A Nutrient Soil and Water Quality Assessment of Central Alabama. (S11-tsegaye214742-Oral)

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Abstract:

In the Mobile River Basin, USGS prioritized water quality issues include nutrient enrichment of ground and surface waters bodies from human and animal wastes, and runoff from soilscapes. The study was designed to assess and evaluate concentrations and yields of nutrient, and heavy metals in selected creeks. Water samples were collected from eight counties across central Alabama. Mean comparison was performed to evaluate statistical differences by sampling period, land use/cover type (LULC), and county. Significant differences were observed for water temperature, pH, Dissolved Oxygen and lead concentration between sampling periods, LULC types, and counties. However, Cadmium (Cd), Zinc (Zn), and Nickel (Ni) concentration level showed significant differences by sampling periods and counties, but not by LULC types. Total phosphorus concentration showed significant differences for both sampling periods and counties. However, LULC types did not show significant difference for total phosphorous concentration level. Overall, this study indicated that a given water quality parameter vary across the study area depending on the sampling period and LULC types.

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