

(e) The Fuller Ranch Dam site located downstream from the Red Rock Valley.

*Answer No. 5.*—(a) It is a feature of the Central Arizona Project dependent upon that project; hence, no determination of a separate benefit-cost ratio for Hooker Dam and Reservoir has been made.

(b) We have made reconnaissance investigations of numerous damsites on the Gila River in New Mexico since about 1930. These include the following, which are listed in downstream order:

*The Alum Dam Site*, being located upstream from the Hooker Dam site, could serve the same geographic areas and could provide similar benefits. The cost per acre-foot of net water yield at this site was shown by reconnaissance studies to be only slightly higher than at the Hooker site. The Alum Dam and Reservoir site, therefore, was considered to be a truly comparable alternative to the Hooker site but was dropped from further consideration because the site is located entirely within or surrounded by the Gila Wilderness Area at considerable distance from paved highways or habitations, making it less desirable than sites outside or on the edge of the wilderness area. Because the Alum site is located higher on the watershed, the quantity of water that could be developed and the degree of flood protection that could be provided to downstream areas also would be less than at the Hooker site.

*Hooker Dam and Reservoir* were proposed as features of the Central Arizona Project because of the strategic location and superior physical potentialities of the Hooker site relative to benefits within the State of New Mexico. Although the cost per acre-foot of net yield at the Hooker site was shown by reconnaissance studies to be less than at any other site studied, this finding was not the sole basis for selecting the Hooker site for more detailed investigation.

Hooker Dam site is located at the point where the Gila River emerges from the mountains and flows through the irrigated valleys of western New Mexico into eastern Arizona. A dam and reservoir at this strategic location would serve the three principal irrigated areas along the Gila River in New Mexico, the Cliff-Gila, Duck Creek, Red Rock, and Virden Valleys and also would provide the most practicable source of additional municipal and industrial water supply for the Silver City and Tyrone areas. It also would provide aquatic recreation and fishing and hunting opportunities readily accessible by paved highways to Silver City and other urban areas. The dam would be located outside the Gila Wilderness and Primitive Areas, and the reservoir would back water only a few miles inside these areas which, at this point, are comprised of typical, undistinguished, sparsely vegetated, desert hills located in close proximity to State highways, towns, and farmsteads.

*The Cliff Dam Sites* (upper and lower) were dropped from consideration because early reconnaissance investigations indicated that the physical potentialities of these sites were inferior to either the upstream Hooker site or the downstream Conner site. A dam at this site would inundate about 2,000 acres of presently irrigated farmland.

*The Conner Dam Site*, being located downstream from the Cliff-Gila Valley, would neither serve nor protect that valley, which contains nearly 50 percent of all farmlands irrigated from the Gila River in the State of New Mexico. This site, therefore, is not a comparable alternative to the Hooker Dam site insofar as it relates to benefits within the State and, for that reason, was not considered in the original Central Arizona Project report. New developments that have occurred during the 20 years since the original Central Arizona Project report was issued provide no basis for reconstruction of this site.

As previously noted, the 18,000-acre-foot increase in New Mexico's annual water use from the Gila River as provided for in the Arizona-New Mexico agreement includes the evaporation losses that would occur on any reservoir constructed to develop this water. Such losses would be far greater at the Conner site because of its lower location on the watershed and the resulting requirement for increased reservoir capacity due to its greater sediment inflow. It is estimated that the annual evaporation from the Hooker site will be about one-third that of the Conner site. Evaporation from a reservoir at the Conner site constructed with active storage capacity needed for water conservation purposes might easily consume most of the additional 18,000 acre-feet per year permitted by the interstate agreement. The Conner site is also less desirable from a recreation and fish and wildlife standpoint because