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MEMORANDUM

To: Shelly Keen, Water Right File 37-21177
From: Steve Burrell 
Date: 12/20/04
Subject: Mitigation plan implementation for permit 37-21177

This memo documents how I developed the watermaster instructions and additional conditions for permit application 37-21177 in the Memo from Shelly Keen to the 37-21177 water right file. As part of this process, the original mitigating right, 37-12818, was reviewed. Right 37-12818 was later transferred to create 37-21114, which is the proposed mitigating right for permit 37-21177. The adjudication claims review report dated 10/15/1993 shows the recommendation for claim 37-12818 is it be disallowed by forfeiture. Thus, this memo and the watermaster instructions and additional conditions referenced above are meant only as guidance should the mitigation right be found valid and the permit approved.

I reviewed 2003 water district "cut sheets", written instructions, and decree books to figure out how water is appropriated above Magic Reservoir. When certain conditions exist, as per decree, the Big Wood River is considered separated. This separation has recently occurred in early summer. Priority cut dates before the river separates are the same for the entire Big Wood river, and get determined per instructions in the 1930 Arkoosh vs BWCC decree using measured inflow to Magic Reservoir.

In determining the priority cut date for after the river is separated, the watermaster first obtains the measured flow at the USGS's Hailey gage (WD 37 Sta. #19). From studying the cut sheets, it appears that an estimate of the diversions above the gage is added to this measured flow, which then gives the natural flow. This natural flow is matched up with the running total of flows for all consumptive rights in the reach listed from senior to junior priority in the decree book. The nearest matching flow in the decree book determines the priority.

Kevin Lakey, the current watermaster, told me that the separated river condition is the only condition that may cause the mitigation water "left in the river" to become an issue. This is because sufficient water is available to satisfy demands from the river prior to the separated condition.

Lee Peterson, the previous watermaster for Water District 37 was contacted about his method for implementing previous mitigated ground water permit 37-8821. This permit uses the same concept as this proposed mitigation plan. Peterson treated mitigating flow as a reach gain, or inflow, and so it was included in the portion of natural flow measured at the Hailey gage. Peterson said treating the mitigating water as natural flow helped out downstream users because they could get more water.

Mitigating, or "left in the river" flow is flagged in the watermaster's decree book as non-consumptive use. Non-consumptive use water is not tallied in the running total of flows sorted by senior to junior priority in the decree book. By listing rights for mitigation as non-consumptive in the decree book, and not accounting for the flow could result in selecting an artificially high priority. Thus, the previous water master's procedure is not correct for managing mitigating surface rights.

To ensure old surface flows are actually left in the river to mitigate for depletion caused by changing them to ground water, it is correct to still manage them as surface rights. The point of diversion from the old surface source is treated as a "dummy" diversion located on the river closest to the new ground water diversion location, at the point of maximum interference to the river by the well. Since the new ground water diversion has an actual priority cut date corresponding to the old surface right, the new ground water right essentially is a transferred surface right, but without a real physical headgate type point of diversion. When the ground water diversion is being used, the mitigating amount of the old surface right should be considered as a diversion from the river at the new "dummy" point of diversion.

To properly manage this 37-21177 permit and the other "left in the river" mitigation type permits, they should be listed as consumptive in the water master's decree books and the ground water pump regulated just the same as a surface right headgate.