COLORADO RIVER WATER CONSERVATION DISTRICT

Protecting Western Colorado Water Since 1937

October 1, 2006

TO: CRWCD Board of Directors

FROM: Don Meyer

SUBJECT: New Assessment of Wolford Marketable Yield

Background

In 1997, an assessment of the potential hydrologic impacts of a water marketing program of 10,000 AF was prepared for CRWCD (Wolford Mountain Reservoir - Assessment of Reservoir Operations and Hydrologic Impacts) by Kerry Sundeen, Enartech Inc, using a computer model originally developed by the River District. The model simulates monthly project operations for the period of 1963 to 1994. Two alternative demands for Denver Water's use of the reservoir were evaluated. Figure 1 shows the results of the Alternative 2 computer model run, with an increased demand for Wolford Mountain Reservoir releases by Denver (average of 5,300 acre feet per year).

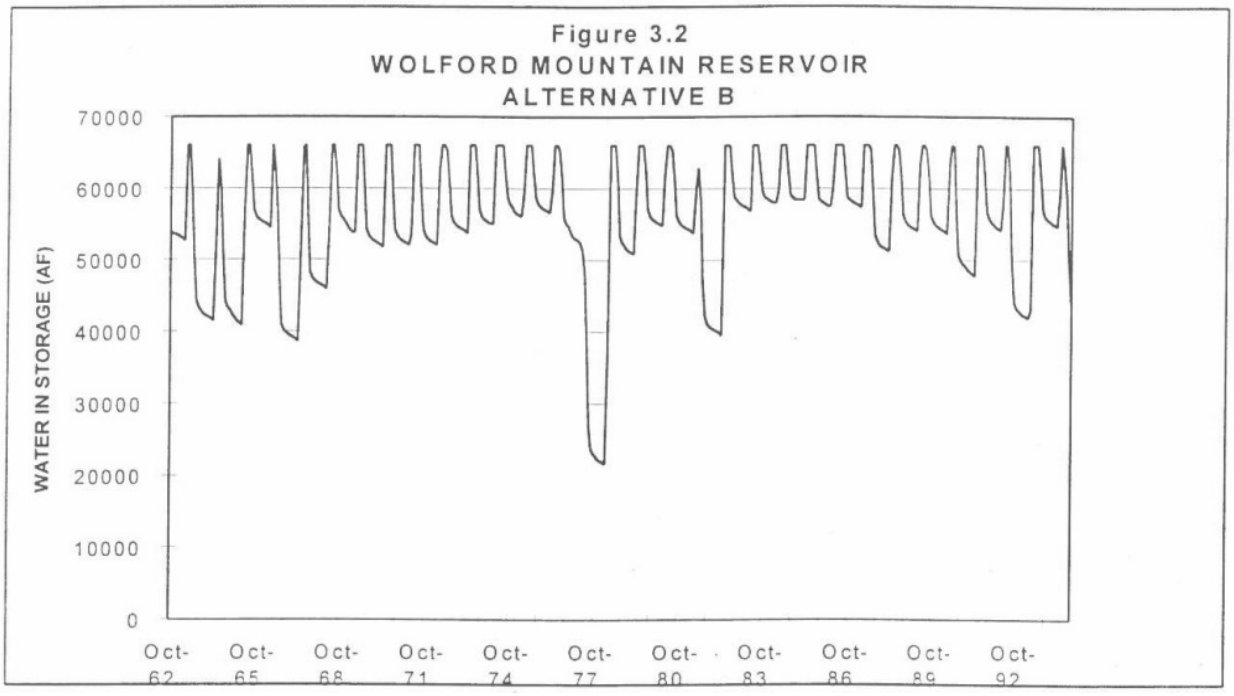

Figure 1: Results of 1997 Alternate 2 Computer Model Run

Assumptions included full use of the 3,000 acre feet Middle Park and 920 acre feet Fraser pools. The model results suggest a critical period of 1977-1978, when the reservoir content was reduced to about 20,000 AF.

New Model

Since 1997, the computer model has been modified several times, and was used to assess a marketable yield with criteria based on recent operations, including historic call reductions, full use of Fraser and Middle Park pools, full demands by the Deberard Ditch, and the new hydrologic period of record from 1995 to 2006. A minimum total reservoir volume of 6,000 AF was used to assess the marketable yield. Figure 2 shows reservoir contents from the critical model run which resulted in the minimum volume in the spring of 2004.

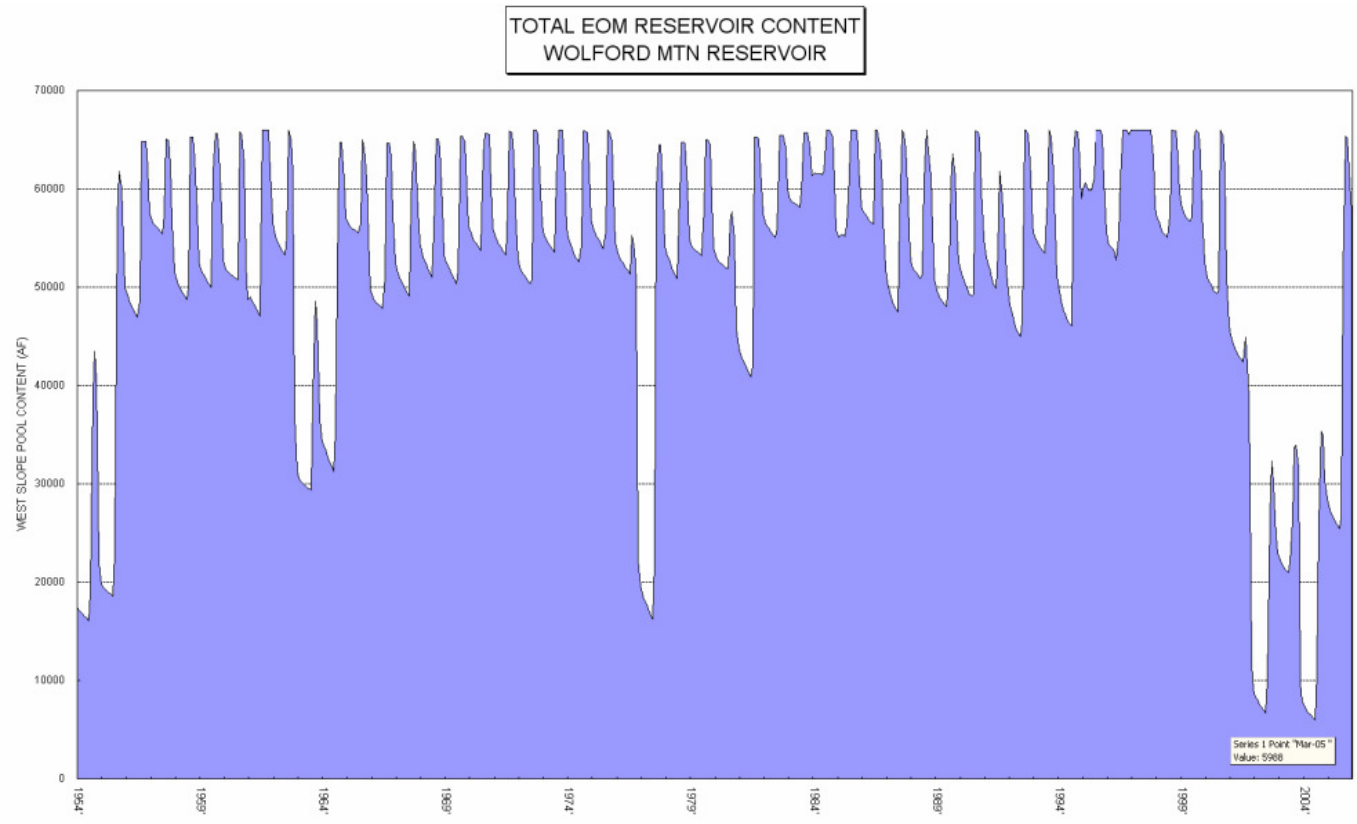

Figure 2: Results of 2006 computer model run for a Minimum Reservoir Volume of 6,000 acre feet

The marketable yield input to this model run was 8,100 acre feet.. The new model did not allocate water for the interim 5412.5 fish pool (expires in 2010) or CSU substitution releases. Figure 3 shows these computer model results for the historic period of operations of the reservoir 1995-2006, as well as the actual historic reservoir content.

The model caused the reservoir to spill in 2006 using 1982 and 1972 inflows (118% and 101% of average), but not using 1991 hydrology (89% of average). Actual 2006 inflows to Wolford are 120% of average to date. The historic reservoir content shows the minimum content occurring in the spring of 2003, but model results suggest the low point would be in the spring of 2005, 3 years into the new critical 5 year period of 2001-2006. Throughout this critical period, actual reservoir content was higher than the modeled content, due to less than full demands on the marketing pool, as well as other factors.

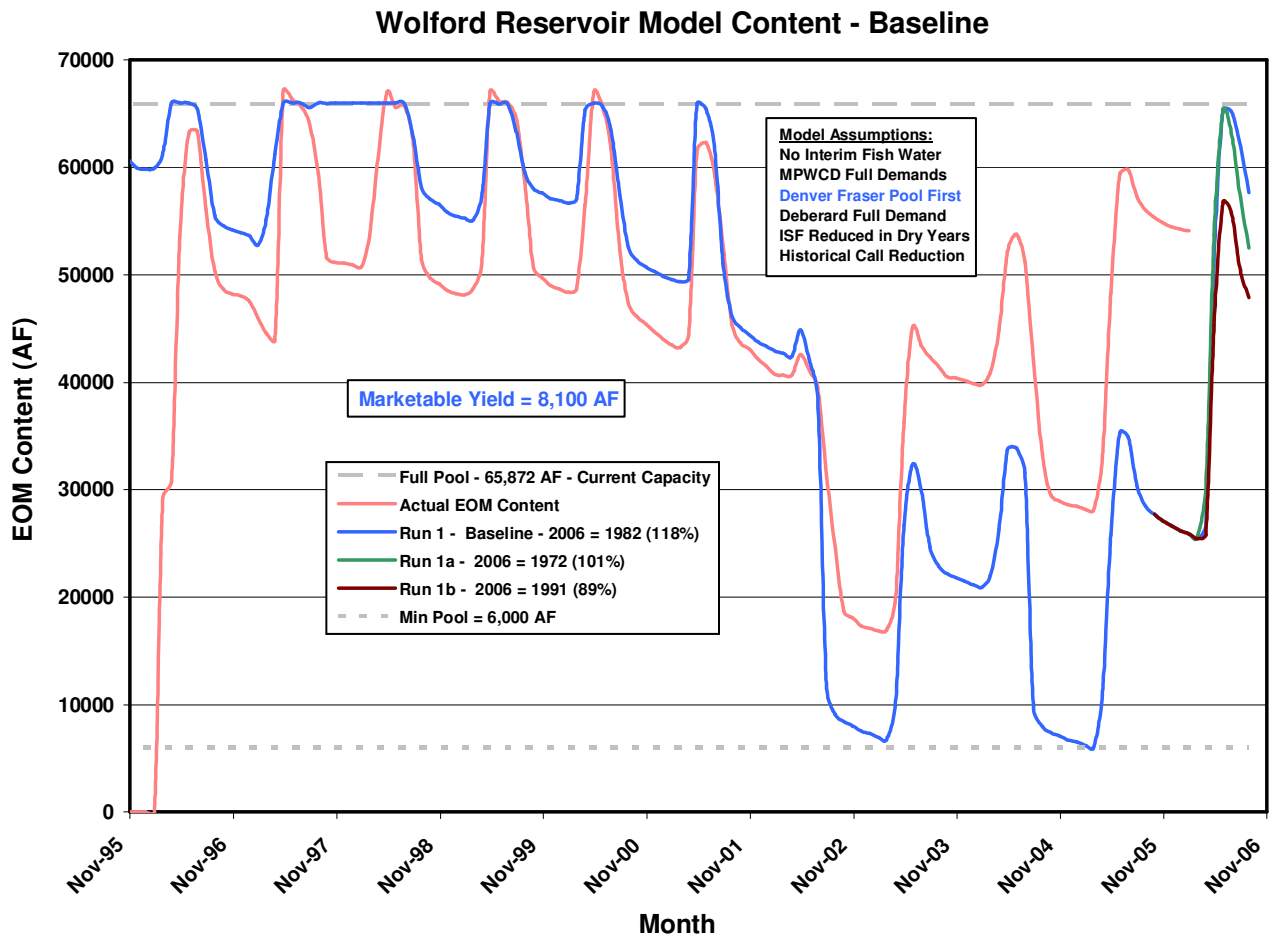

Figure 3: Results of 2006 computer model run for a Minimum Reservoir Volume of 6,000 acre feet for the operating period 1995-2006, including actual historic reservoir content.

Old Yield Allocation

As of July, 2006, allocation of the previously assessed Wolford 10,000 AF marketing pool was as follows:

10,000 AF = 1250 AF (CSU substitution) + 5412.5 AF (Interim Fish) + 3122 AF (current allocation of WMP contracts - Colorado River Supply above Shoshone) + **195.5 AF (remaining WMP available)**

New Yield Allocation

As of October 2006, allocation of the revised Wolford 8100 AF marketing pool is as follows:

8,100 AF (based on 2006 study) * = 3114 AF (impact of 5412 AF yield) ** + 3142 AF (current allocation of WMP contracts) + **1844 AF (remaining WMP available through 2010)**

* CSU Substitution Demands fully served. ** Based on delivery of 5412 AF in 2 years out of the 5 year critical period.