Abstract

Nowadays, in many parts of Iran temporary dewatering, and floodwater distribution systems are being conducted and utilized as watershed management projects. In this project the characteristics of the soil (specially the surface layer) is changed mainly by the entrance of floodwaters with different sources which contain a high percentage of different floating minerals from one point, and the resident of different sediments from the other point.Therefore, this research has been conducted with the aim of analyzing the physical and chemical characteristics of Hamun Lake due to the temporarily dewatering. The studied project in this research consisted mainly of two different fields which respectively were the experimental region (۶ hectares) and the observed region (۶ hectare), the total of the studied regions was ۱۲ hectares. In order to investigate the physical and chemical characteristics of the soil, a soil sampling from ۰-۲۰ and ۲۰-۴۰ centimeters of the soil has been conducted by using a systematic network framework. In the systematic network sampling the sampling is performed by taking samples in ۶ lines and from ۵ different points in each line. The sampling of the observed region was based on the congruity of the soil like the type of the soil, the ecological characteristics and type of connections that it had with the experimental region. In total, ۶۰ different samples were taken from both the experimental and observed regions. The gathered samples were taken to the lab and their physical and chemical characteristics such as the (SP) texture of the soil, acidity of the soil, electricity conductivity, total nitrogen, total potassium, total phosphor, and the absorbed sodium were measured. The obtained results from the SPSS and Minitab software indicated that there is a meaningful increasing relationship between the percentages of phosphor, organic carbons, organic material, calcium magnesium, and there is a meaningful decreasing relationship between the percentages of potassium, sodium, percentages of sodium absorption, and electrical conductivity of the sediments in the experimental region. Also, the dewatering process did not have a meaningful effect on the percentage of acidity, nitrogen, cationic exchanging capacity, lime, clay and sand. Therefore, it can be stated that conducting a dewatering operation will result in the prolificacy of the soil.

Keywords: Physical and chemical characteristics of the soil, Hirmand floodwater, Hamun Lake, Khaje mountain

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The Effects of Temporary Dewatering of Hamoon Lake Bed on the Physicol and Chemical Properties of Soil (Case Study Hirmand Hamoon- Khajeh Mountain

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