

## The study of water quality in naseri wetland by using of IRWQI and NSFQI indexes

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### Abstract

This survey was done by using the two indexes involving IRWQI and NSFQI in the 2017 year in two different seasons, spring and summer, in order to evaluate the characteristics of the water quality at Naseri wetland which is located in the north west of Kkhoramshahr city. This wetland is comprised of agricultural drainages of Mirzakochakkhan and Amirkabir sugar cane companies. The sampling was done from 7 stations (5 stations from wetland and 2 control stations) with 3 repetitions, and also the survey was accomplished by utilizing standard methods in July and May. In this survey, some characteristics such as pH, DO, nitrates, phosphate, BOD<sub>5</sub>, COD, Fecal Coliform, turbidity, total hardness, and electrical conductivity were measured. For evaluating the water quality parameters of naseri wetland, IRWQI, and NSFQI (Iran sublime water index) indices were used. The results showed that the qualitative characteristics of measured water are at a bad level, in all wetland stations and control samples. However, the comparison between results have shown that the water quality in control stations is in the lower level. Based on NSFQI index the lowest and the best quality was seen in control station 7 (38.79) and station 3 (42.4) in May respectively. In the case of the IRWQI index, among the surveyed stations, stations 6 and 7 represented the lowest water quality at 16.56549 and 16.54693 respectively, and the highest water quality was documented at 16.80906 in station 1 in May.

**Keywords:** NSFQI index, IRWQI index, Naseri wetland, Water quality, Drainage.