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THE EFFECT OF SINKHOLES ON LEAKAGE OF WATER FROM THE SARABCHENAR DAM, SOUTHWEST IRAN

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ABSTRACT

The study area is situated in the south of the village of Sarabchenar in southwest Iran. The earth dam with a height of 15 meters and an area of 20 hectares was constructed to control floods and store water for irrigation. After the construction of the dam, several sinkholes appeared on the lake created by the dam. The sinkholes are oriented along a fault at the contact of the Amiran conglomerate and the highly weathered reef limestone. The main fault extends from west to east. The shape of the sinkholes varies from oval to elliptical. The largest diameter is 12 meters in the eastern part of the lake. In spite of a mean annual precipitation of only 550 millimeters, a small portion of rainfall is stored and the rest of water is released through the sinkholes immediately after rainfall stops. The effect of water leakage has been observed in the Hezar Many River which is about 15 kilometers away from the dam. Due to the instability of formations such as the Kashkan Formation (conglomerate, sandstone, and red marl) in the northern part of the dam, sedimentation will soon fill the lake.

Reference: *Ahmadipour, M. ; The Effect of Sinkholes on Leakage of Water From the Sarabchenar Dam, Southwest Iran, Journal of Environmental Hydrology, Vol. 13, Paper 1, January 2005*

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