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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF THE MITIGATION)
COMPUTATIONS IN WATER DISTRICT 120)
FOR THE SURFACE WATER COALITION)
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**FIRST QUESTIONS
OF IDAHO GROUND WATER
APPROPRIATORS, INC.
("IGWA")**

TO: THE IDAHO DEPARTMENT OF WATER RESOURCES

COME NOW, Idaho Ground Water Appropriators, Inc. ("IGWA"), by and through their attorneys of record, pursuant to the Director's authorization and directive given at the May 4, 2009 workshop, and hereby submit the following questions to the Idaho Department of Water Resources ("Department"), and request that each question be answered as soon as practicable after the date of service. These questions are deemed continuing so as to require seasonal supplemental answers as additional information becomes known.

QUESTIONS

QUESTION 1: Metadata in "SWC_Carryover_data_1959-2008.xls" states that historical carryover in regression development was normalized to be the difference between storage allocation and storage use prior to rentals and leases. However, the data in the spreadsheet suggests other adjustments were made to this calculated difference. Please explain

and document more fully what adjustments were made to each of the dependent variable datasets?

QUESTION 2: In the proposed protocol, how will rentals and leases be considered in calculating carryover deficits?

QUESTION 3: In some cases the validation period begins in 1987 and in others it begins in 1989. What were the reasons for discarding 1987 and 1988 from some validation periods?

QUESTION 4: The regression models for predicting reasonable carryover do not all use the same set of independent variables. What criteria were used to determine which variables to use or discard from the regressions?

QUESTION 5: Did the Department investigate the use of common set of independent variables for all the SWC entities? Did the Department investigate the use of a zero intercept for the models? What other independent variables were considered or evaluated in developing the regression models?

QUESTION 6: What statistical tests (e.g., for normality of data and residuals, correlations between variables) were carried out in developing the regression models?

QUESTION 7: Will carryover calculations and determinations (both reasonable and actual) all be carried out using actual (as opposed to estimated or projected) flow, climate, and diversion data for the irrigation season? If so, some of this data may have to come from WD01 accounting for the year; this accounting data has historically been considered “provisional” until February or so of the following year. Does the Department contemplate updating carryover calculations when accounting data are finalized?

QUESTION 8: The initial natural flow supply for each SWC entity is predicted using regression models but it does not appear that these spreadsheets and regression details were included in the supporting information. Please provide these.

QUESTION 9: It appears that the historical data used for developing these natural flow diversion regressions comprises the years 1990 through the preceding year. Does the Department propose using this sample definition in the future? Have any adjustments been made to either the independent or dependent variables in developing the regressions?

QUESTION 10: Is it correct that updates to natural flow supply will be based in part on reach gains and a “similar years” approach? If so, how are the “similar years” to be determined? What is the sample pool of “similar years”?

QUESTION 11: Is it correct that the “likely fill” component of initial storage supply estimate also will be determined using a “similar years” approach? If so, how are the “similar years” to be determined in this case?

QUESTION 12: Is it correct that the storage supply estimate will be updated at the time of the initial storage allocation? How will any carryover replacement water delivered by ground water users figure into this updated storage supply? Will there be late-season adjustments to storage supply estimates? If so, describe how these will be made.

QUESTION 13: Describe how irrigated acreage for each SWC entity will be determined each year and utilized for purposes of the SWC mitigation calculation. How will this acreage be adjusted in making updated mitigation calculations?

QUESTION 14: The Department proposes using 2006 diversions as the foundation for a baseline demand assumption. The quantitative rationale for this choice appears to rely on total-season comparisons of runoff, PET and growing-degree-days (GDD). Were any monthly or shorter-period evaluations made using these or other parameters? If so, please provide these.

QUESTION 15: The 2006 baseline demand reflects adjustments for early season precipitation in 2006. In determining these adjustments, did the Department perform any analysis of antecedent soil moisture conditions for 2006 or for any other years? If so, please provide these.

QUESTION 16: Were any other adjustments to 2006 diversions considered in defining the baseline demands? If so, please describe.

QUESTION 17: On slide 13 of the presentation “RISD Protocol 5-1-09.ppt” there appear to be errors in the subscripting in the formula for RISK. Is the intention that RISD be based on actual water needs in preceding months and baseline needs in subsequent months? What is the definition of “FS” in the second equation?

QUESTION 18: Will in-season shortage calculations be updated exactly twice each year? If an updated calculation shows an increase in the projected shortage from a prior calculation, how will ground water users obligations be adjusted and on what schedule?

QUESTION 19: The *Final Order Regarding the Surface Water Coalition Delivery Call dated September 5, 2008* (“Final Order”), incorporated all Findings of Fact and Conclusions of Law of the former Director including the series of Orders culminating in the May 2, 2005 Order and also the Hearing Officer’s *Opinion Constituting Findings of Fact, Conclusions of Law and Recommendation, dated April 28, 2008* (“Opinion”), unless modified in the *Final Order* (Final Order, p. 12). The Opinion at page 55 incorporated in the Final Order states: “Full headgate delivery for Twin Falls Canal Company should be calculated at 5/8ths inch instead of 3/4s inch.” Please describe how that requirement is addressed in the mitigation computations.

QUESTION 20: Page 53 of the Opinion, incorporated in the Final Order, states: “Non-irrigated acres should not be considered in determining the irrigation supply necessary for SWC members.” Please describe how this is addressed in the calculation of the mitigation requirement and how and when it will be periodically adjusted.

QUESTION 21: The Opinion incorporated in the Final Order, referred to the Supreme Court’s Decision in AFRD No. 2 at page 882 stating: “Consequently, in determining the amount of carryover storage to which the irrigation districts are entitled when curtailment is ordered, the amount of water sold or leased for purposes outside the licensed or adjudicated right must not be

considered in calculated storage.” (Opinion, p. 61, 64.) Please describe how water sold or leased by SWC entities will be calculated in determining the mitigation requirement.

QUESTION 22: The Hearing Officer’s Opinion at page 60, incorporated in the Final Order, recognized that under CM Rule 42, the SWC is entitled to maintain a reasonable amount of carryover storage, but made no attempt to determine what the proper amount was. Again citing AFRD No.2 at page 882 the Hearing Officer recognized that “Somewhere between the absolute right to use a decreed water right and an obligation not to waste it and to protect the public’s interest in this valuable commodity, lies an area for the exercise of sound discretion by the Director.” Please describe how the Director intends to exercise this discretion in determining reasonable carry-over storage as part of the SWC mitigation requirement.

QUESTION 23: The Opinion at pages 61 and 64, incorporated in the Final Order, states that the right to secure reasonable carryover storage through curtailment does not extend to make up for water that is sold or leased “for uses unrelated to the original rights, e.g., the sale of water through ESA flow augmentation, power production, etc.” Please describe how this limitation will be included in the calculation of the mitigation requirement.

QUESTION 24: The Opinion at page 62, incorporated in the Final Order, held that the determination of reasonable carryover storage should not consider more than a one year supply: “Anticipating more than the next season of need is closer to faith than science.” “Curtailling total water for longer than a year runs the risk of being classified as hoarding, warned against by the Supreme Court in AFRD No. 2.” Does the determination of the SWC mitigation requirement not consider more than a one-year supply? If so, please explain why and how.

QUESTION 25: The Opinion at pages 26, 40, 51, 52 and 67, incorporated in the Final Order, recognized that the licensed or decreed quantity is a “maximum amount” to which the right holder is entitled, i.e., an authorized but not guaranteed amount; and, further if crop needs are met, there is no material injury and no right of curtailment. Please describe how the

calculation of the mitigation requirement for the SWC entities will distinguish between the maximum quantity under their respective water rights and the amount needed to meet crop needs in determining when junior ground water users should be subject to curtailment.

QUESTION 26: The Opinion, at page 33, incorporated in the Final Order, held that the application of the 10 percent trimline is proper to avoid a significant probability that curtailment would extend to ground water users who would suffer significantly without contributing water where necessary to remediate the material injury to the Surface Water Users. Please describe how the 10 percent trimline will be utilized in determining and administering the mitigation requirement to SWC entities.

QUESTION 27: In computing the reasonable carryover storage amount, please describe how the reservoir storage space priorities held by the different SWC entities is taken into consideration. If reservoir priorities are not considered, please explain why. Also explain how those SWC members that have storage space that fills every year would ever receive benefit by water carried over from the prior year.

QUESTION 28: If the so-called “reasonable in-season demand” is not being met will the curtailment of junior ground water pumpers be basin-wide or based upon a 10 percent trimline? If a trimline, please explain how the trimline will be applied in WD 120.

QUESTION 29: If there is a mitigation requirement based on “reasonable in-season demand”, please explain how any calculated shortfall will be allocated between the three contributing factors: (1) changes in irrigation practices/incidental recharge over time; (2) drought conditions; and (3) ground water pumping.

QUESTION 30: Since all SWC entities other than TFCC and NSCC rely primarily upon early season runoff and storage water for their annual water supply, please explain how irrigation supply differences will be addressed and accounted for in determining the SWC mitigation requirement.

QUESTION 31: Given the denial of the delivery call made by A&B Irrigation District and its physical proximity to SWC diversions, will A&B's ground water rights be subject to the same mitigation obligations as other ground water users? If not, please explain why.

QUESTION 32: Because SWC entities provide water to the BOR for flow augmentation, please explain how this leased water will be accounted for and adjusted to ensure that the mitigation obligations of ground water users are not increased.

QUESTION 33: Please explain how recharge, demand reductions, etc., implemented under the CAMP process will be accounted for in determining the mitigation obligation of SWC entities.

DATED this _____ day of May, 2009.

RACINE, OLSON, NYE, BUDGE &
BAILEY, CHARTERED

By _____
RANDALL C. BUDGE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this _____ day of May, 2009, I caused to be served a true and correct copy of the foregoing *IGWA'S FIRST QUESTIONS TO IDAHO DEPARTMENT OF WATER RESOURCES* by electronic mail, facsimile or regular U.S. Mail, postage prepaid, to:

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