

Patterns of fecal coliform contamination in the Tangipahoa River

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Abstract: This study compiles and documents data available from the Louisiana Department of Environmental Quality, the Louisiana district of the U.S. Geological Survey, and the Louisiana Office of State Climatology. Daily water budgets were calculated for the three Tangipahoa Parish climate stations. It was found that fecal coliform levels in the Tangipahoa River at Robert, Louisiana, are more highly correlated to the water budget estimated runoff ($r=0.65$) than with stream discharge ($r=0.58$). Bacteria are also significantly negatively correlated with water temperature ($r=-0.29$). Runoff and water temperature were used to classify sampling dates into categories of warm, cool, wet, and dry. The correlation of fecal coliforms with runoff was significant ($r=0.71$ and 0.63) for cool and warm dates. Fecal coliforms were significantly correlated with temperature on wet dates ($r=-0.31$), but not in dry weather ($r=-0.10$).

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