



State of Idaho

DEPARTMENT OF WATER RESOURCES

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File

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

February 25, 2002

Mr. Charles M. Brendecke, PhD, PE
Hydrosphere Resource Consultants
1002 Walnut, Suite 200
Boulder, CO 80302

Dear Chuck:

Thanks for your comments related to the October 31-November 1, 2001 project review meeting. Our responses to your comments and questions are listed below in the order they were presented.

We are still working out how the water budgets will be developed and will address this topic in the March 2002 project review meeting. There is no intention to go to a configuration of alternating 7- and 5-month stress periods. The plan for time discretization remains at having 6-month stress periods for the first 21 calibration years, with 1-month stress periods for the last 12 months of calibration. Project time permitting, we will use 1-month stress periods for the entire model calibration period. However, that would not be done until we feel confident that such a change would not severely impact the project completion date. The water budgets will be balanced for the 6-month stress periods**. If we go to the 1-month stress periods, each balanced 6-month period will be somehow apportioned to the 1-month stress periods. One of the difficulties of more stress periods is the increase in the level of required quality control (such as examination of the water budget).

We have been meeting with county extension agents regarding crop distributions for counties partially in the model area. We will present results of these meetings at the March 2002 project review.

The memo on ET calculations and crop stress factors is at IDWR for review and will be made available to the whole committee for review and comment in the near future. This memo will be one of a series of design documentation papers which will be used to document design decisions. Design documentation papers will be written by the individual who is primarily responsible for the specific design area. A draft will be written, reviewed internally by IDWR and IWRRI, and then sent out for review and comment by the whole committee. Comments will be reviewed and incorporated into the final paper. The final design documentation paper will

** Note: in this context, balancing the water budget means differencing the recharge and discharge on an aquifer-wide basis and ensuring that the differences represent plausible changes in aquifer storage

If we said that we might calibrate diversions, we misspoke. We agree that diversions are among the best measured values available; there is no intention to calibrate diversions.

We have identified 44 sites which will be instrumented to measure return flows. We believe that these measurements will give us good insight into the relationship between diversions and return flows. We intend to extrapolate these relationships to estimate return flows for canal companies where they have not been measured. This will provide the most detail which has ever been available on return flows on the eastern Snake River Plain. Through this fieldwork we hope not only to improve our water budgets, but also to provide more hydrologic insight.

We agree with the need for a good transient calibration and hope that the long calibration period and the current parameter estimation tools will help us meet that goal.

We appreciate the time and thought that you put into your comments and encourage you to continue sending us your feedback.

Sincerely,



Paul M. Castelin, P.G., Chief
Technical Services Bureau

Cc: Hal Anderson
Donna Cosgrove
Electronic copies to ESHMC members