

# TEMPORARY DYNAMIC OF SOME PHYSICAL-CHEMICAL PARAMETERS AND PHYTOPLANKTON OF THE WATER OF THE SAN JACINTO RESERVOIR, TARIJA, BOLIVIA

Abstract type

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Abstract

The San Jacinto reservoir is located on the Tolomosa River, in the southern region of Tarija, Bolivia. A multipurpose reservoir, was put into operation in 1989, it is at an altitude of 1900 meters above sea level, with an average surface area of 560 ha., and a perimeter of 48 km. During the dry period (May to September 2018) and rainy season (October 2018 to March 2019), data of temperature, pH, concentration in dissolved oxygen, conductivity and total phosphorus were recorded in the sampling station (E1) located in the deepest zone of the reservoir and to different profiles of the water column, in order to analyze the vertical variations of these elementary water parameters. In addition, values of the composition and abundance of the phytoplankton community were recorded. The reservoir registered a stratification, with a thermocline at 4-6 m., in the water column, preliminarily classifying the reservoir as a hot polymictic, its waters correspond to the "Class B", due to the content of values of BOD, Fecal Coliforms, being a factor that converge to favor the development of phytoplankton, where the genus *Ceratium* shows a greater abundance in the rainy season than during the dry season. The observed results provide acquired knowledge that will be important to assessing the ecological functioning of the reservoir, fish productivity and will contribute to a better management of the aquatic resources of the San Jacinto reservoir.

Keywords

Limnology, Tolomosa river, aquatic ecology, Water quality in lentic system, reservoir management