

## Abstract

In recent decades controlling and extraction of abstaining gather water lay using underground dams has been noted by water source researchers. In this thest, for relation of effectine stanburs and hanging a more corset & more exact decision and saving the time & enpense of we used a method based on composing of maps in GIS adiut surrey and prioritizing with decision system of AHP was used in this method, firstly by using of GIS according to earth layer kind slope distance from fault and Vegetation aveas for every Sub-catchment an appropriate dimit was defined. then base on Field visit in every appropriate limits a place as the lest place specified and wltimately by considering of mean annual reurifall ,store groundwater reservoir volume, upper land basin area water Harvesting method, alluvfun thickness criterias cistern levels uxis length, water usage, and accessing with prioritizing system of AHP the selected places was ranked relatively. the result represents hat underground dams in Samon jahr have the first priority for water saving .further more, the mean annual reurifall ,store Groundwater Reservoir volume, upper land basin area water Harvesting method play the most role on selecting the appropriate place for Constructing underground dams, Also ,according to selected triple places similarities to many of existing choices in edge of desert, we earn derive that edge of desert has appropriate Construction site for building of underground dams we can control urderg round water in border deserts. Also this research represented, composing method of GIS, Field visit and RS are the appropriate method for locate these damse.

**Key words:** Underground dams, locate, Prioritize, edge of desert, Samon jahr, GIS, AHP, RS



University of Zabol  
Graduate school  
Faculty of Engineering  
Department of Civil Engineering

**The Thesis Submitted for the Degree of M.Sc. (in the field  
of Civil Engineering–Water Engineering)**

**Using GIS and RS to locate  
underground dams and prioritize  
places with AHP method (Case study  
edge of Lut desert Kerman)**

**Supervisor:**

Dr. M.R. Molaienja

**Advisor:**

Dr. M.R. Aminizadeh

**By:**

M. Bahrololoum

February 2017