same as those discussed above.

One of the purposes of the site visit was to explore the applicability of our existing cross section data to reaches of the LCR where we were missing data. There is a significant reach of the LCR between the one upper reach cross section (discussed above) and the two lower reach cross sections. As we have come to understand the hydrology in this reach of stream, it is somewhat dynamic and changes from year to year, from early season to late season, and from point to point (there are several other irrigation diversions in this section that have an effect on the available streamflow for instream resources). One question that we had in our July letter was the applicability of our existing data to the entire reach of the LCR - in other words, is our data representative of the reach. Based on observations and measurements taken during the site visit, CPW is of the opinion that our existing data is representative of hydraulic and channel geometry conditions throughout the reach. The stream's dimensions, pattern and profile are consistent from above the MD diversion, down through the dry section, and into the lower reach. All of the bankfull top widths that we measured during the site visit fell within the normal range of variability that one would expect - all fell in the range of 28 feet to 39 feet. Our three R2CROSS cross sections had top widths ranging from 20 feet to 39 feet; the historic CPW data had top widths ranging from 26 to 38 feet. Therefore, it is CPW's opinion that additional cross section data is not necessary at this point in time. Our assumptions and conclusions with repect to the fishery in the LCR above and below the low flow section as stated in our July letter remain unchanged. The following photos of the LCR illustrate these points.

Above the McKinley Ditch Diversion

Immediately Below the McKinley Ditch Diversion

In the Lower Reach of the LCR

Summary and Conclusions

CPW supports the proposed acquisition of an interest in water in the McKinley Ditch. This water, when placed to instream flow uses will improve aquatic conditions and therefore the natural environment of the Little Cimarron River and the Cimarron River. The analysis, conclusions, and opinions contained in this letter and the letter provided to the Board at its July meeting in Rangely constitute CPW's scientific and biological recommendations with respect to this proposed acquisition of water. CPW staff will be at the September, 2014 Board meeting in Glenwood Springs to answer any questions that the Board might have with respect to this agenda item.

Thank you for the opportunity to participate in this important action.

Sincerely

Jay W Skinner
Colorado Parks and Wildlife
Instream Flow Program Coordinator