

## **MODELING OF THE WATER QUALITY VACACAÍ - MIRIM'S RESERVOIR**

Maria Do Carmo Cauduro Gastaldini; Mônica Vanzo;

### **ABSTRACT**

The Vacacaí-Mirim reservoir is localized in Santa Maria, on the center of Rio Grande do Sul State, which cover a total area of 30,6 Km<sup>2</sup>. The majority reservoir destine is for the domestic supply, it is responsible for 40% of Santa Maria's supply and recreation of primary contact. The basin is characterized by urbanization in the right bank of the reservoir and in the rural area in the left bank. The main objective of this article is to model the water quality of Vacacaí-Mirim reservoir and simulate its variation with changes of climate periods and land use. The reservoir simulations are carried out through the mathematical model of water quality CE-QUAL-W2. The simulated parameters are temperature and dissolved oxygen. Then, this article has the intention to assist the maintenance of water quality in the local according to relevant legislations.

**PALAVRA-CHAVE: CE-QUAL-W2, water quality**