

# **MICROBIOLOGICAL WATER ANALYSIS OF SELECTED POINT SOURCES IN ILOILO RIVER**

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by

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## ABSTRACT

The recreational use of the Iloilo River according to the Iloilo River Master Plan entails various studies to support it being safe for swimming and other activities. The Department of Environment and Natural Resources (DENR) Region VI has done very few studies to determine this particular aspect of the Iloilo River. Thus, the present study was conducted to determine the bacteriologic content of water in selected point sources in Iloilo River, Iloilo City and the possible correlations to the incidence of health risks. Specifically the study aims to: (1) determine significant differences in the physico-chemical characteristics of water samples from each point source; (2) to determine the total and fecal coliform counts number for each water sample from the selected point sources; (2) detect the presence or absence of *E. coli*, *Salmonella spp.*, and culturable Vibrios in water in selected point sources; (3) describe the incidence of health risks; and (4) correlate the heterotrophic plate count for total coliforms, Most Probable Number for Fecal Coliforms and the number of symptomatic respondents. The results of the study showed that the total coliform count for Point source A (HPC=6000/100 ml) is higher compared to the standard set by the DENR (5000/100 ml) while Point source B and C are within the range. The concentrations of *E. coli*, in water samples A, B, and C (2400 MPN/100 ml sample) were found to be higher than the DENR standard for fecal coliforms for Class C Waters – fresh water, (200 MPN/100ml sample). Although results indicate that the river water has high fecal contamination, there were no significant correlations between heterotrophic plate counts, Most Probable Number for Fecal Coliforms and the number of symptomatic respondents for each point source.