

## **CAJUN PRAIRIE SOILS AS RESERVOIRS OF WATER, LEAD AND ARSENIC**

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*Abstract:* The disappearing Cajun Prairies of Louisiana are potential dumping grounds for waste materials that may release lead and arsenic into the soil. Two restored prairies (Louisiana [State University](#) at Eunice {LSUE} and the Cajun Prairie Restoration Project {CPRP} in Eunice) and two remnant prairies (Estherwood and Frey) were used to determine their capacities to retain water, lead and arsenic. Soil samples from three different depths (0-10, 10-20 and 20-30 cm) were taken from each prairie. Eight grams of prepared soil were placed in the leaching funnel and 15 ml of distilled water was allowed to percolate through the soil for 22 hours. In separate experiments, 15 ml of lead treatment solutions and 15 ml of arsenic treatment solutions were leached through the soil for 22 hours. The CPRP soils showed equal percolation rates at all soil depths. However, the three prairies showed faster percolation rate at the surface than at the subsurface soils. The data suggest that the slower the percolation rate, the greater the retention of water, lead and arsenic in the soil. The four prairie soils are better reservoirs of lead than of arsenic, and their greater capacities to retain water, lead and arsenic were dependent on higher clay content of the soils.