

Spatial Variability of Terric and Typic Medisaprists Within a Coastal Marsh

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Organic soils in some areas within the brackish and saline marshes in Barataria Bay Basin are mapped as associations of soil series in the soil survey conducted in 1981. The associated series within a particular salinity regime are delineated at subgroup level mainly based on the depth to mineral layer (i.e., Terric Medisaprists and Typic Medisaprists). Thickness of the surface organic layer is a major soil morphological feature that indicates the stability of the marsh. Soil morphology is spatially variable within the marsh. Hurricanes, saltwater intrusion, construction of channels, and other man-made changes may affect accretion and degradation of organic layers within the landscape. Spatial variability studies are necessary to understand pedogenic processes and their landscape relations. Thickness of the surface organic layer (or depth to mineral layer) was measured using a grid at 200m intervals established within a one square mile area in both saline and brackish marsh types. Soil morphology indicated spatial variability within the saline and brackish marshes. Data were used to generate contour maps for depth to mineral layer. Terric and Typic Medisaprists were delineated based upon micro scale spatial variation of organic layer thickness. Classification of these organic soils should be reconsidered as Sulphemists due to pyrite accumulation within the profile.