Water Quality Monitoring in Bayou Plaquemine Brule Watershed in Southwestern Louisiana. (S11jeong182048-Poster)

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Abstract:

We monitored several water quality parameters including Dissolved Oxygen (DO), NO3-N, turbidity, and Biological Oxygen Demand (BOD) along the main stream of Bayou Plaquemine Brule in Southwestern Louisiana. Sediment Oxygen Demand (SOD), total C, and total N were determined for streambed sediments that were collected from six different locations along the Bayou Plaquemine Brule. The DO level declined from upstream to downstream, while NO3-N concentration increased from upstream to downstream. Stream water along the Bayou Plaquemine Brule main channel was less turbid and had a relatively lower BOD value compared to those that of Bayou Plaquemine Brule tributaries. For the sediments, total C ranged from 0.15 to 1.17% while total N was <0.085%. The average SOD value for samples representing upstream of Bayou Plaquemine Brule was 3.57 g/m2/day. Loading rates for oxygen-demanding substances along the main stream of Bayou Plaquemine Brule will be determined and will be correlated with upstream landuse types.

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