

Assessment of Selected Small Dams in the Western Desert of Iraq

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Abstract

Small dams in a Western Desert of Iraq are one of the best rainwater harvesting techniques to conserve water in the dry season. This study aims to evaluate these technologies, which were represented by the Horan / 2 dam and Abila dam on the Wadi Horan. The surface runoff resulting from rainfalls was estimated using the Soil Conservation Services (SCS) method and the total storage amount was calculated for a period of 30 years for the period from (1990-2019). The results of the study for the Horan /2 dam showed that 67% of the years of rainfall occur in which a surface runoff occurs and that the amount of water outflow over the spillway of the dam during these years is 151.86 million cubic meters. In addition to the amount of water entering the dam from the U / S area, and thus it becomes clear that the dam reservoir Horan / 2 is small compared to the amount of water entering it. The results of surface runoff of Abila dam indicate that the number of years in which the dam reaches the designed storage capacity is 2 years, which constitutes 16% of the years of surface runoff for the period of the study. The amount of stored water is considered small compared to the number of losses resulting from infiltration and evaporation and with these quantities of storage it is considered a dam reservoir Abila is great.