Using Microbial Indicators to Analyze Water Quality at Cypremort Point Beach

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From April 2017 to October 2017, 80 advisories on the beaches of Louisiana (Department of Health 2017) have been reported. Louisiana Department of Health has recorded bacteria count throughout the summer at different sites along the Louisiana coast line. Having high amounts of Escherichia coli can be harmful to those who reside in the area and tourists who participate in recreational activities. Two factors that can lead to the increasing sum of bacteria are the residing wildlife in the surrounding areas or the people who inhabit the region. Five strategically placed sites have been selected near the Cypremort Point Beach to determine what was causing the increase of Escherichia coli. Water samples were collected over a period of three months. Test for pH, conductivity, clarity, and dissolved oxygen were conducted to check the health of the water. It was observed that diminishing water quality had a correlation with the bacteria. A T-test was performed and values less than 0.05 were considered significant. Correlation coefficients were determined for the bacteria versus each water quality parameter tested. According to Site 3, the highest wildlife activity in the surrounding area, had the highest count of Escherichia coli. There were negative correlations with the bacteria versus pH, dissolved oxygen, salinity, and conductivity. Wildlife in the surrounding area of Cypremort Beach could be a large contribution towards the count of Escherichia coli and the condition of the water. Continued research could include the relationship with temperature and the tide in the rise of bacteria.

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