



Water Resource Advisors for the West

February 5, 2019

Scott Grosscup
Balcomb & Green, P.C.
818 Colorado Ave
Glenwood Springs, CO 81602

RE: Proposed Change in Place of Storage for Sawmill Reservoir & Lost Creek / Ripple Reservoir Water Rights

Dear Scott:

The purpose of this letter is to provide an analysis of the water physically and legally available to three conditional storage rights located in the White River drainage and owned by the Yellow Jacket Water Conservancy District (YJWCD). A list of the pertinent conditional water rights owned by YJWCD are summarized in Table 1. A diligence filing for these water rights is due by August 31, 2020.

Table 1 – Conditional Water Rights Summary

Water Right Name	Volume [ac-ft]	Approp. Date	Source	Prior Diligence Case	Remark
Sawmill Mountain Reservoir	10,000	10/7/1976	Beaver Creek		None
North Fork Feeder Canal	n/a	10/7/1976	N.F. of the White River	09CW48	Decreed to divert up to 25 cfs
Ripple Creek Reservoir	12,500	11/9/1953	N.F. of the White River	09CW50	Only a combined total of 12,500 ac-ft may be developed between the Ripple Creek & Lost Creek reservoir water rights
Lost Park Reservoir	12,500	11/9/1953	Lost Creek		

YJWCD intends to change the place of storage of the three storage water rights listed in Table 1 to alternative locations; a change to the North Fork Feeder Canal is not contemplated at this time. In the case of the Sawmill Mountain Reservoir water right, YJWCD is seeking to change the place of storage to Big Beaver Creek Reservoir (aka Lake Avery) located downstream on Beaver Creek; this existing reservoir may be enlarged in the future to accommodate the additional storage. In the case of the Ripple Creek / Lost Park reservoir water rights, YJWCD is seeking to change the place of storage to the proposed Little Beaver Creek Reservoir or an off-channel reservoir, both being as-of-yet unconstructed off-channel reservoirs that would be filled by surface water diversions from the White River using the Oak Ridge Park Ditch. The locations of these structures are shown on the attached **Figure 1**.

The subject storage water rights are conditional, meaning that they have not been physically developed and perfected into absolute water rights. In order to change the place of storage for a conditional storage water right, the applicant must demonstrate how much water would have been physically and legally available at

the originally proposed place of storage; only this volume may be changed to the new place of storage in order to prevent an enlargement of the water right.

Calls in the White River basin affecting the subject water rights are rare. The only call that ever impacted these structures over the past 18+ years was a call from the Old Agency Ditch on the White River from August 26, 2002 until September 16, 2002. The only other water right that is commonly considered a possible source of call in the basin is the Taylor Draw Power Conduit, which has the potential to place a call nine months of the year in an average year, but hasn't placed a call to date due to a lack of significant water rights that would be impacted by such a call. The Taylor Draw Power Conduit right is senior to the Sawmill Mountain Reservoir storage right (and thus could potentially curtail its operation), but junior to the Ripple Creek / Lost Park reservoir water rights (and thus would have no impact on the ability of these water rights to store). Given the historical lack of calls in the basin, I assess that legal availability of water to these conditional water rights is not a significant impediment to development; this is particularly true of the Ripple Creek / Lost Park rights, as these rights are senior enough that they wouldn't be curtailed by a call from the Taylor Draw Power Conduit. Rather, the physical availability of water will govern how much water was available and may be changed to the new proposed places of storage.

The physical availability of water to the current reservoir storage sites was evaluated by the Applegate Group in its April 2013 Water Storage Feasibility Study for YJWCD. Two scenarios were analyzed in that study. The first scenario, considered a "high yield" scenario, utilized the StateMod model of the White River basin prepared by CDM as part of the July 27, 2010 Agricultural Water Needs Study for the Yampa/White/Green Basin Roundtable. This scenario assumes that a senior water right would be used at the storage site and agricultural system efficiencies in the basin would increase to a minimum of 30%. The results of this scenario apply to the Ripple Creek / Lost Park water rights, as they would be considered "senior" in relation to the Taylor Draw hydropower right.

The second scenario, considered a "low yield" scenario, utilized a modified version of the StateMod model of the White River basin prepared by AMEC as part of the February 2011 Energy Development Water Needs Assessment (Phase II) for the Colorado River Basin Roundtable. This scenario assumes historic irrigation efficiencies, and the model modifications adds the Taylor Draw hydropower right, which is capable of calling out junior diversions and many conditional water rights nine months out of the year in an average year. The results of this scenario apply to the Sawmill Mountain Reservoir water right, which is junior to the Taylor Draw hydropower right and therefore would be curtailed during a call from that structure.

The results of the Applegate study for the subject reservoirs are shown below in Table 2.

Table 2 – Water Storage Feasibility Study Results

Location	Water Available		
	Min (af/yr)	Avg (af/yr)	Max (af/yr)
Sawmill Mountain Reservoir (Big Beaver Ck Only)	0	23,100	49,100
Ripple Creek Reservoir	7,100	43,400	105,300
Lost Park Reservoir (native flow)	700	4,300	10,400

For the purposes of a change of place of storage of a conditional storage right, a demonstration that the full conditional right would have been available in at least one year is sufficient to change the entire water right. As previously discussed, the legal availability of water to the conditional storage rights is not considered a significant impediment to development. As shown in Table 2, the physical availability of water at the current decreed storage locations exceeds the decreed volume of both the Sawmill Mountain Reservoir and the Ripple Creek Reservoir water right. In the case of the Lost Park Reservoir, the maximum physical availability was determined to be 10,400 acre-feet, which is approximately 83% of the 12,500 acre-feet decreed to that structure.

Given the legal and physical availability of water to the existing storage locations, I assess that the entirety of the Sawmill Mountain Reservoir and Ripple Creek Reservoir water rights may be changed to the proposed downstream places of storage, and 10,400 acre-feet of the Lost Park Reservoir water right may be changed to the proposed downstream place of storage. Please recall that, pursuant to stipulations entered into by YJWCD and terms & conditions specified in the decree for Case No. 09CW50, the total combined storage to be developed under either the Ripple Creek Reservoir or Lost Park Reservoir water rights at the changed locations shall not exceed 12,500 acre-feet.

I trust you will find this information useful. Should you have further questions on this subject, feel free to contact me at your convenience.

Sincerely,
Applegate Group, Inc.



Jared Dains, P.E.
Water Resource Engineer

JMD/tmk

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