

Mr. UDALL. On the hydrology question, both you, Mr. Secretary, and Mr. Dominy indicated that the hydrology figures you are using in planning and evaluating the central Arizona project see reasonably accurate and highly reliable even back to 1906.

Is this correct, Mr. Dominy?

Mr. DOMINY. Yes.

Mr. UDALL. To put it in focus, I should say that we are really talking in terms of degrees of reliability here in considering these different periods and the different factors that we have to estimate the water supply. I suppose there has been some refinement in hydrology techniques in the last 50 years; but, has there been any basic change in the method of determining the flow of the river?

Mr. DOMINY. No, sir; the refinement basically is just more years of record and more gaging stations at more different places on the system.

Mr. UDALL. To use a homely analogy: if I wanted to measure speed, I could, (a) use my old Ford speedometer, which is accurate to within 5 or 6 percent, I suppose, or, (b) get a brand new speedometer carefully calibrated, or, (c) get Massachusetts Institute of Technology, with laser beams and what not within a thousandth of 1 percent, perhaps. But, as I understand it, you are saying that, while the 1906-1922 figures are less reliable, perhaps, than the very latest ones because of these factors you mentioned, they are nevertheless as reliable as my old speedometer.

Mr. DOMINY. I think you have a very good analogy. I think this is right.

Mr. UDALL. If those 1906 to 1922 figures are off, isn't it just as likely that they are off on the low side as the high side?

Mr. DOMINY. This is correct.

Mr. UDALL. There may have been even more water during those years?

Mr. DOMINY. A marginal error, plus or minus.

Mr. UDALL. Once in a while, I see the implication that you are somehow using a brandnew kind of hydrology to justify the central Arizona project. I want to ask you this question: Have you used the same technique and the same figures, as they were available for the central Arizona project, as you used for the Colorado River storage project for San Juan-Chama, for all of the Upper Basin projects, all of the Utah projects, Dixie and the other reclamation projects in the Colorado River Basin?

Mr. DOMINY. That is absolutely correct, and we are plowing in the longest period of record, which includes a long period of dry years.

Mr. UDALL. Is it not true that any engineer in a water project does exactly what you did, that is, use the longest period formula?

Mr. ASPINALL. I think, if my colleague will yield, that is a misleading question, because two or perhaps three other prominent engineering firms have used some other formula. I think you should confine that question to the Bureau of Reclamation.

Mr. UDALL. I am trying to get, Mr. Chairman, at a very narrow point. I remember a rainfall in my area of 5 inches in 24 hours. This was 30 or 40 years ago. It has never happened since.

But would not any engineer, if he had an accurate record of such an event that took place, assume that it is going to happen again sometime?