

LAW OFFICES

601 W Bannock Street
PO Box 2720 Boise, Idaho 83701
TELEPHONE: 208 388-1200
FACSIMILE: 208 388-1300
WEBSITE: www.givenspursley.com

Gary G. Allen
Kelly T. Barbour
Christopher J. Beeson
William C. Cole
Michael C. Creamer
Thomas E. Dvorak
Roy Lewis Eiguren
Timothy P. Feamside
Jeffrey C. Fereday
Steven J. Hippler
Karl T. Klein
Debora K. Kristensen
Anne C. Kunkel
Jeremy G. Ladle

Franklin G. Lee
David R. Lombardi
D. David Lorello, Jr.
Emily A. MacMaster
John M. Marshall
Kenneth R. McClure
Kelly Greene McConnell
Cynthia A. Melillo
Christopher H. Meyer
L. Edward Miller
Patrick J. Miller
Judson B. Montgomery
Angela K. Nelson
Deborah E. Nelson

W. Hugh O'Riordan LL.M.
Michael C. Orr
Kenneth L. Pursley
Bradley V. Sneed
H. Barton Thomas LL.M.
J. Will Varin
Conley E. Ward
Robert B. White

Raymond D. Givens
RETIRED

James A. McClure
RETIRED

April 15, 2005

Cynthia Bridge Clark
Idaho Department of Water Resources
322 E. Front Street
P.O. Box 83720
Boise, ID 83720-0098

Re: United Water Idaho Water Bank Rental
GP File No. 30-127

Dear Cynthia:

Pursuant to our recent conversations, this letter responds to the Department's request for information justifying a diversion volume of more than 225 acre-feet (AF) per each 1.00 cfs of water right 63-148c that United Water Idaho Inc. proposes to rent through the Idaho State Water Bank. The 225 AF number is derived by presuming that 1.00 cfs of right 63-148c irrigates 50 acres, and that each acre requires a diversion volume of 4.5 AF.

By separate letter, Barry Eschen, South Boise Water Company's President, is writing to explain why the South Boise diverts more than 4.5 AF per acre pursuant to right 63-148c. In summary, South Boise needs the additional water to efficiently run its delivery system. Additional water also is necessary to irrigate the porous soils within the company's service area. As a consequence, South Boise typically diverts right 63-148c into its system whenever the right is in priority during the standard irrigation season. We have calculated that on a typical year, given the customary Boise River cutbacks, South Boise diverts approximately 360 AF annually for each 1.00 cfs of right 63-148c, or about 7.2 AF per acre. United Water proposes to divert this same volume of water.

As I understand the Department's information request, in order for United Water to divert this same volume, it must demonstrate that its diversion and use of the water will not be any more consumptive than if South Boise diverted the water. As a starting point, we analyzed South Boise's diversions to determine what percentage is non-consumptive. Assuming the crops within South Boise's system consume approximately 3.0 AF per acre, then approximately 4.2 AF

Cynthia Bridge Clark
Idaho Department of Water Resources
April 15, 2005
Page 2

(7.2 – 3.0) per acre, or 58% of the diversion volume, is not consumed. We believe even less water will be consumed if the water is diverted and delivered through United Water's system.

As you know, United Water's delivery system is a large, city-wide system that delivers water to end users for any number of uses, including irrigation. Most of the other uses are non-consumptive. United Water calculates that approximately 43% percent of the total volume of water delivered is used for irrigation during the irrigation season. The other 57% is used for other, non-consumptive purposes. I have enclosed a graph and a summary that explain this calculation. The water that is not consumed returns to the river either through storm system drains or through Boise's wastewater treatment plant.

Of the 43% of the delivered water that is used for irrigation, assuming that each customer applies water at the rate of 4.5 AF per acre, and that 3.0 AF per acre is consumed, then an additional 1.5 AF per acre (or 33%) delivered by United Water is not consumed. Thus for each acre foot of water delivered by United Water during the irrigation season, approximately 0.71 AF (or 71%) is not consumed ($57\% + (43\% \times 33\%) = 71\%$).

In summary, for each acre foot of water delivered under South Boise's system, approximately 58% of that water is returned to the hydrologic system. For each acre-foot delivered into United Water's system during the irrigation season (even without accounting for customers with separate, pressurized irrigation systems), 71% of the water is returned to the hydrologic system. Accordingly, United Water requests that the Department and/or the Water Resources Board allow United Water to divert its rented portion of right 63-148c whenever the right is in priority in the same manner as South Boise.

Sincerely,



John M. Marshall

JMM/hcm
Enclosures

cc: Scott Rhead
Barry Eschen

S:\CLIENTS\30\127\JM ltr to IDWR re UWID return flows.DOC

EXPLANATION OF CONSUMPTIVE VOLUME CALCULATION

The attached graph shows a hydrograph for a representative sample of United Water's residential and commercial customer's that use United Water for irrigation (in other words, they do not have access to a separate, pressurized irrigation system). The hydrograph shows the pattern of water delivered to these customers over the course of a year. There is a marked increase in the volume delivered beginning on March 19th and again on May 16th. A portion of the initial bump likely is from early season lawn irrigation. Another portion of the bump is accounted for by a general trend of more water use in the warmer months (car washing, more showering, etc.). To account for this mix of uses in the spring-time bump, United Water drew a horizontal line across the graph beginning on April 1st (the green line on the graph). United Water assumes that all of the volume above this line is used for irrigation and that all of the volume below this line is used for other, non-consumptive uses.

The volume of water delivered for irrigation uses to the representative class (the area above the green line) is 2,830.15 AF. The volume delivered for non-consumptive uses is 5,437.48 AF; however this includes water delivered during the non-irrigation season as well as the irrigation season. We recalculated to account only for volume of water delivered for non-consumptive uses during the irrigation season by multiplying 17 AF (which corresponds to the volume delivered on April 1st) by 225 days (the approximate number of days between April 1st and November 14th). The total is approximately 3,825 AF. Thus, the total water delivered to the class during the irrigation season is approximately 6,655 AF (2830 + 3825). The portion of this used for non-consumptive uses (below the green line) is approximately 57% of the total. The portion of the total used for irrigation (above the green line) is approximately 43% of the total.

2001 Residential & Commercial Consumption For United Water Meter Books In Nampa/Meridian Irrigation District w/ Non-Alternate Irrigation Only (does not include sprinkler, irrigation, or common area consumption)

