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Occurrence of Pesticides in Soil and Sediment of the Indian Creek and Huntsville Spring Branch Watersheds of North Alabama

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Abstract Text:

The persistence of pesticides in terrestrial and aquatic ecosystems of the Indian Creek and Huntsville Spring Branch Watersheds is a major concern for North Alabama. This particular study entailed the collection of 108 soil and sediment samples from upland, bank and in-stream depositional areas within these two watersheds. Concentrations for 22 pesticides were determined through dual-column analysis using GC-ECD (EPA Method 8081A). The most predominant occurrences were observed for DDT (dichlorodiphenyltrichloroethane), DDE, DDD, heptachlor and various endrin compounds. Pesticide concentrations ranged from undetectable to 102 µg/Kg for DDT, which was the most highly concentrated pesticide in both watersheds. In addition, an obvious spatial trend was observed for DDT and its metabolites, whereby, these compounds tended to increase in concentration with increasing soil moisture; upland

Impact Statement: