



IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF RECLAMATION
Nebraska Kansas Area Office
McCook Field Office
1706 West 3rd Street
McCook, NE 69001



DEC - 9 2008

NK-460
WTR-4.00 RR

Mr. Brian Dunnigan, P.E.
Acting Director, Nebraska Department of
Natural Resources
PO Box 94676
Lincoln, NE 68509-4676

Mr. David Barfield, P.E.
Chief Engineer, Division of Water Resources
Kansas Department of Agriculture
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283

Subject: Request for Analysis on Potential Impacts to Compact Accounting if Storage from
Bonny Reservoir is Released

Dear Gentlemen:

On May 26, 2007, the Colorado State Engineer's Office placed a water right regulatory call on surface water use in the South Fork of the Republican River and issued an Order directing Reclamation to release 2,200 acre-feet of water stored out-of priority in Bonny Reservoir for the purpose of meeting compact compliance. This Order was later vacated on June 5 due to inordinate transit losses occurring prior to the reservoir releases reaching the Republican River Compact accounting gauging station at Benkelman, NE. The regulatory call continued in 2008 requiring the release of approximately 4,000 acre-feet of water from Bonny Reservoir in August and September of 2008. The level of Bonny Reservoir reached a historic low elevation of 3648.05 on October 9, 2008, following these releases.

We understand that Colorado's benefits from the release of Bonny Reservoir water to Compact Accounting are from a reduction in Bonny Reservoir's evaporation and seepage losses. This relates to an one-time benefit of any of the released water reaching the South Fork Republican River gage at Benkelman, NE, and from a change in timing of the Bonny Reservoir inflow through the groundwater model. Since little or no water has reached the gauging station at Benkelman, the benefit of releasing stored water from Bonny Reservoir has been less than expected. Colorado has stated they would receive two benefits in the groundwater accounting from draining Bonny Reservoir. The first benefit is reducing seepage losses from Bonny Reservoir to the Ogallala Aquifer, and the second benefit is eliminating the re-timing of inflows into Bonny Reservoir. In order to better understand the groundwater accounting impacts of releasing storage water from Bonny Reservoir, we requested Colorado to provide us with an analysis of the benefits of releasing such water. Enclosed for your review is a copy of Colorado's analysis summarizing the results of the water accounting and groundwater model runs

projecting the South Fork impacts with and without Bonny Reservoir. Also enclosed is a copy of a 2007 Memorandum prepared by Slaterry Aqua Engineering for the Republican River Water Conservation District.

We have voiced our concerns to Colorado with the results of their analysis. Specifically, we do not believe it is accurate to base the analysis on a "with" and "without" Bonny Reservoir. Even if Bonny Reservoir is drawn to its lowest level (the top of its dead pool) there will still be over 1,400 acre-feet of water in storage and this remaining stored water will still result in some evaporation and seepage losses from the river system. A more realistic evaluation would be an analysis comparing the reservoir at its present level versus the reservoir drawn to the top of its dead pool at elevation 3635.5. It is also unclear how draining Bonny can result in the large reduction in ground water consumptive use shown in Colorado's analysis (considerable more than the annual inflow to Bonny Reservoir) and how seepage losses from Bonny Reservoir are determined and accounted for in the groundwater model.

We are currently not familiar enough with the Republican River Ground Water Model to analyze the groundwater impacts of draining Bonny Reservoir. In order to gain a better understanding of the Bonny Reservoir effects on Compact Accounting we would like to request your assistance in reviewing the analyses provided by Colorado and Slaterry Aqua Engineering. We would greatly appreciate your independent analysis summarizing the impacts to Compact Accounting with Bonny at its current level versus Bonny drawn to the top of its dead pool at elevation 3635.5.

We greatly appreciate your assistance in this matter. If you have any questions or need additional information from our office to complete this request, please contact me at 308-345-1027.

Sincerely,

MARVIN R. SWANDA

Marvin R. Swanda
Office Manger

Enclosure

cc: Dick Wolfe, P.E.
State Engineer, State of Colorado
Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203-2277

bc: GP-4600 (Perger/GAycock)
NK-100 (AThompson)
NK-400 (MSwanda)
NK-460 (CScott)

WBR:CScott:kjensen:12/9/08:308-345-1030
\\BR6MCCFP001\User\$\anybody\NK460 O&M Support\Letters and Memos\Bonny Impacts to
Compact Acct Ltr FINAL.doc