Best Management Practices on contaminant reduction in the New Orleans aquifer

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ABSTRACT
Due to the fast urbanization in the city of New Orleans along with salt intrusion problems, the aquifer system is deteriorating. Over the last year, physical, chemical, and biological parameters of groundwater have been monitored. This research sought to evaluate the current water condition and provide recommendations for developing best management strategies. Fecal coliform was present in 26 out of 41 well water samples at levels ranging from 1 to 2450 CFU/100 ml. The average pH value ranged between 8.7 and 10.0. The values of electrical conductivity (EC) measured varying between 334.3 and 2660.0 mS, with the highest value found in well which is located on the west shore of Lake Pontchartrain. Similarly, water salinity ranged between 0.17 and 1.31 ppt, with the highest value found in same well. These results suggest that the presence of fecal indicators at different sampling sites in the New Orleans aquifer. In order to develop effective pollution control strategies, further research is needed to determine the source(s) of fecal contamination in the region.

Keywords: water quality; enterococci; fecal coliform; Lake Pontchartrain