

Mr. ASPINALL. Mr. Secretary, before leaving this matter of virgin flow, I want to say I have no confidence in the stream flow records prior to 1922, as you might assume. I believe that my views are shared by most of the experts in this field who have studied this matter, other than the Bureau of Reclamation. In 1953, the State of Colorado hired the firm of Leeds, Hill & Jewett, to report on the availability of water for use in the upper basin and, in 1965, the Upper Colorado River Commission had an exhaustive series of studies made by the internationally recognized engineering firm of Tipton & Kalmbach. It is too bad Mr. Tipton has departed this world. Neither of these firms has agreed with the Bureau of Reclamation in this matter.

It has been 10 years since the progressive 10-year-average virgin flow assumed by the Bureau of Reclamation, and during this 35-year period the trend has been consistently down, as shown by your chart. You will not find this situation in any other river basin in the United States. It seems completely unreasonable to me to attribute this decline in water use entirely to the occurrence of a drought cycle.

Mr. Secretary, do you agree with me that over this period, there have been other scientific reasons for the declining water supply, such things as change in watershed conditions or anything else? What is the opinion of your experts?

Secretary UDALL. I don't think, Mr. Chairman, that we attribute the decline to any major changes in the watershed; watershed conditions that would affect runoff. I think it is our judgment that this is one of the most severe drought cycles in the long history of the Colorado, as indicated by tree-ring records.

Mr. ASPINALL. Mr. Secretary, the second assumption involved in the water supply involves upper basin depletions. In your statement, you point out the differences between the Bureau's estimate and the upper basin estimate of such depletions.

I want the members of the committee to understand how the difference in these estimates could make a big difference in the water availability in the lower basin.

In your statement, by the way, Mr. Secretary, you have taken it upon the Office of the Secretary to determine how these depletions will take place in the upper basin when the use of these waters under the compact are decisions for the upper basin States to make and they have their depletion studies also.

Your statement indicates that, by the year 1990, the Bureau estimates upper basin depletions at only 5,100,000 acre-feet, while the upper basin estimate—this is by the Upper Colorado River Compact Commission—shows 6,342,000 acre-feet. Members of the committee should note that the difference between these two figures is about the same amount as the average annual water supply for the central Arizona project.

I think you would agree to the determination that that is the difference.

Secretary UDALL. I cannot argue with your mathematics, Mr. Chairman; we do have a difference on certain assumptions that are made.

Mr. ASPINALL. Mr. Secretary, who do you think is in the best position to estimate the upper basin development—the Bureau of Reclamation or the States themselves who have a right to this water?