Table 3. Soils by NRCS Hydrologic Group found within the Okefenokee NWR acquisition boundary. [Source: SSURGO Undated-a].

Hydrologic Group	Description	Acres within Acquisition Boundary	Percent of Total Land Acreage
A	High Infiltration/Low Runoff	6,114	1
A/D	Modified Areas: High Infiltration/Low Runoff Natural Condition: Very Slow Infiltration/High Runoff	426,167	82
B/D	Modified Areas: Moderate Infiltration/Moderate Runoff Natural Condition: Very Slow Infiltration/High Runoff	27,490	5
C/D	Modified Areas: Slow Infiltration/Moderately High Runoff Natural Condition: Very Slow Infiltration/High Runoff	61,612	12
Total		***521,383***	

The majority of the refuge soils are representative of the poorly-drained Croatan, Pamlico, and Surrency histosols, and the ponded Dasher-Dorovan-Croatan histosol complexes (Table 2). The very deep, moderately slowly permeable Croatan, Pamlico, and Surrency complex is composed of all poorly-drained, highly-organic histosols found in areas of flats, depressions, and stream terraces of the Coastal Plain. This complex formed in sandy and loamy marine sediments. The Dasher Series is a poorly-drained series that is normally ponded for at least 10 months of the year as part of marshes and swamps. The Dorovan series is similarly found in floodplains and hardwood swamps of the Atlantic Coastal Plain flatwoods, while the Croatan series is found in the lower and middle Coastal Plain and composed of highly decomposed organic material underlain by fluvial sediment (USDA 2008).

The Mascotte fine-sand soil series is the third largest series on the refuge. Mascotte soils (very deep, poorly-and-very-poorly-drained, moderately slowly permeable) are found on areas of flats, depressions, and low stream terraces of the Coastal Plain. The Leon fine sand (very deep, poorly-and-very-poorly-drained, moderately rapid to moderately slowly permeable) is the fourth largest soil series on the refuge, and is found on upland flats, depressions, stream terraces, and tidal areas.

The most common non-hydric soil found within the approved acquisition boundary is Hurricane fine sand, a Spodosol. Hurricane soils (very deep, somewhat poorly drained, moderately to rapidly permeable) are found on uplands commonly associated on the landscape with Albany, Boulogne, Chipley, Foxworth, and Leon soils. Strictly upland soils are a very small percentage of the refuge.

The repeating pattern of Dasher, Dorovan, and Croatan histosols that dominates the swamp areas of the refuge (SSURGO Undated-a) differ in their extent of decomposition but are largely similar in most regards. The botanical origin of the peat in these series broadly reflect the vegetation communities along a soil catena as depicted in Figure 7 from open-marsh environments; glades and island fringes; to tree-island and swamp environments (Cohen et al. 1984). The botanical composition of deeper peats is likely somewhat different due to changing local and regional paleoecological trends in vegetation. When drained, the histosols' organic material is prone to oxidation and vulnerable to fires. Most or all of the lakes in the swamp occur where natural depressions in the topography exist or where the peat has burned as a result of wildfires (USFWS 2006). In-depth discussion about vegetation composition, distribution, and