

capacities and assuming curtailment of delivery water to the Lower Basin to an average of 7.5 million acre-feet per year, the stream depletions above Lee Ferry would be limited by nature to 6.3 million acre-feet per year. The net depletion excluding reservoir losses would be 5.6 million acre-feet annually. Thus, due to the vagaries of nature, the Upper Basin States are already suffering curtailment in their total water resource development to an amount 20% under that apportioned to them by the Colorado River Compact. The risks involved in further curtailment of the Upper Basin's social and economic development as the result of further curtailment of their water uses are real, not imaginary.

Fourth, on the basis of the Department's long-term streamflow records at Lee Ferry, not once since 1933-34 consecutive years—has the progressive 10-year average virgin flow exceeded the average virgin flow. During this 34-year period the trend has been consistently downward. It seems unreasonable to attribute this decline in water yield entirely to the occurrence of a "drought" cycle as contrasted to a "wet" cycle. Scientific reasons for this declining water availability do not seem to be fully known or clearly demonstrated. Maybe watershed conditions have changed materially during the past 35 years so that the same runoff does not result from comparable amounts of precipitation as occurred in earlier years. I recently received a memorandum from my esteemed colleague, Honorable Morris K. Udall of Arizona, that may better illustrate this point. This memorandum states:

"The records of this area (13,000 square-mile watershed of Salt River Project in Arizona) indicate that notwithstanding continuation of approximately the same average annual rainfall which existed more than fifty years ago, the runoff from the watershed has decreased by approximately 50 percent—principally by virtue of uneconomic water-wasting growth on the watershed area. What is true of this area must also be true of watersheds throughout the entire Colorado River Basin—and this undoubtedly has played a great part in the dwindling water supply of the Colorado River since adoption of the Colorado River Compact."²

Whatever the reason may be for this decline in water yield it is apparently obvious to others besides myself that the long-term reliable runoff of the Colorado River has decreased considerable below the estimates for years prior to 1922.

Fifth, the Secretary mentioned that "time will tell regarding your assumptions" that are used in making stream flow analyses. I agree. Yet it seems glaringly apparent from the testimony and discussion that the Department in its studies used the most optimistic water supply, the most pessimistic Upper Basin projected rates of stream depletions, and the most optimistic recovery of river losses of the several agencies whose estimates were compared by the Committee staff. Inherent risks are built into this type of project water supply justification.

In conclusion, Mr. Chairman, I have presented these facts and views on water supply to the Committee in this manner for three important reasons: First, on any river, whether it be the Colorado River or another, that is subject to both severe hydrologic limitations and restrictive legal requirements it is important that the use of water be kept within the capability of the river supply. Second, during my entire Congressional career, almost one-fifth of a Century, it has been the consistent policy of this Committee to report to the Congress only water resources bills about which there is no question concerning availability of water. I believe that this position has been sound, reasonable and in the Nation's interest. Third, I believe that this Committee and the Congress should have before it as complete a set of facts and figures as possible relating to the water supply of the Colorado River system. With all of the facets of the picture in mind and only on this basis with the serious social and economic implications of the probabilities of overestimating the water supply before it, should the Congress decide the issues of this legislation.

Mr. ASPINALL. Mr. Secretary, I am pleased with your discussion of the water quality standards in relation to the Colorado River Basin. I am particularly pleased with your statement that "salinity standards will not be established until we have sufficient information to

² Memorandum dated August 30, 1967, from Hon. Morris K. Udall of Arizona to Hon. Wayne N. Aspinall, Chairman of the Committee on Interior and Insular Affairs, House of Representatives.