Agricultural Contaminants in the San Juan River

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Many people on the Navajo Nation and the rural San Juan region rely on agricultural activities for financial benefit and use the San Juan River as their main source for water. Many families cannot financially support themselves enough to maintain health and decency. They use this water for everyday purposes and they may be consuming unhealthy agricultural contaminants that can lead to death. To test for nitrates in the river, the researcher used mixed acid reagent, nitrate reducing reagent and an axial reader. To test for Escherichia and coliform colony growth, the researcher used Bio Paddles and an incubator. To dispose of the Bio paddles the researcher used household bleach. The hypothesis was that, bacterial colony count and nitrate levels and concentrations in different stations of the San Juan River on the downstream area (Station 7: Shiprock 1 and Station 8: Shiprock 2) will contain the highest bacterial colony count and nitrate level and concentration due to the increase of farmlands and livestock. The results of the experiment partially support the hypothesis because the concentration of nitrates is highest in Station 8: Shiprock 2; however the level is low compared to the allowable 10 ppm level. Stations 1 and 2 in Farmington had the highest count of Escherichia coli colonies of 9. Station 6: Hogback had the highest colony count of coliform of 9.

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