

ABSTRACT

The physical and social aspects of the Bog Walk region of the Rio Cobre Basin are reviewed to verify the importance of the Rio Cobre. The river may be classified as Class B waters i.e. it should be fit for contact recreation, and fish. It should also be fit for domestic and industrial water supply after full treatment(p 51).

Previous studies on the Rio Cobre as well as other case studies are reviewed. Some methods for the determination of K_1 and K_2 (the deaeration and reaeration constants respectively), along with other selected aspects of oxygen sag analysis are discussed.

Data for samples taken at three effluents stations reveal that calcium, sodium, phosphate and chloride, the only inorganic present in considerable quantity in the effluents, are not capable of severely altering background concentrations in the Rio Cobre. By performing oxygen sag analyses, the existence of considerable organic pollution in the Rio Cobre is confirmed.

It is concluded that because of a high organic loading the river is presently not meeting the requirements of Class B waters though its function is as such. Oxygen is found to be the parameter in the stream affected by this heavy load. It is estimated that to correct the situation, a 60% decrease in organic loading is necessary.