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Via Hand Delivery

July 3, 2007

David R. Tuthill, Jr., P.E. *DR*
 Director
 Idaho Department of Water Resources
 322 East Front Street
 P.O. Box 83720
 Boise, ID 83720-0098

Re: Dairymen's Mitigation Agreement

Dear Director Tuthill:

At your direction, the Idaho Dairymen's Association ("IDA") is submitting additional information for review by you and your staff concerning the justification for use of a 29.1 gallon per mature head per day ("gpd") quantity, which the signatories to the IDA Mitigation Agreement have agreed represents a reasonably accurate estimate of depletions to the ESPA attributable to dairy operations by IDA's members.

In response to the IDA's initial submittal of documentation of the basis for the 29.1 gpd quantity, the Department reviewed 2005 metered water diversion data and reported cow numbers for 23 out of the 339 IDA member facilities within Water Districts 120 and 130. Based on this sample, the Department concluded that depletions attributable to IDA member dairy operations should be quantified at 74 gpd. The IDA has analyzed this information, together with other information on the subject that could be obtained in the time available. Based on this review, IDA continues to urge that the 29.1 gpd number used in the Mitigation Agreement be approved by the Department and the implementation of the Agreement as written be deemed to satisfy the Department's delivery call orders. The reasons for this position are summarized below and in the attached materials.

Also included with these materials are additional documents related to the Mitigation Agreement, including the Articles of Incorporation for the Idaho Dairy Water and Land Trust filed with the Idaho Secretary of State, a letter to, and response from Lyle Swank, WD 01 concerning IDA's request to rent 9,500 acre-feet of water from the WD 01 rental pool for 2007 mitigation purposes, and a Resolution of the North Side Canal Company Board of Directors approving rental and carriage of 9,500 acre-feet of water for IDA in 2007.

The 29.1 gpd quantity is supported by relevant published data.

The 29.1 gpd quantity is supported by the analysis originally contained in Exhibit B to the Mitigation Agreement. It also is consistent with relevant published data on dairy water use that IDA has been able to obtain. Only one of these published studies, by Brugger and Dorsey, specifically analyzed cow drinking water use and parlor uses. This study estimated overall water use to be 28 gal/mature head/day.¹ Other studies cited by Brugger and Dorsey contain references to higher gpd quantities, but it is clear they are driven by non-drinking water use of the facilities involved and that those studies do not analyze this non-drinking water component in any meaningful way. In short, the one representative study that IDA has been able to find is supportive of the 29.1 gpd quantity used in the Mitigation Agreement.²

The Brugger and Dorsey study and the others it cites are consistent in recognizing that numerous variables will affect total water use, and that in particular, non-drinking water uses produce highly variable demands depending on the kinds of facilities involved. This variability highlights the importance of not basing conclusions about average dairy water use on a non-representative sample.

The Department's 23-Dairy sample is not representative of IDA's members.

Because of the inherent variability in facility size, milk production per cow and water use among different dairies, and because of the significant administrative difficulties in attempting to document and/or monitor specific water use in individual facilities on an ongoing basis, IDA (and the other agreement signatories) agrees with the Department that for purposes of the Mitigation Agreement, dairy water use should be quantified by averaging water use of representative facilities. It was, however, immediately apparent to IDA, but may not have been to Department staff, that the 23 facilities used in the Department's recent analysis of dairy water use are not representative of IDA's members, and do not make up an appropriate sample by which to average water use or ground water depletions.³

These 23 dairies were selected by the Department because of the availability of metered diversion data without regard to any of the factors that substantially affect actual water use. As a

¹ See Mike Brugger and Ben Dorsey, III Water Use and Savings on a Dairy Farm July 2006 (presented to 2006 American Society of Agricultural and Biological Engineers Annual Meeting) (attached).

² This is particularly so since the cows in the 2006 study produced an average of 80 pounds of milk per day, compared with IDA's members, who on average produce approximately 60 lbs per day. See *2006 Idaho Agricultural Statistics*, p.57 (attached).

³ IDA was able to obtain actual cow numbers for these dairies for 2005 and 2007. Overall, the actual numbers are higher than those used by the Department, which in turn reduces the total gpd quantity for these facilities.

result, the Department's sample includes only the largest of IDA members' facilities, which use higher water-demanding parlor and cooling methods and have higher cow numbers and milk production per cow than the balance of IDA members. IDA has been able to contact virtually all of these 23 dairies and confirmed this. Dr. Brockway's statistical analysis documenting the heavily skewed nature of the Department's 23-dairy sample and data is attached.

The Department's position that 100 percent of dairy withdrawals are consumptively used is unsupported by the facts.

The Department has taken the position that all water diverted to dairy use is consumptively used. Applying that presumption to the 23 dairies included in the Department's sample, or any other sample for that matter, further skews any depletion calculation further away from the actual average. The attached discussion prepared by Mr. Matt Thompson demonstrates this presumption is not justified by the actual facts concerning the 23 dairies reviewed by the Department or any other of IDA's members, and proposes a study to confirm the facts concerning consumptive use of dairy diversions.

IDA proposes to undertake additional studies to confirm the appropriateness of the 29.1 gpd quantity used in the Mitigation Agreement.

It is apparent that there is variability in water use among IDA's 300+ members in Water Districts 120 and 130. It also is apparent that it would be difficult (and unlikely to yield any meaningful benefit) to attempt to document and monitor actual gpd quantities at individual dairies on an ongoing basis. Averaging of gpd quantities based on representative sample(s) makes sense and is preferred by the parties to the Mitigation Agreement, particularly given that dairy diversions represent only one percent or less of the total diversions from the ESPA annually.

IDA believes the 29.1 gpd quantity is representative of average water use for its dairies in Water Districts 120 and 130 and should be accepted by the Department. Nevertheless, provided the Mitigation Agreement can be approved for 2007 and IDA and its members can avoid potential curtailment and the attendant legal and economic consequences and focus on implementing the Mitigation Agreement, IDA would propose that it would prepare and undertake a study to obtain at least a full year's worth of data from an appropriately sized and constituted sample of dairies in Water Districts 120 and 130 to document this number. This study also would include an evaluation of the consumptive use associated with dairy diversions. A draft outline of such a study is attached to this letter.

This information and proposal to institute further study is being provided in a good faith effort to fulfill the compromise IDA has reached with the Surface Water Coalition, Clear Springs Foods and Thousand Springs Water Users, and to satisfy the Department's independent

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concerns. IDA hopes that if, after review of these materials, the Department has any additional questions or concerns, it will provide IDA and its members an opportunity to address them so that these discussions can be concluded without enforcement of any curtailment orders against its members.

I will look forward to your response and any opportunity to further assist the Department in its evaluation.

Sincerely



Michael C. Creamer

Attachments:

Published Dairy Water Use Studies
Dept of Agriculture Statistics
Spreadsheet
Brockway Engineering Statistical Analysis
AGTec Report
Draft Study Outline
Articles of Incorporation Idaho Dairy Water and Land Trust
Letter to Lyle Swank Requesting 9,500 acre-feet of storage from Rental Pool
E-mail Response from Lyle Swank
Resolution adopted by NSCC Board of Directors.

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